

January 13, 2020

Wisconsin Historical Society
Division of Historic Preservation, Office of Preservation Planning
Attn: Leslie Eisenberg
816 State Street
Madison, WI 53706

CC:
Madison Planning and Development
Attn.: Ms. Heather Bailey, Preservation Planner
215 Martin Luther King Boulevard
P.O. Box 2985
Madison, WI 53710

**RE: Conditional No Adverse Effects Determination
Additional Information for WHS Case #19-0386/DA
Proposed Telecommunications Antennas Collocation (antenna upgrades)
U.S. Cellular / Irish Pub (782440)**

Dear SHPO Review Staff & Landmarks Commission:

We previously submitted an FCC 621 form to your offices in April of last year to initiate review of the above described proposed telecommunications collocation at 317 State Street in the City of Madison. Subsequent consultation resulted in SHPO agreeing to a conditional "No Adverse Effects" determination dated October 22, 2019 (copy enclosed) as long as the following conditions can be met:

- Move mechanicals to the building roof
- Enclose wires
- Paint boxes on side of building to match painted sides (of host building)
- Decrease number and size of proposed antennae
- Resubmit plan for review and comment

On October 18, 2019, Heather Baily of the City planning division provided additional comments from the Landmarks Commission indicating concern the originally proposed collocation could result in cumulative effects that would create an Adverse Effect to Historic Properties. A copy of this comment is enclosed. The Commission appears to be in agreement with SHPO that the above revisions to the project design would mitigate potential adverse effect(s).

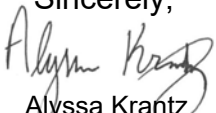
The applicant has considered the above visual impact requests in relation to functionality and structural requirements of the site location and limitations of available antenna models. The applicant was able to modify the site design in a way that should satisfy the intention of the above conditions. We are now able to provide you with updated plans and photo simulations for your consideration. We anticipate these changes will mitigate potential adverse effect(s) to historic properties.

Changes to the site plan include:

- 1.) Moving the proposed LAA radio-antennas (the smaller square shaped antennas) to the rooftop on a ballast tripod ballast mount in the center-rear of the roof. This placement would prevent visibility of these antennas from surrounding areas at street level and would also allow for elimination of one of the proposed mounting pipes on each of the three faces of the building. See enclosed photo simulations to verify anticipated (non) visibility of the rooftop LAA antennas;
- 2.) Regarding the larger LTE panel antennas mounted on the various walls of the building, there is no practicable option to move those from the building face. An alternative antenna model is available that measures 6 feet in length which would be a reduction from the originally proposed 8-foot long antennas. The width of the antennas would remain at approximately 2 feet wide. The applicant proposes to use the smaller 6ft antenna model in an effort to reduce visual impact;
- 3.) Shrouds can be added to cover the previously visible cable protruding from the base of all panel antennas (see photo simulation). Also, the shroud and antennas will be painted to match the wall color. The result of items 2-3 would be the ability to maintain only 2 antennas per sector (no visible gain in number of antennas from current layout) and hiding previously visible cabling behind shrouds.

We believe the above described revision will satisfy the conditions set by SHPO to prevent adverse effects to historic properties. Please advise with your comments and concurrence/disagreement with our assessment that these design changes result in a conditional no adverse effect determination to historic properties. Direct your comment and/or questions to me at the address provided below in my signature block.

Sincerely,



Alyssa Krantz
Edge Consulting Engineers, Inc.
624 Water Street
Prairie du Sac, WI 53578
akrantz@edgeconsult.com

P.S. During the course of determining what we hope are satisfactory revisions described above we drafted two intermediate/alternative photo simulations. We believe both alternatives are less desirable so are not being proposed as the selected design. Since the simulations are readily available, we are including them here for your consideration in case you choose to offer further comment on either alternative. The first of these simulations shows keeping the proposed LAA antennas on the building walls, but reducing the mounting pipe to a minimal size to help reduce visibility. As this option would not decrease the number of visible antennae it was seen as less desirable than the primary design above. The second simulation shows all antennas moved to the rooftop. This would require the larger LTE panel antennas to be mounted in a way that would visibly protrude above the roofline and would, in our opinion, dramatically increase visibility of the collocation as it is functionally not possible to mount the panel antennas horizontally. This option would be the least desirable as we believe the visible effects would instead be worsened.

REQUEST FOR SHPO COMMENT AND CONSULTATION ON A FEDERAL UNDERTAKING

Submit one copy with each undertaking for which our comment is requested. Please print or type. Return to: Wisconsin Historical Society, Division of Historic Preservation, Office of Preservation Planning, 816 State Street, Madison, WI 53706 Please Check All Boxes and Include All of the Following Information, as Applicable. Incomplete Submittals Will Be Returned.

SEP 03 2019

I. GENERAL INFORMATION

- This is a new submittal.
- This is supplemental information relating to Case #: 19-0386, and title: Irish Pub (#782440)
- This project is being undertaken pursuant to the terms and conditions of a programmatic or other interagency agreement. The title of the agreement is Nationwide Programmatic Agreement for Review of Effects on Historic Properties for Certain Undertakings Approved by the Federal Communications Commission
- a. Federal Agency Jurisdiction (Agency providing funds, assistance, license, permit): FCC
- b. Federal Agency Contact Person: Mr. Dan Abeyta Phone: 202-418-1538
- c. Project Contact Person: Alyssa Krantz, Edge Consulting Engineers, Inc. Phone: 608-644-1449
- d. Return Address: 624 Water Street, Prairie du Sac, WI Zip: 53578
- e. Email Address: akrantz@edgeconsult.com
- f. Project Name: Irish Pub (#782440)
- g. Project Street Address: 317 State Street
- h. County: Dane City: Madison Zip Code: 53703
- i. Project Location: Township 7 N, Range 9, (E)W (circle one), Section 23, Quarter Sections NW of NE
- j. Project Narrative Description—Attach Information as Necessary.
- k. Area of Potential Effect (APE). Attach Copy of U.S.G.S. 7.5 Minute Topographic Quadrangle showing APE.

II. IDENTIFICATION OF HISTORIC PROPERTIES

- Historic Properties are located within the project APE per 36 CFR 800.4. Attach supporting materials.
- Historic Properties are not located within the project APE per 36 CFR 800.4. Attach supporting materials.

III. FINDINGS

- No historic properties will be affected (i.e., none is present or there are historic properties present but the project will have no effect upon them). Attach necessary documentation, as described at 36 CFR 800.11.
- The proposed undertaking will have no adverse effect on one or more historic properties located within the project APE under 36 CFR 800.5. Attach supporting documentation as described at 36 CFR 800.11.
- The proposed undertaking will result in an adverse effect to one or more historic properties and the applicant, or other federally authorized representative, will consult with the SHPO and other consulting parties to resolve the adverse effect per 36 CFR 800.6. Attach supporting documentation as described at 36 CFR 800.11 with a proposed plan to resolve adverse effect(s).

Authorized Signature: Katrina Smalagin For Date: 8/30/19

Type or print name: Alyssa Krantz

I concur with your no adverse effect determination only if the recommendations of the City of Madison's Landmarks Commission are followed: 1) Move mechanicals to the building's roof, 2) Enclose wires, 3) Paint the boxes on the sides of the building to match the painted sides, and 4) decrease the number & size of proposed antennae. Please resubmit a revised plan for review and comment.

IV. STATE HISTORIC PRESERVATION OFFICE COMMENTS

- Agree with the finding in section III above.
- Object to the finding for reasons indicated in attached letter.
- Cannot review until information is sent as follows: _____

Authorized Signature: [Signature] Date: 22 Oct 2019

Jake Rieb

From: Bailey, Heather <HBailey@cityofmadison.com>
Sent: Friday, October 18, 2019 8:52 AM
To: Jake Rieb; Heiser-Ertel, Lauren
Cc: Alyssa L. Krantz
Subject: RE: 9/16 Landmarks Commission - 317 State Street (Irish Pub 782440)
Attachments: 55809 LC Report 9-16-19.pdf

Jake,

I apologize for the delay. The Landmarks Commission reviewed the proposal at its September 16, 2019, meeting and determined that due to the cumulative effects of the number of new antennas on the sides of the building that it would create an Adverse Effect. As part of their discussion, they suggested that locating equipment on the rooftop or better blending the antenna boxes may mitigate the effect (the wires hanging out of the bottom of the current boxes and the difference in the color of the boxes as compared to the wall of the building make them stand out).

I have attached the action report from the meeting. Thank you for allow us the time to review and comment on the undertaking.



Heather L. Bailey, Ph.D.

Preservation Planner
Neighborhood Planning, Preservation + Design Section

Department of Planning + Community + Economic Development
Planning Division
215 Martin Luther King, Jr. Blvd.; Suite 017
PO Box 2985
Madison WI 53701-2985
Email: hbailey@cityofmadison.com Phone: 608.266.6552

From: Jake Rieb <jrieb@edgeconsult.com>
Sent: Friday, October 18, 2019 8:26 AM
To: Heiser-Ertel, Lauren <LHeiser-Ertel@cityofmadison.com>
Cc: Bailey, Heather <HBailey@cityofmadison.com>; Alyssa L. Krantz <akrantz@edgeconsult.com>
Subject: RE: 9/16 Landmarks Commission - 317 State Street (Irish Pub 782440)

Heather,

Just reaching out one more time. Will you be commenting on this? The applicant will need to move on with the review soon so I am hoping to collect comment ASAP if you plan to provide.

Sincerely,
Jake Rieb

From: Jake Rieb
Sent: Thursday, October 10, 2019 3:01 PM
To: Heiser-Ertel, Lauren <LHeiser-Ertel@cityofmadison.com>

Cc: Bailey, Heather <HBailey@cityofmadison.com>; Alyssa L. Krantz <akrantz@edgeconsult.com>

Subject: RE: 9/16 Landmarks Commission - 317 State

Lauren & Heather,

Has there been any updated formal comment on this review? Based on my calendar count, yesterday was the 40th day since updated project information including proposed drawings and photo simulations were submitted to your office on August 30th.

