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*Chairman*

ANTHONY GIANNICO  
*Vice Chairman*

**BOARD MEMBERS**  
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ROBERT FRENKEL  
VICTORIA CAUSA  
JOHN NUCULOVIC

**TOWN OF CARMEL**  
**PLANNING BOARD**



60 McAlpin Avenue  
Mahopac, New York 10541  
Tel. (845) 628-1500 – Ext.190  
[www.ci.carmel.ny.us](http://www.ci.carmel.ny.us)

MICHAEL CARNAZZA  
*Director of Code  
Enforcement*

RICHARD FRANZETTI, P.E.  
*Town Engineer*

PATRICK CLEARY,  
AICP, CEP, PP, LEED AP  
*Town Planner*

**PLANNING BOARD AGENDA**  
**JANUARY 12, 2023– 6:00 P.M.**

**TAX MAP #   PUB. HEARING MAP DATE   COMMENTS**

**TOWN BOARD REFERRAL - 6:00 PM – 7:00 PM**

- |   |  |  |  |  |                                 |
|---|--|--|--|--|---------------------------------|
| 1. Town of Carmel Comprehensive Master Plan and Zoning Code Draft |  |  |  |  | Discussion (No Public Comments) |
|---|--|--|--|--|---------------------------------|

**PUBLIC HEARING**

- |                                       |            |         |          |                             |
|---------------------------------------|------------|---------|----------|-----------------------------|
| 2. Jedlicka, Regina – 334 Austin Road | 64.13-1-16 | 1/12/23 | 11/21/22 | Public Hearing & Resolution |
|---------------------------------------|------------|---------|----------|-----------------------------|

**SITE PLAN**

- |  |            |  |          |                   |
|--|------------|--|----------|-------------------|
| 3. Chang, John – 716 Route 6               | 76.30-1-26 |  | 12/28/22 | Amended Site Plan |
| 4. Glenacom Lake Cell Tower – Walton Drive | 87.5-1-90  |  | 12/1/22  | Site Plan         |

**MISCELLANEOUS**

5. Minutes – 10/26/22, 11/10/22, 11/30/22 & 12/8/22

**TOWN BOARD REFERRAL – CONTINUATION OF DISCUSSION**

- |   |  |  |  |  |                                 |
|---|--|--|--|--|---------------------------------|
| 6. Town of Carmel Comprehensive Master Plan and Zoning Code Draft |  |  |  |  | Discussion (No Public Comments) |
|---|--|--|--|--|---------------------------------|



# TOWN OF CARMEL SUBDIVISION APPLICATION INSTRUCTIONS



The Town of Carmel Planning Board meetings are held twice a month, on the second Thursday and fourth Wednesday, at 7:00 PM at Carmel Town Hall, 60 McAlpin Avenue, Carmel

The submission deadline is 10 days prior to the Planning Board meeting. New subdivision applications that have been deemed complete will be placed on the agenda in the order they are received.

**Pre-Submission:**

Prior to the formal submission of the subdivision, a pre-submission conference may be requested by the applicant to be conducted with representatives from the Town, which may include the Town Planner, Town Engineer, Director of Code Enforcement, Planning Board Attorney. This conference will serve to educate the applicant on the process he/she must follow, clarify the information required to submit a complete subdivision application, and to highlight any specific areas of concern. You may arrange a pre-submission conference through the Planning Board Secretary at (845) 628-1500.

**Submission Requirements:**

At least 10 days prior to the Planning Board meeting, the subdivision application shall be submitted to the Planning Board Secretary as follows:

All subdivisions shall be signed, sealed and folded with the title box legible. The application package shall include:

- 5 copies of the Subdivision Application Form signed and notarized.
- 5 copies of the SEQR Environmental Assessment Form (use of short form or long form shall be determined at pre-submission conference).
- 5 full size sets of the Subdivision Plan
- 1 CD (in pdf. format) containing an electronic version of the Subdivision Plan
- 2 copies of the Disclosure Statement
- 5 copies of the Subdivision Completeness Certification Form
- N/A* All supplemental studies, reports, plans and renderings.
- 2 copies of the current deed.
- N/A* 2 copies of all easements, covenants and restrictions.
- The appropriate fee, determined from the attached fee schedule. Make checks payable to the *Town of Carmel*.

*Rose Yombette 12/29/22*  
 Planning Board Secretary; Date

*BB 12/29/22*  
 Town Engineer; Date



# TOWN OF CARMEL SITE PLAN APPLICATION



Per Town of Carmel Code – Section 156 - Zoning

SITE IDENTIFICATION INFORMATION		
<b>Application Name:</b> Site Plan for John Chang	<b>Application #</b> 22-0015	<b>Date Submitted:</b> 12/28/22
<b>Site Address:</b> No. 716      Street: Route 6      Hamlet: Mahopac, NY 10541		
<b>Property Location:</b> <i>(Identify landmarks, distance from intersections, etc.)</i>  716 Route 6, Mahopac, NY 10541		
<b>Town of Carmel Tax Map Designation:</b> Section 76.30    Block 1    Lot(s) 26	<b>Zoning Designation of Site:</b> C	
<b>Property Deed Recorded in County Clerk's Office</b> Date      Liber      Page	<b>Liens, Mortgages or other Encumbrances</b> Yes <input checked="" type="checkbox"/> No	
<b>Existing Easements Relating to the Site</b> <input checked="" type="checkbox"/> No    Yes    Describe and attach copies:	<b>Are Easements Proposed?</b> <input checked="" type="checkbox"/> No    Yes    Describe and attach copies:	
<b>Have Property Owners within a 500' Radius of the Site Been Identified?</b> <input checked="" type="checkbox"/> Yes    No      Attached List to this Application Form		
APPLICANT/OWNER INFORMATION		
<b>Property Owner:</b> John Chang	<b>Phone #:</b> 914-320-5399 <b>Fax#:</b>	<b>Email:</b>
<b>Owners Address:</b> No.2675 Street: Cecile Drive      Town: Yorktown Heights      State:NY Zip: 10598		
<b>Applicant (If different than owner):</b>	<b>Phone #:</b> <b>Fax#:</b>	<b>Email:</b>
<b>Applicant Address (If different than owner):</b> No.      Street:      Town:      State:      Zip:		
<b>Individual/ Firm Responsible for Preparing Site Plan:</b> Architectural Visions	<b>Phone #:</b> 845-628-6613 <b>Fax#:</b> 845-628-2807	<b>Email:</b> joel.greenberg @arch-visions.com
<b>Address:</b> No. 2    Street: Muscoot Road N      Town: Mahopac      State:NY Zip: 10541		
<b>Other Representatives:</b> None	<b>Phone #:</b> <b>Fax#:</b>	<b>Email:</b>
<b>Owners Address:</b> No.2675 Street: Cecile Drive      Town: Yorktown Heights      State:NY Zip:10598		
PROJECT DESCRIPTION		
<b>Describe the project, proposed use and operation thereof:</b>  Legalize House of Worship on 2nd Floor		


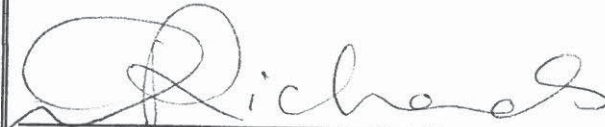
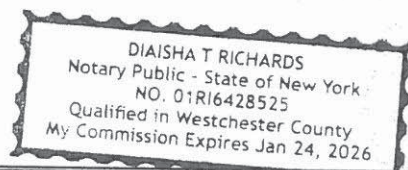
## TOWN OF CARMEL SITE PLAN APPLICATION

PROJECT INFORMATION			
Lot size: Acres: _____ Square Feet: _____		Square footage of all existing structures (by floor): _____	
# of existing parking spaces: 18		# of proposed parking spaces: 18	
# of existing dwelling units: 0		# of proposed dwelling units: 0	
Is the site served by the following public utility infrastructure:			
<ul style="list-style-type: none"> <li>▪ Is project in sewer district or will private septic system(s) be installed? <u>Sewer District</u></li> <li>▪ If yes to Sanitary Sewer answer the following:                             <ul style="list-style-type: none"> <li>▶ Does approval exist to connect to sewer main? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></li> <li>▶ Is this an in-district connection? <u>Yes</u> Out-of district connection? _____</li> <li>▶ What is the total sewer capacity at time of application? <u>400 GPD</u></li> <li>▶ What is your anticipated average and maximum daily flow <u>400 GPD</u></li> </ul> </li> </ul>			
For Town of Carmel Town Engineer			
<ul style="list-style-type: none"> <li>▶ What is the sewer capacity _____</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Water Supply Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></li> </ul>			
<ul style="list-style-type: none"> <li>If Yes:                             <ul style="list-style-type: none"> <li>▶ Does approval exist to connect to water main? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/></li> <li>▶ What is the total water capacity at time of application? _____</li> <li>▶ What is your anticipated average and maximum daily demand _____</li> </ul> </li> </ul>			
<ul style="list-style-type: none"> <li>▪ Storm Sewer Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></li> <li>▪ Electric Service Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></li> <li>▪ Gas Service Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></li> <li>• Telephone/Cable Lines Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></li> </ul>			
For Town of Carmel Town Engineer			
Water Flows _____			
Sewer Flows _____			
Town Engineer; Date _____			
What is the predominant soil type(s) on the site? <u>N/A</u>		What is the approximate depth to water table? <u>N/A</u>	
Site slope categories: 15-25% <u>100</u> % 25-35% _____% >35% _____%			
Estimated quantity of excavation: Cut (C.Y.) <u>None</u> Fill (C.Y.) <u>None</u>			
Is Blasting Proposed Yes: <input type="checkbox"/> No: <input type="checkbox"/> Unknown: <input type="checkbox"/>			
Is the site located in a designated Critical Environmental Area? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Does a curb cut exist on the site? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>		Are new curb cuts proposed? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
What is the sight distance? Left <u>200'+</u> Right <u>200'+</u>			
Is the site located within 500' of:			
<ul style="list-style-type: none"> <li>• The boundary of an adjoining city, town or village Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/></li> <li>• The boundary of a state or county park, recreation area or road right-of-way Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/></li> <li>• A county drainage channel line. Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/></li> <li>• The boundary of state or county owned land on which a building is located Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/></li> </ul>			

## TOWN OF CARMEL SITE PLAN APPLICATION

Is the site listed on the State or Federal Register of Historic Place (or substantially contiguous) Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Is the site located in a designated floodplain? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Will the project require coverage under the Current NYSDEC Stormwater Regulations <span style="float: right;">Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/></span>			
Will the project require coverage under the Current NYCDEP Stormwater Regulations <span style="float: right;">Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/></span>			
Does the site disturb more than 5,000 sq ft		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Does the site disturb more than 1 acre		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Does the site contain freshwater wetlands? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Jurisdiction: NYSDEC: <input type="checkbox"/> Town of Carmel: <input type="checkbox"/> N/A			
<i>If present, the wetlands must be delineated in the field by a Wetland Professional, and survey located on the Site Plan.</i>			
Are encroachments in regulated wetlands or wetland buffers proposed? Yes: <input type="checkbox"/> N/A No: <input type="checkbox"/>			
Does this application require a referral to the Environmental Conservation Board?		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Does the site contain waterbodies, streams or watercourses? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Are any encroachments, crossings or alterations proposed? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Is the site located adjacent to New York City watershed lands? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Is the project funded, partially or in total, by grants or loans from a public source? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>			
Will municipal or private solid waste disposal be utilized? Public: <input type="checkbox"/> Private: <input checked="" type="checkbox"/>			
Has this application been referred to the Fire Department?		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
What is the estimated time of construction for the project? <p style="text-align: center; font-size: 1.2em;">None</p>			
ZONING COMPLIANCE INFORMATION			
Zoning Provision	Required	Existing	Proposed
Lot Area	40,000 SF	16,522 SF	Pre-Existing
Lot Coverage	15%	15.7%	15.7%
Lot Width	200 FT	149.32 FT	149.32 FT
Lot Depth	200 FT	110.58 FT	110.58 FT
Front Yard	40 FT	32.3 FT	Pre-Existing
Side Yard	20 FT	10 FT S./ 73 FT N.	Pre-Existing
Rear Yard	20 FT	0 FT	Pre-Existing
Minimum Required Floor Area	5,000 SF	4,400 SF	Pre-Existing
Floor Area Ratio	N/A		
Height	35 FT	24 FT	24 FT
Off-Street Parking *			
Off-Street Loading	1 Space	1 Space	1 Space
* 1st Floor Deli	1 PS/200 SF	1800 SF/200 = 9 PS	9 PS
2nd Floor House of Worship	1 PS/3 Seats		10 PS
Off Street Parking	20	18	2 PS Variance

# TOWN OF CARMEL SITE PLAN APPLICATION

<b>Will variances be required?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	<b>If yes, identify variances:</b>  Area Variances
<b>PROPOSED BUILDING MATERIALS</b>	
Foundation	N/A
Structural System	N/A
Roof	N/A
Exterior Walls	N/A
<b>APPLICANTS ACKNOWLEDGEMENT</b>	
I hereby depose and certify that all the above statements and information, and all statements and information contained in the supporting documents and drawings attached hereto are true and correct.	
<u>John Chang</u> Applicants Name	 Applicants Signature
Sworn before me this <u>20<sup>th</sup></u> day of <u>December</u> 20 <u>22</u>	
 Notary Public	



## TOWN OF CARMEL SITE PLAN COMPLETENESS CERTIFICATION FORM



All Site Plans submitted to the Planning Board for review shall include the following information and details, as set forth in Section 156-61 B of the Town of Carmel Zoning Ordinance.

This form shall be included with the site plan submission

	<i>Requirement Data</i>	<i>To Be Completed by the Applicant</i>	<i>Waived by the Town</i>
1	Name and title of person preparing the site plan	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
2	Name of the applicant and owner (if different from applicant)	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
3	Original drawing date, revision dates, scale and north arrow	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
4	Tax map, block and lot number(s), zoning district	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
5	All existing property lines, name of owner of each property within a 500' radius of the site	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Contour lines at two-foot intervals, grades of all roads, driveways, sanitary and storm sewers	N/A <input type="checkbox"/> ✓	<input type="checkbox"/>
7	The location of all water bodies, streams, watercourses, wetland areas, wooded areas, rights-of-way, streets, roads, highways, railroads, buildings, structures	N/A <input type="checkbox"/> ✓	<input type="checkbox"/>
8	The location of all existing and proposed easements	N/A <input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
9	The location of all existing and proposed structures, their use, setback dimensions, floor plans, front, side and rear elevations, buildable area.	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
10	On site circulation systems, access, egress ways and service roads, emergency service access and traffic mitigation measures	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
11	Sidewalks, paths and other means of pedestrian circulation	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
12	On-site parking and loading spaces and travel aisles with dimensions	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>
13	The location, height and type of exterior lighting fixtures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	Proposed signage	None <input type="checkbox"/>	<input type="checkbox"/>
15	For non-residential uses, an estimate of the number of employees who will be using the site, description of the operation, types of products sold, types of machinery and equipment used	<input checked="" type="checkbox"/> ✓	<input type="checkbox"/>



# TOWN OF CARMEL SITE PLAN COMPLETENESS CERTIFICATION FORM



Requirement Data		To Be Completed by the Applicant	Waived by the Town
16	The location of clubhouses, swimming pools, open spaces, parks or other recreational areas, and identification of who is responsible for maintenance	N/A <input type="checkbox"/>	<input type="checkbox"/>
17	The location and design of buffer areas, screening or other landscaping, including grading and water management. A comprehensive landscaping plan in accordance with the Tree Conservation Law	N/A <input type="checkbox"/>	<input type="checkbox"/>
18	The location of public and private utilities, maintenance responsibilities, trash and garbage areas	<input checked="" type="checkbox"/>	<input type="checkbox"/>
19	A list, certified by the Town Assessor, of all property owners within 500 feet of the site boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20	Any other information required by the Planning Board which is reasonably necessary to ascertain compliance with this chapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**Applicants Certification (to be completed by the licensed professional preparing the site plan:**

I Joel Greenberg hereby certify that the site plan to which I have attached my seal and signature, meets all of the requirements of §156-61B of the Town of Carmel Zoning Ordinance:

Joel Greenberg  
Signature - Applicant

12/27/2022  
Date

[Signature]  
Signature - Owner

12/22/2022  
Date



Professionals Seal





TOWN OF CARMEL  
SITE PLAN COMPLETENESS  
CERTIFICATION FORM



Town Certification (to be completed by the Town)

I \_\_\_\_\_ hereby confirm that the site plan meets all of the requirements of §156-61B of the Town of Carmel Zoning Ordinance:

Rose Gronlith  
Signature - Planning Board Secretary

12/29/22  
Date

Richard A. [Signature]  
Signature - Town Engineer

12/29/22  
Date

# Short Environmental Assessment Form

## Part 1 - Project Information

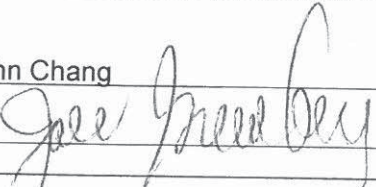
### Instructions for Completing

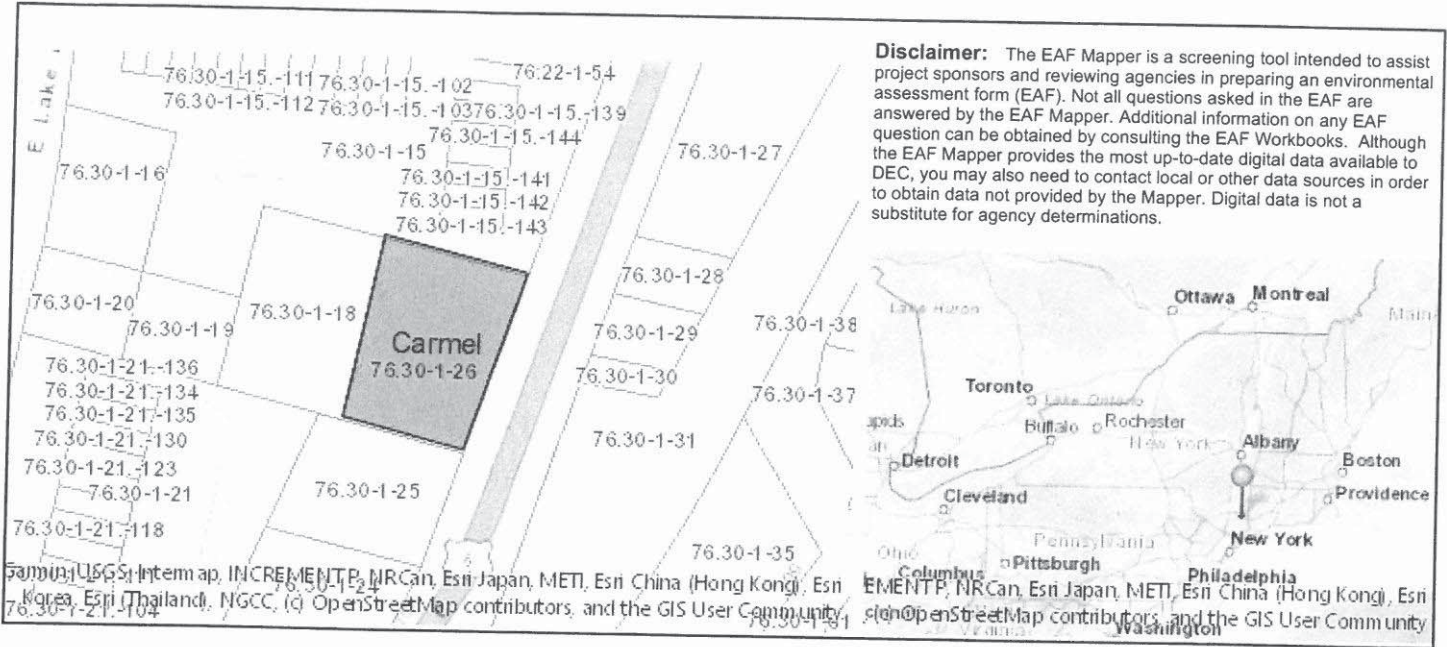
**Part 1 – Project Information.** The applicant or project sponsor is responsible for the completion of Part 1. Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification. Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information.

Complete all items in Part 1. You may also provide any additional information which you believe will be needed by or useful to the lead agency; attach additional pages as necessary to supplement any item.

<b>Part 1 – Project and Sponsor Information</b>			
Name of Action or Project: <b>Amended Site Plan</b>			
Project Location (describe, and attach a location map): <b>716 Route 6, Mahopac, NY 10541</b>			
Brief Description of Proposed Action: <b>Legalize House of Worship on 2nd Floor</b>			
Name of Applicant or Sponsor: <b>John Chang</b>		Telephone:	
		E-Mail:	
Address: <b>2675 Cecile Drive</b>			
City/PO: <b>Yorktown Heights</b>		State: <b>NY</b>	Zip Code: <b>10598</b>
1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation? If Yes, attach a narrative description of the intent of the proposed action and the environmental resources that may be affected in the municipality and proceed to Part 2. If no, continue to question 2.			NO <input checked="" type="checkbox"/>
			YES <input type="checkbox"/>
2. Does the proposed action require a permit, approval or funding from any other government Agency? If Yes, list agency(s) name and permit or approval: <b>Carmel ZBA &amp; Carmel Building Department</b>			NO <input type="checkbox"/>
			YES <input checked="" type="checkbox"/>
3. a. Total acreage of the site of the proposed action?		<u>0.3793</u> acres	
b. Total acreage to be physically disturbed?		<u>0</u> acres	
c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?		<u>0.3793</u> acres	
4. Check all land uses that occur on, are adjoining or near the proposed action:			
5. <input type="checkbox"/> Urban <input type="checkbox"/> Rural (non-agriculture) <input type="checkbox"/> Industrial <input checked="" type="checkbox"/> Commercial <input type="checkbox"/> Residential (suburban)			
<input type="checkbox"/> Forest <input type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input type="checkbox"/> Other(Specify):			
<input type="checkbox"/> Parkland			

5. Is the proposed action, a. A permitted use under the zoning regulations?	NO	YES	N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Consistent with the adopted comprehensive plan?	NO	YES	N/A
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Is the proposed action consistent with the predominant character of the existing built or natural landscape?	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
7. Is the site of the proposed action located in, or does it adjoin, a state listed Critical Environmental Area? If Yes, identify: _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8. a. Will the proposed action result in a substantial increase in traffic above present levels?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
	b. Are public transportation services available at or near the site of the proposed action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9. Does the proposed action meet or exceed the state energy code requirements? If the proposed action will exceed requirements, describe design features and technologies: _____ _____	NO	YES	
	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
10. Will the proposed action connect to an existing public/private water supply? If No, describe method for providing potable water: _____ _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
11. Will the proposed action connect to existing wastewater utilities? If No, describe method for providing wastewater treatment: _____ _____	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
12. a. Does the project site contain, or is it substantially contiguous to, a building, archaeological site, or district which is listed on the National or State Register of Historic Places, or that has been determined by the Commissioner of the NYS Office of Parks, Recreation and Historic Preservation to be eligible for listing on the State Register of Historic Places?	NO	YES	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
b. Is the project site, or any portion of it, located in or adjacent to an area designated as sensitive for archaeological sites on the NY State Historic Preservation Office (SHPO) archaeological site inventory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	13. a. Does any portion of the site of the proposed action, or lands adjoining the proposed action, contain wetlands or other waterbodies regulated by a federal, state or local agency?	NO	YES
b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody? If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____ _____ _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:		
<input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional <input type="checkbox"/> Wetland <input type="checkbox"/> Urban <input checked="" type="checkbox"/> Suburban		
15. Does the site of the proposed action contain any species of animal, or associated habitats, listed by the State or Federal government as threatened or endangered?	NO	YES
Northern Long-eared Bat	<input type="checkbox"/>	<input checked="" type="checkbox"/>
16. Is the project site located in the 100-year flood plan?	NO	YES
	<input checked="" type="checkbox"/>	<input type="checkbox"/>
17. Will the proposed action create storm water discharge, either from point or non-point sources?	NO	YES
If Yes,	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a. Will storm water discharges flow to adjacent properties?	<input type="checkbox"/>	<input type="checkbox"/>
b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?	<input type="checkbox"/>	<input type="checkbox"/>
If Yes, briefly describe:		
_____		
_____		
18. Does the proposed action include construction or other activities that would result in the impoundment of water or other liquids (e.g., retention pond, waste lagoon, dam)?	NO	YES
If Yes, explain the purpose and size of the impoundment: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
_____		
19. Has the site of the proposed action or an adjoining property been the location of an active or closed solid waste management facility?	NO	YES
If Yes, describe: _____	<input checked="" type="checkbox"/>	<input type="checkbox"/>
_____		
20. Has the site of the proposed action or an adjoining property been the subject of remediation (ongoing or completed) for hazardous waste?	NO	YES
If Yes, describe: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
_____		
<b>I CERTIFY THAT THE INFORMATION PROVIDED ABOVE IS TRUE AND ACCURATE TO THE BEST OF MY KNOWLEDGE</b>		
Applicant/sponsor/name: <u>John Chang</u>	Date: <u>12/20/2022</u>	
Signature: <u></u>	Title: <u>Project Architect</u>	



Part 1 / Question 7 [Critical Environmental Area]	No
Part 1 / Question 12a [National or State Register of Historic Places or State Eligible Sites]	No
Part 1 / Question 12b [Archeological Sites]	Yes
Part 1 / Question 13a [Wetlands or Other Regulated Waterbodies]	Yes - Digital mapping information on local and federal wetlands and waterbodies is known to be incomplete. Refer to EAF Workbook.
Part 1 / Question 15 [Threatened or Endangered Animal]	Yes
Part 1 / Question 15 [Threatened or Endangered Animal - Name]	Northern Long-eared Bat
Part 1 / Question 16 [100 Year Flood Plain]	No
Part 1 / Question 20 [Remediation Site]	Yes









**GLENACOM**

**LAKE**

**2022**

**SUBMISSION**

LAW OFFICES OF  
**SNYDER & SNYDER, LLP**  
94 WHITE PLAINS ROAD  
TARRYTOWN, NEW YORK 10591

NEW YORK OFFICE  
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December 29, 2022

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REPLY TO:

TARRYTOWN OFFICE

Honorable Chairman Craig Paeprer  
and Members of the Planning Board  
Town of Carmel Town Hall  
60 McAlpin Avenue  
Mahopac, New York 10541

Re: Application for site plan and special permit approval for  
Glenacom (a/k/a Glencoma) Lake: Walton Drive, Carmel, New York

Honorable Chairman Paeprer  
and Members of the Planning Board:

We are the attorneys for Homeland Towers, LLC and New York SMSA Limited Partnership d/b/a Verizon Wireless (collectively, the "Applicants") in connection with their request for site plan and special permit approval to locate a public utility wireless telecommunications facility ("Facility") at the above captioned property ("Property").

Based on plans on file with the Town, the distances from the monopole to the closest residences within the setback are as follows: The distance to the closest residence (53 Walton Drive) is approximately 174 feet (rather than 169 feet). There is a second residence (48 Walton Drive) that is approximately 276 feet from the monopole. Enclosed please find five (5) copies of a drawing labeled Sheet Z-6 which details the foregoing distances.

We thank you for your consideration and look forward to discussing this matter at the January 12, 2023 Planning Board meeting. If you have any questions or require any additional documentation, please do not hesitate to contact me at 914-333-0700.

Snyder & Snyder, LLP

By:   
Robert D. Gaudioso

RDG:cae

Enclosures

cc: Homeland Towers  
Verizon Wireless

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TARRYTOWN OFFICE

DAVID L. SNYDER  
(1956-2012)

December 7, 2022

Honorable Chairman Craig Paepre  
and Members of the Planning Board  
Town of Carmel Town Hall  
60 McAlpin Avenue  
Mahopac, New York 10541

Re: Application for site plan and special permit approval for  
Glenacom (a/k/a Glencoma) Lake: Walton Drive, Carmel, New York

Honorable Chairman Paepre  
and Members of the Planning Board:

We are the attorneys for Homeland Towers, LLC and New York SMSA Limited Partnership d/b/a Verizon Wireless (collectively, the "Applicants") in connection with their request for site plan and special permit approval to locate a public utility wireless telecommunications facility ("Facility") at the above captioned property ("Property") pursuant to the attached Court Order. The proposed Facility consists of a 140-foot tower and a fenced 30' x 85' compound for related equipment. The Property is located in the Residential Zoning District where the Facility is permitted in accordance with Section 156-62 of the Town of Carmel Zoning Code. This application was first filed to the Planning Board on January 24, 2020.

Verizon Wireless is a provider of personal wireless services, and is licensed by the Federal Communications Commission to provide wireless services throughout the New York metropolitan area, including the Town of Carmel.

In support of the foregoing, we are pleased to enclose five (5) of the following materials and one thumb drive with all documents contained thereon:

1. RF Justification Report;
2. USFWS letters;
3. DEC Letter;

4. Visual Resource Evaluation;
5. SWPPP;
6. MS4 Acceptance;
7. SHPO Concurrence;
8. Generator Certification Letter; and
9. Site Plan.

We thank you for your consideration, and look forward to discussing this matter at the next Planning Board meeting. If you have any questions or require any additional documentation, please do not hesitate to contact me at 914-333-0700.

Snyder & Snyder, LLP

By: 

Robert D. Gaudio

RDG:cae

Enclosures

cc: Homeland Towers  
Verizon Wireless

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UNITED STATES DISTRICT COURT  
SOUTHERN DISTRICT OF NEW YORK

-----x  
NEW YORK SMSA LIMITED PARTNERSHIP d/b/a/  
VERIZON WIRELESS, and HOMELAND TOWERS, LLC,

Plaintiffs,

DOCKET NO.:  
19-cv-10793 (PMH) (JCM)

-against-

THE TOWN OF CARMEL, THE TOWN OF CARMEL  
TOWN BOARD, THE TOWN OF CARMEL PLANNING  
BOARD, THE TOWN OF CARMEL ZONING BOARD  
OF APPEALS, THE TOWN OF CARMEL  
ENVIRONMENTAL CONSERVATION BOARD, and  
MICHAEL CARNAZZA THE TOWN OF CARMEL  
BUILDING INSPECTOR (in his official capacity),

Defendants.

-----x  
**STIPULATION OF SETTLEMENT AND CONSENT ORDER**

**WHEREAS**, the plaintiffs New York SMSA Limited Partnership d/b/a Verizon Wireless, and Homeland Towers, LLC (collectively, “Plaintiffs” or “Applicants”), commenced this action against defendants the Town of Carmel, the Town of Carmel Town Board (“Town Board”), the Town of Carmel Planning Board (“Planning Board”), the Town of Carmel Zoning Board of Appeals (“ZBA” or “Zoning Board”), the Town of Carmel Environmental Conservation Board (“Conservation Board”), and the Town of Carmel Building Inspector (in his official capacity) (“Building Inspector”), (collectively, “Town” or “Defendants”), seeking *inter alia* a Judgment and Order finding that Defendants’ denial of Plaintiffs’ request to: (i) install and maintain a public utility wireless telecommunications facility consisting of a 140-foot monopole designed to resemble a tree and a fenced compound for related equipment (“Casse Facility”) at the property located at 254 Croton Falls Road in the Town of Carmel, New York (“Casse Property”); and (ii) a public utility wireless telecommunications facility consisting of a 110-foot monopole designed to resemble a tree and a

fenced compound for related equipment (“Dixon Facility”) at the property located at 36 Dixon Road in the Town of Carmel, New York (“Dixon Property”), violated Plaintiffs’ rights under the Telecommunications Act of 1996 (“TCA”), as codified at 47 U.S.C. § 332(c) and § 253(a) and directing Defendants to immediately issue any and all local approvals necessary for Plaintiffs to install and operate the facilities that are the subject of this action;

**WHEREAS**, to avoid the delay, expense, inconvenience, and uncertainty of protracted litigation, Plaintiffs and Defendants previously agreed to settle this action pursuant to the terms and conditions set forth in a Stipulation of Settlement and Consent Order, so-ordered by the Court on May 20, 2020 (the “Prior Consent Order”);

**WHEREAS**, the parties reaffirm their respective approval of the Prior Consent Order, and have now agreed to modify the Prior Consent Order to the extent it pertains to the Casse Facility and a separate public utility wireless telecommunications facility including a monopole, a fenced compound with related equipment, and all necessary access and utilities (“Glenacom Facility”) at the property located at Walton Drive in the Town of Carmel, New York (“Glenacom Property”), as set forth herein this Amended Stipulation of Settlement and Consent Order (the “Amended Consent Order”) and as set forth in a separate settlement agreement executed by the parties on November 14, 2022 (the “Agreement”), the terms of which are incorporated by reference into this Amended Consent Order.

**WHEREAS**, Plaintiffs and Defendants, intending to be legally bound, have consulted with their counsel and the undersigned counsel herein have the requisite authority and approval to enter into this Amended Consent Order.

**NOW, THEREFORE, IT IS HEREBY STIPULATED AND AGREED BY PLAINTIFFS AND DEFENDANTS, AND ORDERED BY THE COURT THAT:**

1. The Town Board represents that it diligently considered the terms of this Amended Consent Order, took a hard look at all potential environmental impacts and issued a negative declaration pursuant to SEQRA, by majority vote of Town Board members with no conflict of interest, to reaffirm its approval of the Prior Consent Order and to approve this Amended Consent Order.

2. The parties further acknowledge that Applicants submitted an application for site plan and special permit approval for the Glenacom Facility to the Planning Board, on or about January 24, 2020, and conducted the necessary visual analysis of the Glenacom Facility in February 2020 (the "Prior Filing").

3. The Town Board represents that it satisfied any and all Open Meetings Law requirements by posting on its website the Prior Filing documents prior to entering into this Amended Consent Order. All other documents related to Town Board's approval of the Amended Consent Order, if any, are confidential and/or attorney-client privileged.

4. Plaintiffs shall supplement the Prior Filing by filing additional materials with the Planning Board and the Zoning Board ("Supplemental Filings"), as set forth in the Agreement, and the Planning Board and Zoning Board will process the Supplemental Filings in accordance with all applicable laws and with the Agreement.

5. The Parties shall comply with the terms of the Agreement and the Court shall retain jurisdiction so as to enforce the Agreement. If the Town fails to approve Plaintiffs' applications or fails to issue any required permits or approvals for the construction of the Glenacom Facility for any reason, Plaintiffs shall not be bound by the terms of this Amended Consent Order or the terms of the Prior Consent Order, to the extent that it pertains to the Casse Facility and the Glenacom Facility,

and shall have the right to reinstate this action and/or to file an amended and/or supplemental complaint to add and/or modify any allegations and/or causes of action pertaining to the Casse Facility and/or the Glenacom Facility.

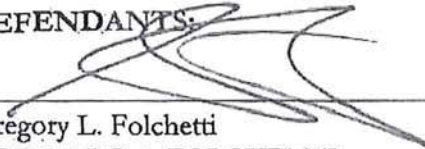
6. This Amended Consent Order shall not be construed to create rights in, or grant any cause of action to, any third party not a party to this Amended Consent Order.

7. Plaintiffs and Defendants acknowledge that this Amended Consent Order was the product of negotiation by all parties through their counsel, including negotiation as to the language set forth herein, and as such, to the extent there is any issue with respect to any alleged, perceived or actual ambiguity in this Amended Consent Order, the ambiguity shall not be resolved based on who drafted the Amended Consent Order. The obligations of this Amended Consent Order apply to and are binding upon the parties, and any successors and assigns or other entities or persons otherwise bound by law.

8. This Amended Consent Order shall be deemed a Type II action under the New York State Environmental Quality Review Act, as it is the action of a court. 6 N.Y.C.R.R. § 617.5(c)(46).

9. The Court shall retain jurisdiction over this matter, including the enforcement of the Agreement, and the Plaintiffs or Defendants may, upon notice, move this Court to enforce this Amended Consent Order and/or the Agreement against any other party or any non-party.

**DEFENDANTS:**



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**PLAINTIFFS:**




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Tarrytown, NY 10591  
T. (914) 333-0700  
*Attorneys for Plaintiffs*

Dated: November 14, 2022



**SO ORDERED:**



---

**The Honorable Philip M. Halpern  
United States District Judge**

Dated: White Plains, New York  
November 17, 2022

Independent Radio Frequency Report  
Regarding a proposed  
Wireless Communications Facility  
For Homeland Towers, LLC and  
New York SMSA Limited Partnership

**Site ID: “Glenacom ”**

Walton Drive  
Mahopac, NY  
Putnam County

Prepared for Homeland Towers, LLC and  
New York SMSA Limited Partnership d/b/a Verizon Wireless

By

PierCon Solutions, LLC  
December 7, 2022

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## 1 PURPOSE AND SCOPE

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PierCon Solutions LLC, an engineering firm specializing in wireless communications, performed an independent analysis regarding the radio frequency engineering aspects of the proposal by Homeland Towers, LLC and New York SMSA Limited Partnership, d/b/a Verizon Wireless to construct and operate a wireless telecommunications facility consisting of antennas and a tower at Walton Drive, Mahopac, NY. The purpose of this site is to relieve a significant coverage gap in service in Verizon Wireless' network. The following report describes the results of this analysis and how those results apply to the purpose of the proposed site.

In preparation for conducting this analysis, PierCon Solutions obtained applicable engineering data from Verizon Wireless, prepared and reviewed coverage propagation studies, considered the potential for alternative site locations and considered relevant portions of the Town of Carmel's ordinance for a Wireless Telecommunications. PierCon also performed an independent drive test of both Verizon's existing coverage and coverage from the proposed tower at 3 heights, 140ft, 120ft and 100ft.

The following report results from a thorough independent study and analysis (from a radiofrequency engineering perspective) of the applicant's proposal in consideration of the Town of Carmel's stated zoning goals and restrictions. It includes responses to specific sections of the Zoning Code of the Town of Carmel, addressing those provisions outlined in the Wireless Telecommunications ordinance.

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## 2 GENERAL OVERVIEW

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Verizon Wireless's current frequency holdings include their original cellular license (850 MHz), PCS license (1900 MHz), AWS license (2100 MHz), and LTE (700 MHz) license. Verizon has currently migrated all of their licensed frequency bands to LTE.

Each frequency band has different performance characteristics for both coverage and capacity. From a coverage perspective, the lower frequency bands (700/850 MHz) cover a greater distance and are less attenuated by trees and terrain, while the higher frequency bands (1900/2100 MHz) cover a lesser distance and are more attenuated by trees and terrain. From a coverage perspective if the 700 MHz (lowest) frequency band demonstrates a gap in coverage then all higher frequency bands (850 MHz, 1900 MHz, 2100 MHz) will demonstrate greater gaps in coverage.

From a capacity perspective, each frequency band offers a finite amount of spectrum bandwidth. It is through this bandwidth that capacity is supported. Within Carmel Verizon Wireless has deployed the following four (4) LTE carrier channels:

Channel / LTE Carrier	Frequency Band	Spectrum LTE Bandwidth	Physical Resource Blocks
1	700 MHz	10 MHz	50
2	1900 MHz	20 MHz	100
3	2100 MHz	20 MHz	100
4	850 MHz	10 MHz	50

In an LTE network, the amount of spectrum LTE bandwidth available defines the capacity of the LTE channel based upon the number of physical resource blocks available. A physical resource block (PRB) is the smallest unit of resource that can be assigned to a user. As can be seen from the table above, Verizon Wireless 1900 & 2100 MHz frequency bands provide for the most LTE capacity. Accordingly, the network design is based upon, and user traffic prioritized on, these higher frequency bands.

To effectively distribute capacity, an antenna system is divided into three or four sectors with each sector serving a portion of the area. Improperly located nodes or sites cause an inefficient design with high levels of interference and noise that result in poor user experiences and ultimately require more sites or nodes to cover the same area. From a coverage perspective, signal is not where it is intended, has excessive signal overlap and/or does not complete the coverage objective. From a capacity perspective, signal is not distributed equally amongst all sectors, thereby limiting the capacity of the site to only the sector or sectors of coverage provided from an improperly located node or site.

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### 3 DESIGN OBJECTIVES

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Verizon Wireless has established service and performance goals to provide reliable wireless services across all of its FCC licensed frequency bands and technologies. Verizon Wireless's service and performance goals include providing adequate coverage and capacity for voice and data services, preparing to provide future services, and otherwise improving service capabilities.

The service goals established by Verizon Wireless are designed to provide all customers with a positive wireless voice and data experience. Simply put, a positive wireless experience includes the customer connecting to the network on the first try, staying connected throughout the session, and the customer ending the session when ready. For positive experiences with data connections (e.g., internet browsing) the speed is as fast as the technology allows. Unreliable service, meaning service levels that do not meet Verizon Wireless's service and performance goals, causes a negative experience: customers cannot place calls when they want to; when they are connected, voice call quality does not meet customer expectations; or, the call simply drops off (disconnects) without notice. A negative data experience is not instantaneous, is much slower than consumers expect and demand, or the connection is never established.

Unreliable service that fails to meet Verizon Wireless's service and performance goals, which include voice and/or data services, can occur if there is: (i) a lack of reliable signal, including poor signal quality; and/or (ii) a lack of system capacity, or in terms of LTE, insufficient throughput, for any of Verizon Wireless's services and across all of Verizon Wireless's licensed frequency bands. Providing quality in-building voice and data services, with sufficient system capacity and high-speed data rates, is critical to Verizon Wireless's customers and is essential to Verizon Wireless's ability to compete effectively with its functionally equivalent competitors in a fair and balanced legal and regulatory environment.

In order to adequately provide reliable wireless service to The Town of Carmel, and surrounding area, the design threshold for reliable service must be defined. Verizon Wireless defines the reliable coverage boundary of an LTE site using a value of Reference Signal Received Power (RSRP). This value is derived from industry standard definitions of LTE receiver sensitivity and data throughput, along with statistically quantifiable variations in the physical surroundings. This threshold takes into account additional losses associated with the location of the user, such as on-street, in-vehicle or in-building. The drive test analysis and propagation coverage analyses for Carmel, presented herein, are for services based upon a suburban in-building standard with a corresponding RSRP of -95 dBm and an in-vehicle standard with a corresponding RSRP of -105 dBm. The suburban in-building standard encompasses most wood framed structures such as single-family homes. Stronger signal levels may be required in other locations and environments where higher density buildings and/or population densities are located.

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## 4 RADIO FREQUENCY ENGINEERING ACTIVITIES PERFORMED

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In the course of the analysis described in this report the following RF engineering tasks were performed:

- Reviewed the Wireless telecommunications services facilities ordinance of Carmel
- Reviewed USGS Topographical Maps of Mahopac and surrounding areas.
- Performed an engineering site analysis and reviewed potential alternate locations.
- Aerial analysis
- Reviewed the location and design of adjacent wireless communications facilities
- Prepared and reviewed Radio Frequency coverage maps and the RF design and objective within and surrounding the Town of Carmel
- Performed an independent drive test and Site Evaluation Drive Test
- Evaluated Verizon Wireless's Key System Performance Indicator Data ("KPI Data")

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## 5 DRIVE TEST METHODOLOGY

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On February 20<sup>th</sup>, 2020, PierCon Solutions performed an independent drive test analysis<sup>1</sup>. The test was performed by Ed Yorke (Sr RF Engineer) and Frances Boschulte (RF Manager). Drive tests (also known as a scan test) are a means to evaluate existing coverage from the network and a site evaluation drive test (also known as a CW test, where a continuous wave test channel is transmitted and measured) are a means to evaluate proposed coverage from a proposed facility.

Drive tests are used to produce maps ("Drive Test Maps"), which demonstrate actual signal levels along roadways that are traveled by specially equipped scan test vehicles. In a drive test, the signals from the surrounding on-air sites (LTE) are collected by a receive antenna mounted to the roof of the drive test vehicle. The data collected by the receive antenna is then processed by computer equipment within the drive test vehicle. The coordinates and signal strength of each collection point is recorded by the computer equipment and ultimately depicted on a Drive Test Map. Literally thousands of data points are collected during a drive test over the roadways driven by the drive test vehicle to ensure that a complete and statistically relevant number of data points can be evaluated.

The drive test consisted of collecting thousands of data points in the vicinity of the Glenacom proposed site and surrounding roadways. A PCTEL IBFLEX F multiband calibrated receiver, capable of measuring signals from the 700, 850, 1900, and 1700/2100 MHz frequency bands, was used to collect data points through the use of a magnetic mounted antenna and GPS device on the outside of the vehicle. The recording software is also capable of measuring LTE Technology. PCTEL drive test software was used to collect the data on a laptop computer while the vehicle was moving. The receiver calibration certification is attached as Exhibit AT.

The site evaluation test also consisted of collecting thousands of data points in the vicinity of the Glenacom proposed site and surrounding roadways. The same PCTEL IBFLEX F multiband receiver was utilized to measure the site evaluation drive test signal from a magnetic mounted antenna located on the roof of the vehicle. The existing coverage drive test and the site evaluation test were performed at the same time with the same receiver.

Since the testing was performed during the time of year with minimal foliage, the test results will be overstated, and require a correlation factor to account for losses due to dense foliage that will be present during the spring through fall

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<sup>1</sup> Since the time of the drive test no additional sites within the proximity of the subject site have been turned on air. Therefore, the data collected is still a valid representation of the signal levels from the surrounding adjacent sites.

season. PierCon utilized a conservative 7 dB foliage correlation in the analysis to follow. This foliage correlation factor was applied to both existing coverage and proposed coverage levels.

- Foliage Correlation Factor applied to all Drive Test measurements (Existing coverage & Test Channels) = **-7dB**

PierCon's level of 7dB for the foliage factor is calculated based on the proposed site location, and the foliage between receiving points. The value of 7dB was calculated using a diffraction loss (commonly known as shadow loss) formula found in William C. Lee's highly respected industry standard book called Mobile Cellular Communications. The formulas which were used are attached to the end of this report in the Appendix. The location referenced for the foliage factor was the intersection of Cottonwood Drive and Tulip Road which resulted in a diffraction loss of 7dB, using an average tree height of 60ft. For locations in this area where tree height exceeds 60ft, the diffraction loss would be greater than 7dB.

An additional correlation factor is required for the site evaluation drive test measurements (and not needed for the existing coverage measurements). This correlation factor is needed so that the transmit power (in terms of EIRP of the test antenna) for the site evaluation drive test channels matches the transmit power of the antennas from an actual LTE communication facility. Correlation factors calculated as follows:

- Correlation Factor for 700 MHz Test Channel
  - 700 MHz Test channel EIRP = 24.5dBm
  - Actual 700MHz LTE Reference Power EIRP = 31.1dBm
  - Correlation Factor to add to 700MHz Test channel measurements =  $31.1 - 24.5 = +6.6\text{dB}$
- Correlation Factor for 2100 MHz Test Channel
  - 2100 MHz Test channel EIRP = 28.9dBm
  - Existing 2100MHz LTE Reference Power EIRP = 31.6dBm
  - Correlation Factor to add to 2100MHz Test channel measurements =  $31.6 - 28.9 = +2.7\text{dB}$

In order to transmit a test channel at several different heights, a crane was required to elevate the test antenna. Due to the surrounding terrain and road access limitations the exact proposed location of the tower could not be tested.

A test location approximately 115' east of the proposed monopole location was selected. This location was along the access road at the end of Walton Drive (about 30 feet past the last house at the end of Walton Drive). Due to the sharp decline in terrain, it would be unsafe to move the crane any closer to the proposed location, and therefore resulted in the test location chosen.

The test location is located at a 25 feet higher ground elevation from the proposed site. To adjust for the ground elevation difference, the crane boom height was reduced 25' at each test height in order to get the equivalent heights as if tested from the subject site location.

- Proposed Location Ground elevation = 742 ft AMSL
- Test Location Ground elevation = 767 ft AMSL (25ft higher)

For a representation of the test location versus the proposed location, please refer to Figure 1 below (Google Earth image) and Figure 2 below (USGS Topographical view)

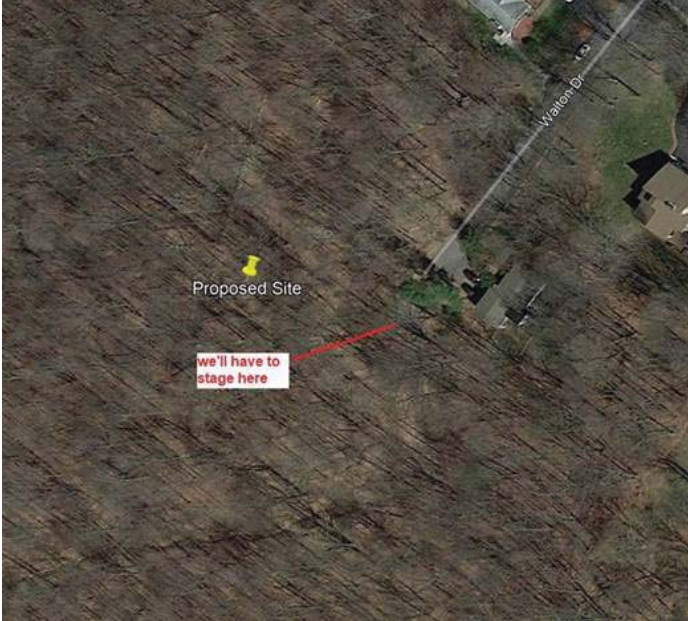


Figure 1 – Google Earth image representing the test location versus the proposed location

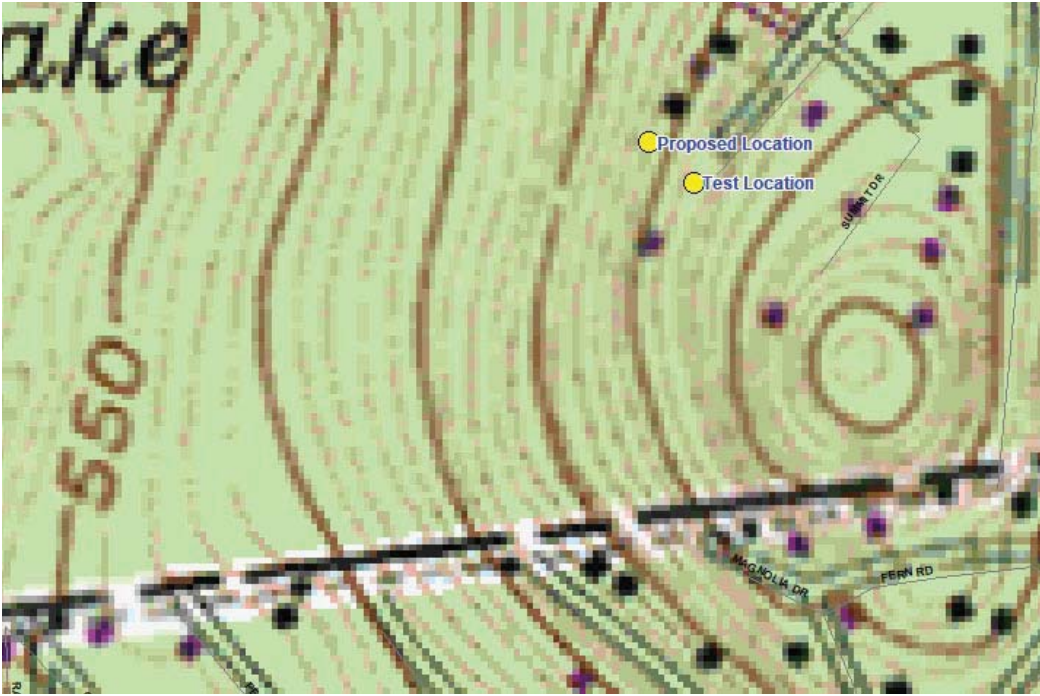


Figure 2 – USGS Topographical Map representing the test location versus the proposed location



## 6 RADIO FREQUENCY DESIGN

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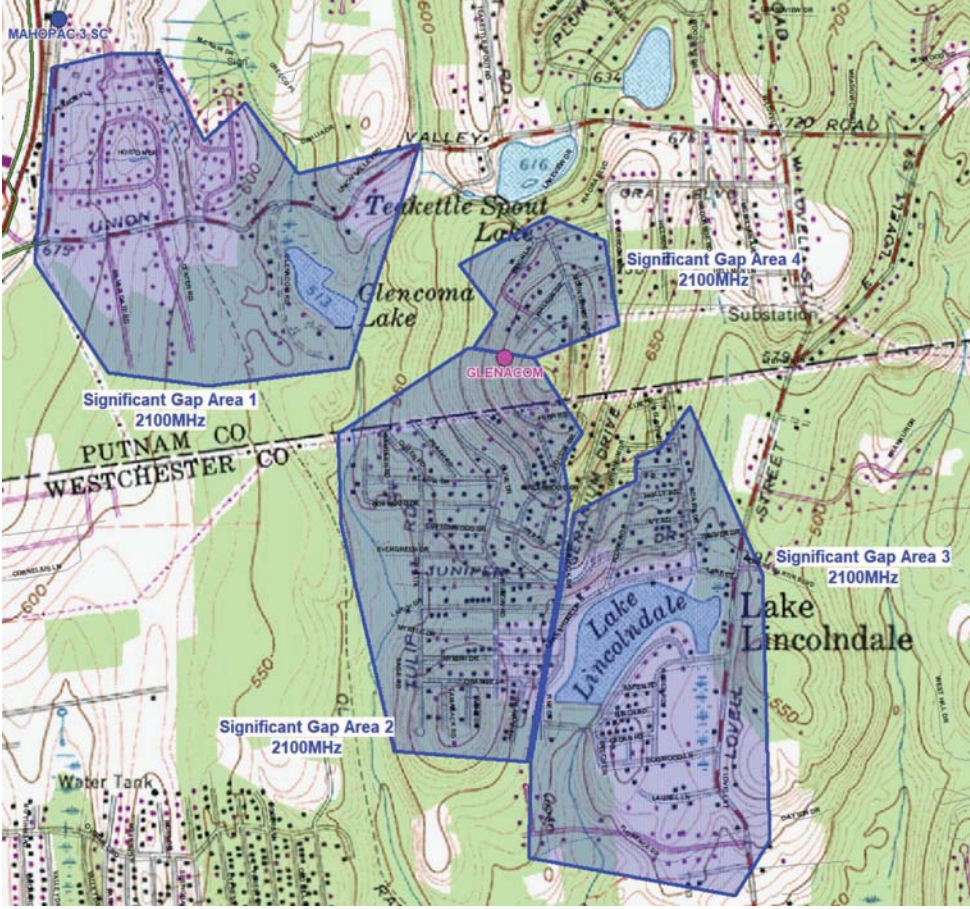
Verizon's current 4th generation technology deployed is LTE and is the relevant standard in which to design to. PierCon Solutions performed site evaluation drive testing on Verizon's highest (2100MHz) and lowest (700MHz) frequency bands in order to demonstrate the worst and best case coverage analysis. PierCon Solutions also collected existing signal strength data on each of Verizon's licensed bands (700 MHz, 850MHz, 1900MHz & 2100 MHz) and prepared exhibits attached hereto for reference. However, the focus of the analysis is based on 700MHz and 2100 MHz as best and worst case scenarios. This is due to the fact that if a gap is demonstrated at 700 MHz, then there will be larger gaps experienced at the 850 MHz and 1900 MHz frequency bands.

Please find attached, in the appendix, the following exhibits for the 2100 MHz LTE, 1900 MHz LTE, 850 MHz LTE, 700 MHz LTE Drive Test Results:

- **Exhibit A – 2100MHz Existing Signal Strength Drive Test Results**
- **Exhibit B – 1900MHz Existing Signal Strength Drive Test Results**
- **Exhibit C – 850MHz Existing Signal Strength Drive Test Results**
- **Exhibit D – 700MHz Existing Signal Strength Drive Test Results**

In exhibits A, B, C and D, the color of the dots represents a range of signal strengths. The blue dots represent RSRP signals greater than or equal to -85 dBm and the green dots represent RSRP signals greater than or equal to -95 dBm and less than -85 dBm. Both blue and green dots represent the area which supports reliable suburban in-building coverage levels. The yellow dots represent RSRP signals greater than or equal to -105 dBm and less than -95 dBm which supports in-vehicle coverage levels (but not suburban in-building coverage). The grey dots represent RSRP signals less than -105 dBm, (no suburban in-building or in-vehicle coverage).

Please refer to the following Exhibits A1 and D1 below as a summary of the significant gap Areas analyzed.



**Exhibit A1 – Coverage Objective Suburban 2100MHz In-Building LTE Coverage**

As shown in Exhibit A1, for 2100MHz the total area that requires reliable coverage is 0.944 square miles and the total residential population is 1,964 people.

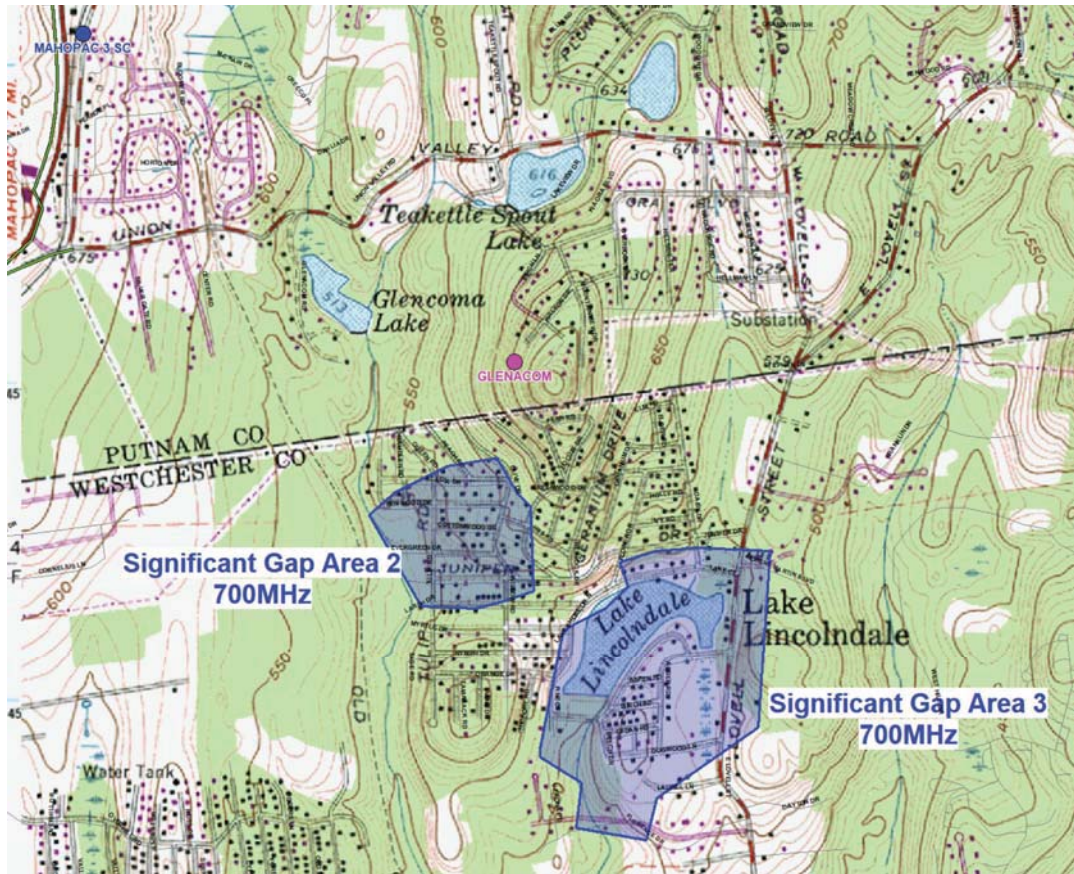


Exhibit D1 – Coverage Objective Suburban 700MHz In-Building LTE Coverage

As shown in Exhibit D1, for 700MHz, the total area that requires reliable coverage is 0.25 square miles and the total residential population is 597 people.

### **2100 MHz Drive Test & Significant Gap in Service**

As previously stated, 2100MHz provides the least coverage range in comparison to all other Verizon frequency bands because of its frequency, but often better signal quality. However, due to its larger bandwidth it is capable of providing more LTE capacity & throughput than the lower frequency bands.

Referring to Exhibit A “2100MHz Existing Signal Strength Drive Test Results”, the drive test data confirms that a significant gap in 2100MHz suburban in-building coverage and 2100MHz suburban in-vehicle coverage exists in the Glenacom area. The four (4) areas shown in Exhibit A1 define the significant gap:

- 2100 Gap Summary
  - Approximately 1 square mile of inbuilding coverage gap
  - According to the 2010 US census, approximately 1,964 people live within the gap area.

### **700 MHz Drive Test & Significant Gap in Service**

As previously stated, 700MHz will provide the largest range in signal coverage in comparison to all other Verizon frequency bands because it is their lowest frequency. However due to its limited bandwidth the signal quality may not be adequate enough to meet Verizon’s LTE service and performance goals.

Referring to Exhibit D 700MHz Existing Signal Strength Drive Test Results, the drive test data confirms that a significant gap in 700MHz suburban in-building coverage exists in the Glenacom area. The two (2) areas shown in Exhibit D1 define the significant gap:

- 700 Gap Summary
  - Approximately 0.25 square mile of inbuilding coverage gap
  - According to the 2010 US census, approximately 597 people live within the gap area.

## **Search Area**

In order to identify an appropriate location for a facility to alleviate the significant gap in coverage a search area was developed. The search area is based upon the existing surrounding sites coverage, validated by the drive test data, and taking into account the surrounding terrain features. A search area is a narrowly defined area, based upon the geometric cellular grid plan and existing gap data analyzed.

Verizon requires a new site centrally located between the four significant gap areas. By being centrally located, the new site would have the minimum overall distance to all four significant gap areas and therefore maximize coverage results of the new site. More specifically, the distance between the northern edge of significant gap area 1 to the southern edge of significant gap area 3 is 2.0 miles. A centrally located site would be no more than 1.0 mile from the furthest resident in these significant gap areas.

In addition, being centrally located would enable the LTE data usage to be equally distributed on all three sectors essentially maximizing the capacity efficiency of the site and improving the overall signal quality in the area.

An additional factor to consider when defining the search area is extreme terrain elevation. The Glenacom area has terrain that varies from approximately 500ft to 860ft AMSL. Terrain features can be major obstacles for providing coverage (terrain can add significant signal attenuation if it blocks line of site visibility). Terrain features can also be a major advantage in some cases (higher ground elevation can typically provide more line of site visibility to the area). Given the significant variations to terrain in this area (~360ft variance), it is necessary to locate a new site on higher ground to maximize line of site visibility. For this area, the highest ground elevation is found in the area that is centrally located around these four significant gap areas.

Combining all these factors, Verizon's search area is centered around the top of this hill. The ideal location would be the 860' elevation peak of this hill which is located at the end of Summit Circle Drive (See Figure 3 below)

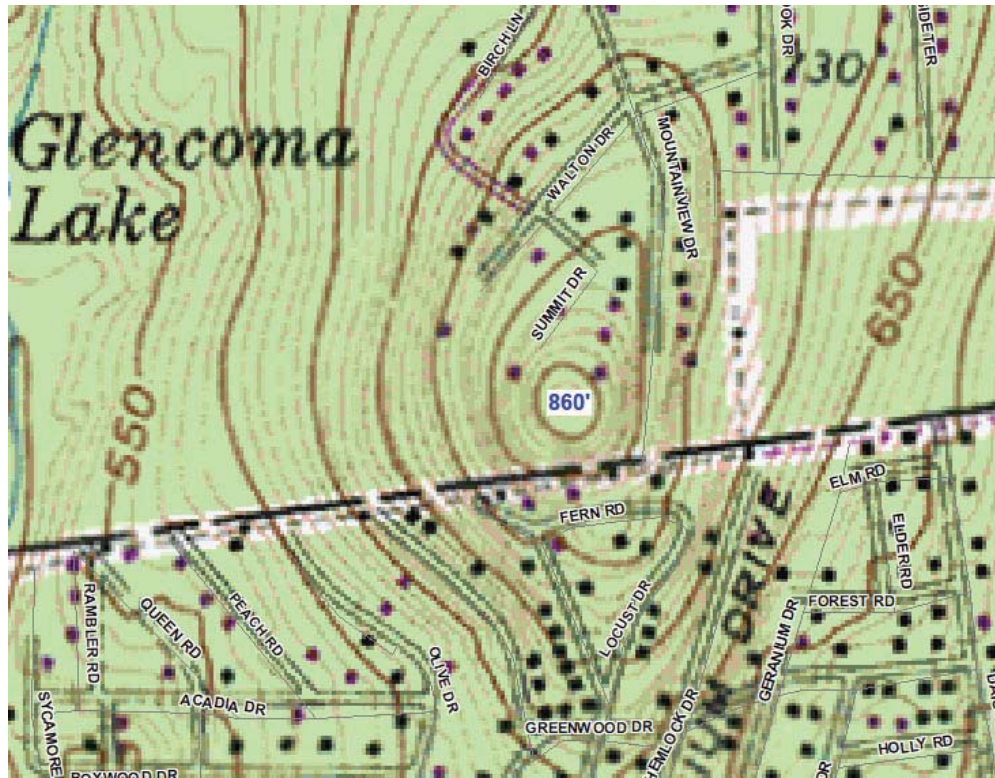


Figure 3 – USGS Topographical Map of the local area

Moving the new site location in any direction away from this 860' elevation peak will result in terrain blocking or shadowing of coverage in particular areas. Given that Verizon's significant gap areas are located west and south of this peak, a new site could potentially be located slightly west or south of the peak as long as there is not a significant loss in terrain elevation. Moving north of the peak will result in blocked / shadowed coverage to the south in the direction of significant gap Areas 2 and 3. Moving east of the peak will result in the blocked / shadowed coverage to the west in the direction of significant gap Area 1.

The process of defining a Search Area for a new site location must take into account all of these factors in order to accomplish the objective. The search area for this particular gap area is centered around the 860' peak at the end of Summit Circle Drive and the western and southern sides of this peak while at the same time maintaining high ground elevation (no less than 700ft elevation). The search area size is 1760ft north to south and 730ft east to west. Please refer to Figure 4 below for the resulting Search Area.

The subject property at the end of Walton Drive was identified to meet the search area criteria and was found to have a willing landlord and therefore the subject of this application.



Figure 4 – Search Area for Glencom area

In order to determine the minimum height necessary to remedy the significant gaps outlined herein a site evaluation (CW) test was performed. The drive test was performed at multiple heights of 100', 120' and 140' and the expected coverage from each height evaluated against the significant gap areas. The following section describes the results of the CW drive test for both the 2100 MHz and 700 MHz bands at the heights tested.

#### 2100 MHz Site Evaluation Drive Test with Proposed height of 140ft

- Please refer to the following exhibit: **Exhibit E – 2100MHz Site Evaluation Drive Test Results at 140ft (via test location at 115ft)**. Results of the 2100 MHz Drive Test at Proposed height of 140ft., in terms of the four significant gaps previously defined above, are as follows: Provides approximately 0.6 square miles of inbuilding residential coverage
- Provides coverage to approximately 1,342 people living within the gap area.
- Provides coverage to the Glencom area.

#### **2100 MHz Site Evaluation Drive Test Results with Proposed Site at 120ft**

- Please refer to the following exhibit: **Exhibit F – 2100MHz Site Evaluation Drive Test Results at 120ft (via test location at 95ft)**. Results of the 2100 MHz Drive Test at Proposed height of 120ft., in terms of the four significant gaps previously defined above, are as follows: Provides approximately 0.36 square miles of inbuilding residential coverage
- Provides coverage to approximately 761 people living within the gap area.
- Provides coverage to the Glenacom area.

#### **2100 MHz Site Evaluation Drive Test Results with Proposed Site at 100ft**

- Please refer to the following exhibit: **Exhibit G – 2100MHz Site Evaluation Drive Test Results at 100ft (via test location at 75ft)**. Results of the 2100 MHz Drive Test at Proposed height of 100ft., in terms of the four significant gaps previously defined above, are as follows: Provides approximately 0.1 square miles of inbuilding residential coverage
- Provides coverage to approximately 573 people living within the gap area.

#### **700 MHz Site Evaluation Drive Test Results with Proposed Site at 140ft**

- Please refer to the following exhibit: **Exhibit H – 700MHz Site Evaluation Drive Test Results at 140ft (via test location at 115ft)**. Results of the 700 MHz Drive Test at Proposed height of 140ft., in terms of the four significant gaps previously defined above, are as follows: Provides approximately 0.21 square miles of inbuilding residential coverage
- Provides coverage to approximately 567 people living within the gap area.
- Provides coverage to the Glenacom area.

#### **700 MHz Site Evaluation Drive Test Results with Proposed Site at 120ft**

- Please refer to the following exhibit: **Exhibit I – 700MHz Site Evaluation Drive Test Results at 120ft (via test location at 95ft)**. Results of the 700 MHz Drive Test at Proposed height of 120ft., in terms of the four significant gaps previously defined above, are as follows: Provides approximately 0.11 square miles of inbuilding residential coverage
- Provides coverage to approximately 196 people living within the gap area.
- Provides coverage to the Glenacom area.

#### **700 MHz Site Evaluation Drive Test Results with Proposed Site at 100ft**

- Please refer to the following exhibit: **Exhibit J – 700MHz Site Evaluation Drive Test Results at 100ft (via test location at 75ft)**. Results of the 700 MHz Drive Test at Proposed height of 100ft., in terms of the four significant gaps previously defined above, are as follows: Provides approximately 0.065 square miles of inbuilding residential coverage
- Provides coverage to approximately 128 people living within the gap area.
- Provides coverage to the Glenacom area.

Table 1 - Summary of Results for 2100MHz Site Evaluation Test

2100MHz Results			Proposed at 140ft		Proposed at 120ft		Proposed at 100ft	
Significant Gap Area #	Area of Gap (sq miles)	Residential Population in Gap	% Area of Resolved Gap	% Residential Population in Resolved Gap	% Area of Resolved Gap	% Residential Population in Resolved Gap	% Area of Resolved Gap	% Residential Population in Resolved Gap
1	0.31	532	93.5%	100%	61.3%	66%	16.1%	44%
2	0.27	526	81.5%	82%	51.9%	19%	12.1%	5%
3	0.31	568	6.5%	8%	0.0%	0%	0.0%	0%
4	0.054	338	85.2%	100%	59.3%	92%	53.7%	92%
TOTALS	0.944	1,964	61.0%	68%	38.3%	39%	11.8%	29%

Based on the Existing Coverage Drive Test for 2100MHz, PierCon Solutions has confirmed a significant gap in suburban inbuilding coverage exists for this area. In addition, the proposed site at 140ft would resolve most of this significant gap in suburban inbuilding coverage.

Furthermore, PierCon Solutions has determined that 140ft is the minimum height required because further height reductions below 140ft result in a significant loss in coverage.

- Lowering the height from 140ft to 120ft results in a reduction in area of resolved gap changing from 61% to 38% (24% of the coverage benefit is lost). In addition, the residential population in resolved gap changes from 68% to 39% (29% of the coverage benefit is lost)
- Lowering the height from 140ft to 100ft results in a reduction in area of resolved gap changing from 61% to 11.8% (49.2% of the coverage benefit is lost). In addition, the residential population in resolved gap changes from 68% to 29% (39% of the coverage benefit is lost)

Table 2 - Summary of Results for 700 MHz Site Evaluation Test

700MHz Results			Proposed at 140ft		Proposed at 120ft		Proposed at 100ft	
Significant Gap Area #	Area of Gap (sq miles)	Residential Population in Gap	% Area of Resolved Gap	% Residential Population in Resolved Gap	% Area of Resolved Gap	% Residential Population in Resolved Gap	% Area of Resolved Gap	% Residential Population in Resolved Gap
2	0.07	148	100.0%	100%	100.0%	100%	92.9%	86%
3	0.18	449	77.8%	93%	22.2%	11%	0.0%	0%
TOTALS	0.25	597	84.0%	95%	44.0%	33%	26.0%	21%

Based on the Existing Coverage Drive Test for 700MHz, PierCon Solutions has confirmed a significant gap in suburban inbuilding coverage exists for this area. In addition, the proposed site at 140ft would resolve most of this significant gap in suburban inbuilding coverage. The small remaining portion of significant gap Area #3 cannot be covered at any height due to the terrain blocking the northern side of Lake Lincolnale.

Furthermore, PierCon Solutions has determined that 140ft is the minimum height required because further height reductions below 140ft result in a significant loss in coverage.

- Lowering the height from 140ft to 120ft results in a reduction in area of resolved gap changing from 84% to 44% (40% of the coverage benefit is lost). In addition, the residential population in resolved gap changes from 95% to 33% (62% of the coverage benefit is lost)
- Lowering the height from 140ft to 100ft results in a reduction in area of resolved gap changing from 84% to 26% (58% of the coverage benefit is lost). In addition, the residential population in resolved gap changes from 95% to 21% (74% of the coverage benefit is lost)



PierCon Solutions concludes that the minimum height required for the proposed site is 140ft.

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## 7 COVERAGE PROPAGATION ANALYSIS

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Documentary evidence regarding the need for the proposed telecommunications facility at the proposed location was obtained by PierCon Solutions from Verizon Wireless' radio coverage planning tool called Atoll. Atoll is used in 140 countries and are used by Verizon Wireless, AT&T, Sprint, and many other service providers throughout the world. The propagation data provided was used to produce propagation coverage maps indicating the locations where reliable service is being provided by Verizon Wireless' wireless communications facilities.

As previously demonstrated above, within the current network of sites for Verizon Wireless, gaps in coverage currently exist for all four (4) FCC licensed frequency bands for Verizon Wireless (700, 850, 1900, and 2100 MHz). In order to help support the analysis and conclusions from the Drive Testing analysis, PierCon also analyzed the propagation data. As always, there can be some degree of variation between the precise coverage boundaries between Drive Test data and Propagation analysis. This is due to the difference in methodology - Drive Test data is based on real-world measurements where the environmental factors that cause signal attenuation apply their real-world effects on the signal strength measurements; however, it is only collected on the roadways. Whereas propagation analysis is based on computer simulations using tuned models, terrain databases and clutter attenuation values which could demonstrate some difference from drive test data. Although Drive Test data is considered a more accurate form of data for this analysis, the propagation data can serve as additional support.

PierCon Solutions obtained propagation data for the highest and lowest frequency bands (700 & 2100 MHz) to demonstrate the best case and worst case (respectively) performing frequency bands with regard to coverage and to compare to the results from the Drive Test data. Based on the comparison, the significant gaps in coverage previously discussed are validated with the propagation maps. Please refer to the following exhibits:

- **Exhibit K – Existing Verizon Wireless Suburban 2100MHz In-Building LTE Coverage**
- **Exhibit L – Existing Verizon Wireless Suburban 700MHz In-Building LTE Coverage**

### **2100 MHz Suburban In-Building Coverage Gap (from Propagation):**

Attached hereto is Exhibit K which represents Verizon Wireless' existing 2100 MHz in-building residential in-building coverage. Exhibit K demonstrates that the same four significant gap areas (previous discussed with drive test data) also have a significant gap in suburban inbuilding coverage.

### **700 MHz Suburban In-Building Coverage Gap (from Propagation):**

From Exhibit L, it can be observed based on 700MHz propagation that the same two significant gap areas (previous discussed with drive test data) also have a significant gap in suburban inbuilding coverage.

### **2100 MHz Existing + Proposed (w/ 137ft Antenna Centerline) Suburban In-Building Coverage (from Propagation):**

Please refer to the following exhibit: **Exhibit M – Existing + Proposed Verizon Wireless Suburban 2100MHz In-Building LTE Coverage at 137'**

From Exhibit M, the propagation analysis demonstrations for all four of the 2100MHz Significant gap areas (Area 1,2,3,4) have very similar results found with the Drive Test analysis which are summarized in Table 1 above. The Proposed Site location with 137' Antenna Centerline (140' overall structure height) is capable of resolving most of the significant gap in coverage at Significant gap Areas 1, 2 and 4 and has marginal effect on Significant gap Area 3. Given these results are very similar to the results from drive test analysis, PierCon Solutions confirms the 2100MHz propagation analysis supports the conclusions made from the drive test analysis.

**700 MHz Existing + Proposed (w/ 137ft Antenna Centerline) Suburban In-Building Coverage (from Propagation):**

Please refer to the following exhibit: **Exhibit N – Existing + Proposed Verizon Wireless Suburban 700MHz In-Building LTE Coverage at 137'**

From Exhibit N, the propagation analysis demonstrations for both of the 700MHz Significant gap areas (Area 2,3) have very similar results found with the Drive Test analysis which are summarized in Table 2 above. The Proposed Site location with 137' Antenna Centerline (140' overall structure height) is capable of resolving the significant gap in coverage at Significant gap Areas 2 and 3. Given these results are very similar to the results from drive test analysis, PierCon Solutions confirms the 700MHz propagation analysis supports the conclusions made from the drive test analysis.

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**8 VERIZON WIRELESS'S SERVICE AND PERFORMANCE GOALS ARE DEMONSTRATED BY KEY PERFORMANCE INDICATOR (KPI) DATA**

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In addition to confirming that Verizon Wireless has a significant gap in both 700 MHz and 2100 MHz 4G LTE coverage with Drive Test Maps and Coverage Maps, PierCon Solutions have also evaluated Verizon Wireless's Key System Performance Indicator Data ("KPI Data"). The KPIs utilized consist of call access failure rates and drop call failure rates from Verizon Wireless' existing antennas providing signal to the area identified in and surrounding the Glenacom area. The KPI Data analyzed and provided herein is for 4G LTE services. For 4G LTE services, Verizon utilizes its 700 MHz, 850 MHz, 1900 MHz and 2100 MHz bands.

The drop call rate and call access failure rate are two performance indicators of a wireless network having a gap in reliable service, or in this case the inability to provide reliable service due to lack of sufficient coverage or poor signal quality. Call access failures, or setup failures, meaning the inability for a customer to place a call, are indicators that the signal strength and/or quality are unreliable such that calls, or data sessions are unable to be established at the will of the customer. Dropped calls, meaning calls that are prematurely ended by the network rather than the customer, are an indicator that the signal strength and/or signal quality is unreliable such that voice calls or data connections are disconnected. PierCon Solutions was able to confirm Verizon Wireless's significant gap in service and the need for the proposed site by analyzing actual system performance data for the existing sites in and surrounding the Glenacom area.

The LTE network manages connections in a priority order based upon signal quality. This allows for the ability to support users at a high level of capacity and throughput to ensure a positive user experience. As noted herein, the coverage characteristics of each frequency band differ with respect to coverage range. The lower bands (700 MHz) provide the largest coverage range whereas the mid band (2100 MHz) provides the least range. Through LTE users have the ability to access bandwidth from different frequency bands provided the user is within coverage range of each band. This is called carrier aggregation and it allows for higher capacity and throughput. Users located close to a transmitter site typically will have access to all the frequency bands deployed. Whereas users located further away may only have access to the 700 MHz or 850 MHz bands. Furthermore, transient users (moving from area to area) will transition from the higher bands to the lower bands, which is called "hand-down" as they move away from a site and the frequency they originated on (2100 or 1900) become weak they will move to a lower frequency band. Observing the KPI data one will typically see the higher amount of drop calls and access failures on the 700 MHz band. This is due to the fact that when no other frequency band is available due to their coverage limitations, only the 700 MHz band remains. When the 700 MHz signal is inadequate users cannot access the network or users' connections drop.

The KPI charts include 4G dropped call performance data and access failure data for Verizon Wireless's facilities surrounding the subject area. The data collected consists of a 1-month period from October 18, 2022, through November 16, 2022, and is based on the daily hourly data<sup>2</sup>. Drop calls, due to unreliable service, will demonstrate even greater

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<sup>2</sup> KPI data was refreshed to include current 1-month data from October 18, 2022, through November 16, 2022.

problems once the foliage comes out. The charts analyzed and provided herein are for the sites and sectors pointing towards the gap area. The drop call percentages and the access failure percentages further demonstrate with actual call data that Verizon Wireless has a significant gap in reliable wireless service in the areas surrounding the proposed site. Any dropped call or access failure can be deemed unacceptable to a wireless customer, particularly in an emergency situation. Verizon Wireless has established that a dropped call rate greater than 1% or an access failure rate greater than 2% is a measure of unreliable wireless coverage. This criteria are consistent with industry standards. Please refer to the following charts below for the 4G KPI data:

The four existing sectors that point towards the Glenacom area provide signal to the area and therefore are relevant. These sectors are:

- Yorktown Heights 2 – Alpha Sector (antenna azimuth = 92 degrees ETN)
- Mahopac Falls – Alpha Sector (antenna azimuth 102 degrees ETN)
- Heritage Hills – Beta Sector (antenna azimuth = 222 degrees ETN)
- Lincolndale – Gamma Sector (antenna azimuth = 305 degrees ETN)

Please refer to the following Exhibits for the 4G KPI data for these four sectors:

- **Exhibit O - Yorktown Heights 2 – Alpha Sector Drop Call Rate (700MHz)**
- **Exhibit P - Lincolndale – Gamma Sector Drop Call Rate (700MHz)**
- **Exhibit Q - Lincolndale – Gamma Sector Drop Call Rate (850MHz)**
- **Exhibit R - Lincolndale – Gamma Sector Drop Call Rate (1900MHz)**
- **Exhibit S - Lincolndale – Gamma Sector Drop Call Rate (2100MHz)**
- **Exhibit T - Lincolndale – Gamma Sector Access Failure Rate (700MHz)**
- **Exhibit U - Heritage Hills – Beta Sector Drop Call Rate (700MHz)**
- **Exhibit V - Heritage Hills – Beta Sector Drop Call Rate (850MHz)**
- **Exhibit W - Heritage Hills – Beta Sector Drop Call Rate (1900MHz)**
- **Exhibit X - Heritage Hills – Beta Sector Drop Call Rate (2100MHz)**
- **Exhibit Y - Heritage Hills – Beta Sector Access Failure Rate (700MHz)**
- **Exhibit Z - Mahopac Falls – Alpha Sector Drop Call Rate (700 MHz)**
- **Exhibit AA – Mahopac Falls – Alpha Sector Access Failure Rate (700 MHz)**

Table 3 – Summary of KPI Data

The summary table below demonstrates that users may be able to access the LTE network on the higher bands but they cannot maintain connections as the move away from the serving sites towards the gap area. This is evident in the high drop call rates and access failure rates on the 700 MHz band. As noted earlier, the 700 MHz band provides the largest coverage range whereas all users transitioning into a gap area will ultimately drop calls and not be able to access the LTE network.

Site & Sector	700 MHz % Days Above 1% Drop Rate	850 MHz % Days Above 1% Drop Rate	1900 MHz % Days Above 1% Drop Rate	2100 MHz % Days Above 1% Drop Rate
Heritage Hills Beta (87')	100%	50%	7%	17%
Lincolndale Gamma (106')	100%	30%	20%	30%
Yorktown Heights 2 Alpha (96')	70%	n/a	7%	3%
Mahopac Falls Beta (121')	100%	13%	7%	7%
Site & Sector	700 MHz % Days Above 1% Access Fail Rate	850 MHz % Days Above 1% Access Fail Rate	1900 MHz % Days Above 1% Access Fail Rate	2100 MHz % Days Above 1% Access Fail Rate
Heritage Hills Beta (87')	100%	0%	0%	0%
Lincolndale Gamma (106')	23%	0%	0%	0%
Yorktown Heights 2 Alpha (96')	7%	n/a	0%	0%
Mahopac Falls Beta (121')	7%	0%	0%	0%

The KPI exhibits demonstrate that Verizon Wireless’s 4G network is not able to provide reliable service due to a significant gap in the area. The KPI for drop call rate greatly exceed 1% which are the industry standard for reliable performance.

The KPI exhibits also demonstrates that while users may be able to access the LTE network on some bands and some instances, ultimately at the 700 MHz largest coverage range frequency band access failures often exceed the 2% standard.

The data presented is an indicator of the lack of reliable service. This presented along with the drive test analysis and coverage maps further substantiates the specific location and significance of the gap area.

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## 9 ALTERNATIVE CANDIDATES EVALUATED

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In addition to evaluating the proposed site, PierCon Solutions also analyzed four alternative candidates. These four sites can be described as:

- Alternative Site #1: 195 Route 6 Mahopac, NY
  - Lat/Long: 41.3498856, -73.75277778
  - Structure: Existing 81 ft flagpole
  - Antenna Height: 137 feet (assuming it can be rebuilt to 140ft structure)
- Alternative Site #2: Willow Wood Rifle Club, 545 Union Valley Rd, Mahopac, NY
  - Lat/Long: 41.3529333, -73.70713889
  - Structure: Raw Land
  - Antenna Height: 137 ft
- Alternative Site #3: Commercial/Business Park property along Rt 6.
  - Lat/Long: 41.349382347, -73.748887129
  - Structure: Raw Land
  - Antenna Height: 137 ft
- Alternative Site #4: Commercial/Business Park property just south of Silver Gate Road
  - Lat/Long: 41.34778176, -74.743918
  - Structure: Raw Land
  - Antenna Height: 137 ft

Refer to the following exhibits for an analysis of these four alternate locations and their ability to remedy the significant gaps defined herein:

- **Exhibit AK – Alternative Candidate #1 Suburban 700MHz In-Building LTE Coverage**
- **Exhibit AL – Alternative Candidate #2 Suburban 700MHz In-Building LTE Coverage**
- **Exhibit AM – Alternative Candidate #3 Suburban 700MHz In-Building LTE Coverage**
- **Exhibit AN – Alternative Candidate #4 Suburban 700MHz In-Building LTE Coverage**
- **Exhibit AO – Alternative Candidate #4 Suburban 2100MHz In-Building LTE Coverage**

In Exhibits AK through AO, the green shaded area represents the potential Suburban 700MHz In-Building Reliable Coverage. Also displayed as a blue shaded area are the Verizon 700MHz significant gap areas which are the coverage objectives. As noted earlier, 700 MHz provides the greatest range in signal. Therefore where 700 MHz cannot meet the coverage objectives neither can 2100 MHz; and therefore only 700 MHz plots were provided. Exhibit AO demonstrates 2100 MHz coverage from Alternate Candidate #4.

### **Alternative Candidate #1**

From Exhibit AK, it can be observed that Alternative Candidate #1 does not have the ability to fill the gaps in 700Mhz coverage. This site location is too far west. The location is 5000ft west of significant gap Area 2 and 7300ft from

significant gap Area 3. Due to the locations away from the gap area and the surrounding terrain Alternate Candidate #1 is not a viable candidate.

**Alternative Candidate #2**

From Exhibit AL, it can be observed that Alternative Candidate #2 does not have the ability to fill the gaps in 700Mhz coverage. This location is too far east and blocked by terrain. The location is 6900ft east of significant gap Area 2 and 5100ft from significant gap Area 3. Due to the locations away from the gap area and the surrounding terrain Alternate Candidate #2 is not a viable candidate.

**Alternative Candidate #3**

From Exhibit AM, it can be observed that Alternative Candidate #3 does not have the ability to fill the gaps in 700Mhz coverage. This site location is too far west. The location is 3900ft west of significant gap Area 2 and 6200ft from significant gap Area 3. Due to the locations away from the gap area and the surrounding terrain Alternate Candidate #3 is not a viable candidate.

**Alternative Candidate #4**

From Exhibit AN, it can be observed that Alternative Candidate #4 does not have the ability to fill the gaps in 700Mhz coverage. This site location is the closest possible location within a commercial zone. The location is 2400ft west of significant gap Area 2 and 4700ft from significant gap Area 3. It does have the ability to partially cover significant gap Area 2, but it is blocked by terrain from providing any reliable coverage to Significant gap Area 3.

Exhibit AO is an additional exhibit for Alternative Candidate #4 demonstrating coverage at the 2100 MHz frequency band. In terms of 2100MHz reliable coverage, Alternative Candidate #4 has the ability to partially cover significant gap Area 1 but cannot provide reliable coverage to significant gap areas 2, 3 and 4. Due to the locations away from the gap area and the surrounding terrain Alternate Candidate #4 is not a viable candidate.

As previously discussed, based on the terrain in this area and the significant gap areas identified, only a site location that is centrally located near the peak of Summit Circle Drive has the ability to resolve all four significant gap areas. The only candidate available that can meet the coverage objectives is the proposed candidate at the end of Walton Drive.

In conclusion, the proposed facility at Walton Drive remedies the significant gap in coverage by providing suburban in-building reliable coverage to the surrounding residential areas identified as significant gap Areas 1 through 4.

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**10 RADIO FREQUENCY ENGINEERING RESPONSES TO THE WIRELESS TELECOMMUNICATIONS ORDINANCE**

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The following section of the report addresses the RF Engineering responses to Town of Carmel's Wireless telecommunications service facilities ordinance. Each section of the checklist is provided, and the RF Engineering responses immediately follow.

156-62. Wireless Telecommunications Structures and Facilities

- G. Facility service plan. All proposals to provide or operate wireless telecommunications facilities shall be accompanied by a facility service plan, which shall include all the information necessary to allow the Planning Board to understand the existing, proposed and long-range plans of the applicant. The facility service plan shall include at least the following information:
  - (1) The location, height and operational characteristics of all existing facilities of the applicant in and immediately adjacent to the Town.

- (2) A two-to-five-year plan for the provision of additional facilities in and immediately adjacent to the Town, indicating whether each proposed facility is for initial coverage or capacity-building purposes and showing proposed general locations or areas in which additional facilities are expected to be needed. Subsequent applications will confirm or modify the facility service plan so that the Planning Board may be kept up to date on future activities.
- (3) A commitment to collocate or allow collocation wherever possible on all existing and proposed facilities

Response: Please refer to the following Exhibits:

- **Exhibit AP – Town of Carmel (Existing, Proposed, Approved and Future Verizon Wireless Sites)**
- **Exhibit AQ – Detailed Site Table**

I. Location of wireless telecommunications facilities.

- (1) Applicants for wireless telecommunications facilities shall locate, site and erect said wireless telecommunications facilities, including towers and other tall structures, in accordance with the following priorities, one being the highest priority and six being the lowest priority:

<b>Priority Level</b>	<b>Description</b>
1	On existing tall structures or wireless telecommunications towers in nonresidential zoning districts

Response to Priority 1:

*The nearest nonresidential zoning district is a Commerce/Business Park zoning district located approximately 1.0 mile to the west and is approximately 100 feet lower in ground elevation. Due to this distance and substantial ground elevation difference, locating a facility in this Commerce/Business Park zoning district or one of the further nonresidential zoning districts is not feasible because it would result in primarily redundant coverage with existing sites named “Yorktown Heights 2” and “Mahopac 3 SC”.*

*There are no existing tall structures in non-residential zones that can meet the coverage objectives. The closest tall structure was evaluated (see analysis of Alternative Candidate #1 and Exhibit AK) and it was not able to meet the coverage objectives. In addition, the closest possible location within the commercial zone was evaluated as a raw land candidate (see analysis of Alternative Candidate #4 and Exhibits AN and AO) and it was not able to meet the coverage objectives.*

*For additional reference, please refer to the following Exhibits:*

- **Exhibit AR– Glenacom (Existing Verizon Wireless Sites on Town Zoning Map)**
- **Exhibit AS – Glenacom (Existing Verizon Wireless Suburban 700 MHz In-Building LTE Coverage Sites on Town Zoning Map)**

- (2) Collocation on a site with existing wireless telecommunications towers or structures in nonresidential districts, not fronting on NYS Routes 6, 6N, 52 and 301

Response to Priority 2: (Same response as Priority 1 regarding Alternative Candidate #1)

- (3) Collocation on a site with existing wireless telecommunications towers or structures in any other nonresidential districts

Response to Priority 3: (Same response as Priority 1 regarding Alternative Candidate #1)

- (4) Installation of a new wireless telecommunications facility in any nonresidential district

Response to Priority 4: (Same response as Priority 1 regarding Alternative Candidate #4)

- (5) Installation of a new wireless telecommunications facility in any residential district

*Response to Priority 5: The Proposed Site at the end of Walton Drive meets Priority 5 criteria*

- (6) On other property in the Town

*Response to Priority 6: The Proposed Site at the end of Walton Drive meets Priority 5 criteria*

L. New wireless telecommunications towers.

- (1) The applicant shall demonstrate to the satisfaction of the Planning Board that there exists no tower on which the antenna may collocate or that collocation is not feasible for any of the following reasons:

- (d) The applicant's network of antenna locations is not adequate to properly serve its customers, and the use of facilities of other entities is not suitable for physical reasons.

*Response: As discussed in detail above regarding the priority 1 area, there are no existing towers available that can meet the coverage objectives.*

- (e) Adequate and reliable service cannot be provided from existing sites in a financially and technologically feasible manner consistent with the service providers' system requirements.

*Response: The existing sites which are shown in all the exhibits are not able to have their coverage extended through any technological enhancements. The limiting factor of how far a site can provide coverage is the mobile device since it has a limited power output.*

- (f) Existing sites cannot accommodate the proposed antenna due to structural or other engineering limitations (e.g., frequency incompatibilities).

*Response: The existing sites, as demonstrated by the exhibits herein, are already being utilized. Coverage signal and signal quality is not able to cover the gap area from the existing sites. There are no other existing structures within our search area and therefore a new tower structure is required.*

O. Bulk regulations and height.

- (2) In residential districts, wireless telecommunications facilities shall not exceed 50 feet in height unless the requirements of Subsection O(3) below are met. In nonresidential districts, wireless telecommunications facilities shall not exceed 100 feet in height unless the requirements of Subsection O(3) below are met.

*Response: Locating any part of the antennas below the tree line (median tree height for this area is approximately 80ft) severely affects the ability of a site to provide coverage to the surrounding area. Antennas must be located above the tree line in order to properly function and achieve their goals.*

*As demonstrated through our drive test a facility below 140' does not remedy the significant gap in coverage. In addition, the proposed site at 140ft would resolve most of this significant gap in suburban inbuilding coverage. The small remaining portion of significant gap Area #3 cannot be covered at any height due to the terrain blocking the northern side of Lake Lindale.*

- (3) In the event that applicants propose a height greater than that listed above, the applicant must demonstrate to the satisfaction of the Planning Board that:

- (a) Alternative means of mounting the antenna have been considered and are not feasible for the applicant.

*Response: To provide effective coverage and capacity (throughput) to the area the minimum antenna height was determined to be at an elevation of 140' or higher from the proposed location.*



(b) The height is the minimum height necessary for adequate operation to meet the applicants' communications needs and the aesthetic intrusion has been minimized to the greatest extent practicable.

Response:

*To determine the minimum height a site evaluation drive test was performed. Equivalent heights tested were 100', 120' and 140'. As noted herein the minimum height to provide reliable service has been determined to be 140'.*

(c) The height does not exceed 50% of the maximum height listed in Subsection O(2) above.

Response: *This response assumes that the 50% reference equates to a 75' tower where a 50' tower was permitted in a residential zone and 150' tower where a 100' tower was permitted in a non-residential zone. As demonstrated by our drive test analysis and coverage plots the significant gap cannot be remedied at heights of 100' or lower. 140' was determined to be the minimum height required to meet the coverage objectives. Therefore, we request a waiver to this provision as we have demonstrated it is not possible to achieve our objectives with the tower heights as noted in the wireless code.*

## 11 CONCLUSION:

---

PierCon Solutions' analysis of Verizon Wireless' existing network coverage indicates that a significant gap in wireless service exists within the town of Carmel. The gap in service is significant as it is approximately 0.944 square miles and affects 1,964 residents.

The application by Verizon Wireless proposes to construct a new wireless telecommunications facility at Walton Drive, Mahopac, NY. The 140' proposed installation, consisting of antennas at centerline heights of 137' will alleviate coverage deficiencies and provide reliable service as described above.

PierCon Solutions also determined, through drive testing, the minimum height required for the proposed site to resolve the significant gap in coverage to be the 140' level (with 137' antenna centerline). From this height, Verizon would be able to cover 95% of the targeted residents with 700Mhz service and 68% of the targeted residents with 2100MHz service. Heights below 140' would result in some residential neighborhoods to have unreliable coverage. For example, the 120' site would only be able to cover 33% of the targeted residents with 700Mhz service and 39% of the targeted residents with 2100MHz service. This is a substantial loss of service at lower heights potentially requiring the need for additional facilities.

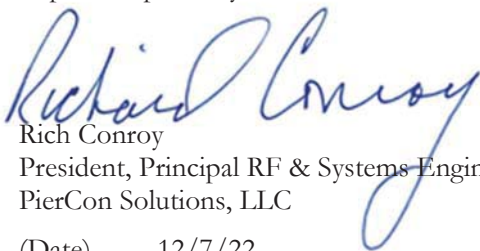
In addition, PierCon Solutions analyzed the standard LTE Key Performance Indicator (KPI) Data and found the drop call rate to be significantly higher than acceptable standards. The KPI exhibits demonstrate that Verizon Wireless's 4G network is not able to provide reliable service due to a significant gap in the area. The KPI for drop call rate greatly exceed 1% which are the industry standard for reliable performance. The data presented is an additional indicator of the lack of reliable service.

PierCon Solutions also evaluated four alternative candidates which included the closest available tower and the closest available property in a non-residential zone. All four candidates could not meet the coverage objectives.

Finally, PierCon performed a thorough review of the wireless code and has addressed each section with respect to the radio frequency perspectives.

The operation of this facility will enable Verizon Wireless to provide reliable wireless 4G LTE service to town of Carmel and to remedy the significant gap in service. After performing the independent radio frequency analysis, PierCon Solutions concludes that this facility is essential to Verizon Wireless' network design for the Town of Carmel and that Verizon Wireless would be materially inhibited from providing reliable service without the facility.

Report Prepared by:



Rich Conroy  
President, Principal RF & Systems Engineer  
PierCon Solutions, LLC

(Date) 12/7/22

12 APPENDIX - EXHIBITS

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- Exhibit A – 2100MHz Existing Signal Strength Drive Test Results
- Exhibit B – 1900MHz Existing Signal Strength Drive Test Results
- Exhibit C – 850MHz Existing Signal Strength Drive Test Results
- Exhibit D – 700MHz Existing Signal Strength Drive Test Results
- Exhibit E – 2100MHz Site Evaluation Drive Test Results at 140ft (via test location at 115ft)
- Exhibit F – 2100MHz Site Evaluation Drive Test Results at 120ft (via test location at 95ft)
- Exhibit G – 2100MHz Site Evaluation Drive Test Results at 100ft (via test location at 75ft)
- Exhibit H – 700MHz Site Evaluation Drive Test Results at 140ft (via test location at 115ft)
- Exhibit I – 700MHz Site Evaluation Drive Test Results at 120ft (via test location at 95ft)
- Exhibit J – 700MHz Site Evaluation Drive Test Results at 100ft (via test location at 75ft)
- Exhibit K – Existing Verizon Wireless Suburban 2100MHz In-Building LTE Coverage
- Exhibit L – Existing Verizon Wireless Suburban 700MHz In-Building LTE Coverage
- Exhibit M – Existing + Proposed Verizon Wireless Suburban 2100MHz In-Building LTE Coverage at 137'
- Exhibit N – Existing + Proposed Verizon Wireless Suburban 700MHz In-Building LTE Coverage at 137'
- Exhibit O - Yorktown Heights 2 – Alpha Sector Drop Call Rate (700MHz)
- Exhibit P - Lincolndale – Gamma Sector Drop Call Rate (700MHz)
- Exhibit Q - Lincolndale – Gamma Sector Drop Call Rate (850MHz)
- Exhibit R - Lincolndale – Gamma Sector Drop Call Rate (1900MHz)
- Exhibit S - Lincolndale – Gamma Sector Drop Call Rate (2100MHz)
- Exhibit T - Lincolndale – Gamma Sector Access Failure Rate (700MHz)
- Exhibit U - Heritage Hills – Beta Sector Drop Call Rate (700MHz)
- Exhibit V - Heritage Hills – Beta Sector Drop Call Rate (850MHz)
- Exhibit W - Heritage Hills – Beta Sector Drop Call Rate (1900MHz)

- Exhibit X - Heritage Hills – Beta Sector Drop Call Rate (2100MHz)
- Exhibit Y - Heritage Hills – Beta Sector Access Failure Rate (700MHz)
- Exhibit Z - Mahopac Falls – Alpha Sector Drop Call Rate (700 MHz)
- Exhibit AA – Mahopac Falls – Alpha Sector Access Failure Rate (700 MHz)
- Exhibit AK – Alternative Candidate #1 Suburban 700MHz In-Building LTE Coverage
- Exhibit AL – Alternative Candidate #2 Suburban 700MHz In-Building LTE Coverage
- Exhibit AM – Alternative Candidate #3 Suburban 700MHz In-Building LTE Coverage
- Exhibit AN – Alternative Candidate #4 Suburban 700MHz In-Building LTE Coverage
- Exhibit AO – Alternative Candidate #4 Suburban 2100MHz In-Building LTE Coverage
- Exhibit AP – Town of Carmel (Existing, Proposed, Approved and Future Verizon Wireless Sites)
- Exhibit AQ – Detailed Site Table
- Exhibit AR– Glenacom (Existing Verizon Wireless Sites on Town Zoning Map)
- Exhibit AS – Glenacom (Existing Verizon Wireless Suburban 700 MHz In-Building LTE Coverage Sites on Town Zoning Map)
- Exhibit AT – Calibration Certificate

### Diffraction Loss Formulas

$$v = -hp \sqrt{\frac{2}{\lambda} \left( \frac{1}{r_1} + \frac{1}{r_2} \right)}$$

$$1 \leq v$$

$$L = 0 \text{ dB}$$

$$0 \leq v < 1$$

$$L = 20 \log(0.5 + 0.62v)$$

$$-1 \leq v < 0$$

$$L = 20 \log(0.5e^{0.95v})$$

$$-2.4 \leq v < -1$$

$$L = 20 \log(0.4 - \sqrt{0.1184 - (0.1v + 0.38)^2})$$

$$v < -2.4$$

$$L = 20 \log\left(-\frac{0.225}{v}\right)$$

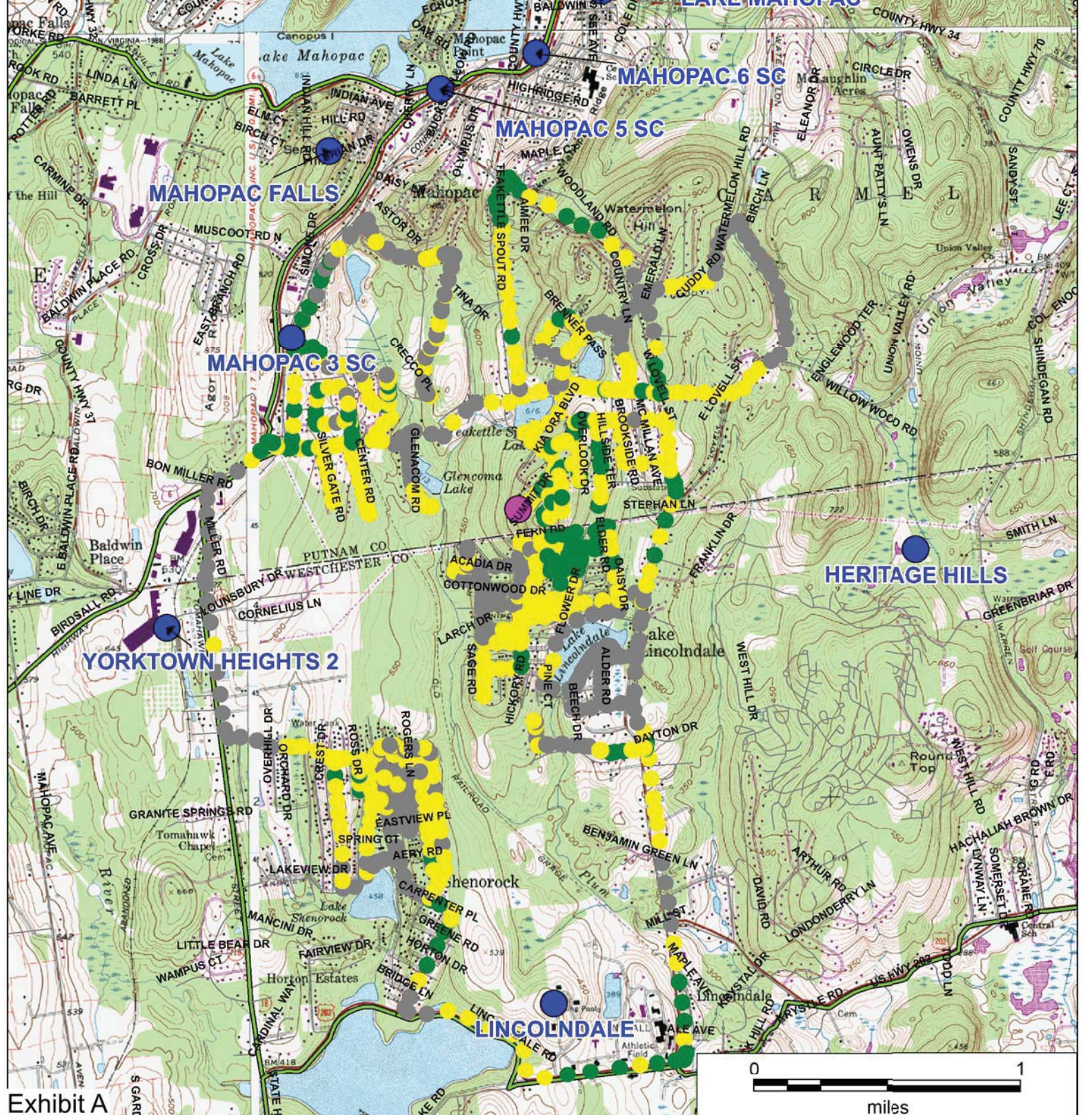


Exhibit A

# Glenacom

2100MHz Existing Signal Strength Drive Test Results

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

Existing 2100MHz RSRP Coverage (-7dB for foliage)

- 95dBm <= x
- 105dBm <= x < -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
02/21/2020

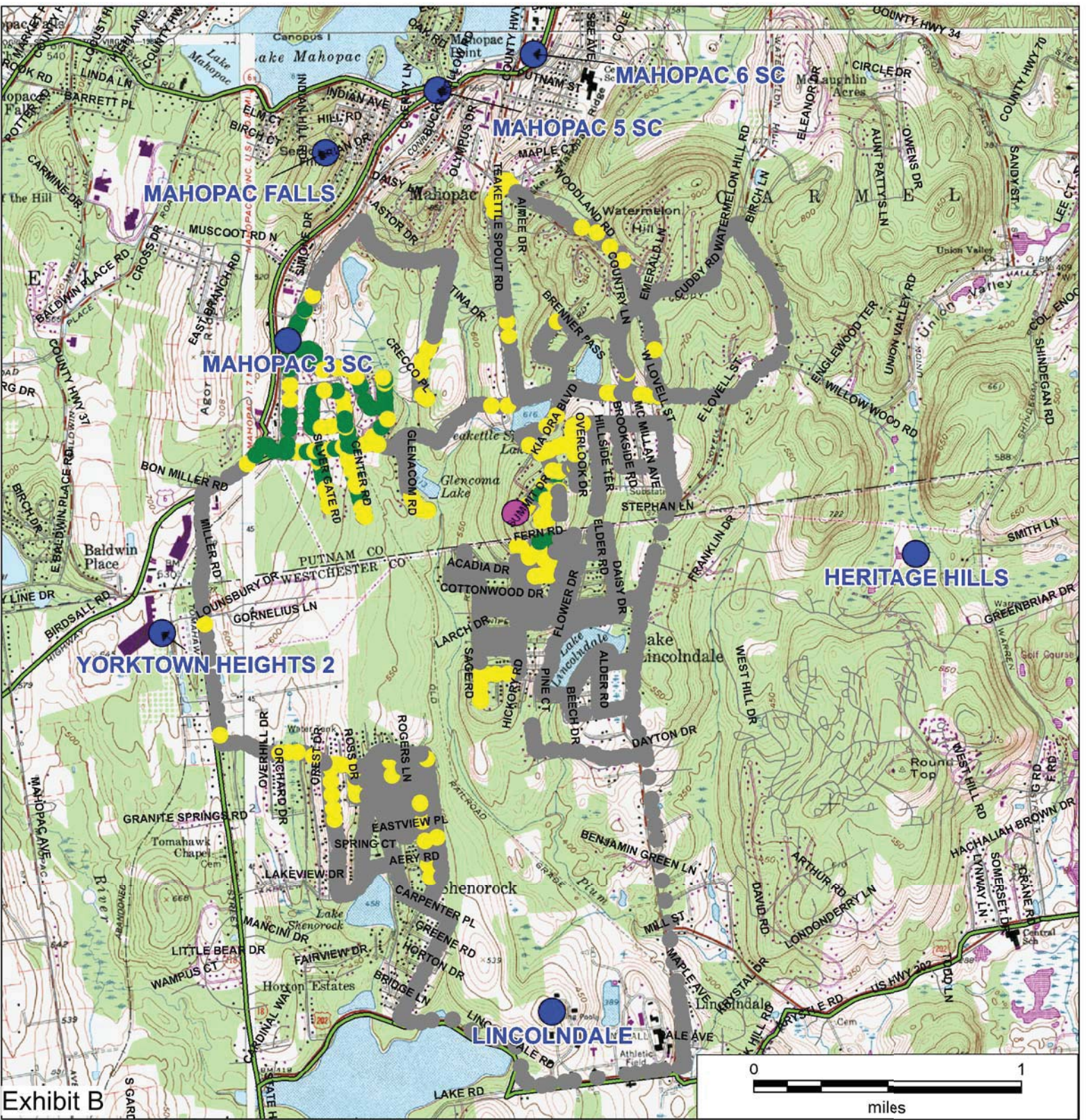


Exhibit B

# Glenacom

1900MHz Existing Signal Strength Drive Test Results

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

Existing 1900MHz RSRP Coverage (-7dB for foliage)

- 95dBm <= x
- 105dBm <= x < -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
02/21/2020

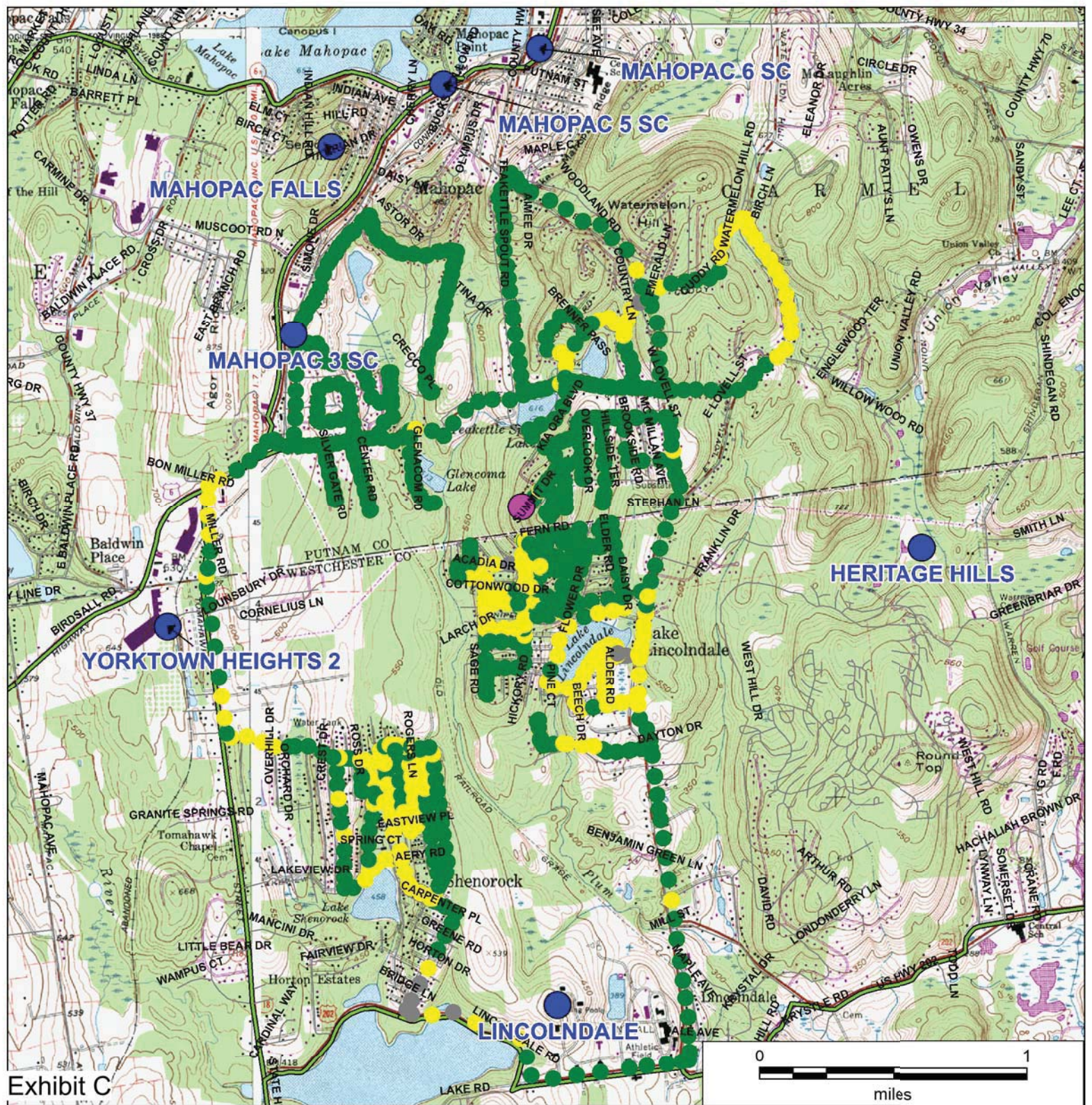


Exhibit C

### Glenacom

850MHz Existing Signal Strength  
Drive Test Results

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

Existing 850MHz RSRP Coverage  
(-7dB for foliage)

- 95dBm <= x
- 105dBm <= x < -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
02/21/2020



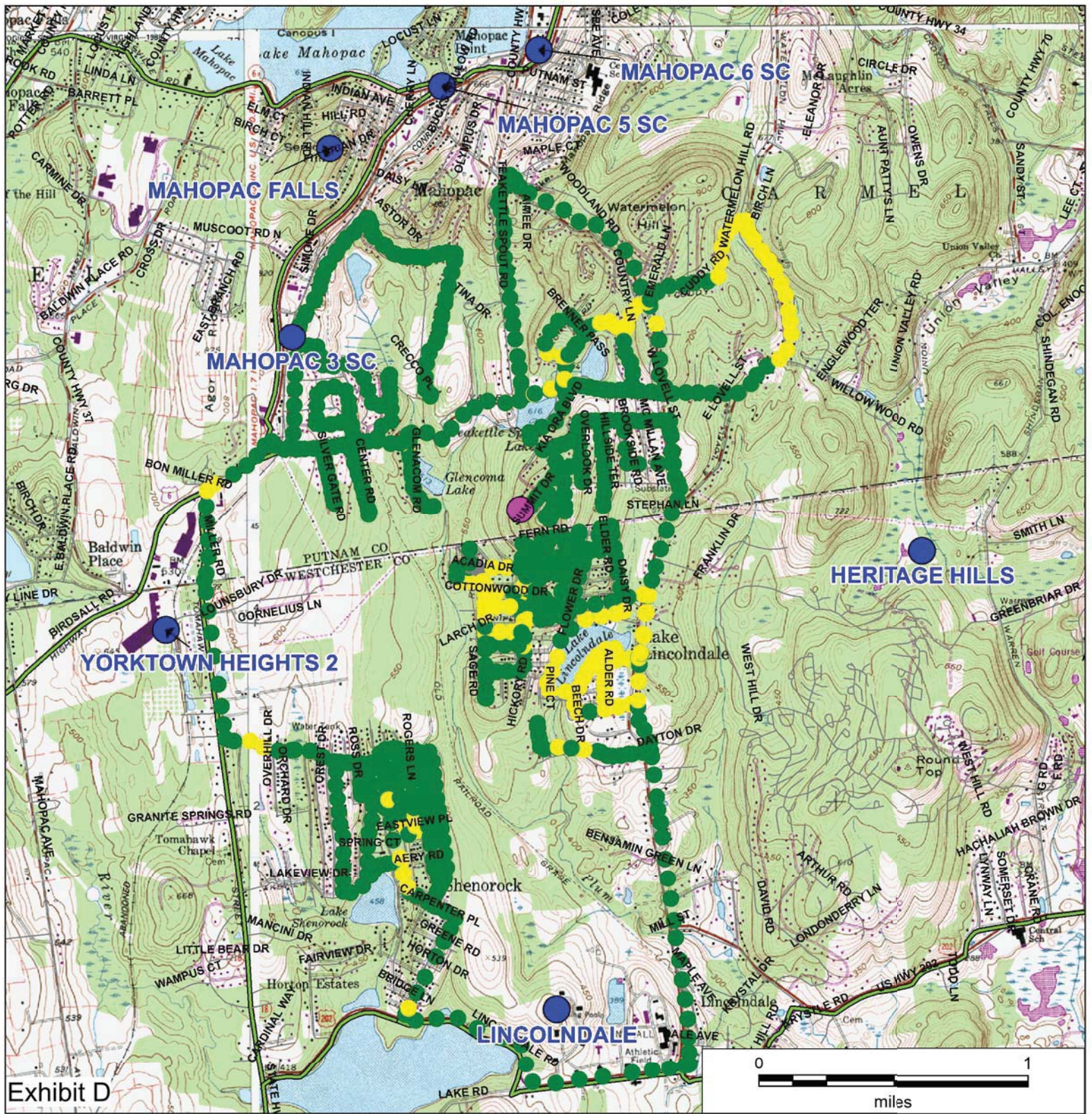


Exhibit D

# Glenacom

700MHz Existing Signal Strength  
Drive Test Results

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

Existing 700MHz RSRP Coverage  
(-7dB for foliage)

- 95dBm <= x
- 105dBm <= x < -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
02/21/2020

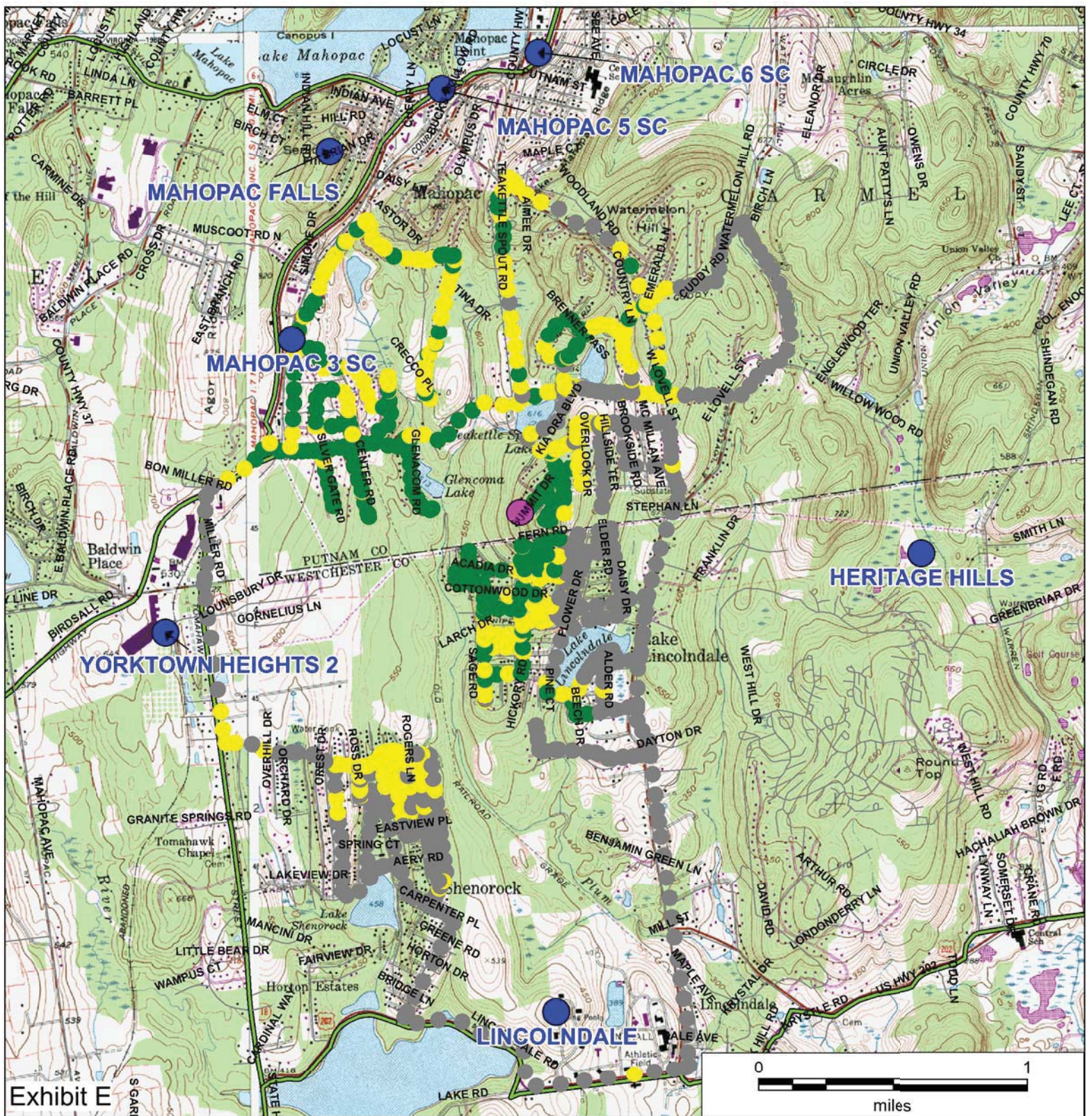


Exhibit E

# Glenacom

2100MHz Site Evaluation  
 Drive Test at 140ft  
 (via test location at 115ft)

Walton Drive  
 Mahopac, NY 10541  
 Page 5 of 37

- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

CW Test 2100MHz RSSI Coverage at 140ft  
 (-7dB for foliage + 2.7dB correction factor)

- 95dBm <= x
- 105dBm <= x < -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
 02/21/2020

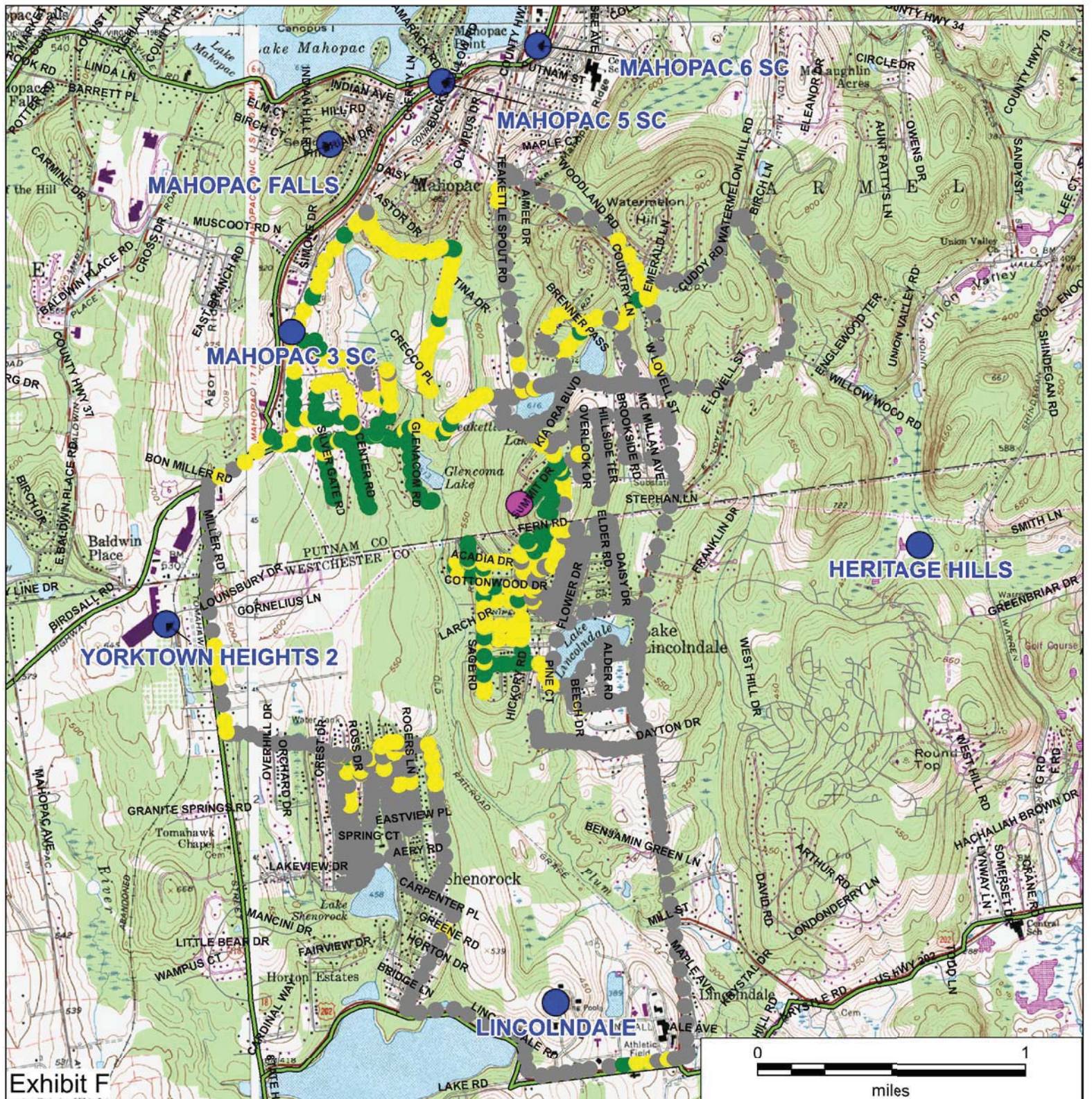



Exhibit F

# Glenacom


2100MHz Site Evaluation  
 Drive Test at 120ft  
 (via test location at 95ft)

