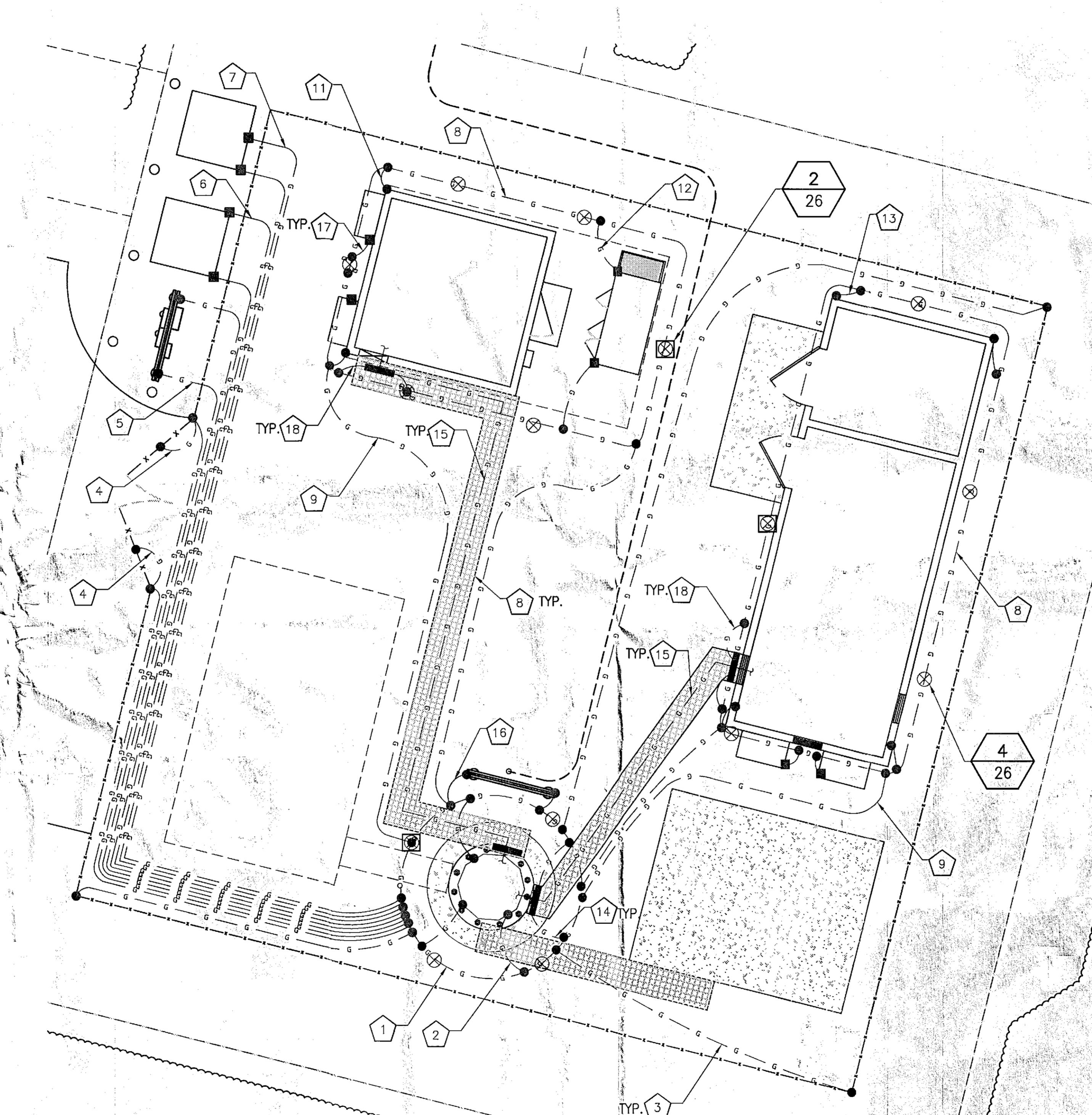


## GROUNDING SYMBOLS

- ⊗ GROUND ROD
- ACCESS WELL
- ☒ GROUND ROD WITH ACCESS
- COMPRESSION TYPE CONNECTION
- CADWELD TYPE CONNECTION
- G — #2/0 BTS COPPER CONDUCTOR BURIED GROUND CABLE 30" BELOW GRADE
- ① INDICATES CODED NOTE

