

#### March 19, 2025

## PLANNING COMMISSION TENTATIVE AGENDA 7:00 PM

- 1. Call to Order
- 2. Approve Agenda
- 3. Approve Consent Agenda Items

Consent Agenda Items are considered routine and will be enacted with a single motion, without discussion, unless a commissioner or citizen requests to have any item separately considered. It will then be moved to the land use/action items for consideration.

- A. Approve Minutes of March 5, 2025, Annual Meeting
- 4. Public Hearings
- 5. Land Use / Action Items
  - A. Bethel Assemblies of God Church Wireless Communication Tower CUP Consider request for a conditional use permit (CUP) for a wireless communications tower on the Bethel Assemblies of God Church property. LOCATION: 14201 Cedar Avenue PETITIONER: Buell Consulting, on behalf of Cellco Partnership (d/b/a Verizon Wireless)
- 6. Other Business
  - A. Review of Upcoming Schedule and Other Updates

Planning Commission - Wednesday, April 2, 2025 - 7:00 p.m. Planning Commission - Wednesday, April 16, 2025 - 7:00 p.m. City Council - Thursday, March 27, 2025 - 7:00 p.m. City Council - Thursday, April 10, 2025 - 7:00 p.m.

### 7. Adjourn

Regular meetings are broadcast, live, on Charter Communications Cable Channel 180 and on the City's website at www.applevalleymn.gov



ITEM: 3.A.

PLANNING COMMISSION MEETING DATE:

SECTION: Consent Agenda

March 19, 2025

Description:

Approve Minutes of March 5, 2025, Annual Meeting

Staff Contact: Department / Division:

Breanna Vincent, Department Assistant Community Development Department

#### **ACTION REQUESTED:**

Approve minutes of annual meeting of March 5, 2025.

#### SUMMARY:

The minutes of the last Annual Planning Commission meeting is attached for your review and approval.

#### **BACKGROUND:**

State statute requires the creation and preservation of meeting minutes which document the official actions and proceedings of public governing bodies.

#### **BUDGET IMPACT:**

N/A

#### **ATTACHMENTS:**

Minutes

#### CITY OF APPLE VALLEY

#### PLANNING COMMISSION MINUTES

March 5, 2025

#### 1. CALL TO ORDER

The City of Apple Valley Planning Commission Annual Meeting was called to order by Chair Kurtz at 7:00 p.m.

Members Present: Jodi Kurtz, Paul Scanlan, Dave Schindler, Phil Mahowald, Becky

Sandahl, Jeff Prewitt, and Douglas Hlas

Member(s) Absent: None

City staff members attending: Community Development Director Tim Benetti, Associate

Planner Sydnee Stroeing, City Engineer Evan Acosta, and

Department Assistant Breanna Vincent.

#### 2. APPROVAL OF AGENDA

*Chair Kurtz* asked if there were any changes to the agenda.

*CD Director Benetti* asked that item 4. B. Approve 2024 Planning Commission Annual Report be moved the 7. A.

MOTION: Commissioner Scanlan moved, seconded by Commissioner Sandahl,

approving the agenda. Roll call vote: Ayes - 7 - Nays - 0.

#### 3. CONSENT ITEMS

#### A. Approval of Minutes of February 5, 2025

MOTION: Commissioner Scanlan moved, seconded by Commissioner Hlas,

approving the minutes of February 5, 2025. call vote: Ayes - 7 - Nays - 0.

#### 4. ANNUAL BUSINESS MEETING

#### A. Nominate and Approve Officers

The Commission recommended the following officers:

Chair – Jodi Kurtz

Vice-Chair – Paul Scanlan

Secretary – David Schindler

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MOTION: Commissioner Mahowald moved, seconded by Commissioner Scanlan,

approving the Planning Commissioner officers. call vote: Ayes - 7 – Nays –

0.

#### B. Approve 2024 Planning Commission Annual Report

CD Director Benetti provided a brief presentation.

MOTION: Commissioner Schindler moved, seconded by Commissioner Scanlan,

approving the 2024 Annual Report. call vote: Ayes - 7 - Nays - 0.

#### 5. PUBLIC HEARING

#### A. Bethel Assemblies of God Church Wireless Communication Tower CUP

Chair Kurtz opened the public hearing.

Associate Planner Stroeing provided a brief presentation.

Commissioner Scanlan asked what the height of the proposed tower was on the 2017 CUP approval and if any mature trees will be removed.

Associate Planner Stroeing stated that the height was about 84' which is just under what is being proposed now. The proposed plans show a slight removal of vegetation in the area and there is a tree preservation concept along with the NRMP, as part of the conditions in the draft resolution.

*Chair Kurtz* stated that an opaque solid fence and paved road will be a definite improvement to the plans.

Commissioner Prewitt asked if a gate will be placed at the paved road leading to the cell tower.

Associate Planner Stroeing said there is not a requirement related to this. The drive is for maintenance access and signage could possibly be added but would defer to the applicant for additional information.

Commissioner Sandahl agreed with previous comments regarding removal of trees and trying to preserve as many as possible.

Commissioner Mahowald asked if the tree preservation includes trees that may become diseased or damaged.

CITY OF APPLE VALLEY Dakota County, Minnesota Planning Commission Minutes March 5, 2025 Page 3 of 5

Associate Planner Stroeing stated that condition 9 in the draft resolution is intended to maintain the existing trees that provide screening to the residential area so if any would die, the property owner would need to maintain the trees so that screening is not diminished.

The applicant, Blair Ransom (Buell Consulting), was present for questions.

*Chair Kurtz* asked how many towers are needed for adequate coverage and do other companies use the same towers.

Mr. Ransom stated that it can vary depending on what data is being used (calls, text, internet). There are currently six towers in the area which do not provide adequate coverage. When multiple carriers join on a tower, this is called co-location. Building a tower is the last resort and there are no existing towers in this area. As part of their application, Verizon committed to allowing other carriers to use this tower.

Chair Kurtz asked about RF exposure which some citizens have expressed concerns over.

Mr. Ransom stated that the FCC governs the amount of emissions that cell carriers can emit. Verizon's job is to comply within those emission limits. This is governed by the federal government.

*Chair Kurtz* asked if towers have fallen due to ice buildup.

Mr. Ransom stated that it is very unlikely and the tower is designed with the breakpoint so that it collapses in on itself.

Commissioner Hlas asked if there were any examples of other locations with settings like this one.

Mr. Ransom stated there is a park in Eden Prairie with a tower about the same height. This is also in a residential area. There is also one being built at the Maple Grove fire station.

Commissioner Prewitt asked for further information on the FFC emission guidelines.

Mr. Ransom stated that information can be provided at the next meeting.

Commissioner Scanlan asked if there were any other locations considered and inquired about FAA lighting.

Mr. Ransom stated that there are six other towers and the distances between the towers must be taken into account for the maximum efficacy of the tower. Co-location options are looked at first and buildings over four-stories were looked at but had a pitched roof and could not be CITY OF APPLE VALLEY Dakota County, Minnesota Planning Commission Minutes March 5, 2025 Page 4 of 5

used. Mr. Ransom stated that FAA lighting will not be required as the tower is under 200 feet.

*Commissioner Scanlan* asked that examples of other towers built in similar locations be brought to the next meeting.

Commissioner Mahowald asked if there are ongoing tests of monitoring of the emissions on these towers and does this change over time as the equipment ages or changes.

Mr. Ransom stated he will provide this information at the next meeting.

Resident, Rich McCabe (14365 Glenda Dr.), raised concerns over the new location of this proposed tower. The previous tower approval was further from the residential area. Mr. McCabe stated he does not believe a tower should be close to any residential areas. There are several townhome associations, rentals, and daycare in the area. Mr. McCabe also referenced his "Letter to the Editor" published on February 27, 2025 in the Sun This Week online newspaper and shared some other cities which would prohibit this. He also stated concerns over home values and any disruptions to the gas line that runs along with site. Mr. McCabe asked for clarification on the height of the tower.

Mr. Ransom stated that the tower location changed as the church has renovation plans and the previous location would conflict. The tower is 86' tall with a small lightning rod that extends 4' further.

Resident, Scott Narveson (14239 Glencove Trl.), said he is on his HOA board and does not speak strongly against this proposal but is gathering information to share with his community. Mr. Narveson agreed with Mr. McCabe's concerns regarding the Magellan pipeline and asked for information from engineering be provided at the next meeting. Mr. Narveson would like to see drawings or renderings of what the site will look like from ground level. He also asked for additional information regarding the FCC guidelines on emissions. Mr. Narveson asked for clarification on the construction process and timeline.

Resident, Jim Peterson (14378 Pennock Ave.), echoed with Mr. McCabe's comments regarding the proximity to residential areas and asked that a less intrusive location be considered.

*Commissioner Scanlan* asked that staff bring forward a narrative on what limitations the City faces in regards to cell towers and federal government directives. Commissioner Scanlan also asked for renderings to be provided and if other locations could be examined at the next meeting.

With no further comments, *Chair Kurtz* closed the public hearing.

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It is the policy of the Planning Commission not to act on an item the same night as its public hearing. This item will appear on a future agenda for a recommendation.

#### 6. LAND USE

None

#### 7. OTHER BUSINESS

#### A. Apple Valley Bike and Pedestrian Plan Update – 2025

Assistant City Engineer Acosta provided a brief presentation on proposed updates and schedule.

#### B. Review of Upcoming Schedule and Other Updates

The next Planning Commission meeting is scheduled for Wednesday, March 19, 2025, 7:00 p.m. The next City Council meeting is Thursday, March 13, 2025, 7:00 p.m.

#### 8. ADJOURNMENT

Chair Kurtz asked for a motion to adjourn.

MOTION: Commissioner Schindler moved, seconded by Commissioner Scanlan, to adjourn the meeting at 8:12 p.m. Roll call vote: Ayes -7 - Nays - 0.

Respectfully submitted,							
Breama Viveent							
Breanna Vincent, Planning Department Assistant							
Approved by the Apple Valley Planning Commission on 03/19/2025 .	Jodi Kurtz, Chair						



ITEM: 5.A.

PLANNING COMMISSION MEETING DATE: March 19, 2025

SECTION: Land Use / Action Items

Description: Bethel Assemblies of God Church Wireless Communication Tower CUP					
Staff Contact:	Department / Division:				
Sydnee Stroeing, Associate Planner	Community Development Department				

Applicant:	Project Number:	
Buell Consulting, on behalf of C	PC25-02-C	
Applicant Date: 2/3/2025	<b>60 Days</b> : 4/4/2025	<b>120 Days:</b> 6/3/2025

#### **ACTION REQUESTED:**

Recommend approval of a conditional use permit (CUP) to construct an 86' wireless communications monopole at 14201 Cedar Avenue subject to conditions 1 through 15.

#### SUMMARY:

Buell Consulting, on behalf of Cellco Partnership (d/b/a Verizon Wireless), request consideration of a conditional use permit (CUP) to construct an 86' tall wireless communications tower (cell tower) at 14201 Cedar Ave. The proposed location of the tower is in the south end of the parcel, adjacent to 143rd St W. The tower is requested to enhance the network coverage and capacity for wireless communication in the surrounding area. The construction of the cell tower will include an equipment pad and generator. The tower and equipment will be located within a 25' x 30' area with a 6' fence around the perimeter.

The construction of a cell tower is subject to a number of performance standards per section 155.385 (*Towers and Antennas Site Design and Maintenance*) of the City Code. In order to obtain a conditional use permit, the petitioner must demonstrate that all of the performance standards of the zoning code are met. A letter of zoning compliance is attached to the staff report. The City may place reasonable conditions on a conditional use to mitigate adverse impacts associated with the use. Recommended conditions are below, and a draft resolution is attached.

### Recommended Conditions (1 through 15):

- 1. The construction and operation of the wireless communications monopole tower shall be in conformance with the Site Plan (Sheet A-1) dated **DATE** and the Enlarged Site Plan (Sheet A-2) dated **DATE**.
- 2. The antennas shall be flush-mounted to the monopole in accordance with the North Elevation Plan (Sheet T-1) dated **DATE**.
- 3. A building permit and electrical permit shall be obtained from the Building Inspections Department prior to any construction on the site.
- 4. Tower construction, maintenance, and operation shall comply with the communications

- tower requirements set forth in the City Code, Section 155.385.
- 5. A qualified and licensed professional engineer shall submit certified construction plans which are in conformance with the following: the latest structural standards; acceptable engineering methods and practices and the National Electrical code.
- 6. The telecommunication service applicant shall provide verification of written final authorization/agreement with the landowner for the placement of the tower on the property prior to issuance of the building permit
- 7. Subject to all conditions noted in the City Engineer's memo dated **DATE**.
- 8. Landscaping that provides year-round screening shall be installed adjacent to 143<sup>rd</sup> St W. A landscaping plan shall be submitted for review and approval prior to the issuance of a building permit.
- 9. The property owner shall maintain the existing trees surrounding the tower and equipment pad area that serve as screening. If these trees are determined to be insufficient in screening the tower area, additional screening measures may be required.
- 10. A tree preservation concept shall be submitted prior to the issuance of a Natural Resources Management Permit (NRMP).
- 11. A qualified and licensed professional engineer shall certify that the cell tower is designed in all aspects to accommodate both the operator's antenna and one additional user.
- 12. The base of the tower shall be enclosed with a fence at least six feet in height, constructed of a durable, maintenance-free material that effectively screens the mechanical equipment. The proposed fence material shall be submitted for review and approval before a building permit is issued.
- 13. The 12-foot-wide access driveway shall be paved with either concrete or bituminous material from and including the driveway apron abutting the public right of way to the security fence.
- 14. The tower's surface color shall be selected to blend with the surrounding area as effectively as possible and shall be reviewed and approved by the City's Planning Department prior to the issuance of a building permit.
- 15. The Conditional Use Permit may be revoked for cause if the terms of (1) through (14) preceding are not adhered to or met while the tower is in place.

#### **BACKGROUND:**

A CUP for a similar tower at this property was approved in 2017. The tower was never constructed, and the approved CUP has lapsed. The original CUP approved a tower located within a large parking lot curb island near the church buildings. The petitioner is proposing a new site to construct the tower on the same property.

**Zoning:** The property is zoned "P" (Institutional). A wireless communications tower is a conditional use in the P zoning district, subject to a number of performance standards as required in section 155.385 (*Towers and Antennas Site Design and Maintenance*) of the City Code. The petitioner submitted a letter outlining how the cell tower complies with the requirements of the zoning code. The City may place reasonable conditions on a conditional

use permit to mitigate any adverse impacts associated with the use.

**Site Plan:** The site plan shows the location of the 86' tall cell tower (with a 4' lightening rod) and equipment pad in a wooded area at the south end of the existing parcel, adjacent to 143rd St W. The tower and equipment will be within a 25' x 30' area and is would be enclosed by a 6' tall fence. The mechanical ground equipment and tower base will be required to be screened per City Code. The fence material will need to be updated and reviewed prior to issuance of a building permit.

Access to the tower and associated equipment is shown to be via a 12' wide path off 143rd St W. The driveway to the tower will be required to be paved per City Code. Additionally, the Assistant City Engineer's memo provides a condition that a sidewalk shall be installed from the existing driveway to the east of the proposed access to the west property line. The City utilizes its authority under ordinance requirements and guiding plan documents to require sidewalk gaps be completed by private development as development (and redevelopment) work occurs where current gaps exist.

The tower will be designed with an engineered "breakpoint" technology which will ensure that if the tower fails and collapses, it will fall upon itself. The setbacks for a tower are based on the breakpoint height. With the breakpoint, the minimum setback from property lines is 64.5'. The site plan shows the proposed tower 95' from the nearest property line. All setbacks to property lines are met. There is also a setback requirement to structures on neighboring properties. The minimum setback for the tower from a structure on a neighboring property is 86' (due to the engineered breakpoint). The nearest structure on a neighboring property is 153' from the proposed tower. All structure setbacks are also met.

**Grading:** No grading plan has been submitted at this time. Minimal grading is expected for the installation of the tower and associated equipment. Final review and approval of a grading plan by the City Engineer will be required.

**Elevations:** The antenna array proposed at this location is designed so that the antennas are flush-mounted to the pole and the ancillary equipment is placed within the ground equipment area to give a sleeker appearance. The ground equipment will be required to be screened with a solid fence and landscaping. The petitioner has submitted renderings of the proposed tower (attached).