Walton Drive  
 Mahopac, NY 10541  
 Page 6 of 37


 Verizon Wireless Existing Facility

 Verizon Wireless Proposed Location

CW Test 2100MHz RSSI Coverage at 120ft  
 (-7dB for foliage + 2.7dB correction factor)

 -95dBm <= x

 -105dBm <= x < -95dBm

 -120dBm <= x < -105dBm



Prepared by PierCon  
 02/21/2020

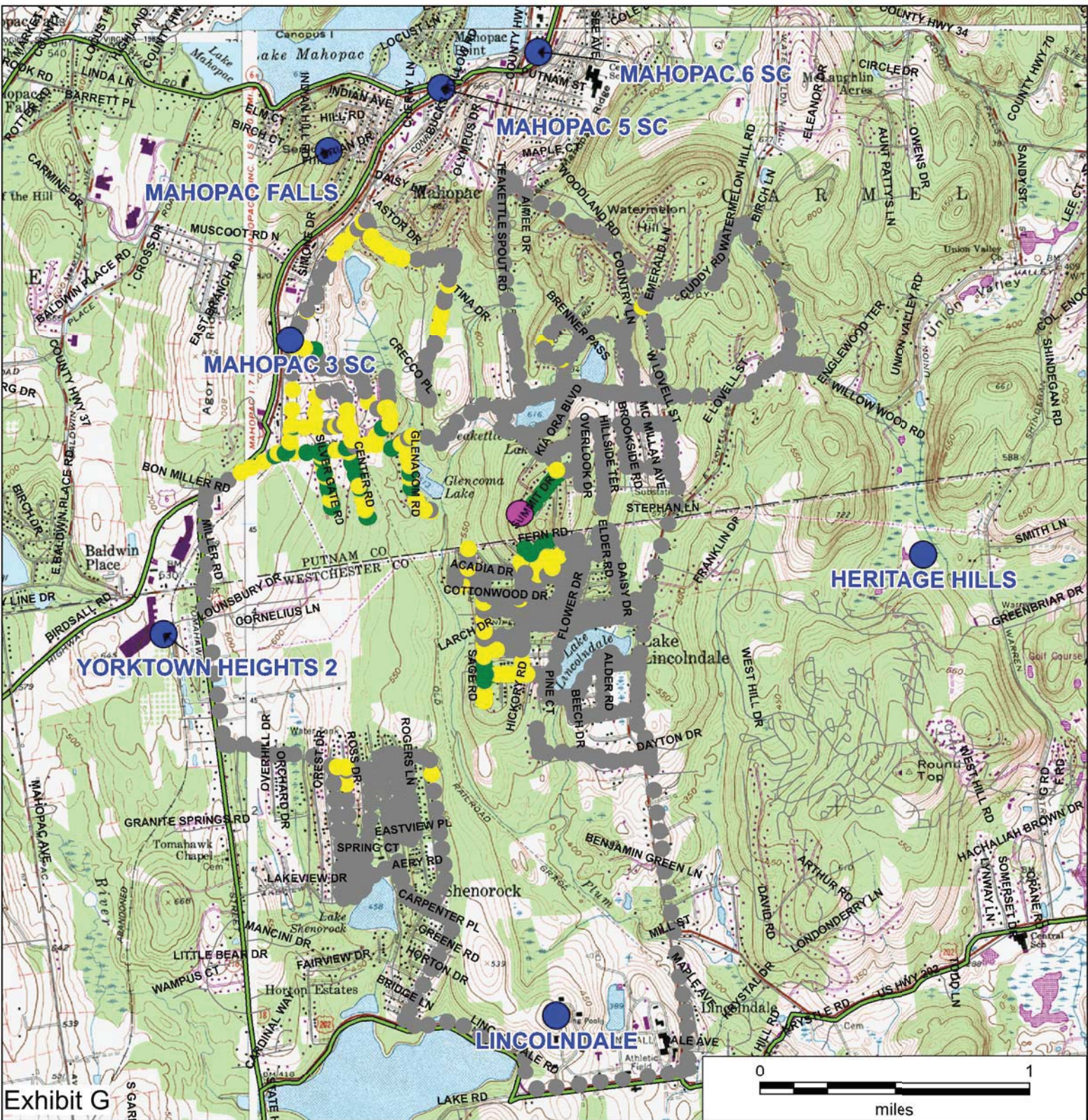


Exhibit G

### Glenacom

2100MHz Site Evaluation  
 Drive Test at 100ft  
 (via test location at 75ft)

Walton Drive  
 Mahopac, NY 10541  
 Page 7 of 37

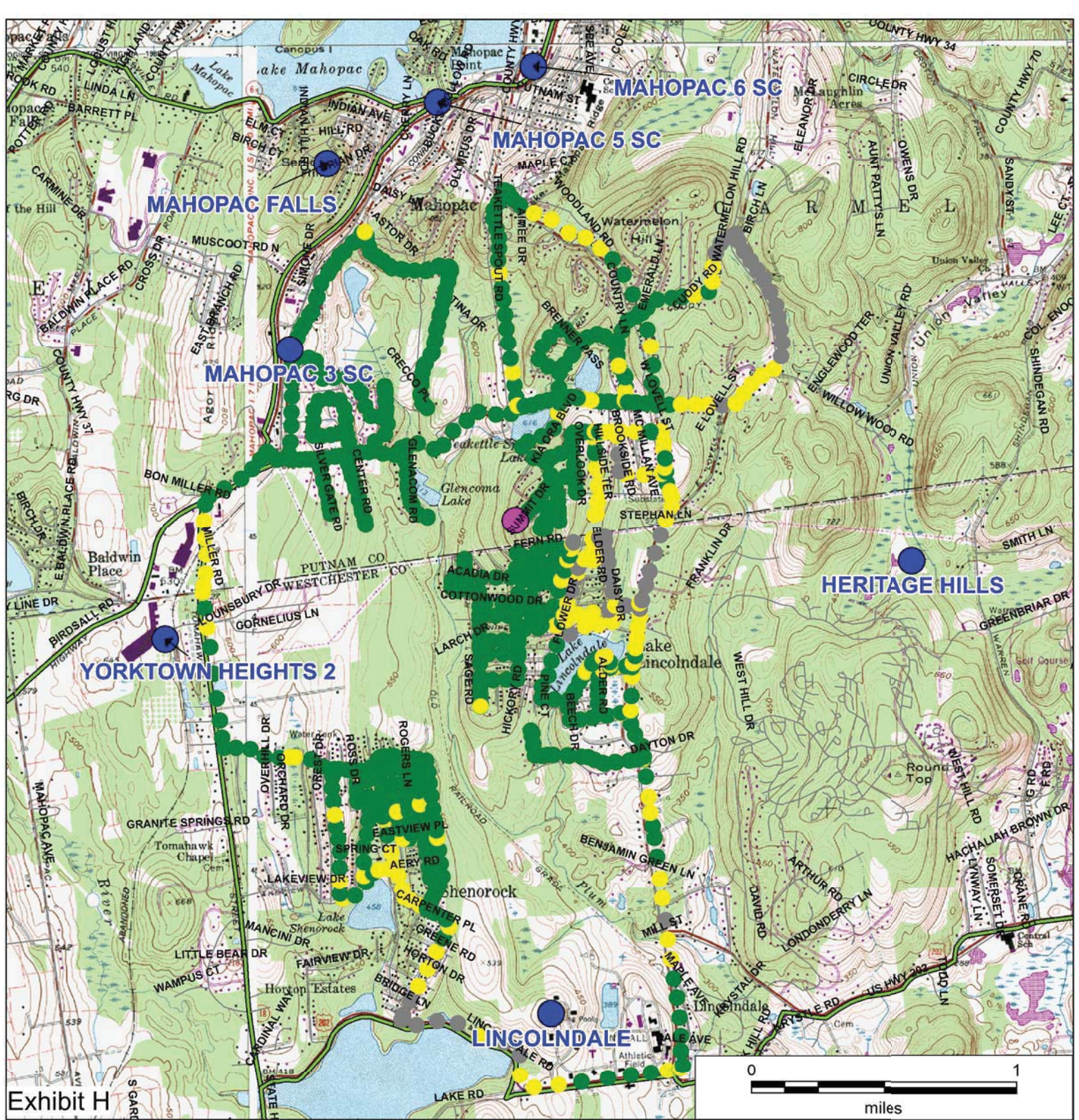
- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

CW Test 2100MHz RSSI Coverage at 100ft  
 (-7dB for foliage + 2.7dB correction factor)

- 95dBm <= x
- 105dBm <= x < -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
 02/21/2020



# Glenacom

700MHz Site Evaluation  
 Drive Test at 140ft  
 (via test location at 115ft)

Walton Drive  
 Mahopac, NY 10541

- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

CW Test 700MHz RSSI Coverage at 140ft  
 (-7dB for foliage + 6.6dB correction factor)

- 95dBm <= x
- 105 to -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
 02/21/2020

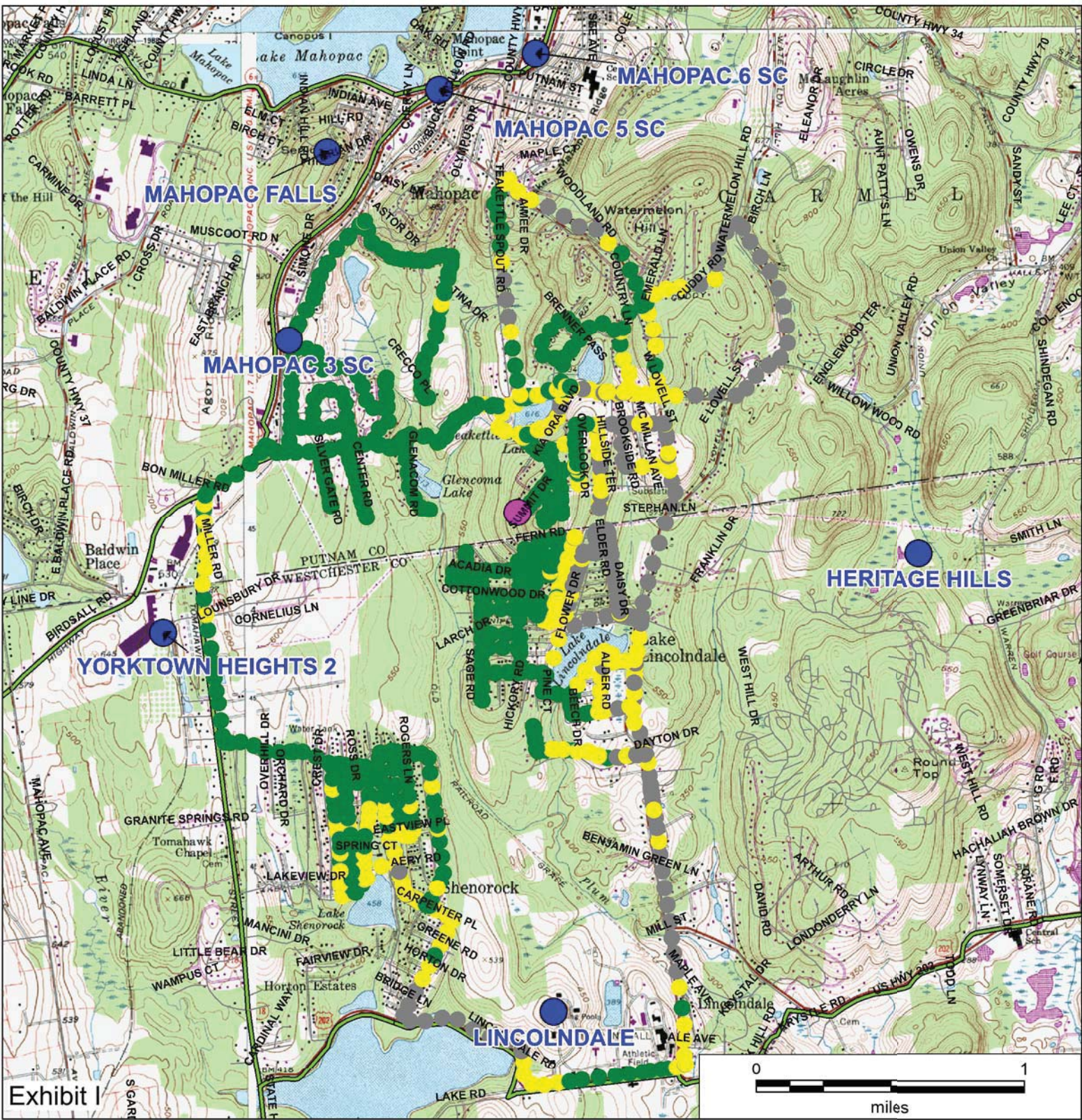


Exhibit I

# Glenacom

700MHz Site Evaluation  
 Drive Test at 120ft  
 (via test location at 95ft)

Walton Drive  
 Mahopac, NY 10541

- Verizon Wireless Existing Facility
  - Verizon Wireless Proposed Location
- CW Test 700MHz RSSI Coverage at 120ft  
 (-7dB for foliage + 6.6dB correction factor)
- 95dBm <= x
  - 105dBm <= x < -95dBm
  - 120dBm <= x < -105dBm



Prepared by PierCon  
 02/21/2020

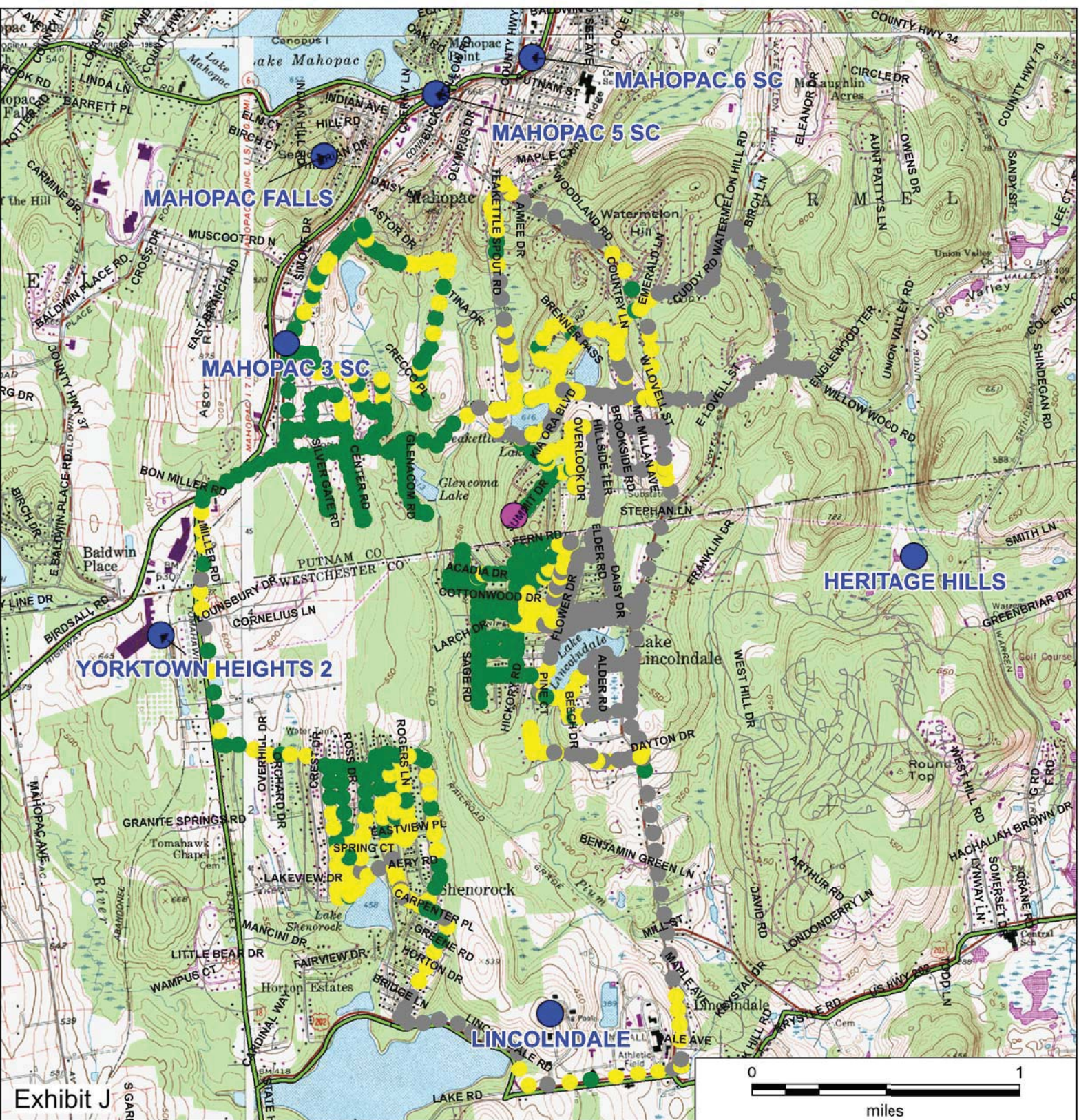


Exhibit J

### Glenacom

700MHz Site Evaluation  
 Drive Test at 100ft  
 (via test location at 75ft)

Walton Drive  
 Mahopac, NY 10541

- Verizon Wireless Existing Facility
- Verizon Wireless Proposed Location

CW Test 700MHz RSSI Coverage at 100ft  
 (-7dB for foliage + 6.6dB correction factor)

- 95dBm <= x
- 105dBm <= x < -95dBm
- 120dBm <= x < -105dBm



Prepared by PierCon  
 02/21/2020

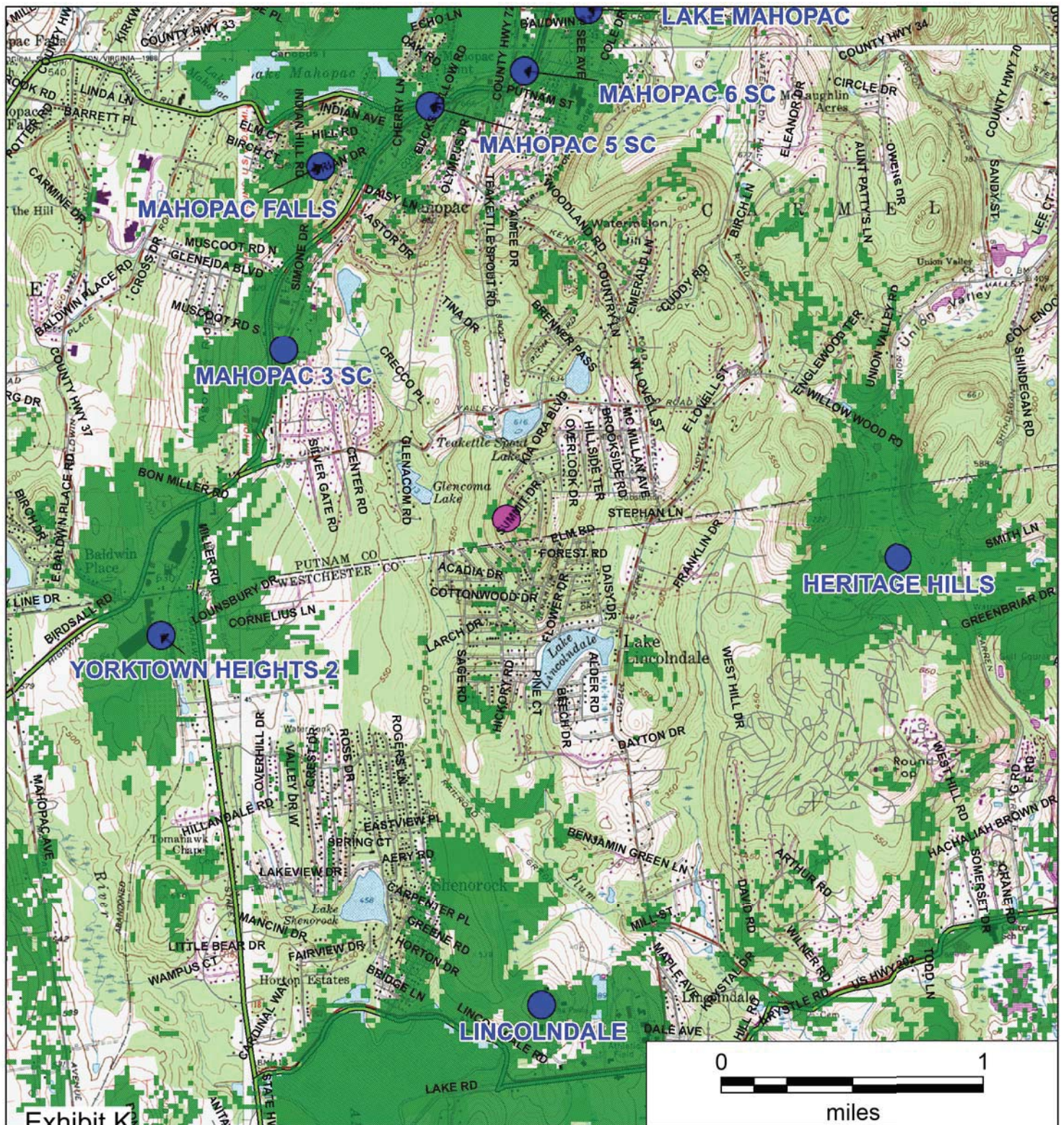


Exhibit K

## Glenacom

Existing Verizon Wireless  
Suburban 2100 MHz  
In-Building LTE Coverage

Walton Drive  
Mahopac, NY 10541

-  Verizon Wireless Existing Site
-  Verizon Wireless Proposed Site
-  Existing Reliable Coverage (greater than -95dBm)




Specialists in Wireless Systems

Prepared by PierCon  
11-14-2019



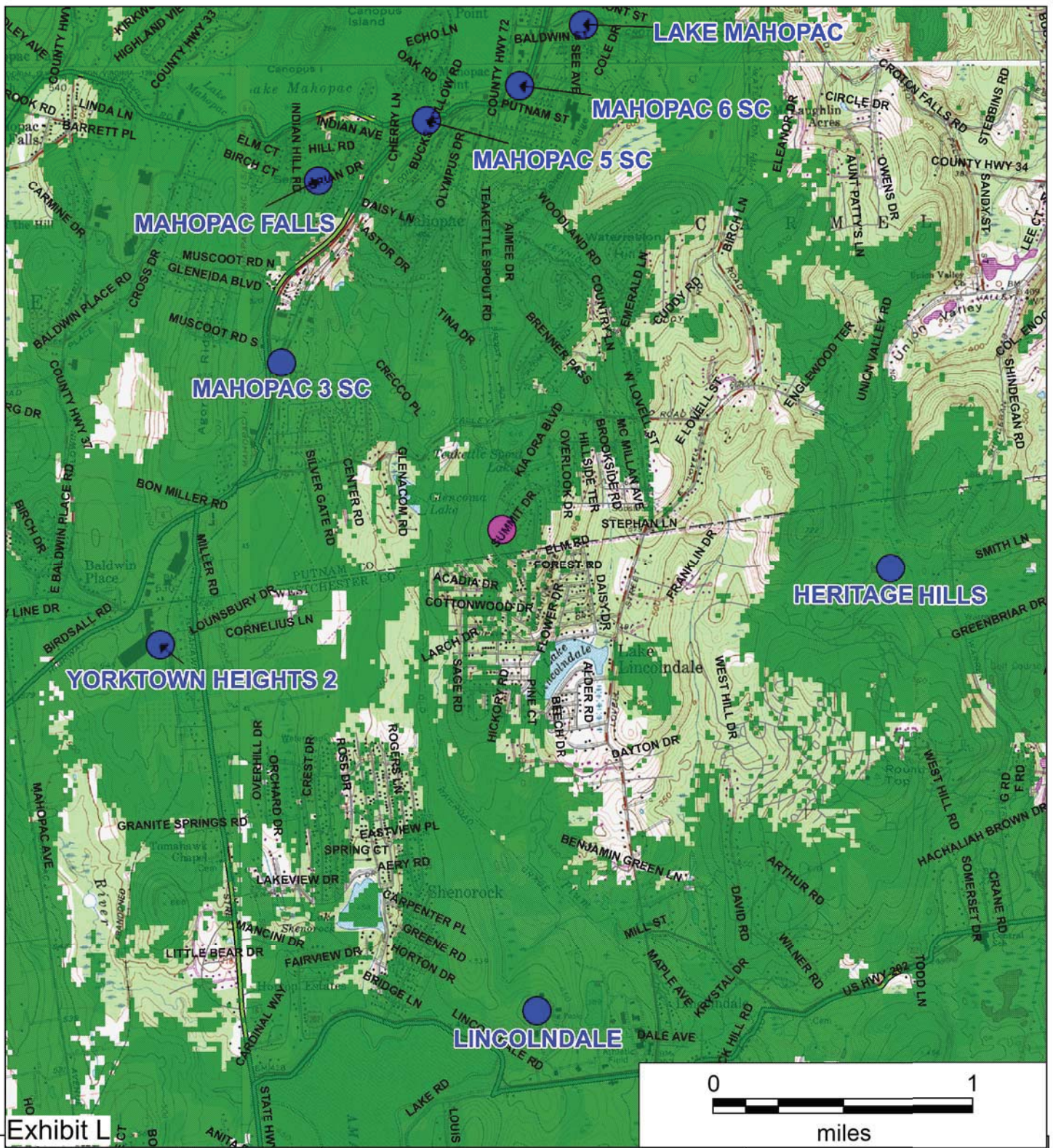


Exhibit L

### Glenacom

Existing Verizon Wireless  
Suburban 700 MHz  
In-Building LTE Coverage

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site
- Existing Reliable Coverage (greater than -95dBm)



Prepared by PierCon  
11-14-2019

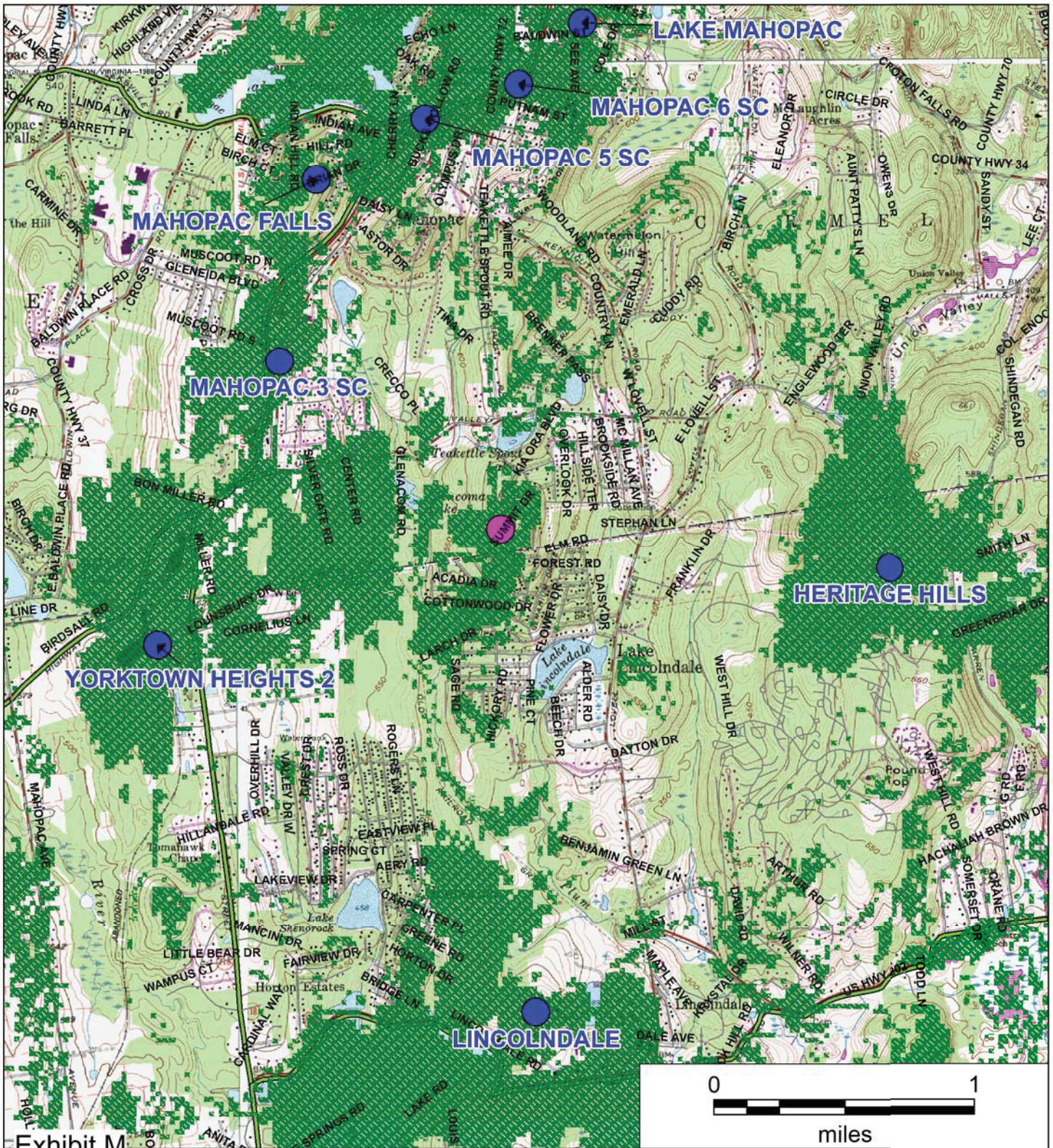





Exhibit M

**Glenacom**  
 Existing + Proposed  
 Verizon Wireless Suburban  
 2100 MHz In-Building  
 LTE Coverage @ 137'

Walton Drive  
 Mahopac, NY 10541

-  Verizon Wireless Existing Site
-  Verizon Wireless Proposed Site
-  Existing Reliable Coverage (greater than -95dBm)



Prepared by PierCon  
 11/14/2019

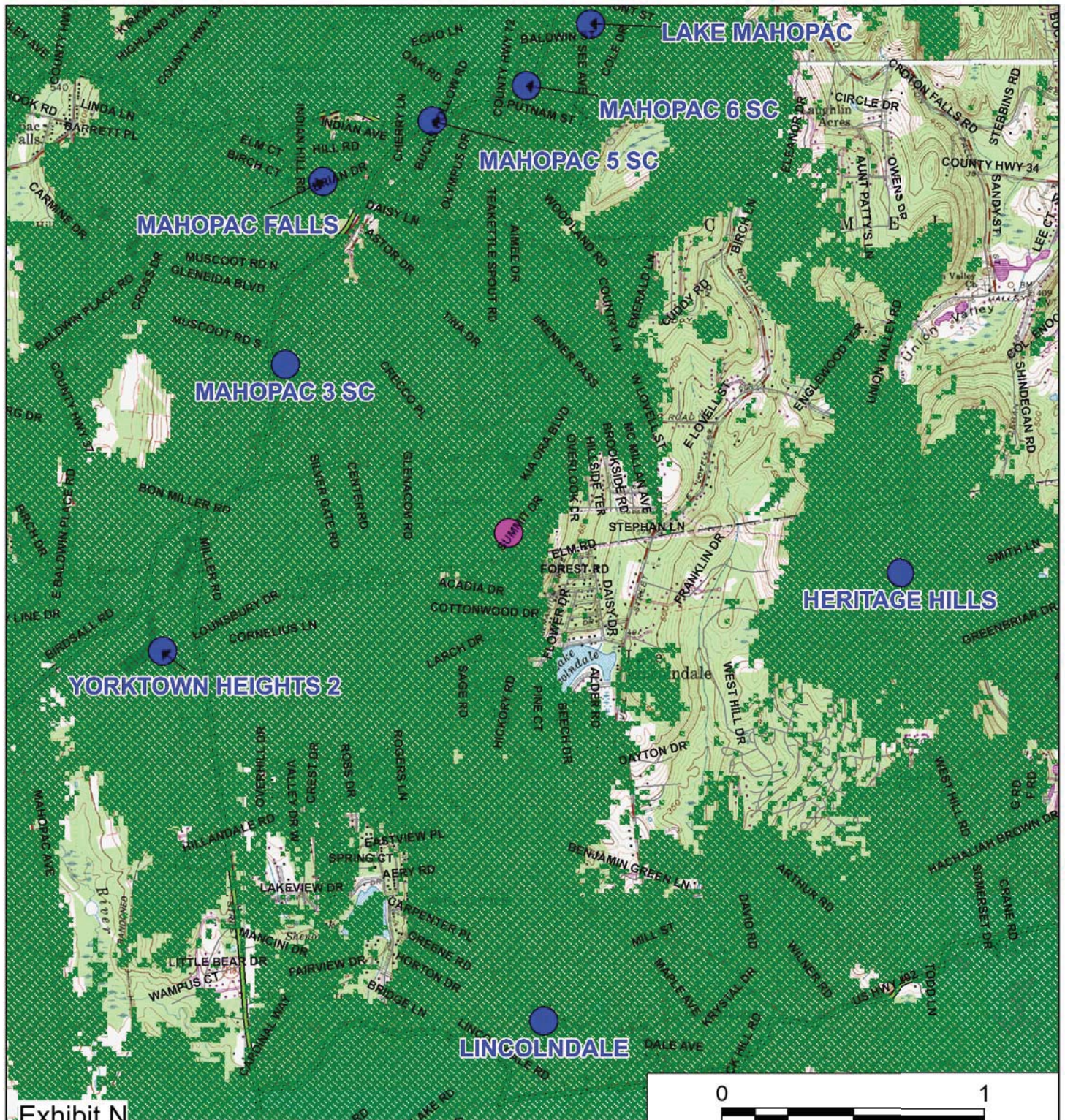


Exhibit N

# Glenacom

Existing + Proposed  
Verizon Wireless Suburban  
700 MHz In-Building  
LTE Coverage @ 137'

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site
- Existing Reliable Coverage (greater than -95dBm)



Prepared by PierCon  
11/14/2019

Exhibit O - Yorktown Heights 2 – Alpha Sector Drop Call Rate (700MHz)

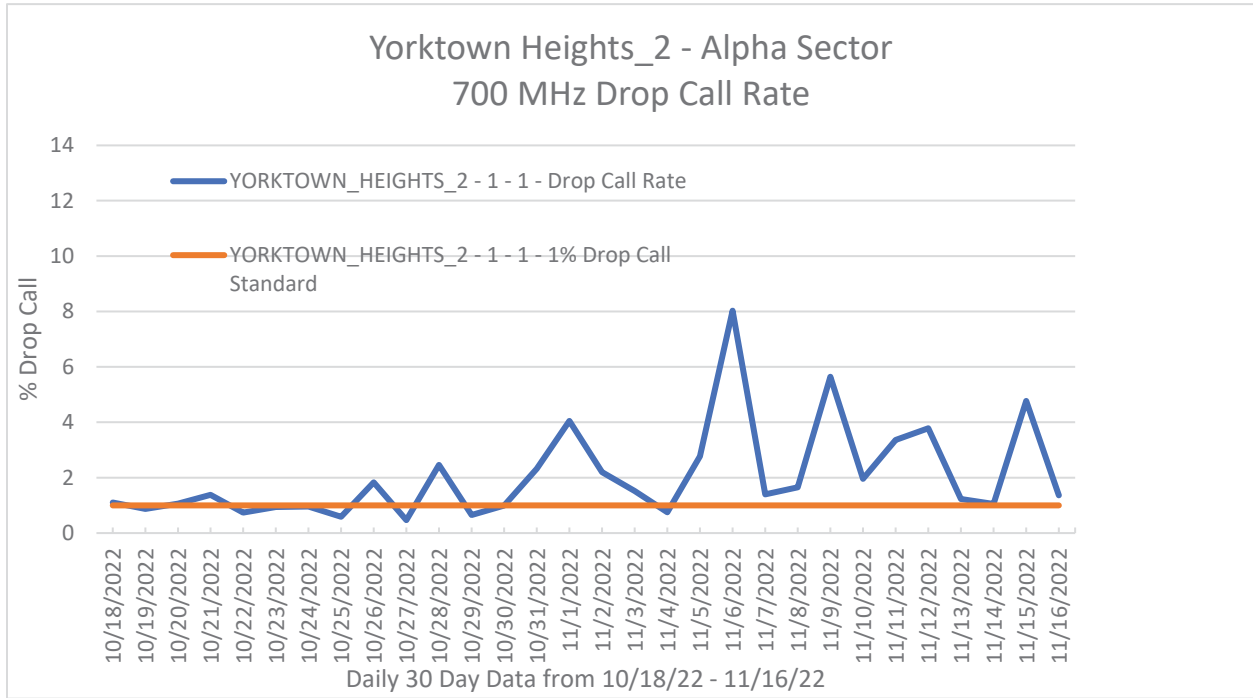


Chart above for Yorktown Heights 2 Alpha Sector at 700MHz demonstrate that users are experiencing significant drop calls on the 4G 700 MHz LTE network. Drop call rates recorded were consistently over 1% with peaks well over 8% failures. Over the 30 day period the 1% drop call rate was exceeded 70% of the time over the of the time period analyzed.

Exhibit P - Lincolndale – Gamma Sector Drop Call Rate (700MHz)

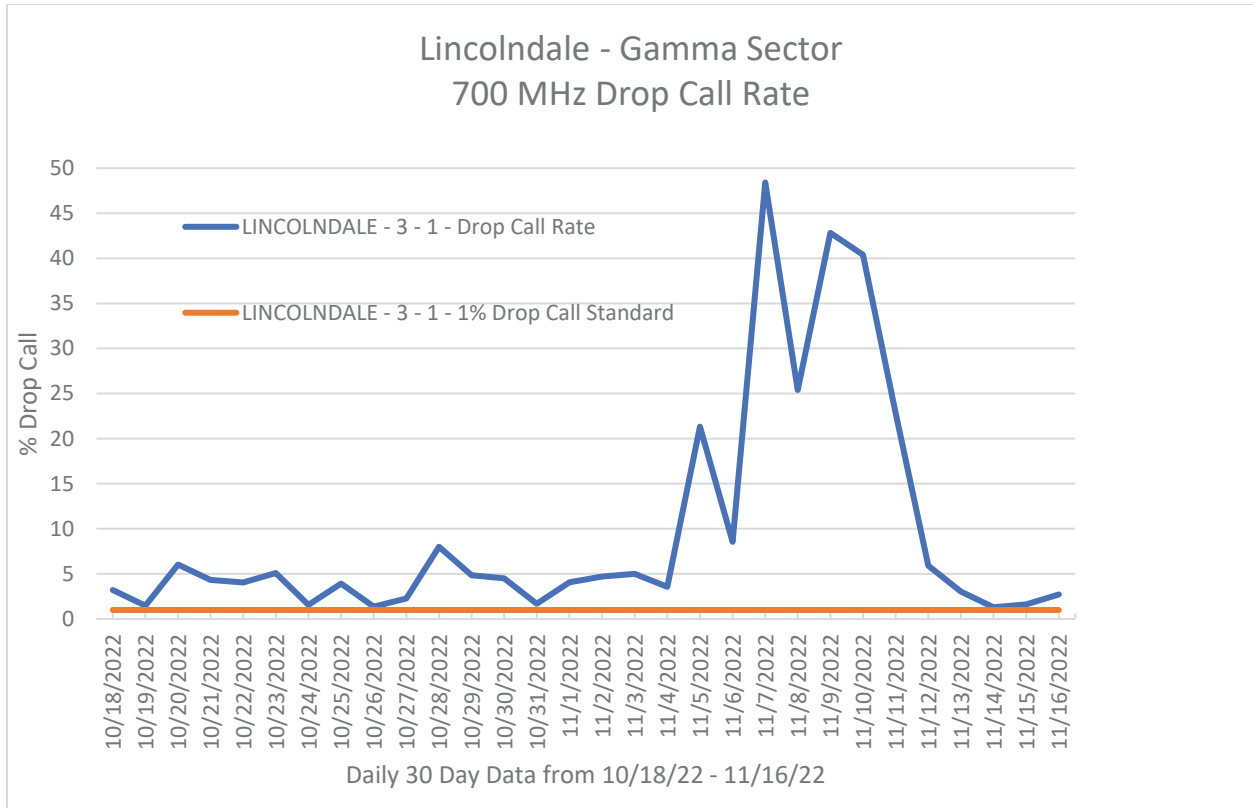


Chart above for Lincolndale Gamma Sector at 700MHz demonstrate that users are experiencing significant drop calls on the 4G 700 MHz LTE network. Drop call rates recorded were consistently over 1% with peaks well over 48% failures. Over the 30 day period the 1% drop call rate was exceeded 100% of the time over the time period analyzed.

Exhibit Q - Lincolndale – Gamma Sector Drop Call Rate (850MHz)

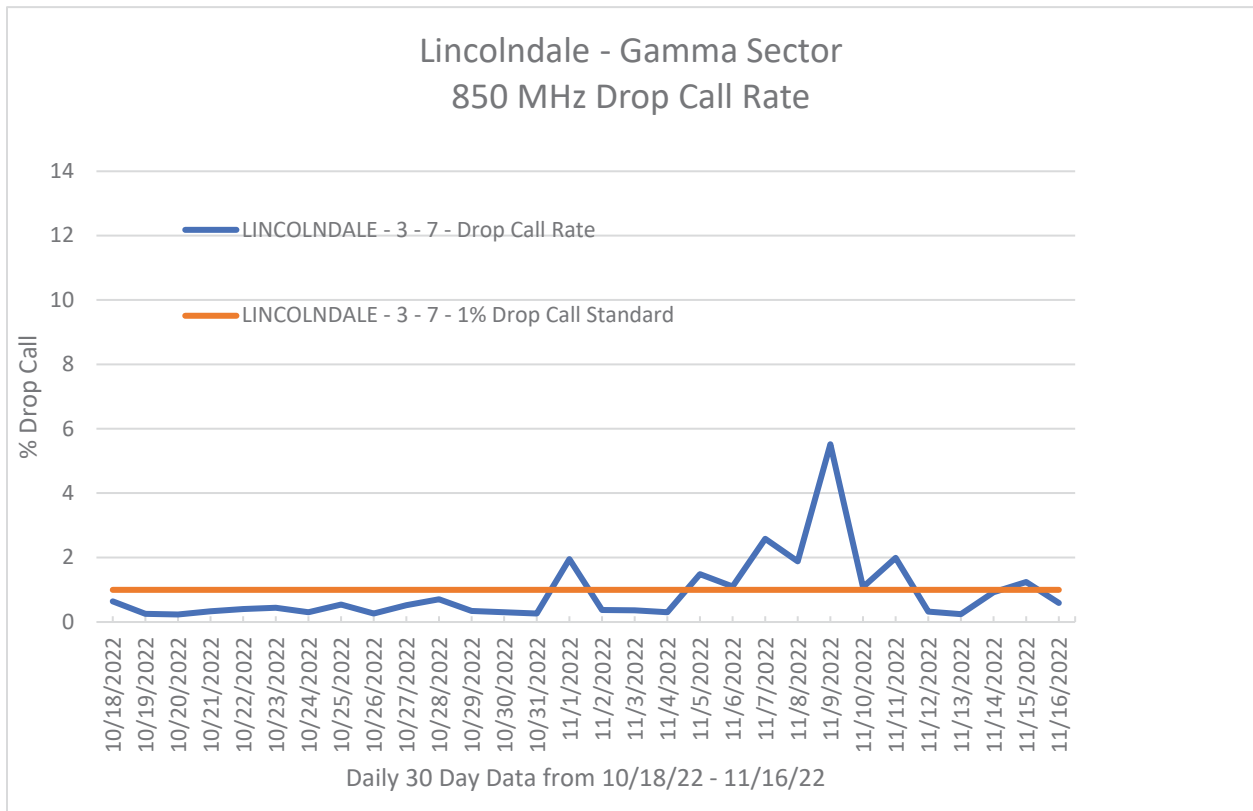


Chart above for Lincolndale Gamma Sector at 850MHz demonstrate that users are experiencing significant drop calls on the 4G 850 MHz LTE network. Drop call rates recorded were consistently over 1% with peaks well over 5% failures. Over the 30 day period the 1% drop call rate was exceeded 30% of the time over the time period analyzed. Since 700 MHz coverage is larger than 850 MHz coverage, some user's wireless connection will transition to 700 MHz and then drop when no frequency band is providing suitable signal. This is the reason why the 700 MHz frequency band experiences more drop calls than the 850 MHz frequency band.

Exhibit R - Lincolndale – Gamma Sector Drop Call Rate (1900MHz)

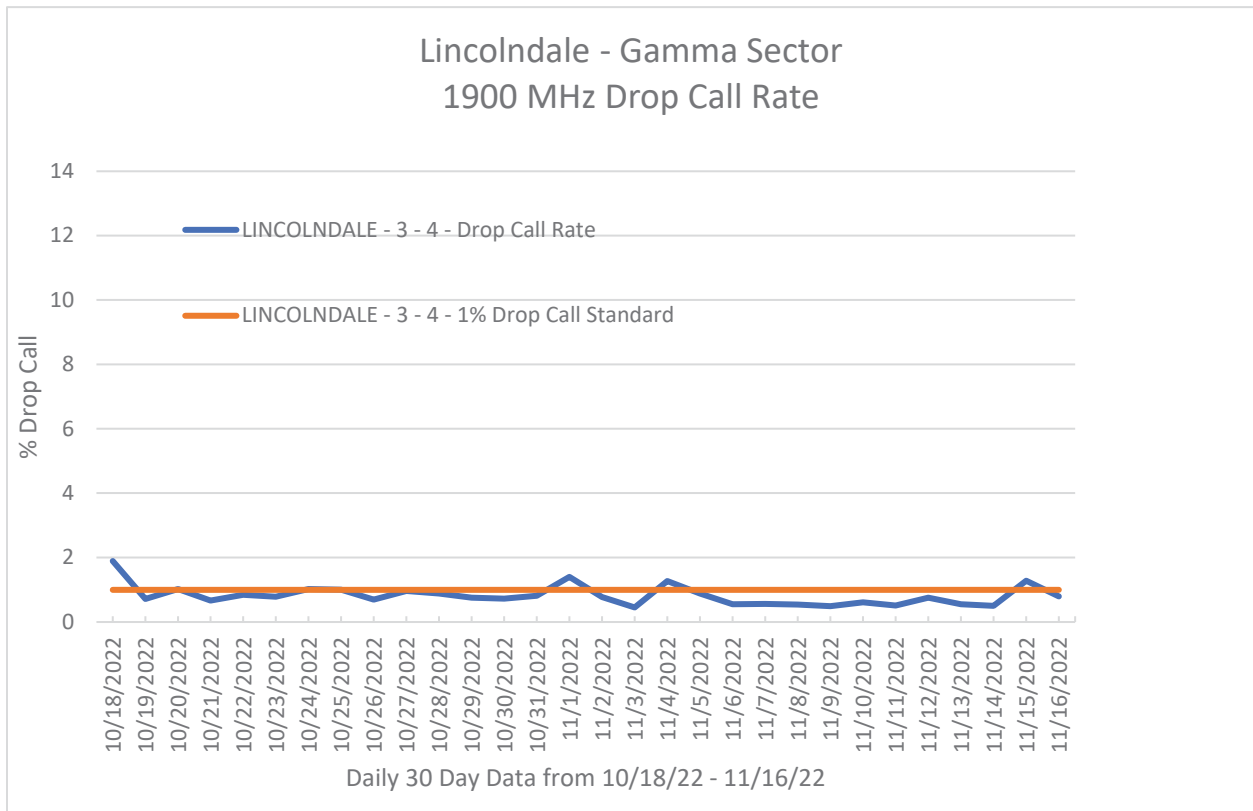


Chart above for Lincolndale Gamma Sector at 1900MHz demonstrate that users are experiencing significant drop calls on the 4G 1900 MHz LTE network. Over the 30 day period the 1% drop call rate was exceeded 20% of the time over the time period analyzed. Since low band coverage (700/850) is larger than 1900 MHz coverage, some user’s wireless connection will transition to low band frequencies and then drop when no frequency band is providing suitable signal, typically on the 700 MHz largest coverage layer band. This is the reason why the 700 MHz frequency band experiences more drop calls than the 1900 MHz frequency band.

Exhibit S - Lincolndale – Gamma Sector Drop Call Rate (2100MHz)

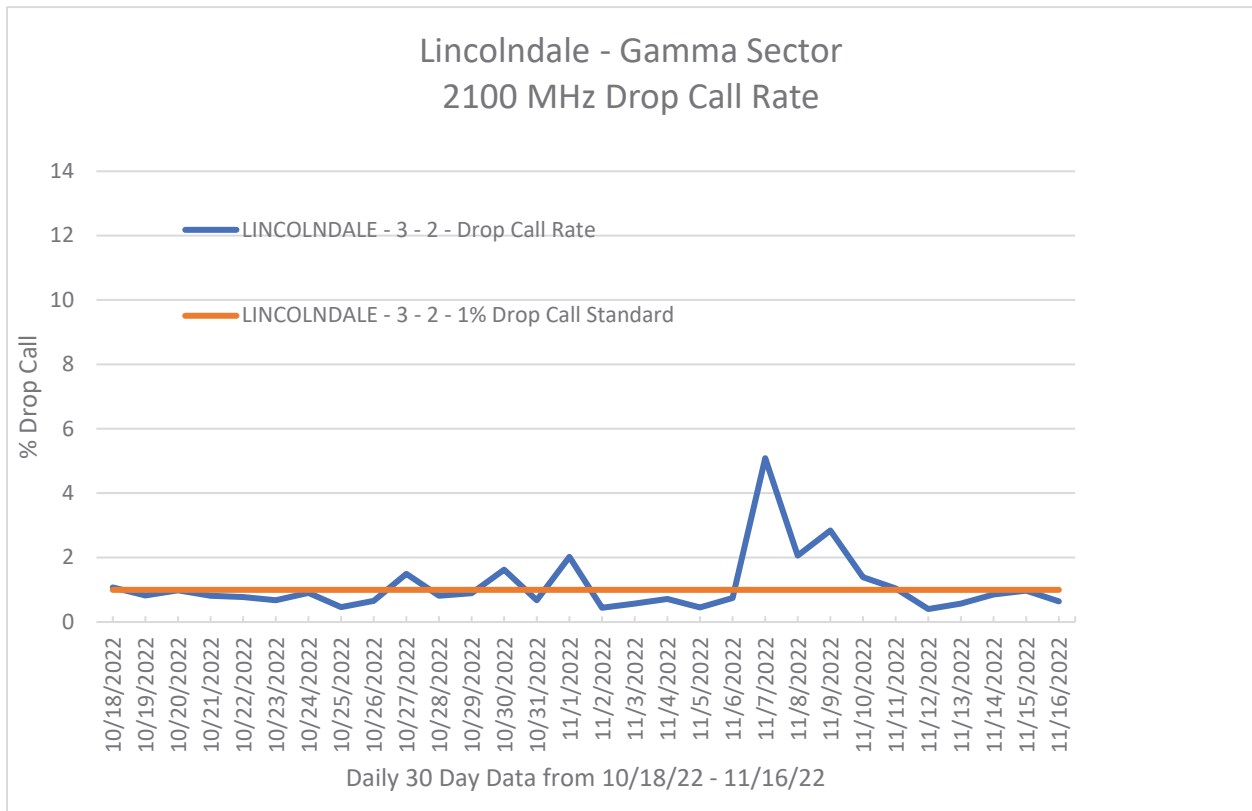


Chart above for Lincolndale Gamma Sector at 2100 MHz demonstrate that users are experiencing significant drop calls on the 4G 2100 MHz LTE network. Drop call rates recorded were consistently over 1% with peaks well over 5% failures. Over the 30 day period the 1% drop call rate was exceeded 30% of the time over the time period analyzed. Since low band coverage (700/850) is larger than 2100 MHz coverage, some user’s wireless connection will transition to low band frequencies and then drop when no frequency band is providing suitable signal, typically on the 700 MHz largest coverage layer band. This is the reason why the 700 MHz frequency band experiences more drop calls than the 2100 MHz frequency band.



Exhibit T - Lincolndale – Gamma Sector Access Failure Rate (700MHz)

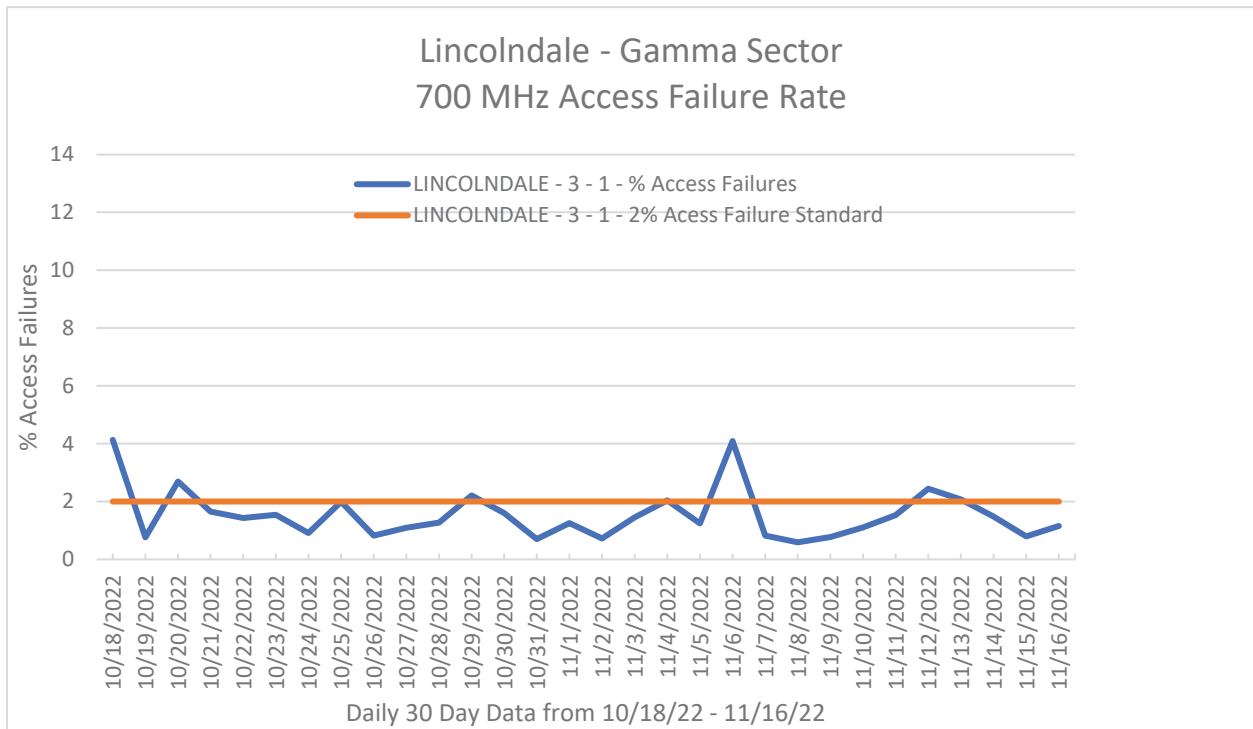


Chart above for Lincolndale Gamma Sector at 700MHz demonstrates that users are experiencing access failure rates on the 4G 700 MHz LTE network. Access Failure rates recorded were over 2% with peaks over 4% failures. Over the 30 day period the 2% drop call rate was exceeded 23% of the time over the time period analyzed. LTE utilizes adaptive modulation which allows users to connect with poor signal, albeit with reduced capacity and throughput. The access failures taken in conjunction with the drop call rate demonstrates that not only are users losing connections, but many cannot connect at all due to significant gap in the area.

Exhibit U – Heritage Hills – Beta Sector Drop Call Rate (700MHz)

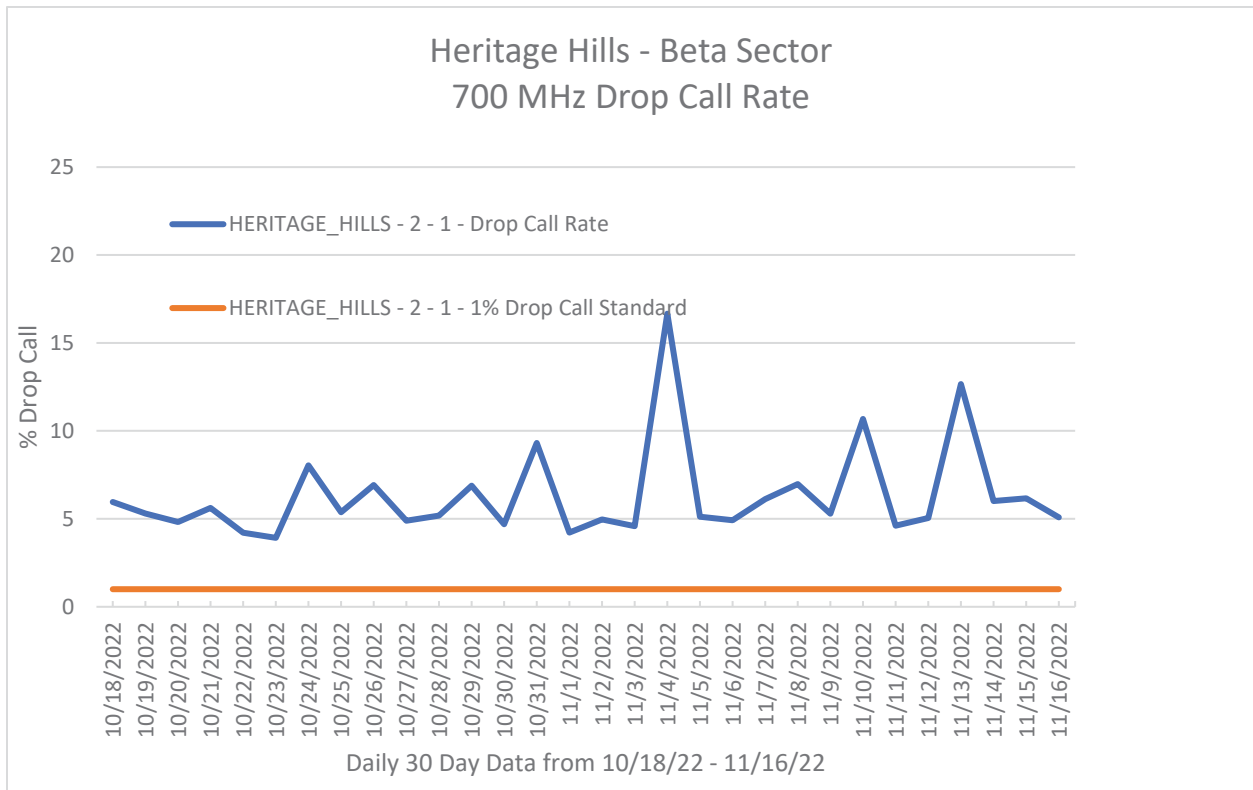


Chart above for Heritage Hills Beta Sector at 700MHz demonstrate that users are experiencing significant drop calls on the 4G 700 MHz LTE network. Drop call rates recorded were consistently over 1% with peaks well over 16% failures. Over the 30 day period the 1% drop call rate was exceeded 100% of the time over the time period analyzed.

Exhibit V – Heritage Hills – Beta Sector Drop Call Rate (850MHz)

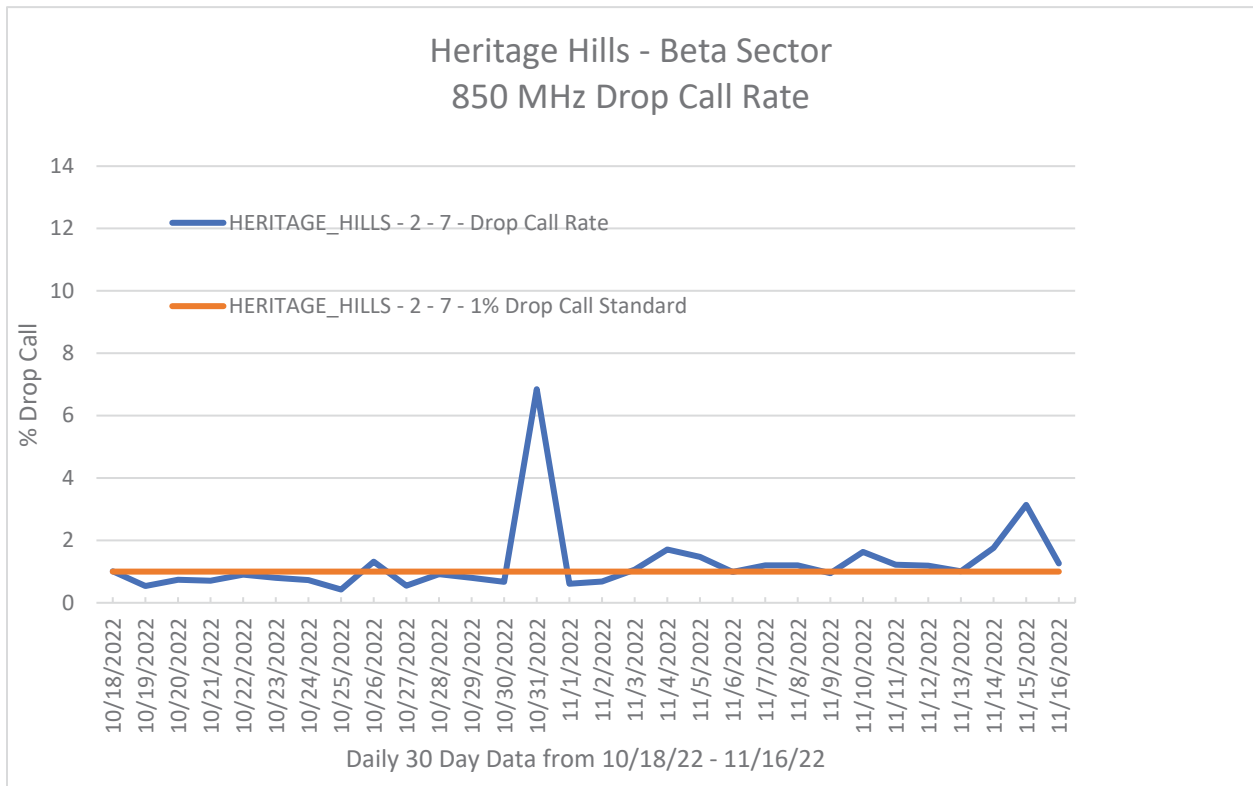


Chart above for Heritage Hills Beta Sector at 850MHz demonstrate that users are experiencing significant drop calls on the 4G 850 MHz LTE network. Drop call rates recorded were consistently over 1% with peaks well over 6% failures. Over the 30 day period the 1% drop call rate was exceeded 50% of the time over the time period analyzed. Since 700 MHz coverage is larger than 850 MHz coverage, some user's wireless connection will transition to 700 MHz and then drop when no frequency band is providing suitable signal. This is the reason why the 700 MHz frequency band experiences more drop calls than the 850 MHz frequency band.

Exhibit W – Heritage Hills – Beta Sector Drop Call Rate (1900MHz)

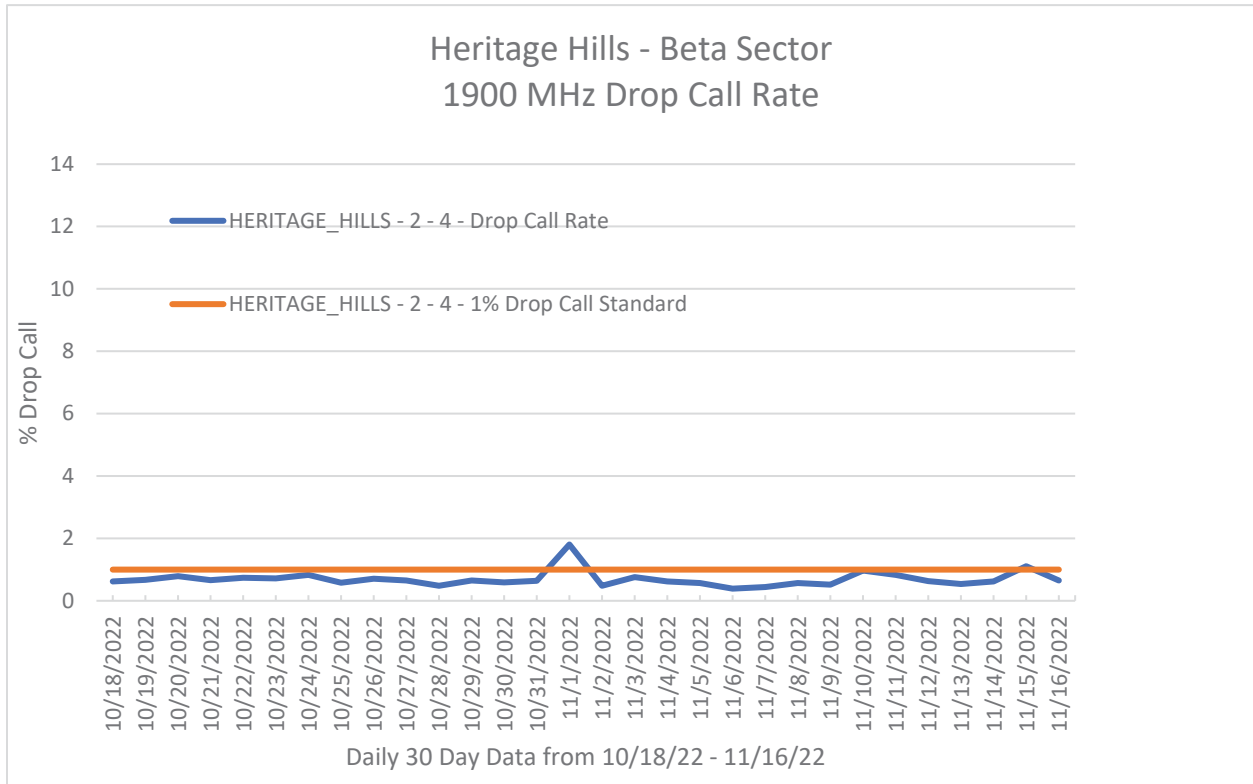


Chart above for Heritage Hills Beta Sector at 1900MHz demonstrate that users are experiencing some drop calls on the 4G 1900 MHz LTE network. Over the 30 day period the 1% drop call rate was exceeded 7% of the time over the time period analyzed. Since low band coverage (700/850) is larger than 1900 MHz coverage, some user's wireless connection will transition to low band frequencies and then drop when no frequency band is providing suitable signal, typically on the 700 MHz largest coverage layer band. This is the reason why the 700 MHz frequency band experiences more drop calls than the 1900 MHz frequency band.

Exhibit X – Heritage Hills – Beta Sector Drop Call Rate (2100MHz)

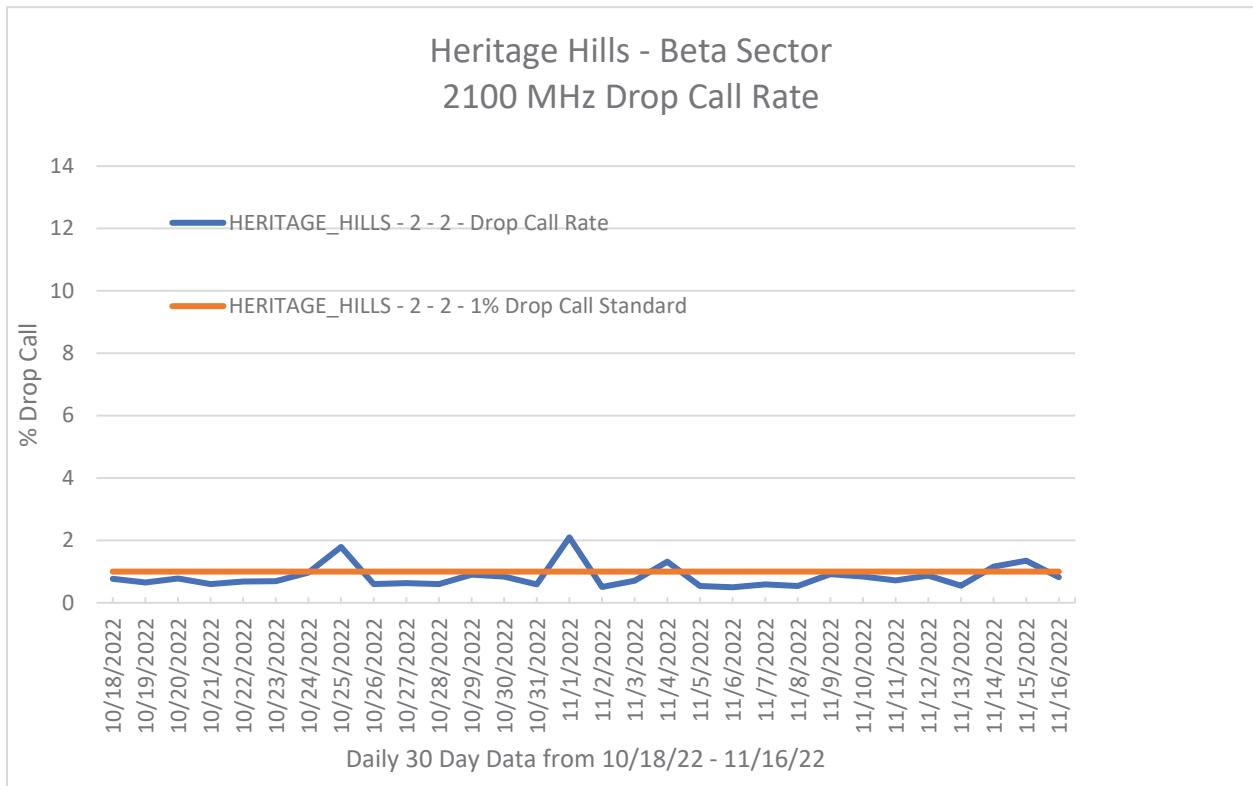


Chart above for Heritage Hills Beta Sector at 2100MHz demonstrate that users are experiencing some drop calls on the 4G 2100 MHz LTE network. Over the 30 day period the 1% drop call rate was exceeded 17% of the time over the time period analyzed. Since low band coverage (700/850) is larger than 2100 MHz coverage, some user’s wireless connection will transition to low band frequencies and then drop when no frequency band is providing suitable signal, typically on the 700 MHz largest coverage layer band. This is the reason why the 700 MHz frequency band experiences more drop calls than the 2100 MHz frequency band.

Exhibit Y – Heritage Hills – Beta Sector Access Failure Rate (700MHz)

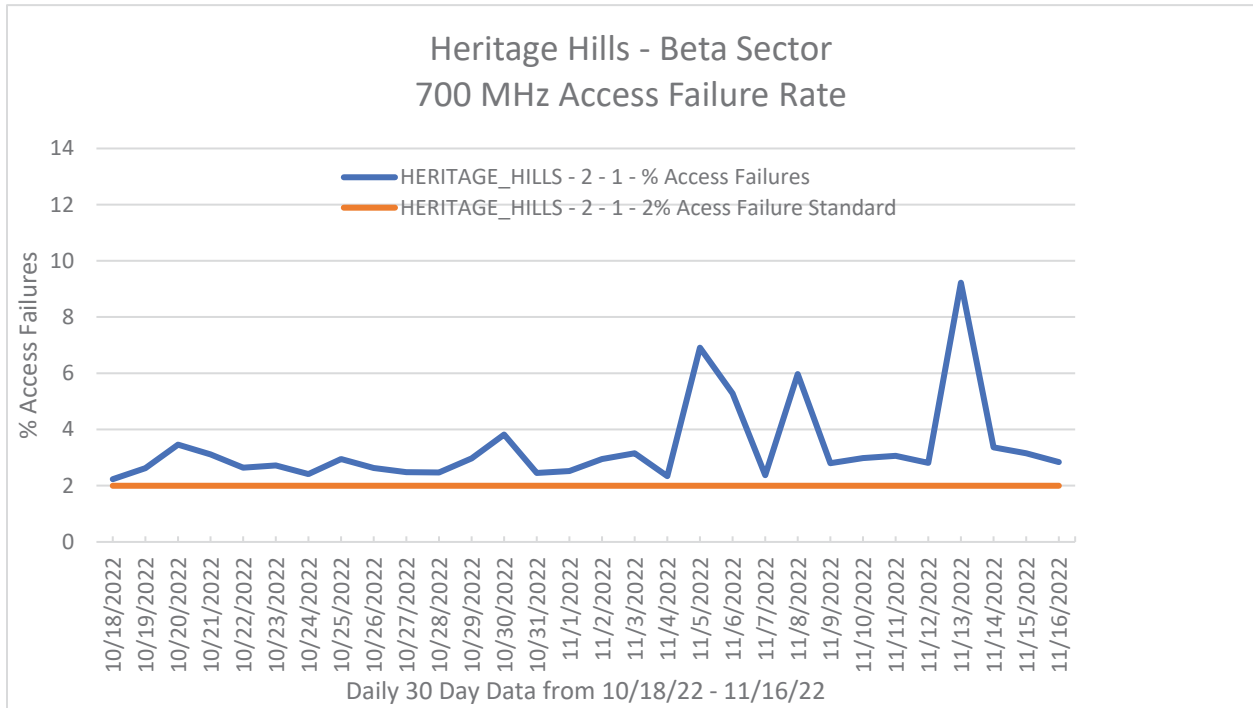


Chart above for Heritage Hills Beta Sector at 700MHz demonstrates that users are experiencing access failure rates on the 4G 700 MHz LTE network. Access Failure rates recorded were over 2% with peaks over 9% failures. Over the 30 day period the 2% drop call rate was exceeded 100% of the time over the time period analyzed. LTE utilizes adaptive modulation which allows users to connect with poor signal, albeit with reduced capacity and throughput. The access failures taken in conjunction with the drop call rate demonstrates that not only are users losing connections, but many cannot connect at all due to significant gap in the area.

Exhibit Z – Mahopac Falls – Alpha Sector Drop Call Rate (700MHz)

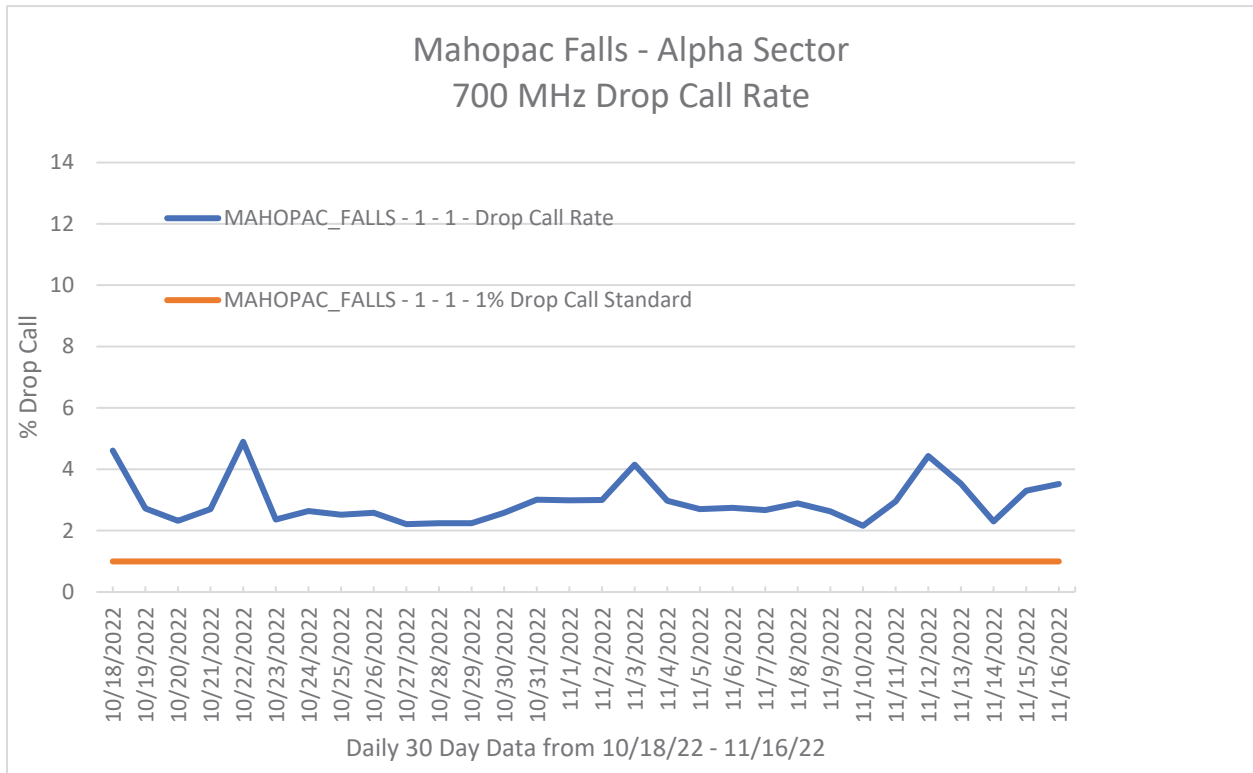


Chart above for Mahopac Falls Beta Sector at 700MHz demonstrate that users are experiencing significant drop calls on the 4G 700 MHz LTE network. Drop call rates recorded were consistently over 1% with peaks well over 8% failures. Over the 30 day period the 1% drop call rate was exceeded 100% of the time over of the time period analyzed.

Exhibit AA - Mahopac Falls Alpha Sector Access Failure Rate (700MHz)

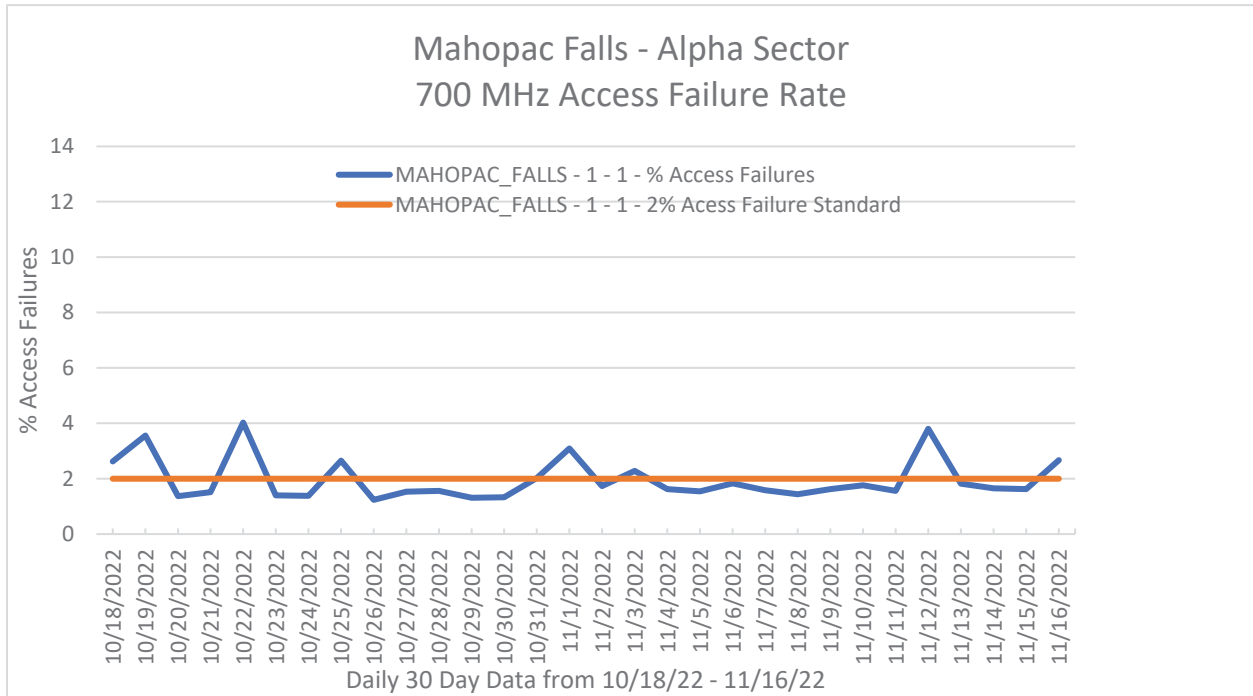


Chart above for Mahopac Falls Alpha Sector at 700MHz demonstrates that users are experiencing access failure rates on the 4G 700 MHz LTE network. Access Failure rates recorded were over 2% with peaks over 9% failures. Over the 30 day period the 2% drop call rate was exceeded 30% of the time over the time period analyzed. LTE utilizes adaptive modulation which allows users to connect with poor signal, albeit with reduced capacity and throughput. The access failures taken in conjunction with the drop call rate demonstrates that not only are users losing connections, but many cannot connect at all due to significant gap in the area.



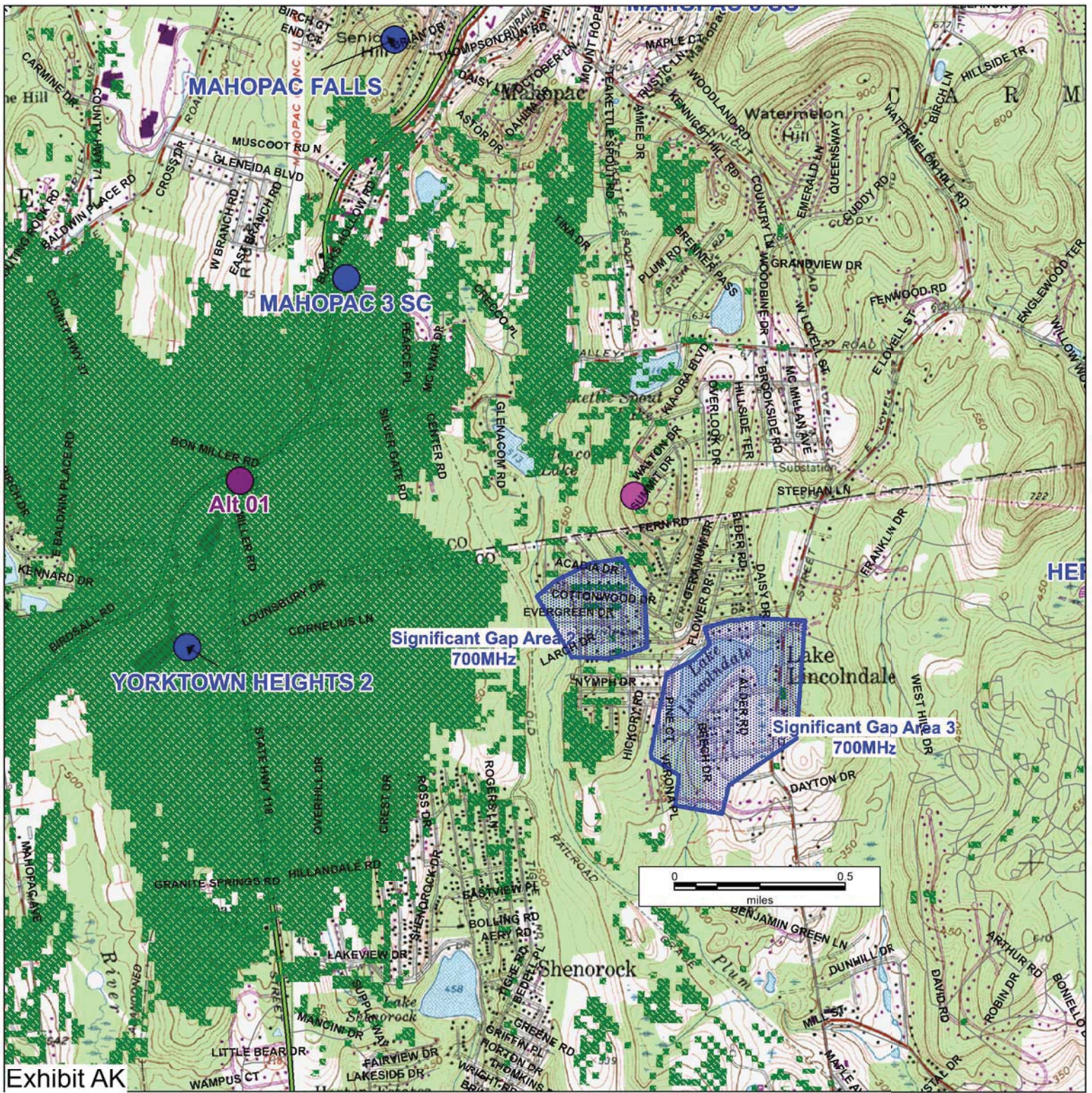







Exhibit AK

## Glenacom

Alternative Candidate #1  
Suburban 700 MHz  
In-Building LTE Coverage

Walton Drive  
Mahopac, NY 10541

-  Verizon Wireless Existing Site
-  Verizon Wireless Proposed Site
-  Verizon Wireless Alternative Site
-  Verizon Wireless 700MHz Gap Area (Coverage Objective)
-  Alt Site Reliable Coverage (greater than -95dBm)




Prepared by PierCon  
01-21-2020

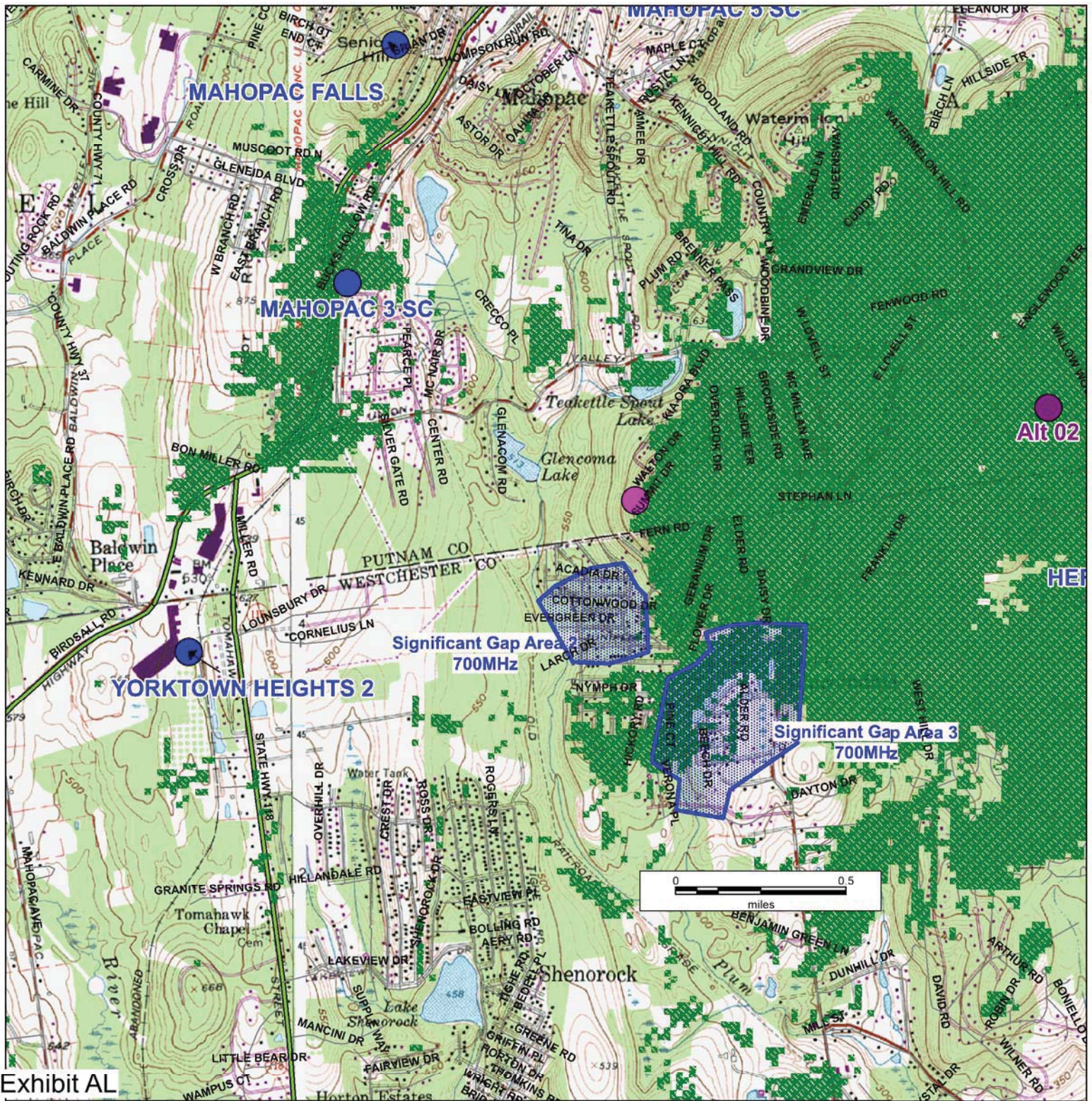


Exhibit AL

# Glenacom

Alternative Candidate #2  
Suburban 700 MHz  
In-Building LTE Coverage

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site
- Verizon Wireless Alternative Site
- Verizon Wireless 700MHz Gap Area (Coverage Objective)
- Alt Site Reliable Coverage (greater than -95dBm)



Prepared by PierCon  
01-21-2020

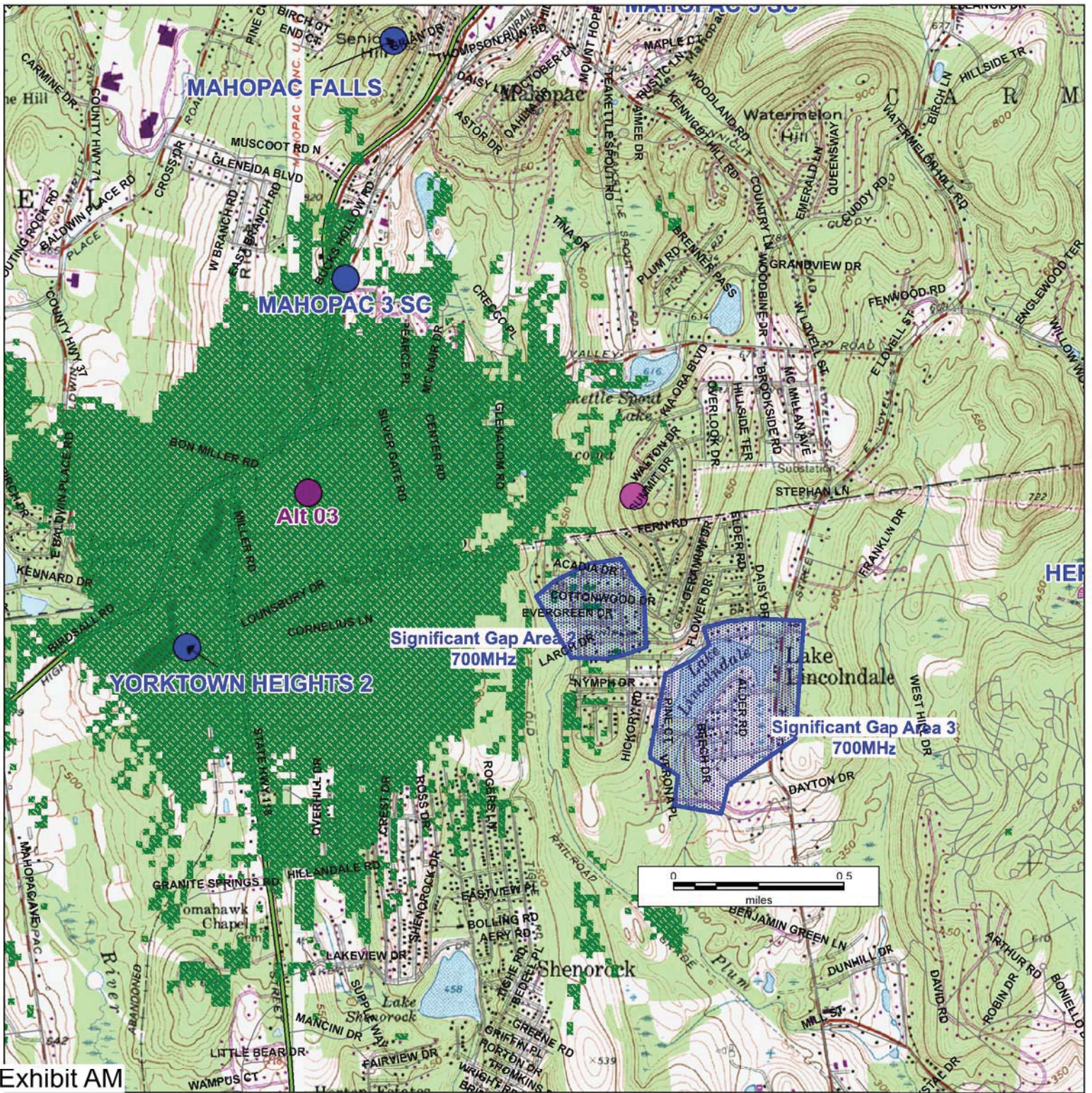


Exhibit AM

# Glenacom

Alternative Candidate #3  
Suburban 700 MHz  
In-Building LTE Coverage

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site
- Verizon Wireless Alternative Site
- Verizon Wireless 700MHz Gap Area (Coverage Objective)
- Alt Site Reliable Coverage (greater than -95dBm)



Prepared by PierCon  
01-21-2020

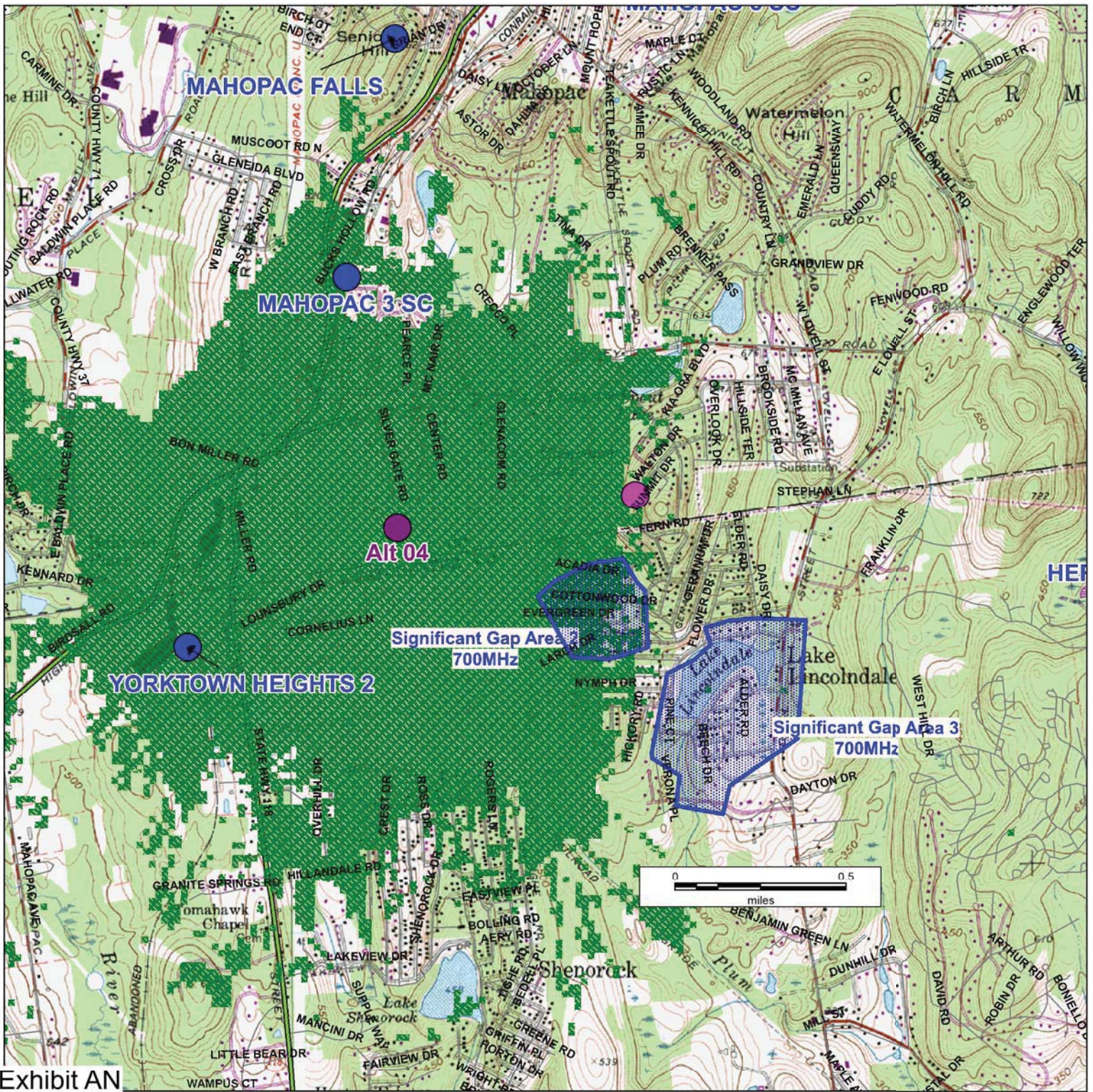


Exhibit AN

# Glenacom

Alternative Candidate #4  
Suburban 700 MHz  
In-Building LTE Coverage

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site
- Verizon Wireless Alternative Site
- Verizon Wireless 700MHz Gap Area (Coverage Objective)
- Alt Site Reliable Coverage (greater than -95dBm)



Prepared by PierCon  
01-21-2020

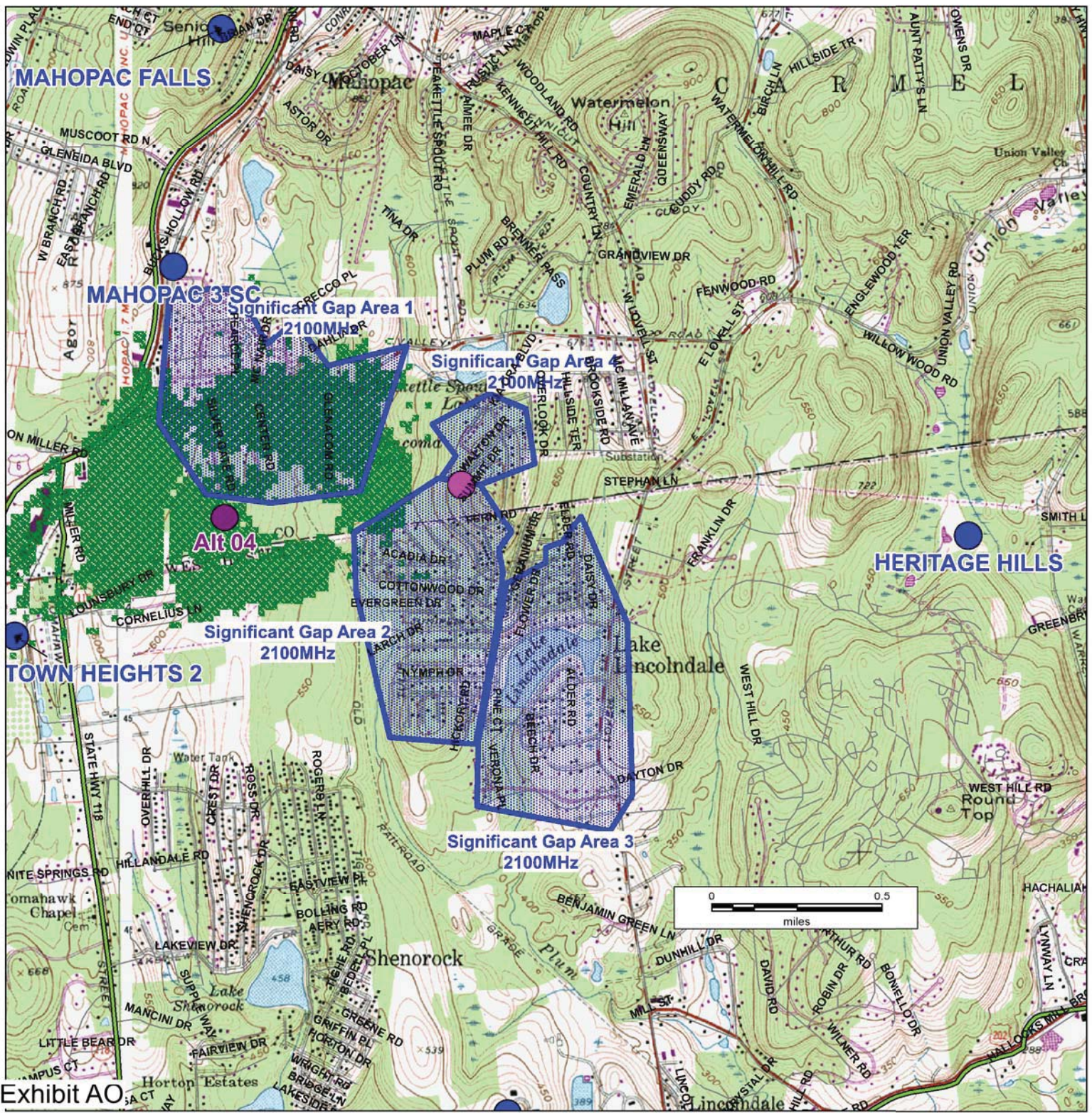







Exhibit AO

## Glenacom

Alternative Candidate #4  
Suburban 2100 MHz  
In-Building LTE Coverage

Walton Drive  
Mahopac, NY 10541

-  Verizon Wireless Existing Site
-  Verizon Wireless Proposed Site
-  Verizon Wireless Alternative Site
-  Verizon Wireless 2100MHz Gap Area (Coverage Objective)
-  Alt Site Coverage (greater than -95dBm)




Prepared by PierCon  
01-21-2020

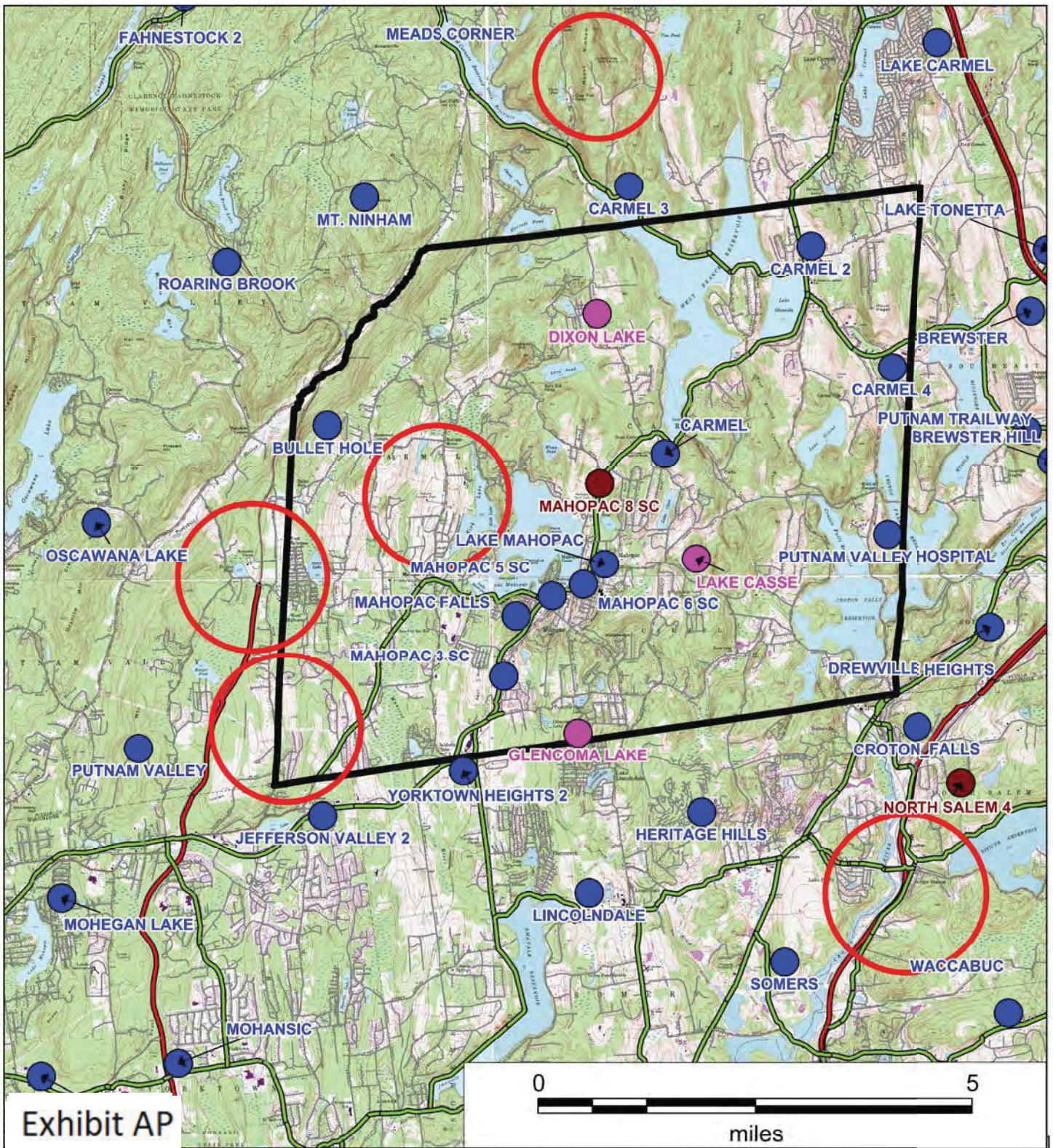


Exhibit AP

### Town Of Carmel

Existing, Proposed/  
Approved, and Future  
Verizon Wireless Sites

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site (Homeland Towers)
- Verizon Wireless Approved Site
- Search Area for Future Site
- Town of Carmel Boundary



Prepared by A. PierCon  
01/14/2020

## Exhibit AQ

<b>Site Name</b>	<b>Address</b>	<b>Height (feet) +/-</b>
JEFFERSON VALLEY	3830 Gomer Street, Yorktown Heights	52
CARMEL 2	94 Gleneida Ave, Carmel	123
AMAWALK 3	2580 Route 35, Somers	119
CARMEL 3	21 Smokey Hollow Court, Carmel	150
LAKE CARMEL	723 Fair St, Carmel	102
FAHNESTOCK 2	Route 301, Cold Spring	101
WACCABUC	117 Waccubuc Road, Goldens Bridge	141
ROARING BROOK	220 Wiccopee Road, Putnam Valley	150
OSCAWANA LAKE	7 Barger Hill Rd, Putnam Valley	157
DREWVILLE HEIGHTS	300-310 Route 22, Brewster	93
MEADS CORNERS	2490 Route 301, Carmel	155
MOHEGAN LAKE	Woodland Ave Ave, Yorktown	93
BREWSTER HILL	87 Hillside Park, Brewster	83
MT NINHAM	320 California Hill Path, Carmel	101
LINCOLNDALE	Rte 202, Lincoln Dale	106
MAHOPAC 3 SC	361 Route 6, Mahopac	19
MAHOPAC 6 SC	692 Route 6, Mahopac	28
HERITAGE HILLS	250 West Hill Drive, Somers	87
SOMERS	294 Route 100, Somers	108
PUTNAM VALLEY HOSPITAL	670 Stoneleigh Ave, Carmel	120
YORKTOWN HEIGHTS 2	80 Route 6, Somers	96
MOHANSIC	26-51 Strang Boulevard, Yorktown Heights	47
CROMPOND	3800 Crompond Rd, Yorktown	125
BREWSTER	Independent Way, Brewster	102
BULLET HOLE	Scout Hill Road, Mahopac	126
MAHOPAC 5 SC	946-954 S Lake Blvd, Mahopac	36
MAHOPAC FALLS	51 Crest Drive, Mahopac	121
GOLDENS BRIDGE	Exit 6A I-684, Goldens Bridge	102
CROTON FALLS	Sun Valley Drive, North Salem	100
PUTNAM VALLEY	Williams Drive, Putnam Valley	106
CARMEL	1183 Route 6, Carmel	117
LAKE MAHOPAC	55 McAlpin Avenue, Carmel	122

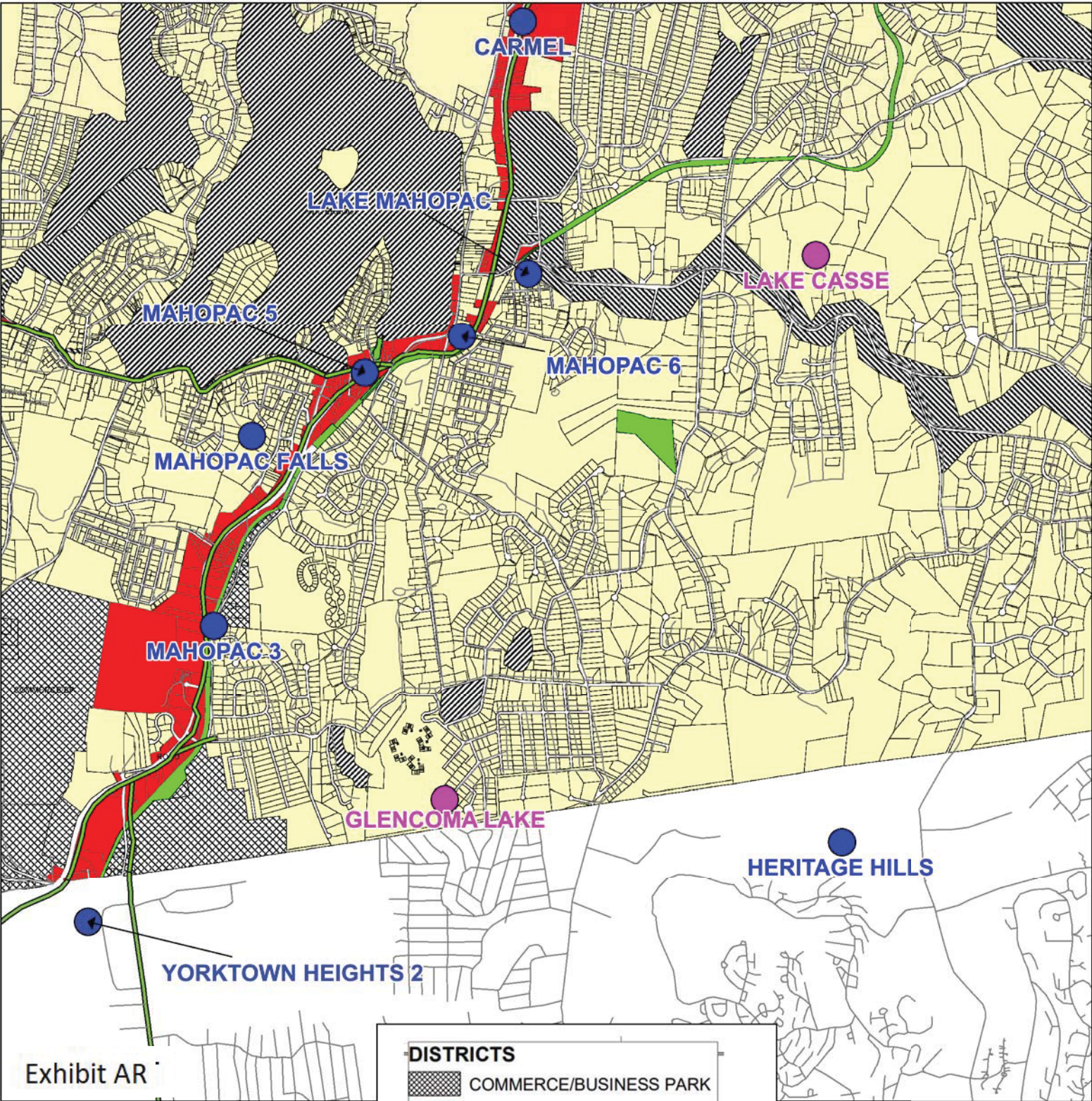


Exhibit AR

# Glenacom

Existing Verizon Wireless Sites on Town Zoning Map

Walton Drive  
Mahopac, NY 10541

DISTRICTS	
	COMMERCE/BUSINESS PARK
	COMMERCIAL
	CONSERVATION
	NEW YORK CITY WATERSHED
	NEW YORK CITY MOA
	RECREATION/TRAILWAY
	RESIDENTIAL
	WATERBODY

- Verizon Wireless Existing Sites
- Verizon Wireless Proposed Sites

**PierCon Solutions**  
*Specialists in Wireless Systems*

Prepared by A. PierCon  
01/14/2020



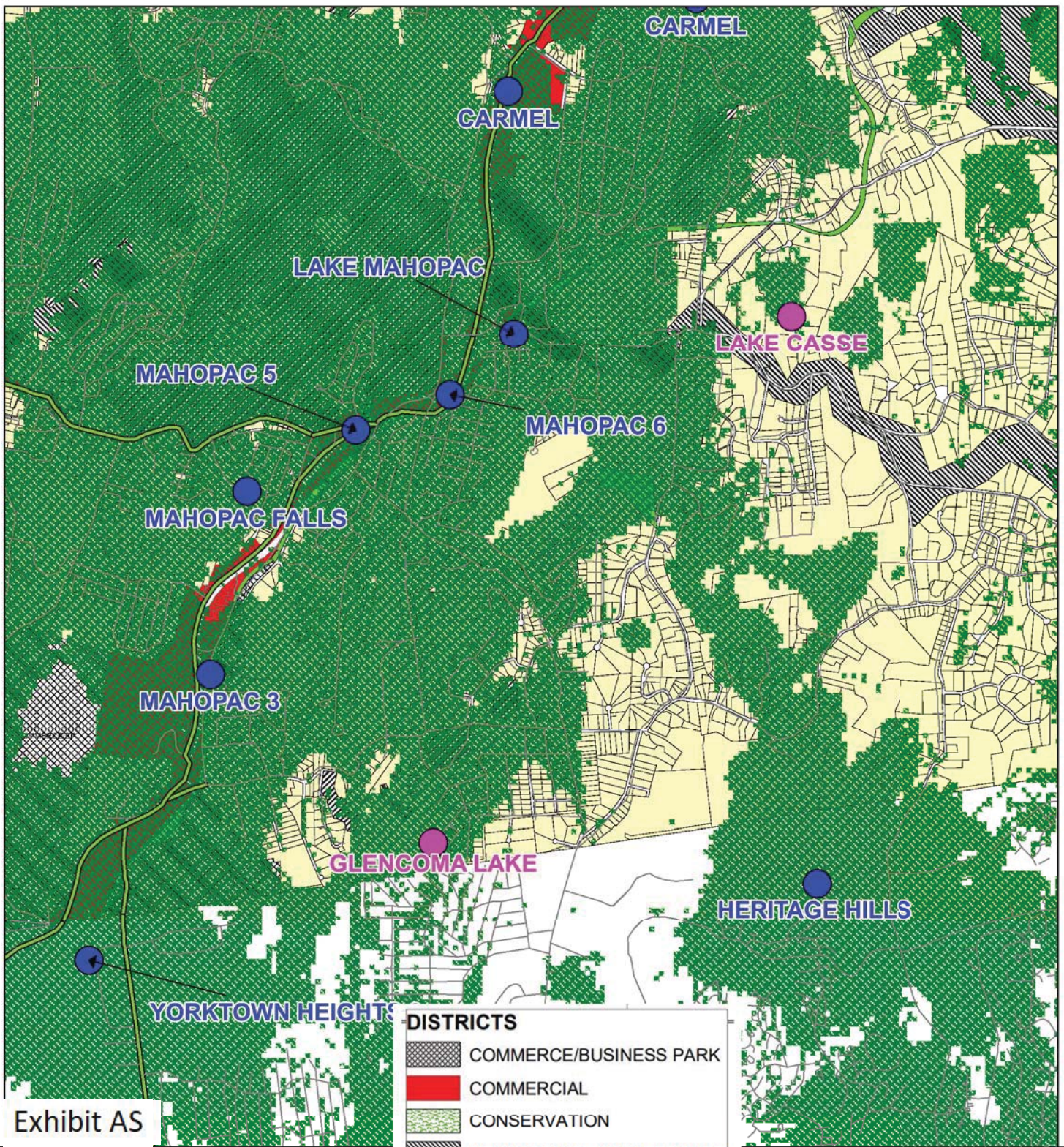


Exhibit AS




### Glenacom

Existing Verizon Wireless  
Suburban 700 MHz  
In-Building LTE Coverage  
Sites on Town Zoning Map

Walton Drive  
Mahopac, NY 10541

#### DISTRICTS

-  COMMERCE/BUSINESS PARK
-  COMMERCIAL
-  CONSERVATION
-  NEW YORK CITY WATERSHED
-  NEW YORK CITY MOA
-  RECREATION/TRAILWAY
-  RESIDENTIAL
-  WATERBODY

-  Verizon Wireless Existing Sites
-  Verizon Wireless Proposed Sites
-  Existing Reliable Coverage (>= -95dBm RSRP)



Prepared by A. PierCon  
01/14/2020

# Exhibit AT - Scanner Calibration Certificate

## Scanner Calibration Certificate

**TRSRenTelco**  
1830 West Airfield Drive  
DFW Airport, Texas 75261

**Calibration Certificate Traceability Statement**

Asset Number: 1180486  
MFG/Model Number: PCTEL/IBFLEX;F  
Serial Number: 81410004  
Description: IBflex Super Config  
Customer: PIERCON SOLUTIONS, LLC  
Address: 63 BEAVER BROOK RD. STE 201  
LINCOLN PARK NJ 07035

Customer P.O. No: 190927RC-1  
Rental Agreement Number: 1773753-0  
Certificate Number: 17737530118048618816

This certificate applies to the instrument identified above and shall not be reproduced, except in full, without written approval of TRS-RenTelco.  
This certifies that the above instrument was calibrated to manufacturer's specifications using approved procedures and traceable measurement standards.  
This calibration was performed by an approved vendor.  
The Quality System of TRS-RenTelco is registered by UL DQS Certificate Number 10000112 to the Quality Management System Standard ISO 9001:2008. TRS-RenTelco's Laboratory is in compliance with MIL-STD-45662A, ANSI/NCSL Z540-1-1994, ISO/IEC 17025:2005 and ISO 10012:2003.  
Measurement standards are calibrated at planned intervals. Traceability is to the International System of Units (SI) through the National Institute of Standards and Technology (NIST) or other recognized National Metrology Institute (NMI), natural physical constants, consensus standards, or by ratio type measurements using self calibrating techniques. Supporting documentation relative to traceability is available for review by appointment.  
This instrument is initially being sent to the above customer calibrated and fully functional.  
Although the calibration laboratory is in compliance with ANSI/NCSL Z540-1-1994 and MIL-STD-45662A this calibration certificate is issued only as a Traceability Statement and does not carry the requirement of recalibration at the end of rental and customer notification of Out of Tolerance conditions.  
TRS-RenTelco's calibration interval for this instrument is 24 months.

Processed By: RODNEY REYES      Calibration Date: Aug 16, 2018  
Calibration Due Date: Aug 16, 2020

Quality Assurance: *Allen J Todd*

Peel Off Sticker Here ----> **TRSRenTelco** 900-671-6354  
ID: 1180486      Date: 08/16/18  
AV      Due: 08/16/20

Certificate Print Date: September 27, 2019      Page 1 of 1



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
3817 Luker Road  
Cortland, New York 13045



December 13, 2019

Mr. Jason Stayer  
Biologist II  
EBI Consulting  
21 B Street  
Burlington, MA 01803

Dear Mr. Stayer:

This responds to your November 19, 2019, letter regarding a telecommunications facility known as “Glencoma Lake/NY054” proposed along Walton Drive, Hamlet of Mahopac, Putnam County, New York. As you are aware, Federal agencies, such as the Federal Communications Commission (FCC), have responsibilities under Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to consult with the U.S. Fish and Wildlife Service (Service) regarding projects that may affect federally listed species or designated critical habitat, and confer with the Service regarding projects that are likely to jeopardize federally proposed species or adversely modify proposed critical habitat. We understand that all FCC licensees, applicants, tower companies, and their representatives have been designated the FCC’s non-federal representative for the purposes of completing informal consultation pursuant to Section 7(a)(2) of the ESA.

We previously completed consultation on this project in a letter to Ms. Tiffany Skrobiszewski, EBI Consulting, dated May 14, 2018. However, since that time, we understand that the tower design has changed from an overall height of 160 feet to 150 feet, the fenced compound for associated support equipment has changed from 65 feet by 70 feet to 30 feet by 85 feet, the access road has changed from 190 feet long to 75 feet long, and the amount of tree clearing has changed from approximately 0.15 acre to 0.30 acre. No other changes are currently anticipated.

Therefore, on behalf of the FCC, EBI Consulting has determined that the proposed project “may affect, but is not likely to adversely affect,” the federally listed Indiana bat (*Myotis sodalis*; Endangered) given the description of the proposed tree removal, location, and conservation measures as described in the May 14, 2018, letter (*e.g.*, conducting tree removal between October 1 and March 31). The Service concurs with your determination.

EBI Consulting also determined the project “may affect” the federally listed northern long-eared bat (*Myotis septentrionalis*; Threatened). Given the project description and location (no known roosts within 150 feet or hibernacula within 0.25 mile) of the proposed project, any taking that

may occur incidental to the proposed project is not prohibited under the ESA Section 4(d) rule<sup>1</sup> for this species (50 CFR § 17.40(o)).

No further coordination or consultation under the ESA is required with the Service at this time. Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of federally listed and proposed endangered and threatened species in New York is available for your information. Until the proposed project is complete, we recommend that you check our website regularly from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.\*

Any additional information regarding the proposed project and its potential to impact listed species should be coordinated with both this office and with the New York State Department of Environmental Conservation.

Thank you for your time. If you require additional information or assistance please contact Noelle Rayman-Metcalf at 607-753-9334. Future correspondence with us on this project should reference project file 18I1709.

Sincerely,

A handwritten signature in blue ink that reads "David A. Stilwell". The signature is written in a cursive style with a large initial "D".

David A. Stilwell  
Field Supervisor

\*Additional information referred to above may be found on our website at:  
<http://www.fws.gov/northeast/nyfo/es/section7.htm>

cc: NYSDEC, New Paltz, NY (Env. Permits)

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<sup>1</sup> For more information about the 4(d) rule, please see:  
<http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/FRnlebFinal4dRule14Jan2016.pdf>.



# United States Department of the Interior

FISH AND WILDLIFE SERVICE  
3817 Luker Road  
Cortland, New York 13045



May 14, 2018

Ms. Tiffany Skrobiszewski  
EBI Consulting  
21 B Street  
Burlington, MA 01803

Dear Ms. Skrobiszewski:

This responds to your May 3, 2018, letter regarding a telecommunications facility proposed along Walton Road, Hamlet of Mahopac, Putnam County, New York. As you are aware, Federal agencies, such as the Federal Communications Commission (FCC), have responsibilities under Section 7 of the Endangered Species Act (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to consult with the U.S. Fish and Wildlife Service (Service) regarding projects that may affect federally listed species or designated critical habitat, and confer with the Service regarding projects that are likely to jeopardize federally proposed species or adversely modify proposed critical habitat. We understand that all FCC licensees, applicants, tower companies, and their representatives have been designated the FCC's non-federal representative for the purposes of completing informal consultation pursuant to Section 7(a)(2) of the ESA.

On behalf of the FCC, EBI Consulting determined that the proposed project "may affect, but is not likely to adversely affect," the federally listed Indiana bat (*Myotis sodalis*; Endangered). The Service concurs with your determination given the location (no known summer or winter habitat nearby), a small amount of trees (approximately 0.16 acre) containing potential suitable roosting habitat are proposed for removal, and the following conservation measures will be incorporated into the project area to avoid and minimize impacts to these bat species:

- Tree removal will occur between October 1 and March 31, when bats are in hibernation; and
- Bright orange construction fencing and/or flagging (or similar) will be used to demarcate trees to be protected compared with those to be cut prior to the initiation of any construction.

EBI Consulting also made a "may affect" determination for the federally listed northern long-eared bat (*Myotis septentrionalis*; Threatened). Given the project description and location (no known roosts within 150 feet or hibernacula within 0.25 mile) of the proposed project, any

taking that may occur incidental to the proposed project is not prohibited under the ESA Section 4(d) rule<sup>1</sup> for this species (50 CFR § 17.40(o)). However, *please note that due to the potential presence of Indiana bats within the project area, tree cutting will need to occur during the winter months, as described above.*

Should project plans change, or if additional information on listed or proposed species or critical habitat becomes available, this determination may be reconsidered. The most recent compilation of federally listed and proposed endangered and threatened species in New York is available for your information. Until the proposed project is complete, we recommend that you check our website regularly from the date of this letter to ensure that listed species presence/absence information for the proposed project is current.\*

Any additional information regarding the proposed project and its potential to impact listed species should be coordinated with both this office and with the New York State Department of Environmental Conservation.

