CITY OF ST. PETERSBURG, FLORIDA

PLANNING AND DEVELOPMENT SERVICES DEPARTMENT

URBAN PLANNING AND HISTORIC PRESERVATION DIVISION

STAFF REPORT

Community Planning and Preservation Commission
Certificate of Appropriateness Request

Report to the Community Planning and Preservation Commission from the Urban Planning and Historic Preservation Division, Planning and Development Services Department, for Public Hearing and Executive Action scheduled for **Tuesday, February 8, 2022, beginning at 2:00 p.m.**, in Council Chambers of City Hall, 175 Fifth St. N., St. Petersburg, Florida. Everyone is encouraged to view the meetings on TV or online at https://www.stpete.org/connect_with_us/stpete_tv.php.

According to Planning & Development Services Department records, no Commission member or his or her spouse has a direct or indirect ownership interest in real property located within 2,000 linear feet of real property contained with the application (measured in a straight line between the nearest points on the property lines). All other possible conflicts should be declared upon the announcement of the item.

Case No.:	**21-90200128**
Address:	Right-of-way in front of 2754 3rd Ave N
Local Landmark:	Kenwood Section – Southwest Central Kenwood Local Historic District (19-90300002)
Owner:	City of St. Petersburg
Agent:	Zayo Group LLC
Request:	Review of a Certificate of Appropriateness for the installation of a 41-foot-tall pole for small wireless facility in the right-of-way in front of 2754 3rd Ave. N., a contributing property to a local historic district
Zoning:	Neighborhood Traditional-2 (NT-2)

Historical Context and Significance

The area under review was designated as a local historic district in 2021 as the Kenwood Section – Southwest Central Kenwood Local Historic District. The area was determined to have a vast majority of contributing resources constructed between 1917 and 1958. Although the architectural identity of the district is most visibly tied to the Craftsman-style bungalow, contributing resources also can be found which exhibit the Minimal Traditional, Tudor Revival, and Mid-Century styles, among others that were fashionable during the Period of Significance. The staff report noted that the district is visibly united by a cohesive rhythm of early twentieth century residences and has retained a number of historic landscape features, such as brick streets, granite curbs, hexagonal concrete block sidewalks, and mature street trees.

Staff described the overall neighborhood design reflecting "both the growing importance of automobiles, which were prevalent enough that homes were commonly constructed with garages, and the retention of the traditional urban housing form, which placed front porches at 'conversation distance' from sidewalks and, therefore, friendly interactions with neighbors, during the district's initial development in the 1920s." Constructed behind each avenue and street, rear alleyways served as the primary location for automobiles and for unsightly utilities, such as the garbage collection and electrical/telephone poles and wires. Over the years, any new utility-related equipment has been installed in these alleyways rather than avenues. This has helped to reinforce the pedestrian quality of the neighborhood, leaving the front parkways unobstructed. The exception has been the installation of streetlights, which provides safety for pedestrians and automobiles.

Figure 1: View of 2700 block of 3rd Avenue North.

The area where this COA is proposed is also located within the boundaries of the Kenwood Section: Southwest Central Local Historic District. Because the proposed location is within the boundaries of a local historic district, a Certificate of Appropriateness (COA) is required. Per the City's COA Matrix, new construction requires review by the Community Planning and Preservation Commission (CPPC).

Project Description and Review

Background

The applicant is proposing installation of a small wireless facility subject to review using the City's Historic and Archaeological Preservation Overlay (Section 16.30.070) and Article VIII. Use of Rights-of-Way for the Provision of Services: Design Standards for Small Wireless Facilities (Section 25-316). In 2017, the State of Florida Legislature adopted the Advanced Wireless Infrastructure Deployment Act ("Act") thereby amending Section 337.401 of Florida Statutes. The Act enabled wireless providers to place small wireless facilities in the public rights-of-way of any county, municipality, or barrier island community (more than 10,000 people). Although the Act pre-empted most local regulations, it gave local jurisdictions six-months to adopt non-discriminatory aesthetic design standards ("design standards").

On December 14, 2017, the St. Petersburg City Council adopted Ordinance 317-H creating City Code Section 25-316, which establishes design standards for small wireless facilities. The design standards include both general criteria and specific criteria when located within traditional zones. City Code Section 25-316 is attached in Appendix B.

Under general criteria, City Code Section 25-316(a)(15) states, "Small wireless facilities and accessory equipment shall meet all applicable historic preservation regulations required by the City's Historic and Archaeological Preservation Overlay Ordinance, including obtaining a certificate of appropriateness if necessary." The subject location is within the Historic Kenwood National Register District and Kenwood Section: Southwest Central Local Historic District; therefore, a Certificate of Appropriateness ("COA") is required.

Under specific criteria, the subject location is zoned NT-2 (Neighborhood Traditional), a traditional zoning category. City Code Section 25-316(b)(1) states, "To the greatest extent possible, the City prefers that new utility poles for small wireless facilities be constructed in alleys; however, upon a demonstration of need related to the provision of wireless services by the wireless provider…" alternative pedestrian level light poles that augment district design characteristics may be considered. During the adoption public hearing, City Council considered the alley criterion, discussed its relationship to historic districts, and the then approved, as written.

The CPPC shall consider this request by applying the criteria for the granting of a COA within the context of the broader design standards outlined in City Code Section 25-316.

Project Description

The COA application (Appendix A) proposes the following work:

- Installation of a wood pole with wireless equipment. Total pole height will be 38 feet above grade level, the proposed panel antenna will stack on top of the pole extending to an overall height of 41 feet above grade level. Everything will be painted grey.

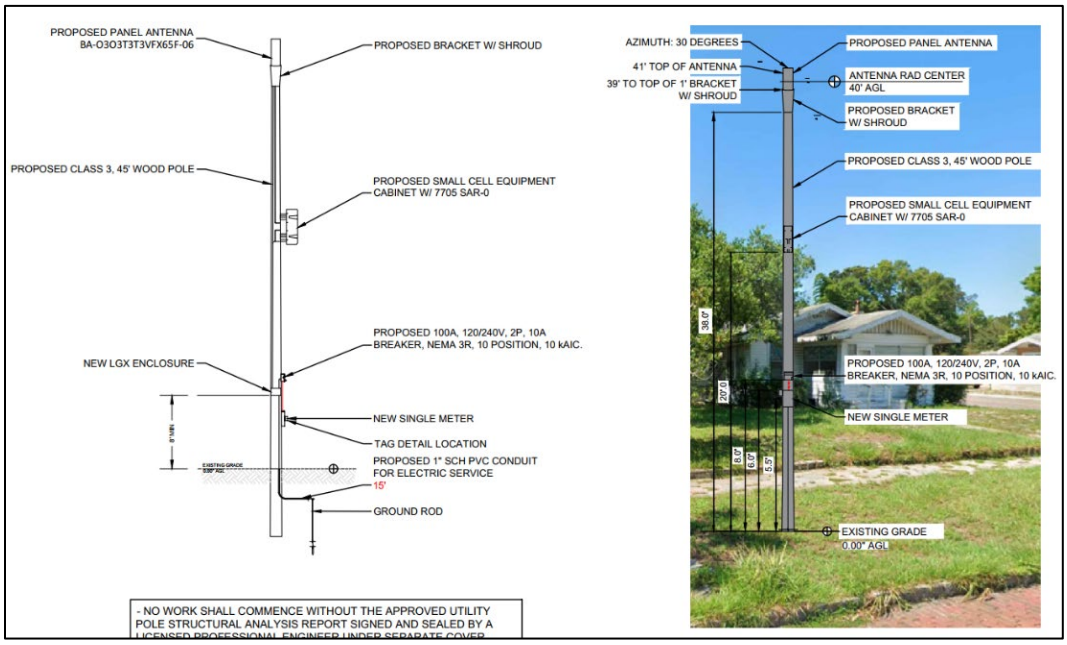


Figure 2: Proposed pole design from the plans in the application. Photo not to scale, as actual pole height is not proportion to house pictured in the background.

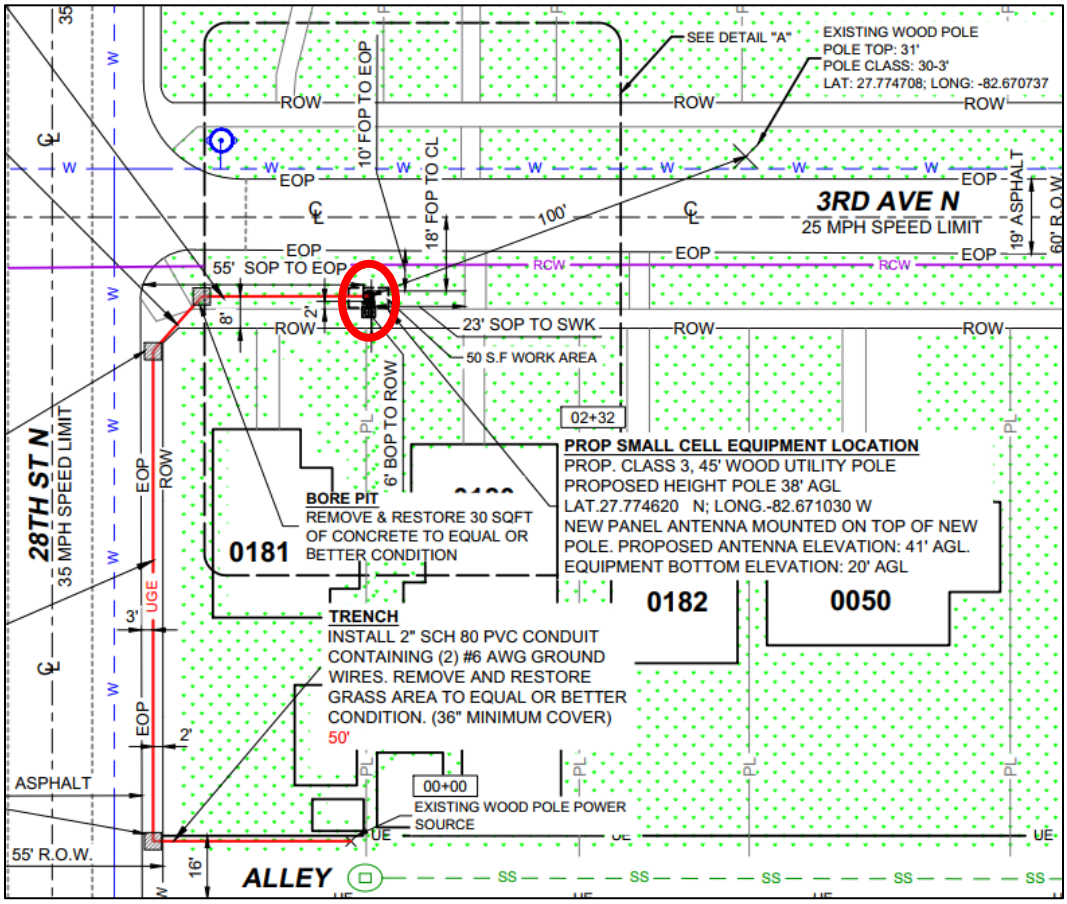


Figure 3: Proposed site plan. Proposed location of the pole is circled in red.

General Criteria for Granting Certificates of Appropriateness and Staff Findings

1. *The effect of the proposed work on the landmark or the property upon which such work is to be done.*

   Inconsistent The proposal will install a tall pole for utility purposes in the front of contributing resources in the local historic district. This is contrary to how utilities have always been placed in the rear alleyways and not in the parkways in the avenues. The project would be precedent setting and would diminish the pedestrian-focused character of the neighborhood.

2. *The relationship between such work and other structures on the landmark site or other property in the historic district.*

   Inconsistent The proposal will install a utility pole in the front of contributing resources in the parkway area that has traditionally been undeveloped open space, negatively impacting the historic district.

3. *The extent to which the historic, architectural, or archaeological significance, architectural style, design, arrangement, texture and materials of the local landmark or the property will be affected.*

   Inconsistent The proposal would alter the design intent of the neighborhood, where utilities are primarily located in the rear alleyways. The pole and associated equipment would create a visual intrusion contrary to the character of the local historic district.

4. *Whether the denial of a Certificate of Appropriateness would deprive the property owner of reasonable beneficial use of his or her property.*

   Not applicable The owner of the property is the City of St. Petersburg.

5. *Whether the plans may be reasonably carried out by the applicant.*

   Consistent The proposed project appears to be appropriate under this criterion.

6. *A COA for a noncontributing structure in a historic district shall be reviewed to determine whether the proposed work would negatively impact a contributing structure or the historic integrity of the district. Approval of a COA shall include any conditions necessary to mitigate or eliminate negative impacts.*

   Inconsistent The installation of a pole that provides utility services in the right-of-way in front of a house is contrary to the intended design of the local historic district. The front avenues were intended to be open space, leaving the houses to be unobstructed to the street. Instead, rear alleyways were the primary location for all utilities. This proposal would negatively impact the historic integrity of the district.

Additional Guidelines for Alterations

1. *A local landmark should be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.*

   Inconsistent The proposal would install a new use in the front right-of-way to serve small cell wireless facilities. Utilities, such as telephone lines and electrical wires, have

traditionally been placed in the rear alleyways and not in the front rights-of-way of the avenues. This proposal would change the defining characteristics of the local historic district, where the front yards and parkways have remained undeveloped and unobstructed.

2. *The distinguishing historic qualities or character of a building, structure, or site and its environment shall be preserved. The removal or alteration of any historic material or distinctive architectural features shall be avoided when reasonable.*

   Inconsistent The proposal would negatively impact the character of the historic district.

3. *Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings without sufficient documentary evidence, shall not be undertaken.*

   Not Applicable

4. *Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved, as appropriate.*

   Not Applicable

5. *Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a property shall be preserved.*

   Inconsistent The proposed installation of a pole with equipment in an area that has traditionally remained open without visual intrusions would negatively affect the character of the local historic district.

6. *Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, texture, and other visual qualities and, where reasonable, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.*

   Not Applicable The application does not include the removal of deteriorated historic features.

7. *Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.*

   Not applicable No indication that harsh treatment will be used.

8. *Significant archaeological resources affected by a project shall be protected and preserved if designated pursuant to this section. If such resources must be disturbed, mitigation measures shall be undertaken.*

   Consistent This property is not located in an archaeological area.

Additional Guidelines for New Construction

In approving or denying applications for a COA for new construction (which includes additions to an existing structure), the Commission and the POD shall also use the following additional guidelines.

1. *The height and scale of the proposed new construction shall be visually compatible with contributing resources in the district.*

   Inconsistent The height of the proposed pole will be significantly taller than any of the contributing resources on the block, which are all single-family residences. The proposed pole will be fifteen feet taller than the streetlights that are in the front right-of-way and will not be visually compatible with contributing resources in the district.

2. *The relationship of the width of the new construction to the height of the front elevation shall be visually compatible with contributing resources in the district.*

   Not Applicable

3. *The relationship of the width of the windows to the height of the windows in the new construction shall be visually compatible with contributing resources in the district.*

   Not Applicable

4. *The relationship of solids and voids (which is the pattern or rhythm created by wall recesses, projections, and openings) in the front facade of a building shall be visually compatible with contributing resources in the district.*

   Not Applicable

5. *The relationship of the new construction to open space between it and adjoining buildings shall be visually compatible with contributing resources in the district.*

   Inconsistent The project proposes the installation of a utility pole in an area that traditionally has always been open space. The only utility poles installed in the parkway of avenues have been for safety reasons (streetlights). The installation of a utility pole with small cell wireless equipment is not visually compatible with contributing resources in the district. This type of utility should be relegated to the rear alleyways, where utilities are already installed.

6. *The relationship of the entrance and porch projections, and balconies to sidewalks of the new construction shall be visually compatible with contributing resources in the district.*

   Not applicable

7. *The relationship of the materials and texture of the facade of the new construction shall be visually compatible with the predominant materials used in contributing resources in the district.*

   Not Applicable

8. *The roof shape of the new construction shall be visually compatible with contributing resources in the district.*

   Not Applicable

9. *Appurtenances of the new construction such as walls, gates and fences, vegetation and landscape features, shall, if necessary, form cohesive walls of enclosures along a street, to ensure visual compatibility of the new construction with contributing resources in the district.*

   Not Applicable

10. *The mass of the new construction in relation to open spaces, the windows, door openings, porches and balconies shall be visually compatible with contributing resources in the district.*

    Not Applicable

11. *The new construction shall be visually compatible with contributing resources in the district in its orientation, flow, and directional character, whether this is the vertical, horizontal, or static character.*

    Inconsistent It is not traditional for utilities to be installed in the avenues in front of contributing resources in the district unless for safety reasons (streetlights).

12. *New construction shall not destroy historic materials that characterize the local landmark or contributing property to a local landmark district. The new construction shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the local landmark and its environment, or the local landmark district.*

    Inconsistent The proposed project is not compatible with the architectural features of the local landmark district. The neighborhood was designed to have open front areas between the houses and the street, with utilities located in the rear alleyways as much as possible. The only utilities installed in the front parkways of avenues are streetlights that are needed for safety. The installation of new utility type would negatively impact the historic integrity of the district.

13. *New construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the local landmark and its environment would be unimpaired.*

    Consistent The proposed pole could be removed without impacting contributing resources in the local historic district.

Other Miscellaneous Findings Pursuant to Section 25-316

Sec. 25-316. Design standards for small wireless facilities.

(a) Design standards—General. Small wireless facilities and accessory equipment placed anywhere in the City right-of-way are subject to the following design guidelines:

(1) *Small wireless facilities may not extend more than ten feet above the utility pole upon which it is mounted.*

The proposed antenna appears to extend no more than three (3) feet above the proposed pole for total proposed height of 41-feet above grade level.

(2) A new pole is limited to the height of the tallest existing utility pole, as of July 1, 2017, located in the same right-of-way and within 500 feet of the proposed new pole. If there is no existing pole within 500 feet of the new pole site, the new pole is limited to 50 feet.

The 3rd Avenue North public right-of-way includes one (1) streetlight pole, on the north side of the avenue approximately 100-feet to the east. The applicant noted an adjacent pole height of 31-feet; however, an approximate field measurement by historic preservation staff yielded an estimated pole height of only 26-feet.

(3) Above ground facilities must be located within the right-of-way where the shared property line between two parcels intersects the right-of-way boundary, or otherwise in a manner that demonstrates the least impact to access to private property. (See alley provision in next subsection.)

The plan drawings show no ground-mounted equipment.

(5) Equipment mounted to the exterior of a pole shall be a minimum of eight feet above finished grade, excluding the electric meter and disconnect switch. The external finish of the equipment cases shall generally match the color of the pole. All mounting and banding fixtures shall also match the color of the pole. Conduits mounted to an existing pole must match the pole color and be encased with a shroud cover.

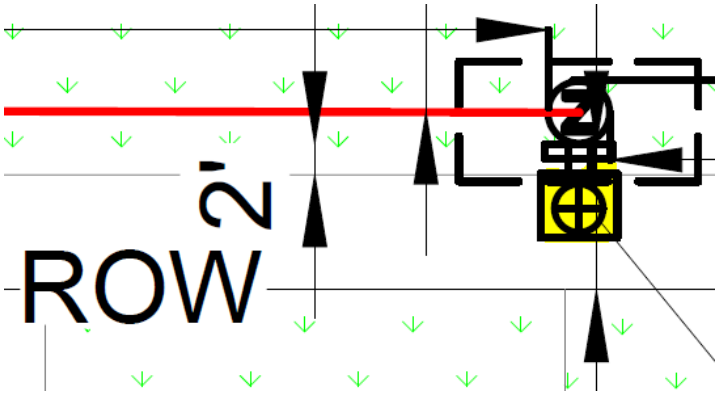
Detail notes within the plan drawings indicate that exterior mounted equipment will comply with the minimum height and color (gray is proposed) requirements.

(6) New poles shall be located at or near roadway intersections or in alleys when possible. When mid-block locations are necessary, new poles shall be located near the property boundary line at the edge of the site or otherwise sited in a manner that demonstrates the least impact to access to private property.

Exclusive of the alley provision, the applicant is proposing to locate where the shared property line between two (2) parcels extends through the public right-of-way. Further, the location one parcel in from the nearby intersection maintains unobstructed views across the four (4) corners.

(10) Facilities shall not block or encroach into an existing or future public sidewalk paths as required in the City's Land Development Regulations.

Illustrated details within the plan drawings appear to show proper clearance from and above the nearby sidewalk and street; however, the site plan sheet C-2 requires clarification from the applicant.



Site Plan Sheet C-2

(b) Design standards—Traditional zones, downtown center zones, and charter parks. Small wireless facilities and accessory equipment placed in the City right-of-way in an NT, CRT, CCT, or DC zone, or in a charter park, are subject to the following design guidelines, in addition to the general guidelines set forth above:

(1) To the greatest extent possible, the City prefers that new utility poles for small wireless facilities be constructed in alleys. However, upon a demonstration of need related to the provision of wireless services by the wireless provider, introduction of pedestrian level light poles which augment district design characteristics and accommodate small wireless facilities may be considered within the right-of-way and at intersections.

The applicant has provided little information to support a "demonstration of need" cited by this standard. A copy of the applicant's "determination of need" is included in Appendix A.

(2) The POD may consider the granting of a waiver to the height restrictions of this section in an effort to accommodate the placement of a small wireless facility, including a new utility pole, in an alley.

This standard was added during authorship of the adopted Ordinance 317-H. Following negotiations with wireless providers, a height waiver was added to accommodate situations requiring alley locations.

(3) Any request by an applicant to construct a new utility pole in City right-of-way that is not an alley may be subject to the alternative location negotiation procedure, in accordance with Section 25-308(c)(3) of the City Code.

Summary of Findings, Certificate of Appropriateness Review

Staff evaluation yields a finding of the following criteria being met by the proposed project:

- General Criteria for Granting Certificates of Appropriateness: 4 of 5 relevant criteria **not** met.
- Additional Guidelines for Alteration: 3 of 4 relevant criteria **not** met.
- Additional Guidelines for New Construction: 4 of 5 relevant criteria **not** met.

Staff Recommendation

Based on a determination of general inconsistency with Chapter 16, City Code of Ordinances, staff recommends that the Community Planning and Preservation Commission **deny** the Certificate of Appropriateness request for the installation of a pole in the right of way *in front of* 2754 3rd Ave. N., a contributing property to the Kenwood Section – Southwest Central Kenwood Local Historic District.

Appendix A:

Application No. 21-90200128

st.petersburg
www.stpete.org

CERTIFICATE OF APPROPRIATENESS

APPLICATION

All applications are to be filled out completely and correctly. The application shall be submitted to the City of St. Petersburg's Planning and Development Services Department, located on the 8th floor of the Municipal Services Building, One Fourth Street North, St. Petersburg, Florida. Laura Duvekot, Historic Preservationist II, (727) 892-5451 or Laura.Duvekot@stpete.org

GENERAL INFORMATION

2754 3RD AVE NORTH, ST. PETERSBURG, 33713, USA Property Address	23-31-16-35082-010-0181 Parcel Identification No.
THE KENWOOD NATIONAL HISTORIC DISTRICT Historic District / Landmark Name	 Corresponding Permit Nos.
Zayo Group LLC Owner's Name	614-282-9388 Property Owner's Daytime Phone No.
12855 SW 132 Street Owner's Address, City, State, Zip Code	jenni.mcfarland@genxcgroup.com Owner's Email
Jenni McFarland Authorized Representative (Name & Title), if applicable	786-380-2377 Representative's Daytime Phone No.
GenXC Group Representative's Address, City, State, Zip Code	permitting@genxcgroup.com Representative's Email

	APPLICATION TYPE (Check applicable)		
	Addition		Window Replacement
✔	New Construction		Door Replacement
	Demolition		Roof Replacement
	Relocation		Mechanical (e.g. solar)
	Other:		

	TYPE OF WORK (Check applicable)	
	Repair Only	
	In-Kind Replacement	
✔	New Installation	Small wood pole
	Other:	

AUTHORIZATION

By signing this application, the applicant affirms that all information contained within this application packet has been read and that the information on this application represents an accurate description of the proposed work. The applicant certifies that the project described in this application, as detailed by the plans and specifications enclosed, will be constructed in exact accordance with aforesaid plans and specifications. Further, the applicant agrees to conform to all conditions of approval. It is understood that approval of this application by the Community Planning and Preservation Commission in no way constitutes approval of a building permit or other required City permit approvals. Filing an application does not guarantee approval.

NOTES: 1) It is incumbent upon the applicant to submit correct information. Any misleading, deceptive, incomplete or incorrect information may invalidate your approval.
2) To accept an agent's signature, a notarized letter of authorization from the property owner must accompany the application.

Signature of Owner: Israel Lopez *Israel Lopez* Date: 10/22/2021

Signature of Representative: Israel Lopez *Israel Lopez* Date: 10/22/2021

CERTIFICATE OF APPROPRIATENESS

APPLICATION

COA #

All applications are to be filled out completely and correctly. The application shall be submitted to the City of St. Petersburg's Planning and Development Services Department by emailing directly to Historic Preservationists Laura Duvekot (Laura.Duvekot@stpete.org) or Kelly Perkins (Kelly.Perkins@stpete.org).

PROPOSED SCOPE OF WORK

Please provide a detailed description of the proposed work, organized according to the COA Matrix. Include information such as materials, location, square footage, etc. as applicable. Attach supplementary material as needed.

Building or Site Feature	Photo No.	Proposed Work
		The project is going to install new wood pole for small wireless facility. The installation includes: (1) new antenna at top of pole with shroud, (1) new radio shroud, (1) new single meter. Conduit with conductors and coaxial cabling will be installed on the pole, all beneath u-guard. All equipment and pole will be painted to gray color.

GLOBAL HQ
1821 30th Street, Unit A
Boulder, CO 80301 USA
www.zayo.com
@ZayoGroup

June 15, 2021 Via Electronic Delivery

Martha Hegenbarth, City Engineering Clerk
City of St. Petersburg
Martha.Hegenbarth@stpete.org

RE: Small Cell Permit Application – Site No. TP2577BA_11LAB

Dear Ms. Hegenbarth:

I am writing on behalf of Zayo Group, LLC ("Zayo"). Zayo is a leading global bandwidth and connectivity infrastructure provider, which has operated in the State of Florida since 2013 as a Provider of Local Telecommunications Service under Florida PSC Docket No. 120321-TX.

In St. Petersburg, Zayo plans to provide communications services by deploying small wireless facilities in the public rights-of-way. Section 25-316(b)(1) of the St. Petersburg City Code provides that "[n]ew utility poles for small wireless facilities shall be constructed in alleys."

Specifically regarding our small cell permit application for site no. TP2577BA_11LAB, our proposed site location is near 2754 3rd Ave N, St. Petersburg, FL 33713.[1] In this area, it is not technically feasible to place our facility in the nearby alley due to the proximity of existing power lines on one side of the alley. If we were to place our facility on the other side of the alley, it would impede traffic. As such, it is physically impossible for Zayo to comply with section 15-316(b)(1). Moreover, changing the proposed location for this site would have an adverse impact on our ability to provide critical telecommunications services.

Given the above, we respectfully request a waiver of this locational requirement. Based upon our research and review, our proposed installation meets and/or exceeds all other applicable standards and requirements in the City Code. We only need a waiver to the alley locational requirement.

Granting Zayo's waiver request would serve the public interest by accommodating the delivery of critical telecommunications infrastructure for a major wireless provider, which will rapidly accelerate the availability of reliable network coverage in the given area. Now more than ever, it is imperative that Zayo is able to rapidly and efficiently deploy our mission critical infrastructure. In the ongoing COVID-19 pandemic, improved coverage and bandwidth is of paramount concern.

Zayo respectfully requests that the City grant our waiver request and allow the installation as proposed. Thank you in advance for your time and assistance with our critical telecommunications deployment. Of course, if you have any questions or would like to discuss further, please feel free to contact me either by phone at (813) 493-1522 or by email at gillian.leytham@zayo.com.

Sincerely,

Gillian Leytham

Gillian N. Leytham, Esq.
Senior Director, Underlying Rights & Government Relations
Zayo Group, LLC

[1] The GPS coordinates are 27.77462, -82.67103.

TMO SITE ID #: TP2577BA_11LAB

ADDRESS:	2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA
POLE OWNER:	ZAYO GROUP, LLC
SITE TYPE:	SMALL CELL PROPOSED WOOD UTILITY POLE
POLE TYPE:	PROPOSED WOOD UTILITY POLE
PROJECT DESCRIPTION:	INSTALL NEW WOOD POLE FOR SMALL WIRELESS FACILITY. INSTALLATION INCLUDES: (1) NEW ANTENNA AT TOP OF POLE WITH SHROUD, (1) NEW RADIO SHROUD, (1) NEW SINGLE METER. CONDUIT WITH CONDUCTORS AND COAXIAL CABLING WILL BE INSTALLED ON THE POLE, ALL BENEATH U-GUARD. ALL EQUIPMENT AND POLE WILL BE PAINTED TO GRAY COLOR.

PROPERTY INFORMATION:

POLE OWNER:	ZAYO GROUP, LLC
SITE COORDINATES:	27.774620 -82.671030
JURISDICTION:	CITY OF ST. PETERSBURG
APPLICANT/LESSEE: ADDRESS:	ZAYO GROUP, LLC 1831 30TH STREET, UNIT A BOULDER, CO 80301 (866) 364 6033
POWER COMPANY:	DUKE ENERGY CUSTOMER SERVICE (800) 228 8485
ZONING DISTRICT:	NT-2 NEIGHBORHOOD TRADITIONAL SINGLE-FAMILY
COMMUNITY PLANNING:	N/A

ENGINEERING TEAM

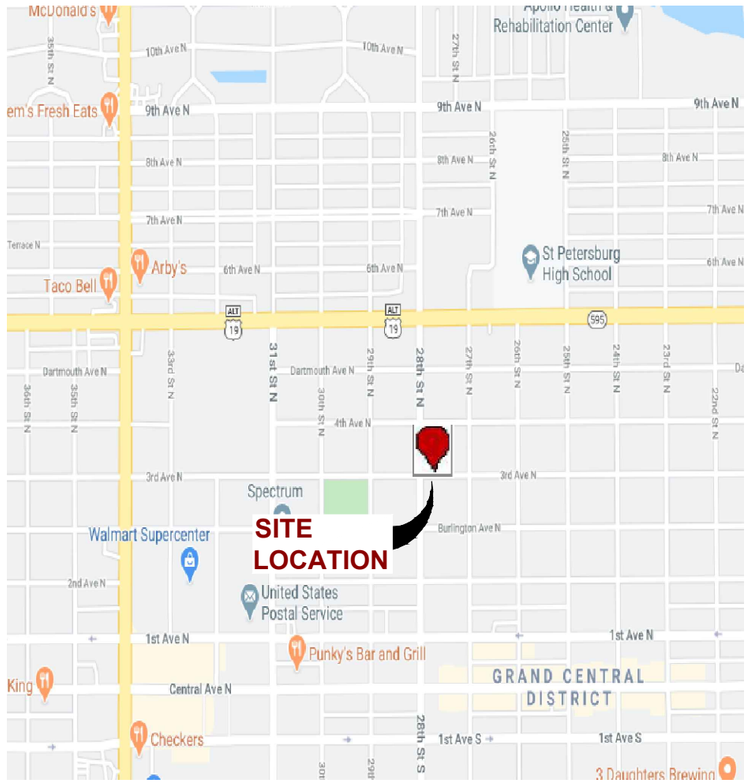
ENGINEERING FIRM:	GENXC
ADDRESS:	12855 SW 132ND ST SUITE 107 MIAMI, FL 33186
CONTACT: PHONE:	ISRAEL LOPEZ (888)-884-3692, EXT. 800

STRUCTURAL & FIRE PROTECTION DESIGN CRITERIA:

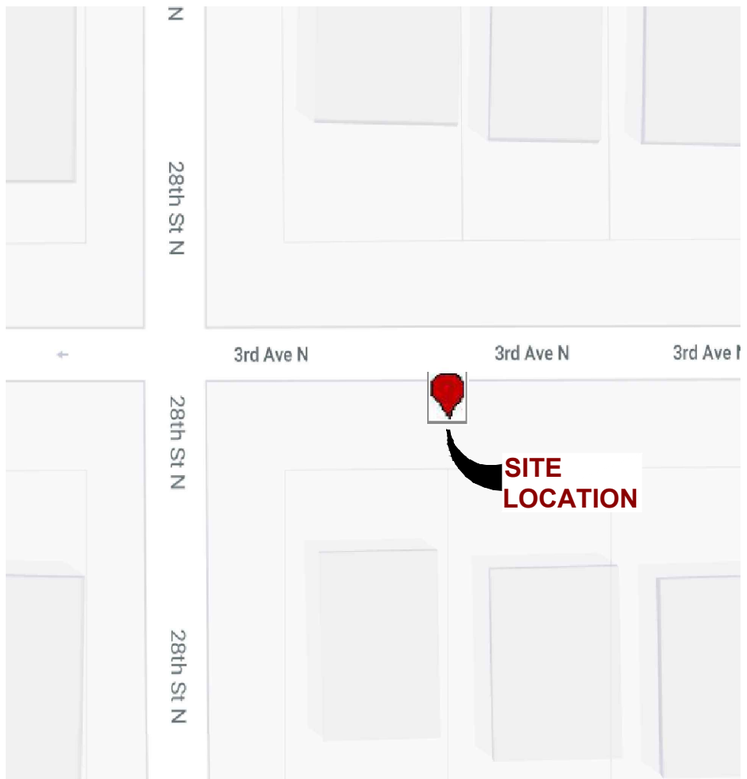
1. FLORIDA BUILDING CODE, 6TH EDITION, 2017 (2015 IBC w/ ASCE 7-10) AND TIA-222-G.
   A. ULTIMATE WIND SPEED: 140MPH, 3 SEC, GUST.
   B. RISK CATEGORY II.
   C. WIND EXPOSURE C.
2. DEAD LOAD.
   A. EQUIPMENT WEIGHT PER MANUFACTURE DATA
3. SEISMIC LOAD DOES NOT GOVERN THIS DESIGN.
4. NATIONAL ELECTRICAL CODE NFPA-70 (2014)
5. CITY AND/OR COUNTY ORDINANCES.

