### STAFF RECOMMENDATION

- [x] Approve
- [ ] Approve with conditions

### ARCHITECTURAL DESCRIPTION

**SIGNIFICANCE:** Non-Contributing Resource to the Takoma Park Historic District

**STYLE:** Modern

**DATE:** c.1950-1970s
PROPOSAL

The applicant proposes removing three (3) of the existing communication antennae from the roof of the 12-story building and installing two new antennae and additional hardware. Staff finds that the minor visual changes to the roof of the subject property will not have a substantial impact on the character of the Non-Contributing Resource or the character of the surrounding district.

APPLICABLE GUIDELINES

Policy On Use of Expedited Staff Reports for Simple HAWP Cases

IV. The Expedited Staff Report format may be used on the following type of cases:

2. Modifications to a property, which do not significantly alter its visual character.

Montgomery County Code; Chapter 24A-8

(b) The commission shall instruct the director to issue a permit, or issue a permit subject to such conditions as are found to be necessary to ensure conformity with the purposes and requirements of this chapter, if it finds that:

(1) The proposal will not substantially alter the exterior features of an historic site or historic resource within an historic district; or

(2) The proposal is compatible in character and nature with the historical, archeological, architectural or cultural features of the historic site or the historic district in which an historic resource is located and would not be detrimental thereto or to the achievement of the purposes of this chapter; or

(d) In the case of an application for work on an historic resource located within an historic district, the commission shall be lenient in its judgment of plans for structures of little historical or design significance or for plans involving new construction, unless such plans would seriously impair the historic or architectural value of surrounding historic resources or would impair the character of the historic district. (Ord.No. 9-4, § 1; Ord.No. 11-59)

Secretary of Interior’s Standards for Rehabilitation

The Secretary of the Interior defines rehabilitation as “the act or process of making possible a compatible use for a property through repair, alterations, and additions while preserving those portions or features, which convey its historical, cultural, or architectural values.” The relevant Standards are as follows:

2. The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

9. New additions, exterior alterations, or related new construction will not destroy historic materials, features, and spatial relationships that characterize the property. The new work shall be differentiated from the old and will be compatible with the historic materials, features, size, scale and proportions, and massing to protect the integrity of the property and its environment.

10. New additions and adjacent or related new construction will be undertaken in such a manner that, if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

STAFF RECOMMENDATION

Staff recommends that the Commission approve the HAWP application under the Criteria for Issuance in Chapter 24A-8(b)(1), (2), and (d), having found that the proposal will not substantially alter the exterior...
features of the historic resource and is compatible in character with the district and the purposes of Chapter 24A;

and with the *Secretary of the Interior’s Standards for Rehabilitation #2, 9, and 10*;

and with the general condition that the applicant shall present the *3 permit sets of drawings, if applicable, to Historic Preservation Commission (HPC) staff for review and stamping* prior to submission for the Montgomery County Department of Permitting Services (DPS) building permits;

and with the general condition that final project design details, not specifically delineated by the Commission, shall be approved by HPC staff or brought back to the Commission as a revised HAWP application at staff’s discretion;

and with the general condition that the applicant shall notify the Historic Preservation Staff if they propose to make *any alterations* to the approved plans. Once the work is completed the applicant will contact the staff person assigned to this application at 301-563-3400 or dan.bruechert@montgomeryplanning.org to schedule a follow-up site visit.
APPLICATION FOR
HISTORIC AREA WORK PERMIT
HISTORIC PRESERVATION COMMISSION
301.563.3400

APPLICANT:
Name: Ryan Fitzgerald
Address: 1362 Mellon Rd SW
Daytime Phone: 443.417.3414
E-mail: ryan.fitzgerald
City: Hanover
Tax Account No.: 13-01072074
Zip: 21076

AGENT/CONTACT (if applicable):
Name: Kelsey Hollingshead
Address: 1362 Mellon Rd SW
Daytime Phone: 443.417.34
City: Hanover
Contractor Registration No.: N/A
Zip: 21076