Thank you for your time. If you require additional information or assistance please contact Noelle Rayman-Metcalf at 607-753-9334. Future correspondence with us on this project should reference project file 18TA1709.

Sincerely,

*Anned. Secord*

for David A. Stilwell  
Field Supervisor

\*Additional information referred to above may be found on our website at:  
<http://www.fws.gov/northeast/nyfo/es/section7.htm>

cc: NYSDEC, New Paltz, NY (Env. Permits)

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<sup>1</sup> For more information about the 4(d) rule, please see:  
<http://www.fws.gov/midwest/endangered/mammals/nleb/pdf/FRnlebFinal4dRule14Jan2016.pdf>.

## NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Fish and Wildlife, New York Natural Heritage Program  
625 Broadway, Fifth Floor, Albany, NY 12233-4757  
P: (518) 402-8935 | F: (518) 402-8925  
www.dec.ny.gov

December 18, 2019

Jason Stayer  
EBI Consulting  
21 B Street  
Burlington, MA 01803

Re: Glencoma Lake / NY054 - proposed communications facility at Walton Drive, Mahopac  
(EBI Project No. 6119004380)  
County: Putnam Town/City: Carmel

Dear Jason Stayer:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to the above project.

We have no records of rare or state-listed animals or plants, or significant natural communities at the project site or in its immediate vicinity.

Within five miles of the project site is a documented winter hibernaculum of **Northern long-eared bat** (*Myotis septentrionalis*, state and federally listed as Threatened). These bats may travel five miles or more from documented locations. The main impact of concern for bats is the cutting or removal of potential roost trees. It appears that your Natural Resource Review for this project already assesses the potential presence of, and impacts on, this species. For an official review and comments on your assessment, and a determination about any permit considerations for your project, contact the Permits staff at the NYSDEC Region 3 Office at [dep.r3@dec.ny.gov](mailto:dep.r3@dec.ny.gov), (845) 256-3054.

For most sites, comprehensive field surveys have not been conducted. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. Depending on the nature of the project and the conditions at the project site, further information from on-site surveys or other resources may be required to fully assess impacts on biological resources.

For information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the NYS DEC Region 3 Office, Division of Environmental Permits, as listed above.

Sincerely,



Nicholas Conrad  
Information Resources Coordinator  
New York Natural Heritage Program

## Proposed Wireless Telecommunications Facility

Site Name: Glenacom Lake, NY- 054  
Walton Road  
Mahopac, NY

# VISUAL RESOURCE ASSESSMENT



HOMELAND TOWERS

Prepared for:  
Homeland Towers  
9 Harmony Street, 2nd Floor  
Danbury, CT 06810

December 5, 2022



Homeland Towers seeks approval from the Town of Carmel, NY to construct a wireless telecommunications facility (the "Facility") to be located on property on Walton Drive ("host property"). To address issues of potential visual impact, Saratoga Associates, Landscape Architects, Architects, Engineers, and Planners, P.C. was retained to conduct a Visual Resource Assessment ("VRA") of the proposed Project.

The study area for this VRA extends to a two-mile radius from the Facility (hereafter referred to as the "2-mile study area").

### **PROJECT DESCRIPTION**

The Facility will be located at 41° 20' 56.88" N, 73° 43' 49.94" W. ("Facility site"). The 66.7± acre host property is identified in Putnam County tax records as tax parcel 87.5-1-90. The existing ground elevation at the Facility site is approximately 741± feet above mean sea level (AMSL). The Facility is located approximately 130 feet east of Walton Drive. The Facility is approximately 500 feet north of the Putnam/Westchester County line.

The Facility involves the construction of a 140-foot-tall galvanized steel monopole style telecommunications tower designed to support up to four antenna levels. Associated ground equipment will be located within a 70-foot by 65-foot (4,550± square feet) lease area at the base of the tower. Access to the Facility site will be from a new 190± foot long 12-foot-wide gravel access drive from Walton Drive. Contained within the lease area will be a 3,705 square foot fenced compound enclosing the monopole tower and up to four (4) equipment pads for installation of proposed and future ground level equipment. The compound fence and ground level equipment will be approximately eight (8) feet tall.

### **LANDSCAPE SETTING**

The Facility is located within the Town of Carmel, NY (2017 estimated population 34,360<sup>1</sup>). The 66.7± acre host property is zoned R- Residential as defined by the Carmel Town Code. The northern portion of the host property is occupied by the Maple Hill Estates apartment complex. The southern portion of the host property is undeveloped woodland. The host property is bordered to the south a regional electric transmission corridor paralleling the Putnam/Westchester County boundary. Transmission towers within this corridor are primarily wooden "H" frame type estimated to be approximately 70 feet tall.

The 2-mile study area is a relatively even mix of low to moderate density (1/2 to 5 acre) single family residential properties and undeveloped woodlot. Structures are typically one- and two-story single-family homes within organized subdivisions or individual homes setback from local roads. Residential neighborhoods are commonly wooded with well landscaped understory

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<sup>1</sup> <https://www.census.gov/quickfacts/fact/table/carmeltownputnamcountyny/PST045217>

areas that generally limit views to the immediate foreground. Along roadways mature trees commonly extend to road edges preventing long distance vistas.

Walton Drive (east of Mountain View Drive) is a 950-foot-long dead-end street serving 12 single-family residential properties. An additional eight (8) single family properties are along Summit Circle Drive which intersects Walton Drive near the Facility. The nearest residential structure (53 Walton Drive) is approximately 170 feet east of the Facility site.

The topography within the 2-mile study area is characterized by a rolling and often steeply sloped landscape. There are multiple summit points within the study area. The topographic high point (elevation 960± feet above mean sea level [amsl]) is located along Crest Lane in the northern portion of the study area. The topographic low point is along Plum Brook (elevation 340± feet amsl) in the southern portion of the study area near Lincolndale, Westchester County.

Several bodies of water found within the study area. These include Lake Mahopac, Plum Brook, Glencoma Lake, Teakettle Spout Lake and Lake Lincolndale, and smaller other creeks and streams.

The study area is substantially wooded with large tracts of mature second growth deciduous forests interspersed with mature evergreen species. The tree canopy occupies approximately 5,400 acres of the 8,040-acre 2-mile study area (67%).<sup>2</sup> Mature tree cover generally ranges from 50 to 70 feet in height. Approximately 273 acres (3%) of the 2-mile study area is classified as pasture, cropland, or scrubland, approximately 3,319 acres (41%) is classified as low to moderate density developed land and 673 acres (8%) is classified as high-density development.<sup>3</sup>

### **VIEWSHED ANALYSIS**

Viewshed mapping identifies the geographic area within which there is a relatively high probability that some portion of the Facility could be visible considering the screening effect of intervening landform, vegetation and topography.

Global Mapper 20.0 GIS software was used to generate viewshed areas based on publicly available topographic and land cover datasets. Topographic data was derived from 2-meter resolution digital elevation models (DEM) acquired from the New York State GIS Clearinghouse.<sup>4</sup> Using Global Mapper's viewshed analysis tool, the proposed Facility location

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<sup>2</sup> Tree cover calculations are based on areas with 50% or greater tree canopy coverage within 30-meter x 30-meter grid cells as presented in the National Land Cover Database (NLCD) 2011 Percent Tree Canopy dataset. <https://viewer.nationalmap.gov/basic/#productSearch>

<sup>3</sup> Land Cover calculations are based on general land cover classifications as presented in the NLCD Land Cover dataset. <https://viewer.nationalmap.gov/basic/#productSearch>. These calculations are provided as a general description of land cover conditions which characterize the 2-mile study area.

<sup>4</sup> <https://orthos.dhSES.ny.gov/>

and height were input and a conservative offset of six feet was applied to account for the observer's eye level. The resulting viewshed identifies grid cells with a theoretical line-of-sight to the Facility high point (140 feet above ground level).

Within approximately one (1) mile of the Facility existing forest vegetation was manually digitized from ½-foot resolution digital ortho-photographs (2016) acquired from NYS Orthos On-line.<sup>5</sup> For the remainder of the 2-mile study area existing forest vegetation is based on areas with 75% or greater tree canopy coverage as presented in the National Land Cover Database (NLCD) 2011 Percent Tree Canopy dataset.<sup>6</sup> Within Putnam County building footprints were manually digitized from ½-foot resolution digital ortho-photographs. Within Westchester County building footprints were imported from the Westchester County GIS Data Warehouse.<sup>7</sup>

The screening effect of vegetation and built structures was incorporated by conservatively allocating 50 feet in vertical height to forest areas and 25 feet to building footprints. Forested areas and building footprints were removed from the viewshed result to account for affected areas located within structures or densely wooded cover.

Based on field observation, most trees in forested portions of the study area are taller than 50 feet. This height therefore represents a conservative estimate of the efficacy of vegetative screening. It is important to note that digitized vegetation is based on interpretation of forest areas that are clearly distinguishable in the source aerial photography. As such, the potential screening value of site-specific vegetative cover such as small hedgerows, street trees and individual trees and other areas of non-forest tree cover may not be represented in the viewshed analysis.

By themselves, the viewshed maps do not determine how much of the proposed Facility would be visible above intervening landform or vegetation (e.g., 100%, 50%, 10% etc. of total tower height), but rather the geographic area within which some portion of the Facility would theoretically be visible. Their primary purpose is to provide a general understanding of a Facility's potential visibility and identify areas to be visited during field reconnaissance.

Figure A1 identifies areas of potential project visibility at a macro scale within the 2-mile study area. Figure A2 provides a more localized assessment potential visibility within the 1-mile study area. Figure A1 and Figure A2 are provided in Appendix A.

#### **STUDY AREA RECONNAISSANCE**

On February 20, 2020 a construction crane was raised on the project site by project consultant PierCon Solutions for purpose of conducting a signal test. Saratoga Associates attended the

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<sup>5</sup> <https://orthos.dhSES.ny.gov/>

<sup>6</sup> <https://viewer.nationalmap.gov/basic/#productSearch>

<sup>7</sup> <https://giswww.westchestergov.com/wcgis/MunPlan/bed.htm>

signal test to use the crane as a proxy for the Facility to document potential visibility from off-site vantage points.

Due to existing forest vegetation at the proposed Facility center point the crane was positioned at the nearest accessible location along an existing unimproved road approximately 100 feet from the end of pavement on Walton Drive; approximately 140 feet southeast of the proposed tower position.

The ground elevation at the crane location was surveyed by PierCon Solutions and determined to be approximately 20 feet higher than the ground elevation at the actual proposed tower location. To account for this grade difference the crane was raised to height of approximately 120 feet to match the proposed top-of-tower elevation (i.e., 140-foot proposed tower height minus 20-foot grade differential). The top of the crane was approximately equal to the proposed top-of-tower elevation (890.8± feet amsl).

To help observers locate the crane from off-site vantage points a four-foot diameter red “spotter” balloon was flown approximately 30 feet above the top of the crane. This balloon was flown solely to make the crane more visible and did not represent the horizontal or vertical position of any proposed structure.

The crane was raised to the proposed top-of-tower elevation (890.8± feet ASL) at approximately 11:15am and remained at this elevation until approximately 1:30pm. At approximately 1:30 the crane was lowered by 20 feet to allow the radio frequency engineers to evaluate signal strength at a lower antenna height. At approximately 3:30pm the crane was lowered an additional 20 feet to evaluate signal strength at the next lower height increment.

The crane test was conducted during winter leaf-off season to represent the worst-case (i.e., most exposed) visual condition. Project visibility will be substantially less during summer leaf-on season.

While the crane was raised to the proposed top-of-tower elevation (890.8± feet amsl) two Saratoga Associates visual analysts drove public roads to inventory those areas where viewshed mapping identified potential Facility visibility. Photographs were taken from multiple vantage points to document the views in the direction of the Facility from places where a theoretical view was identified by viewshed analysis. Photos were also taken from locations where the balloon was not visible to balance the photo record and document visual conditions representative of less affected areas on the subject property.

Photographs were only taken while the crane was raised to the proposed top of tower elevation (890.8± feet amsl). Photographs were not taken while the crane lowered to either of the two lower heights. The lower crane elevations were used only for the radio frequency signal test and are not considered for the purpose of this visual assessment.

Photographs were taken using digital single lens reflex (“DSLR”) 24-mega pixel (minimum) cameras with a lens setting of approximately 50mm (35mm film equivalent). The precise coordinates of each photo location were recorded in the field using a handheld global positioning system (GPS) unit. Prior to field reconnaissance, the coordinates of the proposed telecommunications tower were programmed into a handheld GPS unit as a “waypoint.” The “waypoint indicator” function of the GPS (arrow pointing along a calculated bearing) was used to assist the visual analyst determine the direction of the Facility from each photo location in cases where the crane was not visible through or above intervening vegetation.

### **VISUAL RESOURCES**

Scenic Resources of Statewide Significance - To avoid subjectivity in assessing potential visual impact, the New York State Department of Environmental Conservation’s (“NYSDEC”) Program Policy on Assessing and Mitigating Visual Impact (DEP-00-02 [revised 12/13/2019] (“DEC Visual Policy”)) provides guidance in the determination of visual significance under the State Environmental Quality Review Act (SEQRA). Aesthetic impact is defined by the DEC Visual Policy as follows:

“Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility of a project should not be a threshold for decision making. Instead a project, by virtue of its visibility, must clearly interfere with or reduce the public’s enjoyment or appreciation of the appearance of a significant place or structure.”<sup>8</sup>

The DEC Visual Policy defines an “inventoried resource” as a place recognized for its beauty and has been formally recognized as such by the Federal or State government.<sup>9</sup> Inventoried places are a matter of public record and are not arbitrarily or subjectively determined. The DEC Visual Policy contains specific criteria defining places considered to be aesthetic resources of statewide significance. These places are high value sites including state parks, scenic roads, wild, scenic and recreational rivers, state forests, wildlife management areas, scenic areas of statewide significance, Heritage Areas, National Natural Landmarks, state or federally designated trails, properties or districts listed on the National Register of Historic Places, among others.

The DEC Policy also does not apply to inventoried places that are not open to the general public. The DEC Visual Policy states:

“The Visual Policy is intended to address places or locations that have been officially designated for their aesthetic qualities and that are accessible to the

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<sup>8</sup> DEC Visual Policy, p.15. ([https://www.dec.ny.gov/docs/permits\\_ej\\_operations\\_pdf/visualpolicydep002.pdf](https://www.dec.ny.gov/docs/permits_ej_operations_pdf/visualpolicydep002.pdf))

<sup>9</sup> DEC Visual Policy, p.2.

public at large as opposed to places that may have individual or private importance only.”<sup>10</sup>

The only location meeting this criterion located within the Facility viewshed is the West Somers Methodist-Episcopal Church & Cemetery; a site listed on the National Register of Historic Places. This site, located in the Town of Somers, Westchester County, is approximately 1.7 miles southwest of the Facility and is fully screened by intervening vegetation and buildings. The location of this National Register site is indicated on Figure A1.

Aesthetic Resources of Local Importance - Aesthetic resources of local importance are publicly accessible places generally recognized and enjoyed by community residents and visitors for their unique aesthetic value. Aesthetic resources of local importance are established through local democratic processes and are not arbitrarily or subjectively determined. Such places are most commonly municipal parks, trails, bikeways, and may also include not-for-profit conservation lands and open space preserves.

Places meeting this criterion with the 2-mile study area include:

- Teakettle Park – Teakettle Park (2,320 feet north of the tower site) is a semi-public recreation area providing access to Teakettle Spout Lake for residents of the Teakettle Spout Park Lake District. Facilities include docks and picnic area. From this park the upper portion of the Facility may be seasonally visible through foreground trees during winter leaf-off conditions. Views will be substantially or fully screened during summer leaf-on season during the period when the park is most active. Figure C9 (A-B) in Appendix C illustrates the view from Teakettle Lake Park.
- Putnam County Trailway (4,840 feet west of tower site at its nearest point) – The Putnam County Trailway is a paved bicycle/pedestrian path located primarily on right-of-way lands of the former Putnam Division of the New York Central Railroad. The Putnam Right-of-Way spans 12.0 linear miles through Putnam County, from the Westchester border at Baldwin Place to Brewster Village. In the vicinity of the Facility the Putnam County Trailway closely parallels NYS Route 6. Views are typically limited to the immediate foreground by trailside vegetation. The facility will not be visible from a majority of the Trailway. A very brief and discrete view was identified in the vicinity of Astor Drive where the upper portion of the Facility may be visible above the tree line at a distance of approximately 1.25 miles. A photograph identifying the approximate location of the facility from this portion of the Putnam County Trailway is provided on page B19 in Appendix B.
- Chamber Park (1.6 mile north of tower site) – The Mahopac Chamber Community Park is located in downtown Mahopac at the corner of Routes 6 and 6N. Located on Mahopac

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<sup>10</sup> DEC Visual Policy, p.4.

lake, it features a gazebo, fountain, playground, walking paths and benches. The project is not visible from Chamber Park.

- Michael Geary Memorial Roller Hockey Rink (1.8 miles north of tower site) – Michael Geary Memorial Roller Hockey Rink includes an inline roller hockey rink, concession stand, picnic area, bleachers and restrooms. The project is not visible from the Michael Geary Memorial Roller Hockey Rink.
- Koegel Park (Town of Somers, Westchester County) – Koegel Park is located approximately 2-miles southwest of the Facility site. 68 acre Koegel Park provides passive recreation opportunities such as trails, greenway, picnic areas and parking. The project is not visible from Koegel Park.

Other Areas of Local Interest - While not rising to the threshold of statewide significance or local importance, other places of local interest have been included in this visual assessment to represent potential Facility views from roadways, residential neighborhoods and adjacent or nearby residential properties. Such locations are not representative of any aesthetically significant place as defined under the DEC Visual Policy and are not directly addressed under SEQRA. These places are addressed in this VRA to consider other potential Facility views that that may be of interest to local residents.

- Residential Areas - Within 1/2-mile of the Facility residential development is largely clustered in planned single-family residential subdivisions. Dense woodland and well landscaped understory areas commonly limit views from residential properties to the immediate foreground. From most residential properties, views of the Facility will be substantially screened by intervening dense mature woodland vegetation – even during winter leaf-off-season.

In Putnam County, nearby residential areas include the Kia-Ora Boulevard/Union Valley Road and Maple Hill Drive neighborhoods. Facility views along Walton Drive will be substantially limited to the immediate project vicinity near the dead-end segment southwest of Mountain View Drive. An elevated view exists at the cul-de-sac on the hill top on Summit Circle Drive. All identified views in this area are through existing deciduous trees during winter leaf-off season. Such views will be substantially or fully screened during summer leaf-on season. Figures C5 (A-B), C6 (A-B) and C7 (A-B) in Appendix C illustrate views from this residential area.

Brief intermittent glimpses of the upper portion of the Facility are found through existing deciduous during leaf-off season along portions of the Maple Hill Estates apartment complex. These views will be substantially or fully screened during summer leaf-on season. Figure C4 (A-B) in Appendix C illustrate a worst-case view from Maple Hill Estates.

Isolated areas of project visibility were also found along Lake Glenacom Road and Fassitt Drive at the cul-de-sac. The upper portion of the Facility will be visible above the tree line in along Glenacom Lake Road in the vicinity of Glencoma Lake at a distance of approximately 0.45 miles. Figures C2 (A-B) and C3 (A-B) in Appendix C illustrate views from this residential area.

In Westchester County the Juniper Drive residential area is immediately south of the electric transmission corridor which borders the host property to the south. This neighborhood is heavily wooded and views will be substantially or fully screened by intervening dense mature woodland vegetation – even during winter leaf-off-season. Discrete views through deciduous trees were found along Acacia Drive and Olive Drive. These views will be substantially or fully screened during summer leaf-on season. Figures C1 (A-B) and C9 in Appendix C illustrate views from this residential area.

- Roadways - Approximately 132 miles of public roadways are within the 2-mile study area. State Route 6 is the most heavily travelled roadway. State Route 6 near Union Valley Road has an average daily traffic volume (AADT) of approximately 17,891 vehicles. Union Valley Road near Maple Hill Drive has an AADT of 4,180 vehicles, Lovell Street at the Westchester County line has an AADT of 6,557 vehicles.

Viewshed analysis identified theoretical views along approximately seven linear miles (5.3%) of roadway within the 2-mile study area. Field investigation conducted during the crane test determined Facility visibility will be significantly less due to the presence of dense roadside vegetation in most areas. When visible, views from roadways will be brief and intermittent through roadside vegetation or between structures. Visibility during summer leaf-on season will be substantially or completely screened by roadside deciduous vegetation. Appendix B contains numerous photographs taken during the crane test documenting this limited degree of Facility visibility.

Given the complex visual stimuli encountered by motorists travelling in a moving vehicle, even if the Facility is visible it is probable viewer recognition of the Facility would be limited to a fraction of the total available viewing time. As the tendency of motorists is to focus down the road peripheral views of the Facility may go largely unnoticed by most travelers.



Photographs taken from visual resources during the February 20, 2020 crane test are provided as in Appendix B. Photographs were taken from the following places:

Map ID/ Picture # (Appendix B)	Location Description	Direction to Tower	Distance to Tower (feet)	Theoretical View Indicated by Land Cover Viewshed - (See Figure 2)	Tower Likely Visible*	Photo/ Simulation Provided as
1	Peach Road at #47	NE	940	YES	NO	
2	Acacia Drive at #23	NE	1,590	YES	Seasonal**	Figure C1(A-B)
3	Fassitt Drive near #61	ENE	2,270	YES	Seasonal**	Figure C3(A-B)
4	Center Road near #34	E	3,090	YES	Seasonal**	
5	Lake Glenacom Road near #23	ESE	2,320	YES	YES	Figure C3(A-B)
6	Union Valley Road near #185	SE	2,090	YES	Seasonal**	
7	Maple Hill Drive near #66	SE	1,300	YES	Seasonal**	Figure C4(A-B)
8	Maple Hill Drive near #23	SSE	1,220	YES	Seasonal**	
9	Kia-Ora Boulevard near #123	SSW	1,370	YES	NO	
10	Walton Drive at Mountain View Drive	SW	1,100	YES	Seasonal**	
11	Walton Drive near Summit Circle Drive	SW	670	YES	Seasonal**	
12	Walton Drive near #43	SW	510	YES	Seasonal**	Figure C5(A-B)
13	Mountain View Drive at #31	WSW	1,010	YES	Seasonal**	Figure C6(A-B)
14	Summit Circle Drive at cul-de-sac	WNW	520	YES	Seasonal**	Figure C7(A-B)
15	Narcissus Drive near #34	NNW	850	NO	NO	
16	Olive Drive at Boxwood Drive	N	1,400	YES	NO	
17	Olive Drive at Evergreen Drive	N	1,910	YES	Seasonal**	Figure C8(A-B)
18	Tulip Road at Evergreen Drive	NNE	2,060	YES	Seasonal**	
19	Travis Road near #90	NE	2,790	YES	Seasonal**	
20	Travis Road near #59	NNE	4,280	YES	Seasonal**	
21	Beech Road near Lake Shore Drive	NNW	3,850	YES	NO	
22	Lovell Street at lake Lincolndale	NW	3,430	NO	NO	
23	Magnolia Drive near #13	NNW	1,330	NO	NO	
24	Hillside Terrace at cul-de-sac	W	1,620	NO	NO	
25	Hillside Terrace at #51	WSW	1,750	NO	NO	
26	Kia-Ora Boulevard at #67	SW	2,160	YES	NO	
27	Teakettle Lake Park	SSW	2,323	NO	NO	
28	Union Valley Road at McMillan Ave	SW	3,370	YES	NO	
29	Lovell Street at Stephanie Lane	W	2,980	NO	NO	
30	Heritage Hills at Stone View Court	W	5,780	NO	NO	
31	Heritage Hills at West Hill Drive	WNWE	6,910	NO	NO	
32	Heritage Hills at Golf Course Clubhouse	WNW	8,400	NO	NO	
33	Woodbine Drive near #66	SSW	4,530	YES	Seasonal**	
34	Plum Road near #48	S	3,350	YES	Seasonal**	
35	Putnam County Trailway near Astor Drive	SSE	6,470	YES	YES	
36	NYS Route 6 near #395	SE	6,280	YES	YES	
37	Putnam County Trailway near Bloomer Road	SE	5,540	YES	Seasonal**	
38	Putnam County Trailway near Horton Drive	ESE	4,800	YES	Seasonal**	
39	NY Route 6 at Mahopac Village Center	E	6,630	YES	YES	

**Terminology**

\* "Tower Likely Visible" is based on field observation during the crane test and differs from "Theoretical View Indicated by Land Cover Viewshed" due to the use of a highly conservative estimate of tree height in viewshed calculation (50 feet). In most cases mature woodland vegetation is significantly taller resulting in reduced project visibility.

\*\* "Seasonal" visibility indicates photo locations where the balloon was visible through intervening deciduous vegetation during winter leaf-off season. Such views will likely be fully screened during summer leaf-on season.

## PHOTO SIMULATIONS

To illustrate how the Facility will appear photo simulations were prepared from nine (9) affected photo locations. Photo simulations were developed by superimposing a rendering of a three-dimensional computer model of the proposed Facility into the base photograph taken from each corresponding visual receptor. The three-dimensional computer model was developed using *3D Studio Max Design*® software (3D Studio Max).

Simulated perspectives (camera views) were matched to the corresponding base photograph for each simulated view by replicating the precise coordinates of the field camera position (as recorded by handheld GPS) and the focal length of the camera lens used (e.g. 50mm). Precisely matching these parameters assures scale accuracy between the base photograph and the subsequent simulated view. The camera's elevation (Z) value is derived from digital elevation model (DEM) data plus the camera's height above ground level. The camera's target position was set to match the bearing of the corresponding existing condition photograph as recorded in the field. With the existing conditions photograph displayed as a "viewport background," and the viewport properties set to match the photograph's pixel dimensions, minor camera adjustments were made (horizontal and vertical positioning, and camera roll) to align the horizon in the background photograph with the corresponding features of the 3D model.

To verify the camera alignment, elements visible within the photograph (e.g., crane<sup>11</sup>, existing buildings, utility poles, topography, etc.) were identified and digitized from digital orthophotos as needed. Each element was assigned a Z value based on DEM data and then imported to 3D Studio Max. A 3D terrain model was also created (using DEM data) to replicate the existing local topography. The digitized elements were then aligned with corresponding elements in the photograph by adjusting the camera target. If necessary, slight camera adjustments were made for accurate alignment.

A daylight system was created matching the exact date and time of each baseline photograph to assure proper shading and shadowing of modeled elements.

Once the camera alignment was verified, a to-scale 3D model of the proposed 150-foot-tall monopole style telecommunications tower was merged into the model space. The 3D model of Facility was constructed in sufficient detail to accurately convey visual character and reveal impacts. The scale, alignment, elevations and location of the visible elements of the proposed tower are true to the conceptual design. Post production editing (i.e., airbrush out portion of

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<sup>11</sup> In photo simulations the top of the proposed tower appears offset from the horizontal and/or vertical position of the crane visible in the corresponding existing conditions photograph. This is attributed to the offset location of the crane which was positioned at the nearest accessible location approximately 140 feet southeast of the proposed tower center.

tower that falls below or behind foreground topography and vegetation) was completed using Adobe Photoshop software. The methodology accurately represents the location, height and visual character of the proposed tower.

Photo simulations are provided in Appendix C.

## **CONCLUSIONS**

The Facility involves the construction of a 140-foot-tall galvanized steel monopole style telecommunications tower designed to support up to four antenna levels.

The Facility is located within a densely wooded area off of Walton Drive in the Town of Carmel, NY. The Facility is approximately 400 feet north of a regional electric transmission corridor paralleling the Putnam/Westchester County boundary. Transmission towers within this corridor are primarily wooden “H” frame type estimated to be approximately 70 feet tall.

The study area is suburban and is characterized by its hilly and occasionally steep terrain. There are large tracts of woodlands that will serve to screen views of the Project from most locations. When visible the Facility is primarily viewed through existing deciduous vegetation during the winter leaf-off season. Nearly all identified views will be substantially or fully screened during summer leaf-on season.

Facility views along Walton Drive are substantially limited to the immediate project vicinity near the dead-end segment southwest of Mountain View Drive. An elevated view exists at the cul-de-sac on the hill top on adjacent Summit Circle Drive. Brief intermittent glimpses of the upper portion of the Facility are also found within portions of the Maple Hill Estates apartment complex. All identified views in this area are through existing deciduous trees during winter leaf-off season. Such views will be substantially or fully screened during summer leaf-on season.

Isolated areas of project visibility were also found along Lake Glenacom Road and Fassitt Drive at the cul-de-sac. The upper portion of the Facility will be visible above the tree line in along Glenacom Lake Road in the vicinity of Glencoma Lake at a distance of approximately 0.45 miles.

South of the existing regional transmission corridor discrete views of the Facility will occur through deciduous trees in the Juniper Drive residential neighborhood along Acacia Drive and Olive Drive. This neighborhood is heavily wooded and views will be substantially or fully screened by intervening dense mature woodland vegetation – even during winter leaf-off season.

The facility will not be visible from any aesthetic resources of statewide significance. Visual impact is defined by the NYS Department of Environmental Conservation as follows:

*“Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Mere visibility a project should not be a threshold for decision making. Instead a project, by virtue of its visibility, must clearly interfere with or reduce the public’s enjoyment or appreciation of the appearance of a significant place or structure.”<sup>12</sup> Significant aesthetic impacts are those that may cause a diminishment of the public enjoyment and appreciation of an inventoried resource, or one that impairs the character or quality of such a place. Proposed large facilities by themselves should not be a trigger for a declaration of significance.”<sup>13</sup>*

In other words, the DEC Visual Policy recognizes that not everything that is visible rises to the level of an Aesthetic Impact, and not all Aesthetic Impacts rise to the level of a Significant Aesthetic Impact that may diminish public enjoyment of the resource.

Based on the degree of Facility visibility, it is clear that any remaining project visibility is not of a size or extent that it would constitute an unacceptable magnitude. Nor does the Facility affect a sufficient number of public viewers or geographic area where the Facility can reasonably be deemed to be visually important as defined by SEQRA.

Furthermore, when considered within the framework of the DEC Visual Policy’s definition of “significant adverse visual impact”, it is clear the Facility will not cause a diminishment of the public enjoyment and appreciation of any scenic or historic resource, or one that impairs the character or quality of such a place. As such the proposed Project will not result in an adverse visual impact.

Submitted by:



Matthew W. Allen, RLA

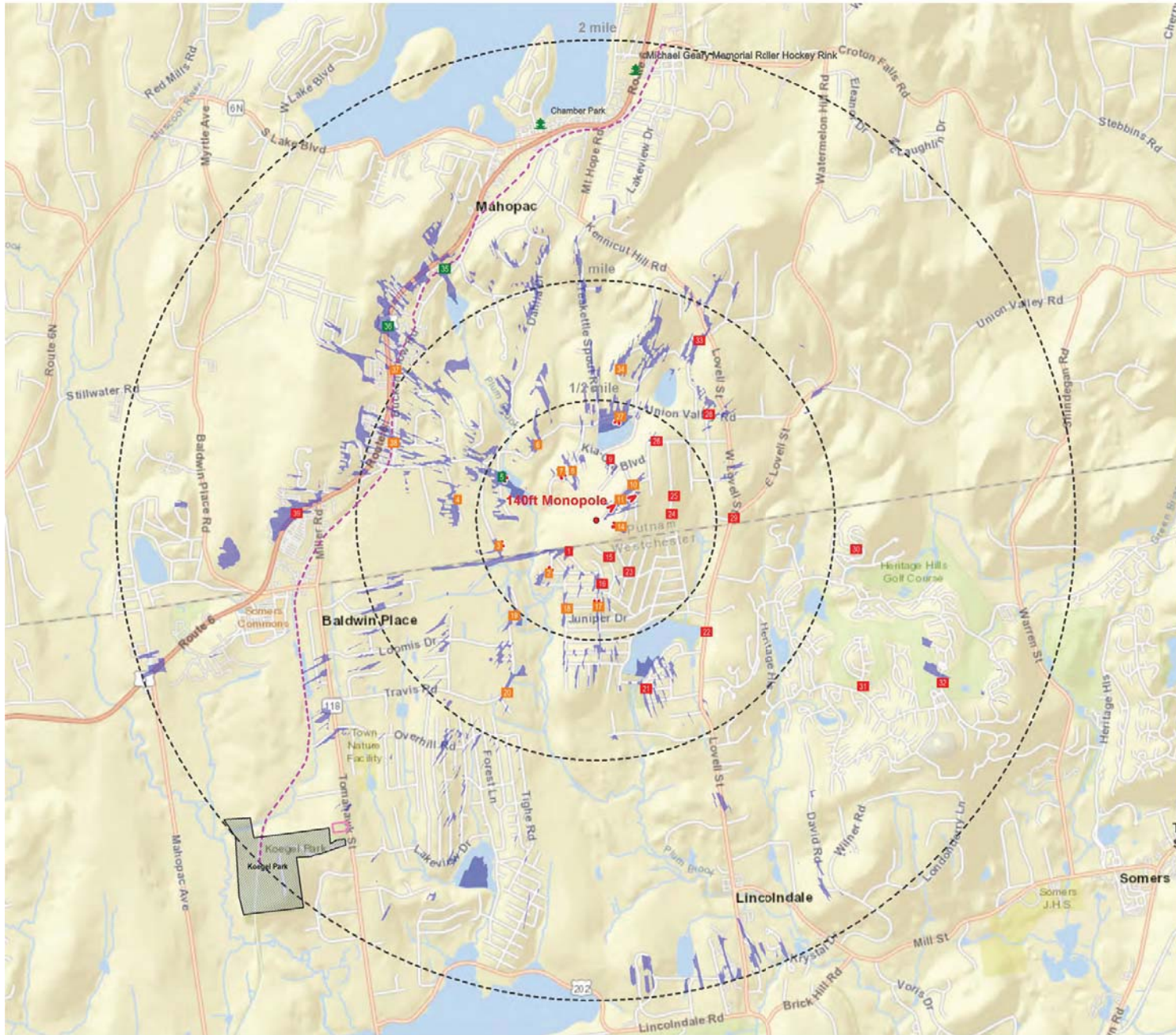
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<sup>12</sup> NYSDEC Visual Policy (DEP-00-2), p15.

<sup>13</sup> *Id.* p.5.

# APPENDIX A

## Viewshed Maps



### LEGEND

- Land Cover Viewshed Area - 140ft Monopole Tower (Includes existing vegetation and structures)

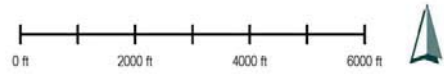
#### Photo Locations

- Facility not visible
- Facility visible seasonally
- Facility visible

#### Scenic Resources

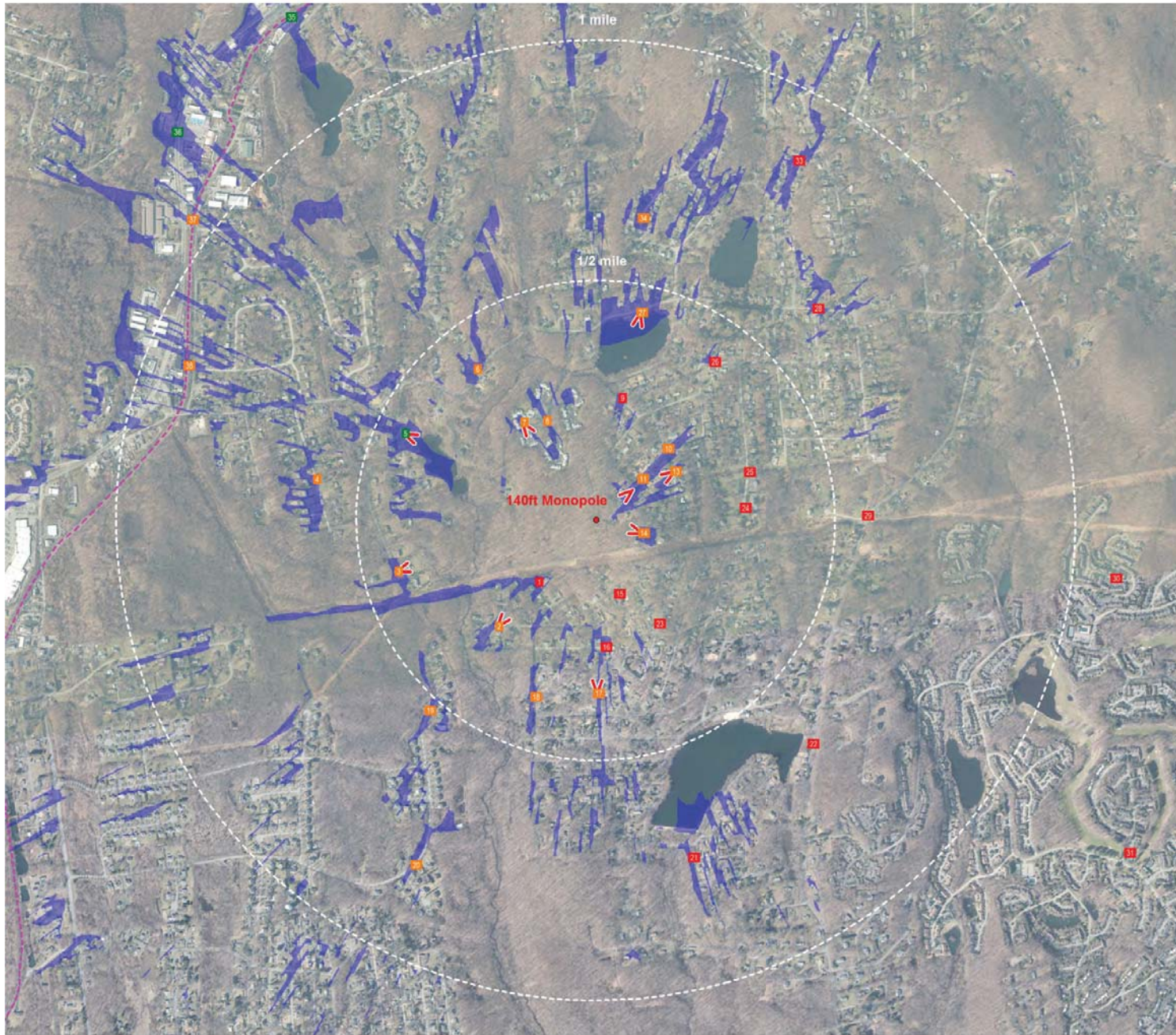
- Municipal Recreation Area
- National Register of Historic Places
- Putnam Trailway
- Municipal Park

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.



**FIGURE 1**  
 VIEWSHED/SCENIC RESOURCE MAP - 2 MILE RADIUS  
 Visual Resource Assessment  
 Proposed Telecommunications Tower

Glenacom Lake Site (NY054)  
 Walton Drive  
 Mahopac, NY 10541



**LEGEND**

■ Land Cover Viewshed Area - 140ft Monopole Tower  
(Includes existing vegetation and structures)

**Photo Locations**

- Facility not visible
- Facility visible seasonally
- Facility visible
- V Photo Simulations

**Scenic Resources**

- Municipal Recreation Area
- National Register of Historic Places
- Putnam Trailway
- Municipal Park

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.



**FIGURE 2**  
VIEWSHED/SCENIC RESOURCE MAP - 1 MILE RADIUS  
Visual Resource Assessment  
Proposed Telecommunications Tower



Glenacom Lake Site (NY054)  
Walton Drive  
Mahopac, NY 10541

# APPENDIX C

## Photo Log



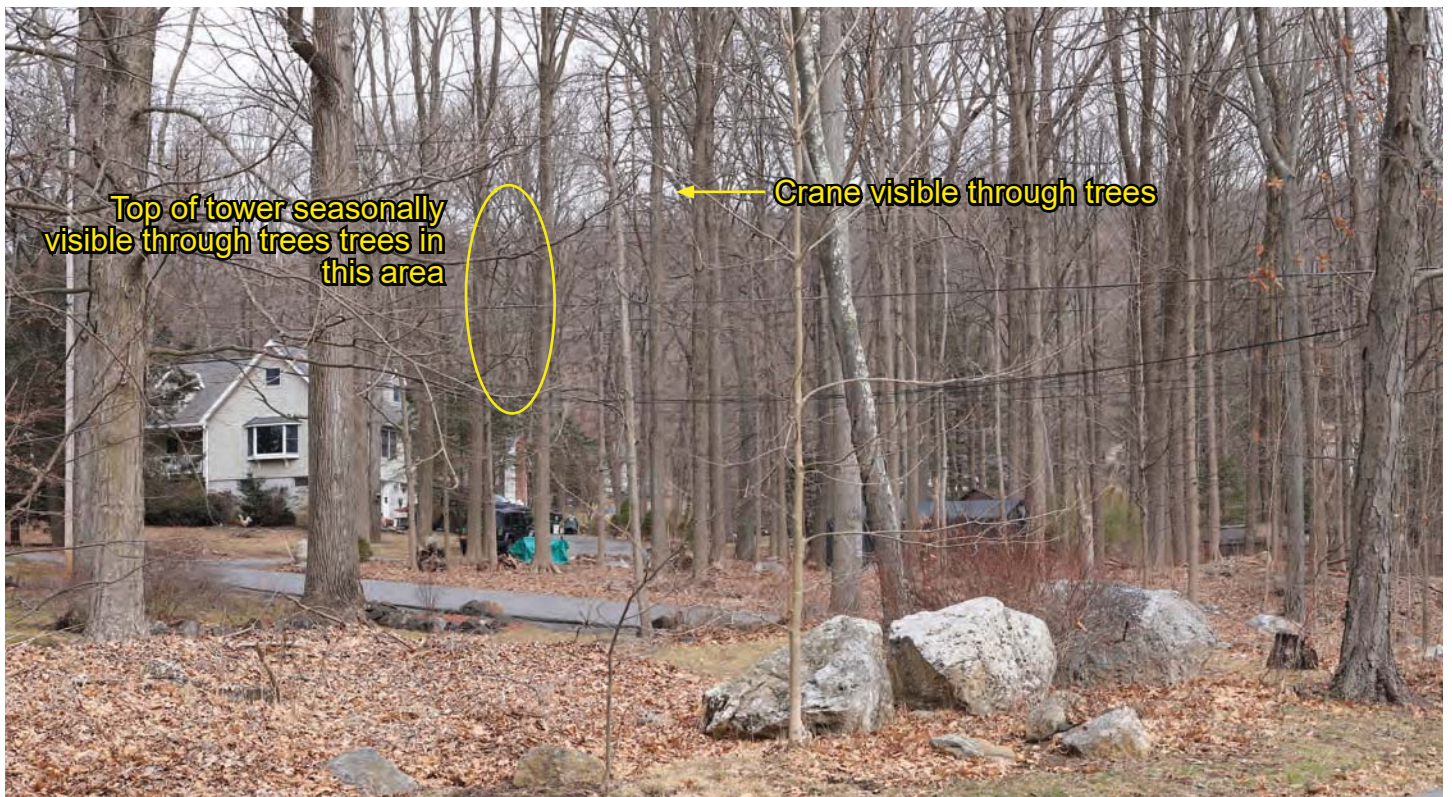


Top of tower screened by trees in this area

Crane not visible behind trees

VP1 - Peach Road at #47

Distance: 940 Feet



Top of tower seasonally visible through trees in this area

Crane visible through trees

VP2 - Acacia Drive at #23

Distance: 1,590 Feet

PHOTO LOG

Figure B-1

Visual Resource Assessment  
Proposed Telecommunications Tower

SARATOGA  
ASSOCIATES

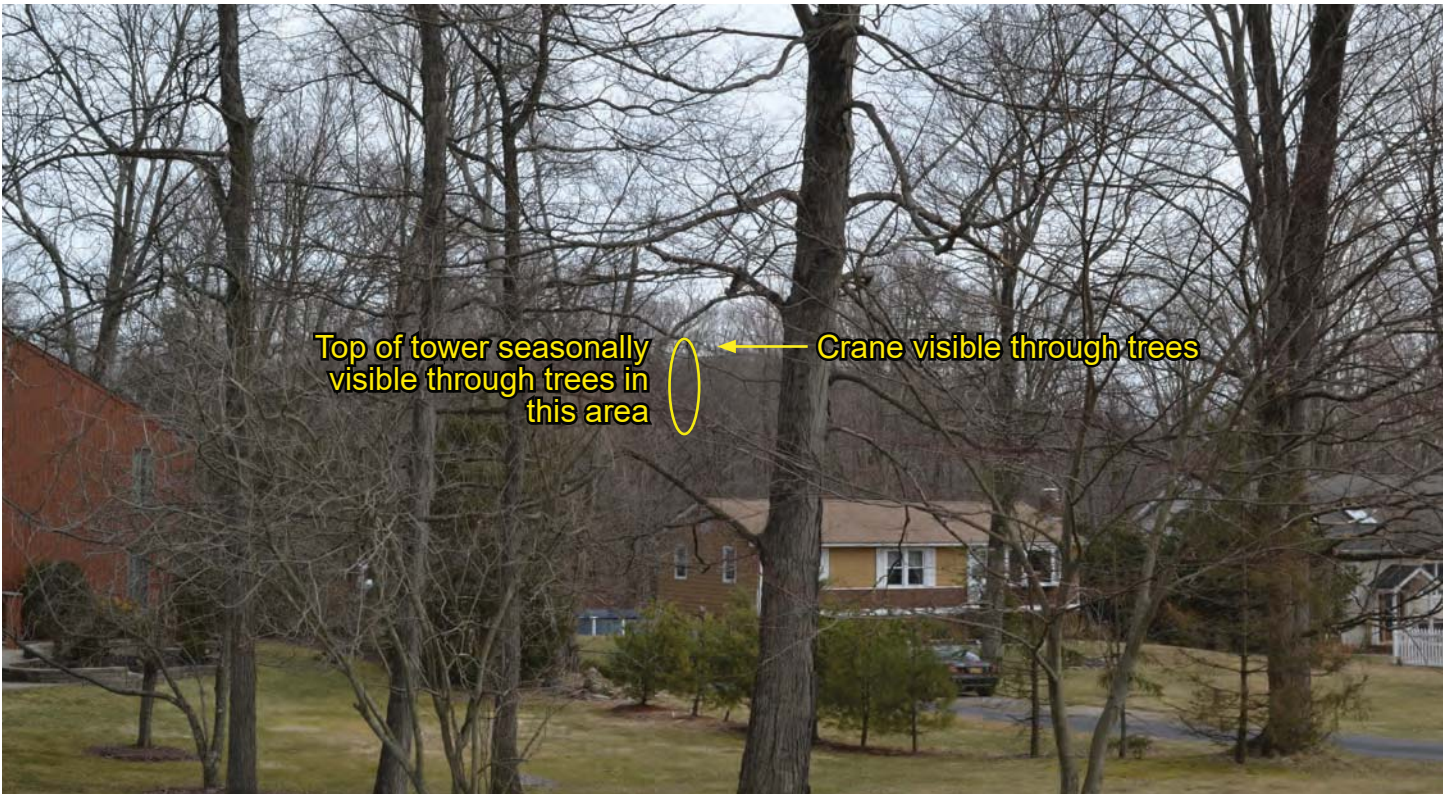


Glenacom Lake Site (NY054)  
Walton Drive  
Mahopac, NY 10541



VP3 - Fassitt Drive near #61

Distance: 2,270 Feet



VP4 - Center Road near #34

Distance: 3,090 Feet

PHOTO LOG

Figure B-2

Visual Resource Assessment  
Proposed Telecommunications Tower



VP5 - Lake Glenacom Road near #23

Distance: 2,320 Feet



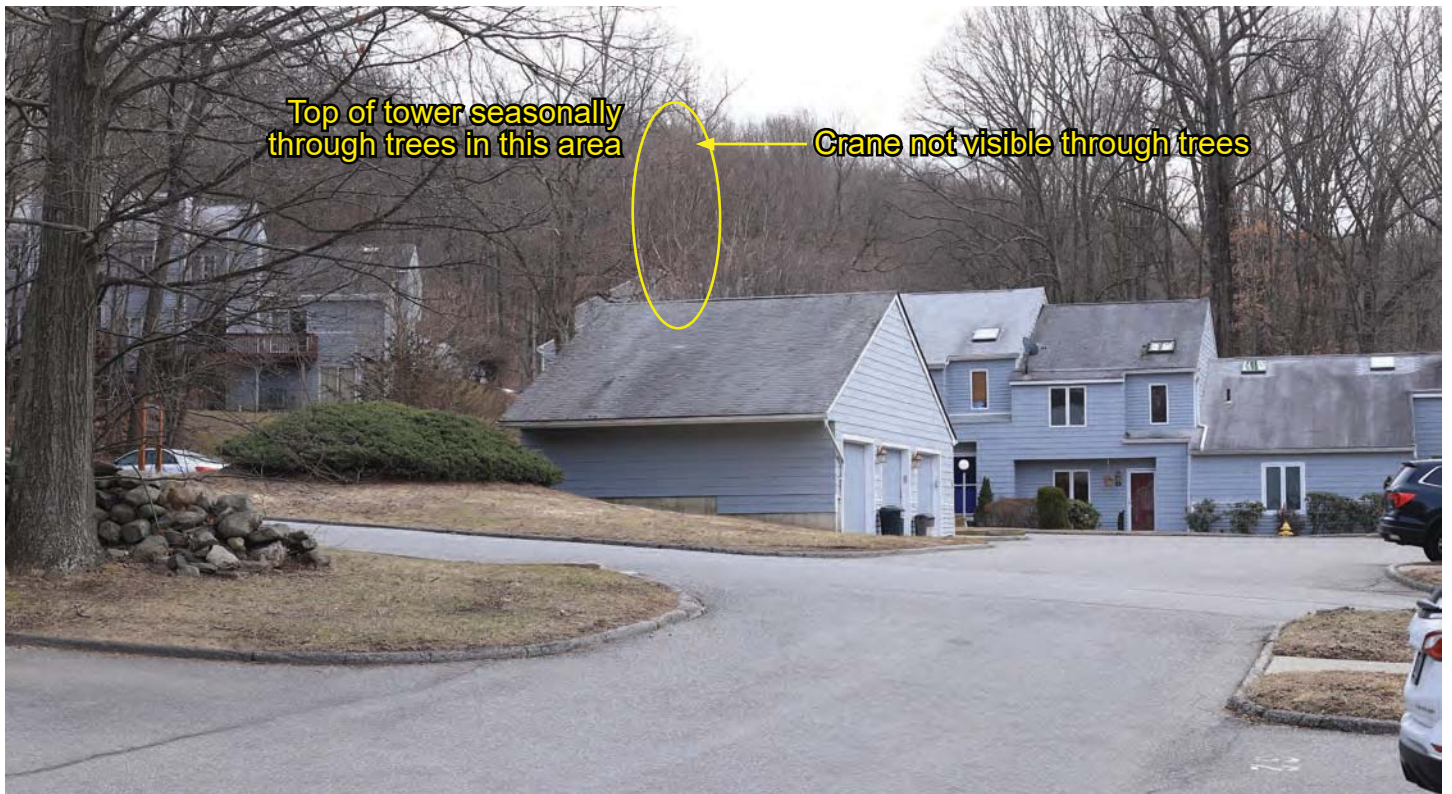
VP6 - Union Valley Road near #185

Distance: 2,090 Feet

PHOTO LOG

Figure B-4

Visual Resource Assessment  
Proposed Telecommunications Tower



Top of tower seasonally visible through trees in this area

Crane not visible through trees

VP7 - Maple Hill Drive near #66

Distance: 1,300 Feet



Crane not visible through trees

Top of tower seasonally visible through trees in this area

VP8 - Maple Hill Drive near #23

Distance: 1,220 Feet

PHOTO LOG

Figure B-1

Visual Resource Assessment  
Proposed Telecommunications Tower



VP9 - Kia-Ora Boulevard near #123

Distance: 1,370 Feet



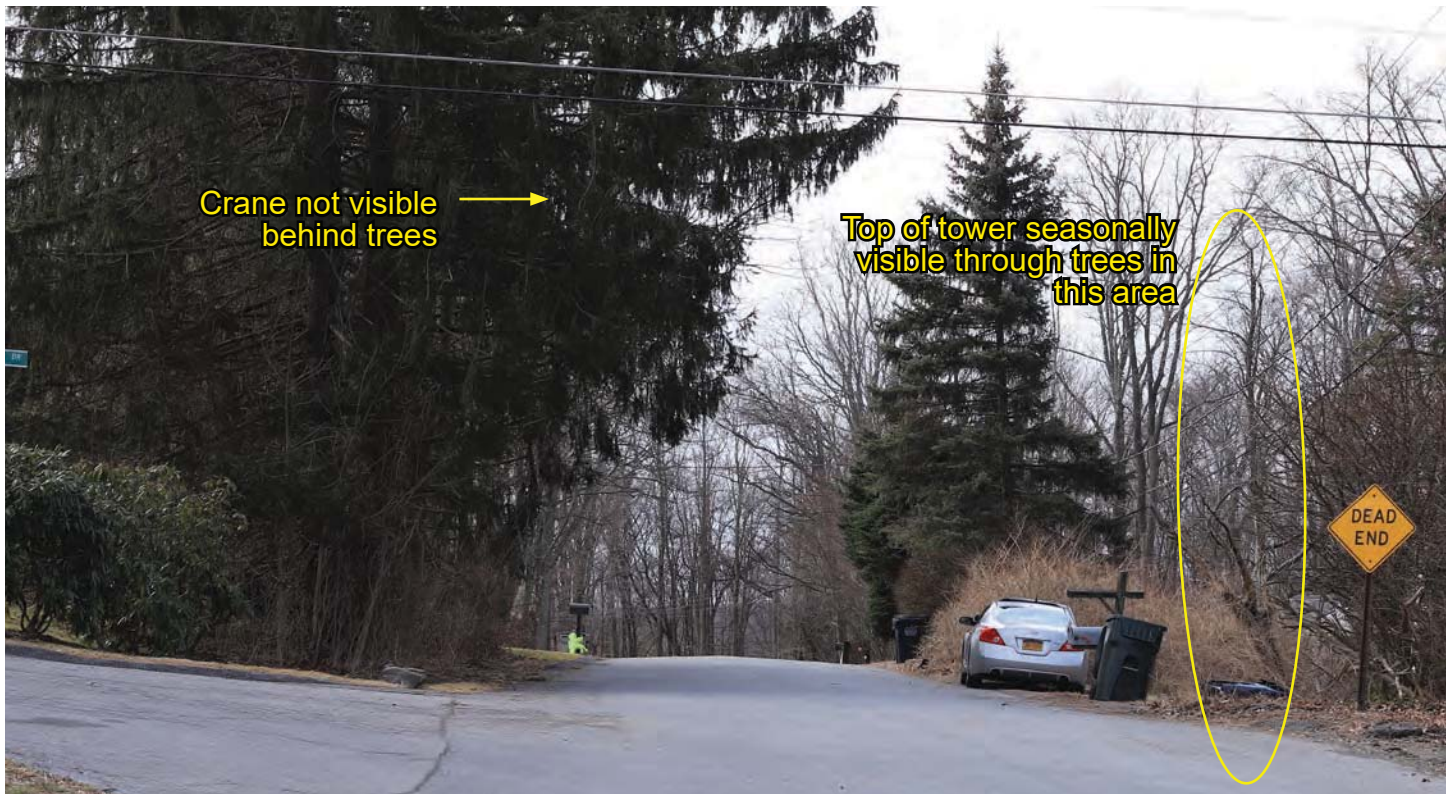
VP10 - Walton Drive at Mountain View Drive

Distance: 1,100 Feet

PHOTO LOG

Figure B-6

Visual Resource Assessment  
Proposed Telecommunications Tower



VP11 - Walton Drive near Summit Circle Drive

Distance: 670 Feet



VP12 - Walton Drive near #43

Distance: 510 Feet

PHOTO LOG

Figure B-7

Visual Resource Assessment  
**Proposed Telecommunications Tower**



Crane not visible behind trees →

Top of tower seasonally visible through trees by trees in this area

VP13 - Mountain View Drive at #31

Distance: 1,010 Feet



Crane visible through trees →

Top of tower seasonally visible through trees in this area

VP14 - Summit Circle Drive at cul-de-sac

Distance: 520 Feet

PHOTO LOG

Figure B-8

Visual Resource Assessment  
Proposed Telecommunications Tower



VP15 - Narcissus Drive near #34

Distance: 850 Feet



VP16 - Olive Drive at Boxwood Drive

Distance: 1,400 Feet

PHOTO LOG

Figure B-9

Visual Resource Assessment  
**Proposed Telecommunications Tower**





VP17 - Olive Drive at Evergreen Drive

Distance: 1,910 Feet



VP18 - Tulip Road at Evergreen Drive

Distance: 2,060 Feet

PHOTO LOG

Figure B-10

Visual Resource Assessment  
**Proposed Telecommunications Tower**



VP19 - Travis Road near #90

Distance: 2,790 Feet



VP20 - Travis Road near #59

Distance: 4,280 Feet

PHOTO LOG

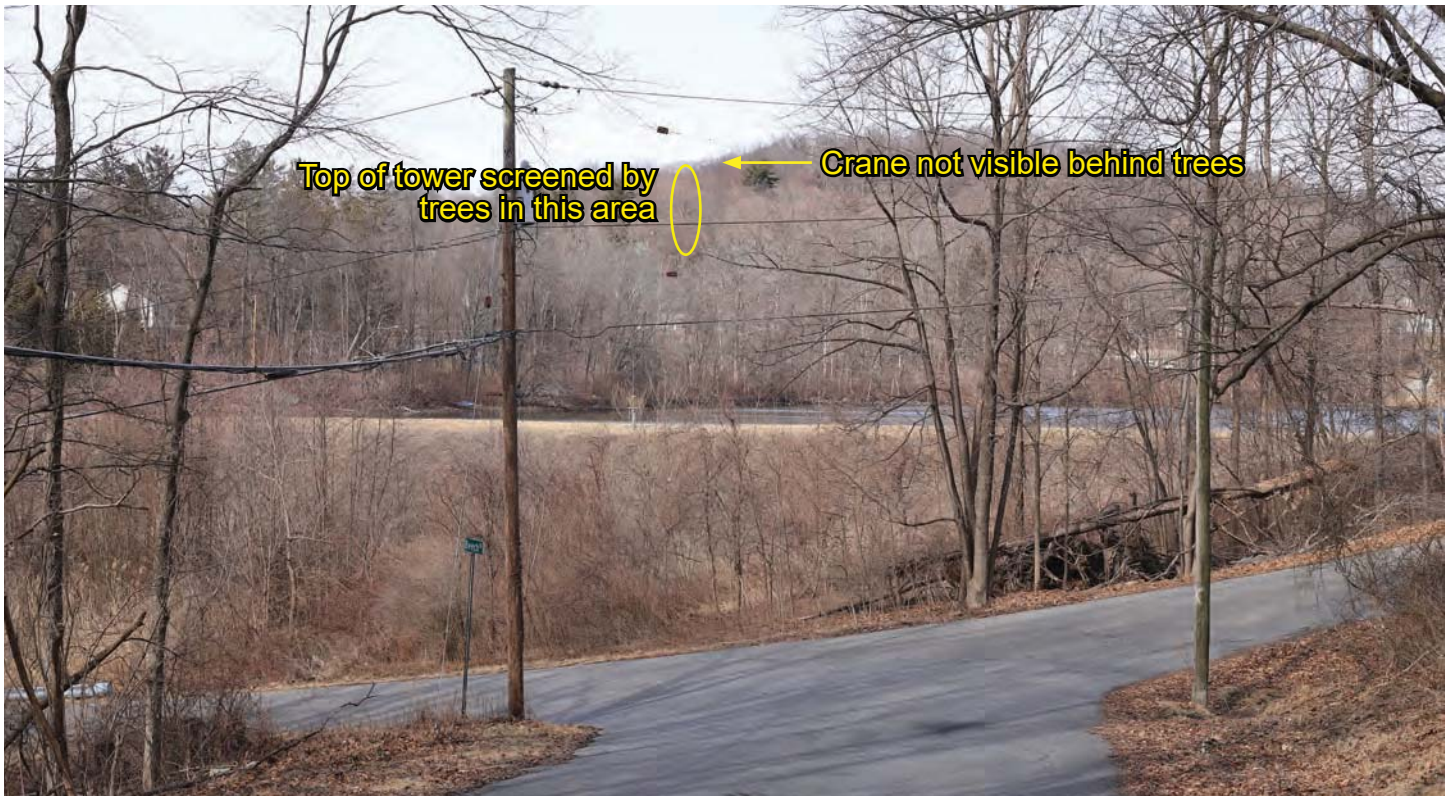
Figure B-11

Visual Resource Assessment  
Proposed Telecommunications Tower

SARATOGA  
ASSOCIATES



Glenacom Lake Site (NY054)  
Walton Drive  
Mahopac, NY 10541



Top of tower screened by trees in this area

Crane not visible behind trees

VP21 - Beech Road near Lake Shore Drive

Distance: 3,850 Feet



Crane not visible behind hill

Top of tower not visible behind hill in this area

VP22 - Lovell Street at Lake Lincolndale

Distance: 3,430 Feet

PHOTO LOG

Figure B-12

Visual Resource Assessment  
Proposed Telecommunications Tower

SARATOGA  
ASSOCIATES



Glenacom Lake Site (NY054)  
Walton Drive  
Mahopac, NY 10541



Top of tower screened by trees in this area

Crane not visible behind trees

VP23 - Magnolia Drive near #13

Distance: 1,330 Feet



Crane not visible behind hill

Top of tower screened by hill in this area

VP24 - Hillside Terrace at cul-de-sac

Distance: 1,620 Feet

PHOTO LOG

Figure B-13

Visual Resource Assessment  
Proposed Telecommunications Tower



VP25 - Hillside Terrace at #51

Distance: 1,750 Feet



VP26 - Kia-Ora Boulevard at #67

Distance: 2,160 Feet

PHOTO LOG

Figure B-14

Visual Resource Assessment  
Proposed Telecommunications Tower



VP27 - Teakettle Lake Park

Distance: 2,320 Feet



VP28 - Union Valley Road at McMillan Ave

Distance: 3,370 Feet

PHOTO LOG

Figure B-15

Visual Resource Assessment  
Proposed Telecommunications Tower



Crane not visible behind hill



Top of tower not visible behind hill



VP29 - Lovell Street at Stephanie Lane

Distance: 2,980 Feet



Crane not visible behind trees



Top of tower not visible behind trees in this area



VP30 - Heritage Hills at Stone View Court

Distance: 5,780 Feet

PHOTO LOG

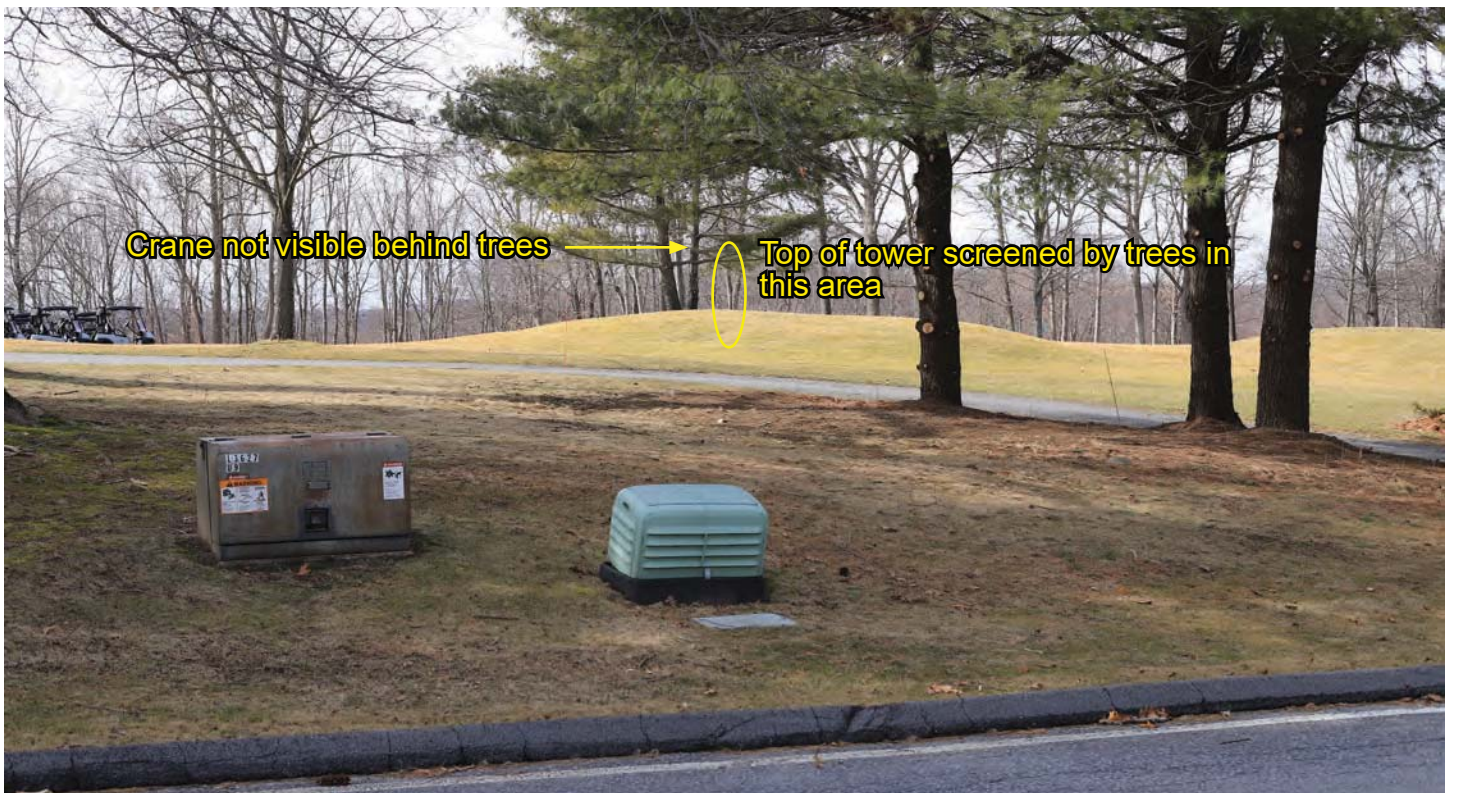
Figure B-16

Visual Resource Assessment  
Proposed Telecommunications Tower



VP31 - Heritage Hills at West Hill Drive

Distance: 6,910 Feet



VP32 - Heritage Hills at Golf Course Clubhouse

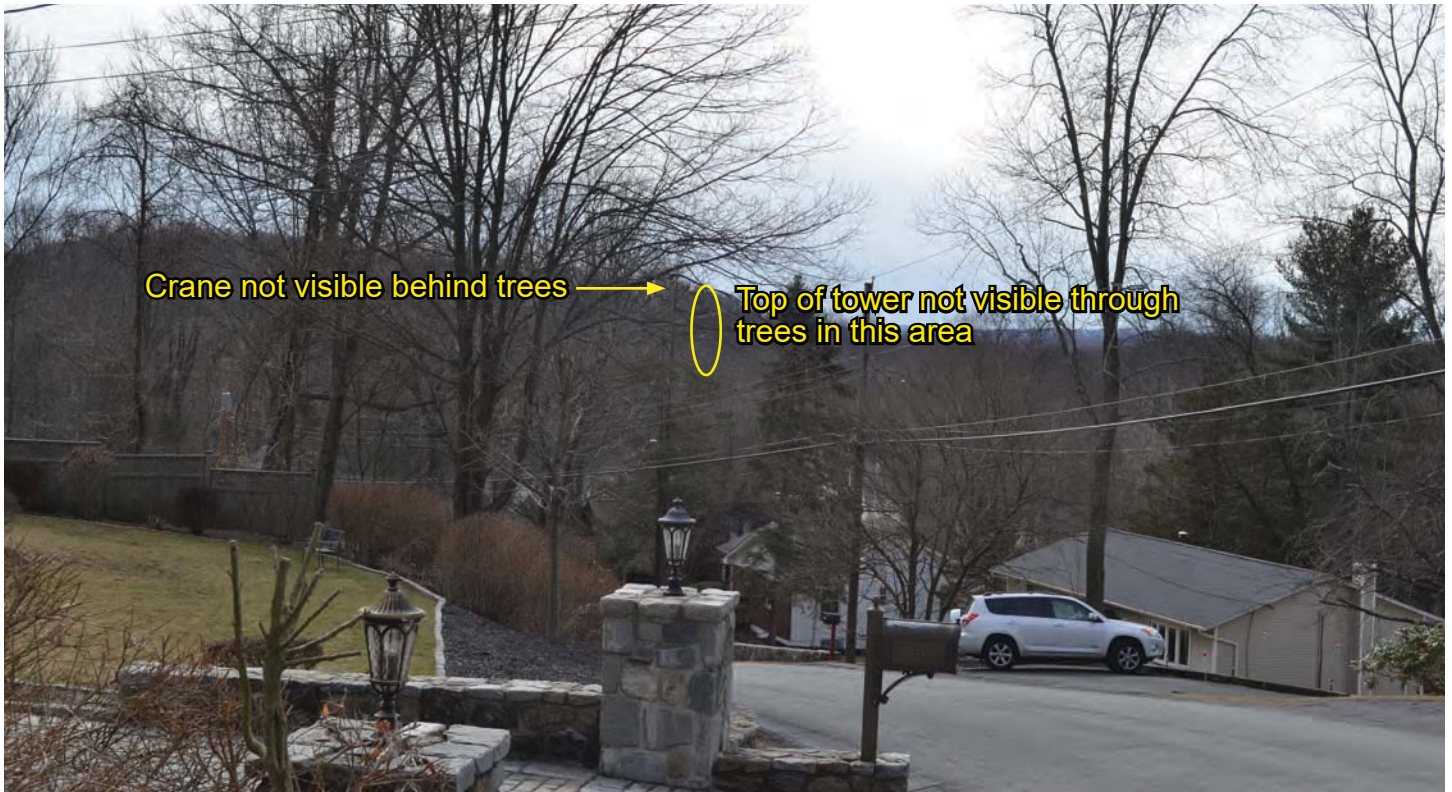
Distance: 8,400 Feet

PHOTO LOG

Figure B-17

Visual Resource Assessment  
Proposed Telecommunications Tower





VP33 - Woodbine Drive near #66

Distance: 4,530 Feet



VP34 - Plum Road near #48

Distance: 3,350 Feet

PHOTO LOG

Figure B-18

Visual Resource Assessment  
Proposed Telecommunications Tower



VP35 - Putnam County Trailway near Astor Drive

Distance: 6,470 Feet



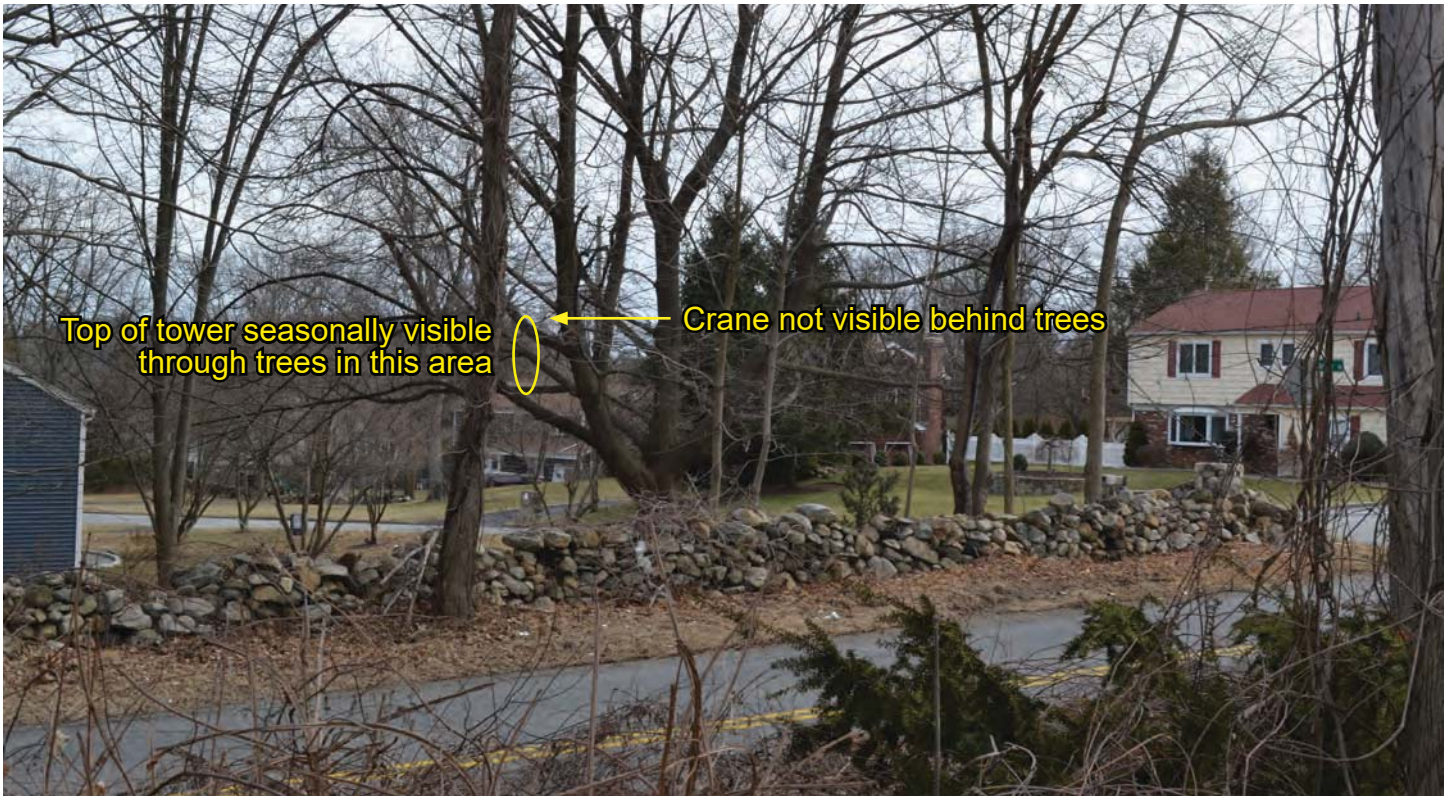
VP36 - NYS Route 6 near #395

Distance: 6,280 Feet

PHOTO LOG

Figure B-19

Visual Resource Assessment  
**Proposed Telecommunications Tower**

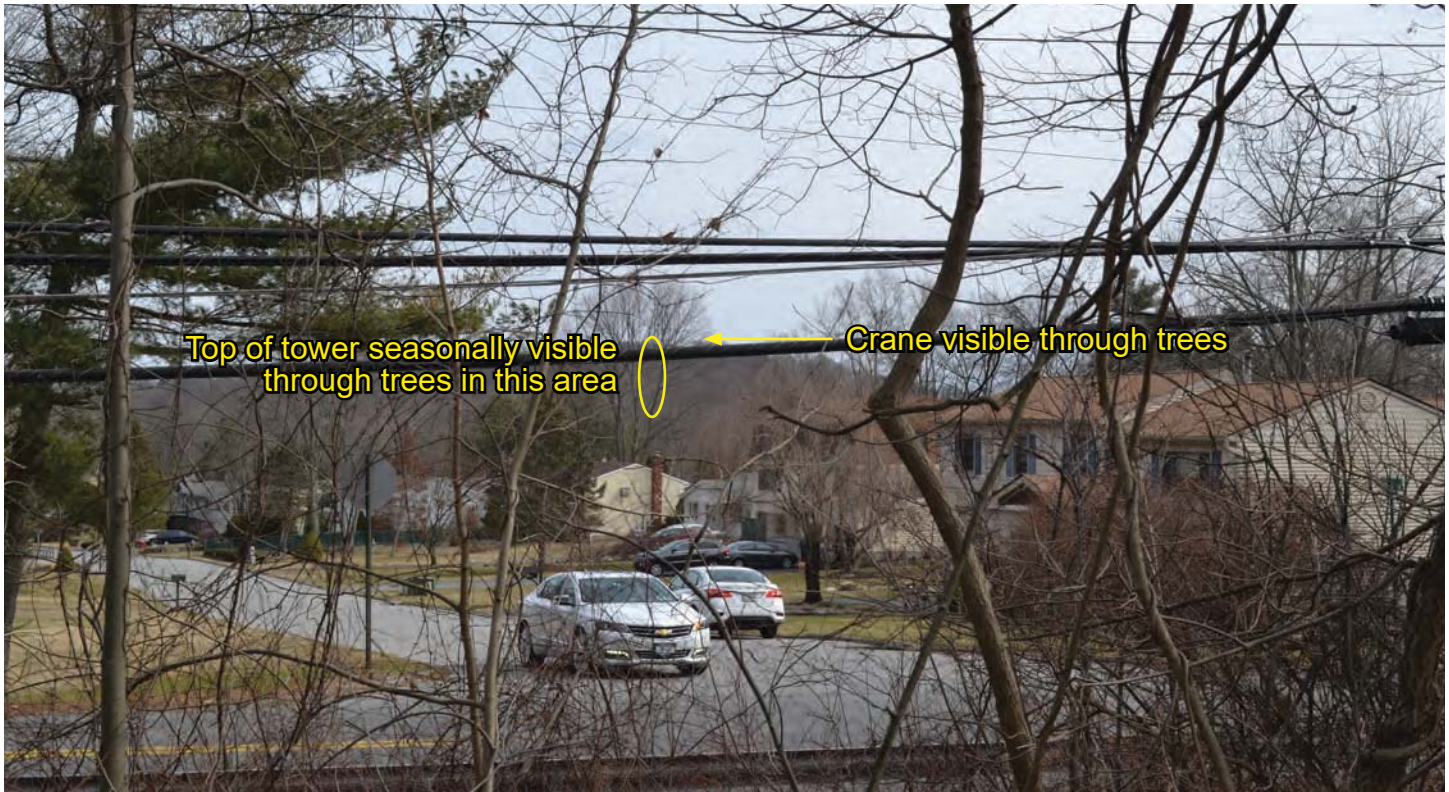


Top of tower seasonally visible through trees in this area

Crane not visible behind trees

VP37 - Putnam County Trailway near Bloomer Road

Distance: 5,540 Feet



Top of tower seasonally visible through trees in this area

Crane visible through trees

VP38 - Putnam County Trailway near Horton Drive

Distance: 4,800 Feet

PHOTO LOG

Figure B-20

Visual Resource Assessment  
Proposed Telecommunications Tower

SARATOGA  
ASSOCIATES



Glenacom Lake Site (NY054)  
Walton Drive  
Mahopac, NY 10541



VP39 - NY Route 6 at Mahopac Village Center

Distance: 6,630 Feet

PHOTO LOG

Figure B-21

Visual Resource Assessment  
**Proposed Telecommunications Tower**

**SARATOGA**  
ASSOCIATES



Glenacom Lake Site (NY054)  
Walton Drive  
Mahopac, NY 10541

# APPENDIX C

## Photo Simulations



Existing Condition  
 VP2 - Acacia Drive at #23

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 12:36 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 45.4236" N  
 73° 44' 04.3584" W  
 Distance: 1,590 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 1a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



← Top of Tower seasonally visible through trees

Simulated Condition - 140 ft Monopole Tower  
 VP2 - Acacia Drive at #23

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 12:36 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 45.4236" N  
 73° 44' 04.3584" W  
 Distance: 1,590 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 1b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Existing Condition  
 VP3 - Fassitt Drive near #61

SARATOGA  
 ASSOCIATES

Photograph Information

Date: February 20, 2020  
 Time: 1:20 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 51.4968" N  
 73° 44' 18.7908" W  
 Distance: 2,270 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 2a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541





Simulated Condition - 140 ft Monopole Tower  
 VP3 - Fassitt Drive near #61

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 1:20 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 51.4968" N  
 73° 44' 18.7908" W  
 Distance: 2,270 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 2b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Simulated Condition - 140 ft Monopole Tower - Brown Color Alternative  
 VP3 - Fassitt Drive near #61

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 1:20 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 51.4968" N  
 73° 44' 18.7908" W  
 Distance: 2,270 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 2c  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Existing Condition  
 VP5 - Lake Glenacom Road near #23

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 1:16 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 06.4512" N  
 73° 44' 17.5920" W  
 Elevation: 2,320 Feet

This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.

**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541

Figure 3a  
 Visual Resource Assessment



Simulated Condition - 140 ft Monopole Tower  
 VP5 - Lake Glenacom Road near #23

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 1:16 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 06.4512" N  
 73° 44' 17.5920" W  
 Elevation: 2,320 Feet

This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.

Figure 3b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Existing Condition  
 VP7 - Maple Drive near #66

SARATOGA  
 ASSOCIATES

Photograph Information

Date: February 20, 2020  
 Time: 1:07 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 07.5348" N  
 73° 44' 00.4632" W  
 Distance: 1,300 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 4a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



← Top of Tower seasonally visible through trees

Simulated Condition - 140 ft Monopole Tower  
 VP7 - Maple Drive near #66

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 1:07 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 07.5348" N  
 73° 44' 00.4632" W  
 Distance: 1,300 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 4b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Existing Condition  
 VP12 - Walton Drive near #43

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 11:34 am  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 00.1368" N  
 73° 43' 44.7060" W  
 Distance: 510 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 5a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Simulated Condition - 140 ft Monopole Tower  
 VP12 - Walton Drive near #43

SARATOGA  
 ASSOCIATES

Date:	February 20, 2020	Photo Location:	41° 21' 00.1368" N
Time:	11:34 am		73° 43' 44.7060" W
Focal Length:	50 mm	Distance:	510 Feet
Camera:	Canon EOS 6D MarkII		

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 5b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541





Existing Condition  
 VP13 - Mountainview Drive at #31

SARATOGA  
 ASSOCIATES

Photograph Information

Date: February 20, 2020  
 Time: 11:48 am  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 02.1096" N  
 73° 43' 38.6256" W  
 Distance: 1,010 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 6a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Simulated Condition - 140 ft Monopole Tower  
 VP13 - Mountainview Drive at #31

SARATOGA  
 ASSOCIATES

Photograph Information

Date: February 20, 2020  
 Time: 11:48 am  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 02.1096" N  
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*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 6b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Existing Condition  
 VP14 - Summit Circle Drive at cul-de-sac

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 11:42 am  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 55.4136" N  
 73° 43' 43.3488" W  
 Distance: 520 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 7a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Simulated Condition - 140 ft Monopole Tower  
 VP14 - Summit Circle Drive at cul-de-sac

SARATOGA  
 ASSOCIATES

Photograph Information		Photo Location:	
Date:	February 20, 2020	41° 20' 55.4136" N	
Time:	11:42 am	73° 43' 43.3488" W	
Focal Length:	50 mm	Distance:	520 Feet
Camera:	Canon EOS 6D MarkII		

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 7b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Simulated Condition - 140 ft Monopole Tower - Brown Color Alternative  
 VP14 - Summit Circle Drive at cul-de-sac

SARATOGA  
 ASSOCIATES

Photograph Information		Photo Location:	
Date:	February 20, 2020	41° 20' 55.4136" N	
Time:	11:42 am	73° 43' 43.3488" W	
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Camera:	Canon EOS 6D MarkII		

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 7c  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Existing Condition  
 VP17 - Olive Drive at Evergreen Drive

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 12:50 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 38.0436" N  
 73° 43' 50.0556" W  
 Distance: 1,910 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 8a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



← Top of Tower seasonally visible through trees

Simulated Condition - 140 ft Monopole Tower  
 VP17 - Olive Drive at Evergreen Drive

SARATOGA  
 ASSOCIATES

Photograph Information

Date: February 20, 2020  
 Time: 12:50 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 20' 38.0436" N  
 73° 43' 50.0556" W  
 Distance: 1,910 Feet

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Figure 8b  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**



Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541



Existing Condition  
 VP27 - Teakettle Lake Park

SARATOGA  
 ASSOCIATES

Photograph Information  
 Date: February 20, 2020  
 Time: 12:57 pm  
 Focal Length: 50 mm  
 Camera: Canon EOS 6D MarkII

Photo Location: 41° 21' 19.3680" N  
 73° 43' 43.3236" W  
 Distance: 2,323 Feet

*This photograph was taken using a 50mm wide angle lens. To appear at the correct scale this page is intended to be viewed approximately 18 inches from the reader's eye when printed on 11"x17" paper.*

Figure 9a  
 Visual Resource Assessment  
**PROPOSED TELECOMMUNICATIONS TOWER**

HOMELAND TOWERS

Glenacom Lake (NY 054)  
 Walton Drive  
 Mahopac, NY 10541





Simulated Condition - 140 ft Monopole Tower  
 VP27 - Teakettle Lake Park

Photograph Information		Photo Location:	41° 21' 19.3680" N
Date:	February 20, 2020		73° 43' 43.3236" W
Time:	12:57 pm	Distance:	2,323 Feet
Focal Length:	50 mm		
Camera:	Canon EOS 6D MarkII		

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# Stormwater Pollution Prevention Plan

**Project Name:** Glencoma Lake Cell Tower Compound

Walton Drive, Mahopac, NY 10541

Town of Carmel, Putnam County, New York

Block 1, Lot 90

October 2020



10/12/20

SUBMITTED BY:

**Dewberry Engineers Inc.**

600 Parsippany Road, Suite 301  
Parsippany, NJ 07054-3715  
973.739.9400

Robert J. Foley, P.E.  
NY Lic. No. 088774

**Stormwater Pollution Prevention Plan**  
**Project Name: Glencoma Lake Cell Tower Compound**  
**Block 1, Lot 90**  
**Walton Drive, Mahopac, NY 10541**  
**Town of Carmel, Putnam County, New York**

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**Stormwater Pollution Prevention Plan**  
**Project Name: Glencoma Lake Cell Tower Compound**  
**Block 1, Lot 90**  
**Walton Drive, Mahopac, NY 10541**  
**Town of Carmel, Putnam County, New York**

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- Appendix A: Figures
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- Appendix C: NYSDEC SPDES General Permit GP-0-20-001
- Appendix D: NYSDEC Forms: Notice of Intent (NOI), Notice of Termination (NOT)
- Appendix E: Preparer, Owner, Contractor/Subcontractor, Inspector Certifications
- Appendix F: NY Department of Environmental Conservation Standards
- Appendix G: SWPPP Plan Set (3 sheets)

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- FIGURE 1: Site Location map
- FIGURE 2: Street map
- FIGURE 3: Tax map
- FIGURE 4: USGS Soils Map
- FIGURE 5: FEMA Flood Map
- FIGURE 6: NYS Environmental Resource Mapper

**1.0 INTRODUCTION**

This Stormwater Pollution Prevention Plan (SWPPP) has been prepared for the activities associated with construction of the Glencoma Lake Cell Tower Compound located in the Town of Carmel, Putnam County, NY. Since the project is located in the “East of Hudson” watershed and the disturbance is between five thousand (5,000) square feet and one acre of land, coverage under the SPDES General Permit (GP-0-20-001) is required and erosion and sediment controls are required.

To obtain coverage under the general permit for this project, the following are required:

- Project review pursuant to the State Environmental Quality Review Act (“SEQRA”) have been satisfied, when applicable.
- Where required, all necessary permits subject to the Uniform Procedures Act (“UPA”) (see 6 NYCRR Part 621) have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4).
- The final SWPPP has been prepared, and

- A complete NOI will be submitted to the NYSDEC in accordance with the requirements of this permit immediately upon approval by the delegated MS4 permittee.

### 1.1 Relevant Standards and Guidelines

The erosion and sediment control measures have been designed to minimize soil loss, retain eroded soil, and prevent it from reaching water bodies or adjoining properties. These measures have been designed and evaluated in accordance with the following standards and guidelines:

- New York State Department of Environmental Conservation, SPDES General Permit for Stormwater Discharges from Construction Activity, Permit No. GP-0-20-001, effective January 29, 2020, expiration date January 28, 2025;
- New York State Department of Environmental Conservation, Division of Water, New York State Standards and Specifications for Erosion and Sediment Control, November 2016;

### 1.2 Responsible Parties

There is a shared responsibility between the project owner and the owner's contractor to ensure that the intent and purpose of this Stormwater Pollution Prevention Plan (SWPPP) are implemented. While the size of the proposed disturbance does not trigger a weekly inspection requirement, it is recommended that a qualified SWPPP Inspector verify that the erosion and sediment controls remain functional during construction.

The responsible parties will ensure cooperation with the local enforcing authority. A copy of the updated, approved SWPPP will be kept at the project site throughout the duration of the construction.

The SWPPP Certification requires signatures from the Owner, Contractor, and SWPPP preparer. A copy of the contractors Department of Environmental Conservation (DEC) training shall also be provided.

### 1.3 Stormwater Management and Downstream Impacts

The Town of Carmel's chapter on Stormwater Management requires that sites meeting certain criteria to install post-construction stormwater management. Article X – Stormwater Control in the Town Code of Carmel, Section **156-81 – C** states:

Land development activities, as defined in § 156-80 of this article, meeting Condition One, Two or Three below shall also include water quantity and water quality controls (postconstruction stormwater runoff controls) as set forth in Subsection D below as applicable:

1. Condition One: stormwater runoff from land development activities discharging a pollutant of concern to either an impaired water identified on the Department's 303(d) list of

- impaired waters or a total maximum daily load (TMDL) designated watershed for which pollutants in stormwater have been identified as a source of the impairment.
2. Condition Two: stormwater runoff from land development activities disturbing five or more acres.
  3. Condition Three: stormwater runoff from land development activity disturbing between one and five acres of land during the course of the project, exclusive of the construction of single-family residences and construction activities at agricultural properties

Additionally, Table 1 of Appendix B in GP-0-20-001 lists, “All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land” to only include Erosion and Sediment Controls in the SWPPP (and not post-construction stormwater management).

The proposed activities of this project do not meet the criteria requiring postconstruction stormwater controls; therefore, none are proposed.

The proposed development will mimic existing drainage characteristics and stormwater will overland flow to the west through wooded areas to the Plum Brook (class C) which is part of the Plum River-Croton River sub-watershed (HUC12 020301010302). The Plum River-Croton-River is part of the Lower Hudson Watershed (HUC8 – 02030101). By implementing the temporary and permanent erosion and sediment control measures outlined in this document the proposed development will have no adverse impacts to any of the downstream areas.

## **2.0 SITE AND PROJECT DESCRIPTION**

### **2.1 Project Location**

The project is located within Block 1, Lot 90 of Mahopac (a hamlet) in the town of Carmel in Putnam County, New York. It is bound by Walton Drive to the east, a private residence to the north, and undeveloped wooded land to the south and west. The project site and the immediate surrounding area is shown on the USGS/Site Location Map (Figure 1), Street Map (Figure 2) and Tax Map (Figure 3). Per tax map number 87.5, lot 90 is 66.68 acres.

### **2.2 Existing Land use and Topography**

The existing site is undeveloped wooded land and is located at the southern end of Walton Drive which is a dead-end street.

The existing topography of the subject site is varied and in some areas relatively steep and graded slopes ranging from 15% to 50%. The site surface topography generally slopes down in a westerly direction, from Walton Drive towards the Plum Brook, approximately 1,450 LF to the west of the site.

The highest elevations are  $\pm 750$  feet above sea level along the easterly side of the site, near Walton Drive. At the edge of this project’s disturbance, the land elevation drops  $\pm 20$  feet to

approximately  $\pm 730$  feet above sea level. Based on available mapping, this slope continues until it reaches the Plum Brook.

### 2.3 Proposed Project Description

The proposed improvements include clearing and grading the site in order to install a 2,550 SF fenced equipment compound with a new 140' monopole and associated cellular equipment.

### 2.4 Site Soil Conditions

Based on information provided in the United States Department of Agriculture Natural Resources Soil Conservation Service, Web Soil Survey of Putnam County, New York, the project area consists of, "CID - Charlton loam, very stony, 15 to 25% slopes." Soils surrounding the site range include "CIF – Charlton loam, very stony, 35-45% slopes" and "CIE – Charlton loam, very stony, 25-35% slopes"

According to the Web Soil Survey the 'CID' soils in this area have a Hydrologic Soil Group 'B'. The USDA Soil Information & Maps (Figure 4) is included in the Appendix.

### 2.5 Floodplains

Per FEMA Flood Insurance Rate Map 36079C0226E, the site is not located within the 100-year floodplain. Refer to Figure 5 for additional information.

### 2.6 Wetlands

Delineated Wetlands (by others) are located south of the proposed cell tower and are depicted on the SWPPP drawings. No disturbance is proposed within 100' of the of delineated area. The NYS DEC Environmental Resource Mapper indicates that there are state-regulated wetlands located approximately 1,200 LF west of the site. Refer to Figure 6 for additional information.

### 2.7 Site map and Construction Drawings

A Site Location Map included as Figure 1.

#### Construction Drawing Set

A full-size Stormwater Pollution Prevention Plan drawing set is incorporated as Appendix G (see drawing list below of 3 sheets – 22"x34"). The drawings include information on existing conditions, phasing of construction and earthwork, erosion and sediment control, site improvements, grading, and SWPPP details.

### **3.0 CONSTRUCTION PHASING AND SEQUENCE OF OPERATIONS**

#### **3.1 Pre-Construction Activities**

- Conduct pre-construction meeting.
- Identify contractor / subcontractor trained contractor responsible for implementation of the SWPPP and provide certification (see Appendix F for a copy of the certification).
- Identify on-site and downstream surface water bodies and install controls to protect them from sedimentation.
- Establish temporary stone construction entrance pad to capture mud and debris from the tires of construction vehicles.
- Install perimeter sediment controls such as silt fences, as shown on the project plans.
- Install temporary construction fencing as shown on the project plans or as directed by the site engineer.
- All earth disturbances during this phase should be limited to work necessary to install erosion and sedimentation controls.
- Owner's qualified inspector to inspect completed erosion and sediment control measures as required

#### **3.2 During Construction Activities**

- Stabilize soils with seed and mulch and plantings upon completion of work and at the end of each phase. The maximum time limit for any soil exposure shall be 7 days.
- Maintain soil erosion and sediment control measures throughout construction phase. Remove phased measures as appropriate at the end of phase.
- Completely stabilize with seed, mulch, plantings and other measures, or impervious cover.
- The applicant or developer or their representative shall be on site at all times when construction or grading activity takes place and shall inspect and document the effectiveness of all erosion and sediment control practices per NYS DEC requirements

Total Disturbance: 19,615 SF

#### **3.3 Post Construction Activities**

- Ensure that all surfaces are completely stabilized with seed and mulch or impervious cover. Do not leave any exposed soil.
- After site work is completed perform routine inspection and maintenance and insure proper vegetative cover is maintained at the site.
- Remove temporary erosion and sediment control measures.
- Submit Notice of Termination.



#### **4.0 CONSTRUCTION PHASE EROSION AND SEDIMENT CONTROL**

The SWPPP and accompanying plans identify and detail the proposed temporary erosion and sediment control practices to be utilized during construction. These measures will be implemented during construction to minimize soil erosion and control sediment transport off-site.

Temporary erosion and sediment control measures that shall be applied during construction generally include:

- Minimizing soil erosion and sedimentation by stabilization of disturbed areas and by removing sediment from construction-site discharges.
- Establishment of permanent vegetation following the completion of construction activities in any portion of the site.
- Site preparation activities shall be planned to minimize the area and duration of soil disruption.
- The maximum time limit for any soil exposure shall be 7 days.

The contractor will comply with all conditions of the SPDES GP-0-20-001, including the conditions related to maintaining the SWPPP and evidence of compliance with the SWPPP at the job site and allowing regulatory personnel access to the job site and to records in order to determine compliance. If during construction a method is not working, the contractor must make adjustments to prevent sediment-laden runoff or other pollutants from leaving construction site or entering waterbodies.

##### **4.1 Temporary and Permanent Erosion and Sediment Control Measures**

The temporary and permanent erosion and sediment control measures recommended and described in the following section are to be installed and/or implemented prior to the initiation of construction and during construction as required and as directed. SEE APPENDIX F FOR MORE INFORMATION ON NYDEC EROSION AND SEDIMENT CONTROL STANDARDS.

###### **Stabilized Construction Entrance**

Prior to construction, a stabilized construction entrance will be installed at points of entry and egress from the site to reduce the tracking of sediment onto public roadways. Construction traffic must enter and exit the site at the stabilized construction entrance. When necessary, the placement of additional aggregate atop the filter fabric will be done to assure the minimum thickness is maintained. All sediments and soils spilled, dropped, or washed onto the adjacent streets must be removed immediately. Periodic inspection and needed maintenance shall be provided after each substantial rainfall event.

###### **Landgrading**

Permanent reshaping of the existing land surface by grading in accordance with and engineering topographic plan and specification to provide for erosion control and vegetative

establishment on disturbed reshaped areas. This will take place on the subject property in preparation for the new building and site improvements. In order to level the site a large volume of soil will be placed as fill.

#### *Mulching/Wood Mulch/Jute Mat Mulch*

Use wood mulch outside of the growing season. Areas undergoing clearing or grading and any areas disturbed by construction activities where work has temporarily or permanently ceased will be stabilized with wood mulch within seven days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the New York State Standards and Specifications for Erosion and Sediment Control. During growing season other suitable mulch material may be used. On slopes, Jute Mat or anchored stabilization in combination with wood mulch shall be used. See pages 4.40 and 4.41 of Appendix G for more information.

#### *Permanent Construction Area Planting*

Establishment of permanent grasses and or shrubs to provide a minimum of 80% perennial vegetative cover on areas disturbed by construction. See Section 4.5 for Permanent stabilization planting.

#### *Temporary Construction Area Seeding*

Areas undergoing clearing or grading and any areas disturbed by construction activities where work has temporarily or permanently ceased will be stabilized with temporary vegetative cover within seven days from the date the soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the New York State Standards and Specifications for Erosion and Sediment Control.

#### *Topsoiling*

Spreading a specified quality and quantity of topsoil material on grade or constructed subsoil areas to provide acceptable plant cover growing condition thereby reducing erosion to reduce irrigation water needs and to reduce the need for nitrogen fertilizer application.

#### *Trees and Shrubs*

Establishing trees and shrubs to protect the soil and plant resources improve an area to increase attractiveness and usefulness of areas.

#### *Silt Fence*

A temporary barrier of geotextile fabric installed on contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil. Prior to the initiation of and during construction activities, a geotextile filter fabric (silt fence) will be established along the down slope perimeter of areas to be disturbed. To facilitate effectiveness of the silt fence, daily inspections and inspections immediately after significant storm events will be performed by site personnel. Maintenance of the fence will be performed as needed. In specified areas a reinforced silt fence will be utilized.

## 4.2 General Considerations and Measures

### Steep Slope Stabilization

Proposed slopes are designed to not exceed a 2:1 slope ratio. At all times during and after earthmoving operations slopes will be maintained by a variety of measures including anchored stabilization blankets and jute matting.

### Temporary Soil Stockpile

Materials, such as topsoil, will be temporarily stockpiled (if necessary) on-site during construction. Stockpiles will be located in an area away from storm drainage, water bodies and/or courses, and will be properly protected from erosion by a surrounding silt fence.

## 4.3 Housekeeping Measures – Construction Material and Pollution & Spill Prevention

### Litter, Debris, Chemicals, Waste Material

Litter, construction debris, chemicals, waste material shall be prevented from exposure to stormwater and from becoming a pollutant source. A daily walkthrough of the project site by the trained contractor shall be conducted to identify exposure of potential pollutants to stormwater. Debris and waste material shall be properly covered and managed until removal from the project site is accomplished. All waste materials shall be disposed of properly in accordance with all applicable regulations.

The following good housekeeping and material management practices will be followed on site during the construction project to reduce the risk of spills or other accidental exposure of materials and substances to stormwater runoff.

- Materials will be brought on site in the minimum quantities required.
- Construction materials shall be stored in a stabilized area designated for contractor use.
- The contractor staging and storage area shall be located in an area that does not negatively impact stormwater quality and will be surrounded with silt fence.
- All materials stored on site will be stored in a neat, orderly manner in their appropriate containers, and if possible, under a roof or other enclosure.
- Products will be kept in their original containers with the original manufacturer's label.
- Substances will not be mixed with one another unless recommended by the manufacturer.
- Whenever possible, all of a product will be used up before disposal. Manufacturer's recommendations for proper use and disposal will be followed.
- The construction manager or his designee will inspect regularly to ensure proper use and disposal of materials on site.
- The contractor shall prohibit washing of tools, equipment, and machinery in or within 100 feet of any watercourse or wetland.

### Inventory for Pollution Prevention Plan

The materials and substances listed below are expected to be on-site during construction.

- Petroleum for fueling vehicles will be stored in above ground storage tanks. Tanks will either be steel with an enclosure capable of holding 110% of the storage tank volume or of a Con-Store, concrete encased type typically employed by NYSDOT. Hydraulic oil and other oils will be stored in their original containers. Concrete and asphalt will be stored in the original delivery trucks.
- Fertilizer may be stored on site in its original container for a short period of time prior to seeding. Original containers will be safely piled on pallets or similar devices to protect from moisture.
- Paints and other similar materials will be stored in their original containers and all empty containers will be disposed of in accordance with label directions.
- Portable sanitary facilities, which contain chemical disinfectants (deodorants) will be located on-site, with the disinfectants held in the tank of the toilet.

### Hazardous Products

These practices are used to reduce the risks associated with hazardous materials.

- Products will be kept in original containers unless they are not resealable.
- Original labels and material safety data sheets will be retained; they contain important product information.
- If surplus product must be disposed of, manufacturers' or local and State recommended methods for proper disposal will be followed.

### Spill Prevention

The following product specific practices will be followed on site.

#### **Petroleum Products:**

- Construction personnel should be made aware that emergency telephone numbers are located in this SWPPP.
- The contractor shall immediately contact NYSDEC in the event of a spill and shall take all appropriate steps to contain the spill, including construction of a dike around the spill and placing absorbent material over this spill.
- The contractor shall instruct personnel that spillage of fuels, oils, and similar chemicals must be avoided and will have arranged with a qualified spill remediation company to serve the site.
- Fuels, oils, and chemicals will be stored in appropriate and tightly capped containers. Containers shall not be disposed of on the project site.
- Fuels, oils, chemicals, material, equipment, and sanitary facilities will be stored/located away from trees and at least 100 feet from streams, wells, wet areas, and other environmentally sensitive sites.
- Dispose of chemical containers and surplus chemicals off the project site in accordance with label directions.
- Use tight connections and hoses with appropriate nozzles in all operations involving fuels, lubricating materials or chemicals.
- Use funnels when pouring fuels, lubricating materials or chemicals.

- Refueling and cleaning of construction equipment will take place in parking areas to provide rapid response to emergency situations.
- All on-site vehicles will be monitored for leaks and receive regular preventative maintenance to reduce the chance of leakage. Any vehicle leaking fuel or hydraulic fuel will be immediately scheduled for repairs and use will be discontinued until repairs are made.

**Fertilizers:**

- Fertilizer will be stored in its original containers on pallets with water resistant coverings.
- Proper delivery scheduling will minimize storage time.
- Any damaged containers will be repaired immediately upon discovery and any released fertilizer recovered to the fullest extent practicable.

**Paints:**

- All containers will be tightly sealed and stored when not required for use.
- Excess paint will not be discharged to the storm water system or wastewater system but will be properly disposed of according to manufacturers' instructions or State and local regulations.

**Concrete Trucks:**

- Concrete trucks will be allowed to wash out or discharge surplus concrete or drum wash water only at designated locations on site.

**Asphalt Trucks:**

- Asphalt trucks shall not discharge surplus asphalt on the site.

*Spill Control Practices*

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup.

- The construction manager responsible for the day-to-day site operations will be the spill prevention and cleanup coordinator. The names of responsible spill personnel will be posted in the material storage area and in the onsite construction office or trailer.
- Manufacturers' recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies. Any spill in excess or suspected to be in excess of two gallons will be reported to the NYSDEC Regional Spill Response Unit. Notification to the NYSDEC (1-800-457-7362) must be completed within two hours of the discovery of the spill.
- Materials and equipment necessary for spill cleanup will be kept in the material storage area onsite. Equipment and materials will include but not be limited to absorbent pads, brooms, dust pans, mops, rags, gloves, goggles, activated clay, sand, sawdust, and plastic and metal trash containers specifically for this purpose.

- All spills will be cleaned up immediately after discovery.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with spilled substance.
- Spills of toxic or hazardous material will be reported to the appropriate State or local government agency, regardless of the size

#### 4.4 Maintenance Requirements

The following maintenance procedures shall be performed by the contractor as noted:

- The applicant or developer or their representative shall be on site at all times when construction or grading activity takes place and shall inspect and document the effectiveness of all erosion and sediment control practices
- Litter, construction debris and chemicals shall be prevented from exposure to stormwater and from becoming a pollutant source.
- The maximum time limit for any soil exposure shall be 7 days.
- All measures will be maintained in good working order; if repairs are found to be necessary, they will be initiated within 24 hours of report.
- Remove built-up sediment from silt fences when it has reached 1/3 of the aboveground height of the silt fence.
- Inspect silt fences for depth of sediment, tears or sags in the fabric, and to see if the fabric is securely attached to the posts. Inspect posts to ensure that they are firmly set in the ground. Replace deteriorated silt fences as soon as the condition is discovered.
- Inspect temporary and permanent seeding weekly during its period of establishment for bare spots and areas of insufficient germination or growth. Take remedial action to establish a stabilized surface in these areas, once identified.
- Accumulations of sediment that escape to off-site areas must be removed at intervals to minimize off-site impacts. Sediment accumulations in public streets shall be removed as soon as possible and before any anticipated rain event. Vehicle tire mud cleaning devices shall be maintained to ensure their proper operation.
- Spare erosion and sediment control barrier material and mulch shall be stocked on-site at all times.

#### 4.5 Permanent Stabilization (seeding)

Permanent Seeding shall be done in accordance with “Permanent Construction Area Planting” Section and Table 4.4 of the New York Department of Environmental Conservation Standards for Erosion and Sediment Control, (See Appendix F of this Volume)

- Upland seed mix shall be applied to all disturbed areas
- In areas to be seeded, the seed bed shall be prepared by discing to a depth of 4 inches.
- Seed shall be evenly spread either by hand or mechanical means at the specified rate.
- Immediately following seeding, seed shall be incorporated into the soil by tracking with a dozer.
- Permanent seeding shall occur in the spring or fall. The spring seeding window is from March 1 to May 15 and the fall seeding window is from August 15 to October 1.

- Permanent seeding application shall be applied at the rate of a minimum of 4.0 pounds total seed per 1000 square feet or approximately 175 pounds per acre. If hydroseeding will be the method of application, the seed rate should be increased by 25% hydro seed areas must still receive straw and tackifier.
- If construction is completed between May 16 and July 15 or between October 2 and February 1, temporary seeding shall be required. The temporary seeding shall then be followed by a permanent seeding in the subsequent spring/fall seeding window. temporary seeding shall be as directed by the engineer.
- A non-growing season stabilization cover shall be applied if construction is completed between July 16 and August 14 or February 2 and February 28. The cover shall consist of straw mulch applied at the rate of 4,000 lbs./acre. The mulch shall be bound in place with an approved binder.
- For permanent or temporary seeding, the seed mix shall be mulched at the rate of 4,000 lbs./acre of straw mulch. The mulch shall be bound in place with an approved binder.
- Approval of final grading by the Owner is required prior to permanent or temporary seeding.

#### 4.6 Final Stabilization

Final Stabilization is defined as all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

#### 5.0 Post-Construction Requirements

The owner or operator shall ensure that the provisions of the SWPPP are implemented from the commencement of construction activity until all areas of disturbance have achieved final stabilization and the Notice of Termination (“NOT”) has been submitted to the Department in accordance with Part V. of the permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of the permit.

# Appendix A

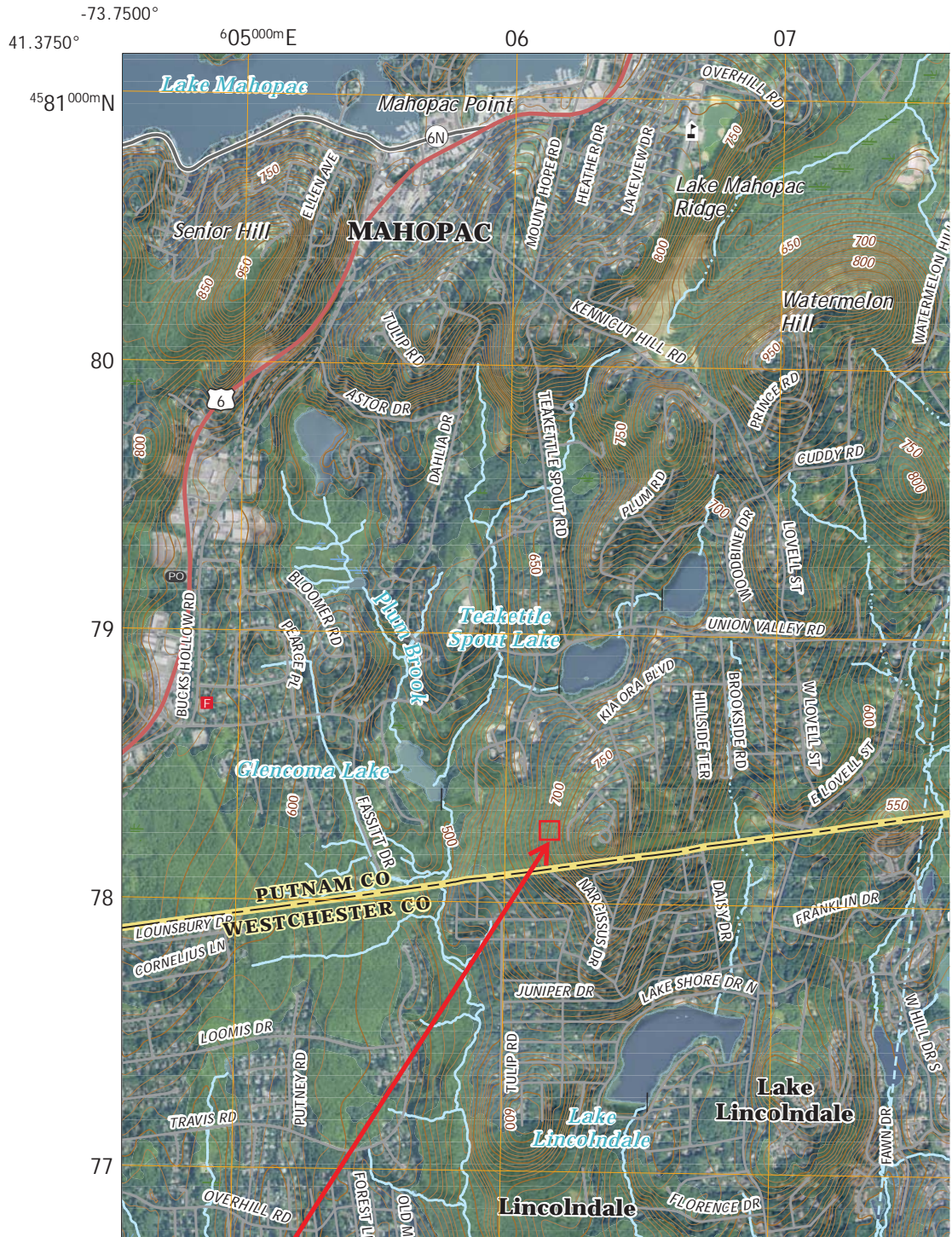


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# FIGURE 1: USGS/SITE LOCATION MAP

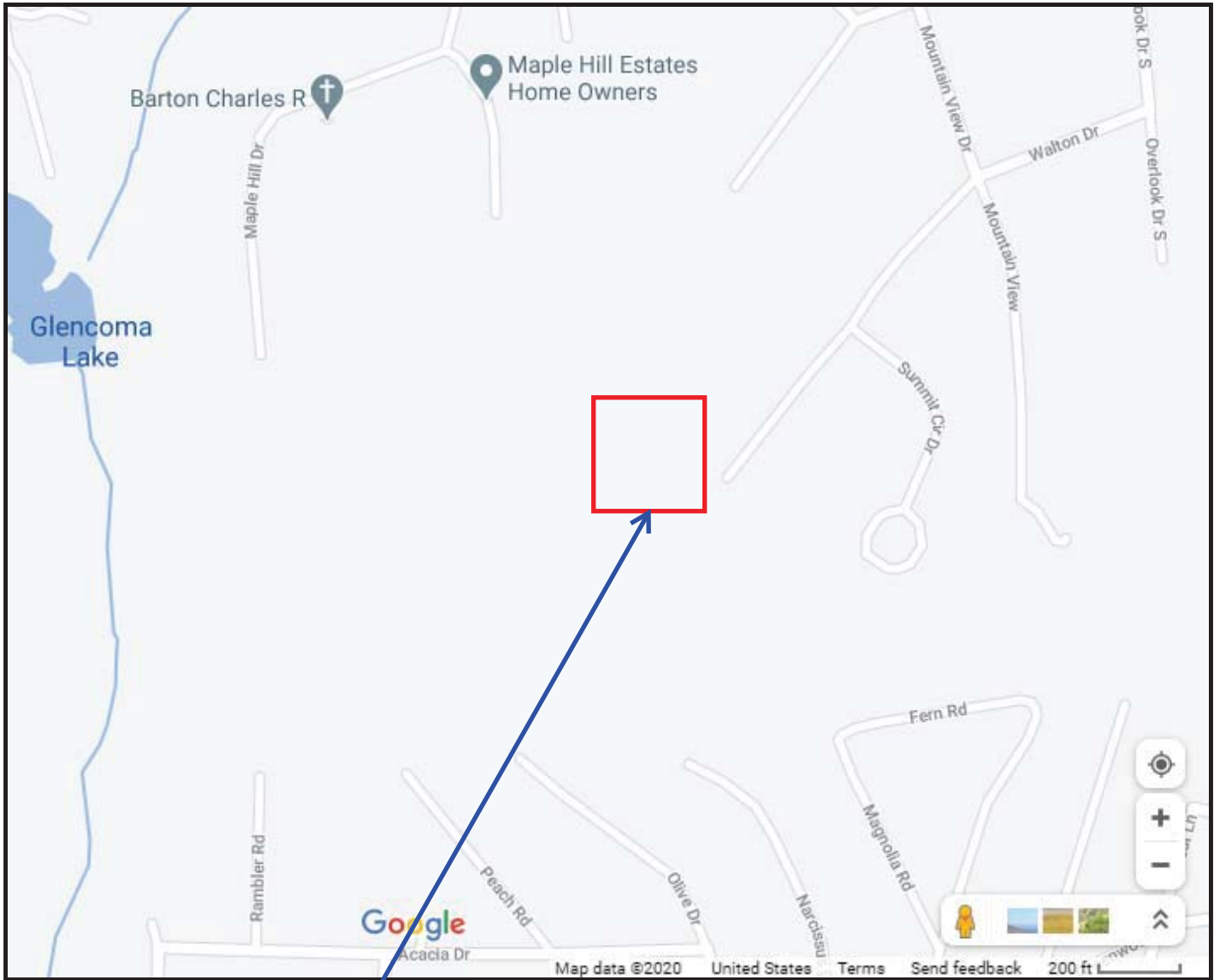




Approximate site location

## FIGURE 2: STREET MAP





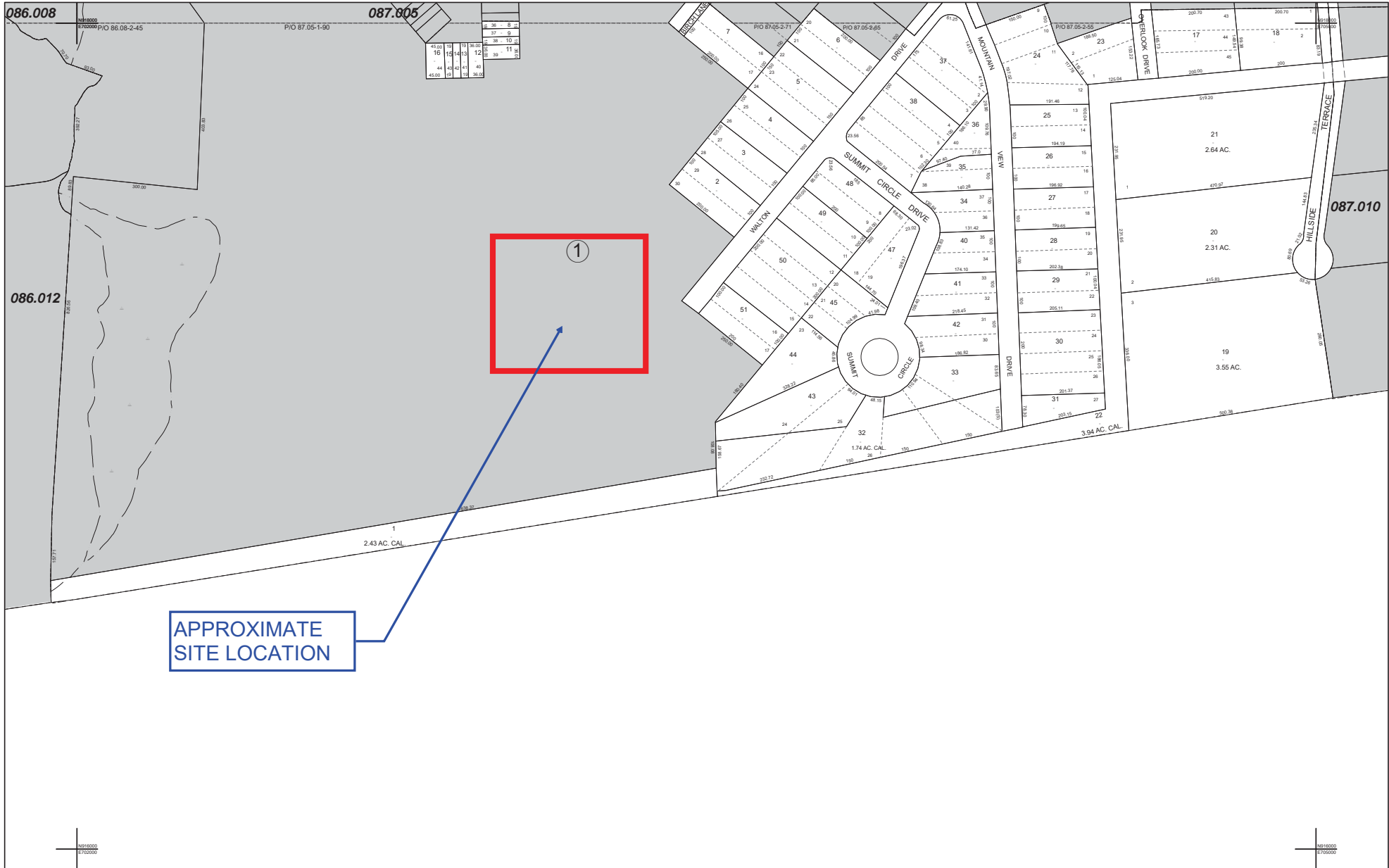
APPROXIMATE  
SITE LOCATION

## STREET MAP

## FIGURE 3: TAX MAP



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APPROXIMATE  
SITE LOCATION

**SEWALL**  
FOR ASSESSMENT PURPOSES ONLY  
NOT TO BE USED FOR CONVEYANCES  
CONVERTED TO E861 GEODATABASE DIGITAL  
DATA FORMATTED BY WHEELER HAPPING,  
A DIVISION OF JAMES W. SEWALL COMPANY  
JUNE 2004

REVISIONS	
DATE	DESCRIPTION
06/12/2000	01-1-450-861-05
02/01/2009	01-1-104-11-11

**Special Districts**  
MAHOPAC CENTRAL SCHOOL DISTRICT  
MAHOPAC FD

LEGEND	
STATE LINE	—————
COUNTY LINE	- - - - -
TOWN LINE	- · - · -
VILLAGE LINE	- · - · -
BLOCK LIMIT	—————
ORIGINAL LOT LINE	·····
PROPERTY LINE	—————
DISPUTED AREA	·····
CONTRIBUTOR OWNERSHIP	—————
ROAD RIGHT	—————
STREAM WATER LINE	—————
SPECIAL DISTRICT LINE	—————
SCHOOL DISTRICT LINE	—————
PART OF PARCEL BOUNDARY	·····
WETLANDS LINE & SYMBOL	—————
DEVELOPER'S LOT NUMBER	5
DEED DIMENSION	100(S)
SCALED DIMENSION	100(S)
CALCULATED AREA	2.34 AC. CAL
VISUAL CENTERLINE	—————
PARCEL NUMBER	25

86.08	87.05	87.06
86.12	87.10	

**TOWN OF CARMEL**  
PUTNAM COUNTY, NEW YORK

REVISED THROUGH  
FEBRUARY 28, 2020

DATE AERIAL PHOTOGRAPHY... 4-10-87 MAP-2-17-89  
NY STATE PLANE COORD. = NAD83 IN FEET

87.9

## FIGURE 4: SOILS MAP



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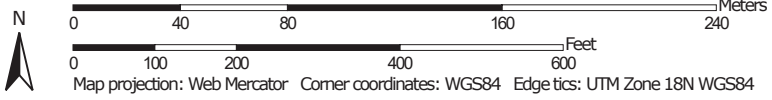
Soil Map—Putnam County, New York, and Westchester County, New York  
(Walton Drive)

Approximate site location



Soil Map may not be valid at this scale.


Map Scale: 1:2,820 if printed on A landscape (11" x 8.5") sheet.





