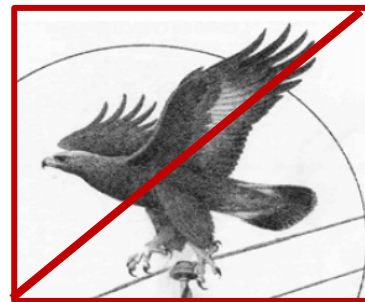
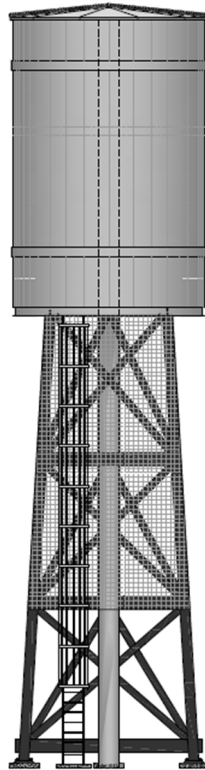


GEIST ENGINEERING & ENVIRONMENTAL GROUP INC



## Tower Avian Avoidance Plan

### AT&T Faux Water Tank and Shelter



### **COPY TO BE POSTED ONSITE**

**AT&T Site Number: CCL03978 / AT&T Site Name: Manchester Cable Station  
45001 Kinney Road, Manchester, Mendocino County, California 95459  
GE<sup>2</sup>G Project Number: 311066**

**Wireless Client:**  
AT&T Mobility, LLC  
2600 Camino Ramon, 4th Floor San Ramon, Contra Costa County, California 94583

**Prepared by:**  
Geist Engineering and Environmental Group, Inc.  
4200 Park Boulevard #149 Oakland, California 94602

August 31, 2021



August 31, 2021

**RE: Tower Avian Avoidance Plan for the Faux Water Tank Facility (updated)  
AT&T Tower & Ground Improvements  
AT&T Site Number: CCL03978  
AT&T FA: 13787556  
AT&T Site Name: Manchester Cable Station  
45001 Kinney Road, Manchester, Mendocino County, California 95459**

**GE<sup>2</sup>G Project # 311066**

Geist Engineering and Environmental Group, Inc. (GE<sup>2</sup>G), appreciates the opportunity to provide this updated Tower Avian Avoidance Plan. This Tower Avian Avoidance Plan was completed for the above listed proposed AT&T Mobility, LLC undertaking per input from the California State Parks Sonoma-Mendocino District, the California Department of Fish and Wildlife (CDFW) and United States Fish and Wildlife Service (USFWS). GE<sup>2</sup>G prepared this Tower Avian Avoidance Plan to discourage birds of prey from using the new tower facility as a predator perch.

**Objective:**

This Tower Avian Avoidance Plan will be implemented to stop birds of prey from using the new tower facility as predator perch. Winter flocks of Western Snowy Plovers along with other migratory shorebirds and nesting bank swallows may be present to the west approximately 700-feet along the Manchester State stretch of beach. While the tower will be more than 700-feet away from potential nesting and foraging habitat, the tower without anti-predator controls could potentially allow the tower to be used as a predator perch.

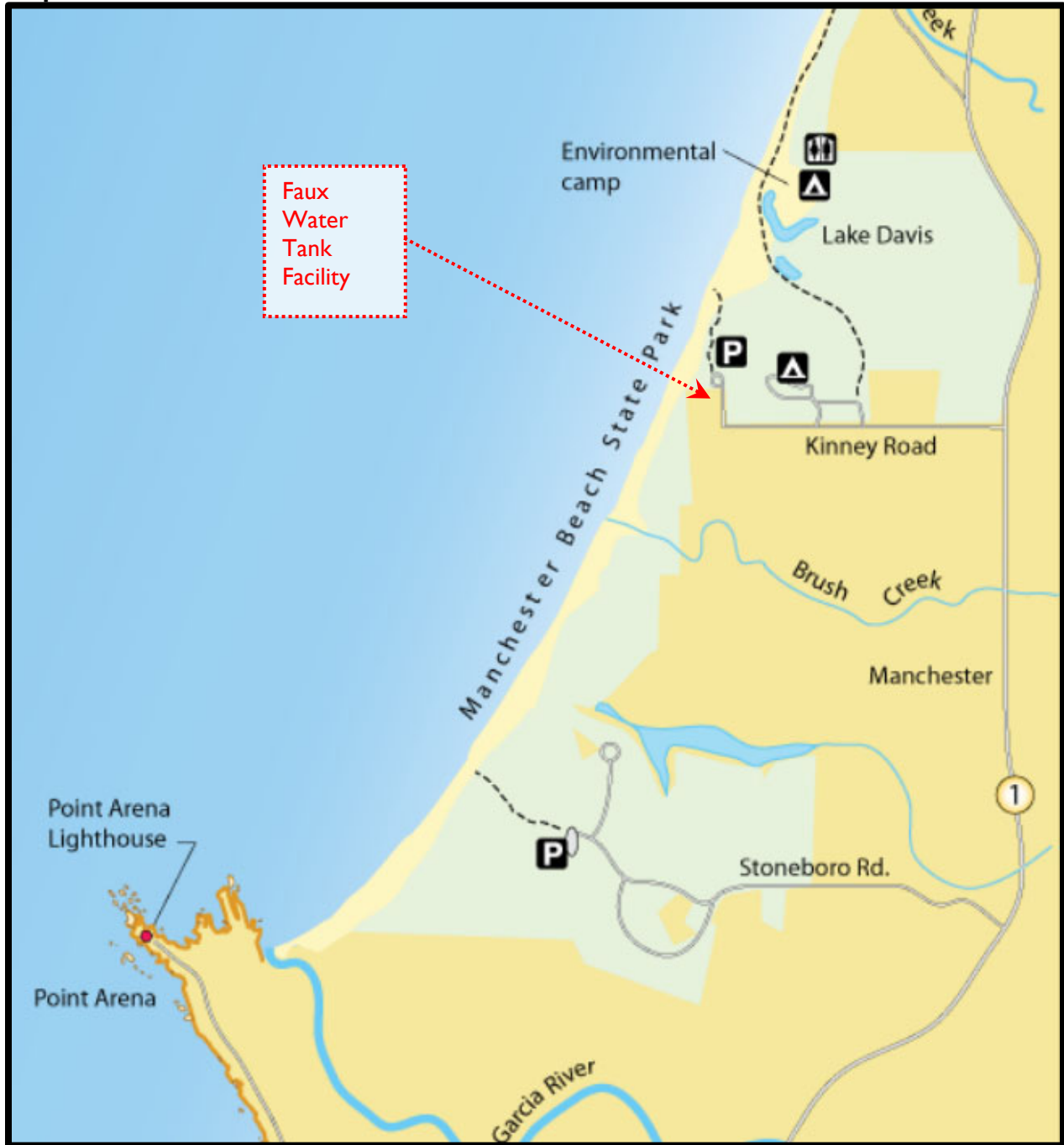
**This concise Tower Avian Avoidance Plan is designed to be easily understood by tower technicians and contractors so it is clear that the anti-bird measures in place on this tower are designed to protect vulnerable shore birds located to the west on Manchester Beach.**