## CODED DRAWING NOTES

- ① PROPOSED TOWER GROUND RING WITH #2/0 SOLID TINNED BCW.
- ② BOND PROPOSED TOWER GROUND RING TO PROPOSED TOWER WITH #2/0 SOLID TINNED BCW.
- ③ BOND PROPOSED TOWER GROUND RING TO PROPOSED FENCE POSTS AS REQUIRED WITH #4 SOLID TINNED BCW.
- ④ BOND PROPOSED TOWER GROUND RING TO PROPOSED GATE WITH #4 SOLID TINNED BCW.
- ⑤ BOND NEW UTILITY BACKBOARD TO TOWER GROUND RING WITH #4 SOLID TINNED BCW IN TWO PLACES.
- ⑥ BOND PROPOSED GROUND RING TO PROPOSED MESA SPAN CABINET WITH #4 SOLID TINNED BCW.
- ⑦ BOND PROPOSED GROUND RING TO PROPOSED TRANSFORMER WITH #4 SOLID TINNED BCW.
- ⑧ PROPOSED SHELTER GROUND RING WITH #4 SOLID TINNED BCW.
- ⑨ BOND PROPOSED SHELTER GROUND RING TO PROPOSED TOWER GROUND RING WITH #4 SOLID TINNED BCW, 2 PLACES
- ⑩ BOND PROPOSED ICE BRIDGE SUPPORT POST TO PROPOSED COMPOUND GROUND RING WITH #4 SOLID TINNED BCW.
- ⑪ BOND PROPOSED SHELTER GROUND RING TO PROPOSED AT&T SHELTER WITH #4 SOLID TINNED BCW, 2 PLACES
- ⑫ BOND PROPOSED SHELTER GROUND RING TO PROPOSED AT&T GENERATOR WITH #4 SOLID TINNED BCW, 2 PLACES
- ⑬ BOND PROPOSED SHELTER GROUND RING TO PROPOSED VERIZON SHELTER WITH #4 SOLID TINNED BCW, 2 PLACES
- ⑭ BOND PROPOSED TOWER GROUND BAR TO PROPOSED TOWER GROUND RING IN 2 PLACES WITH #4 SOLID TINNED BCW.
- ⑮ BOND PROPOSED TOWER GROUND BAR TO PROPOSED SHELTER GROUND BAR WITH #4 SOLID TINNED BCW.
- ⑯ BOND PROPOSED TOWER GROUND RING TO PROPOSED TOWN H-FRAME WITH #4 SOLID TINNED BCW, 2 PLACES.
- ⑰ BOND PROPOSED SHELTER HVAC UNIT TO PROPOSED SHELTER GROUND RING PER MANUFACTURER'S SPECIFICATIONS.
- ⑱ BOND PROPOSED SHELTER GROUND BAR TO PROPOSED SHELTER GROUND RING WITH #4 SOLID TINNED BCW, 2 PLACES.



1 COMPOUND GROUNDING LAYOUT  
SCALE AS NOTED:

GRAPHIC SCALE  
20' 10' 0 20'  
SCALE (11x17): 1" = 20'-0"  
SCALE (22x34): 1" = 10'-0"