## MAP LEGEND

### Area of Interest (AOI)

 Area of Interest (AOI)

### Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

### Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

### Water Features



Streams and Canals

### Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

### Background



Aerial Photography

## MAP LEGEND

## MAP INFORMATION

The soil surveys that comprise your AOI were mapped at scales ranging from 1:12,000 to 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service  
Web Soil Survey URL:  
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Putnam County, New York  
Survey Area Data: Version 17, Jun 11, 2020

Soil Survey Area: Westchester County, New York  
Survey Area Data: Version 16, Jun 11, 2020

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Dec 31, 2009—Oct 5, 2016

## MAP INFORMATION

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

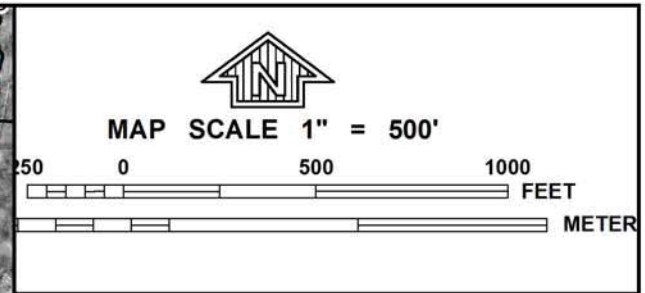
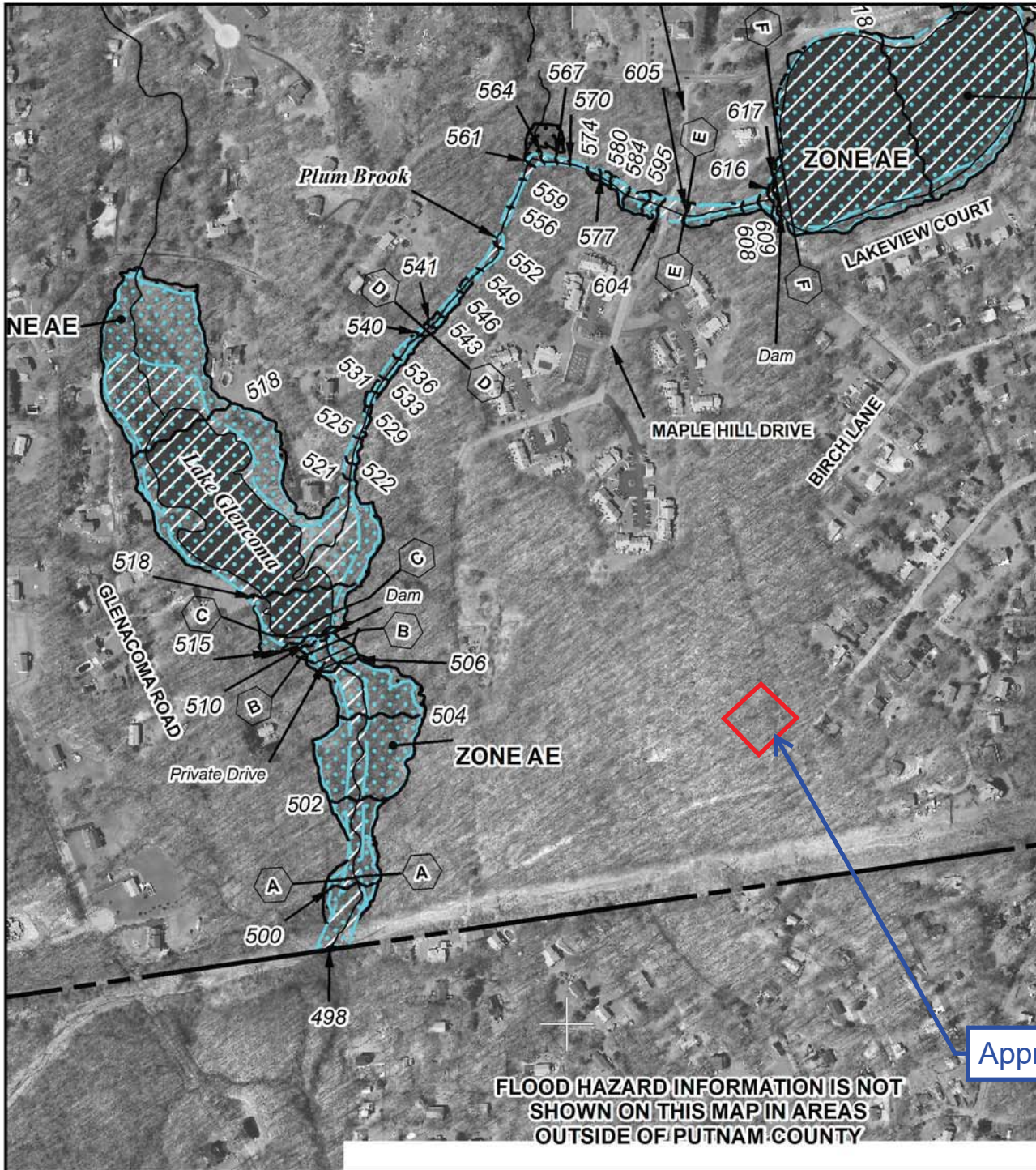
## Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CIC	Charlton fine sandy loam, 8 to 15 percent slopes, very stony	0.0	0.0%
CID	Charlton loam, 15 to 25 percent slopes, very stony	12.7	36.9%
CIE	Charlton loam, 25 to 35 percent slopes, very stony	4.8	13.8%
CIF	Charlton loam, 35 to 45 percent slopes, very stony	1.6	4.6%
CrC	Charlton-Chatfield complex, 0 to 15 percent slopes, very rocky	3.1	8.9%
CsD	Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky	8.6	25.0%
CtC	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	1.4	4.1%
PoD	Paxton fine sandy loam, 15 to 25 percent slopes, very stony	0.4	1.2%
WdC	Woodbridge loam, 8 to 15 percent slopes	0.1	0.4%
<b>Subtotals for Soil Survey Area</b>		<b>32.8</b>	<b>95.0%</b>
<b>Totals for Area of Interest</b>		<b>34.5</b>	<b>100.0%</b>

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CIE	Charlton loam, 25 to 35 percent slopes, very stony	0.2	0.7%
CsD	Chatfield-Charlton complex, 15 to 35 percent slopes, very rocky	1.3	3.8%
CtC	Chatfield-Hollis-Rock outcrop complex, 0 to 15 percent slopes	0.1	0.4%
<b>Subtotals for Soil Survey Area</b>		<b>1.7</b>	<b>5.0%</b>
<b>Totals for Area of Interest</b>		<b>34.5</b>	<b>100.0%</b>

## FIGURE 5: FEMA FLOODPLAIN MAP





NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0226E

**FIRM**  
**FLOOD INSURANCE RATE MAP**  
**PUTNAM COUNTY,**  
**NEW YORK**  
 (ALL JURISDICTIONS)

**PANEL 226 OF 256**  
 (SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
CARMEL, TOWN OF	360669	0226	E

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.



**MAP NUMBER**  
**36079C0226E**

**EFFECTIVE DATE**  
**MARCH 4, 2013**

Federal Emergency Management Agency

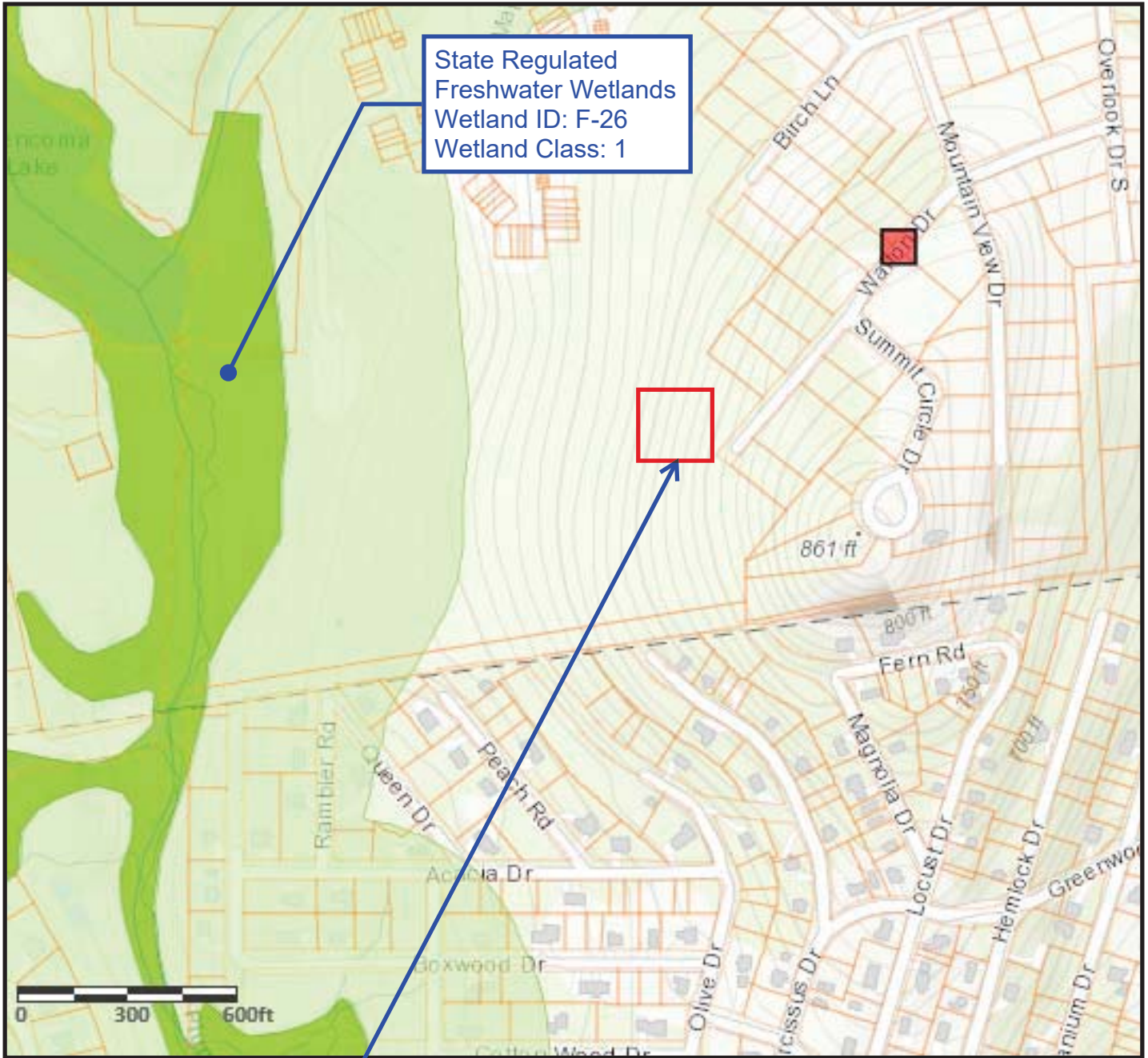
Approximate Site Location

**FLOOD HAZARD INFORMATION IS NOT SHOWN ON THIS MAP IN AREAS OUTSIDE OF PUTNAM COUNTY**

This is an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at [www.msc.fema.gov](http://www.msc.fema.gov)

## FIGURE 6: NYS ERS MAP





State Regulated  
Freshwater Wetlands  
Wetland ID: F-26  
Wetland Class: 1

Approximate Site  
Location

# ERM MAP

Source: <https://gisservices.dec.ny.gov/gis/erm/>

# Appendix B

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**APPENDIX F**  
**CONSTRUCTION SITE INSPECTION**  
**AND MAINTENANCE LOG BOOK**

**STATE POLLUTANT DISCHARGE ELIMINATION SYSTEM FOR CONSTRUCTION**  
**ACTIVITIES**

**SAMPLE CONSTRUCTION SITE LOG BOOK**

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---

- I. Pre-Construction Meeting Documents
  - a. Preamble to Site Assessment and Inspections
  - b. Pre-Construction Site Assessment Checklist
  
- II. Construction Duration Inspections
  - a. Directions
  - b. Modification to the SWPPP



**I. PRE-CONSTRUCTION MEETING DOCUMENTS**

**Project Name** \_\_\_\_\_  
**Permit No.** \_\_\_\_\_ **Date of Authorization** \_\_\_\_\_  
**Name of Operator** \_\_\_\_\_  
**Prime Contractor** \_\_\_\_\_

**a. Preamble to Site Assessment and Inspections**

The Following Information To Be Read By All Person’s Involved in The Construction of Stormwater Related Activities:

The Operator agrees to have a qualified inspector<sup>1</sup> conduct an assessment of the site prior to the commencement of construction<sup>2</sup> and certify in this inspection report that the appropriate erosion and sediment controls described in the SWPPP have been adequately installed or implemented to ensure overall preparedness of the site for the commencement of construction.

Prior to the commencement of construction, the Operator shall certify in this site logbook that the SWPPP has been prepared in accordance with the State’s standards and meets all Federal, State and local erosion and sediment control requirements. A preconstruction meeting should be held to review all of the SWPPP requirements with construction personnel.

When construction starts, site inspections shall be conducted by the qualified inspector at least every 7 calendar days. The Operator shall maintain a record of all inspection reports in this site logbook. The site logbook shall be maintained on site and be made available to the permitting authorities upon request.

Prior to filing the Notice of Termination or the end of permit term, the Operator shall have a qualified inspector perform a final site inspection. The qualified inspector shall certify that the site has undergone final stabilization<sup>3</sup> using either vegetative or structural stabilization methods and that all temporary erosion and sediment controls (such as silt fencing) not needed for long-term erosion control have been removed. In addition, the Operator must identify and certify that all permanent structures described in the SWPPP have been constructed and provide the owner(s) with an operation and maintenance plan that ensures the structure(s) continuously functions as designed.

1 Refer to “Qualified Inspector” inspection requirements in the current SPDES General Permit for Stormwater Discharges from Construction Activity for complete list of inspection requirements.  
2 “Commencement of construction” means the initial removal of vegetation and disturbance of soils associated with clearing, grading or excavating activities or other construction activities.  
3 “Final stabilization” means that all soil-disturbing activities at the site have been completed and a uniform, perennial vegetative cover with a density of eighty (80) percent has been established or equivalent stabilization measures (such as the use of mulches or geotextiles) have been employed on all unpaved areas and areas not covered by permanent structures.

**b. Pre-construction Site Assessment Checklist**  
**(NOTE: Provide comments below as necessary)**

1. Notice of Intent, SWPPP, and Contractors Certification:

**Yes No NA**

- Has a Notice of Intent been filed with the NYS Department of Conservation?
- Is the SWPPP on-site? Where? \_\_\_\_\_
- Is the Plan current? What is the latest revision date? \_\_\_\_\_
- Is a copy of the NOI (with brief description) onsite? Where? \_\_\_\_\_
- Have all contractors involved with stormwater related activities signed a contractor's certification?

2. Resource Protection

**Yes No NA**

- Are construction limits clearly flagged or fenced?
- Important trees and associated rooting zones, on-site septic system absorption fields, existing vegetated areas suitable for filter strips, especially in perimeter areas, have been flagged for protection.
- Creek crossings installed prior to land-disturbing activity, including clearing and blasting.

3. Surface Water Protection

**Yes No NA**

- Clean stormwater runoff has been diverted from areas to be disturbed.
- Bodies of water located either on site or in the vicinity of the site have been identified and protected.
- Appropriate practices to protect on-site or downstream surface water are installed.
- Are clearing and grading operations divided into areas <5 acres?

4. Stabilized Construction Access

**Yes No NA**

- A temporary construction entrance to capture mud and debris from construction vehicles before they enter the public highway has been installed.
- Other access areas (entrances, construction routes, equipment parking areas) are stabilized immediately as work takes place with gravel or other cover.
- Sediment tracked onto public streets is removed or cleaned on a regular basis.

5. Sediment Controls

**Yes No NA**

- Silt fence material and installation comply with the standard drawing and specifications.
- Silt fences are installed at appropriate spacing intervals
- Sediment/detention basin was installed as first land disturbing activity.
- Sediment traps and barriers are installed.

6. Pollution Prevention for Waste and Hazardous Materials

**Yes No NA**

- The Operator or designated representative has been assigned to implement the spill prevention avoidance and response plan.
- The plan is contained in the SWPPP on page \_\_\_\_\_
- Appropriate materials to control spills are onsite. Where? \_\_\_\_\_

## II. CONSTRUCTION DURATION INSPECTIONS

### a. Directions:

**Inspection Forms will be filled out during the entire construction phase of the project.**

Required Elements:

- 1) On a site map, indicate the extent of all disturbed site areas and drainage pathways. Indicate site areas that are expected to undergo initial disturbance or significant site work within the next 14-day period;
- 2) Indicate on a site map all areas of the site that have undergone temporary or permanent stabilization;
- 3) Indicate all disturbed site areas that have not undergone active site work during the previous 14-day period;
- 4) Inspect all sediment control practices and record the approximate degree of sediment accumulation as a percentage of sediment storage volume (for example, 10 percent, 20 percent, 50 percent);
- 5) Inspect all erosion and sediment control practices and record all maintenance requirements such as verifying the integrity of barrier or diversion systems (earthen berms or silt fencing) and containment systems (sediment basins and sediment traps). Identify any evidence of rill or gully erosion occurring on slopes and any loss of stabilizing vegetation or seeding/mulching. Document any excessive deposition of sediment or ponding water along barrier or diversion systems. Record the depth of sediment within containment structures, any erosion near outlet and overflow structures, and verify the ability of rock filters around perforated riser pipes to pass water; and
- 6) Immediately report to the Operator any deficiencies that are identified with the implementation of the SWPPP.

**SITE PLAN/SKETCH**

\_\_\_\_\_  
**Inspector (print name)**

\_\_\_\_\_  
**Date of Inspection**

\_\_\_\_\_  
**Qualified Inspector (print name)**

\_\_\_\_\_  
**Qualified Inspector Signature**

The above signed acknowledges that, to the best of his/her knowledge, all information provided on the forms is accurate and complete.

# Appendix C

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Department of  
Environmental  
Conservation

NEW YORK STATE  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

SPDES GENERAL PERMIT  
FOR STORMWATER DISCHARGES

From

**CONSTRUCTION ACTIVITY**

Permit No. GP- 0-20-001

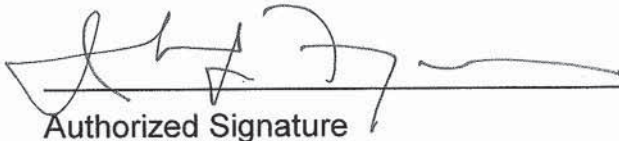
Issued Pursuant to Article 17, Titles 7, 8 and Article 70  
of the Environmental Conservation Law

Effective Date: January 29, 2020

Expiration Date: January 28, 2025

John J. Ferguson

Chief Permit Administrator



Authorized Signature

1-23-20

Date

Address: NYS DEC  
Division of Environmental Permits  
625 Broadway, 4th Floor  
Albany, N.Y. 12233-1750

## PREFACE

Pursuant to Section 402 of the Clean Water Act (“CWA”), stormwater *discharges* from certain *construction activities* are unlawful unless they are authorized by a *National Pollutant Discharge Elimination System (“NPDES”)* permit or by a state permit program. New York administers the approved State Pollutant Discharge Elimination System (SPDES) program with permits issued in accordance with the New York State Environmental Conservation Law (ECL) Article 17, Titles 7, 8 and Article 70.

An *owner or operator* of a *construction activity* that is eligible for coverage under this permit must obtain coverage prior to the *commencement of construction activity*. Activities that fit the definition of “*construction activity*”, as defined under 40 CFR 122.26(b)(14)(x), (15)(i), and (15)(ii), constitute construction of a *point source* and therefore, pursuant to ECL section 17-0505 and 17-0701, the *owner or operator* must have coverage under a SPDES permit prior to *commencing construction activity*. The *owner or operator* cannot wait until there is an actual *discharge* from the *construction site* to obtain permit coverage.

**\*Note: The italicized words/phrases within this permit are defined in Appendix A.**

**NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION  
SPDES GENERAL PERMIT FOR STORMWATER DISCHARGES FROM  
CONSTRUCTION ACTIVITIES**

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## Part 1. PERMIT COVERAGE AND LIMITATIONS

### A. Permit Application

This permit authorizes stormwater *discharges to surface waters of the State* from the following *construction activities* identified within 40 CFR Parts 122.26(b)(14)(x), 122.26(b)(15)(i) and 122.26(b)(15)(ii), provided all of the eligibility provisions of this permit are met:

1. *Construction activities* involving soil disturbances of one (1) or more acres; including disturbances of less than one acre that are part of a *larger common plan of development or sale* that will ultimately disturb one or more acres of land; excluding *routine maintenance activity* that is performed to maintain the original line and grade, hydraulic capacity or original purpose of a facility;
2. *Construction activities* involving soil disturbances of less than one (1) acre where the Department has determined that a *SPDES* permit is required for stormwater *discharges* based on the potential for contribution to a violation of a *water quality standard* or for significant contribution of *pollutants to surface waters of the State*.
3. *Construction activities* located in the watershed(s) identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.

### B. Effluent Limitations Applicable to Discharges from Construction Activities

*Discharges* authorized by this permit must achieve, at a minimum, the effluent limitations in Part I.B.1. (a) – (f) of this permit. These limitations represent the degree of effluent reduction attainable by the application of best practicable technology currently available.

1. Erosion and Sediment Control Requirements - The *owner or operator* must select, design, install, implement and maintain control measures to *minimize the discharge of pollutants* and prevent a violation of the *water quality standards*. The selection, design, installation, implementation, and maintenance of these control measures must meet the non-numeric effluent limitations in Part I.B.1.(a) – (f) of this permit and be in accordance with the New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, using sound engineering judgment. Where control measures are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must include in the *Stormwater Pollution Prevention Plan* (“SWPPP”) the reason(s) for the

deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

- a. **Erosion and Sediment Controls.** Design, install and maintain effective erosion and sediment controls to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such controls must be designed, installed and maintained to:
- (i) *Minimize* soil erosion through application of runoff control and soil stabilization control measure to *minimize pollutant discharges*;
  - (ii) Control stormwater *discharges*, including both peak flowrates and total stormwater volume, to *minimize* channel and *streambank* erosion and scour in the immediate vicinity of the *discharge* points;
  - (iii) *Minimize* the amount of soil exposed during *construction activity*;
  - (iv) *Minimize* the disturbance of *steep slopes*;
  - (v) *Minimize* sediment *discharges* from the site;
  - (vi) Provide and maintain *natural buffers* around surface waters, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce *pollutant discharges*, unless *infeasible*;
  - (vii) *Minimize* soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it be compacted;
  - (viii) Unless *infeasible*, preserve a sufficient amount of topsoil to complete soil restoration and establish a uniform, dense vegetative cover; and
  - (ix) *Minimize* dust. On areas of exposed soil, *minimize* dust through the appropriate application of water or other dust suppression techniques to control the generation of pollutants that could be discharged from the site.
- b. **Soil Stabilization.** In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within fourteen (14) days from the date the current soil disturbance activity ceased. For construction sites that *directly discharge* to one of the 303(d) segments

listed in Appendix E or is located in one of the watersheds listed in Appendix C, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. See Appendix A for definition of *Temporarily Ceased*.

- c. **Dewatering.** *Discharges* from *dewatering* activities, including *discharges* from *dewatering* of trenches and excavations, must be managed by appropriate control measures.
  
- d. **Pollution Prevention Measures.** Design, install, implement, and maintain effective pollution prevention measures to *minimize* the *discharge* of *pollutants* and prevent a violation of the *water quality standards*. At a minimum, such measures must be designed, installed, implemented and maintained to:
  - (i) *Minimize* the *discharge* of *pollutants* from equipment and vehicle washing, wheel wash water, and other wash waters. This applies to washing operations that use clean water only. Soaps, detergents and solvents cannot be used;
  
  - (ii) *Minimize* the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste, hazardous and toxic waste, and other materials present on the site to precipitation and to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a *discharge* of *pollutants*, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use) ; and
  
  - (iii) Prevent the *discharge* of *pollutants* from spills and leaks and implement chemical spill and leak prevention and response procedures.
  
- e. **Prohibited *Discharges*.** The following *discharges* are prohibited:
  - (i) Wastewater from washout of concrete;
  
  - (ii) Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;

- (iii) Fuels, oils, or other *pollutants* used in vehicle and equipment operation and maintenance;
  - (iv) Soaps or solvents used in vehicle and equipment washing; and
  - (v) Toxic or hazardous substances from a spill or other release.
- f. Surface Outlets. When discharging from basins and impoundments, the outlets shall be designed, constructed and maintained in such a manner that sediment does not leave the basin or impoundment and that erosion at or below the outlet does not occur.

### **C. Post-construction Stormwater Management Practice Requirements**

1. The *owner or operator of a construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must select, design, install, and maintain the practices to meet the *performance criteria* in the New York State Stormwater Management Design Manual (“Design Manual”), dated January 2015, using sound engineering judgment. Where post-construction stormwater management practices (“SMPs”) are not designed in conformance with the *performance criteria* in the Design Manual, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. The *owner or operator of a construction activity* that requires post-construction stormwater management practices pursuant to Part III.C. of this permit must design the practices to meet the applicable *sizing criteria* in Part I.C.2.a., b., c. or d. of this permit.

#### **a. Sizing Criteria for New Development**

- (i) Runoff Reduction Volume (“RRv”): Reduce the total Water Quality Volume (“WQv”) by application of RR techniques and standard SMPs with RRv capacity. The total WQv shall be calculated in accordance with the criteria in Section 4.2 of the Design Manual.
- (ii) Minimum RRv and Treatment of Remaining Total WQv: Construction activities that cannot meet the criteria in Part I.C.2.a.(i) of this permit due to site limitations shall direct runoff from all newly constructed impervious areas to a RR technique or standard SMP with RRv capacity unless infeasible. The specific site limitations that prevent the reduction of 100% of the WQv shall be documented in the SWPPP.

For each impervious area that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered infeasible.

**In no case shall the runoff reduction achieved from the newly constructed impervious areas be less than the Minimum RRv as calculated using the criteria in Section 4.3 of the Design Manual.**

The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (“Cpv”): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
  - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
  - (2) The site discharges directly to tidal waters, or fifth order or larger streams.
- (iv) *Overbank* Flood Control Criteria (“Qp”): Requires storage to attenuate the post-development 10-year, 24-hour peak discharge rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
  - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (“Qf”): Requires storage to attenuate the post-development 100-year, 24-hour peak discharge rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
  - (1) the site discharges directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.

**b. Sizing Criteria for New Development in Enhanced Phosphorus Removal Watershed**

- (i) Runoff Reduction Volume (RRv): Reduce the total Water Quality Volume (WQv) by application of RR techniques and standard SMPs with RRv capacity. The total WQv is the runoff volume from the 1-year, 24 hour design storm over the post-developed watershed and shall be

calculated in accordance with the criteria in Section 10.3 of the Design Manual.

- (ii) Minimum RRv and Treatment of Remaining Total WQv: *Construction activities* that cannot meet the criteria in Part I.C.2.b.(i) of this permit due to *site limitations* shall direct runoff from all newly constructed *impervious areas* to a RR technique or standard SMP with RRv capacity unless *infeasible*. The specific *site limitations* that prevent the reduction of 100% of the WQv shall be documented in the SWPPP. For each *impervious area* that is not directed to a RR technique or standard SMP with RRv capacity, the SWPPP must include documentation which demonstrates that all options were considered and for each option explains why it is considered *infeasible*.

**In no case shall the runoff reduction achieved from the newly constructed *impervious areas* be less than the Minimum RRv as calculated using the criteria in Section 10.3 of the Design Manual.** The remaining portion of the total WQv that cannot be reduced shall be treated by application of standard SMPs.

- (iii) Channel Protection Volume (Cpv): Provide 24 hour extended detention of the post-developed 1-year, 24-hour storm event; remaining after runoff reduction. The Cpv requirement does not apply when:
  - (1) Reduction of the entire Cpv is achieved by application of runoff reduction techniques or infiltration systems, or
  - (2) The site *discharges* directly to tidal waters, or fifth order or larger streams.
- (iv) *Overbank* Flood Control Criteria (Qp): Requires storage to attenuate the post-development 10-year, 24-hour peak *discharge* rate (Qp) to predevelopment rates. The Qp requirement does not apply when:
  - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.
- (v) Extreme Flood Control Criteria (Qf): Requires storage to attenuate the post-development 100-year, 24-hour peak *discharge* rate (Qf) to predevelopment rates. The Qf requirement does not apply when:
  - (1) the site *discharges* directly to tidal waters or fifth order or larger streams, or
  - (2) A downstream analysis reveals that *overbank* control is not required.

### c. Sizing Criteria for Redevelopment Activity

- (i) Water Quality Volume (WQv): The WQv treatment objective for *redevelopment activity* shall be addressed by one of the following options. *Redevelopment activities* located in an Enhanced Phosphorus Removal Watershed (see Part III.B.3. and Appendix C of this permit) shall calculate the WQv in accordance with Section 10.3 of the Design Manual. All other *redevelopment activities* shall calculate the WQv in accordance with Section 4.2 of the Design Manual.
- (1) Reduce the existing *impervious cover* by a minimum of 25% of the total disturbed, *impervious area*. The Soil Restoration criteria in Section 5.1.6 of the Design Manual must be applied to all newly created pervious areas, or
  - (2) Capture and treat a minimum of 25% of the WQv from the disturbed, *impervious area* by the application of standard SMPs; or reduce 25% of the WQv from the disturbed, *impervious area* by the application of RR techniques or standard SMPs with RRv capacity., or
  - (3) Capture and treat a minimum of 75% of the WQv from the disturbed, *impervious area* as well as any additional runoff from tributary areas by application of the alternative practices discussed in Sections 9.3 and 9.4 of the Design Manual., or
  - (4) Application of a combination of 1, 2 and 3 above that provide a weighted average of at least two of the above methods. Application of this method shall be in accordance with the criteria in Section 9.2.1(B) (IV) of the Design Manual.

If there is an existing post-construction stormwater management practice located on the site that captures and treats runoff from the *impervious area* that is being disturbed, the WQv treatment option selected must, at a minimum, provide treatment equal to the treatment that was being provided by the existing practice(s) if that treatment is greater than the treatment required by options 1 – 4 above.

- (ii) Channel Protection Volume (Cpv): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iii) *Overbank* Flood Control Criteria (Qp): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site.
- (iv) Extreme Flood Control Criteria (Qf): Not required if there are no changes to hydrology that increase the *discharge* rate from the project site



**d. Sizing Criteria for Combination of Redevelopment Activity and New Development**

Construction projects that include both New Development and Redevelopment Activity shall provide post-construction stormwater management controls that meet the sizing criteria calculated as an aggregate of the Sizing Criteria in Part I.C.2.a. or b. of this permit for the New Development portion of the project and Part I.C.2.c of this permit for Redevelopment Activity portion of the project.

**D. Maintaining Water Quality**

The Department expects that compliance with the conditions of this permit will control *discharges* necessary to meet applicable *water quality standards*. It shall be a violation of the *ECL* for any discharge to either cause or contribute to a violation of *water quality standards* as contained in Parts 700 through 705 of Title 6 of the Official Compilation of Codes, Rules and Regulations of the State of New York, such as:

1. There shall be no increase in turbidity that will cause a substantial visible contrast to natural conditions;
2. There shall be no increase in suspended, colloidal or settleable solids that will cause deposition or impair the waters for their best usages; and
3. There shall be no residue from oil and floating substances, nor visible oil film, nor globules of grease.

If there is evidence indicating that the stormwater *discharges* authorized by this permit are causing, have the reasonable potential to cause, or are contributing to a violation of the *water quality standards*; the *owner or operator* must take appropriate corrective action in accordance with Part IV.C.5. of this general permit and document in accordance with Part IV.C.4. of this general permit. To address the *water quality standard* violation the *owner or operator* may need to provide additional information, include and implement appropriate controls in the SWPPP to correct the problem, or obtain an individual SPDES permit.

If there is evidence indicating that despite compliance with the terms and conditions of this general permit it is demonstrated that the stormwater *discharges* authorized by this permit are causing or contributing to a violation of *water quality standards*, or if the Department determines that a modification of the permit is necessary to prevent a violation of *water quality standards*, the authorized *discharges* will no longer be eligible for coverage under this permit. The Department may require the *owner or operator* to obtain an individual SPDES permit to continue discharging.

## **E. Eligibility Under This General Permit**

1. This permit may authorize all *discharges* of stormwater from *construction activity to surface waters of the State* and *groundwaters* except for ineligible *discharges* identified under subparagraph F. of this Part.
2. Except for non-stormwater *discharges* explicitly listed in the next paragraph, this permit only authorizes stormwater *discharges*; including stormwater runoff, snowmelt runoff, and surface runoff and drainage, from *construction activities*.
3. Notwithstanding paragraphs E.1 and E.2 above, the following non-stormwater discharges are authorized by this permit: those listed in 6 NYCRR 750-1.2(a)(29)(vi), with the following exception: “Discharges from firefighting activities are authorized only when the firefighting activities are emergencies/unplanned”; waters to which other components have not been added that are used to control dust in accordance with the SWPPP; and uncontaminated *discharges* from *construction site* de-watering operations. All non-stormwater discharges must be identified in the SWPPP. Under all circumstances, the *owner or operator* must still comply with *water quality standards* in Part I.D of this permit.
4. The *owner or operator* must maintain permit eligibility to *discharge* under this permit. Any *discharges* that are not compliant with the eligibility conditions of this permit are not authorized by the permit and the *owner or operator* must either apply for a separate permit to cover those ineligible *discharges* or take steps necessary to make the *discharge* eligible for coverage.

## **F. Activities Which Are Ineligible for Coverage Under This General Permit**

All of the following are **not** authorized by this permit:

1. *Discharges after construction activities* have been completed and the site has undergone *final stabilization*;
2. *Discharges* that are mixed with sources of non-stormwater other than those expressly authorized under subsection E.3. of this Part and identified in the SWPPP required by this permit;
3. *Discharges* that are required to obtain an individual SPDES permit or another SPDES general permit pursuant to Part VII.K. of this permit;
4. *Construction activities or discharges from construction activities* that may adversely affect an *endangered or threatened species* unless the *owner or*

*operator* has obtained a permit issued pursuant to 6 NYCRR Part 182 for the project or the Department has issued a letter of non-jurisdiction for the project. All documentation necessary to demonstrate eligibility shall be maintained on site in accordance with Part II.D.2 of this permit;

5. *Discharges* which either cause or contribute to a violation of *water quality standards* adopted pursuant to the *ECL* and its accompanying regulations;
6. *Construction activities* for residential, commercial and institutional projects:
  - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
  - b. Which are undertaken on land with no existing *impervious cover*; and
  - c. Which disturb one (1) or more acres of land designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase “E” or “F” (regardless of the map unit name), or a combination of the three designations.
7. *Construction activities* for linear transportation projects and linear utility projects:
  - a. Where the *discharges* from the *construction activities* are tributary to waters of the state classified as AA or AA-s; and
  - b. Which are undertaken on land with no existing *impervious cover*; and
  - c. Which disturb two (2) or more acres of land designated on the current USDA Soil Survey as Soil Slope Phase “D” (provided the map unit name is inclusive of slopes greater than 25%), or Soil Slope Phase “E” or “F” (regardless of the map unit name), or a combination of the three designations.

8. *Construction activities* that have the potential to affect an *historic property*, unless there is documentation that such impacts have been resolved. The following documentation necessary to demonstrate eligibility with this requirement shall be maintained on site in accordance with Part II.D.2 of this permit and made available to the Department in accordance with Part VII.F of this permit:
- a. Documentation that the *construction activity* is not within an archeologically sensitive area indicated on the sensitivity map, and that the *construction activity* is not located on or immediately adjacent to a property listed or determined to be eligible for listing on the National or State Registers of Historic Places, and that there is no new permanent building on the *construction site* within the following distances from a building, structure, or object that is more than 50 years old, or if there is such a new permanent building on the *construction site* within those parameters that NYS Office of Parks, Recreation and Historic Preservation (OPRHP), a Historic Preservation Commission of a Certified Local Government, or a qualified preservation professional has determined that the building, structure, or object more than 50 years old is not historically/archeologically significant.
    - 1-5 acres of disturbance - 20 feet
    - 5-20 acres of disturbance - 50 feet
    - 20+ acres of disturbance - 100 feet, or
  - b. DEC consultation form sent to OPRHP, and copied to the NYS DEC Agency Historic Preservation Officer (APO), and
    - (i) the State Environmental Quality Review (SEQR) Environmental Assessment Form (EAF) with a negative declaration or the Findings Statement, with documentation of OPRHP's agreement with the resolution; or
    - (ii) documentation from OPRHP that the *construction activity* will result in No Impact; or
    - (iii) documentation from OPRHP providing a determination of No Adverse Impact; or
    - (iv) a Letter of Resolution signed by the owner/operator, OPRHP and the DEC APO which allows for this *construction activity* to be eligible for coverage under the general permit in terms of the State Historic Preservation Act (SHPA); or
  - c. Documentation of satisfactory compliance with Section 106 of the National Historic Preservation Act for a coterminous project area:

- (i) No Affect
- (ii) No Adverse Affect
- (iii) Executed Memorandum of Agreement, or

d. Documentation that:

- (i) SHPA Section 14.09 has been completed by NYS DEC or another state agency.
9. *Discharges from construction activities* that are subject to an existing SPDES individual or general permit where a SPDES permit for *construction activity* has been terminated or denied; or where the *owner or operator* has failed to renew an expired individual permit.

## Part II. PERMIT COVERAGE

### A. How to Obtain Coverage

1. An *owner or operator* of a *construction activity* that is not subject to the requirements of a regulated, traditional land use control MS4 must first prepare a SWPPP in accordance with all applicable requirements of this permit and then submit a completed Notice of Intent (NOI) to the Department to be authorized to discharge under this permit.
2. An *owner or operator* of a *construction activity* that is subject to the requirements of a *regulated, traditional land use control MS4* must first prepare a SWPPP in accordance with all applicable requirements of this permit and then have the SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department. The *owner or operator* shall have the “MS4 SWPPP Acceptance” form signed in accordance with Part VII.H., and then submit that form along with a completed NOI to the Department.
3. The requirement for an *owner or operator* to have its SWPPP reviewed and accepted by the *regulated, traditional land use control MS4* prior to submitting the NOI to the Department does not apply to an *owner or operator* that is obtaining permit coverage in accordance with the requirements in Part II.F. (Change of *Owner or Operator*) or where the *owner or operator* of the *construction activity* is the *regulated, traditional land use control MS4* . This exemption does not apply to *construction activities* subject to the New York City Administrative Code.

## B. Notice of Intent (NOI) Submittal

1. Prior to December 21, 2020, an owner or operator shall use either the electronic (eNOI) or paper version of the NOI that the Department prepared. Both versions of the NOI are located on the Department's website (<http://www.dec.ny.gov/>). The paper version of the NOI shall be signed in accordance with Part VII.H. of this permit and submitted to the following address:

**NOTICE OF INTENT  
NYS DEC, Bureau of Water Permits  
625 Broadway, 4<sup>th</sup> Floor  
Albany, New York 12233-3505**

2. Beginning December 21, 2020 and in accordance with EPA's 2015 NPDES Electronic Reporting Rule (40 CFR Part 127), the *owner or operator* must submit the NOI electronically using the *Department's* online NOI.
3. The *owner or operator* shall have the SWPPP preparer sign the "SWPPP Preparer Certification" statement on the NOI prior to submitting the form to the Department.
4. As of the date the NOI is submitted to the Department, the *owner or operator* shall make the NOI and SWPPP available for review and copying in accordance with the requirements in Part VII.F. of this permit.

## C. Permit Authorization

1. An *owner or operator* shall not *commence construction activity* until their authorization to *discharge* under this permit goes into effect.
2. Authorization to *discharge* under this permit will be effective when the *owner or operator* has satisfied all of the following criteria:
  - a. project review pursuant to the State Environmental Quality Review Act ("SEQRA") have been satisfied, when SEQRA is applicable. See the Department's website (<http://www.dec.ny.gov/>) for more information,
  - b. where required, all necessary Department permits subject to the *Uniform Procedures Act ("UPA")* (see 6 NYCRR Part 621), or the equivalent from another New York State agency, have been obtained, unless otherwise notified by the Department pursuant to 6 NYCRR 621.3(a)(4). *Owners or operators of construction activities* that are required to obtain *UPA* permits

must submit a preliminary SWPPP to the appropriate DEC Permit Administrator at the Regional Office listed in Appendix F at the time all other necessary *UPA* permit applications are submitted. The preliminary SWPPP must include sufficient information to demonstrate that the *construction activity* qualifies for authorization under this permit,

- c. the final SWPPP has been prepared, and
  - d. a complete NOI has been submitted to the Department in accordance with the requirements of this permit.
3. An *owner or operator* that has satisfied the requirements of Part II.C.2 above will be authorized to *discharge* stormwater from their *construction activity* in accordance with the following schedule:
- a. For *construction activities* that are not subject to the requirements of a *regulated, traditional land use control MS4*:
    - (i) Five (5) business days from the date the Department receives a complete electronic version of the NOI (eNOI) for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.; or
    - (ii) Sixty (60) business days from the date the Department receives a complete NOI (electronic or paper version) for *construction activities* with a SWPPP that has not been prepared in conformance with the design criteria in technical standard referenced in Part III.B.1. or, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C., the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, or;
    - (iii) Ten (10) business days from the date the Department receives a complete paper version of the NOI for *construction activities* with a SWPPP that has been prepared in conformance with the design criteria in the technical standard referenced in Part III.B.1 and the *performance criteria* in the technical standard referenced in Parts III.B., 2 or 3, for *construction activities* that require post-construction stormwater management practices pursuant to Part III.C.

- b. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*:
  - (i) Five (5) business days from the date the Department receives both a complete electronic version of the NOI (eNOI) and signed “MS4 SWPPP Acceptance” form, or
  - (ii) Ten (10) business days from the date the Department receives both a complete paper version of the NOI and signed “MS4 SWPPP Acceptance” form.
4. Coverage under this permit authorizes stormwater *discharges* from only those areas of disturbance that are identified in the NOI. If an *owner or operator* wishes to have stormwater *discharges* from future or additional areas of disturbance authorized, they must submit a new NOI that addresses that phase of the development, unless otherwise notified by the Department. The *owner or operator* shall not *commence construction activity* on the future or additional areas until their authorization to *discharge* under this permit goes into effect in accordance with Part II.C. of this permit.

#### **D. General Requirements For Owners or Operators With Permit Coverage**

1. The *owner or operator* shall ensure that the provisions of the SWPPP are implemented from the *commencement of construction activity* until all areas of disturbance have achieved *final stabilization* and the Notice of Termination (“NOT”) has been submitted to the Department in accordance with Part V. of this permit. This includes any changes made to the SWPPP pursuant to Part III.A.4. of this permit.
2. The *owner or operator* shall maintain a copy of the General Permit (GP-0-20-001), NOI, *NOI Acknowledgment Letter*, SWPPP, MS4 SWPPP Acceptance form, inspection reports, responsible contractor’s or subcontractor’s certification statement (see Part III.A.6.), and all documentation necessary to demonstrate eligibility with this permit at the *construction site* until all disturbed areas have achieved *final stabilization* and the NOT has been submitted to the Department. The documents must be maintained in a secure location, such as a job trailer, on-site construction office, or mailbox with lock. The secure location must be accessible during normal business hours to an individual performing a compliance inspection.
3. The *owner or operator of a construction activity* shall not disturb greater than five (5) acres of soil at any one time without prior written authorization from the Department or, in areas under the jurisdiction of a *regulated, traditional land*



- use control MS4, the regulated, traditional land use control MS4 (provided the regulated, traditional land use control MS4 is not the owner or operator of the construction activity). At a minimum, the owner or operator must comply with the following requirements in order to be authorized to disturb greater than five (5) acres of soil at any one time:*
- a. The *owner or operator* shall have a *qualified inspector* conduct **at least** two (2) site inspections in accordance with Part IV.C. of this permit every seven (7) calendar days, for as long as greater than five (5) acres of soil remain disturbed. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
  - b. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures must be initiated by the end of the next business day and completed within seven (7) days from the date the current soil disturbance activity ceased. The soil stabilization measures selected shall be in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016.
  - c. The *owner or operator* shall prepare a phasing plan that defines maximum disturbed area per phase and shows required cuts and fills.
  - d. The *owner or operator* shall install any additional site-specific practices needed to protect water quality.
  - e. The *owner or operator* shall include the requirements above in their SWPPP.
4. In accordance with statute, regulations, and the terms and conditions of this permit, the Department may suspend or revoke an *owner's or operator's* coverage under this permit at any time if the Department determines that the SWPPP does not meet the permit requirements or consistent with Part VII.K..
  5. Upon a finding of significant non-compliance with the practices described in the SWPPP or violation of this permit, the Department may order an immediate stop to all activity at the site until the non-compliance is remedied. The stop work order shall be in writing, describe the non-compliance in detail, and be sent to the *owner or operator*.
  6. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4*, the *owner or operator* shall notify the

*regulated, traditional land use control MS4* in writing of any planned amendments or modifications to the post-construction stormwater management practice component of the SWPPP required by Part III.A. 4. and 5. of this permit. Unless otherwise notified by the *regulated, traditional land use control MS4*, the *owner or operator* shall have the SWPPP amendments or modifications reviewed and accepted by the *regulated, traditional land use control MS4* prior to commencing construction of the post-construction stormwater management practice.

#### **E. Permit Coverage for Discharges Authorized Under GP-0-15-002**

1. Upon renewal of SPDES General Permit for Stormwater Discharges from *Construction Activity* (Permit No. GP-0-15-002), an *owner or operator* of a *construction activity* with coverage under GP-0-15-002, as of the effective date of GP- 0-20-001, shall be authorized to *discharge* in accordance with GP- 0-20-001, unless otherwise notified by the Department.

An *owner or operator* may continue to implement the technical/design components of the post-construction stormwater management controls provided that such design was done in conformance with the technical standards in place at the time of initial project authorization. However, they must comply with the other, non-design provisions of GP-0-20-001.

#### **F. Change of Owner or Operator**

1. When property ownership changes or when there is a change in operational control over the construction plans and specifications, the original *owner or operator* must notify the new *owner or operator*, in writing, of the requirement to obtain permit coverage by submitting a NOI with the Department. For *construction activities* subject to the requirements of a *regulated, traditional land use control MS4*, the original *owner or operator* must also notify the MS4, in writing, of the change in ownership at least 30 calendar days prior to the change in ownership.
2. Once the new *owner or operator* obtains permit coverage, the original *owner or operator* shall then submit a completed NOT with the name and permit identification number of the new *owner or operator* to the Department at the address in Part II.B.1. of this permit. If the original *owner or operator* maintains ownership of a portion of the *construction activity* and will disturb soil, they must maintain their coverage under the permit.
3. Permit coverage for the new *owner or operator* will be effective as of the date the Department receives a complete NOI, provided the original *owner or*

*operator* was not subject to a sixty (60) business day authorization period that has not expired as of the date the Department receives the NOI from the new *owner or operator*.

### Part III. STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

#### A. General SWPPP Requirements

1. A SWPPP shall be prepared and implemented by the *owner or operator* of each *construction activity* covered by this permit. The SWPPP must document the selection, design, installation, implementation and maintenance of the control measures and practices that will be used to meet the effluent limitations in Part I.B. of this permit and where applicable, the post-construction stormwater management practice requirements in Part I.C. of this permit. The SWPPP shall be prepared prior to the submittal of the NOI. The NOI shall be submitted to the Department prior to the *commencement of construction activity*. A copy of the completed, final NOI shall be included in the SWPPP.
2. The SWPPP shall describe the erosion and sediment control practices and where required, post-construction stormwater management practices that will be used and/or constructed to reduce the *pollutants* in stormwater *discharges* and to assure compliance with the terms and conditions of this permit. In addition, the SWPPP shall identify potential sources of pollution which may reasonably be expected to affect the quality of stormwater *discharges*.
3. All SWPPPs that require the post-construction stormwater management practice component shall be prepared by a *qualified professional* that is knowledgeable in the principles and practices of stormwater management and treatment.
4. The *owner or operator* must keep the SWPPP current so that it at all times accurately documents the erosion and sediment controls practices that are being used or will be used during construction, and all post-construction stormwater management practices that will be constructed on the site. At a minimum, the *owner or operator* shall amend the SWPPP, including construction drawings:
  - a. whenever the current provisions prove to be ineffective in minimizing *pollutants* in stormwater *discharges* from the site;

- b. whenever there is a change in design, construction, or operation at the *construction site* that has or could have an effect on the *discharge* of *pollutants*;
  - c. to address issues or deficiencies identified during an inspection by the *qualified inspector*, the Department or other regulatory authority; and
  - d. to document the final construction conditions.
5. The Department may notify the *owner or operator* at any time that the SWPPP does not meet one or more of the minimum requirements of this permit. The notification shall be in writing and identify the provisions of the SWPPP that require modification. Within fourteen (14) calendar days of such notification, or as otherwise indicated by the Department, the *owner or operator* shall make the required changes to the SWPPP and submit written notification to the Department that the changes have been made. If the *owner or operator* does not respond to the Department's comments in the specified time frame, the Department may suspend the *owner's or operator's* coverage under this permit or require the *owner or operator* to obtain coverage under an individual SPDES permit in accordance with Part II.D.4. of this permit.
6. Prior to the *commencement of construction activity*, the *owner or operator* must identify the contractor(s) and subcontractor(s) that will be responsible for installing, constructing, repairing, replacing, inspecting and maintaining the erosion and sediment control practices included in the SWPPP; and the contractor(s) and subcontractor(s) that will be responsible for constructing the post-construction stormwater management practices included in the SWPPP. The *owner or operator* shall have each of the contractors and subcontractors identify at least one person from their company that will be responsible for implementation of the SWPPP. This person shall be known as the *trained contractor*. The *owner or operator* shall ensure that at least one *trained contractor* is on site on a daily basis when soil disturbance activities are being performed.

The *owner or operator* shall have each of the contractors and subcontractors identified above sign a copy of the following certification statement below before they commence any *construction activity*:

"I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the *qualified inspector* during a site inspection. I also understand that the *owner or operator* must comply with

the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater *discharges* from *construction activities* and that it is unlawful for any person to cause or contribute to a violation of *water quality standards*. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violations"

In addition to providing the certification statement above, the certification page must also identify the specific elements of the SWPPP that each contractor and subcontractor will be responsible for and include the name and title of the person providing the signature; the name and title of the *trained contractor* responsible for SWPPP implementation; the name, address and telephone number of the contracting firm; the address (or other identifying description) of the site; and the date the certification statement is signed. The *owner or operator* shall attach the certification statement(s) to the copy of the SWPPP that is maintained at the *construction site*. If new or additional contractors are hired to implement measures identified in the SWPPP after construction has commenced, they must also sign the certification statement and provide the information listed above.

7. For projects where the Department requests a copy of the SWPPP or inspection reports, the *owner or operator* shall submit the documents in both electronic (PDF only) and paper format within five (5) business days, unless otherwise notified by the Department.

## **B. Required SWPPP Contents**

1. Erosion and sediment control component - All SWPPPs prepared pursuant to this permit shall include erosion and sediment control practices designed in conformance with the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Where erosion and sediment control practices are not designed in conformance with the design criteria included in the technical standard, the *owner or operator* must demonstrate *equivalence* to the technical standard. At a minimum, the erosion and sediment control component of the SWPPP shall include the following:
  - a. Background information about the scope of the project, including the location, type and size of project

- b. A site map/construction drawing(s) for the project, including a general location map. At a minimum, the site map shall show the total site area; all improvements; areas of disturbance; areas that will not be disturbed; existing vegetation; on-site and adjacent off-site surface water(s); floodplain/floodway boundaries; wetlands and drainage patterns that could be affected by the *construction activity*; existing and final contours ; locations of different soil types with boundaries; material, waste, borrow or equipment storage areas located on adjacent properties; and location(s) of the stormwater *discharge(s)*;
- c. A description of the soil(s) present at the site, including an identification of the Hydrologic Soil Group (HSG);
- d. A construction phasing plan and sequence of operations describing the intended order of *construction activities*, including clearing and grubbing, excavation and grading, utility and infrastructure installation and any other activity at the site that results in soil disturbance;
- e. A description of the minimum erosion and sediment control practices to be installed or implemented for each *construction activity* that will result in soil disturbance. Include a schedule that identifies the timing of initial placement or implementation of each erosion and sediment control practice and the minimum time frames that each practice should remain in place or be implemented;
- f. A temporary and permanent soil stabilization plan that meets the requirements of this general permit and the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016, for each stage of the project, including initial land clearing and grubbing to project completion and achievement of *final stabilization*;
- g. A site map/construction drawing(s) showing the specific location(s), size(s), and length(s) of each erosion and sediment control practice;
- h. The dimensions, material specifications, installation details, and operation and maintenance requirements for all erosion and sediment control practices. Include the location and sizing of any temporary sediment basins and structural practices that will be used to divert flows from exposed soils;
- i. A maintenance inspection schedule for the contractor(s) identified in Part III.A.6. of this permit, to ensure continuous and effective operation of the erosion and sediment control practices. The maintenance inspection

schedule shall be in accordance with the requirements in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016;

- j. A description of the pollution prevention measures that will be used to control litter, construction chemicals and construction debris from becoming a *pollutant* source in the stormwater *discharges*;
  - k. A description and location of any stormwater *discharges* associated with industrial activity other than construction at the site, including, but not limited to, stormwater *discharges* from asphalt plants and concrete plants located on the *construction site*; and
  - l. Identification of any elements of the design that are not in conformance with the design criteria in the technical standard, New York State Standards and Specifications for Erosion and Sediment Control, dated November 2016. Include the reason for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.
2. Post-construction stormwater management practice component – The *owner or operator* of any construction project identified in Table 2 of Appendix B as needing post-construction stormwater management practices shall prepare a SWPPP that includes practices designed in conformance with the applicable *sizing criteria* in Part I.C.2.a., c. or d. of this permit and the *performance criteria* in the technical standard, New York State Stormwater Management Design Manual dated January 2015

Where post-construction stormwater management practices are not designed in conformance with the *performance criteria* in the technical standard, the *owner or operator* must include in the SWPPP the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the technical standard.

The post-construction stormwater management practice component of the SWPPP shall include the following:

- a. Identification of all post-construction stormwater management practices to be constructed as part of the project. Include the dimensions, material specifications and installation details for each post-construction stormwater management practice;

- b. A site map/construction drawing(s) showing the specific location and size of each post-construction stormwater management practice;
- c. A Stormwater Modeling and Analysis Report that includes:
  - (i) Map(s) showing pre-development conditions, including watershed/subcatchments boundaries, flow paths/routing, and design points;
  - (ii) Map(s) showing post-development conditions, including watershed/subcatchments boundaries, flow paths/routing, design points and post-construction stormwater management practices;
  - (iii) Results of stormwater modeling (i.e. hydrology and hydraulic analysis) for the required storm events. Include supporting calculations (model runs), methodology, and a summary table that compares pre and post-development runoff rates and volumes for the different storm events;
  - (iv) Summary table, with supporting calculations, which demonstrates that each post-construction stormwater management practice has been designed in conformance with the *sizing criteria* included in the Design Manual;
  - (v) Identification of any *sizing criteria* that is not required based on the requirements included in Part I.C. of this permit; and
  - (vi) Identification of any elements of the design that are not in conformance with the *performance criteria* in the Design Manual. Include the reason(s) for the deviation or alternative design and provide information which demonstrates that the deviation or alternative design is *equivalent* to the Design Manual;
- d. Soil testing results and locations (test pits, borings);
- e. Infiltration test results, when required; and
- f. An operations and maintenance plan that includes inspection and maintenance schedules and actions to ensure continuous and effective operation of each post-construction stormwater management practice. The plan shall identify the entity that will be responsible for the long term operation and maintenance of each practice.



3. Enhanced Phosphorus Removal Standards - All construction projects identified in Table 2 of Appendix B that are located in the watersheds identified in Appendix C shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the applicable *sizing criteria* in Part I.C.2. b., c. or d. of this permit and the *performance criteria*, Enhanced Phosphorus Removal Standards included in the Design Manual. At a minimum, the post-construction stormwater management practice component of the SWPPP shall include items 2.a - 2.f. above.

### **C. Required SWPPP Components by Project Type**

Unless otherwise notified by the Department, *owners or operators of construction activities* identified in Table 1 of Appendix B are required to prepare a SWPPP that only includes erosion and sediment control practices designed in conformance with Part III.B.1 of this permit. *Owners or operators of the construction activities* identified in Table 2 of Appendix B shall prepare a SWPPP that also includes post-construction stormwater management practices designed in conformance with Part III.B.2 or 3 of this permit.

## **Part IV. INSPECTION AND MAINTENANCE REQUIREMENTS**

### **A. General Construction Site Inspection and Maintenance Requirements**

1. The *owner or operator* must ensure that all erosion and sediment control practices (including pollution prevention measures) and all post-construction stormwater management practices identified in the SWPPP are inspected and maintained in accordance with Part IV.B. and C. of this permit.
2. The terms of this permit shall not be construed to prohibit the State of New York from exercising any authority pursuant to the ECL, common law or federal law, or prohibit New York State from taking any measures, whether civil or criminal, to prevent violations of the laws of the State of New York or protect the public health and safety and/or the environment.

### **B. Contractor Maintenance Inspection Requirements**

1. The *owner or operator* of each *construction activity* identified in Tables 1 and 2 of Appendix B shall have a *trained contractor* inspect the erosion and sediment control practices and pollution prevention measures being implemented within the active work area daily to ensure that they are being maintained in effective operating condition at all times. If deficiencies are identified, the contractor shall

begin implementing corrective actions within one business day and shall complete the corrective actions in a reasonable time frame.

2. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *trained contractor* can stop conducting the maintenance inspections. The *trained contractor* shall begin conducting the maintenance inspections in accordance with Part IV.B.1. of this permit as soon as soil disturbance activities resume.
3. For construction sites where soil disturbance activities have been shut down with partial project completion, the *trained contractor* can stop conducting the maintenance inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational.

### C. Qualified Inspector Inspection Requirements

The *owner or operator* shall have a *qualified inspector* conduct site inspections in conformance with the following requirements:

[Note: The *trained contractor* identified in Part III.A.6. and IV.B. of this permit **cannot** conduct the *qualified inspector* site inspections unless they meet the *qualified inspector* qualifications included in Appendix A. In order to perform these inspections, the *trained contractor* would have to be a:

- licensed Professional Engineer,
  - Certified Professional in Erosion and Sediment Control (CPESC),
  - New York State Erosion and Sediment Control Certificate Program holder
  - Registered Landscape Architect, or
  - someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity].
1. A *qualified inspector* shall conduct site inspections for all *construction activities* identified in Tables 1 and 2 of Appendix B, with the exception of:
    - a. the construction of a single family residential subdivision with 25% or less *impervious cover* at total site build-out that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located

in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;

- b. the construction of a single family home that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres and is not located in one of the watersheds listed in Appendix C and not directly discharging to one of the 303(d) segments listed in Appendix E;
  - c. construction on agricultural property that involves a soil disturbance of one (1) or more acres of land but less than five (5) acres; and
  - d. *construction activities* located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.
2. Unless otherwise notified by the Department, the *qualified inspector* shall conduct site inspections in accordance with the following timetable:
- a. For construction sites where soil disturbance activities are on-going, the *qualified inspector* shall conduct a site inspection at least once every seven (7) calendar days.
  - b. For construction sites where soil disturbance activities are on-going and the *owner or operator* has received authorization in accordance with Part II.D.3 to disturb greater than five (5) acres of soil at any one time, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
  - c. For construction sites where soil disturbance activities have been temporarily suspended (e.g. winter shutdown) and *temporary stabilization* measures have been applied to all disturbed areas, the *qualified inspector* shall conduct a site inspection at least once every thirty (30) calendar days. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to reducing the frequency of inspections.

- d. For construction sites where soil disturbance activities have been shut down with partial project completion, the *qualified inspector* can stop conducting inspections if all areas disturbed as of the project shutdown date have achieved *final stabilization* and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational. The *owner or operator* shall notify the DOW Water (SPDES) Program contact at the Regional Office (see contact information in Appendix F) or, in areas under the jurisdiction of a *regulated, traditional land use control MS4*, the *regulated, traditional land use control MS4* (provided the *regulated, traditional land use control MS4* is not the *owner or operator* of the *construction activity*) in writing prior to the shutdown. If soil disturbance activities are not resumed within 2 years from the date of shutdown, the *owner or operator* shall have the *qualified inspector* perform a final inspection and certify that all disturbed areas have achieved *final stabilization*, and all temporary, structural erosion and sediment control measures have been removed; and that all post-construction stormwater management practices have been constructed in conformance with the SWPPP by signing the “*Final Stabilization*” and “*Post-Construction Stormwater Management Practice*” certification statements on the NOT. The *owner or operator* shall then submit the completed NOT form to the address in Part II.B.1 of this permit.
  - e. For construction sites that directly *discharge* to one of the 303(d) segments listed in Appendix E or is located in one of the watersheds listed in Appendix C, the *qualified inspector* shall conduct at least two (2) site inspections every seven (7) calendar days. The two (2) inspections shall be separated by a minimum of two (2) full calendar days.
3. At a minimum, the *qualified inspector* shall inspect all erosion and sediment control practices and pollution prevention measures to ensure integrity and effectiveness, all post-construction stormwater management practices under construction to ensure that they are constructed in conformance with the SWPPP, all areas of disturbance that have not achieved *final stabilization*, all points of *discharge* to natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site*, and all points of *discharge* from the *construction site*.
  4. The *qualified inspector* shall prepare an inspection report subsequent to each and every inspection. At a minimum, the inspection report shall include and/or address the following:

- a. Date and time of inspection;
- b. Name and title of person(s) performing inspection;
- c. A description of the weather and soil conditions (e.g. dry, wet, saturated) at the time of the inspection;
- d. A description of the condition of the runoff at all points of *discharge* from the *construction site*. This shall include identification of any *discharges* of sediment from the *construction site*. Include *discharges* from conveyance systems (i.e. pipes, culverts, ditches, etc.) and overland flow;
- e. A description of the condition of all natural surface waterbodies located within, or immediately adjacent to, the property boundaries of the *construction site* which receive runoff from disturbed areas. This shall include identification of any *discharges* of sediment to the surface waterbody;
- f. Identification of all erosion and sediment control practices and pollution prevention measures that need repair or maintenance;
- g. Identification of all erosion and sediment control practices and pollution prevention measures that were not installed properly or are not functioning as designed and need to be reinstalled or replaced;
- h. Description and sketch of areas with active soil disturbance activity, areas that have been disturbed but are inactive at the time of the inspection, and areas that have been stabilized (temporary and/or final) since the last inspection;
- i. Current phase of construction of all post-construction stormwater management practices and identification of all construction that is not in conformance with the SWPPP and technical standards;
- j. Corrective action(s) that must be taken to install, repair, replace or maintain erosion and sediment control practices and pollution prevention measures; and to correct deficiencies identified with the construction of the post-construction stormwater management practice(s);
- k. Identification and status of all corrective actions that were required by previous inspection; and

- I. Digital photographs, with date stamp, that clearly show the condition of all practices that have been identified as needing corrective actions. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report being maintained onsite within seven (7) calendar days of the date of the inspection. The *qualified inspector* shall also take digital photographs, with date stamp, that clearly show the condition of the practice(s) after the corrective action has been completed. The *qualified inspector* shall attach paper color copies of the digital photographs to the inspection report that documents the completion of the corrective action work within seven (7) calendar days of that inspection.
5. Within one business day of the completion of an inspection, the *qualified inspector* shall notify the *owner or operator* and appropriate contractor or subcontractor identified in Part III.A.6. of this permit of any corrective actions that need to be taken. The contractor or subcontractor shall begin implementing the corrective actions within one business day of this notification and shall complete the corrective actions in a reasonable time frame.
6. All inspection reports shall be signed by the *qualified inspector*. Pursuant to Part II.D.2. of this permit, the inspection reports shall be maintained on site with the SWPPP.

## **Part V. TERMINATION OF PERMIT COVERAGE**

### **A. Termination of Permit Coverage**

1. An *owner or operator* that is eligible to terminate coverage under this permit must submit a completed NOT form to the address in Part II.B.1 of this permit. The NOT form shall be one which is associated with this permit, signed in accordance with Part VII.H of this permit.
2. An *owner or operator* may terminate coverage when one or more the following conditions have been met:
  - a. Total project completion - All *construction activity* identified in the SWPPP has been completed; and all areas of disturbance have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices have been constructed in conformance with the SWPPP and are operational;

- b. Planned shutdown with partial project completion - All soil disturbance activities have ceased; and all areas disturbed as of the project shutdown date have achieved *final stabilization*; and all temporary, structural erosion and sediment control measures have been removed; and all post-construction stormwater management practices required for the completed portion of the project have been constructed in conformance with the SWPPP and are operational;
  - c. A new *owner or operator* has obtained coverage under this permit in accordance with Part II.F. of this permit.
  - d. The *owner or operator* obtains coverage under an alternative SPDES general permit or an individual SPDES permit.
3. For *construction activities* meeting subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *qualified inspector* perform a final site inspection prior to submitting the NOT. The *qualified inspector* shall, by signing the “*Final Stabilization*” and “*Post-Construction Stormwater Management Practice certification statements*” on the NOT, certify that all the requirements in Part V.A.2.a. or b. of this permit have been achieved.
  4. For *construction activities* that are subject to the requirements of a *regulated, traditional land use control MS4* and meet subdivision 2a. or 2b. of this Part, the *owner or operator* shall have the *regulated, traditional land use control MS4* sign the “*MS4 Acceptance*” statement on the NOT in accordance with the requirements in Part VII.H. of this permit. The *regulated, traditional land use control MS4* official, by signing this statement, has determined that it is acceptable for the *owner or operator* to submit the NOT in accordance with the requirements of this Part. The *regulated, traditional land use control MS4* can make this determination by performing a final site inspection themselves or by accepting the *qualified inspector’s* final site inspection certification(s) required in Part V.A.3. of this permit.
  5. For *construction activities* that require post-construction stormwater management practices and meet subdivision 2a. of this Part, the *owner or operator* must, prior to submitting the NOT, ensure one of the following:
    - a. the post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain such practice(s) have been deeded to the municipality in which the practice(s) is located,

- b. an executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s),
- c. for post-construction stormwater management practices that are privately owned, the *owner or operator* has a mechanism in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the *owner or operator's* deed of record,
- d. for post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university, hospital), government agency or authority, or public utility; the *owner or operator* has policy and procedures in place that ensures operation and maintenance of the practices in accordance with the operation and maintenance plan.

## **Part VI. REPORTING AND RETENTION RECORDS**

### **A. Record Retention**

The *owner or operator* shall retain a copy of the NOI, NOI Acknowledgment Letter, SWPPP, MS4 SWPPP Acceptance form and any inspection reports that were prepared in conjunction with this permit for a period of at least five (5) years from the date that the Department receives a complete NOT submitted in accordance with Part V. of this general permit.

### **B. Addresses**

With the exception of the NOI, NOT, and MS4 SWPPP Acceptance form (which must be submitted to the address referenced in Part II.B.1 of this permit), all written correspondence requested by the Department, including individual permit applications, shall be sent to the address of the appropriate DOW Water (SPDES) Program contact at the Regional Office listed in Appendix F.

## **Part VII. STANDARD PERMIT CONDITIONS**

### **A. Duty to Comply**

The *owner or operator* must comply with all conditions of this permit. All contractors and subcontractors associated with the project must comply with the terms of the SWPPP. Any non-compliance with this permit constitutes a violation of the Clean Water



Act (CWA) and the ECL and is grounds for an enforcement action against the *owner or operator* and/or the contractor/subcontractor; permit revocation, suspension or modification; or denial of a permit renewal application. Upon a finding of significant non-compliance with this permit or the applicable SWPPP, the Department may order an immediate stop to all *construction activity* at the site until the non-compliance is remedied. The stop work order shall be in writing, shall describe the non-compliance in detail, and shall be sent to the *owner or operator*.

If any human remains or archaeological remains are encountered during excavation, the *owner or operator* must immediately cease, or cause to cease, all *construction activity* in the area of the remains and notify the appropriate Regional Water Engineer (RWE). *Construction activity* shall not resume until written permission to do so has been received from the RWE.

#### **B. Continuation of the Expired General Permit**

This permit expires five (5) years from the effective date. If a new general permit is not issued prior to the expiration of this general permit, an *owner or operator* with coverage under this permit may continue to operate and *discharge* in accordance with the terms and conditions of this general permit, if it is extended pursuant to the State Administrative Procedure Act and 6 NYCRR Part 621, until a new general permit is issued.

#### **C. Enforcement**

Failure of the *owner or operator*, its contractors, subcontractors, agents and/or assigns to strictly adhere to any of the permit requirements contained herein shall constitute a violation of this permit. There are substantial criminal, civil, and administrative penalties associated with violating the provisions of this permit. Fines of up to \$37,500 per day for each violation and imprisonment for up to fifteen (15) years may be assessed depending upon the nature and degree of the offense.

#### **D. Need to Halt or Reduce Activity Not a Defense**

It shall not be a defense for an *owner or operator* in an enforcement action that it would have been necessary to halt or reduce the *construction activity* in order to maintain compliance with the conditions of this permit.

### **E. Duty to Mitigate**

The *owner or operator* and its contractors and subcontractors shall take all reasonable steps to *minimize* or prevent any *discharge* in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

### **F. Duty to Provide Information**

The *owner or operator* shall furnish to the Department, within a reasonable specified time period of a written request, all documentation necessary to demonstrate eligibility and any information to determine compliance with this permit or to determine whether cause exists for modifying or revoking this permit, or suspending or denying coverage under this permit, in accordance with the terms and conditions of this permit. The NOI, SWPPP and inspection reports required by this permit are public documents that the *owner or operator* must make available for review and copying by any person within five (5) business days of the *owner or operator* receiving a written request by any such person to review these documents. Copying of documents will be done at the requester's expense.

### **G. Other Information**

When the *owner or operator* becomes aware that they failed to submit any relevant facts, or submitted incorrect information in the NOI or in any of the documents required by this permit, or have made substantive revisions to the SWPPP (e.g. the scope of the project changes significantly, the type of post-construction stormwater management practice(s) changes, there is a reduction in the sizing of the post-construction stormwater management practice, or there is an increase in the disturbance area or *impervious area*), which were not reflected in the original NOI submitted to the Department, they shall promptly submit such facts or information to the Department using the contact information in Part II.A. of this permit. Failure of the *owner or operator* to correct or supplement any relevant facts within five (5) business days of becoming aware of the deficiency shall constitute a violation of this permit.

### **H. Signatory Requirements**

1. All NOIs and NOTs shall be signed as follows:
  - a. For a corporation these forms shall be signed by a responsible corporate officer. For the purpose of this section, a responsible corporate officer means:

- (i) a president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision-making functions for the corporation; or
    - (ii) the manager of one or more manufacturing, production or operating facilities, provided the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;
  - b. For a partnership or sole proprietorship these forms shall be signed by a general partner or the proprietor, respectively; or
  - c. For a municipality, State, Federal, or other public agency these forms shall be signed by either a principal executive officer or ranking elected official. For purposes of this section, a principal executive officer of a Federal agency includes:
    - (i) the chief executive officer of the agency, or
    - (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of EPA).
2. The SWPPP and other information requested by the Department shall be signed by a person described in Part VII.H.1. of this permit or by a duly authorized representative of that person. A person is a duly authorized representative only if:
- a. The authorization is made in writing by a person described in Part VII.H.1. of this permit;
  - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of plant manager, operator of a well or a well field,

superintendent, position of *equivalent* responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a named individual or any individual occupying a named position) and,

- c. The written authorization shall include the name, title and signature of the authorized representative and be attached to the SWPPP.
3. All inspection reports shall be signed by the *qualified inspector* that performs the inspection.
4. The MS4 SWPPP Acceptance form shall be signed by the principal executive officer or ranking elected official from the *regulated, traditional land use control MS4*, or by a duly authorized representative of that person.

It shall constitute a permit violation if an incorrect and/or improper signatory authorizes any required forms, SWPPP and/or inspection reports.

## **I. Property Rights**

The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations. *Owners or operators* must obtain any applicable conveyances, easements, licenses and/or access to real property prior to *commencing construction activity*.

## **J. Severability**

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit shall not be affected thereby.

## **K. Requirement to Obtain Coverage Under an Alternative Permit**

1. The Department may require any owner or operator authorized by this permit to apply for and/or obtain either an individual SPDES permit or another SPDES general permit. When the Department requires any discharger authorized by a general permit to apply for an individual SPDES permit, it shall notify the discharger in writing that a permit application is required. This notice shall

include a brief statement of the reasons for this decision, an application form, a statement setting a time frame for the owner or operator to file the application for an individual SPDES permit, and a deadline, not sooner than 180 days from owner or operator receipt of the notification letter, whereby the authorization to discharge under this general permit shall be terminated. Applications must be submitted to the appropriate Permit Administrator at the Regional Office. The Department may grant additional time upon demonstration, to the satisfaction of the Department, that additional time to apply for an alternative authorization is necessary or where the Department has not provided a permit determination in accordance with Part 621 of this Title.

2. When an individual SPDES permit is issued to a discharger authorized to *discharge* under a general SPDES permit for the same *discharge(s)*, the general permit authorization for outfalls authorized under the individual SPDES permit is automatically terminated on the effective date of the individual permit unless termination is earlier in accordance with 6 NYCRR Part 750.

#### **L. Proper Operation and Maintenance**

The *owner or operator* shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the *owner or operator* to achieve compliance with the conditions of this permit and with the requirements of the SWPPP.

#### **M. Inspection and Entry**

The *owner or operator* shall allow an authorized representative of the Department, EPA, applicable county health department, or, in the case of a *construction site* which *discharges* through an *MS4*, an authorized representative of the *MS4* receiving the discharge, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the owner's or operator's premises where a regulated facility or activity is located or conducted or where records must be kept under the conditions of this permit;
2. Have access to and copy at reasonable times, any records that must be kept under the conditions of this permit; and

3. Inspect at reasonable times any facilities or equipment (including monitoring and control equipment), practices or operations regulated or required by this permit.
4. Sample or monitor at reasonable times, for purposes of assuring permit compliance or as otherwise authorized by the Act or ECL, any substances or parameters at any location.

#### **N. Permit Actions**

This permit may, at any time, be modified, suspended, revoked, or renewed by the Department in accordance with 6 NYCRR Part 621. The filing of a request by the *owner or operator* for a permit modification, revocation and reissuance, termination, a notification of planned changes or anticipated noncompliance does not limit, diminish and/or stay compliance with any terms of this permit.

#### **O. Definitions**

Definitions of key terms are included in Appendix A of this permit.

#### **P. Re-Opener Clause**

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction activity covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part VII.K. of this permit or the permit may be modified to include different limitations and/or requirements.
2. Any Department initiated permit modification, suspension or revocation will be conducted in accordance with 6 NYCRR Part 621, 6 NYCRR 750-1.18, and 6 NYCRR 750-1.20.

#### **Q. Penalties for Falsification of Forms and Reports**

In accordance with 6NYCRR Part 750-2.4 and 750-2.5, any person who knowingly makes any false material statement, representation, or certification in any application, record, report or other document filed or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished in accordance with ECL §71-1933 and or Articles 175 and 210 of the New York State Penal Law.

**R. Other Permits**

Nothing in this permit relieves the *owner or operator* from a requirement to obtain any other permits required by law.

## **APPENDIX A – Acronyms and Definitions**

### **Acronyms**

APO – Agency Preservation Officer

BMP – Best Management Practice

CPESC – Certified Professional in Erosion and Sediment Control

Cpv – Channel Protection Volume

CWA – Clean Water Act (or the Federal Water Pollution Control Act, 33 U.S.C. §1251 et seq)

DOW – Division of Water

EAF – Environmental Assessment Form

ECL - Environmental Conservation Law

EPA – U. S. Environmental Protection Agency

HSG – Hydrologic Soil Group

MS4 – Municipal Separate Storm Sewer System

NOI – Notice of Intent

NOT – Notice of Termination

NPDES – National Pollutant Discharge Elimination System

OPRHP – Office of Parks, Recreation and Historic Places

Qf – Extreme Flood

Qp – Overbank Flood

RRv – Runoff Reduction Volume

RWE – Regional Water Engineer

SEQR – State Environmental Quality Review

SEQRA - State Environmental Quality Review Act

SHPA – State Historic Preservation Act

SPDES – State Pollutant Discharge Elimination System

SWPPP – Stormwater Pollution Prevention Plan

TMDL – Total Maximum Daily Load

UPA – Uniform Procedures Act

USDA – United States Department of Agriculture

WQv – Water Quality Volume



## Definitions

All definitions in this section are solely for the purposes of this permit.

**Agricultural Building** – a structure designed and constructed to house farm implements, hay, grain, poultry, livestock or other horticultural products; excluding any structure designed, constructed or used, in whole or in part, for human habitation, as a place of employment where agricultural products are processed, treated or packaged, or as a place used by the public.

**Agricultural Property** – means the land for construction of a barn, *agricultural building*, silo, stockyard, pen or other structural practices identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State” prepared by the Department in cooperation with agencies of New York Nonpoint Source Coordinating Committee (dated June 2007).

**Alter Hydrology from Pre to Post-Development Conditions** - means the post-development peak flow rate(s) has increased by more than 5% of the pre-developed condition for the design storm of interest (e.g. 10 yr and 100 yr).

**Combined Sewer** - means a sewer that is designed to collect and convey both “sewage” and “stormwater”.

**Commence (Commencement of) Construction Activities** - means the initial disturbance of soils associated with clearing, grading or excavation activities; or other construction related activities that disturb or expose soils such as demolition, stockpiling of fill material, and the initial installation of erosion and sediment control practices required in the SWPPP. See definition for “*Construction Activity(ies)*” also.

**Construction Activity(ies)** - means any clearing, grading, excavation, filling, demolition or stockpiling activities that result in soil disturbance. Clearing activities can include, but are not limited to, logging equipment operation, the cutting and skidding of trees, stump removal and/or brush root removal. Construction activity does not include routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility.

**Construction Site** – means the land area where *construction activity(ies)* will occur. See definition for “*Commence (Commencement of) Construction Activities*” and “*Larger Common Plan of Development or Sale*” also.

**Dewatering** – means the act of draining rainwater and/or groundwater from building foundations, vaults or excavations/trenches.

**Direct Discharge (to a specific surface waterbody)** - means that runoff flows from a *construction site* by overland flow and the first point of discharge is the specific surface waterbody, or runoff flows from a *construction site* to a separate storm sewer system

and the first point of discharge from the separate storm sewer system is the specific surface waterbody.

**Discharge(s)** - means any addition of any pollutant to waters of the State through an outlet or *point source*.

**Embankment** – means an earthen or rock slope that supports a road/highway.

**Endangered or Threatened Species** – see 6 NYCRR Part 182 of the Department’s rules and regulations for definition of terms and requirements.

**Environmental Conservation Law (ECL)** - means chapter 43-B of the Consolidated Laws of the State of New York, entitled the Environmental Conservation Law.

**Equivalent (Equivalence)** – means that the practice or measure meets all the performance, longevity, maintenance, and safety objectives of the technical standard and will provide an equal or greater degree of water quality protection.

**Final Stabilization** - means that all soil disturbance activities have ceased and a uniform, perennial vegetative cover with a density of eighty (80) percent over the entire pervious surface has been established; or other equivalent stabilization measures, such as permanent landscape mulches, rock rip-rap or washed/crushed stone have been applied on all disturbed areas that are not covered by permanent structures, concrete or pavement.

**General SPDES permit** - means a SPDES permit issued pursuant to 6 NYCRR Part 750-1.21 and Section 70-0117 of the ECL authorizing a category of discharges.

**Groundwater(s)** - means waters in the saturated zone. The saturated zone is a subsurface zone in which all the interstices are filled with water under pressure greater than that of the atmosphere. Although the zone may contain gas-filled interstices or interstices filled with fluids other than water, it is still considered saturated.

**Historic Property** – means any building, structure, site, object or district that is listed on the State or National Registers of Historic Places or is determined to be eligible for listing on the State or National Registers of Historic Places.

**Impervious Area (Cover)** - means all impermeable surfaces that cannot effectively infiltrate rainfall. This includes paved, concrete and gravel surfaces (i.e. parking lots, driveways, roads, runways and sidewalks); building rooftops and miscellaneous impermeable structures such as patios, pools, and sheds.

**Infeasible** – means not technologically possible, or not economically practicable and achievable in light of best industry practices.

**Larger Common Plan of Development or Sale** - means a contiguous area where multiple separate and distinct *construction activities* are occurring, or will occur, under one plan. The term “plan” in “larger common plan of development or sale” is broadly defined as any announcement or piece of documentation (including a sign, public notice or hearing, marketing plan, advertisement, drawing, permit application, State Environmental Quality Review Act (SEQRA) environmental assessment form or other documents, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating that *construction activities* may occur on a specific plot.

For discrete construction projects that are located within a larger common plan of development or sale that are at least 1/4 mile apart, each project can be treated as a separate plan of development or sale provided any interconnecting road, pipeline or utility project that is part of the same “common plan” is not concurrently being disturbed.

**Minimize** – means reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practices.

**Municipal Separate Storm Sewer (MS4)** - a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, man-made channels, or storm drains):

- (i) Owned or operated by a State, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, stormwater, or other wastes, including special districts under State law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to surface waters of the State;
- (ii) Designed or used for collecting or conveying stormwater;
- (iii) Which is not a *combined sewer*, and
- (iv) Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR 122.2.

**National Pollutant Discharge Elimination System (NPDES)** - means the national system for the issuance of wastewater and stormwater permits under the Federal Water Pollution Control Act (Clean Water Act).

**Natural Buffer** –means an undisturbed area with natural cover running along a surface water (e.g. wetland, stream, river, lake, etc.).

**New Development** – means any land disturbance that does not meet the definition of Redevelopment Activity included in this appendix.

**New York State Erosion and Sediment Control Certificate Program** – a certificate program that establishes and maintains a process to identify and recognize individuals who are capable of developing, designing, inspecting and maintaining erosion and sediment control plans on projects that disturb soils in New York State. The certificate program is administered by the New York State Conservation District Employees Association.

**NOI Acknowledgment Letter** - means the letter that the Department sends to an owner or operator to acknowledge the Department's receipt and acceptance of a complete Notice of Intent. This letter documents the owner's or operator's authorization to discharge in accordance with the general permit for stormwater discharges from *construction activity*.

**Nonpoint Source** - means any source of water pollution or pollutants which is not a discrete conveyance or *point source* permitted pursuant to Title 7 or 8 of Article 17 of the Environmental Conservation Law (see ECL Section 17-1403).

**Overbank** –means flow events that exceed the capacity of the stream channel and spill out into the adjacent floodplain.

**Owner or Operator** - means the person, persons or legal entity which owns or leases the property on which the *construction activity* is occurring; an entity that has operational control over the construction plans and specifications, including the ability to make modifications to the plans and specifications; and/or an entity that has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the permit conditions.

**Performance Criteria** – means the design criteria listed under the “Required Elements” sections in Chapters 5, 6 and 10 of the technical standard, New York State Stormwater Management Design Manual, dated January 2015. It does not include the Sizing Criteria (i.e. WQv, RRv, Cpv, Qp and Qf ) in Part I.C.2. of the permit.

**Point Source** - means any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, vessel or other floating craft, or landfill leachate collection system from which *pollutants* are or may be discharged.

**Pollutant** - means dredged spoil, filter backwash, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand and industrial, municipal, agricultural waste and ballast discharged into water; which may cause or might reasonably be expected to cause pollution of the waters of the state in contravention of the standards or guidance values adopted as provided in 6 NYCRR Parts 700 et seq .

**Qualified Inspector** - means a person that is knowledgeable in the principles and practices of erosion and sediment control, such as a licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder or other Department endorsed individual(s).

It can also mean someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided that person has training in the principles and practices of erosion and sediment control. Training in the principles and practices of erosion and sediment control means that the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect has received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the individual working under the direct supervision of the licensed Professional Engineer or Registered Landscape Architect shall receive four (4) hours of training every three (3) years.

It can also mean a person that meets the *Qualified Professional* qualifications in addition to the *Qualified Inspector* qualifications.

Note: Inspections of any post-construction stormwater management practices that include structural components, such as a dam for an impoundment, shall be performed by a licensed Professional Engineer.

**Qualified Professional** - means a person that is knowledgeable in the principles and practices of stormwater management and treatment, such as a licensed Professional Engineer, Registered Landscape Architect or other Department endorsed individual(s). Individuals preparing SWPPPs that require the post-construction stormwater management practice component must have an understanding of the principles of hydrology, water quality management practice design, water quantity control design, and, in many cases, the principles of hydraulics. All components of the SWPPP that involve the practice of engineering, as defined by the NYS Education Law (see Article 145), shall be prepared by, or under the direct supervision of, a professional engineer licensed to practice in the State of New York.

**Redevelopment Activity(ies)** – means the disturbance and reconstruction of existing impervious area, including impervious areas that were removed from a project site within five (5) years of preliminary project plan submission to the local government (i.e. site plan, subdivision, etc.).

**Regulated, Traditional Land Use Control MS4** - means a city, town or village with land use control authority that is authorized to discharge under New York State DEC's

SPDES General Permit For Stormwater Discharges from Municipal Separate Stormwater Sewer Systems (MS4s) or the City of New York's Individual SPDES Permit for their Municipal Separate Storm Sewer Systems (NY-0287890).

**Routine Maintenance Activity** - means *construction activity* that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of a facility, including, but not limited to:

- Re-grading of gravel roads or parking lots,
- Cleaning and shaping of existing roadside ditches and culverts that maintains the approximate original line and grade, and hydraulic capacity of the ditch,
- Cleaning and shaping of existing roadside ditches that does not maintain the approximate original grade, hydraulic capacity and purpose of the ditch if the changes to the line and grade, hydraulic capacity or purpose of the ditch are installed to improve water quality and quantity controls (e.g. installing grass lined ditch),
- Placement of aggregate shoulder backing that stabilizes the transition between the road shoulder and the ditch or *embankment*,
- Full depth milling and filling of existing asphalt pavements, replacement of concrete pavement slabs, and similar work that does not expose soil or disturb the bottom six (6) inches of subbase material,
- Long-term use of equipment storage areas at or near highway maintenance facilities,
- Removal of sediment from the edge of the highway to restore a previously existing sheet-flow drainage connection from the highway surface to the highway ditch or *embankment*,
- Existing use of Canal Corp owned upland disposal sites for the canal, and
- Replacement of curbs, gutters, sidewalks and guide rail posts.

**Site limitations** – means site conditions that prevent the use of an infiltration technique and or infiltration of the total WQv. Typical site limitations include: seasonal high groundwater, shallow depth to bedrock, and soils with an infiltration rate less than 0.5 inches/hour. The existence of site limitations shall be confirmed and documented using actual field testing (i.e. test pits, soil borings, and infiltration test) or using information from the most current United States Department of Agriculture (USDA) Soil Survey for the County where the project is located.

**Sizing Criteria** – means the criteria included in Part I.C.2 of the permit that are used to size post-construction stormwater management control practices. The criteria include; Water Quality Volume (WQv), Runoff Reduction Volume (RRv), Channel Protection Volume (Cpv), *Overbank Flood* (Qp), and Extreme Flood (Qf).

**State Pollutant Discharge Elimination System (SPDES)** - means the system established pursuant to Article 17 of the ECL and 6 NYCRR Part 750 for issuance of permits authorizing discharges to the waters of the state.

**Steep Slope** – means land area designated on the current United States Department of Agriculture (“USDA”) Soil Survey as Soil Slope Phase “D”, (provided the map unit name is inclusive of slopes greater than 25%) , or Soil Slope Phase E or F, (regardless of the map unit name), or a combination of the three designations.

**Streambank** – as used in this permit, means the terrain alongside the bed of a creek or stream. The bank consists of the sides of the channel, between which the flow is confined.

**Stormwater Pollution Prevention Plan (SWPPP)** – means a project specific report, including construction drawings, that among other things: describes the construction activity(ies), identifies the potential sources of pollution at the *construction site*; describes and shows the stormwater controls that will be used to control the pollutants (i.e. erosion and sediment controls; for many projects, includes post-construction stormwater management controls); and identifies procedures the *owner or operator* will implement to comply with the terms and conditions of the permit. See Part III of the permit for a complete description of the information that must be included in the SWPPP.

**Surface Waters of the State** - shall be construed to include lakes, bays, sounds, ponds, impounding reservoirs, springs, rivers, streams, creeks, estuaries, marshes, inlets, canals, the Atlantic ocean within the territorial seas of the state of New York and all other bodies of surface water, natural or artificial, inland or coastal, fresh or salt, public or private (except those private waters that do not combine or effect a junction with natural surface waters), which are wholly or partially within or bordering the state or within its jurisdiction. Waters of the state are further defined in 6 NYCRR Parts 800 to 941.

**Temporarily Ceased** – means that an existing disturbed area will not be disturbed again within 14 calendar days of the previous soil disturbance.

**Temporary Stabilization** - means that exposed soil has been covered with material(s) as set forth in the technical standard, New York Standards and Specifications for Erosion and Sediment Control, to prevent the exposed soil from eroding. The materials can include, but are not limited to, mulch, seed and mulch, and erosion control mats (e.g. jute twisted yarn, excelsior wood fiber mats).

**Total Maximum Daily Loads (TMDLs)** - A TMDL is the sum of the allowable loads of a single pollutant from all contributing point and *nonpoint sources*. It is a calculation of the maximum amount of a pollutant that a waterbody can receive on a daily basis and still meet *water quality standards*, and an allocation of that amount to the pollutant's sources. A TMDL stipulates wasteload allocations (WLAs) for *point source* discharges, load allocations (LAs) for *nonpoint sources*, and a margin of safety (MOS).

**Trained Contractor** - means an employee from the contracting (construction) company, identified in Part III.A.6., that has received four (4) hours of Department endorsed

training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity. After receiving the initial training, the *trained contractor* shall receive four (4) hours of training every three (3) years.

It can also mean an employee from the contracting (construction) company, identified in Part III.A.6., that meets the *qualified inspector* qualifications (e.g. licensed Professional Engineer, Certified Professional in Erosion and Sediment Control (CPESC), Registered Landscape Architect, New York State Erosion and Sediment Control Certificate Program holder, or someone working under the direct supervision of, and at the same company as, the licensed Professional Engineer or Registered Landscape Architect, provided they have received four (4) hours of Department endorsed training in proper erosion and sediment control principles from a Soil and Water Conservation District, or other Department endorsed entity).

The *trained contractor* is responsible for the day to day implementation of the SWPPP.

**Uniform Procedures Act (UPA) Permit** - means a permit required under 6 NYCRR Part 621 of the Environmental Conservation Law (ECL), Article 70.

**Water Quality Standard** - means such measures of purity or quality for any waters in relation to their reasonable and necessary use as promulgated in 6 NYCRR Part 700 et seq.



## APPENDIX B – Required SWPPP Components by Project Type

**Table 1**  
**Construction Activities that Require the Preparation of a SWPPP That Only Includes Erosion and Sediment Controls**

<p><b>The following construction activities that involve soil disturbances of one (1) or more acres of land, but less than five (5) acres:</b></p> <ul style="list-style-type: none"><li>• Single family home <u>not</u> located in one of the watersheds listed in Appendix C or <u>not directly discharging</u> to one of the 303(d) segments listed in Appendix E</li><li>• Single family residential subdivisions with 25% or less impervious cover at total site build-out and <u>not</u> located in one of the watersheds listed in Appendix C and <u>not</u> directly discharging to one of the 303(d) segments listed in Appendix E</li><li>• Construction of a barn or other <i>agricultural building</i>, silo, stock yard or pen.</li></ul>
<p><b>The following construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land:</b></p> <p>All construction activities located in the watersheds identified in Appendix D that involve soil disturbances between five thousand (5,000) square feet and one (1) acre of land.</p>
<p><b>The following construction activities that involve soil disturbances of one (1) or more acres of land:</b></p> <ul style="list-style-type: none"><li>• Installation of underground, linear utilities; such as gas lines, fiber-optic cable, cable TV, electric, telephone, sewer mains, and water mains</li><li>• Environmental enhancement projects, such as wetland mitigation projects, stormwater retrofits and stream restoration projects</li><li>• Pond construction</li><li>• Linear bike paths running through areas with vegetative cover, including bike paths surfaced with an impervious cover</li><li>• Cross-country ski trails and walking/hiking trails</li><li>• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are not part of residential, commercial or institutional development;</li><li>• Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that include incidental shoulder or curb work along an existing highway to support construction of the sidewalk, bike path or walking path.</li><li>• Slope stabilization projects</li><li>• Slope flattening that changes the grade of the site, but does not significantly change the runoff characteristics</li></ul>

**Table 1 (Continued) CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT ONLY INCLUDES EROSION AND SEDIMENT CONTROLS**

**The following construction activities that involve soil disturbances of one (1) or more acres of land:**

- Spoil areas that will be covered with vegetation
- Vegetated open space projects (i.e. recreational parks, lawns, meadows, fields, downhill ski trails) excluding projects that *alter hydrology from pre to post development* conditions,
- Athletic fields (natural grass) that do not include the construction or reconstruction of *impervious area* and do not *alter hydrology from pre to post development* conditions
- Demolition project where vegetation will be established, and no redevelopment is planned
- Overhead electric transmission line project that does not include the construction of permanent access roads or parking areas surfaced with *impervious cover*
- Structural practices as identified in Table II in the “Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State”, excluding projects that involve soil disturbances of greater than five acres and construction activities that include the construction or reconstruction of impervious area
- Temporary access roads, median crossovers, detour roads, lanes, or other temporary impervious areas that will be restored to pre-construction conditions once the construction activity is complete

**Table 2**  
**CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES**  
**POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES**

**The following construction activities that involve soil disturbances of one (1) or more acres of land:**

- Single family home located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family home that disturbs five (5) or more acres of land
- Single family residential subdivisions located in one of the watersheds listed in Appendix C or *directly discharging* to one of the 303(d) segments listed in Appendix E
- Single family residential subdivisions that involve soil disturbances of between one (1) and five (5) acres of land with greater than 25% impervious cover at total site build-out
- Single family residential subdivisions that involve soil disturbances of five (5) or more acres of land, and single family residential subdivisions that involve soil disturbances of less than five (5) acres that are part of a larger common plan of development or sale that will ultimately disturb five or more acres of land
- Multi-family residential developments; includes duplexes, townhomes, condominiums, senior housing complexes, apartment complexes, and mobile home parks
- Airports
- Amusement parks
- Breweries, cideries, and wineries, including establishments constructed on agricultural land
- Campgrounds
- Cemeteries that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Commercial developments
- Churches and other places of worship
- Construction of a barn or other *agricultural building* (e.g. silo) and structural practices as identified in Table II in the "Agricultural Management Practices Catalog for Nonpoint Source Pollution in New York State" that include the construction or reconstruction of *impervious area*, excluding projects that involve soil disturbances of less than five acres.
- Golf courses
- Institutional development; includes hospitals, prisons, schools and colleges
- Industrial facilities; includes industrial parks
- Landfills
- Municipal facilities; includes highway garages, transfer stations, office buildings, POTW's, water treatment plants, and water storage tanks
- Office complexes
- Playgrounds that include the construction or reconstruction of impervious area
- Sports complexes
- Racetracks; includes racetracks with earthen (dirt) surface
- Road construction or reconstruction, including roads constructed as part of the construction activities listed in Table 1

Table 2 (Continued)

**CONSTRUCTION ACTIVITIES THAT REQUIRE THE PREPARATION OF A SWPPP THAT INCLUDES POST-CONSTRUCTION STORMWATER MANAGEMENT PRACTICES**

The following construction activities that involve soil disturbances of one (1) or more acres of land:

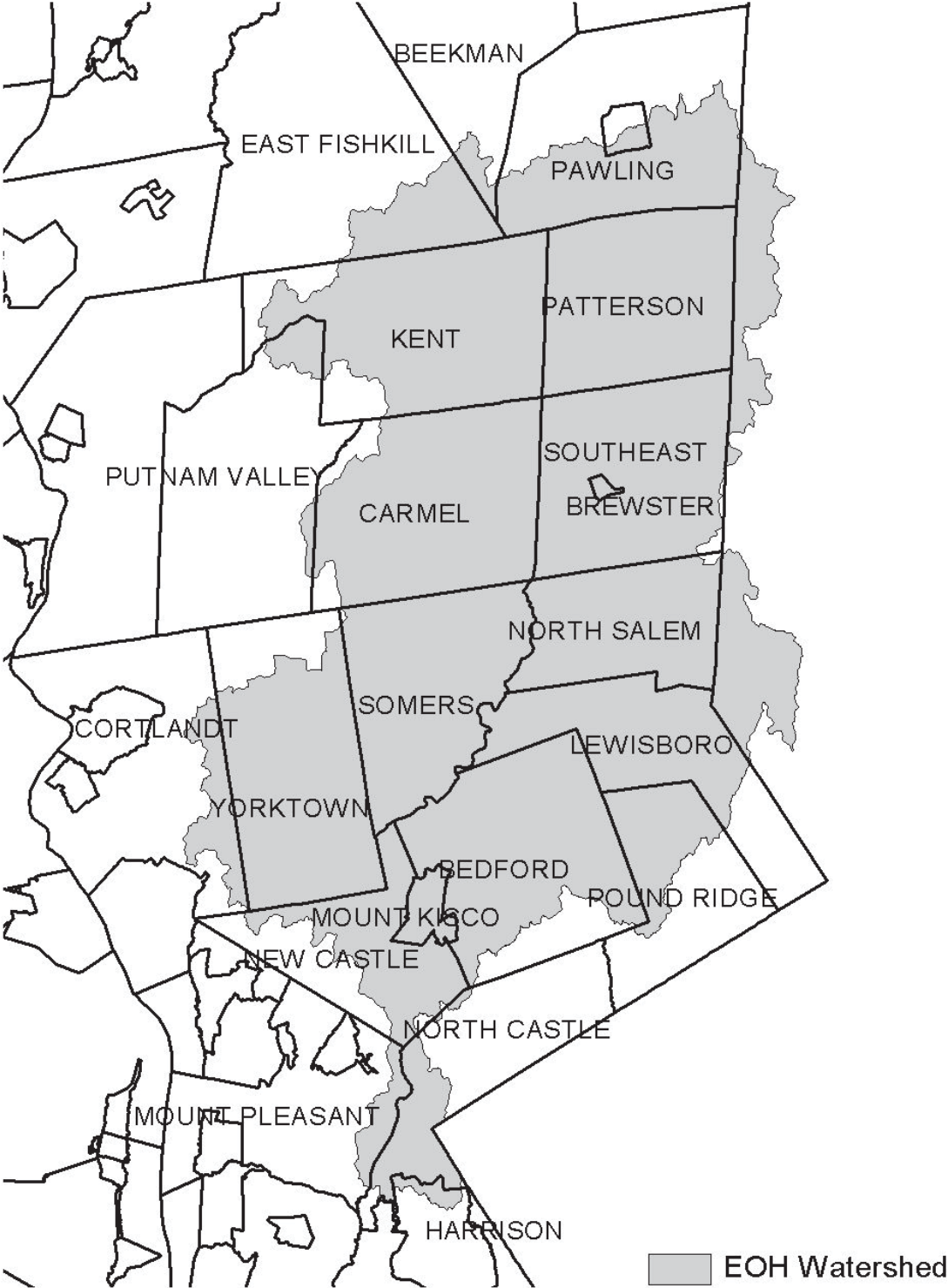
- Parking lot construction or reconstruction, including parking lots constructed as part of the construction activities listed in Table 1
- Athletic fields (natural grass) that include the construction or reconstruction of impervious area (>5% of disturbed area) or *alter the hydrology from pre to post development* conditions
- Athletic fields with artificial turf
- Permanent access roads, parking areas, substations, compressor stations and well drilling pads, surfaced with *impervious cover*, and constructed as part of an over-head electric transmission line project, wind-power project, cell tower project, oil or gas well drilling project, sewer or water main project or other linear utility project
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a residential, commercial or institutional development
- Sidewalk, bike path or walking path projects, surfaced with an impervious cover, that are part of a highway construction or reconstruction project
- All other construction activities that include the construction or reconstruction of *impervious area* or *alter the hydrology from pre to post development* conditions, and are not listed in Table 1

## APPENDIX C – Watersheds Requiring Enhanced Phosphorus Removal

**Watersheds where *owners or operators* of construction activities identified in Table 2 of Appendix B must prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the Enhanced Phosphorus Removal Standards included in the technical standard, New York State Stormwater Management Design Manual (“Design Manual”).**

- Entire New York City Watershed located east of the Hudson River - Figure 1
- Onondaga Lake Watershed - Figure 2
- Greenwood Lake Watershed -Figure 3
- Oscawana Lake Watershed – Figure 4
- Kinderhook Lake Watershed – Figure 5

**Figure 1 - New York City Watershed East of the Hudson**



**Figure 2 - Onondaga Lake Watershed**

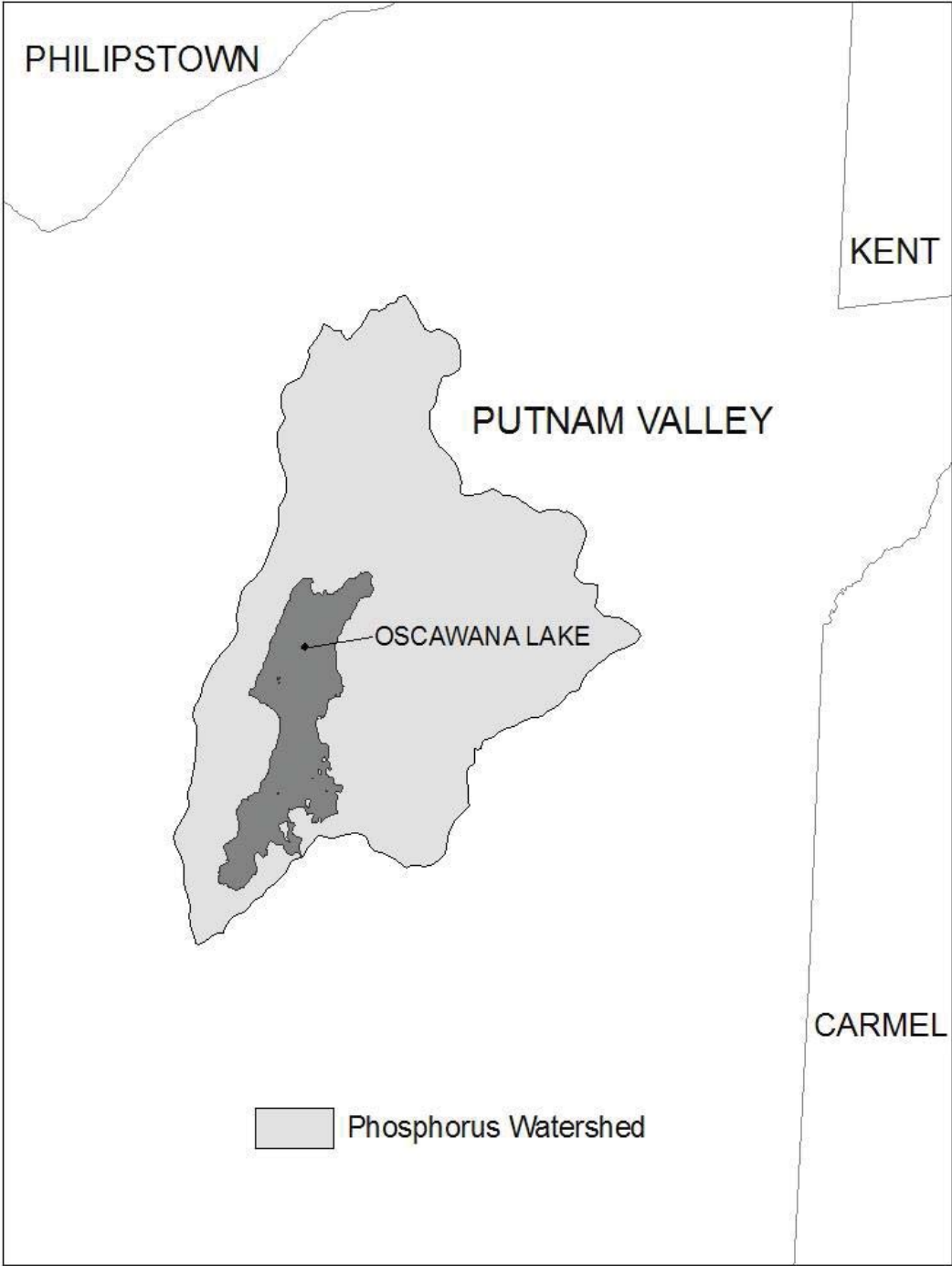


**Figure 3 - Greenwood Lake Watershed**

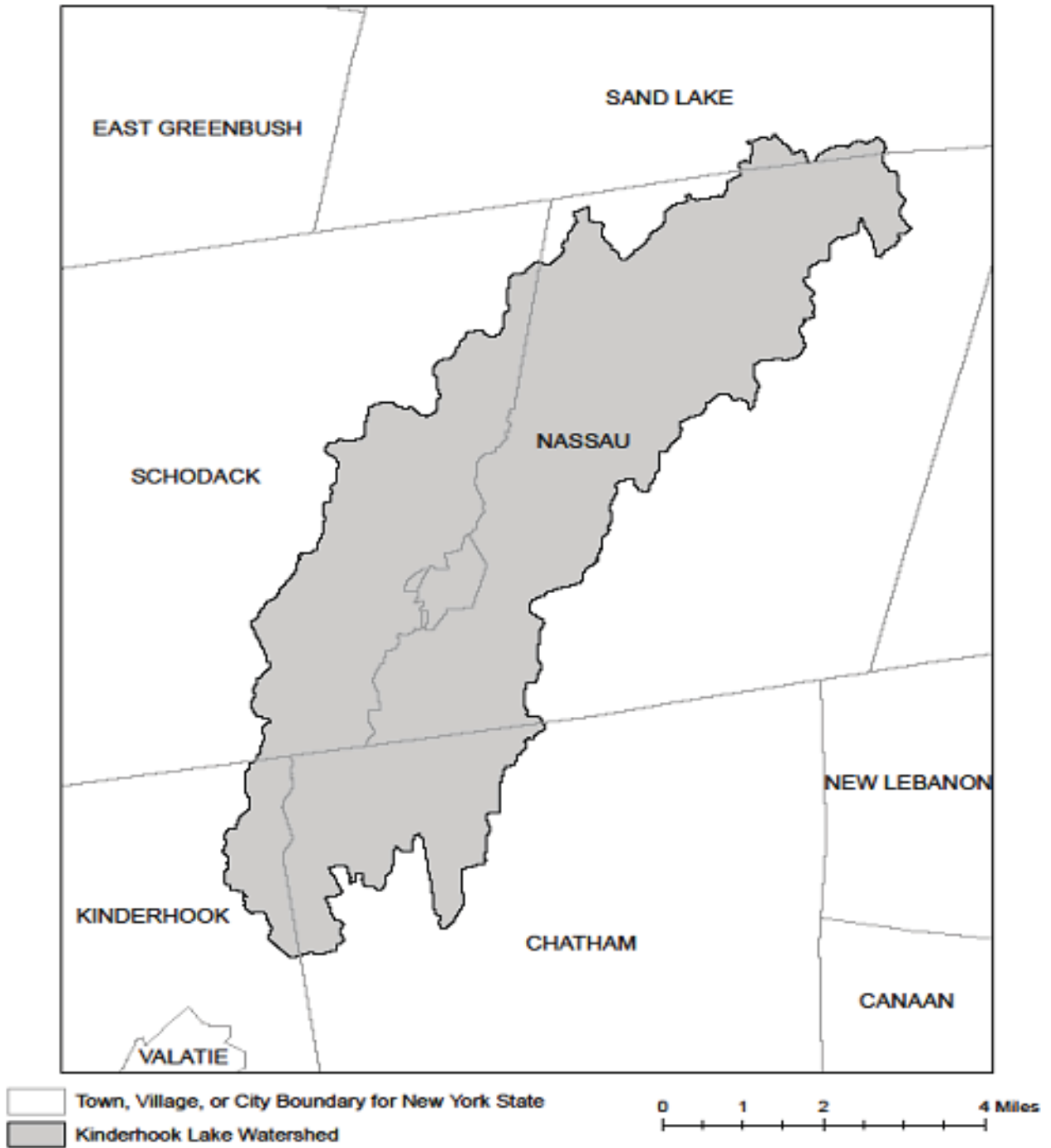




**Figure 4 - Oscawana Lake Watershed**



**Figure 5 - Kinderhook Lake Watershed**



## **APPENDIX D – Watersheds with Lower Disturbance Threshold**

**Watersheds where *owners or operators* of construction activities that involve soil disturbances between five thousand (5000) square feet and one (1) acre of land must obtain coverage under this permit.**

Entire New York City Watershed that is located east of the Hudson River - See Figure 1 in Appendix C

## APPENDIX E – 303(d) Segments Impaired by Construction Related Pollutant(s)

List of 303(d) segments impaired by pollutants related to *construction activity* (e.g. silt, sediment or nutrients). The list was developed using "The Final New York State 2016 Section 303(d) List of Impaired Waters Requiring a TMDL/Other Strategy" dated November 2016. *Owners or operators* of single family home and single family residential subdivisions with 25% or less total impervious cover at total site build-out that involve soil disturbances of one or more acres of land, but less than 5 acres, and *directly discharge* to one of the listed segments below shall prepare a SWPPP that includes post-construction stormwater management practices designed in conformance with the New York State Stormwater Management Design Manual ("Design Manual"), dated January 2015.

COUNTY	WATERBODY	POLLUTANT
Albany	Ann Lee (Shakers) Pond, Stump Pond	Nutrients
Albany	Basic Creek Reservoir	Nutrients
Allegany	Amity Lake, Saunders Pond	Nutrients
Bronx	Long Island Sound, Bronx	Nutrients
Bronx	Van Cortlandt Lake	Nutrients
Broome	Fly Pond, Deer Lake, Sky Lake	Nutrients
Broome	Minor Tribs to Lower Susquehanna (north)	Nutrients
Broome	Whitney Point Lake/Reservoir	Nutrients
Cattaraugus	Allegheny River/Reservoir	Nutrients
Cattaraugus	Beaver (Alma) Lake	Nutrients
Cattaraugus	Case Lake	Nutrients
Cattaraugus	Linlyco/Club Pond	Nutrients
Cayuga	Duck Lake	Nutrients
Cayuga	Little Sodus Bay	Nutrients
Chautauqua	Bear Lake	Nutrients
Chautauqua	Chadakoin River and tribs	Nutrients
Chautauqua	Chautauqua Lake, North	Nutrients
Chautauqua	Chautauqua Lake, South	Nutrients
Chautauqua	Findley Lake	Nutrients
Chautauqua	Hulburt/Clymer Pond	Nutrients
Clinton	Great Chazy River, Lower, Main Stem	Silt/Sediment
Clinton	Lake Champlain, Main Lake, Middle	Nutrients
Clinton	Lake Champlain, Main Lake, North	Nutrients
Columbia	Kinderhook Lake	Nutrients
Columbia	Robinson Pond	Nutrients
Cortland	Dean Pond	Nutrients

### 303(d) Segments Impaired by Construction Related Pollutant(s)

Dutchess	Fall Kill and tribs	Nutrients
Dutchess	Hillside Lake	Nutrients
Dutchess	Wappingers Lake	Nutrients
Dutchess	Wappingers Lake	Silt/Sediment
Erie	Beeman Creek and tribs	Nutrients
Erie	Ellicott Creek, Lower, and tribs	Silt/Sediment
Erie	Ellicott Creek, Lower, and tribs	Nutrients
Erie	Green Lake	Nutrients
Erie	Little Sister Creek, Lower, and tribs	Nutrients
Erie	Murder Creek, Lower, and tribs	Nutrients
Erie	Rush Creek and tribs	Nutrients
Erie	Scajaquada Creek, Lower, and tribs	Nutrients
Erie	Scajaquada Creek, Middle, and tribs	Nutrients
Erie	Scajaquada Creek, Upper, and tribs	Nutrients
Erie	South Branch Smoke Cr, Lower, and tribs	Silt/Sediment
Erie	South Branch Smoke Cr, Lower, and tribs	Nutrients
Essex	Lake Champlain, Main Lake, South	Nutrients
Essex	Lake Champlain, South Lake	Nutrients
Essex	Willsboro Bay	Nutrients
Genesee	Bigelow Creek and tribs	Nutrients
Genesee	Black Creek, Middle, and minor tribs	Nutrients
Genesee	Black Creek, Upper, and minor tribs	Nutrients
Genesee	Bowen Brook and tribs	Nutrients
Genesee	LeRoy Reservoir	Nutrients
Genesee	Oak Orchard Cr, Upper, and tribs	Nutrients
Genesee	Tonawanda Creek, Middle, Main Stem	Nutrients
Greene	Schoharie Reservoir	Silt/Sediment
Greene	Sleepy Hollow Lake	Silt/Sediment
Herkimer	Steele Creek tribs	Silt/Sediment
Herkimer	Steele Creek tribs	Nutrients
Jefferson	Moon Lake	Nutrients
Kings	Hendrix Creek	Nutrients
Kings	Prospect Park Lake	Nutrients
Lewis	Mill Creek/South Branch, and tribs	Nutrients
Livingston	Christie Creek and tribs	Nutrients
Livingston	Conesus Lake	Nutrients
Livingston	Mill Creek and minor tribs	Silt/Sediment
Monroe	Black Creek, Lower, and minor tribs	Nutrients
Monroe	Buck Pond	Nutrients
Monroe	Cranberry Pond	Nutrients

### 303(d) Segments Impaired by Construction Related Pollutant(s)

Monroe	Lake Ontario Shoreline, Western	Nutrients
Monroe	Long Pond	Nutrients
Monroe	Mill Creek and tribs	Nutrients
Monroe	Mill Creek/Blue Pond Outlet and tribs	Nutrients
Monroe	Minor Tribs to Irondequoit Bay	Nutrients
Monroe	Rochester Embayment - East	Nutrients
Monroe	Rochester Embayment - West	Nutrients
Monroe	Shipbuilders Creek and tribs	Nutrients
Monroe	Thomas Creek/White Brook and tribs	Nutrients
Nassau	Beaver Lake	Nutrients
Nassau	Camaans Pond	Nutrients
Nassau	East Meadow Brook, Upper, and tribs	Silt/Sediment
Nassau	East Rockaway Channel	Nutrients
Nassau	Grant Park Pond	Nutrients
Nassau	Hempstead Bay	Nutrients
Nassau	Hempstead Lake	Nutrients
Nassau	Hewlett Bay	Nutrients
Nassau	Hog Island Channel	Nutrients
Nassau	Long Island Sound, Nassau County Waters	Nutrients
Nassau	Massapequa Creek and tribs	Nutrients
Nassau	Milburn/Parsonage Creeks, Upp, and tribs	Nutrients
Nassau	Reynolds Channel, west	Nutrients
Nassau	Tidal Tribs to Hempstead Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Nutrients
Nassau	Tribs (fresh) to East Bay	Silt/Sediment
Nassau	Tribs to Smith/Halls Ponds	Nutrients
Nassau	Woodmere Channel	Nutrients
New York	Harlem Meer	Nutrients
New York	The Lake in Central Park	Nutrients
Niagara	Bergholtz Creek and tribs	Nutrients
Niagara	Hyde Park Lake	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Niagara	Lake Ontario Shoreline, Western	Nutrients
Oneida	Ballou, Nail Creeks and tribs	Nutrients
Onondaga	Harbor Brook, Lower, and tribs	Nutrients
Onondaga	Ley Creek and tribs	Nutrients
Onondaga	Minor Tribs to Onondaga Lake	Nutrients
Onondaga	Ninemile Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Lower, and tribs	Nutrients
Onondaga	Onondaga Creek, Middle, and tribs	Nutrients

### 303(d) Segments Impaired by Construction Related Pollutant(s)

Onondaga	Onondaga Lake, northern end	Nutrients
Onondaga	Onondaga Lake, southern end	Nutrients
Ontario	Great Brook and minor tribs	Silt/Sediment
Ontario	Great Brook and minor tribs	Nutrients
Ontario	Hemlock Lake Outlet and minor tribs	Nutrients
Ontario	Honeoye Lake	Nutrients
Orange	Greenwood Lake	Nutrients
Orange	Monhagen Brook and tribs	Nutrients
Orange	Orange Lake	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Orleans	Lake Ontario Shoreline, Western	Nutrients
Oswego	Lake Neatahwanta	Nutrients
Oswego	Pleasant Lake	Nutrients
Putnam	Bog Brook Reservoir	Nutrients
Putnam	Boyd Corners Reservoir	Nutrients
Putnam	Croton Falls Reservoir	Nutrients
Putnam	Diverting Reservoir	Nutrients
Putnam	East Branch Reservoir	Nutrients
Putnam	Lake Carmel	Nutrients
Putnam	Middle Branch Reservoir	Nutrients
Putnam	Oscawana Lake	Nutrients
Putnam	Palmer Lake	Nutrients
Putnam	West Branch Reservoir	Nutrients
Queens	Bergen Basin	Nutrients
Queens	Flushing Creek/Bay	Nutrients
Queens	Jamaica Bay, Eastern, and tribs (Queens)	Nutrients
Queens	Kissena Lake	Nutrients
Queens	Meadow Lake	Nutrients
Queens	Willow Lake	Nutrients
Rensselaer	Nassau Lake	Nutrients
Rensselaer	Snyders Lake	Nutrients
Richmond	Grasmere Lake/Bradys Pond	Nutrients
Rockland	Congers Lake, Swartout Lake	Nutrients
Rockland	Rockland Lake	Nutrients
Saratoga	Ballston Lake	Nutrients
Saratoga	Dwaas Kill and tribs	Silt/Sediment
Saratoga	Dwaas Kill and tribs	Nutrients
Saratoga	Lake Lonely	Nutrients
Saratoga	Round Lake	Nutrients
Saratoga	Tribs to Lake Lonely	Nutrients

### 303(d) Segments Impaired by Construction Related Pollutant(s)

Schenectady	Collins Lake	Nutrients
Schenectady	Duane Lake	Nutrients
Schenectady	Mariaville Lake	Nutrients
Schoharie	Engleville Pond	Nutrients
Schoharie	Summit Lake	Nutrients
Seneca	Reeder Creek and tribs	Nutrients
St.Lawrence	Black Lake Outlet/Black Lake	Nutrients
St.Lawrence	Fish Creek and minor tribs	Nutrients
Steuben	Smith Pond	Nutrients
Suffolk	Agawam Lake	Nutrients
Suffolk	Big/Little Fresh Ponds	Nutrients
Suffolk	Canaan Lake	Silt/Sediment
Suffolk	Canaan Lake	Nutrients
Suffolk	Flanders Bay, West/Lower Sawmill Creek	Nutrients
Suffolk	Fresh Pond	Nutrients
Suffolk	Great South Bay, East	Nutrients
Suffolk	Great South Bay, Middle	Nutrients
Suffolk	Great South Bay, West	Nutrients
Suffolk	Lake Ronkonkoma	Nutrients
Suffolk	Long Island Sound, Suffolk County, West	Nutrients
Suffolk	Mattituck (Marratooka) Pond	Nutrients
Suffolk	Meetinghouse/Terrys Creeks and tribs	Nutrients
Suffolk	Mill and Seven Ponds	Nutrients
Suffolk	Millers Pond	Nutrients
Suffolk	Moriches Bay, East	Nutrients
Suffolk	Moriches Bay, West	Nutrients
Suffolk	Peconic River, Lower, and tidal tribs	Nutrients
Suffolk	Quantuck Bay	Nutrients
Suffolk	Shinnecock Bay and Inlet	Nutrients
Suffolk	Tidal tribs to West Moriches Bay	Nutrients
Sullivan	Bodine, Montgomery Lakes	Nutrients
Sullivan	Davies Lake	Nutrients
Sullivan	Evens Lake	Nutrients
Sullivan	Pleasure Lake	Nutrients
Tompkins	Cayuga Lake, Southern End	Nutrients
Tompkins	Cayuga Lake, Southern End	Silt/Sediment
Tompkins	Owasco Inlet, Upper, and tribs	Nutrients
Ulster	Ashokan Reservoir	Silt/Sediment
Ulster	Esopus Creek, Upper, and minor tribs	Silt/Sediment
Warren	Hague Brook and tribs	Silt/Sediment



### 303(d) Segments Impaired by Construction Related Pollutant(s)

Warren	Huddle/Finkle Brooks and tribs	Silt/Sediment
Warren	Indian Brook and tribs	Silt/Sediment
Warren	Lake George	Silt/Sediment
Warren	Tribs to L.George, Village of L George	Silt/Sediment
Washington	Cossayuna Lake	Nutrients
Washington	Lake Champlain, South Bay	Nutrients
Washington	Tribs to L.George, East Shore	Silt/Sediment
Washington	Wood Cr/Champlain Canal and minor tribs	Nutrients
Wayne	Port Bay	Nutrients
Westchester	Amawalk Reservoir	Nutrients
Westchester	Blind Brook, Upper, and tribs	Silt/Sediment
Westchester	Cross River Reservoir	Nutrients
Westchester	Lake Katonah	Nutrients
Westchester	Lake Lincolndale	Nutrients
Westchester	Lake Meahagh	Nutrients
Westchester	Lake Mohegan	Nutrients
Westchester	Lake Shenorock	Nutrients
Westchester	Long Island Sound, Westchester (East)	Nutrients
Westchester	Mamaroneck River, Lower	Silt/Sediment
Westchester	Mamaroneck River, Upper, and minor tribs	Silt/Sediment
Westchester	Muscoot/Upper New Croton Reservoir	Nutrients
Westchester	New Croton Reservoir	Nutrients
Westchester	Peach Lake	Nutrients
Westchester	Reservoir No.1 (Lake Isle)	Nutrients
Westchester	Saw Mill River, Lower, and tribs	Nutrients
Westchester	Saw Mill River, Middle, and tribs	Nutrients
Westchester	Sheldrake River and tribs	Silt/Sediment
Westchester	Sheldrake River and tribs	Nutrients
Westchester	Silver Lake	Nutrients
Westchester	Teatown Lake	Nutrients
Westchester	Titicus Reservoir	Nutrients
Westchester	Truesdale Lake	Nutrients
Westchester	Wallace Pond	Nutrients
Wyoming	Java Lake	Nutrients
Wyoming	Silver Lake	Nutrients

## APPENDIX F – List of NYS DEC Regional Offices

<u>Region</u>	<u>COVERING THE FOLLOWING COUNTIES:</u>	<u>DIVISION OF ENVIRONMENTAL PERMITS (DEP) PERMIT ADMINISTRATORS</u>	<u>DIVISION OF WATER (DOW) WATER (SPDES) PROGRAM</u>
1	NASSAU AND SUFFOLK	50 CIRCLE ROAD STONY BROOK, NY 11790 TEL. (631) 444-0365	50 CIRCLE ROAD STONY BROOK, NY 11790-3409 TEL. (631) 444-0405
2	BRONX, KINGS, NEW YORK, QUEENS AND RICHMOND	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4997	1 HUNTERS POINT PLAZA, 47-40 21ST ST. LONG ISLAND CITY, NY 11101-5407 TEL. (718) 482-4933
3	DUTCHESS, ORANGE, PUTNAM, ROCKLAND, SULLIVAN, ULSTER AND WESTCHESTER	21 SOUTH PUTT CORNERS ROAD NEW PALTZ, NY 12561-1696 TEL. (845) 256-3059	100 HILLSIDE AVENUE, SUITE 1W WHITE PLAINS, NY 10603 TEL. (914) 428 - 2505
4	ALBANY, COLUMBIA, DELAWARE, GREENE, MONTGOMERY, OTSEGO, RENSSELAER, SCHENECTADY AND SCHOHARIE	1150 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2069	1130 NORTH WESTCOTT ROAD SCHENECTADY, NY 12306-2014 TEL. (518) 357-2045
5	CLINTON, ESSEX, FRANKLIN, FULTON, HAMILTON, SARATOGA, WARREN AND WASHINGTON	1115 STATE ROUTE 86, Po Box 296 RAY BROOK, NY 12977-0296 TEL. (518) 897-1234	232 GOLF COURSE ROAD WARRENSBURG, NY 12885-1172 TEL. (518) 623-1200
6	HERKIMER, JEFFERSON, LEWIS, ONEIDA AND ST. LAWRENCE	STATE OFFICE BUILDING 317 WASHINGTON STREET WATERTOWN, NY 13601-3787 TEL. (315) 785-2245	STATE OFFICE BUILDING 207 GENESEE STREET UTICA, NY 13501-2885 TEL. (315) 793-2554
7	BROOME, CAYUGA, CHENANGO, CORTLAND, MADISON, ONONDAGA, OSWEGO, TIOGA AND TOMPKINS	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7438	615 ERIE BLVD. WEST SYRACUSE, NY 13204-2400 TEL. (315) 426-7500
8	CHEMUNG, GENESEE, LIVINGSTON, MONROE, ONTARIO, ORLEANS, SCHUYLER, SENECA, STEUBEN, WAYNE AND YATES	6274 EAST AVON-LIMA ROADAVON, NY 14414-9519 TEL. (585) 226-2466	6274 EAST AVON-LIMA RD. AVON, NY 14414-9519 TEL. (585) 226-2466
9	ALLEGANY, CATTARAUGUS, CHAUTAUQUA, ERIE, NIAGARA AND WYOMING	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7165	270 MICHIGAN AVENUE BUFFALO, NY 14203-2999 TEL. (716) 851-7070

# Appendix D



[www.dewberry.com](http://www.dewberry.com)

# NOTICE OF INTENT



**New York State Department of Environmental Conservation  
Division of Water  
625 Broadway, 4th Floor  
Albany, New York 12233-3505**

**NYR**   
(For DEC use only)

**Stormwater Discharges Associated with Construction Activity Under State Pollutant Discharge Elimination System (SPDES) General Permit # GP-0-20-001**  
All sections must be completed unless otherwise noted. Failure to complete all items may result in this form being returned to you, thereby delaying your coverage under this General Permit. Applicants must read and understand the conditions of the permit and prepare a Stormwater Pollution Prevention Plan prior to submitting this NOI. Applicants are responsible for identifying and obtaining other DEC permits that may be required.

**- IMPORTANT -**  
**RETURN THIS FORM TO THE ADDRESS ABOVE**  
**OWNER/OPERATOR MUST SIGN FORM**

### Owner/Operator Information

Owner/Operator (Company Name/Private Owner Name/Municipality Name)

Owner/Operator Contact Person Last Name (NOT CONSULTANT)

Owner/Operator Contact Person First Name

Owner/Operator Mailing Address

City

State  Zip  -

Phone (Owner/Operator)  -  -  Fax (Owner/Operator)  -  -

Email (Owner/Operator)

FED TAX ID  -  (not required for individuals)

**Project Site Information**

Project/Site Name

GLENCOMA LAKE CELL TOWER COMPOUND

Street Address (NOT P.O. BOX)

WALTON DRIVE

Side of Street

North  South  East  West

City/Town/Village (THAT ISSUES BUILDING PERMIT)

C A R M E L

State

N Y

Zip

1 0 5 4 1 -

County

P U T N A M

DEC Region

3

Name of Nearest Cross Street

S U M M I T C I R C L E D R I V E

Distance to Nearest Cross Street (Feet)

5 5 0

Project In Relation to Cross Street

North  South  East  West

Tax Map Numbers

Section-Block-Parcel  
1 - 9 0

Tax Map Numbers

8 7 . 9

1. Provide the Geographic Coordinates for the project site. To do this, go to the NYSDEC Stormwater Interactive Map on the DEC website at:

<https://gisservices.dec.ny.gov/gis/stormwater/>

Zoom into your Project Location such that you can accurately click on the centroid of your site. Once you have located the centroid of your project site, go to the bottom right hand corner of the map for the X, Y coordinates. Enter the coordinates into the boxes below. For problems with the interactive map use the help function.

