

STATE OF CONNECTICUT CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051 Phone: (860) 827-2935 Fax: (860) 827-2950 E-Mail: siting.council@ct.gov Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

September 21, 2023

Kenneth C. Baldwin, Esq. Robinson & Cole LLP 280 Trumbull Street Hartford, CT 06103-3597 kbaldwin@rc.com

RE: **TS-VER-011-230505** - Cellco Partnership d/b/a Verizon Wireless request for an order to approve tower sharing at an existing telecommunications facility located at 7A Old Windsor Road,

Bloomfield, Connecticut. Request for Project Change.

Dear Attorney Baldwin:

The Connecticut Siting Council (Council) is in receipt of the correspondence dated September 20, 2023 regarding a project change for the above-referenced tower share request approved by the Council on August 17, 2023.

Pursuant to Condition No. 1 of the Council's August 17, 2023 tower share approval, the request to install three model MT6413-77A antennas, three model RF4461d-13A RRH's and three model RT4423-48A RRH's due to the unavailability of the originally approved antenna and RRH models, is hereby approved.

This approval applies only to the project change referenced in the correspondence dated September 20, 2023.

Please be advised that deviations from the standards established by the Council in the tower share approval are enforceable under the provisions of Connecticut General Statutes §16-50u.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman Executive Director

MiliaBal

MAB/ANM/lm

c: The Honorable Danielle Wong, Mayor, Town of Bloomfield (dwong@bloomfieldct.org) Philip Schenck, Acting Town Manager, Town of Bloomfield (pschenck@bloomfieldct.org)

Robinson+Cole

KENNETH C. BALDWIN

280 Trumbull Street Hartford, CT 06103-3597 Main (860) 275-8200 Fax (860) 275-8299 kbaldwin@rc.com Direct (860) 275-8345

Also admitted in Massachusetts and New York

September 20, 2023

Melanie A. Bachman, Esq. Executive Director/Staff Attorney Connecticut Siting Council 10 Franklin Square New Britain, CT 06051

Re: TS-VER-011-230505 - Cellco Partnership d/b/a Verizon Wireless - 7A Old Windsor

Road, Bloomfield, Connecticut

Request for Staff Approval of Minor Changes for Equipment Modifications

Dear Attorney Bachman:

On May 25, 2023, the Siting Council approved the above referenced tower share filing permitting Cellco Partnership d/b/a Verizon Wireless to share an existing telecommunications facility located at 7A Old Windsor Road in Bloomfield. Since receiving that approval, Cellco has decided to change certain antenna and remote radio head ("RRH") models and seeks staff approval for these changes.

In lieu of three (3) model MT6407-77A antennas, Cellco will install three (3) model MT6413-77A antennas. Likewise, in lieu three (3) model RF4440d-13A RRHs and three (3) model RF4401-48A RRHs, Cellco will install three (3) RF4461d-13A RRHs and three (3) RT4423-48A RRHs. All new equipment will be installed on Cellco's antenna mounting system.

Enclosed is a revised Structural Analysis Report, a revised Structural Analysis & Design Report (Mount Analysis), an updated set of project plans, and specifications for the new antennas and RRHs Cellco intends to install. Cellco respectfully requests staff approval of these minor equipment modifications.

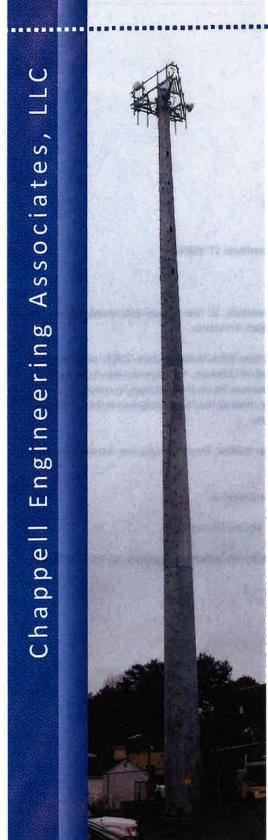
Please contact me if you have any questions regarding this proposal.

Sincerely,

Kenneth C. Baldwin

Kunie BMM-

Attachments
Copy: Tim Parks



verizon /

Tower Structural Analysis

Verizon New Site Build

Structural Analysis Report

Site Name: Bloomfield 5 CT

Address:

7A Old Windsor Road Bloomfield, CT 06002

September 12, 2023 (Revision 3)





September 12, 2023

Verizon✓
20 Alexander Drive, 2nd Floor
Wallingford, CT 06492

Reference: Tower Data: Build Date: **Tower Structural Analysis** 149ft Valmont Monopole

2021

Tower Address:

7A Old Windsor Road, Bloomfield, CT 06002

Dear Sirs:

Chappell Engineering Associates, LLC has performed a structural analysis of the above-referenced tower to evaluate the effect of the proposed **Verizon New Site Build** on the subject structure.

This analysis has been performed in accordance with the 2022 Connecticut State Building Code (2021 International Building Code) with Connecticut Amendments based upon a wind speed of 135mph. A structure class II (Structures that due to height, use or location represent a substantial hazard to human life and/or damage to property in the event of failure and/or used for services that may be provided by other means) has been assigned to the structure. The tower has been modeled as being located in an exposure B category.

The proposed Verizon antenna configuration is detailed on the Lease Exhibit Drawings and are included in this structural report.

Based on the results of the analysis, it has been determined that the structure is:

Structurally Acceptable – Tower Rating: 42.9% (Baseplate)

The antenna tower is structurally able to withstand the proposed cellular equipment installation as detailed in the lease exhibit drawings provided.

If you have any questions, please do not hesitate to call.

Very truly yours,

CHAPPELL ENGINEERING

Clement J. Salek, P.E.

TABLE OF CONTENTS

Introduction		
Tower Information		
Analysis Criteria		 1
Analysis Results	***********	 3
Conclusions and Recommendations		 4
Limitations		 4
Appendices:		
Appendix A – Site Location Map		
Appendix B – Proposed Antenna Plan		
Appendix C – Calculations		
Appendix D – Photos		

Introduction

The subject tower has been modeled using tnxTower software developed by Tower Numerics, Inc. tnxTower is a general-purpose modeling, analysis, and design program created specifically for the analysis and design of communication towers using the TIA-222-H Standard, as well as any of the previous TIA/EIA Standards back to RS-222 (1959). Steel design is checked using the AISC ASD 9th Edition or the AISC LRFD Specifications.

This particular tower analysis has been performed by Chappell Engineering Associates, LLC to determine the structural capacity of the tower under the current *TIA-222-H* Standard given the proposed antenna loading detailed in this report.

Tower Information

	SOURCE	INFORMATION
Structure	Valmont	Valmont Structures dated 06-08-2021 Engineering File Number 468082
Foundation	Valmont	Valmont Structures dated 06-08-2021 Engineering File Number 468082
Current Inventory	Chappell Engineering Associates	Site Visit 01-23-2023
Proposed Condition	Verizon	Proposed Antenna Configuration Sheets

Analysis Criteria

Table 1: Antenna Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert	Azimuth Adjustment	Placement		C _A A _A Front	CAAA Side	Weight
			ft		ft		ft²	ft²	K
12' Dipole Antenna	С	None		0.0000	156.00	No Ice	2.25	2.25	0.04
						1/2" Ice	3.94	3.94	0.06
						1" lce	5.63	5.63	0.08
						2" Ice	9.01	9.01	0.12
Lightning Rod	С	None		0.0000	153.00	No Ice	0.38	0.38	0.01
						1/2" Ice	0.99	0.99	0.01
				1 1		1" lce	1.60	1.60	0.01
						2" Ice	2.82	2.82	0.01
PiROD 15' Platform with	С	None		0.0000	147.50	No Ice	33.80	33.80	2.04
handrail				1		1/2" ice	43.60	43.60	2.75
						1" Ice	53.40	53.40	3.45
						2" Ice	73.00	73.00	4.86
Universal Ring Mount	C	None		0.0000	143.50	No Ice	2.50	2.50	0.42
						1/2" lce	3.00	3.00	0.60
				1		1" lce	3.50	3.50	0.78
						2" lce	4.50	4.50	1.14
PiROD 15' Platform with	С	None		0.0000	137.00	No Ice	33.80	33.80	2.04
handrail			l.			1/2" lce	43.60	43.60	2.75
-						1" Ice	53.40	53.40	3.45
						2" lce	73.00	73.00	4.86

Description	Face or	Offset Type	Offsets: Horz	Azimuth Adjustment	Placement		GAA Front	C _A A _A Side	Weight
	Leg	TaxVel	Lateral Vert ft		ft		ft²	∫ft²	К
Universal Ring Mount	С	None		0.0000	133.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.50 3.00 3.50 4.50	2.50 3.00 3.50 4.50	0.42 0.60 0.78 1.14
Commscope NHH-65B-R2B	А	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.44 5.94 6.47 7.57	0.05 0.10 0.16 0.30
Commscope NHHSS-65B-R2B- R2BT4	Α	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.34 5.79 6.26 7.20	0.05 0.10 0.16 0.29
Samsung MT6413-77A	А	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.81 4.06 4.32 4.86	1.46 1.65 1.84 2.26	0.06 0.08 0.11 0.18
Commscope NHH-65B-R2B	В	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.44 5.94 6.47 7.57	0.05 0.10 0.16 0.30
Commscope NHHSS-65B-R2B- R2BT4	В	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.34 5.79 6.26 7.20	0.05 0.10 0.16 0.29
Samsung MT6413-77A	В	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.81 4.06 4.32 4.86	1.46 1.65 1.84 2.26	0.06 0.08 0.11 0.18
Commscope NHH-65B-R2B	С	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.44 5.94 6.47 7.57	0.05 0.10 0.16 0.30
Commscope NHHSS-65B-R2B- R2BT4	С	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	8.08 8.53 9.00 9.95	5.34 5.79 6.26 7.20	0.05 0.10 0.16 0.29
Samsung MT6413-77A	С	From Face	3.00 0.00 0.00	0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	3.81 4.06 4.32 4.86	1.46 1.65 1.84 2.26	0.06 0.08 0.11 0.18
(3) Samsung RF4461d-13A	С	None		0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	1,88 2.05 2.22 2.60	1.27 1.42 1.57 1.89	0.08 0.10 0.12 0.17
(3) Samsung RF4439d-25A B25/B66A	С	None		0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	1.88 2.05 2.22 2.60	1.25 1.39 1.54 1.86	0.08 0.09 0.11 0.17
(3) Samsung RT4423-48A	С	None		0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	0.86 0.97 1.10 1.37	0.42 0.51 0.61 0.83	0.02 0.03 0.04 0.06
Rayco Fiber Junction Box	С	None		0.0000	137.00	No Ice 1/2" Ice 1" Ice 2" Ice	2.51 2.71 2.91 3.35	1.97 2.15 2.33 2.73	0.03 0.05 0.08 0.15

Table 2: Dish Antenna Loads

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral Vert ft	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter ft		Aperture Area	Weight K
2.5' Dish w/Radome	A	Paraboloid w/Radome	From Face	4.00 4.00 0.00	Worst		148.00	2.50	No ice 1/2" ice 1" ice 2" ice	4.91 5.24 5.57 6.24	0.05 0.08 0.10 0.16
2.5' Dish w/Radome	С	Paraboloid w/Radome	From Face	4.00 6.00 0.00	Worst		148.00	2.50	No ice 1/2" ice 1" ice 2" ice	4.91 5.24 5.57 6.24	0.05 0.08 0.10 0.16

Analysis Results

Section No.	Elevation ft	Component Type	Size	P K	#Pattow K	% Capacity	Pass Fail
L1	149 - 103	Pole	TP42.34x27.5x0.25	-11.72	1871.44	21.6	Pass
L2	103 - 78.9	Pole	TP49.4x40.0657x0.313	-16.67	2733.69	23.8	Pass
L3	78.9 - 39.32	Pole	TP63.1x46.7242x0.375	-28.05	4169.56	25.6	Pass
L4	39.32 - 0	Pole	TP73x59.507x0.438	-48.55	5901.28	28.1	Pass

The following table summarizes the foundation capacity analysis:

LOAD	ORIGINAL DESIGN FOUNDATION LOADS	PROPOSED FOUNDATION LOADS	FACTOR OF SAFETY	PASS/FAII
Overturning (ft-k)	5,699.8 ft-k	2,512 ft-k	2.3	Pass
Shear (k)	52.9 k	28.0 k	1.8	Pass

Conclusions and Recommendations

Under the proposed loading considered in the analysis, the existing structure is rated at 42.9% (Baseplate). As such, it conforms to the loading criteria set forth in the IBC/TIA-222 Rev H.

Limitations

Any future modifications made to the structure or to the listed appurtenances for which Chappell Engineering was not made aware of shall invalidate this report. Modifications made to the structure which have occurred after the date of this analysis shall invalidate this report. Modifications include (but are not limited to):

- 1. The addition of or reconfiguration of antennas or other appurtenances
- 2. The addition of or reconfiguration of coax cables or other feed lines
- 3. Modifications to the structure
- 4. Local damage or structural deficiencies not specifically identified in this report



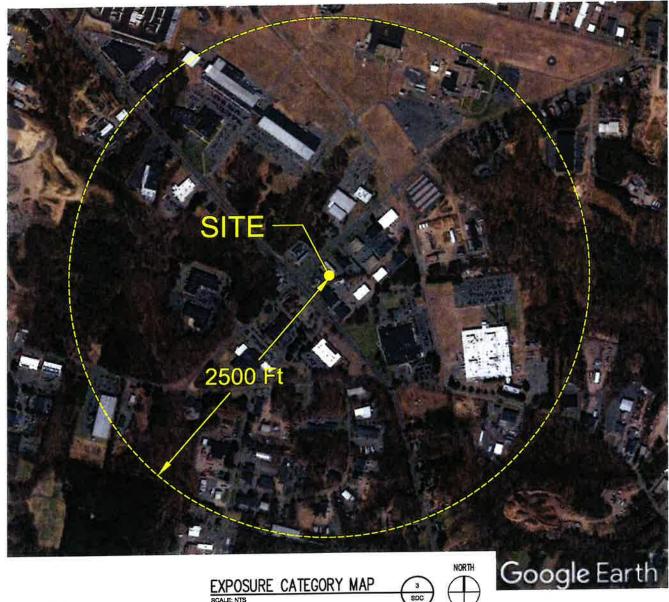
201 BOSTON POST ROAD WEST MARLBOROUGH, MA 01752 P. (508) 481-7400 F. (508) 481-7406 www.chappellengineering.com TITLE: 7A Old Windsor Rd, Bloomfield, CT 06002

PROJECT #: Bloomfield 5 CT New Site Build (96210.413)

DATE: March 14, 2023 BY: CJS

CHK: JMF





2.6.5 EXPOSURE CATEGORIES

2.6.5.1 GENERAL

AN EXPOSURE CATEGORY THAT ADEQUATELY REFLECTS THE CHARACTERISTICS OF GROUND SURFACE IRREGULARITIES AT THE SITE SHALL BE DETERMINED. ACCOUNT SHALL BE TAKEN OF VARIATIONS IN GROUND SURFACE ROUGHNESS THAT ARISE FROM NATURAL TOPOGRAPHY AND VEGETATION AS WELL AS FROM CONSTRUCTED FEATURES. THE EXPOSURE CATEGORY FOR A STRUCTURE SHALL BE ASSESSED AS BEING ONE OF THE FOLLOWING:

- 1. EXPOSURE B: URBAN AND SUBURBAN AREAS, WOODED AREAS, OR OTHER TERRAIN WITH NUMEROUS CLOSELY SPACED OBSTRUCTIONS HAVING THE SIZE OF SINGLE-FAMILY DWELLINGS OR LARGER. USE OF THIS EXPOSURE SHALL BE LIMITED TO THOSE AREAS FOR WHICH TERRAIN REPRESENTATIVE OF EXPOSURE B SURROUNDS THE STRUCTURE IN ALL DIRECTIONS FOR A DISTANCE OF AT LEAST 2,630 FT (800 M) OR TEN TIMES THE HEIGHT OF THE STRUCTURE, WHICHEVER IS GREATER.
- EXPOSURE C: OPEN TERRAIN WITH SCATTERED OBSTRUCTIONS HAVING HEIGHTS GENERALLY LESS THAN 30 FT [9.1 M]. THIS CATEGORY INCLUDES FLAT, OPEN COUNTRY, GRASSLANDS AND SHORELINES IN HURRICANE PRONE REGIONS.
- 3. EXPOSURE D; FLAT, UNOBSTRUCTED SHORELINES EXPOSED TO WIND FLOWING OVER OPEN WATER (EXCLUDING SHORELINES IN HURRICANE PRONE REGIONS) FOR A DISTANCE OF AT LEAST 1 MILE [1.61 KM]. SHORELINES IN EXPOSURE D INCLUDE INLAND WATERWAYS, LAKES AND NON-HURRICANE COASTAL AREAS. EXPOSURE D EXTENDS INLAND A DISTANCE OF 680 FT [200 M] OR TEN TIMES THE HEIGHT OF THE STRUCTURE, WHICHEVER IS GREATER. SMOOTH MUD FLATS, SALT FLATS AND OTHER SIMILAR TERRAIN SHALL BE CONSIDERED AS EXPOSURE D.

2.6.6.2 TOPOGRAPHIC CATEGORIES

THE TOPOGRAPHIC CATEGORY FOR A STRUCTURE SHALL BE ASSESSED AS BEING ONE OF THE FOLLOWING:

CATEGORY 1: NO ABRUPT CHANGES IN GENERAL TOPOGRAPHY, E.G. FLAT OR ROLLING TERRAIN, NO WIND SPEED-UP CONSIDERATION SHALL BE REQUIRED.

CATEGORY 2: STRUCTURES LOCATED AT OR NEAR THE CREST OF AN ESCARPMENT. WIND SPEED-UP SHALL BE CONSIDERED TO OCCUR IN ALL DIRECTIONS. STRUCTURES LOCATED VERTICALLY ON THE LOWER HALF OF AN ESCARPMENT OR HORIZONTALLY BEYOND 8 TIMES THE HEIGHT OF THE ESCARPMENT FROM ITS CREST, SHALL BE PERMITTED TO BE CONSIDERED AS TOPOGRAPHIC CATEGORY 1.

CATEGORY 3: STRUCTURES LOCATED IN THE UPPER HALF OF A HILL. WIND SPEED-UP SHALL BE CONSIDERED TO OCCUR IN ALL DIRECTIONS. STRUCTURES LOCATED VERTICALLY ON THE LOWERHALF OF A HILL SHALL BE PERMITTED TO BE CONSIDERED AS TOPOGRAPHIC CATEGORY 1.

CATEGORY 4: STRUCTURES LOCATED IN THE UPPER HALF OF A RIDGE. WIND SPEED-UP SHALL BE CONSIDERED TO OCCUR IN ALL DIRECTIONS. STRUCTURES LOCATED VERTICALLY ON THE LOWER HALF OF A RIDGE SHALL BE PERMITTED TO BE CONSIDERED AS TOPOGRAPHIC CATEGORY 1.

CATEGORY 5: WIND SPEED-UP CRITERIA BASED ON A SITE-SPECIFIC INVESTIGATION.

SUPPORTING DOCUMENTS

HACID FREQUENCY (IN) DESIGN DATE. 7/24/25

ANTENNA BUPPORT STRUCTURE (180 \pm MONOPOLE) STRUCTURAL ANALYSIS DATE: $\Psi(t)_{(1)}$ ANTENNA MOUNT STRUCTURAL ANALYSIS DATE: 4/12/23



20 ALEXANDER DRIVE, 2nd FLOOR, WALLINGFORD, CT 06492

ASSOCIATES, LLC

CHAPPELL

Verizon

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

PROJECT TYPE: WIRELESS TELECOMMUNICATIONS COLLOCATION ON EXISTING 150'± MONOPOLE

VICINITY MAP

SITE INFORMATION:

PANENT PANCE, CHMEN; BB NOR CONRECONSE	GODEI GENOS CONGE (846) 28	UNIOK	CELLC (dist VI 80 ALE WALLE	NOOTE .	HARTE	AITE CONTROL, POINT: CENTR	NHOO	TAX IO PARCEL NUMBER: MAP 1	ANCHTEOT / ENGINEER ZD1 BC MARILE MARILE	EVERG 847 61 WEST (781) 4	TBLEPHONE COMPANY: VENEZ 106 TR (BOS) (
MAZI, LLO SE NORTH HARBIGON AVENUE CONGERS, NY 10620	GOOBEITAWN NETWORK SERVICES, LLC OB NORTH HARRIBON AVENUE CONGERS, NY 10820 (846) 288-7800	UNIGHOMAN	CELLCO PARTNERSHIP (dex VENZON WREE EAS) 20 ALEXANDER DRIVE, SNG FLOOR WALLINGFORD, CT 09462	7A OLD WINDSOR, ROAD BLOOMFHELD, OT DRIVE	HARTFORD COUNTY, CT	CENTER OF EDSTING MONOPOLE N 41° B1°19 DET (41 MENHT) (NAD 125) W TENNEN (71.704717) (NAD 127)	CONNECTICUT BITMIG COUNCIL.	MAP 18 BLOCK 68	CHAPPEL ENGINEERING ASSOCIATES, LLC 201 BOSTON FOST ROAD WEST, BUTTE 101 MARLEOROUGH, MA 01722	EVENGOUNCE ENERGY 847 BTATION DIEVE, 9E 210 WESTWOOD, MA CADAD (781) 441-2810	NCENTRALION BITRET BOSTON, MA 02107 (800) 941-9800

GENERAL NOTES



BCALE: 1"=1000"

DRIVING DIRECTIONS

FIDM WALLWAROND, TAYCHAN NORTH, TAYC BOT 57 FOR OT-SWARLCOWFELD AVENUE TOWARD WANDOR CENTER. URE LETT 2 LANSE TO TURN LEFT CATTO GT-300 W/RUCOMPELD AVENUE. THE SITE WILL BE CAN THE LEFT HAND SIDE.

SHEET INDEX

ENGINEER/JAND SURVEYOR

DWG.	DESCRIPTION	HEV.
ē	TIME BREET	•
GWEH	GENERAL MOTES	*
1 00	PHOPERITY PLAN	•
701	MONOPOLE YORNITY PLAN	•
90	BOUPWENT APEA PLAN & DETANS	
904	SOUTHEAST ATTE ELEVATION	*
100	ICE SHEED FRANKES PLANE STRUCTURAL CETALS	*
101	ANTENNA MOUNTING PLAN AND DETALS	٠
HELE	ANTENN DETAILS AND ANCALLARY EDISPARAT INSCRINING	•
2	IF BLL OF MATERIALS AND IF CARLE PLANTING DAGGAM	•
104	HE COLOR CODE SPECIFICATIONS	•
ē	PLIMINING NOTES AND BCHEMATIC	•
2	STTE PLIMINES PLAN	•
ā	ELECTRICAL (PEC)FICATIONS AND NOTES	•
2	STTE UTILITY PLAN & DETAILS	•
HIEA	MONOPOLE WONITY UTILITY PLAN & DETALS	*
9	ELECTRICAL DIVISIONES & CETALS	•
ă	SCHEMATIC GROUNDING PLAN & DETAILS	*
909	CANDUNISMS DETAILS	•

DO NOT SCALE DRAWINGS

TITLESHEET

BLOOMFIELD 5 CT 7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

PROJECT DESCRIPTION

T01



L. FOR THE FADOUG OF CONTINUENCE DIFFINISHING FOR THE PRICE ODINATION - VILLOW BELLES.

SADAMINION - LORDIN, CONTINUENCE (OPERATION)

ORIGINATION - VILLOW WANTER WITH CONTINUENCE OF CONT

A. AL MITTALS FRANKED AND METALLIS SHALL BY IN STREET ACCORDANCE WITH ALL AMPLICACE, COCCE, RESULTIONS, ON COMMISSION SALVOMENTS AND COUNTY WITH ALL LANGE COMMISSION SHALL SH , all state cares out sail courty sen all apricate leaster, and uplity colferny systematics. And local senseting ferentiating. From to the distinction of that the global discontribution ship, ver the cold stift to fundation ship. The discontribution of some discontributions are no common to the discontribution of some discontributions of some of the contribution discontribution of the contribution discontribution of the discontribution of contribution.

, Limichi antio opposite, Tie done somi delege perdanen unterva, dolpradi, affated Rossiony to complete all bestudde as desposit on the dolbrods. D HERE ME HAT TO BE BOXED AND ME ANDRED TO SHOP CORDE ONLY.

7, TRE SUCCEMBROTON SWILL PETRUL ALL ENEMBER AND METONIS IN ACCOMMENDE WITH INMERCENCES SCREENINGS. STREET OFFERENCES.

s, amadofiniotra sivil, detranse adulu, noutro of comunt, rader and oblide, gardadora challes as suprim On the forms, groupers, and tild of the remore, describerche field, under demark and sandor sevel, and The trips of all describerts, associations and, coveral the active, forms with the community. ng, the supportmentan swill from a deposit brokenta, nyambats, carra, carrayang and structures, and design from swill be resource to the section of the carray. orioni esta proposi fino te enema finologi depende proposi sumo enemas such as comens comens comens Pros proposituatos sumo termeny ad proposity deponso for el scomp meterale such as comens comens comens Estados L F. THE SPECIFIED INJURIENT CHEMPIES AS SHOWN ON THESE DANSMES, THE SUBSEMPLIEN SHALL Royale an Alternative Destruction for Afford, in the lightingside.

MICHAEL SPALL LEME PREMEES IN CAEMI CONCIDEN

1. Companyon shall coppy with spicon firm des natural symbolo (patrice) to the busined despited feveral sharp profit feveral sharp prof NECONTRACTOR SHALL NETHY OWNERS, DESCRIPTION ACCOUNTS, LLC. 48 HOURS IN ADMINES OF POLYMEN CONTRACTOR. MINING THE SECOND HOUSE SECOND FOR SHALL PRESENCE AS A POST TO DRIVER. PRESENCE FOR SHALL FOR SHALL S 1.1 NF, SACKHWAND SHILL SPETMER, AND ENCET THE PROJECT CECONICS HENCY, HE SUMMERCINE SHILL RE NALLY RECORDED TON ALL CONTINUENT MINING AND ALTHOUGH FOR ACCOUNTS, NO PROCESSERY FOR CONTINUENDE ALL PRINTED OF THE WAY WHEN THE CONTINUE.

SERDATIVICAR BALL VOOTY ALL DERRING DADGEORS AND COMBINDE PRIOR TO COMBINESS ANY WORK, ALL DERRING OF THE COMPLEX SECURITY SECURITY SECURITY THE WORLY THE WINNESS OF A PRINCIPLE SHALL WORLY THE WORLY OF ANY OF AN TO THE COMMENT OF THE REPORT OF THE PROPERTY AND COMMENTS THE OFFICE OF THE PROPERTY OF THE PR

NOTE THE COLL WIS OF ACTIVE, ALL WHOTP PRESENTING HAND WERN WITHOUT AND ACTIVE OF THE OFFICE OF THE COLL OFFICE OF THE COLL OFFICE OFFI

STE WORK CENERAL MOTES.

MINISTER SHALL CONTACT UTILITY LOCATING SCONGES 1950N TO THE START OF CONSTITUTION

A ALL DRIVER ARMS, SERVE WITH DAY OF BLITTING WEST FORWARDD IN THE WING PROFILE ARE IN THE THROUGH OF A SERVE IN THROUGH ON THE WIND PROFILE ARE IN THROUGH OF A SERVE IN THROUGH ON THE WIND PROFILE ARE IN THROUGH ON THROUGH O LALL STE FOR SHALL IE AN INDURED ON THE DAMMES AND PROJECT SPECIFICAL

A F MEDINANT, RUMEN STUARS, SCHOOL, STORES AND OTHER WILLIAM SEWEL BE MEMORING THE SEE AND ADDRESS OF LEGISLY.

e, no file og gjandarot watna, smal de placo) om procem orzupo, prozen datomus, socie or se smal not e naco di mat or edispundat. A THE BITE SHALL BE GINGO TO GAISE NUMBER WITH TO THE MAY FIRM THE BIT CAMPAINT AND TOWN AND IS. A GROWN THE SAME THE COMPANIES AND UNIQUEST TO A GROWN WRITTEN CHARLE THOSE TO PRESENCE SAMPLE. A, ALI DATING MACINE, STEEN, MATER, GAÉ, ELECTRO, AND CHAFFEL MACINE, MACINEMENT STEEN THE DESCRIPTION OF THE NEWS, ENALL DE EXEMPLE AND CHAFFEL MACINE ON CHAPPER. DOCUMENTS OF THEM STANDARD MACINE THE THEM THE WITH DE EXEMPLE OF THE WAYS, SAFECT OF THE MYNOWLY OF EMPRESSIONS, OWERS MACINE, TOOL UTILISES.

O, SERDATHOURS SHALL MARKE DRITHOWNER. TO DESTING SET DAWN COMMUNITION, CHEMIN CONTINUED AND SERVERS. IF TRANSMEN MARKEN COMMUNICATION, SHALL BE IN CONTINUED FOR EXCENSIVE TORS PRODUCE AND SERVERS. II. NE SHOOMINGOOK SMUL FICHIEG SIE SOWGE IN KOOMINGE WIN 'NE VEILOM WIELES SPLEFICOOM FOM SIE L. THE APPA OF THE CHRONE PREVENT CONTINUED OF THE WORK AROUND CONTINUES CONTROL CONTR

CONTRETE_AND REDIFFORCED STEEL NOTES. TO CONCERT WIRE SHE HE ACCOUNTED. SEELAND CONCERT WIRE SHE TO CONTRETE THE TAKE CONSTITUTED AND AND AND THE TOPICAL HE HE TO CONTRETE THE TAKE CONSTITUTED. SEELAND CONTRETE WIRE SHE TO CONTRETE THE TAKE CONSTITUTED.

2. AL CONCRETE SPALL HAVE A MARMAIN COMPRESSATE STREAMTH OF 3020 PGS AT 251 BAYS, UNLESS MOTED OFFICIENCE, A COMPRESSENT STREAM HAVE AT UNEX. ALL CONCRETE FROM DRIVEL DE DI ACCOUNTING WITH THE ALL 381 COME TO COMPRESSENTS.

, NEWTONES STEEL SHALL CONTINUE THAN A RELL CHANCE BY COTTONED UNIXES HOTOCOMPUNE. WELDO BUT THANK HALL CONTINUE AND A RELLE SHELLOS STEEL WAS FAIRD WALDS HOTOCOMPUNE. SPLICES SHALL BY CLAUS TO AND ALL WEST SHALL BY SHAVING, HOTO THE FOLLOWING MARKIN CONCILE COVER SWILL IN PROPERTY FOR INDIVIDUAL STEEL LINESS SHOWN ONSTANDED ON

TOTAL TOTA ANNONE TOTAL ANNO TOTAL AND TOTAL AN

A DIWITCH NE SHALL BE PROKED AF ALL DIFORDS GOODS OF CONCRETE, UNQ, IN ACCORDANCE WITH AC 301 SECTION 4.2.4. NA RELIGIORS OF COUNTED CONNECTON WICK AND WASHINGTON TO WASHINGTON WITH RECOMBINED MICHAEL NE MODE ROLL CORLE OR DO WILL CORNEY DE MICHAEL TO RECOGNISHED FOR THE OWNER THE PARK REPORTE, OR MAN POLI. & C.O. TRAZE DEPORTED PROCESS. THE PRESENCE OF THE PRESENCE OF THE PROCESS. TO STATE AND THE STATE OF THE PROCESS. THE PROCESS OF WASHINGTON AND THE TOWNS OF THE PROCESS. THE PROCESS OF WASHINGTON AND THE TOWNS OF THE PROCESS.

A COMMENT COLOREST TOTO IN ANY RESIDENCE FOR A SHOW IN HOUSE THE BUILD THE WASHINGTON THE COUNTRY BATHLING. THE RESIDENCE WASHINGTON THE COUNTRY CHANGED IN THE COUNTRY BATHLING. THE RESIDENCE CHANGED THE PRESIDENCE AND THE SHOW THE COUNTRY WASHINGTON THE PRESIDENCE AND THE SHOW THE COUNTRY WASHINGTON WASHINGTON THE COUNTRY WASHINGTON WASHINGTON THE COUNTRY WASHINGT

, AL AN ALDINANE TO REA 7, TOT DAMODES SHALL RETRIED WITHLY AND THEREPTER FOR EACH NO YAPUR OF TAXABLE FINAL FACE SCHOOL SPECIFIED WITH FACE. n, southern swill, not be placed on Not than the 2004 bits first the impairs, unless it is verified of places that compresse establish his box at 1860.

STRUCTURM, STEEL MOTES:

I. A. TILL WAY SHELL RANDO ON GANGOON ALCOHOLICEN THE HE REMOVED THE SHELL WAS THE PROPERTY OF SHELL WAS THE SHELL WITH SHELL WAS THE SHE WAS THE SHELL WAS

2, AL NIZHE SHAL NI PRIVOND UMB (2000 ELEMBOR) AN WEIDNE SHALL ORDTON TO AND AN AND MIT, WENE That hall so shall she for sense, from the man ass you must all the the "mone, of stell commodish" The latter, eachs sheard shell at talked us". general alter de la service service service de (A)) de service service service service service service de la servi

, how-structural connections for stall general size in " Be, ashe a sit dolls unless honds ofhere

NAME AND THE OCCUPATION OF THE PROPERTY OF THE OCCUPATION OCCUPA

CONTINUES SPILL NOW! IN CHARMES FOR EMPIRES ROLLS & APPEAR, ON PROCESS REGIONS STRUCTURE, STEEL AL STRATUM, STEL WHE SMILE OOK IN ACCOUNCE WIN ACC STERLUSSES

SOL COMPACTION NOTES FOR SLAB ON CHARGE

Chemicion Christothe M Infestral Ad Writin Cartholium of a Calaite Geoegasia, Teachom of Examidia Assemble DENATE AS REQUED TO FIELD WASHING AND TOPICE. TO ESPOSE WITHIN SOMEWOE AND PLACE CREATED STIDE AS TORRED.

A A M ATTOWNER TO TIME 2 HIGh 2 THE SAMEDICE TIES WITH IN MINERS DIE A MOTOR SETTO WHENCHET FACE COMPLETED. THE SET OF THE WEST STATE OF THE PROSEST WAS EVEN WISHOUT THE LOOP OF SETTOW THE THE PROSEST OF THE SETTOM TO THE SETTOM TH L AS AN ALTONINE TO INSPERTOR AND WITHIN CONTRICING, THE "MARCHES DAY" DIES WAS DE CONTRICION WHICH TO REPORT THE ARM IN THE WITHIN EL , CONFINED SUBJECT SHALL TRE LINETING AND LEAGUE, INCOME, IT LEAGUED CRISKED GOVER, CONFINED IN 3". FIS ABOVE CONFINED SOLL, CRINICL, SHALL RELIEVED, OR CRISKED WITH TOOK PROSECT OF SERVE.

SOMPHICTION EDUPARIE

HAS GEBATE DOUBLE DRUK, WENGEN' ROLLEN, WENTGRY FLATE COMPOUNDE OR JULIFIED JOCK COMPACTO CONSTITUTION HOUSE field werehitch Sometimes shulf feld young some of your, handay werden antibak, fuotofiel location and antibake to be Poaced.

ONEEL VALORY MOSE. ROOMENTEN SHELF GROWN NO BROTHL OWER LACOON MOSE, CHIEF THAY, AND COMBUT AN REQUIRED TO BENOOM CANES THE MESS INSTITUTE. COMMUNICATION SWILL COURSENIE IF WERE AND PROCESSURES WITH COMPLETION.

LECTRICAL RISTALLATION NOTES.

OF THE PROPERTY AND SAFFORD METHODS AND METHODS SHALL COMPAY WITH THE RESURBABITS OF THE THE I. AL CRICATS SIVIL DE SEMERARTO AND MARTINI LIBERAL CHILE SEMPORA AS REGIMED DY THE RES. AND TROPOTON.

L CHELTS SWILL NOT BE NOTTED THROUGH LIGHER-STAFE CHELE THAY REMED.

A PORT FINE CONCURRE (L. KITI) SHILL IN VINIOUS WITH COLDS COLDS TO MALENDA TO THE CONCURRENCE FOLLOWS THE COLD WITH CONCURRENCE FOLLOWS TO THE COLD WITH TH L BOIN DO OF DEEP FORMS, MINIMENS, AND IT COMMUTEN AND ONLY SHALL IN LANDED WITH COLORS-COMMUNES OF MILITARY IN THE TANK OF LYSING YOUR TOTALY. HE WAS TO AN UNITED BY OF TOTALY IN MINIMENS OF SHALL COMPUNE WITH SECOND WITH STRONG SHALL COMPUNE WITH SECOND WITH SECOND SHALL COMPUNE WITH SECOND SHALL COMP

l Pred. Idrae) (d) riameta), and https://dicht. decates (catolit d) riameta) savo, et cleary daesed The Bretted Labour Parette Daese. ALL ELEMENT CONTROLLS WIND MELLON WITH DROWNER LAWCOD PLANTS ALL WASTERN THAL RELIEFED WITH THE WASTERN WAS CONTROLLED WITH THE WASTERN WAS CONTROLLED WITH THE WASTERN WASTER

A. Prest, Contral, and Iga-Made Cadolo Were, in Tuber of Contral Shall at Seal Considered (DA) We are underly, box v, or recorded Then on Teneva, class is strength Getter code, with the to-Teneval of Contrady, lates on Legals for the Cadolog and Machine Testas (set), will be considered. A. ALL TE WINES SPALL IN CAST FALSH WITH APPROVED CASTING TOOL TO MAJOR SWAY EDUCA.

II. SEPPLEMBLIK, KOPPIOT GECLAG WENE LOCKED MODDEL SPALL JE BACZ CONDICTOR (14 MEI OT LOCKE) AND THE OT LOCKED STORY DESCRIPTION OF THE DESCRIPTION OF THE OTHER DESCRIPTION OF THE OTHER DESCRIPTION OF THE OTHER DESCRIPTION OF THE OTHER OTHE

12 SPFFLEDON, ELEMENT GALLING WIND LICKED AVENDED, OR ELLY CHAIL SPILL ET SIGLE CORDIE 15 JPF TOLD THEID CHAIL LICKER HALCH OFFICER BYTHEID.

A, ALL FORDI NO GROUNDS CONSTITUED SHALL BE CINE STALL CONFIGURAL WIS LISTS AND UNE NATE OF PROMISED AT MILE AND UNE NATE OF PROMISED AT MILE AND THE GROUN SHALL BE WRITE FOR COMPANIES AT MILE THAN THE GROUN SHALL BE WRITE FOR COMPANIES AT MILE THAN THE GROUN SHALL BE WRITE FOR COMPANIES AT MILE THAN THE GROUN SHALL BE WRITE FOR COMPANIES AT MILE THAN THE GROUN SHALL BE WRITE FOR COMPANIES AT MILE THAN THE WRITE FOR THE WRITE FOR COMPANIES AT MILE THAN THE WRITE FOR THE WRIT

7. BECHON, LEWILD THING (BIT) OR RED KNINEZILLS CORVIT (LE, RED PIC SOURILE 40, DR NED PIC POLIZILE 40, DR NED PIC POLIZILE DI PICK LIDISONE SUBCOR LIGISONE. WICHTHAM WE WEET THAY SHALL BE LESTED ON LINEARD FOR ELECTRICIAL LINE IN ACCORDANCE WITH HEIR, IN, VIEW, AND MICH. A HET MOTHER ON OME, THE SAL MOIN THE CHEMIC HETALLOTON WHOSE POSSIBLE.

14. Bestanza menuen turana (data), bestanda meneralen turan (dat), on medin memeralen ombuti (medianda). Per, schedale 40) syall en und dar omeralen bengai locariara. A CACHARTED STOLL MITCHESTARE MENULD COMBUT (NO.) SHILL BE UNTO TON CONTOUR LLOCKIONS ARON: SHICK NA, MED NOMEDLIA CONCETT DAL MED PAY SOCIALE NO UN UND PRO SOCIALE DO SAVAL DE LINES MODERNOLES DESENTANTO DE MEMO NO CONCENSA, UNIVERSE TRAFE OF DECIMED IN RESPUNDA DOCUMENT IN MATERIO DE CARNO VIOLAT PRAYES.

12. Owners, eister, and specials spall in Leite of Laber for Degreval, inc. in accompanie with Heak. "L. Ang/Pees, and Hes. 21. CONSTAT AND TUBRIO FITTINGS SHALL BE THREADED OR COMPRESSORI-THE AND APPROVED FOR THE LEGITIMS LED. SET SETS TITLINGS HER KASSPARIES. ii. Leed-traf redale world corrus (Joan-Tie Re) syll ee (1919 1900) an Coundas. Septim occus or redally & Neder).

24. OWHERS, BOXES, AND WRESHES TO MATCH THE DOTTING MEDIC POSSINE.

AL SILVERNI CHRUTA, TYRAMA, ROZEN, JASCICKH IRROZ, AND PILL EROES BANL ER GALWANDO OR Port - Lockyo 2027 (Fill 2 Mall 1627 or Dacedo L. Ca, and Mato Hoba 1 (or estrot) daganes, on heam Rosenson da Chromes THE RELEVACE, SPECIA, AND COMES SHELD CONMESSED, DOWN-COMESS, OR INSK-COPPUSSED, WHILL MET OF COLDING 14, AND ADDRESS, AND ADDRESS, OR SETTING PROCESSED, ON SERVICE OF SERVICE OF SETTING PROCESSED, OR SERVICE OF SERVICE

2. CORDINET INCURSOR ME SCHOWEN. SUBCOMMINICATOR SMALL BOEINLI COMBATIS SO THAT ACCOUNT TO EXAMPLEST IS NOT BLOCKED. 11. ALI ELEGIERAL SORI SINULI EL POPONIZO IN ADXIONAZI SIRIN TIC PROACTI GITUSTORIONI, NOI AND ALL PRIONILE LODIL CIBES. 19, the authoritycorn shall prove addressmit thans on the brough, chars was defination thats in accommand with the applicate codes was structure to betsure address for property. Nobeltale reducing, which, we cence then their of excess reday of z are interparently accord, on resures properties (as or retres) autocare. I. THE SAECHTRACION SHALL HOTELY AND GENERAL HAZZARAY ATHANIZATION FACIN THE COMPLICTOR EUTOPE MANDRICHE TOOK ON THE ACTIONER TOTHER TOTHER PRESS.

