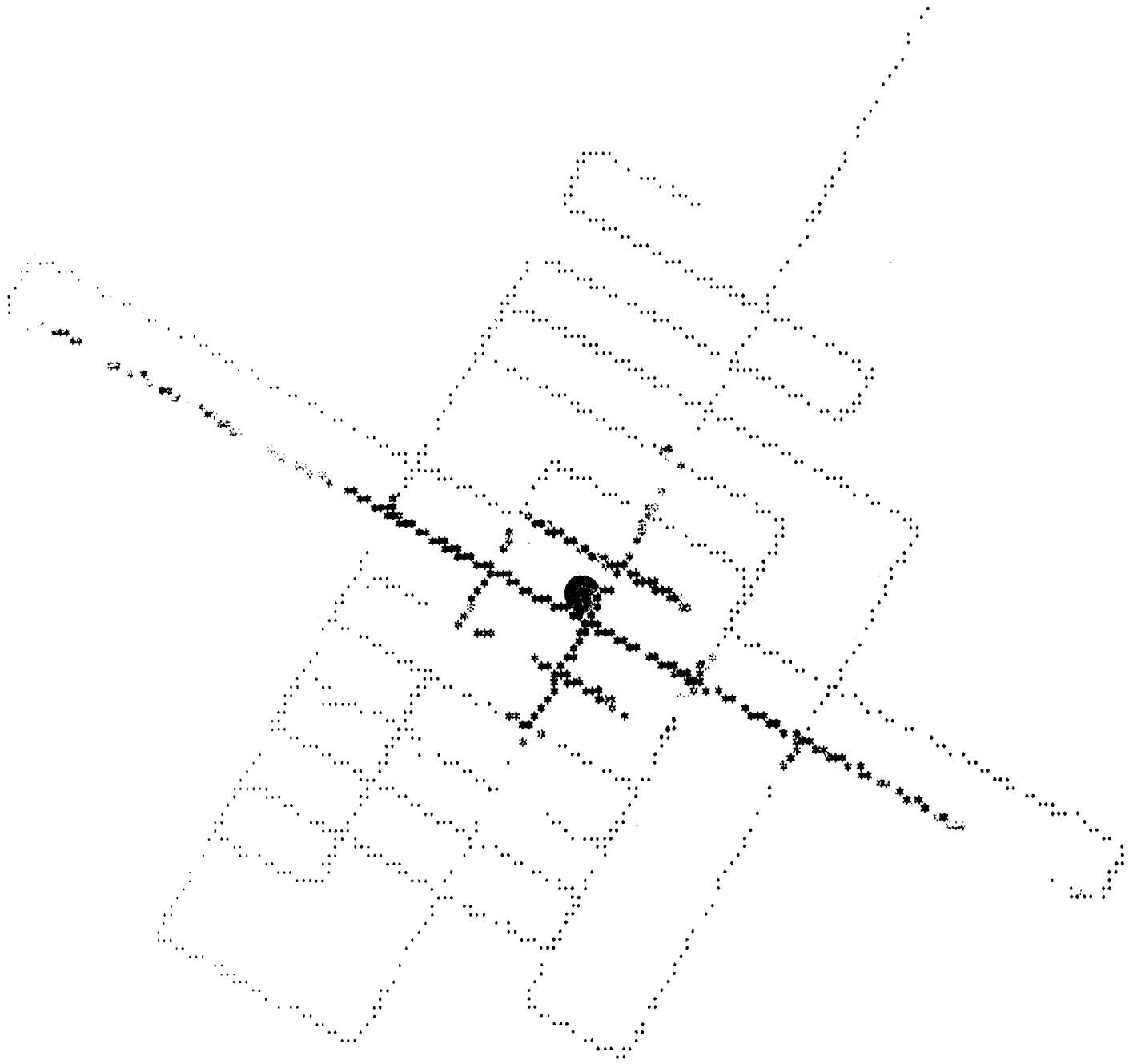


COVERAGE CHANNEL PLOT

Coverage Type: Average

Market: ERP NRMLZD TO 0.2 W

BS7 PARK & 56

08/14/93 21:00:38

File	Nav	File	Nav
56TH1.MMA	ETAK	DR2.MMA	ETAK
56TH2.MMA	ETAK	DR3.MMA	ETAK
DR1.MMA	ETAK		

Chan	Char	SAT
19	t	None
219	gl	None

CMA V4.0
LCC Inc.

LEGEND

Threshold Values
(dBm)

Sig >= -85 + M
Sig >= -90 + M
Sig >= -95 + M
Sig >= -100 + M
-105 + M
-110 + M

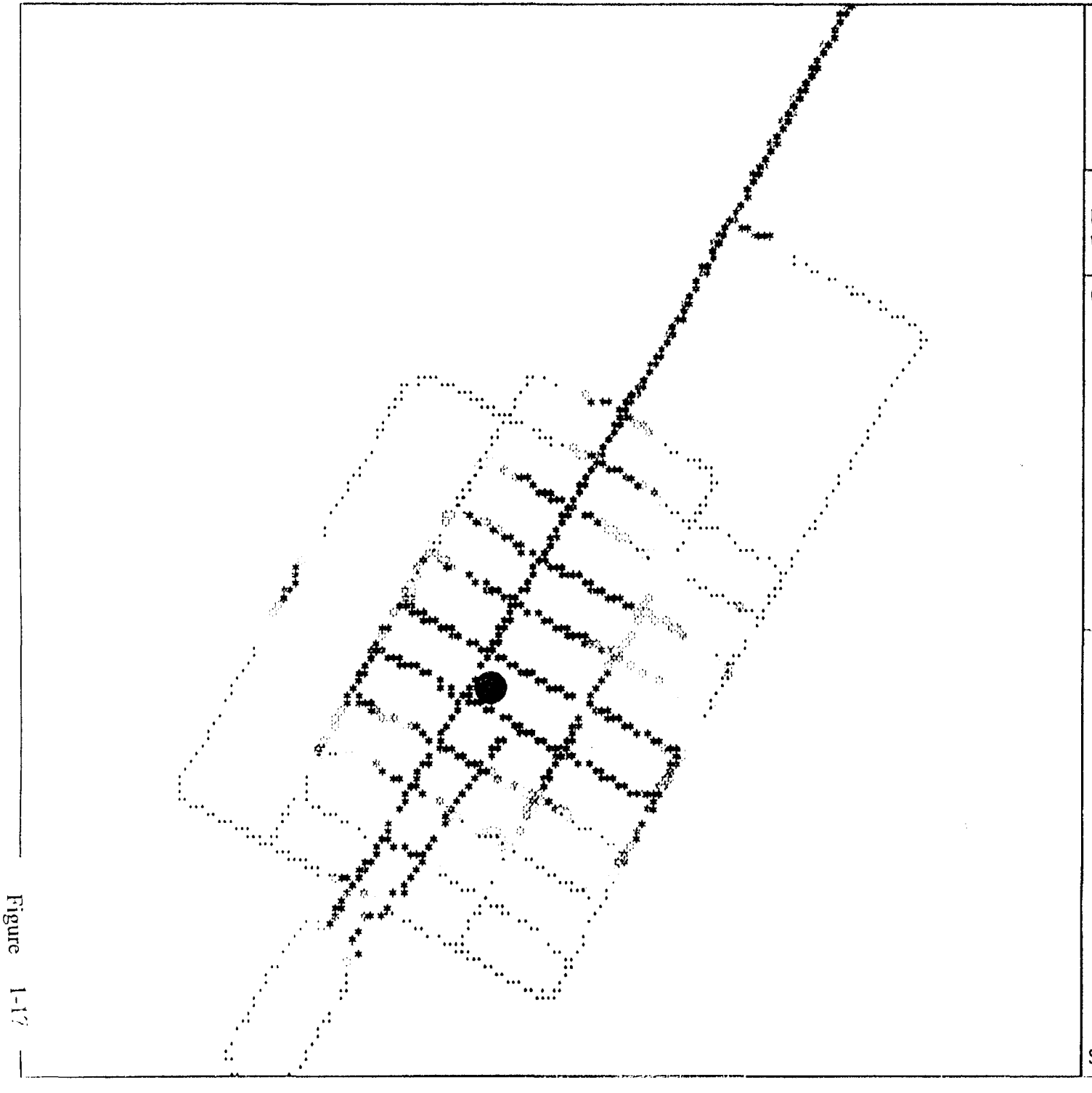
M = Fade Margin
M_{LOS} = 18 dB
$M_{Non\text{-}LOS}$ = 21 dB

Miles

0 0.1 0.2

SCALE: 1:8,000

Figure 1-16



COVERAGE CHANNEL PLOT

Coverage Type: Average

Market: ERP NRMLZD TO 0.2 W

Client: BS-8: PARK & 50TH

08/14/93 23:06:59

File	Nov
PARK.MMA	ETAK
WD1.MMA	ETAK

Chan	Char	SAT
27	B	None
227	gt	None

LEGEND

CMA V4.0
LCC Inc.

Threshold Values
(dBm)

Sig >= -85 + M
Sig >= -90 + M
Sig >= -95 + M
Sig >= -100 + M
-105 + M
-110 + M

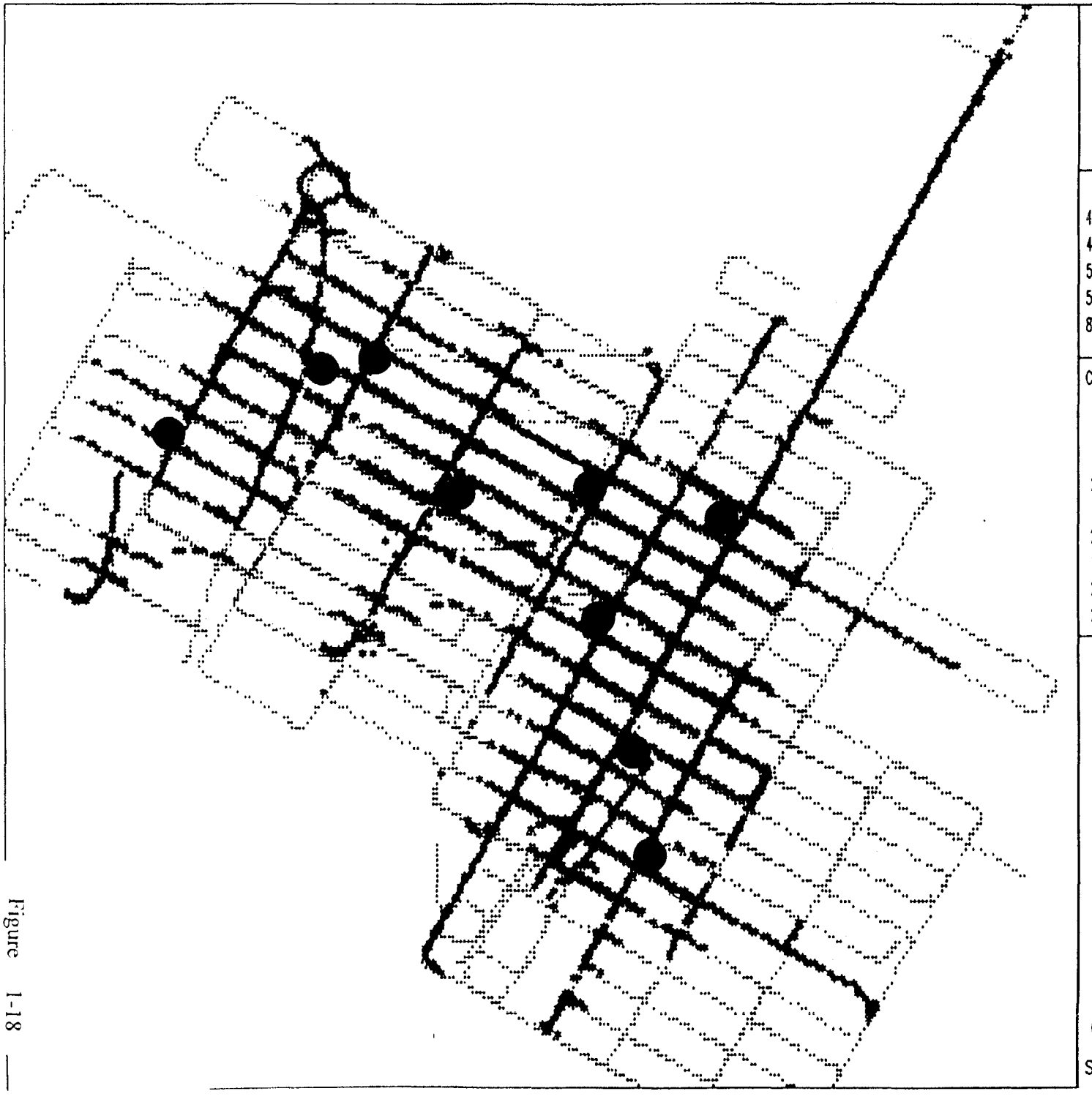
M = Fade Margin
M_{LOS} = 18 dB
$M_{Non\text{-}LOS}$ = 21 dB