**X Coordinates (Easting)**

-7 3 . 7 3 1

Ex. -73.749

**Y Coordinates (Northing)**

4 1 . 3 5 0

Ex. 42.652

2. What is the nature of this construction project?

New Construction

Redevelopment with increase in impervious area

Redevelopment with no increase in impervious area





15. Does the site runoff enter a separate storm sewer system (including roadside drains, swales, ditches, culverts, etc)?  Yes  No  Unknown

16. What is the name of the municipality/entity that owns the separate storm sewer system?

TOWN OF CARMEL

17. Does any runoff from the site enter a sewer classified as a Combined Sewer?  Yes  No  Unknown

18. Will future use of this site be an agricultural property as defined by the NYS Agriculture and Markets Law?  Yes  No

19. Is this property owned by a state authority, state agency, federal government or local government?  Yes  No

20. Is this a remediation project being done under a Department approved work plan? (i.e. CERCLA, RCRA, Voluntary Cleanup Agreement, etc.)  Yes  No

21. Has the required Erosion and Sediment Control component of the SWPPP been developed in conformance with the current NYS Standards and Specifications for Erosion and Sediment Control (aka Blue Book)?  Yes  No

22. Does this construction activity require the development of a SWPPP that includes the post-construction stormwater management practice component (i.e. Runoff Reduction, Water Quality and Quantity Control practices/techniques)?  Yes  No  
**If No, skip questions 23 and 27-39.**

23. Has the post-construction stormwater management practice component of the SWPPP been developed in conformance with the current NYS Stormwater Management Design Manual?  Yes  No







Post-construction Stormwater Management Practice (SMP) Requirements

**Important: Completion of Questions 27-39 is not required if response to Question 22 is No.**

27. Identify all site planning practices that were used to prepare the final site plan/layout for the project.

- Preservation of Undisturbed Areas
- Preservation of Buffers
- Reduction of Clearing and Grading
- Locating Development in Less Sensitive Areas
- Roadway Reduction
- Sidewalk Reduction
- Driveway Reduction
- Cul-de-sac Reduction
- Building Footprint Reduction
- Parking Reduction

27a. Indicate which of the following soil restoration criteria was used to address the requirements in Section 5.1.6("Soil Restoration") of the Design Manual (2010 version).

- All disturbed areas will be restored in accordance with the Soil Restoration requirements in Table 5.3 of the Design Manual (see page 5-22).
- Compacted areas were considered as impervious cover when calculating the **WQv Required**, and the compacted areas were assigned a post-construction Hydrologic Soil Group (HSG) designation that is one level less permeable than existing conditions for the hydrology analysis.

28. Provide the total Water Quality Volume (WQv) required for this project (based on final site plan/layout).

**Total WQv Required**

.  acre-feet

29. Identify the RR techniques (Area Reduction), RR techniques (Volume Reduction) and Standard SMPs with RRv Capacity in Table 1 (See Page 9) that were used to reduce the Total WQv Required (#28).

Also, provide in Table 1 the total impervious area that contributes runoff to each technique/practice selected. For the Area Reduction Techniques, provide the total contributing area (includes pervious area) and, if applicable, the total impervious area that contributes runoff to the technique/practice.

**Note:** Redevelopment projects shall use Tables 1 and 2 to identify the SMPs used to treat and/or reduce the WQv required. If runoff reduction techniques will not be used to reduce the required WQv, skip to question 33a after identifying the SMPs.

Table 1 - Runoff Reduction (RR) Techniques and Standard Stormwater Management Practices (SMPs)

<u>RR Techniques (Area Reduction)</u>	<u>Total Contributing Area (acres)</u>		and/or	<u>Total Contributing Impervious Area(acres)</u>	
<input type="radio"/> Conservation of Natural Areas (RR-1) ...	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Sheetflow to Riparian Buffers/Filters Strips (RR-2) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Tree Planting/Tree Pit (RR-3) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Disconnection of Rooftop Runoff (RR-4) ..	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
 <u>RR Techniques (Volume Reduction)</u>					
<input type="radio"/> Vegetated Swale (RR-5) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Rain Garden (RR-6) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Stormwater Planter (RR-7) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Rain Barrel/Cistern (RR-8) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Porous Pavement (RR-9) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Green Roof (RR-10) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
 <u>Standard SMPs with RRv Capacity</u>					
<input type="radio"/> Infiltration Trench (I-1) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Infiltration Basin (I-2) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Dry Well (I-3) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Underground Infiltration System (I-4) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Bioretention (F-5) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Dry Swale (O-1) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
 <u>Standard SMPs</u>					
<input type="radio"/> Micropool Extended Detention (P-1) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Wet Pond (P-2) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Wet Extended Detention (P-3) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Multiple Pond System (P-4) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Pocket Pond (P-5) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Surface Sand Filter (F-1) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Underground Sand Filter (F-2) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Perimeter Sand Filter (F-3) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Organic Filter (F-4) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Shallow Wetland (W-1) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Extended Detention Wetland (W-2) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Pond/Wetland System (W-3) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Pocket Wetland (W-4) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
<input type="radio"/> Wet Swale (O-2) .....	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>



33. Identify the Standard SMPs in Table 1 and, if applicable, the Alternative SMPs in Table 2 that were used to treat the remaining total WQv(=Total WQv Required in 28 - Total RRv Provided in 30).

Also, provide in Table 1 and 2 the total impervious area that contributes runoff to each practice selected.

**Note:** Use Tables 1 and 2 to identify the SMPs used on Redevelopment projects.

33a. Indicate the Total WQv provided (i.e. WQv treated) by the SMPs identified in question #33 and Standard SMPs with RRv Capacity identified in question 29.

**WQv Provided**

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**New York State Department of Environmental Conservation  
Division of Water  
625 Broadway, 4th Floor  
Albany, New York 12233-3505**

\*(NOTE: Submit completed form to address above)\*

**NOTICE OF TERMINATION for Storm Water Discharges Authorized  
under the SPDES General Permit for Construction Activity**

**Please indicate your permit identification number:** NYR \_\_\_\_\_

**I. Owner or Operator Information**

1. Owner/Operator Name:

2. Street Address:

3. City/State/Zip:

4. Contact Person:

4a. Telephone:

4b. Contact Person E-Mail:

**II. Project Site Information**

5. Project/Site Name:

6. Street Address:

7. City/Zip:

8. County:

**III. Reason for Termination**

9a.  All disturbed areas have achieved final stabilization in accordance with the general permit and SWPPP. \*Date final stabilization completed (month/year): \_\_\_\_\_

9b.  Permit coverage has been transferred to new owner/operator. Indicate new owner/operator's permit identification number: NYR \_\_\_\_\_  
(Note: Permit coverage can not be terminated by owner identified in I.1. above until new owner/operator obtains coverage under the general permit)

9c.  Other (Explain on Page 2)

**IV. Final Site Information:**

10a. Did this construction activity require the development of a SWPPP that includes post-construction stormwater management practices?  yes  no (If no, go to question 10f.)

10b. Have all post-construction stormwater management practices included in the final SWPPP been constructed?  yes  no (If no, explain on Page 2)

10c. Identify the entity responsible for long-term operation and maintenance of practice(s)?

\_\_\_\_\_

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the  
SPDES General Permit for Construction Activity - continued**

10d. Has the entity responsible for long-term operation and maintenance been given a copy of the operation and maintenance plan required by the general permit?     yes     no

10e. Indicate the method used to ensure long-term operation and maintenance of the post-construction stormwater management practice(s):

- Post-construction stormwater management practice(s) and any right-of-way(s) needed to maintain practice(s) have been deeded to the municipality.
- Executed maintenance agreement is in place with the municipality that will maintain the post-construction stormwater management practice(s).
- For post-construction stormwater management practices that are privately owned, a mechanism is in place that requires operation and maintenance of the practice(s) in accordance with the operation and maintenance plan, such as a deed covenant in the owner or operator's deed of record.
- For post-construction stormwater management practices that are owned by a public or private institution (e.g. school, university or hospital), government agency or authority, or public utility; policy and procedures are in place that ensures operation and maintenance of the practice(s) in accordance with the operation and maintenance plan.

10f. Provide the total area of impervious surface (i.e. roof, pavement, concrete, gravel, etc.) constructed within the disturbance area? \_\_\_\_\_  
(acres)

11. Is this project subject to the requirements of a regulated, traditional land use control MS4?     yes  
 no  
(If Yes, complete section VI - "MS4 Acceptance" statement

**V. Additional Information/Explanation:**  
(Use this section to answer questions 9c. and 10b., if applicable)

**VI. MS4 Acceptance - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative** (Note: Not required when 9b. is checked -transfer of coverage)

I have determined that it is acceptable for the owner or operator of the construction project identified in question 5 to submit the Notice of Termination at this time.

Printed Name:

Title/Position:

Signature:

Date:

**NOTICE OF TERMINATION for Storm Water Discharges Authorized under the  
SPDES General Permit for Construction Activity - continued**

**VII. Qualified Inspector Certification - Final Stabilization:**

I hereby certify that all disturbed areas have achieved final stabilization as defined in the current version of the general permit, and that all temporary, structural erosion and sediment control measures have been removed. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

**VIII. Qualified Inspector Certification - Post-construction Stormwater Management Practice(s):**

I hereby certify that all post-construction stormwater management practices have been constructed in conformance with the SWPPP. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

**IX. Owner or Operator Certification**

I hereby certify that this document was prepared by me or under my direction or supervision. My determination, based upon my inquiry of the person(s) who managed the construction activity, or those persons directly responsible for gathering the information, is that the information provided in this document is true, accurate and complete. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of the referenced permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Printed Name:

Title/Position:

Signature:

Date:

(NYS DEC Notice of Termination - January 2015)

# Appendix E

[www.dewberry.com](http://www.dewberry.com)

## CONTRACTOR SWPPP CERTIFICATION

I hereby certify under penalty of law that I understand and agree to comply with the terms and conditions of the SWPPP and agree to implement any corrective actions identified by the qualified inspector during a site inspection. I also understand that the owner or operator must comply with the terms and conditions of the most current version of the New York State Pollutant Discharge Elimination System ("SPDES") general permit for stormwater discharges from construction activities and that it is unlawful for any person to cause or contribute to a violation of water quality standards. Furthermore, I am aware that there are significant penalties for submitting false information, that I do not believe to be true, including the possibility of fine and imprisonment for knowing violation

PROJECT NAME: Glencoma Lake Cell Tower Compound
PROJECT ADDRESS: Walton Drive, Mahopac, New York
PRIME CONTRACTOR
ADDRESS
TELEPHONE NUMBER
SIGNATURE
TYPE OR PRINT NAME
TITLE:
DATE:

**EROSION AND SEDIMENT CONTROL**  
**TRAINED INDIVIDUAL**

Project Name \_\_\_\_\_

Trained Individual \_\_\_\_\_

Training Provided By \_\_\_\_\_

Date of Training \_\_\_\_\_

Follow Up Training Dates \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
I certify under penalty of law that the above-named individual has received Erosion and Sediment Control Training as specified in Section 015713, Part 1, 1.01 Erosion and Sediment Control.

Signature \_\_\_\_\_

Type in Print Name \_\_\_\_\_

Title \_\_\_\_\_

Date \_\_\_\_\_

Company Name \_\_\_\_\_

Address \_\_\_\_\_



# Owner/Operator Certification Form

## SPDES General Permit For Stormwater Discharges From Construction Activity (GP-0-20-001)

Project/Site Name: \_\_\_\_\_

eNOI Submission Number: \_\_\_\_\_

eNOI Submitted by:  Owner/Operator  SWPPP Preparer  Other

### Certification Statement - Owner/Operator

I have read or been advised of the permit conditions and believe that I understand them. I also understand that, under the terms of the permit, there may be reporting requirements. I hereby certify that this document and the corresponding documents were prepared under my direction or supervision. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I further understand that coverage under the general permit will be identified in the acknowledgment that I will receive as a result of submitting this NOI and can be as long as sixty (60) business days as provided for in the general permit. I also understand that, by submitting this NOI, I am acknowledging that the SWPPP has been developed and will be implemented as the first element of construction, and agreeing to comply with all the terms and conditions of the general permit for which this NOI is being submitted.

Owner/Operator First Name

M.I. Last Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date





# SWPPP Preparer Certification Form

---

*SPDES General Permit for Stormwater  
Discharges From Construction Activity  
(GP-0-20-001)*

## Project Site Information

### Project/Site Name

Glencoma Lake Cell Tower Compound

## Owner/Operator Information

### Owner/Operator (Company Name/Private Owner/Municipality Name)

Homeland Towers, LLC

## Certification Statement – SWPPP Preparer

I hereby certify that the Stormwater Pollution Prevention Plan (SWPPP) for this project has been prepared in accordance with the terms and conditions of the GP-0-20-001. Furthermore, I understand that certifying false, incorrect or inaccurate information is a violation of this permit and the laws of the State of New York and could subject me to criminal, civil and/or administrative proceedings.

Robert

First name

J.

MI

Foley

Last Name

Signature

Date

# **Appendix F**

## **NY Department of Environmental Conservation Standards for Erosion and Sediment Control**

<b><u>Standard</u></b>	<b><u>Page</u></b>
Standard for Protecting Vegetation	2.26
Stabilized Construction Access	2.30
Standard for Winter Stabilization	2.38
Anchored Stabilization Matting	4.5
Landgrading	4.24
Loose Stabilization Blankets	4.37
Mulching & Wood Mulch	4.39
Permanent Construction Area Planting	4.42
Temporary Construction Area Seeding	4.58
Topsoiling	4.59
Trees, Shrubs, and Vines	4.63
Silt Fence	5.54

# STANDARD AND SPECIFICATIONS FOR PROTECTING VEGETATION DURING CONSTRUCTION



## **Definition & Scope**

The protection of trees, shrubs, ground cover and other vegetation from damage by construction equipment. In order to preserve existing vegetation determined to be important for soil erosion control, water quality protection, shade, screening, buffers, wildlife habitat, wetland protection, and other values.

## **Conditions Where Practices Applies**

On planned construction sites where valued vegetation exists and needs to be preserved.

## **Design Criteria**

### 1. Planning Considerations

#### A. Inventory:

1) Property boundaries, topography, vegetation and soils information should be gathered. Identify potentially high erosion areas, areas with tree windthrow potential, etc. A vegetative cover type map should be made on a copy of a topographic map which shows other natural and manmade features. Vegetation that is desirable to preserve because of its value for screening, shade, critical erosion control, endangered species, aesthetics, etc., should be identified and marked on the map.

2) Based upon this data, general statements should be prepared about the present condition, potential problem areas, and unique features of the property.

#### B. Planning:

1) After engineering plans (plot maps) are prepared, another field review should take place and

recommendations made for the vegetation to be saved. Minor adjustments in location of roads, dwellings, and utilities may be needed. Construction on steep slopes, erodible soils, wetlands, and streams should be avoided. Clearing limits should be delineated (See "Determine Limits of Clearing and Grading" on page 2.2).

2) Areas to be seeded and planted should be identified. Remaining vegetation should blend with their surroundings and/or provide special function such as a filter strip, buffer zone, or screen.

3) Trees and shrubs of special seasonal interest, such as flowering dogwood, red maple, striped maple, serviceberry, or shadbush, and valuable potential shade trees should be identified and marked for special protective treatment as appropriate.

4) Trees to be cut should be marked on the plans. If timber can be removed for salable products, a forester should be consulted for marketing advice.

5) Trees that may become a hazard to people, personal property, or utilities should be removed. These include trees that are weak-wooded, disease-prone, subject to windthrow, or those that have severely damaged root systems.

6) The vigor of remaining trees may be improved by a selective thinning. A forester should be consulted for implementing this practice.

### 2. Measures to Protect Vegetation

A. Limit soil placement over existing tree and shrub roots to a maximum of 3 inches. Soils with loamy texture and good structure should be used.

B. Use retaining walls and terraces to protect roots of trees and shrubs when grades are lowered. Lowered grades should start no closer than the dripline of the tree. For narrow-canopied trees and shrubs, the stem diameter in inches is converted to feet and doubled, such that a 10 inch tree should be protected to 20 feet.

C. Trenching across tree root systems should be the same minimum distance from the trunk, as in "B". Tunnels under root systems for underground utilities should start 18 inches or deeper below the normal ground surface. Tree roots which must be severed should be cut clean. Backfill material that will be in contact with the roots should be topsoil or a prepared planting soil mixture.

D. Construct sturdy fences, or barriers, of wood, steel, or other protective material around valuable

vegetation for protection from construction equipment. Place barriers far enough away from trees, but not less than the specifications in "B", so that tall equipment such as backhoes and dump trucks do not contact tree branches.

E. Construction limits should be identified and clearly marked to exclude equipment.

F. Avoid spills of oil/gas and other contaminants.

G. Obstructive and broken branches should be pruned properly. The branch collar on all branches whether living or dead should not be damaged. The 3 or 4 cut method should be used on all branches larger than two inches at the cut. First cut about one-third the way through the underside of the limb (about 6-12 inches from the tree trunk). Then (approximately an inch further out) make a second cut through the limb from the upper side. When the branch is removed, there is no splintering of the main tree trunk. Remove the stub. If the branch is larger than 5-6 inches in diameter, use the four cut system. Cuts 1 and 2 remain the same and cut 3 should be from the underside of the limb, on the outside of the branch collar. Cut 4 should be from the top and in alignment with the 3rd cut. Cut 3 should be 1/4 to 1/3 the way through the limb. This will prevent the bark from peeling down the trunk. Do not paint the cut surface.

H. Penalties for damage to valuable trees, shrubs, and herbaceous plants should be clearly spelled out in the contract.

#### **PROTECTING TREES IN HEAVY USE AREAS**

The compaction of soil over the roots of trees and shrubs by the trampling of recreationists, vehicular traffic, etc., reduces oxygen, water, and nutrient uptake by feeder roots. This weakens and may eventually kill the plants. Table 2.6 rates the "Susceptibility of Tree Species to Compaction."

Where heavy compaction is anticipated, apply and maintain a 3 to 4 inch layer of undecayed wood chips or 2 inches of No. 2 washed, crushed gravel. In addition, use of a wooden or plastic mat may be used to lessen compaction, if applicable.

## Table 2.6 Susceptibility of Tree Species to Compaction<sup>1</sup>

### Resistant:

Box elder.....	<i>Acer negundo</i>	Willows.....	<i>Salix spp.</i>
Green ash.....	<i>Fraxinus pennsylvanica</i>	Honey locust.....	<i>Gleditsia triacanthos</i>
Red elm.....	<i>Ulmus rubra</i>	Eastern cottonwood.....	<i>Populus deltoides</i>
Hawthornes.....	<i>Crataegus spp.</i>	Swamp white oak.....	<i>Quercus bicolor</i>
Bur oak.....	<i>Quercus macrocarpa</i>	Hophornbeam.....	<i>Ostrya virginiana</i>
Northern white cedar....	<i>Thuja occidentalis</i>		

### Intermediate:

Red maple.....	<i>Acer rubrum</i>	Sweetgum.....	<i>Liquidambar styraciflua</i>
Silver maple.....	<i>Acer saccharinum</i>	Norway maple.....	<i>Acer platanoides</i>
Hackberry.....	<i>Celtis occidentalis</i>	Shagbark hickory.....	<i>Carya ovata</i>
Black gum.....	<i>Nyssa sylvatica</i>	London plane.....	<i>Platanus x hybrida</i>
Red oak.....	<i>Quercus rubra</i>	Pin oak.....	<i>Quercus palustris</i>
Basswood.....	<i>Tilia americana</i>		

### Susceptible:

Sugar maple.....	<i>Acer saccharum</i>	Austrian Pine.....	<i>Pinus nigra</i>
White pine.....	<i>Pinus strobus</i>	White ash.....	<i>Fraxinus americana</i>
Blue spruce.....	<i>Picea pungens</i>	Paper birch.....	<i>Betula papyrifera</i>
White oak.....	<i>Quercus alba</i>	Moutain ash.....	<i>Sorbus aucuparia</i>
Red pine.....	<i>Pinus resinosa</i>	Japanese maple.....	<i>Acer palmatum</i>

<sup>1</sup> If a tree species does not appear on the list, insufficient information is available to rate it for this purpose.

# STANDARD AND SPECIFICATIONS FOR STABILIZED CONSTRUCTION ACCESS



inert to commonly encountered chemicals, hydro-carbons, mildew, rot resistant, and conform to the fabric properties as shown:

Fabric Properties <sup>3</sup>	Light Duty <sup>1</sup> Roads Grade Sub- grade	Heavy Duty <sup>2</sup> Haul Roads Rough Graded	Test Meth- od
Grab Tensile Strength (lbs)	200	220	ASTM D1682
Elongation at Failure (%)	50	60	ASTM D1682
Mullen Burst Strength (lbs)	190	430	ASTM D3786
Puncture Strength (lbs)	40	125	ASTM D751 Modified
Equivalent	40-80	40-80	US Std Sieve
Opening Size			CW-02215
Aggregate Depth	6	10	-

## Definition & Scope

A stabilized pad of aggregate underlain with geotextile located at any point where traffic will be entering or leaving a construction site to or from a public right-of-way, street, alley, sidewalk, or parking area. The purpose of stabilized construction access is to reduce or eliminate the tracking of sediment onto public rights-of-way or streets.

## Conditions Where Practice Applies

A stabilized construction access shall be used at all points of construction ingress and egress.

## Design Criteria

See Figure 2.1 on page 2.31 for details.

**Aggregate Size:** Use a matrix of 1-4 inch stone, or reclaimed or recycled concrete equivalent.

**Thickness:** Not less than six (6) inches.

**Width:** 12-foot minimum but not less than the full width of points where ingress or egress occurs. 24-foot minimum if there is only one access to the site.

**Length:** As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum would apply).

**Geotextile:** To be placed over the entire area to be covered with aggregate. Filter cloth will not be required on a single-family residence lot. Piping of surface water under entrance shall be provided as required. If piping is impossible, a mountable berm with 5:1 slopes will be permitted.

**Criteria for Geotextile:** The geotextile shall be woven or nonwoven fabric consisting only of continuous chain polymeric filaments or yarns of polyester. The fabric shall be

<sup>1</sup>Light Duty Road: Area sites that have been graded to subgrade and where most travel would be single axle vehicles and an occasional multi-axle truck. Acceptable materials are Trevira Spunbond 1115, Mirafi 100X, Typar 3401, or equivalent.

<sup>2</sup>Heavy Duty Road: Area sites with only rough grading, and where most travel would be multi-axle vehicles. Acceptable materials are Trevira Spunbond 1135, Mirafi 600X, or equivalent.

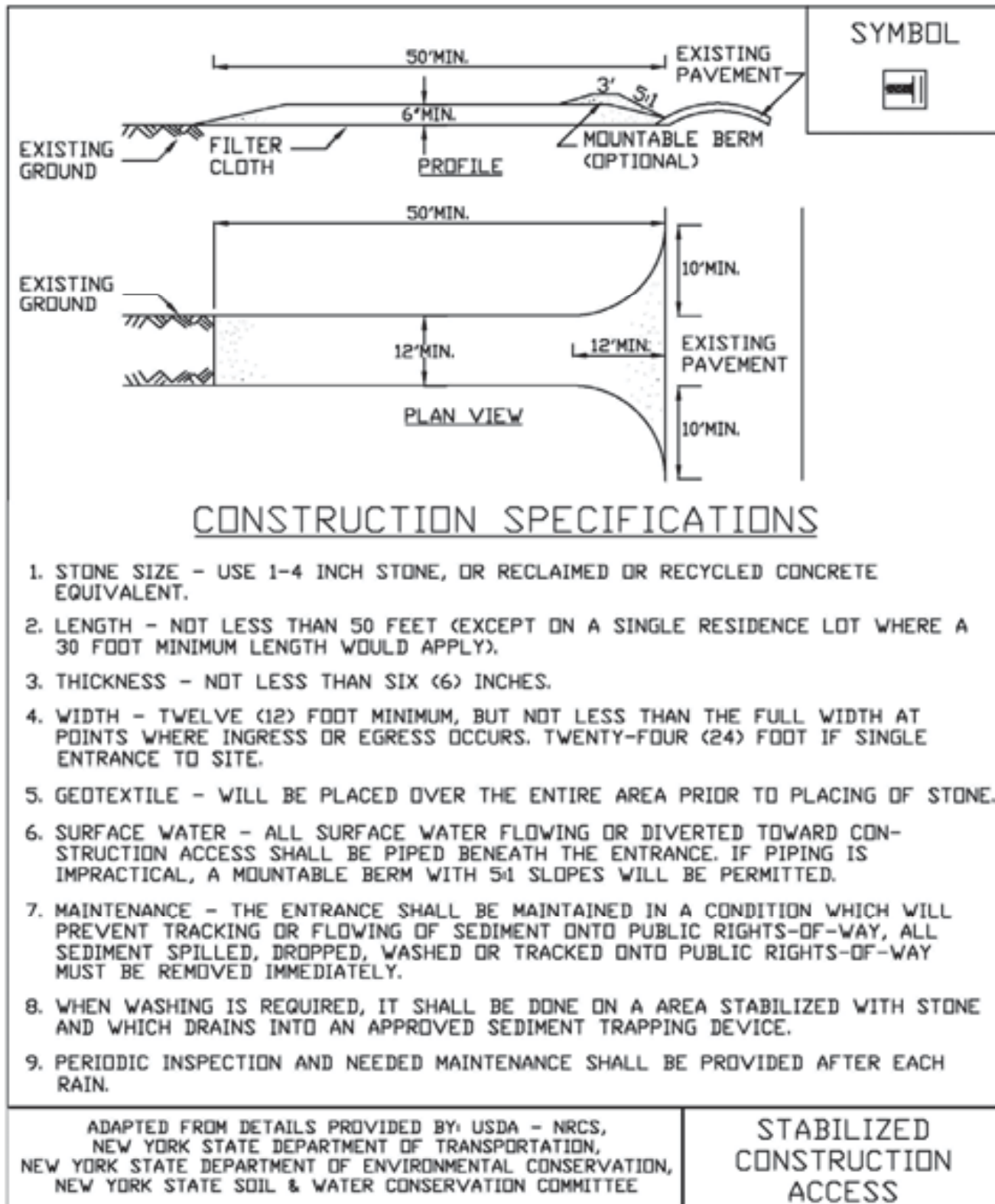
<sup>3</sup>Fabrics not meeting these specifications may be used only when design procedure and supporting documentation are supplied to determine aggregate depth and fabric strength.

## Maintenance

The access shall be maintained in a condition which will prevent tracking of sediment onto public rights-of-way or streets. This may require periodic top dressing with additional aggregate. All sediment spilled, dropped, or washed onto public rights-of-way must be removed immediately.

When necessary, wheels must be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with aggregate, which drains into an approved sediment-trapping device. All sediment shall be prevented from entering storm drains, ditches, or watercourses.

**Figure 2.1  
Stabilized Construction Access**



# STANDARD AND SPECIFICATIONS FOR WINTER STABILIZATION



## **Definition & Scope**

A temporary site specific, enhanced erosion and sediment control plan to manage runoff and sediment at the site during construction activities in the winter months to protect off-site water resources.

## **Conditions Where Practice Applies**

This standard applies to all construction activities involved with ongoing land disturbance and exposure between November 15<sup>th</sup> to the following April 1<sup>st</sup>.

## **Design Criteria**

1. Prepare a snow management plan with adequate storage for snow and control of melt water, requiring cleared snow to be stored in a manner not affecting ongoing construction activities.
2. Enlarge and stabilize access points to provide for snow management and stockpiling. Snow management activities must not destroy or degrade installed erosion and sediment control practices.
3. A minimum 25 foot buffer shall be maintained from all perimeter controls such as silt fence. Mark silt fence with tall stakes that are visible above the snow pack.
4. Edges of disturbed areas that drain to a waterbody within 100 feet will have 2 rows of silt fence, 5 feet apart, installed on the contour.
5. Drainage structures must be kept open and free of snow and ice dams. All debris, ice dams, or debris from plowing operations, that restrict the flow of runoff and meltwater, shall be removed.
6. Sediment barriers must be installed at all appropriate

perimeter and sensitive locations. Silt fence and other practices requiring earth disturbance must be installed before the ground freezes.

7. Soil stockpiles must be protected by the use of established vegetation, anchored straw mulch, rolled stabilization matting, or other durable covering. A barrier must be installed at least 15 feet from the toe of the stockpile to prevent soil migration and to capture loose soil.
8. In areas where soil disturbance activity has temporarily or permanently ceased, the application of soil stabilization measures should be initiated by the end of the next business day and completed within three (3) days. Rolled erosion control blankets must be used on all slopes 3 horizontal to 1 vertical or steeper.
9. If straw mulch alone is used for temporary stabilization, it shall be applied at double the standard rate of 2 tons per acre, making the application rate 4 tons per acre. Other manufactured mulches should be applied at double the manufacturer's recommended rate.
10. To ensure adequate stabilization of disturbed soil in advance of a melt event, areas of disturbed soil should be stabilized at the end of each work day unless:
  - a. work will resume within 24 hours in the same area and no precipitation is forecast or;
  - b. the work is in disturbed areas that collect and retain runoff, such as open utility trenches, foundation excavations, or water management areas.
11. Use stone paths to stabilize access perimeters of buildings under construction and areas where construction vehicle traffic is anticipated. Stone paths should be a minimum 10 feet in width but wider as necessary to accommodate equipment.

## **Maintenance**

The site shall be inspected frequently to ensure that the erosion and sediment control plan is performing its winter stabilization function. If the site will not have earth disturbing activities ongoing during the "winter season", all bare exposed soil must be stabilized by established vegetation, straw or other acceptable mulch, matting, rock, or other approved material such as rolled erosion control products. Seeding of areas with mulch cover is preferred but seeding alone is not acceptable for proper stabilization.

Compliance inspections must be performed and reports filed properly in accordance with the SWPPP for all sites under a winter shutdown.



## References

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1. Northeastern Illinois Soil and Sedimentation Control Steering Committee. October 1981. Procedures and Standards for Urban Soil Erosion and Sediment Control in Illinois.
2. J.F. Rushing, V.M. Moore, J.S. Tingle, Q. Mason, and T. McCaffery, 2005. Dust Abatement Methods for Lines of Communication and Base Camps in Temperate Climates. ERDC/GSL TR-05-23, October 2005.

# STANDARD AND SPECIFICATIONS FOR ANCHORED STABILIZATION MATTING



## Definition and Scope

A **temporary** or **permanent** protective covering placed on a prepared, seeded planting area that is anchored in place by staples or other means to aid in controlling erosion by absorbing rain splash energy and withstand overland flow as well as provide a microclimate to protect and promote seed establishment.

## Conditions Where Practice Applies

Anchored stabilization mats are required for seeded earthen slopes steeper than 3 horizontal to 1 vertical; in vegetated channels where the velocity of the design flow exceeds the allowable velocity for vegetation alone (usually greater than 5 feet per second); on streambanks and shorelines where moving water is likely to erode newly seeded or planted areas; and in areas where wind prevents standard mulching with straw. This standard does not apply to slopes stabilized with sod, rock riprap or hard armor material.

## Design Criteria

Slope Applications - Anchored stabilization mats for use on slopes are primarily used as mulch blankets where the mesh material is within the blanket or as a netting over previously placed mulch. These stabilization mats are NOT effective in preventing slope failures.

1. Required on all slopes steeper than 3:1
2. Matting will be designed for proper longevity need and strength based on intended use.
3. All installation details and directions will be included on the site erosion and sediment control plan and will follow manufactures specifications.

Channel Applications - Anchored stabilization mats, for use in supporting vegetation in flow channels, are generally a non-degradable, three dimensional plastic structure which can be filled with soil prior to planting. This structure provides a medium for root growth where the matting and roots become intertwined forming a continuous anchor for the vegetated lining.

1. Channel stabilization shall be based on the tractive force method.
2. For maximum design shear stresses less than 2 pounds per square foot, a temporary or bio-degradable mat may be used.
3. The design of the final matting shall be based on the mats ability to resist the tractive shear stress at bank full flow.
4. The installation details and procedures shall be included on the site erosion and sediment control plan and will follow manufacturers specifications.



## Construction Specifications

1. Prepare soil before installing matting by smoothing the surface, removing debris and large stone, and applying lime, fertilizer and seed. Refer to manufacturers installation details.
2. Begin at the top of the slope by anchoring the mat in a 6" deep x 6" wide trench. Backfill and compact the trench after stapling.
3. In channels or swales, begin at the downslope end, anchoring the mat at the bottom and top ends of the blanket. When another roll is needed, the upslope roll

should overlay the lower layer, shingle style, so that channel flows do not peel back the material.

4. Roll the mats down a slope with a minimum 4" overlap. Roll center mat in a channel in direction of water flow on bottom of the channel. Do not stretch blankets. Blankets shall have good continuous contact with the underlying soil throughout its entire length.
5. Place mats end over end (shingle style) with a 6" overlap, use a double row of staggered staples 4" apart to secure mats.
6. Full length edge of mats at top of side slopes must be anchored in 6" deep x 6" wide trench; backfill and compact the trench after stapling.
7. Mats on side slopes of a channel must be overlapped 4" over the center mat and stapled.
8. In high flow channel applications, a staple check slot is recommended at 30 to 40 foot intervals. Use a row of staples 4" apart over entire width of the channel. Place a second row 4" below the first row in a staggered pattern.
9. The terminal end of the mats must be anchored in a 6"x6" wide trench. Backfill and compact the trench after stapling.
10. Stapling and anchoring of blanket shall be done in accordance with the manufactures recommendations.

### **Maintenance**

Blanketed areas shall be inspected weekly and after each runoff event until perennial vegetation is established to a minimum uniform 80% coverage throughout the blanketed area. Damaged or displaced blankets shall be restored or replaced within 2 calendar days.

# STANDARD AND SPECIFICATIONS FOR LANDGRADING



## **Definition & Scope**

**Permanent** reshaping of the existing land surface by grading in accordance with an engineering topographic plan and specification to provide for erosion control and vegetative establishment on disturbed, reshaped areas.

## **Design Criteria**

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surrounding to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal, and vegetative treatment, etc.

Many municipalities and counties have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they shall be followed.

The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

1. Provisions shall be made to safely convey surface runoff to storm drains, protected outlets, or to stable water courses to ensure that surface runoff will not

damage slopes or other graded areas; see standards and specifications for Grassed Waterway, Diversion, or Grade Stabilization Structure.

2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. When slopes exceed 2:1, special design and stabilization consideration are required and shall be adequately shown on the plans. (Note: Where the slope is to be mowed, the slope should be no steeper than 3:1, although 4:1 is preferred because of safety factors related to mowing steep slopes.)
3. Reverse slope benches or diversion shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.
  - A. Benches shall be a minimum of six feet wide to provide for ease of maintenance.
  - B. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.
  - C. The flow length within a bench shall not exceed 800 feet unless accompanied by appropriate design and computations; see Standard and Specifications for Diversion on page 3.9
4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of diversions, ditches and swales or conveyed downslope by the use of a designed structure, except where:
  - A. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.
  - B. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainage ways, graded ditches, downspouts, etc.
  - C. The face of the slope will be protected by anchored stabilization matting, sod, gravel, riprap, or other stabilization method.

5. Cut slopes occurring in ripable rock shall be serrated as shown in Figure 4.9 on page 4.26. The serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1 ½: 1. These steps will weather and act to hold moisture, lime, fertilizer, and seed thus producing a much quicker and longer-lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.
6. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.
7. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence, or other related damages.
8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.
9. Stockpiles, borrow areas, and spoil shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.
10. All disturbed areas shall be stabilized structurally or vegetatively in compliance with the Permanent Construction Area Planting Standard on page 4.42.
4. Areas to be filled shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots, or other objectionable material.
5. Areas that are to be topsoiled shall be scarified to a minimum depth of four inches prior to placement of topsoil.
6. All fills shall be compacted as required to reduce erosion, slippage, settlement, subsidence, or other related problems. Fill intended to support buildings, structures, and conduits, etc., shall be compacted in accordance with local requirements or codes.
7. All fill shall be placed and compacted in layers not to exceed 9 inches in thickness.
8. Except for approved landfills or nonstructural fills, fill material shall be free of frozen particles, brush, roots, sod, or other foreign objectionable materials that would interfere with, or prevent, construction of satisfactory fills.
9. Frozen material or soft, mucky or highly compressible materials shall not be incorporated into fill slopes or structural fills.
10. Fill shall not be placed on saturated or frozen surfaces.
11. All benches shall be kept free of sediment during all phases of development.
12. Seeps or springs encountered during construction shall be handled in accordance with the Standard and Specification for Subsurface Drain on page 3.48 or other approved methods.
13. All graded areas shall be permanently stabilized immediately following finished grading.
14. Stockpiles, borrow areas, and spoil areas shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.

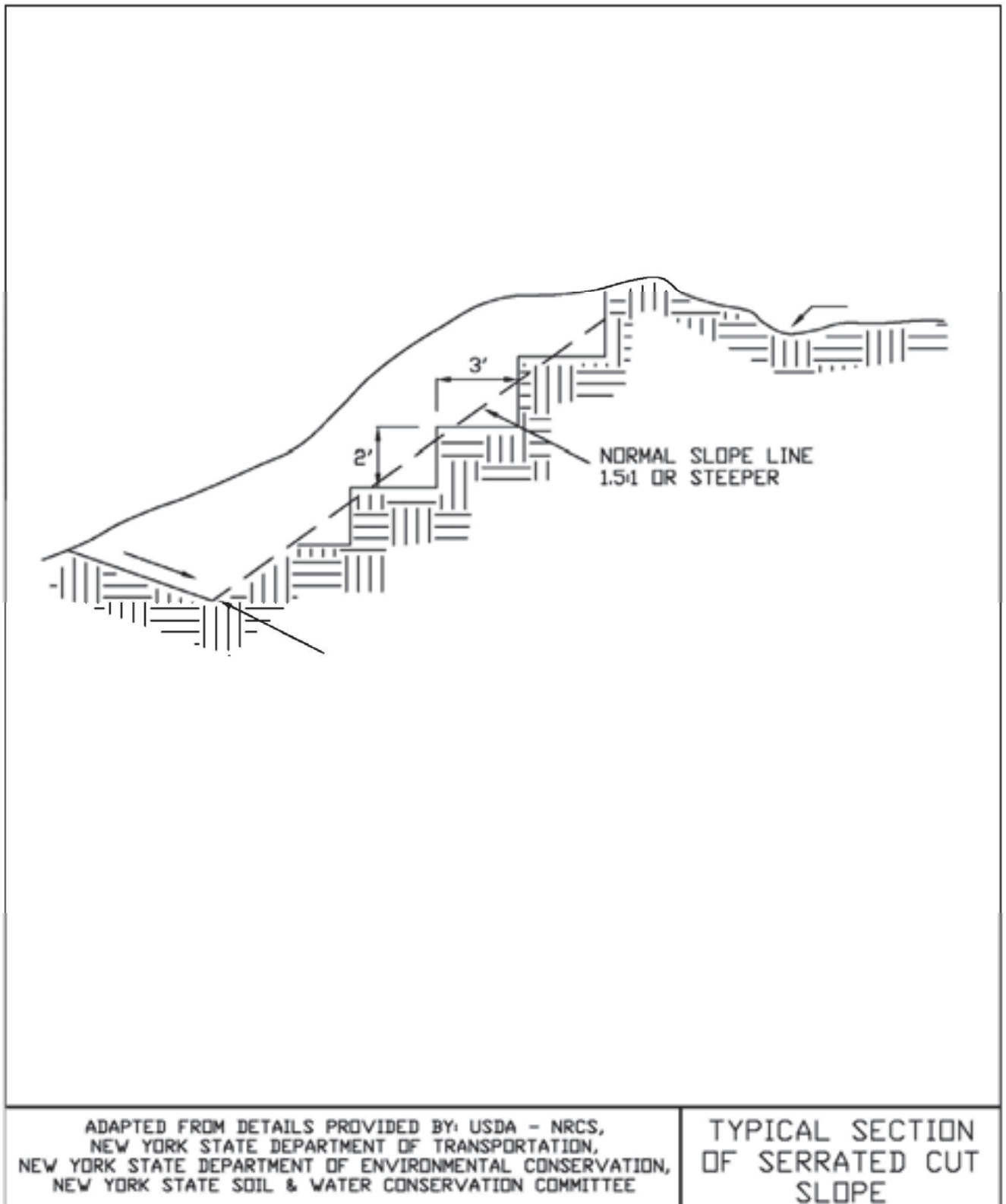
### **Construction Specifications**

See Figures 4.9 and 4.10 for details.

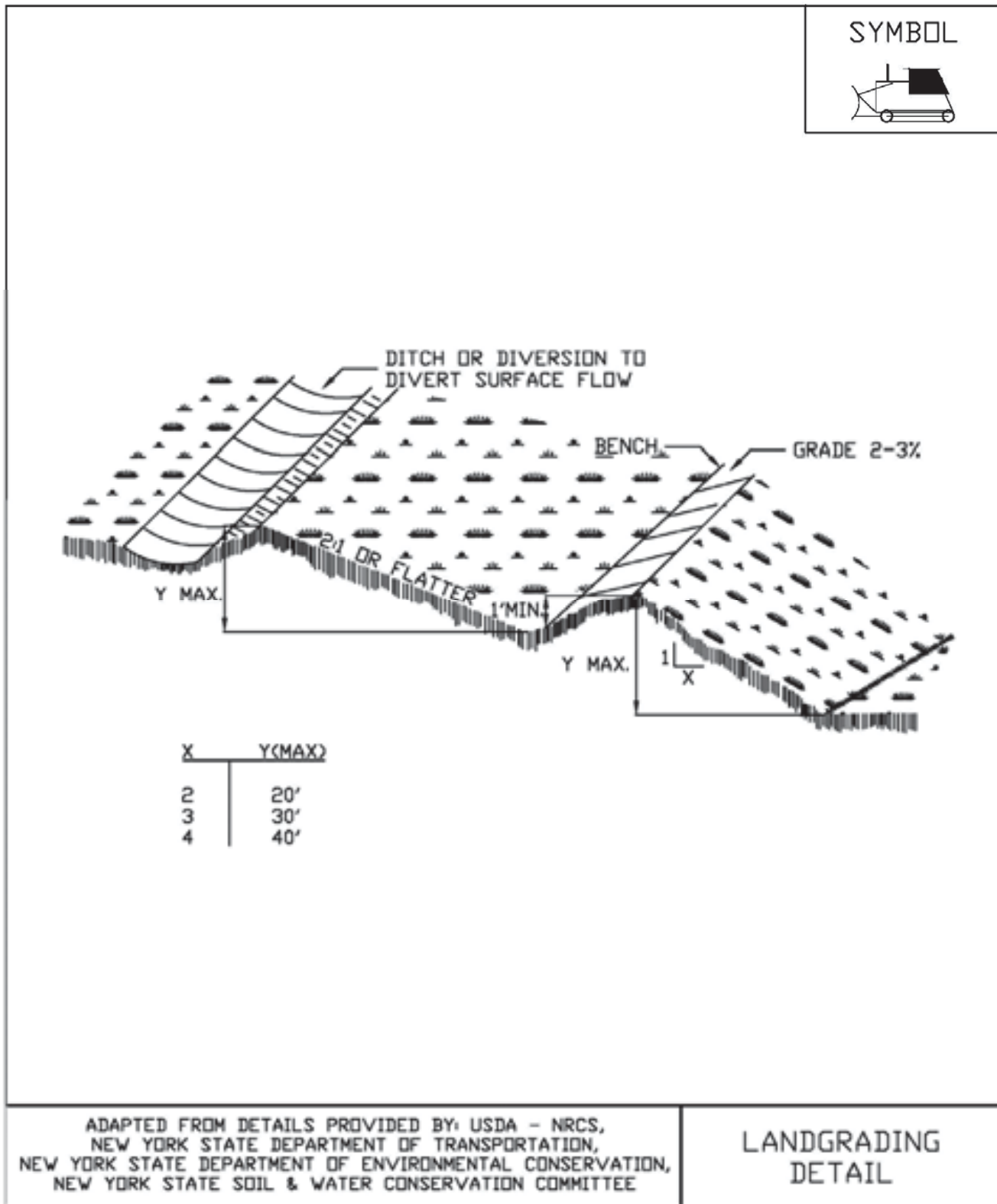
1. All graded or disturbed areas, including slopes, shall be protected during clearing and construction in accordance with the erosion and sediment control plan until they are adequately stabilized.
2. All erosion and sediment control practices and measures shall be constructed, applied and maintained in accordance with the erosion and sediment control plan and these standards.
3. Topsoil required for the establishment of vegetation shall be stockpiled in amount necessary to complete finished grading of all exposed areas.



**Figure 4.9**  
**Typical Section of Serrated Cut Slope**



**Figure 4.10**  
**Landgrading**



**Figure 4.11**  
**Landgrading - Construction Specifications**

<u>CONSTRUCTION SPECIFICATIONS</u>	
<ol style="list-style-type: none"> <li>1. ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.</li> <li>2. ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.</li> <li>3. TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.</li> <li>4. AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.</li> <li>5. AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.</li> <li>6. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.</li> <li>7. ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.</li> <li>8. EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.</li> <li>9. FROZEN MATERIALS OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED IN FILLS.</li> <li>10. FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.</li> <li>11. ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.</li> <li>12. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.</li> <li>13. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.</li> <li>14. STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.</li> </ol>	
ADAPTED FROM DETAILS PROVIDED BY: USDA - NRCS, NEW YORK STATE DEPARTMENT OF TRANSPORTATION, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION, NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE	<b>LANDGRADING SPECIFICATIONS</b>



# STANDARD AND SPECIFICATIONS FOR LOOSE STABILIZATION BLANKETS



## Definition and Scope

Blankets of various materials placed pneumatically, hydraulically, or other means on a prepared planting area or a critical area where existing vegetation can remain to reduce rain splash and sheet erosion and promote vegetative stabilization.

## Conditions Where Practice Applies

Loose blankets are an appropriate stabilization practice for any soil surface that is rocky, frozen, flat, or steep. They can be used on streambanks, road cuts and embankments, and construction site areas where stormwater runoff occurs as sheet flow. They should not be used in areas of concentrated flow.

## Design Criteria

### Compost Blanket

Material: The compost infill shall be well decomposed (matured at least 3 months), weed-free, organic matter. It shall be aerobically composted, possess no objectionable odors, and contain less than 1%, by dry weight, of man-made foreign matter. The physical parameters of the compost shall meet the standards listed in Table 5.2 - Compost Standards Table. **Note: All biosolids composts produced in New York State (or approved for importation) must meet NYS DEC's 6 NYCRR Part 360 (Soild Waste Management Facilities) requirements. The Part 360 requirements are equal to or more stringent than 40 CFR Part 503 which ensure safe standards for pathogen reduction and heavy metal content. When using compost blankets adjacent to surface waters, the compost should have a low nutrient value.**

Placement: The method of application and depth of compost depend upon site conditions. Vegetation of the compost blanket is generally archived by incorporating seed into the compost before it is applied. However, seeding may occur after the application if needed.

The compost application rate will be in accordance with the following table. Compost is not recommended for slopes steeper than 2H:1V. Slopes with problem soils and more runoff will require greater application rates.

Compost Application Rates		
Slope Length (ft)	<3H:1V Slopes	3H:1V to 2H:1V Slopes
20 or less	270 cy/acre (2" Layer)	540 cy/acre (4" Layer)
20 to 60	405 cy/acre (3" Layer)	675 cy/acre (5" Layer)
60 to 100	540 cy/acre (4" Layer)	810 cy/acre (6" Layer)*
* For slopes between 2H:1V and 1H:1V use this rate with a max. slope length of 40 ft.		

## Construction Specifications

1. Compost shall be placed evenly and must provide 100% soil coverage (no soil visible). On highly unstable soils, use compost in conjunction with appropriate structural measures.
2. Spread the compost uniformly to the design thickness by hand or mechanically (e.g. with a manure spreader, front end loader, dozer, pneumatic blower, etc.) and then track (compact) the compost layer using a bulldozer or other appropriate equipment.
3. When using a pneumatic (blower) unit, shoot the compost directly at soil, to provide a tighter interface between the soil and compost and prevent water from moving between the two layers.
4. Apply compost layer approximately 3 feet beyond the top of the slope or overlap it into existing vegetation.
5. Follow by seeding or ornamental planting as specified.
6. When planting immediate grass, wildflower, or legume seeding or ornamental planting, use only a well composted product that contains no substances toxic to plants.

7. Very coarse composts should be avoided if the slope is to be landscaped or seeded, as it will make planting and crop establishment more difficult. Composts containing fibrous particles that range in size produce a more stable mat.

### **Hydraulically Applied Blankets**

These blankets are formed by mixing different types of materials with water and are then applied using standard hydroseeding equipment. These blankets should not be used in areas of concentrated flow such as ditches and channels.

- A. **Bonded Fiber Matrix (BFM)** - This method makes use of a cross-linked hydrocolloid tackifier to bond thermally processed wood fibers. Application rates vary according to site conditions. For slopes up to 3H:1V the BFM should be applied at a rate of 3,000 lb/acre. Steeper slopes may need as much as 4,000 lb/acre in accordance with the manufacturer's recommendations.

BFMs should only be used when no rain is forecast for at least 48 hours following the application. This is to allow the tackifier sufficient time to cure properly. Once properly applied, a BFM is very effective in preventing accelerated erosion. **Bonded Fiber Matrix should not be applied between September 30 and April 1 to allow for proper curing of the polymer.**

- B. **Flexible Growth Medium (FGM)** - This method has the added component of 1/2 inch long, crimped manmade fibers which add a mechanical bond to the chemical bond provided by BFMs. This increases the blanket's resistance to both raindrop impact and erosion due to runoff. Unlike BFMs, a flexible growth medium typically does not require a curing time to be effective. Properly applied, an FGM is also very effective.

There is no need to smooth the slope prior to application. In fact some roughening of the surface (either natural or mechanically induced) is preferable. However, large rocks ( $\geq 9$  inches) and existing rills should be removed prior to application. Mixing and application rates should follow manufacturer's recommendations.

- C. **Polymer Stabilized Fiber Matrix (PSFM)** - PSFMs make use of a linear soil stabilization tackifier that works directly on soil to maintain soil structure, maintain pore space capacity and flocculate dislodged sediment that will significantly reduce runoff turbidity. PSFMs can be used in re-vegetation applications and for site winterization and/or dormant seeding - fall planting for spring germination - applications. Application rates vary according to site conditions and

should be in accordance with manufacturers recommendations.

### **Construction Specifications**

BFMs, FGMs and PSFMs are typically applied in two stages. Unless specifically recommended to be applied in one application by the manufacturer, the seed mixture and soil amendments should be applied first. If the seed is applied at the same time as the hydraulically applied blankets, the bonded fibers may keep the seed from making sufficient contact with the soil to germinate. After the seed mixture is applied, the hydraulically applied blankets should be sprayed over the area at the required application rate, according to the manufactures recommendations.



# STANDARD AND SPECIFICATIONS FOR MULCHING



## **Definition and Scope**

Applying coarse plant residue or chips, or other suitable materials, to cover the soil surface to provide initial erosion control while a seeding or shrub planting is establishing. Mulch will conserve moisture and modify the surface soil temperature and reduce fluctuation of both. Mulch will prevent soil surface crusting and aid in weed control. Mulch can also be used alone for temporary stabilization in non-growing months. Use of stone as a mulch could be more permanent and should not be limited to non-growing months.

## **Conditions Where Practice Applies**

On soils subject to erosion and on new seedings and shrub plantings. Mulch is useful on soils with low infiltration rates by retarding runoff.

## **Criteria**

Site preparation prior to mulching requires the installation of necessary erosion control or water management practices and drainage systems.

Slope, grade and smooth the site to fit needs of selected mulch products.

Remove all undesirable stones and other debris to meet the needs of the anticipated land use and maintenance required.

Apply mulch after soil amendments and planting is accomplished or simultaneously if hydroseeding is used.

Select appropriate mulch material and application rate or material needs. Hay mulch shall not be used in wetlands or in areas of permanent seeding. Clean straw mulch is preferred alternative in wetland application. Determine local availability.

Select appropriate mulch anchoring material.

NOTE: The best combination for grass/legume establishment is straw (cereal grain) mulch applied at 2 ton/acre (90 lbs./1000sq.ft.) and anchored with wood fiber mulch (hydromulch) at 500 – 750 lbs./acre (11 – 17 lbs./1000 sq. ft.). The wood fiber mulch must be applied through a hydroseeder immediately after mulching.



**Table 4.2**  
**Guide to Mulch Materials, Rates, and Uses**

<b>Mulch Material</b>	<b>Quality Standards</b>	<b>per 1000 Sq. Ft.</b>	<b>per Acre</b>	<b>Depth of Application</b>	<b>Remarks</b>
Wood chips or shavings	Air-dried. Free of objectionable coarse material	500-900 lbs.	10-20 tons	2-7"	Used primarily around shrub and tree plantings and recreation trails to inhibit weed competition. Resistant to wind blowing. Decomposes slowly.
Wood fiber cellulose (partly digested wood fibers)	Made from natural wood usually with green dye and dispersing agent	50 lbs.	2,000 lbs.	—	Apply with hydromulcher. No tie down required. Less erosion control provided than 2 tons of hay or straw.
Gravel, Crushed Stone or Slag	Washed; Size 2B or 3A—1 1/2"	9 cu. yds.	405 cu. yds.	3"	Excellent mulch for short slopes and around plants and ornamentals. Use 2B where subject to traffic. (Approximately 2,000 lbs./cu. yd.). Frequently used over filter fabric for better weed control.
Hay or Straw	Air-dried; free of undesirable seeds & coarse materials	90-100 lbs. 2-3 bales	2 tons (100-120 bales)	cover about 90% surface	Use small grain straw where mulch is maintained for more than three months. Subject to wind blowing unless anchored. Most commonly used mulching material. Provides the best micro-environment for germinating seeds.
Jute twisted yarn	Undyed, unbleached plain weave. Warp 78 ends/yd., Weft 41 ends/yd. 60-90 lbs./roll	48" x 50 yds. or 48" x 75 yds.	—	—	Use without additional mulch. Tie down as per manufacturers specifications. Good for center line of concentrated water flow.
Excelsior wood fiber mats	Interlocking web of excelsior fibers with photodegradable plastic netting	4' x 112.5' or 8' x 112.5'.	—	—	Use without additional mulch. Excellent for seeding establishment. Anchor as per manufacturers specifications. Approximately 72 lbs./roll for excelsior with plastic on both sides. Use two sided plastic for centerline of waterways.
Straw or coconut fiber, or combination	Photodegradable plastic net on one or two sides	Most are 6.5 ft. x 3.5 ft.	81 rolls	—	Designed to tolerate higher velocity water flow, centerlines of waterways, 60 sq. yds. per roll.

**Table 4.3**  
**Mulch Anchoring Guide**

Anchoring Method or Material	Kind of Mulch to be Anchored	How to Apply
1. Peg and Twine	Hay or straw	After mulching, divide areas into blocks approximately 1 sq. yd. in size. Drive 4-6 pegs per block to within 2" to 3" of soil surface. Secure mulch to surface by stretching twine between pegs in criss-cross pattern on each block. Secure twine around each peg with 2 or more tight turns. Drive pegs flush with soil. Driving stakes into ground tightens the twine.
2. Mulch netting	Hay or straw	Staple the light-weight paper, jute, wood fiber, or plastic nettings to soil surface according to manufacturer's recommendations. Should be biodegradable. Most products are not suitable for foot traffic.
3. Wood cellulose fiber	Hay or straw	Apply with hydroseeder immediately after mulching. Use 500 lbs. wood fiber per acre. Some products contain an adhesive material ("tackifier"), possibly advantageous.
4. Mulch anchoring tool	Hay or straw	Apply mulch and pull a mulch anchoring tool (blunt, straight discs) over mulch as near to the contour as possible. Mulch material should be "tucked" into soil surface about 3".
5. Tackifier	Hay or straw	Mix and apply polymeric and gum tackifiers according to manufacturer's instructions. Avoid application during rain. A 24-hour curing period and a soil temperature higher than 45 <sup>0</sup> Fahrenheit are required.

# STANDARD AND SPECIFICATIONS FOR PERMANENT CONSTRUCTION AREA PLANTING



## Definition & Scope

Establishing **permanent** grasses with other forbs and/or shrubs to provide a minimum 80% perennial vegetative cover on areas disturbed by construction and critical areas to reduce erosion and sediment transport. Critical areas may include but are not limited to steep excavated cut or fill slopes as well as eroding or denuded natural slopes and areas subject to erosion.

## Conditions Where Practice Applies

This practice applies to all disturbed areas void of, or having insufficient, cover to prevent erosion and sediment transport. See additional standards for special situations such as sand dunes and sand and gravel pits.

## Criteria

All water control measures will be installed as needed prior to final grading and seedbed preparation. Any severely compacted sections will require chiseling or disking to provide an adequate rooting zone, to a minimum depth of 12", see Soil Restoration Standard. The seedbed must be prepared to allow good soil to seed contact, with the soil not too soft and not too compact. Adequate soil moisture must be present to accomplish this. If surface is powder dry or sticky wet, postpone operations until moisture changes to a favorable condition. If seeding is accomplished within 24 hours of final grading, additional scarification is generally not needed, especially on ditch or stream banks. Remove all stones and other debris from the surface that are greater than 4 inches, or that will interfere with future mowing or maintenance.

Soil amendments should be incorporated into the upper 2 inches of soil when feasible. **The soil should be tested to determine the amounts of amendments needed.** Apply

ground agricultural limestone to attain a pH of 6.0 in the upper 2 inches of soil. If soil must be fertilized before results of a soil test can be obtained to determine fertilizer needs, apply commercial fertilizer at 600 lbs. per acre of 5-5-10 or equivalent. If manure is used, apply a quantity to meet the nutrients of the above fertilizer. This requires an appropriate manure analysis prior to applying to the site. Do not use manure on sites to be planted with birdsfoot trefoil or in the path of concentrated water flow.

Seed mixtures may vary depending on location within the state and time of seeding. Generally, warm season grasses should only be seeded during early spring, April to May. These grasses are primarily used for vegetating excessively drained sands and gravels. See Standard and Specification for Sand and Gravel Mine Reclamation. Other grasses may be seeded any time of the year when the soil is not frozen and is workable. When legumes such as birdsfoot trefoil are included, spring seeding is preferred. See Table 4.4, "Permanent Construction Area Planting Mixture Recommendations" for additional seed mixtures.

<u>General Seed Mix:</u>			
	<b>Variety</b>	<b>lbs./acre</b>	<b>lbs/1000 sq. ft.</b>
Red Clover <sup>1</sup> <u>OR</u>	Acclaim, Rally, Red Head II, Renegade	8 <sup>2</sup>	0.20
Common white clover <sup>1</sup>	Common	8	0.20
<u>PLUS</u>			
Creeping Red Fescue	Common	20	0.45
<u>PLUS</u>			
Smooth Bromegrass <u>OR</u>	Common	2	0.05
Ryegrass (perennial)	Pennfine/Linn	5	0.10
<sup>1</sup> add inoculant immediately prior to seeding <sup>2</sup> Mix 4 lbs each of Empire and Pardee OR 4 lbs of Birdsfoot and 4 lbs white clover per acre. All seeding rates are given for Pure Live Seed (PLS)			

Pure Live Seed, or (PLS) refers to the amount of live seed in a lot of bulk seed. Information on the seed bag label includes the type of seed, supplier, test date, source of seed, purity, and germination. Purity is the percentage of pure seed. Germination is the percentage of pure seed that will produce normal plants when planted under favorable conditions.

To compute Pure Live Seed multiply the “germination percent” times the “purity” and divide that by 100 to get Pure Live Seed.

$$\text{Pure Live Seed (PLS)} = \frac{\% \text{ Germination} \times \% \text{ Purity}}{100}$$

For example, the PLS for a lot of Kentucky Blue grass with 75% purity and 96% germination would be calculated as follows:

$$\frac{(96) \times (75)}{100} = 72\% \text{ Pure Live Seed}$$

For 10lbs of PLS from this lot =

$$\frac{10}{0.72} = 13.9 \text{ lbs}$$

Therefore, 13.9 lbs of seed is the actual weight needed to meet 10lbs PSL from this specific seed lot.

Time of Seeding: The optimum timing for the general seed mixture is early spring. Permanent seedings may be made any time of year if properly mulched and adequate moisture is provided. Late June through early August is not a good time to seed, but may facilitate covering the land without additional disturbance if construction is completed. Portions of the seeding may fail due to drought and heat. These areas may need reseeding in late summer/fall or the following spring.

Method of seeding: Broadcasting, drilling, cultipack type seeding, or hydroseeding are acceptable methods. Proper soil to seed contact is key to successful seedings.

Mulching: Mulching is essential to obtain a uniform stand of seeded plants. Optimum benefits of mulching new seedings are obtained with the use of small grain straw applied at a rate of 2 tons per acre, and anchored with a netting or tackifier. See the Standard and Specifications for Mulching for choices and requirements.

Irrigation: Watering may be essential to establish a new seeding when a drought condition occurs shortly after a new seeding emerges. Irrigation is a specialized practice and care must be taken not to exceed the application rate for the soil or subsoil. When disconnecting irrigation pipe, be sure pipes are drained in a safe manor, not creating an erosion concern.



80% Perennial Vegetative Cover



50% Perennial Vegetative Cover

**Table 4.4  
Permanent Construction Area Planting Mixture Recommendations**

Seed Mixture	Variety	Rate in lbs./acre (PLS)	Rate in lbs./1,000 ft <sup>2</sup>
<b>Mix #1</b>			
Creeping red fescue	Ensylva, Pennlawn, Boreal	10	.25
Perennial ryegrass	Pennfine, Linn	10	.25
*This mix is used extensively for shaded areas.			
<b>Mix #2</b>			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	20	.50
*This rate is in pure live seed, this would be an excellent choice along the upland edge of a wetland to filter runoff and provide wildlife benefits. In areas where erosion may be a problem, a companion seeding of sand lovegrass should be added to provide quick cover at a rate of 2 lbs. per acre (0.05 lbs. per 1000 sq. ft.).			
<b>Mix #3</b>			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	4	.10
Big bluestem	Niagara	4	.10
Little bluestem	Aldous or Camper	2	.05
Indiangrass	Rumsey	4	.10
Coastal panicgrass	Atlantic	2	.05
Sideoats grama	El Reno or Trailway	2	.05
Wildflower mix		.50	.01
*This mix has been successful on sand and gravel plantings. It is very difficult to seed without a warm season grass seeder such as a Truax seed drill. Broadcasting this seed is very difficult due to the fluffy nature of some of the seed, such as bluestems and indiangrass.			
<b>Mix #4</b>			
Switchgrass	Shelter, Pathfinder, Trailblazer, or Blackwell	10	.25
Coastal panicgrass	Atlantic	10	.25
*This mix is salt tolerant, a good choice along the upland edge of tidal areas and roadsides.			
<b>Mix #5</b>			
Saltmeadow cordgrass ( <i>Spartina patens</i> )—This grass is used for tidal shoreline protection and tidal marsh restoration. It is planted by vegetative stem divisions.			
'Cape' American beachgrass can be planted for sand dune stabilization above the saltmeadow cordgrass zone.			
<b>Mix #6</b>			
Creeping red fescue	Ensylva, Pennlawn, Boreal	20	.45
Chewings Fescue	Common	20	.45
Perennial ryegrass	Pennfine, Linn	5	.10
Red Clover	Common	10	.45
*General purpose erosion control mix. Not to be used for a turf planting or play grounds.			



# STANDARD AND SPECIFICATIONS FOR TEMPORARY CONSTRUCTION AREA SEEDING



## **Definition & Scope**

Providing temporary erosion control protection to disturbed areas and/or localized critical areas for an interim period by covering all bare ground that exists as a result of construction activities or a natural event. Critical areas may include but are not limited to steep excavated cut or fill slopes and any disturbed, denuded natural slopes subject to erosion.

## **Conditions Where Practice Applies**

Temporary seedings may be necessary on construction sites to protect an area, or section, where final grading is complete, when preparing for winter work shutdown, or to provide cover when permanent seedings are likely to fail due to mid-summer heat and drought. The intent is to provide temporary protective cover during temporary shutdown of construction and/or while waiting for optimal planting time.

## **Criteria**

Water management practices must be installed as appropriate for site conditions. The area must be rough graded and slopes physically stable. Large debris and rocks are usually removed. Seedbed must be seeded within 24 hours of disturbance or scarification of the soil surface will be necessary prior to seeding.

Fertilizer or lime are not typically used for temporary seedings.

IF: Spring or summer or early fall, then seed the area with ryegrass (annual or perennial) at 30 lbs. per acre (Approximately 0.7 lb./1000 sq. ft. or use 1 lb./1000 sq. ft.).

IF: Late fall or early winter, then seed Certified 'Aroostook' winter rye (cereal rye) at 100 lbs. per acre (2.5 lbs./1000 sq. ft.).

Any seeding method may be used that will provide uniform application of seed to the area and result in relatively good soil to seed contact.

Mulch the area with hay or straw at 2 tons/acre (approx. 90 lbs./1000 sq. ft. or 2 bales). Quality of hay or straw mulch allowable will be determined based on long term use and visual concerns. Mulch anchoring will be required where wind or areas of concentrated water are of concern. Wood fiber hydromulch or other sprayable products approved for erosion control (nylon web or mesh) may be used if applied according to manufacturers' specification. Caution is advised when using nylon or other synthetic products. They may be difficult to remove prior to final seeding and can be a hazard to young wildlife species.

# STANDARD AND SPECIFICATIONS FOR TOPSOILING



## **Definition & Scope**

Spreading a specified quality and quantity of topsoil materials on graded or constructed subsoil areas to provide acceptable plant cover growing conditions, thereby reducing erosion; to reduce irrigation water needs; and to reduce the need for nitrogen fertilizer application.

## **Conditions Where Practice Applies**

Topsoil is applied to subsoils that are droughty (low available moisture for plants), stony, slowly permeable, salty or extremely acid. It is also used to backfill around shrub and tree transplants. This standard does not apply to wetland soils.

## **Design Criteria**

1. Preserve existing topsoil in place where possible, thereby reducing the need for added topsoil.
2. Conserve by stockpiling topsoil and friable fine textured subsoils that must be stripped from the excavated site and applied after final grading where vegetation will be established. Topsoil stockpiles must be stabilized. Stockpile surfaces can be stabilized by vegetation, geotextile or plastic covers. This can be aided by orientating the stockpile lengthwise into prevailing winds.
3. Refer to USDA Natural Resource Conservation Service soil surveys or soil interpretation record sheets for further soil texture information for selecting appropriate design topsoil depths.

## **Site Preparation**

1. As needed, install erosion and sediment control practices such as diversions, channels, sediment traps, and stabilizing measures, or maintain if already installed.
2. Complete rough grading and final grade, allowing for depth of topsoil to be added.
3. Scarify all compact, slowly permeable, medium and fine textured subsoil areas. Scarify at approximately right angles to the slope direction in soil areas that are steeper than 5 percent. Areas that have been overly compacted shall be decompact in accordance with the Soil Restoration Standard.
4. Remove refuse, woody plant parts, stones over 3 inches in diameter, and other litter.

## **Topsoil Materials**

1. Topsoil shall have at least 6 percent by weight of fine textured stable organic material, and no greater than 20 percent. Muck soil shall not be considered topsoil.
2. Topsoil shall have not less than 20 percent fine textured material (passing the NO. 200 sieve) and not more than 15 percent clay.
3. Topsoil treated with soil sterilants or herbicides shall be so identified to the purchaser.
4. Topsoil shall be relatively free of stones over 1 1/2 inches in diameter, trash, noxious weeds such as nut sedge and quackgrass, and will have less than 10 percent gravel.
5. Topsoil containing soluble salts greater than 500 parts per million shall not be used.
6. Topsoil may be manufactured as a mixture of a mineral component and organic material such as compost.

## **Application and Grading**

1. Topsoil shall be distributed to a uniform depth over the area. It shall not be placed when it is partly frozen, muddy, or on frozen slopes or over ice, snow, or standing water puddles.
2. Topsoil placed and graded on slopes steeper than 5 percent shall be promptly fertilized, seeded, mulched, and stabilized by “tracking” with suitable equipment.
3. Apply topsoil in the amounts shown in Table 4.7 below:

<b>Table 4.7 - Topsoil Application Depth</b>		
<b>Site Conditions</b>	<b>Intended Use</b>	<b>Minimum Topsoil Depth</b>
1. Deep sand or loamy sand	Mowed lawn	6 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	1 in.
2. Deep sandy loam	Mowed lawn	5 in.
	Tall legumes, unmowed	2 in.
	Tall grass, unmowed	none
3. Six inches or more: silt loam, clay loam, loam, or silt	Mowed lawn	4 in.
	Tall legumes, unmowed	1 in.
	Tall grass, unmowed	1 in.

# STANDARD AND SPECIFICATIONS FOR TREES, SHRUBS, AND VINES



## **Definition & Scope**

Establishing trees, shrubs, and vines or selectively reducing stand density and trimming woody plants to protect the soil and plant resources, improve an area for recreation and increase the attractiveness and usefulness of areas.

## **Conditions Where Practice Applies**

On any area planned for recreation or landscape use such as yard areas, leisure areas, picnic areas, and park lands providing outdoor recreational opportunities.

## **Criteria and Specifications**

### 1. Planting nursery stock

A. Select species to serve the intended purpose. See Appendix G, Table G.1, “Trees Suitable for Landscape and Conservation Plantings in New York.” Where planting of trees is to be done in recreation areas, use those species resistant to compaction listed in Table G.2, “Susceptibility of Tree Species to Compaction” whenever possible.

### B. Plant Materials

1) Plants shall conform to the species, variety, size, number, and conditions as stated in a conservation plan or on a plant list shown on landscape drawings. “American Standard for Nursery Stock,” by American Association of Nurserymen, shall be used to develop the plant list for landscape drawings and to check quality of plant materials.

2) Durable, legible labels with the scientific and common name and cultivar shall be securely

attached to plants, bundles of seedlings, containers, and/or flats.

### C. Plant Protection

Prior to delivery, the trunk, branches, and foliage of the plants shall be sprayed with non-toxic antidesiccant, applied according to the manufacturer’s recommendations. This does not apply to state nursery seedlings.

### D. Planting Time

Deciduous trees and shrubs: April 1 to June 1 and October 15 to December 15. Evergreen trees and shrubs: April 1 to June 1 and September 1 to November 15.

### E. Spacing

Plant all trees and shrubs well back from buildings to allow for mature crown size. The following are guides for planning:

Large Trees	50-60 feet apart
Small Trees	20-30 feet apart
Columnar Species	6-8 feet apart
Hedges	1-4 feet apart
Shrubs	For clumps, plan spacing so mature shrubs will be touching or overlapping by only 1 or 2 feet

### F. Site Preparation

1) Individual sites for planting seedlings can be prepared by scalping the sod away from a four foot square area where the seedling is to be planted.

2) All planting beds shall be cultivated to a depth of 8 inches, or chemically treated for weed control. Remove objectionable objects that will interfere with maintenance of site.

### G. Planting

1) Plants shall be located as shown on plans and/or drawings and, where necessary, located on the site by stakes, flags or other means.

2) Prior to planting, remove galvanized wire basket securing root ball, untie and roll down burlap covering from around the stem.

3) The plants shall be set upright in holes as illustrated in Figure G.1 in Appendix G.

4) All plants shall be thoroughly watered on the same day of planting. Plants that have settled shall be reset to grade.

H. Wrapping

Immediately after planting, wrap deciduous tree trunks from the bottom to the first limb with a 4 inch wide bituminous impregnated, insect resistant tape or paper manufactured for that purpose. Tie with jute (bag strings) at top and bottom. The wrap should be removed per nursery recommendations.

I. Mulching

Mulch the disturbed area around individual trees and shrubs with a 2-3" layer of wood chips. Pull wood chips 1 inch away from the base of shrubs to avoid fungus development.

J. Pruning

After planting, prune to remove injured twigs and branches. The natural shape of the plant should not be changed.

K. Cleanup and Maintenance

1) After all work is complete, all excess soil, peat moss, debris, etc., shall be removed from the site.

2) Water plants two weeks after planting. For two years, water plants every two weeks during dry periods, which exceed three weeks without a good soaking rain, or water as needed in accordance with local conditions. Shrubs may require 5 to 10 gallons and trees, 20 to 30 gallons for each watering.

3) Remove trunk wrap per nursery recommendation.

2. Transplanting "Wild" Stock

Successful transplanting of wild stock will require heavy equipment and considerable labor as a large weight of soil must be moved with the roots.

- A. Select trees and shrubs with good form and full crowns.
- B. Transplant only when plants are dormant and soil is moist. Wrap soil ball with burlap to prevent soil from separating from roots.
- C. Table 4.8 shows minimum diameter and

approximate weight of soil ball that must be moved with each size plant.

- D. Plant and maintain as described above for nursery stock.

**PRUNING AND THINNING**

Use	Cleared Width Each Side of Trail Tread (ft.)	Cleared Height (ft.)
<b>TRAILS</b>		
Hiking	1	8
Bicycle	2	10
Motorbike	2	10
Horse	2	12
X-Country Ski	Total: 3-12	12 <sup>1</sup>
Snowmobile	Total: 6-12	12 <sup>1</sup>
<b>PICNIC &amp; CAMPING AREAS</b>		
Campfire/Grill	10 ft. diam.	15
<sup>1</sup> Includes allowance for snow depth and snow load on branches		

1. Pruning

- A. Remove trees, limbs, and limb stubs to the above widths and heights specified for the intended use.
- B. Remove dead, diseased, or dying limbs that may fall.
- C. Do not remove more than one-third of the live crown of a tree in a year.
- D. Cut limbs flush to the branch bark ridge.
- E. Use the 3 or 4 cut pruning method on all branches over 2 inches in diameter: First cut about one-third the way through the underside of the limb (about 6-12 inches from the tree trunk). Then (approximately an inch further out) make a second cut through the limb from the upper side. When the branch is removed, there is no splintering of the main tree trunk. Remove the stub. If the branch is larger than 5-6 inches in diameter, use the four cut system. Cuts 1 and 2 remain the same and cut 3 should be from the underside of the limb, on the outside of the branch collar. Cut 4 should be from the top and in alignment with the 3rd cut. Cut 3 should be 1/4 to 1/3 the way through the limb. This will prevent the bark from peeling down the trunk. Do not paint the cut surface.

2. Thinning
  - A. Remove dead, diseased, dying, poorly anchored, or ice damaged trees that pose a hazard to recreationists or that interfere with intended use.
  - B. To maintain grass cover in a wooded area, thin according to formula  $D \times 3$  (average diameter of the trunk of overstory trees, in inches, times three—the answer is the spacing between trees to be left, in feet). For example, for trees with average diameter of 6 inches, spacing after thinning should leave trees 18 feet apart on average. Crown cover after thinning should be about 50 percent.
  - C. Selectively thin as needed to favor those trees that are most “resistant” to compaction around their roots. See Table G.2, “Susceptibility of Tree Species to Compaction” in Appendix G. If the soil on the site is naturally well drained, those species in the “intermediate” group may also be favored.

**Table 4.8**  
**Size and Weight of Earth Ball Required to Transplant Wild Stock**

Caliper <sup>1</sup> (Inches)	Shade Trees (Maple, Ash, Oak, Birch, etc.)		Small Trees & Shrubs (Crabapple, Thornapple, Viburnum, Dogwood, etc.)		
	Minimum Diameter Ball (Inches)	Weight of Ball (lbs.)	Up to 6 ft. Height — 6 ft. and Caliper <sup>1</sup>	Minimum Diameter Ball (Inches)	Weight of Ball (lbs.)
1/2	14	88	2	12	55
3/4	16	130	3	14	88
1	18	186	4	16	130
1-1/4	20	227	5	18	186
1-1/2	22	302	3/4	18	186
1-3/4	24	390	1	20	227
2	28	621	1-1/2	22	302
3	32	836	1-3/4	24	390
3-1/2	38	1,400	2	28	621
4	42	1,887	2-1/2	32	836
			3	38	1,400

<sup>1</sup>Caliper is a diameter measurement of trees at a height of 6 inches above the ground.

# STANDARD AND SPECIFICATIONS FOR SILT FENCE



## Definition & Scope

A **temporary** barrier of geotextile fabric installed on the contours across a slope used to intercept sediment laden runoff from small drainage areas of disturbed soil by temporarily ponding the sediment laden runoff allowing settling to occur. The maximum period of use is limited by the ultraviolet stability of the fabric (approximately one year).

## Conditions Where Practice Applies

A silt fence may be used subject to the following conditions:

1. Maximum allowable slope length and fence length will not exceed the limits shown in the Design Criteria for the specific type of silt fence used ; and
2. Maximum ponding depth of 1.5 feet behind the fence; and
3. Erosion would occur in the form of sheet erosion; and
4. There is no concentration of water flowing to the barrier; and
5. Soil conditions allow for proper keying of fabric, or other anchorage, to prevent blowouts.

## Design Criteria

1. Design computations are not required for installations of 1 month or less. Longer installation periods should be designed for expected runoff.
2. All silt fences shall be placed as close to the disturbed area as possible, but at least 10 feet from the toe of a slope steeper than 3H:1V, to allow for maintenance and

roll down. The area beyond the fence must be undisturbed or stabilized.

3. The type of silt fence specified for each location on the plan shall not exceed the maximum slope length and maximum fence length requirements shown in the following table:

		Slope Length/Fence Length (ft.)		
Slope	Steepness	Standard	Reinforced	Super
<2%	< 50:1	300/1500	N/A	N/A
2-10%	50:1 to 10:1	125/1000	250/2000	300/2500
10-20%	10:1 to 5:1	100/750	150/1000	200/1000
20-33%	5:1 to 3:1	60/500	80/750	100/1000
33-50%	3:1 to 2:1	40/250	70/350	100/500
>50%	> 2:1	20/125	30/175	50/250

**Standard Silt Fence (SF)** is fabric rolls stapled to wooden stakes driven 16 inches in the ground.  
**Reinforced Silt Fence (RSF)** is fabric placed against welded wire fabric with anchored steel posts driven 16 inches in the ground.  
**Super Silt Fence (SSF)** is fabric placed against chain link fence as support backing with posts driven 3 feet in the ground.

4. Silt fence shall be removed as soon as the disturbed area has achieved final stabilization.

The silt fence shall be installed in accordance with the appropriate details. Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass. Butt joints are not acceptable. A detail of the silt fence shall be shown on the plan. See Figure 5.30 on page 5.56 for Reinforced Silt Fence as an example of details to be provided.

## Criteria for Silt Fence Materials

1. Silt Fence Fabric: The fabric shall meet the following specifications unless otherwise approved by the appropriate erosion and sediment control plan approval authority. Such approval shall not constitute statewide acceptance.

Fabric Properties	Minimum Acceptable Value	Test Method
Grab Tensile Strength (lbs)	110	ASTM D 4632
Elongation at Failure (%)	20	ASTM D 4632
Mullen Burst Strength (PSI)	300	ASTM D 3786
Puncture Strength (lbs)	60	ASTM D 4833
Minimum Trapezoidal Tear Strength (lbs)	50	ASTM D 4533
Flow Through Rate (gal/min/sf)	25	ASTM D 4491
Equivalent Opening Size	40-80	US Std Sieve ASTM D 4751
Minimum UV Residual (%)	70	ASTM D 4355

### Super Silt Fence



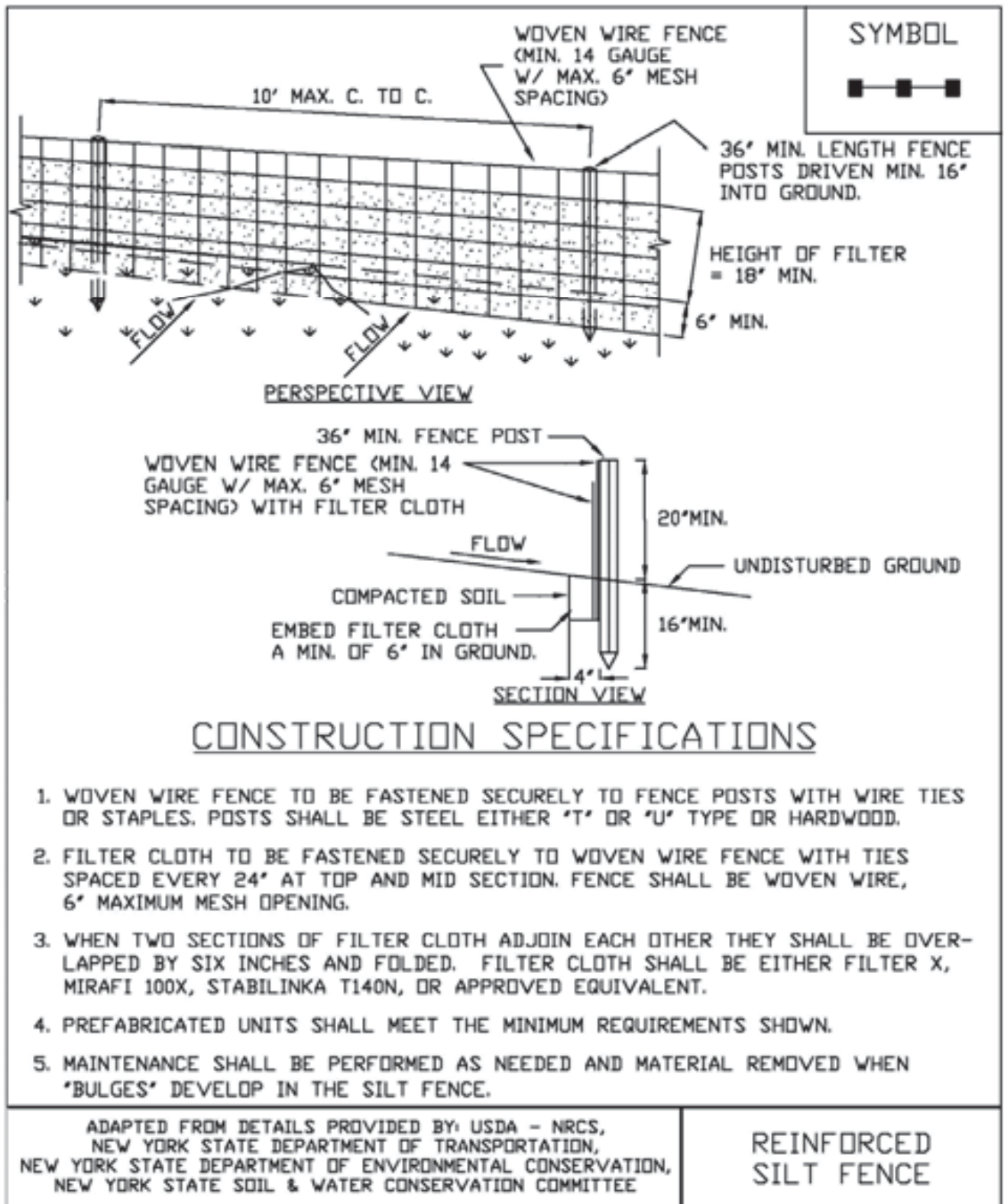
2. Fence Posts (for fabricated units): The length shall be a minimum of 36 inches long. Wood posts will be of sound quality hardwood with a minimum cross sectional area of 3.5 square inches. Steel posts will be standard T and U section weighing not less than 1.00 pound per linear foot. Posts for super silt fence shall be standard chain link fence posts.
3. Wire Fence for reinforced silt fence: Wire fencing shall be a minimum 14 gage with a maximum 6 in. mesh opening, or as approved.
4. Prefabricated silt fence is acceptable as long as all material specifications are met.

### Reinforced Silt Fence





**Figure 5.30  
Reinforced Silt Fence**



# Appendix G

[www.dewberry.com](http://www.dewberry.com)



January 21, 2020

Honorable Chairman and Members of the Planning Board  
 Town of Carmel  
 60 McAlpin Avenue,  
 Mahopac, NY 10541

**Re: Site ID: NY054**  
**Location Name: Glenacom Lake**  
**Dewberry No.: 50114388**  
**Site Address: Walton Drive**  
**Mahopac, NY 10541**

To Whom It May Concern,

As part of the proposed telecommunication facility installation, Verizon Wireless is proposing a 50kW Kohler Co. diesel generator. Kohler Co. indicates that the noise level output is 65 dBA @ 23 feet.

The approximate projected noise levels at the property lines are as follows:

<u>Property Line</u>	<u>Distance</u>	<u>Noise Level</u>
North	2040'	26 dBA
South	396'	40 dBA
East	108'	52 dBA
West	1104'	31 dBA

Approximate noise levels above are based on the Inverse Square Law. Due the heavy vegetation in the area the actual noise level at the property line is expected to be below 50 dBA at the property line.

Noise level regulations per Section 104-14(B) of the Town Code for the Residential Zone district in the town of Carmel, NY are as follows:

8:00 AM – 6:00 PM not to exceed 65 dBA @ the property line  
 6:00 PM – 8:00 AM not to exceed 50 dBA @ the property line

The generator is expected to only run in emergency situations and will be routinely cycled for approximately 30 minutes a week on a weekday between 8:00 AM and 6:00 PM. Based on the foregoing, the generator will comply with the town noise code.

If you have any questions, please do not hesitate to call me at 973.576.9639.

Sincerely,  
 Dewberry Engineers Inc.



David Revette, PE  
 NY Professional Engineer License No. 101758



Department of  
Environmental  
Conservation

NYS Department of Environmental Conservation  
Division of Water  
625 Broadway, 4th Floor  
Albany, New York 12233-3505

**MS4 Stormwater Pollution Prevention Plan (SWPPP) Acceptance  
Form**

for

**Construction Activities Seeking Authorization Under SPDES General Permit**

\*(NOTE: Attach Completed Form to Notice Of Intent and Submit to Address Above)

**I. Project Owner/Operator Information**

1. Owner/Operator Name: Homeland Towers, LLC  
2. Contact Person: Klaus Wimmer  
3. Street Address: 9 Harmony St, 2nd Floor  
4. City/State/Zip: Danbury, CT 06801

**II. Project Site Information**

5. Project/Site Name: Glencoma Lake Cell Tower Compound  
6. Street Address: Walton Drive  
7. City/State/Zip: Mahopac, New York, 10541

**III. Stormwater Pollution Prevention Plan (SWPPP) Review and Acceptance Information**

8. SWPPP Reviewed by: Roberty J Foley P.E.  
9. Title/Position: Licensed Professional Engineer  
10. Date Final SWPPP Reviewed and Accepted: 10/12/2020

**IV. Regulated MS4 Information**

11. Name of MS4: Town of Carmel  
12. MS4 SPDES Permit Identification Number: NYR20A HP3-EXSV-KSNZ3  
13. Contact Person: Richard J. Franzetti, P.E. Town Engineer  
14. Street Address: 60 McAlpin Ave  
15. City/State/Zip: Carmel, NY 10541  
16. Telephone Number: 845-628-1500

## MS4 SWPPP Acceptance Form - continued

### V. Certification Statement - MS4 Official (principal executive officer or ranking elected official) or Duly Authorized Representative

I hereby certify that the final Stormwater Pollution Prevention Plan (SWPPP) for the construction project identified in question 5 has been reviewed and meets the substantive requirements in the SPDES General Permit For Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s).  
Note: The MS4, through the acceptance of the SWPPP, assumes no responsibility for the accuracy and adequacy of the design included in the SWPPP. In addition, review and acceptance of the SWPPP by the MS4 does not relieve the owner/operator or their SWPPP preparer of responsibility or liability for errors or omissions in the plan.

Printed Name: RICHARD FRANZETTA

Title/Position: Town Engineer

Signature: 

Date: 12-1-2020

### VI. Additional Information

## Alexis Green

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**From:** towernotifyinfo@fcc.gov  
**Sent:** Tuesday, April 21, 2020 2:21 PM  
**To:** Alexis Green  
**Subject:** Section 106 Notification of SHPO/THPO Concurrence- Email ID #4527426

**Categories:** Upload to RPM/E106, Production or ASAP

This is to notify you that the Lead SHPO/THPO has concurred with the following filing:

Date of Action: 04/21/2020

Direct Effect: No Historic Properties in Area of Potential Effects (APE)

Visual Effect: No Historic Properties in Area of Potential Effects (APE)

Comment Text: The NYSHPO concurs with the recommended effect finding based on the information provided.

Reviewed by J.A. Bonafide, NYSHPO

File Number: 0009036498

TCNS Number: 194673

Purpose: New Tower Submission Packet

Notification Date: 7AM EST 04/08/2020

Applicant: Homeland Towers, LLC

Consultant: EnviroBusiness Inc. d/b/a EBI Consulting (EBI 6119004380)

Positive Train Control Filing Subject to Expedited Treatment Under Program Comment: No

Site Name: Glencoma Lake / NY054

Site Address: Walton Drive

Detailed Description of Project: 6119004380 Proposed construction of a new telecommunications monopole and compound resulting in ground disturbance Please see Attachment 4 of this filing for project design details

Site Coordinates: 41-20-56.9 N, 73-43-49.9 W

City: Mahopac

County: PUTNAM

State:NY

Lead SHPO/THPO: New York State Historic Preservation Office

### NOTICE OF FRAUDULENT USE OF SYSTEM, ABUSE OF PASSWORD AND RELATED MISUSE

Use of the Section 106 system is intended to facilitate consultation under Section 106 of the National Historic Preservation Act and may contain information that is confidential, privileged or otherwise protected from disclosure under applicable laws. Any person having access to Section 106 information shall use it only for its intended purpose. Appropriate action will be taken with respect to any misuse of the system.





MAP 87.5 BLOCK 1 LOT 91  
NOW OR FORMERLY  
DAVID W. PARENT - EST.  
BOOK 1187 PAGE 136  
#205 UNION VALLEY ROAD

MAP 87.5 BLOCK 1 LOT 95  
NOW OR FORMERLY  
DAVID W. PARENT - EST.  
BOOK 1187 PAGE 136  
UNION VALLEY ROAD

MAP 86.6 BLOCK 2 LOT 45 NOW  
OR FORMERLY  
ELIZABETH SALVESEN &  
GERALD L. SALVESEN  
BOOK 1633 PAGE 192  
#159 UNION VALLEY ROAD

MAP 86.12 BLOCK 1 LOT 34  
NOW OR FORMERLY  
IRENE SOSA  
BOOK 1101 PAGE 75  
#59 GLENACOM ROAD

MAP 87.5 BLOCK 1 LOT 90  
NOW OR FORMERLY  
MAPLE HILL ESTATES  
HOMEOWNER'S ASSOCIATION, INC.  
BOOK 887 PAGE 26  
PARCEL AREA  
3,070,669 S.F.±  
70.49286 ACRES±

MAP 87.9 BLOCK 1 LOT 1  
NOW OR FORMERLY  
NYS ELECTRIC & GAS CORP.  
BOOK 194 PAGE 64  
OFF SUMMIT CIRCLE

MAP 87.5 BLOCK 1 LOT 5  
NOW OR FORMERLY  
JOHN P. GALLAGHER &  
CAROL A. GALLAGHER  
BOOK 774 PAGE 704  
#123 KIA ORA BLVD.

MAP 87.5 BLOCK 1 LOT 3  
NOW OR FORMERLY  
CRAIG L. PASCHETTI &  
ELIZABETH ANN PASCHETTI  
BOOK 1158 PAGE 307  
#5 BIRCH LANE

MAP 87.5 BLOCK 1 LOT 2  
NOW OR FORMERLY  
GARY PREVOSTO &  
MARY PREVOSTO  
BOOK 1504 PAGE 164  
#11 BIRCH LANE

MAP 87.5 BLOCK 1 LOT 1  
NOW OR FORMERLY  
BERNARD SMALL &  
DOROTHY SMALL  
BOOK 1602 PAGE 293  
#15 BIRCH LANE

MAP 87.9 BLOCK 1 LOT 7  
NOW OR FORMERLY  
AMANDA K. LEVINE &  
MICHAEL S. LEVINE  
BOOK 1991 PAGE 449  
#22 BIRCH LANE

MAP 87.9 BLOCK 1 LOT 5  
NOW OR FORMERLY  
VINCENT CARINO  
BOOK 1813 PAGE 217  
#36 WALTON DRIVE

MAP 87.9 BLOCK 1 LOT 4  
NOW OR FORMERLY  
JOSEPH ARMISTO &  
RUTH ARMISTO  
BOOK 748 PAGE 876  
#40 WALTON DRIVE

MAP 87.9 BLOCK 1 LOT 3  
NOW OR FORMERLY  
EDWARD WECHSLER &  
SUZANNE WECHSLER  
BOOK 1675 PAGE 288  
#44 WALTON DRIVE

MAP 87.9 BLOCK 1 LOT 2  
NOW OR FORMERLY  
PATRICIA GONDOLFO  
BOOK 1508 PAGE 26  
#49 WALTON DRIVE

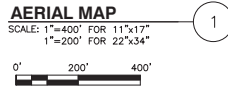
MAP 87.9 BLOCK 1 LOT 51  
NOW OR FORMERLY  
MICHAEL SHAW &  
LINDA SHAW  
BOOK 769 PAGE 169  
#53 WALTON DRIVE

MAP 87.9 BLOCK 1 LOT 44  
NOW OR FORMERLY  
GERARD D. HANRAHAN  
BOOK 1047 PAGE 54  
#25 SUMMIT CIRCLE DRIVE

MAP 87.9 BLOCK 1 LOT 43  
NOW OR FORMERLY  
ROBERT A. AMICUCCI &  
PATRICIA A. AMICUCCI  
BOOK 1732 PAGE 344  
#27 SUMMIT CIRCLE DRIVE

MAP 87.9 BLOCK 1 LOT 32  
NOW OR FORMERLY  
NYS ELECTRIC & GAS CORP.  
BOOK 549 PAGE 241  
MOUNTAIN DRIVE

- NOTES:
1. AERIAL PLAN COURTESY OF GOOGLE MAPS.
  2. SEE ABUTTER LIST ON Z-3, Z-4 AND Z-5 FOR INFORMATION PROVIDED BY TOWN OF CARMEL.



  
HOMELAND TOWERS, LLC  
9 HARMONY STREET  
2nd FLOOR  
DANBURY, CT 06810  
(203) 297-6345  
NEW YORK SMSA  
LIMITED PARTNERSHIP  
d/b/a  
**verizon**  
WIRELESS  
4 CENTERCROSS ROAD  
WEST NYACK, NY 10994

**GLENACOM LAKE**

ZONING DRAWINGS

5	12/02/22	ISSUED FOR ZONING
4	11/22/22	ISSUED FOR ZONING
3	11/04/22	ISSUED FOR ZONING
2	10/26/22	ISSUED FOR ZONING
1	05/07/20	ISSUED FOR ZONING
0	01/20/20	ISSUED FOR ZONING
C	01/02/20	ISSUED FOR REVIEW
B	11/07/19	ISSUED FOR REVIEW
A	09/27/19	ISSUED FOR REVIEW

  
Dewberry Engineers Inc.  
800 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710



DAVID REVETTE, P.E.  
NY LICENSE No. 101758

DRAWN BY:	JC/KFM
REVIEWED BY:	MS
CHECKED BY:	DER
PROJECT NUMBER:	50114387
JOB NUMBER:	50114388
SITE ADDRESS:	

WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE  
**AERIAL MAP**

SHEET NUMBER





SUBJECT PARCEL  
 MAP 87'S BLOCK 1 LOT 30  
 MAPLE HILL ESTATES HOME  
 OWNERS ASSOCIATION, INC.  
 WALTON DRIVE  
 MAHOPAC, NY 10541

PROJECT LOCATION

NOTE:  
 1. RADIUS MAP IS BASED ON PUBLICLY AVAILABLE  
 INFORMATION PROVIDED BY THE TOWNS OF CARMEL AND  
 SOMERS, AND WESTCHESTER & PUTNAM COUNTIES.

**1000' RADIUS MAP**  
 SCALE: 1"=600' FOR 11"x17"  
 1"=300' FOR 22"x34"

  
 HOMELAND TOWERS, LLC  
 9 HARMONY STREET  
 2nd FLOOR  
 DANBURY, CT 06810  
 (203) 297-6345  
**NEW YORK SMSA**  
**LIMITED PARTNERSHIP**  
 d/b/a  
**verizon**  
 WIRELESS  
 4 CENTEROCK ROAD  
 WEST NYACK, NY 10994

**GLENACOM LAKE**

ZONING DRAWINGS

5	12/02/22	ISSUED FOR ZONING
4	11/22/22	ISSUED FOR ZONING
3	11/04/22	ISSUED FOR ZONING
2	10/28/22	ISSUED FOR ZONING
1	05/07/20	ISSUED FOR ZONING
0	01/20/20	ISSUED FOR ZONING
C	01/02/20	ISSUED FOR REVIEW
B	11/07/19	ISSUED FOR REVIEW
A	09/27/19	ISSUED FOR REVIEW

  
**Dewberry**  
 Dewberry Engineers Inc.  
 600 PARSIPPANY ROAD  
 SUITE 301  
 PARSIPPANY, NJ 07054  
 PHONE: 973.739.9400  
 FAX: 973.739.9710



DRAWN BY: JC/KFM  
 REVIEWED BY: MS  
 CHECKED BY: DER  
 PROJECT NUMBER: 50114387  
 JOB NUMBER: 50114388  
 SITE ADDRESS:

WALTON DRIVE  
 MAHOPAC, NY 10541  
 PUTNAM COUNTY

SHEET TITLE  
 1000' RADIUS MAP  
 SHEET NUMBER

TOWN OF CARMEL - PUTNAM COUNTY

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
1	87.5	1	1	15 BIRCH LN, MAHOPAC, NY 10541	BERNARD SMALL	15 BIRCH LN, MAHOPAC, NY 10541
2	87.5	1	2	11 BIRCH LN, MAHOPAC, NY 10541	GARY PREVOSTO	11 BIRCH LN, MAHOPAC, NY 10541
3	87.5	1	3	5 BIRCH LN, MAHOPAC, NY 10541	THOMAS MIGLIO	5 BIRCH LN, MAHOPAC, NY 10541
4	87.5	1	4	1 BIRCH LN, MAHOPAC, NY 10541	MICHAEL TRAINOR	1 BIRCH LN, MAHOPAC, NY 10541
5	87.5	1	5	123 KIA ORA BLVD, MAHOPAC, NY 10541	JOSE HERNANDEZ	123 KIA ORA BLVD, MAHOPAC, NY 10541
6	87.5	1	6	163 KIA ORA BLVD, MAHOPAC, NY 10541	PENNY FIORIO	163 KIA ORA BLVD, MAHOPAC, NY 10541
7	87.5	1	7-9000	90 MAPLE HILL DR, MAHOPAC, NY 10541	JESSICA FELICIANO	23 MAPLE HILL DR, MAHOPAC, NY 10541
8	87.5	1	8-9100	91 MAPLE HILL DR, MAHOPAC, NY 10541	MARIANNE SCOFIELD	3 MAPLE HILL DR, MAHOPAC, NY 10541
9	87.5	1	9-9200	92 MAPLE HILL DR, MAHOPAC, NY 10541	JOAN SEGAL	18 MAPLE HILL DR, MAHOPAC, NY 10541
10	87.5	1	10-100	1 MAPLE HILL DR, MAHOPAC, NY 10541	KYLE TRILLAS	1 MAPLE HILL DR, MAHOPAC, NY 10541
11	87.5	1	11-200	2 MAPLE HILL DR, MAHOPAC, NY 10541	NUNZIO SQUILLANTE	2 MAPLE HILL DR, MAHOPAC, NY 10541
12	87.5	1	12-300	3 MAPLE HILL DR, MAHOPAC, NY 10541	MARIANNE SCOFIELD	3 MAPLE HILL DR, MAHOPAC, NY 10541
13	87.5	1	13-400	4 MAPLE HILL DR, MAHOPAC, NY 10541	ROSETTA DELUCA	4 MAPLE HILL DR, MAHOPAC, NY 10541
14	87.5	1	14-500	5 MAPLE HILL DR, MAHOPAC, NY 10541	ARMINDO CARVALHO	5 MAPLE HILL DR, MAHOPAC, NY 10541
15	87.5	1	15-600	6 MAPLE HILL DR, MAHOPAC, NY 10541	JOAN BURTT	39 BLAIR HEIGHTS, CARMEL, NY 10512
16	87.5	1	16-700	7 MAPLE HILL DR, MAHOPAC, NY 10541	KRISTINE DAGNINO	7 MAPLE HILL DR, MAHOPAC, NY 10541
17	87.5	1	17-800	8 MAPLE HILL DR, MAHOPAC, NY 10541	MICHAEL CIRILLO	8 MAPLE HILL DR, MAHOPAC, NY 10541
18	87.5	1	18-900	9 MAPLE HILL DR, MAHOPAC, NY 10541	SUSAN PALDIN	9 MAPLE HILL DR, MAHOPAC, NY 10541
19	87.5	1	19-7200	72 MAPLE HILL DR, MAHOPAC, NY 10541	ANTHONY FABIANO	PO BOX 634, MAHOPAC, NY 10541
20	87.5	1	20-7300	73 MAPLE HILL DR, MAHOPAC, NY 10541	MICHAEL MURPHY	12 MAPLE HILL DR, MAHOPAC, NY 10541
21	87.5	1	21-7400	74 MAPLE HILL DR, MAHOPAC, NY 10541	CORINNE MARANO	14 MAPLE HILL DR, MAHOPAC, NY 10541
22	87.5	1	22-1000	10 MAPLE HILL DR, MAHOPAC, NY 10541	MARY JANE MARCHUT	10 MAPLE HILL DR, MAHOPAC, NY 10541
23	87.5	1	23-1100	11 MAPLE HILL DR, MAHOPAC, NY 10541	DANIEL CAHILL	11 MAPLE HILL DR, MAHOPAC, NY 10541
24	87.5	1	24-1200	12 MAPLE HILL DR, MAHOPAC, NY 10541	MICHAEL MURPHY	12 MAPLE HILL DR, MAHOPAC, NY 10541
25	87.5	1	25-1300	13 MAPLE HILL DR, MAHOPAC, NY 10541	FRANK LOMBARDI	13 MAPLE HILL DR, MAHOPAC, NY 10541
26	87.5	1	26-1400	14 MAPLE HILL DR, MAHOPAC, NY 10541	CORINNE MARANO	14 MAPLE HILL DR, MAHOPAC, NY 10541
27	87.5	1	27-1500	15 MAPLE HILL DR, MAHOPAC, NY 10541	HALIMA ANDERSON	15 MAPLE HILL DR, MAHOPAC, NY 10541
28	87.5	1	28-1600	16 MAPLE HILL DR, MAHOPAC, NY 10541	LINDA MORREALE	16 MAPLE HILL DR, MAHOPAC, NY 10541
29	87.5	1	29-1700	17 MAPLE HILL DR, MAHOPAC, NY 10541	ANTHONY FABIANO	PO BOX 634, MAHOPAC, NY 10541
30	87.5	1	30-1800	18 MAPLE HILL DR, MAHOPAC, NY 10541	JOAN SEGAL	18 MAPLE HILL DR, MAHOPAC, NY 10541
31	87.5	1	31-1900	19 MAPLE HILL DR, MAHOPAC, NY 10541	RICHARD SALAT	19 MAPLE HILL DR, MAHOPAC, NY 10541
32	87.5	1	32-2000	20 MAPLE HILL DR, MAHOPAC, NY 10541	JOSEPH DE CLEMENTE	20 MAPLE HILL DR, MAHOPAC, NY 10541
33	87.5	1	33-2100	21 MAPLE HILL DR, MAHOPAC, NY 10541	LORETTA MCGRATH	21 MAPLE HILL DR, MAHOPAC, NY 10541
34	87.5	1	34-2200	22 MAPLE HILL DR, MAHOPAC, NY 10541	JAMES MASSI	22 MAPLE HILL DR, MAHOPAC, NY 10541
35	87.5	1	35-2300	23 MAPLE HILL DR, MAHOPAC, NY 10541	JESSICA FELICIANO	23 MAPLE HILL DR, MAHOPAC, NY 10541
36	87.5	1	36-7500	75 MAPLE HILL DR, MAHOPAC, NY 10541	MICHAEL GIBBONS	47 MAPLE HILL DR, MAHOPAC, NY 10541
37	87.5	1	37-7600	76 MAPLE HILL DR, MAHOPAC, NY 10541	LALESSA GONAJ	45 MAPLE HILL DR, MAHOPAC, NY 10541
38	87.5	1	38-7700	77 MAPLE HILL DR, MAHOPAC, NY 10541	CHERIE SCHILLO	48 MAPLE HILL DR, MAHOPAC, NY 10541
39	87.5	1	39-7800	78 MAPLE HILL DR, MAHOPAC, NY 10541	LINDA MINNECI	49 MAPLE HILL DR, MAHOPAC, NY 10541
40	87.5	1	40-7900	79 MAPLE HILL DR, MAHOPAC, NY 10541	JOANNE CRUZ	35 MAPLE HILL DR, MAHOPAC, NY 10541
41	87.5	1	41-8000	80 MAPLE HILL DR, MAHOPAC, NY 10541	ANGELO SAVINO	1408 FLINTLOCK WAY, YORKTOWN HEIGHTS, NY 10598
42	87.5	1	42-3400	34 MAPLE HILL DR, MAHOPAC, NY 10541	JAMES DAVID MOORE	34 MAPLE HILL DR, MAHOPAC, NY 10541
43	87.5	1	43-3500	35 MAPLE HILL DR, MAHOPAC, NY 10541	JOANNE CRUZ	35 MAPLE HILL DR, MAHOPAC, NY 10541
44	87.5	1	44-4500	45 MAPLE HILL DR, MAHOPAC, NY 10541	LALESSA GONAJ	45 MAPLE HILL DR, MAHOPAC, NY 10541
45	87.5	1	45-4600	46 MAPLE HILL DR, MAHOPAC, NY 10541	YOUNG-SUK LEE	46 MAPLE HILL DR, MAHOPAC, NY 10541

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
46	87.5	1	46-4700	47 MAPLE HILL DR, MAHOPAC, NY 10541	MICHAEL GIBBONS	47 MAPLE HILL DR, MAHOPAC, NY 10541
47	87.5	1	47-4800	48 MAPLE HILL DR, MAHOPAC, NY 10541	CHERIE SCHILLO	48 MAPLE HILL DR, MAHOPAC, NY 10541
48	87.5	1	48-4900	49 MAPLE HILL DR, MAHOPAC, NY 10541	LINDA MINNECI	49 MAPLE HILL DR, MAHOPAC, NY 10541
49	87.5	1	49-5000	50 MAPLE HILL DR, MAHOPAC, NY 10541	ANGELA LOPANE	50 MAPLE HILL DR, MAHOPAC, NY 10541
50	87.5	1	50-5100	51 MAPLE HILL DR, MAHOPAC, NY 10541	THOMAS GRIMALDI	51 MAPLE HILL DR, MAHOPAC, NY 10541
51	87.5	1	51-5200	52 MAPLE HILL DR, MAHOPAC, NY 10541	LISA SPENCER	52 MAPLE HILL DR, MAHOPAC, NY 10541
52	87.5	1	52-5300	53 MAPLE HILL DR, MAHOPAC, NY 10541	DENNIS LUSARDI	53 MAPLE HILL DR, MAHOPAC, NY 10541
53	87.5	1	53-5400	54 MAPLE HILL DR, MAHOPAC, NY 10541	PATRICIA DESANTIS FAMILY TRUST	54 MAPLE HILL DR, MAHOPAC, NY 10541
54	87.5	1	54-5500	55 MAPLE HILL DR, MAHOPAC, NY 10541	EBONY HUNTLEY	55 MAPLE HILL DR, MAHOPAC, NY 10541
55	87.5	1	55-5600	56 MAPLE HILL DR, MAHOPAC, NY 10541	MIKE DI LIETO	56 MAPLE HILL DR, MAHOPAC, NY 10541
56	87.5	1	56-5700	57 MAPLE HILL DR, MAHOPAC, NY 10541	KATHLEEN DIMEO	57 MAPLE HILL DR, MAHOPAC, NY 10541
57	87.5	1	57-5800	58 MAPLE HILL DR, MAHOPAC, NY 10541	GEORGE MARTINEZ, SR.	58 MAPLE HILL DR, MAHOPAC, NY 10541
58	87.5	1	58-5900	59 MAPLE HILL DR, MAHOPAC, NY 10541	JOHN STABILE	59 MAPLE HILL DR, MAHOPAC, NY 10541
59	87.5	1	59-6000	60 MAPLE HILL DR, MAHOPAC, NY 10541	ROSANNE DINARDO	60 MAPLE HILL DR, MAHOPAC, NY 10541
60	87.5	1	60-6100	61 MAPLE HILL DR, MAHOPAC, NY 10541	CHARLES BARTON	61 MAPLE HILL DR, MAHOPAC, NY 10541
61	87.5	1	61-8100	81 MAPLE HILL DR, MAHOPAC, NY 10541	KATHLEEN DIMEO	57 MAPLE HILL DR, MAHOPAC, NY 10541
62	87.5	1	62-8200	82 MAPLE HILL DR, MAHOPAC, NY 10541	GEORGE MARTINEZ, SR.	58 MAPLE HILL DR, MAHOPAC, NY 10541
63	87.5	1	63-8300	83 MAPLE HILL DR, MAHOPAC, NY 10541	CHARLES BARTON	61 MAPLE HILL DR, MAHOPAC, NY 10541
64	87.5	1	64-2000	62 MAPLE HILL DR, MAHOPAC, NY 10541	EDWARD BALLUS	62 MAPLE HILL DR, MAHOPAC, NY 10541
65	87.5	1	65-6300	63 MAPLE HILL DR, MAHOPAC, NY 10541	DIANE MATELSKY	63 MAPLE HILL DR, MAHOPAC, NY 10541
66	87.5	1	66-6400	64 MAPLE HILL DR, MAHOPAC, NY 10541	ANGELO PRESTAMO	64 MAPLE HILL DR, MAHOPAC, NY 10541
67	87.5	1	67-6500	65 MAPLE HILL DR, MAHOPAC, NY 10541	VALENTINA DUHANI	65 MAPLE HILL DR, MAHOPAC, NY 10541
68	87.5	1	68-6600	66 MAPLE HILL DR, MAHOPAC, NY 10541	WILLIAM LORETTA BOWENS	66 MAPLE HILL DR, MAHOPAC, NY 10541
69	87.5	1	69-6700	67 MAPLE HILL DR, MAHOPAC, NY 10541	ELIZABETH BARKSDALE	67 MAPLE HILL DR, MAHOPAC, NY 10541
70	87.5	1	70-6800	68 MAPLE HILL DR, MAHOPAC, NY 10541	ANDREW ROBERTO	68 MAPLE HILL DR, MAHOPAC, NY 10541
71	87.5	1	71-6900	69 MAPLE HILL DR, MAHOPAC, NY 10541	JEANNE MCCUGAN	69 MAPLE HILL DR, MAHOPAC, NY 10541
72	87.5	1	72-7000	70 MAPLE HILL DR, MAHOPAC, NY 10541	KAREN CONTI	70 MAPLE HILL DR, MAHOPAC, NY 10541
73	87.5	1	73-7100	71 MAPLE HILL DR, MAHOPAC, NY 10541	DOMINICK DIMICCO	71 MAPLE HILL DR, MAHOPAC, NY 10541
74	87.5	1	74-8600	86 MAPLE HILL DR, MAHOPAC, NY 10541	ANGELO PRESTAMO	64 MAPLE HILL DR, MAHOPAC, NY 10541
75	87.5	1	75-8500	85 MAPLE HILL DR, MAHOPAC, NY 10541	ANDREW ROBERTO	68 MAPLE HILL DR, MAHOPAC, NY 10541
76	87.5	1	76-8400	84 MAPLE HILL DR, MAHOPAC, NY 10541	VALENTINA DUHANI	65 MAPLE HILL DR, MAHOPAC, NY 10541
77	87.5	1	77-3300	33 MAPLE HILL DR, MAHOPAC, NY 10541	ROBERT KELLY	33 MAPLE HILL DR, MAHOPAC, NY 10541
78	87.5	1	78-3200	32 MAPLE HILL DR, MAHOPAC, NY 10541	MARY TYSON	32 MAPLE HILL DR, MAHOPAC, NY 10541
79	87.5	1	79-3100	31 MAPLE HILL DR, MAHOPAC, NY 10541	ASSER TANTAWI	220 BRIARWOOD DR, SOMERS, NY 10589
80	87.5	1	80-3000	30 MAPLE HILL DR, MAHOPAC, NY 10541	RICHARD SANTOS	30 MAPLE HILL DR, MAHOPAC, NY 10541
81	87.5	1	81-2900	29 MAPLE HILL DR, MAHOPAC, NY 10541	GLORIA CLEMENTE	29 MAPLE HILL DR, MAHOPAC, NY 10541
82	87.5	1	82-2800	28 MAPLE HILL DR, MAHOPAC, NY 10541	LINDA ALIOTTA-FOLEY	28 MAPLE HILL DR, MAHOPAC, NY 10541
83	87.5	1	83-2700	27 MAPLE HILL DR, MAHOPAC, NY 10541	FREDERICK CAMILLI	27 MAPLE HILL DR, MAHOPAC, NY 10541
84	87.5	1	84-2600	26 MAPLE HILL DR, MAHOPAC, NY 10541	ROBERT DELEON	26 MAPLE HILL DR, MAHOPAC, NY 10541
85	87.5	1	85-2500	25 MAPLE HILL DR, MAHOPAC, NY 10541	GARY ULRICH	25 MAPLE HILL DR, MAHOPAC, NY 10541
86	87.5	1	86-2400	24 MAPLE HILL DR, MAHOPAC, NY 10541	BRIAN KENNELLY	24 MAPLE HILL DR, MAHOPAC, NY 10541
87	87.5	1	87-8900	89 MAPLE HILL DR, MAHOPAC, NY 10541	ASSER TANTAWI	220 MITCHELL RD, SOMERS, NY 10589
88	87.5	1	88-8800	88 MAPLE HILL DR, MAHOPAC, NY 10541	BRIAN KENNELLY	24 MAPLE HILL DR, MAHOPAC, NY 10541
89	87.5	1	89-8700	87 MAPLE HILL DR, MAHOPAC, NY 10541	ROBERT KELLY	33 MAPLE HILL DR, MAHOPAC, NY 10541
90	87.5	1	91	205 UNION VALLEY ROAD, MAHOPAC, NY 10541	DAVID W - EST. PARENT	PO BOX 396, MAHOPAC, NY 10541

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
91	87.5	1	92	191 UNION VALLEY ROAD, MAHOPAC, NY 10541	PHUONG HUYNH	2955 EAST COLONIAL DR, ORLANDO, FL 32803
92	87.5	1	93	185 UNION VALLEY RD, MAHOPAC, NY 10541	JONATHAN ZAMORA	185 UNION VALLEY RD, MAHOPAC, NY 10541
92	87.5	1	93	185 UNION VALLEY RD, MAHOPAC, NY 10541	YESENIA BARRERA	185 UNION VALLEY RD, MAHOPAC, NY 10541
93	87.5	1	94	179 UNION VALLEY RD, MAHOPAC, NY 10541	WILLIAM PEARCE	179 UNION VALLEY RD, MAHOPAC, NY 10541
94	87.5	1	95	UNION VALLEY RD, MAHOPAC, NY 10541	DAVID W PARENT - EST. ATTN: DAVID PARENT JR.	PO BOX 396, MAHOPAC, NY 10541
95	87.5	2	10	202 LAKEVIEW COURT, MAHOPAC, NY 10541	MICHAEL RYAN	PO BOX 769, MAHOPAC, NY 10541
96	87.5	2	11	210 LAKEVIEW CT, MAHOPAC, NY 10541	ANNETTE ROMITO	210 LAKEVIEW CT, MAHOPAC, NY 10541
97	87.5	2	12	214 LAKEVIEW CT, MAHOPAC, NY 10541	ADRIENNE WEXLER	55 E 11TH ST, NEW YORK, NY 10003
98	87.5	2	13	218 LAKEVIEW CT, MAHOPAC, NY 10541	RAEANN MAZZEI	218 LAKEVIEW CT, MAHOPAC, NY 10541
99	87.5	2	14	222 LAKEVIEW CT, MAHOPAC, NY 10541	LORNA LEVANT CLEMENTS	PO BOX 826, MAHOPAC, NY 10541
100	87.5	2	15	226 LAKEVIEW CT, MAHOPAC, NY 10541		
101	87.5	2	16	228 LAKEVIEW CT, MAHOPAC, NY 10541	GERARD AQUILINO	228 LAKEVIEW CT, MAHOPAC, NY 10541
102	87.5	2	17	230 LAKEVIEW CT, MAHOPAC, NY 10541	NICHOLAS CAPALBO	230 LAKEVIEW CT, MAHOPAC, NY 10541
103	87.5	2	18	234 LAKEVIEW CT, MAHOPAC, NY 10541	JOHN MORRIS	PO BOX 395, MAHOPAC, NY 10541
104	87.5	2	19	238 LAKEVIEW CT, MAHOPAC, NY 10541	SHAKUNTALA BALRAM	238 LAKEVIEW CT, MAHOPAC, NY 10541
105	87.5	2	20	242 LAKEVIEW CT, MAHOPAC, NY 10541	ANTHONY & LAURIE TROTTA	242 LAKEVIEW CT, MAHOPAC, NY 10541
106	87.5	2	21	244 LAKEVIEW CT, MAHOPAC, NY 10541	RANDY ABRAMS	244 LAKEVIEW CT, MAHOPAC, NY 10541
107	87.5	2	22	110 KIA ORA BLVD, MAHOPAC, NY 10541	JOHN HLINKA	110 KIA ORA BLVD, MAHOPAC, NY 10541
108	87.5	2	23	106 KIA ORA BLVD, MAHOPAC, NY 10541	VINCENTS ETTERE	106 KIA ORA BLVD, MAHOPAC, NY 10541
109	87.5	2	24	102 KIA ORA BLVD, MAHOPAC, NY 10541	KEITH BEHLER	102 KIA ORA BLVD, MAHOPAC, NY 10541
110	87.5	2	25	98 KIA ORA BLVD, MAHOPAC, NY 10541	KOENIGSMANN & SEPE TRUST	98 KIA ORA BLVD, MAHOPAC, NY 10541
111	87.5	2	26	94 KIA ORA BLVD, MAHOPAC, NY 10541	DARRYL MACK	94 KIA ORA BLVD, MAHOPAC, NY 10541
112	87.5	2	27	84 KIA ORA BLVD, MAHOPAC, NY 10541	ANTHONY LAUREN FORMALA	84 KIA ORA BLVD, MAHOPAC, NY 10541
113	87.5	2	28	78 KIA ORA BLVD, MAHOPAC, NY 10541	KIM SMITH	78 KIA ORA BLVD, MAHOPAC, NY 10541
114	87.5	2	29	74 KIA ORA BLVD, MAHOPAC, NY 10541	JAMES R STRIPE LIVING TRUST	74 KIA ORA BLVD, MAHOPAC, NY 10541
115	87.5	2	30	72 KIA ORA BLVD, MAHOPAC, NY 10541	LEONARD CUFFONE	72 KIA ORA BLVD, MAHOPAC, NY 10541
116	87.5	2	45	67 KIA ORA BLVD, MAHOPAC, NY 10541	PASKA DEVIKUNJ PASHKA LULI	67 KIA ORA BLVD, MAHOPAC, NY 10541
117	87.5	2	46	75 KIA ORA BLVD, MAHOPAC, NY 10541	CHRISTOPHER MARINO	75 KIA ORA BLVD, MAHOPAC, NY 10541
118	87.5	2	47	85 KIA ORA BLVD, MAHOPAC, NY 10541	JASON SAVINO	85 KIA ORA BLVD, MAHOPAC, NY 10541
119	87.5	2	48	506 OVERLOOK DR SOUTH, MAHOPAC, NY 10541	HUDSON VIANNA	191 MARBLE AVE, PLEASANTVILLE, NY 10570
120	87.5	2	49	510 OVERLOOK DR SOUTH, MAHOPAC, NY 10541	THOMAS E BOGAN PATRICIA A ROGAN	510 OVERLOOK DR SOUTH, MAHOPAC, NY 10541
121	87.5	2	50	514 OVERLOOK DR SOUTH, MAHOPAC, NY 10541	THOMAS M KEHRER VIRGINIA C KNOX	514 OVERLOOK DR SOUTH, MAHOPAC, NY 10541
122	87.5	2	55	527 OVERLOOK DR SOUTH, MAHOPAC, NY 10541	KEVIN CONNORS	

TOWN OF CARMEL - PUTNAM COUNTY

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
133	87.5	2	66	22 WALTON DR. MAHOPAC, NY 10541	ENZO TEDESCO	22 WALTON DR. MAHOPAC, NY 10541
134	87.5	2	67	3 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	DENNIS RECK	3 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
135	87.5	2	68	6 BIRCH LN. MAHOPAC, NY 10541	DONALD NAILOR	6 BIRCH LN. MAHOPAC, NY 10541
136	87.5	2	69	10 BIRCH LN. MAHOPAC, NY 10541	ERIC OLIVER	10 BIRCH LN. MAHOPAC, NY 10541
137	87.5	2	70	14 BIRCH LN. MAHOPAC, NY 10541	AJDN MESHAI	14 BIRCH LN. MAHOPAC, NY 10541
138	87.5	2	71	18 BIRCH LN. MAHOPAC, NY 10541	ZACHARY OLIVA	18 BIRCH LN. MAHOPAC, NY 10541
139	87.5	3	1	212 UNION VALLEY RD. MAHOPAC, NY 10541	CHRISTINE BROWN	212 UNION VALLEY RD. MAHOPAC, NY 10541
140	87.5	3	2	218 UNION VALLEY RD. MAHOPAC, NY 10541	CHARLES PAROUBEK	PO BOX 956, BALDWIN PLACE, NY 10545
141	87.5	3	3	225 UNION VALLEY RD. MAHOPAC, NY 10541	SAVERIO SADOVIA	225 UNION VALLEY RD. MAHOPAC, NY 10541
142	87.5	3	4	240 UNION VALLEY RD. MAHOPAC, NY 10541	SCOTT JENNINGS	240 UNION VALLEY RD. MAHOPAC, NY 10541
143	87.5	3	5	9 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541	RAYMOND GENOVESE	9 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541
144	87.5	3	6	11 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541	EDWARD NIEVES	11 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541
145	87.5	3	7	15 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541	KEVIN KIERNAN	15 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541
146	87.5	3	8	12 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541	WALDIE MURRAY	12 TEAKETTLE SPOUT RD. MAHOPAC, NY 10541
147	87.5	3	9	250 UNION VALLEY RD. MAHOPAC, NY 10541	SELM BRAHIMI	250 UNION VALLEY RD. MAHOPAC, NY 10541
148	87.5	3	10	260 UNION VALLEY RD. MAHOPAC, NY 10541	JOHN DELUCCA	22 CUNNINGHAM DR. LA GRANGEVILLE, NY 12540
149	87.5	3	11	264 UNION VALLEY RD. MAHOPAC, NY 10541	ANGELA FUSCO	264 UNION VALLEY RD. MAHOPAC, NY 10541
150	87.5	3	12	268 UNION VALLEY RD. MAHOPAC, NY 10541	JAMES STIRPE	268 UNION VALLEY RD. MAHOPAC, NY 10541
151	87.5	3	13	3 NORTHVIEW DR. MAHOPAC, NY 10541	EDWIN PERCH	3 NORTHVIEW DR. MAHOPAC, NY 10541
152	87.9	1	2	48 WALTON DR. MAHOPAC, NY 10541	PATRICIA GONDOLFO	48 WALTON DR. MAHOPAC, NY 10541
153	87.9	1	3	44 WALTON DR. MAHOPAC, NY 10541	EDWARD WECHSLER	25 SHADY LN, MAHOPAC, NY 10541
154	87.9	1	4	40 WALTON DR. MAHOPAC, NY 10541	JOSEPH ARMISTO	122 CRANE RD, CARMEL, NY 10512
155	87.9	1	5	36 WALTON DR. MAHOPAC, NY 10541	GUS GETSOS	36 WALTON DR. MAHOPAC, NY 10541
156	87.9	1	6	30 WALTON DR. MAHOPAC, NY 10541	PEARL MOHAMMED	30 WALTON DR. MAHOPAC, NY 10541
157	87.9	1	7	22 BIRCH LN. MAHOPAC, NY 10541	AMANDA LEVINE	22 BIRCH LN. MAHOPAC, NY 10541
158	87.9	1	8-3600	36 MAPLE HILL DR. MAHOPAC, NY 10541	GEORGE BICKEL	PO BOX 303, LINCOLNDALE, NY 10540
159	87.9	1	9-3700	37 MAPLE HILL DR. MAHOPAC, NY 10541	ROBERT FALAGUERRA	37 MAPLE HILL DR. MAHOPAC, NY 10541
160	87.9	1	10-3800	38 MAPLE HILL DR. MAHOPAC, NY 10541	ANDRZEJ REJMAN	38 MAPLE HILL DR. MAHOPAC, NY 10541
161	87.9	1	11-3900	39 MAPLE HILL DR. MAHOPAC, NY 10541	CAROL ANN BURKE	39 MAPLE HILL DR. MAHOPAC, NY 10541
162	87.9	1	12-4000	40 MAPLE HILL DR. MAHOPAC, NY 10541	SANTHEYA MELY	40 MAPLE HILL DR. MAHOPAC, NY 10541
163	87.9	1	13-4100	41 MAPLE HILL DR. MAHOPAC, NY 10541	VALERIA LOPEZ	41 MAPLE HILL DR. MAHOPAC, NY 10541
164	87.9	1	14-4200	42 MAPLE HILL DR. MAHOPAC, NY 10541	SHEILA TRUC	42 MAPLE HILL DR. MAHOPAC, NY 10541
165	87.9	1	15-4300	43 MAPLE HILL DR. MAHOPAC, NY 10541	ANDREW LOMBARDI	43 MAPLE HILL DR. MAHOPAC, NY 10541
166	87.9	1	16-4400	44 MAPLE HILL DR. MAHOPAC, NY 10541	ANGELO SAVINO	1408 FLINTLOCK WAY, YORKTOWN HEIGHTS, NY 10598
167	87.9	1	17	534 OVERLOOK DR S. MAHOPAC, NY 10541	THOMAS JUDGE	534 OVERLOOK DR S. MAHOPAC, NY 10541
168	87.9	1	19	63 HILLSIDE TER. MAHOPAC, NY 10541	JOAO DE MELO	63 HILLSIDE TER. MAHOPAC, NY 10541
169	87.9	1	20	57 HILLSIDE TER. MAHOPAC, NY 10541	FRANK MERENDA	57 HILLSIDE TER. MAHOPAC, NY 10541
170	87.9	1	21	51 HILLSIDE TER. MAHOPAC, NY 10541	SALVATORE DIGRANDI	51 HILLSIDE TER. MAHOPAC, NY 10541
171	87.9	1	23	531 OVERLOOK DR S. MAHOPAC, NY 10541	ALFONSO & ANN GALLO IREVE TRUST	531 OVERLOOK DR S. MAHOPAC, NY 10541
172	87.9	1	24	26 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	AUGUST WILES	26 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
173	87.9	1	25	32 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	IRENE NARULA	32 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
174	87.9	1	26	36 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	TIMUR FILIPPOV	36 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
175	87.9	1	27	40 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	KIERAN CLARKE	40 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
176	87.9	1	28	44 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	REBECCA BIERHOFF	44 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
177	87.9	1	29	48 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	WALTER BECKER	48 MOUNTAIN VIEW DR. MAHOPAC, NY 10541

