

**TOWN OF BARRE  
APPLICANT ACKNOWLEDGEMENT**

Date: 6/26/2022

Applicant: Name: RTO WIRELESS LLC AGENT, GEORGE CHIANIS  
Address: 271 CHELMSFORD ST, CHELMSFORD, MA 01824  
Telephone: 202-595-4034

Subject Property: Address: 4709 OAK ORCHARD ROAD  
Tax Lot No. 95.3-1-45

Referred to Planning Board for:

Special Use Permit

Site Plan Review

Applicant shall reimburse the Town of Barre for all engineering, legal, or other extraordinary or unanticipated expenses incurred by the Town in review of the proposed action. The applicant shall reimburse the Town as expenses are incurred.

Where such expenses are estimated to be greater than \$1,000.00, the Planning Board will require an escrow account be established in an amount determined by such Board. The escrow account will be replenished as expenses are paid by the Town.

All monies due the Town of Barre shall be paid in full before issuance of any required permit OR within thirty (30) days of final action taken by the Planning Board.

I, GEORGE CHIANIS have read the above statement and agree to the terms and conditions thereof.

*George Chianis*  
Applicant's Signature

6/26/2022  
Date

Fee's paid

TOWN OF BARRE  
PLANNING BOARD

APPLICATION  
(See Instructions and Procedures Attached)

Date Received: \_\_\_\_\_

1. I (we) hereby apply to the Town Planning Board:

for Site Plan Review

for a Special Use Permit

Pursuant to Section for the Town of Barre Zoning Regulations: ARTICLE IX, ARTICLE X  
SECTION 719

2. LOCATION: Address 479 OAK ORCHARD ROAD Tax Lot No. 95.3-1-45  
Current Zoning: Light Industrial / Ag Res.

3. OWNER: TOWN OF BARRE Telephone: 585-589-5100

Address: 14317 WEST BARRE ROAD, ALBION NY Zip: 14411

APPLICANT: RTO WIRELESS LLC Telephone: 202-595-4034

Address: 271 CHELMSFORD ST, CHELMSFORD, MA Zip: 01824

AGENT: GEORGE CHIANIS Telephone: 202-595-4034

Address: 271 CHELMSFORD ST, CHELMSFORD, MA Zip: 01824

If the applicant is not the owner or if there is an applicant/agent, please explain:

RTO WIRELESS LLC HAS A LEASE WITH THE TOWN OF BARRE

4. DESCRIBE BRIEFLY THE DETAILS OF THIS REQUEST: TO CO-LOCATE ON THE EXISTING  
WATER TANK TOWER STRUCTURE WITH 3 PANEL ANTENNAS AND 2 PARABOLC DISHES

AND A RADIO STATION EQUIPMENT CABINET LOCATED AT THE BASE OF THE STRUCTURE.

SIGNATURE(s): George Chianis DATE: 6/26/2022

DATE: \_\_\_\_\_

**AGRICULTURAL DATA STATEMENT**

Per § 305-a of the New York State Agriculture and Markets Law, any application for a special use permit, site plan approval, use variance, or subdivision approval requiring municipal review and approval that would occur on property within a New York State Certified Agricultural District containing a farm operation or property with boundaries within 500 feet of a farm operation located in an Agricultural District shall include an Agricultural Data Statement.

A. Name of applicant: RTO WIRELESS LLC  
Mailing address: 271 CHELMSFORD STREET  
CHELMSFORD, MA 01824

B. Description of the proposed project: Broadband Service Facility co-locating on existing 125' Water Tower Structure with 3 panel antennas and 2 parabolic dishes mounted at a height of 105' with a Radio Station Equipment Cabinet enclosed with existing fence/locked gate accessed by existing access road.

C. Project site address: 4709 OAK ORCHARD ROAD Town: BARRE

D. Project site tax map number: 95.3-1-45

E. The project is located on property:  
 within an Agricultural District containing a farm operation, or  
 with boundaries within 500 feet of a farm operation located in an Agricultural District.

F. Number of acres affected by project: ~~1.0005~~ .0005

G. Is any portion of the project site currently being farmed?  
 Yes. If yes, how many acres \_\_\_\_\_ or square feet \_\_\_\_\_?  
 XNo.

H. Name and tax parcel identification number or address of any owner of land containing farm operations within the Agricultural District and is located within 500 feet of the boundary of the property upon which the project is proposed.

