PLANNING COMMISSION REPORT
Regular Agenda – Public Hearing Item

ITEM NO. 1  CONDITIONAL USE PERMIT FOR VERIZON WIRELESS; 1211 E 600 RD (SLD)

CUP-14-00550: Consider a Conditional Use Permit for a new 189’ self-supporting communication tower located at 1211 E 600 Rd. Submitted by SSC, Inc and Horvath Communications for Verizon Wireless on behalf of Rex and Shirley Johnson, property owners of record.

STAFF RECOMMENDATION: Staff recommends approval of the Conditional Use Permit for a communication tower located at 1211 E 600 Rd and forwarding it to the County Commission for a recommendation of approval subject to the following conditions:

1. Provision of a note on the face of the site plan sheet T-1 stating: “The owner at the owner’s expense shall remove any tower that is not in use for a period of three years or more.” And
2. Provision of a note on the face of the site plan stating: “There shall be a sign placed on the exterior of the fence noting the name and telephone number of the tower owner/operator.”

Reason for Request: Enhancement of the area of Clinton Lake located southwest of the City of Lawrence.

ATTACHMENTS
1. Site plan
2. RF Justification Report
3. Soils Map
4. Clinton Community Area Map

KEY POINTS
- Property is not encumbered by regulatory floodplain.
- Property is not located within any Lawrence Urban Growth Area.

ASSOCIATED CASES/OTHER ACTION REQUIRED
- Board of County Commissioners’ approval of the Conditional Use.
- Submission and approval of a local building permit to Douglas County.
- Obtain a Conditional Use Permit from Douglas County.

PUBLIC COMMENT
- None received

SITE SUMMARY/PROJECT DESCRIPTION
Subject Property: 31.77 Acres
Proposed Improvements: 100’ x 100’ lease area
11’6” x 25’ 5½” pad for equipment building
180’ self-supporting tower with 9’ lightning rod
Ground equipment includes shelter building with a generator.
The proposed tower shows space for up to five total carriers
I. ZONING AND USES OF PROPERTY NEARBY
The area between the Wakarusa River Arm and the Rock Creek Arm of Clinton Lake is zoned A (Agricultural) District. The property is located within the community of Clinton. Surrounding land uses include several rural residential homes located along county roads, larger agricultural areas are located to the west of the subject property, north and south of N 1200 Road. Clinton Presbyterian Church is located south of the subject property along the north side of N 1200 Road. Much of the area to the northeast and east is part of the Clinton Lake State Park land. This area includes boat access to the lake as well as camping and day-use areas.

South of the subject property, located on the south side of N 1200 Road, includes an area zoned B-3 (Limited Business) District that is developed with a residence and a retail store. This area was platted as part of the Clinton Townsite plat recorded in 1863.

South of the subject property, located on the south side of N 1180 Road, is the Clinton School District #25 building listed on the National Register of Historic Places.

Section 12-319-4.31 (d)(5) requires towers to be located in commercial, industrial or agricultural districts.

Staff Finding - This area, immediately surrounding the subject property, is uniformly zoned A (Agricultural) District. The area to the immediate east and south are developed with residential homes and a church while the surrounding area is used for agricultural purposes. Towers are allowed in the Agricultural District subject to a Conditional Use Permit.

II. CHARACTER OF THE AREA
Clinton, Kansas is a peninsula surrounded by Clinton Lake with the main access from N 851 Diagonal Road, County Road 6. The area includes multiple homes in a traditional urban pattern at the heart of the community. The main road, N 1190 Road/County Road 6, provides direct access to primary camping area along Clinton Lake.

Areas to the west are dominated by larger tracts of land with scattered rural residential homes located along county roads and agricultural fields. The area along the lake shoreline includes dense vegetation except where public access and camping areas are located. The subject property includes an area designated as Class 2 soils. The proposed tower site will occupy a small portion in the northeast corner of the parent parcel.

Staff Finding - This area is largely agricultural west of E 600 Road. Property to the north includes Clinton Lake State Park land.

III. SUITABILITY OF SUBJECT PROPERTY FOR THE USES TO WHICH IT HAS BEEN RESTRICTED

<table>
<thead>
<tr>
<th>GENERAL INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current Zoning and Land Use: A (Agricultural) District. Existing rural residential home on large tract including crop land</td>
</tr>
<tr>
<td>Surrounding Zoning and Land Use: A (Agricultural) District in all directions. Existing rural residential home located along existing county roads and Clinton Lake park land.</td>
</tr>
</tbody>
</table>
This property is currently restricted to uses allowed in the A (Agricultural) District. This district is associated with agricultural activities such as farms, truck gardens, nurseries, grazing and similar activities. The A (Agricultural) District allows both residential and non-residential uses.

The proposed request does not change the base zoning district or alter the allowed uses. Section 12-319.4.31(d) specifically identifies commercial, industrial or agricultural zoning districts as suitable for communication towers.

**Staff Finding** - The subject property, zoned A (Agricultural) District, is a suitable district for the proposed use. The base zoning district is not altered by this request. A communication tower is an allowed use in the A (Agricultural) District subject to a Conditional Use Permit.

**IV. LENGTH OF TIME SUBJECT PROPERTY HAS REMAINED VACANT AS ZONED**

The property is not vacant. This site is developed with a rural residence and related accessory buildings. The zoning has remained unchanged since 1966.

**Staff Finding** - The property is not vacant. The zoning has remained unchanged since 1966.

**V. EXTENT TO WHICH REMOVAL OF RESTRICTIONS WILL DETRIMENTALLY AFFECT NEARBY PROPERTY**

Section 12-319-1.01 of the County Zoning Regulations recognize that “…certain uses may be desirable when located in the community, but that these uses may be incompatible with other uses permitted in a district…when found to be in the interest of the public health, safety, morals and general welfare of the community may be permitted, except as otherwise specified in any district from which they are prohibited.”

Communication towers are specifically recommended to be located in commercial, industrial or agricultural zoning districts.

Property on the south and east sides of the site are developed with homes located on rural residential lots. Visibility of the tower is an aesthetic concern that may be perceived by residents as a detriment. The height of the tower does not require lighting. This will mitigate some concerns by maintaining a “dark sky” in the area.

**Staff Finding** - Detrimental affects are mostly likely to be categorized as aesthetic in nature. The base zoning district is appropriate for the request. The height of the tower mitigates the requirements for lighting.

**VI. RELATIVE GAIN TO THE PUBLIC HEALTH, SAFETY AND WELFARE BY THE DESTRUCTION OF THE VALUE OF THE PETITIONER’S PROPERTY AS COMPARED TO THE HARDSHIP IMPOSED UPON THE INDIVIDUAL LANDOWNERS**

Approval of the request expands the structural network of towers and structures that are capable of supporting communication equipment. The proposed request facilitates cellular communications and wireless data use within the community. The proposed equipment does not conflict with existing emergency communication equipment.

The property will remain viable for existing land uses and uses permitted within the A (Agricultural) District.
**Staff Finding** - The benefit to the public is improved cellular communication and wireless data capacity within the Verizon network. Additionally, the structure provides an opportunity for other carriers to co-locate in the future. If denied, the property can continue to be used for current land uses and those uses allowed per the existing zoning of the property.