Sincerely,
Jake Rieb

From: Heiser-Ertel, Lauren <LHeiser-Ertel@cityofmadison.com>

Sent: Friday, September 13, 2019 8:22 AM

To: Jake Rieb <jrieb@edgeconsult.com>

Subject: 9/16 Landmarks Commission - 317 State

Hi Jake,

Attached please find the staff report for the item that will be reviewed by the Landmarks Commission on September 16. The process will be the same as last time—you do not need to attend the meeting and Heather will follow up with comments afterward.

Best,
Lauren



Lauren Heiser-Ertel

Administrative Clerk
Department of Planning & Community & Economic Development
215 Martin Luther King Jr Blvd
PO Box 2985
Madison, WI 53701-2985
608-266-4807
lheiser-ertel@cityofmadison.com

AGENDA # 9

City of Madison, Wisconsin

REPORT OF: LANDMARKS COMMISSION

PRESENTED: 9/16/19

TITLE: Section 106 Consulting Party Review -
Proposed Irish Pub
Telecommunications Facility at 317
State St; 4th Ald. Dist.

REFERRED:

REREFERRED:

REPORTED BACK:

AUTHOR: Heather Bailey, Preservation Planner

ADOPTED:

POF:

DATED: 9/26/19

ID NUMBER: 55809

Members present were: Richard Arnesen, Katie Kaliszewski, Arvina Martin, and David McLean. Excused was Anna Andrzejewski.

SUMMARY:

Bailey explained that the Landmarks Commission reviewed a proposal for new cellular infrastructure at 317 State Street at the May 20 meeting, and requested additional photo simulations and more detailed renderings. She said that the applicants took the feedback from the State Historic Preservation Office and the Landmarks Commission and have reworked their proposal. She said that they are proposing to remove the antenna installation currently located on the chimney on the back of the property and are introducing additional antennas on the sides. She showed images of the proposed installation on the west side of the building and pointed out that the new boxes will be no further forward than the current box. She said that in removing the existing items from the chimney, they are now proposing to install similar boxes on the rear of the building. In looking at the images of the west side of the building, McLean asked which boxes are new and which are existing on the side. Bailey showed photos of the existing conditions, and said that there are currently two boxes on the west side; one additional box would be added and one existing box would be enlarged. She said that the new proposal does clean things up on the east side facing the Capitol, and being a three-story building next to a two-story building, the box is minimally visible. However, she said that on the west side facing farther down State Street, the move to create more equipment there is troubling. Kaliszewski agreed, and noted that it would be larger than what is currently there. Bailey said that the applicants are proposing to increase the infrastructure on the most visible side of the building, which is next to a single-story building. She pointed out that the proposed installation includes a box to hide the equipment, but there appear to be wires hanging out of the bottom of the box. Kaliszewski agreed that it would look cleaner if the wires were not visible at the bottom. Bailey mentioned that having the wires hanging down is probably not good in terms of weather conditions either, and suggested they ask the applicants if there is a way to cover the wires. She said that the color of the boxes is kind of in keeping with the side of the building, but is not quite the same color, and suggested they ask if there is a better color match to the side of the building. Bailey discussed her recommendations and pointed out that the proposal seems to remove most of the mechanical equipment from the top of the building and it increases the amount that is on the sides of the building. She said that one expects to see mechanical equipment on top of a building, so it is generally ignored in that location. She said that rather than including more infrastructure hanging off the sides of the building, her preference is that they put mechanical equipment on top of the building, even if it is a set of antennas that are visible. She said that if the applicants do end up installing boxes that hang off the sides, she is interested in seeing if the wires can be enclosed and the boxes can better match the color of the existing building. Arnesen said that those recommendations sound good, and Kaliszewski agreed.

Bailey explained that the State Street District was determined eligible to the National Register, and this particular building has distinctive architecture. She said that staff believes that placing additional antennas on the side of the building will negatively impact the architectural character of the Irish Pub building and the properties within the viewshed of that building along State Street. She said that particularly on the west side looking down State Street, they need to look at the cumulative effects in that area because she thinks it is too much. She explained the determination the Landmarks Commission needs to make regarding whether the proposal meets the criteria for an Adverse Effect. McLean said that he agreed with Bailey's recommendation and the suggested methods to mitigate the visual impacts. Arnesen asked if staff's recommendation is that if the applicant completes the suggested methods to mitigate visual impacts that they would no longer consider it an Adverse Effect. Bailey confirmed that is correct. McLean asked if they would be able to review the project again in the future. Bailey said that they could ask to review it again. Kaliszewski explained that if the Landmarks Commission determines there is an Adverse Effect, that information would go to the State Historic Preservation Office and the reviewer would determine if they agree and what mitigation is needed.

ACTION:

A motion was made by McLean, seconded by Martin, to determine that the proposal would meet the criteria for an Adverse Effect. The motion passed by voice vote/other.



NORTH

PHOTO SIMULATION NOTES:

1. THESE PHOTO SIMULATIONS ARE AN INTERPRETATION OF THE GENERAL APPEARANCE OF THE PROPOSED INSTALLATION. EACH PHOTO SIMULATION IS BASED ON THE SCALING CRITERIA OR ASSUMPTIONS IDENTIFIED
2. AN OBJECT OF KNOWN HEIGHT WAS NOT AVAILABLE FOR REFERENCE IN THE DIRECT VICINITY OF THE ANTENNA LOCATION, LIMITING RELIABILITY OF THE HEIGHT INTERPRETATION
3. PHOTO SIMULATIONS GENERATED USING A SIMILAR ANTENNA OF SIMILAR HEIGHT AT A SIMILAR DISTANCE; ARTISTIC INTERPRETATIONS USED TO ESTIMATE THE APPROXIMATE ANTENNA SIZE AND APPEARANCE
4. THE DIFFERENCE IN ELEVATION BETWEEN THE PHOTOGRAPH LOCATION AND ANTENNA LOCATION HAS BEEN TAKEN INTO CONSIDERATION
5. THE TOPOGRAPHICAL FEATURES BETWEEN THE PHOTOGRAPH LOCATION INTERPRETED AS BEST AS POSSIBLE. THE VISIBILITY OF THE ANTENNAS WILL BE DRASTICALLY REDUCED WITHIN AREAS OF MATURE VEGETATION AND VALLEYS AND INCREASED WITHIN LARGE OPEN FIELDS AND AT HIGHER ELEVATIONS
6. A STRUCTURAL ANALYSIS WAS NOT INCLUDED IN THE SCOPE OF WORK FOR THE INCLUDED PHOTO SIMULATIONS. EQUIPMENT AND MOUNTING DEPICTED IS FOR AESTHETIC AND LOCATION APPROVAL ONLY
7. BUILDING PARAPET HEIGHT IS NOT KNOWN AND IS INTERPERETED AS BEST AS POSSIBLE. THE VISIBILITY OF THE ANTENNAS WILL BE DRASTICALLY INCREASED IN AREAS WITH A LOWER PARAPET WALL

CONSULTANT:

Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:

U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

TITLE SHEET
IRISH PUB (782440)
MADISON, WISCONSIN



PROPOSED LTE ANTENNAS: (TYP. OF 2 PER SECTOR)
 40.0' ABOVE GROUND LEVEL
 GROUND ELEVATION: 864'

PROPOSED LAA ANTENNAS: (TYP. OF 1 PER SECTOR);
 MOUNTED ON A ROOF-TOP TRI-POD BALLAST MOUNT

PHOTO SIMULATION LOCATION DESCRIPTION:

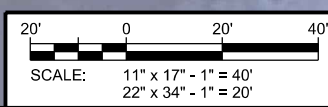
- PHOTO SIMULATION 1 (T-901)**
 TAKEN FROM THE NORTH SIDE OF STATE STREET IN FRONT OF THE SOAP OPERA
 DISTANCE TO PROPOSED TOWER: 94'
 GROUND ELEVATION: 863'
- PHOTO SIMULATION 2 (T-902)**
 TAKEN FROM THE NORTH SIDE OF STATE STREET IN FRONT OF KAREN & CO.
 DISTANCE TO PROPOSED TOWER: 115'
 GROUND ELEVATION: 861'
- PHOTO SIMULATION 3 (T-903)**
 TAKEN FROM THE INTERSECTION OF STATE STREET AND N. HENRY STREET
 DISTANCE TO PROPOSED TOWER: 254'
 GROUND ELEVATION: 860'
- PHOTO SIMULATION 4 (T-904)**
 TAKEN FROM THE PARKING LOT TO THE SOUTH OF IRISH PUB, 35' OFF OF W. JOHNSON STREET
 DISTANCE TO PROPOSED TOWER: 110'
 GROUND ELEVATION: 861'

SHEET TITLE

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/13/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	G-001



I:\214002\431\Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_08_Antenna_RoofTop_LAA-G-001.dgn



I:\214002\1431\Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_08_Antenna_RoofTop_LAAT-901.dgn