Verizon

CHAPPELL ENGINECRING ASSOCIATES, LLC

AC. DECUM. GRITTE 201 BOSTON FORD WEST SATE 101 MALEOPOORT, MA 01782 (200) 481-7400 www.chappellergicanchy.com



불 ENGREEN/LAND SURVEYOR

WHAT SCALE MOTE

AT A PART OF THE P

DATE	17/86/2	12/11/4	4/14/33	62/16/8	8/13/23	
DESCRIPTION	MOUSE FOR MONEY	NEWSON THE REPORCE BAT	AND YOU COMMITTED AND CLASS	NOMED FOR (1/34/33) INDE	NOMED FOR YON RF COMPUTA	
ğ	•		1	-	٠	

E.mi Bew's

BLOOMFIELD 5 CT

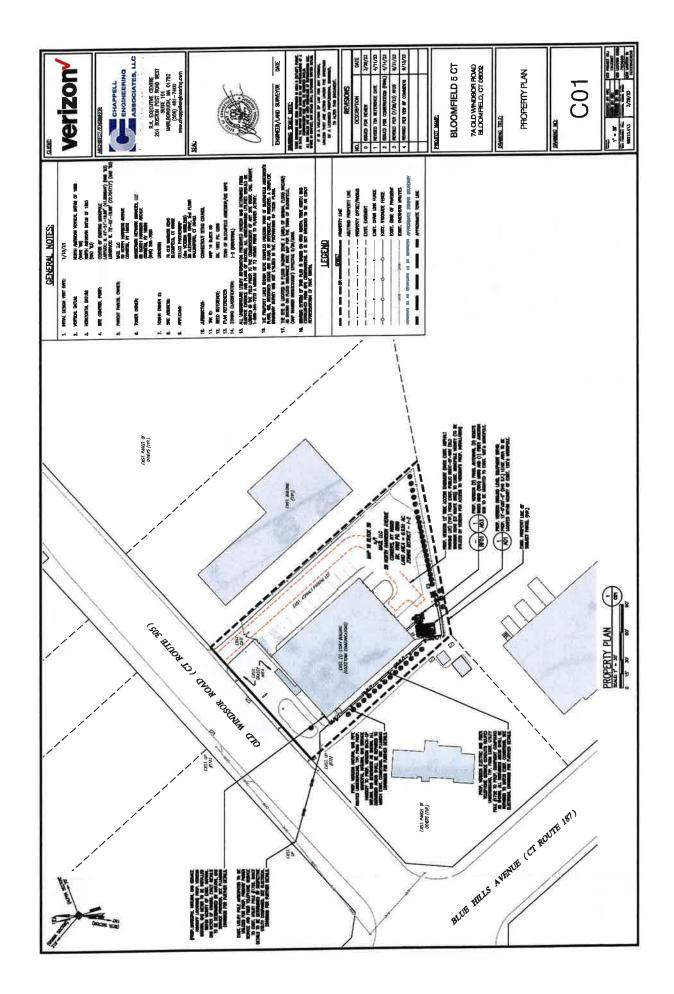
7A OLD WINDSOR FOAD BLOOMFIELD, CT 08002

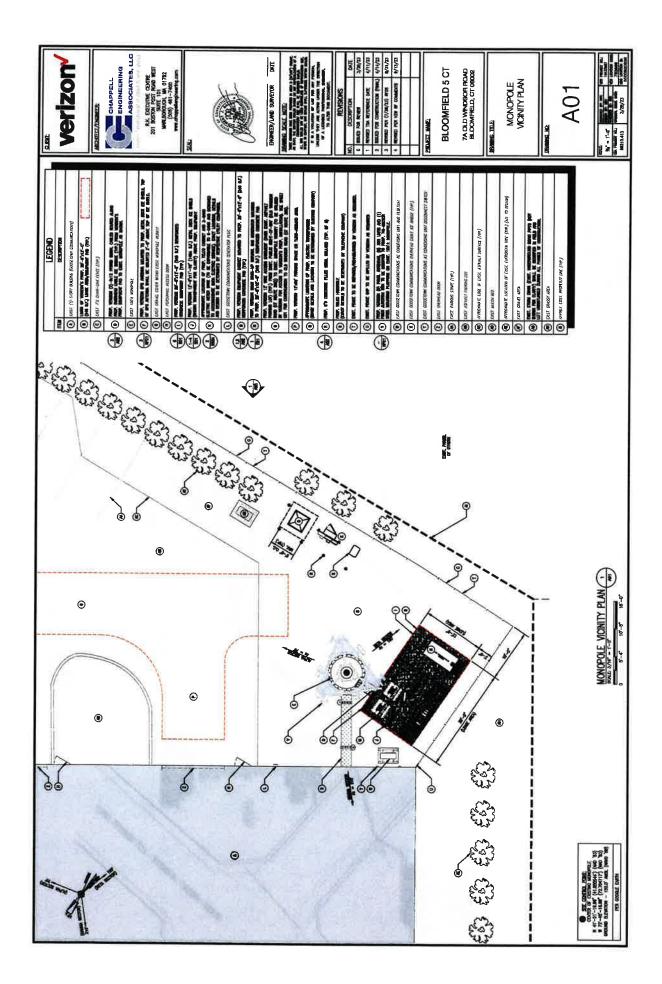
MAN DE

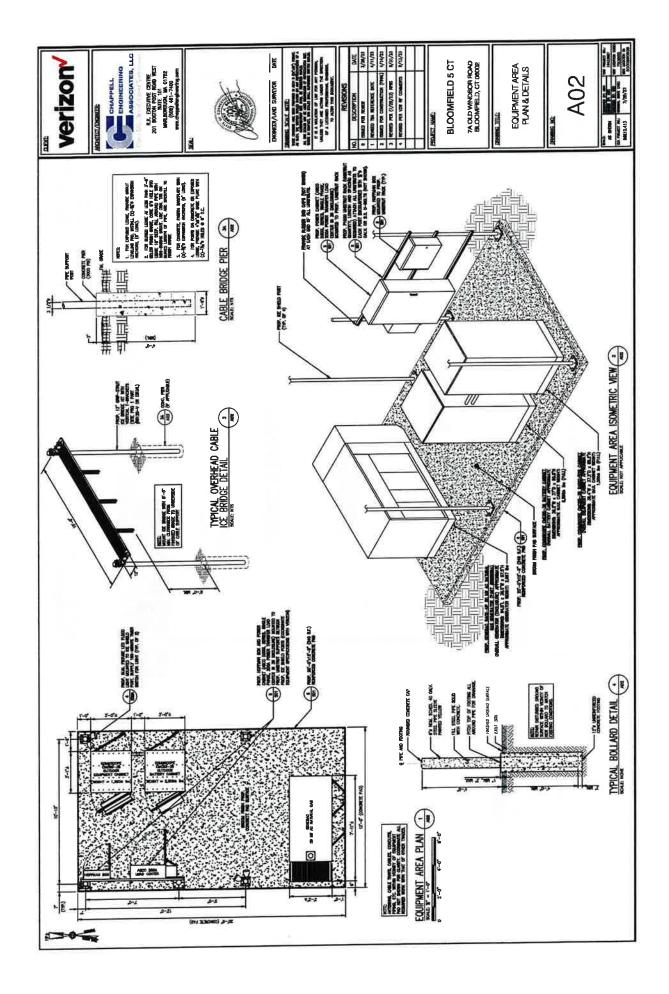
GENERAL NOTES

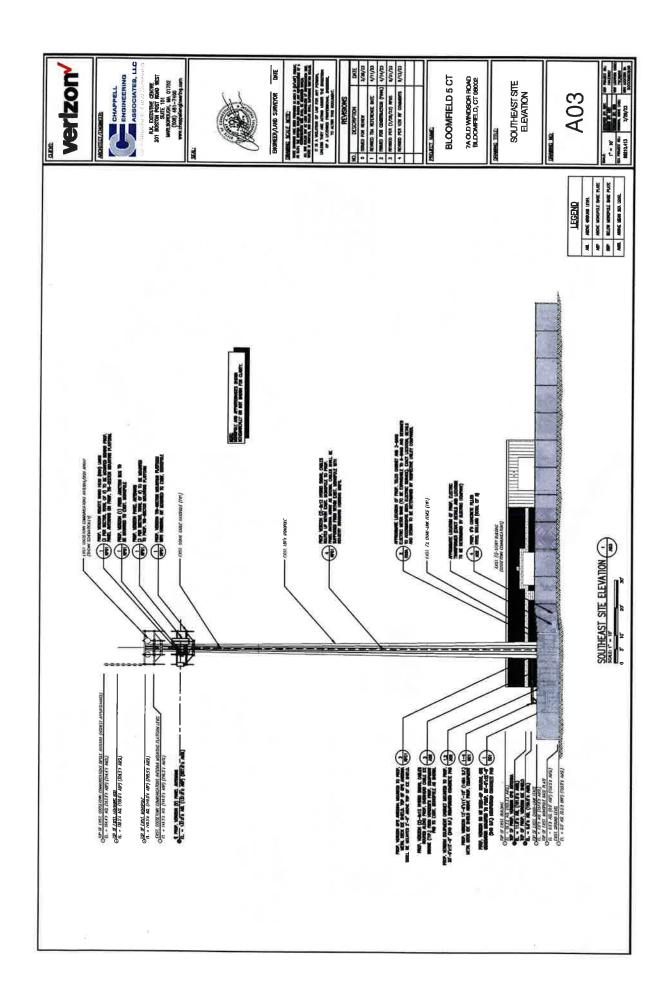
GN01

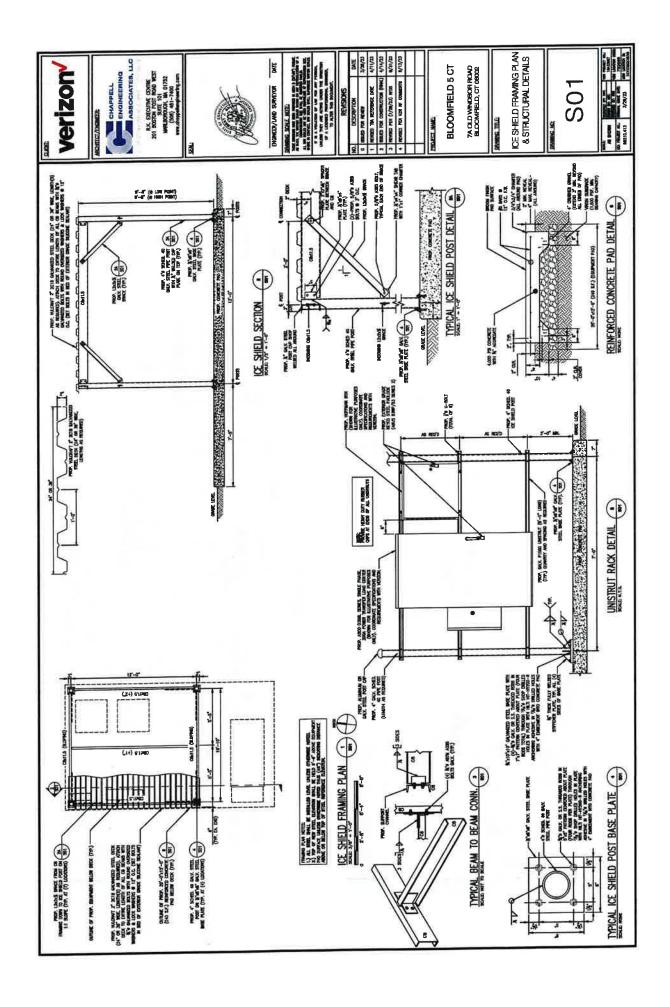


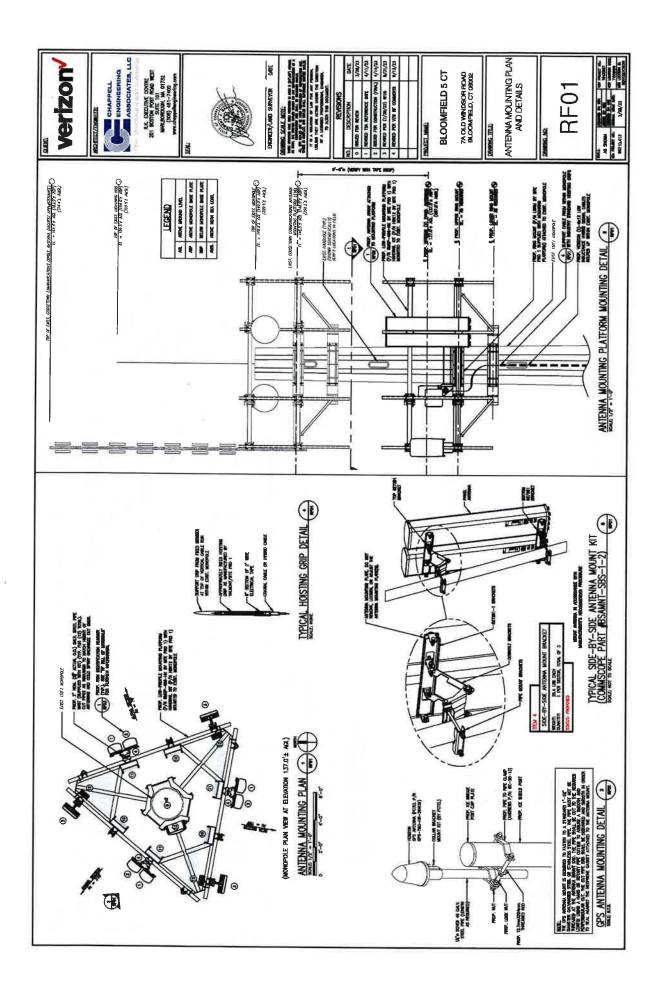


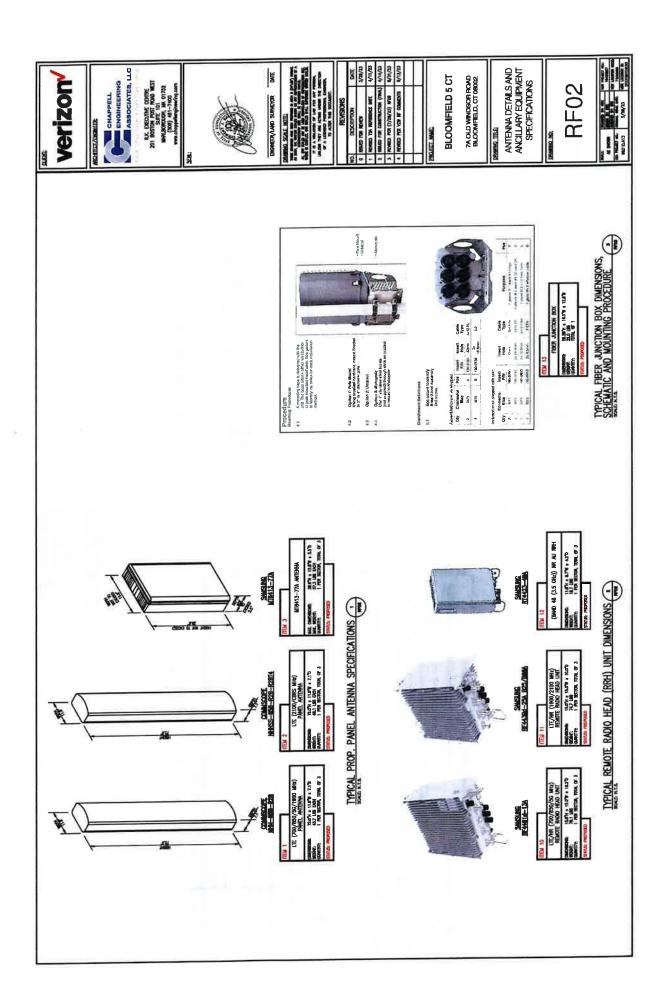


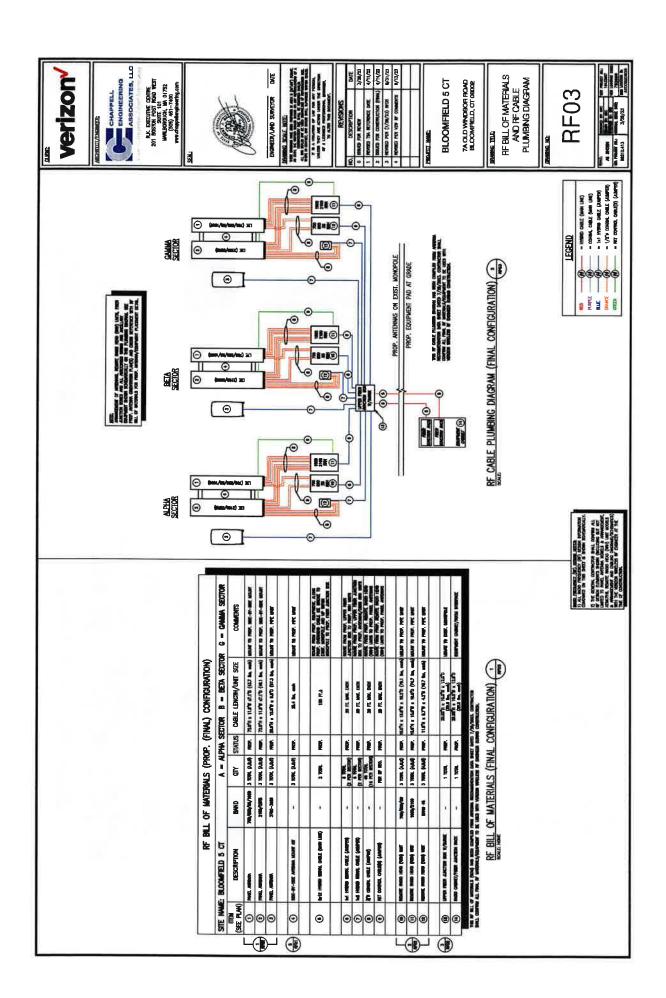


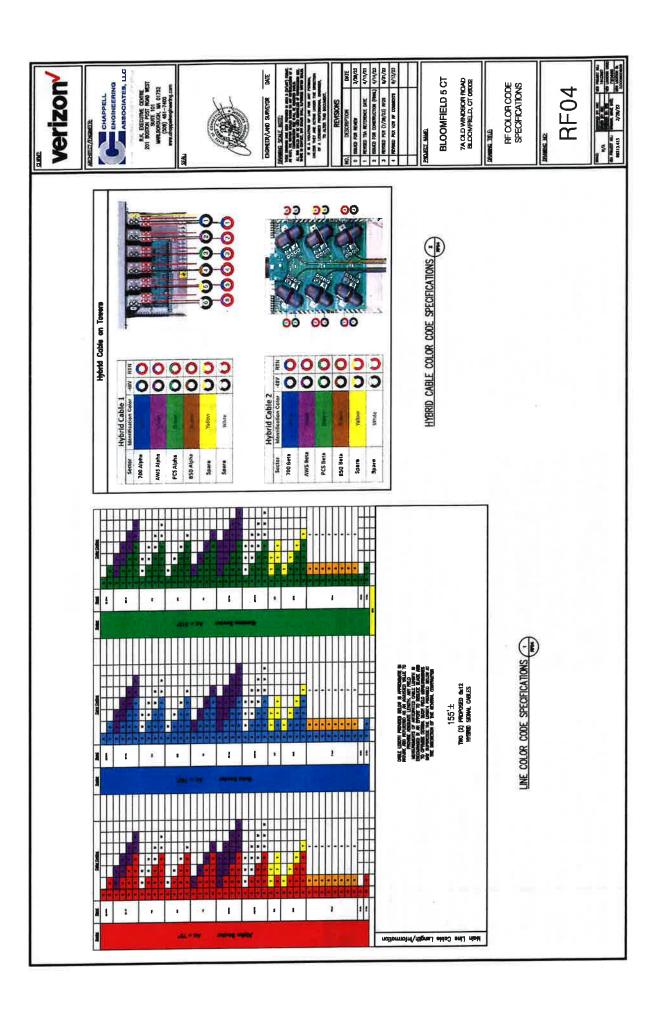












GENERAL PLIMANNE NOTES

3. AL WORK SPALL DE DA STROET ACCORDANCE WITH THE LOCALLY PRESIDED DISEASE CODE, AND ALL CHEST AUTHORIES. WASHINGTONIAL 2. The communers sweet persons all cather delications, resonal, descent, pathers, scalars, restrants we all edge sometimes destablished. i, the continuous shall provide and natural a couplede and fally opdivated distributions all labors and distributions will be seen that the seek of the couple of of th

6. Sept appeal of the following SMLL is supported to the order's project respisationing for approximately be desirable.

4, THE CONTINUEDS SHALL FOR ALL FESS AND TOWER, CIRCUM ALL PERMITS AND AFFECHAS, FILE THE RESIDENCE PROCESSES AND CAUSE ALL BENEGISTINGS.

A. Lingut of all equipment to the charter of all equipment specified by the equipment specified by all equipment specified by the equipment specified by the equipment of all equipments to refer to the equipment of all equipments.

7. THE INDIANO OF WHOTING, CHETTING, CINE, DIRLING, WORK IN OTHER TRAVIT SPYCES OR OCCUPIED MENA, WORK, OWNER, OWNER, THE ORICIA TO BE A MUNICIPAL TO OTHER TOWNS SWALL BE DONE AFTER TOWNS FALLE. g. Al ppc hybrid shall be athord to the galdro/alphoat structure, proport therete baparete as Boured.

8. AL POETVOTAR THEOLEM FIE MATO PARTITIONS AND FLOMS BANL OF TRESTOPPID BITH HELT FRESTOPPID. METHINE, FINGUES FOR ALL PERCHANDING BANLOS BITH AN AFFICIATO PRESSOR.

II. Composito) sivil pureda all necessari confice, spatres, pares, motors, pages and nelais esc. Foi a Plais pagediamo systel. 6. THE CONTRUCTOR SHALL FLARREII A CHE (1) YOR CLARANTEZ CHI PHATS MO LABOR OF THE DESTALLATON THOU THE BASE OF CHIEFS ACCEPTATION WHOSE AMALABLE.

11. WATHE LABLE SHILL BE BETALED AT ALL NEW IDJANUAL FOR EDITIONIN PURPOSES.

12. ANT RELIBED SHIDOMEN OF DRES BILDING STSTEMS FOR COMBESTION OF TOWER SYSTEMS MAST BE FINCED AND COMMUNICATION THE LIBERTH SALESHARENTH SALESHARENTH THE STREAM STATEMENT OF THE COMMUNICATION THE COMMUNICATION SHALL RESULT HE SALESHARENTHY. 13. THE CONTRACTOR SHALL VEIT THE LEGITIONS OF ALL FROMEISTS WORK, AND DECOME THOROUGHLY FAILING WITH ALL DIRECTOR CONTRACTOR AND LABRACIONS.

11. Meny al denno condition al new meno no duprede saul el comeando ner al defini Perindry, pero, electrol, no govern, sie conditios.

il. Al dering expredit, dichton, fryn, dichton, wo odern ein commune enten me approximateden commune was et nomed in the fedu decident communes was et nomed in the fedu decident. IN ALL WORK SHALL COPPOSE TO THE COMPSHIPS SHALL SEALENCY TO STANCANDO

12. THE CONTROLLED SHALL CONTROLLEN HIS NEW SET BEIGHT/PUTSTAFF, WANKESSET HEN TO THE COLLEGE OF MISSISSEMENT AND SECURISE OF THE COLLEGE OF THE EXAMENDER WHITE OF THE COLLEGE OF THE EXAMENDER HIS COLLEGE OF THE EXAMENDER HIS COLLEGE OF THE EXAMENDER HIS COLLEGE OF THE COLLEG

O. ALL WIGLARY PORTY AND LINE VOLVAE, WINNES BALL TO DOKE BY A LIESSIED AND REFERD ELECTRICAL CORPORATION.

PLUG VALVE PIPE CIRCLE THE RISE

Ī 悻╪

Ŷ 显

DOERN, PLIMENS NOTES (CONTINUED)

A. IN COMPACTA BLAT, PROMULT BENET IN STATE OF THE PROMULT WAS USED WAS USED IN COTROLOGY ON MAKE AN ADDRESS ASSESSMENT ASSESSMENT BLANKSCOPEN STATEMENT ASSESSMENT BY A SECURITY OF THE STATEMENT ASSESSMENT ASS

THE REPORT OF THE PROPERTY OF

22. TEE OMENEEN ME SOCIATION IN WINDE, BUT STORT THE WARDS COMPOSETTS OF THE STORTING AFFICIABILITY TO THE MAN AND THE OFFICE THE WARDS OF A PROMOTED OFFICE THE MAN AND THE MAN AND THE CONTROL OF THE CONTROL OFFI PREMIABILITY AND THE REPRESENTS OF THE TO THE MAN AND THE TREATING ALCOHOLD CONTROL OFFI PROMOTED BY THE MAN AND THE WARDS OFFI THE MAN AND BY THE PROMOTED BY THE PROMOTED OFFI PROMOTED BY THE MAN AND THE WARDS OFFI THE MAN AND BY THE PROMOTED BY THE PROMOTED OFFI T

PAS PENG NUTES

L. GAS PET STOKE SWILL BE BASED ON TRIES IN-AREAS(Q) ON THE BLOCK MATISHEL BESIMPLEAL CODE. A BANDAIN FREE SHOWN OF 200 FT. SHOUL BE URED FOR THE EXPRESSION. . OS PTRO SHUL DE EZURED NO SHUL DE INSKLED IN AZDENNE WITH THE INTENDIVENE, MEZHANDA COTE. Ales Rejenda no in acerdans bith 1879, ch.

L. DE FREE BALL IN DE MATORIL BEGEND ON FLARE WITH ALL DELIGIENT STORMED FITTURE, MATER ONS PRING. TO AND A MATORIL IT SHALL DE FROMED WITH A DIVE LIST THE FALL SEE OF THE SAFFLY FIFL. A 1999 SMITH-OF THE GOOD, AND A MATORIL

. PORTERS OF A DAS THING STREET WITHLISD IN CONCUSALS LICKLATURE SMALL NOT HAK UNDERS, THE FITTINGS OR LICKLATURE. AND DAS WAYES SMALLES IN ABOVE CICLUM ON MILLOS WAYES STREET. ON FIND HANDES AND SEPTORES SHALL CONTROL TO THE REQUIREMENTS OF "STORMING PRICESS." IN CONTROL THE PRICESS.
 AND THE PRICESS.
 AND THE SEPTORES SHALL CONTROL IN FIND THE SECTION OF THE SEPTORES.
 AND THE SEPTORES SHALL S

ALL ON YOND TRON FROM FROM FILLER ON PRESENCE LIMING DONGS SHALL BE 1750 THE TALL OUTLINGS AND WILLIAM AND AND SHALL BE FITTED WITH AN ANAMORD FILLER WITH WITH WILST SCHOOLS, PROTING CALADAGE ON PARTICIPATION FLAVORED AT VOICE NAMES CLASS PACE SWILL SE, NACH FIRST FOR SOF SOES OF THE HOSTONY, LIKES AND HOT THE SOSTION, Like strikestings landing those those command activity and common strikes.

SAPPLICE BY VENEZOR SECONDA (NATURAL EAS) SAPPLICE BY VENEZOR NETALED BY CONTRACTOR. CONTRACTOR BHALL CRITAIN FULL SPECIFICATIONS FILTIN VENEZON WIELLYS FIREM TO BED, DOPEST, TOTA NO FUSIC THE ONE THRNS STATIS IN ACCORDANCE TO HERA SHIFT HAS ALL LACK. MEDITIS LINEAUS RECOGNISHED SHIFT IS FIRST FOR A PERIOD OF 2 HOURS.

CONTRACTOR SHALL ABRANCE FOR OBVERATOR STATE-UP SERVICE.

PLIMERIC PROCEDURAL PREPARATION AND TESTING NOTES.

ONE TO THE MATTER OF THE DISTRESS AND OTHER SMARK SYSTEMS IN LIKE BY THE CONTINUE THE CONTINUES AND TH

Verizon

L. THE CORTINOTORS SHILL PROVED THE (4) BIRTA ADMINISTE INTERDITION OF ALL DELIMINES TO THE SITE AND RIVER (7) DAYS ADMINISTED NOTHERCITON OF ANY MEMORIES SITINGS BART-GORDER. 2. AL WORK WIND LIKE ELECTION, PARES SPALL COOM TARMS HOURS ACCEPTABLE TO THE PAREL COMES.

A. THE CORMINATION BAND, ATTENDED A PRE-COMMUNICATION MEDITING TO BE MED AT THE JOB SITE OR OF THE ANEX REPORT OF RESTAURTION WILL TONE PLACE. n, the compacture shall mannan between they cancel and then of their compacture, you can distance that.

CHAPPELL ENGINEERING ASSOCIATES, LLC

201 BOSTON CONTRE 201 BOSTON FORD REST MALLDOSCOUN, M. 01732 (SOS) 481-7400 VPM. chtppolinginestig.com

finor to the speet of comparation, all womens same, as enform on all overty requirements then to the however discovered in the however the same of the property of the house of the house of the same of the property of the p

I, The compactor spall arbite the ambienty are accompany of additions on-safe five dimension definition. a, all concernar, test educacións no palements synl es cherry whosed by an opera-ptiono project supplication.

FIRST DE SENSIT-OF THE STEELS, THE CONTENTES MALL COST, ALL COST, ALL COST, ALL COST, ALL COST, ALL CONTENTS AND THE ALL CONTENTS ALL CONTENTS ALL CONTENTS TO THE CONTENTS ALL CONTENTS TO THE CONTENTS AND THE C

11. CONTROCTOR SWILL BEHIEF AND TOT ALL FEES AND EQUATION IN ACCORDANCE WITH APPLICATE CORP. EQUIPMENTS AND EQUATION MAKENGERS REPUBLISHES. THE MANAGEMENT PARTICULAR REPORTED SHALL BE ON SITE TO COMMENSE THE STREET

12. ADMONICOD PERIODRICE, SPALL CONDUCT CLORRICE, PURBON PRO TESTRO PROCEDURES, TESTRA OF FRING SPALL UTILIZE HARROTOTO OR PRESENTE INSPIRITOS. CARGOLI OR 19 DAS ES NOT TO SE LIEDO.

PARIE PETO WITH NOTE ON PRICE TO REPOSICION LF GAL.

A. CORNECT SHALL THE TO NOW THE U. OLD ON PURING IN IMPROVED AN PREVENTED TO HAVE SHALL SHALL THE WORNING THE OF SHALL THE GLOBE AND THE OFFI HAVE SHALL THE SHALL SHALL

RAMBE SCAF NOTE:

불

ENGINEER/LAND SURVEYOR

CANAD FOR (1/10/20) WITE BAN/3

7A OLD WINDSOR ROAD BLOOMFIELD, CT 09002

BLOOMFIELD 5 CT

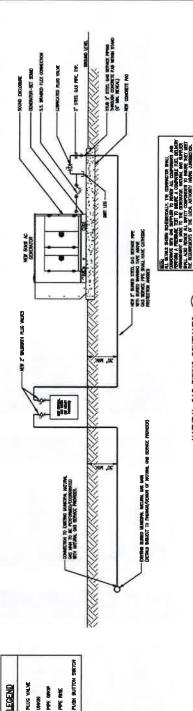
PLUMBING NOTES AND SCHEMATIC

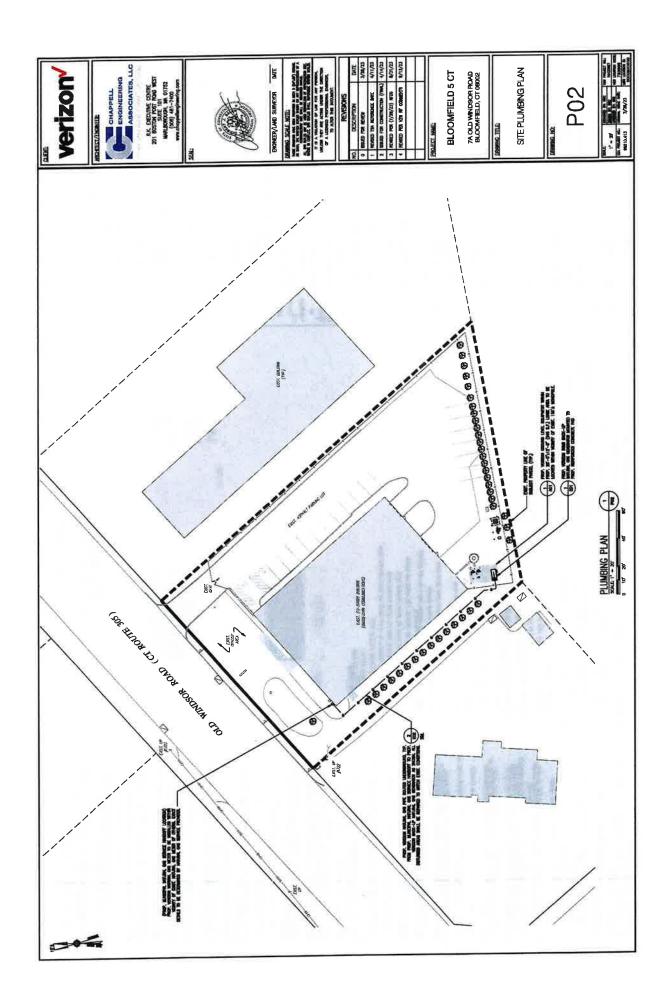
AME INC

P01

NATURAL GAS PIPING SCHEMATIC (*)

NOT TO SOULE THE RESET OF THE STATE OF THE S





ELECTRICAL SPECIFICATIONS

- FARMS ALL LANCE, WRITING, CHARGO, SALL AND MCCHARLE RELAKED TO WASH YOUR OWNERS OF THE CONTINUE STREET, WHITE AND SHOWN OF THE CONTINUE AND SHOWN.
- THE GLEENAL STRING SPALE ALL MATERIAL OF THE PASSAGE TO THE SECOND TO THE STRING SPALE OF THE PASSAGE AND THE PASSAGE TO THE STRING SPALE OF THE PASSAGE THE SECOND TO THE STRING SPALE OF THE SECOND SPACE SPACE

A SAME OF THE ALL STRONGS AND A SAME IS A CARBONILLY IN THE AMERICAN OF THE ALL SAME IS A CARBONILLY IN THE AMERICAN OF THE AM

- WOTHER, NO TEAMON SHELL OF LICE UNITED AND INSTITUTION LABORITHMS, HE LETTER CONTINUES WITH LICENSESS WELL STORMED AND MEMORING ALL WITHOUT IN THE PRINCE, MELLING THE PARK HELL METERAPHY COLVERY.
- ALL WIND COUNTS IN LE NEULIE H RENT-AUE, (DOSDLE E) IND STELL COOKES IN INC. O'CHE, O'C DES SHILL SE STACK HE HECK NO CHEEK, APPLIES HE HECK NO CHEEK SHILL SE STACK HEEK HECK NO CHEEK SHILL SE STACK HEEK SHILL SE COOKESSEN FIND
 - LINEGRADING COMMENT SHALL IT FOR EXPOSURE 44 AND MENULED NOT LESS THAN 30 HOUSES MEAN FRANCE WHOLE.
- THE STATE OF THE PRIME THE BOTTOM TO BE IN COLOUR SALL BY MENLED IN BAT, DAT THESE SALL BY AREA CHARLES IN BAT, DAT
 - COMMUTE SHALL SHALL COROLI SHALL WE CONTROL SHALL SHAL
 - ATTINE AND DEVELOPMENT OF THE PROPERTY OF THE
 - PLUM GENET AND GALLY MEND SHILL D. RET-EFFED SWINNERS, PRESEND SHELL SHILL HAN MADE GROVE FAVOR, CALOM AS DESIRAND BY THE DRINGER.
- COUNTY A SERVING STORM, TOWARD, ASSESSED AND TAXABLE SEED AND TAXABLE SEED AND TAXABLE SEED, THE PARTY SEED, THE SEED, THE SEED, THE P
- The Less term leads that construct to an expectation of the expectation of the state of the sta
 - IA. WHERE, MICH. BLOK FARES, NEW GARPE, DY. SPALL R. WANTED ACT OF STEEL CONDUCT. SPALL R. SAFFORNED AT LINES FROM J. P. R.D..
- TOWNS OWNER SHEET, WAS GOOD TOWN THE WORK OF THE CONTROL OF THE CO
- 18. CONTACT SHALL BUT BE SHATONED FIRST FINES SHATONED, CLATTURA, CLATTURA COLUMN SHATONE OF MATERIAL SHATONES OF MATERIAL OF
 - CHERTO POLI, EL TENDOCIDI SI MENELLIO SPETI SPETI SEGO AND DISCUSSO THI MAIN LOC NATI ACCUSENTA MANDELLI RATORIO DE COCCASI CONCRETO DECUDINO PRATERIO PROCESSO TALO, COCCAS POLI, EL TENDOCIDI SE VOCESSO PETI MIN, ESCO AC
- REAL FOR THEIRS AND LIBERIES DENICH CHICKED WALL OF 600 VAL), THY SHIEL WEE, FOR COTHICS CHICKED SHIEL AC SHE SHIEL THAT SHIEL AND LIBERIES AND EMBERGE CONCLUDIOUS AND PRESENT SHIEL AT THE SHIELD CONCLUDES IN, TO ARRE AND SHALLE SHIEL AT STAR AND A NO UNITED SHIEL AT STRANGES. 21. ORBENDRO BRILL EL ANDRES, SE FUNDIT ORBENDRO, EST-EFER COTTEL NO COM-MILLER NOT NO. 12 AND SHILL SE MIND, SERVIT AS CHEMICAL MITTO.
- AL CONDUCTOR SHALL IN CHARGET HANDLE TO AND HAIS OF DIRECT TO HAILURE. LINESCORE WAS IN LINES TO CHARGE WIN, FALLING, LINESCORE SHALL IN LASTS FOR US. HE FAR HALLING WASTER.

 - A. MODINACIÓ MEDICA SANI EL 40 DE 30 VAC, PEDVICUEN, CAST-AME, QUEC MENE, VARAE RIME, S'ACE SAN SONIO MENERAL DE CASTA MENERA Pt. 44 Chipaet an interes such se eniman in chart address with the charters exemple one, and the manges separately by versay where an oldery.
- WELL SETTENCE SPINE, IN STATE FOLK 7-BPY OR 1-BPY, INCOME, TOWER-FOLMY, FILEN, OLLY THE, SPENETURE SPINE, WITH 30 METRIC, 123-277 VOL. COLOR AS EXPRESSED OF DESIGNA-
 - D. GEBRE, PAPER PREFECTO BALL E BATS, 1746, 3 WG, 5 WG, 5 WG STRAND BALE, NIGHTAN GEBRENO TOT, 20 AFTE, 15 VET, 24TATARN OVER COLOR & CERNING STRAND
- AT BEAUTH SHILL IN LIGHTS ONE, NEWL JADICTE THE WIN HIS SHAETHCA. WHEN RANGE OF LESS HAN LINES AND IN NO. NO. HENCER, DICKNOS MADE SHILL HER MICHORIO REMAINED AND CONSING. OFFICIA SHILL HE IN THE CONTRIBUTION OF SHILL SHILL SHILL CONTRIBUTION.
- - ALL STRAND THE WAY CAROLITIES LAD IN CRISTON MAIN SWAL OF GLICK PLLES.

THE DESTROY, CORRECTOR, AT HIS OWN EMBARE, SHILL FROMDE HIS OWN, INDICE CHARTER STOWNED, AND OWNER SHARES. OLETICAL CONTRACTOR SHALL AS PART OF 180 WORK MEDIUM: ALL PRIMER, SAENES AND MEDICAL CLATHER RECAIRED FOR 148 WIRES, INCLUMED FREED-STOPPING.

AL COMES CONCESS BYLL IS A ME, MID, DAY, THEN COPTS, USING COPES, USING COPES, USING COPES, USING COPES. ALL COMPANION TO WALD GRAUPD NOW AND ALL CHARE THAY JAMPING MALL IN JR AND, MEASURE, SEVERALLY, COPPEN WAL.

GROUNDING GENERAL NOTES

- THE COPES OF SKIP SPIRINGS OF ALL ENGINEER SHALL BE PROCESS TO THE DIRECT
- richman communications benn sault beziege all laren and batteria, southers thou and theorythological histories for complete betallistie.
 - 57, BESTRON, CORRECTOR TO FAMILE DIGINESS ONC 82 OF INTANE OF "NE BEAL" CAMP.
 AL. BECTRON, CORRECTOR SMILL PROME TAKING FORMS & LIGHTING AS META.
 - GENERAL MOTES
- CONTRACTOR SHALL, WEIT THE STITE TO SECONE ARMIR OF THE ESCENIA CONCINCIA

CORRECT SEALED CORRECTION TO DETTOR SECURITIES, ATTACK TO THALS, PARVEZ, CORE TWO, THE THIRD A COLUMN AS RECEIVED, THE EXPERT PROFESSION, THE EXPERT PARVEZ THE TO ACTURE COLUMN CORRECTION.

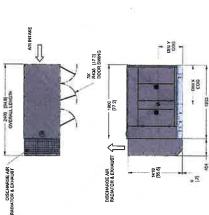
ООТНЕСТ ТО НИЦА ОБЕЗИТО ЦЕНИВ О-ТИР (ДВИТОВ)

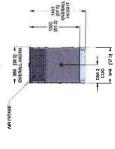
MENWICKLY BOD MITTON KOLFT WIN JA AR, DATE, STAMED COOLIGER. AL MELICINE FOR SALL CORPY WIN YOUR WILLIAM EXPONENT.

- THEE ENVIRONMENT OF COMMISSION OF THE DAYS LOCKED, MEANING HEARTH DESCRIPTION OF THE PERSON OF THE P SWICK CROUT RUSH 100 FT AND DUCK SWILL BY \$18 AND CONCUCTOR
- THE DEFENCE CONTRICTE SHALL COORDINATE WITH THE HINC AND YLARDING COMMUNICATION WHICH A CONTRICTED HE SHALL THE CONTRICTED WHICH AND CONTRICTED HE SHARES OF THE CONTRICTED FOR CONTRICTED HE SHARES OF THE CONTRICTED FOR CONTRICTED HE CONTRICTED HE SHALL CONTRICTED FOR CONTRICTED HE CONTRICTED HE SHALL SHAL
- NUMBERORY IN HE CORTED DESIRES, NUMBERORY STATES CONSTITUTE, REDENTING CONTRACTOR, RESERVANCE OF THE WAR DESIRES, NO THE CONSTITUTE, NO THE CONSTITUTE NUMBER OF THE WARR.
 - AL CORUL SAL E SERVE HOURS UNES OFFICE AND TO PROTO HOUSE CORUM ELLO 7-4" AT IN NESSES SALCE.

 - ALL WHEN TO BE 3/4", Afte is 1919 secure, unergy officients norm.
- arra 1802 ar baltara sal e sa statoma are ao al lato Jaco ao artar ben sal e sorno para enare.
- ALI RESPOET NO ESPERA CELAS SPILLE ESPECIAS. LAS A PAL SECTION SELECTOR. SELECTRO CORRIGOR REVIEW DE CURSON CORLICOR.

 - ALL SWICKED SHALL BE FORTY-DRIFT (40) PROSES AFF, UNLESS CONCERNING ALL RECOPOLISI GIVIL DE CIPREDA (II) NOIGO AFF, UNESO OTIGI





CHAPPELL ENGINEERING ASSOCIATES, LLC Verizon 201 BOSTON POST NOND WEST SURE 101 WPLEOROUCH, MA 01752 (509) 461-7479 ENGINEER/LAND SURVEYOR FEOTONIC VALIN - ,1, W ,AC, - ICLUMS EXTREMODERS (SIGN) *Ox - 14 TEMPORTURE ALMA THEM *Oxus - NATO HARETIY ALMA HEM PACTOR GARGINES RESPINAL GROUNDS THE I'XC' SAFROE WIT. PLEOFERCENT LEBRING FRAME PORTIC DOOR SEETEN (DOOR JUST TITY) KOODIE - MACHE, DOODES HORDONEY SOUT CONTRACTO DATING, LEGISTICS LINET RUCHEN PROOF ERCOMECT SWITCH HOLDER TROOK HE-MOTI-MEE ELECTRICAL SYMBOLS CHRYSTE IN MARKS e d • y y • • 0 1

MEMORANS	HO, DESCRIPTION DATE	CZ/MC/C MANUAL MOST SOURCE O	1 NEWSED TAN NETURNICK DATE 4/11/23	27/11/1 (SWAC) HOLOGOROWS BLACK STATES TO 1/11/12	27/10/8 stat (17/10/2) was disease t	4 NOVERD PER YER BY COMMENTS B/13/23			PRODUCT SAME:		BLOOMFIELD 5 CT		7A OLD WINDBOR ROAD	BLDOMPIELD, CT 08002		DBANNE TIME	i	FECHICAL	SPECIFICATIONS AND	NOTES		Of Swings	DRAMME, NO.
COLUMN CONTRACTOR SECTION OF	MINICE AMERICA - JOSENN CAT, NO. 1436-80	ARONE ENERGY FLOOR	MOTORCOM CARGO	State and the state	Table-Filty someon of	ALMIN TERMINI, OMNET	COUNTRY ON CONTRACT TOWNS ON THE	ABBREMATIONS	AMERICAN WHE GALOE	IME COPPER WAS	METER CHARGES AND AND A	PERSONAL COMMEMICATION SYSTEM	WCDM	THEOL	MED CAWARD STEE	CLEETHON, METALLE TUBBO	Dames of the Control	PHENCE CROCKED FING (PALC)	CONTINUE	Security	COM GROUP IN CYTISHAL	COME DICUMO ANN CATURAN.	COAK DICURD ANI STIEDAN. COAK DICURD ONCINO BAN EOTENA. WIETER DICURD DAT
	ă	×	ı			ŧ				_											w	# #	w w

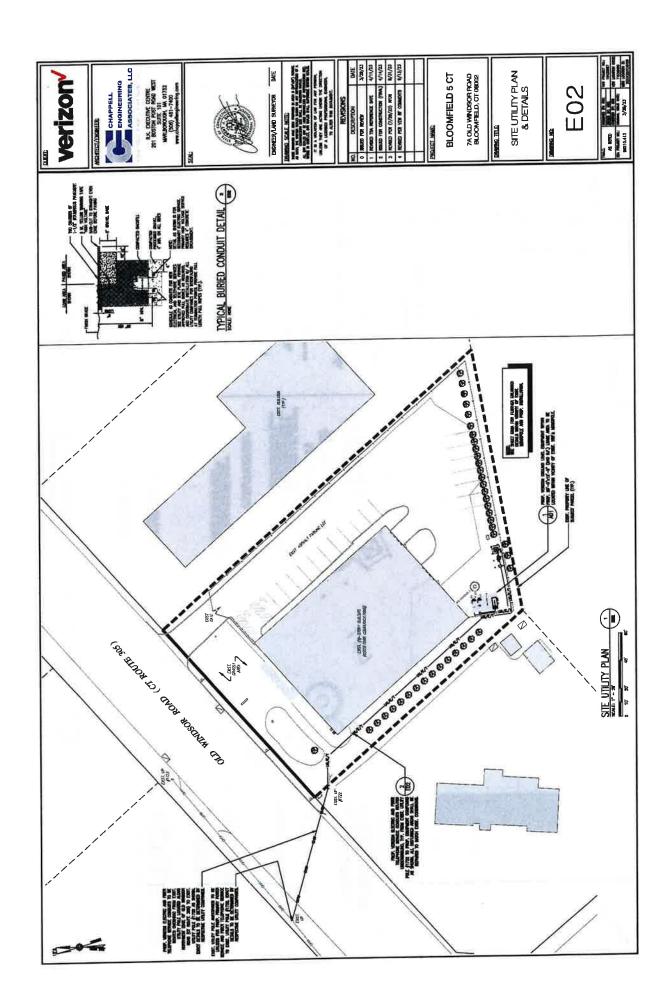
	DBANNE TITE	i	ELECIHICAL	SPECIFICATIONS AND	NOTES		CH CHINESE				- 01	
NEED CANNETTO STEEL	CLEENSON, METALLE TURNE	Champio	MIDDOR GNOWN MPG (MALD)	CONTINUE	CHEMICAL	OM DEUM IN STERM	COM SOUNTS ONDING BAN EXTEND.	WE'SY GROUP BY	NOTO (SOIL 40) POLYMAN, CALORICE CONDUIT	EMERIC MOX HALL	The second secon	
2	8	8	8	ĕ	8	8	3000	ĝ	£	ě		

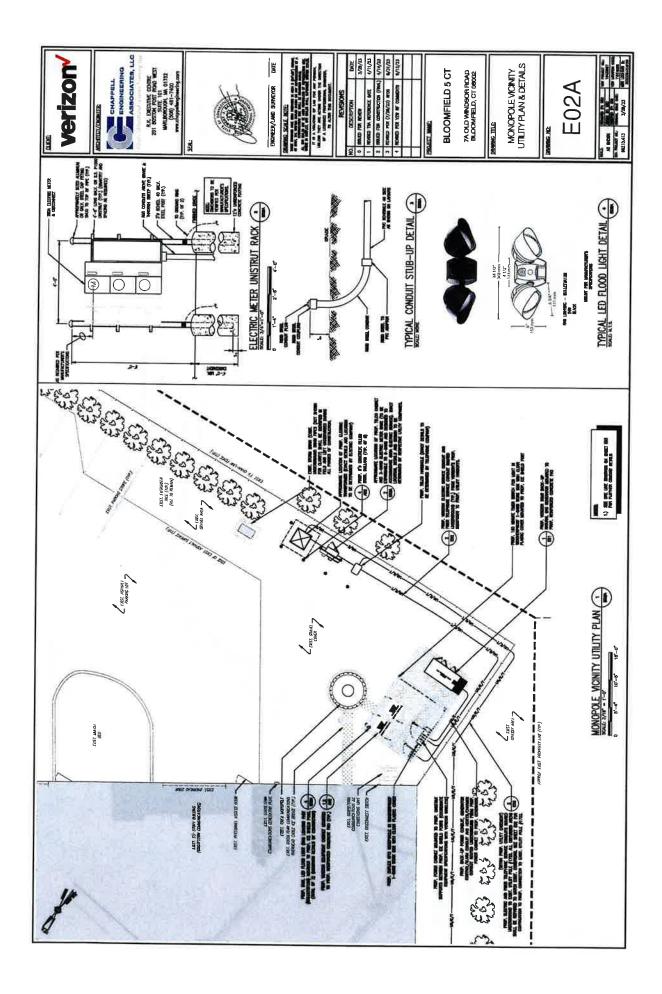


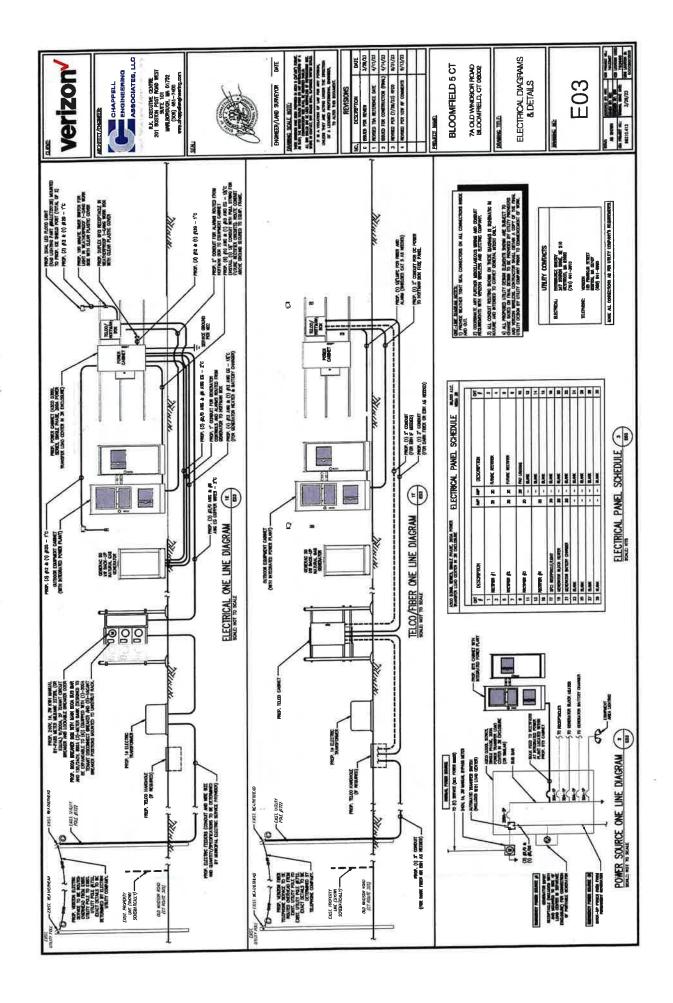
1

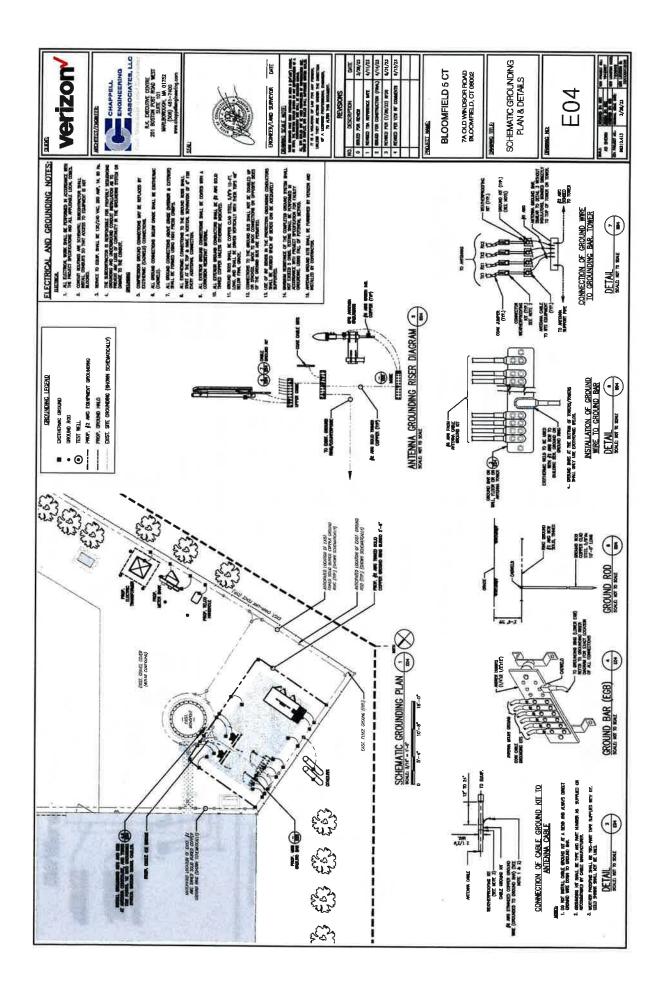
GENERATOR DETAIL

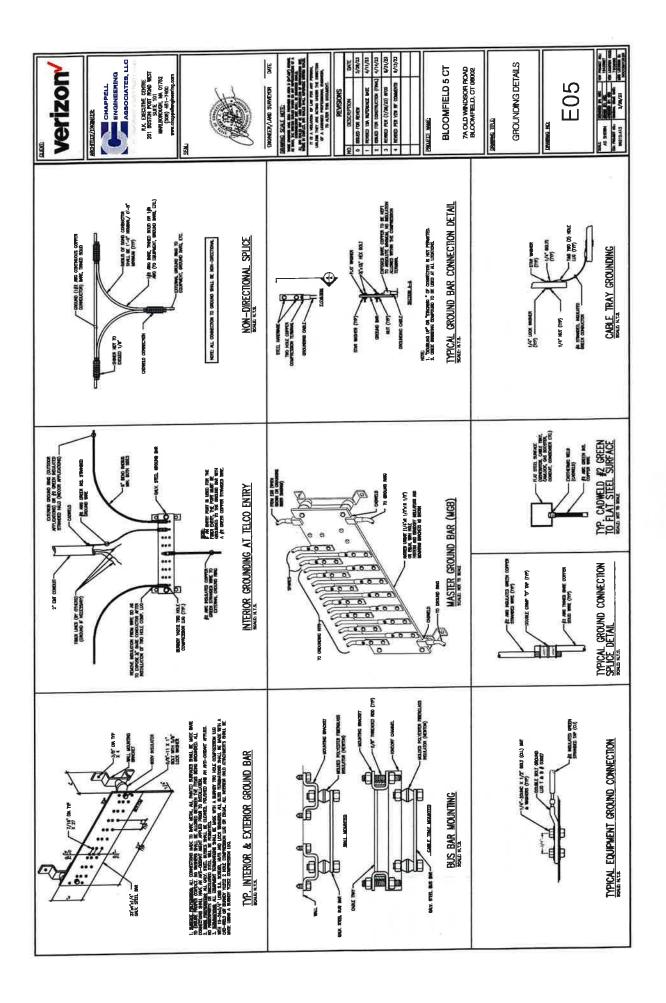
GONERO, SARE MATINEL, RAS, GURRATOR DIVIT, BROOMEN OFFICE OFFICE (CLUSTORS), PRESONANT DANIESCONE SLAT, - 28.0°V x 37.5°N APPEDDAMENT MAY, IN-SERVER WEIGHT, 2,00°7 No.