**Tower Avian Avoidance Plan (updated): Faux Water Tank Facility**  
AT&T Tower & Ground Improvements  
AT&T Site Number: **CCL03978**  
AT&T Site Name: **Manchester Cable Station**

GEIST ENGINEERING & ENVIRONMENTAL GROUP INC



**Map Location of the Tower and Manchester State Beach:**



**Figure 1: Vicinity Map**  
**Subject Property: CCL03978**  
(Source <http://www.californiasbestbeaches.com> )

**Tower Avian Avoidance Plan (updated): Faux Water Tank Facility**

AT&amp;T Tower &amp; Ground Improvements

AT&T Site Number: **CCL03978**AT&T Site Name: **Manchester Cable Station****Timeline:**

This 2021 Updated Tower Avian Avoidance Plan will be implemented during construction and remain in effect until the tower is deemed to be no longer required and the tower is physically removed from service. Tower anti-perch engineering control devices will be installed at the time of construction and maintained yearly or as needed.

**Background and Regulation:**

The Migratory Bird Treaty Act (16 U.S.C. 703-712; MBTA), is administered by USFWS. The MBTA implements four treaties that provide for international protection of migratory birds. Wording is clear in that most actions that result in a “taking” or possession (permanent or temporary) of a protected species may be a violation. The MBTA prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nests, except when specifically authorized by the Department of the Interior.” The word “take” is defined as “to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to pursue, hunt, shoot, wound, kill, trap, capture, or collect.” A violation of the MBTA by an individual can result in a financial fine of up to \$15,000 and/or imprisonment for up to six months for a misdemeanor, and up to \$250,000 and/or imprisonment for up to two years for a felony. Fines may be doubled for organizations.

*While the Service generally does not authorize incidental “take” under these Acts, USFWS realizes that some birds may be killed even if all reasonable measures to avoid the take are implemented. USFWS Office of Law Enforcement carries out its mission to protect migratory birds through investigations and enforcement, as well as by fostering relationships with individuals, companies, and industries who seek to minimize their impacts on migratory birds. Unless the take is authorized, it is not possible to absolve individuals, companies, or agencies from liability even if they implement avian mortality avoidance or similar conservation measures. However, the Office of Law Enforcement focuses on those individuals, companies, or agencies that “take: migratory birds with disregard for their actions and the law, especially when conservation measures have been developed but are not properly implemented (Avian Protection Plan (APP) guidelines, USFWS 2005).*

**The faux water tank tower has the potential to provide perching habitat for birds of prey (Raptors), including but not limited to Peregrine Falcons and or Merlin Falcons. These birds of prey could potentially prey on Western Snowy Plovers and other special status bird species (including Bank Swallows) that may be present on or near Manchester Beach. This impact would be considered significant. To reduce or avoid this potential impact, AT&T will install bird deterrence devices on the proposed telecommunications tower to discourage birds of prey from landing and/or nesting.**

**GEIST ENGINEERING AND ENVIRONMENTAL GROUP, INC.**

4200 Park Boulevard #149, Oakland, California 94602

510.238.8851 (p) / [sgeist@ge2g.com](mailto:sgeist@ge2g.com)

**Field Offices: Arizona, California, Colorado, Oregon, and Washington**

**Tower Avian Avoidance Plan (updated): Faux Water Tank Facility**

AT&T Tower & Ground Improvements

AT&T Site Number: **CCL03978**

AT&T Site Name: **Manchester Cable Station**

GEIST ENGINEERING & ENVIRONMENTAL GROUP INC



**Anti-Predator Controls:**

The telecom industry has many devices available to them that can be employed on the proposed tower to exclude raptors from using the tower as a nesting or perching site. AT&T will implement the below devices to be installed on the proposed tower. Use of these devices should help to avoid raptor impacts on Western Snowy Plover and other special-status bird species, including but not limited to Bank Swallow.

**GEIST ENGINEERING AND ENVIRONMENTAL GROUP, INC.**

4200 Park Boulevard #149, Oakland, California 94602

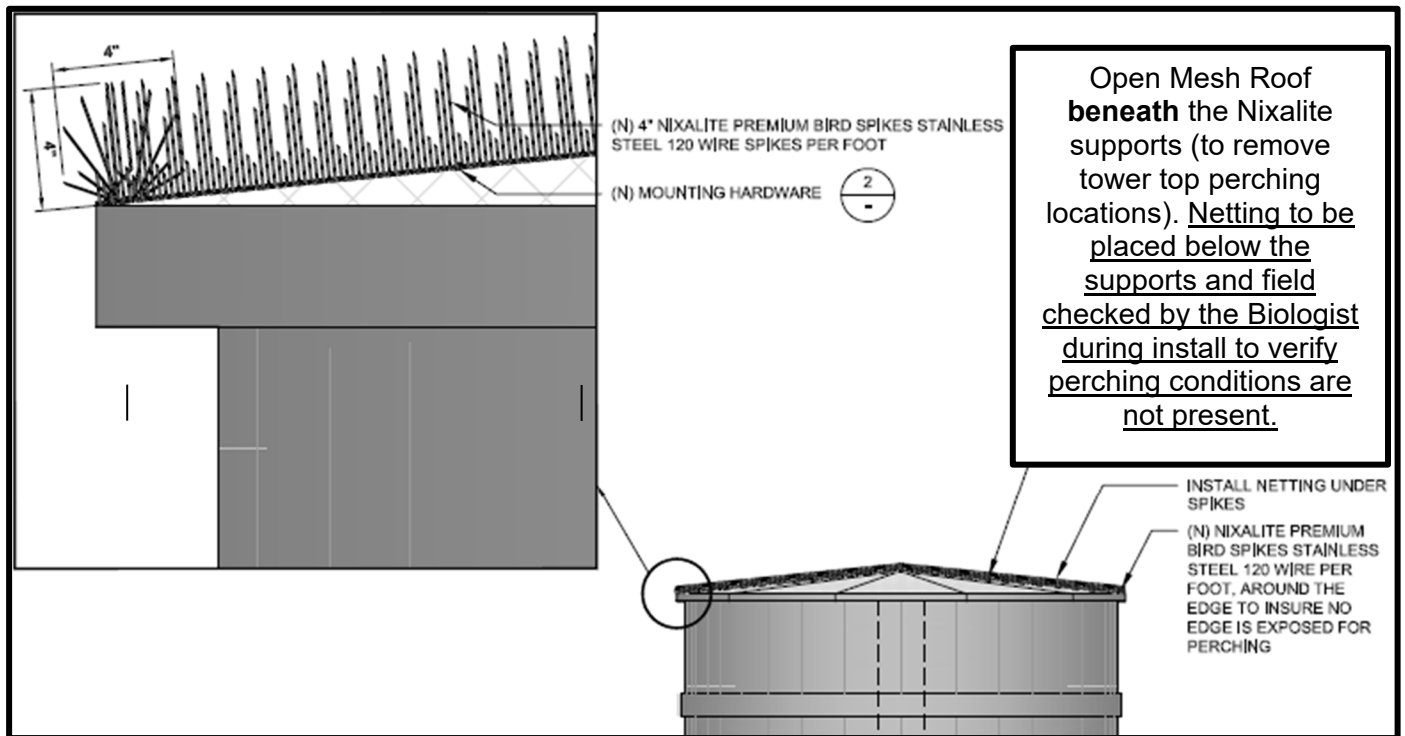
510.238.8851 (p) / [sgeist@ge2g.com](mailto:sgeist@ge2g.com)