A ACTUAL PHOTO BEFORE SIMULATION

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

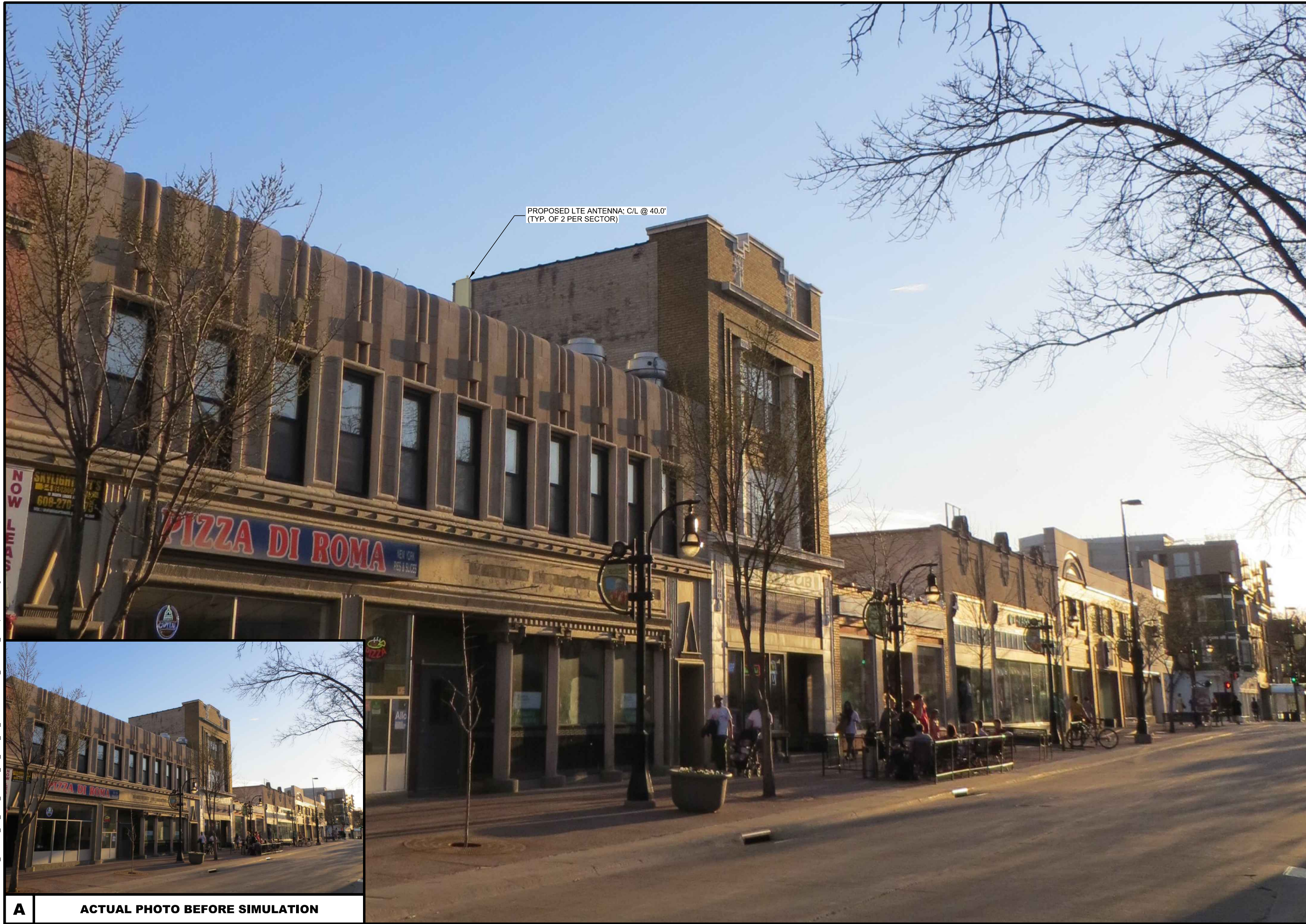
CLIENT:
U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

PHOTO SIMULATION 1
IRISH PUB (782440)
MADISON, WISCONSIN

SHEET TITLE

SUBMITTAL:		
INT.	DATE	DESCRIPTION:
BJN	01/13/20	REV. 0


CHECKED BY	KCB
PLOT DATE	1/13/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-901



PROPOSED LTE ANTENNA: C/L @ 40.0'
(TYP. OF 2 PER SECTOR)

K:\214002\1431\Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_08_Antenna_RoofTop LAAT-492.dgn

A ACTUAL PHOTO BEFORE SIMULATION

CONSULTANT:

Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:

U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

PHOTO SIMULATION 2
 IRISH PUB (782440)
 MADISON, WISCONSIN

SHEET TITLE

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
BJN	01/13/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/13/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-902

CONSULTANT:

Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53678
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:

U.S. Cellular
U.S. CELLULAR
8410 W. BRYN MAWR AVE.
SUITE 700
CHICAGO, IL 60631

PHOTO SIMULATION 4
IRISH PUB (782440)
MADISON, WISCONSIN

SHEET TITLE

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
BJN	01/13/20	REV. 0

CHECKED BY: KCB

PLOT DATE: 1/13/2020

PROJECT NUMBER: 21431

SET TYPE: PHOTO SIMS.

SHEET NUMBER: **T-904**



A ACTUAL PHOTO BEFORE SIMULATION

I:\214002\1431\Photo_Sims\High_Pub_Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_08_Antenna_Rooftop LAAT-904.dgn





IRISH PUB (782440) MADISON, STATE

MODERNIZATION DRAWINGS: WAVE 1

AX110-L-SS-CDMA: E// B71/B12 / B2/B4 / 2T2R B5 / B46

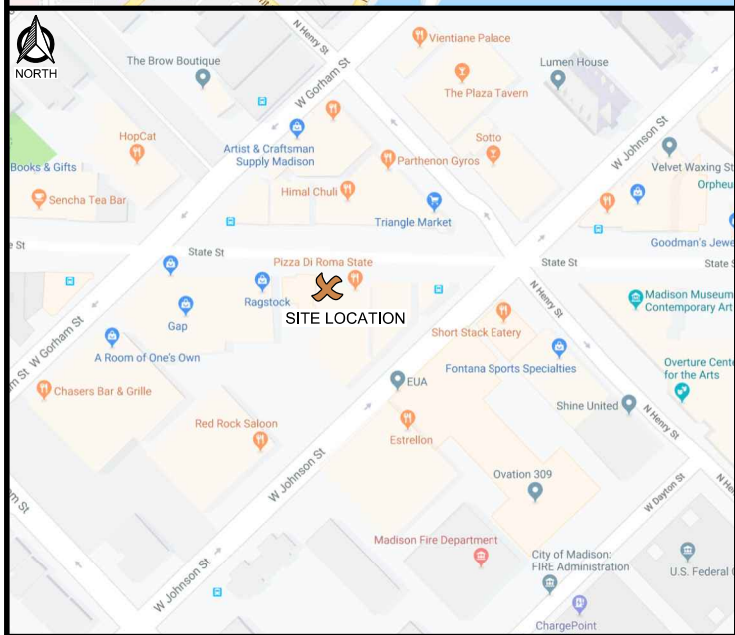
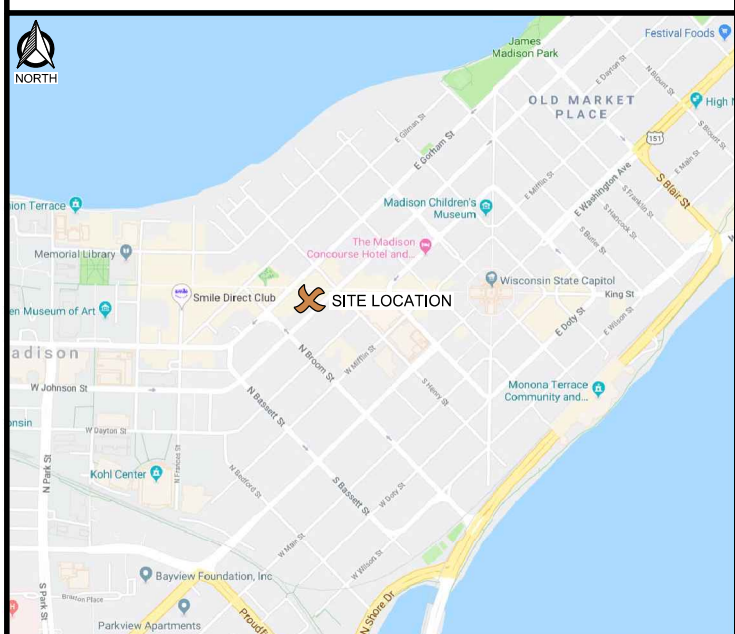
ROOFTOP INSTALLATION

CONSULTANT:

Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53578
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:

U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

TITLE SHEET
IRISH PUB (782440)
MADISON, WISCONSIN

SITE LOCATION MAPS



SCOPE OF WORK

ROOFTOP SCOPE		
QTY.	EQUIPMENT	ACTION
EX. EQUIPMENT:		
3	CDMA ANTENNA(S)	TO BE REMOVED
3	LTE ANTENNA(S)	TO BE REMOVED
6	1-5/8" LTE COAX	TO BE REMOVED
6	7/8" CDMA COAX	TO REMAIN
3	3x6 HYBRID CABLE(S)	TO BE REMOVED
3	RAYCAP SPD(S)	TO BE REMOVED
3	RADIO UNIT(S)	TO BE REMOVED
FINAL EQUIPMENT:		
6	LTE ANTENNA(S) @ 40'	TO BE INSTALLED
3	LAA RADIO(S) W/ BUILT-IN ANTENNA	TO BE INSTALLED
6	7/8" CDMA COAX	EXISTING
3	1-1/4" EUPEN HYBRID CABLE(S)	TO BE INSTALLED
3	RAYCAP SPD(S)	TO BE INSTALLED
9	REMOTE RADIO(S)	TO BE INSTALLED
9	RET JUMPER(S)	TO BE INSTALLED
COAX JUMPERS: SEE T-502 FOR QUANTITY AND LENGTHS		
6	CDMA COAX JUMPERS	TO REMAIN
6	LTE COAX JUMPERS	TO BE REMOVED
GPS ANTENNAS:		
1	CDMA GPS ANTENNA(S)	TO BE REMOVED
1	LTE GPS ANTENNA	TO BE INSTALLED
GROUND BARS:		
3	SECTOR GROUND BARS	TO REMAIN
2	COLLECTOR GROUND BARS*	TO REMAIN
CABLE ROUTE:		
1	VERTICAL CABLE TRAY	TO REMAIN
-	PARAPET MOUNTED Z-BRACKETS	TO REMAIN

EQUIPMENT PLATFORM SCOPE		
QTY.	EQUIPMENT	ACTION
EQUIPMENT:		
1	RAYCAP SPD(S)	TO BE REMOVED
5	RADIO UNITS	TO BE REMOVED
5	LTE DIPLEXERS	TO BE REMOVED
1	RBS 8102 CABINET	TO BE REMOVED
1	RBS 8120 RADIO CABINET	TO BE INSTALLED
1	BBS 174 BATTERY CABINET	TO BE INSTALLED
3	RAYCAP SPD(S)	TO BE INSTALLED
GROUND BARS:		
-	GROUND BAR AT PLATFORM*	TO REMAIN

SPECIAL REQUIREMENTS

U.S. CELLULAR PANEL ANTENNAS TO BE VERTICALLY CENTERED ON MOUNTS.

