CHARLES TOWN UTILITY BOARD
AGENDA

WEDNESDAY, NOVEMBER 17, 2021

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

CALL TO ORDER

1. **APPROVAL OF MINUTES**
   a. Approval of October 27, 2021 Regular Meeting Minutes
   UB Minutes 10.27.21.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 2021) or by accessing the following zoom link:

   https://us06web.zoom.us/j/89083344723?pwd=bmE5azlzd252YkhEb1VDY0RlNlNyZz09

   Meeting ID: 890 8334 4723
   Passcode: 625146
   +1 301 715 8592 US

3. **UNFINISHED BUSINESS**
   a. Capacity Improvement Fee Assumption Review
   Excess Capacity Years vs EDUs per Year Chart.pdf

4. **NEW BUSINESS**
   a. U.S. Cellular Lease Amendment - 6th Avenue Water Tank
   6th Avenue US Cellular 2nd Amendment.pdf
   b. Xylem Pump Conversion
   Xylem Quote.pdf
   c. NPDES Permit WV0022349 Renewal Update - Possible Executive Session of the Board pursuant to the following statutory exception to the Open Governmental Proceeds Act): 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, or which is not considered

a public record within the meaning of the Freedom of Information Act, specifically in this case, matters protected by Attorney-Client Privilege.

5. **MANAGER REPORTS**
   a. Utility Manager Report
      UM Report 11.17.21.pdf
   b. Chairman Report
   i. Executive Session Protocol
   ii. Utility Manager Performance Review

6. **APPROVAL OF BILLS**
   a. November 3, 2021
      Board Report 11.03.21.pdf
   b. November 17, 2021
      Board Report 11.17.21.pdf

7. **ADJOURNMENT**

8. **INFORMATION ONLY**
   a. Next Meeting - December 15, 2021 at 4:00 PM

October 27, 2021

The Charles Town Utility Board held a regular meeting on October 27, 2021 at 4:00 p.m. Members of the Board present were Daryl Hennessy, Pete Kubic, Duke Pierson, Tommy Stocks and Jacquelyn Milliron. Also present were Kristen Stolipher, April Shultz, and Ashley Stottlemyer. The Chairman called for changes or corrections to the October 13, 2021 regular meeting minutes. Jacquelyn suggested changes and with no objections, the Board approved the minutes as amended. The Board received no public comments.

The Chairman next opened the floor for discussion on the Capacity Improvement Fee Assumption Review. As a follow up to the presentation that Dewberry did at the previous meeting, the Board discussed the assumptions more in depth as they are a critical component of calculating the CIF. Marty Kazmierczak from Dewberry provided discussion on the key input parameters that go into calculating the sewer fee. The Board discussed the parameters at length to make sure they are in line with needed upcoming improvements for collection and treatment. Also debated was the size of the future wastewater treatment plant upgrades and the bond terms for such a project. The Board will discuss that in further detail at the next meeting.

Next discussed was the Hollywood Casino Sewer User Agreement. Kristen provided the agreement includes conveying softened water flows up to 4,000 gallons per day into the Charles Town system. The agreement is similar to the agreement with Rockwool and was reviewed by both Counsels. Motion by Duke, seconded by Pete, the Board discussed approving the Sewer User Agreement with Hollywood Casino. Kristen mentioned the agreement protects the Board and allows for an enforcement mechanism on the flow and sampling. This was included in the recent NPDES permit modification. The motion was approved by the Board.

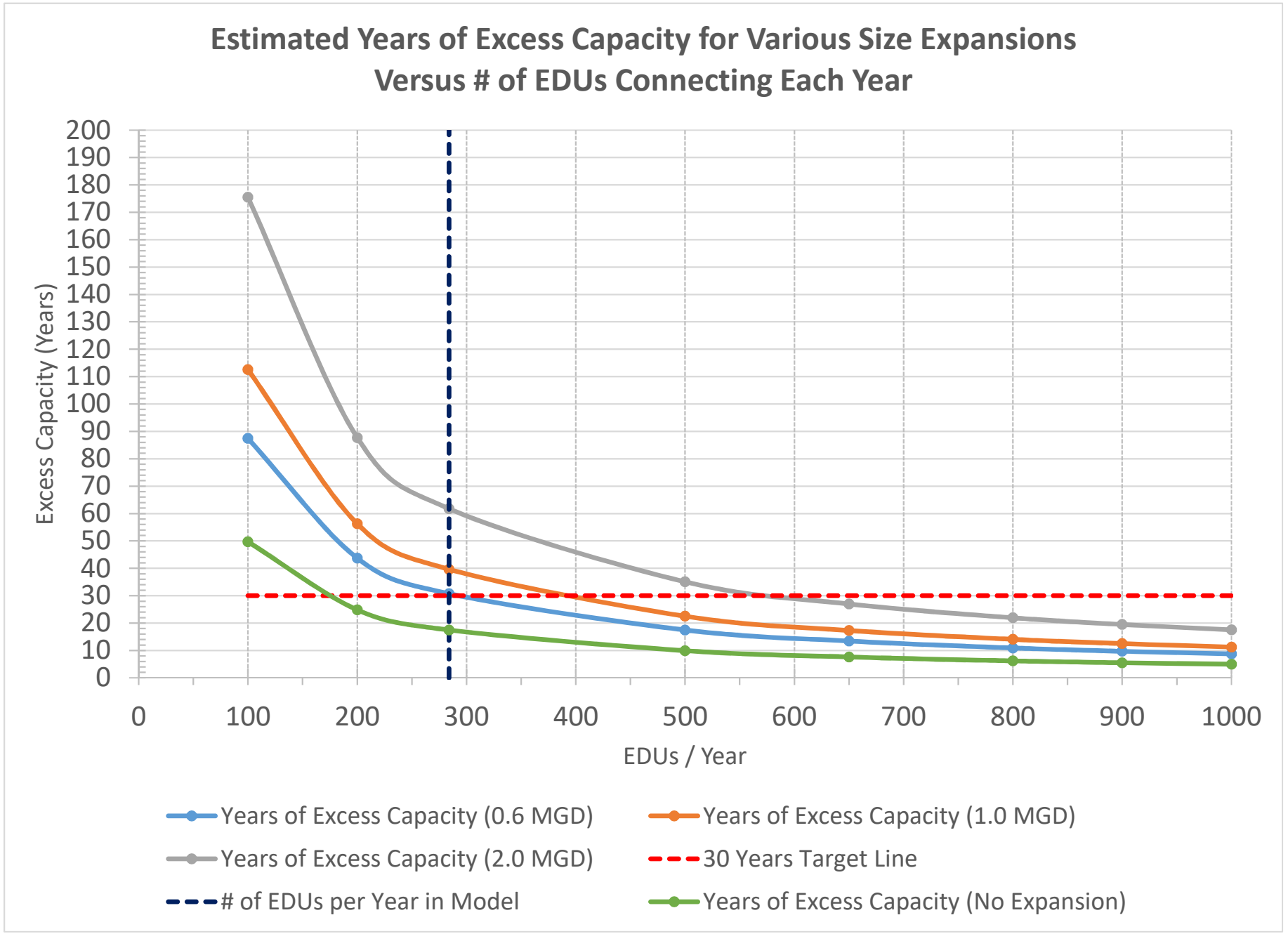
The Utility Manager Report was next addressed. Kristen briefed the Board on this month's sewer and water efforts including the submission of the ARP funding request on the Jefferson County Commission portal, as well as requests to the City of Ranson and Charles Town. She also mentioned issues during the water tank cleaning which will be assessed and discussed at a later meeting. Staff is also working on purchasing software to develop an asset management plan. The Board provided comments.

Under the Chairman Report, the Chairman provided the Safe Drinking Water Collaborative Steering Committee has switched host organizations from WV Rivers to the Potomac Conservancy. Jacquelyn also provided information on a USGS geological survey being conducted on the underground of Jefferson County. The Board next discussed the Approval of Bills. Motion by Tommy, second by Duke, with discussion from the Board, the Board approved the payment of bills.

With no objections, the Board adjourned the meeting at 5:20p.m. The November 17th special meeting will be held beginning at 4:00 p.m.

_____ _____

Chairman Secretary


Estimated Years of Excess Capacity for Various Size Expansions
Versus # of EDUs Connecting Each Year
Excess Capacity (Years)
200
190
180
170
160
150
140
130
120
110
100
90
80
70
60
50
40
30
20
10
0
0
100
200
300
400
500
600
700
800
900
1000
EDUs / Year
Years of Excess Capacity (0.6 MGD)
Years of Excess Capacity (1.0 MGD)
Years of Excess Capacity (2.0 MGD)
30 Years Target Line
# of EDUs per Year in Model
Years of Excess Capacity (No Expansion)

SECOND AMENDMENT TO LEASE AGREEMENT

Site Name/Location: **The City of Charles Town – WV-004 6th Avenue**
6th Avenue, City of Ranson, Jefferson County, West Virginia

This Second Amendment to Lease Agreement (the "Amendment"), dated as of _____, 2021, by and between HARDY CELLULAR TELEPHONE COMPANY, a Delaware corporation, with its principal offices at Attention: Real Estate Lease Administration, 8410 West Bryn Mawr Avenue, Chicago, Illinois 60631 ("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 May 11, 2009 (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 East 6th Avenue, Ranson, West Virginia for the purposes of operating certain communications antennas and related equipment thereat (collectively the "Premises"); and

WHEREAS, the parties entered into a First Amendment to Lease Agreement dated March 4, 2015 ("First Amendment"); 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

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. Revised Exhibit 1 and Revised Exhibit 2 to the Agreement are hereby deleted in their entirety, and the new **Exhibit B1** to the Agreement, which includes a legal description of the Premises and the Collocation Application of Tenant, along with ***Exhibit B2*** to the Agreement, which includes the Approved Tenant Construction Drawings are hereby incorporated into the Agreement in lieu thereof.

2. Paragraph 2a of the Lease is deleted and the following inserted in lieu thereof:

   (a) Tenant may use the Premises for the transmission and reception of communications signals and the installation, construction, maintenance, operation, repair and replacement of its communication facilities and related equipment, as identified in the **Exhibit B1** and **Exhibit B2** herein, and which may include suitable support structures associated with said equipment and may also include equipment shelters, cabinets, fencing and other items necessary to the successful and secure use of the Premises (collectively the "Communication Facility"); such use may include the right to test, survey and review title on the Property (collectively, the "Permitted Use"). Tenant can replace the communication equipment with equipment of the same size, weight and operating specifications with notice to and approval of the Landlord, such approval to not be unreasonably withheld, conditioned or delayed. Tenant agrees to comply with all applicable government laws, rules, statutes, and regulations, relating to its use of the Communications Facility on the Property. All other changes to the size, weight and operating specifications for any new additional or replacement equipment must be preapproved by Landlord, in its sole discretion.

3. Section 4(a) shall be amended by adding the following:

4. RENT

(a) Commencing on the date Tenant commences construction of the changes outlined in this Second Amendment, but not later than September 1, 2021 (The "Commencement Date") Tenant will pay the Landlord a monthly rental payment of Two Thousand Nine Hundred Sixteen Dollars and Thirty-Seven Cents ($2,916.37) ("Rent") to landlord at the address set forth above, on or before the fifth (5th) day or each month in advance. Rent shall be pro-rated for any partial month and each Rent payment shall bear the site designation of 6th Avenue Water Tank / WV-004.

4. Section 18 of the Agreement is hereby deleted in its entirety, and the following new Section 18 is hereby incorporated into the Agreement in lieu thereof:

18. NOTICES. 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:

Hardy Cellular Telephone Company
Attn: Real Estate Lease Administration
8410 Bryn Mawr Avenue
Chicago, Illinois 60631
Site Number: 416429 – Race Track

If to Landlord:

The City of Charles Town
101 East Washington Street
Charles Town, West Virginia 25414
Attn: City Manager
Site ID: WV-004 6th Avenue

With a copy to:

The City of Charles Town Utility Board
661 South George Street, Suite 101
Charles Town, West Virginia 25414
Attn: Utility Manager
Site ID: WV-004 6th Avenue

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.

6. 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.

7. 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]

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:

TENANT:

HARDY CELLULAR TELEPHONE COMPANY
a Delaware corporation

_____

By: Denise Lintz

Print Name: _____

Name: Denise Lintz

Title: Vice President

SIGNED, SEALED AND DELIVERED IN THE PRESENCE OF:

LANDLORD:

C

CITY OF CHARLES TOWN
a Municipal Corporation

_____

By: _____

Print Name: _____

Name: _____

Title: _____

TENANT ACKNOWLEDGEMENT

STATE OF ILLINOIS
COUNTY OF COOK

On this 18th day of October, 2021, before me, the undersigned notary public, personally appeared Denise Lintz, 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 Vice President of HARDY CELLULAR TELEPHONE COMPANY, a Delaware corporation, the TENANT named in the attached instrument, and as such was authorized to execute this instrument on behalf of the TENANT.

(*official seal*)

ELLEN M GROH
Official Seal
Notary Public - State of Illinois
My Commission Expires Jan 22, 2025

Ellen M Groh
Notary Public
Type or Print Name: Ellen M Groh
My commission expires: 1/22/2025

LANDLORD ACKNOWLEDGEMENT

STATE/COMMONWEALTH OF WEST VIRGINIA
COUNTY OF JEFFERSON

On this _____ day of _____, 2021, 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 B1
(Page 1 of 6)

DESCRIPTION OF PREMISES

LEGAL DESCRIPTIONS

HARDY CELLULAR TELEPHONE COMPANY LEASED AREA (20' x 35')

BEING A 20' BY 30' PARCEL LOCATED WITHIN THE LANDS OF THE CITY OF CHARLES TOWN (DEED BOOK 962 PAGE 423), AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT A 5/8" REBAR FOUND ON THE SOUTHERLY EDGE OF AN EXISTING 20' RIGHT OF WAY AND AT THE COMMON CORNER OF A PARCEL NOW OR FORMERLY OWNED BY THE ESTATE OF W.C. WILLINGHAM (DEED BOOK 185 PAGE 375) AND THE SAID CITY OF CHARLES TOWN PARCEL; THENCE, S70°51'55"E, 41.70' TO A POINT AT THE NORTHWESTERLY CORNER OF THE PROPOSED LEASE AREA, THE TRUE POINT OF BEGINNING; THENCE MAKING A NEW LINE THROUGH THE SAID CITY OF CHARLES TOWN PARCEL FOR THE FOLLOWING FOUR (4) BEARINGS AND DISTANCES:

1) N65°08'40"E, 20.00' TO A POINT;
2) S24°51'20"E, 35.00' TO A POINT;
3) S65°08'40"W, 20.00' TO A POINT;
4) N24°51'20"W, 35.00' TO THE POINT OF BEGINNING;

CONTAINING 700 SQUARE FEET, MORE OR LESS.

HARDY CELLULAR TELEPHONE COMPANY 30' WIDE ACCESS EASEMENT

BEING A 15' WIDE EASEMENT, 7.5' ON EITHER SIDE OF THE CENTERLINE WHICH IS DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT ON THE WESTERLY LINE OF THE ABOVE DESCRIBED 20'x30' LEASE PARCEL, SAID POINT BEARS N24°51'20"W, 9.56' FROM THE SOUTHWESTERLY CORNER OF SAID LEASE PARCEL; THENCE THROUGH SAID CITY OF CHARLES TOWN FOR THE FOLLOWING TWO (2) BEARINGS AND DISTANCES:

1) S26°47'20"W, 28.69' TO A POINT;
2) S24°51'20"E, 52.80' TO A POINT IN THE NORTHERLY LINE OF EAST SIXTH AVENUE. TOTAL LENGTH OF EASEMENT: 81.49'

EXHIBIT B1
(Page 2 of 6)

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

INTERNAL USE ONLY	
APP VERSION #	1
LEASE #	13
AMENDMENT #	2

PLEASE RETURN THIS APPLICATION VIA EMAIL TO:			
Wireless Networks Group, Inc. 2926 Rohrersville Road Rohrersville, Maryland 21779-1214 Attn: Michael Hofe	E-Mail: mhofe@wirelessnetworksgroup.com Phone: 301-667-0001	Charles Town Site Number: Charles Town Site Name: Application Date: Revision Dates: OPS Approval:	WV-004 (Flat Bottom) 6th Avenue 10/12/2021

APPLICANT / CARRIER INFORMATION			
Carrier Name:	U.S Cellular	**Contact Name:**	Jacob Milan
Carrier Site Number:	416429	**Contact Number:**	630-634-4938
Carrier Site Name:	Race Track	**Contact Fax:**	
Carrier Legal Entity Name:	Hardy Cellular Telephone Company	**Contact Address:**	1351 E. Irving Park Rd. Itasca, IL 60143
State of registration:	WV		
Type of entity (LP, LLC, Corp) d/b/a (If applicable)			
Notice Address for Lease:	8410 West Bryn Mawr Ave. Suite 700, Chicago IL 60631	**Contact E-mail:**	jacob.milan@mastec.com
With copies to:	1351 E. Irving Park Rd. Itasca, IL 60143	**Additional E-mail:**	Michael.Jernigan@mastec.com Susan.Garcia@mastec.com
Carrier Invoice Address:	8410 West Bryn Mawr Ave. Suite 700, Chicago IL 60	**Desired Install Date:**	11/4/2021
Carrier Invoice Contact - Name, Title, Phone No.	Mark Schroeder	**Carrier NOC#**	224-653-3101

ADDITIONAL CONTACT INFORMATION	
Leasing Contact Name/Number:	Lease Administration - Jaideep Dudani - jaideep.dudani@usceullular.com
RF Contact Name/Number:	
Construction Contact Name/Number:	MasTec Network Solution - Raymond Daymunde - raymond.daymunde@mastec.com
Emergency Contact Name/Number:	224-653-3101

SITE INFORMATION				
Latitude:	39.298264	N	**Existing Structure Type:**	Water Tank (Flat Bottom)
Longitude:	-77.857967	W	**Existing Structure Height:**	98'
Site Address:	213 East 6th Avenue, Ranson, WV 25438			

FREQUENCY/TECHNOLOGY INFORMATION	
Type of Technology for all equipment (i.e., 3G, LTE, CMDA, MW, WiFi, TV, etc.)	LTE
TX Frequency (MHz)	734-740, 704-710
RX Frequency (MHz)	891.5 - 894, 835-846
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 (6) existing Antel RWA-80017-E-DIN Antennas. Remove existing (3) KMS-AM-X-CW-18-65-00t-RET Antennas. Adding (6) Dengyo OCT8-2LX2HX-BW65 Antennas. Adding (3) Nokia AHLOA Radios, (3) Nokia AHFIB Radios, and (2) Nokia FXCA/FXCB Radios. Removing (6) 1-5/8" Coax. Adding (2) 1-1/4" Hybrid Fiber Lines. Adding (2) RUSDC-6267-PF-48 Raycaps. Existing mounts standoff and cross member to be replaced with L3X3X3/16 And L2X2X3/16 respectively, replace existing antenna pipe mounts in the proposed antenna locations with (1) 2-7/8" O.D SCH 40 pipe and (1) Crossover kits

EXHIBIT B1
(Page 3 of 6)

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	102	102	Stand-Off	6	Antel	RWA 80017-E-DIN			60 180 300	No
Panel	102	102	Stand-Off	3	KMS	KMS-AM-X-CW-18-65-00T-RET			60 180 300	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	1-5/8"	6	exterior	Yes	
Coax	1-5/8"	6	exterior	No	Remove (6) of (12) total Coax

Revised 2018.05.01

EXHIBIT B1
(Page 4 of 6)

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	102	102	Sector Frames	6	Dengyo	OCT8-2LX2HX-BW65	95.9 x 19.6 x 7.1	103.4	41 160 280
RRU	102	102	Sector Frames	3	Nokia	AHLOA	22.05 x 12.13" 7.44	83.8	41 160 280
RRU	102	102	Sector Frames	3	Nokia	AHFIB	26.6 x 12.9 x 6.5	66.1	41 160 280
RRU	102	102	Sector Frames	2	Nokia	FXCA/FXCB	5.2" x 19.4 x 22.1	55.1	41
Raycap	102	102	Sector Frames	2	Raycap	RUSDC-6267-PF-48	20.6" x 18.9" x 5.8"	19.95	41

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	1-1/4"	2	exterior	Hybrid Line
DC Power				MEDA

Revised 2018.05.01

EXHIBIT B1
(Page 5 of 6)

PROPOSED FINAL CONFIGURATION TOTALS	
EQUIPMENT TYPE	TOTAL
Panel Antennas	6
Omni/Whip Antennas	
RRU	8
TMA	
Diplexer / Triplexer	
Bias T	
Surge Suppressor	2
MW Dish	
Ice Shield	
ODU	
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	6
Hybrid	2
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.

MEJA

EXHIBIT B1
(Page 6 of 6)

GROUND / INTERIOR SPACE REQUIREMENTS							
Total Ground / Interior Area Dimensions: **L' x W' = Total Square Feet Required**	24	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	Ground Platform			
Shelter Pad Dimensions	24	X 11	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	0	Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Number of Cabinets Required	0	Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Number of Cabinets Required	0	Cabinet Dimensions (L' x W' x H')		Manufacturer:	
Equipment Cabinet Comments					

GENERATOR REQUIREMENTS					
Generator Required?:		Generator Fuel Type		Generator Size	
Generator Pad Dimensions		No generator present		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	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?	Yes 1	If wet seals required, please provide address:	

ADDITIONAL COMMENTS

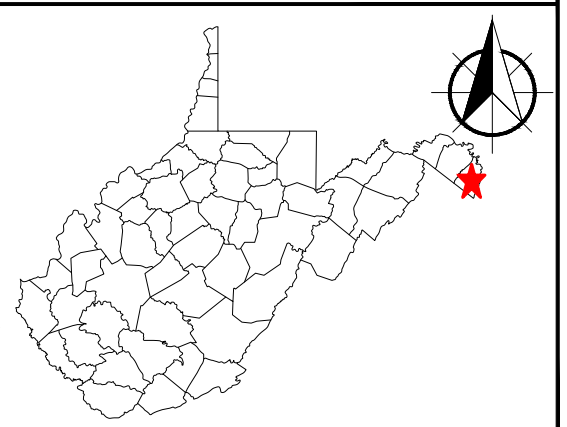
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EXHIBIT B2

APPROVED TENANT CONSTRUCTION DRAWINGS

[See Attached Construction Drawings]

STATE MAP



DX210F-CDMA: NSN// B71/B12 / B2/B66 / B5
MODERNIZATION DRAWINGS WAVE 3
97'-7" WATER TANK

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

SITE LOCATION



STRUCTURAL REFERENCES

GC SHALL REVIEW AND COMPLY WITH THIS PROJECTS MOST CURRENT, PASSING STRUCTURAL ANALYSIS AND MOUNT STRUCTURAL ANALYSIS.

