CHARLES TOWN UTILITY BOARD
AGENDA

WEDNESDAY, MARCH 9, 2022

Regular Meeting | **661 South George Street, Charles Town, WV 25414** | **4:00 PM**

CALL TO ORDER

1. **APPROVAL OF MINUTES**
   a. Approval of February 23, 2022 Regular Meeting Minutes
   UB Minutes 2.23.22.pdf

2. **PUBLIC COMMENT**
   This portion of the agenda is designed for members of the general public to share thoughts on items of interest in the community. By law, Board members may ask clarifying questions or discuss procedural matters but are not permitted to discuss the policy merits of any issue unless it is scheduled for discussion.

   The public is invited to attend this meeting in person or via webcast (www.ctubwv.com- Board Meetings - Meeting Agendas and Minutes 2022) or by accessing the following zoom link:

   https://us06web.zoom.us/j/88316562233?pwd=ZzNSbE1qVUlCS29KMERiYlZ4NTgrdz09

   Meeting ID: 883 1656 2233
   Passcode: 526954
   +1 301 715 8592 US

3. **UNFINISHED BUSINESS**
   a. Distressed Utility Updates - Possible Executive Session Under: WV State Code Section §6-9A-4(b)(9) - To consider matters involving or affecting the purchase, sale or lease of property, advance construction planning, the investment of public funds or other matters involving commercial competition, which if made public, might adversely affect the financial or other interest of the state or any political subdivision and involving contract matters.
   i. Shenandoah Junction Public Sewer
   ii. Cave Road Utilities, LLC

4. **NEW BUSINESS**
   a. Charles Town Road - T-Mobile 3rd Lease Agreement
   CT Road T-Mobile 3rd Amendment.pdf

b. Keyes Ferry Road - Telegia 2nd Lease Amendment
Keyes Ferry Telegia 2nd Amendment.pdf
c. Keyes Ferry Road - Shentel 3rd Lease Amendment
Keyes Ferry Shentel 3rd Amendment.pdf
d. Renewal and Replacement Project Schedule and CTUB Resolution
Resolution 2022-02 Bond Ordinance Resolution for R&R Project.pdf
Memo to Charles Town City Council Regarding Schedule for Ordinance.pdf
e. RK&K
i. Green Hill Sewer Model Report
Green Hill Sewer Model Report.pdf
f. PSC Case 22-0265-LRR-WS-C Possible Executive Session Under: WV State Code Section §6-9A-4(b)(12) to discuss any matter which, by express provision of federal law or state statute or rule of court is rendered confidential.

5. **MANAGER REPORTS**
a. Utility Manager Report
UM Report 3-9-22.pdf
CTUB Fees- Summary.pdf
b. Chairman Report

6. **APPROVAL OF BILLS**
a. March 9, 2022
Board Report 3.9.22.pdf

7. **ADJOURNMENT**

8. **INFORMATION ONLY**
a. Next Meeting - March 23, 2022 at 4:00 PM

February 23, 2022

The Charles Town Utility Board held a regular meeting on February 23, 2022 at 4:00 P.M. Members of the Board present were Interim Chairman, Mayor Bob Trainor, Duke Pierson, Tommy Stocks, Jacquelyn Milliron and Jeff Whitten. Also present were Kristen Stolipher, April Shultz, Hoy Shingleton, and Ashley Stottlemyer. The Chairman called for changes or corrections to the February 9, 2022 regular meeting minutes. Jacquelyn suggested changes and with no objections, the Board unanimously approved the minutes as amended. The Board received a public comment from Councilwoman, Elizabeth Ricketts.

The Chairman next opened the floor for discussion on the Fiscal Year 2022 Water and Sewer Budget Revisions. April and Kristen briefed the Board on the minor revisions to the operating budgets of water and sewer. The new fiscal year 2023 budget will be brought before the Board in April. The Board provided discussion on the revisions. Motion by Duke, second by Jeff, the Board unanimously approved the fiscal year 2022 water and sewer budget revisions.

Next, the Board discussed the CTUB Leak Adjustment Policy. Kristen provided the policy was originally to be discussed with the sewer tariff change at the March ordinance committee meeting, but that schedule was accelerated and discussed by City Council prior to the Board reviewing. Staff has been adhering to the Public Service Commission revised leak adjustment rules since its adoption back in September 2021, but did not have a written policy until now. The Board discussed the policy. Motion made by Duke, second by Jeff, with discussions from the Board. Motion by Jacquelyn to amend the original motion to revise the language of the presented policy, second by Duke, the Board unanimously approved the CTUB Leak Adjustment Policy as revised.

The Chairman next opened the floor for discussion on the B.C. Partners Alternate Mainline Extension Agreement – Country Club Commons. Kristen briefed the Board on the draft agreement for sewer service to the commercial development consisting of four lots at the intersection of Country Club Road and Rt. 340. Dan Snyder, from B.C. Partners, and Paul Raco, consultant, were both in the audience to answer questions from the Board. They are proposing a gas station, a pharmacy, a restaurant, and a bank for an estimated 55 EDUs with a max of 85 EDU's. The Board held discussions on the agreement. Motion by Duke, second by Jeff, the Board unanimously approved the B. C. Partners Alternate Mainline Extension Agreement for Country Club Commons with the changes to Article 2 regarding on/off-site as discussed.

The Board next discussed the Route 9 Tank – Lease Agreement AT&T – 3rd Amendment. Kristen provided the 3rd amendment for the Route 9 tank is to add a backup generator at this location increasing the rent $275.00 per month dating back to January 1, 2022. Hoy reviewed the agreement finding no issues. Motion by Jacquelyn, second by Duke, the Board unanimously approved the lease amendment with AT&T.

The Utility Manager Report was next addressed. Kristen briefed the Board on this month's sewer and water efforts including the January Revenue & Expense Report, updated disinfection byproducts results, and January plant flows. The Board provided questions on the report. The Chairman had no updates. The Board next discussed the Approval of Bills. Motion by Tommy, second by Duke, the Board unanimously approved the payment of bills.

With no objections, the Board adjourned the meeting at 5:17 P.M. The March 9th regular meeting will be held beginning at 4:00 P.M.

_____ _____

Chairman Secretary

THIRD AMENDMENT TO LEASE AGREEMENT

Site Name/Location: **The City of Charles Town – WV-002 Charles Town Road**
Charles Town, Jefferson County, West Virginia

This Third Amendment to Lease Agreement (the "Amendment"), dated as of _____, 2022, is made and entered into by and between SPRINT SPECTRUM, LLC, a Delaware limited liability company, with its principal offices at 12920 SE 38th Street, Bellevue, WA 98006, as successor-in-interest to SHENANDOAH PERSONAL COMMUNICATIONS, LLC, a Virginia limited liability company ("Tenant"); and the CITY OF CHARLES TOWN ("Landlord"), a Municipal Corporation, with an address at 101 East Washington Street, Charles Town, West Virginia 25414.

RECITALS

WHEREAS Landlord and Tenant are parties to that Lease Agreement dated as of October 9, 2003, as amended by that First Amendment to Lease Agreement dated as of November 7, 2012 (the "First Amendment"), and as amended by that Second Amendment to Lease Agreement dated as of December 12, 2018 (the "Second Amendment") (collectively, the "Agreement"), pursuant to which Tenant is leasing from Landlord space on Landlord's water tank (the "Tank") and within Landlord's Property located off Charles Town Road, Charles Town, West Virginia for the purposes of operating certain communications antennas and related equipment thereat (collectively the "Premises");

WHEREAS, Tenant desires to change the configuration of its antennas and related equipment at the Premises and within the Property in accordance with the terms hereof, and Landlord is amenable to such change in configuration in accordance with the terms hereof; and

WHEREAS, Landlord and Tenant desire to amend the Agreement in accordance with the terms hereof to reflect such change in the configuration of Tenant's antennas and related equipment at the Premises and within the Property and to increase the Fee Payments under the Agreement to reflect the increase in loading on the Tank resulting from such reconfiguration of Tenant's antennas and related equipment.

NOW, THEREFORE, in consideration of the foregoing recitals and the agreements and covenants set forth herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

1. Exhibit 1 to the Agreement is hereby deleted in its entirety, and the new Exhibit A-3 to the Agreement, the Co-Location Application, is hereby incorporated into the Agreement in lieu thereof.

2. Exhibit 2 to the Agreement is hereby deleted in its entirety, and the new Exhibit B-3 to the Agreement, the Tenant Construction Drawings, is hereby incorporated into the Agreement in lieu thereof.

3. Section 4(d) of the Second Amendment is deleted in its entirety and the following inserted in lieu thereof:

> 4(d) Beginning on the earlier of February 1, 2022 or the date upon which Tenant commences their configuration changes under this Amendment, the monthly rental payment due shall be Three Thousand Two Hundred Eighty-Eight Dollars and 12 Cents ($3288.12). On March 1, 2022, and on the same date thereafter throughout this renewal term or any other renewal terms exercised by Tenant, the monthly rent shall be increased subject to the annual monthly rental increase set forth in Section 4(b) hereof. In the event that this Lease continues beyond the expiration of the initial Lease term and any renewal terms provided for herein, the monthly rental payment shall be increased on March 1st of each year during any month-to-month term to an amount equal to 103% of the previous year's term and said rent shall be payable monthly through any month-to-month tenancy. Tenant shall have the right to terminate this Agreement at any time with six (6) months prior written notice beginning with any yearly renewal term.

4. Tenant's Notice Address. Tenant's notice addresses in the Agreement are deleted in their entirety and replaced with the following:

If to Tenant: Sprint Spectrum, LLC
12920 S.E. 38th Street
Bellevue, WA 98006
Attn.: Lease Compliance/Site No. 7HCH507A

5. Except as expressly amended hereby, the Agreement and the terms and provisions thereof shall remain in full force and effect. Capitalized terms not otherwise defined herein shall have the meanings ascribed to such terms in the Agreement.

6. This Amendment may be executed in multiple counterparts, each of which, when executed, shall be deemed an original instrument, but all of which taken together shall constitute one and the same agreement.

[This Space Left Blank Intentionally;
Signatures Appear on the Next Page]

DocuSign Envelope ID: 93E2E6C6-3184-4A91-9E1E-C824EE29237F

TENANT Site ID: – 7HCH507A

IN WITNESS WHEREOF, the parties have executed this Amendment as of the day and year first above written.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

Print Name: Timothy Dwyer

TENANT:

SPRINT SPECTRUM, LLC
a Delaware limited liability company

By: DocuSigned by: JAMES SIMON 2E1DB67290EE4DD

Name: James Simon

Title: Area Director

Approved — NATIONAL LEASE GOVERNANCE — T-MOBILE 2022

TMO Signatory Level: L06

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

Print Name: _____

LANDLORD:

CITY OF CHARLES TOWN
a Municipal Corporation

By: _____

Name: _____

Title: _____

John J. Velasquez — Digitally signed by John J. Velasquez DN: cn=John J Velasquez, o=T-Mobile USA, Inc., ou=Legal Affairs, e=mail=John.Velasquez@t-mobile.com, c=US Date: 2022.02.15 11:47:16 05'00'

DocuSign Envelope ID: 93E2E6C6-3184-4A91-9E1E-C824EE29237F

TENANT Site ID: – 7HCH507A

TENANT ACKNOWLEDGEMENT

STATE/COMMONWEALTH OF Maryland
COUNTY OF Prince George's

On this 25th day of February, 2022, before me, the undersigned notary public, personally appeared James Simon, proved to me through satisfactory evidence of identification, which was ☐ photographic identification with signature issued by a federal or state governmental agency, ☑ personal knowledge of the undersigned, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose in his capacity as the Area Director of SPRINT SPECTRUM, LLC, a Delaware limited liability company, the TENANT named in the attached instrument, and as such was authorized to execute this instrument on behalf of the TENANT.

(*official seal*)

TIMOTHY D DWYER
NOTARY PUBLIC
PRINCE GEORGE'S COUNTY
MARYLAND
MY COMMISSION EXPIRES SEPT. 10, 2022

Notary Public
Type or Print Name: Timothy Dwyer
My commission expires: 9/10/2022

LANDLORD ACKNOWLEDGEMENT

STATE/COMMONWEALTH OF WEST VIRGINIA
COUNTY OF JEFFERSON

On this _____ day of _____, 2022, before me, the undersigned notary public, personally appeared _____, proved to me through satisfactory evidence of identification, which was ☐ photographic identification with signature issued by a federal or state governmental agency, ☐ personal knowledge of the undersigned, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he/she signed it voluntarily for its stated purpose in his/her capacity as a _____ of LANDLORD.

(*official seal*)

_____
Notary Public
Type or Print Name: _____
My commission expires:

EXHIBIT A-3

CO-LOCATION APPLICATION OF TENANT

[See Attached Co-Location Application]

☐ NEW LEASE	☑ AMENDMENT TO EXISTING LEASE	☐ ANCHOR TENANT	☐ RECONTRACT	INTERNAL USE ONLY	
				APP VERSION #	2
				LEASE #	2
				AMENDMENT #	3

PLEASE RETURN THIS APPLICATION VIA EMAIL TO:			
Wireless Networks Group, Inc. 1011 Holden Road Frederick, Maryland 21701-3437 Attn: Michael Hofe	E-Mail: mhofe@wirelessnetworksgroup.com Phone: 301-667-0001	Charles Town Site Number:	**WV-002**
		Charles Town Site Name:	**Charles Town Road**
		Application Date:	10/27/2021
		Revision Dates:	11/3/2021
		OPS Approval:	12/14/2021

APPLICANT / CARRIER INFORMATION

Carrier Name:	**T-Mobile (Prev. Shenandoah Prsnl. Comm. LLC)**	**Contact Name:**	**Rob Neely**
Carrier Site Number:	**7HCH507A**	**Contact Number:**	**240-264-8600**
Carrier Site Name:	**Mechanicstown**	**Contact Fax:**	
Carrier Legal Entity Name:	Sprint Spectrum LLC, a Delaware limited liability co	**Contact Address:**	12050 Baltimore Avenue Beltsville, MD 20705-1247
State of registration:	Deleware		
Type of entity (LP, LLC, Corp) d/b/a (If applicable)	LLC		
Notice Address for Lease:	12920 SE 38th Street, Bellevue, WA 98006	**Contact E-mail:**	Robert.Neely1@T-Mobile.com
With copies to:		**Additional E-mail:**	
Carrier Invoice Address:	12920 SE 38th Street, Bellevue, WA 98006	**Desired Install Date:**	3/1/2022 Projected
Carrier Invoice Contact - Name, Title, Phone No.	propertymanagement@t-mobile.com 8883730093	**Carrier NOC#**	1-888-218-6664

ADDITIONAL CONTACT INFORMATION

Leasing Contact Name/Number:	Kyle Yingling / 410-251-9431
RF Contact Name/Number:	Ryan Conaway / 443-570-1753
Construction Contact Name/Number:	Neil Fitzpatrick /
Emergency Contact Name/Number:	T-Mobile / 1-888-218-6664

SITE INFORMATION

Latitude:	**39.273867**	**N**	**Existing Structure Type:**	**Water Tank**
Longitude:	**-77.849578**	**W**	**Existing Structure Height:**	**93'**
Site Address:	**1376 Charles Town Road, Charles Town, WV 25414**			

FREQUENCY/TECHNOLOGY INFORMATION

Type of Technology for all equipment (i.e., 3G, LTE, CMDA, MW, WiFi, TV, etc.)		5G, LTE, GSM
TX Frequency (MHz)	Licensed	622-642(LTE/5G), 698-705(LTE), 1740-1755(LTE), 1850-1865(LTE/GSM), 1885-1895(LTE/GSM), 1910-1915(LTE/GSM), 2496-2690(
RX Frequency (MHz)	Licensed	668-688(LTE/5G), 728-734(LTE), 2140-2155(LTE), 1930-1945(LTE/GSM), 1967-1975(LTE/GSM), 1990-1995(LTE/GSM), 2496-2690(
Tenants using an unlicensed band must provide exact Frequency Channels and Call Sign(s) to be utilized. (Providing the band range only will not be accepted.)		

PLEASE PROVIDE A BRIEF DESCRIPTION OF GENERAL SCOPE OF WORK

Removing (9) antennas, (12) radios, (1) MW antenna, (1) ODU, (4) cabinets, (2) fiber boxes, (1) MW junction box, all coax/cables.
Installing (9) antennas, (6) radios, (1) MW antenna, (1) MW ODU, (3) 6x24 Hybrids, (4) coax cables, (2) cabinets.

EXISTING EQUIPMENT Applicant's Existing Equipment Configuration and Specifications										
Equipment Type (ex: panel, TMA, RRU)	**RAD (feet)**	**Mount Height (feet)**	**Mount Type**	**Equip Qty**	**Equipment Manufacturer**	**Equipment Model #**	**Equip Dim (HxWxD) (ft or in)**	**Equip Weight (lbs)**	**Az**	**Remain**
Panel	71		Pipe Mount	3	RFS	APXVSPP18-C-A20	72"x11.8"x7"	64.5	0/120/240	No
Panel	71		Pipe Mount	3	RFS	APXVRR13-C-NA20	54.8"x13.8"x4.3"	39.5	0/120/240	No
Panel	71		Pipe Mount	3	RFS	APXVTM14-C-I20	56.3"x12.6"x6.3"	67.7	0/120/240	No
Dish	70		Pipe Mount	1	Andrew	A-ANT-18G-2-C	2'-2"	27	232.5	No
RRH	71		Pipe Mount	3	Alcatel-Lucent	FD-RRH-2x50-800	13"x19.7"x15"	64		No
RRH	71		Pipe Mount	3	Alcatel-Lucent	FD-RRH-4x45-1900	11"x25"x10.7"	60		No
RRH	71		Pipe Mount	3	Alcatel-Lucent	TD-RRH 8x20	25.4"x17.5"x5.7"	66.1		No
RRH	71		Pipe Mount	3	Alcatel-Lucent	B25 RRH 4x30	21.2"x12"x7.2"	53		No
ODU	70		Pipe Mount	1	Horizon	Compact 50 Mbps	4"x9.6"x8.7"	7.5		No

EXISTING LINES Applicant's Existing Lines and Specifications					
Line Type	**Line Size (Inches)**	**Total # of Lines**	**Coax interior or exterior (for monopoles)**	**Remain**	**Comments:**
Coax	1-1/4"	3		No	

PROPOSED EQUIPMENT Applicant's Proposed Equipment Configuration and Specifications									
Equipment Type (ex: panel, TMA, RRU, ice shields)	**RAD (feet)**	**Mount Height (feet)**	**Mount Type**	**Equip Qty**	**Equipment Manufacturer**	**Equipment Model #**	**Equip Dim (HxWxD) (ft or in)**	**Equip Weight (lbs)**	**Azimuth**
Panel	71		Pipe Mount	3	Commscope	VV-65A-R1	54.72"x12.01"x4.65"	24.69	0/120/240
Panel	71		Pipe Mount	3	Ericsson	AIR6449 B41	331."x20.5"x8.5"	13	0/120/240
Panel	71		Pipe Mount	3	RFS	APXVAALL24_43-U-NA20	95.9"x24"x8.5"	122.8	0/120/240
MW	71		Pipe Mount	1	Commscope	VHLP3-11W/A	39.3"x17.2"	37.5	232.54
RRU	71		Pipe Mount	3	Ericsson	4460 B25+B66	17"x15.1"x11.9"	109	0/120/240
RRU	71		Pipe Mount	3	Ericsson	4480 B71+B85	21.8"x15.7"x7.5"	83.3	0/120/240
ODU	71		Pipe Mount	1	Ceragon IP-20A	RFU-D-HP	12.56"x11.26"x4.21"	26.5	232.54

PROPOSED LINES Applicant's Proposed Lines and Specifications				
Line Type	**Line Size (Inches)**	**Total # of Lines**	**Coax interior or exterior (for monopoles)**	**Comments:**
Coax	1.99 1/2"	3 4		Installing (3) 6x24 Hybrid Cables and (4) 1/2" coax cables
RET Home Run Cable				
Fiber				
DC Power				

PROPOSED FINAL CONFIGURATION TOTALS	
EQUIPMENT TYPE	TOTAL
Panel Antennas	9
Omni/Whip Antennas	
RRU	6
TMA	
Diplexer / Triplexer	
Bias T	
Surge Suppressor	
MW Dish	1
Ice Shield	
ODU	1
Filter	
Combiner	
Junction Box	
RET	
Equipment Cabinets	2
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	

PROPOSED FINAL CONFIGURATION TOTALS	
LINE TYPE	TOTAL
Coax	4
Hybrid	3
CAT5	
DC/Power	
RET	
Fiber	

ADDITIONAL EQUIPMENT INFORMATION

- RRUs, TMAs and ODUs are required to be installed directly behind the antennas / MW dish. Otherwise there will be an additional charge.
- All equipment lines are required to be installed inside the tower when space is available. Carriers will be charged an additional $25.00 per line per month if equipment lines are installed on the outside of the tower even though there is available space inside the tower. Charles Town must approve any installation of lines on the outside of the tower.
- All tenant equipment must be installed within one continuous 10 ft vertical envelope. Exceeding this vertical space will be subject to additional rent.

GROUND / INTERIOR SPACE REQUIREMENTS						
Total Ground / Interior Area Dimensions: **L' x W' = Total Square Feet Required**	20 X 12	(Including all Equipment (i.e., Shelter, Equipment Platform or Pad, Generator Pad, Generator Fuel Tank Pad, Antenna Sleds, etc. – provide details below)				
Cabinet Area Dimensions (Pad/Platform)	16 X 10	Cabinet Installation Type				
Shelter Pad Dimensions	X	Shelter Manufacturer				
Rooftop Antenna Total Area Required	X	Antenna Sled Dimensions (per sector)	X	Antenna Wall Mount Dimensions (per sector)	X	

EQUIPMENT CABINET REQUIREMENTS (Required for rooftops or Charles Town interior space)					
Number of Cabinets Required	2	Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Number of Cabinets Required		Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Number of Cabinets Required		Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Equipment Cabinet Comments					

GENERATOR REQUIREMENTS					
Generator Required?:		Generator Fuel Type		Generator Size	
Generator Pad Dimensions			Generator Manufacturer		
Generator Fuel Tank Pad Dimensions			Fuel Tank Manufacturer		

AC POWER REQUIREMENTS			
Meter Type		Estimated Monthly Utility Usage Amount	
Voltage	240	Total Amperage	200

FIBER / BACKHAUL					
Fiber Installation Status		Fiber Provider			
Cable Type		Number of Points of Entry		Conduit/Riser Size (in inches)	

STRUCTURAL ANALYSIS DETAILS			
Structural Hardcopies Required?		If wet seals required, please provide address:	

ADDITIONAL COMMENTS

EXHIBIT B-3

TENANT CONSTRUCTION DRAWINGS

[See Attached Construction Drawings]

NOTE TO GENERAL CONTRACTOR:
REFER TO THE PASSING STRUCTURAL ANALYSIS AND APPLICABLE MOUNT ANALYSIS OF THE EXISTING WATER TANK CONSIDERING THE EXISTING AND PROPOSED LOADS PERFORMED BY OTHERS. IF ANY DISCREPANCIES ARE FOUND, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEERING IN WRITING.

DESIGN BASED ON RFDS VERSION: 1 DATED: 10/21/21.

SHENTEL

SITE NAME: NTM A SITE NAME: MECHANICSTOWN
SHENTEL 5G EEP INSTALLATION DESIGN PACKAGE

1376 S. GEORGE STREET
CHARLES TOWN, WV 25414
CITY OF CHARLES TOWN

SCOPE OF WORK

PROJECT CONSISTS OF:

REMOVING:
- (9) EXISTING ANTENNAS
- (12) EXISTING RADIOS
- (1) EXISTING MW ANTENNA
- (1) EXISTING ODU
- (4) EXISTING CABINETS
- (2) EXISTING FIBER BOXES
- (1) EXISTING MW JUNCTION BOX
- ALL EXISTING COAX/CABLES
- ALL EXISTING CABLE BANDIT STRAP SUPPORTS

INSTALLING:
- (9) PROPOSED ANTENNAS
- (6) PROPOSED RADIOS
- (1) PROPOSED MW ANTENNA
- (1) PROPOSED MICROWAVE ODU
- (3) PROPOSED 6X24 HYBRID CABLES
- (4) PROPOSED COAX CABLES
- (2) PROPOSED CABINETS
- PROPOSED CABLE SUPPORTS

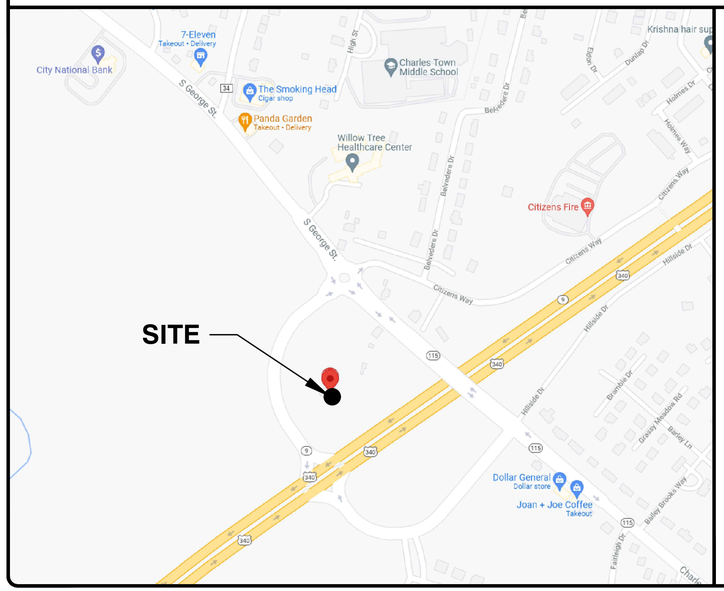
SITE INFORMATION

LATITUDE (NAD 83):	39.27385000°
LONGITUDE (NAD 83):	-77.84960800°
JURISDICTION:	CITY OF CHARLES TOWN
ZONING:	N/A
TAX ACCOUNT NUMBER:	19-03-0010-0211-0000
PARCEL AREA:	0.58± ACRES
PARCEL OWNER:	CITY OF CHARLES TOWN
ADDRESS:	S. GEORGE STREET CHARLES TOWN WV 25414
GROUND ELEVATION:	534.0' (AMSL)
STRUCTURE TYPE:	WATER TANK
STRUCTURE HEIGHT:	92.5' (AGL)

PROJECT TEAM

APPLICANT:	SHENANDOAH PERSONAL COMMUNICATIONS, LLC POST OFFICE BOX 459 500 SHENTEL WAY EDINBURG, VA 22824 (540) 984-5220
PROJECT MANAGEMENT FIRM:	NETWORK BUILDING & CONSULTING, LLC. 6095 MARSHALEE DRIVE, SUITE 300 ELKRIDGE, MD 21075 (410) 712-7092
ENGINEERING FIRM:	NB&C ENGINEERING SERVICES, LLC. 6095 MARSHALEE DRIVE, SUITE 300 ELKRIDGE, MD 21075 (410) 712-7092 MARCO GROTTI MGROTTI@NBCLLC.COM (410) 712-7092 - EXT 1032

VICINITY MAP



CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2015 INTERNATIONAL BUILDING CODE
- 2014 NATIONAL ELECTRICAL CODE
- 2015 NFPA 101, LIFE SAFETY CODE
- 2015 STATEWIDE FIRE PREVENTION CODE
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSI/TIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELCORDIA GR-1275
- ANSI/T 311

DRAWING INDEX

T-1	TITLE SHEET
GN-1	GENERAL NOTES
SP-1	SITE PLAN
C-1	COMPOUND PLAN
C-2	EQUIPMENT PLANS
C-3	ELEVATION
A-1	ANTENNA SCHEDULE
A-2	ANTENNA PLANS
A-3	ANTENNA SPECIFICATIONS & DETAILS
A-4	EQUIPMENT SPECIFICATIONS & DETAILS
A-5	PLUMBING DIAGRAM & CABLING DETAIL
E-1	ELECTRICAL DETAILS
G-1	GROUNDING DETAILS
ST-1	ANTENNA MOUNTING DETAILS
PN-1	PAINT NOTES I
PN-2	PAINT NOTES II
PN-3	PAINT NOTES III

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 22"X34". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

WATER TANK OWNER

CITY OF CHARLES TOWN
CHARLES TOWN UTILITY BOARD
661 SOUTH GEORGE STREET, SUITE 101
CHARLES TOWN, WV 25414
MICHAEL HOFE: (P) 301-667-0001

3/1/2022

811 MISS UTILITY OF WEST VIRGINIA, INC.

WEST VIRGINIA ONE CALL SYSTEM, INC. — STOP! CALL BEFORE YOU DIG

WEST VIRGINIA LAW REQUIRES THREE WORKING DAYS NOTICE PRIOR TO ANY EARTH MOVING ACTIVITIES

APPLICANT

SHENTEL
NOW APART OF T-Mobile
T-MOBILE NORTHEAST LLC
SHENANDOAH PERSONAL COMMUNICATIONS, LLC
POST OFFICE BOX 459
500 SHENTEL WAY
EDINBURG, VA 22824
(540) 984-5220

ENGINEER

NB+C TOTALLY COMMITTED.
NB+C ENGINEERING SERVICES, LLC.
6095 MARSHALEE DRIVE, SUITE 300
ELKRIDGE, MD 21075
(410) 712-7092

SITE INFORMATION

7HCH507A
NTM WA07SH133
(MECHANICSTOWN)
1376 S. GEORGE STREET
CHARLES TOWN, WV 25414
CITY OF CHARLES TOWN

DESIGN RECORD

REVISIONS

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1	11/15/21	REV PER COMMENTS	ESP
0	10/28/21	FINAL CDs	AMM

PROFESSIONAL STAMP

TRENT TRAVIS SNARR — REGISTERED — 21726 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER — 11/30/21

ENGINEER

TRENT TRAVIS SNARR, P.E.
WEST VIRGINIA PROFESSIONAL ENGINEER
LICENSE #21726

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

ELECTRICAL & GROUNDING NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATION INCLUDING INCIDENTAL WORK TO PROVIDE COMPLETE OPERATING AND APPROVED ELECTRICAL SYSTEM.
4. GENERAL CONTRACTOR SHALL PAY FEES FOR PERMITS, AND IS RESPONSIBLE FOR OBTAINING SAID PERMITS AND COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING AT EXPOSED INDOOR LOCATIONS SHALL BE IN ELECTRICAL METALLIC TUBING OR RIGID NONMETALLIC TUBING (RIGID SCHEDULE 40 PVC OR RIGID SCHEDULE 80 PVC FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) (AS PERMITTED BY CODE).
6. ELECTRICAL AND TELCO WIRING AT CONCEALED INDOOR LOCATIONS SHALL BE IN ELECTRICAL METALLIC TUBING, ELECTRICAL NONMETALLIC TUBING, OR RIGID NONMETALLIC TUBING (RIGID SCHEDULE 40 PVC AS PERMITTED BY CODE).
7. ELECTRICAL AND TELCO WIRING OUTSIDE A BUILDING, ABOVE GRADE AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS (RGS) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
8. BURIED CONDUIT SHALL BE RIGID NONMETALLIC CONDUIT (RIGID SCHEDULE 40 PVC); DIRECT BURIED IN AREAS OF OCCASIONAL LIGHT TRAFFIC, ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY TRAFFIC.
9. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT SHALL BE USED INDOORS AND OUTDOORS IN AREAS WHERE VIBRATION OCCURS AND FLEXIBILITY IS NEEDED.
10. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE THHN, THWN–2, OR THIN INSULATION.
11. RUN ELECTRICAL CONDUIT OR CABLE BETWEEN ELECTRICAL UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE PPC AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE. COORDINATE INSTALLATION WITH UTILITY COMPANY.
12. RUN TELCO CONDUIT OR CABLE BETWEEN TELEPHONE UTILITY DEMARCATION POINT AND PROJECT OWNER CELL SITE TELCO CABINET AND BTS CABINET AS INDICATED ON THIS DRAWING. PROVIDE FULL LENGTH PULL ROPE IN INSTALLED TELCO CONDUIT. PROVIDE GREENLEE CONDUIT MEASURING TAPE AT EACH END.
13. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE NEMA 3R ENCLOSURE.
14. GROUNDING SHALL COMPLY WITH NEC ART. 250. ADDITIONALLY, GROUNDING, BONDING AND LIGHTING PROTECTION SHALL BE DONE IN ACCORDANCE WITH SHENTEL CELL SITE GROUNDING STANDARDS.
15. GROUND CABLE SHIELDS MINIMUM AT BOTH ENDS USING MANUFACTURERS CABLE GROUNDING KITS SUPPLIED BY PROJECT OWNER.
16. INSTALL #2 AWG GREEN–INSULATED STRANDED WIRE FOR ABOVE GRADE GROUNDING AND #2 BARE TINNED COPPER WIRE FOR BELOW GRADE GROUNDING UNLESS OTHERWISE NOTED.
17. ALL POWER AND GROUND CONNECTIONS TO BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY HARGER (OR APPROVED EQUAL) RATED FOR OPERATION AT NO LESS THAN 75°C OR CADWELD EXOTHERMIC WELD. DO NOT ALLOW BARE COPPER WIRE TO BE IN CONTACT WITH GALVANIZED STEEL.
18. ROUTE GROUNDING CONDUCTORS ALONG THE SHORTEST AND STRAIGHTEST PATH POSSIBLE, EXCEPT AS OTHERWISE INDICATED. GROUNDING LEADS SHOULD NEVER BE BENT AT RIGHT ANGLE. ALWAYS MAKE AT LEAST 12" RADIUS BENDS. #6 WIRE CAN BE BENT AT 6" RADIUS WHEN NECESSARY. BOND ANY METAL OBJECTS WITHIN 6 FEET OF PROJECT OWNER EQUIPMENT OR CABINET TO MASTER GROUND BAR OR GROUNDING RING.
19. CONNECTIONS TO GROUND BARS SHALL BE MADE WITH TWO HOLE COMPRESSION TYPE COPPER LUGS. APPLY OXIDE INHIBITING COMPOUND TO ALL LOCATIONS.
20. APPLY OXIDE INHIBITING COMPOUND TO ALL MECHANICAL GROUND CONNECTIONS.
21. CONTRACTOR SHALL PROVIDE AND INSTALL OMNI DIRECTIONAL ELECTRONIC MARKER SYSTEM (EMS) BALLS OVER EACH GROUND ROD AND BONDING POINT BETWEEN EXISTING TOWER/ MONOPOLE GROUNDING RING AND EQUIPMENT GROUNDING RING.
22. CONTRACTOR SHALL TEST COMPLETED GROUND SYSTEM AND RECORD RESULTS FOR PROJECT CLOSE–OUT DOCUMENTATION. 5 OHMNS MINIMUM RESISTANCE REQUIRED.
23. CONTRACTOR SHALL CONDUCT ANTENNA, CABLE, AND LNA RETURN–LOSS AND DISTANCE–TO–FAULT MEASUREMENTS (SWEEP TESTS) AND RECORD RESULTS FOR PROJECT CLOSE OUT.
24. THE SHENTEL ELECTRICAL EQUIPMENT INCLUDING PANEL, SWITCH GEAR AND DISCONNECT ARE TO BE LABELED WITH ENGRAVED BAKELITE LABELS.

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
8. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
9. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
10. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
11. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.
12. PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
13. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
14. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
15. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
16. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
17. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
18. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.

CHARLES TOWN UTILITY BOARD NOTES

WELDING NOTE:
WELDING ONTO THE TANK IS ONLY APPROVED FOR THE PROPOSED CABLE SUPPORT SYSTEM. WELDER CERTIFICATIONS WILL NEED TO BE PROVIDED AND THE WELDER WILL NEED TO BE PRE–APPROVED BY CTUB PRIOR TO START OF CONSTRUCTION.

STRUCTURAL NOTES

1. THE STRUCTURAL STEEL CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE ANCHOR BOLT LOCATIONS, ELEVATION OF TOP OF CONCRETE AND BEARING PLATES, ALIGNMENT ETC. PRIOR TO START OF STEEL ERECTION.
2. THE LATEST EDITION OF THE FOLLOWING SPECIFICATIONS SHALL GOVERN:
   A. AISC – "ALLOWABLE STRESS DESIGN SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS".
   B. AISC – "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".
   C. AWS – "D1.1 STRUCTURAL WELDING CODE – STEEL".
3. MATERIAL, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE FOLLOWING ASTM SPECIFICATIONS

STRUCTURAL WIDE FLANGE & M SHAPES	A992 OR A572 FY = 50KSI
OTHER STRUCTURAL SHAPES AND PLATES A500, GRADE B	A36, FY = 36 KSI STRUCTURAL TUBING FY = 46 KSI
HIGH STRENGTH BOLTS	A325
THREADED RODS	A354, GRADE BC
ANCHOR BOLTS	A325 OR A354 BC
PIPE (HANDRAIL)	SCH 40 PIPE

4. ALL WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 USING E70XX ELECTRODES. UNLESS OTHERWISE NOTED PROVIDE CONTINUOUS MINIMUM SIZED FILLET WELDS PER AISC REQUIREMENTS.
5. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED. ALL HOLES IN BEARING PLATES SHALL BE DRILLED.
6. ALL STEEL TO BE HOT–DIPPED GALVANIZED AFTER FABRICATION PER ASTM A123.
7. EPOXY ANCHORS TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
8. ALL BOLTS SHALL BE TIGHTENED USING TURN–OF–THE–NUT METHOD PER AISC SPECIFICATIONS USING STANDARD HOLES.
9. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS AND FIT PRIOR TO FABRICATION.

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PROFESSIONAL STAMP

TRENT TRAVIS SNARR
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21726
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
11/30/21

ENGINEER

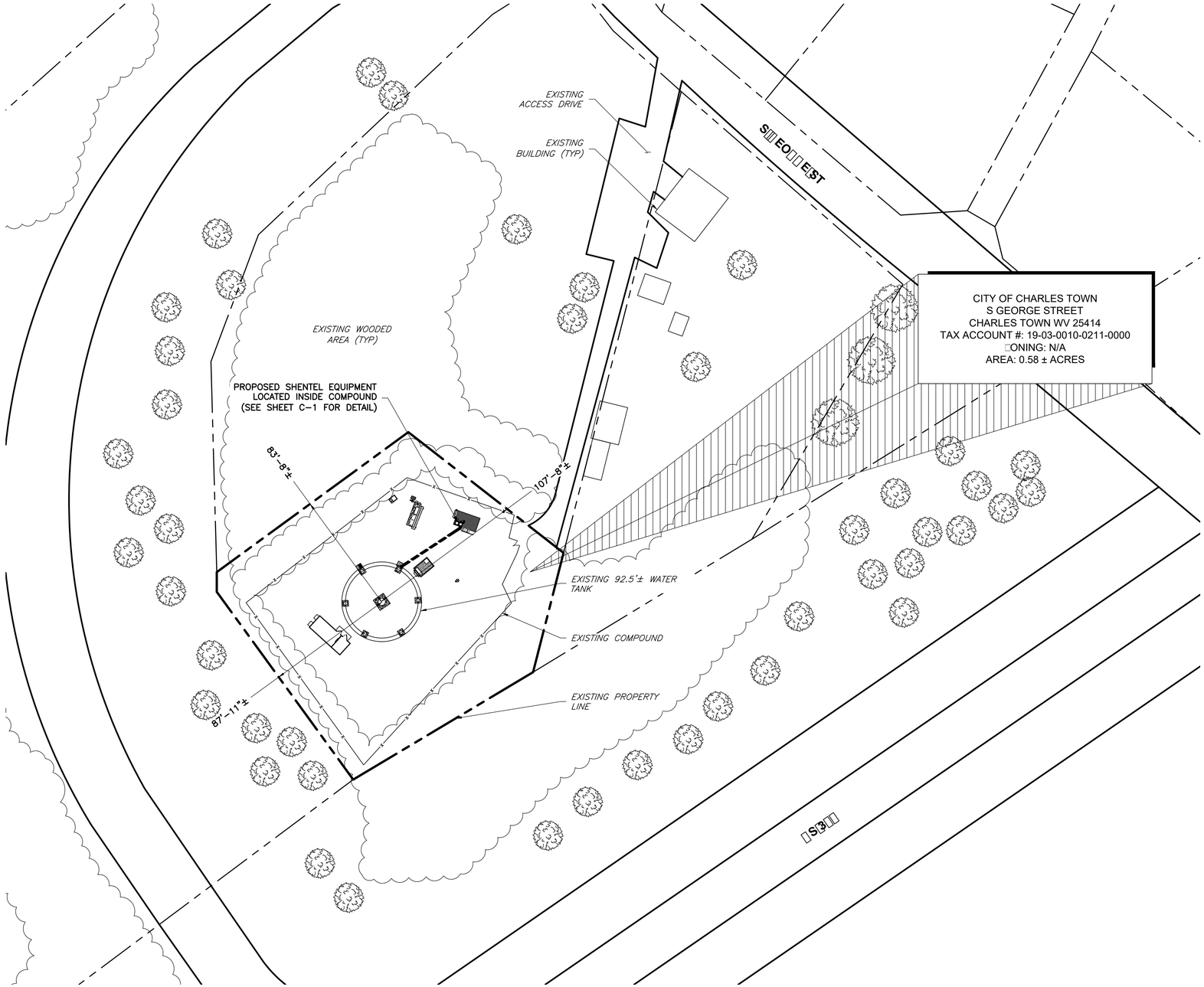
TRENT TRAVIS SNARR, P.E.
WEST VIRGINIA PROFESSIONAL ENGINEER
LICENSE #21726

SHEET TITLE

GENERAL NOTES

SHEET NUMBER

G-1



1 / SP-1 SITE PLAN
SCALE: 1" = 40' (22X34)
SCALE: 1" = 80' (11X17)

GRAPHIC SCALE

40 0 20 40 80 160

1 INCH = 40 FEET (22X34)
1 INCH = 80 FEET (11X17)

ZONING INFORMATION

□URISDICTION: CITY OF CHARLES TOWN

□ONING: N/A

DIMENSION	EXISTING ±	PROPOSED ±
FRONT YARD SETBACK:	107'-8"	NO CHANGE
SIDE YARD SETBACK:	83'-8"	NO CHANGE
REAR YARD SETBACK:	87'-11"	NO CHANGE
LOT AREA:	0.58 ± ACRES	

(ALL MEASUREMENTS ARE IN FEET ± UNLESS OTHERWISE NOTED)

NOTES:

1) SITE PLAN IS NOT THE RESULT OF A SURVEY. IT IS BASED ON FIELD MEASUREMENTS AND SCALED ASSESSORS MAPS AVAILABLE. ALL INFORMATION SHOWN IS APPROXIMATE ONLY AND SUB□ECT TO ANY CONDITION THAT A SURVEY MAY REVEAL.