**Field Offices: Arizona, California, Colorado, Oregon, and Washington**



**Tower Top:**

- Bird Premium Spikes to be placed at the peak
  - Bird Premium Spikes to be placed above the open mesh roof on mounting brackets. The expended bracket design will provide for additional bird Premium Spikes to block perching locations.
  - Bird Spikes to be placed at the edge of the upper perimeter edge of the faux water tank top.
  - Open Mesh Roof to be placed beneath the Nixalite Bird Premium Spikes supports. Netting to be placed below the supports and field checked by the Biologist during install to verify perching conditions are not present.
- (Specific Bird Spikes part specification, see attached plan sheet)



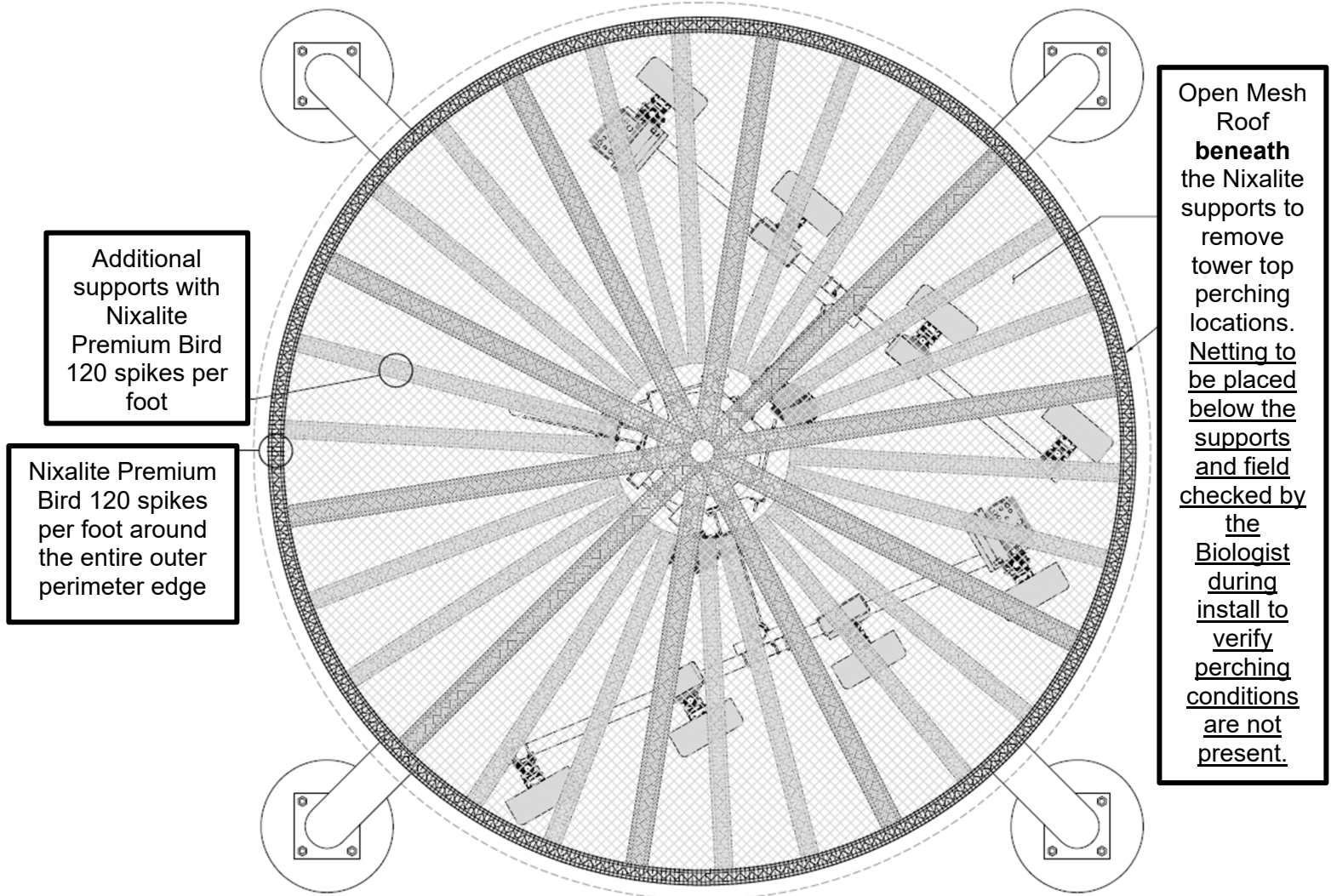
**Figure 2 Tower Top Anti-Predator Controls (Tower Top Figure 1 of 2)**



**Tower Top:**

- Bird Spikes to be placed above the open mesh roof on mounting brackets below.
- Bird Spikes to be placed at the edge of the upper perimeter edge of the faux water tank top.

(Specific Bird Spikes part specification, see attached plan sheet)