Miles

0 0.1 0.2

SCALE: 1:8,000

Figure 1-17



COVERAGE CHANNEL PLOT

Coverage Type: Average

Market: COMPOSITE COVERAGE(0.01 CDF)

Client: ERP NRMLZD TO 0.2W

08/15/93 18:51:33

File	Nav	File	Nav
47EAST.MMA	ETAK	AL1.MMA	ETAK
47WEST.MMA	ETAK	AL2.MMA	ETAK
56TH1.MMA	ETAK	ALLEN55.MMA	ETAK
56TH2.MMA	ETAK	BR1.MMA	ETAK
8TH.MMA	ETAK	** See coverage.lgd for data file **	

Chan	Char	SAT	Chan	Char	SAT
3	d	None	103	bz	None
19	t	None	23	x	None
11	l	None	27	B	None
231	gx	None	15	p	None
31	F	None	227	gt	None
223	gp	None	207	fz	None
107	cd	None	7	h	None
219	gl	None			
211	gd	None			

CMA V4.0
LCC Inc.

LEGEND

Threshold Values
(dBm)
Sig >= -105 + M

M = Fade Margin
M_{LOS} = 18 dB
$M_{Non\text{-}LOS}$ = 21 dB

Miles

0 0.1 0.2 0.3 0.4

SCALE: 1:12,000

Figure 1-18

STF11_93.XLS Chart 6

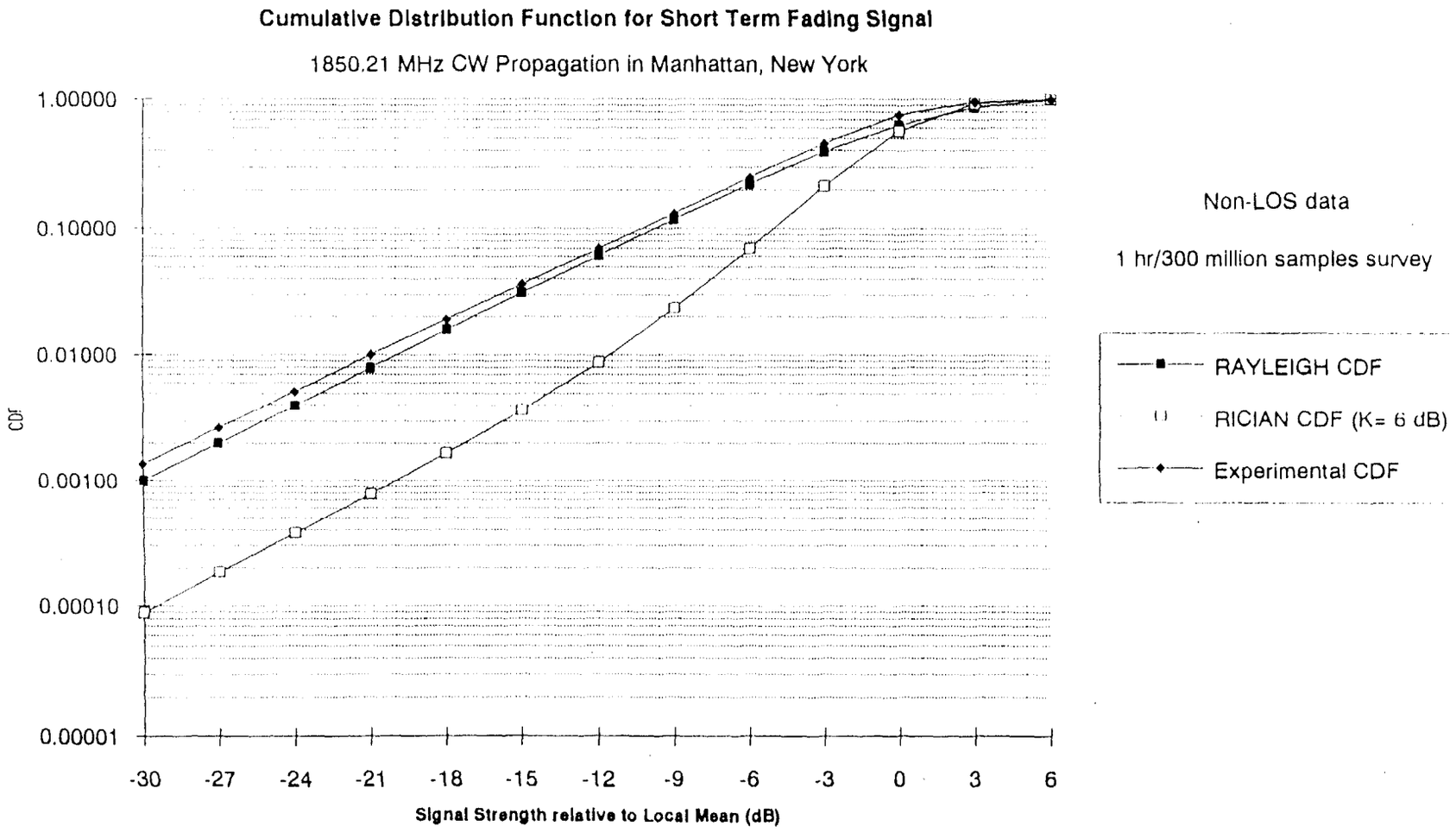


Figure 1-19

STF11_93.XLS Chart 7

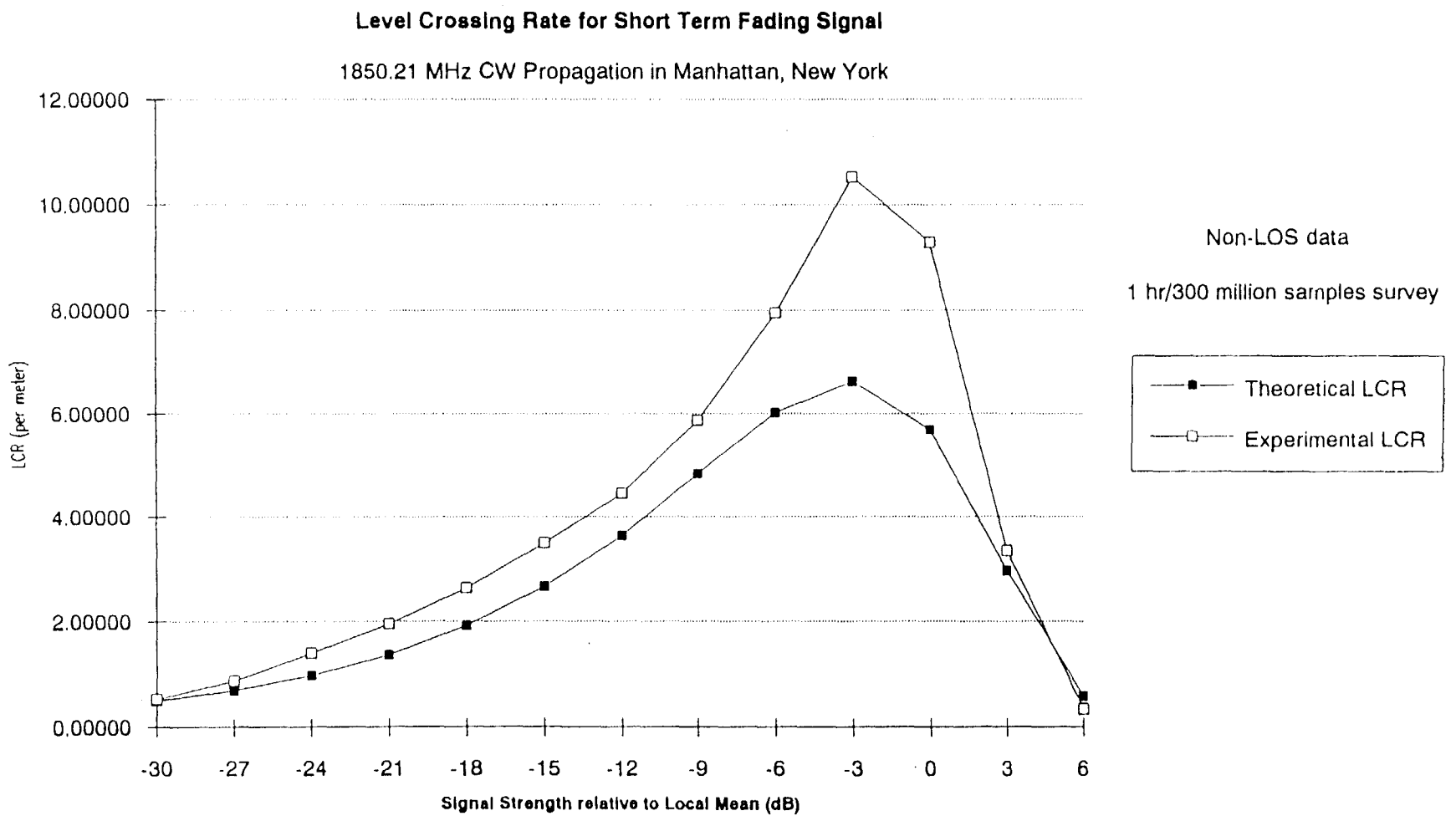


Figure 1-20

STF11_93.XLS Chart 8