2) ALL SETBACKS SHOWN ARE FROM EXISTING WATER TANK TO EXISTING PROPERTY LINES.

LEGEND

- PROPERTY LINE – SUBJECT PARCEL
- PROPERTY LINE – ABUTTERS
- EXISTING FENCE LINE
- EXISTING ROAD
- EXISTING BUILDING

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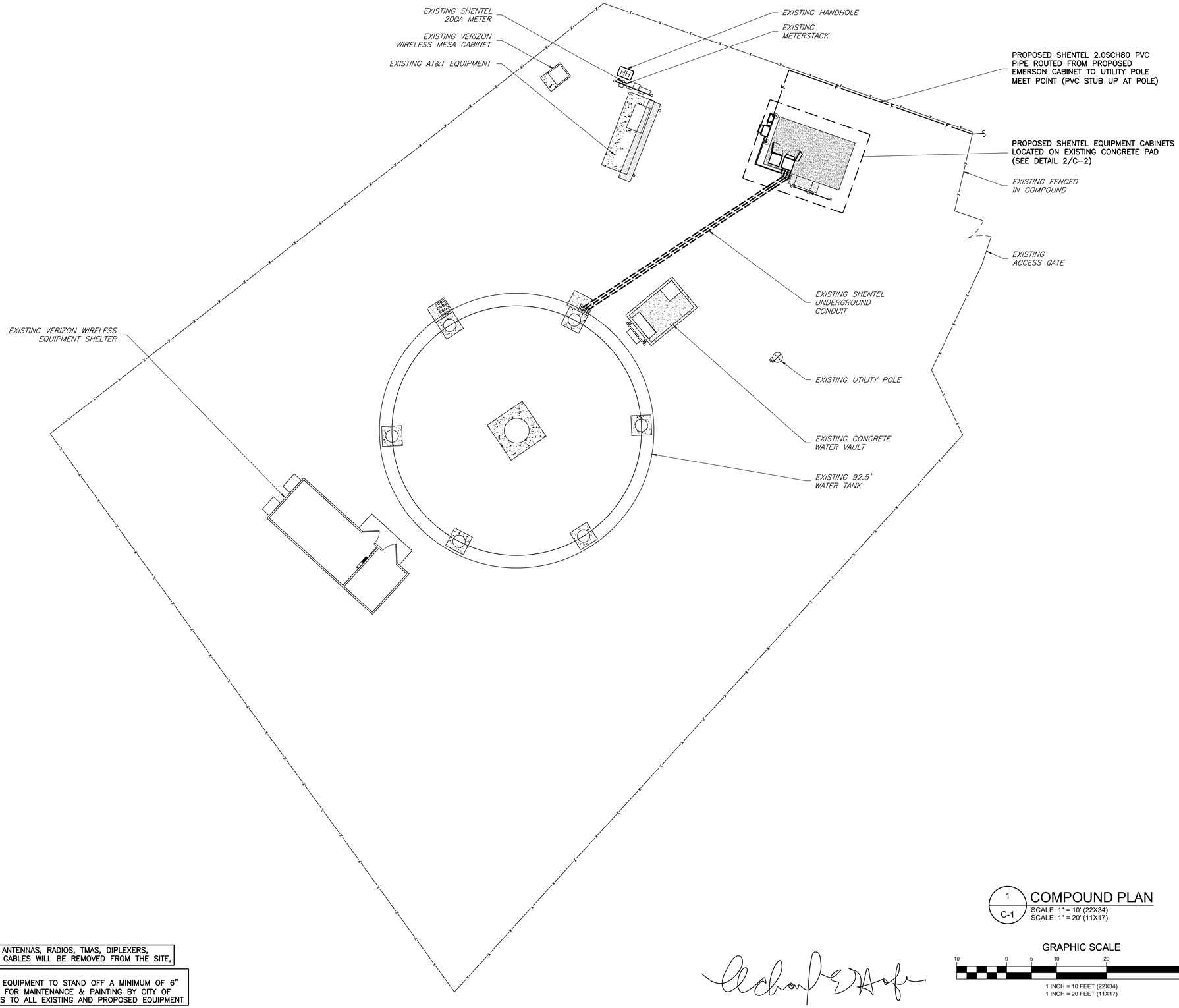
SHEET TITLE

SITE□PLAN

SHEET NUMBER

SP-□



ALL EXISTING SHENTEL ANTENNAS, RADIOS, TMAS, DIPLEXERS, CABINETS, RACKS, AND CABLES WILL BE REMOVED FROM THE SITE,

NOTE:
CABLES & ASSOCIATED EQUIPMENT TO STAND OFF A MINIMUM OF 6" FROM STEEL TO ALLOW FOR MAINTENANCE & PAINTING BY CITY OF CHARLES TOWN. APPLIES TO ALL EXISTING AND PROPOSED EQUIPMENT

1 / C-1 COMPOUND PLAN
SCALE: 1" = 10' (22X34)
SCALE: 1" = 20' (11X17)

GRAPHIC SCALE
10 0 5 10 20 40
1 INCH = 10 FEET (22X34)
1 INCH = 20 FEET (11X17)

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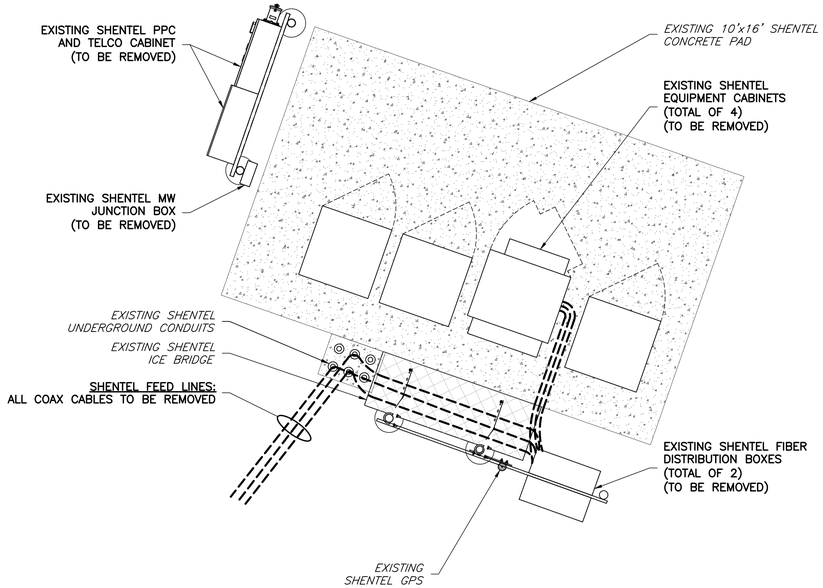
COMPOUND PLAN

SHEET NUMBER

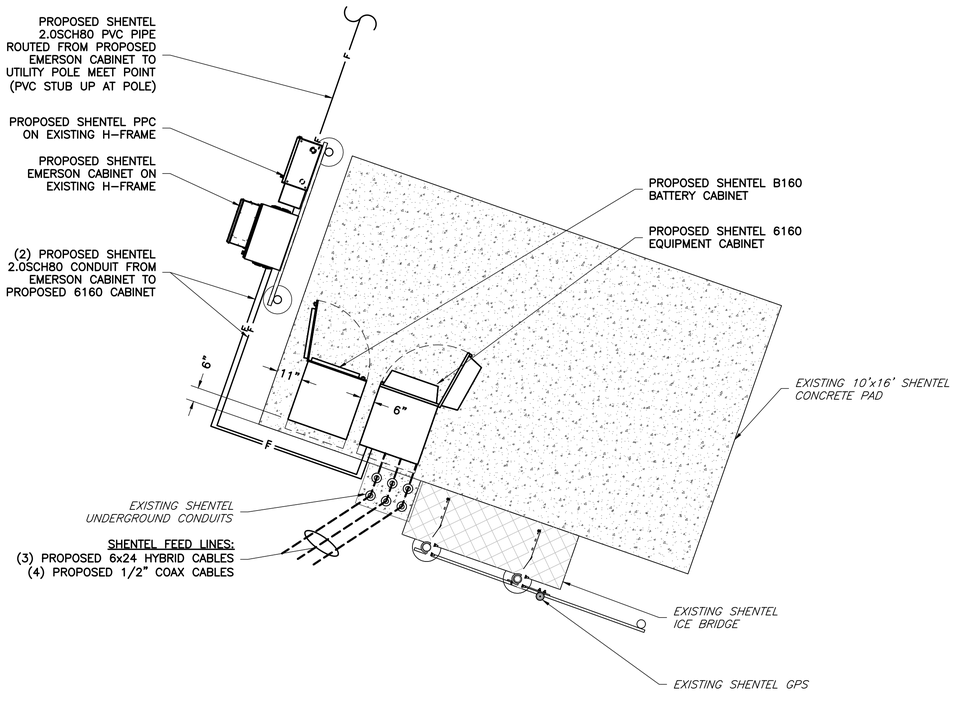
C-1

TRUE NORTH



1 C-2 **EXISTING EQUIPMENT PLAN**
SCALE: 3/8" = 1' (22X34)
SCALE: 3/16" = 1' (11X17)

GRAPHIC SCALE
4 0 1 2 4 8
3/8 INCH = 1 FOOT (22X34)
3/16 INCH = 1 FOOT (11X17)



2 C-2 **PROPOSED EQUIPMENT PLAN**
SCALE: 3/8" = 1' (22X34)
SCALE: 3/16" = 1' (11X17)

GRAPHIC SCALE
4 0 1 2 4 8
3/8 INCH = 1 FOOT (22X34)
3/16 INCH = 1 FOOT (11X17)

ALL EXISTING SHENTEL ANTENNAS, RADIOS, TMAS, DIPLEXERS, CABINETS, RACKS, AND CABLES WILL BE REMOVED FROM THE SITE,

NOTE:
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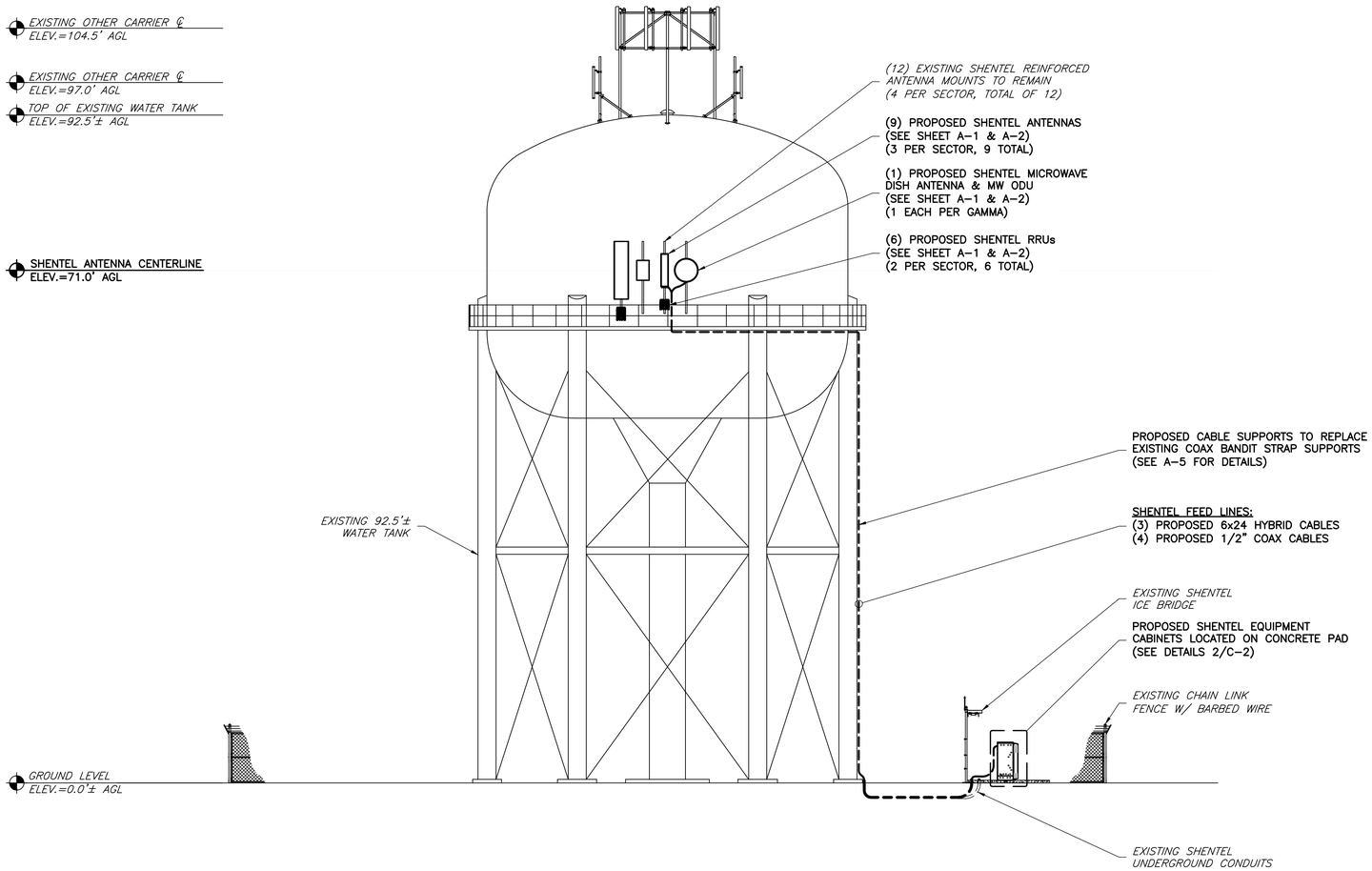
SHEET TITLE

EQUIPMENT PLANS

SHEET NUMBER

C-2



GENERAL ANTENNA NOTES

1. ALL ANTENNAS TO BE FURNISHED WITH DOWNTILT BRACKETS. CONTRACTOR IS TO COORDINATE AND VERIFY THE PROPOSED DOWNTILTS WITH SHENTEL MANAGER PRIOR TO CONSTRUCTION.
2. ANTENNA CENTERLINE HEIGHT IS IN REFERENCE TO ELEVATION 0.0'. (EXISTING GRADE)
3. CHECK WITH RF ENGINEER FOR LATEST ANTENNA TYPE & AZIMUTH.
4. CONTRACTOR SHALL VERIFY ANTENNA TYPE AND AZIMUTH WITH CONSTRUCTION MANAGER PRIOR TO CONSTRUCTION.
5. ALL CABLE LENGTHS ARE ESTIMATED AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
6. COLOR TAPE MARKINGS MUST BE 3/4" WIDE AND UV RESISTANT, SUCH AS SCOTCH 35 VINYL ELECTRICAL COLOR CODING TAPE.
7. CONTRACTOR SHALL COORDINATE COLOR CODINGS IN THE FIELD WITH SHENTEL REPRESENTATIVE.

1 / C-3 ELEVATION
SCALE: 1" = 10' (22X34)
SCALE: 1" = 20' (11X17)

GRAPHIC SCALE
10 0 5 10 20 40
1 INCH = 10 FEET (22X34)
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SHEET TITLE

ELEVATION

SHEET NUMBER

C-3

SECOND AMENDMENT TO LICENSE AGREEMENT

Site Name/Location: **The City of Charles Town – WV-001 Keyes Ferry Road**
Keyes Ferry Road, Jefferson County, West Virginia

This Second Amendment to License Agreement (the "**Second Amendment**"), dated as of _____, 2022, is made and entered into by and between TELEGIA COMMUNICATIONS INC., ("**LICENSEE**") a Delaware Corporation, with its principal offices at 5310 Spectrum Drive, Suite C, Frederick, Maryland 21703; and the CITY OF CHARLES TOWN, WEST VIRGINA ("**LICENSOR**"), a Municipal Corporation, with an address at 101 East Washington Street, Charles Town, West Virginia 25414. Licensee and Licensor are at times collectively referred to herein as the "**Parties**" and individually as a "**Party**".

RECITALS

WHEREAS Licensee and Licensor are parties to that License Agreement dated as of September 12, 2018 (the "Agreement") pursuant to which Licensee is leasing from Licensor space on Licensor's water tank (the "**Site**") and within Licensor's Property located at 475 Keyes Ferry Road, Charles Town, West Virginia for the purposes of operating certain communications antennas and related equipment thereat (collectively the "**Property**"); and

WHEREAS, Landlord and Tenant are parties to that First Amendment to the License Agreement (the "First Amendment") dated October 14, 2020, whereby Licensor and Licensee consented to allow the addition of certain equipment on the Site and within the Property; and

WHEREAS, Licensee desires to change the configuration of its antennas and related equipment at the Site and within the Property in accordance with the terms hereof; and

NOW, THEREFORE, in consideration of the foregoing recitals and the agreements and covenants set forth herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the Parties hereto agree as follows:

1. In consideration of Licensor's consent to the equipment modifications referenced in Exhibit 2 of this Second Amendment, the rent will increase effective April 1, 2022 by Two Hundred Dollars and No Cents ($200.00) per month and is hereby affirmed for a total of Eight Hundred Sixty-Six Dollars and Seventy-Five Cents ($866.75) per month. On September 27, 2024, or any other extension terms exercised by Lessee, the monthly rent shall be increased subject to the Extension Term monthly rental increase set forth in Section 2(a) of the Agreement.

2. **Exhibit 2** to the Agreement is hereby deleted in its entirety, and the new **Exhibit 2-A** to the Agreement, the Colocation Application of Tenant, is hereby incorporated into the Agreement in lieu thereof.

3. **Exhibit 3** to the Agreement is hereby deleted in its entirety, and the new **Exhibit 3-A** to the Agreement, the Tenant As-Built Construction Drawings, is hereby incorporated into the Agreement in lieu thereof.

4. Except as expressly amended herein, the Agreement terms and provisions thereof shall remain in full force and effect. Capitalized terms not otherwise defined herein shall have the meanings ascribed to such terms in the Agreement.

5. This Amendment may be executed in multiple counterparts, each of which, when executed, shall be deemed an original instrument, but all of which taken together shall constitute one and the same agreement.

SIGNATURES APPEAR ON THE NEXT PAGE

IN WITNESS WHEREOF, the parties have executed this Amendment as of the day and year first above written.

Witness

Pamela K. Mitchell

Print Name: Pamela K. Mitchell

LICENSOR:

TELEGIA COMMUNICATIONS INC.
a Delaware Corporation

By: _____

Name: Roan Sanders

Title: CEO

Witness

_____

Print Name: _____

LICENSEE:

CITY OF CHARLES TOWN
a Municipal Corporation

By: _____

Name: _____

Title: _____

EXHIBIT 2-A

CO-LOCATION APPLICATION OF TENANT

[See Attached Co-location Application of Tenant]

☐ NEW LEASE ☑ AMENDMENT TO EXISTING LEASE ☐ ANCHOR TENANT ☐ RECONTRACT

INTERNAL USE ONLY	
APP VERSION #	Initial
LEASE #	18
AMENDMENT #	2

PLEASE RETURN THIS APPLICATION VIA EMAIL TO:

Wireless Networks Group, Inc.
1011 Holden Road
Frederick, Maryland 21701-3437
Attn: Michael Hofe
E-Mail: mhofe@wirelessnetworksgroup.com
Phone: 301-667-0001

Charles Town Site Number:	**WV-001**
Charles Town Site Name:	**Keyes Ferry Road**
Application Date:	1/20/2022
Revision Dates:	11/3/2021
OPS Approval:	2/9/2022

APPLICANT / CARRIER INFORMATION

Carrier Name:	**Telegia Communications Inc.**	**Contact Name:**	**Roan Saunders**
Carrier Site Number:		**Contact Number:**	**240.529.2000 x501**
Carrier Site Name:	**KFT**	**Contact Fax:**	**240.436.6229**
Carrier Legal Entity Name:	Telegia Communications Inc.	**Contact Address:**	5310 Spectrum Drive, Suite C Frederick MD 21703
State of registration:	Maryland		
Type of entity (LP, LLC, Corp) d/b/a (If applicable)	Corporation		
Notice Address for Lease:	5310 Spectrum Drive, Suite C Frederick MD 21703	**Contact E-mail:**	rsaunders@telegia.com
With copies to:		**Additional E-mail:**	
Carrier Invoice Address:	5310 Spectrum Drive, Suite C Frederick MD 21703	**Desired Install Date:**	09-26-2018
Carrier Invoice Contact - Name, Title, Phone No.	Roan Saunders CFO 240.529.2000 x501	**Carrier NOC#**	240-529-2000 - Ext #2

ADDITIONAL CONTACT INFORMATION

Leasing Contact Name/Number:	Roan Saunders 240.529.2000 x501
RF Contact Name/Number:	Scott Stambaugh 240.529.2000 x115
Construction Contact Name/Number:	Scott Stambaugh 240.529.2000 x115
Emergency Contact Name/Number:	Roan Saunders 240.529.2000 x501

SITE INFORMATION

Latitude:	**39.292967**	**N**	**Existing Structure Type:**	**Water Tank**
Longitude:	**-77.832567**	**W**	**Existing Structure Height:**	**160'**
Site Address:	**475 Keyes Ferry Road, Charles Town, WV 25414**			

FREQUENCY/TECHNOLOGY INFORMATION

Type of Technology for all equipment (i.e., 3G, LTE, CMDA, MW, WiFi, TV, etc.)		WiFi, MW
TX Frequency (MHz)	Unlicensed	5735, 5755, 5775, 5795, 5815, 5835
RX Frequency (MHz)	Unlicensed	5735, 5755, 5775, 5795, 5815, 5835
Tenants using an unlicensed band must provide exact Frequency Channels and Call Sign(s) to be utilized. (Providing the band range only will not be accepted.)		MW Licensed 11GHz

PLEASE PROVIDE A BRIEF DESCRIPTION OF GENERAL SCOPE OF WORK

Adding 4' Dish and ODU to existing collar mount located on tank leg at 120' AGL.

EXISTING EQUIPMENT Applicant's Existing Equipment Configuration and Specifications										
Equipment Type (ex: panel, TMA, RRU)	**RAD (feet)**	**Mount Height (feet)**	**Mount Type**	**Equip Qty**	**Equipment Manufacturer**	**Equipment Model #**	**Equip Dim (HxWxD) (ft or in)**	**Equip Weight (lbs)**	**Az**	**Remain**
Panel	137'	137'	Pipe Mount	2	Ubiquiti	AM-5AC21-60	29.53 x 6.81 x 3.07"	10.58 lbs	165, 220	Yes
Panel	137'	137'	Pipe Mount	2	Ubiquiti	AM-5AC21-60	29.53 x 6.81 x 3.07"	10.58 lbs	270,330	Yes
Panel	137'	137'	Pipe Mount	2	Ubiquiti	RD-5G30	25.6" Dia. x 11.97"	21.61 Lbs	10, 150	Yes
Panel	137'	137'	Pipe Mount	1	Ubiquiti	airFIBER AF-24HD	30.24" x 23.35" x 14.57"	38.14 lbs	30	Yes
RRU	137'	137'	Pipe Mount	7	Ubiquiti	RP-5AC-Gen2	3.47 x 1.58 x 9.06"	14.11 oz	At Panel Azimuth	Yes
MW Dish	120'	120'	Pipe Mount	1	Dragonwave	HP3-11	36"x36"x20"	49.6 Lbs	138.5	Yes
ODU	120'	120'	Pipe Mount	1	Dragonwave	Horizon Duo	7.8" x 7.8" x 3.6"	7 Lbs	138.5	Yes
	71									

EXISTING LINES Applicant's Existing Lines and Specifications					
Line Type	**Line Size (Inches)**	**Total # of Lines**	**Coax interior or exterior (for monopoles)**	**Remain**	**Comments:**
Coax	1/2"	1			LDF4-50A to feed Dragonwave dish
Cat6	3/8"	7			Cat6 to feed Panel Antennas

PROPOSED EQUIPMENT Applicant's Proposed Equipment Configuration and Specifications									
Equipment Type (ex: panel, TMA, RRU, ice shields)	**RAD (feet)**	**Mount Height (feet)**	**Mount Type**	**Equip Qty**	**Equipment Manufacturer**	**Equipment Model #**	**Equip Dim (HxWxD) (ft or in)**	**Equip Weight (lbs)**	**Azimuth**
MW Dish	120'	120'	Pipe Mount	1	Dragonwave	A-ANT-11G-4-C	50.8"x50.8"x26"	55lbs	180
ODU	120'	120'	Pipe Mount	1	Dragonwave	Harmony	10.5"x10"x6.2"	16.5lbs	180
						Above Added to Existing Loading			

PROPOSED LINES Applicant's Proposed Lines and Specifications				
Line Type	**Line Size (Inches)**	**Total # of Lines**	**Coax interior or exterior (for monopoles)**	**Comments:**
Coax				
RET Home Run Cable				
Fiber	3/8"	2		Cat6 adding to existing cable mount
DC Power	3/8"	1		adding to existing cable mount

PROPOSED FINAL CONFIGURATION TOTALS	
EQUIPMENT TYPE	TOTAL
Panel Antennas	7
Omni/Whip Antennas	
RRU	7
TMA	
Diplexer / Triplexer	
Bias T	
Surge Suppressor	
MW Dish	2
Ice Shield	
ODU	2
Filter	
Combiner	
Junction Box	
RET	
Equipment Cabinets	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	

PROPOSED FINAL CONFIGURATION TOTALS	
LINE TYPE	TOTAL
Coax	1
Hybrid	
CAT5	9
DC/Power	1
RET	
Fiber	

ADDITIONAL EQUIPMENT INFORMATION

- RRUs, TMAs and ODUs are required to be installed directly behind the antennas / MW dish. Otherwise there will be an additional charge.
- All equipment lines are required to be installed inside the tower when space is available. Carriers will be charged an additional $25.00 per line per month if equipment lines are installed on the outside of the tower even though there is available space inside the tower. Vertical Bridge must approve any installation of lines on the outside of the tower.
- All tenant equipment must be installed within one continuous 10 ft vertical envelope. Exceeding this vertical space will be subject to additional rent.

GROUND / INTERIOR SPACE REQUIREMENTS							
Total Ground / Interior Area Dimensions: **L' x W' = Total Square Feet Required**	3	X	3	(Including all Equipment (i.e., Shelter, Equipment Platform or Pad, Generator Pad, Generator Fuel Tank Pad, Antenna Sleds, etc. – provide details below)			
Cabinet Area Dimensions (Pad/Platform)	3	X	3	Cabinet Installation Type	Ground Platform		
Shelter Pad Dimensions		X		Shelter Manufacturer			
Rooftop Antenna Total Area Required		X		Antenna Sled Dimensions (per sector)		X	Antenna Wall Mount Dimensions (per sector)		X	

EQUIPMENT CABINET REQUIREMENTS (Required for rooftops or Vertical Bridge interior space)					
Number of Cabinets Required	1	Cabinet Dimensions (L' x W' x H')	25"x34"x50"	Manufacturer:	DDB
Number of Cabinets Required		Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Number of Cabinets Required		Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Equipment Cabinet Comments					

GENERATOR REQUIREMENTS					
Generator Required?:		Generator Fuel Type		Generator Size	
Generator Pad Dimensions			Generator Manufacturer		
Generator Fuel Tank Pad Dimensions			Fuel Tank Manufacturer		

AC POWER REQUIREMENTS			
Meter Type	New Tenant Meter	Estimated Monthly Utility Usage Amount	5000kwh
Voltage	110	Total Amperage	20amp

FIBER / BACKHAUL					
Fiber Installation Status	Existing (No Change)	Fiber Provider	Shentel		
Cable Type	Fiber	Number of Points of Entry		Conduit/Riser Size (in inches)	2"

STRUCTURAL ANALYSIS DETAILS			
Structural Hardcopies Required?	No	If wet seals required, please provide address:	

ADDITIONAL COMMENTS

EXHIBIT 3-A

TENANT AS-BUILT CONSTRUCTION DRAWINGS

[See Attached Final Approved CD's to be Replaced by As-Built Construction Drawings]

telegia
Communications ✲ Unified

SITE NAME: KEYES FERRY TANK
CITY SITE ID: WV-001 - KEYES FERRY
MW DISH ADD

475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

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

SITE INFORMATION

PROJECT DESCRIPTION:	COLLOCATE PROPOSED TELECOMMUNICATIONS ANTENNA ON EXISTING WATER TANK AND UNMANNED OUTDOOR EQUIPMENT IN THE EXISTING FENCED IN COMPOUND.
CITY SITE ID:	WV-001 - KEYES FERRY
SITE ADDRESS:	475 KEYES FERRY ROAD CHARLES TOWN, WV 25414
LATITUDE (NAD 83): LONGITUDE (NAD 83):	39.292967° -77.832567°
GROUND ELEVATION:	486'± (AMSL)
JURISDICTION:	JEFFERSON COUNTY
ZONING:	RESIDENTIAL/LIGHT INDUSTRIAL/COMMERCIAL
PARCEL ID:	02 9000800060000
PARCEL AREA:	0.92 ACRES
PARCEL OWNER:	CITY OF CHARLES TOWN P.O. BOX 14 CHARLES TOWN, WV 25414
STRUCTURE TYPE:	WATER TANK
EXISTING STRUCTURE HEIGHT:	161.0' (AGL)
PROPOSED RAD CENTER:	120.0' (AGL)
OVERALL STRUCTURE HEIGHT:	161.0' (AGL)
CLASSIFICATION GROUP:	U
CONSTRUCTION TYPE:	2B
POWER PROVIDER:	POTOMAC EDISON
TELCO PROVIDER:	SHENTEL

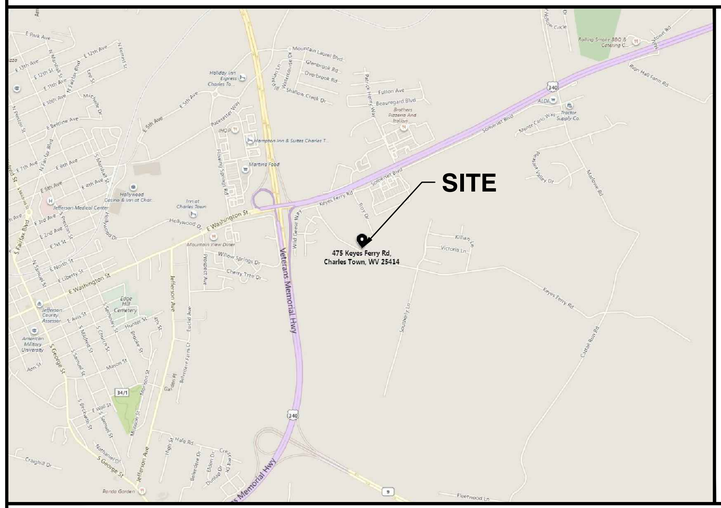
EMERGENCY INFORMATION:

CITIZENS FIRE COMPANY:	(304) 725-2814
CITY OF CHARLES TOWN POLICE DEPT:	(304) 725-6753

PROJECT TEAM

CITY OF CHARLES TOWN:	WIRELESS NETWORKS GROUP MICHAEL HOFE (301) 667-0001
APPLICANT:	TELEGIA 5310 SPECTRUM DRIVE, SUITE C FREDERICK, MD 21703 SCOTT STAMBAUGH (240) 529-2000 x 115
PROJECT MANAGEMENT FIRM:	NETWORK BUILDING + CONSULTING, LLC. 4435 WATERFRONT DRIVE - SUITE 100 GLEN ALLEN, VA 23060 (804) 548-4079
ENGINEERING FIRM:	NB+C ENGINEERING SERVICES, LLC. 4435 WATERFRONT DRIVE - SUITE 100 GLEN ALLEN, VA 23060 tsnarr@nbcllc.com (804) 548-4079

VICINITY MAP



DIRECTIONS

DEPART SPECTRUM DR TOWARD NEW HORIZON WAY. AT ROUNDABOUT, TAKE 2ND EXIT. TURN LEFT ONTO MD-85 / BUCKEYSTOWN PIKE. TAKE RAMP FOR I-270 N. AT EXIT 32, TAKE RAMP RIGHT FOR I-70 WEST TOWARD HAGERSTOWN. AT EXIT 52, TAKE RAMP RIGHT FOR US-15 SOUTH / US-340 WEST TOWARD CHARLES TOWN / LEESBURG. KEEP STRAIGHT ONTO US-340 W. ROAD NAME CHANGES TO WILLIAM L WILSON FWY. KEEP STRAIGHT ONTO US-340 S / WILLIAM L WILSON FWY. TURN LEFT ONTO KEYES FERRY RD / CR-26, AND THEN IMMEDIATELY TURN RIGHT ONTO KEYES FERRY RD. TURN LEFT ONTO KEYES FERRY RD / CR-26. THE SITE WILL BE ON THE LEFT.

CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THE LATEST EDITIONS OF THE FOLLOWING CODES.

- 2015 INTERNATIONAL BUILDING CODE
- 2017 NATIONAL ELECTRICAL CODE
- 2018 NFPA 101, LIFE SAFETY CODE
- 2018 IFC
- AMERICAN CONCRETE INSTITUTE
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION
- MANUAL OF STEEL CONSTRUCTION 13TH EDITION
- ANSI/TIA-222-G
- TIA 607
- INSTITUTE FOR ELECTRICAL & ELECTRONICS ENGINEER 81
- IEEE C2 NATIONAL ELECTRIC SAFETY CODE LATEST EDITION
- TELECORDIA GR-1275
- ANSI/T 311

DRAWING INDEX

T-1	TITLE SHEET
C-1	COMPOUND PLAN
C-2	ELEVATION
A-1	ANTENNA SCHEDULE & PLAN
A-2	MOUNTING & EQUIPMENT DETAILS

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 24"X36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

APPROVAL BLOCK

PARCEL OWNER - MICHAEL HOFE — DATE 2/9/2022

	APPROVED	APPROVED AS NOTED	DISAPPROVED/ REVISE
	X		

ENGINEER

NB+C TOTALLY COMMITTED.
NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
804-548-4079

APPLICANT

telegia
Communications ✲ Unified
5310 SPECTRUM DRIVE, SUITE C
FREDERICK, MD 21703
(855) 698-3534

SITE INFORMATION

KEYES FERRY TANK
CITY SITE #: WV-001
CITY SITE NAME: KEYES FERRY
NB+C PROJ. #100519
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
1	02/07/22	FINAL	TWD
0	01/28/22	PRELIMINARY	TWD

PROFESSIONAL STAMP

TRENT T. SNARR REGISTERED 21726 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER
02/07/22

ENGINEER

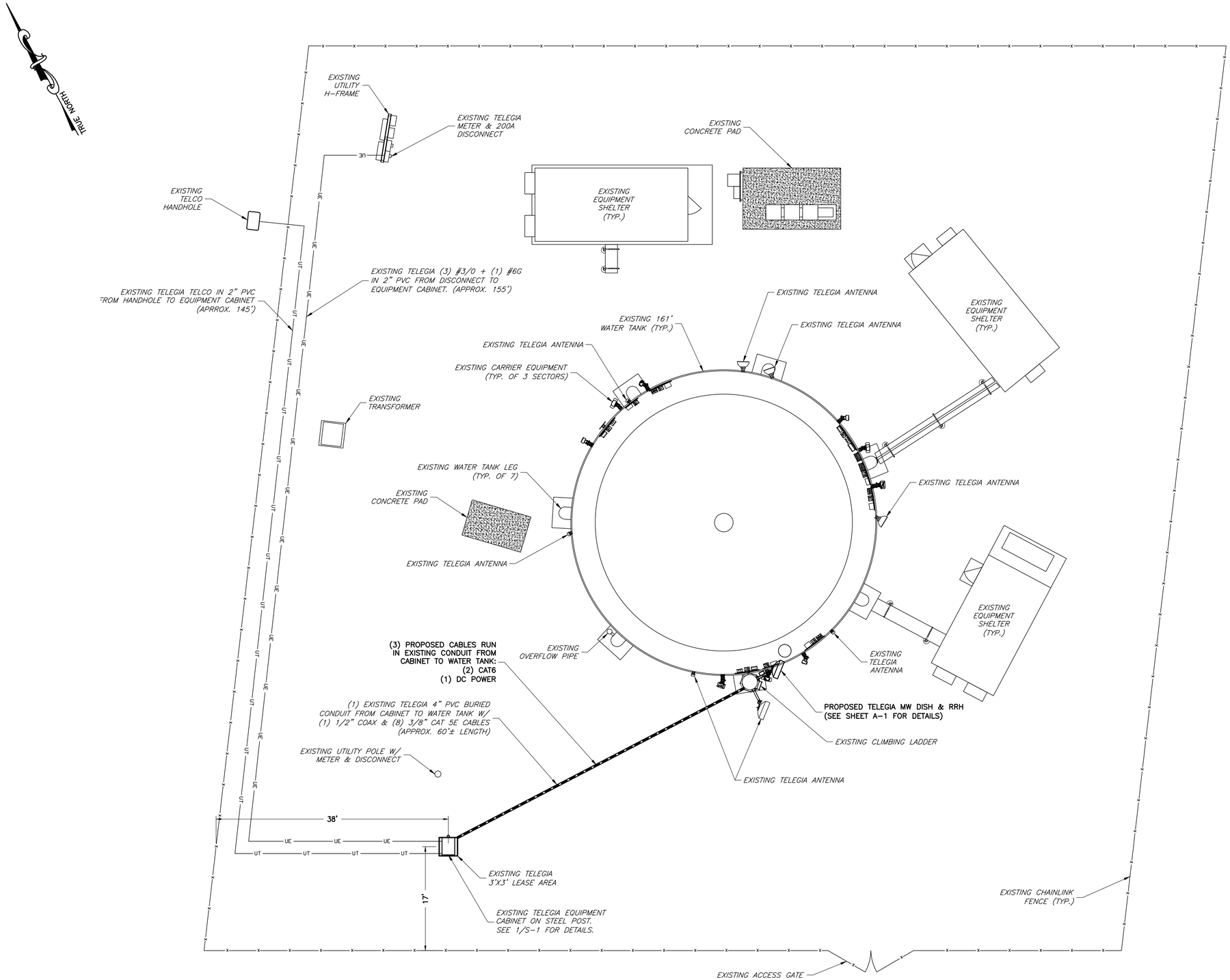
TRENT T. SNARR, P.E.
WV PROFESSIONAL ENGINEER LIC. #21726

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1



1 C-1 COMPOUND PLAN
SCALE: 1/8" = 1'-0"

GRAPHIC SCALE
8 0 4 8 16 32
(IN FEET)
1 INCH = 8 FEET

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

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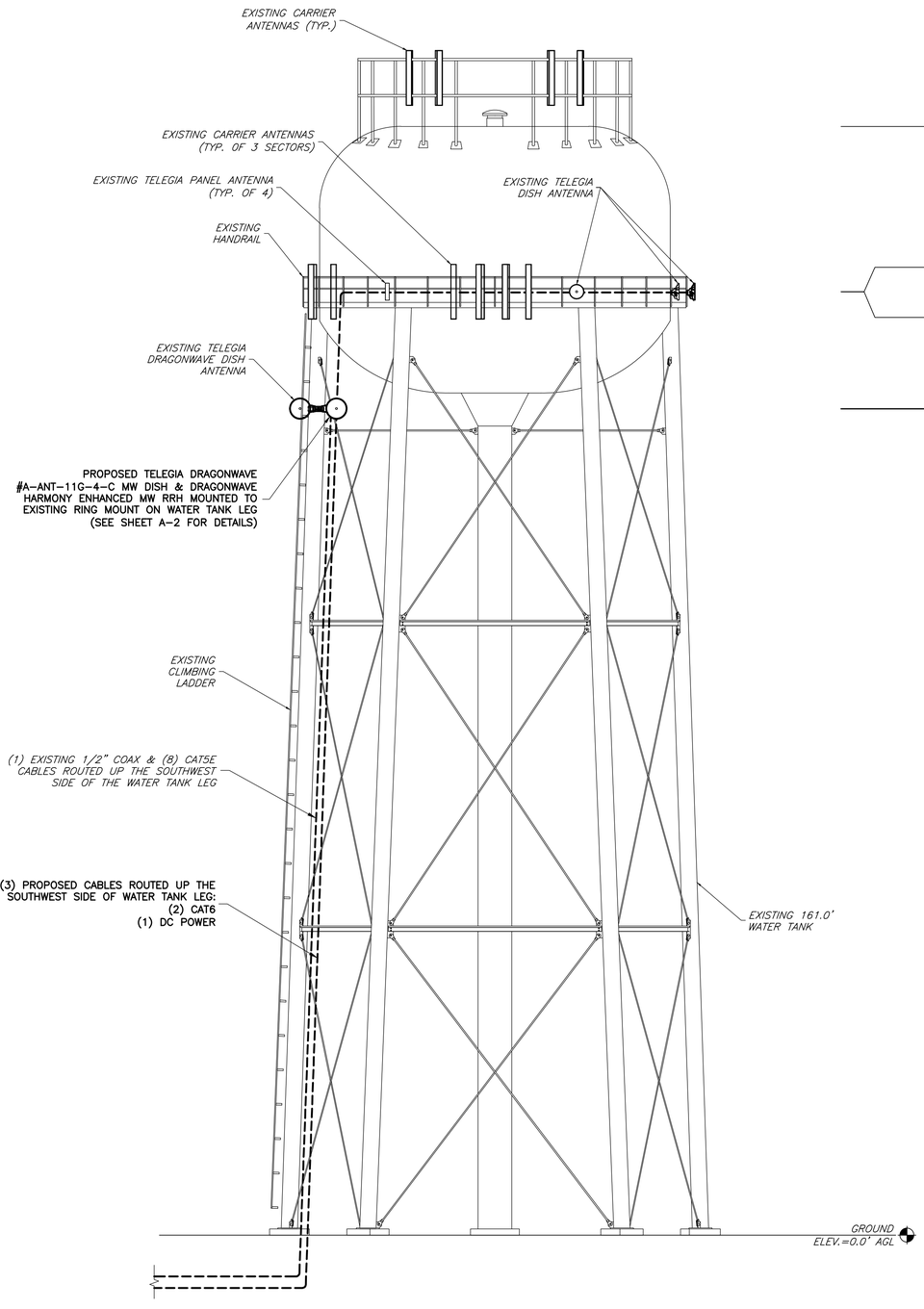
SHEET TITLE

COMPOUND PLAN

SHEET NUMBER

C-1



1 / C-2 SOUTHEAST ELEVATION
SCALE: 1" = 16'

GRAPHIC SCALE
16 0 8 16 32 64
(IN FEET)
1 INCH = 16 FEET

NOTES:

1. ALL CABLING ON THE WATER TANK MUST BE ELEVATED 6" OFF OF ALL PAINTED SURFACES.
2. SOME EQUIPMENT NOT SHOWN FOR CLARITY.