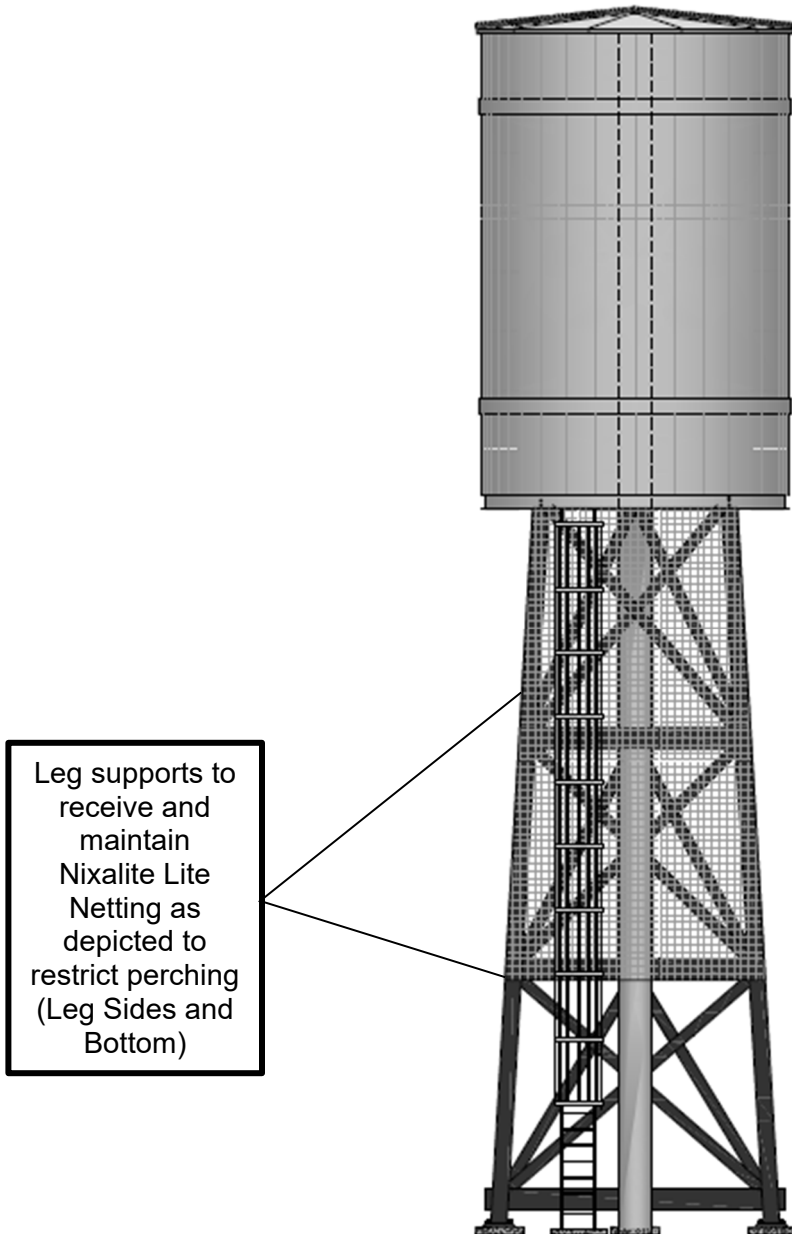


**Figure 3 Tower Top Anti-Predator Controls (Tower Top Figure 2 of 2)**



**Tower Bottom and Legs:**

- Netting (Nixalite Lite Netting) deterrent to be placed on the tower support legs
- Faux center tower water fill pipe (Cable Pipe) to have all entry points sealed
- Sealed grating to be placed at bottom of the tank
- Faux center tower water fill pipe (Cable Pipe) to have all entry points sealed (Specific Bird Spikes part specification listed in the attached plan sheet)



**Figure 4 Faux Tower Tank Bottom Anti-Predator Controls**





### **Lighting Restrictions:**

- No lights on the Tower.
- The at grade facility compound will have a manual light switch (if required) with a timer set for 15 minutes maximum or less.
- Motion activated lights will not be used at this time.
- The potential exists that lighting placed on the proposed telecommunications tower and associated facilities could impact the feeding and nesting activities of avian species at Manchester Beach.
- Per the Federal Aviation Administration (FAA) lighting on the upper portions of the tower is not required.
- To reduce potential impacts to less than significant, AT&T would direct any ground equipment lighting away from Manchester Beach and set lighting for a manual start with a limitation timer.

### **Construction (Initial and Maintenance):**

As a part of the condition of approval, AT&T will have a Biological Monitoring during initial construction or significant facility upgrades, on the tower. The Biological Monitor will document the biological avian deterrent controls by noting the type and installation locations.

### **Crane Lifting (Initial and Maintenance):**

As a part of the condition of approval, AT&T will have a Biological Monitoring during initial construction or significant facility upgrades, on the tower for all elevated crane work. The Biological Monitor will document the biological avian deterrent controls by noting the type and installation locations.

### **Signage:**

The below signage will be fabricated and installed in at least four locations at the AT&T facility.

#### ***Warning:***

***This tower facility has anti-bird perching devices which must be kept in place. If the anti-bird perching devices are removed for equipment servicing they must be reinstalled. Significant liability (civil and financial) may be incurred by any entity that damages or does not replace the anti-bird perching devices prior to completing any daily task.***

#### **Sign Locations:**

- 1) At the front facility entrance gate;
- 2) At the base tower leg base;
- 3) At the front door to the Shelter; and
- 4) Inside the shelter.



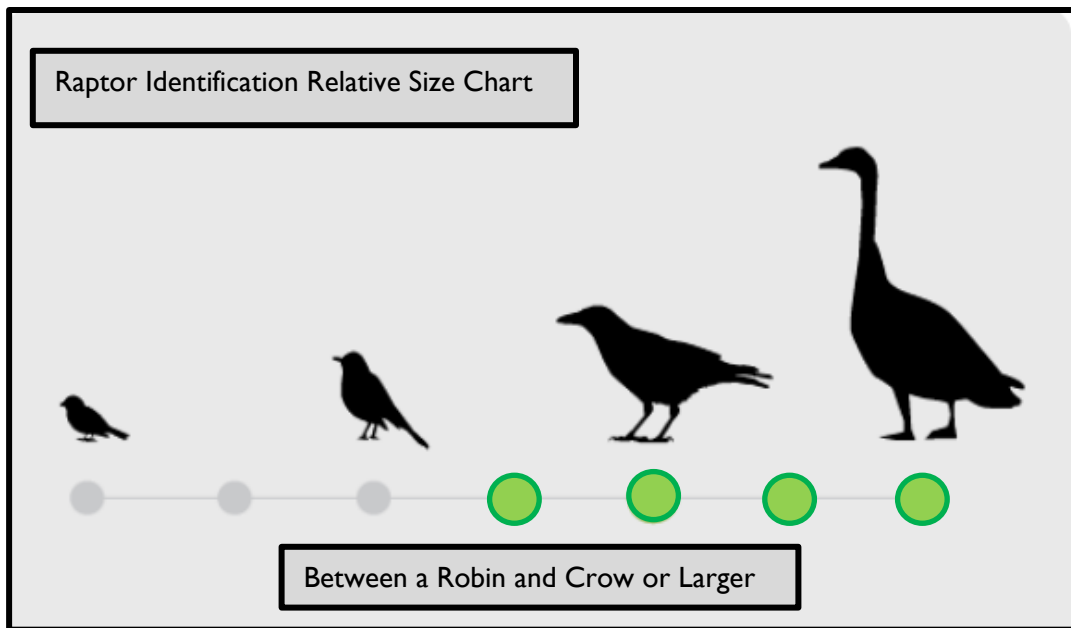
**Tower Avian Avoidance Plan Onsite Availability:**

A copy of this plan will be kept inside the shelter and clearly located on the wall for any AT&T staff or AT&T subcontractors to review and understand.

**Ground based Shelter Equipment and Fencing:**

Based on the distance and the elevation topography (sand dunes) to Manchester Beach from the AT&T grade based equipment will likely not need anti bird deterrent controls.

**Raptor Observation:**



**Figure 5 General Public Raptor Size Reference Chart** (source: The Cornell Lab)

- If a medium to large bird or raptor is observed on the tower, facility improvements (**Peregrine Falcon, Merlin, Red Tail Hawk, Hawk, Eagle, Osprey, etc.**) is observed please contact the assigned AT&T contact the same day of the observation as soon as possible.
- Example approximate wing widths (from small to large) ranges:
  - 20-inches to 27-inches (Merlin)
  - 39-inches to 43-inches (Peregrine Falcon)
  - 45-inches to 52-inches (Red Tail Hawk)
  - 59-inches to 71 (Osprey)
  - 73-inches to 87 (Eagle)

**Nest or Avian Carcasses:**

- If a nest is located on the tower, facility improvements or on the ground, please contact the assigned AT&T contact.
- If a bird carcass is found on the tower, facility improvements or on the ground, please contact the assigned AT&T contact.

