PROJECT TERRA CONSULTING GROUP, LTD

600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
(847) 698-6400

SURVEYOR: WILLIAMS & WORKS 549

OTTAWA AVE NW GRAND RAPIDS, MI 49503 (616) 224-1500

STRUCTURAL: HUTTER TRANKINA ENGINEERING 32 W 273 ARMY TRAIL RD, SUITE #100

(630) 513-6711

EQUIPMENT ENGINEERING

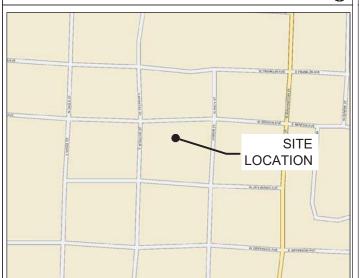
FOR S1-S5 ONLY

DATE: 7-30-18

EXP 11/18

OPERATIONS:

APPROVALS REAL ESTATE: RF: CONSTRUCTION:



VICINITY MAP

N.T.S.



REGIONAL MAP

GENERAL CONTRACTOR IS TO PROVIDE DESIGNER A SHOP DRAWING AND/ OR CUT SHEET FOR STEEL FABRICATION, ELECTRICAL COMPONENTS, MECHANICAL COMPONENTS PRIOR TO FABRICATION OR PURCHASE. IF THERE ARE ANY CONFLICTS WITH SPECIFIED PART/ MODEL NUMBERS, PLEASE BRING THAT TO THE ATTENTION OF THE DESIGNER.

CHICAGO SMSA

limited partnership

CHICAGO SMSA LIMITED PARTNERSHIP d/b/a VERIZON WIRELESS 1515 WOODFIELD ROAD, SUITE 1400 SCHAUMBURG, ILLINOIS 60173 PHONE: (847) 619-5397 FAX: (847) 706-7415

LOCATION NUMBER: 455883

SITE NAME: WASHINGTON & JACKSON

55 S MAIN ST. NAPERVILLE, IL 60540

ALL ROOF WORK TO BE BY AND COORDINATED WITH LANDLORD'S ROOFER.

FIBER COORDINATION IS NOT COMPLETE (PENDING FIBER CONTACT). PRIOR TO CONSTRUCTION, CONTACT DESIGNER FOR UPDATE.

PROJECT TYPE

PROPOSED LESSEE ANTENNAS AND EQUIPMENT PLATFORM TO BE MOUNTED ON EXISTING ROOF

PROJECT INFORMATION

SITE COORDINATES: LATITUDE: 41° 46' 27.71" N (1A CERTIFICATION)

LONGITUDE: 88° 09' 01.14" W (1A CERTIFICATION)

 GROUND ELEVATION:
 679' (1A)

 P.I.N. #:
 07-13-418-017

 ADDRESS:
 55 S. MAIN STREET NAPERVILLE, IL 60540

N.T.S.

UTILITIES: POWER: NAPERVILLE ELECTRIC FIBER: T.B.D.

JURISDICTION: CITY OF NAPERVILLE

OCCUPANCY: COMMERCIAL BUILDING

OCCUPANCY: COMMERCIAL BU
ZONING: OR

CONSTRUCTION TYPE: ROOF TOP

GENERATOR TYPE: TAP BOX (NO PERMANENT GENERATOR)

PROPERTY OWNER: RPAI REAL ESTATE

LL CONTACT: LAURA PACINO PHONE: (630) 634-4283

APPLICANT: CHICAGO SMSA limited partnership d/b/a Verizon Wireless 1515 WOODFIELD ROAD

SCHAUMBURG, IL 60173

CONSTRUCTION MANAGER: MIKE EISENMENGER

REAL ESTATE MANAGER: NICK POLYDOROUS (847) 619-4281

SHEET	DRAWING INDEX	REVISION
T-1	TITLE SHEET	4
C-1	SITE PLAN	-
A-1	ROOF PLAN	4
A-2	PROPOSED PLATFORM EQUIPMENT LAYOUT	4
A-3	SITE ELEVATIONS	4
A-4	SITE ELEVATION	4
A-5	SITE DETAILS	4
A-6	SITE DETAILS	4
A-7	SITE DETAILS	-
ANT-1	ANTENNA INFORMATION	3
ANT-2	ANTENNA INFORMATION	3
ANT-3	ANTENNA LAYOUT	1,3
EQ-1	EQUIPMENT DETAILS	-
EQ-2	EQUIPMENT DETAILS	-
S-1	ROOF PLAN	1,3,4
S-2	DETAILS	4
S-3	DETAILS AND NOTES	3,4
S-4	DETAILS	1,3
S-5	DETAILS	3
E-1	UTILITY ROUTING PLAN	4
E-2	UTILITY ROUTING PLAN	4
E-3	GROUNDING ROUTING PLAN	1,4
E-4	GROUNDING ROUTING PLAN	4
E-5	PLATFORM LIGHTING PLAN	3,4
E-6	ELECTRICAL AND GROUNDING DETAILS	-
E-7	PANEL BOARD AND ON - LINE DIAGRAM	-
SP-1	SPECIFICATIONS	-
P-1	EXISTING SITE PHOTOS	-
	ATTACHMENTS	
SE-1	SITE SURVEY	-
RF-1,2	SITE SAFE RF COMPLIANCE REPORT	2
	22" x 34" IS FULL SCALE. 11" x 17" IS HALF SCALE.	

SMSA sited partnersh



	BY	S	ST	ST	ESH	ESH	
	DATE	2/26/18	3/2/18	4/1/18	7/13/18	7/30/18	
REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	UPDATE PER LATEST STRUCTURAL DESIGN	FINALS PENDING FIBER	UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN	UPDATED PER SITETRACKER AND LANDOWNER COMMENTS	
	NO.		-	2	6	4	

LOC. # 455833

WASHINGTON & JACKSON

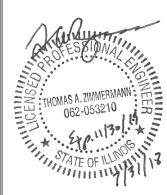
55 S MAIN STREET NAPERVILLE, IL 60540

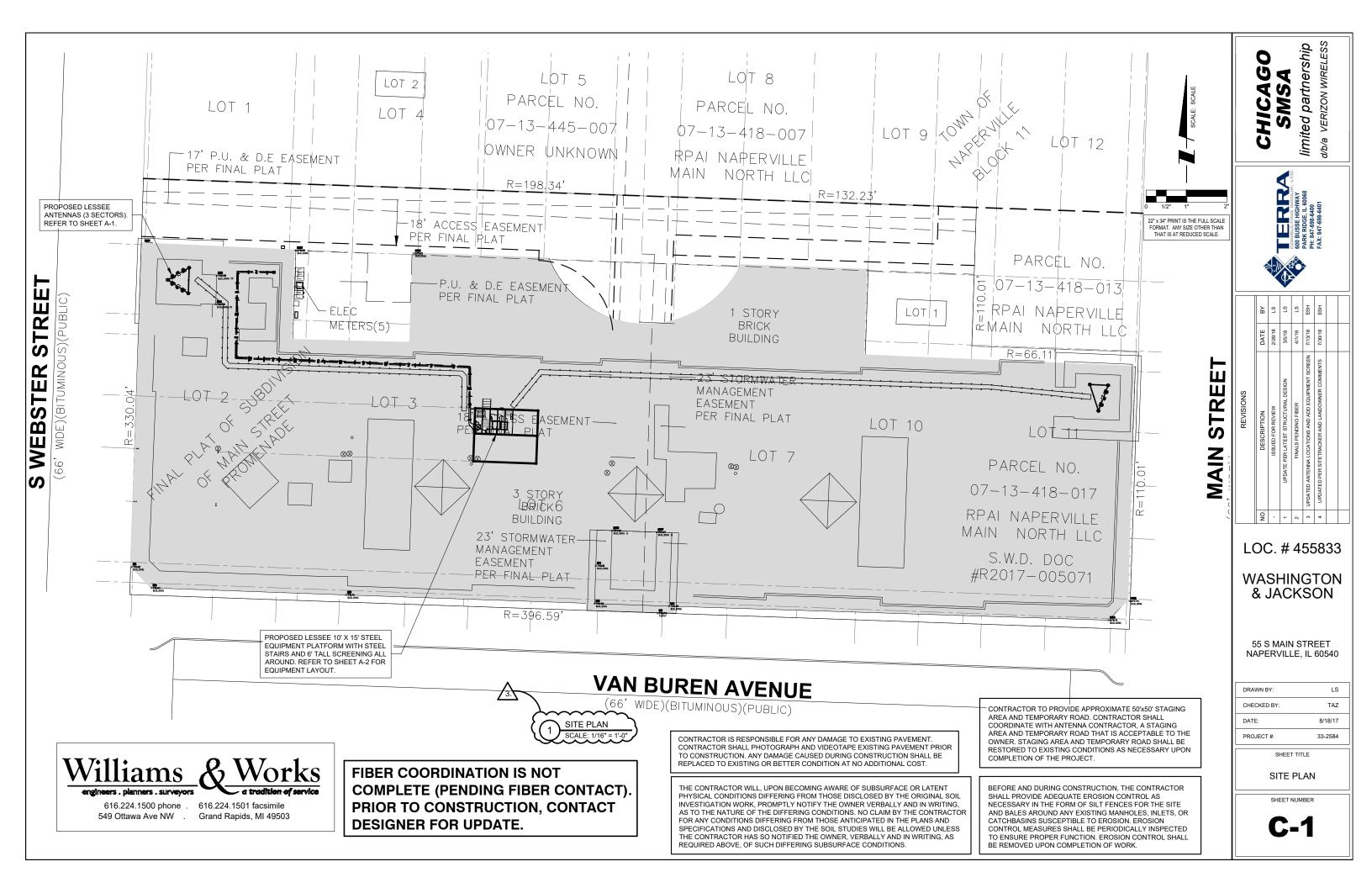
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PPO IECT #:	33.2584