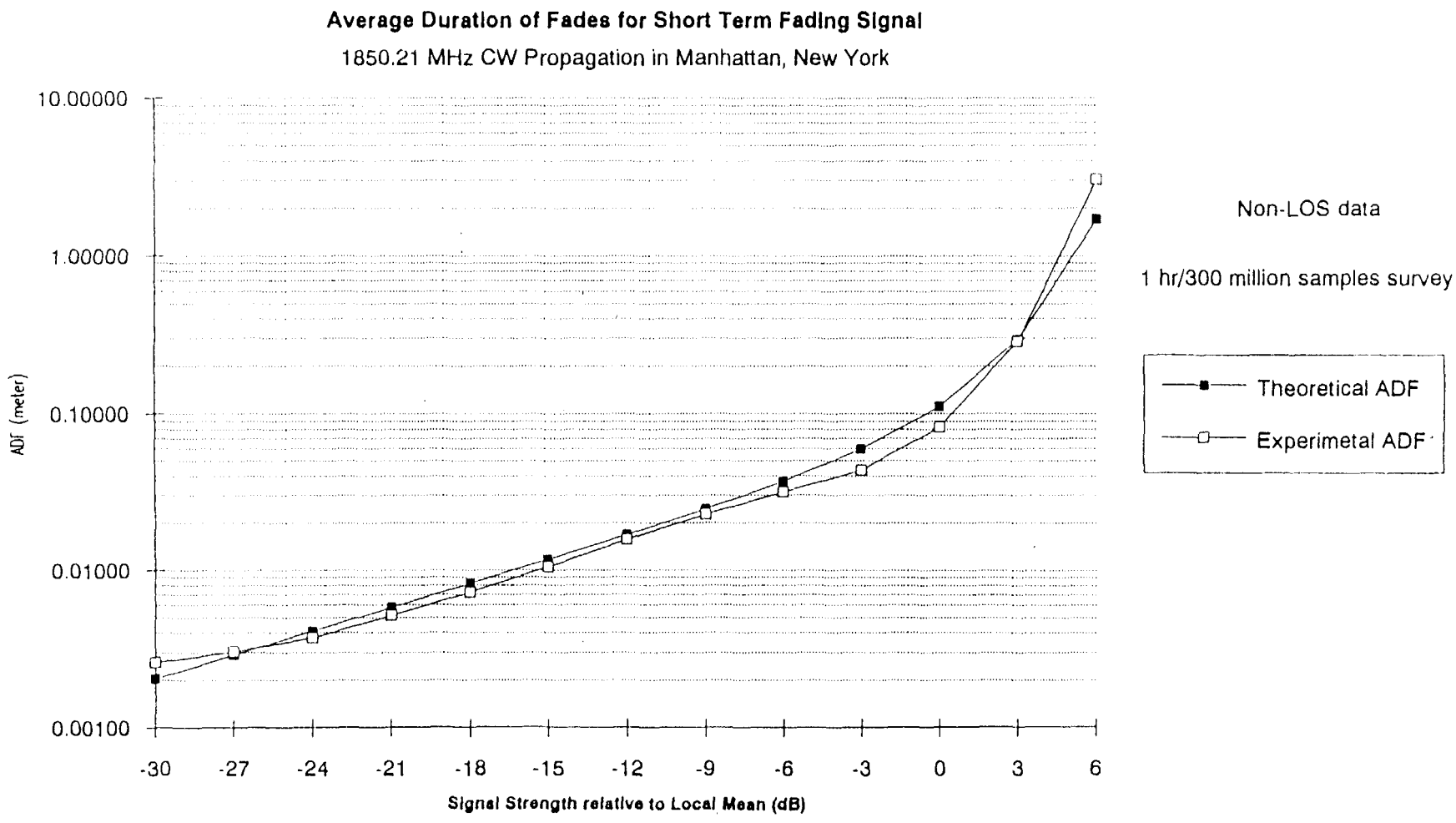


Figure 1-21

STF99_00.XLS Chart 6

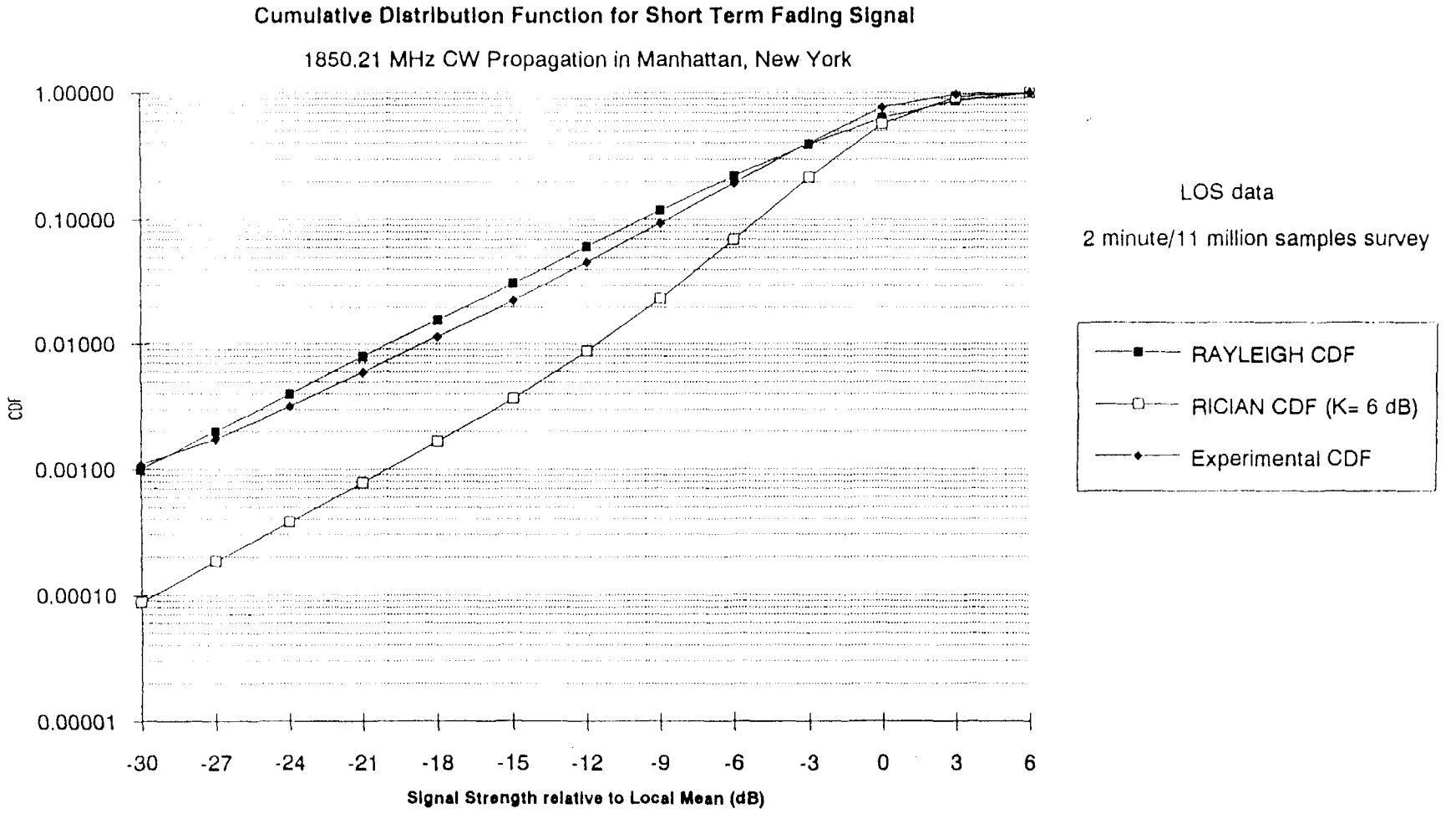


Figure 1-22

STF99_00.XLS Chart 7

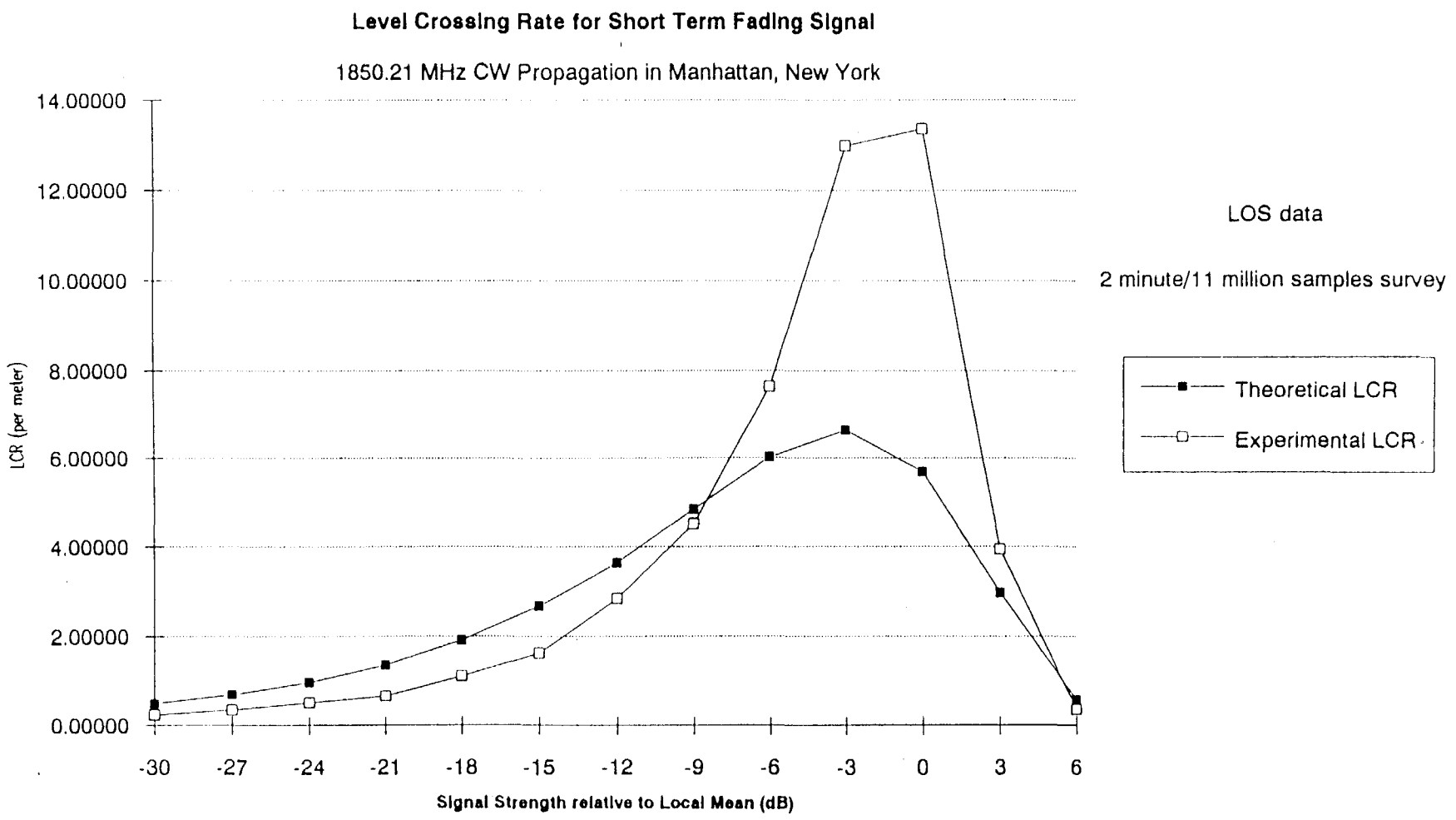


Figure 1-23

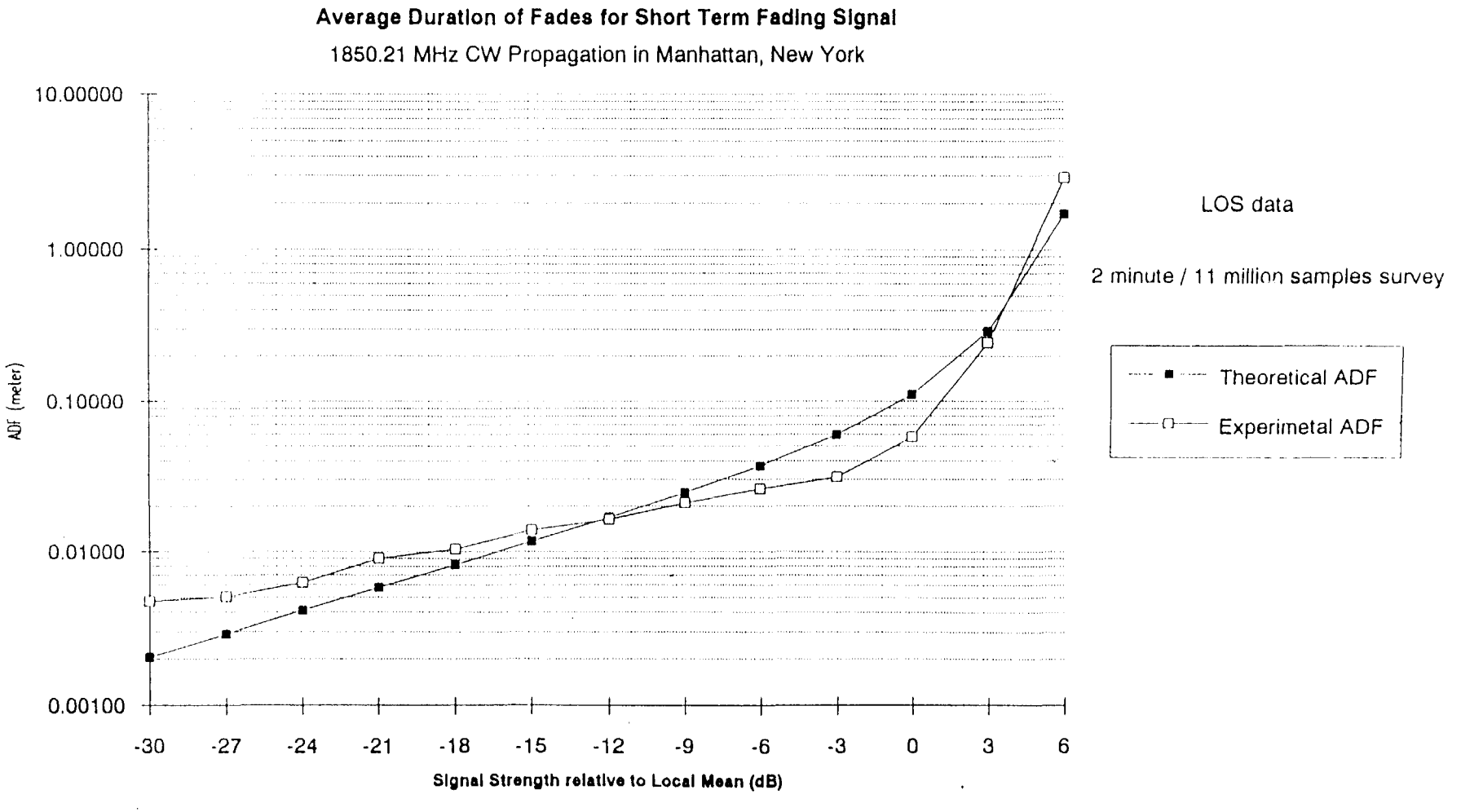

Average Duration of Fades for Short Term Fading Signal
1850.21 MHz CW Propagation in Manhattan, New York
10.00000
1.00000
0.10000
0.01000
0.00100
ADF (meter)
-30
-27
-24
-21
-18
-15
-12
-9
-6
-3
0
3
6
Signal Strength relative to Local Mean (dB)
LOS data
2 minute / 11 million samples survey
Theoretical ADF
Experimetal ADF

Figure 1-24

LCC Incorporated

MEMORANDUM

To: Jeff Vanderpool
From: Martin Lavin
Date: August 4, 1993
Subject: Summary of Channel Selection for PCS Trial System

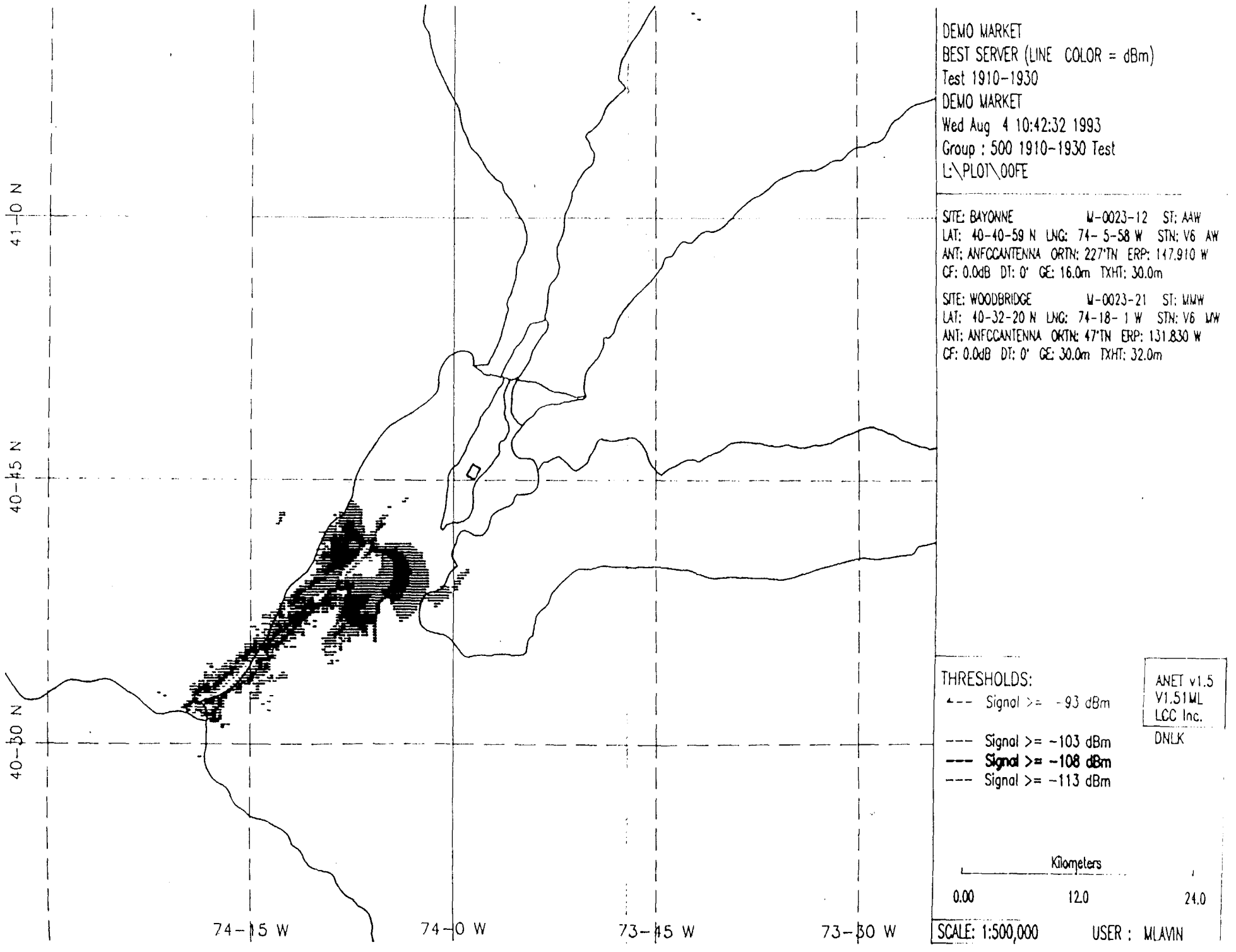
Enclosed are three plots depicting the OFS usage of the frequencies (1910, 1925 and 1970 MHz) selected for the Omnipoint PCS trial system. The 1970 MHz receiver plot