NOTE

THIS SITE IS CONTAINED WITHIN THE KENWOOD NATIONAL HISTORIC DISTRICT.



VICINITY MAP



LOCAL MAP

DRIVING DIRECTIONS:

HEAD TOWARD W JOHN F KENNEDY BLVD.TURN RIGHT ONTO W JOHN F KENNEDY BLVD (SR-60). MAKE A U-TURN AT S TRASK ST ONTO W JOHN F KENNEDY BLVD (SR-60). TURN LEFT ONTO W JOHN F KENNEDY BLVDTOWARD KENNEDY BLVD/ST PETERSBURG/I-275 S.TAKE RAMP ONTO I-275 S (SR-93).TAKE EXIT 23B TOWARD SR-595 W ONTO US-19-ALT (5TH AVE N). TURN LEFT ONTO 28TH ST N (CR-681).TURN LEFT ONTO 3RD AVE N.ARRIVE AT 3RD AVE N. YOUR DESTINATION IS ON THE RIGHT.

CONSTRUCTION PERMIT APPLICATIONS:

ALL REQUIRED ATTACHMENTS AND DATED DRAWINGS SHOWING THE LOCATION AND AREA OF THE PROPOSED PROJECT AND THE LOCATION OF ALL EXISTING AND PROPOSED FACILITIES, ACCOMPANIED BY THE CERTIFICATION OF A REGISTERED PROFESSIONAL ENGINEER THAT THE DRAWINGS, PLANS AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION COMPLY WITH APPLICABLE TECHNICAL CODES, RULES AND REGULATIONS:

- CITY OF ST. PETERSBURG ENGINEERING DESIGN STANDARD AND SPECIFICATIONS
- FDOT UTILITY ACCOMMODATION MANUAL
- FDOT ROADWAY DESIGN STANDARDS
- FLORIDA STATUTES

DESIGN STANDARDS:

PER CITY CODE 25-316, TO MINIMIZE VISUAL IMPACT, PROPOSED POLE MATCHES HEIGHT REQUIREMENTS OF HB687, THE WOODEN POLE MATCHES THE PREDOMINANT POLE TYPE IN THE AREA, ALL EQUIPMENT, MOUNTING AND BANDING FIXTURES MATCH THE POLE COLOR (GRAY), AND ALL WIRING/FIBER/ETC. MOUNTED TO THE POLE SHALL BE ENCASED WITHIN CONDUIT AND COVERED WITH A SHROUD COVER. FOR CONCRETE AND METAL POLES ALL CONDUITS AND WIRING ARE INTERNAL.

CONSTRUCTION SCHEDULE:

THE INSTALLATION WILL BE WITHIN A YEAR OF THE PERMIT ISSUANCE DATE. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING CONSTRUCTION INSPECTION DIVISION A MINIMUM OF 48 HOURS PRIOR TO INITIATING CONSTRUCTION BY PHONING 727-893-7130.

DRAWING INDEX

SMALL WIRELESS FACILITIES NOTES.

1. THE PROPOSED FACILITIES TO BE CONSTRUCTED WILL NOT MATERIALLY INTERFERE WITH THE SAFE OPERATION OF TRAFFIC CONTROL EQUIPMENT.
2. THE PROPOSED FACILITIES WILL NOT MATERIALLY INTERFERE WITH SIGHT LINES, CLEAR ZONES FOR TRANSPORTATION, PEDESTRIANS, OR PUBLIC SAFETY PURPOSES.
3. THE PROPOSED FACILITIES WILL NOT MATERIALLY INTERFERE WITH COMPLIANCE WITH AMERICANS WITH DISABILITIES ACT (ADA) OR SIMILAR FEDERAL OR STATE STANDARDS REGARDING PEDESTRIAN ACCESS OR MOVEMENT.
4. THE PROPOSED FACILITIES WILL BE FOR THE USE OF ZAYO GROUP, LLC ONLY.
5. ZAYO GROUP, LLC OWNED POLES FOR ANTENNAS AND EQUIPMENT TO BE INSTALLED ON THE POLES,WHICH INCLUDE: ANTENNA, RADIO EQUIPMENT, METER AND DISCONNECT. GROUND MOUNTED PEDESTAL IS NOT REQUIRED.
6. ZAYO GROUP, LLC SHALL BE RESPONSIBLE FOR MAINTENANCE FOR ALL INSTALLED EQUIPMENT INCLUDING: ANTENNA, RADIO EQUIPMENT, METER AND DISCONNECT.
7. THE FACILITY IS NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED.
8. SMALL CELL PLANS AND SPECIFICATIONS DEMONSTRATE COMPLIANCE WITH DESIGN STANDARDS TO BE UTILITIZED TO MINIMIZE THE VISUAL IMPACTS, IN ACCORDANCE WITH SECTION 25-316 OF THE CITY CODE.

CONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

811 Know what's below. Call before you dig.

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301
SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

TITLE SHEET

SHEET NUMBER

T-1

1 - GENERAL PROVISIONS

1.1 - CONTRACT OVERVIEW

1. THE INTENTION OF THE DOCUMENTS IS TO SHOW THE COMPLETE INSTALLATION AND TO INCLUDE ALL LABOR AND MATERIALS REASONABLY NECESSARY, WHETHER OR NOT SPECIFICALLY INDICATED, FOR THE PROPER EXECUTION AND COMPLETION OF THE WORK AS STIPULATED IN THE CONTRACT. THE INTENT OF THIS DOCUMENT IS NOT TO DESIGNATE THE MEANS AND METHODS OF PROCEDURE OF THE WORK. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES, SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES, STANDARDS AND SUPPLEMENTS:
   · FBC - FLORIDA BUILDING CODE 2017
   · NEC - NATIONAL ELECTRICAL CODE 2017
   · NESC - NATIONAL ELECTRICAL SAFETY CODE
   · AISC - AMERICAN INSTITUTE OF STEEL CONSTRUCTION SPECIFICATIONS
   · IEEE - INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
   · NEC - NATIONAL ELECTRICAL CODE
   · NEMA - NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
   · UL - UNDERWRITERS LABORATORIES
   · NSPC - NATIONAL STANDARD PLUMBING CODE
   · IMC - INTERNATIONAL MECHANICAL CODE
   · NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
   · OSHA - OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION
   · ADA - AMERICANS WITH DISABILITIES ACT
   · FDOT UAM - 2010 FOOT UTILITY ACCOMMODATION MANUAL
   · ANSI/TIA - AMERICAN NATIONAL STANDARDS INSTITUTE/TELECOMMUNICATIONS INDUSTRY ASSOCIATION - 222-G STANDARD
   · HIGH VELOCITY ZONE CRITERIA (FEMA)
   · SAFETY RULES FOR THE INSTALLATION AND MAINTENANCE OF ELECTRICAL SUPPLY AND COMMUNICATION LINES
   · PROVIDED BY THE DEPARTMENT OF COMMERCE, BUREAU OF STANDARDS OF THE UNITED STATES
   · ALL GOVERNING STATE, COUNTY AND LOCAL CODES AND ORDINANCES
   THE MOST STRINGENT CODE WILL APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
3. THE ENGINEERING DRAWINGS SHOW PRINCIPAL AREAS WHERE WORK MUST BE ACCOMPLISHED UNDER THIS CONTRACT.
   INCIDENTAL WORK MAY ALSO BE NECESSARY IN AREAS NOT SHOWN ON THE ENGINEERING DRAWINGS DUE TO CHANGES AFFECTING EXISTING ELECTRICAL OR OTHER SYSTEMS. SUCH INCIDENTAL WORK IS ALSO A PART OF THIS CONTRACT.
   INSPECT THOSE AREAS AND ASCERTAIN WHAT IS NEEDED TO DO THAT WORK IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
4. DO NOT SCALE DRAWINGS. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE.
5. MINOR DEVIATIONS FROM THE DESIGN LAYOUT ARE ANTICIPATED AND SHALL BE CONSIDERED AS PART OF THE WORK HOWEVER, NO CHANGE THAT ALTER THE CHARACTER INTENT OF THE DESIGN WILL BE MADE OR PERMITTED BY THE OWNER WITHOUT A CHANGE ORDER.
6. GENERAL CIVIL, STRUCTURAL, ELECTRICAL AND ANTENNA DRAWINGS ARE INTERRELATED. IN PERFORMANCE OF THE WORK,
   EACH CONTRACTOR MUST REFER TO ALL DRAWINGS. ALL COORDINATION SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
7. THE GENERAL NOTES CONTAINED HEREIN ARE PART OF THE PLANS AND SPECIFICATIONS, AND ARE TO BE COMPLIED WITH IN ALL RESPECTS. THE MOST RESTRICTIVE NOTES SPECIFIED ARE TO TAKE PRECEDENCE. CERTAIN SECTIONS OF THE GENERAL NOTES MAY NOT APPLY TO EVERY SITE. THE CONTRACTOR IS TO COMPLY WITH ALL APPLICABLE GENERAL NOTES IN ALL RESPECTS.
8. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENT TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
9. REPRESENTATION OF TRUE NORTH OTHER THAN THOSE FOUND ON THE PLOT OF THE SURVEY DRAWING SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF THE TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF THE SURVEY DRAWING AND ANY SURVEYOR'S MARKING AT THE SITE FOR THE ESTABLISHMENT OF THE TRUE NORTH, AND SHALL NOTIFY THE ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE CIVIL SURVEY. THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ENGINEER.
10. THE CONTRACTOR SHALL USE ADEQUATE NUMBERS OF SKILLED WORKMEN WHO ARE THOROUGHLY TRAINED AND EXPERIENCED IN THE NECESSARY CRAFTS, AND WHO ARE COMPLETELY FAMILIAR WITH THE SPECIFIED REQUIREMENTS AND METHODS NEEDED FOR PROPER PERFORMANCE OF THE WORK.
11. THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY, THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO INDEMNIFY AND HOLD THE DESIGN ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT.
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS SUCH AS OSHA COMPLIANCE DURING THE PROGRESS OF THE WORK. THE ENGINEER WILL NOT ADVISE NOR PROVIDE DIRECTION AS TO SAFETY PRECAUTIONS AND PROGRAMS.
13. THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY OF THE SECURITY OF THE SITE UNTIL COMPLETION OF THE CONSTRUCTION.
14. IT IS THE CONTRACTOR'S RESPONSIBILITY TO EXAMINE ALL PLAN SHEETS AND SPECIFICATIONS AND COORDINATE HIS WORK WITH THE WORK OF ALL OTHER CONTRACTORS TO ENSURE THAT WORK PROGRESSION IS NOT INTERRUPTED.
15. THE CONTRACTOR IS INSTRUCTED TO COOPERATE WITH ANY AND ALL OTHER CONTRACTORS PERFORMING WORK ON THIS JOB SITE DURING THE PERFORMANCE OF THIS CONTRACT TO AVOID DELAYS IN THE CONTRACT SCHEDULE OR OTHER WORK PERFORMED IN THE VICINITY OF THE CONSTRUCTION AREA.
16. THE CONTRACTOR SHALL SUBMIT A CONSTRUCTION SCHEDULE TO THE PROPERTY OWNER WELL IN ADVANCE OF THE STARTING DATE OF THE WORK. THE OWNER SHALL ALSO BE NOTIFIED OF A CHANGE IN THE CONSTRUCTION SCHEDULE.
17. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIRED PERMITS.
18. EACH CONTRACTOR IS RESPONSIBLE FOR PULLING THE BUILDING PERMIT AT THE LOCAL JURISDICTION AS THE CONTRACTOR OF RECORD, AND SHALL PROVIDE THE JURISDICTION WITH ALL PROOF REQUIRED TO OPERATE AS THE CONTRACTOR IN THIS JURISDICTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING, AND INCURRING THE COST OF ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATIONS, ETC. PRIOR TO BEGIN THE WORK.
19. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AMPLE NOTICE TO THE BUILDING INSPECTION DEPARTMENT TO SCHEDULE THE REQUIRED INSPECTIONS. A MINIMUM OF 48 HOURS OF NOTICE SHOULD BE GIVEN TO AUTHORITIES. AN EXTENSION IN THE CONTRACT SCHEDULE WILL NOT BE GRANTED DUE TO DELAY CAUSED BY INSPECTIONS.
20. EACH CONTRACTOR IS RESPONSIBLE FOR APPLICATION AND PAYMENT OF CONTRACTOR LICENSES, BONDS AND INSURANCES. DOCUMENTATION SHALL BE PROVIDED TO THE OWNER PRIOR TO THE WORK.
21. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTOR RESP0NSIBIU1Y TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILTS CHANGES, REVISIONS, ADDENDA, OR CHANGES ORDERS.
22. THE CONTRACTOR IS TO PROVIDE THE OWNER WITH A FULL SET OF RECORD DRAWINGS WITH ACTUAL DIMENSIONS, ROUTING AND CIRCUITS UPON COMPLETION OF CONSTRUCTION.
23. THE CONTRACTOR IS TO CONTACT BOTH LOCAL POWER AND TELEPHONE UTILITY COMPANIES BEFORE CONSTRUCTION BEGINS TO ORDER SERVICE, OBTAIN AND PAY ALL FEES ASSOCIATED WITH CONSTRUCTION, SCHEDULE INSTALLATION OF SERVICE, COORDINATE CONDUIT RUN/TERMINATION POINT AND OBTAIN ANY HELD MATERIALS THAT MAY BE SUPPLIED BY THE UTILITY COMPANIES AND INSTALLED BY THE CONTRACTORS.
24. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY BRACING, SHORING, TIES, FORM WORK AND THE PROTECTION OF ALL WORK DURING CONSTRUCTION TO AVOID DAMAGE, COLLAPSE, DISTORTION, MISALIGNMENT AND ALTERATION OF ROOFING WARRANTIES.
25. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
26. THE CONTRACTOR SHALL MONITOR ALL EXISTING STRUCTURES DURING CONSTRUCTION.
27. THE CONTRACTOR SHALL COORDINATE THE FINAL DIMENSIONS OF ANY TYPE OF BEAM LAYOUT WITH THE FOOTPRINT OF THE NEW EQUIPMENT BEFORE ORDERING ANY MATERIALS.
28. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN SAFE CONDITIONS PRIOR TO INSTALLATIONS, AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT.
29. ALL MATERIALS MUST BE STORED IN A LEVEL AND DRY LOCATION AND IN A MANNER THAT WILL NOT OBSTRUCT THE FLOW OF OTHER WORK RELATED OR NOT TO THIS CONTRACT. ANY EQUIPMENT OR MATERIAL STORAGE MUST MEET ALL RECOMMENDATIONS OF THE MANUFACTURER. THE CONTRACTOR SHALL INSPECT THOROUGHLY ALL MATERIALS AND EQUIPMENT PRIOR TO FINAL INSTALLATION. DAMAGED EQUIPMENT OR MATERIALS SHALL NOT BE INSTALLED PERMANENTLY.
30. ALL MATERIALS SHALL BE INSTALLED PER THE MANUFACTURERS' INSTRUCTIONS.
31. EXCEPT FOR WARNING SIGNS SUCH AS 'NO TRESPASSING' AND SIGNS THAT STATE OWNERSHIP AND EMERGENCY TELEPHONE NUMBERS, NO SIGN SHALL BE LOCATED ON THE TOWER.
32. ALL EQUIPMENT SHALL BE INSTALLED LEVEL AND PLUMB.

1.2 EXISTING CONDITIONS AND STRUCTURES

1. BEFORE BEGINNING WORK AT THE SITE, THE CONTRACTOR SHALL INSPECT THE EXISTING COMPOUND OR BUILDING AND DETERMINE THE EXTENT OF EXISTING FINISHES, SPECIALTIES, EQUIPMENT AND OTHER ITEMS WHICH MUST BE REMOVED AND REINSTALLED IN ORDER TO PERFORM THE WORK UNDER THIS CONTRACT. THE CONTRACTOR MUST VERIFY ALL DIMENSIONS, CONDITIONS AND ELEVATIONS BEFORE STARTING WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCES BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ALL DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH ACCEPTED CONSTRUCTION PRACTICES.
2. BY SUBMITTING A BID FOR THIS WORK, THE CONTRACTOR ACKNOWLEDGES THAT HE HAS THOROUGHLY REVIEWED AND UNDERSTOOD THE CONSTRUCTION DOCUMENTS, VISITED THE SITE AND IS FAMILIAR WITH THE CONDITIONS ENCOUNTERED AT THE SITE.
3. THE CONTRACTOR, IF AWARDED THE CONTRACT, WILL NOT BE ALLOWED ANY EXTRA COMPENSATION BY REASON OF ANY MATTER OR THING WHICH SUCH THE CONTRACTOR MIGHT NOT HAVE FULLY INFORMED HIMSELF TO BIDDING.

1. NO PLEA OF IGNORANCE OF CONDITIONS THAT EXIST, OR OF DIFFICULTIES THAT MAY BE ENCOUNTERED OR OF ANY OTHER RELEVANT MATTER CONCERNING THE WORK TO BE PERFORMED WILL BE ACCEPTED AS A REASON FOR ANY FAILURE OR OMISSION ON THE PART OF THE CONTRACTOR TO FULFILL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
2. IT IS UNDERSTOOD BY THE OWNER THAT THE CONTRACTOR IN SUBMITTING HIS BID, WARRANTS THAT HE HAS CAREFULLY EXAMINED THE SITE OF THE PROJECT TO ACQUAINT HIMSELF WITH THE SURROUNDING PROPERTIES, THE MEANS OF APPROACH TO THE SITE, THE CONDITIONS OF THE ACTUAL JOB SITE, THE FACILITIES FOR DELIVERING, STORING, PLACING, HANDLING AND THE REMOVAL OF MATERIALS AND EQUIPMENT AND ANY AND ALL DIFFICULTIES THAT MAY BE ENCOUNTERED DURING THE EXECUTION OF THE ALL WORK IN ACCORD WITH THE CONTRACT DOCUMENTS.
3. THE LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITIES LOCATED WITHIN THE LIMITS OF CONSTRUCTION AND ACCEPTS FULL RESPONSIBILITY FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTORS FAILURE TO LOCATE ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.
4. SHOULD ANY ERROR OR INCONSISTENCY APPEAR IN THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK MUST MAKE MENTION OF THE SAME TO THE ENGINEER AND OWNER FOR PROPER ADJUSTMENT AND IN NO CASE PROCEED WITH THE WORK IN UNCERTAINTY OR WITH INSUFFICIENT DRAWINGS.
5. THE CONTRACTOR AND EACH SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL MEASUREMENTS AT THE SITE BEFORE ORDERING ANY MATERIALS OR DOING ANY WORK. NO EXTRA CHARGE OR COMPENSATION SHALL BE ALLOWED DUE TO DIFFERENCE BETWEEN ACTUAL DIMENSIONS AND DIMENSIONS INDICATED ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY IN DIMENSIONS WHICH MAY BE FOUND SHALL BE SUBMITTED TO THE ENGINEER AND THE OWNER REPRESENTATIVE FOR CONSIDERATION BEFORE THE CONTRACTOR PROCEEDS WITH THE WORK IN THE AFFECTED THE CONTRACTOR'S WORK SHALL NOT VARY FROM THE PLANS WITHOUT THE EXPRESSED APPROVAL OF THE OWNER OR ITS REPRESENTATIVE.
6. TRADE, PRODUCT NAMES OR MANUFACTURER'S NAMES OR CATALOG NUMBERS AND INDICATIONS OF EXISTING PRODUCT TYPES SHOWN ON THE DRAWINGS ARE BELIEVED TO BE ACCURATE. IF THEY ARE DISCOVERED TO BE INACCURATE, NOTIFY ENGINEERS IMMEDIATELY AND DO NOT PROCEED WITHOUT INSTRUCTIONS.
7. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGES WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGES TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE COST OF REPAIRING OR REPLACING ANY DAMAGES AREAS.
8. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONARY MEASURES AND EFFORTS TO PROTECT THE STRUCTURAL INTEGRITY OF EXISTING STRUCTURES. WHEN WORK IS PERFORMED IN THE VICINITY OF EXISTING STRUCTURE, THE STRUCTURAL INTEGRITY AND STABILITY SHALL BE MONITORED AT ALL TIMES DURING EVERY PHASE OF THE CONSTRUCTION.
9. THE CONTRACTOR SHALL PROTECT EXISTING PROPERTY LINE MONUMENTATION. ANY MONUMENTATION DISTURBED OR DESTROYED, AS JUDGED BY THE OWNER OR OWNER'S REPRESENTATIVE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE UNDER THE SUPERVISION OF A LICENSED LAND SURVEYOR.
10. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
11. WHERE INDICATED ON THE PLANS, THE CONTRACTOR SHALL PAINT ALL NEW ANTENNAS SHROUDS AND RELATED
    MOUNTING HARDWARE TO MATCH THE EXISTING ADJACENT SURFACES, THE CONTRACTOR SHALL NOT USE A METAL BASED PAINT FOR ANTENNAS. ALL SURFACE CONTAMINATION SHALL BE REMOVED PRIOR TO PAINTING NEW SURFACES.
12. THE PLANS SHOW SOME KNOWN SUBSURFACE STRUCTURES, ABOVE-GROUND STRUCTURES AND/OR UTILITIES BELIEVED TO EXIST IN THE WORKING AREA, EXACT LOCATION OF WHICH MAY VARY FROM THE LOCATIONS INDICATED, IN PARTICULAR, THE CONTRACTOR IS WARNED THAT THE EXACT OR EVEN APPROXIMATE LOCATION OF SUCH PIPELINES, SUBSURFACE STRUCTURES AND/OR UTILITIES IN THE AREA MAY BE SHOWN OR MAY NOT BE SHOWN; AND IT SHALL BE HIS RESPONSIBILITY TO PROCEED WITH GREAT CARE IN EXECUTING ANY WORK. BEFORE YOU DIG, DRILL OR BLAST, CALL THE UNDERGROUND SERVICES ALERT NUMBER ON SHEET T1 AT THE REQUIRED TIME.
13. ALL EXISTING ACTIVE SEWER, WATER GAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK AREA SHALL BE PROTECTED AT ALL TIMES, WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. THE CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.
14. IF AN INACTIVE ELECTRICAL, TELEPHONE, SEWER, WATER OR ANY OTHER UTILITY ARE ENCOUNTERED AND INTERFERE WITH THE EXECUTION OF THE WORK, THE CONTRACTOR IS TO REMOVE THE UTILITY AND CAP, PLUG OR OTHERWISE TERMINATE THE UTILITY AT A POINT WHERE IT NO LONGER CONFLICT WITH THE WORK. THE UTILITY WORK SHALL BE DONE IN ACCORDANCE WITH THE UTILITY COMPANIES RECOMMENDATIONS AND PER LOCAL AUTHORITY HAVING JURISDICTION.
15. ALL UTILITY WORK INVOLVING CONNECTIONS TO EXISTING SYSTEMS SHALL BE COORDINATED WITH THE OWNER OR OWNER'S REPRESENTATIVE AND THE UTILITY OWNER BEFORE EACH AND EVERY CONNECTION TO EXISTING SYSTEM IS MADE.
16. MAINTAIN FLOW FOR ALL EXISTING UTILITIES.
17. THE CONTRACTOR SHALL RESTORE ALL PUBLIC OR PRIVATE PROPERTY DAMAGED OR REMOVED AT LEAST AS GOOD OF CONDITION AS BEFORE DISTURBED AS DETERMINED BY THE OWNER OR OWNER'S REPRESENTATIVE.
18. PROTECT FINISHED SURFACES INCLUDING JAMBS AND HEADS OF OPENINGS USED AS PASSAGEWAYS THROUGH WHICH EQUIPMENT AND MATERIALS WILL PASS.
19. PROVIDE PROTECTION FOR EQUIPMENT ROOM SURFACES PRIOR TO ALLOWING EQUIPMENT OR MATERIALS TO BE MOVED OVER SUCH SURFACES.
20. MAINTAIN FINISHED SURFACES CLEAN, UNARMED AND SUITABLY PROTECTED UNTIL JOB SITE IS ACCEPTED BY THE OWNER.
21. IN THE EVENT OF DAMAGE TO AN EXISTING STRUCTURE, THE CONTRACTOR SHALL NOTIFY THE OWNER OR ITS REPRESENTATIVE IMMEDIATELY, AND THEN PROMPTLY MAKE ALL REPLACEMENTS AND REPAIR TO THE SATISFACTION OF THE OWNER. THE OWNER MAY ELECT TO USE A THIRD PARTY CONTRACTOR TO PERFORM THE REPAIRS. ALL EXPENSES ASSOCIATED WITH THE REPAIRS AND REPLACEMENTS SHALL BE PAID BY THE GENERAL CONTRACTOR SELECTED FOR THIS CONTRACT.
22. ADDITIONAL TIME REQUIRED TO SECURE REPLACEMENT AND MAKE REPAIRS WILL NOT BE CONSIDERED BY THE OWNER TO JUSTIFY AN EXTENSION IN THE CONTRACT TIME FOR COMPLETION.

1.3 ACCESS

1. USE MOST DIRECT ROUTE FROM PUBLIC STREET AS AGREED TO BY COMPOUND OR BUILDING OWNER. FOR ACCESS TO AN EXISTING BUILDING INTERIOR, USE LOADING DOCK AS AGREED TO BY BUILDING OWNER.
2. COORDINATE WITH SITE OWNER CONSTRUCTION SCHEDULE & SITE ACCESS. ENSURE THAT THE OWNER OF PARENT PARCEL IS NOTIFIED IN WRITING OF CONSTRUCTION ACTIVITIES.
3. A LIST OF WORKERS INVOLVED IN THIS PROJECT SHALL BE PROVIDED TO THE PROPERTY OWNER OR ITS REPRESENTATIVE.
4. THE CONTRACTOR SHALL COORDINATE ALL SPECIAL CONSIDERATIONS OF CONSTRUCTION SUCH AS NOISY OPERATION, INTERRUPTION OF ANY MECHANICAL AND/OR ELECTRICAL SERVICES, MATERIAL DELIVERIES AND STORAGE, STATING AREA, CRANE LIFTS WITH THE OWNER PRIOR TO THE START OF THE WORK.
5. CONTRACTOR SHALL COORDINATE WITH AN OWNER REPRESENTATIVE, THE TEMPORARY REMOVAL OF FENCE, LANDSCAPE & ANY EXPECTED DAMAGE TO ACCESS ROAD OR ADJACENT REPAIR OF PROPERTY PRIOR TO COMMENCING THE WORK.
6. THE CONTRACTOR SHALL COORDINATE WORK HOURS & STAGING AREAS WITH OWNER.
7. CONTRACTOR TO NOTIFY PROPERTY OWNER OF CONSTRUCTION START DATE WELL IN ADVANCE OF CONSTRUCTION.

1.4 SITE MAINTENANCE

1. REMOVE STAINING OR REACTIVE MATERIALS FROM NEW AND EXISTING SURFACES IMMEDIATELY. REMOVE HAZARDOUS ACCUMULATIONS OF DEBRIS PROMPTLY, AT LEAST DAILY. CONFINE DUST PRODUCING OPERATIONS DURING CUTTING, DRILLING, PAINTING AND FINISHING. THERE SHOULD BE NO OVER SPRAYING PAINT IN PARKING AREA VACUUM IMMEDIATELY AFTER COMPLETION.
2. THERE SHALL NOT BE ANY CREATION OF NOISE OUTSIDE THE NORMAL HOURS OF 7 AM TO 6 PM, UNLESS OTHERWISE AGREED UPON WITH THE OWNER. NOISE SHOULD BE KEPT TO A MINIMUM THROUGHOUT THE CONSTRUCTION.
3. NOISE AND EXISTING BUILDING STRUCTURE VIBRATION GENERATED BY CONSTRUCTION PROCEDURES, EQUIPMENT, TOOL AND OPERATIONS ARE TO BE KEPT TO A PRACTICABLE MINIMUM. WHERE USE OF HIGH NOISE LEVEL EQUIPMENT IS UNAVOIDABLE, AND CAN BE HEARD. THE RIGHT OF WAY PERMIT WILL LIMIT HOURS OF WORKS FROM 7:00 AM TO 3:30 P.M. MONDAY THROUGH FRIDAY EXCLUDING CITY RECOGNIZED HOLIDAYS, FOR ALL MECHANICAL ACTIVITIES. NO WORK SHALL CONTINUE LATER THAN 7:00 PM ANY DAY.
4. THE CONTRACTOR IS TO PROVIDE PORTABLE FIRE EXTINGUISHERS WITH A RATING OF NOT LESS THAN 2-A OR 2 ABC WITHIN 75FT OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A NEAT AND ORDERLY SITE, YARD AND GROUNDS, REMOVE AND DISPOSE LEGALLY OFF SITE ALL RUBBISH, WASTE MATERIALS, LITTER, AND ALL FOREIGN SUBSTANCES. REMOVE PETROCHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS TO A SMOOTH EVEN-TEXTURED SURFACE.
6. AT PROJECT COMPLETION, REMOVE TEMPORARY SERVICES, CONSTRUCTION EQUIPMENT, TOOLS AND FACILITIES, MOCKUPS, TEMPORARY STRUCTURES, SURPLUS MATERIALS, DEBRIS, AND RUBBISH FROM BUILDING OWNERS PROPERTY. PUT SITE IN NEAT, ORDERLY CONDITION, READY FOR USE. LEAVE ROOF AREAS, PIPE SPACES AND OTHER SPACES CLEAN AND FREE FROM DEBRIS ON A DAILY BASIS.
7. THE SITE AND/OR BUILDING SECURITY SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION IN ORDER TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING THE PREMISES. EXISTING AND NEW EQUIPMENT AND MATERIALS REMAIN THE CONTRACTOR'S RESPONSIBILITY AT ALL TIME DURING CONSTRUCTION.
8. THE TENANTS INGRESS AND EGRESS OF THE SITE AND/OR BUILDING SHALL BE MAINTAIN THROUGHOUT CONSTRUCTION.
9. THE CONTRACTOR SHALL TAKE ALL MEASURE NECESSARY TO MAINTAIN POLLUTION CONTROL, COMPLY WITH ALL GOVERNING REGULATION PERTAINING TO ENVIRONMENTAL PROTECTION, AND PROMPTLY REMOVE ALL DEBRIS AND ACCUMULATION OF MATERIALS RESULTING FROM THE WORK.

1.5 TEMPORARY FACILITIES

1. THE CONTRACTOR SHALL CONSIDER THAT WATER, POWER AND LIGHT ARE NOT AVAILABLE THIS SITE. WHEN PERMANENT POWER IS ESTABLISHED, ALL CONTRACTORS MAY USE THE SERVICE CONNECTION FOR PRODUCTION WORK ONLY, PROVIDED THAT ELECTRICAL CORDS AND CONNECTIONS ARE FURNISHED BY THE CONTRACTOR AND ARE DISCONNECTED AND PROPERLY STORED DURING NON-WORKING HOURS.
2. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.

2 - DEMOLITION AND EXISTING STRUCTURAL ALTERATION

2.1 DEMOLITION SPECIFICS

1. GENERAL CONTRACTOR IS TO DEMOLISH AND REMOVE FROM SITE (AND DISPOSE OF APPROPRIATELY) ALL ITEMS NOTED FOR DEMOLITION IN THE ARCHITECTURAL, CIVIL, ELECTRICAL AND/OR STRUCTURAL DRAWINGS, INCLUDING BELOW GRADE
   FOUNDATION AND STRUCTURES. CONTRACTOR SHALL COORDINATE WITH THE OWNER REPRESENTATIVE THE DISPOSAL EQUIPMENT & MATERIALS.
2. GENERAL CONTRACTOR IS TO EXERCISE UTMOST CARE DURING DEMOLITION AND PROMPTLY INFORM THE ENGINEER OF ANY DEVIATION TO THE EXISTING STRUCTURE FROM WHAT IS SHOWN IN THESE PLANS PRIOR TO PROCEEDING WITH THE WORK.
3. GENERAL CONTRACTOR IS SOLELY RESPONSIBLE FOR THE SHORING, BRACING, PROVIDING LATERAL SUPPORT AND FOR MAINTAINING THE INTEGRITY OF THE EXISTING STRUCTURE DURING ALL PHASES OF THE DEMOLITION AND CONSTRUCTION AND SHALL PROVIDE, IF REQUIRED, SIGNED & SEALED SHOP DRAWINGS, BY A REGISTERED PROFESSIONAL ENGINEER, FOR THE SHORING OF ALL WALLS, BEAMS, SLABS, ROOF JOISTS, OR OTHER ELEVATED STRUCTURAL ITEM, THAT ARE HAVING THE SUPPORT BELOW NOTED FOR DEMOLITION.
4. ANY DAMAGE DUE TO DEMOLITION, OR OTHER CONSTRUCTION ACTIVITIES, DONE TO ANY EXISTING SURFACE TO REMAIN SHALL BE REPAIRED TO MATCH EXISTING AT NO ADDITIONAL COST TO THE OWNER.

