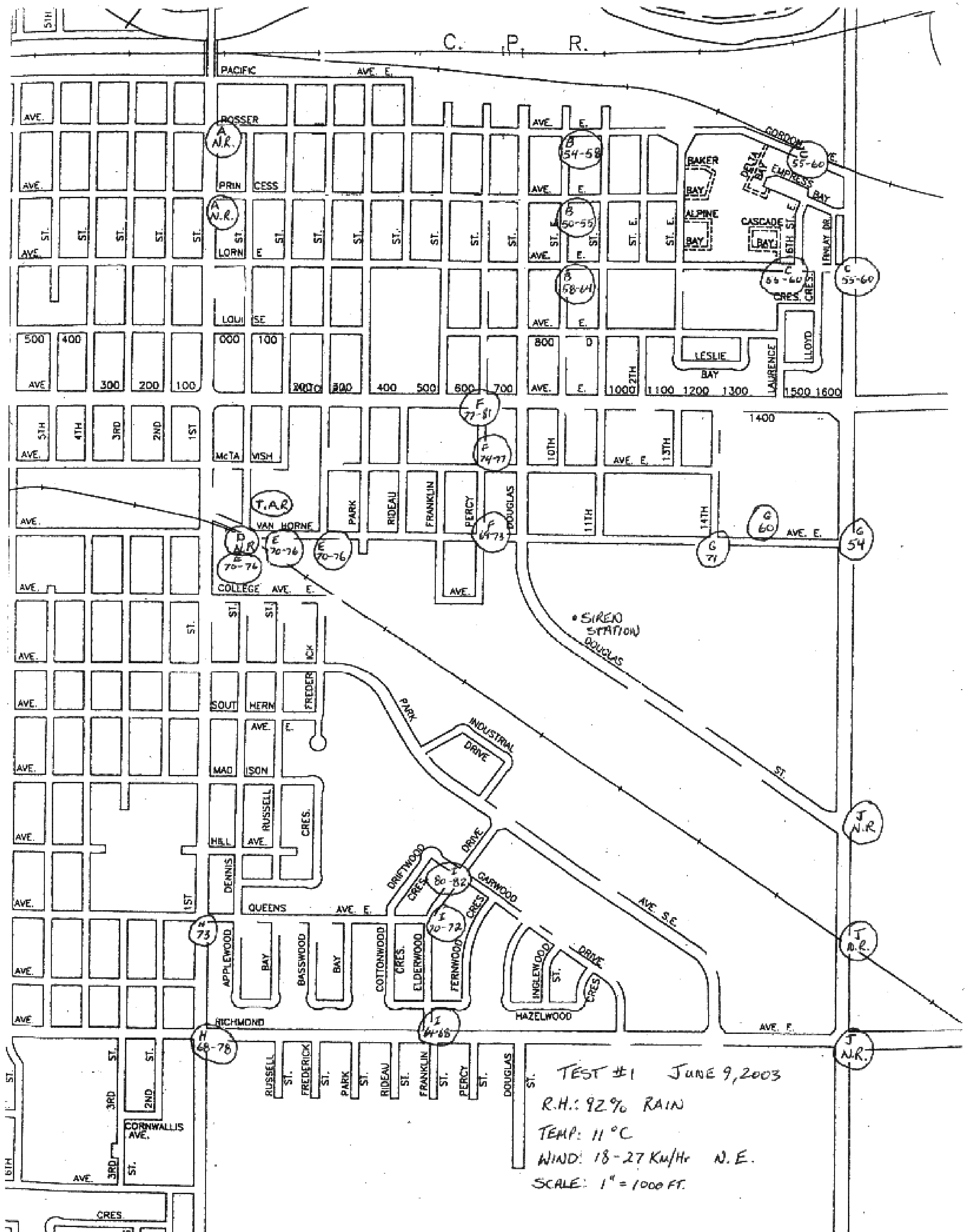
APPENDIX F

SIREN TEST DATA

June 9, 20 and July 2, 2003


C. P. R.
PACIFIC AVE. E.
ROSSER AVE. E.
PRINCESS AVE. E.
LORNE AVE. E.
LOUISE AVE. E.
McTAVISH AVE. E.
VAN HORNE AVE. E.
COLLEGE AVE. E.
SOUTHERN
FREDERICK
MADISON
RUSSELL
HILL AVE.
CRES.
DENNIS
QUEENS AVE. E.
APPLEWOOD
BAY
BASSWOOD
COTTONWOOD CRES.
ELDERWOOD
FERNWOOD CRES.
DRIFTWOOD CRES.
GARWOOD DRIVE
INGLEWOOD ST.
HAZELWOOD CRES.
RICHMOND AVE. E.
CORNWALLIS AVE.
PARK
RIDEAU
FRANKLIN
PERCY
DOUGLAS
DOUGLAS ST.
PARK DRIVE
INDUSTRIAL DRIVE
AVE. S.E.
GORDON AVE.
BAKER BAY
DELTA BAY
EMPRESS BAY
ALPINE BAY
CASCADE BAY
16TH ST. E.
FINLAY DR.
CRES.
LESLIE BAY
LAWRENCE
LLOYD
10TH
11TH
12TH
13TH
14TH
1ST
2ND
3RD
4TH
5TH
6TH
500 400 300 200 100 000 100 200 300 400 500 600 700 800 1000 1100 1200 1300 1400 1500 1600
A N.R.
B 54-58
B 50-55
B 58-64
C 55-60
D N.R.
E 70-76
F 77-81
F 74-77
F 69-73
G 60
G 71
G 54
H 73
H 68-78
I 80-82
I 70-72
I 64-68
J N.R.
T.A.R.
SIREN STATION
TEST #1 JUNE 9, 2003
R.H.: 92% RAIN
TEMP: 11 °C
WIND: 18-27 Km/Hr N.E.
SCALE: 1" = 1000 FT.

TEST #1
Date: June 9, 2003
Time: 11:30 AM

Administrative note:	One volunteer could not attend. One volunteer arrived late but was in position in time.
Relative humidity:	92% steady rain
Temperature:	11 degrees Celsius
Wind speed:	18 gusting to 27 km/hr
Wind direction:	North East
Tone:	3 minute steady high pitch
P.A.:	"This has been a test of the Brandon Emergency Alerting Project. The test has been successful." (Repeated twice) Total activation time approximately 4 minutes.

Map location A1
Maximum approximate distance from siren station: 5,000 ft.

Location:	1st St. & Rosser Ave. East	No reading above ambient
	1st St. & Princess Ave. East	No reading above ambient
Ambient:	78 - 80 dB with traffic	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	Traffic noise levels interfered with the readings on the machine. Significant traffic noise from large trucks. Siren could be heard faintly but if not listening for same, would not have paid any attention to it.	

Map location B1
Maximum approximate distance from siren station: 4,000 ft.

Location:	10th St. East & Rosser Ave. East	54 - 58 dB
	10th St. East & Princess Ave. East	50 - 55 dB
	10th St. East & Lorne Ave. East	58 - 64 dB
Ambient:	Not recorded but readings are likely ambient due to noise from rain (comments)	
P.A.:	Not heard.	
Strobe:	Not visible	
Comments:	Some traffic on Rosser Ave. Rain noise affected sound level reading. No significant traffic noise. Heavy trees are in direct line to the siren station. Could not see it until one block closer - Louise Ave. and 10th St. East.	

Map location C1
Maximum approximate distance from siren station: 4,000 ft.

Location:	Empress Bay	55 - 60 dB
	16th St. East & Lorne Ave. East	55 - 60 dB
	17th St. East & Lorne Ave. East	55 - 60 dB
Ambient:	Not recorded	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	Buildings and being at the bottom of a hill. Very faint to the ear.	

Map location D1
Maximum approximate distance from siren station: 2,800 ft.

Location:	Van Horne Ave. East & Dennis St.	No reading above ambient
Ambient:	72 - 76 dB	
P.A.:	Not heard	
Strobe:	Easily visible	
Comments:	Training idling across the street and reading on meter did not change with siren on. The Health Centre blocks some of the sound as the volunteer was positioned at the south entrance to the BRHC. Also operated tone alert receiver.	

Map location E1
Maximum approximate distance from siren station: 3,000 ft.

Location:	Van Horne Ave. East & Dennis St.	70 - 76 dB
	Van Horne Ave. East & Russell St.	70 - 76 dB
	Van Horne Ave. East & Fredrick St.	70 - 76 dB
Ambient:	84 dB with traffic, 70 dB without	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	Siren was audible to volunteer. Normal traffic on 1st St. No traffic on Van Horne during test. Train idling on track 50 yards east of 1st. St. Light building construction between Dennis St. and Russell St. Maximum height of buildings between sample location and siren station is two stories.	

Map location F1
Maximum approximate distance from siren station: 2,000 ft.

Location:	Percy St. & Victoria Ave. East	77 - 81 dB
	Percy St. & McTavish Ave. East	74 - 77 dB
	Percy St. & Van Horne Ave. East	69 - 73 dB
Ambient:	68 - 73 dB with traffic, 60 - 64 dB without	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	This area is densely treed - no strobe visible. Traffic at Victoria Ave. East and Percy St. is at the same level as the alarm tone. Significant traffic	

noise from large trucks. No buildings as obstructions in this area.