**VI. CONFORMANCE WITH THE COMPREHENSIVE PLAN**

The subject property is not located within an identified Urban Growth Area for any of the incorporated cities in Douglas County. Chapter 10; Community Facilities of Horizon 2020 addresses public utilities. Key strategies (Page 10-10) primarily address municipal utilities such as water and wastewater planning. One strategy states:

- The visual appearance of utility improvements will be addressed to ensure compatibility with existing and planned land use areas.

The plan specifically addressed electric and telephone services and encourages this infrastructure to be placed underground in conjunction with new development where feasible. Communication towers support the wireless industry and accommodate the reduction of hardwire infrastructure. However, it should not be interpreted that wireless communication will replace hardwire needs in the community.

The plan recognizes that “telephone and electric utilities have a strong visual presence in the unincorporated Douglas County Landscape.” Large transmission lines and easements should be coordinated throughout the community to minimize visual and environmental impacts. This property and the surrounding area are flat. This tower will be very visible to surrounding property owners.

The Comprehensive Plan does not explicitly address communication towers.

**Staff Finding** - The comprehensive plan does not provide specific land use recommendations regarding communication towers. A Conditional Use Permit can be used to allow specific non-residential uses subject to approval of a site plan. This tool allows proportional development in harmony with the surrounding area. The proposed request is not inconsistent with the Comprehensive Plan.

**STAFF REVIEW**

In addition to typical site plan design standards, communication towers must address specific requirements of Section 12-319-4.31 of the County Zoning Regulations. As discussed above, the proposed use is located in an appropriate zoning district.

New communication towers require design that accommodates at least three two-way antennas for every 150' of tower height or co-location space. The proposed tower includes space for multiple (up to 5) carriers. The site plan shows pad sites capable of supporting up to five carriers.

**Opportunity to Co-locate**

As part of the review of any application for a new communication tower the applicant is required to show justification for need for a new structure and that they have exhausted the possibility to co-locate equipment on another structure or tower in the area. The nearest communications towers are located more than 3 miles from the area intended to be covered.
The applicant’s justification report is attached to this application. It shows the existing service coverage as well as the proposed coverage with construction of the new communication tower. The following graphics were prepared by staff to demonstrate the location of the existing towers in proximity to the proposed tower location.

Figure 1: Distance to Nearest Towers

Figure 2: One-Mile Buffer of Existing Towers
**Setback**
The setback of the communication tower is required per Section 20-319-4.31(d) to be at least equal to the height of the tower to the nearest property line measured from the center of the tower. The tower setback may be reduced when documentation from a registered engineer is submitted certifying the “fall zone” of the tower in the event of a failure. Evaluation of the required structural documentation will continue to be reviewed with the submission of a building permit to the County Zoning and Codes Office. The proposed setback is shown to be 196’ from the nearest property line. The proposed tower exceeds the required district setbacks.

The tower and ground equipment will be located in a lease area that is 100’ by 100’.

**Lighting**
Lighting is not proposed with this application for the communication tower. Generally, towers less than 200’ are not required to be lit. Lighting of ground equipment must be shielded and directed down.

**Access, Circulation, and Off Street Parking**
Access to this site is from E 600 Road. The applicant will be required to seek an access permit from the County for the driveway to the tower site. The access drive will provide maintenance access to the tower enclosure. This use does not require off-street parking. The design of the site provides adequate vehicular access and turnaround for maintenance activity at the site. The applicant has been advised that a Douglas County Entrance Permit will be required for this project. This permit will be coordinated with the Building Permit for the site.

**Other**
This area of land includes extensive shoreline and camping areas that are generally accessible by vehicle from the west side of Clinton Lake. An existing communication tower is located approximately 3.25 miles to the southwest from the subject property. A water tower is located to the northwest of the proposed tower site. The surrounding land uses include large tracts of land that are used for agricultural fields.

Prior to construction of the tower the applicant will be required to obtain a Conditional Use Permit, issued by the County Zoning and Codes Office, as well as applicable building and floodplain development permits.

The subject property includes Class 2 soils. The proposed tower is located in the northeast corner of the site. The majority of the site will not be disturbed with this proposed improvement.

Notes regarding the removal of the tower if vacant for three years or more and provision of signage on the tower providing contact for the owner operator of the tower are needed.

**Conclusion**
The proposed application meets the required documentation requirements of the County Zoning Regulations as conditioned.
OVERALL SITE PLAN

SCALE: 1" = 50'

OVERALL SITE PLAN

SCALE BASED ON 11"x17" ONLY

REFERENCE C-2 FOR ENLARGED VIEW

C+1

DESCRIPTION:

- PROPOSED TOWER 100'-0" x 100'-0"
- LEASE AREA REFER TO SURVEY
- PROPOSED 20'-0" WIDE GRAVEL ROAD, REFER TO DETAIL 2/C-4
- PROPOSED 10'-0" WIDE SIDEWALK, REFER TO DETAIL 1/C-9

NOT FOR CONSTRUCTION

E 600 ROAD

PROPOSED TOWER 180'-0" SELF-SUPPORT TOWER IN ACCORDANCE WITH TOWER MANUFACTURER'S SPECIFICATIONS, REFER TO DETAIL 1/S-1.

OUND LAKE
1211 E. 600 ROAD
LAWRENCE, KS 66047
DOUGLAS COUNTY

KBB CAR
14849892

HY960 CLINTON LAKE
1211 E 600 ROAD
LAWRENCE, KS 66047
DOUGLAS COUNTY

OVERALL SITE PLAN

SCALE BASED ON 11"x17" ONLY
C-3

GRADING PLAN

SCALE: 1" = 50' BASED ON 11"x17" ONLY

NOT FOR CONSTRUCTION

CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES, INSTALL AND MAINTAIN RF FENCE AS SHOWN WHERE ADDITIONALLY REQUIRED FOR PROTECTION OF ADJACENT PROPERTIES, ROADSIDE, AND INFRASTRUCTURE.

CONTRACTOR SHALL INSTALL EROSION CONTROL DEVICES DURING CONSTRUCTION AND AFTER HEAVY RAIN FOR DRAINAGE OF EXCESS WATER. MAINTENANCE SHALL INCLUDE CLEANING BUILT-UP SEDIMENT BEHIND THE BARRIERS AND/OR REPLACING DAMAGED SECTIONS.

THE EROSION CONTROL DEVICES SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL PERMANENT STABILIZATION IS ESTABLISHED.