TA# 95.0-1-66  
TA# 106.-00-1-7

I. Attach a copy of the current tax map showing the site of the proposed project relative to the location of farm operations identified in Item H above. Web-mapping available at [tinyurl.com/MapOrleans](http://tinyurl.com/MapOrleans).

~~~~~  
**FARM NOTE**  
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Prospective residents should be aware that farm operations may generate dust, odor, smoke, noise, vibration and other conditions that may be objectionable to nearby properties. Local governments shall not unreasonably restrict or regulate farm operations within State Certified Agricultural Districts unless it can be shown that the public health or safety is threatened.  
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GEORGE CHIANIS, AGENT

6/26/2022

Name and Title of Person Completing Form

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:<br>060020 / Barre WT                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                         |                                 |
| Project Location (describe, and attach a location map):<br>4709 Oak Orchard Road, Barre, Orleans County, NY 14411 (43.1850806, -78.1923583)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                                                         |                                 |
| Brief Description of Proposed Action:<br>RTO Wireless, LLC proposes to collocate three (3) panel antennas (one antenna per sector) and two (2) dish antennas (painted to match) at a centerline height of 105-feet on the existing 125-foot water tank that is located on the eastern portion of the Subject Property and was constructed in 1993. Additionally, RTO Wireless, LLC proposes to install a proposed wireless equipment cabinet on a proposed 4-foot by 4-foot pad located within 5-foot by 5-foot lease area under the water tank. Proposed antenna cables will be routed from the proposed antennas, down the water tank leg to the proposed equipment cabinet. Proposed electrical conduit will be routed underground from the proposed equipment cabinet to the existing utility rack with electric meter. The Project Site will be access via an existing access road from Oak Orchard Road. |  |                                                         |                                 |
| Name of Applicant or Sponsor:<br>RTO Wireless, LLC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Telephone: 207-240-7204<br>E-Mail: dave@rtowireless.com |                                 |
| Address:<br>45 Concord Street                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                         |                                 |
| City/PO:<br>Framingham                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | State:<br>MA                                            | Zip Code:<br>01701              |
| 1. Does the proposed action only involve the legislative adoption of a plan, local law, ordinance, administrative rule, or regulation?<br>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<br><input type="checkbox"/>  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                         | YES<br><input type="checkbox"/> |
| 2. Does the proposed action require a permit, approval or funding from any other government Agency?<br>If Yes, list agency(s) name and permit or approval:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |  |                                                         | NO<br><input type="checkbox"/>  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                         | YES<br><input type="checkbox"/> |
| 3. a. Total acreage of the site of the proposed action?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | 0.0005 acres                                            |                                 |
| b. Total acreage to be physically disturbed?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | 0.0005 acres                                            |                                 |
| c. Total acreage (project site and any contiguous properties) owned or controlled by the applicant or project sponsor?                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | 2.2 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 checked="" type="checkbox"/> Residential (suburban)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                         |                                 |
| <input type="checkbox"/> Forest <input checked="" type="checkbox"/> Agriculture <input type="checkbox"/> Aquatic <input checked="" type="checkbox"/> Other(Specify): Water tank / telecommunications facility                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |  |                                                         |                                 |
| <input type="checkbox"/> Parkland                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                         |                                 |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | NO                                  | YES                                 | N/A                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 5. Is the proposed action,<br>a. A permitted use under the zoning regulations?<br>b. Consistent with the adopted comprehensive plan?                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input checked="" type="checkbox"/> | <input type="checkbox"/>            | <input type="checkbox"/> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <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?<br>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?<br>b. Are public transportation services available at or near the site of the proposed action?<br>c. Are any pedestrian accommodations or bicycle routes available on or near the site of the proposed action?                                                                                                                                                                                                                                                                                             | NO                                  | YES                                 |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
| 9. Does the proposed action meet or exceed the state energy code requirements?<br>If the proposed action will exceed requirements, describe design features and technologies:<br><u>The proposed action meets state energy code requirements</u>                                                                                                                                                                                                                                                                                                                                                            | NO                                  | YES                                 |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/>            | <input checked="" type="checkbox"/> |                          |