LOCATION OF BUILDING/PREMISE: MIHP # of Historic Property: #37103
Is the Property Located within an Historic District? Yes/District Name: Takoma Park Historic
No/Individual Site Name: __________________________________________
Is there an Historic Preservation/Land Trust/Environmental Easement on the Property? If YES, include a map of the easement, and documentation from the Easement Holder supporting this application. No
Are other Planning and/or Hearing Examiner Approvals /Reviews Required as part of this Application? (Conditional Use, Variance, Record Plat, etc.?) If YES, include information on these reviews as supplemental information. No

Building Number: __________ Street: 7051 Carroll Avenue
Town/City: Rockville Nearest Cross Street: ______________________________________
Lot: _______ Block: ______ Subdivision: _______ Parcel: _______

TYPE OF WORK PROPOSED: See the checklist on Page 4 to verify that all supporting items for proposed work are submitted with this application. Incomplete Applications will not be accepted for review. Check all that apply:
☐ New Construction  ☐ Shed/Garage/Accessory Structure
☐ Addition  ☐ Solar
☐ Demolition  ☐ Tree removal/planting
☐ Grading/Excavation  ☐ Window/Door
☐ Deck/Porch  ☐ Other: __________________________________________________________________
☐ Fence  ☐ Hardscape/Landscape
☐ Hardscape/Landscape  ☐ Roof
☐ Hardscape/Landscape  ☐ Hardscape/Landscape

I hereby certify that I have the authority to make the foregoing application, that the application is correct and accurate and that the construction will comply with plans reviewed and approved by all necessary agencies and hereby acknowledge and accept this to be a condition for the issuance of this permit.

____________________  ______________________
Signature of owner or authorized agent  Date

12.7.20
Description of Property: Please describe the building and surrounding environment. Include information on significant structures, landscape features, or other significant features of the property:

10-11 story brick building used for Senior Living apartments.

Description of Work Proposed: Please give an overview of the work to be undertaken:

AT&T proposes to remove (3) existing antennas, (1) power plant, (1) GSM cabinet and (2) converter shelves. New.

Then AT&T will install (2) antennas at 129', and (1) new antenna at 116', (3) new RRHs and (1) new Emerson Neasure Power Plant.
<table>
<thead>
<tr>
<th>Work Item 1:</th>
<th><strong>3</strong> new NNHH-65A-R4 antennas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of Current Condition:</td>
<td>Take (3) existing antennas down put these (3) new Commscope NNHH-65A-R4 antennas up.</td>
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<tr>
<td>Proposed Work:</td>
<td></td>
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<tr>
<th>Work Item 2:</th>
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<td>Description of Current Condition:</td>
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<td>Proposed Work:</td>
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<table>
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<tr>
<th>Work Item 3:</th>
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<tbody>
<tr>
<td>Description of Current Condition:</td>
<td>Proposed Work:</td>
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<td>Proposed Work:</td>
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<tr>
<td>New Construction</td>
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<td>Additions/ Alterations</td>
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<td>Demolition</td>
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<td>Deck/Porch</td>
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<tr>
<td>Fence/Wall</td>
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<tr>
<td>Driveway/ Parking Area</td>
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<td>Grading/Excavation/Landscaping</td>
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<td>Tree Removal</td>
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<td>Siding/ Roof Changes</td>
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<td>Window/ Door Changes</td>
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<td>Masonry Repair/ Repoint</td>
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<td>Signs</td>
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</table>
HISTORIC AREA WORK PERMIT APPLICATION
Application Date: 11/18/2020

Affidavit Acknowledgement
The Contractor is the Primary applicant authorized by the property owner
This application does not violate any covenants and deed restrictions

Primary Applicant Information
Address 7051 CARROLL AVE
TAKOMA PARK, MD 20912
Other contact Fitzgerald (Primary)

Historic Area Work Permit Details
Work Type ALTER
Scope of Work AT&T proposes to remove (3) existing antennas and install (2) new antennas at 129', (1) new antenna at 116' and (3) new RRHs.
SITE NAME: TULIP AVE
USID: 3939
FA NUMBER: 10072888

