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## PRE-FILED TESTIMONY OF DAVID VIVIAN

1.Q. Mr. Vivian, please summarize your professional background in telecommunications.

- A. I have background in commercial and residential lending and commercial real estate appraisal before I began consulting in the site acquisition and zoning fields for the wireless telecommunications industry in 1997. Over the past nine years, I have worked as a Property Specialist for Sprint PCS in Wakefield, Massachusetts, a Zoning Manager for Wireless Facilities, Inc. ("WFI") in Nashua, New Hampshire, the Project Manager for American Tower Corporation's ("AMT") New England tower development program, and, until its acquisition last fall, I was a Senior Vice President for Tower Ventures II, LLC.

Currently, I oversee Gridcom's site acquisition and network development in Eastern and Southern Connecticut, Central and Western Massachusetts, and parts of Vermont. My duties include the following:

- Developing strategically placed wireless telecommunication facilities for the co-location of multiple wireless service providers.
- Oversight and coordination of employees and subcontractors in the site acquisition, permitting and construction operations of wireless telecommunication facilities.
- Marketing of existing and developing wireless telecommunication facilities inventory.

2.Q. What is the purpose of your testimony?

- A. The purpose of this testimony is to provide background information relating to the application of National Grid Communications, Inc. ("Gridcom") to the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need for the proposed facility in Derby and to explain: (1) Gridcom's role in developing telecommunications facilities; (2) Gridcom's methodology for selecting sites; and (3) Gridcom's application of its methodology in the selection of the sites proposed in this Application.

3. Q. Please provide a brief description of Gridcom and its role in developing telecommunications facilities.

- A. Gridcom is a telecommunications infrastructure company providing wireless and fiber solutions to communications companies and private industry. Wireless activities include developing, owning, operating and maintaining new communication towers, locating wireless equipment on existing utility structures and related turnkey services. Gridcom, headquartered in Westborough, Massachusetts, was established to partner with telecom providers and to offer them shared infrastructure and service opportunities where applicable. Gridcom is the telecommunications infrastructure subsidiary of National Grid USA, which includes the following utility networks: Niagara Mohawk Power, Massachusetts Electric, Nantucket Electric, Narragansett

Electric and Granite State Electric. National Grid USA is a subsidiary of National Grid Transco (NYSE: NGG), the fourth largest utility worldwide with principal activities in the regulated electric and gas industries.

4. Q. How does Gridcom conduct a site search?

- A. Gridcom focuses on developing quality communication facilities to be shared and used by numerous wireless providers. As a result of its substantial wireless experience and solid relationships with the various service providers, Gridcom is able to locate facilities in areas where multiple wireless carriers' needs exist. Gridcom engages in significant site research, interaction with the local municipalities, and communication with the carriers prior to developing a new site in an effort to provide wireless telecommunications facilities that will be a benefit to the community as well as to the service providers with the least environmental impact.

Once an area of need is identified, Gridcom will investigate the feasibility of using existing telecommunications structures or other existing structures within this area of need. If no suitable structures are located, Gridcom will begin investigating locations that can appropriately accommodate a new monopole. In its search for sites, Gridcom's goal is to select a site that will allow the telecommunication carriers to provide needed service and at the same time have the least impact to the surrounding environment. Several important factors are considered and investigated during the site search including ground elevation, topography, tree coverage and the willingness of property owners to lease space.

5. Q. Please describe Gridcom's search for the sites proposed in this Application.

- A. Gridcom, doing business as Tower Ventures at the time, initially began a search for a new facility in the Derby area in the summer of 2003. Gridcom (d/b/a Tower Ventures) was aware of a gap in wireless coverage along the Route 34 corridor in Derby and in the areas of Routes 243, 115 and part of the Route 8 corridor (the "target area"). To fill this gap, Gridcom analyzed the area and conducted an extensive search for existing structures, large parcels of land, commercial and municipal properties. This search included a field analysis to determine if there were any existing structures in the area that could be used to improve the telecommunication services to the target area for multiple wireless service providers. The search also included investigation of public, private and Council maintained tower databases for existing facilities. As part of this review, Gridcom identified 17 existing towers within a four-mile radius from the proposed target area. The tower structures and existing facilities that fell within this area were then analyzed to see if any of them could be used to provide service to the target area. The result of this analysis indicated that none of the existing towers could be utilized to provide service to the target area.

In addition to the analysis of existing towers and structures, Gridcom also investigated the potential use of several properties within the target area. The properties that were identified as a potential candidate for a new facility included three City owned

properties off of David Humphrey Road. These City-owned properties included the property surrounding the Ansonia Reservoir, the property behind the Bradley School and the property behind the Hotchkiss Hose Fire Company building. The property adjacent to the Reservoir was rejected due to the fact that a proposed Facility at this location would not provide adequate signal performance. The Bradley School property was rejected from consideration because the City was not interested in leasing a portion of the school's property for a new facility. After over a year of correspondence and negotiations with the City to develop a new facility on the Hotchkiss Hose Fire Company property, including a formal written proposal, it was concluded that the City was not interested in developing the proposed facility at this location.

Other sites along the Route 34 corridor were also considered, but generally were rejected for radio frequency reasons due to the hilly terrain in the area. As such, the proposed Facility (Site A or Site B) at the St. Jude Roman Catholic Church was determined to be the most appropriate location for this search area.

6. Q. Has Gridcom consulted with municipal officials in Derby with regard to its plans?

- A. Yes, as required by statute. On March 31, 2005, Gridcom provided a technical report detailing the proposed sites to the Mayor's office. During the months of April and May, the Mayor's office and the Building Department were contacted for any feedback on the proposed sites. At this time, the City has not provided any specific comments or recommendations regarding the proposed Facility.



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## NOTICE

Notice is hereby given, pursuant to Section 16-50/(b) of the Connecticut General Statutes and Section 16-50/-1(e) of the Regulations of Connecticut State Agencies of an Application to be submitted to the Connecticut Siting Council ("Siting Council") on or about June 30, 2005 by National Grid Communications, Inc. ("Gridcom" or the "Applicant"). In its Application Gridcom will request a certificate of environmental compatibility and public need from the Siting Council for the construction and maintenance of a telecommunications facility in Derby, Connecticut. Two locations are being considered for the proposed telecommunications facility. The sites, designated as Site A and Site B, are located on the approximately 17 acre property at 71 Pleasant View Road owned by St. Jude's Roman Catholic Church. At Site A, on a 5,625 square-foot lease area in the southeast corner of the property, the Applicant would construct a 130-foot self-supporting monopole and a 75' by 75' fenced compound area at grade. At Site B, on a 5,625 square-foot leased area in the southwest section of the property, the Applicant would construct a 130-foot flagpole facility and a 75' by 75' fenced compound area at grade. The location, height and other features of the proposed facility are subject to review and potential change under provisions of the Connecticut General Statutes § 16-50g et. seq.

The proposed facility would provide personal wireless communication service in portions of Derby and surrounding areas, which do not have adequate service. The Application will explain the need, purpose and benefits of the facility and will also describe the environmental impacts of the proposed facility.

A balloon representative of the proposed heights of the Site A and Site B facilities will be flown on the day of the Siting Council public hearing on the Application, which will take place in the City of Derby. The balloons will be flown from approximately 2 p.m. to 7 p.m. Notice of the public hearing date will be provided by the Siting Council.

Interested parties and residents of the City of Derby are invited to review the Application during normal business hours at any of the following offices:

Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

Derby City Clerk  
Derby City Hall  
1 Elizabeth Street  
Derby, Connecticut 06418-1801

or the offices of the undersigned. All inquiries should be addressed to the Connecticut Siting Council or to the undersigned.

National Grid Communications, Inc.  
Lucia Chiocchio, Esq.  
Cuddy & Feder LLP  
90 Maple Avenue  
White Plains, New York 10601  
(914) 761-1300  
Attorneys for the Applicant

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June \_\_, 2005

**VIA CERTIFIED MAIL**  
**RETURN RECEIPT REQUESTED**

Re: Proposed Wireless Communications Facility  
Application by National Grid Communications, Inc. ("Gridcom")  
for Approval by the Connecticut Siting Council  
Derby, Connecticut

Dear \_\_\_\_\_:

We are writing to you on behalf of our client, Gridcom, with respect to the above referenced matter which involves the submission of an application to the Connecticut Siting Council for approval for a proposed wireless communications tower facility at one of two locations within the City of Derby. We are writing to you because State law requires that owners of record of property which abuts a parcel on which the proposed facility may be located must be sent notice of the submission of the application.

The proposed location for the installation of Gridcom's facility is an approximately 17 acre property located at 71 Pleasant View Road owned by St. Jude's Roman Catholic Church. At this location, Gridcom is proposing two alternatives. In the southeast corner of this property, Gridcom proposes to install a self-supporting monopole 130 feet in height and a 75' x 75' fenced equipment area at the base of the monopole. The monopole and compound area would be enclosed by a security fence 6 feet in height. Vehicle access to the proposed facility would extend from Pleasant View Road along a the existing paved driveway and then along a new gravel drive for a distance of approximately 65 feet to the compound area.

June \_\_\_\_, 2005  
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For the second alternative, in the southwestern section of the property, Gridcom proposes to install a flagpole facility 130 feet in height and a 75' x 75' fenced compound area at the base of the flagpole. The flagpole and compound area would be enclosed by a security fence 6 feet in height. Vehicle access to the proposed facility would extend from Sentinel Road along the existing driveway for a distance of approximately 350 feet to the compound area.

The location, height and other features of the proposed facility are subject to review and potential change by the Connecticut Siting Council under the provisions of Connecticut General Statutes §16-50g et seq.

If you have any questions concerning this application, please do not hesitate to contact the Connecticut Siting Council or the undersigned.

Very truly yours,

Lucia Chiocchio

**ADJACENT PROPERTY OWNERS**

**Site A and Site B**

Owner: St. Jude's Roman Catholic Church

Owner address: 71 Pleasant View Road, Derby, Connecticut

Tax Parcel: Map 5-6, Lots 101 & 113

Zoning District: Public and Semi-Public ("P") Zoning District

The following information was collected from the Tax Assessors' records and land records of the City of Derby, Connecticut, City Hall.

**Property Owner/Mailing Addresses**

Map 5-6/Lot 98  
Christine George Estate  
c/o Gregory J. Stamos, Esq.  
200 Main Street  
P.O. Box 166  
Ansonia, CT 06401

Map 5-6/Lot 104  
Diane Garofalo  
47 Pleasant View Rd.  
Derby, CT 06418

Map 5-6/Lot 99  
Bruce & Lucia Hanock  
87 Pleasant View Road  
Derby, CT 06418

Map 5-6/Lot 105  
Walter & Sabina Florczak  
39 Pleasant View Rd.  
Derby, CT 06418

Map 5-6/Lot 100  
John B. Griffiths, Jr.  
79 Pleasant View Road  
Derby, CT 06418

Map 5-6/Lot 112  
Timothy P. & Nancy Marren  
195 Sentinel Rd.  
Derby, CT 06418

Map 5-6/Lot 102  
Carmine & Rosann Lizza  
63 Pleasant View Road  
Derby, CT 06418

Map 5-6/Lot 114  
Scott D. Grim  
173 Sentinel Hill Rd.  
Derby, CT 06418

Map 5-6/Lot 103  
Kenneth & Diane K. Betlej  
55 Pleasant View Rd.  
Derby, CT 06418

Map 5-6/Lot 115  
Lucy Fabiano  
1 Lombardi Dr.  
Derby, CT 06418

## CERTIFICATION OF SERVICE

I hereby certify that on this 30 th day of June, 2005, copies of Gridcom's Application and Attachments for a Certificate of Environmental Compatibility and Public Need for the Construction and Maintenance of a Wireless Telecommunications Facility were sent by certified mail, return receipt requested, to the following:

The Honorable Richard Blumenthal  
Attorney General  
Office of the Attorney General  
55 Elm Street  
Hartford, CT 06106  
(860) 808-5318

Department of Environmental Protection  
Gina McCarthy, Commissioner  
79 Elm Street  
Third Floor  
Hartford, CT 06106-5127  
(860) 424-3001

Department of Public Health  
J. Robert Galvin, M.D., M.P.H.  
Commissioner  
410 Capitol Avenue  
P.O. Box 340308  
Hartford, CT 06134-0308  
(860) 509-7101

Council On Environmental Quality  
Karl J. Wagener, Executive Director  
79 Elm Street  
Hartford, CT 06106  
(860) 424-4000

Department of Public Utility Control  
Donald W. Downes, Chairperson  
10 Franklin Square  
New Britain, CT 06051  
(860) 827-1553

Office of Policy and Management  
Robert L. Genuario, Secretary  
450 Capitol Avenue  
Hartford, CT 06106-1308  
(860) 418-6200

Department of Economic and Community Development  
James F. Abromaitis, Commissioner  
505 Hudson Street  
Hartford, CT 06106-7107  
(860) 270-8000

Department of Transportation  
Stephen E. Korta, Commissioner  
2800 Berlin Turnpike  
Newington, CT 06131-7546  
(860) 594-3000

Valley Council of Governments  
Marc Garofalo, Chairman  
Derby Train Station  
12 Main Street  
Derby, CT 06418  
(203) 735-8688

State Senator  
Joseph J. Criso, Jr.  
Legislative Office Bldg.  
Room 2800  
Hartford, CT 06106-1591  
(860) 240-0189

House of Representatives  
Themis Klarides  
114<sup>th</sup> Assembly District  
State Capitol  
Legislative Office Building  
Hartford, CT 06106  
1-800-842-1423



State Historic Preservation Officer  
Connecticut Commission on  
Culture & Tourism  
History Division  
59 South Prospect Street  
Hartford, CT 06106  
(860) 566-3005

Federal Aviation Administration  
800 Independence Avenue, SW  
Washington, DC 20591

Federal Communications Commission  
1919 M Street, NW  
Washington, DC 20554

## DERBY

City of Derby  
Mayor Marc J. Garofalo  
City Hall  
1 Elizabeth Street  
Derby, Connecticut 06418-1801

City of Derby  
Planning and Zoning Commission  
Theodore Estwan, Jr., Chairman  
City Hall  
1 Elizabeth Street  
Derby, Connecticut 06418-1801

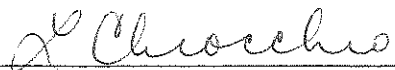
City of Derby  
Zoning Board of Appeals  
Samuel Rizzitelli, Jr., Chairman  
City Hall  
1 Elizabeth Street  
Derby, Connecticut 06418-1801

City of Derby  
Inland Wetlands Commission  
Fred Columbo, Chairman  
City Hall  
1 Elizabeth Street  
Derby, Connecticut 06418-1801

City of Derby  
City Clerk  
City Hall  
1 Elizabeth Street  
Derby, Connecticut 06418-1801

Dated 6/30/05

City of Derby  
City Engineer  
Milone and MacBroom, Inc.  
Michael Joyce  
716-726 South Main Street  
Cheshire, CT 06410

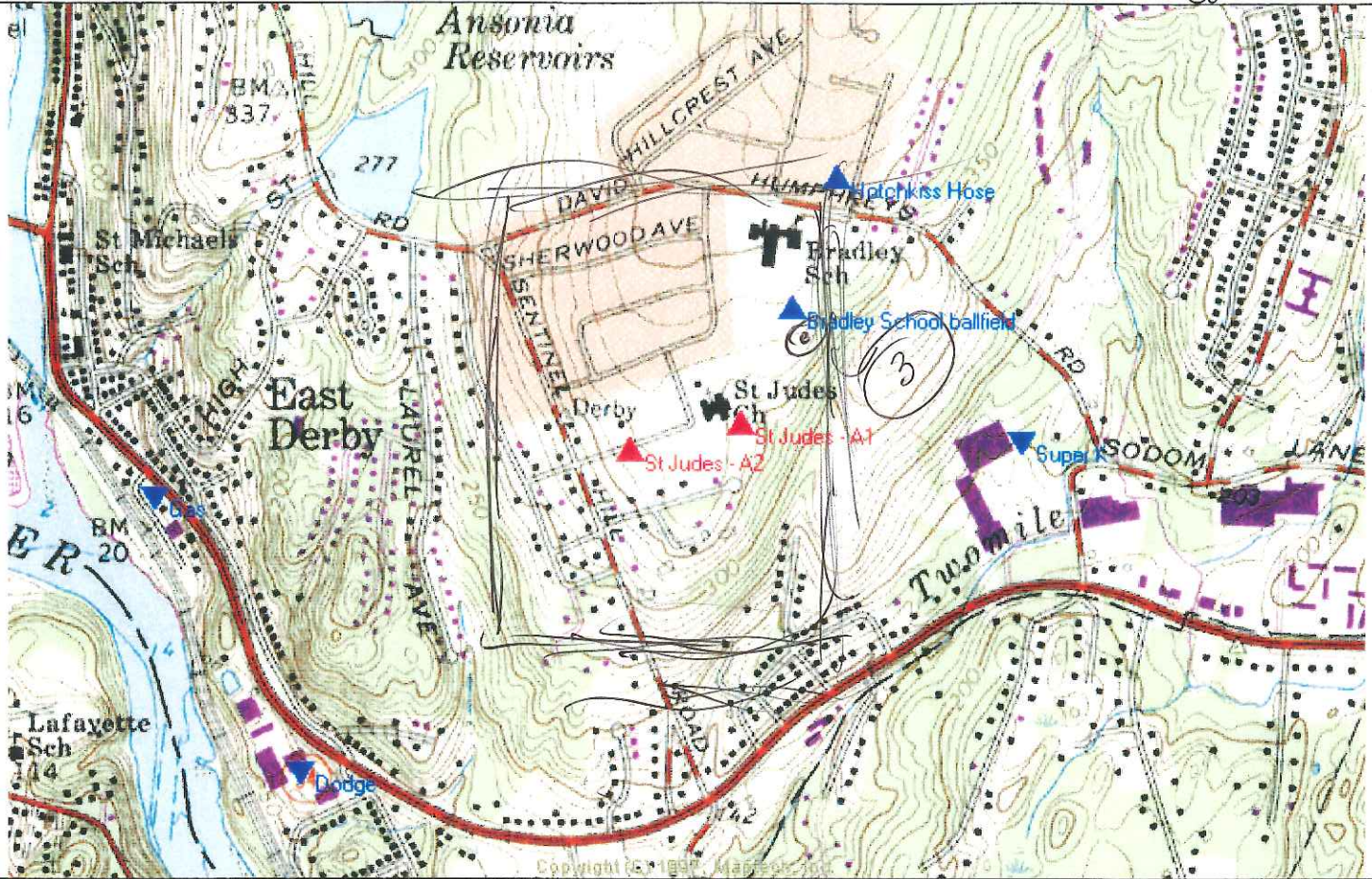
  
Cuddy & Feder LLP  
90 Maple Avenue  
White Plains, New York 10601  
Attorneys for:  
Gridcom

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## Alternate Site Analysis

**Gridcom**  
25 Research Drive  
Westborough, MA 01582  
Phone: 508-389-3300  
Fax: 508-389-3001

Contact: David Vivian  
Phone: 413-583-3168  
Mobile: 413-218-5042  
Fax: 413-583-3214  
email: David.Vivian@gridcom.com



| Candidate        | Address                               | Type   | RF / Comments                                       |
|------------------|---------------------------------------|--|---|
| Hotchkiss Hose   | David Humphrey Rd, E. Derby           | Tower Rebuild – existing FD 2-way            | RF approved @ 150' / could not close deal with City |
| Bradley School   | David Humphrey Rd., E. Derby          | Raw land – behind ball field                 | RF approved @ 160' / City not interested            |
| Super K          | Orange-Derby Shopping Plaza, E. Derby | Raw land – adjacent to retail center         | RF rejected   |
| Dodge dealership | Route 34, E. Derby                    | Raw land – small lot adjacent to condominium | RF rejected   |
| Gas station      | Route 34, E. Derby                    | Raw land – small lot near bridge             | RF rejected / environmental concerns                |

# List of Towers within 4 miles of Search Area

| Town       | Address                         | Latitude    | Longitude   | User           | Owner          | Twr Type         | Ant Height  | Twr Height | Comments   |
|------------|---------------------------------|-------------|-------------|----------------|----------------|------------------|-------------|------------|--|
| Ansonia    | 401 Wakelee Street              | 41-21-21.85 | 73-05-29.66 | SNET           | Spectrasite    | ssl              | 168.00      | 196.00     |  |
| Ansonia    | Coe Road                        |             |             | UI             | UI             | m                | 79.00       | 79.00      | replace 30' wood utility pole with 79' wood utility pole |
| Ansonia    | Pulaski Highway                 | 41-19-36    | 73-03-54    | UI             | UI             | m                | 79.00       | 79.00      |  |
| Derby      | 74 Cottage Street               |             |             | UI             | town           | m                | 75.00       | 65.00      | antenna mounted to 10 foot pipe mount                    |
| Orange     | Grassy Hill Road                | 41-17-2.47  | 73-02-37.16 | Sprint         | Sprint         | m                | 130.00      | 140.00     |  |
| Orange     | Hunting Hill Place              | 41-17-39    | 72-59-27    | T-Mobile       | CL&P           | pm               | 112.00      | 100.00     | 3 Nortel S8000 cabinets                                  |
| Orange     | 525 Orange Center Rd./ 41-16-25 |             | 73-01-19    | Sprint         | Orange, Town   | m                | 136.00      | 160.00     | Share tower with SCLP, Nextel, BAM and building          |
| Orange     | Oge Meadow                      | 41-18-32    | 73-01-53    | Meticom        | Crown Media    | m                | 70.00       | 160.00     |  |
| Seymour    | Great Hill Road                 | 41-21-04.3  | 73-06-48.24 | Valley Cable V | Valley Cable V | gl               |             | 250.00     | Remove existing 200' tower and replace with 250'         |
| Seymour    | Old Kings Highway               | 41-21-56    | 73-06-32    | BAM            | TCL            | gl               | 182.00      | 195.00     | Replace guy wires  |
| Shelton    | 165 Birdseye Road               | 41-19-32.8  | 73-8-55.2   | AT&T           | Nextel         | m                | 108.00      | 120.00     | add 2 equipment panels; Nextel on tower @ 120'           |
| Shelton    | 219 Nellis Rock Rd.             | 41-18-15    | 73-07-06    | SNET Cellular  | SNET Cellular  | ssl              | 162.00      | 162.00     | alternate  |
| Shelton    | 70 Platt Road                   | 41-17-39    | 73-06-25    | AT&T           | AT&T           | m                | 95.00       | 100.00     |  |
| Shelton    | 309 River Road                  | 41-17-46    | 73-4-20     | AT&T           | VoicesStream   | stealth-flagpole | 93.5 & 85.5 | 120.00     | up to 4 equipment cabinets on concrete pad               |
| Woodbridge | 1027 Race Brook Road            | 41-19-00    | 73-00-41    | AT&T Wireless  | Sprint         | m                | 137.50      | 150.00     | Same tower as 1116 Johnson Road                          |
| Woodbridge | 77 Pease Rd.                    | 41-20-28    | 72-59-38    | SNET Cellular  | SNET Cellular  | m                | 150.00      | 150.00     |  |
| Woodbridge | Johnson Road at Oak 14          | 41-19-05.2  | 73-00-35.6  | Omni           | CL&P           | pm               | 88.00       | 81.00      | 60"x7"(dia.) antenna mounted on structure 7284           |

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Proposed Site A

71 Pleasant View Road, Derby

Land of  
St. Jude's Roman Catholic Church

Assessor's Map 5-6, Lots 101 & 113

16.6 Acre Parcel

### General Facility Description

The proposed Site A facility would consist of a 75-foot by 75-foot leased area located in the southeastern portion of an approximately 16.6 acre parcel at 71 Pleasant View Road owned by St. Jude's Roman Catholic Church. A new self-supporting monopole tower 130 feet in height would be constructed. T-Mobile would install up to three panel antennas at a centerline height of 127 feet and would place equipment cabinets on a concrete pad within the equipment compound. The equipment compound would be enclosed by a 6-foot high security fence. Vehicular access to Site A would extend from Pleasant View Drive southeasterly along the St. Jude rear entrance, then following the existing paved driveway that runs behind the Rectory and Church building to a paved parking area for service vehicles and church employees. From the end of the driveway, a new 12-foot wide gravel access driveway (approximately 65 feet from the parking lot) to the compound area will be constructed. Utility service will run through an underground conduit from a new utility pole that will be set at the end of the parking lot to a transformer located within the lease area.



## Site Evaluation Report

### I. LOCATION

- A. COORDINATES: 41° – 18' – 54.15" N  
73° – 03' – 51.53" W
- B. GROUND ELEVATION: 366 feet AMSL
- C. USGS MAP: Ansonia, CT
- D. SITE ADDRESS: 71 Pleasant View Road, Derby
- E. ZONING WITHIN 1/4 MILE OF SITE: Land within 1/4 mile of the facility is zoned R-3 and R-4 (Residential), P (Public & Semi-Public) & B-1 (Business).

### II. DESCRIPTION

- A. SITE SIZE: 75' x 75'
- B. LESSOR'S PARCEL: 16.6 acres
- C. TOWER TYPE/HEIGHT: Monopole/130'
- D. SITE TOPOGRAPHY AND SURFACE: The site is in a relatively level area improved with a church building and paved parking lot.
- E. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: The lessor's parcel is improved with a church and rectory and associated paved driveway and parking area. Mature trees are located in the eastern corner and along part of the western border of the parcel. Wetlands were delineated in the northeastern section of the parcel.
- F. LAND USE WITHIN 1/4 MILE OF SITE: The surrounding area contains residential development, a school, and a ball field.

### III. FACILITIES

- A. POWER COMPANY: Connecticut Light and Power
- B. POWER PROXIMITY TO SITE: Facilities available from Pleasant View Drive.

- C. TELEPHONE COMPANY: SNET
- D. PHONE SERVICE PROXIMITY: Same as power.
- E. VEHICLE ACCESS TO SITE: Access to Site A would extend from Pleasant View Drive southeasterly along the St. Jude rear entrance, then follow the existing paved driveway that runs behind the Rectory and Church building. From the end of the driveway, a new 12-foot wide gravel access driveway (approximately 65 feet from the parking lot) to the compound area will be constructed.
- F. OBSTRUCTION: None
- G. CLEARING AND FILL REQUIRED: Minimal clearing and grading would be required for development of the compound area. No clearing or grading would be required for development of the access drive, as the Site utilizes an existing paved driveway and parking lot. Two (2) trees greater than six inches diameter at breast height will be removed. Detailed plans would be included in a D&M plan after any approval of the facility which may be issued by the Connecticut Siting Council.

#### IV. LEGAL

- A. PURCHASE ☐ LEASE ☒
- B. OWNER: St. Jude's Roman Catholic Church
- C. ADDRESS: 71 Pleasant View Road, Derby, Connecticut
- D. DEED ON FILE AT: City of Derby Vol. 142; page 281 (Parcel 113) and Vol. 144; page 94 (Parcel 101)

Facilities and Equipment Specification  
(New Tower & Equipment)

I. TOWER SPECIFICATIONS:

- A. MANUFACTURER: TBD
- B. TYPE: Self-Supporting monopole
- C. HEIGHT: 130'  
DIMENSIONS: Approx. 52" at base  
Approx. 18" at top

II. TOWER LOADING:

- A. T-Mobile – up to 3 panel Antennas (this is a flush-mount)
  - a. Model – TBD by T-Mobile
  - b. Antenna Dimensions – TBD by T-Mobile
  - c. Position on Tower – 127' centerline flush-mounted
  - d. Transmission Lines – up to 6 internal to the monopole
- B. Future Carriers - TBD

III. ENGINEERING ANALYSIS AND CERTIFICATION:

In accordance with Electronic Industries Association Standard EIA/TIA-222-F "Structural Standards for Steel Antenna Towers and Antenna Support Structures," the tower would be designed to withstand pressures equivalent to an 85 MPH wind with a one-half inch solid ice accumulation. The foundation design would be based on soil conditions at the site.

## Environmental Assessment Statement

### I. PHYSICAL IMPACT

#### A. WATER FLOW AND QUALITY

No water flow and/or water quality changes are anticipated as a result of the construction or operation of the proposed Site A facility. Best management practices to control storm water and soil erosion during construction will be implemented. The equipment associated with the facility will discharge no pollutants to area surface or groundwater systems.

#### B. AIR QUALITY

Under ordinary operating conditions, the equipment that would be used at the proposed facility would emit no air pollutants of any kind.

#### C. LAND

Minimal clearing and grading would be required for development of the compound area. Two (2) trees greater than six inches diameter at breast height will be removed. No clearing or grading would be required for development of the access drive, as the Site utilizes an existing paved driveway and parking lot. The remaining land of the lessor would remain unchanged by the construction and operation of the facility.

#### D. NOISE

The equipment to be in operation at the facility would emit a minimal amount of noise associated with operation of the installed ventilation system(s) with no impacts to adjoining property owners. Some construction related noise would be anticipated during facility construction, which is expected to take approximately four to six weeks.

#### E. POWER DENSITY

The worst-case calculation of power density from operations at the facility, assuming that all channels were operating simultaneously, would be  $0.022620 \text{ mW/cm}^2$ , which is approximately 2.262% of the applicable MPE standard.

#### F. VISIBILITY

The potential visual impact of the proposed facility was assessed by preparation of photosimulations from twenty-one (21) locations and a comparative viewshed analysis as more fully identified in the visual materials included in Attachment 9.

In general, areas of visibility depicted over the Housatonic River and adjacent, undeveloped farmland account for significant portions of the total acreage that the top of the Site A Facility will be visible above the tree canopy.

## II. SCENIC, NATURAL, HISTORIC & RECREATIONAL VALUES

The parcel on which the facility is located appears to exhibit no scenic, natural, historic or recreational characteristics which are unique. The Connecticut Department of Environmental Protection (DEP) has reviewed the proposed site. According to the DEP, no known extant populations of Federal or State Endangered, Threatened or Special Concern Species occur at the site. The Connecticut State Historic Preservation Officer (SHPO) expects the proposed Facility to have no effect upon Connecticut's archaeological heritage or areas of historic or cultural significance.

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Proposed Site B

71 Pleasant View Road, Derby

Land of  
St. Jude's Roman Catholic Church

Assessor's Map 5-6, Lots 101 & 113

16.6 Acre Parcel

### General Facility Description

The proposed Site B facility would consist of a 75-foot by 75-foot leased area located in the southwestern portion of an approximately 16.6 acre parcel at 71 Pleasant View Road owned by St. Jude's Roman Catholic Church. A new self-supporting stealth flagpole tower 130 feet in height would be constructed. T-Mobile would install up to three panel antennas at a centerline of 127 feet and would place equipment cabinets on a concrete pad within the equipment compound. The equipment compound would be enclosed by a 6-foot high security fence. Vehicular access and utility service would extend from the St. Jude Catholic Church main entrance on Sentinel Hill Road and follow along the existing paved driveway approximately 350 feet, and then branch off to the south to the proposed compound. Utility service will run through an underground conduit from an existing utility pole to a transformer located within the lease area.