2.2 CUTTING & PATCHING

1. DO NOT DRILL OR CUT EXISTING FLOOR JOISTS, BEAMS, COLUMNS OR OTHER STRUCTURAL ELEMENTS UNLESS SPECIFICALLY INDICATED. DRILL SLABS WHERE APPROVED. CORE DRILL CIRCULAR OPENINGS THROUGH CONCRETE SLAB LINE DRILL FOR RECTANGULAR OPENINGS. MAKE OPENINGS OF PROPER SIZE FOR CONDUIT, DUCTS, PIPES, AND OTHER ITEMS PASSING THROUGH OPENINGS. MAKE ALL NEW HOLES OR OPENINGS BE WEATHER TIGHT OR FIRE SAFE AS REQUIRED BY LOCAL BUILDING CODES & ORDINANCES.
2. PREPARE, SUBMIT AND RECEIVE APPROVAL OF SLEEVES AND OPENING DRAWINGS BEFORE LOCATING SLEEVES AND OPENINGS IN NEW CONSTRUCTION AND BEFORE DRILLING EXISTING STRUCTURE. SHOWN EACH OPENING AND SLEEVE IN THE ENTIRE PROJECT.
3. SEAL WATER TIGHT AND PROTECT WITH FIRE PROOFING MATERIALS NEW SLEEVES AND OPENINGS THROUGH ROOFS, FLOORS AND INVERTICAL CHASES AS REQUIRED BY CODE AND INDUSTRY STANDARDS. ALL FLOOR AND WALL PENETRATIONS SHALL BE SEALED WITH FIRE RETARDANT COMPOUND MEETING UL CAJ5045.
4. THE CONTRACTOR SHALL PROVIDE THE FIRE MARSHALL APPROVED MATERIALS TO FILL/SEAL FIRE RATED ASSEMBLIES.
5. WHERE CUTTING OF EXISTING SURFACES OR REMOVAL OF EXISTING FINISHES IS REQUIRED TO PERFORM THE WORK UNDER THIS CONTRACT AND A NEW FINISH IS NOT INDICATED, FILL RESULTING OPENINGS AND PATCH THE SURFACE AFTER DOING THE WORK AND FINISH TO MATCH ADJACENT EXISTING SURFACES.
6. EXCEPT IN SPACE WHERE NO WORK UNDER THIS CONTRACT IS REQUIRED, ENCLOSE EXISTING AND NEW CONDUITS, DUCTS, PIPES AND SIMILAR ITEMS IN FURRING WHERE SUCH ITEMS PASS THROUGH FINISHED SPACES WHETHER OR NOT FURRING IS INDICATED.
7. ALL CONCRETE AND MASONRY PENETRATIONS SHALL BE DONE USING ROTARY ACTION ONLY (NO HAMMERING ACTION). X-RAYS ARE TO BE TAKEN PRIOR TO DRILLING.
8. CORE LOCATIONS IF REQUIRED SHALL BE CHOSEN SO AS TO AVOID CUTTING ANY REINFORCING BARS. FIRESTOP FLOOR OR WALL PENETRATION WITH TWO HOUR RATED SEALANT TO MEET UL CAJ5045. PROVIDE WEATHERPROOFING OF ANY ROOF PENETRATIONS.
9. REPAIR, PATCH, FINISH AND/OR REFINISH AS APPLICABLE TO MATCH ADJACENT EXISTING FINISHES THOSE EXISTING SURFACES DAMAGED OR NEW PROPOSED SURFACES DURING PERFORMANCE OF THE WORK.
10. WHERE CONDUITS, DUCTS, PIPES AND SIMILAR ITEMS ARE SHOW TO BE INSTALLED IN EXIST WALLS OR PARTITIONS. NEATLY CHASE THE WALLS OR PARTITIONS. INSTALL THE TIMES AND PATCH THE WALLS OR PARTITIONS TO MAKE THE INSTALLATION NOT DISCERNIBLE IN THE FINISHED WORK.
11. WHERE A NEW CUTTING IS NOT SCHEDULED, INSTALL NEW CONDUITS AND PIPES IN EVERY CASE, AND NEW DUCT WHERE POSSIBLE ABOVE EXISTING CEILING. REMOVE EXISTING CEILING AS NECESSARY. AFTER INSTALLATION OF CONCEALED WORK, REINSTALL REMOVED CEILING AND PATCH AND REFINISH TO MATCH ADJACENT UNREMOVED CEILINGS.
12. REPAIR ALL METAL SURFACES THAT HAVE BEEN CUT OR DAMAGED BY REMOVING ANY EXISTING RUST AND APPLYING COLD GALVANIZATION.

3 - SITE WORK

3.1 CLEARING AND GRUBBING

1. CLEARING OF TREES AND VEGETATION ON THE SITE SHOULD BE HELD TO A MINIMUM. ONLY THE TREES NECESSARY FOR THE CONSTRUCTION OF THE FACILITY SHALL BE REMOVED. ANY DAMAGES TO PROPERTY OUTSIDE THE CONSTRUCTION LIMIT SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.
2. THE CONTRACTOR SHALL: PROTECT EXISTING TREES, VEGETATION, LANDSCAPING MATERIALS AND SITE IMPROVEMENTS NOT SCHEDULED FOR CLEARING OR REMOVAL WHICH MIGHT BE DAMAGED BY CONSTRUCTION ACTIVITIES.
3. TRIM EXISTING TREES AND VEGETATION AS RECOMMENDED BY THE ARBORIST FOR PROTECTION DURING CONSTRUCTION.
4. CLEAR AND GRUB STUMPS, VEGETATION, DEBRIS, RUBBISH, DESIGNATED TREES AND SITE IMPROVEMENT.
5. STRIP AND STOCKPILE TOPSOIL.
6. PROTECT TEMPORARILY ADJACENT PROPERTY, STRUCTURES, BENCHMARKS AND MONUMENTS.
7. MARK DESIGNATED TREES AND VEGETATION DURING CONSTRUCTION ACTIVITIES.
8. PROVIDE TEMPORARY EROSION CONTROL, SILTATION CONTROL AND DUST CONTROL.
9. REMOVE AND LEGALLY DISPOSE OF CLEARED MATERIALS.

3.2 EXCAVATION AND BACKFILL

1. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATION APPROVED BY GOVERNING AGENCIES PRIOR TO DISPOSAL
2. ALL SITE FILL SHALL MEET SELECTED FILL STANDARDS AS DEFINED BY THE OWNER'S REPRESENTATIVE ON THE DRAWINGS OR GEOTHECHNICAL REPORT RECOMMENDATIONS.
3. THIS PROJECT INCLUDES:
   · EXCAVATION, TRENCHING, FILLING, COMPACTING AND GRADING FOR STRUCTURES, SITE IMPROVEMENTS, ACCESS ROAD AND UTILITIES.
   · ALL MATERIALS FOR SUBBASE, DRAINAGE FILL, BACK FILL AND GRAVEL FOR SLABS, PAVEMENT AND IMPROVEMENTS.
   · ROCK EXCAVATION WITHOUT BLASTING.
   · SUPPLY OF ADDITIONAL MATERIALS FROM OF SITE AS REQUIRED.
   · REMOVAL AND LEGAL DISPOSAL OF EXCAVATED MATERIALS AS REQUIRED.
4. FILL LAYERS THAT REQUIRE COMPACTION SHALL HAVE A MAXIMUM THICKNESS OF 6 INCHES.
5. THE COMPACTING UNDER STRUCTURES, BUILDING SLABS, STEPS, PAVEMENT AND WALKWAYS SHALL BE 95% MAXIMUM DENSITY, ASTM D-1557, TESTED IN EACH OF THE COMPACTING LAYERS AT EACH COMPACTING SITE, OR AT LEAST IN EACH 100CU. PER YARDS OF MATERIAL VOLUME.
6. THE COMPACTING UNDER LAWNS OR UNPAVED AREAS SHALL BE 85% MAXIMUM DENSITY, ASTM D1557.
7. THE COMPACTED LAYERS SHALL NOT EXCEED 8 INCHES.
8. AREAS THAT DO NOT MEET ASTM D-1557 REQUIREMENTS MUST BE RECOMPACTED AT THE CONTRACTOR EXPENSES.
9. ALL TRENCH EXCAVATIONS AND ANY REQUIRED SHEETING AND SHORING SHALL BE DONE IN ACCORDANCE WITH OSHA REGULATIONS FOR CONSTRUCTION.
10. WHERE UNSTABLE SOIL CONDITIONS EXIST, LINE THE GRUBBED AREAS WITH GEOTEXTILE FABRIC (MIRAFI 500X OR APPROVED EQUIVALENT) PRIOR TO PLACING FILL OR BASE MATERIAL.
11. THE USE OF EXPLOSIVE IS PROHIBITED ON SITE.
12. ALL EXCAVATION ON WHICH CONCRETE IS TO BE PLACED SHALL BE SUBSTANTIAL HORIZONTAL, UNDISTURBED AND BE FREE FROM LOOSE MATERIAL AND EXCESS GROUND WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED IF REQUIRED.
13. ANY EXCAVATION OVER THE REQUIRED DEPTH SHALL BE FILLED WITH OTHER MECHANICALLY COMPACTED GRANULAR MATERIAL OR CONCRETE OF THE SAME QUALITY SPECIFIED FOR THE FOUNDATION. CRUSHED STONE MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. STONE, IF USED, SHALL NOT BE USED AS COMPILING CONCRETE THICKNESS.
14. BACK FILL SHALL USE APPROVED MATERIALS CONSISTING OF LOAM, SANDY CLAY, SAND, GRAVEL OR SOFT SHALE AND SHALL BE FREE FROM CLODS OR STONES OVER 2 ½".
15. AFTER COMPLETION OF THE FOUNDATION AND OTHER CONSTRUCTION BELOW GRADE AND BEFORE BACK FILLING, ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIALS SUCH AS VEGETATION, DEBRIS, TRASH AND ANY FOREIGN MATERIAL.

3.3 DRAINAGE

1. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE AWAY FROM BUILDING OR EQUIPMENT ON THE SITE AT ALL TIMES. SILT AND EROSION CONTROL SHALL BE MAINTAINED ON THE DOWNSTREAM SIDE OF THE SITE AT ALL TIMES. ANY DAMAGE TO ADJACENT PROPERTIES WILL BE CORRECTED AT THE CONTRACTOR'S EXPENSES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEWATERING AND THE MAINTENANCE OF SURFACE DURING COURSE OF WORK.
3. ANY DRAIN, FIELD TILE OR DRAINAGE STRUCTURE ENCOUNTERED DURING CONSTRUCTION SHALL BE RETURNED TO ITS ORIGINAL OR BETTER CONDITIONS AFTER CONSTRUCTION AND BE NOTED ON THE RECORD DOCUMENTS.

3.4 EROSION CONTROL

1. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE SUCH MEASURES AS SILT FENCE, STRAW BALES, SEDIMENT BARRIERS AND CHECK DAMS.
2. EROSION CONTROL MEASURES MAY BE REQUIRED IN ADDITION TO THOSE SHOWN ON DRAWINGS WHERE DETERMINED NECESSARY BY ACTUAL SITE CONDITIONS.
3. PRIOR TO ANY OTHER CONSTRUCTION, A STABILIZED CONSTRUCTION ENTRANCE SHALL BE CONSTRUCTED AT EACH ENTRY TO OR FROM THE SITE.
4. THE CONSTRUCTION EXIT SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHT OF WAYS. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH STONE AS CONDITIONS DEMAND, REPAIR AND/OR CLEAN OUT OF ANY STRUCTURES USED TO TRAP SEDIMENTS. ALL MATERIALS SPILLED, DROPPED WASHED OR TRACKED FROM VEHICLE OF SITE ONTO ROADWAY OR INTO STORM DRAINS MUST BE REMOVED.
5. IMMEDIATELY AFTER THE ESTABLISHMENT OF CONSTRUCTION ENTRANCES/EXITS, ALL PERIMETER EROSION CONTROL DEVICES AND STORMWATER MANAGEMENT DEVICES SHALL BE INSTALLED PRIOR TO ANY OTHER CONSTRUCTION.
6. ALL SILT BARRIERS MUST BE PLACED AS ACCESS IS OBTAINED DURING CLEARING. NO GRADE SHALL BE DONE UNTIL SILT BARRIER INSTALLATION AND DETENTION FACILITIES ARE CONSTRUCTED. SILT BARRIERS SHALL BE PLACED AT ALL DOWNSTREAM TOE OF CUT AND FILL SLOPES.
7. THE LOCATION OF SOME EROSION CONTROL DEVICES MAY HAVE TO BE ALTERED FROM WHAT IS SHOWN ON THE APPROVED PLANS IF DRAINAGE PATTERNS DURING CONSTRUCTION ARE DIFFERENT FROM THE FINAL PROPOSED DRAINAGE PATTERNS. IT IS THE CONTRACTOR RESPONSIBILITY TO ACCOMPLISH EROSION CONTROL FOR DRAINAGE PATTERN CREATED AT VARIOUS STAGES DURING CONSTRUCTION. ANY DIFFICULTY IN CONTROL EROSION DURING ANY PHASE OF CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY. ANY DISTURBED AREA LEFT EXPOSED FOR A PERIOD GREATER THAT (7) DAYS SHALL BE STABILIZED WITH TEMPORARY SEEDING.
8. THE CONSTRUCTION OF THE SITE WILL INITIATE WITH THE INSTALLATION OF EROSION CONTROL MEASURES SUFFICIENT TO CONTROL SEDIMENT DEPOSIT AND EROSION. ALL SEDIMENT CONTROL WILL BE MAINTAINED UNTIL ALL UPSTREAM GROUND WITHIN THE CONSTRUCTION AREA HAS BEEN COMPLETELY STABILIZED WITH PERMANENT VEGETATION AND ALL ROADS AND DRIVEWAYS HAVE BEEN COMPLETED. THE CONTRACTOR SHALL INSPECT EROSION CONTROL MEASURES AT THE END OF EACH WORKING DAY TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
9. FAILURE TO INSTALL, OPERATE OR MAINTAIN ALL EROSION CONTROL MEASURES WILL RESULT IN ALL CONSTRUCTION BEING STOPPED ON THE JOB SITE UNTIL SUCH MEASURES ARE CORRECTED.
10. THE CONTRACTOR SHALL REMOVE ACCUMULATED SILT WHEN THE SILT IS WITHIN 12" OF TOP OF THE SILT FENCE UTILIZED FOR EROSION CONTROL
11. ALL OPEN SWALES MUST BE GRASSED, AND RIP-RAP MUST BE PLACED AS REQUIRED TO CONTROL EROSION. ALL CUT AND FILL SLOPES MUST BE SURFACE ROUGHENED AND VEGETATED WITHIN (7) DAYS OF CONSTRUCTION.
12. SODDING AND MULCHING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE SITE DEVELOPMENT. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING AND MAINTAINING AN ADEQUATE COVER OF VEGETATION OVER OVER THE SITE FOR A PERIOD OF ONE YEAR.
13. IN CONCENTRATED AREAS, ALL SLOPES STEEPER THAN 2.5:1 AND LENGTH OF 10 FEET OR GREATER, AND CUTS AND FILLS WITHIN STREAM BUFFER, SHALL BE STABILIZED WITH THE APPROPRIATE EROSION CONTROL MATTING OR BLANKETS
14. RIPRAP SHALL BE CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY, AND FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC, OIL, ALKALI OR OTHER DELETERIOUS SUBSTANCES.

3.5 PLACING OF SOD

1. CONTRACTOR SHALL GUARANTEE ALL SOD WORK UP UNTIL THE END OF THE MAINTENANCE PERIOD. CONTRACTOR SHALL REPLACE ANY DEFECTIVE OR DISTRESSED GRASS MATERIALS AT NO ADDITIONAL COST TO THE OWNER. DURING THE GUARANTEE PERIOD, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY REPLACE ANY DEAD MATERIAL.
2. THE SETTING OF PIECES SHALL BE STAGGERED IN SUCH A MANNER AS TO AVOID CONTINUOUS SEAMS. SOD SHALL BE MOIST AND PLACED ON A MOIST EARTH BED. CAREFULLY PLACE SOD BY HAND, EDGE TO EDGE IN ROWS AT RIGHT ANGLES TO THE SLOPE, STARTING AT THE BASE OF THE AREA AND WORKING UPWARD. ON ST. AUGUSTINE AND BAHIA LAWNS, INSTALL ONLY FULL SIZE (16" X 24") PIECES OF SOD (EXCEPT FOR CUTTING-IN PURPOSES). THERE SHALL BE NO VOIDS BETWEEN SOD PIECES, NO OVERLAPPING OF THE EDGES OF SOD PIECES, AND THE FINISHED GRADE OF ALL SODDED AREAS SMOOTH AND EVEN. USE CLEAN SAND TO FILL ANY DEVELOPING VOIDS OR UNEVENNESS IN THE SOD SURFACE. UNLESS OTHERWISE INDICATED BY THE GRADING PLANS, THE CONTRACTOR SHALL ENSURE THAT THE FINISHED GRADE OF SOD DOES NOT VARY MORE THAN 2" FROM A 10' LONG STRAIGHT EDGE.
3. PLACE BERMUDA GRASS SOD FIELD AS REQUIRED TO PRODUCE A SMOOTH AND EVEN SURFACE CONFORMING TO THE GRADES INDICATED ON THE PROJECT CIVIL ENGINEERING PLANS. ALL FIELD AREAS SHALL BE LASER GRADED AS REQUIRED TO PRODUCE THE REQUIRED SURFACE FINISH. THE CONTRACTOR SHALL ENSURE THAT THE FINISHED GRADE OF SOD DOES NOT VARY MORE THAN ¼" FROM A 10' LONG STRAIGHT EDGE. REMOVE ANY MESH BACKING ON THE BERMUDA GRASS FROM THE SOD AND FROM THE PROJECT SITE.
4. CAREFULLY PLACE SOD LOCATED ON SLOPES SO THAT ROLLING WITH A POWER ROLLER IS NOT NECESSARY. CONTRACTOR MAY STAKE SOD LOCATED AROUND RETENTION AREAS, ALONG PAVEMENT AREAS OR IN SWALES. THE CONTRACTOR IS RESPONSIBLE FOR THE REPAIR OF ANY EROSION OR RELOCATION PRIOR TO THE SOD FIRMLY ROOTING INTO THE EXISTING SOIL. STAKES, IF USED, SHALL NOT INTERFERE WITH WALKING ON, OR THE MOWING OF, THE SODDED AREAS.
5. THE CONTRACTOR SHALL ENSURE THAT THE FINISHED GRADE OF SOD PLACED DIRECTLY ADJACENT TO BUILDINGS OR OTHER WALLS DOES NOT VARY MORE THAN 2" FROM A 10' LONG STRAIGHT EDGE.
6. CONTRACTOR SHALL GUARANTEE ALL SOD WORK UP UNTIL THE END OF THE MAINTENANCE PERIOD. CONTRACTOR SHALL REPLACE ANY DEFECTIVE OR DISTRESSED GRASS MATERIALS AT NO ADDITIONAL COST TO THE OWNER. DURING THE GUARANTEE PERIOD, IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO IMMEDIATELY REPLACE ANY DEAD MATERIAL.
7. IF THE PERMANENT IRRIGATION SYSTEM IS NOT AVAILABLE UNDER THIS CONTRACT, THE CONTRACTOR SHALL PROVIDE TEMPORARY IRRIGATION FACILITIES FOR WATERING AS REQUIRED TO ESTABLISH AND MAINTAIN TURF AREAS IN A HEALTHY AND GREEN CONDITION. THE CONTRACTOR SHALL PROVIDE WATER FOR AREAS OF THIS WORK NOT COVERED BY AN IRRIGATION SYSTEM.

4 - CONCRETE

4.1 GENERAL

1. DESIGN AND CONSTRUCTION OF ALL CONCRETE ELEMENTS SHALL CONFORM TO THE LATEST EDITIONS OF THE FOLLOWING APPLICABLE CODES:
   ACI 301 - SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS
   ACI 318 - BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE
   ACI 544.1 R - FIBER REINFORCED CONCRETE (IF SPECIFIED)
   ACI 544.2R - MEASUREMENT OF PROPERTIES OF FIBER REINFORCED CONCRETE (IF SPECIFIED)
2. MIX DESIGN SHALL BE APPROVED BY OWNER'S REPRESENTATIVE PRIOR TO PLACING CONCRETE.
3. CONCRETE SHALL BE NORMAL WEIGHT, 6% AIR ENTRAINED (+-1.5%) WITH A MAXIMUM OF 4" SLUMP, AND HAVE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI UNLESS OTHERWISE NOTED.
4. MAXIMUM AGGREGATE SIZE SHALL BE 1".
5. THE FOLLOWING MATERIALS SHALL BE USED:

· PORTLAND CEMENT:	ASTM C 150, TYPE I
· REINFORCEMENT:	ASTM C 185, & A 615
· NORMAL WEIGHT AGGREGATE:	ASTM C 33
· WATER:	DRINKABLE
· ADMIXTURES:	NON-CHLORIDE CONTAINING
· FIBEROUS REINFORCEMENT:	ASTM C1116 (IF SPECIFIED)

6. REINFORCING DETAILS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF ACI 315.
7. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS OTHERWISE NOTED. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED WIRE FABRIC UNLESS OTHERWISE NOTED. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNO.
8. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN ON DRAWINGS:
   · CONCRETE CAST AGAINST EARTH: 3 IN.
   · CONCRETE EXPOSED TO EARTH OR WEATHER:
   · #6 AND LARGER: 2 IN.
   · #5 AND SMALLER AND WWF: 1)* IN.
   · CONCRETE NOT EXPOSED TO EARTH OR WEATHER OR NOT CAST AGAINST THE GROUND:
   · SLABS AND WALL: 1 ⁄2 IN.
   · BEAMS AND COLUMNS: 1 1 ⁄2 IN.
9. A CHAMFER OF 3⁄4 IN. SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.
10. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN ON THE DRAWINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRILLING HOLES IN CONCRETE.
11. CURING COMPOUNDS SHALL CONFORM TO ASTM C-309.
12. ADMIXTURE SHALL CONFORM TO THE APPROPRIATE ASTM STANDARD AS REFERENCED IN ACI-301.
13. DO NOT WELD OR TACKWELD REINFORCING STEEL.
14. ALL DOWELS, ANCHORS BOLTS, EMBEDMENT STEEL ELECTRICAL CONDUITS, PIPE SLEEVES, GROUNDS AMD ALL OTHER EMBEDDED ITEMS AND FORMED DETAILS SHALL BE IN PLACE BEFORE START OF CONCRETE PLACEMENT.
15. LOCATE ADDITIONAL CONSTRUCTION JOINTS REQUIRED TO FACILITATE CONSTRUCTION AS ACCEPTABLE TO THE ENGINEER. PLACE REINFORCEMENT CONTINUOUSLY THROUGH JOINT.
16. REINFORCEMENT SHALL BE COLD BENT WHEN BENDING IS REQUIRED.
17. PLACE CONCRETE IN A UNIFORM MANNER TO PREVENT THE FORMATION OF COLD JOINTS AND OTHER PLANE OF WEAKNESS. VIBRATE THE CONCRETE TO FULLY EMBED REINFORCING. DO NOT USE VIBRATOR TO TRANSPORT CONCRETE THROUGH CHUTES OR FORMWORK.
18. DO NOT PLACE CONCRETE IN PONDING WATER, ICE, OR ON FROZEN GROUND.
19. FOR COLD WEATHER AND HOT WEATHER CONCRETE PLACEMENT, CONFORM TO APPLICABLE ACI CODES AND RECOMMENDATIONS. IN EITHER CASE, MATERIALS CONTAINING CHLORIDE, CALCIUM, SALTS, ETC. SHALL NOT BE USED. PROTECT FRESH CONCRETE FROM WEATHER FOR 7 DAYS MINIMUM.
20. FIBER REINFORCED CONCRETE MIX, IF SPECIFIED, SHALL INCLUDE 1 % LBS OF FIBER PER

5 - FOUNDATION

5.1 GENERAL

1. ALL WORK SHALL COMPLY WITH OSHA AND STATE SAFETY REQUIREMENTS. PROCEDURES FOR THE PROTECTION OF EXCAVATIONS, EXISTING CONSTRUCTIONS AND UTILITIES SHALL BE ESTABLISHED PRIOR TO FOUNDATION INSTALLATION.
2. PRIOR TO INITIATING EARTHWORK OPERATIONS, GROUND WATER AND SURFACE WATER CONTROL MEASURES NEED TO BE TAKEN.
3. THE CONTRACTOR SHALL PROVIDE ADEQUATE SLOPING, SHORING, AND BRACING FOR ALL EXCAVATION TO PROTECT ADJACENT STRUCTURES AND COMPLY WITH LOCAL CODES, ORDINANCES, OSHA AND ANSI REQUIREMENTS.
4. PRIOR TO CONSTRUCTION OF ANY PERMANENT STRUCTURE, THE SITE SHALL BE STRIPPED OF ALL SURFACE VEGETATION, TOP SOIL, AND ORGANIC MATERIAL; ALL WET, SOFT, LOOSE FROZEN, OR OTHERWISE UNDESIRABLE SOIL SHALL BE REMOVED.
5. THE CONTRACTOR IS TO PREVENT SURFACE WATER FROM ENTERING EXCAVATIONS, PUDDLE AND FROM FLOODING ADJACENT PROPERTIES DURING CONSTRUCTION. CONTRACTOR IS ALSO RESPONSIBLE FOR PREVENTING SOFTENING OF THE FOUNDATION SOILS PRIOR TO PLACING CONCRETE.
6. THE EXPOSED SUB GRADE SHALL BE PROOFED-ROLLED WITH MEDIUM WEIGHT ROLLERS OR OTHER APPROVED EQUIPMENT TO DETERMINE IF ANY POCKETS OF SOFT, COMPRESSIBLE SOIL EXISTS BELOW THE EXPOSED SUB GRADE. WHEREVER SUCH MATERIALS IS ENCOUNTERED, THE AREA SHALL BE UNDERCUT TO SUITABLE SOIL, AS DIRECTED BY A QUALIFIED ENGINEER.
7. ALL STRUCTURAL FILL EXTENDING FROM SUITABLE SUB GRADE TO BOTTOM OF FOUNDATIONS OR FLOOR SLABS SHALL CONSIST OF GRANULAR MATERIAL AND WITH 3% TO 10% BY DRY WEIGHT PASSING THE U.S. STD #200 SIEVE SIZE, COMPACTED TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D1557 IN LAYERS NOT EXCEEDING 8".
8. THE SOIL PREPARATION, INCLUDING FOOTING EXCAVATION, FILL, BACK FILL AND COMPACTING SHALL BE DONE FOLLOWING THE RECOMMENDATION CONTAINED IN FBC 2017.
9. PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR RESISTANCE TO ANTICIPATED AGGRESSIVE ACTIONS IN THE VICINITY OF THE FOUNDATION. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON CONDITIONS EXPECTED AT THE SITE.

ZAYO GROUP

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

GenXc
Delivering Excellence

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
GENERAL NOTES & SPECIFICATIONS

SHEET NUMBER
T-2

AS A MINIMUM, CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI (20.7 MPa) IN 28 DAYS.
10. CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE STATE REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
11. WELDING IS PROHIBITED ON REINFORCING STEEL EMBEDMENTS.
12. MINIMUM CONCRETE COVER FOR REINFORCEMENT SHALL BE 3 INCHES (76 MM) UNLESS OTHERWISE NOTED. APPROVED SPACERS SHALL BE USED TO INSURE A 3 INCH (76 MM) MINIMUM COVER ON REINFORCEMENT.
13. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF REINFORCEMENT SHALL NOT EXCEED 3 INCHES (76 MM) NOR BE LESS THAN 2 INCHES (51 MM).
14. FOOTING IS DESIGNED TO BEAR ON EXISTING NATURALLY OCCURRING NON-EXPANSIVE SOILS OR ENGINEERED FILL CAPABLE OF SAFELY SUSTAINING 2000 PSF.
15. IF SOIL PROPERTIES WERE NOT AVAILABLE, THE FOUNDATION DESIGN HAS BEEN DEVELOPED IN ACCORDANCE WITH GENERALLY ACCEPTED PROFESSIONAL ENGINEERING PRINCIPLES AND PRACTICES WITHIN THE LIMITS OF THE SUBSURFACE DATA PRESCRIBED BY GOVERNING CODE. FOUNDATION DESIGN IS BASED ON SOIL PARAMETERS FROM THE ABOVE REFERENCED BUILDING CODE AS FOLLOWS:
· ALLOWABLE SOIL BEARING PRESSURE = 2000 PSF
· ALLOWABLE SLIDING RESISTANCE = 150 PSF/FT.
16. FOUNDATION SHALL BE FORMED WITH PLYWOOD OR METAL PANELS SUFFICIENT FOR STRUCTURAL AND VISUAL REQUIREMENTS. FORMS SHALL BE STRUCTURALLY ADEQUATE TO WITHSTAND UNCURED CONCRETE PRESSURE. FORMS SHALL BE REMOVED ONCE CONCRETE HAS ATTAINED 75% OF ITS ULTIMATE STRENGTH.
17. THE CONTRACTOR SHALL EXPECT SUBMERGED DRILLING CONDITIONS FOR DEEP FOUNDATION CONSTRUCTION SUCH AS DRILLED PIERS OR DEADMAN ANCHORS AND SHALL MOBILIZE ACCORDINGLY.
18. FOUNDATION INSTALLATION SHALL BE SUPERVISED BY PERSONNEL KNOWLEDGEABLE AND EXPERIENCED WITHIN THE PROPOSED FOUNDATION TYPE. CONSTRUCTION SHALL BE IN ACCORDANCE WITH GENERALLY ACCEPTED INSTALLATION PRACTICES.
19. FOUNDATION DESIGN ASSUMES FIELD INSPECTIONS WILL BE PERFORMED TO VERIFY THAT CONSTRUCTION MATERIALS, INSTALLATION METHODS AND ASSUMED DESIGN PARAMETERS ARE ACCEPTABLE BASED ON CONDITIONS EXISTING AT THE SITE.
20. CONCRETE SHALL BE PLACED IN A MANNER THAT WILL PREVENT SEGREGATION OF CONCRETE MATERIALS, INFILTRATION OF WATER OR SOIL AND OTHER OCCURRENCES WHICH MAY DECREASE THE STRENGTH OR DURABILITY OF THE FOUNDATION.
21. FREE FALL CONCRETE MAY BE USED PROVIDED FALL IS VERTICAL DOWN WITHOUT HITTING SIDES OF EXCAVATION, FORM WORK, REINFORCING BARS, FORM TIES, OR OTHER OBSTRUCTIONS. UNDER NO CIRCUMSTANCES SHALL CONCRETE FALL THROUGH WATER.
22. FOUNDATION DESIGN ASSUMES CONTINUOUS CONCRETE PLACEMENT WITHOUT CONSTRUCTION JOINTS.
23. TOP OF FOUNDATION OUTSIDE LIMITS OF ANCHOR BOLTS SHALL BE SLOPED TO DRAIN WITH A FLOATED FINISH. AREA INSIDE LIMITS OF ANCHOR BOLTS SHALL BE LEVEL WITH A SCRATCHED FINISHED.
24. EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4"x3/4" (19MM x 19MM) MINIMUM.
25. INTIMATE CONTACT BETWEEN CONCRETE AND SOIL-WALLS OF PAD IS ESSENTIAL FOR ADEQUATE FOUNDATION PERFORMANCE. THE CONCRETE SHOULD BE APPROPRIATELY VIBRATED DURING CONSTRUCTION.
26. THE CONTRACTOR MIGHT HAVE TO BUILD THE FOUNDATION WITH SUBMERGED CONDITIONS AND SHALL MOBILIZE ACCORDINGLY.
27. ALL EXISTING GROUNDING RINGS AND DEVICES EXPOSED BY EXCAVATION OR REGRADING SHALL BE REPLACED AND PROPERLY CONNECTED TO EXISTING SYSTEM PER NEC OR LOCAL JURISDICTION REQUIREMENTS.

5.4 DRILLED SHAFT
1. REINFORCING CAGES SHALL BE BRACED TO RETAIN PROPER DIMENSIONS DURING HANDLING AND THROUGHOUT PLACEMENT OF CONCRETE. WHEN TEMPORARY CAGES ARE UTILIZED, BRACING SHALL BE ADEQUATE TO RESIST FORCES OCCURRING FROM THE FLOWING CONCRETE DURING CASING EXTRACTION.
2. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED 3 INCHES (76 NOR BE LESS THAN 2 INCHES (51 MM).
3. SPACERS SHALL BE ATTACHED INTERMITTENTLY THROUGHOUT THE ENTIRE LENGTH OF VERTICAL REINFORCING CAGES TO INSURE CONCENTRIC PLACEMENT OF CAGES IN EXCAVATIONS.
4. FOUNDATION DESIGN HAS BEEN BASED ON THE GEOTECHNICAL ENGINEERING REPORT. CONTRACTOR SHALL CONFORM TO THE PROVISIONS OF THE GEOTECHNICAL STUDY FOR THIS SITE. COMPANY PROVIDING GEOTECHNICAL REPORT TO OBSERVE AND APPROVE IN WRITING DRILLING OF PIER AND POURING OF CONCRETE. COPIES OF WRITTEN APPROVAL SHALL BE SENT TO AW SOLUTIONS. CONTRACTOR SHALL PROVIDE ADEQUATE ASSISTANCE AND NOTIFICATION TO ACCOMPLISH THIS REQUIREMENT.
5. FOUNDATION DESIGN MODIFICATIONS MAY BE REQUIRED IN THE EVENT OF THE FOLLOWING DESIGN PARAMETERS ARE NOT APPLICABLE FOR THE SUBSURFACE CONDITIONS ENCOUNTERED.
6. FOR FOUNDATION AND ANCHOR TOLERANCES REFER TO TOWER MANUFACTURER DRAWINGS FOR SPECIFIC JOB NUMBER AND DATE. IN ABSENCE OF MORE SPECIFIC INFORMATION, THE CONTRACTOR MAY USE THE FOLLOWING:
TOWER FOUNDATION:
· LOCATION: L/24 OF SHAFT DIAMETER (MAX..)
· OUT OF PLUMB: 1.5% OF SHAFT LENGTH NOT TO EXCEED 12.5% OF SHAFT DIAMETER OR 12".
· CONCRETE CUT OFF ELEVATION: +/-1/2"
PLATFORM FOUNDATION:
· LOCATION: 1" IN PLAN
· OUT OF PLUMB: 2"
· CONCRETE CUT OF ELEVATION: +/-1/2"
7. FOUNDATION DESIGN ASSUMES CASING, IF USED, WILL NOT BE LEFT IN PLACE. EQUIPMENT, PROCEDURES AND PROPORTIONS OF CONCRETE MATERIALS SHALL INSURE CONCRETE WILL NOT BE ADVERSELY DISTURBED UPON CASING REMOVAL
8. DRILLING FLUID, IF USED, SHALL BE FULLY DISPLACED BY CONCRETE AND SHALL NOT BE DETRIMENTAL TO CONCRETE OR SURROUNDING SOIL CONTAMINATED CONCRETE SHALL BE REMOVED FROM TOP OF FOUNDATION AND REPLACED WITH FRESH CONCRETE.
9. INTIMATE CONTACT BETWEEN CONCRETE AND SOIL-WALLS OF DRILLED SHAFT IS ESSENTIAL FOR ADEQUATE FOUNDATION PERFORMANCE. THE CONCRETE SHOULD BE APPROPRIATELY VIBRATED DURING CONSTRUCTION.
10. FOUNDATION DESIGN HAS BEEN BASED ON THE GEOTECHNICAL ENGINEERING REPORT AS FOLLOW:
A. AXIAL UPLIFT (NOT FOR MONOPOLE APPLICATIONS).
B. AXIAL (GROSS) COMPRESSION (SUPERIMPOSED POLE DOWNLOAD PLUS PILE SELF IS WITHIN ALLOWABLE PILE COMPRESSIVE CAPACITY BASED ON THE COMBINED ACTION OF THE PILE END ULTIMATE BEARING AND THE PILE ULTIMATE SKIN FICTION WITH THEIR RESPECTIVE SAFETY FACTORS.
C. LATERAL STABILITY IS BASED ON AN ALLOWABLE SOIL PASSIVE SOIL WITH A MINIMUM SAFETY FACTOR OF 2 OF THE REPORT SOIL STRATA TO RESIST THE INDICATED BASE SHEAR AND OVERTURNING MOMENT.
11. DRILLED PIER INSTALLATION SHALL BE OBSERVED AND APPROVED IN WRITING BY GEOTECHNICAL ENGINEER PROVIDING GEOTECHNICAL REPORT.
12. TOWER BASE REACTIONS ARE GIVEN BY TOWER MANUFACTURER FOR TOWER SIZE, TYPE, AND SPECIFIC JOB NUMBER LISTED.
13. FOR ANCHOR BOLTS AND TEMPLATES, SEE TOWER MANUFACTURER. DRAWINGS PROVIDED BY THE TOWER MANUFACTURER REPRESENTATIVE.
14. THE SHAFT CASING SHALL BE A STEEL PIPE ASTM A252, GRADE 2 OR ASTM A36.