MONTGOMERY COUNTY
EXISTING 111'-0" ROOFTOP LTE 6C UPGRADE

PROJECT SUMMARY

BUILDING OWNER: TURNO TOWER LLC
ADDRESS: 7550 GARSELL STREET
TAKOMA PARK, MD 20912

SITE ADDRESS: 7550 GARSELL STREET
TAKOMA PARK, MD 20912

CUSTOMER/APPLICANT: AT&T Mobility
7757 BOWIE ROAD
LANHAM, MD 20706

LOCATION:
LONGITUDE: 38.974747 N
LATITUDE: 77.010627 W
JURISDICTION: MONTGOMERY COUNTY
COUNTY: MONTGOMERY
GROUND ELEVATION: 205' AMSL
OCUPANCY TYPE: UNMANNED
AERIAL COMPLIANCE: FACILITY IS UNMANNED AND NOT FOR HUMAN INHABITATION

CONTACT INFORMATION

AREA PRINCIPAL: 354 SHERMAN ST 300
710 MAA C2 3400 1200 6930
PHONE (301) 595-4000
FAX (301) 595-4040

ELECTRIC PROVIDER: PEPI
PHONE (877) 197-3825
ELECTRIC PROVIDER: PEPI
PHONE (877) 197-3825

AREA PRINCIPAL: 354 SHERMAN ST 300
710 MAA C2 3400 1200 6930
PHONE (301) 595-4000
FAX (301) 595-4040

PHONE (301) 595-4000
FAX (301) 595-4040

CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITION OF THE FOLLOWING CODES AS ADAPTED TO THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSIDERED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

CODE OF NICE
MECHANICAL: 2016
ELECTRICAL: 2017

PROJECT DESCRIPTION

THE PROPOSED PROJECT INCLUDES:
- REMOVE (1) EXISTING ANTENNA
- REMOVE (2) EXISTING CABLES
- INSTALL (2) NEW ANTENNAS AT 116'-0"
- INSTALL (2) NEW ANTENNAS AT 116'-0"
- INSTALL (2) NEW ANTENNAS AT 116'-0"
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- INSTALL (2) NEW ANTENNAS AT 116'-0"

CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING CONDITIONS AND COORDINATE WITH THE JOB SITE AND SMALL INDEPENDENTLY NOTIFY THE ENGINEER IN WRITING OF ANY DEVIATIONS BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

DO NOT SCALE DRAWINGS

ALL DRAWINGS CONTAINED HERIN ARE PREPARED FOR 111'-0"
CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING CONDITIONS AND COORDINATE WITH THE JOB SITE AND SMALL INDEPENDENTLY NOTIFY THE ENGINEER IN WRITING OF ANY DEVIATIONS BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

DRAWING INDEX

Sheet # Sheet Description
T-1 TITLE SHEET
T-2 GENERAL SITE PLAN
T-3 BUILDING ELECTRICAL
T-4 CONSTRUCTION ELEVATIONS
T-5 SITE DEVELOPMENT PLANS
T-6 SITE PLAN
T-7 NEW MOUNTING DECK
T-8 AERIAL SITE SCHEDULE

CALL MARYLAND ONE CALL
(800) 282-8555
CALL 3 WORKING DAYS BEFORE YOU DIG!
SOUTHERN GROUNDING NOTES:

ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, INPEX, LEADING PROTECTION AND AC GROUNDING) SHALL BE INSTALLED TO A CENTER OF SPACE AT OR BELOW GRAY OF 2 IME OR COPPER RODDING CONNECTIONS IN ACCORDANCE WITH THE NEC.

THE SUBCONTRACTOR SHALL PERFORM FULL-PHASE-TO-NEUTRAL FABRIC TO START (LEGAL AND WELL FABRICATION AND INSTALLATION) REQUIREMENTS FOR FABRICATION BERTH (MAX. 13 IN. BY 13 IN.) AND FIELD (MAX. 12 IN. BY 12 IN.) REQUIREMENTS. THE SUBCONTRACTOR SHALL FABRICATE AND INSTALL FULL-PHASE-TO-NEUTRAL GROUNDING CONNECTIONS IN ACCORDANCE WITH THE NEC.

THE SUBCONTRACTOR IS RESPONSIBLE FOR PROPER GROUNDING CONNECTIONS AND COMPLIANCE WITH THE NEC. ALL GROUND CONNECTIONS MUST BE MADE IN ACCORDANCE WITH THE NEC AND ALL COPPER RODDING CONNECTIONS IN ACCORDANCE WITH THE NEC.