## Site Evaluation Report

### I. LOCATION

- A. COORDINATES: 41° – 18' – 52.48" N  
73° – 04' – 00.81" W
- B. GROUND ELEVATION: 366 feet AMSL
- C. USGS MAP: Ansonia, CT
- D. SITE ADDRESS: 71 Pleasant View Drive, Derby
- E. ZONING WITHIN 1/4 MILE OF SITE: Land within 1/4 mile of the facility is zoned R-3 and R-4 (Residential), P (Public & Semi-Public) & B-1 (Business).

### II. DESCRIPTION

- A. SITE SIZE: 75' x 75'
- B. LESSOR'S PARCEL: 16.6 acres
- C. TOWER TYPE/HEIGHT: Stealth Flagpole/130'
- D. SITE TOPOGRAPHY AND SURFACE: The site is in a relatively level area improved with the main access driveway to the church building.
- E. SURROUNDING TERRAIN, VEGETATION, WETLANDS, OR WATER: The lessor's parcel is improved with a church and rectory and associated paved driveway and parking area. Mature trees are located along the southern property line just beyond the proposed compound area, as well as in the eastern corner of the property. There are no wetlands in this section of the property.
- F. LAND USE WITHIN 1/4 MILE OF SITE: The surrounding area contains residential development, a school, and a ball field.

### III. FACILITIES

- A. POWER COMPANY: Connecticut Light and Power
- B. POWER PROXIMITY TO SITE: Facilities available from Sentinel Hill Road.

- C. TELEPHONE COMPANY: SNET
- D. PHONE SERVICE PROXIMITY: Same as power.
- E. VEHICLE ACCESS TO SITE: Access to Site B would extend from the St. Jude Catholic Church main entrance on Sentinel Hill Road and follow along the existing paved driveway approximately 350 feet, and then branch off to the south to the proposed compound.
- F. OBSTRUCTION: None
- G. CLEARING AND FILL REQUIRED: No clearing and grading would be required for development of the compound area, as it is located just off a paved driveway on a grassy field. No clearing or grading would be required for development of the access drive, which is proposed over the existing paved driveway. No trees greater than six inches diameter at breast height will be removed. Detailed plans would be included in a D&M plan after any approval of the facility which may be issued by the Connecticut Siting Council.

#### IV. LEGAL

- A. PURCHASE ☐ LEASE ☒
- B. OWNER: St. Jude's Roman Catholic Church
- C. ADDRESS: 71 Pleasant View Road, Derby, Connecticut
- D. DEED ON FILE AT: City of Derby Vol. 142; page 281 (Parcel 113) and Vol. 144; page 94 (Parcel 101)

Facilities and Equipment Specification  
(New Tower & Equipment)

I. TOWER SPECIFICATIONS:

- A. MANUFACTURER: TBD
- B. TYPE: Self-Supporting monopole
- C. HEIGHT: 130'  
DIMENSIONS: Approx. 5 ½ feet at base  
Approx. 2 ½ feet at top

II. TOWER LOADING:

- A. T-Mobile – up to 3 panel Antennas
  - a. Model – TBD by T-Mobile
  - b. Antenna Dimensions – TBD by T-Mobile
  - c. Position on Tower – 127' centerline flush-mounted
  - d. Transmission Lines – up to 6 internal to the monopole
- B. Future Carriers - TBD

III. ENGINEERING ANALYSIS AND CERTIFICATION:

In accordance with Electronic Industries Association Standard EIA/TIA-222-F “Structural Standards for Steel Antenna Towers and Antenna Support Structures,” the tower would be designed to withstand pressures equivalent to an 85 MPH wind with a one-half inch solid ice accumulation. The foundation design would be based on soil conditions at the site.

## Environmental Assessment Statement

### I. PHYSICAL IMPACT

#### A. WATER FLOW AND QUALITY

No water flow and/or water quality changes are anticipated as a result of the construction or operation of the proposed Site B facility. Best management practices to control storm water and soil erosion during construction will be implemented. The equipment associated with the facility will discharge no pollutants to area surface or groundwater systems.

#### B. AIR QUALITY

Under ordinary operating conditions, the equipment that would be used at the proposed facility would emit no air pollutants of any kind.

#### C. LAND

No clearing and grading would be required for development of the compound area, as it is located just off a paved driveway on a grassy field. No clearing or grading would be required for development of the access drive, which is proposed over the existing paved driveway. The remaining land of the lessor would remain unchanged by the construction and operation of the facility.

#### D. NOISE

The equipment to be in operation at the facility would emit a minimal amount of noise associated with operation of the installed ventilation system(s) with no impacts to adjoining property owners. Some construction related noise would be anticipated during facility construction, which is expected to take approximately four to six weeks.

#### E. POWER DENSITY

The worst-case calculation of power density from operations at the facility, assuming that all channels were operating simultaneously, would be  $0.022620 \text{ mW/cm}^2$ , which is approximately 2.262% of the applicable MPE standard.

#### F. VISIBILITY

The potential visual impact of the proposed facility was assessed by preparation of photosimulations from twenty-one (21) locations and a comparative viewshed analysis as more fully identified in the visual materials included in Attachment 9.

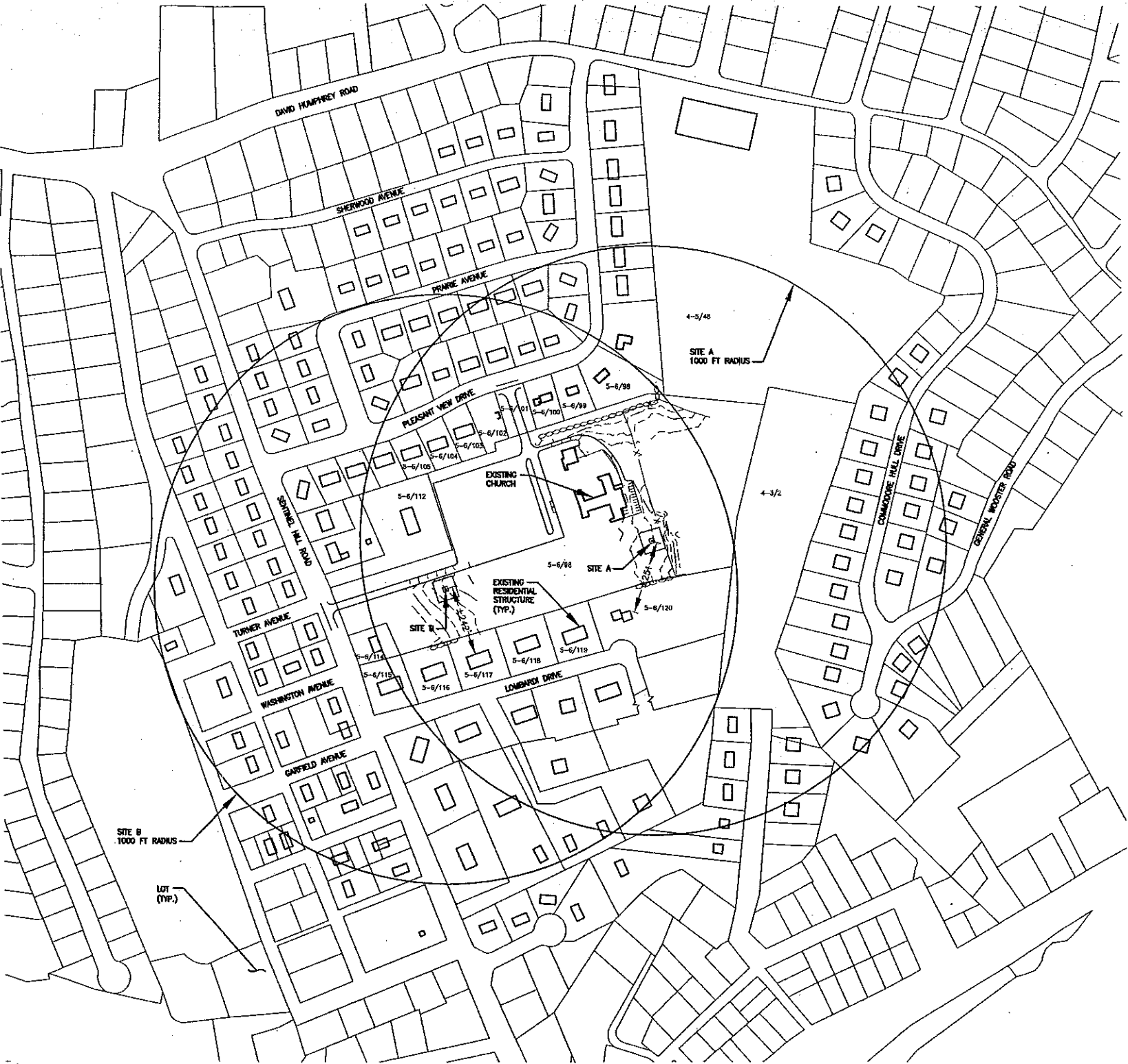
In general, areas of visibility depicted over the Housatonic River and adjacent, undeveloped farmland account for significant portions of the total acreage that the top of the Site B Facility will be visible above the tree canopy.

## II. SCENIC, NATURAL, HISTORIC & RECREATIONAL VALUES

The parcel on which the facility is located appears to exhibit no scenic, natural, historic or recreational characteristics which are unique. The Connecticut Department of Environmental Protection (DEP) has reviewed the proposed site. According to the DEP, no known extant populations of Federal or State Endangered, Threatened or Special Concern Species occur at the site. The Connecticut State Historic Preservation Officer (SHPO) expects the proposed Facility to have no effect upon Connecticut's archaeological heritage or areas of historic or cultural significance.

8

| ABUTTERS LIST |   |                      |  |
|---------------|---|----------------------|--|
| MAP/LOT #     | OWNERS NAME   | PROPERTY LOCATION    | MAILING ADDRESS                                |
| 5-6/113&101   | St. Jude's RC Parish Church                             | 71 Pleasant View Rd  | 71 Pleasant View Rd<br>Derby, CT 06418         |
| 5-6/98        | Christine Georges Estate<br>C/O Gregory J. Stamos, Esq. | 95 Pleasant View Rd  | 200 Main St. P.O. Box 166<br>Ansonia, CT 06401 |
| 5-6/99        | Bruce & Lucia Hancock                                   | 87 Pleasant View Rd  | 87 Pleasant View Rd<br>Derby, CT 06418         |
| 5-6/100       | John B. Griffiths, Jr. &                                | 79 Pleasant View Rd  | 79 Pleasant View Rd<br>Derby, CT 06418         |
| 5-6/102       | Carmine & Rosann Lizza                                  | 63 Pleasant View Rd  | 63 Pleasant View Rd<br>Derby, CT 06418         |
| 5-6/103       | Kenneth & Diana K. Betlej                               | 55 Pleasant View Rd  | 55 Pleasant View Rd<br>Derby, CT 06418         |
| 5-6/104       | Diane C. Garofalo                                       | 47 Pleasant View Rd  | 47 Pleasant View Rd<br>Derby, CT 06418         |
| 5-6/105       | Walter & Sabina Florczak                                | 39 Pleasant View Rd  | 39 Pleasant View Rd<br>Derby, CT 06418         |
| 5-6/112       | Timothy P. & Nancy Marren                               | 195 Sentinel Hill Rd | 195 Sentinel Hill Rd<br>Derby, CT 06418        |
| 5-6/114       | Scott D. Grim   | 173 Sentinel Hill Rd | 173 Sentinel Hill Rd<br>Derby, CT 06418        |
| 5-6/115       | Lucy Fabiano  | 1 Lombardi Dr        | 1 Lombardi Dr<br>Derby, CT 06418               |
| 5-6/116       | Michael & Pauline I.<br>Debradetto                      | 3 Lombardi Dr        | 3 Lombardi Dr<br>Derby, CT 06418               |
| 5-6/117       | Carmen J. & Theresa F.<br>Mongillo                      | 8 Lombardi Dr        | 8 Lombardi Dr<br>Derby, CT 06418               |
| 5-6/118       | Joseph N. & Laura M.<br>Daddio Et Als                   | 14 Lombardi Dr       | 14 Lombardi Dr<br>Derby, CT 06418              |
| 5-6/119       | Carolyn, Emre L. & Lee A.<br>Akter                      | 18 Lombardi Dr       | 18 Lombardi Dr<br>Derby, CT 06418              |
| 5-6/120       | Amedeo & Carmelina Durante                              | 24 Lombardi Dr       | 24 Lombardi Dr<br>Derby, CT 06418              |
| 4-3/2         | Joseph Francis Oliwa                                    | Shelton St           | 12 Shelton St<br>Derby, CT 06418               |
| 4-5/48        | B Bradley School  | David Humphreys Rd   | David Humphreys Rd<br>Derby, CT 06418          |



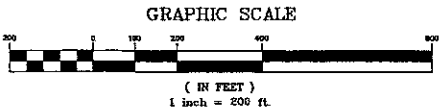
RESIDENTIAL STRUCTURE TABLE

SITE A:

-# OF BUILDING STRUCTURES WITHIN 1000' RADIUS = 73  
-CLOSEST BUILDING STRUCTURE TO COMPOUND=±251'

SITE B:

-# OF BUILDING STRUCTURES WITHIN 1000' RADIUS = 94  
-CLOSEST BUILDING STRUCTURE TO COMPOUND=±242'



|   |  |             |              |
|---|--|-------------|--------------|
|   | GRIDCOM TOWER SITE<br>ST. JUDES CHURCH<br>71 PLEASANT VIEW ROAD, DERBY, CT |             |              |
|   | 1000' RADIUS<br>PLAN   |             |              |
| REV   | DATE   | DESCRIPTION | BY           |
|   |  |             |              |
| McFARLAND - JOHNSON, INC.<br>400 BAYONET STREET SUITE 201 NEW LONDON, CT 06320<br>PHONE (860) 447-2844 FAX (860) 447-9222 |  |             |              |
| SCALE:  | 1"=200'  | DESIGNER:   | CDG          |
| DRAWN:  | CDG  | PROJECT:    | 18572.00     |
| CHECKED:  | ACG  | DATE:       | MAY 23, 2005 |
|   |  |             | C-1          |

ulations of Connecticut State Agencies Sections  
a for Surveys and Maps in the State of  
on of Land Surveyors, Inc. on September 26,  
ing to Horizontal Class D and Vertical Class 1-2  
ations, intended to be used for existing conditions,

er maps, limited field measurements and other  
undary or Limited Property/Boundary Survey and is

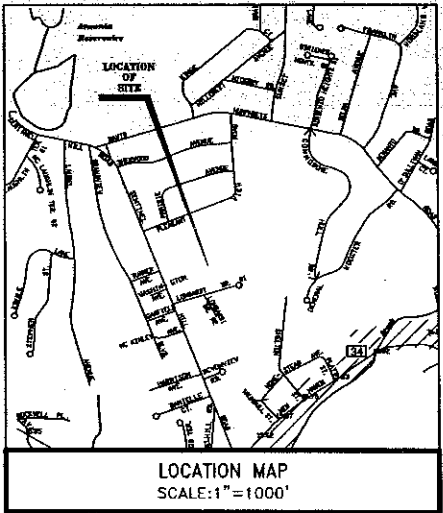
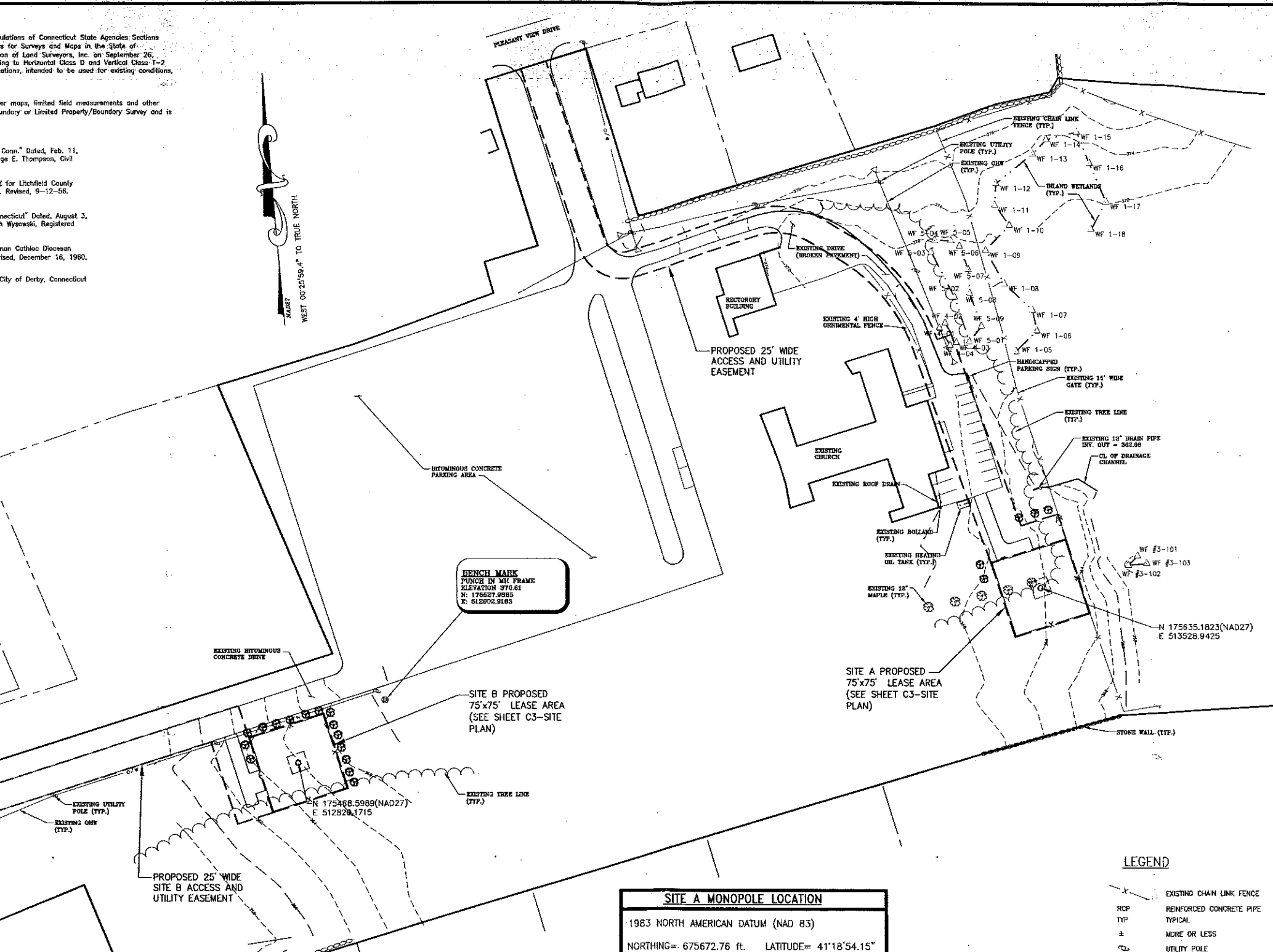
Conn." Dated, Feb. 11,  
ge E. Thompson, Civil

for Litchfield County  
Revised, 9-12-56.

necticut" Dated, August 3,  
h Wysocki, Registered

man Catholic Diocesan  
ised, December 16, 1960.

City of Derby, Connecticut



#### GENERAL NOTES:

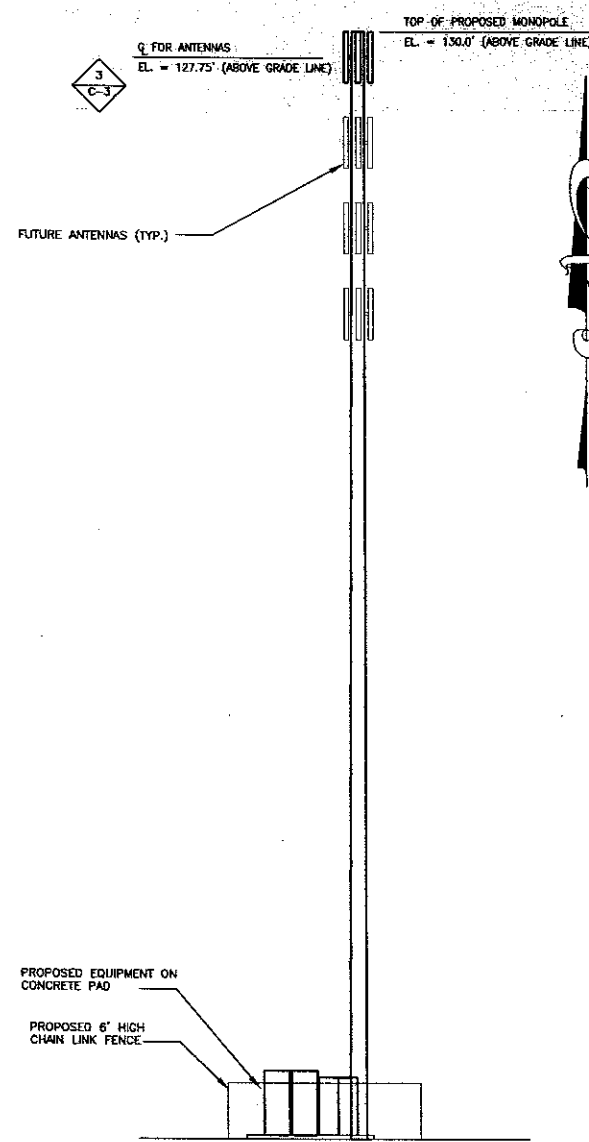
- Existing conditions shown on this plan are from the result of a field survey conducted on February 16, 2005 and on May 4, 2005.
- This parcel is identified as Lots 101 & 113 on Assessor's Map 5, Block 6, and recorded in the City Of Derby Assessors Office.
- The owner of this parcel is St. Jude's Roman Catholic Parish Church and is located at 71 Pleasant View Road, City of Derby, in the County of New Haven, Connecticut.
- The project site number is C111-618-E/F, currently not under construction at this time.
- Bearings are based on 1927 North American Datum (NAD27). Elevations are based on 1929 National Geodetic Vertical Datum (NGVD29). Monopole coordinates provided in 1983 North American Datum (NAD83). Horizontal and Vertical control: CTGS Station 67 CTGS Station 5966
- Underground utility, structure and facility locations depicted and noted hereon have been compiled, in part, from mapping supplied by the respective utility companies or governmental agencies, from parole testimony and from other sources. These locations must be considered as approximate in nature. Additionally other such features may exist on the

#### LEGEND

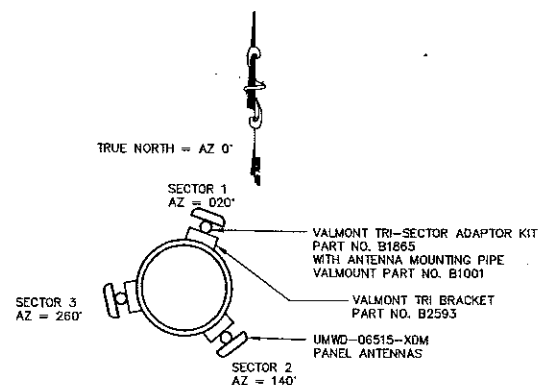
- EXISTING CHAIN LINK FENCE
- RCP REINFORCED CONCRETE PIPE
- TYP TYPICAL
- ± MORE OR LESS
- UTILITY POLE

| SITE A MONOPOLE LOCATION           |                        |
|------------------------------------|------------------------|
| 1983 NORTH AMERICAN DATUM (NAD 83) |                        |
| NORTHING= 675672.76 ft.            | LATITUDE= 41°18'54.15" |

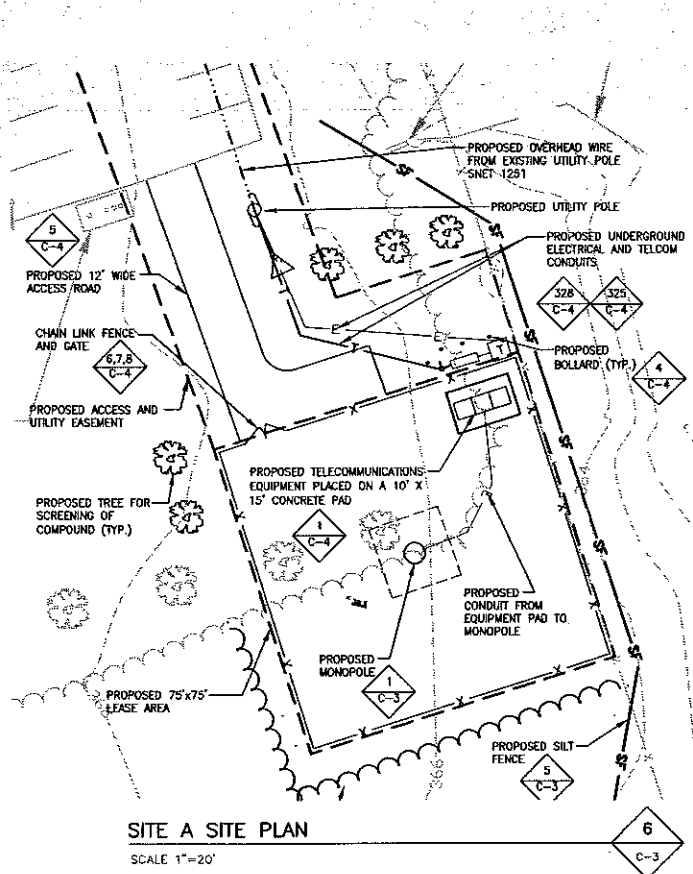




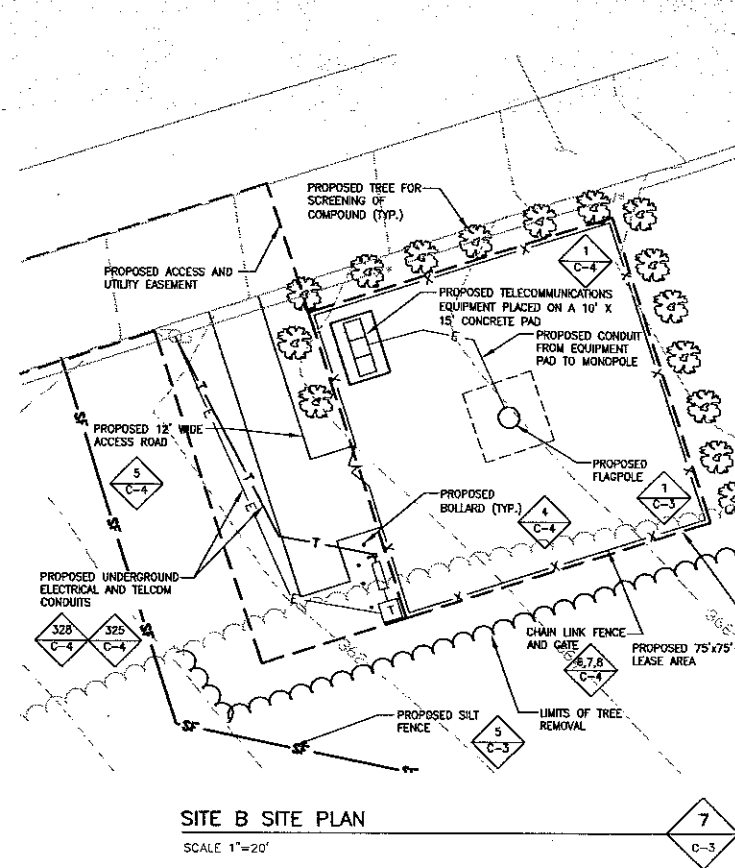
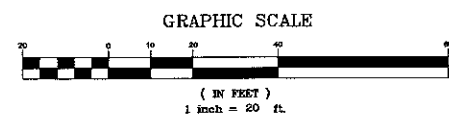
**SITE A MONOPOLE ELEVATION**  
SCALE 1"=10'



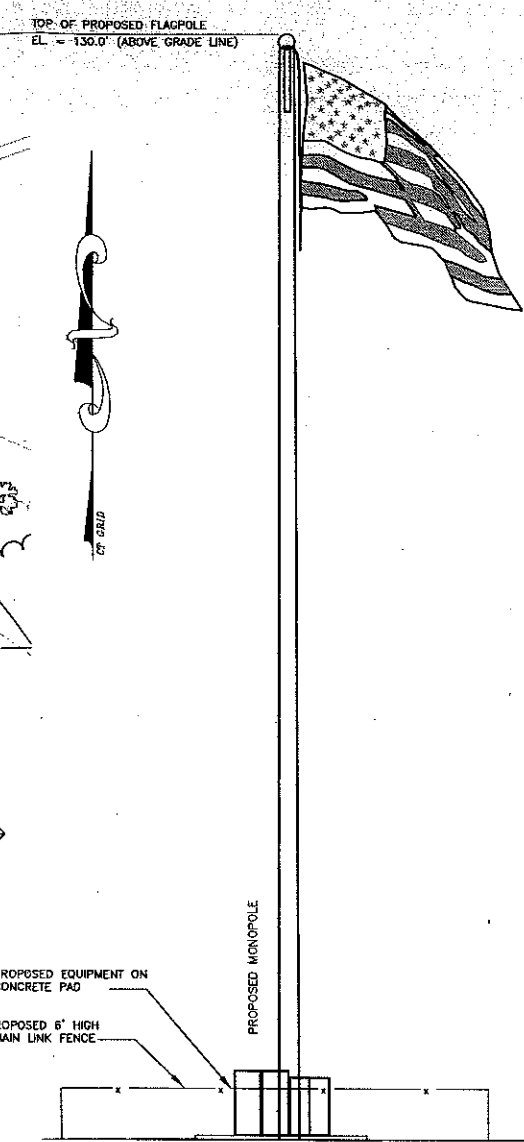
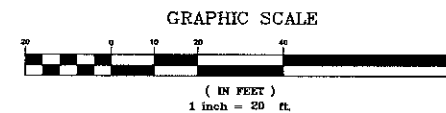
**SITE B ANTENNA ORIENTATION DIAGRAM**  
NOT TO SCALE



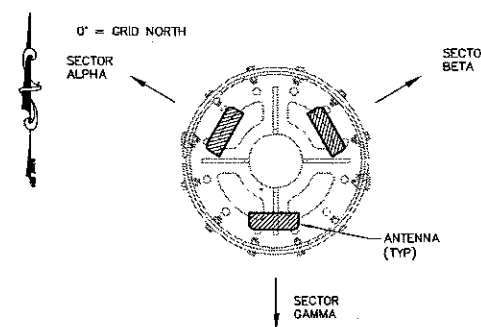
**SITE A SITE PLAN**  
SCALE 1"=20'



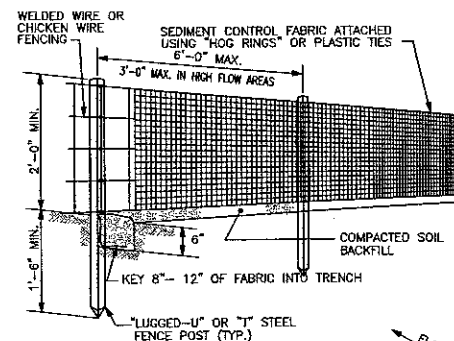
**SITE B SITE PLAN**  
SCALE 1"=20'



**SITE B STEALTH FLAGPOLE ELEVATION**



**SITE B ANTENNA ORIENTATION PLAN**  
NOT TO SCALE



**SILT FENCE**  
NOT TO SCALE

|  |      |   |    |
|--|------|---|----|
|  |      | <b>GRIDCOM TOWER SITE</b><br>ST. JUDES CHURCH<br>71 PLEASANT VIEW ROAD, DERBY, CT |    |
|  |      | <b>SITE PLAN AND TOWER ELEVATION PLAN</b>   |    |
| REV  | DATE | DESCRIPTION   | BY |
| <b>McFARLAND - JOHNSON, INC.</b><br>400 BAYVIEW STREET, SUITE 301<br>NEW LONDON, CT 06320<br>PHONE (860) 447-2844 FAX (860) 447-1632 |      | SCALE: 1"=40' DRAWN: CDG PROJECT: 16572.00<br>CHECKED: ACG DATE: MAY 23, 2005     |    |

C-3

9

# *Proposed Wireless Telecommunications Facility*

St. Jude's Church  
71 Pleasant View Road  
City of Derby  
New Haven County, Connecticut

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Prepared for   **GridCom**  
25 Research Drive  
Westborough, Massachusetts 01582

Prepared by    **VHB/Vanassee Hangen Brustlin, Inc.**  
54 Tuttle Place  
Middletown, CT 06457

February 2005

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## Visual Resource Evaluation

GridCom seeks approval from the Connecticut Siting Council for a Certificate of Environmental Compatibility and Public Need associated with the construction of a wireless telecommunications facility (Facility) to be located within the City of Derby, Connecticut. As part of the approval process, Gridcom has selected two potential site locations (referred to herein as Candidates A and B) for further consideration. One of the Site selection criteria is the potential visual impacts of the proposed Facility.