EXISTING EQUIPMENT SLED MOUNTS TO BE REMOVED & REPLACED

EQUIPMENT PLATFORM MODIFICATIONS REQUIRED PER STRUCTURAL ANALYSIS

* BRING UP TO U.S. CELLULAR STANDARDS AS NECESSARY

DIRECTORY

CLIENT:
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE., SUITE 700
 CHICAGO, IL 60631
 CONTACT: BRIAN BUTH

ENGINEERING COMPANY:
 EDGE CONSULTING ENGINEERS, INC.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53578
 PROJECT MANAGER: KEN BAUMGARDT

SITE ACQUISITION:
 WIRELESS PLANNING, LLC
 2310 MILL STREET
 NEW LONDON, WI 54961
 CONTACT: JIM WEINMANN
 920-982-3286

PROJECT INFO

SITE LOCATION:
 317 STATE STREET
 MADISON, WI 53703

SITE #: 782440

PROPERTY OWNER (2):
 IRISH PUB
 VINCE & ARLINE MACKESEY
 482 SOUTH SEGOE ROAD
 MADISON, WI 53711
 PHONE: 608.238.3553
 ACCESS CONTACT: MARK MACKESEY
 PHONE: 608.256.6071

SOAP OPERA
 CHUCK BAUER
 318 STATE STREET
 MADISON, WI 53711
 PHONE: 608.251.4051

SITE COORDINATES (PER PREVIOUS SURVEY):
 LAT: 43°-04'-28.67"
 LONG: 89°-23'-27.19"
 GROUND ELEVATION (NGVD 29): 874.6'

SHEET INDEX

NO.:	SHEET TITLE
G-001	TITLE SHEET
C-101	SITE PLAN
C-102	EXISTING EQUIPMENT SITE PLAN
A-101	EQUIPMENT PLATFORM PLAN
A-102	EQUIPMENT CABINET DETAILS
A-501	EQUIPMENT DETAILS
T-001	ANTENNA SPECIFICATIONS
T-002	EQUIPMENT SPECIFICATIONS
T-003	MOUNTING SPECIFICATIONS
T-201	SITE ELEVATION
T-301	ANTENNA CONFIGURATION
T-501	INSTALLATION DETAILS **
T-502	CABLE DETAILS
T-503	CABLE BANDING DETAILS
T-504	PLUMBING DIAGRAM
T-901	SITE PHOTOS
E-501	GROUNDING DETAILS

** SEE STRUCTURAL ANALYSIS FOR APPROVED DETAILS AND SPECIFICATIONS; DETAILS INCLUDED IN CONSTRUCTION DRAWINGS FOR CONVENIENCE ONLY

STRUCTURAL

STRUCTURAL/ MOUNT ANALYSIS:
 MP SQUARED STRUCTURAL ENGINEERS, LLC.
 REPORT #: 1916178 DATED: 10/11/2019

CONCLUSION: EXISTING AND PROPOSED ANTENNA MOUNTS ARE ADEQUATE.

THE EXISTING EQUIPMENT PLATFORM WILL NEED ADDITIONAL FRAMING AND FRAMING MODIFICATIONS TO SAFELY SUPPORT EQUIPMENT CABINETS. PLATFORM MODIFICATION DRAWINGS TO BE COMPLETED SEPARATELY FROM THIS DRAWING SET

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



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN, CALL DIGGERS HOTLINE

TOLL FREE: 1-800-242-8511
 FAX A LOCATE: 1-800-242-5811

WI STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

ENGINEER SEAL:

I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

SIGNATURE: _____

DATE: _____

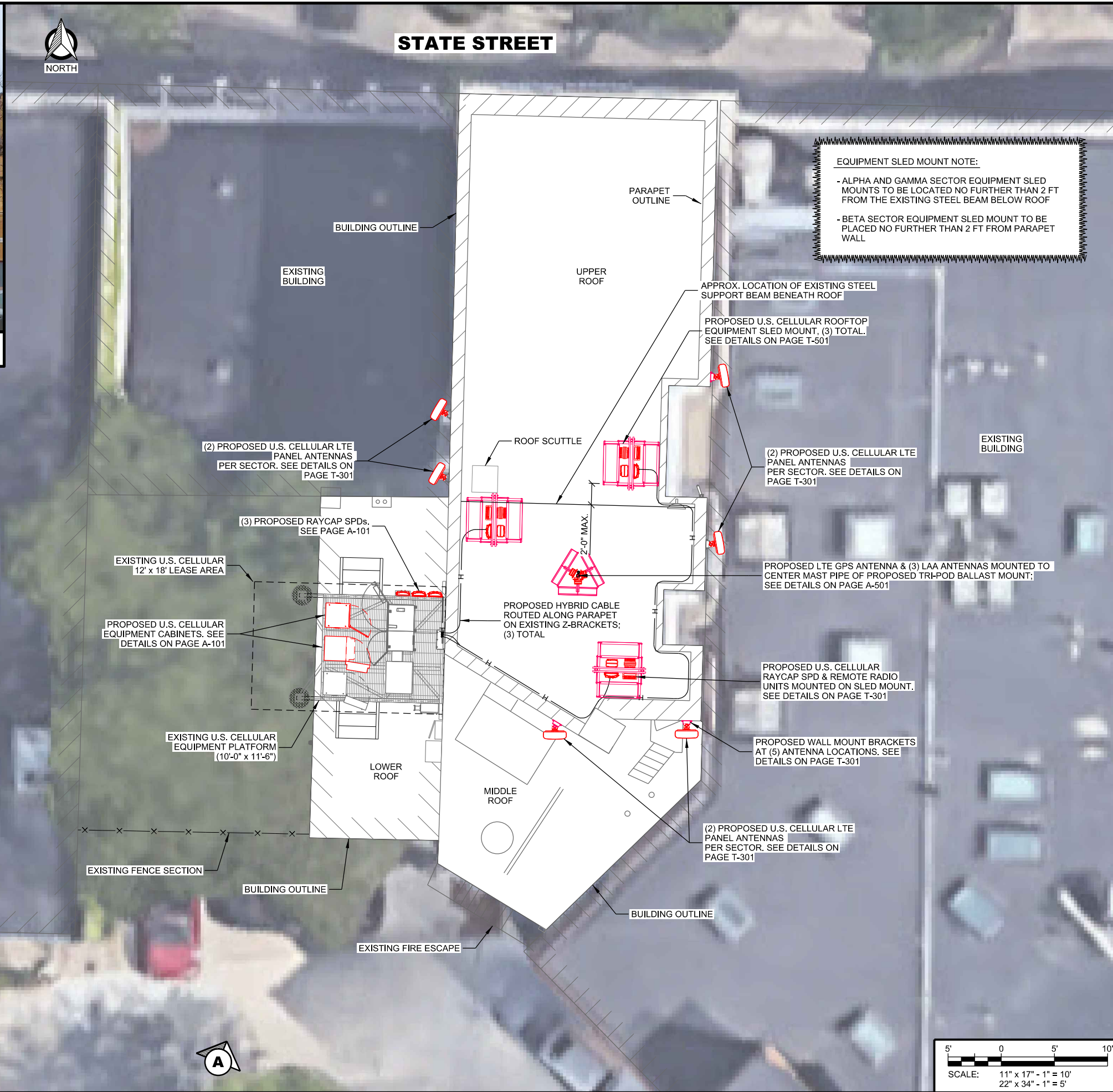
SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
CV	7/25/19	REV. A
CV	8/2/19	REV. B
CV	10/15/19	REV. 0
BJN	01/03/20	REV. 0

CHECKED BY:	KCB
PLOT DATE:	1/3/2020
PROJECT NUMBER:	21431
SET TYPE:	FINAL
SHEET NUMBER:	G-001

R2140021431CADICDIPRtG-001.dgn



A SITE OVERVIEW



CONSULTANT:
Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:
U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

SITE PLAN
IRISH PUB (782440)
MADISON, WISCONSIN

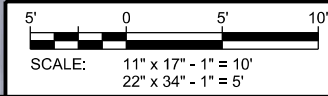
SUBMITTAL:

INT.	DATE	DESCRIPTION:
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CV	8/2/19	REV. B
CV	10/15/19	REV. 0
BJN	01/03/20	REV. 0

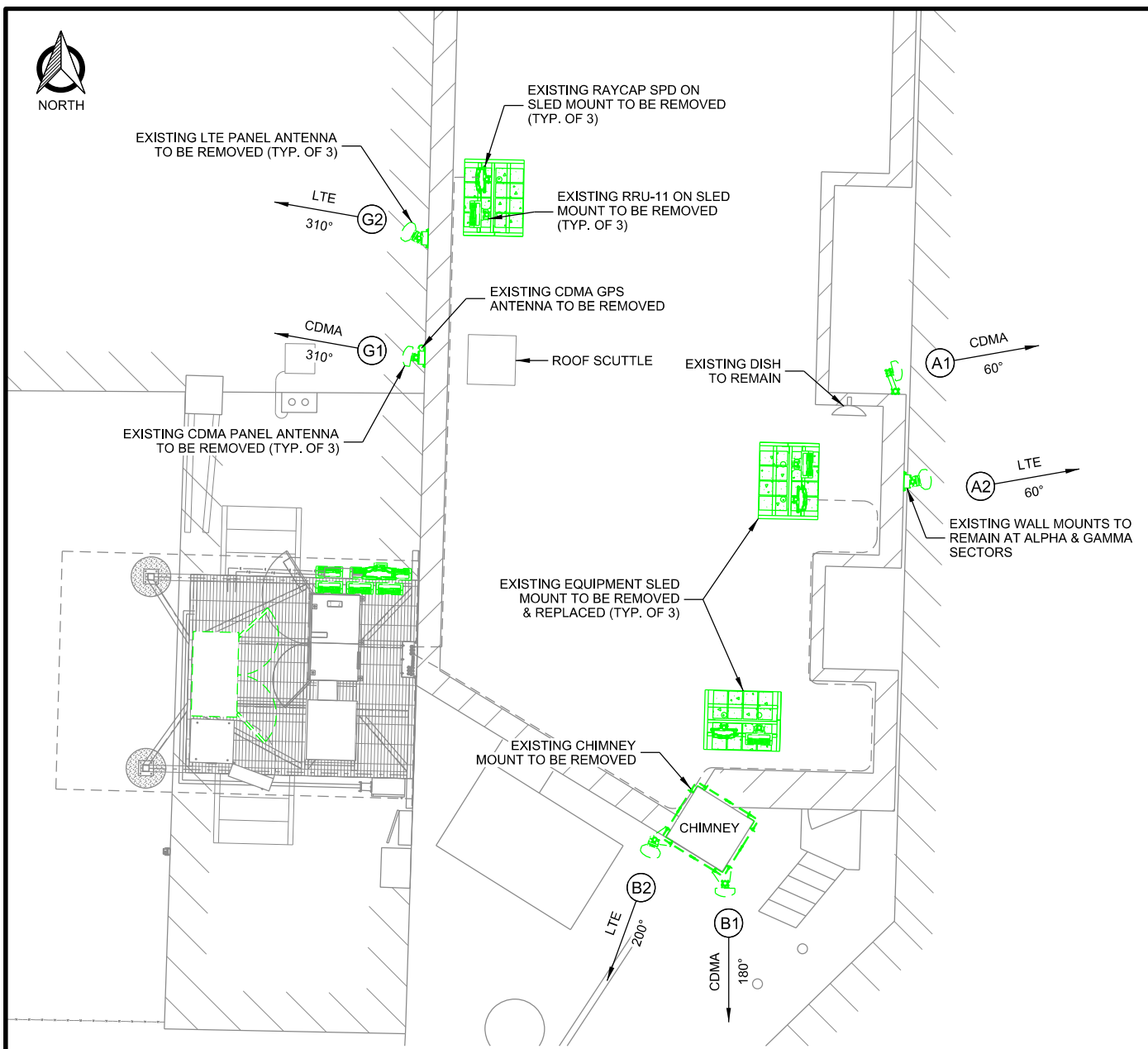
CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	FINAL
SHEET NUMBER	C-101