8 - STEEL
8.1 STRUCTURAL STEEL
1. ALL STRUCTURAL STEEL SHALL BE A-36
2. ALL PIPE SHALL BE A-53 GRADE B (Fy=35KSI)
3. ALL W SHAPES SHALL BE ASTM A992 (Fy=50KSI)
4. ALL HSS SHALL BE A500 GRADE C (Fy=46KSI)
5. BOLTS SHALL BE A-325 OR A490 AS INDICATED ON PLANS WITH THREADS EXCLUDED FROM THE SHEAR PLANE UNLESS OTHERWISE NOTED.
6. ALL A-325/A490 BOLTS, NUTS, AND WASHERS SHALL BE AMERICAN MADE. THE MANUFACTURER SHALL PROVIDE CERTIFICATION THAT THEY ARE AMERICAN MADE. THREADS SHALL BE EXCLUDED FROM THE SHEAR PLANE FOR ALL BOLT CONNECTIONS. BOLTS SHALL BE INSTALLED W/ PAL NUTS, LOCK WASHERS OR LOCK NUTS.
7. WELDING SHALL BE DONE WITH E80XX, LOW HYDROGEN ELECTRODES IN ACCORDANCE WITH THE LATEST A.W.S. D1.1 WELDING CODE. THE MINIMUM WELD IS 3/16 FILLET ALL AROUND, UON.
8. ALL STRUCTURAL STEEL AND PIPE, EXCEPT A490 & SAE GR 8 BOLTS, TO BE HOT DIPPED GALVANIZED PER ASTM A123. ALL NUTS AND WASHERS SHALL BE GALVANIZED PER ASTM A153. A490 BOLTS SHALL NOT BE GALVANIZED. A490 BOLTS SHALL BE CADMIUM PLATED PER ASTM B766 WITH BAKING PROCESS PRIOR TO PLATING. PLATED A490 BOLTS SHALL CONFORM TO ASTM FI 940-01 TO PREVENT HYDROGEN EMBRITTLEMENT.
9. ALL PIPES SHALL BE GALVANIZED INSIDE AND OUTSIDE.
10. EDGE DISTANCE SHALL BE AT LEAST 1 1/4" UNLESS OTHERWISE NOTED. HOLES SHALL BE PUNCHED OR DRILLED 1/16" LARGER THAN THE DIAMETER OF THE BOLTS THEY WILL RECEIVE UNLESS OTHERWISE NOTED.
11. ALL FIELD DRILLED HOLES AND HELD CUT ENDS SHALL BE GIVEN TWO (2) COATS OF ZRC. GALV1UTE GALVANIZING REPAIR COMPOUND OR APPROVED EQUIVALENT. TOUCH UP AND REPAIR OF GALVANIZED SURFACES SHALL BE PERFORMED PER THE REQUIREMENTS OF ASTM A-780.
12. ALL U-BOLTS SHALL HAVE 2 EA NUTS PER LEG OR ONE ANCO LOCK NUT. U-BOLTS SHALL BE ASTM A193 GR. B7.
13. NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED, OR OTHERWISE ALTERED UNLESS APPROVED IN WRITING BY THE ENGINEER.

11 - ELECTRICAL
11-1 GENERAL
1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, TRANSPORTATION, CONSTRUCTION TOOLS, ETC., FOR THE INSTALLATION OF COMPLETE AND PROPERLY OPERATING SYSTEMS.
2. INSTALLATION SHALL COMPLY WITH ALL APPLICABLE LAWS AND ORDINANCES OF ALL AUTHORITIES HAVING JURISDICTION AND WITH ALL ASSOCIATED UTILITY COMPANY REGULATIONS AND APPLICABLE REQUIREMENTS. INSTALLATION WILL ALSO COMPLY WITH THE LATEST EDITIONS OF ALL CODES AND STANDARDS OF THE ENTITIES LISTED ON SHEET T-2, NOTE 2.
THE MOST STRINGENT CODE APPLY IN THE CASE OF DISCREPANCIES OR DIFFERENCES IN THE CODE REQUIREMENTS.
3. THE CONTRACTOR SHALL SECURE ALL NECESSARY ELECTRICAL PERMITS AND PAY ALL REQUIRED FEES.
4. RECORD DRAWINGS: MAINTAIN A RECORD OF ALL CHANGES, SUBSTITUTIONS BETWEEN WORK AS SPECIFIED AND INSTALLED. RECORD CHANGES ON A CLEAN SET OF CONTRACT DOCUMENTS WHICH SHALL BE TURNED OVER TO THE CONSTRUCTION MANAGER UPON COMPLETION OF THE PROJECT.
5. ALL BROCHURES, OPERATION MANUALS, CATALOGS, SHOP DRAWINGS, SPECIFICATIONS, ETC., SHALL BE TURNED OVER TO THE CARRIER AT THE COMPLETION OF THE PROJECT.
6. GUARANTEE/WARRANTY: GUARANTEE INSTALLATION TO BE FREE OF DEFECTS, SHORTS, GROUND, ETC., FOR A PERIOD OF ONE YEAR. FURNISH WARRANTY SO THE DEFECTIVE MATERIAL AND/OR WORKMANSHIP WILL BE REPAIRED/REPLACED IMMEDIATELY UPON NOTIFICATION AT NO COST TO THE OWNER FOR PERIOD OF WARRANTY. IF, AFTER THIRTY (30) DAYS THE CORRECTIONS ARE NOT COMPLETE, THE OWNER RESERVES THE OPTION OF ARRANGING FOR THE NECESSARY REPAIRS AND BACKCHARGING THE CONTRACTOR FOR THE WORK.
7. THE CONTRACTOR SHALL COORDINATE WITH OTHER TRADES, AS NECESSARY.
8. DO NOT INTERRUPT EXISTING SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER OF THAT SERVICE AND WRITTEN PERMISSION OF THIS INSTALLATION'S CARRIER.
9. CHANGES: NO ADDITIONAL COSTS FOR LABOR OR MATERIALS WILL BE ALLOWED FOR CHANGES OR MODIFICATIONS MADE UNLESS PRIOR WRITTEN APPROVAL IS OBTAINED FROM THE ARCHITECT, ENGINEER OR OWNER IN THE FORM OF A CHANGE ORDER.
10. DRAWINGS: ELECTRICAL DRAWINGS ARE DIAGRAMMATIC IN NATURE AND ARE NOT TO BE SCALED.
11. DISCREPANCIES: DISCREPANCIES ON THESE PLANS, SPECIFICATIONS, ETC., MUST BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ENGINEER.
12. SURVEY AND CONDITIONS: VISIT THE JOB SITE PRIOR TO SUBMITTING BID, AND MAKE A SURVEY OF EXISTING CONDITIONS WHICH MAY AFFECT THE WORK TO BE PERFORMED. NO OTHER ALLOWANCES WILL BE GIVEN FOR THE SITE CONDITION.
13. CO-OPERATION: CO-OPERATE WITH OTHER CONTRACTORS AND SUBCONTRACTORS ON SITE. ARRANGE AND EXECUTE WORK IN SUCH A MANNER AS REQUIRED FOR THE SATISFACTORY AND EFFICIENT CONSTRUCTION OF THIS PROJECT BY ALL TRADES CONCERNED.
14. TEMPORARY POWER: ARRANGE AND PAY FOR THE CARRIER'S TEMPORARY POWER DURING CONSTRUCTION.
15. INSTALLATION SHALL COMPLY SPECIFICALLY WITH ENGINEERING STANDARDS MANUAL. ANY DEVIATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER PRIOR TO COMMENCEMENT OF WORK.
16. PROCUREMENT VERIFICATION: PROVIDE AN ITEMIZED CERTIFICATION TO THE PROJECT MANAGER THAT EQUIPMENT AND RELATED HARDWARE HAVE BEEN ORDERED WITHIN 24 HOURS OF NOTICE TO PROCEED.
17. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

11.2 INSPECTIONS
1. GENERAL: DURING AND UPON COMPLETION OF WORK, ARRANGE AND PAY ALL ASSOCIATED INSPECTIONS OF ALL ELECTRICAL WORK INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE CONDITIONS OF THE CONTRACT.
2. INSPECTIONS REQUIRED: AS PER THE LAWS AND REGULATIONS OF THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
3. INSPECTION AGENCY: APPROVED BY THE LOCAL AND/OR STATE AGENCIES HAVING JURISDICTION AT THE PROJECT SITE.
4. CERTIFICATES: SUBMIT ALL REQUIRED INSPECTION CERTIFICATES TO THE CARRIER AND UTILITY.

11.3 HANGERS AND SUPPORTS
1. MATERIALS: ALL HANGERS, SUPPORTS, FASTENERS AND HARDWARE SHALL BE ZINC COATED OR OF EQUIVALENT CORROSION RESISTANCE BY TREATMENT OR INHERENT PROPERTY AND SHALL BE MANUFACTURED PRODUCTS DESIGNED FOR THE APPLICATION. PRODUCTS FOR OUTDOOR USE SHALL BE HOT DIP GALVANIZED.
2. TYPES: HANGERS, STRAPS, RISER SUPPORTS, CLAMPS, U-CHANNEL, THREADED RODS, ETC., AS INDICATED OR REQUIRED.
3. INSTALLATION: RIGIDLY SUPPORT AND SECURE ALL MATERIAL, RACEWAY AND EQUIPMENT TO BUILDING STRUCTURE USING HANGERS, SUPPORTS AND FASTENERS SUITABLE FOR THE USE ON MATERIALS AND LOADS ENCOUNTERED. PROVIDE ALL NECESSARY HARDWARE. PROVIDE CONDUIT SUPPORTS AT MAXIMUM 5 FT. O.C.
4. STRUCTURAL MEMBERS: DO NOT CUT, DRILL OR WELD ANY STRUCTURAL MEMBER EXCEPT AS SPECIFICALLY APPROVED BY THE ENGINEER.
5. MISCELLANEOUS SUPPORTS: PROVIDE ANY ADDITIONAL STRUCTURAL SUPPORT STEEL BRACKETS, ANGLES, FASTENERS AND HARDWARE AS REQUIRED TO ADEQUATELY SUPPORT ALL ELECTRICAL MATERIALS AND EQUIPMENT.
6. ONE-HOLE STRAPS SHALL NOT BE USED FOR CONDUITS LARGER THAN 3/4 INCH.

11.4 ENCLOSURES/WIREWAYS.
1. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY-COATED SHEET STEEL, SHALL MEET OR EXCEED UL 50, AND BE RATED NEMA 1 (OR BETTER) INDOORS OR NEMA 3R (OR BETTER) OUTDOORS.
2. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLUDE A HINGED COVER AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.
3. JUNCTION BOXES: JUNCTION BOXES SHALL BE A MINIMUM SIZE OF 4 INCHES SQUARE BY 1-1/4 INCHES DEEP.

11.5 HOLES, SLEEVES AND OPENINGS
1. GENERAL PROVIDE ALL HOLES, SLEEVES AND OPENINGS REQUIRED FOR THE COMPLETION OF WORK AND RESTORE ALL DAMAGED SURFACES TO MATCH SURROUNDING SURFACES.
2. CONDUIT PENETRATIONS: SIZE CORE-DRILLED HOLES SO THAT AN ANNULAR SPACE OF NOT LESS THAN 1/4 INCH AND NOT MORE THAN 1 INCH IS LEFT AROUND THE CONDUIT, PIPE, ETC. WHEN OPENINGS ARE CUT IN LIEU OF CORE-DRILLED, PROVIDE SLEEVE IN ROUGH OPENING. SIZE SLEEVES TO PROVIDE AN ANNULAR SPACE OF NOT LESS THAN 1/4 INCH AND NOT MORE THAN 1 INCH AROUND THE CONDUIT, PIPE, ETC. PATCH AROUND SLEEVE TO MATCH SURROUNDING SURFACE.
3. PROVIDE APPROPRIATE WEATHERPROOFING MATERIALS FOR PENETRATIONS NEEDING TO BE SEALED FROM POTENTIAL WATER INTRUSION. PROVIDE FIREPROOF MATERIALS FOR PENETRATIONS REQUIRING A FIRE RATED SEAL REFER TO CUTTING AND PATCHING NOTES UNDER SECTION 1 - GENERAL
4. IF ANY ROOFTOP WORK IS TO BE PERFORMED, THE CONTRACTOR SHALL USE THE BUILDING OWNER'S APPROVED ROOFING CONTRACTOR TO PREVENT VOIDING ANY EXISTING ROOFING WARRANTIES. ANY DAMAGE TO THE EXISTING ROOFING MEMBRANE SHALL BE REPAIRED IMMEDIATELY TO AVOID MOISTURE INTRUSION INTO THE BUILDING SHELL.
5. GENERAL PROVIDE ALL CUTTING, DRILLING, FITTING AND PATCHING NECESSARY FOR ACCOMPLISHING THE WORK. THIS INCLUDES REMOVAL AND REPLACEMENT OF DEFECTIVE WORK AND WORK NOT CONFORMING TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
6. REPAIRS: REPAIR ANY AND ALL DAMAGE TO WORK OF OTHER TRADES CAUSED BY CUTTING AND PATCHING OPERATIONS, USING SKILLED MECHANICS OF THE TRADES INVOLVED.
7. DO NOT CUT MAJOR STRUCTURAL ELEMENTS WITHOUT APPROVAL PATCHING SHALL BE OF QUALITY EQUAL TO AND OF MATCHING APPEARANCE OF EXISTING CONSTRUCTION.

11.6 CONDUCTORS
1. USE 98% CONDUCTIVITY COPPER WITH TYPE XHHW-2 INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG, STRANDED CONDUCTORS FOR WIRE LARGER THAN NO. 8 AWG. USE PRESSURE-TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER, SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER. ALUMINUM CONDUCTORS SHALL NOT BE USED.
2. NO BX, MC OR ROMEX CABLE SHALL BE PERMITTED.
3. EACH END OF EVERY POWER, GROUNDING AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAP WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS.
4. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL REMOVE SHARP EDGES.
5. ALL CONDUIT SIZES SPECIFIED IN THIS DOCUMENT WERE DONE SO TAKING INTO ACCOUNT THE USE OF COPPER CONDUCTORS.

11.7 ELECTRICAL SERVICE
1. GENERAL COMPLY WITH AND CO-ORDINATE ALL REQUIREMENTS OF THE UTILITY COMPANY.
2. SHORT CIRCUIT RATINGS: PROVIDE EQUIPMENT WITH HIGHER FAULT CURRENT RATINGS AS NEEDED TO MATCH UTILITY COMPANY AVAILABLE FAULT CURRENT.
3. CONTRACTOR TO VERIFY UTILITY CO. FAULT CURRENT AND ENSURE THAT ALL EQUIPMENT MEETS FAULT CURRENT (AT A MINIMUM ALL EQUIPMENT TO BE 10,000 AIC).
4. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS WITH THE ELECTRIC UTILITY RELATIVE TO A TIMELY INSTALLATION OF THE NEW SERVICE AND PAYING ALL ASSOCIATED FEES.
5. IDENTIFICATION: IDENTIFY SERVICE DISCONNECTION MEANS WITH PERMANENT NAMEPLATE.
6. THE LOCATION SHOWN FOR A UTILITY POLE OR CONNECTION TO NEW UTILITIES IS FOR CONCEPTUAL USE ONLY. THE CONTRACTOR SHALL COORDINATE THE ACTUAL LOCATION WITH THE ELECTRIC UTILITY.
7. LOCATION AND ARRANGEMENTS: DRAWINGS INDICATE DIAGRAMMATICALLY THE DESIRED LOCATION OF EQUIPMENT, FIXTURES, OUTLETS, ETC., AND ARE NOT TO BE SCALED. PROPER JUDGMENT MUST BE EXERCISED IN THE EXECUTION TO ENSURE THE BEST POSSIBLE INSTALLATION.
8. PANEL AND DISTRIBUTION BOARD IDENTIFICATION: SWITCHBOARDS, PANELBOARDS, TRANSFORMERS AND DISTRIBUTION SECTIONS SHALL BE IDENTIFIED WITH ENGRAVED, WHITE ON BLACK, LAMINATED, RIGID PHENOLIC NAMEPLATES WITH 1/4 INCH CHARACTERS, SECURELY AFFIXED TO FACE OF CABINET.

11.8 TELEPHONE SERVICE
1. GENERAL: INSTALLATION SHALL BE IN ACCORDANCE WITH TELEPHONE UTILITY COMPANY'S RULES AND REGULATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS WITH THE TELEPHONE UTILITY RELATIVE TO A TIMELY INSTALLATION OF THE INCOMING TELEPHONE SERVICES AND PAYING ALL ASSOCIATED FEES.
3. METALLIC CONDUIT OR TUBING FOR T1 LINES SHALL BE BONDED TO GROUND ON BOTH ENDS.
4. THE LOCATION SHOWN FOR A TELEPHONE POLE OR CONNECTION TO THE TELCO DEMARC IS FOR CONCEPTUAL USE THE CONTRACTOR SHALL COORDINATE THE ACTUAL LOCATION WITH THE TELEPHONE UTILITY.

11.9 CHECKOUT, TESTING AND ADJUSTING
1. CORRECTION/REPLACEMENT: AFTER TESTING BY CONTRACTOR, OWNER OR ENGINEER, CORRECT ANY DEFICIENCIES AND REPLACE MATERIALS AND EQUIPMENT SHOWN TO BE DEFECTIVE OR UNABLE TO PERFORM AT DESIGN OR RATED CAPACITY.
2. POWER CONDUCTORS: CONTRACTOR SHALL CONDUCT A CONTINUITY AND INSULATION TEST ON CONDUCTORS BETWEEN SERVICE DISCONNECT SWITCH AND LOAD CENTER.
3. WHEN SITE POWER IS DERIVED FROM A 3-PHASE SOURCE, LOAD READINGS WILL BE TAKEN AND RECORDED TO MAINTAIN A BALANCED LOAD AT THE PRIMARY SOURCE. RECORDS SHALL BE RETURNED TO THE OWNER'S REPRESENTATIVE.

11.10 RACEWAY SYSTEMS / CONDUIT
1. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC CONDUIT. UNDERGROUND PVC CONDUIT SHALL TRANSITION TO RIGID GALVANIZED STEEL CONDUIT OR SCHEDULE 80 PVC CONDUIT BEFORE RISING ABOVE GRADE OR CONCRETE SLAB. EXPOSED CONDUIT SHALL BE RIGID GALVANIZED STEEL (RGS) CONDUIT OR SCHEDULE 80 PVC CONDUIT.
2. GRS CONDUITS, WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT.
3. ELECTRICAL METALLIC TUBING (EMT) OR RIGID, NONMETALLIC CONDUIT (RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
4. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (RIGID PVC SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
5. LIQUID—TIGHT FLEXIBLE METALLIC CONDUIT (UQUID-TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
6. PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LB. TEST POLYETHYLENE CORD.
7. ALL CONDUIT BENDS SHALL BE MINIMUM OF 24 INCH RADIUS.
8. ALL METALLIC RACEWAYS SHALL BE GROUNDED PER NEC.
9. THE CONTRACTOR SHALL FIELD VERIFY THE BEST AND LEAST DISRUPTIVE ROUTING OF CONDUITS, CABLE TRAYS AND CONDUIT ROUTING IS SHOWN AS A GUIDE ONLY, ACTUAL CONDUIT PLACEMENT IS TO BE DONE IN A PROFESSIONAL MANNER.

11.11 BELOW GRADE
1. THIS SITE INCLUDES NEW CRITICAL UNDERGROUND ELECTRIC, TELEPHONE AND OTHER SERVICES IN THE VICINITY OF OTHER UNDERGROUND SERVICES AND EQUIPMENT SUPPORTS. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID SERVICE DISRUPTION TO THESE FACILITIES. THE CONTRACTOR SHALL ALSO CONTACT ELECTRIC AND TELEPHONE, AND ALL OTHER APPROPRIATE AGENCIES PRIOR TO EXCAVATION AT THIS SITE.
2. PRIOR TO EXCAVATION, A UTILITY MARK OUT SHALL BE DONE TO LOCATE EXISTING UNDERGROUND UTILITIES. ALL UNDERGROUND UTILITIES MUST BE LOCATED AND MARKED OUT PRIOR TO ANY EXCAVATION WORK BEING PERFORMED. PHOTOS SHALL BE TAKEN OF ALL UNDERGROUND WORK AND GIVEN TO THE CARRIER DURING THE SITE'S HANDOFF.
3. ALL TRENCHING AND EXCAVATION WITHIN EXISTING COMPOUNDS MUST BE PERFORMED BY HAND IN ACCORDANCE WITH THE OWNER'S SPECIFICATIONS. ANY OTHER METHODS OF DIGGING MUST FIRST BE APPROVED BY THE CONSTRUCTION MANAGER.
4. ALL LOW VOLTAGE CONDUIT (600V OR LESS) SHALL HAVE A MINIMUM BURIAL DEPTH OF 24'. ALL HIGH VOLTAGE CONDUIT (600V OR MORE) SHALL HAVE A MINIMUM BURIAL DEPTH OF 36".
5. UNDERGROUND CONDUIT SHALL BE ENCASED IN REINFORCED CONCRETE IN AREAS OF VEHICLE TRAFFIC. CONCRETE ENCASEMENT SHALL BE 3" MINIMUM ALL AROUND AND BETWEEN CONDUITS.
6. ALL BURIED CONDUIT SHALL BE IDENTIFIED WITH ELECTRICAL MARKER TAPE. TAPE SHALL BE PLACED 12" ABOVE CONDUIT FOR EASY IDENTIFICATION.

11.12 EQUIPMENT
1. THE MAIN CIRCUIT BREAKER SHALL BE RATED FOR STANDARD A.I.C. RATING HIGHER THAN INCOMING EQUIPMENT A.I.C.
2. ALL EQUIPMENT SHALL BE BRACED FOR STANDARD A.I.C. RATING HIGHER THAN INCOMING FROM UTILITY CO.
3. THE CONTRACTOR SHALL PROVIDE AN ITEMIZED CERTIFICATION TO THE CARRIER OF ALL EQUIPMENT AND RELATED HARDWARE, SPECIFIED TO BE PURCHASED AND INSTALLED BY THE CONTRACTOR, WHERE ORDERED WITHIN 24 HRS OF THE NOTICE TO PROCEED.
4. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH ITS VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (I.E., PANELBOARD AND CIRCUIT ID'S).
5. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY-COATED OR NON-CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND BE RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER-PROTECTED (WP OR BETTER) OUTDOORS.
6. NONMETALLIC RECEPTACLE SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2, AND BE RATED NEMA 1 (OR BETTER) INDOORS OR WEATHER-PROTECTED (WP OR BETTER) OUTDOORS.

11.13 TRANSIENT VOLTAGE SURGE SUPPRESSION (TVSS)
1. TVSS DEVICES FOR AC POWER SHALL BE INSTALLED IN ALL EXISTING FACILITIES THAT ARE MISSING TVSS DEVICES OR HAVE UNSUITABLE TVSS DEVICES.
2. THE AC POWER COMMON MODE SURGE SUPPRESSOR SHALL BE CONNECTED TO THE COMMERCIAL POWER INPUT SIDE OF THE MANUAL TRANSFER SWITCH.
3. IN MARKETS WITH LIGHTNING ZONE > OR = TO 4, RF TVSS DEVICE SHALL BE INSTALLED AT THE ENTRANCE TO THE SHELTER OR AS CLOSE AS POSSIBLE TO THE BTS CABINET FOR OUTDOOR SITES, TO PROTECT AGAINST LIGHTNING AND TRANSIENT VOLTAGES.
4. A T1 TRANSPORT TVSS DEVICE SHALL BE INSTALLED AT ALL SITES BETWEEN THE NIU AND THE BTS.

12 - GROUNDING
12.1 GENERAL GROUNDING MATERIALS AND NOTES
1. THE SUBCONTRACTOR SHALL VERIFY THAT THE SYSTEM IS EFFECTIVELY GROUNDED, MEETS NEC ARTICLE 250 REQUIREMENTS, IS ACCEPTABLE TO THE LOCAL UTILITY AND THE LOCAL AUTHORITY HAVING JURISDICTION, AND MEETS THE CARRIER'S ELECTRICAL AND GROUNDING SPECIFICATIONS. FOLLOWING COMPLETEION OF WORK, CONDUCT GROUND OWNER'S REPRESENTATIVE WILL INSPECT CADWELDS AND REVIEW GROUND TEST PRIOR TO BURIAL USE CLEAN SAND AND CLAY BACKFILL FOR BURIED GROUND CONDUCTORS.
2. ALL DETAILS SHOWN ARE DIAGRAMMATICAL ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
3. NOTIFY CONSTRUCTION MANAGER IF THERE ARE ANY DIFFICULTIES INSTALLING THE GROUND SYSTEM DUE TO SITE/SOIL CONDITIONS.
4. GROUND CONNECTIONS: WHERE GROUND CONNECTIONS ARE MADE, THE CONTACT POINTS SHALL BE THOROUGHLY CLEANED AND MADE FREE OF FOREIGN MATERIAL SUCH AS PAINT, GALVANIZATION, AND CORROSION, TO ENSURE ADEQUATE BOND. REFER TO EXOTHERMIC WELD, LUGS, AND ANTI-OXIDATION COMPOUND NOTES FOR FURTHER DETAILS.
5. GROUND WIRE: OUTSIDE / UNDERGROUND: MINIMUM NO. 2 AMERICAN WIRE GAUGE (AWG) BARE, SOLID, ANNEALED, TINNED COPPER WIRE (BTCW) BUT SIZED IN ACCORDANCE WITH NEC TABLE 250.66. UNDER NO CIRCUMSTANCES IS STRANDED WIRE ACCEPTABLE. ALL BURIED WIRE SHALL BE INSTALLED TO MEET MINIMUM BEND RADIUS. SHARP BENDS AND KINKS ARE NEVER ACCEPTABLE. WHEN ANY GROUNDING OR BONDING WIRE RUNS THROUGH CONCRETE, IT SHALL BE SLEEVED IN PVC. GROUND WIRES SHALL NOT BE INSTALLED OR ROUTED THROUGH HOLES IN ANY METAL OBJECTS OR SUPPORTS.
6. GROUND WIRE - INSIDE: WIRE SHALL BE NO. 2 AWG THHN OR THWN-2, CLASS B STRANDED COPPER CABLE RATED FOR 9(T WC (WET AND DRY) OPERATION, GREEN INSULATED (A HIGH-STRAND COUNT WIRE IS PREFERRED).
7. BURIED GROUND RING: THE EQUIPMENT/SHELTER PAD OR PLATFORM SHALL HAVE A BURIED GROUND RING (BGR) THAT CONSISTS OF A RING OF NO. 2 AWG BARE, SOLID, ANNEALED, TINNED COPPER WIRE AND EXOTHERMICALLY WELDED GROUND RODS. THE BGR DESIGN SHOULD RESULT IN 10 OHMS OR LESS WITH SOIL RESISTIVITIES OF UP TO 50,000 OHM-CM. SOIL RESISTIVITIES HIGHER THAN THIS WILL REQUIRE FURTHER AUGMENTATION. ALL UNDERGROUND (BELOW GROUNDING CONNECTIONS, INCLUDING COPPER GROUND RODS, CHEMICAL GROUND ROD ATTACHMENTS, AND GROUND LEADS FROM EQUIPMENT, TOWER, AND COAX SHALL BE MADE BY AN EXOTHERMIC WELD. THE GROUND RING SHALL BE BETWEEN A MINIMUM OF TWO FEET FROM THE SHELTER FOUNDATION, BTS PAD, OR PLATFORM PERIMETER AT A MINIMUM DEPTH OF TWO FEET, SIX INCHES, AND WITH NO BEND HAVING A RADIUS OF LESS THAN TWO FEET. THE TRENCH SHALL BE DUG 6 INCHES BELOW THE REQUIRED WIRE DEPTH. GROUND RODS SHALL BE INSTALLED, AT A MINIMUM, AT EACH CORNER OF THE BGR, OR PER NFPA 70, ARTICLE 250-56. EVERY EFFORT SHALL BE MADE TO ENSURE THAT ALL GROUND PATHS TO THE BGR ARE INSTALLED SO THAT ANY POTENTIAL DISCHARGE OF ELECTRICITY WILL BE DOWNWARD, OR, IF NECESSARY, FLAT. AT NO POINT SHOULD ANY GROUND PATH GO UPWARD.
8. EXOTHERMIC WELDING: EXOTHERMIC WELDS SHALL BE CADWELD, A REGISTERED TRADEMARK OF ERICO PRODUCTS, INC. OF CLEVELAND, OHIO, OR THERMOWELD, A DIVISION OF CONTINENTAL INDUSTRIES, INC. OF TULSA OKLAHOMA OR EQUIVALENT.
9. GROUND ROD: 5/8" X 8-FEET (MINIMUM LENGTH) STEEL WITH PURE COPPER JACKET NOT LESS THAN 0.0012 INCHES GROUND RODS SHALL BE SPACED NO GREATER THAN 15 FT O.C. AND NO LESS THAN 6 FT. O.C.
10. GROUND ROD COUPUNG: 5/8' GROUND ROD COUPLING MADE OF THE SAME MATERIAL AS THE GROUND ROD TO PREVENT DISSIMILAR METAL HIGH OXIDATION POINTS.
11. CHEMICAL GROUND ROD: COMPRISED OF A HOLLOW COPPER GROUND ROD, A GROUND TESTWELL, A 4-0' EXOTHERMICALLY WELDED PIGTAIL, AND CONDUCTIVE BACKFILL MATERIAL THE CHEMICAL GROUND ELECTRODE SHALL BE MADE OF A MINIMUM 2 INCH I.D. TYPE K COPPER TUBE WITH A MINIMUM WALL THICKNESS OF 0.083 INCH AND SHALL BE A MINIMUM OF 8 FEET IN LENGTH. THE CHEMICAL GROUND ROD COPPER TUBE SHALL BE FILLED WITH NON-HAZARDOUS METALLIC SALTS. CHEMICAL GROUND ROD SHALL BE UL LISTED. IN SITUATIONS WHERE DRILLING VERTICALLY IS TOO DIFFICULT OR COSTLY, HORIZONTAL L-SHAPE CHEMICAL GROUND RODS ARE ACCEPTABLE.
12. GROUND BARS: GROUND BARS SHALL BE MANUFACTURED EXACTLY AS SPECIFIED. NO DEVIATIONS ARE ALLOWED. DIMENSIONS SHALL BE ACCURATE WITHIN 1/32 INCH. HOLE DIAMETERS SHALL BE ACCURATE WITHIN 1/64 INCH. BARS SHALL BE 1/4 INCH THICK SOLID ELECTRICAL GRADE COPPER MANUFACTURED BY HARGER OR APPROVED EQUAL GROUND BARS SHALL NOT BE FABRICATED OR MODIFIED IN THE HELD. COAXIAL CABLE GROUND BARS SHOULD BE MECHANICALLY CONNECTED TO THE TOWER STRUCTURAL STEEL HOWEVER, DO NOT DRILL HOLES OR USE EXOTHERMIC WELDS TO CONNECT GROUND LEADS TO A STEEL TOWER EXCEPT ON STEEL TABS OR FLANGES SPECIFICALLY DESIGNED FOR THAT PURPOSE. HOLES AND/OR EXOTHERMIC WELDING CAN NEGATIVELY IMPACT THE STRUCTURAL INTEGRITY OF THE TOWER AND INCREASE CHANCES OF CORROSION.
13. INSULATORS: POLYESTER FIBERGLASS, 15 KV MINIMUM DIELECTRIC STRENGTH, FLAME RESISTANT PER UL 94 VO CLASSIFICATION.
14. CLIPS: WHEN SECURING ANY GROUND WIRES, SOLID OR STRANDED, INSULATED OR UNINSULATED, NEVER USE ANY CUPS OR OTHER DEVICES THAT ARE CONDUCTIVE AND FORM A CLOSED LOOP. METALLIC CUPS ARE ACCEPTABLE IF THEY DO NOT FORM A CLOSED LOOP.
15. GROUND CLAMP: BURNDY GAR STYLE UL CLAMP WITH TWO-HOLE PROVISIONS FOR LONG BARREL MULTIPLE CRIMP TWO-HOLE LUGS.
16. COAX GROUNDING KIT: COAX GROUND KITS SHALL BE FROM THE SAME MANUFACTURER AS THE COAX. GROUND KITS SHALL BE SOLID STRAP TYPE WITH NO. 6 AWG WIRE AND 2-HOLE COMPRESSION CRIMPED LUGS (INSTALLED USING THE PROPER UL TOOL AND CIRCUMFERENTIAL HEXAGON DIE). BRAID OR HOSE CLAMP TYPE SHALL NOT BE USED. SOLID COPPER STRAP TYPE WITH SINGLE HOLE LUGS SHALL NOT BE USED. ALL COAX CABLES ARE TO BE GROUNDED AT THEIR SECTOR CGB, THE COLLECTOR CGB, MIDPOINT CGB (IF REQUIRED), BOTTOM CGB, WAVEGUIDE BRIDGE CGB (IF REQUIRED), AND AT THE SHELTER WALL. A MIDPOINT CGB IS ONLY REQUIRED IF THE COAX LENGTH EXCEEDS 200. A WAVEGUIDE BRIDGE CGB IS ONLY REQUIRED WHEN THE LENGTH OF CABLE (FROM TOWER TO EQUIPMENT) IS GREATER THAN 15 FEET.
17. WEATHERPROOFING: ALL COAX GROUND KITS SHALL BE WEATHERPROOFED. ONLY GROUND KITS APPROVED BY THE COAX MANUFACTURER SHALL BE USED.
18. METALLIC CONDUIT: ANY GROUND WIRES, SOLID OR STRANDED, THAT PASS THROUGH CONDUIT, METALLIC SLEEVE, OR CABLE COVER, SHALL BE BONDED AT BOTH ENDS.
19. ANTENNA GROUNDING - ALL ANTENNAS (INCLUDING THE GPS ANTENNAS) ARE GROUNDED BY THEIR MOUNTS/MASTS AND BY THE GROUND KITS ON THE COAXIAL CABLE CONNECTED TO THE COAX GROUND BARS. DO NOT INSTALL SEPARATE ANTENNA GROUND CONNECTIONS UNLESS SPECIFIED BY THE ANTENNA'S MANUFACTURER. THE GPS ANTENNA (S) MUST BE INSTALLED AND CONNECTED TO THE COAX GROUND BAR AT THE END OF THE WAVEGUIDE BRIDGE.
20. MICROWAVE ANTENNA GROUNDING: TOWERS THAT HAVE MICROWAVE ANTENNAS SHALL HAVE GROUND KITS AND COAX GROUND BAR INSTALLED BELOW AT EACH DISH ELEVATION. INSTALL GROUND KITS ON ALL MICROWAVE LINES AT ALL OTHER COAX GROUND BAR LOCATIONS.
21. LUGS: ALL LUGS SHALL BE 2-HOLE, LONG BARREL, TINNED SOLID COPPER UNLESS OTHERWISE SPECIFIED, INSTALLED USING THE PROPER UL TOOL AND CIRCUMFERENTIAL HEXAGON DIE. LUGS SHALL BE THOMAS AND BETTS, BURNDY, ERICO OR EQUIVALENT. BOLT HOLE DIAMETER AND SPACING ON ALL GROUND LUGS SHALL MATCH HOLE DIAMETER AND SPACING OF THE GROUND BAR. TAG ALL GROUND LUGS THAT ARE ATTACHED TO ANY PUBLICALLY ACCESSIBLE GROUND POINT (I.E. WATER PIPES, BUILDING STEEL, ETC). THE TAGS SHALL READ, "DO NOT DISCONNECT". OUTDOOR SITES THAT ARE LOCATED INSIDE A LOCKED TELECOMMUNICATIONS COMPOUND ARE NOT CONSIDERED PUBLICALLY ACCESSIBLE PROVIDE STAINLESS STEEL HARDWARE AND LOCK WASHERS ON ALL MECHANICAL CONNECTION.
22. ANTI-OXIDATION COMPOUND: ANTI-OXIDATION COMPOUND SHALL BE THOMAS AND BETTS KOPR-SHIELD (TM OF JET LUBE, INC.) OR BURNDY PENETROX - E. ANTI-OXIDATION COMPOUND SHALL BE APPLIED BETWEEN LUG AND GROUND BAR ONLY. DO NOT COVER THE LUG.
23. SERVICE DISCONNECT GROUNDING: IF THERE IS A SERVICE DISCONNECT SEPARATE FROM THE PPC MAIN CIRCUIT BREAKERS, THE NEUTRAL TO GROUND BOND SHALL BE MADE AT THE SERVICE DISCONNECT SWITCH LOCATED SEPARATELY AND ON THE SUPPLY SIDE OF THE PPC CABINET AND NO NEUTRAL TO GROUND CONNECTION SHOULD BE IN THE PPC. IT IS CRITICAL THAT ONLY ONE NEUTRAL TO GROUND BOND BE MADE AT THE SERVICE ENTRANCE EQUIPMENT AS DEFINED BY THE NATIONAL ELECTRIC CODE.
24. INCORPORATE PULL BOXES (AS REQUIRED PER SEC 22-328 (b) (3)