This "Visual Resource Evaluation" was prepared to evaluate the visibility of each Candidate, identify specific areas where the proposed towers are likely to be visible and provide a comparative analysis of the two Candidates. For the purposes of this document, an approximate 2-mile radius surrounding the center point between the two Candidates was chosen as the "Study Area."

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### Site Setting and Candidate Descriptions

Both Candidate A and Candidate B are located on property at 71 Pleasant View Road in the City of Derby, Connecticut. The host property is currently occupied by St. Jude's Church and rectory. Candidate A is situated behind the church on an undeveloped, wooded portion of the property. This area includes tall, dense shrubbery interspersed with several coniferous trees. Candidate B is located in front of the church in a cleared area adjacent to an existing access road utilized by the church. The Photolog Documentation map contained in Attachment A identifies the locations of the Candidate sites.

The Study Area is traversed by the Route 8, Route 15 and Route 34 transportation corridors, important regional roadways that provide access to other key roadways such as US Route 1 and Interstate 95 and service the New Haven, Derby and Orange commercial districts. Land use surrounding the proposed Site is comprised of medium-density residential parcels, but transitions to large-scale commercial uses as one approaches Route 34.

Topography within the Study Area is generally characterized by rolling hills that range in elevation from approximately 150 feet above mean sea level (AMSL) to just over 400 feet AMSL. The Housatonic River traverses the western portion of the Study Area, forming the boundary between New Haven and Fairfield Counties. The forest cover within the Study Area consists mainly of mixed deciduous hardwood species with an average tree canopy height of 65 feet.<sup>1</sup> This secondary growth forest occupies approximately 3,494 acres of the 8,042-acre study area (43%).

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<sup>1</sup> During the in-field activities associated with this analysis, an infrared laser range finder (Bushnell Yardage Pro) was used to accurately determine the average tree canopy height throughout the Study Area. Trees from numerous locations were selected and measured. The average tree canopy was then established, in this case 65 feet.

The proposed Facility at the Candidate A location would include an approximate 135-foot high monopole tower, onto which flush mounted antennas will be attached. The structure site is located at approximately 380 feet AMSL. Associated ground equipment will be located at the base of the monopole within a chain link fence enclosure. The monopole will be constructed of galvanized steel, which will weather to a non-reflective gray finish. Access to the Facility will be provided via the existing parking area located behind the church building.

The proposed Candidate B Facility includes an approximate 135-foot Flagpole (to accommodate interior antenna installation) and associated ground equipment. The structure site is located at approximately 387 feet AMSL. Access to the Facility will be provided via the existing driveway.

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## Methodology

In order to accurately represent the visibility associated with a given tower Facility, VHB has developed a two-fold approach utilizing both predictive computer modeling and in-field verification. The predictive model is employed to quantitatively assess potential visibility throughout the entire study area, including private property and/or otherwise inaccessible areas for field verification. A "balloon float" and Study Area reconnaissance are also conducted to qualitatively evaluate the potential "viewshed" of the proposed Candidates and provide photographic documentation from publicly accessible areas. A detailed description of the methodologies used in the analysis is provided below.

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## Visibility Analysis

Using ESRI's ArcView® Spatial Analyst, a computer modeling tool, the areas from which at least the tops of the towers are expected to be visible are calculated. This is based on information entered into the computer model, such as tower height, ground elevation, surrounding topography, existing vegetation, and potential visual receptors. Data incorporated in the model includes 7.5 minute digital elevation models (DEMs) and a digital forest layer for the project area. The DEMs were produced by the United States Geological Survey (USGS) in 1982 at a 30 meter resolution. The forest layer was derived through on-screen digitizing in ArcView® GIS from 1990 digital orthophotos with a 1 meter pixel resolution.

A series of constraints were then applied to the computer model to achieve a realistic estimate of where the tower will be visible from within the Study Area. Initially, only topography was used as a visual constraint; the forest canopy is omitted to evaluate all areas of potential visibility without any vegetative screening. Although this is an overly conservative prediction, the initial omission of the forest canopy layer assists in the evaluation of potential seasonal visibility of the proposed facility.

The forested areas within the Study Area were overlaid on the DEM. It was reasoned that all the forested land (beyond a radius of 500 feet from the proposed Site) consisted of light-impenetrable trees of a uniform height. A canopy height of 65 feet was then added to the DEM within the forested areas, and the visibility calculated. As a final step, the forested areas were extracted from the areas of visibility, with the assumption that a person standing within the forest will not be able to view the proposed tower beyond a distance of approximately 500 feet depending on the density and topography of the surrounding woodlands.

Also included on the map is a data layer, obtained from the Connecticut State Department of Environmental Protection (CTDEP), which depicts various land and water resources such as state parks and forests, recreational facilities, dedicated open space and CTDEP boat launches among other categories. This layer is useful in identifying potential visual impacts to State, local or other resources that are located within the Study Area.

Lastly, personnel at the City of Derby were contacted to determine whether any local roads or other areas are designated as scenic. Based on information provided by the City and a review of available data from the Connecticut Department of Transportation (ConnDOT), it was determined that there are no local or state scenic roads located within the Study Area.

A preliminary viewshed map is generated prior to the in-field activity and used during the Study Area reconnaissance in order to confirm that large forested areas were not clear cut since the 1990 flight and to verify the results of the model in comparison to the balloon float. The preliminary map assumes a conservative average forest canopy height of 50 feet; the actual canopy is determined in the field by measuring mature trees from several locations within the Study Area using a hand-held infra-red laser range finder. Information obtained from the balloon float and Study Area reconnaissance is then incorporated into the final visibility map.

## **Balloon Float and Reconnaissance**

On February 1, 2005, Vanasse Hangen Brustlin Inc., (VHB) conducted "balloon floats" at both Candidate Sites and Study Area reconnaissance to assist in evaluating the potential viewshed associated with the proposed facilities. The balloon floats consisted of raising different colored helium-filled balloons to the proposed heights of 135 feet for each Candidate Site. The Study Area reconnaissance consisted of a drive by, windshield survey conducted from public roads and other publicly accessible locations. During the balloon floats, weather conditions were sunny. The temperature was approximately 38 degrees Fahrenheit with calm winds.

Once the balloons were secured at their respective heights, VHB staff conducted a drive-by reconnaissance along the roads located within the Study Area with an emphasis on nearby residential areas to evaluate the results of the preliminary viewshed map and to verify where the balloons were, and were not, visible above the tree canopy. The balloons were photographed from a number of different vantage points to document the actual view towards the proposed towers.

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### Photographic Documentation

The location, orientation and brief description of each photograph included in this Visual Resource Evaluation are depicted on the Photolog Documentation Map contained in Attachment A and are listed below:

1. *View from Sentinel Hill Road at Turner Avenue, looking east – Candidate A and Candidate B are visible.*
  - Both proposed Sites are visible from this location which is representative of views at and adjacent to the Sentinel Hill Road access drive to St. Jude's Church.
2. *View from Pleasant View Road at Entrance to St. Jude's Church, looking southeast – Candidate A is visible; Candidate B is visible looking south.*
  - Candidates A and B are visible from this location looking in slightly different directions. Views of the Sites in this area are mainly limited to the photo location. However, intermittent views are achieved along portions of Pleasant View Road in this general area.
3. *View from Pleasant View Road south of David Humphreys Road, looking southeast – Candidate A is visible; Candidate B is not visible from this location.*
  - An opening in the trees affords views of Candidate A from this area while several adjacent trees serve to obstruct views of Candidate B.
4. *View from Prairier Avenue, looking south – Candidate B is visible; Candidate A is not visible from this location.*
  - Photograph four represents an open, unobstructed view of Candidate B. Nearby trees and houses minimize views from other locations along Prairier Avenue.
5. *View from David Humphreys Road at Bradley School, looking south – Candidate A is visible; Candidate B is visible looking, southwest.*
  - Both Candidate A and Candidate B are visible from this general area which includes and approximate 0.25 mile stretch along David

Humphreys Road east and west of the photo location. Views extend roughly 0.10 mile north along Sunset Drive.

6. *View from Sunset Drive at house #94, looking south – Candidate A is visible; Candidate B is not visible from this location.*

- This photograph was taken from the northern portion of Sunset Drive where the balloon for Candidate A briefly comes into view. Although residential development in this area is somewhat dense, the surrounding tree cover is adequate to entirely block views of Candidate B while minimizing those associated with Candidate A.

7. *View from Commodore Hull Drive at house #23 looking northwest – Candidate A is visible through trees; Candidate B is not visible looking from this location.*

- This photo, representing seasonal or leaf-off conditions, was taken from the end of Commodore Hull Drive. Similar seasonal views of Candidate A can be found along the roadway.

8. *View from General Wooster Drive at house #9, looking west – Candidate A is visible; Candidate B is not visible from this location.*

- A break between two houses affords an unobstructed view of Candidate A. Views are generally limited to the immediate vicinity of the photographic location.

9. *View from end of Lombardi Drive, looking northeast – Candidate A is visible; Candidate B is not visible from this location.*

- Views of Candidate A are generally limited to the terminus of Lombardi Drive, a cul-de-sac that abuts the host property.

10. *View from Lombardi Drive at house #14, looking north – Candidate B is visible; Candidate B is not visible from this location.*

- Prominent views of Candidate B are achieved from this location along Lombardi Drive as the Site is located approximately 0.05 mile north of this photographic location.

11. *View from Grandview Avenue at Garfield Avenue, looking northeast – Candidate B is visible; Candidate A is not visible from this location.*

- Candidate B will be visible within this general area. View 11 depicts the most prominent area of visibility.



12. *View from Sherwood Avenue at house #33, looking southeast – Candidate B is visible; Candidate A is not visible from this location.*

- Views of Candidate B are generally limited to the area from where this photograph was taken as a cleared area between two houses provides a direct line of sight to the proposed facility.

13. *View from Route 34 west of Baldwin Road, looking northwest – Candidate A and Candidate B are visible.*

- Open agricultural land affords views of both Candidate A and Candidate B from this portion of Route 34. Similar views of the Sites extend for approximately 1 mile west of this photographic location.

14. *View from Route 34 at Orange Derby Shopping Center, looking northwest – Candidate A and Candidate B are visible.*

- Unobstructed views of the proposed Sites are achieved from this segment of Route 34 which accommodates large-scale retail land uses.

15. *View from Rainbow Trail at Willard Road, looking north – Candidate A is visible; Candidate B is visible, looking north.*

- Views of both Candidates are achieved from this segment of Rainbow Trail which offers a direct line of sight view towards the proposed facilities.

16. *View from Willard Road at house #1011, looking northwest – Candidate A is visible through trees; Candidate B is visible looking northwest.*

- Views 16A and 16B were taken from the same general area along Willard Road. View 16A is seasonal while View 16B depicts views above the existing tree canopy. Views of both Candidates are generally confined to the area from which the photographs were taken.

17. *View from Route 110 north of Gordon Avenue, looking northeast – Candidate A and Candidate B are visible.*

- Open views of both Candidates are obtained from this and adjacent segments of Route 110 for a distance of approximately one half of a mile.

18. *View from Ladas Place at house #46, looking northeast – Candidate A is visible; Candidate B is not visible from this location.*

- Views of Candidate A are limited to the immediate vicinity of the photo location while views of Candidate B are obstructed by vegetation.

19. *View from Route 110 at house #122, looking northeast – Candidate A and Candidate B are visible.*

- Open views of both Candidates are obtained from this and adjacent segments of Route 110 extending northward for approximately one-half mile.

20. *View from end of Jenyfer Court, looking northeast – Candidate A and Candidate B are visible.*

- Minimal tree cover and a ground elevation of approximately 200 feet AMSL in this area combine to allow for open views across the Housatonic River of both Candidate A and Candidate B.

21. *View from Route 110 north of Route 8 underpass, looking west – Candidate A and Candidate B are visible.*

- Commercial and industrial development characteristics and uses along this segment of Route 110. The urban nature of the area affords direct views towards the Candidates.

Photographs of the balloons from the view points listed above were taken with a Nikon Digital Camera COOLPIX 950, which has a lens focal length equivalent to a 35 mm camera with a 38 to 115 mm zoom. "The lens that most closely approximates the view of the unaided human eye is known as the normal focal-length lens. For the 35 mm camera format, which gives a 24x36 mm image, the normal focal length is about 50 mm.<sup>2</sup> The optical zoom lens for the Nikon COOLPIX was set at a range of 50 mm to 70 mm for the purposes of this Visual Resource Evaluation.

The locations of the photographic points are recorded in the field using a hand held GPS receiver and are subsequently plotted on the maps contained in the attachments to this document.

## Photographic Simulations

Photographic Simulations were generated for the twenty-one locations (Views 1-21) where at least one of the balloons was visible. The Photographic Simulations

<sup>2</sup> Warren, Bruce. *Photography*, West Publishing Company, Eagan, MN, c. 1993, (page 70).

represent scaled depictions of the proposed Facilities of each Candidate Site. The height of the Facility is determined based on the location of the balloon in the photographs and a proportional image of the Facility is simulated into the photographs. The simulations are contained in Attachment B.

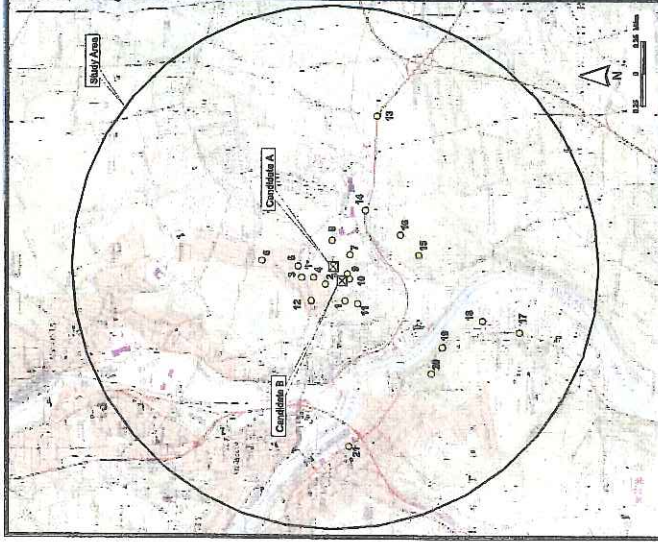
## Conclusions

Based on the viewshed analysis, areas from where Candidate A and Candidate B will be visible above the tree canopy comprise approximately 200 acres and 207 acres, respectively (just over two percent of the Study Area for each Site). Large areas of visibility depicted over the Housatonic River and adjacent, undeveloped farmland account for significant portions of the total acreage. As one would expect, given the Sites close proximity to one another, the viewshed associated with each Candidate location is similar in nature. In both cases, the designs of the towers, a flush mounted monopole (Candidate A) and flagpole (Candidate B), would serve to minimize the visual profile of the proposed Facility. Conservatively, VHB estimates that approximately 70 residences will have year round views associated with either of the proposed Facilities. Seasonal, or leaf off, visibility is also expected to be similar for the two Candidates and would comprise approximately 81 additional acres. In total, VHB anticipates that approximately 40 residences within the Study Area would have views of either of the Candidates during the winter months when there are no leaves on the deciduous tree species.

# Photographic Documentation and Simulation

View 1A Flush Mount Monopole  
Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

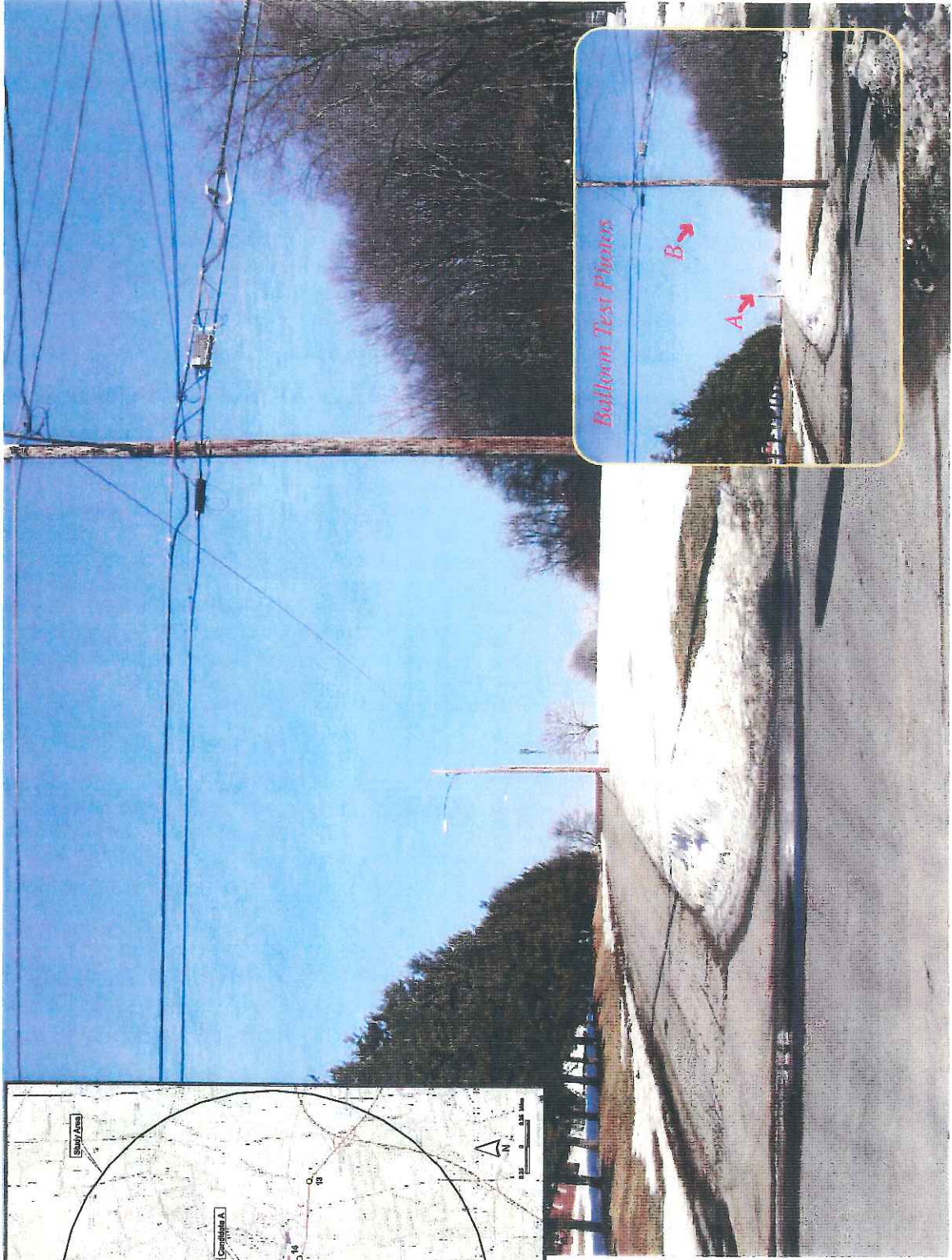


PHOTO TAKEN FROM SENTINEL HILL ROAD AT TURNER AVENUE, LOOKING EAST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.34 MILE +/-

GRIDCOM

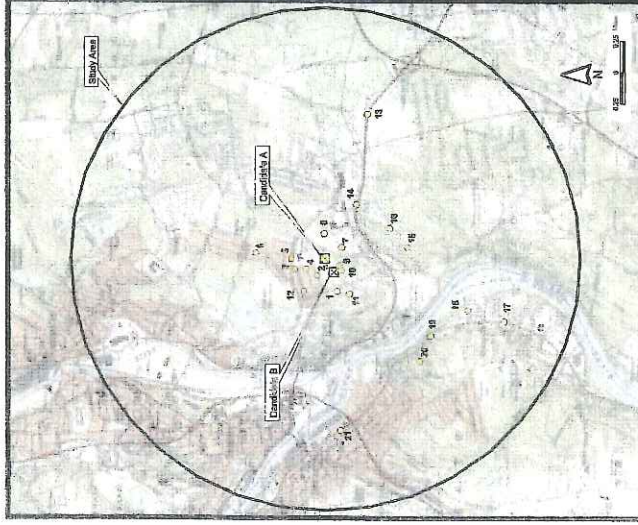




# Photographic Documentation and Simulation

View 1B Flagpole  
Candidate B

City of  
Derby  
Connecticut



St. Jude's Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

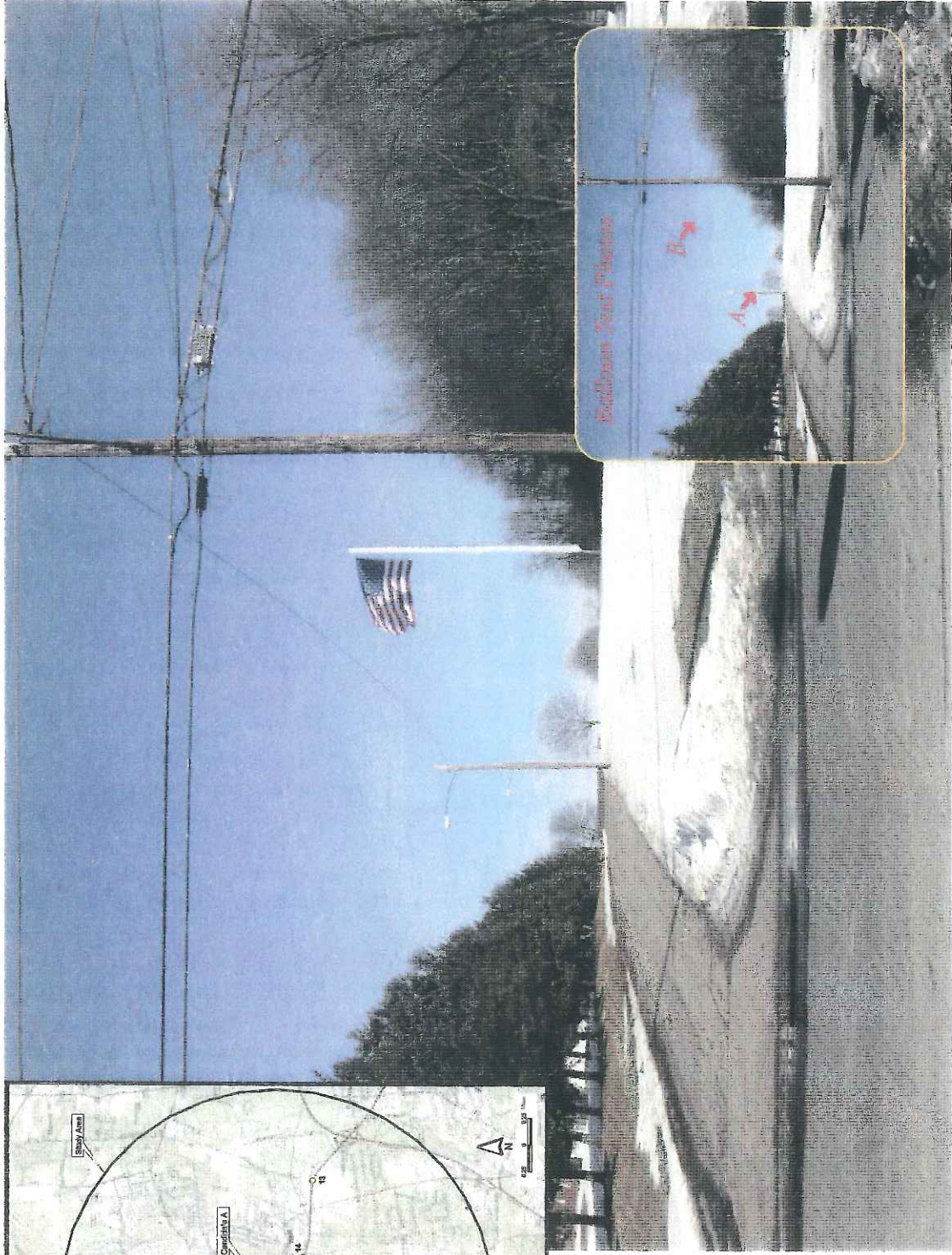


PHOTO TAKEN FROM SENTINEL HILL ROAD ATTUNER AVENUE, LOOKING EAST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.34 MILE +/-

GRID.COM



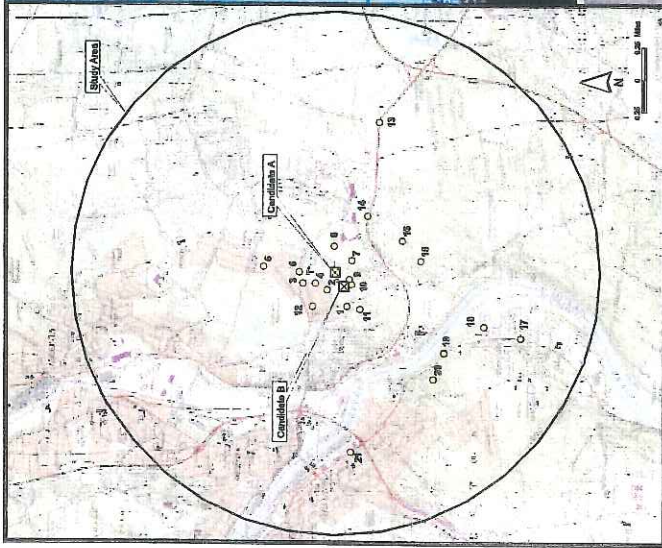


# Photographic Documentation and Simulation

View 2A Flush Mount Monopole

Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

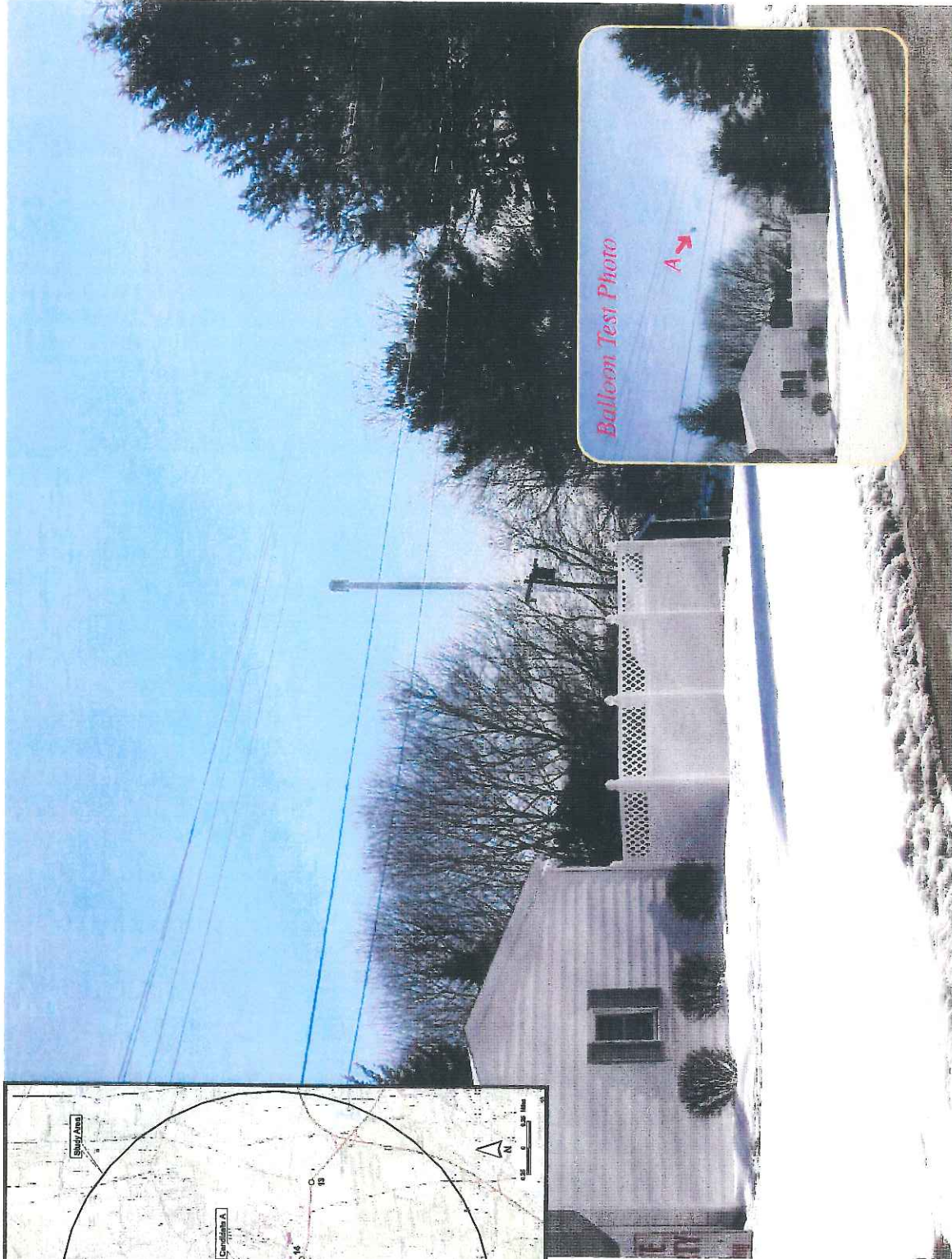


PHOTO TAKEN FROM PLEASANT VIEW ROAD AT ENTRANCE TO ST. JUDE'S CHURCH, LOOKING SOUTHEAST -  
CANDIDATE A IS VISIBLE; CANDIDATE B IS VISIBLE LOOKING SOUTH (SEE PHOTO 2B)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.14 MILE +/-

GRIDCOM

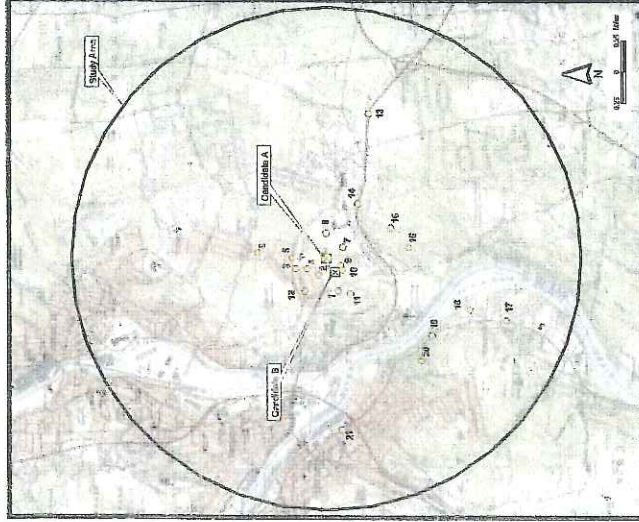




# Photographic Documentation and Simulation

View 2B Flagpole  
Candidate B

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

the following information is provided for your information and use only. It is not to be used for any other purpose.