## GENERAL GROUNDING NOTES:

1. TO ENSURE PROPER BONDING, ALL CONNECTIONS SHALL BE AS FOLLOWS:
  - #2/0 BARE TINNED SOLID COPPER CONDUCTOR: CADWELD TO RODS OR GROUND RING
  - LUGS AND BUS BAR (UNLESS NOTED OTHERWISE): SANDED CLEAN, COATED WITH OXIDE INHIBITOR AND BOLTED FOR MAXIMUM SURFACE CONTACT. ALL LUGS SHALL BE COPPER (NO ALUMINUM SHALL BE PERMITTED). PROVIDE LOCK WASHERS FOR ALL MECHANICAL CONNECTIONS FOR GROUND CONDUCTORS. USE STAINLESS STEEL HARDWARE THROUGHOUT.
2. ALL GROUNDING CABLE IN CONCRETE OR THROUGH WALLS SHALL BE IN 3/4" PVC CONDUIT. SEAL AROUND CONDUIT THROUGH WALLS. NO METALLIC CONDUIT SHALL BE USED FOR GROUNDING CONDUCTORS.
3. OWNER'S REPRESENTATIVE WILL INSPECT CADWELDS AND CONDUCT MEGGER TEST PRIOR TO BURIAL. MAXIMUM 5 OHMS RESISTANCE IS REQUIRED.
4. DO NOT INSTALL GROUND RING OUTSIDE OF LEASED AREA.
5. MAKE ALL GROUND CONNECTIONS AS SHORT AND DIRECT AS POSSIBLE. AVOID SHARP BENDS. ALL BENDS SHALL BE A MINIMUM 8" RADIUS AND NO GREATER THAN 90 DEGREES.
6. ALL CADWELDS TO BURIED GROUND RING SHALL BE THE PARALLEL TYPE, EXCEPT FOR THE GROUND RODS WHICH SHALL BE THE TEE TYPE.
7. BOND SERVICE CONDUITS TO GROUND RING AS THEY CROSS. DO NOT EXOTHERMICALLY WELD TO CONDUITS.
8. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER WHEN THE GROUNDING SYSTEM IS COMPLETE. THE CONSTRUCTION MANAGER SHALL INSPECT THE GROUNDING SYSTEM PRIOR TO BACKFILLING.
9. THE MINIMUM SPACING BETWEEN GROUND RODS SHALL BE 10'-0" (MAX. 15'-0").
10. BOND CIGBE TO EXTERNAL GROUND RING WITH 2 RUNS OF #2 BARE, TINNED, SOLID COPPER CONDUCTOR IN PVC. CONNECT BAR END WITH 2 HOLE LUG, AND "CADWELD" THE OTHER END TO THE EXTERNAL GROUND ROD.
11. THE PREFERRED LOCATION FOR COAX GROUNDING IS AT THE BASE OF THE TOWER PRIOR TO THE COAX BEND. BONDING IS SHOWN ON THE ICE BRIDGE DUE TO DIFFICULTY WITH WELDING OR ATTACHING TO TOWER LEGS. CONTRACTOR SHALL ADVISE CONSTRUCTION MANAGER PRIOR TO PLACING CIGBE ON ICE BRIDGE IF MOUNTING TO TOWER LEG IS POSSIBLE.
12. BONDING OF THE GROUNDED CONDUCTOR (NEUTRAL) AND THE GROUNDING CONDUCTOR SHALL BE AT THE SERVICE DISCONNECTING MEANS. BONDING JUMPER SHALL BE INSTALLED PER N.E.C. ARTICLE 250-30.

**INFINIGY**  
Design. Build. Deliver.  
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1 REVISED PER COMMENTS SKB 6/30/15  
0 ISSUED FOR BP SKB 4/22/15  
No. Submittal / Revision App'd Date

Drawn: SKB Date: 4/22/15  
Designed: AJD Date: 4/22/15  
Checked: AJD Date: 4/22/15

Project Number 168-117

Project Title

CELL TOWER

457 NYS ROUTE 85  
SLINGERLANDS, NY 12159

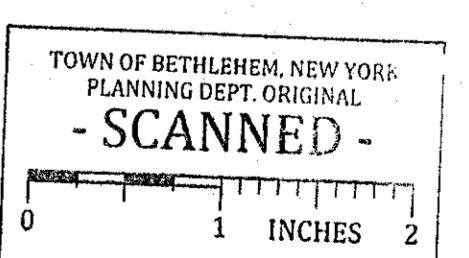
Prepared For  
Phoenix Towers LLC

110 WASHINGTON AVE  
NORTH HAVEN, CT 06473  
C: 203-623-3287

Drawing Title

COMPOUND GROUNDING PLAN

Drawing Scale:  
CD  
Date: 6/30/15



TOWN OF BETHLEHEM, NEW YORK  
PLANNING DEPT. ORIGINAL  
- SCANNED -  
0 1 INCHES 2  
PLANNING BOARD  
TOWN OF BETHLEHEM  
ALBANY COUNTY, NEW YORK  
By direction of the Chairman.  
These drawings are hereby approved.  
See sheet(s) 3 of 27  
for date and signature.

UNAUTHORIZED ALTERATION OR ADDITION  
TO THIS DOCUMENT IS A VIOLATION OF  
APPLICABLE STATE AND/OR LOCAL LAWS

Sheet Number:

26 OF 27