| 10. Will the proposed action connect to an existing public/private water supply?<br>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?<br>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?<br>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? | NO                                  | YES                                 |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input 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?<br>b. Would the proposed action physically alter, or encroach into, any existing wetland or waterbody?                                                                                                                                                                                                                                                                                                             | NO                                  | YES                                 |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |                          |
| If Yes, identify the wetland or waterbody and extent of alterations in square feet or acres: _____<br>_____<br>_____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                     |                                     |                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     |                                     |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|-------------------------------------|
| 14. Identify the typical habitat types that occur on, or are likely to be found on the project site. Check all that apply:<br><input type="checkbox"/> Shoreline <input type="checkbox"/> Forest <input type="checkbox"/> Agricultural/grasslands <input type="checkbox"/> Early mid-successional<br><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?<br>Northern Harrier (immediate project area is maintained lawn, no habitat present)                                                                                                                                                        | NO                                  | YES                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                   | <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?<br>If Yes,<br>a. Will storm water discharges flow to adjacent properties?<br>b. Will storm water discharges be directed to established conveyance systems (runoff and storm drains)?<br>If Yes, briefly describe:<br>_____<br>_____                                                                            | NO                                  | YES                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> | <input type="checkbox"/>            |
|                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/>            | <input type="checkbox"/>            |
|                                                                                                                                                                                                                                                                                                                                                                                                                   |                                     |                                     |
| 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)?<br>If Yes, explain the purpose and size of the impoundment: _____<br>_____                                                                                                                                                        | NO                                  | YES                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                   | <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?<br>If Yes, describe: _____<br>_____                                                                                                                                                                                                                                    | NO                                  | YES                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                   | <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?<br>If Yes, describe: _____<br>_____                                                                                                                                                                                                                                  | NO                                  | YES                                 |
|                                                                                                                                                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> | <input 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>RTO Wireless, LLC</u> Date: <u>6/23/2022</u>                                                                                                                                                                                                                                                                                                                                           |                                     |                                     |
| Signature: <u>Mr. Chris Adams</u> <i>Chris Adams</i> Title: <u>Consultant for Applicant</u>                                                                                                                                                                                                                                                                                                                       |                                     |                                     |

June 26, 2022

***VIA HAND DELIVERY***

Town of Barre NY  
Planning Board  
14317 West Barre Road  
Barre, NY 14411

**Re:** **Application for Special Use Permit/Site Plan Review**  
**Applicant:** **RTO Wireless, LLC**  
**Property Address:** **4709 Oak Orchard Road**

**Property Tax ID:** **Map 3 / Lot 25-3**  
**Zone:** **Light Industrial**  
**Proposed Use:** **Broadband Service Facility**  
**Zoning Regulations:** **Section 719, Article IX, Article X**

CEO Shellye Dale-Hall,