1. EROSION SHELTERS SHALL BE USED ONLY AS EROSION CONTROL.
2. CONTRACTOR IS RESPONSIBLE FOR PROVIDING SITE FREE OF SEDIMENT PROBLEMS.
3. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICES FOR CONSTRUCTION TO PREVENT THE DESTRUCTION OF SEDIMENT FIGURE WATER RUNOFF OR EXCESS MATERIALS FROM LEAVING THE CONSTRUCTION SITE.
4. CONTRACTOR SHALL PROVIDE TRACING OF SEDIMENT OUTSIDE OF CONSTRUCTION LIMITS THAT MAY BE REQUIRED TO CLEAN UP AND ACCOUNT FOR LOSSES OF SEDIMENT AND SEDIMENT FROM ALL VEHICLES PRIOR TO EXITING THE SITE ANY SEDIMENT SPOTTED ON THE ROADWAY SHALL BE CLEANED UNTIL NEEDED AND SUBMITTED BY IN AN APPROPRIATE MANOR.
5. SEDIMENT OUTSIDE OF CONSTRUCTION LIMITS SHALL NOT BE WASHED INTO DRAINAGE SYSTEMS.
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11. SEDIMENT OUTSIDE OF CONSTRUCTION LIMITS SHALL NOT BE WASHED INTO DRAINAGE SYSTEMS.

LEGEND

- PROPOSED CONTOUR LINE
- EXISTING CONTOUR LINE
- S/F
- PROPOSED Silt fence
- X = 1469.5

NOTE

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9. SEDIMENT OUTSIDE OF CONSTRUCTION LIMITS SHALL NOT BE WASHED INTO DRAINAGE SYSTEMS.
NOTES:
1. Site will be graded to allow drainage away from property and driveway.
2. Prior to laying the stone, the compound should be cleared of all organic material, sterilized with weed killer, and then treated with herbicide.
3. After project completion, all disturbed areas must be seeded with low maintenance grasses.
4. Stone shall be compacted 95% of the maximum dry density as determined by ASTM D-1557 to prevent immediate erosion and ease in driving accessibility.

TYPICAL COMPOUND SECTION DETAIL

4-8' STANDARD GAUGE GATE POST
2-1/2' STANDARD GAUGE PIPE GATE FRAME

TYPICAL ACCESS ROAD SECTION

2-3/8' STANDARD GAUGE HEADED GALVANIZED WIRE 9'/4 POINT SPOOLS

NOTES:
1. All fencing material must be galvanized.
2. All posts must have steel caps.
3. All posts and brackets must be galv. 40.
4. Install fencing per ASTM F-557
5. Install gates per ASTM F-600
6. All concrete foundations to have a minimum of 4000 psi.
7. Refer to fence specifications for further information.
8. Locate fence as shown on site plan.
9. Contractor to provide and install tarp.
   6'6" height chain link fence with Horvath approved combination lock.

CHAIN LINK FENCE DETAIL

NOT FOR CONSTRUCTION
NOTES

1. THESE DRAWINGS SHALL NOT BE REPRODUCED OR DISTRIBUTED WITHOUT THE EXPRESS WRITTEN CONSENT OF THE DESIGNER.

2. INSTALLATION SHALL BE CONDUCTED BY FIELD CREWS EXPERIENCED IN THE ASSEMBLY AND Erection OF RADIO ANTENNAS, TRANSMISSION LINES, AND SUPPORT STRUCTURES. ANTENNA WORK TO BE PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF THE MANUFACTURER.

3. CONTRACTOR TO PROVIDE THE PROPER HARDWARE TO DETAIL ATTACHMENTS TO THE TOWER AND ANTENNA MOUNT.

THE CONTRACTOR MUST FIELD VERIFY ALL MEASUREMENTS AND FIELD CONDITIONS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.

ANTENNA CONFIGURATION (VERIZON)

1. REFER TO ANTENNA SCHEDULE FOR ADDITIONAL INFO.
2. ADJUST ANTENNA MOUNTS AS REQUIRED TO ACHIEVE THE ALIGNMENTS SPECIFIED AND LIMIT OF SHADOWING.
3. VERIFY TYPE AND SIZE OF TOPOGRAPHIC MOUNT PRIOR TO ORDERING MOUNT.
4. UNLESS NOTED OTHERWISE THE CONTRACTOR MUST PROVIDE ALL OF THE MATERIAL NECESSARY.

TOWER ELEVATION AND DETAILS

S-1
STRUCTURAL NOTES:

1. INFORMATION SHOWN ON THESE DRAWINGS WAS ORIGINATED BY FIELD MEASUREMENT. THE GENERAL CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES PRIOR TO ORDERING MATERIALS OR PROCEEDING WITH CONSTRUCTION.

2. THE GENERAL CONTRACTOR AND HIS SUB CONTRACTORS SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND inspections WHICH MAY BE REQUIRED FOR THE WORK.

3. STRUCTURAL STEEL SHALL CONFORM TO SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS, ASME 360-02 EXCLUDING THE COMPLIANT AND THE ASD CODE OF STANDARD PRACTICE.

4. STRUCTURAL STEEL PLATES, ANGLES, AND CHANNELS SHALL CONFORM TO AS360-02. STRUCTURAL STEEL PLATES SHALL CONFORM TO AS360-02. STRUCTURAL STEEL ANGLES SHALL CONFORM TO ASME 360-02. ALL STRUCTURAL STEEL CHANNELS SHALL CONFORM TO ASME 360-02. ALL STRUCTURAL STEEL HOLES SHALL BE MIXED FRAMING PATTERN WITH 2 COATS OF ZINC RICH PAINT IN ALL EXISTING AND NEW AREAS. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS D1.1) STRUCTURAL WELDING CODE.

5. WELDING ELECTRODES SHALL BE E6011, WELD TOUCH UP WITH ZINC RICH PAINT IN ALL EXISTING AND NEW AREAS. ALL WELDING SHALL BE COMPLETE.

6. ALL TYPICAL STRUCTURAL STEEL DETAILS FOR ALL SUPPORT ASSEMBLIES SHALL CONFORM TO ASME 360-02. ALL STRUCTURAL STEEL DETAILS FOR ALL SUPPORT ASSEMBLIES SHALL BE 5/8 INCH DIAMETER. ALL STRUCTURAL STEEL DETAILS FOR ALL SUPPORT ASSEMBLIES SHALL BE 6/8 INCH DIAMETER. ALL STRUCTURAL STEEL DETAILS FOR ALL SUPPORT ASSEMBLIES SHALL BE 7/8 INCH DIAMETER. ALL STRUCTURAL STEEL DETAILS FOR ALL SUPPORT ASSEMBLIES SHALL BE 8/8 INCH DIAMETER.

7. ALL FOUNDATION STEEL SHALL CONFORM TO ASME 360-02. ALL FOUNDATION STEEL SHALL CONFORM TO ASME 360-02. ALL FOUNDATION STEEL SHALL CONFORM TO ASME 360-02. ALL FOUNDATION STEEL SHALL CONFORM TO ASME 360-02.

8. CONCRETE FOR THE FOUNDATION PAD SHALL BE 4000 PSI NORMAL WEIGHT CONCRETE. CONCRETE STRENGTH SHALL CONFORM TO ASME 360-02. CONCRETE STRENGTH SHALL CONFORM TO ASME 360-02. CONCRETE STRENGTH SHALL CONFORM TO ASME 360-02. CONCRETE STRENGTH SHALL CONFORM TO ASME 360-02.

9. MINIMUM CONCRETE COVER REINFORCEMENT IS 2" UNLESS NOTED OTHERWISE. MINIMUM CONCRETE COVER REINFORCEMENT IS 2" UNLESS NOTED OTHERWISE. MINIMUM CONCRETE COVER REINFORCEMENT IS 2" UNLESS NOTED OTHERWISE. MINIMUM CONCRETE COVER REINFORCEMENT IS 2" UNLESS NOTED OTHERWISE.