Map location G1
Maximum approximate distance from siren station: 2,500 ft.
Location: Van Horne Ave. East & 17th St. East 54 dB
Van Horne Ave. East & Fire College 60 dB
Van Horne Ave. East & 14th St. East 71 dB
Ambient: 77 dB with traffic, 51 - 53 dB without
P.A.: Not heard
Strobe: Not visible
Comments: Lots of background noise. Traffic noise. trucks.

Map location H1
Maximum approximate distance from siren station: 4,500 ft.
Location: 1st St. & Richmond Ave. East 68 - 78 dB
1st St. & Queens Ave. East 73 dB
Ambient: Not recorded
P.A.: Not recorded
Strobe: Not visible
Comments: Loud trucks on 1st St.

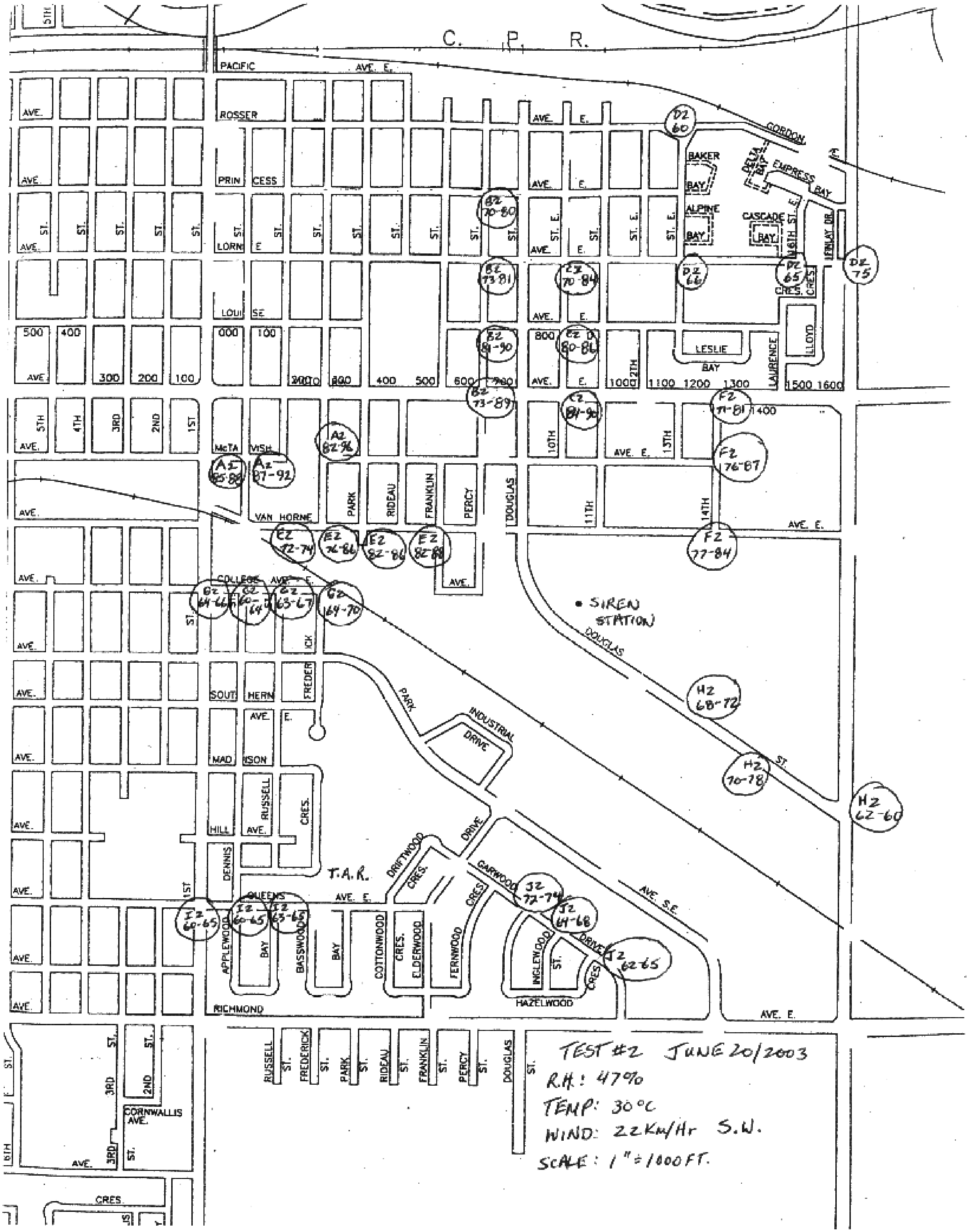
Map location I1
Maximum approximate distance from siren station: 3,500 ft.
Location: Elderwood Dr. & Richmond Ave. East 64 -68 dB
Elderwood Dr.. & Queens Ave. East 70 - 72 dB
Elderwood Dr.. & Garwood Dr. 80 - 82 dB
Ambient: Not recorded
P.A.: Not heard
Strobe: Not visible
Comments: Traffic noise from trucks on Richmond Ave. East. Heavy treed area.

Map location J1
Maximum approximate distance from siren station: 4,000 ft.
Location: 17th St. East & Richmond Ave. East No reading above ambient
17th St. East & Canadian National crossing No reading above ambient
17th St. East & Douglas St. No reading above ambient
Ambient: 78 - 80 dB with traffic, 54 dB without
P.A.: Not heard
Strobe: Not visible
Comments: Significant traffic noise from large trucks, Feed-Rite mill started up just as test began. Large buildings include Feed-Rite elevator, Cargill elevator, Shur-Gro tanks. Siren could be heard faintly. As the volunteer walked north towards the siren station the sound became more discernable but not

loud enough for the meter to pick up over background sound.

Map location T.A.R.

Tone Alert Receiver: The receiver was located in the Security Office at the Brandon Regional Health Centre on Van Horne Ave. East. The radio signals were heard. Voice announcement was clear. Same announcement did not interfere with the BRHC Security radios. There was some static but the announcement did not come over the Security's radios.


C. P. R.
PACIFIC AVE. E.
ROSSER AVE. E.
PRINCESS AVE. E.
LORNE AVE. E.
LOUISE AVE. E.
McTAVISH
VAN HORNE AVE. E.
COLLEGE AVE. E.
SOUTHERN
AVE. E.
MADISON
HILL AVE.
QUEENS AVE. E.
RICHMOND AVE. E.
GORDON
BAKER BAY
ALPINE BAY
DELTA BAY
EMPRESS BAY
CASCADE BAY
16TH ST. E.
FINLAY DR.
CRES.
LESLIE BAY
LAURENCE
LLOYD
1ST
2ND
3RD
4TH
5TH
10TH
11TH
12TH
13TH
14TH
PARK
RIDEAU
FRANKLIN
PERCY
DOUGLAS
DOUGLAS ST.
FREDERICK
RUSSELL
CRES.
DENNIS
PARK
INDUSTRIAL DRIVE
DRIVE
DRIFTWOOD
CRES.
GARWOOD DRIVE
CRES
AVE. S.E.
APPLEWOOD
BAY
BASSWOOD
BAY
COTTONWOOD
CRES.
ELDERWOOD
FERNWOOD
INGLEWOOD
ST.
CRES
HAZELWOOD
CORNWALLIS AVE.
CRES.
T.A.R.
SIREN STATION
500 400 300 200 100 000 100 200 300 400 500 600 700 800 900 1000 1100 1200 1300 1400 1500 1600
AZ 85-88
AZ 87-92
AZ 82-96
BZ 70-80
BZ 73-81
BZ 81-90
BZ 73-89
CZ 70-84
CZ 80-86
CZ 81-90
DZ 60
DZ 66
DZ 65
DZ 75
EZ 72-74
EZ 76-86
EZ 82-86
FZ 82-88
FZ 71-81
FZ 76-87
FZ 77-84
GZ 64-66
GZ 60-64
GZ 63-67
GZ 64-70
HZ 68-72
HZ 70-78
HZ 62-60
IZ 60-65
IZ 60-65
IZ 65-65
JZ 72-74
JZ 64-68
JZ 62-65
TEST #2 JUNE 20/2003
R.H.: 47%
TEMP: 30°C
WIND: 22Km/Hr S.W.
SCALE: 1" = 1000 FT.

TEST #2
Date: June 20, 2003
Time: 1:30 PM
Administrative note: One volunteer arrived late but was in position in time.
Relative humidity: 47%
Temperature: 30 degrees Celsius
Wind speed: 22 km/hr
Wind direction: South West
Tone: 3 minute steady high pitch activated twice.
P.A.: "This has been a test of the Brandon Emergency Alerting Project. The test has been successful." (Repeated three times) Total activation time approximately 7 minutes.

Map location A2
Maximum approximate distance from siren station: 3,500 ft.

Location:	McTavish Ave. East & 1st St.	85 - 88 dB
	McTavish Ave. East & Dennis St.	87 - 92 dB
	McTavish Ave. East & Fredrick St.	82 - 96 dB

Ambient: 85 - 95 dB with traffic
P.A.: Not heard
Strobe: Not visible
Comments: Significant traffic noise from large trucks and heavy construction on BRHC site. Siren could be heard faintly when the ambient noise level dropped.

