

**BOARD OF COUNTY COMMISSIONERS
SARPY COUNTY, NEBRASKA**

**RESOLUTION AUTHORIZING CHAIRMAN TO SIGN LETTER OF CONSENT TO
MODIFICATIONS OF THE SARPY COUNTY CELL TOWER**

WHEREAS, pursuant to Neb. Rev. Stat. § 23-104 (Reissue 2012), the County has the power to do all acts in relation to the concerns of the County necessary to the exercise of its corporate powers;

WHEREAS, pursuant to Neb. Rev. Stat. § 23-103 (Reissue 2012), the powers of the County as a body are exercised by the County Board;

WHEREAS, Sarpy County has a property lease agreement ("Lease Agreement") with Omaha Cellular Limited Partnership (now Verizon Wireless) (see attached);

WHEREAS, Verizon Wireless is in the process of upgrading its wireless technology and has requested the County's consent to modifications (with connecting appurtenances) of the Sarpy County Cell Tower, as described in the attached letter ("Consent Letter");

WHEREAS, Verizon Wireless has also provided technical drawings detailing the modifications and these drawings have been reviewed; and

WHEREAS, the County desires to consent to the modifications of the Sarpy County Cell Tower.

NOW, THEREFORE, BE IT RESOLVED BY THE SARPY COUNTY BOARD OF COMMISSIONERS THAT the Chairman of this Board, together with the County Clerk are hereby authorized to sign on behalf of this Board, the Consent Letter, and any other related documents, the same being approved by the Board.

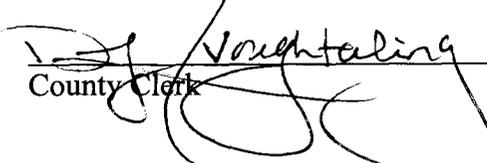
The above Resolution was approved by a vote of the Sarpy County Board of Commissioners at a public meeting duly held in accordance with applicable law on the 11th day of February, 2014.

Attest

SEAL




Sarpy County Board Chairman


County Clerk

Sarpy County Board of Commissioners

1210 GOLDEN GATE DRIVE
PAPILLION, NE
593-4155
www.sarpy.com

ADMINISTRATOR Mark Wayne
DEPUTY ADMINISTRATOR Scott Bovick
FISCAL ADMIN./PURCHASING AGT. Brian Hanson



<p><u>COMMISSIONERS</u> Don Kelly District 1 Jim Thompson District 2 Tom Richards District 3 Brenda Carlisle District 4 Jim Warren District 5</p>

Memo

To: Sarpy County Board

From: Brian Hanson

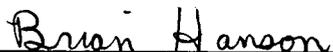
Re: Cell Tower Modifications

On February 11, 2014, the Sarpy County Board will be asked to authorize the Board Chairman to sign the attached Consent to Modifications form for Verizon Wireless.

Sarpy County owns the tower structure located on the east side of the Hall of Justice. We lease space on the tower to Verizon Wireless. The lease provides that Verizon's antennas and electronic equipment may not interfere with Sarpy County's communications equipment or exceed the load bearing capacity of the tower.

The technical drawings describing the proposed modifications have been reviewed and approved by Neil Johnson from Sarpy County E911 Communications. Based on Neil's review, I recommend approval of the attached resolution.

February 5, 2014



Brian E. Hanson

BEH/mg

cc: Mark Wayne
Scott Bovick
Deb J. Houghtaling
Larry Lavelle
Neil Johnson
Bonnie Moore



Buell Consulting, Inc.
2324 University Avenue West, Suite 200
Saint Paul, Minnesota 55114-1854
(651) 225-0792

www.buellconsulting.com
Site Acquisition
Permitting
Established 1991

COMPLETE AND FAX TO Robert Loinaz
#651-225-0795
Or via email to: rlainaz@siteac-llc.com

CONSENT TO MODIFICATIONS

Verizon Wireless Site Name: OMA Papillion

Site Address: 1210 Golden Gate Drive, Papillion, NE 68046

The County of Sarpy, ("*Lessor*") acknowledges receipt of a request for consent to a site modification with connecting appurtenances currently located at the above referenced site. "*Lessor*" hereby consents to the proposed modifications.

LESSOR:

By: 
Jim Thompson
Its: County Board Chairman

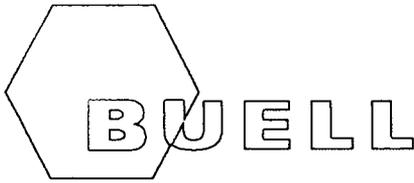
2/11/14
Date

ACCESS INFORMATION

Please indicate the name and telephone number of the person that Verizon Wireless needs to contact in order to coordinate the logistics of the proposed antenna change.

Neil Johnson (402) 593-5900
Name Telephone Number

Please list any special considerations that need to be taken into account in coordinating the proposed upgrade. For example, please list any dates of special events, other scheduled maintenance, special hours request, and the like that may interfere with the proposed Verizon Wireless upgrade.



Buell Consulting, Inc.
2324 University Avenue West, Suite 200
Saint Paul, Minnesota 55114-1854
(651) 225-0792
www.buellconsulting.com

*Site Acquisition
Permitting
Established 1991*

January 17, 2014

The County of Sarpy
1210 Golden Gate Drive
Papillion, NE 68046

Attn: County Clerk

RE: Tower Construction and Property Lease Agreement dated March 29, 1994 between The County of Sarpy [Lessor] and Omaha Cellular Limited Partnership [Tenant].

**Verizon Wireless Site Name: OMA Papillion
Site Address: 1210 Golden Gate Drive, Papillion, NE 68046**

Dear Sir or Madam:

Verizon Wireless is in the process of upgrading their wireless network to incorporate technology known as "AWS" (Advanced Wireless Services). As technology advances, it is necessary for Verizon Wireless to upgrade their equipment, which will consist of adding appurtenances at the site. The enclosed construction drawings outline the specifics of this modification. Also, a structural review of the building has been done, and a copy of the analysis is attached.

On page two of this letter, a form is provided for The County of Sarpy to indicate their consent for the proposed modification. Please complete the form and return it to me as soon as possible either by email at: rlainaz@siteac-llc.com or via fax at 651-225-0795. A return envelope has been included for the original.

Do not hesitate to contact me at 612-284-5300 with any questions or concerns you may have.

Sincerely,

Robert Loinaz

Robert Loinaz
Buell Consulting, Inc.
Agent for Verizon Wireless

Brian Hanson

From: Larry Lavelle
Sent: Monday, February 03, 2014 1:41 PM
To: Brian Hanson; Neil Johnson
Cc: Bonnie Moore
Subject: RE: Tower Modifications

Brian,
I did discuss this with Neil upon my return. There are no concerns regarding the proposed modifications to the tower site here at the Courthouse.

Larry

-----Original Message-----

From: Brian Hanson
Sent: Monday, February 03, 2014 12:57 PM
To: Neil Johnson
Cc: Bonnie Moore; Larry Lavelle
Subject: FW: Tower Modifications

Neil, have you had a chance to review the proposed tower modifications?

Brian

-----Original Message-----

From: Brian Hanson
Sent: Monday, January 27, 2014 10:50 AM
To: Neil Johnson
Cc: Larry Lavelle; Mark Wayne; 'rlainaz@siteac-llc.com'; Chris Vance; Renee Lansman
Subject: Tower Modifications

Neil, we have received the attached correspondence regarding modifications that Verizon Wireless plans to make to our tower on the East side of the Courthouse. Mikala is bringing down the technical drawings to you. Would you take a look at the drawings and let me know if you have any concerns? Thanks!

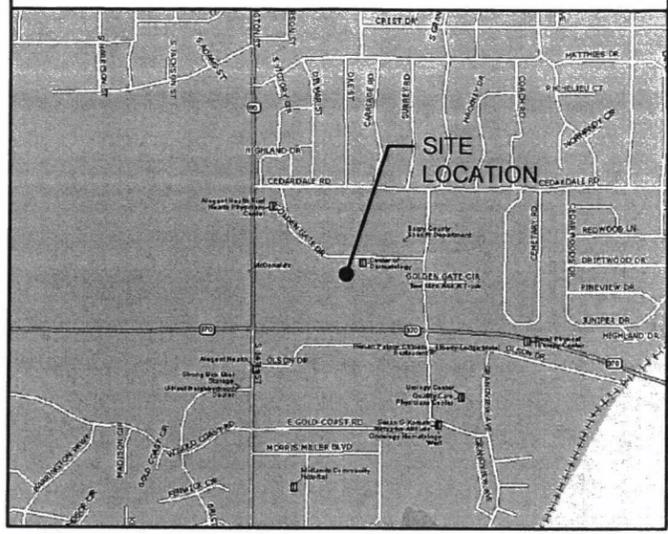
Brian



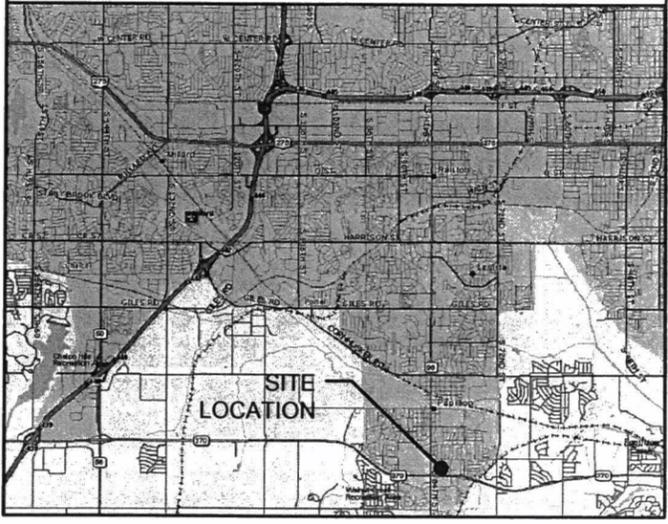
OMA PAPILLION (ALLTEL)