10. CONTRACTOR SHALL COORDINATE ALL PIERCING, CONCRETE CHAMBERS, AND EXPOSED PIPE PRIOR TO CONCRETE PLACEMENT AND/ OR STEEL ERECTION. CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS.

11. DO NOT MISS PIPE SERVICE LOAD (I.E., FLOOR DECK AND LINE LOADS, RIGGING, ETC.) UNTIL THE CONCRETE HAS REACHED ITS SPECIFIED MINIMUM COMpressive STRENGTH.

12. BACKFILL SHALL BE CLEAN SAND FILL APPROVED FOR USE BY THE ENGINEER. CLEAN SAND FILL SHALL BE FREE OF ALL ROCKS, BOULDERS, OR OTHER DELEterIOUS MATERIAL.

13. SOIL SHALL BE COMPACTED TO 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY TO A MINIMUM OF 2 FEET BELOW THE BOTTOM OF THE FOUNDATION, AND SHALL OBTAIN A 1000 PSI MINIMUM ALLOWABLE Bearing CAPACITY.
KEY NOTES:

1. #2 SOLID, BARE, TINNED, COPPER SHELF GROUND RING, MAINTAIN 24" CLEARANCE FROM SHELF FOUNDATION, BURIED AT 42" MIN. OR 8" BELOW FROST LINE. WHICHEVER IS GREATER.
2. SHELF GROUND BAR (W.G.B.) REFER TO DETAIL 7/GR-3.
3. 5/8" x 8' LONG COPPER GROUND ROO (TYP.) REFER TO DETAIL 4/GR-3.
4. 5/8" x 6' LONG COPPER GROUND ROO WITH TEST WELD (TYP.) REFER TO DETAIL 2/GR-3.
5. BOND SHELF GROUND RING TO INTERIOR SHELF GROUND WIRE THROUGH SHELF PENETRATIONS PROVIDED AND SEAL WITH SILICONE CAULK (TYP. FOR 2).
6. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM WAVEGUIDE CONDUIT TO SHELF GROUND RING BY MEANS OF A WIRE Connection (TYP. FOR 2).
7. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM SHELF GROUND RING TO TOWER GROUND RING. (MIN. 2 PLACES)
8. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM EXTERIOR SHELF GROUND BAR TO SHELF GROUND RING. (MIN. 2 PLACES)
9. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM WAVEGUIDE SUPPORT POST TO GROUND RING (TYP. FOR ALL POSTS)
10. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE BETWEEN WAVEGUIDE BRIDGE STEEL TO SUPPORT POST (TYP. FOR ALL POSTS)
11. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM INTERIOR WAVEGUIDE BAR (W.G.B.) TO SHELF GROUND RING THROUGH SHELF PENETRATIONS PROVIDED AND SEAL WITH SILICONE CAULK (TYP. FOR 2)
12. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM GENERATOR TO SHELF GROUND RING THROUGH SHELF PENETRATIONS PROVIDED AND SEAL WITH SILICONE CAULK (TYP. FOR 2).
13. #2 BARE, TINNED, SOLID COPPER GROUND WIRE FROM SHELF GROUND RING TO GPS ANTELLA.
14. #2 BARE, TINNED, SOLID COPPER GROUND WIRE FROM WAVEGUIDE BRIDGE TO WAVEGUIDE BRIDGE (TYP. FOR 2).
15. #2 BARE, TINNED, SOLID COPPER GROUND WIRE FROM SHELF ANCHOR PLATES TO SHELF GROUND RING.
16. #2 BARE, TINNED, SOLID COPPER GROUND WIRE SPACED FROM WAVEGUIDE BRIDGE SECTION TO ADJACENT SECTION. BOND BY MEANS OF ELECTRIC WELD OR UL APPROVED CLAMP. (TYP.)
17. TOWER BOTTOM GROUND BARRIER, TOWER GROUND BARRIER SHALL BE COPPER CLASS REFER TO VENTER WAVEGUIDE GROUNDING SPECIFICATIONS.
18. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM TOWER GROUND BARRIER TO TOWER FRAME STEEL BOND BY MEANS OF ELECTRIC WELD OR UL APPROVED CLAMP. (TYP.)
19. #2 SOLD, BARE, TINNED, COPPER GROUND WIRE FROM TOWER GROUND BARRIER TO TOWER FRAME STEEL BOND BY MEANS OF ELECTRIC WELD OR UL APPROVED CLAMP. (TYP.)
20. BOND SHELF GROUND RING TO EXTERNAL GROUND RING WITH #2, SOLID, BARE, TINNED, COPPER WIRE (TYP.)

NOTE:
PROPOSED GROUNDING AND BONDING IN ACCORDANCE WITH VENTOR WAVEGUIDE NETWORK STANDARDS NOTED IN "CELL SITE AND WAVEGUIDE RACK STATION SPECIFICATIONS", LATEST EDITION UNLESS SPECIFIED OTHERWISE, MUST BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE. ALL WORKING CONNECTIONS ARE TO BE MADE IN ACCORDANCE WITH CODES, CODES AND APPROVED PROVISO. WHERE THE CONSTRUCTION OF SMALL GROUND WIRE CONNECTORS SHALL BE 2-MILE WORD MARBLE TYPE COMPRISION LUGS.
Grounding Details

Typical CAD Welds

Typical Ground Bar Connection Detail

Typical Fence Bonding Detail

Ground Rod Detail

Inspection Sleeve Detail

Coaxial Cable Grounding Detail
GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL LAWS, ORDISINATIONS, RULES, REGULATIONS AND LAWS OF ANY AUTHORITY HAVING JURISDICTION OR AUTHORITY HAVING JURISDICTION ON THE PERFORMANCE OF THE WORK. THE WORK PERFORMED ON THE PROJECT AND THE MATERIALS INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES.

2. THE ARCHITECT/ENGINEER HAS ENSURED EVERY EFFORT TO SET UP THE CONSTRUCTION AND CONTRACT DOCUMENTS AND THE COMPLETE WORK OF THE CONTRACTOR TO EXCEED THE CONTRACT. THE CONTRACTOR IS RESPONSIBLE FOR COMPLIANCE WITH THE CONTRACT.

3. THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFITING (IN WRITING) THE CONTRACTOR MANAGER OF ALL SPECIFICATIONS, LIMITATIONS, OR OTHER REQUIREMENTS PRIOR TO THE PERFORMING OF THE CONTRACT.

4. THE CONTRACTOR MUST COMPLY WITH ALL LAWS, ORDISINATIONS, RULES, REGULATIONS AND LAWS OF ANY AUTHORITY HAVING JURISDICTION OR AUTHORITY HAVING JURISDICTION ON THE PERFORMANCE OF THE WORK.

5. THE CONTRACTOR SHALL SUBMIT HIS INFORMATION TO THE OWNER FOR REVIEW. THE CONTRACTOR SHALL PROVIDE THEM WITH ALL INFORMATION REQUIRED TO COMPLETE THE PROJECT.