**Tower Avian Avoidance Plan (updated): Faux Water Tank Facility**  
AT&T Tower & Ground Improvements  
AT&T Site Number: **CCL03978**  
AT&T Site Name: **Manchester Cable Station**



**AT&T Yearly Inspection and Record Keeping:**

AT&T will retain a qualified consultant to visually document the condition of the anti-predator control devices each year by February 15. The consultant will prepare a report of findings on the condition of the anti-predator control devices and if required make appropriate recommendation for repairs, additions, or replacement. AT&T will keep the yearly inspection reports on file.

**AT&T Point of Contact:**

**Melissa Murphree**  
**AT&T Mobility**  
**Property Manager**  
**Lower Northern California**  
**Mobile: (925) 963 – 8027**

**Environmental Consultant of Record:**

**Geist Engineering and Environmental Group, Inc GE<sup>2</sup>G**  
**Mr. Steve Geist, GE<sup>2</sup>G President**  
**Mobile: (510) 610 - 1453**  
[sgeist@ge2g.com](mailto:sgeist@ge2g.com)

**Attached:**

AT&T Avian Anti-Perching Design Sheet dated July 20, 2021

Sources:

*Avian Protection Plan (APP) Guidelines, A Joint Document Prepared By The Edison Electric Institute's Avian Power Line Interaction Committee (APLIC) and U.S. Fish and Wildlife Service (USFWS) (2005)*

[www.californiasbestbeaches.com](http://www.californiasbestbeaches.com)

<https://www.allaboutbirds.org/>, The Cornell Lab

<http://www.californiasbestbeaches.com>

## **APPENDIX**

### **AT&T Avian Anti-Perching Design Sheets**



SITE NUMBER: CCL03978
SITE NAME: MANCHESTER CABLE STATION
SITE TYPE: FLUX WATER TANK

45001 KINNEY ROAD
MANCHESTER, CA 95459
JURISDICTION: MENDOCINO COUNTY
APN: 133-010-04-05

PAGE ID: MRSFR073668, MRSFR035265, MRSFR051905, RSFR052164
PTN: 3701A0WDVCV, 3701A08XKQ, 3701A0JZV7, 3701A0JZMA
RFDS VERSION: 4.0
RFDS DATE: 01/04/2021
RFDS ID: 1488830

ISSUED FOR: MANCHESTER CABLE STATION
45001 KINNEY ROAD
MANCHESTER, CA 95459



1337 CALLE AVANZADO
SAN CLEMENTE CA 95051 3108884
PROJECT NO: CCL03978
PROJECT DATE: 13/07/2016
DRAWN BY: ARP
CHECKED BY: ET

Table with columns: REV, DATE, DESCRIPTION. Includes rows for licensee information.

Table with columns: REV, DATE, DESCRIPTION. Includes rows for drawing revisions.

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO REPLY TO THIS DOCUMENT.

SHEET TITLE: TITLE SHEET

SHEET NUMBER: T-1

SHEET INDEX

Table with columns: T-1 through E-5, listing sheet titles such as TITLE SHEET, GENERAL NOTES, SURFACE DETAILS, etc.

PROJECT TEAM

AT&T WIRELESS: MANCHESTER CABLE STATION
PROJECT MANAGER: [Name]
CONTACT: [Info]
EPIC WIRELESS: [Info]
M SQUARED WIRELESS: [Info]

PROJECT INFORMATION

SITE NAME: MANCHESTER CABLE STATION
SITE NUMBER: CCL03978
SEARCH RANGE: [Info]
POWER AGENCY: [Info]
ASSESSORS PARCEL NO.: 133-010-04-05
NEW USE: UNMANNED OUTDOOR TELECOMMUNICATIONS FACILITY
ZONING JURISDICTION: MENDOCINO COUNTY
LONGITUDE: 122 42 53.7 W (L23.706053)

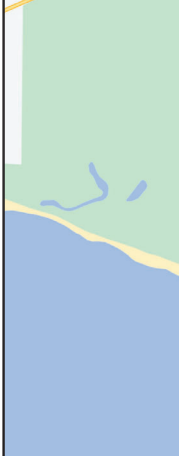
PROJECT DESCRIPTION

AT&T WIRELESS PROPOSES TO CONSTRUCT AN UNMANNED TELECOMMUNICATIONS FACILITY. THE SCOPE WILL CONSIST OF THE FOLLOWING:
(1) NEW 20'X20'X10' BOX TOTAL LEASE AREA (APPROX. 32 SF)
(2) NEW 7'X7' TALL AIR WATER TOWER BY OTHERS
(3) NEW AT&T REIS (REINFORCED EARTH STEEL)
(4) NEW AT&T REIS (REINFORCED EARTH STEEL)
(5) NEW AT&T 500W DIESEL EMERGENCY BACKUP GENERATOR WITH 100 GAL BILLY
(6) NEW AT&T 500W DIESEL EMERGENCY BACKUP GENERATOR WITH 100 GAL BILLY
(7) NEW AT&T 500W DIESEL EMERGENCY BACKUP GENERATOR WITH 100 GAL BILLY
(8) NEW AT&T 500W DIESEL EMERGENCY BACKUP GENERATOR WITH 100 GAL BILLY

DIRECTIONS

- DIRECTIONS FROM AT&T OFFICE AT 2800 CANINO RANCHO, SAN RAFAEL, CA:
1. SOUTH ON SAN RAFAEL AVENUE FOR 0.5 MI.
2. TURN RIGHT ONTO BOLLINGER CANYON ROAD FOR 0.4 MI.
3. TAKE RAMP RIGHT FOR 0.5 MI NORTH TOWARD SACRAMENTO. (0.5 MI)
4. TAKE RAMP RIGHT FOR 0.6 MI WEST TOWARD SACRAMENTO. (SAN FRANCISCO-0.9 MI)
5. TAKE RAMP LEFT ONTO 100 N STREET FOR 0.1 MI.
6. TAKE RAMP LEFT ONTO 100 N STREET FOR 0.1 MI.
7. YOLK ROAD - (0.10 MI)
8. TAKE RAMP LEFT ONTO 100 N STREET FOR 0.1 MI.
9. TAKE RAMP LEFT ONTO 100 N STREET FOR 0.1 MI.
10. TAKE RAMP RIGHT FOR 0.4 MI WEST TOWARD FT BRAGG / MENDOCINO- (0.2 MI)
11. TAKE RAMP RIGHT FOR 0.4 MI WEST TOWARD FT BRAGG / MENDOCINO- (0.2 MI)
12. TURN RIGHT TO STAY ON 0.4 MI WEST TOWARD FT BRAGG / MENDOCINO- (0.2 MI)
13. TURN RIGHT ONTO 0.4 MI WEST TOWARD FT BRAGG / MENDOCINO- (0.2 MI)
14. TURN RIGHT ONTO 0.4 MI WEST TOWARD FT BRAGG / MENDOCINO- (0.2 MI)
15. TURN LEFT ONTO RINNEY ROAD FOR 1.0 MI.