GENERAL NOTES

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE CODES ORDINANCES, LAWS AND REGULATIONS OF ALL MUNICIPALITIES, UTILITIES COMPANY OR OTHER PUBLIC AUTHORITIES.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND INSPECTIONS THAT MAY BE REQUIRED BY ANY FEDERAL, STATE, COUNTY OR MUNICIPAL AUTHORITIES.
3. THE CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER, IN WRITING, OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF BIDS OR PERFORMANCE OF WORK. MINOR OMISSIONS OR ERRORS IN THE BID DOCUMENTS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR THE OVERALL INTENT OF THESE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING SITE IMPROVEMENTS PRIOR TO COMMENCING CONSTRUCTION. THE CONTRACTOR SHALL REPAIR ANY DAMAGE CAUSED AS A RESULT OF CONSTRUCTION OF THIS FACILITY.
5. THE SCOPE OF WORK FOR THIS PROJECT SHALL INCLUDE PROVIDING ALL MATERIALS, EQUIPMENT AND LABOR REQUIRED TO COMPLETE THIS PROJECT. ALL EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
6. THE CONTRACTOR SHALL VISIT THE PROJECT SITE PRIOR TO SUBMITTING A BID TO VERIFY THAT THE PROJECT CAN BE CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. CONTRACTOR SHALL VERIFY ANTENNA ELEVATION AND AZIMUTH WITH RF ENGINEERING PRIOR TO INSTALLATION.
8. TRANSMITTER EQUIPMENT AND ANTENNAS ARE DESIGNED TO MEET ANSI/TIA 222-G REQUIREMENTS.
9. ALL STRUCTURAL ELEMENTS SHALL BE HOT DIPPED GALVANIZED STEEL.
10. CONTRACTOR SHALL MAKE A UTILITY "ONE CALL" TO LOCATE ALL UTILITIES PRIOR TO EXCAVATING.
11. IF ANY UNDERGROUND UTILITIES OR STRUCTURES EXIST BENEATH THE PROJECT AREA, CONTRACTOR MUST LOCATE IT AND CONTACT THE APPLICANT & THE OWNER'S REPRESENTATIVE.
12. OCCUPANCY IS LIMITED TO PERIODIC MAINTENANCE AND INSPECTION BY TECHNICIANS APPROXIMATELY 2 TIMES PER MONTH.
13. PRIOR TO THE INSTALLATION OF THE PROPOSED EQUIPMENT OR MODIFICATION OF THE EXISTING STRUCTURE, A STRUCTURAL ANALYSIS SHALL BE PERFORMED BY THE OWNER'S AGENT TO CERTIFY THAT THE EXISTING/PROPOSED COMMUNICATION STRUCTURE AND COMPONENTS ARE STRUCTURALLY ADEQUATE TO SUPPORT ALL EXISTING AND PROPOSED ANTENNAS, COAXIAL CABLES AND OTHER APPURTENANCES.
14. PROPERTY LINE INFORMATION WAS PREPARED USING DEEDS, TAX MAPS, AND PLANS OF RECORD AND SHOULD NOT BE CONSTRUED AS AN ACCURATE BOUNDARY SURVEY.
15. THIS PLAN IS SUBJECT TO ALL EASEMENTS AND RESTRICTIONS OF RECORD.
16. THE PROPOSED FACILITY WILL CAUSE ONLY A "DE MINIMIS" INCREASE IN STORMWATER RUNOFF. THEREFORE, NO DRAINAGE STRUCTURES ARE PROPOSED.
17. NO SIGNIFICANT NOISE, SMOKE, DUST, OR ODOR WILL RESULT FROM THIS FACILITY.
18. THE FACILITY IS UNMANNED AND NOT INTENDED FOR HUMAN HABITATION (NO HANDICAP ACCESS REQUIRED).
19. THE FACILITY IS UNMANNED AND DOES NOT REQUIRE POTABLE WATER OR SANITARY SERVICE.
20. POWER TO THE FACILITY WILL BE MONITORED BY A SEPARATE METER.

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

ENGINEER

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
804-548-4079

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02/07/22

ENGINEER

TRENT T. SNARR, P.E.
WV PROFESSIONAL ENGINEER LIC. #21726

SHEET TITLE

ELEVATION

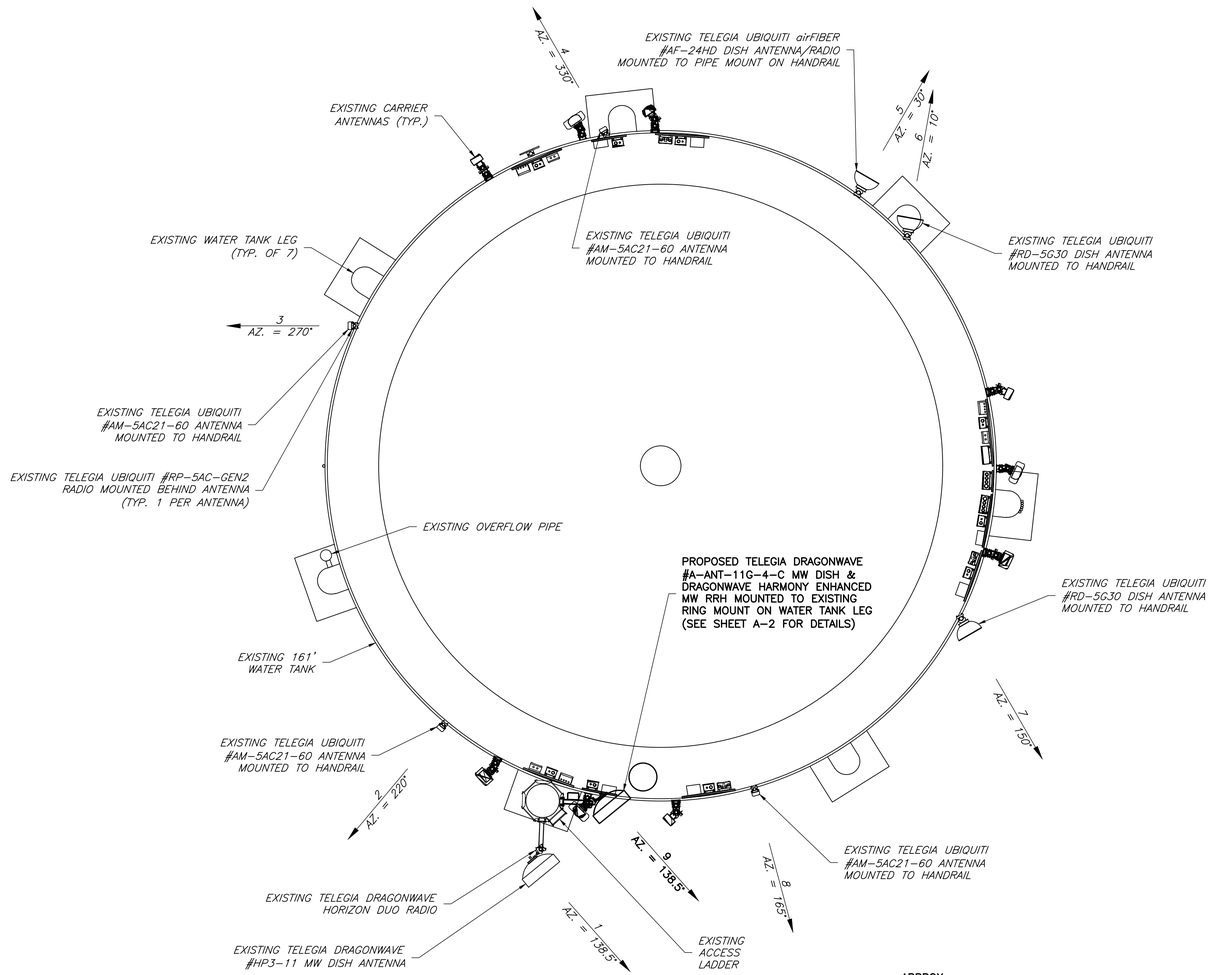
SHEET NUMBER

C-2

ANTENNA INFORMATION

SECTOR	STATUS	ANTENNA MANUFACTURER	ANTENNA MODEL	ANTENNA DIMENSIONS (HxWxD)	RAD CENTER	AZIMUTH	RADIO QUANTITY & MODEL	CABLE QUANTITY & TYPE	CABLE LENGTH
1	EXISTING	DRAGONWAVE	HP3-11	36"øX20"	120'	138.5°	DRAGONWAVE HORIZON DUO	(1) 1/2" COAX CABLE	180'±
2	EXISTING	UBIQUITI	AM-5AC21-60	29.53"X6.81"X3.07"	137'	220°	UBIQUITI RP-5AC-GEN2	(1) 3/8" CAT5E CABLE	215'±
3	EXISTING	UBIQUITI	AM-5AC21-60	29.53"X6.81"X3.07"	137'	270°	UBIQUITI RP-5AC-GEN2	(1) 3/8" CAT5E CABLE	250'±
4	EXISTING	UBIQUITI	AM-5AC21-60	29.53"X6.81"X3.07"	137'	330°	UBIQUITI RP-5AC-GEN2	(1) 3/8" CAT5E CABLE	275'±
5	EXISTING	UBIQUITI	airFIBER AF-24HD	30.24"X23.35"X14.57"	137'	30°	-	(1) 3/8" CAT5E CABLE	270'±
6	EXISTING	UBIQUITI	RD-5G30	25.6"øX11.97"	137'	10°	UBIQUITI RP-5AC-GEN2	(1) 3/8" CAT5E CABLE	265'±
7	EXISTING	UBIQUITI	RD-5G30	25.6"øX11.97"	137'	150°	UBIQUITI RP-5AC-GEN2	(1) 3/8" CAT5E CABLE	235'±
8	EXISTING	UBIQUITI	AM-5AC21-60	29.53"X6.81"X3.07"	137'	165°	UBIQUITI RP-5AC-GEN2	(1) 3/8" CAT5E CABLE	215'±
9	PROPOSED	DRAGONWAVE	A-ANT-11G-4-C	50.8"øX26.1"	120'	138.5°	(1) DRAGONWAVE HARMONY ENHANCED	(2) CAT6 + (1) DC CABLES	180'±

NOTES:
1. CONTRACTOR TO VERIFY PROPOSED ANTENNA INFORMATION IS THE MOST CURRENT DATA AT TIME OF CONSTRUCTION.
2. CONTRACTOR TO CONFIRM CABLE LENGTHS PRIOR TO CONSTRUCTION.



1 / A-1 PROPOSED ANTENNA ORIENTATION PLAN
NTS

ENGINEER

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
804-548-4079

APPLICANT

telegia
Communications ✲ Unified
5310 SPECTRUM DRIVE, SUITE C
FREDERICK, MD 21703
(855) 698-3534

SITE INFORMATION

KEYES FERRY TANK
CITY SITE #: WV-001
CITY SITE NAME: KEYES FERRY
NB+C PROJ. #100519
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

DESIGN RECORD

REVISIONS

REV	DATE	DESCRIPTION	BY
1	02/07/22	FINAL	TWD
0	01/28/22	PRELIMINARY	TWD

PROFESSIONAL STAMP

TRENT T. SNARR REGISTERED STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 21726
02/07/22

ENGINEER

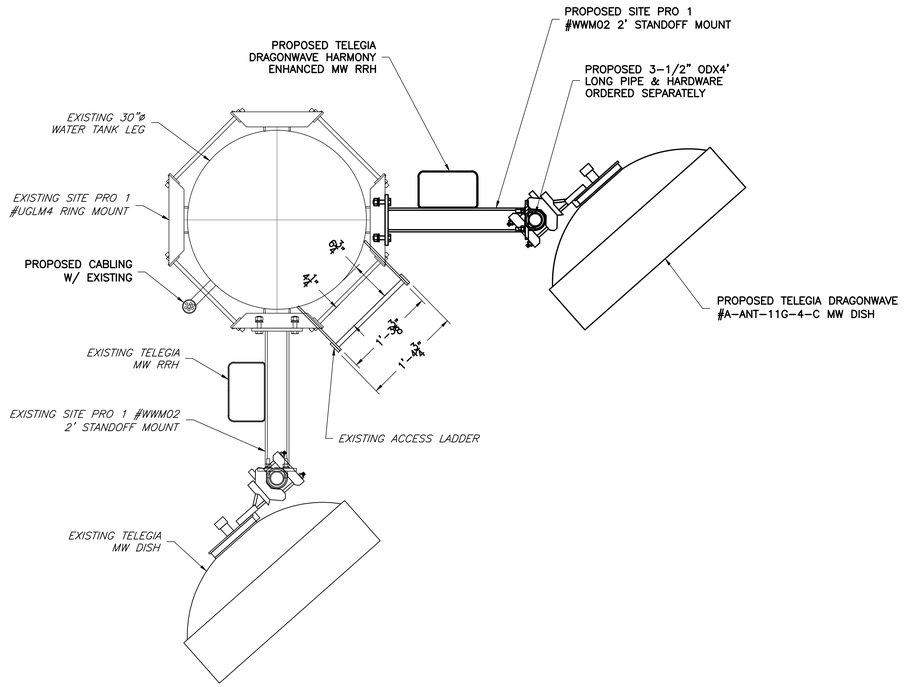
TRENT T. SNARR, P.E.
WV PROFESSIONAL ENGINEER LIC. #21726

SHEET TITLE

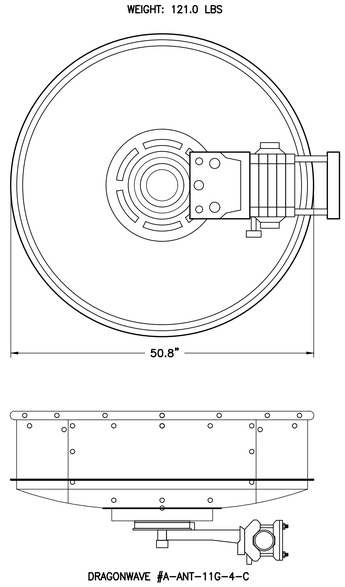
ANTENNA SCHEDULE & PLAN

SHEET NUMBER

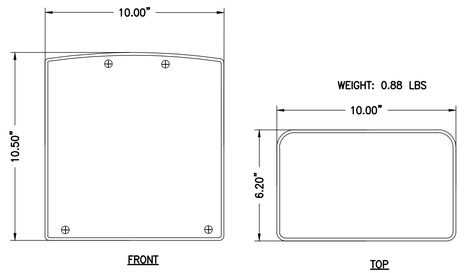
A-1



1 / A-2 PROPOSED MW DISH MOUNTING DETAIL
NTS



2 / A-2 DRAGONWAVE DISH ANTENNA #A-ANT-11G-4-C
NTS



3 / A-2 DRAGONWAVE HARMONY ENHANCED MW RRH
NTS

ENGINEER

NB+C ENGINEERING SERVICES, LLC.
120 EASTSHORE DRIVE, SUITE 300
GLEN ALLEN, VA 23059
804-548-4079

APPLICANT

telegia
Communications ✲ Unified
5310 SPECTRUM DRIVE, SUITE C
FREDERICK, MD 21703
(855) 698-3534

SITE INFORMATION

KEYES FERRY TANK
CITY SITE #: WV-001
CITY SITE NAME: KEYES FERRY
NB+C PROJ. #100519
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

DESIGN RECORD

REVISIONS

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0	01/28/22	PRELIMINARY	TWD

PROFESSIONAL STAMP

TRENT T. SNARR
REGISTERED
21726
STATE OF
WEST VIRGINIA
PROFESSIONAL ENGINEER
02/07/22

ENGINEER

TRENT T. SNARR, P.E.
WV PROFESSIONAL ENGINEER LIC. #21726

SHEET TITLE

MOUNTING & EQUIPMENT DETAILS

SHEET NUMBER

A-2

TENANT Site ID: Charles Town South - 7HCH506A

THIRD AMENDMENT TO LEASE AGREEMENT

Site Name/Location: **The City of Charles Town – WV-001 Keyes Ferry Road**
Keyes Ferry Road, Jefferson County, West Virginia

This Third Amendment to Lease Agreement (the "Amendment"), dated as of _____, 2022, is made and entered into by and between SPRINT SPECTRUM LLC, a Delaware limited liability company, with its principal offices at 6220 Sprint Parkway, Overland Park, Kansas 66251-2650, as successor-in-interest to SHENANDOAH PERSONAL COMMUNICATIONS, LLC, a Virginia limited liability company ("Tenant"); and the CITY OF CHARLES TOWN, WEST VIRGINA ("Landlord"), a Municipal Corporation, with an address at 101 East Washington Street, Charles Town, West Virginia 25414.

RECITALS

WHEREAS Landlord and Tenant are parties to that Lease Agreement dated as of November 20, 2002 (the "Agreement"), a First Amendment to the Lease dated November 7, 2012 (the "First Amendment") and a Second Amendment to the Lease dated April 14, 2016 pursuant to which Tenant is leasing from Landlord space on Landlord's water tank (the "Tank") and within Landlord's Property located off Keyes Ferry Road, Charles Town, West Virginia for the purposes of operating certain communications antennas and related equipment thereat (collectively the "Premises"); and

WHEREAS, Tenant desires to change the configuration of its antennas and related equipment at the Premises and within the Property in accordance with the terms hereof, and Landlord is amenable to such change in configuration in accordance with the terms hereof; and

WHEREAS, Landlord and Tenant desire to amend the Agreement in accordance with the terms hereof to reflect such change in the configuration of Tenant's antennas and related equipment at the Premises and within the Property and to increase the Fee Payments under the Agreement to reflect the increase in loading on the Tank resulting from such reconfiguration of Tenant's antennas and related equipment;

NOW, THEREFORE, in consideration of the foregoing recitals and the agreements and covenants set forth herein, and for other good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, the parties hereto agree as follows:

1. Exhibit 1 to the Agreement is hereby deleted in its entirety, and the new Exhibit A-3 to the Agreement, including the Collocation Application of Tenant, is hereby incorporated into the Agreement in lieu thereof.

2. Exhibit 2 to the Agreement is hereby deleted in its entirety, and the new Exhibit B-3 to the Agreement, the Tenant Construction Drawings, is hereby incorporated into the Agreement in lieu thereof.

3. The following new subsection (d) is hereby incorporated into Section 4 of the Agreement:

(d) Beginning on the earlier of April 1, 2022 or prorated as of the date upon which Tenant commences their configuration changes under this Third Amendment, the monthly rental payment due shall be Three Thousand Six Hundred Eleven and Sixty-Seven Cents ($3,611.67). On January 1, 2023, and on the same date thereafter throughout this renewal term or any other renewal terms exercised by Lessee, the monthly rent shall be increased subject to the annual monthly rental increase set forth in Section 4(b) hereof. In the event that this Lease continues beyond the expiration of the initial Lease term and any renewal terms provided for herein, the monthly rental payment shall be increased on January 1st of each year during any month-to-month term to an amount equal to 103% of the previous year's term and said rent shall be payable monthly through any month-to-month tenancy. Landlord or Tenant shall have the right to terminate this Agreement at any time with six (6) months prior written notice beginning with any yearly renewal term.

DocuSign Envelope ID: CBCC52F1-A2D8-42A2-9AE2-277139A53822

All notices, requests, demands and communications hereunder will be given by first class certified or registered mail, return receipt requested, or by a nationally recognized overnight courier, postage prepaid, to be effective when properly sent and received, refused or returned undelivered. Notices will be addressed to the parties as follows.

If to Tenant:

Sprint Property Services
Mailstop KSOPHD0101-Z2650
6220 Sprint Parkway
Overland Park, KS 66251-2650
Sprint Site ID No.: WA06SH128 (Charles Town South)

If to Landlord:

The City of Charles Town Utility Board
832 South George Street
Charles Town, West Virginia 25414
Attn: Utility Manager – WV-001 – Keyes Ferry Road

Notice given by certified mail or by reliable overnight courier shall be deemed delivered on the date of receipt (or on the date receipt is refused) as shown on the certification of receipt or on the records or manifest of the U.S. Postal Service or such courier service. Either party may change the location for providing notice to the other party by thirty (30) days written notice, as provided herein.

8. Except as expressly amended herein or within the First or Second Amendments previously in effect, the Agreement and the terms and provisions thereof shall remain in full force and effect. Capitalized terms not otherwise defined herein shall have the meanings ascribed to such terms in the Agreement.

9. This Amendment may be executed in multiple counterparts, each of which, when executed, shall be deemed an original instrument, but all of which taken together shall constitute one and the same agreement.

[This Space Left Blank Intentionally;
Signatures Appear on the Next Page]

TENANT Site ID: Charles Town South - 7HCH506A

IN WITNESS WHEREOF, the parties have executed this Amendment as of the day and year first above written.

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

_____

Print Name: _____

TENANT:

SPRINT SPECTRUM LLC
a Delaware limited liability company

By: DocuSigned by: JAMES SIMON 2F1DB67290EF4DD...

Name: JAMES SIMON

Title: Director

Approved
TMO Signatory Level : L06

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

_____

Print Name:_____

LANDLORD:

CITY OF CHARLES TOWN
a Municipal Corporation

By: _____

Name:_____

Title: _____

Digitally signed by John J. Velasquez
DN: cn=John J. Velasquez, o=T-Mobile USA, Inc., ou=Legal Affairs, email=John.Velasquez@t-mobile.com, c=US
Date: 2022.03.01 10:40:37 -05'0

DocuSign Envelope ID: CBCC52F1-A2D8-42A2-9AE2-277139A53822

EXHIBIT A-3

TENANT CO-LOCATION APPLICATION

[See Attached Co-Location Application]

DocuSign Envelope ID: CBCC52F1-A2D8-42A2-9AE2-277139A53822

☐ NEW LEASE	☑ AMENDMENT TO EXISTING LEASE	☐ ANCHOR TENANT	☐ RECONTRACT

INTERNAL USE ONLY	
APP VERSION #	1
LEASE #	7
AMENDMENT #	3

PLEASE RETURN THIS APPLICATION VIA EMAIL TO:

Wireless Networks Group, Inc.
1011 Holden Road
Frederick, Maryland 21701-3437
Attn: Michael Hofe

E-Mail: mhofe@wirelessnetworksgroup.com

Phone: 301-667-0001

Charles Town Site Number:	
Charles Town Site Name:	**Charles Town South**
Application Date:	12/17/21
Revision Dates:	1/14/2022
OPS Approval:	2/22/2022

APPLICANT / CARRIER INFORMATION

Carrier Name:	**T-Mobile**	**Contact Name:**	**Jonathan Redding**
Carrier Site Number:	**7HCH506A**	**Contact Number:**	**410-309-4949**
Carrier Site Name:		**Contact Fax:**	
Carrier Legal Entity Name:	T-Mobile Northeast, LLC	**Contact Address:**	3620 Commerce Dr #707, Baltimore, MD 21227
State of registration:	Delaware		
Type of entity (LP, LLC, Corp) d/b/a (If applicable)	LLC		
Notice Address for Lease:	12920 SE 38th St, Bellevue, WA 98006	**Contact E-mail:**	jredding@sitelinkwireless.com
With copies to:		**Additional E-mail:**	
Carrier Invoice Address:	12050 Baltimore Ave, Beltsville, MD 20705	**Desired Install Date:**	
Carrier Invoice Contact - Name, Title, Phone No.	Andrew Wissel, Project Manager	**Carrier NOC#**	

ADDITIONAL CONTACT INFORMATION

Leasing Contact Name/Number:	Jonathan Redding, Site Link Wireless, 410-309-4949
RF Contact Name/Number:	
Construction Contact Name/Number:	
Emergency Contact Name/Number:	

SITE INFORMATION

Latitude:	**39.29299600**	**N**	**Existing Structure Type:**	**Water Tank**
Longitude:	**-77.83232900**	**W**	**Existing Structure Height:**	**157**
Site Address:	**475 Keyes Ferry Road, Charles Town, WV**			

FREQUENCY/TECHNOLOGY INFORMATION

Type of Technology for all equipment (i.e., 3G, LTE, CMDA, MW, WiFi, TV, etc.)		L21, L19, U19, 2.5 GHZ NR+LTE, L/N600, L600
TX Frequency (MHz)	Licensed	668-734, 2135-2690, 1930-1975
RX Frequency (MHz)	Licensed	622-704, 2496-2690, 1735-1895
Tenants using an unlicensed band must provide exact Frequency Channels and Call Sign(s) to be utilized. (Providing the band range only will not be accepted.)		

PLEASE PROVIDE A BRIEF DESCRIPTION OF GENERAL SCOPE OF WORK

T-Mobile will be modifying its equipment for a final design of 3 new sector frames, 9 antennas, 6 RRUs, 1 MW dish, 1 ODU, 3 hybrid cables, 4 coax, 2 cabinets and new sector frames for mounts.

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EXISTING EQUIPMENT Applicant's Existing Equipment Configuration and Specifications										
Equipment Type (ex: panel, TMA, RRU)	**RAD (feet)**	**Mount Height (feet)**	**Mount Type**	**Equip Qty**	**Equipment Manufacturer**	**Equipment Model #**	**Equip Dim (HxWxD) (ft or in)**	**Equip Weight (lbs)**	**Az**	**Remain**
Panel	122	122	Pipe Mount	3	RFS	APXVSPP18-C-A20	not listed	not listed	60/200/330	No
Panel	122	122	Pipe Mount	3	RFS	APXVRR13-C-NA20	not listed	not listed	60/200/330	No
Panel	122	122	Pipe Mount	3	RFS	APXVTM14-ALU-120	not listed	not listed	60/200/330	No
MW	122	122	Pipe Mount	1	RFS	SC2-220AMPT Dish	not listed	not listed	60/200/330	No
RRH	122	122	Pipe Mount	6	Alcatel-Lucent	FR-RRH-4x45-1900	not listed	not listed	N/A	No
RRH	122	122	Pipe Mount	3	Alcatel-Lucent	FD-RRH-2x50-800	not listed	not listed	N/A	No
RRH	122	122	Pipe Mount	3	Alcatel-Lucent	TD-RRH-8x20-1900	not listed	not listed	N/A	No
ODU	122	122	Pipe Mount	1	Alcatel-Lucent	9500 MPR MPT-HC ODU	not listed	not listed	N/A	No

EXISTING LINES Applicant's Existing Lines and Specifications					
Line Type	**Line Size (Inches)**	**Total # of Lines**	**Coax interior or exterior (for monopoles)**	**Remain**	**Comments:**
Cat 5e	.265	1		No	Belden
Coax	1 1/4	6		No	RFS

DocuSign Envelope ID: CBCC52F1-A2D8-42A2-9AE2-277139A53822

PROPOSED EQUIPMENT Applicant's Proposed Equipment Configuration and Specifications									
Equipment Type (ex: panel, TMA, RRU, ice shields)	**RAD (feet)**	**Mount Height (feet)**	**Mount Type**	**Equip Qty**	**Equipment Manufacturer**	**Equipment Model #**	**Equip Dim (HxWxD) (ft or in)**	**Equip Weight (lbs)**	**Azimuth**
Panel	122	122	Sector Frames	3	Commscope	VV-65A-R1 (Quad)	54.7x12x4.6	43	60, 200, 285
Panel	122	122	Sector Frames	3	RFS	APXVAARR24_43-U-N-NA20 (Octo)	95.9x24x8.5	143.3	60, 200, 285
Panel	122	122	Sector Frames	3	Ericsson	AIR6449 B41	33.1x20.6x8.6	104	160, 200, 285
RRU	122	122	Sector Frames	3	Ericsson	Radio 4460 B25	19.6x15.7x12.1	109	N/A
RRU	122	122	Sector Frames	3	Ericsson	Radio 4449 B71+B85	13.19x14.95x9.25	74	N/A
MW	122	122	Sector Frames	1	Commscope	VHLP3-11W/A	39.3x32x15.2	37.5	285
ODU	122	122	Sector Frames	1	Ceragon	Fiber Air IP 20A	12.56x11.26x4.21	26.5	N/A

PROPOSED LINES Applicant's Proposed Lines and Specifications				
Line Type	**Line Size (Inches)**	**Total # of Lines**	**Coax interior or exterior (for monopoles)**	**Comments:**
Coax	1/2	4	water tank	1/2 coax lines
RET Home Run Cable				
Fiber	1 5/8	3	water tank	6x24 4 AWG
DC Power				

DocuSign Envelope ID: CBCC52F1-A2D8-42A2-9AE2-277139A53822

PROPOSED FINAL CONFIGURATION TOTALS	
EQUIPMENT TYPE	TOTAL
Panel Antennas	9
Omni/Whip Antennas	
RRU	6
TMA	
Diplexer / Triplexer	
Bias T	
Surge Suppressor	
MW Dish	1
Ice Shield	
ODU	1
Filter	
Combiner	
Junction Box	
RET	
Equipment Cabinets	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	
Other (Please specify)	

PROPOSED FINAL CONFIGURATION TOTALS	
LINE TYPE	TOTAL
Coax	4
Hybrid	3
CAT5	
DC/Power	
RET	
Fiber	

ADDITIONAL EQUIPMENT INFORMATION
• RRUs, TMAs and ODUs are required to be installed directly behind the antennas / MW dish. Otherwise there will be an additional charge. • All equipment lines are required to be installed inside the tower when space is available. Carriers will be charged an additional $25.00 per line per month if equipment lines are installed on the outside of the tower even though there is available space inside the tower. Charles Town must approve any installation of lines on the outside of the tower. • All tenant equipment must be installed within one continuous 10 ft vertical envelope. Exceeding this vertical space will be subject to additional rent.

GROUND / INTERIOR SPACE REQUIREMENTS						
Total Ground / Interior Area Dimensions: **L' x W' = Total Square Feet Required**	12 X 20	(Including all Equipment (i.e., Shelter, Equipment Platform or Pad, Generator Pad, Generator Fuel Tank Pad, Antenna Sleds, etc. – provide details below)				
Cabinet Area Dimensions (Pad/Platform)	X	Cabinet Installation Type				
Shelter Pad Dimensions	X	Shelter Manufacturer				
Rooftop Antenna Total Area Required	X	Antenna Sled Dimensions (per sector)	X	Antenna Wall Mount Dimensions (per sector)	X	

EQUIPMENT CABINET REQUIREMENTS (Required for rooftops or Charles Town interior space)					
Number of Cabinets Required	2	Cabinet Dimensions (L' x W' x H')	63x26x26	Manufacturer:	Ericsson
Number of Cabinets Required		Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Number of Cabinets Required		Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Equipment Cabinet Comments					

GENERATOR REQUIREMENTS					
Generator Required?:		Generator Fuel Type		Generator Size	
Generator Pad Dimensions		Generator Manufacturer			
Generator Fuel Tank Pad Dimensions		Fuel Tank Manufacturer			

AC POWER REQUIREMENTS			
Meter Type	Existing Tenant Meter	Estimated Monthly Utility Usage Amount	
Voltage		Total Amperage	

FIBER / BACKHAUL					
Fiber Installation Status	Existing (No Change)	Fiber Provider			
Cable Type		Number of Points of Entry		Conduit/Riser Size (in inches)	

STRUCTURAL ANALYSIS DETAILS			
Structural Hardcopies Required?	No	If wet seals required, please provide address:	

ADDITIONAL COMMENTS
All cabinets to be replaced with two (2) new cabinets on the existing concrete pad.

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TENANT Site ID: Charles Town South - 128

EXHIBIT B-3

TENANT CONSTRUCTION DRAWINGS

[See Attached Construction Drawings]

DocuSign Envelope ID: CBCC52F1-A2D8-42A2-9AE2-277139A53822

T-MOBILE NORTHEAST LLC
SITE ID: 7HCH506A
SITE NAME: NTM WA06SH128 (CHARLES TOWN SOUTH)
475 KEYES FERRY ROAD
CHARLES TOWN, WEST VIRGINIA 25414
JEFFERSON COUNTY
T-MOBILE SHENTEL KEEP PROJECT
DESIGN: 67E5A998E 6160

DESIGN BASED ON DRAFT RFDS: 7HCH506A_SPRINT RETAIN_1_DRAFT (LAST MODIFIED: 9/20/2021)

TRUE NORTH

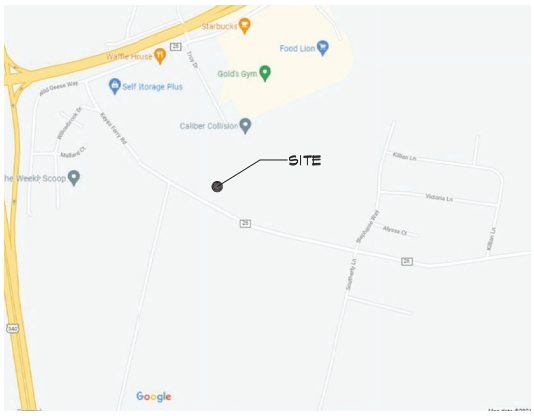
NOTE TO GENERAL CONTRACTOR

NO WORK IS TO BE PERFORMED ON THIS SITE WITHOUT REVIEW OF THE APPROVED STRUCTURAL ANALYSIS. IF ANY DISCREPANCIES ARE FOUND THE GENERAL CONTRACTOR SHALL NOTIFY ENGINEER IN WRITING, AT NO TIME WILL ANY ADDITIONAL ANTENNAS BE INSTALLED WITHOUT WRITTEN CONSENT FROM TOWER ENGINEER.

SITE INFORMATION

SCOPE OF WORK:	(9) EXISTING SHENTEL ANTENNAS TO BE REMOVED (12) EXISTING SHENTEL RRH TO BE REMOVED (7) EXISTING SHENTEL CABLES TO BE REMOVED (6) REMOVED 7/8" COAX (1) REMOVED 1/2" COAX (3) EXISTING SHENTEL ANTENNA FRAMES TO BE REMOVED (3) EXISTING SHENTEL RING MOUNTS TO BE REMOVED (4) EXISTING SHENTEL CABINETS TO BE REMOVED (1) EXISTING SHENTEL JUNCTION BOX TO BE REMOVED (1) EXISTING SHENTEL FIBER BOX TO BE REMOVED (9) PROPOSED ANTENNAS (1) PROPOSED 24IN W CABLE (3) PROPOSED 4460 B25+B66 RRU (3) PROPOSED 4460 B25+B66 RRU (3) PROPOSED 6x24 HYBRID CABLES (4) PROPOSED 6" COAX (3) PROPOSED ANTENNA SECTOR FRAMES (3) PROPOSED FRAME ATTACHMENT ASSEMBLIES (12) PROPOSED MOUNTING PIPES (1) PROPOSED T-MOBILE CABLE ROUTING (1) EXISTING T-MOBILE EQUIPMENT PAD (1) EXISTING PPC PANEL TO BE REMOVED (1) PROPOSED B160 BATTERY CABINET (1) PROPOSED B160 EQUIPMENT CABINET (1) PROPOSED PPC PANEL (1) EXISTING TELCO CABINET (1) EXISTING METER
PROJECT DESIGN:	T-MOBILE MOD CONSTRUCTION
SITE ID NUMBER:	7HCH506A
911 SITE ADDRESS:	475 KEYES FERRY ROAD CHARLES TOWN, WV 25414
CENTROID OF (3) SECTORS:	LAT. = N39° 17' 34.79", LONG. = W77° 49' 56.38" LAT. = 39.2929972, LONG. = 77.8323328
JURISDICTION: ZONING:	JEFFERSON COUNTY R-4 I-C (RESIDENTIAL/LIGHT INDUSTRIAL/COMMERCIAL)
PARCEL ID: TRACT AREA: PARCEL OWNER: ADDRESS:	02-4000080006 0.9 ACRES CITY OF CHARLES TOWN 101 EAST WASHINGTON STREET CHARLES TOWN, WV 25414
OWNER CONTACT:	MICHAEL HOFE (301) 667-3001
GROUND ELEVATION:	498' AMSL (AVG.)
EXISTING USE GROUP:	UTILITY (U)
STRUCTURE HEIGHT:	126'-0" AGL (TOP OF T-MOBILE ANTENNAS) 157'-0" AGL (TOP OF WATER TANK BOWL) 167'-0" AGL (TOP OF VERIZON ANTENNAS / HIGHEST POINT)

VICINITY PLAN



INDEX OF DRAWINGS

CS-1	COVER SHEET
GN-1	GENERAL STRUCTURAL NOTES
C-1	SITE PLAN
C-2	SITE DETAILS
C-3	ANTENNA SECTOR PLANS
C-4	ANTENNA SCHEDULE & EQUIPMENT DETAILS
C-5	WATER TOWER ELEVATIONS
C-6	PAINTING SPECIFICATIONS
S-1	STRUCTURAL DETAILS
S-2	STRUCTURAL DETAILS
G-1	SITE GROUNDING PLAN, EQUIPMENT GROUNDING PLANS AND NOTES
G-2	ANTENNA GROUNDING PLANS, AND NOTES
E-1	SITE POWER PLAN, EQUIPMENT POWER PLANS AND NOTES
E-2	POWER RISERS, PANEL SCHEDULES AND NOTES
E-3	SYMBOLS LIST, GENERAL NOTES, AND DETAILS

DO NOT SCALE DRAWINGS

THESE DRAWINGS ARE FORMATTED TO BE FULL-SIZE AT 24"X36". CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER / ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR MATERIAL ORDERS OR BE RESPONSIBLE FOR THE SAME. CONTRACTOR SHALL USE BEST MANAGEMENT PRACTICE TO PREVENT STORM WATER POLLUTION DURING CONSTRUCTION.