Approved 10/13/2021

RAPHAEL MOHAMED
REGISTERED
16602
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
4/23/2021	CONSTRUCTION	0	RM
7/20/2021	CONSTRUCTION	1	RM
7/30/2021	CONSTRUCTION	2	RM
9/21/2021	CONSTRUCTION	3	RM
10/13/2021	CONSTRUCTION	4	RM

DRAWN BY:	SL
CHECKED BY:	JFS
APPV'D BY:	RM
MNS PROJECT NO:	23347-AEC

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PREPARED FOR:
uscellular

PREPARED BY:
MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

SHEET INDEX

SHEET	DESCRIPTION	REV.	REV. DATE
T-1	TITLE SHEET	4	10/13/2021
C-1	AERIAL SITE PLAN	4	10/13/2021
C-2	ENLARGED SITE PLAN	4	10/13/2021
C-3	EQUIPMENT LAYOUT	4	10/13/2021
C-4	SHELTER BLOCK DIAGRAM	4	10/13/2021
C-5	TOWER ELEVATIONS	4	10/13/2021
C-6	ANTENNA LAYOUTS	4	10/13/2021
C-7	EQUIPMENT MOUNTING DETAILS	4	10/13/2021
C-8	EQUIPMENT MOUNTING DETAILS	4	10/13/2021
C-9	ANTENNA SPECIFICATIONS	4	10/13/2021
C-10	REMOTE RADIO SPECIFICATIONS	4	10/13/2021
C-11	PLUMBING DIAGRAM	4	10/13/2021
C-12	CABLE DETAILS	4	10/13/2021
C-13	CABLE BANDING DETAILS	4	10/13/2021
C-14	COAX AND HATCH PLATE LAYOUT	4	10/13/2021
C-15	GROUNDING DETAILS	4	10/13/2021
N-1	GENERAL NOTES	4	10/13/2021

SCOPE OF WORK

TOWER SCOPE

	QTY	EQUIPMENT	ACTION
EX EQUIPMENT	6	CDMA ANTENNA(S)	TO BE REMOVED
	3	LTE ANTENNA(S)	TO BE REMOVED
	6	1-5/8" CDMA COAX	TO REMAIN
	6	1-5/8" LTE COAX	TO BE REMOVED
FINAL EQUIPMENT	6	LTE ANTENNA(S) @ 102'	TO BE INSTALLED
	6	1-5/8" LTE COAX	EXISTING
	2	1-1/4" EUPEN HYBRID CABLE	TO BE INSTALLED
	2	RAYCAP SPD(S)	TO BE INSTALLED
	8	REMOTE RADIO(S)	TO BE INSTALLED
	6	RET JUMPER(S)	TO BE INSTALLED
COAX JUMPERS	-	CDMA COAX JUMPERS	REPLACE AS NECESSARY
(SEE SHEET C-12 FOR	-	EXISTING LTE COAX JUMPERS	TO BE REMOVED
QUANTITY AND LENGTHS)	-	NEW LTE COAX JUMPERS	TO BE INSTALLED
GROUND BARS	1	ANTENNA GROUND BAR*	TO REMAIN
	1	EQUIPMENT GROUND BAR(S)	TO BE INSTALLED
	-	MID TOWER GROUND BAR*	G.C. TO VERIFY
	-	LOWER TOWER GROUND BAR*	TO REMAIN

COMPOUND SCOPE

	QTY.	EQUIPMENT	ACTION
CABLE ROUTE	15	ICE BRIDGE HANGERS	TO REMAIN
	16	SHELTER COAX PORT	TO REMAIN
GPS ANTENNA(S)	1	CDMA GPS ANTENNA(S)	TO REMAIN
	1	LTE GPS ANTENNA(S)	TO REMAIN
GROUND BARS	1	SHELTER EXTERIOR GROUND BAR*	TO REMAIN

SHELTER INTERIOR SCOPE

	QTY.	EQUIPMENT	ACTION
EQUIPMENT	1	RAYCAP PDU(S)	INSTALLED BY OTHERS
	1	POWER BAY RACK	INSTALLED BY OTHERS
	1	BATTERY BACKUP RACK	INSTALLED BY OTHERS
AUX RACK	1	BASE BAND UNIT (BBU)	INSTALLED BY OTHERS
	2	RAYCAP FIBER TRAY(S)	TO BE INSTALLED
EQUIPMENT RACK	1	LTE EQUIPMENT RACK(S)	TO BE REMOVED
GROUND BARS	1	GROUND BAR AT COAX PORT*	TO REMAIN

SPECIAL REQUIREMENTS

- EXISTING MOUNT STANDOFF AND CROSS MEMBERS TO BE REPLACED WITH L3X3X3/16 AND L2X2X3/16 RESPECTIVELY
- REPLACE THE EXISTING ANTENNA PIPE MOUNTS IN THE PROPOSED ANTENNA LOCATIONS WITH (1) 2-7/8" O.D. SCH. 40 PIPE AND (1) CROSSOVER KITS
- EXISTING COAX TO BE REMOVED FROM PLASTIC TANK OVERFLOW PIPE AND PUT ON TO NEW PROPOSED PIPE
- US CELLULAR PANEL ANTENNAS TO BE VERTICALLY CENTERED ON MOUNTS
- EXISTING ANTENNA AZIMUTHS TO BE ADJUSTED TO MATCH LTE RF DESIGN
- EX. US CELLULAR LTE ANTENNAS & COAX TO BE REMOVED POST INTEGRATION

*BRING UP TO US CELLULAR STANDARDS AS NECESSARY

GENERAL NOTES

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

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION, THEREFORE HANDICAP ACCESS IS NOT REQUIRED. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED. NO WORK SHALL COMMENCE WITHOUT THE APPROVED TOWER/ANTENNA MOUNT STRUCTURAL ANALYSIS REPORT SIGNED AND SEALED BY A LICENSED PROFESSIONAL ENGINEER UNDER SEPARATE COVER.

CONTRACTOR TO REVIEW STRUCTURAL REPORT IN ITS ENTIRETY. ANY DISCREPANCIES OR DISAGREEMENTS BETWEEN THE REPORT AND THESE PLANS SHOULD BE RESOLVED PRIOR TO CONSTRUCTION.

SITE SUMMARY

SCOPE TYPE:	CARRIER ADD
OCCUPANCY TYPE:	TELECOMMUNICATIONS
LATITUDE:	39.29805603
LONGITUDE:	-77.85777816
JURISDICTION:	CITY OF RANSON
COUNTY:	JEFFERSON

PROJECT DIRECTORY

APPLICANT:	U.S. CELLULAR CORPORATION 8410 W. BRYN MAWR, SUITE 700 CHICAGO, IL 60631
TOWER OWNER:	CITY OF CHARLES TOWN, WV 101 E WASHINGTON ST. CHARLES TOWN, WV 25414 CONTACT: MICHAEL HOFE (301) 667-0001
PROJECT MANAGER:	MASTEC NETWORK SOLUTIONS 507 AIRPORT BLVD, SUITE 111 MORRISVILLE, NC 27560 WALTER McCOWAN PHONE: (919) 674-5823
SITE DESIGN:	MASTEC NETWORK SOLUTIONS 507 AIRPORT BLVD, SUITE 111 MORRISVILLE, NC 27560 CONTACT: RAPHAEL MOHAMED PHONE: (919) 674-5895



0 20' 40'

1"=20'-0"

AERIAL SITE PLAN

11"x17" SCALE: 1"=20'-0"
24"x36" SCALE: 1"=10'-0"

Approved 10/13/2021

RAPHAEL MOHAMED
REGISTERED
16602
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

SUBMITTALS

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DRAWN BY:	SL
CHECKED BY:	JFS
APPV'D BY:	RM
MNS PROJECT NO:	23347-AEC

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PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
AERIAL SITE PLAN

SHEET NUMBER
C-1



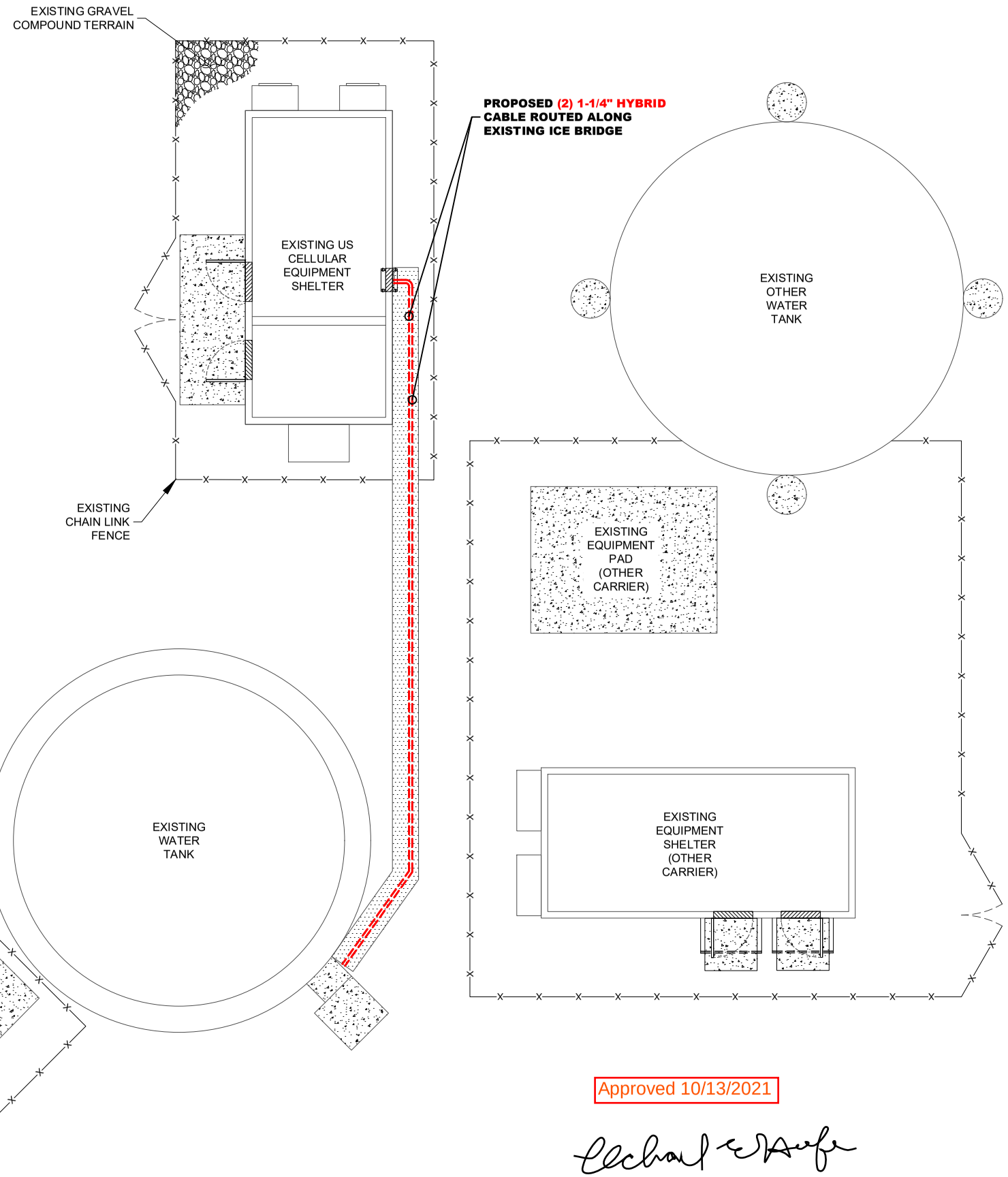
COMPOUND OVERVIEW



SITE OVERVIEW



ICE BRIDGE



0 10' 20'

1"=10'-0"

ENLARGED SITE PLAN

11"x17" SCALE: 1"=10'-0"
24"x36" SCALE: 1"=5'-0"

PROPOSED EQUIPMENT
EXISTING EQUIPMENT
EXISTING TO BE REMOVED

Approved 10/13/2021

RAPHAEL MOHAMED REGISTERED 16602 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

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PREPARED BY:

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MORRISVILLE, NC 27560

SITE NUMBER:
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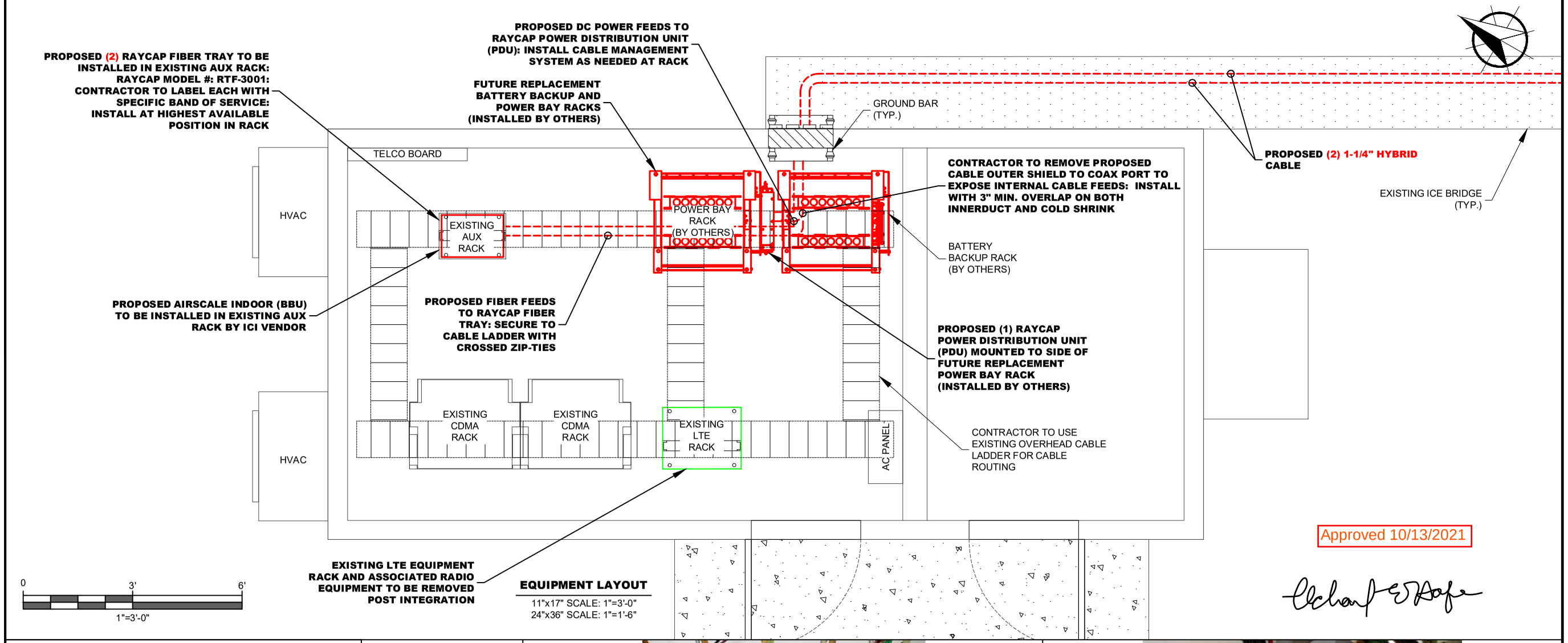
SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
C-2



EQUIPMENT LAYOUT

11"x17" SCALE: 1"=3'-0"
24"x36" SCALE: 1"=1'-6"

Approved 10/13/2021

MANUFACTURER: RAYCAP
MODEL: RUSDC-1176-PDU-48 (BREAKERS NOT INCLUDED
RUSDC-1176-PDU-48-AMCB-1240 (12 X 40A BREAKERS INCLUDED)
DIMENSIONS: 18.99" (D) x 19.00" (W) x 3.48" (H)
WEIGHT: 22 LBS (WITHOUT BREAKERS)

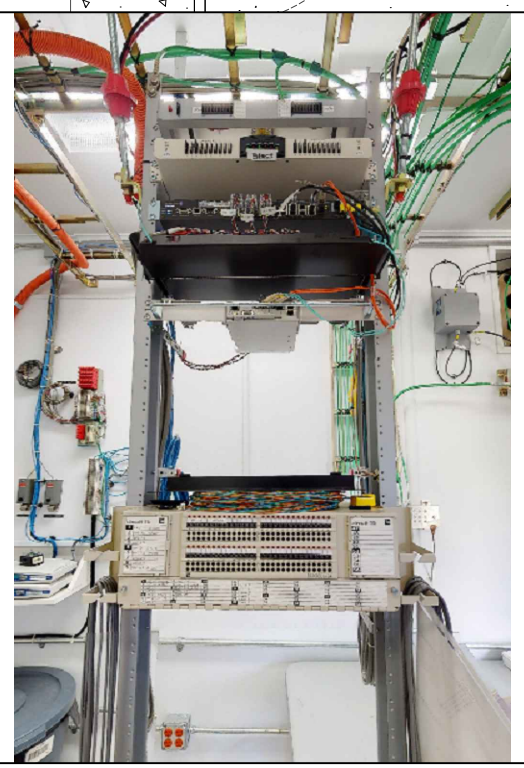
OPTIONAL ACCESSORIES:

- 12 BREAKER KIT FOR ERICSSON RADIO SET: AMCB-48-1225-KIT
- 9 BREAKER KIT FOR NOKIA RADIO SET: AMCB-48-0640-0325-KIT
- 40A CIRCUIT BREAKER: AMCD-48-0140
- 25A CIRCUIT BREAKER: AMCD-48-0125
- CABLE STORAGE: RTF-6601

2RU RACK MOUNTED DC SURGE SUPPRESSION AND POWER DISTRIBUTRION SYSTEM FOR USE IN REMOTE RADIO HEAD (RRH) AND MULT-CIRCUIT, DISTRIBUTED ANTENNA SYSTEMS



RAYCAP POWER DISTRIBUTION UNIT (PDU)
SCALE: N.T.S.



EXISTING AUX EQUIPMENT RACK
SCALE: N.T.S.



EXISTING LTE RACK TO BE REMOVED
SCALE: N.T.S.

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10/13/2021

RAPHAEL MOHAMED, P.E.
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PREPARED FOR:
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PREPARED BY:
MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
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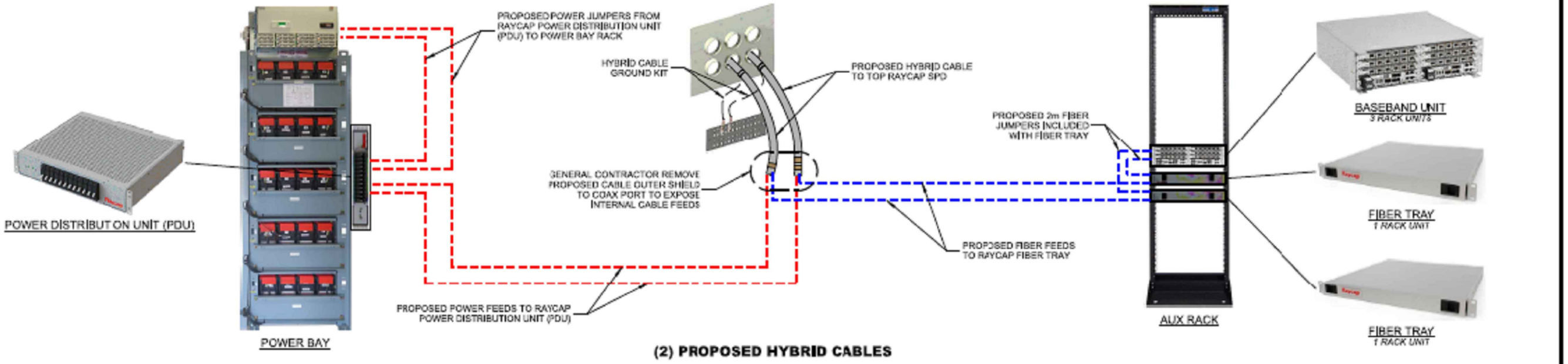
SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

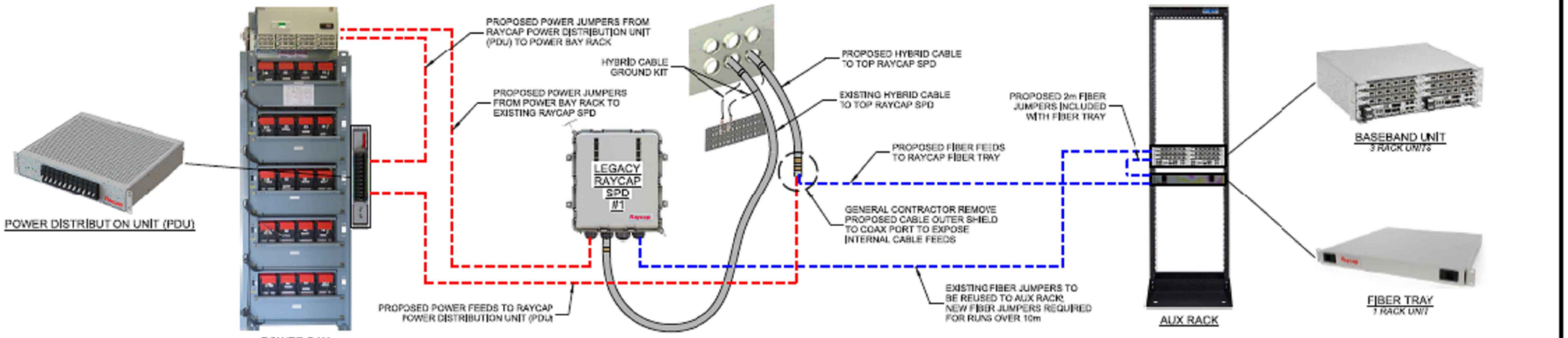
TOWER OWNER ID:
416429

SHEET TITLE
EQUIPMENT LAYOUT

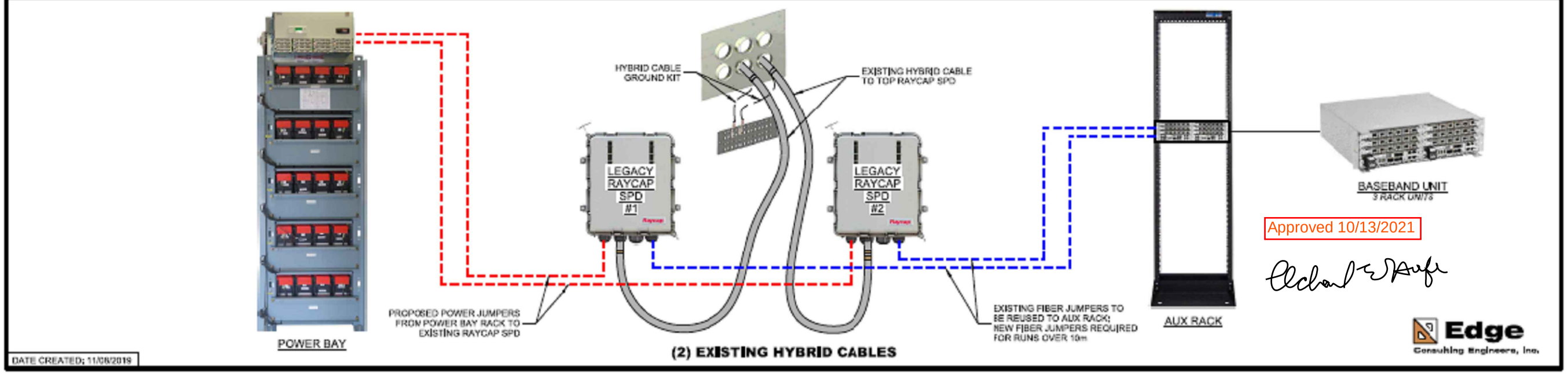
SHEET NUMBER
C-3



(2) PROPOSED HYBRID CABLES



(1) EXISTING HYBRID & (1) PROPOSED HYBRID



(2) EXISTING HYBRID CABLES

DATE CREATED: 11/06/2019

RAPHAEL MOHAMED
REGISTERED
16602
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

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PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
SHELTER BLOCK DIAGRAM

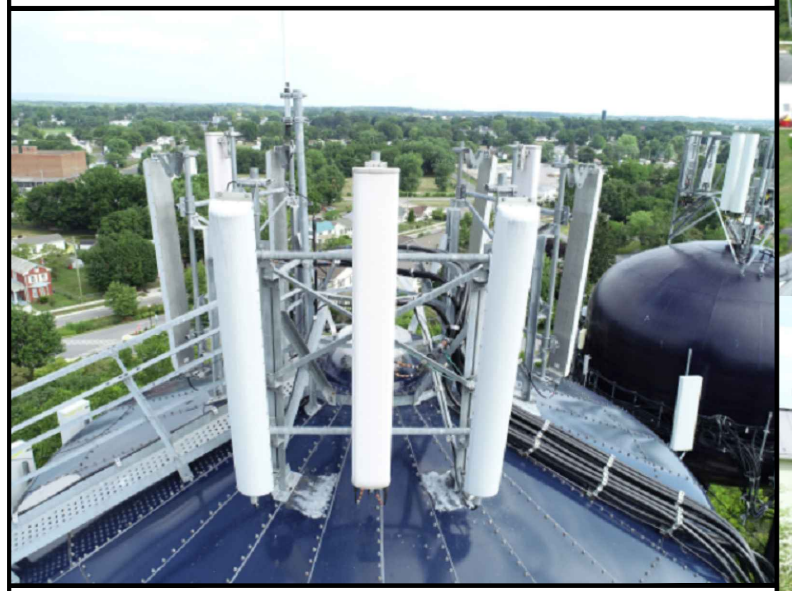
SHEET NUMBER
C-4

Approved 10/13/2021

Edge Consulting Engineers, Inc.