NOTES:

- AERIAL IMAGE FROM GOOGLE MAPS
- NORTH ARROW SHOWN AS APPROXIMATE.
- SITE PHOTOS PROVIDED BY EDGE CONSULTING ENGINEERS, INC.
- NO SURVEY AVAILABLE. SITE LAYOUT BASED ON FIELD MEASUREMENTS AND SITE PHOTOS.



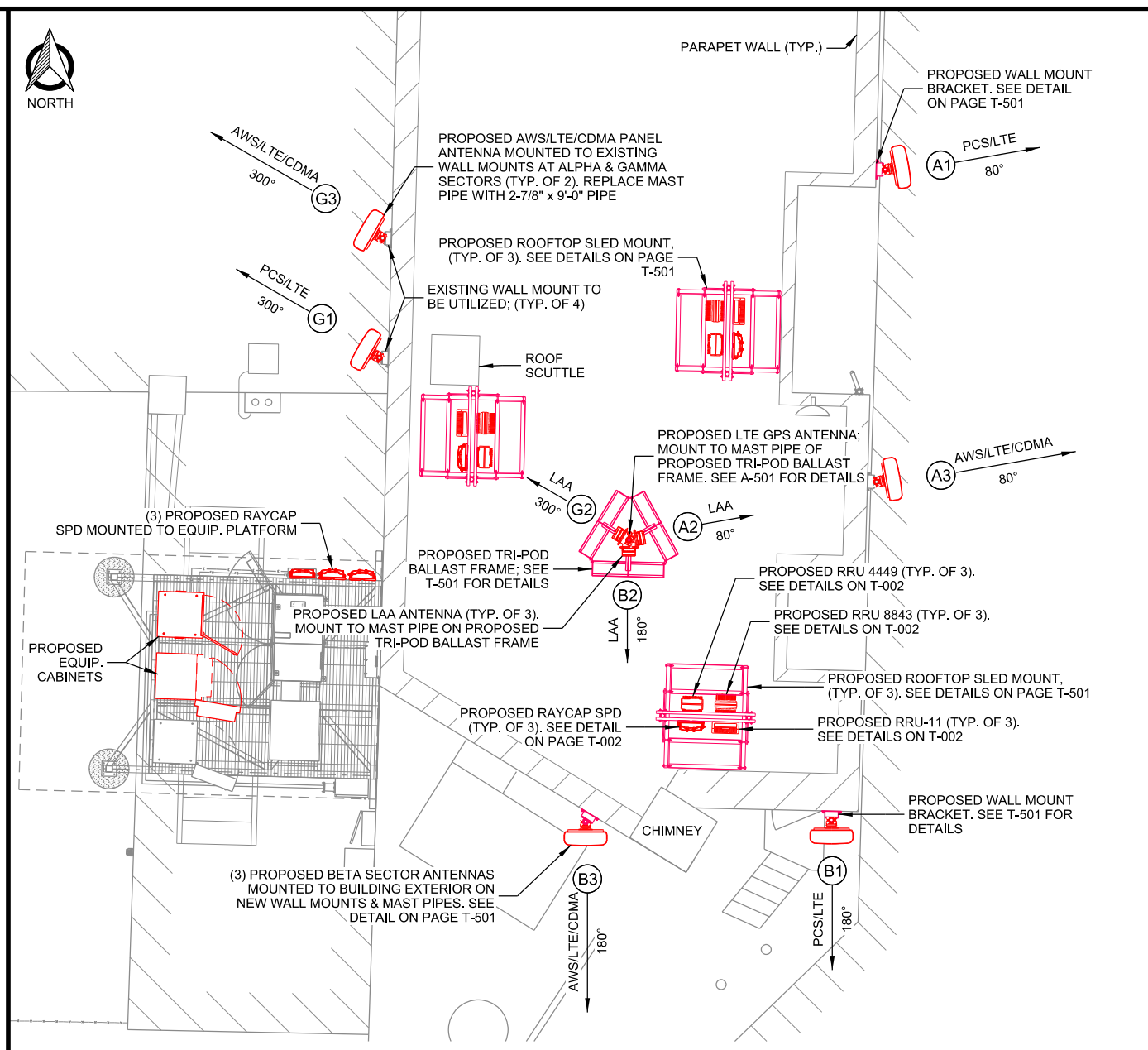
R2140021431\CAD\CDD\Plan\C-101.dgn



	Antenna Position	Technology	Antenna Model	Antenna Quantity	RAD Center	Azimuth	Surge Protector Qty.	Radio Model	Radio Qty.	Diplexer Qty.	Bias-T Qty.	Cable Type	Cable Qty.
ALPHA	A1	CDMA	Antel BXA-80063-6CF	1	39'	60°	-	-	-	-	-	7/8" Coax	2
	A2	LTE	Kathrein 800 10766	1	39'	60°	1	RRU-11	1	-	-	1-5/8" Coax	2
BETA	B1	CDMA	Antel BXA-80063-6CF	1	47'	180°	-	-	-	-	-	7/8" Coax	2
	B2	LTE	Kathrein 800 10766	1	47'	200°	1	RRU-11	1	-	-	1-5/8" Coax	2
GAMMA	G1	CDMA	Antel BXA-80063-6CF	1	39'	310°	-	-	-	-	-	7/8" Coax	2
	G2	LTE	Kathrein 800 10766	1	39'	310°	1	RRU-11	1	-	-	1-5/8" Coax	2
Total:				6			3		3		0		12

NOTE:
1. ALL ANTENNA AZIMUTHS TO BE FROM TRUE NORTH.

A EXISTING ANTENNA LAYOUT
SCALE: 11" x 17" - 1/8" = 1'-0"
22" x 34" - 1/4" = 1'-0"



	Antenna Position	Technology	Antenna Model	Antenna Quantity	RAD Center	Azimuth	Mech. Tilt	Surge Protector Qty.	B71/B12 Radio	Radio Qty.	B2/B4 Radio	Radio Qty.	B5 Radio	Radio Qty.	B46 Radio	Radio Qty.	Cable Type	Cable Qty.
ALPHA	A1	PCS/LTE	Amphenol TWIN658LU000G-T	1	39'	80°	0°	1	RRU4449	1	RRU8843	1	-	-	-	-	1-1/4" Hybrid	1
	A2	LAA	RRU2205 Built-in Directional Antenna	1	39'	80°	-	Shared	-	-	-	-	-	-	Shared	-	Shared	-
	A3	AWS/LTE/CDMA	Amphenol TWIN658LU000G-T	1	39'	80°	0°	Shared	-	-	Shared	-	RRU11	1	-	-	7/8" Coax	2
BETA	B1	PCS/LTE	Amphenol TWIN658LU000G-T	1	39'	180°	0°	1	RRU4449	1	RRU8843	1	-	-	-	-	1-1/4" Hybrid	1
	B2	LAA	RRU2205 Built-in Directional Antenna	1	39'	180°	-	Shared	-	-	-	-	-	-	Shared	-	Shared	-
	B3	AWS/LTE/CDMA	Amphenol TWIN658LU000G-T	1	39'	180°	0°	Shared	-	-	Shared	-	RRU11	1	-	-	7/8" Coax	2
GAMMA	G1	PCS/LTE	Amphenol TWIN658LU000G-T	1	39'	300°	0°	1	RRU4449	1	RRU8843	1	-	-	-	-	1-1/4" Hybrid	1
	G2	LAA	RRU2205 Built-in Directional Antenna	1	39'	300°	-	Shared	-	-	-	-	-	-	Shared	-	Shared	-
	G3	AWS/LTE/CDMA	Amphenol TWIN658LU000G-T	1	39'	300°	0°	Shared	-	-	Shared	-	RRU11	1	-	-	7/8" Coax	2
Total:				9				3		3		3		3		0		9

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

B PROPOSED ANTENNA LAYOUT
SCALE: 11" x 17" - 1/8" = 1'-0"
22" x 34" - 1/4" = 1'-0"

CONSULTANT:
Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53678
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:
U.S. Cellular
U.S. CELLULAR
8410 W. BRYN MAWR AVE.
SUITE 700
CHICAGO, IL 60631

ANTENNA CONFIGURATION
IRISH PUB (782440)
MADISON, WISCONSIN

SUBMITTAL:

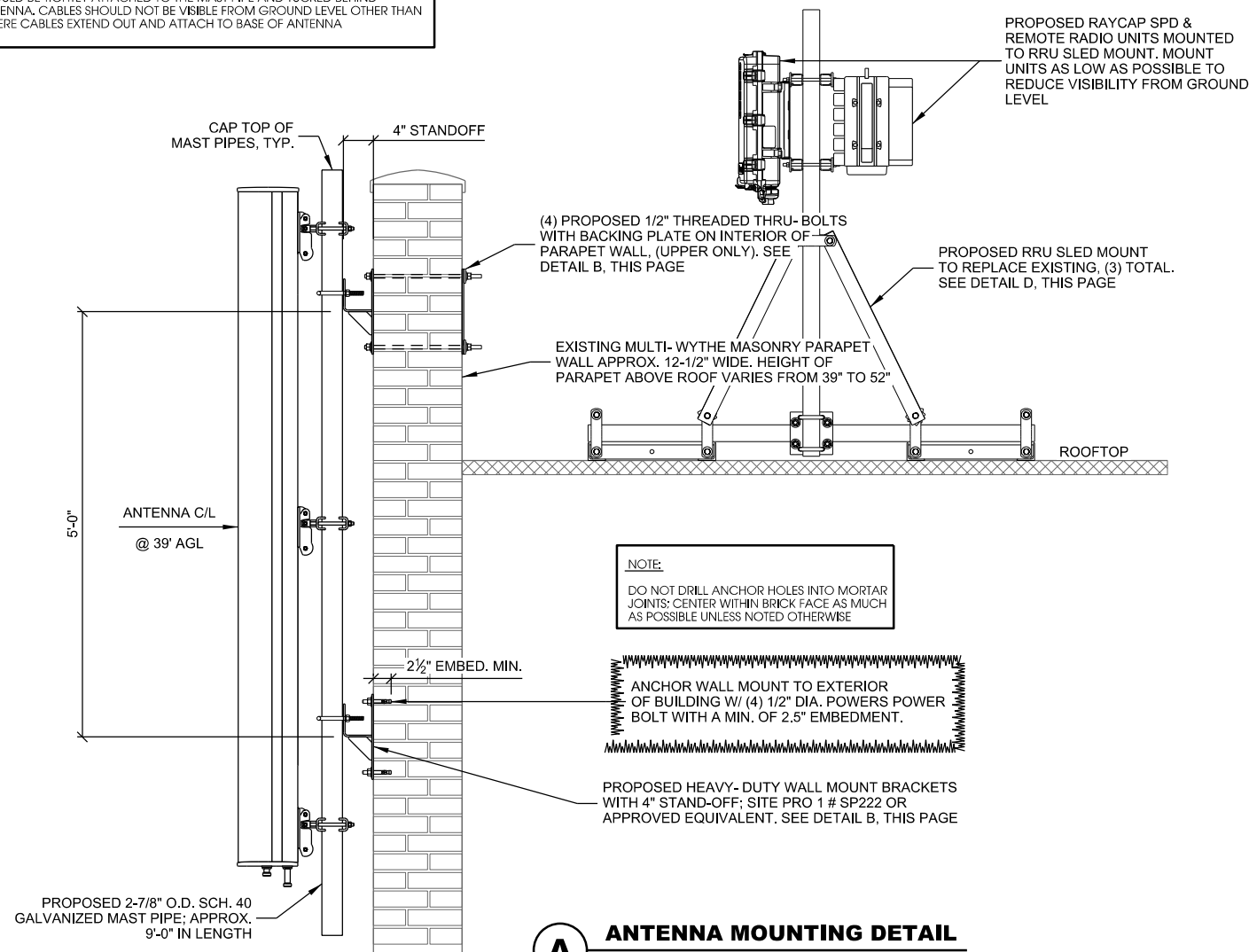
INT.	DATE	DESCRIPTION:
CV	7/25/19	REV. A
CV	8/2/19	REV. B
CV	10/15/19	REV. 0
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	FINAL
SHEET NUMBER	T-301

R2140021431\CAD\CDD\PlanT-301.dgn

NOTE:

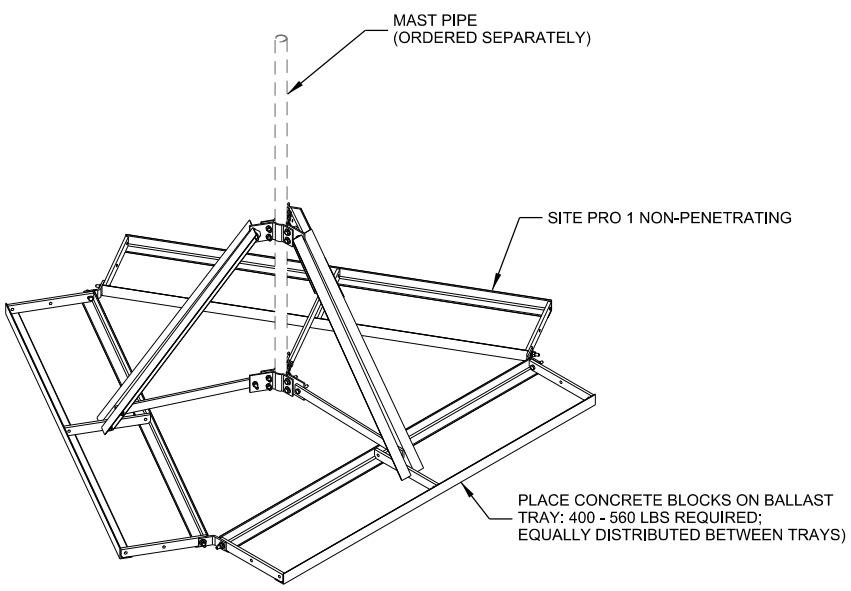
TOP OF ANTENNA SHOULD BE FLUSH WITH TOP OF THE PARAPET. ALL CABLES SHOULD BE TIGHTLY ATTACHED TO THE MAST PIPE AND TUCKED BEHIND ANTENNA. CABLES SHOULD NOT BE VISIBLE FROM GROUND LEVEL OTHER THAN WHERE CABLES EXTEND OUT AND ATTACH TO BASE OF ANTENNA



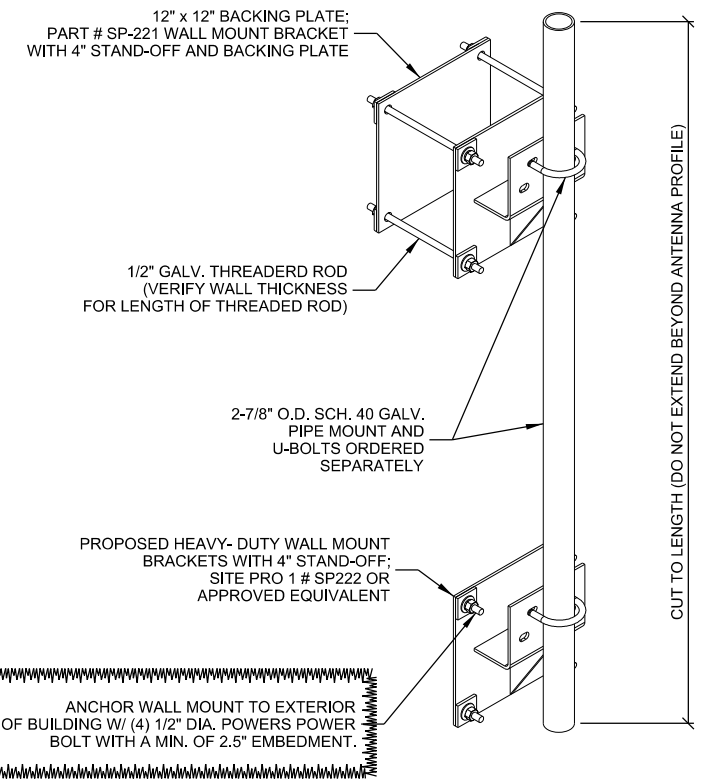
NOTE:
DO NOT DRILL ANCHOR HOLES INTO MORTAR JOINTS; CENTER WITH BRICK FACE AS MUCH AS POSSIBLE UNLESS NOTED OTHERWISE

A ANTENNA MOUNTING DETAIL
SCALE: 11" x 17" - 1/2" = 1'-0"
22" x 34" - 1" = 1'-0"

MANUFACTURER: SITE PRO 1
MODEL: TRPD-HD
ACCEPTS: 2-3/8", 2-7/8", 3-1/2" OR 4-1/2" O.D. MAST PIPE
VERIFY BALLAST REQUIRED WITH STRUCTURAL ANALYSIS LISTED ON TITLE SHEET.



C TRIPOD BALLAST FRAME

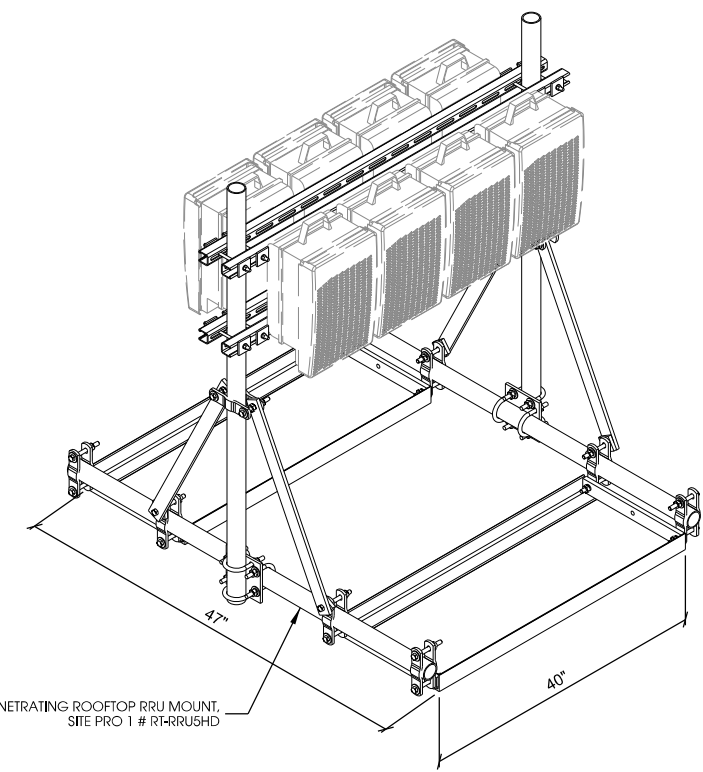


B HD WALL MOUNT BRACKETS

MANUFACTURER: SITE PRO 1
MODEL: RT-RRU5HD
ENGINEERED FOR (8) RRU MOUNTING LOCATIONS
40" x 47" FOOT PRINT
HORIZONTALS ARE 12 GA. GALVANIZED SLOTTED UNISTRUT FOR DIRECT MOUNTING
SUITABLE FOR MOUNTING RRU'S ON BOTH SIDES
ORDER (2) RUBBER MATS SEPARATELY (PART # MAT18)