METAL CONDUIT SHALL BE GROUNDED WITH metallic ELECTRICAL CONNECTIONS WITH AN EARTH GROUNDING CONNECTION TO THE NEUTRAL OR GROUND WIRE. THIS CONNECTOR SHALL BE GROUNDED WITH A COPPER RODDING CONNECTION TO THE NEUTRAL OR GROUND WIRE.

ALL EXTERIOR GROUND CONNECTIONS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUNDING TERMINAL SHALL BE MADE OF SIZED COPPER RODDING CONNECTIONS IN ACCORDANCE WITH THE NEC.

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GROUND CONNECTIONS SUCH AS TOE (TOE AND HOOKS) SHALL BE MADE USING THE NEC. CONDUCTOR CONNECTIONS MAY BE REPLACED BY EXTERIOR GROUND CONNECTIONS.

GROUND TERMINAL CONNECTIONS SHALL BE ELECTRICAL CONNECTIONS TO THE EQUIPMENT/GROUND BARS AND THE GROUNDING TERMINAL.

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PROJECT GENERAL NOTES:

1. ON THE PURPOSE OF CONSTRUCTION DRAWING. THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONSTRUCTION = GENERAL CONTRACTOR (CONTRACTOR)
   SUBCONTRACTOR = LOCAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF THIS, THE DESIGNER SUBCONTRACTOR SHALL VISIT THE SITE TO FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY CHANGE FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS PURCHASED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL OBSERVE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, REGULATIONS, AND LAWFUL ORDERS OF ANY PERTINENT GOVERNMENTAL BODY HAVING JURISDICTION OVER THE PERFORMANCE OF THE WORK. ALL WORK COVERED OUT WITHIN SHALL COMPLY WITH ALL APPLICABLE NUCLEAR AND AT&T COMPANY SPECIFICATIONS AND LOCAL, JURISDICTIONAL CODES, REGULATIONS, AND APPLICABLE REGULATIONS.

4. DRAWINGS PRODUCED HEREIN ARE NOT TO SCALE AND ARE INTENDED TO SHOW OUTLINE ONLY.

5. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE PURCHASING MATERIALS, EQUIPMENT, APPARATUS, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

6. WORKING MATERIALS SUPPLIED WITH THE IBM PACKAGE IDENTIFIED ITEMS THAT WILL BE SUPPLIED BY CONTRACTOR. ITEMS NOT INCLUDED IN THE IBM SELL MATERIALS AND ITEMS LISTED SHALL BE SUPPLIED BY THE SUBCONTRACTOR.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL INFILTRATE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL PROVIDE SELLING UNIT POOLING AND TO CABLES, CORDING CABLES AS SHOWN ON THE DRAWINGS. CORDING CABLES AS SHOWN ON THE DRAWINGS. CORDING CABLES AS SHOWN ON THE DRAWINGS.

10. THE SUBCONTRACTOR SHALL PROVIDE EXISTING INSTRUMENTATION, HARDWARE, CORDS, CORDINGS AND STRUCTURES, AND HARDWARE PARTS SHALL BE INSTALLED AND TESTED TO SUBCONTRACTOR'S SELECTION OF THE SATISFACTION OF OWNER.

11. SUBCONTRACTOR SHALL NOTIFY AND PROVIDE NOTICE OF ALL ORIGINAL MATERIALS SUCH AS CABLES, BOXES AND OTHER ITEMS TO THE SATISFACTION OF OWNER. MATERIALS RECEIVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.

12. SUBCONTRACTOR SHALL LEAVE PREPARED IN CLEAN CONDITION.

13. CONSTRUCTION CONTRACTOR TO BECOME PART OF THE AT&T INFRASTRUCTURE MANAGEMENT POLICY AT & T, INC. "WIRE CLIPS & CRIMP SUPPORT THE PROPERLY PLACED, IN-PLACE, INSTALLATION.