shows susceptibility of the OFS microwave receivers to interference from the Trial system and the 1970 MHz transmitter plot shows the interference levels the trial system would receive from OFS microwave transmitters. Both plots clearly show that there should be no interference whatsoever, either from PCS-to-OFS or OFS-to-PCS, with the Omnipoint system operating cells at 1970 MHz within the coverage objective area.

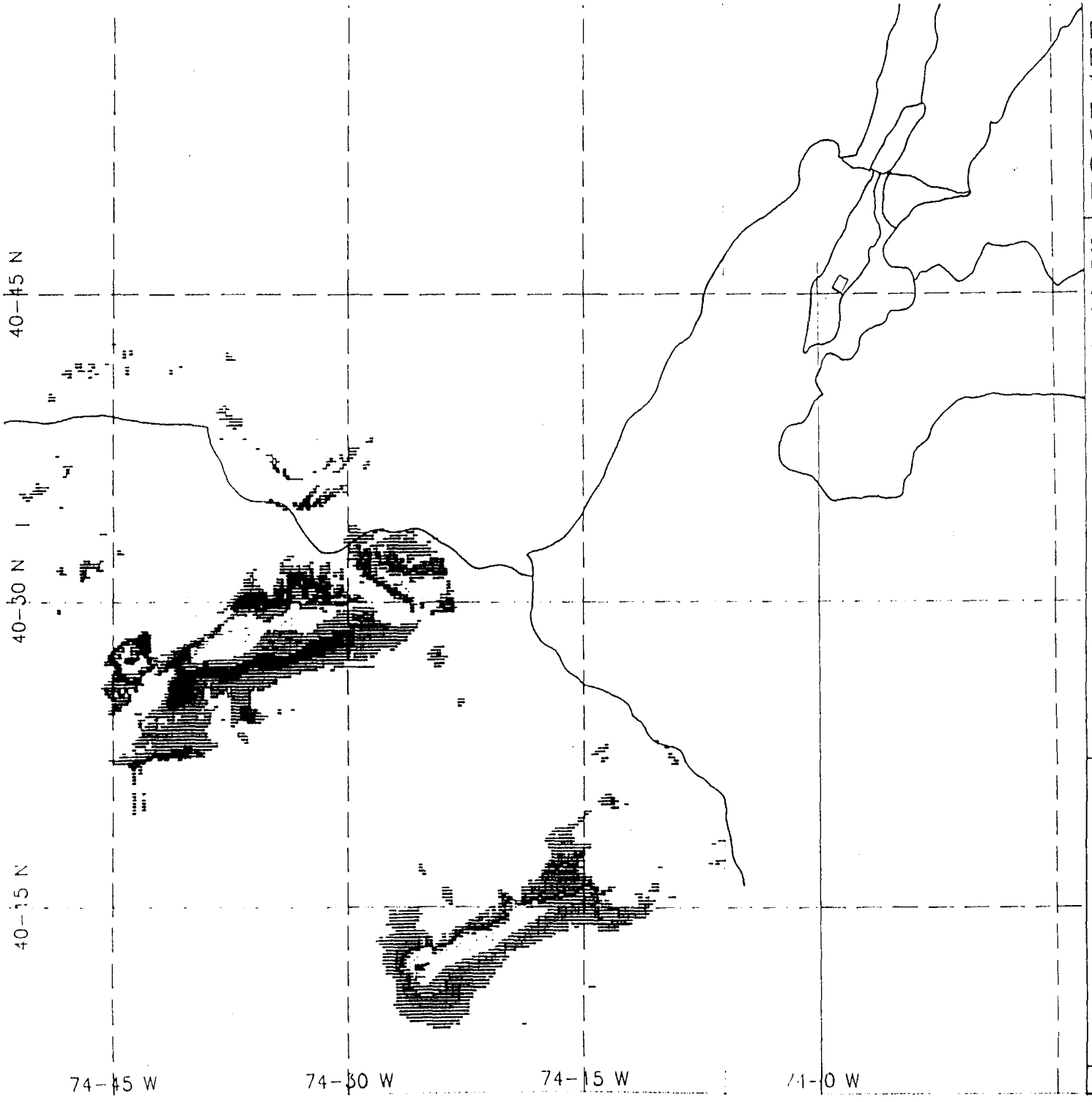
The other two frequencies selected for the trial are 1910 and 1925 MHz. Neither of these frequencies is used by any microwave receiver or transmitter in the New York area. The 1910-1930 plot enclosed depicts the coverage of all microwave receivers and transmitters in the band from 1910 to 1930 MHz. The only sites within 50 km of the coverage objective are Woodbridge (RX) and Bayonne (TX), which operate on 1915 MHz. The plots show absolutely no interference to either OFS or PCS.