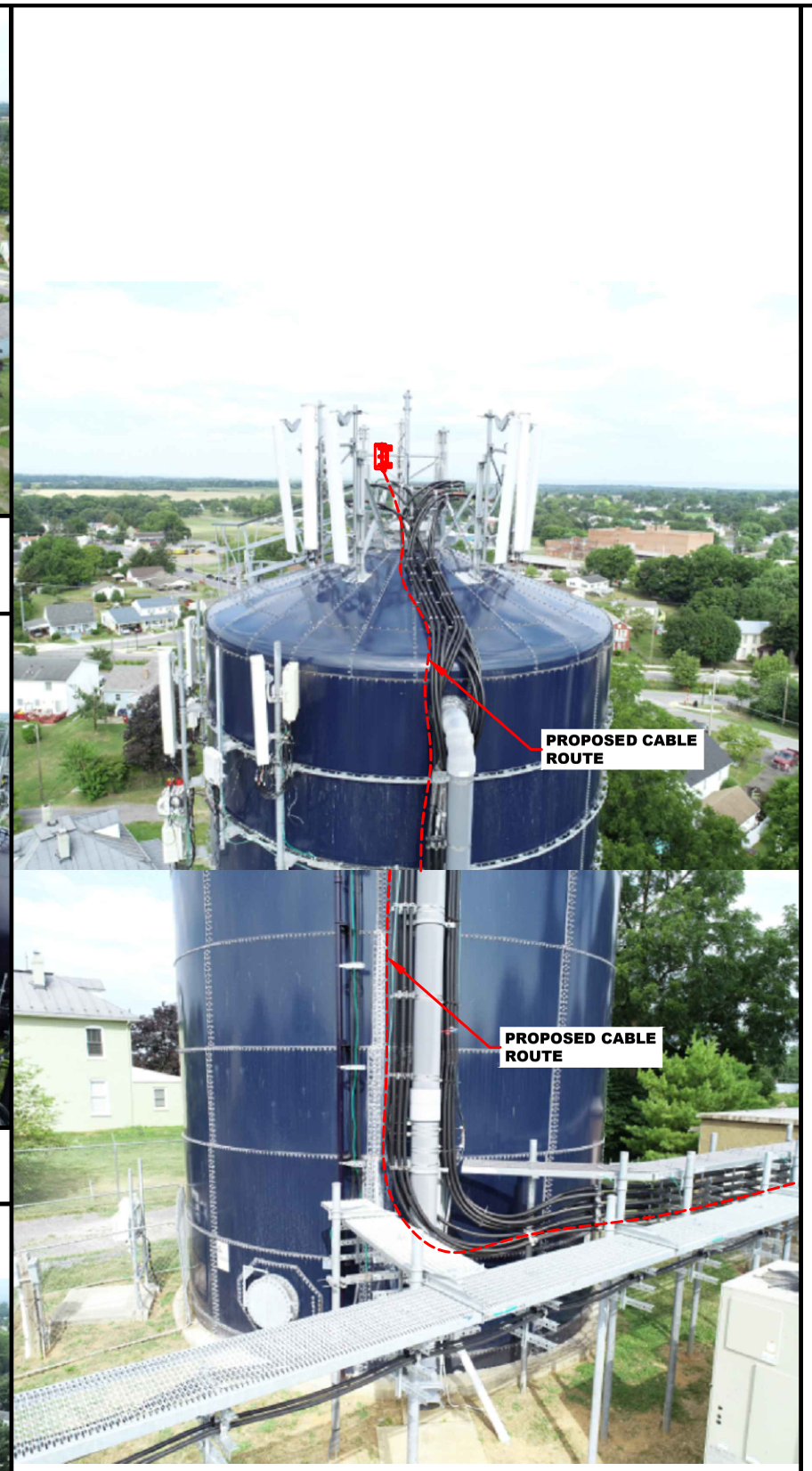
EXISTING ALPHA SECTION



EXISTING BETA SECTION

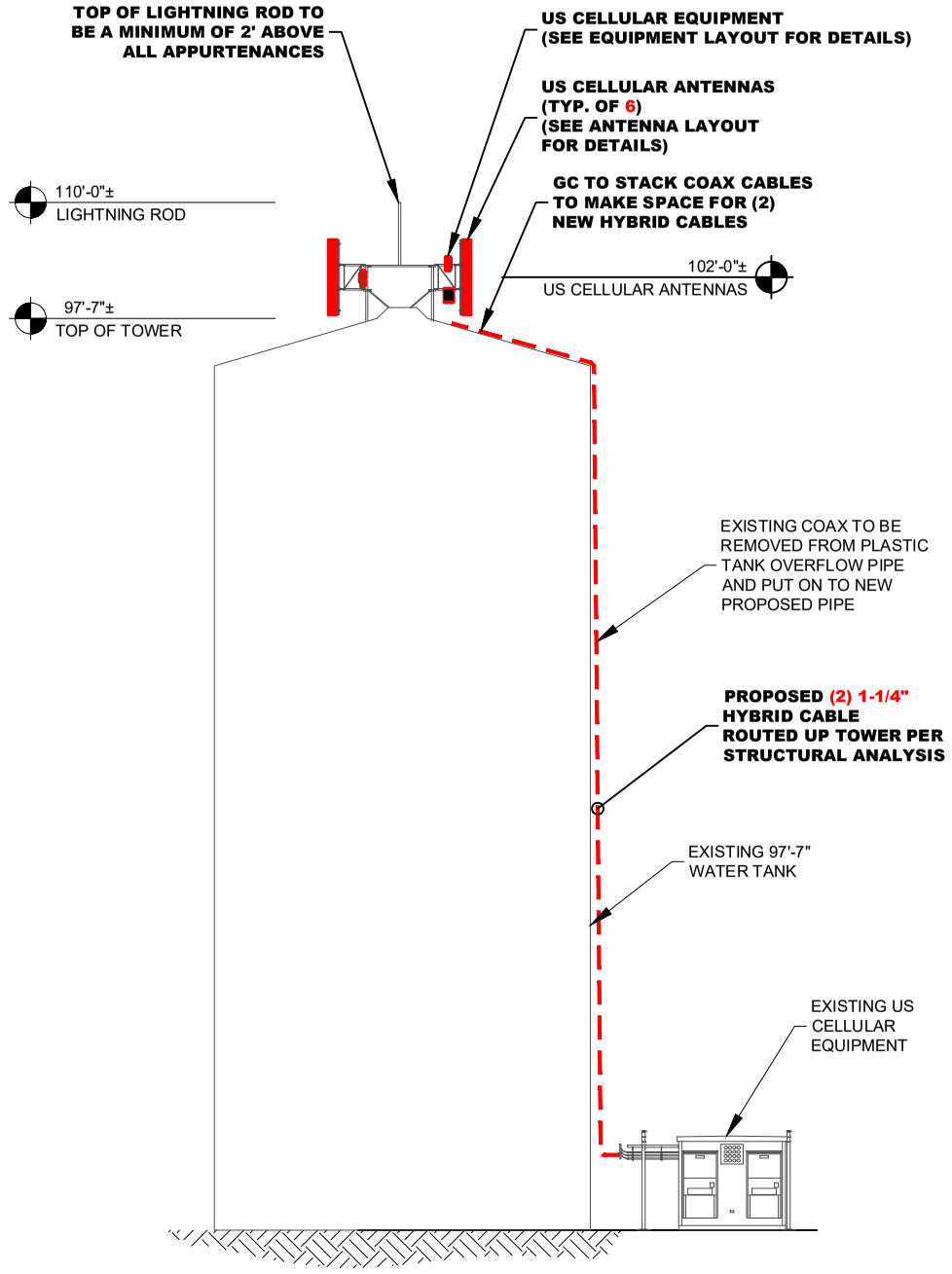


EXISTING GAMMA SECTION



TOWER ELEVATION

Approved 10/13/2021



PROPOSED TOWER ELEVATION

11"x17" SCALE: 1"=20'-0"
24"x36" SCALE: 1"=10'-0"

PROPOSED LTE PANEL
EXISTING CDMA PANEL

PROPOSED EQUIPMENT TO BE INSTALLED PRIOR TO EXISTING EQUIPMENT DECOMMISSION

RAPHAEL MOHAMED
REGISTERED
16602
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

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MNS PROJECT NO:	23347-AEC

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PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

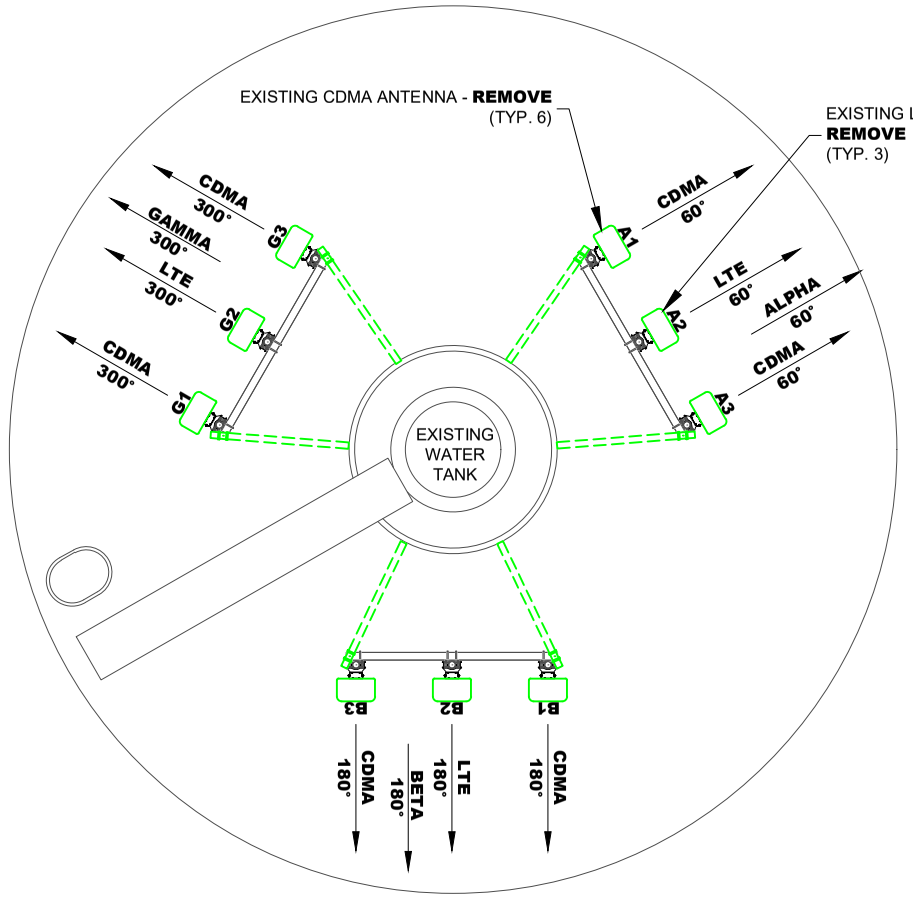
SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

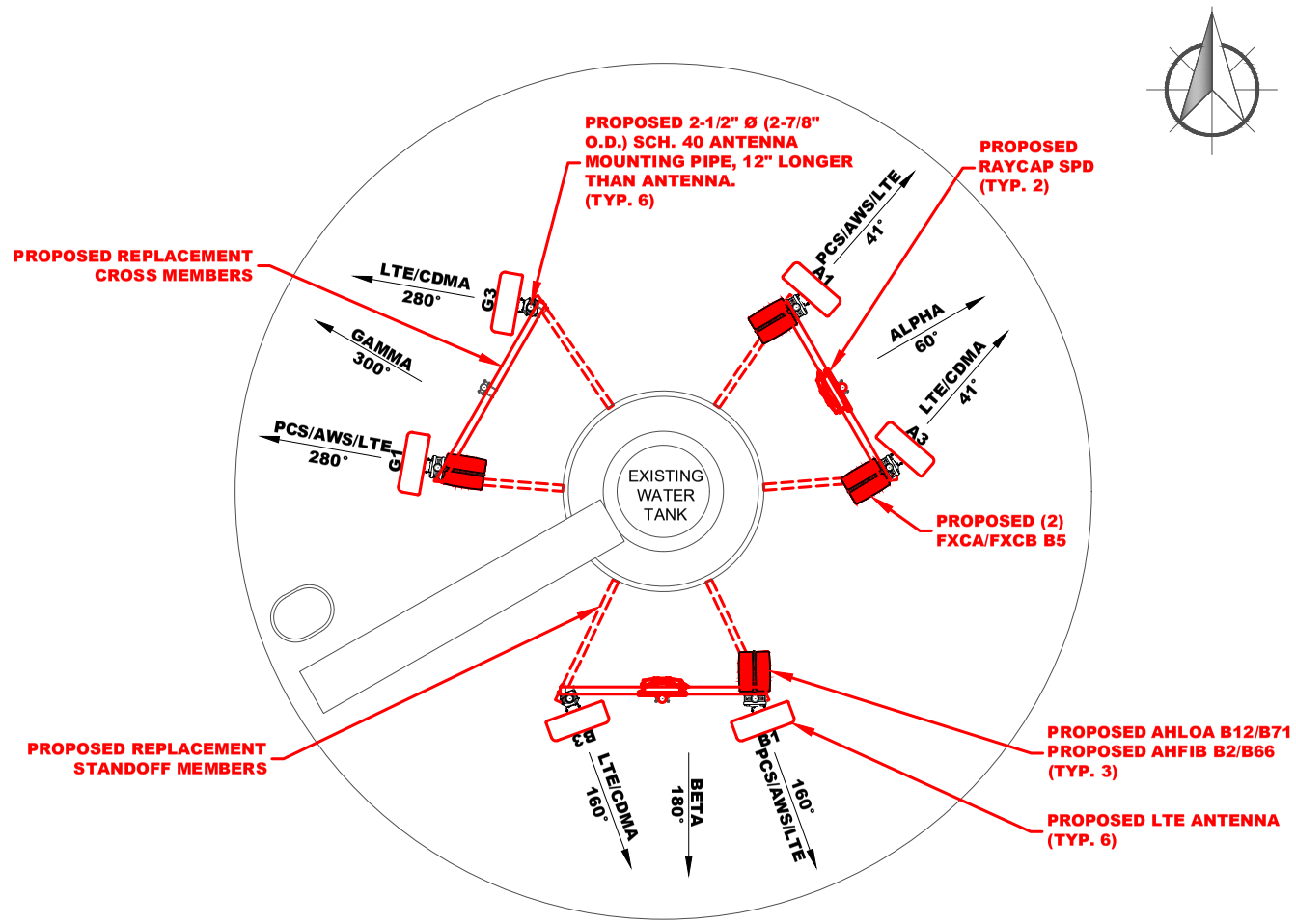
TOWER OWNER ID:
416429

SHEET TITLE
TOWER ELEVATION

SHEET NUMBER
C-5

PROPOSED EQUIPMENT
EXISTING EQUIPMENT
EXISTING TO BE REMOVED
EXISTING TO BE RELOCATED





EXISTING RF SCHEDULE

	ANTENNA POSITION	TECHNOLOGY	ANTENNA MODEL	ANTENNA QTY	RAD CENTER	AZIMUTH	SPD QTY	RADIO MODEL	RADIO QTY	DIPLEXER QTY	BIAS-T QTY	CABLE TYPE	CABLE QTY
ALPHA	A1	CDMA	ANTEL RWA-80017-E-DIN	1	102'	60°	-	-	-	-	-	1-5/8" COAX	1
	A2	LTE	KMS-AM-X-CW-18-65-00T-RET	1	102'	60°	-	-	-	-	-	1-5/8" COAX	2
	A3	CDMA	ANTEL RWA-80017-E-DIN	1	102'	60°	-	-	-	-	-	1-5/8" COAX	1
BETA	B1	CDMA	ANTEL RWA-80017-E-DIN	1	102'	180°	-	-	-	-	-	1-5/8" COAX	1
	B2	LTE	KMS-AM-X-CW-18-65-00T-RET	1	102'	180°	-	-	-	-	-	1-5/8" COAX	2
	B3	CDMA	ANTEL RWA-80017-E-DIN	1	102'	180°	-	-	-	-	-	1-5/8" COAX	1
GAMMA	G1	CDMA	ANTEL RWA-80017-E-DIN	1	102'	300°	-	-	-	-	-	1-5/8" COAX	1
	G2	LTE	KMS-AM-X-CW-18-65-00T-RET	1	102'	300°	-	-	-	-	-	1-5/8" COAX	2
	G3	CDMA	ANTEL RWA-80017-E-DIN	1	102'	300°	-	-	-	-	-	1-5/8" COAX	1
TOTALS				9			0		0	0	0		12

- ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH

0 5' 10'
1"=5'-0"

EXISTING ANTENNA LAYOUT
11"x17" SCALE: 1"=5'-0"
24"x36" SCALE: 1"=2'-6"

- ALL RRU MOUNTING BRACKETS TO BE SUPPLIED BY US CELLULAR
- SEE SHEET C-7 FOR RRU MOUNTING BRACKET DETAILS

- RRUS AND SURGE SUPPRESSION MOUNTED BELOW THE ANTENNA MOUNTS

FINAL RF SCHEDULE

	ANTENNA POSITION	TECHNOLOGY	ANTENNA MODEL	ANTENNA QTY	RAD CENTER	AZIMUTH	SPD QTY	B71/B12 RADIO MODEL	B71/B12 RADIO QTY	B2/B66 RADIO MODEL	B2/B662 RADIO QTY	B5 RADIO MODEL	B5 RADIO QTY	ELEC TILT LB,MB	MECH TILT	CABLE TYPE	CABLE QTY
ALPHA	A1	PCS/AWS/LTE	DENGYO OCT8-2LX2HX-BW65	1	102'	41°	1	AHLOA	1	AHFIB	1	-	-	2°, 2°	0°	1-1/4" HYBRID	1
	A2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	A3	LTE/CDMA	DENGYO OCT8-2LX2HX-BW65	1	102'	41°	1	-	-	-	-	FXCA/FXCB	2	-	-	1-1/4" HYBRID 1-5/8" COAX	1 2
BETA	B1	PCS/AWS/LTE	DENGYO OCT8-2LX2HX-BW65	1	102'	160°	SHARED	AHLOA	1	AHFIB	1	-	-	2°, 2°	0°	1-1/4" HYBRID	SHARED
	B2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	B3	LTE/CDMA	DENGYO OCT8-2LX2HX-BW65	1	102'	160°	SHARED	-	-	-	-	FXCA/FXCB	SHARED	-	-	1-1/4" HYBRID 1-5/8" COAX	SHARED 2
GAMMA	G1	PCS/AWS/LTE	DENGYO OCT8-2LX2HX-BW65	1	102'	280°	SHARED	AHLOA	1	AHFIB	1	-	-	2°, 2°	0°	1-1/4" HYBRID	SHARED
	G2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	G3	LTE/CDMA	DENGYO OCT8-2LX2HX-BW65	1	102'	280°	SHARED	-	-	-	-	FXCA/FXCB	SHARED	-	-	1-1/4" HYBRID 1-5/8" COAX	SHARED 2
TOTALS				6			2		3		3		2				8

- ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH
- CONTRACTOR MAY NEED ADDITIONAL 9'-0" LONG MAST PIPES FOR TEMPORARY RELOCATION OF LTE ANTENNAS

0 5' 10'
1"=5'-0"

FINAL ANTENNA LAYOUT
11"x17" SCALE: 1"=5'-0"
24"x36" SCALE: 1"=2'-6"

Approved 10/13/2021

RAPHAEL MOHAMED REGISTERED 16602 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

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PREPARED FOR:
uscellular

PREPARED BY:
MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
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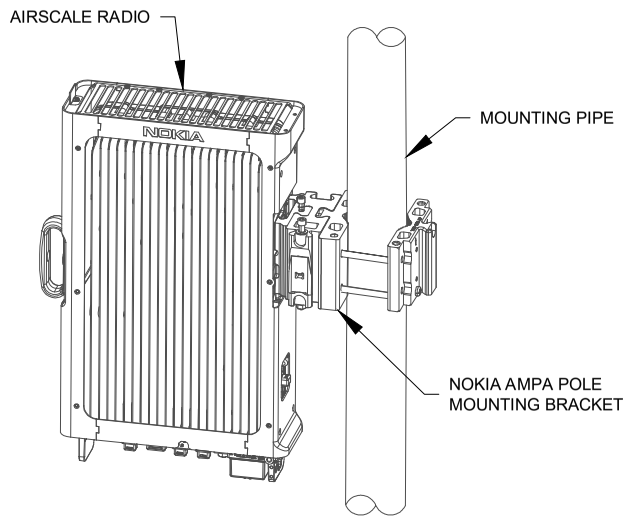
SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
ANTENNA LAYOUTS

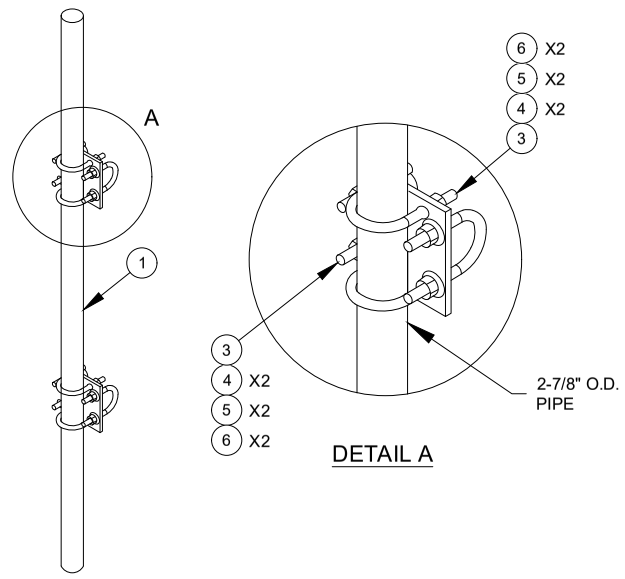
SHEET NUMBER
C-6



AIRSCALE RADIO ON BOOK MOUNT DETAIL

SCALE: N.T.S.

PARTS LIST					
ITEM	QTY	PART DESCRIPTION	LENGTH	UNIT WT.	NET WT.
1	1	2-7/8" O.D. X 108" SHC. 40 GALVANIZED PIPE	108 IN	53.00	53.00
2	2	CROSSOVER PLATE 2-3/8" X 2-7/8"		3.71	7.42
3	8	1/2" X 2 1/2" X 4-1/2" X 2" U-BOLT (HDG)		0.63	5.00
4	16	1/2" HDG USS FLATWASHER		0.03	0.55
5	16	1/2" HDG LOCKWASHER		0.01	0.22
6	16	1/2" HDG HEAVY 2H HEX NUT		0.07	1.15
				TOTAL WT.	72.34



NOTE:
ANTENNA MOUNTING PIPE MUST BE 12" LONGER THAN PROPOSED ANTENNA.

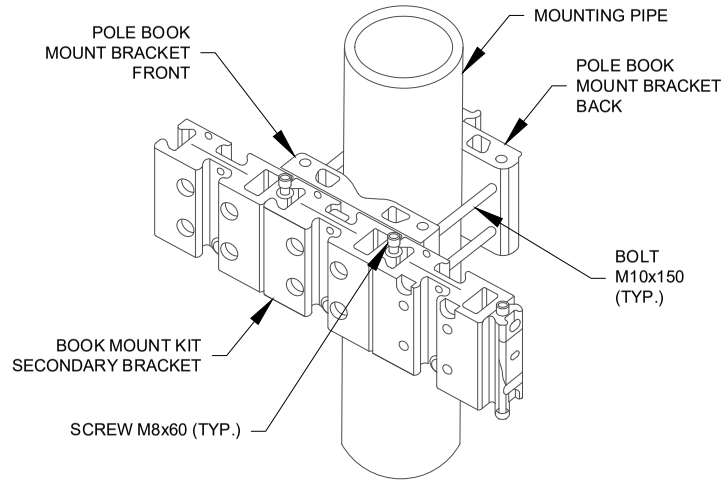
PIPE MOUNT KIT

SCALE: N.T.S.

MANUFACTURER: NOKIA
MODEL: 473879A

NOTE:
POLE MOUNTING KIT (AMPA) TO BE USED WITH AIRSCALE RADIOS.

CAN BE USED WITH PIPES FROM 1.2"± DIA. TO 4.7"±

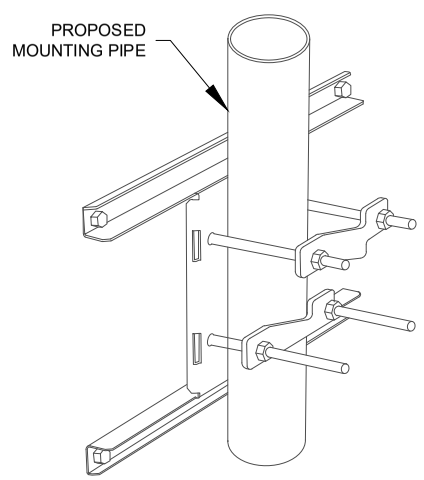


BOOK MOUNT POLE KIT DETAIL

SCALE: N.T.S.

MANUFACTURER: RAYCAP

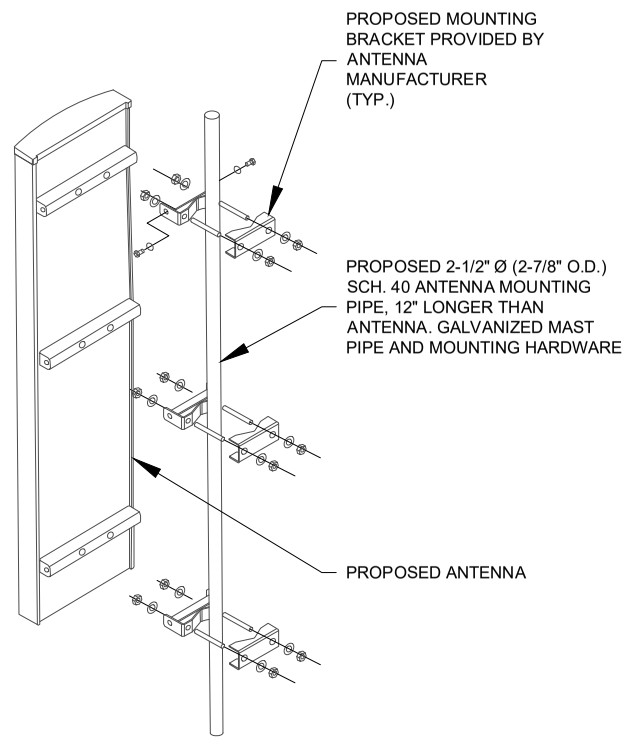
INCLUDED WITH RUSDC-6267-PF-48
SURGE PROTECTOR



NOTE:
MOUNTING BRACKET PROVIDED W/RAYCAP JUNCTION BOX SHALL BE USED TO MOUNT UNIT TO INTERIOR BUILDING WALL

RAYCAP - JUNCTION BOX MOUNTING BRACKET DETAIL

SCALE: N.T.S.



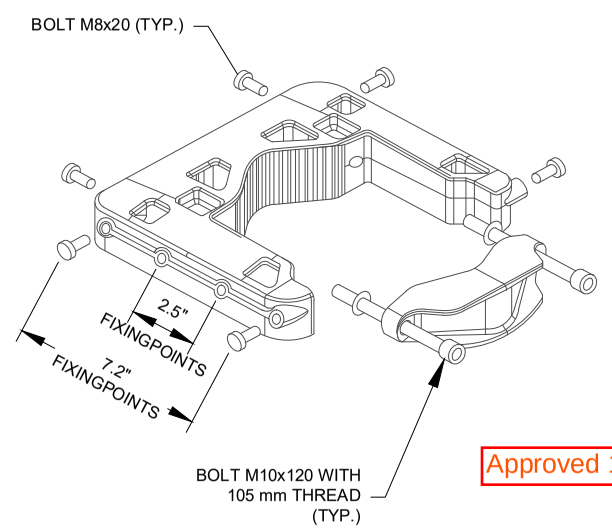
ANTENNA MOUNTING

SCALE: N.T.S.

MANUFACTURER: NOKIA
MODEL: 471649A

NOTE:
FLEXI POLE KIT (FPKA) TO BE USED WITH FXCA/B AND FMFA

CAN BE USED WITH PIPES FROM 2.4"± DIA TO 4.7"± MAX ALLOWABLE WEIGHT IS 352.7 LBS.