Map location B2
Maximum approximate distance from siren station: 3,500 ft.

Location:	Percy St. & Princess Ave. East	70 - 80 dB
	Percy St. & Lorne Ave. East.	73 - 81 dB
	Percy & Louise Ave. East	81 - 90 dB
	Percy St. & Victoria Ave. East	73 - 89 dB

Ambient: 78 dB with traffic
P.A.: Could hear the voice but could not understand what was said
Strobe: Not visible
Comments: Curb repairs and construction between Princess Ave. East and Lorne Ave. East. BRHC site. Heavily treed residential area. Siren could be heard faintly when the ambient noise level dropped. Siren could be heard in background.

Map location C2
Maximum approximate distance from siren station: 3,000 ft.

Location:	10th St. East & Lorne Ave.	70 - 84 dB
	10th St. East & Louise Ave.	80 - 86 dB
	10th St. East & Victoria Ave.	84 - 90 dB

Ambient: 85 - 95 dB with traffic
P.A.: Not heard

Strobe: Not visible
Comments: Significant wind noise. Lots of trees in this area. Siren sound came in on a wave with the wind and the meter reading got higher.

Map location D2
Maximum approximate distance from siren station: 4,000 ft.

Location:	17th St. East & Lorne Ave.	75 dB
	16th St. East & Lorne Ave.	65 dB
	13th St. East & Lorne Ave.	66 dB
	13th St. East & Rosser Ave. East	60 dB

Ambient: Not recorded
P.A.: Not heard
Strobe: Not visible
Comments: This area is blocked from a direct line to the siren station by Assiniboine Community College. Treed residential area.

Map location E2
Maximum approximate distance from siren station: 2,500 ft.

Location:	VanHorne Ave. East & Russell St.	72 - 74 dB
	Van Horne Ave. East & Fredrick St.	76 - 86 dB
	Van horne Ave. East & Park St.	82 - 86 dB
	Van Horne Ave. East & Franklin St.	82 - 88 dB

Ambient: No t recorded
P.A.: Not heard
Strobe: Not visible
Comments: Very windy. Construction noise near Russell St.

Map location F2
Maximum approximate distance from siren station: 2,00 ft.

Location:	14th St. East & Van Horne Ave. East	77 - 84 dB
	14th St. East & Mc Tavish Ave. East	76 - 87 dB
	14th St. East & Victoria Ave. East	71 - 81 dB

Ambient: Not recorded
P.A.: Not heard
Strobe: Visible from Van Horne Ave. E. and from McTavish Ave. E. Not from Victoria Ave. E.
Comments: Wind carried the sound and caused reading to fluctuate greatly. The Coke building may have obstructed view of the strobe.

Map location G2
Maximum approximate distance from siren station: 3,000 ft.

Location:	College Ave. East & 1st St.	64 - 66 dB
	College Ave East & Dennis St.	60 - 64 dB
	College Ave. East & Russell St.	63 - 67 dB
	College Ave. East & Fredrick St.	64 - 70 dB

Ambient: 72 dB with traffic, 55 without

P.A.: Not heard
Strobe: Visible due to direct line of sight. Did not catch attention otherwise
Comments: No traffic except for 1st St. Treed residential area.

Map location H2
Maximum approximate distance from siren station: 2,700 ft.

Location:	Douglas St.& 17th St. East	62 - 60 dB
	Douglas St. & ShurGro	70 - 78 dB
	Douglas St. & Behlen Industries	68 - 72 dB

Ambient: Not recorded
P.A.: Not heard
Strobe: Visible from ShurGro location
Comments: No buildings acted as direct barrier. Trees in this area obscure strobe.

Map location I2
Maximum approximate distance from siren station: 4,000 ft.

Location:	Queens Ave. East & 1st St.	60 - 65 dB
	Queens Ave. East & Applewood Bay west	60 - 65 dB
	Queens Ave. East & Applewood Bay east	63 - 65 dB

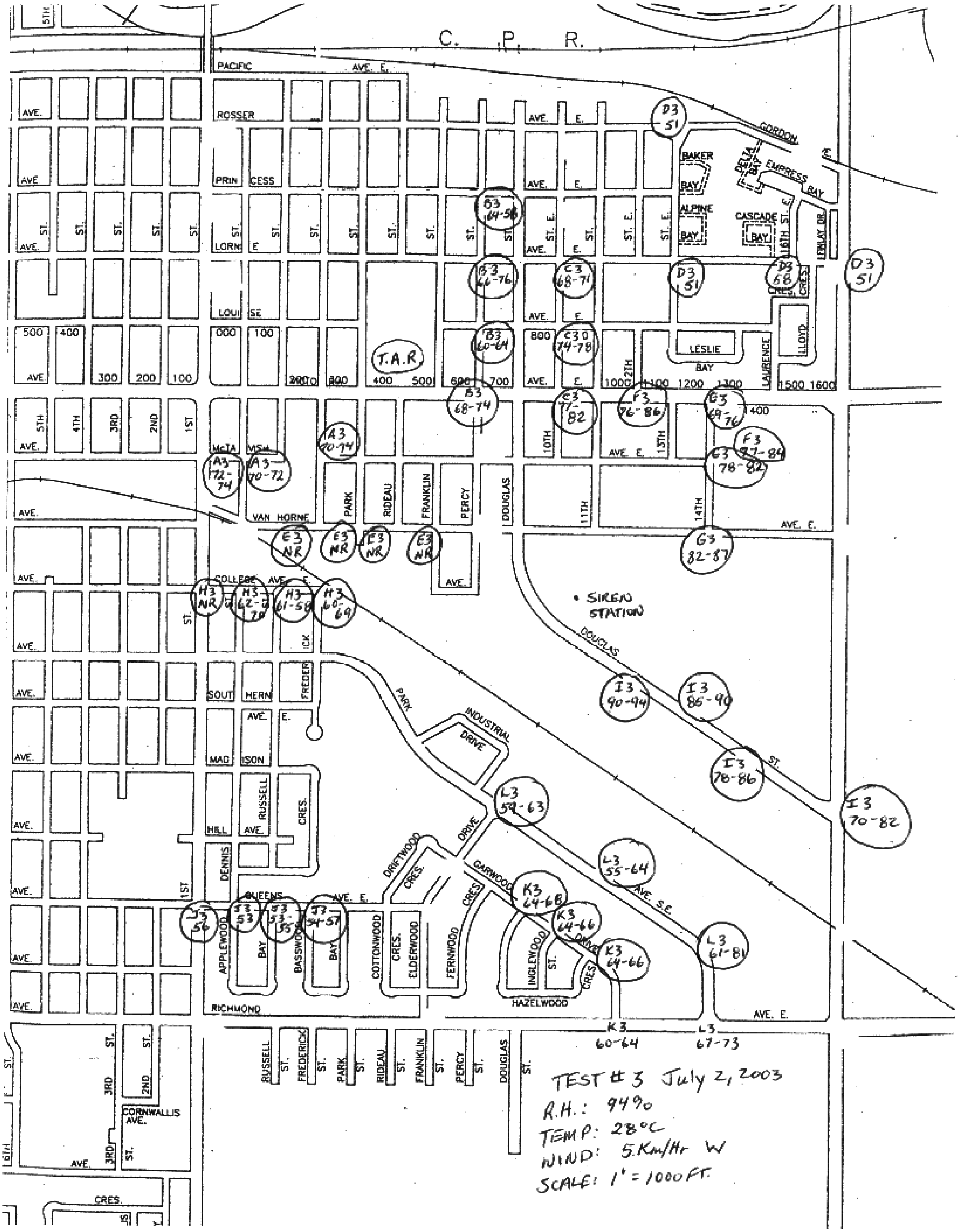
Ambient: Not recorded
P.A.: Not heard
Strobe: Not visible
Comments: Traffic noise and lawn mower on Queens St. made it difficult to capture siren. Treed residential area. Large church on Queens St. across from Applewood Bay.

Map location J2
Maximum approximate distance from siren station: 2,700 ft.

Location:	Garwood Dr. & Hazelwood Cres. south	62 - 65 dB
	Garwood Dr. & Inglewood Cres.	64 - 68 dB
	Garwood Dr. & Hazelwood Cres. north	72 - 74 dB

Ambient: Not recorded
P.A.: Not heard
Strobe: Not visible
Comments: Traffic noise from Richmond Ave. E. Brisk wind from the south west. Treed residential area.

Map location T.A.R.
Tone alert receiver: The receiver was located at Green Acres School on Queens St. Confusion about the correct position of the buttons. Heard the radio signals but did not hear any voice. Could faintly hear the siren in the school yard but not inside the school. The secretary may not always be located in the office so some system to notify the school generally may be required. Suggested a strobe in the hallway.