As agent for and on behalf of RTO Wireless LLC ("RTO"), the Applicant, we are hereby submitting this correspondence in support of the above-referenced application for a Special Use Permit/ Site Plan Review from the Town of Barre Planning Board (the "Board"). The Applicant seeks to install and operate a Broadband Service Facility (the "Facility") on the Town of Barre Water Tank Tower ("the Tower"). The Property is in the Light Industrial District and the Facility is permitted upon approval by the Board in this district.

The applicant seeks to install and operate the Facility consisting of three (3) panel antennas and two (2) parabolic dishes and coaxial cables mounted to the Tower. Further the proposal also includes a Radio Station Equipment Cabinet (the "Cabinet") located at the base of the Water Tower. The Applicant's facilities are shown on the plans attached hereto and incorporated herein by reference (the "Plans").

## **I. Background**

The Applicant, RTO Wireless LLC ("RTO") builds and operates wireless broadband services in rural markets. RTO was recently awarded a contract by Orleans County to deploy broadband services throughout the entire county. RTO is a member of Microsoft Airband consortium of companies that aims to eliminate the broadband deficiencies in rural markets. RTO supported Barre during Covid by providing a free public WiFi network for residents at the front of Town Hall on West Barre Road.

## **II. The Facility**

The Applicant proposes to install three (3) panel antennas and two (2) parabolic dishes, which consists of a dish one foot (1' diameter) and a second dish 3 feet (3'diameter) to the proposed one hundred twenty-five (125') Water Tower at a centerline height of one hundred five feet (105'). The Applicant's Facility will also include a radio equipment cabinet located on a concrete pad, four feet by four feet (4'x4'). The equipment cabinet will be located within and surrounded by an existing fence and locked gate.

After installation, the Facility will be unmanned and will only require occasional maintenance visits. The only utilities required to operate this Facility are standard 100-amp service. (See attached "Plans"). Other specifics regarding the proposed Facility are as follows:

1. The proposed Facility will be in the Light Industrial District which is in the targeted coverage area.
2. The Facility will comply in all respects with radio frequency emission standards established by the FCC.
3. The proposed Facility will not have any adverse effect on the value of land and buildings in the neighborhood or on the amenities thereof. The proposed use is passive, requires no employees on the premises, and has no characteristics that are incompatible with the underlying zoning. Specifically, it will generate only an occasional vehicle trip by a service technician for routine maintenance, will be served by standard electrical and requires no water, septic, or other town services.
4. The proposed Facility will promote and conserve the convenience and general welfare of the inhabitants of the Town by enhancing Broadband services within the Town.
5. The proposed Facility will not create overcrowding of land or undue concentration of population because it is an unmanned Facility.
6. The proposed Facility will preserve and increase the amenities of the Town by enhancing Broadband services.
7. The proposed Facility will not create adverse effects on public and



private water supplies and indeed will utilize no water at all.

8. The proposed Facility will not create adverse effects on drainage, schools, parks, open space, or other public requirements.
9. The proposed Facility will not create excessive noise or pollution to the environment.
10. The proposed Facility will not create adverse effects on historic sites.

The Facility will comply with all applicable local, state, and federal safety codes.

### **RTO Wireless/ Town of Barre Agreement**

1. **Galvanized Steel Conduit/Bonus.** Landlord shall be entitled to a One Thousand Dollar (\$1000.00) "Bonus" to be paid to Landlord by the Tenant within thirty (30) days after the full execution of the Tower Lease and Ground Space Agreement and once the Tenant has secured all necessary Federal, State, County and Municipal permits which allows for the start of construction.

This Document's "Bonus" intent is for the Landlord to purchase a One Hundred Twenty Foot (120') One Inch (1") Galvanized Steel Conduit. The Tenant will install the Landlord's above-mentioned Conduit to the height of One Hundred Feet (100') adjacent to the Tenant's Conduit during the Tenant's installation. The Tenant will incur the cost of the One Thousand Dollar (\$1000.00) installation fee.

2. **Utilities.** The Tenant shall pay the Landlord a one-time annual fee (Lease Year One) for Utilities (National Grid) in the sum of One Thousand Eight Hundred Dollars (\$1800.00). This fee represents an estimated One Hundred Fifty Dollars (\$150.00) per month Utility cost for the operation of the Tenant's Communication Service. The Tenant will install a measuring instrument to gauge the amount of power used. The measuring instrument and the Landlord's monthly Utility bill at the Site will provide an accurate Tenant's Utility cost. This cost will be adjusted annually according to the aforementioned process.
3. **WiFi Service.** The Tenant shall attempt to provide, to the best of its capabilities without guarantee, WiFi service to a certain section of property owned by the Landlord adjacent to or near Oak Orchard Road and Rice Road. Tenant will provide the WiFi device and monthly connectivity service at no charge to the Landlord (complimentary) for the term of the Lease and any renewal periods.

**Brief to the Barre Planning Board**  
**In Support of the Application for a**  
**Broadband Service Facility (Co-Location) at 4709 Oak Orchard Road**  
**Barre, NY**

RTO Wireless, LLC. ("RTO") the applicant, has submitted an application for Special Use Permit and Site Plan Review for a Broadband Service Facility, Special Use Permit/Site Plan Submittal Requirements of the Town of Barre Zoning Regulations. RTO respectfully submits that its application is consistent with the intent and purpose of the Site Plan Review criteria and meets the criteria of the Site Plan Submittal Requirements, in addition to meeting the purpose and goals of Article IX and Article X.

Specifically RTO is seeking all necessary approvals for the proposed Broadband Service Facility which includes co-locating on the existing 125 feet Water Tower structure (See attached plans). RTO's installation includes three (3) panel antennas and two (2) parabolic dishes mounted to the existing Water Tower Structure at a center line height of 105 feet with an unmanned Radio Station Equipment Cabinet (See attached Plans). The Radio Station Equipment Cabinet will be enclosed with an existing chain-link fence accessed by a locked gate and will be accessed by the existing access road.