APPROVAL BLOCK

		APPROVED	APPROVED AS NOTED	DISAPPROVED/ REVISE
PROPERTY OWNER	2/22/2022	☒	☐	☐
SITE ACQUISITION	DATE	☐	☐	☐
CONSTRUCTION MANAGER	DATE	☐	☐	☐
ZONING	DATE	☐	☐	☐
RF ENGINEER	DATE	☐	☐	☐

PROJECT TEAM

APPLICANT:	T-MOBILE NORTHEAST LLC 12050 BALTIMORE AVENUE BELTSVILLE, MD 20705 OFFICE: (240) 264-8600 FAX: (240) 264-8610
PROJECT MANAGEMENT FIRM:	SITELINK WIRELESS, LLC 3620 COMMERCE DRIVE, SUITE 707 BALTIMORE, MD 21227 (410) 309-4949
ENGINEERING FIRMS:	TELEGENT ENGINEERING INC. 2216 COMMERCE ROAD, SUITE 1 FOREST HILL, MD 21050 (410) 692-5816 MORRIS & RITCHIE ASSOCIATES, INC. 1220-B EAST JOPPA ROAD, SUITE 400K TOWSON, MD 21286 (410) 821-1690

CODE ANALYSIS

APPLICABLE BUILDING CODE:	IBC 2015
APPLICABLE ELECTRIC CODE:	NEC 2014
USE GROUP:	UTILITY (U)
CONSTRUCTION TYPE:	IIA

DIRECTIONS TO SITE

FROM BELTSVILLE:

1. HEAD SOUTHEAST TOWARD US-1 N
2. TURN LEFT ONTO US-1 N
3. TURN LEFT ONTO THE MD-200 W RAMP TO I-95/I-270
4. CONTINUE ONTO MD-200 W
5. KEEP LEFT TO STAY ON MD-200 W
6. CONTINUE ONTO I-370 W
7. TAKE THE EXIT ONTO I-270 N TOWARD FREDERICK
8. TAKE THE EXIT ON THE LEFT TO STAY ON I-270 N TOWARD FREDERICK
9. TAKE EXIT 32 TO MERGE ONTO I-70 W TOWARD HAGERSTOWN
10. TAKE EXIT 30 TO MERGE ONTO US-15 S/US-340 W TOWARD CHARLES TOWN/LEESBURG
11. CONTINUE TO FOLLOW US-340 W PASSING THROUGH VIRGINIA AND INTO WEST VIRGINIA
12. TURN LEFT ONTO KEYES FERRY ROAD
13. QUICK RIGHT TO STAY ON KEYES FERRY ROAD
14. TURN LEFT TO STAY ON KEYES FERRY ROAD
    THE DESTINATION IS ON YOUR LEFT

T-MOBILE NORTHEAST LLC
12050 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705
OFFICE: (240) 264-8600
FAX: (240) 264-8610

MORRIS & RITCHIE ASSOCIATES, INC.

SITE ID:
7HCH506A
SITE NAME:
NTM WA06SH128
(CHARLES TOWN SOUTH)
SITE ADDRESS:
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

REVISION BLOCK

NO.	DESCRIPTION	DATE
1	DISH ADDITION	12/14/2021
2	PERMIT DRAWINGS	1/11/2022
3	CABLE UPDATES	1/24/2022
4	OWNER REVISION	1/26/2022

DRAWN BY:	KTP
DESIGNED BY:	RJD
ORIGINAL DATE:	12/09/2021
MRA PROJECT #:	19851.073
DESIGN SCALE:	AS NOTED

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

PROJECT YOURSELF, GIVE THREE WORKING DAYS NOTICE

THE DRAWINGS ARE NOT TO BE SCALED. NECESSARY COMPONENTS OF CONSTRUCTION (EXISTS, ALL OR NOT SHOWN) ARE TO BE INSTALLED AS REQUIRED TO GIVE THE COMPLETE SYSTEM IN COMPLIANCE WITH ALL LAWS AND REGULATIONS THERE TO APPERTAINING.

SHEET TITLE

Cover Sheet

SHEET NUMBER

CS-1

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STRUCTURAL NOTES:

CODES

A. ALL CONSTRUCTION SHALL CONFORM WITH THE 2015 INTERNATIONAL BUILDING CODE (IBC 2015), AND ALL SUBSEQUENT SUPPLEMENTS.

B. ANSI/TIA/EIA-222-F STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS", AND ALL SUBSEQUENT SUPPLEMENTS

C. IN ADDITION, ALL CONSTRUCTION SHALL CONFORM WITH THE GOVERNING LOCAL BUILDING CODE

DESIGN LOADS

A. PROPOSED MOUNTS HAVE BEEN ANALYZED TO SUPPORT THE APPURTENANCES LISTED IN THE ANTENNA MOUNT ANALYSIS REPORT, BY MORRIS & RITCHIE ASSOCIATES, JOB NO. 19951.073, DATED DECEMBER 14, 2021.

B. MOUNT WIND LOAD DESIGN DATA:

ULTIMATE WIND SPEED (NO ICE)	V = 115 MPH
BASIC WIND SPEED (WITH ICE)	V = 50 MPH
DESIGN RADIAL ICE THICKNESS:	1.0" (ICE THICKNESS INCREASES W/ HEIGHT)
RISK CATEGORY:	II
EXPOSURE CATEGORY:	C
TOPOGRAPHIC CATEGORY:	1

C. EARTHQUAKE LOAD DESIGN DATA:

SHORT PERIOD ACCELERATION, Sxs	0.127 g
ONE SECOND PERIOD ACCELERATION, Sx1	0.043 g
SITE CLASS:	D (BY DEFAULT)
DAMPED SHORT PERIOD ACCELERATION, Sds	0.139 g
RESPONSE MODIFICATION FACTOR, R:	3.0
SEISMIC RESPONSE COEFFICIENT, Cs:	0.055 g

D. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS FOR THE EXISTING STRUCTURE, AS REQUIRED TO COMPLETE THE PROJECT. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHOD OF CONSTRUCTION AND SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE AND TO SUPPORT CONSTRUCTION LOADS DURING CONSTRUCTION.

EXISTING STRUCTURE

A. ALL EXISTING PLANS, DETAILS, DIMENSIONS, AND ELEVATIONS INDICATE EXISTING CONDITIONS AS KNOWN. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE AND CONDITION OF THE ACTUAL EXISTING ELEMENTS. SHOULD THEY DIFFER FROM THAT SHOWN, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY ALL EXISTING CONDITIONS INCLUDING DIMENSIONS AND ELEVATIONS PRIOR TO STARTING CONSTRUCTION. MINOR VARIATIONS CAN BE EXPECTED AND ANY REQUIRED DEVIATION FROM THE CONTRACT DOCUMENTS SHALL BE APPROVED BY THE ENGINEER PRIOR TO PROCEEDING WITH CONSTRUCTION.

B. CONTRACTOR TO PROVIDE TEMPORARY SUPPORT FOR ALL EXISTING ANTENNAS, TRANSMISSION LINES, OR OTHER APPURTENANCES, AS NEEDED, DURING CONSTRUCTION.

C. CONTRACTOR SHALL PROTECT ALL EXISTING APPURTENANCES FROM DAMAGE DURING CONSTRUCTION.

D. NO ANTENNAS, CABLES, OR OTHER APPURTENANCES SHALL BE ADDED TO THE TANK UNTIL THE REINFORCING WORK IS COMPLETE.

E. THE CONTRACTOR SHALL FIELD VERIFY THE SIZE AND CONDITION OF ALL EXISTING TANK ELEMENTS. SHOULD THE SIZE OR CONDITION OF THE EXISTING ELEMENTS DIFFER FROM THAT SHOWN ON THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ENGINEER.

F. THE CONTRACTOR IS RESPONSIBLE FOR REPAIRS TO ANY STRUCTURAL ELEMENTS WHICH ARE TO REMAIN AND THAT HAVE BEEN DAMAGED TO THE COMPLETE SATISFACTION OF THE OWNER. THE REPAIRS SHALL BE AT NO EXPENSE TO THE OWNER. ALL REPAIR WORK SHALL BE DESIGNED BY A LICENSED STRUCTURAL ENGINEER IN THE STATE THAT THE PROJECT IS LOCATED AND SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD FOR REVIEW AND APPROVAL PRIOR TO COMMENCING REPAIR WORK.

G. DO NOT PERMIT PORTIONS OF THE STRUCTURE TO FALL NOR DEEMS TO DROP EXCEPT BY METHODS WHICH WILL ENSURE INTEGRITY OF THE STRUCTURE.

H. THE CONTRACTOR SHALL COMPLETELY REMOVE ANY ABANDONED CABLES OR EQUIPMENT FROM THE SITE.

I. CONTRACTOR SHALL NOT INSTALL CABLING IN SUCH A MANNER THAT IT IMPEDES ACCESS TO THE CLIMBING LADDERS OR HATCH AREAS.

J. ALL CABLES SHALL BE FULLY SUPPORTED. CABLING SHALL NOT REST DIRECTLY ON TANK SURFACES OR BE PLACED IN A MANNER THAT CREATES A TRIPPING HAZARD.

MISCELLANEOUS

A. ALL WORK SHALL BE PERFORMED IN CALM WEATHER, WITH WIND GUSTS LESS THAN 20 MPH.

B. SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED FOR REVIEW BY THE ENGINEER. IF THE SHOP DRAWINGS ARE NOT SUBMITTED FOR REVIEW, THE ENGINEER WILL NOT BE RESPONSIBLE FOR STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. THE SHOP DRAWINGS SHALL INDICATE ANY DEVIATIONS OR OMISSIONS FROM THE CONTRACT DOCUMENTS. THE GENERAL CONTRACTOR SHALL REVIEW ALL SHOP DRAWINGS PRIOR TO SUBMISSION AND MAKE ALL CORRECTIONS DEEMED NECESSARY.

C. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS SHOWN ON THE CONTRACT DRAWINGS BEFORE PROCEEDING WITH CONSTRUCTION. ALL DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.

D. SCALES SHOWN ON THE STRUCTURAL CONTRACT DRAWINGS ARE FOR GENERAL INFORMATION ONLY. DIMENSIONAL INFORMATION SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.

E. THE CONTRACTOR SHALL MONITOR THE EXISTING STRUCTURE DURING CONSTRUCTION. IMMEDIATELY NOTIFY THE ENGINEER OF AREAS OF EXISTING DISTRESS OR FAILURE.

STRUCTURAL AND MISCELLANEOUS STEEL

A. ALL STEEL CONSTRUCTION SHALL CONFORM TO THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (ANSI/AISC 360) AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES".

B. ALL PIPE SHALL CONFORM TO ASTM A53, GRADE B (F_y = 35 KSI).

C. ALL PLATES SHALL CONFORM TO ASTM A36 (F_y = 36 KSI).

D. ALL STRUCTURAL BOLTS SHALL CONFORM TO ASTM F3125, GRADE A325 (F_u = 120 KSI), UNLESS OTHERWISE NOTED.

E. ALL U-BOLTS SHALL CONFORM TO SAE J429, GRADE 2 (F_u = 74 KSI), WITH SAE J995 NUTS AND WASHERS.

F. ALL NUTS SHALL CONFORM TO ASTM A563.

G. ALL WASHERS SHALL CONFORM TO ASTM F436.

H. ALL WELDED CONNECTIONS SHALL USE E7018 ELECTRODES.

I. ALL FIELD WELDS SHALL BE PERFORMED BY CERTIFIED WELDERS AND CONFORM TO THE AMERICAN WELDING SOCIETY CODE FOR BUILDINGS AWS D1.1. WELDER CERTIFICATIONS SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER OF RECORD. WELDS SHALL DEVELOP THE FULL STRENGTH OF MATERIALS BEING WELDED UNLESS OTHERWISE INDICATED.

J. THE CONTRACTOR SHALL NOT SPLICE OR CUT ORIGINAL STEEL MEMBERS NOT SHOWN ON CONTRACT DRAWINGS WITHOUT THE PERMISSION OF THE STRUCTURAL ENGINEER.

K. ALL STEEL MEMBERS, FABRICATIONS AND ASSEMBLIES (INCLUDING BOLTS, NUTS & WASHERS) SHALL BE COATED TO MATCH THE PERFORMANCE, MANUFACTURER AND COLOR OF THE EXISTING COATING AND PER THE SATISFACTION OF THE TANK OWNER.

L. DAMAGED GALVANIZED SURFACES SHALL BE REPAIRED BY COLD GALVANIZING IN ACCORDANCE WITH ASTM A780.

M. AN INDEPENDENT INSPECTION AGENCY SHALL INSPECT ALL STRUCTURAL STEEL AND VERIFY THAT IT CONFORMS TO THE REQUIREMENTS OF THE CONTRACT DOCUMENTS. RECONSTRUCTION REPORTS SHALL BE SUBMITTED TO THE ENGINEER WITHIN 5 DAYS OF THE INSPECTION. THE CONTRACTOR SHALL NOTIFY THE INSPECTION AGENCY OF ALL PHASES OF STEEL CONSTRUCTION AND ERECTION.

N. SHOW ALL COPES, HOLES, OPENINGS AND MODIFICATIONS REQUIRED IN STRUCTURAL STEEL MEMBERS FOR ERECTION OR THE WORK OF OTHER TRADES ON THE SHOP DRAWINGS FOR APPROVAL BY THE STRUCTURAL ENGINEER.

TANK SURFACE PREPARATION & PAINTING NOTES

A. ALL POINTS WHERE THE ANTENNA OR CABLING SUPPORTS ARE TO BE ATTACHED TO A COMPONENT OF THE EXISTING TANK SHALL BE BY PERMANENT WELDING OF BRACKETS, CLIP ANGLES OR BAR STOCK TO THE TANK. FULL CIRCUMFERENTIAL FILLET WELDING IS REQUIRED AT SUCH ATTACHMENT POINTS AND WELDS SHALL BE GROUND SMOOTH TO CONDITION D OF ANCE SP10-71.

B. BEFORE WELDING TO THE TANK, THE EXISTING COATINGS SHALL BE GROUND BACK TO AN AREA OUTSIDE THE HEAT AFFECTED ZONE (HAZ). THIS IS USUALLY ONLY TWO INCHES BEYOND THE WELDMENT. HOWEVER, ALL CARBONIZED AREAS ADJACENT TO HAZ SHALL ALSO BE GROUND DOWN TO BARE METAL WITH A FEATHERING OF THE REMAINING PAINT.

C. ALL WELDING SHALL BE ACCOMPLISHED WITH THE MAXIMUM OF PHYSICAL SHIELDING OF THE ARC TO MINIMIZE THE DAMAGE TO EXISTING COATINGS. ALUMINUM SHEETS, BOTTOMLESS METAL PAILS AND OTHER METHODS SHALL BE EMPLOYED TO VAPORIZE THE DISPERSION AGENT OF COATING DAMAGE FROM HOT SLAG OR SPARKS.

D. ALL LOCALIZED DAMAGE SITES TO THE EXISTING TANK COATINGS SHALL BE GROUND DOWN TO BARE METAL AND REPRIMED AS PER THE REQUIREMENTS OF THE TANK OWNER.

E. ALL COATING TO BE CONSIDERED FOR USE ON THE TANK OR ANCILLARY STRUCTURES (INCLUDING ANTENNA COMPONENTS) SHALL BE SUBMITTED FOR APPROVAL TO THE T-MOBILE PROJECT MANAGER AND THE TANK OWNERS REPRESENTATIVE PRIOR TO COMMENCEMENT OF ANY COATINGS WORK.

F. ALL COATINGS USED SHALL ADHERE TO THE SPECIFICATIONS LISTED ON SHEET GN-4. THIS INCLUDES ALL COATINGS APPLIED TO THE WATER TOWER OR TANK STRUCTURE AND/OR ANTENNA SUPPORT STRUCTURE.

G. THE COLOR OF ALL FINISHED COATINGS SHALL ADHERE TO THE SPECIFICATION ON SHEET GN-4. ALL COATING REPAIRS SHALL BE COMPLETED WITHIN THE ACCEPTABLE RECOAT WINDOW OF THE COATING LISTED ON THE COATING MANUFACTURER'S PRODUCT DATA SHEET.

H. IF TANK COMPONENTS OR COATINGS ARE DAMAGED AS A RESULT OF THE ANTENNA MODIFICATION, THESE COMPONENTS MUST BE REPAIRED TO THE SATISFACTION OF THE TANK OWNER. ALL REPAIRS TO TANK COMPONENTS MUST BE ACCOMPLISHED IN ACCORDANCE WITH AWWA D102 INCLUDING THE REQUIREMENTS FOR MATERIALS, FABRICATION, WELDING, INSTALLATION, AND INSPECTION.

I. ACCOMPANYING THE PRODUCT DATA SHEET SUBMISSIONS SHALL BE A LETTER FROM THE COATINGS MANUFACTURER DETAILING THAT EACH OF THE COATINGS SUBMITTED FOR CONSIDERATION FOR THIS WORK IS RECOMMENDED FOR THE TYPES OF SERVICE IMMERSION WITH THEIR USE AT THIS TANK. THIS SUBMISSION SHALL ALSO DETAIL ARE AND ALL SURFACE PREPARATION STEPS REQUIRED ESPECIALLY FOR GALVANIZED SURFACES AND PREVIOUSLY PAINTED SURFACES.

J. ALL COATING WORK SHALL BE PERFORMED ONLY BY PAINTING CONTRACTOR APPROVED BY THE TANK OWNERS QUALITY CONTROL (QC) REPRESENTATIVE.

K. ALL COATINGS SHALL BE ACCOMPLISHED IN THE PRESENCE OF A THE TANK OWNERS QC REPRESENTATIVE, IF REQUESTED, IT IS THE RESPONSIBILITY OF THE COATINGS SUB-CONTRACTOR TO COORDINATE TIMES FOR INSPECTION SERVICES WITH THE TANK OWNERS DESIGNATED REPRESENTATIVE. ANY COATINGS WORK ACCOMPLISHED WITHOUT THE TANK OWNERS INSPECTOR PRESENT OR COATINGS WORK REJECTED FOR FAILURE TO MEET MANUFACTURER REQUIREMENTS SHALL BE REMOVED AND RE-ACCOMPLISHED.

L. ALL REPAIRS TO TANK COATINGS MUST BE ACCOMPLISHED IN ACCORDANCE WITH AWWA D102 USING COATING SYSTEMS COMPATIBLE WITH THE EXISTING COATINGS AND THAT PROVIDE THE SAME OR BETTER LEVEL OF CORROSION PROTECTION AS THE EXISTING TANK COATING SYSTEMS.

DESIGN LIAISON

A. CONTRACTOR SHALL PROVIDE A RIGGING PLAN IN ACCORDANCE WITH THE TIA-322 STANDARD FOR "LOADING, ANALYSIS, AND DESIGN CRITERIA RELATED TO THE INSTALLATION, ALTERATION, AND MAINTENANCE OF COMMUNICATION STRUCTURES" WITH A QUALIFIED ENGINEER AND QUALIFIED PERSON.

B. THE RIGGING PLAN SHALL BE COMPLETED BY A PROFESSIONAL ENGINEER LICENSED IN THE JURISDICTION IN WHICH THE PROJECT IS LOCATED.

C. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, INSTALLATION AND REMOVAL OF TEMPORARY BRACING AND CONSTRUCTION SUPPORTS FOR THE EXISTING STRUCTURE, AS REQUIRED TO COMPLETE THE PROJECT. THE CONTRACTOR IS COMPLETELY RESPONSIBLE FOR THE METHOD OF CONSTRUCTION AND SHALL PROVIDE ALL TEMPORARY BRACING AND SHORING REQUIRED TO MAINTAIN THE STABILITY OF THE STRUCTURE AND TO SUPPORT CONSTRUCTION LOADS DURING CONSTRUCTION.

POST-MODIFICATION INSPECTION

A. A POST-MODIFICATION INSPECTION REPORT IS REQUIRED AND SHALL BE INCLUDED IN THE CONTRACTORS BID. A POST-MODIFICATION INSPECTION IS A VISUAL INSPECTION OF THE APPURTENANCE CONFIGURATION AND A REVIEW OF MATERIAL SUBMITTALS OTHER REPORTS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, MANUFACTURER'S INSTRUCTIONS AND SHOP DRAWINGS.

B. THE POST-MODIFICATION INSPECTION REPORT SHALL BE COMPLETED BY A PROFESSIONAL ENGINEER LICENSED IN THE JURISDICTION IN WHICH THE PROJECT IS LOCATED.

C. THE INTENT OF THE POST-MODIFICATION INSPECTION REPORT IS TO CONFIRM INSTALLATION AND CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE CONSTRUCTION DESIGN ITSELF.

D. TO ENSURE THAT THE REQUIREMENTS OF THE POST-MODIFICATION INSPECTION REPORT ARE MET, IT IS VITAL THAT THE CONTRACTOR AND POST-MODIFICATION INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A FULL IS RECRUITED.

T-Mobile

T-MOBILE NORTHEAST LLC

12050 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705
OFFICE: (240) 264-8500
FAX: (240) 264-8510

MORRIS & RITCHIE ASSOCIATES, INC.

SITE ID:
7HCH508A
SITE NAME:
NTM WA05SH128
(CHARLES TOWN SOUTH)
SITE ADDRESS:
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
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PROTECT YOURSELF, GIVE THREE WORKING DAYS NOTICE

THE DRAWINGS ARE NOT BUILDING ACCURATE COMPONENTS FOR CONSTRUCTION ASSETS. ALL CONSTRUCTION SHALL BE DONE IN STRICT ACCORDANCE WITH THE LATEST EDITION OF ALL CODES AND ACT OF THIS AND ALL RULES AND REGULATIONS THERE TO APPURTENANT.

SHEET TITLE

General Structural Notes

SHEET NUMBER

GN-1

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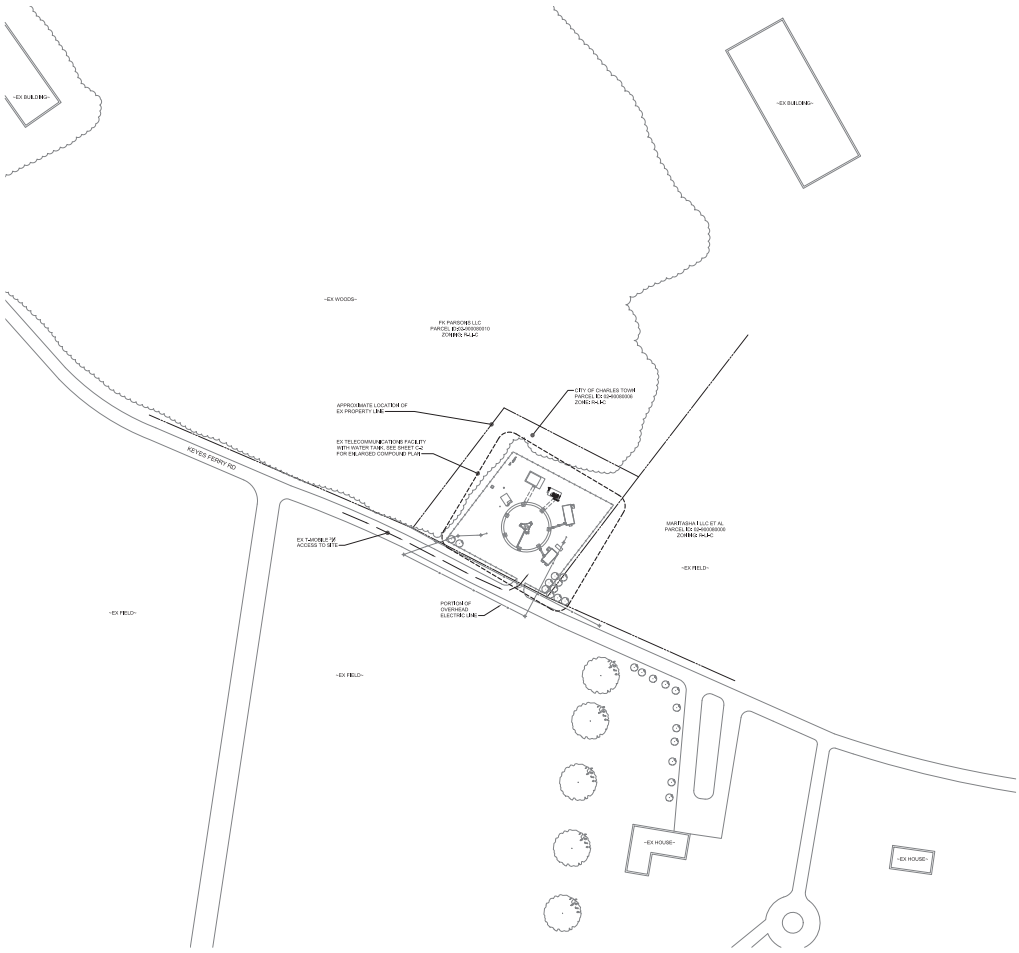

SITE PLAN
SCALE: 1" = 60'-0"



VICINITY MAP
SCALE: 1" = 1000'

SITE NOTES

1. APPLICANT: T-MOBILE NORTHEAST LLC
12050 BALTIMORE AVENUE
BELTSVILLE, MD 20705
TEL. (240) 264-8600
FAX (240) 264-8610

2. PROPERTY OWNER: CITY OF CHARLES TOWN
101 NORTH GEORGE STREET
CHARLES TOWN, WV 25414

3. SITE DATA: TAX MAP 03 PARCEL 25J
TAX DISTRICT #3
PARCEL ID 03-04W0008-0007.0000
PARCEL ID 03-04W0008-0008.0000
TRACT AREA 52.4 ACRES
ADDRESS=475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
EXISTING USE=WATER TANK / TELECOMMUNICATIONS

4. ZONING=R-3-C
HORIZONTAL AND VERTICAL CONTROL SHOWN HEREON IS BASED ON INFORMATION FROM MOBILE
LATITUDE: 39°16'29.9996 (NAD 83)
LONGITUDE: 077°52'23.0000 (NAD 83)
GROUND ELEVATION=489' AMSL (NAVD)
EXISTING STRUCTURE HEIGHT= 107' AGL
TOTAL ELEVATION=596.2' AMSL

5. TOTAL DISTURBED AREA = 0 SF

6. THIS PROJECT INCLUDES REMOVING (6) (6 ANTENNAS, THREE (3) FROM EACH SECTOR AND INSTALLING NINE (9) ANTENNAS, THREE (3) AT EACH SECTOR, INSTALL (36) (12 ANNOUNCING SEEN & COLLEAGUE TWELVE (12) REMOTE RADIO HEADS (RRH) FOUR (4) FROM EACH SECTOR AND INSTALL SEVEN (7) GROUNDS, TWO (2) AT EACH SECTOR, REMOVE SEVEN (7) 6' COAXIAL AND INSTALL THREE (3) 6x24 HYBRID CABLES & FOUR (4) COAX, ALONG THE FIRST MOBILE CABLE ROUTES, REMOVE THREE (3) ANTENNA FRAMES AND THREE (3) MW MOUNTS AND INSTALL THREE (3) ANTENNA SECTOR FRAMES AND THREE (3) RRAH ATTACHMENT KITS, REMOVE AND REPLACE (1) 6630 RADIO CABINET, REMOVE AND REPLACE (1) JUNCTION BOX AND ONE (1) RRUS BOX, INSTALL ONE (1) RXI ASSEMBLE CABINET AND ONE (1) 6160 DISTRIBUTION CABINET.

7. THE STRUCTURE WILL NOT SUPPORT LIGHTS OR DEVICES REQUIRED FOR AIRCRAFT MARKING OR OTHER SAFETY RECORDS.

8. THE APPLICANT WILL PROVIDE A CERTIFICATION FROM A REGISTERED ENGINEER THAT THE STRUCTURE WILL MEET THE APPLICABLE DESIGN STANDARDS FOR WIND LOADS PER THE REQUIREMENTS OF THE TELECOMMUNICATIONS INDUSTRY ASSOCIATION.

9. IF THE ANTENNAS ARE NO LONGER USED FOR TELECOMMUNICATIONS PURPOSES FOR A CONTINUOUS PERIOD OF ONE (1) YEAR, THEY SHALL BE REMOVED BY THE ANTENNA OWNER AT OWNERS EXPENSE.

10. NO WATER OR SANITARY UTILITIES ARE REQUIRED FOR THE OPERATION OF THIS FACILITY.

11. STORMWATER MANAGEMENT NOTE: NO STORMWATER MANAGEMENT IS REQUIRED FOR THIS SITE.

12. BOUNDARY SHOWN PER COUNTY RECORDS.

13. THIS PLAN PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT. PLANS SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

14. ALL DETAILS SHOWN ARE "STANDARD" OR "TYPICAL" FOR REFERENCE ONLY. FOR ACTUAL DETAILS, SEE ARCHITECTURAL, STRUCTURAL, OR CONSTRUCTION PLANS BY OTHERS.

15. THE COMMUNICATIONS EQUIPMENT SHALL BE UNMANNED, WITH FREQUENT VISITS (FOUR OR FEWER PER YEAR) BY MAINTENANCE PERSONNEL TO ENSURE PROPER OPERATION. NO POTABLE WATER OR SEWER SERVICE IS REQUIRED. THE PROPOSED FACILITY IS NOT FOR HUMAN HABITATION AND THEREFORE WILL NOT BE ACCESSED BY VISITORS.

16. STRUCTURAL ANALYSIS/DESIGN TO BE PERFORMED BY OTHERS AT CLIENT AND/OR OWNERS DISCRETION PRIOR TO COMMENCEMENT OF ANY WORK.

GENERAL NOTES

1. CONTRACTOR SHALL NOTIFY "MISS UTILITY" (811) 48 HOURS PRIOR TO DIGGING AND EXCAVATING IN THIS AREA. CONTRACTOR SHALL CONTACT A SUBSURFACE UTILITY LOCATOR FOR LOCATION OF EXISTING UTILITIES PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION ACTIVITIES. CONTRACTOR SHALL VERIFY EXISTING UTILITY LOCATIONS BY TEST PIT AS NECESSARY. LOCATION OF UTILITIES SHOWN ON THESE PLANS APPROXIMATE AND FOR PLANNING PURPOSES ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT OCCUR AS A RESULT OF THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ALL UNDERGROUND UTILITIES. DAMAGE TO UTILITIES OR PROPERTY OF OTHERS BY THE CONTRACTOR DURING CONSTRUCTION SHALL BE REPAIRED TO PRECONSTRUCTION CONDITION BY THE CONTRACTOR.

2. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH ALL STATE AND LOCAL CODES AND ORDINANCES. THE LATEST EDITION THEREOF.

3. ANY PERMITS WHICH MUST BE OBTAINED SHALL BE THE CONTRACTOR'S RESPONSIBILITY. CONTRACTOR SHALL SECURE ALL PERMITS AND PAY ALL CHARGES AND FEES AND GIVE ALL NOTICES NECESSARY AND INCIDENTAL TO THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ORDERS BY ALL COMMITTEES AND REQUIREMENTS OF THE PERMITS.

4. CONTRACTOR SHALL COORDINATE ALL UTILITY CONNECTIONS WITH APPROPRIATE UTILITY OWNERS.

5. THESE PLANS ARE NOT FOR RECORDATION OR CONVEYANCE.

6. EXISTING PAVEMENT AND OTHER SURFACES DISTURBED BY CONTRACTOR (WHICH ARE NOT TO BE REMOVED) SHALL BE REPAIRED TO PRECONSTRUCTION CONDITIONS BY THE CONTRACTOR.

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MORRIS & RITCHIE ASSOCIATES, INC.

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7HCH508A
SITE NAME:
NTM WA06SH126
(CHARLES TOWN SOUTH)
SITE ADDRESS:
475 KEYES FERRY ROAD
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SHEET TITLE
Site Plan

SHEET NUMBER
C-1

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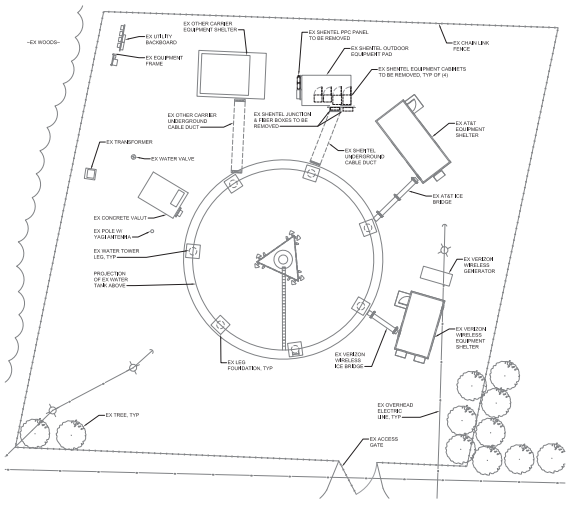
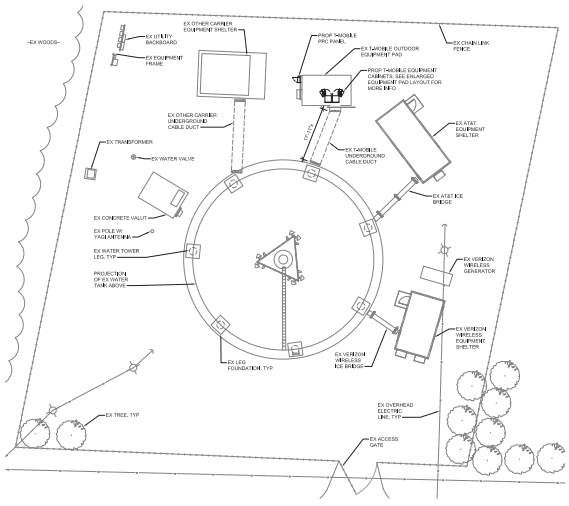


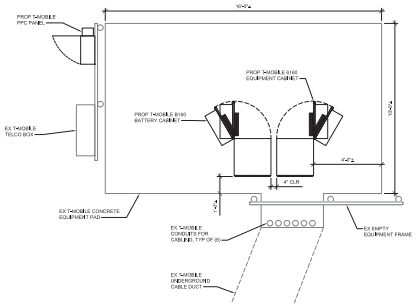
EXISTING ENLARGED COMPOUND PLAN

SCALE: 1" = 15'-0"



PROPOSED ENLARGED COMPOUND PLAN

SCALE: 1" = 15'-0"



ENLARGED EQUIPMENT PAD LAYOUT

SCALE: 3/8" = 1'-0"

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THE DRAWINGS ARE NOT TO SCALE NECESSARY COMPONENTS OF CONSTRUCTION (MISTIC, ALL CONTRACTORS SHALL BE RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND SAFETY IN CONNECTION WITH THE WORK IN COMPLIANCE WITH THE CONTRACT DOCUMENTS AND ALL APPLICABLE LAWS, CODES, RULES AND REGULATIONS. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES FROM THE CONDITIONS SHOWN ON THE DRAWINGS PRIOR TO THE COMMENCEMENT OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER EXECUTION AND COORDINATION OF THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DIMENSIONS AND CONDITIONS AT THE JOB SITE

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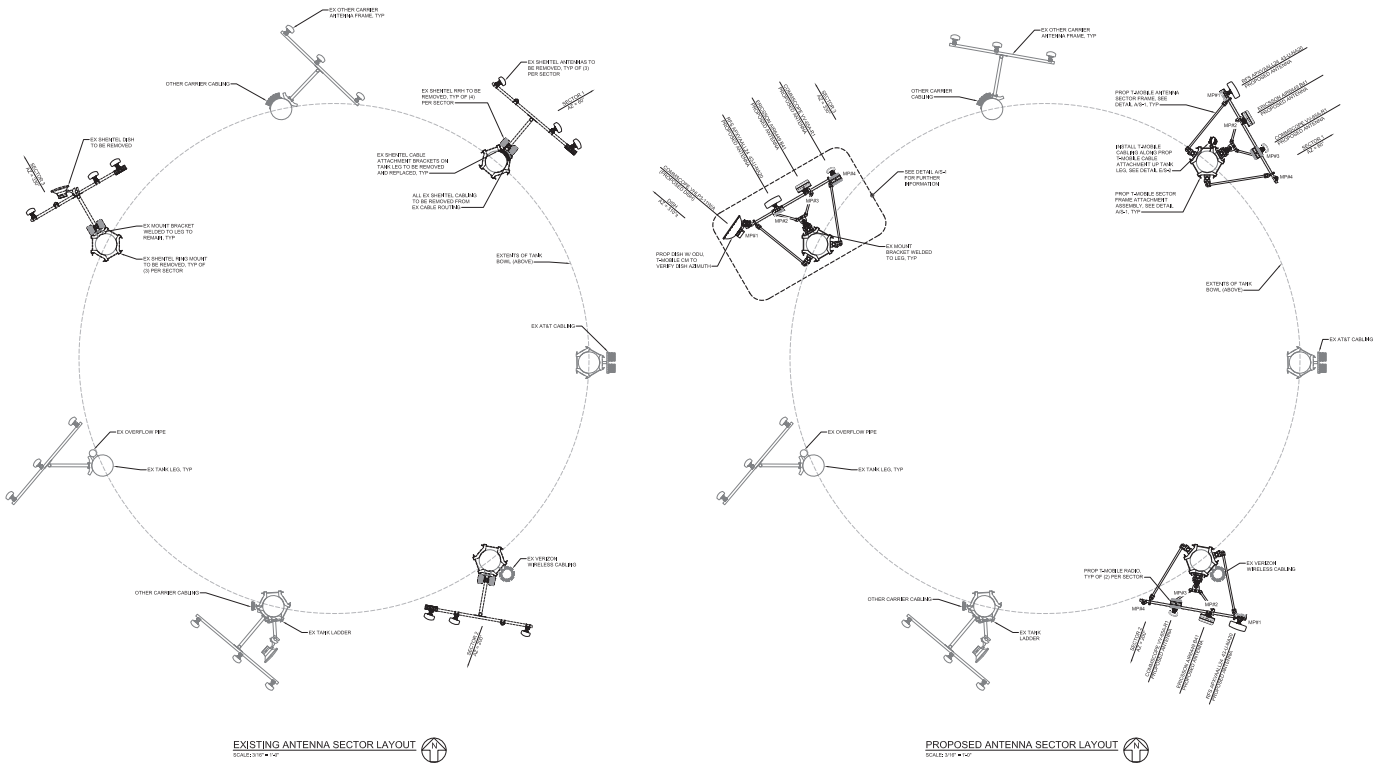

T-Mobile
T-MOBILE NORTHEAST LLC
12050 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705
OFFICE: (240) 264-8600
FAX: (240) 264-8610

MORRIS & RITCHIE ASSOCIATES, INC.

SITE ID:
7HCH508A
SITE NAME:
NTM WA06SH126
(CHARLES TOWN SOUTH)
SITE ADDRESS:
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

REVISION BLOCK

NO.	DESCRIPTION	DATE
1	DISH ADDITION	12/14/2021
2	PERMIT DRAWINGS	1/11/2022
3	CABLE UPDATES	1/24/2022
4	OWNER REVISION	1/26/2022

DRAWN BY:	KTP
DESIGNED BY:	RJD
ORIGINAL DATE:	12/09/2021
MRA PROJECT #:	19851.073
DESIGN SCALE:	AS NOTED

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THE DRAWINGS MAY INCLUDE NECESSARY COMPONENTS OF CONSTRUCTION DEBTS. ALL CONTRACTORS SHALL REVIEW ALL DRAWINGS AND CONSTRUCTION DEBTS IN THEIR ENTIRETY TO ASCERTAIN THEIR RESPECTIVE SCOPES OF WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ACTS OF THIS AND ALL WAIVE AND REGULATIONS THERE TO APPURTENANT.