ABBREVIATIONS AND SYMBOLS:

- **ABBREVIATIONS:**
  - A3L: ALL ABOVE SPACE LEVELS
  - B3L: BASE MOUNTED SPAN
  - M3L: MINIMUM
  - NS: NOT TO SCALE
  - REF: REFERENCE
  - RF: Radio Frequency
  - T.B.: TO BE DETERMINED
  - T.B.R.: TO BE RECOMMENDED
  - T.T.: TYPICAL
  - W.B.: WIRE BARE
  - W.G.: WIRE GROUND
  - W.E.: WIRE EXPOSED
  - W.T.: WIRE TERMINATION

- **SYMBOLS:**
  - 160: SOLID GROUND BUS BAR
  - 200: SOLID NEUTRAL BUS BAR
  - 16: SINGLE POLE THERMAL-HEATING CIRCUIT BREAKER
  - 100: SINGLE POLE THERMAL-HEATING CIRCUIT BREAKER
  - 120: SINGLE POLE THERMAL-HEATING CIRCUIT BREAKER
  - 140: SINGLE POLE THERMAL-HEATING CIRCUIT BREAKER
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NOTE: THESE DRAWINGS ARE NOT INTENDED TO REFLECT THE STRUCTURAL CODING REQUIREMENTS OF THE PROPOSED ANTENNAS AND TRANSMISSION LINES. DESIGN ARE REPRESENTED IN NATURE AND DO NOT REFLECT THE ACTUAL CONFIGURATIONS REQUIRED THE CONTRACTOR SHALL REFER TO THE STRUCTURAL ANALYSIS OF THIS TOWER SITE FOR THE APPROVED LOCATION AND CONFIGURATION OF ALL ANTENNAS AND TRANSMISSION LINES. ALL CONSTRUCTION DETAILS ARE TO BE IN ACCORDANCE WITH THE STRUCTURAL ANALYSIS.

1. ANTENNA PLACEMENT WAS DETERMINED WITHOUT CONSIDERATION OF STRUCTURAL ANALYSIS.
2. REFER TO STRUCTURAL ANALYSIS OR STRUCTURAL LETTER FOR APPROVAL OF ADDITIONAL NEW ANTENNAS.

PROPOSED:
(1) ANTENNAS WITH
(2) REMOTE RACK HEATS
(3) RAINCAP SURGE SUPPRESSORS
(4) FIBER TRUNKS AND
(5) DC TRUNKS
MOUNTED TO EXISTING ANTENNA MOUNT

ALPHA & BETA ANTENNA TOP HEIGHT
ELAV. = 131'-0" TOPEOF PENTHOUSE
ELAV. = 135'-0"

NEW ANTENNAS
RAD CENTER = 135'-0"

TOP OF PENTHOUSE
ELAV. = 135'-0"

EXISTING 111'-0" ROOFTOP

1/2"=1'-0"
C/32

BUILDING ELEVATION
SCALE: N.T.S.
PROPOSED ANTENNA AZIMUTH PLAN

SCALE: N.T.S.
## Antenna Cable Schedule

<table>
<thead>
<tr>
<th>Antenna Position</th>
<th>Azimuth</th>
<th>Antenna</th>
<th>TRG Center</th>
<th>E Tilt</th>
<th>W Tilt</th>
<th>Coax Size</th>
<th>RH</th>
<th>TA</th>
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<tbody>
<tr>
<td>2</td>
<td>25°</td>
<td>NHHI-85A-R4</td>
<td>0°/90°/180°/270°</td>
<td>2°</td>
<td></td>
<td>FIBER</td>
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<td></td>
<td>60°</td>
<td></td>
</tr>
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<td></td>
<td></td>
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</tr>
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<td></td>
<td>FIBER</td>
<td></td>
<td></td>
<td>130°</td>
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</table>

### Antenna Schedule Notes:
1. ALL CABLE LENGTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
2. COLOR CODE MARKINGS MUST BE 3/4"额外 AND 1/2" INCHES OF COPPER TO PROTECT ELECTRICAL COLOR CODING TAPED.
3. CONTRACTOR SHALL INSTALL A 3/4" RED OR YELLOW IDENTIFICATION TAG IN THE FIELD WITH AN AT&T REPRESENTATIVE.