6. THE CONTRACTOR SHALL COMPLETE ALL WORK IN ACCORDANCE WITH THE CONTRACT.

7. THE CONTRACTOR SHALL COMPLETE THE PROJECT IN ACCORDANCE WITH THE CONTRACT. THE CONTRACTOR SHALL PROVIDE THEM WITH ALL INFORMATION REQUIRED TO COMPLETE THE PROJECT.

8. THE CONTRACTOR SHALL SUBMIT HIS INFORMATION TO THE OWNER FOR REVIEW. THE CONTRACTOR SHALL PROVIDE THEM WITH ALL INFORMATION REQUIRED TO COMPLETE THE PROJECT.

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23. THE CONTRACTOR SHALL SUBMIT HIS INFORMATION TO THE OWNER FOR REVIEW. THE CONTRACTOR SHALL PROVIDE THEM WITH ALL INFORMATION REQUIRED TO COMPLETE THE PROJECT.
GENERAL NOTES:

1. FENCED SITE AREA SHALL BE CLEANED AND GRADED. REMOVE UNRECYCLABLE MATERIAL OR LOOSE SOIL. ORGANIC MATTER OR ANY SUBSTANCES SUSPENDED TO SIMPLIFY INSTALLATION OF THE WIRELESS ANTENNA.

2. IF ANY GEOTECHNICAL REQUIREMENTS ARE ENCOUNTERED DURING CONSTRUCTION, THE CONTRACTOR SHALL STOP WORK IMMEDIATELY AND NOTIFY OTHER MAJOR WORKS CONCERNED.

3. IN ADDITION TO PROVIDING THE REQUIRED RIGHTS-OF-WAY, THE CONTRACTOR SHALL SUBMIT A COPY OF THE APPROVED PLANS TO EACH MAJOR WORK CONCERNED.

4. THE CONTRACTOR SHALL CONTACT THE NEAREST EAGLE OFFICE TO DETERMINE THE NEAREST EAGLE OFFICE FOR THIS PROJECT.

5. THE CONTRACTOR IS TO ENSURE THAT NO DAMAGE OR DEBRIS OCCURS ON THE ADJACENT PROPERTY.

6. THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION AREAS HAVE PROPER MAINTENANCE TOWARDS SUITABILITY.

7. THE ANTENNA IS SUBMITTED TO A PERMANENT FENCE FOR THE TOWER AND POST A "NO TRESPASSING" SIGN. ALL CLIMBING IN OVERHEAD TOWER AREAS MUST BE ASKED TO SCALE TO SCALE OR IN TRENCHES AS INDICATED.

8. THE CONTRACTOR MUST ENSURE THAT ALL DILAPIDATED MATERIALS ARE COMPLETELY REMOVED FROM THE SITE AND THAT THE SITE IS LEFT IN A SAFE AND WORKABLE CONDITION.

9. IF THE CONTRACTOR IS NOT IN THE POSSESSION OF THE PROPER DOCUMENTS, IT IS THE CONTRACTOR'S RESPONSIBILITY TO NOTIFY THE LOCAL OFFICIALS OF THE PROPER DOCUMENTS PERTAINING TO THE PROJECT.

10. IN CASE OF THE CONTRACTOR'S FAILURE TO COMPLY WITH THE REQUIREMENTS OF THE LOCAL OFFICIALS, THE CONTRACTOR IS SUBJECT TO PENALTY.

11. THE CONTRACTOR MUST ONLY USE THE MATERIALS ALLOWED BY THE LOCAL OFFICIALS.

12. THE CONTRACTOR MUST ONLY INSTALL THE ANTENNA ACCORDING TO THE LOCAL OFFICIALS' REQUIREMENTS.


14. THE CONTRACTOR MUST ONLY USE THE MATERIALS ALLOWED BY THE LOCAL OFFICIALS. ALL UNAUTHORIZED MATERIALS WILL BE REMOVED FROM THE SITE.

15. THE CONTRACTOR MUST ONLY INSTALL THE ANTENNA ACCORDING TO THE LOCAL OFFICIALS' REQUIREMENTS.

16. THE CONTRACTOR MUST ONLY INSTALL THE ANTENNA ACCORDING TO THE LOCAL OFFICIALS' REQUIREMENTS.

17. THE CONTRACTOR IS TO ENSURE THAT THE ANTENNA IS SECURELY INSTALLED AND THAT NO DAMAGE OCCURS TO THE STRUCTURE.

18. THE CONTRACTOR MUST ENSURE THAT ALL ELECTRICAL COMPONENTS ARE PROPERLY INSTALL AND THAT THE ELECTRICAL CONNECTIONS ARE SECURE.

19. THE CONTRACTOR MUST ENSURE THAT THE ANTENNA IS PROPERLY ELECTRICAL CONNECTED AND THAT THE ELECTRICAL CONNECTIONS ARE SECURE.

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GENERAL NOTES:

1. ZONING REGULATIONS AND CONDITIONAL USE PERMITS:
   A. CLIENT WILL SUBMIT FOR AND OBTAIN ALL ZONING AND CONDITIONAL USE PERMITS REQUIRED FOR THE SITE.
   B. CONDITIONAL USE PERMITS MAY HAVE SPECIFIC REQUIREMENTS FOR THE SITE.
   C. ISSUES BETWEEN THE CITY AND THE CONTRACTOR MAY BE RESOLVED BY THE CITY.

2. FAIA PERMIT AND TOWER LIGHTING:
   A. REFER TO CONSTRUCTION DOCUMENTS AND CONSTRUCTION MANAGER FOR FAIA AND TOWER LIGHTING REQUIREMENTS. CONTRACTOR WILL OBTAIN TEMPORARY FAIA APPROVED PERMITS UNTIL PERMANENT LIGHTING IS OPERATIONAL.

3. SITE SECURITY:
   A. SITE SECURITY WILL BE PROVIDED BY CONTRACTOR TEMPORARILY OR PERMANENTLY WITHIN 60 HOURS OF CONSTRUCTION. DO NOT ALLOW THE GATE TO BE OPENED OR LOCKED TOypical USE FOR ANY REASON.
   B. THE GATE WILL BE CLOSED AND LOCKED WHEN NOT IN USE.

4. CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING, REPLACING, AND INSTALLATION OF ALL CONCRETE RENEWAL OR CASTING OF CONCRETE EARTHWARK:
   A. ALL MATERIALS PRODUCED BY CONSTRUCTION MANAGER WILL BE AVAILABLE FOR USE.
   B. CONTRACTOR IS RESPONSIBLE FOR ALL CONCRETE RENEWAL OR CASTING OF CONCRETE EARTHWARK.