C. P. R.
PACIFIC AVE. E.
ROSSER AVE. E.
PRINCESS AVE. E.
LORNE AVE. E.
LOUISE AVE. E.
McTAVISH AVE. E.
VAN HORNE AVE. E.
COLLEGE AVE. E.
SOUTHERN AVE. E.
MADISON AVE.
QUEENS AVE. E.
RICHMOND AVE. E.
GORDON
EMPRESS BAY
BAKER BAY
ALPINE BAY
CASCADE BAY
DELTA BAY
LESLIE BAY
LAURENCE
LLOYD CRES.
16TH ST. E.
FERLAY DR.
PARK
RIDEAU
FRANKLIN
PERCY
DOUGLAS
DOUGLAS ST.
INDUSTRIAL DRIVE
PARK AVE. S.E.
GARWOOD DRIVE
DRIFTWOOD CRES.
APPLEWOOD BAY
BASSWOOD BAY
COTTONWOOD CRES.
ELDERWOOD
FERNWOOD CRES.
INGLEWOOD ST.
HAZELWOOD
RUSSELL
FREDERICK
DENNIS
CORNWALLIS AVE.
SIREN STATION
T.A.R.
TEST # 3 July 2, 2003
R.H.: 94%
TEMP: 28°C
WIND: 5 Km/Hr W
SCALE: 1" = 1000 FT.

TEST #3
Date: July 2, 2003
Time: 6:30 PM
Administrative note: Two volunteers could not attend and their locations were given to additional volunteers.
One volunteer arrived late but was in position in time.
Relative humidity: 94%
Temperature: 28 degrees Celsius
Wind speed: 5 km/hr
Wind direction: West
Tone: 3 minute alternating high low tone. Following the first activation this message:
P.A.: "This is a test of the Brandon Emergency Alerting Project. A second activation will take place shortly." (Repeated three times)
Tone: A second 3 minute alternating pitch followed by this announcement:
P.A.: "This has been a test of the Brandon Emergency Alerting Project. The test has been successful." (Repeated three times) Total activation time approximately 9 minutes.

Map location A3
Maximum approximate distance from siren station: 3,500 ft.

Location:	McTavish Ave. East & 1st St.	72 - 74 dB
	McTavish Ave. East & Dennis St.	70 - 72 dB
	McTavish Ave. East & Fredrick St.	70 - 74 dB

Ambient: 70 - 72 dB with traffic, 66 - 68 dB without
P.A.: Clear from all locations
Strobe: Not visible
Comments: Light car traffic. No construction activity today. Significant traffic noise from large trucks and heavy construction on BRHC site. Possible obstructions include large buildings - BRHC, Brandon Clinic. Noise from roof top fans on the BRHC. Recognized the alternating pitch very distinctive and easier to orientate people to this as an emergency signal.

Map location B3
Maximum approximate distance from siren station: 3,500 ft.

Location:	Percy St. & Princess Ave. East	64 - 58 dB
	Percy St. & Lorne Ave. East.	66 - 76 dB
	Percy & Louise Ave. East	60 - 64 dB
	Percy St. & Victoria Ave. East	68 - 74 dB

Ambient: 78 dB with traffic
P.A.: Faintly heard but could not understand what was said
Strobe: Not visible
Comments: Heavily treed residential area. This tone is much better that the earlier test tones. Seemed louder. Treed residential area. Dog barking and one loud vehicle as Louise Ave. East and Percy St.

Map location C3
Maximum approximate distance from siren station: 3,000 ft.

Location:	10th St. East & Lorne Ave.	68 - 71 dB
	10th St. East & Louise Ave.	74 - 78 dB
	10th St. East & Victoria Ave.	77 - 82 dB
Ambient:	73 dB with traffic	
P.A.:	Sounded like it was coming from rotating speakers. Could not understand	
Strobe:	Visible from 10th St. East and Victoria Ave. East	
Comments:	Little other noise. Heavily treed residential area.	

Map location D3
Maximum approximate distance from siren station: 4,000 ft.

Location:	17th St. East & Lorne Ave.	51 dB
	16th St. East & Lorne Ave.	58 dB
	13th St. East & Lorne Ave.	51 dB
	13th St. East & Rosser Ave. East	51 dB
Ambient:	Not recorded	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	Sound level seems louder this time. Prefer the high low sound in this test.	

Map location E3
Maximum approximate distance from siren station: 2,500 ft.

Location:	VanHorne Ave. East & Russell St.	No reading - equipment failure
	Van Horne Ave. East & Fredrick St.	No reading - equipment failure
	Van Horne Ave. East & Park St.	No reading - equipment failure
	Van Horne Ave. East & Franklin St.	No reading - equipment failure
Ambient:	No reading - equipment failure	
P.A.:	Announcement was clear at Van Horne Ave. East and Fredrick St.	
Strobe:	Visible from Van Horne and Park St.	
Comments:	Siren sounded like church bells.	

Map location F3
Maximum approximate distance from siren station: 2,000 ft.

Location:	14th St. East & Assiniboine Community College	77 - 83 dB
	Victoria Ave. East & 12th St. East	76 - 86 dB
Ambient:	Not recorded	
P.A.:	Not recorded	
Strobe:	Visible when pole is in sight.	
Comments:	Heavy large truck traffic on 1st St. make capturing a siren reading impossible. Further you go from 1st St. the better you hear the siren. Treed residential area. High low tone is preferable to the single tone.	

Map location G3
Maximum approximate distance from siren station: 2,00 ft.

Location:	14th St. East & Van Horne Ave. East	82 - 87 dB
	14th St. East & Mc Tavish Ave. East	78 - 82 dB
	14th St. East & Victoria Ave. East	69 - 76 dB
Ambient:	Not recorded	
P.A.:	Not heard	
Strobe:	Visible from Van Horne Ave. E. and from McTavish Ave. E. Not from Victoria Ave. E.	
Comments:	The Coke building may have obstructed view of the strobe.	

Map location H3
Maximum approximate distance from siren station: 3,000 ft.

Location:	College Ave. East & 1st St.	No reading above ambient
	College Ave East & Dennis St.	62 - 70 dB
	College Ave. East & Russell St.	61 - 58 dB
	College Ave. East & Fredrick St.	60 - 69 dB
Ambient:	80 dB with traffic, 56 - 62 without	
P.A.:	Could hear entire message from College Ave. East and Fredrick St.	
Strobe:	Not visible unless in middle of the street. Lots of hydro poles and antennas make siren station less obvious	
Comments:	Heavy large truck traffic on 1st St. make capturing a siren reading impossible. The further you go from 1st St. the better you can hear the siren. Treed residential area. High low tone is preferable to the single tone.	

Map location I3
Maximum approximate distance from siren station: 2,700 ft.

Location:	Douglas St.& 17th St. East	70 - 82 dB
	Douglas St. & ShurGro	78 - 86 dB
	Douglas St. & Behlen Industries	85 - 90 dB
	Douglas St & Redfern Farm Srevices	90 - 94 dB
Ambient:	60 db with traffic, 40 without	
P.A.:	Clear from all locations	
Strobe:	Visible with direct line of sight	
Comments:	No buildings acted as direct barrier. Trees in this area obscure strobe.	

Map location J3
Maximum approximate distance from siren station: 4,000 ft.

Location:	Queens Ave. East & 1st St.	56 dB
	Queens Ave. East & Applewood Bay west	53 dB
	Queens Ave. East & Applewood Bay east	53 - 55 dB
	Queens Ave. East & Basswood west	54 - 57 dB
Ambient:	55 - 68 dB with traffic, 44 dB without	
P.A.:	Heard announcement but could not understand it	

Strobe: Not visible
Comments: Traffic noise on Queens St. made it difficult to capture siren. Treed residential area. Large church on Queens St. across from Applewood Bay. This siren tone is more audible.

Map location K3
Maximum approximate distance from siren station: 2,700 ft.

Location:	Garwood Dr. & Richmond Ave. East	60 - 64 dB
	Garwood Dr. & Hazelwood Cres. south	64 - 66 dB
	Garwood Dr. & Inglewood Cres.	64 - 66 dB
	Garwood Dr. & Hazelwood Cres. north	64 - 68 dB

Ambient: Not recorded
P.A.: Heard announcement from Hazelwood Dr. but could not understand it
Strobe: Not visible
Comments: Treed residential area.