### ATT Naming Convention for "RET NAME"

**Usage:** [USID][CellId][CellId][AntPos][FrequencyBand][Tech]

**Field Length Description**

- **Antenna Techno.D.:**
  - Cell01: 0.000
  - Cell02: 0.000
  - Cell03: 0.000
  - Cell04: 0.000

- **FrequencyBand:**
  - [Band-1]: 0.000
  - [Band-2]: 0.000

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<td>&lt;FrequencyBand&gt;</td>
<td>0.000</td>
<td>Band-2</td>
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</table>
DC SURGE PROTECTION SYSTEM

SCALE: N.T.B.

NOTE:
1. SIMPLIFIED DIAGRAM FOR CONDUCTOR SIZES
2. WHEN SIMPLIFIED CABLE IS USED, CONNECT CABLE SINGLE CHAIN WIRE AND GROUND WIRE TO GROUND BAR.
3. PROVIDE LOOP-BACK CONNECTOR ON THE LAST ACTIVE POWERING MODULE AND POWER THAN 5 RIMS OR PINS ARE DEPLETED.

GROUNDED HEADER MODULE BY MOUNT.
DC CONNECTOR

GROUND BAR

CONNECTORS ON DC SURGE PROTECTION MODULES (GREAT LAKES ELECTRIC, LTD.)

(1) 1/2" AND GROUND CABLE
(2) 2/0 DC POWER CABLE, 5/5 RATED
(3) 8/6 DC POWER CABLE, 5/6 RATED
(4) ALARM CABLE, 5/6 RATED TO SECURED A 8/6/4 RIM OR RCIS
(5) 2/0 SINGLE MODE FIBER CABLE, 5/6 RATED
(6) 24/7 CONNECTORIZED FIBER OPTIC CABLE P/N=1880-0000-0000

BY RODENHEIMER SITE SOLUTIONS, LLC (OR LINB)

TYPICAL PER SECTOR
1. LABEL THE DC POWER CABLES WITH IDENTifiers AT BOTH ENDS OF EVERY WIRE AND IN ANY FULL BOX IF USED. LABEL SHALL BE DISCENTIVE SELF ADHESIVE, HATCHED HORIZONTALLY, ALL THE SAME AND STATE THE SECTOR, FREQUENCY BAND AND POLARITY, IE (+) 23-004-190. 3.
2. INSTALL ON LTE EQUIPMENT RACK.
3. COVERED.
4. CABLE TERMINALS FOR 48V INPUT FEED A AND FEED B REFEREFERENCE CONNECTIONS SHALL BE 2-HOLE 3/8" ON 1/2" CENTER.
5. INSTALL CABLE TERMINALS FOR FEED A AND FEED B RETURN BACK-TO-BACK ON OPPOSITE SIDES OF PANEL.
6. CABLE TERMINALS FOR GROUND CONNECTIONS SHALL BE 2-HOLE 3/8" ON 1/2" CENTER.
7. INSTALL CABLE TERMINALS FOR GROUND CONNECTIONS ON THE OUTER REGION AND MAXIMUM LENGTH.
8. SEE 1/2" FOR DISTANCE BETWEEN CABLE.
9. A BLAVERSION BOX IS REQUIRED WHEN FEED LITE CABLES ARE INSTALLED IN CONDUIT AS DEPICTED.
10. PROVIDE GROUND WIRE FOR ENHANCED ALARM MODULE BASIS WEB EXPOSED TO MAGNETIC FIELDS.
11. CABLE TERMINAL GROUND CABLE IS NOT REQUIRED WHEN CONNECTED AND 25 VDC POWER PLANT ARE ON THE SAME RACK OR EXCLUDE.
12. THE SAME GROUND WIRE OF EACH MULTI-CONDUCTOR CABLE SHALL BE CONNECTED TO THE 3" GROUND BAR ON THE RACK. WHEN A NO GROUNDING CABLE IS USED, THE GROUND WIRE ALSO SHALL BE CONNECTED TO THE 3" GROUND BAR.
13. SEE ALARM BLOCK ASSIGNMENT DETAL FOR ALARM CABLE CONNECTIONS.
14. ADD DC POWER SOURCE TO EXISTING RACK MOUNTED SPACE UNTIL AS REQUIRED.