BALLAST REQUIREMENTS:

- (6) CONCRETE BLOCKS REQUIRED FOR BALLAST, (3) BLOCKS PER TRAY
- A NOMINAL 4" x 8" x 16" SOLID CONCRETE BLOCK WEIGHS 20-35 LBS; AN ASSUMED WEIGHT OF 30 LBS WAS USED FOR THE BLOCK CALCS.
- THE TOTAL NUMBER OF CONCRETE BLOCKS SHOULD BE SPLIT BETWEEN THE TWO BALLAST TRAYS
- ADDITIONAL BALLAST WILL BE NEEDED IF MORE EQUIPMENT IS ADDED



D ROOFTOP RRU SLED MOUNT

MANUFACTURER: SITE PRO 1
MODEL: SP221 & SP222
MODEL SP221 INCLUDES BACKING PLATE
MOUNTING PLATE IS 12" x 12" WITH 9/16" HOLES ON 10" CENTERS
STANDS 4" OFF WALL
ACCEPTS 2-3/8" TO 4-1/2" O.D. PIPES
PURCHASE MAST PIPES & U-BOLTS SEPARATELY
INCLUDES STAINLESS WEDGE ANCHORS

CONSULTANT:
Edge Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53678
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:
U.S. Cellular
U.S. CELLULAR
8410 W. BRYN MAWR AVE.
SUITE 700
CHICAGO, IL 60631

INSTALLATION DETAILS
IRISH PUB (782440)
MADISON, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
CV	7/25/19	REV. A
CV	8/2/19	REV. B
CV	10/15/19	REV. 0
BJN	01/03/20	REV. 0

CHECKED BY:	KCB
PLOT DATE:	1/3/2020
PROJECT NUMBER:	21431
SET TYPE:	FINAL
SHEET NUMBER:	T-501



A EXISTING EQUIPMENT PLATFORM



B EXISTING CABLE ROUTING UP BUILDING EXTERIOR



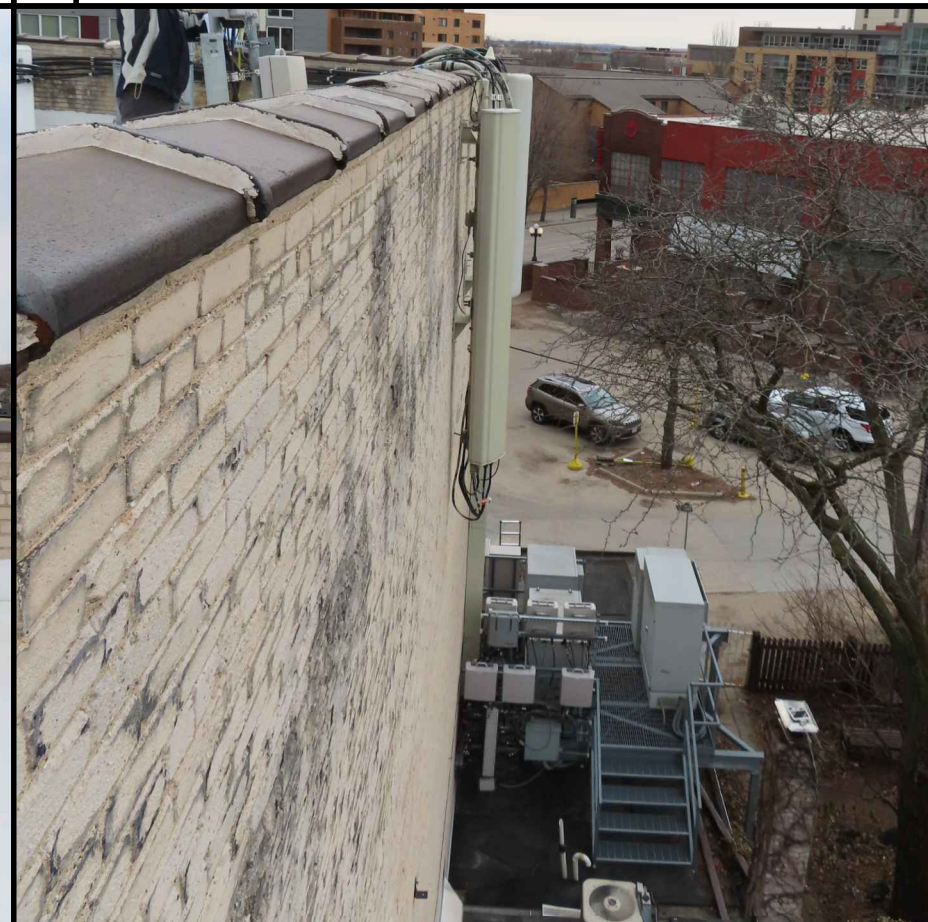
C EXISTING CABLE ROUTING ALONG PARAPET



D EXISTING ROOFTOP OVERVIEW



E EXISTING EQUIPMENT SLED MOUNT



F EXISTING WALL MOUNTED PANEL ANTENNAS

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:
U.S. Cellular
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SITE PHOTOS
IRISH PUB (782440)
MADISON, WISCONSIN

SUBMITTAL:

INT.	DATE	DESCRIPTION:
CV	7/25/19	REV. A
CV	8/2/19	REV. B
CV	10/15/19	REV. 0
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	FINAL

SHEET NUMBER **T-901**

R2140021431CAD/CD/Plat/T-901.dgn



Unselected Option A: LAA Remain on Side Walls

PHOTO SIMULATION NOTES:

1. THESE PHOTO SIMULATIONS ARE AN INTERPRETATION OF THE GENERAL APPEARANCE OF THE PROPOSED INSTALLATION. EACH PHOTO SIMULATION IS BASED ON THE SCALING CRITERIA OR ASSUMPTIONS IDENTIFIED
2. AN OBJECT OF KNOWN HEIGHT WAS NOT AVAILABLE FOR REFERENCE IN THE DIRECT VICINITY OF THE ANTENNA LOCATION, LIMITING RELIABILITY OF THE HEIGHT INTERPRETATION
3. PHOTO SIMULATIONS GENERATED USING A SIMILAR ANTENNA OF SIMILAR HEIGHT AT A SIMILAR DISTANCE; ARTISTIC INTERPRETATIONS USED TO ESTIMATE THE APPROXIMATE ANTENNA SIZE AND APPEARANCE
4. THE DIFFERENCE IN ELEVATION BETWEEN THE PHOTOGRAPH LOCATION AND ANTENNA LOCATION HAS BEEN TAKEN INTO CONSIDERATION
5. THE TOPOGRAPHICAL FEATURES BETWEEN THE PHOTOGRAPH LOCATION INTERPRETED AS BEST AS POSSIBLE. THE VISIBILITY OF THE ANTENNAS WILL BE DRASTICALLY REDUCED WITHIN AREAS OF MATURE VEGETATION AND VALLEYS AND INCREASED WITHIN LARGE OPEN FIELDS AND AT HIGHER ELEVATIONS
6. A STRUCTURAL ANALYSIS WAS NOT INCLUDED IN THE SCOPE OF WORK FOR THE INCLUDED PHOTO SIMULATIONS. EQUIPMENT AND MOUNTING DEPICTED IS FOR AESTHETIC AND LOCATION APPROVAL ONLY
7. BUILDING PARAPET HEIGHT IS NOT KNOWN AND IS INTERPRETED AS BEST AS POSSIBLE. THE VISIBILITY OF THE ANTENNAS WILL BE DRASTICALLY INCREASED IN AREAS WITH A LOWER PARAPET WALL

CONSULTANT:

Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53678
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:

U.S. Cellular
U.S. CELLULAR
8410 W. BRYN MAWR AVE.
SUITE 700
CHICAGO, IL 60631

TITLE SHEET
IRISH PUB (782440)
MADISON, WISCONSIN

SHEET TITLE

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
BJN	01/03/20	REV. 0

CHECKED BY: KCB

PLOT DATE: 1/3/2020

PROJECT NUMBER: 21431

SET TYPE: PHOTO SIMS.

SHEET NUMBER: **G-001**

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PROPOSED ROOFTOP ANTENNAS:
40.0' ABOVE GROUND LEVEL
GROUND ELEVATION: 864'

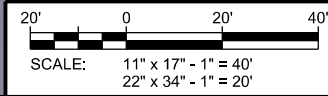
PHOTO SIMULATION LOCATION DESCRIPTION:

PHOTO SIMULATION 1 (T-901)
TAKEN FROM THE NORTH SIDE OF STATE STREET IN FRONT OF THE SOAP OPERA
DISTANCE TO PROPOSED TOWER: 94'
GROUND ELEVATION: 863'

PHOTO SIMULATION 2 (T-902)
TAKEN FROM THE NORTH SIDE OF STATE STREET IN FRONT OF KAREN & CO.
DISTANCE TO PROPOSED TOWER: 115'
GROUND ELEVATION: 861'

PHOTO SIMULATION 3 (T-903)
TAKEN FROM THE INTERSECTION OF STATE STREET AND N. HENRY STREET
DISTANCE TO PROPOSED TOWER: 254'
GROUND ELEVATION: 860'

PHOTO SIMULATION 4 (T-904)
TAKEN FROM THE PARKING LOT TO THE SOUTH OF IRISH PUB, 35' OFF OF W. JOHNSON STREET
DISTANCE TO PROPOSED TOWER: 110'
GROUND ELEVATION: 861'



I:\214002\431\Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_08_Antenna_Store\med_LAA_Pipe\C-001.dgn

Unselected Option A: LAA Remain on Side Walls

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
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CLIENT:
U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

PHOTO SIMULATION 1
IRISH PUB (782440)
MADISON, WISCONSIN



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A ACTUAL PHOTO BEFORE SIMULATION

SHEET TITLE

SUBMITTAL:		
INT.	DATE	DESCRIPTION:
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-901