Verizon fuze RFDS

NORTHEAST > North East > New England > New England West > BLOOMFIELD 5 CT

RF Submit by: Brauer, Mark - mark.brauer2@verizonwireless.com - 7/28/2023, 7:36:38 AM

EE Submit by: , - -

Location Information

Project Details

FUZE Project ID: 16433987

Project Name: BLOOMFIELD 5 CT

Project Alt Name: BLOOMFIELD 5 CT - MKT 66 - MC

E-NodeB ID: 068538,0689551

Site ID: 616946037

MDG Location ID: 5000920838

PSLC: 783866

Switch Name: Windsor 1

Tower Owner:

Project Type: Initial Build

Modification Type:

Designed Sector Carrier 4G: 18

Designed Sector Carrier 5G: 3

Additional Sector Carrier 4G: N/A

Additional Sector Carrier 5G: N/A

FP Solution Type & Tech Type: MCR;4G_700,4G_850,4G_AWS,4G_CBRS,4G_PCS,5G_L-

Sub6

Carrier Aggregation: false

MPT Id:

eCIP-0: false

Suffix:

Site Sub Type: TRADITIONAL Site Type: MACRO

Tower Type: Monopole

Street Address: 7A Old Windsor Road City: Bloomgfield

State: CT

Zip Code: 06002

County: Hartford

Latitude: 41.855561 / 41° 51' 20.0196" N

Longitude: -72,704708 / 72° 42' 16,9488" W

New build monopole RFDS Project Scope: Update 01/23/2023 - Antenna centerline updated per LEs REV 0 dated 01/20/23

Update 04/13/2023 - corrected antenna quantity

Update 07/28/2023 - Update to latest RRHs

Antenna Summary

Item ID		000000001800086292	0000000001800055945
Quantity	6	e	
Inst. Type Quantity	PHYSICAL	PHYSICAL	PHYSICAL 3
4xRx	false	£	å
RET			
Azimuth	70(0444) 190(0445) 310(0446)	70(01) 190(02) 310(03) 70(0444) 190(0445) 310(0448)	70(01) 190(02) 310(03) 70(19) 190(20) 310(21)
Tip Height	138.2	041	g g
Centerline Tip Height	131	137	121
Model	MT6413-77A	NHH-65B-R2B	NHHSS-85B-R2BT4
Make	Samsung	CommScope	CommScope
L-Sub6 Make	2		
CBRS			Ĕ
AWS		185	Ĕ
1900		5	
820		£ 28	
200		Ĕ	

	Item ID			Item ID	
	Quantity			Quantity	
	Inst. Type			Inst. Type	
	4xRx			4xRx	
	RET			RET	
	Azimuth	data available.		Azimuth	The second secon
	Tip Height	ON.		Centerline Tip Height Azimuth	
	Centerline Tip Height Azlmuth			Centerline	
	Model			Model	
	L-Sub6 Make			L-Sub6 Make	
	CBRS L			CBRS	
	AWS			AWS	
	1900			1900	
20	880		<u> </u>	850	
Removed	200		Retained	200	

Retained: 0

Equipment Summary

25
9
•
•
_

Equipment Type Location	Location	200	850	1900	AWS	CBRS	L-Sub6 Make	Make	Model	Cable Length Cable Size Install Type Quantity	te Install Type	e Quantity	Item ID	
RRU	Tower			35	LTE			Samsung	B2/B66A RRH ORAN (RF 4439d-25A)		PHYSICAL	т.		
RRU	Tower						99	Samsung	MT6413-77A		PHYSICAL	0		
RRU	Tower	5	LTE 5G					Samsung	RF4461d-13A		PHYSICAL	6		
RRU	Tower	Į				LTE		Samsung	RT4423-48A		PHYSICAL	6		
Hybrid Cable	Tower							N/A	6xt2 Hybrillex		PHYSICAL	8		
Mount	Tower							Commscope	BASMNT-SBS-1-2		PHYSICAL	8		
OVP Box	Tower							N/A	12 OVP		PHYSICAL			
Removed														
Equipment Type	Location	700	850	1900	AWS	CBRS	L-Sub6 Make	Make	Model	Cable Length Cable Size Install Type Quantity	e Install Type	9 Quantity	Item ID	
								2	No data available	waisble				

No data avadable

Model

Equipment Type Location 700 850 1900 AWS CBRS L-Sub6 Make

Retained

Cable Length Cable Size Install Type Quantity Item ID

CBRS 3_5 GHz

Sector Azimuth Cell / ENode B ID Anterna Model	Antenna Make Antenna Centerline (Et) Mechanical Down-Till (Deg.) Electrical Down-Till Tip Helight Regulatory Power DIEARFCN	Channel Bandwidth(MHz) TOtal ERP (W) TMA Model TMA Model RRU Make RRU Make RRU Make RRU Make RRU Make RRU Make TY, Rx Lines Vosibon Transmitter id	Spurce	Sector Azimuth Cell / ENode B ID Antenna Model	Antenna Make Antenna Centerine (Ft) Mechanical Cown: Till (Deg.) Electrical Down: Till Regulatory Power DLEASPCN	Channel Bandwidth(MHz) Total ERP.(W) TMA Make
200			10 MHz LTE			

211
068538
H155-65B-R2BT4
CommScope
137
0
144
140
34.98
55790
10
47.97
Samsung
R14423-48A
44
113085556
ATOLL API
0
03
30
03
313
04
313
05
06
10
06
06
10
06
06
1137
140
73.41
5230
10
660.69
Samsung
RF44644.13A
4,4
15085551
ATOLL API

19
066538
IIHISS-658-R2814
06 4
140
34.98
55790
10
47.97
Samsung
R1442-48A
44
1508554
ATOLL_API
0660.69
10.
660.69
Samsung
ATOLL_API
1208554
44
1208554
ATOLL_API
0660.69

Service Inf		(c	3
Service II	•	9		
Service	٠	۰		
Servi		1		
Spr	•		ì	
V,		1		į
	(Ĺ	ĺ	

	CommScope 137 0 4 140 317.55 2450 10 714.5 Samsung RF44614-13A 4,4 115085542 ATOLL_API 0444 70 0689551. NHH-659-R2B CommScope 137 0 140 137 0 144 140 1145 Samsung RF44616.13A 4,4 114.5	CommScope 137 140 140 144 144 144 144 144 14
--	---	---

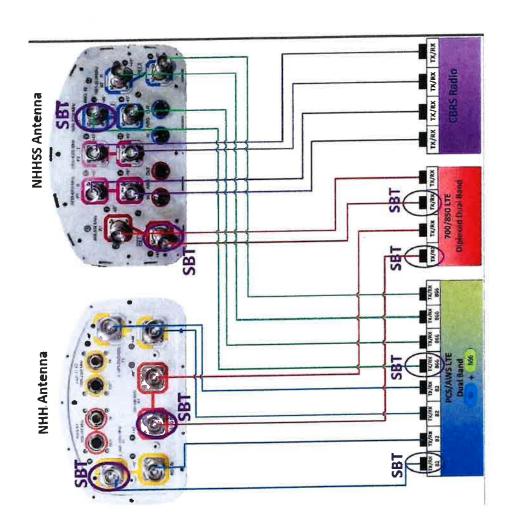
850 MHz 5GNR

1000 MHz 1TE		1000	
		50	8
Sector	5	30	3 7
Azimuth	70	190	310
Coll / Enode B ID	068538	068538	068538
A Laboratory A Lab	NHH-658-828	NHH-658-R28	NHH-65B-R2B
Antenna Migari			
Antonna Mako	CommScope	CommScope	Сотт
And the state of t	TEI	137	137
Americal Center in Control of Center in Control of Center in Control of Center in Cente	į	į	C
	3300		. 2
	340	140	140
Inp Height	041 C	274 274 27	254 54
Regulatory Power	+11+11	יייייי יייייי	0501
ULEARTON	2004		
Channel Bandwidth(MHz)	10	10	TO
Total ERP (W)	1396.37	1396.37	1396.37
TMA Make			
TMA Model			
RRU Make	Samsung	Samsung	Samsung
RRU Model	BZ/B66A RRH ORAN (RF4439d-25A)	BZ/B66A RRH ORAN (RF4439d-25A)	
Number of Tx, Rx Lines	4,4	4,4	4,4
Position		00000	000
Transmitter Id	12062346	13000049	ZCCCBOCT
Source	ATOLL API	A! OLL AP!	ALULL API
2100 MHz LTE		0002	
Sector	93	02	03
Agmith	70	190	310
Cell / ENode B ID	068538	068538	068538
Anterna Model	NHH55-65B-R2BT4	NHHSS-65B-R2BT4	NHHSS-65B-R2BT4
	and a second		90000
Antenna Make	adoreumo	adoptillion 131	20000000
Antenna Centerline(Ft)	151	13/	/57
Mechanical Down-Tilt(Deg.)	٥	o (0 (
Electrical Down-Tilt	7	7	7
Tip Height	140	140	140
Regulatory Power	138.91	138,91	138,91
DESAFON		27 00	000
Channel Bandwidth(MHz)	20	70	07
Total ERP (W)	1524.05	1524.05	1524.05
TMA Make			
TMA Model		•	
RRU Make	Sansanga Sa	Samsung	Samsung sage of the same of th
RRU Model	BZ/B00A KKH UKAN (KF44390-Z3A)	BZ/BOOA KKII UKAN (KF4459U-25A)	DZ/B00A KKI OKKIN (KF4439U-234
Number of Tx, Rx Lines	7.7	t -†	t f
	1508547	15085550	15085553
	I TO TO THE	IGA LIOTA	IGA LIOTA

	0444 70 0689531 MT6413-77A Samsung 137 0 -1 138,2 746,98 650006 100 21627.19 Samsung MT6413-77A 2.2	0444 0445 70 0689551 0689551 MT6413-77A Samsung 137 0 0 0 137 138 2 138 2 746.99 650006 100 1600 1600 21627.19 Samsung MT6413-77A 327 32.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2 2.2
--	---	--

Proprietary and Confidential. Not for disclosure outside of Verizon.





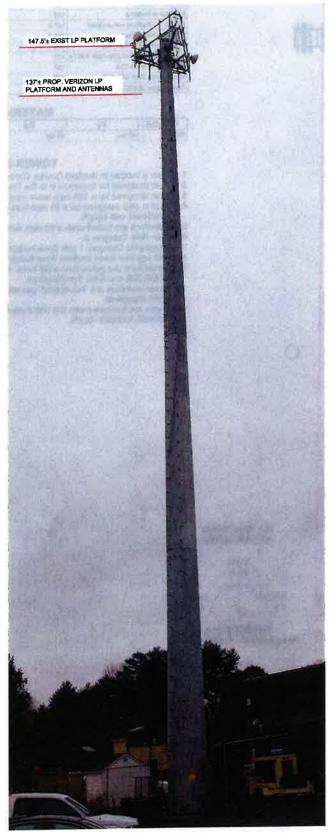


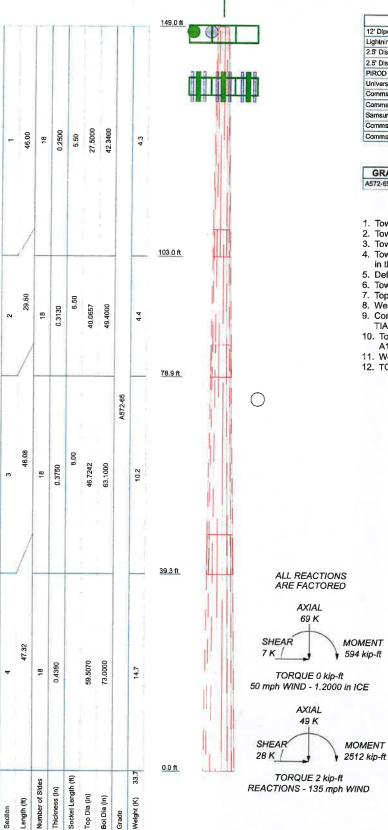
201 BOSTON POST ROAD WEST MARLBOROUGH, MA 01752 P. (508) 481-7400 F. (508) 481-7406 www.chappellengineering.com TITLE: 7A Old Windsor Rd, Bloomfield, CT 06002

PROJECT#: Bloomfield 5 CT New Site Build (96210.413)

DATE: March 14, 2023 BY: CJS CHK: JMF







DESIGNED APPURTENANCE LOADING

ELEVATION	TYPE	ELEVATION
156	Samsung MT6413-77A	137
153	Commscope NHH-65B-R2B	137
148	Commscope NHHSS-65B-R2B-R2BT4	137
148	Samsung MT6413-77A	137
147.5	(3) Samsung RF4461d-13A	137
143.5	(3) Samsung RF4439d-25A B25/B66A	137
137	(3) Samsung RT4423-48A	137
137	Rayco Fiber Junction Box	137
137	PIROD 15' Platform with handrail	137
137	Universal Ring Mount	133
137		
	153 148 148 147.5 143.5 137 137 137	153 Commscope NHH-65B-R2B 148 Commscope NHHSS-65B-R2B-R2BT4 148 Samsung MT6413-77A 147.5 (3) Samsung RF4461d-13A 143.5 (3) Samsung RF4439d-25A B25/B66A 137 (3) Samsung RT4422-48A 137 Rayco Fiber Junction Box 137 PIRCD 15 Platform with handrell 137 Universal Ring Mount

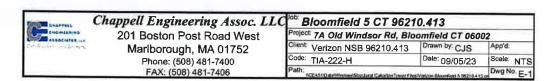
MATERIAL STRENGTH

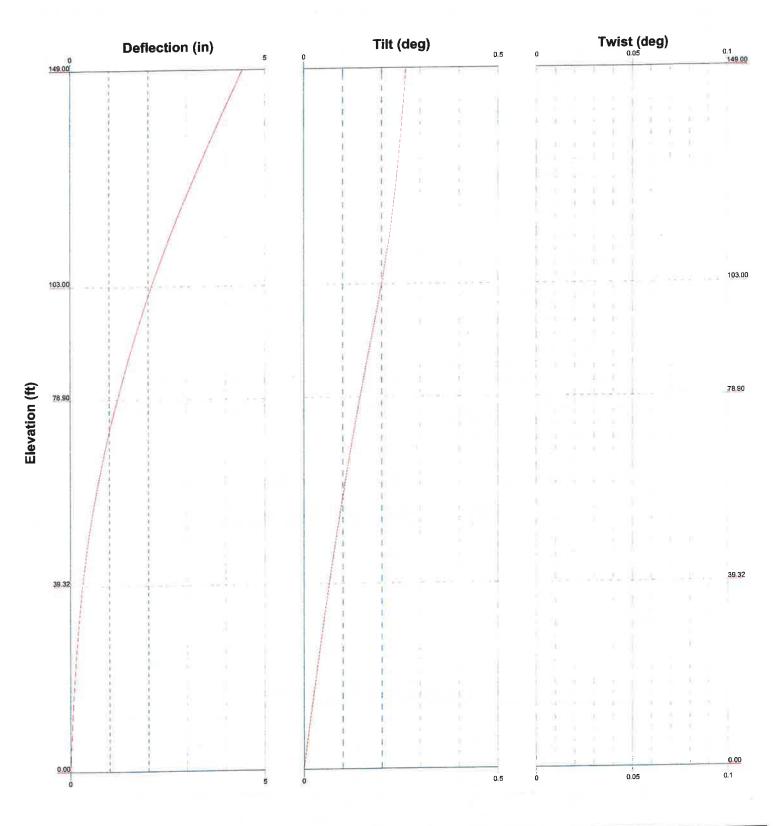
GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 kei	80 kei			

TOWER DESIGN NOTES

- 1. Tower is located in Hartford County, Connecticut.
- 2. Tower designed for Exposure B to the TIA-222-H Standard.
- 3. Tower designed for a 135 mph basic wind in accordance with the TIA-222-H Standard.
- Tower is also designed for a 50 mph basic wind with 1.20 in ice. Ice is considered to increase in thickness with height.
- 5. Deflections are based upon a 60 mph wind.

- Topographic Category II.
 Topographic Category I with Crest Height of 0.00 ft
 Weld together tower sections have flange connections.
- Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC Specifications.
- 10. Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards.
- 11. Welds are fabricated with ER-70S-6 electrodes.
- 12. TOWER RATING: 42.9%





ENGINEERING ASSOCIATES, V.E.	Chappell Engineering Assoc. LL	Bloomfield 5 CT 9621	0.413		
	201 Boston Post Road West	Project 7A Old Windsor Rd, Bloomfield CT 06002			
		Client: Verizon NSB 96210.413	Drawn by: CJS	App'd:	
Chapter Court of It	Marlborough, MA 01752	Code: TIA-222-H	Date: 09/05/23	Scale: NTS	
	Phone: (508) 481-7400 FAX: (508) 481-7406	Path: NCCASTIQUARMINISTRATOR CAUSTINITOR FRO	Dwg No. E-5		

Chappell Engineering Assoc. LLC

201 Boston Post Road West Marlborough, MA 01752 Phone: (508) 481-7400 FAX: (508) 481-7406

Job		Page
	Bloomfield 5 CT 96210.413	1 of 7
Project	7A Old Windsor Rd, Bloomfield CT 06002	Date 12:31:54 09/05/23
Client	Verizon NSB 96210.413	Designed by

Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

Tower is located in Hartford County, Connecticut.

Tower base elevation above sea level: 0.00 ft.

Wind speed of 135 mph.

Risk Category II.

Exposure Category B.

Topographic Category: 1.

Crest Height: 0.00 ft.

Nominal ice thickness of 1.2000 in.

Ice thickness is considered to increase with height.

Ice density of 56 pcf.

A wind speed of 50 mph is used in combination with ice.

Temperature drop of 50 °F.

Deflections calculated using a wind speed of 60 mph.

Weld together tower sections have flange connections..

Connections use galvanized A325 bolts, nuts and locking devices. Installation per TIA/EIA-222 and AISC

Specifications..

Tower members are "hot dipped" galvanized in accordance with ASTM A123 and ASTM A153 Standards..

Welds are fabricated with ER-70S-6 electrodes..

A non-linear (P-delta) analysis was used.

Pressures are calculated at each section.

Stress ratio used in pole design is 1.

Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
Ll	149.00-103.00	46.00	5.50	18	27.5000	42.3400	0.2500	1.0000	A572-65
L2	103.00-78.90	29.60	6.50	18	40.0657	49.4000	0.3130	1.2520	(65 ksi) A572-65
L3	78.90-39.32	46.08	8.00	18	46.7242	63.1000	0.3750	1.5000	(65 ksi) A572-65
L4	39.32-0.00	47.32		18	59.5070	73.0000	0.4380	1.7520	(65 ksi) A572-65
									(65 ksi)

Tapered Pole Properties

Section	Tip Dia.	Area	I	r	С	I/C	J	It/Q	w	w/t
	in	in ²	in⁴	in	in	in ³	in ⁴	in ²	in	
L1	27.8857	21.6229	2028.5415	9.6738	13.9700	145.2070	4059.7522	10.8135	4.4000	17.6
	42.9546	33.3984	7475.1715	14.9420	21.5087	347.5414	14960.1789	16.7024	7.0118	28.047
L2	42.3966	39.4927	7884.7337	14.1122	20.3534	387.3924	15779.8424	19.7501	6.5007	20.769
	50.1138	48.7661	14845.2728	17.4259	25.0952	591.5583	29710.0793	24.3877	8.1435	26.018
L3	49.7328	55.1672	14972.8045	16.4540	23.7359	630.8082	29965.3107	27.5888	7.5635	20.169
	64.0156	74.6584	37110.5722	22.2674	32.0548	1157.7228	74269.9754	37.3363	10.4456	27.855
L4	62.6737	82.1184	36199.0344	20.9695	30.2295	1197.4719	72445.7004	41.0670	9.7023	22.151
	74.0586	100.8766	67103.6613	25.7595	37.0840	1809.5044	134295.619	50.4479	12.0771	27.573

Chappell Engineering Assoc. LLC 201 Boston Post Road West

201 Boston Post Road West Marlborough, MA 01752 Phone: (508) 481-7400 FAX: (508) 481-7406

Job	Bloomfield 5 CT 96210.413	Page 2 of 7
Project	7A Old Windsor Rd, Bloomfield CT 06002	Date 12:31:54 09/05/23
Client	Verizon NSB 96210.413	Designed by

Section	Tip Dia.	Area	I in ⁴	r in	C in	I/C in³	J in⁴	It/Q in²	w in	w/t
	171						3			

Tower Elevation	Gusset Area (per face)	Gusset Thickness in	Gusset Grade	Adjust. Factor A _f	Adjust. Factor A,	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
<u></u>	· · · · · · · · · · · · · · · · · · ·			1	1	1			
149.00-103.00 L2				1	1	1			
103.00-78.90 L3 78.90-39.32 L4 39.32-0.00				1	1	1 1			

Monopole Base Plate Data

Base Plate Data	
Base plate is square	
Base plate is grouted	
Anchor bolt grade	A615-75
Anchor bolt size	1.7500 in
Number of bolts	24
Embedment length	57.0000 in
f _c	5 ksi
Grout space	2.0000 in
Base plate grade	A572-50
Base plate thickness	2.2500 in
Bolt circle diameter	80.0000 in
Outer diameter	84.3000 in
Inner diameter	54.7500 in
	Plain Plate
Base plate type	Plain Plate

Feed Line/Linear Appurtenances - Entered As Area

Description	Face	Allow	Exclude	Component	Placement	Total Number		C_AA_A	Weight
	or Leg	Shield	From Torque Calculation	Туре	fi	Numoer		ft²/ft	plf
7/8	A	No	Yes	Inside Pole	149.00 - 0.00	3	No Ice	0.00	0.54
//6	Λ	140	100				1/2" Ice	0.00	0.54
							1" Ice	0.00	0.54
							2" Ice	0.00	0.54
Or D. It-	В	No	Yes	CaAa (Out	149.00 - 0.00	1	No Ice	0.03	0.50
Step Bolts	ь	140	103	Of Face)	2.0.00		1/2" Ice	0.13	1.00
				011100)			1" Ice	0.23	1.50
							2" Ice	0.43	2.50
	ъ	NIa	Yes	Inside Pole	138.00 - 0.00	2	No Ice	0.00	1.30
S Hybriflex Cable	В	No	1 68	Hiside I ole	150.00 0.00	_	1/2" Ice	0.00	1.30
1.25in							1" Ice	0.00	1.30
							2" Ice	0.00	1.30

Chappell Engineering Assoc. LLC 201 Boston Post Road West Marlborough, MA 01752 Phone: (508) 481-7400 FAX: (508) 481-7406

Jop		Page
	Bloomfield 5 CT 96210.413	3 of 7
Project	7A Old Windsor Rd, Bloomfield CT 06002	Date 12:31:54 09/05/23
Client	Verizon NSB 96210.413	Designed by CJS

Discrete Tower Loads

	or Leg	Туре	Horz Lateral Vert	Adjustment	Placement		$C_A A_A$ Front	$C_A A_A$ Side	Weight
			fi fi fi	o	ft		ft²	ft²	K
12' Dipole Antenna	С	None	Jı	0.0000	156.00	No Ice	2.25	2.25	0.04
						1/2" Ice	3.94	3.94	0.06
						1" Ice	5.63	5.63	0.08
						2" Ice	9.01	9.01	0.12
Lightning Rod	C	None		0.0000	153.00	No Ice	0.38	0.38	0.01
						1/2" Ice	0.99	0.99	0.01
						1" Ice	1.60	1.60	0.01
						2" Ice	2.82	2.82	0.01
PiROD 15' Platform with	C	None		0.0000	147.50	No Ice	33.80	33.80	2.04
handrail						1/2" Ice	43.60	43.60	2.75
						1" Ice	53.40	53.40	3.45
TT 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	_					2" Ice	73.00	73.00	4.86
Universal Ring Mount	С	None		0.0000	143.50	No Ice	2.50	2.50	0.42
						1/2" Ice	3.00	3.00	0.60
						1" Ice	3.50	3.50	0.78
DIDOD 151 DI 16	_					2" Ice	4.50	4.50	1.14
PiROD 15' Platform with	C	None		0.0000	137.00	No Ice	33.80	33.80	2.04
handrail						1/2" Ice	43.60	43.60	2.75
						1" Ice	53.40	53.40	3.45
I I - i 1 D i 1 M 1						2" Ice	73.00	73.00	4.86
Universal Ring Mount	C	None		0.0000	133.00	No Ice	2.50	2.50	0.42
						1/2" Ice	3.00	3.00	0.60
						1" Ice	3.50	3.50	0.78
Commissions NUU 65D D2D		F . P	2.00			2" Ice	4.50	4.50	1.14
Commscope NHH-65B-R2B	Α	From Face	3.00	0.0000	137.00	No Ice	8.08	5.44	0.05
			0.00			1/2" Ice	8.53	5.94	0.10
			0.00			1" Ice	9.00	6.47	0.16
Commscope	A	From Fore	2.00	0.0000	107.00	2" Ice	9.95	7.57	0.30
NHHSS-65B-R2B-R2BT4	A	From Face	3.00	0.0000	137.00	No Ice	8.08	5.34	0.05
1411135-03B-R2B-R2B14			0.00			1/2" Ice	8.53	5.79	0.10
			0.00			1" Ice	9.00	6.26	0.16
Samsung MT6413-77A	Α	From Face	2.00	0.0000	127.00	2" Ice	9.95	7.20	0.29
bansing WIO413-77A	А	FIOIII Face	3.00 0.00	0.0000	137.00	No Ice	3.81	1.46	0.06
			0.00			1/2" Ice	4.06	1.65	0.08
			0.00			1" Ice	4.32	1.84	0.11
Commscope NHH-65B-R2B	В	From Face	3.00	0.0000	127.00	2" Ice	4.86	2.26	0.18
	D	110411 acc	0.00	0.0000	137.00	No Ice 1/2" Ice	8.08	5.44	0.05
			0.00			1/2 Ice	8.53	5.94	0.10
			0.00			2" Ice	9.00	6.47	0.16
Commscope	В	From Face	3.00	0.0000	137.00	No Ice	9.95	7.57	0.30
NHHSS-65B-R2B-R2BT4	_	11011111100	0.00	0.0000	137.00	1/2" Ice	8.08 8.53	5.34	0.05
			0.00			1" Ice	9.00	5.79	0.10
			0.00			2" Ice	9.00	6.26	0.16
Samsung MT6413-77A	В	From Face	3.00	0.0000	137.00	No Ice	3.81	7.20 1.46	0.29 0.06
9			0.00	0.0000	137.00	1/2" Ice	4.06		
			0.00			1" Ice	4.32	1.65 1.84	0.08 0.11
			0.00			2" Ice	4.32	2,26	0.11
Commscope NHH-65B-R2B	C	From Face	3.00	0.0000	137.00	No Ice	8.08	5.44	0.18
			0.00		137.00	1/2" Ice	8.53	5.94	0.03
			0.00			1" Ice	9.00	6.47	0.16
						2" Ice	9.95	7.57	0.16
Commscope	C	From Face	3.00	0.0000	137.00	No Ice	8.08	5.34	0.05
NHHSS-65B-R2B-R2BT4			0.00			1/2" Ice	8.53	5.79	0.03

Chappell Engineering Assoc. LLC 201 Boston Post Road West Marlborough, MA 01752 Phone: (508) 481-7400 FAX: (508) 481-7406

Jop	Bloomfield 5 CT 96210.413	Page 4 of 7
Project	7A Old Windsor Rd, Bloomfield CT 06002	Date 12:31:54 09/05/23
Client	Verizon NSB 96210.413	Designed by CJS

Description	Face or Leg	Offset Type	Offsets: Horz Lateral	Azimuth Adjustment	Placement		C _A A _A Front	C _A A _A Side	Weight
	Ü		Vert ft ft ft	0:	fi		fì²	ft²	K
			0.00			1" Ice	9.00	6.26	0.16
						2" Ice	9.95	7.20	0.29
Samsung MT6413-77A	С	From Face	3.00	0.0000	137.00	No Ice	3.81	1.46	0.06
Damsdig Will Clip Will	_		0.00			1/2" Ice	4.06	1.65	0.08
			0.00			1" Ice	4.32	1.84	0.11
						2" Ice	4.86	2.26	0.18
(3) Samsung RF4461d-13A	С	None		0.0000	137.00	No Ice	1.88	1.27	0.08
(3) Salisung RI Hold 1311	•	11022				1/2" Ice	2.05	1.42	0.10
						1" Ice	2.22	1.57	0.12
						2" Ice	2.60	1.89	0.17
(3) Samsung RF4439d-25A	С	None		0.0000	137.00	No Ice	1.88	1.25	0.08
B25/B66A	0	110110				1/2" Ice	2.05	1.39	0.09
D23/D00A						1" Ice	2.22	1.54	0.11
						2" Ice	2.60	1.86	0.17
(2) G BT4432 48 A	С	None		0.0000	137.00	No Ice	0.86	0.42	0.02
(3) Samsung RT4423-48A	C	Hone		0.0000		1/2" Ice	0.97	0.51	0.03
						1" Ice	1.10	0.61	0.04
						2" Ice	1.37	0.83	0.06
		None		0.0000	137.00	No Ice	2.51	1.97	0.03
Rayco Fiber Junction Box	C	None		0.0000	137.00	1/2" Ice	2.71	2.15	0.05
						1" Ice	2.91	2,33	0.08
						2" Ice	3.35	2.73	0.15

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral	Azimuth Adjustment	3 dB Beam Width	Elevation	Outside Diameter		Aperture Area	Weigh
				Vert ft	۰	0	ft	ft		ft²	K
2.51D: 1/D	A	Paraboloid	From	4.00	Worst		148.00	2.50	No Ice	4.91	0.05
2.5' Dish w/Radome	A	w/Radome	Face	4.00					1/2" Ice	5.24	0.08
		W/Kadome	race	0.00					1" Ice	5.57	0.10
				0.00					2" Ice	6.24	0.16
	_	B 1 1.14	F	4.00	Worst		148.00	2.50	No Ice	4.91	0.05
2.5' Dish w/Radome	С	Paraboloid	From		WOLST		110.00		1/2" Ice	5.24	0.08
		w/Radome	Face	6.00					1" Ice	5.57	0.10
				0.00					2" Ice	6.24	0.16

Chappell Engineering Assoc. LLC

201 Boston Post Road West Marlborough, MA 01752 Phone: (508) 481-7400 FAX: (508) 481-7406

Job		Page
	Bloomfield 5 CT 96210.413	5 of 7
Project	7A Old Windsor Rd, Bloomfield CT 06002	Date 12:31:54 09/05/23
Client	Verizon NSB 96210.413	Designed by CJS

Load Combinations

Comb. No.	Description	
1	Dead Only	
2	1.2 Dead+1.0 Wind 0 deg - No Ice	
3	0.9 Dead+1.0 Wind 0 deg - No Ice	
4	1.2 Dead+1.0 Wind 90 deg - No Ice	
5	0.9 Dead+1.0 Wind 90 deg - No Ice	
6	1.2 Dead+1.0 Wind 180 deg - No Ice	
7	0.9 Dead+1.0 Wind 180 deg - No Ice	
8	1.2 Dead+1.0 Ice+1.0 Temp	
9	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	
10	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	
11	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	
12	Dead+Wind 0 deg - Service	
13	Dead+Wind 90 deg - Service	
14	Dead+Wind 180 deg - Service	

Maximum Tower Deflections - Service Wind

Section	Elevation	Horz.	Gov.	Tilt	Twist
No:		Deflection	Load		
	ft	in	Comb.	90	0
L1	149 - 103	4.431	12	0.2657	0.0019
L2	108.5 - 78.9	2.330	12	0.2096	0.0006
L3	85.4 - 39.32	1.423	12	0.1595	0.0003
L4	47.32 - 0	0.438	12	0.0826	0.0001

Critical Deflections and Radius of Curvature - Service Wind

Elevation	Appurtenance	Gov.	Deflection	Tilt	Twist	Radius of
		Load				Curvature
ft		Comb.	in	۰	٥	ft
156.00	12' Dipole Antenna	12	4.431	0.2657	0.0019	186410
153.00	Lightning Rod	12	4.431	0.2657	0.0019	186410
148.00	2.5' Dish w/Radome	12	4.375	0.2645	0.0019	186410
147.50	PiROD 15' Platform with handrail	12	4.348	0.2640	0.0018	186410
143.50	Universal Ring Mount	12	4.126	0.2595	0.0017	169463
137.00	PiROD 15' Platform with handrail	12	3.770	0.2520	0.0014	77671
133.00	Universal Ring Mount	12	3.553	0.2471	0.0013	58253

Maximum Tower Deflections - Design Wind

Section No.	Elevation	Horz. Deflection	Gov. Load	Tilt	Twist
	ft	in	Comb.	•	۰
L1	149 - 103	25.135	2	1.5070	0.0108
L2	108.5 - 78.9	13.216	2	1.1896	0.0031
L3	85.4 - 39.32	8.071	2	0.9048	0.0017
L4	47.32 - 0	2.486	2	0.4683	0.0006

Chappell Engineering Assoc. LLC

201 Boston Post Road West Marlborough, MA 01752 Phone: (508) 481-7400 FAX: (508) 481-7406

Job	Bloomfield 5 CT 96210.413	Page 6 of 7
Project	7A Old Windsor Rd, Bloomfield CT 06002	Date 12:31:54 09/05/23
Client	Verizon NSB 96210.413	Designed by CJS

Critical Deflections and Radius of Curvature - Design Wind

Elevation	Appurtenance	Gov. Load	Deflection	Tilt	Twist	Radius of Curvature
ft.		Comb.	in	0	0	ft
156.00	12' Dipole Antenna	2	25.135	1.5070	0.0108	32898
153.00	Lightning Rod	2	25.135	1.5070	0.0108	32898
	2.5' Dish w/Radome	2	24.820	1.5007	0.0106	32898
148.00	PiROD 15' Platform with handrail	2	24.663	1.4975	0.0104	32898
147.50	12100	2	23.408	1.4721	0.0095	29907
143.50	Universal Ring Mount	2	21.385	1.4296	0.0081	13707
137.00	PiROD 15' Platform with handrail	2	Particular to Committee	1.4021	0.0072	10280
133.00	Universal Ring Mount	2	20.156	1.4021	0.0072	10200

Base Plate Design Data

Plate	Number	Anchor Bolt	Actual	Actual	Actual	Actual	Controlling	Ratio
Thickness	of Anchor Bolts	Size	Allowable Ratio Bolt	Allowable Ratio Bolt	Allowable Ratio Plate	Allowable Ratio Stiffener	Condition	
in		īn	Tension K	Compression K	Stress ksi	Stress ksi		
2.2500	24	1.7500	61.08 142.46 0.43	64.82 236.48 0.27	18.760 45.000 0.42		Bolt T	0.43

Compression Checks

Pole Design Data

Section	Elevation	Size	L	L_u	K1/r	A	P_u	ϕP_n	Ratio P_u
No.	ft		ft	ft		in ²	K	K	ϕP_n
T.1	140 102 (1)	TP42.34x27.5x0.25	46.00	0.00	0.0	31.9905	-11.72	1871.44	0.006
LI	149 - 103 (1) 103 - 78.9 (2)	TP49.4x40.0657x0.313	29.60	0.00	0.0	46.7297	-16.67	2733.69	0.006
L2	` '	TP63.1x46.7242x0.375	46.08	0.00	0.0	71.2745	-28.05	4169.56	0.007
L3 L4	78.9 - 39.32 (3) 39.32 - 0 (4)	TP73x59.507x0.438	47.32	0.00	0.0	100.877	-48.55	5901.28	0.008

Pole Bending Design Data

Section	Elevation	Size	$M_{\scriptscriptstyle LC}$	ϕM_{nx}	Ratio M _{ux}	M_{uy}	ϕM_{ny}	$Ratio$ M_{uy}
No.	ft		kip-ft	kip-ft	ϕM_{nx}	kip-ft	kip-ft	$\phi M_{\rm ny}$
T 1	149 - 103 (1)	TP42.34x27.5x0.25	344.52	1645.98	0.209	0.00	1645.98	0.000
Ll	103 - 78.9 (2)	TP49.4x40.0657x0.313	669.31	2896.55	0.231	0.00	2896.55	0.000
L2		TP63.1x46.7242x0.375	1364.64	5472.55	0.249	0.00	5472.55	0.000
L3 L4	78.9 - 39.32 (3) 39.32 - 0 (4)	TP73x59.507x0.438	2511.97	9219.58	0.272	0.00	9219.58	0.000

Chappell Engineering Assoc. LLC

201 Boston Post Road West Marlborough, MA 01752 Phone: (508) 481-7400 FAX: (508) 481-7406

Job		Page
	Bloomfield 5 CT 96210.413	7 of 7
	7A Old Windsor Rd, Bloomfield CT 06002	Date 12:31:54 09/05/23
Clie	verizon NSB 96210.413	Designed by CJS

Pole Shear Design Data

Section No.	Elevation	Size	Actual V.,	ϕV_n	Ratio V.,	Actual T _u	φT _n	Ratio T _u
	ft		K	K	$-\phi V_n$	kip-ft	kip-ft	фТ,
L1	149 - 103 (1)	TP42.34x27.5x0.25	12.56	561.43	0.022	1.93	1982.22	0.001
L2	103 - 78.9 (2)	TP49.4x40.0657x0.313	15.58	820.11	0.019	1.93	3378.25	0.001
L3	78.9 - 39.32 (3)	TP63.1x46.7242x0,375	20.96	1250.87	0.017	1.93	6559.76	0.000
L4	39.32 - 0 (4)	TP73x59.507x0.438	27.55	1770.38	0.016	1.93	11250.08	0.000

Pole Interaction Design Data

Section No.	Elevation	Ratio P _u	Ratio M _{ux}	Ratio M _{uv}	Ratio V _u	Ratio T _u	Comb. Stress	Allow. Stress	Criteria
	ft	φ <i>P</i> ,,	$\phi M_{\rm ex}$	ϕM_{m}	ϕV_n	ϕT_n	Ratio	Ratio	
L1	149 - 103 (1)	0.006	0.209	0.000	0.022	0.001	0.216	1.000	4.8.2
L2	103 - 78.9 (2)	0.006	0.231	0.000	0.019	0.001	0.238	1.000	4.8.2
L3	78.9 - 39.32 (3)	0.007	0.249	0.000	0.017	0.000	0.256	1.000	4.8.2
L4	39.32 - 0 (4)	0.008	0.272	0.000	0.016	0.000	0.281	1.000	4.8.2

Section Capacity Table

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	øP _{allow} K	% Capacity	Pass Fail
L1	149 - 103	Pole	TP42.34x27.5x0.25	1	-11.72	1871.44	21.6	Pass
L2	103 - 78.9	Pole	TP49.4x40.0657x0.313	2	-16.67	2733.69	23.8	Pass
L3	78.9 - 39.32	Pole	TP63.1x46.7242x0.375	3	-28.05	4169.56	25.6	Pass
L4	39.32 - 0	Pole	TP73x59.507x0.438	4	-48,55	5901.28	28.1	Pass
							Summary	
						Pole (L4)	28.1	Pass
						Base Plate	42.9	Pass
						RATING =	42.9	Pass







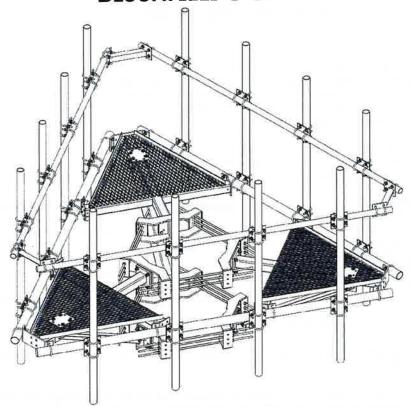






20 Alexander Drive Wallingford, CT 06492

MOUNT ANALYSIS BLOOMFIELD 5 CT



Address:

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

MDG LOCATION ID: 5000920838

Date:

SEPTEMBER 12, 2023 (REV. 4)



Civil · Structural · Land Surveying



Civil · Structural · Land Surveying

September 12, 2023



2nd Floor Wallingford, CT 06492

RE:

Applicant Site Name: MDG Location ID:

Bloomfield 5 CT 5000920838

Site Address:

7A Old Windsor Road, Bloomfield, CT 06002

To whom it may concern:

Chappell Engineering Associates, LLC has performed a structural analysis of the proposed Verizon braced low-profile antenna mounting platform being proposed at the existing 150'+/- monopole located at the above-referenced address at approximately 137 ft AGL to analyze the effect of the proposed Verizon antenna installation on the subject platform. Our analysis has been performed in accordance with the 2022 Connecticut State Building Code (2021 International Building Code) with Connecticut Amendments.

The proposed antenna support structure will consist of one (1) low-profile antenna frame supporting twelve (12) individual antenna pipes mounts. Our analysis has considered the following total major equipment loads indicated on the antenna design summary (included in this report) to be installed on the proposed low-profile antenna frame:

<u>Appurtenance</u>	Size (HxWXD)(in)	Weight	Location	Status
(3) NHH-65B-R2B Panel Antennas	72.0x11.9x7.1	43.7lbs	Face of Mount	Proposed
(3) NHHSS-65B-R2B-R2BT4 Panel Antennas	72.0x11.9x7.1	48.1lbs	Face of Mount	Proposed
(3) Samsung MT6413-77A Panel	28.9x15.8x5.5	57.3lbs	Face of Mount	Proposed
(3) Samsung RF4461d-13A RRH	15.0x15.0x10.2	79.1lbs	Face of Mount	Proposed
(3) Samsung RF4439d-25A B25/B66A RRH	15.0x15.0x10.0	74.7lbs	Face of Mount	Proposed
(3) Samsung RT4423-48A RRH	11.8x8.7x4.2	18.7lbs	Face of Mount	Proposed
(1) Fiber Junction Box	29.58x16.5x12.6	32.0lbs	Face of Mount	Proposed

The proposed antennas and ancillary hardware are shown on the enclosed Lease Exhibits.

We have modeled the entire low-profile antenna frame under both wind and wind/ice loads. Our analysis and results are included in this report.

Based upon our analysis of the antenna mounts being proposed, we consider the proposed RMQP-496-HK low-profile mounting frame assembly has adequate capacity to support the proposed antenna configuration as shown. The maximum percentage stress capacity as determined by our analysis are the antenna mounting pipes supporting the combined dual-mount antennas with a capacity of 53%. Our analysis assumes the proposed antenna mounting platform will be properly installed and maintained according to manufacturers' recommendations.

If you have any questions regarding this matter, please do not hesitate to call.

Very truly yours,

CHAPPELL ENGINEERING ASSQ

Clement J Salek, P.E.

CJS/cjs

SUPPORTING DOCUMENTS

WITHING BUPPORT STRUCTURE (1801 MONOPOLE) STRUCTURAL ANALYSIS DATE: #1201 INTERNA MOUNT STRUCTURAL ANALYSIS DATE 4/12/23 NADIO FREGUENCY (RE) DESIGN DATE: 7/24/23



20 ALEXANDER DRIVE, 2nd FLOOR, WALLINGFORD, CT 06492

ASSOCIATES, LLC

CHAPPELL

Verizon

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002 PROJECT TYPE: WIRELESS TELECOMMUNICATIONS COLLOCATION ON EXISTING 150'± MONOPOLE

VICINITY MAP 8CALE 11:1000

SITE INFORMATION:

SHIER OF EXISTING MONOPOLE
N 41"-67"-18.90" (41.202544) (NAD 193)
W TO-42"-18.20" (TE,TO4T) (NAD 193)
NAMEDITICUT SITING COUNCIL OLD WINDSON ROAD DOMFHELD, CT DROES 16 BLDCK 88

GENERAL NOTES

PROM WALENGEONG, TAKELIN HORFIT, TAKE DIT 27 FOR CIT-DAME, COMPELL) AVENUE TOWARD WHODOR CERTER. USE LEFT \$1,0485 TO TURN LEFT OKTO CIT-DO WIRL, COMPILLD AVENUE. THE \$175 MALL RE ON THE LEFT FAMID BIDE.

DRIMING DIRECTIONS

- NEW COMETRICATION SHALL CONFORM TO ALL APPLICABLE CODES AND ORIZINANCES

 PRIVATION CODE BEST OWNERFORCES ATTHE BALLINANCE CODE

 ELECTRICAL CODE: BAT NATIONAL BASTINES ALL CODE

 STREAM TO THE STREAM TO ALL APPLICATION TO THE STREAM TO SHALL CODE

 STREAM TO THE STREAM T

AT LEAST 72 HOURS PRICH TO DISGRAG, THE CONTRACTOR IS NEGLINED TO CALL DIG SAFE AT 811



SHEET INDEX

ENGINEER/LAND SURVEYOR

DWG.	DESCRIPTION	HEV.
ē	THESPEET	٠
GMDI	CHENERAL MOTES	•
8	PROPERTY PLAN	•
ē	MONOPOLE VIONATY PLAN	•
QQ.	EQUIPMENT AREA PLAN & DETAND	•
908	BOUTHEAST GITE ELEVATION	•
100	ICE SHELD FRAME OF JAM & STRUCTURAL OCTARS	•
Ē	ANTERNA MOUNTING PLAN AND DETAILS	•
PPCE	ANTENNA DETAILS ME ANCILATIFE CURRENT SPECIFICATIONS	•
EFEE	HE BILL CHANTERALD AND IF CARLE PLANSING DACKAM	*
Ě	PF COULTR CODE SPECIFICATIONS	•
ē	PLINEBNG NOTES AND SCHEWATIC	•
2	SITE PLINGING PLAN	•
ā	ELECTRICAL SPECIFICATIONS AND NOTES	•
2	BITE LITELITY PLAN & DETANS	•
EOEA	MONOPOLE VICINITY UTLITY PLAN & DETALS	*
200	BETTRCAL DIAGNAIS & DETAILS	•
ă	BOHEMATIC GROUNDING PLAN & DETAILS	•
98	CHOUNTHY DETAILS	•

DO NOT SCALE DRAWINGS

THESTEL

BLOOMFIELD 5 CT

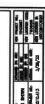
7A OLD WINDSOR FOAD BLOOMPIELD, CT 06002

PROJECT DESCRIPTION

- The B wild wild wild pura material access Exprehent waruumch And will.

 The B wild wild wild be access Exprehent waruumch and wild be access to the access of more management and access to the access of more management and access to the access of more management and access to the access of more access to the access of the a

T01



FOR THE PURPORE OF CONSTRUCTION DANSWORT, THE PULLOWING INSTITUTION SWELL APPLY.

COMMISSION - PRESENCE OF CONSTRUCTION (COMMISSION)

MINICIPALITY COMMISSION.

A AL WORK CHRISD OUT SHALL SURLY WITH ALL APPLICABLE MARGEN, AND UTLITY COMPANY SPECIATIONS. WE LICKLE, MARGINET CHRIST, GREEN AND APPLICABLE SPECIATIONS. A AL MITTONIA FRANKASIO AND MITALIO SANI, AE NI STATIC ACCORDANCE WITH ALL ANYCOMES COLCE, RESULTIONS, AND COMMUNICAL SALES AND COMPANION, AND ALL ANYCOMES TO SALES AND COMPANION OF A THEORY OF ANY COMMUNICAL AND COMPANION OF ANY COMPANION OF A FINCK TO BE SEMESTICH OF BIRE, THE EXCHAET SEMESTICHE SHILL WIST THE COLL STILL TO FAIRLINGS WITH THE RESIDENCE AND TO COMMENT THE WASKING STILL TO CONTINUE AND THE WASKING STILL THE SEMESTIC TO SEMESTIC THE SEMES

UALSS WITED OFFENERS, THE WORK SWILL INCLUDE FUNKERNO WITEWAYS, ERLINGER, APPLITEMENTS, NO LAKEN INCOMENT TO CORPLETE ALL MEDLLITEMES AN INCOMENT ON THE DROWNESS. DAGRACI FROMED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOP CURLINE CHEM.