AWS CARRIER ADD
 1210 GOLDEN GATE DR.
 PAPILLION, NE 68046

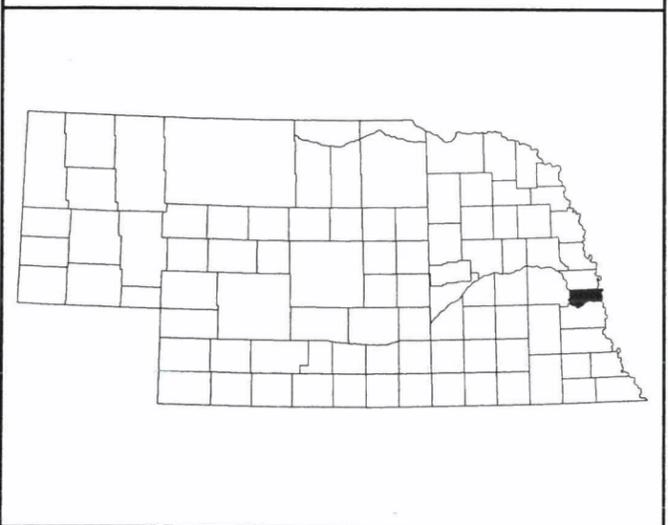
VICINITY MAP



REGIONAL MAP



GENERAL LOCATION



DIRECTIONS

FROM I-80 AND I-680 INTERSECTION:
 TAKE I-80 WEST, TAKE EXIT TO L ST./SR-92/US-275 EAST, TURN SOUTH ONTO
 84TH ST./SR 85/WASHINGTON ST., TURN EAST CEDARDALE RD., TURN SOUTH
 ONTO GOLDEN GATE DR. AND ARRIVE AT SITE.

THESE DOCUMENTS ARE DRAWN TO SCALE FOR 24X36 SIZE SHEET.
 DOCUMENTS PRINTED IN 11X17 SIZE SHEET ARE
 REDUCED TO HALF THE ORIGINAL SCALE.



SHEET INDEX

SHEET	DESCRIPTION	REV.
T-1	TITLE SHEET	A
C-1	TOWER ELEVATIONS	A
C-2	SHELTER PLAN	A
C-3	ANTENNA SCHEDULE	A
C-4	ANTENNA CONFIGURATIONS	A
C-5	COAX INFORMATION	A
C-6	PLUMBING DIAGRAM	A
C-7	SITE DETAILS	A
C-8	SITE PHOTOS	A
C-9	SITE PHOTOS	A

VERIZON WIRELESS DEPARTMENTAL APPROVALS

	NAME	DATE
RF ENGINEER		
OPERATIONS MANAGER		
CONSTRUCTION ENGINEER		
CONSTRUCTION MANAGER		
REAL ESTATE MANAGER		
LANDLORD		

PROJECT INFORMATION

SITE NAME: OMA PAPILLION (ALLTEL) ADDRESS (FROM SITE PLACARD): 1210 GOLDEN GATE DR. PAPILLION, NE 68046 LATITUDE (FROM VZW DATA): 41° 8' 29.0" N LONGITUDE (FROM VZW DATA): 96° 2' 23.0" W GROUND ELEVATION (FROM VZW DATA): 1116' - NAVD '88 ANTENNA TIP HEIGHT: 77'-0" A.G.L. STRUCTURE HEIGHT: 180' ± A.G.L. MONOPOLE TOWER OVERALL STRUCTURE HEIGHT: 198' ± A.G.L. YEAR TOWER BUILT: T.B.D. STRUCTURAL CONSULTANT: HUTTER FRANKINA ENGINEERING 32 W 273 ARMY TRAIL RD, SUITE #100 WAYNE, IL 60184 (630) 513-6711	SITE NAME: UNINHABITED SHELTER 2009 INTERNATIONAL BUILDING CODE 2008 NATIONAL ELECTRIC CODE TIA/EIA-222-G OR LATEST EDITION STRUCTURE CLASS II TOPOGRAPHIC CATEGORY 1 EXPOSURE CATEGORY B PROJECT DESCRIPTION: CONTRACTOR SHALL WORK DIRECTLY WITH VERIZON NETWORK OPERATIONS MANAGER, REGARDING THE AWS ANTENNAS AND LINE ADDITION. ALL ANTENNA AND LINE WORK SHALL BE PERFORMED SUCH THAT THERE IS NO INTERRUPTION IN COMMERCIAL SERVICE BETWEEN THE HOURS OF 5:00 A.M. AND 11:00 P.M. THREE SECTOR CDMA, LTE/AWS (3) SBNH-16565C ANTENNAS, LTE/AWS (3) ERICSSON AWS RRU-12, (1) 1-5/8" HYBRID CABLE, (1) TOP DISTRIBUTION BOX, (1) RET HOMERUN CABLE SMARTTILT SYSTEM.	LESSEE: VERIZON WIRELESS 10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438 CONTACT: KATIE POSER PHONE: (952) 943-7342 SITE ACQUISITION: VERIZON WIRELESS 10801 BUSH LAKE ROAD BLOOMINGTON, MN 55438 CONTACT: KATIE POSER PHONE: (952) 943-7342 CONSTRUCTION ENGINEER: VERIZON WIRELESS 1620 M STREET LINCOLN, NE 68508 CONTACT: SCOTT HORKY PHONE: (402) 436-4723 CELL: (402) 470-1134 FAX: (402) 436-5041 CONSULTING ENGINEER: TERRA CONSULTING GROUP, LTD. 600 BUSSE HIGHWAY PARK RIDGE, IL 60068 CONTACT: DENNIS MURPHY PHONE: (847) 698-6400 FAX: (847) 698-6401
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NO	DESCRIPTION	DATE	BY	ML	DS	DS
A	ISSUED FOR REVIEW	12/10/13				
B	REVISED PER CLIENT COMMENTS	12/30/13				
C	REVISED ANTENNA DOWN TILT	01/07/14				

OMA PAPILLION (ALLTEL)
 1210 GOLDEN GATE DR.
 PAPILLION, NE 68046

DRAWN BY:	ML
CHECKED BY:	DM
DATE:	10/25/13
PROJECT #:	63-080

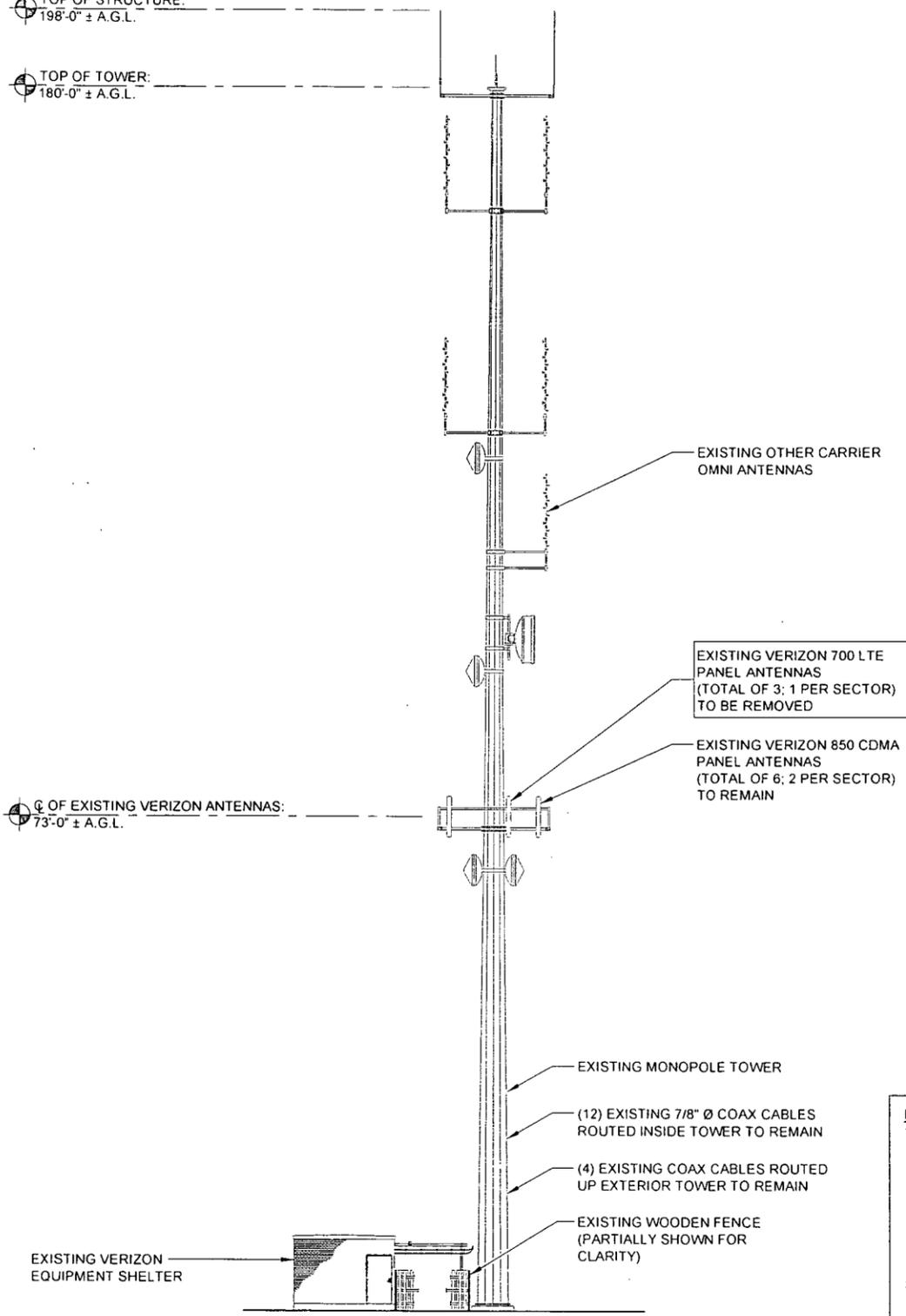
SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