Please feel free to contact me at (703) 516-7660 with any questions you may have.

cc: Omnipoint: Douglas Smith,
LCC: Masud Kibria

Arlington Courthouse Plaza II 2300 Clarendon Boulevard, Suite 800 Arlington, Va. 22201 (703) 351-6666 Fax (703) 516-19[illegible]


DEMO MARKET
BEST SERVER (LINE COLOR = dBm)
Test 1910-1930
DEMO MARKET
Wed Aug 4 10:42:32 1993
Group : 500 1910-1930 Test
L:\PLOT\00FE
SITE: BAYONNE M-0023-12 ST: AAW
LAT: 40-40-59 N LNG: 74- 5-58 W STN: V6 AW
ANT: ANFCCANTENNA ORTN: 227°TN ERP: 147.910 W
CF: 0.0dB DT: 0° GE: 16.0m TXHT: 30.0m
SITE: WOODBRIDGE M-0023-21 ST: WWW
LAT: 40-32-20 N LNG: 74-18- 1 W STN: V6 WW
ANT: ANFCCANTENNA ORTN: 47°TN ERP: 131.830 W
CF: 0.0dB DT: 0° GE: 30.0m TXHT: 32.0m
THRESHOLDS:
Signal >= -93 dBm
Signal >= -103 dBm
Signal >= -108 dBm
Signal >= -113 dBm
ANET v1.5
V1.51ML
LCC Inc.
DNLK
Kilometers
0.00
12.0
24.0
SCALE: 1:500,000
USER : MLAVIN
41-0 N
40-45 N
40-30 N
74-15 W
74-0 W
73-45 W
73-30 W



DEMO MARKET
BEST SERVER (LINE COLOR = dBm)
Test 1970 Transmitters
NEW YORK CITY
Wed Aug 4 10:25:43 1993
Group : 131 Group 1970
L:\PLOT\00EF

SITE: SCHOOLHSE L M-0012-21 ST: MML
LAT: 40-12- 2 N LNG: 74-25-29 W STN: V6 ML
ANT: ANFCCANTENNA ORTN: 65°TN ERP: 831.760 W
CF: 0.0dB DT: 0° GE: 75.0m TXHT: 46.0m

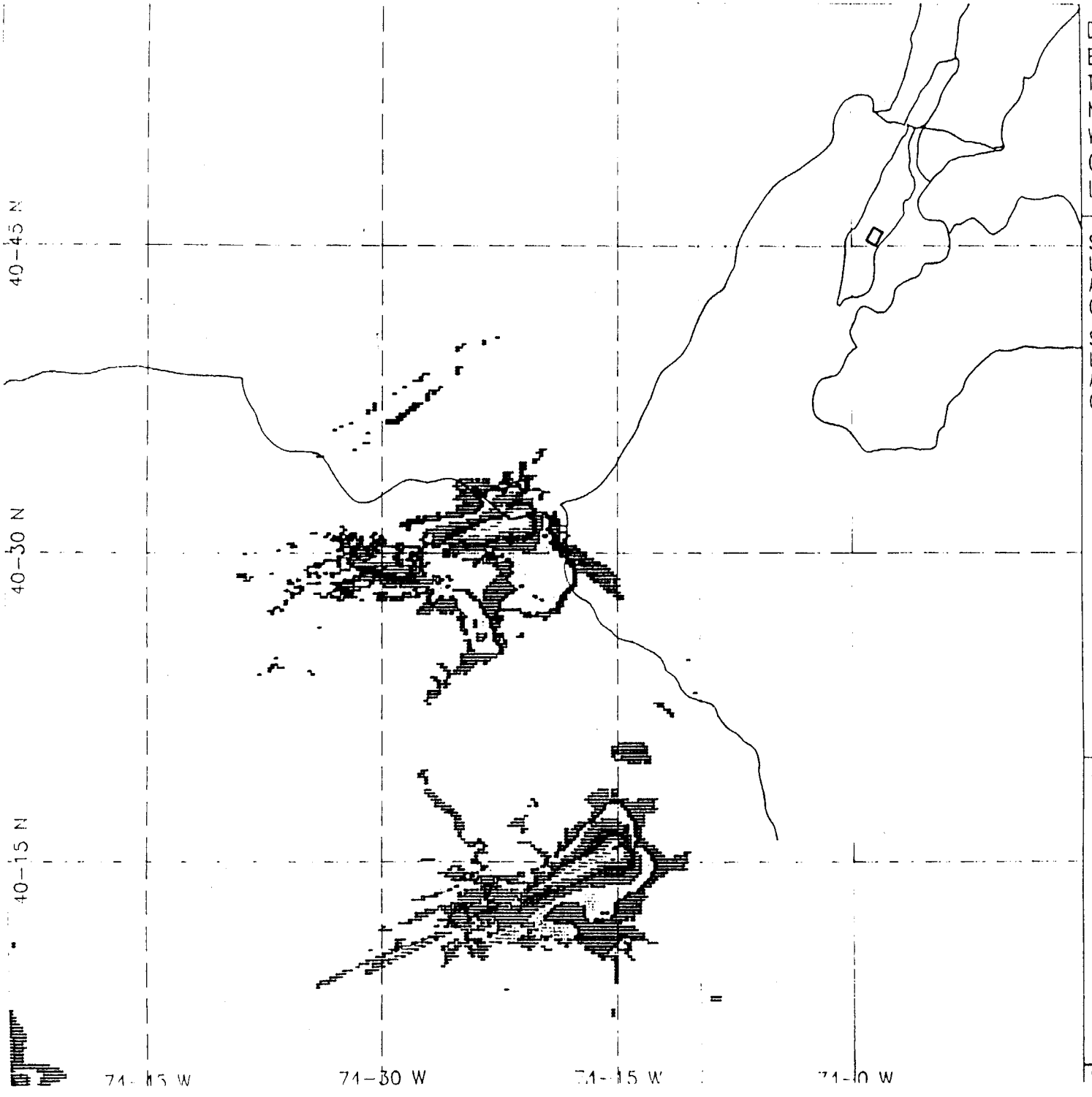
SITE: SOURLAND MT M-0019-21 ST: MMS
LAT: 40-27- 6 N LNG: 74-43-57 W STN: V6 MS
ANT: ANFCCANTENNA ORTN: 75°TN ERP: 537.030 W
CF: 0.0dB DT: 0° GE: 152.0m TXHT: 37.0m

THRESHOLDS:
--- Signal >= -91 dBm
--- Signal >= -101 dBm
--- Signal >= -106 dBm
--- Signal >= -111 dBm

ANET v1.5
V1.51ML
LCC Inc.
DNLK

Kilometers
0.00 12.0 24.0

SCALE: 1:500,000 USER : MLAVIN



DEMO MARKET
BEST SERVER (LINE COLOR = dBm)
Test 1970 Receivers
NEW YORK CITY
Wed Aug 4 10:29:07 1993
Group : 223 Rec 1970
L:\PLOT\00B8

SITE: POLICE M-0012-12 ST: AAL
LAT: 40-15-51 N LNG: 74-14-46 W STN: V6 AL
ANT: ANFCCANTENNA ORTN: 245°TN ERP: 831.760 W
CF: -8.0dB DT: 0° GE: 58.0m TXHT: 41.0m

SITE: PIERSON ST M-0019-12 ST: AAS
LAT: 40-31-51 N LNG: 74-20-36 W STN: V6 AS
ANT: ANFCCANTENNA ORTN: 255°TN ERP: 426.580 W
CF: -6.0dB DT: 0° GE: 29.0m TXHT: 40.0m

THRESHOLDS:
- Signal >= -93 dBm
- Signal >= -103 dBm
- **Signal >= -108 dBm**
- Signal >= -113 dBm
- Signal >= -118 dBm
- Signal >= -123 dBm

ANET v1.5
V1.51ML
LCC Inc.
DNLK

Kilometers
0.00 12.0 24.0

SCALE: 1:500,000 USER : MLAVIN

2120 Hollowbrook Drive, Cc rado Springs, CO 80910

United States of America
FEDERAL COMMUNICATIONS COMMISSION
EXPERIMENTAL
SPECIAL TEMPORARY AUTHORIZATION

EXPERIMENTAL
(Nature of Service)

K K 2 X C V
(Call Sign)

XD FX & MO
(Class of station)

S-1200-EX-93
(File number)

NAME OMNIPOINT CORPORATION

Vicinity of New York, NY
(Location of station)

Special Temporary Authority is hereby granted to operate the radio transmitting apparatus described below:

Frequency MHz	Authorized Power (watts)	Emission Designator
1850-2200	5 (ERP)	1

1. Licensee is authorized to use various modes of modulation, bandwidth, and data rates. None of these modes of transmission shall extend beyond the band band limits set forth above.

This special temporary authorization is granted upon the express condition that it may be terminated by the Commission at any time without advance notice or hearing if in its discretion the need for such action arises. Nothing contained herein shall be construed as a finding by the Commission that the authority herein granted is or will be in the public interest beyond the express terms hereof.

This special temporary authorization shall not vest in the grantee any right to operate the station nor any right in the use of the frequencies designated in the authorization beyond the term hereof, nor in any other manner than authorized herein. Neither the authorization nor the right granted hereunder shall be assigned or otherwise transferred in violation of the Communications Act of 1934. This authorization is subject to the right of use of control by the Government of the United States conferred by Section 706 of the Communications Act of 1934.

This authorization effective August 3, 1993 and will expire 3:00 A.M. EST. December 31, 1993