, F. THE SPECIFIED EQUIPMENT CANNET BY DESILIED AS SHOWN ON THEIR COMMENTS, THE SUBSCRIPTION SHALL WHOSE AN ATTEMENT OF THE CONTRICTOR. THE GALCORFINGTRA SHILL PERMIL ALL ENLINGET AND MATTHUS IN ACCORDANCE WITH MANUFACTURET'S EXPERIMENTAL VALUE SHILL ALL ENLINGET AND DIFFERENCE OF ACCORDANCE WITH MANUFACTURET'S STATEMENT OF THE SHIP OF THE SHIP

g, ne socontricto and protest diend depotablis, purdents cure, lucosang no seniciues. An nunco part and e repaise at secondators depote to the attraction of the ones. RECORDING THE DETERMENT METHOR OF CHOSET, FORE AND TO CHEEK, GREATMEN ONLY, AS STIMING THE WORLD AND THE PROPERLY STATE DETERMINED THE MAYON EVEL, AND THE MECHANICAL SUDCEMENTS THAT, AND THE PROPERLY AND THE MECHANICAL SUDCEMENTS THAT, DETERMINED THE MECHANICAL SUDCEMENTS. ii, suraminatingi shali lanalay and propriat oppose of all schip withous such as coana, obeits addono. Oppose Oppose

TITLE SPALL LERKE PREMISES IN CLEAN CONDITION.

1), The Subdomination with supplies and inform the project decorate indicate the subdomination small be stated the transfer of the substitution of the university of the substitution of the university of the substitution of the university confined, the substitution of the university confined to the university confined

15, duentacida sala, coekt, ett kondan embera kendak siandaro (astriza to the undala) ditek fossber Unios fedeliogo on lakto et desa soom on tass damaks. A SECONDACION SHALL KITH" CHAPTIL CHARITHME AND CATES I.I.C. 46 YOURS OF AGAINGT OF POLITICAL CHARITMEN FOR THE CATES OF T

IA, SERCONTRUCTOR, SHALL VEGETA IN EXEMBED NACIONALE AND COMMUNICATION OF THE MANAGEMENT OF THE WORLY ALL MINISTERIOR OF DESIRING COMPILITION SHOULD NOT HER DEPONDE OF THE REPORT SACREMANIST OF THE MANAGEMENT OF THE SACREMANIST OF THE MANAGEMENT OF THE SACREMANIST OF THE SACREMA

17, ME DARMO COLL SIE B VILL COMMUNICAN, CHENCHON, AMY COLOMINATION WORK OF SUBSCHIMMENTON SINN LOT EXISTENCE MENTION MANUEL CONTRACTOR WAS NOT MANUEL CONTRACTOR OF SUBSCHIMMENTON OF CONTRACTOR OF SUBSCHIMMENTON CONTRACTOR OF ANY CONTRACTOR OF SUBSCHIMMENT OF SUBSCHIMENT OF SUBSCHIMMENT OF SUBSCHIMME

IN THE COLL BIT IS ACTIVE, ALL SWITTY INCLUSION MAIT IN THOSY WICH VENERS WALKED INCOL LOCATS OF ELECTROMOGRAPH MAINTAIN, ELECTROMIC OF SHATCHS WICH TO THE VENER OF MAINTAIN THE VENERAL DEPORT THE VENERAL THE MAINTAIN AND THE VENERAL WICH THE WARRY TO THE WARR TO ALKER OF HIS DISABLES DEPORTED.

STE WORK CENERAL HOTTES

MINOTOR SAUL CONTACT UTLITY LOCATING SERVICES PRION TO THE STAFF OF CONSTITUTION

2. AL DERMO, JOSE STREET, WATE, DAT LICENCE, AND CHES USTREET WATER DECOMETS DE NIN WATER, SHALL MATERIAL DE NIN WATER, DAT LICENCE DE NIN WATER DE

A ALL BIE WERT SHALL BE AS FREIGNED ON THE DIVINNES AND PRIMEDIT SPEEDWINGE.

I, F MEZDORY, RAMEN, STAFF, SEDEC, STOCK, STOKES AND OTHER MEDIES SHALL BE MOUNTED THOU THE SETS, AND MEDIES OF LEGALLY.

L NO FILL OR EXEMPLES TWODAY, SHALL OF PLACED ON FROMEN OFFICEN INTERNAL, SHOW OF ICE SHALL NOT B. Placed by Any Fill of Betweening. IL THE STITE SHILL BE GHOOD IN OUCE SURSICE BITCH IN THE PROF. THE BITCH BY COMPANY AND TONCH AND E

A. ALL DISTRING HOUTHER STEERN, WITHEN, CARL, CLEATING, AND CITATION OF THE TOTAL STEERING HOUTHER STEERING HOUTHER THE STEERING HOUTHER STEERING HOUTHER STEERING HOUTHER STEERING HOUTHER STEERING HOUTHER STEERING HOUTHER STEERING HOUTH HOUTHER STEERING HOUTH HOUTH HOUTHER STEERING HOUTH HOUTH HOUTHERS. THE SAS ENGLE BINLE IS CONFICID AND INCURNITY A SECOND LINEOUS CINCE FROM TO PRINKED SURFACE.

n, regionmyctor swil, leiner cettureck to dethe ste copro constituci, etaign control, etaigns see sees sees se Traines white cortificities, swil, ee ni constances ethi de look, erejars for decicil no seeson and senastif Compact. I, THE MAKE OF THE OWENE PREVENT MENUNCE OF THE WORK AND HOT CORRESS OF THE TOTALS. EXPRESS OF THE WASHINGTON TO A UNITED BY THE WASHINGTON TO A PREVENT BROSEN AS SPECIFIED IN THE PRACEIT.

MACINE SINT PROFES STE SENSE IN AZORDANCE WITH THE VERICON SPECESS SPECIFICAL FOR SITE

VONCRETE AND REWEDSCHIEG SITED, MOTES.

LOCATE WAS BUY BY AND RESPONDED BY AND AND AND AND AND AND AND AND AND THE SHARP AND CONSERVE A

A ALL CONDERE SHALL HAVE A LABOLAR CONFINENCE STREAGTH OF 2000 PSI AT 28 INAS, UNLESS MOTED OFFENERS. A RESPECTIVE STREAGHT (NODEW) MAY BE URES, ALL CONDICTOR STANK SHALL BE IN ACCORDANCE WITH THE AS 301 CONF. STREAGHTS.

A, NESTROCOGO STED, SWALL CORPORAN TO ARTIA A RIIL, GONCE, RA, DETANIANO LIALZIS MOTOD CINCERNES, WELSON WAR FAMINE. Lander Lockford to Artia A, Colon Control Will Control United Motes On Desiries, SWALL IS: CLASS VF AND ALL CROSS SWALL RES CAMENTING, LING.

A CHAPTER N. SHALL BE PROPERS AT ALL ESPECES EDGES OF CONCRETE, UND, BY ACCORDANCE WITH ACIDED ALL STEEDS 4.2.4. A BETALINE OF CHEET COMMENDATION ANCHOR, INTEL REPRESENTATION WITH RECORDED PROCESSES. THE ARTICLE CORE OF SOME SHARES AND THE WASHE OF TO THE COUNTY OF THE COUNTY CO

, emprent skil fot de place de red for en tre som dat fets fot de place, units it il voets di Albos test ivet composife emplorin ha ben ettern. A, AG AN ALTONOMINE TO FIGHT 7, TOST CALLINGES SHALL BE THERN BATHLET AND THEORASTER FOR EARDY GO THRUG OF Concesse from Each optioned bath plant. A command cubest to the Readon pay as an operation are consecred that has so case were by accurate the former formers are previously as the service form. Command the by accurate of command the service former and the service former and the command of command the service former and the service former and the service former and the service for service for service for service for the service for serv

STRUCTURAL STEEL NOTES.

1. ALI NOJMO, SHALI KE PERFURBAD USANG ELECTRODES AND NOJMOG SHALI CONTRIBE TO AND. AND AND DIAL NODE: THE TRE THE TOTAL STANDARD SHALL SHALL BE TOUCHOOLD WITH PROBLEM SHALL SHALL BE TOUCHOOLD WITH THE TASK WHITH AND THE TOWN SHALL SHALL BE TOUCHOOLD US. A. A. THE REPORT OF THE PROPERTY OF A OWNERS A CANODECT WHI TO HAVE BROKEN TO NO CHANGE WELLOW STATES OF A CANODINATION OF THE SECONDARY STATES OF THE WIND OF THE SECONDARY STATES OF THE WIND OF THE SECONDARY STATES OF THE WIND OF THE SECONDARY STATES OF THE SECONDARY S

A NACIED COMPETIONS SHALL WE NOTWOOD THE ASIA AND NACIO (RTV) AND SHALL HAS MEMBAN OF THO UNLESS CONTROL CHARGO.

NOTIFICATION OF DESCRIPTION OF THE STATE OF CONNECTIONS FOR STIEL SWIND MY USE N. M. ARIN A 327 BOLD UNION KITS ONCORES.

, AL BREITURY, BRID, WOR, SHELL OF DORE IN ACCOMMEND WIN ARE SPLENDED &

SOIL COMPACTION NOTES FOR SLAB ON CRADE

DENNE A NEMBED TO NOTICE NEEDING AND TOTALE TO EXTOR WITHAL SUBMICE AND PLACE CHIEFED STORE AS SURED.

. Сожнатом силитатись ин винертом ию вистра сектромом вт а омыгаю вколяторы, тосянося от влячаем 3 досержива , as an attended to defection and within complexion, the "underived bod" date sall its completion that compared expensively, letter bedge, to at 1550 are also present and any design for any of 1550 are also designed experted for any of 1550 are also designed for a fine of the second completion o

S, AI AN LITEMET. DI ROS S AND A, NE BARRACE RELE UNS S MUEL DAS A RECAN ESTE MANDREY PARE COMPATTA MESSE FINE MESSE STANDE SONO E ESTANDE AND ESTANDE UNE A RELEGACIÓ DIRECTAR DE APECTARIES PA TOMBACE CONTREDE SONO E ESTANDE AN ESTANDE AND ESTANDE UNA A RELEGACIÓ DIRECTAR DE APECTARIES PA CONNATIO SUBJECT SWILL BE LIFETURE AND LIFELDS. PROVIDE IF MARKED STOKE OR GRANT, COMPACTION IN 3" FITS ADDRESS COMPACTION SEEL, CARRIED SWILL SMILL CHARLES WITH 1055 PACKED SF SERVE.

COMPACTION FOUNDMENTS

HAND OFFINED DOUBLE DRAW, VIRINTORY HOLLEN, VERNOREY PLATE CAMPICITIES OR JANUAR, JUCK COMPATION.

sellor Kollon is los

, field werelands Bedominischer Saul field veury soofe of Weigh, venera Wielen Affekan, Plust Perioso

CORET (MEET) BROCK. BEACH CORETS SHALL TANGEN AND METALL CARLE LACKER BACK, CHALE THIN, AND COMBAST ON RETAINED TO SUPPORT CHALES TO THE RESET LOCKERS. e. Ochowydnian of note, for the arm made indeximed with contractor.

SIEGIBICAL INSTALLATION NOTES:

. West, Washir, and Support Methods and Madries spall courty with the Regulations of the Nes Volumes, Process, and Support Methods and Madries Spall Courty with the Regulations of the Nes

2. Subcompassy saal koefy desire calle day system as recurso to suffer an industrial called in the secondarial called the secondarial subcompartal sale. Alternational to compart at the first and the secondarial subcompartal sale. 1. AL CITOLITÀ S'INIL IE SEMENTED NO WARTHI MANNA CIELE SEVINATAN RE REDUED IN TIE NED MO Tolonome.

4. DIGES SHILL NOT IN HIGHER THYCAM LADOR-STAE DIGE TWY READS.

A PORT THEE CONDUCTOR D.E. HOTS SHALL BE LABBLE WIN OLDS-COORS MOLATOR OF DECEMBEL VAR. IN MINISTRANCE WAS INSTRUCTOR. WE WANT THE TOTAL TO THE TOTAL WINDS WIN SERVED WIN SERVED WIN SERVED WINDS L EACH DO OF EACH FOWER, MICHORAGON, AND TH COMBUSTORS AND CARLES SAME, RE LANDISTS WITH COLUMN-CORRECTION OF COLUMN AND COLUMN OF COLUMN AND C

A YMEL BOARDS (D MINESTER) AND MITSHAL CHICAT DIRECKSIS (CRICATE D MAREDS) SHALL RE CLEMEN LHELED BIT ERROWED LINGUED FLATS, LMEUS. A AL DETRICA, CONFIDENT SHALL SE DUARY UNDER SHI ROBANDO MANDO PANTO MATELA AL MANDOTO NESAL, SE LABUELS SHIT NESS ROUGE RIVER, FINDE CONFUNDOS NEC CONFUNDOS, POES OR MANDOTO HERSE, AND DESICH CEDAT OR MANDOS JAL, PANEL SOOIS AND CEDAT STIJ.

No. Peren, Coppied, and Colamber Ordones wasser in Tuben, on coording sayl, ex. security community, (Cry. figs of versely, edd n., or recognit that on their 2, dues is streaded coppied that the top to the community of the community that of their community is presented, leading on the laboration of the community of the communit A. AL TE STOPE SWILL BE OUT FLUSH WITH AFTENDE CUTTING TOOL TO INDICKE SWAP EDUCA.

11, SAPLOSORIA, EQUIPOCT GESTAO WHAO LOXICO ROCKERS SANLE E SACIE CORRECTOR (A. AND GE LANESS BOX Y, DL. REMINHET HAN GATTHING -S GEEN PRELATING, CAMES & STRINGED COPPER, CAMEL (AND), TALES OFFERENCE (PET 2010 DE MY CHRONIC LEITED ON LABOLD FOR THE LUCKNICK HAD INCIDENT SYRTIX LINES). JALESS OFFERENCE STATEST. 2. Septembria, equipor produco serve locato outdore, on india revine, semil in serve carblica 10 ann solo transc copyo) que, uness crestante secuesa.

14, ALL PORTO, NO ADDIAGOS CONDESTROND SPALL DE COMP STALL, COMPRESTRON UNE LIUS, AND UNTE, MATE DY Thomas and destro (on equal), lues and une mate band der antide fon optivation at no leur than 1700 (doc). AL PORTH AND CONTROL WERSE, NOT IN YARDS ON CONDUCT, SHALL RE MAIN-CONDUCTOR, THY TO CHAIL ILY AND ONE WITH AND CONTROL WITH THE WAY THE WOOD ONLY WITH AND WAY THE CHAIL THE WAY THE

A INCOME WE CHALL THE SIVEL IN LITTLE OF LITTLE THE GLETINGS, UK. IN ACCIDENCE WHI HEIN, IS, MACKET, AND HEL.

18. ELECTRICAL METALLE: TUBNIO (2017), ELECTRICAL NUMBER/ALLO: TUBNIO (2017), OR MIED NOMEDIALIO COSTOUT (PIED PR., STORIOLE 40) SWALL DE LIEU POR CORNEXALD DEGORA LOCETRICA. 77, eestivaa, vedujo tulindo (est) or maio kalaestalijo combus (e., maio pro saeduje a), on maio pro Sombule do por loogische saalest to prinsoal damae) saal de loed fon diprosto room loogische. IS HER PACHET OF CHILL THE TALL MICH THE ESTING HOUSE WHERE POSSILE.

A. ONUMERO SEEL MEDILEGENE NETLLE COROLF (NC) SHILL NE UND FOR OUTGOR LEGICING ABOY, SHICE AND REAL HEAD ROMENTIAL CONTROL (ALL MEND FOR EXCEPTING THE WINDS THAT THE WINDS THAT THE WEST THE WEST THAT THE WEST THE WEST THE WEST THE WE

C), charets, bokes, and wheeking shall be lefted or lareled for eletingsa. Lee in accordance with ireas, a, ansa/ede, and med. 2. CONDUIT NO TUBRO FILIDAS SHALL SE TREZVOJ OR COMPRESION-THTE AND MPROVED FOR THE LEGITOR (U.S.). SET STREET FILIDAS ME NOT ASSETVABLE. ин теревати постите изменуте изменят (менер-тек поло) энче те нево месота ино очлясня, янчая внеже 24. CARRETS, BOACH, AND WRIGHNS TO MATCH THE COURSE MATCHANISM WHERE PROSPELL.

el, werken synther dynk-contro (enny) and maller a famed goner, resmort to shen detended the shares of seen detended the process, on feen, an (on ester) from estery in companies, on feen, an (on estery).

28. EUGPIGHT, CORREST, TOWNIN, ERECK, JAKETON EDICK, AND PILL EDICKS ENNL EE GULMMEZED GE THE CONTRACT STEEL STREEL, SANLE MEST OF DESCED IJ, EN, AND NATED HOMA I (ON ENTER) MODORS, ON HEMA SH (ON ENTER) DUTCOME. ALT, MITH, RELEVACE, SWEICH, AND ENGLE DREES SHALL BE DANNESSE, DRON'-CORRES, ON NAM-CONTENSOR.

THE OR DELEGE DE, \$154, AND MAKE 15, AND NOTICE RELY 1 (ON BETTER) WOODING, ON WESTHER PROMITTIES (NO BETTER) STATEMENT OF THE STA

D. THE SERECHTING SWILL PEOPLE (STEEPING DATE BENDER, CHEES AND DEFENTION THEIR AND DEFENTION THEIR AND DEFENDING MODIFIED WITH THE MPTICORDER CODES AND SPANDAND TO SAFESUMED ARREST LET, AND PROPERTY. WINDER LOCK CORES. 31, AL ELSTRICA. WORK SWILL OF FOTOTOMED IN ACCORDANCE SITH THE PRIMETY SPECIFICATION, NED AND ALL IN MONETALLE NEEDENDLE, SINTH, AND DENCE NOTED HAND MEET OF DEEDS NEEM OF 2, AND NATED NEEM, ON NEEDEN NATUREN PROFESTED (NP OA NETTED) CATALOANS. ILL THE SUBCOMPACTOR SHALL HOTTEY AND COTTON RECOVERY AUTHORIZATION FROM THE COMPACTOR BETWEE Transforms work on the AC Power Latingality Pares.

22. CONDUT RUTHES ME SCHEIMTE, SUBCONTRICTOR BIMLE INSTILL CONDUTS SO THAT ACCESS TO EXAMINENT IN MET BLOCKEL.



CHAPPELL ENGINEERING ASSOCIATES, LLC

R.K. DECUTINE COUTRE 201 BOSTON POUT FOM WEST SAITE 101 WARLEGROUGH, W 01722 (204) 401-3-40 www.choppallangineering.com



ENGINEER/LAND SURVEYOR DATE

If it a vectorist or Lee for are received.

(Malan her ret Actes Loom he described or A upleago provinces, concern, or Albon the secundary.

REMISIONE

A NONECO PER (1/34/23) NEGE 4 NONECO PER (1/34/23) NEGE 4 NONECO PER YOUNG NE COMMENTS N HO. DESCRIPTION
0 metabr rever
1 metabr rever
1 metabr rever
2 metabr rever construction (PMA)
3 metabr rever reversity may
4 metabr rever very revision may

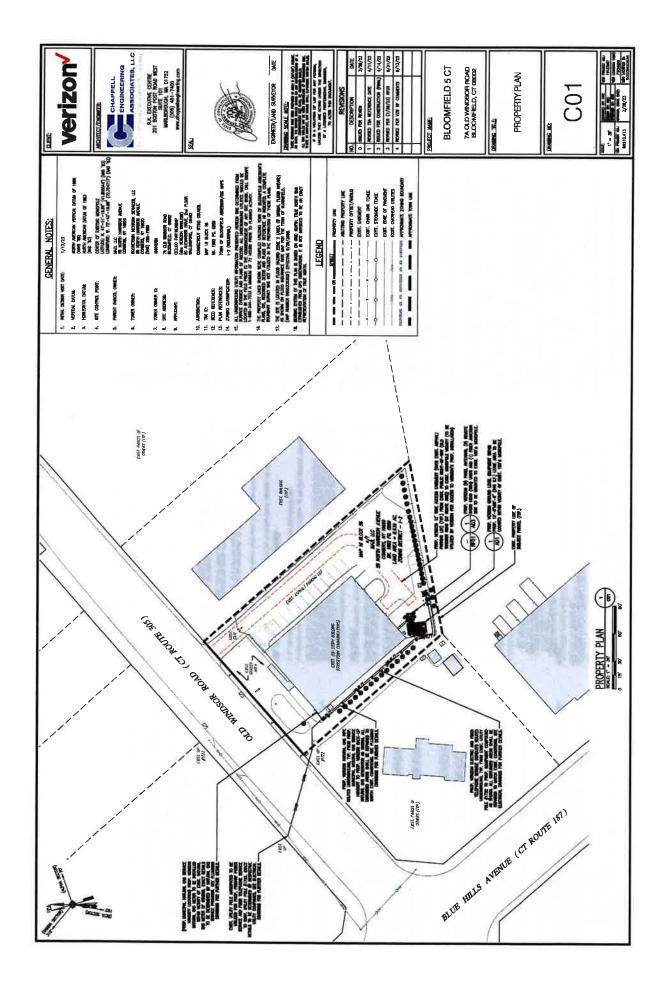
BLOOMFIELD 5 CT

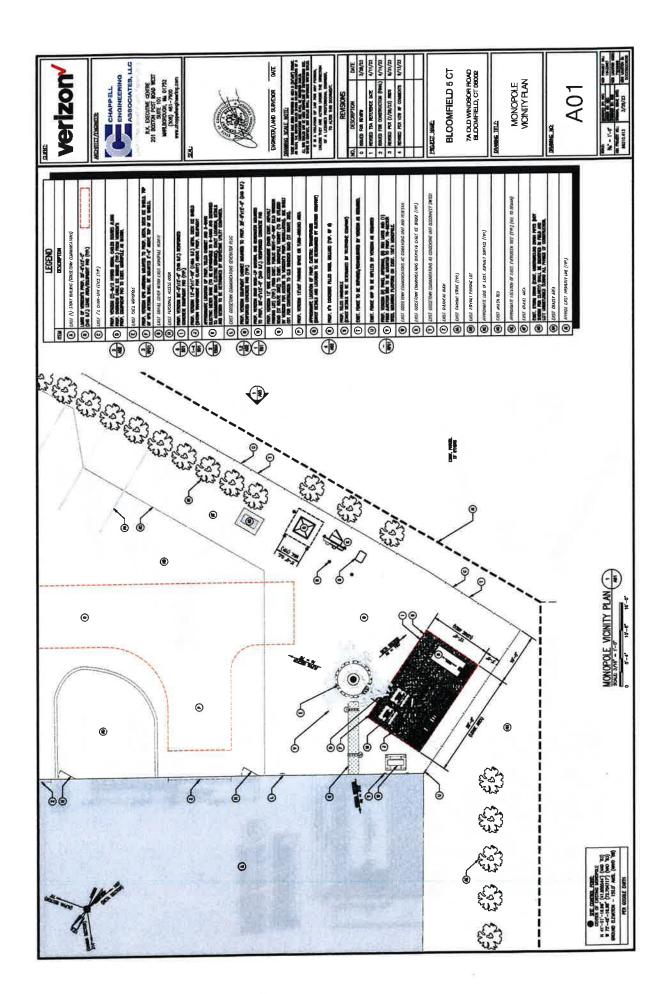
7A OLD WINDSOR HOAD BLOOMFIELD, CT 05002

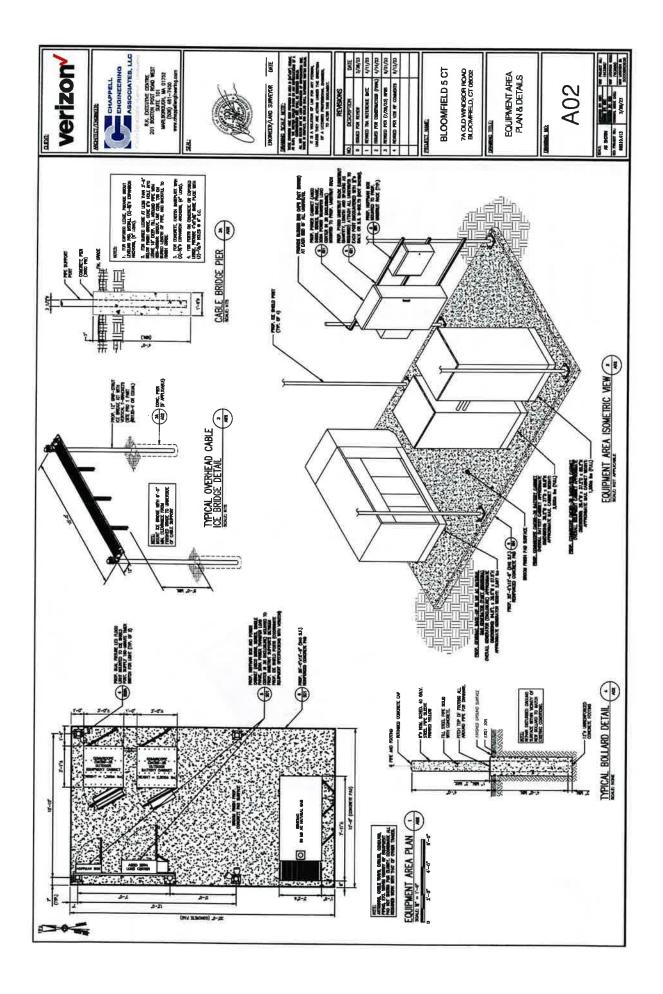
GENERAL NOTES

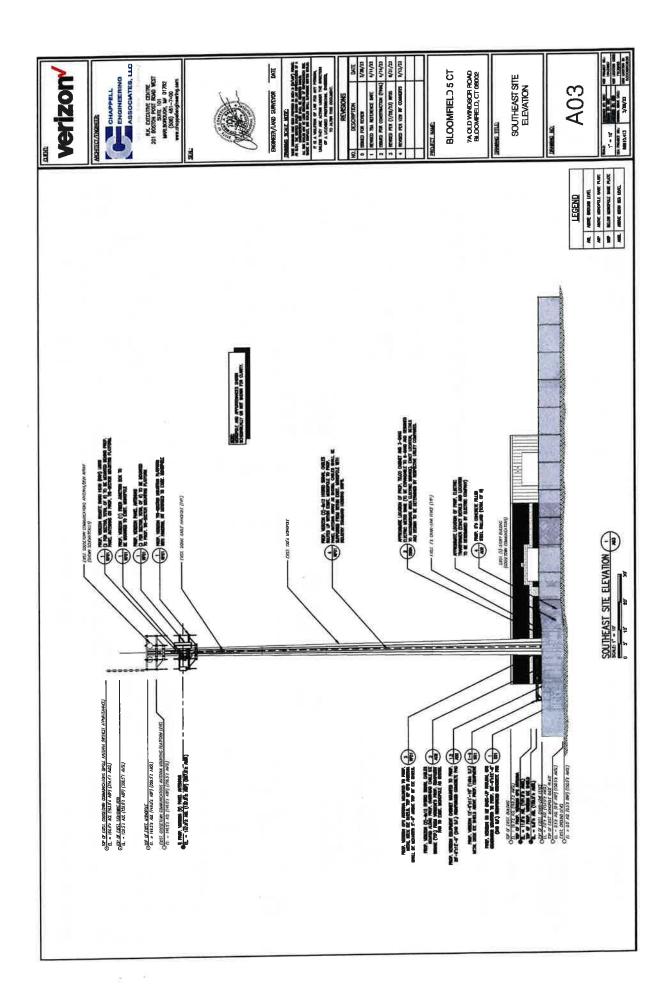
GN01

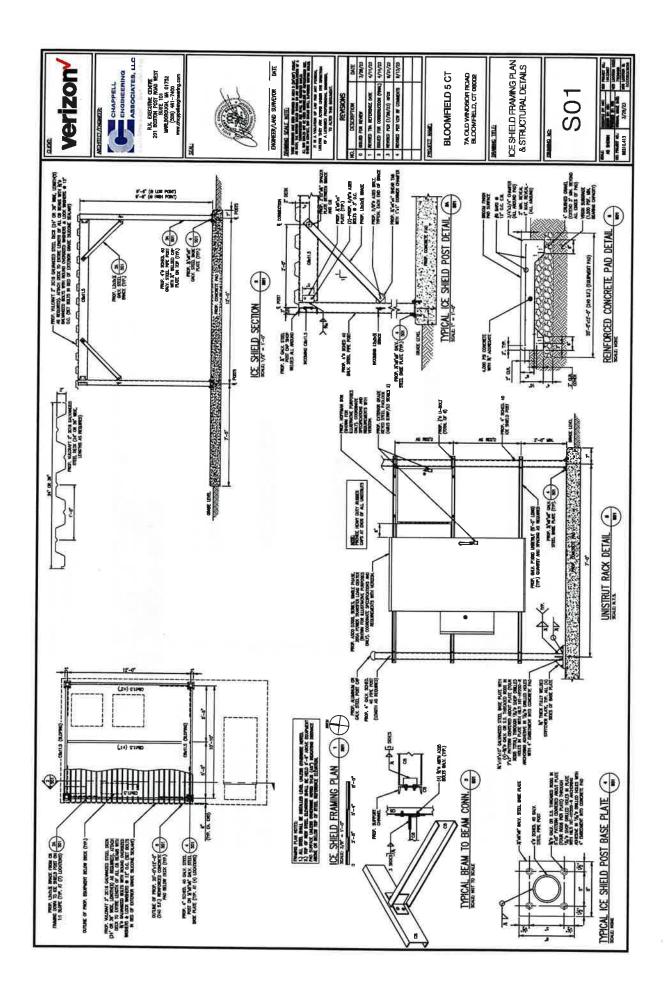


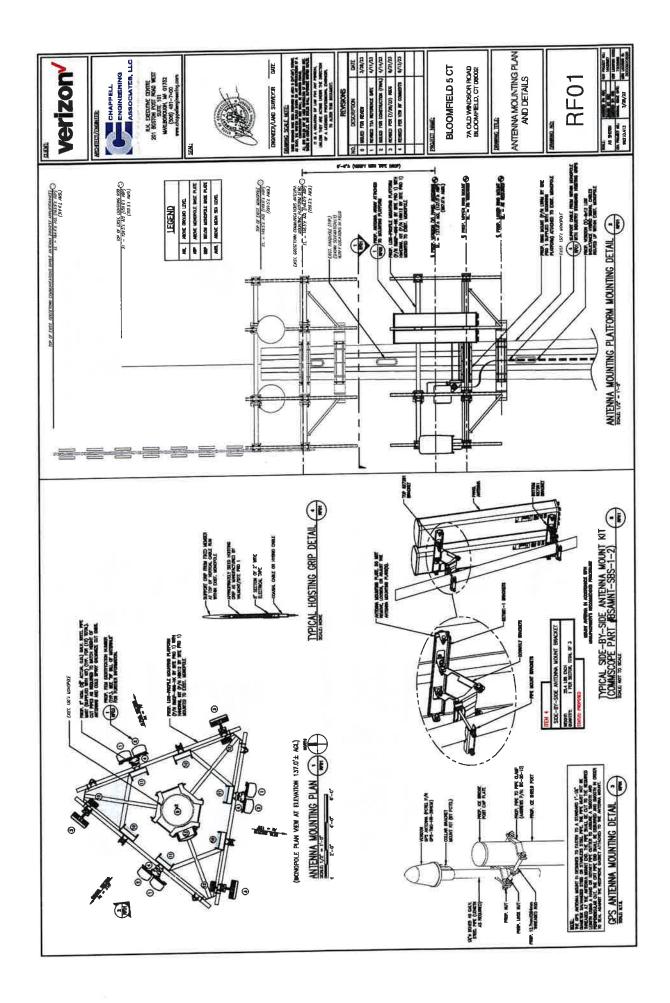


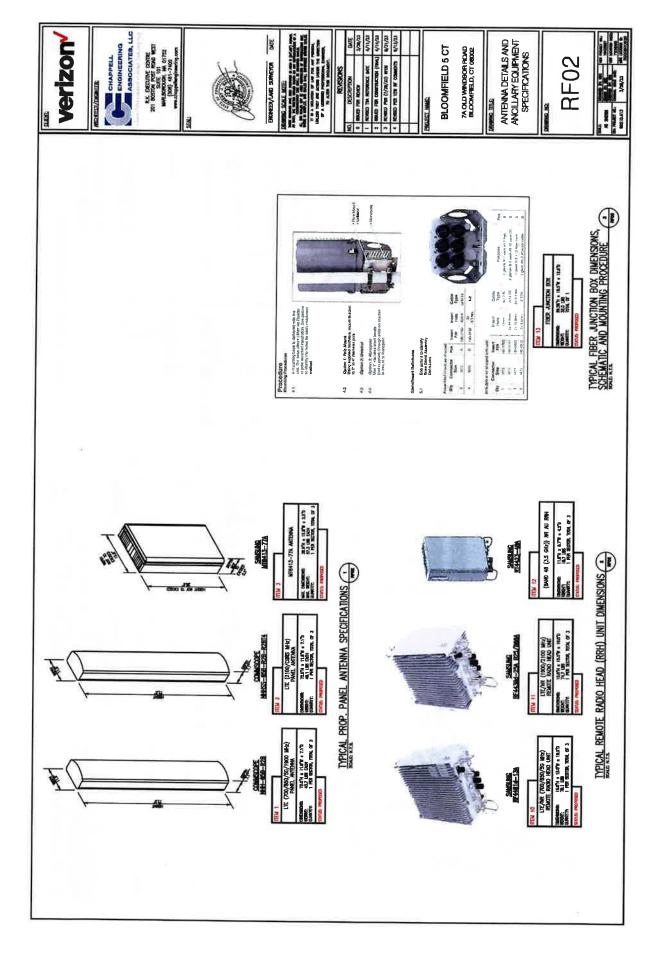


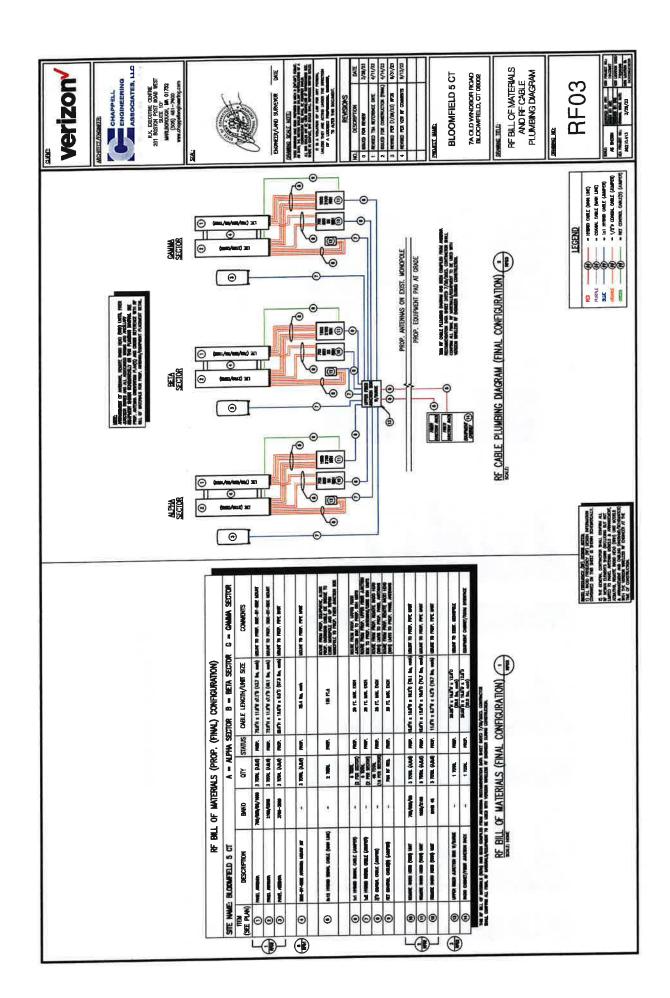


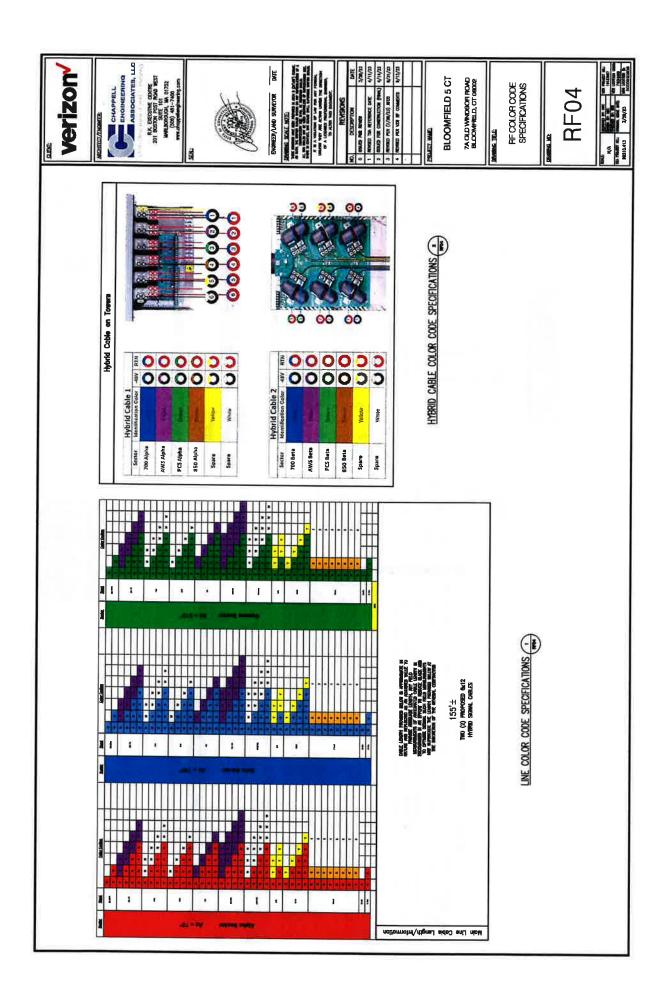












1. ALL WORK SHALE OF STORES ACCORDANCE WITH THE LOCALLY PROSIDING PLEADED CODE AND ALL OTHER AUTHORITIES. WARD AUTHORITICAL. 2. THE CONTROURY SHALL PREMIER ALL CATING, DEMILESHO, FIZINAL, EXPINSA, PATITURE, SEATINATON WIS ALL DES REQUESTO TO COMPLETE THE PLEMEND POTOLISTICAL. s. Socratery of the polations shall be supplied to the orbits pholosy representate for afficiency. I, THE CONTRICTOR SHALL PROMISE AND DETILL A CAMPLETS AND PALLY OFFICIARED STATES WILLIAMS ALL LABOR. MYDDING AND EMAPLEM RESEMBNIT AS DESCRIP ON UPWERFIRM AND AS DESCRIPED IN THESE SPECIFICATIONS. . THE CORPORTOR SWILL FOR ALL FEES AND TAKEN, CORDON ALL POBATIS AND APPROVAL, FLE THE RESLUEND COLORGIES AND CARGE ALL RESPERTINGS.

A LYDUT OF ALL EXEMPERY
B. INCREMENTAL BOOKINESS PRINK LYDUT
C. MANUSCHIERTS SPECIFICATIONS OF ALL EXUMENT SPECIFIED
B. ISTALES CONTROL WIND DIMENSION

18. CONTINUOUS SWILE FIBERS ALL RECESSAY CONTROLS, STATTES, PLATS, MOTERS, PARELS AND RELYIS ETC. FOR A PLALF FUNCTIONES STATES. 8. THE COMPACTOR SHALL FURBLE A CASE (1) YEAR COUMPRIZE ON PARTS AND LABER OF THE RETALLETSH FIRST THE CASE OF CHARGE ACCURACE, HAR A FIRE (5) YEAR COMPRISEOUS MARKETS RANGE, AMELIARLY. V. THE DRIBER OF HANDERS, CHETTER, CIVE DELLING, WINK IN CITED TENNIT SPACES OR COCKIPED ARON, WORK TROUGH FAIRS ELL, ON WORK TEETED BY THE CORREST OF DE A MACHANIC TO CHETH TENNITS SHALL DE COME AFTER TROUGH OLDERS. s. Al pretacione degree fre nato parmitor and reads soul et presidord with illi presidorad. Notone, prome par elegas for al president exaed mis an appropad frestor. L. ALI PPE WHICH SPALL OF ATRIOCO TO THE BELIEVO/BURNORT STRUCTURE. PROVIDE TWICED SUPPORTS AS BENNESS.

IS, AL DERING EXPENDIT, DECIDENC, FINA, BLEIMON, AND ODIENL BIT. CONSTINIS SECIN AND APPROXIMENT AND CHACK CONSTINUES. MOTEON MATERIAL MATERIAL CONSTINUES. 12. MF REJEKTS SHOWNED OF DATE BACKNESS FORTING FOR CONCESSOR OF TOWER SYSTEMS MATT BE PROPERTY AND ADMINISTRATION THE LANGUAGE MATERIAL PROPERTY OF THE STATE OF 13. THE CONTINUED SHALL VAIL THE LOCATION OF ALL PROPOSED BOOK AND BECOME THOROUGHLY FAMILYS WITH ALL PROPOSED CHROROCOL SHALL WITH ALL IA, WINST ALL CHITTED COOPERAL ALL HOW PIPES, AND EXUMPLES SHALL BE COORDANTED WITH ALL CHITTED BY ALL CHITTED STATE OF COLUMNICS. II. BHELIFE LARLE BHIL IR HENLED AT ALL HOY EXAMANT FOR EXHIBITORION FURFORES.

ON THE WORK SHALL CONFORM TO THE CONFERENCE BASE BLACK STATES/PHOPERTY STANDARD

17. No CONTROL DISALLANDER UNIT AND REALING/STROUGH WANDERED OF TO THE COLUMN OF MEMORY OF THE COUNTROL OF MEMORY OF THE COUNTROL OF THE COUNT

18. AL MEDIANY PONDI NO LIKE VILVAE WINN SAMI. NE DONE NY A LECHRON NO INTERD ELETINON. Compando dels lega the beanné favores of the recomban, compando.

LEGEND PLUG VALVE PIPE DROP CHICK

> Ī ॄ‡

9 显

SENSIN PLIMENO NOTES (CONTINUED)

11. AL METRA, AND AFFARIES SHILL IS THE FIRST CLASS CONSISTS, ALL METRA, AND AFFARIES SHILL IS THE FIRST CONSISTS ALL METRA, AND AFFARIES SHILL IS THE CONSISTS ALL METRA, AND AFFARIES SHILL IS THE CONSISTS ALL METRA, AND AFFARIES SHILL IS THE CONSISTS AND AFFARIES SHILL IN CONSISTS, AND AFFARIES AND AFF

IN THE FIGURE PRINTED THEN BY PREPARED OF THE WANT SHALL IS EXCHOLORS WE WENTER THE PROPERTY OF THE PROPERTY O Do, DIE COMPACTIBI BULL PEDOMALI BEREIT DE SITT OF TRE PROTOCOLOGIO SINCE DOMES DE COLOTISMENT DE UNE SI DOCTIONE LUGIO IN SINCE PROTOCOLOGIO SINCE DO DOS SINCE PROTOCOLOGIO SI DOS SIDOS PLUE PROMED DE SI DOCTIONE LUGIO IN SINCE DE UN DESCRIPTO SINCE DE DOS SIDOS SILVES PROTOCOLOGIO SINCEDE MITENZANO DE RESENTE OR UNION DESCRIPTO SINCE AND RANCE PROCESSOR DE SINCE PROTOCOLOGIO SINCEDE TRANSPORTE DE RESENTE OR UNION DE SINCEDE SINC

12. DE CHRRING ME LOCULOT IN HATHE, BUT SIND HE WANCH CONCURSING O'TE TITOLIA APPROBACIEL TO THE LANG FINE TO PROSECTION DE HE LOS DE RESTORMED TO CHIN HATHE TO LES ABSENCIATIONS. THE LIBERTON SHIELE IN HATHER TO THE TOWN SHIPMENT WE RESTORMED TO THE TOWN THE TO

CAS PENS NOTES

. DAS TOPING SAFAL TO CHINGTON, SPECIFIC ON PLANS SERVINI AL DICEMENT STANGARD FITHER, SHENG ONE PRING SHEDGEST TO SAFAL TO: THEOREM SHENG THE PALL NO. OF THE SAFALY FIRE, A 100H WAT -OFF TO COS, AND A 100H. C DAS FORE GENER SHALL BE EMED ON THE ELACELATOR) IN THE BEEN HATERAL MESHAGOAL CODE. A MANNAM PER EXPRING OF 200 FT. SHALL BE LIMID FOR THIS GENERAL . CAS FIRMS SHALL BE DESCRIBED AND SHALL BE BETRALED IN ACCORDANCE WITH THE INTERNATIONAL MEDIAMON, CODE. Alest remember has an accordance with Metra Da. DGS FEMINISTED AND SAFFOURS SHALL CONTINUED TO THE INSULABILISTS OF "STREEMED FROCTICE FOR FREE TO SAFFOURS AND SAFFOURS AND SEMILATION" (PRINCIPLES SAFFOURS AND SEMILATION (PARK)/INSULATION SAFFOURS AND SAFFOURS

, ALL ON VERTS TICH PROSURE, RELETS OF PEODERS, LINEAGE DERIOS BANLL EF FIFO, THE PLAIL OUTSING MAN. NOT SHARMS AT VERTS. WITHOUGH ON PROPER FLAGRICA AT VERTS. PRITING OF A USE PHING STREET HEITHER IN CONCRAED LECKTONS BING, NOT HEIT, LICENTING, THE PRITING OF BINGS IN WAYS SHALL SE PRITILIES IN ADDRESSION OF BELLING STREET, LICENTING. WHICH CALLET PIPES SHILL AC DIVIN FIRM THE TOP ON SIEES OF THE HORIZORIN, LINES AND HOT THE EDITION LISE DELETTE UNITIES WE'DE CARRIELAR WENUS ARE LEGED TOKTHET.

REPERT, TOTT AND PARKE THE GREET STATES IN ADDRESSAYS TO NETA 54 — THEIT 4 AND ALL LOCAL, INDICALL STATES OF 3 FOLICE. THE STATES OF 3 FOLICE.

II. COINCIDE SHI, SAMIL TO THE CORD, THEE CO, DAYS OF MITHER, THE MATCHES AND CONTROL FOR THE ODERATOR: ODDERAU SCOOMA (NATURAL GAS) SUPPLIED BY VARIZEN, NETALED BY CONTRACTOR.

CONTRACTOR SHALL OBTAN FALL SPECIFICATIONS FROM VENEZIN WINDESS PROOR TO SID. CONTRACTOR FALLL ARRANGE FOR CENERATOR STATT—UP SERVICES.

verizon I, DIE TO THE WINNE OF THE STATEM AND OTHER SMALM STATEM IN LIEE OF THE OWINGS. THE CONTINUES SMALL FRANCE IN THE TITLES AS SPECIFIED, SMALL FOUR IN CONSIDERED AT THE TIME IN THE LIMEDS

CHAPPELL ENGINEERING ASSOCIATES, LLC

A. THE CONTINCTION BIFLE. ATTECT A FINE-CONSTRUCTION MEXING TO BE MELD AT THE JOB SITE OR WITHE AREA WERE THE WELL ATTECT THAT THE LABOR WELL ATTECT.

A. THE CONTRICKING SMLL WASTAN BREEFICE WITH THE CONT. AND WITH ALL OF THEN COMMUNICACE, MEDICINE AND DESIGNATION OF THESE. A, THE CONTINUOUS SWILL PROVIDE THIS (2) DAYS ADMINEDS WOTFFORTION OF ALL DELAFFIES TO THE SITE AND SERVE) (7) DAYS ADMINEDS NOTFFICIATION OF AMY INDUMEDS SERVED SMALL PROVIDES.

ALL WHEN WHEN UNICOTHECK PARCE SHALL OCCUP DAWNS PACE ACCUPABLE TO THE PARCE CHARGE ACCUPABLE.

PLIMENC PROCESSIBAL PREPARATION AND TESTING NOTES.

7. THE CONTINUEND SHALL BROKES THE AMEABUTY AND ACCESSIONS OF ACTUALITY CON-UNE THE EXPRINABILISMENTS. SPECT EXAMPLEST BROKES AND STREET AND SOURCES.

6. Prode to the sourt of complication, all trogeds swall be broad on all swally requesions. Probed to the strong divinion of all swalls desirables.

A. AL CONCENSO, 15TH MORRORION AND ANAMAND SHALL BE DISCUIT WINNESD BY AN OWNER. APPROVED PRESENT SAFERIOR.

SCHITCL/DIGNEERS

20) ECSTON CONTRE 20) ECSTON POST EOAU WEST WARLEDGECOCH, MA DITEZ (500) 481-7100 war chappelingfrimering.com

CORDACT A FUNCTIONA, TEST OF ALL IDOURDS WAYER, CITCLES FLOW WAYER AND PRESSURE HELEF WAYER.

PUBLY PYSO WEN NOTE OUT PROPE TO IMMODICINE UP BAS.

12. AUTOCIZIO FIZIONEL SWELLO COLOCI CLONOS, PARSHE NO 1239G PORTO TO TOTAL OF THE OF

COMPACTOR SHALL REPECT HIGH TAST ALL TENDS NO EQUIPMENT IN ACCORDANCE WITH APPLICATE COST. Underline and Experient Handracher's Hermachines.