TOP OF STRUCTURE:
198'-0" ± A.G.L.

TOP OF TOWER:
180'-0" ± A.G.L.

Q OF EXISTING VERIZON ANTENNAS:
73'-0" ± A.G.L.

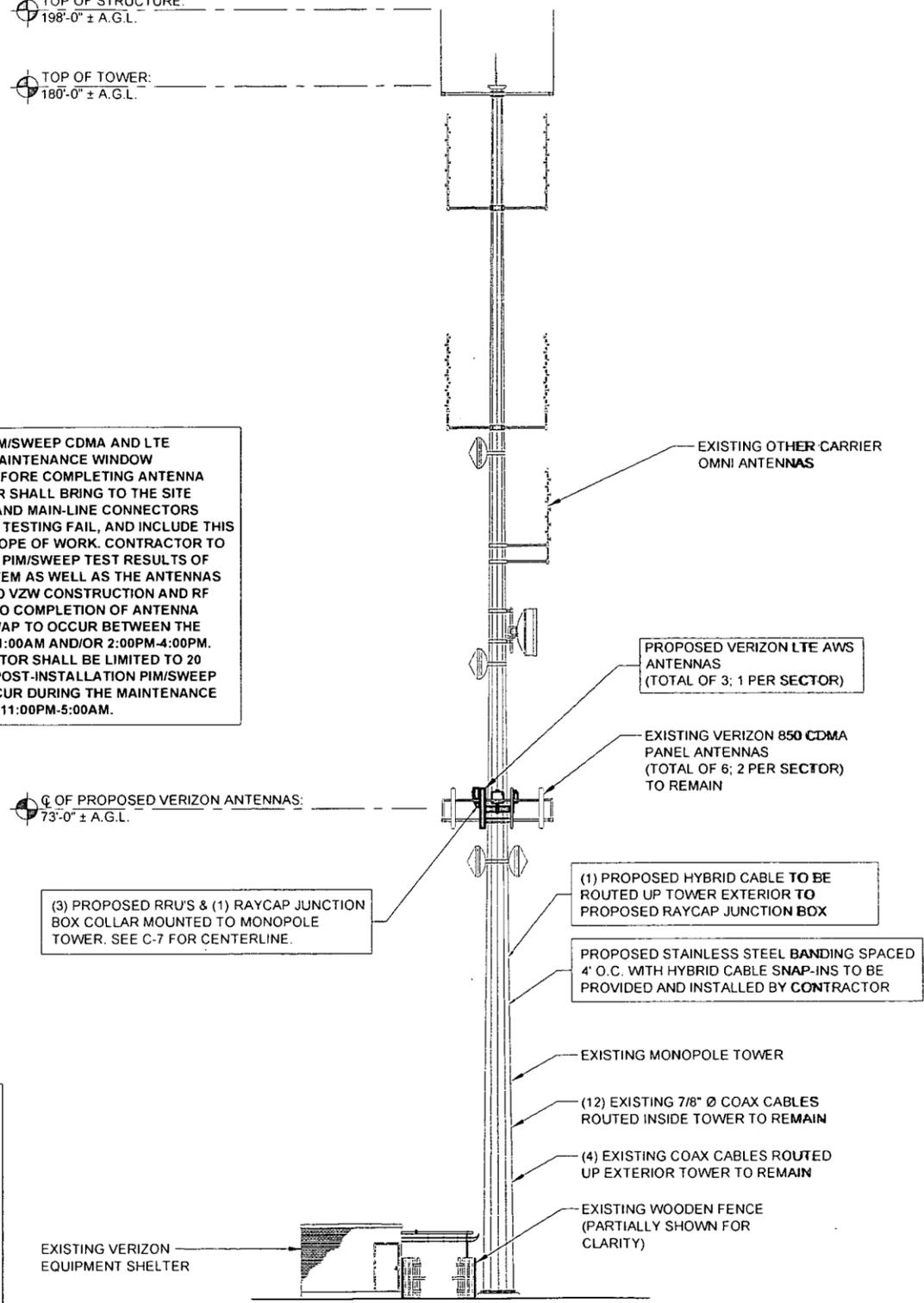


1 EXISTING TOWER ELEVATION
SCALE: 3/32" = 1'-0"

TOP OF STRUCTURE:
198'-0" ± A.G.L.

TOP OF TOWER:
180'-0" ± A.G.L.

Q OF PROPOSED VERIZON ANTENNAS:
73'-0" ± A.G.L.



2 PROPOSED TOWER ELEVATION
SCALE: 3/32" = 1'-0"

CONTRACTOR TO PIM/SWEEP CDMA AND LTE SYSTEMS DURING MAINTENANCE WINDOW (11:00PM-5:00AM) BEFORE COMPLETING ANTENNA SWAP. CONTRACTOR SHALL BRING TO THE SITE ENOUGH JUMPERS AND MAIN-LINE CONNECTORS SHOULD PIM/SWEEP TESTING FAIL, AND INCLUDE THIS IN THE ORIGINAL SCOPE OF WORK. CONTRACTOR TO PROVIDE PRE-SWAP PIM/SWEEP TEST RESULTS OF BOTH THE A&L SYSTEM AS WELL AS THE ANTENNAS TO BE INSTALLED TO VZW CONSTRUCTION AND RF ENGINEERS PRIOR TO COMPLETION OF ANTENNA SWAP. ANTENNA SWAP TO OCCUR BETWEEN THE HOURS OF 9:00AM-11:00AM AND/OR 2:00PM-4:00PM. DOWNTIME PER SECTOR SHALL BE LIMITED TO 20 MINUTES OR LESS. POST-INSTALLATION PIM/SWEEP TESTING SHALL OCCUR DURING THE MAINTENANCE WINDOW HOURS OF 11:00PM-5:00AM.

NOTES:
1. TOWER/ANTENNA DESIGN AND ANALYSIS BY OTHERS. TOWER OWNER RESPONSIBLE FOR REVIEW OF PROPOSED ANTENNAS.
2. CONTRACTOR SHALL CUT ANTENNA MOUNTING PIPES IN FIELD TO LENGTH THAT SHALL NOT EXCEED OVERALL LENGTH OF ANTENNA.
3. CONTRACTOR TO PROVIDE AND INSTALL GROUND KITS AND TINNED PLATED COPPER BUSS BARS AT INTERVALS NO GREATER THAN 100'. ALL GROUND BARS ARE TO BE GALVANIZED STEEL.
4. CONTRACTOR TO SHIP ALL REMOVED ANTENNAS, MOUNTS, TMA'S, COAX, ETC. TO FORD STORAGE, OMAHA, NE.
5. CONTRACTOR SHALL VERIFY THAT NO ANTENNAS ARE ABOVE THE BEACON.

verizon wireless
10801 Bush Lake Rd.
Bloomington, MN 55138

TERRA CONSULTING GROUP, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6401
Fax: 847/698-6401

