

Harnett County, North Carolina
Telecommunications Site Review
New Wireless Facility

CityScape

C O N S U L T A N T S , I N C .

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July 11, 2018

Mr. Jay Sikes
Planning, Central Permitting & Inspections
108 East Front Street
Lillington, NC 27546

RE: Harnett County / 17-50042835
Verizon Wireless / Campbell University

Dear Mr. Sikes,

At your request, on behalf of Harnett County, North Carolina (“County”), CityScape Consultants, Inc. (“CityScape”) in its capacity as telecommunications consultant for the County, has considered the merits of the above referenced application submitted by Kimley Horn on behalf of Verizon Wireless (“Applicant”), to construct a new wireless telecommunications facility at Jones Hall, 179 Day Dorm Road (Campbell University), Lillington, North Carolina, *see Figure 1*.

This application is proposed to provide improved service on the Campbell University campus. The proposal has been evaluated from the following perspectives:

- Whether the proposed facility, as specified, is justified due to technological reasons and is essential for the Applicant to provide its telecommunications service; and,
- Whether the proposed facility will follow the guidelines of the Telecommunications Act of 1996, the Harnett County Ordinance and all other pertinent rules and regulations.

Harnett County Ordinance Requirements (11.2)

§11.2.1: Exempt Facilities – N/A

§11.2.2: General Provisions

- A. Type of facility: 7 - Attached wireless
 - B. Abandonment
 - C. Public Safety interference
 1. Compliance with Good Engineering Practices, as defined by the FCC – provided
 2. Compliance with FCC regulations regarding RFI - provided
 3. For collocation applications, best efforts to avoid interference to public safety shall be made – N/A
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4. Interference repercussions

§11.2.3: Antennas, Towers & Associated Equipment

- A. Building Code Requirements – defer to permitting
- B. Alternative Location Options
 - 1. Locating Alternatives Order – a. Concealed attached
 - 2. Locating Alternatives on Attached/Collocated/Combined (a – d) – N/A
 - 3. Locating Alternatives for Mitigation/Freestanding towers (d – f) – N/A
- C. Facility Use Regulations – Level II

§11.2.4: Level I Permit – N/A

§11.2.5: Level II Permit

- A. Application Requirements - provided
- B. Co-location & Combination – N/A
- C. Concealed & Non-concealed Attachment
 - 1. Antenna not more than 20 feet above existing structure – complies
 - 2. Non-concealed attachments – N/A
 - 3. Nonconforming structure setback – N/A
 - 4. Feedlines and antennas shall architecturally match - complies
- D. Antenna Element Replacement- N/A
- E. Minimum Mitigation Accomplishments – N/A
- F. Mitigation Requirements – N/A
- G. Concealed Towers – N/A

§11.2.6: Level III Permit – N/A

§11.2.7: Level IV Permit – N/A

§11.2.8: Application Requirements

- A. Collocation/Attachment Requirements
 - 1. Authorization of owner – lease provided
 - 2. Compliance with ANSI standards – complies
 - 3. Structural certification – complies
 - 4. Survey – N/A
 - 5. Interference protection – statement provided (see §11.2.2.C.2)
- B. Mitigation & New Level II & III Towers – N/A
- C. New Level IV Towers – N/A

Site Justification and Coverage

For a new wireless communications facility to be justified, its need, location and height must be addressed. The application proposes to construct a new rooftop facility at Jones Hall, a three-story residential building on the campus of Campbell University, *see Appendix, Exhibit A*.

The proposal is a small cell facility. *Small cell* is a classification where the facility is only intended to provide service over a range of hundreds of meters, not miles like a macrocell. Small cells typically use lower powered equipment and smaller antennas at a lower elevation.

The term DAS is a method of deployment and typically only applicable for small cells. North Carolina State Law (HB310) has further definitions for small cells, specifically regarding size of the installation. Specifically, a small wireless facility cannot exceed a cumulative volume of 28 cubic feet. The proposal meets these requirements.