10. ATTACHENE FACTOR REPORTED SPALE OF SIE TO CHARLEN THE BESTELL

M. SPERT OF AN ENDING OF THE STATION, THE STATION OF THE CONTRACTION CONTRACTORS WERE OFFI MARITHE, CHEST ACCOURTMENT HIS DESIGNATION OF THE MACHINES WHEN ALL OFFICERS WERE SEXT MENTION OF MARITHE, CHEST MAL OFFICIANES TO NEW TROUBLE OF THE DIMENSIA NO STICKLYSTOR AND MAKE THIS MARITHER, THE MEXICAL AND THE MALE AND THE MALE THE THE THE MALE THE THE MALE THE THE THE THE THE MALE

붛 ENGMEER/LAND SURVEYOR

2 MANNED TON REPRESENCE SOUTH 2 MANNED FOR COMMUNICATION (PANA) 3 MANNED FOR (C/AM/ALS) RVDS 4 MANNED FOR VIZH RF COMMUNICATION MANUAL FOR REVEN

BLOOMFIELD 5 CT

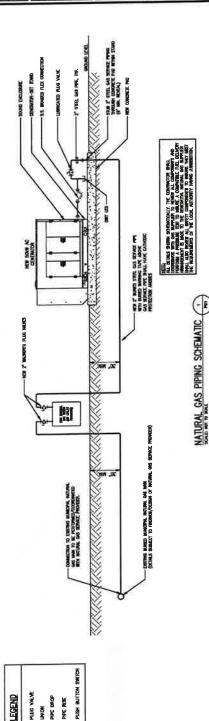
7A OLD WINDSOR HOAD BLOOMFIELD, CT 08002

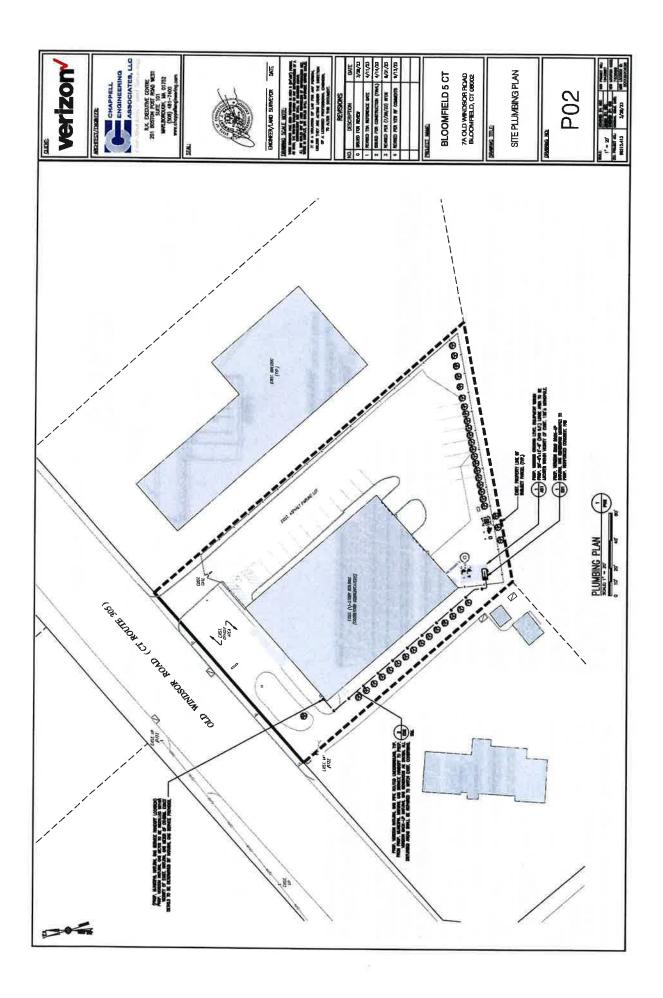
PLUMBING NOTES AND SCHEMATIC

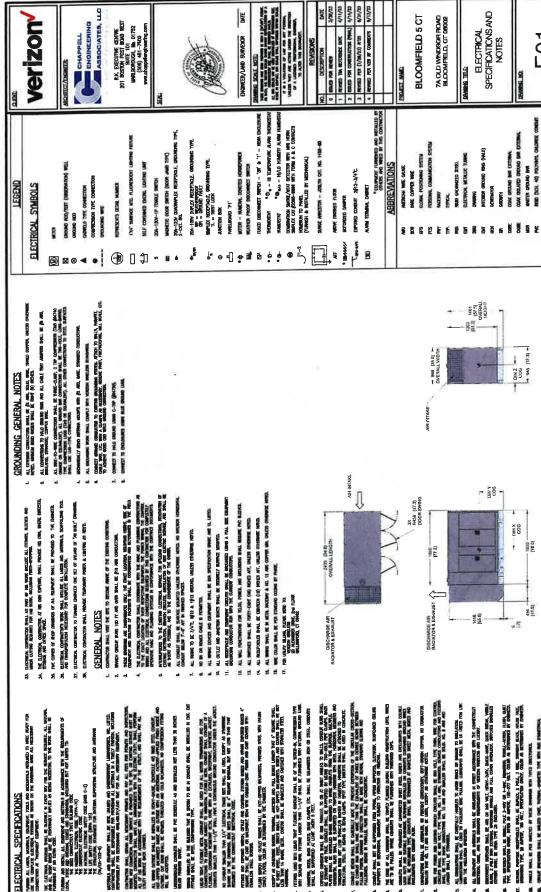
STATE OF THE

P01

MOT TO STOLE AND PARTY OF THE PRESENCE OF THE







SECTRICAL SPECIFICATIONS

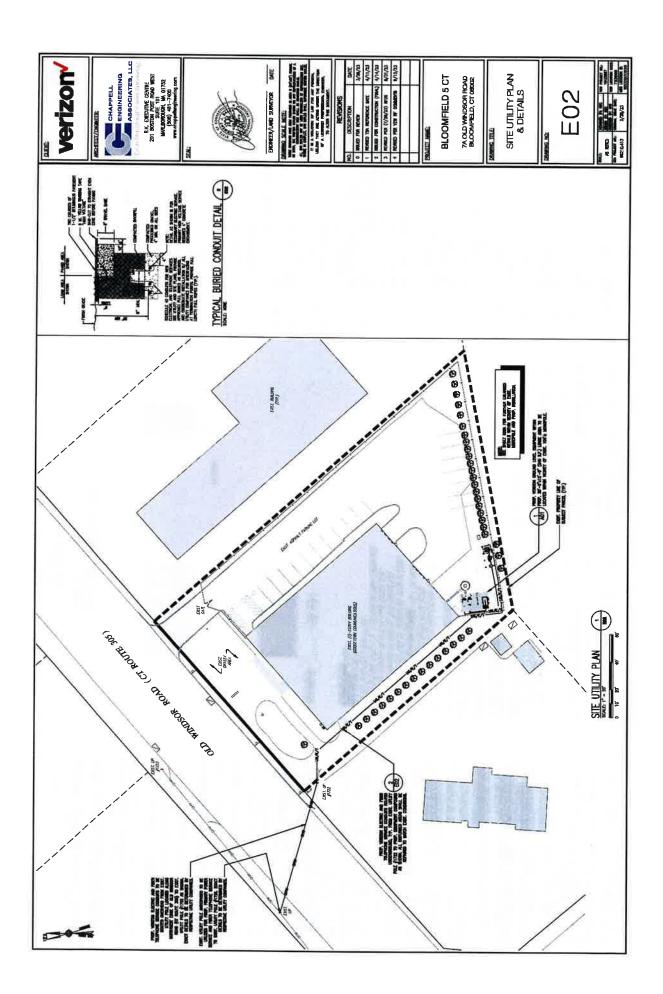
GENERATOR DETAIL

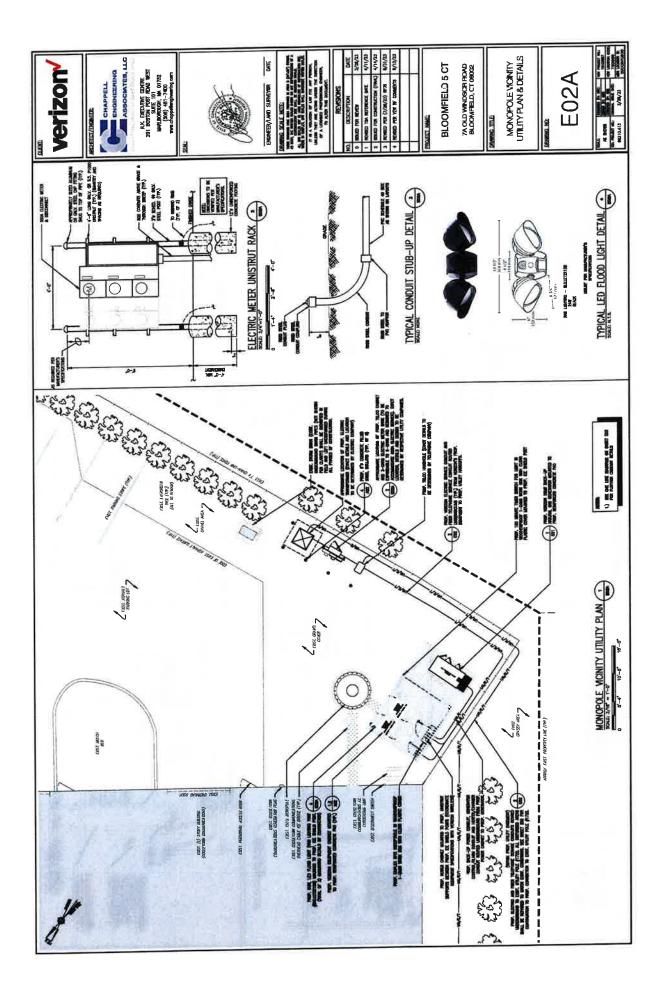
MARCHITO SHILL OF TOWAGO, FOR ALL CAMPADOT ROCKING WINDS, THIRE, ME AND KNOWN OF MEMORY AND CONTROL OF MEMORY

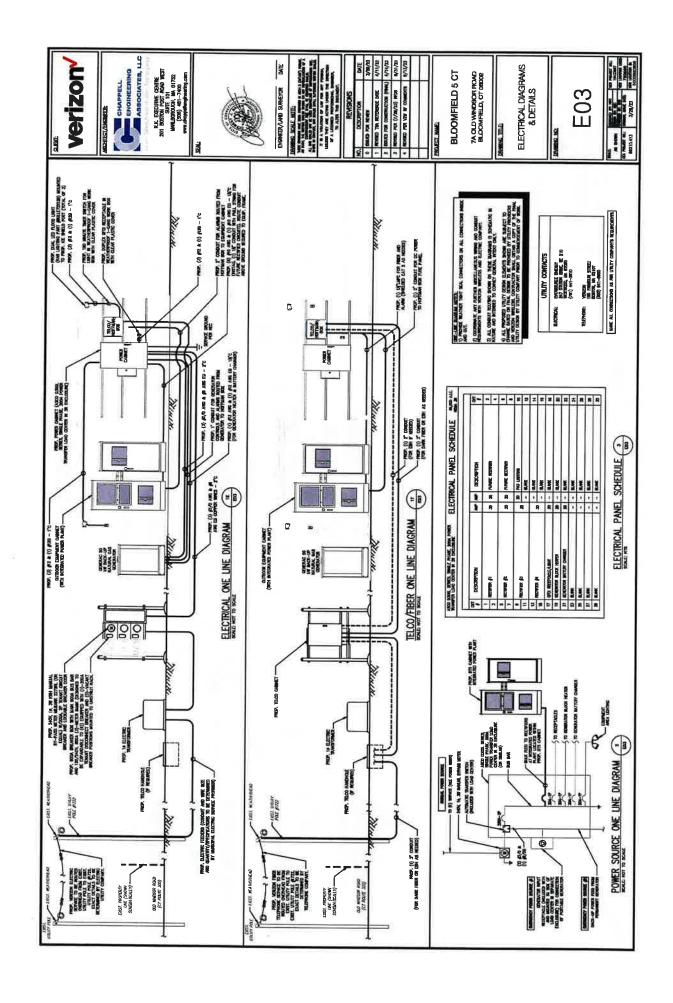
TH, ALL STREET OFFICEROAN FORMERS WITH THE THE READON FALLS.

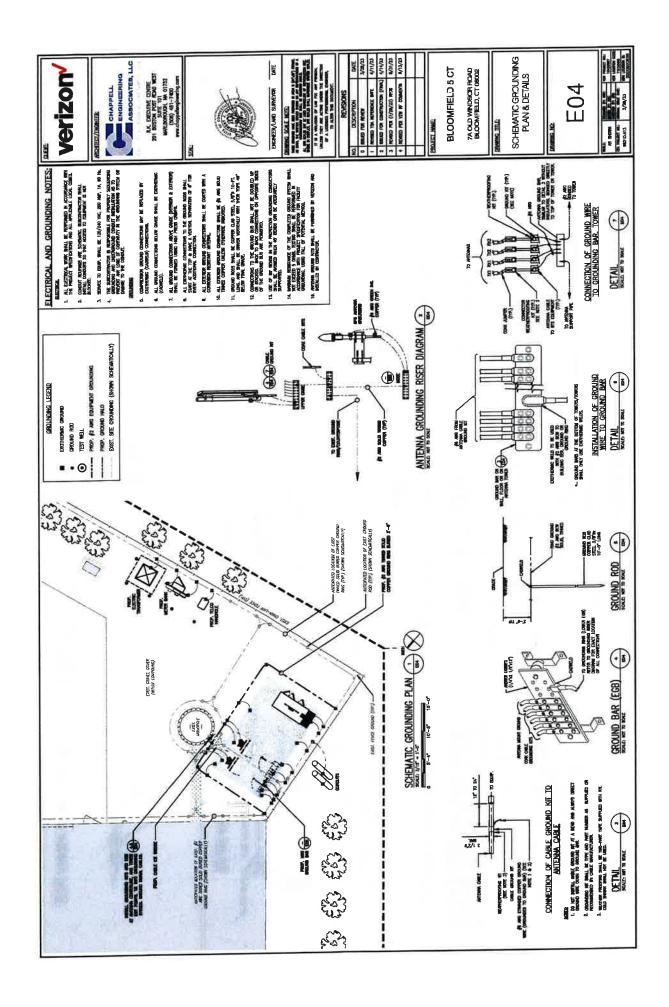
SECUL PROCESS SPILE AT MAND DOLY. POTAM, ANNOTOT FOR WING STREETING, MANDELS FOR THE WAY AND THE STREET, POTAGO PROCESS. OF STREETING, AND THE STREET, POTAGO PROCESS. OF THE STREET, AND THE STREET, AND THE STREETING STREET, WHITE STREET, WHITE STREET, WITH THE CONTROL OF THE STREET, WIND STREET, WHITE STREET, WHITE STREET, WHITE STREET, WHITE STREET, WHITE STREET, WHITE STREET, WIND STREET, WHITE STREET,

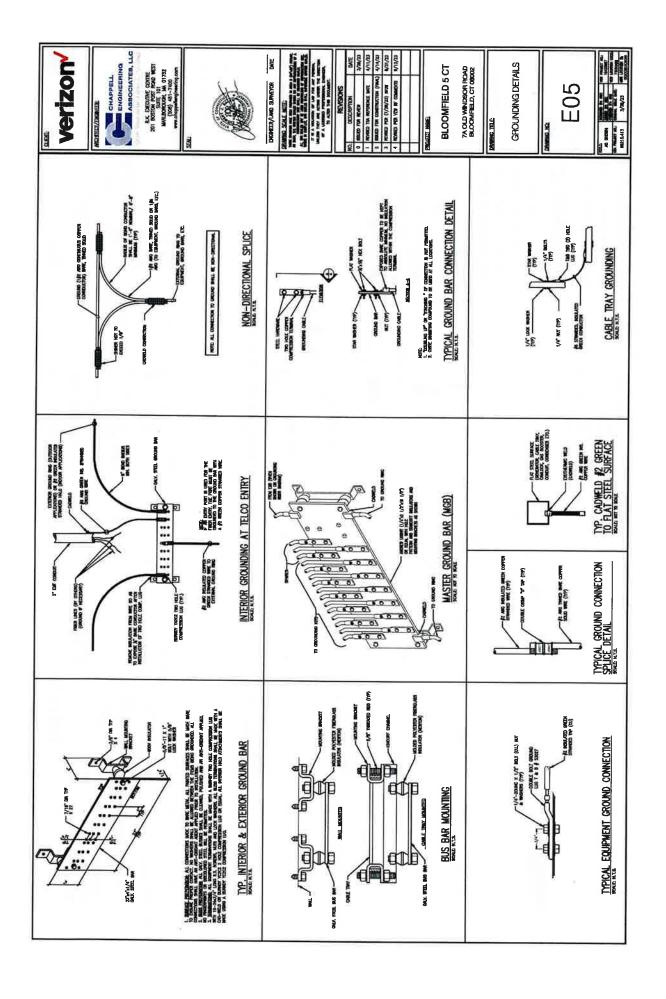
E01

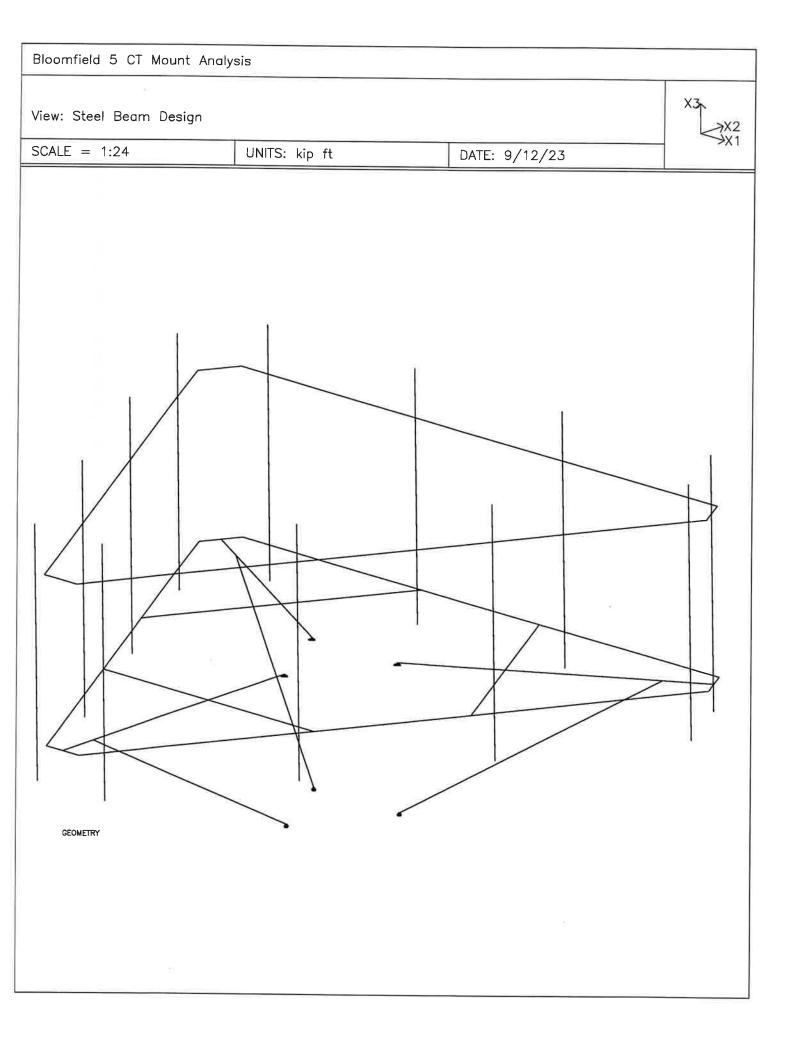












/iew: Steel Beam Design			X3, XX
SCALE = 1:24	UNITS: kip ft	DATE: 9/12/23	
PIPEZ	PIPEZPIPES COMMISSION PIPEZ PIPEZ COMMISSION PIPEZ COMMISSION COMM	PIPEZ Zadia Zadia PIPEZ Zadia Za	PIPEZ IN TO PIPEZ

Prepared by:

Page: 1 Date: 9/12/23 ——9:31—

Load no. 1: Front No Ice (units - kips ft.)
* GROUP NONE / JOINT LOADS / BEAM LOADS / JOINT LOADS / JOINT LOADS / BEAM LOADS
/ JOINT LOADS / BEAM LOADS / JOINT LOADS / JOINT LOADS / JOINT LOADS
/ JOINT LOADS FX2 0.047 FX3 -0.023 N 132 FX2 0.047 FX3 -0.023 N 133 135 FX2 0.22 FX3 -0.045 N 28 27 FX2 0.143 FX3 -0.045 N 48 47 64 63
FX2 0.57 FX3 -0.084 N 126 131 127 136 125 134 / JOINT LOADS FX2 0.058 FX3 -0.03 N 70 26 FX2 0.02 FX3 -0.03 N 84 54 76 38 / END
FORCE SUMMATION
FX1=0 kip FX2=4.769 kip FX3=-1.023 kip

Load no. 2: Side No Ice (units - kips ft.)
* GROUP NONE / JOINT LOADS / BEAM LOADS / JOINT LOADS / BEAM LOADS
/ JOINT LOADS / BEAM LOADS / JOINT LOADS / BEAM LOADS / JOINT LOADS
/ JOINT LOADS / JOINT LOADS FX1 0.047 FX3 -0.023 N 132 135 133 FX1 0.143 FX3 -0.045 N 28 27 48 47 64 63 FX1 0.057 FX3 -0.084 N 126 127 125
FX1 0.057 FX3 -0.084 N 131 136 134 / JOINT LOADS FX1 0.02 FX3 -0.03 N 70 26 76 38 84 54 / END
FORCE SUMMATION
FX1=1.461 kip FX2=0 kip FX3=-1.023 kip

Prepared by:

Page: 2 Date: 9/12/23 ——9:31——

Load no. 3: Front Ice (units - kips ft.)	
* GROUP NONE / JOINT LOADS / BEAM LOADS / JOINT LOADS / BEAM LOADS / JOINT LOADS / JOINT LOADS / JOINT LOADS / JOINT LOADS / BEAM LOADS	
/ JOINT LOADS / JOINT LOADS FX2 0.016 FX3 -0.049 N 132 135 133 FX2 0.065 FX3 -0.156 N 28 27 48 47 64 63 FX2 0.02 FX3 -0.123 N 126 127 125 134 131 136 / JOINT LOADS	
FX2 0.017 FX3 -0.06 N 70 26 FX2 0.008 FX3 -0.06 N 76 38 84 54 / END	
FORCE SUMMATION	
FX1=0 kip FX2=0.624 kip FX3=-2.181 kip	

Load no. 4: Side Ice (units - kips ft.)
* GROUP NONE / JOINT LOADS	
/ BEAM LOADS / JOINT LOADS / BEAM LOADS	
/ JOINT LOADS / BEAM LOADS / JOINT LOADS / JOINT LOADS / JOINT LOADS	
FX1 0.01 FX3 -0.049 N 132 135 133 FX1 0.048 FX3 -0.156 N 28 27 48 47 64 63 FX1 0.014 FX3 -0.123 N 126 127 125 134 131 136 / JOINT LOADS FX1 0.008 FX3 -0.06 N 70 26 38 76 84 54	
/ END	
FORCE SUMMATION	
FX1=0.45 kip FX2=0 kip FX3=-2.181 kip	

Prepared by:

Page: 3 Date: 9/12/23 ----9:31---

Load no. 5: Selfweight (units - kips ft.)

* GROUP NONE / BEAM LOADS

SELF X3 -1. B 1 TO 138 142 TO 150

/ GLOBAL LOADS

/ GLOBAL LOADS

/ GLOBAL LOADS

DIST FX3 -0.003 PLANE -7.25 4.763 0. -1.805 4.763 0. -5.028 -0.818

0. PT -0.5 0.866 BEAMS

DIST FX3 -0.003 PLANE 1.805 4.763 0. 7.25 4.763 0. 7.75 3.897 0. PT

3.223 5.581 BEAMS

DIST FX3 -0.003 PLANE -3.222 -3.945 0. 3.222 -3.945 0. 0.5 -8.66

0. PT 2.722 4.715 BEAMS

/ END

FORCE SUMMATION

FX1≃0 kip

FX2=0 kip

FX3=-1.4597 kip

Load no. 6: Front Frame Ice (units - kips ft.)

* GROUP NONE

BEAM LOADS

DIST GL FX2 -0.002 B 1 4 5 13 TO 35 BY 2 49 TO 51 55 56 63 64 66 71 TO 74 76 TO 81 83 TO 88 90 TO 115 117 133 TO 135 142 TO 150

/ END

FORCE SUMMATION

FX1=0 kip

FX2=-0.3127 kip

FX3=0 kip

Load no. 7: Side Frame Ice (units - kips ft.)

* GROUP NONE

/ BEAM LOADS

/ BEAM LOADS

DIST GL FX1 -0.002 B 4 5 13 TO 35 BY 2 50 51 63 64 66 71 72 TO 78 BY 2

79 TO 81 83 TO 88 90 91 93 94 TO 100 BY 2 101 TO 115 117 133 TO 135

142 TO 150

/ END

FORCE SUMMATION

FX1=-0.2564 kip

FX2=0 kip

FX3=0 kip

Prepared by:

Page: 4 Date: 9/12/23 -9:31-

Load no. 8: Front Frame No Ice (units - kips ft.)

GROUP NONE

BEAM LOADS

BEAM LOADS DIST GL FX2 -0.005 B 1 4 5 13 TO 35 BY 2 49 TO 51 55 56 63 64 66 71 TO 74

76 TO 81 83 TO 88 90 TO 115 117 133 TO 135 142 TO 150

/END

FORCE SUMMATION

FX1=0 kip FX2=-0.7817 kip FX3=0 kip

Load no. 9: Side Frame No Ice (units - kips ft.)

GROUP NONE

BEAM LOADS

/ BEAM LOADS

/ BEAM LOADS

DIST GL FX1 -0.005 B 4 5 13 TO 35 BY 2 50 51 63 64 66 71 72 TO 78 BY 2

79 TO 81 83 TO 88 90 91 93 94 TO 100 BY 2 101 TO 115 117 133 TO 135

142 TO 150 / END STATIC

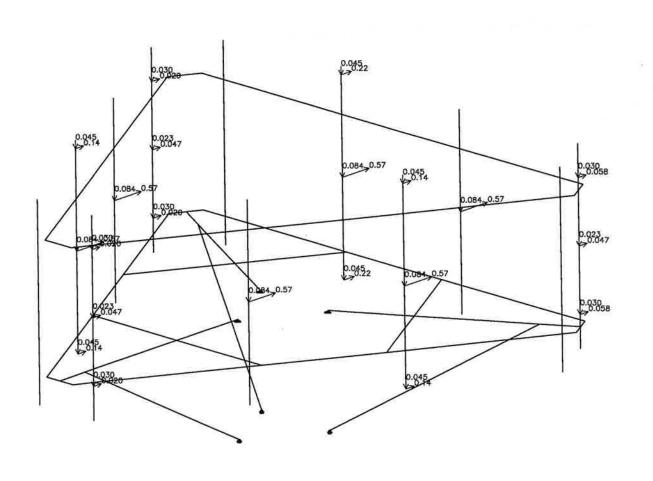
FORCE SUMMATION

FX1=-0.6411 kip

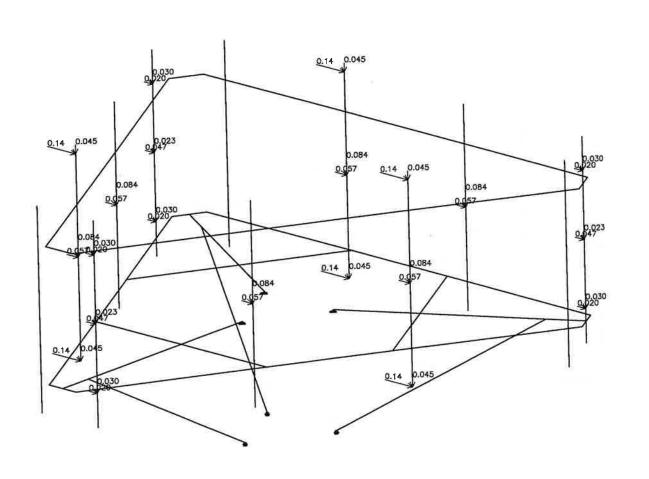
FX2=0 kip

FX3=0 kip

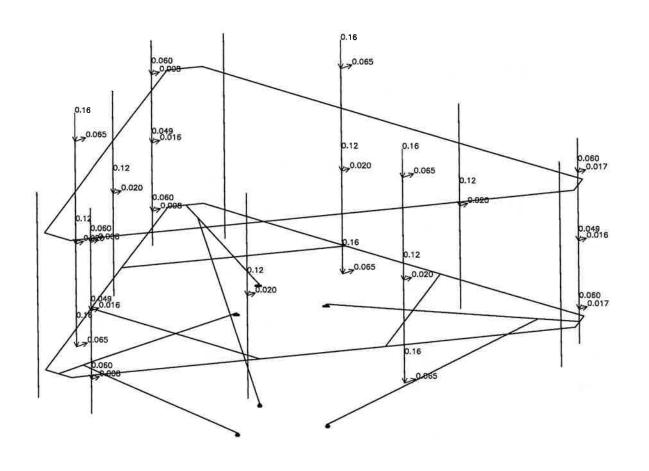
Bloomfield 5 CT Mour	t Analysis		
Load 1: Front No Ice		s ⁸	X3.
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	>X1



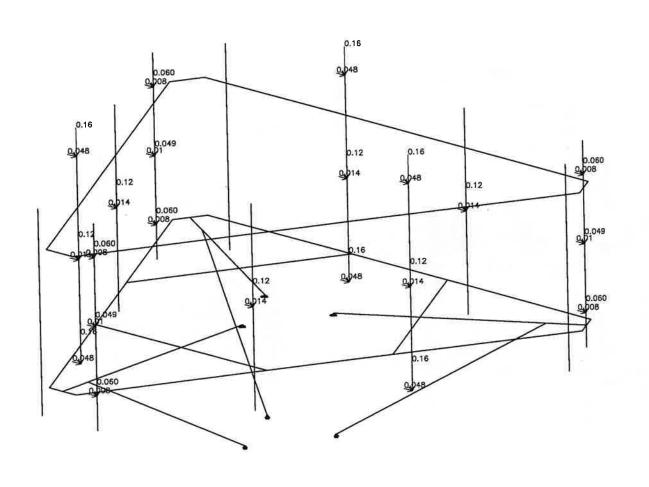
Bloomfield 5 CT Mount	Analysis		
Load 2: Side No Ice			X3 X2 X1
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	



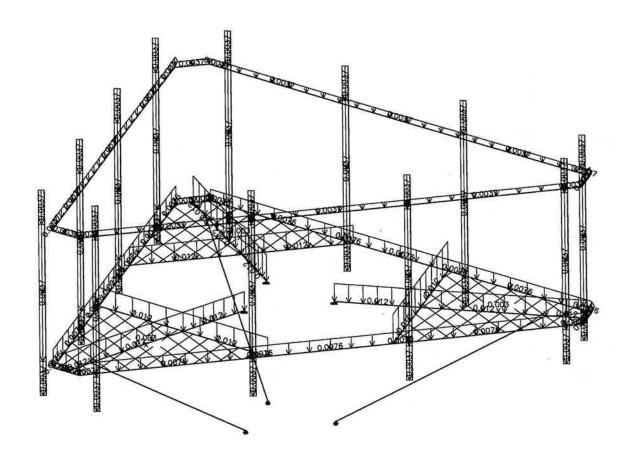
Bloomfield 5 CT Mour	nt Analysis		
Load 3: Front Ice		+-	X3,
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	→X1



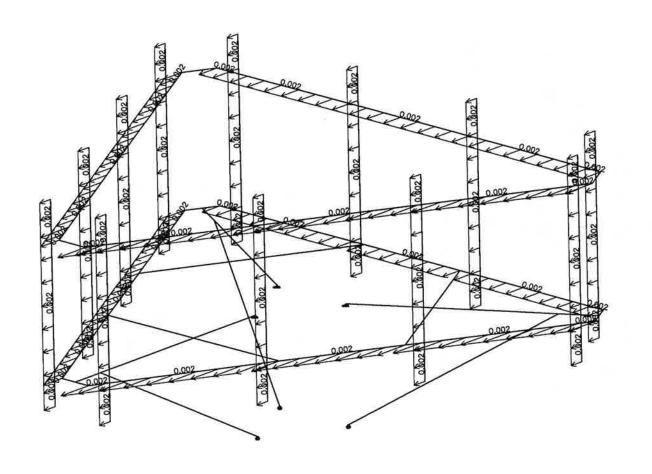
Bloomfield 5 CT Mount	Analysis		
Load 4: Side Ice	71		X3, X2, X1
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	



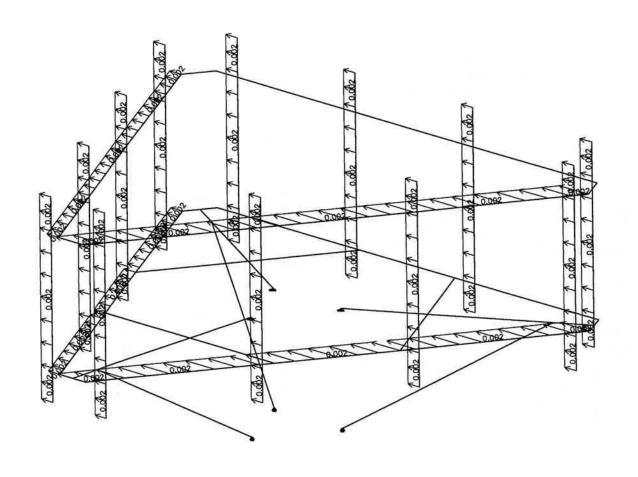
Bloomfield 5 CT Mount Analysis				
Load 5: Selfweight			X3, ->X2	
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	→X1	



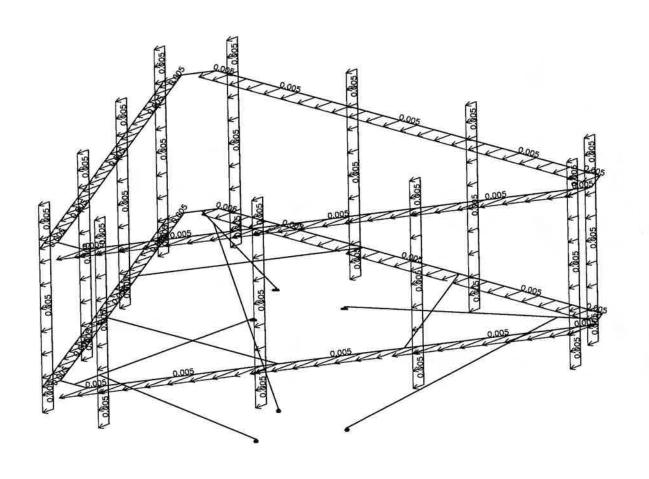
Bloomfield 5 CT Mount	Analysis		
Load 6: Front Frame I	ce		X3 X2 X1
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	



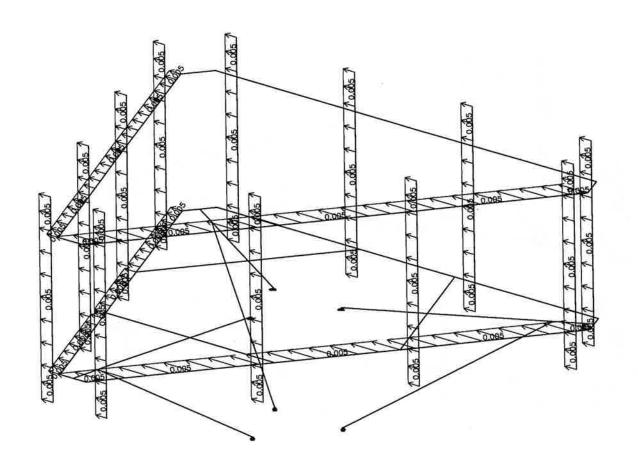
Bloomfield 5 CT Mount Analysis			
Load 7: Side Frame Ice			X3.
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	→X1



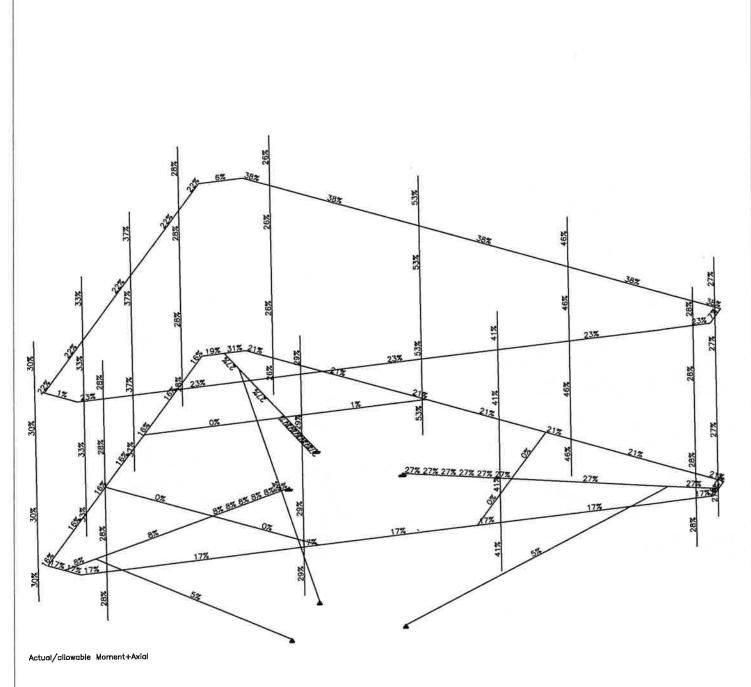
Bloomfield 5 CT Mount Analy	rsis		
Load 8: Front Frame No Ice			X3 ->X2 ->X1
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23	



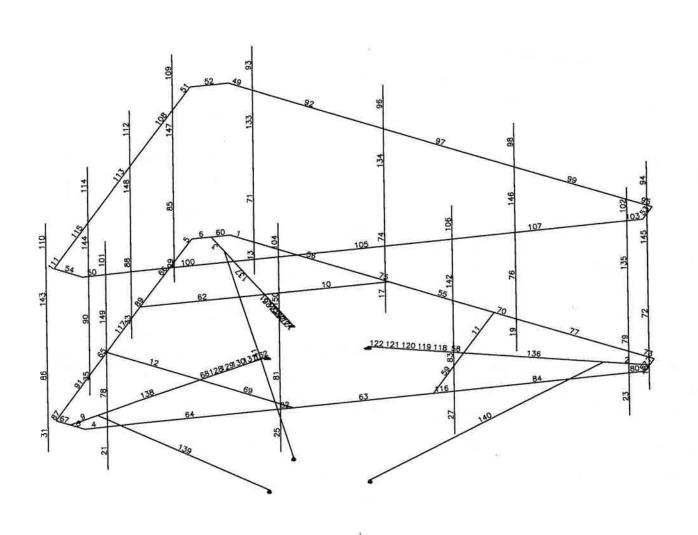
Bloomfield 5 CT Mount Analysis						
Load 9: Side Frame N	o Ice		X3,			
SCALE = 1:30	UNITS: kip ft	DATE: 9/12/23				



		X3 _N
View: Steel Beam Design		X2
SCALE = 1:24	DATE: 9/12/23	



	X3 7X2
DATE: 9/12/23	



Prepared by:

Code: AISC-LRFD

Date: 9/12/23 ——9:36—

Results Summary Table											
		П						APAC	ITY		
Beam	Section	Com	Defi L/	Slen	Axial	Dir	Shear	Mom	LTB	Combined Axial+Mom	
1	PIPE 3	1	531	150	-0.01	MJ	0.02	0.14	0.14	0.21	
a			2005		0.00		0.03	0.07	0.00	0.27	
2	TS 4x4x1/4	1	3295	57	0.02	MI	0.03	0.20	0.00		
3	TS 4x4x1/4	1	3383	57	0.02		0.03	0.08		0.27	H
	DIDE 2	1	7363	8	-0.01	MI	0.03	0.20 0.14	0.00	0.19	
ь	PIPE 2		7303			MI	0.01	0.04	0.00		
7	PIPE 2	1	9999	8	0.00	MJ	0.04 0.01	0.14	0.14	0.17	
8	PIPE 2	1	9999	8	0.01	MJ	0.04	0.12	0.12	0.17	
٥						MI	0.04	0.14	0.00	0.08	
9	TS 4x4x1/4	4	3971	57	-0.01	MJ	0.03	0.07	0.07	0.06	
10	TS 4x4x1/4	4	9999	26	0.01	MI		0.00		0.01	_
	TS 4x4x1/4	4	9999	26	0.00	MI	0.00	0.00	0.00	0.00 0.00	
12 49	TS 4x4x1/4 PIPE 2	1 1	9999 397	26 221	0.00	MI	0.00	0.00	0.00	0.38	**
			120000			MI	0.01	0.19	0.00	0.00	
	PIPE 2	1	9999	15	0.00	MJ	0.02	0.06	0.06	0.06	
53 54	PIPE 2 PIPE 2	1 2	9999 9999	15 15	0.00	MJ		0.01	0.01	0.01	
57		1	6428	8	-0.01	MJ	0.03	0.15	0.15	0.18	
50	TO AvAv1/A	1	9999	26	0.00	Feb. 146.77	0.01	0.03	0.00	0.00	
17000	TS 4x4x1/4 PIPE 2	1	4213	8	-0.01	MJ	0.04	0.26	0.26	0.31	Γ
00	1112					MI		0.04	0.00	0.00	
	TS 4x4x1/4 PIPE 2	1 1	9999 9999	26 8	0.00	MI	0.00	0.00	0.00	0.00	
67	PIPE 2		3993		0.01	MI	0.04	0.14	0.00		
	TS 4x4x1/4	1	9999	26	0.00	MI	0.00	0.00 0.13	0.00	0.00 0.17	
80	PIPE 3	4	646	150	0.01	MJ	0.02	0.13	0.00	0.17	
87	PIPE 3	4	647	150	0.01	MJ	0.02	0.13	0.13	0.16	
		1	477	91	-0.02	MJ	0.01	0.04	0.00	0.26	**
93	PIPE 2	1	177	91	-0.02		0.00	0.04	0.00		
94	PIPE 2	1	163	91	-0.02		0.01	0.20 0.08	0.20	0.27	**
96	PIPE 2	1	88	91	-0.01		0.00 0.01	0.14	0.14	0.53	**
		\vdash				_	0.04	0.39			**
98	PIPE 2	1	93	91	0.00	MJ MI	0.01	0.14 0.32	0.14	0.46	**
101	PIPE 2	1	432	91	-0.01	MJ		0.13	0.13	0.28	
							0.01	0.14	0.00	0.00	**
102	PIPE 2	1	201	91	-0.01		0.01	0.08 0.26	0.08	0.28	""
103	PIPE 2	4	682	221	-0.06	MJ	0.02	0.16	0.16	0.23	**
			220	0.1	0.00		0.01	0.06	0.00	0.29	**
104	PIPE 2	1	228	91	0.00	MI		0.26	0.00	0.20	
106	PIPE 2	1	179	91	-0.01	MJ	0.01	0.10	0.10	0.41	**
		.	227	91	-0.01	MI M.I	0.04	0.34	0.00	0.28	**
109	PIPE 2	1	221	91	-0.01	MI		0.26	0.00		
110	PIPE 2	1	415	91	-0.01	MJ		0.14	0.14	0.30	
144	DIDE 2	3	689	221	-0.06	MJ	0.01	0.15 0.16	0.00	0.22	**
11(1	PIPE 2	"	Nimials.			Mi	0.01	0.06	0.00	No. of the last of	**
112	PIPE 2	1	195	91	0.00		0.00	0.05	0.05	0.37	-
	PIPE 2	1	215	91	-0.01	MI MJ	0.04	0.32 0.12	0.00	0.33	**

Prepared by:

Code: AISC-LRFD

Date: 9/12/23

7.	IJΙ	12	~
	9:	36-	_

Results Summary Table										
					CAPACITY					
Beam	Section	Com	Defl L/	Slen	Axial	Dir	Shear	Mom	LTB	Combined Axial+Mom
						MI	0.03	0.28	0.00	
139	2L 3x3x1/4	4	9999	91	-0.05	MI	0.00	0.00	0.00	0.05
140	2L 3x3x1/4	4	9999	90	-0.05	MI	0.00	0.00	0.00	0.05
141	2L 3x3x1/4	3	9999	90	-0.05	MI	0.00	0.00	0.00	0.05

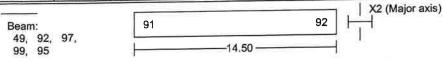
Prepared by:

Code: AISC-LRFD

Date: 9/12/23 -9:39

Detailed Results Table for Beam 49 - 95

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



CONSTRAINTS

DESIGN DATA

- Sections :

Check

- Kx = 1.00- Ky = 1.00

- Steel Grade: A500C

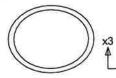
- Allow. Slend.: 200 (compr.) 300 (tens.)

- Allowable Deflection: 1/240

- Tension Area Reduction Factor: 1.00

- Building type : Unbraced

Section: PIPE 2



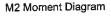
= 2.37in = 0.2inArea = 1.1in2

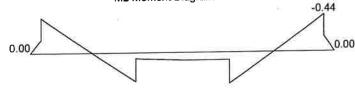
= 1.3in4Cw = 0.in6

= 0.7in412 = 0.8in3**Z**2 = 1.2in е3

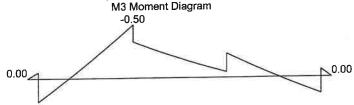
= 0.7in413 **Z**3 = 0.8in3e2 = 1.2in

DESIGN COMBINATION = 1





0.08 (tens.), -0.27 (compr.) Max. SHEAR Force = 0.36 Max. AXIAL Force =



Max. AXIAL Force = 0.08 (tens.), -0.27 (compr.) Max. SHEAR Force = 0.17

SECTION CLASSIFICATION: *** COMPACT ***

Limiting Ratios: d/t= 15.46

Compact Non-Compact 45.0 71.7

(Fy= 46.0 R = 0.005)

$\begin{array}{ c c c c c c c c } \hline DESIGN & EQUATION & FACTORS & VALUES & RESULT \\ \hline V2 Shear & Vu/(.9*Vn)<1.00 & Av = 0.64 & Vu = 0.17 \\ Vn = 0.6*Fy*Av & Vu = 0.7 & Vu = 17.79 & 0.01 \\ \hline M3 Moment & M & < 1.00 & Z = 0.76 & M = 0.50 \\ Mn = 2.92 & 0.19 & 0.19 \\ \hline V3 Shear & Vu/(.9*Vn)<1.00 & Av = 0.64 & Vu = 0.36 \\ Vn = 0.6*Fy*Av & Vu = 0.77 & 0.02 \\ \hline \hline \end{tabular}$					
V2 Shear Vd/(.9 Vh) AV 0.01 Vn = 17.79 0.01 M3 Moment (A-F1-1) without LTB M	DESIGN	EQUATION	FACTORS	VALUES	RESULT
Mark Mornest Mark Mark			Av = 0.64		0.01
V3 Shear Vu/(.9 Vii)<1.00 AV = 0.01 1/2 = 17.70 0.02	(A-F1-1)	< 1.00	Z = 0.76	111	0.19
			Av = 0.64		0.02

Prepared by:

Code: AISC-LRFD

Date: 9/12/23 9:39

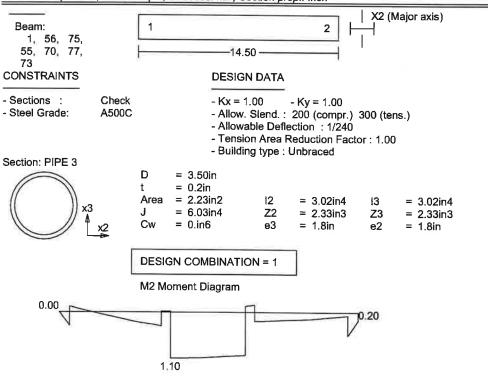
Detailed Results Table for Beam 49 - 95

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch

DESIGN	EQUATION	FACTORS	VALUES	RESULT
M2 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 0.76	M = 0.44 Mn = 2.92	0.17
Deflection	defl. < 1.00 L / 240		defl = 0.43874	0.61
Axial Force (E2-1)	Pu 	(kL/r)x =192 (kL/r)y =192 λc = 2.43	Pu = 0.27 Ag = 1.07 Fcr = 6.82	0.04
Combined Forces (compress.) (H1-1b)	Pu	Cmx = 1.00 Cmy = 0.85 Pex = 8.36 Pey = 8.36	Mux = 0.45 Muy = 0.50 B1x = 1.03 B1y = 1.00	0.38

Detailed Results Table for Beam 1 - 73

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



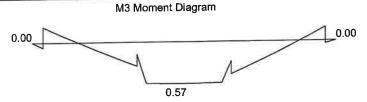
Prepared by:

Code: AISC-LRFD

Date: 9/12/23 9:39

Detailed Results Table for Beam 1 - 73

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



Max. AXIAL Force = 0.50 (tens.), -0.34 (compr.) Max. SHEAR Force = 0.89

SECTION CLASSIFICATION: *** COMPACT ***

Limiting Ratios: d/t= 16.16 Compact Non-Compact 45.0 71.7

71.7

(Fy= 46.0 R = -0.005)

			VALUEC	RESULT
DESIGN	EQUATION	FACTORS	VALUES	RESULT
V2 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 1.34	Vu = 0.89 Vn = 36.91	0.03
M3 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 2.33	M = 0.57 Mn = 8.94	0.07
V3 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 1.34	Vu = 0.71 Vn = 36.91	0.02
M2 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 2.33	M = 1.10 Mn = 8.94	0.14
Deflection	defl. < 1.00 L / 240		defl = 0.32768	0.45
Axial Force (D1-1)	Pu 0.90AgFy < 1.00	(kL/r)x =63 (kL/r)y =63	Pu = 0.50 Ag = 2.23 Fy = 46.00	0.01
Combined Forces (compress.) (H1-1b)	Pu + Mux + Muy 2¢Pn ¢Mnx ¢Mny < 1.00	Cmx = 1.00 Cmy = 0.85 Pex = 158.39 Pey = 158.39	Mux = 1.10 Muy = 0.57 B1x = 1.00 B1y = 1.00	0.21

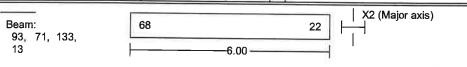
Prepared by:

Code: AISC-LRFD

Date: 9/12/23 -9:39-

Detailed Results Table for Beam 93 - 13

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



CONSTRAINTS

- Sections :

- Steel Grade:

Check A500C **DESIGN DATA**

-Kx = 1.00- Ky = 1.00

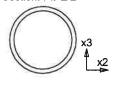
- Allow. Slend.: 200 (compr.) 300 (tens.)