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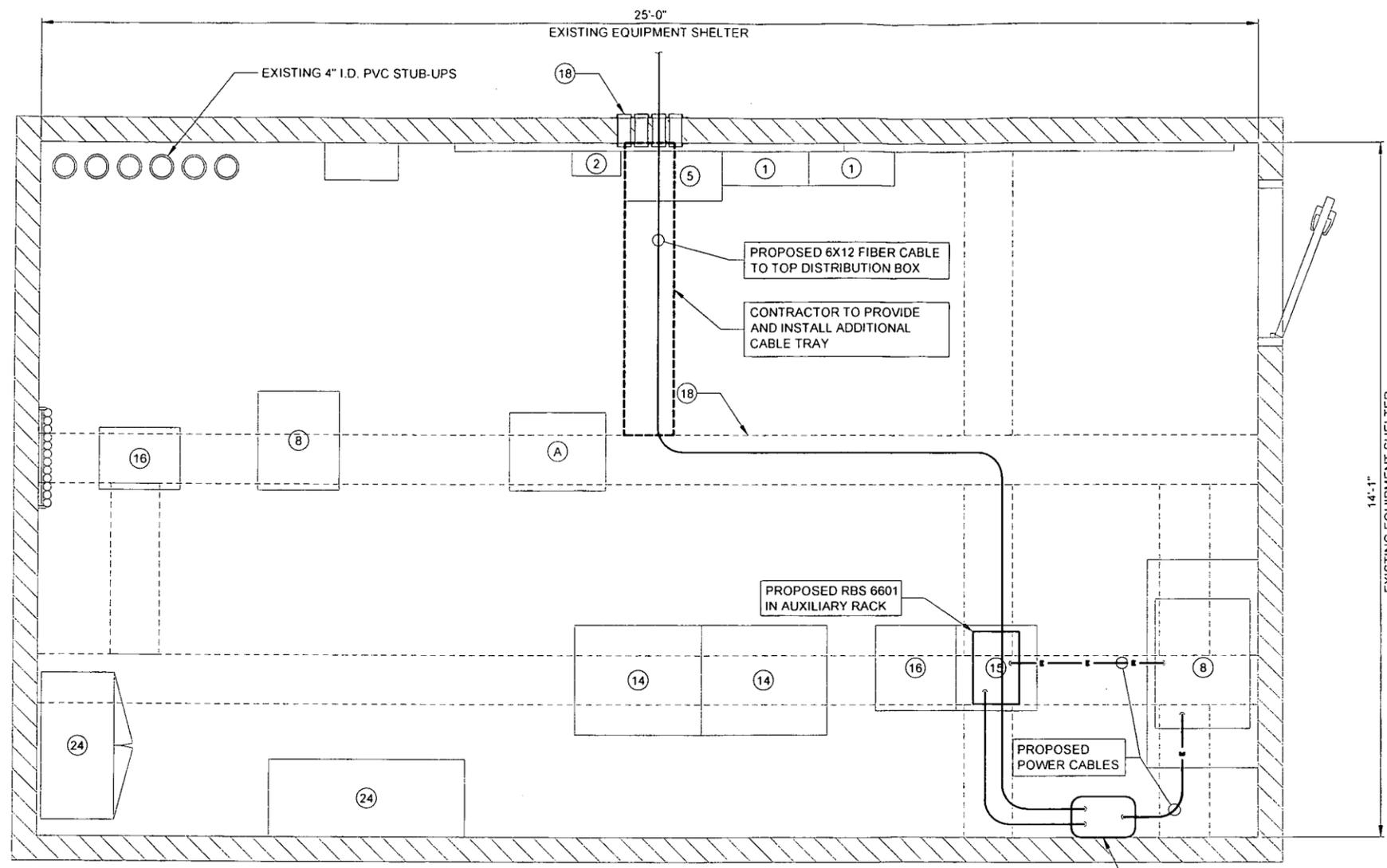
SHEET TITLE
TOWER ELEVATIONS

SHEET NUMBER
C-1

24" x 36" PRINT IS THE FULL SCALE FORMAT. ANY SIZE OTHER THAN THAT IS AT REDUCED SCALE.



24" x 36" PRINT IS THE FULL SCALE
FORMAT. ANY SIZE OTHER THAN
THAT IS AT REDUCED SCALE



1 SHELTER PLAN
SCALE: 3/4" = 1'-0"

NOTES:
 1. CONTRACTOR TO PROVIDE AND INSTALL ALL JUMPERS AND CONNECTORS REQUIRED.
 2. PROPOSED RET CABLE TO BE PROVIDED BY VERIZON AND INSTALLED BY CONTRACTOR.
 3. CONTRACTOR SHALL PROVIDE AND INSTALL HORIZONTAL AND VERTICAL CABLE TRAY REQUIRED TO ROUTE CABLING TO AND FROM THE FIBER FIF RACK.

verizon wireless
 10501 Bush Lake Rd
 Bloomington, MN 55438

TERRA CONSULTING GROUP, LTD.
 500 Busse Highway
 Park Ridge, IL 60068
 Ph: 847/698-6700
 Fax: 847/698-6401

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OMA PAPILLION (ALTEL)
 1210 GOLDEN GATE DR.
 PAPILLION, NE 68046

DRAWN BY:	ML
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DATE:	10/25/13
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SHEET TITLE
SHELTER PLAN
 SHEET NUMBER
C-2

- EQUIPMENT LEGEND**
- | | | |
|---------------------------|---------------------------------|---------------------------------------|
| (A) LTE EQUIPMENT CABINET | (9) RECTIFIER | (17) CABLE ENTRANCE PANEL/PORT (USED) |
| (B) PCS EQUIPMENT CABINET | (10) TELCO BOARD | (18) CABLE ENTRANCE PANEL/PORT |
| (1) ELECTRICAL PANEL | (11) TELCO GROUND BAR | (19) EXISTING CABLE LADDER |
| (2) AC SERVICE DISCONNECT | (12) LUCENT EQUIPMENT CABINET | (20) FIRE EXTINGUISHER |
| (3) DC DISTRIBUTION PANEL | (13) HVAC UNIT | (21) FIRE SUPPRESSION SYSTEM |
| (4) DC POWER PANEL | (14) MOTOROLA EQUIPMENT CABINET | (22) THERMOSTAT/ HVAC CONTROLS |
| (5) TRANSFER SWITCH | (15) FIF RACK | (23) ALARM JUNCTION BOX |
| (6) MAIN LOAD CENTER | (16) EQUIPMENT RACK (E) | (24) DESK |
| (7) BATTERY | | (25) SHELF |
| (8) BATTERY/ RECTIFIER | | |

- ACRONYM LEGEND**
- | | |
|--|--|
| LTE: LONG TERM EVOLUTION | RRU: REMOTE RADIO UNIT |
| FIF: FACILITY INTERFACE FRAME | RET: REMOTE ELECTRICAL TILT |
| TDMA: TIME DIVISION MULTIPLE ACCESS | TMA: TOWER MOUNTED AMPLIFIER |
| CDMA: CODE DIVISION MULTIPLE ACCESS | CMU: CONCRETE MASONRY UNIT |
| GSM: GLOBAL SYSTEM FOR MOBILE COMMUNICATIONS | GPS: GLOBAL POSITIONING SYSTEM |
| UMTS: UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM | HVAC: HEATING VENTILATION & AIR CONDITIONING |

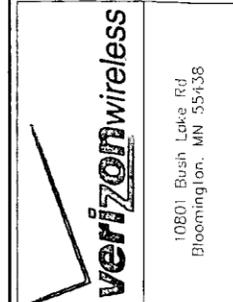
EXISTING ANTENNA KEY												EXISTING COAX KEY							EXISTING TTA/TMA KEY				
ANT. POS.	MOUNT AZIMUTH	FUNCTION	QTY	ANTENNA MODEL	ANTENNA TECHNOLOGY	ANT. LENGTH	ANT. TIP	RAD CENTER	DT ELEC.	DT MECH.	STATUS	QTY	COAX TYPE	MFR.	MODEL	DIELECTRIC	DIAMETER	LENGTH	STATUS	QTY	MODEL	VENDOR	STATUS
1-1	30°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		6°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
1-2.1	30°		1	X7C-865-4D	700 LTE	96"	77'-0"	73'-0"		5°	REMOVE	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
1-2.2												1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
1-3																							
1-4	30°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		6°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-5	150°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		2°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-6.1	150°		1	X7C-865-4D	700 LTE	96"	77'-0"	73'-0"		5°	REMOVE	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-6.2												1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-7																							
2-8	150°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		2°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-9	270°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		4°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-10.1	270°		1	X7C-865-4D	700 LTE	96"	77'-0"	73'-0"		4°	REMOVE	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-10.2												1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-11																							
3-12	270°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		4°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				

1 EXISTING ANTENNA SCHEDULE
N.T.S.

PROPOSED ANTENNA KEY												PROPOSED COAX KEY							PROPOSED TTA/TMA KEY				
ANT. POS.	MOUNT AZIMUTH	FUNCTION	QTY	ANTENNA MODEL	ANTENNA TECHNOLOGY	ANT. LENGTH	ANT. TIP	RAD CENTER	DT ELEC.	DT MECH.	STATUS	QTY	COAX TYPE	MFR.	MODEL	DIELECTRIC	DIAMETER	LENGTH	STATUS	QTY	MODEL	VENDOR	STATUS
1-1	30°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		6°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
1-2.1	30°		1	SBNH-1D6565C	700 LTE	96.42"	77'-0"	73'-0"	9	0°	PROPOSED	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
1-2.2					AWS LTE				4			1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
1-3																							
1-4	30°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		6°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-5	150°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		2°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-6.1	150°		1	SBNH-1D6565C	700 LTE	96.42"	77'-0"	73'-0"	9	0°	PROPOSED	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-6.2					AWS LTE				4			1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
2-7																							
2-8	150°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		2°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-9	270°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		4°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-10.1	270°		1	SBNH-1D6565C	700 LTE	96.42"	77'-0"	73'-0"	9	0°	PROPOSED	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-10.2					AWS LTE				4			1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				
3-11																							
3-12	270°		1	WPA-70063-8CF	850 CDMA	94.6"	76.94'	73'-0"		4°	EXISTING	1	MAIN	ANDREW	AVA5-50A	FOAM	7/8"	95'-0"	EXISTING				