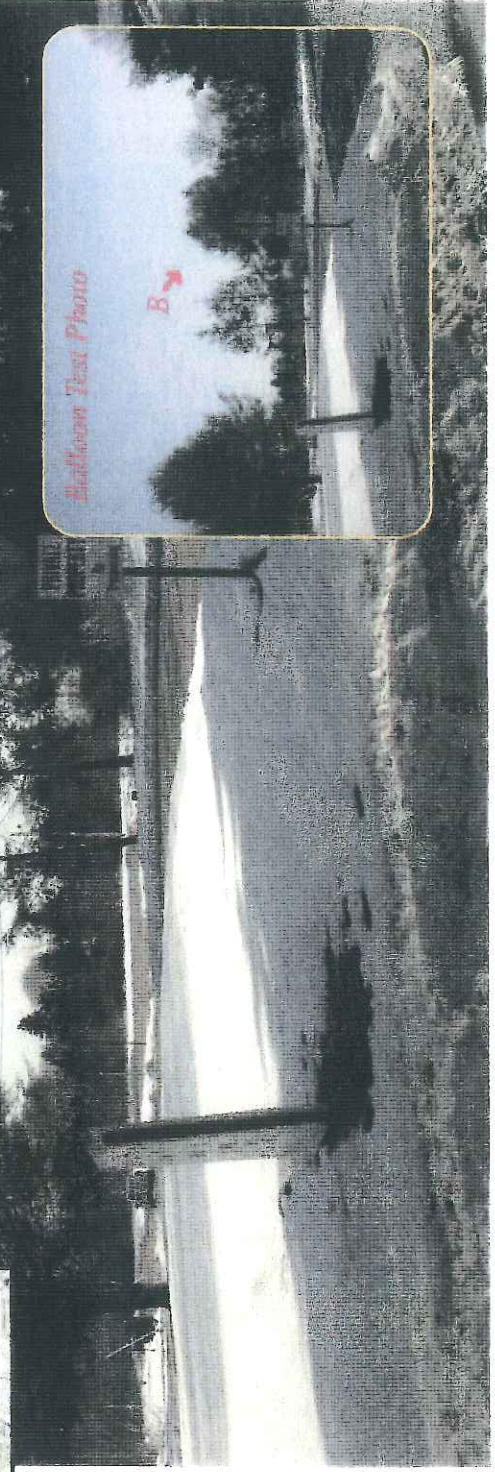


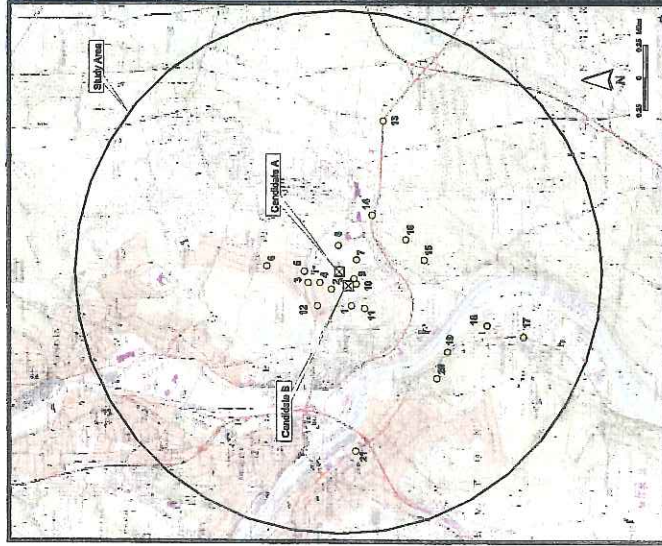
PHOTO TAKEN FROM PLEASANT VIEW ROAD AT ENTRANCE TO ST. JUDE'S CHURCH, LOOKING SOUTH - CANDIDATE B IS VISIBLE; CANDIDATE A IS VISIBLE LOOKING SOUTHEAST (SEE PHOTO 2A)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 0.12 MILE +/-

GRIDCOM





Photographic Documentation and Simulation View 3 Flush Mounted Monopole  
Candidate A



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

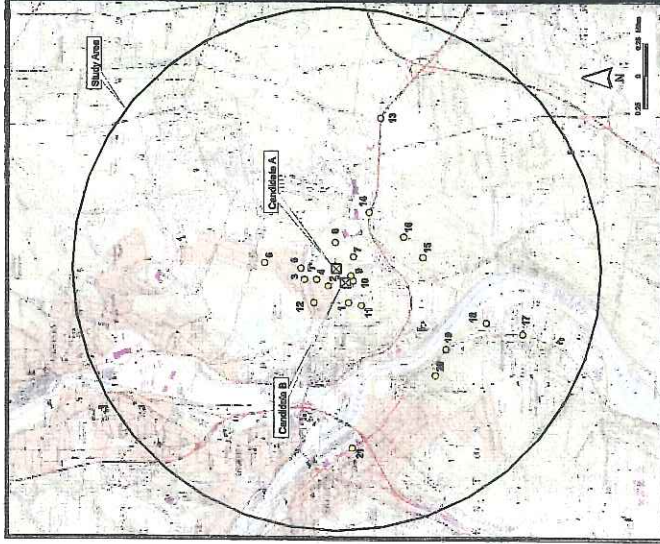
Flush Mount Monopole  
with 1 carrier



PHOTO TAKEN FROM PLEASANT VIEW ROAD SOUTH OF DAVID HUMPHREYS ROAD, LOOKING SOUTHEAST - CANDI-  
DATE A IS VISIBLE; CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.26 MILE +/-



Photographic Documentation and Simulation  
View 4 Flagpole  
Candidate B



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

GRIDCOM



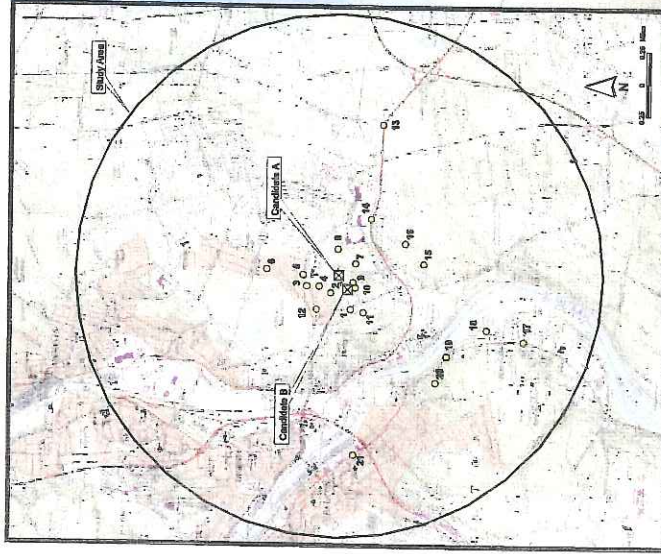
PHOTO TAKEN FROM PRAIRIER AVENUE AT PLEASANT VIEW ROAD, LOOKING SOUTH - CANDIDATE B IS VISIBLE;  
CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.16 MILE +/-



# Photographic Documentation and Simulation

## View 5A Flush Mounted Monopole Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier



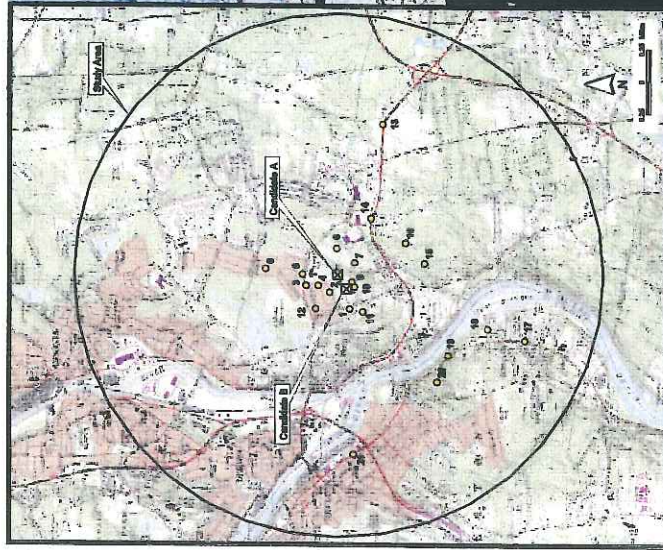
PHOTO TAKEN FROM DAVID HUMPHREYS ROAD AT BRADLEY SCHOOL, LOOKING SOUTH - CANDIDATE A IS VISIBLE;  
CANDIDATE B IS VISIBLE, LOOKING SOUTHWEST (SEE PHOTO 5B)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.27 MILE +/-

GRIDCOM





Photographic Documentation and Simulation View 5B Flagpole  
Candidate B



St. Junes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

GRIDCOM



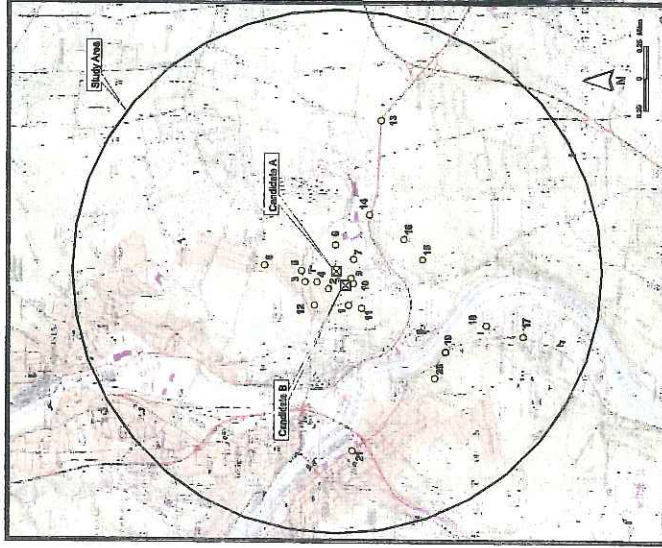
PHOTO TAKEN FROM DAVID HUMPHREYS ROAD AT BRADLEY SCHOOL, LOOKING SOUTHWEST - CANDIDATE B IS VISIBLE; CANDIDATE A IS VISIBLE, LOOKING SOUTH (SEE PHOTO 5A)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 0.35 MILE +/-



# Photographic Documentation and Simulation

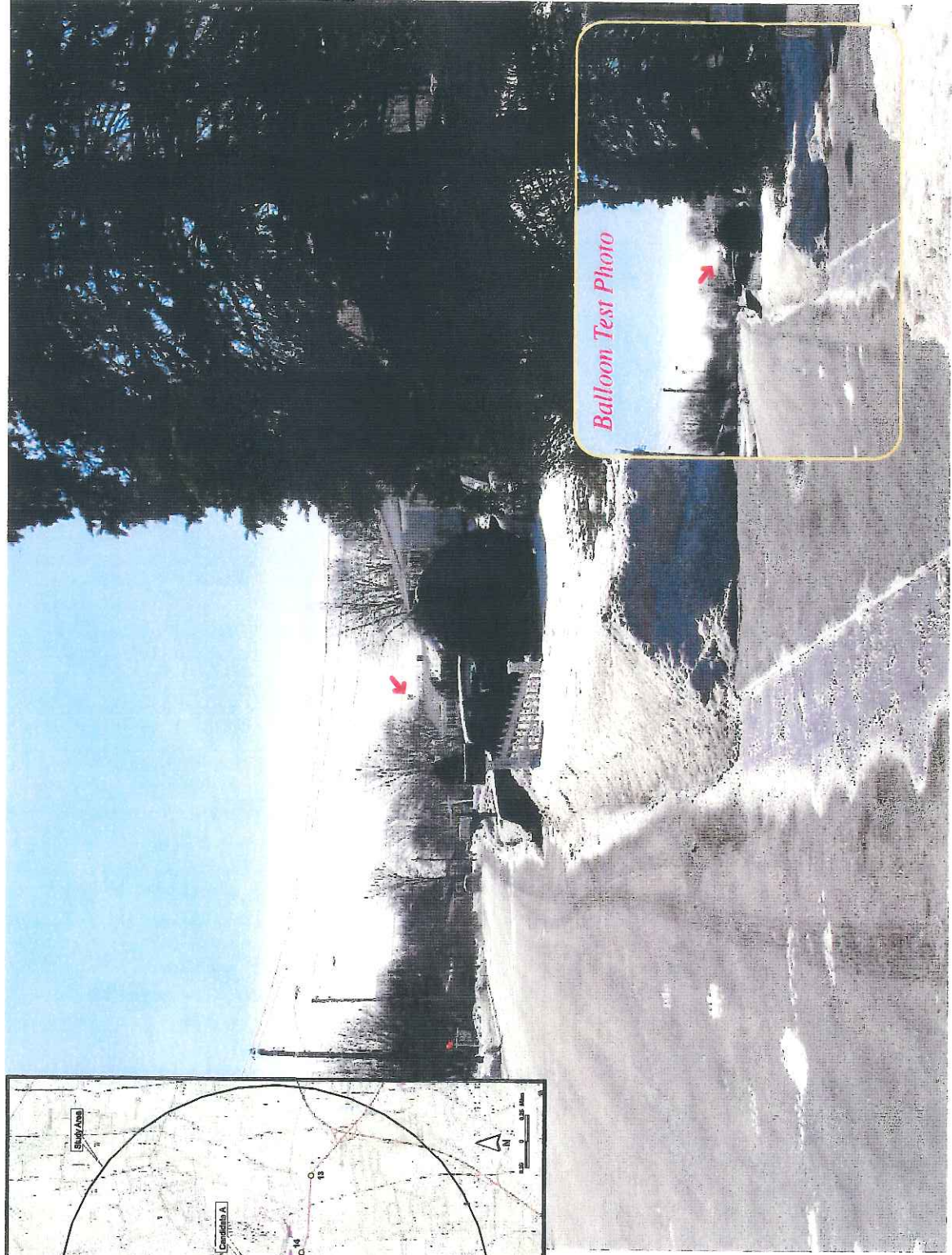
## View 6 Flush Mounted Monopole Candidate A

City of  
Derby  
Connecticut



St. Jude's Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier



Balloon Test Photo

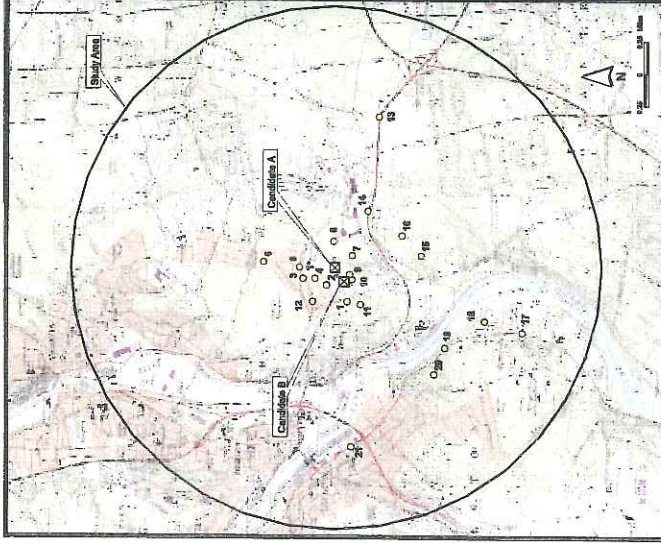
PHOTO TAKEN FROM SUNSET DRIVE AT HOUSE #94, LOOKING SOUTH - CANDIDATE A IS VISIBLE; CANDIDATE B IS NOT VISIBLE AT THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.56 MILE +/-

GRIDCOM





Photographic Documentation and Simulation View 7 Flush Mounted Monopole  
Candidate A



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

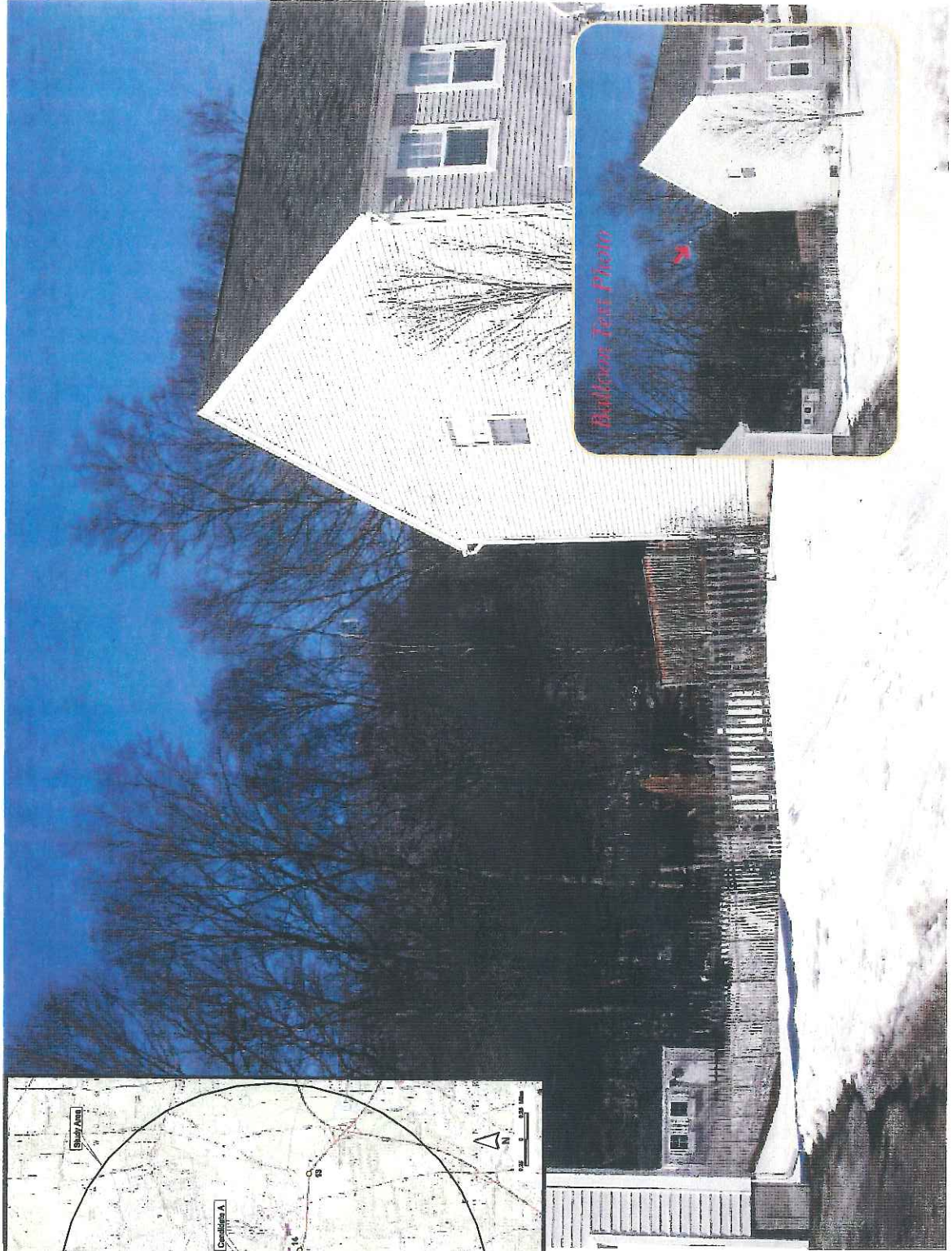
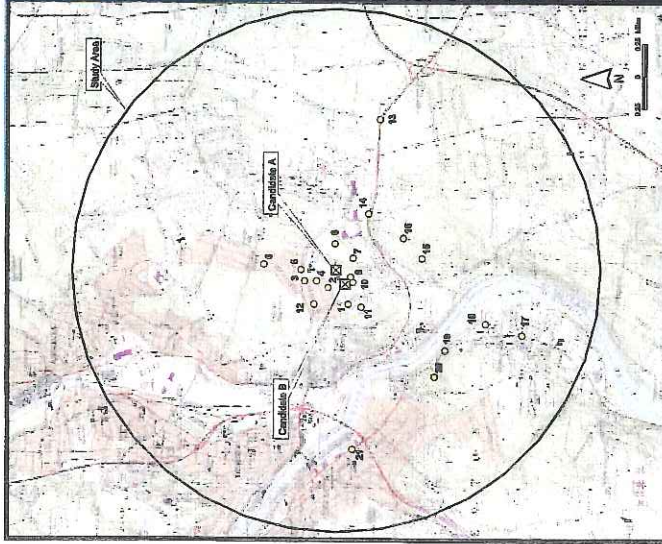


PHOTO TAKEN FROM COMMODORE HULL DRIVE AT HOUSE #23, LOOKING NORTHWEST - CANDIDATE A IS VISIBLE THROUGH TREES; CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.15 MILE +/-



Photographic Documentation and Simulation  
View 8 Flush Mounted Monopole  
Candidate A



St. Jutes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

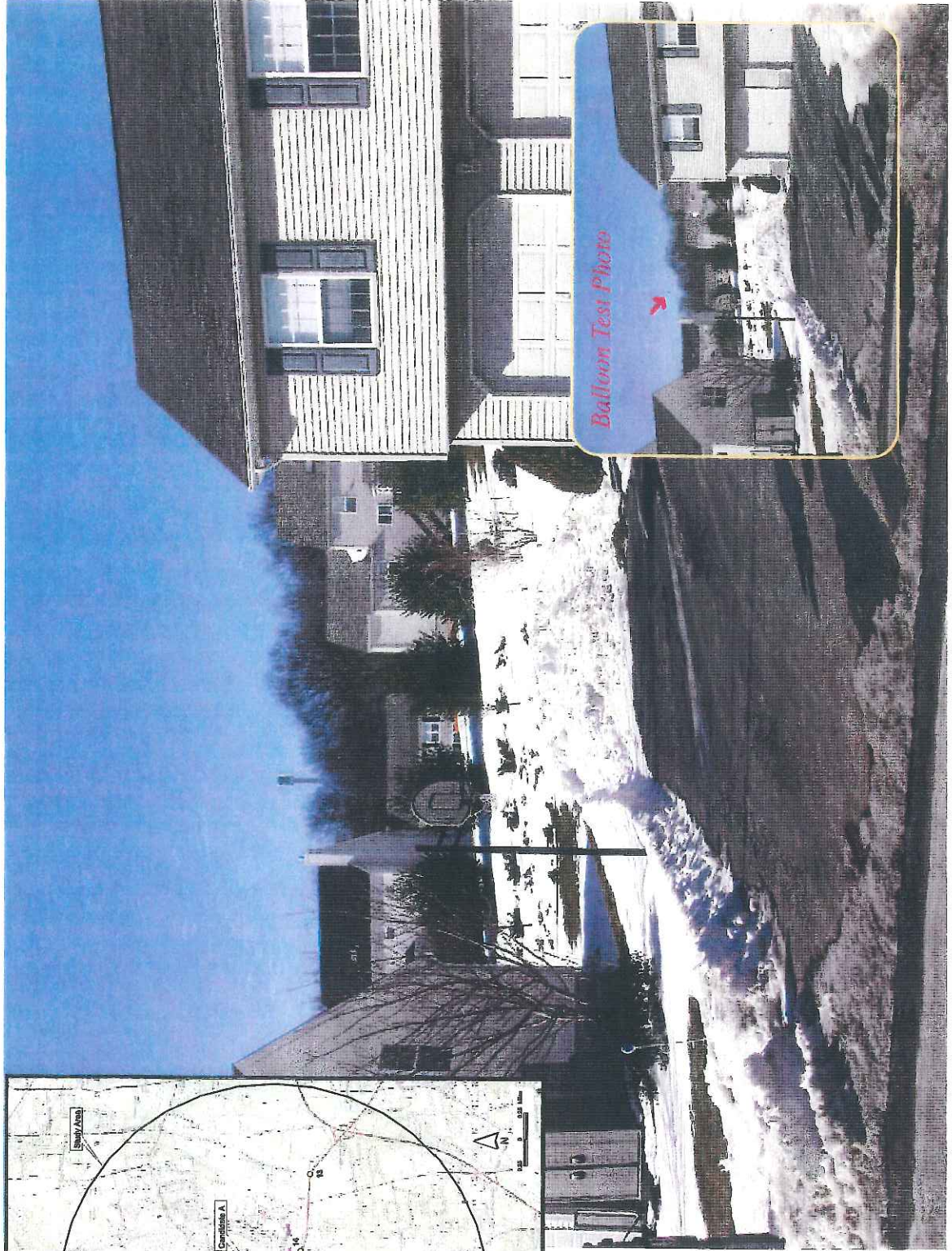
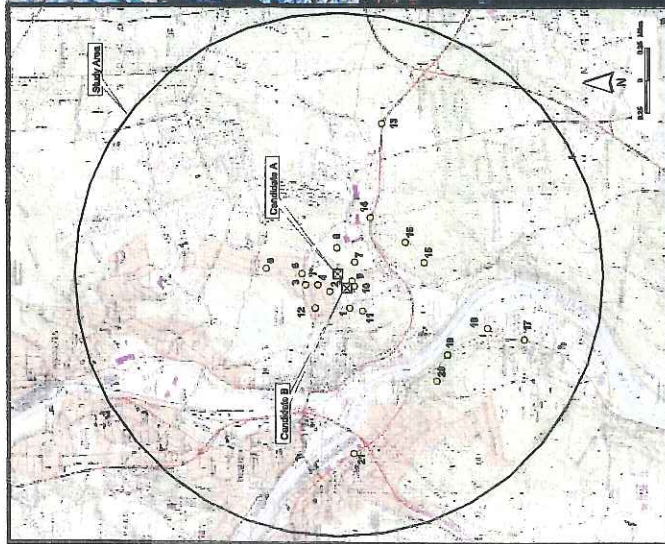


PHOTO TAKEN FROM GENERAL WOOSTER DRIVE AT HOUSE #9, LOOKING WEST - CANDIDATE A IS VISIBLE;  
CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.22 MILE +/-



Photographic Documentation and Simulation      View 9 Flush Mounted Monopole  
Candidate A



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

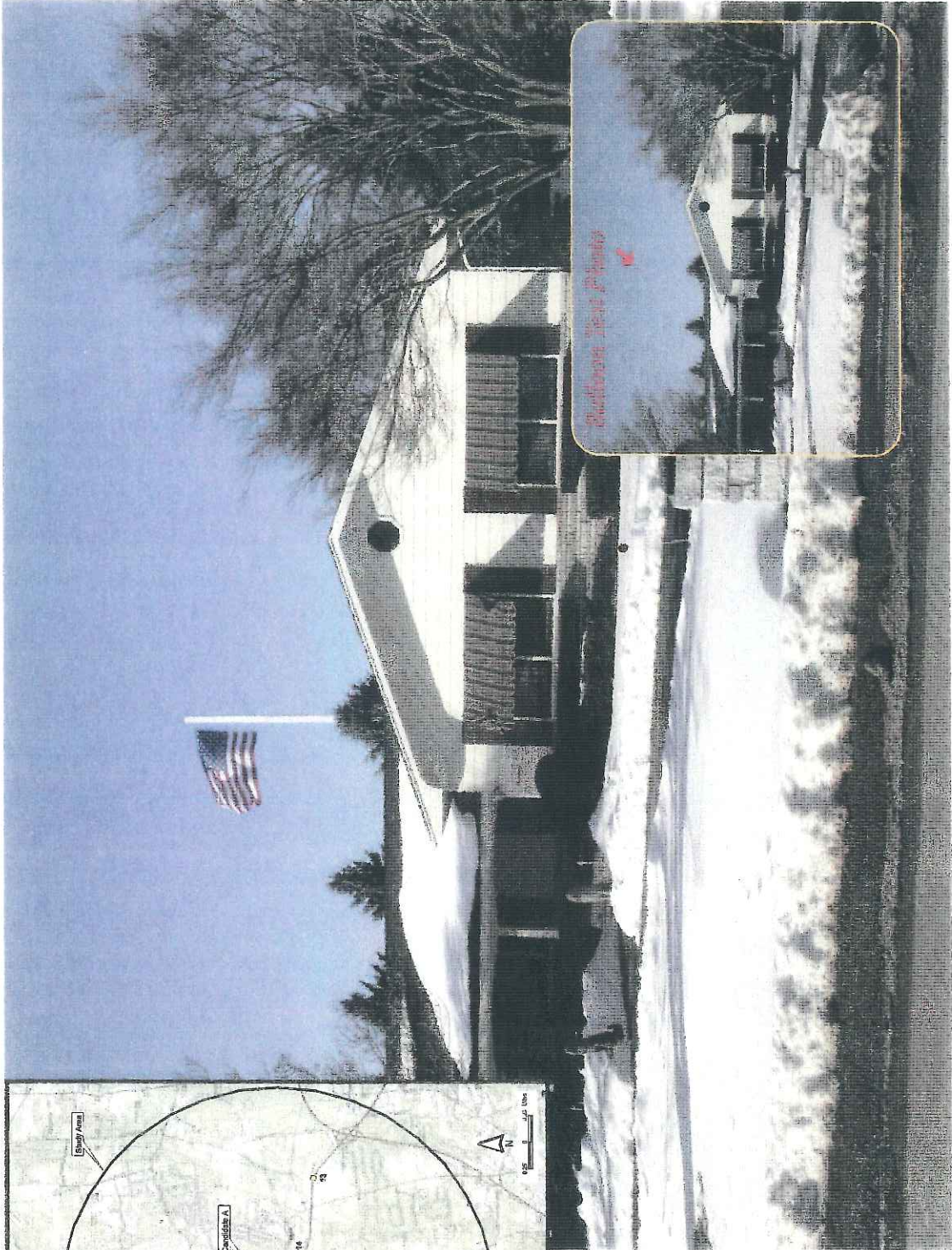
Flush Mount Monopole  
with 1 carrier

GRIDCOM



PHOTO TAKEN FROM END OF LOMBARDI DRIVE, LOOKING NORTHEAST - CANDIDATE A IS VISIBLE; CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.11 MILE +/-