Unselected Option A: LAA Remain on Side Walls

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
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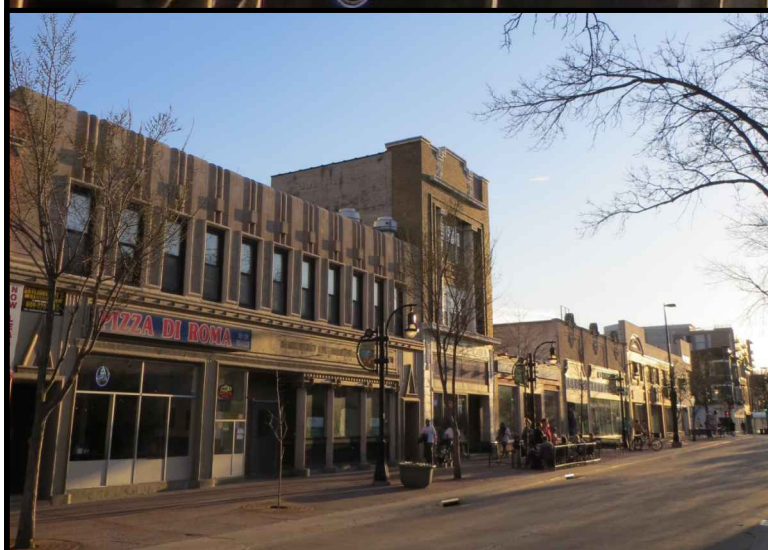
PHOTO SIMULATION 2
IRISH PUB (782440)
MADISON, WISCONSIN

SHEET TITLE

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-902

PROPOSED LTE ANTENNA C/L @ 40.0'
 (TYP. OF 2 PER SECTOR)



A ACTUAL PHOTO BEFORE SIMULATION

I:\214002\21431\Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_08_Antenna_Shortened_LAA_Pipe1-T-902.dgn

Unselected Option A: LAA Remain on Side Walls

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
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CLIENT:
U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

PHOTO SIMULATION 3
 IRISH PUB (782440)
 MADISON, WISCONSIN



I:\214002\21431\Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_08_Antenna_Shrouded_LAA_Pipe1-T-903.dgn

A ACTUAL PHOTO BEFORE SIMULATION

SHEET TITLE

SUBMITTAL:		
INT.	DATE	DESCRIPTION
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-903

Unselected Option A: LAA Remain on Side Walls

CONSULTANT:

Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:

U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

PHOTO SIMULATION 4
IRISH PUB (782440)
MADISON, WISCONSIN

SHEET TITLE

SUBMITTAL:

INT.	DATE	DESCRIPTION
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-904



A ACTUAL PHOTO BEFORE SIMULATION

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NORTH

Unselected Option B: All Antennas on Rooftop

PHOTO SIMULATION NOTES:

1. THESE PHOTO SIMULATIONS ARE AN INTERPRETATION OF THE GENERAL APPEARANCE OF THE PROPOSED INSTALLATION. EACH PHOTO SIMULATION IS BASED ON THE SCALING CRITERIA OR ASSUMPTIONS IDENTIFIED
2. AN OBJECT OF KNOWN HEIGHT WAS NOT AVAILABLE FOR REFERENCE IN THE DIRECT VICINITY OF THE ANTENNA LOCATION, LIMITING RELIABILITY OF THE HEIGHT INTERPRETATION
3. PHOTO SIMULATIONS GENERATED USING A SIMILAR ANTENNA OF SIMILAR HEIGHT AT A SIMILAR DISTANCE; ARTISTIC INTERPRETATIONS USED TO ESTIMATE THE APPROXIMATE ANTENNA SIZE AND APPEARANCE
4. THE DIFFERENCE IN ELEVATION BETWEEN THE PHOTOGRAPH LOCATION AND ANTENNA LOCATION HAS BEEN TAKEN INTO CONSIDERATION
5. THE TOPOGRAPHICAL FEATURES BETWEEN THE PHOTOGRAPH LOCATION INTERPRETED AS BEST AS POSSIBLE. THE VISIBILITY OF THE ANTENNAS WILL BE DRASTICALLY REDUCED WITHIN AREAS OF MATURE VEGETATION AND VALLEYS AND INCREASED WITHIN LARGE OPEN FIELDS AND AT HIGHER ELEVATIONS
6. A STRUCTURAL ANALYSIS WAS NOT INCLUDED IN THE SCOPE OF WORK FOR THE INCLUDED PHOTO SIMULATIONS. EQUIPMENT AND MOUNTING DEPICTED IS FOR AESTHETIC AND LOCATION APPROVAL ONLY
7. BUILDING PARAPET HEIGHT IS NOT KNOWN AND IS INTERPERETED AS BEST AS POSSIBLE. THE VISIBILITY OF THE ANTENNAS WILL BE DRASTICALLY INCREASED IN AREAS WITH A LOWER PARAPET WALL

CONSULTANT:



CLIENT:



TITLE SHEET
IRISH PUB (782440)
MADISON, WISCONSIN



PHOTO SIMULATION LOCATION DESCRIPTION:

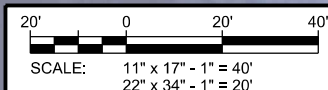
- PHOTO SIMULATION 1 (T-901)**
TAKEN FROM THE NORTH SIDE OF STATE STREET IN FRONT OF THE SOAP OPERA
DISTANCE TO PROPOSED TOWER: 94'
GROUND ELEVATION: 863'
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TAKEN FROM THE NORTH SIDE OF STATE STREET IN FRONT OF KAREN & CO.
DISTANCE TO PROPOSED TOWER: 115'
GROUND ELEVATION: 861'
- PHOTO SIMULATION 3 (T-903)**
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DISTANCE TO PROPOSED TOWER: 254'
GROUND ELEVATION: 860'
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TAKEN FROM THE PARKING LOT TO THE SOUTH OF IRISH PUB, 35' OFF OF W. JOHNSON STREET
DISTANCE TO PROPOSED TOWER: 110'
GROUND ELEVATION: 861'

SHEET TITLE

SUBMITTAL:

INT.	DATE:	DESCRIPTION:
BJN	01/03/20	REV. 0

CHECKED BY:	KCB
PLOT DATE:	1/3/2020
PROJECT NUMBER:	21431
SET TYPE:	PHOTO SIMS.
SHEET NUMBER:	G-001



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Unselected Option B: All Antennas on Rooftop

PROPOSED LTE ANTENNA MOUNTED ON ROOF-TOP SLED MOUNTS; (TYP. 2 PER SECTOR)

CONSULTANT:
Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:
U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

PHOTO SIMULATION 1
IRISH PUB (782440)
MADISON, WISCONSIN

SHEET TITLE

SUBMITTAL:		
INT.	DATE	DESCRIPTION:
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-901

K:\214002\1431\Photo_Sims\Irish_Pub_Photo_Sim_Photos\Photo_Sims_Rooftop_Sheds\T-901.dgn



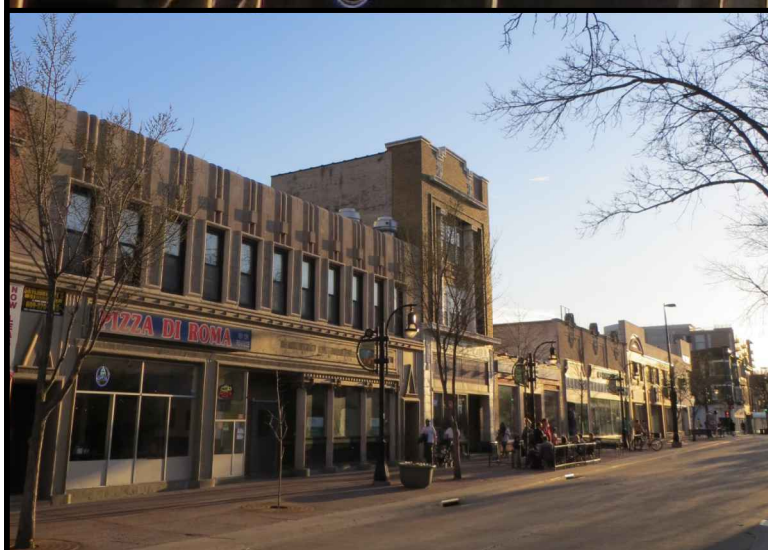
A ACTUAL PHOTO BEFORE SIMULATION



Unselected Option B: All Antennas on Rooftop

PROPOSED LTE ANTENNA
MOUNTED ON ROOF-TOP SLED
MOUNTS: (TYP. 2 PER SECTOR)

I:\214002\1431\Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_Rooftop_Sheds\T-902.dgn



A ACTUAL PHOTO BEFORE SIMULATION



CONSULTANT:
Edge
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608.644.1549 FAX
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CLIENT:
U.S. Cellular
U.S. CELLULAR
8410 W. BRYN MAWR AVE.
SUITE 700
CHICAGO, IL 60631

PHOTO SIMULATION 2
IRISH PUB (782440)
MADISON, WISCONSIN

SHEET TITLE

INT.	DATE	DESCRIPTION
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-902

Unselected Option B: All Antennas on Rooftop

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Edge
 Consulting Engineers, Inc.
 624 WATER STREET
 PRAIRIE DU SAC, WI 53678
 608.644.1449 VOICE
 608.644.1549 FAX
 www.edgeconsult.com

CLIENT:
U.S. Cellular
 U.S. CELLULAR
 8410 W. BRYN MAWR AVE.
 SUITE 700
 CHICAGO, IL 60631

PHOTO SIMULATION 4
IRISH PUB (782440)
MADISON, WISCONSIN

PROPOSED LTE ANTENNA MOUNTED ON
 ROOF-TOP SLED MOUNTS;
 (TYP. 2 PER SECTOR)



A **ACTUAL PHOTO BEFORE SIMULATION**

SHEET TITLE

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
BJN	01/03/20	REV. 0

CHECKED BY	KCB
PLOT DATE	1/3/2020
PROJECT NUMBER	21431
SET TYPE	PHOTO SIMS.
SHEET NUMBER	T-904

K:\214002\1431\Photo_Sims\High_Pub_Photo_Sims\High_Pub_Photo_Sim_Photos\Photo_Sims_RoofTop_Sheds\T-904.dgn