- ADDITIONAL:
- (2) DISTRIBUTION BOXES (1 IN SHELTER, 1 ON TOWER)
 - (1) 6X12 HYBRID CABLE +/- 95' (DISTRIBUTION BOX TO DISTRIBUTION BOX)
 - (1) SHELTER POWER +/- 10' (POWER PLANT TO DISTRIBUTION BOX)
 - (1) SHELTER POWER +/- 11' (POWER PLANT TO AWS)
 - (1) FIBER CABLE +/- 12' (eNB TO DISTRIBUTION BOX)
 - (3) RET CABLES (RRU TO ANTENNA)

2 PROPOSED ANTENNA SCHEDULE
N.T.S.



10801 Bush Lake Rd
Bloomington, MN 55438



600 Busse Highway
Park Ridge, IL 60068
Ph: 847/698-6400
Fax: 847/698-6401

NO	DESCRIPTION	DATE	BY
A	ISSUED FOR REVIEW	12/10/13	ML
B	REVISED PER CLIENT COMMENTS	12/20/13	DS
C	REVISED ANTENNA DOWNLIT	01/07/14	DS

OMA
PAPILLION
(ALLTEL)

1210 GOLDEN GATE DR.
PAPILLION, NE 68046

DRAWN BY:	ML
CHECKED BY:	DM
DATE:	10/25/13
PROJECT #:	63-080

SHEET TITLE
ANTENNA SCHEDULE

SHEET NUMBER
C-3

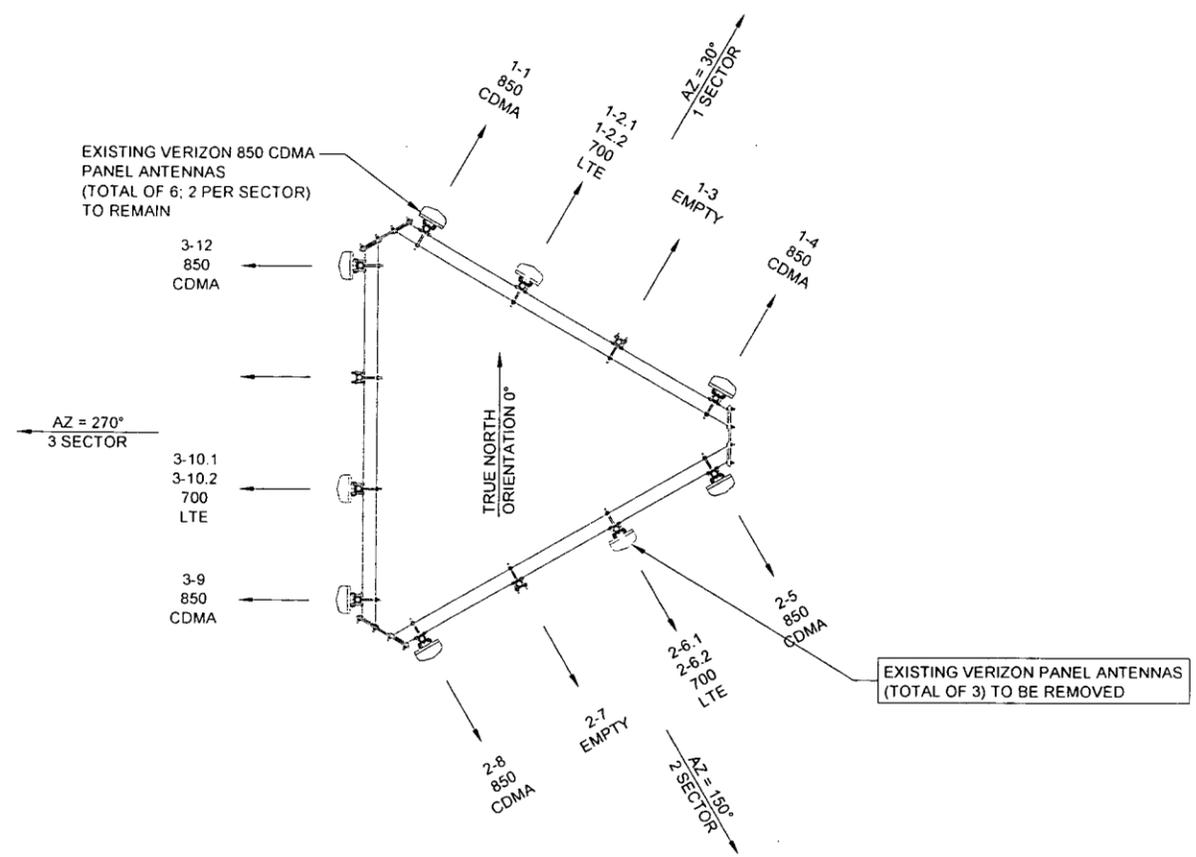
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A	ISSUED FOR REVIEW	12/10/13	ML
B	REVISED PER CLIENT COMMENTS	12/30/13	DS
C	REVISED ANTENNA DOWN/TILT	01/07/14	DS

OMA PAPILLION (ALLTEL)
 1210 GOLDEN GATE DR.
 PAPILLION, NE 68046

DRAWN BY:	ML
CHECKED BY:	DM
DATE:	10/25/13
PROJECT #:	63-060

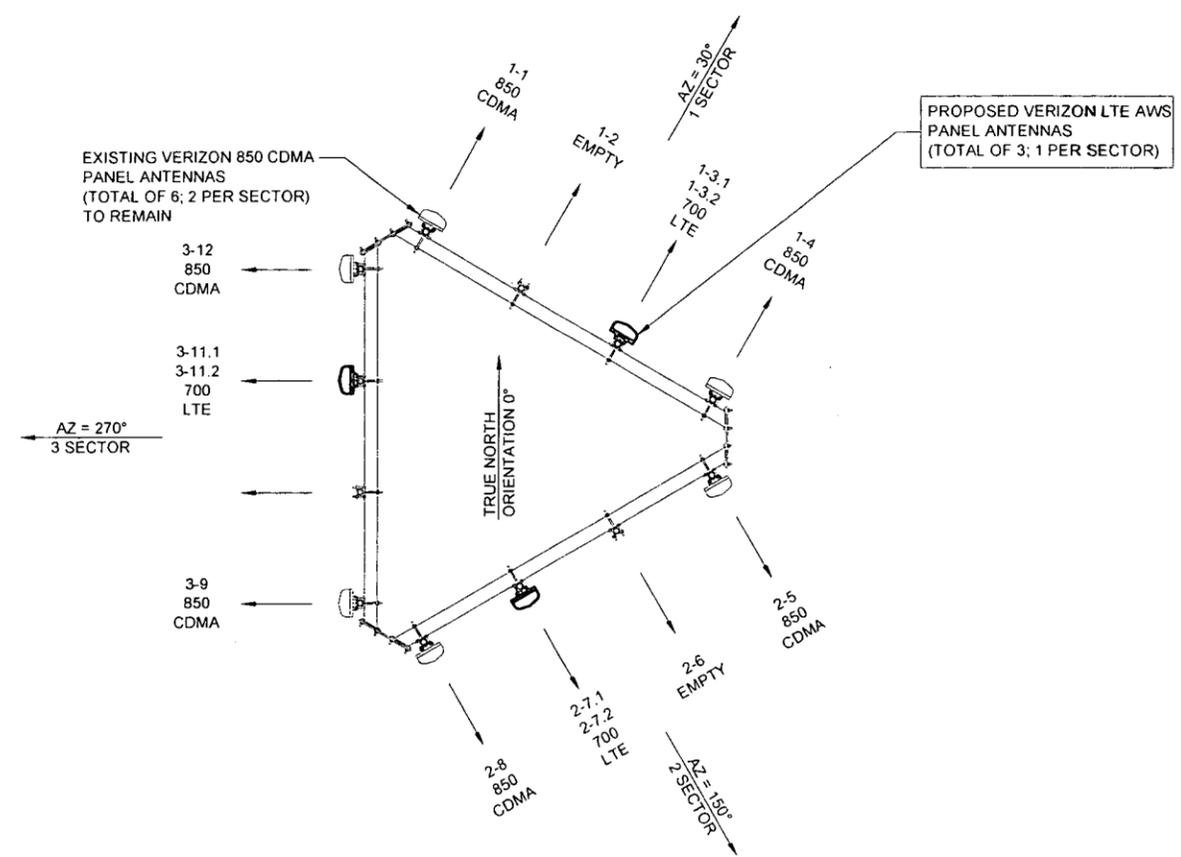
SHEET TITLE
ANTENNA CONFIGURATIONS

SHEET NUMBER
C-4



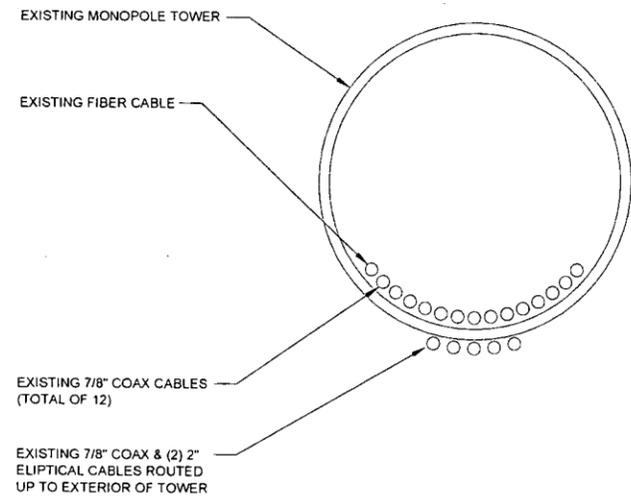
1 EXISTING ANTENNA LAYOUT
 N.T.S.