- Allowable Deflection : 1/240

- Tension Area Reduction Factor: 1.00

- Building type: Unbraced

Section: PIPE 2



D = 2.37in

= 0.2inArea = 1,1in2 = 1.3in4

Cw

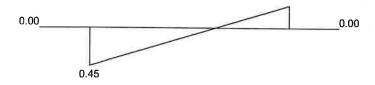
= 0.7in4**Z**2 = 0.8in3= 1.2in

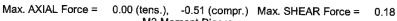
13 = 0.7in4**Z**3 = 0.8in3= 1.2in

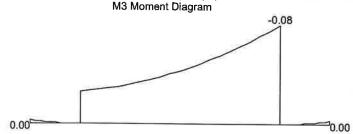
DESIGN COMBINATION = 1

M2 Moment Diagram

= 0.in6







0.00 (tens.), -0.51 (compr.) Max. SHEAR Force =

SECTION CLASSIFICATION: *** COMPACT ***

Limiting Ratios: d/t = 15.46

Max. AXIAL Force =

Compact Non-Compact 45.0

(Fy= 46.0 R = 0.010)

DESIGN	EQUATION	FACTORS	VALUES	RESULT
M3 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 0.76	M = 0.08 Mn = 2.92	0.03
V3 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 0.64	Vu = 0.18 Vn = 17.79	0.01
M2 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 0.76	M = 0.45 Mn = 2.92	0.17

Prepared by:

Code: AISC-LRFD

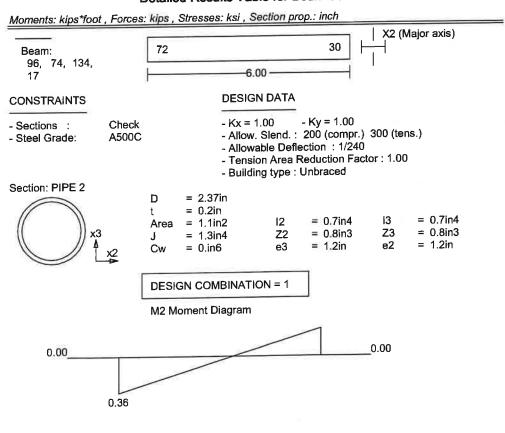
Date: 9/12/23 ——9:39—

Detailed Results Table for Beam 93 - 13

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch

DESIGN	EQUATION	FACTORS	VALUES	RESULT
Deflection	defl. < 1.00 L / 240		defl = 0.40616	1.35
Axial Force (E2-1)	Pu < 1.00 0.85AgFcr	(kL/r)x =88 (kL/r)y =88 λc = 1.12	Pu = 0.51 Ag = 1.07 Fcr = 27.25	0.02
Combined Forces (compress.) (H1-1b)	Pu + Mux + Muy 2φPn φMnx φMny < 1.00	Cmx = 1.00 Cmy = 0.85 Pex = 39.50 Pey = 39.50	Mux = 0.45 Muy = 0.08 B1x = 1.01 B1y = 1.00	0.21

Detailed Results Table for Beam 96 - 17



Max. AXIAL Force = 0.09 (tens.), -0.05 (compr.) Max. SHEAR Force = 0.16

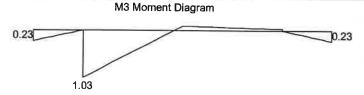
Prepared by:

Code: AISC-LRFD

Date: 9/12/23 -9:39-

Detailed Results Table for Beam 96 - 17

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



Max. AXIAL Force = 0.09 (tens.), -0.05 (compr.) Max. SHEAR Force = 0.57

SECTION CLASSIFICATION: *** COMPACT ***

Limiting Ratios: d/t= 15.46

Compact Non-Compact

45.0

71.7

(Fy= 46.0 R = -0.002)

DESIGN	EQUATION	FACTORS	VALUES	RESULT
V2 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 0.64	Vu = 0.57 Vn = 17.79	0.04
M3 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 0.76	M = 1.03 Mn = 2.92	0.39
V3 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 0.64	Vu = 0.16 Vn = 17.79	0.01
M2 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 0.76	M = 0.36 Mn = 2.92	0.14
Deflection	defl. L / 240 < 1.00		defl = 0.81939	2.73
Axial Force (D1-1)	Pu < 1.00 0.90AgFy	(kL/r)x =32 (kL/r)y =32	Pu = 0.09 Ag = 1.07 Fy = 46.00	0.00
Combined Forces (compress.) (H1-1b)	Pu + Mux + Muy 2\$Pn + \$\phi Mnx \$\phi Mny < 1.00	Cmx = 1.00 Cmy = 0.85 Pex = 291.56 Pey = 291.56	Mux = 0.36 Muy = 1.03 B1x = 1.00 B1y = 1.00	0.53

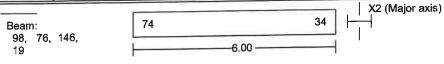
Prepared by:

Code: AISC-LRFD

Date: 9/12/23 9:39

Detailed Results Table for Beam 98 - 19

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



CONSTRAINTS

- Sections : Check - Steel Grade: A500C

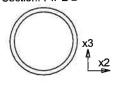
$$-Kx = 1.00$$
 $-Ky = 1.00$

- Allowable Deflection : 1/240

- Tension Area Reduction Factor: 1.00

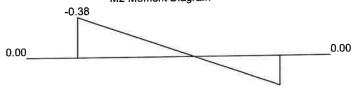
- Building type : Unbraced

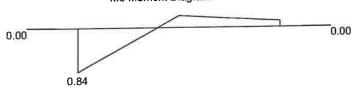
Section: PIPE 2



DESIGN COMBINATION = 1







Max. AXIAL Force = 0.16 (tens.), 0.00 (compr.) Max. SHEAR Force = 0.54

SECTION CLASSIFICATION: *** COMPACT ***

Limiting Ratios: d/t= 15.46 Compact Non-Compact 45.0 71.7

(Fy= 46.0 R = -0.003)

DESIGN	EQUATION	FACTORS	VALUES	RESULT
V2 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 0.64	Vu = 0.54 Vn = 17.79	0.03
M3 Moment (A-F1-1) without LTB	M < 1.00 0.9Mn	Z = 0.76	M = 0.84 Mn = 2.92	0.32
V3 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 0.64	Vu = 0.16 Vn = 17.79	0.01

Prepared by:

Code: AISC-LRFD

Date: 9/12/23 ——9:39—

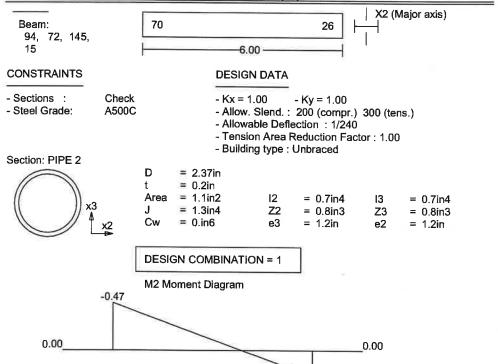
Detailed Results Table for Beam 98 - 19

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch

DESIGN	EQUATION	FACTORS	VALUES	RESULT
M2 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 0.76	M = 0.38 Mn = 2.92	0.14
Deflection	defl. L / 240 < 1.00		defl = 0.77424	2.58
Axial Force (D1-1)	Pu < 1.00 0.90AgFy	(kL/r)x =91 (kL/r)y =91	Pu = 0.16 Ag = 1.07 Fy = 46.00	0.00
Combined Forces (compress.) (H1-1b)	Pu Mux Muy 2¢Pn ¢Mnx ¢Mny < 1.00	Cmx = 1.00 Cmy = 0.85 Pex = 36.76 Pey = 36.76	Mux = 0.38 Muy = 0.84 B1x = 1.00 B1y = 1.00	0.46

Detailed Results Table for Beam 94 - 15

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



Max. AXIAL Force = 0.00 (tens.), -0.62 (compr.) Max. SHEAR Force = 0.18

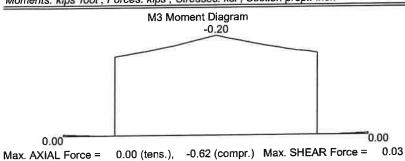
Prepared by:

Code: AISC-LRFD

Date: 9/12/23 -9:39

Detailed Results Table for Beam 94 - 15

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



SECTION CLASSIFICATION: *** COMPACT ***

Limiting Ratios:

Compact Non-Compact

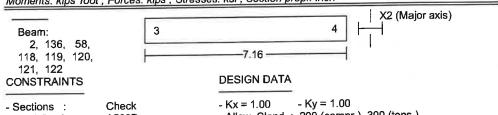
d/t = 15.46

45.0 71.7 (Fy= 46.0 R = 0.013)

DESIGN	EQUATION	FACTORS	VALUES	RESULT
M3 Moment (A-F1-1) without LTB	M 	Z = 0.76	M = 0.20 Mn = 2.92	0.08
V3 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 0.64	Vu = 0.18 Vn = 17.79	0.01
M2 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 0.76	M = 0.47 Mn = 2.92	0.18
Deflection	defl. < 1.00 L / 240		defl = 0.44049	1.47
Axial Force (E2-1)	Pu < 1.00 0.85AgFcr	(kL/r)x =87 (kL/r)y =87 λc = 1.11	Pu = 0.62 Ag = 1.07 Fcr = 27.48	0.02
Combined Forces (compress.) (H1-1b)	Pu Mux Muy 26Pn 6Mnx 6Mny < 1.00	Cmx = 1.00 Cmy = 0.85 Pex = 40.16 Pey = 40.16	Mux = 0.48 Muy = 0.20 B1x = 1.02 B1y = 1.00	0.27

Detailed Results Table for Beam 2 - 122

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch



A500B - Steel Grade:

- Allow. Slend.: 200 (compr.) 300 (tens.)

- Allowable Deflection: 1/240

- Tension Area Reduction Factor: 1.00

- Building type : Unbraced

Prepared by:

Code: AISC-LRFD

Date: 9/12/23 9:39

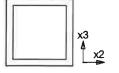
Detailed Results Table for Beam 2 - 122

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch

INTERMEDIATE SUPPORTS

L=	1.17	4.71	5.13	5.50	5.92	6.29	6.71
LatTors.							
Compress.	х	х	х	х	х	х	х

Section: TS 4x4x1/4



h = 4.0int = 0.2in b = 4.0in

._

I2 = 8.22in4

l3 = 8.22in4

J = 13.50in4Cw = 0.in6

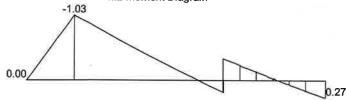
Area

Z3 = 4.97in3e2 = 2.0in

DESIGN COMBINATION = 1

M2 Moment Diagram

= 3.59in2

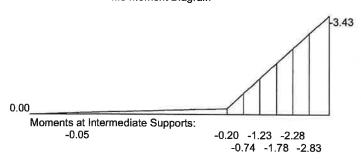


Moments at Intermediate Supports:

-1.02

0.19 -0.14 0.06 -0.23 -0.03 0.17

Max. AXIAL Force = 2.48 (tens.) Max. SHEAR Force = 0.90 M3 Moment Diagram



Max. AXIAL Force = 2.48 (tens.) Max. SHEAR Force = 1.32

SECTION CLASSIFICATION: *** COMPACT ***

Limiting Ratios:

Compact Non-Compact

d/t= 13.13 b/t= 13.13 35.2 28.1 35.2 35.2 (Fy= 46.0 R = -0.015)

DESIGN	EQUATION	FACTORS	VALUES	RESULT
V2 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 1.79	Vu = 1.32 Vn = 49.54	0.03
M3 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 4.97	M = 3.43 Mn = 19.05	0.20

Prepared by:

Code: AISC-LRFD

Date: 9/12/23 9:39

Detailed Results Table for Beam 2 - 122

Moments: kips*foot , Forces: kips , Stresses: ksi , Section prop.: inch

DESIGN	EQUATION	FACTORS	VALUES	RESULT
V3 Shear (F2-1)	Vu/(.9*Vn)<1.00 Vn=0.6*Fy*Av	Av = 1.79	Vu = 0.90 Vn = 49.54	0.02
M2 Moment (A-F1-1) without LTB	M 0.9Mn < 1.00	Z = 4.97	M = 1.03 Mn = 19.05	0.06
Deflection	defl. < 1.00		defl = 0.02608	0.07
Axial Force (D1-1)	Pu < 1.00 0.90AgFy	(kL/r)x =28 (kL/r)y =57	Pu = 2.48 Ag = 3.59 Fy = 46.00	0.02
Lateral Torsional Buckling	M < 1.00 0.9Mn Critical Segment from Segment End Momen	Lb = 7.16 Lp = 14.40 0.00 to 7.16 on -z fl ts: 0.00 and 0.27	M = 1.03 Mn = 19.05 ange	0.06
Combined Forces (tension) (H1-1b)	Pu + Mux + Muy 2¢Pn + фMnx • фMny < 1.00		Mux = 1.03 Muy = 3.43	0.27

SUPPORTING DOCUMENTS

RADIO FREQUENCY (RF) DESIGN DATE: 7/28/23

ANTENNA MOUNT STRUCTURAL ANALYSIS DATE: 9/12/23

ANTENNA SUPPORT STRUCTURE (150° ± MONOPOLE) STRUCTURAL ANALYSIS DATE: 9/12/23



20 ALEXANDER DRIVE, 2nd FLOOR, WALLINGFORD, CT 06492

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

PROJECT TYPE: WIRELESS TELECOMMUNICATIONS **COLLOCATION ON EXISTING 150'± MONOPOLE**

SITE INFORMATION:

PARENT PARCEL OWNER

MAZL LLC

58 NORTH HARRISON AVENUE CONGERS, NY 10920

TOWER OWNER:

GOOSETOWN NETWORK SERVICES, LLC 58 NORTH HARRISON AVENUE

(845) 268-7500

TOWER OWNER ID:

APPLICANT:

CELLCO PARTNERSHIP

(dba VERIZON WIRELESS) 20 ALEXANDER DRIVE, 2nd FLOOR WALLINGFORD, CT 06492

SITE ADDRESS

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

COUNTY SITE CONTROL POINT

CENTER OF EXISTING MONOPOLE

CONNECTICUT SITING COUNCIL

N 41°-51'-19.96" (41.855544°) (NAD '83)

W 72°-42'-16.98" (72.704717°) (NAD '83)

TAX ID PARCEL NUMBER:

MAP 16 BLOCK 56

ARCHITECT / ENGINEER:

CHAPPELL ENGINEERING ASSOCIATES, LLC 201 BOSTON POST ROAD WEST, SUITE 101

MARLBOROUGH, MA 01752

POWER COMPANY

EVERSOURCE ENERGY 247 STATION DRIVE, SE 210 WESTWOOD, MA 02090 (781) 441-3610

TELEPHONE COMPANY:

VERIZON 185 FRANKLIN STREET BOSTON, MA 02107

GENERAL NOTES

- 1. CONTRACTOR SHALL VERIFY ALL PLANS, EXISTING DIMENSIONS, AND CONDITIONS ON JOB SITE. CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK, FAILURE TO NOTIFY THE ARCHITECT/ENGINEER PLACES THE RESPONSIBILITY ON THE CONTRACTOR TO CORRECT
- 2. NEW CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND ORDINANCES.
 - BUILDING CODE: 2022 CONNECTICUT STATE BUILDING CODE
 - ELECTRICAL CODE: 2017 NATIONAL ELECTRICAL CODE
 - STRUCTURAL CODE: TIVEIA-222-G STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS.

AT LEAST 72 HOURS PRIOR TO DIGGING. THE CONTRACTOR IS REQUIRED TO CALL DIG SAFE AT 81

VICINITY MAP

SCALE: 1"=1000" SITE

DRIMING DIRECTIONS

FROM WALLINGFORD, TAKE I-91 NORTH. TAKE EXIT 37 FOR CT-305/BLOOMFIELD AVENUE TOWARD WINDSOR CENTER. USE LEFT 2 LANES TO TURN LEFT ONTO CT-305 W/BLOOMFIELD AVENUE. THE SITE WILL BE ON THE LEFT HAND SIDE.

SHEET INDEX

DWG.	DESCRIPTION	REV.
T01	TITLE SHEET	4
GN01	GENERAL NOTES	4
C01	PROPERTY PLAN	4
A01	MONOPOLE VICINITY PLAN	4
A02	EQUIPMENT AREA PLAN & DETAILS	4
A03	SOUTHEAST SITE ELEVATION	4
S01	ICE SHIELD FRAMING PLAN & STRUCTURAL DETAILS	4
RF01	ANTENNA MOUNTING PLAN AND DETAILS	4
RF02	ANTENNA DETAILS AND ANCILLARY EQUIPMENT SPECIFICATIONS	4
RF03	RF BILL OF MATERIALS AND RF CABLE PLUMBING DIAGRAM	4
RF04	RF COLOR CODE SPECIFICATIONS	4
P01	PLUMBING NOTES AND SCHEMATIC	4
P02	SITE PLUMBING PLAN	4
E01	ELECTRICAL SPECIFICATIONS AND NOTES	4
E02	SITE UTILITY PLAN & DETAILS	4
E02A	MONOPOLE VICINITY UTILITY PLAN & DETAILS	4
E03	ELECTRICAL DIAGRAMS & DETAILS	4
E04	SCHEMATIC GROUNDING PLAN & DETAILS	4
E05	GROUNDING DETAILS	4

DO NOT SCALE DRAWINGS

ALL PLANS, EXISTING DIMENSIONS AND CONDITIONS AT THE PROPOSED PROJECT SITE SHALL BE VERIFIED IN THE FIELD DURING THE CONSTRUCTION PHASE, THE PROJECT OWNERS REPRESENTATIVE SHALL BE NOTIFIED IN WRITING OF ANY DISCREPANCIES IMMEDIATELY PRIOR TO PROCEEDING WITH THE PROPOSED WORK AFFECTED BY SUCH DISCREPANCIES. IN THE EVENT OF LACK OF SUCH NOTIFICATION, SUCH DISCREPANCIES SHALL BECOME THE RESPONSIBILITY OF THE PREVAILING CONTRACTOR RESPONSIBLE FOR CONSTRUCTION.

PROJECT DESCRIPTION

- 1. THIS IS AN UNMANNED AND RESTRICTED ACCESS EQUIPMENT INSTALLATION AND WILL BE USED FOR THE TRANSMISSION OF RADIO SIGNAL FOR THE PURPOSE OF PROVIDING PUBLIC WIRELESS TELECOMMUNICATIONS SERVICE.
- THIS FACILITY WILL CONSUME NO UNRECOVERABLE ENERGY
- 4. NO WASTE WATER WILL BE GENERATED AT THIS LOCATION 5. NO SOLID WASTE WILL BE GENERATED AT THIS LOCATION

verizon



R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400





ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE:

THESE CHRONICS HAVE GERN FRETWEID IN ARCH D (AVISIT) FORMET.
AS SUCH THE WINTER SOLES SHOW ON ANY REPRESENCED OF A
LL BRI SOLES MAY BE (RED MINNELES OF THROUGH ON ALC.
HERE NO LOUGH, THE SOLES SHALL SUPPOSEDE WINTER SOLES.

UNLESS THEY ARE ACTING UNDER THE DIRECTIO TO ALTER THIS DOCUMENT.

	REVISIONS		
NO.	DESCRIPTION	DATE	
0	ISSUED FOR REVIEW	3/28/23	
1	REVISED TSA REFERENCE DATE	4/11/23	
2	ISSUED FOR CONSTRUCTION (FINAL)	4/14/23	
3	REVISED PER (7/28/23) RFDS	8/31/23	
4	REVISED PER VZW RF COMMENTS	9/13/23	

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

DRAWING TITLE:

TITLE SHEET

DRAWING NO:

T01

AS SHOWN	DESIGNED BIT MING	VZW PROJECT NO:
	CHEDGE BY: CPS	VZW LOCKTION CODE:
CEA PROJECT NO.:	ORGANIL BISLE DATE:	783866
96210.413	3/28/23	NDC LOCATION ID: 5000920838

GENERAL NOTES:

FOR THE PURPOSE OF CONSTRUCTION DRAWINGS, THE FOLLOWING DEFINITIONS SHALL APPLY: CONTRACTOR — VERIZON WIRELESS

SUBCONTRACTOR — GENERAL CONTRACTOR (CONSTRUCTION)
OWNER — VERIZON WIRELESS CEM - ORIGINAL EQUIPMENT MANUFACTURER

2. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE BUSTING CONDITIONS AND TO COMPRENENT HATA THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWNINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CONTRACTOR.

3. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES, SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE MOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK.

4. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.

5. DRAWINGS PROVIDED HERE ARE NOT TO BE SCALED AND ARE INTENDED TO SHOW OUTLINE ONLY.

6. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLIDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.

7. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S

8. IF THE SPECIFIED EQUIPMENT CANNOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CONTRACTOR.

9. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND 11 CABLES, GROUNDING CABLES AS SHOWN ON THE POWER, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EQISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.

10. THE SUBCONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAYEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT SUBCONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE OWNER.

11. Subcontractor shall legally and properly dispose of all scrap materials such as consul cables and other news removed from the existing faculty. Antennas removed shall be returned to the owner's designated

12. SUBCONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION.

13. THE SUBCONTRACTOR SHALL SUPERVISE AND DIRECT THE PROJECT DESCRIBED HEREIN. THE SUBCONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MERINS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES FOR COORDINATION ALL PORTIONS OF THE WORK UNDER THE CONTRACT.

14. SUBCONTRACTOR SHALL NOTIFY CHAPPELL ENGINEERING ASSOCIATES, LLC. 48 HOURS IN ADVANCE OF POURING CONCRETE OR BUCK FILLING TRENCHES, SEALING ROOF AND WALL PENETRATIONS & POST DOWNS, FIRSHING NEW WALLS OR FINAL ELECTRICAL CONNECTIONS FOR ENGINEERING REVIEW.

15, CONSTRUCTION SHALL COMPLY WITH VERIZON WIRELESS NETWORK STANDARD (INSTD123 TO THE MAXIMUM EXTENT FEASIBLE UNLESS PRECLUDED OR LIMITED BY DESIGN SHOWN ON THESE DRAWINGS.

18. SUBCONTRACTOR SHALL VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO COMMENCING ANY WORK, ALL DIMENSIONS OF EISTING CONSTRUCTION SHOWN ON THE DRAWNINGS MUST BE VERIFIED. SUBCONTRACTOR SHALL NOTIFY THE CONTRACTOR OF ANY DISCREPANCES PRIOR TO ORDERING MUTERAL OF PROCESSION WITH CONSTRUCTION.

17. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH CONTRACTOR. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MONIGHT.

18. SINCE THE CELL SITE IS ACTIVE, ALL SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMACNETIC ROUNTON. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKINGTON DUMBER. PRESENGUL RF EXPOSURE MONTROPS ARE TO BE WORK TO ALBIT OF ANY DAMEGROUS EXPOSURE

SITE WORK GENERAL NOTES:

1. THE SUBCONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.

2. ALL EQISTING ACTIVE SEWER, WATER, CAS, ELECTRIC, AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES, AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY ENCHERS. EXTREME CAUTION SHOULD BE USED BY THE SUBCONTRACTOR WHICH EXCAVATING OR BRILLING PIERS AROUND OR REAR UTILITIES. SUBCONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING & EXCAVATION.

3. ALL SITE WORK SHALL BE AS INDICATED ON THE DRAWINGS AND PROJECT SPECIFICATIONS.

4. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.

5. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE BTS EQUIPMENT AND TOWER AREAS.

6. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

7. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE

8. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTBLITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF ENGINEERING, OWNER AND/OR LOCAL UTBLITES.

9. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE AND STABILIZED TO PREVENT EROSION AS SPECIFIED IN THE PROJECT SPECIFICATION.

10. SUBCONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION, EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.

11. THE SUBCONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE VERIZON WIRELESS SPECIFICATION FOR SITE

CONCRETE AND REINFORCING STEEL NOTES:

ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST—81—PLACE CONCRETE.

2. ALL CONCRETE SHALL HAVE A MANMANA COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, UNLESS NOTED OTHERWISE. A HIGHER STRENGTH (4000PSI) MAY BE USED. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 381 CODE

3. REINFORCING STEEL SHALL CONFORM TO ASTM A 615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE, WELDED WIRE FABRIC SHALL CONFORM TO ASTM A 185 WELDED STEEL WIRE FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UND.

I. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON

5. A CHAMFER X" SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNO, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4

6. INSTALLATION OF CONCRETE EXPANSION/MEDICE ANCHOR, SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE.
THE ANCHOR BOLT, DOWEL OR ROD SHALL CONFORM TO MANUFACTURER'S RECOMMENDATION FOR EMBEDMENT DEPTH OR AS SHOWN
ON THE DRAWNINGS. NO REBAR SHALL BE CUT WITHOUT PRIOR ENGINEERING APPROVAL WHEN DRALLING HOLES IN CONCRETE.
SPECIAL INSPECTIONS, REQUIRED BY GOVERNING CODES, SHALL BE STANLESS STIEL OR HOT DIPPED GALVANIZED. EXPANSION BOLTS SHALL BE PROVIDED BY RAMSET/REDHEAD OR APPROVED EQUAL.

7. CONCRETE CYLINDER TEST IS NOT REQUIRED FOR SLAB ON GRADE WHEN CONCRETE IS LESS THAN 50 CUBIC YARDS (IBC1905.6.2.3) IN THAT EVENT THE FOLLOWING RECORDS SHALL BE PROVIDED BY THE CONCRETE SUPPLIER; (A) RESULTS OF CONCRETE CHAINDER IEST PERFORMED AT THE SUPPLIERS PLANT. (B) CERTIFICATION OF MINIMUM COMPRESSIVE STREAMS FOR THE CONCRETE GRADE SUPPLIED. FOR GREATER THAN 50 CUBIC YARDS THE GC SHALL PERFORM THE CONCRETE CYLINDER TEST.

8. As an alternative to ITEM 7. Test cylinders shall be taken initially and thereafter for every 50 yards of concrete from each different batch plant.

9. EQUIPMENT SHALL NOT BE PLACED ON NEW PADS FOR SEVEN DAYS AFTER PAD IS POURED, UNLESS IT IS VERIFIED BY CYLINDER TESTS THAT COMPRESSIVE STRENGTH HAS BEEN ATTAINED.

STRUCTURAL STEEL NOTES:

1. ALL STEEL WORK SHALL BE PAINTED OR GALVANIZED IN ACCORDANCE WITH THE DRAWINGS AND VERIZON WIRELESS SPECIFICATION 25:222-000-395-6ET-00001 UNLESS OTHERWISE NOTED. STRUCTURAL STEEL SHALL BE ASTA-A-36 UNLESS OTHERWISE NOTED ON THE SITE SPECIFIC DRAWINGS. STEEL DESIGN, INSTALLATION AND BOLTING SHALL BE IN ACCORDANCE WITH THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) "MANUAL OF STEEL CONSTRUCTION".

2. ALL WELDING SHALL BE PERFORMED USING E700X ELECTRODES AND WELDING SHALL CONFORM TO ASC AND AWS D1.1. WHERE FILLET WELD SIZES ARE NOT SHOWN, PROVIDE THE MENUALM SIZE PER TABLE 12.4 IN THE ASC "MANUAL OF STEEL CONSTRUCTION", STHE ENTIRE PARTIES DIVERSES SHALL BE TOUGHED UP.

3. BOLTED CONNECTIONS SHALL USE BEARING TYPE ASTM A325 BOLTS (%%) AND SHALL HAVE MINIMUM OF TWO BOLTS UNLESS MOTED OTHERWISE.

4. NON-STRUCTURAL CONNECTIONS FOR STEEL GRATING MAY USE \$4" DIA. ASTM A 307 BOLTS UNLESS NOTED OTHERWISE.

5. INSTALLATION OF CONCRETE EXPANSION/WEDGE ANCHORS SHALL BE PER MANUFACTURER'S WRITTEN RECOMMENDED PROCEDURE. 5. Installation of Concrete depayson/wedge anchors shall be per manufacturers written recommended procedure. The anchor bolt, down or or ord shall conform to the manufacturers recommendation for embeddent depth or as shown on the drawings. No rebar shall be cut without prior contractor approval when drilling holes in concrete. Special inspections, required by comprising codes, shall be ferformed in order to mantain manufacturer's madaman allowable looks. All downson/wedge anchors shall be stanless steel or hot dipped galvanized, expansion bolts shall be provided by ramset/rednead or approved equal.

6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ENGINEER REVIEW & APPROVAL ON PROJECTS REQUIRING STRUCTURAL STEEL

7. ALL STRUCTURAL STEEL WORK SHALL BE DONE IN ACCORDANCE WITH AISC SPECIFICATIONS.

SOIL COMPACTION NOTES FOR SLAB ON GRADE:

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL TO EXPOSE NATURAL SUBGRADE AND PLACE CRUSHED STONE AS REQUIRED.

2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL TECHNICIAN OR ENGINEER IS ACCEPTABLE.

3. As an alternate to inspection and written certification, the "undisturged soil" base shall be compacted with "compaction equipment", listed below, to at least 90% modified proctor maximum density per astm 0 1557 method c.

4. COMPACTED SUBBASE SHALL BE LINEFORM AND LEVELED, PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED IN 3" LIFTS ABOVE COMPACTED SOIL GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING #1 SIEVE

5. AS AN ALTERNATE TO ITEMS 2 AND 3, THE SUBGRADE SOLS WITH 5 PASSES OR A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BY 30/38) OR HAND-OPERATED SINGLE DRIVE VIBRATORY ROLLER (SUCH AS BOMAG BY 55E). AND SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADED GRANULAR FILL AND COMPACTED AS STATED ABOVE.

COMPACTION EQUIPMENT:

1. HAND OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR.

CONSTRUCTION NOTES:

SUBCONTRACTOR SHALL FIELD VERBY SCOPE OF WORK, VERIZON WIRELESS ANTENNA PLATFORM LOCATION AND ANTENNAS TO BE REPLACED.

2. COORDINATION OF WORK: SUBCONTRACTOR SHALL COORDINATE RF WORK AND PROCEDURES WITH CONTRACTOR.

3. CABLE LADDER RACK: SUBCONTRACTOR SHALL FURNISH AND INSTALL CABLE LADDER RACK, CABLE TRAY, AND CONDUIT AS REQUIRED TO SUPPORT CABLES TO THE NEW BIS LOCATION.

ELECTRICAL INSTALLATION NOTES:

1. WIRING, RACEWAY, AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC AND TELECORDA.

2. SUBCONTRACTOR SHALL MODIFY EXISTING CABLE TRAY SYSTEM AS REQUIRED TO SUPPORT RF AND TRANSPORT CABLING TO THE NEW BTS EQUIPMENT. SUBCONTRACTOR SHALL SUBJIT MODIFICATIONS TO CONTRACTOR FOR APPROVAL.

3. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC AND TELOORDIA.

4. CABLES SHALL NOT BE ROUTED THROUGH LADDER-STYLE CABLE TRAY RUNGS.

5. EACH END OF EVERY POWER, GROUNDING, AND T1 CONDUCTOR AND CABLE SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2 INCH PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUIAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC & OSHA, AND MATCH EXISTING INSTALLATION REQUIREMENTS.

5. POWER PHASE CONDUCTORS (I.E., HOTS) SHALL BE LABELED WITH COLOR-CODED INSULATION OR ELECTRICAL TAPE (3M BIRAND, 1/4 INCH PLASTIC ELECTRICAL TAPE WITH LIV PROTECTION, OR EQUAL). PHASE CONDUCTOR COLOR CODES SHALL CONFORM WITH THE NEC & OSHA AND MATCH EXISTING INSTALLATION REQUIREMENTS

7. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS. ALL EQUIPMENT SHALL BE LABELED WITH THEIR VOLTAGE RATING, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPOCITY RATING, AND BRANCH ORGUT ID NUMBERS (LE., PANEL BOARD AND CIRCUIT ID'S).

8. PANEL BOARDS (10 NUMBERS) AND INTERNAL CIRCUIT BREAKERS (CIRCUIT 10 NUMBERS) SHALL BE CLEARLY LABELED WITH ENGRAVED LAMACOID PLASTIC LABELS.

9. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.

10. POWER, CONTROL, AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE CONDUCTOR (#34 AMG OR LARGER), 600 V, OIL RESISTANT THIN OR THINN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEDWAY SYSTEM USED, UNLESS OTHERWISE SPECIFED.

11. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE CONDUCTOR (#6 AWG OR LARGER), 600 V, OIL RESISTANT THEN OR THINN-2 GREEN INSULATION, CLASS B STRANDED COPPER CABLE RATED FOR 80 °C (WET AND DRY) OPERATION; LISTED OR LABELED FOR THE LOCATION AND RACEWAY SYSTEM USED, UNLESS OTHERWISE SPECIFIED.

12. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED OUTDOORS, OR BELOW GRADE, SHALL BE SINGLE CONDUCTOR #3 AWG SOLID TINNED COPPER CABLE, UNLESS OTHERWISE SPECIFIED.

13. POWER AND CONTROL WIRING, NOT IN TUBING OR CONDUT, SHALL BE MULTI-CONDUCTOR, TYPE TC CABLE (#34 ANG OR LARGER), 600 V, OIL RESISTANT THINN OR THINN-2, CLASS B STRANDED COPPER CABLE RATED FOR 90 °C (WET AND DRY) OPERATION; WITH OUTER JACKET; LISTED OR LABELED FOR THE LOCATION USED, UNLESS OTHERWISE SPECIFIED.

14. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL), LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION AT NO LESS THAN 75°C (90°C

15. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL,

16. NEW RACEWAY OR CABLE TRAY WILL MATCH THE EXISTING INSTALLATION WHERE POSSIBLE

17. ELECTRICAL METALLIC TUBING (EMT) OR RIGID NONMETALLIC CONDUIT (I.E., RIGID PVC SCHEDULE 40, OR RIGID PVC SCHEDULE 80 FOR LOCATIONS SUBJECT TO PHYSICAL DAMAGE) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.

18. ELECTRICAL METALLIC TURING (EMT), ELECTRICAL NORMETALLIC TURING (ENT), OR RIGID NORMETALLIC CONDUIT (RIGID PVC. SCHEDULE 40) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.

18. CALVANIZED STEEL INTERMEDIATE METALLIC CONDUIT (IMC) SHALL BE USED FOR OUTDOOR LOCATIONS ABOVE GRADE

20. RIGID NONMETALLIC CONDUIT (LE, RIGID PVC SCHEDULE 40 OR RIGID PVC SCHEDULE 80) SHALL BE USED UNDERGROUND; DIRECT BURBED, N AREAS OF OCCUSIONAL LIGHT VEHICLE TRAFFIC OR ENCASED IN REINFORCED CONCRETE IN AREAS OF HEAVY VEHICLE TRAFFIC.

21. LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID-TITE FLEX) SHALL BE USED INDOORS AND CUTDOORS, WHERE VIBINATION OCCURS OR FLEXIBILITY IS NEEDED.

22. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION—TYPE AND APPROVED FOR THE LOCATION USED, SET SCREW FITTINGS ARE NOT ACCEPTABLE.

23. CABINETS, BOXES, AND WIREWAYS SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA,

24. CABINETS, BOXES, AND WIREWAYS TO MATCH THE EXISTING INSTALLATION WHERE POSSIBLE.

25. WIREWAYS SHALL BE EPOXY-COATED (GRAY) AND INCLLIDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARD: SHALL BE PANDUIT TYPE E (OR EQUAL); AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA 3R (OR BETTER) OUTDOORS.

28. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES, AND PULL BOXES SHALL BE GALVANZED OR EPOXY—COATED SHIEET STEEL, SHALL MEET OR EXCRED UL 50, AND RATED NEMA 1 (OR BETTER) INDOORS, OR NEMA

27. METAL RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY—COATED, OR NON— CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER

28. NONMETALLIC RECEPTACLE, SWITCH, AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2; AND RATED NEMA 1 (OR BETTER) INDOORS, OR WEATHER PROTECTED (MP OR BETTER) OUTDOORS.

29. THE SUBCONTRACTOR SHALL NOTIFY AND OBTAIN MECESSARY AUTHORIZATION FROM THE CONTRACTOR BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.

30. The subcontractor shall provide necessary tagging on the Breakers, cables and distribution panels in accordance with the applicable codes and standards to safeguard against life and property.

31. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE LOCAL CODES.

32. CONDUIT ROUTINGS ARE SCHEMATIC. SUBCONTRACTOR SHALL RISTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED.

verizon^v

ARCHITECT/ENGINEER:



R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400 www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE:

THESE CHARGES HAVE SEEN PREVIOUD IN ARCH ID (147-107) FORMAL, AS SUCH THE SHIPLES SOLES SHOW ON ANY REPRESENCES OF AN ACCOUNTEDING SEES SHIPLES OF REPORTS HAVE ALL SEED IN ACCOUNTS HAVE USED IN SHIPLES OF REPORTS HOUSE AND SHIPLES SHIPLES

IT IS A VIOLATION OF LAW FOR ANY PERSON. UNLESS THEY ARE ACTING UNDER THE DIRECTION

REVISIONS		
DESCRIPTION	DATE	
ISSUED FOR REVIEW	3/26/23	
REVISED TSA REFERENCE DATE	4/11/23	
ISSUED FOR CONSTRUCTION (FINAL)	4/14/23	
REVISED PER (7/28/23) RFDS	8/31/23	
REVISED PER VZW RF COMMENTS	9/13/23	
	DESCRIPTION ISSUED FOR REVIEW REVISED TSA REFERENCE DATE ISSUED FOR CONSTRUCTION (FINAL) REVISED PER (7/28/23) RFUS	

PROJECT NAME:

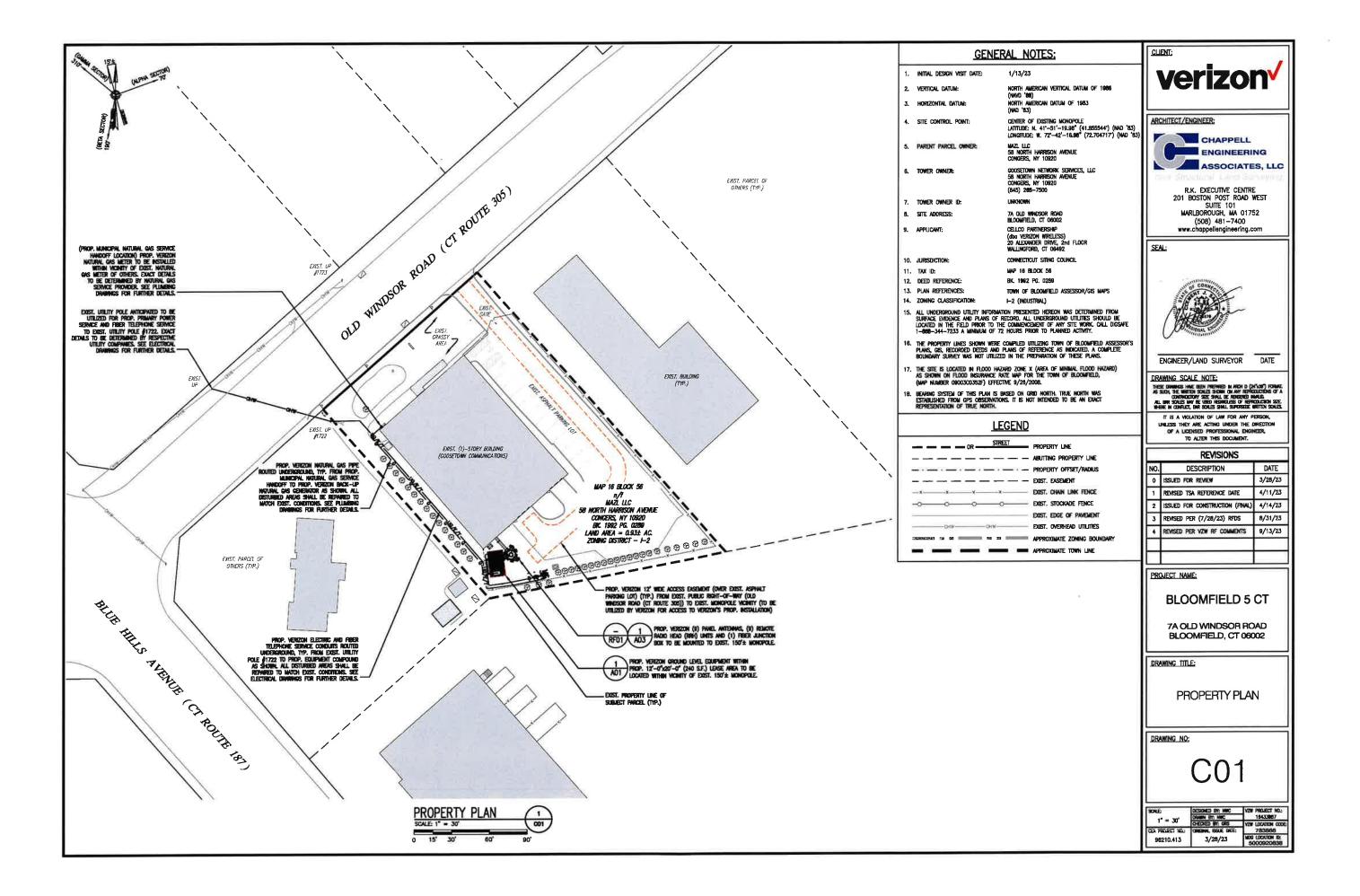
BLOOMFIELD 5 CT

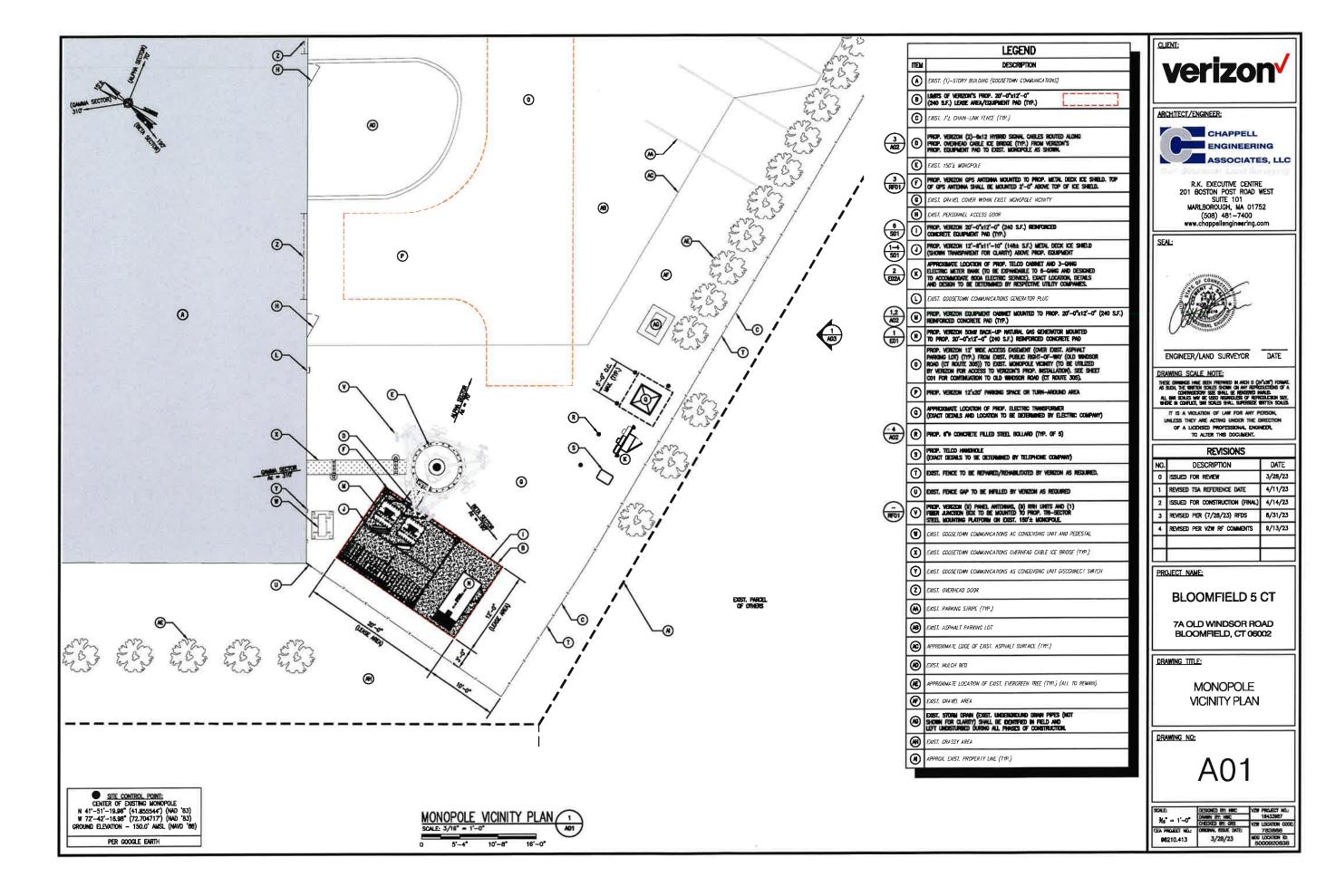
7A OLD WINDSOR BOAD BLOOMFIELD, CT 06002

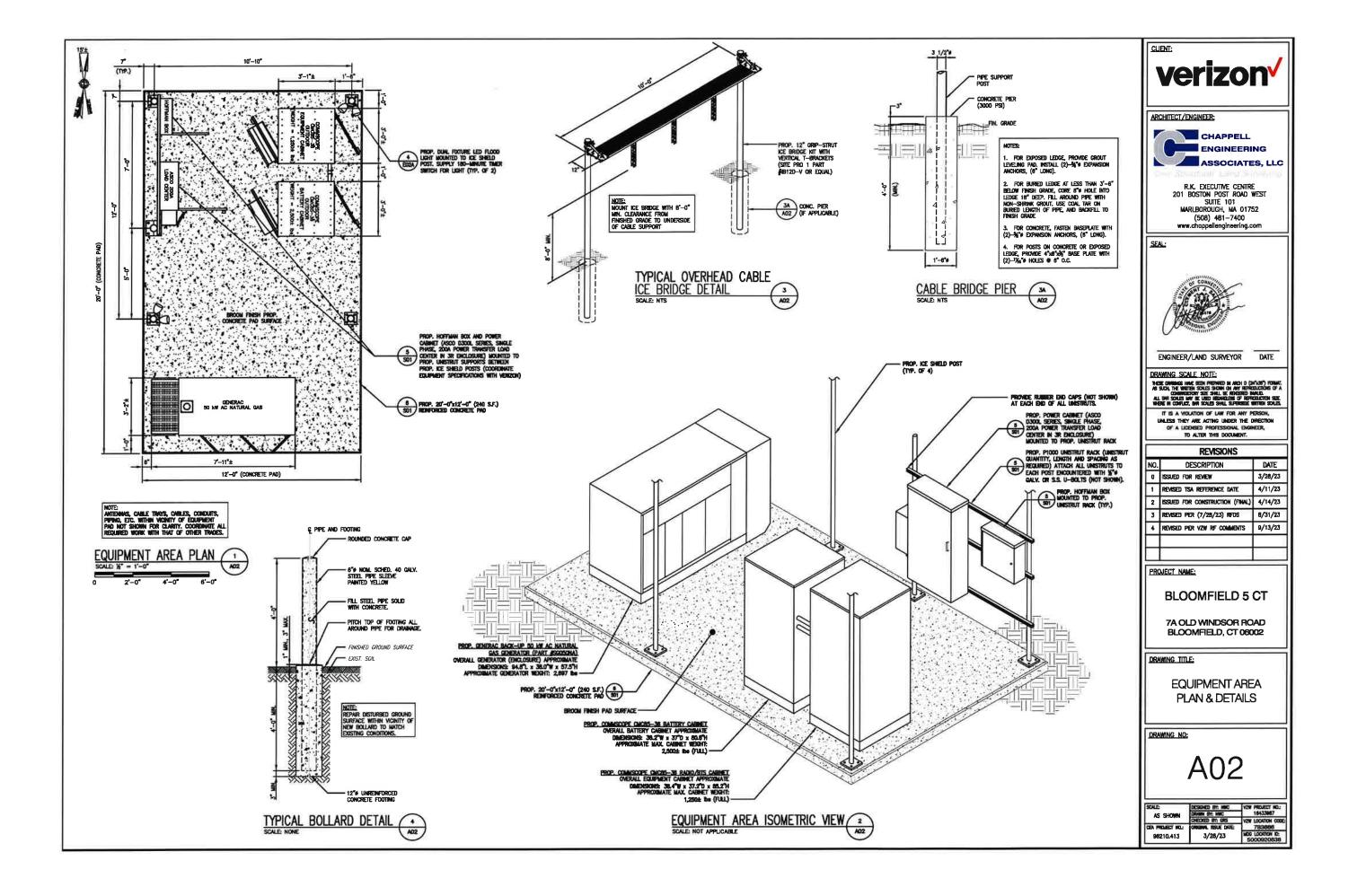
DRAWING TITLE:

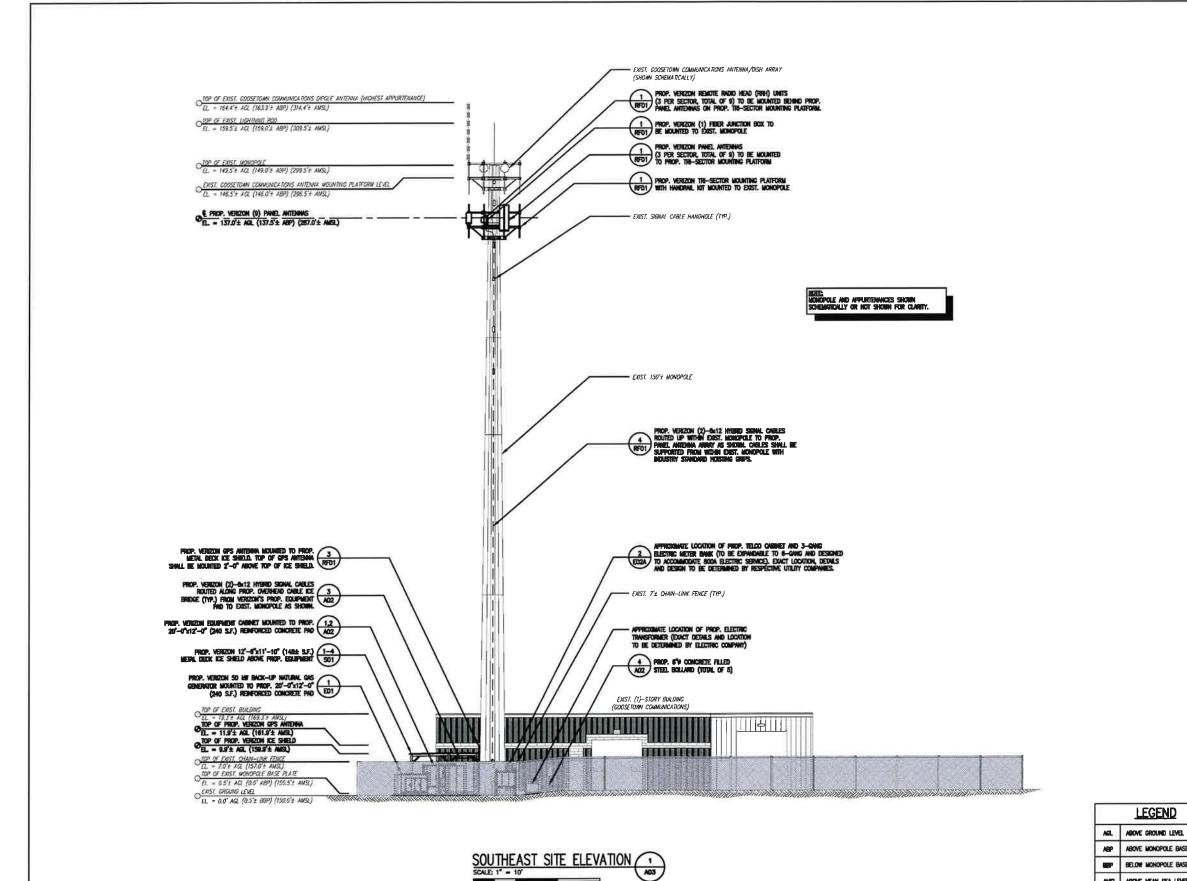
GENERAL NOTES

SCALE	DESIGNED BY: MIKE	VAN PROJECT NO.:
N/A	DRUMM EN: MIC	15433967
.,,,	CHECKED BY: CRS	VZW LOCKTION CODE
UZA FRUMEUT HEL:	OFFICIANT, ISSUE DATE:	783866
96210.413	3/28/23	MDG LOCATION ID: 5000920838











ARCHITECT/ENGINEER:



R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400 www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE: REN: DIVIDEDE HINE BEEN PREPARED IN ARCH D (N°257) FORMOT, AS SUCH THE WINDERS SOURCE ON ANY MEMICILIZATION OF A COLUMN STREET, SHE BEEN STREET, AND ANY SUCH SHE SOURCE SHE SEED IN ARCHITECTURES SEE ALL BRE SOURCE, ON SOURCE SHALL SUPPLIES WITHIN SOURCE BREET IN CORPULATION, ON SOURCE SHALL SUPPLIES WITHIN SOURCE.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

	REVISIONS		
NO.	DESCRIPTION	DATE	
0	ISSUED FOR REVIEW	3/28/23	
1	REVISED TSA REFERENCE DATE	4/11/23	
2	ISSUED FOR CONSTRUCTION (FINAL)	4/14/23	
3	REVISED PER (7/28/23) RFDS	8/31/23	
4	REVISED PER VZW RF COMMENTS	9/13/23	

PROJECT NAME:

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

DRAWING TITLE:

SOUTHEAST SITE **ELEVATION**

DRAWING NO:

LEGEND

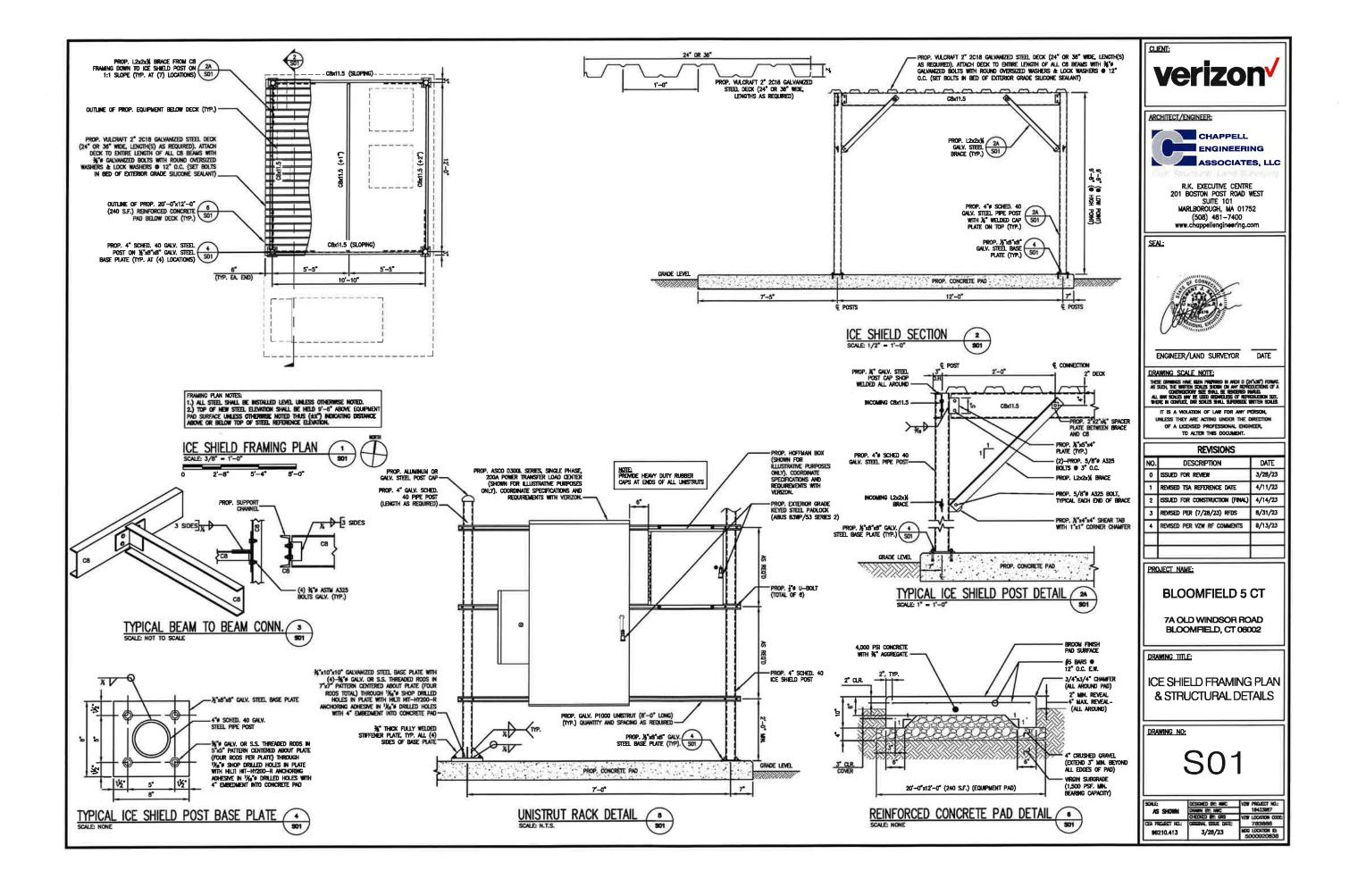
ABOVE MONOPOLE BASE PLATE

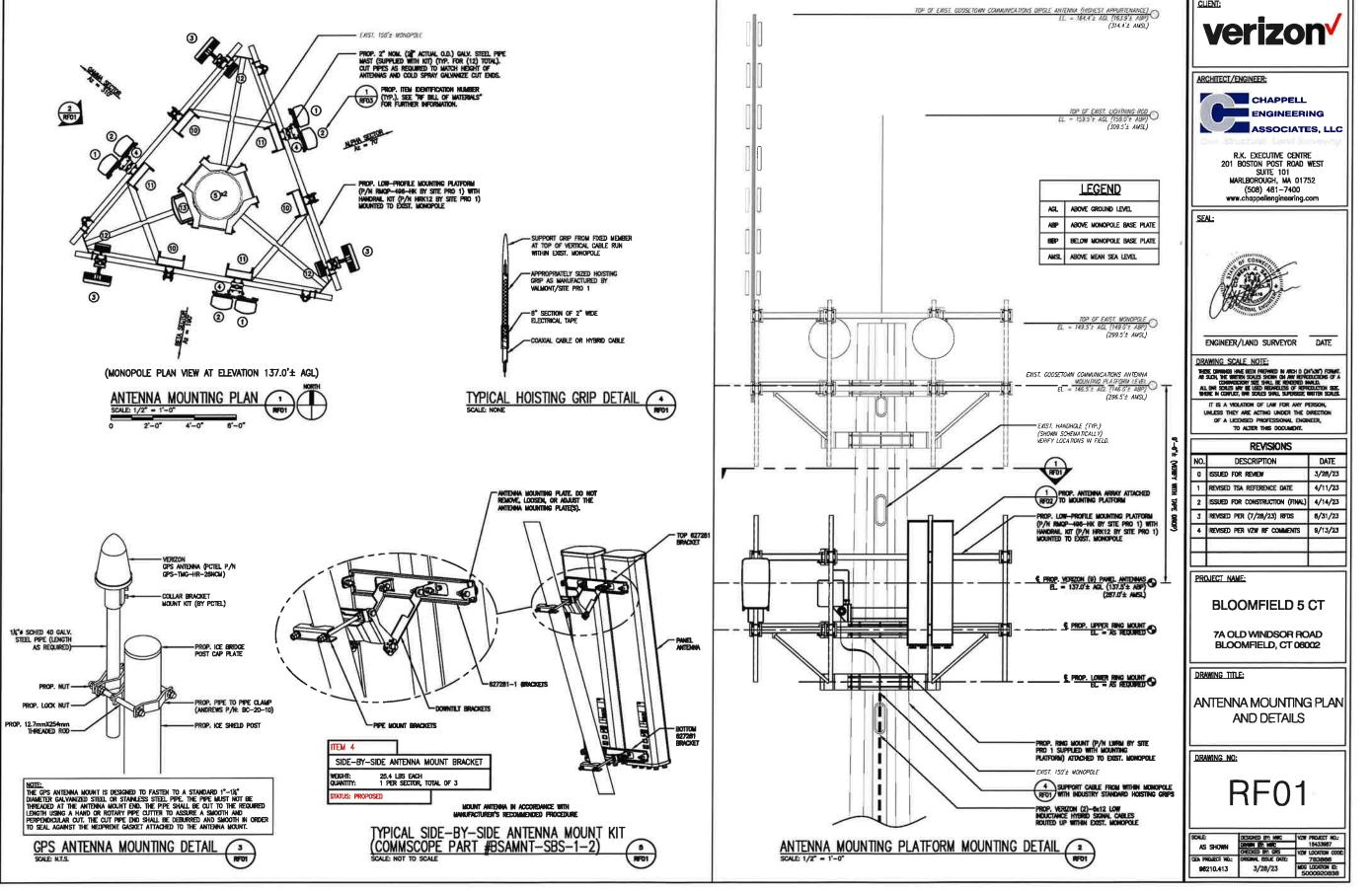
BELOW MONOPOLE BASE PLATE

AMSL ABOVE MEAN SEA LEVEL

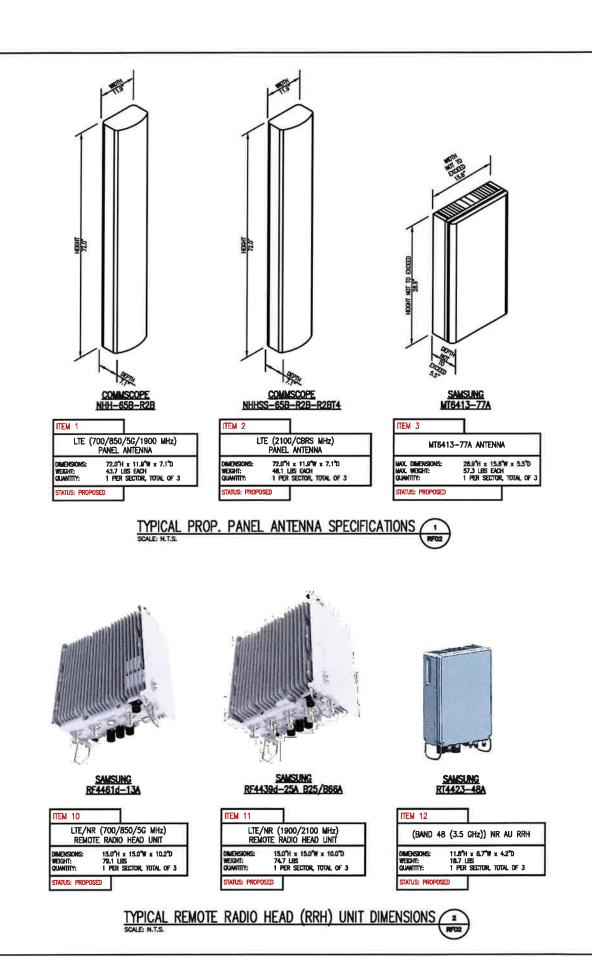
A03

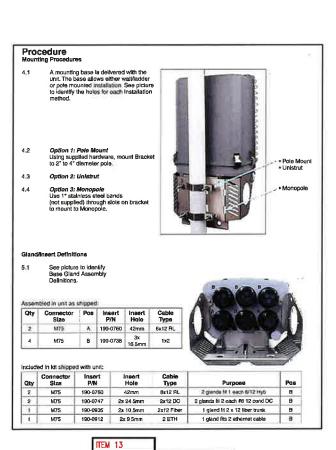
1" = 10"	DESIGNED BY: NWC	YOM PROJECT NO.:
	CRIMIN EY: MIC	16433087
	CHECKED BY: CRS	VZW LOCATION CODE
96210.413	OFFICIAL ISSUE DATE:	783886
	3/28/23	MDC LOCATION ID: 5000920838











FIBER JUNCTION BOX

TYPICAL FIBER JUNCTION BOX DIMENSIONS, SCHEMATIC AND MOUNTING PROCEDURE (

29.56"H x 16.5"W x 12.6"D 32.0 LBS TUTAL OF 1



ARCHITECT/ENGINEER:



R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400 www.chappellengineering.com



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE: THE CHARGE HAS REPRESED IN ARCH D (26%35) FORMS, AS SUP, THE WITHER COLUMN ON ANY REPRODUCTIONS OF A COMMUNICATION SEE SHALL BE REPORTED MALE. ALL BAY SOLDS MAY BE USED REPORTED OF AS PRODUCTION SEE WHERE IN CORPULT, BAY SULES SHALL SUPPRESED WITHIN SOLDS.

IT IS A VIOLATION OF LAW FUR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

	REVISIONS		
NO.	DESCRIPTION	DATE	
0	ISSUED FOR REVIEW	3/28/23	
1	revised tsa reference date	4/11/23	
2	ISSUED FOR CONSTRUCTION (FINAL)	4/14/23	
3	REVISED PER (7/28/23) RFDS	8/31/23	
4	REVISED PER VZW RF COMMENTS	9/13/23	
_			

PROJECT NAME:

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

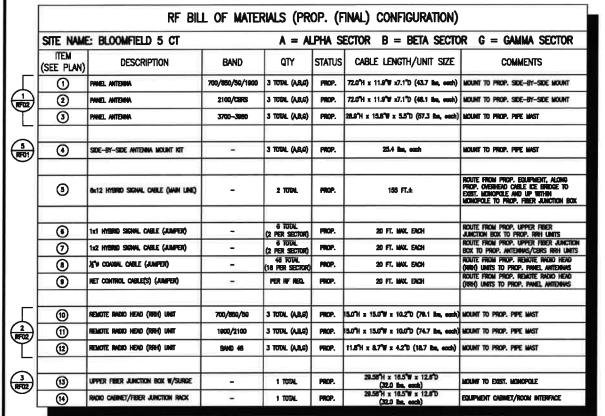
DRAWING TITLE:

ANTENNA DETAILS AND ANCILLARY EQUIPMENT **SPECIFICATIONS**

DRAWING NO:

RF02

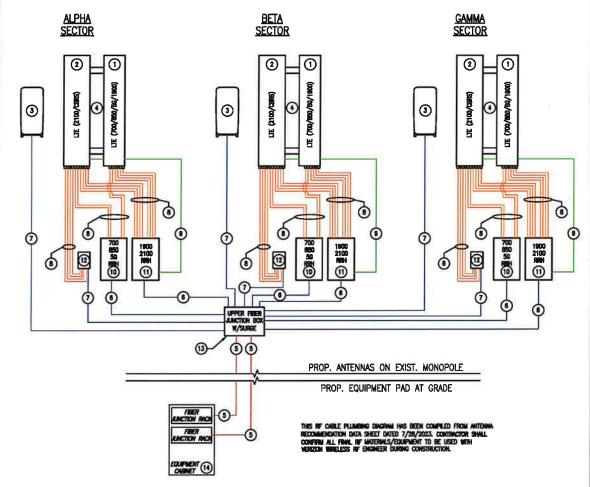
SCHE	DESIGNED ITT: MITC	YZW PROJECT NO.:
AS SHOWN	DRAWN BY: MIC	15433987
AL GIORIO	CHEDOD BY: ORS	VZW LOCATION COOK
96210.413	ORICHME ISSUE DATE:	783866
	3/28/23	MDG LOOATION ID: 5000920838



THIS IF RILL OF INSTRUMES (ROM) HAS BEEN COMPILED FROM ANTIDINA RECOMMENDATION DATA SHEET DATED 7/28/2023, CONTRACTOR SHALL CONFIRM ALL FINAL RF INSTRUMES/EQUIPMENT TO BE USED WITH VERZION WIRELESS RF ENGINEER DURING CONSTRUCTION.

RF BILL OF MATERIALS (FINAL CONFIGURATION)

ANNUAL MEDIT OF ANTIDIMAS, RELATER RADIO HEAD (REA) UNITS, FIBER AUCTION BOXES AND ALL ASSOCIATED WINDOW AND ANCILLARY COUNTRIES SHOWN SCHEMICALLY ON THIS FULNISHED DIAGNAL SEE. PROC. ANTIDIMA ORBITATION FLANCIS, AND CROSS REFERENCE WITH RF BILL OF MICERALS FOR PROC. ANTIDIMA ORBITATION FLANCIS, AND CROSS REFERENCE WITH RF BILL OF MICERALS FOR PROC. ANTIDIMA COUNTRIES FOR PROC.



RF CABLE PLUMBING DIAGRAM (FINAL CONFIGURATION) (2)

BAGIO FREQUENCY (RF) DESIGN NOTES:

1) ALL RADIO FREQUENCY (RF) DESIGN INFORMATION
CONTAINED ON THIS SHEET IS SHOWN SCHEMATICALL THE GENERAL CONTRACTOR SHALL CONFIRM AL

LEGEND - Hybrid Cable (Main Line) PURPLE - COAXIAL CABLE (MAIN LINE) BLUE = 1x1 HYBRID CABLE (JUMPER) ORANGE = 1/2" COAXIAL CABLE (JUMPER) GREEN -= RET CONTROL CABLE(S) (JUMPER)







R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400 www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR

DATE

DRAWING SCALE NOTE: THESE CHANNES HAVE BEEN PREPARED IN ANCH D (165287) FORMAL AS SUC) THE WINTER SOLES SOUL OF ANY REPRODUCTION OF A COMMUNICATIVE SEES, SHALL BY REPRODUCTION AND ALL BRY SOLES MAY BE USED REPORTED SO OF REPORT OF A HORSE M CORPLIC, OR SOLES SHALL SEPTIMENE WITHOU SOULS.

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER. TO ALTER THIS DOCUMENT.

REVISIONS

NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	3/28/23
1	revised tsa reference date	4/11/23
2	ISSUED FOR CONSTRUCTION (FINAL)	4/14/23
3	REVISED PER (7/28/23) RFDS	8/31/23
4	REVISED PER VZW RF COMMENTS	9/13/23

PROJECT NAME:

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

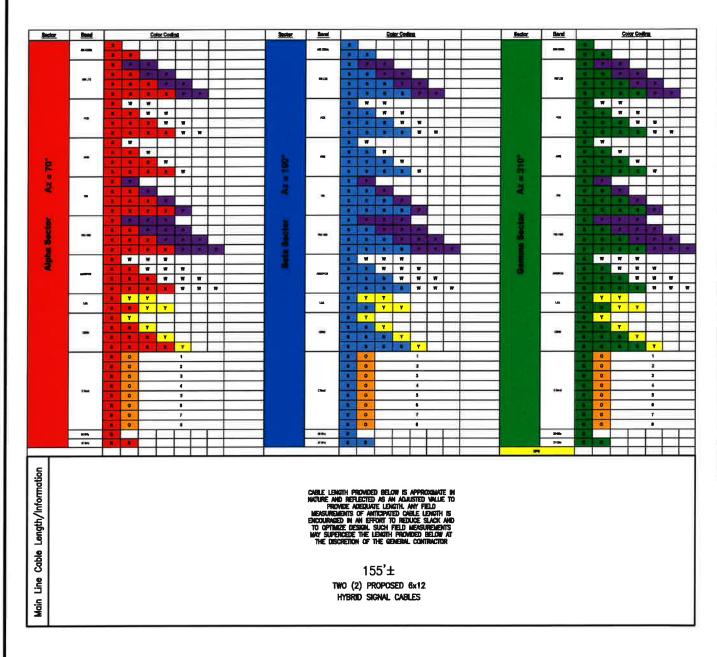
DRAWING TITLE:

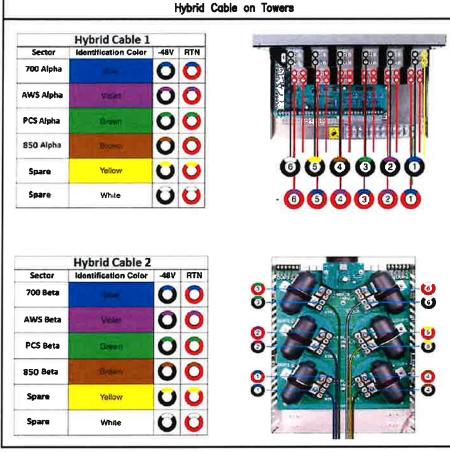
RF BILL OF MATERIALS AND RF CABLE PLUMBING DIAGRAM

DRAWING NO:

RF03

SOLE	DESCRED BY: MIC	VZW PROJECT NO.:
AS SHOWN	DRAWN BY: MAC	16433987
AS SHOWN	CHECORED BY: CRES	YZW LOCATION CODE
CEA PROJECT NO.:	DREWNL ESUE DATE:	783866
96210.413	3/28/23	MDG LOCATION ID: 5000920838





HYBRID CABLE COLOR CODE SPECIFICATIONS (2)





R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400 www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE: THESE DIMMINISHME SEEN FRENWED IN WICH O (14" LIST) FORMAL AS SLOW, THE WIRTH SOLIES SHOWN ON MAY REPRODUCTIONS OF A COMMUNICATION SEE SHALL SE RESULTED MAKE AS ALL SHOWN SHALL SHA

IT IS A VIOLATION OF LAW FOR ANY PERSON, URLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

	REVISIONS	
NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	3/28/23
1	revised tsa reference date	4/11/23
2	ISSUED FOR CONSTRUCTION (FINAL)	4/14/23
3	REVISED PER (7/28/23) RFDS	8/31/23
4	REVISED PER VZW RF COMMENTS	9/13/23

PROJECT NAME:

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

DRAWING TITLE:

RF COLOR CODE SPECIFICATIONS

DRAWING NO:

RF04

SCHE	DESIGNED BY: WINC	VZW PROJECT NO.:
N/A	CRAWN ST: MIKE	16433967
17/1	CHEDED BY: CRS	YZW LOCATION CODE
CEA PROJECT NO.:	CHECKIE, SHE DATE	783866
96210.413	3/28/23	MDG LOCKTON ID: 5000920838

LINE COLOR CODE SPECIFICATIONS (1)

GENERAL PLUMBING NOTES:

- 1. THE CONTRACTOR SHALL PROVIDE AND INSTALL A COMPLETE AND FULLY OPERATING SYSTEM INCLIDING ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY AS INDICATED ON DRAWINGS AND AS DESCRIBED IN THESE SPECIFICATIONS.
- 2. THE CONTRACTOR SHALL PERFORM ALL CUTTING, DEMOLISHING, REMOVAL, DISPOSAL, PATCHING, SEALING, RESTORATION AND ALL ELSE REQUIRED TO COMPLETE THE PLUMBING INSTALLATION.
- 3. ALL WORK SHALL BE IN STRICT ACCORDANCE WITH THE LOCALLY PRESIDING BUILDING CODE AND ALL OTHER AUTHORITIES
- 4. THIS CONTRACTOR SHALL PAY ALL FEES AND TAXES, OBTAIN ALL PERMITS AND APPROVALS, FILE THE REQUIRED DOCUMENTS AND CAUSE ALL INSPECTIONS.
- 5. SHOP DRAWINGS OF THE FOLLOWING SHALL BE SUBMITTED TO THE OWNER'S PROJECT REPRESENTATIVE FOR APPROVAL PRIOR TO INSTALLATION:
 - A. LAYOUT OF ALL EQUIPMENT B. DIMENSIONED AND DETAILED PIPING LAYOUT
- C. MANUFACTURER'S SPECIFICATIONS OF ALL EQUIPMENT SPECIFIED
 D. DETAILED CONTROL WIRING DIAGRAMS
- 6. ALL PIPE HANGERS SHALL BE ATTACHED TO THE BUILDING/SUPPORT STRUCTURE. PROVIDE TRAPEZE SUPPORTS AS
- 7. THE DIGGING OF HANGERS, CHOPPING, CORE DRILLING, WORK IN OTHER TENANT SPACES OR OCCUPIED AREAS, WORK CREATING FUNES ETC. OR WORK DEEMED BY THE OWNER TO BE A NUISANCE TO OTHER TENANTS SHALL BE DONE AFTER WORKING HOURS.
- 8. ALL PENETRATIONS THROUGH FIRE RATED PARTITIONS AND FLOORS SHALL BE FIRESTOPPED WITH HILTI FIRESTOPPING MATERIAL PROVIDE PIPE SLEEVES FOR ALL PENETRATIONS SEALED WITH AN APPROVED FIRESTOP.
- 9. THIS CONTRACTOR SHALL FURNISH A ONE (1) YEAR GUARANTEE ON PARTS AND LABOR OF THE INSTALLATION FROM THE DATE OF OWNER ACCEPTANCE AND A FIVE (5) YEAR COMPRESSOR WARRANTY WHERE AVAILABLE.
- 10. CONTRACTOR SHALL FURNISH ALL NECESSARY CONTROLS, STARTERS, PUMPS, MOTORS, PANELS AND RELAYS ETC. FOR A FULLY FUNCTIONING SYSTEM.
- 11. BAKELITE LABELS SHALL BE INSTALLED AT ALL NEW EQUIPMENT FOR IDENTIFICATION PURPOSES.
- 12. ANY REQUIRED SHUTDOWNS OF BASE BUILDING SYSTEMS FOR CONNECTION OF TENANT SYSTEMS MUST BE PRIOR APPROVED AND COORDINATED WITH ALL APPROPRIATE BUILDING/PROPERTY REPRESENTATIVES. THIS CONTRACTOR SHALL ASSUME ALL FEES REQUIRED BY THE OWNER TO ARRANGE AND SUPERVISE THE SHUTDOWN(S).
- 13. THE CONTRACTOR SHALL VISIT THE LOCATIONS OF ALL PROPOSED WORK AND BECOME THOROUGHLY FAMILIAR WITH ALL EXISTING AND FORECASTED CONDITIONS AND LIMITATIONS.
- 14. VERIFY ALL EXISTING CONDITIONS, ALL NEW PIPING AND EQUIPMENT SHALL BE COORDINATED WITH ALL EXISTING DUCTWORK, PIPING, ELECTRICAL AND GENERAL SITE CONDITIONS,
- 15. ALL EXISTING EQUIPMENT, DUCTHORK, PIPING, ELECTRICAL AND GENERAL SITE CONDITIONS SHOWN ARE APPROXIMATE AND EXACT CONDITIONS MUST BE VERIFED IN THE FIELD THROUGHOUT CONSTRUCTION.
- 16. ALL WORK SHALL CONFORM TO THE GOVERNING BASE BUILDING/PROPERTY STANDARDS.
- 17. THE CONTRACTOR SHALL COORDINATE WITH THE BASE BUILDING/PROPERTY MANAGEMENT AS TO THE DELIVERY OF EQUIPMENT AND SCHEDULING OF WORK SO AS TO NOT INTERFERE WITH THE OPERATION OF THE DOCUPPED FACILITIES, MAY REQUIRED SHUTDOWNS OF THE DISTING BASE BUILDING/PROPERTY STETLES OR WORK OUTSIDE OF THE DEMISSING AREA SHALL BE STRICTLY COORDINATED WITH ALL APPROPRIATE BUILDING/PROPERTY REPRESENTATIVES.
- 18. ALL ANCILLARY POWER AND LINE VOLTAGE WIRING SHALL BE DONE BY A LICENSED AND INSURED ELECTRICAL CONTRACTOR BASED LIPON THE DIAGRAMS FURNISHED BY THE MECHANICAL CONTRACTOR.

GENERAL PLUMBING NOTES (CONTINUED):

- 19. ALL MATERIAL AND APPARATUS SHALL BE NEW AND IN FIRST CLASS CONDITION. ALL MATERIAL AND APPARATUS SHALL HAVE MARKINGS OR A NAMEPIATE IDENTIFYING THE MANUFACTURER AND PROTODING SUFFICIENT REFERENCE TO ESTABLISH OURLITY, SEE AND CAPACITY, ALL WORKMANSERP SHALL BE OF THE PROPER TRADE. IN GENERAL, ALL MATERIALS AND EQUIPMENT SHALL BE OF COMMERCIAL SPECIFICATION GRADE IN QUALITY, LIGHT DUTY AND RESDERFIALL TYPE COUPMENT WILL NOT BE CONSIDERED ACCEPTRALE ALL HOSTS, REFOLDES, STRADING, RUMMAYS, TOOLS, MACHINERY AND EQUIPMENT WILL NOT BE CONSIDERED ACCEPTRALE ALL HOSTS, REFOLDES, STRADING, RUMMAYS, TOOLS, MACHINERY AND EQUIPMENT REQUIRED FOR THE PERFORMANCE OF THE WORK SHALL BE FURNISHED BY THIS CONTRACTOR. MITERAL AND EQUIPMENT SHALL BE STORED AND MAINTAINED IN CLEAN CONDITION AND PROTECTED FROM WEATHER, MOISTURE AND PHYSICAL DAMAGE.
- 20. THE CONTRACTOR SHALL PERSONALLY INSPECT THE SITE OF THE PROPOSED WORK DURING THE CUSTOMER'S BID WALK OR AS OTHERWISE ARRANGED WITH APPROPRIATE BULLDING/PROPERTY REPRESENTATIVES AND BECOME FULLY INFORMED AS TO THE CONDITIONS UNDER WHICH THE WORK IS TO BE DONE, FAILURE TO DO SO WILL NOT BE CONSIDERED SUFFICIENT JUSTIFICATION TO REQUEST OR OFTAIN EXTRA COMPENSATION OVER AND ABOVE THE CONTRIANCT PRICE.
- 21. DRY AND REFUSE RESULTING FROM THE PERFORMANCE OF THE WORK SHALL BE REMOVED FROM THE PREMISES OMLY TO PREVENT ACCUMULATION. THE CONTRACTOR SHALL COOPERATE IN MARTANING REASONABLY CLEAN PREMISES AT ALL TIMES TREDUCISIOUT CONSTRUCTION, IMMEDIATELY PROOT TO FRAIL INSPECTION. THE CONTRACTOR SHALL PERFORM A FINAL CLEANUP OF DRY AND REFUSE RESULTING FROM THE WORK PERFORMED. THE CONTRACTOR SHALL CLEAN ALL MATERIAL AND EQUIPMENT INSTALLED LINDER THE CONTRACT, DRY, DUST, PLASTER, STAINS AND ALL FOREIGN MATTER SHALL BE REMOVED FROM ALL SLRWAGED FRISHESS SHALL BE TOUCHED UP AND RESTORCED TO THEIR ORIGINAL CONDITION.
- 22. THE DRAWINGS ARE SCHEMATIC IN NATURE, BUT SHOW THE VARIOUS COMPONENTS OF THE SYSTEMS APPROXIMATELY TO SCALE AND ATTEMPT TO INDICATE HOW THEY ARE TO BE INTEGRATED WITH OTHER PARTS OF THE BUILDING/STRUCTURE. FIGURED DIMENSIONS SHALL BE THEN IN PREPENDE TO SCALED DIMENSIONS, DETERMINE EVALUAT LOCATIONS BY FIELD MESSAGRAINS, CHECKING THE REQUIREMENTS OF OTHER TRADES AND BY REVENING ALL CONTRACT DOCUMENTS. THE CONTRIBUTOR WILL BE HELD RESPONSIBLE FOR ERRORS WHICH COULD HAVE BEEN AVOIDED BY PROPER CHECKING AND INSPETTION.

GAS PIPING NOTES:

- Gas piping shall be designed and shall be installed in accordance with the international mechanical code latest revision and in accordance with NFPA 54.
- 2. GAS PIPE SIZING SHALL BE BASED ON TABLE M-805.4.1(2) IN THE BOCA NATIONAL MECHANICAL CODE. A MAXIMUM PIPE LENGTH OF 200 FT. SHALL BE USED FOR THIS DESIGN.
- 3. GAS PIPING SHALL BE OF MATERIAL SPECIFIED ON PLANS WITH ALL INDUSTRY STANDARD FITTINGS, WHERE GAS PIPING CONNECTS TO EQUIPMENT, IT SHALL BE PROVIDED WITH A DRIP LEG THE FULL SIZE OF THE SUPPLY PIPE, A 100% SHUT-OFF
- 4. GAS PIPMIG HANGERS AND SUPPORTS SHALL COMPORM TO THE REQUIREMENTS OF "STANDARD PRACTICE FOR PIPPE HANGERS AND SUPPORTS MATERIALS, DESICH, MANUFACTURE, SELECTION, APPLICATION AND INSTALLATION" (ANSI/MSS SP-58-2008). ALL PIPE SHALL BE SUPPORTED IN A NEAT AND WORKMANLINE MANNER.
- 5. Portions of a gas piping system installed in concealed locations shall not have unions, tube fittings or running threads. No gas valves shall be installed in above colong or below grade locations.
- ALL GAS VENTS FROM PRESSURE RELIEF OR PRESSURE LIMITING DEVICES SHALL BE PIPED THE FULL OUTLET SIZE AND SHALL BE FITTED WITH AN AGA APPROVED FITTING WITH INSECT SCREEN, PROVIDE CALLIANG OR PROPER FLASHING AT VENTS.
- 7. BRANCH OUTLET PIPES SHALL BE TAKEN FROM THE TOP OR SIDES OF THE HORIZONTAL LINES AND NOT THE BOTTOM.
- 8. USE DIELECTRIC UNIONS WHERE DISSIMILAR METALS ARE JOINED TOGETHER.
- 9. INSPECT, TEST AND PURGE THE GAS PIPING SYSTEM IN ACCORDANCE TO NFPA 54 PART 4 AND ALL LOCAL REQUIREMENTS, MINMAUN REQUIREMENTS SHALL BE 5 PSIG FOR A PERIOD OF 2 HOURS.

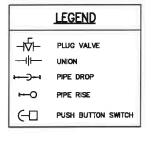
PLUMBING PROCEDURAL PREPARATION AND TESTING NOTES:

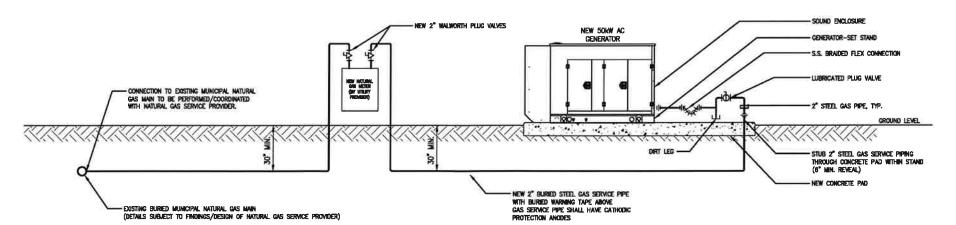
- Due to the nature of this system and other similar systems in use by the owner, the contractor simil provide the systems as specified. Substitutions shall not be considered at this time unless directed by owner.
- 2. ALL WORK WITHIN LIVE ELECTRICAL PANELS SHALL OCCUR DURING HOURS ACCEPTABLE TO THE PANEL OWNER.
- 3. THE CONTRACTOR SHALL PROVIDE TWO (2) DAYS ADVANCED NOTIFICATION OF ALL DELIVERIES TO THE SITE AND SEVEN (7) DAYS ADVANCED NOTIFICATION OF ANY REQUIRED SERVICE SHUT—DOWNS.
- 4. THE CONTRACTOR SHALL MAINTAIN INTERFACE WITH THE OWNER AND WITH ALL OF THEIR CONTRACTORS, VENDORS
- 5. THE CONTRACTOR SHALL ATTEND A PRE-CONSTRUCTION MEETING TO BE HELD AT THE JOB SITE OR IN THE AREA WHERE THE INSTALLATION WILL TAKE PLACE.
- 6. PRIOR TO THE START OF CONSTRUCTION, ALL WORKERS SHALL BE BRIEFED ON ALL SAFETY REQUIREMENTS PERTINENT TO THE WORKING ENVIRONMENT.
- THE CONTRACTOR SHALL INSURE THE AVAILABILITY AND ACCESSIBILITY OF ADEQUATE ON—SITE FIRE EXTINGUISHERS, SAFETY EQUIPMENT BOARDS AND FIRST AID STATIONS.
- B. ALL CONNECTIONS, TEST MEASUREMENTS AND ADJUSTMENTS SHALL BE DIRECTLY WITNESSED BY AN OWNER APPROVED PROJECT SUPERMISOR.
- PRIOR TO THE START-UP OF THE SYSTEMS, THE CONTRACTOR SHALL CHECK ALL COMPONENTS AND DEVICES, LUBRICATE FEBIS ACCORDINALY AND TIGHTEN ALL CONNECTIONS. AFTER ALL SYSTEMS HAVE BEEN INSPECTED AND ADJUSTIBLY CONTRIL ALL OPERATING FEATURES REQUIRED BY THE DRAWINGS AND SPECIFICATIONS AND MAKE FINAL ADJUSTMENTS AS NECESSARY.
- 10. APPROPRIATE FACTORY REPRESENTATIVES SHALL BE ON SITE TO COMMISSION THE SYSTEM.
- 11. CONTRACTOR SHALL INSPECT AND TEST ALL PIPING AND EQUIPMENT IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS AND EQUIPMENT MANUFACTURER'S INSTRUCTIONS.
- 12. AUTHORIZED PERSONNEL SHALL CONDUCT CLEANING, PURCING AND TESTING PROCEDURES. TESTING OF PIPING SHALL UTILIZE HYDROSTATIC OR PNEUMATIC MEASURES. 0XYGEN OR LP GAS IS NOT TO BE USED.
- 13. PURGE PIPING WITH INERT GAS PRIOR TO INTRODUCING LP GAS.
- 14. CONDUCT A FUNCTIONAL TEST OF ALL ISOLATION VALVES, EXCESS FLOW VALVES AND PRESSURE RELIEF VALVES.
- 15. CONTRACTOR SHALL SUBMIT TO THE OWNER THREE (3) COPIES EACH OF MATERIAL FOR MAINTENANCE AND OPERATION INSTRUCTION MANUALS APPROPRIATELY BOUND INTO MANUAL FORM INCLUDING APPROVED COPIES OF MANUFACTURES CATALOG SHEETS, WIRRING DUGGRAUS, MAINTENANCE INSTRUCTIONS, OPERATING INSTRUCTIONS AND PARTS LISTS (REVISED IF INCESSARY TO SHOW SYSTEM AND EQUIPMENT AS ACTUALLY INSTALLED). CONTRACTOR SHALL ALSO PROVIDE ADEQUATE VERMAL INSTRUCTIONS OF SYSTEM OPERATION AND RE-START TO OWNER'S REPRESENTATIVE AT THE COUCLUSION OF THE WORK.

CONTRACTOR SHALL OBTAIN FULL SPECIFICATIONS FROM VERIZON WIRELESS PRIOR TO BID.

GENERATOR: GENERAC SG050NA (NATURAL GAS) SUPPLIED BY VERIZON, INSTALLED BY CONTRACTOR.

CONTRACTOR SHALL ARRANGE FOR GENERATOR START-UP SERVICES.





NATURAL GAS PIPING SCHEMATIC

NOTE:
ALL DETALS SHOWN SCHEMATICALLY, THE CONTRACTOR SHALL
COMPONENTS WITH GAS SUPPLER TO REVIEW ALL COMPONENTS AND
PERFORM A PRESSURE TEST TO INSURE A COMPATIBLE FUEL DELIVERY
ARRANGEMENT IS MADE TO THE GENERATOR, NATURAL, GAS SUPPLER
SHALL ALSO REVIEW ALL SAFETY COMPONENTS TO INSURE THEY MEET
THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

verizon^v

ARCHITECT/ENGINEER:



R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400 www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE: THESE DIMBINES HAVE BEEN PREVIOUD IN ARCH D (M*100°) FORMAL AS SUCH THE WITHER SOLES SHOULD NOW ANY REPRODUCTIONS OF A COMMUNICATIVE SEE SHALL BE RESPONDED INMUS. ALL BAY SOLES MAY BE USED RESPONDED OF THE SHALL WHERE M CORPLATE, BAY SOLES SHALL SAPERIESE WITHIN SOURCE.

IT IS A VIOLATION OF LAW FOR ANY PERSON. UNLESS THEY ARE ACTING UNDER THE DRECTIK,
OF A LICENSED PROFESSIONAL ENGINEER,
TO ALTER THIS DOCUMENT.