SHEET TITLE

Antenna Sector Plans

SHEET NUMBER

C-3

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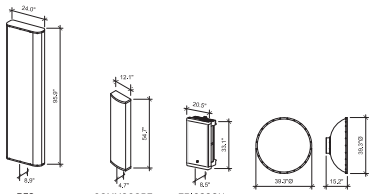


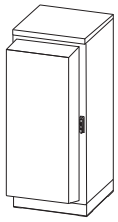
RFS APXVAALL24_43-U-NA20 | COMMSCOPE VV-65A-R1 | ERICSSON AIR6449 B41 | COMMSCOPE VHLP3-11W/A

PROPOSED T-MOBILE ANTENNA DETAILS

NOT TO SCALE

PROPOSED ANTENNA SCHEDULE

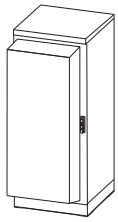
SECTOR	STATUS	POS	MANUFACTURER	MODEL #	ANTENNA DIMENSIONS	AZIMUTH	RAD CENTER AGL (FT)	RRH/TMA QUANTITY & MODEL NO	CABLE QUANTITY & TYPE	CABLE LENGTH
SECTOR 1	PROPOSED	1	RFS	APXVAALL24-43-U-NA20	95.9"H x 24.0"W x 8.9"D	60°	122'-0"	(1) ERICSSON RADIO 4480 B71+B85	(1) ERICSSON HYBRID TRUNK 6/24 4AWG	180'
	PROPOSED	2	ERICSSON	AIR6449 B41	33.1"H x 20.5"W x 9.5"D	60°	122'-0"	N/A		
	PROPOSED	3	COMMSCOPE	VV-65A-R1	54.7"H x 12.1"W x 7"D	60°	122'-0"	(1) ERICSSON RADIO 4460 B25+B66		
SECTOR 2	PROPOSED	1	RFS	APXVAALL24-43-U-NA20	95.9"H x 24.0"W x 8.9"D	200°	122'-0"	(1) ERICSSON RADIO 4480 B71+B85	(1) ERICSSON HYBRID TRUNK 6/24 4AWG	240'
	PROPOSED	2	ERICSSON	AIR6449 B41	33.1"H x 20.5"W x 9.5"D	200°	122'-0"	N/A		
	PROPOSED	3	COMMSCOPE	VV-65A-R1	54.7"H x 12.1"W x 7"D	200°	122'-0"	(1) ERICSSON RADIO 4460 B25+B66		
SECTOR 3	PROPOSED	1	COMMSCOPE	VHLP3-11W/A	39.370	310°	122'-0"	(1) CERAGON RFU-D-HP	(4) 3/" COAX	240'
	PROPOSED	2	RFS	APXVAALL24-43-U-NA20	95.9"H x 24.0"W x 8.9"D	330°	122'-0"	(1) ERICSSON RADIO 4480 B71+B85	(1) ERICSSON HYBRID TRUNK 6/24 4AWG	
	PROPOSED	3	ERICSSON	AIR6449 B41	33.1"H x 20.5"W x 9.5"D	330°	122'-0"	N/A		
	PROPOSED	4	COMMSCOPE	VV-65A-R1	54.7"H x 12.1"W x 7"D	330°	122'-0"	(1) ERICSSON RADIO 4460 B25+B66		



ERICSSON B160 BATTERY CABINET

NOT TO SCALE

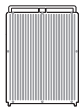
B160 BATTERY CABINET:	
MANUFACTURER:	ERICSSON
DIMENSIONS:	26"W x 26"D x 63"H (INCL. BASE)
WEIGHT (EMPTY):	290 LBS
WEIGHT (FULL):	2,990 LBS



ERICSSON 6160 EQUIPMENT CABINET

NOT TO SCALE

6160 EQUIPMENT CABINET:	
MANUFACTURER:	ERICSSON
DIMENSIONS:	26"W x 26"D x 63"H (INCL. BASE)
WEIGHT (EMPTY):	329 LBS
WEIGHT (FULL):	1,669 LBS

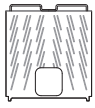


RADIO 4480 B71+B85 REMOTE RADIO UNIT:	
MANUFACTURER:	ERICSSON
POWER SUPPLY:	-48VDC
DIMENSIONS:	21.3"H x 15.7"W x 7.5"D
WEIGHT:	80.7 LBS

NOTES:

1. INSTALL RRU PER MANUFACTURERS RECOMMENDATIONS.
2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

ERICSSON RADIO 4480 B71+B85 (PROPOSED)



RADIO 4460 B25+B66 REMOTE RADIO UNIT:	
MANUFACTURER:	ERICSSON
POWER SUPPLY:	-48VDC
DIMENSIONS:	17.0"H x 15.7"W x 11.2"D
WEIGHT:	109 LBS

NOTES:

1. INSTALL RRU PER MANUFACTURERS RECOMMENDATIONS.
2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

ERICSSON RADIO 4460 B25+B66 (PROPOSED)

T-MOBILE EQUIPMENT DETAILS

NOT TO SCALE



OUTDOOR UNIT RFU-D-HP:	
MANUFACTURER:	CERAGON
MAX. DIMENSIONS:	12.99"H x 11.26"W x 4.31"D
MAX. WEIGHT:	20.2 LBS

NOTES:

1. INSTALL ODU PER MANUFACTURERS RECOMMENDATIONS.
2. FIBER, DC POWER & GROUND CONNECTIONS NOT SHOWN.

CERAGON RFU-D-HP (PROPOSED)

T-Mobile
T-MOBILE NORTHEAST LLC
12050 BALTIMORE AVENUE
BELTSVILLE, MARYLAND 20705
OFFICE: (240) 264-8600
FAX: (240) 264-8610

MORRIS & RITCHIE ASSOCIATES, INC.
[illegible]
Phone: [illegible]

SITE ID:
7HCH508A
SITE NAME:
NTM WA06SH126
(CHARLES TOWN SOUTH)
SITE ADDRESS:
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

REVISION BLOCK

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SHEET TITLE
Antenna Schedule & Equipment Details

SHEET NUMBER
C-4

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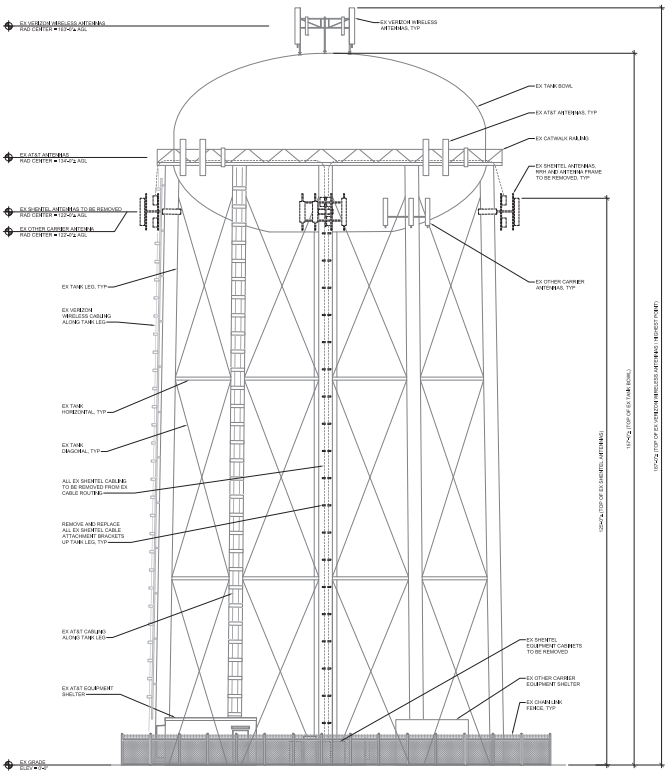
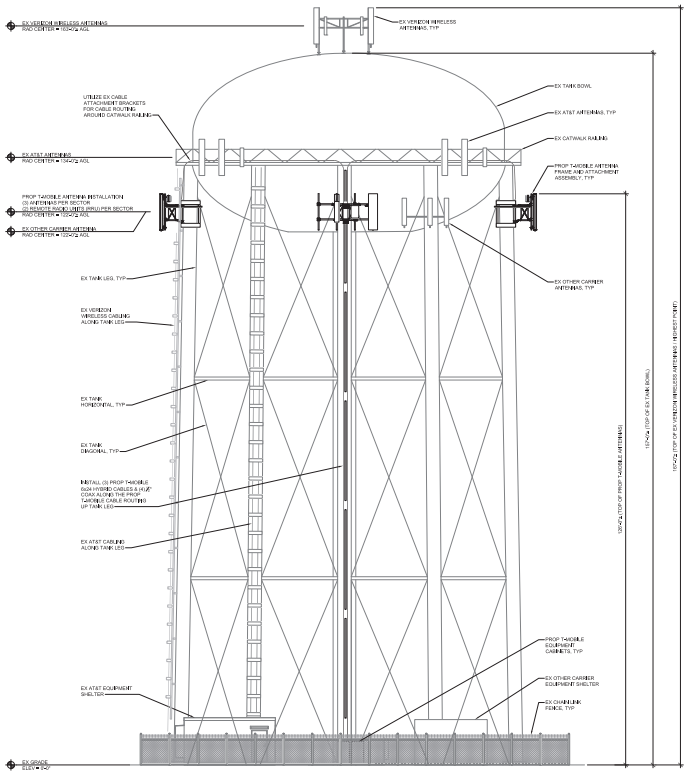


EXISTING WATER TOWER ELEVATION

SCALE: 1" = 10'-0"



PROPOSED WATER TOWER ELEVATION

SCALE: 1" = 10'-0"

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BELTSVILLE, MARYLAND 20705
OFFICE: (240) 264-8600
FAX: (240) 264-8610

MORRIS & RITCHIE ASSOCIATES, INC.

SITE ID:
7HCH508A
SITE NAME:
NTM WA06SH128
(CHARLES TOWN SOUTH)
SITE ADDRESS:
475 KEYES FERRY ROAD
CHARLES TOWN, WV 25414
JEFFERSON COUNTY

REVISION BLOCK

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DRAWN BY:	KTP
DESIGNED BY:	RJD
ORIGINAL DATE:	12/09/2021
MRA PROJECT #:	19851.073
DESIGN SCALE:	AS NOTED

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THE DRAWINGS ARE NOT TO BE USED INDIVIDUALLY. THEY ARE PART OF A SET AND ARE INCOMPLETE WITHOUT ALL OF THE OTHER SHEETS. ANY USE OF THESE DRAWINGS IN WHOLE OR IN PART IS PROHIBITED WITHOUT THE WRITTEN CONSENT OF MRA. ANY UNAUTHORIZED USE OF THESE DRAWINGS IS A VIOLATION OF THE FEDERAL COPYRIGHT ACT OF 1976 AND ALL STATE AND LOCAL LAWS AND REGULATIONS THERETO APPERTAINING.

SHEET TITLE

Water Tower Elevations

SHEET NUMBER

C-5

Charles Town
Utility Board

661 S. George Street, Suite 101 Charles Town, WV 25414
Phone: (304) 725-2316 ♦ Fax: (304) 725-7150 ♦ Web: www.ctubwv.com

UTILITY BOARD

CHAIRMAN
Daryl Hennessy

VICE CHAIRMAN
City of Ranson Mayor Duke Pierson

TREASURER
Thomas Stocks

INTERIM SECRETARY
Ashley Stottlemyer

County Commission Representative Jacquelyn Milliron

Board Member Jefferson Whitten

UTILITY MANAGER
Kristen Stolipher

RESOLUTION NO. 2022-02
CHARLES TOWN UTILITY BOARD
Combined Waterworks and Sewerage System Revenue Bonds, Series 2022 B

WHEREAS there is need for the Charles Town Utility Board to complete a Sewer Renewal and Replacement Project for upgrades to the Charles Town Wastewater Treatment Plant;

The Charles Town Utility Board ("CTUB") hereby petitions the Council of the City of Charles Town ("City") to enact an ordinance directing that combined waterworks and sewerage system revenue bonds of the City be issued pursuant to the provisions of Chapter 8, Article 20 of the West Virginia Code of 1931, as amended, such bonds to be in an amount not to exceed $10,000,000, in one or more series for the purpose of financing the costs of acquisition and construction of certain additions, betterments and improvements to the existing Charles Town Wastewater Treatment Plant, together with all necessary appurtenances and paying the costs of issuance and related costs. Specifically, the Charles Town Wastewater Treatment Plant Renewal and Replacement Project focuses on essential upgrades to the existing main wastewater treatment plant facilities and equipment. The project includes upgrades to the Influent Screening, Influent Pump Station and Metering Manhole, Sequencing Batch Reactors, Ultraviolet Disinfection System, Solids Digestion and Dewatering System, Effluent Pump Station, and Electrical System. Collectively all of the above discussed additions, betterments, and improvements, together with all appurtenant facilities, are referred to as the "WWTP Renewal and Replacement Project" and, together with the "2022 Collection System Project," the "Projects."

NOW, THEREFORE, BE IT RESOLVED, that the Charles Town Utility Board hereby petitions the City to enact an ordinance for the funding and construction of certain additions, betterments and improvements to the existing Charles Town Wastewater Treatment Plant.

CHARLES TOWN UTILITY BOARD

By: _____
Its: Chairman

DRAFT

John C. Stump, Esquire
Chase Tower, 17th Floor (25301)
P.O. Box 1588
Charleston, WV 25326-1588
304.353.8196 Office 304.933.8704 Fax
304.549.8196 Cell
john.stump@steptoe-johnson.com

MEMORANDUM

To: **Charles Town Utility Board**
Kristen Stolipher, CTUB General Manager

From: **John C. Stump**

Date: **March 4, 2022**

Re: **Proposed Ordinance Schedule for Combined Waterworks and Sewerage System Revenue Bonds, Series 2022 A and Series 2022 B**

The purpose of this memorandum is to propose a schedule for the necessary actions of the City Council (the "Council") of the City of Charles Town (the "City") and the Charles Town Utility Board (the "Utility Board") related to enactment of an ordinance (the "Bond Ordinance") authorizing the issuance by the City of its Combined Waterworks and Sewerage System Revenue Bonds, Series 2022 A and Series 2022 B, in an amount not to exceed $10,000,000 (collectively, the "Bonds"). The proceeds of the Bonds will be used to finance the design, acquisition, construction and equipping of the WWTP Renewal and Replacement Project, the description of which, as approved in the Project Ordinance, is below:

Wastewater Treatment Plant Renewal and Replacement Project. This project focuses on essential upgrades to the existing main wastewater treatment plant facilities and equipment, including upgrades to the Influent Screening, Influent Pump Station and Metering Manhole, Sequencing Batch Reactors, Ultraviolet Disinfection System, Solids Digestion and Dewatering System, Effluent Pump Station, and Electrical System, together with all necessary appurtenances.

A proposed schedule for enactment of the Bond Ordinance to authorize the issuance of the Bonds is set forth below. In preparing this schedule, I have assumed the shortest time frames between each step permitted by state law while accommodating the newspaper publication schedule, as well as affirmative council action at each meeting. These assumptions are made solely for purposes of preparing this schedule and are not meant to infer that any decision by Council or CTUB is pre-determined. This schedule does not contemplate a referral of the Bond Ordinance to the ordinance committee.

March 9, 2022 4:00 p.m. CTUB Regular Meeting

- Consideration of Resolution Requesting Issuance of Bonds

March 21, 2022 7:00 p.m. Council Regular Meeting

- First Reading and Adoption of Bond Ordinance

April 4, 2022 7:00 p.m. Council Regular Meeting

- Second Reading and Adoption of Bond Ordinance

April 13, 2022 First Publication in the *Spirit of Jefferson and Farmer's Advocate* of Notices of Public Hearing for May 2, 2022 for:*

- Public Hearing on Bond Ordinance

April 20, 2022 Second Publication in the *Spirit of Jefferson and Farmer's Advocate* of Notices of Public Hearing for May 2, 2022 for:*

- Public Hearing on Bond Ordinance

May 2, 2022 7:00 p.m. Council Regular Meeting

- Public Hearing on Bond Ordinance
- Third Reading and Enactment of Bond Ordinance

*Steptoe & Johnson will arrange all publications for the public hearing.

Finally, please note that the enactment of the Bond Ordinance does not, in anyway, obligate the City to issue to the Bonds or proceed with the Project. Following the enactment of the Bond Ordinance, City Council will be presented with a Supplemental Parameters Resolution (the "Resolution") for consideration. The Resolution is the final official action of the City Council which is required for the issuance of the Bonds.

DRAFT

159 Plaza Drive | Keyser, WV 26726 | P 304.788.3370 | F 304.788.3577 | www.rkk.com

February 17, 2022

Ms. Kristen Stolipher, Utility Manager
Charles Town Utility Board
661 S. George Street
Charles Town, WV 25414

Re: Charles Town Utility Board
Green Hill – Sanitary Sewer Availability

Ms. Stolipher,

At the request of the Charles Town Utility Board (CTUB), RK&K reviewed the available information on the existing sewer collection system in the Breckenridge Pump Station sewershed to determine available capacity following a July 12, 2021 sewer service availability request from Gordon Associates for a proposed 320 unit Green Hill Subdivision. The analysis of the collection system involved expanding CTUB's sewer model by incorporating the additional areas of the collection system that will be impacted by the new development. This report summarizes the finding of the analysis.

Throughout the report, 150 gallons/day per unit is used as an average water usage to calculate flows and the impact to the collection system. This average water usage number comes from the residential usage equivalents for capacity improvements fees section in CTUB's Sewer Tariff dated February 3, 2020. Information regarding invert depths, lengths of sewer lines, and pump stations is from CTUB's GIS mapping, record drawings, and field data provided by CTUB. The remaining capacity in the gravity sewer lines, force mains, and pump stations was calculated using GIS mapping, customer counts and flow monitoring data provided by CTUB, and the above-mentioned water usage of 150 gal/day. A summary of the allocated and projected EDUs for the Breckenridge Pump Station, including the proposed 320 Green Hill units, is identified within ***Table 1*** and was utilized for capacity analysis and modeling efforts. The 320 units from the Green Hills Subdivision are projected as follows: 60 EDUs in 5-years, an additional 100 EDUs in 10-years, and final build out with of an additional 160 in 20-years.

Breckenridge Gravity Sewer

An analysis of the Breckenridge Gravity Sewer between the connection manholes from the Green Hill Subdivision (manholes AG-13 and AG-16) and the Breckenridge Pump Station was conducted. ***Table 2*** provides the results of the analysis showing that the majority of the gravity sewer between the Green Hill Subdivision and the Breckenridge Pump Station has adequate capacity for the 320 proposed units; all units previously allocated to the Aspen Greens Subdivision; and the 20-year projected units in the existing subdivisions within the Breckenridge Pump Station drainage basin. However, the analysis identified one segment of sewer between manholes BK-53 and BK-52 is over capacity. This limitation is attributed to the relatively "flat" slope of the pipe as the section of line immediate downstream between manholes BK52 and the PS has plenty of capacity.

During the development of the model, CTUB staff indicated that the area where the pipe transitions from 15" to 10" (WG-54 to BK-1) may be a concern. Analysis of the area did not indicate any potential problems due to the reduction in pipe size.

A preliminary analysis of the Breckenridge Gravity Sewer between the connection manhole from the Beallair Subdivision (manhole BK-24) and the Breckenridge Pump Station was previously conducted on September 16, 2020 as part of the Beallair Phases 3-6 sewer service availability study. A summary of those calculations has been amended to the bottom of ***Table 2.*** Analysis of these revised flow projections indicate that the segment between manholes BK-29 and BK-33 was over capacity due to the pump station flows, affirming the results presented in the September 2020 recommendation.

Breckenridge Pump Station

The Breckenridge Pump Station serves the Breckenridge Subdivision, the Beallair Subdivision, Aspen Grove Subdivision and the subdivisions to the west. The Breckenridge Pump Station currently utilizes two Myers 4VC300M4-43 pumps with a duty point of 600 GPM at 86.64' TDH.

RK&K's September, 2020 report of the Breckenridge Pump Station indicated that the pump station could handle the flow from the Beallair, Aspen Greens and the existing subdivisions in the near future. It was concluded that, to maintain a peaking factor closer to 4.0 for future unapproved developments, the pumps at the Breckenridge Pump Station would need to be modified or replaced to increase pumping capacity.

Therefore, it is anticipated that the pumps will need to be upgraded to handle the total build-out flow from the Green Hill Subdivision and future addition of the Breckenridge East Subdivision. Analysis of the projected flows indicate that the existing 8" force main from Breckenridge Pump Station will be able to accommodate flow from larger pumps.

Alterations/Additions to Sewer Model

To verify the analysis of the Breckenridge Gravity Sewer, the segment was added to the CTUB sewer model previously developed by RK&K in January 2021. The previous model included up to the Breckenridge Pump Station and didn't cover any additional gravity sewers or pump stations. Utilizing CTUB GIS data, the model was expanded to include the gravity sewer connecting the Green Hill Subdivision (AG-13 and AG-16) and the Breckenridge Pump Station (BK-WW). ***Exhibit 1*** provides the extents of the additional modeled area. Complete data was not available for the various manholes and connecting pipes within the GIS database, so invert information was developed from the record drawings and field investigation.

Additionally, the Beallair Pump Station, future Breckenridge East Pump Station, and gravity segments previously reported in September 2020 were added to the model. This was done to verify the previous recommendations and identify any effects of connection of the Beallair Pump Station and the future Breckenridge East Pump Station serving the 200 proposed units in the 20-year projection.

Sewer Model Results – Current, 5-year and 10-year Sanitary Load Projections

The updated CTUB sewer model was run under both Dry Weather and Wet Weather flow conditions for the four (Current, 5-year, 10-year and 20-year) allocated (projected) sanitary loading scenarios. As anticipated, no issues were presented during the Dry Weather analysis under the various loading scenarios. Review of the Wet Weather analysis did not indicate any issues over the Current or 5-year loading projections. During the 10-year analysis the pipe segment between BK-53 and BK-52 was found to be nearing its hydraulic capacity at nearly 88%. No surcharging or overflowing manholes were predicted.

Sewer Model Results – 20-year Sanitary Load Projections

Under the 20-year loading scenario, multiple areas of concern were identified. Four (4) scenarios were analyzed to determine the effect on the Breckenridge pump station and surrounding gravity lines:

1) Scenario 1 (***Exhibit 2***) – Existing/Committed + Greenhill
   - Build out Green Hill subdivision to the fully requested amount of 320 units
   - Build out Aspen Green to the approved number of units from 2012 AMEA (200 units)
   - Build out Beallair to the fully approved number of units from 2020 Approval (436 units)
   - Retain the existing pumps at the Breckenridge Pump Station
   - Future flow from the Breckenridge East Pump Station is not included

2) Scenario 2 (***Exhibit 3***) – Existing/Committed + Greenhill + Breckenridge East
   - Build out Green Hill subdivision to the fully requested amount of 320 units
   - Build out Aspen Green to the approved number of units from 2012 AMEA (200 units)
   - Build out Beallair to the fully approved number of units from 2020 Approval (436 units)
   - **Retain the existing pumps at the Breckenridge Pump Station**
   - Future flow from the Breckenridge East Pump Station (200 units) is included (per 2014 Breckenridge East drawings)

3) Scenario 3 (***Exhibit 4***) – Existing/Committed + Greenhill + Breckenridge East + Upgrade Breckenridge PS
   - Build out Green Hill subdivision to the fully requested amount of 320 units
   - Build out Aspen Green to the approved number of units from 2012 AMEA (200 units)
   - Build out Beallair to the fully approved number of units from 2020 Approval (436 units)
   - **Upgraded pumps at Breckenridge East Pump Station**
   - Future flow from the Breckenridge East Pump Station (200 units) is included (per 2014 Breckenridge East drawings)

4) Scenario 4 (***Exhibit 5***) – Existing/Committed + Greenhill + New Beallair PS to Walmart
   - Build out Green Hill subdivision to the fully requested amount of 320 units
   - Build out Aspen Green to the approved number of units from 2012 AMEA (200 units)
   - Build out Beallair to the fully approved number of units from 2020 Approval (436 units)
   - Future flow from the Breckenridge East Pump Station (200 units) is included (per 2014 Breckenridge East drawings)
   - **Reroute the Beallair and Breckenridge East Pump Stations out of the Breckenridge PS drainage basin to the manhole by Walmart**

Results of the model runs are summarized on the following pages.

Scenario 1 – Existing/Committed + Greenhill

- Maximum flow into Breckenridge PS: 1.07 MGD (+/- 740 gpm) exceeding pumping capacity
- Overflowing Manholes: BK-54 and BK-53
- Surcharging Manholes: BK-40, BK-44, BK-56, BK-55, and BK-52
- Hydraulically Deficient Segments:
  - ≥100% (Critical): BK53-BK52
  - ≥67%, <80% (Monitor): BK81-BK56, BK26-BK27, and BK29-BK33

An analysis of the modeling results indicates that with the addition of the final 160 units from the Green Hill Subdivision the pumps at the Breckenridge Pump Station no longer have adequate capacity. This results in several upstream manhole overflows and surcharging as shown in ***Exhibit 2***. It should be noted that the current model ***does not*** include manholes or gravity sewers south of the Breckenridge PS or east of BK-33 on Posting Way. These potentially could also be negatively impacted from the flow backup at the pump station. These results verify the September 2020 recommendation to upsize the pumps at the Breckenridge Pump Station. Of note, no issues are predicted at the transition from 15" to 10" gravity pipe. Only 27% of the hydraulic capacity is being utilized in the 10" pipe (WG54-BK1) with a maximum depth of flow less than 42% of the diameter.

Scenario 2 – Existing/Committed + Greenhill + Breckenridge East

With the addition of 200 units from the Breckenridge East Pump Station (Subdivision), the maximum flow into BK-24 is increased to 350gpm leading to a larger number of affected structures within the Breckenridge Subdivision. These are summarized below and in ***Exhibit 3***:

- Maximum flow into Breckenridge PS – 1.17 MGD (+/- 810 gpm) exceeding pumping capacity
- Overflowing Manholes: BK-44, BK-54, and BK-53
- Surcharging Manholes: BK-40, BK-56, BK-55, and BK-52
- Hydraulically Deficient Segments:
  - ≥100% (Critical): BK53-BK52 and BK29- BK33
  - ≥80%, <100% (Concern): BK26-BK27, BK27-BK28, BK40-BK44, and BK44-BK53
  - ≥67%, <80% (Monitor): BK81-BK56 and BK33-BK40

Addition of the Breckenridge East PS still causes the existing pumps to exceed their capacity and therefore will need to be upgraded. Additional flow within the Breckenridge Subdivision is causing sanitary sewer segment BK29-BK33 to exceed its hydraulic capacity and one additional manhole (BK-44) to overflow.

Scenario 3 – Existing/Committed + Greenhill + Breckenridge East + Upgrade Breckenridge Pump Station

This scenario utilizes upgraded pumps at Breckenridge PS to handle the total flow from the Green Hill subdivision and the additional 200 units from the Breckenridge East Subdivision. Results are summarized in ***Exhibit 4*** and below:

- Maximum flow into Breckenridge PS – 1.18 MGD (+/- 820 gpm)
- Hydraulically Deficient Segments:
  - ≥100% (Critical): BK53-BK52 and BK29- BK33
  - ≥80%, <100% (Concern): BK26-BK27, BK27-BK28, BK40-BK44, and BK44-BK53
  - ≥67%, <80% (Monitor): BK81-BK56 and BK33-BK40

Upgrading the Breckenridge pump station removes all overflows and surcharges predicted by the model. The hydraulic deficiencies remain unchanged from Scenario 2. Although the hydraulic capacity of these pipes is exceeded, they are not in any danger of surcharging the system as it is RK&K's understanding that no customers are connected to these segments.

Pumps within the model are sized for a minimum peaking factor of 4.0 and an estimated run time of 6 hours/day. Pumps will need to be sized for 930 GPM to accommodate the addition of flows (based on CTUB's tariff with 150 GPD/EDU). Velocity in the existing 8" FM should not exceed 6 feet per second (fps) under this scenario.

Scenario 4 – Existing/Committed + Greenhill + New Beallair PS to Walmart

A final scenario looks at rerouting all flows from the Beallair and Breckenridge East Pump Station to the area near the Walmart shopping plaza. This removes the Breckenridge East and Beallair flow from the Breckenridge and Flowing Springs Pump Stations and transfers their flows to the Demory Farms PS and further within the east side of the CTUB system.

RK&K's Task Order 3 – Beallair / Sleepy Hollow Plan Review analyzed the cost for the various alternatives for conveying flow from the Beallair Pump Station to Walmart. This option involves replacement of the pumps with larger pumps and modifications at the Beallair pump station to handle the additional capacity and installation of a new force main. RK&K's Task Order 5 – Sewer Model indicated that the Clarence Drive pump station currently runs an average of 5.3 hours/day, the Willow Spring pump station currently runs 3.6 hours/day, the Demory Farm pump station currently runs 1.8 hours/day, and the Samuel Street pump station currently runs 4.5 hours/day. These run times indicate that the pump stations can handle additional capacity. As mentioned in the Task 3 Report, the line through Jefferson Memorial Park is undersized, but modifications are being made as part of the 2022 Collection System Project, allowing for additional capacity.

Model run results for Breckenridge PS are shown in ***Exhibit 5*** and highlights are summarized below:

- Maximum flow into Breckenridge PS – 0.83 MGD (+/- 580 gpm) within the current pumping capacity
- Hydraulically Deficient Segments:
  - ≥67%, <80% (Monitor): BK81-BK56 and BK53-BK52

CONCLUSION

RK&K's conclusion is that CTUB's existing system, including the Breckenridge Subdivision Gravity Sewer, and the Breckenridge Pump Station can accommodate flow from the previously approved subdivisions and the additional flows from 160 units of the Green Hill Subdivision. In order to accommodate the full 320 units, the pumps at the Breckenridge Pump Station will need to be upgraded. Therefore, it is RK&K's recommendation that CTUB should limit Gordon Associates' request for sewer service to 160 units at this time knowing that revised pumps will be required at the Breckenridge Pump Station.

Although there are hydraulically deficient segments ≥100% (Critical), these manholes are not anticipated to overflow. In addition, the segment between BK53-BK52 does not have direct connections to homes so no backups are anticipated. In Scenario 2 and Scenario 3, the segment between BK29-BK33 has two direct connections to homes, but the pipe is not surcharged due to the drop manhole downstream, so no backups in these homes are anticipated.

The capacity of the gravity sewer line along Posting Way and Barrel Horse Drive was not included in this Scope of Work, so the hydraulic capacity and any backups in this line due to flows in the Breckenridge sewer shed are unknown.

During the Board's review, should you have any questions or require additional information, please do not hesitate to contact us at 304.788.3370 or rdodge@rkk.com.

Very truly yours,
RUMMEL, KLEPPER & KAHL, LLP

Rhiannon A. Dodge, EIT
Associate Engineer

John W. Cole, PE
Senior Manager, Municipal Engineering

Enc.
Breckenridge Sewer Projections
Breckenridge Gravity Sewer Capacities
Model Run Exhibits
Request for Service from Gordon Associates
Aspen Greens AMLEA
CTUB Tariff Section on Usage

Table 1 - Breckenridge PS Revised EDU Distribution

	Minor Basin	Manhole	Current Flows (2021)		5-Year Projection			10-Year Projection			20-Year Projection		
			EDU Count	Flow (gpd)	Addtn'l EDUs	Total EDU Count	Flow (gpd)	Addtn'l EDUs	Total EDU Count	Flow (gpd)	Addtn'l EDUs	Total EDU Count	Flow (gpd)
BRECKENRIDGE	Breckenridge - Flowing Acres Rd	BK-52	343	51,450	10	353	52,950	0	353	52,950	0	353	52,950
	Cambridge	BK-52	12	1,800	0	12	1,800	0	12	1,800	0	12	1,800
	Beallair	BL-WW	112	16,800	100	212	31,800	100	312	46,800	124	436	65,400
	Breckenridge East	BE-WW	0	0	0	0	0	0	0	0	200	200	30,000
	Breckenridge - Barrel Horse Court	BK-24	13	1,950	0	13	1,950	0	13	1,950	0	13	1,950
	Breckenridge - Bridle Court	BK-29	31	4,650	0	31	4,650	0	31	4,650	0	31	4,650
	Breckenridge - Posting Way	BK-40	53	7,950	0	53	7,950	0	53	7,950	0	53	7,950
	Breckenridge - Pommel Lane (North)	BK-44	59	8,850	0	59	8,850	0	59	8,850	0	59	8,850
	Breckenridge - Pommel Lane (South)	BK-56	30	4,500	0	30	4,500	0	30	4,500	0	30	4,500
	Breckenridge - N Kimberwicke Dr	BK-4	40	6,000	0	40	6,000	0	40	6,000	0	40	6,000
	Security Hills	BK-1	25	3,750	0	25	3,750	0	25	3,750	0	25	3,750
	Walnut Grove	WG-26	140	21,000	0	140	21,000	0	140	21,000	0	140	21,000
	Briar Run	WG-26	95	14,250	0	95	14,250	0	95	14,250	0	95	14,250
	Briar Run 1	WG-26	59	8,850	0	59	8,850	0	59	8,850	0	59	8,850
	Briar Run 2*	WG-26	152	22,800	0	152	22,800	0	152	22,800	0	152	22,800
	Walnut Grove - Old Country Club Dr	AG-8	3	450	0	3	450	0	3	450	0	3	450
	Aspen Green - Ph 1A	AG-8	27	4,050	0	27	4,050	0	27	4,050	0	27	4,050
	Aspen Green - Ph 1B	AG-26	0	0	34	34	5,100	0	34	5,100	0	34	5,100
	Aspen Green - Ph 2A	AG-12	19	2,850	10	29	4,350	0	29	4,350	0	29	4,350
	Aspen Green - Ph 2B	AG-15	0	0	33	33	4,950	0	33	4,950	0	33	4,950
	Aspen Green - Ph 3	AG-26	0	0	23	23	3,450	57	80	12,000	0	80	12,000
	Green Hill	AG-13	0	0	30	30	4,500	20	50	7,500	0	50	7,500
	Green Hill	AG-16	0	0	30	30	4,500	50	80	12,000	0	80	12,000
	Green Hill	AG-26	0	0	0	0	0	30	30	4,500	160	190	28,500
		Totals	858	128,700	260	1,118	167,700	257	1,375	206,250	484	1,859	278,850

Modeled Flow 150 GPD/EDU

NOTES:

(1) EDU GROWTH/FLOW PROJECTIONS BASED ON CTUB PROJECTED DEVELOPMENTS

(*) PORTION OF THE PROJECTED GROWTH WITHIN BRIAR RUN 2 MINOR BASIN IS TO OCCUR OUTSIDE THE BRECKENRIDGE PS BASIN

Charles Town - Sanitary Sewer System Expansion - Green Hill Development

Upstream MH	Downstream MH	Pipe Diam. (in)	Invert Elevations		2D Length (LF) (center to center)	Pipe Slope	Gravity Flow Capacity			
			Upstr-eam	Down-stream			ft^3/sec	gal/day	gal/min	EDUs @ PF of 4
BK-52	BK PS	21	425.83	425.63	50	0.400%	10.021	6,476,477	4,498	10,794
BK-53	BK-52	10	426.54	426.00	153	0.353%	1.302	841,218	584	1,402
BK-54	BK-53	10	432.20	428.14	83	4.892%	4.846	3,131,709	2,175	5,220
BK-55	BK-54	10	433.87	432.40	251	0.586%	1.677	1,083,625	753	1,806
BK-56	BK-55	10	437.70	434.00	204	1.814%	2.951	1,906,967	1,324	3,178
BK-81	BK-56	10	438.97	437.70	401	0.317%	1.233	796,869	553	1,328
BK-4	BK-81	10	445.04	438.97	305	1.990%	3.091	1,997,569	1,387	3,329
BK-3	BK-4	10	445.80	445.18	255	0.243%	1.080	698,205	485	1,164
BK-2	BK-3	10	448.50	447.80	149	0.470%	1.502	970,540	674	1,618
BK-1	BK-2	10	449.73	448.60	127	0.890%	2.067	1,335,656	928	2,226
WG-54	BK-1	10	451.53	449.90	69.16	2.357%	3.364	2,173,820	1,510	3,623
WG-26	WG-54	15	454.25	453.80	132	0.341%	3.772	2,437,549	1,693	4,063
WG-25	WG-26	15	457.40	454.40	344.8	0.870%	6.026	3,894,135	2,704	6,490
WG-24	WG-25	15	458.45	457.55	184.2	0.489%	4.515	2,918,169	2,027	4,864
WG-23	WG-24	15	458.90	458.60	53	0.566%	4.860	3,140,919	2,181	5,235
WG-22	WG-23	15	460.55	459.05	375.8	0.399%	4.081	2,637,554	1,832	4,396
AG-36	WG-22	15	461.40	460.70	174.3	0.402%	4.094	2,645,662	1,837	4,409
AG-35	AG-36	15	462.60	461.55	266.6	0.394%	4.054	2,619,984	1,819	4,367
AG-34	AG-35	15	463.77	462.75	256.8	0.397%	4.071	2,631,096	1,827	4,385
AG-33	AG-34	15	465.20	463.88	332	0.398%	4.073	2,632,401	1,828	4,387
AG-32	AG-33	15	466.80	465.35	363.3	0.399%	4.081	2,637,457	1,832	4,396
AG-31	AG-32	15	468.09	467.00	263.5	0.414%	4.155	2,685,079	1,865	4,475
AG-30	AG-31	15	468.67	468.19	120.54	0.398%	4.076	2,634,445	1,829	4,391
AG-29	AG-30	15	470.33	468.77	267.46	0.583%	4.933	3,188,357	2,214	5,314
AG-27	AG-29	15	471.49	470.43	221.99	0.477%	4.464	2,884,830	2,003	4,808
AG-26	AG-27	15	473.54	471.59	397.41	0.491%	4.525	2,924,368	2,031	4,874
AG-17	AG-26	15	475.27	473.64	336.24	0.485%	4.498	2,906,720	2,019	4,845
AG-8	AG-17	15	475.65	475.37	31.94	0.877%	6.048	3,908,819	2,714	6,515
AG-9	AG-8	8	479.47	476.33	190.46	1.649%	1.552	1,002,752	696	1,671
AG-14	AG-9	8	481.25	479.57	171.8	0.978%	1.195	772,278	536	1,287
AG-15	AG-14	8	488.22	481.35	281.84	2.438%	1.887	1,219,292	847	2,032
AG-16	AG-15	8	494.72	488.32	321.08	1.993%	1.706	1,102,590	766	1,838
AG-10	AG-9	8	481.18	479.57	93.95	1.714%	1.582	1,022,340	710	1,704
AG-11	AG-10	8	487.50	481.28	214.17	2.904%	2.059	1,330,903	924	2,218
AG-12	AG-11	8	497.17	487.60	257.22	3.721%	2.331	1,506,379	1,046	2,511
AG-13	AG-12	8	501.24	497.27	167.75	2.367%	1.859	1,201,419	834	2,002
BK-44	BK-53	8	430.62	427.70	555	0.526%	0.877	566,468	393	944
BK-40	BK-44	8	431.49	430.67	169	0.485%	0.842	543,994	378	907
BK-33	BK-40	8	432.34	431.52	154	0.532%	0.882	569,872	396	950
BK-29	BK-33	8	441.27	440.24	346	0.298%	0.659	426,100	296	710
BK-28	BK-29	8	447.33	442.02	189	2.810%	2.025	1,309,022	909	2,182
BK-27	BK-28	8	448.11	447.43	135	0.504%	0.858	554,266	385	924
BK-26	BK-27	8	448.77	448.22	110	0.500%	0.854	552,224	383	920
BK-25	BK-26	8	451.42	448.87	200	1.275%	1.364	881,832	612	1,470
BK-24	BK-25	8	454.33	451.42	153	1.902%	1.667	1,077,039	748	1,795

NOTE: EDU = 150 gal/day
Flow Calculated with a Manning's Coefficent of Friction (n) of 0.013

EXHIBIT 1
Green Hill Subdivision
Charles Town Sewer Model
Extents of Additional Modeled Segments

RK&K

Green Hill

Butler Farms

Breckenridge East

Aspen Greens

Walnut Hills

Walnut Dell

Walnut Grove

Security Hills

Flowing Springs Estates

Beallair West

Bellair

Beallair

Sleepy Hollow Estates

AG-16
AG-13
AG-15
AG-12
AG-14
AG-11
AG-10
AG-9
AG-8
AG-17
AG-26
AG-27
AG-29
AG-30
AG-31
AG-32
AG-33
AG-34
AG-35
AG-36
WG-22
WG-23
WG-24
WG-25
WG-26
WG-54
BK-1
BK-2
BK-3
BK-4
BK-81
BK-56
BK-55
BK-54
BK-53
BK-52
BK-44
BK-40
BK-33
BK-29
BK-28
BK-27
BK-26
BK-25
BK-24

8" 15" 10"

6" FM
4" FM
8" FM

Breckenridge East (Future)

Breckenridge

Beallair

PS

Old Country Club Rd
Flowing Springs Rd
Bluebells Ct
Fox Run Way
Azalea Dr
Iris Way
Boxwood Ln
Evergreen Dr
Marie Dr
Porter Way
Flowing Acres Rd
Manchester Dr
Cambridge Dr
Oxford Way
Rex Dr
Oak Lee Dr
Briar Run Park
Bellair Manor Dr
Robinson Way
Lewis Washington Dr
Louisa Beall Ln
Hanoverian Dr
Posting Way
Pelham Ln
Belgian Way
Barrel Horse Dr
N Kimberwick Dr
Trotting Way
Pommel Ln
Sawmill Ct
Valley Ln
Appaloosa Way
Quail Hollow Rd
Fairway Dr

150 0 600 Feet
1" = 600 Feet

Modeled Gravity Sewer
Modeled Manholes
Modeled Force Mains
Sanitary Sewer

EXHIBIT 2
Green Hill Subdivision
Charles Town Sewer Model
20-Year WWF Conditions
Scenario 1 - Green Hill Flows
no Breckenridge East

Breckenridge East (Future)

AG-32 AG-33 AG-34 AG-35 AG-36 WG-22 WG-23 WG-24 WG-25 WG-26 WG-54 BK-1 BK-2 BK-3 BK-4 BK-81 BK-56 BK-55 BK-54 BK-53 BK-24 BK-25 BK-26 BK-27 BK-28 BK-29 BK-33 BK-40 BK-44

Breckenridge

Old Country Club Rd

Beallair West

Walnut Hills

Walnut Dell

Walnut Grove

Security Hills

Modeled Gravity Sewer
Modeled Manholes
Modeled Force Mains
Sanitary Sewer

Gravity Sewer Pipe Capacity (%)

>100%
>=80% <100%
>=67% <80%
<67%
Surcharge
Surcharge & Overflow

75 0 300 Feet
1" = 300 Feet

EXHIBIT 3
Green Hill Subdivision
Charles Town Sewer Model
WWF 20-Year Conditions
Scenario 2 - Green Hill Flows with Beallair and Breckenridge East

Breckenridge East (Future)