Clause 155.385 (B)(8) of City Code states that "All towers and their antennas shall utilize building materials, colors, textures, screening and landscaping that effectively blend the tower facilities within the surrounding natural setting and built environment to the greatest extent possible as determined by the City." The submitted materials show the tower being painted a color to match the existing church building. The proposed tower location is over 300' from any existing church building on the site. Staff believes there should be further review of the proposed tower color as there may be a more suitable option that effectively blends the tower facilities in with the surrounding wooded area.

**Landscape Plan:** A landscape plan will be required at building permit review. Additional year-round landscaping will be required adjacent to 143rd St W to assist in screening the ground equipment pad from the roadway. The proposed tower location is heavily wooded, and the existing trees will be utilized to screen from adjacent residential properties. The property owner will be required to maintain existing trees that provide screening of the tower. If it is found that the existing trees do not provide enough adequate screening, it will be required provide additional screening.

### **Public Hearing Comments:**

1. Why was the 2017 tower never constructed? What was the previous tower height and color? Why is a new site proposed?

**Staff response:** The previous tower did not receive issuance of a building permit, and the CUP was not utilized within one year of approval as required in clause 155.399(H), therefore the 2017 CUP lapsed. The previous tower plans show a total height of 84' and painted a yellow color that matched the church building.

**Applicant response:** The original location was agreed to by the previous property owner, Mount Olivet Church. The new location is to accommodate Bethel Rock's future development plans.

2. What other sites were considered for this tower? Are there any other locations on the Bethel Church property where the proposed tower could be located?

**Staff response:** Per clause 155.385(A) of City Code, there are co-location requirements for towers. Further, a proposal of a new tower must provide reasoning as to why the communication equipment cannot be accommodated on an existing or approved tower or building within one-half mile radius of the proposed tower. After further review, there is one tower within the one-half mile of the proposed Bethel Church tower site. It is located at Apple Valley High School (AVHS). The City reviews the project and site based on what has been proposed by the petitioner.

Applicant response: There are no existing towers or buildings of sufficient height within the 0.5-mile colocation exclusion radius. The alternate location within the 0.5-mile radius (AVHS) was analyzed; the existing antenna centerline height of this (AVHS) tower will not address the height and identified needs for this proposed project. Subsequently, there are no feasible alternatives to consider. Bethel Church has development plans that restrict the parking lot. Other areas on-site are too heavily wooded, and the proposed site is setback compliant.

3. How many existing towers are there in Apple Valley?

<u>Staff response:</u> Based on previous land use applications and City records, there are 10 existing towers. This does not include antennas attached to buildings.

4. General comments and questions on RF (radio frequency) emissions.

<u>Staff response:</u> It is not within the City's purview to determine or monitor RF emissions

and it is not an adopted performance standard in the City Code -- this is regulated by the Federal Communications Commission (FCC). The City may not deny a communications tower CUP based on concerns of RF emissions.

**Applicant response:** The FCC regulates emissions based on Effective Radiated Power (ERP). FCC guidelines are based on recommendations from other federal health and safety agencies. The ERP of this tower is within the FCC mandated guidelines. There is not a federal requirement to monitor emissions over time. Please see the applicant presentation attachment below.

5. Comment on prohibiting towers near schools.

**Staff response:** In Apple Valley, school properties are generally zoned as "P" (Institutional). The Institutional zone allows for towers as a conditional use. There are existing towers that are near schools, as well as located on school properties. The City cannot prohibit the location of a proposed tower in a zoning district where it is currently allowed as a conditional use.

6. Concern with property values when adjacent to a tower.

**Staff response:** Property values are determined by a complex set of variables that are difficult to attribute to a single adjacent land use. Instead, property values are impacted by overall City development patterns. There has been no documentation provided of a decrease in property value due to being adjacent to a cell tower.

7. How long will construction of the tower last? What streets will be used for construction of the tower? How many trees will be removed due to construction of the tower?

**Staff response:** Staff does not have concerns with the proposed construction of the tower. The Natural Resources department will review the required tree preservation concept as part of a Natural Resources Management Permit (NRMP). Additionally, a building permit is required prior to construction. Conditions of the CUP resolution would need to be meet prior to issuance of a building permit.

**Applicant response:** Construction access will come from 143rd St W, except for underground electric, which is installed from a transformer to the north. Construction is phased including civil work, tower staking, antenna installation, and utility installation. In total, the process will be approximately 6 weeks. One, 24" tree and brush will be removed due to construction of the tower.

8. Was Magellan Pipeline contacted for the tower site?

**Staff response:** The submitted plans show the tower and equipment pad outside of the pipeline easement.

**Applicant response:** No, as shown on the land survey, the lease premises and access are not within the pipeline easement. Furthermore, existing gas lines are located on the south side of 143rd St W.

9. What is the City's authority when reviewing CUPs?

<u>Staff response:</u> The City exercises a quasi-judicial role when reviewing a request for a

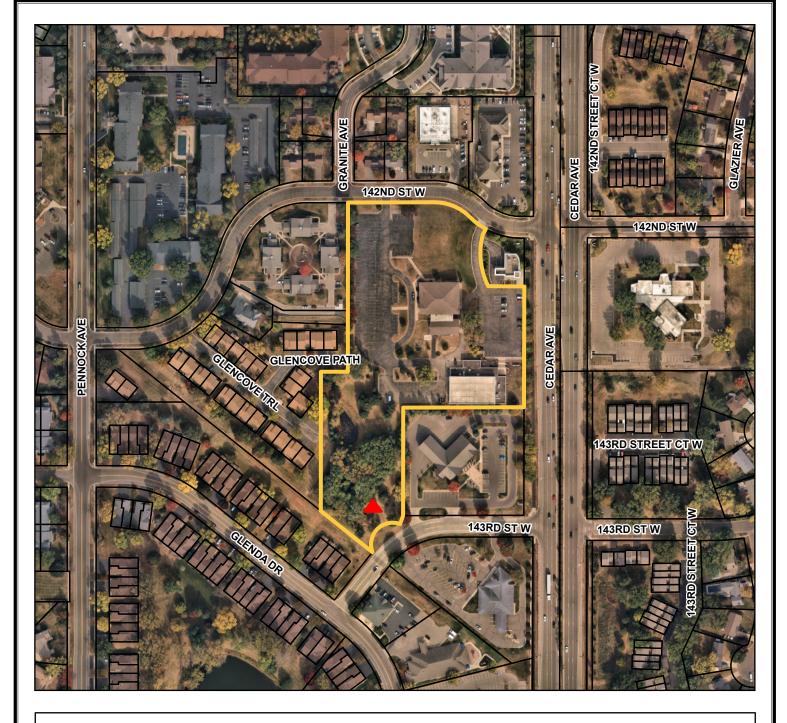
CUP, meaning that it is reviewing the request based on requirements that are currently adopted in City Code. The performance standards related to a CUP for a communications tower are set out in section 155.385 of City Code. If the applicant provides plans and documentation that meet the performance standards and requirements set in City Code, the applicant is entitled to the CUP. The City may place reasonable conditions that are related to the adopted performance standards on a conditional use to mitigate adverse impacts associated with the use.

#### **BUDGET IMPACT:**

N/A

#### **ATTACHMENTS:**

Location Map
Zoning Map
Applicant Letter
Plan Set
Survey
Applicant Letter
Letter
Memo
Correspondence
Presentation
Resolution



### Bethel Assemblies Church Location Map

14201 Cedar Avenue



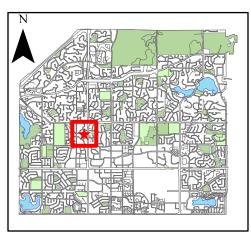
**Subject Property** 

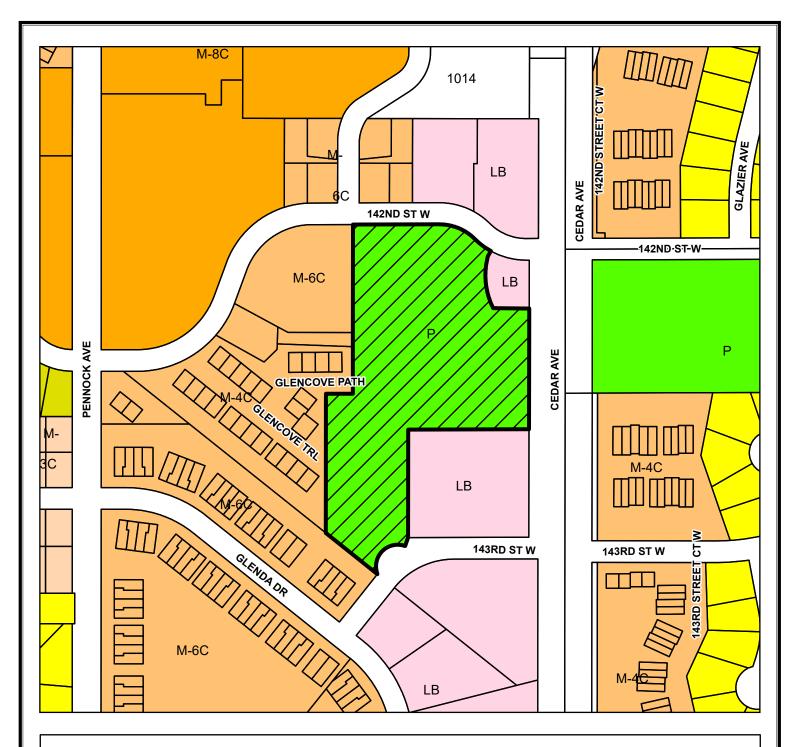


**Proposed Tower Location** 



0 130 260 Feet





## Bethel Assemblies Church Zoning Map

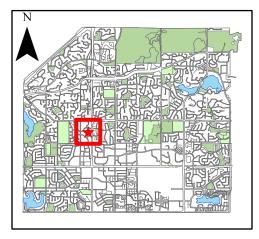
14201 Cedar Avenue



**Subject Property** 



0 130 260 Feet





720 Main Street, Suite 200 Saint Paul, MN 55118 (651) 361-8110 www.buellconsulting.com

SENT VIA EMAIL

February 2, 2025

Sydnee Stroeing - Associate Planner City of Apple Valley 7100 147<sup>th</sup> Street W Apple Valley, MN 55124

RE: Verizon Wireless / Cell Tower Conditional Use Permit / Site Name: Toffee

Dear Ms. Stroeing,

Cellco Partnership d/b/a Verizon Wireless is proposing to construct a new cell tower in Apple Valley on the Bethel's Rock Church property. The proposed tower is an 86' monopole with an overall height of 90' including the lightning rod. The tower will be built within a 30' x 25' fenced gravel compound and accessible via a new 12' gravel driveway and approach from 143rd St W.

The purpose of constructing this new cell tower is to enhance the network coverage and capacity for Verizon Wireless customers in the area, addressing the increasing demand for reliable and high-speed wireless communication. With the steady growth of residential and commercial activities in Apple Valley, it has become imperative to offload the capacity of existing sites to ensure seamless connectivity to the Verizon Wireless network.

The design of the cell tower includes a flush mount, in an effort to integrate into the suburban residential environment. Moreover, the selected location for this tower is within a wooded area, which helps minimize the visual impact and preserves the aesthetic value of the surrounding area.

Site Address: 14201 Cedar Ave, Apply Valley, MN 55124 PID: 01.494.010.1010. See land survey for full legal description.

The following lists the supplementary documentation included in the application and addresses the relevant portions of § 155.385 Tower and Antennas Site Design and Maintenance of the Apple Valley zoning ordinance.

#### **Supplementary Documentation:**

- Land Use Development Application
- Deposit Agreement
- Co-location Letter of Intent
- Construction Drawings
- Land Survey
- Fall Letter



720 Main Street, Suite 200 Saint Paul, MN 55118 (651) 361-8110 www.buellconsulting.com

#### § 155.385 – Tower and Antennas Site Design and Maintenance

#### A. Co-location requirements:

1) As shown in Attachment I, the only existing wireless facility is approximately 0.5 miles west at the Apple Valley High School football stadium. The available ACL is approximately 45' which does not satisfy the required 78' and 84' ACLs. It is also only 0.9 miles from the nearest existing site. Furthermore, the buildings within the radius are all between one and four stories which would not achieve the necessary height.

#### B. Tower Construction Requirements

- 1) The proposed tower is a flush mounted monopole designed to blend into the surrounding area. *See construction drawings pages T-1 and A-4*.
- 2) The proposed tower will comply with applicable provisions of this code.
- 3) Tower and accessory facilities are designed in accordance with 2020 MN Building code. *See construction drawings pages T-1.*
- 4) Tower and accessory facilities are designed in accordance with 2023 NFPA70 (NEC). See construction drawings pages T-1.
- 5) Proposed tower is built with galvanized steel intended to resistant corrosion.
- 6) Proposed tower is designed to accommodate an additional carrier at the 60' ACL. Note, the flush mount design requires radios to be placed below the antennas making 60' is the next highest available ACL. The 25' x 30' compound will also accommodate an additional carrier's ground equipment.
- 7) The compound is surrounded by a locked 6' chain link barbed-wire fence and not climbable.
- 8) In addition to the flush mounted design, the tower will be painted to match the adjacent church building. Locating it in the wooded area also conceals the ground equipment and partially shields the tower.
- 9) No advertising or signage will be placed on the tower or compound fencing other than what is required by applicable regulatory agencies.
- 10) Tower will not require any lighting.
- 11) Tower and appurtenances will not extend into the right-of-way, public street, highway, or sidewalk.
- 12) Applicant holds a minimum of \$2M in liability insurance.
- 13) Tower will be removed and restored within 12-months of cessation of operations per ordinance.
- 14) Additional submittal requirements.
  - a) ASR and FAA approval are in progress and applicant request it be a condition of permit.
  - b) See construction drawings, signed by Joshua Herzog, PE (License# 42392).
  - c) See Co-location Letter of Intent.
- E. The parcel is zoned Institutional (P). As shown on page A-1 of the construction drawings, the tower meets the 1.5x fall zone setback requirement of 70'-6". The nearest structure on a neighboring property, shown on Attachment II, is approximately 153' from the tower, which is within the required 2x fall zone setback of 94'.
  - 1) Fall zone:
    - a) Fall zone is 50% of tower height or 43'.
    - b) Effective fall zone including 4' lightning rod is 47'.
  - 2) See fall zone letter from tower manufacture, Sabre Industries.



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Thank you in advance for your time in reviewing our application and please do not hesitate to contact me via email or the number below with any questions or requests for further information.