SCALE: N.T.S.
1. WIRING DIAGRAM - ROOFTOP

SCALE: N.T.S.
### Notes:
- All cabling to be routed from left side of the box.
- All equipment to be routed from right side of the box.
- All equipment cabling needs to be labeled.
- All block covers required.
- Wire clips are required.

### Labeling:
- Label cover "LTE External Alarm Block".
- Label DC surge arrestor alarm cable (DC Surge Arrestor) 24DC DC surge arrestor.
- Label 24V/5V/28V/120V power cables ("24V" "5V" "120V" "120V").
- Label 24V fuse cable (24V fuse alarm).
- Label feeder jumper from 240V to 240V feeder.
- Label feeder panel ports with "240V" "120V" "24V".
- Label all 24V feeder if required.
- Update all DC breaker schedule in DC power plant 8G to 24V convertor.

### 66 Block Alarm Detail for LTE

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<th>Color</th>
<th>Status</th>
<th>Notes</th>
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<tbody>
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<td>OPEN</td>
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</tr>
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**Scale:** N.T.S.
INDOOR EMERSON NETSURE 721-48V DC POWER SYSTEM

SCALE: N.T.S.
### eSure™ Converter C4824-1500

#### Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
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<tbody>
<tr>
<td>Input Voltage</td>
<td>480 VAC</td>
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<tr>
<td>Output Voltage</td>
<td>24 VDC, 0% to 20% AC</td>
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<tr>
<td>Max Input Current</td>
<td>20 A</td>
</tr>
<tr>
<td>Operating Ambient Temperature</td>
<td>0°C to 40°C</td>
</tr>
<tr>
<td>Protection Level</td>
<td>IP54</td>
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<tr>
<td>Fan Type</td>
<td>PPF</td>
</tr>
<tr>
<td>Fan Current</td>
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</table>

#### Ordering Information

| Description | C4824-1500 |

---

### eSure Rectifier R482000E3

#### Technical Specifications

<table>
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<tr>
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<th>Value</th>
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<tbody>
<tr>
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#### Ordering Information

| Description | R482000E3 |

---

### Diagrams

- **Output Power vs. Temperature**
- **Output Voltage vs. Output Current**
- **Output Voltage vs. Output Power**
### Power Load Calculations

**Unit Quantity of Equipment & DC Operating Voltage**

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<th>Equipment</th>
<th>Quantity</th>
<th>Voltage</th>
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<td>240V</td>
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<tr>
<td>L2</td>
<td>20</td>
<td>480V</td>
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<tr>
<td>L3</td>
<td>30</td>
<td>600V</td>
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**Other Equipment Details**

- **L4**: 50 units, 1200V
- **L5**: 75 units, 1500V

**Total Usage Specifications**

- **Total Load**: Calculated based on individual equipment quantities and voltages.
- **Output**: Adjusted for efficiency and safety standards.
### Panel Schedule

**Main Breaker Rating (A):** 200  
**System Voltage (V):** 120/208V, 3 PHASE

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
<th>VA</th>
<th>C/NC</th>
<th>L1</th>
<th>L3</th>
<th>L2</th>
<th>VA</th>
<th>Description</th>
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<td>nc</td>
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</table>

- **Panel Schedule**
  - **Panel Loading (Total) (kVA):** 32450
  - **Panel Capacity (kVA):** 39.6
  - **Panel Capacity (kVA):** 39.6
  - **Panel Loading (Total) (kVA):** 32.5
  - **Panel Loading (Total) (kVA):** 32.5

### AC Panel Schedule

1. **Scale:** N.T.S.

   - **Description:**
   - **Rating:**
   - **Position:**

2. **DC Panel Schedule**

   - **Scale:** N.T.S.

   - **Description:**
   - **Rating:**
   - **Position:**

**Notes:**
- Current per phase cannot exceed main breaker rating
- Panel total (VA): 32450
- Panel capacity (kVA): 39.6
- Panel loading (total) (kVA): 32.5
- Spare capacity (kVA): 39.6
DIAGONALS DOUBLED WITH NEW L2.5X2.5X4 ANGLES, BOLTED TO EXISTING ANGLES WITH 1/2” DIA BOLT, 1ft. SPACING BETWEEN BOLTS.