The Applicant provided coverage maps showing the improvement but did not submit a search ring. CityScape does not believe a search ring is necessary in the case of a small cell. The target site location for a small cell is very small and not always dictated by a search ring.

Structural Analysis

The Applicant provided a letter, signed by an NC professional engineer, stating the rooftop sled mounts will not exceed their structural capacity when the antennas and faux chimney are attached.


Concealment

The Applicant provided two different concealment options and the University chose a “faux chimney” option, *see Appendix, Exhibit D*. This will hide the antennas behind a structure that looks like a chimney but is made of a material that will permit the antennas to operate.

In conclusion, it is the opinion of the undersigned that the Applicant has justified the need for a new rooftop facility at the proposed location and has complied with State and Federal guidelines for personal wireless facility deployment. CityScape Consultants, as the wireless expert for the County, recommends the application be approved.

I certify to the best of my knowledge all information included herein is accurate at the time of this report. CityScape is employed by local governments, has unbiased opinions and reviews all applications based on technical merits without prejudice and per prevailing laws and codes.

Respectfully submitted,



Jonathan N. Edwards, P.E.
CityScape Consultants, Inc.

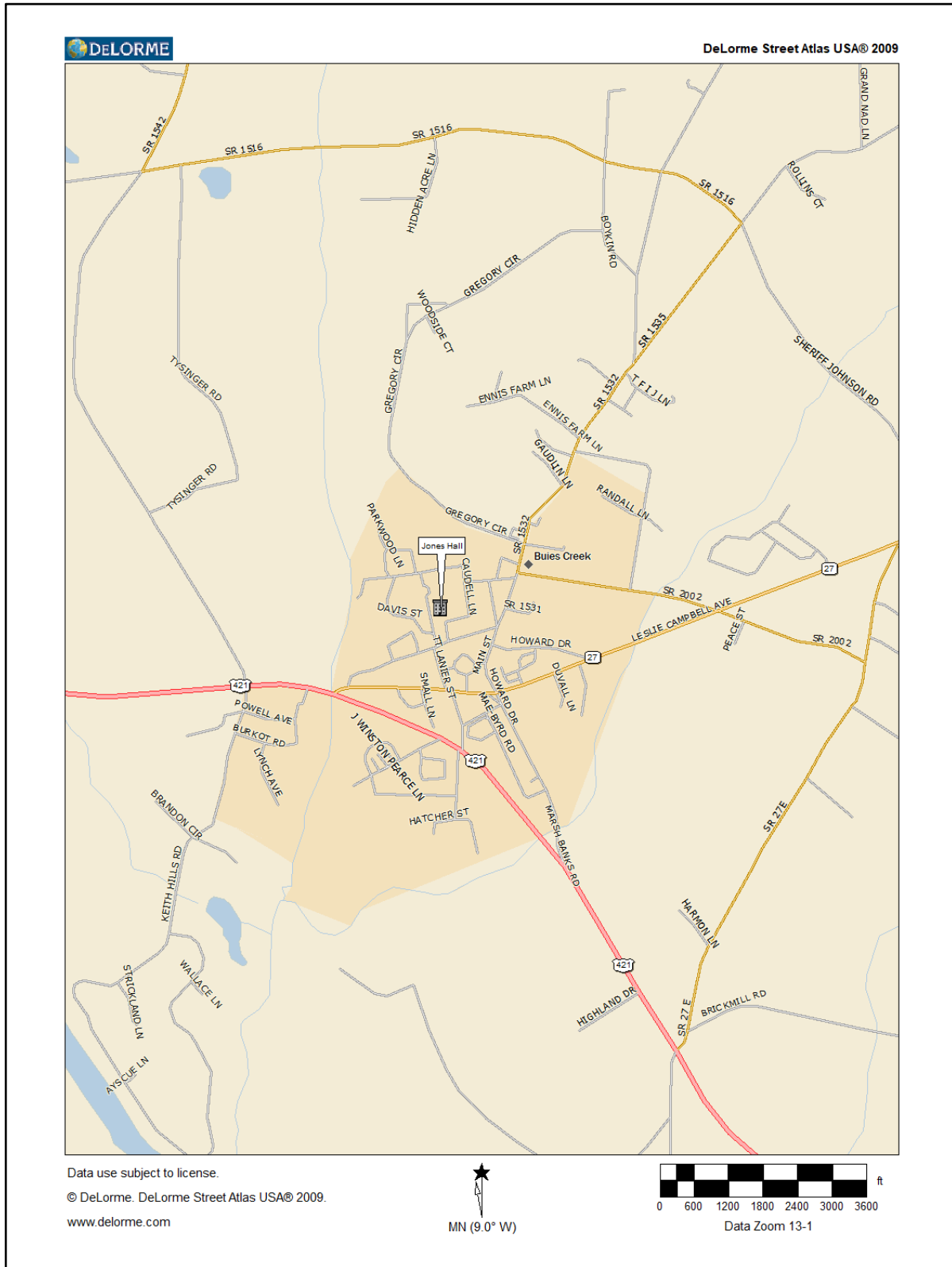