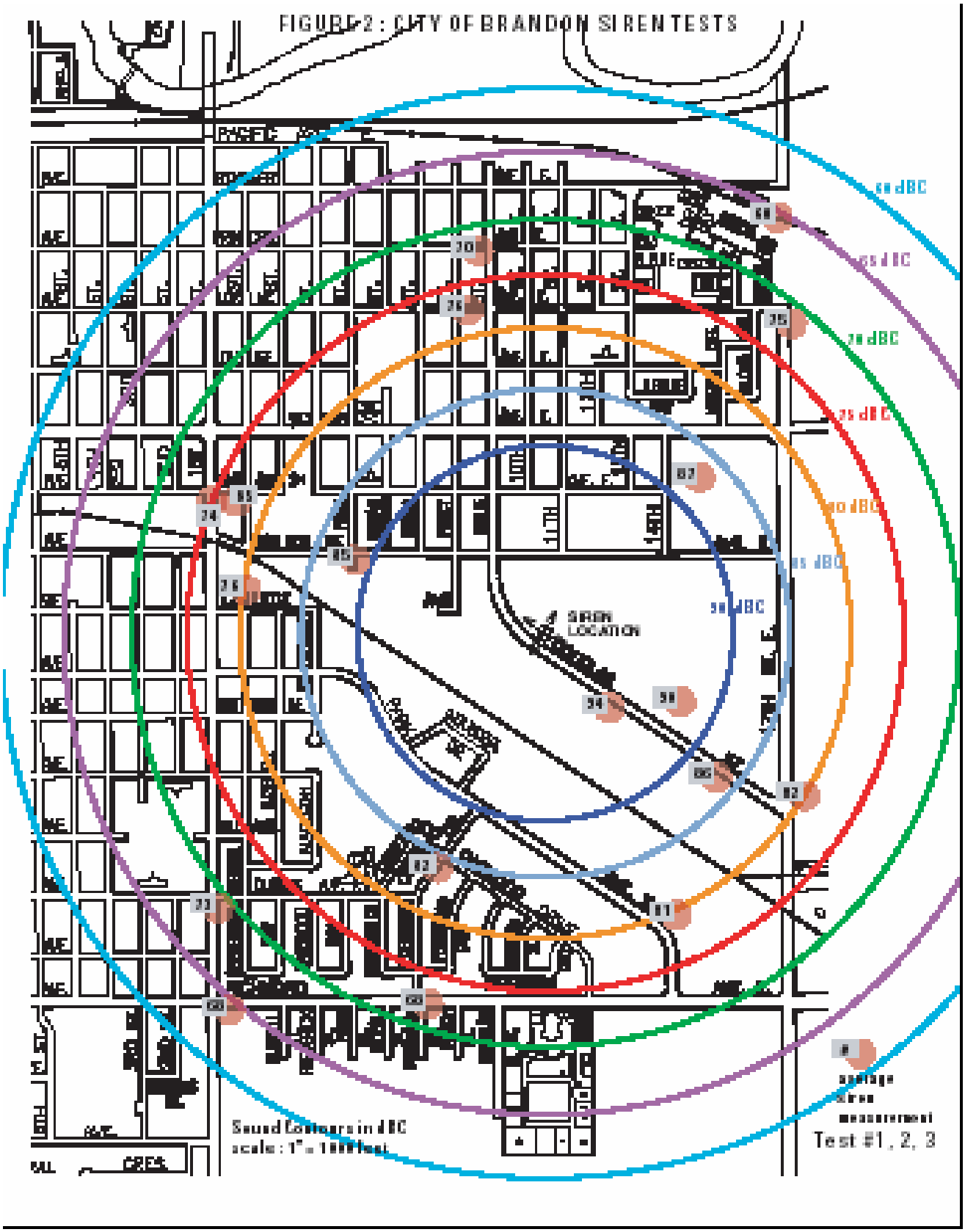
Map location L3
Maximum approximate distance from siren station: 4,000 ft.

Location:	Park Ave. East & Richmond Ave. East	67 - 73 dB
	Park Ave. East & first curve	61 - 81 dB
	Park Ave. East & Dairyland	55 - 64 dB
	Garwood Dr. & Elderwood Dr.	59 - 63 dB

Ambient: 74 dB with traffic, 58 without
P.A.: Heard announcement but could not understand it
Strobe: Not visible
Comments: Found this tone more distinctive than previous steady tone

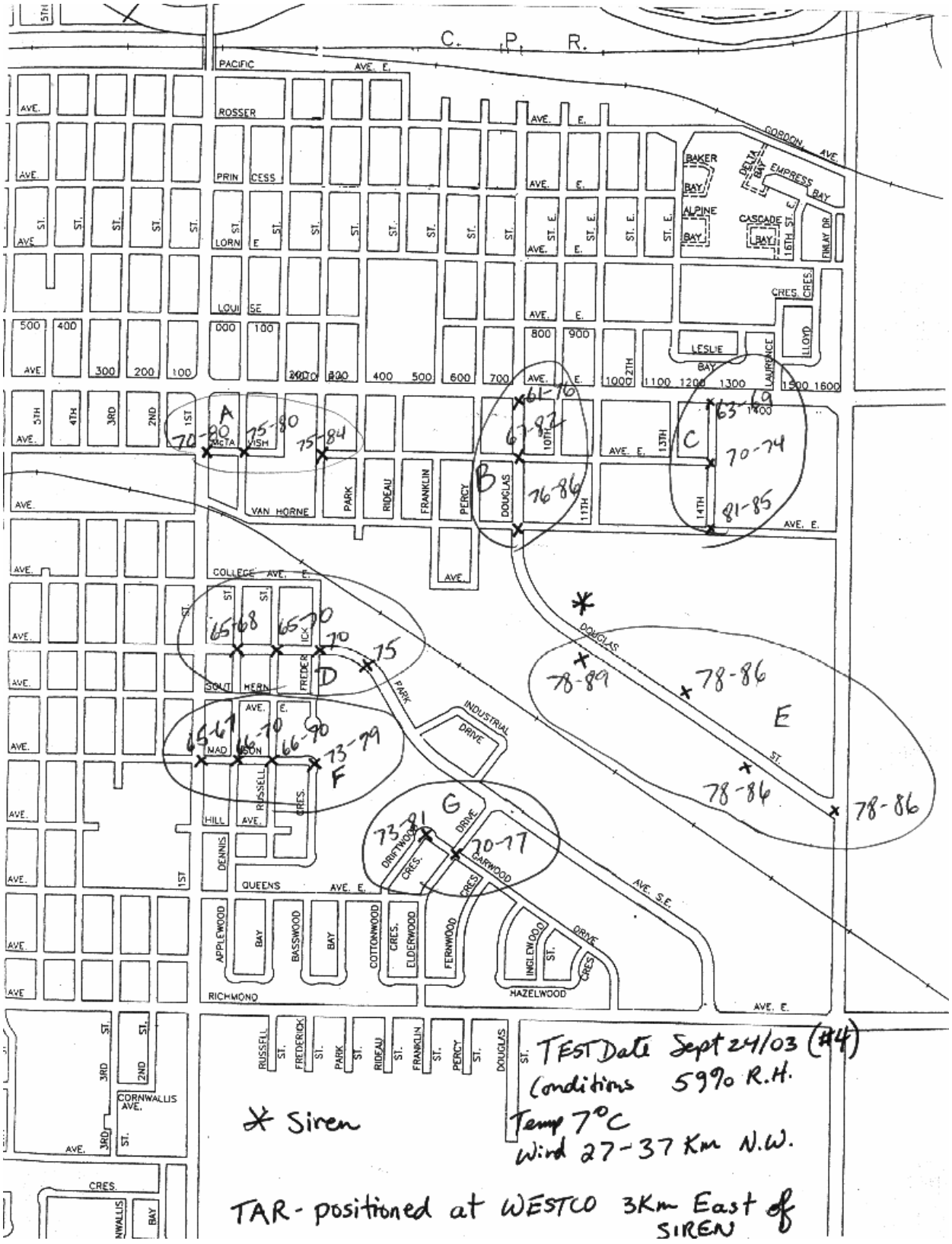
Tone alert receiver: The receiver was located at Rideau Park Personal Care Home on Victoria Ave. Voice was clearly understood. Volume was very good. The siren could also be heard when the front doors were opened but not with doors closed.

FIGURE 2 : CITY OF BRANDON SIREN TESTS



SIREN TEST DATA

September 24 and October 17, 29, 2003


C. P. R.
PACIFIC AVE. E.
ROSSER
GORDON AVE.
BAKER BAY
DELTA BAY
EMPRESS BAY
ALPINE BAY
CASCADE BAY
16TH ST. E.
FINLAY DR.
LESLIE BAY
LAURENCE
LLOYD
CRES.
PRINCESS
LORNE
LOUISE
VAN HORNE
PARK
RIDEAU
FRANKLIN
PERCY
DOUGLAS
10TH
11TH
12TH
13TH
14TH
AVE. E.
COLLEGE AVE. E.
SOUTHERN
FREDERICK
INDUSTRIAL DRIVE
DOUGLAS ST.
RUSSELL
HILL AVE.
DENNIS
QUEENS AVE. E.
DRIFTWOOD CRES.
CARNWOOD DRIVE
AVE. S.E.
APPLEWOOD
BASSWOOD
COTTONWOOD
ELDERWOOD
FERNWOOD
INGLEWOOD
HAZELWOOD
RICHMOND
CORNWALLIS AVE.
A
B
C
D
E
F
G
70-80
75-80
75-84
61-76
67-82
76-86
63-69
70-74
81-85
65-68
65-70
70-75
65-69
66-70
66-90
73-79
78-89
78-86
78-86
78-86
73-81
70-77
* Siren
TEST Date Sept 24/03 (#4)
Conditions 59% R.H.
Temp 7°C
Wind 27-37 Km N.W.
TAR - positioned at WESTCO 3Km East of SIREN

TEST #4
Date: September 24, 2003
Time: 3:00 PM

Administrative note:	All volunteers arrived on time.
Relative humidity:	59%
Temperature:	7 degrees Celsius
Wind speed:	27 gusting to 37 km/hr
Wind direction:	North West
Tone:	Alternating High Low tone
P.A.:	"This has been a test of the Brandon Emergency Alerting Project. The test has been successful." (Repeated twice) The tone was activated a second time and the message repeated following the activation. Total activation time was approximately 8 minutes.