VICINITY MAP



CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES:
• CALIFORNIA ADMINISTRATIVE CODE (IMC, TITLE 24, 29)
• CALIFORNIA BUILDING CODE (CBC)
• CALIFORNIA ELECTRICAL CODE (CEC)
• CALIFORNIA FIRE CODE (CFC)
• CALIFORNIA GREEN BUILDING CODE (CAL GREEN)
• CALIFORNIA MECHANICAL CODE (CMC)
• CALIFORNIA PLUMBING CODE (CPC)
• CALIFORNIA SOLENOID VALVE CODE (CSVC)
• CALIFORNIA TANKING CODE (CTC)
• CALIFORNIA TIRE CODE (CTC)
• CALIFORNIA WOOD PRESERVATION CODE (CWP)
• CALIFORNIA ZONING CODE (CZC)

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE PROJECT. THESE DOCUMENTS & ANY IMPOSED CHANGES OR MODIFICATIONS.
AT&T ENGINEER: \_\_\_\_\_ DATE: \_\_\_\_\_
SITE ACQUISITION: \_\_\_\_\_ DATE: \_\_\_\_\_
CONSTRUCTION MANAGER: \_\_\_\_\_ DATE: \_\_\_\_\_
PROPERTY OWNER: \_\_\_\_\_ DATE: \_\_\_\_\_
ZONING: \_\_\_\_\_ DATE: \_\_\_\_\_
PROJECT MANAGER: \_\_\_\_\_ DATE: \_\_\_\_\_

SPECIAL INSPECTIONS

MULTI-PHASE PERIODIC INSPECTION

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE SCALED TO FULL SIZE AT 20'-0" AND HALF SIZE AT 11'-0". CONTRACTORS SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS BEFORE BEGINNING CONSTRUCTION. WRITINGS OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BEFORE COMMENCING CONSTRUCTION. BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.





ISSUED FOR:  
**MANCHESTER  
 CABLE STATION**  
 45001 KINNEY ROAD  
 MANCHESTER, CA 95459



AT&T SITE NO: COLM9378  
 PROJECT NO: 13782566  
 DRAWN BY: ARP  
 CHECKED BY: EJ

REV	DATE	DESCRIPTION	BY
C	07/29/2021	REV. CDS FOR BIRD-SPRINK	AW
B	04/10/2021	REV. CDS FOR BIRD-SPINK	AW
A	05/19/2021	REV. CDS FOR BIRD-SPINK	ARP

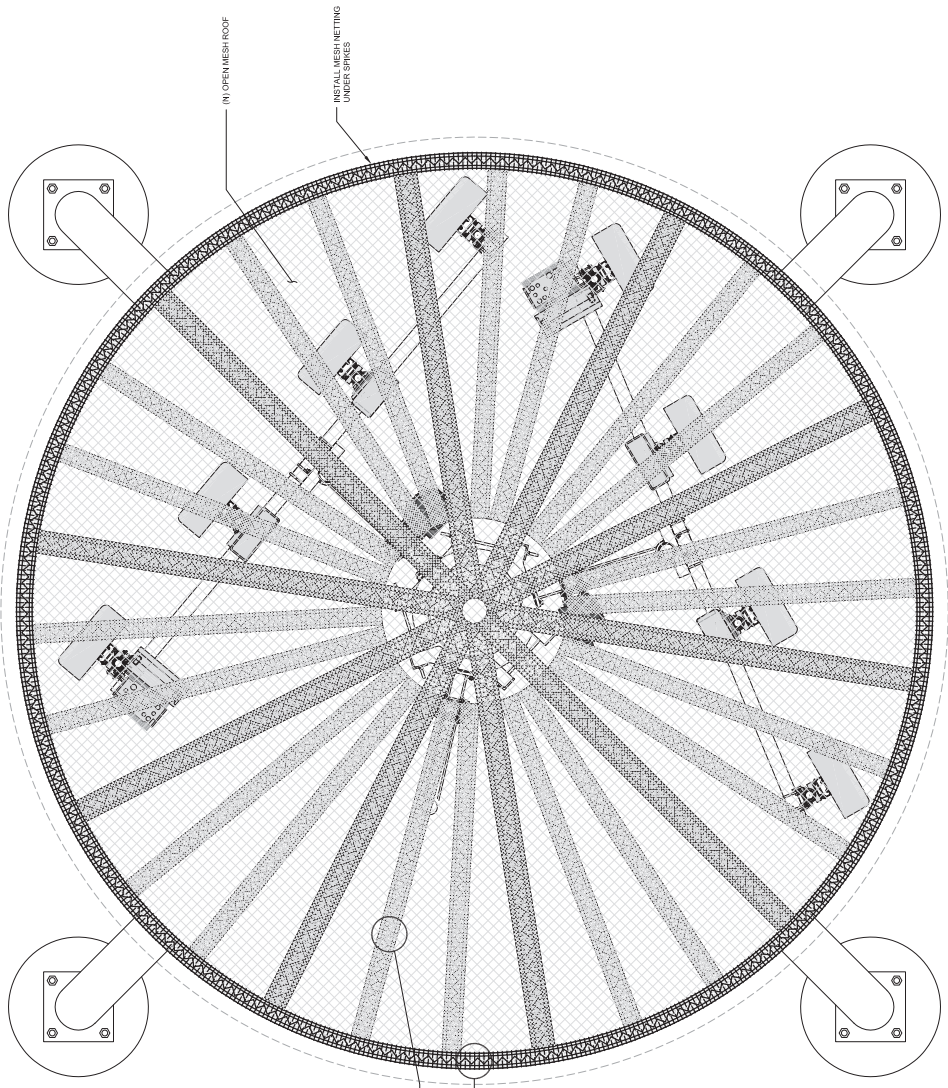
LICENSOR:  
 IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO REPLY THIS DOCUMENT.

SHEET TITLE  
**AVAIAN PREVENTION  
 PLAN**

SHEET NUMBER  
**A-8**

- NOTES TO CONTRACTOR:**
- M SQUARED WIRELESS ACCEPTS NO LIABILITY FOR THE ACCURACY OF THE INFORMATION ON THIS DRAWING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES, TOWER STRUCTURE, MOUNTS, ANTENNAS, CABLES OR ANY OTHER APPURTENANCE ON THE SITE AND SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COORDINATE WITH ALL AFFECTED AGENCIES AND COMPY WITH THE PROVISIONS OF THE LOCAL ORDINANCES AND REGULATIONS FOR THIS SITE AND PROJECT PRIOR TO THE INSTALLATION OF ANTENNAS AND CABLE ON THE SITE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF ALL EXISTING UTILITIES, TOWER STRUCTURE, MOUNTS, ANTENNAS, CABLES OR ANY APPURTENANCE ON THE SITE AND SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND COORDINATE WITH ALL AFFECTED AGENCIES AND COMPY WITH THE PROVISIONS OF THE LOCAL ORDINANCES AND REGULATIONS FOR THIS SITE AND PROJECT PRIOR TO THE INSTALLATION OF ANTENNAS AND CABLE ON THE SITE.
  - CONTRACTOR IS TO REFER TO AT&T'S MOST CURRENT RADIO FREQUENCY DATA SHEET FOR THE LOCATION OF ALL EXISTING UTILITIES, TOWER STRUCTURE, MOUNTS, ANTENNAS, CABLES OR ANY APPURTENANCE ON THE SITE. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK AND REPORT ANY DISCREPANCIES TO THE CONTRACTOR'S SUFFICIENT ROOM.
  - ACCESS HATCH NOT SHOWN FOR CLARITY.