Sincerely,

**Blair Ransom** 

Site Development Agent on behalf of The Towers, LLC d/b/a Vertical Bridge

Cell: 612-875-1808

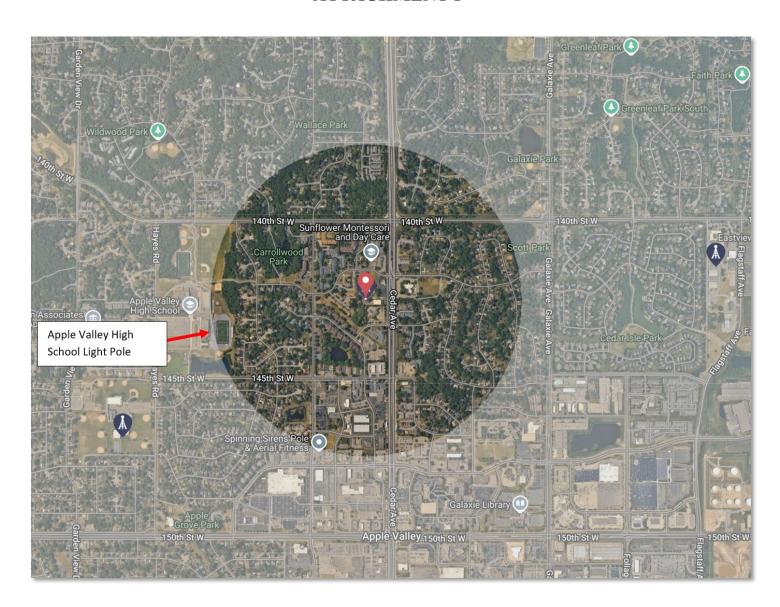
Email: b.ransom@grahamredev.com

Bla Ren



720 Main Street, Suite 200 Saint Paul, MN 55118 (651) 361-8110 www.buellconsulting.com

### **ATTACHMENT I**



1/2-mile radius



720 Main Street, Suite 200 Saint Paul, MN 55118 (651) 361-8110 www.buellconsulting.com

### **ATTACHMENT II**





## MIN TOFFEE NEW BUILD

#### PROJECT INFORMATION

SITE NAME: MIN TOFFEE

SITE ADDRESS: CEDAR AVENUE APPLE VALLEY, MN 55124

DAKOTA COUNTY:

LATITUDE: N 44° 44' 30.69" (NAD83)

W 93° 13' 11.22" LONGITUDE:

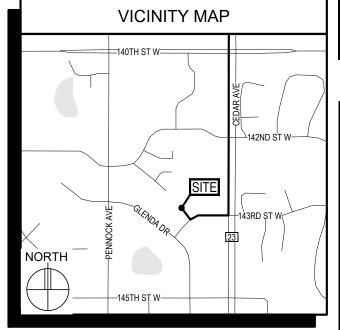
DRAWING BASED ON

REDS DATED. 09-27-24 CONSTRUCTION TYPE:

SITE AREA 30' x 25' = 750 S F

UTILIZED CODES: 2020 MN BUILDING CODE & 2023 NFPA 70

SHEET INDEX						
SHEET	SHEET DESCRIPTION					
T-1	PROJECT INFORMATION, TOWER ELEVATION & SHEET INDEX					
A-1	SITE PLAN & DETAIL INDEX					
A-2	ENLARGED SITE PLAN					
A-3	ANTENNA AND COAX KEY, CABLE BRIDGE PLAN & NOTES					
A-4	MOUNT BRACKET DETAILS					
A-5	OUTLINE SPECIFICATIONS					
G-1	GROUNDING & UTILITY NOTES					
G-2	GROUNDING PLAN & GROUNDING DETAIL INDEX					
U-1	SITE UTILITY PLANS & NOTES					
-	SURVEY					



MAP DATA ©2025 GOOGLE

### **LOCATION SCAN**



	ISSUE SUMMARY						
REV	DESCRIPTION	SHEET/DETAIL					
Α	ISSUED FOR REVIEW	ALL					
В	ISSUED FOR OWNER SIGNOFF	ALL					
С	ISSUED FOR OWNER SIGNOFF	ALL					

#### **DEPARTMENTAL APPROVALS**

JOB TITLE	NAME	DATE
RF ENGINEER	JORDAN ALSTAD	10-23-24
OPERATIONS MANAGER		
CONSTRUCTION ENGINEER	BRIAN NELSEN	10-23-24

#### LESSOR / LICENSOR APPROVAL

SIGNATURE	PRINTED NAME	DATE				
LESSOR / LICENSOR: PLEASE CHECK THE APPROPRIATE BOX BELOW						

NO CHANGES.

CHANGES NEEDED. SEE COMMENTS.

#### **CONTACTS**

LESSOR / LICENSOR: BETHEL ASSEMBLY OF GOD

14201 CEDAR AVENUE APPLE VALLEY, MN 55124 JOE McCORMACK (952) 715-6321

LESSEE: VERIZON WIRELESS

10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438

CONSTRUCTION DEPT (952) 946-4700 POWER LITTLITY DAKOTA ELECTRIC ASSOCIATION COMPANY CONTACT: 4300 220TH STREET WEST

> FARMINGTON, MN 55024 COREY WILLERT (651) 463-6212

TELCO UTILITY TBD

COMPANY CONTACT:

**DESIGN 1 OF EDEN PRAIRIE** 9973 VALLEY VIEW ROAD

EDEN PRAIRIE, MN 55344 (952) 903-9299

SURVEYOR: WIDSETH

610 FILLMORE STREET - PO BOX 1028 ALEXANDRIA, MN 56308-1028

T.B.D

TRD

320-762-8149

STRUCTURAL ENGINEER:

DESIGNER:

GEOTECHNICAL

**ENGINEER** 

THESE DRAWINGS DO NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED. OF THE ACCURACY OF THE STRUCTURAL ANALYSES AND THE PERFORMANCE OF THE COMPLETED CONSTRUCTION AS SHOWN ON THESE DOCUMENTS AND THE STRUCTURAL ANALYSES.

. NO STRUCTURAL ANALYSIS FOR THE TOWER, MOUNTS OR FOUNDATION HAVE BEEN PERFORMED AS PART OF THESE DRAWINGS. THE STRUCTURAL ANALYSIS FOR THE TOWER AND FOUNDATION ARE BY THE TOWER SUPPLIER AND SHALL BE DESIGNED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF THE PROJECT.

3. PLEASE COORDINATE ANY STRUCTURAL CONCERNS/MATTERS OR ANY LOADING MODIFICATIONS TO THE CONSULTANT WHO AUTHORED THE ANALYSIS AND NOTIFY DESIGN 1 IMMEDIATELY OF THE ISSUE . TOWER FOUNDATION, EQUIPMENT SLAB, GENERATOR FOUNDATION, AND

THE ACCESS DRIVE TO BE EXCAVATED AND CONSTRUCTED IN ACCORDANCE WITH RECOMMENDATIONS AND SPECIFICATIONS OF THE GEOTECHNICAL REPORT WHICH IS NOT INCLUDED IN THIS PACKAGE. DISCREPANCIES BETWEEN THE REPORT AND THE OTHER DOCUMENTS TO BE IMMEDIATELY REPORTED TO VERIZON WIRELESS AND THE DESIGNER.

#### **TOWER ELEVATION**

NOTES:

1. TOWER TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH TOWER

1. TOWER TO BE ERECTED AND INSTALLED IN ACCORDANCE WITH TOWER TO SHAPE TO SH MANUFACTURER'S DRAWINGS NOT INCLUDED WITH THIS PACKAGE. DISCREPANCIES BETWEEN TOWER DRAWINGS AND DESIGNER DRAWINGS TO BE REPORTED TO VERIZON WIRELESS AND THE DESIGNER IMMEDIATELY.

2. CONTRACTOR TO ENSURE TIP OF ANTENNAS DO NOT EXCEED TOWER HEIGHT.

3. ELEVATION IS SHOWN FOR GENERAL DIAGRAMMATIC PURPOSES ONLY. DO NOT

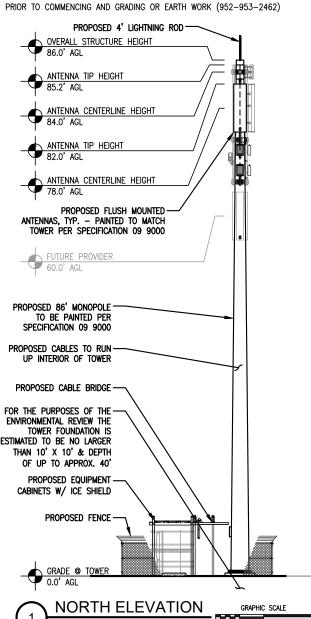
4. THE STRUCTURAL ANALYSIS FOR THE MOUNTS (BY OTHERS) SHALL BE PER THE VERIZON NETWORK STANDARD NSTD-445. ALL LOADING AND DESIGN SHALL BE PER

5.) CONSTRUCTION SHALL COMPLY WITH ALL REQUIREMENTS OF THE MINNESOTA

6.) CONSTRUCTION SHALL COMPLY WITH ALL REQUIREMENTS OF THE APPLE VALLEY

7.) NO SITE WORK MAY BEGIN WITHOUT CITY APPROVAL AND/OR PERMIT.

8.) A (NRMP) NATURAL RESOURCES MANAGEMENT PERMIT IS REQUIRED. THE PERMIT MAY BE OBTAINED THROUGH THE BUILDING INSPECTION DEPARTMENT ONCE THE NRMP PERMIT HAS BEEN ISSUED, PLEASE CONTACT SAM BERGER FOR A SITE INSPECTION



## **DESIGN**

9973 VALLEY VIEW RD. EDEN PRAIRIE, MN 55344 (952) 903-9299 WWW.DESIGN1EP.COM

10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438 (952) 946-4700

**PROJECT** 17326166 LOC. CODE: 265804

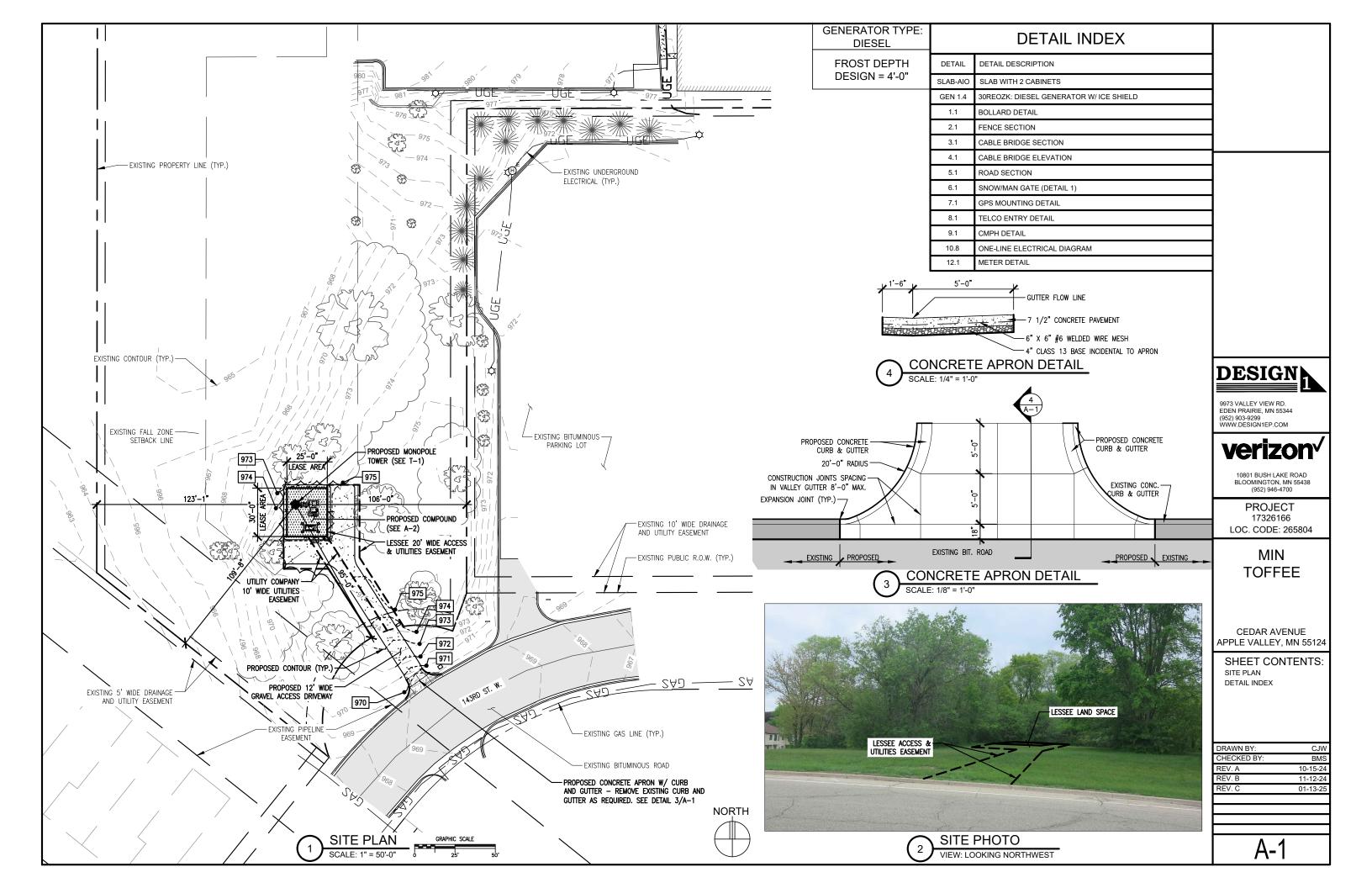
> MIN TOFFEE

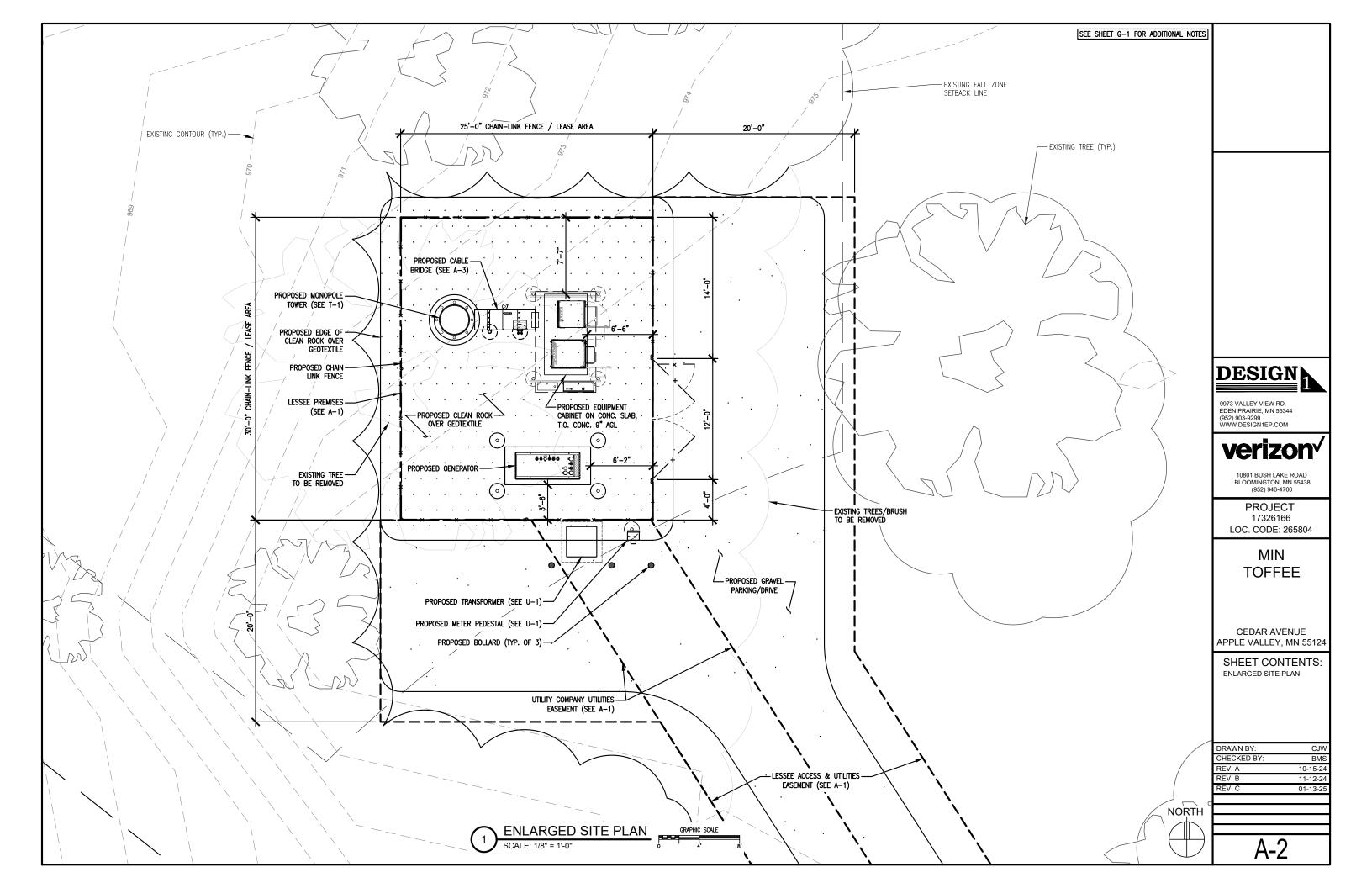
CEDAR AVENUE APPLE VALLEY, MN 55124

#### SHEET CONTENTS:

CONTACTS ISSUE SUMMARY SHEET INDEX DEPARTMENTAL APPROVALS LESSOR APPROVAL PROJECT INFORMATION AREA & VICINITY MAPS GENERAL NOTES