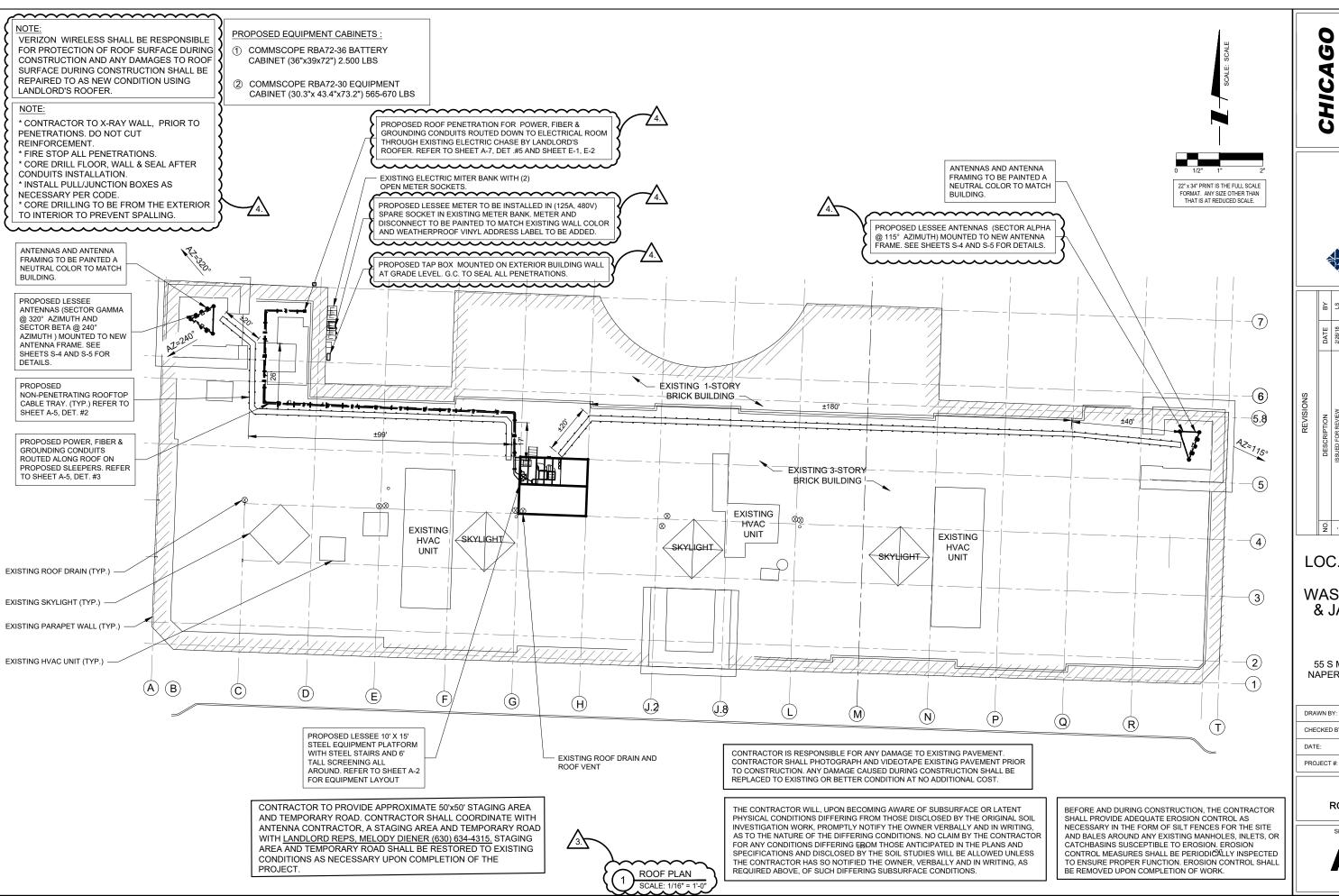
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REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	UPDATE PER LATEST STRUCTURAL DESIGN	FINALS PENDING FIBER	UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN	UPDATED PER SITETRACKER AND LANDOWNER COMMENTS	
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LOC. # 455833

WASHINGTON & JACKSON

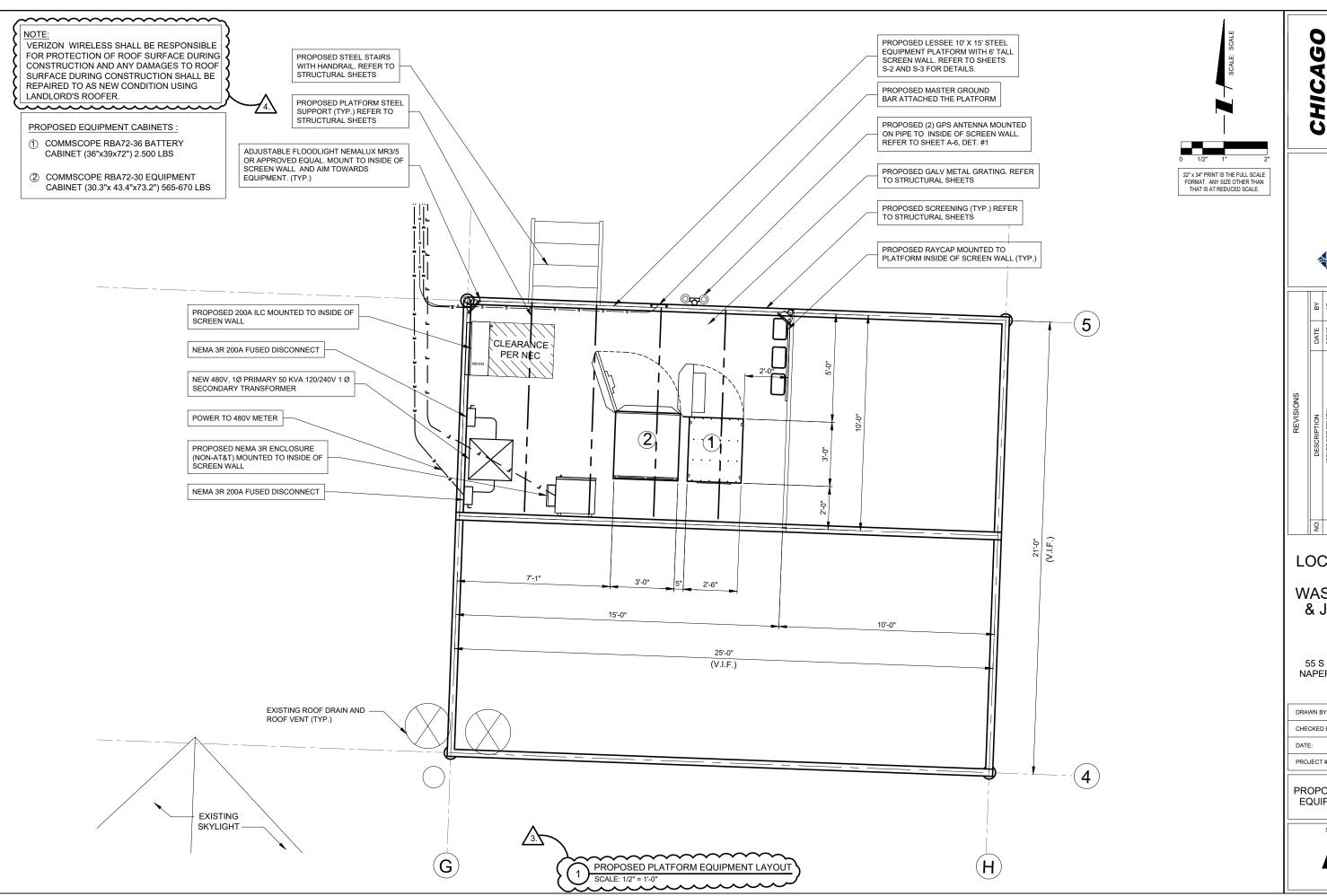
55 S MAIN STREET NAPERVILLE, IL 60540

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١	DATE:	8/18/17
ı	PROJECT #:	33-2584