Map location A4
Maximum approximate distance from siren station: 3,250 ft.

Location:	McTavish Ave. East & 1st St.	70 – 80 dB
	McTavish Ave. East & Dennis St.	75 – 80 dB
	McTavish Ave. East & Fredrick St.	75 – 84 dB
Ambient:	60 – 80 dB with traffic	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	Traffic noise levels interfered with the readings on the machine. Significant traffic noise from large trucks and construction around Brandon Regional Health Centre. Siren could be heard but if not paying attention you may not notice it. it.	

Map location B4
Maximum approximate distance from siren station: 1,800 ft.

Location:	Douglas St & Victoria Ave. East	61 - 76 dB
	Douglas St & McTavish Ave. East	67 - 82 dB
	Douglas St & Van Horne Ave. East	76 - 86 dB
Ambient:	60 – 70 dB traffic	
P.A.:	Heard.	
Strobe:	Not visible	
Comments:	Some traffic on Douglas. Leaves on trees are in direct line to the siren station. Could not see it until McTavish and also from Van Horne. Heard PA at Van Horne.	

Map location C4
Maximum approximate distance from siren station: 2,200 ft.

Location:	14th St. & Victoria Ave. East	63 – 69 dB
	14th St. & McTavish Ave. East	70 – 74 dB
	14th St. & Van Horne Ave. East	81 - 85 dB
Ambient:	Not recorded	
P.A.:	Not heard	
Strobe:	Visible	
Comments:	Strobe visible at Van Horne. Buildings block sight and sound. Some traffic.	

Map location D4
Maximum approximate distance from siren station: 2,800 ft.

Location:	Park Ave. East & Dennis St.	65 – 68 dB
	Park Ave. East & Russell St.	65 – 70 dB
	Park Ave. East & Fredrick St.	70 dB
	Park Ave. East & 1st Curve	75 dB
Ambient:	60 - 76 dB with traffic and wind.	
P.A.:	Heard but not understood	
Strobe:	Visible	
Comments:	Strobe visible at Fredrick.	

Map location E4
Maximum approximate distance from siren station: 3,000 ft.

Location:	Douglas St.& 17th St. East	78 - 86 dB
	Douglas St. & ShurGro	78 - 86 dB
	Douglas St. & Behlen Industries	78 - 86 dB
	Douglas St. & Redfern	78 – 89 dB
Ambient:	Not recorded	
P.A.:	Heard	
Strobe:	Visible from ShurGro location	
Comments:	No buildings acted as direct barrier. Trees in this area obscure strobe. Could understand PA except at 17th St.	

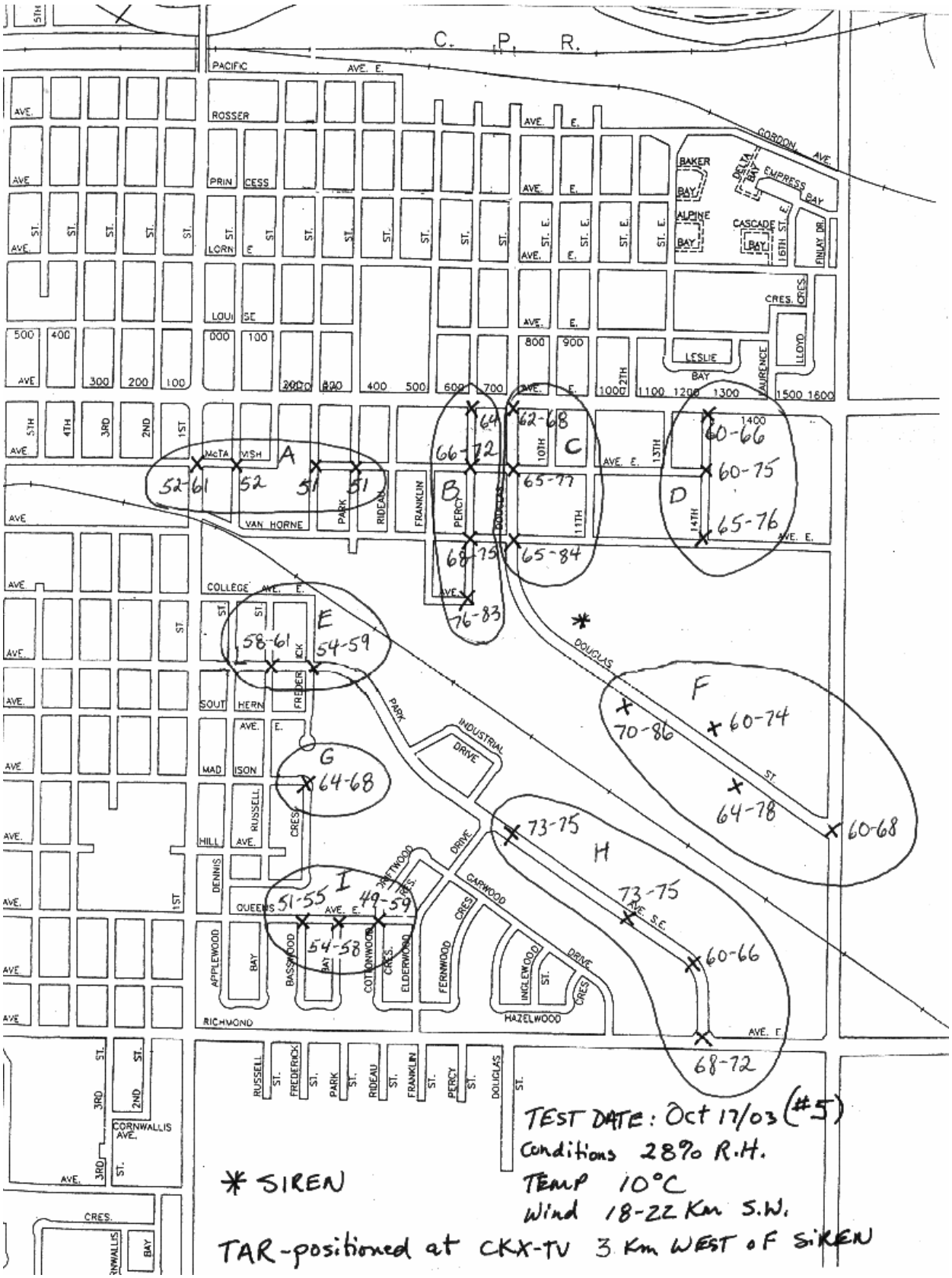
Map location F4
Maximum approximate distance from siren station: 3,200 ft.

Location:	Madison Ave. & 1st St.	65 – 67 dB
	Madison Ave. & Dennis St.	66 – 70 dB
	Madison Ave. & Russell St.	66 - 70 dB
	Madison Ave. & N.E. curve	73 - 79 dB
Ambient:	Not recorded.	
P.A.:	Heard	
Strobe:	Not visible	
Comments:	Normal traffic on 1st St. No on Madison. Wind gusts.	

Map location G4
Maximum approximate distance from siren station: 2,200 ft.

Location:	Driftwood Cres. & Queens Ave.	no reading
	Driftwood Cres. & 1st curve	73 – 81 dB
	Driftwood Cres & Elderwood Dr.	70 – 77 dB
Ambient:	65 – 75 dB	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	This area is densely treed - no strobe visible. Traffic at Victoria Ave. East and Percy St. is at the same level as the alarm tone. Significant traffic noise from large trucks. No buildings as obstructions in this area.	

Map location T.A.R. (not shown on this map)
Tone Alert Receiver: The receiver was located in the office building at Western Cooperative Fertilizers. This is approximately 3 km east of the speaker station. The radio signals were heard. Voice announcements were loud and clear.


C. P. R.
PACIFIC AVE. E.
ROSSER
GORDON AVE.
BAKER BAY
EMPRESS BAY
ALPINE BAY
CASCADE BAY
FINLAY DR
CRES.
LESLIE BAY
LLOYD
LAURENCE
VAN HORNE
PARK
RIDEAU
FRANKLIN
PERCY
DOUGLAS
COLLEGE AVE. E.
SOUTHERN
FREDERICK
INDUSTRIAL DRIVE
MADISON
RUSSELL AVE.
HILL
DENNIS
QUEENS
APPLEWOOD BAY
BASSWOOD BAY
COTTONWOOD CRES.
ELDERWOOD CRES.
FERNWOOD CRES.
INGLEWOOD ST. CRES.
HAZELWOOD
RICHMOND
DRIFTWOOD CRES.
GARWOOD DRIVE
CORNWALLIS AVE.
A
B
C
D
E
F
G
H
I
52-61
52
51
51
66-72
64
62-68
65-77
60-66
60-75
65-76
68-75
65-84
76-83
58-61
54-59
64-68
70-86
60-74
64-78
60-68
73-75
73-75
60-66
51-55
49-59
54-58
68-72
* SIREN
TEST DATE: Oct 17/03 (#5)
Conditions 28% R.H.
TEMP 10°C
Wind 18-22 Km S.W.
TAR-positioned at CKX-TV 3 Km WEST of SIREN

TEST #5
Date: October 17, 2003
Time: 6:45 PM

Administrative note:	Everything fine.
Relative humidity:	28%
Temperature:	10 degrees Celsius
Wind speed:	18 - 22 km/hr
Wind direction:	South West
Tone:	3 minute Red Alert (air raid) tone activated twice.
P.A.:	After the first activation: "This has been a test of the Brandon Emergency Alerting Project. There will be a second activation shortly." After the second activation: "This has been a test of the Brandon Emergency Alerting Project. The test has been successful." Total activation time approximately 8 minutes.