DRAWN DT.	CJW
CHECKED BY:	BMS
REV. A	10-15-24
REV. B	11-12-24
REV. C	01-13-25





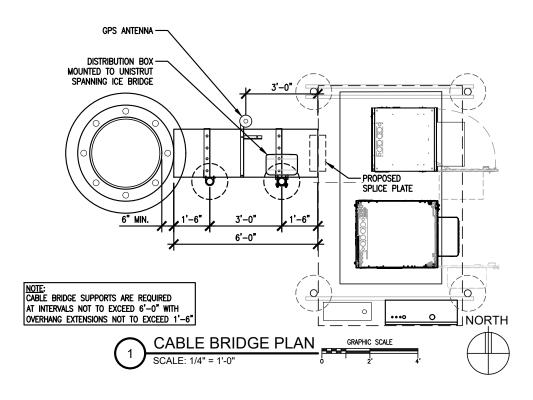
ANTENNA KEY								EQUIPME	ENT KEY	KEY						
	AZIMUTH	POSITION	FUNCTION	QTY	MANUFACTURER	MODEL	MOD TYPE	ANTENNA LENGTH	antenna Tip		ELEC DOWNTILT	MECH DOWNTILT	QTY	MANUFACTURER	MODEL	RRU PORT
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	350°	2.1	TX/RX1	1	JMA WIRELESS	MX12FHG865-01	700/850	96"	82.0'	78.0'	2*	0,	1	ERICSSON	4490	1
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		2.4	TX/RX4			4TH PORT	700/850	†- <u>-</u> -			<del>-</del>		1-1			-   -4
		2.5	TX/RX1			5TH PORT	PCS	†- <u>-</u> -			7			ERICSSON	4890	-   -
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		2.8	TX/RX4			8TH PORT	PCS	†- <u>-</u> -			<del>-</del>		1-1			-   -4
		2.9	TX/RX1	- <u>-</u> -		9TH PORT	AWS	†- <u>-</u> -			7		1-1		<u>-</u>	1 5
		2.10	TX/RX2	- <u>-</u> -		10TH PORT	AWS	†- <u>-</u> -			— <del>-</del>		1-1		<u>-</u>	- 1 - 6
		2.11	TX/RX3	- <u>-</u> -		11TH PORT	AWS	†- <u>-</u> -			- <u>-</u>		1-1		<u>-</u>	
		2.12	TX/RX4			12TH PORT	AWS	†- <u>-</u> -					-		<u>-</u>	-   -8
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	85*	2.1	TX/RX1	1	JMA WIRELESS	MX12FHG865-01	700/850	96"	82.0'	78.0'	2*	0.	1	ERICSSON	4490	1 1
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	250°	2.1	TX/RX1	1	JMA WIRELESS	MX12FHG865-01	700/850	96"	82.0'	78.0'	2*	0,	1	ERICSSON	4490	1
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		☐ 2.12 I	TX/RX4			12TH PORT	T AWS	Γ					1 - 7			T _8_

- (2) DISTRIBUTION BOX, MODEL RVZDC-6627-PF-48 (1 ON TOWER, 1 ON CABLE BRIDGE)
- (2) HUBER+SUHNER HYBRID TRUNK CABLE MODEL #85205112 (DIST BOX ON CABLE BRIDGE TO DIST BOX ON TOWER)
- (9) HUBER+SUHNER HYBRID JUMPER MPN # 85243898 (DIST. BOX TO RRU)
- (24) ANDREW COAX JUMPER, MODEL LDF4—50A, 1/2"ø FOAM DIELECTRIC, 6" EACH (RRU TO ANTENNA)
  (12) ANDREW COAX JUMPER, MODEL LDF4—50A, 1/2"ø FOAM DIELECTRIC, 9" EACH (RRU TO ANTENNA)
  (1) POWERSHIFT EQUIPMENT, DC—DC UP—CONVERTER UNITS (IN CABINET)

- (5) POWERSHIFT EQUIPMENT, DC-DC UP-CONVERTER MODULE (IN CABINET)

RAD CENTER = 70' EXTRA = 14'





## DESIGN

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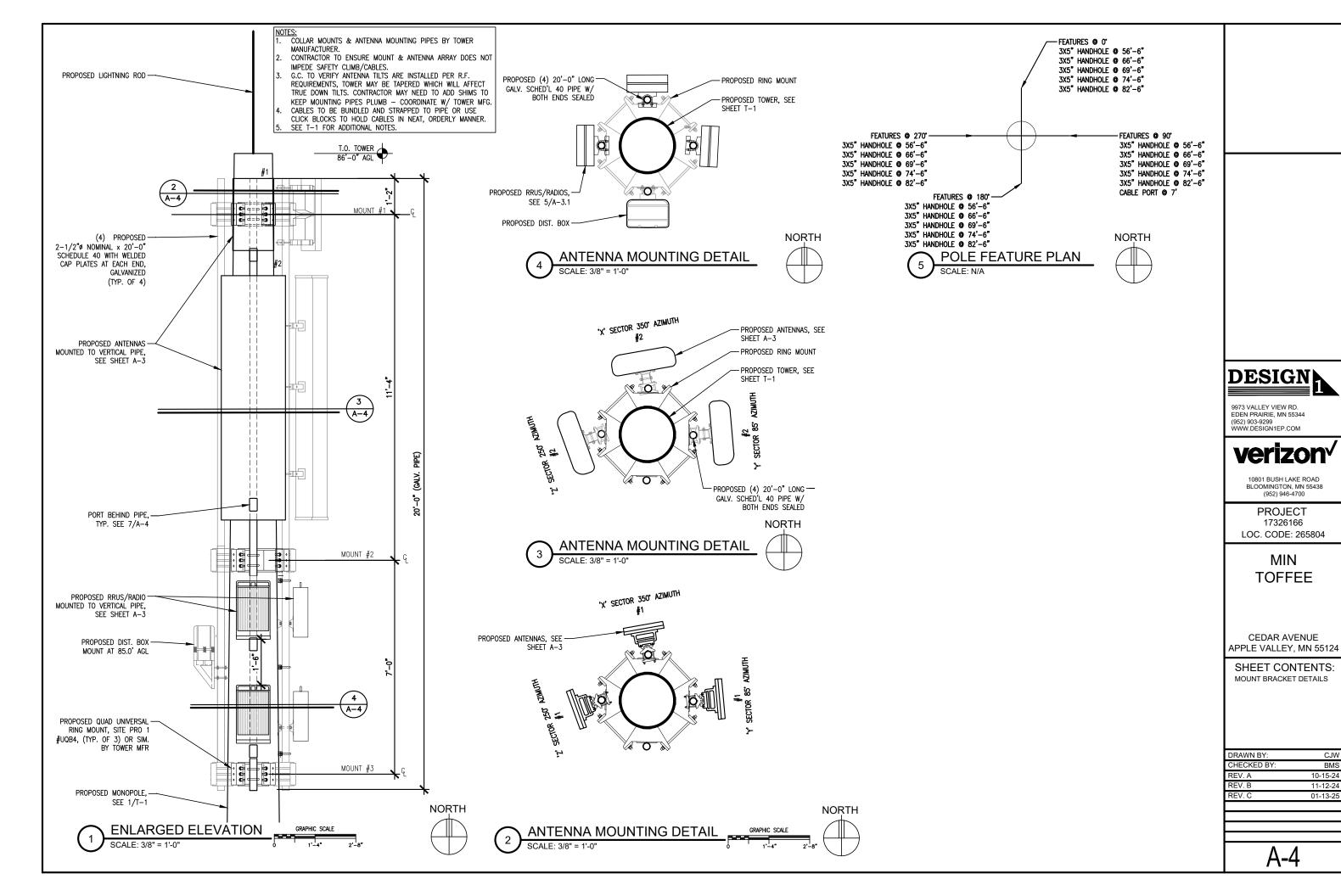
> MIN TOFFEE

CEDAR AVENUE APPLE VALLEY, MN 55124

SHEET CONTENTS:

PROPOSED KEYS CABLE BRIDGE PLAN

DRAWN BY:	CJW
CHECKED BY:	BMS
REV. A	10-15-24
REV. B	11-12-24
REV. C	01-13-25



#### GENERAL CONDITIONS

00 0001 PERMITS

Construction Permit shall be acquired by, or in the name of, Verizon Wireless, to be hereinafter referred to as the OWNER. Other permits shall be acquired by the

00 0002 SURVEY FEES
Survey shall be furnished by the Designer. Layout Staking shall be coordinated with the Surveyor per "Request For Quote", (RFQ).

#### 01 0010 INSURANCE & BONDS

Contractor is to furnish Insurance certificates for themselves and subcontractors. Contractor will provide any required Bonding. Contractor agrees to warranty the project for (1) one year after completion.

#### 01 0400 SUPERVISION & COORDINATION

Contractor shall provide supervision throughout the Project, coordinating the work of the Subcontractors, and delivery & installation of Owner-furnished items. Contractor's responsibilities include arranging & conducting of Underground Utilities Locates. Contractor shall comply with municipal, county, state and/or federal codes, including OSHA.

#### 01 0600 TESTING

Contractor is responsible for providing Agencies with sufficient notice to arrange for Test Samples (i.e.: Concrete Cylinders), and for Special Inspections.

#### 01 2000 MEETINGS

Contractor shall make themselves aware of, and attend, meetings with the Owner and/or Designer. Contractor is to attend a Pre—Construction Meeting of all parties involved, prior to the start of construction.

#### 01 5100 TEMPORARY UTILITIES

Contractor shall maintain the job site in a clean and orderly fashion, providing temporary sanitary facilities, waste disposal, and security (fence area or trailer module).

#### 01 5300 FQUIPMENT RENTAL

Contractor shall furnish equipment necessary to expedite work.

#### 01 5900 FIELD OFFICES & SHEDS

Contractor shall provide security (fence area or trailer module) for tools and materials that remain overnight on site.

#### 01 7000 CLEAN UP & CLOSE OUT

Contractor shall clean up the Site to the satisfaction of Owner. Contractor shall complete the items listed on the Owner's Punch List, and shall sign and return the List to the Owner. Contractor shall maintain a set of drawings during the job, on which changes shall be noted in red ink. A full set of redlined drawings (As-Builts) are to be given to the Designer at Job completion and submit "construction work complete memo" to Construction Engineer.

#### 01 8000 TRUCKS & MILEAGE

Contractor shall provide transportation for their own personnel.

#### 01 8300 TRAVEL TIME & PER DIEM

Contractor shall provide room and board for their own personnel, and reasonable time for traveling to & from job site.

#### 01 9200 TAXES

Contractor shall pay sales and/or use tax on materials and taxable services.

#### Contractor s

#### 02 1000 SITE PREPARATION

Contractor is to mobilize within 7 calendar days of the Owner issuing a 'START' document. Contractor will immediately report to Designer if any environmental considerations arise. Site shall be scraped to a depth of 3" minimum to remove vegetative matter, and scrapings shall be stockpiled on site. Excess material to be disposed of in accordance with RFQ.

#### 02 1100 ROAD IMPROVEMENT & CONSTRUCTION

Contractor shall furnish materials for, and install, a twelve foot (12') wide gravel roadway from the road access to the work area, for truck and crane access to site. Base course shall be 6" deep, 3"+ crushed rock, topped with 3" deep, 1½" crushed rock, topped with 3" deep MN Class 5 Aggregate, (3/4" minus with binder) or Driveway Mix. Contractor shall furnish & install culverts as necessary to prevent ponding or washing—out from normal surface runoff. Contractor shall obtain city, county, state and/or federal approvals for road approach and culvert work within or adjacent to right—of ways. Road shall be graded smooth, and edges dressed, at job completion.

#### 02 1500 TREE REMOVAL

Contractor shall furnish all labor, supervision, supplies, tools, equipment and other means necessary for performing and completing the work shown in the drawings. The contractor shall take special care so as not to damage any utility lines in the process of cutting and removing the tree. The contractor shall maintain proper barricades and watchpersons to guide traffic during the cutting and removal of the tree if required. The contractor shall be responsible for removing branches, foliage, trunk, roots, etc., from the construction site as soon as the tree has been cut. If any damaged occurs during the removal of a tree, the contractor shall replace the damaged portions at his/her own expense.

Stump removal shall include disposal of vegetative matter in accordance with RFQ and stump voids backfilled/compacted with adequate soils.

#### 02 2000 FARTHWORK & FXCAVATION

Excavation material shall be used for surface grading as necessary; excess to be stockpiled on site. Excess material to be disposed of in accordance with RFQ. For dewatering excavated areas, contractor shall utilize sock or sediment filter for filtering of water discharge.

#### 02 5000 PAVING & SURFACING

Gravel paving shall be as described in 02 1100.

#### 02 7800 POWER TO SITE

Contractor shall coordinate the electrical service to the building with the Utility Provider. Conduits shall include pull strings. Underground conduits shall be 2-1/2" Schedule 40 PVC. (schedule 80 PVC under roads and drives) Cable to be 3/0 THWN CU. Trenches shall be backfilled in a timely fashion, using a compactor, and including two (2) detectable ribbons; one each at 3" and 15" above conduit. Service shall be 200 amp, single phase, 120/240 volt. Service type shall be "General Time-Of-Dav" if available, and meter base shall be approved by utility provider.

Imme—OT—Day if available, and meter base shall be approved by utility provider. Contractor to provide and install expansion joint sleeve connections to prevent differential movement at utility connections.

#### 02 7900 TELCO TO SITE

Contractor shall provide 2" SDR-11 HDPE conduit for fiber conduit as noted on Drawings when directional boring is utilized. Contractor shall provide 2" schedule 40 PVC conduit and 2" schedule 80 PVC conduit under roadways with large—sweep elbows for fiber conduit as noted on Drawings when hand trenched. Trenches shall be as in 02 7800.

Contractor to provide and install handholes as noted in the Drawings. Additional handholes shall be provided and installed a maximum of 500 feet on center; at 90° bends if directional boring; and every third bend if hand trenched. Handholes size per Drawings and traffic—rated in roadways.

Contractor to provide and install Carlon expansion joint connections at cabinets/shelter location per manufacturer's specifications and recommendations.

#### 02 8000 SITE IMPROVEMENTS

Areas bounded by fence and adjacent to Cabinet Slab shall receive polyethylene geotextile, 200 mesh woven, topped with 3" deep 3/4" to 1 1/2" clean rock (no fines), raked smooth.

#### 02 8001 FENCING

All fence materials and fittings shall be galvanized steel. Fence shall be 6'-0" high x 9 ga. X 2" chain link fabric, w/ 7 ga. bottom tension wire. Corner and Gate posts shall be 2 7/8" 0.D. sch 40 steel pipe, driven 60" below grade. Line posts shall be 2 3/8" 0.D. sch 40 steel pipe. Top Rails shall be 1 5/8" 0.D. steel pipe. Gate frames shall be 1 5/8" 0.D. welded pipe. Fence top shall be three (3) strands barbed wire to 7'-0" above grade, canted outward. Bracing shall be 3/8" truss rods and 1 5/8" 0.D. pipe mid-rails at corners. Gate latch shall be commercial grade, "Cargo" or equal. Fabric shall extend to within 1" of finish grade. Fence enclosures shall be completed within 7 days of tower erecting and Contractor shall provide for temporary security fence at base of Tower. Existing fences shall be protected against damage during this work, and any damage that may occur shall be repaired or replaced to equal existing pre-construction condition.

#### 02 8500 IRRIGATION SYSTEMS

N/A

#### 02 9000 LANDSCAPING

N/A

#### <u>CONCRETE</u>

#### 03 1000 CONCRETE FORMWORK

Concrete forms shall be dimensional lumber, modular, or steel.

#### 03 8000 TOWER FOUNDATION

Contractor shall arrange for delivery of anchors, and shall furnish and install materials per Tower Manufacturer Plans. Tower foundation concrete and reinforcing to be per tower manufacturer's specification. Contractor shall comply with the Owner's Standard CONSTRUCTION SPECIFICATIONS MINIMUM CONCRETE STANDARDS.

#### 03 8001 CATHODIC PROTECTION

N/A

#### 03 9000 EQUIPMENT CABINETS/GENERATOR FOUNDATION

Contractor shall furnish & install materials for Equipment Cabinets/Generator foundation. Concrete shall be 6%  $\pm1\%$  air entrained, and 4,000 psi at 28 days. All reinforcing steel is to be Grade 60 (ASTM 615). Anchor bolts are furnished by Contractor. Contractor shall comply with the Owner's Standard CONSTRUCTION SPECIFICATIONS MINIMUM CONCRETE STANDARDS.

#### MASONRY

N/A

#### **METALS**

05 0000 METALS

Contractor will furnish and install steel shapes and fabricated steel items not specifically furnished by Owner, and install Owner—furnished materials. Fabrication and erection of steel items per AISC standards. Welding shall conform to AWS standards. Fabrications shall be shop welded and galvanized before delivery to site unless noted otherwise.

Steel shapes shall meet ASTM A36 and steel pipe ASTM A53 Grade B. Steel shapes and fabrications shall be hot-dip galvanized per ASTM A123 with minimum coating thickness Grade 55 (2.2 mil). Bolts shall meet ASTM F3125 and U-bolts SAE J429 Grade 5 minimum. Bolts and hardware to be hot-dip galvanized per ASTM A153. Field repair of galvanized coatings shall be per ASTM A780.