The proposed facility will require an occasional maintenance visit, thus, avoiding any traffic to the site. No sewer, septic or water are required. Other specifics regarding the proposed site are as follows:

- **Surface Water Drainage.** The proposed installation will have no impact on surface water drainage.
- **Circulation.** The proposed installation will have no impact on circulation.
- **Utility Service.** The proposed installation requires only 100 amp service.
- **Advertising Features.** The proposed installation will have no sign or other advertising features.
- **Safety.** All equipment is self-contained, and access is limited.
- **Microclimate.** The proposed installation will not emit heat, vapor or fumes nor will it impact lights, air, or water resources or on noise and temperature levels or immediate environment.

The proposed facility will comply with all applicable local, state, and federal safety codes.

## **Article IX Standards**

### **Basic Requirements**

#### **1 Ingress and Egress**

The proposed facility will require an occasional visit thus avoiding any traffic to the site.

#### **2 Noise**

There will be no excessive noise at unreasonable hours. There will be no emissions of dust, fly ash, fumes, vapors, or gases. The proposed Broadband Service Facility will not produce any light or reflections or that light beyond its lot lines.

#### **3 Refuse/Service Areas**

The proposal will have no impact.

#### **4 Utilities**

The proposed installation requires a 100-amp service (see Plans).

## **5 Storm Drainage**

The proposed installation has no effect on storm drainage as the equipment cabinet is located in the existing compound. (See Plans).

## **6 Screening/Buffering**

See Plans.

## **7 Signs/Lighting**

There will be no signage or exterior lighting (see Plans for contact signage).

## **8 Yards/Open Space**

Not applicable (see Plans).

## **9 Compatibility**

The proposed installation is on an existing Water Tower Structure (see Plans).

## **SECTION 719 Telecommunication Facility**

The applicant will conform with all building setback provisions as the proposal includes co-location on an existing Water Tower Structure. The height of the existing Water Tower Structure will not increase, nor will it violate the terms or conditions of any previous local approval.

The proposal encompasses the intent and purpose of the supplemental regulations by encouraging the use of high structures to minimize the visual effects of telecommunication towers and to minimize the total number of telecommunication towers in the community.

\*RTO was recently awarded a contract by New Orleans County to deploy Broadband Services throughout the entire county.

\*The proposal conforms with all applicable regulations promulgated by the Federal Communications Commission, Federal Aviation Administration, and all other federal agencies.

\*The proposed installation is designed and constructed in a manner which minimizes visual impact to the extent practical.

\*The proposal complies with the necessary requirements of this Ordinance

\*The proposed site is the most technically feasible structure.

## **SECTION 1003 APPLICATION FOR SITE PLAN APPROVAL**

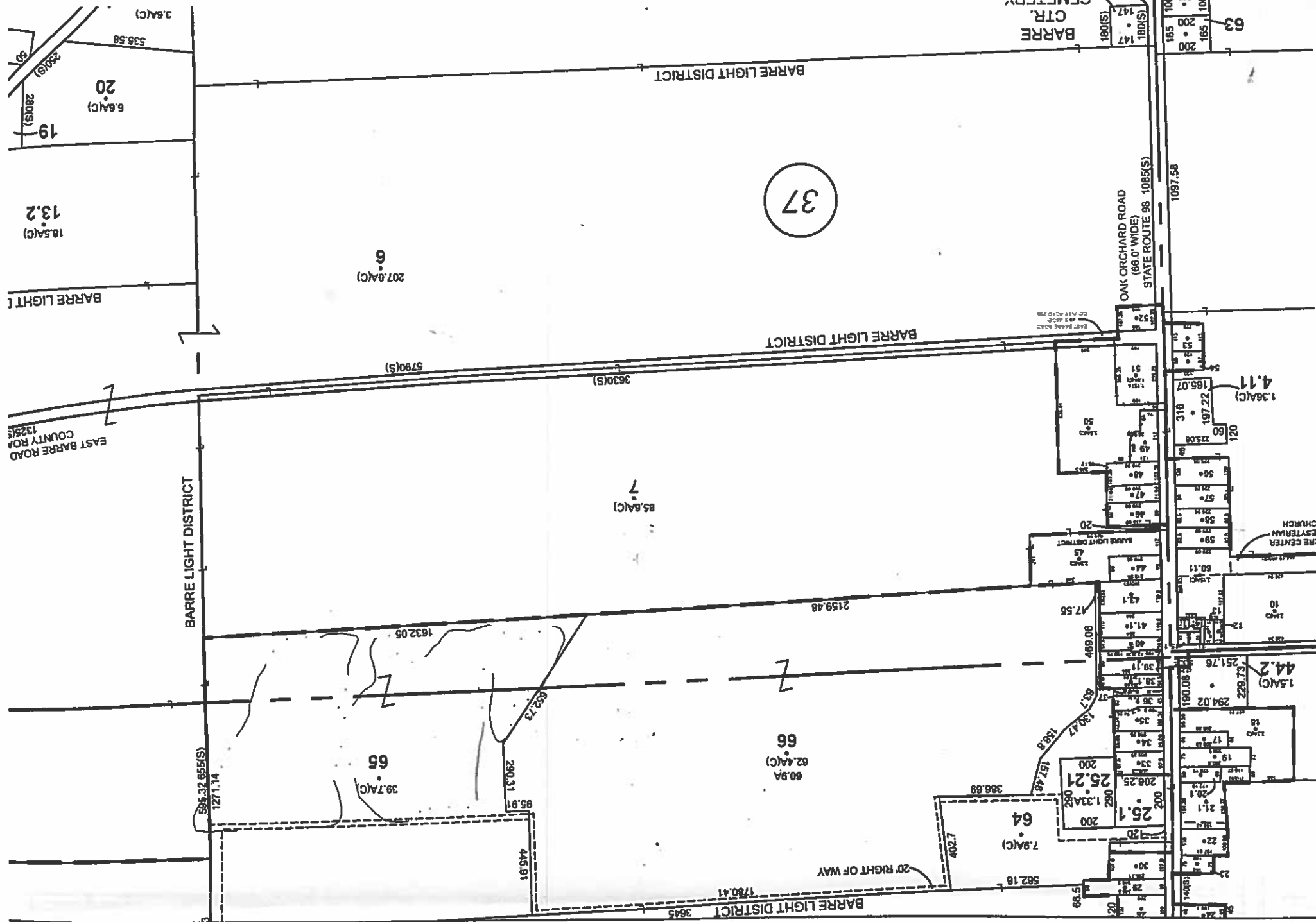
An application for site plan approval shall be made in writing to the Code Enforcement Officer and shall be accompanied by information drawn from the following checklist. The Planning Board may require additional information, if necessary, to complete its review.

### **A. Plan Checklist for all Site Plans:**

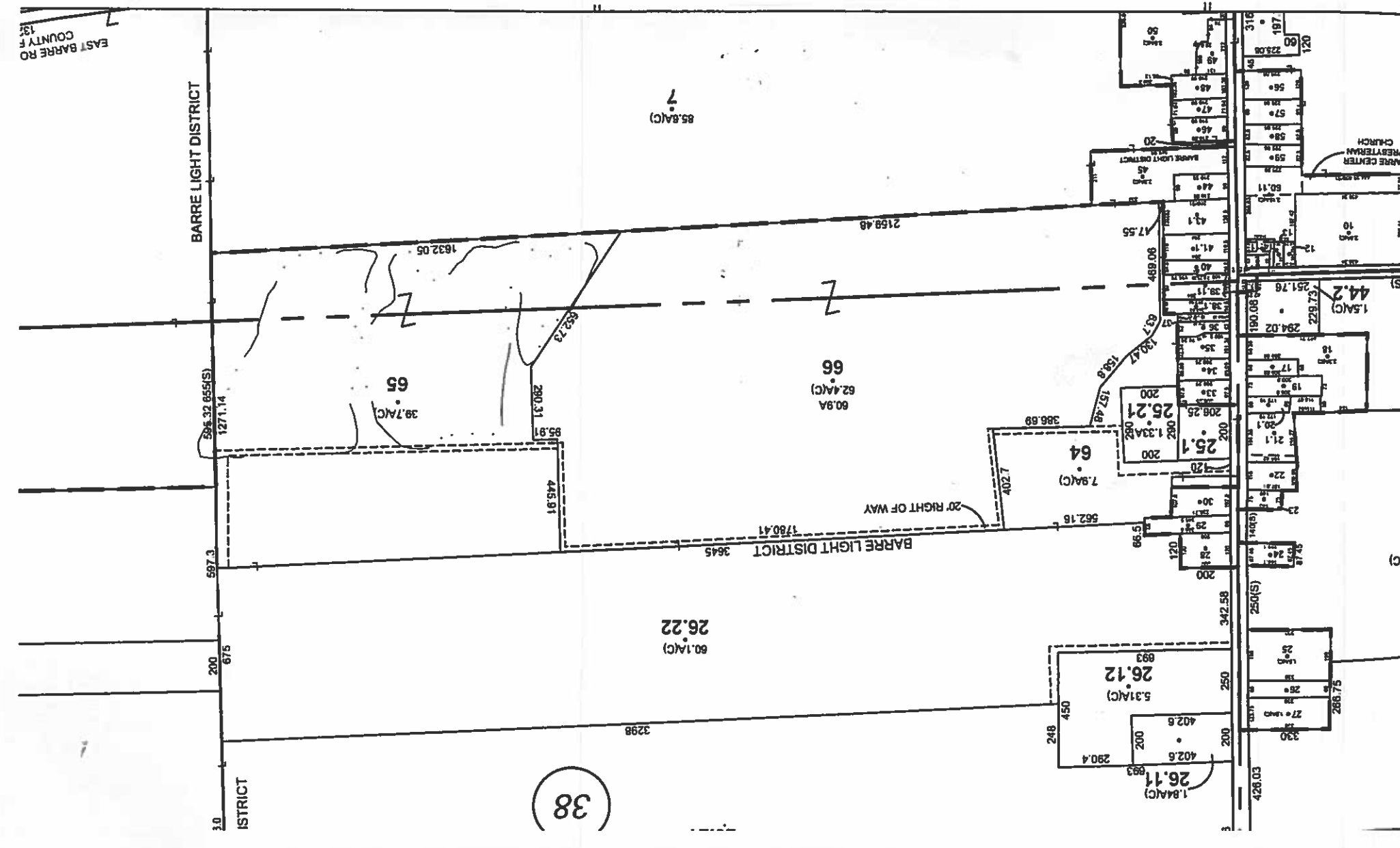
1. Title of drawing, including name and address of applicant and person responsible for preparation of such drawing.  
See Plans.
2. North arrow, scale and date.  
See Plans.
3. Boundaries of the property plotted to scale.  
The Applicant respectfully requests a waiver.
4. Existing watercourses and bodies of water.  
Not Applicable
5. Location of any slopes of five percent (5%) or greater.  
Not Applicable
6. Existing and proposed grading and drainage.  
Not Applicable
7. Location, proposed use, and height of all buildings and site improvements including culverts, drains, retaining walls and

fences.  
See Plans.

8. Location, design and construction materials of all parking and truck loading areas, showing points of entry and exit from the site.  
Not Applicable
9. Location of outdoor storage, if any.  
Not Applicable
10. Description of the method of sewage disposal and location of the facilities.  
Not Applicable
11. Identification of water source; if well, locate on drawing.  
Not Applicable
12. Location, size and design and construction materials of all proposed signs.  
See Plans
13. Location and proposed development of all buffer areas, including existing vegetation cover.  
Not Applicable
14. Location and design of outdoor lighting facilities.  
Not Applicable
15. General landscaping plan.  
Not Applicable
16. Copy of property deed and a listing of all deed restrictions.  
The Town of Barre and RTO Wireless have an executed Lease dated June 11, 2022.



37



38



**SITE NAME:**  
**BARRE**

**SITE NUMBER:**  
**060020**

**SITE ADDRESS:**  
**4709 OAK ORCHARD ROAD  
BARRE, NY 14411**

**GENERAL NOTES**

CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO COMMENCEMENT OF CONSTRUCTION. HE SHALL IMMEDIATELY NOTIFY THE ENGINEER OF ANY UNAUTHORIZED ALTERATIONS OR ACTIONS TO A DOCUMENT BEARING THE SEAL OF A LICENSED PROFESSIONAL ENGINEER OR LAND SURVEYOR IS A VIOLATION OF SECTION 7208 SUBSECTION 20F OF THE NEW YORK STATE EDUCATION LAW.

THIS DRAWING AND ALL THE INFORMATION CONTAINED HEREIN IS AUTHORIZED FOR USE ONLY BY THE PARTY IDENTIFIED HEREIN. ANY OTHER USE, REPRODUCTION, DISTRIBUTION OR RELEASE WITHOUT THE EXPRESS WRITTEN CONSENT OF RTO WIRELESS, LLC IS PROHIBITED.

**SCOPE OF WORK**

THIS IS NOT AN ALL INCLUSIVE LIST. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT PARTS OR DIMENSIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL VERIFY ALL NEEDED EQUIPMENT TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.

THE PROJECT GENERALLY CONSISTS OF THE FOLLOWING:

- TOWER SCOPE OF WORK:
  - INSTALLATION OF (1) PROPOSED PANEL ANTENNAS (1 PER SECTOR)
  - INSTALLATION OF (2) PROPOSED DISH ANTENNAS (2 TOTAL)
  - INSTALLATION OF (1) PROPOSED 4" DIA. CONCRETE PAVEMENT (1 PER SECTOR)
  - INSTALLATION OF (1) PROPOSED CABLES
- GROUND WORK SCOPE OF WORK:
  - INSTALLATION OF (1) PROPOSED 4"x4" CONCRETE PAVEMENT
  - INSTALLATION OF (1) PROPOSED EQUIPMENT CABINET
  - INSTALLATION OF (1) PROPOSED OPS UNIT