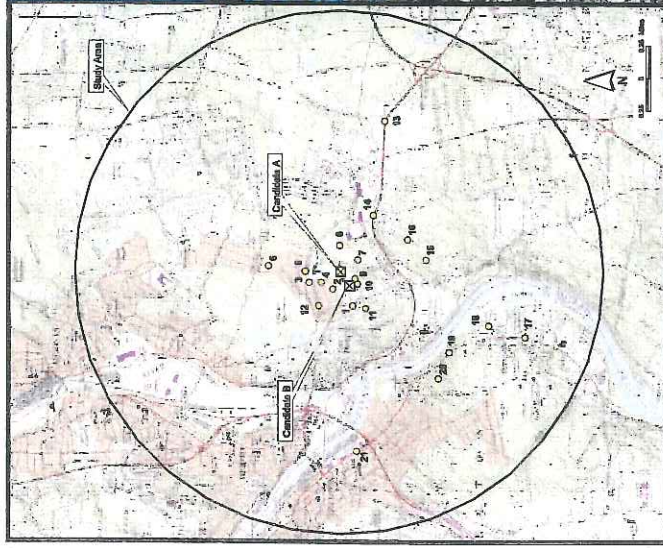
## Flagpole

DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.15 MILE +/-

DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 0.05 MILE +/-



Photographic Documentation and Simulation View 11 Flagpole  
Candidate B



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole



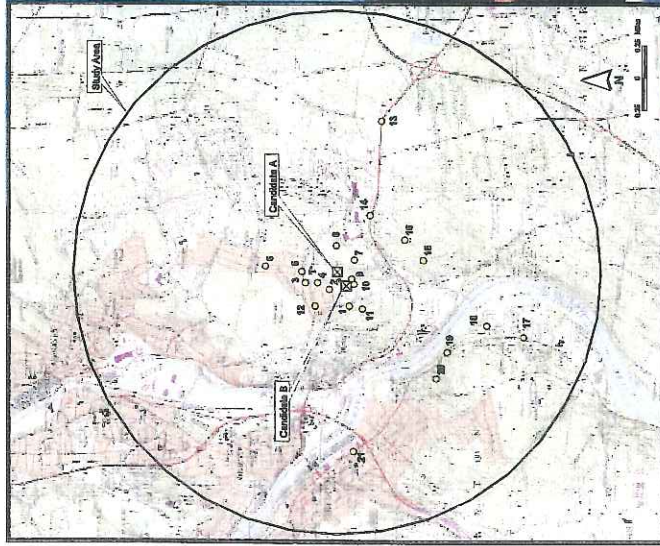
Balloon Test Photo



PHOTO TAKEN FROM GRANDVIEW AVENUE AT GARFIELD AVENUE, LOOKING NORTHEAST - CANDIDATE B IS  
VISIBLE; CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.34 MILE +/-



Photographic Documentation and Simulation View 12 Flagpole  
Candidate B



St. Junes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

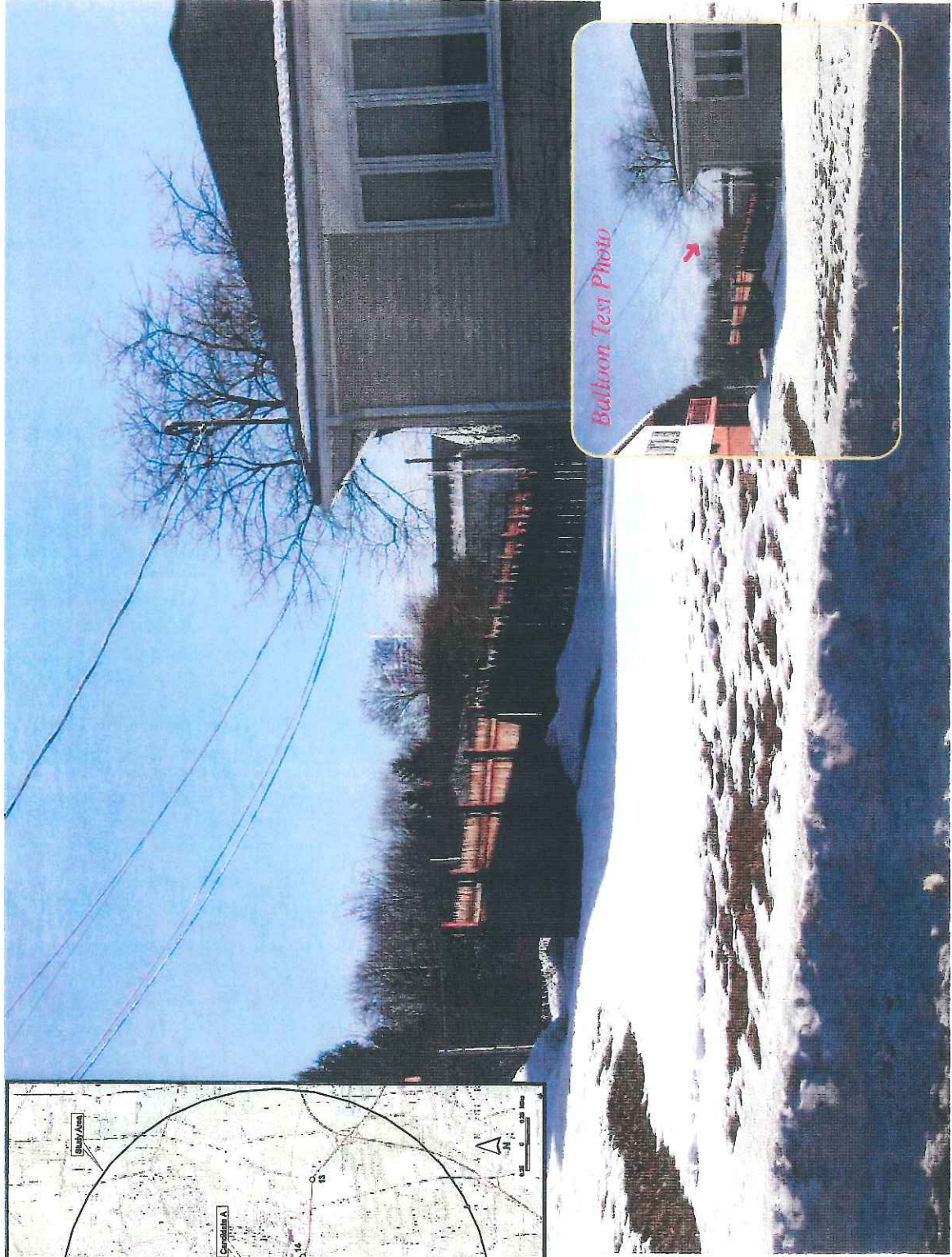


PHOTO TAKEN FROM SHERWOOD AVENUE AT HOUSE #33, LOOKING SOUTHEAST - CANDIDATE B IS VISIBLE;  
CANDIDATE A IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.31 MILE +/-

GRIDCOM

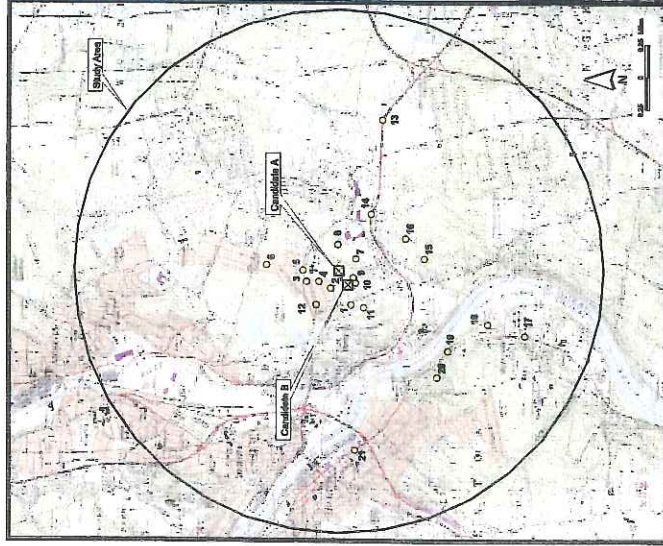




# Photographic Documentation and Simulation

View 13A Flush Mounted Monopole  
Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

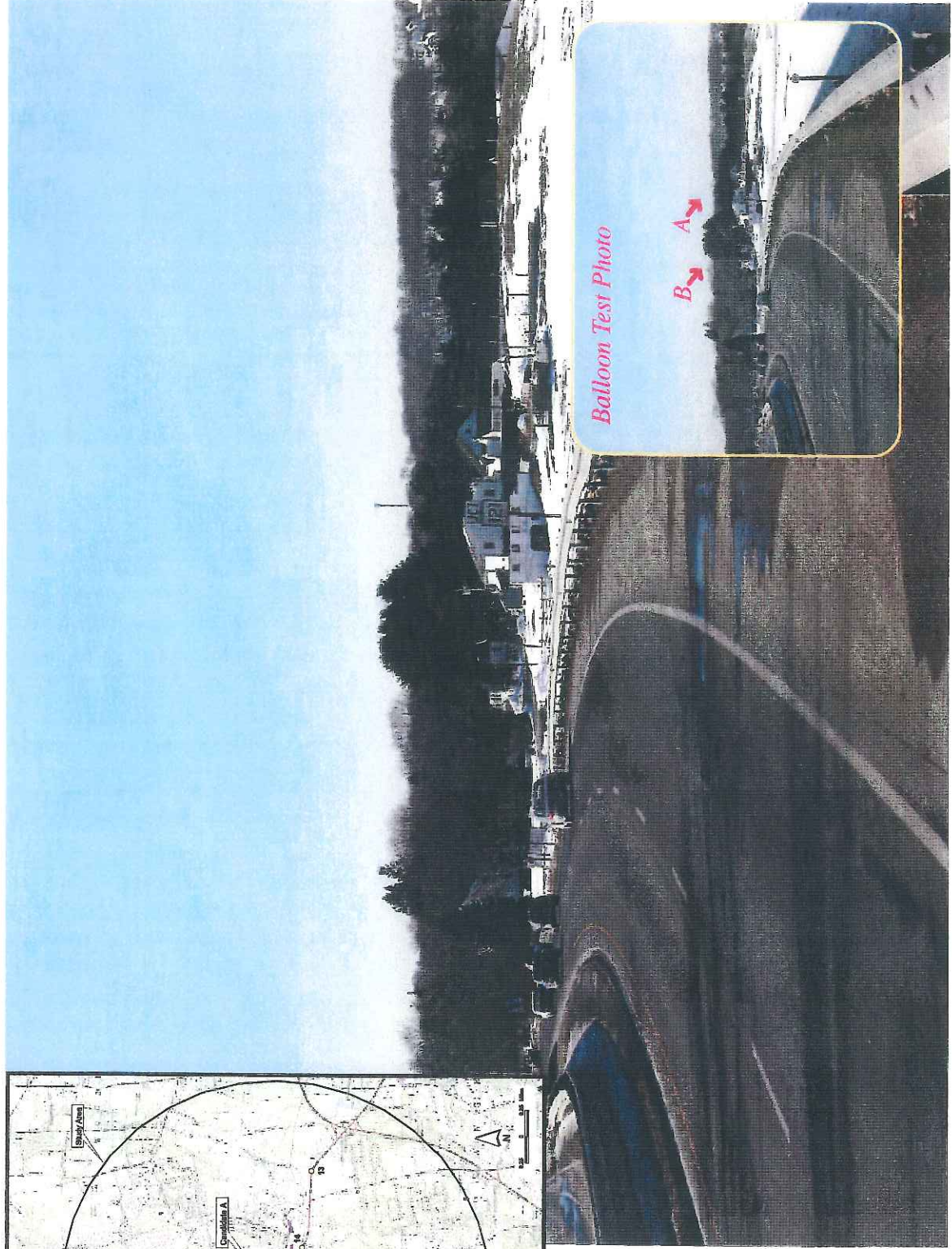


PHOTO TAKEN FROM ROUTE 34 WEST OF BALDWIN ROAD, LOOKING NORTHWEST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.21 MILES +/-

GRIDCOM

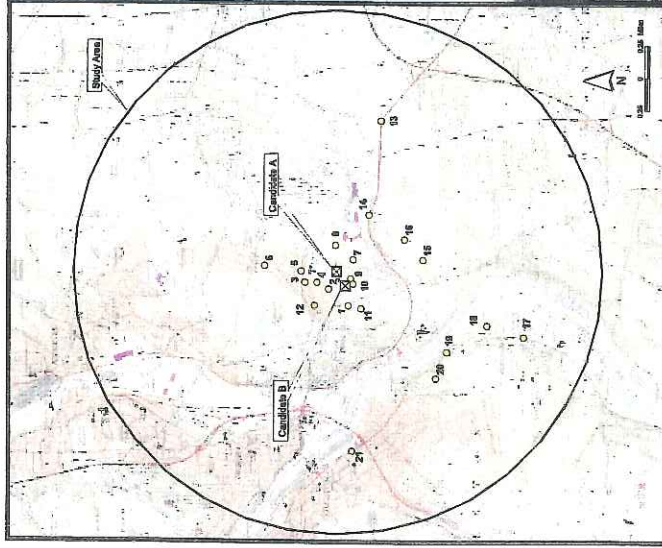




# Photographic Documentation and Simulation

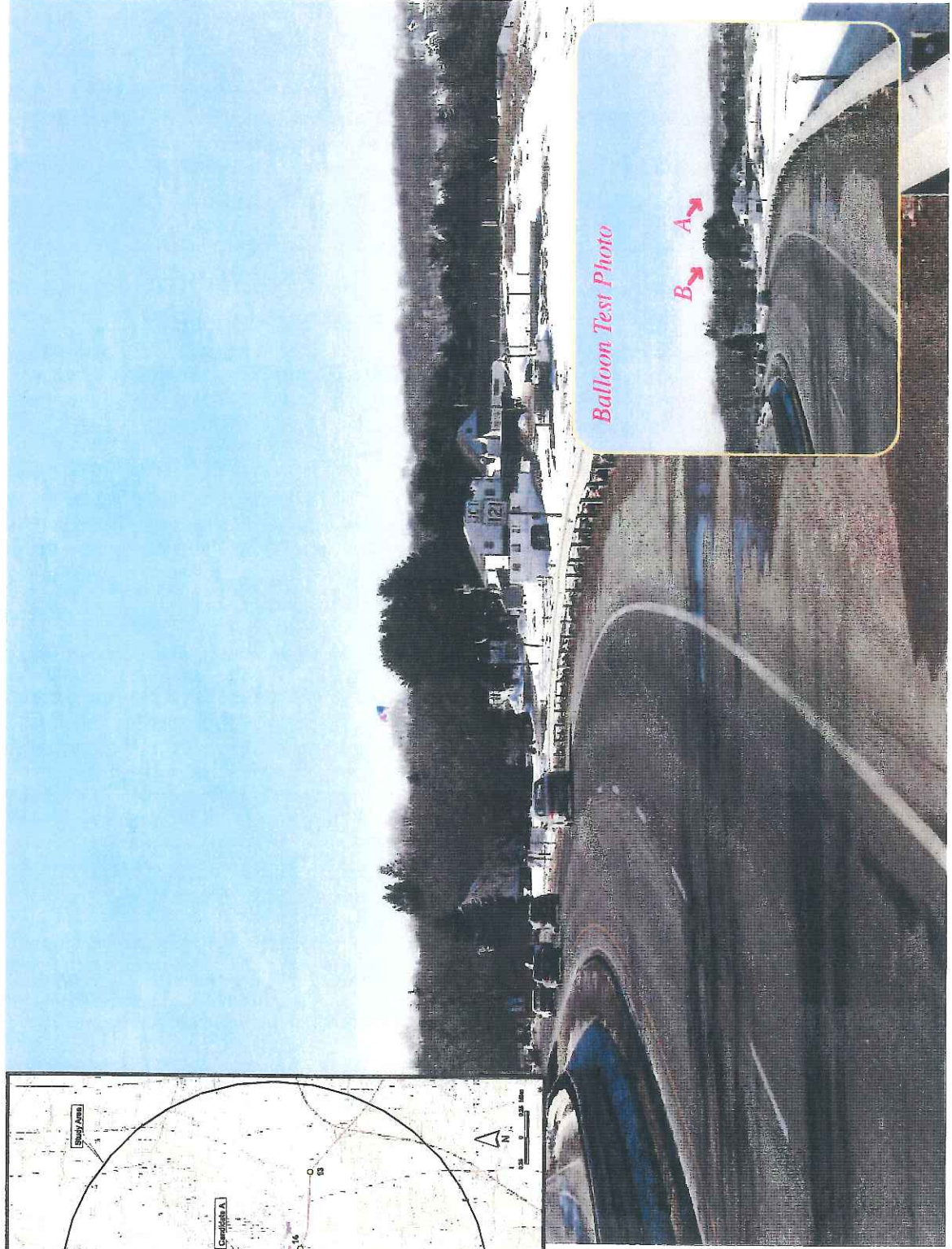
View 13B Flagpole  
Candidate B

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole



Balloon Test Photo

B A

PHOTO TAKEN FROM ROUTE 34 WEST OF BALDWIN ROAD, LOOKING NORTHWEST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.21 MILES +/-

GRIDCOM

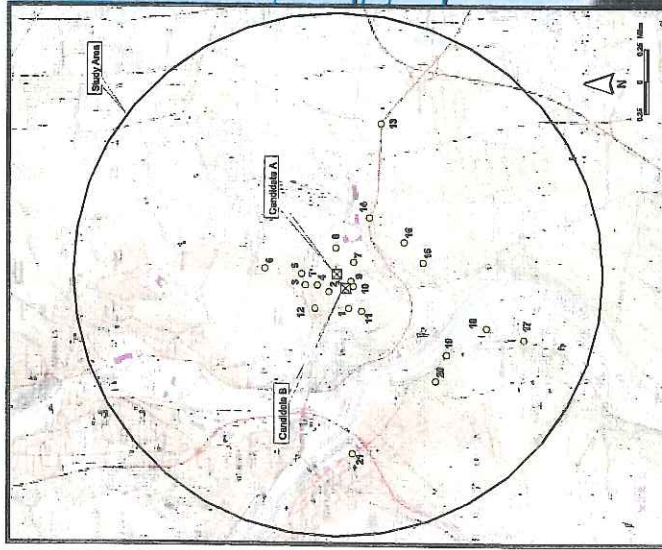




# Photographic Documentation and Simulation

View 14A Flush Mounted Monopole  
Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

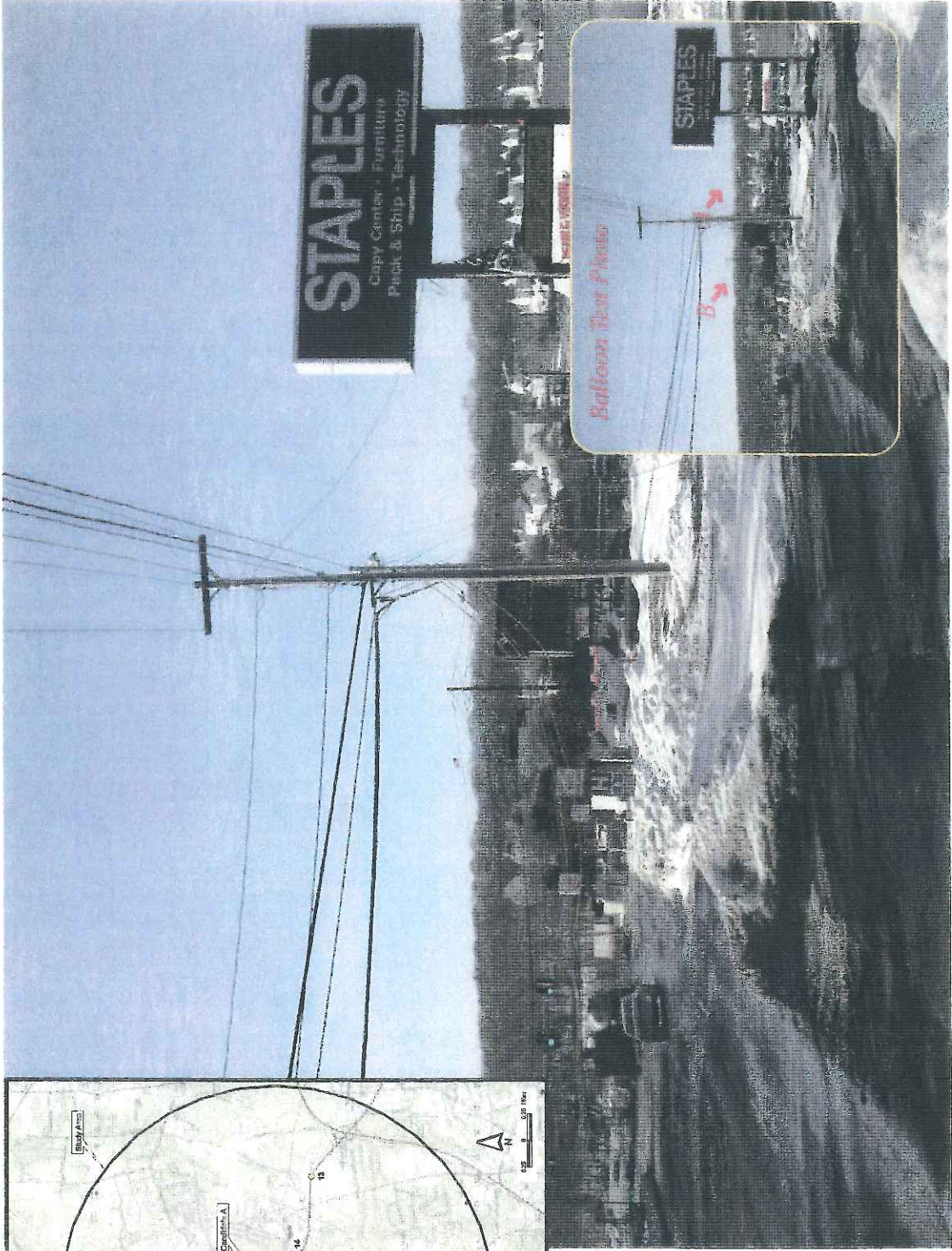


PHOTO TAKEN FROM ROUTE 34 AT ORANGE DERBY SHOPPING CENTER, LOOKING NORTHWEST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.50 MILE +/-

GRIDCOM







## Flagpole

DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.50 MILE +/-

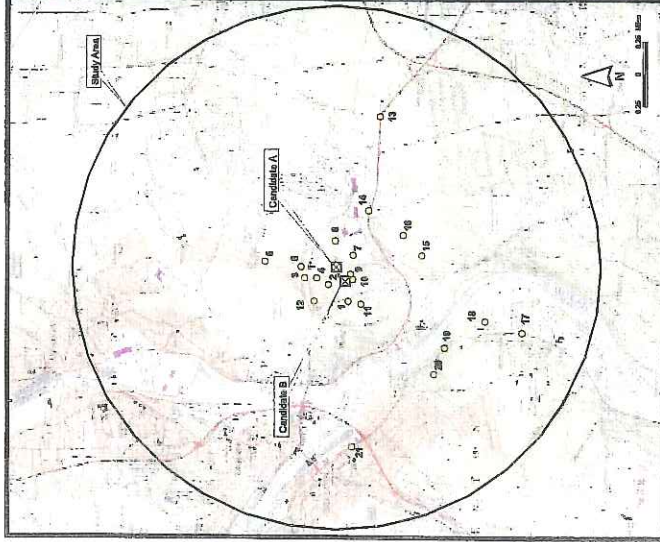
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 0.57 MILE +/-



# Photographic Documentation and Simulation

City of  
Derby  
Connecticut

View I5A Flush Mounted Monopole  
Candidate A



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier



PHOTO TAKEN FROM RAINBOW TRAIL AT WILLARD ROAD, LOOKING NORTH - CANDIDATE A IS VISIBLE; CANDIDATE B IS VISIBLE, LOOKING NORTH (SEE PHOTO 15B)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.64 MILE +/-

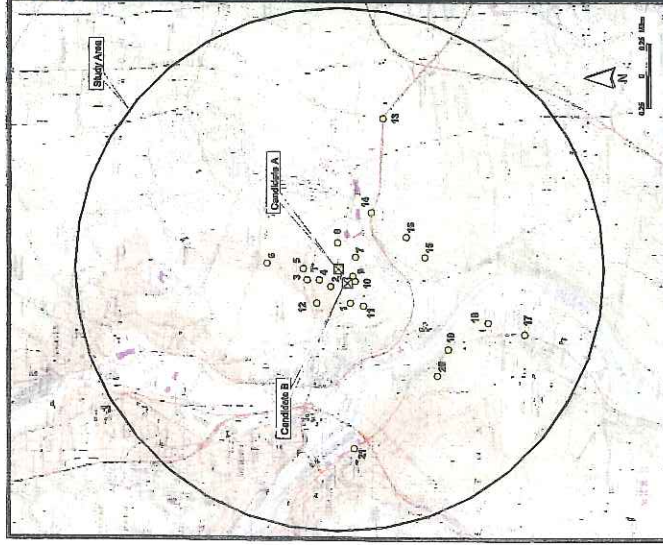
GRID.COM





View 15B Flagpole  
Candidate B

Photographic Documentation and Simulation



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole



Buttman Test Photo

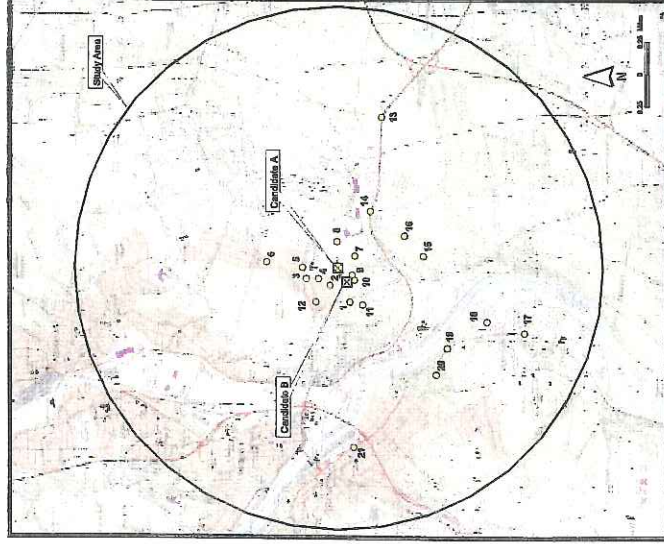
PHOTO TAKEN FROM RAINBOW TRAIL AT WILLARD ROAD, LOOKING NORTH - CANDIDATE B IS VISIBLE; CANDIDATE A IS VISIBLE, LOOKING NORTH (SEE PHOTO 15A)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 0.61 MILE +/-



# Photographic Documentation and Simulation

View 16A Flush Mounted Monopole  
Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier



PHOTO TAKEN FROM WILLARD ROAD AT HOUSE #1011, LOOKING NORTHWEST - CANDIDATE A IS VISIBLE THROUGH TREES; CANDIDATE B IS VISIBLE LOOKING NORTHWEST (SEE PHOTO 16B)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 0.57 MILE +/-

GRID|OM

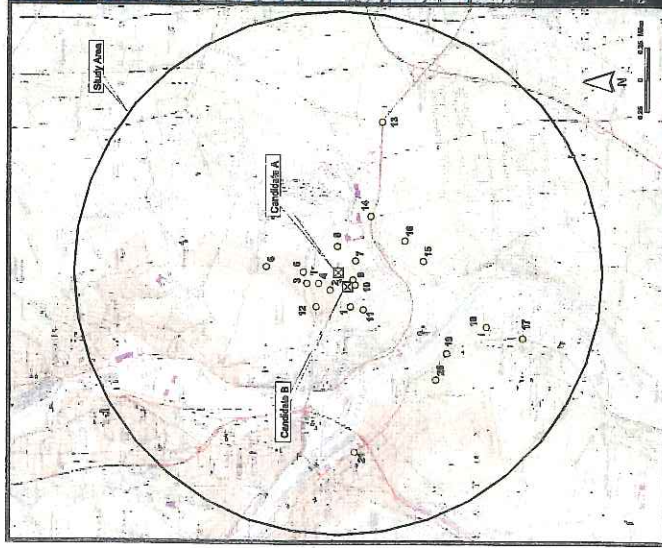




# Photographic Documentation and Simulation

View 16B Flagpole  
Candidate B

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole



Balloon Test Photo



PHOTO TAKEN FROM WILLARD ROAD AT HOUSE #1011, LOOKING NORTHWEST - CANDIDATE B IS VISIBLE; CANDIDATE A IS VISIBLE THROUGH TREES, LOOKING NORTHWEST (SEE PHOTO 16A)  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 0.56 MILE +/-

GRIDCOM

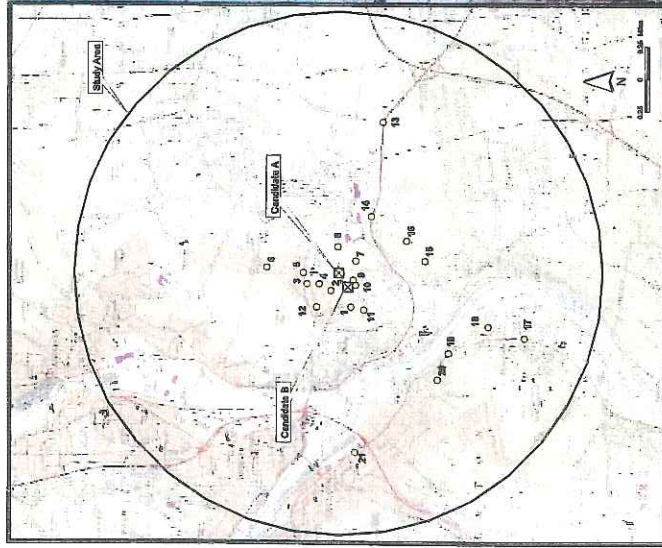




# Photographic Documentation and Simulation

View 17A Flush Mounted Monopole  
Candidate A

City of  
Derby  
Connecticut



St. Junes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier



PHOTO TAKEN FROM ROUTE 110 NORTH OF GORDON AVENUE, LOOKING NORTHEAST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.49 MILES +/-

GRIDCOM

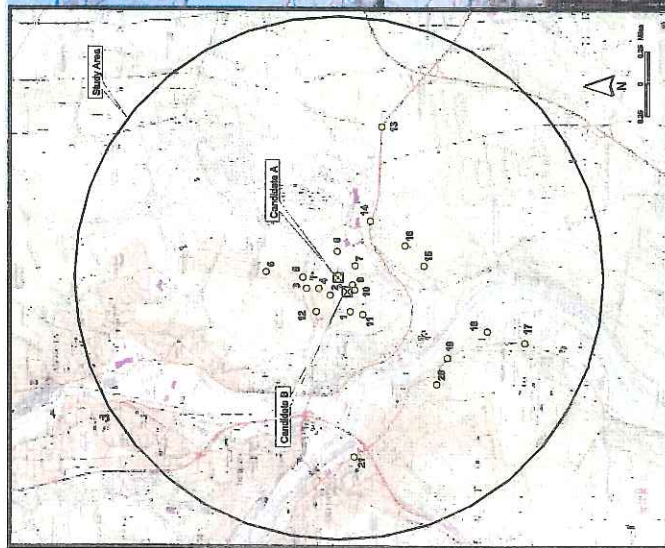




# Photographic Documentation and Simulation

## View 17B Flagpole

### Candidate B



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

GRIDCOM



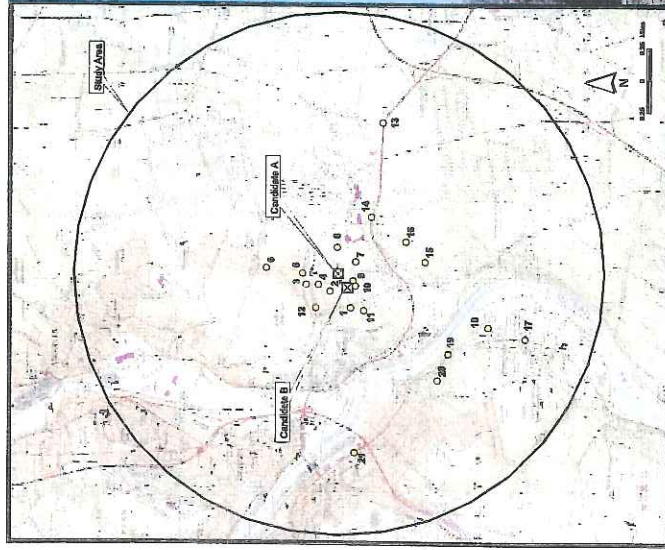
PHOTO TAKEN FROM ROUTE 110 NORTH OF GORDON AVENUE, LOOKING NORTHEAST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.49 MILES +/-