#### WOOD & PLASTICS

N/A

#### THERMAL & MOISTURE

N/A

#### DOORS AND HARDWARE

N/A

#### FINISHES

#### 09 9000 PAINTING

Monopole tower to be Sherwin Williams SW 7551 "Greek Villa" to match existing building color and will be painted by tower manufacturer.

Antennas, Triplexers, and Non-Galvanized Metals (as referenced within the drawings), excluding identification tags/labels, are to be cleaned in accordance with SSPC SP-1 Solvent cleaning, scarify lightly with steel wool to break gloss. Primer: (1) coat Sherwin Williams Pro-Cryl Primer. Finish: (1) coat Sherwin Williams Sher-Cryl HPA. Finish coat shall be a solid color, Sherwin Williams SW 7551 "Greek Villa".

Coax Cables, Hybrid Cables and Flexible Non-Metallics (exposed and visible by public) to be solvent wiped and prepared to manufacturer's recommendations. Primer: Two (2) coats XIM Advanced Technology UMA bonding primer/sealer. Finish: Two (2) coats Sherwin Williams Sher-Cryl HPA acrylic coating. Finish coat shall be a solid color, Sherwin Williams SW 7551 "Greek Villa".

Contractor shall touch-up construction related scrapes & scratches.

#### SPECIAL CONSTRUCTION

13 1260 CABLE BRIDGE, CANOPY, & ICE SHIELDS

Contractor shall furnish & install materials for the Cable Bridge as indicated on the drawings and Verizon Wireless Standard Details.

#### 13 1400 ANTENNA INSTALL

Contractor shall install Owner's antennas and feed lines during erecting. Contractor shall test and certify feed lines per current VZW standards.

#### 13 3423 TRANSPORT AND SET EQUIPMENT CABINETS/GENERATOR

Contractor shall provide crane(s) and/or truck for transporting, setting and erecting Equipment Cabinets/Generator per RFQ. Contractor shall install items shipped loose with the Equipment Cabinets/Generator.

#### 13 3613 TRANSPORT AND ERECT TOWER/ANTENNA MOUNTS

Contractor shall schedule delivery of Owner-furnished Tower, and provide cranes for unloading and erecting. Contractor shall ensure the existence of a 3/8" cable safety climb (DBI/Sala or equal) on the Tower.

#### MECHANICAL

15 4000 PLUMBING

N/A

#### 15 5000 HVAC

N/A

#### ELECTRIC

16 5000 LIGHTING AND ELECTRICAL

Contractor shall provide labor and materials as necessary to complete the work shown on Drawings including items shipped loose with the Equipment Cabinets/Generator assembly.

#### 16 6000 GROUNDING

Contractor shall make themselves familiar with and follow the current GROUNDING STANDARDS of VERIZON WIRELESS. Contractor shall perform work as shown on Grounding Plans. Any site—specific grounding issues not covered by the GROUNDING STANDARD are to be addressed by the Contractor to the Owner.

#### OWNER-FURNISHED EQUIPMENT & FEES

GENERATOR
MONOPOLE TOWER
ANTENNA FRAMES
CABINETS
COAX AND/OR CABLES
ANTENNAS & DOWNTILT BRACKETS
GPS & GPS MOUNTING
BUILDING PERMIT FEES
MATERIALS TESTING FEES
SPECIAL INSPECTIONS FEES

#### CONTRACTOR-FURNISHED EQUIPMENT

POWER TO SITE TELCO TO SITE CABLE BRIDGE & ICE SHIELDS GROUNDING MATERIALS FENCING

#### CONNECTORS, BOOTS, & RELATED HARDWARE

SCOPE OF WORK:

CONTRACTOR SHALL PROVIDE MATERIALS, LABOR, TOOLS, TRANSPORTATION, SUPERVISION, ETC. TO FULLY EXECUTE WORK. WORK REQUIREMENTS ARE DETAILED ON THE DRAWINGS AND SPECIFICATIONS AND SHALL INCLUDE. BUT NOT BE LIMITED TO. THE FOLLOWING

SITE PREPARATION
SITE WORK & ROAD CONSTRUCTION
CABINET SLAB, GENERATOR, & TOWER FOUNDATIONS
SET EQUIPMENT CABINETS, SET GENERATOR & ERECT TOWER
ROUTING OF GROUND, POWER, FIBER & ALARM

SITE GROUNDING ELECTRICAL & TELEPHONE SERVICES

INSTALL ANTENNAS & CABLES
CABLE BRIDGE & ICE SHIELDS
GRAVEL SURFACING & FENCING

Contractor to compare drawings against Owner's "Request for Quote", (RFQ). If discrepancies arise, Contractor shall verify with Owner that the RFQ supersedes the

#### **EQUIPMENT**

The Designer/E.O.R. makes no warranty, expressed or implied, on the structural adequacy for proprietary brackets, clips & parts from a manufacturer.

## DESIGN

9973 VALLEY VIEW RD. EDEN PRAIRIE, MN 55344 (952) 903-9299 WWW.DESIGN1EP.COM

## | verizon<sup>/</sup>

10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438 (952) 946-4700

PROJECT 17326166 LOC. CODE: 265804

### MIN TOFFEE

CEDAR AVENUE APPLE VALLEY, MN 55124

SHEET CONTENTS: OUTLINE SPECIFICATIONS

DRAWN BY:	CJW
CHECKED BY:	BMS
REV. A	10-15-24
REV. B	11-12-24
REV. C	01-13-25

A-5

#### **GENERAL GROUNDING NOTES:**

An external buried ground ring (Lead 1) shall be established around the equipment cabinets and tower foundations. Lead 1 shall be kept 24" from foundations: if foundations are less than 48" apart, keep Lead 1 centered between them. If the tower base is over 20'-0" from the equipment cabinets, a separate Lead 1 shall be established around each foundation, and the two Lead 1s shall be bonded with two parallel leads at least 6 feet apart horizontally. Connections between the two Lead 1s shall he bi-directional

All subgrade connections shall be by exothermic weld, brazed weld, or gas-tight UL467-listed compression fittings pre-filled with anti-oxidant compound. Subgrade connections shall not be 'cold galvanize' coated.

Lead 1 shall be #2 solid bare tin-clad (SBTC) copper wire buried at local frost depth. Lead 1 bends shall be minimum 24" radius. 'Whip' lead bends may be of 12" radius.

Ground rods shall be galvanized steel, 5/8"Ø, spaced twenty feet apart, or as shown. Rods shall be kept min. 24 inches from foundations. Ground rods are required to be installed at their full specified length. Depth shall be as shown in Detail 11.1 in the Verizon Wireless Standard Detail Booklet.

#### SPECIAL CONSIDERATIONS FOR GROUND RODS:

When ground rods are not specified to be backfilled w/ Bentonite Slurry: If boulders, bedrock, or other obstructions prevent driving of around rods, the Contractor will need to have drilling equipment bore a hole for ground rod placement. Hole to be backfilled w/ Bentonite Slurry.

When specified with slurried Bentonite encasement, drilling equipment will be need to be used to be bore a hole for ground rod placement. Slurry shall be made from pelletized material ("Grounding Gravel"); powdered Bentonite is not allowed. If boulders, bedrock, or other obstructions are found, Contractor shall drill to the specified depth and provide Bentonite encasements

Above-grade connections shall be by lugs  $\mathbf{w}/$   $\mathbf{two-hole}$  tongues unless noted otherwise, joined to solid leads by welding (T&B 54856BE "BROWN"), self-threading (RECOGNIZED, EM 2522DH.75.312), or 10,000psi crimping (BURNDY YA3C 2TC 14E2). Surfaces that are galvanized or coated shall have coating(s) removed prior to bolting. Bolts shall be stainless steel with flat washers on each side of the connection and a lock washer beneath the fastening nut. Star-tooth washers shall be used between lug & dissimilar metal (copper-to-steel, etc) but are not required between tin-clad CU lugs & tin-clad CU bus bars. Lug tongues shall be coated with anti-oxidant compound, and excess compound wiped clean after bolting. The connection shall then be coated with cold-galvanizing compound, or with color-matching paint.

Ground bars exposed to weather shall be tin-clad copper, and shall be clean of any oxidation prior to lug bolting.

Galvanized items shall have zinc removed within 1" of weld area, and below lug surface contact area. After welding or bolting, the joint shall be coated with cold galvanizing compound.

#### Ground Bar leads

Ground bars are isolated electrically from tower bottoms and equipment cabinets by their standoff mounts. Leads from each ground bar to the ground ring shall be a pair of #2 SBTC, each connected to Lead 1 bi-directionally with #2 SBTC 'jumpers'. Pairs of #2 SBTC may be required between ground bars. Leads shall be routed to ground bars as follows:

- \* The Main Ground Bar (MGB), typically mounted adjacent to the ILC (location varies).
- \* The Port Ground Bars (PGB), mounted inside and outside on the equipment shelter walls beneath the transmission line port. Note: Transmission line grounds also attach to the PGBs.
- \* The Tower Ground Bar (TGB) mounted at the base of the tower. Note: Transmission line grounds also attach to the TGBs.

NOTE: Contractor shall confirm that TGBs exist at 75-foot vertical intervals on any guyed or self-support tower, and that transmission lines are grounded to each TGB. Only the bottom-most TGB is isolated from the tower steel frame; upper TGBs may use the tower steel frame as common ground, requiring no copper leads between TGBs.

#### #2 SBTC Whip leads

"Whip" leads shall connect the buried external ground ring to the

Three whips to flanges on the monopole base, at least 90° apart. If none are provided, attach to the baseplate or consult

#### Self-Support Towers:

\* Two whips to flange(s) on each tower leg base. If none are provided, attach to the baseplate or consult tower

#### Guyed Towers:

- Two whips to flange(s) on the tower base. If none are provided, attach to the baseplate or consult tower manufacturer. Establish a Lead 1 within the fence enclosure of each guy anchor, at least 40 foot perimeter and having 4 ground rods.
- #2 SBTC leads shall extend up, and be clamped (bronze clamshell or equal), to any two guy wires. NEVER weld leads to the guy wires. The lead to the guy anchor 'hand' plate may be

Metallic fence within 25 feet of tower Lead 1, or within 6 feet of shelter lead 1, shall have whip leads as follows:

- Each corner post.
- Each pair of gate posts.
- Any line post over 20'-0" from a grounded post.
- Each gate leaf to its respective gatepost using braided strap (3/4", tin-clad copper w/ lug ends).
- Fences around guy anchors shall be grounded in similar

NEVER WELD to any fuel enclosure. NEVER penetrate the fuel containment. Metal tanks shall have one whip lead attached. Use an approved clamp or two-hole lug on an available flange.

Equipment Shelter/Platform and Other General Requirements (including but not limited to):

- Extend new Lead 21B up to shelter halo, remaking two-way connections as needed. Generator-equipped shelters have 6 such connections. Connections within the shelter shall be by compression; NEVER weld inside the shelter.
- Each vertical support pipe of the exterior cable bridge. Bridge end shall be kept at least 6" from the tower structure. The cable bridge shall be jumpered to the vertical support pipes with #2 SBTC at each vertical support pipe.
- Opposite corners of the steel equipment platform.
- Opposite corners of the roof shield over the equipment shelter.
- Each HVAC unit shield, if separate (may be 'jumpered' to main roof shield).
- · Each HVAC package unit.
- · Commercial electric meter box.
- Generator receptacle, if present.
- Steel building skid, if shelter is metal frame. Each air intake or exhaust fan vent louver.
- Each generator vent hood or louver.
- Generator exhaust stack, external,
- Opposite corners of generator support frame, if separate from shelter. Generator fuel tank, if separate from generator unit.
- Host building rain gutter, downspouts, and roof flashings within 25 feet.
- Telco MPOP (Main Point of Presence), if external to equipment shelter.
- Within cable vaults, one each to the ladder and to the

Note: The door frame is connected to the interior ground halo, and need no separate connection to the external ground ring.

#### Inspection & Testing

Test lead #1 and ground rods after installation but before backfilling or connecting to any other grounding, using the 3-point fall of potential method. Contractor to notify Verizon Wireless senior construction engineer at least 48 hours prior to testing. Document installation and test results with photographs.

#### General Contractor Notes:

- Contractor to coordinate public & private utility locates prior to construction start. Notify the Designer & VZW Construction Engineer immediately of any utility line issues.
- General contractor is responsible for confirming that the installation of all grounding meets the Verizon Network Standard Number "NSTD46" document titled "Cell Site and Microwave Radio Station Protection - Engineering Considerations".
- Contractor shall ensure that each whip is routed to lead 1 by the shortest path, and bends shall not be less than 12" radius.
- Primary Electrical Depth and specification by Power Utility
- Secondary Electrical -
- Install conduit 32" below grade with two (2) detectable ribbons
- Install conduit 36" below grade with pull string, traceable wire and two (2) detectable ribbons.

#### SYMBOL AND NOTE LEGEND

--(1)-- #2 SBTC AROUND CABINET SLAB, TOWER, OR GUY ANCHOR 5/8" X 10'-0" GALVANIZED STEEL GROUND ROD

TEST WELL PREFERRED LOCATION

---- #2 SBTC 'WHIP' LEAD

(2) #2 SBTC FROM MGB, PGB, OR TGB TO LEAD 1

6 AC

(21B) BC BUILDING CORNER

6 RO **BOLLARD** 

CABLE BRIDGE SUPPORT POST

4 EL ELECTRICAL SERVICE GROUND

6 EM COMMERCIAL ELECTRICAL METER

6 FAN GUY ANCHOR PLATE FP FENCE POST

6 90) GEN GENERATOR

0 GP GATE POST, 3/4" BRAID STRAP TO LEAF

6

6 GUY WIRE, MECH. CLAMP ONLY - NO WELDS GUY

6

6 HB OUTSIDE OF HOFFMAN BOX

6 INTEGRATED LOAD CENTER

(5) MGB MAIN GROUND BAR

6 MU GENERATOR MUFFLER

(5) PGB PORT GROUND BAR ROOF SHIELD

6 FOUNDATION REINFORCING

6 6 SB STEEL BEAM

6 SP STEEL POST

6 STP STEEL PLATFORM

6 TEL HOFFMAN BOX

(5) TGR TOWER GROUND BAR

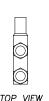
6 TWR TOWER BASE

RS

6 VP DIESEL FUEL VENT PIPE

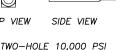
#### Note:

Contractor to provide #2 solid bare tin-clad (SBTC) copper wire lead from #1 ground ring to air conditioner & ice shield if provided by VZW.



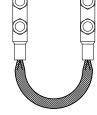
NOTE: REMOVE GALVANIZING FROM FENCE POSTS IN AREAS LUGS WILL BE INSTALLED LIGHTLY COAT THE UNDERSIDE OF THE LUGS W/ ANTI-OX COMPOUND REFORE ATTACHING TO POSTS.