NO.		
1404	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	3/28/23
1	revised tsa reference date	4/11/23
2	ISSUED FOR CONSTRUCTION (FINAL)	4/14/23
3	REVISED PER (7/28/23) RFDS	8/31/23
4	REVISED PER VZW RF COMMENTS	9/13/23

PROJECT NAME:

BLOOMFIELD 5 CT

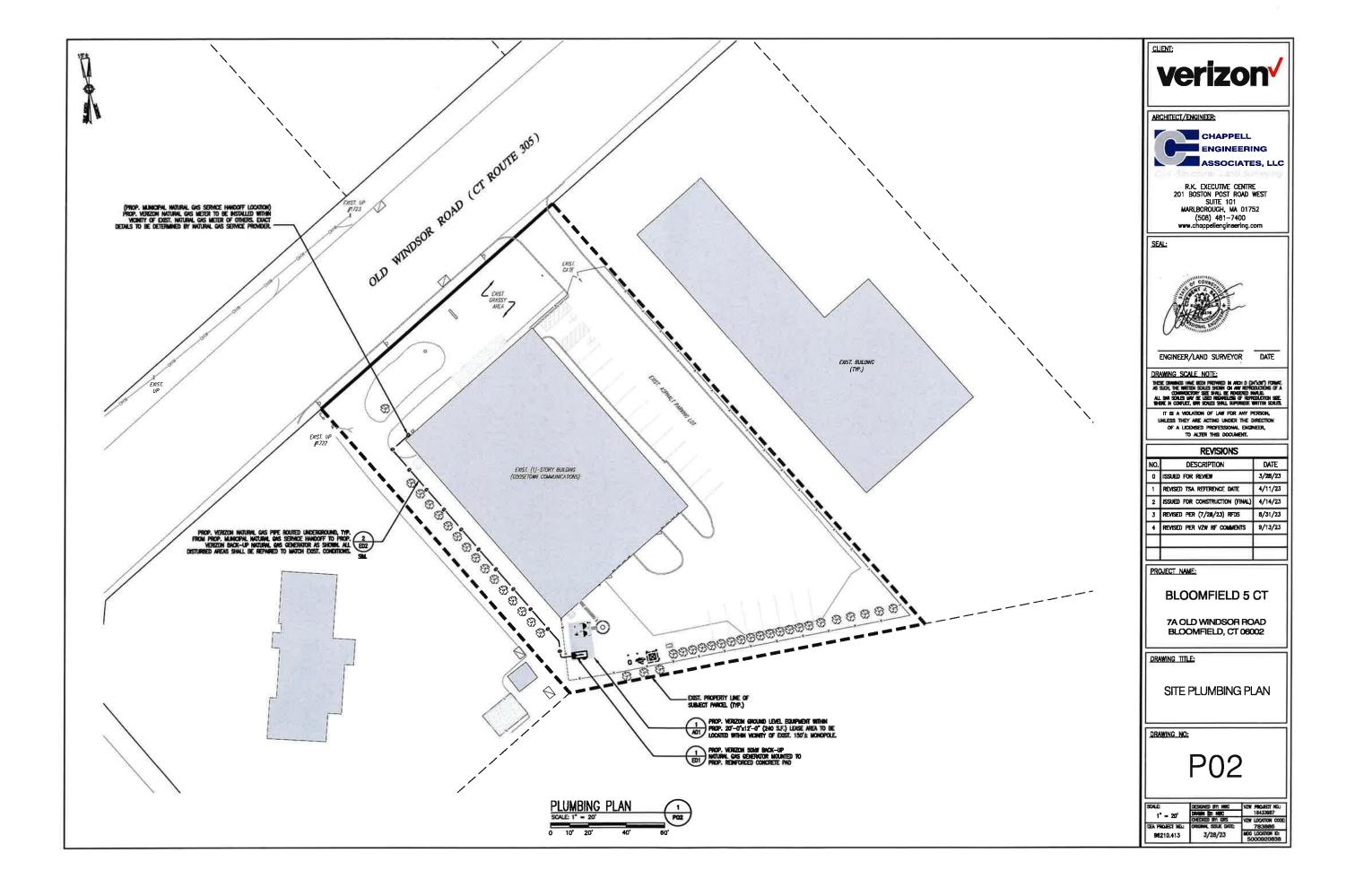
7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

DRAWING TITLE:

PLUMBING NOTES AND SCHEMATIC

DRAWING NO:

96210.413	3/28/23	MEG LOCATION ID: 5000920838
CEA PROJECT NO.:	ORIGINAL ISSUE DATE:	783866
	CHECKED BY: CRS	YZW LOCKTON CODE
NOT TO SCALE	DRAWN BY: MIC	16433987
SCALE	DESIGNED ET: NWC	VZW PROJECT HOL



ELECTRICAL SPECIFICATIONS

- Furnish all labor, materials, equipment, tools and incidentals required to make ready for use the complete electrical systems as shown on the drawings. Make all necessary
- THE ELECTRICAL SYSTEMS SHALL BE SUITABLE IN EVERY WAY FOR THE SERVICE REQUIRED. ALL MATERIAL AND ALL WORK WHICH MAY BE REASONABLY BAPLED AS BEING INCIDENTAL TO THE WORK SHALL BE PRINCIPLED TO DETIRE OFFICE AT DO EDITIRE OFFICE.
- FURNISH AND INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE REDUREMENTS OF LOCAL, STATE AND MATIONAL CODES AND STANDARDS, INCLUDING BUT NOT LIMITED TO: THE 2022 CONNECTION STATE BURDING CODE

 - THE NATIONAL ELECTRICAL CODE (NFPA-70)
 THE CONNECTICUT ELECTRIC CODE

 - THE NATIONAL ELECTRICAL SAFETY CODE (ANSI C-2)
 THE LIFE SAFETY CODE (NPPA 101)
 THE STRUCTURAL STANDARDS FOR ANTENNA SUPPORTING STRUCTURE AND ANTENNAS
- MATERIALS AND EQUIPMENT SHALL BE NEW, UNUSED AND UNDERWRITERS' (JABORATORIES, INC. LISTED, CONTRACTOR SHALL BE RESPONSIBLE FOR PROVING ALL MATERIALS IN A THIELY FACIOUR, INCLIDING RESPONSIBLE FOR DETERMINE AMAILMENTY/LIVE THE FOR ALL INCESSANT EQUIPMENT.
- CONTRACTOR SHALL DETAIN ALL NECESSARY PERMITS AND THE ELECTRIC EMPERATIONS.
 WHERE NEW COMMERCIAL POWER SERVICE IS PROVIDED TO THE SITE, OR EXISTING SERVICE MUST BE
 MODIFIED, CONTRACTOR SHALL IMAGE ALL ARRANGEMENTS WITH THE ELECTRIC UTILITY, SHALL PERFORM
 ALL OF HIS WORK IN ACCORDINACE WITH THE REQUIREMENTS OF THE UTILITY, AND SHALL PAY ALL
 UTILITY SERVICE BLOCK CHARGE.
- ALL WRING OUTSIDE SHALL BE INSTALLED IN HEAVY-GANCE, (SCHEDULE 40) RIGID STEEL CONDUIT, HOT-DIPPED CALVANZED INSIDE AND OUTSIDE WITH AN ADDITIONAL FACTORY-APPLED FINISH INSIDE AND OUTSIDE. CUT BIOS SHALL BE REAMED, THREADED AND COLD GALVANZED. NO COMPRESSION FITTING WILL BE ACCEPTED.
- UNDERGROUND CONDUITS SHALL BE PVC SCHEDULE 40 AND INSTALLED NOT LESS THAN 30 INCHES BELOW FINISHED GRADE.
- when constalled in the building that is shown to be in conduit shall be installed in each eithings shall be steel compression type.
- LIQUID TIGHT, FLEXIBLE METAL COMDUIT SHALL BE USED FOR ALL MOTIOR TERMINATIONS AND FOR COMMETTIONS TO EQUIPMENT SUBJECT TO VIBRATION, FLEXIBLE METAL CONDUIT SHALL CONSIST OF A FLEXIBLE, CORROSION RESISTANT METAL CORE WITH AM EXTRIDED, WHITEHERT, SYNTHETIC MCMET. CONDUITS SHALLET THAN 1-1/2" SHALL HAVE A CONTINUOUS GROUND CONDUCTOR UNDER THE JACKET.
- NO CONDUIT SMALLER THAN $3/4^{\circ}$ ELECTRICAL TRADE SIZE SHALL BE USED, EXCEPT AS OTHERWISS SHOWN ON THE DRAWNINGS. BOX SIZES SHALL BE 4° SQUARE MINIMUM, BUT NOT LESS THAN THAT RECURRED BY THE CONNECTICUT ELECTRICAL, COOE.
- 12. Flush switch and outlet boxes shall be hot-dipped galvanized, pressed steel with nylon cover plates, color as determined by the engineer.
- 13. EXCEPT AS OTHERWISE SHOWN, TERMINAL, JUNCTION AND PULL BOXES LARGER THAT 4" SQUARE SHALL BE SHEET STEEL SIZEL BOXES SHALL BE HOT-DIPPED GALVANIZED, BOXES AND COVERS SHALL BE NOT LESS THAN 14 GAUGE METAL COVERS SHALL BE GASICITED AND FASTENED WITH STANLESS STEEL MADERIUMS.
- FITTINGS USED WITH LIQUID TIGHT, FLEXIBLE CONDUIT SHALL BE OF THE SCREW-IN, COMPRESSION TYPE
 WITH SEALING RING. FITTINGS LARGER THAN 1-1/4" SHALL BE FURNISHED WITH INTEGRAL GROUND LUGS.
- HANGERS, RODS, BACK PLATES, BEAM CLAMPS, ETC. SHALL BE GALVANIZED IRON OR STEEL. CONDUITS SHALL BE SUPPORTED AT LEAST EVERY 5 FEET.
- 16. DIPOSED COMDUTS SHALL BE RUM PARALLEL TO OR AT RIGHT ANGLES TO WALLS. COMDUIT RUMS SHALL BE STRAKGHT AND TRUE. COMDUTS SHALL BE SUPPORTED BY MEANS OF TWO-HOLE PIPE CLAMPS, BACK PLATES SHALL BE INSTALLED WHERE REDURED TO RASE COMDUTIS FROM THE SUPPORTED MULTIPLE, HORIZONTAL RUMS SHALL BE SUPPORTED ON TRAFFICE HANGERS WITH STEEL HORIZONTAL MEMBERS AND THREADED ROOS NOT LESS THAN 3/8 INCHES IN DIMANETER, HANGERS SHALL BE ATTACHED TO STRUCTUREN, STEEL BY THE STEEL SHALL BE USED IN CONDRETE.
- 17. CONDUIT BENDS SHALL BE CAREFULLY MADE TO PREVENT DISTORTION OF THE CIRCULAR CROSS-SECTION. NO COMOUNT RIN SHALL HAVE MORE THAN THE EQUINALENT OF THREE SO DEGREE BENDS BETWEEN PULLING PORTS. CHANGES IN DIRECTION SHALL BE MORE WITH BENDS, STANDARD ELBOWS AND PULLISONES, BENDS IN PARALLEL RUNS SHALL BE CONCENTRIC.
- CONDUIT SHALL NOT BE SUPPORTED FROM PIPMS, PIPMS SUPPORTS, DUCTWORK, SUSPENDED CELLING SUPPORTS OR MECHANICAL EQUIPMENT SUBJECT TO VIBRATION OR REMOVAL.
- THE ENDS OF ALL CONDUITS SHALL BE TIGHTLY PLUGGED DURBING BUILDING CONSTRUCTION UNTIL WIFES
 AND TO BE PULLED, SPARE CONDUITS SHALL BE FURNISHED WITH THREADED CAPS.
- 20. CONDUITS SHALL BE TERMINATED AT UNGASKETED SHEET STEEL BOXES AND ENCLOSURES WITH DOUBLE LOCK NUTS AND SUITABLE BUSHMASS. BUSHMASS INSTALLED ON CONDUITS CONTAMBING GROUND WIFES SHALL BE GROUNDING TIPE. CONDUITS SHALL BE TERMINATED AT GASKETED SHEET METAL BOXES AND ENCLOSURES WITH CONDUIT HUBS.
- CONDUCTORS SHALL BE ANNEALED, 90 PERCENT CONDUCTIVITY, SOFT—DRAWN COPPER, NO CONDUCTOR SMALLER THAT NO. 12 ANG SHALL BE USED, EXCEPT AS OTHERWISE NOTED.
- 22. WRE FOR POWER AND LIGHTING BRANCH CIRCUITS SHALL BE 600 VOLT, TYPE THAIN, WIRE FOR CONTROL CIRCUITS SHALL BE 600 VOLT, TYPE THAIN, NO. 14 AIRG, STRANGED, SERVICE CONDUCTORS AND FEEDERS SHALL BE TYPE XHAIN, CONDUCTORS NO. 10 AIRG AND SMALLER SHALL BE SOLID. NO. 8 AIRG AND LARGER SHALL BE STRANGED.
- 23. ALL CONDUCTORS SHALL BE CAREFULLY HANDLED TO MOID KINKS OR DAMAGE TO RESULATION. LIBERCATIONS SHALL BE USED TO FACULTATE WIRE PULLING, LUBRICANTS SHALL BE UL LISTED FOR USE WITH THE RESULATION SPECIFIC.
- 44. ALL EQUIPMENT AND MATERIALS SHALL BE GROUNDED IN STRICT ACCORDANCE WITH THE CONNECTICUT ELECTRICAL CODE, AND THE STANDARD REQUIREMENTS OF VERIZON WIRELESS AND LLICENT.
- DISCONNECT SWITCHES SHALL BE 480 OR 240 VOLT, HEAVY-DUTY, QUICK-MAKE, QUICK BREAK, VISBEL BLADE, 2 POLE WITH EXTERNAL OPERATING HANDLE AND FULL COVER INTERLOCK. SWITCHES INSTALLED OUTSIDE SHALL BE NEAR TYPE 3.7 ROLLOSED.
- 28. WALL SMITCHES SHALL BE SHIGHE POLE 3—WAY OR 4—WAY, INDICATING, TOGGLE—ACTION, FLUSH, QUIET TYPE, SPECIFICATION GRADE, RATED 20 AMPERE, 120—277 VOLT. COLOR AS DETERMINED BY ENGINEER.
- GENERAL PURPOSE RECEPTACLES SHALL BE DUPLEX, 2 POLE, 3 WIRE, STRAIGHT BLADE, NYLON FACE, GROUNDING TYPE, 20 AMPERE, 125 VOLT, SPECIFICATION GRADE. COLOR AS DETERMINED BY ENGINEER.
- 28. PANELS SHALL BE PER DIRECTED BY THESE DRAWINGS WITH TYPED DIRECTORIES.
- 29. CRICUIT BREAKERS SHALL BE WOLDED CASE, THERMAL-MAGNETIC TYPE WITH RMS SYMMETRICAL INTERRUPTING ROTING OF NOT LESS THAN 22,000 AMPERE FOR 240 VOLT BREAKERS. ENCLOSED BREAKERS SHALL HAVE PROLOCKING PROMOSIONS AND EXTERNAL OPERATING HANDLE WITH FULL COVER INTERDICK. BREAKERS SHALL BE 1" MODULES IMPRIMUM.
- 30. IMMEPILATES SHALL BE PROVIDED FOR ALL EDUPMENT INDICATING VOLTAGE, PHASE, USE AND SOURCE OF ORGIN, DEVICES SHALL BE LABELED MODICATING VOLTAGE AND BRANCH CHORDICORDS SHALL BE LABELED MODICATING BRANCH CRICILIF FEEDER CONDUCTORS SHALL INDICATE PHASE.
- 31. ALL EXTERIOR CONDUCTOR/LUG TERMINALS SHALL HAVE AN ANTIOXIDANT APPLIED.
- 32. ALL SPRING TYPE WINE CONDUCTORS USED IN EXTERIOR BOXES SHALL BE SILICON FILLED

- ELECTRICAL CONTRACTOR SHALL AS PART OF HIS WORK INCLIDER ALL FITTINGS, SLEEVES AND MINOR CUITING REDURED FOR HIS WORK, INCLIDING FRES-STOPPING.
- 34. THE ELECTRICAL CONTRACTOR, AT HIS OWN EXPENSE, SHALL PROVIDE HIS OWN, WHERE DIRECTED, STORAGE AND OFFICE SPACE.
- 35. FIVE COPIES OF SHOP DRAWINGS OF ALL EQUIPMENT SHALL BE PROVIDED TO THE ENGINEER.
- ELECTRICAL CONTRACTOR'S WORK SHALL INCLIDE ALL LABOR AND INITERIALS, SCAFFOLDING TOOL AND TRANSPORTATION NECESSARY FOR COMPLETE INSTALLATION.
- 37. ELECTRICAL CONTRACTOR TO FURNISH ENGINEER ONE SET OF INVLARS OF "AS BUILD" DRAWINGS.
- 38. ELECTRICAL CONTRACTOR SHALL PROVIDE TEMPORARY POWER & LIGHTING AS REO'D.

- 1. CONTRACTOR SHALL VISIT THE SITE TO BECOME AWARE OF THE EXISTING CONDITIONS.
- 2. BRANCH CIRCUIT RUNS 100 FT AND OVER SHALL BE \$10 AMG CONDUCTORS.
- THESE DRAWINGS ARE DIAGRAMMATIC ONLY. THE EXACT LOCATION, MOUNTING HEIGHT, SIZE OF EQUIPMENT AND ROUTING OF RACEWAYS SHALL BE COORDINATED AND DETERMINED IN THE FIELD.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE HAZC AND PLIABBING CONTRACTORS AS TO THE EXACT LOCATION OF THEIR RESPECTIVE EDUBRIENT, THE POWER WIRING, THE CONTROL WIRING AND ALL ELECTRICAL CONNECTIONS REQUIRED BY THE CONTRACTOR FOR COMPUTERLY OPERATIVE HAZC AND PLIABBING SYSTEMS IN CONFORMANCE WITH THE CONTRACT DOCUMENTS.
- Interruptions to the existing electrical service for splicing connections, renovation of distribution distribution, branch circuits, installation of new electric service, and shall be as short as possible, and to the convenence of the owner.
- ALL CONDUIT SHALL BE SURFACE MOUNTED UNLESS OTHERWISE NOTED. NO INTERIOR HORIZONTAL CONDUIT BELOW 7"-8" AFF IN FINISHED SPACES.
- 7. ALL WIRING TO BE 3/4°C, 2812 & 1812 GROUND, UNLESS OTHERWISE NOTED.
- 8. NO EX OR ROMEX CABLE IS PERMITTED.
- 9. ALL WIRING DEVICES AND EQUIPMENT SHALL BE 20A SPECIFICATION GRADE AND UL LISTED.
- 10. ALL OUTLET AND JUNCTION BOXES SHALL BE SECURELY SURFACE MOUNTED.
- ALL RECEPTACLE AND EQUIPMENT CIRCUITS SHALL BE GROUNDED USING A FULL SIZE EQUIPMENT GROUNDING CONDUCTOR RUN WITH THE CURRENT CONDUCTORS.
- 12. ALL WALL PENETRATIONS FOR TELCO, POWER AND GROUNDING SHALL REQUIRE PVC SLEEVES.
- 13. ALL SWITCHES SHALL BE FORTY-EIGHT (48) INCHES AFF, UNLESS OTHERWISE NOTED.
- 14. ALL RECEPTACLES SHALL BE EIGHTEEN (18) INCHES AFF, UNLESS OTHERWISE NOTED.
- 15. ALL WIRING SHALL BE IN METAL RACEWAY & NO. 12 ANG COPPER MIN. UNLESS OTHERWISE NOTED.

2409 194.81

[77.2]

- 16. WHIE COLOR SHALL HE PER STANDARD CODING BY PHASE.
- 17. FOR UTILITY BILLING, PLEASE SEND TO: VERIZION WIRELESS 20 ALEXANDER DRIVE, 2nd FLOOR WALLINGFORD, CT 08492

DISCHARGE AIR

DISCHARGE AIR RADIATOR & EXHAUST

[55.8]

GROUNDING GENERAL NOTES

- ALL EXTERIOR CONDUCTORS SHALL BE #2 AWG, SOLID, BARE, TINNED COPPER, UNLESS OTHERWISE NOTED. MINIMANIA BEND RADIUS SHALL BE EIGHT (8) INCHES.
- ALL CONNECTIONS TO HALD GROUND RING AND ALL CABLE TRAY JUMPERS SHALL BE #6 ANG, RESULATED, STRANDED, COPPER WIRE.
- ALL WIRE-TO-WIRE CONNECTIONS SWALL BE THREE-CLAMP, C TAP COMPRESSION (TAB #54740 ORANGE OR EQUINALITY). ALL GROUND BAR CONNECTIONS SHALL BE TWO-HOLE, LONG-BARREL. TYPE COMPRESSION LIGIS (TAB OR EQUINALITY). ALL OTHER CONNECTIONS TO STEEL SURFACES SWALL USE LUG—TYPE CONNECTIONS.
- 4. MECHANICALLY BOND ANTENNA MOUNTS WITH #2 AMG, BARE, STRANDED CONDUCTORS.
- 5. ALL CROUNDING WORK SHALL COMPLY WITH VERIZON WIRELESS STANDARDS.
- a. CONNECT GROUND CONDUCTOR TO EXISTING GROUNDING SYSTEM. ATTACH TO WALLS, PARAPET, CABLE TRAY, ETC. WITH A CLAME'S AS NECESSARY. REMOVE PANY, PREPROOFING, MILL SCALE, ETC. TO ACRESS GOOD ON MELL GROUND CONNECTION.
- 7. CONNECT TO HALO GROUND USING C-TAP (#54730).
- 8. CONNECT TO ENCLOSURES USING BILLIE GROUND LUGS

LEGEND

ELECTRICAL SYMBOLS



 \boxtimes GROUND ROD/TEST (OBSERVATION) WELL

8 GROUND ROD

CADWELD TYPE CONNECTION

COMPRESSION TYPE CONNECTION

GROUNDING WIRE

REPRESENTS DETAIL NUMBER

4

SELF CONTAINED EMERG. LIGHTING UNIT

1"X4" SURFACE MTD. FLUORESCENT LIGHTING FIXTURE

20A-120V-1P TOGGLE SWITCH MAGNETIC DOOR SWITCH (DOOR JAMB TYPE)

20A-120V QUADRAPLEX RECEPTACLE, GROUNDING TYPE, 2-CKT, NO.

20A-120V DUPLEX RECEPTACLE, GROUNDING TYPE. WP = WEATHERPROOF GFI = GROUND FAULT

SIMPLEX RECEPTACLE, GROUNDING TYPE.

0 JUNCTION BOX

. 0 MOTOR - NUMERAL DENOTES HORSEPOWER WEATHER PROOF DISCONNECT SWITCH Zi.

FUSED DISCONNECT SWITCH - '3R' & '1' - NEWA ENCLOSUR Zh.

SURGE ARRESTOR - JOSLYN CAT, NO. 1455-85

THERMOSTAT $^{ullet}\Phi_{ullet}$ — HI TEMPERATURE ALARM THERMOSTA .0-* 10 HUMIDITY ALARM HUMIDIST * B-

COMBINATION SMOKE/HEAT DETECTOR WITH MINI HORN SIMPLEX CAT. \$\int 2098-9696 WITH FORM A & C CONTACTS P1-2 HOMERUN TO PANEL (FURNISH & INSTALLED BY MECHANICAL)

0

ABOVE FINISHED FLOOR

1004444 EXPOSED CONDUIT 2#12-3/4°C.

AWG

* EQUIPMENT FURNISHED AND INSTALLED B OTHERS AND WIRED BY THIS CONTRACTOR

ABBREVIATIONS

BARE COPPER WIRE GLOBAL POSITIONING SYSTEM PCS PERSONAL COMMUNICATION SYSTEM

AMERICAN WIRE GAUGE

RWY RACEWAY TYP. TYPICAL

RIGID GALVANIZED STEEL RGS

DAT ELECTRICAL METALLIC TUBING DWG

EMT INTERIOR GROUND RING (HALD) GEN GENERATOR

CR CGSE COAX GROUND BAR EXTERNAL COAX ISOLATED GROUND BAR EXTERNAL CIGRE

MASTER GROUND BAR

RIGID (SCH. 40) POLYMINYL CHLORIDE CONDUIT FRH ETHERNET BACK HAUL

verizon^v

ARCHITECT/ENGINEER:

CLIENT:



R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400

SEAL:



ENGINEER/LAND SURVEYOR

DRAWING SCALE NOTE:

THESE DRIVENES HAVE SEEN PREFINED IN MICH ID (14"SOF) FORMAT, AS SUD, THE WIRTH SOLIDS SOOM ON ANY REPORTATION OF A COMMUNICATIVE SEE SOUL OR REQUESTED MAJOR. ALL BIRS SOLIDS HAVE USED RESPORTANCES OF REPORTATION SOLID. WHERE MI COMPLEX, BAY SOLIDS SHALL SUPPRISEDE WITTEN SOLID.

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION

REVISIONS

DESCRIPTION DATE 3/26/23 O ISSUED FOR REVIEW 1 REVISED TSA REFERENCE DATE 4/11/23 ISSUED FOR CONSTRUCTION (FINAL) 4/14/23 REVISED PER (7/28/23) RFDS 8/31/23 REVISED PER VZW RF COMMENTS 9/13/23

PROJECT NAME:

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

DRAWING TITLE:

ELECTRICAL SPECIFICATIONS AND NOTES

DRAWING NO:

E01

AS SHOWN 3/28/23 96210.413

APPROXIMATE MAX. IN-SERVICE WEIGHT: 2,697 lbs GENERATOR DETAIL

AIR INTAKE

3X R438 [17.3]

DOOR SWING

AIR INTAKE → 965 [38.0] → OVERALL WIDTH [51.3] 1461 [57.5] OVERALI HEIGH DIM Z COG

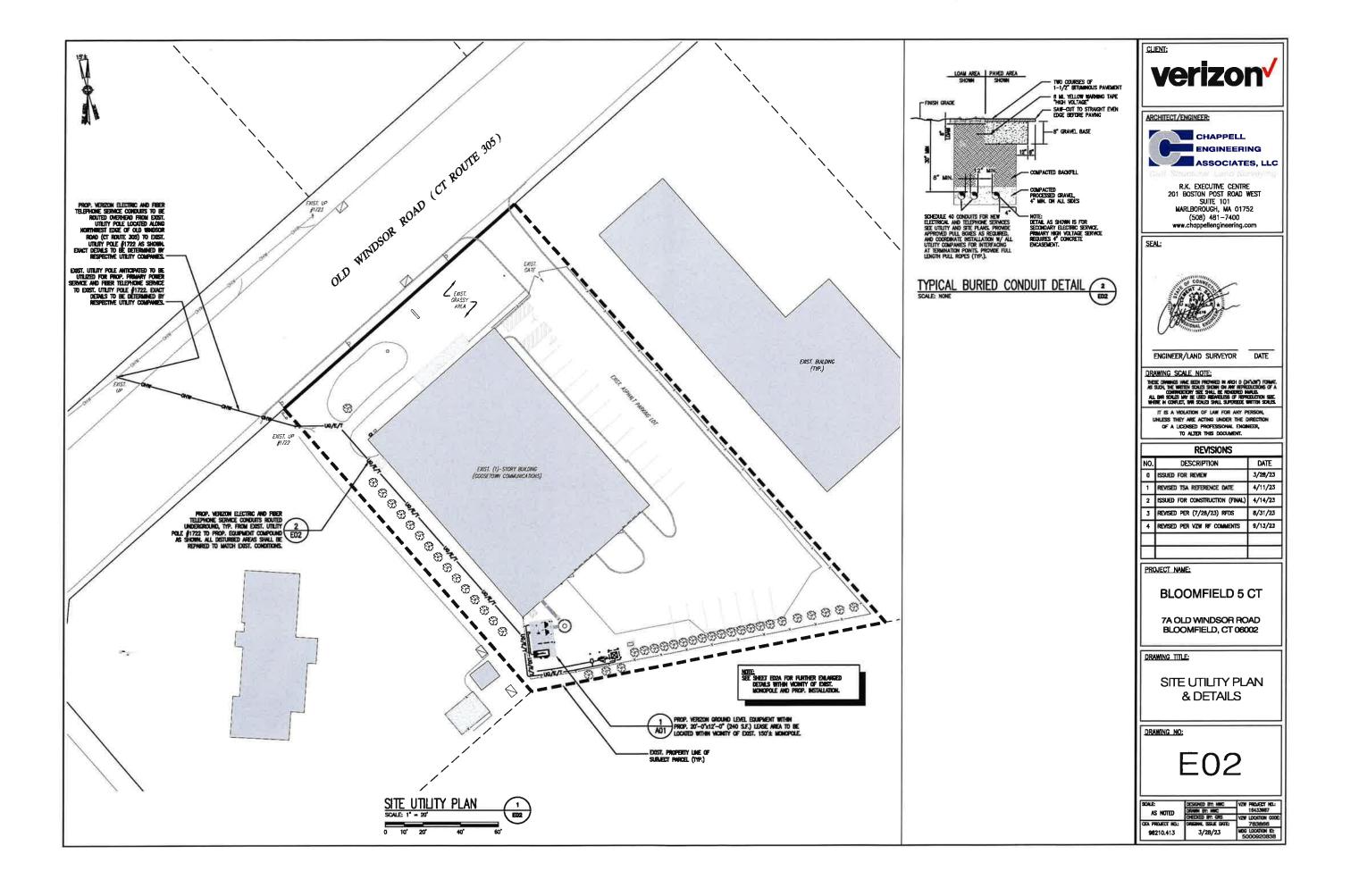
5 0 - 946 [37.3] -[76.0]

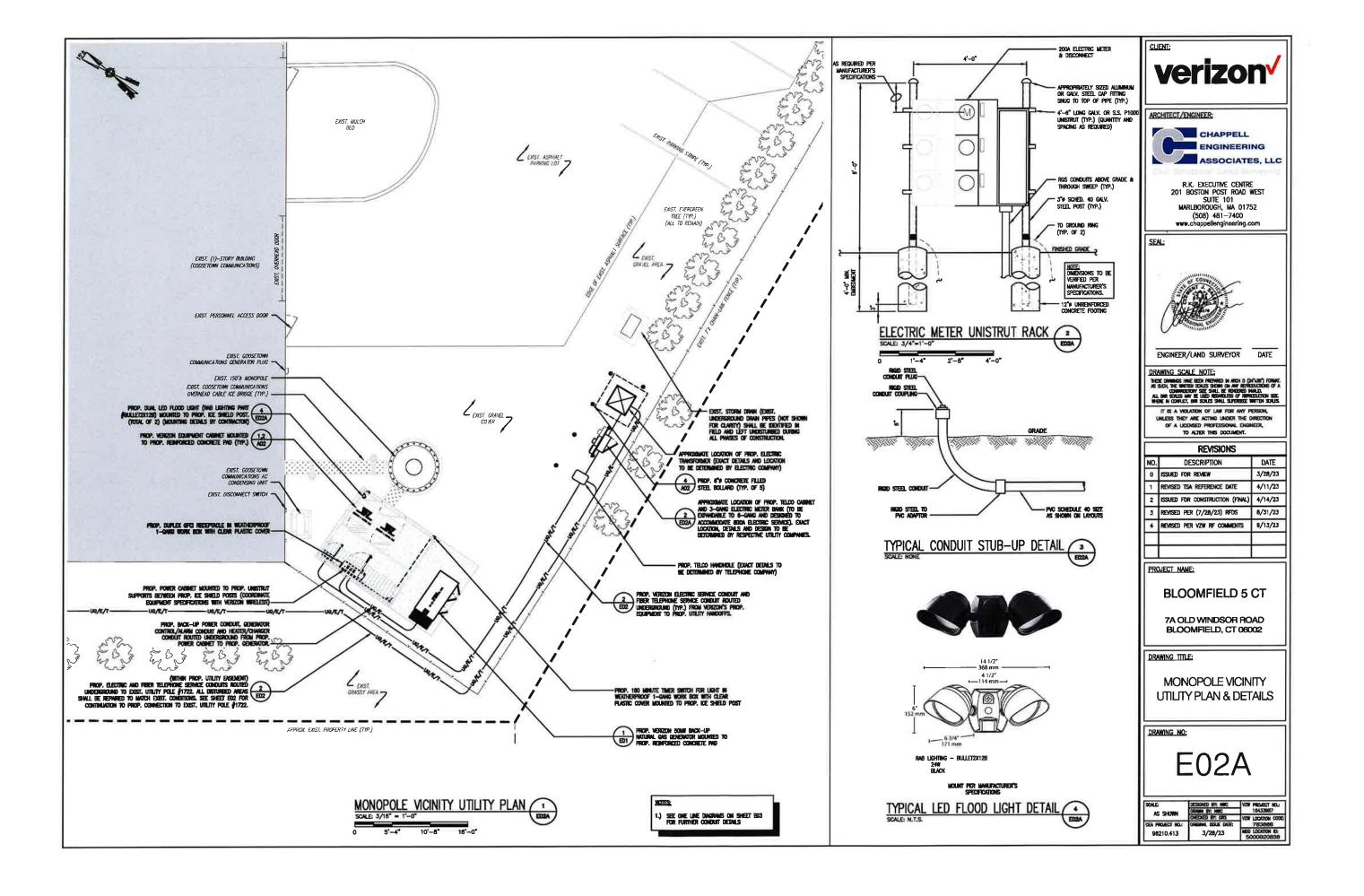
E01

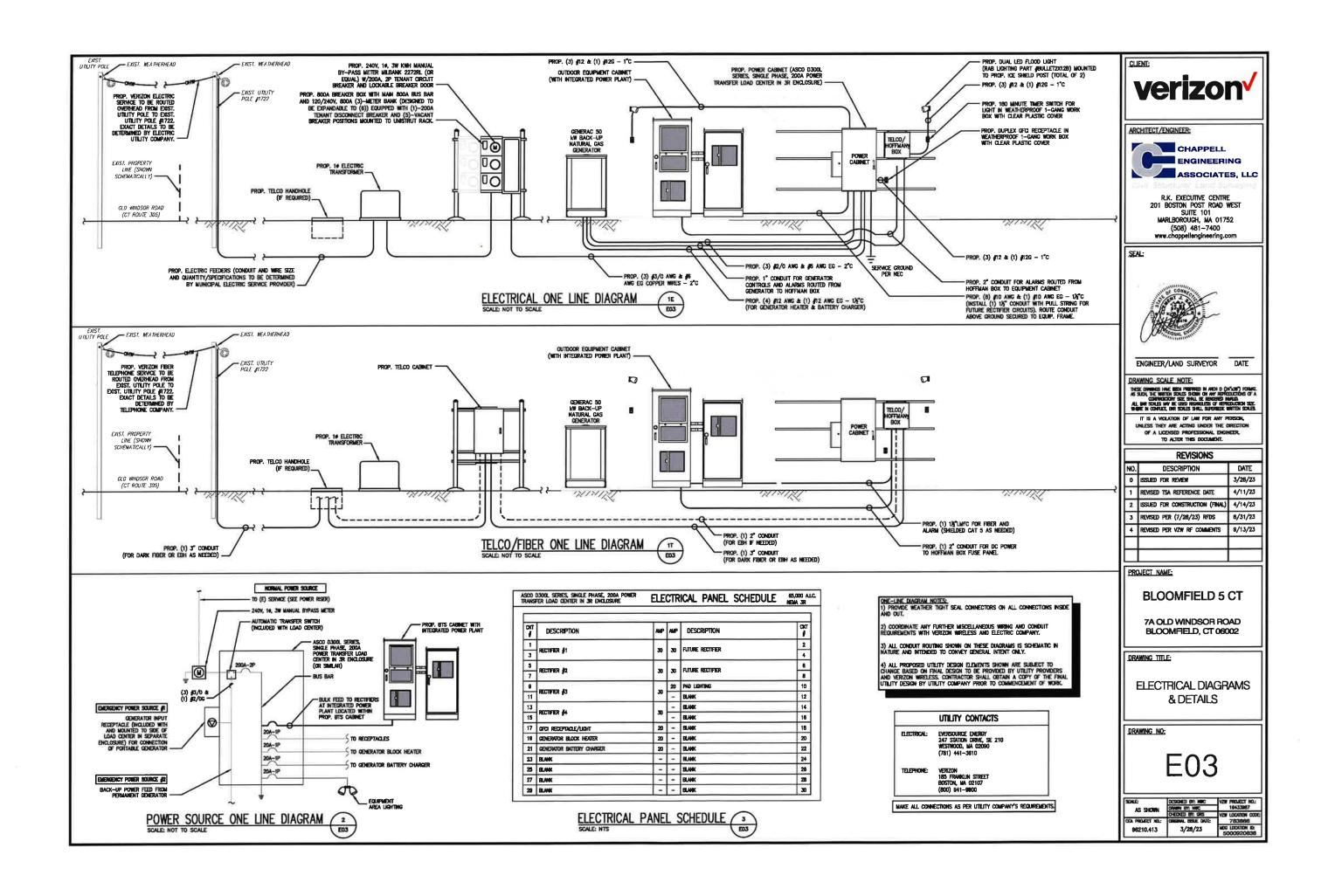
GENERAC 50kW NATURAL GAS GENERATOR (PART #SG050NA)

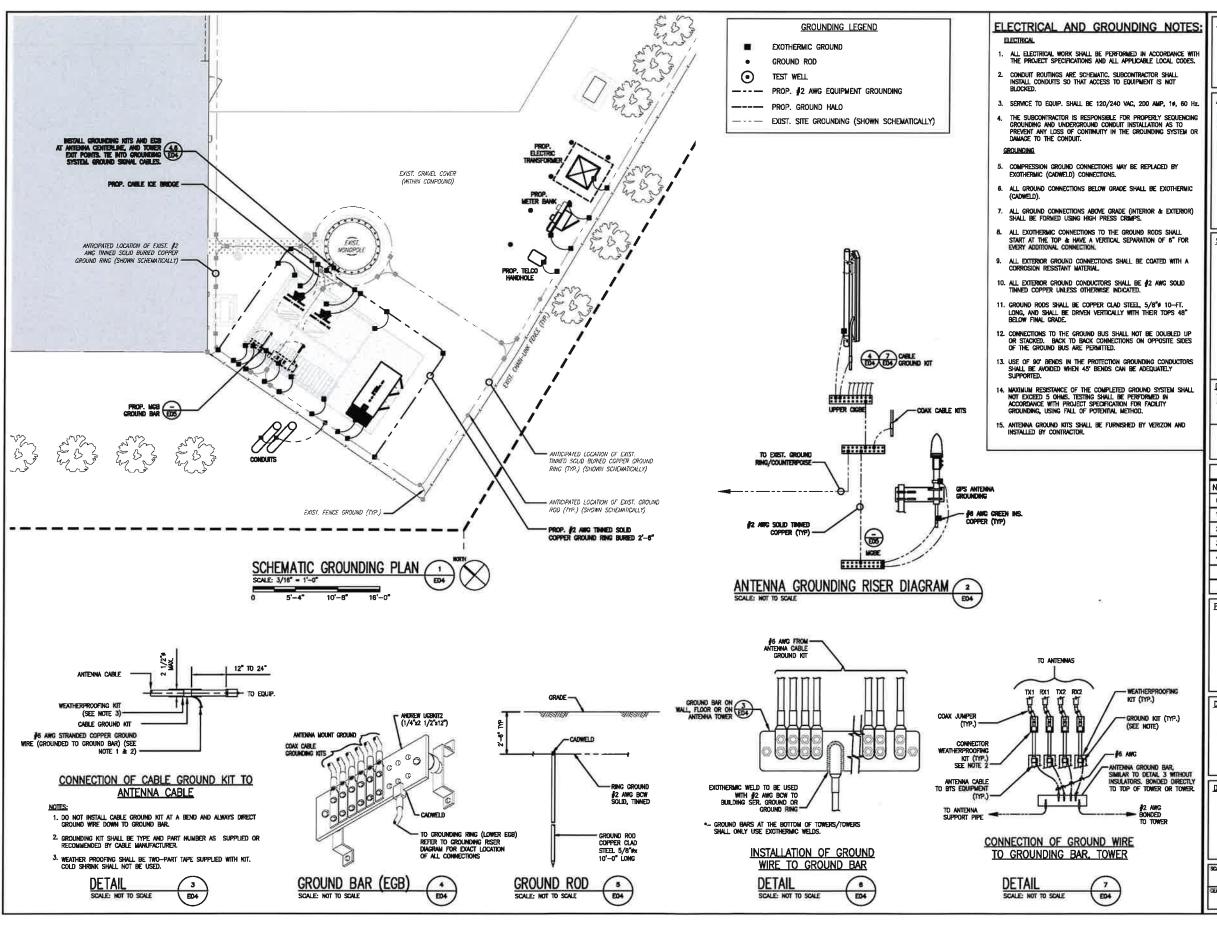
OVERALL GENERATOR (ENCLOSURE) APPROXIMATE

DIMENSIONS: 94.8°L x 38.0°W x 57.5°H









verizon

ARCHITECT/ENGINEER:



R.K. EXECUTIVE CENTRE 201 BOSTON POST ROAD WEST SUITE 101 MARLBOROUGH, MA 01752 (508) 481-7400 www.chappellengineering.com

SEAL:



ENGINEER/LAND SURVEYOR DATE

DRAWING SCALE NOTE: THESE CHARGE HAS BEEN FROMFOD BY ARCH D (167-187) FORMAT, AS SLOT, THE WRITTEN SOLES SHOWN ON ANY REPRODUCTIONS OF A CONTRACTOR STATE SHALL BE REMISSED BY AND. ALL BY SOLES MAY BE USED RESPONDED OF A PRIFE IN COUNTY, BY

IT IS A VIOLATION OF LAW FOR ANY PERSON UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

	REVISIONS	
NO.	DESCRIPTION	DATE
0	ISSUED FOR REVIEW	3/28/23
1	REVISED TSA REFERENCE DATE	4/11/23
2	ISSUED FOR CONSTRUCTION (FINAL)	4/14/23
3	REVISED PER (7/28/23) RFDS	8/31/23
4	REVISED PER VZW RF COMMENTS	9/13/23

PROJECT NAME:

BLOOMFIELD 5 CT

7A OLD WINDSOR ROAD BLOOMFIELD, CT 06002

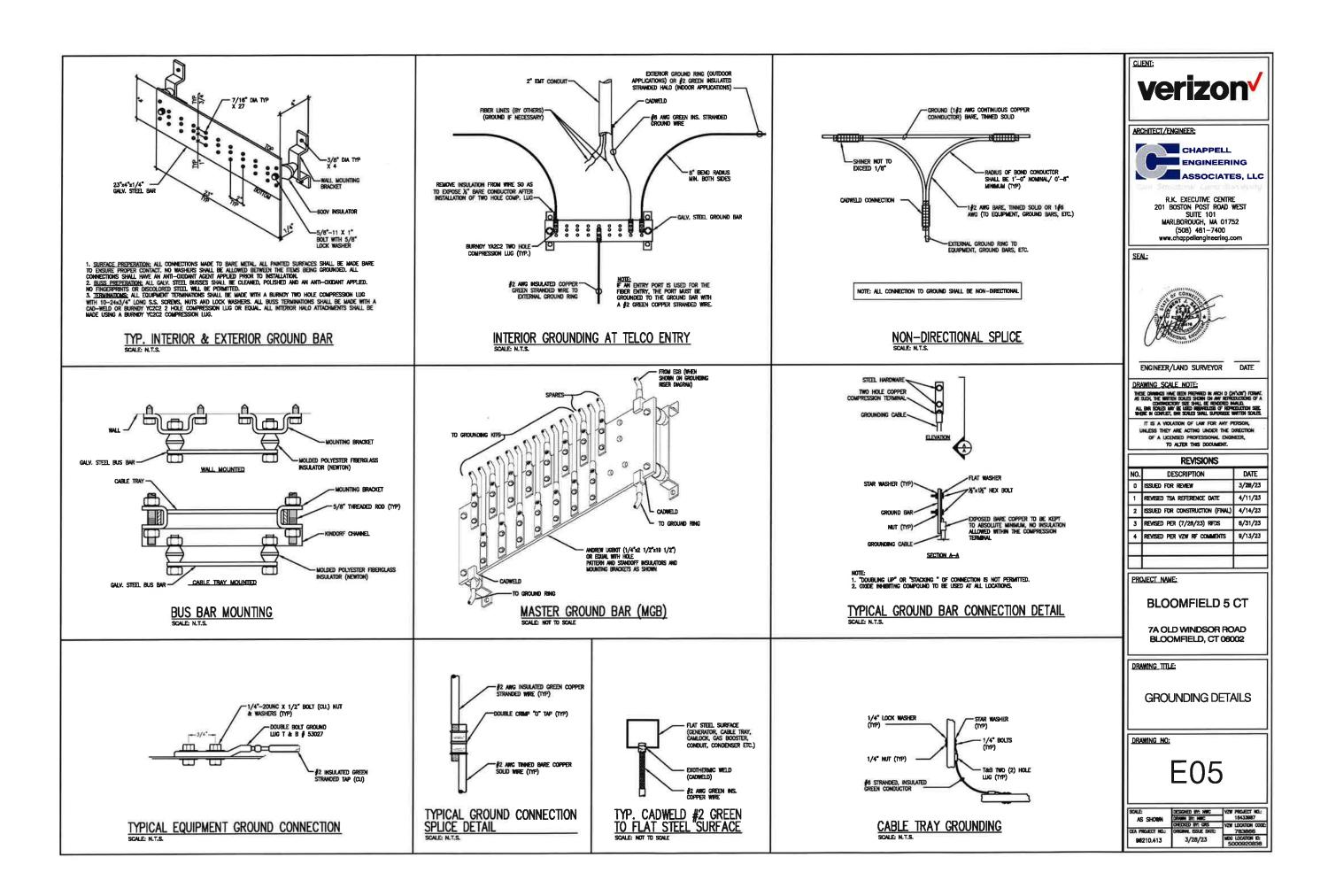
DRAWING TITLE:

SCHEMATIC GROUNDING PLAN & DETAILS

DRAWING NO:

E04

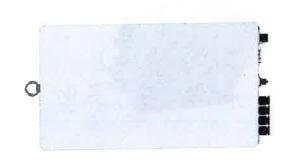
	YZW PROJECT NO.
DRAWN SY: MIC	16433987
CHEDIED BY: GRS	VZW LOCKTION CODE
ORGANIL ESSUE DATE:	783866
3/28/23	MDG LOCATION IC:
	DRIMM BY: MIC CHEDIED BY: CRS CRECHAL SSUE DATE: 3/28/23



C-band 64T64R

Gen 2

Gen 2: Higher conducted power radio with reduced size/volume/weight vs Gen 1 and also SOC embedded for flexibility to support new features



* Preliminary Design: External appearance and

400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)	26kg (57.3 lb)
Size (WxHxD)	Weight

ınge	SINO	15.75	
mechanical design can be subject to change	Gen 2. 64764R C-band MMU Dimensions	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)	
mechanical desi	Gen 2. 64764	Size (WxHxD)	

ved
Rese
Rights
₹
Electronics
© Samsung

Item	Gen 2 64T64R (MT6413-77A)
Air Technology	NR n77/TDD
Frequency	3700 – 3980 MHz
IBW	200 MHz
WBO	200 MHz
Carrier Bandwidth	20(HW ready)/40/60/80/100 MH>
# of Carriers	2 carriers
Layer	DL : 16L, UL : 16RX (8L)
RF Chain	64T64R
Antenna Configuration	4V16H with 192 AE
EIRP	80.5 dBm @320W (55 dBm + 25.5 dBi)
Conductive Power	320W
Spectrum Analyzer	TX/RX support
RX Sensitivity	Typical -97.8dBm @(1Rx, 18.36MHz with 30kHz,51RBs)
Modulation	DL 256QAM support, (DL 1024QAM with 1~2dB power back-off)
Function Split	DL/UL option 7-2x
Input Power	-48 VDC (-38 VDC to -57 VDC)
Power Consumption	1,287W (100% load, room temp.)
Size (WHD)	400 x 734 x 140 mm (15.75 x 28.90 x 5.51 inch)
Volume	41.11
Weight	26kg (57.3 lb)
Operating Temperature	-40°C - 55°C (w/o solar load)
Cooling	Natural convection
	3GPP 38.104
	FCC 47 CFR 27,53 : < -13dBm/MHz
Unwanted Emission	< -40 dBm/MHz @ above 4 GHz <-50 dBm /MHz @ 4,040 ~ 4,050 MHz <-60 dBm /MHz @ above 4,050 MHz
Optic Interface	15km, 4 ports (25Gbps x 4), SFP28, single mode, Bi-di (Option; Duplex)
Mounting Options	Pole, wall
N8-IoT	Nat support
External Alarm	4RX
Fronthaul Interface	E G D B

700/850 4T4R Macro 320W ORU - New Filter (RF4461d-13A)

Specifications



* 5MHz supporting in BI3(700MHz) depends on 3GPP std. and UE capability. External filters in interferent and victim sides for Mexican boarder to support 5MHz service need to be considered. ** Finger guard is not needed.

Item	Speci	Specification
Air Interface	LTE, NR(HW	LTE, NR(HW resource ready)
Band	Band13 (700MHz)	k
	DL: 746-756MHz	DL: 869-894MHz
Frequency	UL: 777~787MHz	UL: 824~849MHz
1BW	10MHz	25MHZ
OBW	10MHz	25MHz
Carrier Bandwidth	LTE/NR 5×/10MHz	LTE 5/10MHz NR 5/10/15/20MHz
# of carriers	5C•	30
Total # of carriers	4C + 81	4C + 813 (5DL) 1C
RF Chain	4T4R/2T4 2T2R+2T	414R/2T4R/2T2R/112R 2T2R+2T2R bi-sector
2 7 7 7 7 2	Tota	Total : 320W
KF Output Power	4 x 40W or 2 x 60W	4 x 40W or 2 x 60W
Spectrum Analyzer	TX/RX	TX/RX Support
RX Sensitivity	Typ104.5d8m (Typ104.5d8m @1Rx (25R8s 5MHz)
Modulation	256QAM support, (1024QA	256QAM support, (1024QAM with 1~2dB power back-off)
Input Power	-48VDC (-38	48VDC (-38VDC to -57VDC)
Power Consumption	1,165 Watt @ 100% R	1,165 Watt @ 100% RF load, room temperature
Size (WHD)	380 x 380 x 260 mm (380 x 380 x 260 mm (14,96 x 14,96 x 10,23 inch)
Volume	80	7.5 L
Weight (W/o Solar Shield & finger quard)	35.9 ki	35.9 kg (79.1 lb)
Operating Temperature	-40°C (-40°F) - 55°C (1	- 55°C (131°F) (Without solar load)
Cooling	Natural	Natural convection
	3GPP 36.104	3GPP 36.104
Unwanted Emission	FCC 47 CFR 27.53 c), f)	FCC 47 CFR 22,917
	•	-69 dBm/100 kHz per path @ 836 ~901MHz
CPRI Cascade	Not s	Not supported
Optic Interface	20km, 2 ports (9 8Gbps x 2), SFP+	20km, 2 ports (9.8Gbps x 2), SFP+, single mode, Duplex (Option: Bi-di)
RET & TMA Interface	¥	AISG 3.0
8ias-T	4 ports (2 g	4 ports (2 ports per band)
Mounting Options	Po	Pole, wall
N8-loT	2G8+2IB or 4IB	25A+2GB or 2GB+2IB or 4GB
PIM Cancellation		Support
# of antenna port		
External Alarm		4
Fronthaul Interface	Opt. 8 CPRI / Opt. 7-2x selec	Opt. 8 CPRI / Opt. 7-2x selectable (not simultaneous support)
CDRI compraccion	**N	Not Support

SAMSUNG

Samsung Micro Radio

CBRS(N48) 4T4R Micro Radio

Samsung's CBRS 4T4R Micro Radio provides mobile operators with a cost-effective solution to fill coverage gaps encountered when Macro Radios are in use.

Model Code

RT4423-48A(DC) RT4423-48B(AC)





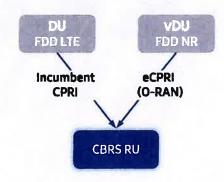




Points of Differentiation

Dual Personality

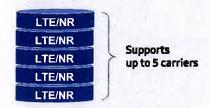
The new CBRS Radio supports existing CPRI and advanced eCPRI interfaces providing Installation options for both legacy LTE and NR network equipment.



High Capacity

The number of carriers required varies according to site(region). Supporting multiple carriers is essential to customers as they seek to utilize all frequencies available to them.

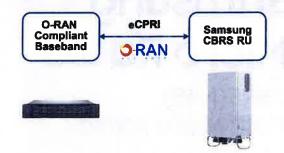
The new CBRS radio can support up to 5 carriers which is and increase of 3 carriers over the capacity of the previous CBRS product.



O-RAN Compliant

A standardized O-RAN radio supports implementing cost-effective networks capable of enhanced data throughput without compromising existing or new network investments.

Samsung O-RAN products ensure state-of-the-art O-RAN technology will accelerate efforts for creating solid O-RAN ecosystems.



Compact and Easy Installation

New CBRS RU is compact in it's design with a volume of 6L and weighing only about 7kg.

This compact design allows for various installation options including, tower, rooftop, pole, wall and shroud.

A clip on antenna is available providing flexibility to Installation requirements.



Technical Specifications

Item	Specification
Tech	LTE / NR
Band	B48, n48 / TDD
Frequency Band	3,550 – 3,700 MHz
RF Power	20 W (5 W x 4 Ports)
IBW/OBW	150MHz / 100MHz
Installation	Pole, Wall, Side by side (max 3 radio)
Size/ Weight	[Radio] w/o Clip-on antenna: 8.7 x 11.8 x 3.6 inch, 5.97L, 7kg w/ Clip-on antenna: 8.7 x 11.8 x 5.0 inch, 8.42L, 8.5kg *AC and DC type have same size and weight
	[Bracket Weight] Tilting & Swivel (EP97-02038A) : 2.51kg Fixed (EP97-02037A) : 1.31kg Side by side (EP97-02089A) : 8.0kg