**NOTES:**  
RTO WIRELESS IS INSTALLING FOR THE TOWER A ONE INCH (1") GALVANIZED STEEL CORNER ANCHOR TO THE TOWER'S CONCREAT AT A HEIGHT OF APPROXIMATELY 10' (ONE TOWERED 10'1") DURING THE TOWER'S INSTALLATION.

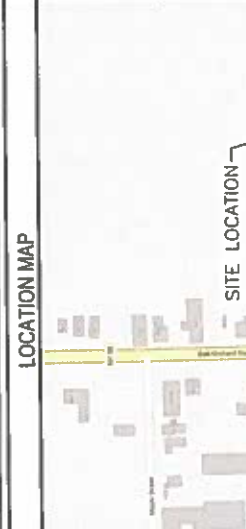
**NEW YORK CODE OF COMPLIANCE**

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS APPLICABLE TO THE PROJECT: NOTHING IN THESE NOTES SHALL BE CONSIDERED TO CONTRADICT OR SUPERSEDE ANY OF THE ABOVE CODES.

CODE TITLE  
BUILDING  
ELECTRICAL  
MECHANICAL  
2018 IBC  
2018 NEC  
2015 IMC

**UNDERGROUND SERVICE ALERTS - NEW YORK 411**  
UTILITY NOTIFICATION CENTER OF NEW YORK  
(888) 373-4488  
WWW.NEWTORR-411.COM

CALL 3 BEFORE ANY UTILITY INSTALLATION BEGINS TO DETERMINE



**NO SCALE**

**PROJECT DIRECTORY**

**APPLICANT:**  
RTO WIRELESS  
145 CONCORD STREET  
FRAMINGHAM, MA 01701

**SITE ADDRESS:**  
4709 OAK ORCHARD ROAD  
BARRE, NY 14411

**CONTACT:**  
RTO WIRELESS, LLC  
GEORGE CHAMBERS  
(202) 985-4034

**SITE INFORMATION**

**PROPERTY OWNER:**  
BARRE FIRE CO  
4709 OAK ORCHARD RD  
BARRE, NY 14411

**PROPERTY TAX ID:**  
95-3-1-43

**ZONING DISTRICT:**  
LIGHT INDUSTRIAL DISTRICT

**COORDINATES:**  
LATITUDE (NAD 83): 43° 11' 04.7" N  
LONGITUDE (NAD 83): 76° 11' 32.45" W  
ELEVATION: 488' (PER GOOGLE EARTH)

**TOWER TYPE:**  
125' WATER TOWER

**CURRENT USE:**  
WATER TOWER

**PROPOSED USE:**  
WATER TOWER/TELECOMMUNICATIONS

**SHEET INDEX**

| SHEET NO. | SHEET TITLE                      |
|-----------|----------------------------------|
| T-1       | TITLE SHEET                      |
| D-1       | GENERAL NOTES                    |
| E-1       | OVERALL SITE PLAN                |
| E-2       | ENLARGED SITE PLAN               |
| E-3       | TOWER ELEVATION AND ANTENNA PLAN |
| E-4       | CONSTRUCTION DETAILS - 1         |
| E-5       | CONSTRUCTION DETAILS - 2         |
| E-6       | GROUNDING DETAILS - 1            |
| E-7       | GROUNDING DETAILS - 2            |
| E-8       | ELECTRICAL DETAILS               |

**CONSTRUCTION DOCUMENTS**

**REVISIONS:**

| REV. | DATE       | DESCRIPTION            |
|------|------------|------------------------|
| 1    | 06/17/2020 | ISSUE FOR PERMIT       |
| 2    | 06/22/2020 | REVISED PER COMMENTS   |
| 3    | 06/23/2020 | ISSUE FOR CONSTRUCTION |

**PROJECT INFORMATION:**  
PROJECT NUMBER: 50490.RTO.CDN.B53333.0

**SITE NUMBER:** 060020  
**ADDRESS:** 4709 OAK ORCHARD ROAD  
BARRE, NY 14411  
**COUNTY:** ORLEANS COUNTY

**TITLE SHEET**  
SHEET NUMBER: T-1

**PREPARED FOR:**  
RTO Wireless  
Rural Technology Operators  
145 CONCORD STREET  
FRAMINGHAM, MA 01701

**PREPARED BY:**  
Alaaul  
ENGINEERING  
3840 E. JOHNSON ROAD  
AMHERST, NY 14228  
WWW.ALAULINC.COM



**DMITRIY ALBUL**  
NY LICENSE NO. 0808075

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE REGISTERED AS AN ENGINEER OR ARCHITECT TO SEAL THIS DOCUMENT.

**DRAWN BY:** [Signature]  
**CHECKED BY:** [Signature]

**DATE:** 06-23-2020

**CONSTRUCTION DOCUMENTS**

**REVISIONS:**

| REV. | DATE       | DESCRIPTION            |
|------|------------|------------------------|
| 1    | 06/17/2020 | ISSUE FOR PERMIT       |
| 2    | 06/22/2020 | REVISED PER COMMENTS   |
| 3    | 06/23/2020 | ISSUE FOR CONSTRUCTION |

**PROJECT INFORMATION:**  
PROJECT NUMBER: 50490.RTO.CDN.B53333.0

**SITE NUMBER:** 060020  
**ADDRESS:** 4709 OAK ORCHARD ROAD  
BARRE, NY 14411  
**COUNTY:** ORLEANS COUNTY

**TITLE SHEET**  
SHEET NUMBER: T-1

**CONSTRUCTION DOCUMENTS**

**REVISIONS:**

| REV. | DATE       | DESCRIPTION            |
|------|------------|------------------------|
| 1    | 06/17/2020 | ISSUE FOR PERMIT       |
| 2    | 06/22/2020 | REVISED PER COMMENTS   |
| 3    | 06/23/2020 | ISSUE FOR CONSTRUCTION |

**PROJECT INFORMATION:**  
PROJECT NUMBER: 50490.RTO.CDN.B53333.0

**SITE NUMBER:** 060020  
**ADDRESS:** 4709 OAK ORCHARD ROAD  
BARRE, NY 14411  
**COUNTY:** ORLEANS COUNTY

**TITLE SHEET**  
SHEET NUMBER: T-1

**CONSTRUCTION DOCUMENTS**

**REVISIONS:**

| REV. | DATE       | DESCRIPTION            |
|------|------------|------------------------|
| 1    | 06/17/2020 | ISSUE FOR PERMIT       |
| 2    | 06/22/2020 | REVISED PER COMMENTS   |
| 3    | 06/23/2020 | ISSUE FOR CONSTRUCTION |

**PROJECT INFORMATION:**  
PROJECT NUMBER: 50490.RTO.CDN.B53333.0

**SITE NUMBER:** 060020  
**ADDRESS:** 4709 OAK ORCHARD ROAD  
BARRE, NY 14411  
**COUNTY:** ORLEANS COUNTY

**TITLE SHEET**  
SHEET NUMBER: T-1

**11'x17' PLOT WILL BE HALF SCALE UNLESS OTHERWISE NOTED**

CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING CONDITIONS, AND CONDITIONS ON THE JOB SITE, AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.





PREPARED FOR:



945 CONCORD STREET  
FRAMINGHAM, MA 01701

PREPARED BY:



3840 E. ROBINSON ROAD  
AMHERST, NY 14228  
WWW.ALPAUL.COM



DMITRY ALBUL  
NY LICENSE NO.0808075

IT IS A CONDITION OF USE FOR ANY SERVICE  
OR PRODUCT PROVIDED BY ALPAUL ENGINEERING  
THAT THE USER SHALL HOLD THE USER  
RESPONSIBLE FOR ANY DAMAGE TO ANY  
PROPERTY OR PERSONS.

DATE: 08-23-2022

CHECKED BY:

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### CONSTRUCTION DOCUMENTS

#### SUBMITTALS

| REV | DATE       | DESCRIPTION             |
|-----|------------|-------------------------|
| 1   | 08/17/2022 | ISSUED FOR REVIEW       |
| 2   | 08/22/2022 | REVISED FOR COMMENTS    |
| 3   | 08/22/2022 | ISSUED FOR CONSTRUCTION |

PROJECT NUMBER

30490.RTO.CDN.B33353.0

PROJECT INFORMATION

SITE NUMBER: 060020  
4709 OAK ORCHARD ROAD  
BARRE, NY 14411  
ORLEANS COUNTY

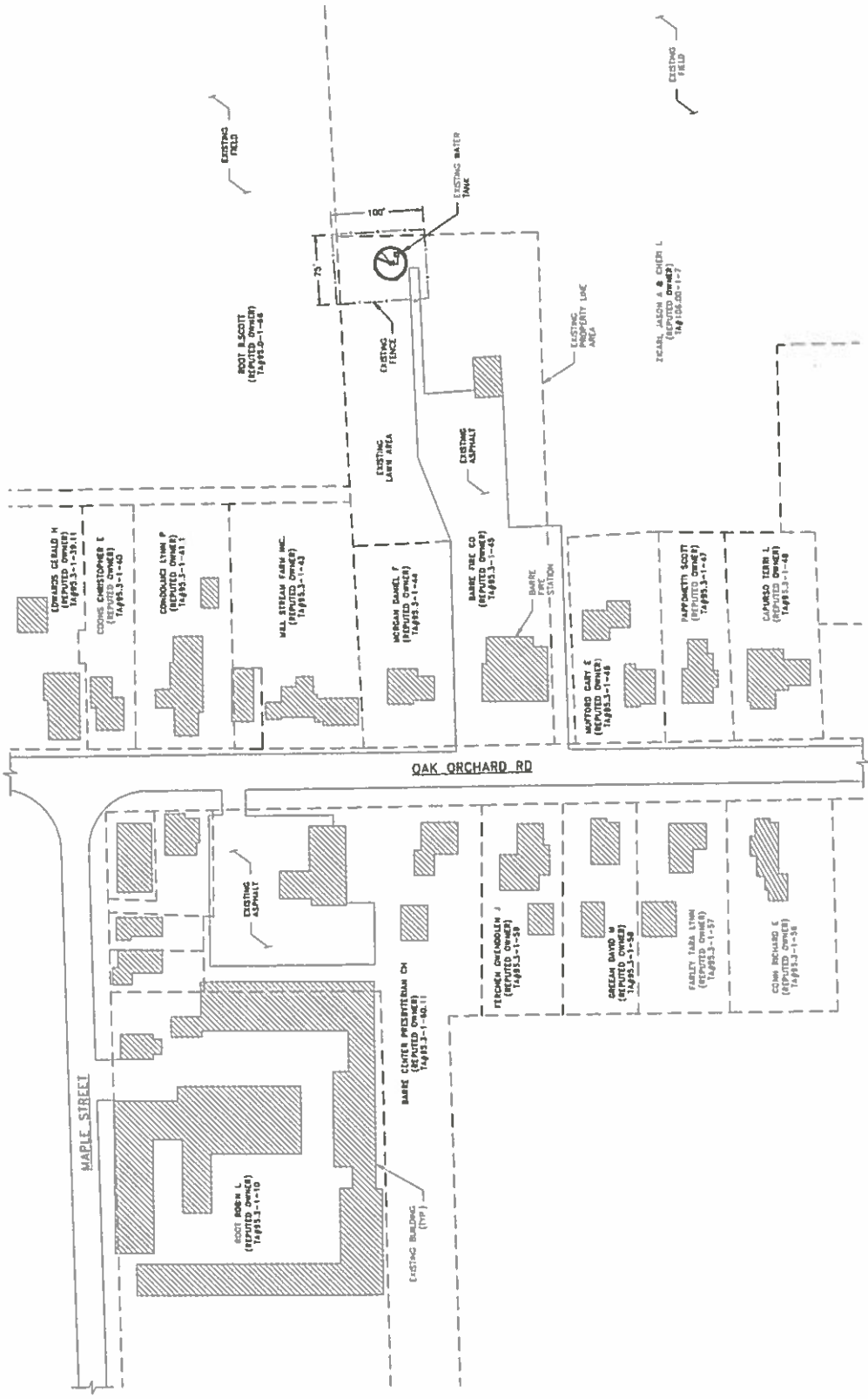
SHEET TITLE

ENLARGED

SITE PLAN

SHEET NUMBER

A-1



NO SCALE

OVERALL SITE PLAN



PREPARED FOR:



845 CONCORD STREET  
FRAMINGHAM, MA 01701

PREPARED BY:



3640 E. BOBROWSON ROAD  
AMHERST, NY 14228  
WWW.ALPAUL.COM



DMITRY ALBUL  
NY LICENSE NO.089075

08-23-2022

IT IS A VIOLATION OF LAW FOR ANY PERSON  
UNLESS THEY ARE EXEMPT UNDER THE PROVISIONS  
OF A STATUTE TO SIGN THIS DOCUMENT.

DRAWN BY: AAK  
CHECKED BY: AAK

PTDS REV #:

CONSTRUCTION DOCUMENTS

| REV | DATE       | DESCRIPTION             |
|-----|------------|-------------------------|
| 1   | 08/17/2022 | ISSUED FOR REVIEW       |
| 2   | 08/22/2022 | REVISED FOR COMMENTS    |
| 3   | 08/23/2022 | ISSUED FOR CONSTRUCTION |

PROJECT NUMBER

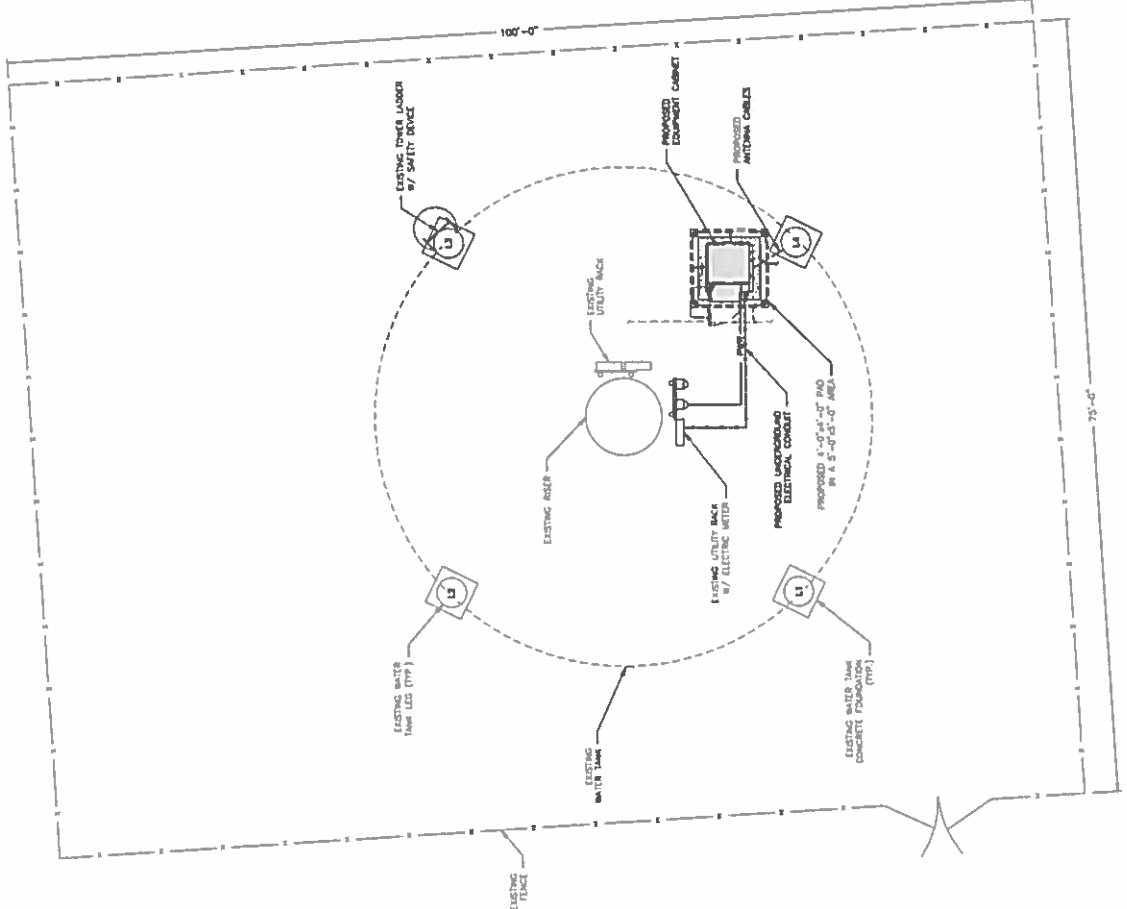
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PROJECT INFORMATION

SITE NUMBER: 060020  
4709 OAK ORCHARD ROAD  
BARRE, NY 14411  
ORLEANS COUNTY

SHEET TITLE  
ENLARGED  
SITE PLAN

SHEET NUMBER  
A-2



1"=20'-0"  
1/8"=1'-0"

ENLARGED SITE PLAN AT GROUND LEVEL

1





PREPARED FOR:  
**RTO Wireless**  
 Rural Technology Operators  
 843 CONCORD STREET  
 FRAMINGHAM, MA 01701

PREPARED BY:  