SHEET TITLE

ROOF PLAN

SHEET NUMBER



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	DATE	2/26/18	3/5/18	4/1/18	7/13/18	8/02/18	
REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	UPDATE PER LATEST STRUCTURAL DESIGN	FINALS PENDING FIBER	UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN	UPDATED PER SITETRACKER AND LANDOWNER COMMENTS	

LOC. # 455833

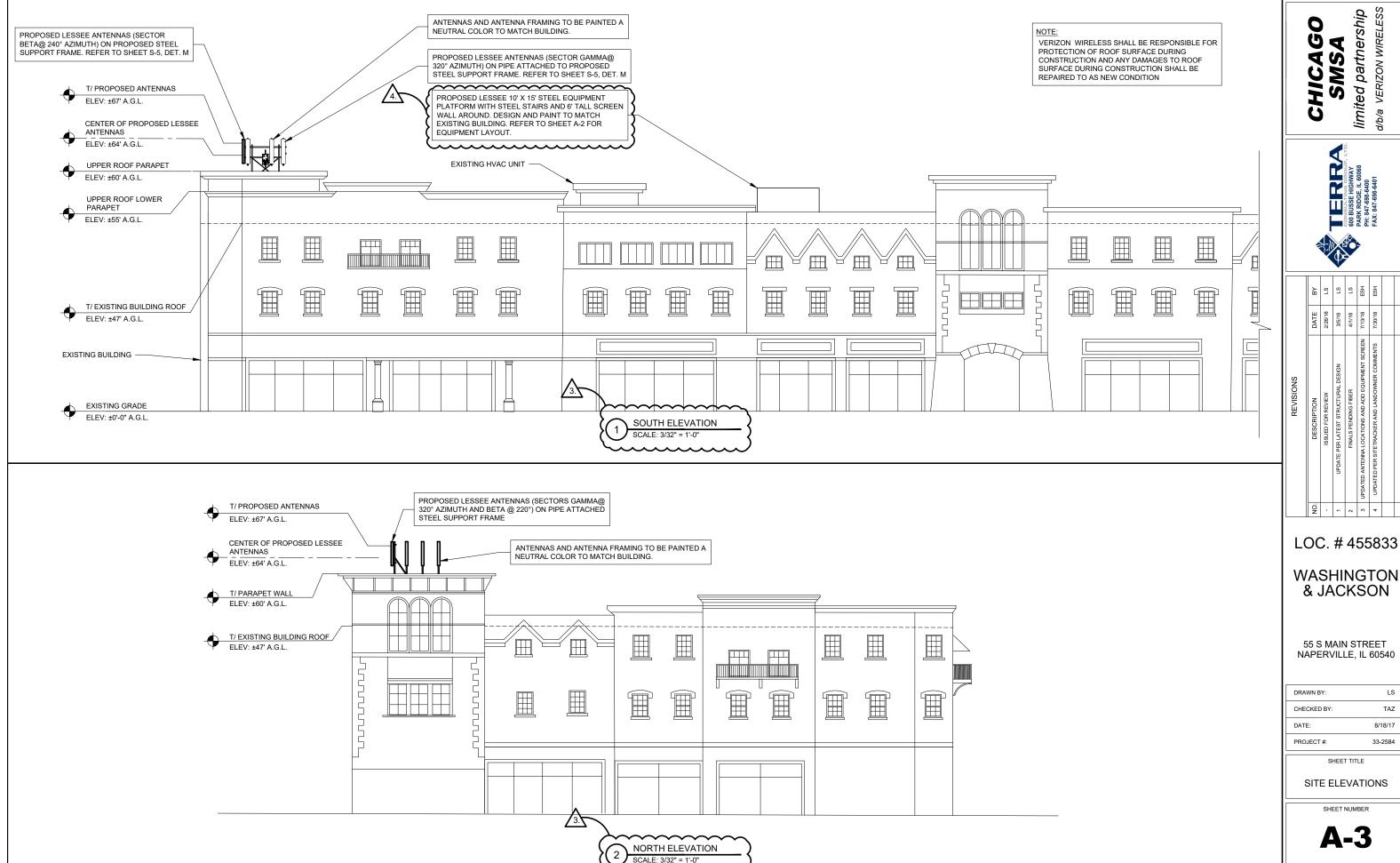
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55 S MAIN STREET NAPERVILLE, IL 60540

ı	DRAWN BY:	LS
ı	CHECKED BY:	TAZ
ı	DATE:	8/18/17
ı	PROJECT#:	33-2584

PROPOSED PLATFORM EQUIPMENT LAYOUT

SHEET NUMBER



d/b/a VERIZON WIRELESS



	В	ST	ST	ST	ESH	ESH	
	DATE	2/26/18	3/5/18	4/1/18	7/13/18	7/30/18	
REVISIONS	DESCRIPTION	ISSUED FOR REVIEW	UPDATE PER LATEST STRUCTURAL DESIGN	FINALS PENDING FIBER	UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN	UPDATED PER SITETRACKER AND LANDOWNER COMMENTS	

LOC. # 455833

& JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

DRAWN BY:	LS
CHECKED BY:	TAZ
DATE:	8/18/17
PROJECT #:	33-2584

NOTE:

VERIZON WIRELESS SHALL BE RESPONSIBLE FOR PROTECTION OF ROOF SURFACE DURING CONSTRUCTION AND ANY DAMAGES TO ROOF SURFACE DURING CONSTRUCTION SHALL BE REPAIRED TO AS NEW CONDITION USING LANDLORD'S ROOFER.



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NO. DESCRIPTION DATE BY								
PREVISIONS DESCRIPTION ISSUED FOR REVIEW UPDATE PER LATEST STRUCTURAL DESIGN FINALS PENDING FIBER UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN UPDATED PER SITETRACKER AND LANDOWNER COMMENTS		BY	S7	ST	S.T	ESH	ESH	
		DATE	2/26/18	3/5/18	4/1/18	7/13/18	7/30/18	
ON 1 - 2 & 8 4	REVISIONS		ISSUED FOR REVIEW	UPDATE PER LATEST STRUCTURAL DESIGN	FINALS PENDING FIBER	UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN	UPDATED PER SITETRACKER AND LANDOWNER COMMENTS	
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LOC. # 455833

WASHINGTON & JACKSON

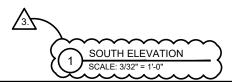
55 S MAIN STREET NAPERVILLE, IL 60540

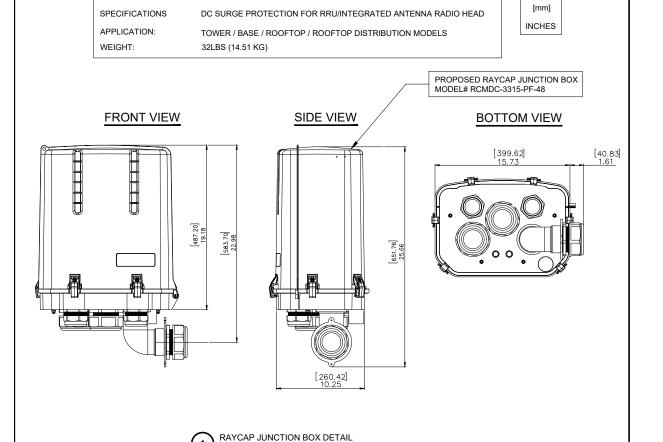
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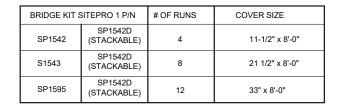
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SITE ELEVATION

SHEET NUMBER

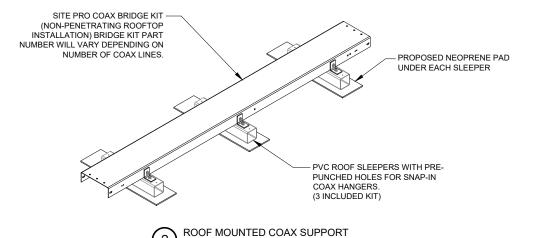




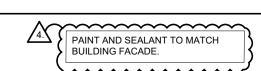


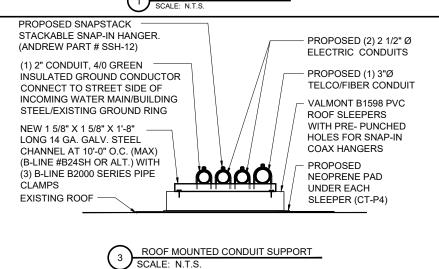
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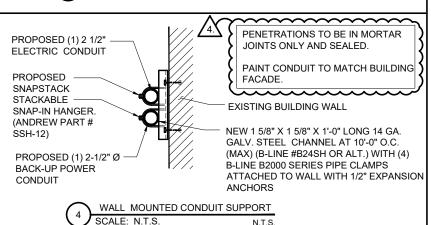
- \bullet AT TURNS USE SITE PRO ADJUSTABLE SPLICES FOR 0° TO 45° BENDS AND 45° TO 90° BENDS
- CONTRACTOR TO SUPPLY SUFFICIENT SLACK AT BOTH ENDS OF CABLE TRAY. CABLE TRAY SHOULD BE ABLE TO BE TEMPORARILY SHIFTED FOR ROOF MAINTENANCE.
- IF CABLE BRIDGE REQUIRES TEMPORARY RELOCATION (DUE TO ROOF MAINTENANCE) REMOVE THE BRIDGE COVER TO EASE THE MOVEMENT OF THE NON-PENETRATING SLEEPERS.