COMPRESSION FITTING

UL 9498 LISTED



**LEAD IDENTIFICATION & DESCRIPTION:** 

MAIN AC PANEL NEUTRAL BUS TO (2) GROUND

RING, EXTERNAL BURIED w/ RODS

RODS, ISOLATED FROM LEAD #1

AC PANEL TO WATER METER
EXT WATER TO INT WATER PIPES

2 DEEP ANODE (TO IMPROVE OHMS)

1A RING, CONCRETE ENCASED

5 RING TO GROUND BAR

RING TO RIDG STI FRAME

RING TO EXT MTI OBJECT

14 MGB/FGB TO BLDG STL FRAME

16A ECPGB TO CABLE ENTRY RACK

17B MGB/FGB TO F-O SPLICE SHELF

MGB/FGB TO BRANCH AC PNI

19 IFAD 18 TO OTHER FGRs <6'

20B GWB TO AC DISTR PNI

21 MGB/FGB TO INT HALO

21A INTERIOR 'GREEN' HALO

21B INT HALO TO EXT RING

21C INT HALO TO EQUIPMENT MTI

18 LOWEST MGB/FGB TO HIGHEST FGB

20A NEAREST GRND TO DISCONNECT PNI

ROOF TOWER RING TO ROOF GRND

24 ECPGB TO EACH PROTECTOR ASSEMBLY

23 MGB/FGB TO ECPGB, SAME FLOOR

23A MGR/FGR TO CXR-HE LINE PROT

24A LOWER PROT ASSY TO UPPER

17 MGB TO CABLE SHIELDING

17A ECPGB TO CABLE SHIELDING

14C MGB/FGB TO ROOF/WALL MTL PNL

15 MGB/FGB TO FGB-HE SAME FLOOR

DEEP ANODE TO MGB

10 INT WATER PIPE TO MGB

11-12 NOT USED

16 NOT LISED

13 AC PANEL TO MGB

GATE BONDED TO FENCE POST (2) TWO-HOLE 10,000 PSI COMPRESSION FITTING
W/ 3/4" BRAIDED TINNED COPPER JUMPER STRAP

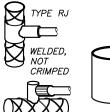
HYTAP CONNECTOR 10,000 PSI COMPRESSION FITTING FITTING MUST BE UL467 LISTED ACCEPTABLE FOR DIRECT BURIAL

WELD: THOMAS & BETTS, 54856BE "BROWN33

CRIMP: BURNDY, YA3C 2TC 14E2, 10,000 PSI

SCREW: RECOGNIZED, EM 2522DH.75.312





TYPE RR



ROUND SURFACE



TYPE VS FLAT SURFACE











**EXOTHERMIC WELD DETAILS** 

#31 TO PCU FRAME #6 I-STR #31 TO DSU FRAME #6 I-STR #31 TO PDU FRAME #6 I-STR 37 MGB/FGB TO BTTY RETURN NSTD33-14.5 37A MGB/FGB TO RTN TERM CARR SUPP #6 I-STR 38 FGB TO PDU GB #750MCM I-STR #2/0 I-STF 38A FGB TO PDU GB CARRIER SUPPLY 39 DC BUS DUCT TO NEXT SECTION #6 I-STF 40 DC BUS DUCT TO MGB/FGB #6 I-STR 41A MGB/FGB TO #58 #2/0 I-STR 42-44 NOT USED MAIN AC PNL TO BRANCH AC PNL NSTD33-11 BRANCH AC PNL TO DED OUTLET NSTD33-1 47 FGB TO INTEG FRM #2 I-STR 48 LEAD #31 TO INTEG FRM #6 I-STR INTEG FRM TO EQUIP SHELF BY FASTENERS PDU BTTY RET TO #51 #2/0 I-ST #50 TO TRANS FRM ISO DC PWR #6 I-STR 52 TRANS FRM FLISE TO FRM OR BAR #8 I-STR 53A MGB/FGB TO PDF/BDFB NSTD33-22 54 MGB/FGB TO STATIC DEVICES #6 I-STR 55 MGB/FGB TO CABLE AT ENTRY 6 I-STR 56 MGB/FGB TO AC PWR RADIO XMTTR #6 I-STR #2/0 I-STR 57A MGB/FGB TO CBL GRID/RUNWAY #2 I-STR 58A #41A TO AISLE FRAME 59A #58A TO EACH SGL FRAME GRND #6 I-STR 60-89 NOT USED 90 GENERATOR FRAME TO EXT RING #2 SBTC

#2 SBTC

NFPA 780

(2) #2 SBTC

(2) #2 SBTC

#2/0 I-STR

#6 I-STR

#6 I-STR

25 RING TO NEAREST LIGHTNING ROD

RING TO TOWER RING

RING TO SHELTER RING

27

28

32

3.3

36

51

#2 SBTC

#2 SBTC

#2 SRTC

#2 SBTC

NSTD33-9

NEC 250.66 NSTD33-9

NSTD33-9

NSTD33-9

#2/0 I-STR

#1/0 I-STR

#2/0 I-STR

#1/0 I-STR

#6 I-STR

#6 I-STR

#1 I-STR

#2/0 I-STR

#2/0 I-STR

<u>#6 I-</u>STR

#6 I-STR

#2 I-STR

#2 I-STR

#2 SBTC

#6 I-STR

NFPA 780

#1 I-STR

#6 I\_STR

#6 I-STR

#6 I-STR

RURNDY

**RFI DFN** 

1/2"Ø I.D.

**TUBULAR** 

RRAIDED

STRAP

YA6C 2TC 14

CRIMP LUG

NEC 250.66

ROD OR PIPE

NFC 250.66

(2) #2 SBTC

26 LGHTNG ROD SYS TO NEARBY MTL

BRANCH AC PNL TO BTTY CHG FRM
BRANCH AC PNL TO OUTLETS

MGB/FGB TO PWR. BTTY FRAMES

#31 TO BATTERY CHARGER FRAME

#31 TO BATTERY RACK FRAME



9973 VALLEY VIEW RD. EDEN PRAIRIE, MN 55344 (952) 903-9299 WWW.DESIGN1EP.COM

## verizon<sup>v</sup>

10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438 (952) 946-4700

**PROJECT** 17326166 LOC. CODE: 265804

> MIN **TOFFEE**

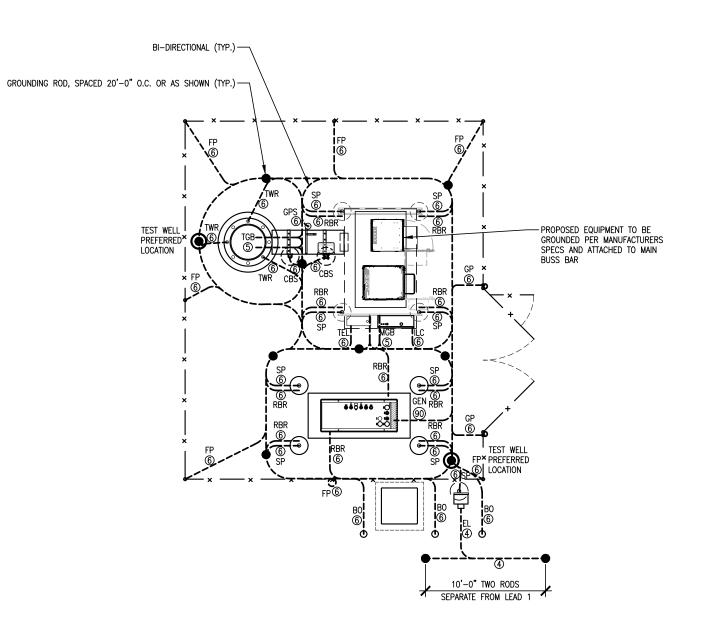
CEDAR AVENUE APPLE VALLEY, MN 55124

SHEET CONTENTS: GROUNDING NOTES

DRAWN BY:	CJW
CHECKED BY:	BMS
REV. A	10-15-24
REV. B	11-12-24
REV. C	01-13-25

G-1

GROUNDING DETAIL INDEX				
DETAIL	DETAIL DESCRIPTION			
SLAB	SLAB ON GRADE GROUNDING			
11.1	TEST WELL DETAIL, GROUND RING & ROD DETAIL			
11.3	REBAR GROUNDING DETAIL			
11.4	CONDUIT DETAIL			
11.5	TYPICAL GROUNDING CABLE BRIDGE DETAIL			
11.6	TYPICAL TOWER GROUNDING DETAIL			





9973 VALLEY VIEW RD. EDEN PRAIRIE, MN 55344 (952) 903-9299 WWW.DESIGN1EP.COM

## verizon/

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CEDAR AVENUE APPLE VALLEY, MN 55124

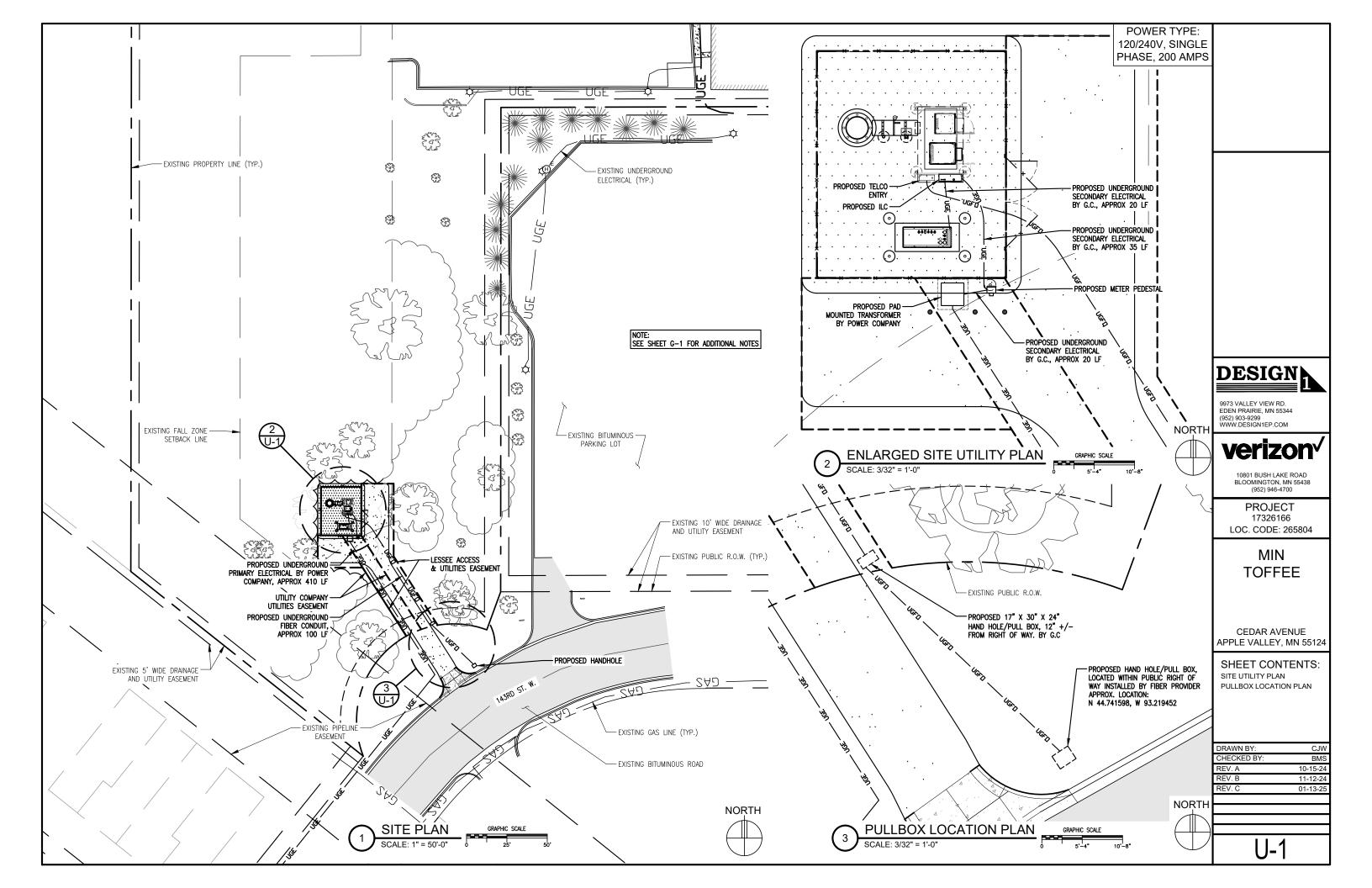
SHEET CONTENTS:

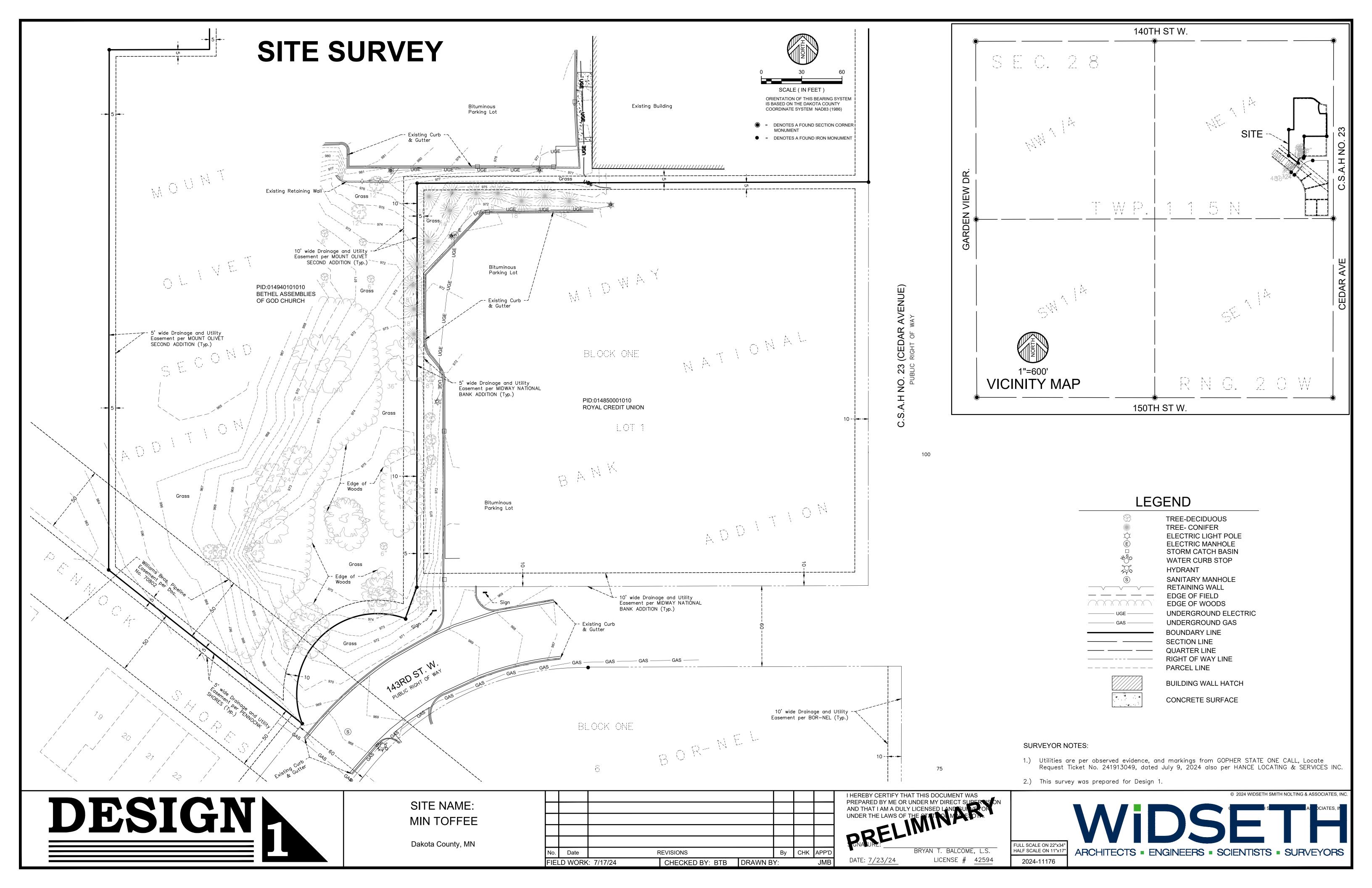
GROUNDING PLAN GROUNDING DETAIL INDEX

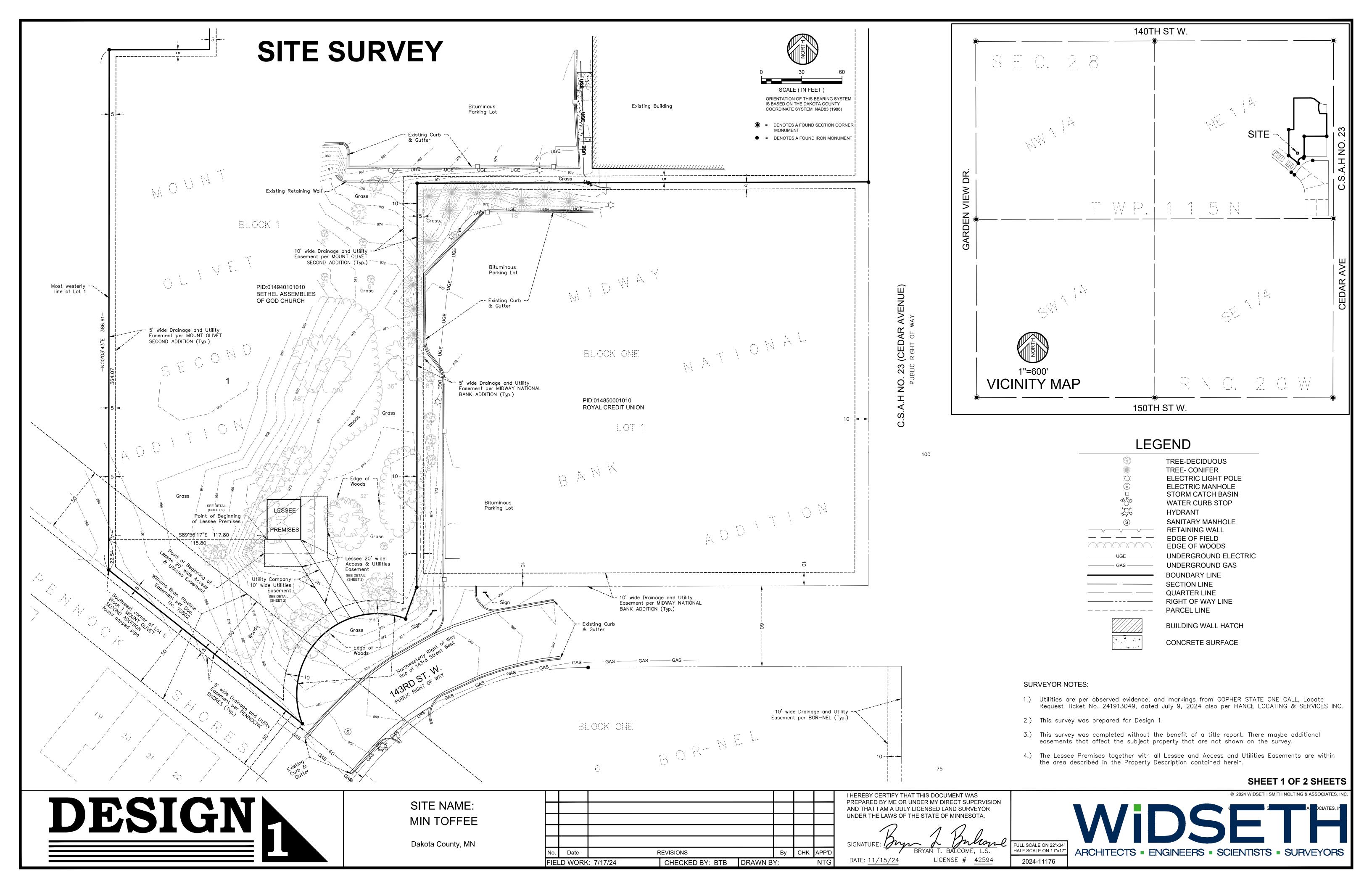
DRAWN BY:	CJW
CHECKED BY:	BMS
REV. A	10-15-24
REV. B	11-12-24
REV. C	01-13-25