4" FM

6" FM

8" FM

AG-32 15" AG-33 15" AG-34 15" AG-35 15" AG-36 15" WG-22 15" WG-23 15" WG-24 15" WG-25 15" WG-26 15" WG-54 10" BK-1 10" BK-2 10" BK-3 10" BK-4 10" BK-81 10" BK-56 10" BK-55 10" BK-54 10" BK-53

BK-24 8" BK-25 8" BK-26 8" BK-27 8" BK-28 8" BK-29 8" BK-33 8" BK-40 8" BK-44 8" BK-44 10" BK-56

Old Country Club Rd

Beallair Manor Dr

Beallair West

Posting Way

Barrel Horse Dr

Bridle Ct

Walker Ct

Hanoverian Dr

Pelham Ln

Belgian Way

Breckenridge

Quail Hollow Rd

Flowing Springs Run

S Kimberwicke Dr

Pommel Ln

Trotting Way

Buckskin Ct

Appaloosa Way

Walnut Hills

Walnut Dell

Walnut Grove

Iris Way

Cherry Blossom Dr

Evergreen Dr

Marie Dr

Daisy Ln

Boxwood Ln

Porter Way

Johns Ct

Security Hills

Flowing Acres Rd

N E S W

75 0 300 Feet

1" = 300 Feet

Modeled Gravity Sewer
Modeled Manholes
Modeled Force Mains
Sanitary Sewer

Gravity Sewer Pipe Capacity (%)

>100%
>=80% <100%
>=67% <80%
<67%
Surcharge
Surcharge & Overflow

EXHIBIT 4
Green Hill Subdivision
Charles Town Sewer Model
WWF 20-Year Conditions
Scenario 3 - Upgrade
Breckenridge PS

Breckenridge East (Future)

AG-32 AG-33 AG-34 AG-35 AG-36 WG-22 WG-23 WG-24 WG-25 WG-26 WG-54 BK-1 BK-2 BK-3 BK-4 BK-81 BK-56 BK-55 BK-54 BK-53 BK-52 BK-24 BK-25 BK-26 BK-27 BK-28 BK-29 BK-33 BK-40 BK-44

Old Country Club Rd

Beallair West

Walnut Hills

Walnut Dell

Walnut Grove

Security Hills

Breckenridge

Posting Way

Barrel Horse Dr

Quail Hollow Rd

Flowing Springs Run

Beallair Manor Dr

Walker Ct

Hanoverian Dr

Pelham Ln

Belgian Way

S Kimberwicke Dr

Pommel Ln

Trotting Way

Appaloosa Way

Buckskin Ct

Iris Way

Evergreen Dr

Marie Dr

Cherry Blossom Dr

Porter Way

Johns Ct

Flowing Acres Rd

Boxwood Ln

Daisy Ln

N E S W

75 0 300 Feet

1" = 300 Feet

- Modeled Gravity Sewer
- Modeled Manholes
- Modeled Force Mains
- Sanitary Sewer

Gravity Sewer Pipe Capacity (%)

- >100%
- >=80% <100%
- >=67% <80%
- <67%
- Surcharge
- Surcharge & Overflow

EXHIBIT 5
Green Hill Subdivision
Charles Town Sewer Model
WWF 20-Year Conditions
Scenario 4 - Reroute Beallair PS and Breckenridge East PS

Breckenridge East (Future)

To MH W1 (WALMART) →

Breckenridge

AG-32 15" AG-33 15" AG-34 15" AG-35 15" AG-36 15" WG-22 15" WG-23 15" WG-24 15" WG-25 15" WG-26 15" WG-54 10" BK-1 10" BK-2 10" BK-3 10" BK-4 10" BK-81 10" BK-56 10" BK-55 10" BK-54 10" BK-53 10" BK-52

BK-24 8" BK-25 8" BK-26 8" BK-27 8" BK-28 8" BK-29 8" BK-33 8" BK-40 8" BK-44 8"

Old Country Club Rd

Beallair Manor Dr

Beallair West

Barrel Horse Dr

Posting Way

Walker Ct

Hanoverian Dr

Pelham Ln

Belgian Way

Breckenridge

Quail Hollow Rd

Flowing Springs Run

S Kimberwicke Dr

Appaloosa Way

Pommel Ln

Trotting Way

Buckskin Ct

Walnut Hills

Walnut Dell

Walnut Grove

Iris Way

Cherry Blossom Dr

Evergreen Dr

Marie Dr

Porter Way

Johns Ct

Security Hills

Flowing Acres Rd

Boxwood Ln

Daisy Ln

N E S W

75 0 300 Feet

1" = 300 Feet

Modeled Gravity Sewer
Modeled Manholes
Modeled Force Mains
Sanitary Sewer

Gravity Sewer Pipe Capacity (%)

>100%
>=80% <100%
>=67% <80%
<67%
Surcharge
Surcharge & Overflow

July 12, 2021

Ms. Kristen M. Stolipher
Charles Town Utility Board
832 South George Street
Charles Town, WV 25414

Re: County #: TBD
Project Name: Green Hill
GORDON Project: 2582-0103

To Kristen:

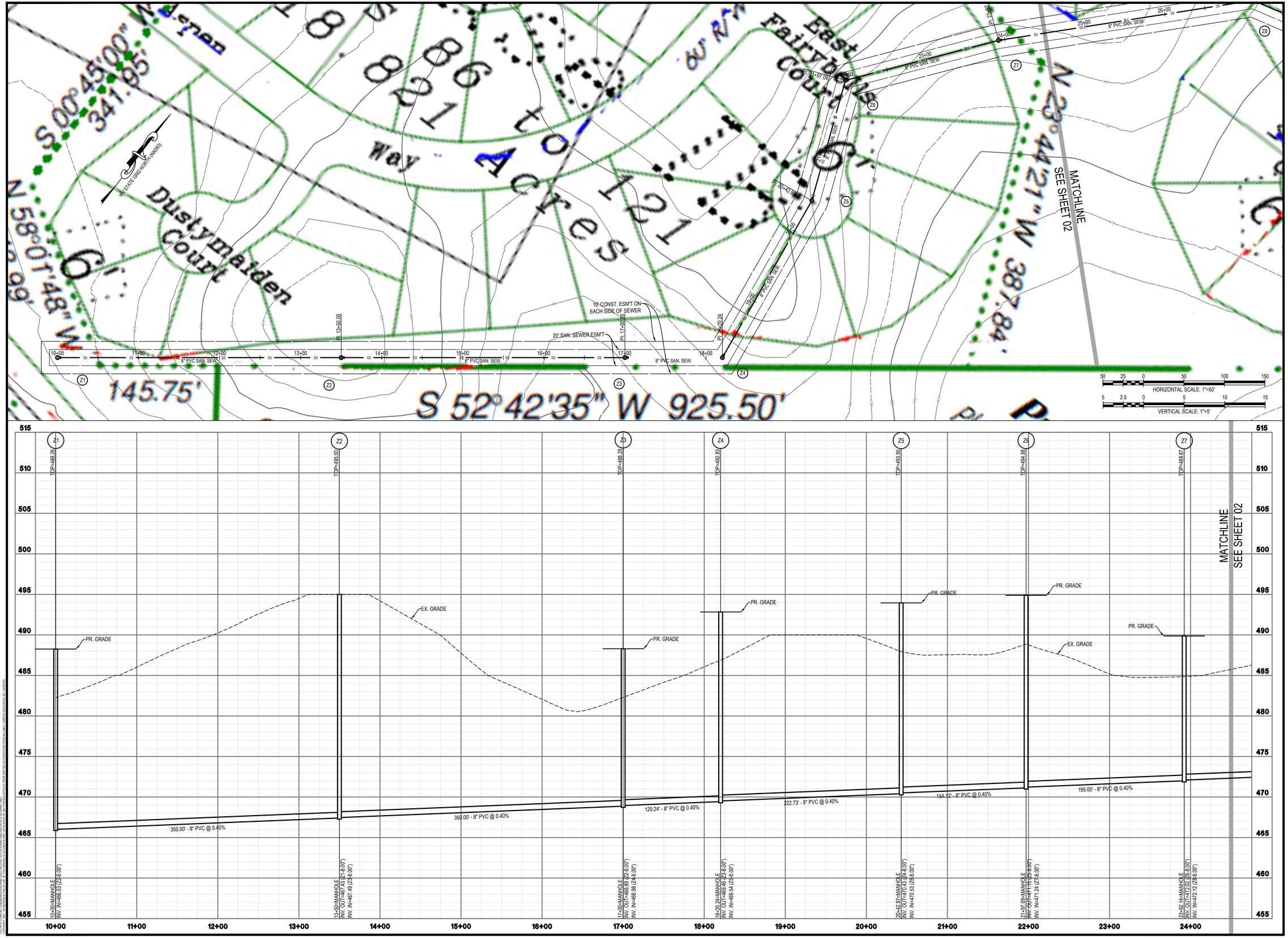
May this letter serve as a request for sanitary sewer availably for the proposed Green Hill residential project that will be serving 320 lots. Please refer to attached exhibit showing a proposed sewer alignment to the existing sanitary sewer connection.

Please feel free to contact me at 304-725-8456 or by email at tevanst@gordon.us.com if you should have any further questions.

Sincerely,
WILLIAM H. GORDON ASSOCIATES, INC.

Thomas M Evans
Design Manager

g:\project\admin\2582 green hill\0103 green hill\4-correspondence\2021-07-12_ctub_ssew avail. letter.doc



Gordon
PROGRAMMING AND PLANNING
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
SURVEY AND MAPPING
SECURITY CONSULTING
148 S Queen Street, Suite 201
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www.gordon.us.com

SEAL:

REVISIONS
1) 07/09/2021 - REVISED PER CLIENT

PRELIMINARY SANITARY SEWER OUTFALL PLAN AND PROFILE EXHIBIT

GREEN HILL SUBDIVISION

TAX MAP 3, PARCEL 9, D.B. 795, PG. 754
CHARLES TOWN TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #XXX-XX

SCALE:	HORIZ.: 1"=50' VERT.: 1"=5'
DATE:	JUNE 2021
JOB:	2582-0103
DRAWN: TME	CHECK: JPG
CADD:	
NCS:	
SHEET:	01 OF 03

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Martinsburg, WV 25401
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SEAL:

REVISIONS

11	07/09/2021 - REVISED PER CLIENT

PRELIMINARY SANITARY SEWER OUTFALL PLAN AND PROFILE EXHIBIT

GREEN HILL SUBDIVISION

TAX MAP 3, PARCEL 9; D.B. 795, PG. 754
CHARLES TOWN TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #XXX-XX

SCALE:	HORIZ.: 1"=50' VERT.: 1"=5'
DATE:	JUNE 2021
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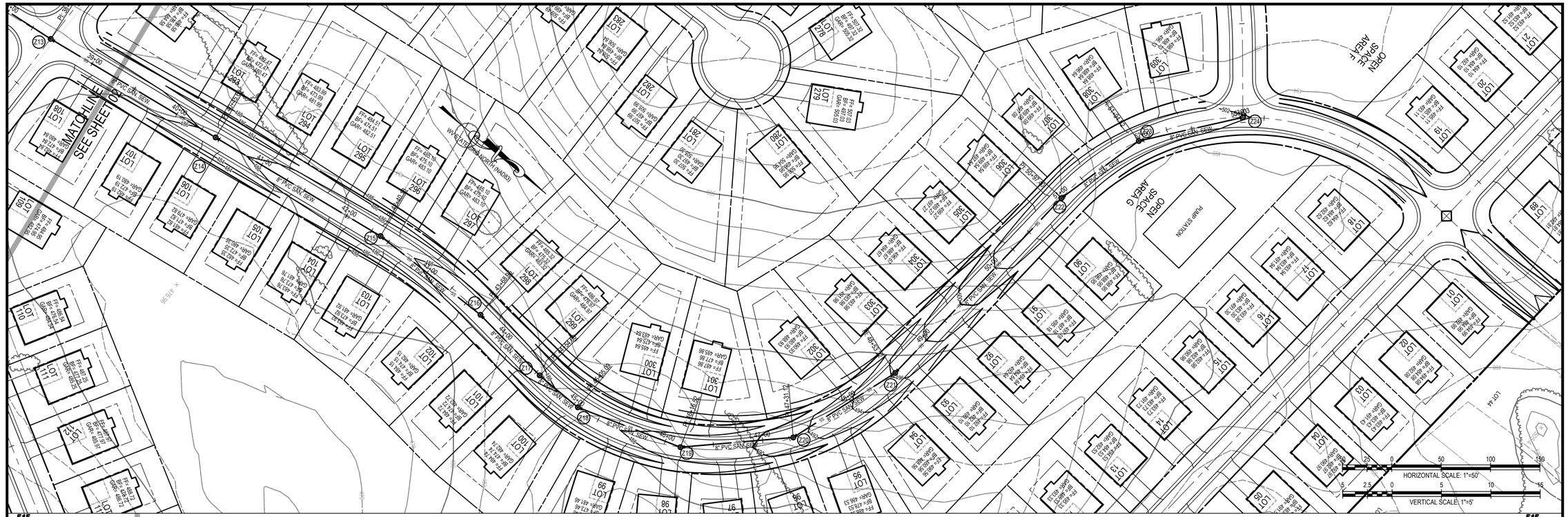

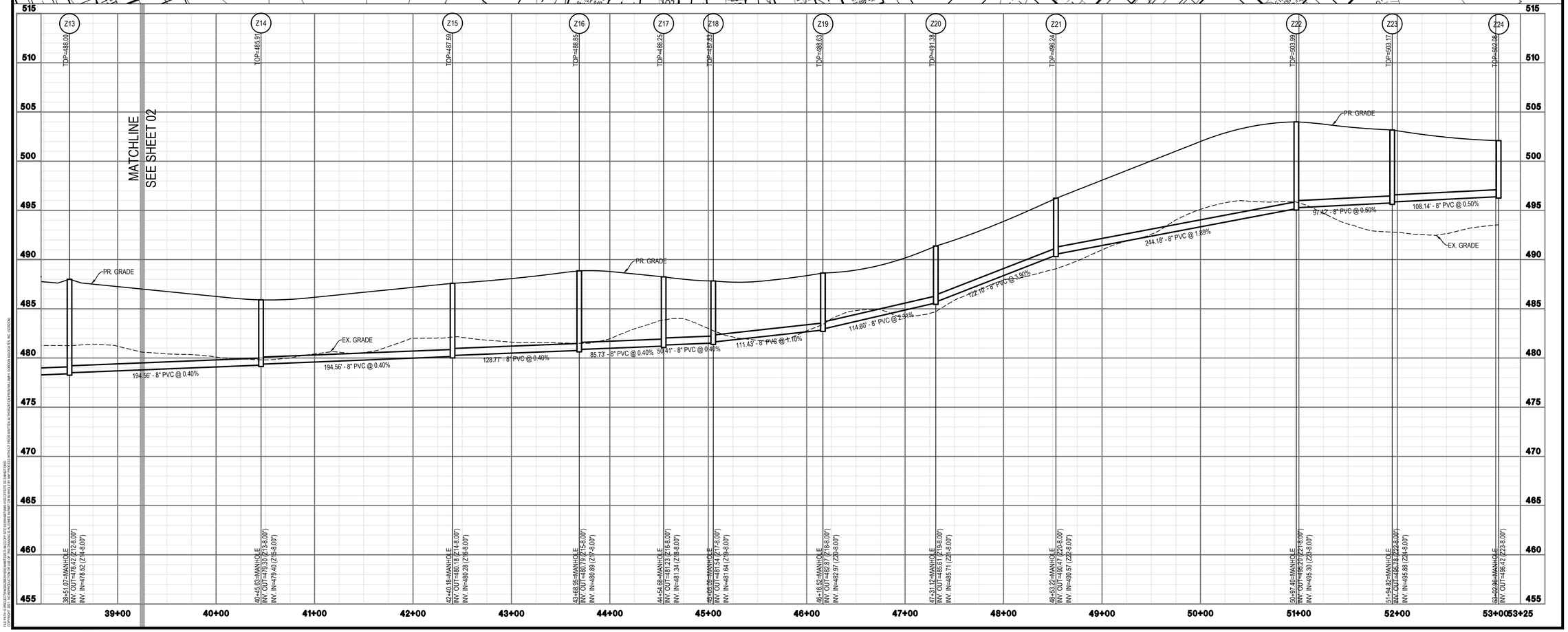

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LAYOUT EXHIBIT

GREEN HILL

TAX MAP 3, PARCEL 9; D.B. 795, PG. 754
CHARLES TOWN TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

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AMENDMENT TO ALTERNATE SEWER

MAIN LINE EXTENSION AGREEMENT

This 1st day of July, 2013, comes the Jefferson County Public Service District, Ranson, West Virginia, a public corporation, (hereinafter referred to as the "UTILITY"), and Roderick Planes, L.L.C., (hereinafter referred to as the "DEVELOPER"); and agree to enter into this amendment ("Amendment") to the Alternate Main Line Extension Agreement ("Agreement") dated December 3, 2012 with respect to providing a main line sewer extension to serve Aspen Green (hereinafter referred to as the "DEVELOPMENT") which is located in Jefferson County, West Virginia.

WHEREAS, the EXTENSION was sized to provide adequate service to the DEVELOPMENT, including an OFF-SITE PORTION which included 3008 linear feet of 8 inch diameter main;

WHEREAS, the UTILITY wishes to enlarge the OFF-SITE PORTION of the EXTENSION to 15 inch diameter main so that the UTILITY can readily serve additional growth expected in the vicinity of the DEVELOPMENT;

WHEREAS, the enlargement of the main as desired by UTILITY will provide transmission capacity for an additional 1550 equivalent dwelling units of usage;

WHEREAS, under the Agreement the DEVELOPER would pay for all costs of construction of the EXTENSION;

WHEREAS, the only increased costs arising from enlarging the OFF-SITE PORTION is in the cost of the enlarged main;

WHEREAS, DEVELOPER is willing to construct the EXTENSION with an enlarged diameter OFF-SITE PORTION provided the UTILITY reimburses the DEVELOPER for the increased cost of materials;

NOW, THEREFORE, and in consideration of the covenants and agreements set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the UTILITY and DEVELOPER amend the Agreement only as follows:

1. Exhibit No. 1 to the Agreement is stricken and replaced with the Amended Exhibit No. 1 attached hereto.

2. Section 4.01 of the Agreement is stricken and replaced with the following

Amended Section 4.01 The UTILITY shall bear no financial or other responsibility for the construction of the EXTENSION, except for the incremental increase to the cost of materials arising from UTILITY's decision to enlarge the diameter of the main beyond the size needed to serve the DEVELOPMENT at full build out, estimated to be $ 43,716.

Upon transfer of ownership of the EXTENSION, UTILITY shall reimburse DEVELOPER for the incremental increase to the cost of materials arising from the enlargement of the OFF-SITE PORTION in equal installments over a 24 month period. DEVELOPER shall not charge interest for the time period required for UTILITY's reimbursement. The DEVELOPER shall pay the UTILITY its cost to provide a full time "resident project representative" during construction of the complete EXTENSION, including service lines to connect dwellings. It is understood that a "resident project representative" is only required for periods of actual construction and the DEVELOPER shall only be charged for those periods of actual construction. The fee for such resident project representative shall be at the going rate for such services for water and sewer utilities in Jefferson County, West Virginia, not to exceed an hourly rate of $60.00 including per diem if travel is required by the UTILITY'S engineer.

3. Except for the specific terms stated herein, the terms of the Agreement remain in effect without modification.

WITNESS the following signatures this 1st day of July, 2013.

RODERICK PLANES, L.L.C.

By: _____
MAURICE GLADHILL

Its: MANAGING MEMBER

JEFFERSON COUNTY PUBLIC SERVICE DISTRICT

By: William H. Strider

Its: Treasurer

STATE OF WEST VIRGINIA

COUNTY OF JEFFERSON, to-wit:

I, Ashley Stottlemyer, a Notary Public in and for the state and county aforesaid, do hereby certify that Maurice Gladhill, in his/her capacity as Managing Member for Roderick Planes, L.L.C. signed the foregoing writing bearing date the 1 day of July, 2013, and has this day in my said county, before me, acknowledged the said writing to be the act and deed of said corporation.

Given under my hand and seal this 1 day of July, 2013.

My commission expires August 11, 2015

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
ASHLEY N. STOTTLEMYER
1251 Steed Street, Ranson, WV 25438
My Commission Expires August 11, 2016

Notary Public Ashley Stottlemyer

STATE OF WEST VIRGINIA

COUNTY OF JEFFERSON, to-wit:

I, Ashley Stottlemyer, a Notary Public in and for the state and county aforesaid, do hereby certify that William Strider, in his/her capacity as for the Jefferson County Public Service District, signed the foregoing writing bearing date the 1 day of July, 2013, and has this day in my said county, before me, acknowledged the said writing to be the act and deed of said corporation.

Given under my hand and seal this 1st day of July, 2013.

My commission expires August 11, 2015.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
ASHLEY N. STOTTLEMYER
1281 Steel Street, Ranson, WV 25438
My Commission Expires August 11, 2015

Notary Public Ashley Stottlemyer

ALTERNATE SEWER MAIN LINE EXTENSION AGREEMENT

This 3rd day of December ,20 12 , comes the **Jefferson County Public Service District**, Ranson, West Virginia, a public corporation, (hereinafter referred to as the "UTILITY"), and **Roderick Planes, L.L.C.**, (hereinafter referred to as the "DEVELOPER"); and agree to enter into an Alternate Main Line Extension Agreement for the purpose of providing a main line sewer extension to serve **Aspen Green** (hereinafter referred to as the "DEVELOPMENT") which is located in Jefferson County, West Virginia.

WHEREAS, the UTILITY wishes to make sewer facilities available to the greatest number of Jefferson County residents as expeditiously as prudently possible; and

WHEREAS, the DEVELOPER is planning to develop 203 single family houses within the DEVELOPMENT; and

WHEREAS, the planned development of DEVELOPER'S property is contingent upon DEVELOPER having proper sanitary sewer facilities; and

WHEREAS, it is in the best interest of the future users of the DEVELOPER'S property to have sewer facilities; and

WHEREAS, it is in the best interest of the UTILITY'S and the DEVELOPER'S customers to expand the UTILITY'S facilities to anticipate future developments and growth; and

WHEREAS, the construction proposed by this agreement includes two sewer main line extensions as described on the attached Exhibit No. 1; the first, a 3,008 linear foot extension of gravity main, all necessary cleanouts and manholes, and associated appurtenances (hereinafter referred to as the "OFF-SITE PORTION") that is to be an extension of the UTILITY'S existing facilities, and second, a 3,252 foot sewer main extension and appurtenances (hereinafter referred to as the "ON-SITE PORTION",) that is to be an extension of the UTILITY'S sewer facilities into the DEVELOPMENT; (the "OFF-SITE PORTION" and "ON-SITE PORTION" are collectively hereinafter referred to as the "EXTENSION"); and

WHEREAS, the DEVELOPER is familiar with the terms of **Rule 5.5 of the Public Service Commission *Rules for the Government of Sewer Utilities* ("Sewer Rules"), a copy of which is attached hereto as Exhibit No. 2**, and, in order to facilitate the development of the EXTENSION, it willingly waives its right to reimbursement as provided for therein, or in any successor version of such Rule; and

WHEREAS, the Developer is familiar with the terms of **Sewer Rule 5.3, a copy of which is attached hereto as Exhibit No. 3,** and agrees to install customer service lines in compliance therewith.

NOW, THEREFORE, and in consideration of the covenants and agreements set forth herein, and other good and valuable consideration, the receipt and sufficiency of which are

hereby acknowledged, the UTILITY and DEVELOPER agree:

ARTICLE I

CONDITIONS PRECEDENT

Section 1.01. This agreement and respective terms and obligations of the parties are neither binding nor effective until the Public Service Commission West Virginia's (the "PSC") Final Order approving it is issued. Any action taken by any party prior to PSC approval of this agreement is at each respective party's sole risk and expense.

Section 1.02. At the time this Agreement is signed by the DEVELOPER, the DEVELOPER shall pay to the UTILITY the sum of One Thousand Dollars ($1,000.00) to cover the cost of having the Public Service Commission approve this Agreement. This cost includes, but is not limited to, legal costs expended in obtaining said approval. If the charges to the UTILITY for Public Service Commission approval are less than the amount paid by the DEVELOPER to the UTILITY, the excess shall be refunded to the DEVELOPER. If the charges are greater than the amount paid by the DEVELOPER to the UTILITY, the DEVELOPER shall reimburse the UTILITY for the difference. Payment of the sum of One Thousand Dollars, ($1,000.00) is to be made to the UTILITY by the DEVELOPER prior to this Agreement being forwarded by the UTILITY to the Public Service Commission of West Virginia for approval. Total charges to the DEVELOPER under this Section shall not exceed $5,000.00.

Section 1.03. DEVELOPER agrees that it will pay to the UTILITY the applicable capital improvement fee for each equivalent residential unit within the DEVELOPMENT which is connected to the UTILITY.

ARTICLE II

DESIGN

Section 2.01. The DEVELOPER hereby agrees to employ Registered Professional Engineers, licensed by the State of West Virginia to design the EXTENSION in compliance with the minimum design parameters (size, flow rates and general location) for the EXTENSION to serve the DEVELOPMENT and existing and future customers of the UTILITY.

Section 2.02. The UTILITY shall bear no financial responsibility for the design of the EXTENSION or appurtenances thereto.

Section 2.03. The UTILITY shall provide design parameters for the proposed EXTENSION to the DEVELOPER prior to its design so that all parties can agree, in writing, to its sizing and capacity.

Section 2.04. The UTILITY shall have the right to approve/disapprove, prior to the start of construction, all plans, designs, specifications and shop drawings of the EXTENSION and all appurtenances thereto, to ensure that the EXTENSION transports and otherwise conveys the sewage from the DEVELOPMENT and extensions therefrom in accordance with all current engineering, regulatory or UTILITY requirements, and the terms of this agreement, minimizes line loss or minimizes infiltration and eliminates illegal and improper sources of inflow. DEVELOPER shall furnish UTILITY'S engineer with all plans, designs, specifications and shop drawings for review and approval at least thirty (30) days prior to the expected start of construction. The UTILITY may require such revisions of said plans and specifications by the DEVELOPER as are necessary before giving final approval. DEVELOPER shall reimburse UTILITY for the cost of the review and approval by the UTILITY'S engineer, including any further review following a request for revision.

Section 2.05. After approval by the UTILITY, the DEVELOPER shall, at his own expense, submit the plans and specifications for the EXTENSION to the UTILITY and to the appropriate State, Federal and local regulatory agencies for approval.

Section 2.06. The DEVELOPER shall, consistent with the terms of Article VI of this Agreement, administer, design and construct the EXTENSION.

ARTICLE III

PERMITS AND EASEMENTS

Section 3.01. The DEVELOPER shall, at its own expense, obtain all necessary permits, authorizations and approvals of Federal, State and local agencies prior to the construction phase of the EXTENSION and shall make such changes as required by said agencies.

Section 3.02. The DEVELOPER shall grant the UTILITY construction and permanent easements within the DEVELOPMENT, using the easement form **attached as Exhibit No. 4,** as shown on recorded, Planning Commission approved plats signed and sealed by a Professional Land Surveyor, licensed by the State of West Virginia. The DEVELOPER, whenever reasonably possible, shall secure easements from third parties using the attached easement form and deliver them to the UTILITY free of charge before construction is started. If, however it is not reasonably possible for DEVELOPER to secure an easement, and the construction of the EXTENSION involves the UTILITY incurring expenses for easement acquisition, either by purchase or condemnation, such costs shall be reimbursed by DEVELOPER. DEVELOPER shall cooperate with UTILITY and undertake such actions as are necessary to assign or transfer easements to UTILITY.

Section 3.03. In order that the UTILITY may provide sewer service to adjoining properties of the DEVELOPER'S project, the UTILITY shall require and the DEVELOPER shall agree to provide all necessary easements on the DEVELOPER'S property from the DEVELOPMENT to adjoining properties, at the locations specified by the UTILITY using the UTILITY'S easement form for no additional consideration. The District reserves the right to further extend its main line from and beyond each main line extension constructed per this agreement. In such event, the DEVELOPER shall not be entitled to any reimbursement for the attaching of customers to any extension constructed beyond the main(s) constructed per this agreement. In the event that changes made by the UTILITY to its system permit, UTILITY agrees that it will, where feasible, and in the UTILITY'S best interest, take necessary action to eliminate, if possible, any existing easements which are no longer needed by UTILITY. However, it is understood that no such action will be taken by UTILITY unless DEVELOPER agrees to be responsible for the cost of any such action.

Section 3.04. The UTILITY shall assure the DEVELOPER that the DEVELOPER'S construction of the EXTENSION will be within easements and with permits and approvals validly granted to the UTILITY for such construction prior to the commencement of construction.

ARTICLE IV

CONSTRUCTION, INSPECTION AND FINAL TESTING

Section 4.01. The UTILITY shall bear no financial or other responsibility for the construction of the EXTENSION. The DEVELOPER shall pay the UTILITY its cost to provide a full time "resident project representative" during construction of the complete EXTENSION, including service lines to connect dwellings. It is understood that a "resident project representative" is only required for periods of actual construction and the DEVELOPER shall only be charged for those periods of actual construction. The fee for such resident project representative shall be at the going rate for such services for water and sewer utilities in Jefferson County, West Virginia, not to exceed an hourly rate of $xxx including per diem if travel is required by the UTILITY'S engineer.

Section 4.02. DEVELOPER shall provide UTILITY with at least two weeks advance notice of its need for inspection of construction activities by a resident project representative.

Section 4.03. The DEVELOPER shall construct the EXTENSION in accordance with the plans and specifications developed in accordance with the UTILITY'S design parameters.

Section 4.04. The DEVELOPER shall provide to the UTILITY two complete sets of designs, plans, specifications, and shop

drawings of the EXTENSION and continually update these plans through the design and construction of the system, as needed.

Section 4.05. At all times during the construction of the EXTENSION, the DEVELOPER shall maintain sole ownership of the EXTENSION.

Section 4.06. The DEVELOPER is to commence construction of the EXTENSION within twenty-four (24) months after the UTILITY'S acceptance and the issuance by the PSC of a final, non-appealable Order approving this Agreement, together with such other final, non-appealable approvals as are necessary for the orderly development of the DEVELOPMENT. In the event the construction of the EXTENSION, or any portion thereof, is delayed by litigation, administrative proceedings or appeals, or in the event that construction is delayed due to the failure of the DEVELOPER to diligently and timely provide the design parameters of the EXTENSION, or for other good cause shown as determined by the UTILITY in its sole discretion, the period within which construction is to commence may be extended by such period of time as is required to bring such litigation, administrative proceedings or appeals to an unappealable conclusion, to obtain the requisite design parameters for construction, or for expiration of the good cause delaying construction.

Section 4.07. Inspection and Testing.

The DEVELOPER and UTILITY agree to the following:

1. Testing shall be done by the DEVELOPER at his expense under the observation of the UTILITY. All the necessary equipment and labor for testing shall be provided and paid for by the DEVELOPER. The testing procedures and standard shall be conducted as provided in Section 4.10.

2. Testing of the EXTENSION shall be done not less than thirty (30) days after the EXTENSION (or portion thereof) has been installed.

3. The DEVELOPER agrees to give the UTILITY at least two weeks notice of any tests or inspections to be conducted and the UTILITY agrees to provide a qualified representative to witness and approve the test or inspection.

4. Light, alignment and deflection, Mandrel, infiltration and exfiltration, low pressure air, manhole, and such other tests, or substitutes therefore as approved by UTILITY, when applicable, will be conducted according to the accepted industry, UTILITY, and regulatory standards.

5. If the EXTENSION fails any of these tests then the DEVELOPER shall remedy the defect at its expense. The repairs and tests shall be repeated under the supervision of the UTILITY.

6. The UTILITY agrees to notify the DEVELOPER in writing as soon as possible, but in no event not later than four (4) working days after the test(s), as to whether the EXTENSION or portion thereof is acceptable and if not, what parts are defective and what remedies are required. The DEVELOPER may commence any repairs or changes immediately. Any defects will be repaired by the DEVELOPER. Testing after repairs are completed will be done by the DEVELOPER at its expense under the supervision of the UTILITY

Section 4.08. The UTILITY shall inspect and approve, prior to the implementation of service, the construction of the EXTENSION to ensure that sewage will be collected and transported in accordance with current Federal, State and Local regulations and the terms of the Agreement, that infiltration is minimized and that illegal and improper sources of inflow are eliminated and/or line loss is minimized, and that the system is constructed in accordance with the approved designs, plans, specifications, and shop drawings using materials in compliance with Federal, State and UTILITY'S standards, consistent with sound utility practices. Such inspection shall be at the DEVELOPER'S cost. A one year guarantee of materials and workmanship shall be provided by the DEVELOPER.

Section 4.09. In addition to the tests called for under Sections 4.07, 4.08 and 4.10, the UTILITY shall have the right to conduct, at UTILITY'S expense, additional tests of the EXTENSION which UTILITY deems appropriate in the circumstances. UTILITY shall inform DEVELOPER of its intent to undertake such additional tests, and the standards governing the same, within thirty (30) days after the EXTENSION (or portion thereof) has been installed, unless the need for such additional tests is determined in the course of conducting the routine tests set forth in Section 4.10. DEVELOPER is not to make final hook up until such time as record (as built) plans are submitted to the UTILITY, all aspects of the EXTENSION have been inspected and approved by the UTILITY.

Section 4.10. Routine Testing Procedures and Standards:

ALIGNMENT AND DEFLECTION TESTS

The alignment test is to make sure the pipe is laid on grade. The deflection test is to ensure that the pipe is not collapsed or otherwise bent.

LIGHT TEST

The light test is a check to see that the pipe is properly aligned and not collapsed. The procedure for doing the test is to shine a light into the pipe between each manhole where applicable. If one sees a full circle of light then the test is passed verification. Further testing may be conducted eleven (11) months after

installation by Mandrel test procedures as described below.

MANDREL TEST

If less than a full circle is observed during the initial light test, the mandrel test will be required. The mandrel will check for deflected pipe. A mandrel is a rigid round object with a diameter 95 percent of the inside diameter of the pipe. The mandrel test is accomplished by manually pulling the mandrel through the pipe. Mechanical pulling is not allowed. If the mandrel passes through without resistance then the pipe has passed the test. If the mandrel appears to have passed through a puddle of water further investigation needs to be done to find the low places(s).

INFILTRATION AND EXFILTRATION TESTS

If the pipe is below the water table this check is to ensure that ground water will not infiltrate the line. If the pipe is above the water table this check is to make sue the sewer does not leak out of the pipe.

LOW PRESSURE AIR TEST

The low pressure air test is performed using the following procedure:

1. Plug both ends of the sewer line using pneumatic plugs. Make sure the plugs are securely blocked. The plug at one end shall have an orifice to allow air to pass into the pipe. The same plug shall have an accurate air gauge having a range of 0 to 25 PSI with minimum divisions of .10 PSI.

2. Air pressure shall be slowly introduced into the section of the line being tested until the air pressure in the line is 4.0 PSI. A minimum of two minutes shall be provided to allow the air pressure to stabilize within the pipe. Air may be slowly added or subtracted to maintain the 4.0 PSI pressure.

3. After the two minute stabilization period, adjust the pressure to exactly 3.5 PSI. Start the stopwatch. When the pressure reaches 2.4 PSI stop the stopwatch. The portion of the line shall pass if the time for the pressure to go from 3.5 PSI to 2.5 PSI is greater than the time shown on the following table, then no further infiltration/exfiltration testing shall be required on the pipe.

Pipe Diameter (Inches)	Time (Minutes)
4	2.0
6	3.0
8	4.0
10	5.0
12	5.5
15	7.5
18	8.5
21	10.5
24	11.5

In areas where the ground water is above the level of the pipe, the pressure will be increased according to the UTILITY'S specifications. In the event the pipe does not pass, further appropriate investigation as directed by the UTILITY shall be conducted and the pipe repaired. After the repair is completed, testing shall be repeated as provided in Section 4.08.

MANHOLE TEST (Vacuum)

Manholes shall be vacuum tested as follows:

1. All pipes entering the manhole shall be plugged, taking care to securely brace the plugs from being drawn into the manhole.

2. The test head shall be placed at the top of the same section and the seal inflated in accordance with the manufacturer's recommendation.

3. A vacuum of 10 inches of mercury shall be drawn and the vacuum pump shut off.

With the valves closed, the time shall be measured for the vacuum to drop to 9 inches. The manhole shall pass if the welltime is greater than 60 seconds for a 48" diameter manhole, 75 seconds for 60"; and 90 seconds for 72".

4. If the manhole fails the initial test, necessary repairs shall be made with a non-shrink grout. Retesting shall proceed until a satisfactory test is obtained.

ARTICLE V

TRANSFER OF OWNERSHIP

Section 5.01. Upon completion of the construction of the entire EXTENSION, or specific phases or portions of the EXTENSION as agreed by the DEVELOPER and the UTILITY, and when the DEVELOPER shall have obtained such Federal, State, and required local certifications, authorizations or approvals and following final testing with results acceptable to UTILITY, the DEVELOPER shall provide the UTILITY with written notice of completion that the entire or specific phase of the EXTENSION is completed in all respects. As used in this and subsequent Sections, "completed in all respects" includes, but is not limited to, the EXTENSION or phase of the EXTENSION being completed, all engineers, materialmen, contractors and subcontractors of the DEVELOPER have been paid for their work on the EXTENSION or specific phase of the EXTENSION, and a legal certification from

the DEVELOPER that all legal disputes regarding the EXTENSION or specific phase of the EXTENSION are resolved, and no outstanding liens or potential liens exist regarding the EXTENSION or specific phase of the EXTENSION, the same to be certified in writing by the DEVELOPER. Transfer of ownership may take place in phases as areas of the DEVELOPMENT are built, provided all conditions as stated in this Section are met.

Section 5.02. After receipt of the notice set forth in Section 5.01, the DEVELOPER shall deliver, and the UTILITY shall acquire, in accordance with the terms outlined in Article VI herein, ownership of the entire EXTENSION or specific phase of EXTENSION, including easements, and all real property and easements necessary for ownership, operation and maintenance of the entire EXTENSION or specific phase of the EXTENSION.

Section 5.03. At the time of transfer of ownership, the DEVELOPER shall deliver to the UTILITY a mylar reproducible original and three (3) blue line printed copies of the plans and specifications of the EXTENSION, or portion thereof to be transferred to the UTILITY, reflecting its actual design and construction. The DEVELOPER shall also deliver to the UTILITY a disc containing the "as built" EXTENSION on U.S. Geological Survey grids in a format suitable for the UTILITY's Geological Information System, and all shop drawings, operating manuals, and written warranties that were required by the construction specifications and drawings.

Section 5.04. The UTILITY may purchase ownership of the EXTENSION a section at a time or any portion less than the completion of the entire EXTENSION.

ARTICLE VI

FINANCIAL TERMS

Section 6.01. Prior to the construction of any phase of the EXTENSION, the DEVELOPER shall obtain independent financing for its costs of the construction of such phase of the EXTENSION and shall provide the UTILITY with adequate assurances (such as a loan commitment letter issued by a federally insured banking institution) that sufficient capital has been obtained to pay its costs of the construction of the approved phase of the EXTENSION

Section 6.02. The DEVELOPER shall complete the construction of the EXTENSION, or specific phase thereof, and shall, in accordance with the provisions set forth herein, deliver the completed EXTENSION or specific phase thereof to the UTILITY at the earliest possible date for One Dollar ($1.00).

Section 6.03. DEVELOPER acknowledges that it is aware of the existence of the reimbursement provisions of Rule 5.5 of the Public Service Commission's Rules for the Government of Sewer Utilities, and knowingly waives its rights to receive reimbursement from the UTILITY that it might have under that provision, or under any succeeding version of such provision.

Section 6.04. Upon transfer of ownership of the EXTENSION or portion thereof to the UTILITY, nothing in this agreement shall be construed to provide the DEVELOPER with any ownership or other interest in the EXTENSION, which shall become the exclusive property of the UTILITY. However, DEVELOPER retains the right to continue to construct, utilize, and hook up to the transferred portion of the system, pursuant to the then-applicable rates, tariffs, rules and regulations applicable to the UTILITY, so as to provide access for and service to the remaining portions of the DEVELOPMENT.

ARTICLE VII

REPRESENTATIONS AND WARRANTIES

Section 7.01. The UTILITY represents and warrants that the execution, delivery and performance of this agreement by the UTILITY will have been duly authorized, and this Agreement constitutes a valid and binding obligation of the UTILITY enforceable in accordance with its terms.

Section 7.02. The DEVELOPER represents and warrants that EXTENSION will be designed and constructed in accordance with the designs, plans, specifications, and shop drawings approved by the UTILITY. The DEVELOPER hereby warrants the DEVELOPER'S work on all aspects and components of the EXTENSION constructed by the DEVELOPER for one (1) year from the date of transfer of ownership to the UTILITY and will make such changes, repairs and additions, at the DEVELOPER'S expense, as are reasonably needed to maintain the EXTENSION in a proper working condition. All underground pipe will be accepted by the UTILITY "as is" at the time of transfer and will be warranted by the DEVELOPER for one (1) year after the date of transfer as to defects in materials and workmanship. However, the UTILITY will be obligated to accept the EXTENSION only if a "resident project representative" was present during actual construction, and approved or did not object to the installation of the EXTENSION, pursuant to Section 4.02 and the EXTENSION meets all tests and standards set forth in Article IV.