(2) ROUF IVIOU SCALE: N.T.S.

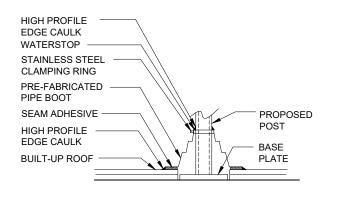


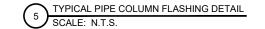


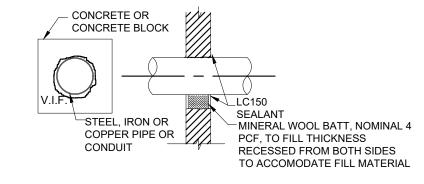


NOTE: G.C. TO CONTRACT WITH BUILDING APPROVED ROOFING CONTRACTOR FOR ALL ROOF REPAIRS.

FLASHING SHOWN HERE AS GUIDE. ROOFING CONTRACTOR TO UTILIZE BEST METHODS FOR REPAIRS.







PENETRANT	MAXIMUM	SEALANT	MINERAL	ANNULUS (IN.)	
	TRADE SIZE (IN.)	DEPTH (IN.)	WOOL (IN.)	MINIMUM	MAXIMUM
STEEL OR IRON	24	1/2	3	POINT CONTACT	2
STEEL OR IRON	4	1	NONE REQ'D.	POINT CONTACT	1-1/2
COPPER	4	1/2	3	POINT CONTACT	2

UL C-AJ-1213 FIRE STOP DETAIL (FOR ALL PENETRATIONS)

SCALE: N.T.S.



limited partnership

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LOC. # 455833

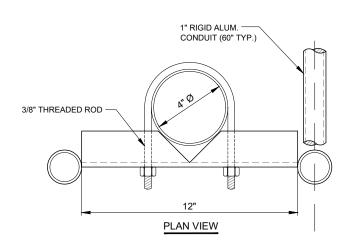
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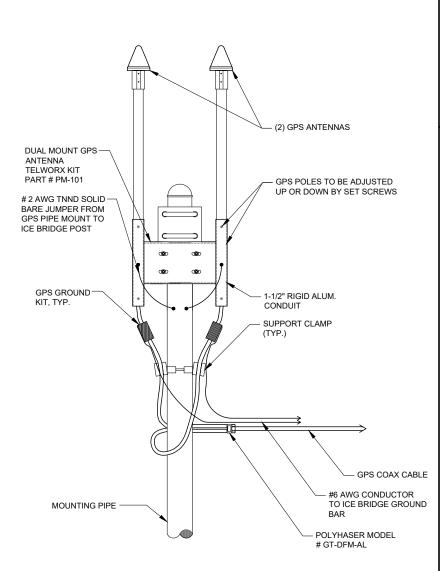
55 S MAIN STREET NAPERVILLE, IL 60540

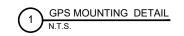
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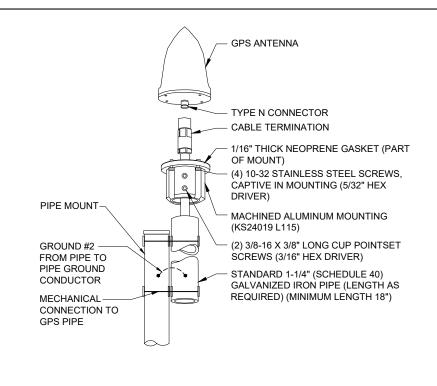
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DETAILS

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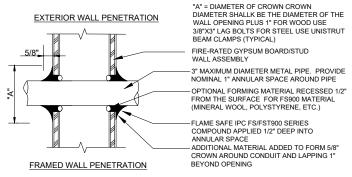








FLAME SAFE IPC FSP1000 PUTTY I. CONTRACTOR SHALL EXAMINE APPLIED INTO THE OPENNING-1/2 JUTRASOUND OR FQUAL) TO LOCATE THICKNESS AT EA. WALL SURFACE XISTING REBAR OR CONDUITS PRIOR 3-1/4" MIN. CON. WALL OR CMU. OPENING TO PROVIDE 3/4" MAX. ANNULAR SPACE AROUND PIPE TO DRILLING OR CORING. DO NOT CUT CONTRACTOR SHALL ENSURE WATER-TIGHTNESS AT ALL EXTERIOR WALL AND FLOOR PENETRATIONS. 4" MAX. DIAM. METAL 3. PAINT AND SEALANT TO MATCH BUILDING FACADE. EXISTING CONCRETE MINERAL WOOL (4 PCF) PACKED INTO ANNULAR SPACE AND RECESSED 1/2' FROM WALL SURFACES



CONDUIT WALL PENETRATION SCALE: N.T.S.

FIRESTOPPING SPECIFICATIONS

TYPICAL GPS DETAIL

1.1 DESCRIPTION

A. CLOSURES OF OPENINGS IN WALLS, FLOORS, AND ROOF DECKS AGAINST PENETRATION OF FLAME, HEAT, AND SMOKE OR GASES IN FIRE RESISTANT RATED CONSTRUCTION.

B. CLOSURE OF OPENINGS IN WALLS AGAINST PENETRATION OF GASES OR SMOKE IN SMOKE PARTITIONS.

1.2 GUARANTEI

FIRESTOPPING WORK SUBJECT TO THE TERMS OF THE ARTICLE GUARANTY OF SECTION GENERAL CONDITIONS, EXCEPT EXTEND THE GUARANTY PERIOD TO FIVE YEARS

1.3 QUALITY ASSURANCE FM, UL, OR WH OR OTHER APPROVED LABORATORY TESTED PRODUCTS WILL BE ACCEPTABLE.

1.4 APPLICABLE PUBLICATION

PUBLICATIONS LISTED BELOW FORM A PART OF THIS SPECIFICATION TO THE EXTENT REFERENCED. PUBLICATIONS ARE REFERENCED IN THE TEXT BY THE BASIC DESIGNATION ONLY.

A. AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM): E84-99 SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS E814-97 FIRE TESTS OF THROUGH-PENETRATION FIRE STOPS.

B.FACTORY MUTUAL ENGINEERING AND RESEARCH CORPORATION (FM): ANNUAL ISSUE APPROVAL GUIDE BUILDING MATERIALS.

C. UNDERWRITERS LABORATORIES, INC. (UL): ANNUAL ISSUE BUILDING MATERIALS DIRECTORY ANNUAL ISSUE FIRE RESISTANCE DIRECTORY 1479-98 FIRE TESTS OF THROUGH-PENETRATION FIRESTOPS.

D. WARNOCK HERSEY (WH): ANNUAL ISSUE CERTIFICATION LISTINGS.

PART 2 - PRODUCTS

2.1 FIRESTOP SYSTEMS

A. USE EITHER FACTORY BUILT (FIRESTOP DEVICES) OR FIELD ERECTED (THROUGH-PENETRATION FIRESTOP SYSTEMS) TO FORM A SPECIFIC BUILDING SYSTEM MAINTAINING REQUIRED INTEGRITY OF THE FIRE BARRIER AND STOP THE PASSAGE OF GASES OR SMOKE.

B. THROUGH-PENETRATION FIRESTOP SYSTEMS AND FIRESTOP DEVICES
TESTED IN ACCORDANCE WITH ASTM E814 OR UL 1479 USING THE "F" OR "T"
RATING TO MAINTAIN THE SAME RATING AND INTEGRITY AS THE FIRE BARRIER
BEING SEALED. "T" RATINGS ARE NOT REQUIRED FOR PENETRATIONS SMALLER
THAN OR EQUAL TO 100 MM

(4 IN) NOMINAL PIPE OR 0.01 M2 (16 SQ. IN.) IN OVERALL CROSS SECTIONAL AREA.

FIRE STOP NOTES
N.T.S.