5. CONFLICTS:
   A. VERIFY ALL MEASUREMENTS AT THE SITE BEFORE BEGINNING WORK OR DOING ANY WORK. CONTRACTOR WILL NOT BE HELD RESPONSIBLE FOR ERRORS OR OMISSIONS DUE TO DIFFERENCES BETWEEN AUTOMATIC DIMENSIONS, CROSSING SHOWS, OR PLANS.
   B. CONTRACTOR WILL PROVIDE A SATISFACTORY RESULT IN CONFORMITY WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION MANAGER FOR REVISION BEFORE PROCEEDING WITH THE WORK.
   C. IF NO PLACE OF CONSTRUCTION THAT ERECTS OR OBTAINS INFLUENCE FOR ANY REASON WHICH魚 MAY BE ENCOUNTERED OR WHICH ANY OTHER RELEVANT MATERIALS DO NOT CONFORM TO THE MOON EMERGENCY IN THE EXECUTION OF THE WORK WILL BE CARIED OUT TO THE SITUATION. A WORKMANSHIP THAT CONFORMS TO ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS GOVERNING THE WORK.

6. PHOTOS:
   A. PROVIDE PHOTOGRAPHIC EVIDENCE OF ALL FOUNDATION INSTALLATION, BOUNDING AND ENSURING WHERE APPROPRIATE OF UTILITIES PRIOR TO BACHEL.

SITE PREPARATION:

1. CONTRACTOR'S SCOPE OF WORK:
   A. PREPARATION OF EARTH TRENCHES, VEGETATION AND LANDSCAPING MATERIALS WHICH WILL BE SHAPED BY CONSTRUCTION ACTIVITIES.
   B. TRENCHING OF EARTH TRENCHES AND VEGETATION AS REQUIRED FOR PREPARATION DURING CONSTRUCTION.
   C. CLEANING CONSTRUCTION MACHINERY, STAMPS, VEHICLES, IDES, TAXIS, IDES, DESIGNED ADDITIONS, AND SITE IMPROVEMENTS.
   D. TYPICAL SANDING AND SANDING.
   E. PREPARATION OF SITE IMPROVEMENTS, ENSURING BACK OF SITE IMPROVEMENTS, AND AIR CONTROL OF ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS GOVERNING THE WORK.

2. CONTRACTOR'S SCOPE OF WORK:
   A. ALL MATERIALS PRODUCED BY CONSTRUCTION MANAGER WILL BE AVAILABLE FOR USE.
   B. CONTRACTOR IS RESPONSIBLE FOR ALL CONCRETE RENEWAL OR CASTING OF CONCRETE EARTHWARK.

3. CONTRACTOR'S SCOPE OF WORK:
   A. ALL MATERIALS PRODUCED BY CONSTRUCTION MANAGER WILL BE AVAILABLE FOR USE.
   B. CONTRACTOR IS RESPONSIBLE FOR ALL CONCRETE RENEWAL OR CASTING OF CONCRETE EARTHWARK.

4. CLEARING AND MOVING:
   A. REMOVE ALL VEGETATION AND MATERIALS TO A MINIMUM DEPTH OF 6 INCHES, REMOVE ALL VEGETATION AND MATERIALS TO A MINIMUM DEPTH OF 6 INCHES.
   B. PREPARE A SATISFACTORY RESULT IN CONFORMITY WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION MANAGER FOR REVISION BEFORE PROCEEDING WITH THE WORK.
   C. CLEARING AND MOVING OF VEGETATION AND MATERIALS TO A MINIMUM DEPTH OF 6 INCHES.
   D. PREPARE A SATISFACTORY RESULT IN CONFORMITY WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION MANAGER FOR REVISION BEFORE PROCEEDING WITH THE WORK.
   E. CLEARING AND MOVING OF VEGETATION AND MATERIALS TO A MINIMUM DEPTH OF 6 INCHES.

5. MAINTENANCE:
   A. MAINTAIN SITE SECURITY WITHIN 60 HOURS OF CONSTRUCTION. DO NOT ALLOW THE GATE TO BE OPENED OR LOCKED TO TYPICAL USE FOR ANY REASON.
   B. MAINTAIN SITE SECURITY WITHIN 60 HOURS OF CONSTRUCTION. DO NOT ALLOW THE GATE TO BE OPENED OR LOCKED TO TYPICAL USE FOR ANY REASON.
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   E. MAINTAIN SITE SECURITY WITHIN 60 HOURS OF CONSTRUCTION. DO NOT ALLOW THE GATE TO BE OPENED OR LOCKED TO TYPICAL USE FOR ANY REASON.

6. CONSTRUCTION:
   A. CLEARANCE OF DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
   B. CLEARANCE OF DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
   C. CLEARANCE OF DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
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   E. CLEARANCE OF DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.

7. EXCAVATION:
   A. EXCAVATION TO DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
   B. EXCAVATION TO DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
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   E. EXCAVATION TO DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.

8. ENVIRONMENT:
   A. CONSTRUCT ENVIRONMENT TO THE LINES AND GRADING SHOWN ON THE DRAWINGS.
   B. EXCAVATION TO DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
   C. EXCAVATION TO DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
   D. EXCAVATION TO DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.
   E. EXCAVATION TO DEPTH FEATURES, LINES, AND GRADING ON THE SPAN OF OR AS SPECIFIED.

9. SITE IMPROVEMENT:
   A. PREPARE A SATISFACTORY RESULT IN CONFORMITY WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION MANAGER FOR REVISION BEFORE PROCEEDING WITH THE WORK.
   B. PREPARE A SATISFACTORY RESULT IN CONFORMITY WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION MANAGER FOR REVISION BEFORE PROCEEDING WITH THE WORK.
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   E. PREPARE A SATISFACTORY RESULT IN CONFORMITY WITH THE CONTRACT DOCUMENTS AND CONSTRUCTION MANAGER FOR REVISION BEFORE PROCEEDING WITH THE WORK.
TRENCHING:

CONTRACTOR MUST NOTIFY "ONE-CALL" UTILITY LOCATING SERVICE THREE DAYS PRIOR TO CONSTRUCTION TO MARK ALL UNDERGROUND UTILITIES.

1. MATERIALS:
   A. ALL MATERIALS SHALL BE OBTAINED TO THE MAXIMUM EXTENT POSSIBLE, FROM EXCAVATIONS ON-SITE. THE STRUCTURAL SPECIFICATIONS MANDATE THE USE OF MATERIALS APPROVED BY THE CONSTRUCTION MANAGER AND SHALL CONFORM TO LOCAL GOVERNING JURISDICTION AND UTILITY COMPANY REQUIREMENTS. THE FULL MATERIALS SHALL BE TAKEN FROM PERMITTED SOURCES, MEETING STANDARDS SET BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA) AND OTHER RELEVANT ENTITIES.

2. PIPE DETECTION AND IDENTIFICATION:
   A. UTILIZE WARNING TAPE. ALL ELECTRIC SERVICE TRENCHES SHALL BE MARKED WITH WARNING TAPE.

3. TRENCH EXCAVATION:
   A. SLOPE DITCH TO LINES AND GRADES SHOWN ON THE PLANS OR AS DIRECTED BY THE CONSTRUCTION MANAGER.
   B. TRENCH SHOULDS BE SUFFICIENT TO ALLOW FOR SATISFACTORY CONSTRUCTION AND INSPECTION OF THE PROJECT, WITHOUT EXCESSIVE WORK OR ADVERSE FACILITIES.
   C. DEPTH OF EXCAVATION SHOULD BE DETERMINED PROPERLY, AS DIRECTED BY THE CONSTRUCTION MANAGER.
   D. USE HARD CORE MATERIALS FOR TRENCHES THAT CANNOT BE ACCOMMODATED WITHOUT EXCESSIVE WORK OR EXISTING STRUCTURES OR OTHER FACILITIES.