Approved 10/13/2021

FLEXI POLE KIT

SCALE: N.T.S.

RAPHAEL MOHAMED
REGISTERED
16602
STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER

10/13/2021

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WEST VIRGINIA NO. 16602

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DRAWN BY:	SL
CHECKED BY:	JFS
APPV'D BY:	RM
MNS PROJECT NO:	23347-AEC

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PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

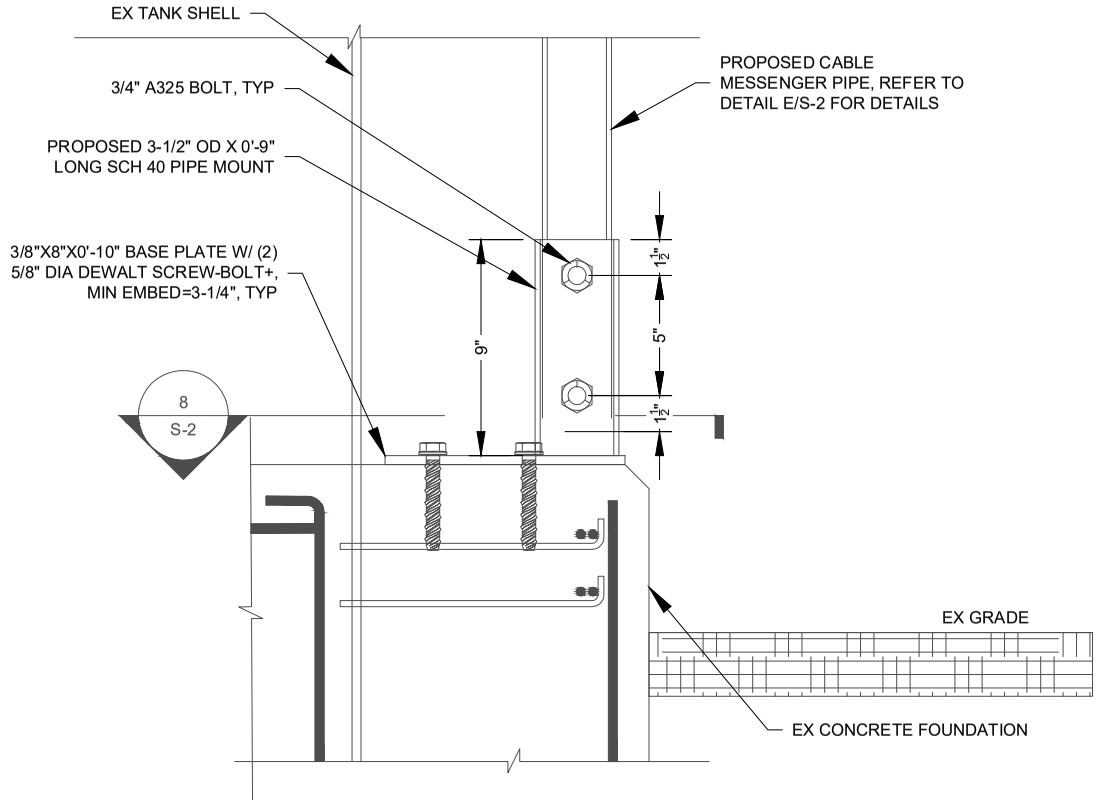
SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

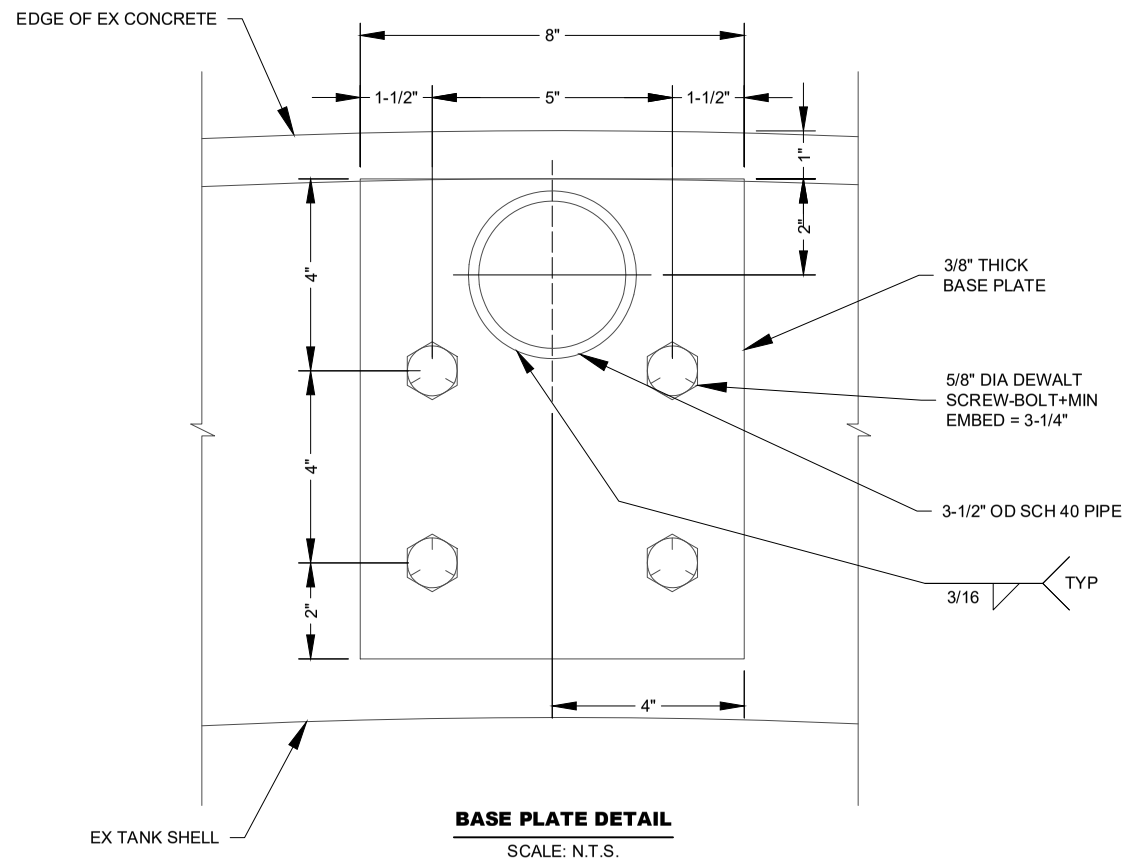
SHEET TITLE
EQUIPMENT MOUNTING DETAILS

SHEET NUMBER
C-7



MESSENGER ATTACHMENT AT FOUNDATION

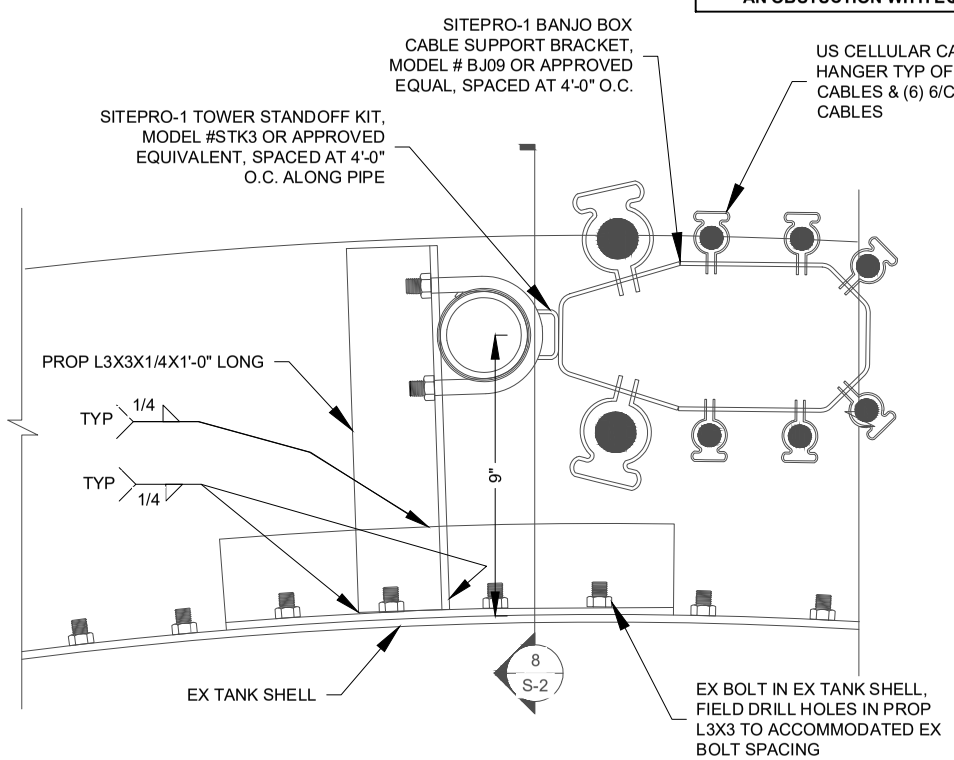
SCALE: N.T.S.



BASE PLATE DETAIL

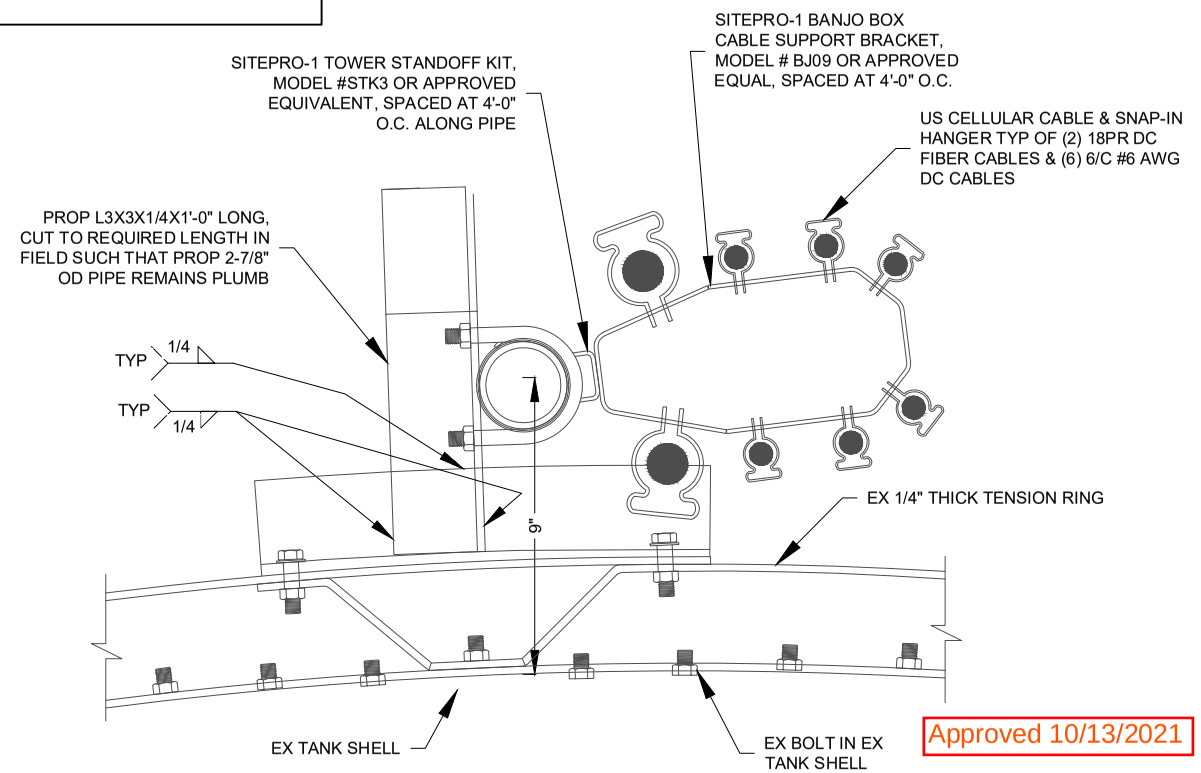
SCALE: N.T.S.

NOTE:
DETAILS BELOW SHOW MESSENGER PIPE INSTALLED ON LEFT SIDE OF OVERFLOW PIPE. GENERAL CONTRACTOR MAY INSTALL MESSENGER PIPE ON RIGHT SIDE OF OVERFLOW SHOULD THERE BE AN OBSTUCTION WITH EQUIPMENT ON LEFT SIDE.



TYP CABLING SUPPORT @ CYLINDRICAL TANK

SCALE: N.T.S.



Approved 10/13/2021

TYP CABLING SUPPORT @ CYLINDRICAL TANK

SCALE: N.T.S.

RAPHAEL MOHAMED REGISTERED 16602 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

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WEST VIRGINIA NO. 16602

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PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
EQUIPMENT MOUNTING DETAILS

SHEET NUMBER
C-8

DENGYO | Base Station Antennas

Type OCT8-2LX2HX-BW65

Frequency Range	617-894x2 1695-2400x2
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2° - 12°x4

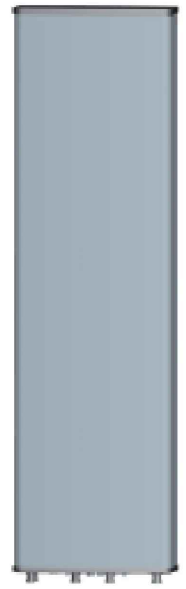
Base Station Antenna

8-ports 617-894 / 617-894 /1695-2400 /1695-2400 MHz 65°, 16 / 16 / 18 / 18 dBi, 2°-12° / 2°-12° / 2°-12° / 2 - 12 °Tilt Antenna With 4 Integrated RCUs.

AISG

Electrical Specifications

Frequency Range(MHz)		2x617-894			2x1695-2400		
		617-698	698-824	824-894	1695-1920	1920-2180	2300-2400
Polarization		±45°					
Horizontal 3dB Beamwidth(°)		70	63	60	66	63	58
Vertical 3dB Beamwidth(°)		10.4	9.1	8.0	5.5	5	4.3
Gain (dBi)		15.0	15.5	16.0	17.6	18.0	18.1
Electrical Downtilt		2°-12°			2°-12°		
Upper Sidelobe Suppression(dB)	First	≥16	≥16	≥16	≥16	≥16	≥16
Front-to-Back Ratio Total Power, ±30° (dB)		≥23	≥24	≥25	≥25	≥25	≥25
Cross polar ratio	Main direction(dB)	≥17	≥17	≥17	≥17	≥17	≥17
	±60° (dB)	≥7	≥7	≥7	≥7	≥7	≥7
Isolation ports		≥25 dB					
Isolation Frequency		≥30 dB					
VSWR		< 1.5					
Intermodulation IM3		< -150 dBc(2x43dBm carrier)					
Impedance		50 Ω					
Max. Power per Input (at 50°C ambient temperature)		500 W			300 W		
Lightning Protection		DC Ground					



Mechanical Specifications

Redome Material	Fiberglass
Connector Type and Location	4.3-10x8 ,Bottom IRCU In:1 x 8 pin male IRCU out:1 x 8 pin female
Dimensions,HxWxD(mm)/(inches)	2438 x 499 x 180 / 95.9 x 19.6 x 7.1
Packing Size(mm)/(inches)	2750 x 620 x 325 / 108.3 x 24.4 x 12.8
Weight ,w/o Mounting kit(kg)/(lbs)	47 / 103.4
Weight,with Mounting kit(kg)/(lbs)	53 / 116.6
Packing Weight(kg)/(lbs)	63 / 138.6
Max. Wind Velocity(mph)	150
Mounting hardware	¢ 50 mm ~ ¢ 115 mm
Operational Temperature(°C)	-40 to +65
Operational Humidity(%)	<95
Wind Load at 100mph (Frontal/lateral/Rearside(N))	1416/280/1027

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DENGYO | Base Station Antennas

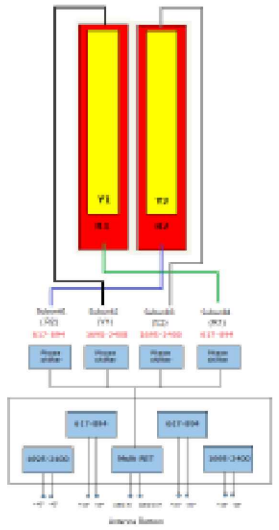
Type OCT8-2LX2HX-BW65

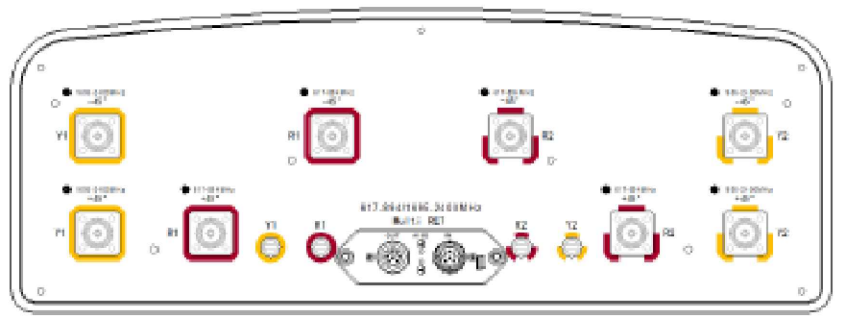
Frequency Range	617-894x2 1695-2400x2
Polarization	±45°
Half-Power Beam Width	65°
Electrical Downtilt	2° - 12°x4

Integrated RET Properties

Protocols		Compliant to AISG 2.0/3GPP
Input voltage range		+10~+30VDC(pin 6)
Power consumption		<2W(stand by);<13W(motor activated)
Connectors	AISG	2 x 8 pin connector acc. To IEC 60130-9 Acc.to AISG Daisy chain In:male Daisy chain out:female
	Antenna	Two motor shaft(Embedded motor)
Hardware Interface	AISG	RS485A/B(pin5/pin3);Power supply(pin6); DC return(pin7)Acc.to AISG
Adjustment time(full range)		40 sec(typically,depending on antenna)
Adjustment Cycles		≥10000
Torque Max		≥160mN.m
Lightning Protection Rating		IEC 61000-4-5 Current Pulse Profile,8/20 μs 10 Repetitions Min.@ 5kA IEC 61312-1 Annex B Current Pulse Profile, 10/350 μs,200 Repetitions Min. @ 0.6KA

COMPREHENSIVE TILT CONFIGURATION





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Approved 10/13/2021

RAPHAEL MOHAMED REGISTERED 16602 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

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DRAWN BY: SL
CHECKED BY: JFS
APPV'D BY: RM
MNS PROJECT NO: 23347-AEC

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PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

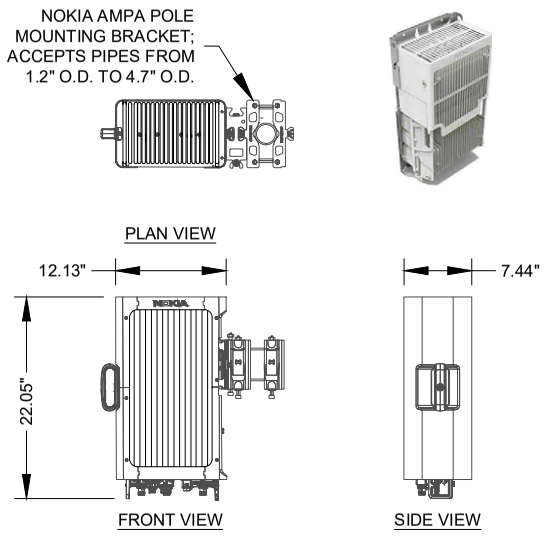
SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
ANTENNA SPECIFICATIONS

SHEET NUMBER
C-9

MANUFACTURER: NOKIA
MODEL: AIRSCALE DUAL RRH 4T4R B12/B71 240W (AHLOA)
DIMENSIONS: 22.05" x 12.13" x 7.44" (H x W x D)
WEIGHT: 83.8 LBS (WITHOUT SOLAR SHIELD)

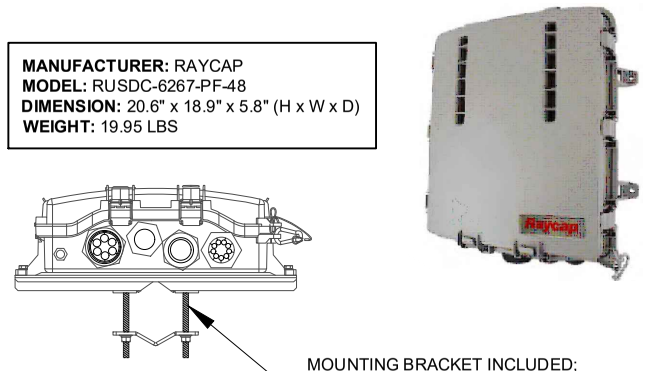


REMOTE RADIO UNITS MUST BE POWERED UP WITHIN 48 HOURS OF INSTALLATION

NOKIA RRU AHLOA DETAIL
SCALE: N.T.S.

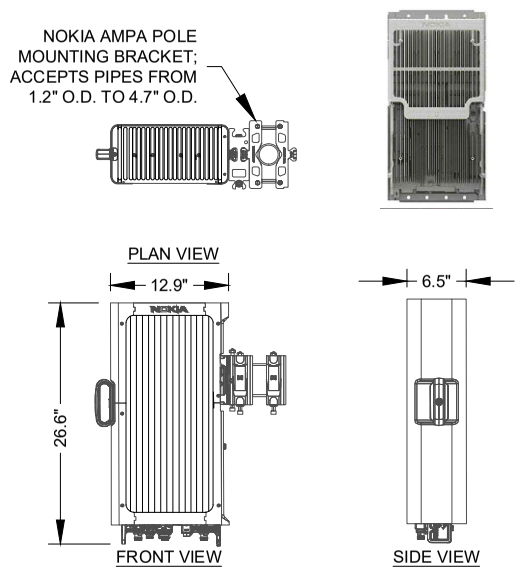
THIS SPACE INTENTIONALLY LEFT BLANK

MANUFACTURER: RAYCAP
MODEL: RUSDC-6267-PF-48
DIMENSION: 20.6" x 18.9" x 5.8" (H x W x D)
WEIGHT: 19.95 LBS



RAYCAP RUSDC-6267-PF-48 DETAIL
SCALE: N.T.S.

MANUFACTURER: NOKIA
MODEL: AIRSCALE DUAL RRH 4T4R B2/B66 320W (AHFIB)
DIMENSIONS: 26.6" x 12.9" x 6.5" (H x W x D)
WEIGHT: 66.1 LBS



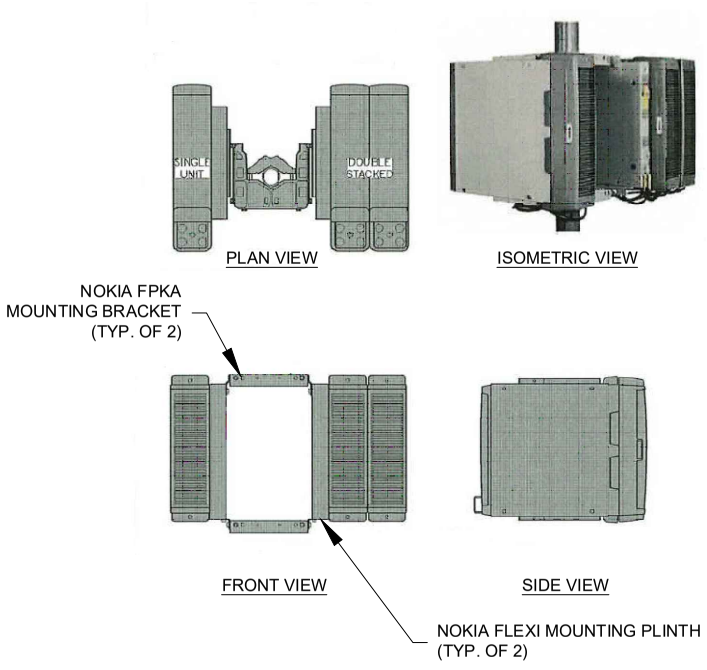
REMOTE RADIO UNITS MUST BE POWERED UP WITHIN 48 HOURS OF INSTALLATION

NOKIA RRU AHFIB DETAIL
SCALE: N.T.S.

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Approved 10/13/2021

MANUFACTURER: NOKIA
MODEL: FXCA/FXCB
DIMENSIONS: 5.2" x 19.4" x22.1" (H x W x D)
WEIGHT: 55.1 LBS



FXCA/FXCB SPECIFICATIONS
SCALE: N.T.S.