- C. PRODUCTS REQUIRING HEAT ACTIVATION TO SEAL AN OPENING BY ITS INTUMESCENCE SHALL EXHIBIT A DEMONSTRATED ABILITY TO FUNCTION AS DESIGNED TO MAINTAIN THE FIRE BARRIER.
- D. FIRESTOP SEALANTS USED FOR FIRESTOPPING OR SMOKE SEALING SHALL HAVE FOLLOWING PROPERTIES:
- 1. CONTAIN NO FLAMMABLE OR TOXIC SOLVENTS.

~~~~~

- 2. HAVE NO DANGEROUS OR FLAMMABLE OUTGASSING DURING THE DRYING OR CURING OF PRODUCTS.
- 3. WATER-RESISTANT AFTER DRYING OR CURING AND UNAFFECTED BY HIGH HUMIDITY, CONDENSATION OR TRANSIENT WATER EXPOSURE.
- 4. WHEN USED IN EXPOSED AREAS, SHALL BE CAPABLE OF BEING SANDED AND FINISHED WITH SIMILAR SURFACE TREATMENTS AS USED ON THE SURROUNDING WALL OR FLOOR SURFACE.
- E. FIRESTOPPING SYSTEM OR DEVICES USED FOR PENETRATIONS BY GLASS PIPE, PLASTIC PIPE OR CONDUITS, UNENCLOSED CABLES, OR OTHER NON-METALLIC MATERIALS SHALL HAVE FOLLOWING PROPERTIES:
- 1. CLASSIFIED FOR USE WITH THE PARTICULAR TYPE OF PENETRATING MATERIAL USED.
  2. PENETRATIONS CONTAINING LOOSE ELECTRICAL CABLES, COMPUTER DATA
- CABLES, AND COMMUNICATIONS CABLES PROTECTED USING FIRESTOPPING SYSTEMS THAT ALLOW UNRESTRICTED CABLE CHANGES WITHOUT DAMAGE TO THE SEAL.
- 3. INTUMESCENT PRODUCTS WHICH WOULD EXPAND TO SEAL THE OPENING AND ACT AS FIRE, SMOKE, TOXIC FUMES, AND, WATER SEALANT. F. MAXIMUM FLAME SPREAD OF 25 AND SMOKE DEVELOPMENT OF 50 WHEN
- G.FM, UL, OR WH RATED OR TESTED BY AN APPROVED LABORATORY IN
- ACCORDANCE WITH ASTM E814. H. MATERIALS TO BE ASBESTOS FREE.

### PART 3 - EXECUTION

#### 3.1 PREPARATIO

A. REMOVE DIRT, GREASE, OIL, LOOSE MATERIALS, OR OTHER SUBSTANCES THAT PREVENT ADHERENCE AND BONDING OR APPLICATION OF THE FIRESTOPPING OR SMOKE STOPPING MATERIALS.

B. REMOVE INSULATION ON INSULATED PIPE FOR A DISTANCE OF 150 MM (SIX INCHES) ON EITHER SIDE OF THE FIRE RATED ASSEMBLY PRIOR TO APPLYING THE FIRESTOPPING MATERIALS UNLESS THE FIRESTOPPING MATERIALS ARE TESTED AND APPROVED FOR USE ON INSULATED PIPES.

#### 3.2 INSTALLATIO

A. DO NOT BEGIN WORK UNTIL THE SPECIFIED MATERIAL DATA AND INSTALLATION INSTRUCTIONS OF THE PROPOSED FIRESTOPPING SYSTEMS HAVE BEEN SUBMITTED AND APPROVED.

B. INSTALL FIRESTOPPING SYSTEMS WITH SMOKE STOPPING IN ACCORDANCE WITH FM, UL, WH, OR OTHER APPROVED SYSTEM DETAILS AND INSTALLATION INSTRUCTIONS.

C. INSTALL SMOKE STOPPING SEALS IN SMOKE PARTITIONS.

# CHICAGO SMSA limited partnership



| DESCRIPTION   DATE |           | В    | ST                | ST                                  | ST                   | ESH                                                | ESH                                            |  |
|--------------------|-----------|------|-------------------|-------------------------------------|----------------------|----------------------------------------------------|------------------------------------------------|--|
|                    |           | DATE | 2/26/18           | 3/5/18                              | 4/1/18               | 7/13/18                                            | 7/30/18                                        |  |
|                    | REVISIONS |      | ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL DESIGN | FINALS PENDING FIBER | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |  |
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LOC. # 455833

## WASHINGTON & JACKSON

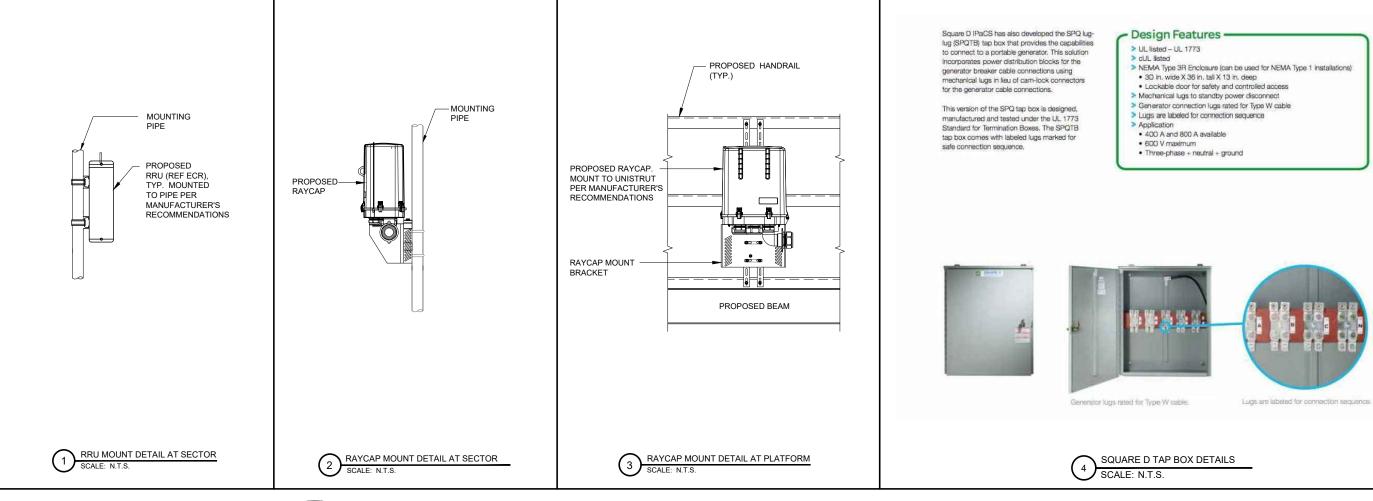
55 S MAIN STREET NAPERVILLE, IL 60540

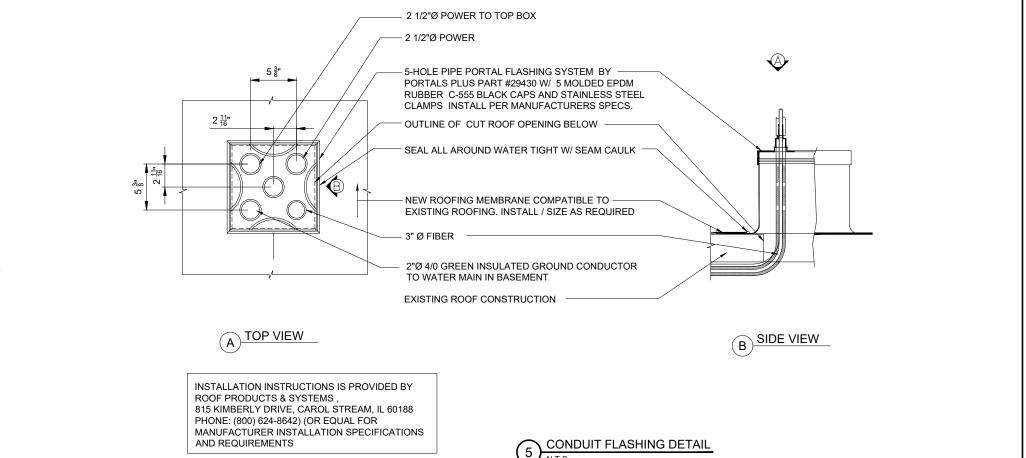
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| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |

SITE DETAILS

0112 2217 ((2

SHEET NUMBER





CHICAGO SMSA

d/b/a VERIZON WIRELESS limited partnership



| DESCRIPTION  ISSUED FOR REVIEW  UPDATE PER LATEST STRUCTURAL DESIGN FINALS PENDING FIBER  PUPDATED PER SITETRACKER AND LANDOWNER COMMENTS  UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |          | DATE BY | 2/26/18 LS          | SIGN 3/5/18 LS               | 4/1/18 LS | PMENT SCREEN 7/13/18 ESH | R COMMENTS 7/30/18 ESH               |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|---------|---------------------|------------------------------|-----------|--------------------------|--------------------------------------|--|
| ON 1 1 2 8 4                                                                                                                                                                              | REVISION |         | - ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL |           |                          | 4 UPDATED PER SITETRACKER AND LANDOW |  |

LOC. # 455833

#### WASHINGTON & JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

| DRAWN BY:   | LS      |
|-------------|---------|
| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |
|             |         |

SHEET TITLE SITE DETAILS

SHEET NUMBER

# RF EMISSIONS REPORT REQUIRED VES NO DATE OF REPORT: 3/14/18

| Cell Na           | me   |                      | WASHINGTON AND JACKSO                   |                       |                   |                |            | Cell ID               |          |            | TBD                            |
|-------------------|------|----------------------|-----------------------------------------|-----------------------|-------------------|----------------|------------|-----------------------|----------|------------|--------------------------------|
| Locatio<br>Date o |      |                      | 455833<br>6/27/2018                     | RF Engineer<br>Market | Jeremy Litz<br>HH |                |            | Address<br>City/State | /Zin     |            | Main Street<br>ille, IL, 60540 |
| ute oj            | пеци | est                  |                                         | ROPOSED CONFIGURATION |                   |                |            |                       | uration  |            | tion-A2                        |
|                   |      |                      | Antenna                                 | TO OSED COM TOOMATTO  |                   |                |            | Coming                |          |            | LIOII AL                       |
|                   |      |                      |                                         |                       |                   | Antenna Serial |            |                       | Variable | Mechanical |                                |
| ector             | Pos  | Port<br>L1 (-45)     | RF Path<br>700/850 - RxTx0              | Antenna Manufacturer  | Antenna Model     | Number         | Centerline | Azimuth               | Tilt     | Tilt       | Action                         |
|                   |      | L2 (+45)             | 700/850 - RXTX1                         |                       |                   |                |            |                       | 4        |            |                                |
|                   | ١.,  | H1 (-45)             | PCS - RxTx0                             |                       |                   |                |            |                       |          |            |                                |
|                   | A1   | H2 (+45)             | PCS - RxTx1                             | COMMSCOPE             | NHH-65B-R2B       |                | 55         | 130                   | 1        | 0          | Add- Install                   |
|                   |      | H3 (-45)             | PCS - RxTx2                             |                       |                   |                |            |                       | 1        |            |                                |
|                   |      | H4 (+45)             | PCS - RxTx3                             |                       |                   |                |            |                       | 1        |            |                                |
|                   |      | L1 (-45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   |      | L2 (+45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   | A2   | H1 (-45)<br>H2 (+45) | Unused at this time                     |                       |                   |                |            |                       |          |            | Unchanged                      |