4. TRENCH PROTECTION:
   A. PROVIDE MATERIALS, LABOR, AND EQUIPMENT NECESSARY TO PROTECT TRENCHES AT ALL TIMES.
   B. SHEETING AND BRACING MUST BE OBTAINED AS PER ISSUANCE REQUIREMENTS.

5. BACKFILLING:
   A. A PERMANENT EXHIBIT OF RECOVERY TEST SHALL BE PERFORMED PRIOR TO BACKFILLING.
   B. BACKFILL SHALL BE PERFORMED AT TRENCH WORK ONLY, UNTIL THE TRENCH WORK AND BACKFILLING HAVE BEEN INSTRUCTED AND APPROVED BY THE CONSTRUCTION MANAGER. CLIENT CONTRACTORS, OPERATORS, AND OTHERS MUST FOLLOW THE CONSTRUCTION MANAGER AT LEAST 24 HOURS IN ADVANCE OF EXPECTED BACKFILLING.
   C. BACKFILL MATERIALS SHOULD BE STORED ON-SITE, UNINTERFERED WITH, AND STORED IN A MANNEr THAT MINIMIZES THE RISK OF EXPANSION EXPANSION.
   D. PROVIDE MATERIALS THAT MEET THE REQUIREMENTS OF THE SPECIFICATIONS, PREVIOUSLY STORED ON-SITE, OR STORED IN A MANNEr THAT MINIMIZES THE RISK OF EXPANSION EXPANSION.
   E. BACKFILL MATERIALS SHALL BE STORED ON-SITE, UNINTERFERED WITH, AND STORED IN A MANNEr THAT MINIMIZES THE RISK OF EXPANSION EXPANSION.
   F. FOLLOWING AN APPROVED INSPECTION, BACKFILL MATERIALS SHALL BE DEPOSITED IN THE TRENCH WITH HAND SHOVELS OR BY MEANS OF MACHINES, ENSURING COMPLETE DEPOSITS IN LAYERS AND COMPACTED BY MECHANICAL TAMERS. THE HORIZONTAL HORIZONTAL SHEET IS CONSTRUCTED OR PIPE WITH A COVER OF NOT LESS THAN 3 INCH DEEP TO PREVENT THE RECOVERY OF THE BACKFILL MATERIALS AND SHALL BE STORED IN THE TRENCH IN LAYERS AND MECHANICALLY COMPACTED.
   G. PROTECT CONDUIT FROM EROSION, DAMAGE FROM IMPACT OR DISPLACEMENT, AND SETTLEMENT DUE TO EXCESSIVE WEATHERING OR RAINFALL. ALL GROUNDS SETTLEMENTS OR EXCESSIVE WEATHERING OR RAINFALL SHALL BE CONSIDERED THE RESULT OF IMPROPER CONSTRUCTION AND SHALL BE PROPERLY CORRECTED.
   H. IF REQUIRED CONSTRUCTION DISTRACTIONS HAVE NOT BEEN DESTROYED, REMOVE THE BACKFILL FROM THE TRENCH OR STRUCTURE, REPLACE WITH APPROVED BACKFILL, AND RECOMPACT AS SPECIFIED.

CHAIN LINK FENCES AND GATES

1. GENERAL:
   A. PROVIDE CHAIN LINK FENCES AND GATES AS COMPLETE UNITS OF A SINGLE SUPPLY SOURCE, INCLUDING ALL NECESSARY FIXTURES, ACCESSORIES, FITTINGS, AND FASTENINGS.

2. PRODUCTS AND MATERIALS (AS APPROVED BY THE CONSTRUCTION MANAGER):
   A. A FEEDING CHAIN (AS APPROVED BY THE CONSTRUCTION MANAGER) SHALL BE FURNISHED AT ONE LOCATION AT THE ODDS, ALL MATERIALS 60 INCHES HIGH AND UNDER SHALL BE AVAILABLE TO REPAIR THEM.
   B. STEEL FABRIC:
      A. COMPLY WITH CHAIN LINK FENCE MANUFACTURER'S INSTITUTE (CLMF) PRODUCT MANUAL.
      B. PROVIDE ONE PIECE OF FABRIC WIDTHS, WIRE SIZE, INCLUDES ZINC OR ALUMINUM COATINGS.
      C. WALLS: 2-INCH MILD, 9 GAUGE (0.148-INCH DIAMETER) WIRE.
      D. GALVANIZED STEEL FROM ASTM A53 CLASS 2, WITH A MINIMUM 29.0 FT, 20 PER SFC, OF UNCOATED WIRE SURFACE.

3. FRAMEWORK AND ACCESSORIES:
   A. GENERAL REQUIREMENTS.
   B. CONFORMANCE TO THE CHAIN LINK FENCE MANUFACTURER'S INSTITUTE (CLMF) SPECIFICATIONS.
   C. CONFORMANCE TO THE INDUSTRIAL STEEL GUIDE FOR FENCE VAULTS, POSTS, GATES, AND ACCESSORIES.
   D. ACCESSORIES:
      A. PROVIDE NECESSARY ACCESSORIES TO SUIT MANUFACTURER'S STANDARDS.
      B. PROVIDE MEANS FOR ATTACHING TOP RAIL SECURELY TO EACH GATE CORNER, POSTS, AND END POST.

4. GATE MOUNTING:
   A. GALVANIZED STEEL 1-1/4 INCH NPS (1.66 INCH OD) TYPE I OR II STEEL PIPE OF 1-1/2 INCH IX 1-1/2 INCH SADDLE 2-3/8, WITH THE FOLLOWING:
      A. WEAPONS NON-LIFT-OFF TYPE, OUTFITTED TO PERMIT 180 DEG. GATE OPENING.
      B. LATCH KEEPERS OF PLUNGER-BAR TYPE TO OPERATE FROM EITHER SIDE OF GATE, WITH TURRET PIN AS PART OF LATCH.
      C. PROVIDE GATE KEEPERS FOR VEHICLE GATES, WHICH AUTOMATICALLY EXPOSES GATE LEAF AND HINGE IN OPEN POSITION UNTIL MANUALLY RELEASED.
      D. GATE STOP: PROVIDE GATE STOP FOR GATE STOP ON DOUBLE GATES, CONSTRUCTED OF 2-3/8 X 2-3/8 LONG PIPE ROD KEEPER, ENABLING IN CONCRETE, AND DESIGNED TO ENCLOSE GATE STOP 200 FT. OF CHAINING, WHICH INCLUDES LOCKING DEVICE AND FALLBACKS AS PART OF LATCH, FURNISHING 1000 FT. GATE STOP TO BE LINKED WITH STABLE FALLBACK.

5. CONCRETE:
   A. PROVIDE CONCRETE CONSISTING OF PORTLAND CEMENT, ASTM C150, AGGREGATES ASTM C33, AND CLEAN WATER.
LANDSCAPE PLAN AND DETAILS

SCALE: 1" = 20'

SCALE BASED ON 11"x17" ONLY

KBB
CAR

PROPOSED SAND CHERRY SHEDS REFER TO PLANT MATERIAL LIST.