ARTICLE VIII

SUBSEQUENT CONNECTIONS

Section 8.01. Tap fees shall be waived if the sewer connection is done by the DEVELOPER and installation is observed by the UTILITY. A tap is defined as being a connection leading from the on-site collection system to the lot.

ARTICLE IX

MISCELLANEOUS PROVISIONS

Section 9.01. Nothing in this agreement shall be construed to make the UTILITY liable or responsible for any obligations of the DEVELOPER, nor shall this agreement be construed to make the DEVELOPER liable or responsible for any obligations of the UTILITY, except as specifically stated herein.

The DEVELOPER hereby agrees to save and indemnify and keep harmless the UTILITY against all liability claims and judgments or demands for damages arising from accidents to persons or property occasioned by the DEVELOPER, his agents or employees, and against all claims or demands for damages arising from accidents to the DEVELOPER, his agents or employees, resulting from the construction contemplated herein, whether occasioned by said DEVELOPER or his employees or any other person or persons and the DEVELOPER will defend any and all suits that may be brought against the UTILITY for any expenditures that the UTILITY may take by reason for such accidents.

The DEVELOPER hereby agrees to save and indemnify and keep harmless the UTILITY from all claims, demands, causes of action, or suits of whatever nature arising out of the labor and materials used by the DEVELOPER and his contractors or subcontractors, and from all laborers, materialmen's and mechanics' liens upon the EXTENSION or upon the DEVELOPMENT property upon which the EXTENSION is located arising out of labor and materials used by the DEVELOPER and his contractors and subcontractors resulting from construction of the EXTENSION and said DEVELOPMENT.

Section 9.02. This agreement constitutes the entire agreement between the UTILITY and the DEVELOPER with respect to the matters addressed and may be amended only in a subsequent writing executed by all parties.

Section 9.03. This Agreement may not be assigned by any party without mutual written consent and is binding upon all purchasers, heirs or assigns. The parties hereto agree that the consent to such assignment shall not be unreasonably withheld. The DEVELOPER hereby agrees that in the event that the DEVELOPER transfers any portion of the DEVELOPER'S property within the DEVELOPMENT to any individual (other than individual homeowners), corporation, or other entity, the DEVELOPER'S rights, duties and responsibilities under this Agreement shall be binding on and assumed by any such successor and assign, whereupon the DEVELOPER shall be relieved and released from any further responsibility, liability, or obligation under this Agreement as to such portion of the DEVELOPER'S property.

Section 9.04. The DEVELOPER and the UTILITY agree that, as the initial step in resolving any technical disputes that arise in the interpretation of this agreement, an arbitration committee of three qualified individuals with extensive knowledge in the related field will attempt to resolve the issue. One person shall be selected by the DEVELOPER, another person shall be selected by the UTILITY. Together, they will select the third. This section does not remove any rights, by either party, to seek resolution by any other means, including, but not limited to, the Court system.

Section 9.05. If any portion of this agreement is declared void or unenforceable as a result of a change in Federal or State law or regulations or by a change in Federal, State or local specifications, the remaining section will remain in force and any party to this agreement may propose an amendment to the offending section or part thereof to bring it back into compliance.

Section 9.06. The article and section headings in this agreement are merely for the convenient reference of the parties and shall not affect the meaning or interpretation of this agreement.

Section 9.07. The DEVELOPER has read and understands the provisions of the Public Service Commission's extension of mains rule (Rule 5.5 of the Sewer Rules), and DEVELOPER has expressly waived the applicability of such rule or any successor thereto with respect to the EXTENSION contained herein; both the UTILITY and DEVELOPER have jointly consented to the utilization of this alternate plan and the DEVELOPER expressly waives any right for any reimbursement for the costs incurred in the construction and installation of the EXTENSION except as set forth herein.

Section 9.08. The DEVELOPER agrees to waive its right to a detailed cost estimate, as provided in Rule 5.5 of the Sewer Rules.

Section 9.09. The UTILITY and the DEVELOPER will work together to obtain expeditious approval of this Agreement by the Public Service Commission of West Virginia.

WITNESS the following signatures this 3rd day of December, 2012.

RODERICK PLANES, L.L.C.

By: _____

Its: Managing partner

JEFFERSON COUNTY PUBLIC SERVICE DISTRICT

By: _____

Its: Chair

STATE OF WEST VIRGINIA
COUNTY OF JEFFERSON, to-wit:

I, Susanne Lawton, a Notary Public in and for the state and county aforesaid, do hereby certify that Maurice Gladhill, in his/her capacity as Managing Partner for **Roderick Planes, L.L.C.** signed the foregoing writing bearing date the 3rd day of December, 2012 and has this day in my said county, before me, acknowledged the said writing to be the act and deed of said corporation.

Given under my hand and seal this 6th day of December 2012.

My commission expires October 8, 2020.



_____
Notary Public

STATE OF WEST VIRGINIA
COUNTY OF JEFFERSON, to-wit:

I, Ashley Stottlemyer, a Notary Public in and for the state and county aforesaid, do hereby certify that James D. Cummins, in his/her capacity as Chair for the **Jefferson County Public Service District,** signed the foregoing writing bearing date the 3rd day of December, 2012, and has this day in my said county, before me, acknowledged the said writing to be the act and deed of said corporation.

Given under my hand and seal this 3rd day of December, 2012.

My commission expires August 11, 2015.

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
ASHLEY N. STOTTLEMYER
1251 Steed Street, Ranson, WV 25438
My Commission Expires August 11, 2015

Ashley Stottlemyer
Notary Public

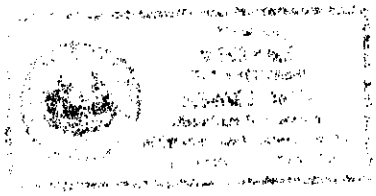


EXHIBIT NO. 1
DESCRIPTION OF EXTENSION

EXHIBIT NO. 1
DESCRIPTION OF EXTENSION

The proposed Aspen Greens Development will be located in Jefferson County on 110 Acres of land owned by the Developer, Roderick Planes LLC. This land is located on the North East Corner of the intersection of Old Country Club Road (Co. Rte. 24) and Flowing Springs Road (Co. Rte. 17). At full build-out the development will have 203 residential lots.

Phase 1A Onsite System:

Phase 1A will consist of 20 residential lots. The remaining lots will be fully engineered and permitted at a later time. The following sanitary sewer pipes, fittings, manholes and appurtenances will be in the Phase 1A onsite system:

- 3252 LF 8" SDR 35 piping
- 16 manholes
- 20, 4" SDR 35 laterals

Offsite System:

The offsite system will serve the full build-out of the Development. It will follow easements owned by Jefferson County PSD and will include the following sanitary sewer pipes, fittings, manholes and appurtenances. It will also remove one small existing District owned pump station and bring the flows from the three homes currently connected to this pump station into the Aspen Greens onsite sewer system.

- 3008 LF 8" SDR 35 piping
- 10 manholes
- 1 doghouse manhole
- 1, 4" SDR 35 lateral to serve new customer

See the associated maps to show alignment and point of connection with JCPSD sanitary sewer at the point where Walnut Grove and Breckenridge meet.



JEFFERSON COUNTY PUBLIC SERVICE DISTRICT
ASPEN GREENS - ALTERNATE SEWER MAIN LINE EXTENSION AGREEMENT
EXHIBIT 1

ONSITE SYSTEM

OFFSITE SYSTEM

EXHIBIT NO. 2
RULE 5.5 OF RULES FOR THE GOVERNMENT OF SEWER UTILITIES

5.5. Extension of mains to serve new customers.

5.5.a. A sewer utility, whether publicly or privately owned, is under a public service obligation to extend its mains, and its plant and facilities to serve new customers within its service area who may apply for service.

5.5.b. Extensions shall be made in all cases in which the public convenience and necessity require the service, construction problems are not unusual or burdensome, and the extensions appear to be economically feasible.

5.5.c. For any proposed extension of mains, a reasonable relationship should exist between the per customer investment to serve new customers and the per customer investment to serve old customers.

5.5.d. Every effort shall be made by a utility to install its main line in the public road right-of-way or in a utility right-of-way abutting the public road right-of-way.

5.5.e. Extension for general sewer service.

5.5.e.1. The utility will respond to all inquiries regarding new sewer service, whether oral or written, by explaining all available options for obtaining service under these rules.

5.5.e.2. The utility will, upon written request for service in the form of Sewer Form No. 4, by a prospective customer or group of prospective customers located in the same neighborhood, determine the necessary size of main required to give service and make an estimate of the cost of providing the requested service, using the form of Sewer Form No. 5, including pipe, valves, manholes, fittings, necessary materials, permits, labor costs incurred by the utility when the utility externally contracts for the construction of the extension, or internal labor costs, provided such internal or external costs are not recovered in existing rates, and other applicable related costs. When a road crossing(s) is (are) necessary to serve the customer(s) requesting service, the cost estimate shall not include costs attributable to extending the main across the first road (closest to the already existing main), but shall include the costs of installing the main across a second and any subsequent road(s). The written estimate calculated using Sewer Form No. 5 shall be provided to the customer in the form of Sewer Form No. 6, no more than forty-five (45) days from the receipt by the utility of the written request for service. The written estimate shall include an estimated construction start date and an estimated time of construction. If the prospective customer believes that any part of the estimate is unreasonable, the customer is free to pursue an informal request for assistance from the Commission staff or to file a formal complaint with the Commission. Further, the utility and the customer shall execute a Main Line Extension Agreement. Commission Staff may be consulted to provide assistance and sample forms. The agreement must include as an attachment a copy of this extension rule. The utility shall keep an executed copy of the agreement for at least six (6) years. The length of the extension required shall be that length required to extend from the new proposed service area to the nearest point of connection to the utility system having sufficient excess capacity to provide service at maximum demand.

5.5.e.3. Whenever the utility is required to extend service from an existing main to property that does not immediately abut the utility's right-of-way or the public road that contains the utility main, the extension shall be considered a main extension and the cost responsibility shall be determined under subdivision 5.5.e.

5.5.e.4. Where the cost of the extension does not exceed the estimated total net revenue, as calculated below, from prospective customers whose service pipes will immediately be connected directly to the extension and from whom the utility has received applications for service upon forms provided by the utility for this purpose, the utility will install, at its own cost and expense, the necessary extension; provided, that the patronage or demand will be of such permanency as to warrant the capital expenditure involved.

5.5.e.4.A. Net revenue shall be gross revenue minus the excess usage leak adjustment

rate approved for the utility, and with this difference further reduced for any revenue based taxes.

5.5.e.4.B. Revenue shall be based on 4,500 gallons per month per residential unit, unless circumstances of the applicant show this would result in significant error. For non-residential units, annual revenue shall be based on typical consumption for comparable units published by the American Water Works Association.

5.5.e.4.C. Estimated total net revenue for private, for profit, utilities will be calculated as six (6) times estimated net annual revenue. Each such utility shall file for a utility-specific line extension multiplier within twelve (12) months of the effective date of these rules.

5.5.e.4.D. The utility-specific line extension multiplier for private, for profit, utilities shall be based on one (1) divided by the utility's net fixed charge rate. The net fixed charge rate shall equal a function of the utility's weighted cost of capital, applicable income tax rates, and the Commission approved depreciation accrual rate.

5.5.e.4.E. Estimated total net revenue for associations, municipal, and public service district utilities will be calculated as five (5) times estimated net annual revenue. If the excess leak adjustment calculated for the utility fails to include all of the incremental costs of serving a new customer that should properly be netted out from the total revenues of the utility, the utility may apply to the Commission for a determination of the proper amount to be deducted from gross revenues to arrive at an appropriate determination of net revenue.

5.5.f. Extensions beyond the limit of utility-financed extensions of general sewer service.

5.5.f.1. If the estimated cost of the proposed extension required in order to furnish general sewer service exceeds the utility's estimate of total net revenue as determined by paragraph 5.5.e.4., such extension shall be made if the applicant or the applicant's authorized agent contracts for such extension and deposits in advance with the utility the estimated cost of the extension over and above the limit of the utility-funded portion of the extension. The utility shall not pay nor be liable for any interest on such cash deposits. The utility shall make the extension after receiving the cash deposit. The utility shall, for each bona fide new customer who, within a period of ten (10) years from the making of such extension, directly connects to the extension between its original beginning and original terminus refund to the original depositor(s), an amount equal to the estimated total net revenue of the new customer as determined by Rule 5.5.e.4., but in no event shall the aggregate refund made to the depositors exceed the original deposit. Provided, however, that associations, public service districts and municipal sewer utilities may elect to refund the estimated amount over a period of five (5) years making payments no less frequently than every six (6) months.

5.5.g. Alternate Depositor-Financed Extension Plan.

5.5.g.1. Qualifying utilities. -- The above requirements notwithstanding, the utility may decline to finance the portion of a requested extension that would be utility-funded, if it can demonstrate that it has no prospect of any reasonable internal or external financing through commercial loans, grants, or through an installment arrangement with an entity installing the extension or providing the necessary materials.

5.5.g.1.A. If the utility declines to finance the portion of a requested extension that would be the financial responsibility of the utility, the utility shall file for a waiver of the extension rule within sixty (60) days of the written request.

5.5.g.1.B. Before filing for a waiver, the utility must first make an estimate of the extension costs.

5.5.g.1.C. A request for a waiver by a utility shall be accompanied by supporting documentation justifying its request, including cost estimates, documentation of inability to finance,

internally or externally, through commercial loans, grants or an installment arrangement with an entity installing the extension or providing the necessary materials.

5.5.g.1.D. If the Commission finds that the utility has reasonably declined to finance the portion of the requested extension that would otherwise be utility-funded, the Commission shall authorize the use of the alternate depositor-financed extension plan as described below.

5.5.g.2. Description of alternate depositor-financed extension plan. -- Under the alternate depositor-financed extension plan, the utility shall make the extension after:

5.5.g.2.A. receiving a cash deposit equal to the full amount of the extension cost; and

5.5.g.2.B. agreeing to give the depositor(s), who is a customer, a monthly bill credit totaling one hundred percent (100%) of the actual net bill(s) from the date service is initiated and until the total credits given equal the estimated total net revenue as defined in paragraph 5.5.e.4; and

5.5.g.2.C. agreeing to refund to the original depositor(s) an amount equal to estimated total net revenue as defined in paragraph 5.5.e.4. of each bona fide customer, other than the depositor(s), who, within a period of ten (10) years from the construction of the extension, directly connects to the extension between its original beginning and the original terminus. The refund may be spread out over a five (5) year period with the utility making payments no less frequently than every six (6) months. Such refunds shall continue until the total refunds given equal the estimated total net revenue as defined in paragraph 5.5.e.4.

5.5.g.3. In no event shall the total refund made to the depositor(s) under subparagraph 5.5.g.2.C. exceed the original deposit of the depositor(s).

5.5.g.4. The utility shall not pay nor be liable for any interest on the cash deposits associated with line extensions.

5.5.h. General provisions.

5.5.h.1. Should the actual cost of the extension be less than the estimated cost, the utility will refund the difference as soon as the actual cost has been ascertained, but in no event longer than ninety (90) days after completion of construction of the extension. When the actual cost of the extension exceeds the estimate cost, then the utility will bill the depositor for the difference between the estimated and the actual cost. The customer may pay this additional amount in installments. No interest will be paid by the utility on the applicant's payment or on any balance to be refunded.

5.5.h.2. In estimating the cost of an extension, the estimate shall be based on the diameter of the pipe to be used; provided, that the estimated cost to the customer or customers shall not be based on a pipe diameter greater than the diameter of the main from which the extension is to be made, unless actual use estimated for the proposed customer or customers required a larger pipe.

5.5.h.3. Extensions made under this rule shall be and remain the property of the utility.

5.5.h.4. The utility reserves the right to further extend its sewer mains from and beyond the extension made under this rule, and the depositor or the depositor's agent paying for an extension shall not be entitled to any refund for the attaching of customers to such further extension or branch mains so installed.

5.5.h.5. In determining the length of main extensions or of sewer line to be installed in an urban area when land is subdivided in lots, the main, or sewer line (if installed by an entity other than a utility), shall be extended to fully cover the frontage of the property and if the last lot to be served is a corner lot, the terminal point of the extension made hereunder shall be located so that the sewer line ties in with the intersecting street; and further; provided that if there is no main located in the intersecting

street, the terminal point of the extension shall be located at the nearest street line of the intersecting street. In rural areas or open land areas, the extension required will be that length necessary to adequately serve the applicant.

5.5.h.6. Before sewer lines will be laid in any new subdivision, the road surface shall be brought to the established sub-grade as determined by the agency having jurisdiction.

5.5.h.7. This rule shall not be construed as prohibiting the utility from entering into an agreement with a customer that complies with the Commission approved checklist attached hereto as Sewer Form No. 7, in providing an alternate plan for a main extension. Commission Staff may be consulted to provide assistance and sample forms. In providing an alternate plan for main extensions a utility may not discriminate between customers whose service requirements are similar. The agreement shall be filed with and approved by the Commission prior to the implementation or execution of the agreement by any of the parties. The agreement shall include the name, address and phone number of the parties to the agreement. The agreement shall also include a provision explaining why the utility is not funding the extension. The agreement must attach a copy of this rule subsection 5.5., and a statement signed by the prospective customer that he has reviewed and understands the provisions of subdivision 5.5.f. which entitle a customer to refunds and that he knowingly waives such rights, if applicable. Failure to obtain Commission approval will result in the loss of the right to obtain reimbursement from the utility. If an entity other than the utility constructs the extension, upon completion of construction and proper utility inspection of the extension, the utility shall initiate service only after proper transfer of title to all facilities including property, plant and rights-of-way incidental to the furnishing of utility service.

5.5.h.8. Contract for service. -- The utility shall not be required to make utility-funded extensions or refunds as described in this rule unless those to be served by such extensions shall guarantee to the utility that they will take the service at their premises within thirty (30) days after service is available or as otherwise mutually agreed in a user's agreement.

5.5.h.9. Construction conditions. -- Construction of line extensions, as provided in this rule, will be undertaken promptly after all applications have been completed, necessary right-of-way agreements or rights of entry have been delivered to the utility, and all prospective customers have signed contracts.

5.5.h.10. Right-of-Way.

5.5.h.10.A. If the construction of an extension involves the acquisition of a private right-of-way, then the prospective customer shall attempt to secure the right-of-way and deliver it to the utility free of cost before construction of the extension is started.

5.5.h.10.B. If, however, it is not reasonably possible for the prospective customer or customers to secure the right-of-way, and the construction of an extension involves the utility's incurring expense for right-of-way easements, either by purchase or condemnation, such costs shall be added to the total cost of the extension.

5.5.h.10.C. As a condition to obtaining a main extension, any property owner or developer shall grant the utility the necessary easements which would allow the utility to make future extensions into unserved areas. The granting of the necessary easements shall be made without the utility being required to pay additional consideration for the additional easements to the property owner or developer. If the property owner or developer is unwilling to grant the additional easements, the utility shall not be required to extend its main to serve the property owner or developer.

5.5.h.11. Upon the proper filing of a Tariff Rule 42A, 42T, or 19A rate case or a certificate case filed pursuant to W. Va. Code §24-2-11 by the utility, the utility may seek to include in its tariff a Capacity Improvement Fee, Capacity Assurance Fee or such other fee or charge designed to raise capital to cover the cost of future capacity expansion to be assessed against customers or entities creating those costs.

5.5.i. Community infrastructure investment agreements with municipal utilities and public service districts.

5.5.i.1. Notwithstanding the foregoing, municipal utilities and public service districts may enter into "community infrastructure investment agreements" in accordance with the provisions of W. Va. Code §22-28-1 et seq.

5.5.i.2. Utilities that have entered into "community infrastructure investment agreements" pursuant to W. Va. Code §22-28-1 et seq. shall be required to maintain separate books and records for the project areas involved in the agreements. For purposes of this section, the project areas for which separate books and records are required include plant upgrades and stand alone systems.

5.5.i.3. Utilities that have entered into "community infrastructure investment agreements" pursuant to W. Va. Code §22-28-1 et seq. shall file (i) a copy of the certificate of appropriateness, (ii) a copy of the community infrastructure investment agreement, and, if necessary, (iii) a new tariff containing rates applicable to the new service area. The required documents shall be filed with the Commission no later than thirty (30) days of the date the project is transferred to the utility.

5.5.i.4. If the rates for the new customers served by a public service district's project are higher than the rates for the public service district's existing customers, the public service district shall, within ninety (90) days of the date the project is transferred to the public service district, make a formal rate application with the Commission in order to justify the higher rates to the new customers. A municipality shall enact an ordinance increasing rates, if necessary, within ninety (90) days of the date the project is transferred to the municipality.

EXHIBIT NO. 3
RULE 5.3 OF RULES FOR THE GOVERNMENT OF SEWER UTILITIES

5.3. Customer Service Pipe.

5.3.a. No customer, plumber, company owner or any agent shall connect to the utility's main or to any utility service pipe, or extend the pipes therefrom to any premises for the purpose of securing sewer service, until application has been made therefor to the utility as provided in these rules and permission for doing so has been granted by the utility in writing.

5.3.b. Once an application for service has been granted, the customer shall install and maintain the customer service pipe.

5.3.c. The utility's authorized employee shall inform the customer of the location of the point of service. The customer shall install the customer service pipe to the point of service after which the utility will install the utility service pipe from the main to the point of service.

5.3.d. Where the utility's service pipe is already installed to the point of service, the customer shall connect with the utility service pipe as installed.

5.3.e. The customer service pipe shall be installed in a workmanlike manner, shall conform to all reasonable rules and regulations of the utility, and shall be maintained by the customer at his own expense.

5.3.f. The utility will specify the size, kind, quality and location of all materials used in the customer's service pipe and the customer shall comply with those specifications.

5.3.g. A customer must maintain his service pipe in good condition and free from all leaks and defects, at the customer's cost and expense. A customer's failure to comply with this rule may result in termination of water or sewer service pursuant to these rules.

5.3.h. The customer's service pipe shall be laid below the frost line at all points and shall be placed on firm and continuous earth so as to give unyielding and permanent support; and be installed in a trench at least two feet in a horizontal direction from any other trench wherein gas pipe, water pipe, or other facilities, public or private, are or are to be installed.

5.3.i. A customer's service pipe shall not pass through or across any premises or property other than that to be served nor across any portion of the property that could practicably be sold separately from the immediate premises served and no pipes or plumbing in any premises shall be extended therefrom to adjacent or other premises.

5.3.j. The customer's service pipe and all connections and fixtures attached thereto shall be subject to the inspection of the utility before use, and all premises, including any and all fixtures within the said premises, shall at all reasonable hours be subject to inspection by a duly authorized employee of the utility.

5.3.k. The utility shall make changes and bear the full costs of changes in the customer's service pipe required due to changes in grade, relocation of mains, and other causes not related to the customer. The customer shall bear the full costs of changes in service pipe or meter location desired by the customer for his or her convenience.

5.3.l. The customer shall not attach any fixtures to, or make any branches in, the customer service pipe between the point of service and the premises served. Violation of this rule may result in termination of service pursuant to these rules.

5.3.m. The connection of surface drains to the sanitary system is prohibited. As a means to deter prohibited connections where surface or ground water is introduced into the sanitary system, the utility may add a surcharge to the customer's sewer bill where evidence of a violation exists. The surcharge shall be authorized by separate schedule to the utility's sewer tariff filed pursuant to the *Rules for the*

Construction and Filing of Tariffs, 150CSR2, but the utility need not file revenue, expense, or other financial data unless otherwise ordered by the Commission. The charge for roof drains, downspouts, storm sewers or similar facilities connected to the sanitary sewer system will be calculated by the formula or rate clearly stated in the tariff, and will not be cumulative to any metered rate for sewer service. The tariff should further provide that the surcharge will not be imposed unless and until the customer is notified by certified mail, return receipt requested, or by hand delivery, that it has been established by smoke testing, dye testing, or on-site inspection that rain or surface water is being introduced into the sanitary sewer, and that the customer has thirty (30) days to divert that water from the sanitary sewer.

EXHIBIT NO. 4
EASEMENT FORM

4872147.1

TAX MAX ____, PARCEL NO. ____

SANITARY SEWER EASEMENT

THIS SANITARY SEWER EASEMENT made this _____ day of , 20__, by and between _____, hereinafter, jointly and severally, referred to as GRANTOR, party of the first part, and JEFFERSON COUNTY PUBLIC SERVICE DISTRICT, a public corporation and political subdivision of the State of West Virginia, created and existing by virtue of §16-13A-1, et seq., Code of West Virginia, 1931, as amended, hereinafter referred to as DISTRICT, party of the second part.

NOW THEREFORE WITNESSETH: That for and in consideration of the sum of One ($1.00) Dollar, cash in hand paid, and other good and valuable consideration, the receipt of all of which is hereby acknowledged, the Grantor does hereby grant, bargain, sell and convey unto the District, its successors or assigns, an easement and right of way as described on the attached Exhibit A for the purpose of constructing, operating, maintaining, repairing and removing a sewer line and all appurtenances thereto. The property subject to this easement was conveyed to the Grantor by deed dated _____ _____ recorded in the Office of the Clerk of the County Commission of Jefferson County, West Virginia, in Deed Book _____, at Page ____.

This easement and right of way is made upon and subject to the following terms and conditions:

(1) The Grantor shall have the right to a tap from said sewer line and to use same for the benefit of its property upon payment of such sewer user charges and tap fee as are, or may be, fixed by ordinances or by the rules of the District; to use the sewer for service of the property. The District shall not be required to bear any portion of expenses incurred by the Grantor in constructing a sewer line to the sewer tap.

(2) The Grantor retains the right to the use and enjoyment of the lands described above through which the sewer easement extends for purposes not inconsistent with the rights herein granted to the District. The Grantor agrees to the following: (a) not to construct improvements on the easement or to take any other action which would interfere with the sewer line and the rights of the District to construct, operate, maintain, repair, or remove the sewer line; (b) not to plant trees or other vegetation which could damage the sewer line or interfere with the rights herein granted; (c) not to alter the ground profile of the land within the easement without the prior written permission of the District.

(3) The rights herein granted include the right of ingress and egress over the lands of the Grantor to and from the easement for the purpose of constructing, operating, maintaining, repaving and removing the sewer line. The rights herein granted further include the right to use reasonable portions of the lands of the Grantor immediately adjacent to the easement for said purposes.

(4) The District, upon completion of any construction, operation, maintenance, repair or removal of the sewer line, agrees that it will do the following: (a) restore the property of the Grantor, to the extent such restoration is compatible with the easement and right of way granted herein, to its condition immediately prior to the construction, operation, maintenance, repair or removal of said sewer, as nearly as reasonably possible; (b) repair, replace or compensate the Grantor for any damages to any building, structure or other improvements not within the easement; (c) reseed, re-sod or compensate the Grantor for damage to any established lawn; (d) repair, replace or compensate the Grantor for damage to sidewalks, driveways or other pavements, and any underground structure or appurtenances thereto; and (e) replace, restore or compensate the Grantor for damage to any trees or shrubbery on adjacent land but off the easement area provided for herein, caused by any acts of ingress and egress onto the subject easement.

(5) The District agrees to indemnify and hold harmless the Grantor against any and all suits, claims, losses and damages by reason of bodily injury, including death, to person or persons, or damage to or

destruction of property of any kind or character, including the loss of use thereof, arising out of or resulting from any act of the District relating to the construction, operation, maintenance, repair, or removal of the sewer line within the easement herein granted.

This Agreement shall be binding upon the Grantor, District and their respective executors, administrators, heirs, devisees, successors and assigns. It is understood and agreed that the right of way easement granted herein is subject to other utility easements and rights of way of record.

DECLARATION OF CONSIDERATION OR VALUE: Under penalty of fine and imprisonment, as provided by law, the undersigned Grantor hereby declares that the property conveyed by the document to which this declaration is appended is a transfer to a political subdivision of the State of West Virginia, and therefore exempt pursuant to §11-22-1, Code of West Virginia, 1931, as amended.

WITNESS the following signatures and seals.

(SEAL) _____
Grantor

JEFFERSON COUNTY PUBLIC SERVICE DISTRICT,
a public corporation and political subdivision of the
State of West Virginia

CORPORATE SEAL By: _____
Its Chairman

ATTEST:

_____
Secretary

ADDITIONAL CAPACITY IMPROVEMENT FEE – APPLICABLE WITHIN THE TERRITORY FORMERLY SERVED BY JEFFERSON COUNTY PUBLIC SERVICE DISTRICT

As used in this section, a "Developer" is defined as "a person, corporation, or entity who is in the business of land and/or commercial or housing development for profit, or a person, corporation, or entity who requests an alternate main line extension that includes the installation of mains by the person, corporation or entity.

As used in the section, a "Previously Developed Tract" is defined as property previously subdivided for commercial or housing development, for profit.

On and after August 13, 2015, Developers and resale customers (in instances of developer connections), and those seeking a new sewer connection for a Previously Developed Tract shall pay the Utility a capacity improvement fee for connections made to the sewer system of an unserved structure or facility. For Developers and those seeking a new sewer connection for a Previously Developed tract, the CIFs are due as of the date of the entry into the final sewer availability agreement with the Utility. For resale customers making developer connections, the CIF is due the month following the date a new customer of the Utility's resale customer to which the CIF is applicable connects to the facilities of the Utility's resale customer.

The CIF shall be $2,080.00 per equivalent dwelling unit (EDU).

The usage equivalent for other than single family residential units for the capacity improvement fee and additional capacity improvement fees shall be based upon the following:

RESIDENTIAL USAGE EQUIVALENTS
FOR CAPACITY IMPROVEMENT FEES

UNIT	WATER GALLONS/DAY	RESIDENTIAL USAGE EQUIVALENT
Apartments	150/unit	1.0/unit
Bowling Alleys	200/alley	1.33/alley
Churches with kitchen	8/member	0.05/member
Churches w/o kitchen	2/member	0.013/member
Food Service	32/seat	0.213/seat
Fast Food Restaurant	35/seat	0.23/seat
Bar & Cocktail Lounge (additive)	2/patron	0.013/patron
Tavern-Little or no food	20/seat	0.132/per seat
Hotel	120/room	0.8/per room
Industry, sanitary	15/person/shift	0.1/person per shift

Institutions:		
Hospital	250/bed	1.67/bed
Nursing Homes	150/bed	1.0/bed
Others	75/person	0.5/person
Office Buildings	15/person	0.1/person
Laundry Self Service	250/washer	1.67/washer
Motels	120/room	0.8/room
Retail Stores	400/toilet room	2.67/toilet room
Residence	150/residence	1.0/residence
School:		
Day, no cafeteria/showers	15/pupil	0.1/pupil
Day with cafeteria	18/pupil	0.12/pupil
Day with cafeteria/showers	20/pupil	0.133/pupil
Boarding	75/pupil	0.5/pupil
Service Station	500/set of pumps	3.33/set of pumps
Shopping Centers	16/100 ft. of sales area	0.12/100 ft. of sales area
Swimming Pools	10/swimmer design capacity	0.067/swimmer design capacity
Capacity Theaters	3/seat	0.02/seat
Warehouse	15/employee	0.1/employee

If a unit does not appear on this schedule the sewer department shall determine its Residential Usage Equivalent in consultation with its consulting engineer.

Charles Town
Utility Board
661 S. George Street, Suite 101 Charles Town, WV 25414
Phone: (304) 725-2316 ♦ Fax: (304) 725-7150 ♦ Web: www.ctubwv.com

MEMORANDUM TO THE BOARD OF DIRECTORS

FROM: Kristen Stolipher, Utility General Manager
SUBJECT: Utility General Manager's Report
DATE: March 9, 2022

ADMINISTRATIVE

- Customer Counts
  - Sewer 8,233 (2,036 billed by JUI)
  - Water 6,375

- Utility Availability
  - Green Hill – 325 Single Family Residential units
  - Springfield – 301 Residential units and 5 acres of Commercial

- Glo Fiber installations

WATER

- Lead and Copper
  - BPH granted Lead and Copper reduced sampling
  - Initial customer surveys to be sent

- Sanitary Survey completed January 19, 2022: No significant deficiencies noted

- Water Facility Plan update
  - GDF and Dewberry DRAFT reports to be presented to the Board in March/April

SEWER

- Trenchless Technology demonstration

INFORMATION

- **Wastewater and Water Plant flows: See attached.**
- **Capacity Improvement Fee collection: See attached.**

Charles Town
Utility Board

661 S. George Street, Suite 101 Charles Town, WV 25414
Phone: (304) 725-2316 ♦ Fax: (304) 725-7150 ♦ Web: www.ctubwv.com

March 3, 2022

Re: Green Hill Development – 325 units
Sewer Availability
Delivered via email to jgerhart@ifs-ae.com

UTILITY BOARD

INTERIM CHAIRMAN
City of Charles Town
Mayor Bob Trainor

VICE CHAIRMAN
City of Ranson
Mayor Duke Pierson

TREASURER
Thomas Stocks

INTERIM SECRETARY
Ashley Stottlemyer

County Commission Representative
Jacquelyn Milliron

Board Member
Jefferson Whitten

UTILITY MANAGER
Kristen Stolipher

Dear Mr. Gerhart:

The Charles Town Utility Board (CTUB) has received your request for water and sewer availability for the construction of 325 residential units in the proposed Green Hill Development. CTUB shall be notified if the number of units changes or change in use; the difference will be handled accordingly with the Developer. Please accept this as our confirmation of availability for water and sewer utilities for the proposed development.

Sewer Service:

CTUB has sewer infrastructure adjacent to the proposed subdivision on Flowing Springs Road. Sewer Infrastructure may also be coordinated with the adjacent development "Aspen Green".

CTUB can furnish sewer service for the development of 325 residential units. The Sewer Capacity Improvement Fees will apply pursuant to the CTUB Sewer Tariff at the time of building permit.

A copy of the CTUB Rates, Rules and Regulations can be found at: www.ctubwv.com.

If you have any questions, please contact me at (304) 725-2316.

Sincerely,

Kristen Stolipher
Utility Manager

Gordon
PROGRAMMING AND PLANNING
CIVIL ENGINEERING
LANDSCAPE ARCHITECTURE
SURVEY AND MAPPING
SECURITY CONSULTING
148 S. Queen Street, Suite 201
Martinsburg, WV 25401
Phone: 304-725-8456
www.gordon.us.com

SEAL:

REVISIONS

SANITARY SEWER OUTFALL EXHIBIT

GREEN HILL SUBDIVISION

TAX MAP 3, PARCEL 9; D.B. 795, PG. 754
CHARLES TOWN TAX DISTRICT
JEFFERSON COUNTY, WEST VIRGINIA

J.C. FILE #XXX-XX

SCALE:	HORIZ.: 1"=200' VERT.:
DATE:	AUGUST 2021
JOB:	2582-0103
DRAWN: TME	CHECK: JPG
CADD:	
NCS:	
SHEET:	01 OF 01

FILE PATH: C:\PROJECTS\NON-DIVISION\2582-0103\EXHIBIT\2582-0103 EXHIBIT FOR OUTFALL.DWG [SEPTEMBER 2021]
COPYRIGHT 2021 - NO COMMERCIAL USE OF THIS DRAWING IS TO BE MADE WITHOUT PRIOR WRITTEN AUTHORIZATION FROM GORDON ASSOCIATES, INC. - GORDON

Charles Town
Utility Board

661 S. George Street, Suite 101 Charles Town, WV 25414
Phone: (304) 725-2316 ◆ Fax: (304) 725-7150 ◆ Web: www.ctubwv.com

March 3, 2022

Re: Springfield Development – 301 units and Commercial Water/Sewer Availability
Delivered via email to jgerhart@ifs-ae.com

UTILITY BOARD

INTERIM CHAIRMAN
City of Charles Town
Mayor Bob Trainor

VICE CHAIRMAN
City of Ranson
Mayor
Duke
Pierson

TREASURER
Thomas
Stocks

INTERIM SECRETARY
Ashley
Stottlemyer

County Commission Representative
Jacquelyn
Milliron

Board Member
Jefferson
Whitten

UTILITY MANAGER
Kristen
Stolipher

Dear Mr. Gerhart:

The Charles Town Utility Board (CTUB) has received your request for water and sewer availability for the construction of 301 residential units and five (5) acres of Commercial Development in the proposed Springfield Development. CTUB shall be notified if the number of units changes or change in use; the difference will be handled accordingly with the Developer. Please accept this as our confirmation of availability for water and sewer utilities for the proposed development.

Water Service:

CTUB has a 12" main to the northwest of the property as well as a 12" main to the east of the property.

CTUB can furnish water service for the development of 301 residential units. The Water Capacity Improvement Fees will apply pursuant to the CTUB Water Tariff at the time of building permit.

A copy of the CTUB Rates, Rules and Regulations can be found at: www.ctubwv.com.

Sewer Service:

CTUB has sewer infrastructure adjacent to the proposed subdivision. It appears that a pump station will be necessary for the development.

CTUB can furnish sewer service for the development of 301 residential units. The Sewer Capacity Improvement Fees will apply pursuant to the CTUB Sewer Tariff at the time of building permit.

A copy of the CTUB Rates, Rules and Regulations can be found at: www.ctubwv.com.

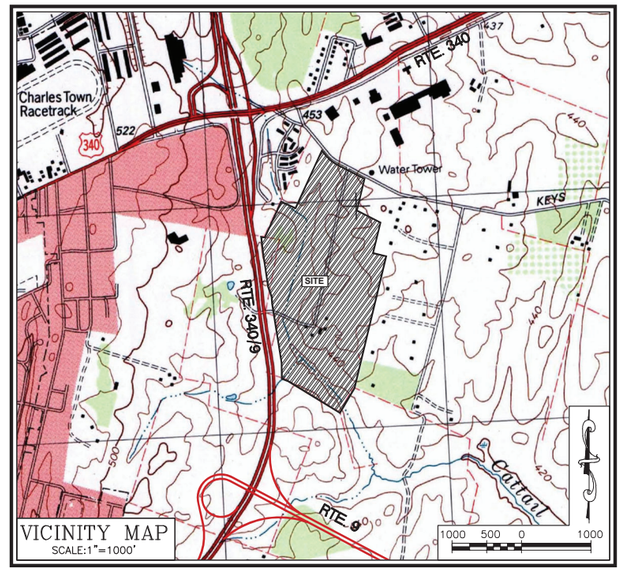
If you have any questions, please contact me at (304) 725-2316.

Sincerely,

Kristen Stolipher
Utility Manager

SKETCH PLAN FOR
SPRINGFIELD
CITY OF CHARLES TOWN, WV
TAX MAP 15, PARCEL 1
DEED BOOK 1249, PAGE 647

OWNER/APPLICANT
SPRINGFIELD PARTNERS, LLC
108 N. GEORGE STREET, 3RD FLOOR
CHARLES TOWN, WV 25414



VICINITY MAP
SCALE: 1"=1000'

SKETCH PLAN CHECKLIST NOTES PER SECTION 1332.04, SKETCH PLAN REQUIREMENTS

E.2.a. Existing conditions obtained from aerial survey. Perimeter boundary information shown hereon is based on a survey performed by GORDON.
E.2.b. See Sheets 2-6 for arrangement of land uses. Proposed land uses include single-family detached, single family attached, commercial, parks/open space and associated improvements. Per City of Charles Town Resolution _____, land set aside for Neighborhood Commercial uses, mixed use construction, including first floor commercial and upper level residential uses shall be permitted and considered, subject to all other limitation, including height, in a Neighborhood Residential zoning district.
E.2.c. See this sheet for a Vicinity Map. Map is 1997 USGS Quadrangle Map modified to reflect new Route 9 and associated interchange.
E.2.d. See this sheet for all abutting owners; see Sheets 2-6 for adjoining lot lines, and structures within 100'. Owner information obtained from the Jefferson County Assessors Tax Map Viewer website.
E.2.e. See title block for for date, creator of plan and address. See this Sheet for Owner / Applicant information.
E.2.f. The property is zoned Neighborhood Residential (NR) and consists of 98.88+/- acres.
E.2.g. See Net Buildable Land Area Calculation Table this sheet for maximum and proposed densities based on the net buildable land area.
E.2.h. Public water and sanitary sewer services are available through the Charles Town Utility Board (CTUB). Electric service is available from Potomac Edison.
E.2.i.
- There is an existing water main along Keyes Ferry Road
- There is an existing water tower opposite Keyes Ferry Road.
- Sanitary sewer pump station is located at the former Willow Springs waste water treatment site.