|                   |      | H3 (-45)             | Unused at this time Unused at this time |                       |                   |                |            |                       |          |            |                                |
| Alpha             |      | H4 (+45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
| ₽                 |      | L1 (-45)             | 700/850 - RxTx2                         |                       |                   |                |            |                       | 4        |            |                                |
| ~                 |      | L2 (+45)             | 700/850 - RxTx3                         |                       |                   |                |            |                       | 4        |            |                                |
|                   | A3   | H1 (-45)             | Unused at this time                     | COMMSCOPE             | NHH-65B-R2B       |                | 55         | 130                   | 1        | 0          | Add- Install                   |
|                   |      | H2 (+45)             | Unused at this time                     |                       | 141111 000 1120   |                |            |                       |          |            |                                |
|                   |      | H3 (-45)<br>H4 (+45) | Unused at this time                     |                       |                   |                |            |                       | 1        |            |                                |
|                   |      | L1 (-45)             | Unused at this time Unused at this time |                       |                   |                |            |                       |          |            |                                |
|                   |      | L2 (+45)             | Unused at this time                     |                       |                   |                |            |                       | 4        |            |                                |
|                   | ١    | H1 (-45)             | AWS - RxTx0                             |                       |                   | 1              |            | 1                     |          |            |                                |
|                   | A4   | H2 (+45)             | AWS - RxTx1                             | COMMSCOPE             | NHH-65B-R2B       |                | 55         | 130                   | 1        | 0          | Add- Install                   |
|                   |      | H3 (-45)             | AWS - RxTx2                             |                       |                   |                |            |                       | 1        |            |                                |
|                   |      | H4 (+45)             | AWS - RxTx3                             |                       |                   |                |            |                       | 1        |            |                                |
|                   |      |                      |                                         |                       |                   |                |            |                       |          |            |                                |
|                   |      | L1 (-45)             | 700/850 - RxTx0                         |                       |                   |                |            |                       | 4        |            |                                |
|                   |      | L2 (+45)<br>H1 (-45) | 700/850 - RxTx1<br>PCS - RxTx0          |                       |                   |                |            |                       |          |            |                                |
|                   | B1   | H2 (+45)             | PCS - RXTX1                             | COMMSCOPE             | NHH-65B-R2B       |                | 60         | 240                   | 1        | 0          | Add- Install                   |
|                   |      | H3 (-45)             | PCS - RxTx2                             |                       |                   |                |            |                       |          |            |                                |
|                   |      | H4 (+45)             | PCS - RxTx3                             |                       |                   |                |            |                       | 1        |            |                                |
|                   |      | L1 (-45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   |      | L2 (+45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   | B2   | H1 (-45)             | Unused at this time                     |                       |                   |                |            |                       |          |            | Unchanged                      |
|                   |      | H2 (+45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
| Ø                 |      | H3 (-45)<br>H4 (+45) | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
| 3et               |      | L1 (-45)             | Unused at this time<br>700/850 - RxTx2  |                       |                   |                |            |                       |          |            |                                |
| Beta              |      | L2 (+45)             | 700/850 - RxTx3                         |                       |                   |                |            |                       | 4        |            |                                |
|                   | B3   | H1 (-45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   | 53   | H2 (+45)             | Unused at this time                     | COMMSCOPE             | NHH-65B-R2B       |                | 60         | 240                   | 1        | 0          | Add- Install                   |
|                   |      | H3 (-45)             | Unused at this time                     |                       |                   |                |            |                       | 1        |            |                                |
|                   |      | H4 (+45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   |      | L1 (-45)             | Unused at this time                     |                       |                   |                |            |                       | 4        |            |                                |
|                   |      | L2 (+45)<br>H1 (-45) | Unused at this time<br>AWS - RxTx0      |                       |                   |                |            |                       |          |            |                                |
|                   | B4   | H2 (+45)             | AWS - RxTx1                             | COMMSCOPE             | NHH-65B-R2B       |                | 60         | 240                   | 1        | 0          | Add- Install                   |
|                   |      | H3 (-45)             | AWS - RxTx2                             | $\dashv$              |                   | 1              |            |                       |          |            |                                |
|                   |      | H4 (+45)             | AWS - RxTx3                             |                       |                   |                |            | <u></u>               | 1        |            |                                |
|                   |      |                      |                                         |                       |                   |                |            |                       |          |            |                                |
|                   |      | L1 (-45)             | 700/850 - RxTx0                         |                       |                   |                |            |                       | 4        |            |                                |