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MNS PROJECT NO:	23347-AEC

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PREPARED FOR:
uscellular

PREPARED BY:
MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
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SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
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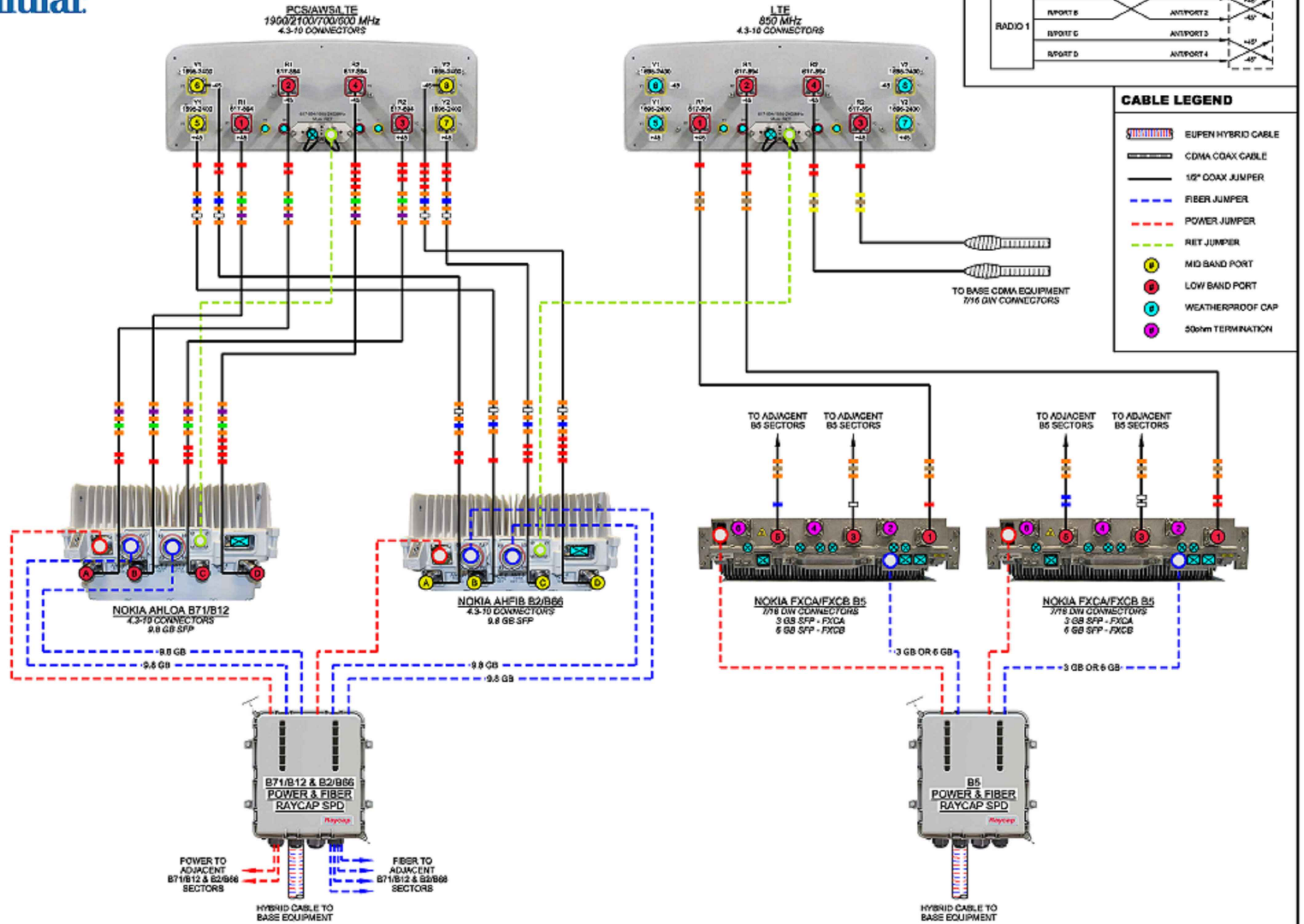
SHEET TITLE
REMOTE RADIO SPECIFICATIONS

SHEET NUMBER
C-10

U.S. Cellular

NSN// B71/B12 / B2/B66 / B5

PER SECTOR CONFIGURATION



PLUMBING DIAGRAM: DX210F-CDMA

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DATE CREATED: 05/05/2020

NOTES:

1. ALL JUMPERS BETWEEN RADIO UNITS & ANTENNAS MUST BE THE SAME LENGTH.
2. CONTRACTOR TO INSTALL WEATHERPROOF CAP ON ALL UN-USED PORTS.

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TOWER OWNER ID:
416429

SHEET TITLE
PLUMBING DIAGRAM

SHEET NUMBER
C-11

Approved 10/13/2021

EUPEN CABLE LENGTH	
EXISTING HYBRID CABLE QUANTITY	0
PROPOSED HYBRID CABLE QUANTITY	2
LENGTH OF BREAKOUT CABLES	15'
LENGTH ALONG ICE BRIDGE	60'
LENGTH FROM T.O.C. TO TOWER TOP RAYCAP SPD	110'
TOTAL LENGTH OF HYBRID CABLE	185'
ROUNDED LENGTH**	200'

* 410' MAX = TYPICAL HYBRID CABLE
* 550' MAX = LOW INDUCTANCE HYBRID CABLE
** CABLE LENGTH TO BE ROUNDED UP TO NEAREST 50' LENGTH

RET CABLE INFORMATION			
REMOTE RADIO TO ANTENNA			
	QUANTITY	LENGTH	LENGTH "METERS"
ALPHA SECTOR	2	32.80 Ft	10 m
BETA SECTOR	2	32.80 Ft	10 m
GAMMA SECTOR	2	32.80 Ft	10 m

* STANDARD RET CABLE LENGTH OF 10 METERS:
RF APPROVAL REQUIRED FOR ADDITIONAL RET CABLE LENGTH

NOTE:
1. CABLE LENGTHS AND QUANTITIES ARE FOR LTE INSTALLATION ONLY, CONTRACTOR TO PROVIDE AND DETERMINE QUANTITY AND LENGTH OF ANY ADDITIONAL JUMPERS REQUIRED.

FIBER JUMPER CABLE INFORMATION			
RAYCAP SPD TO REMOTE RADIO (B71/B12) -10GB			
	QUANTITY	LENGTH	
ALPHA SECTOR	2	19.70 Ft	5 m
BETA SECTOR	2	19.70 Ft	5 m
GAMMA SECTOR	2	19.70 Ft	5 m
RAYCAP SPD TO REMOTE RADIO (B2/B66) -10 GB			
	QUANTITY	LENGTH	
ALPHA SECTOR	2	19.70 Ft	5 m
BETA SECTOR	2	19.70 Ft	5 m
GAMMA SECTOR	2	19.70 Ft	5 m
RAYCAP SPD TO REMOTE RADIO (B5) -3 GB			
	QUANTITY	LENGTH	
ALPHA SECTOR	2	19.70 Ft	5 m
BETA SECTOR	2	19.70 Ft	5 m
GAMMA SECTOR	2	19.70 Ft	5 m

ALL SECTORS MUST HAVE THE SAME JUMPER LENGTHS
* PREFERRED JUMPER LENGTH OF 5m (16.40')
* MAXIMUM JUMPER LENGTH OF 6m (19.70')

COAX JUMPER CABLE INFORMATION		
REMOTE RADIO TO ANTENNA (B71/B12)		
	QUANTITY	LENGTH
ALPHA SECTOR	4	15 FT *
BETA SECTOR	4	15 FT *
GAMMA SECTOR	4	15 FT *
REMOTE RADIO TO ANTENNA (B2/B66)		
	QUANTITY	LENGTH
ALPHA SECTOR	4	15 FT *
BETA SECTOR	4	15 FT *
GAMMA SECTOR	4	15 FT *
REMOTE RADIO TO ANTENNA (B5)		
	QUANTITY	LENGTH
ALPHA SECTOR	2	25 FT *
BETA SECTOR	2	25 FT *
GAMMA SECTOR	2	25 FT *

ALL SECTORS MUST HAVE THE SAME JUMPER LENGTHS
* APPROVED JUMPER LENGTH 25 FT.
* U.S. CELLULAR PRE-ORDERED JUMPER LENGTHS.

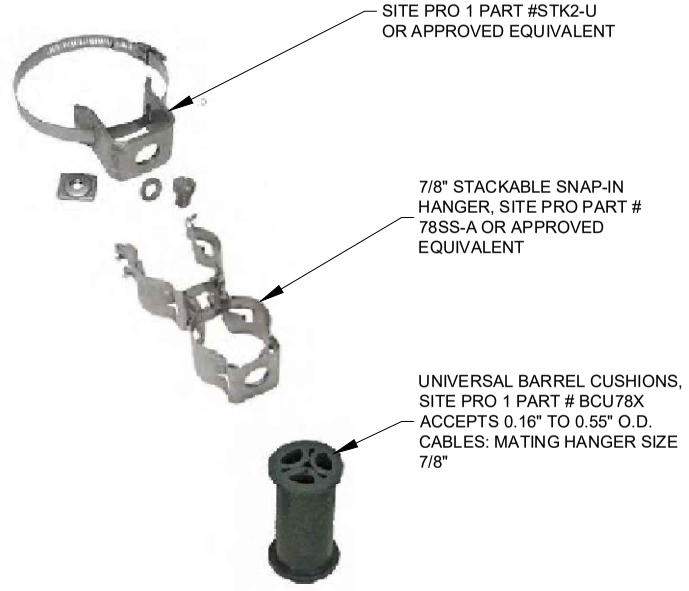
CABLE LENGTHS

Approved 10/13/2021

MANUFACTURER: SITE PRO
MODEL: STL2-U
UNIVERSAL TOWER STANDOFF KIT
FITS 1-1/2" DIA. TO 3" DIA. ROUND MEMBERS

MODEL: 78SS-A
7/8" STACKABLE SNAP-IN HANGER

MODEL: BCU78X
UNIVERSAL BARREL CUSHION
ACCEPTS 0.16" TO 0.55" O.D. CABLES
7/8" MATING HANGER



JUMPER ATTACHMENT

MANUFACTURER: EUPEN
MODEL: EUCAHYBRID 114-12AWG6 (HYBRID)
MINIMUM BENDING RADIUS: 360mm (14")
MAXIMUM PULLING STRENGTH: 150 Dan
MAXIMUM HANGER SPACING: 1.0m
APPROX. WEIGHT: 2300 kg/km (1.55 LB/FT)

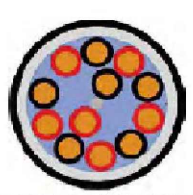
1-1/4" HYBRID FIBER OPTIC CABLE WITH 48V ENERGY FEEDER IN CORRUGATED ALUMINUM SHIELDING UP UV RESISTANT PE JACKET

MAXIMUM CABLE LENGTH OF 410 FT

MANUFACTURER: EUPEN
MODEL: EUCAPOWER 114-12AWG6 (POWER)
MINIMUM BENDING RADIUS: 360mm (14")
MAXIMUM PULLING STRENGTH: 150 Dan
MAXIMUM HANGER SPACING: 1.0m
APPROX. WEIGHT: 2300 kg/km (1.55 LB/FT)

1-1/4" CABLE WITH 48V ENERGY FEEDER IN CORRUGATED ALUMINUM SHIELDING WITH UV RESISTANT PE JACKET

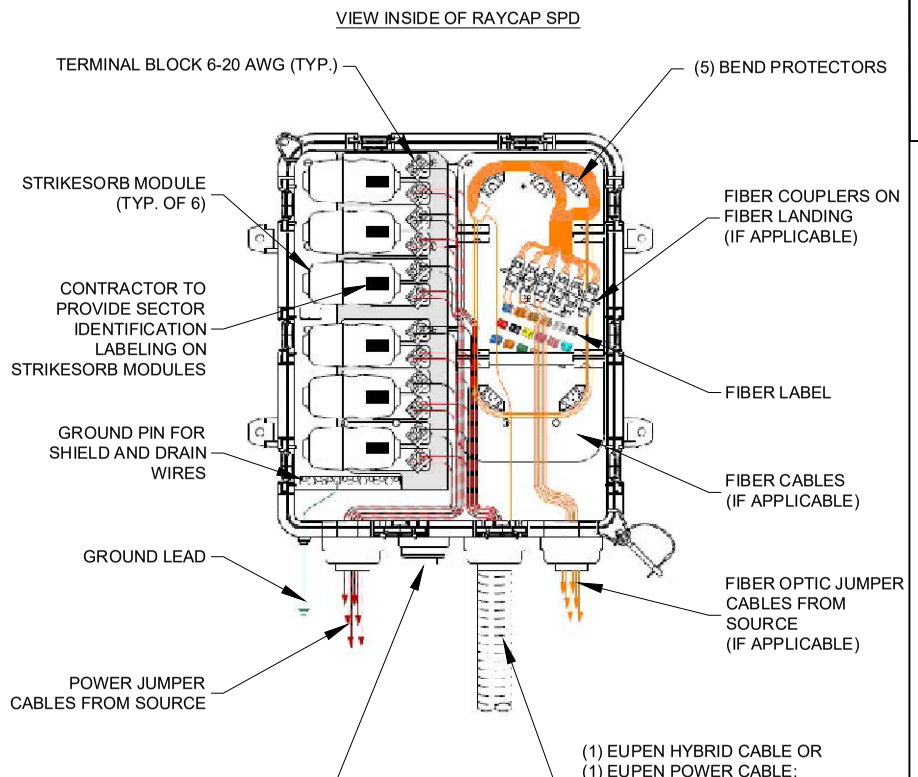

HYBRID CABLE CROSS SECTION


POWER CABLE CROSS SECTION


HYBRID CABLE ISOMETRIC


POWER CABLE ISOMETRIC

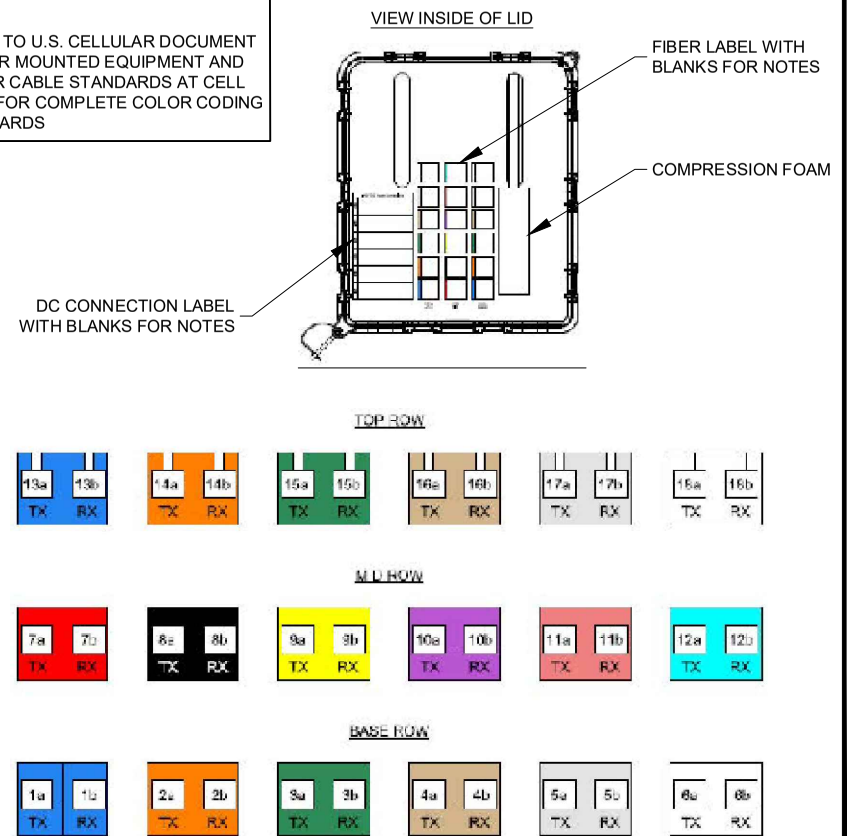
EUPEN HYBRID AND POWER CABLES



RAYCAP SURGE PROTECTION DEVICE (SPD) CABLING

NOTE:

REFER TO U.S. CELLULAR DOCUMENT "TOWER MOUNTED EQUIPMENT AND TOWER CABLE STANDARDS AT CELL SITES FOR COMPLETE COLOR CODING STANDARDS



FIBER LABEL

RAPHAEL MOHAMED REGISTERED 16602 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
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7/30/2021	CONSTRUCTION	2	RM
9/21/2021	CONSTRUCTION	3	RM
10/13/2021	CONSTRUCTION	4	RM

DRAWN BY: SL
CHECKED BY: JFS
APPV'D BY: RM
MNS PROJECT NO: 23347-AEC

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PREPARED FOR:
uscellular

PREPARED BY:
MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

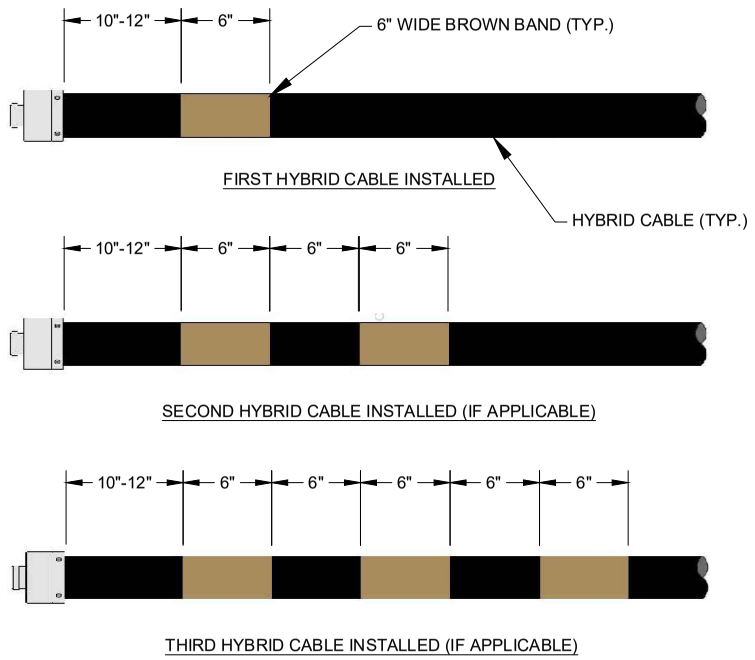
SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
CABLE DETAILS

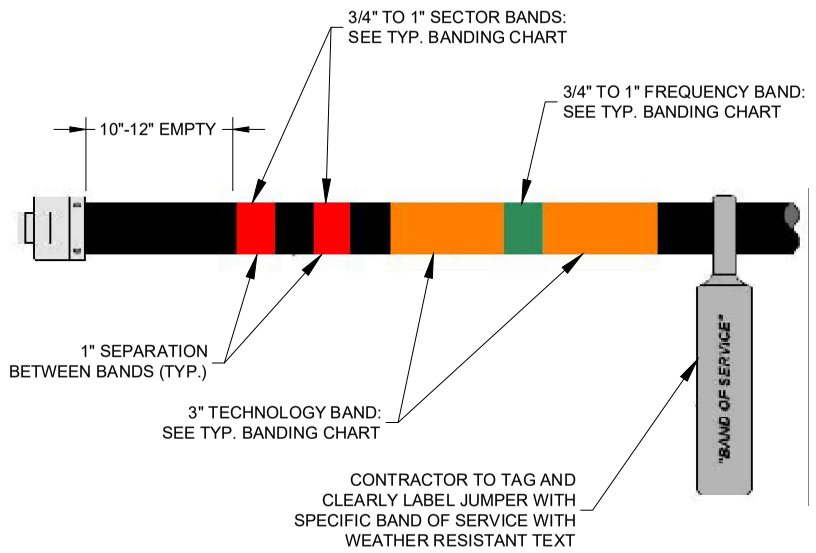
SHEET NUMBER
C-12



NOTES:

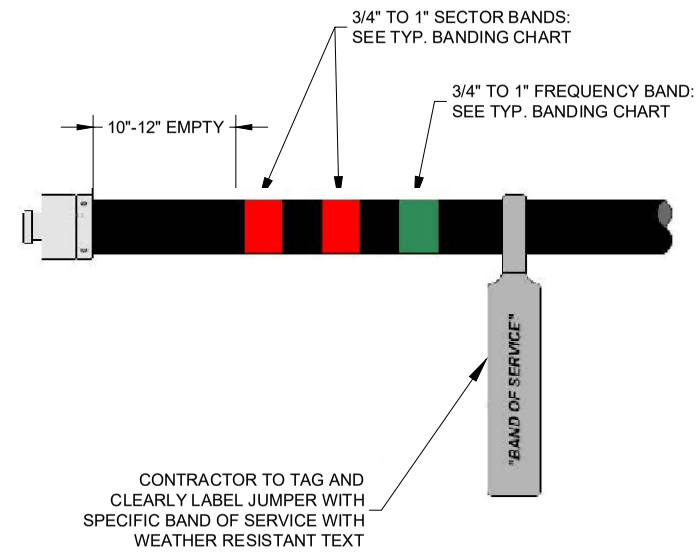
1. AT THE TOP OF THE TOWER/BUILDING/WATER TOWER AND AT THE ENTRY POINT OF THE GROUND LEVEL JUNCTION BOX, HYBRID CABLES MUST BE BANDED IN ACCORDANCE TO THE ILLUSTRATION ABOVE.
2. REFER TO THE LATEST EDITION OF THE U.S. CELLULAR STANDARD: STD72 TO VERIFY CURRENT COLOR CODING

TYP. HYBRID COLOR CODE

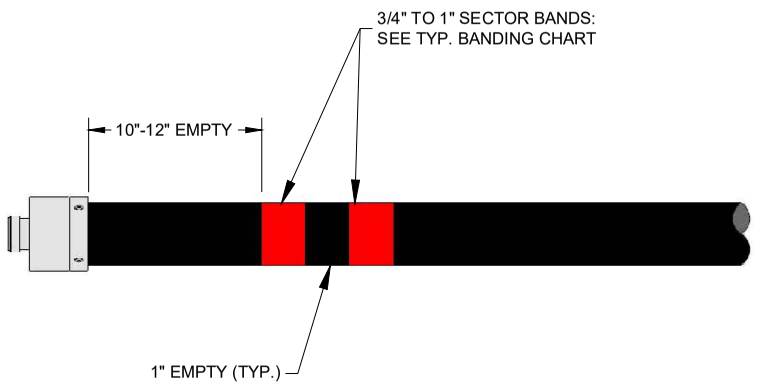


TYP. COAX JUMPER BANDING

Approved 10/13/2021



TYP. POWER JUMPER BANDING



RET SECTOR BAND			
SECTOR	**ASSIGNED COLOR**	**LINE 1**	**LINE 2**
ALPHA	RED	(1) RED BAND	(2) RED BANDS
BETA	WHITE	(1) WHITE BAND	(2) WHITE BANDS
GAMMA	BLUE	(1) BLUE BAND	(2) BLUE BANDS

TYP. RET CABLE BANDING

SECTOR BAND (MOST COMMON CASE: SINGLE TECHNOLOGY WITHIN THE SECTOR)					
SECTOR	ASSIGNED COLOR	LINE 1	LINE 2	LINE 3	LINE 4
ALPHA	RED	(1) RED BAND	(2) RED BANDS	(3) RED BANDS	(4) RED BANDS
BETA	WHITE	(1) WHITE BAND	(2) WHITE BANDS	(3) WHITE BANDS	(4) WHITE BANDS
GAMMA	BLUE	(1) BLUE BAND	(2) BLUE BANDS	(3) BLUE BANDS	(4) BLUE BANDS
DELTA (IF APPLICABLE)	GREEN	(1) GREEN BAND	(2) GREEN BANDS	(3) GREEN BANDS	(4) GREEN BANDS
EPSILON (IF APPLICABLE)	VIOLET	(1) VIOLET BAND	(2) VIOLET BANDS	(3) VIOLET BANDS	(4) VIOLET BANDS
ZETA (IF APPLICABLE)	BROWN	(1) BROWN BAND	(2) BROWN BANDS	(3) BROWN BANDS	(4) BROWN BANDS

SECTOR BAND (EXCEPTION CASE: ALPHA SECTOR CDMA ON 1 & 4, LTE ON 2 & 3)					
SECTOR	ASSIGNED COLOR	LINE 1 (CDMA)	LINE 2 (LTE)	LINE 3 (LTE)	LINE 4 (CDMA)
ALPHA	RED	(1) RED BAND	(1) RED BAND	(2) RED BANDS	(2) RED BANDS

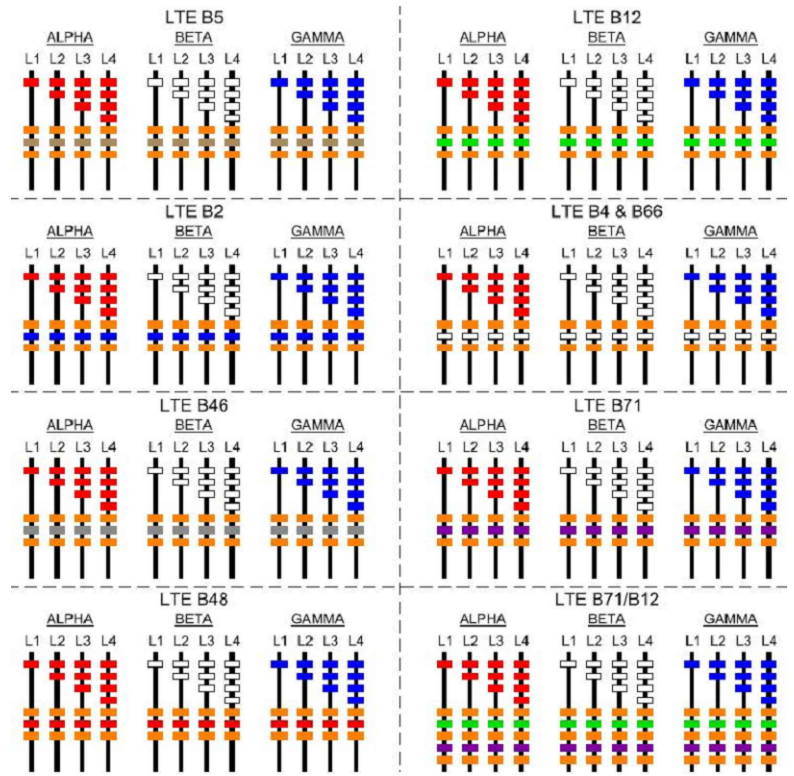
TECHNOLOGY BAND	
TECHNOLOGY	BANDING
CDMA	YELLOW
GSM	VIOLET
LTE	ORANGE

FREQUENCY BAND		
FREQUENCY	BAND	BANDING
600	B71	VIOLET
700	B12	GREEN
800/850	B5	BROWN
1900	B2	BLUE
2100	B4 & B66	WHITE
3500	B48 - CBRS	RED
5100	B46 - LAA	GREY