Figure 1 – Site Location

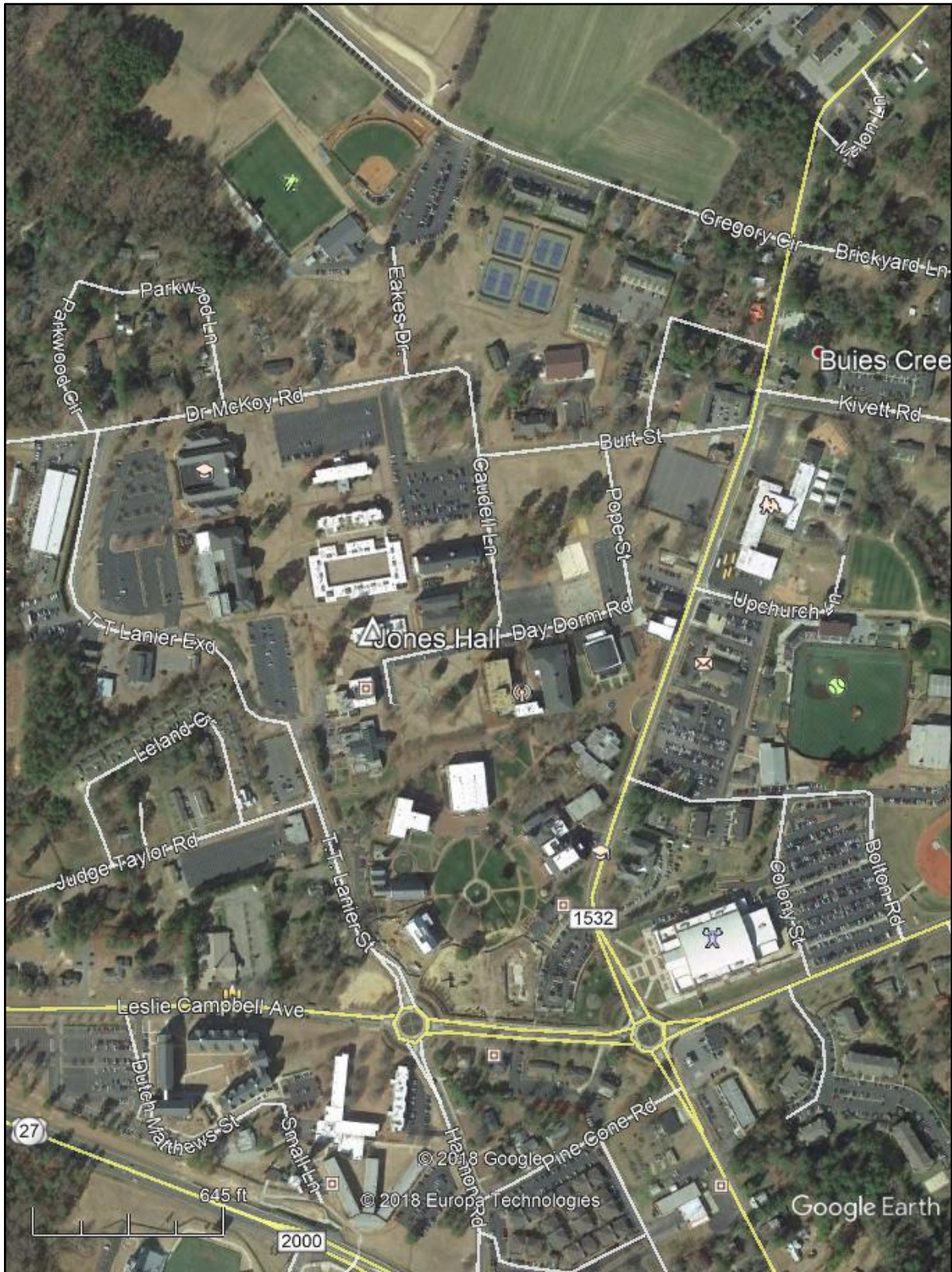


Figure 2 – Aerial Site View

Appendix

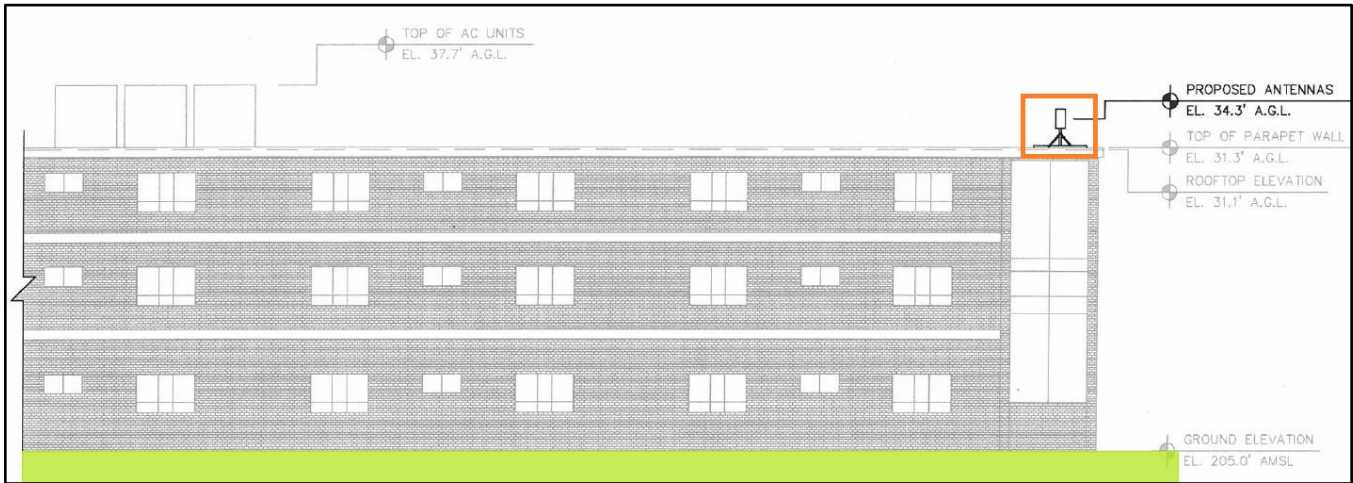


Exhibit A – Existing Building

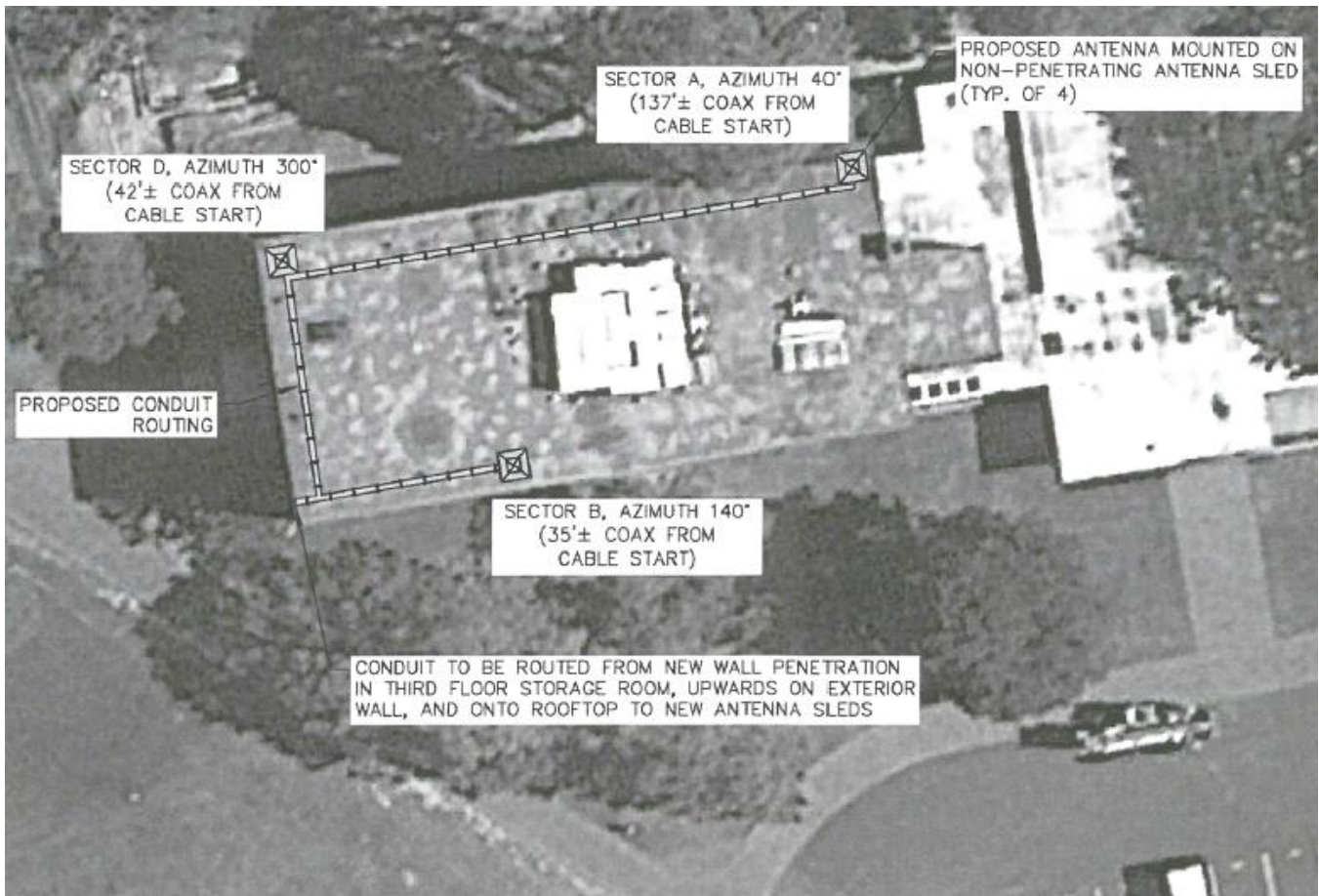


Exhibit B – Rooftop Equipment Layout

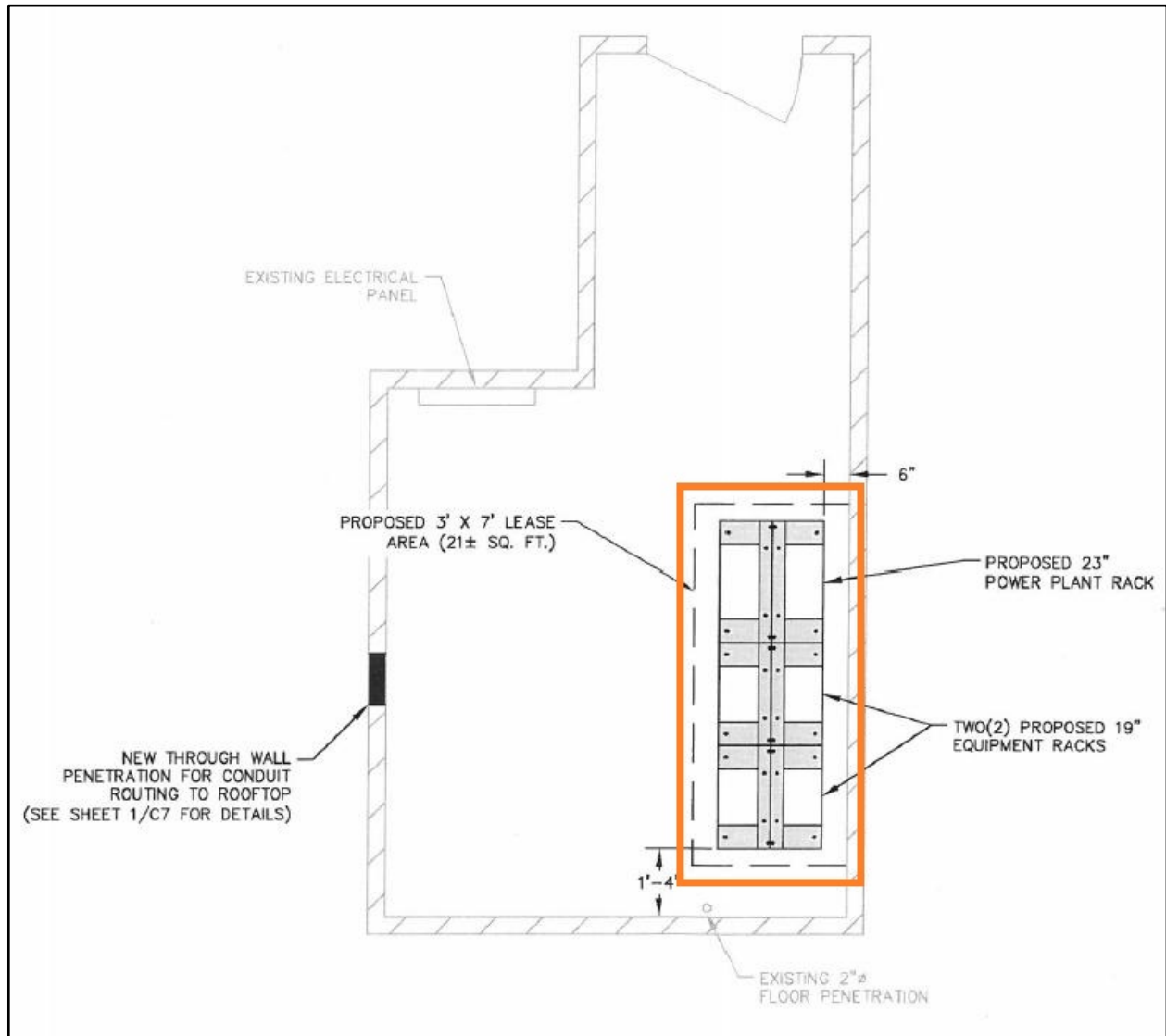


Exhibit C – 3rd Floor Equipment Room (Ground Compound)



Exhibit D – Faux Chimney Example