NORTH









# SITE SURVEY

#### LESSEE PREMISES DESCRIPTION:

That part of Lot 1, Block 1, MOUNT OLIVET SECOND ADDITION, according to the recorded plat thereof, Dakota County, Minnesota, described as follows:

Commencing at the southwest corner of said Lot 1; thence North 0 degrees 03 minutes 43 seconds East along the most westerly line of said Lot 1, a distance of 22.54 feet; thence South 89 degrees 56 minutes 17 seconds East, a distance of 117.80 feet to the Point of Beginning of the premises to be described; thence South 90 degrees 00 minutes 00 seconds East, a distance of 25.00 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 30.00 feet; thence North 90 degrees 00 minutes 00 seconds West, a distance of 25.00 feet; thence South 0 degrees 00 minutes 00 seconds West, a distance of 30.00 feet to the Point of Beginning.

#### LESSEE ACCESS AND UTILITIES EASEMENT DESCRIPTION:

A 20.00 foot wide easement for ingress, egress and utility purposes over, under and across Lot 1, Block 1, MOUNT OLIVET SECOND ADDITION, according to the recorded plat thereof, Dakota County, Minnesota, the centerline of said easement is described as follows:

Commencing at the southwest corner of said Lot 1; thence North 0 degrees 03 minutes 43 seconds East along the most westerly line of said Lot 1, a distance of 22.54 feet; thence South 89 degrees 56 minutes 17 seconds East, a distance of 115.80 feet; thence South 0 degrees 00 minutes 00 seconds West, a distance of 10.00 feet to the Point of Beginning of the centerline to be described; thence South 90 degrees 00 minutes 00 seconds East, a distance of 33.21 feet to a point hereinafter referred to as Point "A"; thence continue South 90 degrees 00 minutes 00 seconds East, a distance of 3.79 feet; thence North 0 degrees 00 minutes 00 seconds East, a distance of 42.00 feet and said centerline there terminating.

#### TOGETHER WITH

A 20.00 foot wide easement for ingress, egress and utility purposes over, under and across said Lot 1, the centerline of said easement is described as follows:

Beginning at the previously described Point "A"; thence South 32 degrees 35 minutes 30 seconds East, a distance of 57.30 feet to the northwesterly right of way line of 143rd Street West and said centerline there terminating.

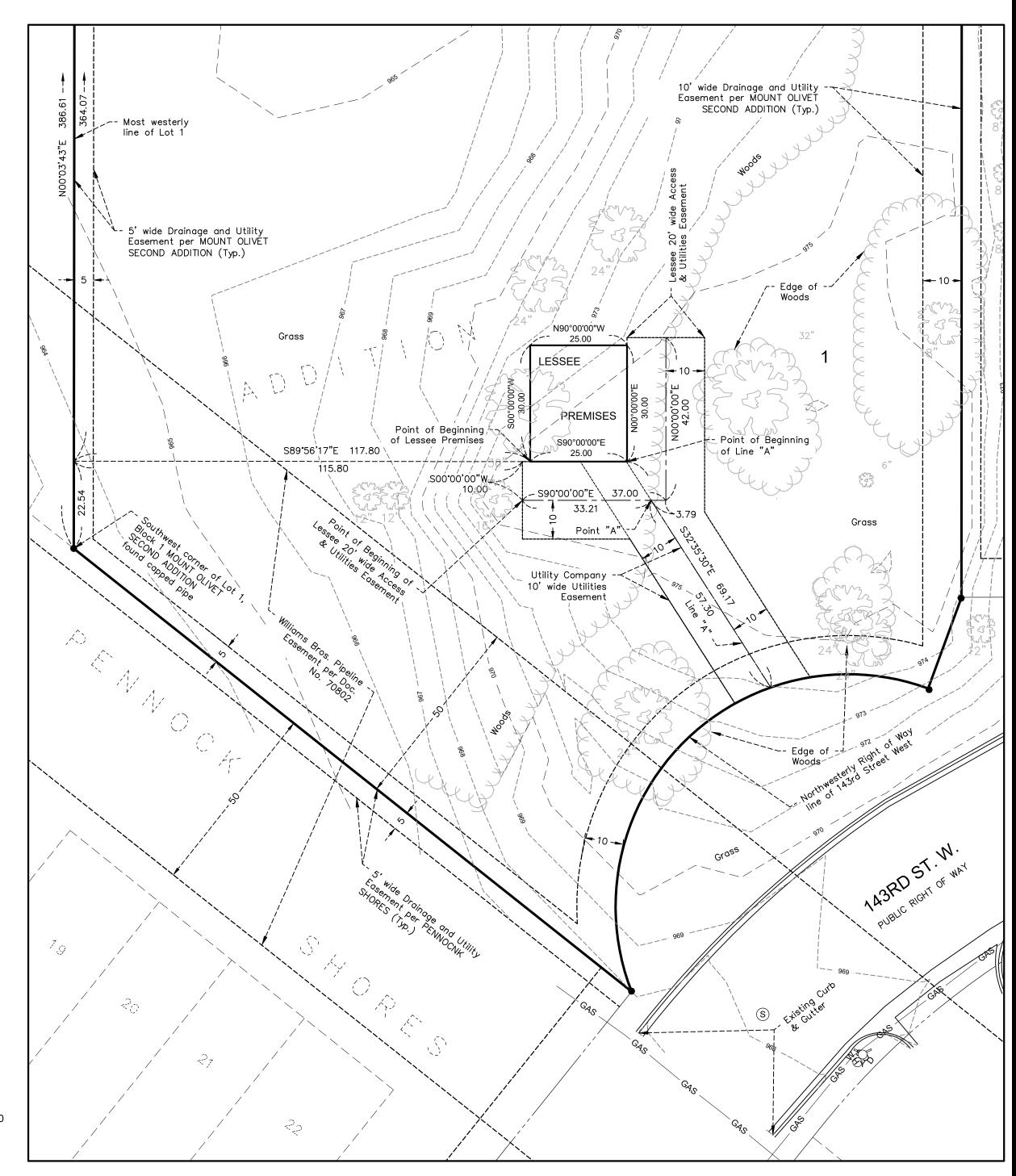
The sidelines of said easement shall be shortened or lengthened to terminate at said northwesterly right of way line of 143rd Street West.

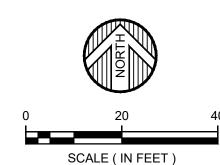
### UTILITY COMPANY UTILITIES EASEMENT DESCRIPTION:

A 10.00 foot wide easement for utility purposes over, under and across Lot 1, Block 1, MOUNT OLIVET SECOND ADDITION, according to the recorded plat thereof, Dakota County, Minnesota, lying between 0.00 feet and 10.00 feet right (southwesterly) of the following described Line "A".

Commencing at the southwest corner of said Lot 1; thence North 0 degrees 03 minutes 43 seconds East along the most westerly line of said Lot 1, a distance of 22.54 feet; thence South 89 degrees 56 minutes 17 seconds East, a distance of 117.80 feet; thence South 90 degrees 00 minutes 00 seconds East, a distance of 25.00 feet to the Point of Beginning of said Line "A"; thence South 32 degrees 35 minutes 30 seconds East, a distance of 69.17 feet to the northwesterly right of way line of 143rd Street West and said Line "A" there terminating.

The sideline of said easement shall be shortened or lengthened to terminate at said northwesterly right of way line of 143rd Street West and at a line bearing North 90 degrees 00 minutes 00 seconds West from the Point of Beginning.





DETAIL

SHEET 2 OF 2 SHEETS

DESIGN |

SITE NAME: MIN TOFFEE

Dakota County, MN

No.	Date	REVISIONS			Ву	CHK	APP'D	
FIEL	D WORK	(: 7/17/24		CHECKED BY: BTB	DRAWN B	Y:		NTG

I HEREBY CERTIFY THAT THIS DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: Bry J Bulione
BRYAN T. BALCOME, L.S.

FULL SCALE ON 22"x34" HALF SCALE ON 11"x17" 2024-11176





January 15, 2025

Brian Schriener Design 1 of Eden Prairie 9973 Valley View Road Eden Prairie, MN 55344

RE: Proposed 86' Monopole for MIN TOFFEE, MN

Dear Mr. Schriener,

Upon receipt of order, we propose to design and supply the above-referenced monopole for an Basic Wind Speed of 109 mph without ice and 50 mph with 1.5" ice, Risk Category II, Sitespecific Exposure Category, and Topographic Category 1, in accordance with the Telecommunications Industry Association Standard ANSI/TIA-222-H.

When designed according to this standard, the wind pressures and steel strength capacities include several safety factors. Therefore, it is highly unlikely that the monopole will fail structurally in a wind event where the design wind speed is exceeded within the range of the built-in safety factors.

Should the wind speed increase beyond the capacity of the built-in safety factors, to the point of failure of one or more structural elements, the most likely location of the failure would be within the monopole shaft, above the base plate. Assuming that the wind pressure profile is similar to that used to design the monopole, the monopole will buckle at the location of the highest combined stress ratio within the monopole shaft. This is likely to result in the portion of the monopole above leaning over and remaining in a permanently deformed condition. *Please note that this letter only applies to the above-referenced monopole designed and manufactured by Sabre Industries.* This would effectively result in a fall radius less than or equal to 50% of the monopole height. **PROFESSIONAL ENGINEER** 

Sincerely,

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the Laws of the State of Minnesota.

Thomas T. Wilson, P.E. Design Engineer

Print Name THOMAS T. WILSON
Signature

Date 1/15/2025 License #60302



January 14, 2025

City of Apple Valley Community Development & Planning 7100 West 147th Street Apple Valley, MN 55124

Re:

Verizon Wireless Co-location Letter of Intent (Site Name: "MIN Toffee")

Site Location: 14201 Cedar Avenue, Apple Valley, MN 55124

Parcel ID: 01.494.0101.010

To Whom It May Concern:

Pursuant to §155.385.B.14.c of the City of Apple Valley Code of Ordinances, Verizon submits this Letter of Intent for commitment to shared use of this proposed tower, so long as there is no negative structural impact upon the tower, there is no disruption to the service provided, and reasonable business terms are agreeable.

Thank you for your consideration.

Sincerely,

Jeff Armour

Associate Director - Great Plains Network Real Estate and Outreach





**Public Works** 

TO: Sydnee Stroeing, Associate Planner

FROM: Evan Acosta, Assistant City Engineer

DATE: February 27, 2025

SUBJECT: Bethel Assemblies Church Tower CUP plans dated 1/13/2025

Sydnee,

The following are comments regarding the Bethel Assemblies Church Tower CUP Plans dated January 13, 2025. Please include these items as conditions to approval.

#### **General**

- 1. All work and infrastructure within public easements or right of way shall be to City standards.
- 2. Provide a narrative of how the buildings will be constructed and any impacts. The narrative shall include the following:
  - a. Shoring (if applicable)
  - b. Material Storage.
  - c. Haul routes to and from the site.
  - d. Phasing
- 3. No construction work shall begin prior to a preconstruction meeting conference with a Public works and a Building Inspections representative.
- 4. Provide a copy of the approval letter from the Department of Labor and Industry (DOLI), if applicable, prior to construction.
- 5. Public Work Department (952-953-2400) shall be notified a minimum of 48 hours for any required water main shut downs and/or connections.

#### **Permits**

- 6. Provide a copy of all executed permits prior to construction.
- 7. Department of Labor and Industry (DOLI) shall review private utilities.
- 8. A right of way permit will be required for all work within public easements or right of way.
- 9. A Natural Resource Management Permit (NRMP) will be required prior to any land disturbing activity commences.

#### Site

- 10. Show locations of proposed lighting fixtures for parking lots and site.
- 11. Final site plan to be approved by the City Engineer
- 12. The City will require the new driveway entrance to be a Non-Residential Driveway (Concrete Entrance). See City Detail plate STR-5.
  - The detail on sheet A-1 should be changed to reflect City Plate STR-5.
- 13. The City requires that sidewalk is extended from the existing driveway to the east of the proposed access to the west property line.
  - The sidewalk shall be 6' in width and built per city detail STR-35
  - STR-35 shall be shown on the plans
  - Proposed handholes shall be located outside of the sidewalk.
- 14. All driveways must be paved surface (concrete or asphalt).
  - The plans currently show a gravel driveway access.

#### **Landscape and Natural Resources**

- 15. Tree inventory is required for all affected trees located in work zone, and any replacement tree planting will need to follow the 15-10-5 diversity rule.
- 16. Final landscaping plan to be approved by Natural Resources Coordinator.

14301 Huthrie Ave. Opple Volley, MIV 55124 3-3-25

Planning Comminson City of apple Valley 7180 147th Starts apple Valley, MN55124 Dear Sie or Maderm:

The letter to the editor in the Dahotor County Inluine regarding the proposed 86 ft cell Jawe was interesting,

The amount of radiation emitted from whem is very minimal.

on one of the stadium's light pole. I can see it when the sun shines on it.

There hown't been any untald problems in and, our property values how increased acrosding to am tax bill.

Dincerely, Phyllis Deter PHYLLIS PETER

### **Breanna Vincent**

From: Richard Greenlee <

Sent:Tuesday, March 4, 2025 9:29 AMTo:Community DevelopmentSubject:wireless communication tower

You don't often get email from . Learn why this is important

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

To the planning commission,

I'm no expert but this looks like a bad idea. Why would someone want to put a communication tower in a residential area....There are schools and daycare centers that would be near the tower. There is lots of information available about RF exposure 24 hours a day 365 days a year. We would be putting our community at risk.

Sincerely Richard Greenlee

#### **Breanna Vincent**

From: Richard Greenlee

Sent:Tuesday, March 4, 2025 9:29 AMTo:Community DevelopmentSubject:Wireless Communication Tower

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CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

### Dear Planning Department,

My husband and I reside approximately 500 yards away from where the proposed communication tower is going to be located. I was shocked to hear that Bethel Assemblies of God Church is okay with RF Effects-Increased cancer risk, headaches,, sleep issues, genetic damage, changes to the reproductive system, memory deficits, and impacts to the nervous system especially when a daycare is so close to their church! Not to mention members of their own congregation and homeowners that live close by to the proposed area. They either are not aware of the side effects or they are extremely money hungry!

It should be brought to everyone's attention that the effects of radiation absorption are far more serious in children than adults because their brains and organ systems are still developing.

For our children's and grandchildren's sakes, please do not allow this tower to be located in the proposed area.