- NOTE:**
- ADD INVAUTE (K-MET HT BIRD) NETTING ON THE EXTERIOR OF THE TOWER. HORIZONTAL PLANE WITH ACCESS LADDER.
  - THE LOWER ZONE WILL BE LABELED THE AVAIAN PREVENTION PLAN WITH THE SITE SIZE AND BOTTOM NETTING.



24"x36" SCALE: 1/2" = 1'-0"  
 11"x17" SCALE: 1/4" = 1'-0"

**AVAIAN PREVENTION PLAN**

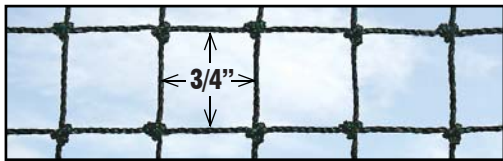


# Strength, Quality, Value

## Unbeatable Bird Netting From Nixalite®

### K-Net HT Bird Netting

High strength, seamless construction and unbeatable prices make K-Net HT the perfect choice for all types of bird exclusion jobs. Now available in UV resistant black HDPE.



### K-Net HT Features

- 75 lbs/strand knotted breaking strength
- 12-ply high density polyethylene (HDPE)
- Seamless nets with steam-set knots
- UV, flame and abrasion resistant
- 3/4" square mesh keeps out most birds
- **15 Year** warranty for black HDPE K-Net
- ISO 9001-2000 Quality Management Standards

Short Form Specs on back --->

### K-Net HT Versatility

Perfect for architecture, industrial, aquaculture and agriculture bird exclusion. K-Net HT's strength and durability make it ideal for the toughest bird exclusion jobs. The seamless 3/4" square mesh keeps out all but the smallest of birds.

### K-Net HT Netting Sizes

25 feet wide by 25, 50 or 100 feet long  
 50 feet wide by 25, 50 or 100 feet long  
 Each piece of K-Net is seamless.

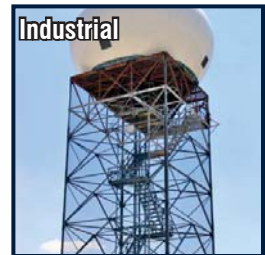
### Bird Net Installation Hardware

Nixalite offers a full line of bird netting hardware, accessories and tools to help you securely fasten the K-Net HT Bird Netting to nearly any surface. From tensioned perimeter cables to air powered ring tools, we have what you need to complete your netting installation. For details, visit our website at [www.nixalite.com](http://www.nixalite.com) or call 800.624.1189.

Toughest netting in bird control.  
 K-Net HT is perfect for long term use in tough conditions.



- Canopies, Bell towers
- Pediments, Columns
- Bridges, Stadiums
- Retail Stores...



- Communications
- Utility Substations
- Oil Tank Net Covers
- Aircraft Hangars



- Fish Ponds, Aviaries
- Plant / Tree Nurseries
- High Density Orchards
- Large Area Enclosures

## K-Net HT is Easier to Work With and Goes Up Faster!

Some bird netting is packaged in a 'rope' or collapsed mesh form. This may save space but it takes valuable time and considerable effort to stretch this 'rope' net out to its advertised size.



Other nets come in a collapsed mesh or 'rope' form. This takes time & effort to stretch out to size.



K-Net netting is a true square mesh net. It is shipped in a folded bundle that you unfold to width and length.

*K-Net HT Bird Netting is the best netting you can buy for all types of bird exclusion jobs. Refer to the short form specs on back or contact Nixalite® of America Inc.*



**Nixalite® of America Inc**  
 1025 16th Avenue, East Moline, IL 61244  
 Experts In Architectural Bird Control Since 1950

**P:** 309.755.8771

**E:** [birdcontrol@nixalite.com](mailto:birdcontrol@nixalite.com)

**www.nixalite.com**



# K-Net HT Bird Netting Short Form Specs

Master Format 1995 - 10290 - Bird & Pest Control  
Master Format 2004 - 10 81 00 - Pest Control Devices  
Master Format 2004 - 10 81 13 - Bird Control Devices

## PART 1 - GENERAL

### 1.1 - SYSTEM DESCRIPTION:

K-Net HT Bird Netting is constructed of black, abrasion, UV, flame and rot resistant, high density polyethylene (HDPE). The 3/4" (1.9cm) square mesh keeps out all but the smallest of pest birds. All knots are steam set.

Bird Netting Hardware provides a solid foundation that quality, long lasting installations require. Nixalite offers netting hardware to fasten all brands of bird netting to all types of surfaces.

Surface Cleaning System includes surface disinfectants and deodorizers to neutralize potentially hazardous bird or animal waste and prepare surface for installation.

### 1.2 - QUALITY ASSURANCE

A. Installer must obtain, review and understand all K-Net HT and bird netting hardware installation guidelines.

B. Installer must be familiar with the proper installation procedures for the K-Net HT bird netting and the installation hardware.

### 1.3 - SUBMITTALS

A. Manufacturer's literature including K-Net HT specifications and installation guidelines for the K-Net HT, netting hardware and specified surface cleaning system.

B. Sample of the K-Net HT Bird Netting not less than 4" square (15.2cm square).

### 1.4 STORAGE & HANDLING

Provide storage to keep all netting and netting hardware shipping boxes dry, clean and undamaged. Do not stack or place other packaging or objects on the K-Net HT boxes or bundles.

## PART 2 - PRODUCTS

### 2.1 ACCEPTABLE MANUFACTURER

Nixalite of America Inc 1025 16th Ave, East Moline, IL. 61244; U.S.A.  
P:309.755.8771 E:birdcontrol@nixalite.com  
Web: www.nixalite.com

### 2.2 K-NET HT BIRD NETTING

Material: Black high density polyethylene. UV, flame and rot resistant.

Construction: Seamless knotted netting.

Standards: Must meet ISO 9001 2000 Quality Management Standards.

Strands: 12 ply (4x3) strands with 75 lbs. (33.9 kg) knotted breaking strength.

Mesh size: 3/4" (1.9cm) square, steam set knots.

Widths: 25' (7.6m), 50' (15.2m). Lengths: 25' (7.6m), 50' (15.2m), 100' (30.4m).

Warranties: 15 year limited warranty on black K-Net HT bird netting.

Thermal & Physical Properties:

Melting point: 293 degrees F.

Remains flexible at very low temperatures.

Specific gravity: 0.96, does not absorb water.