- NOTES:**
- CONTRACTOR TO SHIP ALL REMOVED ANTENNAS, MOUNTS AND TMA'S TO FOR STORAGE IN OMAHA, NE.
 - CONTRACTOR TO VERIFY THE REMOVAL OF ANTENNAS OR COAX CABLES PRIOR TO REMOVAL.
 - EXISTING COAX CABLE HAS BEEN FIELD VERIFIED BY ASSOCIATED ENGINEERING.
 - CONTRACTOR TO PROVIDE AND INSTALL ANTENNA MOUNTING PIPES, U-BOLTS, AND ALL ASSOCIATED HARDWARE FOR MOUNTING PROPOSED ANTENNAS, RRU'S, DISTRIBUTION BOXES AND TMA'S.

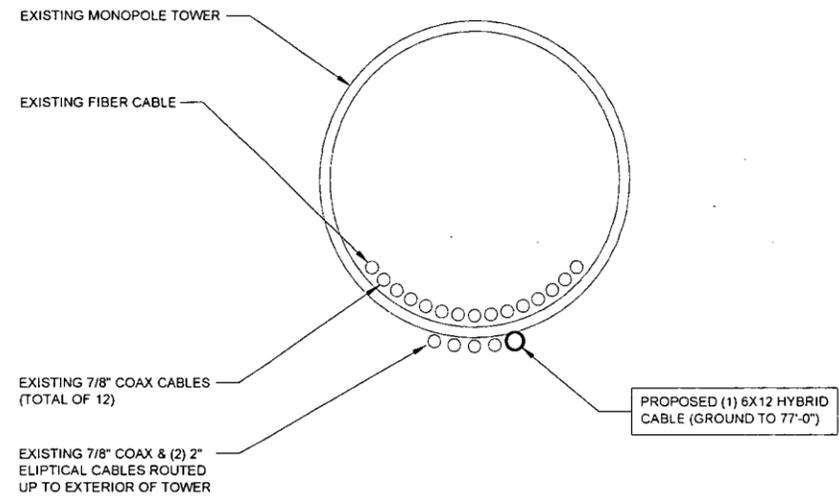


2 PROPOSED ANTENNA LAYOUT
 N.T.S.

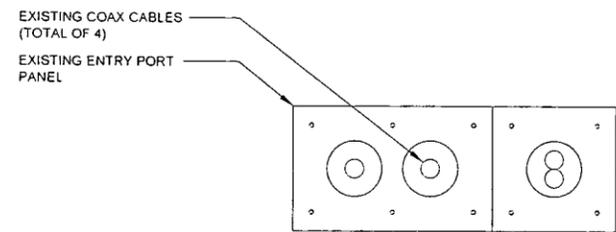
NOTE:
 1. CONTRACTOR TO PROVIDE AND INSTALL COAX ATTACHMENT TO TOWER HARDWARE.
 2. CONTRACTOR TO SWEEP TEST EXISTING COAX CABLES AND VERIFY THEY ARE IN GOOD WORKING ORDER.



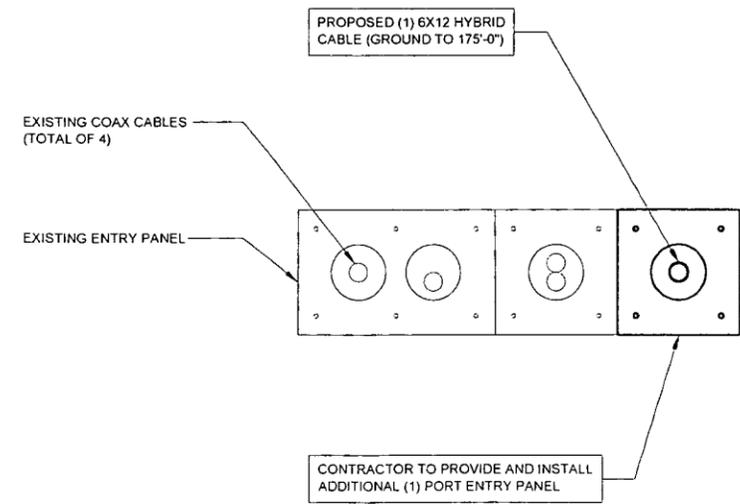
1 EXISTING COAX CONFIGURATION
 N.T.S.



2 PROPOSED COAX CONFIGURATION
 N.T.S.



3 EXISTING ENTRY PANEL DETAIL (INSIDE SHELTER)
 N.T.S.



4 PROPOSED ENTRY PANEL DETAIL (INSIDE SHELTER)
 N.T.S.

verizon wireless

10801 Bush Lake Rd
 Bloomington, MN 55438

TERRA CONSULTING GROUP, LTD.

600 Busse Highway
 Park Ridge, IL 60068
 Ph: 847/698-6400
 Fax: 847/698-6401

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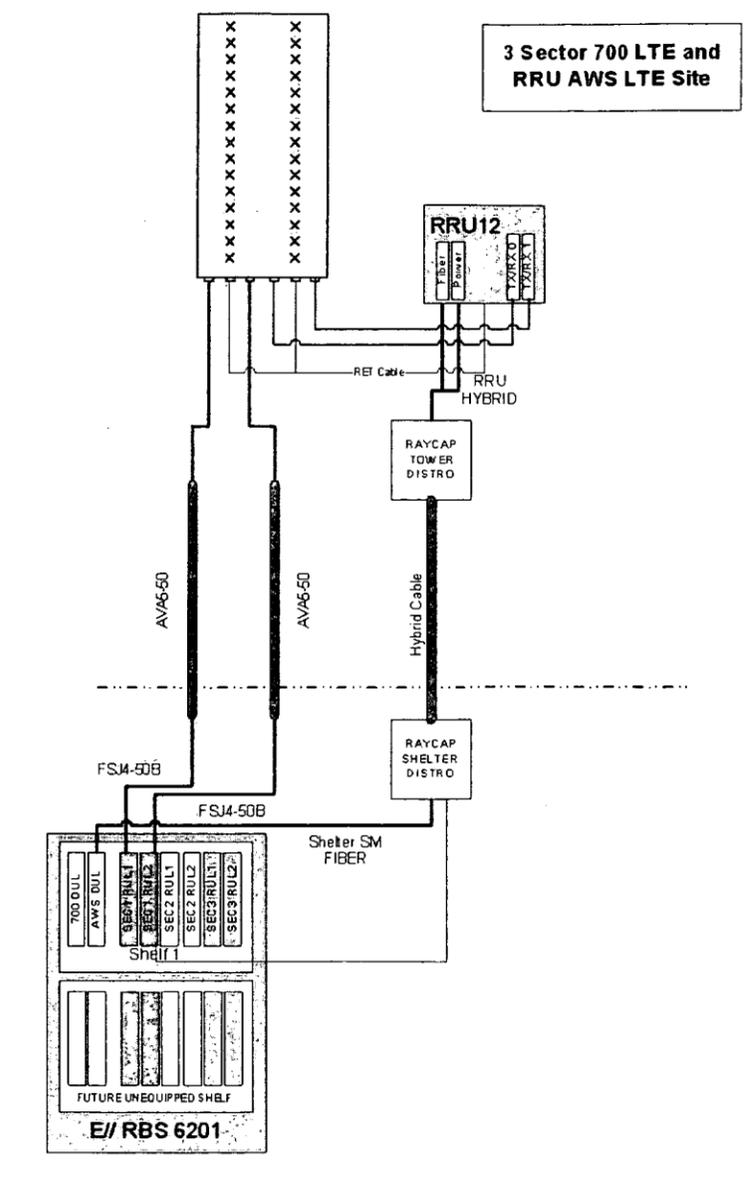
OMA PAPILLION (ALLTEL)

1210 GOLDEN GATE DR.
 PAPILLION, NE 68046

DRAWN BY:	ML
CHECKED BY:	DM
DATE:	10/25/13
PROJECT #:	63-080

SHEET TITLE
COAX INFORMATION

SHEET NUMBER
C-5



1 PLUMBING DIAGRAM
N.T.S.



REVISIONS

NO.	DESCRIPTION	DATE	BY
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(ALLTEL)
1210 GOLDEN GATE DR.
PAPILLION, NE 68046