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
178	87.9	1	30	54 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	RICHARD DEPOLO	54 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
179	87.9	1	31		NYS ELEC & GAS CORP	1 CITY CENTER FL 5, PORTLAND, ME 04101
180	87.9	1	32		NYS ELEC & GAS CORP	1 CITY CENTER FL 5, PORTLAND, ME 04101
181	87.9	1	33	26 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	PATRICK KOHLMAN	26 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
182	87.9	1	34	8 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	PATRICK BOYLE	8 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
183	87.9	1	35	35 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	AISLING O'HANLON	35 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
184	87.9	1	36	33 MOUNTAIN VIEW DR. MAHOPAC, NY 10541	PHILIP GOLDSTEIN	33 MOUNTAIN VIEW DR. MAHOPAC, NY 10541
185	87.9	1	37	25 WALTON DR. MAHOPAC, NY 10541	JASON SIMONE	25 WALTON DR. MAHOPAC, NY 10541
186	87.9	1	38	29 WALTON DR. MAHOPAC, NY 10541	LINDA BOWMAN-WILLIAMS	29 WALTON DR. MAHOPAC, NY 10541
187	87.9	1	40	14 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	VINCENT GENTILE	14 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
188	87.9	1	41	18 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	LUIGI PAGANELLI	18 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
189	87.9	1	42	23 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	CARL VU	23 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
190	87.9	1	43	27 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	ROBERT AMICUCCI	27 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
191	87.9	1	44	25 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	GERARD HANRAHAN	25 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
192	87.9	1	45	19 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	DENNIS NORBY	271 HILL ST, MAHOPAC, NY 10541
193	87.9	1	47	11 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	DONNA AQUILATO	11 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
194	87.9	1	48	1 SUMMIT CIRCLE DR. MAHOPAC, NY 10541	MARY PALMER	1 SUMMIT CIRCLE DR. MAHOPAC, NY 10541
195	87.9	1	49	43 WALTON DR. MAHOPAC, NY 10541	TODD MCCORMACK	43 WALTON DR. MAHOPAC, NY 10541
196	87.9	1	50	49 WALTON DR. MAHOPAC, NY 10541	ROBERT CAVALLARO	49 WALTON DR. MAHOPAC, NY 10541
197	87.9	1	51	53 WALTON DR. MAHOPAC, NY 10541	LINDA SHAW	53 WALTON DR. MAHOPAC, NY 10541
198	86.8	2	29	136 UNION VALLEY RD. MAHOPAC, NY 10541	MARIE SWARM SANDRA SWARM MCDERMOTT	136 UNION VALLEY RD. MAHOPAC, NY 10541
199	86.8	2	30	146 UNION VALLEY RD. MAHOPAC, NY 10541	VIRGINIA NICHOLSON	146 UNION VALLEY RD. MAHOPAC, NY 10541
200	86.8	2	31	153 UNION VALLEY RD. MAHOPAC, NY 10541	DAVID W. EST. PARENT	PO BOX 396, MAHOPAC, NY 10541
201	86.8	2	32.1	25 DAHLIA DR. MAHOPAC, NY 10541	PETER J CUOMO KATHERYN L CUOMO	25 DAHLIA DR. MAHOPAC, NY 10541
202	86.8	2	32.2	29 DAHLIA DR. MAHOPAC, NY 10541	THOMAS DAZI	29 DAHLIA DR. MAHOPAC, NY 10541
203	86.8	2	32.3	30 DAHLIA DR. MAHOPAC, NY 10541	JOHN GRASSIA	30 DAHLIA DR. MAHOPAC, NY 10541
204	86.8	2	32.4	156 UNION VALLEY RD. MAHOPAC, NY 10541	DANIEL HORTON	156 UNION VALLEY RD. MAHOPAC, NY 10541
205	86.8	2	32.5	158 UNION VALLEY RD. MAHOPAC, NY 10541	CHANDRA PRASAD	158 UNION VALLEY RD. MAHOPAC, NY 10541
206	86.8	2	39	48 DAHLIA DR. MAHOPAC, NY 10541	ERIK BAKKEN ALAYEN A BAKKEN	48 DAHLIA DR. MAHOPAC, NY 10541
207	86.8	2	40	44 DAHLIA DR. MAHOPAC, NY 10541	ARTHUR K HANRATTY ANN M HANRATTY	44 DAHLIA DR. MAHOPAC, NY 10541
208	86.8	2	41	40 DAHLIA DR. MAHOPAC, NY 10541	RAYMOND MARZIANO	40 DAHLIA DR. MAHOPAC, NY 10541
209	86.8	2	42	32 DAHLIA DR. MAHOPAC, NY 10541	MCGLYNN FAMILY TRUST	32 DAHLIA DR. MAHOPAC, NY 10541
210	86.8	2	43	173 UNION VALLEY RD. MAHOPAC, NY 10541	DAVID W. EST. PARENT	PO BOX 396, MAHOPAC, NY 10541
211	86.8	2	44	163 UNION VALLEY RD. MAHOPAC, NY 10541	JAMES RISPOLI	163 UNION VALLEY RD. MAHOPAC, NY 10541
212	86.8	2	45	159 UNION VALLEY RD. MAHOPAC, NY 10541	ELIZABETH SALVESSEN	159 UNION VALLEY RD. MAHOPAC, NY 10541
213	86.8	2	46	155 UNION VALLEY RD. MAHOPAC, NY 10541	THOMAS MAFFUCCI	155 UNION VALLEY RD. MAHOPAC, NY 10541
214	86.8	2	47	40 GLENEDA AVE. CARMEL, NY 10512	COUNTY OF PUTNAM	40 GLENEDA AVE. CARMEL, NY 10512
215	86.8	2	48	16 GLENACOM RD. MAHOPAC, NY 10541	DAVID MAHOSKEY	779 GLENDALE AVE, NAPLES, FL 34110
216	86.8	2	49	22 GLENACOM RD. MAHOPAC, NY 10541	RAFAEL CLAUDIO	23 GLENACOM RD. MAHOPAC, NY 10541
217	86.8	2	50	28 GLENACOM RD. MAHOPAC, NY 10541	ERIN YOUNG	29 GLENACOM RD. MAHOPAC, NY 10541
218	86.8	2	51	29 GLENACOM RD. MAHOPAC, NY 10541	ERIN YOUNG	29 GLENACOM RD. MAHOPAC, NY 10541
219	86.8	2	52	23 GLENACOM RD. MAHOPAC, NY 10541	MONIQUE DANIELS	23 GLENACOM RD. MAHOPAC, NY 10541
220	86.8	2	53	19 GLENACOM ROAD. MAHOPAC, NY 10541	DAVID M MAHOSKEY ANTONETTE MAHOSKEY	19 GLENACOM ROAD. MAHOPAC, NY 10541
221	86.8	2	86			
222	86.8	2	56	11 FASSITT DR. MAHOPAC, NY 10541	PATSY LEONE	11 FASSITT DR. MAHOPAC, NY 10541
223	86.12	1	21	23 FASSIT DR. MAHOPAC, NY 10541	ROBERT GOUVEIA	23 FASSIT DR. MAHOPAC, NY 10541

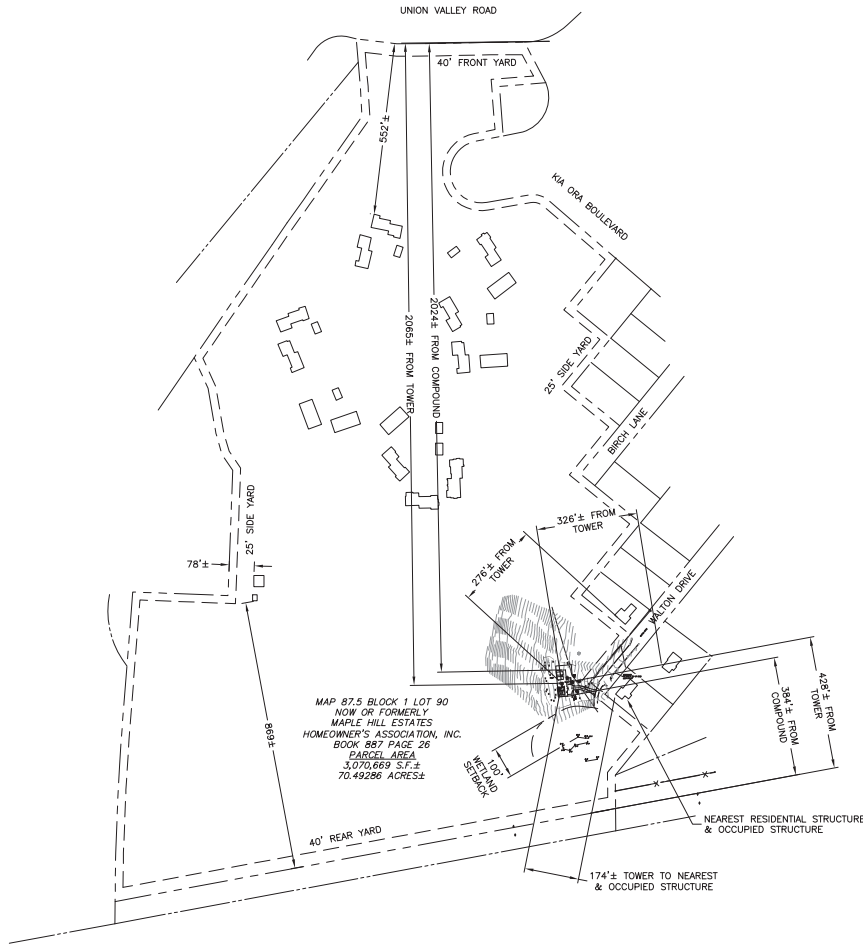
MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
224	86.12	1	22	35 FASSITT DR. MAHOPAC, NY 10541	VICTOR SHIRELI	35 FASSITT DR. MAHOPAC, NY 10541
225	86.12	1	23	47 FASSITT DR. MAHOPAC, NY 10541	THOMAS BAIER	47 FASSITT DR. MAHOPAC, NY 10541
226	86.12	1	24	53 FASSITT DR. MAHOPAC, NY 10541	GREGORY SC-AVELLI	53 FASSITT DR. MAHOPAC, NY 10541
227	86.12	1	25	61 FASSITT DR. MAHOPAC, NY 10541	GEORGE KOKKINAKIS	61 FASSITT DR. MAHOPAC, NY 10541
228	86.12	1	26	67 FASSITT DR. MAHOPAC, NY 10541	MARSILO LANGELLA	67 FASSITT DR. MAHOPAC, NY 10541
229	86.12	1	28.1	59 CENTER RD. MAHOPAC, NY 10541	MATTHEW ROSELEN	59 CENTER RD. MAHOPAC, NY 10541
230	86.12	1	28.2	60 FASSITT DR. MAHOPAC, NY 10541	CHRISTOPHER VENNARD	60 FASSITT DR. MAHOPAC, NY 10541
231	87.5	3	14	UNION VALLEY RD. MAHOPAC, NY 10541	TOWN OF CARMEL	60 MCALPIN AVE. MAHOPAC, NY 10541
232	86.12	1	30	34 GLENACOM RD. MAHOPAC, NY 10541	EMIL DONOFRO	34 GLENACOM RD. MAHOPAC, NY 10541
233	86.12	1	31	38 GLENACOM RD. MAHOPAC, NY 10541	RALPH NARDO	35 GLENACOM RD. MAHOPAC, NY 10541
234	86.12	1	32	42 GLENACOM RD. MAHOPAC, NY 10541	CHARLENE WOOD	42 GLENACOM RD. MAHOPAC, NY 10541
235	86.12	1	33.1	56 GLENACOM RD. MAHOPAC, NY 10541	VINCENT DECICCO	56 GLENACOM RD. MAHOPAC, NY 10541
236	86.12	1	33.2	GLENACOM RD. MAHOPAC, NY 10541	CHRISTOPHER DECICCO	56 GLENACOM RD. MAHOPAC, NY 10541
237	86.12	1	34	58 GLENACOM RD. MAHOPAC, NY 10541	IRENE SOSA	58 GLENACOM RD. MAHOPAC, NY 10541
238	86.12	1	35	71 GLENACOM RD. MAHOPAC, NY 10541	JOHN VOUGHT	71 GLENACOM RD. MAHOPAC, NY 10541
239	86.12	1	36	55 GLENACOM RD. MAHOPAC, NY 10541	MICHAEL DAVIS	55 GLENACOM RD. MAHOPAC, NY 10541
240	86.12	1	37	53 GLENACOM RD. MAHOPAC, NY 10541	DEIRDRE FOLEY	53 GLENACOM RD. MAHOPAC, NY 10541
241	86.12	1	39	47 GLENACOM RD. MAHOPAC, NY 10541	CHRISTINE PERI	47 GLENACOM RD. MAHOPAC, NY 10541
242	86.12	1	41	41 GLENACOM RD. MAHOPAC, NY 10541	CODY LECLAIRE	41 GLENACOM RD. MAHOPAC, NY 10541
243	86.12	1	42	35 GLENACOM RD. MAHOPAC, NY 10541	RALPH NARDO	35 GLENACOM RD. MAHOPAC, NY 10541
244	75.2	1	18	51 DAHLIA DR. MAHOPAC, NY 10541	JAMES PACIULO ROSE PACIULO	51 DAHLIA DR. MAHOPAC, NY 10541
245	75.2	1	19	57 DAHLIA DR. MAHOPAC, NY 10541	RAYMOND A KOLKMANN JON APPELBERG	57 DAHLIA DR. MAHOPAC, NY 10541
246	75.2	1	30	74 DAHLIA DR. MAHOPAC, NY 10541	PATRICK TARPET CATHERINE TARPET	74 DAHLIA DR. MAHOPAC, NY 10541
247	75.2	1	31	68 DAHLIA DR. MAHOPAC, NY 10541	JOSEPH KIRINIC DEBORAH KIRINIC	68 DAHLIA DR. MAHOPAC, NY 10541
248	75.2	1	32	64 DAHLIA DR. MAHOPAC,		

TOWN OF SOMERS - WESTCHESTER COUNTY

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
1	5.18	1	3.1	50 LOOMIS DR, MAHOPAC, NY 10541	BEAVER BROOK/SOMERS ACQ LLC	118 N BEDFORD ROAD
2	5.18	1	4.1	66 TRAVIS RD, MAHOPAC, NY 10541	BEAVER BROOK/SOMERS ACQ LLC	118 N BEDFORD ROAD MT., KISCO, NY 10549
3	5.14	1	2	0 POWER LINES, MAHOPAC, NY 10541	NYS ELECTRIC & GAS CORP	ONE CITY CENTER 5TH FLOOR, PORTLAND, ME 04101
4	5.14	1	5	0 POWER LINES, MAHOPAC, NY 10541	NYS ELECTRIC & GAS CORP	ONE CITY CENTER 5TH FLOOR, PORTLAND, ME 04101
5	5.14	1	7	13 SYCAMORE RD, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
6	5.14	1	8	9 SYCAMORE RD, MAHOPAC, NY 10541	MILTARI, NICOLA & SOPHIA	9 SYCAMORE ROAD, MAHOPAC, NY 10541
7	5.14	1	9	7 SYCAMORE RD, MAHOPAC, NY 10541	ALEXANDER, RICHARD & MARGARET	7 SYCAMORE ROAD, MAHOPAC, NY 10541
8	5.14	1	10	5 SYCAMORE RD, MAHOPAC, NY 10541	CULLEN, MARTIN R & KATHLEEN	5 SYCAMORE ROAD, MAHOPAC, NY 10541
9	5.14	1	11	3 SYCAMORE RD, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
10	5.14	1	12	1 SYCAMORE RD, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
11	5.14	1	15	6 TULIP RD, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
12	5.14	1	16.5	20 BOXWOOD DR, MAHOPAC, NY 10541	SCHWARZE, PATRICK P, AUSAONI, ANNA KRISTINA	20 BOXWOOD DRIVE, MAHOPAC, NY 10541
13	5.14	1	18	19 BOXWOOD DR, MAHOPAC, NY 10541	SCHLISSMANN, DAVID & MARY	18 BOXWOOD DRIVE, MAHOPAC, NY 10541
14	5.14	1	19	16 BOXWOOD DR, MAHOPAC, NY 10541	GIBSON, JONATHAN & YAMLY	19 ACACIA DRIVE, MAHOPAC, NY 10541
15	5.14	1	20	2 TULIP RD, MAHOPAC, NY 10541	RUCKERT, EDWARD	28 EAST WHIPPOORWILL ROAD, ARMONK, NY 10504
16	5.14	1	21	17 ACACIA DR, MAHOPAC, NY 10541	GIBSON, JONATHAN & YAMLY	19 ACACIA DRIVE, MAHOPAC, NY 10541
17	5.14	1	22	19 ACACIA DR, MAHOPAC, NY 10541	GIBSON, JONATHAN & YAMLY	19 ACACIA DRIVE, MAHOPAC, NY 10541
18	5.14	1	23	23 ACACIA DR, MAHOPAC, NY 10541	MARTIN, MANUEL & MANTARING, CECILLE M	23 ACACIA DRIVE, MAHOPAC, NY 10541
19	5.14	1	24.5	16 ACACIA DR, MAHOPAC, NY 10541	SALERNO, PAUL & STEPHANIE	16 ACACIA DRIVE, MAHOPAC, NY 10541
20	5.14	1	26	3 RAMBLER RD, MAHOPAC, NY 10541	MC GUIRE, ANNE M.	3 RAMBLER ROAD, MAHOPAC, NY 10541
21	5.14	1	27	5 RAMBLER RD, MAHOPAC, NY 10541	SALVATI, RICHARD & MADLEINE	P.O. BOX 17 LINCOLNDALE, NY 10540
22	5.14	1	28	7 RAMBLER RD, MAHOPAC, NY 10541	SHRES, ANDREW & STACY K.	7 RAMBLER RD, MAHOPAC, NY 10541
23	5.14	1	29	6 RAMBLER RD, MAHOPAC, NY 10541	DONOVAN, MICHAEL & SHERRI	P.O. BOX 442 LINCOLNDALE, NY 10540
24	5.14	1	30	12 ACACIA DR, MAHOPAC, NY 10541	DONOVAN, MICHAEL P	P.O. BOX 440 LINCOLNDALE, NY 10540
25	5.14	1	31	10 ACACIA DR, MAHOPAC, NY 10541	MC CORMACK, JULIA A MC CORMACK,	P.O. BOX 153 LINCOLNDALE, NY 10540
26	5.14	1	32	8 ACACIA DR, MAHOPAC, NY 10541	FAWCETT, RICHARD J. (JR.) NICOLE	8 ACACIA ROAD, MAHOPAC, NY 10541
27	5.14	1	33	1 PEACH RD, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
28	5.14	1	34	3 PEACH RD, MAHOPAC, NY 10541	TOGMA, THOMAS J. (JR) & BARBARA A.	PO BOX 341, LINCOLNDALE, NY 10540
29	5.14	1	35	5 PEACH RD, MAHOPAC, NY 10541	DURAN, DON'TAE J. & EMMA J.	5 PEACH RD, MAHOPAC, NY 10541
30	5.14	1	36	7 PEACH RD, MAHOPAC, NY 10541	CHEYSVIN, BORIS & JULIA	7 PEACH ROAD, MAHOPAC, NY 10541
31	5.14	1	37	9 PEACH RD, MAHOPAC, NY 10541	CHEYSVIN, BORIS & JULIA	7 PEACH ROAD, MAHOPAC, NY 10541
32	5.14	1	38	8 RAMBLER RD, MAHOPAC, NY 10541	KOEBINKEN, STEVEN & SHANNON	8 RAMBLER RD, MAHOPAC, NY 10541
33	5.14	1	39	8 QUEEN RD, MAHOPAC, NY 10541	CHEYSVIN, BORIS & JULIA	7 PEACH ROAD, MAHOPAC, NY 10541
34	5.14	1	40	104 TRAVIS RD, MAHOPAC, NY 10541	MC CULLOUGH, JOHN & WENDY	104 TRAVIS ROAD BALDWIN PLACE, NY 10505
35	5.14	1	41	102 TRAVIS RD, MAHOPAC, NY 10541	FURICA, CHRIS & CHRISTINE	102 TRAVIS ROAD BALDWIN PLACE, NY 10505
36	5.14	1	42	100 TRAVIS RD, MAHOPAC, NY 10541	CHORNY, DENNIS T. & OKSANA	100 TRAVIS ROAD BALDWIN PLACE, NY 10505
37	5.15	1	1	13 ACACIA DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
38	5.15	1	2	11 ACACIA DR, MAHOPAC, NY 10541	MASTRANTONI, PAUL & THOMASINE	10 BOXWOOD DRIVE, MAHOPAC, NY 10541
39	5.15	1	3	9 ACACIA DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
40	5.15	1	4	7 ACACIA DR, MAHOPAC, NY 10541	TOLEDO, CLAUDIA	7 ACACIA DRIVE, MAHOPAC, NY 10541
41	5.15	1	5	5 ACACIA DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
42	5.15	1	7.1	3 ACACIA DR, MAHOPAC, NY 10541	WILLIAM D & ANN C FITZGERALD	63 ARBOR LN, DIX HILLS, NY 11746
43	5.15	1	8	0 ACACIA DR, MAHOPAC, NY 10541	MICHAEL J JR & TAMMY REPP	2 BOXWOOD DR, MAHOPAC, NY 10541
44	5.15	1	9	0 ACACIA DR, MAHOPAC, NY 10541	MICHAEL J JR & TAMMY REPP	2 BOXWOOD DR, MAHOPAC, NY 10541
45	5.15	1	10	2 BOXWOOD DR, MAHOPAC, NY 10541	MICHAEL J JR & TAMMY REPP	2 BOXWOOD DR, MAHOPAC, NY 10541
46	5.15	1	11	4 BOXWOOD DR, MAHOPAC, NY 10541	MONTY & KAREN DOMAN	745 WARREN ST, SOMERS, NY 10589
47	5.15	1	12	6 BOXWOOD DR, MAHOPAC, NY 10541	JUDY A, DONALD D & BRUCE A RATH	6 BOXWOOD DR, MAHOPAC, NY 10541

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
48	5.15	1	13	8 BOXWOOD DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
49	5.15	1	14	8 BOXWOOD DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
50	5.15	1	15	10 BOXWOOD DR, MAHOPAC, NY 10541	PAUL THOMASINE MASTRANTONI	10 BOXWOOD DRIVE, MAHOPAC, NY 10541
51	5.15	1	16	12 BOXWOOD DR, MAHOPAC, NY 10541	PATRICIA A FOLEY	PO BOX 245, 12 BOXWOOD DR, LINCOLNDALE, NY 10541
52	5.15	1	17.5	11 BOXWOOD DR, MAHOPAC, NY 10541	ROBERT & ANNE MARIE DE CRENZIA	11 BOXWOOD DRIVE, MAHOPAC, NY 10541
53	5.15	1	19	7 BOXWOOD DR, MAHOPAC, NY 10541	THOMAS SCHNEIDER FAMILY TRUST	108 LONGDALE DR, MAHOPAC, NY 10541
54	5.15	1	20	5 BOXWOOD DR, MAHOPAC, NY 10541	KEVIN & CAROLYN MOSS	PO BOX 74, LINCOLNDALE, NY 10541
55	5.15	1	21	3 BOXWOOD DR, MAHOPAC, NY 10541	KEVIN & CAROLYN MOSS	PO BOX 74, LINCOLNDALE, NY 10541
56	5.15	1	22	11 OLIVE DR, MAHOPAC, NY 10541	MICHAEL & ELIZABETH ALLEN	11 OLIVE DR, MAHOPAC, NY 10541
57	5.15	1	18	10 COTTONWOOD DR, MAHOPAC, NY 10541	STEVE & DEBORAH PILLA	PO BOX 73, LINCOLNDALE, NY 10541
59	5.15	1	65.5	16 OLIVE DR, MAHOPAC, NY 10541	PAUL & AMY ESKRIDGE	16 OLIVE DR, MAHOPAC, NY 10541
60	5.15	1	67	18 OLIVE DR, MAHOPAC, NY 10541	ROBERT & CHERYL BOUZA	PO BOX 519, LINCOLNDALE, NY 10541
61	5.15	1	68	18 OLIVE DR, MAHOPAC, NY 10541	ROBERT & CHERYL BOUZA	PO BOX 519, LINCOLNDALE, NY 10541
62	5.15	1	69	18 OLIVE DR, MAHOPAC, NY 10541	ROBERT & CHERYL BOUZA	PO BOX 519, LINCOLNDALE, NY 10541
63	5.15	1	70	20 OLIVE DR, MAHOPAC, NY 10541	ROBERT & CHERYL BOUZA	PO BOX 519, LINCOLNDALE, NY 10541
64	5.15	1	71	25 NARCISSEUS DR, MAHOPAC, NY 10541	SEYMOUR WEINSTEIN	PO BOX 32, LINCOLNDALE, NY 10541
65	5.15	1	72	23 NARCISSEUS DR, MAHOPAC, NY 10541	SEYMOUR WEINSTEIN	PO BOX 32, LINCOLNDALE, NY 10541
66	5.15	1	73	23 NARCISSEUS DR, MAHOPAC, NY 10541	ROBERT & CHERYL BOUZA	PO BOX 519, LINCOLNDALE, NY 10541
67	5.15	1	74	19 NARCISSEUS DR, MAHOPAC, NY 10541	EVELYN PFAFFENBACH	19 NARCISSEUS DR, MAHOPAC, NY 10541
68	5.15	1	76	24 OLIVE DR, MAHOPAC, NY 10541	BRAD & LISA ROBERTS	24 OLIVE DR, MAHOPAC, NY 10541
69	5.15	1	77	26 OLIVE DR, MAHOPAC, NY 10541	DEFLIPPIS FAMILY TRUST 2013 TRUST, MICHAEL DEFLIPPIS AS TRUSTEE	83 MORTON BLVD, PLAINVIEW, NY 11803
70	5.15	1	78	26 OLIVE DR, MAHOPAC, NY 10541	DEFLIPPIS FAMILY TRUST 2013 TRUST, MICHAEL DEFLIPPIS AS TRUSTEE	83 MORTON BLVD, PLAINVIEW, NY 11803
71	5.15	1	79	28 OLIVE DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
72	5.15	1	80	30 OLIVE DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
73	5.15	1	85	4 PEACH RD, MAHOPAC, NY 10541	CIVITA, LYNNE	4 PEACH RD, MAHOPAC, NY 10541
78	5.15	1	86	8 PEACH RD, MAHOPAC, NY 10541	SKORLIE, CHARLES F & FELICE	8 PEACH ROAD, MAHOPAC, NY 10541
79	5.15	1	87	0 PEACH RD, MAHOPAC, NY 10541	SMITH, DAVID E. & DORIS JANE	18 PONDER LN, DEER PARK, NY 11729
80	5.15	1	88	10 PEACH RD, MAHOPAC, NY 10541	CLERICO, ALFRED J	PO BOX 147, LINCOLNDALE, N. Y., 10540
81	5.15	1	89	12 PEACH RD, MAHOPAC, NY 10541	SMITH, DAVID & DORIS	P. O. BOX 147 LINCOLNDALE, N. Y., 10540
82	5.15	1	90	19 OLIVE DR, MAHOPAC, NY 10541	PITMAN/WESTCHESTER BUILDERS, INC.	361 ROUTE 4, MAHOPAC, NY 10541
83	5.15	1	91	2 ACACIA DR, MAHOPAC, NY 10541	MARLENE FERRELL	2 ACACIA DR, MAHOPAC, NY 10541
84	5.15	2	1	6 FERN RD, MAHOPAC, NY 10541	STEVEN & LAURAL WINES	6 FERN RD, MAHOPAC, NY 10541
85	5.15	2	2	4 FERN RD, MAHOPAC, NY 10541	VICTOR K III & JOANNE M BOVD	PO BOX 255, LINCOLNDALE, NY 10541
86	5.15	2	3	2 FERN RD, MAHOPAC, NY 10541	ERNEST LUCY SANTANELLO (TRUST)	426 STRATFORD DR, NEW PORT RICHEL, FL 34652
87	5.15	2	4	34 NARCISSEUS DR, MAHOPAC, NY 10541	MICHAEL J COOGAN & MARIE S RICE	PO BOX 429, SOMERS, NY 10589
88	5.15	2	5	32 NARCISSEUS DR, MAHOPAC, NY 10541	LINDA IRENE SCHERIFF	32 NARCISSEUS DR, MAHOPAC, NY 10541
89	5.15	2	6	32 NARCISSEUS DR, MAHOPAC, NY 10541	LINDA IRENE SCHERIFF	32 NARCISSEUS DR, MAHOPAC, NY 10541
90	5.15	2	7	32 NARCISSEUS DR, MAHOPAC, NY 10541	LINDA IRENE SCHERIFF	32 NARCISSEUS DR, MAHOPAC, NY 10541
91	5.15	2	8	28 NARCISSEUS DR, MAHOPAC, NY 10541	MICHAEL PFAFFENBACH	28 NARCISSEUS DR, MAHOPAC, NY 10541
92	5.15	2	9	26 NARCISSEUS DR, MAHOPAC, NY 10541	JAVIER ROBLES	PO BOX 504, LINCOLNDALE, NY 10540
93	5.15	2	10	24 NARCISSEUS DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 220, SOMERS, NY 10589
94	5.15	2	11	0 NARCISSEUS DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 220, SOMERS, NY 10589
95	5.15	2	12	22 NARCISSEUS DR, MAHOPAC, NY 10541	JOSE & MARIA CABRERA	22 NARCISSEUS DR, MAHOPAC, NY 10541
96	5.15	2	13	20 GREENWOOD DR, MAHOPAC, NY 10541	MICHAEL & THERESE DRISCOLL	PO BOX 58, LINCOLNDALE, NY 10540
97	5.15	2	14	16 GREENWOOD DR, MAHOPAC, NY 10541	ELIZABETH KELLY	PO BOX 275, LINCOLNDALE, NY 10540
98	5.15	2	15	16 GREENWOOD DR, MAHOPAC, NY 10541	ADNAN & SELVET ASLLANI	16 GREENWOOD DR, MAHOPAC, NY 10541

MAP ID	MAP	BLOCK	LOT	PROPERTY ADDRESS	OWNER NAME	OWNER ADDRESS
99	5.15	2	16	3 MAGNOLIA DR, MAHOPAC, NY 10541	JOHN PAUL J & JOAN M KAMENSKI	3 MAGNOLIA DR, MAHOPAC, NY 10541
100	5.15	2	17	5 MAGNOLIA DR, MAHOPAC, NY 10541	KEVIN HARRIGAN & JOHN R JR	5 MAGNOLIA DR, MAHOPAC, NY 10541
101	5.15	2	18	7 MAGNOLIA DR, MAHOPAC, NY 10541	YAROSLAV & OLGA ROMANKY	7 MAGNOLIA DR, MAHOPAC, NY 10541
102	5.15	2	19	9 MAGNOLIA DR, MAHOPAC, NY 10541	JAMES & PATRICIA WHITE	9 MAGNOLIA DR, MAHOPAC, NY 10541
103	5.15	2	20	11 MAGNOLIA DR, MAHOPAC, NY 10541	NICOLAS & ELIZABETH BORDIGA	PO BOX 329, LINCOLNDALE, NY 10540
104	5.15	2	21	13 MAGNOLIA DR, MAHOPAC, NY 10541	NICOLAS & ELIZABETH BORDIGA	PO BOX 329, LINCOLNDALE, NY 10540
105	5.15	2	22	11 FERN RD, MAHOPAC, NY 10541	LINDA IRENE SCHERIFF	32 NARCISSEUS DR, MAHOPAC, NY 10541
106	5.15	2	23	7 FERN RD, MAHOPAC, NY 10541	MICHAEL J & KRISTIE A EVERS	7 FERN RD, MAHOPAC, NY 10541
107	5.15	2	24	6 MAGNOLIA DR, MAHOPAC, NY 10541	JAMES B & CAROLANN WILSON	PO BOX 425, LINCOLNDALE, NY 10540
108	5.15	2	27	13 LOCUST DR, MAHOPAC, NY 10541	CATHERINE BUTTERWORTH ET AL	68 CHURCH ST, TEANECK, NY 07666
109	5.15	2	28	15 LOCUST DR, MAHOPAC, NY 10541	CHRISTOPHER L MERWIN	18 LOCUST DR, MAHOPAC, NY 10541
110	5.15	2	29	17 LOCUST DR, MAHOPAC, NY 10541	JAMES B & CAROLANN WILSON	PO BOX 425, LINCOLNDALE, NY 10540
111	5.15	2	30	19 LOCUST DR, MAHOPAC, NY 10541	JOHN & JOHANNE YURSA	PO BOX 222, LINCOLNDALE, NY 10540
112	5.15	2	31	0 LOCUST DR, MAHOPAC, NY 10541	TOWN OF SOMERS	335 ROUTE 202, SOMERS, NY 10589
113	5.15	2	32.1	21 LOCUST DR, MAHOPAC, NY 10541	ANTHONY & PAMELA BEADLE	21 LOCUST DR, MAHOPAC, NY 10541
114	5.15	2	34	1 FERN RD, MAHOPAC, NY 10541	JOHN & JOHANNE YURSA	PO BOX 222, LINCOLNDALE, NY 10540
115	5.15	2	35	5 FERN RD, MAHOPAC, NY 10541	JOSEPH MCCARTHY & CATHERINE F ANDREOLI, CO-BRIAN ANDREOLI	15 FRESCENUS RD, WESTPORT, CT 06880
116	5.15	2	36	5 FERN RD, MAHOPAC, NY 10541	JOSEPH MCCARTHY & CATHERINE F ANDREOLI, CO-BRIAN ANDREOLI	15 FRESCENUS RD, WESTPORT, CT 06880
117	5.15	2	37	7 FERN RD, MAHOPAC, NY 10541	MICHAEL J & KRISTIE A EVERS	7 FERN RD, MAHOPAC, NY 10541
118	5.15	2	38	26 LOCUST DR, MAHOPAC, NY 10541	ERNEST LUCY SANTANELLO (TRUST)	4136 STRATFORD DR, NEW PORT RICHEL, FL 34652
119	5.15	2				



**SITE PLAN**

SCALE: 1"=400' FOR 11"x17"  
1"=200' FOR 22"x34"



1

**ZONING TABLE:  
CARMEL ZONING DISTRICT RESIDENTIAL**

ITEM	REQUIRED	EXISTING	PROPOSED	REMARKS
MAX. HEIGHT (FT)	35	30±	NO CHANGE	COMPLIES
MIN. LOT AREA (SF)	120,000	3,070,669±	NO CHANGE	COMPLIES
MIN. LOT WIDTH (FT)	200	448±	NO CHANGE	COMPLIES
MIN. LOT DEPTH (FT)	200	2,562±	NO CHANGE	COMPLIES
MIN. FRONT YARD SETBACK (FT)	40	552±	NO CHANGE	COMPLIES
MIN. SIDE YARD SETBACK (FT)	25	78±	NO CHANGE	COMPLIES
MIN. REAR YARD SETBACK (FT)	40	384±	NO CHANGE	COMPLIES
MAX. BUILDING COVERAGE	15%	2.4%	NO CHANGE	COMPLIES
TOWER SETBACK (FT) **	280	N/A	174±	***
TOWER HEIGHT (FT) ***	75	N/A	140	***

NA = NOT APPLICABLE

\* EXISTING DIMENSIONAL NON-CONFORMITY.

\*\* IN RESIDENTIAL ZONES, TOWER SETBACK TO ALL RESIDENTIAL BUILDINGS ON ADJUTING LOTS MUST BE 2 TIMES THE HEIGHT OF PROPOSED TOWER.

\*\*\* VARIANCE REQUIRED

**NOTES:**

- NORTH SHOWN AS APPROXIMATE.
- SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
- THE PROPOSED USE IS FOR TELECOMMUNICATIONS AND IS NOT INTENDED FOR PERMANENT EMPLOYEE OCCUPANCY. THEREFORE, POTABLE WATER, SANITARY SEWERS, AND ADDITIONAL ON SITE PARKING ARE NOT REQUIRED.
- THE FACILITY SHALL BE VISITED ON THE AVERAGE OF ONCE A MONTH FOR MAINTENANCE AND SHALL BE CONTINUOUSLY MONITORED FROM A REMOTE FACILITY FOR BOTH FIRE AND INTRUSION.
- THE FACILITIES ARE REMOTELY OPERATED AND CONTROLLED, AND AS SUCH, ARE NORMALLY UNMANNED. A COMPUTERIZED EQUIPMENT AND FACILITY ALARM SYSTEM CONTINUOUSLY MONITORS AN EXTENSIVE NUMBER OF OPERATING AND BUILDING FUNCTIONS. UNPLANNED EVENTS WILL TRIGGER ALARM REPORTS TO VERIZON WIRELESS HEADQUARTERS LOCATION IN BEDMINSTER, NJ, RANGING FROM ROUTINE REPORTS TO IMMEDIATE ACTIVATION OF LOCAL PERSONNEL OR EMERGENCY SERVICES, 24 HOURS A DAY.
- CONTRACTOR SHALL CONTACT "DIG SAFELY NEW YORK @ 811" AND LOCATE ALL EXISTING UTILITIES WITHIN THE AREA OF WORK PRIOR TO START OF EXCAVATION.
- CONTRACTOR SHALL COORDINATE & COMPLY WITH EXISTING UTILITY COMPANIES' REQUIREMENTS.
- THERE ARE NO PROPOSED ALTERATIONS, IMPROVEMENTS OR RELOCATIONS FOR ANY STREAMS OR EXISTING DRAINAGE STRUCTURES WITHIN THE PROPERTY.
- SITE PLAN BASED ON "V8101, GLENACOMA LAKE, WALTON DRIVE, COMPILOTION PLAN", SHEET 1 OF 2 & "V8102, GLENACOMA LAKE, WALTON DRIVE, PARTIAL BOUNDARY & TOPOGRAPHIC SURVEY", SHEET 2 OF 2, PREPARED BY LANGAN, 555 LONG WHARF DRIVE, NEW HAVEN, CT 06511. SHEET 1 OF 1, DATED APRIL 10, 2018.
- THE FACILITIES SECURITY AND OTHER LIGHTING SYSTEMS WILL BE DESIGNED, INSTALLED AND MAINTAINED IN SUCH A MANNER (THROUGH MOTION DETECTION, AUTOMATIC SHUT-OFF, PROJECTING DOWNWARD, SHIELDING, AND MINIMUM WATTAGE) AS TO MINIMIZE OR ELIMINATE LIGHT POLLUTION; THE FACILITIES WILL BE DESIGNED, INSTALLED AND MAINTAINED IN SUCH A MANNER AS TO MINIMIZE OR ELIMINATE NOISE POLLUTION.
- DISTANCES TO NEARBY STRUCTURES WERE VERIFIED BASED ON PUBLICLY AVAILABLE LOT SURVEYS FROM THE TOWN OF CARMEL: 48 WALTON DRIVE, J.F. DOWLING, 09/15/1992; 49 WALTON DRIVE, BADEY & WATSON, 04/18/1946; 53 WALTON DRIVE, BURGESS & BEHR, P.C., 02/26/1980.

HOMELAND TOWERS, LLC  
9 HARMONY STREET  
2nd FLOOR  
DANBURY, CT 06810  
(203) 297-6345

NEW YORK SMSA  
LIMITED PARTNERSHIP  
d/b/a  
**verizon**  
WIRELESS

4 CENTERCROK ROAD  
WEST NYACK, NY 10994

**GLENACOMA LAKE**

**ZONING DRAWINGS**

6	12/22/19	ISSUED FOR ZONING
5	12/02/22	ISSUED FOR ZONING
4	11/22/22	ISSUED FOR ZONING
3	11/04/22	ISSUED FOR ZONING
2	10/26/22	ISSUED FOR ZONING
1	05/07/20	ISSUED FOR ZONING
0	01/20/20	ISSUED FOR ZONING
C	01/02/20	ISSUED FOR REVIEW
B	11/07/19	ISSUED FOR REVIEW

Dewberry Engineers Inc.

600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710



DAVID REVETTE, P.E.  
NY LICENSE No. 101758

DRAWN BY: JC/KFM

REVIEWED BY: MS

CHECKED BY: DER

PROJECT NUMBER: 50114387

JOB NUMBER: 50114388

SITE ADDRESS:

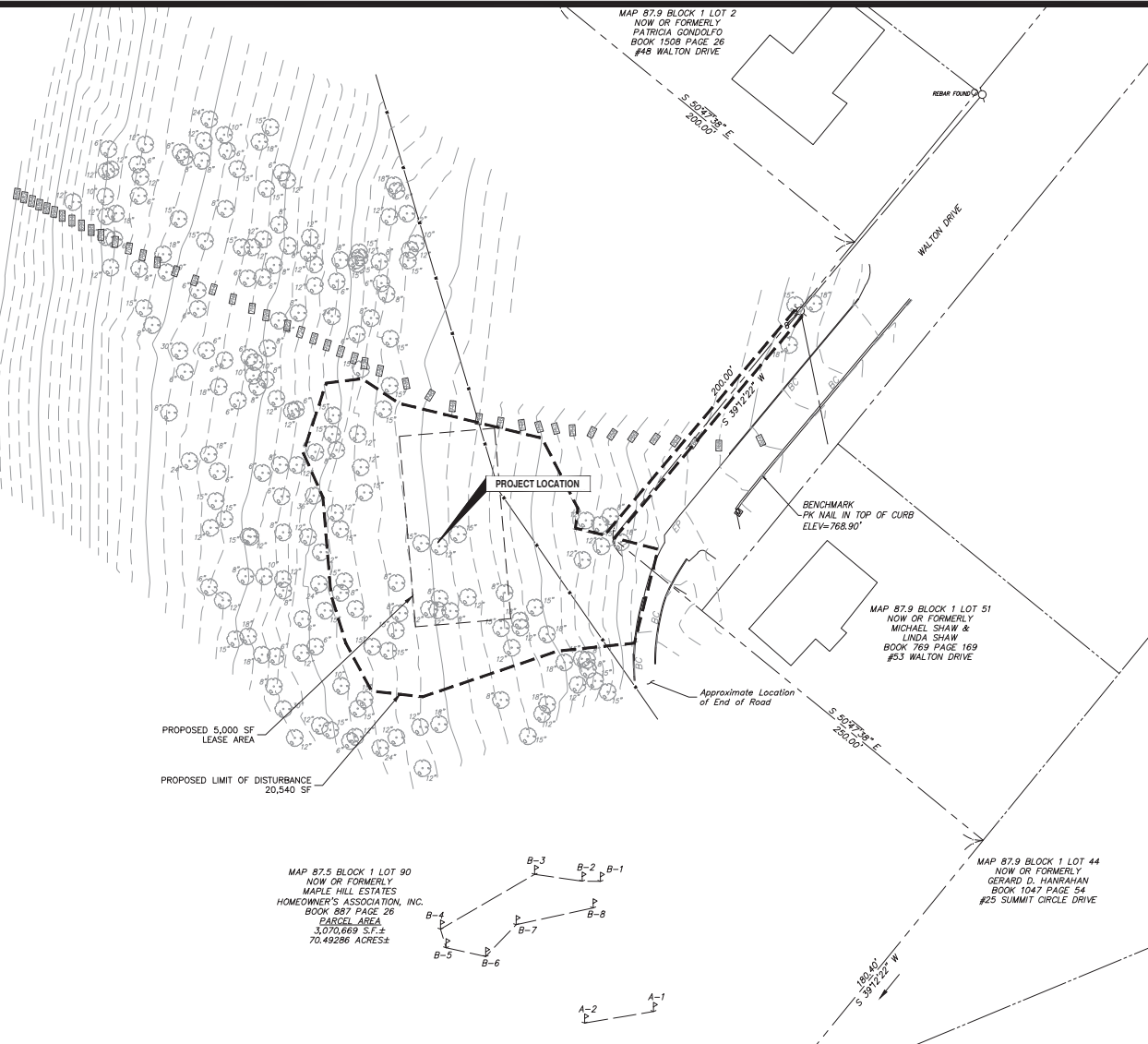
WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE

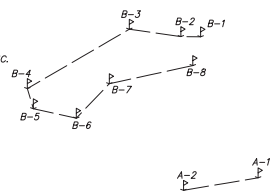
SITE PLAN

SHEET NUMBER

APPROXIMATE TRUE NORTH



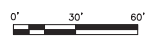
MAP 87.5 BLOCK 1 LOT 90  
NOW OR FORMERLY  
MAPLE HILL ESTATES  
HOMEOWNERS ASSOCIATION, INC.  
BOOK 887 PAGE 26  
PARCEL AREA  
3,070.869 S.F. ±  
70.49286 ACRES ±



MAP 87.9 BLOCK 1 LOT 44  
NOW OR FORMERLY  
GERARD D. HANRAHAN  
BOOK 1047 PAGE 54  
#25 SUMMIT CIRCLE DRIVE

**EXISTING CONDITIONS PLAN**

SCALE: 1"=60' FOR 11"x17"  
1"=30' FOR 22"x34"



1

**NOTES:**

- EXISTING CONDITIONS PLAN IS BASED ON A SURVEY BY LANGAN ENGINEERING DATED 04/10/18.
- THE SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS AT THE SUBJECT SITE, DEED INFORMATION AND THE FOLLOWING REFERENCES:
  - MAP TITLED "FINAL SUBDIVISION PLAT OF MAPLE HILL ESTATES, SITUATE IN TOWN OF CARMEL, COUNTY OF PUTNAM, STATE OF NEW YORK", SCALE: 1"=100', DATED: MAY 22, 1985, PREPARED BY: CASHIN ASSOCIATES, P.C.
- THE MERIDIAN OF THIS SURVEY IS REFERENCED TO NEW YORK EAST STATE PLANE COORDINATE SYSTEM NAD 83 AS ESTABLISHED THROUGH GPS METHODS.
- ELEVATIONS SHOWN ARE REFERENCED TO NAVD 88, AS ESTABLISHED THROUGH GPS METHODS.
- PLANIMETRIC AND TOPOGRAPHIC INFORMATION SHOWN HEREON HAS BEEN OBTAINED FROM GROUND SURVEYS AND LANDSCAPE ARCHITECTURE, DPC FIELD WORK COMPLETED DURING THE MONTH OF APRIL, 2018.
- AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP ENTITLED "PUTNAM COUNTY, NEW YORK PANEL 226 OF 256, MAP NUMBER 36079C0226E, EFFECTIVE DATE MARCH 4, 2013" THE PROJECT AREA IS IN ZONE X (UNSHADED).
- UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC) CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED DESPITE MEETING THE REQUIRED STANDARD OF CARE. THE SURVEYOR CANNOT, AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES.
- ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC.) DATA IS SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS.
- UNLESS SPECIFICALLY NOTED HEREON, THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON.
- ALL BUILDINGS AND STRUCTURES WERE LOCATED AND MEASURED AT GROUND LEVEL. THE SURVEYOR MAKES NO DETERMINATIONS OR GUARANTEES AS TO THE ABSENCE, EXISTENCE OR LOCATIONS OF UNDERGROUND STRUCTURES, FOUNDATIONS, FOOTINGS, PROJECTIONS, WALLS, TANKS, SEPTIC SYSTEMS, ETC. NO TEST PITS, EXCAVATIONS OR GROUND PENETRATING RADAR WERE PERFORMED AS PART OF THIS SURVEY.
- PRIOR TO ANY DESIGN OR CONSTRUCTION, THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.
- WETLANDS DELINEATED BY OTHERS.

HOMELAND TOWERS, LLC  
9 HARMONY STREET  
2nd FLOOR  
DANBURY, CT 06810  
(203) 297-6345

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**verizon**  
WIRELESS

4 CENTERCROK ROAD  
WEST NYACK, NY 10994

**GLENACOM LAKE**

ZONING DRAWINGS

5	12/02/22	ISSUED FOR ZONING
4	11/22/22	ISSUED FOR ZONING
3	11/04/22	ISSUED FOR ZONING
2	10/28/22	ISSUED FOR ZONING
1	05/07/20	ISSUED FOR ZONING
0	01/20/20	ISSUED FOR ZONING
C	01/02/20	ISSUED FOR REVIEW
B	11/07/19	ISSUED FOR REVIEW
A	09/27/19	ISSUED FOR REVIEW

**Dewberry**  
Dewberry Engineers Inc.

600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.8710

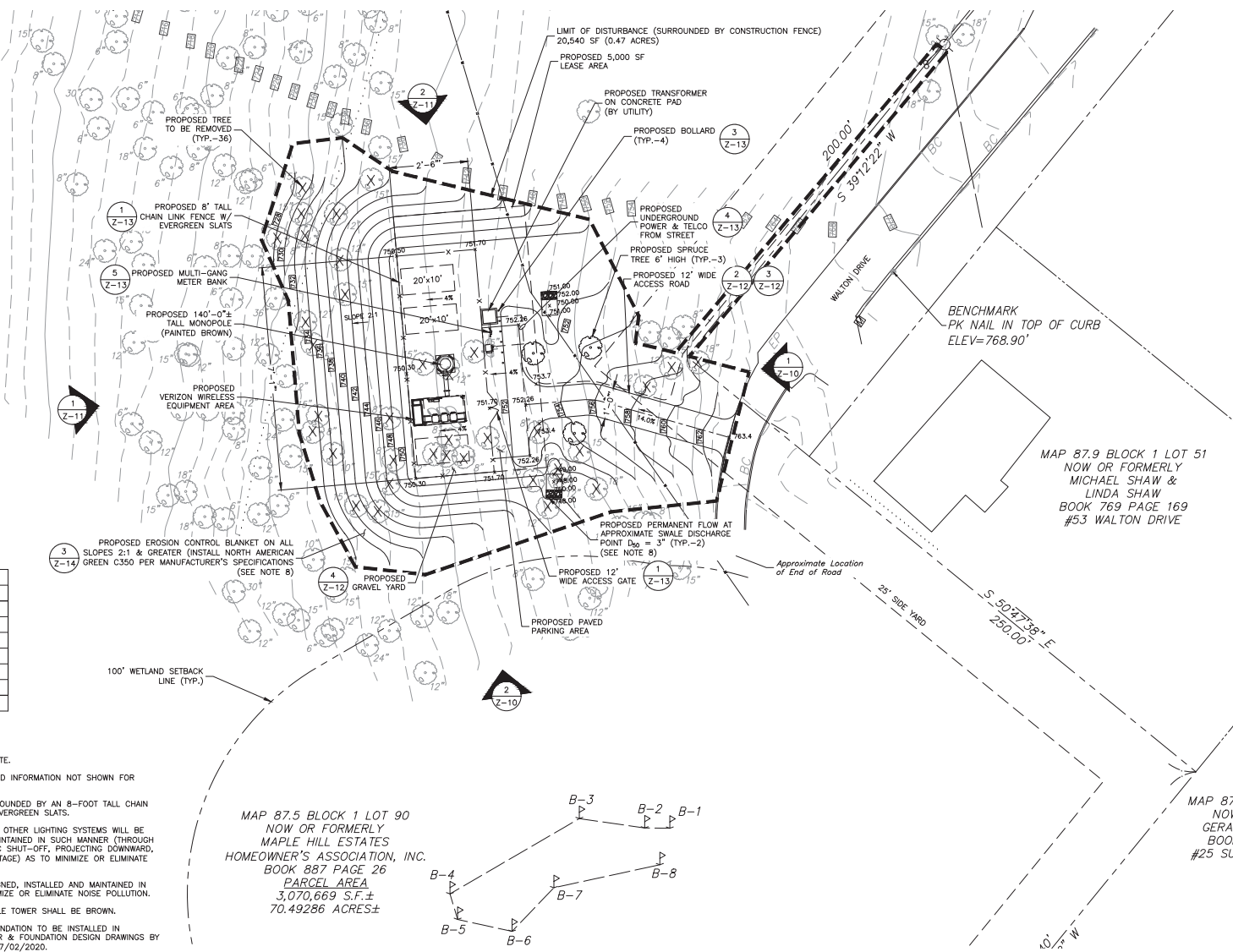
DAVID REVETTE, P.E.  
NY LICENSE No. 101758

DRAWN BY:	JC/KFM
REVIEWED BY:	MS
CHECKED BY:	DER
PROJECT NUMBER:	50114387
JOB NUMBER:	50114388
SITE ADDRESS:	

WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE  
**EXISTING CONDITIONS  
PLAN**

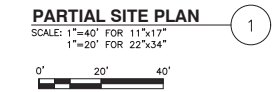
SHEET NUMBER



TREES TO BE REMOVED	
SIZE/CALIPER (IN)	QTY
6"	1
8"	7
10"	1
12"	11
15"	13
18"	3
<b>TOTAL</b>	<b>36</b>

- NOTES:**
- NORTH SHOWN AS APPROXIMATE.
  - SOME EXISTING AND PROPOSED INFORMATION NOT SHOWN FOR CLARITY.
  - THE FACILITIES WILL BE SURROUNDED BY AN 8-FOOT TALL CHAIN LINK SECURITY FENCE WITH EVERGREEN SLATS.
  - THE FACILITIES SECURITY AND OTHER LIGHTING SYSTEMS WILL BE DESIGNED, INSTALLED AND MAINTAINED IN SUCH MANNER (THROUGH MOTION DETECTION, AUTOMATIC SHUT-OFF, PROJECTING DOWNWARD, SHIELDING, AND MINIMUM WATTAGE) AS TO MINIMIZE OR ELIMINATE LIGHT POLLUTION.
  - THE FACILITIES WILL BE DESIGNED, INSTALLED AND MAINTAINED IN SUCH A MANNER AS TO MINIMIZE OR ELIMINATE NOISE POLLUTION.
  - THE COLOR OF THE MONOPOLE TOWER SHALL BE BROWN.
  - MONOPOLE & MONOPOLE FOUNDATION TO BE INSTALLED IN ACCORDANCE WITH THE TOWER & FOUNDATION DESIGN DRAWINGS BY AMBOR STRUCTURES DATED 07/02/2020.
  - ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLANS COMPLETED BY DEWBERRY ENGINEERS INC. DATED 11/20/20. CONTRACTOR TO REFERENCE BOTH THESE PLANS & THE SWPPP WHEN SUBMITTING BID.
  - CONTRACTOR SHALL CONTACT "DIG SAFELY NEW YORK, INC." AT 811 OR 1-800-272-4480 AND LOCATE ALL EXISTING UTILITIES WITHIN THE AREA OF WORK PRIOR TO THE START OF ANY EXCAVATION.

MAP 87.5 BLOCK 1 LOT 90  
 NOW OR FORMERLY  
 MAPLE HILL ESTATES  
 HOMEOWNER'S ASSOCIATION, INC.  
 BOOK 887 PAGE 26  
 PARCEL AREA  
 3,070,669 S.F. ±  
 70.49286 ACRES ±



MAP 87.9 BLOCK 1 LOT 51  
 NOW OR FORMERLY  
 MICHAEL SHAW &  
 LINDA SHAW  
 BOOK 769 PAGE 169  
 #53 WALTON DRIVE

**HOMELAND TOWERS, LLC**  
 9 HARMONY STREET  
 2nd FLOOR  
 DANBURY, CT 06810  
 (203) 297-6345

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 WEST NYACK, NY 10994

**GLENACOM LAKE**

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 600 PARSHIPANNY ROAD  
 SUITE 301  
 PARSHIPANNY, NJ 07054  
 PHONE: 973.739.9400  
 FAX: 973.739.8710

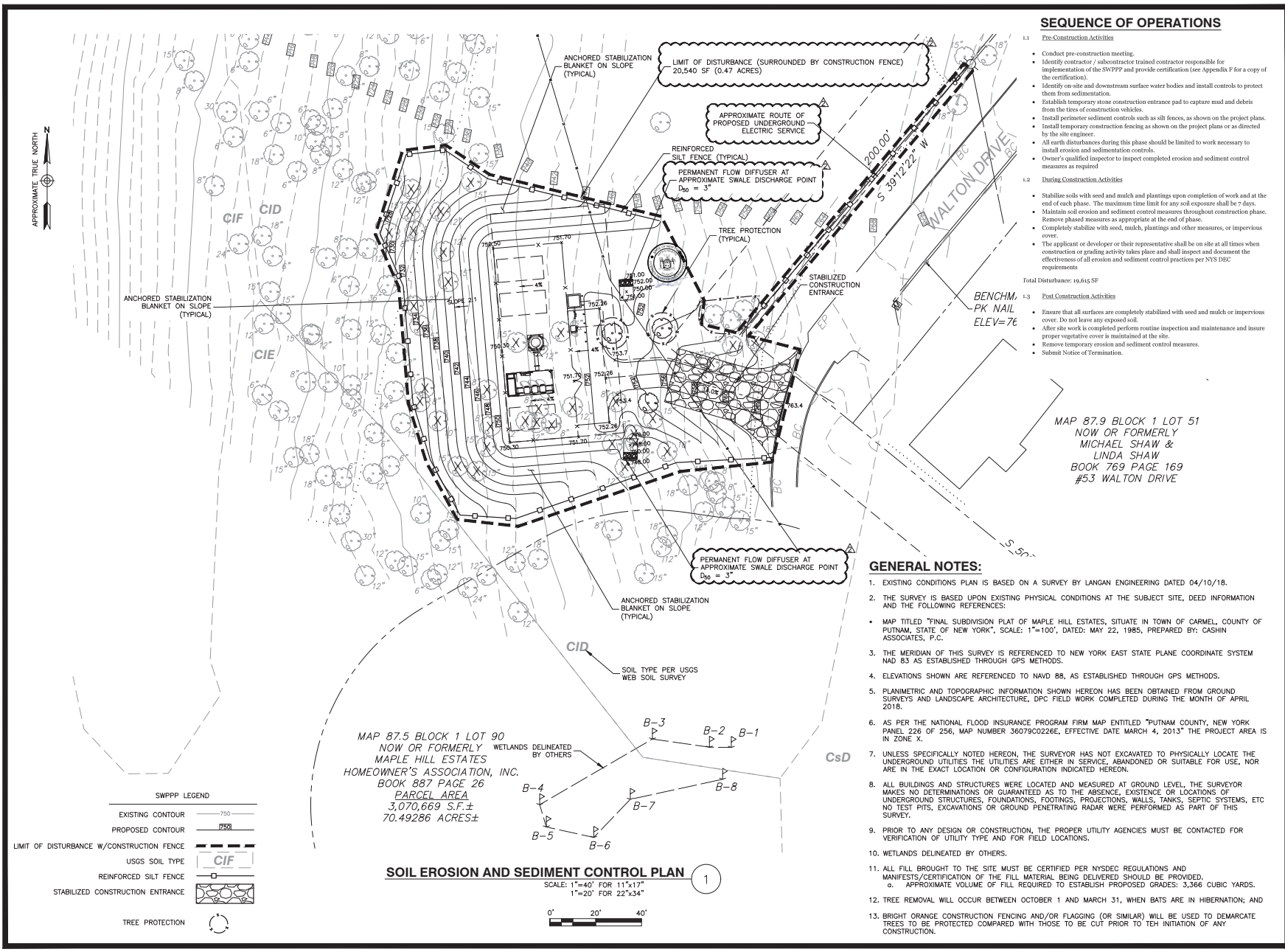


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REVIEWED BY:	MS
CHECKED BY:	DER
PROJECT NUMBER:	50114387
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SITE ADDRESS:	

WALTON DRIVE  
 MAHOPAC, NY 10541  
 PUTNAM COUNTY

SHEET TITLE  
 PARTIAL SITE PLAN

SHEET NUMBER  
 Z-8



**SEQUENCE OF OPERATIONS**

- 1.1 Pre-Construction Activities
- Conduct pre-construction meeting.
  - Identify contractor / subcontractor trained contractor responsible for implementation of the SWPPP and provide certification (see Appendix F for a copy of the certification).
  - Identify on-site and downstream surface water bodies and install controls to protect them from sedimentation.
  - Establish temporary stone construction entrance pad to capture mud and debris from the tires of construction vehicles.
  - Install perimeter sediment controls such as silt fences, as shown on the project plans.
  - Install temporary construction fencing as shown on the project plans or as directed by the site engineer.
  - All earth disturbances during this phase should be limited to work necessary to install erosion and sedimentation controls.
  - Owner's qualified inspector to inspect completed erosion and sediment control measures as required.
- 1.2 During Construction Activities
- Stabilize soils with seed and mulch and plantings upon completion of work and at the end of each phase. The maximum time limit for any soil exposure shall be 7 days.
  - Maintain soil erosion and sediment control measures throughout construction phase. Remove phased measures as appropriate at the end of phase.
  - Completely stabilize with seed, mulch, plantings and other measures, or impervious cover.
  - The applicant or developer or their representative shall be on site at all times when construction or grading activity takes place and shall inspect and document the effectiveness of all erosion and sediment control practices per NYS DEC requirements.
- Total Disturbance: 19,615 SF
- 1.3 Post Construction Activities
- Ensure that all surfaces are completely stabilized with seed and mulch or impervious cover. Do not leave any exposed soil.
  - After site work is completed perform routine inspection and maintenance and insure proper vegetative cover is maintained at the site.
  - Remove temporary erosion and sediment control measures.
  - Submit Notice of Termination.

MAP 87.9 BLOCK 1 LOT 51  
 NOW OR FORMERLY  
 MICHAEL SHAW &  
 LINDA SHAW  
 BOOK 769 PAGE 169  
 #53 WALTON DRIVE

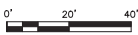
**GENERAL NOTES:**

- EXISTING CONDITIONS PLAN IS BASED ON A SURVEY BY LANGAN ENGINEERING DATED 04/10/18.
- THE SURVEY IS BASED UPON EXISTING PHYSICAL CONDITIONS AT THE SUBJECT SITE, DEED INFORMATION AND THE FOLLOWING REFERENCES:
- MAP TITLED "FINAL SUBDIVISION PLAT OF MAPLE HILL ESTATES, SITUATE IN TOWN OF CARMEL, COUNTY OF PUTNAM, STATE OF NEW YORK", SCALE: 1"=100', DATED: MAY 22, 1985, PREPARED BY: CASHIN ASSOCIATES, P.C.
- THE MERIDIAN OF THIS SURVEY IS REFERENCED TO NEW YORK EAST STATE PLANE COORDINATE SYSTEM NAD 83 AS ESTABLISHED THROUGH GPS METHODS.
- ELEVATIONS SHOWN ARE REFERENCED TO NAVD 88, AS ESTABLISHED THROUGH GPS METHODS.
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- AS PER THE NATIONAL FLOOD INSURANCE PROGRAM FIRM MAP ENTITLED "PUTNAM COUNTY, NEW YORK PANEL 226 OF 256, MAP NUMBER 36079C02286, EFFECTIVE DATE MARCH 4, 2013" THE PROJECT AREA IS IN ZONE X.
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- WETLANDS DELINEATED BY OTHERS.
- ALL FILL BROUGHT TO THE SITE MUST BE CERTIFIED PER NYSDEC REGULATIONS AND MANIFESTS/CERTIFICATION OF THE FILL MATERIAL BEING DELIVERED SHOULD BE PROVIDED.
  - APPROXIMATE VOLUME OF FILL REQUIRED TO ESTABLISH PROPOSED GRADES: 3,366 CUBIC YARDS.
- TREE REMOVAL WILL OCCUR BETWEEN OCTOBER 1 AND MARCH 31, WHEN BATS ARE IN HIBERNATION; AND
- BRIGHT ORANGE CONSTRUCTION FENCING AND/OR FLAGGING (OR SIMILAR) WILL BE USED TO DEMARCATÉ TREES TO BE PROTECTED COMPARED WITH THOSE TO BE CUT PRIOR TO THE INITIATION OF ANY CONSTRUCTION.

MAP 87.5 BLOCK 1 LOT 90  
 NOW OR FORMERLY  
 MAPLE HILL ESTATES  
 HOMEOWNER'S ASSOCIATION, INC.  
 BOOK 887 PAGE 26  
 PARCEL AREA  
 3,070,669 S.F. ±  
 70.49286 ACRES ±

**SOIL EROSION AND SEDIMENT CONTROL PLAN**

SCALE: 1"=40' FOR 11"x17"  
 1"=20' FOR 22"x34"



HOMELAND TOWERS, LLC  
 9 HARMONY STREET  
 2nd FLOOR  
 DANBURY, CT 06810  
 (203) 297-6345

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**verizon**  
 WIRELESS

4 CENTERCROSS ROAD  
 WEST NYACK, NY 10994

**GLENACOM LAKE**

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C	01/02/20 ISSUED FOR REVIEW
B	11/07/19 ISSUED FOR REVIEW
A	09/27/19 ISSUED FOR REVIEW

**Dewberry**  
 Dewberry Engineers Inc.  
 600 PARSIPPANY ROAD  
 SUITE 201  
 PARSIPPANY, NJ 07054  
 PHONE: 973.739.9400  
 FAX: 973.739.8710

DAVID REVETTE, P.E. NY LICENSE No. 101758	
DRAWN BY:	JC/KFM
REVIEWED BY:	MS
CHECKED BY:	DER
PROJECT NUMBER:	50114387
JOB NUMBER:	50114388
SITE ADDRESS:	

WALTON DRIVE MAHOPAC, NY 10541 PUTNAM COUNTY	
SHEET TITLE	
SOIL EROSION AND SEDIMENT CONTROL PLAN	
SHEET NUMBER	



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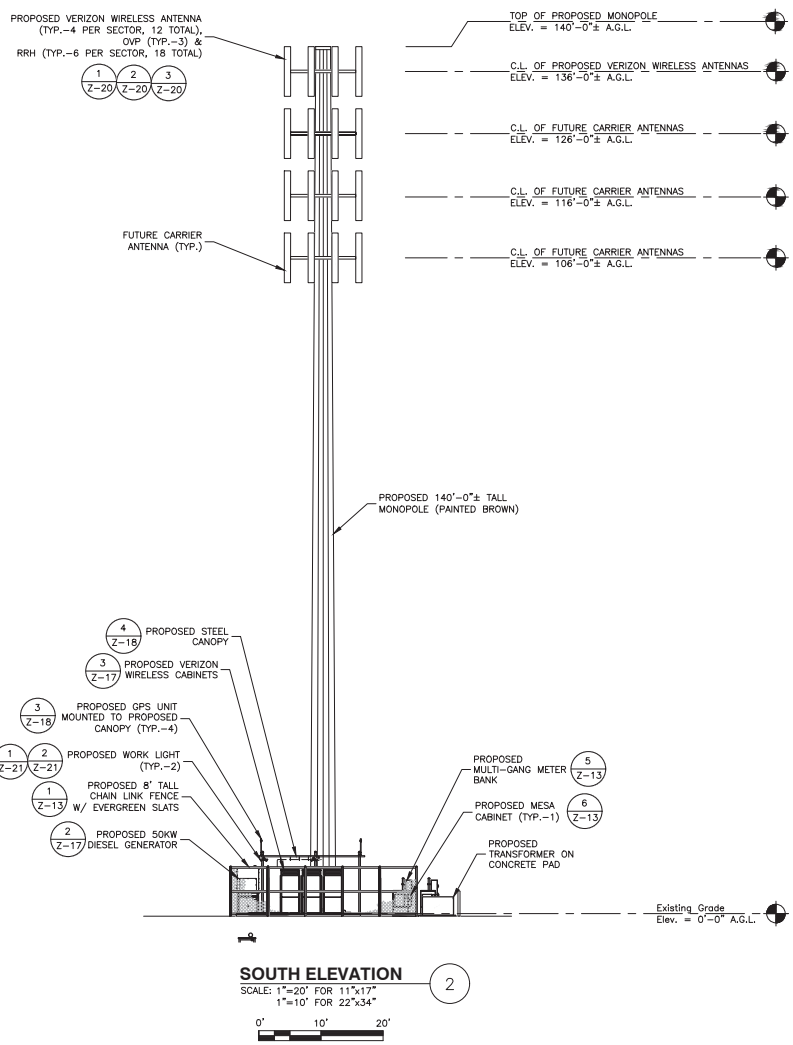
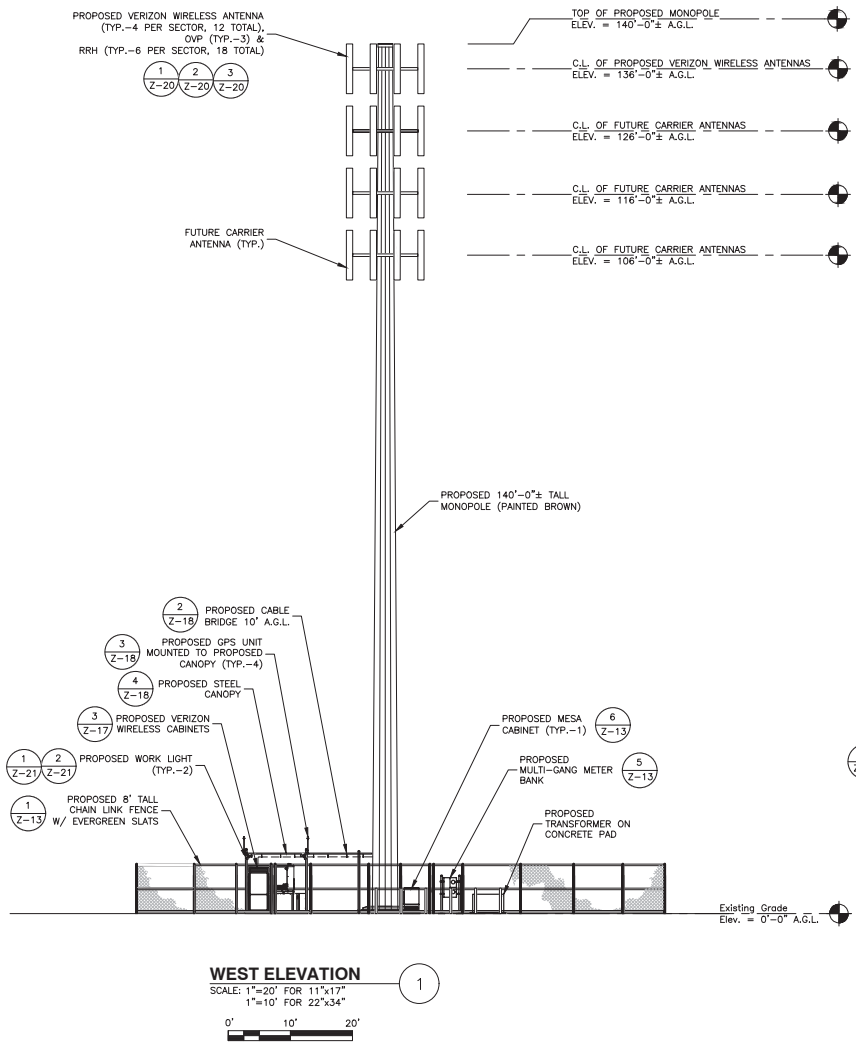
WALTON DRIVE  
 MAHOPAC, NY 10541  
 PUTNAM COUNTY

SHEET TITLE

ELEVATIONS-1

SHEET NUMBER

Z-10



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 Dewberry Engineers Inc.

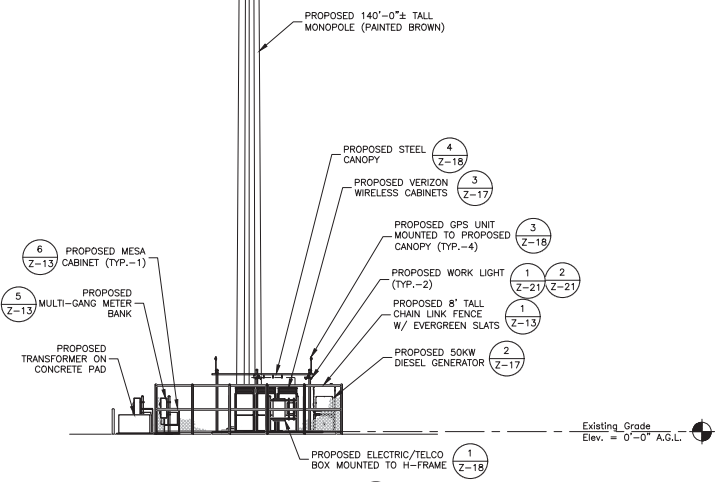
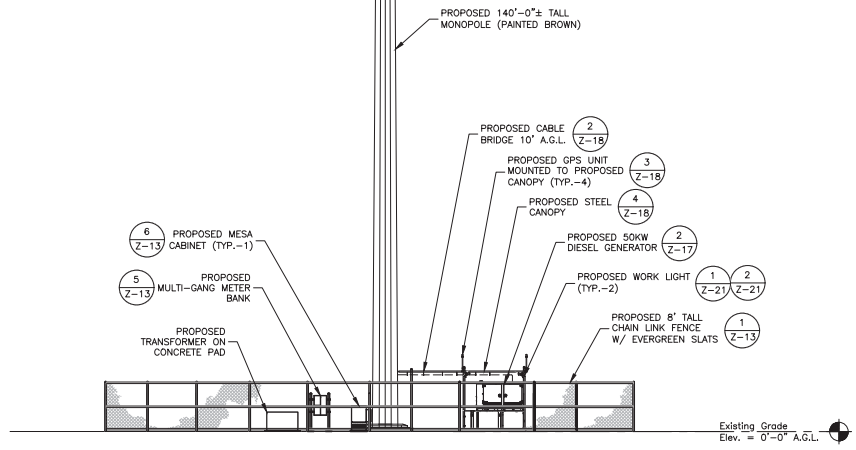
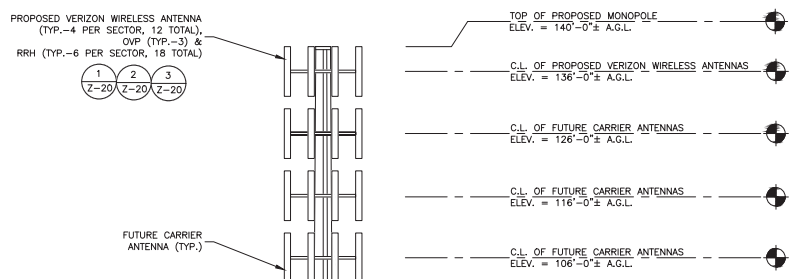
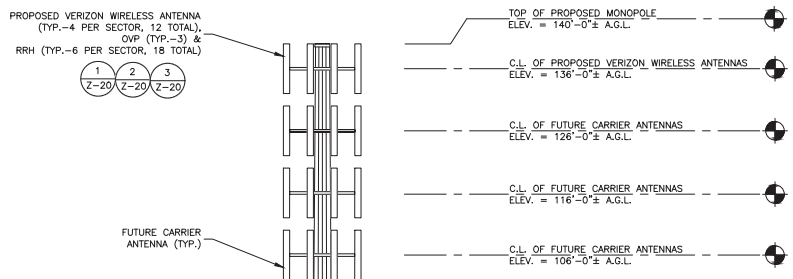
600 PARSIPPANY ROAD  
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 PARSIPPANY, NJ 07054  
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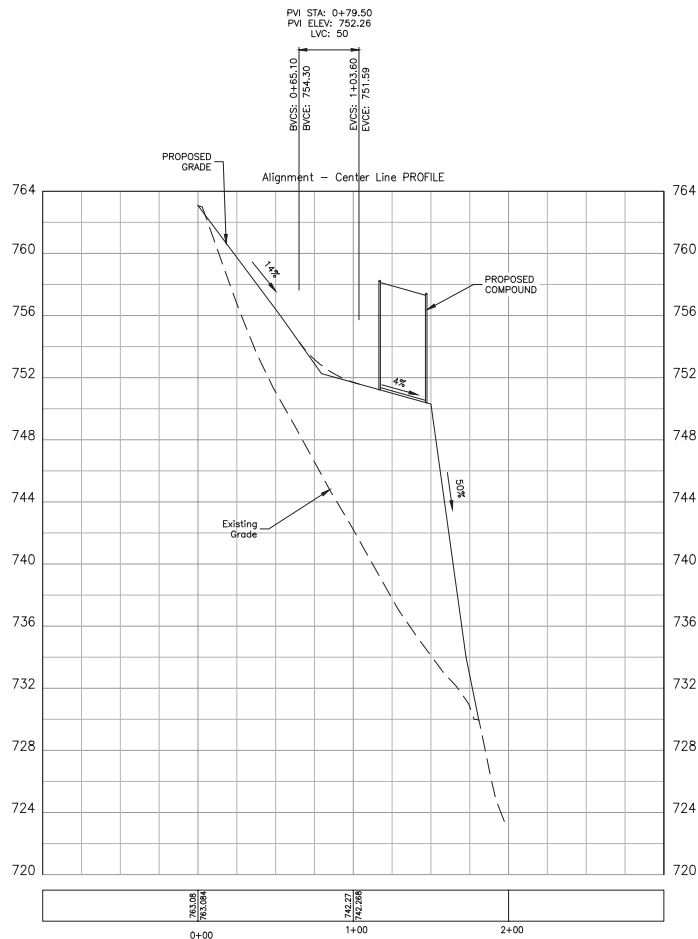
WALTON DRIVE  
 MAHOPAC, NY 10541  
 PUTNAM COUNTY

SHEET TITLE	ELEVATIONS-2
SHEET NUMBER	

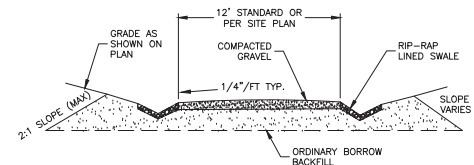
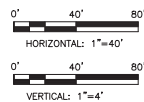


**EAST ELEVATION**  
 SCALE: 1"=20' FOR 11"x17"  
 1"=10' FOR 22"x34"

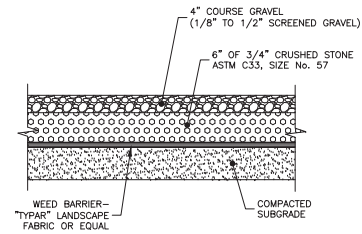
**NORTH ELEVATION**  
 SCALE: 1"=20' FOR 11"x17"  
 1"=10' FOR 22"x34"



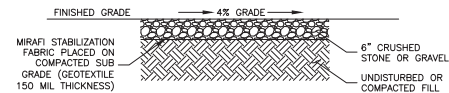
**ACCESS DRIVEWAY PROFILE** 1  
SCALE: HORIZONTAL: 1"=40'  
VERTICAL: 1"=4'



**ACCESS ROAD DETAIL** 2  
SCALE: N.T.S.



**GRAVEL ACCESS ROAD DETAIL** 3  
SCALE: N.T.S.



**GRAVEL YARD DETAIL** 4  
SCALE: N.T.S.

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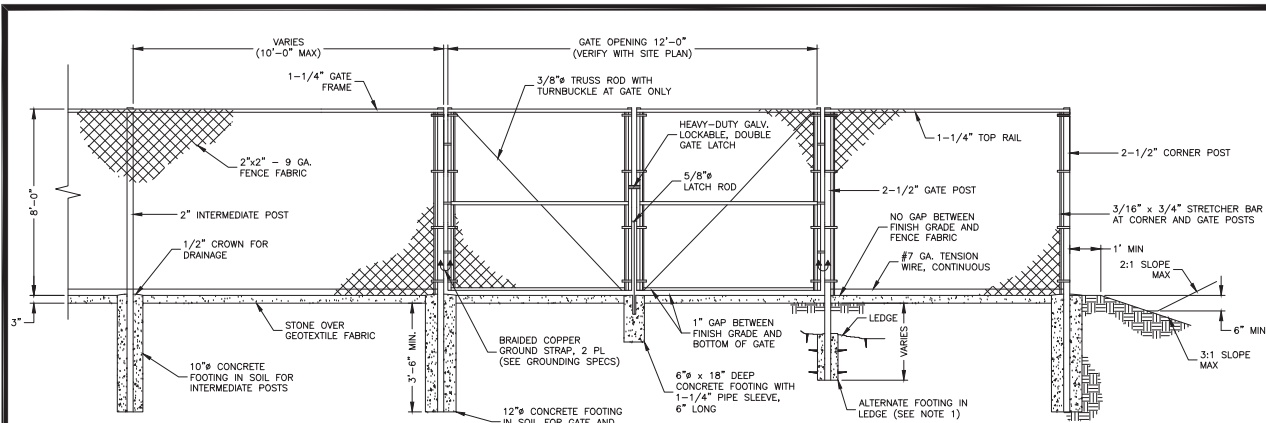
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PUTNAM COUNTY

SHEET TITLE

ACCESS DRIVEWAY  
PROFILE & DETAILS

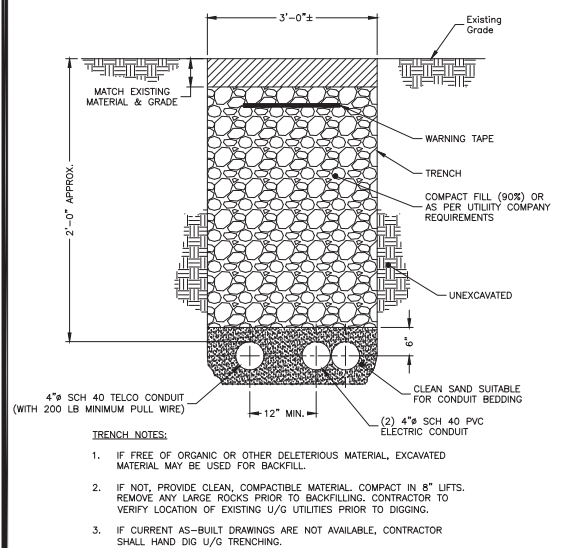
SHEET NUMBER



**FENCE NOTES:**

1. ALTERNATE FOOTINGS FOR ALL FENCE POSTS IN LEDGE: IF LEDGE IS ENCOUNTERED AT GRADE, OR AT A DEPTH SHALLOWER THAN 3'-6", CORE DRILL AN 8" DIA HOLE 18" INTO THE LEDGE, CENTER POST IN THE HOLE AND FILL WITH CONCRETE OR GROUT. IF LEDGE IS BELOW FINISH GRADE, COAT BACKFILLED SECTION OF POST WITH COAL TAR, AND BACKFILL WITH WELL-DRAINING GRAVEL.
2. ATTACH EACH GATE WITH 1-1/2" PAIR OF NON-LIFT-OFF TYPE, MALLEABLE IRON OR FORGING, PIN-TYPE HINGES. ASSEMBLIES SHALL ALLOW FOR 180° OF GATE TRAVEL.
3. INSTALL SWALE AROUND COMPOUND (MIN. DEPTH: 6") TO ALLOW FOR DRAINAGE.
4. CONCRETE FOOTINGS SHALL HAVE A MINIMUM 28-DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS OTHERWISE NOTED.
5. INSTALL PRIVACY EVERGREEN SLATS.

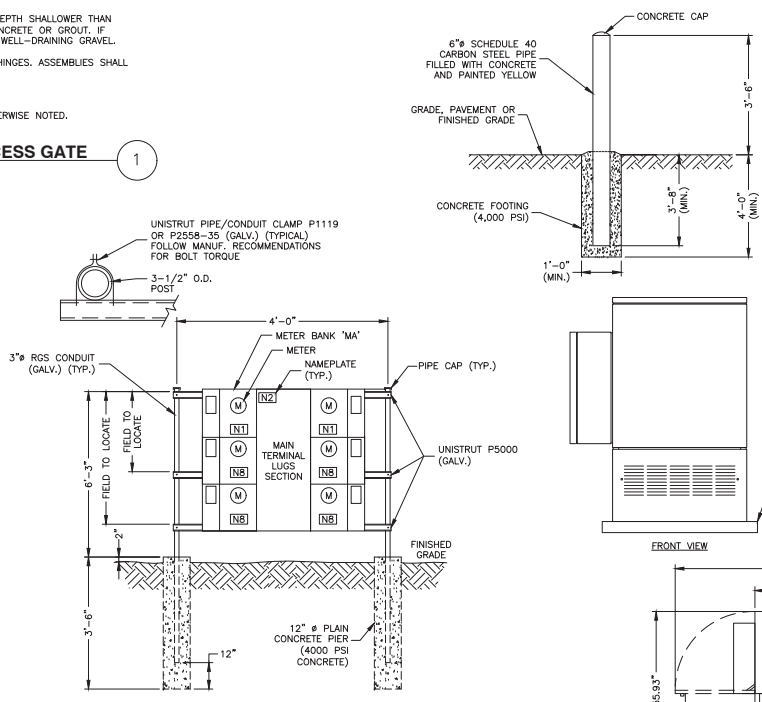
**FENCE AND ACCESS GATE**  
SCALE: N.T.S. 1



**TRENCH NOTES:**

1. IF FREE OF ORGANIC OR OTHER DELETERIOUS MATERIAL, EXCAVATED MATERIAL MAY BE USED FOR BACKFILL.
2. IF NOT, PROVIDE CLEAN, COMPACTIBLE MATERIAL, COMPACT IN 8" LIFTS. REMOVE ANY LARGE ROCKS PRIOR TO BACKFILLING. CONTRACTOR TO VERIFY LOCATION OF EXISTING U/G UTILITIES PRIOR TO DIGGING.
3. IF CURRENT AS-BUILT DRAWINGS ARE NOT AVAILABLE, CONTRACTOR SHALL HAND DIG U/G TRENCHING.

**JOINT SERVICE TRENCH BURIED CONDUIT (ELECTRIC/TELEPHONE)**  
SCALE: N.T.S. 4

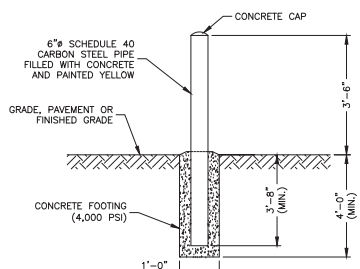


- NOTE:**
1. MOUNT METER BANK AND MAIN LUGS SECTION PER MANUFACTURER'S RECOMMENDATION AND INSTRUCTIONS.

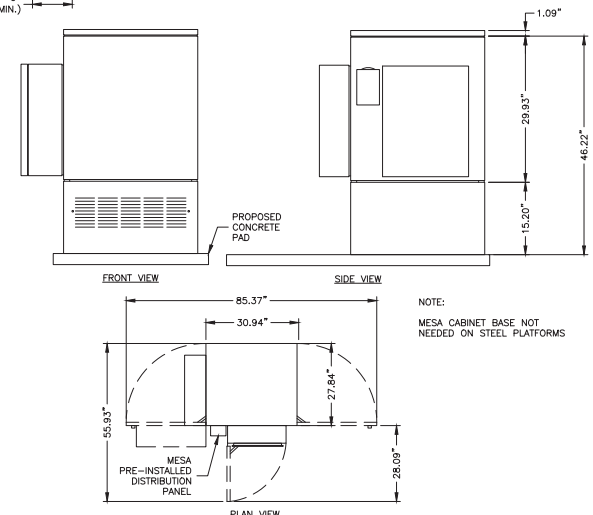
**MULTIPLE POWER METER MOUNTING**  
SCALE: N.T.S. 5



**SIGNAGE DETAIL**  
SCALE: N.T.S. 2



**BOLLARD DETAIL**  
SCALE: N.T.S. 3



**MESA CABINET DETAIL**  
SCALE: N.T.S. 6

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4 CENTERCROSS ROAD  
WEST NYACK, NY 10994

**GLENACOM LAKE**

ZONING DRAWINGS	
5	12/02/22 ISSUED FOR ZONING
4	11/22/22 ISSUED FOR ZONING
3	11/04/22 ISSUED FOR ZONING
2	10/28/22 ISSUED FOR ZONING
1	05/07/20 ISSUED FOR ZONING
0	01/20/20 ISSUED FOR ZONING
C	01/02/20 ISSUED FOR REVIEW
B	11/07/19 ISSUED FOR REVIEW
A	09/27/19 ISSUED FOR REVIEW

**Dewberry**  
Dewberry Engineers Inc.  
600 PARSIPPANY ROAD  
SUITE 301  
PARSIPPANY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710

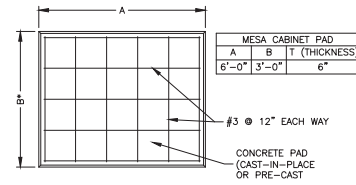
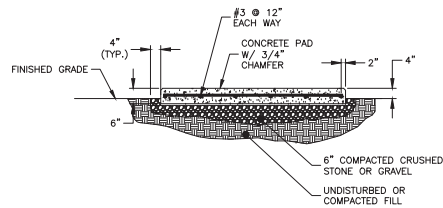
STATE OF NEW YORK  
DAVID REVETTE, P.E.  
NY LICENSE No. 101758

DRAWN BY:	JC/KFM
REVIEWED BY:	MS
CHECKED BY:	DER
PROJECT NUMBER:	50114387
JOB NUMBER:	50114388
SITE ADDRESS:	

WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE  
**CONSTRUCTION DETAILS**

SHEET NUMBER



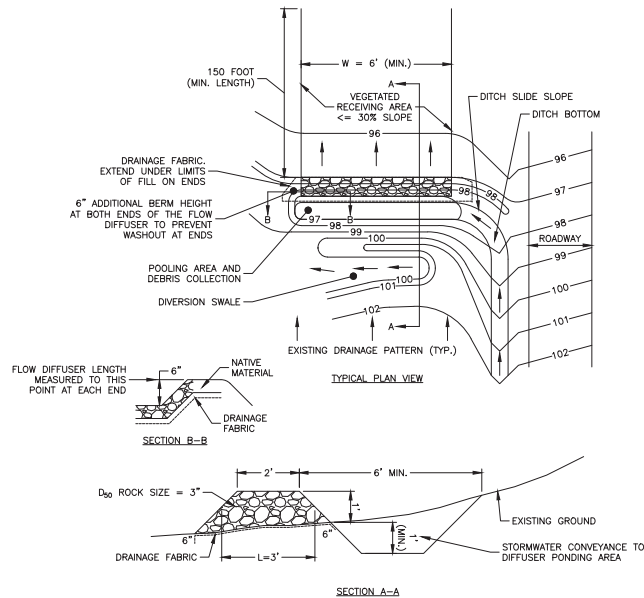
**NOTES:**

1. USE GALVANIZED HILTI EXPANSION ANCHORS (OR APPROVED EQUAL) FOR EQUIPMENT ANCHORAGE.
2. VERIFY THE SIZE OF THE CABINET STAND WITH THE SUPPLIER & UTILITY.
3. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENTS, SEE EQUIPMENT VENDOR DRAWINGS.

**OUTDOOR PAD FOR MINOR EQUIPMENT**

SCALE: N.T.S.

1



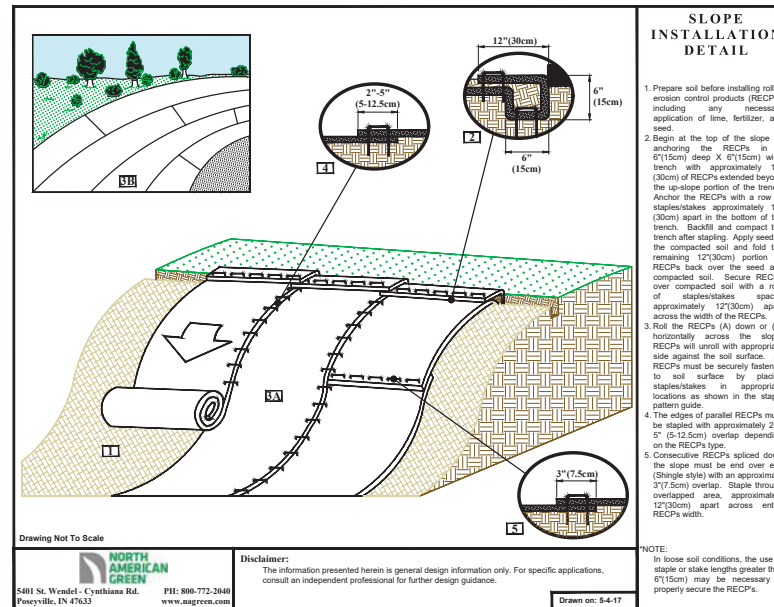
**NOTES:**

1. TYPICAL ELEVATIONS SHOWN HERE ARE TO ILLUSTRATE THE OPERATION OF THE FLOW DIFFUSER.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLANS COMPLETED BY DEWBERRY ENGINEERS INC. DATED 11/20/20. CONTRACTOR TO REFERENCE BOTH THESE PLANS & THE SWPPP WHEN SUBMITTING BID.

**FLOW DIFFUSER DETAIL**

SCALE: N.T.S.

2



Drawing Not To Scale  
**NORTH AMERICAN GREEN**  
 5401 St. Wendel - Cynthia Rd. P.O. Box 772-2040  
 Pewaukee, WI 47033 PH: 800-772-2040 www.nagreen.com

**Disclaimer:**  
 The information presented herein is general design information only. For specific applications, consult an independent professional for further design guidance.  
 Drawn on: 6-4-17

**NOTE:**

1. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED IN ACCORDANCE WITH THE STORMWATER POLLUTION PREVENTION PLANS COMPLETED BY DEWBERRY ENGINEERS INC. DATED 11/20/20. CONTRACTOR TO REFERENCE BOTH THESE PLANS & THE SWPPP WHEN SUBMITTING BID.

**EROSION CONTROL BLANKET DETAIL**

SCALE: N.T.S.

3

**HOMELAND TOWERS, LLC**  
 9 HARMONY STREET  
 2nd FLOOR  
 DANBURY, CT 06810  
 (203) 297-6345

**NEW YORK SMSA LIMITED PARTNERSHIP**  
 d/b/a  
**verizon** WIRELESS

4 CENTEROCK ROAD  
 WEST NYACK, NY 10994

**GLENACOM LAKE**

**ZONING DRAWINGS**

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 SUITE 301  
 PARSIPPANY, NJ 07054  
 PHONE: 973.739.9400  
 FAX: 973.739.9710

STATE OF NEW YORK  
 LICENSED PROFESSIONAL ENGINEER  
 19188-01  
 DAVID REVETTE, P.E.  
 NY LICENSE No. 101758

DRAWN BY:	JC/KFM
REVIEWED BY:	MS
CHECKED BY:	DER
PROJECT NUMBER:	50114387
JOB NUMBER:	50114388
SITE ADDRESS:	

WALTON DRIVE  
 MAHOPAC, NY 10541  
 PUTNAM COUNTY

SHEET TITLE	
CONSTRUCTION DETAILS II	
SHEET NUMBER	

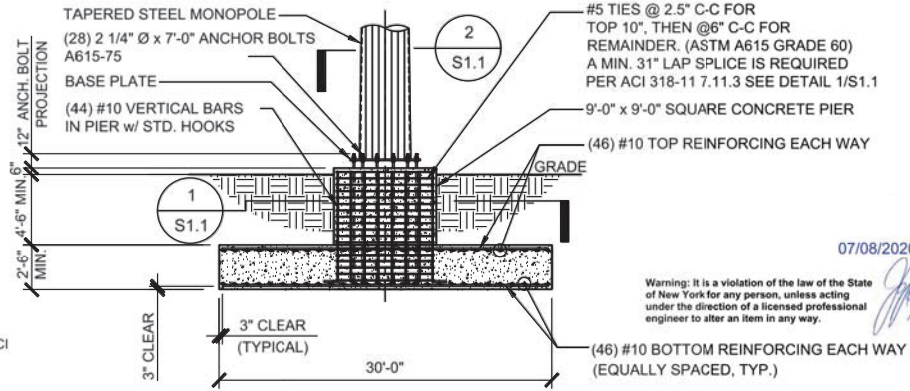
**GENERAL NOTES:**

- FOUNDATION DESIGN PER 2020 NEW YORK STATE BUILDING CODE (2018 INTERNATIONAL CODES) AND PER SOIL REPORT BY DELTA OAKS GROUP PROJECT NO. GEO20-06521-08 DATED JUNE 25, 2020.

**SOIL PARAMETERS:**

TOP	BOT.	UNIT WT. (PCF)	NET ULTIMATE BEARING (PSF)	COHESION (PSF)	FRICTION ANGLE (DEG.)
0	0.3	105	-	0	0
0.3	2.0	105	-	0	28
2.0	5.0	125	-	0	36
5.0	7.0	120	30,000	0	35

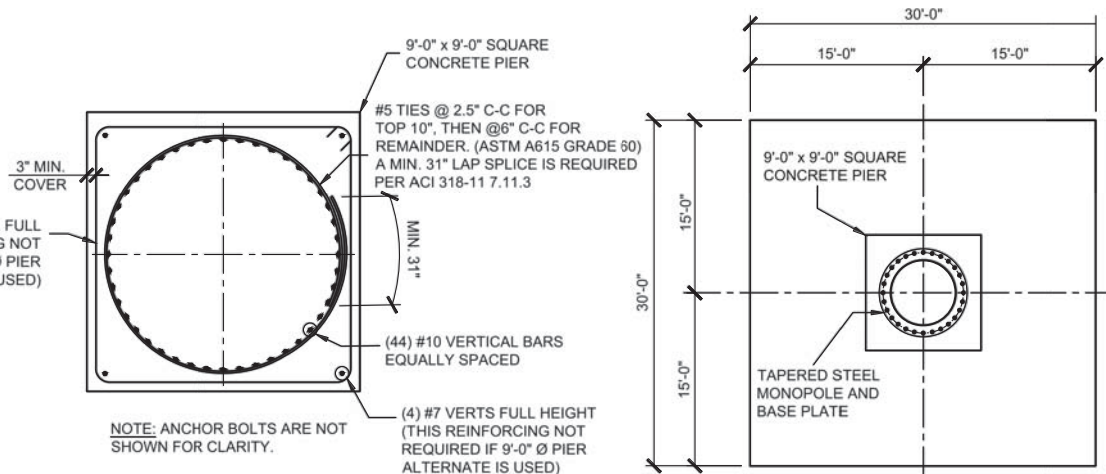
- CONCRETE SHALL BE 4500 P.S.I. (MINIMUM) @ 28 DAYS COMPRESSIVE STRENGTH.
- FOUNDATION INSTALLATION SHALL BE OBSERVED BY AN ENGINEER FROM DELTA OAKS GROUP.
- MAT/PIER FOUNDATION INSTALLATION SHALL BE IN ACCORDANCE WITH ACI 318 LATEST EDITION.
- ALL REINFORCING SHALL BE A.S.T.M. A615 GRADE 60.
- REFER TO SOIL REPORT FOR PROPER PREPARATION AND INSTALLATION REQUIREMENTS.
- CONTRACTOR IS RESPONSIBLE FOR SHORING WORK ETC.



07/08/2020

**SPREAD FOUNDATION**

NOT TO SCALE



**SECTION 1**

NOT TO SCALE

**SECTION 2**

NOT TO SCALE

**NOTE:**

- MONOPOLE FOUNDATION TO BE INSTALLED IN ACCORDANCE WITH THE TOWER & FOUNDATION DESIGN DRAWINGS BY AMBOR STRUCTURES DATED 07/02/2020.

**FOUNDATION DESIGN**

SCALE: N.T.S.

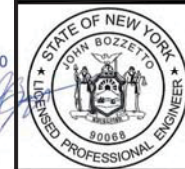
1



**bennett & pless**

Experience Structural Expertise  
Atlanta, Georgia Chattanooga, Tennessee  
Boca Raton, Florida

750 Park of Commerce Dr., Suite 200  
Boca Raton, Florida 33487  
Tel 561 282 2676  
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B & P Job Number 20-03-0001.033



**Revisions:**

NO.	DESCRIPTION:	DATE:
5	12/02/22	ISSUED FOR ZONING
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3	11/04/22	ISSUED FOR ZONING
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0	01/20/20	ISSUED FOR ZONING
C	01/02/20	ISSUED FOR REVIEW
B	11/07/19	ISSUED FOR REVIEW
A	09/27/19	ISSUED FOR REVIEW

DATE: 07/07/2020

SITE NAME (LOCATION): NY054 GLENACOMA LAKE WALTON DRIVE, MAHOPAC, NEW YORK 10541

JOB NAME: MONOPOLE CELL TOWER - FOUNDATION DESIGN

DRAWING TITLE: SPREAD FOUNDATION DETAIL AND SECTION

SCALE: NOT TO SCALE

REVIEWED BY: JB

CS

SHEET NUMBER:

**S-1.1**

**HOMELAND TOWERS, LLC**  
9 HARMONY STREET  
2nd FLOOR  
DANBURY, CT 06810  
(203) 297-6345

**NEW YORK SMSA LIMITED PARTNERSHIP**  
d/b/a



4 CENTEROCK ROAD  
WEST NYACK, NY 10994

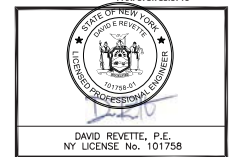
**GLENACOM LAKE**

ZONING DRAWINGS

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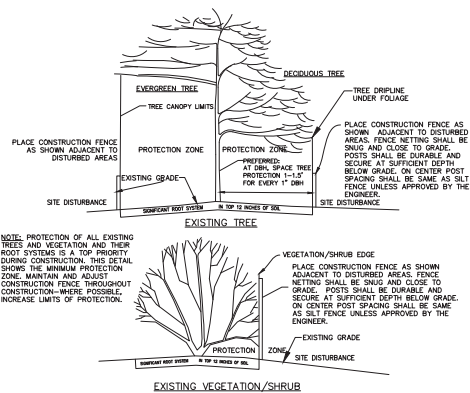
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DRAWN BY:	JC/KFM
REVIEWED BY:	MS
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PROJECT NUMBER:	50114387
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SITE ADDRESS:	

WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE	CONSTRUCTION DETAILS III
SHEET NUMBER	



**1 TREE / VEGETATION PROTECTION CONSTRUCTION FENCE DETAILS**  
N.T.S.

**SEDIMENT AND EROSION CONTROL NOTES**

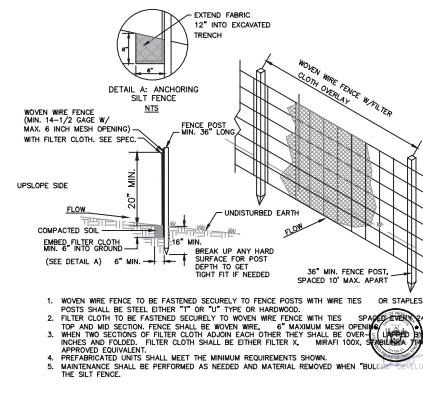
- INSTALL ALL SOIL EROSION CONTROLS REQUIRED BY THE CONTRACT BEFORE ANY CONSTRUCTION ACTIVITIES BEGIN. NOTIFY THE ENGINEER TO PERFORM A PRECONSTRUCTION STORMWATER INSPECTION. NO DISTURBANCE OF THE SITE SHALL OCCUR UNTIL STORMWATER AND EROSION CONTROL MEASURES ARE ACCEPTED BY THE ENGINEER.
- NECESSARY MEASURES SHALL BE TAKEN TO REDUCE THE DISTURBANCE OF EXISTING VEGETATED AREAS TO THE MINIMUM AS REQUIRED BY THE WORK. THESE MEASURES SHALL INCLUDE THE CLEAR MARKING OF ALL CONSTRUCTION LIMITS AND THE DELINEATION OF ALL VEGETATED AREAS TO BE PROTECTED SO AS TO EXCLUDE ALL EQUIPMENT.
- PROVIDE TEMPORARY SEEDING AND MULCH ON ANY AREA WHERE THE EXISTING VEGETATED COVER OR OTHER PROTECTIVE SURFACE HAS BEEN REMOVED OR SUBSTANTIALLY DISTURBED AND FURTHER WORK ON THAT AREA WILL NOT OCCUR WITHIN THE SUCCEEDING 14 CALENDAR DAYS.
- LIMIT ACCESS ON UNSTABILIZED SOIL SURFACES TO THOSE VEHICLES NECESSARY FOR THE WORK. DO NOT PARK EMPLOYEES' VEHICLES ON ERODIBLE SOIL SURFACES. STABILIZED AND PROTECT SOIL SURFACES TO MINIMIZE THE GENERATION OF DUST AND THE OFF-SITE VEHICLE TRACKING OF SOIL MATERIALS.
- THE CONDITION OF ALL EROSION CONTROL MEASURES IN THE CONSTRUCTION SITE SHALL BE JOINTLY INSPECTED AT LEAST EVERY WEEK BY THE CONTRACTOR. DEFICIENCIES FOUND SHALL BE CORRECTED WITHIN THREE CALENDAR DAYS OF INSPECTION.
- NO DEVIATIONS FROM THE DETAILS SHOWN SHALL BE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER.

**WINTER STABILIZATION NOTES**

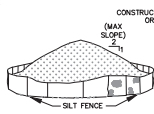
ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.

- SITE STABILIZATION** - ALL BARE/EXPOSED SOILS SHALL BE STABILIZED BY AN ESTABLISHED VEGETATION, STRAW OR MULCH, MATTING, ROCK OR OTHER APPROVED PRODUCT SUCH AS ROLLED EROSION CONTROL SEEDING. SEEDING OF AREAS ALONG WITH MULCHING MAY BE USED, HOWEVER SEEDING ALONE IS NOT CONSIDERED ACCEPTABLE FOR PROPER STABILIZATION.
- SILT FENCE** - SILT FENCE BARRIERS SHALL BE PROPERLY INSTALLED AT ALL LOCATIONS SHOWN ON THE CONTRACT DRAWINGS.
- SLOPES** - ALL SLOPES AND GRADES SHALL BE PROPERLY STABILIZED. ROLLED EROSION CONTROL PRODUCTS SHALL BE USED ON ALL SLOPES GREATER THAN 3:1 (H:V), OR AS CALLED FOR ON THE CONTRACT DRAWINGS.
- SOIL STOCKPILES** - STOCKPILED SOILS SHALL BE PROTECTED BY THE USE OF ESTABLISHED VEGETATION, AN ANCHORED-DOWN STRAW OR MULCH, ROLLED EROSION CONTROL PRODUCT OR OTHER DURABLE COVERING. A BARRIER SHALL BE INSTALLED AROUND THE PILE TO PREVENT ANY EROSION AWAY FROM THAT LOCATION.
- CONSTRUCTION ENTRANCE** - ALL ENTRANCE/EXIT LOCATIONS TO THE SITE SHALL BE PROPERLY STABILIZED AND MAINTAINED TO ACCOMMODATE SNOW MANAGEMENT AS SET FORTH IN THE NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL.
- SNOW MANAGEMENT** - SNOW MANAGEMENT SHALL NOT DESTROY OR DEGRADE EROSION AND SEDIMENT CONTROL PRACTICES.

FROZEN GROUND, WINTER CONDITIONS AND EQUIPMENT CAN AFFECT EROSION AND SEDIMENT CONTROL PRACTICES. CHECK FOR DAMAGE DURING MONTHLY INSPECTIONS AND REPAIR AS NECESSARY. THIS IS ESPECIALLY IMPORTANT DURING THAWS AND PRIOR TO SPRING RAIN EVENTS. WEEKLY INSPECTIONS SHALL RESUME NO LATER THAN MARCH 15 OR AS DIRECTED BY THE ENGINEER.



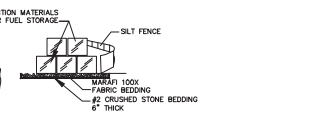
**2 REINFORCED SILT FENCE DETAIL**  
N.T.S.



**SOIL OR MATERIAL STOCKPILE**

N.T.S.

- AREA CHOSEN FOR STOCKPIILING OPERATIONS SHALL BE DRY AND STABLE. THE AREA SHALL NOT BE DELIVERED OR CANOPIED BY TREES. THE LOCATION MUST BE PRE-APPROVED BY THE ENGINEER PRIOR TO DELIVERY OF ANY MATERIALS.
- NO STOCKPILE AREA SHALL BE LOCATED WITHIN FIFTY (50) FEET OF SURFACE WATER, FLOODPLAIN, SLOPE, OR DRAINAGE FACILITY OR ROADWAY.
- IF STABLE SURFACE NOT AVAILABLE, THE TOP SIX (6) INCHES OF NATIVE MATERIAL SHALL BE ENCAUSTED FROM MATERIAL/FUEL STORAGE AREA AND STOCKPILED TO ALLOW FOR RESTORATION OF THE AREA. IN THE AREA EXCAVATED, PLACE SEPARATION FABRIC AND SIX (6) INCHES OF #3 GROUNDSTONE BEDDING. SEE SPECIFICATIONS. IF APPROVED BY THE ENGINEER, USE OF EXISTING DRAINAGE AREA MAY BE USED IN LIEU OF EXCAVATION, STONE, AND FABRIC.
- SILT FENCING SHALL BE PLACED FIVE (5) FEET TO THE TOP OF STOCKPILE.
- SEE ADDITIONAL DETAILS FOR INSTALLATION OF SILT FENCE.
- TEMPORARY PERIMETER DICES MAY BE REQUIRED TO DIRECT CLEAN RUNOFF FROM STOCKPILE AREAS.

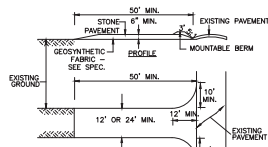


**FUEL, EQUIPMENT, OR MATERIAL STORAGE AREA**

N.T.S.

- AREA CHOSEN FOR STORAGE OPERATIONS SHALL BE DRY AND STABLE. THE AREA SHALL NOT BE DELIVERED OR CANOPIED BY TREES. THE LOCATION MUST BE PRE-APPROVED BY THE ENGINEER PRIOR TO DELIVERY OF ANY MATERIALS.
- NO STOCKPILE AREA SHALL BE LOCATED WITHIN FIFTY (50) FEET OF SURFACE WATER, FLOODPLAIN, SLOPE, OR DRAINAGE FACILITY OR ROADWAY.
- IF STABLE SURFACE NOT AVAILABLE, THE TOP SIX (6) INCHES OF NATIVE MATERIAL SHALL BE ENCAUSTED FROM MATERIAL/FUEL STORAGE AREA AND STOCKPILED TO ALLOW FOR RESTORATION OF THE AREA. IN THE AREA EXCAVATED, PLACE SEPARATION FABRIC AND SIX (6) INCHES OF #3 GROUNDSTONE BEDDING. SEE SPECIFICATIONS. IF APPROVED BY THE ENGINEER, USE OF EXISTING DRAINAGE AREA MAY BE USED IN LIEU OF EXCAVATION, STONE, AND FABRIC.
- SILT FENCING SHALL BE PLACED FIVE (5) FEET TO THE TOP OF STOCKPILE.
- TEMPORARY PERIMETER DICES MAY BE REQUIRED TO DIRECT CLEAN RUNOFF FROM STORAGE AREAS.
- REMOVE ALL MATERIALS INCLUDING STONE AND FABRIC WHEN NEED FOR STORAGE IS OVER. RESTORE TO ORIGINAL GRADE WITH STOCKPILED EXCAVATED SOIL (NO FOREIGN DEBRIS) APPROVED BY THE ENGINEER.

**5 CONSTRUCTION STOCKPILE / STORAGE AREA DETAILS**  
N.T.S.



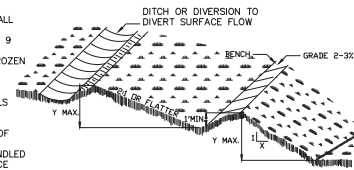
**CONSTRUCTION SPECIFICATIONS**

- STONE SIZE - USE 1-4 INCH STONE, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SNOW STORAGE LOT WHERE A 30 FOOT MINIMUM LENGTH WOULD APPLY).
- THICKNESS - NOT LESS THAN SIX (6) INCHES.
- WIDTH - TWELVE (12) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY-FOUR (24) FOOT MINIMUM TO SITE.
- GEOTEXTILE - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
- SURFACE WATER - ALL SURFACE WATER FLOWING OR DRIPPING FROM CONSTRUCTION ACCESS SHALL BE PIPED BEHIND THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE FINISHED.
- MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. ALL SEDIMENT, SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
- MARKING IS REQUIRED - MARKING SHALL BE DONE ON A AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
- PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

**6 STABILIZED CONSTRUCTION ENTRANCE DETAILS**  
N.T.S.

- ALL GRADED OR DISTURBED AREAS INCLUDING SLOPES SHALL BE PROTECTED DURING CLEARING AND CONSTRUCTION IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN UNTIL THEY ARE PERMANENTLY STABILIZED.
- ALL SEDIMENT CONTROL PRACTICES AND MEASURES SHALL BE CONSTRUCTED, APPLIED AND MAINTAINED IN ACCORDANCE WITH THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
- TOPSOIL REQUIRED FOR THE ESTABLISHMENT OF VEGETATION SHALL BE STOCKPILED IN AMOUNT NECESSARY TO COMPLETE FINISHED GRADING OF ALL EXPOSED AREAS.
- AREAS TO BE FILLED SHALL BE CLEARED, GRUBBED, AND STRIPPED OF TOPSOIL TO REMOVE TREES, VEGETATION, ROOTS OR OTHER OBJECTIONABLE MATERIAL.
- AREAS WHICH ARE TO BE TOPSOILED SHALL BE SCARIFIED TO A MINIMUM DEPTH OF FOUR INCHES PRIOR TO PLACEMENT OF TOPSOIL.
- ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.
- ALL FILL SHALL BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.
- EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.
- FROZEN MATERIALS OR SOFT, MUCKY OR HIGHLY COMPRESSIBLE MATERIALS SHALL NOT BE INCORPORATED IN FILLS.
- FILL SHALL NOT BE PLACED ON SATURATED OR FROZEN SURFACES.
- ALL BENCHES SHALL BE KEPT FREE OF SEDIMENT DURING ALL PHASES OF DEVELOPMENT.
- SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.
- ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED IMMEDIATELY FOLLOWING FINISHED GRADING.
- STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.

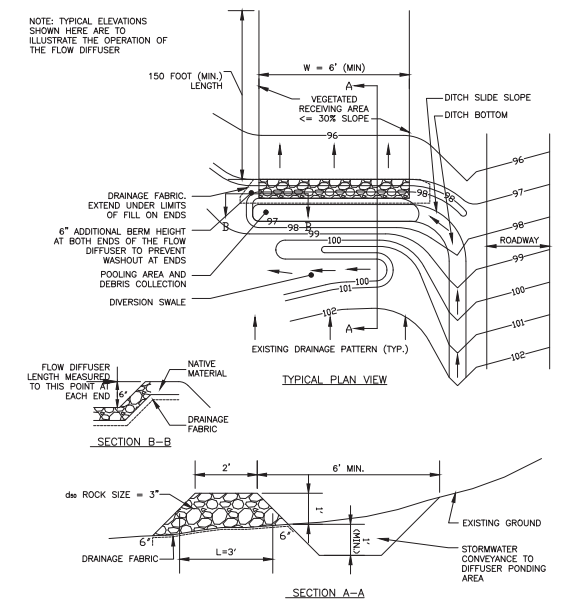
**3 LANDGRADING SPECIFICATIONS**  
N.T.S.



**DITCH OR DIVERSION TO DIVERT SURFACE FLOW**

N.T.S.

**4 LANDGRADING DETAIL**  
N.T.S.



**NOTE: TYPICAL ELEVATIONS SHOWN HERE ARE TO ILLUSTRATE THE OPERATION OF THE FLOW DIFFUSER**

**SECTION B-B**

**TYPICAL PLAN VIEW**

**SECTION A-A**

**7 FLOW DIFFUSER DETAIL**  
N.T.S.

HOMELAND TOWERS, LLC  
9 HARMONY STREET  
2nd FLOOR  
DANBURY, CT 06810  
(203) 297-6345

NEW YORK SMSA  
LIMITED PARTNERSHIP

d/b/a  
**verizon**  
WIRELESS

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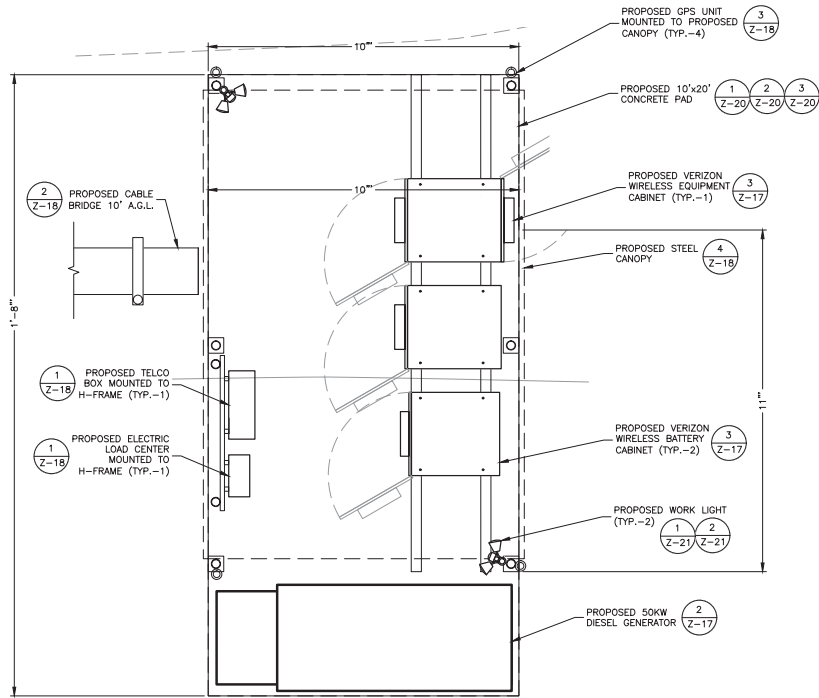
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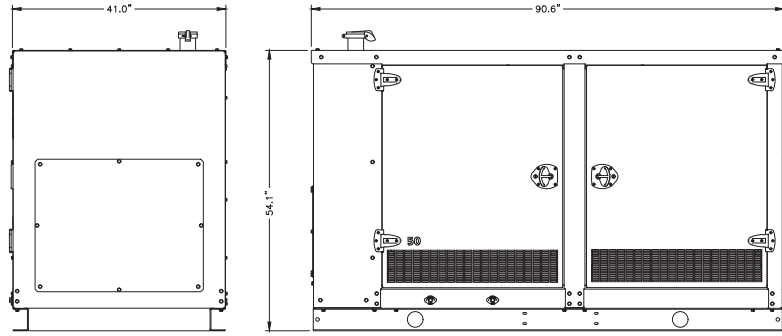
WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE  
**EROSION CONTROL NOTES & DETAILS**

SHEET NUMBER

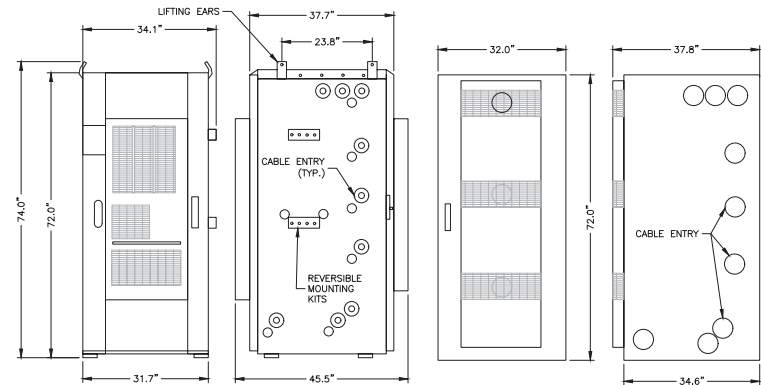


**PROPOSED EQUIPMENT PLAN** (1)  
 SCALE: 1/4"=1' FOR 11'x17'  
 1/2"=1' FOR 22'x34'  
 0' 1' 2' 4'



KOHLER 50KW DIESEL GENERATOR MODEL S0RE02X	
HEIGHT:	54.1"
WIDTH:	41.0"
DEPTH:	90.6"
WEIGHT:	APPROX. 2369 LBS WITH ENCLOSURE (RECTIFIERS AND EQUIPMENT EXCLUDED)

**DIESEL GENERATOR DETAIL** (2)  
 SCALE: N.T.S.



ESOF16-ECA01 (DC-AIR/DAC) POWER/EQUIPMENT	
HEIGHT:	72.0"
WIDTH:	31.7"
DEPTH:	45.5"
WEIGHT:	578 LBS (RECTIFIERS AND EQUIPMENT EXCLUDED)

ESOF024-ECx01 CABINET	
HEIGHT:	72.0"
WIDTH:	32.0"
DEPTH:	34.6"
WEIGHT:	APPROX. 690 LBS (RECTIFIERS AND EQUIPMENT EXCLUDED)

**EQUIPMENT CABINET DETAIL** (3)  
 SCALE: N.T.S.

**HOMELAND TOWERS, LLC**  
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 2nd FLOOR  
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 d/b/a  
**verizon**  
 WIRELESS

4 CENTERCROSS ROAD  
 WEST NYACK, NY 10994

**GLENACOM LAKE**

ZONING DRAWINGS

5	12/02/22	ISSUED FOR ZONING
4	11/22/22	ISSUED FOR ZONING
3	11/04/22	ISSUED FOR ZONING
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C	01/02/20	ISSUED FOR REVIEW
B	11/07/19	ISSUED FOR REVIEW
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**Dewberry**  
 Dewberry Engineers Inc.  
 800 PARSIPPANY ROAD  
 SUITE 301  
 PARSIPPANY, NJ 07054  
 PHONE: 973.739.9400  
 FAX: 973.739.8710

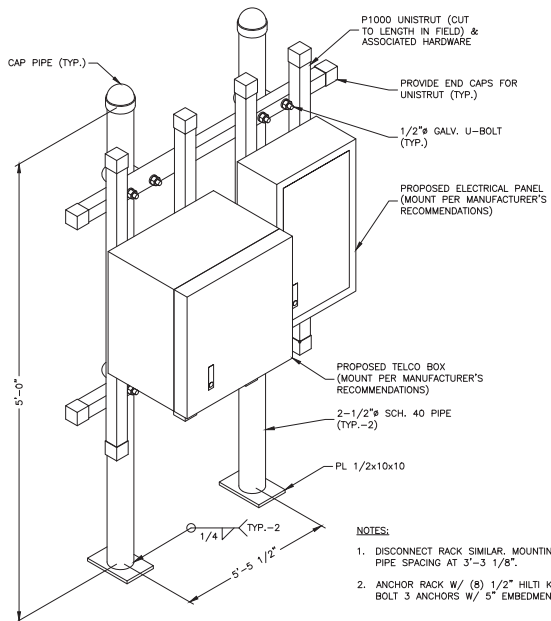


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REVIEWED BY:	MS
CHECKED BY:	DER
PROJECT NUMBER:	50114387
JOB NUMBER:	50114388
SITE ADDRESS:	

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 MAHOPAC, NY 10541  
 PUTNAM COUNTY

SHEET TITLE	VERIZON WIRELESS EQUIPMENT PLAN & DETAILS
SHEET NUMBER	



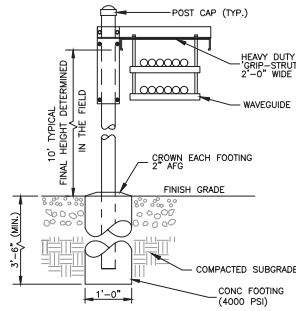


**ELECTRIC/TELCO RACK DETAIL**

SCALE: N.T.S.