NOTE:

1. REFER TO LATEST EDITION OF U.S. CELLULAR STANDARD: STD72 TO VERIFY CURRENT COLOR CODING

TYP. BANDING CHART



TYP. COAX COLOR CODE STANDARD

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DRAWN BY:	SL
CHECKED BY:	JFS
APPV'D BY:	RM
MNS PROJECT NO:	23347-AEC

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PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

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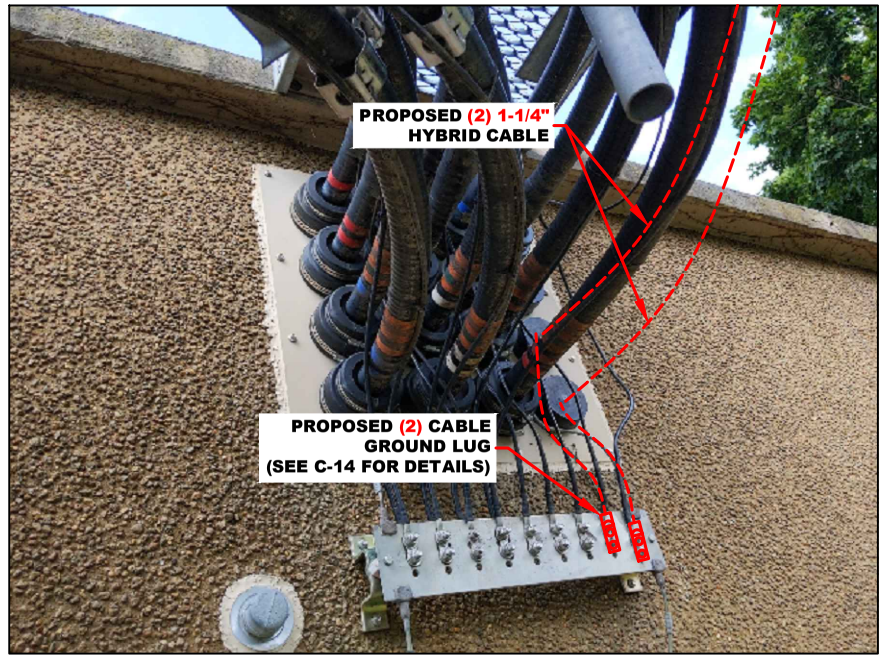
SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

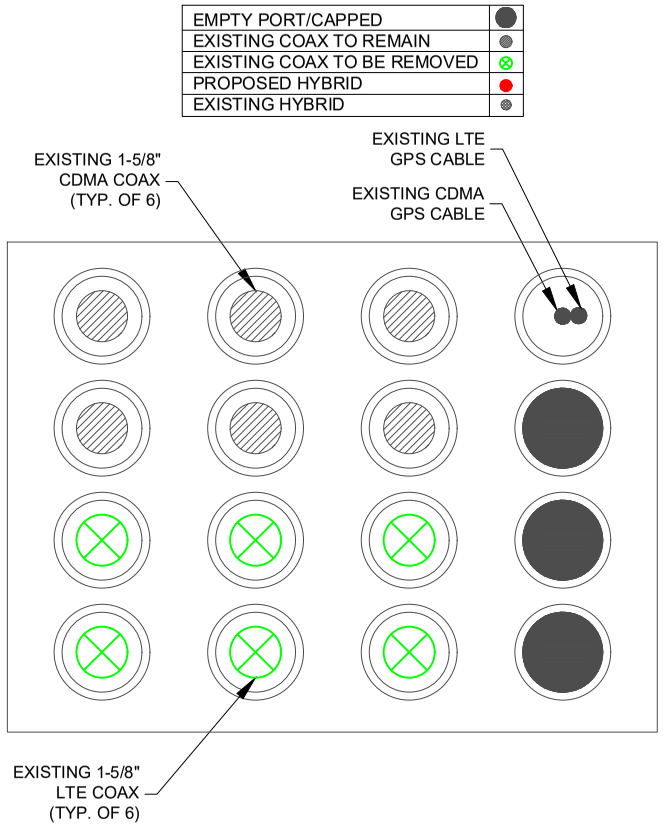
SHEET TITLE
CABLE BANDING DETAILS

SHEET NUMBER
C-13



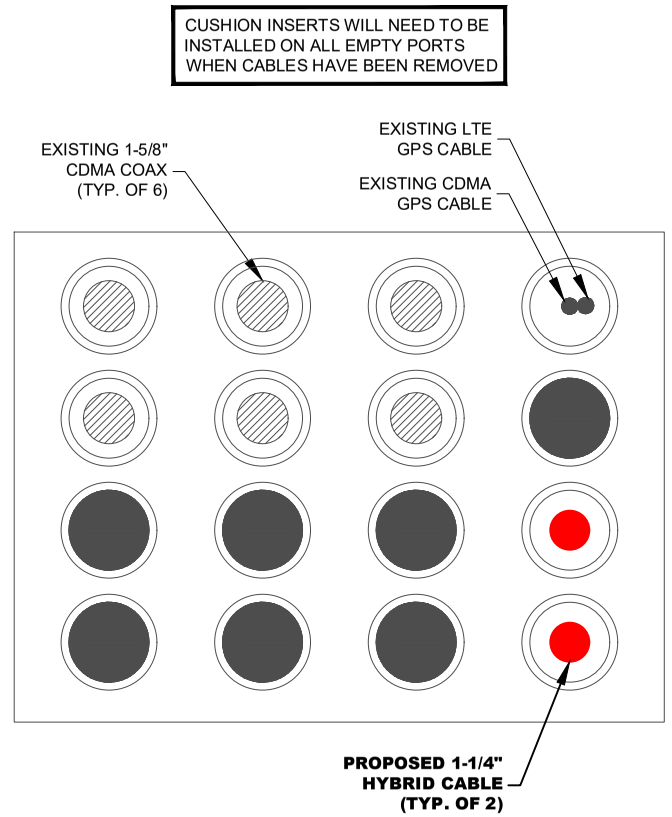
EXISTING HATCH PLATE PHOTO

SCALE: N.T.S.



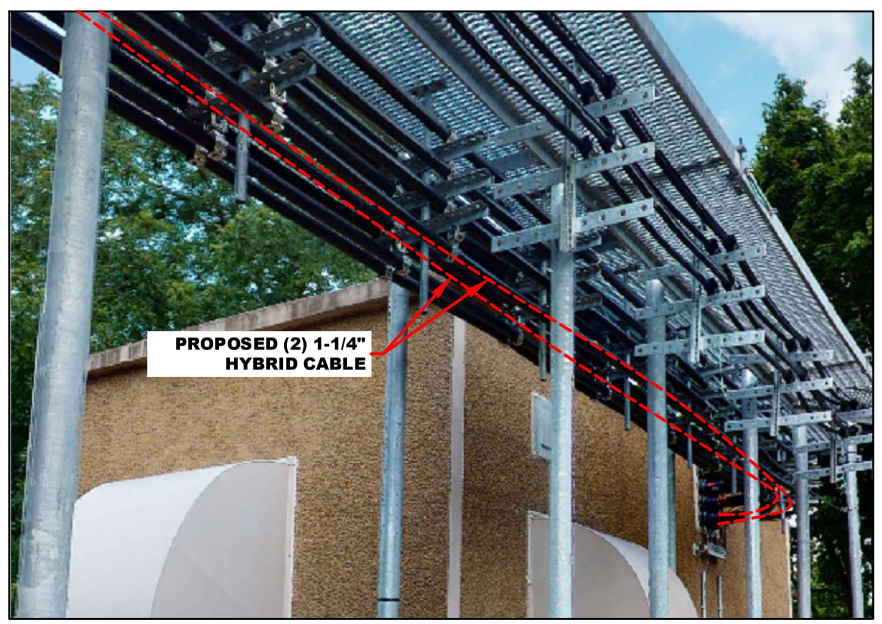
EXISTING HATCH PLATE LAYOUT

SCALE: N.T.S.



PROPOSED HATCH PLATE LAYOUT

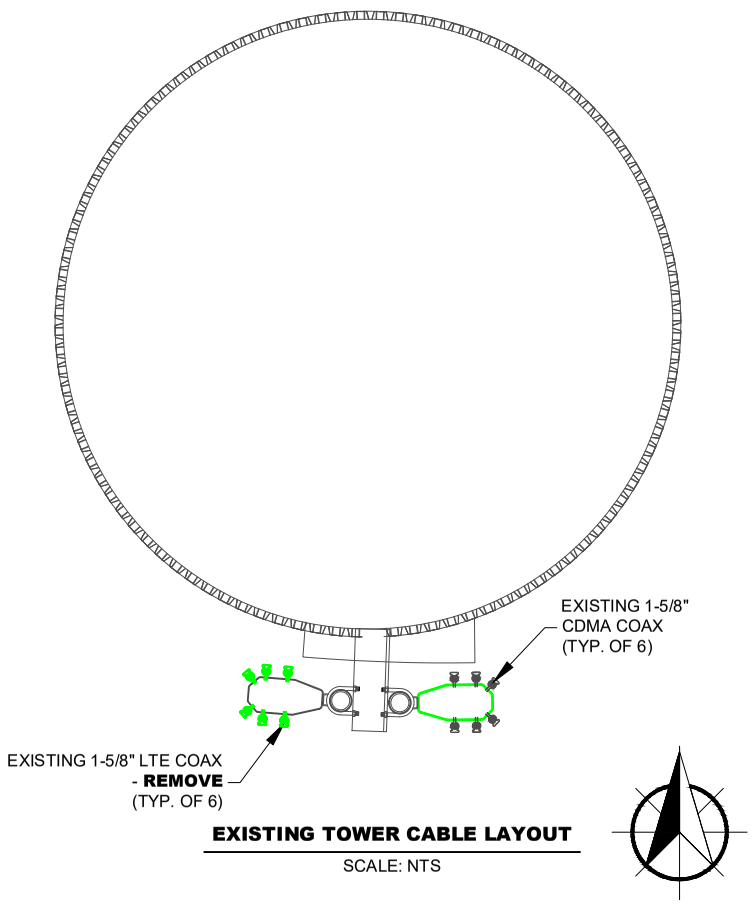
SCALE: N.T.S.



Approved 10/13/2021

PROPOSED ICE BRIDGE ELEVATION PHOTO

SCALE: N.N.T.S.

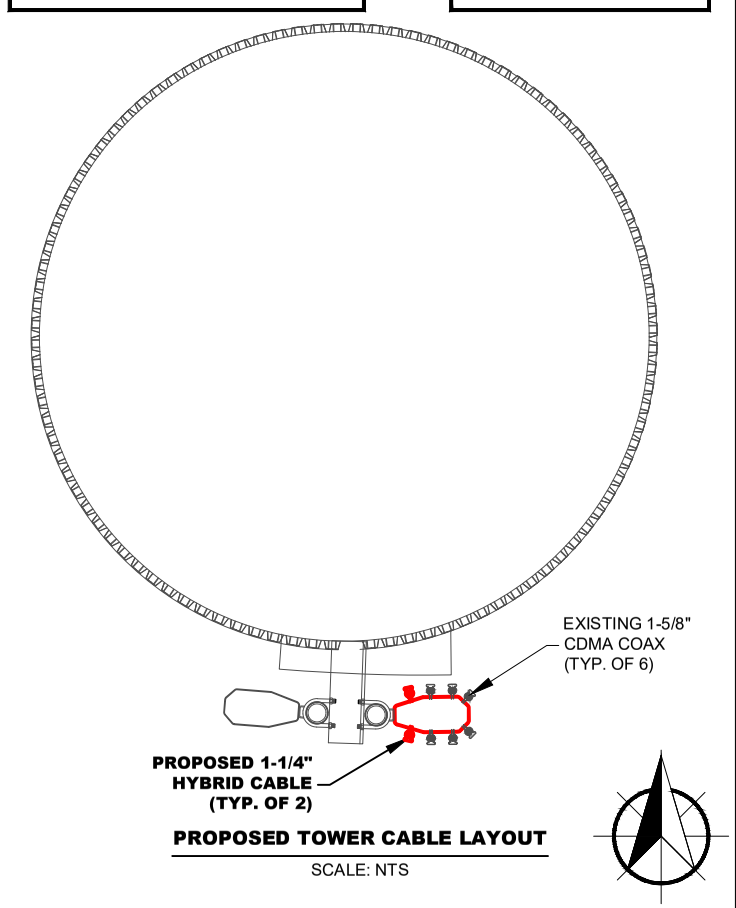


EXISTING TOWER CABLE LAYOUT

SCALE: NTS

GC TO STACK COAX CABLES TO MAKE SPACE FOR 2 HYBRID CABLES, HYBRID CABLES CAN NOT BE DOUBLE STACKED.

NO STACKING OF HYBRID CABLES PERMITTED UNDER ANY CIRCUMSTANCES



PROPOSED TOWER CABLE LAYOUT

SCALE: NTS

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uscellular

PREPARED BY:

MasTec Network Solutions

507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

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TOWER OWNER ID:

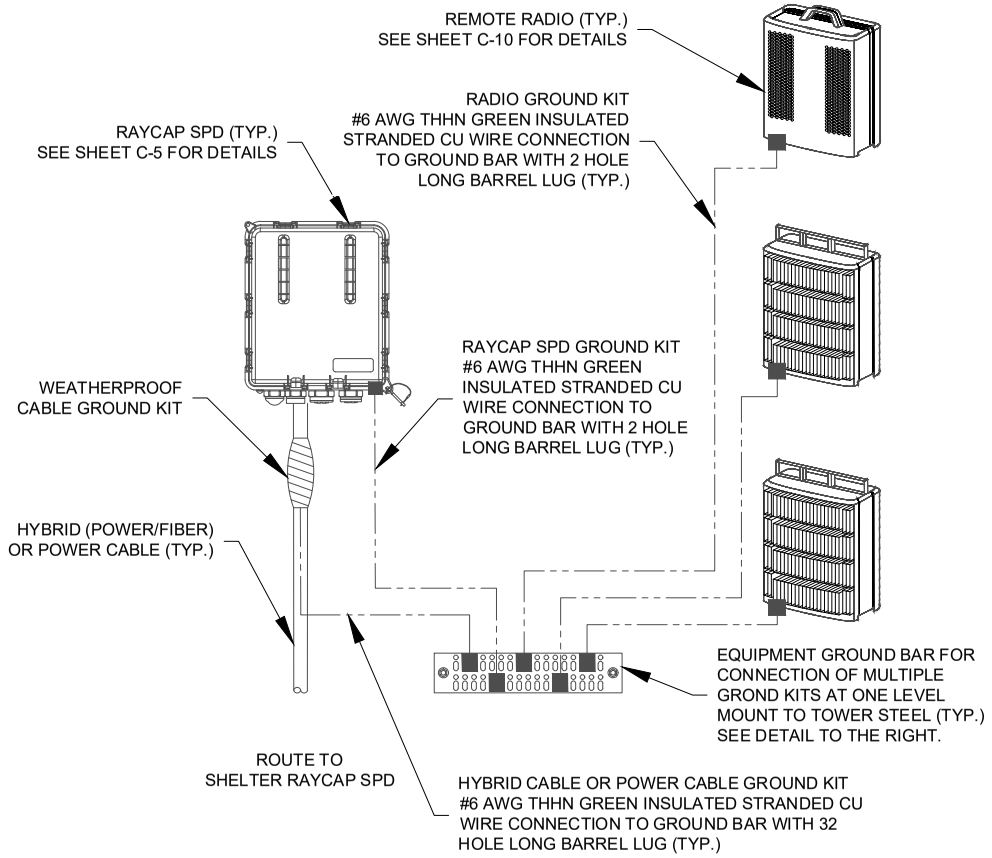
416429

SHEET TITLE

COAX AND HATCH PLATE LAYOUTS

SHEET NUMBER

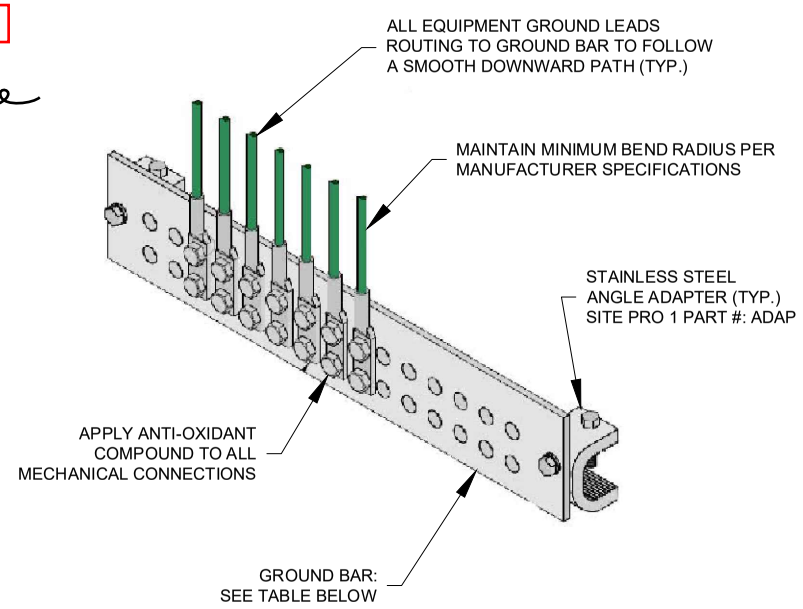
C-14



TYPICAL UPPER EQUIPMENT GROUNDING

N.T.S. (NOT TO SCALE)

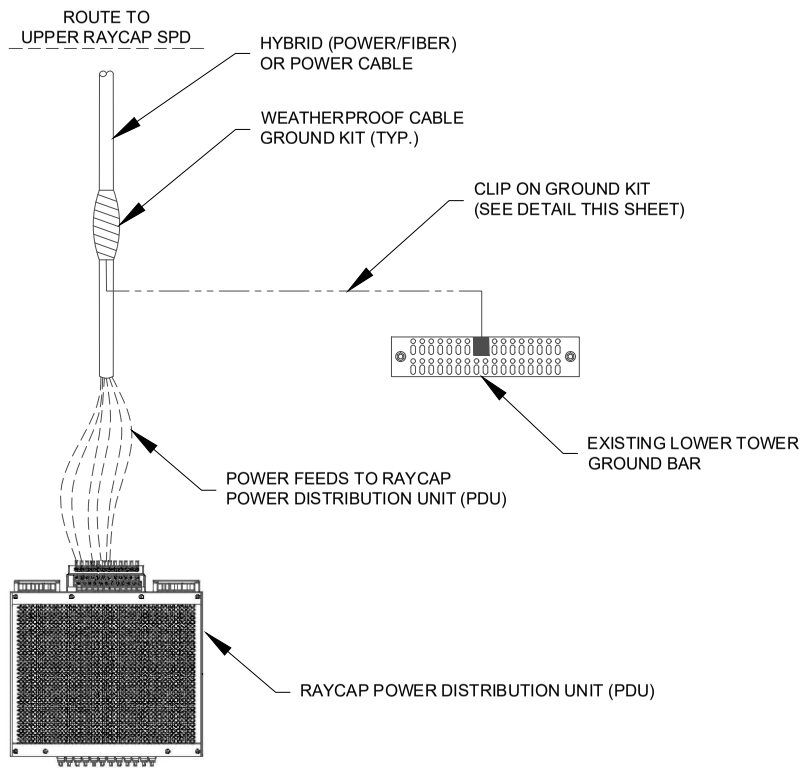
Approved 10/13/2021



GROUND BAR SCHEDULE	
EQUIPMENT GROUND BAR	1/4" X 2" X 15" GROUND BAR WITH INSULATORS AND BRACKETS SIZED FOR 12 SETS OF 2-HOLE LUGS SITE PRO 1 PART #: MG21524 OR APPROVED EQUAL TIN PLATING SITE PRO 1 #: TIN21524 OR APPROVED EQUAL

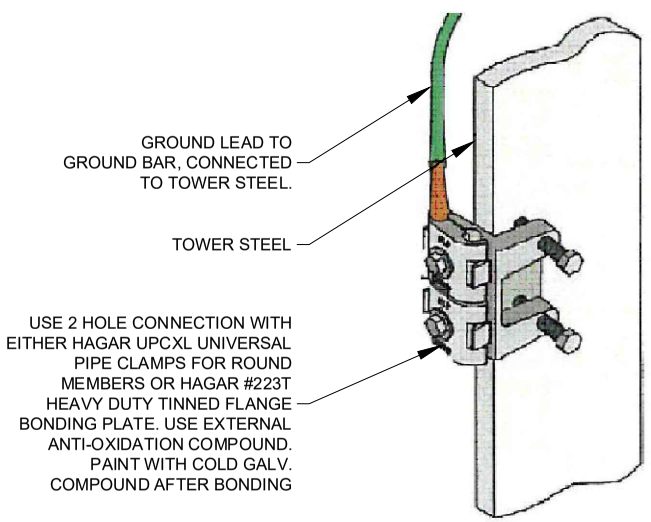
UPPER EQUIPMENT GROUND BAR

N.T.S. (NOT TO SCALE)



TYPICAL LOWER EQUIPMENT GROUNDING

N.T.S. (NOT TO SCALE)



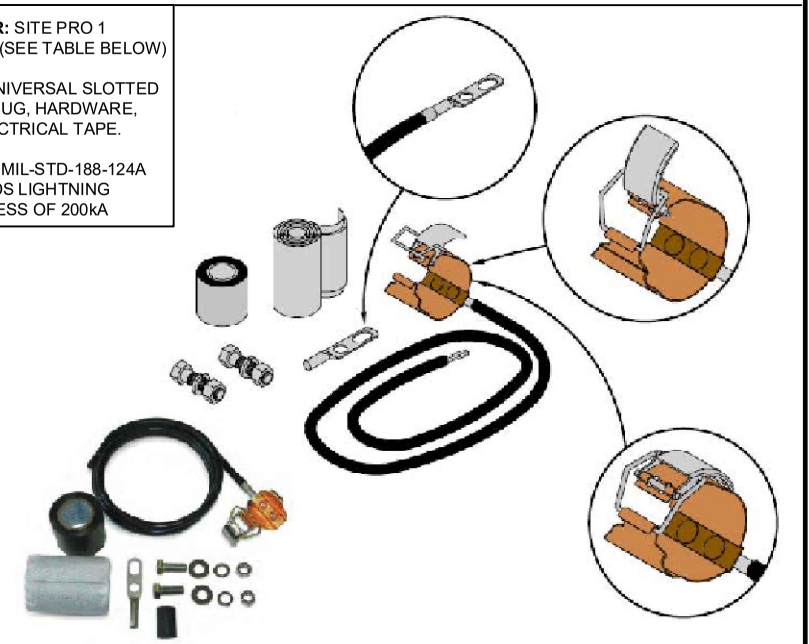
TOWER GROUNDING DETAIL

SCALE: N.T.S.

MANUFACTURER: SITE PRO 1
MODEL: VARIES (SEE TABLE BELOW)

KIT INCLUDES UNIVERSAL SLOTTED 3/8" TWO-HOLE LUG, HARDWARE, BUTYL, AND ELECTRICAL TAPE.

COMPLIES WITH MIL-STD-188-124A AND WITHSTANDS LIGHTNING STRIKES IN EXCESS OF 200kA



PART #	CABLE SIZE & TYPE	LENGTH	LUG	WEIGHT
GK-C12	1/2" CORREUGATED	5'	UNATTACHED	1.50 LB
GK-C78	7/8" CORRUGATED	5'	UNATTACHED	1.65 LB
GK-C114	1-1/4" CORRUGATED	5'	UNATTACHED	1.70 LB
GK-C158	1-5/8" CORRUGATED	5'	UNATTACHED	1.70 LB
GK-C214	2-1/4" CORRUGATED	5'	UNATTACHED	1.80 LB

CLIP ON GROUND KIT

SCALE: N.T.S.

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PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
C-15

GENERAL NOTES:

1. ALL REFERENCES TO OWNER IN THESE DOCUMENTS SHALL BE CONSIDERED U.S. CELLULAR OR IT'S DESIGNATED REPRESENTATIVE.

2. ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE, THE CONTRACTOR MUST HAVE CONSIDERABLE EXPERIENCE IN PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THE HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED AND THAT HE IS PROPERLY LICENSED AND PROPERLY REGISTERED TO DO THIS WORK IN THE STATE ASSIGNED.

3. STRUCTURE IS DESIGNED IN ACCORDANCE WITH ANSI/TIA-222-G-2, 2009, AND THE REQUIREMENTS OF THE STATE STRUCTURAL SPECIALTY CODE.

4. WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE ASSIGNED STATE STRUCTURAL SPECIALTY CODE.

5. UNLESS SHOWN OR NOTED OTHERWISE ON THE CONTRACT DRAWINGS, OR IN THE SPECIFICATIONS, THE FOLLOWING NOTES SHALL APPLY TO THE MATERIALS LISTED HEREIN, ANT TO THE PROCEDURES TO BE USED ON THIS PROJECT.

6. ALL HARDWARE ASSEMBLY MANUFACTURER'S INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERCEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.

7. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE STRUCTURE AND IT'S COMPONENT PARTS DURING ERECTION AND/OR FIELD MODIFICATIONS. THIS INCLUDES BUT IS NOT LIMITED TO, THE ADDITION OF TEMPORARY BRACING, GUYS OR TIE DOWNS THAT MAY BE NECESSARY. SUCH MATERIAL SHALL BE REMOVED AND SHALL REMAIN THE PROPERTY OF THE CONTRACTOR AFTER THE COMPLETION OF THE PROJECT.

8. ALL DIMENSIONS, ELEVATIONS, AND EXISTING CONDITIONS SHOWN ON THE DRAWINGS SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO BEGINNING ANY MATERIALS ORDERING, FABRICATION OR CONSTRUCTION WORK ON THIS PROJECT. CONTRACTOR SHALL NOT SCALE CONTRACT DRAWINGS IN LIEU OF FIELD VERIFICATIONS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE OWNER AND THE OWNER'S ENGINEER. THE DISCREPANCIES MUST BE RESOLVED BEFORE THE CONTRACTOR IS TO PROCEED WITH THE WORK. THE OWNER SHALL HAVE A SET OF APPROVED PLANS AVAILABLE AT THE SITE AT ALL TIMES WHILE WORK IS BEING PERFORMED. A DESIGNATED RESPONSIBLE EMPLOYEE SHALL BE AVAILABLE FOR THE CONTACT BY GOVERNING AGENCY INSPECTORS. THE CONTRACT DOCUMENTS DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK AND SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. OBSERVATION VISITS TO THE SITE BY THE OWNER AND/OR THE ENGINEER SHALL NOT INCLUDE INSPECTION OF THE PROTECTIVE MEASURES OR THE PROCEDURES.

9. ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS AND IN CONFORMANCE WITH THE CONTRACT DOCUMENTS. ANY AND ALL SUBSTITUTIONS MUST BE PROPERLY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER PRIOR TO INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING,AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS RESPONSIBLE FOR INSURING THAT THIS PROJECT AND RELATED WORK COMPLIES WITH ALL APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY CODES AND REGULATIONS GOVERNING THIS WORK.

11. ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIALS ACCESS, WITH THE RESIDENT LEASING AGENT FOR APPROVAL.

12. BILL OF MATERIALS AND PART NUMBERS LISTED ON CONSTRUCTION DRAWINGS ARE INTENDED TO AID CONTRACTOR. CONTRACTOR SHALL VERIFY PARTS AND QUANTITIES WITH MANUFACTURER PRIOR TO BIDDING AND/OR ORDERING MATERIALS.

13. ALL PERMITS THAT MUST BE OBTAINED ARE THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR WILL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.

14. 24 HOURS PRIOR TO THE BEGINNING OF ANY CONSTRUCTION, THE CONTRACTOR MUST NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY, OR CITY) ENGINEER.

15. THE CONTRACTOR SHALL REWORK (DRY, SCARIFY, ETC.) ALL MATERIAL NOT SUITABLE FOR SUBGRADE IN IT'S PRESENT STATE. AFTER REWORKING, IF THE MATERIAL REMAINS UNSUITABLE, THE CONTRACTOR SHALL UNDERCUT THIS MATERIAL AND REPLACE WITH APPROVED MATERIAL. ALL SUBGRADES SHALL BE PROOF-ROLLED WITH A FULLY LOADED TANDEM AXLE DUMP TRUCK PRIOR TO PAVING. ANY SOFTER MATERIAL SHALL BE REWORKED OR REPLACED.

16. ALL MATERIAL AND WORKMANSHIP SHALL BE WARRANTED FOR ONE YEAR FROM ACCEPTANCE DATE.

STRUCTURAL STEEL NOTES:

1. THE FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, 14TH EDITION.

2. UNLESS OTHERWISE NOTED, ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
   A. STRUCTURAL STEEL, ASTM DESIGNATION A36 OR GR50
   B. ALL BOLTS, ASTM A325 TYPE 1 GALVANIZED HIGH STRENGTH BOLTS.
   C. ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.
   D. ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.

3. ALL CONNECTIONS NOT FULLY DETAILED ON THESE PLANS SHALL BE DETAILED BY THE STEEL FABRICATOR IN ACCORDANCE WITH AISC SPECIFICATIONS AND MANUAL OF STEEL CONSTRUCTION, 13TH EDITION.

4. HOLES SHALL NOT BE FLAME CUT THRU STEEL UNLESS APPROVED BY THE ENGINEER.

5. HOT-DIP GALVANIZED ALL ITEMS UNLESS OTHERWISE NOTED, AFTER FABRICATION WHERE PRACTICABLE. GALVANIZING: ASTM A123, ASTM, A153/A153M OR ASTM A653/A653MM G90, AS APPLICABLE.

6. REPAIR DAMAGED SURFACES WITH GALVANIZING REPAIR METHOD AND POINT CONFORMING TO ASTM A780 OR BY APPLICATION OF STICK OR THICK PASTED MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING. CLEAN AREAS TO BE REPAIRED AND REMOVE SLAG FROM WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTED; SPREAD MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE OFF EXCESS MATERIAL.

7. A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED BOLTS.

8. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH TO EXCLUDE THE THREADS FROM THE SHEAR PLANE.

9. ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.

10. ALL ASSEMBLY AND ANCHOR BOLTS ARE TO BE TIGHTENED TO A "SNUG TIGHT" CONDITION AS DEFINED IN SECTION 8.1 OF THE AISC, "SPECIFICATION FOR STRUCTURAL JOINTS USING ASTM A325 OR A490 BOLTS", DATED JUNE 30, 2004.

11. FLAT WASHER ARE TO BE INSTALLED WITH BOLTS OVER SLOTTED HOLES.

12. DO NOT OVER TORQUE ASSEMBLY BOLTS. GALVANIZING ON BOLTS, NUTS, AND STEEL PARTS; MAY ACT AS LUBRICANT, THUS OVER TIGHTENING MAY OCCUR AND MAY CAUSE BOLTS TO CRACK AND SNAP OFF.

13. PAL NUTS ARE TO BE INSTALLED AFTER NUTS ARE TIGHT AND WITH EDGE LIP OUT. PAL NUTS ARE NOT REQUIRED WHEN SELF-LOCKING NUTS ARE PROVIDED.

14. GALVANIZED ASTM A325 BOLTS SHALL NOT BE REUSED.

15. ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1: 2010, STRUCTURAL WELDING CODE-REINFORCING STEEL. ALL WELDERS SHALL DISPLAY PROPER CERTIFICATION OF QUALIFICATION.

GROUNDING NOTES:

1. ALL CADWELD CONNECTIONS TO GALVANIZED MATERIAL SHALL BE PROPERLY PREPARED TO ASSURE A SATISFACTORY CADWELD.
2.
3. CADWELD CONNECTIONS SHALL BE COATED WITH COLD GALVANIZING SPRAY.

4. ALL VERTICAL JUMPERS SHALL NOT BE WELDED WITHIN (2') TWO FEET OF THE GROUND ROD

5. SECTOR GROUNDING DIAGRAM:

Approved 10/13/2021

RAPHAEL MOHAMED REGISTERED 16602 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER

10/13/2021

RAPHAEL MOHAMED, P.E.
WEST VIRGINIA NO. 16602

SUBMITTALS

DATE	DESCRIPTION	REV	ISSUED BY
4/23/2021	CONSTRUCTION	0	RM
7/20/2021	CONSTRUCTION	1	RM
7/30/2021	CONSTRUCTION	2	RM
9/21/2021	CONSTRUCTION	3	RM
10/13/2021	CONSTRUCTION	4	RM

DRAWN BY:	SL
CHECKED BY:	JFS
APPV'D BY:	RM
MNS PROJECT NO:	23347-AEC

THE INFORMATION CONTAINED IN THESE DOCUMENTS IS PROPRIETARY BY NATURE. REPRODUCTION OR CAUSING TO BE REPRODUCED THE WHOLE OR ANY PART OF THESE DRAWINGS WITHOUT THE PERMISSION OF MASTEC NETWORK SOLUTIONS IS PROHIBITED.

PREPARED FOR:

uscellular

PREPARED BY:

MasTec Network Solutions
507 AIRPORT BLVD, SUITE 111
MORRISVILLE, NC 27560

SITE NUMBER:
416429

SITE NAME:
RACE TRACK

SITE ADDRESS:
213 E 6TH AVE
RANSON, WV 25438

TOWER OWNER ID:
416429

SHEET TITLE
GENERAL NOTES

SHEET NUMBER
N-1

5716 Columbia Park Road
Cheverly, MD 20785-3825
Tel: 301-390-3806
Fax: 301-390-3810
www.godwinpumps.com

November 9, 2021

Mr. Joe Burris
City of Charles Town
661 S GEORGE ST STE 101
Suite 101
Charles Town, WV 25414-1421

Phone: 304-676-6890
Fax: 304-724-8217
Email: Jburris@ctubwv.com

RE: Convert HH Pumps to Trash Pumps Sale
Sale Quotation 102031469

Dear Mr. Burris:

Hope all is well Sir. Per our telephone conversations, please see below sale pricing to convert City of Charlestown customer owned High Head Diesel Pumps over to true Diesel Trash Pumps.

HL80M to CD150M Conversion - $20,520.00
* CD150M Pump end & Compressor
* Coupling (65HE10)
* Suction & Discharge Spools
* Rear Enclosure Panels
* Labor

HL4M to CD225M Conversion - $27,360.00
* CD225M Pump end & Compressor
* Coupling (65HE115)
* Suction Spool
* Check Valve & Bracket
* Rear Enclosure Panels
* Right Side Enclosure Panels
* Labor

Pick Up:$285.00
Delivery:$285.00

We have a unique culture, built on having the very best equipment and the very best people. Our corporate model sets us apart from the competition. We are on call and available 24 hours a day, 7 days a week, no matter where there is a pumping emergency or a customer that needs help. We aren't just the product. We're the service behind the product.

Thank you for your continued interest in our Godwin Pumps. Please do not hesitate to call me with questions on my mobile @ 301-332-6457 or e-mail @ tom.vance@xylem.com.

Sincerely,



Thomas A. Vance
Outside Sales Representative

TAV / lm

5716 Columbia Park Road
Cheverly, MD 20785-3825
Tel: 301-390-3806

SALE QUOTATION

Convert High Head Pumps to True Trash Pumps

ITEM	QTY	DESCRIPTION	UNIT PRICE	SALE TOTAL
A	1	Sale Item • HL80M to CD150M Conversion *Includes items as noted	$ 20,520.00	$ 20,520.00
B	1	Sale Item • HL4M to CD225M Conversion *Includes items as noted	27,360.00	27,360.00

Our current delivery lead-times associated with this Quotation are best estimates at this time. Due to the outbreak of the COVID-19 virus pandemic and its global effects on commerce, supply chain, and logistics, these lead-times are an estimate only and not a commitment. Xylem is and will continue to use all commercially reasonable efforts to minimize any delivery delay impacts.

NET SALE TOTAL	**$ 47,880.00**
DELIVERY CHARGE	**$ 570.00**

Please note all sale pricing is in U.S. Dollars. The price does not include freight, export boxing, duties, taxes, or any other items not specifically mentioned.

This pricing information is for internal use only. We ask that these items and terms be kept confidential. All applicable tax and freight charges will be added to invoices. All quotations are subject to credit approval. All quotations are valid for 30 days. All prices quoted in US dollars.

This order is subject to the Standard Terms and Conditions of Sale - Xylem Americas effective on the date the order is accepted which terms are available at https://www.xylem.com/en-US/support/xylem-americas-standard-terms-and-conditions/ and incorporated herein by reference and made a part of the agreement between the parties.

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: November 17, 2021

ADMINISTRATIVE

- Utility Billing Clerk
- PSC Reports now available on the WVPSC website
- Customer Counts
    - Sewer 8,131 (2,028 billed by JUI)
    - Water 6,358

WATER

- Source Water Monitoring Panel received
- Storage Tank Cleaning

SEWER

- IJDC Project Initiation form submitted for 2022 Collections System Project
- Holden Property Sewer Availability request – 150 Single Family homes, 60 Townhomes

INFORMATION

- **Capacity Improvement Fee collection: See attached.**
- **Water and Sewer Treatment Plant Flows: 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

UTILITY BOARD

CHAIRMAN
Daryl Hennessy

VICE CHAIRMAN
Pete Kubic

TREASURER
Thomas Stocks

INTERIM SECRETARY
Ashley Stottlemyer

City of Ranson
Mayor
Duke Pierson

Jacquelyn Milliron

UTILITY MANAGER
Kristen Stolipher

October 29, 2021

Re: Holden Property – 150 Homes , 60 Townhomes

Sewer Availability

Delivered via email to astratton@ifs-ae.com

Dear Mrs. Stratton:

Pursuant to your request for sewer availability for the proposed Holden property development located on Shenandoah Junction Road we offer the following:

Sewer Service:

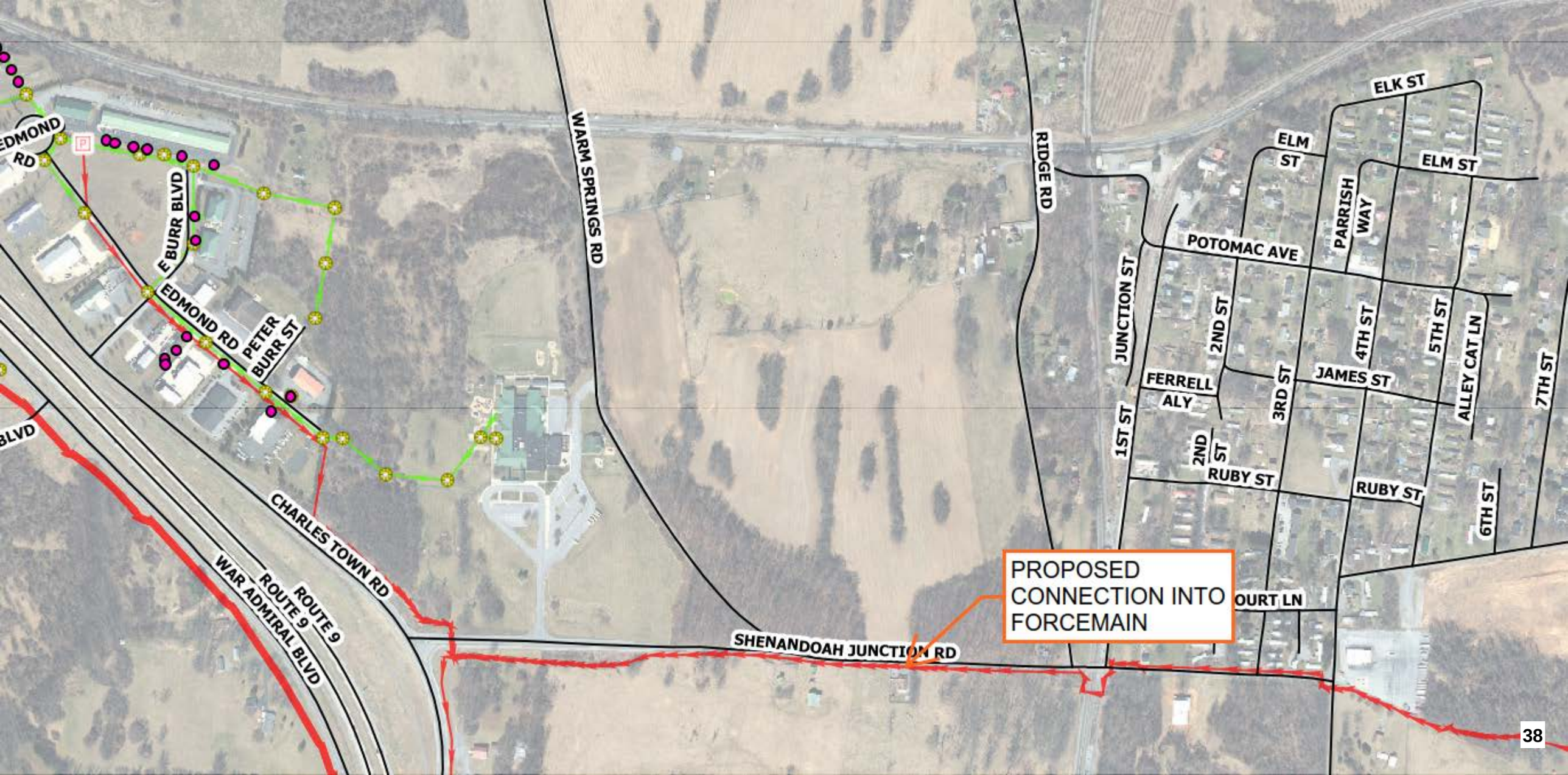
The Charles Town Utility Board (CTUB) can furnish sewer service for the development of one hundred fifty (150) single-family residential units and sixty (60) townhomes. The Sewer Capacity Improvement Fees of $3,207.00 per unit will apply. The point of connection to the existing sewer system will be on a forcemain. This connection will need to be evaluated by a professional engineer for proper design. Please provide our office with a set of the preliminary drawings for review. 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,



Travis Markley
Engineering Technician


EDMOND RD
E BURR BLVD
EDMOND RD
PETER BURR ST
BLVD
WARM SPRINGS RD
RIDGE RD
ELK ST
ELM ST
ELM ST
PARRISH WAY
POTOMAC AVE
JUNCTION ST
2ND ST
4TH ST
5TH ST
ALLEY CAT LN
7TH ST
FERRELL ALY
3RD ST
JAMES ST
1ST ST
2ND ST
RUBY ST
RUBY ST
6TH ST
CHARLES TOWN RD
ROUTE 9
ROUTE 9
WAR ADMIRAL BLVD
SHENANDOAH JUNCTION RD
PROPOSED CONNECTION INTO FORCEMAIN
OURT LN

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	
Dan Ryan Builders	Tate Manor	1-6	1/4/2021	6	$ 6,762.00	6	$ 15,456.00	
Dan Ryan Builders	Briar Run	387-389, 391	1/4/2021	4	$ 12,828.00			
Dan Ryan Builders	Tate Manor	7-12	1/25/2021	6	$ 6,762.00	6	$ 15,456.00	
Dan Ryan Builders	Tate Manor	13-18	1/25/2021	6	$ 6,762.00	6	$ 15,456.00	
Stanley Martin	Presidents Pointe	51-56	2/12/2021	6	$ 16,512.00			
DRH	Magnolia Springs	38-41	2/17/2021	4	$ 4,508.00	4	$ 10,304.00	$ 38,640.00
Dan Ryan Builders	Tate Manor	19-24	2/24/2021	6	$ 6,762.00	6	$ 15,456.00	
Dan Ryan Builders	Tate Manor	25-29	2/24/2021	5	$ 5,635.00	5	$ 12,880.00	
DRH	Magnolia Springs	21,23, 32-35, 42-48	3/5/2021	13	$ 14,651.00	13	$ 33,488.00	
DRH	Magnolia Springs	22	3/12/2021	1	$ 1,127.00	1	$ 2,576.00	
DRH	Magnolia Springs	8-10, 18-20, 24-28, 36-37, 66-70	3/17/2021	18	$ 20,286.00	18	$ 46,368.00	
Rockwool	Rockwool		3/31/2021	104.7	$ 117,959.33			
R&D Investments	17 Clems Drive		4/21/2021	1	$ 3,207.00			
Salgato	West Washington Street	45	5/28/2021	1	$ 1,127.00	1	$ 2,576.00	
Lutman	2 Sunlite Dr- Tuscawilla		6/15/2021	1	$ 1,127.00	1	$ 2,576.00	
Uniwest	Jefferson Xing Apartments	7	6/23/2021	36	$ 115,452.00	36	$ 92,736.00	
Jenkins	100 Center Street		6/30/2021	1	$ 1,127.00	1	$ 2,576.00	
Jenkins	203 E 7th Ave		6/30/2021	1	$ 1,127.00	1	$ 2,576.00	
DRH	Magnolia Springs	71-73, 101-102, 114-122, 125-133, 135, 138, 140-145	7/29/2021	35	$ 39,445.00	35	$ 90,160.00	
Wormald	Beallair	142	7/30/2021	1	$ 3,207.00			
Wormald	Beallair	67	7/30/2021	1	$ 3,207.00			
Sudhir Rana	West Burr Industrial Park	5	8/2/2021	1.8	$ 5,772.60			
DHR	Magnolia Springs	134, 139	8/4/2021	2	$ 2,254.00	2	$ 5,152.00	
Wormald	Beallair	149	8/13/2021	1	$ 3,207.00			
McGuire	71 Jefferson Crossing Way (Laundromat)		8/30/2021	7.42	$ 23,795.94	7.42	$ 19,113.92	
Wormald	Beallair	157	9/8/2021	1	$ 3,207.00			
Wormald	Beallair	144	9/17/2021	1	$ 3,207.00			
DRH	Magnolia Springs	74-75, 91-99, 100, 103-113, 123-124, 136-137, 150-164	9/22/2021	42	$ 47,334.00	42	$ 108,192.00	
Wormald	Beallair	139	10/15/2021	1	$ 3,207.00			
			Total	**314.92**	$ 481,564.87	**191.42**	$ 493,097.92	

Charles Town Utility Board
2021 Capacity Improvement Fee Collections/EDU for Sewer

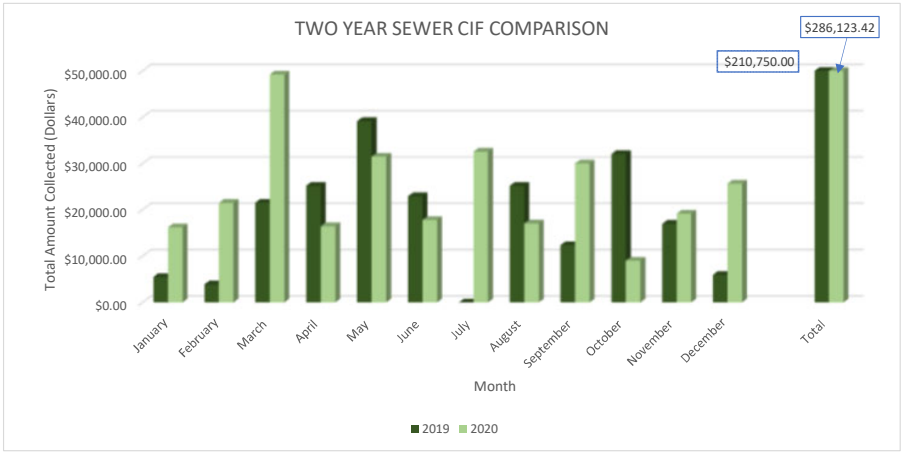
Month	Commercial	Residential	Total Number of EDU's	Total Sewer CIF Collected	CIF Paid to Ranson	Total
Jan-21		22	22	$ 33,114.00		$ 33,114.00
Feb-21		21	21	$ 33,417.00	$ 9,750.00	$ 23,667.00
Mar-21		32	136.7	$ 154,023.33		$ 154,023.33
Apr-21		1	1	$ 3,207.00		$ 3,207.00
May-21		1	1	$ 1,127.00		$ 1,127.00
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						$ -
Dec-21						
Total 2021	**45.22**	**118**	**314.92**	**$ 481,564.87**	**$ 9,750.00**	**$ 471,814.87**

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		0	0	$ -
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				
Total 2021	**43.42**	**106**	**191.42**	**$ 493,097.92**

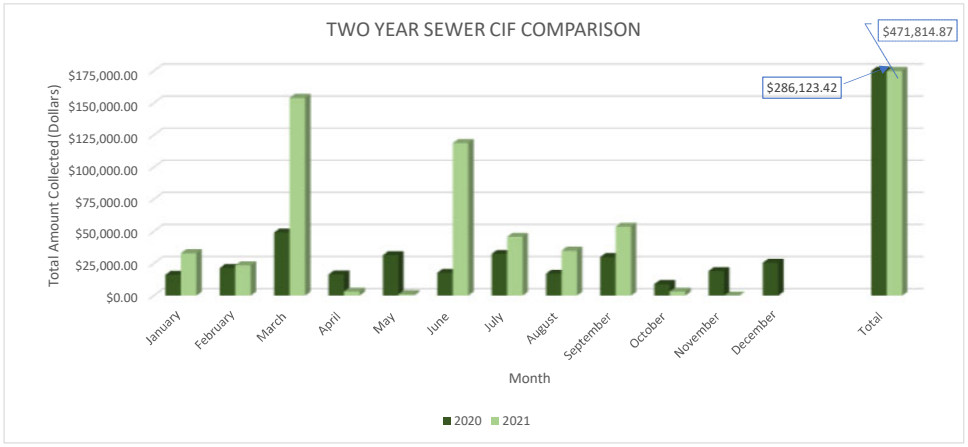
Charles Town Utility Board
2020 Capacity Improvement Fee Collections/EDU for Sewer

Month	Commercial	Residential	Total Number of EDU's	Total Sewer CIF Collected	CIF Paid to Ranson	Total
Jan-20		7	7	$21,084.00	$4,875.00	$16,209.00
Feb-20		8	8	$24,746.00	$3,250.00	$21,496.00
Mar-20		16	16	$49,232.00		$49,232.00
Apr-20		21	21	$58,702.00	$42,250.00	$16,452.00
May-20		16	16	$44,487.00	$13,000.00	$31,487.00
Jun-20	1	6	7	$17,803.40		$17,803.40
Jul-20		11	11	$32,547.00		$ 32,547.00
Aug-20		5.31	5.31	$17,040.00		$ 17,040.00
Sep-20		19.26	19.26	$39,776.02	$9,750.00	$ 30,026.02
Oct-20		8	8	$18,766.00	$9,750.00	$ 9,016.00
Nov-20		17	17	$45,159.00	$26,000.00	$ 19,159.00
Dec-20		8	8	$25,656.00		$ 25,656.00
Total 2020	**1**	**137**	**143.57**	**$394,998.42**	**$108,875.00**	**$286,123.42**