PROPOSED PERENNIAL 75'-0" x 75'-0"
FENCED COMPOUND.

PROPOSED MORAVIAN 14' WIDE DOUBLE SWING GATE.

PROPOSED MORAVIAN 100'-0" x 100'-0" LEASE AREA REFER TO SURVEY.

PROPOSED MORAVIAN 100'-0" SELF-SUPPORT TIMBER IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

PROPOSED VERONIC WIRELESS 11'-0" X 20'-0" 1/2" EQUIPMENT SHELTER.

PLANT MATERIAL LIST

<table>
<thead>
<tr>
<th>SYMBOL</th>
<th>CITY</th>
<th>COMMON NAME</th>
<th>BOTANICAL NAME</th>
<th>SPECIFICATIONS</th>
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<tr>
<td>1218 DA</td>
<td>SANDBERRY</td>
<td>PRUNUS DENSIFLORA</td>
<td>16'-24' AT PLANTING, 36&quot; O.C., 2 GAL SIZE SHRUB</td>
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Landscape Installation Notes:

1. Sizes specified in the plant list are minimum sizes to which the plants are to be installed.
2. All plantings shall be installed and maintained in accordance with the Douglas County standards and in accordance with current industry standards for optimum growth of landscape materials before installation begins.
3. The landscape contractor is responsible to ensure that all plant beds areas have proper drainage for optimum growth of landscape materials before installation begins.
4. The landscape contractor shall ensure that all planting islands and other areas shall be clean of trash. Construction debris other waste materials to a depth of 24" prior to landscape installation.
5. The landscape contractor shall be responsible for removal of all construction debris. Planting islands shall be landscaped with gravel prior to planting.
6. All plant beds and tree rings shall be treated with a pre-emergent herbicide and then top-dressed with 3" deep fine sand mulch. All new trees shall have a tree ring with a minimum 24" radius. All new trees and plantings shall be staked.
7. Tree shrub and ground cover shall be installed using the following procedure. Plant pits shall be excavated to twice the diameter of the plant root ball, advance existing soil, before backfilling the and adjusting fertilizer tablets to each plant pit, as per the specifications.
8. The contractor must retain the landscape for 1 year from the date of completion. This excludes but is not limited to, watering and weeding until the landscape dies. If any of the landscapes dies within the 1-year time frame, the contractor must replace it with equivalent landscape. Local jurisdiction watering guidelines shall be followed thoroughly.
9. Contractor must follow all landscape requirements and specifications with local jurisdiction.
10. If existing trees remain, location/watering of new trees may be modified to avoid conflict.
Dear City/County Representatives,

Verizon Wireless is proud to serve the greater Lawrence, KS area and we are always diligent to maintain excellent service and improvements. At this time, we are trying to enhance the area of Clinton Lake located just southwest of the city of Lawrence, KS where coverage service reliability and data performance must be improved. The primary area that needs improvement at this time is the community of Clinton and the areas just west and southwest of the lake. The fast growing 4G (LTE) data usage has required us to plan for a new cell site in this area to improve coverage and data performance. The current signal level in this area is shown below, Map 1.

Map 1 – Existing Coverage
Below is Map 2 showing coverage improvement with the proposed new cell site, Clinton Lake. Notice that the community of Clinton and much of the lake area should improve significantly.

Map 2 – Coverage with the new cell site

As 4G (LTE) data usage continues to increase dramatically as wireless customers utilize their phones for more day to day task and recreation, the demand also increases to meet these needs by creating new opportunities to develop methods of improving coverage, capacity, and data throughput. The most challenging is capacity and data throughput. Verizon Wireless is meeting the expectations of our customers by designing this proposed cell site in the Clinton Lake area.

This coverage improvement will afford our customers the best possible data performance at the location identified. Verizon Wireless continues to strive to provide the best possible wireless experience for its customers while still recognizing the needs and desires of the surrounding community and being a good neighbor.
DISCLAIMER NOTICE
The map is provided "as is" without warranty or any representation of accuracy, timeliness or completeness. The burden for

determining accuracy, completeness, timeliness, merchantability and fitness for or the appropriateness for use rests solely on

the requester. The City of Lawrence makes no warranties, express or implied, as to the use of the map. There are no implied

warranties of merchantability or fitness for a particular purpose. The requester acknowledges and accepts the limitations of

the map, including the fact that the map is dynamic and is in a constant state of maintenance, correction and update.

Date: 2/3/2015

Legend

Parcels

Soils Class 1 and Class 2

Class

Class 1

Class 2
CUP-14-00550: Conditional Use Permit for a New Verizon Wireless Communications Tower
Located in the Northeast Corner of 1211 E 600 Road

Lawrence-Douglas County Planning Office
February 2015
I own the property north of the proposed Verizon tower location. I do not want this tower erected right next to my home.

1) City of Lawrence declined Verizon a tower permit after public opposition during the City Commission meeting 9 DEC 2014.
   a. Neighbors stated the tower was too close to their homes and would lower property values.
   b. My home should be given the same considerations as the homes of Lawrence residents.
2) What is the full scope of this project? The height of the tower has increased since we received notification of the intent to build next to our property.
   a. A letter form SSC, Inc. dated 22 DEC 2014 states the tower is 180’ in height.
   b. A letter from the City of Lawrence dated 30 JAN 2014 states the tower is 198’.
   c. How big is this structure?
   d. What support facilities accompany the tower?
   e. Will there be permanent noise producing equipment (generators or transformers) on site?
3) If this tower is permitted, what plans are there to remove the tower once its permitted purpose is no longer viable?
   a. Is there a bond or fund established to remove the tower?
   b. Is the property owner responsible to remove the tower once it becomes obsolete or the company finds a better deal elsewhere?
   c. The microwave tower building in downtown Lawrence is a good example of an unsightly structure that no longer serves its permitted purpose to house defunct microwave technology.
4) If this tower is permitted, will there be construction activities on my property?
   a. Someone placed (and did not remove) surveyor stakes on my property adjacent to the proposed tower site late last year. I found one stake with my tractor tire while mowing.
   b. Will workers expect to use my land to access the building site?
   c. Will I be compensated for use of and any damage caused to my property?
5) Has the builder considered alternative sites that afford a greater stand-off distance from occupied residences?
6) The Clinton lake water tower is less than a mile from the proposed building site of this tower.
   a. Can the company use this water tower in lieu of or to augment construction of a new tower?
7) There are already seven (7) towers and 24 antennas supporting cellular signals within a four (4) mile radius from my home.
   a. Can the use of additional low visibility antennas achieve the similar results to the construction of a new tower?
8) If this tower is permitted, it will lower the resale value of my home and property. This fact is based on common sense.
   a. Would you want a 198’ tower in your neighbor’s yard?
   b. Relators will struggle to sell my home at a price comparable to similar properties because it has a huge tower next to it.
   c. You’ll not see too many home listings offering a beautiful view of a cellphone tower to entice prospective buyers.
9) Current studies have determined no harmful effects to humans living next to cellphone towers. We used to line our homes and protective clothing with asbestos too.

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