|                   |      | L2 (+45)             | 700/850 - RxTx1                         | _                     |                   |                |            |                       |          |            |                                |
|                   | G1   | H1 (-45)             | PCS - RxTx0<br>PCS - RxTx1              | COMMSCOPE             | NHH-65B-R2B       | 1              | 64         | 320                   | 1        | 0          | Add- Install                   |
|                   |      | H3 (-45)             | PCS - RXTX2                             | $\dashv$              |                   | 1              |            |                       |          |            |                                |
|                   |      | H4 (+45)             | PCS - RxTx3                             | $\dashv$              |                   | 1              |            |                       | 1        |            |                                |
|                   |      | L1 (-45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   |      | L2 (+45)             | Unused at this time                     |                       |                   | 1              |            |                       |          |            |                                |
|                   | G2   | H1 (-45)             | Unused at this time                     | _                     |                   |                |            |                       |          |            | Unchanged                      |
| _                 | -    | H2 (+45)             | Unused at this time                     |                       |                   | 1              |            |                       |          |            |                                |
| Σ                 |      | H3 (-45)             | Unused at this time                     | $\dashv$              |                   | 1              |            |                       |          |            |                                |
| ξ                 | -    | H4 (+45)<br>L1 (-45) | Unused at this time                     |                       |                   | +              |            |                       | -        |            |                                |
| Q.                |      | L1 (-45)             | 700/850 - RxTx2<br>700/850 - RxTx3      | $\dashv$              |                   | 1              |            |                       | 4        |            |                                |
| _                 |      | H1 (-45)             | Unused at this time                     |                       |                   | 1              |            |                       |          |            |                                |
| GAMMA             | G3   | H2 (+45)             | Unused at this time                     | COMMSCOPE             | NHH-65B-R2B       |                | 64         | 320                   | 1        | 0          | Add- Install                   |
|                   |      | H3 (-45)             | Unused at this time                     |                       |                   | 1              |            |                       | 1        |            |                                |
|                   |      | H4 (+45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   |      |                      | Unused at this time                     |                       |                   | 1              |            |                       | 4        |            |                                |
|                   |      | L1 (-45)             |                                         | —                     |                   |                |            |                       |          |            |                                |
|                   |      | L2 (+45)             | Unused at this time                     |                       |                   |                |            |                       |          |            |                                |
|                   | G4   | L2 (+45)<br>H1 (-45) | Unused at this time<br>AWS - RxTx0      | COMMSCOPE             | NHH-65B-R2B       |                | 64         | 320                   | 1        | 0          | Add- Install                   |
|                   | G4   | L2 (+45)             | Unused at this time                     | COMMSCOPE             | NHH-65B-R2B       |                | 64         | 320                   |          | 0          | Add- Install                   |

PROPOSED ANTENNA CONFIGURATION
N.T.S.

Comments

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|           |             |                   | _                                   |                      |                                                    |                                                |  |
|-----------|-------------|-------------------|-------------------------------------|----------------------|----------------------------------------------------|------------------------------------------------|--|
|           | ВУ          | rs                | rs                                  | ST                   | ESH                                                | ESH                                            |  |
|           | DATE        | 2/26/18           | 3/5/18                              | 4/1/18               | 7/13/18                                            | 7/30/18                                        |  |
| REVISIONS | DESCRIPTION | ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL DESIGN | FINALS PENDING FIBER | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |  |
|           | Š.          |                   | -                                   | 7                    | 6                                                  | 4                                              |  |

LOC. # 455833

#### WASHINGTON & JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

| DRAWN BY:   | LS      |
|-------------|---------|
| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |

SHEET TITLE

ANTENNA INFORMATION

SHEET NUMBER

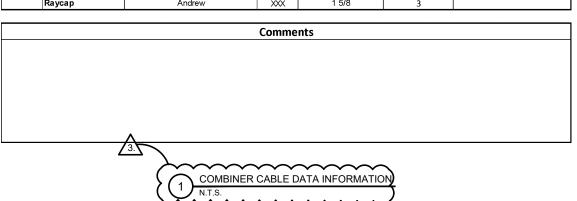
**ANT-1** 

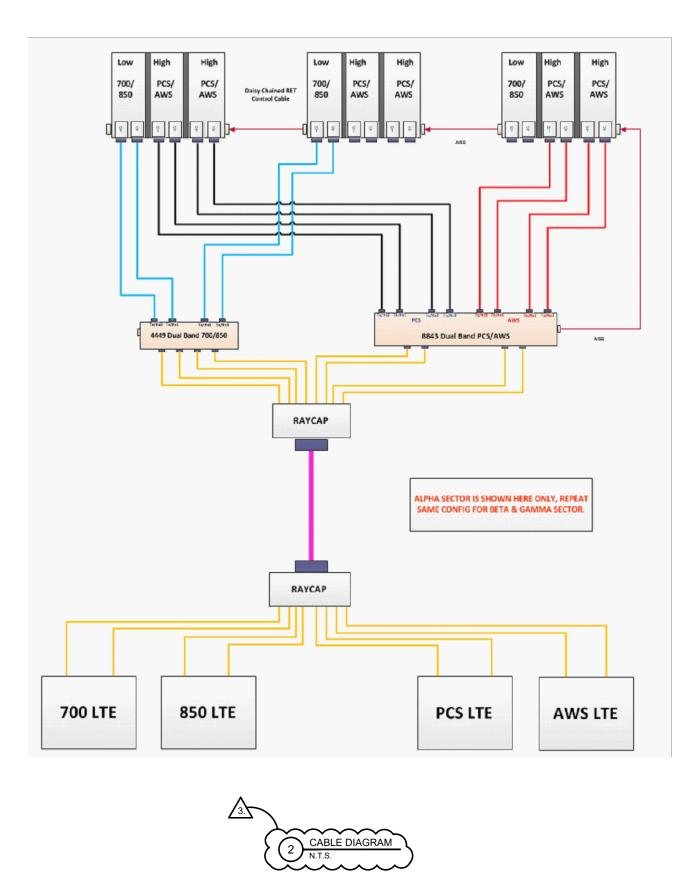
|               | ESTIMATED MAIN | LINE HYBRID LENGTH |           |
|---------------|----------------|--------------------|-----------|
| SECTOR        | HORIZONTAL (±) | VERTICAL (±)       | TOTAL (±) |
| ALPHA AZ=115° | 250'           | 10'                | 260'      |
| BETA AZ=240°  | 165'           | 10'                | 175'      |
| GAMMA AZ=320° | 165'           | 10'                | 175'      |

|                     |                         | POWER   |       |                     |                       |
|---------------------|-------------------------|---------|-------|---------------------|-----------------------|
| 3                   | 700 RRU                 |         | 6     | 700 RRU2/A2         |                       |
| 2                   | PCSLT RRU               |         | 5     | PCSLT RRU2/A2       |                       |
| 1                   | AWS RRU                 |         | 4     | AWS RRU2/A2         | 1                     |
|                     |                         | FI      | BER   |                     |                       |
| 1                   | 2                       | FI<br>3 | BER 4 | 5                   | 6                     |
| <b>1</b><br>AWS RRU | <b>2</b><br>AWS RRU2/A2 |         |       | <b>5</b><br>700 RRU | <b>6</b><br>700 RRU/A |

#### **Combiner - Cable Data**

|            |                  | FINA              | AL CONFIGU         | RATION      |       |  |
|------------|------------------|-------------------|--------------------|-------------|-------|--|
|            | Location         | Manufacturer      | Compo              | nent Model  | Count |  |
| Components | Top (Platform)   | Ericsson          | 444                | 9 B13/B5    | 3     |  |