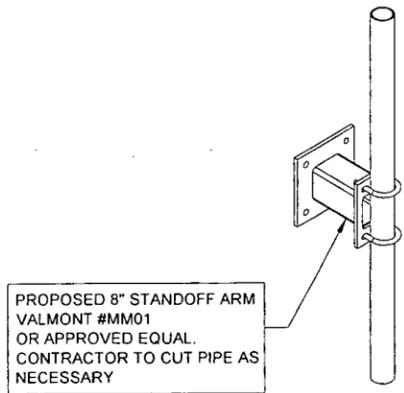
DRAWN BY:	ML
CHECKED BY:	DM
DATE:	10/25/13
PROJECT #:	63-080

SHEET TITLE
PLUMBING DIAGRAM

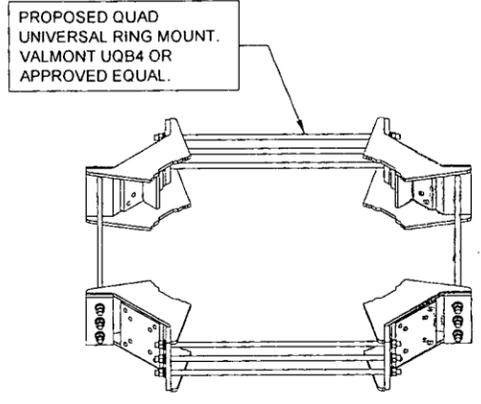
SHEET NUMBER
C-6

ORDERING INFORMATION
 APPLICATION: MONOPOLE
 DESIGN: 8" STANDOFF ARM
 FEATURE: ACCEPTS 2-3/8" Ø & 2-7/8" Ø PIPES
 MOUNTS TO: RING MOUNT
 MATERIAL: HOT DIP GALVANIZED STEEL
 INCLUDES: HARDWARE

ORDERING INFORMATION
 APPLICATION: MONOPOLE
 DESIGN: 4 SECTOR CLAMP-ON MOUNT
 FEATURE: FITS BROAD RANGE OF POLE SIZES
 MOUNTS TO: 12" TO 60" OD MONOPOLES
 MATERIAL: HOT DIP GALVANIZED STEEL
 INCLUDES: MOUNT AND THREADED ROD
 ORDER SEPARATELY: ARMS

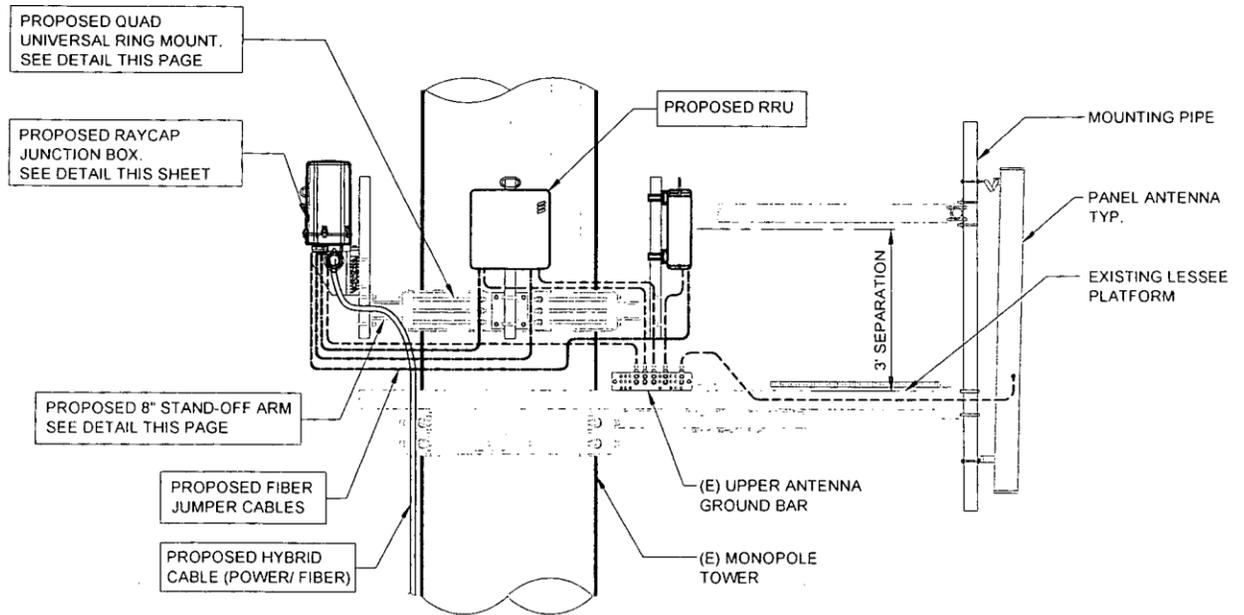


3 8" STANDOFF ARM
 SCALE: N.T.S.

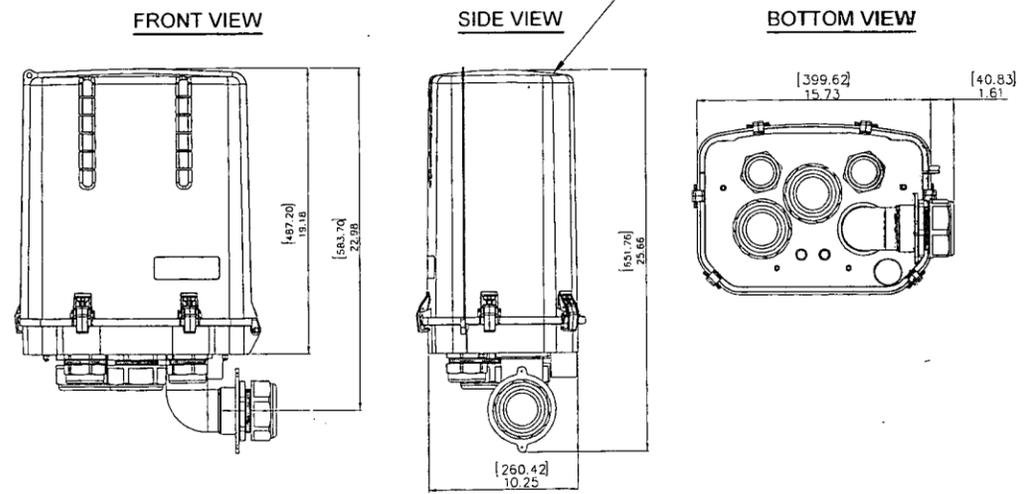


4 QUAD UNIVERSAL RING MOUNT
 SCALE: N.T.S.

SPECIFICATIONS DC SURGE PROTECTION FOR RRU/INTEGRATED ANTENNA RADIO HEAD [mm]
 APPLICATION: TOWER / BASE / ROOFTOP / ROOFTOP DISTRIBUTION MODELS INCHES
 WEIGHT: 32LBS (14.51 KG)



1 ANTENNA, RRU & RAYCAP JUNCTION BOX MOUNTING DETAIL
 SCALE: N.T.S.



2 RAYCAP JUNCTION BOX DETAIL
 SCALE: N.T.S.



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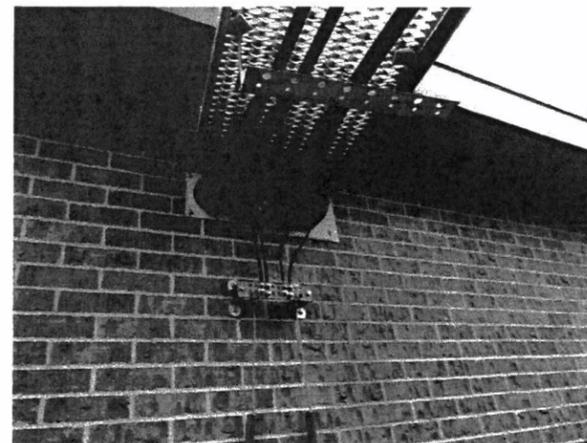
DRAWN BY: ML
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 PROJECT #: 63-080

SHEET TITLE
SITE DETAILS

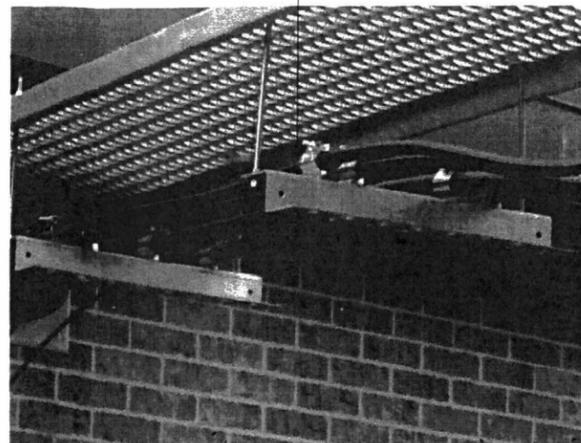
SHEET NUMBER
C-7



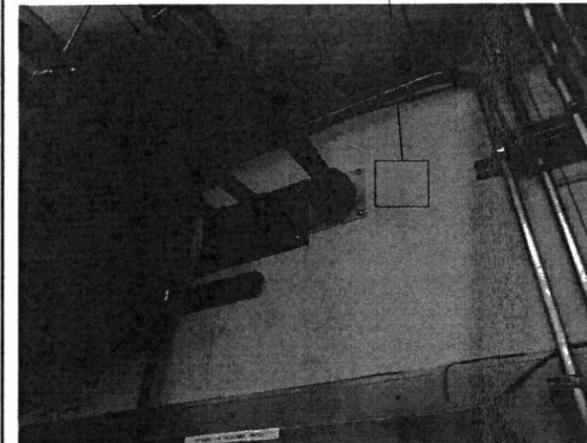
1 EXISTING TOWER PHOTO
N.T.S.