**Alaul**  
 ENGINEERING  
 3840 E. JOHNSON ROAD  
 AMENAST, NY 14228  
 WWW.ALJALID.COM

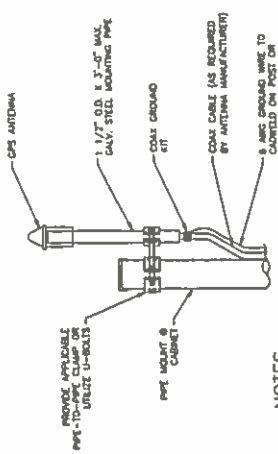


DMITRY ALBUL  
 NY LICENSE NO.089075  
 08-23-2022

CONSTRUCTION DOCUMENTS

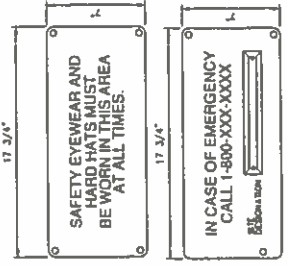
| REV | DATE       | DESCRIPTION             |
|-----|------------|-------------------------|
| 1   | 04/17/2022 | ISSUED FOR REVIEW       |
| 2   | 04/22/2022 | REVISED FOR COMMENTS    |
| 3   | 04/22/2022 | ISSUED FOR CONSTRUCTION |

PROJECT NUMBER  
 30490.RTO.CDM.B53353.0  
 PROJECT INFORMATION  
 BARRE  
 SITE NUMBER: 060020  
 4709 OAK ORCHARD ROAD  
 BARRE, NY 14411  
 ORLEANS COUNTY  
 SHEET TITLE  
 CONSTRUCTION  
 DETAILS - II  
 SHEET NUMBER  
 A-5



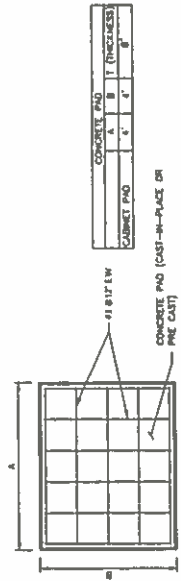
**NOTES:**  
 1. GROUND ANTENNAS & MOUNTS PER MANUFACTURERS RECOMMENDATIONS & CARRIER STANDARDS  
 2. LOCATION OF ANTENNA MUST HAVE A CLEAR VIEW OF THE SOUTHERN SKY AND COMPASS BEARING WITHIN THE VIEWING ZONE OF THE SURFACE AREA OF A CARRIER ANTENNA  
 3. ALL GPS ANTENNA LOCATIONS MUST BE ABLE TO RECEIVE CLEAR SIGNALS FROM A MINIMUM OF FOUR (4) SATELLITES. VERIFY WITH HANDHELD GPS BEFORE FINAL LOCATION OF GPS ANTENNA

1. GPS ANTENNA DETAIL  
 1-3 SCALE: N.T.S.



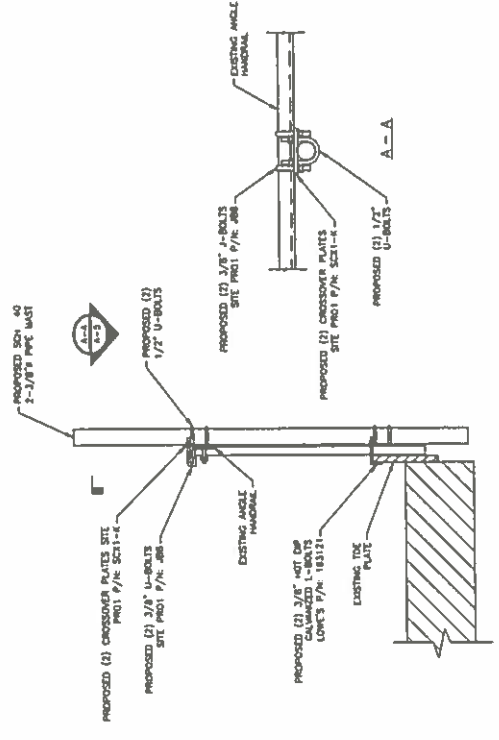
**NOTES:**  
 1. SIGN SHALL BE MOUNTED AT ROOF DOOR  
 2. MOUNTING HEIGHT SHALL BE 5' A.P.L. TO SIGN CENTERLINE

2. SAFETY SIGN DETAIL  
 1-3 SCALE: N.T.S.



**NOTES:**  
 1. USE CALVICATED METL EXPANSION ANCHORS OR APPROVED EQUAL FOR EQUIPMENT ANCHORAGE  
 2. FOR SIZE AND LOCATION OF ANCHORS AND OTHER REQUIREMENTS, SEE EQUIPMENT TIE-DOWN DRAWINGS  
 3. CONCRETE SHALL HAVE A COMPRESSIVE STRENGTH OF 4000 PSI

3. CONCRETE PAD DETAIL  
 1-3 SCALE: N.T.S.



4. PROPOSED MOUNT DETAIL  
 1-3 SCALE: N.T.S.



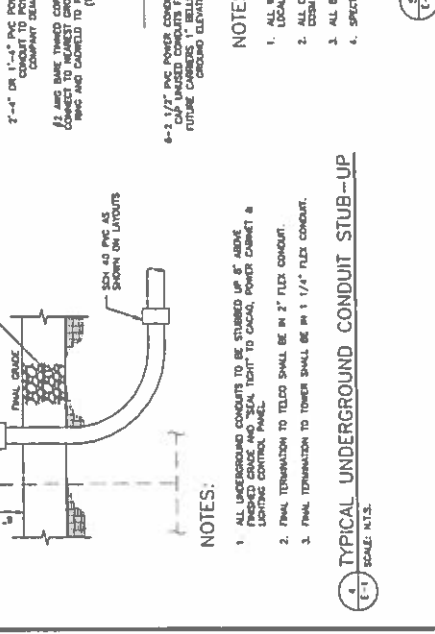
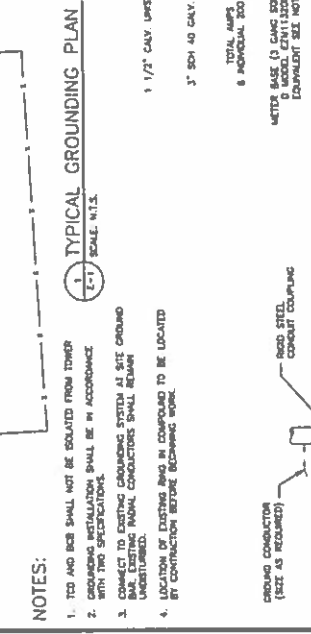
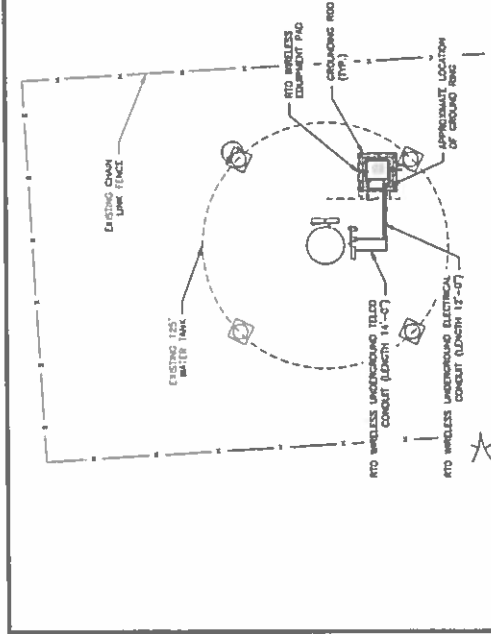
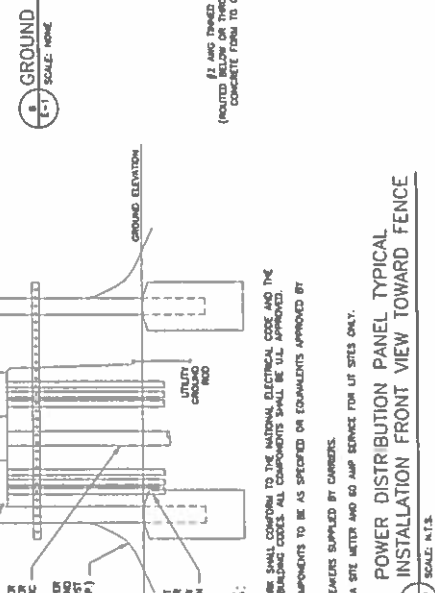
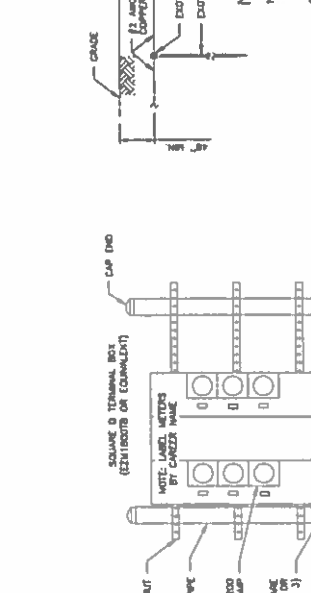
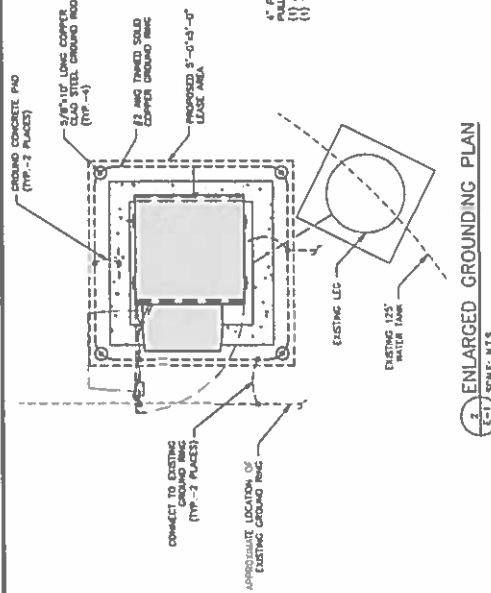
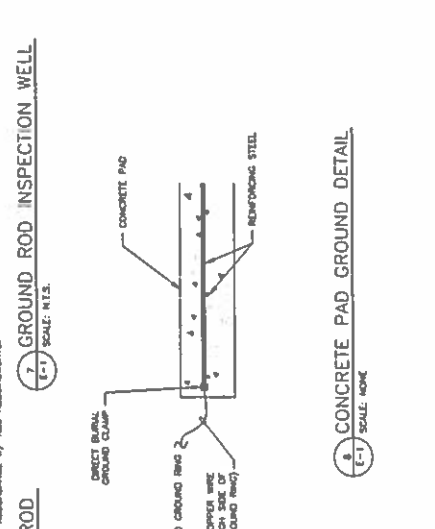
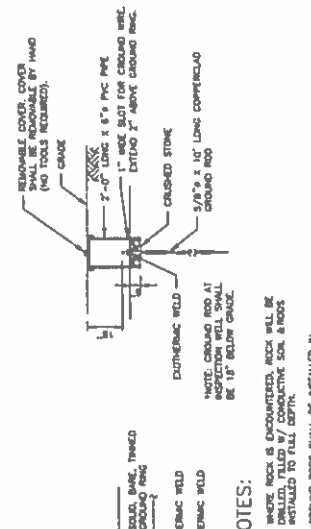
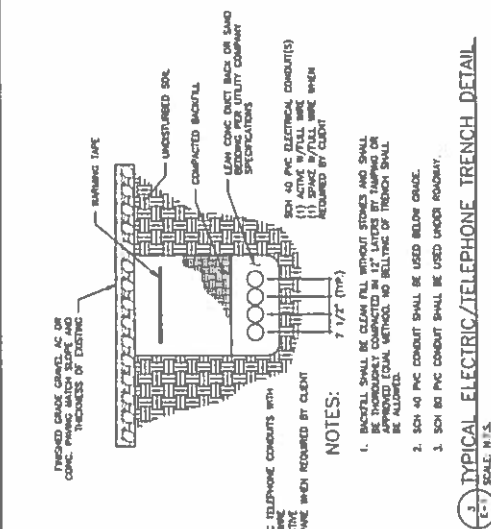








| REV | DATE       | DESCRIPTION             |
|-----|------------|-------------------------|
| 1   | 08/17/2022 | ISSUED FOR BIDD         |
| 2   | 08/22/2022 | REVISED PER COMMENTS    |
| 3   | 08/22/2022 | ISSUED FOR CONSTRUCTION |



Date: **March 16, 2022**



David Duplissis  
RTO Wireless  
69 Woodlawn Avenue  
Auburn, ME 04210  
(207) 240-7204

Albul Engineering, LLC  
3840 E. Robinson Road  
Amherst, NY 14228  
(716) 800-1364  
dalbul@albuleng.com

**Subject: Water Tank Structural Analysis Report**

**RTO Wireless**                      **Site Name:** Barre Water Tank  
                                         **Site Number:** NY060020

**Albul Engineering**              **Project Number:** 30490.6324.01.F82300.0

**Site Data:**                      **4709 Oak Orchard Road, Barre, NY, Orleans County**  
                                         **Latitude: 43° 11' 06.36", Longitude: -78° 11' 32.32"**  
                                         **125-Foot-Tall Water Tank**

Mr. Duplissis,

Per your request, Albul Engineering has performed a structural analysis to evaluate the structural capacity of the existing water tank located at the above referenced address for the addition of wireless telecommunication appurtenances by RTO Wireless. The analysis has been performed in accordance with the 2020 New York State Existing Building Code, TIA-222-H, and AWWA D100-21 standards, and local code requirements based upon an ultimate 3-second gust wind speed of 121 mph.

Upon reviewing the results of this analysis, it is our opinion that the structure meets the specified TIA and AWWA code requirements. The water tank is therefore deemed **adequate** to support the proposed loading as listed in this report.

We at Albul Engineering appreciate the opportunity of providing our continuing professional services to RTO Wireless. If you have any questions or need further assistance on this or any other projects, please give us a call.

Sincerely,

Dmitriy Albul, P.E.  
Director of Engineering



*D. Albul*  
03-16-22

## CONTENTS

- 1.0 INTRODUCTION
  - 1.1 DOCUMENTS PROVIDED
  - 2.0 PROPOSED EQUIPMENT
  - 3.0 CODES AND LOADING
  - 4.0 STANDARD CONDITIONS FOR ENGINEERING SERVICES ON EXISTING STRUCTURES
  - 5.0 ANALYSIS AND ASSUMPTIONS
  - 6.0 RESULTS AND CONCLUSION
- APPENDIX A      PHOTOS AND CALCULATIONS

**1.0 INTRODUCTION**

The existing structure is a 32' diameter by 125' tall elevated water tank supported by four (4) 24" diameter round legs. The tank was designed by Caldwell Tank Inc. in 1993. The proposed antennas will be mounted at 105' centerline above ground level on the pipe mounts attached to the catwalk. The objective of this report is to access the proposed installation of new antennas and RRU units at the proposed antenna mounts attached to the water tank catwalk rails. This report is limited to the water tank analysis only.

**1.1 DOCUMENTS PROVIDED**

The structural analysis of the site is based on the following documents provided:

- Lease Exhibit by Albul Engineering, LLC, dated March 11, 2022
- Site Visit by Albul Engineering, LLC, dated March 4, 2022
- Construction Drawings by Caldwell Tank Inc., dated May 5, 1993

**2.0 PROPOSED EQUIPMENT**

The analysis is based on the following appurtenances:

| Mounting Level (ft) | Center Line Elevation (ft) | Number of Antennas | Antenna Manufacturer | Antenna Model                   | Number of Feed Lines | Feed Line Size (in) |
|---------------------|----------------------------|--------------------|----------------------|---------------------------------|----------------------|---------------------|
| 105.0               | 105.0                      | 3                  | -                    | Panel Antenna w/ Mount Pipe     | 3                    | 7/8" Hybriflex      |
|                     |                            | 3                  | -                    | RRH                             |                      |                     |
|                     |                            | 1                  | -                    | 3' Parabolic Dish w/ Mount Pipe |                      |                     |
|                     |                            | 1                  | -                    | 1' Parabolic Dish w/ Mount Pipe |                      |                     |

### **3.0 CODES AND LOADING**

The analysis has been performed in accordance with the following codes and loading as adopted in Orleans County, New York:

- 2020 Building Code of New York State
- Structural Standard for Antenna Supporting Structures, Antennas and Small Wind Turbine Support Structures - ANSI/TIA-222-H