# Photographic Documentation and Simulation

View 18 Flush Mounted Monopole  
Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

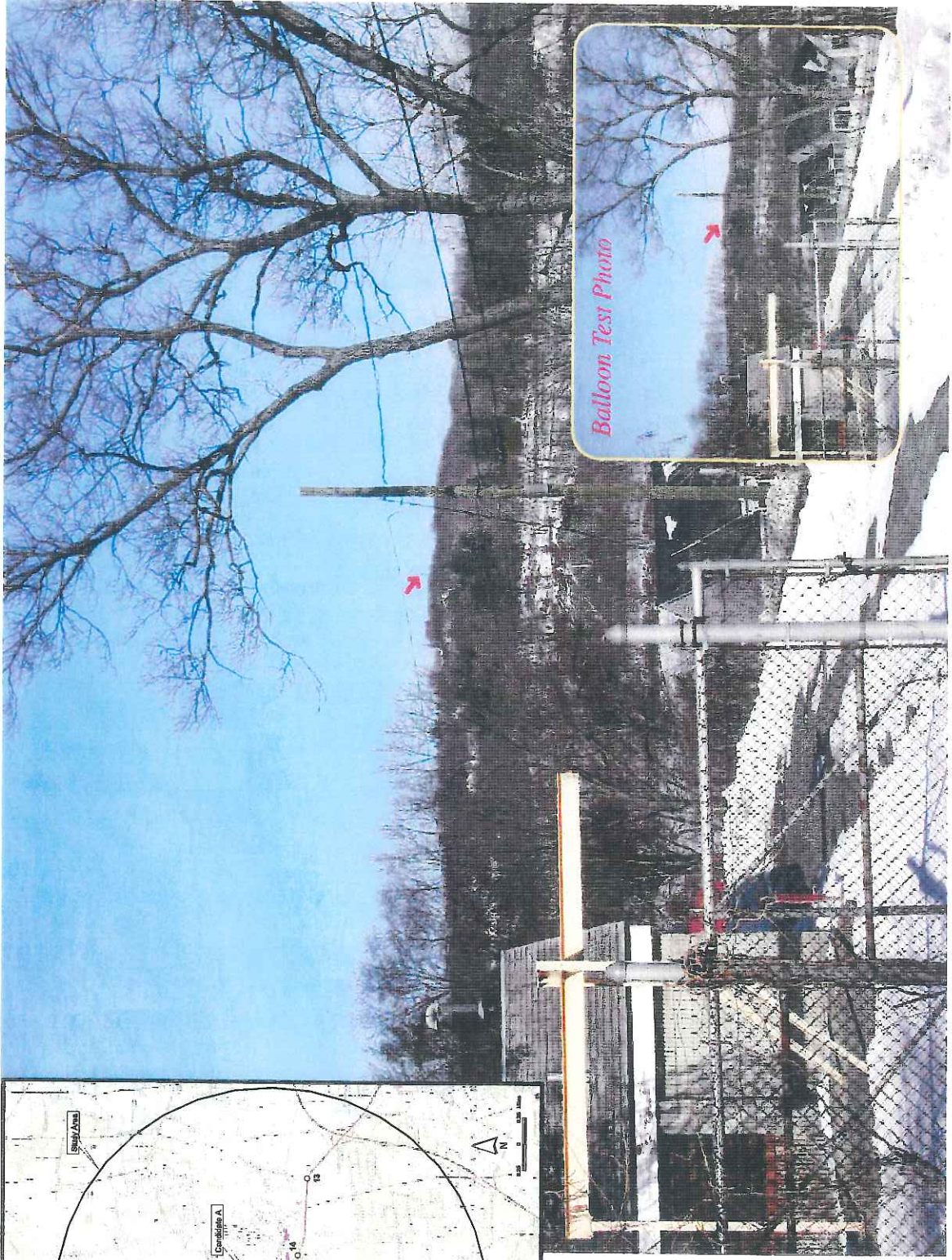


PHOTO TAKEN FROM LADAS PLACE AT HOUSE #46, LOOKING NORTHEAST - CANDIDATE A IS VISIBLE; CANDIDATE B IS NOT VISIBLE FROM THIS LOCATION  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.19 MILES +/-

GRIDCOM

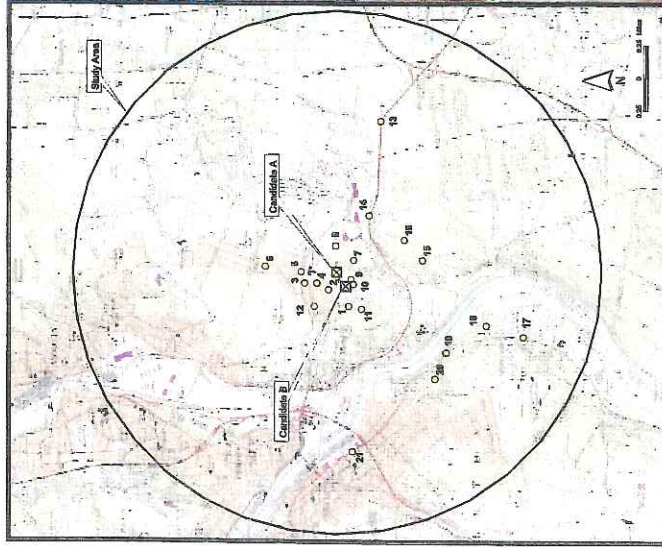




# Photographic Documentation and Simulation

## View 19A Flush Mounted Monopole Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

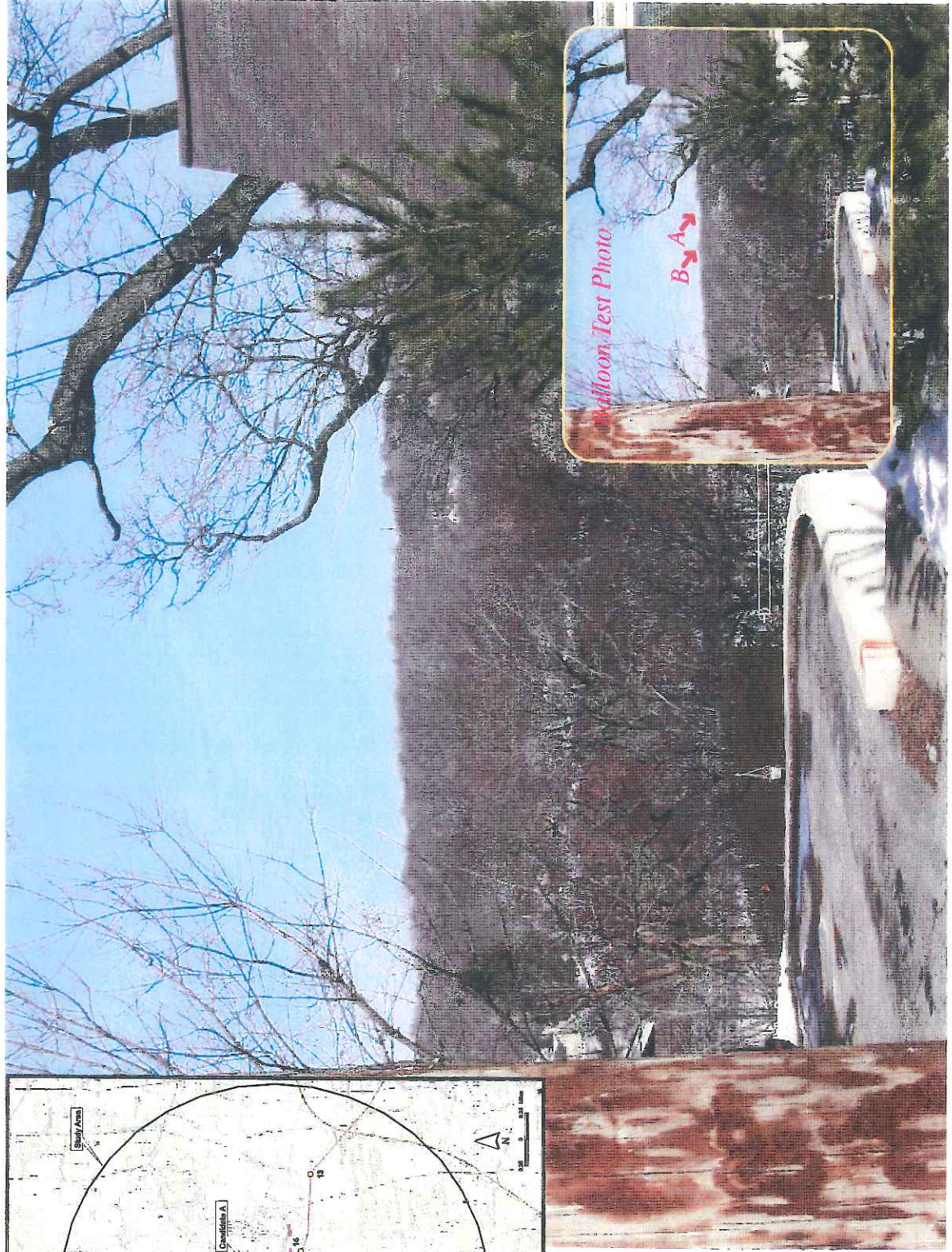


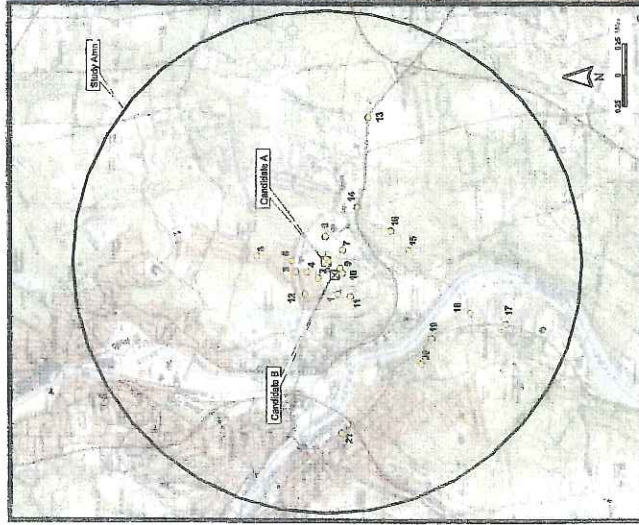
PHOTO TAKEN FROM ROUTE 110 AT HOUSE #122, LOOKING NORTHEAST - CANDIDATE A AND CANDIDATE B ARE  
VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.02 MILES +/-

GRID.OM





Photographic Documentation and Simulation  
View 19B Flagpole  
Candidate B



St. Jude's Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

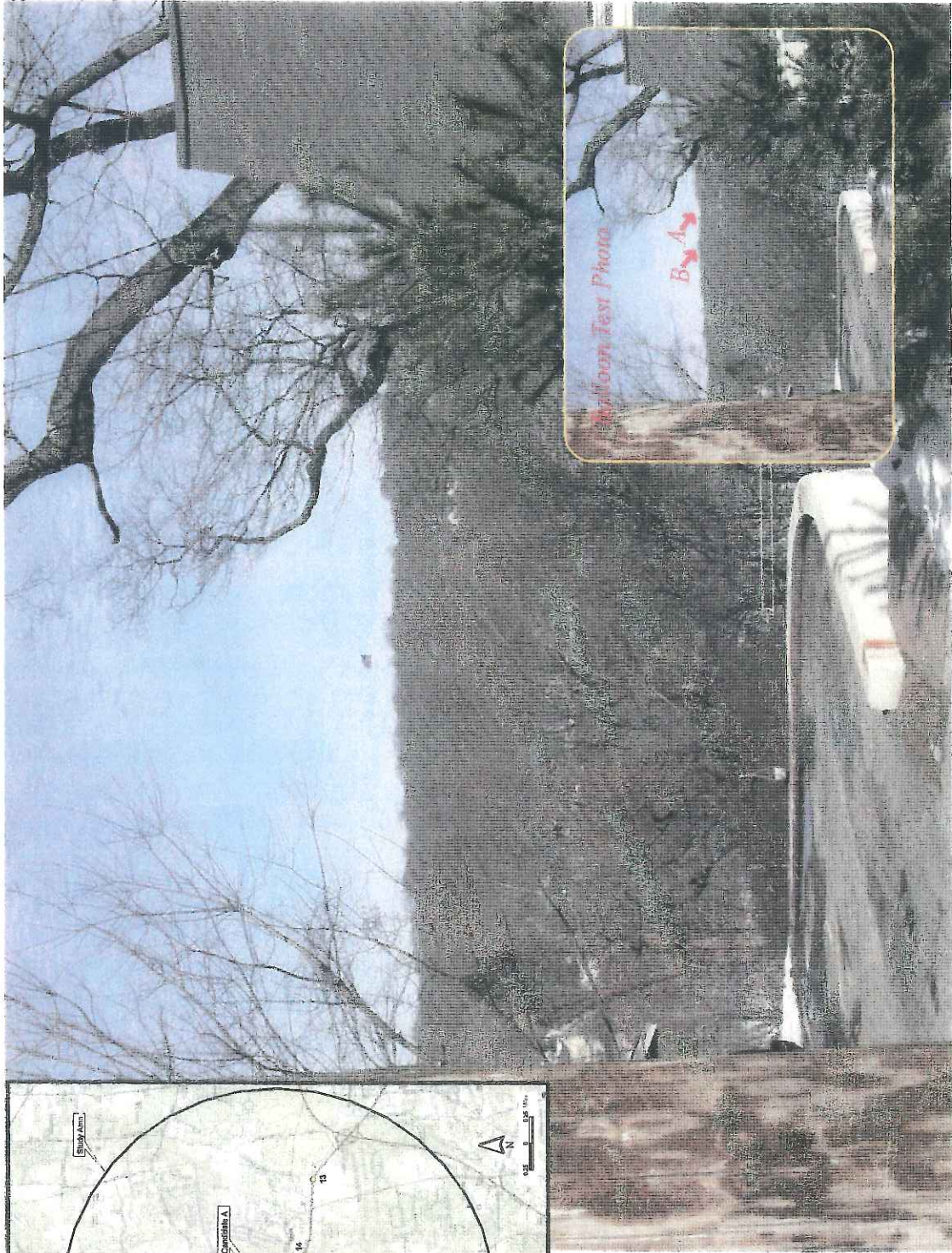


PHOTO TAKEN FROM ROUTE 110 AT HOUSE #122, LOOKING NORTHEAST - CANDIDATE A AND CANDIDATE B ARE VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.02 MILES +/-

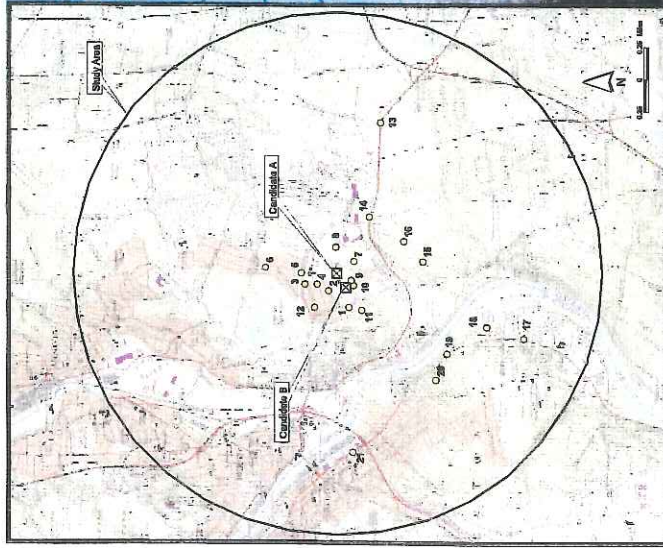
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 0.92 MILE +/-



# Photographic Documentation and Simulation

View 20A Flush Mounted Monopole  
Candidate A

City of  
Derby  
Connecticut



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier



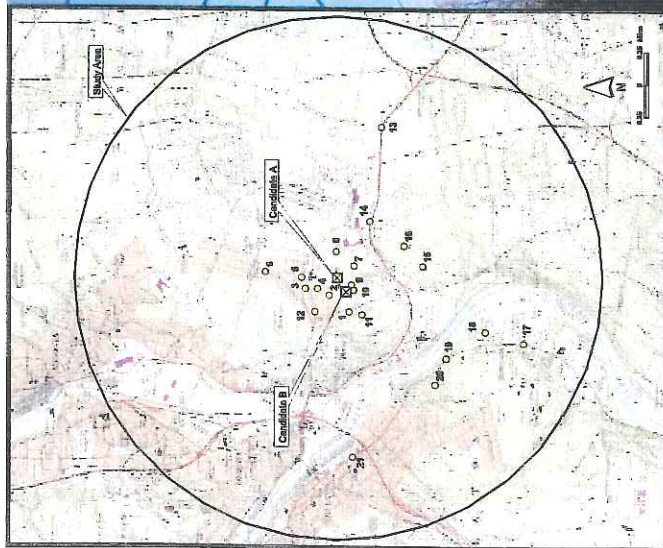
PHOTO TAKEN FROM END OF JENYFER COURT, LOOKING NORTHEAST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.09 MILES +/-

GRIDCOM





# Photographic Documentation and Simulation View 20B Flagpole Candidate B



St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

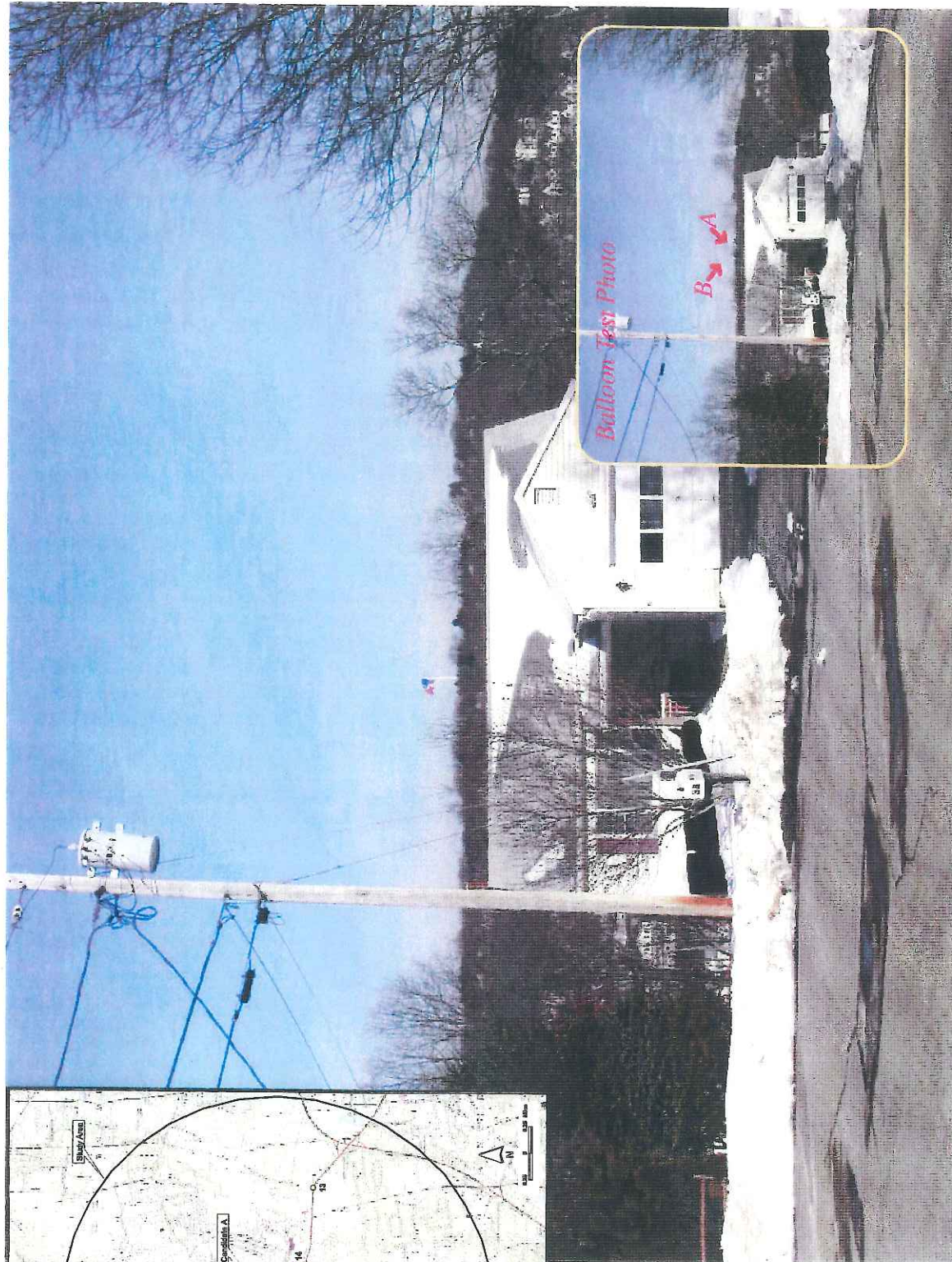
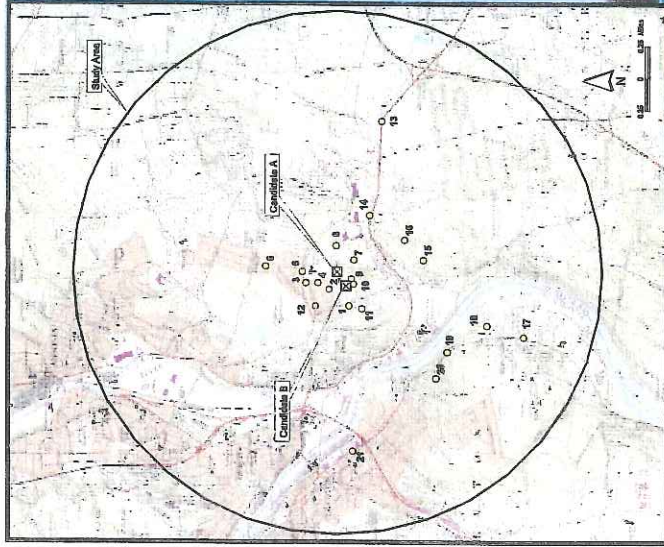


PHOTO TAKEN FROM END OF JENYFER COURT, LOOKING NORTHEAST - CANDIDATE A AND CANDIDATE B ARE  
VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.09 MILES +/-

GRID|OM







St. Jude's Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flush Mount Monopole  
with 1 carrier

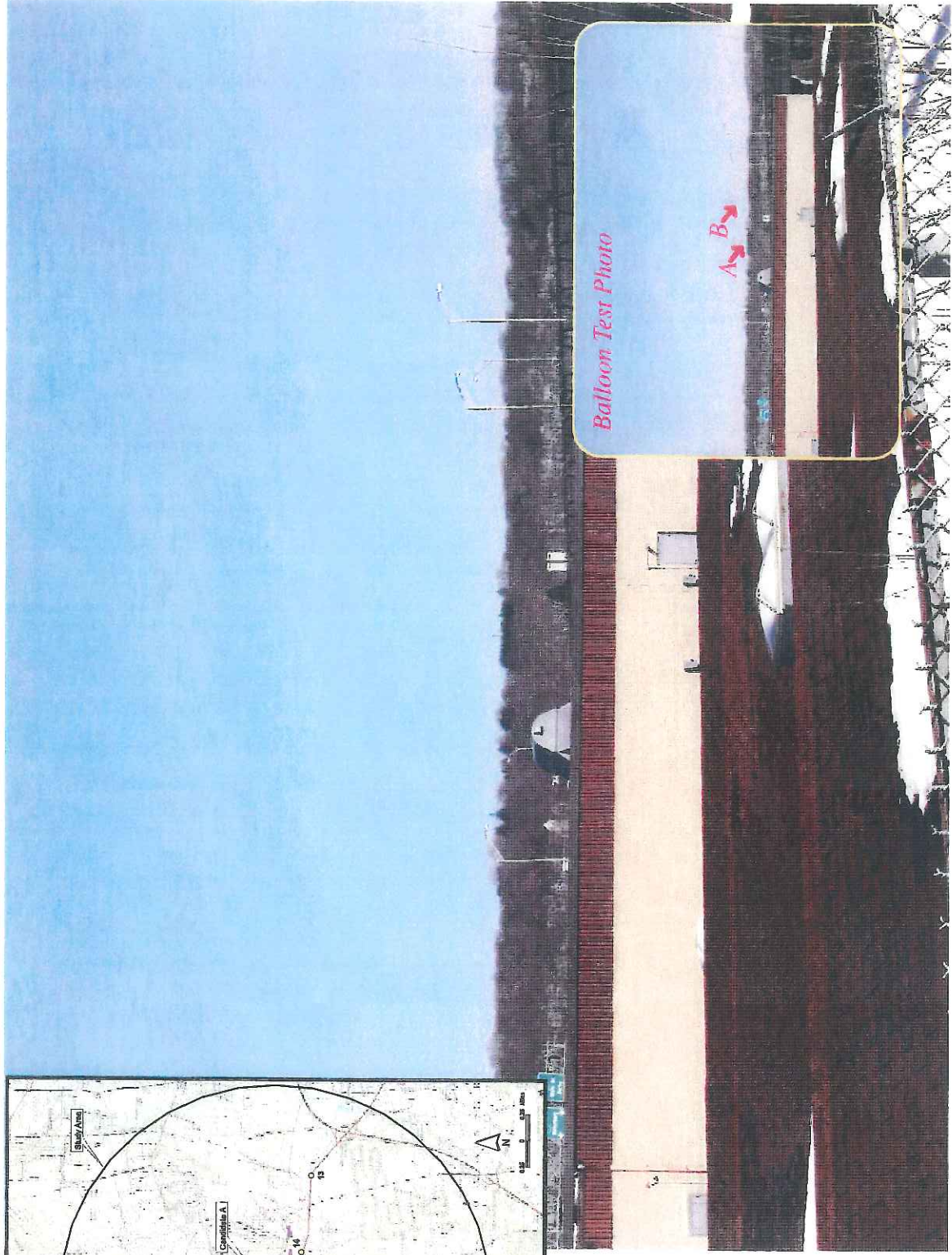
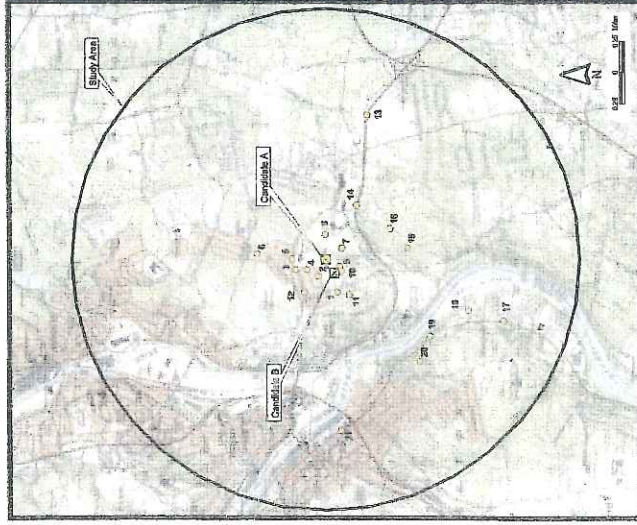


PHOTO TAKEN FROM ROUTE 110 NORTH OF ROUTE 8 UNDERPASS, LOOKING WEST - CANDIDATE A AND CANDIDATE B ARE VISIBLE  
DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.37 MILES +/-





St. Judes Church  
71 Pleasant View Road  
Derby, CT  
CT11-618

Flagpole

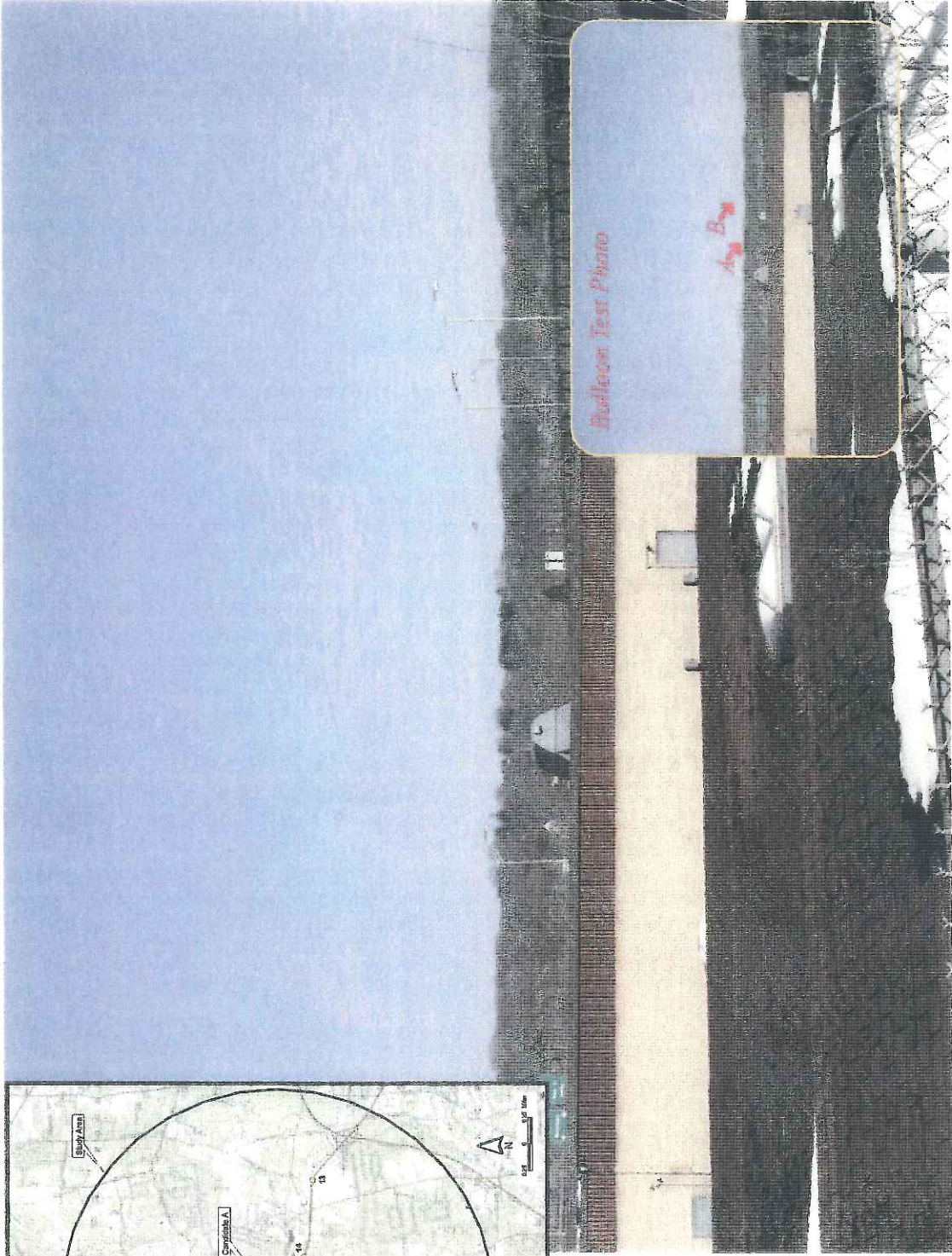


PHOTO TAKEN FROM ROUTE 110 NORTH OF ROUTE 8 UNDERPASS, LOOKING WEST - CANDIDATE A AND CANDIDATE B ARE VISIBLE

DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE A IS 1.37 MILES +/-

DISTANCE FROM THE PHOTOGRAPH LOCATION TO CANDIDATE B IS 1.26 MILES +/-

## Attachment B

# Comparative Viewshed Map



# Comparative V

City of  
Derby  
Connecticut

## Candidate Site Locations Road

ESRI's ArcView Spatial Analyst.  
to field investigations.

