CITY OF PORTLAND, MAINE RESURGAM
Reviewed for Code Compliance
Inspections Division
Approved with Conditions
Date: 10/13/17

July 28, 2017

Rachelle Steffes
Partner Delivery Manager
T-Mobile
15 Commerce Way, Suite B
Norton, MA 02766

Structural Assessment Letter for the Proposed T-Mobile 600MHz Installation, Design 6004G
Site Address: 340 Eastern Promenade, Portland, ME 04101, Cumberland County
T-Mobile Site Number: 4DN2283A
T-Mobile Site Name: ME283 / Promenade East

Dear Ms. Steffes:

Pursuant to your request, Network Building + Consulting Engineering Services ("NB+C ES") has evaluated the proposed T-Mobile telecommunication upgrades at the subject location. The existing structure is a 112' high multi story building, with a penthouse on top, located in Portland, ME. The following tables below show the existing and proposed installation.

**Table 1 - Proposed Antenna and Cable Information**

| Mounting Level (ft.) | Center Line Elevation (ft.) | Number of Antennas | Antenna Manufacturer | Antenna Model | Carrier | Feed Line Size (in) | Note |
|---|---|---|---|---|---|---|---|
| 108.0 | 108.0 | 3 | RFS | APXVAA24_43-U-A20 (96.0"x24.0"x8.5", 101.4 lbs.) | T-Mobile | (1) 6x12 Hybrid | - |
| | | 3 | Ericsson | Radio 4478 B71 RRU (15.0"x13.0"x8.0", 60.0 lbs.) | | | |

**Table 2 – Existing/Future Antenna and Cable Information**

| Mounting Level (ft.) | Center Line Elevation (ft.) | Number of Antennas | Antenna Manufacturer | Antenna Model | Carrier | Feed Line Size (in) | Note |
|---|---|---|---|---|---|---|---|
| 108.0 | 108.0 | 3 | Commscope | LNX-6515DS-A1M | T-Mobile | (4) 7/8 Coax | 2 |
| | | 3 | - | Generic Twin Style 1A - PCS TMA | | (12) 7/8 Coax | 1 |
| | | 3 | - | Generic Twin Style 1B - AWS TMA | | | |
| | | 3 | - | 9' x 2.0"-Ø Nom. Sch. 40 pipe mount | | | |
| 119.0 | 119.0 | 3 | RFS | APX16DWV-16DWVS | | | |
| | | 1 | - | Custom Mount | | | |

Notes:
1) Existing Equipment
2) Existing Equipment to be removed (Cables to be capped).

T-Mobile – 4DN2283A
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NB+C ES Project Number 01781

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NB+C ES has reviewed the Mount Analysis prepared by NB+C ES dated July 28, 2017, the Preliminary Cons Drawings prepared by NB+C ES dated July 20, 2017, Structural Analysis Report by Chappell Engineering Associates, LLC dated May 31, 2012, Structural Analysis Report by Advanced Engineering Group, P.C. dated December 1, 2015, Structural Analysis Report by Hudson Design Group, LLC dated February 19, 2016, Previous Construction Drawing by Hudson Design Group, LLC dated May 10, 2016, RFDS sheet from T-Mobile dated June 27, 2017 and Site Photos and Notes taken by NB+C ES personnel dated July 6, 2017.

This certification assumes that all structural members are in good condition. The contractor shall be responsible for the means and methods of construction. No structural qualification is made or implied by this letter for existing structural members not supporting the proposed installation. Any deterioration or localized damage or distress to the structure or mounts, should be documented and reported to the engineer and repaired by the contractor prior to the installation of the proposed antennas.

Based on an assessment of the existing site conditions and by reviewing the aforementioned documents, and per the code provision of the *Maine Uniform Building and Energy Code* and *Structural Standards for Steel Antenna Towers and Antenna Supporting Structures ANSI/TIA-222-G code* for applied gravity and lateral loads, NB+C ES has determined that the proposed loading will have a negligible increase in the stresses to the existing building structure. Thus the existing structure is adequate and can support the proposed installation as intended.

Please refer to the construction drawings prepared by NB+C ES for additional details. Should you have any questions or require additional information, please feel free to contact us.

Prepared by: Hitesh Pandey, E.I.T.

Respectfully submitted by:
NB+C Engineering Services, LLC

Krupakaran Kolandaivelu, P.E.
Engineering Manager – Structural
ME License # 12979

STATE OF MAINE
KRUPAKARAN KOLANDAIVELU
No. 12979
LICENSED
PROFESSIONAL ENGINEER

7/28/2017