### 2.3 BIRD NETTING HARDWARE

A. Installer to contact manufacturer for up-to-date information and recommendations for hardware applications and procedures.

B. Manufacturer to recommend the hardware that best suits the netting application.

## PART 3 - EXECUTION

### 3.1 - INSPECTION

A. Visually inspect the surfaces that will receive the netting hardware and all areas that will end up behind or inside the installation. Note any damaged surfaces or incomplete construction that could compromise the bird netting installation.

B. Note all areas, surfaces or objects that may require maintenance after the bird netting is installed (i.e. lights, electrical equipment, etc.). Plan on using the appropriate netting hardware to allow access after installation.

C. Note any objects or conditions that could damage the installed bird netting. Plan on installing the K-Net HT in such a manner as to avoid these conditions.

### 3.2 - PREPARATION

A. Field Measurements: Verify dimensions of the areas to be enclosed. Make sure you have sufficient quantity of bird netting, netting hardware and surface cleaning products to properly install the K-Net HT Bird Netting.

### 3.3 SURFACE CLEANING

A. All surfaces to be clean, dry and free of obstructions before bird control is installed.

### 3.4 - INSTALLATION

A. Install the bird netting hardware as recommended by manufacturer. General order of installation: install perimeter and support hardware; attach bird netting to installed hardware; install access or additional support hardware as specified.

B. Install K-Net HT as recommended by the manufacturer. If necessary cut the netting to fit the area. If multiple pieces are needed, join the pieces together with the recommended seam fastening hardware.

C. Install K-Net HT to avoid contact with machinery, vehicles, extreme heat, tree branches, etc. Make necessary adjustments to keep the netting a sufficient distance from these objects or conditions.

D. Finished K-Net HT installation to be taut, free of wrinkles, gaps and openings.

### 3.5 ADJUSTMENTS / CLEANING

A. Remove debris and waste materials from project site.

B. Inspect finished installation. Make any adjustments needed to conform to manufacturer's K-Net HT installation guidelines.



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Experts In Architectural Bird Control Since 1950

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# 15 Year Warranty

## Black K-NET HT Bird Netting

Nixalite of America Inc warrants the black K-Net HT polyethylene netting with a UV additive and marketed for use in structural bird & bat control applications will retain 70% of its published tensile strength for up to 15 Years from time of purchase.

If any K-Net HT is found to fall below these tensile values, as determined by standard Instron test procedures conducted by the manufacturer, Nixalite of America Inc will replace the material at no charge. Adequate samples are required to be returned to the manufacturer to determine tensile values through testing.

This warranty does not cover costs associated with labor, installation or related hardware.

This warranty covers the tensile strength of the product only. It does not cover other damage to the netting, such as rips, tears, etc. that may be caused by poor or improper installation, impact from objects, damage from severe weather or other acts of god, or abnormal occurrences.

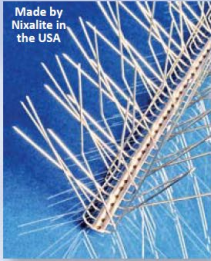
Nixalite of America offers a wide variety of bird netting. This warranty does not warrant that a given product is suitable for a specific application. The purchaser determines the suitability of a particular product for a specific application.

Nixalite® of America Inc - 1025 16<sup>th</sup> Avenue - East Moline, IL 61244

Ph:309.755.8771 Fax:309.755.0077 [www.nixalite.com](http://www.nixalite.com)

# Premium Nixalite®

## All Stainless Steel Barrier Spikes

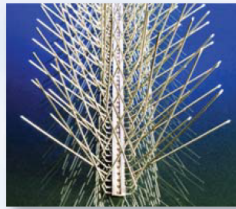


Premium Nixalite is the original and most successful bird barrier needle strip ever made. Made entirely of high grade stainless steel wire and strip, these barriers protect all types of surfaces from all pest birds and climbing animals. Premium Nixalite's applications are limited only by the imagination.

## The Spikes That Have No Equal

Premium Nixalite Bird Barrier Spikes are superior to all other spikes in every way.

No other bird spike can match Nixalite's quality, versatility or design. Its effectiveness for all bird species, in all infestation levels and on all types of installation surfaces is a proven fact.

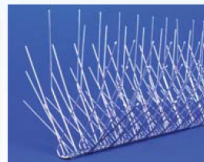


With 120 points per foot, Nixalite is engineered to provide the best possible surface protection without gaps or openings that birds can exploit.

Do your own side-by-side comparison and learn what our customers have known since 1950. Nixalite has no equal.

Go to [www.nixalite.com/nixalitemodels.aspx](http://www.nixalite.com/nixalitemodels.aspx)

## Bird Spike Comparison



**Premium Nixalite®**



**E-Spike™ Economy**



**Pigeon Spike Composite**



**Pigeon Spike Plastic**

<b>Works for Infestation</b>	<b>ALL BIRDS</b>	<b>PIGEONS, SEAGULLS</b>	Pigeons & Seagulls	Pigeons & Seagulls
<b>Points/ft</b>	<b>ALL LEVELS</b>	<b>LIGHT INFESTATION</b>	Light infestation	Light infestation
<b>Made of</b>	<b>120 POINTS/FT</b>	<b>48 POINTS/FT</b>	20 points/ft	20 points/ft
<b>Lengths</b>	<b>ALL STAINLESS</b>	<b>ALL STAINLESS</b>	Stainless & plastic	All plastic
<b>Hardware</b>	<b>2 &amp; 4 FT</b>	<b>2 &amp; 4 FT</b>	1 foot only	1 foot only
<b>Spike Cost</b>	<b>INCLUDED</b>	<b>AVAILABLE</b>	Available	Available
<b>Warranty</b>	<b>PAYS FOR ITSELF</b>	<b>ECONOMICAL</b>	Low cost	Lowest cost
<b>Equivalents</b>	<b>20 YEAR</b>	<b>15 YEAR</b>	None	None
	<b>NONE</b>	<b>NONE</b>	Numerous	Numerous

Go to [www.nixalite.com/spikecomparisontable.aspx](http://www.nixalite.com/spikecomparisontable.aspx)

# NIXALITE® PREMIUM BIRD BARRIER SPIKE WARRANTY

Nixalite of America Inc warrants the workmanship of the Nixalite Premium Stainless Steel Bird Barrier Spike Models (hereafter referred to as Nixalite Premium Spikes) for a period of 20 years against any manufacturing defects. If Nixalite of America Inc determines there is a defect with the Nixalite Premium Spikes they will be replaced. This warranty does not cover any labor costs of any kind nor does it cover any damage to the Nixalite Premium Spikes caused by acts of God, abuse/neglect or ordinary wear and tear. This warranty is null and void if the Nixalite Premium Spike installation is not consistent with that of Nixalite of America Inc's written installation guidelines.

Since we can not control how proficiently Nixalite Premium Spikes are installed, we make no warranties, guarantees or representations, expressed or implied concerning individual installations. Any guarantee of effectiveness is the responsibility of the installer. There are many Nixalite Premium Spike installations still working today after being installed more than 50 years ago.



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