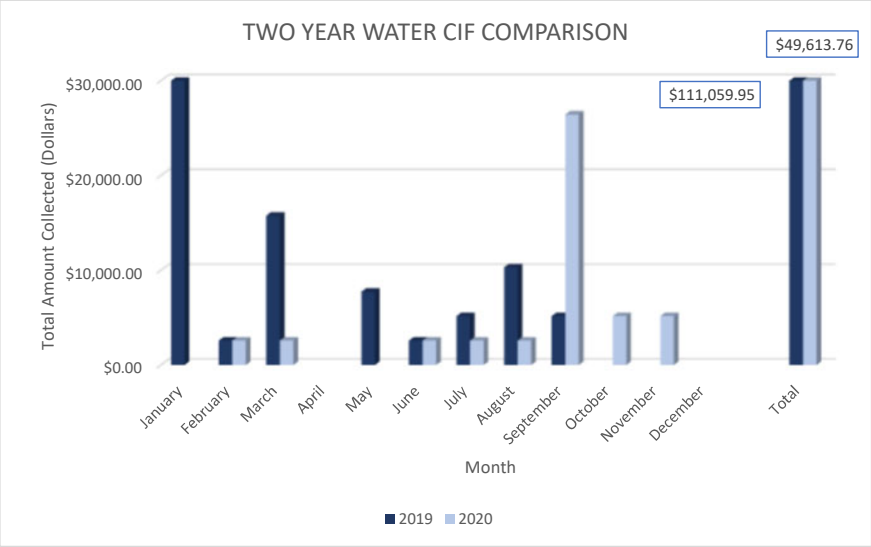
Charles Town Utility Board
2021 Capacity Improvement Fee Collections/EDU for Sewer

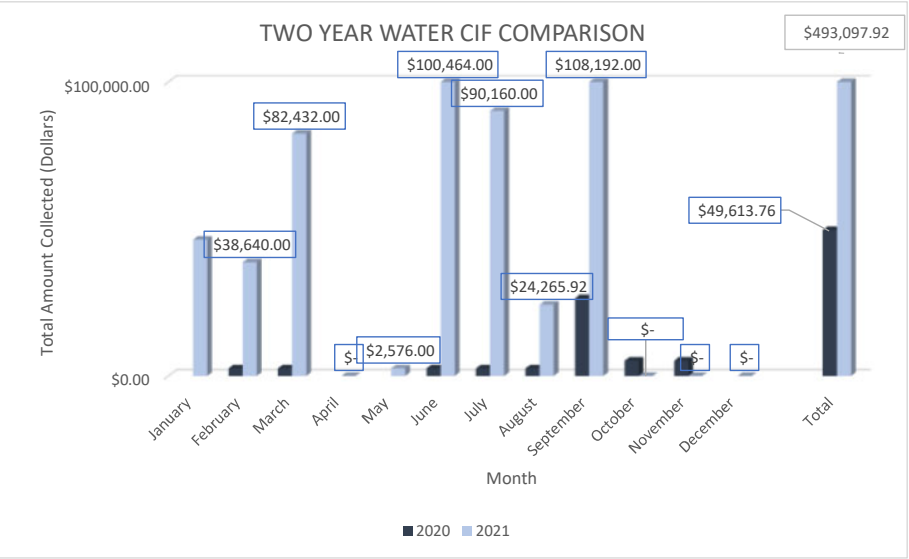
Month	Commercial	Residential	Total Number of EDU's	Total Sewer CIF Collected	CIF Paid to Ranson	Total
Jan-21		22	22	$ 33,114.00		$ 33,114.00
Feb-21		21	21	$ 33,417.00	$ 9,750.00	$ 23,667.00
Mar-21		32	136.7	$ 154,023.33		$ 154,023.33
Apr-21		1	1	$ 3,207.00		$ 3,207.00
May-21		1	1	$ 1,127.00		$ 1,127.00
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						$ -
Dec-21						
Total 2021	**45.22**	**118**	**314.92**	**$481,564.87**	**$9,750.00**	**$471,814.87**



Charles Town Utility Board 2020 Capacity Improvement Fee Collections/EDU for Water				
Month	**Commercial**	**Residential**	**Total Number of EDU's**	**Total Water CIF**
Jan-20				
Feb-20		1	1	$ 2,576.00
Mar-20		1	1	$ 2,576.00
Apr-20				
May-20				
Jun-20		1	1	$ 2,576.00
Jul-20		1	1	$ 2,576.00
Aug-20		1	1	$ 2,576.00
Sep-20		10.26	10.26	$ 26,429.76
Oct-20		2	2	$ 5,152.00
Nov-20		2	2	$ 5,152.00
Dec-20				
Total 2020	**0**	**19**	**19.26**	**$ 49,613.76**

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				$ -
Total 2021	**43.42**	**106**	**191.42**	**$ 493,097.92**





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	336.27	1.11	0.64	636,000	4,240

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	28.31	0.1	0.4	400,000	2,667

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	

2019		
	Total	AVERAGE
JANUARY	51.37	1.66
FEBRUARY	43.72	1.56
MARCH	44.32	1.43
APRIL	37.29	1.24
MAY	45.1	1.45
JUNE	33.83	1.13
JULY	39.09	1.26
AUGUST	33.33	1.08
SEPTEMBER	30.89	1.03
OCTOBER	32.86	1.06
NOVEMBER	30.65	1.02
DECEMBER	36.55	1.18
Annual Total	459	1.26

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		
DECEMBER		
Annual Total	336.27	1.11

2019		
	Total	AVERAGE
JANUARY	6.25	0.2
FEBRUARY	4.98	0.18
MARCH	7.53	0.24
APRIL	5.28	0.18
MAY	7.88	0.25
JUNE	3.75	0.12
JULY	4.2	0.14
AUGUST	3.75	0.12
SEPTEMBER	3.64	0.12
OCTOBER	3.97	0.13
NOVEMBER	3.66	0.12
DECEMBER	0.35	0.01
Annual Total	55.24	0.15

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		
DECEMBER		
Annual Total	28.31	0.10

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	508.97	1.66	1.14	1,137,215	7,581

2019		
	Total	AVERAGE
JANUARY	52,264,325	1,685,946
FEBRUARY	48,901,884	1,746,496
MARCH	52,112,735	1,681,056
APRIL	51,316,538	1,710,551
MAY	56,973,829	1,837,865
JUNE	55,111,832	1,837,061
JULY	57,587,563	1,857,663
AUGUST	58,291,878	1,880,383
SEPTEMBER	53,642,580	1,788,086
OCTOBER	54,262,184	1,750,393
NOVEMBER	50,656,056	1,688,535
DECEMBER	53,202,360	1,716,205
Annual Total	644,323,764	1,765,020

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		
DECEMBER		
Annual Total	508,972,709	1,662,785

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	2.63	0.01	0.01	12,919	-

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		
DECEMBER		
Annual Total	2,634,700	8,681

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	1.62	0.01	0.03	30,668	

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		
DECEMBER		
Annual Total	1,617,900	5,332

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
DEWBERRY ENGINEERS INC	WA & WW CIFS: THRU 7/30/21	WATER FUND	WATER		2,350.00
	WA & WW CIFS: THRU 9/24/21	WATER FUND	WATER		2,350.00
	WA & WW CIFS: THRU 7/30/21	SEWER FUND	SEWER		7,050.00
	WA & WW CIFS: THRU 9/24/21	SEWER FUND	SEWER		7,050.00
				TOTAL:	18,800.00
WV DEPT OF HEALTH & HUMAN SERVICES	BACTERIOLOGICAL TESTING	WATER FUND	WATER		160.00
				TOTAL:	160.00
GEIGER PUMP & EQUIPMENT	SEAL,PUMP,GLAND,RING,PIN,S	SEWER FUND	SEWER		2,995.81
				TOTAL:	2,995.81
LOGICAL CONCEPTS, INC	FLWNGSPRGS,GRNFLDSTH 4-5,B	SEWER FUND	SEWER		443.00
	FLWNGSPRGS,GRNFLDSTH 4-5,B	SEWER FUND	SEWER		418.00
				TOTAL:	861.00
SNYDER ENVIRONMENTAL SERVICES, INC	LOCUST KNOLL CASING	SEWER FUND	SEWER		1,400.00
				TOTAL:	1,400.00
THE TRAVELERS INDEMNITY COMPANY	POLICY 0105344361 S RENEWA	WATER FUND	WATER		250.00
				TOTAL:	250.00

========== FUND TOTALS ==========

50	WATER FUND	5,110.00
60	SEWER FUND	19,356.81
	GRAND TOTAL:	24,466.81

TOTAL PAGES: 1

APPROVED BY: _____

APPROVED BY: _____

This Packet: $ 24,466.81
Security Deposit refunds: 943.99
City of Charles Town, check dated 10/13/2021: 16,379.96
Collins Gutter Service, check dated 10/13/2021: 175.00
City of Ranson, check dated 10/13/2021: 3,124.54
WV Water Dev.Auth #2017-175 Infrstrctr FndPrjct, check dated 10/27/2021: 454.88

Total: $ 45,545.18

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT

FUND TOTALS		
50	WATER FUND	162,535.83
60	SEWER FUND	124,131.60
	GRAND TOTAL:	286,667.43

TOTAL PAGES: 6

APPROVED BY: _____

APPROVED BY: _____

Note:

Highlighted invoices to be reimbursed for the R&R Project

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
	OILCHNG & SVC: SEWER	SEWER FUND	SEWER		215.67
				TOTAL:	1,823.11
LAW OFFICES OF HOY SHINGLETON, L.C.	GENERAL 10/1 - 10/13/21	SEWER FUND	SEWER		3,152.50
	SHEN JCT 10/20 - 10/21/21	SEWER FUND	SEWER		260.00
				TOTAL:	3,412.50
SPRINT	MONTHLY CELL SERVICE	WATER FUND	WATER		556.67
	MONTHLY CELL SERVICE	SEWER FUND	SEWER		580.72
				TOTAL:	1,137.39
GERALD TAYLOR CO., INC.	VAC / TRANSPORT	WATER FUND	WATER		612.38
	PUMP / TRANSPORT	WATER FUND	WATER		778.34
	SUPERVAC / TRANSPORT	SEWER FUND	SEWER		2,152.80
				TOTAL:	3,543.52
THE CI THORNBURG CO, INC.	2" OMNI C2 100G AMR 1G PUL	WATER FUND	WATER		1,468.32
	3/4"X90 AYM 74779MQ CTS CO	WATER FUND	WATER		294.47
	5/8"X3/4" SRII TRPL 100G P	WATER FUND	WATER		4,173.44
	10"X2'3-1/4"CL/53 DIP FXF	WATER FUND	WATER		1,072.94
	CHLORINE	WATER FUND	WATER		1,013.00
				TOTAL:	8,022.17
USA BLUEBOOK	GLOVES, FILTER, PRYBAR	SEWER FUND	SEWER		579.40
	GLOVES, FILTER, PRYBAR	SEWER FUND	SEWER		226.37
	GLOVES, FILTER, PRYBAR	SEWER FUND	SEWER		183.48
				TOTAL:	989.25
WAKEFIELD & ASSOCIATES INC	OCT COLLECTIONS	WATER FUND	WATER		52.73
	OCT COLLECTIONS	SEWER FUND	SEWER		52.72
				TOTAL:	105.45
WIRELESS NETWORKS GROUP, INC.	MISC SVCS, OCT	WATER FUND	WATER		10,927.50
				TOTAL:	10,927.50
WV WATER DEVELOPMENT AUTHORITY	#2017-175 INFRSTRCTR FNDPR	SEWER FUND	NON-DEPARTMENTAL		464.28
				TOTAL:	464.28

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT
MISS UTILITY OF WV, INC.	MESSAGE FEES: OCT	WATER FUND	WATER	274.40
			TOTAL:	274.40
JOHN MURPHY, JR	MILEAGE 9/13 - 9/17/21	SEWER FUND	SEWER	368.48
			TOTAL:	368.48
THOMAS NALLS	OCT TANK LOT RENT	WATER FUND	NON-DEPARTMENTAL	3,518.48
			TOTAL:	3,518.48
PACE ANALYTICAL SERVICES, LLC	TESTING:	SEWER FUND	SEWER	82.85
	TESTING: CT WKLY	SEWER FUND	SEWER	173.19
	TESTING: TUSC WKLY	SEWER FUND	SEWER	85.85
	TESTING: CT WKLY	SEWER FUND	SEWER	173.19
	TESTING: TUSC QTRLY	SEWER FUND	SEWER	302.39
	TESTING: CT QRTLY	SEWER FUND	SEWER	238.70
	TESTING: CT QRTLY	SEWER FUND	SEWER	201.00
	TESTING: JCPSD IU04 QRTLY	SEWER FUND	SEWER	74.52
	TESTING: TUSC WKLY	SEWER FUND	SEWER	85.85
	TESTING: CT WKLY	SEWER FUND	SEWER	173.19
	TESTING: TUSC WKLY	SEWER FUND	SEWER	85.85
	TESTING: CT WKLY	SEWER FUND	SEWER	184.18
	TESTING: CT WKLY	SEWER FUND	SEWER	173.19
	TESTING: TUSC MNTHLY	SEWER FUND	SEWER	173.19
			TOTAL:	2,207.14
PETTY CASH @ 661 S GEORGE ST	PETTY CASH- MISC RECEIPTS	WATER FUND	WATER	77.99
	PETTY CASH- MISC RECEIPTS	WATER FUND	WATER	18.05
	PETTY CASH- MISC RECEIPTS	SEWER FUND	SEWER	77.97
	PETTY CASH- MISC RECEIPTS	SEWER FUND	SEWER	18.06
			TOTAL:	192.07
RL BENTLEY MACHINERY REPAIR & SERVICE,	KAESER SK15 AIR COMPRESSOR	SEWER FUND	SEWER	9,919.00
			TOTAL:	9,919.00
ROBERTS OXYGEN COMPANY, INC.	YEARLY RENTAL RENEWAL	WATER FUND	WATER	350.00
	YEARLY RENTAL RENEWAL	WATER FUND	WATER	1,200.00
			TOTAL:	1,550.00
ROSS H BARE	SVC CALL: FORREST DR PS	SEWER FUND	SEWER	440.00
	SVC CLL: MULT PS & WWTP	SEWER FUND	SEWER	175.00
	SVC CLL: MULT PS & WWTP	SEWER FUND	SEWER	100.00
	SVC CLL: MULT PS & WWTP	SEWER FUND	SEWER	100.00
	SVC CLL: MULT PS & WWTP	SEWER FUND	SEWER	100.00
	SVC CALL: CTWWTP CK PISTAG	SEWER FUND	SEWER	460.63
			TOTAL:	1,375.63
SHENANDOAH AIR CONDITIONING & HEATING,	FLWNG SPRNGS PS: RPLC DFRS	SEWER FUND	SEWER	439.00
			TOTAL:	439.00
SHENANDOAH SALES & SERVICE, INC.	WINCH MOTOR: CRANE TRUCK	WATER FUND	WATER	376.16
	INSPECTION: SEWER	SEWER FUND	SEWER	14.00
	OILCHNG & SVC: SEWER	SEWER FUND	SEWER	129.30
	GPI PUMP: SEWER	SEWER FUND	SEWER	174.21
	OILCHNG & SVC: SEWER	SEWER FUND	SEWER	490.24
	OILCHNG & SVC: SEWER	SEWER FUND	SEWER	122.12
	OILCHNG & SVC: SEWER	SEWER FUND	SEWER	301.41

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
	TESTING: FECAL ONLY	SEWER FUND	SEWER		50.00
				TOTAL:	100.00
FRONTIER COMMUNICATIONS	304-876-9970-121914-4	WATER FUND	WATER		93.47
	304-876-2120-111514-4	WATER FUND	WATER		94.12
				TOTAL:	187.59
GUTTMAN ENERGY	W/E 10/24/21	WATER FUND	WATER		911.32
	W/E 10/31/21	WATER FUND	WATER		662.73
	W/E 11/07/21	WATER FUND	WATER		736.06
	W/E 10/24/21	SEWER FUND	SEWER		922.72
	W/E 10/31/21	SEWER FUND	SEWER		1,246.85
	W/E 10/31/21	SEWER FUND	SEWER		25.25
	W/E 11/07/21	SEWER FUND	SEWER		841.13
				TOTAL:	5,346.06
GANNETT FLEMING VALUATION & RATE CONSU	WW COST SVC STUDY	SEWER FUND	SEWER		1,850.00
				TOTAL:	1,850.00
GWIN DOBSON & FOREMAN INC	WWTP UPGRADE	SEWER FUND	NON-DEPARTMENTAL		29,232.19
				TOTAL:	29,232.19
HACH COMPANY	HACH(SWMP) SRC WTR MNTRNG	WATER FUND	NON-DEPARTMENTAL		46,765.00
				TOTAL:	46,765.00
HOLTZMAN OIL CORP	OIL & GREASE @ CT PLANT	SEWER FUND	SEWER		240.63
				TOTAL:	240.63
INTELLIPOINT TECHNOLOGIES, LLC	IT-REGULAR-REMOTE	WATER FUND	WATER		150.00
				TOTAL:	150.00
PROTOUCH COMMUNICATIONS, LLC	OCT SVCS: AFTER-HOURS EMER	WATER FUND	WATER		151.04
				TOTAL:	151.04
INWOOD QUARRY, INC.	C2 PICKUPS: 10/22/21	WATER FUND	WATER		331.99
	C2 PICKUPS: 10/29/21	WATER FUND	WATER		384.19
	I8 PICKUPS: 11/02/21	WATER FUND	WATER		475.77
				TOTAL:	1,191.95
IRON MOUNTAIN, INC	SHREDDING, STORAGE	WATER FUND	WATER		248.93
	SHREDDING, STORAGE	SEWER FUND	SEWER		248.92
				TOTAL:	497.85
JAMES RIVER EQUIPMENT	230KIT- 230TOOT DISPKIT	WATER FUND	WATER		57.00
				TOTAL:	57.00
JEFFERSON PUBLISHING COMPANY	11/10 AD: ACCTNGCLRK	WATER FUND	WATER		48.83
	11/10 AD: ACCTNGCLRK	SEWER FUND	SEWER		48.82
				TOTAL:	97.65
J.C. KUNKLE & ASSOCIATES, A.C.	PROFF SVCS 8/21 - 10/31/21	WATER FUND	WATER		2,100.00
	PROFF SVCS 8/21 - 10/31/21	SEWER FUND	SEWER		3,825.00
				TOTAL:	5,925.00
LIQUID ENGINEERING CORPORATION	WATNK CLNG/INSPCTN & RPRTN	WATER FUND	WATER		22,295.00
				TOTAL:	22,295.00

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT		AMOUNT
CRYSTAL SPRINGS	MONTHLY SVC@ WWTP	WATER FUND	WATER		25.94
	MONTHLY SVC@ 661 S GEORGE	WATER FUND	WATER		33.22
	MONTHLY SVC@ 661 S GEORGE	SEWER FUND	SEWER		33.22
				TOTAL:	92.38
DEWBERRY ENGINEERS INC	TO3 CAPITAL IMPVMNT PLANNI	SEWER FUND	SEWER		6,740.00
				TOTAL:	6,740.00
WV DEPT OF HEALTH & HUMAN SERVICES	FLOURIDE TEST	WATER FUND	WATER		15.00
	ALGAE BLOOM TEST	WATER FUND	WATER		280.00
	BACTERILOGICAL TEST	WATER FUND	WATER		100.00
	BACTERILOGICAL TEST	WATER FUND	WATER		120.00
	BACTERILOGICAL TEST	WATER FUND	WATER		20.00
	BACTERIOLOGICAL TEST	WATER FUND	WATER		60.00
	BACTERIOLOGICAL TEST	WATER FUND	WATER		120.00
				TOTAL:	715.00
DIGITAL ASSURANCE CERTIFICATION, LLC	DISSEMINATION SVC & STORAG	WATER FUND	WATER		1,250.00
	DISSEMINATION SVC & STORAG	SEWER FUND	SEWER		1,250.00
				TOTAL:	2,500.00
EAST MOUNTAIN HEALTH PHYSICIANS, INC	J.M. HEP A VACCINE	SEWER FUND	SEWER		128.00
	J.M. HEP B VACCINE	SEWER FUND	SEWER		92.00
				TOTAL:	220.00
ELM SHOES, INC	BOOTS	WATER FUND	WATER		2,775.13
	BOOTS	SEWER FUND	SEWER		1,594.77
				TOTAL:	4,369.90
ENCOVA INSURANCE	INSTALLMENT	WATER FUND	WATER		1,804.88
	INSTALLMENT	SEWER FUND	SEWER		1,418.12
				TOTAL:	3,223.00
EXECUTIVE EMERGENCY LIGHTING LLC	SEWER TRUCK LIGHTS & INSTA	SEWER FUND	SEWER		643.25
				TOTAL:	643.25
FIFTH THIRD BANK	PCARD 4726	WATER FUND	WATER		2,191.00-
	PCARD 4726	WATER FUND	WATER		1,310.51
	PCARD 4726	WATER FUND	WATER		455.46
	PCARD 4726	WATER FUND	WATER		866.83
	PCARD 4726	WATER FUND	WATER		803.43
	PCARD 4726	WATER FUND	WATER		387.75
	PCARD 4726	SEWER FUND	NON-DEPARTMENTAL		638.00
	PCARD 4726	SEWER FUND	SEWER		2,191.00-
	PCARD 4726	SEWER FUND	SEWER		1,104.58
	PCARD 4726	SEWER FUND	SEWER		2,383.21
	PCARD 4726	SEWER FUND	SEWER		135.36
	PCARD 4726	SEWER FUND	SEWER		963.74
	PCARD 4726	SEWER FUND	SEWER		32.90
	PCARD 4726	SEWER FUND	SEWER		1,634.96
				TOTAL:	6,334.73
TRAFFIC CONTROL SVCS, LLC	FLAGGERS FOR WASHINGTON ST	SEWER FUND	SEWER		3,735.15
				TOTAL:	3,735.15
FREDERICKTOWNE LABS INC	TESTING: FECAL ONLY	SEWER FUND	SEWER		50.00

VENDOR SORT KEY	DESCRIPTION	FUND	DEPARTMENT	AMOUNT
AMERIGAS	TANK RENTAL: FLWNG SPRG	SEWER FUND	SEWER	113.30
			TOTAL:	113.30
APPLE VALLEY TIRE	SEWER TRUCK REPAIR PATCH	SEWER FUND	SEWER	28.25
			TOTAL:	28.25
BIEDLER'S ELECTRIC MOTOR REPAIR, INC.	TUSCAWILLA: FOR MOTOR ONSC	SEWER FUND	SEWER	689.63
			TOTAL:	689.63
JP & RF BURNS PARTNERSHIP	OCT LOADS - 31	SEWER FUND	SEWER	5,549.00
			TOTAL:	5,549.00
CEDARCHEM, LLC	2,000G CEDARCLEAR 1757	WATER FUND	WATER	9,750.40
			TOTAL:	9,750.40
CEM	SAMPLE PADS	SEWER FUND	SEWER	176.53
			TOTAL:	176.53
CHARLES TOWN SEWER	OCTOBER FUNDING	SEWER FUND	NON-DEPARTMENTAL	13,246.95
			TOTAL:	13,246.95
CHARLES TOWN UTILITY BOARD	OCTOBER FUNDING	WATER FUND	NON-DEPARTMENTAL	9,669.59
	WATER OCTOBER FUNDING	WATER FUND	NON-DEPARTMENTAL	14,491.57
			TOTAL:	24,161.16
CHARLES TOWN WATER	OCTOBER FUNDING	WATER FUND	NON-DEPARTMENTAL	9,660.71
			TOTAL:	9,660.71
CITY NATIONAL BANK	LOCKBOX SERVICES: OCT	WATER FUND	WATER	1,647.09
	LOCKBOX SERVICES: OCT	WATER FUND	WATER	714.04
	LOCKBOX SERVICES: OCT	SEWER FUND	SEWER	1,647.09
	LOCKBOX SERVICES: OCT	SEWER FUND	SEWER	714.04
			TOTAL:	4,722.26
CLIFFS CLEANING SERVICE	OCT CLEANING	WATER FUND	WATER	125.00
	OCT CLEANING	WATER FUND	WATER	365.00
	OCT CLEANING	SEWER FUND	SEWER	200.00
	OCT CLEANING	SEWER FUND	SEWER	100.00
	OCT CLEANING	SEWER FUND	SEWER	365.00
			TOTAL:	1,155.00
COMCAST BUSINESS	8299 31 008 0138502	WATER FUND	WATER	115.98
	8299 31 008 0138502	SEWER FUND	SEWER	115.97
			TOTAL:	231.95
COMPRESSED AIR SERVICES, INC.	CMPRSR SVC LBR, CHMPN TMR	WATER FUND	WATER	458.40
			TOTAL:	458.40
CORE & MAIN	GASKET, CLNOUT	WATER FUND	WATER	58.16
	WAREHOUSE SEWER FITTINGS	SEWER FUND	SEWER	2,911.66
			TOTAL:	2,969.82
COYNE CHEMICAL	CP837,AMMNMSLFT40%NSF,HYRD	WATER FUND	WATER	4,972.42
	CESPACL 2000&2040, MICRO C	SEWER FUND	SEWER	7,918.82
	ZETAG 8868FS	SEWER FUND	SEWER	7,933.09
			TOTAL:	20,824.33