Map location A5
Maximum approximate distance from siren station: 3,400 ft.

Location:	McTavish Ave. East & 1st St.	52 - 61 dB
	McTavish Ave. East & Dennis St.	52 dB
	McTavish Ave. East & Fredrick St.	51 dB
	McTavish Ave. East & Park St.	51 dB
Ambient:	No recorded	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	Significant traffic noise from large trucks on 1st Street. Building block sight and sound.	

Map location B5
Maximum approximate distance from siren station: 2,000 ft.

Location:	Percy St. & Victoria Ave. East	64 dB
	Percy St. & McTavish Ave. East	66 - 72 dB
	Percy St. & Van Horne Ave.East	68 - 75 dB
	Percy St. & College Ave. East	76 – 83 dB
Ambient:	78 dB with traffic	
P.A.:	Heard	
Strobe:	Visible	
Comments:	Strobe visible from Van Horne. Trees and buildings blocked sight and sound. Could hear the PA but not understand what was said.	

Map location C5
Maximum approximate distance from siren station: 1,800 ft.

Location:	Douglas St & Victoria Ave. East	62 - 68 dB
	Douglas St & McTavish Ave. East	65 - 77 dB
	Douglas St & Van Horne Ave. East	65 - 84 dB
Ambient:	Not recorded.	
P.A.:	Heard	
Strobe:	Visible	
Comments:	Some traffic on Douglas. Leaves on trees are in direct line to the siren station. Could not see it until McTavish and also from Van Horne. Heard PA at McTavish and also at Van Horne. Could understand it at Van Horne.	

Map location D5
Maximum approximate distance from siren station: 2,200 ft.

Location:	14th St. & Victoria Ave. East	60 - 66 dB
	14th St. & McTavish Ave. East	60 - 75 dB
	14th St. & Van Horne Ave. East	65 - 76 dB
Ambient:	50 -64 dB	
P.A.:	Heard	
Strobe:	Visible	
Comments:	Strobe visible at McTavish and also at Van Horne. Buildings block sight and sound. Some traffic. PA message clear.	

Map location E5
Maximum approximate distance from siren station: 2,500 ft.

Location:	Park Ave. East & Russell St.	58 - 61 dB
	Park Ave East & Fredrick St.	54 - 59 dB
Ambient:	85 - 95 dB with traffic	
P.A.:	Not heard	
Strobe:	Not visible	
Comments:	Significant traffic noise. Reading taken when no traffic. Very hard to hear siren. Lots of trees in this area.	

Map location F5
Maximum approximate distance from siren station: 3,000 ft.

Location:	Douglas St.& 17th St. East	60 - 68 dB
	Douglas St. & ShurGro	64 - 78 dB
	Douglas St. & Behlen Industries	60 - 74 dB
	Douglas St. & Redfern	70 - 86 dB
Ambient:	42 - 44 dB	
P.A.:	Heard	
Strobe:	Visible from ShurGro location	
Comments:	No buildings acted as direct barrier. Trees in this area obscure strobe but most leaves gone. Could understand PA except at 17th St.	

Map location G5
Maximum approximate distance from siren station: 2,500 ft.

Location:	Madison Ave. & N.E. curve	64 - 68 dB
Ambient:	64 – 66dB	
P.A.:	Heard	
Strobe:	Not visible	
Comments:	Tried to record at First Street but traffic too loud. Siren and PA were clear from NE curve.	

Map location H5
Maximum approximate distance from siren station: 3,800 ft.

Location:	Park Ave. East & Richmond Ave. East	68 - 72 dB
	Park Ave. East & first curve	60 - 66 dB
	Park Ave. East & Dairyland	73 - 75 dB
	Park Ave. East & Elderwood Dr.	73 - 75 dB
Ambient:	78 dB with traffic	
P.A.:	Heard	
Strobe:	Visible	
Comments:	Not heard when semis go by. Heard PA but could not understand it. Strobe visible at Elderwood area.	

Map location I5
Maximum approximate distance from siren station: 3,200 ft.

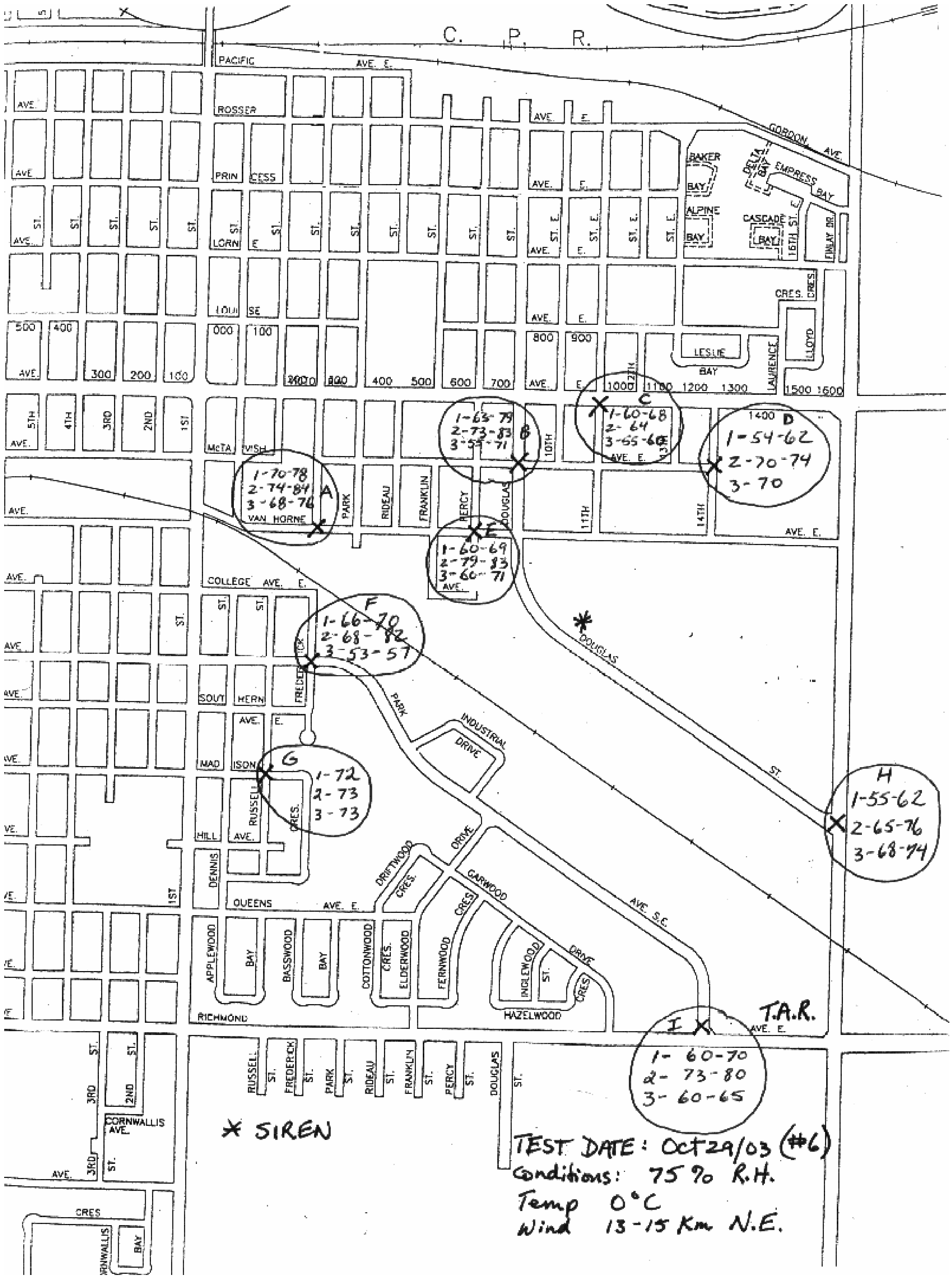
Location:	Queens Ave. East & Basswood Bay	51 - 55 dB
	Queens Ave. East & Basswood Bay	54 - 58 dB
	Queens Ave. East & Cottonwood Bay	49 - 59 dB
Ambient:	50 – 54 dB	
P.A.:	Heard	
Strobe:	Not visible	
Comments:	Heard PA but could not understand it.	

Map location T.A.R. (not shown on map)

Tone alert receiver:	The receiver was located at CKX TV approximately 3 kilometres east on Victoria Ave.. The TAR did not receive any of the PA messages. There was some faint radio cross talk.