FEDERAL COMMUNICATIONS COMMISSION

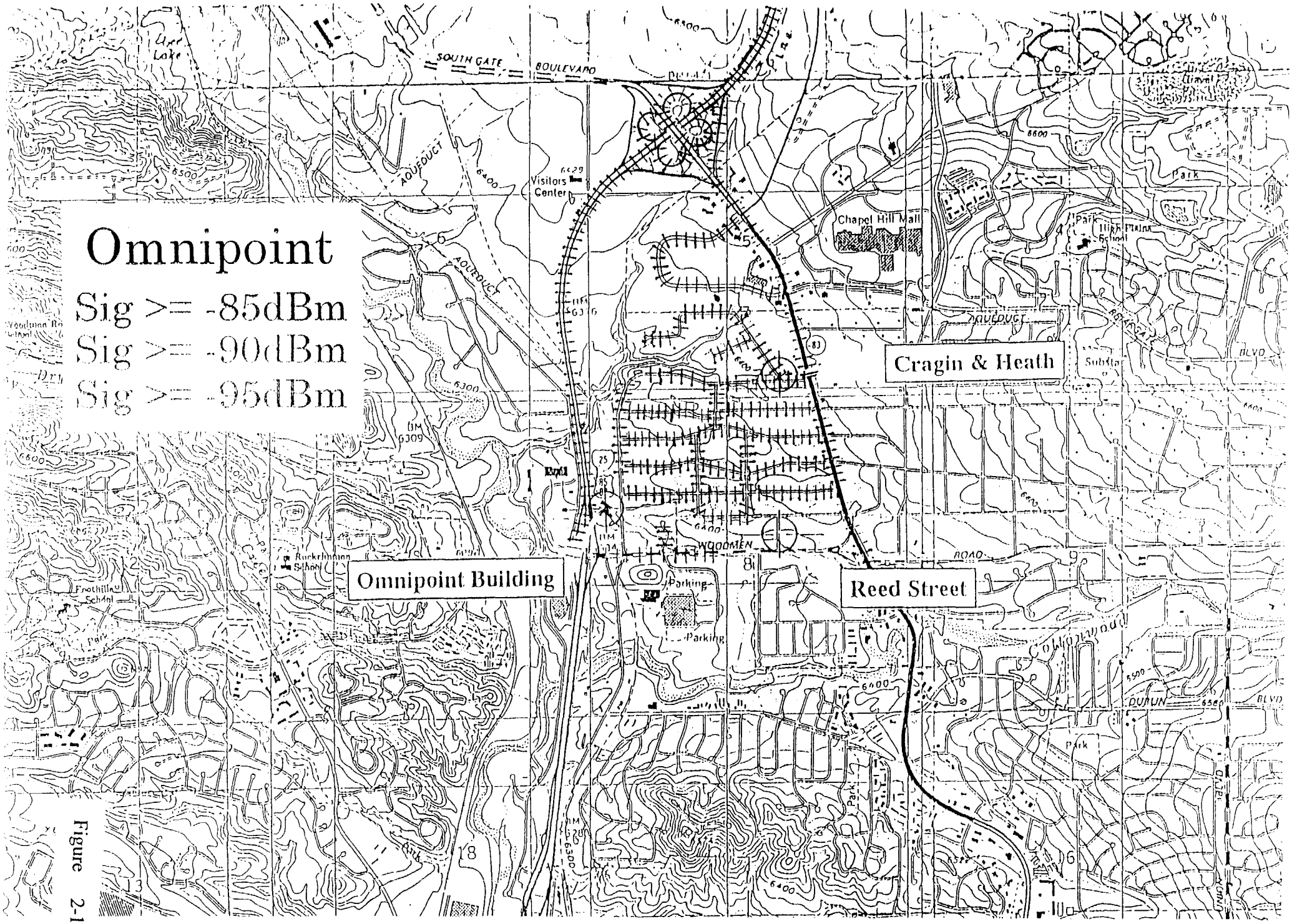

Omnipoint
Sig >= -85dBm
Sig >= -90dBm
Sig >= -95dBm
Cragin & Heath
Omnipoint Building
Reed Street
SOUTH GATE BOULEVARD
AQUEDUCT
Visitors Center
Chapel Hill Mall
WOODMEN ROAD
Parking
Park
Substa
Cottonwood
DUBLIN BLVD
Foothills School
Ruckrimmon School
High Plains School

Figure 2-1

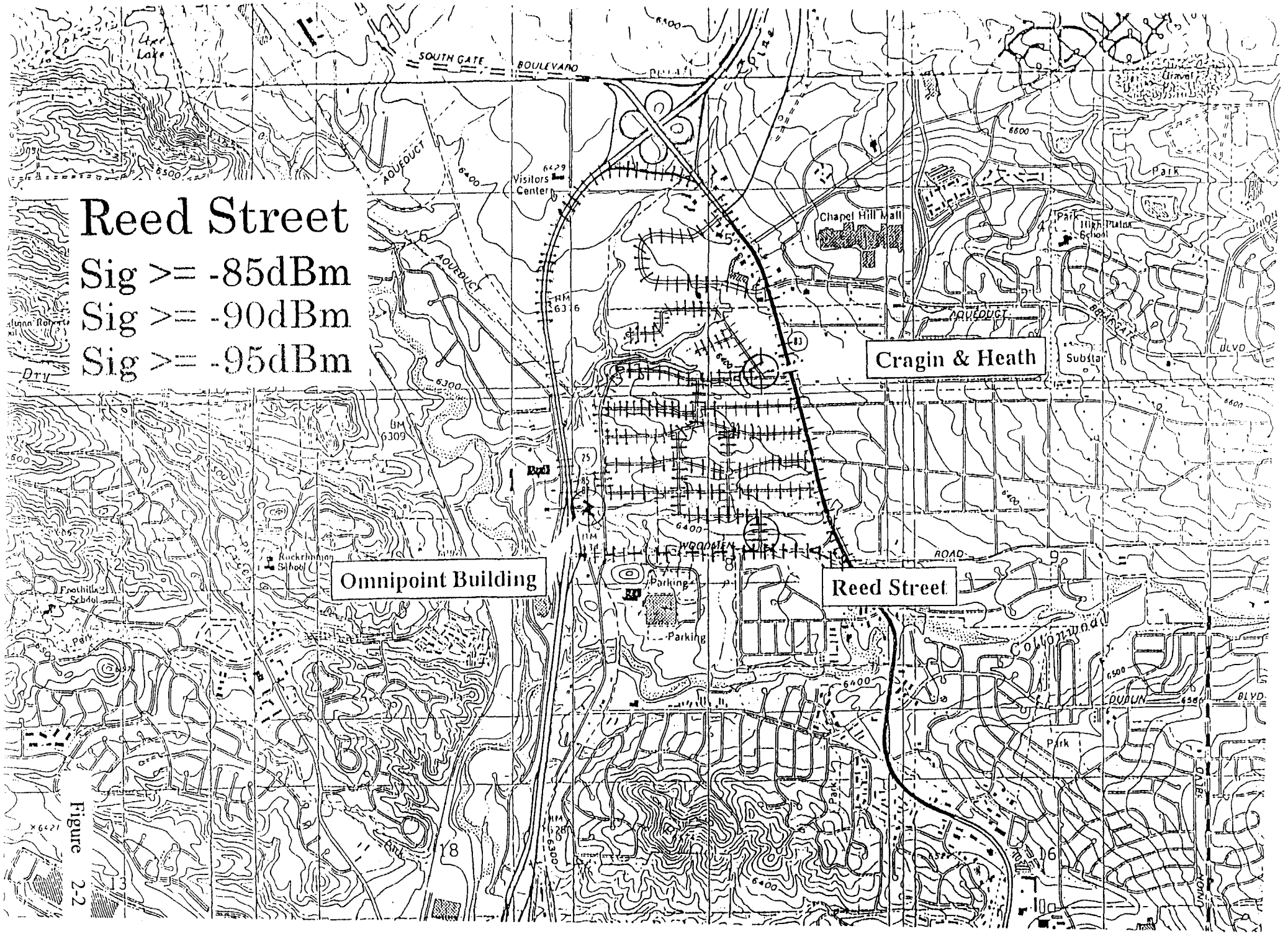
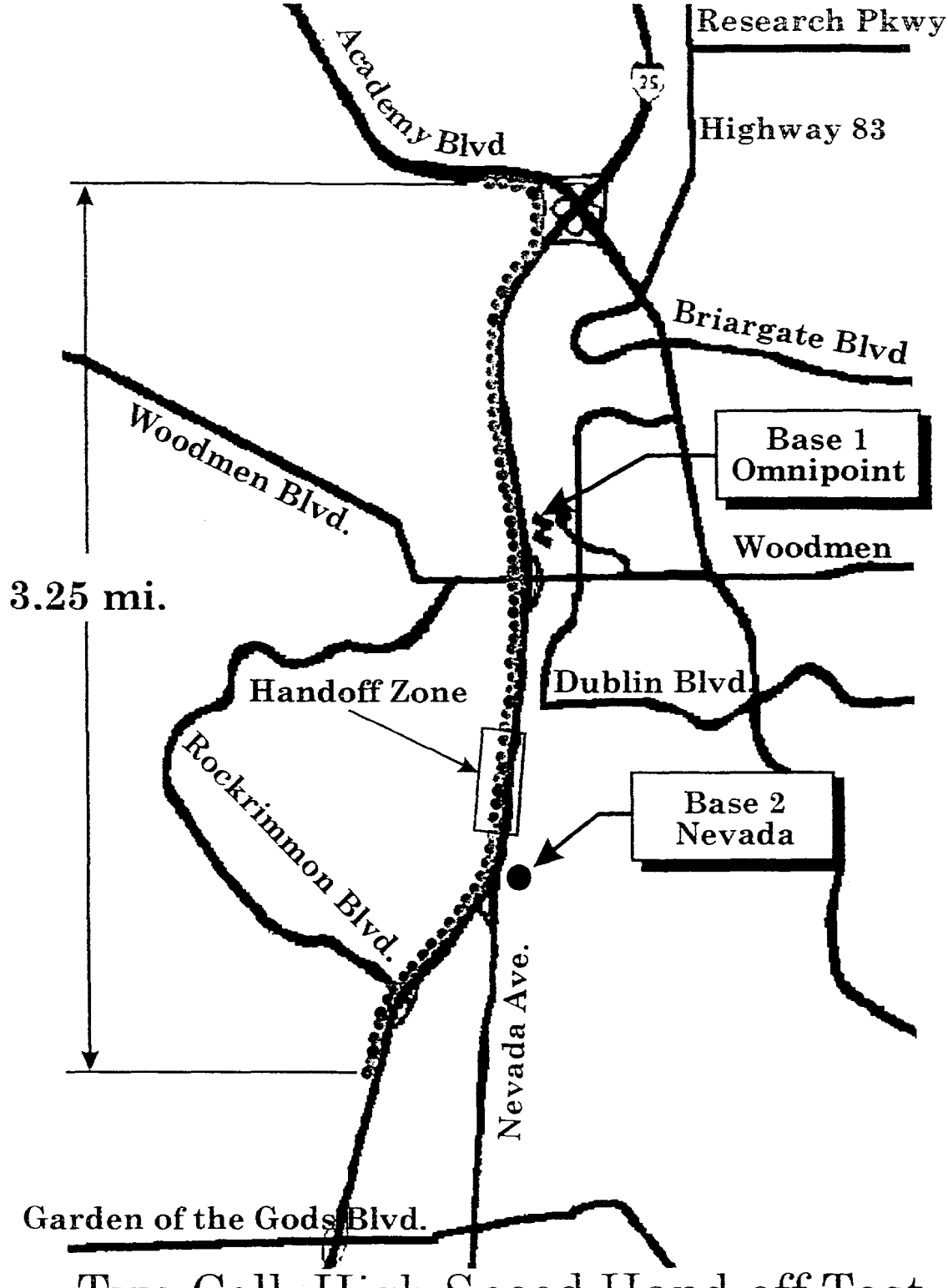

Reed Street
Sig >= -85dBm
Sig >= -90dBm
Sig >= -95dBm
Cragin & Heath
Omnipoint Building
Reed Street
SOUTH GATE BOULEVARD
Visitors Center
Chapel Hill Mall
AQUEDUCT
WOODMEN ROAD
Parking
Cottonwood
DUBLIN BLVD
Park
Substa
Rockrimmon School
Foothills School
Dry

Figure 2-2

Cragin Street
Sig >= -85dBm
Sig >= -90dBm
Sig >= -95dBm
Cragin & Heath
Omnipoint Building
Reed Street
SOUTH GATE
BOULEVARD
AQUEDUCT
Visitors Center
Chapel Hill Mall
High Plains School
Substa
WOODMEN
ROAD
Parking
Cottonwood
DUBLIN
BLVD
Pikeview
Pulpit Rock Park
Park