1

- NOTES:
1. DISCONNECT RACK SIMILAR, MOUNTING PIPE SPACING AT 3'-3 1/8".
  2. ANCHOR RACK W/ (8) 1/2" HILT KWIK BOLT 3 ANCHORS W/ 5" EMBEDMENT.



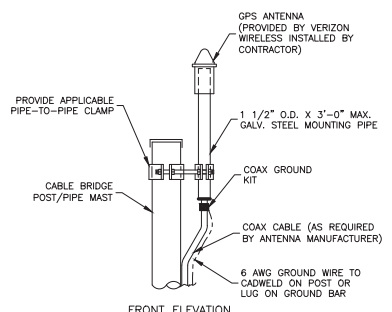
NOTES:

1. CABLE BRIDGE SHALL BE SITE PRO 1 GRIP STRUT TRANSMISSION LINE BRIDGE KIT (P/N: 18240-21613) OR APPROVED EQUAL.
2. ALL COMPONENTS SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S SPECIFICATIONS.
3. CONTRACTOR SHALL DETERMINE REQUIRED QUANTITY OF ALL CABLE BRIDGE COMPONENTS.
4. SNAP-IN HANGERS, SPLICE KITS, HINGE KITS, EXTENSION KITS, STIFFENERS, AND OTHER MISCELLANEOUS HARDWARE SHALL BE PROVIDED BY THE CONTRACTOR AS REQUIRED.
5. CABLE BRIDGE SHALL BE ROUTED TO ACCOMMODATE THE MINIMUM BENDING RADIUS OF THE COAXIAL CABLE.
6. CABLE BRIDGE COMPONENTS SHOWN ARE SCHEMATIC, CONSULT MANUFACTURER FOR EXACT AND CURRENT SPECIFICATIONS.

**CABLE BRIDGE DETAIL**

SCALE: N.T.S.

2



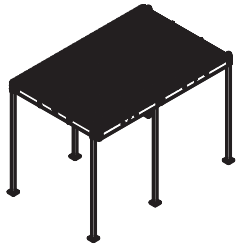
NOTES:

1. LOCATION OF ANTENNA MUST HAVE CLEAR VIEW OF SOUTHERN SKY AND CANNOT HAVE ANY BLOCKAGES EXCEEDING 25% OF THE SURFACE AREA OF A HEMISPHERE AROUND THE GPS ANTENNA.
2. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA.

**GPS ANTENNA**

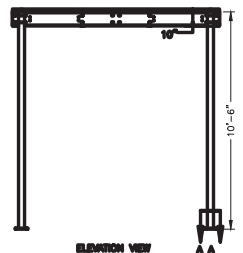
SCALE: N.T.S.

3

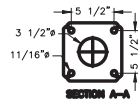


**PERFECT VISION PV-WC1016-B**

CANOPY DIMENSIONS	15'-1" X 10'-0"
WEIGHT	1777 LBS.



ELEVATION VIEW

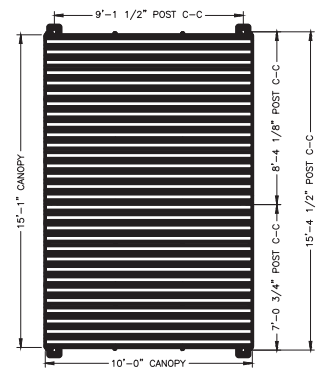


SECTION A-A

NOTES:

1. INSTALL ICE CANOPY PER MANUFACTURER'S RECOMMENDATIONS.

TOP VIEW



**ICE CANOPY DETAIL**

SCALE: N.T.S.

4

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**verizon** WIRELESS  
 4 CENTERCROSS ROAD  
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**GLENACOM LAKE**

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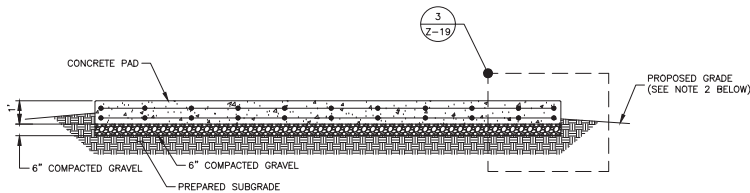
**Dewberry**  
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 MAHOPAC, NY 10541  
 PUTNAM COUNTY

SHEET TITLE	VERIZON WIRELESS DETAILS I
SHEET NUMBER	



**SECTION**

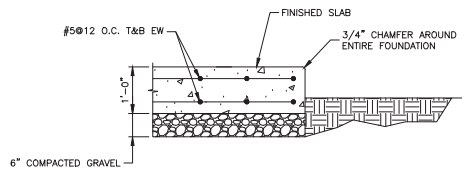
USE	PAD LENGTH	PAD WIDTH
CABINET	20'-0"	10'-0"

**NOTES:**

1. CONTRACTOR TO VERIFY FINAL PAD DIMENSIONS PRIOR TO CONSTRUCTION OF FOUNDATION.
2. GRADE SHALL SLOPE AWAY FROM THE CONCRETE PAD TO ALLOW FOR PROPER WATER RUNOFF.
3. ANCHOR EQUIPMENT TO FOUNDATION PER EQUIPMENT MANUFACTURER RECOMMENDATIONS.
4. IF BEDROCK IS ENCOUNTERED AT A SHALLOW DEPTH, USE DETAIL 3, THIS SHEET.
5. BEARING STRATA MEDIUM TO DENSE INSET GRANULAR MATERIAL OR COMPACTED GRAVEL FILL. 95% COMPACTION.
6. FILL SHALL CONSIST OF CLEAN SOIL. NO DELETERIOUS MATERIALS OR ORGANICS TO BE USED.
7. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4,000 PSI.
8. MAINTAIN 3" MIN. COVER ON ALL STEEL REINFORCEMENT.

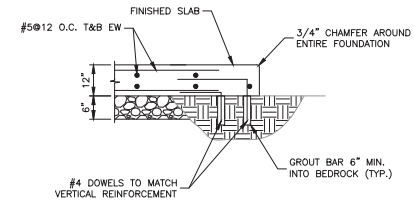
**CONCRETE PAD FOUNDATION**  
SCALE: N.T.S.

1



**CONCRETE PAD DETAIL**  
SCALE: N.T.S.

2



**FOUNDATION SLAB DETAIL @ BEDROCK**  
SCALE: N.T.S.

3

  
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**GLENACOM LAKE**

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FAX: 973.739.9710



DAVID REVETTE, P.E.  
NY LICENSE No. 101758

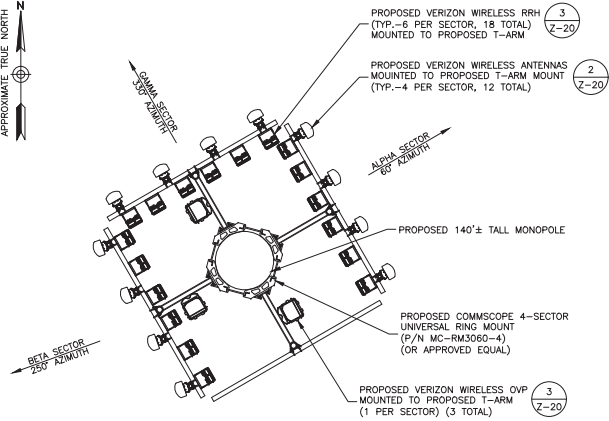
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PUTNAM COUNTY

SHEET TITLE

VERIZON WIRELESS  
DETAILS II

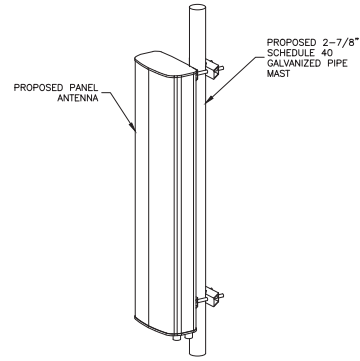
SHEET NUMBER



**NOTES:**

1. AZIMUTHS TBD.
2. CONTRACTOR TO VERIFY FINAL AZIMUTHS WITH RF ENGINEER PRIOR TO ANTENNA INSTALLATION.

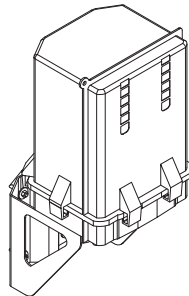
**ANTENNA ORIENTATION PLAN** 1  
SCALE: N.T.S.



**NOTES:**

1. MOUNT ANTENNA PER MANUFACTURER'S RECOMMENDATIONS.
2. WEIGHT INCLUDES MOUNTING BRACKETS.
3. DIMENSIONS OF PROPOSED ANTENNAS SHOWN ARE APPROXIMATE AND SUBJECT TO CHANGE BASED ON AVAILABILITY OF ANTENNAS AT TIME OF CONSTRUCTION. ANTENNAS MAY INCLUDE RRHS, TMA'S AND/OR DIPLEXERS.
4. ANTENNA SIZE, MAKE AND MODEL SUBJECT TO CHANGE BASED ON FUTURE TECHNOLOGY UPDATES AND COVERAGE/CAPACITY NEEDS PER VERIZON WIRELESS REQUIREMENTS.

**ANTENNA DETAIL** 2  
SCALE: N.T.S.



**NOTES:**

1. MOUNT EQUIPMENT ACCORDING TO MANUFACTURER'S RECOMMENDATIONS.
2. CONTRACTOR TO CONFIRM RRH CLEARANCE REQUIREMENTS ARE MET.
3. RRH AND DISTRIBUTION BOX SIZE, MAKE AND MODEL SUBJECT TO CHANGE BASED ON FUTURE TECHNOLOGY UPDATES AND COVERAGE/CAPACITY NEEDS PER VERIZON WIRELESS REQUIREMENTS.

**RRH & OVP DETAIL** 3  
SCALE: N.T.S.

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WIRELESS

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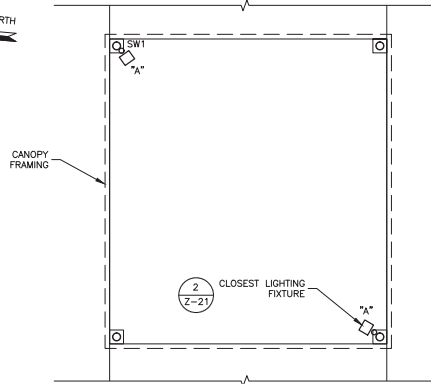
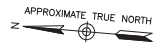
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MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE	VERIZON WIRELESS ANTENNA PLAN & DETAILS
SHEET NUMBER	



**CANOPY LIGHTING**  
SCALE: N.T.S. 1

**SW1:**

1. 120V MOTION SENSOR RAB PART # LS300W.
2. OUTLET BOX: RAB LIGHTING INC. MODEL # B3B.
3. WEATHERPROOF COVER: RAB LIGHTING INC. MODEL #TCB.

**"A":**

1. FIXTURES (2 TOTAL): FULL CUTOFF, RAB LIGHTING INC. MODEL #WPLEDFC52NW.

**NOTE:**

1. LIGHTING TO BE MOUNTED BELOW CANOPY. BOTTOM OF LIGHT FIXTURE APPROXIMATELY 9'± A.G.L.
2. LIGHTING TO BE OPERATED ON A MOTION SENSOR.

LIGHT FIXTURE MOUNTING HEIGHT (MH) = 9'  
 DISTANCE TO PROPERTY LINE (D) = 70'-0"  
 MAXIMUM MOUNTING HEIGHT (MMH) = D/3 + 3'  
 MMH = 70 / 3 + 3'  
 MMH = 26'  
 26' MMH > 9' MH ~ NO LIGHT TRESPASS

**LIGHTING CALCULATIONS** 3  
 SCALE: N.T.S.

**WPLED52**



<b>Project:</b>	<input type="text"/>	<b>Type:</b>	<input type="text"/>
<b>Prepared By:</b>	<input type="text"/>	<b>Date:</b>	<input type="text"/>

Driver Info		LED Info	
Type	Constant Current	Watts	52W
120V	0.51A	Color Temp	5000K (Cool)
208V	0.33A	Color Accuracy	72 CRI
240V	0.29A	L70 Lifespan	100,000 Hours
277V	0.24A	Lumens	3,392 lm
Input Watts	57.9W	Efficacy	127.7 lm/W

**Technical Specifications**

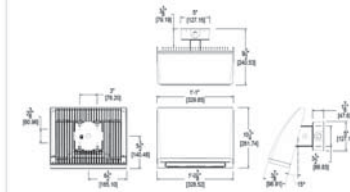
<b>Compliance</b> UL Listed: Suitable for wet locations <b>IESNA LM-79 &amp; LM-80 Testing:</b> RAB LED luminaires and LED components have been tested by an independent laboratory in accordance with IESNA LM-79 and LM-80	<b>Color Consistency:</b> 7-step MacAdam Ellipse binning to achieve consistent fixture-to-fixture color <b>Color Stability:</b> LED color temperature is warranted to shift no more than 200K in color temperature over a 5-year period <b>Color Uniformity:</b> RAB's range of Correlated Color Temperature follows the guidelines of the American National Standard for Specifications for the Chromaticity of Solid State Lighting (SSL) Products, ANSI C78.3.7-2017.	<b>Housing:</b> Precision die-cast aluminum housing, lens frame <b>Mounting:</b> Die-cast aluminum wallbracket with (5) 1/2" conduit openings with plugs. Two-piece bracket with tether for ease of installation and wiring. <b>Arm:</b> Die-cast aluminum with wiring access plate <b>Cutoff:</b> Standard (15°)
<b>Lifespan:</b> 100,000-Hour LED lifespan based on IES LM-80 results and TM-21 calculations <b>Wattage Equivalency:</b> Equivalent to 250W Metal Halide <b>LED Characteristics</b> <b>LEDs:</b> Two (2) multi-chip, high-output, long-life LEDs	<b>Construction</b> <b>Ambient Temperature:</b> Suitable for use in up to 40°C (104°F) <b>Cold Weather Starting:</b> The minimum starting temperatures: -40°C (-40°F)	

**LIGHTING CUTSHEETS** 2  
 SCALE: N.T.S.

**Technical Specifications (continued)**

<b>Construction</b> <b>Reflector:</b> Specular vacuum-metallized polycarbonate <b>Gaskets:</b> High-temperature silicone <b>Lens:</b> Tempered glass <b>Finish:</b> Formulated for high durability and long-lasting color <b>Green Technology:</b> Mercury and UV free. RoHS-compliant components.	<b>Electrical</b> <b>Driver:</b> Constant Current, 720mA, Class 2, 100-277V, 50-60 Hz, 100-277VAC, 8 Amps. <b>THD:</b> 7.64% at 120V, 5.72% at 277V <b>Power Factor:</b> 99.1% at 120V, 97.5% at 277V <b>Surge Protection:</b> 6kV <b>Other:</b> <b>Patents:</b> The WPLED design is protected by patents in the U.S. Pat D653,877, Canada Pat. 142253, China Pat. ZL201130356930.8, and Mexico Pat. 36921 and pending patent in TW.	<b>Replacement:</b> Replaces 250W HID <b>Buy American Act Compliance:</b> RAB values USA manufacturing! Upon request, RAB may be able to manufacture this product to be compliant with the Buy American Act (BAA). Please contact customer service to request a quote for the product to be made BAA compliant. <b>Optical</b> <b>BUG Rating:</b> 80 U2 G3
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**Dimensions**



**Features**

- High performance LED light engine
- Maintains 70% of initial lumens at 100,000-hours
- Weatherproof high temperature silicone gaskets
- Superior heat sinking with die cast aluminum housing and external fins
- Replaces 250W MH
- Traditional wall pack look from the front
- 3 cutoff options
- 5-Year, No-Compromise Warranty

**Ordering Matrix**

Family	Cutoff	Wattage	Color Temp	Finish	Driver Options	Options	Other Options
WPLED	Blank = Standard (15 degrees) C = Cutoff (0.5 degrees) FC = Full Cutoff (0 degrees)	52 = 52W 80 = 80W	Blank = 5000K Cool N = 4000K Neutral Y = 3000K Warm	Blank = Bronze W = White	Blank = 120-277V / 800 = 480V BL = 0-Level /D10 = 0-10V Dimming	Blank = No Option /PS = 120V Swivel Photocell /PS2 = 277V Swivel Photocell /PS4 = 480V Swivel Photocell /AC = Lightcloud* Controller	USA = BAA Compliant Blank = Standard

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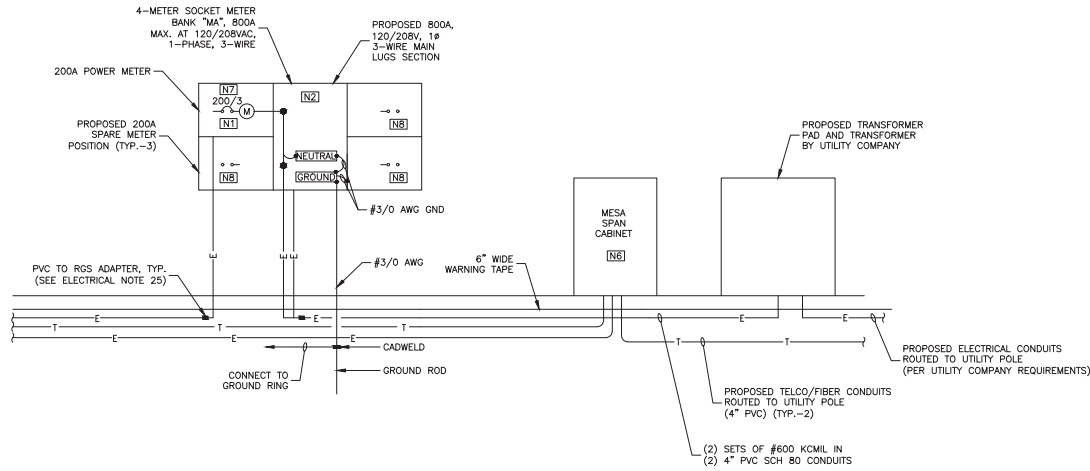
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**DRAWN BY:** JC/KFM  
**REVIEWED BY:** MS  
**CHECKED BY:** DER  
**PROJECT NUMBER:** 50114387  
**JOB NUMBER:** 50114388  
**SITE ADDRESS:**

WALTON DRIVE  
 MAHOPAC, NY 10541  
 PUTNAM COUNTY

**SHEET TITLE**  
 VERIZON WIRELESS  
 EQUIPMENT LIGHTING  
 DETAILS  
**SHEET NUMBER**



**ELECTRICAL RISER DIAGRAM & SERVICE ENTRANCES**

SCALE: N.T.S.

1

**NOTES:**

1. CONFIRM ALL ATS, PANELBOARDS, ETC WITH CM PRIOR TO CONSTRUCTION.
2. CONFIRM GENERATOR WIRING & CONTROLS PRIOR TO CONSTRUCTION.
3. MAKE ALL CONNECTIONS AS PER UTILITY COMPANY REQUIREMENTS.
4. REFER TO ALL OTHER ELECTRICAL AND GROUNDING NOTES ON SHEET G-1 OF THESE PLANS.

**GENERAL ELECTRICAL NOTES**

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT.
2. CONTRACTOR SHALL PERFORM ALL VERIFICATION OBSERVATION TESTS, AND EXAMINATION WORK PRIOR TO THE ORDERING OF THE ELECTRICAL EQUIPMENT AND THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.
3. HEIGHTS SHALL BE VERIFIED WITH OWNER PRIOR TO INSTALLATION.
4. THESE PLANS ARE DIAGRAMMATIC ONLY. FOLLOW AS CLOSELY AS POSSIBLE.
5. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, J-BOX, SWITCH BOX, ETC., IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ACT (O.S.H.A.)
6. CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC., FOR A COMPLETE AND PROPERLY OPERATIVE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
7. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL "U" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA AND NBFU.
8. CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND O.S.H.A.
9. CONTRACTOR SHALL SECURE ALL NECESSARY BUILDING PERMITS AND PAY ALL REQUIRED FEES.
10. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE CONTRACTOR.
11. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE.
12. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
13. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO OWNER AT JOB COMPLETION.
14. USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE.
15. ALL CONDUCTORS SHALL BE COPPER.
16. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING RATING NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED.
17. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY NEC.
18. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
19. IN DRILLING HOLES INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, M PIPE RUNS, ETC., IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND/OR REINFORCING STEEL WILL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES.
20. LOCATION OF TENDONS AND/OR REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND, THEREFORE, MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING AND/OR STEEL TENDONS.
21. PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH 2009 INTERNATIONAL BUILDING CODE, NEW JERSEY EDITION.
22. WIRE AND CABLE CONDUCTORS SHALL BE COPPER #12 AWG MINIMUM UNLESS SPECIFICALLY STATED OTHERWISE ON DRAWINGS.
23. VERIFY ALL CONDUIT ROUTING W/OWNER REP.
24. ALL MATERIALS SHALL BE U.L. LISTED.
25. CONDUIT:
  - a. RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
  - b. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL. FITTINGS SHALL BE GLAND RING COMPRESSION TYPE. EMT SHALL BE USED ONLY FOR INTERIOR RUNS.
26. ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS.
27. COORDINATE THE ELECTRICAL SERVICE SHUTDOWN WITH BUILDING OWNER.
28. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE. SUBMIT TEST REPORTS AND FURNISH TO DISPATCH COMMUNICATIONS ONE COMPLETE SET OF PRINTS SHOWING "INSTALLED WORK".
29. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, AND FALL POTENTIAL GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
30. ALL WALL PENETRATIONS SHALL BE FIRE STOPPED WITH FS-ONE HIGH PERFORMANCE INTUMESCENT FIRE STOP BY JELTI OR APPROVED EQUAL. INSTALL PER MANUFACTURERS' RECOMMENDATIONS.

**ELECTRICAL AND TELEPHONE GENERAL NOTES:**

1. FOLLOWING COMPLETION OF WORK, PROVIDE OWNER WITH AS-BUILT DRAWINGS SHOWING TELEPHONE AND ELECTRIC LOCATIONS.
2. WORK SHALL CONFORM TO THE NATIONAL ELECTRICAL CODE, NEC 2011.
3. COORDINATE WITH UTILITY AND LOCAL ELECTRICAL INSPECTOR FOR FINAL POWER CONNECTION.
4. UTILITY WILL SUPPLY METER. COORDINATE WITH UTILITY FOR METER TYPE AND INTERCONNECTION.
5. CONTRACTOR SHALL CONTACT "DIG SAFELY NEW YORK, INC." AT 811 OR 1-800-272-4480 AND LOCATE ALL EXISTING UTILITIES WITHIN THE AREA OF WORK PRIOR TO THE START OF ANY EXCAVATION.
6. SEE PAGE E-2 FOR GENERAL GROUNDING NOTES.
7. COORDINATE WITH LOCAL TELEPHONE COMPANY FOR ALL ROUTING AND DESIGN.
8. CONTRACTOR TO VERIFY CONTROL WIRING SIZE WITH GENERATOR MANUFACTURER PRIOR TO CONSTRUCTION.
9. CONTRACTOR TO CONFIRM STUB UP LOCATIONS OF WIRING CONDUITS PRIOR TO CONSTRUCTION.

HOMELAND TOWERS, LLC  
9 HARMONY STREET  
DANBURY, CT 06810  
(203) 297-6345

NEW YORK SMSA  
LIMITED PARTNERSHIP



4 CENTERCROSS ROAD  
WEST NYACK, NY 10994

GLENACOM LAKE

ZONING DRAWINGS

5	12/02/22	ISSUED FOR ZONING
4	11/22/22	ISSUED FOR ZONING
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C	01/02/20	ISSUED FOR REVIEW
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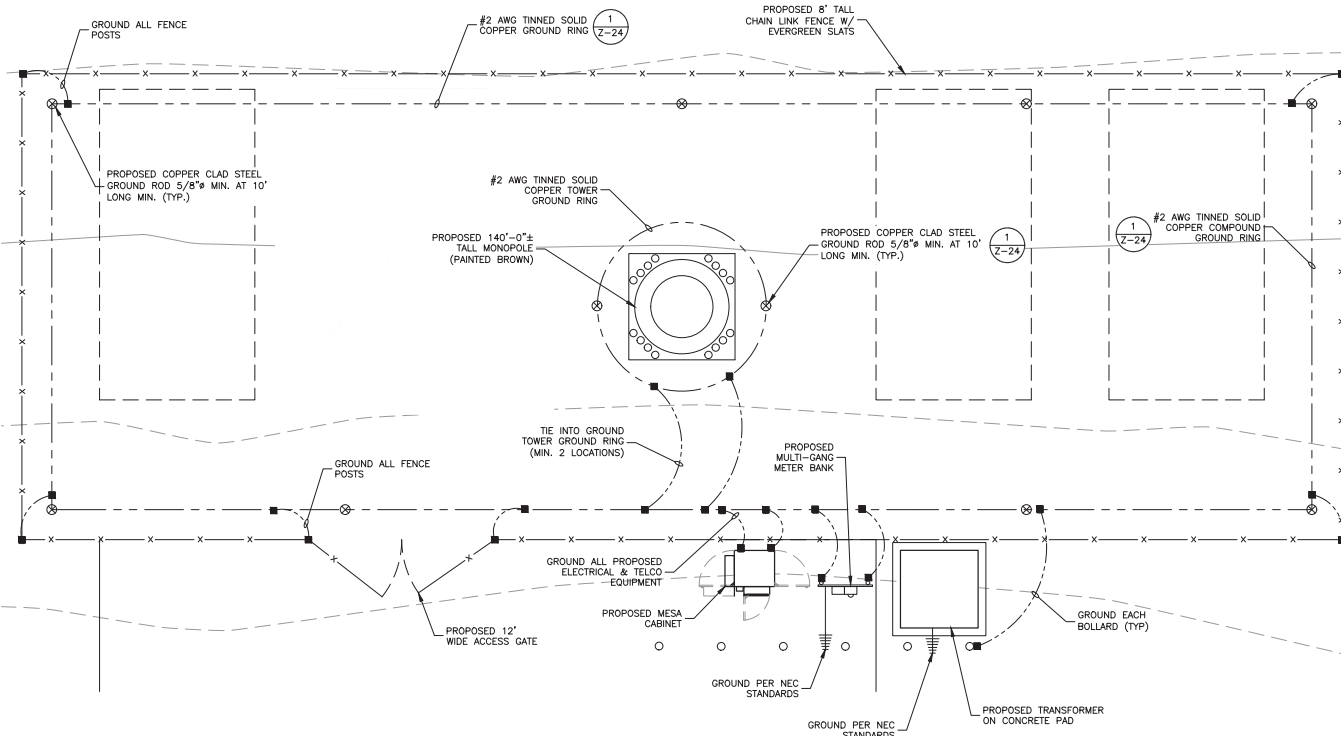
Dewberry Engineers Inc.  
600 PARSHIPANNY ROAD  
SUITE 301  
PARSHIPANNY, NJ 07054  
PHONE: 973.739.9400  
FAX: 973.739.9710



DRAWN BY: JC/KFM  
REVIEWED BY: MS  
CHECKED BY: DER  
PROJECT NUMBER: 50114387  
JOB NUMBER: 50114388  
SITE ADDRESS:

WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE: ELECTRICAL RISER DIAGRAM  
SHEET NUMBER:



**COMPOUND GROUND PLAN** ①  
 SCALE: 1/2"=1' FOR 11'x17'  
 3/8"=1' FOR 22'x34'  
 0' 3' 6' 9'

GROUNDING LEGEND	
	GROUND BAR
	GROUND COPPER WIRE, SIZE AS NOTED
	MECHANICAL GROUND CONNECTION
	5/8"x10" COPPER CLAD STEEL GROUND ROD
	EXOTHERMIC (CADWELD) CONNECTION

**GROUNDING GENERAL NOTES**

1. ALL DOWN CONDUCTORS AND THE GROUND RING CONDUCTOR SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNLESS OTHERWISE NOTED. ALL CONNECTIONS TO GROUND RING SHALL BE EXOTHERMICALLY WELDED. CONDUCTOR SHALL BE AT A MINIMUM DEPTH BELOW GRADE OF 18 INCHES OR TO LEDGE. MINIMUM BEND RADIUS SHALL BE 6 INCHES. CONDUCTOR SHALL BE AT LEAST 24 INCHES FROM ANY FOUNDATION, UNLESS OTHERWISE NOTED.
2. GROUND RODS SHALL BE 5/8" DIAMETER COPPER CLAD, HARGER, T&B, ERICO, OR EQUIVALENT. TOP OF ROD SHALL BE A MINIMUM OF 18" BELOW GRADE. IF LEDGE IS ENCOUNTERED, INSTALL GROUND ROD AT AN ANGLE. ELECTRICAL METER GROUND ROD EXCEPTED.
3. WHERE MECHANICAL CONNECTIONS ARE SPECIFIED, BOLTED, COMPRESSION-TYPE, CLAMPS OR SPLIT-BOLT TYPE CONNECTORS SHALL BE USED.
4. GRIND OFF GALVANIZING IN AFFECTED AREA. EXOTHERMICALLY WELD #2 CONDUCTOR AT 6" ABOVE GRADE OR FOUNDATION, WHICHEVER IS HIGHER. COLD-GALV AFTER. EXOTHERMICALLY WELD OTHER END TO GROUND RING.
5. INSTALL GROUNDING KITS AT ANTENNA CENTERLINE, AND TOWER EXIT POINTS. GROUND COAX LINES. EXOTHERMICALLY WELD #2 DOWN CONDUCTOR TO PLATES, RUN DOWN TOWER, AND TIE INTO GROUNDING SYSTEM.
6. ALL GROUNDING WORK SHALL COMPLY WITH AT&T CONSTRUCTION CONTRACT STANDARDS. FOLLOWING COMPLETION OF WORK, GROUND SYSTEM MUST BE TESTED AND SHALL HAVE A RESISTANCE OF 5 OHMS OR LESS. SUBMIT AN INDEPENDENT "FALL POTENTIAL" TESTING REPORT.
7. ALL GROUNDING CONDUCTORS ON EXTERIOR WALL OF SHELTER SHALL BE INSTALLED IN 3/4" SCH 40 PVC CONDUIT TO 12" BELOW GRADE. ATTACH PVC WITH GALVANIZED "C" CLAMPS.
8. CONTRACTOR SHALL HAND-DIG IN AREAS AROUND EXISTING UTILITIES.
9. NOTIFY CONSTRUCTION ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
10. GROUNDING RING IS SHOWN AS SCHEMATIC ONLY. IT IS DESIGNED WITHOUT BENEFIT OF RESISTIVITY TESTING AND DOES NOT NECESSARILY REPRESENT A GROUNDING SYSTEM TO MEET ANY SPECIFIC GROUND RESISTANCE.
11. PRIOR TO POURING CONCRETE, ALL REBAR LOCATED NEAR THE BOTTOM OF THE FOUNDATION SHALL BE BONDED TOGETHER TO FORM A SINGLE GROUNDING ELECTRODE, BY STEEL TIES OR OTHER EFFECTIVE MEANS APPROVED BY NEC 2011 AND STRUCTURAL ENGINEER, AND BONDED TO THE GROUND RING AS DETAILED IN THESE PLANS. (INSPECTION MAY BE REQUIRED PRIOR TO POURING CONCRETE AND MUST BE COORDINATED BY CONTRACTOR.)
12. IN ACCORDANCE WITH NEC 2011 REQUIREMENTS, ALL GROUNDING ELECTRODES PRESENT ON SITE SHALL BE BONDED TOGETHER (REFERENCE 2011 NEC ARTICLE 250.50).
13. CAULK AND SEAL ALL NON-FACTORY SHELTER PENETRATIONS.

HOMELAND TOWERS, LLC  
 9 HARMONY STREET  
 2nd FLOOR  
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 (203) 297-6345

NEW YORK SMSA  
 LIMITED PARTNERSHIP  
 d/b/a  
  
 4 CENTERCROSS ROAD  
 WEST NYACK, NY 10994

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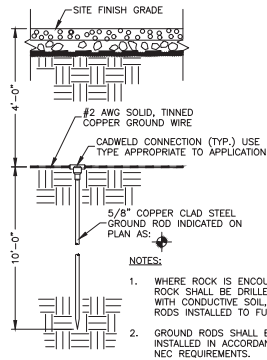
Dewberry Engineers Inc.  
 800 PARSIPPANY ROAD  
 SUITE 301  
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 PHONE: 973.739.9400  
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DAVID REVETTE, P.E.  
 NY LICENSE No. 101758

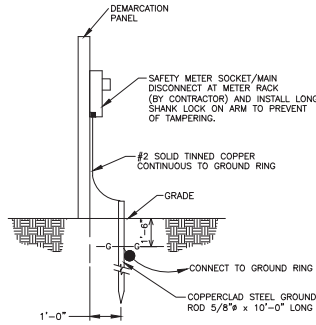
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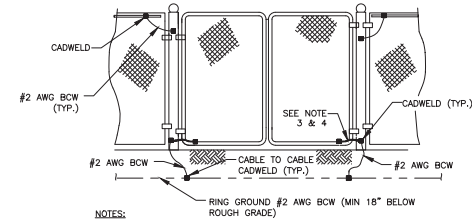
SHEET TITLE  
 COMPOUND  
 GROUNDING PLAN  
 SHEET NUMBER



**GROUND ROD AND RING DETAIL**  
SCALE: N.T.S.

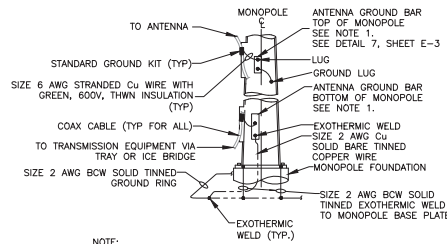


**METER SOCKET GROUNDING**  
SCALE: N.T.S.



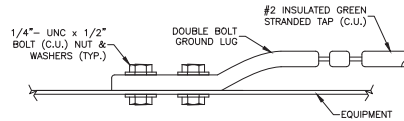
- NOTES:**
1. THE #2 AWG BCW FROM THE RING GROUND SHALL BE CADWELDED TO THE POST ABOVE GRADE.
  2. BOND EACH HORIZONTAL POLE/BRACE TO EACH OTHER AND TO EACH VERTICAL POLE BONDED TO THE EXTERIOR GROUND RING.
  3. GATE JUMPER SHALL BE #4/0 AWG WELDING CABLE OR FLEXIBLE COPPER BRAID BURNDY TYPE B WITH SLEEVES ON EACH END DESIGNED FOR EXOTHERMIC WELDING.
  4. GATE JUMPER SHALL BE INSTALLED SO THAT IT WILL NOT BE SUBJECTED TO DAMAGING STRAIN WHEN GATE IS FULLY OPEN IN EITHER DIRECTION.

**FENCE GROUNDING DETAIL**  
SCALE: N.T.S.

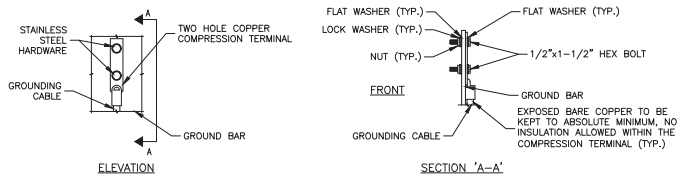


- NOTE:**
1. NUMBER OF GROUND BARS MAY VARY DEPENDING ON THE TYPE OF MONOPOLE, ANTENNA LOCATION AND CONNECTION ORIENTATION. PROVIDE AS REQUIRED. GROUND BAR IS NOT REQUIRED FOR SITES WITH ONE COAX CABLE.

**MONOPOLE GROUNDING**  
SCALE: N.T.S.

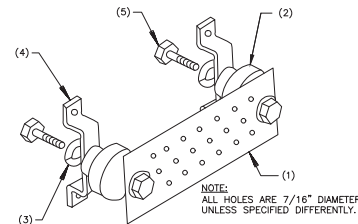


**CONNECTION TO EQUIPMENT DETAIL**  
SCALE: N.T.S.

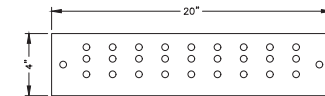


- NOTES:**
1. DOUBLING UP OR STACKING OF CONNECTIONS IS NOT PERMITTED.
  2. OXIDE INHIBITING COMPOUND TO BE USED AT ALL LOCATIONS.

**TYPICAL GROUND BAR MECHANICAL CONNECTION DETAIL**  
SCALE: N.T.S.



- LEGEND:**
1. COPPER GROUND BAR, 1/4"x4"x20", GBIT 14420 J 2-7. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
  2. STANDOFF INSULATORS, HARGER LIGHTNING PROTECTION, INC. CAT. No. 5263-AB.
  3. 1/2" LOCKWASHERS, HARGER CO. CAT. No. LWBS.
  4. WALL MOUNTING STAINLESS STEEL MOUNTING BRACKET, HARGER CAT NO. WBKT-1.
  5. 1/2-13 x 1" HEX HEAD CAP SCREW, HARGER, CAT No. CS865.



THE GROUND BAR IS 1/4" THICK, 4" WIDE, 20" LONG. IT HAS A HOLE PATTERN "J" WITH A NO. 2 AWG SOLID TINNED TAIL.



**STYLE:** GBIT - GROUND BAR WITH WALL MOUNTING BRACKETS, INSULATORS AND A 25' EXOTHERMICALLY WELDED TAIL.  
**SIZE:** THICKNESS, WIDTH, LENGTH IN INCHES.

**HOLE PATTERN:** HOLE PATTERN CENTERS MATCH NEMA DOUBLE LUG CONFIGURATION. SEE ISOMETRIC.

**TAIL:** SPECIFY AMERICAN WIRE GAUGE (AWG) SIZE AND STRANDING REQUIRED. 25' LENGTH IS STANDARD UNLESS OTHERWISE REQUESTED.

**GROUND BAR DETAIL**  
SCALE: N.T.S.

**HOMELAND TOWERS, LLC**  
9 HARMONY STREET  
2nd FLOOR  
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**NEW YORK SMSA LIMITED PARTNERSHIP**  
d/b/a  
**verizon** WIRELESS

4 CENTERCROK ROAD  
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**GLENACOM LAKE**

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Dewberry Engineers Inc.

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WALTON DRIVE  
MAHOPAC, NY 10541  
PUTNAM COUNTY

SHEET TITLE

GROUNDING DETAILS

SHEET NUMBER

2020

SUBMISSION



LAW OFFICES OF  
**SNYDER & SNYDER, LLP**

94 WHITE PLAINS ROAD  
TARRYTOWN, NEW YORK 10591

(914) 333-0700

FAX (914) 333-0743

WRITER'S E-MAIL ADDRESS

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LESLIE J. SNYDER  
ROBERT D. GAUDIOSO

DAVID L. SNYDER  
(1956-2012)

NEW JERSEY OFFICE  
ONE GATEWAY CENTER, SUITE 2600  
NEWARK, NEW JERSEY 07102  
(973) 824-9772  
FAX (973) 824-9774

REPLY TO:

TARRYTOWN OFFICE

January 24, 2020

Honorable Chairman Craig Paeprer  
and Members of the Planning Board  
Town of Carmel Town Hall  
60 McAlpin Avenue  
Mahopac, New York 10541

Re: Application for site plan and special permit approval for  
Glencoma Lake: Walton Drive, Carmel, New York

Honorable Chairman Paeprer  
and Members of the Planning Board:

We are the attorneys for Homeland Towers, LLC and New York SMSA Limited Partnership d/b/a Verizon Wireless (collectively, the "Applicants") in connection with their request for site plan and special permit approval to locate a public utility wireless telecommunications facility ("Facility") at the above captioned property ("Property"). The proposed Facility consists of a 140-foot tower and a fenced 30' x 85' compound for related equipment. The Property is located in the Residential Zoning District where the Facility is permitted in accordance with Section 156-62 of the Town of Carmel Zoning Code.

Verizon Wireless is a provider of personal wireless services, and is licensed by the Federal Communications Commission to provide wireless services throughout the New York metropolitan area, including the Town of Carmel.

In support of the foregoing, we are pleased to enclose two (2) checks made payable to the Town of Carmel, in the amount of \$3,500.00 (escrow application fee) and \$2,000.00 (site plan application fee), along with the following materials and one thumb drive with all documents contained thereon:

1. Eleven (11) copies of the Site Plan Application Form;
2. Two (2) copies of the Disclosure Statements;

3. Two (2) copies of the Vesting Deed with Easements, Covenants, and Restrictions;
4. Eleven (11) copies of the Site Plan Completeness Certification Form;
5. Eleven (11) copies of the Environmental Assessment Form with VEAF;
6. Eleven (11) copies of the Structural Certification Letter;
7. Eleven (11) copies of the RF Exposure Report;
8. Eleven (11) copies of the Generator Noise Certification Letter;
9. Eleven (11) copies of the FAA Opinion Letter confirming that no FAA lighting or marking is required;
10. Eleven (11) copies of the Wetlands Certification Letter;
11. Eleven (11) copies of the Collocation Commitment Letter; and
12. Eleven (11) copies of the Visual Analysis Letter;
13. Eleven (11) copies of the Alternative Site Analysis;
14. Eleven (11) copies of the Setback Justification Letter; and
15. Five (5) copies of the Site Plan.

The enclosed Visual Analysis Letter includes the proposed methodology and dates for the balloon and crane tests in satisfaction of the Town Code Section 156-62P.

We thank you for your consideration, and look forward to discussing this matter at next Planning Board meeting. If you have any questions or require any additional documentation, please do not hesitate to contact me at 914-333-0700.

Snyder & Snyder, LLP

By:   
Robert D. Gaudio

RDG:cae

Enclosures

cc: Homeland Towers  
Verizon Wireless  
Mahopac Fire Department  
P.O Box 267  
Mahopac, NY 10541

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# TOWN OF CARMEL SITE PLAN APPLICATION INSTRUCTIONS



The Town of Carmel Planning Board meetings are held twice a month, on the second and fourth Wednesday's, at 7:00 PM at Carmel Town Hall, 60 McAlpin Avenue, Carmel

The submission deadline is 10 days prior to the Planning Board meeting. New site plan applications that have been deemed complete will be placed on the agenda in the order they are received.

**No application will be placed on the agenda that is incomplete**

### Pre-Submission:

Prior to the formal submission of the site plan, a pre-submission conference may be requested by the applicant to be conducted with representatives from the Town, which may include the Town Planner, Town Engineer, Director of Code Enforcement and/or the Planning Board Attorney. This conference will serve to educate the applicant on the process he/she must follow, clarify the information required to submit a complete site plan application, and to highlight any specific areas of concern. You may arrange a pre-submission conference through the Planning Board Secretary at (845) 628-1500 extension 190.

### Submission Requirements:

At least 10 days prior to the Planning Board meeting, the site plan application shall be submitted to the Planning Board Secretary as follows:

All site plans shall be signed, sealed and folded with the title box legible. The application package shall include:

- 11 copies of the Site Plan Application Form, signed and notarized.
- 11 copies of the SEQR Environmental Assessment Form (use of short form or long form shall be determined at pre-submission conference).
- 5 full size sets of the Site Plan (including floor plans and elevations)
- 1 CD (in pdf. format) containing an electronic version of the Site Plan
- 2 copies of the Disclosure Statement
- 11 copies of the Site Plan Completeness Certification Form
- All supplemental studies, reports, plans and renderings.
- 2 copies of the current deed.
- 2 copies of all easements, covenants and restrictions.
- The appropriate fee, determined from the attached fee schedule. Make checks payable to the *Town of Carmel*.

*Rosa Yombetta* 1/28/20  
Planning Board Secretary; Date

*[Signature]* 1/28/2020  
Town Engineer; Date



# TOWN OF CARMEL SITE PLAN APPLICATION



Per Town of Carmel Code – Section 156 - Zoning

SITE IDENTIFICATION INFORMATION		
<b>Application Name:</b> Glencoma Lake / NY054		<b>Application #</b> 20-0002
<b>Date Submitted:</b> 1/24/20		
<b>Site Address:</b> No. None      Street: Walton Drive      Hamlet: Mahopac		
<b>Property Location:</b> (Identify landmarks, distance from intersections, etc.) ±600 feet southwest of intersection of Walton Drive and Summit Circle Drive		
<b>Town of Carmel Tax Map Designation:</b> Section 87.5    Block 1    Lot(s) 90	<b>Zoning Designation of Site:</b> Residential	
<b>Property Deed Recorded in County Clerk's Office</b> Date 3/14/1986    Liber 887    Page 026	<b>Liens, Mortgages or other Encumbrances</b> Yes      No	
<b>Existing Easements Relating to the Site</b> No <input checked="" type="checkbox"/> Yes    Describe and attach copies: Utility easements	<b>Are Easements Proposed?</b> No    Yes    Describe and attach copies:	
<b>Have Property Owners within a 500' Radius of the Site Been Identified?</b> <input checked="" type="checkbox"/> Yes    No    Attached List to this Application Form    Please see 1000' radius list on site plan.		
APPLICANT/OWNER INFORMATION		
<b>Property Owner:</b> Maple Hill Estates Homeowners Association, Inc.	<b>Phone #:</b> (914) 277-3652 <b>Fax#:</b>	<b>Email:</b> jncrary@yahoo.com
<b>Owners Address:</b> No.      Street: Maple Hill Drive      Town: Mahopac      State: NY Zip: 10541		
<b>Applicant (if different than owner):</b> Homeland Towers, LLC and Verizon Wireless	<b>Phone #:</b> (203) 297-6345 <b>Fax#:</b>	<b>Email:</b> cv@homelandtowers.us
<b>Applicant Address (if different than owner):</b> No. 9    Street: Harmony Street      Town: Danbury      State: CT Zip: 06810		
<b>Individual/ Firm Responsible for Preparing Site Plan:</b> Dewberry Engineers Inc.	<b>Phone #:</b> (973) 739-9400 <b>Fax#:</b>	<b>Email:</b>
<b>Address:</b> No. 600    Street: Parsippany Road, Suite 301      Town: Parsippany      State: NJ Zip: 07054		
<b>Other Representatives:</b> Robert D. Gaudioso of Snyder & Snyder, LLP	<b>Phone #:</b> (914) 333-0700 <b>Fax#:</b> (914) 333-0743	<b>Email:</b> rgaudioso@snyderlaw.net
<b>Address:</b> No. 94    Street: White Plains Road      Town: Tarrytown      State: NY Zip: 10591		
PROJECT DESCRIPTION		
<b>Describe the project, proposed use and operation thereof:</b>  The proposed project consists of an approximately 140-foot monopole tower and associated support equipment located within a fenced 30' x 85' fenced compound on a 50' x 100' lease area.		

# TOWN OF CARMEL SITE PLAN APPLICATION

PROJECT INFORMATION			
Lot size: Acres: +70.49		Square Footage of all existing structures (by floor): N/A	
Square Feet: +3,070,669			
# of existing parking spaces: N/A		# of proposed parking spaces: 1	
# of existing dwelling units: N/A		# of proposed dwelling units: 0	
<p>Is the site served by the following public utility infrastructure:</p> <ul style="list-style-type: none"> <li>▪ Is project in sewer district or will private septic system(s) be installed? <u>N/A</u></li> <li>▪ If yes to Sanitary Sewer answer the following:                             <ul style="list-style-type: none"> <li>▶ Does approval exist to connect to sewer main? Yes: <input type="checkbox"/> No: <input type="checkbox"/> <u>NOT applicable</u></li> <li>▶ Is this an in-district connection? _____ Out-of district connection? <u>NA</u></li> <li>▶ What is the total sewer capacity at time of application? <u>NA</u></li> <li>▶ What is your anticipated average and maximum daily flow <u>NA</u></li> </ul> </li> </ul> <p>For Town of Carmel Town Engineer</p> <ul style="list-style-type: none"> <li>▶ What is the sewer capacity <u>Not applicable for 1/24/2020 - PRIVATE SEWER</u></li> </ul>			
<ul style="list-style-type: none"> <li>▪ Water Supply</li> </ul>		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
<p>If Yes:</p> <ul style="list-style-type: none"> <li>▶ Does approval exist to connect to water main? Yes: <input type="checkbox"/> No: <input type="checkbox"/></li> <li>▶ What is the total water capacity at time of application? _____</li> <li>▶ What is your anticipated average and maximum daily demand _____</li> </ul>			
<ul style="list-style-type: none"> <li>▪ Storm Sewer</li> </ul>		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Electric Service</li> </ul>		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Gas Service</li> </ul>		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
<ul style="list-style-type: none"> <li>▪ Telephone/Cable Lines</li> </ul>		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
For Town of Carmel Town Engineer			
Water Flows _____		Sewer Flows _____	
1/24/2020			
Town Engineer; Date			
What is the predominant soil type(s) on the site? <u>Charlton loam</u>		What is the approximate depth to water table? <u>&gt;6 feet</u>	
Site slope categories:		15-25% <u>100</u> %	25-35% _____ %
		>35% _____ %	
Estimated quantity of excavation:		Cut (C.Y.) <u>6.47 C.Y.</u>	Fill (C.Y.) <u>3,372 C.Y.</u>
Is Blasting Proposed		Yes: <input type="checkbox"/> No: <input type="checkbox"/> Unknown: <input checked="" type="checkbox"/>	
Is the site located in a designated Critical Environmental Area?		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Does a curb cut exist on the site? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	Are new curb cuts proposed? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	What is the sight distance? Left <u>N/A</u> Right <u>N/A</u>	
Is the site located within 500' of:			
• The boundary of an adjoining city, town or village		Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
• The boundary of a state or county park, recreation area or road right-of-way		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
• A county drainage channel line.		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
• The boundary of state or county owned land on which a building is located		Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	

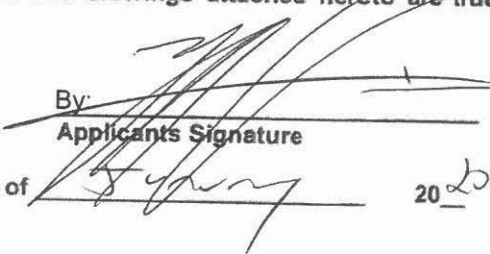

## TOWN OF CARMEL SITE PLAN APPLICATION

Is the site listed on the State or Federal Register of Historic Place (or substantially contiguous) Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Is the site located in a designated floodplain? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Will the project require coverage under the Current NYSDEC Stormwater Regulations <span style="float: right;">Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></span>	
Will the project require coverage under the Current NYCDEP Stormwater Regulations <span style="float: right;">Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/></span>	
Does the site disturb more than 5,000 sq ft	Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>
Does the site disturb more than 1 acre	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Does the site contain freshwater wetlands? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
Jurisdiction: NYSDEC: <input type="checkbox"/> Town of Carmel: <input checked="" type="checkbox"/>	
<i>If present, the wetlands must be delineated in the field by a Wetland Professional, and survey located on the Site Plan.</i>	
Are encroachments in regulated wetlands or wetland buffers proposed? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Does this application require a referral to the Environmental Conservation Board?	Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>
Does the site contain waterbodies, streams or watercourses? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Are any encroachments, crossings or alterations proposed? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Is the site located adjacent to New York City watershed lands? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Is the project funded, partially or in total, by grants or loans from a public source? Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>	
Will municipal or private solid waste disposal be utilized? Public: <input type="checkbox"/> Private: <input type="checkbox"/> <span style="float: right;">N/A</span>	
Has this application been referred to the Fire Department? Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	
What is the estimated time of construction for the project? <p style="text-align: center;">±3 months</p>	

### ZONING COMPLIANCE INFORMATION

Zoning Provision	Required	Existing	Proposed
Lot Area	120,000 sq. feet	±3,070,669 sq. feet	No Change
Lot Coverage	15%	N/A	No Change
Lot Width	200 feet	±448 feet	No Change
Lot Depth	200 feet	±2,562 feet	No Change
Front Yard	40 feet	±552 feet	No Change
Side Yard	25 feet	±78 feet	No Change
Rear Yard	40 feet	±384 feet	No Change
Minimum Required Floor Area	N/A	N/A	N/A
Floor Area Ratio	N/A	N/A	N/A
Height	75 feet	N/A	140 feet
Off-Street Parking	N/A	N/A	1
Off-Street Loading	N/A	N/A	N/A

## TOWN OF CARMEL SITE PLAN APPLICATION

<b>Will variances be required?</b> Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>	<b>If yes, identify variances:</b> A tower setback variance will be needed, as the minimum is 280 feet and the proposed is ±169 feet. A height variance is required unless a waiver is granted by the Planning Board.
<b>PROPOSED BUILDING MATERIALS</b>	
<b>Foundation</b>	Reinforced concrete and rebar
<b>Structural System</b>	Reinforced concrete and rebar
<b>Roof</b>	N/A
<b>Exterior Walls</b>	N/A
<b>APPLICANTS ACKNOWLEDGEMENT</b>	
I hereby depose and certify that all the above statements and information, and all statements and information contained in the supporting documents and drawings attached hereto are true and correct.	
Homeland Towers, LLC and Verizon Wireless <b>Applicants Name</b>	By:  <b>Applicants Signature</b>
Sworn before me this <u>22nd</u> day of <u>February</u> 20 <u>20</u>	
 ROBERT D. GAUDIOSO Notary Public, State of New York No. 02GA5082847 Qualified in Westchester County Commission Expires July 28, <del>200</del> <u>2021</u>	
<b>Notary Public</b>	





## TOWN OF CARMEL SITE PLAN COMPLETENESS CERTIFICATION FORM



All Site Plans submitted to the Planning Board for review shall include the following information and details, as set forth in Section 156-61 B of the Town of Carmel Zoning Ordinance.

This form shall be included with the site plan submission

	Requirement Data	To Be Completed by the Applicant	Waived by the Town
1	Name and title of person preparing the site plan	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	Name of the applicant and owner (if different from applicant)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3	Original drawing date, revision dates, scale and north arrow	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4	Tax map, block and lot number(s), zoning district	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5	All existing property lines, name of owner of each property within a 500' radius of the site	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6	Contour lines at two-foot intervals, grades of all roads, driveways, sanitary and storm sewers	<input type="checkbox"/> *	<input type="checkbox"/>
7	The location of all water bodies, streams, watercourses, wetland areas, wooded areas, rights-of-way, streets, roads, highways, railroads, buildings, structures	<input type="checkbox"/> *	<input type="checkbox"/>
8	The location of all existing and proposed easements	<input type="checkbox"/> *	<input type="checkbox"/>
9	The location of all existing and proposed structures, their use, setback dimensions, floor plans, front, side and rear elevations, buildable area.	<input type="checkbox"/> *	<input type="checkbox"/>
10	On site circulation systems, access, egress ways and service roads, emergency service access and traffic mitigation measures	<input type="checkbox"/> *	<input type="checkbox"/>
11	Sidewalks, paths and other means of pedestrian circulation	<input type="checkbox"/> *	<input type="checkbox"/>
12	On-site parking and loading spaces and travel aisles with dimensions	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13	The location, height and type of exterior lighting fixtures	<input checked="" type="checkbox"/>	<input type="checkbox"/>
14	Proposed signage	<input checked="" type="checkbox"/>	<input type="checkbox"/>
15	For non-residential uses, an estimate of the number of employees who will be using the site, description of the operation, types of products sold, types of machinery and equipment used	<input type="checkbox"/> *	<input type="checkbox"/>

\* SEE ATTACHED LETTER



## TOWN OF CARMEL SITE PLAN COMPLETENESS CERTIFICATION FORM



	Requirement Data	To Be Completed by the Applicant	Waived by the Town
16	The location of clubhouses, swimming pools, open spaces, parks or other recreational areas, and identification of who is responsible for maintenance	<input type="checkbox"/> *	<input type="checkbox"/>
17	The location and design of buffer areas, screening or other landscaping, including grading and water management. A comprehensive landscaping plan in accordance with the Tree Conservation Law	<input checked="" type="checkbox"/>	<input type="checkbox"/>
18	The location of public and private utilities, maintenance responsibilities, trash and garbage areas	<input type="checkbox"/> *	<input type="checkbox"/>
19	A list, certified by the Town Assessor, of all property owners within 500 feet of the site boundary	<input checked="" type="checkbox"/>	<input type="checkbox"/>
20	Any other information required by the Planning Board which is reasonably necessary to ascertain compliance with this chapter	<input checked="" type="checkbox"/>	<input type="checkbox"/>

-----

**Applicants Certification (to be completed by the licensed professional preparing the site plan:**

I GREG NAWROTZKI hereby certify that the site plan to which I have attached my seal and signature, meets all of the requirements of §156-61B of the Town of Carmel Zoning Ordinance:



Signature - Applicant

01-28-2026

Date



Professionals Seal

\_\_\_\_\_  
Signature - Owner

\_\_\_\_\_  
Date



TOWN OF CARMEL  
**SITE PLAN COMPLETENESS  
CERTIFICATION FORM**



-----  
Town Certification (to be completed by the Town)

I \_\_\_\_\_ hereby confirm that the site plan meets all of the requirements of §156-61B of the Town of Carmel Zoning Ordinance:

Rose Yonkette  
Signature - Planning Board Secretary

01/28/20  
Date

Richard [Signature]  
Signature - Town Engineer

01/28/2020  
Date

**Full Environmental Assessment Form  
Part 1 - Project and Setting**

**Instructions for Completing Part 1**

**Part 1 is to be completed by the applicant or project sponsor.** Responses become part of the application for approval or funding, are subject to public review, and may be subject to further verification.

Complete Part 1 based on information currently available. If additional research or investigation would be needed to fully respond to any item, please answer as thoroughly as possible based on current information; indicate whether missing information does not exist, or is not reasonably available to the sponsor; and, when possible, generally describe work or studies which would be necessary to update or fully develop that information.

Applicants/sponsors must complete all items in Sections A & B. In Sections C, D & E, most items contain an initial question that must be answered either "Yes" or "No". If the answer to the initial question is "Yes", complete the sub-questions that follow. If the answer to the initial question is "No", proceed to the next question. Section F allows the project sponsor to identify and attach any additional information. Section G requires the name and signature of the project sponsor to verify that the information contained in Part 1 is accurate and complete.

**A. Project and Sponsor Information.**

Name of Action or Project: Glencoma Lake / NY054		
Project Location (describe, and attach a general location map): Walton Dr (approx. 600 feet SW of intersection with Summit Circle Dr), Mahopac, Putnam County, NY 10541		
Brief Description of Proposed Action (include purpose or need): The proposed project consists of the construction of a new communications facility. Specifically, the proposed installation will consist of an approximately 140-foot monopole tower and associated support equipment located within a fenced 30-foot by 85-foot fenced compound on a 50-foot by 100-foot lease area. Access will be gained via a proposed 12-foot wide gravel access road easement emanating west/northwest from Walton Drive for approximately 75 feet to the proposed facility. Underground utilities will follow the access route. Please see the site drawings for complete details.		
Name of Applicant/Sponsor: Homeland Towers, LLC		Telephone: 203.297.6345
		E-Mail: cv@homelandtowers.us
Address: 9 Harmony St, 2nd Floor		
City/PO: Danbury	State: CT	Zip Code: 06810
Project Contact (if not same as sponsor; give name and title/role): Christine Vergati		Telephone:
		E-Mail:
Address:		
City/PO:	State:	Zip Code:
Property Owner (if not same as sponsor): Maple Hill Estates Home Owners		Telephone:
		E-Mail:
Address: Maple Hill Dr		
City/PO: Mahopac	State: NY	Zip Code: 10541

**B. Government Approvals**

<b>B. Government Approvals, Funding, or Sponsorship.</b> ("Funding" includes grants, loans, tax relief, and any other forms of financial assistance.)		
<b>Government Entity</b>	<b>If Yes: Identify Agency and Approval(s) Required</b>	<b>Application Date (Actual or projected)</b>
a. City Council, Town Board, <input type="checkbox"/> Yes <input type="checkbox"/> No or Village Board of Trustees		
b. City, Town or Village Planning Board or Commission <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Planning Board - Site plan + Special Permit ZBA - Variances	
c. City Council, Town or Village Zoning Board of Appeals <input type="checkbox"/> Yes <input type="checkbox"/> No		
d. Other local agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
e. County agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
f. Regional agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
g. State agencies <input type="checkbox"/> Yes <input type="checkbox"/> No		
h. Federal agencies <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	FCC	
i. Coastal Resources. <ul style="list-style-type: none"> <li>i. Is the project site within a Coastal Area, or the waterfront area of a Designated Inland Waterway? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</li> <li>ii. Is the project site located in a community with an approved Local Waterfront Revitalization Program? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</li> <li>iii. Is the project site within a Coastal Erosion Hazard Area? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</li> </ul>		

**C. Planning and Zoning**

<b>C.1. Planning and zoning actions.</b>	
Will administrative or legislative adoption, or amendment of a plan, local law, ordinance, rule or regulation be the only approval(s) which must be granted to enable the proposed action to proceed?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<ul style="list-style-type: none"> <li>• <b>If Yes</b>, complete sections C, F and G.</li> <li>• <b>If No</b>, proceed to question C.2 and complete all remaining sections and questions in Part 1</li> </ul>	
<b>C.2. Adopted land use plans.</b>	
a. Do any municipally- adopted (city, town, village or county) comprehensive land use plan(s) include the site where the proposed action would be located?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, does the comprehensive plan include specific recommendations for the site where the proposed action would be located?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
b. Is the site of the proposed action within any local or regional special planning district (for example: Greenway Brownfield Opportunity Area (BOA); designated State or Federal heritage area; watershed management plan; or other?)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
If Yes, identify the plan(s): NYC Watershed Boundary _____ _____ _____	
c. Is the proposed action located wholly or partially within an area listed in an adopted municipal open space plan, or an adopted municipal farmland protection plan?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
If Yes, identify the plan(s): _____ _____ _____	

**C.3. Zoning**

a. Is the site of the proposed action located in a municipality with an adopted zoning law or ordinance.  Yes  No  
 If Yes, what is the zoning classification(s) including any applicable overlay district?  
Residential

b. Is the use permitted or allowed by a special or conditional use permit?  Yes  No

c. Is a zoning change requested as part of the proposed action?  Yes  No  
 If Yes,  
 i. What is the proposed new zoning for the site? \_\_\_\_\_

**C.4. Existing community services.**

a. In what school district is the project site located? Mahopac Central School District

b. What police or other public protection forces serve the project site?  
Carmel Police Department

c. Which fire protection and emergency medical services serve the project site?  
Mahopac Volunteer Fire Department

d. What parks serve the project site?  
Baldwin Meadows Park, located approximately 1 mile west of Subject Property.

**D. Project Details**

**D.1. Proposed and Potential Development**

a. What is the general nature of the proposed action (e.g., residential, industrial, commercial, recreational; if mixed, include all components)? Public Utility

b. a. Total acreage of the site of the proposed action? \_\_\_\_\_ 0.135 acres  
 b. Total acreage to be physically disturbed? \_\_\_\_\_ 0.135 acres  
 c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor? \_\_\_\_\_ 0.135 acres

c. Is the proposed action an expansion of an existing project or use?  Yes  No  
 i. If Yes, what is the approximate percentage of the proposed expansion and identify the units (e.g., acres, miles, housing units, square feet)? % \_\_\_\_\_ Units: \_\_\_\_\_

d. Is the proposed action a subdivision, or does it include a subdivision?  Yes  No  
 If Yes,  
 i. Purpose or type of subdivision? (e.g., residential, industrial, commercial; if mixed, specify types) \_\_\_\_\_  
 ii. Is a cluster/conservation layout proposed?  Yes  No  
 iii. Number of lots proposed? \_\_\_\_\_  
 iv. Minimum and maximum proposed lot sizes? Minimum \_\_\_\_\_ Maximum \_\_\_\_\_

e. Will proposed action be constructed in multiple phases?  Yes  No  
 i. If No, anticipated period of construction: \_\_\_\_\_ +/- 3 months  
 ii. If Yes:  
 • Total number of phases anticipated \_\_\_\_\_  
 • Anticipated commencement date of phase 1 (including demolition) \_\_\_\_\_ month \_\_\_\_\_ year  
 • Anticipated completion date of final phase \_\_\_\_\_ month \_\_\_\_\_ year  
 • Generally describe connections or relationships among phases, including any contingencies where progress of one phase may determine timing or duration of future phases: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

f. Does the project include new residential uses?  Yes  No  
 If Yes, show numbers of units proposed.

	<u>One Family</u>	<u>Two Family</u>	<u>Three Family</u>	<u>Multiple Family (four or more)</u>
Initial Phase	_____	_____	_____	_____
At completion of all phases	_____	_____	_____	_____

g. Does the proposed action include new non-residential construction (including expansions)?  Yes  No  
 If Yes,

i. Total number of structures \_\_\_\_\_ 1

ii. Dimensions (in feet) of largest proposed structure: \_\_\_\_\_ 140' height; \_\_\_\_\_ N/A width; and \_\_\_\_\_ N/A length

iii. Approximate extent of building space to be heated or cooled: \_\_\_\_\_ square feet

h. Does the proposed action include construction or other activities that will result in the impoundment of any liquids, such as creation of a water supply, reservoir, pond, lake, waste lagoon or other storage?  Yes  No  
 If Yes,

i. Purpose of the impoundment: \_\_\_\_\_

ii. If a water impoundment, the principal source of the water:  Ground water  Surface water streams  Other specify: \_\_\_\_\_

iii. If other than water, identify the type of impounded/contained liquids and their source. \_\_\_\_\_

iv. Approximate size of the proposed impoundment. Volume: \_\_\_\_\_ million gallons; surface area: \_\_\_\_\_ acres

v. Dimensions of the proposed dam or impounding structure: \_\_\_\_\_ height; \_\_\_\_\_ length

vi. Construction method/materials for the proposed dam or impounding structure (e.g., earth fill, rock, wood, concrete): \_\_\_\_\_

**D.2. Project Operations**

a. Does the proposed action include any excavation, mining, or dredging, during construction, operations, or both?  Yes  No  
 (Not including general site preparation, grading or installation of utilities or foundations where all excavated materials will remain onsite)  
 If Yes:

i. What is the purpose of the excavation or dredging? \_\_\_\_\_

ii. How much material (including rock, earth, sediments, etc.) is proposed to be removed from the site?

- Volume (specify tons or cubic yards): \_\_\_\_\_
- Over what duration of time? \_\_\_\_\_

iii. Describe nature and characteristics of materials to be excavated or dredged, and plans to use, manage or dispose of them. \_\_\_\_\_

iv. Will there be onsite dewatering or processing of excavated materials?  Yes  No  
 If yes, describe. \_\_\_\_\_

v. What is the total area to be dredged or excavated? \_\_\_\_\_ acres

vi. What is the maximum area to be worked at any one time? \_\_\_\_\_ acres

vii. What would be the maximum depth of excavation or dredging? \_\_\_\_\_ feet

viii. Will the excavation require blasting?  Yes  No

ix. Summarize site reclamation goals and plan: \_\_\_\_\_

b. Would the proposed action cause or result in alteration of, increase or decrease in size of, or encroachment into any existing wetland, waterbody, shoreline, beach or adjacent area?  Yes  No  
 If Yes:

i. Identify the wetland or waterbody which would be affected (by name, water index number, wetland map number or geographic description): \_\_\_\_\_

ii. Describe how the proposed action would affect that waterbody or wetland, e.g. excavation, fill, placement of structures, or alteration of channels, banks and shorelines. Indicate extent of activities, alterations and additions in square feet or acres:

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

iii. Will proposed action cause or result in disturbance to bottom sediments?  Yes  No  
If Yes, describe: \_\_\_\_\_

iv. Will proposed action cause or result in the destruction or removal of aquatic vegetation?  Yes  No  
If Yes:

- acres of aquatic vegetation proposed to be removed: \_\_\_\_\_
- expected acreage of aquatic vegetation remaining after project completion: \_\_\_\_\_
- purpose of proposed removal (e.g. beach clearing, invasive species control, boat access): \_\_\_\_\_
- proposed method of plant removal: \_\_\_\_\_
- if chemical/herbicide treatment will be used, specify product(s): \_\_\_\_\_

v. Describe any proposed reclamation/mitigation following disturbance: \_\_\_\_\_

c. Will the proposed action use, or create a new demand for water?  Yes  No  
If Yes:

i. Total anticipated water usage/demand per day: \_\_\_\_\_ gallons/day

ii. Will the proposed action obtain water from an existing public water supply?  Yes  No

If Yes:

- Name of district or service area: \_\_\_\_\_
- Does the existing public water supply have capacity to serve the proposal?  Yes  No
- Is the project site in the existing district?  Yes  No
- Is expansion of the district needed?  Yes  No
- Do existing lines serve the project site?  Yes  No

iii. Will line extension within an existing district be necessary to supply the project?  Yes  No

If Yes:

- Describe extensions or capacity expansions proposed to serve this project: \_\_\_\_\_
- Source(s) of supply for the district: \_\_\_\_\_

iv. Is a new water supply district or service area proposed to be formed to serve the project site?  Yes  No

If, Yes:

- Applicant/sponsor for new district: \_\_\_\_\_
- Date application submitted or anticipated: \_\_\_\_\_
- Proposed source(s) of supply for new district: \_\_\_\_\_

v. If a public water supply will not be used, describe plans to provide water supply for the project: \_\_\_\_\_

vi. If water supply will be from wells (public or private), maximum pumping capacity: \_\_\_\_\_ gallons/minute.

d. Will the proposed action generate liquid wastes?  Yes  No

If Yes:

i. Total anticipated liquid waste generation per day: \_\_\_\_\_ gallons/day

ii. Nature of liquid wastes to be generated (e.g., sanitary wastewater, industrial; if combination, describe all components and approximate volumes or proportions of each): \_\_\_\_\_

iii. Will the proposed action use any existing public wastewater treatment facilities?  Yes  No

If Yes:

- Name of wastewater treatment plant to be used: \_\_\_\_\_
- Name of district: \_\_\_\_\_
- Does the existing wastewater treatment plant have capacity to serve the project?  Yes  No
- Is the project site in the existing district?  Yes  No
- Is expansion of the district needed?  Yes  No



Yes  No  
 Yes  No

• Do existing sewer lines serve the project site?  
 • Will line extension within an existing district be necessary to serve the project?  
 If Yes:  
 • Describe extensions or capacity expansions proposed to serve this project: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

iv. Will a new wastewater (sewage) treatment district be formed to serve the project site?  Yes  No  
 If Yes:  
 • Applicant/sponsor for new district: \_\_\_\_\_  
 • Date application submitted or anticipated: \_\_\_\_\_  
 • What is the receiving water for the wastewater discharge? \_\_\_\_\_

v. If public facilities will not be used, describe plans to provide wastewater treatment for the project, including specifying proposed receiving water (name and classification if surface discharge, or describe subsurface disposal plans):  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

vi. Describe any plans or designs to capture, recycle or reuse liquid waste: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

e. Will the proposed action disturb more than one acre and create stormwater runoff, either from new point sources (i.e. ditches, pipes, swales, curbs, gutters or other concentrated flows of stormwater) or non-point source (i.e. sheet flow) during construction or post construction?  Yes  No  
 If Yes:  
 i. How much impervious surface will the project create in relation to total size of project parcel?  
 \_\_\_\_\_ Square feet or \_\_\_\_\_ acres (impervious surface)  
 \_\_\_\_\_ Square feet or \_\_\_\_\_ acres (parcel size)  
 ii. Describe types of new point sources. \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

iii. Where will the stormwater runoff be directed (i.e. on-site stormwater management facility/structures, adjacent properties, groundwater, on-site surface water or off-site surface waters)?  
 \_\_\_\_\_  
 \_\_\_\_\_  
 • If to surface waters, identify receiving water bodies or wetlands: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

• Will stormwater runoff flow to adjacent properties?  Yes  No

iv. Does proposed plan minimize impervious surfaces, use pervious materials or collect and re-use stormwater?  Yes  No

f. Does the proposed action include, or will it use on-site, one or more sources of air emissions, including fuel combustion, waste incineration, or other processes or operations?  Yes  No  
 If Yes, identify:  
 i. Mobile sources during project operations (e.g., heavy equipment, fleet or delivery vehicles)  
 \_\_\_\_\_  
 Temporary construction vehicles  
 ii. Stationary sources during construction (e.g., power generation, structural heating, batch plant, crushers)  
 \_\_\_\_\_  
 \_\_\_\_\_  
 iii. Stationary sources during operations (e.g., process emissions, large boilers, electric generation)  
 \_\_\_\_\_  
 Emergency Diesel-fired emergency generator on concrete slab

g. Will any air emission sources named in D.2.f (above), require a NY State Air Registration, Air Facility Permit, or Federal Clean Air Act Title IV or Title V Permit?  Yes  No  
 If Yes:  
 i. Is the project site located in an Air quality non-attainment area? (Area routinely or periodically fails to meet ambient air quality standards for all or some parts of the year)  Yes  No  
 ii. In addition to emissions as calculated in the application, the project will generate:  
 • \_\_\_\_\_ Tons/year (short tons) of Carbon Dioxide (CO<sub>2</sub>)  
 • \_\_\_\_\_ Tons/year (short tons) of Nitrous Oxide (N<sub>2</sub>O)  
 • \_\_\_\_\_ Tons/year (short tons) of Perfluorocarbons (PFCs)  
 • \_\_\_\_\_ Tons/year (short tons) of Sulfur Hexafluoride (SF<sub>6</sub>)  
 • \_\_\_\_\_ Tons/year (short tons) of Carbon Dioxide equivalent of Hydrofluorocarbons (HFCs)  
 • \_\_\_\_\_ Tons/year (short tons) of Hazardous Air Pollutants (HAPs)

h. Will the proposed action generate or emit methane (including, but not limited to, sewage treatment plants, landfills, composting facilities)?  Yes  No

If Yes:

i. Estimate methane generation in tons/year (metric): \_\_\_\_\_

ii. Describe any methane capture, control or elimination measures included in project design (e.g., combustion to generate heat or electricity, flaring): \_\_\_\_\_

---

i. Will the proposed action result in the release of air pollutants from open-air operations or processes, such as quarry or landfill operations?  Yes  No

If Yes: Describe operations and nature of emissions (e.g., diesel exhaust, rock particulates/dust): \_\_\_\_\_

---

j. Will the proposed action result in a substantial increase in traffic above present levels or generate substantial new demand for transportation facilities or services?  Yes  No

If Yes:

i. When is the peak traffic expected (Check all that apply):  Morning  Evening  Weekend  
 Randomly between hours of \_\_\_\_\_ to \_\_\_\_\_.

ii. For commercial activities only, projected number of semi-trailer truck trips/day: \_\_\_\_\_

iii. Parking spaces: Existing \_\_\_\_\_ Proposed \_\_\_\_\_ Net increase/decrease \_\_\_\_\_

iv. Does the proposed action include any shared use parking?  Yes  No

v. If the proposed action includes any modification of existing roads, creation of new roads or change in existing access, describe: \_\_\_\_\_

---

vi. Are public/private transportation service(s) or facilities available within ½ mile of the proposed site?  Yes  No

vii. Will the proposed action include access to public transportation or accommodations for use of hybrid, electric or other alternative fueled vehicles?  Yes  No

viii. Will the proposed action include plans for pedestrian or bicycle accommodations for connections to existing pedestrian or bicycle routes?  Yes  No

---

k. Will the proposed action (for commercial or industrial projects only) generate new or additional demand for energy?  Yes  No

If Yes:

i. Estimate annual electricity demand during operation of the proposed action: \_\_\_\_\_  
 Minimal increase for telecommunications equipment for approximately 800 amps to a maximum of 1200 amps

ii. Anticipated sources/suppliers of electricity for the project (e.g., on-site combustion, on-site renewable, via grid/local utility, or other):  
 Via local grid \_\_\_\_\_

iii. Will the proposed action require a new, or an upgrade to, an existing substation?  Yes  No

---

l. Hours of operation. Answer all items which apply.

<p>i. During Construction:</p> <ul style="list-style-type: none"> <li>• Monday - Friday: _____ Normal business hours</li> <li>• Saturday: _____</li> <li>• Sunday: _____</li> <li>• Holidays: _____</li> </ul>	<p>ii. During Operations:</p> <ul style="list-style-type: none"> <li>• Monday - Friday: _____ Unmanned facility operates 24/7</li> <li>• Saturday: _____ Unmanned facility operates 24/7</li> <li>• Sunday: _____ Unmanned facility operates 24/7</li> <li>• Holidays: _____ Unmanned facility operates 24/7</li> </ul>
--	---

m. Will the proposed action produce noise that will exceed existing ambient noise levels during construction, operation, or both?  Yes  No

If yes:

i. Provide details including sources, time of day and duration: \_\_\_\_\_

ii. Will proposed action remove existing natural barriers that could act as a noise barrier or screen?  Yes  No  
Describe: \_\_\_\_\_

---

n. Will the proposed action have outdoor lighting?  Yes  No

If yes:

i. Describe source(s), location(s), height of fixture(s), direction/aim, and proximity to nearest occupied structures:  
Timed lighting sources inside compound. \_\_\_\_\_

ii. Will proposed action remove existing natural barriers that could act as a light barrier or screen?  Yes  No  
Describe: No, trees surrounding compound and access road are to remain, blocking light. \_\_\_\_\_

---

o. Does the proposed action have the potential to produce odors for more than one hour per day?  Yes  No  
If Yes, describe possible sources, potential frequency and duration of odor emissions, and proximity to nearest occupied structures: \_\_\_\_\_

---

p. Will the proposed action include any bulk storage of petroleum (combined capacity of over 1,100 gallons) or chemical products 185 gallons in above ground storage or any amount in underground storage?  Yes  No

If Yes:

i. Product(s) to be stored \_\_\_\_\_

ii. Volume(s) \_\_\_\_\_ per unit time \_\_\_\_\_ (e.g., month, year)

iii. Generally describe proposed storage facilities: \_\_\_\_\_

---

q. Will the proposed action (commercial, industrial and recreational projects only) use pesticides (i.e., herbicides, insecticides) during construction or operation?  Yes  No

If Yes:

i. Describe proposed treatment(s): \_\_\_\_\_

ii. Will the proposed action use Integrated Pest Management Practices?  Yes  No

---

r. Will the proposed action (commercial or industrial projects only) involve or require the management or disposal of solid waste (excluding hazardous materials)?  Yes  No

If Yes:

i. Describe any solid waste(s) to be generated during construction or operation of the facility:

- Construction: \_\_\_\_\_ tons per \_\_\_\_\_ (unit of time)
- Operation : \_\_\_\_\_ tons per \_\_\_\_\_ (unit of time)

ii. Describe any proposals for on-site minimization, recycling or reuse of materials to avoid disposal as solid waste:

- Construction: \_\_\_\_\_
- Operation: \_\_\_\_\_

iii. Proposed disposal methods/facilities for solid waste generated on-site:

- Construction: \_\_\_\_\_
- Operation: \_\_\_\_\_

s. Does the proposed action include construction or modification of a solid waste management facility?  Yes  No

If Yes:

i. Type of management or handling of waste proposed for the site (e.g., recycling or transfer station, composting, landfill, or other disposal activities): \_\_\_\_\_

ii. Anticipated rate of disposal/processing:

- \_\_\_\_\_ Tons/month, if transfer or other non-combustion/thermal treatment, or
- \_\_\_\_\_ Tons/hour, if combustion or thermal treatment

iii. If landfill, anticipated site life: \_\_\_\_\_ years

t. Will proposed action at the site involve the commercial generation, treatment, storage, or disposal of hazardous waste?  Yes  No

If Yes:

i. Name(s) of all hazardous wastes or constituents to be generated, handled or managed at facility: \_\_\_\_\_

ii. Generally describe processes or activities involving hazardous wastes or constituents: \_\_\_\_\_

iii. Specify amount to be handled or generated \_\_\_\_\_ tons/month

iv. Describe any proposals for on-site minimization, recycling or reuse of hazardous constituents: \_\_\_\_\_

v. Will any hazardous wastes be disposed at an existing offsite hazardous waste facility?  Yes  No

If Yes: provide name and location of facility: \_\_\_\_\_

If No: describe proposed management of any hazardous wastes which will not be sent to a hazardous waste facility: \_\_\_\_\_

**E. Site and Setting of Proposed Action**

**E.1. Land uses on and surrounding the project site**

a. Existing land uses.

i. Check all uses that occur on, adjoining and near the project site.

- Urban  Industrial  Commercial  Residential (suburban)  Rural (non-farm)
- Forest  Agriculture  Aquatic  Other (specify): \_\_\_\_\_

ii. If mix of uses, generally describe:

Proposed project to be located in forested area with suburban residential development located to the northeast

b. Land uses and covertypes on the project site.

Land use or Covertypes	Current Acreage	Acreage After Project Completion	Change (Acres +/-)
• Roads, buildings, and other paved or impervious surfaces			
• Forested	0.135	0	-0.135
• Meadows, grasslands or brushlands (non-agricultural, including abandoned agricultural)			
• Agricultural (includes active orchards, field, greenhouse etc.)			
• Surface water features (lakes, ponds, streams, rivers, etc.)			
• Wetlands (freshwater or tidal)			
• Non-vegetated (bare rock, earth or fill)			
• Other Describe: Telecom Facility _____	0	0.135	+0.135

c. Is the project site presently used by members of the community for public recreation?  Yes  No  
i. If Yes: explain: \_\_\_\_\_

---

d. Are there any facilities serving children, the elderly, people with disabilities (e.g., schools, hospitals, licensed day care centers, or group homes) within 1500 feet of the project site?  Yes  No  
If Yes,  
i. Identify Facilities: \_\_\_\_\_  
\_\_\_\_\_

---

e. Does the project site contain an existing dam?  Yes  No  
If Yes:  
i. Dimensions of the dam and impoundment:  
• Dam height: \_\_\_\_\_ feet  
• Dam length: \_\_\_\_\_ feet  
• Surface area: \_\_\_\_\_ acres  
• Volume impounded: \_\_\_\_\_ gallons OR acre-feet  
ii. Dam's existing hazard classification: \_\_\_\_\_  
iii. Provide date and summarize results of last inspection: \_\_\_\_\_  
\_\_\_\_\_

---

f. Has the project site ever been used as a municipal, commercial or industrial solid waste management facility, or does the project site adjoin property which is now, or was at one time, used as a solid waste management facility?  Yes  No  
If Yes:  
i. Has the facility been formally closed?  Yes  No  
• If yes, cite sources/documentation: \_\_\_\_\_  
ii. Describe the location of the project site relative to the boundaries of the solid waste management facility: \_\_\_\_\_  
\_\_\_\_\_

---

g. Have hazardous wastes been generated, treated and/or disposed of at the site, or does the project site adjoin property which is now or was at one time used to commercially treat, store and/or dispose of hazardous waste?  Yes  No  
If Yes:  
i. Describe waste(s) handled and waste management activities, including approximate time when activities occurred: \_\_\_\_\_  
\_\_\_\_\_

---

h. Potential contamination history. Has there been a reported spill at the proposed project site, or have any remedial actions been conducted at or adjacent to the proposed site?  Yes  No  
If Yes:  
i. Is any portion of the site listed on the NYSDEC Spills Incidents database or Environmental Site Remediation database? Check all that apply:  Yes  No  
 Yes – Spills Incidents database Provide DEC ID number(s): \_\_\_\_\_  
 Yes – Environmental Site Remediation database Provide DEC ID number(s): \_\_\_\_\_  
 Neither database  
ii. If site has been subject of RCRA corrective activities, describe control measures: \_\_\_\_\_  
\_\_\_\_\_

---

iii. Is the project within 2000 feet of any site in the NYSDEC Environmental Site Remediation database?  Yes  No  
If yes, provide DEC ID number(s): \_\_\_\_\_  
iv. If yes to (i), (ii) or (iii) above, describe current status of site(s): \_\_\_\_\_  
\_\_\_\_\_

v. Is the project site subject to an institutional control limiting property uses?  Yes  No

- If yes, DEC site ID number: \_\_\_\_\_
- Describe the type of institutional control (e.g., deed restriction or easement): \_\_\_\_\_
- Describe any use limitations: \_\_\_\_\_
- Describe any engineering controls: \_\_\_\_\_
- Will the project affect the institutional or engineering controls in place?  Yes  No
- Explain: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

---

**E.2. Natural Resources On or Near Project Site**

a. What is the average depth to bedrock on the project site? \_\_\_\_\_ >6 feet

b. Are there bedrock outcroppings on the project site?  Yes  No  
 If Yes, what proportion of the site is comprised of bedrock outcroppings? \_\_\_\_\_ %

c. Predominant soil type(s) present on project site: Charlton loam \_\_\_\_\_ 100 %  
 \_\_\_\_\_ %  
 \_\_\_\_\_ %

d. What is the average depth to the water table on the project site? Average: \_\_\_\_\_ >6 feet

e. Drainage status of project site soils:  Well Drained: \_\_\_\_\_ 100 % of site  
 Moderately Well Drained: \_\_\_\_\_ % of site  
 Poorly Drained \_\_\_\_\_ % of site

f. Approximate proportion of proposed action site with slopes:  0-10%: \_\_\_\_\_ % of site  
 10-15%: \_\_\_\_\_ % of site  
 15% or greater: \_\_\_\_\_ 100 % of site

g. Are there any unique geologic features on the project site?  Yes  No  
 If Yes, describe: \_\_\_\_\_  
 \_\_\_\_\_

h. Surface water features.

i. Does any portion of the project site contain wetlands or other waterbodies (including streams, rivers, ponds or lakes)?  Yes  No

ii. Do any wetlands or other waterbodies adjoin the project site?  Yes  No

If Yes to either i or ii, continue. If No, skip to E.2.i.

iii. Are any of the wetlands or waterbodies within or adjoining the project site regulated by any federal, state or local agency?  Yes  No

iv. For each identified regulated wetland and waterbody on the project site, provide the following information:

- Streams: Name NA Classification \_\_\_\_\_
- Lakes or Ponds: Name NA Classification \_\_\_\_\_
- Wetlands: Name NA Approximate Size \_\_\_\_\_
- Wetland No. (if regulated by DEC) NA

v. Are any of the above water bodies listed in the most recent compilation of NYS water quality-impaired waterbodies?  Yes  No  
 If yes, name of impaired water body/bodies and basis for listing as impaired: \_\_\_\_\_  
 Small wetland area approx 140 feet from the Project Site.

---

i. Is the project site in a designated Floodway?  Yes  No

j. Is the project site in the 100 year Floodplain?  Yes  No

k. Is the project site in the 500 year Floodplain?  Yes  No

l. Is the project site located over, or immediately adjoining, a primary, principal or sole source aquifer?  Yes  No  
 If Yes:  
 i. Name of aquifer: \_\_\_\_\_

<p>m. Identify the predominant wildlife species that occupy or use the project site:  The Project Site consists of _____ the Project Site is located in the vicinity _____  undisturbed natural forested habitat. _____ of the Indiana Bat and the Northern _____  Based upon a review of available data _____ Long-eared Bat. (see "o" below)</p>	
<p>n. Does the project site contain a designated significant natural community? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  If Yes:</p> <p>i. Describe the habitat/community (composition, function, and basis for designation): _____</p> <p>ii. Source(s) of description or evaluation: _____</p> <p>iii. Extent of community/habitat:</p> <ul style="list-style-type: none"> <li>• Currently: _____ acres</li> <li>• Following completion of project as proposed: _____ acres</li> <li>• Gain or loss (indicate + or -): _____ acres</li> </ul>	
<p>o. Does project site contain any species of plant or animal that is listed by the federal government or NYS as endangered or threatened, or does it contain any areas identified as habitat for an endangered or threatened species? <span style="float: right;"><input checked="" type="checkbox"/> Yes <input type="checkbox"/> No</span></p>	
<p>The Project Site is in the vicinity of the Indiana Bat (Endangered) and the Northern Long-eared Bat (Threatened). It should be noted, no critical habitat was identified, however, as the area is wooded it is recommended that tree clearing be restricted from April 1 to October 30 to avoid potential roosting bats.</p>	
<p>p. Does the project site contain any species of plant or animal that is listed by NYS as rare, or as a species of special concern? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span></p>	
<p>Based on EBI's review of these resources, the Project Site is located is within the immediate vicinity of NYS listed "Rare Plants or Animals". Therefore, further consultation with the NYDEC is required.</p>	
<p>q. Is the project site or adjoining area currently used for hunting, trapping, fishing or shell fishing? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  If yes, give a brief description of how the proposed action may affect that use: _____</p>	
<p><b>E.3. Designated Public Resources On or Near Project Site</b></p>	
<p>a. Is the project site, or any portion of it, located in a designated agricultural district certified pursuant to Agriculture and Markets Law, Article 25-AA, Section 303 and 304? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  If Yes, provide county plus district name/number: _____</p>	
<p>b. Are agricultural lands consisting of highly productive soils present? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  i. If Yes: acreage(s) on project site? _____  ii. Source(s) of soil rating(s): _____</p>	
<p>c. Does the project site contain all or part of, or is it substantially contiguous to, a registered National Natural Landmark? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  If Yes:  i. Nature of the natural landmark: <input type="checkbox"/> Biological Community <input type="checkbox"/> Geological Feature  ii. Provide brief description of landmark, including values behind designation and approximate size/extent: _____</p>	
<p>d. Is the project site located in or does it adjoin a state listed Critical Environmental Area? <span style="float: right;"><input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</span>  If Yes:  i. CEA name: _____  ii. Basis for designation: _____  iii. Designating agency and date: _____</p>	

**617.20**  
**Appendix B**  
**State Environmental Quality Review**  
**VISUAL EAF ADDENDUM**

This form may be used to provide additional information relating to Question 11 of Part 2 of the Full EAF.

(To be completed by Lead Agency)

<b>Visibility</b>	<b>Distance Between Project and Resource (in Miles)</b>				
1. Would the project be visible from:	0 - ¼	¼ - ½	½ - 3	3 - 5	5+
! A parcel of land which is dedicated to and available to the public for the use, enjoyment and appreciation of natural or man-made scenic qualities? Baldwin Meadows Park	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
! An overlook or parcel of land dedicated to public observation, enjoyment and appreciation of natural or man-made scenic qualities? Baldwin Meadows Park	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
! A site or structure listed on the National or State Registers of Historic Places?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
! State Parks? Donald J. Trump State Park	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
! The State Forest Preserve? California Hill State Forest	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
! National Wildlife Refuges and State Game Refuges? Woods-Trout Wildlife Refuge	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
! National Natural Landmarks and other outstanding natural features? Iona Island Marsh	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
! National Park Service lands? Weir Farm National Historic Site	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
! Rivers designated as National or State Wild, Scenic or Recreational? Delaware Wild and Scenic River	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
! Any transportation corridor of high exposure, such as part of the Interstate System, or Amtrak? US Route 6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
! A governmentally established or designated interstate or inter-county foot trail, or one formally proposed for establishment or designation? Tactonic State Parkway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
! A site, area, lake, reservoir or highway designated as scenic? Tactonic State Parkway	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
! Municipal park, or designated open space? Baldwin Meadows Park	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
! County road?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
! State road? US Route 6	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
! Local road? Walton Drive	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Is the visibility of the project seasonal? (i.e., screened by summer foliage, but visible during other seasons)					
<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
3. Are any of the resources checked in question 1 used by the public during the time of year during which the project will be visible?					
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					



**DESCRIPTION OF EXISTING VISUAL ENVIRONMENT**

4. From each item checked in question 1, check those which generally describe the surrounding environment.

	*1/4 mile	Within	*1 mile
Essentially undeveloped	<input type="checkbox"/>		<input type="checkbox"/>
Forested	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Agricultural	<input type="checkbox"/>		<input type="checkbox"/>
Suburban Residential	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Industrial	<input type="checkbox"/>		<input type="checkbox"/>
Commerical	<input type="checkbox"/>		<input checked="" type="checkbox"/>
Urban	<input type="checkbox"/>		<input type="checkbox"/>
River, Lake, Pond	<input checked="" type="checkbox"/>		<input type="checkbox"/>
Cliffs, Overlooks	<input type="checkbox"/>		<input type="checkbox"/>
Designated Open Space	<input type="checkbox"/>		<input type="checkbox"/>
Flat	<input type="checkbox"/>		<input checked="" type="checkbox"/>
Hilly	<input type="checkbox"/>		<input type="checkbox"/>
Mountainous	<input type="checkbox"/>		<input type="checkbox"/>
Other	<input type="checkbox"/>		<input type="checkbox"/>

**NOTE:** add attachments as needed

5. Are there visually similar projects within:

\*1/2 mile  Yes  No    1 mile  Yes  No    2 miles  Yes  No    3 miles  Yes  No

\*Distance from project site is provided for assistance. Substitute other distances as appropriate.

**EXPOSURE**

6. The annual number of viewers likely to observe the proposed project is 11800?

**NOTE:** When user data is unavailable or unknown, use best estimate.

\*The annual number of viewers is based on data obtained from <https://gis3.dot.ny.gov/html5viewer/?viewer=tdv>. Data from NYS Traffic Data Viewer provides Average Daily Traffic counts for Union Valley Road, Lovell Street, and the surrounding neighborhoods bound by Union Valley Road, Lovell Street, Lake Shore Drive N, and Tulip Road, in the vicinity of the project.

**CONTEXT**

7. The situation or activity in which the viewers are engaged while viewing the proposed action is:

**FREQUENCY**

Activity	Daily	Weekly	Holidays/ Weekends	Seasonally
Travel to and from work	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Involved in recreational activities	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Routine travel by residents	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At a residence	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
At worksite	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Reset

**Maple Hill Estates, H.O.A. Inc.**

c/o Home Management Co.  
137 Mitchell Road  
Somers, NY 10589

**Letter of Authorization**

**Municipality:** Town of Carmel  
**Tax Parcel:** 87.5-1-90

Re: Owner Authorization

Maple Hill Estates Homeowners Association, Inc. the owner ("Owner") of the property identified as Maple Hill Estates, Maple Hill Road, Mahopac, NY 10541, Tax Parcel ID# 87.5-1-90 in the Town of Carmel, County of Putnam, State of New York, (the "Property") hereby authorizes Homeland Towers, LLC., ("Homeland") its agents, contractors and representatives as Owner's agents for the purpose of filing , executing and completing any application with the Town of Carmel and to obtain approvals necessary to permit Homeland's construction and operation of a wireless telecommunications facility on the Property.

Signature of Owner: *Y*

By: *Mary R. Tyson*

Name: Mary Tyson  
Title: President  
Date: *5/12/2018*

**MARLEN MESSINA**  
No. 01ME6210341  
Notary Public, State of New York  
Qualified in Putnam County  
My Commission Expires 08/17/20*21*

Sworn to before me

This *12<sup>th</sup>* day of *May*, 2018

*[Signature]*  
Notary Public



HOMELAND TOWERS

Honorable Chairman  
and Members of the Planning Board  
Town of Carmel Town Hall  
60 McAlpin Avenue  
Mahopac, New York 10541

Re: Site Plan and Special Permit Application for  
Walton Drive, Mahopac, New York  
**Co-location commitment letter**

Dear Hon. Chairman Paepre and Members of the Planning Board:

As owner of the above referenced proposed tower and as required under §156-62(F)(1)(s) of the Town of Carmel Code, Homeland Towers, LLC ("Homeland Towers") hereby consents to allow additional antennas (for purposes of collocating) on any new antenna towers, if feasible.

Very truly yours,  
Homeland Towers, LLC

By:   
Name: Manuel J. Vicente  
Title: President

**OPINION LETTER**

December 31, 2019

Christine Vergati  
Homeland Towers, LLC  
9 Harmony Street, 2<sup>nd</sup> Floor  
Danbury, CT 06810



RE: **NY054 – Glencoma Lake, NY Airspace Analysis**  
**Latitude (NAD-83): 41° 20' 56.88" N**  
**Longitude (NAD-83): 73° 43' 49.94" W**  
**Ground Elevation: 741.0 ft AMSL**  
**Tower tip height: 140.0 ft AGL**  
**Overall height: 881.0 ft AMSL**

Dear Ms. Vergati,


Our airspace analysis results for the NY054 – Glencoma Lake, NY site are as follows:

1. **Filing an FAA Form 7460-1 is not required for the proposed tower height of 140.0 ft AGL (881.0 ft AMSL). The maximum allowable height for not filing an FAA Form 7460-1 is 200 ft.**
2. **FCC's TOWAIR Determination indicates that this structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided. The maximum allowable height is for not filing for an ASR is 200 ft AGL.**
3. The FAA Form 7460-1 for NY054 – Glencoma Lake, NY at 140.0 ft AGL was not filed as of January 1, 2020.
4. The proposed site is 10.897 nm West from the nearest public landing facility – DXR: Danbury Muni. At an overall height of 881.0 ft AMSL, it does not exceed FAR 77.9 (a) or FAR 77.9 (b) Notice Criteria for DXR airport. This airport has both Circling and Straight-In Instrument approach procedures. It does not exceed any glide slopes of DXR airport. DXR: Danbury Muni is an airport type landing facility and it is associated with the city of Danbury, CT.
5. The proposed site is not within any of the instrument approach procedures of DXR airport.
6. The nearest private landing facility is 96NY: Massaro, which is a heliport type landing facility not eligible for study under FAR Part 77 sub-Part C. It is 2.05 nm North from the proposed site.
7. The proposed 140.0 ft AGL tower would not adversely affect low altitude en route airways and/ or VFR routes in the area.
8. The nearest AM tower is WLNA, which is 10.05 mi (16174 meters) away bearing 253.78°. WLNA AM is operating a directional type antenna system. As noted per the FCC AM Tower Locator and per FCC regulation 13-115, Section 1.30002, the structure will not require a "Proof of Performance" measurement study before and after construction.
9. Marking and lighting are not required for the proposed tower height of 140.0 ft AGL.
10. All Wireless Applications Corp. analyses are based on the latest AIRSPACE, FAA Notice Criteria Tool and FCC TOWAIR programs.

If you have any questions, please do not hesitate to call.

Thank you.

Ronald W. Lageson, Jr.  
425-643-5000 (office)  
425-649-5675 (fax)

Telecom Engineering 

The Site Sync Platform 



December 23, 2019

Klaus Wimmer  
Homeland Towers, LLC  
9 Harmony Street, 2nd Floor  
Danbury, CT 06810

*Re: Wetland Delineation  
Walton Drive Site  
Town of Carmel, Putnam County, New York*

Dear Klaus:

Ecological Solutions, LLC completed a wetland delineation at the rear and center of the site in accordance with the Army Corps of Engineers (USACE) Wetlands Delineation Manual (January 1987), Routine Determination Method and recent Northcentral/Northeast supplement during April 2018. Federal wetlands and waters of the US do not contain any regulated buffer area. There is no New York State Department of Environmental Conservation (NYSDEC) regulated wetland in the project area however there is a NYSDEC regulated wetland in the vicinity of the project area being about 1,060 ft west of any area of disturbance for the proposed communications tower facility. The NYSDEC in an email dated October 16, 2019 stated that there is no NYSDEC regulated wetland or Adjacent Area on the property. The Town of Carmel also has a wetland law - Chapter 89 and imposes a 100 foot regulated buffer to the wetland boundary.

Federal and Town wetlands were delineated based upon the identification of the three mandatory criteria for wetland determination as outlined in the 1987 Federal Manual and supplement: dominant hydrophytic vegetation, hydric soils, and evidence of wetland hydrology. The Routine Methodology procedure for wetland determination was used. Transects consisting of at several sample points were walked. Dominant vegetation around each sample point was identified and its percent cover quantified. The areas were checked in detail for the presence of wetland hydrologic indicators. Soil profiles were then observed and characterized at each point.

The detailed field investigation included:

1. Identification of vegetation species to determine whether there was a dominance of hydrophytic plants and areas containing transitional but primarily wetland-oriented species.
2. Determination of soil features for hydric (poorly and very poorly drained) natural soils.
3. Observation of site features displaying evidence of wetland hydrology based on the presence of inundated areas, apparent high seasonal water tables, and evidence of saturation within 12 inches of the surface (considered the root zone) during sufficient periods during the growing season to provide for anaerobic/hydric soil conditions.

The federal and Town wetlands delineated on the site are best classified as a hillside seep and drainage ditches.

The wetlands delineated in the project area are depicted on the map entitled, "Partial Boundary and Topographic Survey" Sheet VB-102 prepared by Langan Engineering & Surveying and dated April 10, 2018. Based on this delineation no NYSDEC, Federal or Town wetland or watercourse permits are required.

If you need any additional information, please contact me.

Sincerely,  
ECOLOGICAL SOLUTIONS, LLC

A handwritten signature in cursive script, appearing to read "Michael Nowicki".

Michael Nowicki  
Biologist

## Klaus Wimmer

---

**From:** Fisher, Joshua M (DEC) <Joshua.Fisher@dec.ny.gov>  
**Sent:** Wednesday, October 16, 2019 3:43 PM  
**To:** Klaus Wimmer  
**Cc:** Michael Nowicki  
**Subject:** RE: NY054 Glencoma Lake - Walton Drive, Mahopac, NY

**Categories:** Red Category

Correct, I don't need to inspect it...unless you plan on working about 1,000 feet to the west.

### Josh Fisher

Biologist, Bureau of Ecosystem Health  
**New York State Department of Environmental Conservation**  
21 South Putt Corners Rd., New Paltz, NY 12561  
Office: (845) 256-3113 | [joshua.fisher@dec.ny.gov](mailto:joshua.fisher@dec.ny.gov)  
Cell: (845) 220-8570

[www.dec.ny.gov](http://www.dec.ny.gov) |  | 

**From:** Klaus Wimmer <kw@homelandtowers.us>  
**Sent:** Wednesday, October 16, 2019 3:26 PM  
**To:** Fisher, Joshua M (DEC) <Joshua.Fisher@dec.ny.gov>  
**Cc:** Michael Nowicki <ecolsol@aol.com>  
**Subject:** RE: NY054 Glencoma Lake - Walton Drive, Mahopac, NY

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Thanks Josh, so it's a Town wetland and does that mean you don't need to inspect it ?

*Klaus Wimmer*

Regional Manager



HOMELAND TOWERS

9 Harmony Street, 2<sup>nd</sup> Floor  
Danbury, CT 06810  
**Office:** (203) 297-6345 | **Cell:** (201) 289-6750  
**Email:** [kw@homelandtowers.us](mailto:kw@homelandtowers.us)

This message originates from the firm of Homeland Towers, LLC. The information contained in this e-mail and any files transmitted with it may be a confidential communication or may otherwise be privileged and confidential and part of the work product doctrine. If the reader of this message, regardless of the address or routing, is not an intended recipient, you are hereby notified that you have received this transmittal in error and any review, use, distribution, dissemination or copying is strictly prohibited. If you have received this message in error, please delete this e-mail and all files transmitted with it from your system and immediately notify Homeland Towers, LLC by sending a reply e-mail to the sender of this message. Thank you.

**From:** Fisher, Joshua M (DEC) <Joshua.Fisher@dec.ny.gov>  
**Sent:** Wednesday, October 16, 2019 3:24 PM  
**To:** Klaus Wimmer <kw@homelandtowers.us>

Cc: Michael Nowicki <[ecolsol@aol.com](mailto:ecolsol@aol.com)>

Subject: RE: NY054 Glencoma Lake - Walton Drive, Mahopac, NY

Hi Klaus, the wetland shown on your plan is not a NYSDEC regulated wetland.

### Josh Fisher

Biologist, Bureau of Ecosystem Health

New York State Department of Environmental Conservation

21 South Putt Corners Rd., New Paltz, NY 12561

Office: (845) 256-3113 | [joshua.fisher@dec.ny.gov](mailto:joshua.fisher@dec.ny.gov)

Cell: (845) 220-8570

[www.dec.ny.gov](http://www.dec.ny.gov) |  | 

From: Klaus Wimmer <[kw@homelandtowers.us](mailto:kw@homelandtowers.us)>

Sent: Wednesday, October 16, 2019 11:01 AM

To: Fisher, Joshua M (DEC) <[Joshua.Fisher@dec.ny.gov](mailto:Joshua.Fisher@dec.ny.gov)>

Cc: Michael Nowicki <[ecolsol@aol.com](mailto:ecolsol@aol.com)>

Subject: NY054 Glencoma Lake - Walton Drive, Mahopac, NY

*ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.*

Hi Josh,

We have another tower project in Carmel that has a little wetland (runoff from an underground water tank overflow) on the property that I was hoping you can inspect. Mike was out to flag it several months ago. Attached please see the delineation survey and site plan. As you can see we are well over 100' from the wetland. The survey is signed & sealed and I'll bring the originals to the visit. Please let me know if you need the surveyor to sign the validation block first or after your visit.

Please let me know when you're in the area and can take a look at this

Thanks

*Klaus Wimmer*

Regional Manager



HOMELAND TOWERS

9 Harmony Street, 2<sup>nd</sup> Floor

Danbury, CT 06810

Office: (203) 297-6345 | Cell: (201) 289-6750

Email: [kw@homelandtowers.us](mailto:kw@homelandtowers.us)

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HOMELAND TOWERS

January 21, 2020

Honorable Chairman Paepre and  
Members of the Planning Board  
Town of Carmel  
60 McAlpin Avenue  
Mahopac, NY 10541

RE: Application for site plan and special permit approval for  
Glencoma Lake: Walton Drive, Mahopac, New York

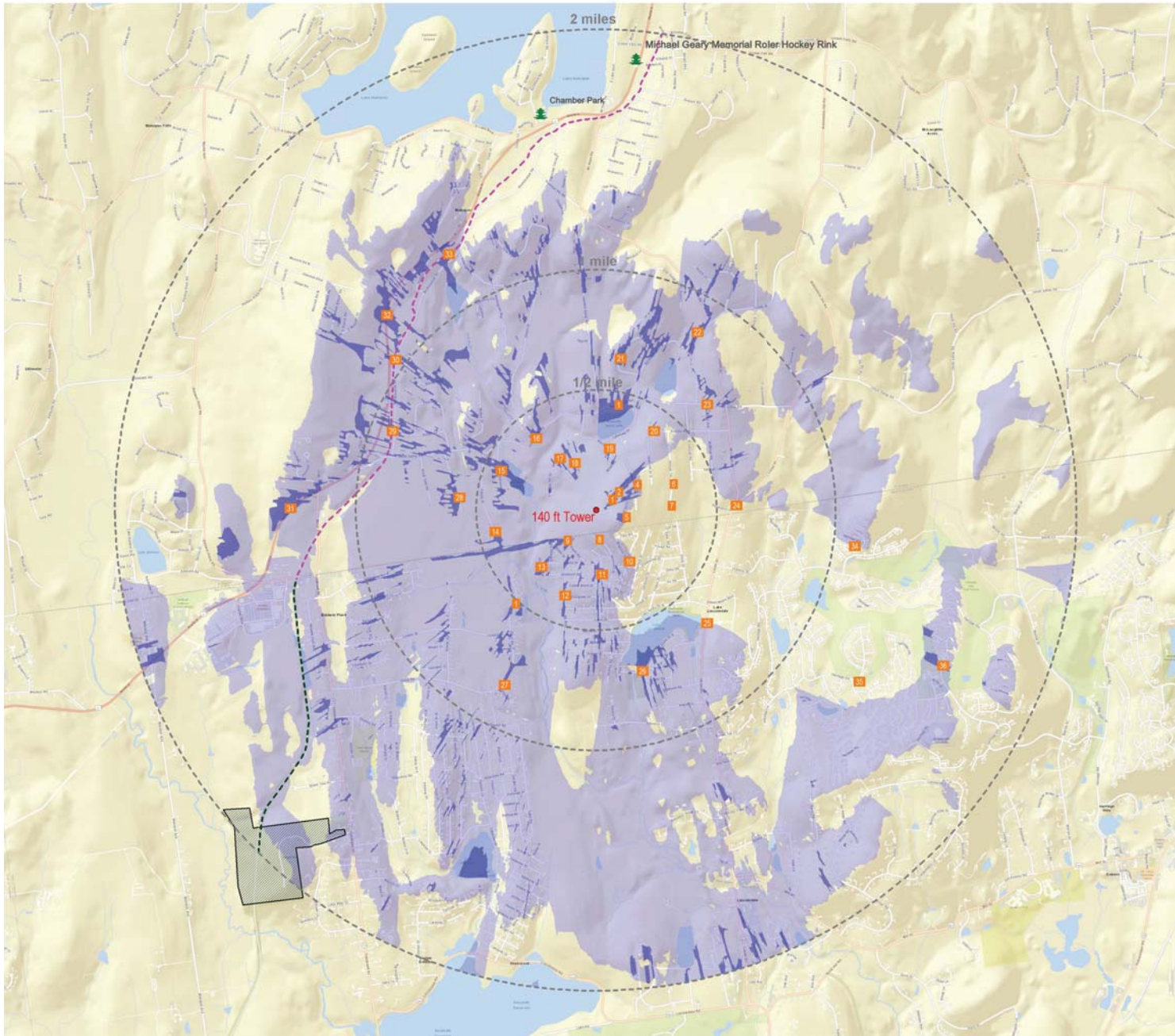
Hon. Chairman Paepre and Members of the Planning Board:

I am the Regional Manager for Homeland Towers, LLC. In connection with our request for site plan and special permit approval to locate a public utility wireless telecommunications facility ("Facility") at the above captioned property ("Property"). I would like to propose the following balloon and drive test schedule. The proposed Facility consists of a 140-foot monopole and a 30'x 85' fenced compound. The Property is located in the Residential Zone District where the Facility is permitted in accordance with Section 156-062 of the Town of Carmel Zoning Code.

1. Balloon tests will be conducted for 6 days, starting with Friday February 14, 2020, Saturday February 15, 2020, Monday February 17, 2020, Friday February 21, 2020, Saturday February 22, 2020 and Monday February 24, 2020. In case of inclement weather on any of the foregoing days, balloon tests will be conducted on the next Friday, Saturday and Monday dates until 6 days are completed. The balloon test will be conducted starting at approximately 8 am until 12 pm.
2. A full Visual Resource Evaluation will be submitted, including photographic renderings. Photographs will be taken from the viewpoints on the attached Viewshed maps, as well as any location reasonably requested by the Planning Board in advance of the first test.
3. A drive test using a crane to obtain signal data will be conducted on February \_\_\_\_, 2020. The test will be conducted at 3 heights, being 140, 120 and 100 feet above ground level. The signal data will be presented to the Planning Board and its consultant.

Thank you for your consideration. Please contact me with any questions or for additional information.

Klaus Wimmer, Regional Manager  
Homeland Towers, LLC  
(203) 297-6345



**LEGEND**

- Bare Earth Viewshed Area  
(Excludes existing vegetation and structures)
- Land Cover Viewshed Area  
(Includes existing vegetation and structures)
- Recommended Photo Location

**Scenic Resources**

- Municipal Recreation Area
- NYS Trails
- Putnam Trailway
- Municipal Park

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Bare Earth" condition overlay identifies areas where the proposed telecommunications tower high point may be visible without consideration of the screening effect of existing vegetation or built structures. Bare earth analysis is provided to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. This topography-only viewshed map is not representative of project visibility during winter season leaf-off conditions.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthoimagery. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.

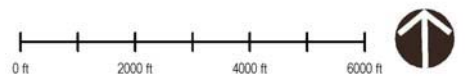
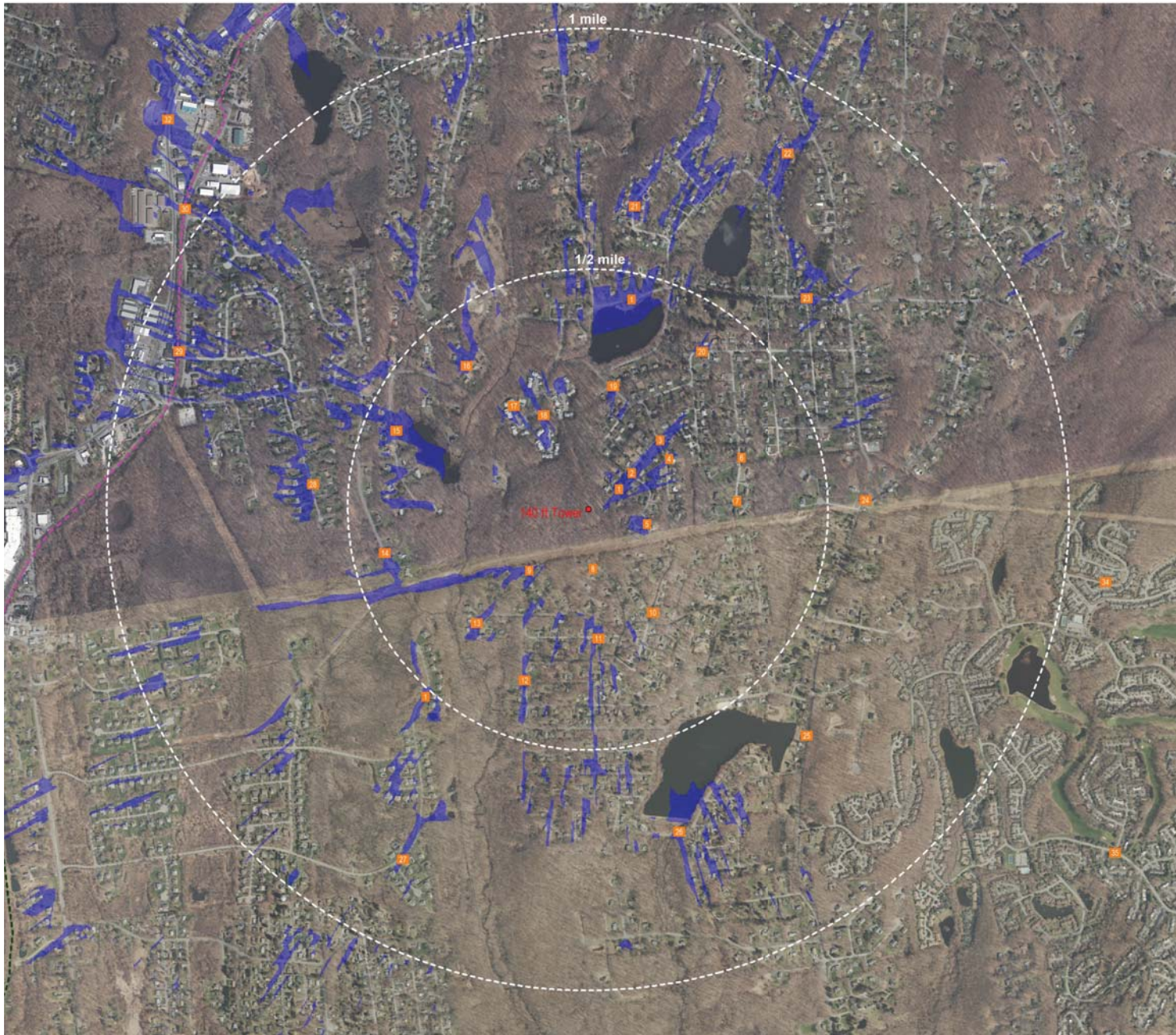


FIGURE A1  
PHOTO LOCATION/VIEWSHED MAP - 2 MILE RADIUS  
Visual Resource Assessment  
Proposed Telecommunications Tower



Glencoma Lake Site (NY054)  
Walton Drive  
Mahopac, NY



**LEGEND**

- Land Cover Viewshed Area  
(Includes existing vegetation and structures)
- Recommended Photo Location

**Scenic Resources**

- Putnam Trailway

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthomagey. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.



FIGURE A2  
PHOTO LOCATION/VIEWSHED MAP - 1 MILE RADIUS  
Visual Resource Assessment  
Proposed Telecommunications Tower



Glencoma Lake Site (NY054)  
Walton Drive  
Mahopac, NY



January 21, 2020

Honorable Chairman Paepre and  
Members of the Planning Board  
Town of Carmel  
60 McAlpin Avenue  
Mahopac, NY 10541

RE: Area analysis of feasibility of alternate existing structure sites or collocation opportunities

Hon. Chairman Paepre and Members of the Planning Board:

I am the Regional Manager for Homeland Towers, LLC. I was responsible for identifying a suitable location for a telecommunications facility that would remedy the significant gap in reliable wireless service throughout the southern portion of Carmel in the vicinity and along Union Valley Road and adjoining residential areas.

In consultation with Verizon Wireless based on its siting needs in the area, I began exploring the area in the vicinity of the proposed site for a facility location taking into account the Town's Zoning Code, collocation opportunities, land uses, potential environmental impacts, leasing and construction feasibility.

Town Code Section 156-62. I. establishes a priority ranking for the location of wireless telecommunications facilities and requires that: *"Applicants for wireless telecommunications facilities shall locate, site and erect said wireless telecommunications facilities, including towers and other tall structures, in accordance with the following priorities, one being the highest priority and six being the lowest priority"*.

*Priority 1. On existing tall structures or wireless telecommunications towers in nonresidential zoning districts*

I performed a review of the Town's zoning map and a series of field visits to determine if there were any "existing tall structure or wireless telecommunications towers in a nonresidential zoning district" and found that the only existing tall structure is a 81' tall stealth tower, approximately 1.15 miles to the west located at 195 Route 6, Mahopac. This existing tower is too close (about 0.6 miles) from an existing Verizon Wireless roof top installation at 361 Route 6, and about 0.5 miles from an existing Verizon Wireless site at 80 Route 6, Somers, NY. There are no other existing tall structures in nonresidential zoning districts (see Exhibit A)

*Priority 2. Collocation on a site with existing wireless telecommunications towers or structures in nonresidential districts, not fronting on NYS Routes 6, 6N, 52 and 301*



## HOMELAND TOWERS

I performed a detailed review of the Town's zoning map and series of field visits to determine if there were any existing wireless communication towers or tall structures in non-residential zoning districts not fronting on NYS Routes 6, 6N, 52 and 301 that would be suitable for collocation. Based on my review there is no structure that meets this criteria within a 2 mile radius of the proposed site. (see Exhibit B)

*Priority 3. Collocation on a site with existing wireless telecommunications towers or structures in any other nonresidential districts*

I performed a detailed review of the Town's zoning map and series of in-depth field surveys to determine if there were any existing wireless communication towers or tall structures in any other non-residential zoning districts that would be suitable for collocation. Based on my review there is no structure that meets these criteria within a 2-mile radius of the proposed site. (see Exhibit C)

*Priority 4: Installation of a new wireless telecommunications facility in any nonresidential district*

I reviewed the Town's zoning map to determine the location of a "non-residential zoning district" suitable for the installation of a new wireless communications facility that would provide coverage for Verizon's service gap. The closest nonresidential zoned property is located at 24 Miller St, Parcel ID 86.11-1-14 approximately 0.7 miles west from the proposed site that is zoned "Commerce/Business Park". An analysis of this location determined that it was about 0.75 miles from existing Verizon Wireless sites at 361 Route 6 Mahopac and an existing site at 80 Route 6, Somers and due to this proximity not suitable for the installation of a new wireless communications facility. In addition, the eastern part of this property slopes downhill to an elevation of about 600 ft above sea level, which is approximately 140 ft lower in elevation than the proposed location. (see Exhibits D, D1, D-2 )

*Priority 5. Installation of a new wireless telecommunications facility in any residential district*

Having explored all the required higher priority locations, I finally evaluated potential locations in a "residential" zoning district and utilized the Putnam County GIS online mapping service and the Towns zoning map to identify what if any residential zoned properties might be suitable. In particular I selected properties based on zoning code regulations, the location of existing on-air sites, size and acreage, distance from residences, environmental impact considerations, constructability and elevation. I identified the following residential zoned properties; the location of the identified properties is shown on the tax map attached as Exhibit E:

- A. 200 Union Valley Rd, Mahopac, Tax parcel # 76.17-1-28. This 34 acre vacant property is owned by Parent Estate, PO Box 396, Mahopac, NY 10541. A certified letter was sent on October 2, 2017. The certified letter was returned unclaimed. I follow up letter with regular mail was sent on November 2, 2017. Copies of the letters are attached in Exhibit F. I never received a response to my letter.
- B. 55 Fenwood Rd, Mahopac, Tax parcel # 76.18-2-56 This 9.3 acre property is owned by David & Dielle Simajlaj, same address. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. I never received a response to my letter.



HOMELAND TOWERS

- C. 74 Teakettel Spout Rd, Mahopac, Tax parcel # 76.17-2-2. This 15.2 acre property is owned by Jeffrey & Debra Kessler, same address. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. Mr. Kessler responded by phone to my letter and expressed an initial interest. I followed up with him by phone and he stated that he would discuss it with his family. I followed up with him a couple times, but he never responded to my calls.
- D. 45 Margaret Rd, Mahopac, Tax parcel# 87.7-1-24. This 43 acre property is owned by Kenneth Sullivan & Sean Kelly 1524 Broad St, North Bellmore, NY 11710. A certified letter was sent on October 2 and October 23, 2017. A copy of the letter is attached in Exhibit F. Mr. Sullivan responded to the letter and expressed initial interest, however he did not respond to my subsequent follow up calls.
- E. 545 Union Valley Rd, Mahopac, NY 10541, Tax Parcel ID# 87.7-1-7. This 74 acre parcel is owned by Willow Wood Rifle and Pistol Club at 551 Union Valley Rd, Mahopac, NY 10541. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. I visited the club as a follow up to the letter and discussed this proposal with the Club President Mr. Calcagnini. The Club was interested in our proposal but it was subsequently determined that the location was too far east and would not provide coverage for the service gap.
- F. 78 Englewood Terrace, Mahopac, Tax# 76.19-1-55. This 25 acre parcel is owned by Vincent Perrone, 7 Vails Ln, Katonah NY 10536. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. I never received a response to my letter.
- G. Maple Hill Dr, Mahopac, Parcel ID # 87.5-1-90. This 70 acre property is owned by and are the common lands of the Maple Hill Estates Home Owners Association, Inc, and is subject to this application.

Based on the above limitations, the local topography, existing site locations and coverage objective, the number of available properties was extremely limited. The only property that was interested in leasing space and that also provides coverage for the service gap, is the subject site. Since this site is approved by Verizon Wireless, Homeland Towers, LLC entered into an agreement with the property owner and is seeking a Special Permit for the site.

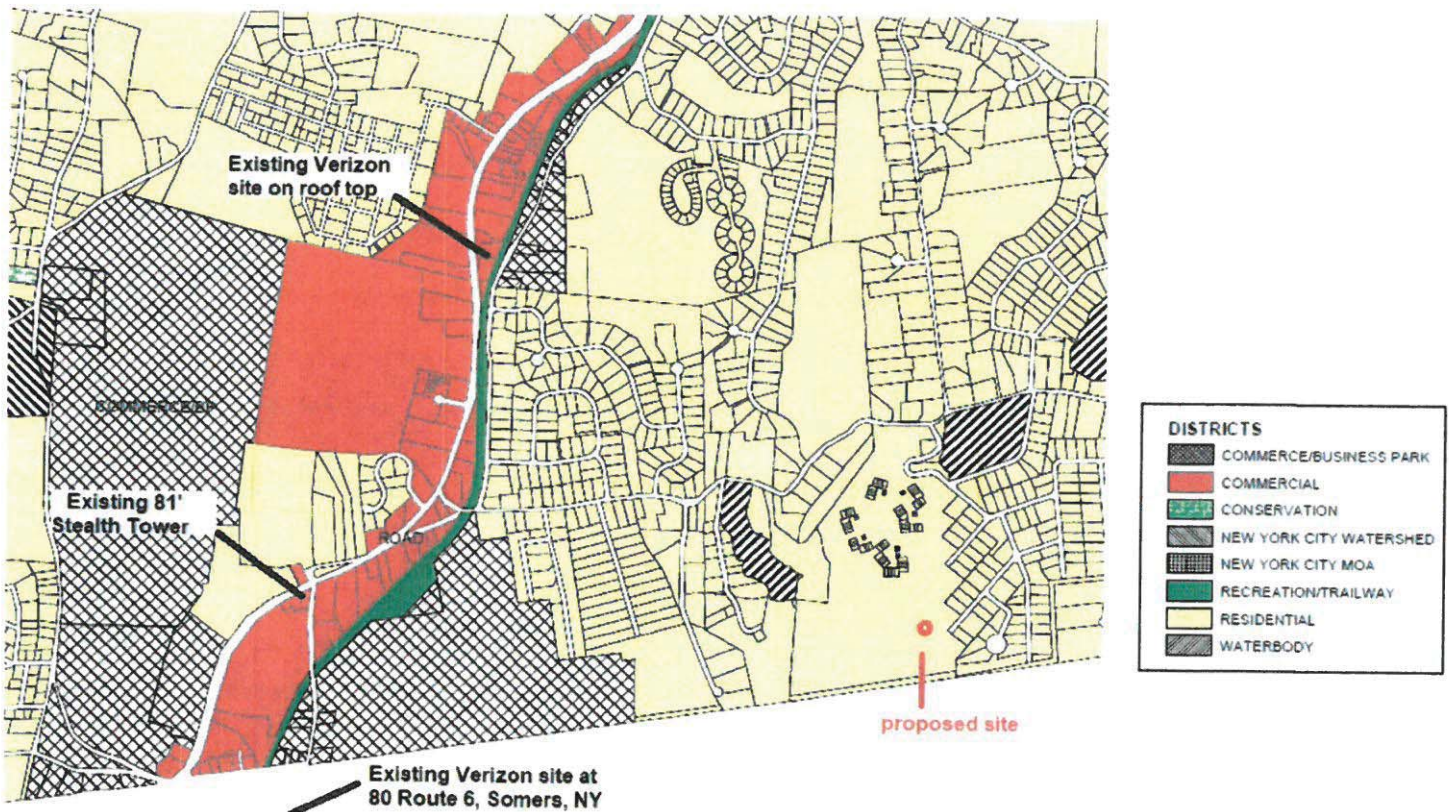
In conclusion, there are no existing structures or collocation opportunities at higher priority ranked locations as an alternative for the proposed facility. Based on its location and the surrounding area, including the Zoning Code requirements, the proposed site is the least intrusive alternative to remedy Verizon Wireless' significant gap in service.