- Welded Carbon Steel Tanks for Water Storage - ANSI/AWWA D100-21
- Risk Category: IV
- 3-sec gust Wind Speed: 121 MPH
- Exposure Category: C
- Topographic Category: 1

### **4.0 STANDARD CONDITIONS FOR ENGINEERING SERVICES ON EXISTING STRUCTURES**

The analysis is based on documents listed in Section 1.1. The appurtenance position and condition of the water tank have not been verified and assumed to be correct. Unless otherwise noted, the structure and the foundation system are assumed to be in good condition, free of defects and can achieve theoretical strength.

It is assumed that the structure has been maintained and shall be maintained during its service. The superstructure and the foundation system are assumed to be designed with proper engineering practice and fabricated, constructed and erected in accordance with the design documents. Albul Engineering will accept no liability which may arise due to any existing deficiency in design, material, fabrication, erection, construction, etc. or lack of maintenance. Contractor should inspect the condition of the existing structure, mounts and connections and notify Albul Engineering for any discrepancies and deficiencies before proceeding with the construction.

The analysis results presented in this report are only applicable for the previously mentioned proposed loading. Any deviation of the proposed equipment and placement will require Albul Engineering to generate an additional structural analysis.

### **5.0 ANALYSIS AND ASSUMPTIONS**

The existing water tank was evaluated by method of comparing lateral loads and reaction as allowed by 2020 Existing Building Code of NYS based upon an ultimate 3-second gust wind speed of 121 mph.

## 6.0 RESULTS AND CONCLUSION

We have completed the structural analysis of the subject water tank and have found it to be adequate within the scope of this analysis to support the proposed antenna loading. Since the additional projected wind area increases the overturning moment of the water tank by 1.3% and horizontal load by 1.5%, which is less than 10% maximum increase permitted by 2020 Existing Building Code of NYS section 503.3 and 503.4 before a complete structural analysis of the existing facility is required.

Should you have any questions or need any clarifications about this report, please contact Albul Engineering at (716) 800-1364.

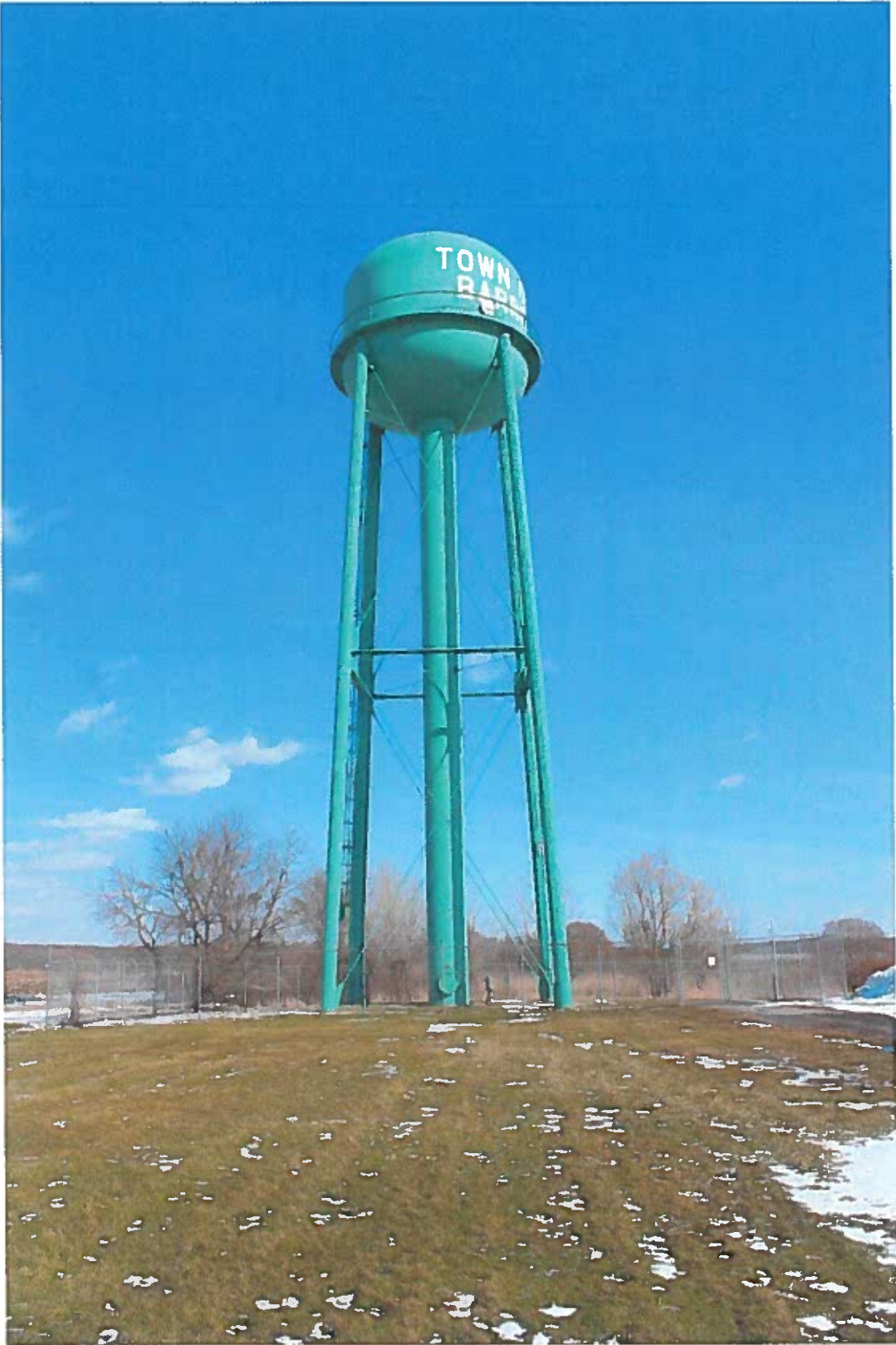
Sincerely,  
**Albul Engineering, LLC**



03-16-22

Dmitriy V. Albul, P.E.  
New York Professional Engineer  
License No. 089075

**APPENDIX A: PHOTOS AND CALCULATIONS**



**WATER TANK ELEVATION VIEW**





## COMPARISON OF OVERTURNING MOMENTS

**Site Name:** Barre Water Tank  
**Site Number:** NY060020  
**Job Number:** 30490.6324.01.F82300.0  
**Date:** 03/16/22

| WT Members             | Quantity | Member Area (ft <sup>2</sup> ) | Centerline (ft) | Pw (psf) | Fa (lb) | Moment (lb-ft) |
|------------------------|----------|--------------------------------|-----------------|----------|---------|----------------|
| WT Bowl                | 1        | 851.0                          | 109.5           | 33.4     | 28391.6 | 3108880.9      |
| Catwalk                | 1        | 50.2                           | 105             | 80.2     | 4021.3  | 422237.7       |
| Legs                   | 4        | 206.0                          | 52.5            | 41.6     | 8562.4  | 1798107.0      |
| Climbing Ladder        | 1        | 125.3                          | 59.5            | 71.1     | 8909.9  | 530137.4       |
| Overflow Pipe          | 1        | 62.5                           | 62.5            | 43.1     | 2694.9  | 168434.2       |
| Standpipe              | 1        | 561.0                          | 46.8            | 40.6     | 22755.5 | 1063818.8      |
| Inner Bracing at 90 ft | 4        | 20.6                           | 90              | 32.0     | 660.4   | 237726.1       |
| Diagonals 54-99 ft     | 8        | 8.0                            | 76.5            | 30.9     | 247.5   | 151464.8       |
| Horizontals at 50 ft*  | 2        | 23.3                           | 50              | 68.6     | 1594.2  | 159418.9       |
| Diagonals 4-48 ft      | 8        | 9.0                            | 26              | 24.6     | 221.8   | 46142.9        |

\* Total of 4 Horizontals, 2 Projected per level

**WT Overturning Moment = 7,686,369**

| Appurtenance Model/Description | Quantity | Effective Area (ft <sup>2</sup> ) | Centerline (ft) | q <sub>z</sub> (psf) | Fa (lb) | Moment (lb-ft) |
|--------------------------------|----------|-----------------------------------|-----------------|----------------------|---------|----------------|
| Panel Antenna                  | 3        | 2.72                              | 105.0           | 39.7                 | 55.2    | 17378.0        |
| RRH                            | 3        | 3.86                              | 105.0           | 39.7                 | 78.3    | 24664.6        |
| 3' Parabolic Dish              | 1        | 4.94                              | 105.0           | 39.7                 | 100.1   | 10508.0        |
| 1' Parabolic Dish              | 1        | 0.85                              | 105.0           | 39.7                 | 17.3    | 1817.7         |
| Mount Pipes 8'                 | 5        | 1.90                              | 105.0           | 39.7                 | 38.5    | 20214.1        |

**Appurtenances Overturning Moment = 74,582**  
**Appurtenance Total Horizontal Load = 710**

| Feedline Model/Description | Quantity Exposed to Wind | Width (in) | Height (ft) | q <sub>z</sub> (psf) | Fa (lb) | Moment (lb-ft) |
|----------------------------|--------------------------|------------|-------------|----------------------|---------|----------------|
| (3) 7/8" Hybriflex         | 3                        | 1.09       | 105.0       | 34.3                 | 452.4   | 23752.0        |

**Feedlines Overturning Moment = 23,752**  
**Feedlines Horizontal Load = 452**

**WT Overturning Moment = 7,686,369 lb-ft**  
**Overturning Moment Due to Appurtenances & Feedlines = 98,334 lb-ft**

**Overturning Moment Percentage Increase = 1.3%**

**Additional Horizontal Load = 1,163 lb**  
**WT Horizontal Load = 78,060 lb**

**Horizontal Load Percentage Increase = 1.5%**

|                                                                                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Overturning Moment and Horizontal Load Percentage Increase does NOT exceed allowable 10% and therefore complete structural analysis not required</p> |
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