Figure 2-3

Omnipoint
CORPORATION

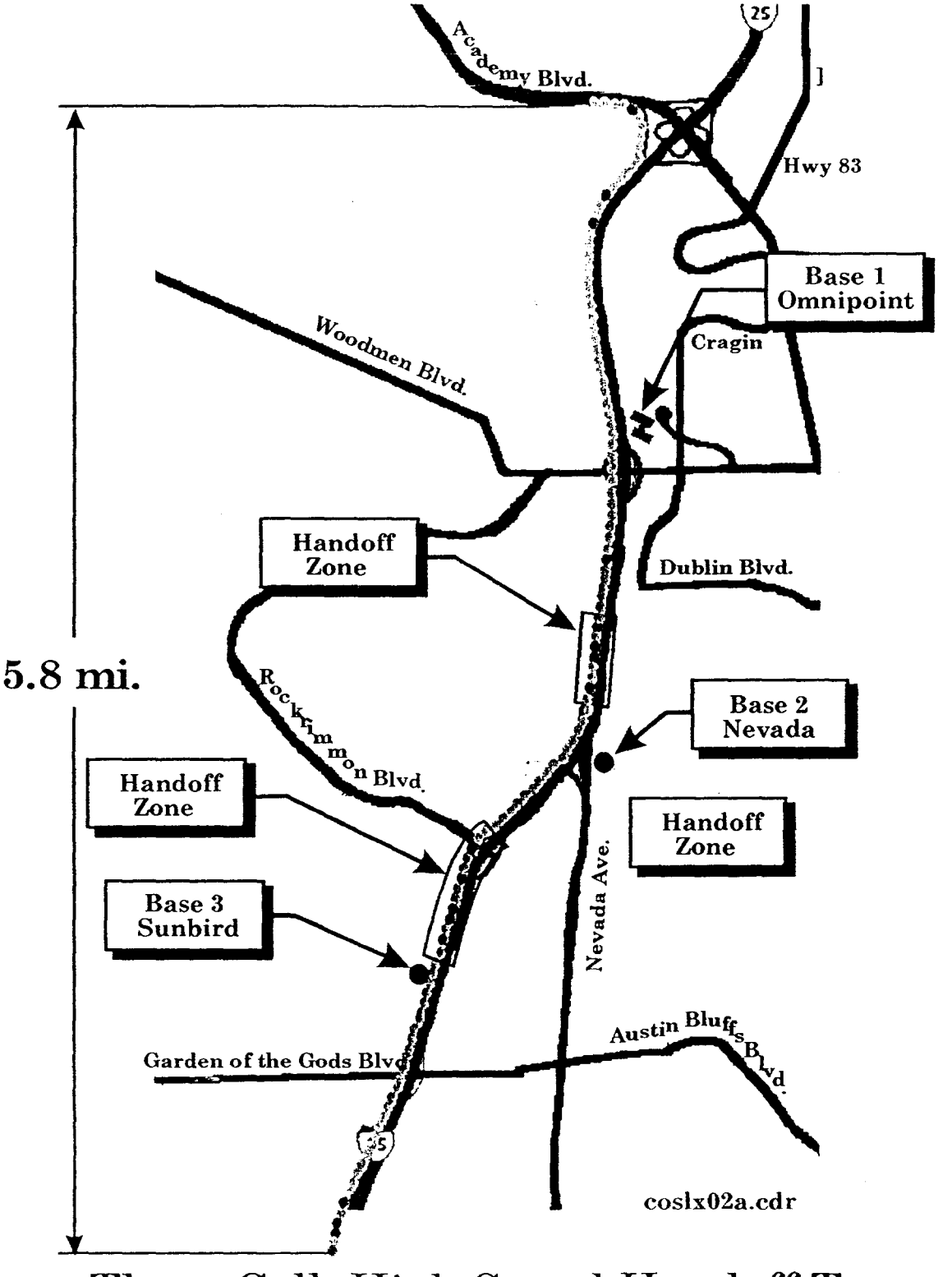


Two Cell, High Speed Hand-off Test

coslx01c.cdr

Figure 2-4

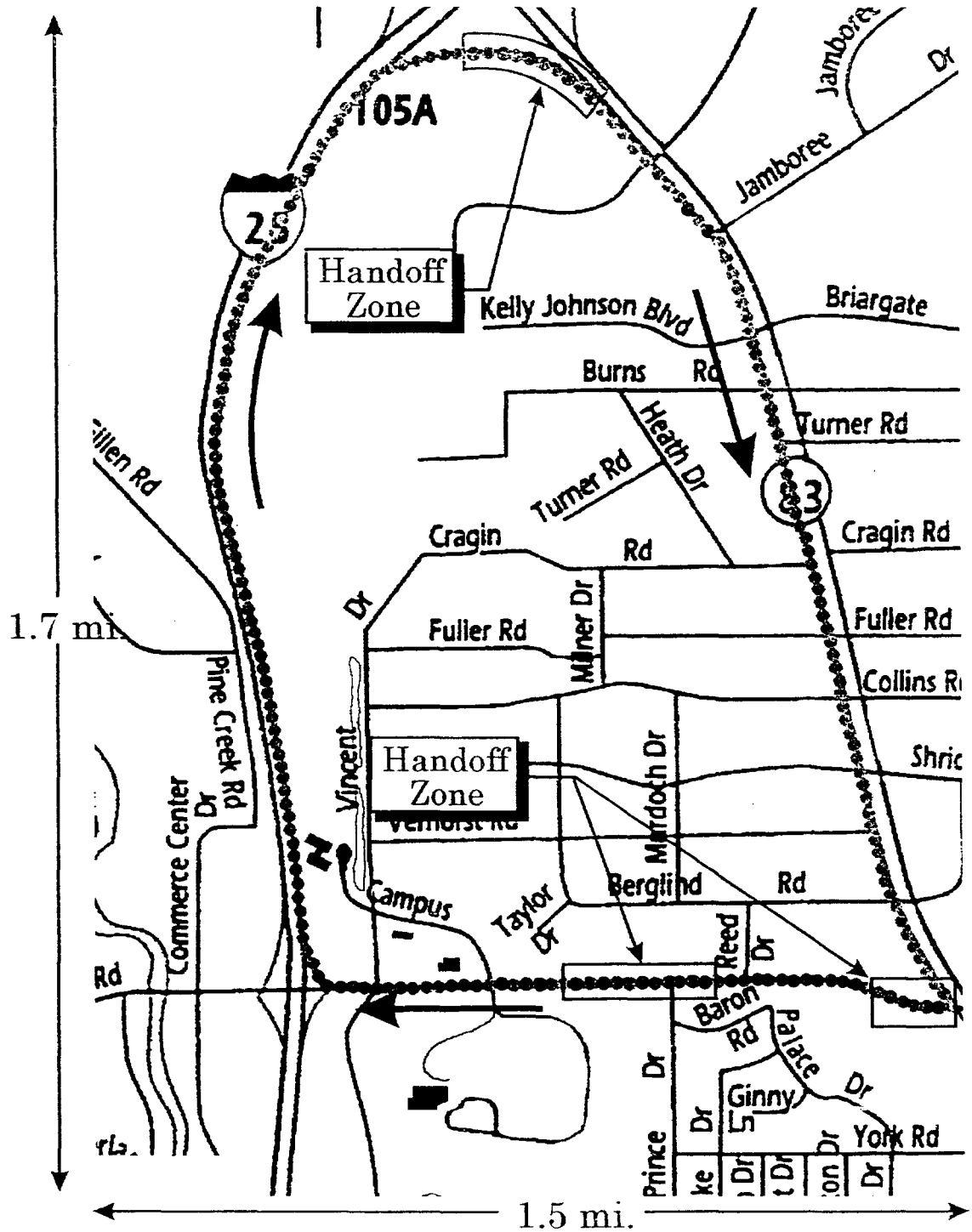
Omnipoint
CORPORATION



Three Cell, High Speed Handoff Test

Experimental License Progress Report - August 1993

Figure 2-5

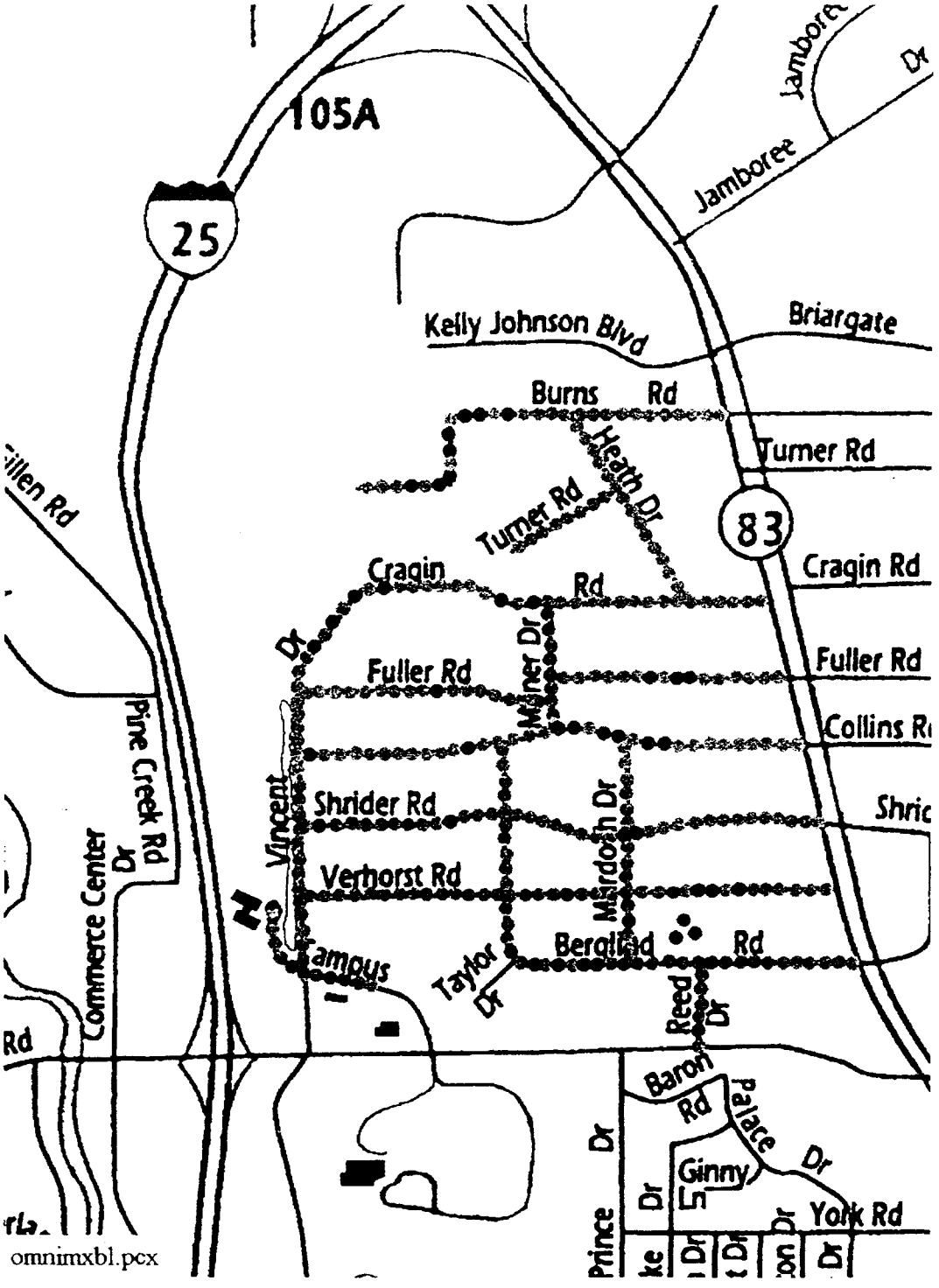


Northeast Residential Quadrant Perimeter High Speed Test

coslp03.cdr

Figure 2-6

Omnipoint
CORPORATION



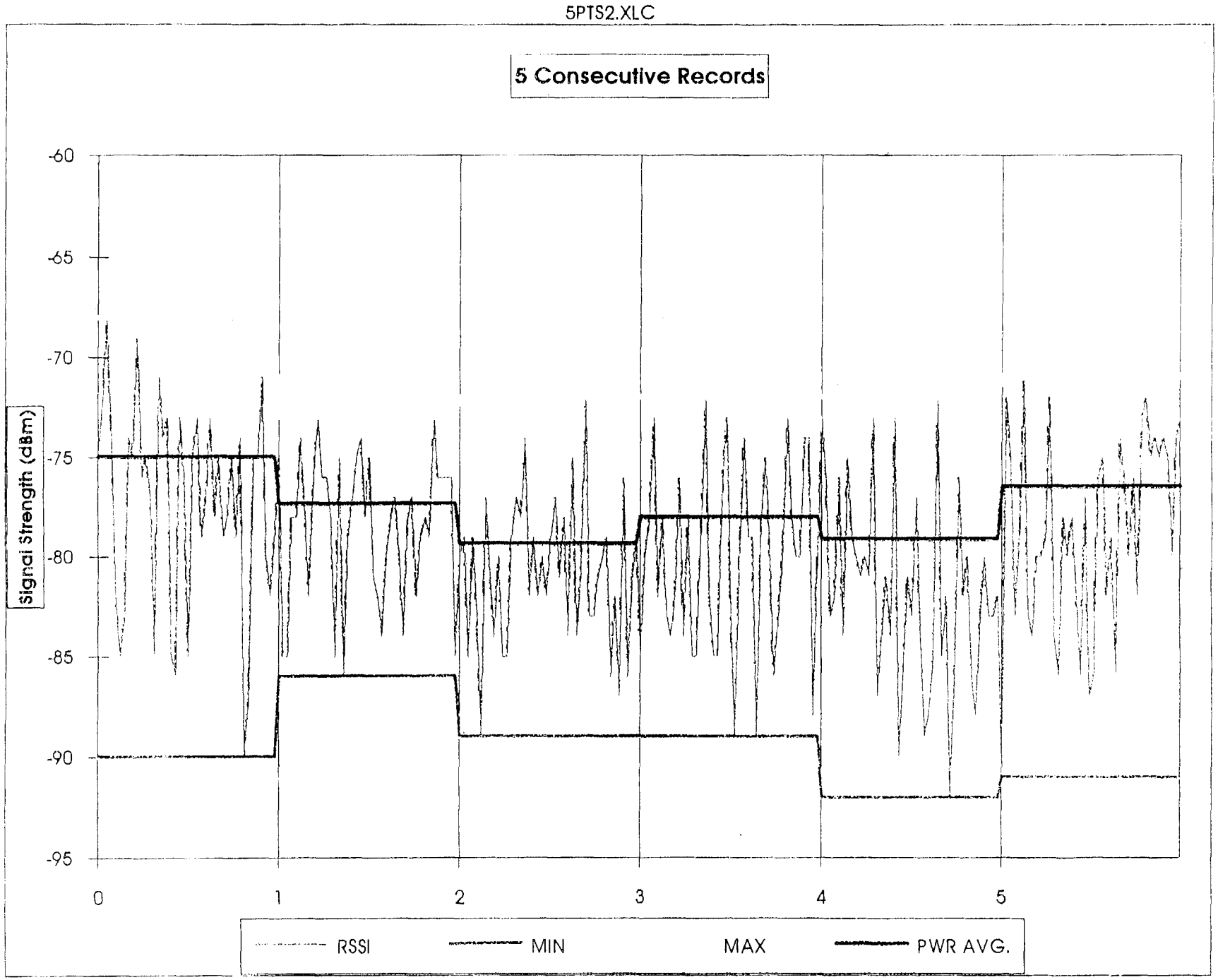
Northeast Residential Quadrant Neighborhood Low Speed Test