12.2 OUTDOOR EQUIPMENT SPECIFIC NOTES:
1. ON CONCRETE PAD: BTS EQUIPMENT GROUND LEADS SHALL BE CONNECTED TO THE EQUIPMENT CABINETS AS DICTATED BY THE BTS MANUFACTURER. UNLESS SPECIFIED OTHERWISE BY MANUFACTURER, GROUND LEADS WILL BE No. 2 AWG BARE, SOLID, ANNEALED, TINNED COPPER WIRE. THE OTHER END OF THE GROUND LEADS SHALL BE CONNECTED TO THE EQUIPMENT GROUND BAR (EGB) OR MGB IF EACH EQUIPMENT CABINET HAS SEPARATE, EXTERNAL ATTACHMENT POINTS FOR GROUND LUGS. IF THE BTS EQUIPMENT CABINETS COLLECTIVELY HAVE A SINGLE GROUND ATTACHMENT, THE GROUND LEAD MAY BE EXOTHERMICALLY WELDED DIRECTLY TO THE BGR. ON A CONCRETE PAD, THE EGB WILL BE HELD FLAT, SEVERAL INCHES ABOVE THE SURFACE OF THE PAD, SECURELY BOLTED WITH CHERRY INSULATORS TO PREVENT MOVEMENT.
2. ON STEEL PLATFORM: IF THE BTS EQUIPMENT IS MOUNTED ON A STEEL FRAME OR I-BEAMS, THE STEEL SHALL BE BONDED TO THE BGR AT OPPOSITE SIDES WITH 2 No. 2 AWG BTCW LEADS EXOTHERMICALLY WELDED AT THE END. THE BTCW GROUND LEADS SHALL BE LOCATED AND SECURED TO MINIMIZE THE POSSIBILITY OF BEING A TRIP HAZARD. ON A PLATFORM, THE MGB WILL BE SECURELY MOUNTED BELOW THE PLATFORM USING CHERRY INSULATORS TO ELECTRICALLY ISOLATE THE BAR FROM THE STEEL PLATFORM. IN THIS CONFIGURATION, THE MGB WILL TYPICALLY BE USED FOR BITS EQUIPMENT, COAX CABLE, AND PLATFORM GROUNDING.

13 - RF AND TOWER APPURTENANCE INSTALLATION RELATED NOTES
13.1 COAXIAL CABLE REQUIREMENTS;
1. GENERAL PROVIDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY FOR RECEIVING, INSTALLING, TESTING, AND ADJUSTING ANTENNA CABLES FROM THE ANTENNA TO THE CONNECTIONS AT THE BASE TRANSMISSION SYSTEM (BTS). THIS SHALL INCLUDE ALL EQUIPMENT SHOWN OR REQUIRED FOR A COMPLETE OPERATING SYSTEM. ANTENNA, ANTENNA CABLES, CONNECTORS, AND FITTING SHALL BE THIRD PARTY FURNISHED COMPONENTS AS SHOWN ON THE BILL OF MATERIALS.
2. CABLE HANGERS SHALL BE INSTALLED AT A MAXIMUM 4' SPACING.
3. INSTALLATION
A. COAXIAL CABLE LENGTHS SHALL BE HELD MEASURED. INSTALLER SHALL NOTIFY CARRIER PRIOR TO PURCHASE OF CABLE OF THE OVERALL LENGTH REQUIRED.
B. COAXIAL CABLE TYPE AND DIAMETER SHALL BE VERIFIED WITH CARRIER.
C. COAXIAL CABLES SHALL BE LABELED IN ACCORDANCE WITH CARRIER ELECTRICAL MATERIALS AND METHODS SPECIFICATIONS. ALL MAIN CABLES WILL BE COLOR CODED AT FOUR LOCATIONS A) AT ANTENNA PRIOR TO JUMPER, B) AT THE BOTTOM OF THE TOWER, C) EXTERIOR PART OF THE WAVE GUIDE ENTRY PORT (AT THE SHELTER/CABINET WALL), D) INTERIOR OF THE SHELTER/CABINET.
D. PROVIDE AT LEAST 6 OF SLACK IN THE MAIN COAXIAL CABLES AT THE ANTENNA END TO PROVIDE FOR FUTURE CONNECTOR REPLACEMENT.
E. INSTALL CONNECTORS TO COAXIAL CABLE AT BOTH ENDS (ANTENNA END AND BTS LOCATION).
F. UPON SUCCESSFUL COMPLETION OF THE SWEEP TEST, THE CONTRACTOR SHALL PROVIDE A WEATHERTIGHT SEAL ON THE COAX CABLES.
G. THE MINIMUM BENDING RADIUS FOR ALL ANTENNA CABLES SHALL BE AS SHOWN BELOW OR PER THE MANUFACTURER, WHICHEVER IS MORE CONSERVATIVE:

CABLE	IN AIR OR CABLE TRAY	IN CONDUIT
1/2"	5"	10"
7/8"	10"	18"
1-5/8"	20"	28"

4. CABLES SHALL BE INSTALLED WITH THE MINIMUM NUMBER OF BENDS. CABLE SHALL NOT BE LEFT UNTERMINATED IN THE FIELD.
5. GROUNDING
A. ALL MAIN CABLES WILL BE GROUNDED AT: A) THE ANTENNA, B) MIDDLE OF THE CABLE RUN IF OVER 200', C) PRIOR TO ENTERING EQUIPMENT SHELTER/CABINET (WITHIN 1' OF ENTRY).
B. GROUNDING KITS - AFTER INSTALLATION OF GROUND STRAPS, THE CONNECTIONS SHALL BE MADE WEATHER TIGHT USING WEATHERPROOF KITS AS IDENTIFIED. GROUND PIGTAILS SHALL BROUGHT OUT IN THE DOWNWARD DIRECTION FROM THE CONNECTION TO THE ANTENNA CABLE WITHOUT ANY SHARP BENDS (MINIMUM RADIUS 10") AND CONNECTION SHALL BE MADE TO GROUNDING SYSTEM.

13.2 ANTENNA REQUIREMENTS:
1. AZIMUTHS ARE ORIENTED CLOCKWISE FROM TRUE NORTH.
2. CONTRACTOR SHALL VERIFY ANTENNA TYPE, AZIMUTHS, AND DOWNTILTS WITH THE CARRIER PRIOR TO CONSTRUCTION.
3. THE MINIMUM DISH RAD CENTER HEIGHT ABOVE THE ROOF SHALL BE 6'-8".

LEGEND AND ABBREVIATIONS

AHJ	AUTHORITY HAVING JURISDICTION
AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
BTS	BASE TRANSMISSION SYSTEM
CIGBE	COAX ISOLATED GROUND BAR, EXTERNAL
DIA, Ø	DIAMETER
EMT	ELECTRICAL METALLIC TUBING
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
MIGB	MASTER ISOLATED GROUND BAR
NEC	NATIONAL ELECTRIC CODE, LATEST ADOPTED EDITION
PPC	POWER PROTECTION CABINET
PVC	POLY VINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL
TYP	TYPICAL

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
GENERAL NOTES & SPECIFICATIONS

SHEET NUMBER
T-3

LEGEND

SYMBOLS	
	FIRE HYDRANT
G	GAS VALVE
	PROPOSED HANDHOLE
or RC	FIBER OPTIC SPLICE
	PROPOSED DOWN GUY & ANCHOR
	EXISTING ANCHOR
MH	MANHOLE
	STORM MANHOLE
	SANITARY MANHOLE
ATT	AT&T MANHOLE
COMM	COMM MANHOLE
CATV	CABLE TV MANHOLE
E	ELECTRICAL MANHOLE
NXT	NEXTEL MANHOLE
TEL	TELECOM MANHOLE
	WATER VALVE
	GROUND LOCATION
	PROPOSED SIDEWALK DOWN GUY & ANCHOR
	ABOVE GROUND PEDESTAL

SYMBOLS	
	TELEPHONE POLE
	WOOD POLE
	JOINT POLE
	CATV POLE
S	STEEL POLE
C	CONCRETE POLE
Z	ZAYO OWNED WOOD POLE
TS	TRAFFIC SIGNAL POLE
	POWER POLE
	LIGHT POLE
	BORE PIT
	TRAFFIC SIGNAL HANDHOLE
	TRAFFIC SIGNAL BOX
T	TRAFFIC SIGNAL CABINET
	STORM DRAINAGE CATCH BASIN
V	VALVE
V	VAULT
MB	MAIL BOX
	WATER METER

LINETYPES	
CATV	CABLE TV SERVICE
DCL	DITCH CENTERLINE
X X X X	EXISTING FENCE
FOC	FIBER OPTICAL CABLE
S S	SANITARY SEWER
SS SS	STORM SEWER
G G	GAS LINE
	GUARD RAIL
TEL	TELECOM SERVICE
OHE	OVERHEAD ELECTRIC
OHC	OVERHEAD CONDUCTORS
W W	WATER LINE
UGE	UNDERGROUND ELECTRIC
E E	EXISTING UNDERGROUND ELECTRIC
E E	UNDERGROUND ELECTRIC GROUND
UG	EXISTING FIBER UNDERGROUND
UG	NEW FIBER UNDERGROUND
AE	EXISTING AERIAL FIBER
AE	NEW FIBER AERIAL
BC	BURIED CABLE
ROW	RIGHT OF WAY LINE
℄	ROAD CENTER LINE
EOP	EDGE OF PAVEMENT
UE	UTILITY EASEMENT
RCW	RECLAIMED WATER

ABBREVIATIONS	
TYP	TYPICAL
SWK	SIDEWALK
DIA, Ø	DIAMETER
EXIST	EXISTING
PROP	PROPOSED
ROW	RIGHT OF WAY
EOP	EDGE OF PAVEMENT
FOP	FRONT OF POLE
FOC	FACE OF CURB
STA. 0+00	STATIONING
R 20'	RISER
AGL	ABOVE GROUND LEVEL
BTS	BASE TRANSMISSION SYSTEM
CIGBE	COAX ISOLATED GROUND BARE,, EXTERNAL
EMT	EXTERNAL METALLIC TUBING
GEN	GENERATOR
GPS	GLOBAL POSITION SYSTEM
MIGB	MASTER ISOLATED GROUND BAR
NEC	NATIONAL ELECTRIC CODE (LATEST EDITION)

ABBREVIATIONS	
AWG	AMERICAN WIRE GAUGE
BCW	BARE COPPER WIRE
AHJ	AUTHORITY HAVING JURISDICTION
PPU	POWER PROTECTION UNIT
PVC	PLY CINYL CHLORIDE
RGS	RIGID GALVANIZED STEEL
BOP	BACK OF POLE
SOP	SIDE OF POLE
BOC	BACK OF CURB
F	FLUTE
SPC	SPECIALTY POWDER COATED
DWY	DRIVEWAY
EOTL	END OF TRAVEL LANE

ZAYO GROUP, LLC
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BOULDER, CO 80301
SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

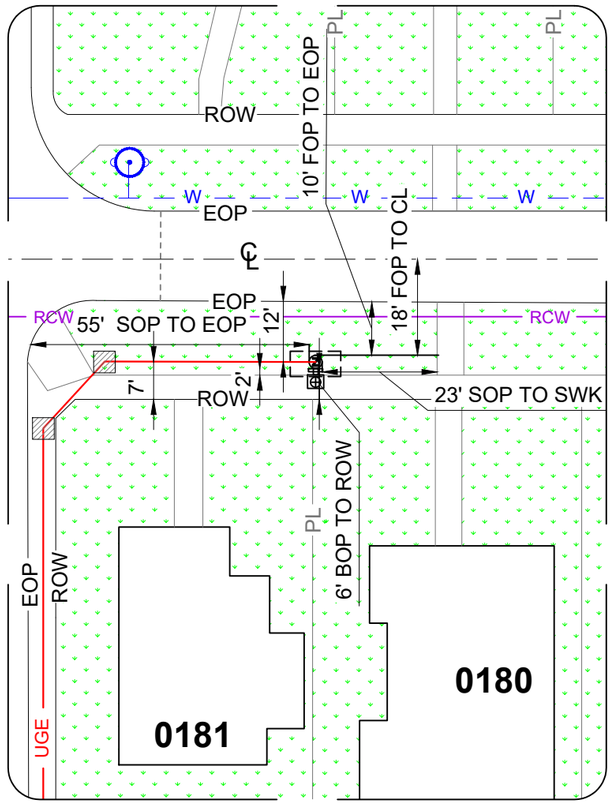
TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
SYMBOLS, LINETYPES & ABBREVIATIONS

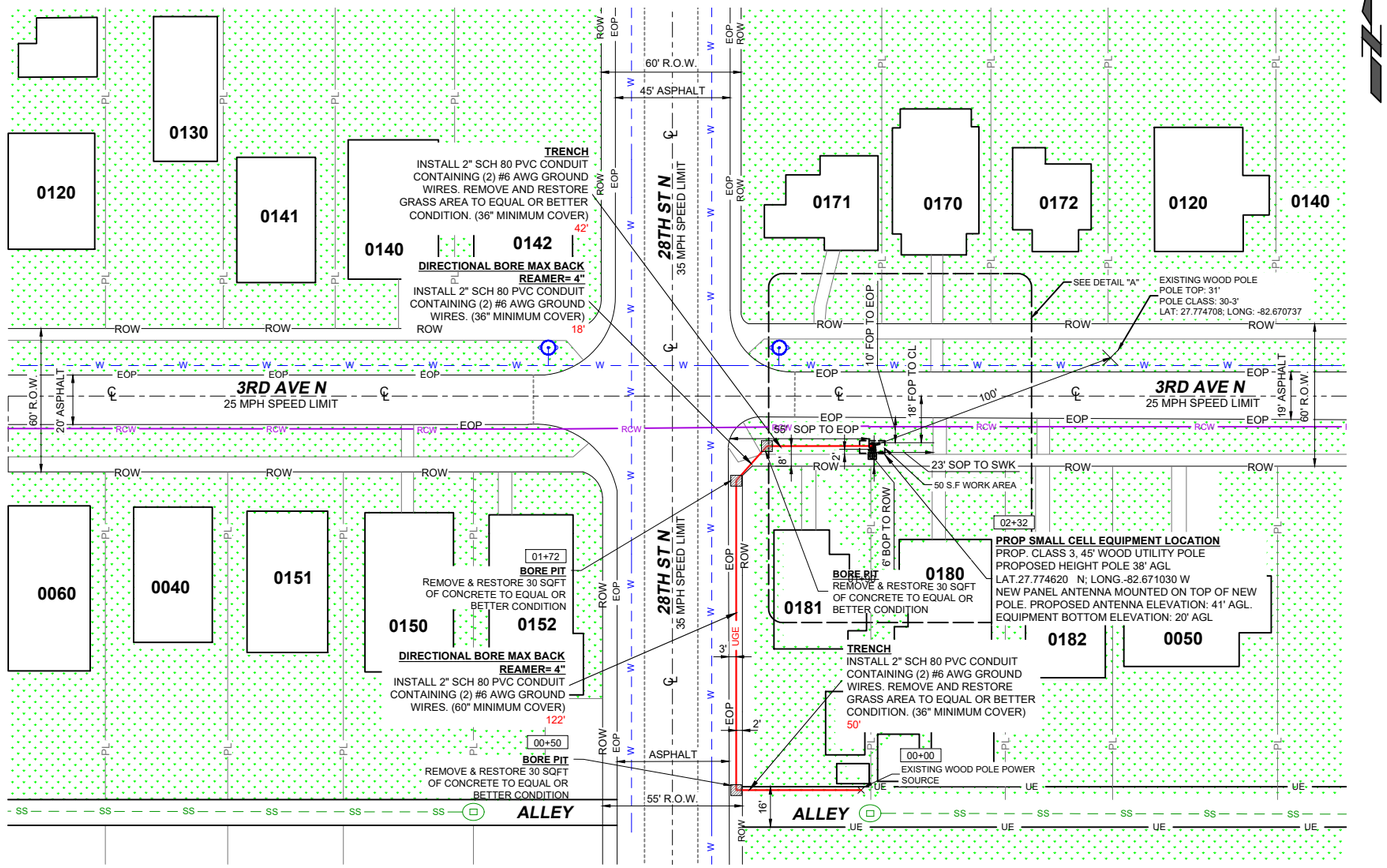
SHEET NUMBER
C-1



DETAIL "A"

SITE: TP2577BA_11LAB

SCALE: 1" = 30'



SITE PLAN NOTES:

1. THE LOCATION OF EXISTING UNDERGROUND UTILITIES HAVE NOT BEEN VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR IS RESPONSIBLE FOR HAVING ALL UNDERGROUND UTILITIES LOCATED WITHIN LIMITS OF CONSTRUCTION AND ACCEPTS FULL RESPONSIBILITY FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THE CONTRACTOR'S FAILURE TO LOCATE ALL UNDERGROUND UTILITIES BEFORE COMMENCING WORK.
2. PRIOR TO ANY CONSTRUCTION, CONTRACTOR TO HAND EXCAVATE,SOFT DIG OR GPR ALL UTILITY CROSSINGS.
3. CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER.
4. CONTRACTOR SHALL REPLACE OR RESTORE ANY DAMAGE SIDEWALK WITHIN 3 BUSINESS DAYS.
5. THE HOLE FOR THE POLE WILL BE HAND DUG, ANY SOIL DISTURBED AROUND THE NEW CONSTRUCTION WILL BE RE-GRADED AND SEEDED. CONTRACTOR SHALL RESTORE ANY DISTURBED AREAS TO ORIGINAL CONDITION OR BETTER.
6. CONTRACTOR SHALL PREPARE LIFT PLANS FOR POLE SETTING ACTIVITIES WITH A BOOM TRUCK. ATTACK LIFTING SLING PER POLE MANUFACTURER RECOMMENDATIONS.
7. CONTRACTOR SHALL MAINTAIN UNINTERRUPTED ACCESS TO ALL DRIVEWAYS, SIDE STREETS AND WALKWAYS AT ALL TIMES UNLESS OTHERWISE PERMITTED.
8. CONTRACTOR SHALL PREPARE A MAINTENANCE OF TRAFFIC (M.O.T.) PLAN FOR VEHICULAR AND PEDESTRIAN TRAFFIC TO ACCOUNT FOR WORK WITHIN THE RIGHT-OF-WAY, INCLUDING VEHICLE PARKING AND EQUIPMENT STAGING. THIS M.O.T. MUST BE PREPARED FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE M.O.T. CONTRACTOR SHALL CONTACT THE CITY'S TRAFFIC OPERATIONS DEPARTMENT FOR PRIOR APPROVAL OF ALL TEMPORARY TRAFFIC CONTROL (TTC) PLANS AND SCHEDULES PRIOR TO ANY CONSTRUCTION IMPACT TO VEHICULAR, BICYCLE, OR PEDESTRIAN TRAFFIC IN THE PUBLIC RIGHT OF WAY (EMAIL CONTACT JERRY.BABCOCK@STPETE.ORG, PHONE 727-893-7450).
9. DESIGN OF THE M.O.T. FOR THE PROTECTION OF TRAFFIC, PEDESTRIANS, AND WORKERS SHALL BE IN ACCORDANCE WITH THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) - PART VI "TEMPORARY TRAFFIC CONTROL", AND LOCAL JURISDICTIONAL REQUIREMENTS AND SHALL BE APPROVED BY THE APPROPRIATE HIGHWAY AUTHORITY HAVING JURISDICTION.
10. WHEN A LANE CLOSURE OR SHOULDER CLOSURE IS REQUIRED, THE M.O.T. MUST BE PROVIDED BY AND NOTARIZED BY A COMPANY THAT HAS FLAGGER CONTROL TRAINING CERTIFICATION.
11. THE SIZE, VOLUME, AND HEIGHT OF ALL ANTENNAE, ANCILLARY EQUIPMENT, POLES, AND SUPPORT STRUCTURES MEET THE REQUIREMENTS OF FLORIDA STATUTES, AND COMPLY WITH CITY REGULATIONS AND DESIGN GUIDELINES.
12. THE HEXBLOCK SIDEWALK WITHIN THE SOUTHERN PARKWAY OF 3RD AVENUE SOUTH IS A PROTECTED HISTORIC FEATURE OF THE NEIGHBORHOOD. THE CONTRACTOR MUST USE EXTREME CARE WHEN WORKING AROUND THE SIDEWALK TO PROTECT IT FROM DAMAGE. THE HEXBLOCK IS NOT TRAFFIC BEARING SO NO EQUIPMENT SHALL BE ALLOWED TO TRAVERSE THE SIDEWALK. IF NECESSARY, TO PROTECT THE BLOCKS DURING CONSTRUCTION, THE CONTRACTOR MUST TEMPORARILY REMOVE THE BLOCKS AND SAFELY STORE THEM (TO PREVENT THEFT) THEN RESTORE THEM PER ATTACHED CITY HEXBLOCK STANDARD DETAILS S20-35 & S20-36 MATCHING EXISTING COLOR AND PATTERN.

NEW POLE INSTALLATION CONSTRUCTION NOTES/SCHEDULE:

- UTILITY LOCATES WILL BE CALLED IN A MINIMUM OF 72 HOURS PRIOR TO ANY WORK BEING STARTED. CONSTRUCTION WILL NOT START UNTIL ALL LOCATES HAVE CLEARED.
- TEMPORARY TRAFFIC CONTROL PLAN WILL BE ORDERED PRIOR TO ANY WORK, COMPLIANT WITH FDOT AND JURISDICTIONAL REQUIREMENTS.
- THE JURISDICTION WILL BE NOTIFIED THAT THE CONSTRUCTION WORK IS SCHEDULED TO BEGIN.
- THE CONSTRUCTION MANAGEMENT TEAM WILL DO THE ARRANGEMENT AN ON-SITE PRE-CONSTRUCTION MEETING AND REQUEST THE UTILITY OWNER ATTENDANCE, IF PERTINENT TO AN EXISTING POLE REPLACEMENT.
- A SAFETY MEETING WILL BE HELD EACH DAY, PRIOR TO ANY WORK.
- ALL NECESSARY EQUIPMENT WILL BE CALIBRATED, IF REQUIRED, PRIOR TO EACH WORK DAY
- EXCAVATION, NEW WOOD POLE PLACEMENT, AND BACKFILL WILL ALL BE CARRIED OUT IN ONE DAY.
- EXCAVATION, INSTALLATION OF REBAR CAGE, CONCRETE POUR WILL ALL BE CARRIED OUT ON ONE DAY FOR STEEL POLE INSTALLATIONS. STEEL POLE INSTALLATION WILL TAKE PLACE 7 TO 14 DAYS AFTER INSTALLATION OF PIER.
- UPON COMPLETION OF EXCAVATION AND POLE PLACEMENT, THE AREA DISTURBED DURING CONSTRUCTION WILL BE RESTORED TO BE IN GOOD CONDITION OR BETTER THAN THE ORIGINAL CONDITION.
- ALL CUSTOMER SPECIFIC EQUIPMENT WILL BE INSTALLED ON POLE, ELECTRIC SERVICE HARDWARE WILL BE FOR LATER HOOK-UP BY UTILITY.
- UPON COMPLETE INSTALLATION (IF A REPLACEMENT POLE), UTILITY WILL BE NOTIFIED TO COMPLETE TRANSITION OF CABLING AND MAKE READY.
- JURISDICTIONS WILL BE NOTIFIED BY OWNER THAT ALL WORK IS COMPLETE AND REQUEST TO CLOSE OUT THE PERMIT.

CITY OF ST. PETERSBURG INSPECTIONS AND PERMITS REQUIREMENTS

- THE CONTRACTOR SHALL OBTAIN ELECTRICAL PERMIT FROM THE CITY'S CONSTRUCTION SERVICES AND PERMITTING (CSP) DIVISION. ELECTRICAL INSPECTION AND RELEASE TO ENERGIZE THE POLE IS PROCESSED BY THE CITY'S CSP DIVISION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO OBTAIN ALL NECESSARY GOVERNMENTAL APPROVALS AND PERMITTING PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL OBTAIN RIGHT OF WAY PERMIT INSPECTIONS FROM THE CITY ENGINEERING & CAPITAL IMPROVEMENTS DEPARTMENT (ECID) CONSTRUCTION INSPECTION DIVISION BY PHONING 727-893-7130 A MINIMUM OF 24 HOURS PRIOR TO COMMENCEMENT OF WORK AND UPON COMPLETION OF THE WORK FOR FINAL RESTORATION AND POLE INSPECTION. WHEN SCHEDULING INSPECTION, PROVIDE THE ECID RIGHT OF WAY PERMIT NUMBER, THE SPECIFIC LOCATION OF THE INSTALLATION, THE FACILITY ID NUMBER, AND THE TYPE OF INSPECTION BEING REQUESTED.
- UPON ACCEPTANCE OF THE WORK BY THE CITY ECID CONSTRUCTION INSPECTOR, PROVIDE RECORD DRAWINGS SHOWING THE POLE CONSTRUCTION AND ANY ASSOCIATED PULL BOXES WITH FOUR PHOTOS OF THE FINAL POLE INSTALLATION WITH ALL EQUIPMENT INSTALLED (VIEW FROM NORTH, SOUTH, EAST, AND WEST) AND ONE PHOTO OF ANY ASSOCIATED PULL BOXES OR GROUND ROD BOXES LABELED WITH THE DATE OF THE PHOTO, THE FACILITY ID, POLE COORDINATES, AND THE CITY ECID RIGHT OF WAY PERMIT NUMBER VIA EMAIL TO NANCY.DAVIS@STPETE.ORG WITH COPY TO MARTHA.HEGENBARTH@STPETE.ORG. IN THE SUBJECT LINE OF THE EMAIL REFERENCE THE ECID RIGHT OF WAY PERMIT NUMBER AND THE FACILITY ID, RECORD DRAWINGS & PHOTOS.
- THE INSTALLATION WILL BE WITHIN A YEAR OF THE PERMIT ISSUANCE DATE. THE CONTRACTOR SHALL NOTIFY THE ENGINEERING CONSTRUCTION INSPECTION DIVISION A MINIMUM OF 48 HOURS PRIOR TO INITIATING CONSTRUCTION BY PHONING 727-893-7130.

NOTE:
PRIOR TO COMMENCING CONSTRUCTION OR INSTALLATION ACTIVITIES, THE CONTRACTOR SHALL VERIFY THAT THE PROPOSED WORK LOCATION IS WITHIN THE R.O.W. AND THAT ALL DIMENSIONS ARE ACCURATE. THE CONTRACTOR IS THE RESPONSIBLE FOR THE FINAL LOCATION OF THE STRUCTURES AND ASSOCIATED EQUIPMENT. THE ENGINEER SHALL NOTIFY ANY DISCREPANCIES FROM THE INFORMATION LISTED IN THE PLANS. ANY RELOCATION COSTS ASSOCIATED TO MISPLACEMENT OF THE STRUCTURES SHALL BE RESPONSIBILITY OF THE CONTRACTOR AND SHALL NOT BE THE RESPONSIBILITY OR CAUSE OF ADDITIONAL CHARGES TO THE ENGINEER.