Additional Citizen Coments

9th and Victoria Ave.:	I heard the siren while in Superstore Parking. A lot of people were standing and looking around for the siren.


C. P. R.
PACIFIC AVE. E.
ROSSER AVE. E.
PRINCESS AVE. E.
LORNE AVE. E.
LOUISE AVE. E.
McTAVISH AVE. E.
VAN HORNE AVE. E.
COLLEGE AVE. E.
SOUTHERN AVE. E.
MADISON
HILL AVE.
QUEENS AVE. E.
RICHMOND AVE. E.
GORDON AVE.
BAKER BAY
ALPINE BAY
DELTA BAY
EMPRESS BAY
CASCADE BAY
16TH ST. E.
FINLAY DR.
LESLIE BAY
LAURENCE CRES.
LLOYD CRES.
PARK
RIDEAU
FRANKLIN
PERCY
DOUGLAS
10TH
11TH
12TH
13TH
14TH
FREDERICK
RUSSELL CRES.
DENNIS
1ST
2ND
3RD
4TH
5TH
PARK AVE.
INDUSTRIAL DRIVE
DOUGLAS ST.
DRIFTWOOD CRES.
GARWOOD DRIVE
AVE. S.E.
APPLEWOOD BAY
BASSWOOD BAY
COTTONWOOD CRES.
ELDERWOOD
FERNWOOD CREST
INGLEWOOD ST.
CRES.
HAZELWOOD
CORNWALLIS AVE.
CORNWALLIS BAY
A 1-70-78 2-74-84 3-68-76
B 1-63-79 2-73-83 3-55-71
C 1-60-68 2-64 3-65-68
D 1-54-62 2-70-74 3-70
E 1-60-69 2-79-83 3-60-71
F 1-66-70 2-68-82 3-53-57
G 1-72 2-73 3-73
H 1-55-62 2-65-76 3-68-74
I 1-60-70 2-73-80 3-60-65
T.A.R.
* SIREN
TEST DATE: Oct 29/03 (#6)
Conditions: 75 % R.H.
Temp 0°C
Wind 13-15 Km N.E.

TEST #6
Date: October 29, 2003
Time: 7:15 PM

Administrative note:	More than enough volunteers. Industry Canada, MEMO, and OCIPEP attend as observers. Some volunteers bring their children for the last test. In this test the volunteers stayed in their designated positions and assessed the three tones and strobe from that position.
Relative humidity:	75%
Temperature:	0 degrees Celsius
Wind speed:	13 – 15 km/hr
Wind direction:	North East
Tone:	Three tones were played: 3 minute Red Alert (air raid) tone; 3 minute high low tone; 2 minute Westminster Chime.
P.A.:	After the first activation: "This has been a test of the Brandon Emergency Alerting Project. There will be a second activation shortly." After the second activation: "This has been a test of the Brandon Emergency Alerting Project. There will be a third activation shortly." After the third activation: "This has been a test of the Brandon Emergency Alerting Project. The test has been successful." Total activation time approximately 13 minutes.

Map location A6
Maximum approximate distance from siren station: 2,200 ft.
Location:
Van Horne Ave. East & Fredrick St.

Red Alert	70 – 78 dB
High Low	74 – 84 dB
Westminster	68 – 76 dB

Ambient:	50 – 64 dB
P.A.:	Heard loud and clear
Strobe:	Visible
Comments:	Strobe was easy to locate. No strobe on Westminster. PA was loud and very clear. High low tone was the best.

Map location B6
Maximum approximate distance from siren station: 1,500 ft.
Location: Douglas St. & McTavish Ave. East

Red Alert	63 – 69 dB
High Low	73 – 83 dB
Westminster	55 - 71 dB

Ambient:	50 – 62 dB
P.A.:	Heard
Strobe:	Visible

Comments: Strobe visible - none on third tone. Was able to hear the PA and message. The high low tone was the strongest.

Map location C6
Maximum approximate distance from siren station: 1,900 ft.
Location: Victoria Ave. East & 11th St. East
Red Alert 60 - 68 dB
High Low 64 dB
Westminster 55 - 60 dB
Ambient: 70 – 75 dB
P.A.: Heard somewhat
Strobe: Not Visible
Comments: Some traffic on Victoria overrides tones. Trees are bare. The high low tone was the strongest one. Could hear PA when there was a drop in traffic noise. Could understand what was said but it was faint.

Map location D6
Maximum approximate distance from siren station: 1,700 ft.
Location: 14th St. & McTavish Ave. East
Red Alert 54 - 62 dB
High Low 70 - 74 dB
Westminster 70 dB
Ambient: 50 -64 dB
P.A.: Heard somewhat
Strobe: Visible
Comments: Lots of traffic. Few trees. No leaves. Strobe easily visible. High low tone was easiest to pick out of the background noise. Could hear and understand PA when traffic noise dropped off.

Map location E6
Maximum approximate distance from siren station: 1,000 ft.
Location: Percy St. and Van Horne Ave.
Red Alert 60 – 69 dB
High Low 73 – 83 dB
Westminster 60 – 71 dB
Ambient: 50 – 62 dB
P.A.: Heard loud and clear
Strobe: Visible
Comments: Strobe easy to see when in a direct line. Lots of trees but no leaves. Very cold. Ink froze in pen. Ears hurt on the second tone it seemed so loud. PA was loud and clear. Easily understood.

Map location F6
Maximum approximate distance from siren station: 2,100 ft.
Location: Park Ave. East & Fredrick St.
Red Alert 66 – 70 dB
High Low 68 - 82 dB

Westminster 53 - 57 dB
Ambient: 52 dB
P.A.: Heard but not understand
Strobe: Visible
Comments: No buildings acted as direct barrier. Trees have lost their leaves. Could hear the PA but not understand what was being said. The second tone (high low) was the easiest to hear.

Map location G6
Maximum approximate distance from siren station: 2,700 ft.
Location: Madison Ave. & Russell St.
Red Alert 72 dB
High Low 73 dB
Westminster 73 dB
Ambient: Not recorded.
P.A.: Heard at 68dB
Strobe: Visible
Comments: Heard PA loud and clear. Very easy to hear the siren. The second tone is by far the best one. Strobe is visible by direct line of sight. No leaves.

Map location H6
Maximum approximate distance from siren station: 3,000 ft.
Location: Douglas St. and 17th St. East
Red Alert 55 - 62 dB
High Low 65 - 76 dB
Westminster 68 - 74 dB
Ambient: 50 64 dB
P.A.: Heard loud and clear.
Strobe: Visible
Comments: Some background noise – train, Feedrite Mills. Strobe is visible but not attention grabbing at a distance. No strobe on third tone. Much better with a clear line of sight. Most of the trees in area are bare. Heard PA loud and clear. Some echoing around the buildings.

Map location I5
Maximum approximate distance from siren station: 3,800 ft.
Location: Richmond Ave. East & Park Ave East
Red Alert 60 - 70 dB
High Low 73 – 80 dB
Westminster 60 - 65 dB
Ambient: 62 – 75 dB
P.A.: Heard somewhat
Strobe: Not visible
Comments: Strobe barely visible. Background noise from Simplot, semis and trains compete with siren. Heard PA when traffic noise dropped but could not understand it.

Map location T.A.R.

Tone alert receiver: The receiver was located at Paul's Hauling. It communicated each message clearly. Some of the squealing noise from radio would be irritating and cause some people to shut it off. There was some radio cross talk or faint Regional Health Authority radio communication. Could hear the Red Alert and Westminster when outside the building. The high low was audible inside the building.

Additional citizen comments:

23rd St. and Van Horne: Heard all three tones from inside the house.

22nd St. and Ottawa Ave.: Heard all three tones. Outside the house. Liked the high low best.

Lorne Ave. E. and 13th St.: Heard a very faint 2 tone sound. Outside in the Riverview Appt. parking lot.

Hazelwood Cres.: Heard the sirens....2 of the different tones. I think the first one I heard was a series of longer tones, and the second was a series of shorter tones. I thought I heard a man's voice saying something over a loudspeaker as well, but could not tell what was said (or maybe it was the TV on downstairs

Cornwallis Crescent (south of Aberdeen Ave.). Yes, I did the siren last night and I live on I was inside. I heard a couple of different tones.

Green Acres: I live in the Green Acres area and we heard the growl siren and the hi-lo siren. The growl was very faint, I barely heard it inside my house, although, it was quite clear outside. The hi-lo was very audible including inside.

100 block of 13th St. E.: I have never heard the siren. Granted during the day I would not be home but last evening I had the radio on in my kitchen and I did hear an announcement on the radio, but never heard or seen anything to connect with this. Last evening I was home from 5 p.m. on, things were very quiet, as I was the only person there. Other times my grandson has been there and when I have asked him he says he has never heard it.

Green Acres: Person is home all day, most days, does not own a radio tells me she has never heard the siren. Perhaps I am just in the wrong place at the wrong time but thought you should be aware.

800 Block 2nd St.: I did hear the siren, it wasn't really loud in my area. Nothing a tv wouldn't block out or something like that. I was inside but then went outside to hear it clearer. I did hear all three tones.