E.2.j. Residential units will be provided water and sanitary sewer through proposed lines running within the right-of-ways and/or open spaces which connect to existing on-site utility lines. Electric will be provided from power lines along Keyes Ferry Road.
E.2.k. There are no existing covenants for the subject property.
E.2.l.
- See Sheets 2-6 for lot layout.
- 56 townhouse units are proposed as part of this application.
  - Average lots are 30'x120' and are 3,600 sf.
  - Townhomes may be up to 3-stories with an approximate height not to exceed 35'.
- 245 single-family detached units are proposed as part of this application.
  - Average lots are 60'x110' and are 6,600 sf.
  - Single-family homes may be up to 3-stories with an approximate height of 35'.
- 3 commercial lots consisting of 5 acres in the aggregate are proposed. A revised annexation agreement allows for less than 10% commercial uses within this development. City of Charles Town Resolution _____.
- Parking for residential units will be provided on-lot and offsite through on-street parking. Commercial parking will be determined at site plan for the specific commercial lot and future uses.

E.2.m. The total acreage of the tract being subdivided is 98.88+/- acres.
- The developments Net Build Land Area is 3,009,893+/- square feet (69.1+/- acres).

E.2.n. See Approximate Acreages Table this Sheet.
E.2.o. The development will consist of 56 townhomes and 245 single-family detached units. Per City of Charles Town Resolution _____, notwithstanding any residential units contained in a mixed-use commercial structure, the total number of residential units proposed for the site may not exceed 325 units.
E.2.p. See Sheets 2-6 for proposed street layout. Access will be provided through Keyes Ferry Road and Route 340/9. Road E extends to the adjacent Langlet property to the east.
E.2.q.
- Sidewalks will be provided on both sides of all proposed streets within the subject property.
- Crosswalks will occur at all intersections.
- No trails are proposed at his time, trails may be added at a later time in conjunction with project amenity design.

E.2.r. The development will provide passive open space throughout the property and an HOA owned park (0.5 acres) in near the center of the property. HOA owned park (0.5 acres) to have adequate playground equipment for its residents. Stream Valley Park area to include vehicular access and parking improvements which will be determined at site plan. The Common Open Space areas consist of 10.27+/- acres. Common open space includes all areas not within HOA owned park, right-of-ways, lots, buffers or storm water management areas. See Approximate Acreages Table this sheet for additional information.
E.2.s. There are no environmental sensitive areas within the Common Open Space. There are wetlands and floodplain in the Stream Valley Park dedication. See Sheets 2, 5, & 6 for location of wetlands and floodplain.
E.2.t. Modifications, Waivers, Variances, Special Exceptions and/or Conditional Uses
- City of Charles Town Resolution _____ allows for a minimum of 5 acres of commercial land, which is less than the 10% required under the Neighborhood Residential district.

E.2.u. No buffers are required/proposed within the development.
E.2.v. See this Sheets 2-6 for road and right-of-way widths. All roads will be curb & gutter and will be in accordance with the the City's typical roadway section requirements (SDLO Appendix A). Driveways will be provided for each residential unit. Parking for commercial areas will be determined for the specific commercial uses at site plan. All proposed right-of-ways will be 50' (Neighborhood Street), 56' (Neighborhood Center Street) or 61' (Minor Collector).
E.2.w. This development will not include any bonus factors.

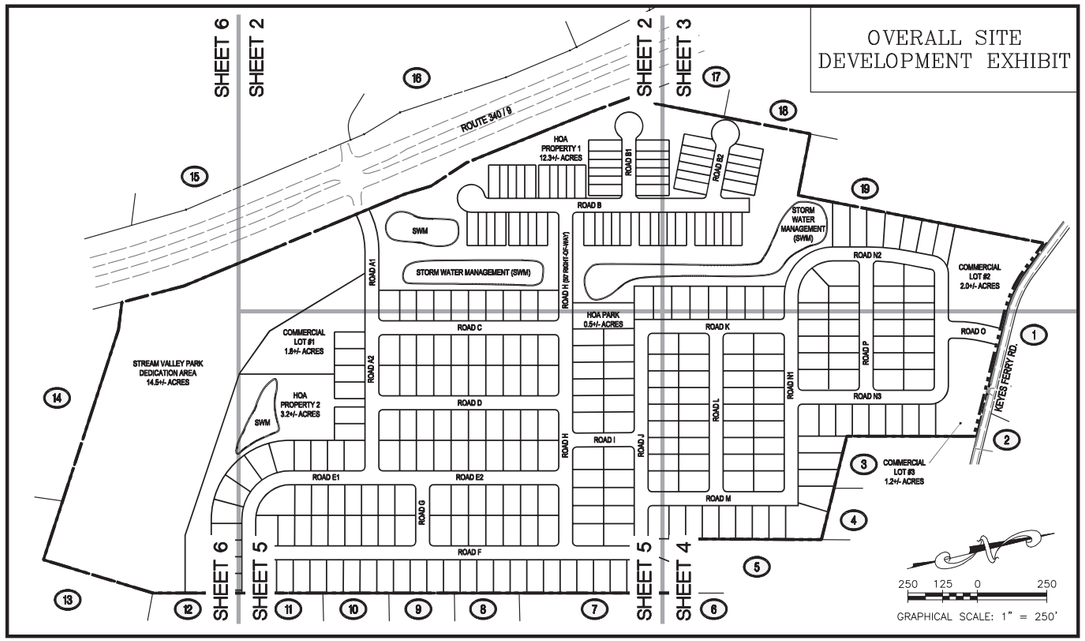
Density Checklist Section - 1332.04(E).2.g.	
Section 1322.08.(B).4.b.	
Maximum Based on NBLA	3,009,893 / 1,750 = 1,719 Units
Proposed	301
Table 1322.08	
Maximum (10 Units Per Acre)	690 Units
Proposed	301 Units

Net Buildable Land Area Calculation - Checklist Section 1332.04(E).2.g.		
Area / Use	Square Feet	Acres
Gross Land Area	4,307,073	98.88
Right-of-Ways	701,505	16.10
Keyes Ferry Road Right-of-Way Reservation	7,480	0.17
Stormwater Management Area	250,000	5.74
Sensitive Natural Areas (wetlands & floodplain)	338,195	7.76
Net Buildable Land Area (NBLA)	3,009,893	69.10

Approximate Acreages - Checklist Section 1332.04(E).2.n.		
Area / Use	Square Feet	Acres
Common Open Space	447,548	10.27
Park Land Dedication	631,620	14.50
Residential Lot Area (Townhouse)	227,735	5.23
Residential Lot Area (Single-Family Detached)	1,823,385	41.86
Commercial Lot Area	217,800	5.00
Right-of-Ways	701,505	16.10
Keyes Ferry Road Right-of-Way Reservation	7,480	0.17
Stormwater Management Area	250,000	5.74
Total	4,307,073	98.88
*Will vary with final engineering design.		

Common Open Space Calculations - Checklist Section 1332.04(E).2.x.	
SLDO Section 1333.20(B) - 1,500 sf. Per Unit (Townhomes)	
Required	56 units x 1,500 sf = 84,000 sf
Proposed	447,548 sf
Section 1322.08(B).3.*	
Required (10%)	56 units x 1,500 sf = 84,000 sf
Proposed	447,548 sf
Stream Valley Park Land Dedication	
SLDO Section 1333.17(E)1.	
Required	301 units x 0.024 ac = 7.23 acres
Proposed	14.5 acres
*Excludes Park Dedication (98.88 - 14.5 = 84.38 acres). Per Ordinance, 10% of "usable land" required for open space.	

Neighborhood Residential Land Use Mix Requirements				
	Requirement*		Provided	
Use	%	Acres	%	Acres
Residential	50	42.19	55.81	47.1
Commercial*	N/A	5	N/A	5
Open Space**	10	8.44	12.18	10.27
*Excludes Park Dedication (98.88 - 14.5 = 84.38 acres).				
**5 acres required per City of Charles Town Resolution _____				
***Per Ordinance, 10% of "usable land" required for open space.				



ADJACENT PROPERTY OWNER INFORMATION						
Reference #	Owner Name	Owner Address	District	Tax Map	Parcel	Zoning District
1	FK PARSONS LLC	PO BOX 783, MARTINSBURG, WV 25402	2	9	8.10	RESIDENTIAL-LIGHT INDUSTRIAL-COMMERCIAL (COUNTY)
2	CITY OF CHARLES TOWN	CITY OF CHARLES TOWN	2	9	6.6	RESIDENTIAL-LIGHT INDUSTRIAL-COMMERCIAL (COUNTY)
3	JEFFREY W & TIFFANY M CRAZE	476 KEYES FERRY RD, CHARLES TOWN, WV 25414	2	9	1.5	RURAL (COUNTY)
4	ROBERT L & TRICIA D FLUHARTY	522 KEYES FERRY RD, CHARLES TOWN, WV 25414	2	9	1.4	RURAL (COUNTY)
5	MATTHEW J & DANIELLE M THOMAS	560 KEYES FERRY RD, CHARLES TOWN, WV 25414	2	9	1.2	RURAL (COUNTY)
6	MARY L GAHR	120 SOUTHERLY LN, CHARLES TOWN, WV 25414	2	9	4.9	RURAL (COUNTY)
7	JAMES KOSKI	282 SOUTHERLY LN, CHARLES TOWN, WV 25414	2	9	4.10	RURAL (COUNTY)
8	PATRICK H WALLACE & CHRISTINA M SMITH	330 SOUTHERLY LN, CHARLES TOWN, WV 25414	2	9	4.18	RURAL (COUNTY)
9	FREDERICK H & PATRICIA L ROLL	344 SOUTHERLY LN, CHARLES TOWN, WV 25414	2	9	4.15	RURAL (COUNTY)
10	HUBERT R JR & ELIZABETH H KEEL	116 SOUTHERLY LN, CHARLES TOWN, WV 25414	2	9	4.16	RURAL (COUNTY)
11	TENA L MILLS	470 SOUTHERLY LN, CHARLES TOWN, WV 25414	2	9	4.20	RURAL (COUNTY)
12	MARK F LANGLET TR	544 LEGO JR, CHARLOTTESVILLE, VA 22911	3	15	4.8	NEIGHBORHOOD RESIDENTIAL
13	MARK F LANGLET TR	544 LEGO JR, CHARLOTTESVILLE, VA 22911	3	15	7.4	NEIGHBORHOOD RESIDENTIAL
14	UNIVERSITY HEALTHCARE FOUNDATION INC	2500 HOSPITAL DR, MARTINSBURG, WV 25401	3	15	8	NEIGHBORHOOD RESIDENTIAL
15	FIRST CHARLES TOWN GROUP INC	PO BOX 183, CHARLES TOWN, WV 25414	3	15	1.6	GENERAL COMMERCIAL
16	CAROL F KABLE ET AL	336 ROSEMONT WAY, CHARLES TOWN, WV 25414	3	15	1.7	GENERAL COMMERCIAL
17	CITY OF CHARLES TOWN	CITY OF CHARLES TOWN	3	15	5.7	GENERAL COMMERCIAL
18	WILLOWBROOK PROPERTY OWNERS ASSOC INC	PO BOX 8:4, CHARLES TOWN, WV 25414	2	10E	55.1	RESIDENTIAL-LIGHT INDUSTRIAL-COMMERCIAL (COUNTY)
19	GATESTONE INC	153 VENICE WAY, SHEPHERDSTOWN, WV 25443	2	9	1.1	RESIDENTIAL-LIGHT INDUSTRIAL-COMMERCIAL (COUNTY)

(1) – ADJACENT PROPERTY OWNER REFERENCE NUMBER

INTEGRITY FEDERAL SERVICES
CIVIL ENGINEERING • LANDSCAPE ARCHITECTURE • PLANNING
148 S. Queen Street, Suite 201 • Phone: 304-725-8456
Martinsburg, WV 25401 • www.ifsse.com

SEAL:

REVISIONS

NOTES AND INFORMATION

SPRINGFIELD SKETCH PLAN
CITY OF CHARLES TOWN, WEST VIRGINIA
TAX MAP 15, PARCEL 1 (D.B. 1249, PG. 647)

CT FILE #

SCALE:	HORIZ.: VARIES VERT.:
DATE:	FEBRUARY 2022
JOB:	2665
DRAWN:	CHECK:
CADD:	SF_SKETCH PLAN.DWG
NCS:	
SHEET:	1 OF 6

I:\2 PROJECTS\2665 - SPRINGFIELD\DWG\PLANS\SF_SKETCH PLAN.DWG
Plotted: 2/28/2022 - 2:39 PM By: Jeffrey Hall
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CHARLES TOWN UTILITY BOARD
WASTEWATER TREATMENT PLANT FLOW DATA

CHARLES TOWN WASTEWATER PLANT FLOW DATA						
YEAR	Total Design (MGD)	TOTAL ANNUAL FLOW (MG)	AVERAGE DAILY (MGD)	Total Design minus Average Daily	Total Available (gpd)	Total Available (EDU's)
2015	1.75	384	1.05	0.7	700,000	4,667
2016	1.75	419	1.14	0.61	610,000	4,067
2017	1.75	393	1.08	0.67	670,000	4,467
2018	1.75	491	1.34	0.41	410,000	2,733
2019	1.75	459	1.26	0.49	490,000	3,267
2020	1.75	419.7	1.15	0.60	603,333	4,022
2021	1.75	401.61	1.11	0.64	637,500	4,250
2022	1.75	71.05	1.21	0.55	545,000	3,633

TUSCAWILLA WASTEWATER PLANT FLOW DATA						
YEAR	Total Design (MGD)	TOTAL ANNUAL FLOW (MG)	AVERAGE DAILY (MGD)	Total Design minus Average Daily	Total Available (gpd)	Total Available (EDU's)
2015	0.5	48	0.13	0.37	370,000	2,467
2016	0.5	49	0.13	0.37	370,000	2,467
2017	0.5	48	0.14	0.36	360,000	2,400
2018	0.5	78	0.21	0.29	290,000	1,933
2019	0.5	55.24	0.15	0.35	350,000	2,333
2020	0.5	1.09	0.16	0.34	340,000	2,267
2021	0.5	32.55	0.10	0.40	400,833	2,672
2022	0.5	0	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!

Total EDU's available between CT and Tuscawilla	
2015	7,133
2016	6,533
2017	6,867
2018	4,667
2019	5,600
2020	6,289
2021	6,922
2022	#DIV/0!

2020		
	Total	AVERAGE
JANUARY	39.05	1.26
FEBRUARY	36.74	1.27
MARCH	36.76	1.19
APRIL	33.32	1.11
MAY	35.50	1.15
JUNE	33.44	1.11
JULY	34.45	1.11
AUGUST	32.65	1.05
SEPTEMBER	32.43	1.08
OCTOBER	33.91	1.09
NOVEMBER	33.49	1.12
DECEMBER	37.96	1.22
Annual Total	419.7	1.15

2021		
	Total	AVERAGE
JANUARY	35.83	1.22
FEBRUARY	32.98	1.18
MARCH	36.39	1.17
APRIL	34.33	1.18
MAY	33.24	1.07
JUNE	36.24	1.21
JULY	30.99	1.00
AUGUST	29.94	0.97
SEPTEMBER	36.36	1.17
OCTOBER	29.97	0.97
NOVEMBER	30.12	1.00
DECEMBER	35.22	1.21
Annual Total	401.61	1.11

2022		
	Total	AVERAGE
JANUARY	37.25	1.20
FEBRUARY	33.8	1.21
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
Annual Total	71.05	1.21

2020		
	Total	AVERAGE
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST	1.09	0.16
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
Annual Total	1.09	0.16

2021		
	Total	AVERAGE
JANUARY	0.52	0.07
FEBRUARY	2.22	0.08
MARCH	4.22	0.14
APRIL	1.12	0.04
MAY	0.89	0.03
JUNE	3.37	0.11
JULY	3.9	0.13
AUGUST	3.6	0.12
SEPTEMBER	4.53	0.15
OCTOBER	3.94	0.13
NOVEMBER	3.73	0.12
DECEMBER	0.51	0.07
Annual Total	32.55	0.10

2022		
	Total	AVERAGE
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
Annual Total	0	#DIV/0!

CHARLES TOWN UTILITY BOARD
WATER TREATMENT PLANT FLOW DATA

CHARLES TOWN WATER PLANT FLOW DATA						
YEAR	Total Design (MGD)	TOTAL ANNUAL FLOW (MG)	AVERAGE DAILY (MGD)	Total Design minus Average Daily	Total Available (gpd)	Total Available (EDU's)
2019	2.8	644.32	1.77	1.03498	1,034,980	6,900
2020	2.8	615.64	1.68	1.12	1,117,946	7,453
2021	2.8	601.87	1.64	1.16	1,164,627	7,764
2022	2.8	91.62	1.56	1.24	1,236,691	8,245

2020		
	Total	AVERAGE
JANUARY	53,689,445	1,731,918
FEBRUARY	49,700,448	1,713,809
MARCH	51,009,216	1,645,459
APRIL	46,966,864	1,565,562
MAY	50,753,036	1,637,195
JUNE	52,587,142	1,752,905
JULY	54,394,477	1,754,661
AUGUST	54,972,785	1,773,316
SEPTEMBER	50,996,141	1,699,871
OCTOBER	51,222,251	1,652,331
NOVEMBER	49,014,344	1,633,811
DECEMBER	50,338,278	1,623,815
Annual Total	615,644,427	1,682,054

2021		
	Total	AVERAGE
JANUARY	50,030,727	1,613,894
FEBRUARY	45,304,029	1,618,001
MARCH	50,881,983	1,641,354
APRIL	49,098,224	1,636,607
MAY	53,910,537	1,739,050
JUNE	53,051,728	1,711,346
JULY	53,198,248	1,716,073
AUGUST	54,959,872	1,772,899
SEPTEMBER	49,200,580	1,587,115
OCTOBER	49,336,781	1,591,509
NOVEMBER	45,777,260	1,476,686
DECEMBER	47,118,143	1,519,940
Annual Total	601,868,112	1,635,373

2022		
	Total	AVERAGE
JANUARY	47,918,736	1,545,766
FEBRUARY	43,703,896	1,580,853
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
Annual Total	91,622,632	1,563,310

GLEN HAVEN WATER PLANT FLOW DATA						
YEAR	Total Design (MGD)	TOTAL ANNUAL FLOW (MG)	AVERAGE DAILY (MGD)	Total Design minus Average Daily	Total Available (gpd)	
2020	0.0216	1.04	0.01	0.01	13,120	
2021	0.0216	3.06	0.01	0.01	13,213	-
2022	0.0216	0.20	0.01	0.02	15,010	-

2020		
	Total	AVERAGE
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER	283,900	9,158
OCTOBER	265,000	8,548
NOVEMBER	250,800	8,360
DECEMBER	243,500	7,855
Annual Total	1,043,200	8,480

2021		
	Total	AVERAGE
JANUARY	242,200	7,813
FEBRUARY	203,500	7,268
MARCH	241,800	8,636
APRIL	262,300	8,743
MAY	289,700	9,345
JUNE	276,500	8,919
JULY	302,900	9,771
AUGUST	302,900	9,771
SEPTEMBER	227,800	7,348
OCTOBER	285,100	9,197
NOVEMBER	227,200	7,329
DECEMBER	201,500	6,500
Annual Total	3,063,400	8,387

2022		
	Total	AVERAGE
JANUARY	204,300	6,590
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
Annual Total	204,300	6,590

CAVALAND WATER PLANT FLOW DATA						
YEAR	Total Design (MGD)	TOTAL ANNUAL FLOW (MG)	AVERAGE DAILY (MGD)	Total Design minus Average Daily	Total Available (gpd)	
2020	0.036	0.59	0.00	0.03	31,210	
2021	0.036	1.91	0.01	0.03	30,766	
2022	0.036	0.15	0.00	0.03	31,158	

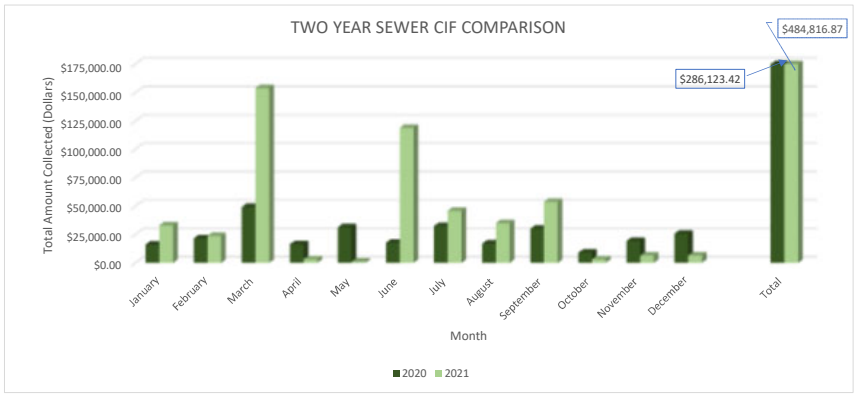
2020		
	Total	AVERAGE
JANUARY		
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER	141,900	4,577
OCTOBER	140,300	4,526
NOVEMBER	151,500	5,050
DECEMBER	155,200	5,006
Annual Total	588,900	4,790

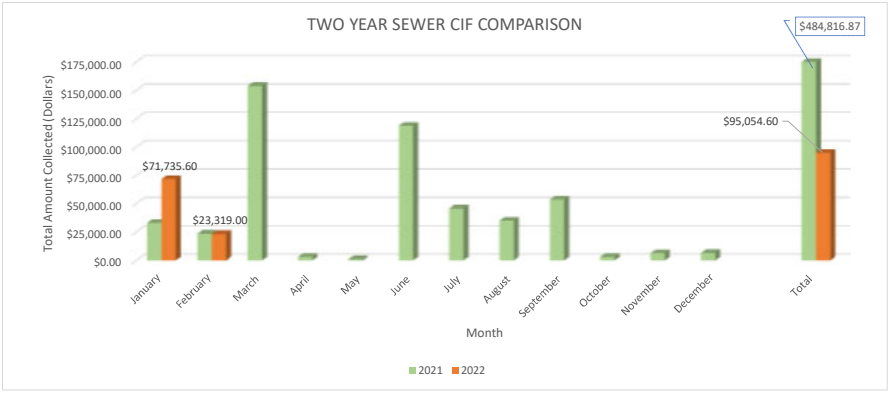
2021		
	Total	AVERAGE
JANUARY	150,900	4,868
FEBRUARY	132,900	4,746
MARCH	145,800	5,207
APRIL	152,900	5,097
MAY	177,900	5,739
JUNE	159,000	5,129
JULY	169,600	5,471
AUGUST	177,300	5,719
SEPTEMBER	175,600	5,665
OCTOBER	176,000	5,677
NOVEMBER	151,200	4,877
DECEMBER	143,000	4,613
Annual Total	1,912,100	5,234

2021		
	Total	AVERAGE
JANUARY	150,100	4,842
FEBRUARY		
MARCH		
APRIL		
MAY		
JUNE		
JULY		
AUGUST		
SEPTEMBER		
OCTOBER		
NOVEMBER		
DECEMBER		
Annual Total	150,100	4,842

Charles Town Utility Board 2021 Capacity Improvement Fee Collections/EDU for Sewer						
Month	**Commercial**	**Residential**	**Total Number of EDU's**	**Total Sewer CIF Collected**	**CIF Paid to Ranson**	**Total**
Jan-21		22	22	$ 33,114.00		$ 33,114.00
Feb-21		21	21	$ 33,417.00	$ 9,750.00	$ 23,667.00
Mar-21		32	136.7	$ 154,023.33		$ 154,023.33
Apr-21		1	1	$ 3,207.00		$ 3,207.00
May-21		1	1	$ 1,127.00		$ 1,127.00
Jun-21	36	3	39	$ 118,833.00		$ 118,833.00
Jul-21		37	37	$ 45,859.00		$ 45,859.00
Aug-21	9.22	3	12.22	$ 35,029.54		$ 35,029.54
Sep-21		44	44	$ 53,748.00		$ 53,748.00
Oct-21		1	1	$ 3,207.00		$ 3,207.00
Nov-21		2	2	$ 6,414.00		$ 6,414.00
Dec-21		4	4	$ 6,588.00		$ 6,588.00
Total 2021	**45.22**	**124**	**320.92**	**$494,566.87**	**$9,750.00**	**$484,816.87**

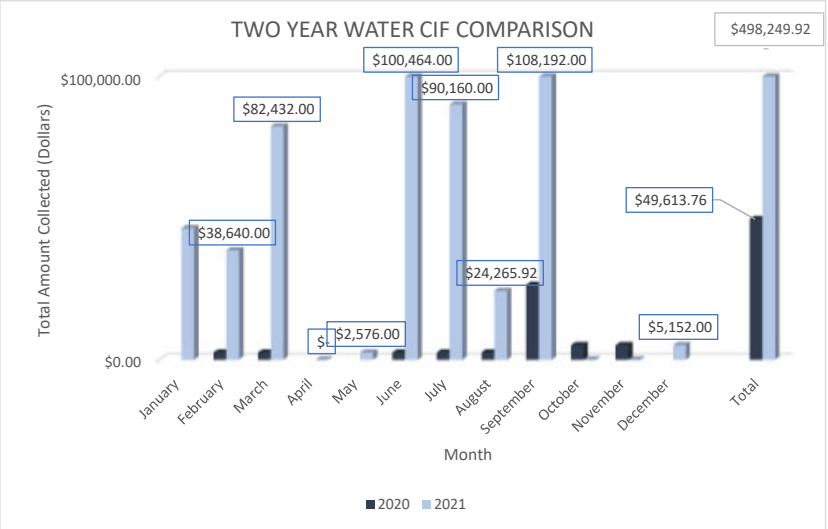
Charles Town Utility Board 2022 Capacity Improvement Fee Collections/EDU for Sewer						
Month	**Commercial**	**Residential**	**Total Number of EDU's**	**Total Sewer CIF Collected**	**CIF Paid to Ranson**	**Total**
Jan-22	**1.53**	29.03	30.56	$ 71,735.60		$ 71,735.60
Feb-22		17	17	$ 23,319.00		$ 23,319.00
Mar-22						
Apr-22						
May-22						
Jun-22						
Jul-22						
Aug-22						
Sep-22						
Oct-22						
Nov-22						
Dec-22						
Total 2022	**1.53**	**46**	**47.56**	**$95,054.60**	**$0.00**	**$95,054.60**

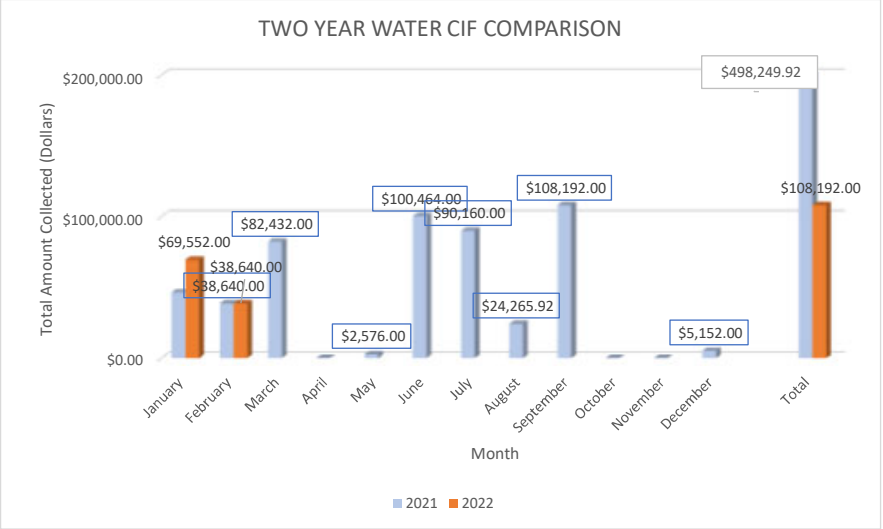




Charles Town Utility Board 2021 Capacity Improvement Fee Collections/EDU for Water				
Month	Commercial	Residential	Total Number of EDU's	Total Water CIF
Jan-21		18	18	$ 46,368.00
Feb-21		15	15	$ 38,640.00
Mar-21		32	32	$ 82,432.00
Apr-21				$ -
May-21		1	1	$ 2,576.00
Jun-21	36	3	39	$ 100,464.00
Jul-21		35	35	$ 90,160.00
Aug-21	7.42	2	9.42	$ 24,265.92
Sep-21		42	42	$ 108,192.00
Oct-21				$ -
Nov-21				$ -
Dec-21		2	2	$ 5,152.00
Total 2021	**43.42**	**108**	**193.42**	**$ 498,249.92**

Charles Town Utility Board 2022 Capacity Improvement Fee Collections/EDU for Water				
Month	Commercial	Residential	Total Number of EDU's	Total Water CIF
Jan-21		27	27	$ 69,552.00
Feb-21		15	15	$ 38,640.00
Mar-21				
Apr-21				
May-21				
Jun-21				
Jul-21				
Aug-21				
Sep-21				
Oct-21				
Nov-21				
Dec-21				
Total 2022	**0**	**42**	**42**	**$ 108,192.00**





Customer Name	Location	Lot Number	CIF Date Paid	Number of Sewer EDUs	Sewer CIF Amount Paid	Number of Water EDU's	Water CIF Amount Paid
Wormald	Beallair	134	1/11/2022	1	$ 3,207.00		
Gordon	Burr West - TeMa	20-21	1/11/2022	1.5	$ 4,810.50		
Leonard, Dave	10th Avenue	A-C	1/13/2022	2	$ 2,254.00	2	$ 5,152.00
Lennar	Norborne Glebe	304-317	1/20/2022	14	$ 44,898.00	14	$ 36,064.00
Dan Ryan	Tate Manor	30-40	1/24/2022	11	$ 12,397.00	11	$ 28,336.00
Wormald	Beallair	136	1/25/2022	1	$ 3,207.00		
Sheetz	Burr Park	13-14	1/25/2022	0.03	$ 962.10		
Wormald	Beallair	153-154	2/8/2022	2	$ 6,414.00		
Roper	418 S Charles St		2/16/2022	1	$ 1,127.00	1	$ 2,576.00
Dan Ryan	Huntfield	858-871	2/25/2022	14	$ 15,778.00	14	$ 36,064.00
Wormald	Beallair	143, 145	3/8/2022	2	$ 6,414.00		
			Total	**49.53**	$ 101,468.60	**42**	$ 108,192.00

Charles Town Utility Board
2022 Capacity Improvement Fee Collections/EDU for Sewer

Month	Commercial	Residential	Total Number of EDU's	Total Sewer CIF Collected	CIF Paid to Ranson	Total
Jan-22	1.53	29	30.53	$ 71,735.60		$ 71,735.60
Feb-22		17	17	$ 23,319.00		$ 23,319.00
Mar-22		2	2	$ 6,414.00		$ 6,414.00
Apr-22			0			$ -
May-22			0			$ -
Jun-22			0			$ -
Jul-22			0			$ -
Aug-22			0			$ -
Sep-22			0			$ -
Oct-22			0			$ -
Nov-22			0			$ -
Dec-22			0			$ -
Total 2022	**1.53**	**48**	**49.53**	**$ 101,468.60**	**$ -**	**$ 101,468.60**

Charles Town Utility Board
2022 Capacity Improvement Fee Collections/EDU for Water

Month	Commercial	Residential	Total Number of EDU's	Total Water CIF
Jan-22		27	27	$ 69,552.00
Feb-22		15	15	$ 38,640.00
Mar-22			0	
Apr-22			0	
May-22			0	
Jun-22			0	
Jul-22			0	
Aug-22			0	
Sep-22			0	
Oct-22			0	
Nov-22			0	
Dec-22			0	
Total 2021	**0**	**42**	**42**	**$ 108,192.00**

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT

FUND TOTALS		
50	WATER FUND	68,901.36
60	SEWER FUND	68,919.80
	GRAND TOTAL:	137,821.16

TOTAL PAGES: 5

APPROVED BY: _____

APPROVED BY: _____

This Packet:	$ 137,821.16
Security Deposit refunds:	1,479.93
T Mobile USA, check dated 2/23/2022:	2,098.82
Total:	$ 141,399.91

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
	SHEN JCT 2/01 & 2/07/22	SEWER FUND	SEWER		272.00
				TOTAL:	4,199.83
MICHAEL CRAIG STARLIPER	TUSCAWILLA	SEWER FUND	SEWER		3,597.50
				TOTAL:	3,597.50
STEPTOE & JOHNSON PLLC	GENERAL EMPLOYER COUNSELIN	WATER FUND	WATER		107.50
				TOTAL:	107.50
GERALD TAYLOR CO., INC.	PUMP / TRANSPORT	WATER FUND	WATER		1,029.52
	PUMP / TRANSPORT	WATER FUND	WATER		1,088.35
	PUMP / TRANSPORT	WATER FUND	WATER		480.05
	SLUDGE FROM WWTP TO TUSC	SEWER FUND	SEWER		524.70
	VAC LIFT STATIONS	SEWER FUND	SEWER		1,357.50
				TOTAL:	4,480.12
THE CI THORNBURG CO, INC.	1-1/2"&2"OMNIC2REGISTERONL	WATER FUND	WATER		2,054.39
	5/8" SRIIECHNGCHMBRRCKSYN	WATER FUND	WATER		982.11
	3"OMNIV2MTRTSTRGL/ACC2-1/2	WATER FUND	WATER		3,654.68
	5/8"SRII METER STRAINER	WATER FUND	WATER		56.25
	5/8"SRII MTRSTRNR, 5/8"SRI	WATER FUND	WATER		4,550.00
				TOTAL:	11,297.43
USA BLUEBOOK	SVCBX CMBOKY, APWAINVRTDPN	SEWER FUND	SEWER		277.34
	SVCBX CMBOKY, APWAINVRTDPN	SEWER FUND	SEWER		65.98
	COVERALLS	SEWER FUND	SEWER		443.90
				TOTAL:	787.22
WALKER DIVING UNDERWATER CONSTRUCTION	3 MBR DIVE CREW 2/25/22	WATER FUND	WATER		5,967.00
				TOTAL:	5,967.00
WIRELESS NETWORKS GROUP, INC.	MISC SVCS, FEB	WATER FUND	WATER		4,075.00
				TOTAL:	4,075.00
XYLEM DEWATERING SOLUTIONS, INC	SVCCLL GODWIN CD103PMP	SEWER FUND	SEWER		1,329.50
				TOTAL:	1,329.50

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT
			TOTAL:	11,180.81
FREDERICKTOWNE LABS INC	TESTING: IU01 FEB 2022	SEWER FUND	SEWER	104.40
	TESTING: OUTLT 1 WKLY	SEWER FUND	SEWER	387.00
	TESTING: CT WKLY	SEWER FUND	SEWER	392.40
			TOTAL:	883.80
GUTTMAN ENERGY	W/E 2/27/22	WATER FUND	WATER	600.99
	W/E 3/06/22	WATER FUND	WATER	574.08
	W/E 2/27/22	SEWER FUND	SEWER	1,129.83
	W/E 3/06/22	SEWER FUND	SEWER	1,222.22
			TOTAL:	3,527.12
PROTOUCH COMMUNICATIONS, LLC	FEB SVCS: AFTER-HRS EMERGE	WATER FUND	WATER	63.53
	FEB SVCS: AFTER-HRS EMERGE	SEWER FUND	SEWER	63.54
			TOTAL:	127.07
IRON MOUNTAIN, INC	SHREDDING, STORAGE	WATER FUND	WATER	252.16
	SHREDDING, STORAGE	SEWER FUND	SEWER	252.15
			TOTAL:	504.31
JAMES RIVER EQUIPMENT	EQUIPMENT RENTAL 6/26-11/1	SEWER FUND	SEWER	16,000.00
	SVC CLL ELECTRICAL ISSUES	SEWER FUND	SEWER	1,059.50
			TOTAL:	17,059.50
KM ELECTRICAL SOLUTIONS LLC	SVC @ DEERFIELD PS	SEWER FUND	SEWER	750.00
			TOTAL:	750.00
THOMAS NALLS	FEB TANK LOT RENT	WATER FUND	NON-DEPARTMENTAL	3,518.48
			TOTAL:	3,518.48
LOGICAL CONCEPTS, INC	FLWNGSPRGS,GRNFLDSTH4-5,BU	SEWER FUND	SEWER	393.00
			TOTAL:	393.00
PACE ANALYTICAL SERVICES, LLC	TESTING: WV3301905 QRTLY	WATER FUND	WATER	660.00
	TESTING: CAV QRTLY	WATER FUND	WATER	28.00
	TESTING: CT ANNUAL	SEWER FUND	SEWER	495.26
	TESTING: CT WKLY	SEWER FUND	SEWER	217.00
	TESTING: ROCKWOOL MNTHLY	SEWER FUND	SEWER	227.00
			TOTAL:	1,627.26
RAILROAD MGMT CO, IV LLC	RANSON, PIPE WATER LICENSE	WATER FUND	WATER	577.54
			TOTAL:	577.54
SHENANDOAH SALES & SERVICE, INC.	OIL CHANGE & SERVICE	WATER FUND	WATER	162.21
	REPAIR BROKEN TAILGATE	SEWER FUND	SEWER	357.59
	OIL CHANGE & SERVICE	SEWER FUND	SEWER	120.09
	OIL CHANGE & SERVICE	SEWER FUND	SEWER	178.79
	OIL CHANGE & SERVICE	SEWER FUND	SEWER	129.04
	OIL CHANGE & SERVICE	SEWER FUND	SEWER	616.47
	OIL CHANGE & SERVICE	SEWER FUND	SEWER	122.05
			TOTAL:	1,686.24
LAW OFFICES OF HOY SHINGLETON, L.C.	GENERAL 1/31 - 2/24/22	WATER FUND	WATER	1,071.00
	GENERAL 1/31 - 2/24/22	SEWER FUND	SEWER	2,496.28
	CAVERD UTILITIES 1/25- 2/2	SEWER FUND	SEWER	360.55

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
	FEB CLEANING	WATER FUND	WATER		365.00
	FEB CLEANING	SEWER FUND	SEWER		200.00
	FEB CLEANING	SEWER FUND	SEWER		100.00
	FEB CLEANING	SEWER FUND	SEWER		365.00
				TOTAL:	1,155.00
COMCAST BUSINESS	8299 31 008 0138502	WATER FUND	WATER		179.74
	8299 31 008 0138502	SEWER FUND	SEWER		179.75
				TOTAL:	359.49
CORE & MAIN	S70-6036X3/4CCBRS,FB1000-3	WATER FUND	WATER		160.13
	18X22X30BLLTMTRBX,AYM74M32	WATER FUND	WATER		1,747.14
				TOTAL:	1,907.27
CRYSTAL SPRINGS	MONTHLY SVC@ WWTP	WATER FUND	WATER		104.85
	MONTHLY SVC@661 S GEORGE S	WATER FUND	WATER		78.72
	MONTHLY SVC@661 S GEORGE S	SEWER FUND	SEWER		78.72
				TOTAL:	262.29
D.R. HORTON, INC.	SEWER UPSIZING PER AMEA	SEWER FUND	NON-DEPARTMENTAL		7,500.00
				TOTAL:	7,500.00
DEWBERRY ENGINEERS INC	WA & WW CIFS: THRU 1/28/22	WATER FUND	WATER		3,000.00
	WA & WW CIFS: THRU 1/28/22	SEWER FUND	SEWER		6,000.00
				TOTAL:	9,000.00
WV DEPT OF HEALTH & HUMAN SERVICES	FLOURIDE TEST	WATER FUND	WATER		15.00
	BACTERIOLOGICAL TEST	WATER FUND	WATER		20.00
				TOTAL:	35.00
DOCUMENT SOLUTIONS, INC	INK FOR PLOTTER	WATER FUND	WATER		416.00
	INK FOR COPIER	SEWER FUND	SEWER		104.00
				TOTAL:	520.00
ENCOVA INSURANCE	INSTALLMENT	WATER FUND	WATER		2,943.36
	INSTALLMENT	SEWER FUND	SEWER		2,312.64
				TOTAL:	5,256.00
FASTLANE EMERGENCY VEHICLES	SEWER TRUCK LIGHTS	SEWER FUND	SEWER		933.00
				TOTAL:	933.00
FIFTH THIRD BANK	PCARD 4726	WATER FUND	WATER		1,036.68
	PCARD 4726	WATER FUND	WATER		697.56
	PCARD 4726	WATER FUND	WATER		1,447.08
	PCARD 4726	WATER FUND	WATER		928.00
	PCARD 4726	WATER FUND	WATER		842.37
	PCARD 4726	WATER FUND	WATER		122.72
	PCARD 4726	WATER FUND	WATER		29.04
	PCARD 4726	SEWER FUND	SEWER		1,372.23
	PCARD 4726	SEWER FUND	SEWER		2,045.77
	PCARD 4726	SEWER FUND	SEWER		387.79
	PCARD 4726	SEWER FUND	SEWER		599.87
	PCARD 4726	SEWER FUND	SEWER		163.14
	PCARD 4726	SEWER FUND	SEWER		9.19
	PCARD 4726	SEWER FUND	SEWER		928.00
	PCARD 4726	SEWER FUND	SEWER		571.37

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
ANTIETAM ELECTRIAL CONTRACTORS, INC	WTP SLDG RM UNTHTR TRBLSHT	WATER FUND	WATER		728.50
				TOTAL:	728.50
NEAL O NILSEN	OFFICE 365 BASIC - 26 USER	WATER FUND	WATER		78.00