SITE PLAN

11"x17" SCALE: 1" = 60'

0' 30' 60'

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

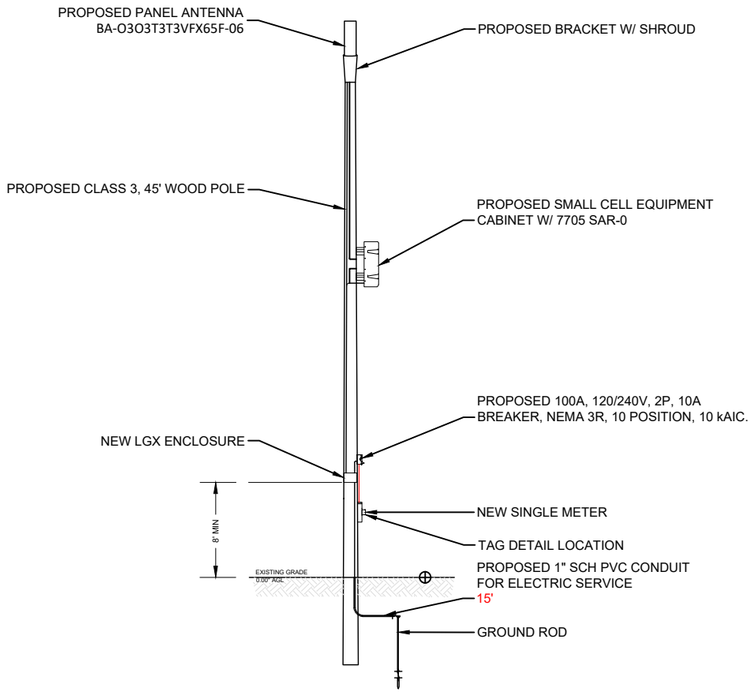
SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

SITE PLAN

SHEET NUMBER

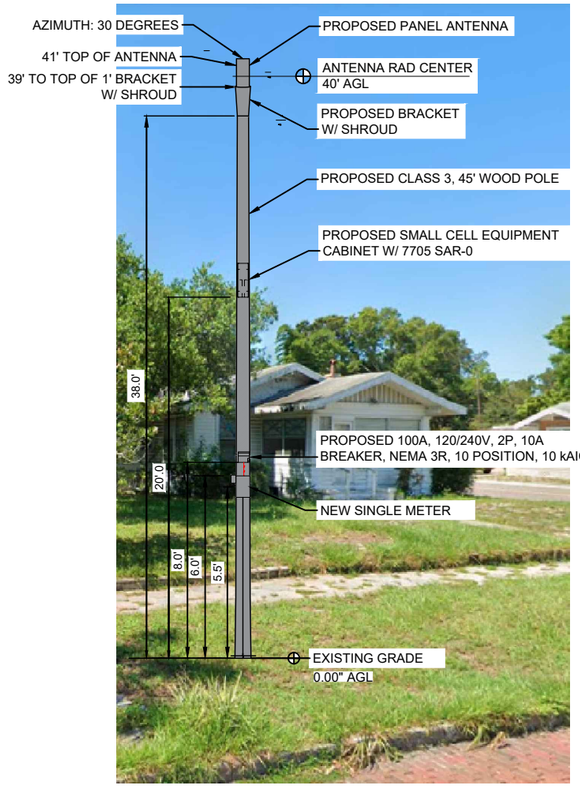
C-2

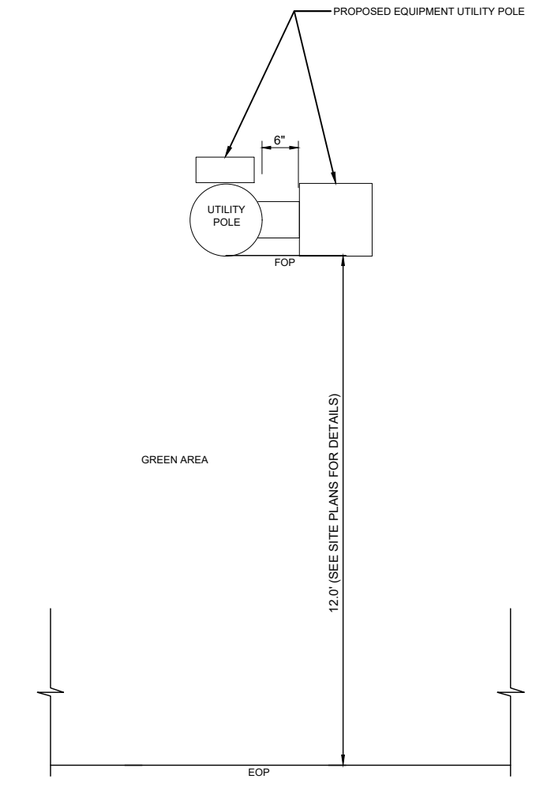


- NO WORK SHALL COMMENCE WITHOUT THE APPROVED UTILITY POLE STRUCTURAL ANALYSIS REPORT SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER UNDER SEPARATE COVER.

POLE ELEVATIONS & DETAILS

1





EQUIPMENT ORIENTATION PLAN

2

NOTES:

1. ELECTRIC METERS AND DISCONNECT SWITCHES SHALL BE LOCATED ON THE SIDE OF THE POLE THAT IS ORIENTED IN THE SAME DIRECTION AS THE FLOW OF VEHICULAR TRAFFIC IN THE ADJACENT ROADWAY. FOR EXAMPLE, IF TRAFFIC FLOW IS NORTH-BOUND, THEN THE EQUIPMENT SHOULD BE PLACED ON THE NORTH SIDE OF THE POLE. CONDUIT LEADING TO THE ELECTRIC METER BOX AND DISCONNECT SWITCH SHALL GENERALLY MATCH THE COLOR OF THE UTILITY POLE.
2. THE EXTERNAL FINISH OF THE EQUIPMENT CASES AND ALL THE MOUNTING AND BANDING FIXTURES, CONDUITS AND SHROUDS WILL BE GRAY.
3. ALL THE WIRING ALONG THE POLE WILL BE PROTECTED BY CONDUITS, SEE DETAIL 2 IN PAGE C-6 AND THE WIRING ALONG THE ANTENNA BRACKET WILL BE COVERED BY A SHROUD, SEE DETAIL 4 & 5 IN PAGE C-6.
4. THE SIZE, VOLUME, AND HEIGHT OF ALL ANTENNAE, ANCILLARY EQUIPMENT, POLES, AND SUPPORT STRUCTURES MEET THE REQUIREMENTS OF FLORIDA STATUTES, AND COMPLY WITH CITY REGULATIONS AND DESIGN GUIDELINES.
   - *MICRO WIRELESS 24" LONG X 15" WIDE X 12" HEIGHT W/EXT. ANTENNA, IF ANY, NOT MORE THAN 11".*
   - *SMALL WIRELESS - ANTENNA ENCLOSURE OR ALL ELEMENTS FIT INTO AN ENCLOSURE < 6 CF. ALL OTHER EQUIPMENT ASSOCIATED WITH THE FACILITY < 28 CF.*
   - *DO NOT COUNT ELECTRIC METERS, CONCEALMENT ELEMENTS, TELECOMMUNICATIONS DEMARCATION BOXES, GROUND-BASED ENCLOSURES, GROUNDING EQUIPMENT, POWER TRANSFER SWITCHES, CUTOFF SWITCHES, VERTICAL CABLE RUNS FOR CONNECTION OF POWER AND OTHER SERVICES, AND UTILITY POLES OR OTHER SUPPORT STRUCTURES.*

ZAYO GROUP

FOR EMERGENCY 24 HOUR SERVICE: **866-236-2824 Opt 3,1**

SYSTEM NAME:

UNIT NUMBER:

SITE ADDRESS:

zayo GROUP

1805 29th St
Boulder , CO 80301
WWW.ZAYO.COM

POLE TAG DETAIL:

WE HAVE A TAG THAT IS 4"X4" THAT IS PLACED ON THE METER CAN – THIS TAG WILL HAVE SITE ID AND ADDRESS (E-911) THERE IS ALSO A TAG THAT IS PLACED ON THE POLE WITH EMERGENCY NUMBER.

NOTICE

Radio frequency fields beyond this point may exceed the FCC general public exposure limit.

Obey all posted signs and site guidelines for working in radio frequency environments.

In accordance with Federal Communications Commission rules on radio frequency emissions 47 CFR 1.1307(b)

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

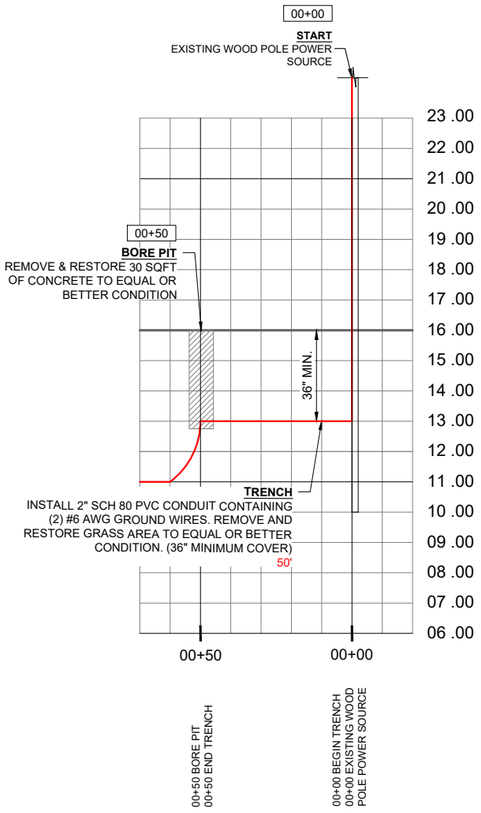
POLE ELEVATION & DETAILS

SHEET NUMBER

C-3

PROFILE - ALLEY

HORIZONT-L SC-LE 1" = 40'
VERTIC-L SC-LE 1" = 4"



NOTES:

- "A MINIMUM HORIZONTAL CLEARANCE OF 3-FEET AND A MINIMUM VERTICAL CLEARANCE OF 18" SHALL BE MAINTAINED BETWEEN THE PROPOSED FACILITY AND ALL EXISTING UTILITIES UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY CONSTRUCTION INSPECTOR. THESE MINIMUM CLEARANCES SHALL ALSO APPLY WHEN LOCATING ASSOCIATED EQUIPMENT OR OTHER SURFACE FEATURES SUCH AS PULL BOXES AND IN NO CASE SHALL PROPOSED SURFACE EQUIPMENT OR PULL BOXES BE LOCATED OVER EXISTING CITY OWNED PUBLIC INFRASTRUCTURE"

PROFILE VIEW

11"x17" SCALE: 1" = 50'

0' 30' 50'

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

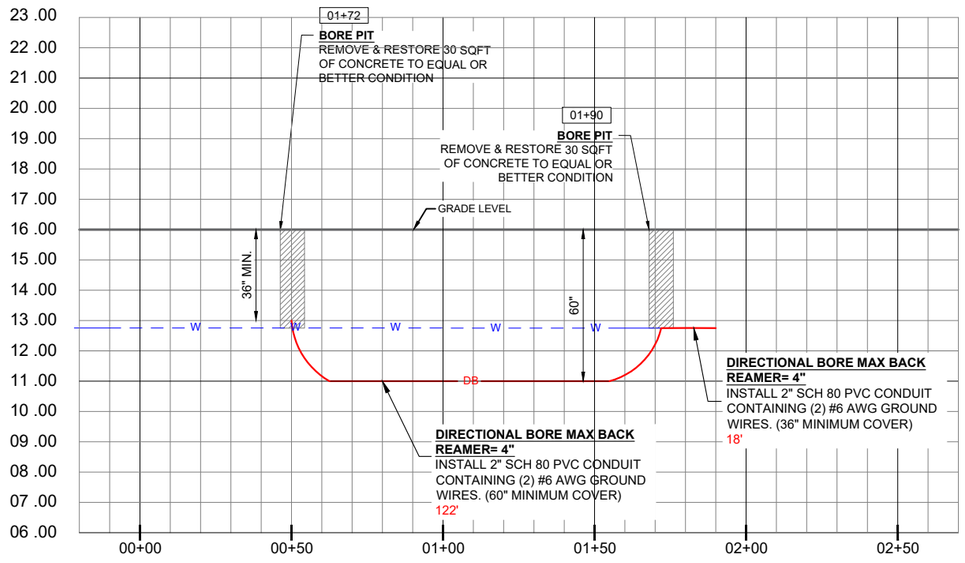
CROSS SECTION DETAIL

SHEET NUMBER

C-4

PROFILE - 28TH ST N

HORIZONT-L SC-LE 1" = 40'
VERTIC-L SC-LE 1" = 4"



NOTES:

- "A MINIMUM HORIZONTAL CLEARANCE OF 3-FEET AND A MINIMUM VERTICAL CLEARANCE OF 18" SHALL BE MAINTAINED BETWEEN THE PROPOSED FACILITY AND ALL EXISTING UTILITIES UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY CONSTRUCTION INSPECTOR. THESE MINIMUM CLEARANCES SHALL ALSO APPLY WHEN LOCATING ASSOCIATED EQUIPMENT OR OTHER SURFACE FEATURES SUCH AS PULL BOXES AND IN NO CASE SHALL PROPOSED SURFACE EQUIPMENT OR PULL BOXES BE LOCATED OVER EXISTING CITY OWNED PUBLIC INFRASTRUCTURE"

PROFILE VIEW

11"x17" SCALE: 1" = 50'

0' 30' 50'

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

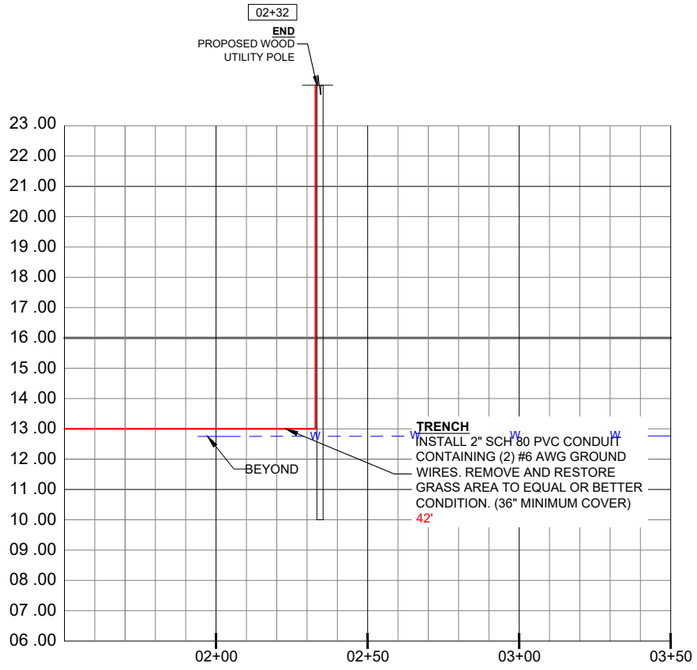
CROSS SECTION DETAIL

SHEET NUMBER

C-5

PROFILE - 3RD AVE N

HORIZONT-L SC-LE 1" = 40'
VERTIC-L SC-LE 1" = 4"



NOTES:

- "A MINIMUM HORIZONTAL CLEARANCE OF 3-FEET AND A MINIMUM VERTICAL CLEARANCE OF 18" SHALL BE MAINTAINED BETWEEN THE PROPOSED FACILITY AND ALL EXISTING UTILITIES UNLESS OTHERWISE SPECIFICALLY APPROVED BY THE CITY CONSTRUCTION INSPECTOR. THESE MINIMUM CLEARANCES SHALL ALSO APPLY WHEN LOCATING ASSOCIATED EQUIPMENT OR OTHER SURFACE FEATURES SUCH AS PULL BOXES AND IN NO CASE SHALL PROPOSED SURFACE EQUIPMENT OR PULL BOXES BE LOCATED OVER EXISTING CITY OWNED PUBLIC INFRASTRUCTURE"

PROFILE VIEW

11"x17" SCALE: 1" = 50'

0' 30' 50'

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

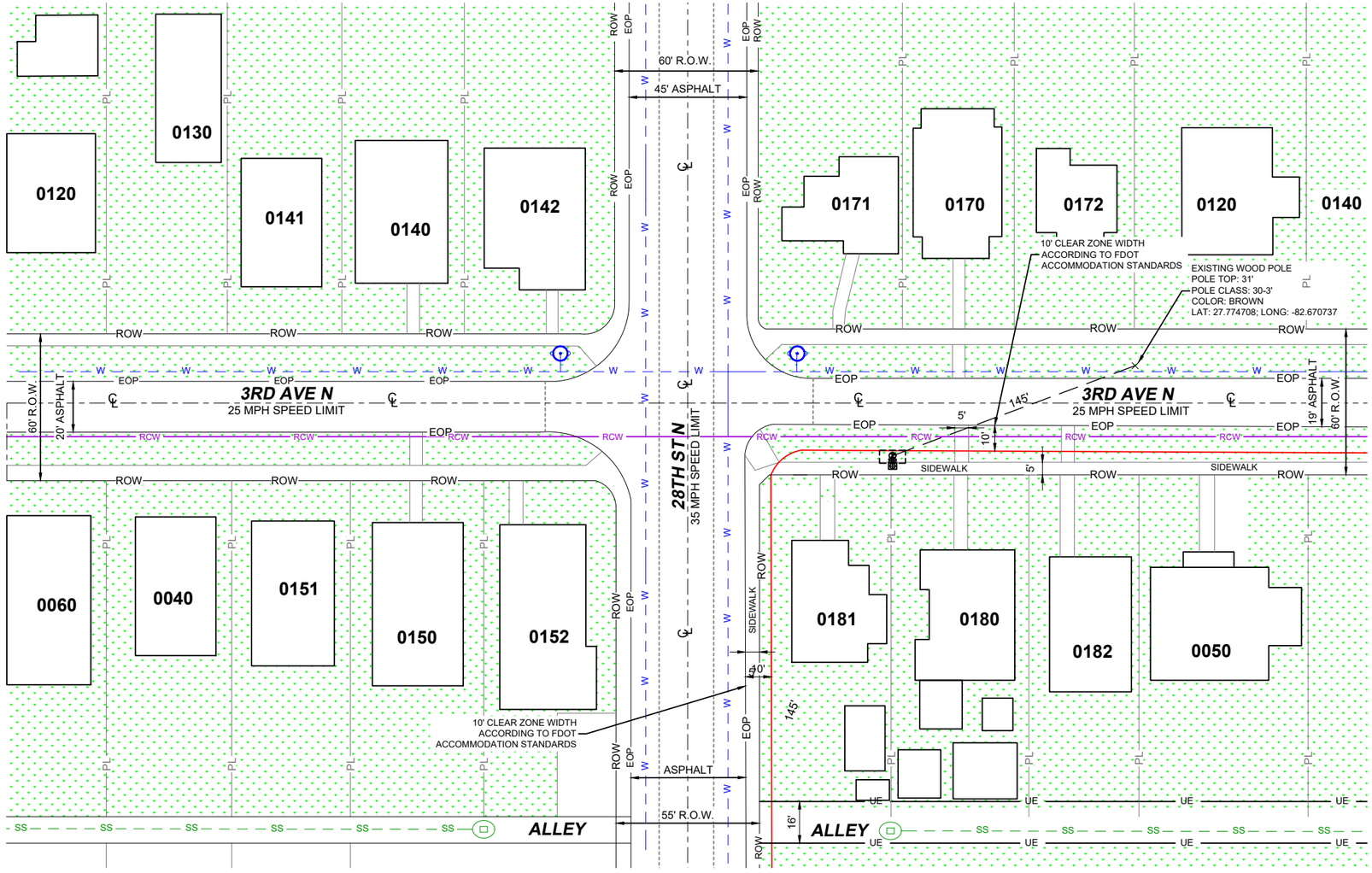
SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

CROSS SECTION DETAIL

SHEET NUMBER

C-6



PLOT PLAN

11"x17" SCALE: 1" = 50'

0' 30' 50'

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

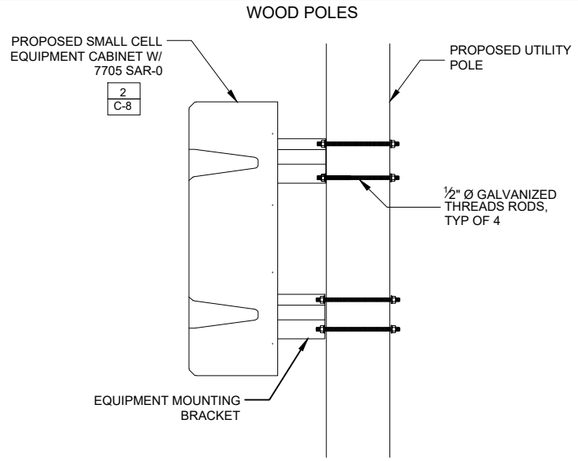
SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

TALLER POLE WITHIN 500' RADIUS PLOT PLAN

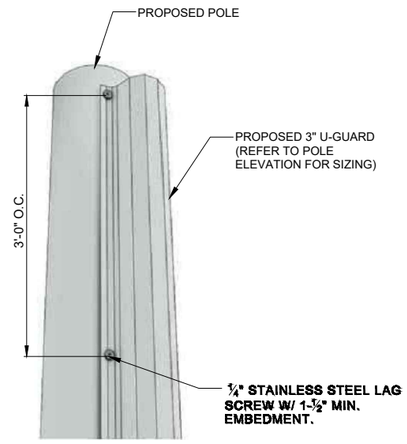
SHEET NUMBER

C-7



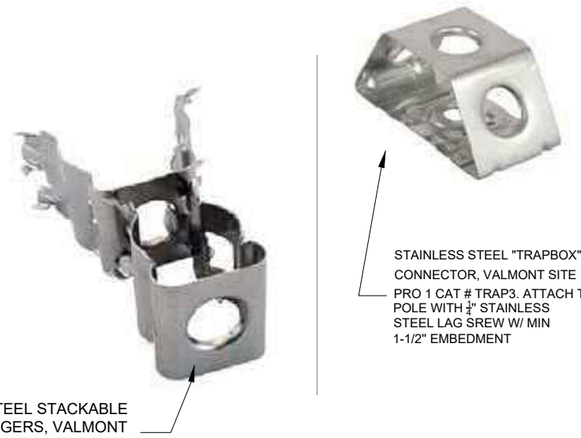
EQUIPMENT ATTACHMENT

SCALE: NTS | 1



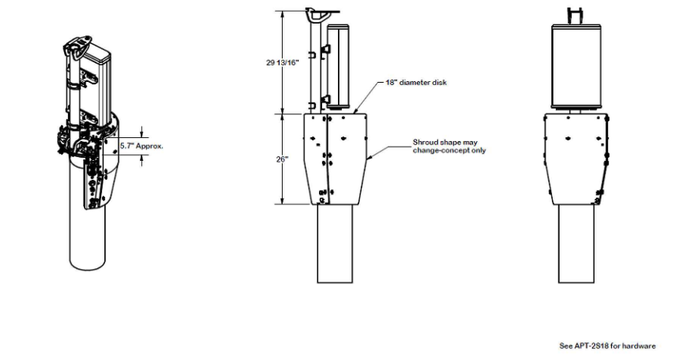
U-GUARD DETAIL

SCALE: NTS | 2



COAXIAL CABLE HANGERS

SCALE: NTS | 3

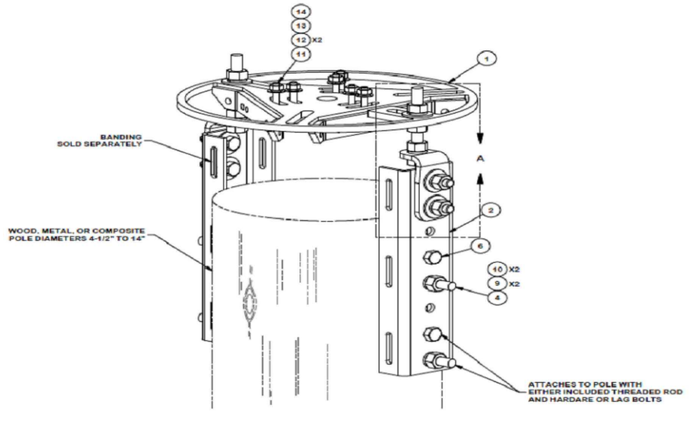


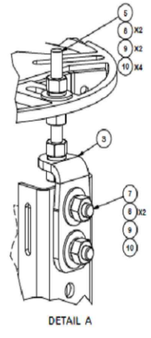
SHROUD DETAIL FOR PANEL ANTENNAS

SCALE: NTS | 4

SHROUD DETAIL FOR OMNI ANTENNAS

SCALE: NTS | 5

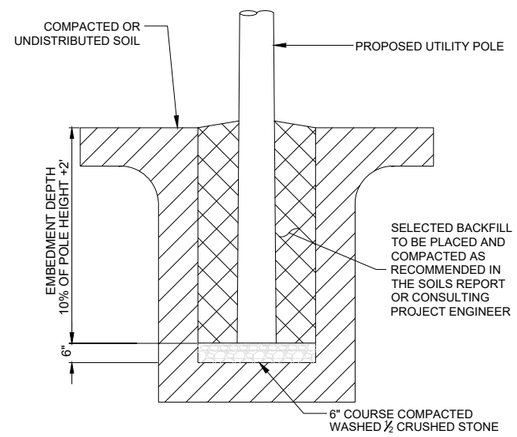




PARTS LIST						
ITEM	QTY	PART NO.	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	X-TLP-18G	TOP LEVELING PLATE FOR 18" SHROUD		20.69	20.69
2	2	X-VEC15	SHORT VERTICAL EXTENSION CHANNEL	7 1/4 in	7.90	15.80
3	2	X-AJP	ADJUSTMENT PLATE	12 in	0.93	1.86
4	2	G58R-20	5/8" x 20" THREADED ROD (HDG.)		1.74	3.48
5	2	G58R-6	5/8" x 6" THREADED ROD (HDG.)		0.52	1.05
6	4	LB5805	5/8" DIA. x 5" HEX HEAD LAG BOLT (HDG.)		0.38	1.53
7	4	G5802	5/8" x 2" HDG HEX BOLT GR5		0.27	1.08
8	12	G58FW	5/8" HDG USS FLATWASHER	1/8 in	0.07	0.85
9	12	G58LW	5/8" HDG LOCKWASHER		0.03	0.31
10	16	G58NUT	5/8" HDG HEAVY 2H HEX NUT		0.13	2.06
11	6	G3802	3/8" x 2" HDG HEX BOLT GR5		0.09	0.53
12	12	G38FW	3/8" HDG USS FLATWASHER		0.01	0.14
13	6	G38LW	3/8" HDG LOCKWASHER		0.01	0.04
14	6	G38NUT	3/8" HDG HEAVY 2H HEX NUT		0.03	0.20
					TOTAL WT. #	50.33

STANDARD POLE TOP KITS SHORT (2 LEGS)

SCALE: NTS | 6



NOTES:

1. **EMBEDMENT DEPTHS SHOWN ARE FOR SOILS CLASS 4 AS OUTLINED IN FBC 2017 TABLE 1806.2.**
2. **EMBEDMENT DEPTHS SHALL BE ADJUSTED BASED ON ACTUAL SOIL CONDITIONS AND FINAL POLE CLASS SELECTION. POOR SOIL CONDITIONS WILL REQUIRE DEEPER EMBEDMENT.**
3. **FOUNDATION HOLE SHALL BE EXCAVATED TO A MINIMUM OF 12" LARGER THAN POLE BASE DIAMETER TO ALLOW FOR SUITABLE BACKFILL PLACEMENT.**
4. **REMOVE EXCESS WATER FROM HOLE BEFORE INSTALLING POLE.**

EQUIPMENT ATTACHMENT

SCALE: NTS | 7

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
EQUIPMENT DETAILS

SHEET NUMBER
C-8

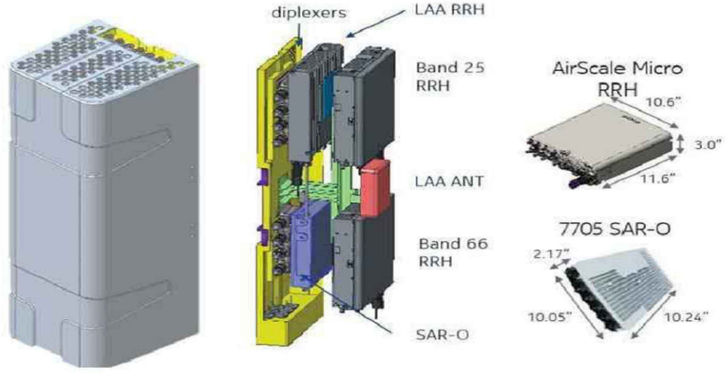
BA-O3O3T3T3VFX65F-06

- 10-Port，Small / Micro Cell Panel Antenna
- 2x(1695-2400)/2x(3550-3700)/5150-5925 MHz
- Gain: 13dBi for high band & 3.5G band / 6dBi for 5G band
- Electrical down tilt: 2° for high band & 3.5G band / 0° for 5G band
- 608 × 350 × 138mm

Rosenberger

ANTENNA DETAIL

SCALE: NTS | 1



SMALL CELL EQUIPMENT W/ 7705 SAR-Wx DETAIL

SCALE: NTS | 2

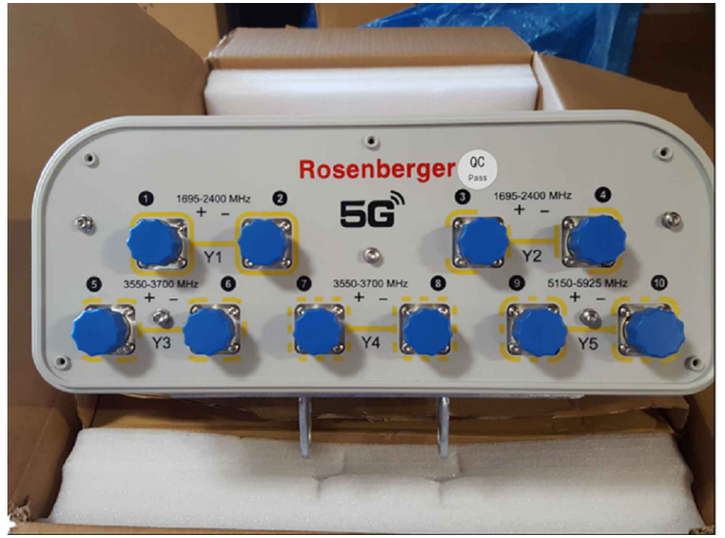
OptiNID® 760XL
Optical Demarcation Closure

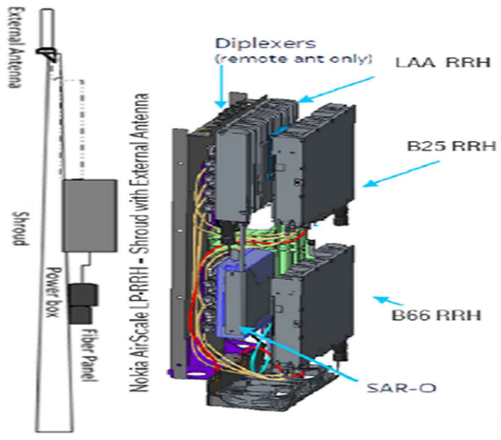
Specifications

PARAMETER	VALUES
Dielectric Strength	Minimum 2500 Vrms for 1 minute
High Temperature Storage/Mold Stress °F (°C)	14 days at 159 (70.55)
Temperature Cycling with Humidity °F (°C)	150 day cycling from 40-140 (4.44-60) with 95% RH
Impact Test °F (°C)	-40 (-40), 5*/lbs on all external surfaces
Drop Test °F (°C)	-40 (-40), 5* (12.7 cm) onto concrete surface 4 times
Rain	24 hours at 10 psi
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Salt Fog (Days Exposed)	60 per ASTM-BLL7-90
Flammability	UL94-5V
Chemical Resistance 30 Days at 100 °F and 95% RH Subject to:	Resists chipping and/or cracking when subject to: house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Material	UL® listed flame retardant thermoplastic alloy
Dimensions (H x W x D) in. (cm)	13 x 13 x 3.75 (32.5 x 32.5 x 9.5)
Cable Entrances in. (cm) diameter—Input	4 x 0.875 (2.2)—3/4" conduit
Covers	Standard – molded-in snap finger and 3/8" hex head fastener

LGX CABINET

3





Site ID: TP2577BA_11LAB
Configuration: N_SC-593H : Shroud External Antenna (AC)
RF Engineer: Dan Babilla
Date: 6/15/2018
Filename:

Antenna Port Matrix

Sector	Color	Antenna	Shroud RF Port (Numbered right to left as looking down on the top of the shroud)	Rosenberger Panel Antenna	Bands	Coax Bands	Technology	RF Module	RF Port	2nd RF Module (Diplex)	2nd RF Port (Diplex)
A	Red	1	1	Port 9	1	1	LAA	AZRA	1	NA	NA
A	Red	1	2	Port 10	2	2	LAA	AZRA	2	NA	NA
A	Red	1	3	Port 1	3	3	LTE	AHIB	1	AFIB	1
A	Red	1	4	Port 2	4	4	LTE	AHIB	2	AFIB	2
A	Red	1	5	Port 3	5	5	LTE	AHIB	3	AFIB	3
A	Red	1	6	Port 4	6	6	LTE	AHIB	4	AFIB	4

SHROUD EXTERNAL ANTENNA - NODE CONFIGURATION

SCALE: NTS | 4

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

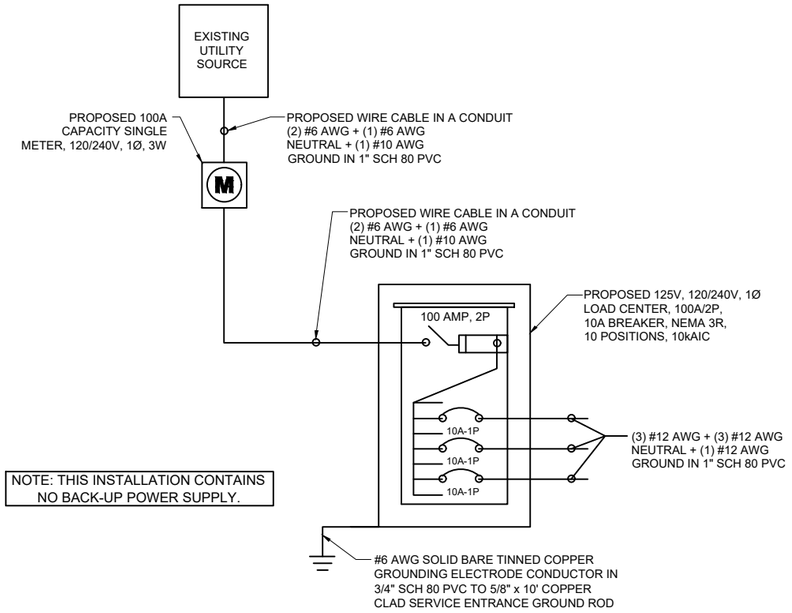
TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
EQUIPMENT DETAILS

SHEET NUMBER
C-9



NOTES:

1. IF UNDERGROUND SERVICES, CONDUCTOR WILL BE ROUTED FROM HAND HOLE AT BASE OF POLE TO HAND HOLE TO UTILITY DEMARK.
2. IF AERIAL SERVICE, CONDUCTORS WILL BE ROUTED TO WEATHERHEAD ON POLE WITH 3' SLACK FOR CONNECTION BY UTILITY COMPANY. DRIP LOOP OF CONDUCTORS TO REMAIN AT LEAST 42" FROM TOP OF RADIO CABINET.

1.- USE 98% CONDUCTIVITY COPPER WITH TYPE XHHW-2 INSULATION, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING #8, STRANDED CONDUCTORS FOR WIRE LARGER THAN #8 AWG.