cosnb01.cdr

Experimental License Progress Report - August 1993

Figure 2-7

5PTS2.XLC



Page 1

Figure 2-8

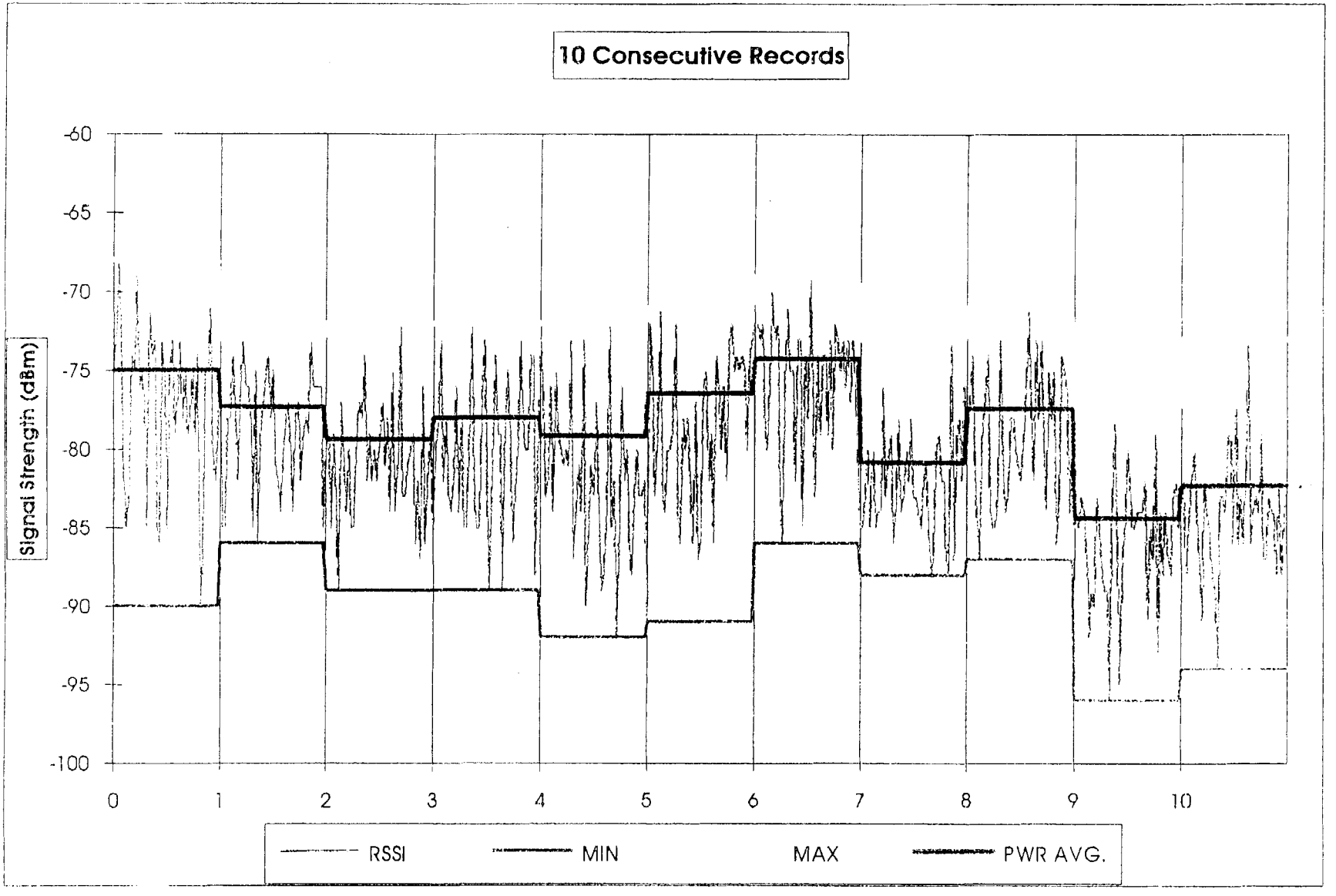

10 Consecutive Records
Signal Strength (dBm)
-60
-65
-70
-75
-80
-85
-90
-95
-100
0
1
2
3
4
5
6
7
8
9
10
RSSI
MIN
MAX
PWR AVG.

Figure 2-9

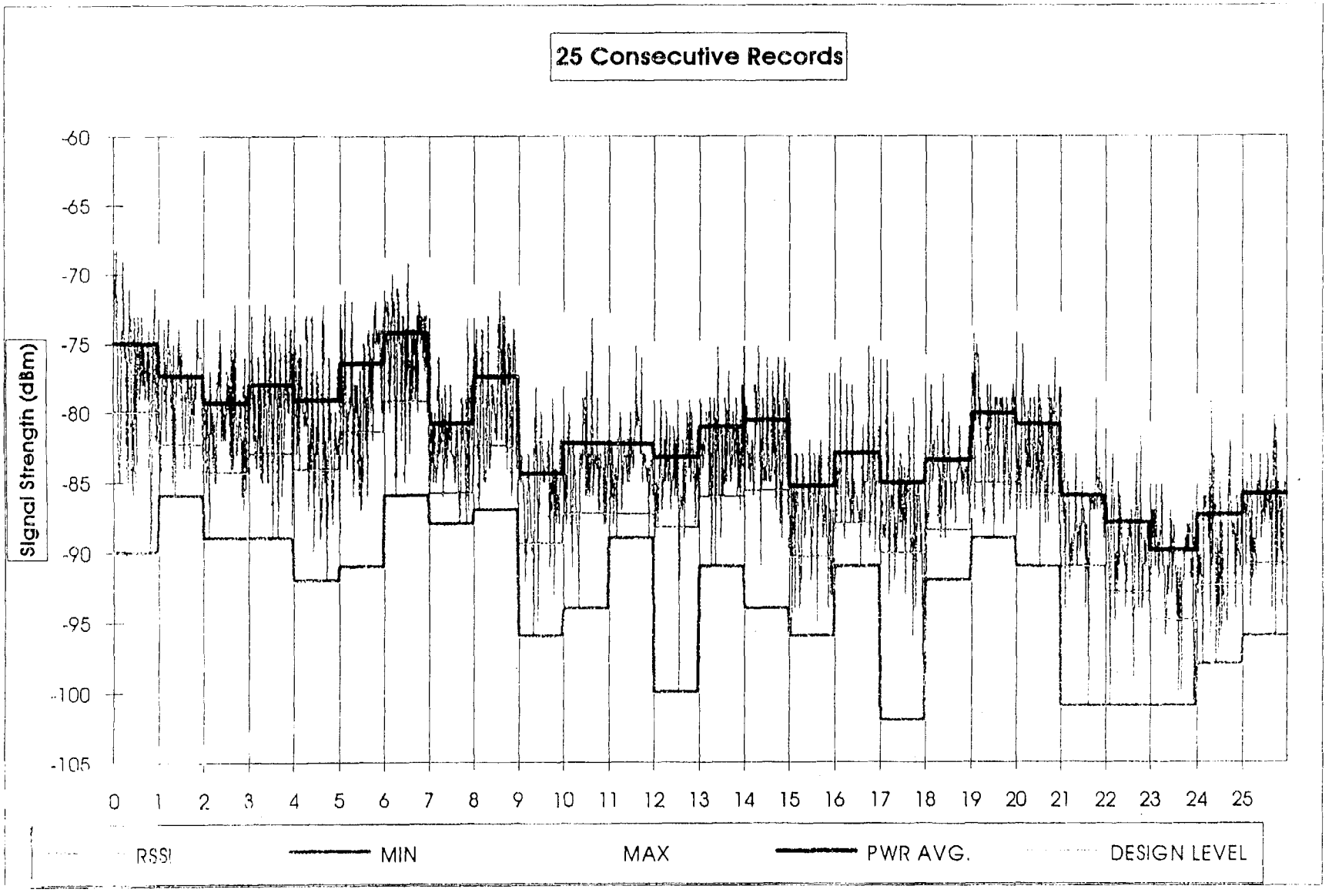

25 Consecutive Records
Signal Strength (dBm)
-60
-65
-70
-75
-80
-85
-90
-95
-100
-105
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25
RSSI
MIN
MAX
PWR AVG.
DESIGN LEVEL

Figure 2-10