Respectfully,

Klaus Wimmer  
Regional Manager  
Homeland Towers, LLC.

## EXHIBIT A

Priority 1. On existing tall structures or wireless telecommunications towers in nonresidential zoning districts

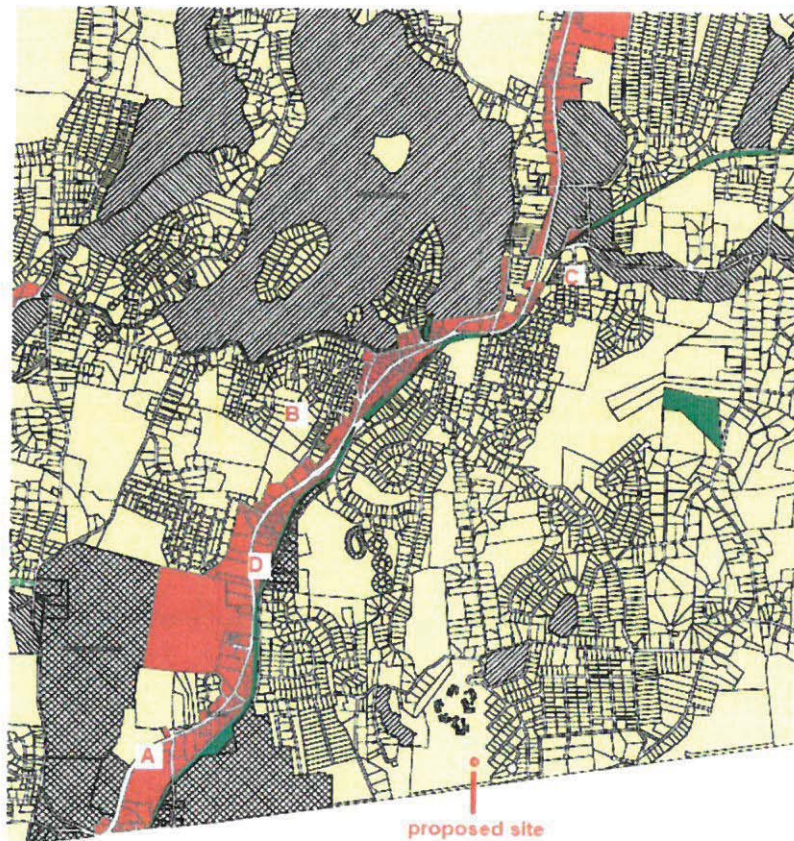


Existing 81' stealth tower structure in Commercial Zone, approximately 1.15 miles west of the proposed site at 195 Route 6, Mahopac. Verizon Wireless is also located on a roof top at 361 Route 6 Mahopac, and at 80 Route 6, Somers, NY. There are no other existing tall structures in nonresidential zoning districts.

## EXHIBIT B

Priority 2: Colocation on existing wireless telecommunications towers or structures in nonresidential districts, not fronting on NYS Routes 6, 6N, 52 and 301

This zoning map shows the locations of all existing wireless telecommunications towers or structures in both nonresidential and residential districts



A: existing 81 ft Tower in commercial zone at 195 Route 6

B: existing 195 ft Tower in residential zone 51 Crest Drive

C: existing 120 ft Tower in residential zone at 55 McAlpin Ave.

D: existing Verizon roof top installation (+/- 30 ft) at 361 Route 6.

### DISTRICTS

- COMMERCE/BUSINESS PARK
- COMMERCIAL
- CONSERVATION
- NEW YORK CITY WATERSHED
- NEW YORK CITY MOA
- RECREATION/TRAILWAY
- RESIDENTIAL
- WATERBODY

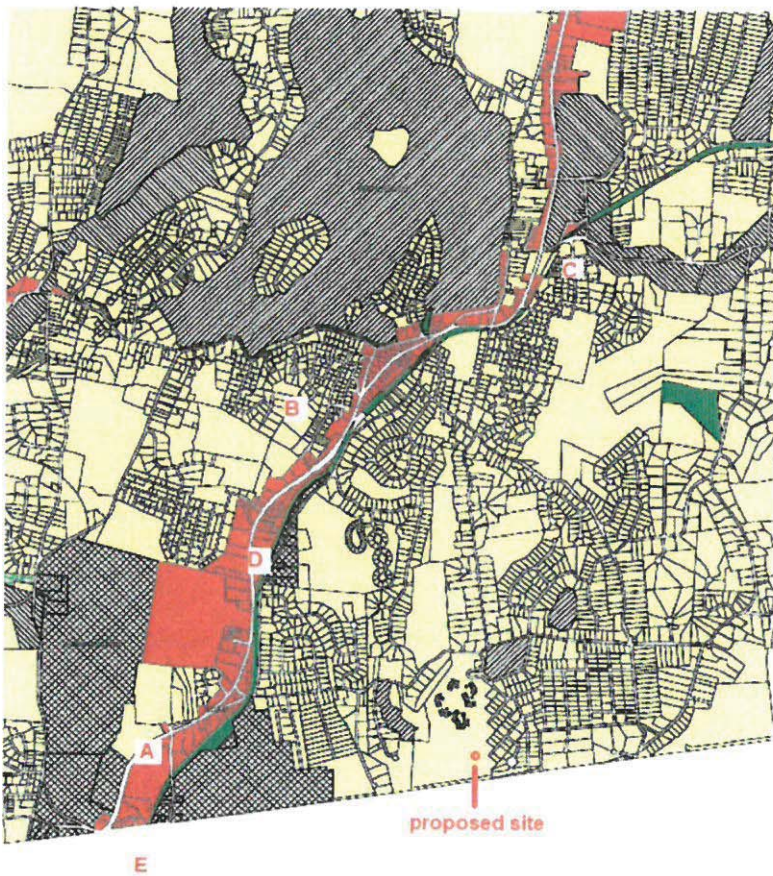
Based on my review there are no existing wireless telecommunications towers or structures in nonresidential districts not fronting on NYS Routes 6, 6N, 52 and 301 within a 1-2 mile radius of the proposed site.



## EXHIBIT C

Priority 3. Collocation on a site with existing wireless telecommunications towers or structures in any other nonresidential districts

This zoning map shows the locations of all existing wireless telecommunications towers or structures on both nonresidential and residential districts



A: existing 81 ft Tower in commercial zone at 195 Route 6

B: existing 195 ft Tower in residential zone 51 Crest Drive

C: existing 120 ft Tower in residential zone at 55 McAlpin Ave.

D: existing Verizon roof top installation (+/- 30 ft ) at 361 Route 6.

E. existing Verizon site at 80 Route 6, Somers, NY.

### DISTRICTS

	COMMERCE/BUSINESS PARK
	COMMERCIAL
	CONSERVATION
	NEW YORK CITY WATERSHED
	NEW YORK CITY MOA
	RECREATION/TRAILWAY
	RESIDENTIAL
	WATERBODY

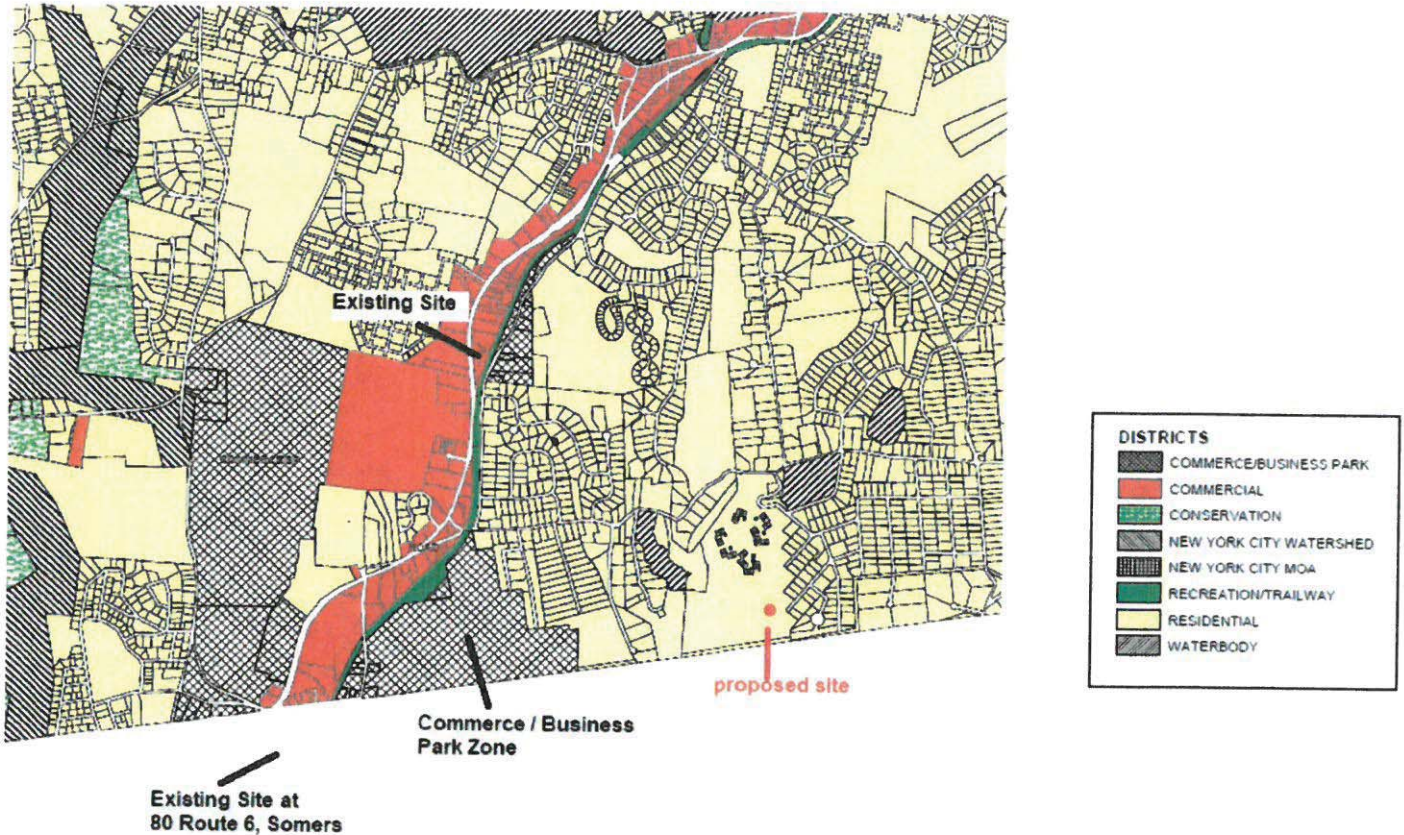
Based on my review there are no existing wireless telecommunications towers or structures in any other nonresidential district.



HOMELAND TOWERS

## EXHIBIT D

Priority 4: Installation of a new wireless telecommunications facility in any nonresidential district



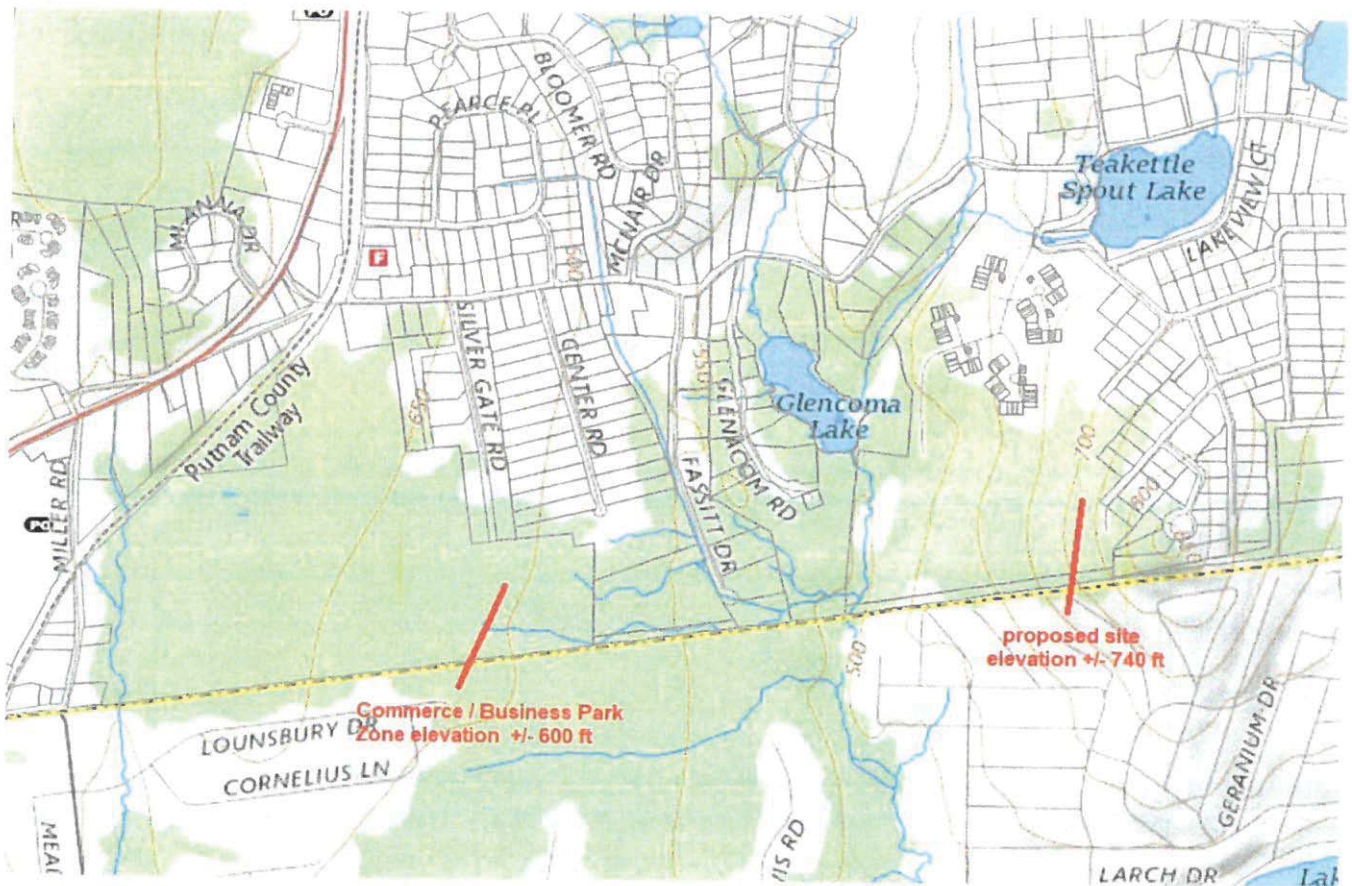
The closest nonresidential zoned property to the proposed site is located at 24 Miller St, Parcel ID 86.11-1-14 approximately 0.6 miles west from the proposed site. That property is zoned "Commerce/Business Park". An analysis of this location determined that it was about 0.6 miles from existing Verizon Wireless sites at 361 Route 6 Mahopac and an existing site at 80 Route 6, Somers and due to this proximity not suitable for the installation of a new wireless communications facility.



HOMELAND TOWERS

## EXHIBIT D1

Priority 4: Installation of a new wireless telecommunications facility in any nonresidential district



The eastern part of this property slopes downhill to an elevation of about 600 ft above sea level, which is approximately 140 ft lower in elevation than the proposed location.

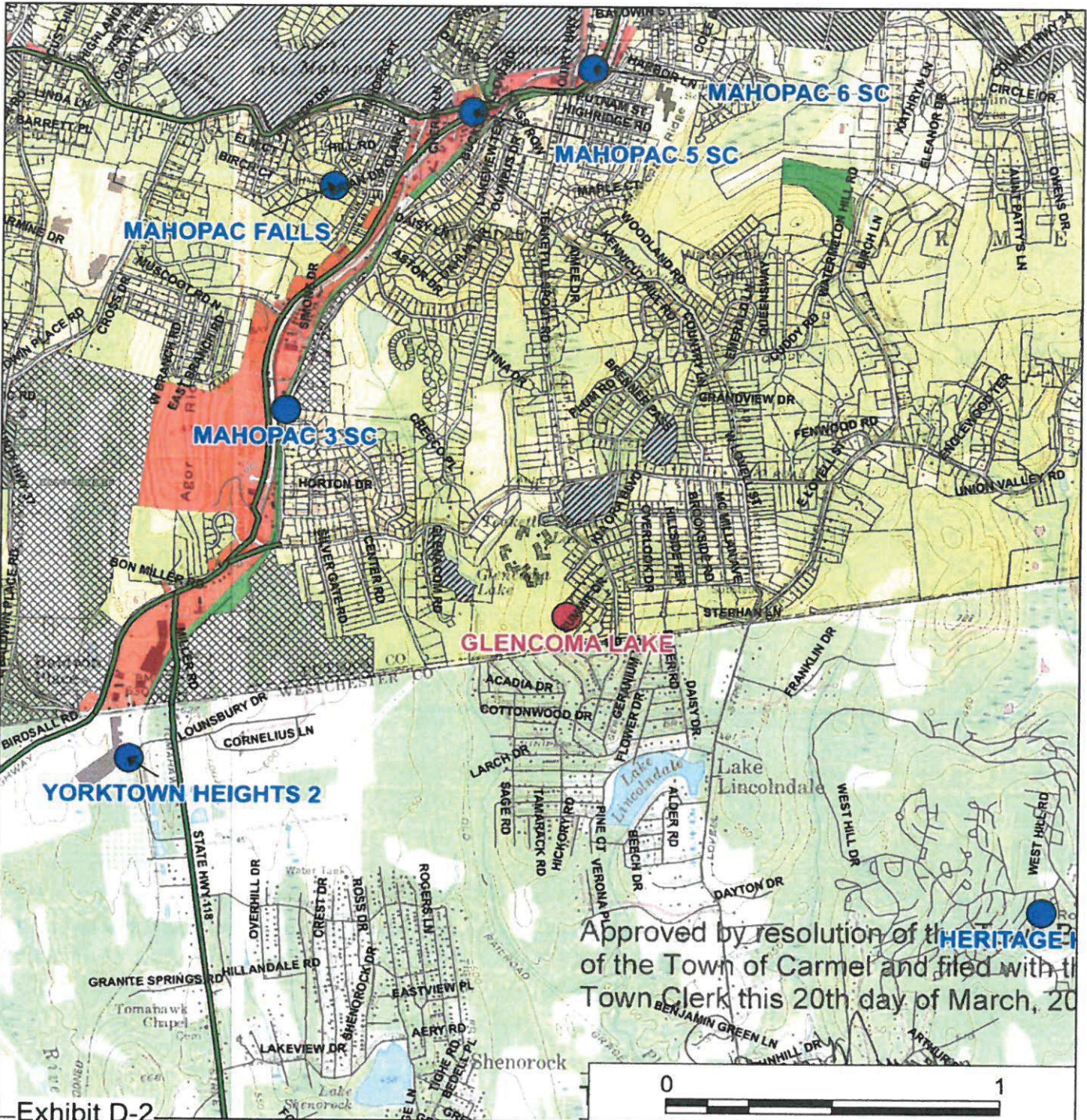


Exhibit D-2

## Glencoma Lake

Topographical Map  
& Zoning Map Overlay  
with Site Locations

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site

**verizon**<sup>v</sup>

Prepared  
01/23/2020



HOMELAND TOWERS

## EXHIBIT E

Inventory of residential properties evaluated



- A. 200 Union Valley Rd, Mahopac, Tax parcel # 76.17-1-28
- B. 55 Fenwood Rd, Mahopac, Tax parcel # 76.18-2-56
- C. 74 Teakettel Spout Rd, Mahopac, Tax parcel # 76.17-2-2
- D. 45 Margaret Rd, Mahopac, Tax parcel# 87.7-1-24
- E. 545 Union Valley Rd, Mahopac, NY 10541, Tax Parcel ID# 87.7-1-7
- F. 78 Englewood Terrace, Mahopac, Tax# 76.19-1-55
- G. Maple Hill Dr, Mahopac, Parcel ID # 87.5-1-90



HOMELAND TOWERS

## EXHIBIT F

Copies of certified proposal letters sent out



October 2, 2017

Via Certified Mail

Parent Estate  
P.O. Box 396  
Mahopac NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.17-1-28) NY054 Glencoma Lake

Dear Sir/Madam,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 200 Union Valley Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



November 2, 2017

Via USPS Mail  
Parent Estate  
P.O. Box 396  
Mahopac NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.17-1-28) NY054 Glencoma Lake

Dear Sir/Madam,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 200 Union Valley Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Klaus Wimmer', is written over a horizontal line.

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us





October 2, 2017

Via Certified Mail

David & Dielle Simajlaj  
55 Fenwood Rd,  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.18-2-56) NY054 Glencoma Lake

Dear Mr. & Mrs. Simajlaj,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 55 Fenwood Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Fenwood Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

A handwritten signature in black ink, appearing to be 'KW' or similar, with the initials 'KH' written in a smaller, more legible script to the right of the signature.

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Jeffrey & Debra Kessler  
74 Teakettel Spout Road  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.17-2-2) NY054 Glencoma Lake

Dear Mr. & Mrs. Kessler,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 74 Teakettel Spout Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Teakettel Spout Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Kenneth Sullivan  
Sean Kelly  
45 Maraget Road  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 87.7-1-24) NY054 Glencom a Lake

Dear Mr. Sullivan & Mr. Kelly,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 45 Margaret Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Margaret Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

A handwritten signature in black ink, appearing to read 'Klaus Wimmer', with a stylized flourish at the end.

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 23, 2017

Via Certified Mail

Kenneth Sullivan & Sean Kelly  
1524 Broad St  
North Bellmore NY 11710

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 87.7-1-24) NY054 Glencom a Lake

Dear Mr. Sullivan & Mr. Kelly,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 45 Margaret Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Margaret Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Willow Wood Club Rifle & Pistol Club  
Attn: President  
551 Union Valley Road  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 87.7-1-7) NY054 Glencoma Lake

Dear President,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 545 Union Valley Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for your organization. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit your organization.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,



1241

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail  
Vincent Perrone  
7 Vails Ln  
Katonah NY 10536

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.19-1-55) NY054 Glencom a Lake

Dear Mr. Perrone,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 78 Englewood Terrace for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Englewood Terrace, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Maple Hill Home Owners Association  
Attn: Jerry Crary  
Maple Hill Dr  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal Maple Hill Drive Maintenance Bldg. NY054 Glencoma Lake

Dear Mr. Crary,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of the property near the maintenance building on Maple Hill Drive for the purpose of a wireless facility. Homeland Towers has identified this property as potential wireless siting solution that will create an additional revenue stream for your organization. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit your organization.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us

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Street and Apt. No.	74 Teakettel Spout Rd.	
City, State, ZIP+4®	Mahopac, NY 10541	
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City, State, ZIP+4®	Maple Hill Dr.	
		Mahopac, NY 10541
		NY054 10.2

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<input type="checkbox"/> Adult Signature Restricted Delivery \$		
Postage		
Total		
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Street and Apt. No.	Sean Kelly	
City, State, ZIP+4®	45 Maraget Rd	
		Mahopac, NY 10541
		NY054 10.2

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<input type="checkbox"/> Adult Signature Required \$		
<input type="checkbox"/> Adult Signature Restricted Delivery \$		
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Total Postage		
Sent To	Willow Wood Club Rifle & Pistol Club	
Street and Apt. No.	Attn: President	
City, State, ZIP+4®	551 Union Valley Rd.	
		Mahopac, NY 10541
		NY054 10.2

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Street and Apt. No.	55 Fenwood Rd	
City, State, ZIP+4®	Mahopac, NY 10541	
		NY054 10.2

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City	

Vincent Perrone  
7 Vails Ln.  
Katonah NY 10536  
  
NY054 10.2

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Total	
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\$	
State	
City	

Kenneth Sullivan & Sean Kelly  
1524 Broad St.  
North Bellmore, NY 11710  
  
NY054 10.23



Dewberry Engineers Inc.  
600 Parsippany Road, Suite 301  
Parsippany, NJ 07054

973.739.9400  
973.739.9710 fax  
www.dewberry.com

January 28, 2020

Honorable Chairman and Members of the Planning Board  
Town of Carmel  
60 McAlpin Avenue,  
Mahopac, NY 10541

**Re: Site ID: NY054**  
**Location Name: Glencoma Lake**  
**Dewberry No.: 50114388**  
**Site Address: Walton Drive**  
**Mahopac, NY 10541**

To Whom It May Concern,

The following is a summary of requested waivers.

6. Contour lines only shown in area of impact.
7. Items only shown in area of impact.
8. Item only shown in area of impact.
9. Proposed structures shown. Existing structures are not applicable to this submittal.
10. Not applicable.
11. Not applicable.
15. Not applicable.
16. Not applicable.
18. Not applicable.

If you have any questions, please do not hesitate to call me at 973.739.9400.

Sincerely,  
Dewberry Engineers Inc.

Gregory Nawrotzki, PE  
NY Professional Engineer License No. 097512



Dewberry Engineers Inc. | 973.739.9400  
600 Parsippany Road, Suite 301 | 973.739.9710 fax  
Parsippany, NJ 07054 | www.dewberry.com

January 21, 2020

Town of Carmel  
60 McAlpin Avenue,  
Mahopac, NY 10541

**Re: Site ID: NY054**  
**Location Name: Glencoma Lake**  
**Dewberry No.: 50114388**  
**Site Address: Walton Drive**  
**Mahopac, NY 10541**

To Whom It May Concern,

Homeland Towers, LLC is proposing the installation of a public utility wireless telecommunications facility, consisting of a 140' monopole ("Tower") with antennas mounted thereon.

The proposed Tower, all attachments, and the Tower's foundation will be designed to meet the ANSI/TIA-222-G "Structural Standard for Antenna Supporting Structures and Antennas", the New York State Uniform Fire Prevention and Building Code, and all county, state and federal structural requirements for loading, including wind and ice loads. The Tower will be designed to be able to support at least four (4) antenna arrays.

If you have any questions, please do not hesitate to call me at 973.739.9400.

Sincerely,  
Dewberry Engineers Inc.



Gregory Nawrotzki, PE  
NY Professional Engineer License No. 097512



January 21, 2020

Honorable Chairman and Members of the Planning Board  
 Town of Carmel  
 60 McAlpin Avenue,  
 Mahopac, NY 10541

**Re: Site ID: NY054**  
**Location Name: Glencoma Lake**  
**Dewberry No.: 50114388**  
**Site Address: Walton Drive**  
**Mahopac, NY 10541**

Dear Honorable Chairman and Members of the Planning Board:

The proposed tower in connection with the above captioned site is 140 feet and is located at a proposed ground elevation of 750 feet AMSL. Pursuant to the Carmel Zoning Code all towers are required to have a setback from residences on abutting properties of two times the height of the tower, or in this case 280 feet. At the proposed site the closest residence is approximately 169 feet from the tower. Thus a variance is required from the Zoning Board of Appeals. The proposed tower and facility meet all other setback requirements.

I reviewed the feasibility of relocating the tower to meet the foregoing residential setback requirement, and based on the reasons below I believe that the impact to the community and environment would be greater at a location that would meet the residential setback requirement.

As shown on the chart below and the attached drawing, location number 2 would meet the tower setback requirements. However, the existing ground elevation is 720' AMSL, being 20 feet lower, and thus the ground elevation have to be raised. In the alternative the height of the tower would have to be increased by 30 feet, thereby resulting again in a noncompliance related to the residential setback. Moreover, as detailed below, the amount of tree removal, grading, disturbance and other construction impacts would be significantly greater.

Next I analyzed a scenario where a 199 foot tower would be constructed. This height was used hypothetically based on it being a height below 200 feet, thereby not requiring FAA lighting and marking. In order to meet a 398 foot setback (2x 199 feet), the tower would have to be located at a location with a ground elevation of 684 feet AMSL, being 58 feet lower than the original location. Thus the ground elevation would have to be raised. More importantly detailed below, the amount of tree clearing, grading and disturbance would be enormous.

	BASE ELEV. (FT-AMSL)	TOWER HEIGHT (FT)	APPROX. SF OF DISTURBANCE (SF)	APPROX VOLUME OF CUT/ FILL (CF)	APPROX. NUMBER OF TREES REMOVED
TOWER LOCATION #1	750*	140	19,660	90,882 (FILL)	36
TOWER LOCATION #2	750*	140	33,804	169,020 (FILL)	88
TOWER LOCATION #3	684	199	42,523	212,615 (FILL)**	160***

\* GRADE RAISED TO 750' AMSL

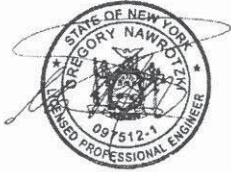
\*\* APPROXIMATE BASED ON GOOGLE EARTCH

\*\*\* APPROXIMATE BASED ON DENSE COVERAGE

Based on the foregoing, it is my professional opinion that the tower has been sited to create the least intrusive impact to the community and environmental while still providing the necessary height for Verizon Wireless' needs.

If you have any questions, please do not hesitate to call me at 973.739.9400.

Sincerely,  
Dewberry Engineers Inc.



Gregory Nawrotzki, PE  
NY Professional Engineer License No. 097512



# **PINNACLE TELECOM GROUP**

*Professional and Technical Services*

## **ANTENNA SITE FCC RF COMPLIANCE ASSESSMENT AND REPORT**

### **HOMELAND TOWERS, LLC**

**SITE "NY054 – GLENCOMA LAKE"  
WALTON DRIVE  
MAHOPAC, NY**

**DECEMBER 11, 2019**

# CONTENTS

INTRODUCTION AND SUMMARY	3
ANTENNA AND TRANSMISSION DATA	5
COMPLIANCE ANALYSIS	7
COMPLIANCE CONCLUSION	12

## CERTIFICATION

APPENDIX A. BACKGROUND ON THE FCC MPE LIMIT

APPENDIX B. SUMMARY OF EXPERT QUALIFICATIONS

## **INTRODUCTION AND SUMMARY**

At the request of Homeland Towers, LLC, Pinnacle Telecom Group has performed an independent expert assessment of radiofrequency (RF) levels and related FCC compliance for proposed wireless antenna operations on a proposed 140-foot monopole to be located on Walton Drive in Mahopac, NY.

Homeland Towers refers to the prospective site as “NY054 – Glencoma Lake”, and the proposed monopole will accommodate the directional panel antennas of up to four wireless carriers. At this time, Verizon Wireless plans to occupy the highest antenna mounting position on the pole.

The FCC requires wireless antenna operators to perform an assessment of the RF levels from all the transmitting antennas at a site whenever antenna operations are added or modified, and ensure compliance with the FCC Maximum Permissible Exposure (MPE) limit in areas of unrestricted public access, i.e., at street level around the site.

In this case, the compliance assessment will include the RF effects of a worst-case hypothetical collocation of three wireless carriers’ antennas. By worst case, we mean that the carriers whose maximum capacity relates to higher emitted power levels will be hypothetically assumed to occupy the lower mounting positions on the monopole, thus matching higher power and smaller distances to ground-level around the site.

The analysis will conservatively assume all the wireless carriers are operating at maximum capacity and maximum power in each of their FCC-licensed frequency bands. With that extreme degree of conservatism incorporated in the analysis, we can have great confidence that the actual RF effects from any combination of wireless operators, however they might actually be positioned on the pole, would be in compliance with the FCC’s MPE limit.

This assessment of antenna site compliance is based on the FCC limit for general population “maximum permissible exposure” (MPE), a limit established



as safe for continuous exposure to RF fields by humans of either sex, all ages and sizes, and under all conditions.

The result of an FCC compliance assessment can be described in layman's terms by expressing the calculated RF levels as simple percentages of the FCC MPE limit. In that way, the figure 100 percent serves as the reference for compliance, and calculated RF levels below 100 percent indicate compliance with the MPE limit. An equivalent way to describe the calculated results is to relate them to a "times-below-the-limit" factor. Here, we will apply both descriptions.

The result of the FCC compliance assessment in this case is as follows:

- At street level around the site, the conservatively calculated maximum RF level caused by the combination of the wireless carriers' panel antenna operations is 2.4215 percent of the FCC general population MPE limit, well below the 100-percent reference for compliance. In other words, even with calculations designed to significantly overstate the RF levels versus those that could actually occur at the site, the worst-case calculated RF level in this case is still more than 40 times below the limit defined by the federal government as safe for continuous exposure of the general public.
- The results of the calculations provide a clear demonstration that the RF levels from as many as four wireless carriers, even under worst-case collocation circumstances, would satisfy the FCC requirement for controlling potential human exposure to RF fields. Moreover, because of the conservative methodology and assumptions applied in this analysis, RF levels actually caused by any combination of wireless operators' antenna operations at this site will be even less significant than the calculation results here indicate.

The remainder of this report provides the following:

- relevant technical data on the parameters for the four wireless carriers;

- a description of the applicable FCC mathematical model for assessing compliance with the MPE limit, and application of the relevant technical data to that model; and
- analysis of the results of the calculations, and the compliance conclusion for the proposed site.

In addition, two Appendices are included. Appendix A provides background on the FCC MPE limit, along with a list of key references. Appendix B provides a summary of the qualifications of the author of this report.

## **ANTENNA AND TRANSMISSION DATA**

As described, the proposed 140-foot monopole will be able to accommodate as many as four wireless carriers' antennas. This analysis will include an assumption of "worst-case" collocation by four wireless carriers – Verizon Wireless, AT&T, Sprint and T-Mobile.

The worst-case collocation methodology basically involves taking the carriers with the most available spectrum and the opportunity for higher power levels and hypothetically positioning them at the lower points on the monopole – thus matching the most power with the shorter distances to the ground. Typically, the vertical spacing between different wireless carriers' antennas on a pole is 10 feet.

The transmission parameters for each of the wireless carriers are described below.

Verizon Wireless is licensed to operate in the 746, 869, 1900 and 2100 MHz frequency bands. In the 746 MHz band, Verizon uses four 40-watt channels per antenna sector. In the 869 MHz band, Verizon uses four 40-watt channels per sector. In the 1900 MHz band, Verizon uses four 40-watt channels per antenna sector. In the 2100 MHz band, Verizon uses four 40-watt channels per sector.

AT&T is licensed to operate in the 700, 850, 1900, 2100 and 2300 MHz frequency bands. In the 700 MHz band, AT&T uses four 40-watt RF channels per

sector. In the 850 MHz band, AT&T uses seven 20-watt channels per sector. In the 1900 MHz band, AT&T uses four 30-watt channels per sector. In the 2100 MHz band, AT&T uses four 45-watt channels per sector. Lastly, in the 2300 MHz band, AT&T uses four 25-watt channels per sector.

Sprint is licensed to operate in the 800 MHz, 1900 MHz and 2500 MHz frequency bands. In the 800 MHz band, Sprint uses two 50-watt channels per antenna sector. In the 1900 MHz band, Sprint uses four 40-watt channels per sector. In the 2500 MHz band, Sprint uses three 40-watt channels per sector.

T-Mobile is licensed to operate in the 600 MHz, 700 MHz, 1900 MHz and 2100 MHz frequency bands. In the 600 MHz band, T-Mobile uses four 40-watt channels per sector. In the 700 MHz band, T-Mobile uses one 40-watt channel per sector. In the 1900 MHz band, T-Mobile uses five 30-watt channels per sector. In the 2100 MHz band, T-Mobile uses one 40-watt channel and two 80-watt channels per sector.

Based on the proposed mounting heights and then followed by overall available power levels, we will hypothetically assign the mounting heights (to the centerline of the antennas) as follows:

- Verizon Wireless: 136 feet
- Sprint: 126 feet
- T-Mobile: 116 feet
- AT&T: 106 feet

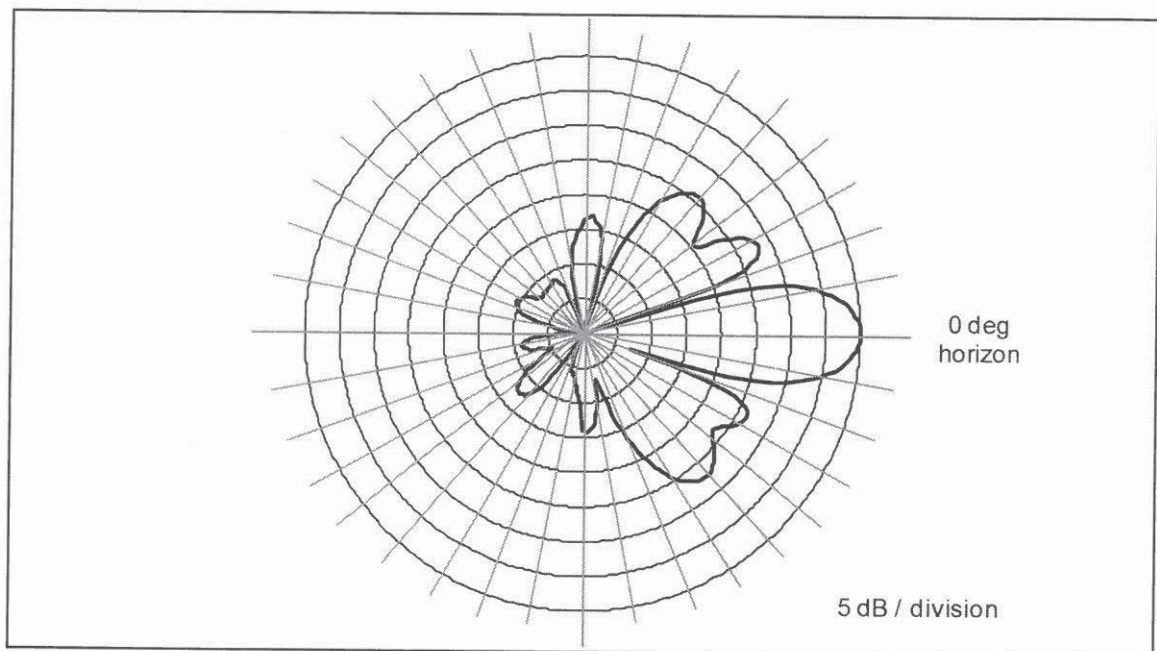
The area below the antennas, at street level, is of interest in terms of potential “uncontrolled” exposure of the general public, so the antenna’s vertical-plane emission characteristic is used in the calculations, as it is a key determinant in the relative level of RF emissions in the “downward” direction.

By way of illustration, Figure 1, below, shows the vertical-plane pattern of a typical 1900 MHz panel antenna. The antenna is effectively pointed at the three o’clock position (the horizon) and the pattern at different angles is described

using decibel units. The use of a decibel scale in incidentally visually understates the relative directionality characteristic of the antenna in the vertical plane. Where the antenna pattern reads 20 dB, the relative RF energy emitted at the corresponding downward angle is 1/100<sup>th</sup> of the maximum that occurs in the main beam (at 0 degrees); at 30 dB, the energy is 1/1000<sup>th</sup> of the maximum.

Note that the automatic pattern-scaling feature of our internal software may skew side-by-side visual comparisons of different antenna models, or even different parties' depictions of the same antenna model.

**Figure 1. 1900 MHz Directional Panel Antenna – Vertical-plane Pattern**



## Compliance Analysis

FCC Office of Engineering and Technology Bulletin 65 ("OET Bulletin 65") provides guidelines for mathematical models to calculate potential RF exposure levels at various points around transmitting antennas.

Around an antenna site at ground level (in what is called the "far field" of the antennas), the RF levels are directly proportional to the total antenna input power and the relative antenna gain (focusing effect) in the downward direction of

interest – and the levels are otherwise inversely proportional to the square of the straight-line distance to the antenna. Conservative calculations also assume the potential RF exposure is enhanced by reflection of the RF energy from the intervening ground. Our calculations will assume a 100% “perfect”, mirror-like reflection, which is the absolute worst-case approach.

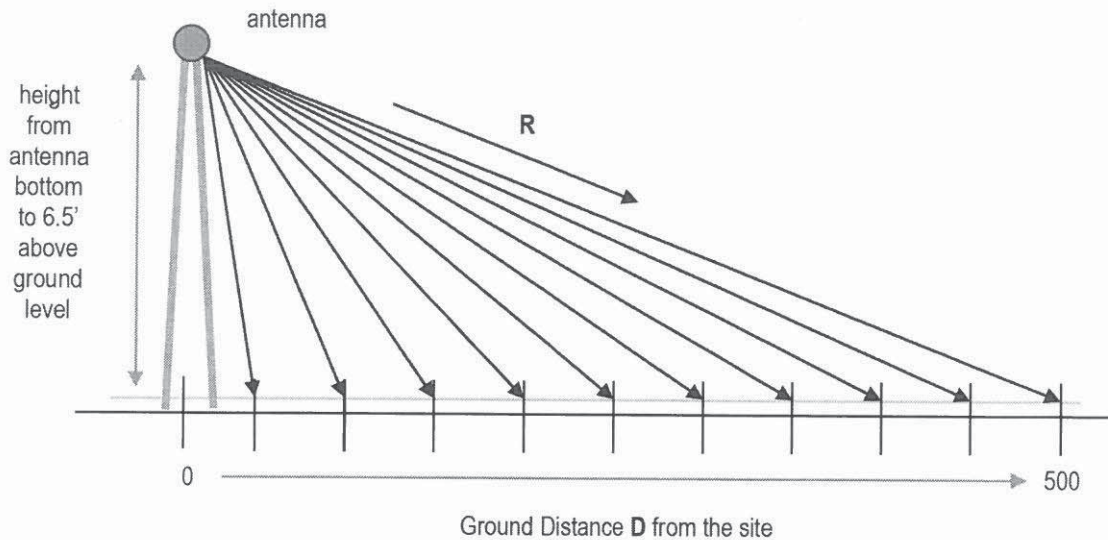
The formula for ground-level MPE compliance assessment of any given wireless antenna operation is as follows:

$$\text{MPE\%} = (100 * \text{TxPower} * 10^{(\text{Gmax-Vdisc})/10} * 4) / (\text{MPE} * 4\pi * \text{R}^2)$$

where

MPE%	=	RF level, expressed as a percentage of the FCC MPE limit applicable to continuous exposure of the general public
100	=	factor to convert the raw result to a percentage
TxPower	=	maximum net power into antenna sector, in milliwatts, a function of the number of channels per sector, the transmitter power per channel, and line loss
$10^{(\text{Gmax-Vdisc})/10}$	=	numeric equivalent of the relative antenna gain in the direction of interest downward toward ground level
4	=	factor to account for a 100-percent-efficient energy reflection from the ground, and the squared relationship between RF field strength and power density ( $2^2 = 4$ )
MPE	=	FCC general population MPE limit
R	=	straight-line distance from the RF source to the point of interest, centimeters

The MPE% calculations are normally performed out to a distance of 500 feet from the facility to points 6.5 feet (approximately two meters, the FCC-recommended standing height) off the ground, as illustrated in Figure 2 on the next page.



**Figure 2. Street-level MPE% Calculation Geometry**

It is popularly thought that the farther away one is from an antenna, the lower the RF level – which is generally but not universally correct. The results of MPE% calculations fairly close to the site will reflect the variations in the vertical-plane antenna pattern as well as the variation in straight-line distance to the antennas. Therefore, RF levels may actually increase slightly with increasing distance within the range of zero to 500 feet from the site. As the distance approaches 500 feet and beyond, though, the antenna pattern factor becomes less significant, the RF levels become primarily distance-controlled and, as a result, the RF levels generally decrease with increasing distance. In any case, the RF levels more than 500 feet from a wireless antenna site are well understood to be sufficiently low and always in compliance.

FCC compliance for a collocated antenna site is assessed in the following manner. At each distance point away from the site, an MPE% calculation is made for each antenna operation, including the individual components of dual-band operations. Then, at each point, the sum of the individual MPE% contributions is compared to 100 percent, where the latter figure serves as a normalized reference for compliance with the MPE limit. We refer to the sum of the individual MPE% contributions as “total MPE%”, and any calculated total MPE% result exceeding 100 percent is, by definition, higher than the limit and

represent non-compliance and a need to take action to mitigate the RF levels. If all results are below 100 percent, that indicates compliance with the federal regulations on controlling exposure.

Note that the following conservative methodology and assumptions are incorporated into the MPE% calculations on a general basis:

1. The antennas are assumed to be operating continuously at maximum RF power – i.e., with the maximum number of channels and the maximum transmitter power per channel.
2. The power-attenuation effects of any shadowing or visual obstruction to a line-of-sight path from the antennas to the points of interest at ground level are ignored.
3. The calculations intentionally minimize the distance factor (R) by assuming a 6'6" human and performing the calculations from the bottom (rather than the centerline) of the antenna.
4. The potential RF exposure at ground level is assumed to be 100-percent enhanced (increased) via a "perfect" field reflection from the intervening ground.

The net result of these assumptions is to intentionally and significantly overstate the calculated RF levels relative to the RF levels that will actually occur – and the purpose of this conservatism is to allow "safe-side" conclusions about compliance with the MPE limit.

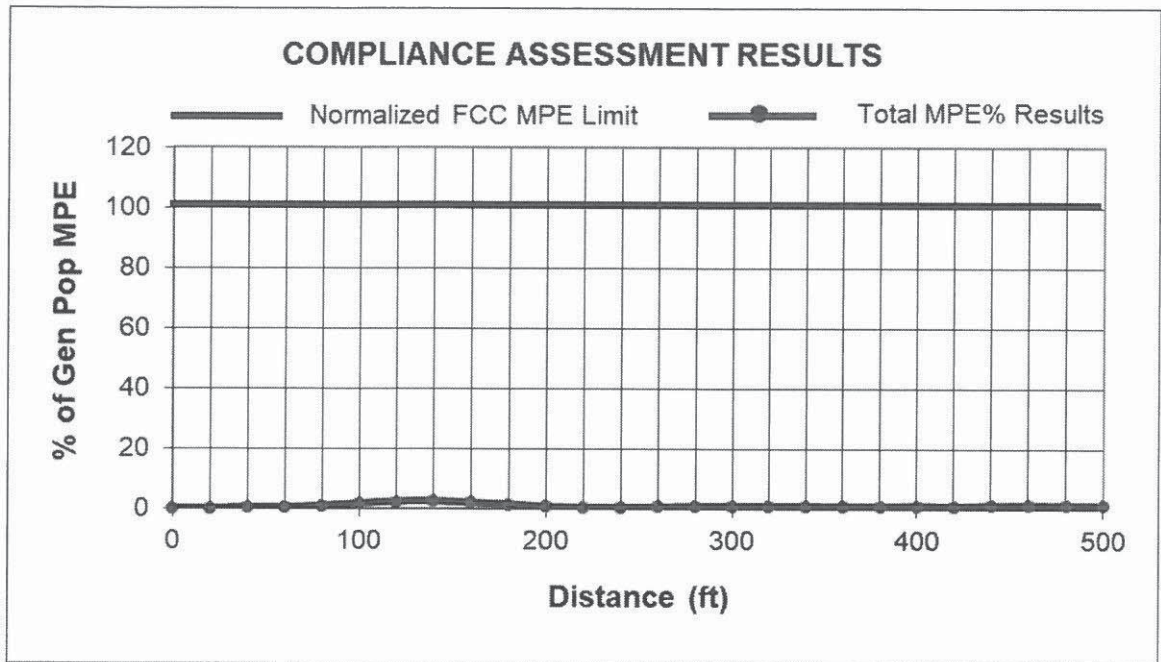
The table on the following page provides the results of the MPE% calculations for each operator, with the worst-case overall result highlighted in bold in the last column.

Ground Distance (ft)	Verizon Wireless MPE%	AT&T MPE%	Sprint MPE%	T-Mobile MPE%	Total MPE%
0	0.1202	0.0778	0.0290	0.0054	0.2324
20	0.1290	0.1041	0.0125	0.0096	0.2552
40	0.2156	0.2024	0.0124	0.1260	0.5564
60	0.1861	0.2696	0.0425	0.0706	0.5688
80	0.4676	0.3638	0.0399	0.1479	1.0192
100	0.5230	0.6948	0.0750	0.4346	1.7274
120	0.5516	1.0007	0.0665	0.6987	2.3175
140	0.9227	0.8700	0.1006	0.5282	<b>2.4215</b>
160	0.9187	0.7693	0.1754	0.1404	2.0038
180	0.5165	0.7536	0.1130	0.1033	1.4864
200	0.1560	0.5311	0.0640	0.1083	0.8594
220	0.1082	0.3058	0.0348	0.0745	0.5233
240	0.1858	0.2408	0.0500	0.0598	0.5364
260	0.2958	0.2564	0.0680	0.0917	0.7119
280	0.3365	0.2477	0.0834	0.2192	0.8868
300	0.4367	0.2311	0.0882	0.2481	1.0041
320	0.4493	0.2538	0.0879	0.2264	1.0174
340	0.4489	0.3531	0.0565	0.1665	1.0250
360	0.4301	0.3176	0.0383	0.1032	0.8892
380	0.3916	0.4758	0.0232	0.0761	0.9667
400	0.3381	0.6655	0.0157	0.1047	1.1240
420	0.2784	0.6068	0.0305	0.0956	1.0113
440	0.2556	0.7583	0.0560	0.1596	1.2295
460	0.2048	0.8488	0.0516	0.1779	1.2831
480	0.1629	0.7823	0.0703	0.2095	1.2250
500	0.1509	0.7232	0.0651	0.2490	1.1882

As indicated, the overall worst-case calculated result is 2.4215 percent of the FCC general population MPE limit – well below the 100-percent reference for compliance, particularly given the significant conservatism incorporated in the analysis.

A graph of the overall calculation results, provided on the next page, provides perhaps a clearer *visual* illustration of the relative compliance of the calculated RF levels. The line representing the overall calculation shows an obviously clear, consistent margin to the FCC MPE limit.





## Compliance Conclusion

The FCC MPE limit has been constructed in such a manner that continuous human exposure to RF fields up to and including 100 percent of the MPE limit is acceptable and completely safe.

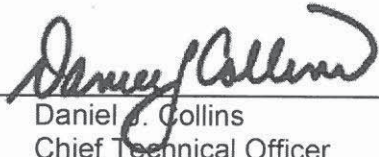
The conservatively calculated maximum RF effect at street level from the assumed worst-case collocation of as many as four wireless carriers is 2.4215 percent of the FCC general population MPE limit. In other words, even with an extremely conservative analysis intended to dramatically overstate the RF effects of any wireless collocation scenario at the site, the calculated worst-case RF level is still more than 40 times below the FCC MPE limit.

The results of the calculations indicate clear compliance with the FCC regulations and the related MPE limit, even for a worst-case collocation scenario. Because of the conservative calculation methodology and operational assumptions applied in this analysis, the RF levels actually caused by any more realistic collocation of antennas at this site would be even less significant than the calculation results here indicate, and compliance would be achieved by an even larger margin.

## CERTIFICATION

It is the policy of Pinnacle Telecom Group that all FCC RF compliance assessments are reviewed, approved, and signed by the firm's Chief Technical Officer who certifies as follows:

1. I have read and fully understand the FCC regulations concerning RF safety and the control of human exposure to RF fields (47 CFR 1.1301 *et seq*).
2. To the best of my knowledge, the statements and information disclosed in this report are true, complete and accurate.
3. The analysis of site RF compliance provided herein is consistent with the applicable FCC regulations, additional guidelines issued by the FCC, and industry practice.
4. The results of the analysis indicate that the subject antenna operations will be in compliance with the FCC regulations concerning the control of potential human exposure to the RF emissions from antennas.



---

Daniel J. Collins  
Chief Technical Officer  
Pinnacle Telecom Group, LLC

12/11/19

---

Date

## Appendix A. Background on the FCC MPE Limit

As directed by the Telecommunications Act of 1996, the FCC has established limits for maximum continuous human exposure to RF fields.

The FCC maximum permissible exposure (MPE) limits represent the consensus of federal agencies and independent experts responsible for RF safety matters. Those agencies include the National Council on Radiation Protection and Measurements (NCRP), the Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), the American National Standards Institute (ANSI), the Environmental Protection Agency (EPA), and the Food and Drug Administration (FDA). In formulating its guidelines, the FCC also considered input from the public and technical community – notably the Institute of Electrical and Electronics Engineers (IEEE).

The FCC's RF exposure guidelines are incorporated in Section 1.301 *et seq* of its Rules and Regulations (47 CFR 1.1301-1.1310). Those guidelines specify MPE limits for both occupational and general population exposure.

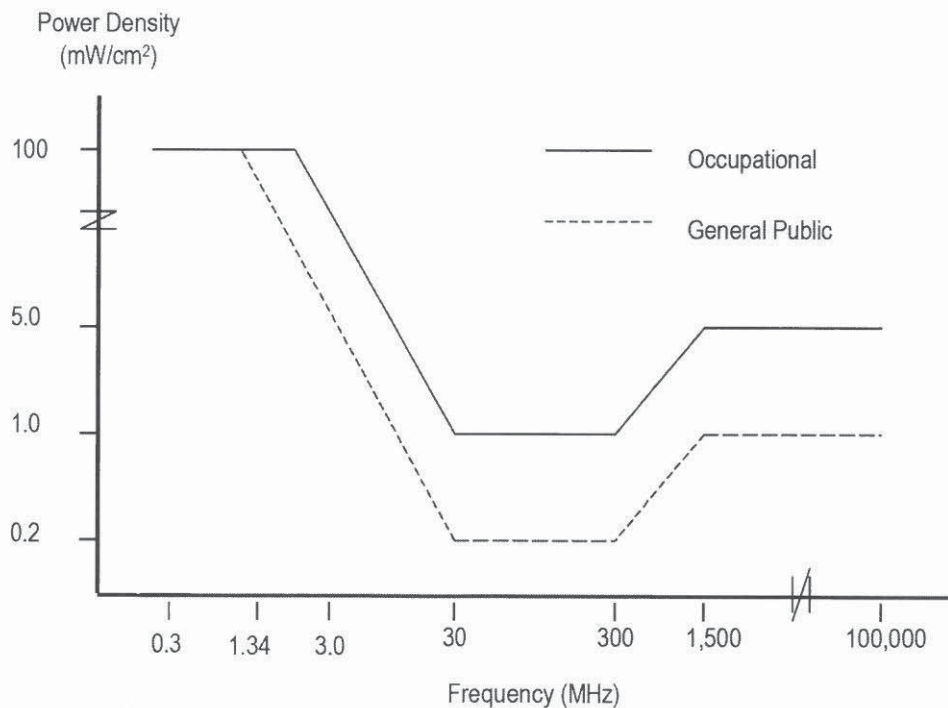
The specified continuous exposure MPE limits are based on known variation of human body susceptibility in different frequency ranges, and a Specific Absorption Rate (SAR) of 4 watts per kilogram, which is universally considered to accurately represent human capacity to dissipate incident RF energy (in the form of heat). The occupational MPE guidelines incorporate a safety factor of 10 or greater with respect to RF levels known to represent a health hazard, and an additional safety factor of five is applied to the MPE limits for general population exposure. Thus, the general population MPE limit has a built-in safety factor of more than 50. The limits were constructed to appropriately protect humans of both sexes and all ages and sizes and under all conditions – and continuous exposure at levels equal to or below the applicable MPE limits is considered to result in no adverse health effects or even health risk.

The reason for two tiers of MPE limits is based on an understanding and assumption that members of the general public are unlikely to have had appropriate RF safety training and may not be aware of the exposures they receive; occupational exposure in controlled environments, on the other hand, is assumed to involve individuals who have had such training, are aware of the exposures, and know how to maintain a safe personal work environment.

The FCC's RF exposure limits are expressed in two equivalent forms, using alternative units of field strength (expressed in volts per meter, or V/m), and power density (expressed in milliwatts per square centimeter, or mW/cm<sup>2</sup>). The table on the next page lists the FCC limits for both occupational and general population exposures, using the mW/cm<sup>2</sup> reference, for the different radio frequency ranges.

Frequency Range (F) (MHz)	Occupational Exposure (mW/cm <sup>2</sup> )	General Public Exposure (mW/cm <sup>2</sup> )
0.3 - 1.34	100	100
1.34 - 3.0	100	180 / F <sup>2</sup>
3.0 - 30	900 / F <sup>2</sup>	180 / F <sup>2</sup>
30 - 300	1.0	0.2
300 - 1,500	F / 300	F / 1500
1,500 - 100,000	5.0	1.0

The diagram below provides a graphical illustration of both the FCC's occupational and general population MPE limits.



Because the FCC's RF exposure limits are frequency-shaped, the exact MPE limits applicable to the instant situation depend on the frequency range used by the systems of interest.

The most appropriate method of determining RF compliance is to calculate the RF power density attributable to a particular RF system and compare that to the MPE limit applicable to the operating frequency in question. The result is usually expressed as a percentage of the MPE limit.

For potential exposure from multiple systems, the respective percentages of the MPE limits are added, and the total percentage compared to 100 (percent of the limit). If the result is less than 100, the total exposure is in compliance; if it is more than 100, exposure mitigation measures are necessary to achieve compliance.

Note that the FCC “categorically excludes” all “non-building-mounted” wireless antenna operations whose mounting heights are more than 10 meters (32.8 feet) from the routine requirement to demonstrate compliance with the MPE limit, because such operations “are deemed, individually and cumulatively, to have no significant effect on the human environment”. The categorical exclusion also applies to *all* point-to-point antenna operations, regardless of the type of structure they’re mounted on. Note that the FCC considers any facility qualifying for the categorical exclusion to be automatically in compliance.

#### ***FCC References on RF Compliance***

47 CFR, FCC Rules and Regulations, Part 1 (Practice and Procedure), Section 1.1310 (Radiofrequency radiation exposure limits).

FCC Second Memorandum Opinion and Order and Notice of Proposed Rulemaking (FCC 97-303), *In the Matter of Procedures for Reviewing Requests for Relief From State and Local Regulations Pursuant to Section 332(c)(7)(B)(v) of the Communications Act of 1934 (WT Docket 97-192), Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation (ET Docket 93-62), and Petition for Rulemaking of the Cellular Telecommunications Industry Association Concerning Amendment of the Commission's Rules to Preempt State and Local Regulation of Commercial Mobile Radio Service Transmitting Facilities*, released August 25, 1997.

FCC First Memorandum Opinion and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released December 24, 1996.

FCC Report and Order, ET Docket 93-62, *In the Matter of Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, released August 1, 1996.

FCC Office of Engineering and Technology (OET) Bulletin 65, “Evaluating Compliance with FCC Guidelines for Human Exposure to Radiofrequency Electromagnetic Fields”, Edition 97-01, August 1997.

FCC Office of Engineering and Technology (OET) Bulletin 56, “Questions and Answers About Biological Effects and Potential Hazards of RF Radiation”, edition 4, August 1999.

## Appendix B. SUMMARY of EXPERT QUALIFICATIONS

*Daniel J. Collins, Chief Technical Officer, Pinnacle Telecom Group, LLC*

<p><b>Synopsis:</b></p>	<ul style="list-style-type: none"> <li>• 40+ years of experience in all aspects of wireless system engineering, related regulation, and RF exposure</li> <li>• Has performed or led RF exposure compliance assessments on more than 20,000 antenna sites since the latest FCC regulations went into effect in 1997</li> <li>• Has provided testimony as an RF compliance expert more than 1,500 times since 1997</li> <li>• Have been accepted as an FCC compliance expert in New York, New Jersey, Connecticut, Pennsylvania and more than 40 other states, as well as by the FCC</li> </ul>
<p><b>Education:</b></p>	<ul style="list-style-type: none"> <li>• B.E.E., City College of New York (Sch. Of Eng.), 1971</li> <li>• M.B.A., 1982, Fairleigh Dickinson University, 1982</li> <li>• Bronx High School of Science, 1966</li> </ul>
<p><b>Current Responsibilities:</b></p>	<ul style="list-style-type: none"> <li>• Leads all PTG staff work involving RF safety and FCC compliance, microwave and satellite system engineering, and consulting on wireless technology and regulation</li> </ul>
<p><b>Prior Experience:</b></p>	<ul style="list-style-type: none"> <li>• Edwards &amp; Kelcey, VP – RF Engineering and Chief Information Technology Officer, 1996-99</li> <li>• Bellcore (a Bell Labs offshoot after AT&amp;T's 1984 divestiture), Executive Director – Regulation and Public Policy, 1983-96</li> <li>• AT&amp;T (Corp. HQ), Division Manager – RF Engineering, and Director – Radio Spectrum Management, 1977-83</li> <li>• AT&amp;T Long Lines, Group Supervisor – Microwave Radio System Design, 1972-77</li> </ul>
<p><b>Specific RF Safety / Compliance Experience:</b></p>	<ul style="list-style-type: none"> <li>• Involved in RF exposure matters since 1972</li> <li>• Have had lead corporate responsibility for RF safety and compliance at AT&amp;T, Bellcore, Edwards &amp; Kelcey, and PTG</li> <li>• While at AT&amp;T, helped develop the mathematical models for calculating RF exposure levels</li> <li>• Have been relied on for compliance by all major wireless carriers, as well as by the federal government, several state and local governments, equipment manufacturers, system integrators, and other consulting / engineering firms</li> </ul>
<p><b>Other Background:</b></p>	<ul style="list-style-type: none"> <li>• Author, <i>Microwave System Engineering</i> (AT&amp;T, 1974)</li> <li>• Co-author and executive editor, <i>A Guide to New Technologies and Services</i> (Bellcore, 1993)</li> <li>• National Spectrum Management Association (NSMA) – former three-term President and Chairman of the Board of Directors; was founding member, twice-elected Vice President, long-time member of the Board, and was named an NSMA Fellow in 1991</li> <li>• Have published more than 35 articles in industry magazines</li> </ul>



Dewberry Engineers Inc.  
600 Parsippany Road, Suite 301  
Parsippany, NJ 07054

973.739.9400  
973.739.9710 fax  
www.dewberry.com

January 21, 2020

Honorable Chairman and Members of the Planning Board  
Town of Carmel  
60 McAlpin Avenue,  
Mahopac, NY 10541

**Re: Site ID: NY054**  
**Location Name: Glencoma Lake**  
**Dewberry No.: 50114388**  
**Site Address: Walton Drive**  
**Mahopac, NY 10541**

To Whom It May Concern,

As part of the proposed telecommunication facility installation, Verizon Wireless is proposing a 15kW Ascot International diesel generator. Ascot International indicates that the noise level output is 66-70 dBA @ 23 feet.

The approximate projected noise levels at the property lines are as follows:

<u>Property Line</u>	<u>Distance</u>	<u>Noise Level</u>
North	2040'	0 dBA
South	396'	0 dBA
East	108'	47 dBA
West	1104'	0 dBA

Approximate noise levels are based on the Inverse Square Law.

Noise level regulations per Section 104-14(B) of the Town Code for the Residential Zone district in the town of Carmel, NY are as follows:

8:00 AM – 6:00 PM not to exceed 65 dBA @ the property line  
6:00 PM – 8:00 AM not to exceed 50 dBA @ the property line

The generator is expected to only run in emergency situations and will be routinely cycled for approximately 30 minutes a week on a weekday between 8:00 AM and 6:00 PM. Based on the foregoing, the generator will comply with the town noise code.

If you have any questions, please do not hesitate to call me at 973.739.9400.

Sincerely,  
Dewberry Engineers Inc.

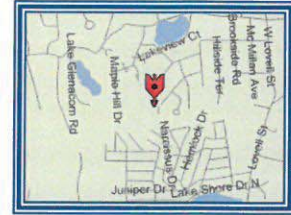


Gregory Nawrotzki, PE  
NY Professional Engineer License No. 097512

**OPINION LETTER**

December 31, 2019

Christine Vergati  
Homeland Towers, LLC  
9 Harmony Street, 2<sup>nd</sup> Floor  
Danbury, CT 06810



RE: **NY054 – Glencoma Lake, NY Airspace Analysis**  
**Latitude (NAD-83): 41° 20' 56.88" N**  
**Longitude (NAD-83): 73° 43' 49.94" W**  
**Ground Elevation: 741.0 ft AMSL**  
**Tower tip height: 140.0 ft AGL**  
**Overall height: 881.0 ft AMSL**

Dear Ms. Vergati,

Our airspace analysis results for the NY054 – Glencoma Lake, NY site are as follows:

1. **Filing an FAA Form 7460-1 is not required for the proposed tower height of 140.0 ft AGL (881.0 ft AMSL). The maximum allowable height for not filing an FAA Form 7460-1 is 200 ft.**
2. **FCC's TOWAIR Determination indicates that this structure does not require registration. There are no airports within 8 kilometers (5 miles) of the coordinates you provided. The maximum allowable height is for not filing for an ASR is 200 ft AGL.**
3. The FAA Form 7460-1 for NY054 – Glencoma Lake, NY at 140.0 ft AGL was not filed as of January 1, 2020.
4. The proposed site is 10.897 nm West from the nearest public landing facility – DXR: Danbury Muni. At an overall height of 881.0 ft AMSL, it does not exceed FAR 77.9 (a) or FAR 77.9 (b) Notice Criteria for DXR airport. This airport has both Circling and Straight-In Instrument approach procedures. It does not exceed any glide slopes of DXR airport. DXR: Danbury Muni is an airport type landing facility and it is associated with the city of Danbury, CT.
5. The proposed site is not within any of the instrument approach procedures of DXR airport.
6. The nearest private landing facility is 96NY: Massaro, which is a heliport type landing facility not eligible for study under FAR Part 77 sub-Part C. It is 2.05 nm North from the proposed site.
7. The proposed 140.0 ft AGL tower would not adversely affect low altitude en route airways and/ or VFR routes in the area.
8. The nearest AM tower is WLNA, which is 10.05 mi (16174 meters) away bearing 253.78°. WLNA AM is operating a directional type antenna system. As noted per the FCC AM Tower Locator and per FCC regulation 13-115, Section 1.30002, the structure will not require a "Proof of Performance" measurement study before and after construction.
9. Marking and lighting are not required for the proposed tower height of 140.0 ft AGL.
10. All Wireless Applications Corp. analyses are based on the latest AIRSPACE, FAA Notice Criteria Tool and FCC TOWAIR programs.

If you have any questions, please do not hesitate to call.

Thank you.

Ronald W. Lageson, Jr.  
425-643-5000 (office)  
425-649-5675 (fax)

Telecom Engineering



The Site Sync Platform 





December 23, 2019

Klaus Wimmer  
Homeland Towers, LLC  
9 Harmony Street, 2nd Floor  
Danbury, CT 06810

*Re: Wetland Delineation  
Walton Drive Site  
Town of Carmel, Putnam County, New York*

Dear Klaus:

Ecological Solutions, LLC completed a wetland delineation at the rear and center of the site in accordance with the Army Corps of Engineers (USACE) Wetlands Delineation Manual (January 1987), Routine Determination Method and recent Northcentral/Northeast supplement during April 2018. Federal wetlands and waters of the US do not contain any regulated buffer area. There is no New York State Department of Environmental Conservation (NYSDEC) regulated wetland in the project area however there is a NYSDEC regulated wetland in the vicinity of the project area being about 1,060 ft west of any area of disturbance for the proposed communications tower facility. The NYSDEC in an email dated October 16, 2019 stated that there is no NYSDEC regulated wetland or Adjacent Area on the property. The Town of Carmel also has a wetland law - Chapter 89 and imposes a 100 foot regulated buffer to the wetland boundary.

Federal and Town wetlands were delineated based upon the identification of the three mandatory criteria for wetland determination as outlined in the 1987 Federal Manual and supplement: dominant hydrophytic vegetation, hydric soils, and evidence of wetland hydrology. The Routine Methodology procedure for wetland determination was used. Transects consisting of at several sample points were walked. Dominant vegetation around each sample point was identified and its percent cover quantified. The areas were checked in detail for the presence of wetland hydrologic indicators. Soil profiles were then observed and characterized at each point.

The detailed field investigation included:

1. Identification of vegetation species to determine whether there was a dominance of hydrophytic plants and areas containing transitional but primarily wetland-oriented species.
2. Determination of soil features for hydric (poorly and very poorly drained) natural soils.
3. Observation of site features displaying evidence of wetland hydrology based on the presence of inundated areas, apparent high seasonal water tables, and evidence of saturation within 12 inches of the surface (considered the root zone) during sufficient periods during the growing season to provide for anaerobic/hydric soil conditions.

The federal and Town wetlands delineated on the site are best classified as a hillside seep and drainage ditches.

The wetlands delineated in the project area are depicted on the map entitled, "Partial Boundary and Topographic Survey" Sheet VB-102 prepared by Langan Engineering & Surveying and dated April 10, 2018. Based on this delineation no NYSDEC, Federal or Town wetland or watercourse permits are required.

If you need any additional information, please contact me.

Sincerely,  
ECOLOGICAL SOLUTIONS, LLC



Michael Nowicki  
Biologist

## Klaus Wimmer

---



**From:** Fisher, Joshua M (DEC) <Joshua.Fisher@dec.ny.gov>  
**Sent:** Wednesday, October 16, 2019 3:43 PM  
**To:** Klaus Wimmer  
**Cc:** Michael Nowicki  
**Subject:** RE: NY054 Glencoma Lake - Walton Drive, Mahopac, NY

**Categories:** Red Category

Correct, I don't need to inspect it...unless you plan on working about 1,000 feet to the west.

### Josh Fisher

Biologist, Bureau of Ecosystem Health  
New York State Department of Environmental Conservation  
21 South Putt Corners Rd., New Paltz, NY 12561  
Office: (845) 256-3113 | [joshua.fisher@dec.ny.gov](mailto:joshua.fisher@dec.ny.gov)  
Cell: (845) 220-8570

[www.dec.ny.gov](http://www.dec.ny.gov) |  | 

**From:** Klaus Wimmer <kw@homelandtowers.us>  
**Sent:** Wednesday, October 16, 2019 3:26 PM  
**To:** Fisher, Joshua M (DEC) <Joshua.Fisher@dec.ny.gov>  
**Cc:** Michael Nowicki <ecolsol@aol.com>  
**Subject:** RE: NY054 Glencoma Lake - Walton Drive, Mahopac, NY

*ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.*

Thanks Josh, so it's a Town wetland and does that mean you don't need to inspect it ?

*Klaus Wimmer*

Regional Manager



HOMELAND TOWERS

9 Harmony Street, 2<sup>nd</sup> Floor  
Danbury, CT 06810  
**Office:** (203) 297-6345 | **Cell:** (201) 289-6750  
**Email:** [kw@homelandtowers.us](mailto:kw@homelandtowers.us)

This message originates from the firm of Homeland Towers, LLC. The information contained in this e-mail and any files transmitted with it may be a confidential communication or may otherwise be privileged and confidential and part of the work product doctrine. If the reader of this message, regardless of the address or routing, is not an intended recipient, you are hereby notified that you have received this transmittal in error and any review, use, distribution, dissemination or copying is strictly prohibited. If you have received this message in error, please delete this e-mail and all files transmitted with it from your system and immediately notify Homeland Towers, LLC by sending a reply e-mail to the sender of this message. Thank you.

**From:** Fisher, Joshua M (DEC) <Joshua.Fisher@dec.ny.gov>  
**Sent:** Wednesday, October 16, 2019 3:24 PM  
**To:** Klaus Wimmer <[kw@homelandtowers.us](mailto:kw@homelandtowers.us)>

**Cc:** Michael Nowicki <ecolsol@aol.com>

**Subject:** RE: NY054 Glencoma Lake - Walton Drive, Mahopac, NY

Hi Klaus, the wetland shown on your plan is not a NYSDEC regulated wetland.

**Josh Fisher**

Biologist, Bureau of Ecosystem Health  
New York State Department of Environmental Conservation  
21 South Putt Corners Rd., New Paltz, NY 12561  
Office: (845) 256-3113 | [joshua.fisher@dec.ny.gov](mailto:joshua.fisher@dec.ny.gov)  
Cell: (845) 220-8570

[www.dec.ny.gov](http://www.dec.ny.gov) |  | 

**From:** Klaus Wimmer <[kw@homelandtowers.us](mailto:kw@homelandtowers.us)>  
**Sent:** Wednesday, October 16, 2019 11:01 AM  
**To:** Fisher, Joshua M (DEC) <[Joshua.Fisher@dec.ny.gov](mailto:Joshua.Fisher@dec.ny.gov)>  
**Cc:** Michael Nowicki <ecolsol@aol.com>  
**Subject:** NY054 Glencoma Lake - Walton Drive, Mahopac, NY

*ATTENTION: This email came from an external source. Do not open attachments or click on links from unknown senders or unexpected emails.*

Hi Josh,

We have another tower project in Carmel that has a little wetland (runoff from an underground water tank overflow) on the property that I was hoping you can inspect. Mike was out to flag it several months ago. Attached please see the delineation survey and site plan. As you can see we are well over 100' from the wetland. The survey is signed & sealed and I'll bring the originals to the visit. Please let me know if you need the surveyor to sign the validation block first or after your visit.

Please let me know when you're in the area and can take a look at this

Thanks

*Klaus Wimmer*

Regional Manager



HOMELAND TOWERS

9 Harmony Street, 2<sup>nd</sup> Floor  
Danbury, CT 06810

**Office:** (203) 297-6345 | **Cell:** (201) 289-6750

**Email:** [kw@homelandtowers.us](mailto:kw@homelandtowers.us)

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HOMELAND TOWERS


Honorable Chairman  
and Members of the Planning Board  
Town of Carmel Town Hall  
60 McAlpin Avenue  
Mahopac, New York 10541

Re: Site Plan and Special Permit Application for  
Walton Drive, Mahopac, New York  
**Co-location commitment letter**

Dear Hon. Chairman Paerprer and Members of the Planning Board:

As owner of the above referenced proposed tower and as required under §156-62(F)(1)(s) of the Town of Carmel Code, Homeland Towers, LLC ("Homeland Towers") hereby consents to allow additional antennas (for purposes of collocating) on any new antenna towers, if feasible.

Very truly yours,  
Homeland Towers, LLC

By:   
Name: Manuel J. Vicente  
Title: President



January 21, 2020

Honorable Chairman Paeprer and  
Members of the Planning Board  
Town of Carmel  
60 McAlpin Avenue  
Mahopac, NY 10541

RE: Application for site plan and special permit approval for  
Glencoma Lake: Walton Drive, Mahopac, New York

Hon. Chairman Paeprer and Members of the Planning Board:

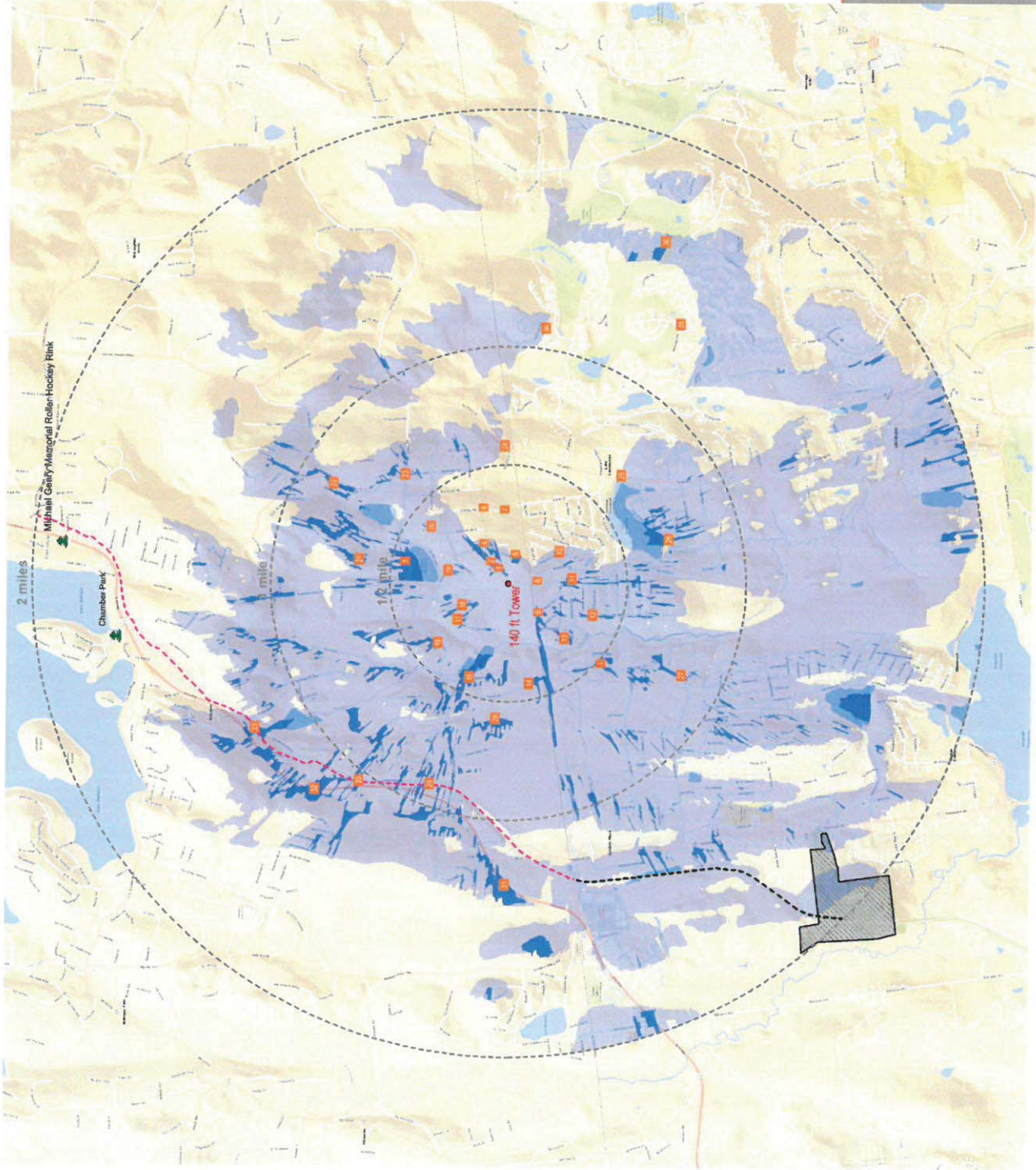
I am the Regional Manager for Homeland Towers, LLC. In connection with our request for site plan and special permit approval to locate a public utility wireless telecommunications facility ("Facility") at the above captioned property ("Property"). I would like to propose the following balloon and drive test schedule. The proposed Facility consists of a 140-foot monopole and a 30'x 85' fenced compound. The Property is located in the Residential Zone District where the Facility is permitted in accordance with Section 156-062 of the Town of Carmel Zoning Code.

1. Balloon tests will be conducted for 6 days, starting with Friday February 14, 2020, Saturday February 15, 2020, Monday February 17, 2020, Friday February 21, 2020, Saturday February 22, 2020 and Monday February 24, 2020. In case of inclement weather on any of the foregoing days, balloon tests will be conducted on the next Friday, Saturday and Monday dates until 6 days are completed. The balloon test will be conducted starting at approximately 8 am until 12 pm.
2. A full Visual Resource Evaluation will be submitted, including photographic renderings. Photographs will be taken from the viewpoints on the attached Viewshed maps, as well as any location reasonably requested by the Planning Board in advance of the first test.
3. A drive test using a crane to obtain signal data will be conducted on February \_\_\_\_, 2020. The test will be conducted at 3 heights, being 140, 120 and 100 feet above ground level. The signal data will be presented to the Planning Board and its consultant.

Thank you for your consideration. Please contact me with any questions or for additional information.

A handwritten signature in black ink, appearing to read 'Klaus Wimmer', is written over a horizontal line.

Klaus Wimmer, Regional Manager  
Homeland Towers, LLC  
(203) 297-6345



**LEGEND**

- Bare Earth Viewshed Area  
(Excludes existing vegetation and structures)
- Land Cover Viewshed Area  
(Includes existing vegetation and structures)
- Recommended Photo Location

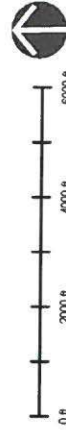
**Scenic Resources**

- Municipal Recreation Area
- NYS Trails
- Putnam Trailway
- Municipal Park

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Bare Earth" condition overlay identifies areas where the proposed telecommunications tower high point may be visible without consideration of the screening effect of existing vegetation or built structures. Bare earth analysis is provided to assist experienced visual analysts identify the maximum potential geographic area within which further investigation is appropriate. This topography-only viewshed map is not representative of project visibility during winter season leaf-off conditions.

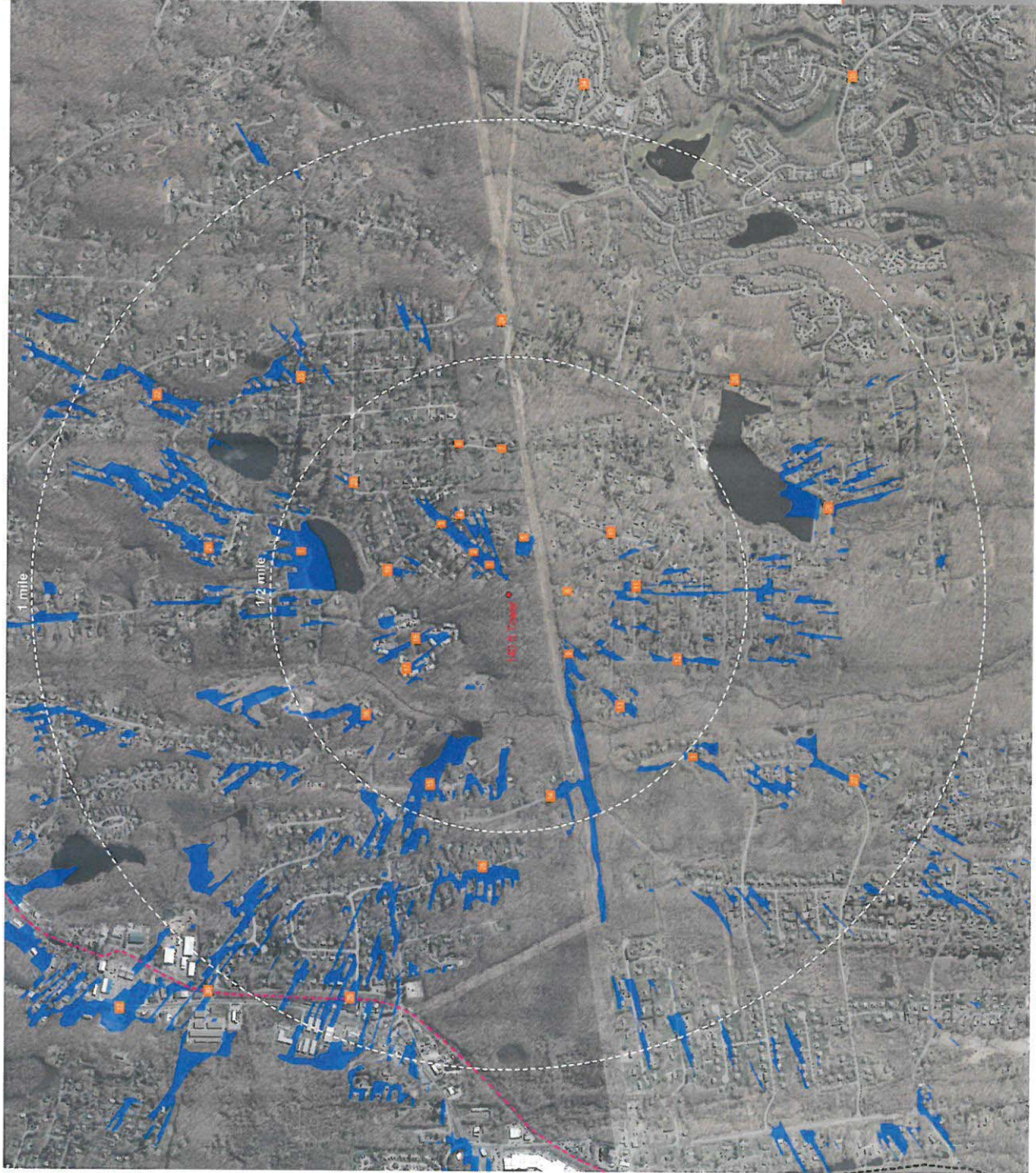
The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthophotography. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.



**FIGURE A1**  
**PHOTO LOCATION VIEWSHED MAP - 2 MILE RADIUS**  
**Visual Resource Assessment**  
**Proposed Telecommunications Tower**

Glacoma Lake Site (NY-54)  
 Walton Drive  
 Mahopac, NY

**HOMELAND TOWERS**



**LEGEND**

- Land Cover Viewshed Area  
(Includes existing vegetation and structures)
- Recommended Photo Location

**Scenic Resources**

- - - Putnam Trailway

Note: Viewshed areas are not definitive. Viewshed mapping provides a general understanding of where the proposed project is theoretically visible based on regional topographic, forest and building cover data sources.

The "Land Cover" condition viewshed area includes the screening effect of intervening vegetation and buildings. Vegetated areas and buildings were manually digitized from 2016 one-foot resolution digital orthomosaic. All digitized tree cover is assumed to be 50 feet tall and all digitized buildings are assumed to be 25 feet tall.

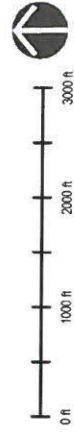


FIGURE A2  
 PHOTO LOCATION VIEWSHED MAP - 1 MILE RADIUS  
 Visual Resource Assessment  
**Proposed Telecommunications Tower**  
 Genesee Lake Site (NY/254)  
 Walton Drive  
 Mahopac, NY



HOMELAND TOWERS





January 21, 2020

Honorable Chairman Paerprer and  
Members of the Planning Board  
Town of Carmel  
60 McAlpin Avenue  
Mahopac, NY 10541

RE: Area analysis of feasibility of alternate existing structure sites or collocation opportunities

Hon. Chairman Paerprer and Members of the Planning Board:

I am the Regional Manager for Homeland Towers, LLC. I was responsible for identifying a suitable location for a telecommunications facility that would remedy the significant gap in reliable wireless service throughout the southern portion of Carmel in the vicinity and along Union Valley Road and adjoining residential areas.

In consultation with Verizon Wireless based on its siting needs in the area, I began exploring the area in the vicinity of the proposed site for a facility location taking into account the Town's Zoning Code, collocation opportunities, land uses, potential environmental impacts, leasing and construction feasibility.

Town Code Section 156-62. I. establishes a priority ranking for the location of wireless telecommunications facilities and requires that: "*Applicants for wireless telecommunications facilities shall locate, site and erect said wireless telecommunications facilities, including towers and other tall structures, in accordance with the following priorities, one being the highest priority and six being the lowest priority*".

*Priority 1. On existing tall structures or wireless telecommunications towers in nonresidential zoning districts*

I performed a review of the Town's zoning map and a series of field visits to determine if there were any "existing tall structure or wireless telecommunications towers in a nonresidential zoning district" and found that the only existing tall structure is a 81' tall stealth tower, approximately 1.15 miles to the west located at 195 Route 6, Mahopac. This existing tower is too close (about 0.6 miles) from an existing Verizon Wireless roof top installation at 361 Route 6, and about 0.5 miles from an existing Verizon Wireless site at 80 Route 6, Somers, NY. There are no other existing tall structures in nonresidential zoning districts (see Exhibit A)

*Priority 2. Collocation on a site with existing wireless telecommunications towers or structures in nonresidential districts, not fronting on NYS Routes 6, 6N, 52 and 301*



## HOMELAND TOWERS

I performed a detailed review of the Town's zoning map and series of field visits to determine if there were any existing wireless communication towers or tall structures in non-residential zoning districts not fronting on NYS Routes 6, 6N, 52 and 301 that would be suitable for collocation. Based on my review there is no structure that meets this criteria within a 2 mile radius of the proposed site. (see Exhibit B)

*Priority 3. Collocation on a site with existing wireless telecommunications towers or structures in any other nonresidential districts*

I performed a detailed review of the Town's zoning map and series of in-depth field surveys to determine if there were any existing wireless communication towers or tall structures in any other non-residential zoning districts that would be suitable for collocation. Based on my review there is no structure that meets these criteria within a 2-mile radius of the proposed site. (see Exhibit C)

*Priority 4: Installation of a new wireless telecommunications facility in any nonresidential district*

I reviewed the Town's zoning map to determine the location of a "non-residential zoning district" suitable for the installation of a new wireless communications facility that would provide coverage for Verizon's service gap. The closest nonresidential zoned property is located at 24 Miller St, Parcel ID 86.11-1-14 approximately 0.7 miles west from the proposed site that is zoned "Commerce/Business Park". An analysis of this location determined that it was about 0.75 miles from existing Verizon Wireless sites at 361 Route 6 Mahopac and an existing site at 80 Route 6, Somers and due to this proximity not suitable for the installation of a new wireless communications facility. In addition, the eastern part of this property slopes downhill to an elevation of about 600 ft above sea level, which is approximately 140 ft lower in elevation than the proposed location. (see Exhibits D, D1, D-2 )

*Priority 5. Installation of a new wireless telecommunications facility in any residential district*

Having explored all the required higher priority locations, I finally evaluated potential locations in a "residential" zoning district and utilized the Putnam County GIS online mapping service and the Towns zoning map to identify what if any residential zoned properties might be suitable. In particular I selected properties based on zoning code regulations, the location of existing on-air sites, size and acreage, distance from residences, environmental impact considerations, constructability and elevation. I identified the following residential zoned properties; the location of the identified properties is shown on the tax map attached as Exhibit E:

- A. 200 Union Valley Rd, Mahopac, Tax parcel # 76.17-1-28. This 34 acre vacant property is owned by Parent Estate, PO Box 396, Mahopac, NY 10541. A certified letter was sent on October 2, 2017. The certified letter was returned unclaimed. I follow up letter with regular mail was sent on November 2, 2017. Copies of the letters are attached in Exhibit F. I never received a response to my letter.
- B. 55 Fenwood Rd, Mahopac, Tax parcel # 76.18-2-56 This 9.3 acre property is owned by David & Dielle Simajlaj, same address. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. I never received a response to my letter.



HOMELAND TOWERS

- C. 74 Teakettel Spout Rd, Mahopac, Tax parcel # 76.17-2-2. This 15.2 acre property is owned by Jeffrey & Debra Kessler, same address. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. Mr. Kessler responded by phone to my letter and expressed an initial interest. I followed up with him by phone and he stated that he would discuss it with his family. I followed up with him a couple times, but he never responded to my calls.
- D. 45 Margaret Rd, Mahopac, Tax parcel# 87.7-1-24. This 43 acre property is owned by Kenneth Sullivan & Sean Kelly 1524 Broad St, North Bellmore, NY 11710. A certified letter was sent on October 2 and October 23, 2017. A copy of the letter is attached in Exhibit F. Mr. Sullivan responded to the letter and expressed initial interest, however he did not respond to my subsequent follow up calls.
- E. 545 Union Valley Rd, Mahopac, NY 10541, Tax Parcel ID# 87.7-1-7. This 74 acre parcel is owned by Willow Wood Rifle and Pistol Club at 551 Union Valley Rd, Mahopac, NY 10541. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. I visited the club as a follow up to the letter and discussed this proposal with the Club President Mr. Calcagnini. The Club was interested in our proposal but it was subsequently determined that the location was too far east and would not provide coverage for the service gap.
- F. 78 Englewood Terrace, Mahopac, Tax# 76.19-1-55. This 25 acre parcel is owned by Vincent Perrone, 7 Vails Ln, Katonah NY 10536. A certified letter was sent on October 2, 2017. A copy of the letter is attached in Exhibit F. I never received a response to my letter.
- G. Maple Hill Dr, Mahopac, Parcel ID # 87.5-1-90. This 70 acre property is owned by and are the common lands of the Maple Hill Estates Home Owners Association, Inc, and is subject to this application.

Based on the above limitations, the local topography, existing site locations and coverage objective, the number of available properties was extremely limited. The only property that was interested in leasing space and that also provides coverage for the service gap, is the subject site. Since this site is approved by Verizon Wireless, Homeland Towers, LLC entered into an agreement with the property owner and is seeking a Special Permit for the site.

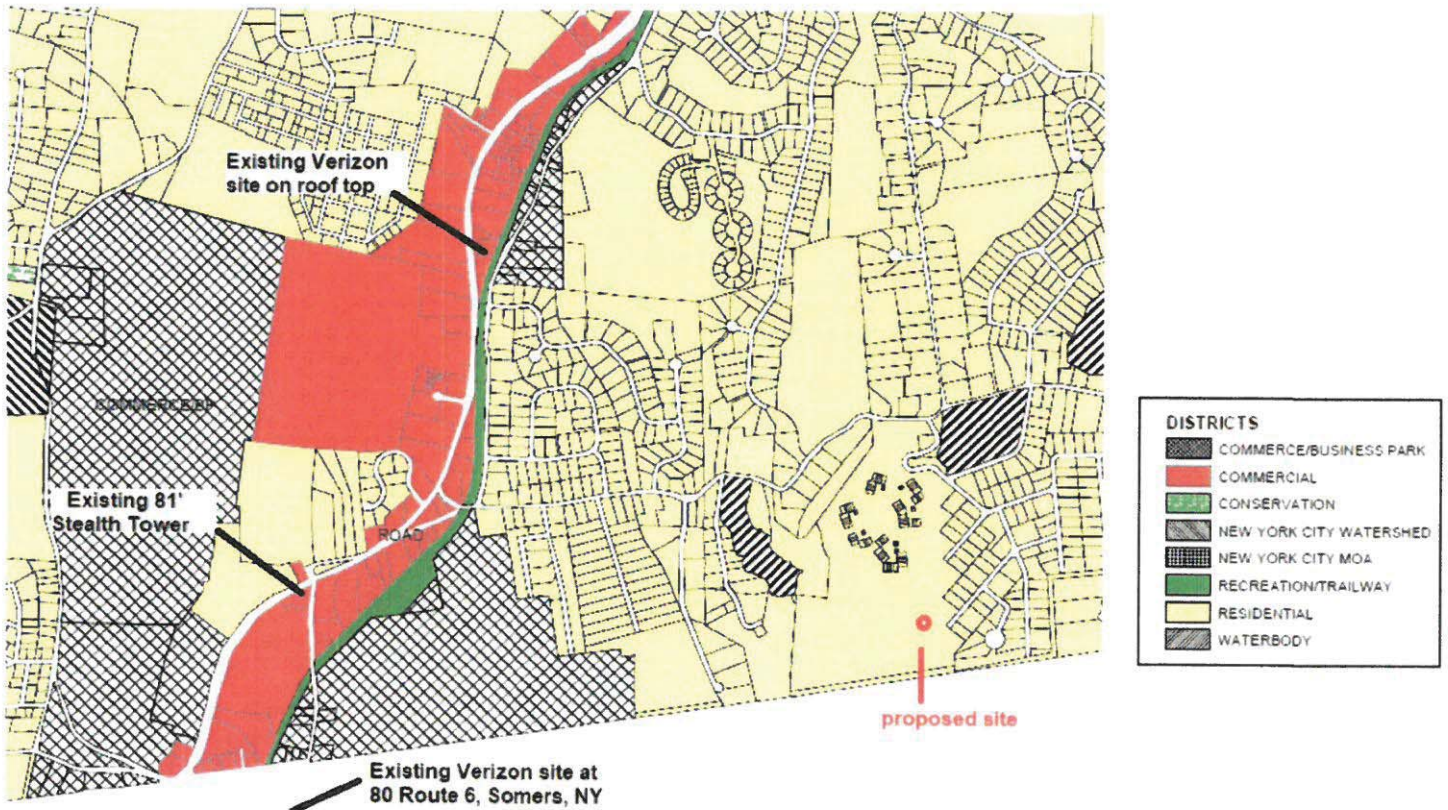
In conclusion, there are no existing structures or collocation opportunities at higher priority ranked locations as an alternative for the proposed facility. Based on its location and the surrounding area, including the Zoning Code requirements, the proposed site is the least intrusive alternative to remedy Verizon Wireless' significant gap in service.

Respectfully,

Klaus Wimmer  
Regional Manager  
Homeland Towers, LLC.

## EXHIBIT A

Priority 1. On existing tall structures or wireless telecommunications towers in nonresidential zoning districts



Existing 81' stealth tower structure in Commercial Zone, approximately 1.15 miles west of the proposed site at 195 Route 6, Mahopac. Verizon Wireless is also located on a roof top at 361 Route 6 Mahopac, and at 80 Route 6, Somers, NY. There are no other existing tall structures in nonresidential zoning districts.

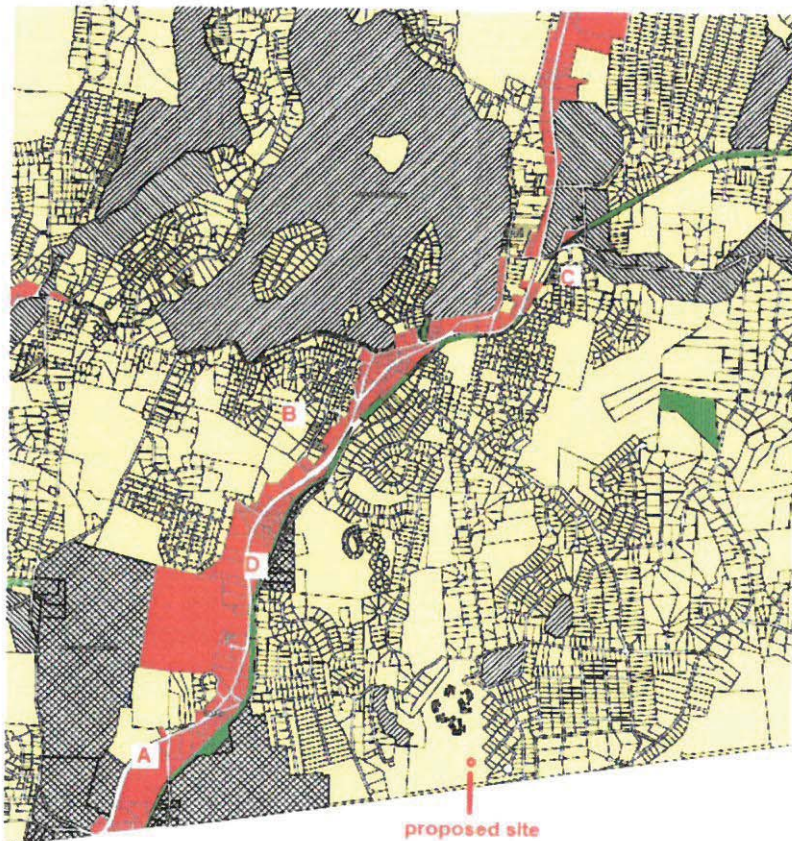


HOMELAND TOWERS

## EXHIBIT B

Priority 2: Colocation on existing wireless telecommunications towers or structures in nonresidential districts, not fronting on NYS Routes 6, 6N, 52 and 301

This zoning map shows the locations of all existing wireless telecommunications towers or structures in both nonresidential and residential districts



A: existing 81 ft Tower in commercial zone at 195 Route 6

B: existing 195 ft Tower in residential zone 51 Crest Drive

C: existing 120 ft Tower in residential zone at 55 McAlpin Ave.

D: existing Verizon roof top installation (+/- 30 ft ) at 361 Route 6.

#### DISTRICTS

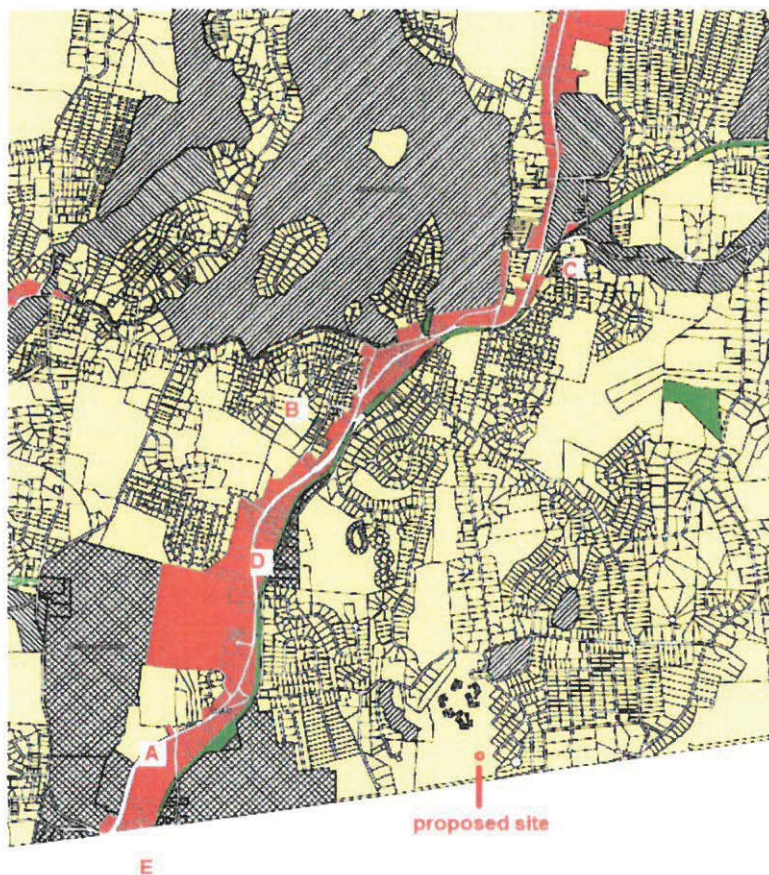
- COMMERCE/BUSINESS PARK
- COMMERCIAL
- CONSERVATION
- NEW YORK CITY WATERSHED
- NEW YORK CITY MOA
- RECREATION/TRAILWAY
- RESIDENTIAL
- WATERBODY

Based on my review there are no existing wireless telecommunications towers or structures in nonresidential districts not fronting on NYS Routes 6, 6N, 52 and 301 within a 1-2 mile radius of the proposed site.

## EXHIBIT C

Priority 3. Collocation on a site with existing wireless telecommunications towers or structures in any other nonresidential districts

This zoning map shows the locations of all existing wireless telecommunications towers or structures on both nonresidential and residential districts



A: existing 81 ft Tower in commercial zone at 195 Route 6

B: existing 195 ft Tower in residential zone 51 Crest Drive

C: existing 120 ft Tower in residential zone at 55 McAlpin Ave.

D: existing Verizon roof top installation (+/- 30 ft ) at 361 Route 6.

E. existing Verizon site at 80 Route 6, Somers, NY.

### DISTRICTS

	COMMERCE/BUSINESS PARK
	COMMERCIAL
	CONSERVATION
	NEW YORK CITY WATERSHED
	NEW YORK CITY MOA
	RECREATION/TRAILWAY
	RESIDENTIAL
	WATERBODY

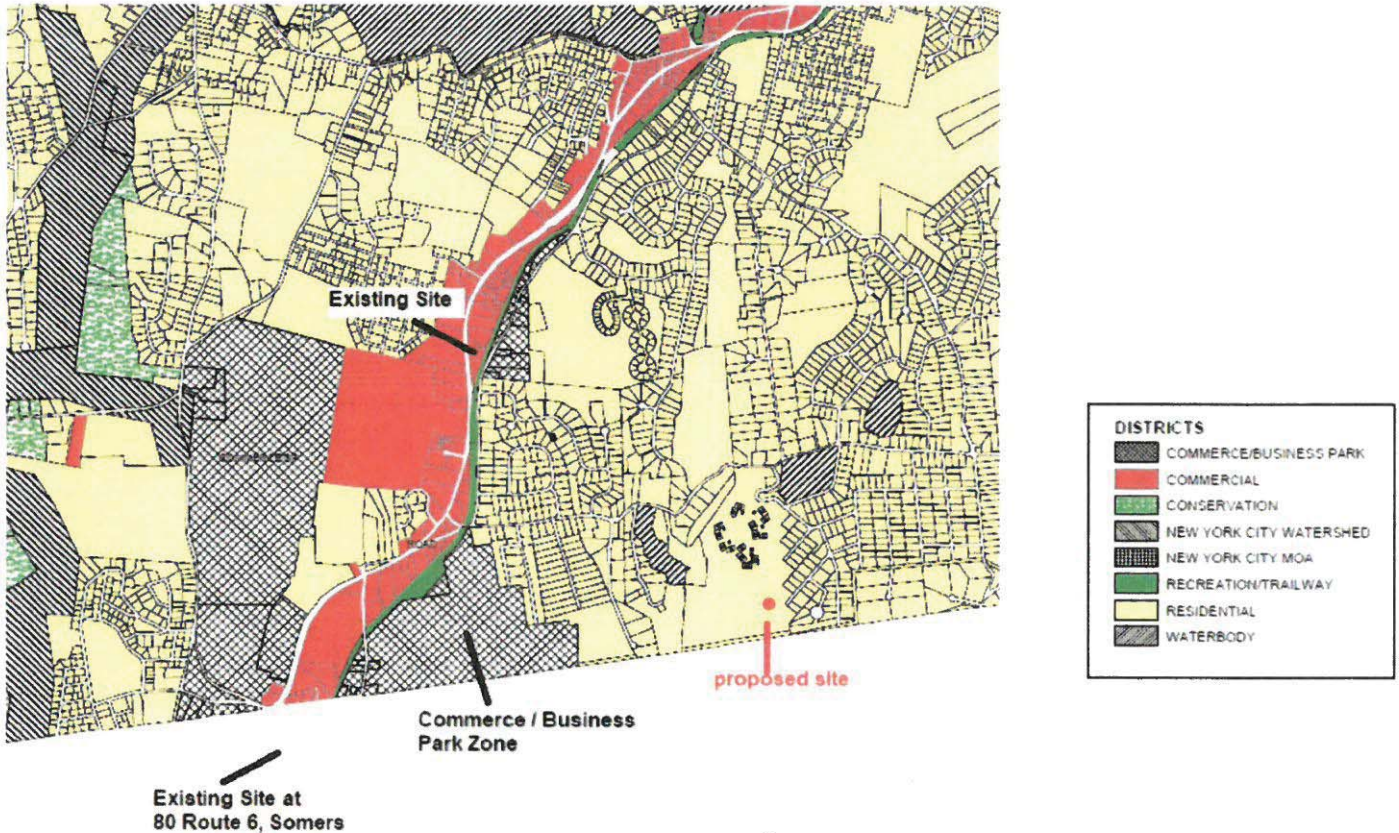
Based on my review there are no existing wireless telecommunications towers or structures in any other nonresidential district.



HOMELAND TOWERS

## EXHIBIT D

Priority 4: Installation of a new wireless telecommunications facility in any nonresidential district



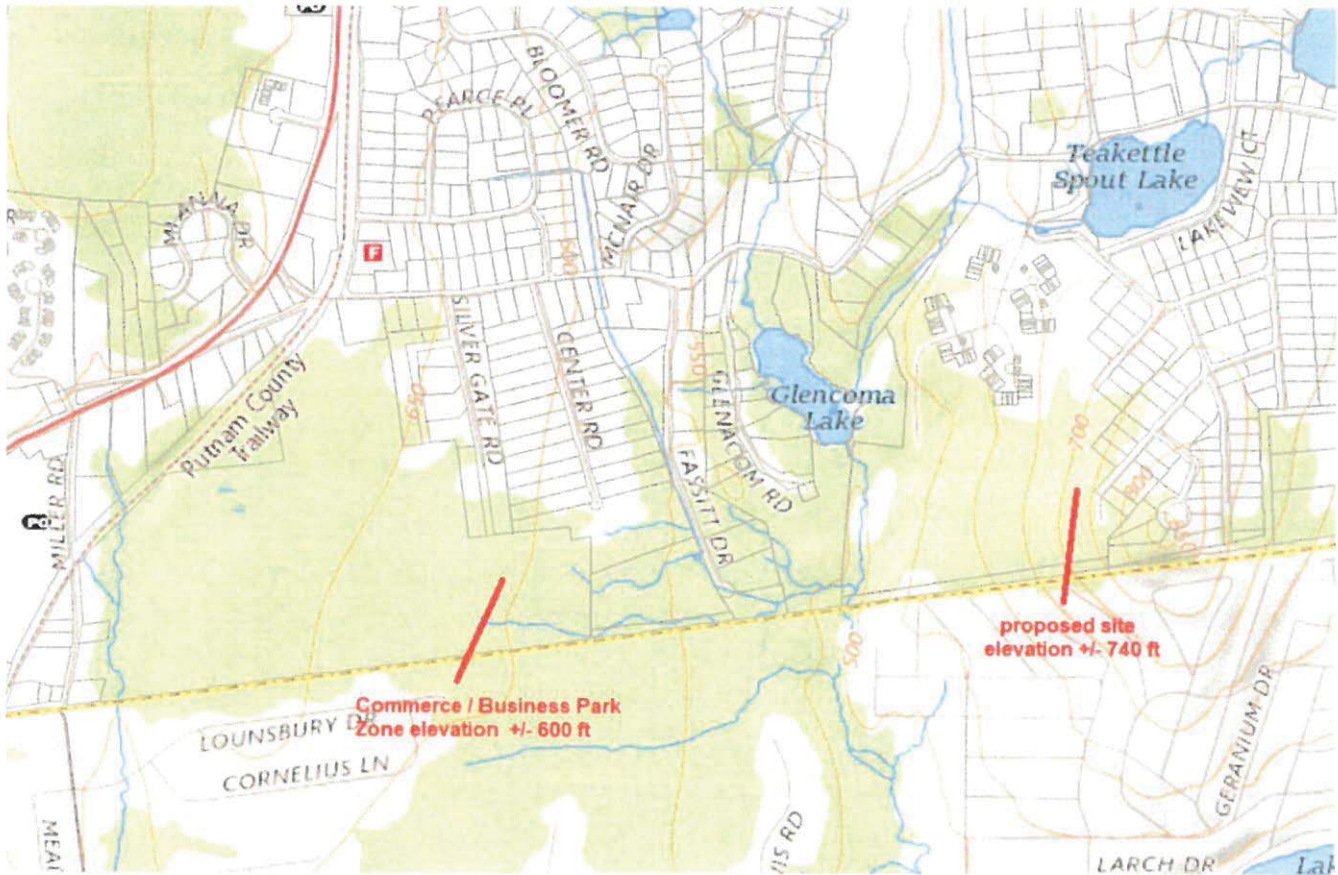
The closest nonresidential zoned property to the proposed site is located at 24 Miller St, Parcel ID 86.11-1-14 approximately 0.6 miles west from the proposed site. That property is zoned "Commerce/Business Park". An analysis of this location determined that it was about 0.6 miles from existing Verizon Wireless sites at 361 Route 6 Mahopac and an existing site at 80 Route 6, Somers and due to this proximity not suitable for the installation of a new wireless communications facility.



HOMELAND TOWERS

## EXHIBIT D1

Priority 4: Installation of a new wireless telecommunications facility in any nonresidential district



The eastern part of this property slopes downhill to an elevation of about 600 ft above sea level, which is approximately 140 ft lower in elevation than the proposed location.



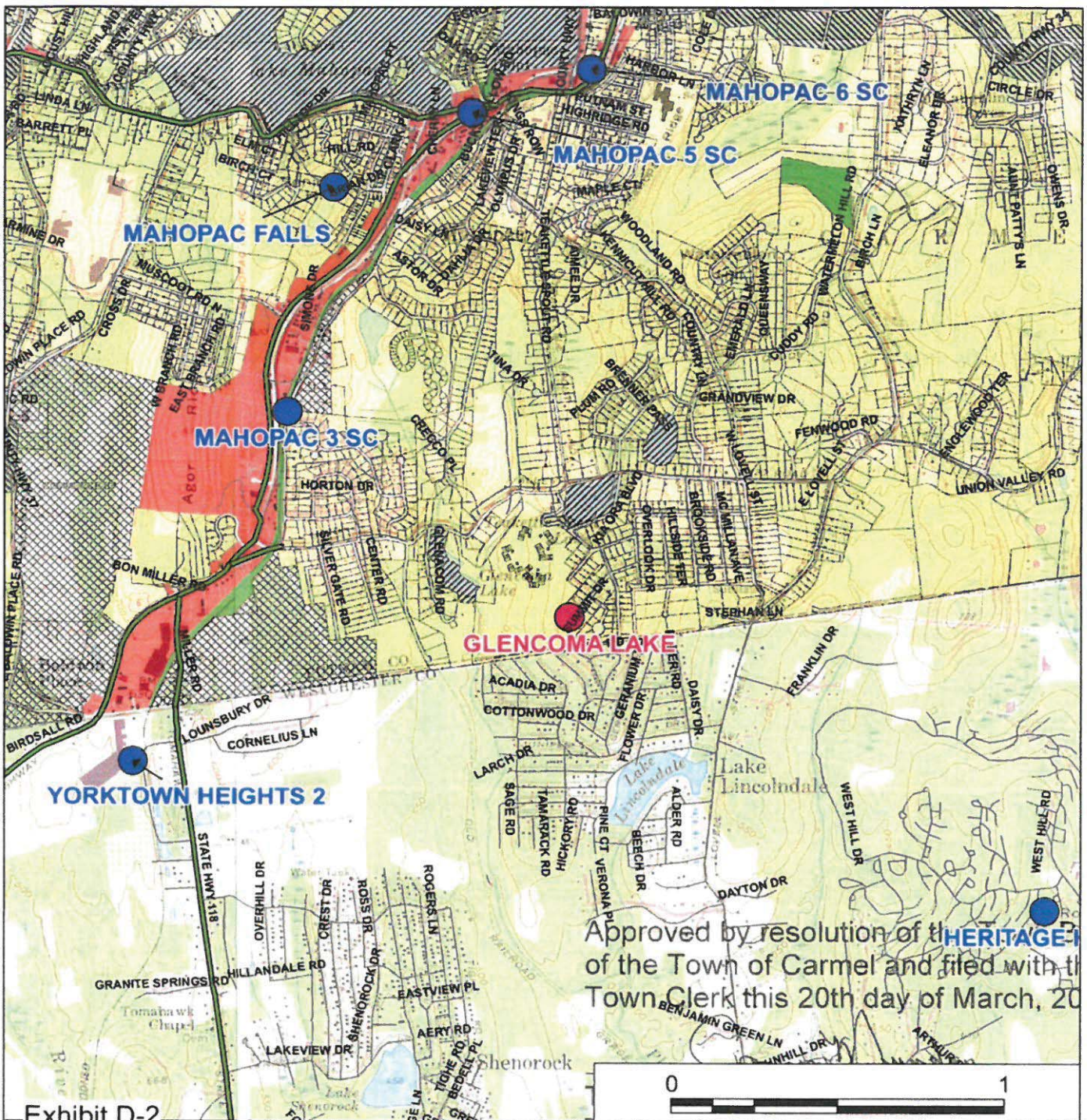


Exhibit D-2

## Glencoma Lake

Topographical Map  
& Zoning Map Overlay  
with Site Locations

Walton Drive  
Mahopac, NY 10541

- Verizon Wireless Existing Site
- Verizon Wireless Proposed Site

**verizon**

Prepared  
01/23/2020



HOMELAND TOWERS

## EXHIBIT E

Inventory of residential properties evaluated



- A. 200 Union Valley Rd, Mahopac, Tax parcel # 76.17-1-28
- B. 55 Fenwood Rd, Mahopac, Tax parcel # 76.18-2-56
- C. 74 Teakettel Spout Rd, Mahopac, Tax parcel # 76.17-2-2
- D. 45 Margaret Rd, Mahopac, Tax parcel# 87.7-1-24
- E. 545 Union Valley Rd, Mahopac, NY 10541, Tax Parcel ID# 87.7-1-7
- F. 78 Englewood Terrace, Mahopac, Tax# 76.19-1-55
- G. Maple Hill Dr, Mahopac, Parcel ID # 87.5-1-90



HOMELAND TOWERS

## EXHIBIT F

Copies of certified proposal letters sent out



October 2, 2017

Via Certified Mail

Parent Estate  
P.O. Box 396  
Mahopac NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.17-1-28) NY054 Glencoma Lake

Dear Sir/Madam,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 200 Union Valley Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



November 2, 2017

Via USPS Mail  
Parent Estate  
P.O. Box 396  
Mahopac NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.17-1-28) NY054 Glencoma Lake

Dear Sir/Madam,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 200 Union Valley Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

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All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

David & Dielle Simajlaj  
55 Fenwood Rd,  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.18-2-56) NY054 Glencoma Lake

Dear Mr. & Mrs. Simajlaj,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 55 Fenwood Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Fenwood Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Jeffrey & Debra Kessler  
74 Teakettel Spout Road  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.17-2-2) NY054 Glencoma Lake

Dear Mr. & Mrs. Kessler,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 74 Teakettel Spout Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Teakettel Spout Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Kenneth Sullivan  
Sean Kelly  
45 Maraget Road  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 87.7-1-24) NY054 Glencom a Lake

Dear Mr. Sullivan & Mr. Kelly,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 45 Margaret Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Margaret Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us





October 23, 2017

Via Certified Mail

Kenneth Sullivan & Sean Kelly  
1524 Broad St  
North Bellmore NY 11710

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 87.7-1-24) NY054 Glencom a Lake

Dear Mr. Sullivan & Mr. Kelly,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 45 Margaret Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Margaret Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Willow Wood Club Rifle & Pistol Club  
Attn: President  
551 Union Valley Road  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 87.7-1-7) NY054 Glencoma Lake

Dear President,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 545 Union Valley Road for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for your organization. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit your organization.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,



12-11

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail  
Vincent Perrone  
7 Vails Ln  
Katonah NY 10536

Re: Homeland Towers Wireless Facility Proposal (Parcel ID# 76.19-1-55) NY054 Glencom a Lake

Dear Mr. Perrone,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of your property located at 78 Englewood Terrace for the purpose of a wireless facility. Homeland Towers has identified this property as a potential wireless siting solution that will create an additional revenue stream for you. In addition to enhanced cellular coverage in the area and along Englewood Terrace, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit you.

All project costs associated with our proposal, including municipal and state approvals along with construction costs are at the sole expense of Homeland Towers. Once construction is complete, we take full responsibility for managing the site and coordinating its use by telecommunications providers.

Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us



October 2, 2017

Via Certified Mail

Maple Hill Home Owners Association  
Attn: Jerry Crary  
Maple Hill Dr  
Mahopac, NY 10541

Re: Homeland Towers Wireless Facility Proposal Maple Hill Drive Maintenance Bldg. NY054 Glencoma Lake

Dear Mr. Crary,

This proposal letter is being sent to your attention in hopes that you will be interested in leasing a small portion of the property near the maintenance building on Maple Hill Drive for the purpose of a wireless facility. Homeland Towers has identified this property as potential wireless siting solution that will create an additional revenue stream for your organization. In addition to enhanced cellular coverage in the area and along Union Valley Road, the proposed facility will provide critical infrastructure for public safety in this area of Mahopac.

The principals of Homeland Towers have a combined 40 years of experience providing wireless solutions utilized by AT&T, Verizon, Sprint and T-Mobile throughout the Northeast. Homeland Towers maintains a proven track record of partnering with Municipalities, Private Landlords, and Organizations to maximize the value of their property. Our expertise in real estate, zoning administration, construction and site management provides a fluid process that will benefit your organization.

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Please contact me at your earliest convenience to discuss the above proposal. I look forward to speaking with you.

Sincerely,

Klaus Wimmer  
203-297-6345  
cell# 201-289-6750  
kw@homelandtowers.us

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 Jeffrey & Debra Kessler  
 74 Teakettel Spout Rd.  
 Mahopac, NY 10541

Street and Apt. No. \_\_\_\_\_  
 City, State, Zip  
 NY054 10.2

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 Maple Hill Home Owners Assoc.  
 Attn: Jerry Crary  
 Maple Hill Dr.  
 Mahopac, NY 10541

Street and \_\_\_\_\_  
 City, State, Zip  
 NY054 10.2

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Sent To  
 Kenneth Sullivan  
 Sean Kelly  
 45 Maraget Rd  
 Mahopac, NY 10541

Street \_\_\_\_\_  
 City, State, Zip  
 NY054 10.2

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Sent To  
 Willow Wood Club Rifle & Pistol Club  
 Attn: President  
 551 Union Valley Rd.  
 Mahopac, NY 10541

Street and \_\_\_\_\_  
 City, State, Zip  
 NY054 10.2

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Total Postage  
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Sent To  
 David & Dielle Simajlaj  
 55 Fenwood Rd  
 Mahopac, NY 10541

Street \_\_\_\_\_  
 City, State, Zip  
 NY054 10.2

PS Form 3800, April 2015 PSN 7530-02-000-9047 See Reverse for Instructions

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Street	
City	

Vincent Perrone  
7 Vails Ln.  
Katonah NY 10536  
  
NY054 10.2

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<input type="checkbox"/> Certified Mail Restricted Delivery	\$
<input type="checkbox"/> Adult Signature Required	\$
<input type="checkbox"/> Adult Signature Restricted Delivery	\$

Postmark  
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Postage	\$
Total	\$
Sent	\$
Street	
City	

Kenneth Sullivan & Sean Kelly  
1524 Broad St.  
North Bellmore, NY 11710  
  
NY054 10.23

2022

SUBMISSION

LAW OFFICES OF  
**SNYDER & SNYDER, LLP**  
94 WHITE PLAINS ROAD  
TARRYTOWN, NEW YORK 10591

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FAX (914) 333-0743

NEW JERSEY OFFICE  
ONE GATEWAY CENTER, SUITE 2600  
NEWARK, NEW JERSEY 07102  
(973) 824-9772  
FAX (973) 824-9774

WRITER'S E-MAIL ADDRESS

REPLY TO:

LESLIE J. SNYDER  
ROBERT D. GAUDIOSO  
DOUGLAS W. WARDEN  
JORDAN M. FRY

rgaudioso@snyderlaw.net

TARRYTOWN OFFICE

DAVID L. SNYDER  
(1956-2012)

December 7, 2022

Honorable Chairman Craig Paepre  
and Members of the Planning Board  
Town of Carmel Town Hall  
60 McAlpin Avenue  
Mahopac, New York 10541

Re: Application for site plan and special permit approval for  
Glenacom (a/k/a Glencoma) Lake: Walton Drive, Carmel, New York

Honorable Chairman Paepre  
and Members of the Planning Board:

We are the attorneys for Homeland Towers, LLC and New York SMSA Limited Partnership d/b/a Verizon Wireless (collectively, the "Applicants") in connection with their request for site plan and special permit approval to locate a public utility wireless telecommunications facility ("Facility") at the above captioned property ("Property") pursuant to the attached Court Order. The proposed Facility consists of a 140-foot tower and a fenced 30' x 85' compound for related equipment. The Property is located in the Residential Zoning District where the Facility is permitted in accordance with Section 156-62 of the Town of Carmel Zoning Code. This application was first filed to the Planning Board on January 24, 2020.

Verizon Wireless is a provider of personal wireless services, and is licensed by the Federal Communications Commission to provide wireless services throughout the New York metropolitan area, including the Town of Carmel.

In support of the foregoing, we are pleased to enclose five (5) of the following materials and one thumb drive with all documents contained thereon:

1. RF Justification Report;
2. USFWS letters;
3. DEC Letter;



4. Visual Resource Evaluation;
5. SWPPP;
6. MS4 Acceptance;
7. SHPO Concurrence;
8. Generator Certification Letter; and
9. Site Plan.

We thank you for your consideration, and look forward to discussing this matter at the next Planning Board meeting. If you have any questions or require any additional documentation, please do not hesitate to contact me at 914-333-0700.

Snyder & Snyder, LLP

By: 

Robert D. Gaudio

RDG:cae

Enclosures

cc: Homeland Towers  
Verizon Wireless

z:\ssdata\wpdata\ss3\rdg\homelandtowers\carmel\glencoma lake\2022 filing\pb letter 12.07.2022.rtf