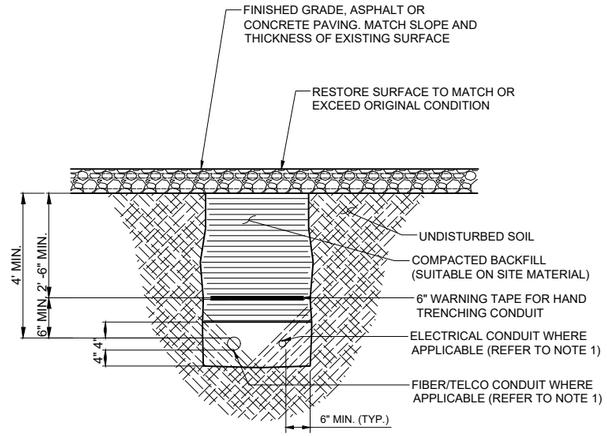
SINGLE LINE DIAGRAM

SCALE: NTS | 1

1.- RF WARNING SIGN, 7" x 10", 0.055" POLYETHYLENE PLASTIC, ATTACH TO POLE WITH (4) 3/16" WOOD SCREWS AT PROVIDED MOUNTING HOLES.

RF WARNING SIGN

SCALE: NTS | 2



1. PROVIDE SCH 40 PVC CONDUIT BELOW GRADE EXCEPT AS NOTED BELOW
2. PROVIDED SCH 80 PVC CONDUIT AND ELBOWS AT STUB-UP LOCATIONS.
3. INSTALL UTILITY PULLBOXES AND HANDHOLES PER NEC.
4. SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY CO. REQUIREMENTS.
5. SLOPE TO SUIT SOIL CONDITION IN ACCORDANCE WITH LOCALS REGULATIONS AND TO MEET OSHA REQUIREMENTS.

UTILITY TRENCH DETAIL

SCALE: NTS | 3

PANEL: "SMALL CELL"
LOCATION: INTERIOR

☐ FLUSH ■ SURFACE ☐ TOP FEED ■ BOTTOM FEED

120/ 240 VOLTS, 1Ø 3 WIRE
125 AMP BUS
■ GROUND BUS ☐ LUGS ONLY NEMA 3R .

■ NEUTRAL ■ FULL ☐ 50% ☐ 200%

■ MAIN BREAKER FRAME 100 A TRIP 100 A ☐ SHUNT TRIP

10,000 AIC @ 240 VOLTS

LOAD DESCRIPTION	WIRE & CONDUIT	POLE	AMP TRIP	CTK K.V.A.	CTK No.	LOAD (KVA) Ø A	LOAD (KVA) Ø B	CTK No.	CTK K.V.A.	AMP TRIP		WIRE & CONDUIT	LOAD DESCRIPTION
RADIO 1	2# 12 - 1# 12G	1	10	1.1	1	1.1		2	-	20	1	-	SHARE
RADIO 2	2# 12 - 1# 12G	1	10	1.1	3		1.1	4	-	20	1	-	SHARE
RADIO 3	2# 12 - 1# 12G	1	10	1.1	5	1.1		6	-	20	1	-	SHARE
						1.1	1.1						

FED FROM: SINGLE METER

TOTAL CONNECTED LOAD: 3.3 KVA; 13.75 AMPS
TOTAL DEMAND LOAD: 3.3 KVA; 13.75 AMPS

NOTES:

ELECTRICAL NOTES

SCALE: NTS | 4

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

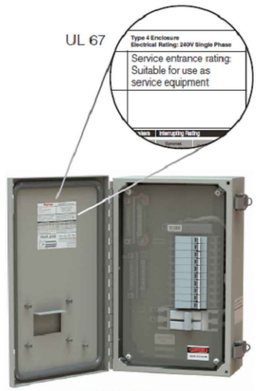
ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
ELECTRICAL DETAILS

SHEET NUMBER
C-10

Surge Suppression Specifications		
Surge Protection Device (SPD) Type to UL	Strikesorb 30-A-2CHV Surge Suppression	ProTec T2 Surge Suppression
Surge Protective Device (SPD) Type per UL 1449 4th Ed.	Recognized UL SPD	Recognized UL SPD
Surge Protection Device (SPD) Class to IEC 61643-11	Class I	Class II
Nominal Operating Voltage [U_L]	120V / 240V split phase	120V / 240V split phase
Nominal Discharge Current [I_n] per UL 1449 4th Ed.	20kA 8/20µs	20kA 8/20µs
Maximum Discharge Current [I_{max}] per IEC 61643-11	60kA 8/20µs	50kA 8/20µs
Impulse Discharge Current [I_{imp}] per IEC 61643-11	5kA 10/350µs	–
Maximum Continuous Operating Voltage [U_c] (MCOV)	150V per line	150V per line
Voltage Protection Level [U_p] per IEC 61643-11	700V	–
Voltage Protection Rating (UL)	–	600V
Suppression Technology	MOV	MOV
Protection Modes	L1 to Neutral, L2 to Neutral	L1 to Neutral, L2 to Neutral

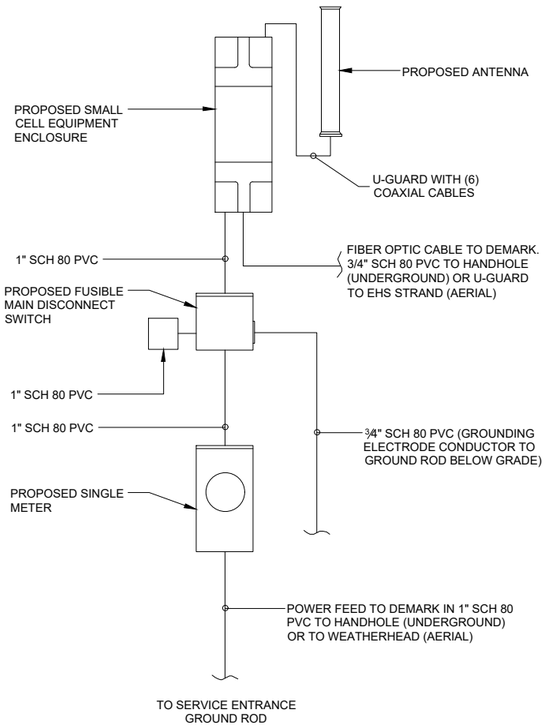


RSD-DMC-Z10MS-21NN
(Lt. Gray color, 10 Breakers, Strikesorb SPD, External Disconnect)

Mounting Bracket Included

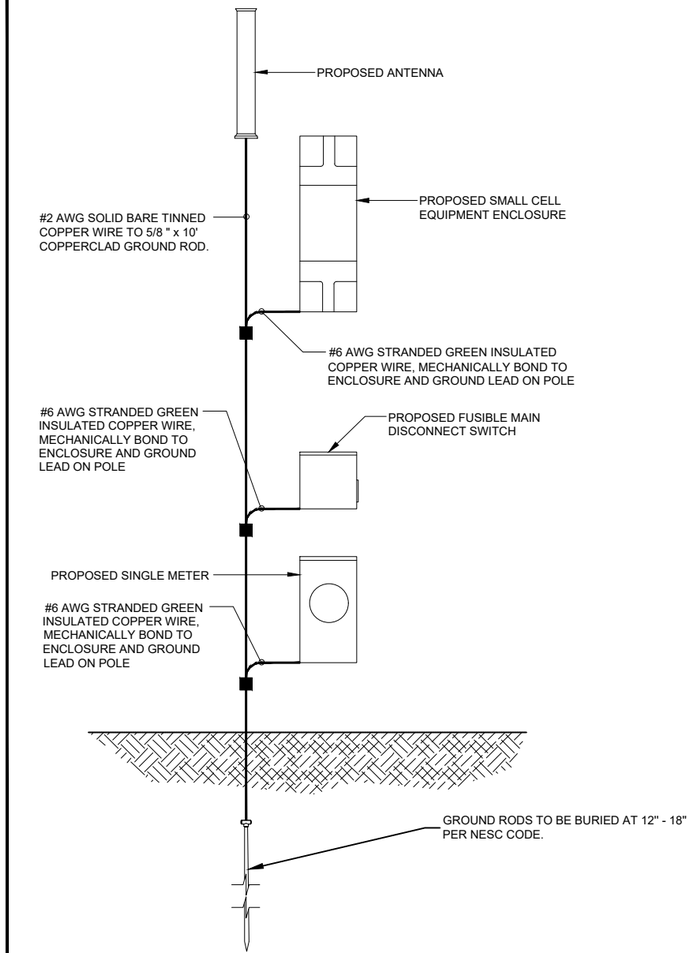
DISCONNECT

SCALE: NTS | 1



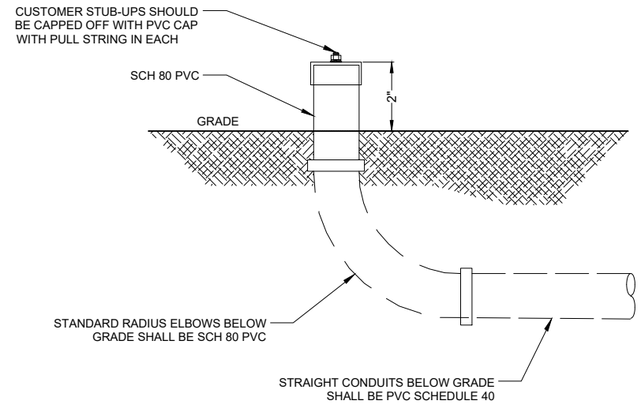
SINGLE LINE DIAGRAM

SCALE: NTS | 2



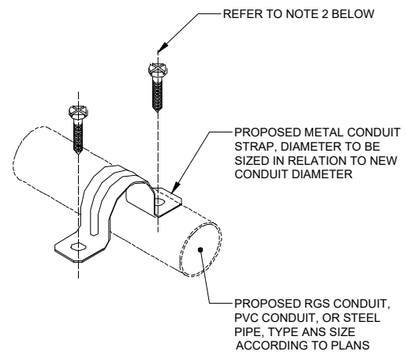
SINGLE LINE GROUNDING DIAGRAM

SCALE: NTS | 3



STUB UP DETAIL

SCALE: NTS | 4



NOTES:

1. SUPPORT 3'-0" O.C. MIN. AND WITHIN 3'-0" OF ANY JUNCTION BOX.
2. ¼" STAINLESS STEEL LAG SCREW W/ MIN. 1-½" EMBEDMENT.

CONDUIT/COAX MOUNTING DETAIL FOR WOOD

SCALE: NTS | 5

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

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REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
ELECTRICAL DETAILS

SHEET NUMBER
C-11

ELECTRICAL NOTES

1. GENERAL
   - 1.1 THE CONTRACTOR SHALL PROVIDE ALL MATERIAL AND LABOR FOR A COMPLETE ELECTRICAL SYSTEM AS INDICATED ON THE DRAWINGS. ITEMS NOT SHOWN BUT OBVIOUSLY NECESSARY FOR A COMPLETE SYSTEM SHALL BE INCLUDED.
   - 1.2 THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS, INSPECTIONS AND APPROVALS.
   - 1.3 ALL WORK SHALL CONFORM TO THE LATESTED ADOPTED FBC, THE NATIONAL ELECTRICAL CODE AND THE LOCAL BUILDING CODES AS WELL AS FPL'S ELECTRICAL SERVICE STANDARDS. ALL COMPONENTS SHALL BE U.L. APPROVED.
   - 1.4 THE CONTRACTOR SHALL BEFORE SUBMITTING HIS BID, VISIT THE SITE OF THE PROJECT AND BECOME FAMILIAR WITH THE CONDITIONS. NO ALLOWANCE WILL BE MADE FOR EXISTING CONDITIONS OR FAILURE OF THE CONTRACTOR TO OBSERVE THEM.
   - 1.5 EXACT LOCATION OF ALL EQUIPMENT SHALL BE COORDINATED WITH WIRELESS CARRIER, THE BUILDING OWNER AND OTHER TRADES.
   - 1.6 WHERE EQUIPMENT IS SPECIFIED BY MANUFACTURER AND TYPE, SUBSTITUTION SHALL ONLY BE MADE WITH THE APPROVAL OF THE ENGINEER. THE CONTRACTOR SHALL SUBMIT DETAILS OF NEW MATERIALS, REASON FOR CHANGE AND CHANGE IN CONTRACT AMOUNT.

2. SCOPE OF WORK
   - 2.1. THE CONTRACTOR SHALL PROVIDE ALL ELECTRICAL WIRING AND EQUIPMENT UNLESS OTHERWISE INDICATED. MAIN COMPONENTS ARE AS FOLLOWS:
     - 2.1.1 PROVIDE ELECTRICAL SERVICE AS INDICATED ON THE DRAWINGS.
     - 2.1.2 PROVIDE SERVICE EQUIPMENT MOUNTED AS DIRECTED BY CARRIER AND AS INDICATED ON THE DRAWINGS.
     - 2.1.3 PROVIDE TELEPHONE CONDUIT WITH PULL WIRE AND CABLE AS INDICATED ON DRAWINGS.
     - 2.1.4 COORDINATE ELECTRICAL SERVICE WITH POWER CO. CONTACT REPRESENTATIVE & OBTAIN FAULT CURRENT LETTER PRIOR TO CONSTRUCTION. CONTRACTOR SHALL MAKE ADJUSTMENTS TO CIRCUIT BREAKERS TO MEET FAULT CURRENT WHEN NOT USING CURRENT LIMITING FUSES.
     - 2.1.5 INSTALL WIRE AND CONDUIT AS INDICATED. PROVIDE CABLE SUPPORTS AS INDICATED.
     - 2.1.6 PROVIDE GROUNDING AND LIGHTNING PROTECTION SYSTEM AS INDICATED.
     - 2.1.7 RESTORE ALL AREAS TO ORIGINAL CONDITION AFTER INSTALLATION OF CONDUIT.
     - 2.1.8 CONTRACTOR SHALL CLEARLY LABEL DISCONNECTS AND OTHER RELATED GEAR.
     - 2.1.9 AT TIME OF PLAN PERMITTING, CONTRACTOR SHALL APPLY FOR A THIRTY (30) DAY TEMPORARY POWER PERMIT FOR TESTING PURPOSES.

3. CONDUIT
   - 3.1 CONDUIT SIZES AS SHOWN ON THE DRAWINGS ARE A MINIMUM. THE CONTRACTOR MAY INCREASE AS REQUIRED FOR EASE OF PULLING.
   - 3.2 CONDUIT TYPES SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED:
     - 3.2.1 ALL ABOVE GRADE CONDUIT SHALL BE RIGID GALVANIZED STEEL.
     - 3.2.2 ALL CONDUIT BELOW GRADE SHALL BE SCHEDULE 40 PVC.
   - 3.3 ALL EXPOSED CONDUIT SHALL BE NEATLY INSTALLED AND RUN PARALLEL OR PERPENDICULAR TO STRUCTURAL ELEMENTS. SUPPORTS AND MOUNTING HARDWARE SHALL BE HOT DIPPED GALVANIZED STEEL. NYLON INSULATED BUSHINGS SHALL BE USED ON ALL CONDUIT TERMINATIONS.
   - 3.4 FLEX CONDUIT SHALL BE LIQUID TIGHT FLEXIBLE METALLIC CONDUIT.
   - 3.5 CONDUIT ROUTES ARE SCHEMATIC, FIELD VERIFY ROUTE BEFORE BID. COORDINATE ROUTE WITH WIRELESS CARRIER AND BUILDING OWNER.

4. CONDUCTORS
   - 4.1. CONDUCTORS SHALL BE STRANDED COPPER TYPE THWN WITH 75 DEGREE C RISE INSULATION.

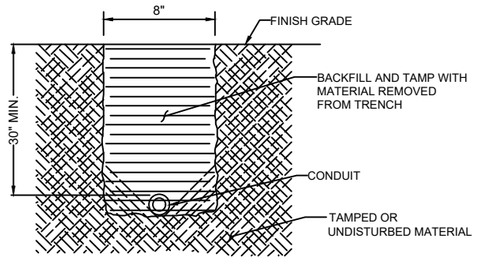
5. PULL BOXES AND JUNCTION BOXES
   - 5.1. INTERIOR ENCL. SHALL BE NEMA 1. RATED; EXTERIOR ENCL. SHALL BE NEMA 3R PART#:M20126RE/CC.

6. GROUNDING
   - 6.1. PROVIDE GROUND SYSTEM AS INDICATED ON THE DRAWINGS AND AS REQUIRED BY THE NATIONAL ELECTRIC CODE AND RADIO EQUIPMENT MANUFACTURER.
   - 6.2. ALL RACEWAYS REQUIRE GROUNDING CONDUCTORS. BONDING CONDUCTORS THROUGH THE RACEWAY SYSTEM SHALL BE CONTINUOUS FROM MAIN SWITCH GROUND BUSES TO PANEL GROUND BARS, AND FROM PANEL GROUNDING BARS TO BRANCH CIRCUIT OUTLETS, MOTORS, LIGHTS, ETC. THESE GROUND CONDUCTORS ARE REQUIRED THROUGHOUT THE PROJECT REGARDLESS OF WHETHER CONDUIT RUNS SHOW GROUND CONDUCTORS ON THE DRAWINGS.
7. METERS
   - 7.1. ALL NEW METERS SHALL BE APPROVED BY THE JURISDICTIONAL POWER COMPANY AND CROWN CASTLE CPM. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE EOR FOR APPROVAL PRIOR TO CONSTRUCTION.

GROUNDING PROTECTION SYSTEM NOTES

1. PROVIDE "CABLE ENTRANCE GROUND BAR" (CEGB), 3"H X 6"L X 1/4"D. MOUNT AT TELCO CABINET. CORD. INSTALLATION WITH CPM.
2. PROVIDE A GROUND RING BURIED A MINIMUM OF 18" BELOW GRADE. THE GROUND RING SHALL BE INSTALLED A MINIMUM OF 2'-0" AWAY FROM THE FOUNDATION UNLESS SHOWN ON DRAWING.
3. BOND DISCONNECT SWITCH, METER, TELEPHONE CABINET AND SERVICE CONDUITS TO BURIED GROUND RING AS THEY CROSS.
4. ELECTRICAL CONTRACTOR SHALL TAKE MEGGER READINGS OF GROUND. FPL GROUNDING SHALL NOT BE GREATER THAN 25 OHMS; CCI GROUNDING SHALL NOT BE GREATER THAN 5 OHMS
5. ALL CONNECTIONS TO GROUND SYSTEM SHALL BE MADE IN LINE WITH BENDS NOMINAL 12" RADIUS IN THE DIRECTION OF CURRENT FLOW. T-CONNECTIONS WILL NOT BE ALLOWED.
6. ALL BENDS IN GROUND WIRES SHALL BE NOMINAL 12" RADIUS
7. ANTENNA CABLES SHALL BE BONDED AT EACH END. RUNS GREATER THAN 150' SHALL BE BONDED TOWARDS MIDDLE OF LENGTH. COORDINATE LOCATION WITH WIRELESS CARRIER'S PROJECT MANAGER
8. EXTEND A #6 WIRE FROM EACH END OF COPPER BUS BAR TO GROUND RING. PROVIDED BRAIDED BONDING JUMPERS BETWEEN EACH GATE AND POST (OPTIONAL).
9. CONTRACTOR SHALL PROVIDE EXOTHERMIC BONDING AT ALL BURIED GROUND RING CONNECTIONS, STRUCTURAL EQUIPMENT FRAME, SERVICE RACK(S), EXISTING TOWER GROUND RINGS, AND AS INSTRUCTED BY CPM.
10. CONTRACTOR SHALL PROVIDE MECHANICAL BONDING AT ALL ANTENNA SECTOR GROUND BARS, ALL ELECTRICAL EQUIPMENT DISCONNECTS, TRANSFORMERS, J-BOXES, PANEL-BOARDS, CABINETS, AND MAIN GROUND BAR AS DIRECTED BY CPM. ALL MECHANICAL CONNECTIONS SHALL BE PROPERLY TERMINATED W/ LUGS, NUTS & BOLTS. CONTRACTOR SHALL COAT WITH NOX-OX ALL POINTS OF CONTACT BETWEEN DISSIMILAR METALS.
11. ALL REMOTES SHALL BE GROUNDED TO BUILDING STEEL VIA A MINIMUM #6 CU GROUNDING CONDUCTOR

ELECTRICAL NOTES 11"x17" SCALE: NTS 24"x36" SCALE: NTS **1**



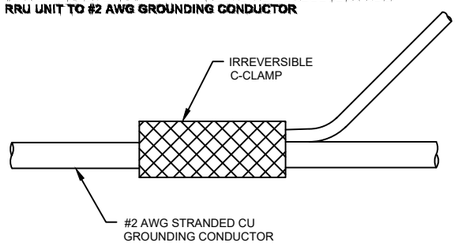
NOTES:
1. SIDEWALK PATCHES TO MATCH EXISTING JOINTS.
2. ENTIRE SIDEWALK SLAB MUST BE REPLACED WHEN SPECIFIED IN THE PLANS.
3. BACKFILL AND TAMP WITH MATERIAL FROM TRENCH EXCEPT AT DRIVEWAYS. AT DRIVEWAYS, BACKFILL A LENGTH OF TRENCH WITHIN THE DRIVEWAY ENTIREY WITH FLOWABLE FILL.

FOR USE IN AREAS NOT EXPOSED TO VEHICULAR TRAFFIC
FDOT STANDARD PLANS INDEX 630-001

UTILITY TRENCH DETAIL

11"x17" SCALE: NTS 24"x36" SCALE: NTS **2**

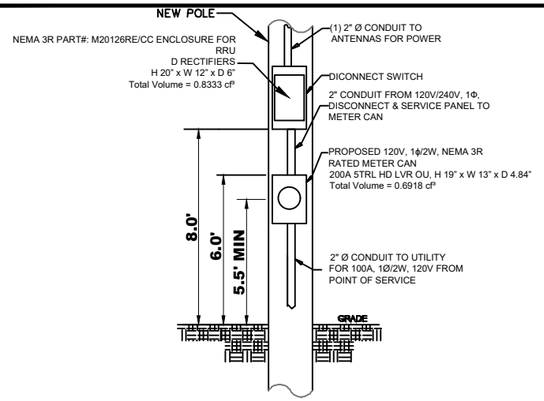
#6 AWG GREEN STRANDED CU GROUNDING CONDUCTOR FROM RRU UNIT TO #2 AWG GROUNDING CONDUCTOR



NOTE:
CONTRACTOR TO SURROUND COMPLETED CONNECTION W/ WEATHER PROOFING TAPE TO ENSURE WEATHER PROOF CONNECTION.

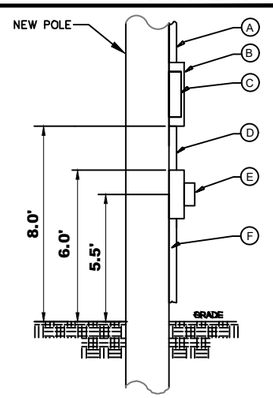
C-TAP GROUNDING DET.

11"x17" SCALE: NTS 24"x36" SCALE: NTS **3**



MECH CONNECTION DETAIL

11"x17" SCALE: NTS 24"x36" SCALE: NTS **4**

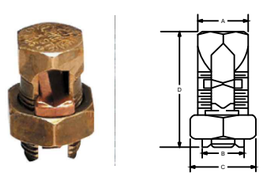


LEGEND

- (A) (1) 2" Ø CONDUIT TO ANTENNAS FOR POWER
- (B) DICONNECT SWITCH
- (C) NEMA 3R PART#: M20126RE/CC ENCLOSURE FOR RRU
  D RECTIFIERS
  H 20" x W 12" x D 6"
  Total Volume = 0.8333 cf³
- (D) 2" CONDUIT FROM 120V/240V, 1Φ, DISCONNECT & SERVICE PANEL TO METER CAN
- (E) PROPOSED 120V, 1ϕ/2W, NEMA 3R RATED METER CAN
  200A 5TRL HD LVR OU, H 19" x W 13" x D 4.84"
  Total Volume = 0.6918 cf³
- (F) 2" Ø CONDUIT TO UTILITY FOR 100A, 1Ø/2W, 120V FROM POINT OF SERVICE

METER/DISCONNECT INSTALLATION DETAILS

11"x17" SCALE: NTS 24"x36" SCALE: NTS **5**



Cat. No.	Conductor Range (AWG or kcmil) Range for equal Main and Tap	Min. Tap with one Max. Main	Dimensions (in.) A	B	C	D
5H	10 str.–12 sol.	14 sol.	3/8	0.146	1/2	25/32
6H	8 str.–10 sol.					29/32
6H3*	8 str.–12 sol.	16 str.				29/32
6H	6 sol.–8 sol.	14 sol.	15/32	0.170	21/32	31/32
6H3*	6 sol.–10 sol.	16 str.				1-1/8
4H	4 sol.–6 sol.	14 sol.	17/32	0.235	23/32	1-1/16
4H3*						1-9/32
3H	3 sol.–6 sol.	16 str.				1-1/16
3H3*	4 str.–6 sol.					1-9/32
2H	2 sol.–6 sol.	14 sol.	19/32	0.271	25/32	1-1/4
2H3*						1-15/32
1H	2 str.–6 sol.		11/16	0.330	7/8	1-11/32
1H3**						1-5/8
1DH	1/0 str.–4 sol.		3/4	0.385	15/16	1-19/32
2DH	2/0 str.–2 sol.		7/8	0.443	1-1/16	1-13/16
3DH	4/0 str.–2 sol.	6 sol.	1	0.500	1-3/16	2-5/32
4DH	250 kcmil–1 str.	8 sol.	1	0.580	1-5/16	2-5/32
350M	350 kcmil–250 kcmil	1/0 str.	1-5/16	0.717	1-21/32	2-11/16
500M	500 kcmil–400 kcmil	2/0 str.	1-1/2	0.842	1-7/8	3-1/32
750M	750 kcmil–600 kcmil	4/0 str.	1-15/16	1.029	2-1/4	3-21/32
1000M	1000 kcmil–800 kcmil		2-1/4	1.185	2-17/32	4-1/32

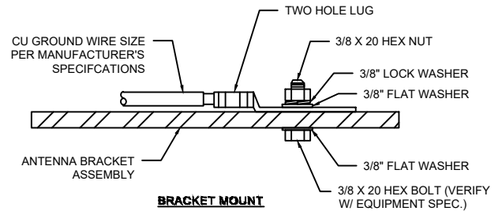
* Will accommodate 3 wires of maximum size.
** Will accommodate 3 #2 str. wires.
UL recognizes solid and stranded conductor configurations for sizes #8 and smaller and stranded configurations only for sizes #6 and larger.

COPPER ALLOY SPLIT BOLT CONNECTORS

11"x17" SCALE: NTS 24"x36" SCALE: NTS **6**

CONNECTOR NOTES:

1. **PLACE CONNECTOR LUG ON FRONT SIDE OF MGB AND IN DIRECT CONTACT WITH MGB.**
   - A. **PLACE FLAT WASHER ON THE BACKSIDE OF THE BUS BAR.**
   - B. **LACE BOLT THROUGH THE BACK WASHER, THROUGH MGB AND THROUGH CONNECTOR LUG.**
   - C. **PLACE FLAT WASHER ON THE FRONT SIDE OF THE LUG.**
   - D. **PLACE LOCK WASHER ON THE FRONT SIDE OF THE FLAT WASHER.**
   - E. **NUT ON THE BOLT, TURNED TO "THREE THREADS SHOWING AT MAXIMUM TORQUE.**



BRACKET MOUNT

NOTES:

1. **CHOOSE BOLT LENGTH TO ALLOW FOR A MINIMUM OF 2 EXPOSED THREADS**
2. **BURNISH MOUNTING AREA TO REMOVE PAINT OR SCALING IN AREA FOR LUG TO BE MOUNTED**
3. **APPLY ANTI OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIPE CLEAN EXCESS COMPOUND**
4. **USE SOLID COPPER WIRE AND TWO HOLE LUG FOR ALL EXTERIOR GROUNDING APPLICATIONS**

ZAYO GROUP, LLC
GLOBAL HD
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BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

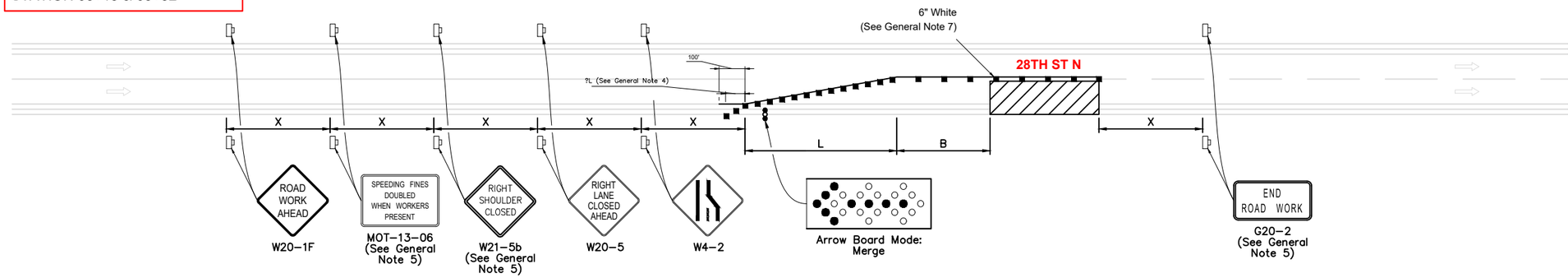
ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE
ELECTRICAL NOTES & GROUNDING DETAILS

SHEET NUMBER
C-12

THIS STANDARD MOT WILL BE APPLIED TO WORK ZONE AT STATION 03+15 & 03+32



SINGLE LANE CLOSURE

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic
- Arrow Board

GENERAL NOTES:

1. L = Taper Length
   B = Buffer Length
   X = Work Zone Sign Distance
   See Index 102-600 for "L", "B", "X", and channelizing device spacing values.

2. On undivided highways the median signs as shown are to be omitted.

3. On limited access facilities, omit "Shoulder Closed Ahead" signs (W21-5b) and associated work zone sign spacing distances.

4. If the paved shoulder is less than 4' in width, omit the taper and channelizing devices from the paved shoulder.

5. The "Speeding Fines Doubled When Workers Present" signs (MOT-13-06) and "End Road Work" signs (G20-2) and "Shoulder Closed Ahead" (W21-5b), along with associated work zone sign distances, may be omitted when the work zone will be in place for 24 hours or less. For Single Lane Closures, arrow boards and buffer (B) may also be omitted when the work zone will be in place for 60 minutes or less and the speed limit is 45 mph or less.

6. Use inverted plan of the illustrations for work on left side of roadways.

7. Temporary pavement markings may be omitted when the work zone is in place for 3 days or less.

8. If the work encroaches on a marked bicycle lane or ridable shoulder, close the lane or shoulder in accordance with the Plans.