5 feet.

sis:  
DEM) at 30 meter resolution

igital orthophotos with  
VHB, 2005  
GS Quadrangle Map.

03 50  
03 56  
ided by CTDEP, 2003  
d Local listings

udes area of  
around facility)  
004

andidate A

A

B

ate designated)

ce (EXPOS)

Protected Properties  
(Federal)

Protected Properties (DEP)

- State Forest (SF)
- State Park (SP)
- State Park Scenic Reserve (SPSR)
- State Park Trail (SPT)
- Natural Area Preserve (NAP)
- Wildlife Area (W)
- Wildlife Sanctuary (WS)
- Historic Preserve (HP)
- Flood Control (FC)
- Fish Hatchery (FH)
- DEP Owned Waterbody (DEPWB)
- Water Access (WA)
- Other (O)

Town Line

\\ctmidas\projects\40900.04\graphics\Figures\derby\_viewshed.pdf

Vanasse Hangen Brustlin, Inc.  
54 Tuttle Plance  
Middletown, CT 06457

GRIDCOM



---

## Attachment B

# Comparative Viewshed Map



# Comparative Viewshed Map

*Topography and Forest Cover as Constraints*

City of  
Derby  
Connecticut

## Two Proposed Candidate Site Locations 71 Pleasant View Road Derby, Connecticut

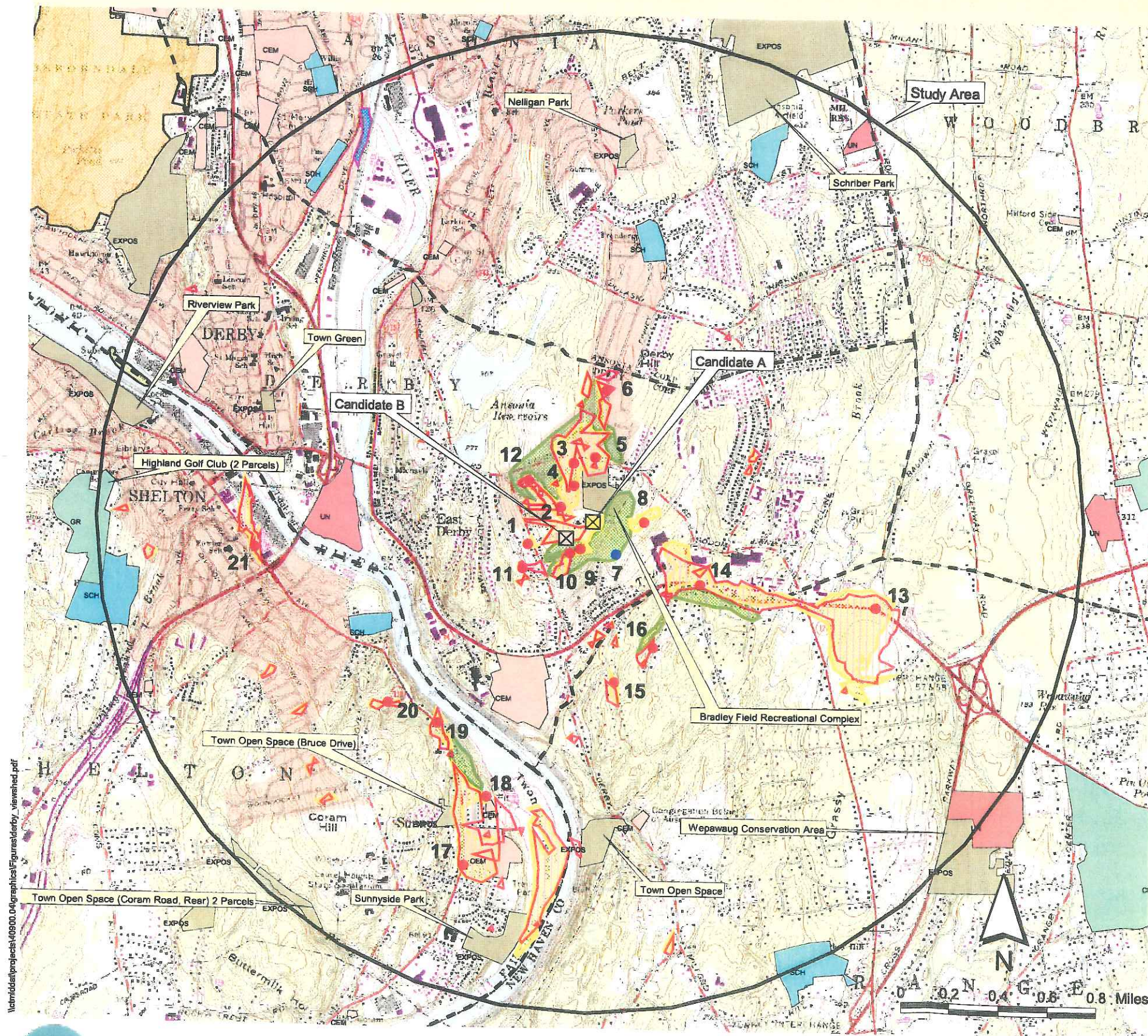
### NOTE:

Viewshed analysis conducted using ESRI's ArcView Spatial Analyst.  
Viewshed results updated according to field investigations.  
Proposed tower heights are 135 feet.  
Forest cover calculated at height of 65 feet.

### DATA SOURCES for viewshed analysis:

- 7.5 minute digital elevation model (DEM) at 30 meter resolution produced by USGS, 1982
- Forested areas derived from 1990 digital orthophotos with 1 meter pixel resolution - digitized by VHB, 2005
- Base map comprised of Ansonia USGS Quadrangle Map.
- Coordinates of proposed sites are:  
Candidate A - Lat. 41 18 56 Long. 73 03 50  
Candidate B - Lat. 41 18 52 Long. 73 03 56
- Protected properties data layer provided by CTDEP, 2003
- Scenic Roads derived from State and Local listings

Map Compiled February, 2005



### LEGEND

- Proposed Tower Location (Includes area of visibility approximately 500 feet around facility)
- Photopoint Locations - February 1, 2004
  - Blue dot: Balloon visible through trees
  - Red dot: Balloon visible above trees
- Anticipated seasonal visibility Candidate A and Candidate B (Approximately 81 acres)
- Year-round visibility Candidate A (Approximately 200 acres)
- Year-round visibility Candidate B (Approximately 207 acres)
- Scenic Roads (Local and/or State designated)
- DEP Boat Ramps
- Protected Properties (Municipal)
  - Cemetery (CEM)
  - Conservation (CONS)
  - Existing Preserved Open Space (EXPOS)
  - General Recreation (GR)
  - Preservation (P)
  - Recreation (REC)
  - School (SCH)
  - Uncategorized (UN)

- Protected Properties (Federal)
- Protected Properties (DEP)
  - State Forest (SF)
  - State Park (SP)
  - State Park Scenic Reserve (SPSR)
  - State Park Trail (SPT)
  - Natural Area Preserve (NAP)
  - Wildlife Area (W)
  - Wildlife Sanctuary (WS)
  - Historic Preserve (HP)
  - Flood Control (FC)
  - Fish Hatchery (FH)
  - DEP Owned Waterbody (DEPWb)
  - Water Access (WA)
  - Other (O)
- Town Line

Vanasse Hangen Brustlin, Inc.  
54 Tuttle Place  
Middletown, CT 06457





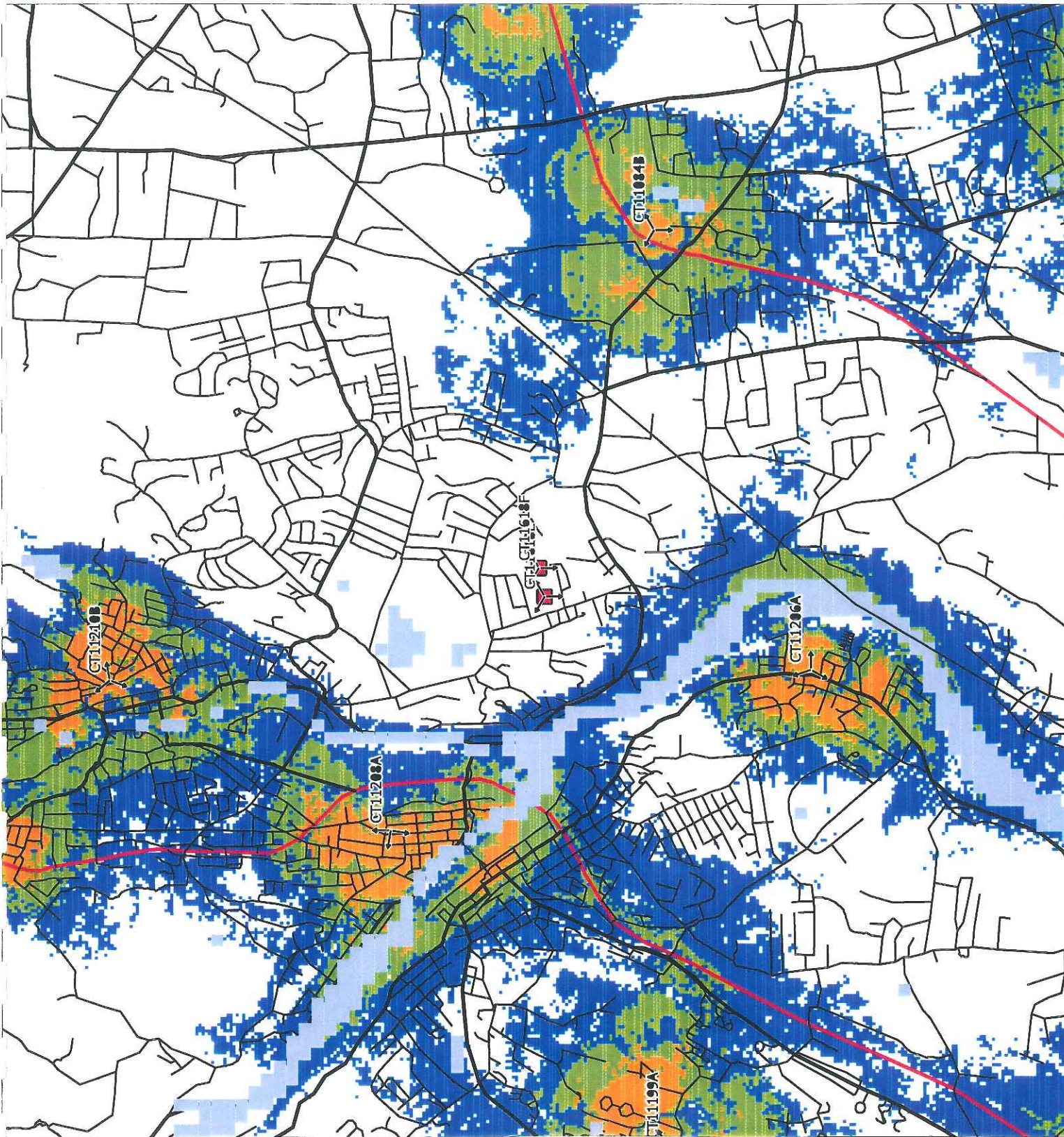
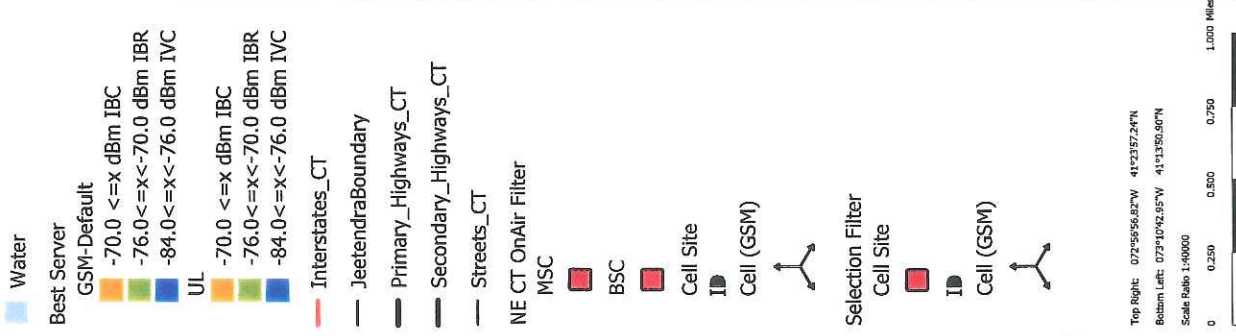


11



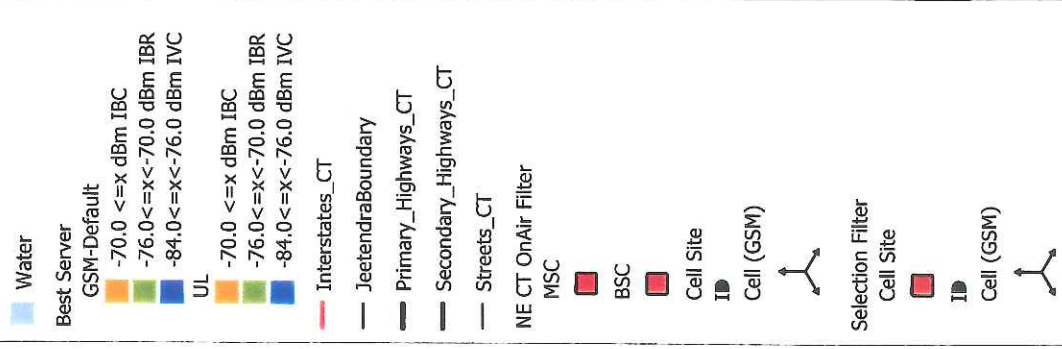
Without CT11618

Thu Mar 17 14:38:49 2005

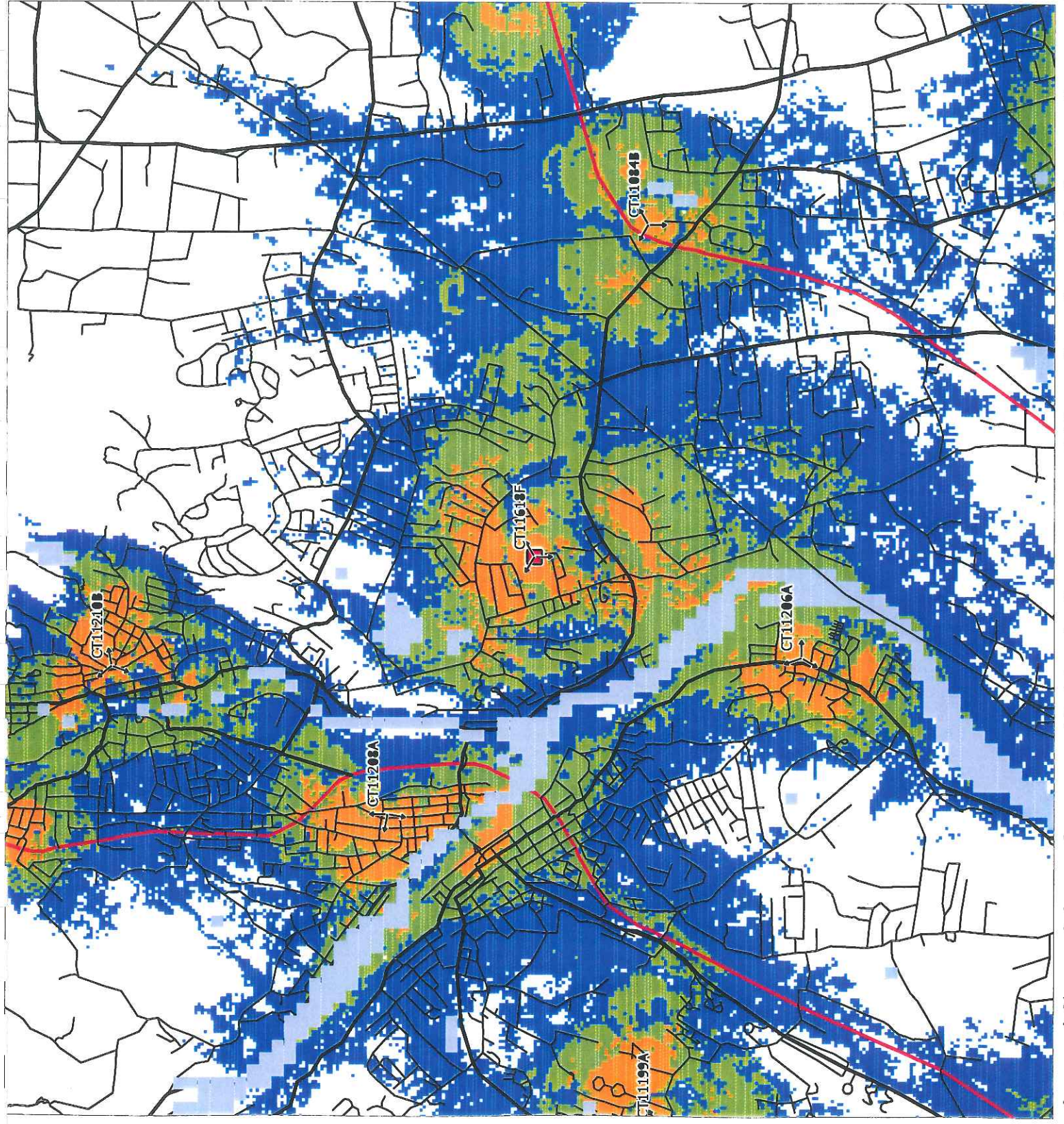




Thu Mar 17 14:32:30 2005

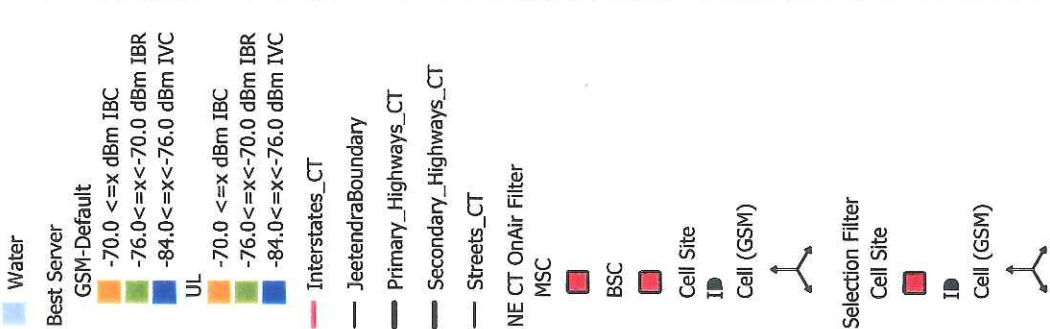


Top Right: 072°56'56.82"W 41°23'57.24"N  
 Bottom Left: 073°10'42.95"W 41°13'50.50"N  
 Scale Ratio: 1:40000  
 0 0.250 0.500 0.750 1.000 Miles

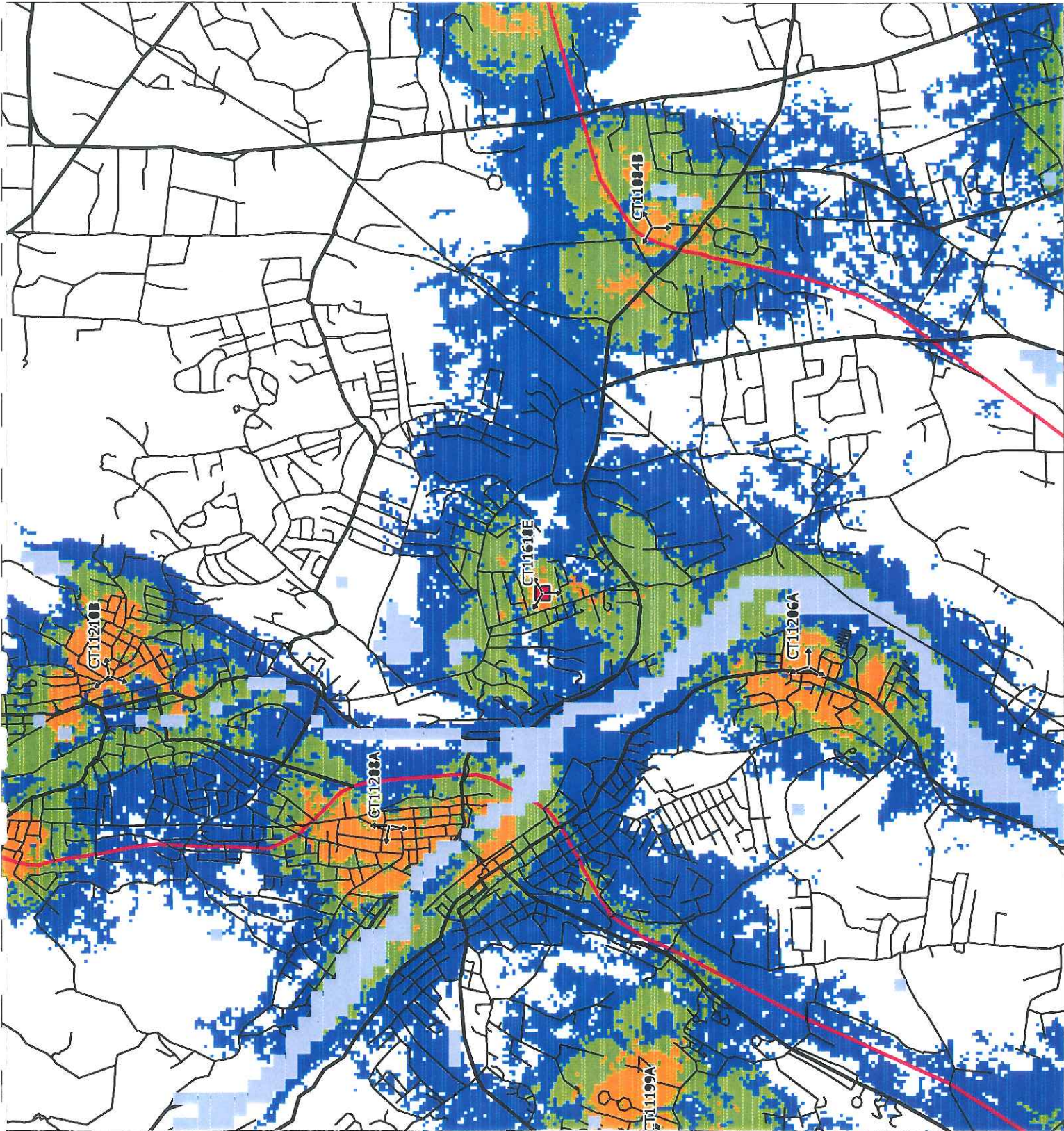




Thu Mar 17 14:07:57 2005



Top Right: 072°56'56.82"W 41°23'57.24"N  
Bottom Left: 073°10'42.95"W 41°13'50.00"N  
Scale Ratio: 1:40000





# **New England Market**

**Connecticut**

**Worst Case Power Density**



|  |                             |
|--|-----------------------------|
| <b>Site:</b>   | <b>CT11618F</b>             |
| <b>Site Address:</b>   | <b>71 Pleasant View Rd.</b> |
| <b>Town:</b>   | <b>Derby</b>                |
| <b>Tower Height:</b>   | <b>130 ft.</b>              |
| <b>Tower Style:</b>  | <b>New Monopole</b>         |
| <b>Base Station TX output</b>  | <b>20 W</b>                 |
| <b>Number of channels</b>  | <b>8</b>                    |
| <b>Antenna Model</b>   | <b>EMS-DR85-17-02DP</b>     |
| <b>Cable Size</b>  | <b>1 5/8 in.</b>            |
| <b>Cable Length</b>  | <b>150 ft.</b>              |
| <b>Antenna Height</b>  | <b>130.0 ft.</b>            |
| <b>Ground Reflection</b>   | <b>1.6</b>                  |
| <b>Frequency</b>   | <b>1935.0 MHz</b>           |
| <b>Jumper &amp; Connector loss</b>   | <b>4.50 dB</b>              |
| <b>Antenna Gain</b>  | <b>16.2 dBi</b>             |
| <b>Cable Loss per foot</b>   | <b>0.0116 dB</b>            |
| <b>Total Cable Loss</b>  | <b>1.7400 dB</b>            |
| <b>Total Attenuation</b>   | <b>6.2400 dB</b>            |
| <b>Total EIRP per Channel</b>  | <b>52.97 dBm</b>            |
| <b>(In Watts)</b>  | <b>198.17 W</b>             |
| <b>Total EIRP per Sector</b>   | <b>62.00 dBm</b>            |
| <b>(In Watts)</b>  | <b>1585.33 W</b>            |
| <b>nsg</b>   | <b>9.9600</b>               |
| <b>Power Density (S) =</b>   | <b>0.022620 mW/cm^2</b>     |
| <b>T-Mobile USA Worst Case % MPE =</b>   | <b>2.2620%</b>              |
| <b>Equation Used:</b> $S = \frac{(1000)(grf)^2(Power)*10^{(nsg/10)}}{4\pi(R)^2}$   |                             |
| Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997 |                             |





T-Mobile USA Inc.  
100 Filley St, Bloomfield, CT 06002-1853  
Phone: (860) 692-7100  
Fax: (860) 692-7159

## Technical Memo

To: David Vivian  
From: Jeetendra Ghare - Radio Frequency Engineer  
cc: Overbey Jason  
Subject: Power Density Report for CT11618F  
Date: March 17, 2005

### 1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a New Monopole at 71 Pleasant View Rd., Derby, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

### 2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the 1935-1945 MHz frequency band.
- 2) The antenna array consists of three sectors, with 1 antennas per sector.
- 3) The model number of the antennas are EMS-DR85-17-02DP and EMS-DR85-17-04DP and EMS-DR85-17-02DP.
- 4) The antenna center line height is 130 ft.
- 5) The maximum transmit power from any sector is 1585.33 Watts Effective Radiated Power (EIRP) assuming 8 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

### 3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a New Monopole at 71 Pleasant View Rd., Derby, CT, is 0.02262 mW/cm<sup>2</sup>. This value represents 2.262% of the Maximum Permissible Emission (MPE) standard of 1 milliwatt per square centimeter (mW/cm<sup>2</sup>) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.

**New England Market****Connecticut****Worst Case Power Density**

|  |                             |
|--|-----------------------------|
| <b>Site:</b>   | <b>CT11618E</b>             |
| <b>Site Address:</b>   | <b>71 Pleasant View Rd.</b> |
| <b>Town:</b>   | <b>Derby</b>                |
| <b>Tower Height:</b>   | <b>130 ft.</b>              |
| <b>Tower Style:</b>  | <b>Flag Pole</b>            |
| <b>Base Station TX output</b>  | <b>20 W</b>                 |
| <b>Number of channels</b>  | <b>8</b>                    |
| <b>Antenna Model</b>   | <b>EMS-DR85-17-02DP</b>     |
| <b>Cable Size</b>  | <b>1 5/8 in.</b>            |
| <b>Cable Length</b>  | <b>150 ft.</b>              |
| <b>Antenna Height</b>  | <b>130.0 ft.</b>            |
| <b>Ground Reflection</b>   | <b>1.6</b>                  |
| <b>Frequency</b>   | <b>1935.0 MHz</b>           |
| <b>Jumper &amp; Connector loss</b>   | <b>4.50 dB</b>              |
| <b>Antenna Gain</b>  | <b>16.2 dBi</b>             |
| <b>Cable Loss per foot</b>   | <b>0.0116 dB</b>            |
| <b>Total Cable Loss</b>  | <b>1.7400 dB</b>            |
| <b>Total Attenuation</b>   | <b>6.2400 dB</b>            |
| <b>Total EIRP per Channel</b>  | <b>52.97 dBm</b>            |
| <b>(In Watts)</b>  | <b>198.17 W</b>             |
| <b>Total EIRP per Sector</b>   | <b>62.00 dBm</b>            |
| <b>(In Watts)</b>  | <b>1585.33 W</b>            |
| <b>nsg</b>   | <b>9.9600</b>               |
| <b>Power Density (S) =</b>   | <b>0.022620 mW/cm^2</b>     |
| <b>T-Mobile USA Worst Case % MPE =</b>   | <b>2.2620%</b>              |
| Equation Used : $S = \frac{(1000 (grf)^2 (Power)^* 10^{(nsg/10)})}{4 \pi (R)^2}$   |                             |
| Office of Engineering and Technology (OET) Bulletin 65, Edition 97-01, August 1997 |                             |



## Technical Memo

To: David Vivian  
From: Jeetendra Ghare - Radio Frequency Engineer  
cc: Overbey Jason  
Subject: Power Density Report for CT11618E  
Date: March 17, 2005

---

### 1. Introduction:

This report is the result of an Electromagnetic Field Intensities (EMF - Power Densities) study for the T-Mobile PCS antenna installation on a Flag Pole at 71 Pleasant View Rd., Derby, CT. This study incorporates the most conservative consideration for determining the practical combined worst case power density levels that would be theoretically encountered from locations surrounding the transmitting location.

### 2. Discussion:

The following assumptions were used in the calculations:

- 1) The emissions from T-Mobile transmitters are in the 1935-1945 MHz frequency band.
- 2) The antenna array consists of three sectors, with 1 antennas per sector.
- 3) The model number of the antennas are EMS-DR85-17-02DP and EMS-DR85-17-04DP and EMS-DR85-17-02DP.
- 4) The antenna center line height is 130 ft.
- 5) The maximum transmit power from any sector is 1585.33 Watts Effective Radiated Power (EIRP) assuming 8 channels per sector.
- 6) All the antennas are simultaneously transmitting and receiving, 24 hours a day.
- 7) Power levels emitting from the antennas are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.
- 8) The average ground level of the studied area does not change significantly with respect to the transmitting location

Equations given in "FCC OET Bulletin 65, Edition 97-01" were then used with the above information to perform the calculations.