Thank You, Deborah Greenlee



**CONDITIONAL USE PERMIT** 

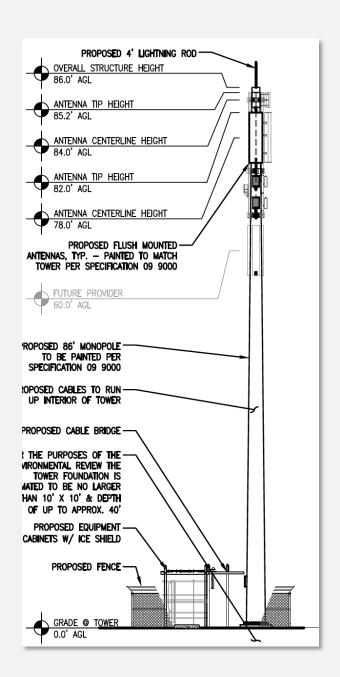
Site Name: MIN Toffee

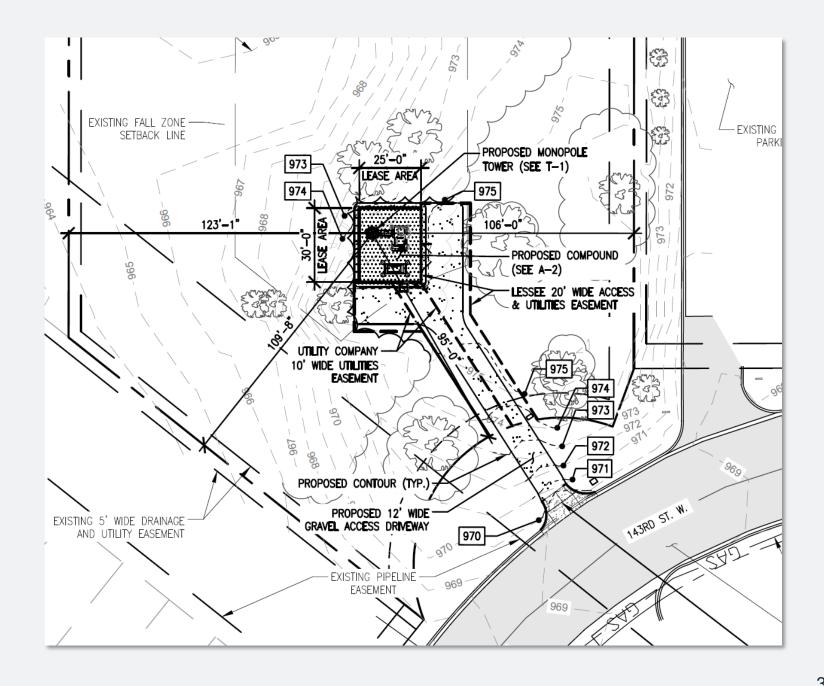


### Site Overview

- Located at 14201 Cedar Ave.
- Wooded area in southern end of parcel.
- 86' monopole with 4' lightning rod.
- Flush mounted antennas to reduce visibility.
- 25' x 30' ground area with opaque fencing and locked gate.
- Painted to match adjacent church building.
- 43' fall zone.
- Complies with all applicable setbacks.







### Initial Hearing Questions

- How many trees are being removed?
  - One 24" tree and brush will be removed.
- What other sites were considered?
  - There are no existing towers or buildings of sufficient height within the 0.5-mile colocation exclusion radius.
     Subsequently, there are no feasible alternatives to consider.
  - The available ACL on the Apple Valley High School football stadium tower is about 45' which does not satisfy the
    respective 78' and 84' ACLs required to achieve network objectives. It is also only 0.9 miles from the nearest existing site.
- Why was the tower site moved from 2017 CUP?
  - The original location was agreed to by the previous owner, Mount Olivet. The new location is to accommodate Bethel Rock's future development plans.
- Was Magellan Pipeline contacted for the tower site?
  - No, as shown in the land survey, the lease premises and access are not within the pipeline easement. Furthermore, existing gas lines are located on the south side of 143<sup>rd</sup> St.
- Construction access, how long will construction take?
  - Construction access will come from 143<sup>rd</sup> St except for underground electric which is installed from a transformer to the north.
  - Construction is a phased process including civil work, tower stacking, antenna installation, and utility installation. In total, the process will be approximately 6-weeks.
- Are there any other sites on the property where the tower could be located?
  - No, Bethel Rock's development plans restrict the entire parking lot. Other areas are too heavily wooded and existing location is setback compliant.

### FCC Compliance

- FCC limits and how are they measured?
  - The FCC regulates emissions.
  - See FCC Consumer Guide. Note this is an overview of the method but specific numbers have changed since the article was published in 2019.
  - FCC guidelines are based on recommendations from other federal health and safety agencies including the EPA, FDA, OSHA, National Institute for Occupational Safety & Health (NIOSH), Institute of Electric and Electronics Engineers (IEEE), and the National Council on Radiation Protection and Measurements (NCRP).
- What are the emissions for this tower?
  - Emissions are within FCC mandated guidelines.
  - Power emitted at ground level is far lower than at antenna level.
  - See CTIA Health & Safety handout.
- Is there a requirement to monitor emissions?
  - o There is no independent monitoring requirement. With several hundred thousand cell sites in the U.S., it would not be feasible for the FCC to track and monitor individual sites.

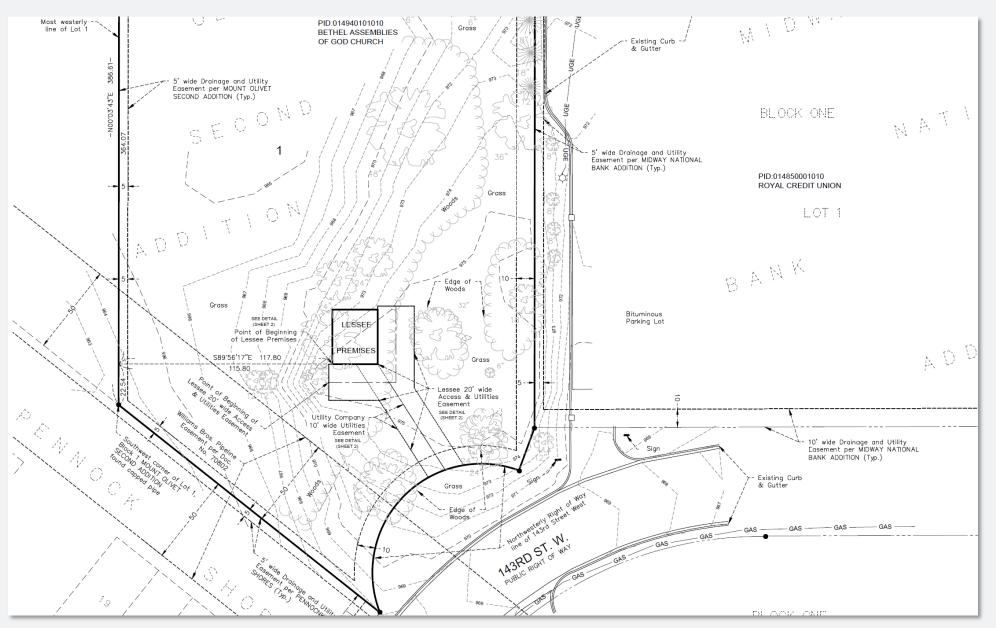
### Additional Resources:

FCC Human Exposure to Radio Frequency Fields: Guidelines for Cellular Antenna Sites

FCC RF Safety FAQ

CTIA Health & Safety

## Land Survey



## Photo Simulations



## Cedar Avenue & 143rd Street - View 1



## Glenda Drive & 143rd Street View 2



## Church Parking Lot – View 3

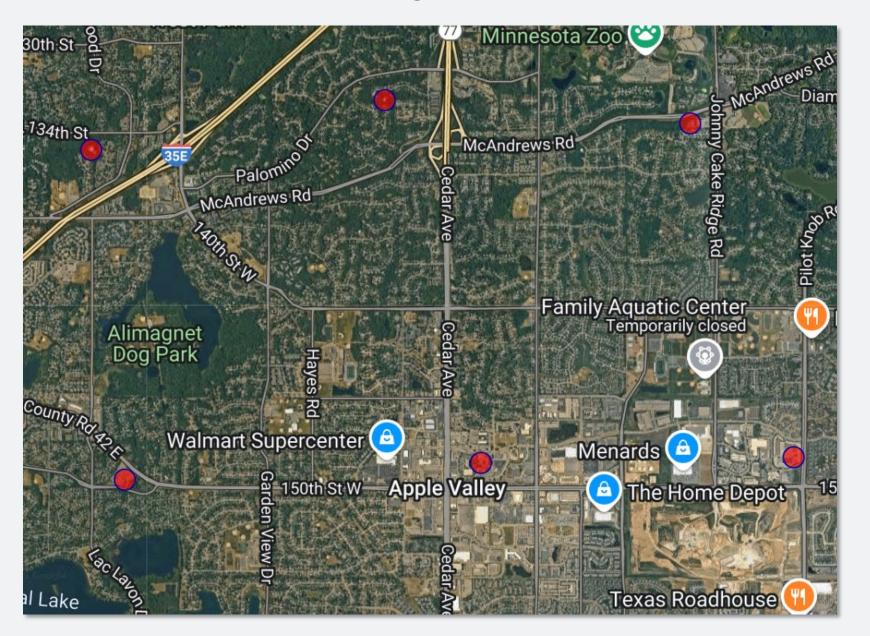


## Comparable Site - Eden Prairie, MN

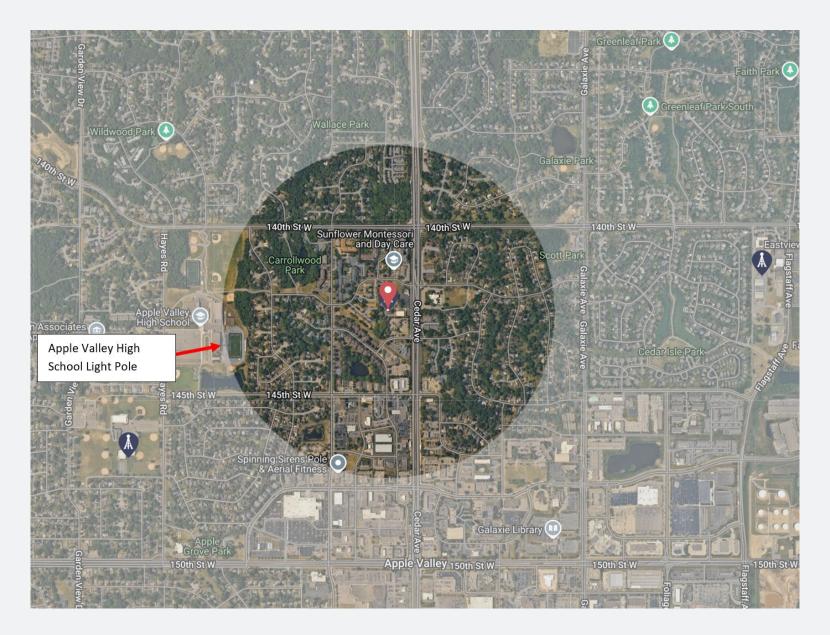




### Surrounding Verizon Sites



## 1/2-Mile Colocation Exclusion Radius



## CITY OF APPLE VALLEY RESOLUTION NO. 2025 -

# A RESOLUTION APPROVING A CONDITIONAL USE PERMIT FOR 86' TALL WIRELESS COMMUNICATIONS MONOPOLE IN "P" (INSTITUTIONAL) ZONE AND ATTACHING CONDITIONS THERETO

WHEREAS, pursuant to Minnesota Statutes 462.357 the City of Apple Valley has adopted, as Title XV of the City Code of Ordinances, zoning regulations to control land uses throughout the City; and

WHEREAS, said regulations provide that wireless communication towers may be allowed within a "P" (Institutional) zoning district and in accordance with specific performance standards, as a conditional use; and

WHEREAS, approval of a Conditional Use Permit for the installation of a wireless communications monopole tower has been requested by Buell Consulting, Inc., on behalf of Cellco Partnership, and the property owner, Bethel Assemblies of God Church, on property legally described as Lot 1, Block 1, Mount Olivet Second Addition; and

WHEREAS, on **DATE**, a public hearing before the Apple Valley Planning Commission was held for the review of the Conditional Use Permit request; and

WHEREAS, on **DATE**, the Apple Valley Planning Commission recommended approval of the Conditional Use Permit request subject to certain conditions; and

WHEREAS, the Apple Valley City Council approved a Conditional Use Permit for a wireless communications monopole tower on the Property on January 12, 2017, as memorialized in Resolution No. 2017-11 and recorded as Document No. 772669 ("2017 CUP"); and

WHEREAS, no wireless communications monopole tower was installed on the Property pursuant to the 2017 CUP and accordingly, the 2017 CUP has since lapsed and is no longer valid.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Apple Valley, Dakota County, Minnesota, that a Conditional Use Permit for a wireless communications monopole tower on property legally described as Lot 1, Block 1, Mount Olivet Second Addition is approved subject to compliance with the City Code and the following conditions:

- 1. The construction and operation of the wireless communications monopole tower shall be in conformance with the Site Plan (Sheet A-1) dated **DATE** and the Enlarged Site Plan (Sheet A-2) dated **DATE**.
- 2. The antennas shall be flush-mounted to the monopole in accordance with the North Elevation Plan (Sheet T-1) dated **DATE**.

- 3. A building permit and electrical permit shall be obtained from the Building Inspections Department prior to any construction on the site.
- 4. Tower construction, maintenance, and operation shall comply with the communications tower requirements set forth in the City code, Section 155.385.
- 5. A qualified and licensed professional engineer shall submit certified construction plans which are in conformance with the following: the latest structural standards; acceptable engineering methods and practices and the National Electrical code.
- 6. The telecommunication service applicant shall provide verification of written final authorization/agreement with the landowner for the placement of the tower on the property prior to issuance of the building permit.
- 7. Subject to all conditions noted in the City Engineer's memo dated **DATE**.
- 8. Landscaping that provides year-round screening shall be installed adjacent to 143<sup>rd</sup> St W. A landscaping plan shall be submitted for review and approval prior to the issuance of a building permit.
- 9. The property owner shall maintain the existing trees surrounding the tower and equipment pad area that serve as screening. If these trees are determined to be insufficient in screening the tower area, additional screening measures may be required.
- 10. A tree preservation concept shall be submitted prior to the issuance of a Natural Resources Management Permit (NRMP).
- 11. A qualified and licensed professional engineer shall certify that the cell tower is designed in all aspects to accommodate both the operator's antenna and one additional user.
- 12. The base of the tower shall be enclosed with a fence at least six feet in height, constructed of a durable, maintenance-free material that effectively screens the mechanical equipment. The proposed fence material shall be submitted for review and approval before a building permit is issued.
- 13. The 12-foot-wide access driveway shall be paved with either concrete or bituminous material from and including the driveway apron abutting the public right of way to the security fence.
- 14. The tower's surface color shall be selected to blend with the surrounding area as effectively as possible and shall be reviewed and approved by the City's Planning Department prior to the issuance of a building permit.

15. The Conditional Use Permit may be represeding are not adhered to or met	evoked for cause if the terms of (1) through (14) while the tower is in place.
ADOPTED this day of, 2025.	
	Clint Hooppaw, Mayor
ATTEST:	
Christina M. Scipioni, City Clerk	
CERTIFICATE	
I, Christina Scipioni, Apple Valley City Claud correct copy of a resolution adopted by the City in my possession, dated thisday of	erk, hereby certify that the forgoing is a true Council on <b>DATE</b> , the original of which is, 2025.
	Christina M. Scipioni, City Clerk
THIS INSTRUMENT WAS DRAFTED BY:	
City of Apple Valley, Minnesota Attn: Community Development Department 7100 147th Street West Apple Valley, MN 55124 (952) 953-2500 Project No. PC25-02-C	



ITEM: 6.A.

PLANNING COMMISSION MEETING DATE:

March 19, 2025 Other Business

Description:

Review of Upcoming Schedule and Other Updates

SECTION:

Staff Contact: Department / Division:

Breanna Vincent, Department Assistant Community Development Department

### **ACTION REQUESTED:**

N/A

#### SUMMARY:

### **Next Planning Commission Meetings:**

Wednesday, April 2, 2025 - 7:00 p.m.

• Applications due by 9:00 a.m. on Wednesday, March 5, 2025.

Wednesday, April 16, 2025 - 7:00 p.m.

• Applications due by 9:00 a.m. on Wednesday, March 19, 2025.

### **Next City Council Meetings:**

- Thursday, March 27, 2025 7:00 p.m.
- Thursday, April 10, 2025 7:00 p.m.

### **BACKGROUND:**

N/A

### **BUDGET IMPACT:**

N/A