2 EXISTING COAX ENTRY PORT
(OUTSIDE SHELTER)
N.T.S.



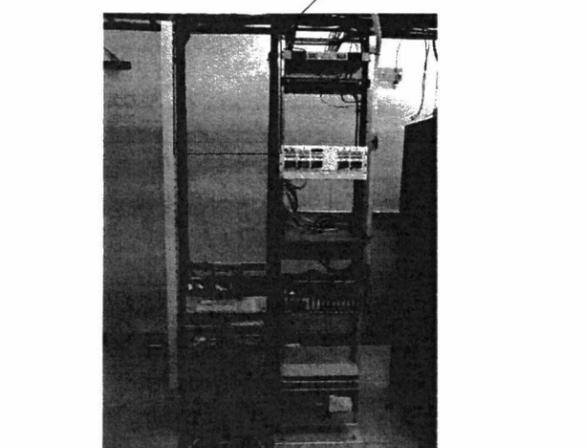
3 EXISTING TRAPEZE
N.T.S.



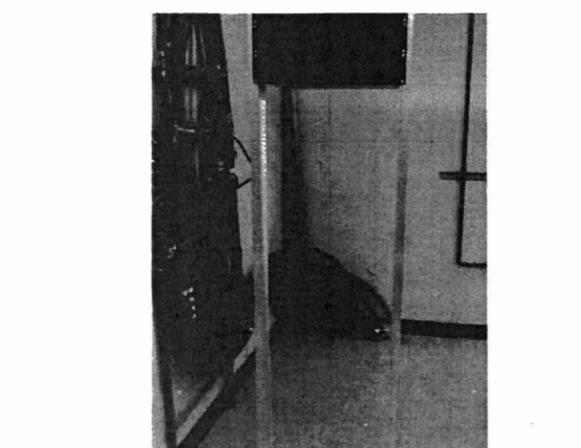
4 EXISTING COAX ENTRY PORT
(INSIDE SHELTER)
N.T.S.



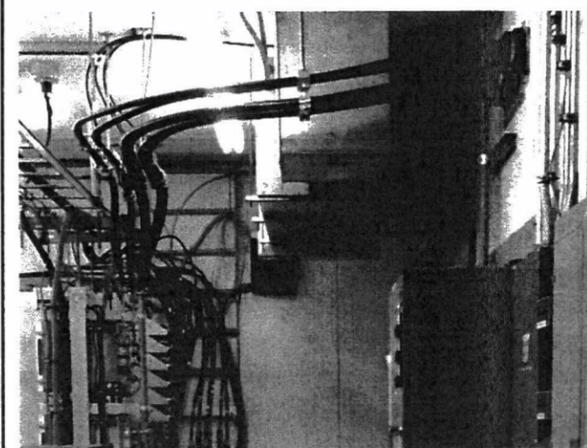
5 PROPOSED DISTRIBUTION BOX VICINITY
N.T.S.



6 PROPOSED RET & RBS6601 LOCATION
N.T.S.



7 EXISTING BURIED COAX CONDUITS
N.T.S.



8 PROPOSED CABLE TRAY LOCATION
N.T.S.

CONTRACTOR TO PROVIDE AND INSTALL ADDITIONAL ICE BRIDGE TO COVER AND SUPPORT PROPOSED HYBRID CABLE

CONTRACTOR TO PROVIDE AND INSTALL ALL ICE BRIDGE HARDWARE TO ACCOMMODATE PROPOSED COAX AND HYBRID CABLES.

LOCATION OF PROPOSED PORT

NOTE:
ENGINEER IS TO SHIFT SOME EXISTING COMPONENTS TO ALLOW ROOM FOR RBS 6601 AND RET CONTROLLER.

PROPOSED RET LOCATION

LOCATION OF PROPOSED PORT

verizon wireless
10801 Bush Lake Rd
Bloomington, MN 55438

TERRA CONSULTING GROUP, LTD.
600 Busse Highway
Park Ridge, IL 60068
Ph: 847/598-6400
Fax: 847/698-6401

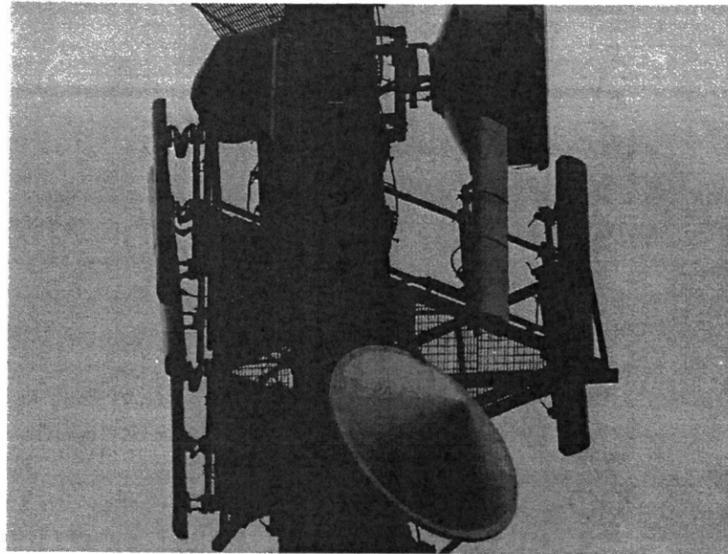
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1210 GOLDEN GATE DR.
PAPIILLON, NE 68046

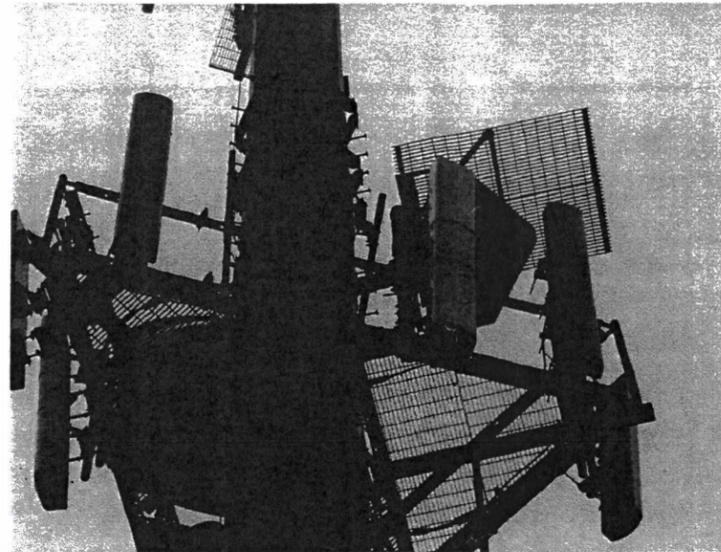
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SHEET TITLE
SITE PHOTOGRAPHS

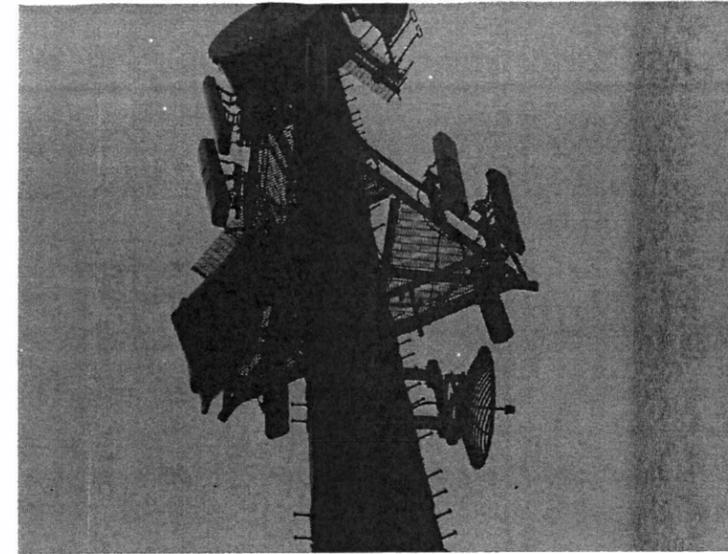
SHEET NUMBER
C-8



1 EXISTING ANTENNA - ALPHA SECTOR
N.T.S.



2 EXISTING ANTENNA - BETA SECTOR
N.T.S.



3 EXISTING ANTENNA - GAMMA SECTOR
N.T.S.

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(ALLTEL)**
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SHEET TITLE
**SITE
PHOTOGRAPHS**

SHEET NUMBER
C-9