### 3. Conclusion:

Based on the above worst case assumptions, the power density calculation from the T-Mobile PCS antenna installation on a Flag Pole at 71 Pleasant View Rd., Derby, CT, is 0.02262 mW/cm<sup>2</sup>. This value represents 2.262% of the Maximum Permissible Emission (MPE) standard of 1 milliwatt per square centimeter (mW/cm<sup>2</sup>) set forth in the FCC/ANSI/IEEE C95.1-1991. Furthermore, the proposed antenna location for T-Mobile will not interfere with existing public safety communications, AM or FM radio broadcasts, TV, Police Communications, HAM Radio communications or any other signals in the area.

12





# AVIATION SYSTEMS INC.

Date: MAR 22 2005

To: David Vivian

GridCom

25 Research Drive

Westborough, MA 01582

ASI #: 05-O-0369.005

Client Site ID: CT-03105a

FAA #:

We are sending you herewith the following via:

- ☒ US Mail    ☐ Overnight    ☒ Fax (413)583-3214    ☐ Email    ☐ 2nd Day
- ☒ ASI FAR Part 77 Airspace Obstruction Report
- ☐ Search Area Study Report
- ☐ Copies of our filing(s) with FAA and/or State
- ☐ Responses from FAA and/or State
- ☐ ASI Opinion Letter
- ☒ Quad Chart
- ☒ See attachments for Airport Runway data and/or AM Stations(s)
- ☐ Certified Survey

Comments:

Sincerely,

Aviation Systems, Inc.

By: 

**AVIATION SYSTEMS, INC.**

Phone: 310-530-3188 Fax: 310-530-3850

asi@aviationsystems.com

www.aviationsystems.com

**FAR PART 77 AIRSPACE OBSTRUCTION REPORT****To:**

David Vivian  
GridCom  
25 Research Drive  
Westborough, MA 01582

**Date:** March 21, 2005**Location:** East Derby, CT**Client Case No:** CT-03105a**ASI Case No:** 05-O-0369.005**SUMMARY OF FINDINGS:**

There are no federal aviation regulatory or operational factors affecting this site and proposed structure. At this location any structure over 200 feet AGL will have to be filed with the FAA. A structure up to 135 feet AGL should receive a routine approval if it were to be filed with the FAA.

**SITE DATA:****Structure:** Antenna Tower**Coordinates:** 41°-18'-54.33" / 073°-03'-51.09" [NAD 27]41°-18'-54.68" / 073°-03'-49.48" [NAD 83]**Site Ground Elevation:** 375' [AMSL]**Studied Structure Height (with Appurtenances):** 135' [AGL]**Total Overall Height:** 510' [AMSL]**SEARCH RESULTS:**

- The nearest public use or military air facility subject to FAR Part 77 is Tweed-New Haven Airport.
- The studied structure is located 8.35 NM / 50,730 feet West (290 ° True) of the Tweed-New Haven Airport Runway 14.
- Other public or private airports or heliports within 3 NM: ☒ None ☐ Printout attached
- AM radio station(s) within 3NM: ☐ None ☒ Printout attached

**Highlighted AM stations on printout require notice under FCC Rules and Policy (Ref.: 47 CFR 73.1692).**



**FINDINGS****FAA Notice (Ref.: FAR 77.13 (a)(1); FAR 77.13 (a)(2) i, ii,iii):**

- ☒ Not required at studied height.
- ☐ Required at studied height.
- ☒ The No Notice Maximum height is 200 feet AGL.

**IMPORTANT:** Our report is intended as a planning tool. If notice is required, actual site construction activities are not advisable until an FAA Final Determination of No Hazard is issued.

**Obstruction Standards of FAR Part 77 (Ref.: FAR 77.23 (a)(1),(2),(3),(4),(5)):**

- ☒ Not exceeded at studied height.
- ☐ Exceeded at studied height and Extended Study may be required.
- ☐ Maximum nonexceedance height is \_\_\_\_\_ feet AGL.

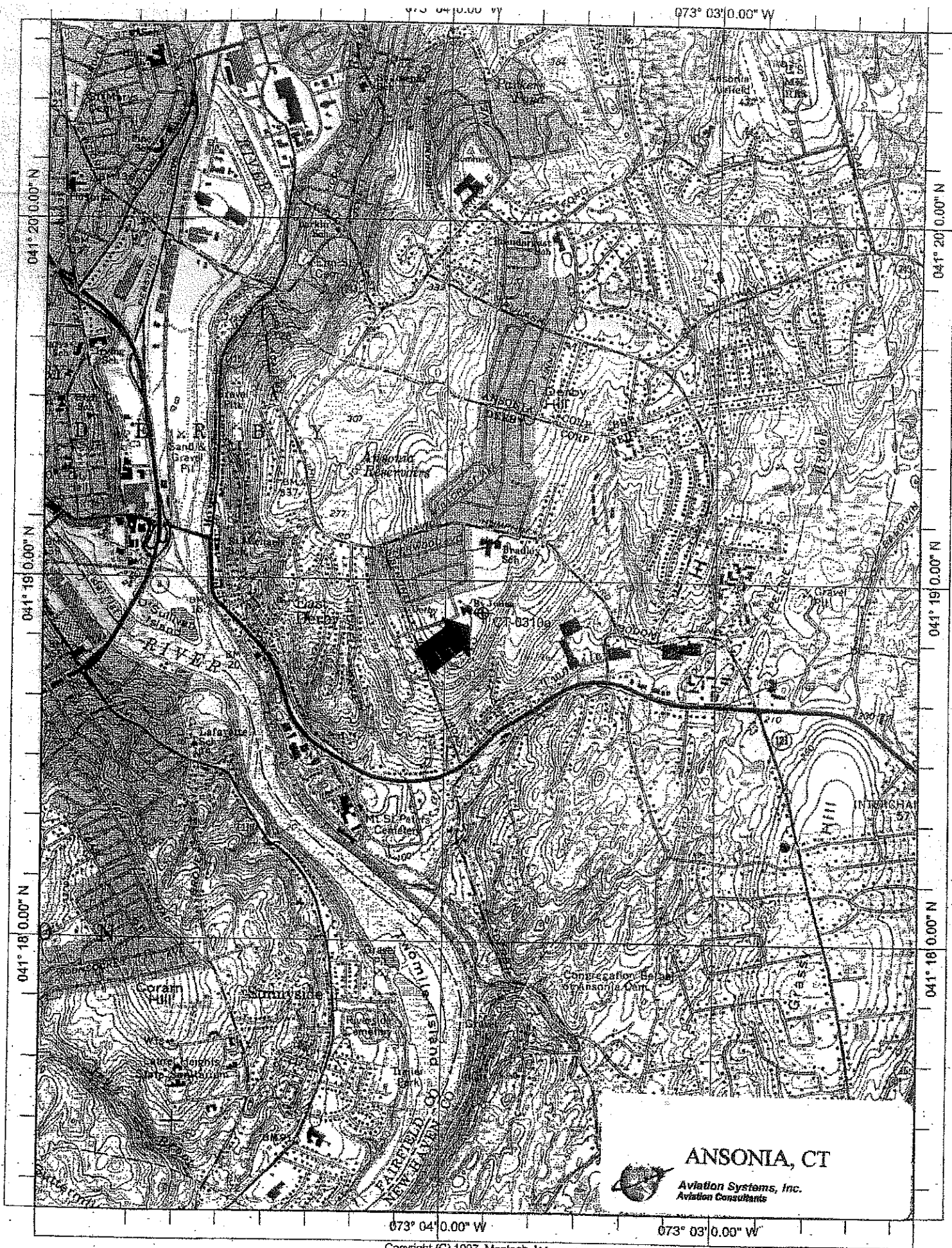
**Marking and Lighting (Ref.: AC 70/7460-1K, Change 1):**

- ☒ Will not be required.
- ☐ Will be required at studied height, if structure exceeds:
  - ☐ 200 feet AGL
  - ☐ Obstruction Standard

**Operational Procedures (Ref.: FAR 77.23 (a)(3), (4); FAA Order 7400.2; FAA Order 8260.3B):**

- ☒ Not affected at studied height (FAA should issue a Determination of No Hazard.)
- ☐ Affected at studied height and the FAA will consider the studied structure to be a hazard to air navigation.
- ☐ Maximum height that would not affect operational procedures is \_\_\_\_\_ feet AMSL.

**Conclusions/Comments****Actions:**ASI will file with FAA Region and State☐ Yes☒ No



# ANSONIA, CT



Aviation Systems, Inc.  
Aviation Consultants

073° 04' 00.00" W

073° 03' 00.00" W

Copyright (C) 1997, Maptech, Inc.



# AM Stations

Search Latitude: 41-18-54 Search Radius: 3  
 Search Longitude: 073-03-51 Height (MSL):

| Freq Call<br>Sign | State City | Latitude  | Longitude  | Power<br>KW | Domestic<br>Status | Hours<br>Of Oper | Antenna<br>Mode | Complete<br>Schedule | Last<br>Update | Distance<br>NM | Feet   | Bear   |
|-------------------|------------|-----------|------------|-------------|--------------------|------------------|-----------------|----------------------|----------------|----------------|--------|--------|
| 690 WADS          | CT ANSONIA | 41-20-46N | 073-06-51W | 320         | L                  | D                | DAD             | D                    |                | 2.93           | 17,789 | 309.61 |
| 1450 CD 145       | PTO VARAS  | 41-18-00S | 073-01-00W | 100         |                    | D                | ND1             | U                    |                | 2.33           | 14,130 | 112.76 |
| 1450 CD 145       | PTO VARAS  | 41-18-00S | 073-01-00W | 100         |                    | N                | ND1             | U                    |                | 2.33           | 14,130 | 112.76 |



# AVIATION SYSTEMS INC.

MAR 22 2005

Date:

To: David Vivian

GridCom

25 Research Drive

Westborough, MA 01582

ASI #: 05-O-0369.006

Client Site ID: CT-03105b

FAA #:

We are sending you herewith the following via:

☒ US Mail    ☐ Overnight    ☒ Fax (413)583-3214    ☐ Email    ☐ 2nd Day

- ☒ ASI FAR Part 77 Airspace Obstruction Report
- ☐ Search Area Study Report
- ☐ Copies of our filing(s) with FAA and/or State
- ☐ Responses from FAA and/or State
- ☐ ASI Opinion Letter
- ☒ Quad Chart
- ☒ See attachments for Airport Runway data and/or AM Stations(s)
- ☐ Certified Survey

Comments:

Sincerely,

Aviation Systems, Inc.

By:



**FAR PART 77 AIRSPACE OBSTRUCTION REPORT**

**To:**

David Vivian  
GridCom  
25 Research Drive  
Westborough, MA 01582

**Date:** March 21, 2005

**Location:** East Derby, CT

**Client Case No:** CT-03105b

**ASI Case No:** 05-O-0369.006

**SUMMARY OF FINDINGS:**

There are no federal aviation regulatory or operational factors affecting this site and proposed structure. At this location any structure over 200 feet AGL will have to be filed with the FAA. A structure up to 135 feet AGL should receive a routine approval if it were to be filed with the FAA.

**SITE DATA:**

**Structure:** Antenna Tower

**Coordinates:** 41°-18'-52.48" / 073°-04'-00.81" [NAD 27]  
41°-18'-52.83" / 073°-03'-59.20" [NAD 83]

**Site Ground Elevation:** 366' [AMSL]

**Studied Structure Height (with Appurtenances):** 135' [AGL]

**Total Overall Height:** 501' [AMSL]

**SEARCH RESULTS:**

- The nearest public use or military air facility subject to FAR Part 77 is Tweed-New Haven.
- The studied structure is located 8.46 NM / 51,379 feet NorthWest (299 ° True) of the Tweed-New Haven Runway 14.
- Other public or private airports or heliports within 3 NM: ☒ None ☐ Printout attached
- AM radio station(s) within 3NM: ☐ None ☒ Printout attached

**Highlighted AM stations on printout require notice under FCC Rules and Policy (Ref.: 47 CFR 73.1692).**

**FINDINGS****FAA Notice (Ref.: FAR 77.13 (a)(1); FAR 77.13 (a)(2) i, ii,iii):**

- ☒ Not required at studied height.
- ☐ Required at studied height.
- ☒ The No Notice Maximum height is 200 feet AGL.

**IMPORTANT:** Our report is intended as a planning tool. If notice is required, actual site construction activities are not advisable until an FAA Final Determination of No Hazard is issued.

**Obstruction Standards of FAR Part 77 (Ref.: FAR 77.23 (a)(1),(2),(3),(4),(5)):**

- ☒ Not exceeded at studied height.
- ☐ Exceeded at studied height and Extended Study may be required.
- ☐ Maximum nonexceedance height is \_\_\_\_\_ feet AGL.

**Marking and Lighting (Ref.: AC 70/7460-1K, Change 1):**

- ☒ Will not be required.
- ☐ Will be required at studied height, if structure exceeds:
  - ☐ 200 feet AGL
  - ☐ Obstruction Standard

**Operational Procedures (Ref.: FAR 77.23 (a)(3), (4); FAA Order 7400.2; FAA Order 8260.3B):**

- ☒ Not affected at studied height (FAA should issue a Determination of No Hazard.)
- ☐ Affected at studied height and the FAA will consider the studied structure to be a hazard to air navigation.
- ☐ Maximum height that would not affect operational procedures is \_\_\_\_\_ feet AMSL.

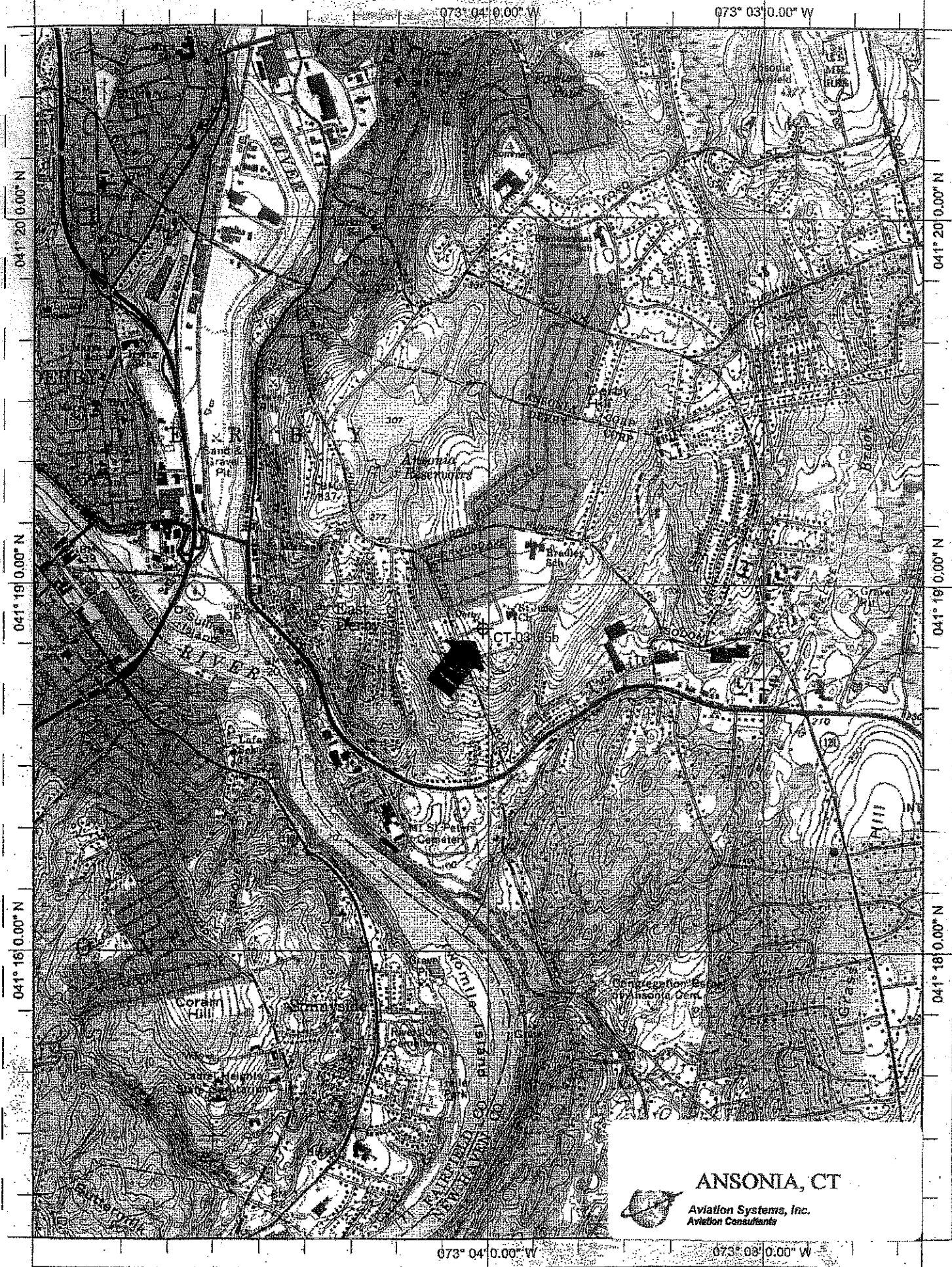
**Conclusions/Comments****Actions:**

ASI will file with FAA Region and State

☐ Yes

☒ No





**ANSONIA, CT**

Aviation Systems, Inc.  
Aviation Consultants

# AM Stations

Search Latitude: 41-18-52 Search Radius: 3  
 Search Longitude: 073-04-01 Height (MSL):

| Freq Call Sign | State City | Latitude  | Longitude  | Power Domestic KW | Status | Hours Of Oper | Antenna Mode | Complete Schedule | Last Update | Distance NM | Bear Feet     |
|----------------|------------|-----------|------------|-------------------|--------|---------------|--------------|-------------------|-------------|-------------|---------------|
| 690 WADS       | CT ANSONIA | 41-20-46N | 073-06-51W | 320               | L      | D             | DAD          | D                 |             | 2.85        | 17,343 311.73 |
| 1450 CD 145    | PTO VARAS  | 41-18-00S | 073-01-00W | 100               |        | D             | ND1          | U                 |             | 2.43        | 14,762 110.89 |
| 1450 CD 145    | PTO VARAS  | 41-18-00S | 073-01-00W | 100               |        | N             | ND1          | U                 |             | 2.43        | 14,762 110.89 |





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March 31, 2005

Mayor Marc Garofalo  
City of Derby  
Derby City Hall  
35 Fifth Street  
Derby, Connecticut 06418-1817

Re: Proposed Wireless Telecommunications Tower Facility  
71 Pleasant View Road  
St. Jude Roman Catholic Church  
Derby, Connecticut

Dear Mayor Garofalo:

We are writing to you on behalf of our client, National Grid Communications, Inc. ("Gridcom"), with respect to the above referenced matter which involves a proposed wireless telecommunications tower facility to be located at one of two sites on property located at 71 Pleasant View Road in the City of Derby, the site of St. Jude Roman Catholic Church. As you may know, jurisdiction over such facilities rests exclusively with the State of Connecticut Siting Council pursuant to Section 16-50i and x of the Connecticut General Statutes.

Section 16-50l(e) of the Connecticut General Statutes does nevertheless require that Gridcom consult with a municipality prior to such an application being filed with the Siting Council. The purpose of such local consultation is to give the municipality in which a facility has been proposed an opportunity to provide the applicant with any recommendations it may have prior to the applicant's filing of an application. As set forth in the statute, any such recommendations must be issued by the municipality within sixty days of its receipt of technical information concerning the proposed facility from the applicant.



CUDDY & FEDER LLP

March 31, 2005

Page 2

The purpose of this letter is to formally notify you of the proposed Facility in the City of Derby and commence the sixty day consultation period that is required prior to Gridcom's filing of any application with the Siting Council. Enclosed is a "Technical Report" for your review and consideration which includes information about the need for the proposed tower facility, a summary of the site selection process and the environmental effects of a tower that has been proposed in the City. We trust that this information will prove helpful to you and others in the City in formulating any recommendations Derby may have about the proposal.

We would appreciate the opportunity to meet with you to review the Technical Report and will follow this letter with a call to schedule such a meeting to discuss the proposed facility at your convenience. Additionally, should the City elect to conduct a public meeting or hearing about the proposal during the consultation period, we would ask that you let us know at your earliest convenience so that we may have representatives available to discuss the project. Thank you for your consideration of this letter and its enclosures. We look forward to meeting with you.

Very truly yours,

  
Lucia Chiocchio

Enclosure

cc: David Vivian, Gridcom

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| <b>Application Guideline</b>   | <b>Location in Application</b>  |
|--|---|
| <b>(A)</b> An Executive Summary on the first page of the application with the address, proposed height, and type of tower being proposed. A map showing the location of the proposed site should accompany the description;  | I.B. Executive Summary, page2<br><br>Attachment 8: Site Plans   |
| <b>(B)</b> A brief description of the proposed facility, including the proposed locations and heights of each of the various proposed sites of the facility, including all candidates referred to in the application;  | I.B. Executive Summary, page 2<br>III.D. Description of the Proposed Prime and Alternate Facilities, pages 7-9  |
| <b>(C)</b> A statement of the purpose for which the application is made;   | I.A Authority and Purpose, page 1   |
| <b>(D)</b> A statement describing the statutory authority for such application;  | I.A. Authority and Purpose, page 1  |
| <b>(E)</b> The exact legal name of each person seeking the authorization or relief and the address or principle place of business of each such person. If any applicant is a corporation, trust, or other organized group, it shall also give the state under the laws of which it was created or organized;   | I.D. Correspondence and Service, page 3   |
| <b>(F)</b> The name, title, address, and telephone number of the attorney or other person to whom correspondence or communications in regard to the application are to be addressed. Notice, orders, and other papers may be served upon the person so named, and such service shall be deemed to be service upon the applicant;   | I.D. Correspondence and Service, page 3   |
| <b>(G)</b> A statement of the need for the proposed facility with as much specific information as is practicable to demonstrate the need including a description of the proposed system and how the proposed facility would eliminate or alleviate any existing deficiency or limitation;  | III.B. Public Need, page 5<br>IV. D. Technological Alternatives and Justification for Site Selected, pages 17-18<br><br>Attachment 11: T-Mobile Radio Frequency Coverage Plots  |
| <b>(H)</b> A statement of the benefits expected from the proposed facility with as much specific information as is practicable;  | III.B. Public Need, page 5  |
| <b>(I)</b> A description of the proposed facility at the proposed prime and alternative sites including:<br>(1) Height of the tower and its associated antennas including a maximum "not to exceed height" for the facility, which may be higher than the height proposed by the Applicant;<br>(2) Access roads and utility services;<br>(3) Special design features;<br>(4) Type, size, and number of transmitters and receivers, as well as the signal frequency and conservative worst-case and estimated operational level approximation of electro magnetic radiofrequency power density levels (facility using FCC Office of | I.B. Executive Summary, page 2<br>III.D. Description of Proposed Prime and Alternate Facilities, pages 7-9<br>III.F.7. Public Health and Safety, pages 13-14<br><br>Attachment 11: T-Mobile's Radio Frequency Coverage Plots<br><br>Attachment 6: Site A: Description and Design of Proposed Facility |

| Application Guideline  | Location in Application  |
|--|--|
| <p>Engineering and Technology Bulletin 65, August 1997) at the base of the tower base, site compound boundary where persons are likely to be exposed to maximum power densities from the facility;</p> <p>(5) A map showing any fixed facilities with which the proposed facility would interact;</p> <p>(6) The coverage signal strength, and integration of the proposed facility with any adjacent fixed facility, to be accompanied by multi-colored propagation maps of red, green and yellow (exact colors may differ depending on computer modeling used, but a legend is required to explain each color used) showing interfaces with any adjacent service areas, including a map scale and north arrows; and</p> <p>(7) For cellular systems, a forecast of when maximum capability would be reached for the proposed facility and for facilities that would be integrated with the proposed facility.</p>  | <p>Attachment 7: Site B: Description and Design of Proposed Facility</p> <p>Attachment 8: Site Plans for Site A and Site B</p> |
| <p>(J) A description of the named sites, including :</p> <p>(1) The most recent U.S. G.S. topographic quadrangle map (scale 1 inch = 2000 feet) marked to show the site of the facility and any significant changes within a one mile radius of the site;</p> <p>(2) A map (scale not less than 1 inch = 200 feet) of the lot or tract on which the facility is proposed to be located showing the acreage and dimensions of such site, the name and location of adjoining public roads or the nearest public road, and the names of abutting owners and the portions of their lands abutting the site;</p> <p>(3) A site plan (scale not less than 1 inch = 40 feet) showing the proposed facility, fall zones, existing and proposed contour elevations, 100 year flood zones, waterways, and all associated equipment and structures on the site;</p> <p>(4) Where relevant, a terrain profile showing the proposed facility and access road with existing and proposed grades; and</p> <p>(5) The most recent aerial photograph (scale not less than 1 inch = 1000 feet) showing the proposed site, access roads, and all abutting properties.</p> | <p>Attachment 5: Alternative Site Analysis</p> <p>Attachment 8: Site Plans for Site A and Site B</p>                           |
| <p>(K) A statement explaining mitigation measures for the proposed facility including:</p> <p>(1) Construction techniques designed to specifically minimize adverse effects on natural areas and sensitive areas;</p> <p>(2) Special design features made specifically to avoid or</p>   | <p>III.F. Environmental Compatibility, pages 9-14</p> <p>Attachment 10: Correspondence from State Agencies</p>                 |



| Application Guideline  | Location in Application   |
|--|---|
| <p>minimize adverse effects on natural areas and sensitive areas;</p> <p>(3) Establishment of vegetation proposed near residential, recreation, and scenic areas; and</p> <p>(4) Methods for preservation of vegetation for wildlife habitat and screening.</p>  |   |
| <p><b>(L)</b> A description of the existing and planned land uses of the named sites and surrounding areas;</p>  | <p>III.H. Description of Public Aspects of Site, page 16</p>  |
| <p><b>(M)</b> A description of the scenic, natural, historic, and recreational characteristics of the named sites and surrounding areas including officially designated nearby hiking trails and scenic roads;</p>   | <p>III.F. Environmental Compatibility, pages 9-14</p> <p>Attachment 10: Correspondence from State Agencies</p>  |
| <p><b>(N)</b> Sight line graphs to the named sites from visually impacted areas such as residential developments, recreational areas, and historic sites;</p>  | <p>Attachment 9: Visual Resource Evaluation Report for Site A and Site B</p> <p>Gridcom respectfully requests a waiver from the sight line graphs requirement given the extensive and comprehensive visual analysis, including viewshed maps and photosimulations included in Attachment 9.</p> |
| <p><b>(O)</b> A list describing the type and height of all existing and proposed towers and facilities within a four mile radius within the site search area, or within any other area from which use of the proposed towers might be feasible from a location standpoint for purposes of the application;</p> | <p>III.C. Site Selection, pages 6-7</p> <p>IV.B. List of Area Towers, page 17</p> <p>Attachment 1: Pre-Filed Testimony of David Vivian</p> <p>Attachment 5: Alternate Site Analysis and Table of Towers within 4 miles</p>  |
| <p><b>(P)</b> A description of efforts to share existing towers, or consolidate telecommunications antennas of public and private services onto the proposed facility including efforts to offer tower space, where feasible, at no charge for space for municipal antennas;</p>                               | <p>III.C. Site Selection, pages 6-7</p> <p>III.D. Description of Proposed Prime and Alternate Facilities, pages 7-9</p> <p>Attachment 1: Pre-Filed Testimony of David Vivian</p> <p>Attachment 5: Alternate Site Analysis and Table of Towers within 4 miles</p>                                |
| <p><b>(Q)</b> A description of the technological alternatives and a statement containing justification for the proposed facility;</p>  | <p>IV.D. Technological Alternatives and Justification for Site Selected, pages 17-18</p>  |
| <p><b>(R)</b> A description of rejected sites with a U.S.G.S. topographic quadrangle map (scale 1 inch= 2,000 feet) marked to show the location of rejected sites;</p>   | <p>III.C. Site Selection, pages 6-7</p> <p>IV.B. List of Area Towers, page 17</p> <p>Attachment 1: Pre-Filed Testimony of David Vivian</p>  |

| Application Guideline   | Location in Application   |
|---|---|
|   | Attachment 5: Alternate Site Analysis and Table of Towers within 4 miles  |
| (S) A detailed description and justification for the site(s) selected, including a description of siting criteria and the narrowing process by which other possible sites were considered and eliminated, including, but not limited to, environmental effects, cost differential, coverage lost or gained, potential interference with other facilities, and signal loss due to geographical features compared to the proposed site(s);  | III.C. Site Selection, pages 6-7<br>IV.B. List of Area Towers, page 17<br><br>Attachment 1: Pre-Filed Testimony of David Vivian<br><br>Attachment 5: Alternate Site Analysis and Table of Towers within 4 miles   |
| (T) A statement describing hazards to human health, if any, with such supporting data and references to regulatory standards;   | III.F.7. Public Health and Safety, pages 13-14  |
| (U) A statement of estimated costs for site acquisition, construction, and equipment for a facility at the various proposed sites of the facility, including all candidates referred to in the application;   | IV.E. Cost Statement, page 18   |
| (V) A schedule showing the proposed program of site acquisition, construction, completion, operation and relocation or removal of existing facilities for the named sites;  | IV.F. Schedule, pages 18-19   |
| (W) A statement indicating that, weather permitting, the applicant will raise a balloon with a diameter of at least three feet, at the sites of the various proposed sites of the facility, including all candidates referred to in the application, on the day of the Council's first hearing session on the application or at a time otherwise specified by the Council. For the convenience of the public, this event shall be publicly noticed at least 30 days prior to the hearing on the application as scheduled by the Council; and  | IV.G. Balloon Display, page 19  |
| (X) Such information as any department or agency of the state exercising environmental controls may, by regulation, require including: <ol style="list-style-type: none"> <li>1. A listing of any federal, State, regional, district, and municipal agencies, including but not limited to the Federal Aviation Administration; Federal Communications Commission; State Historic Preservation Officer; State Department of Environmental Protection; and local conservation, inland wetland, and planning and zoning commissions with which reviews were conducted concerning the facility, including a copy of any agency position or decision with respect to the facility; and</li> <li>2. The most recent conservation, inland wetland, zoning,</li> </ol> | III.F. Environmental Compatibility, pages 9-14<br>V. State and Federal Consultation, pages 19-20<br>III.F. Land Use, pages 14-16<br>III.I. Derby's Inland Wetlands and Watercourses Regulations, pages 16-17<br><br>Attachment 10: Correspondence from State Agencies<br><br>Attachment 12: FAA Consultant Analysis for Site A and Site B |



| <b>Application Guideline</b>  | <b>Location in Application</b>   |
|---|--|
| and plan of development documents of the municipality, including a description of the zoning classification of the site and surrounding areas, and a narrative summary of the consistency of the project with the Town's regulations and plans. | Bulk Filing  |
| <b>(Y)</b> Description of proposed site clearing for access road and compound including type of vegetation scheduled for removal and quantity of trees greater than six inches diameter at breast height and involvement with wetlands;         | Attachment 6: Site A: Description and Design of Proposed Facility<br><br>Attachment 7: Site B: Description and Design of Proposed Facility |
| <b>(Z)</b> Such information as the applicant may consider relevant.   |  |