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2021-22 STANDARDS PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX NO.	SHEET NO.
11/01/20						102-613	1 of 5

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301
SITE ACQUISITION

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TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

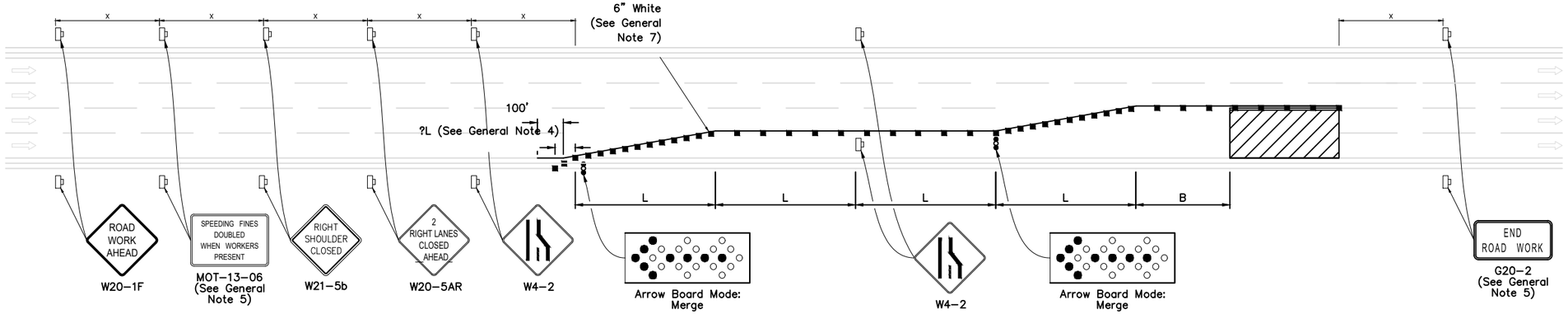
SHEET TILE

MOT

SHEET NUMBER

C-13

DOES NOT APPLY



DOUBLE LANE CLOSURE

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic
- Arrow Board

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2021-22 STANDARDS PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX NO.	SHEET NO.
11/01/20						102-613	2 of 5

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

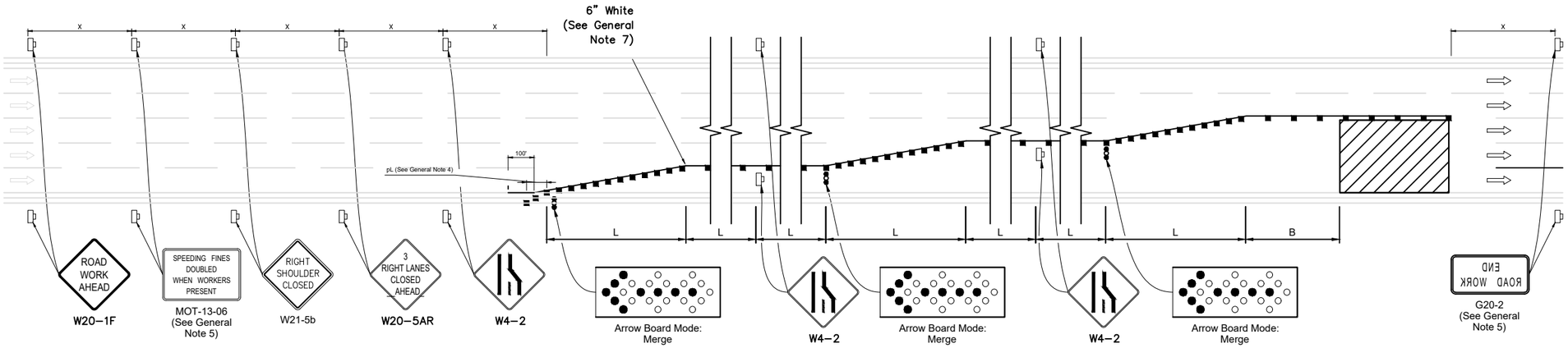
SHEET TILE

MOT

SHEET NUMBER

C-14

DOES NOT APPLY



TRIPLE LANE CLOSURE

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic
- Arrow Board

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARDS PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX NO.	SHEET NO.
11/01/20					102-613	3 of 5

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301
SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

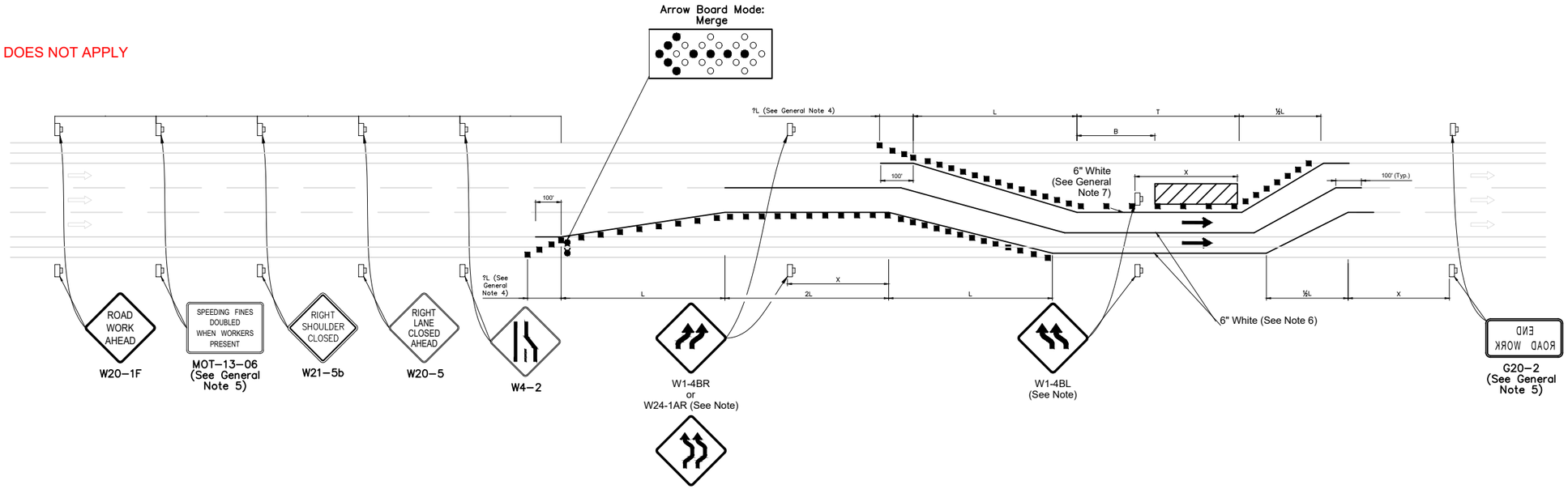
SHEET TILE

MOT

SHEET NUMBER

C-15

DOES NOT APPLY



LANE CLOSURE WITH LANE SHIFT

SYMBOLS:

- Work Area
- Channelizing Device (See Index 102-600)
- Work Zone Sign
- Lane Identification and Direction of Traffic
- Arrow Board

NOTE:
If the tangent distance "T" is less than 600', then use "Double Reverse Curve" signs (W24-1A) instead of the first pair of "Reverse Curve" signs (W1-4B) and omit the second pair of "Reverse Curve" signs.

LAST REVISION	REVISION	DESCRIPTION:	FDOT FY 2021-22 STANDARDS PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX NO.	SHEET NO.
11/01/20					102-613	4 of 5

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301

SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

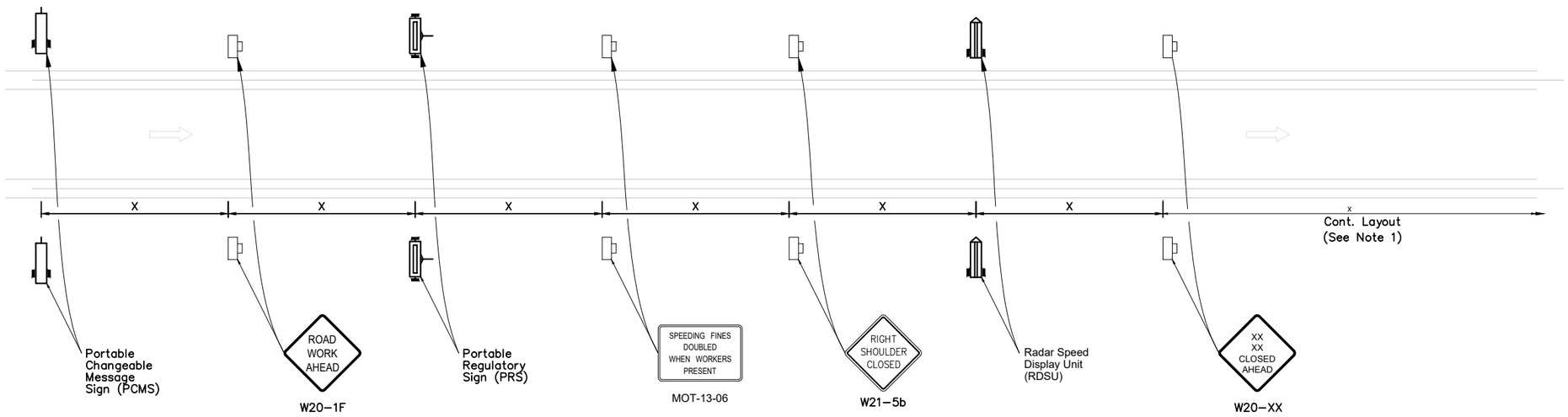
SHEET TILE

MOT

SHEET NUMBER

C-16

DOES NOT APPLY



MOTORIST AWARENESS SYSTEM

SYMBOLS:

- Work Zone Sign
- Lane Identification and Direction of Traffic
- (1) PCMS= Portable Changeable (Variable) Message Sign
- (2) PRS= Portable Regulatory Sign–Speed Limit When Flashing
- (2) RSDU= Radar Speed Display Unit

NOTES:

1. When called for in the Plans, use the Motorist -wareness System (M-S) in accordance with the Plans and this Index. When using this detail, locate the M-S devices (i.e., PCMS, PRS, and RDSU) within the advance warning signs as shown. Continue with the remainder of the work zone sings and devices in accordance with the Plans or Standard Plans after the appropriate "Lane Closed -head' (W20–XX) sign.
2. For a posted speed of 65 mph or greater, display speed with a ten mph reduction. For a posted speed of 60 mph, display a reduced speed of 55 mph. For areas outside of the lane closure, use the posted speed as the work zone speed.
3. Omit the PCMS in the median for roadways with three lanes or less in the same direction of traffic.

TYPICAL PCMS DISPLAY:

With speed reduction:
Message 1: WORKERS PRESENT -HE-D
Message 2: SPEED REDUCED NEXT XXMI

Without speed reduction:
Message 1: WORKERS PRESENT -HE-D
Message 2: NEXT XX MILES

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2021-22 STANDARDS PLANS	MULTILANE ROADWAY, LANE CLOSURES	INDEX NO.	SHEET NO.
11/01/20						102-613	5 of 5

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301
SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

MOT

SHEET NUMBER

C-17

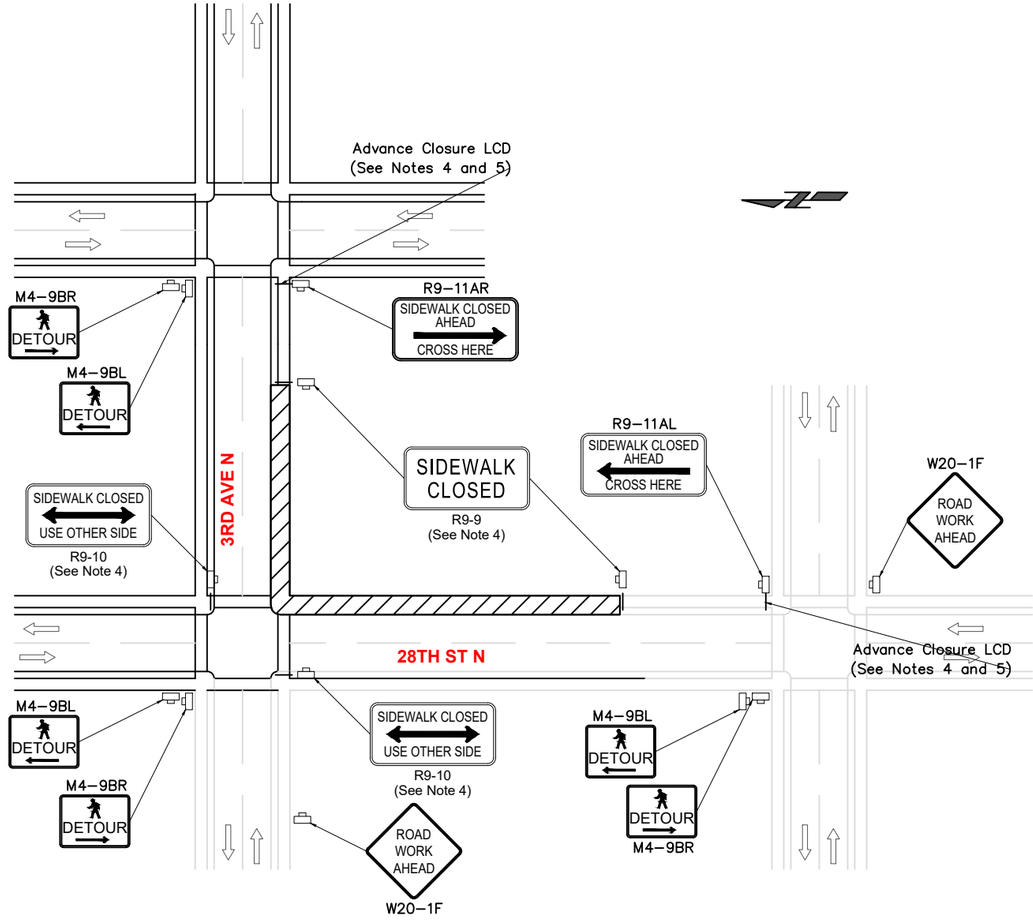
THIS STANDARD MOT WILL BE APPLIED TO WORK ZONE AT STATION 01+90

NOTES:

1. Cover or deactivate pedestrian traffic signal display(s) controlling closed crosswalks.
2. Place pedestrian LCDs across the full width of the closed sidewalk.
3. For post mounted signs located near or adjacent to a sidewalk, maintain a minimum 7? clearance from the bottom of the sign panel to the surface of the sidewalk.
4. "Sidewalk Closed" signs (R9–XX) may be mounted on pedestrian LCDs in accordance with the manufacturer's instructions.
5. Omit the Advance Closure LCD if it blocks access to other pedestrian facilities (e,g,, transit stops, residences, or business entrances).

SYMBOLS:

- Work Area
- Work Zone Sign
- Lane Identification and Direction of Traffic
- Pedestrian Longitudinal Channelizing Device (LCD)



PEDESTRIAN DETOUR

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2021-22 STANDARDS PLANS	SIDEWALK CLOSURES	INDEX NO.	SHEET NO.
11/01/20						102-660	1 of 2

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301
SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

MOT

SHEET NUMBER

C-18

NOTES:

1. L=Taper Length
   B=Buffer Length
   X=Work Zone Sign Distance
   See Index 102–600 for "L", "B", "X", channelizing device spacing values.

2. Provide a 5' wide temporary pedestrian way with a maximum cross–slope of 0.02, except where space restrictions warrant a minimum width of 4'". Provide a 5' x 5' passing space for temporary pedestrian ways less than 5' in width at intervals not to exceed 200'.

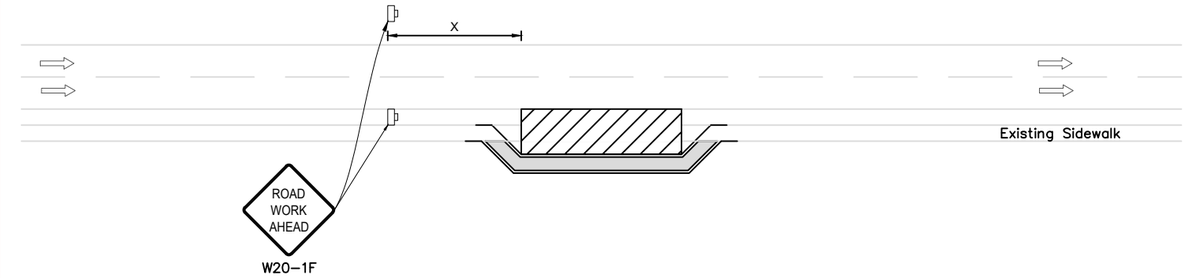
3. When temporary pedestrian ways require curb ramps, meet the requirements of Index 522–002. Detectable warnings are not required for curb ramps diverting pedestrian traffic into a closed lane.

4. The "Speeding Fines Doubled When Workers Present" signs (MOT–13–06) and "End Road Work" signs (G20–2), along with associated work zone sign distances, may be omitted when the work zone will be in place for 24 hours or less.

SYMBOLS:

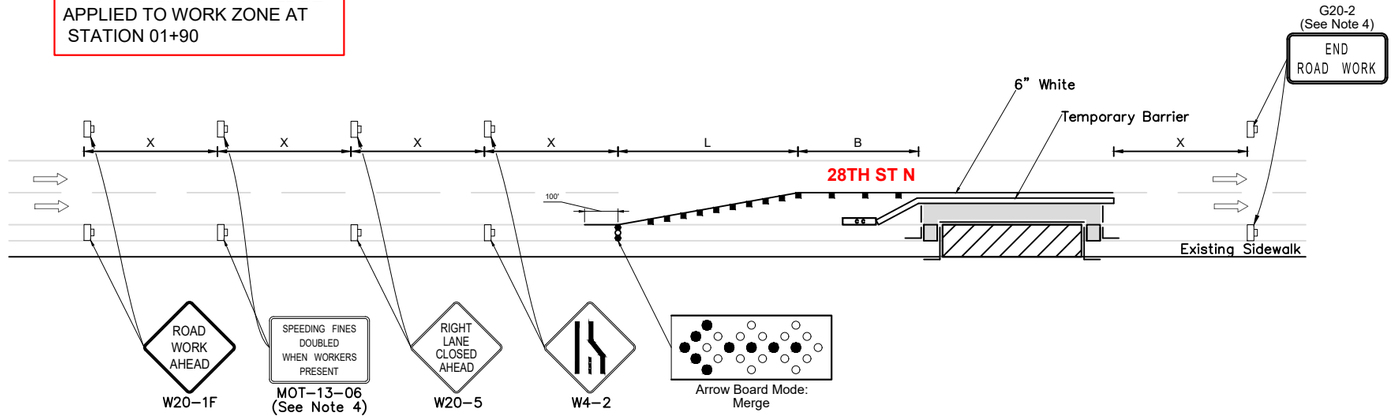
- Work Area
- Temporary Pedestrian Way
- Channelizing Device (See Index 102-000)
- Work Zone Sign
- Lane Identification and Direction of Traffic
- Pedestrian Longitudinal Channelizing Device (LCD)
- Arrow Board
- Crash Cushion

DOES NOT APPLY



TEMPORARY PEDESTRIAN WAY

THIS STANDARD MOT WILL BE APPLIED TO WORK ZONE AT STATION 01+90



TEMPORARY PEDESTRIAN WAY DIVERTING TRAFFIC INTO THE TRAVELED WAY
(Temporary Barrier Shown, Low Profile Barrier Similar)

LAST REVISION	REVISION	DESCRIPTION:	FDOT	FY 2021-22 STANDARDS PLANS	SIDEWALK CLOSURES	INDEX NO.	SHEET NO.
11/01/20						102-660	2 of 2

ZAYO GROUP, LLC
GLOBAL HD
1831 30TH STREET, UNIT A
BOULDER, CO 80301
SITE ACQUISITION

A&E SERVICES

DRAWN BY:	GENXC
DATE:	10/6/2021

REV	DATE	DESCRIPTION	BY
1	10/6/2021	ORIGINAL SUBMITTAL	MP

SPACE RESERVED FOR PROFESSIONAL SEALS

SPACE RESERVED FOR PERMIT AGENCY APPROVAL

TMO SITE #: TP2577BA_11LAB

ADDRESS: 2754 3RD AVE NORTH, ST. PETERSBURG, 33713 , USA

SITE TYPE: SMALL CELL PROPOSED WOOD UTILITY POLE

SHEET TILE

MOT

SHEET NUMBER

C-19

Appendix B:

City Code Section 25-316

City of St. Petersburg Code of Ordinances

Article VIII. Use of Rights-of-Way for the Provision of Services: Design Standards for Small Wireless Facilities

Sec. 25-316. Design standards for small wireless facilities.

(a) *Design standards—General.* Small wireless facilities and accessory equipment placed anywhere in the City right-of-way are subject to the following design guidelines:

(1) Small wireless facilities may not extend more than ten feet above the utility pole upon which it is mounted.

(2) A new pole is limited to the height of the tallest existing utility pole, as of July 1, 2017, located in the same right-of-way and within 500 feet of the proposed new pole. If there is no existing pole within 500 feet of the new pole site, the new pole is limited to 50 feet.

(3) Above ground facilities must be located within the right-of-way where the shared property line between two parcels intersects the right-of-way boundary, or otherwise in a manner that demonstrates the least impact to access to private property.

(4) Equipment boxes and other ground equipment located at grade must be located in areas with existing foliage or another aesthetic feature to obscure it from the view, to the greatest extent possible. The application must include a depiction of techniques utilized for camouflaging.

(5) Equipment mounted to the exterior of a pole shall be a minimum of eight feet above finished grade, excluding the electric meter and disconnect switch. The external finish of the equipment cases shall generally match the color of the pole. All mounting and banding fixtures shall also match the color of the pole. Conduits mounted to an existing pole must match the pole color and be encased with a shroud cover.

(6) New poles shall be located at or near roadway intersections or in alleys when possible. When mid-block locations are necessary, new poles shall be located near the property boundary line at the edge of the site or otherwise sited in a manner that demonstrates the least impact to access to private property.

(7) Separation from driveways and hydrants. Above-ground communications facilities and utility poles shall be located at least ten feet from a driveway apron and at least 30 feet from a fire hydrant.

(8) New poles shall be designed with conduit internal to the pole, with the exception of wood poles. Above the electric meter and disconnect switch, all conduit and wiring shall be located inside the pole.

(9) New poles shall be consistent with the existing poles located in the same right-of-way and within 500 feet of the proposed new pole, unless approved otherwise by the POD.

(10) Facilities shall not block or encroach into an existing or future public sidewalk paths as required in the City's Land Development Regulations.

(11) Electric meters and disconnect switches shall be located on the side of the pole that is oriented in the same direction as the flow of vehicular traffic in the adjacent roadway. For example, if traffic flow is north-bound, then the equipment should be placed on the north side of the pole. Conduit leading to the electric meter box and disconnect switch shall generally match the color of the utility pole.

(12) Grounding rods shall not extend above the surface elevation and the ground wire between the pole and ground rod must be inside an underground conduit.

(13) All pull boxes shall be located outside of the sidewalk or pedestrian ramp. A concrete apron must be installed around all pull boxes located within the landscape area of the parkway.

(14) All pull boxes must be vehicle load bearing, comply with FDOT standard specifications and be listed on the FDOT approved products list.

(15) Small wireless facilities and accessory equipment shall meet all applicable historic preservation regulations required by the City's Historic and Archaeological Preservation Overlay Ordinance, including obtaining a certificate of appropriateness if necessary.

(b) *Design standards—Traditional zones, downtown center zones, and charter parks*. Small wireless facilities and accessory equipment placed in the City right-of-way in an NT, CRT, CCT, or DC zone, or in a charter park, are subject to the following design guidelines, in addition to the general guidelines set forth above:

(1) To the greatest extent possible, the City prefers that new utility poles for small wireless facilities be constructed in alleys. However, upon a demonstration of need related to the provision of wireless services by the wireless provider, introduction of pedestrian level light poles which augment district design characteristics and accommodate small wireless facilities may be considered within the right-of-way and at intersections.

(2) The POD may consider the granting of a waiver to the height restrictions of this section in an effort to accommodate the placement of a small wireless facility, including a new utility pole, in an alley.

(3) Any request by an applicant to construct a new utility pole in City right-of-way that is not an alley may be subject to the alternative location negotiation procedure, in accordance with Section 25-308(c)(3) of the City Code.

(c) *Placement within a scenic/non-commercial corridor*. Unless otherwise authorized by a franchise agreement, for public safety purposes, or waived in accordance with subsection (d) below, no net new utility poles shall be placed within a designated scenic/non-commercial corridor.

(d) *Waiver of design standards.* The design standards may be waived by the POD if a particular standard is either not reasonably compatible to a particular location or imposes an excessive expense.

(Ord. No. 317-H, § 4, 12-14-2017)

Appendix C:

Public Comments

Kelly K. Perkins

From: Susan Dickson <susankdickson@gmail.com>
Sent: Wednesday, December 1, 2021 4:26 PM
To: Laura Duvekot; Kelly K. Perkins; Derek Kilborn
Subject: Opposing COA 21-90200128

Hi,
I'm writing in opposition to the COA for the 41 foot tall pole and wireless facility at 2754 3rd Ave N.
I own the house directly across the street at 2763 3rd Ave N and have lived here for ten years. This pole and wireless facility would be a blight on the view from our house. As it's proposed for the right of way in front of the house, it would be far too close to my house, negatively impacting the property value and completely inappropriate to the look of a historic neighborhood. Cell towers belong in industrial or commercial areas, not historic residential streets, and I'm surprised to hear that there are no zoning restrictions precluding this type of project in Historic Kenwood.
Please let me know the procedure for opposing this project, and if there's anything else I can do. I plan to attend the hearing on 12/14.
Thank you so much for your consideration,
Susan Dickson
727-455-9743

Kelly K. Perkins

From: Cristobal Mitchell <cristobalmitchell@gmail.com>
Sent: Wednesday, December 1, 2021 4:48 PM
To: CPPC; Kelly K. Perkins
Subject: Opponent for 21-9020018

Hello

I am writing in opposition to COA 21-9020018 regarding the installation of a 41-foot-tall pole for small wireless facility in the easement of 2754 3rd Ave N.

I am the home owner of 2747 3rd Ave N which is almost directly across the street from the site in question. This pole would not only be a hideous eye sore but would negatively impact my property value. Wireless towers do not belong in our historic neighborhood and should only be considered in more commercial or industrial parts of the city.

It is shocking that there aren't ordinances already in place to avoid such bone headed attempts at profiting at your neighbors expenses.

Please let me know what the official formal process is so that I can ensure my voice is heard. I do plan on attending the public hearing on 12/14/21.

Kind regards
Cristobal Mitchell

Kelly K. Perkins

From: Brenda Gordon <brendargen@gmail.com>
Sent: Wednesday, December 8, 2021 11:35 AM
To: Kelly K. Perkins
Subject: Installation of 41 ft pole for wireless facility on 3rd Ave N in Historic Kenwood

Dear Ms. Perkins,
As someone who researched and helped to write the four applications for Local Historic Districts (LHD) in Historic Kenwood, I was astounded to see a request for a wireless facility to be placed on the right of way on 3rd Ave North!

During my research, I learned the neighborhood was platted with garages and all utilities to be placed in the alleys behind the homes. Homes with front porches and sidewalks to encourage neighbors to talk and visit was key to the development plan and are an integral component contributing to the charm of our historic neighborhood, which is listed in its entirety on the National Register of Historic Places.

It is absolutely inconceivable to me that a request to place a utility facility in front of any home in any traditional neighborhood with alleys would EVER be considered by the City. Whether or not the request is for placement in LHD, it is totally inappropriate to install utilities in front of homes in these traditional alley neighborhoods.

Please consider this letter one of the strongest opposition to the request for a 41 foot tall pole for a wireless facility in right of way in front of the home located at 2754 3rd Avenue North - or anywhere else on a right of way in Historic Kenwood.

With Regards,

Brenda Gordon

2934 Burlington Ave N
St. Petersburg, FL 33713
813-712-0796

Kelly K. Perkins

From: Susan Eubanks <seubanks4@gmail.com>
Sent: Friday, December 10, 2021 2:28 PM
To: Kelly K. Perkins
Subject: Application #21-90200128, Right-of-way in front of 2754 3rd Ave N

Hello,

I received the notice of public hearing for the above application. I think this has been postponed until sometime in January.

I am submitting my objection to this 41-foot-tall pole being installed on this 2700 block of 3rd Ave N. My property value would more than likely go down with this pole installed.

Please advise me if there are any additional actions I need to take to voice my objection to this application.

Thank you!

--
Susan Eubanks
2725 3rd Ave N
St Petersburg, FL 33713
(C) 813-765-8061

January 10, 2022

Dear Commissioners,

On behalf of the Historic Kenwood Neighborhood Association Board of Directors, I am writing to express our strong opposition to the proposed installation of a wireless facility in the right of way in front of 2754 3rd Avenue North.

This historic neighborhood, listed on the National Register of Historic Places in its entirety, was designed to have all utilities located in the alleyways behind the homes. Electricity, cable, sewer, water, trash, recycling, gas lines, and other utilities are located in the alleys. Installation of a wireless facility easily could be done on an existing utility pole in the alley.

There should be no right of way utilities in front of residences installed anywhere within Historic Kenwood.

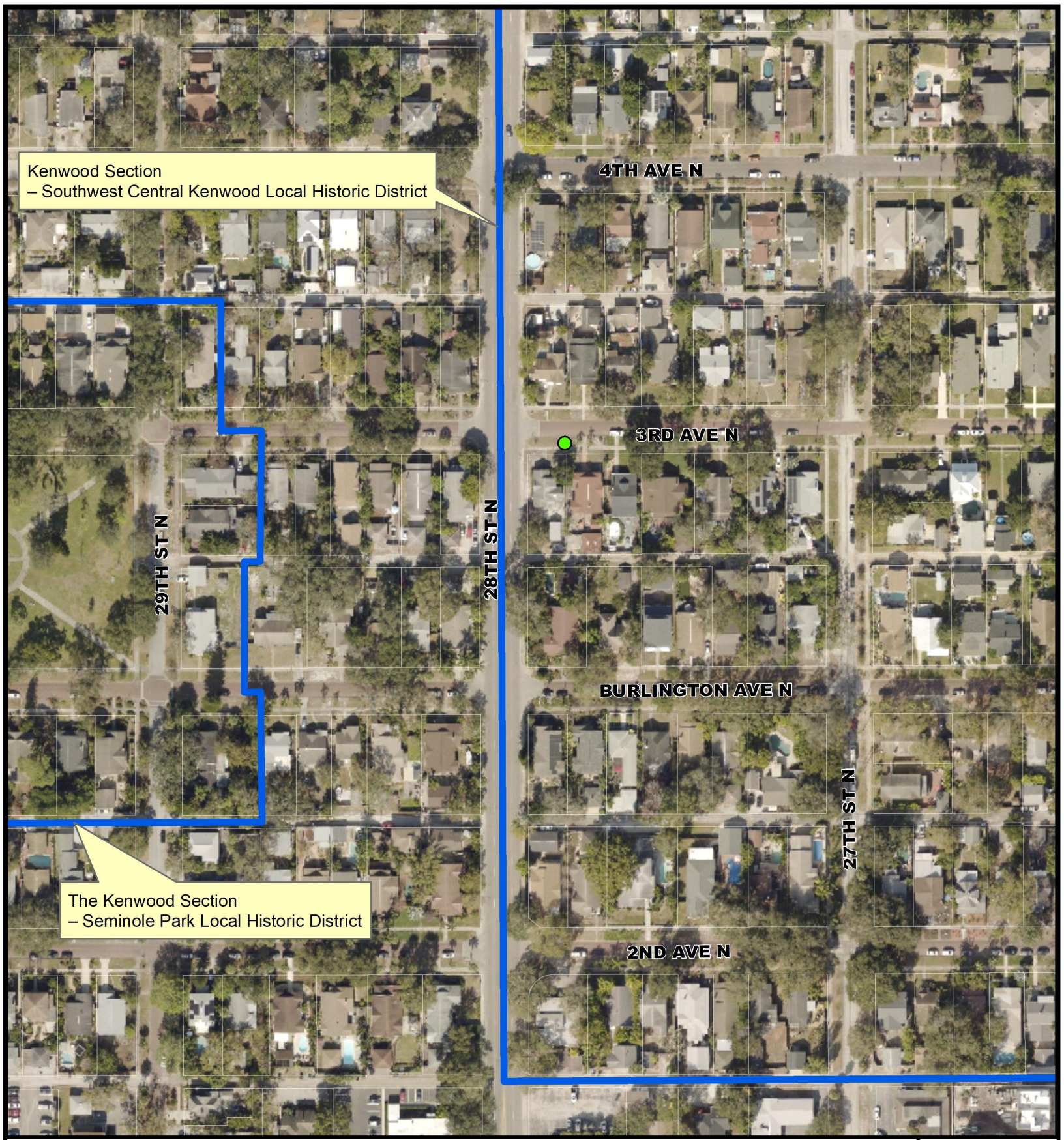
With regards,

Alexis Baum

Historic Kenwood Neighborhood Association President

Appendix D:

Maps of Subject Property



Community Planning and Preservation Commission

Northeast Corner of 2754 3rd Ave N

AREA TO BE APPROVED,

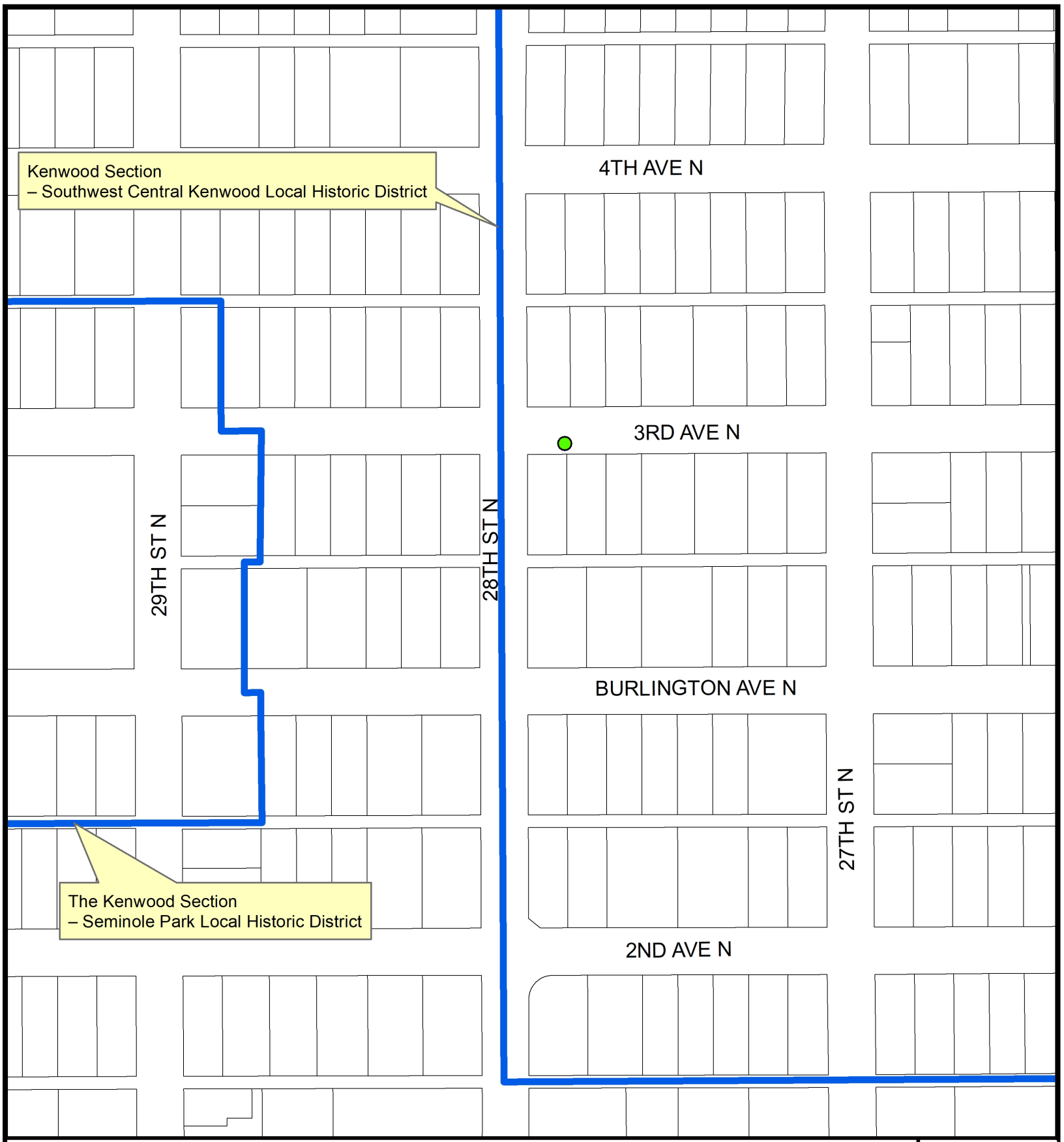
SHOWN IN ●

CASE NUMBER

21-90200128

N

SCALE:
1 " = 180 '



Community Planning and Preservation Commission

Northeast Corner of 2754 3rd Ave N

AREA TO BE APPROVED,

SHOWN IN

CASE NUMBER

21-90200128

N

SCALE:
1 " = 180 '