| aut        | Top (Platform)   |                   |                    |             |       |  |
| ğ          | Top (Platform)   | Ericsson          | 884                | 3 B66/B2    | 3     |  |
| ğ          | Top (Platform)   |                   |                    |             |       |  |
| 0          | Top (Platform)   |                   |                    |             |       |  |
| Passive Co | Top (Platform)   | Raycap            | RCMDO              | -3315-PF-48 | 3     |  |
|            | Top (Platform)   |                   |                    |             |       |  |
|            | Bottom (Shelter) |                   |                    |             |       |  |
|            | Bottom (Shelter) | Raycap            | F                  | аусар       | 3     |  |
|            | Bottom (Shelter) |                   |                    |             |       |  |
|            |                  |                   |                    |             |       |  |
|            | Sector           | Coax Manufacturer | Туре               | Size        | Count |  |
| ×          | Alpha            |                   |                    |             |       |  |
|            | Beta             |                   |                    |             |       |  |
| õ          | Gamma            |                   |                    |             |       |  |
| Coax       |                  |                   | HFT1206-<br>24S49- |             |       |  |
|            | Raycap           | Andrew            | xxx                | 1 5/8       | 3     |  |





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limited partnership



|           | _           |                   |                                     |                      |                                                    |                                                |  |
|-----------|-------------|-------------------|-------------------------------------|----------------------|----------------------------------------------------|------------------------------------------------|--|
|           | B           | ST                | ST                                  | ST                   | ESH                                                | ESH                                            |  |
|           | DATE        | 2/26/18           | 3/5/18                              | 4/1/18               | 7/13/18                                            | 7/30/18                                        |  |
| REVISIONS | DESCRIPTION | ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL DESIGN | FINALS PENDING FIBER | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |  |
|           | NO.         | ١.                | -                                   | 2                    | 8                                                  | 4                                              |  |

LOC. # 455833

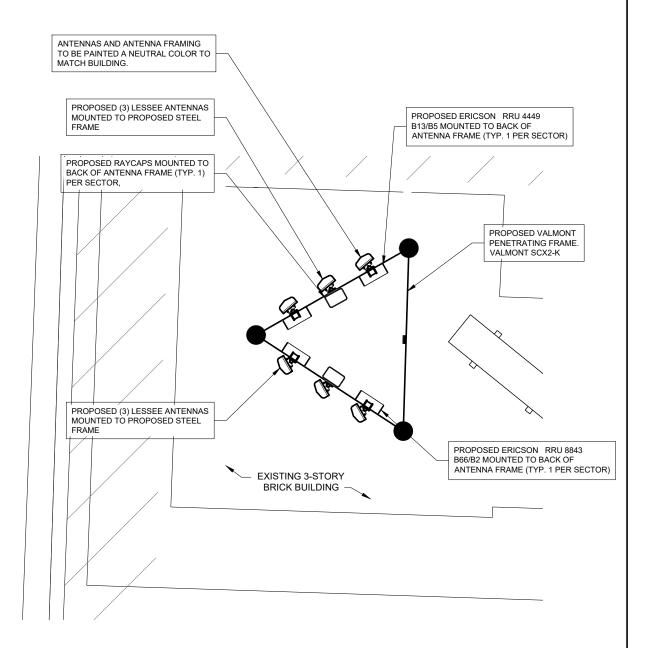
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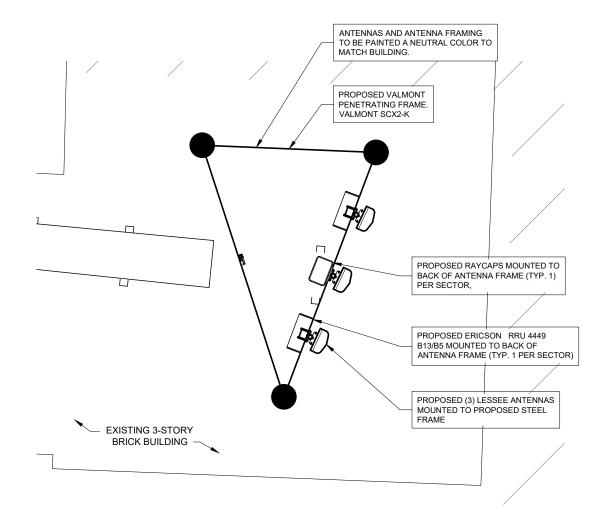
55 S MAIN STREET NAPERVILLE, IL 60540

| DRAWN BY:   | LS      |
|-------------|---------|
| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |

SHEET TITLE
ANTENNA INFORMATION

ANT-2





PROPOSED ANTENNA MOUNTED TO STEEL FRAME AZ=115°
SCALE: 1/2" = 1'-0"

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| DATE 2/26/18 SIN 3/6/18 4/1/18 ENT SCREEN 7/13/18 COMMENTS 7/30/18                                                                                                                                                    |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| SN<br>ENT SCREEN<br>COMMENTS                                                                                                                                                                                          |  |
| REVISIONS  DESCRIPTION ISSUED FOR REVIEW ISSUED FOR REVIEW UPDATE PER LATEST STRUCTURAL DESIGN FINALS PENDING FIBER UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |  |
| O 1 - 2 & 4                                                                                                                                                                                                           |  |

LOC. # 455833

# WASHINGTON & JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

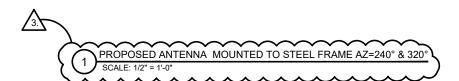
| l | DRAWN BY:   | LS      |
|---|-------------|---------|
| l | CHECKED BY: | TAZ     |
| l | DATE:       | 8/18/17 |
| ı | PROJECT #:  | 33-2584 |

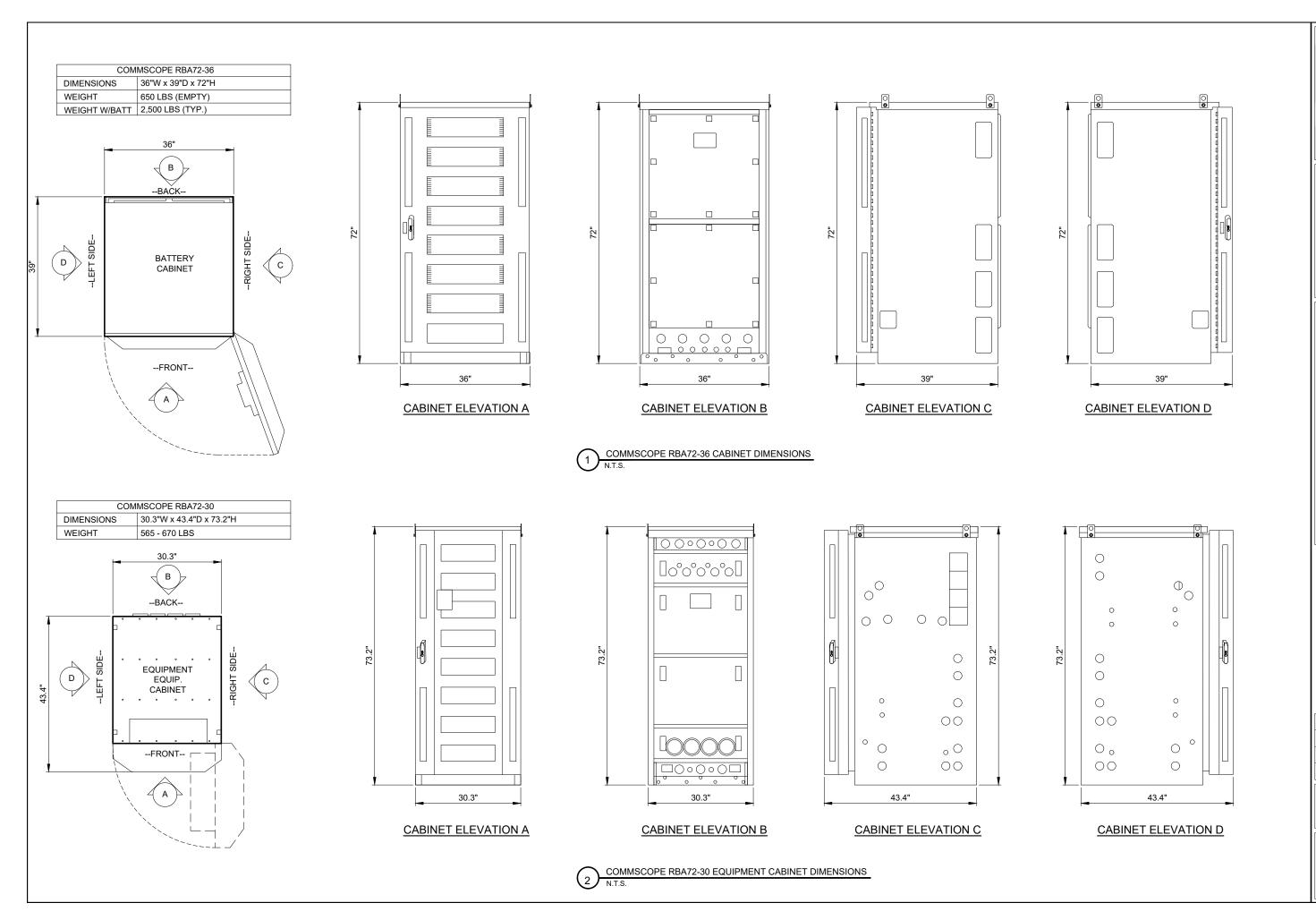
SHEET TITLE

ANTENNA LAYOUT

SHEET NUMBER

ANT-3





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| NO.   DESCRIPTION   DATE   BY                                                                                                                                                            |           |      |                   | •                                   |                      |                                                    |                                                | _ |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|-------------------|-------------------------------------|----------------------|----------------------------------------------------|------------------------------------------------|---|
| DESCRIPTION ISSUED FOR REVIEW UPDATE PER LATEST STRUCTURAL DESIGN FINALS PENDING FIBER UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |           | ВУ   | rs                | rs                                  | ST                   | ESH                                                | ESH                                            |   |
|                                                                                                                                                                                          |           | DATE | 2/26/18           | 3/5/18                              | 4/1/18               | 7/13/18                                            | 7/30/18                                        |   |
| O Λ ι τ α ω 4                                                                                                                                                                            | REVISIONS |      | ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL DESIGN | FINALS PENDING FIBER | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |   |
|                                                                                                                                                                                          |           | 2    | ٠.                | -                                   | 2                    | 3                                                  | 4                                              |   |

LOC. # 455833

WASHINGTON & JACKSON

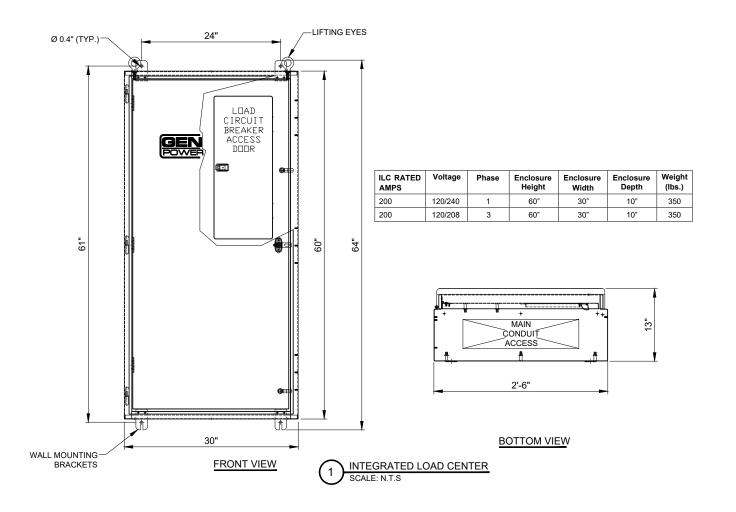
55 S MAIN STREET NAPERVILLE, IL 60540

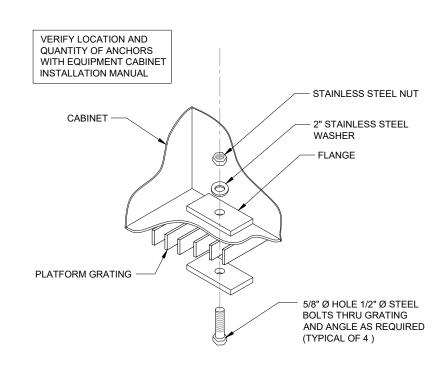
| DRAWN BY:   | LS      |
|-------------|---------|
| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |

SHEET TITLE
EQUIPMENT
DETAILS

SHEET NUMBER

EQ-1





TYPICAL CABINET ANCHORING DETAIL
SCALE: N.T.S

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|    | REVISIONS                                          |         |     |  |
|----|----------------------------------------------------|---------|-----|--|
| Š. | DESCRIPTION                                        | DATE    | В   |  |
|    | ISSUED FOR REVIEW                                  | 2/26/18 | S7  |  |
| -  | UPDATE PER LATEST STRUCTURAL DESIGN                | 3/5/18  | rs  |  |
| 7  | FINALS PENDING FIBER                               | 4/1/18  | rs  |  |
| က  | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | 7/13/18 | ESH |  |
| 4  | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS     | 7/30/18 | ESH |  |
|    |                                                    |         |     |  |
|    |                                                    |         |     |  |

LOC. # 455833

# WASHINGTON & JACKSON

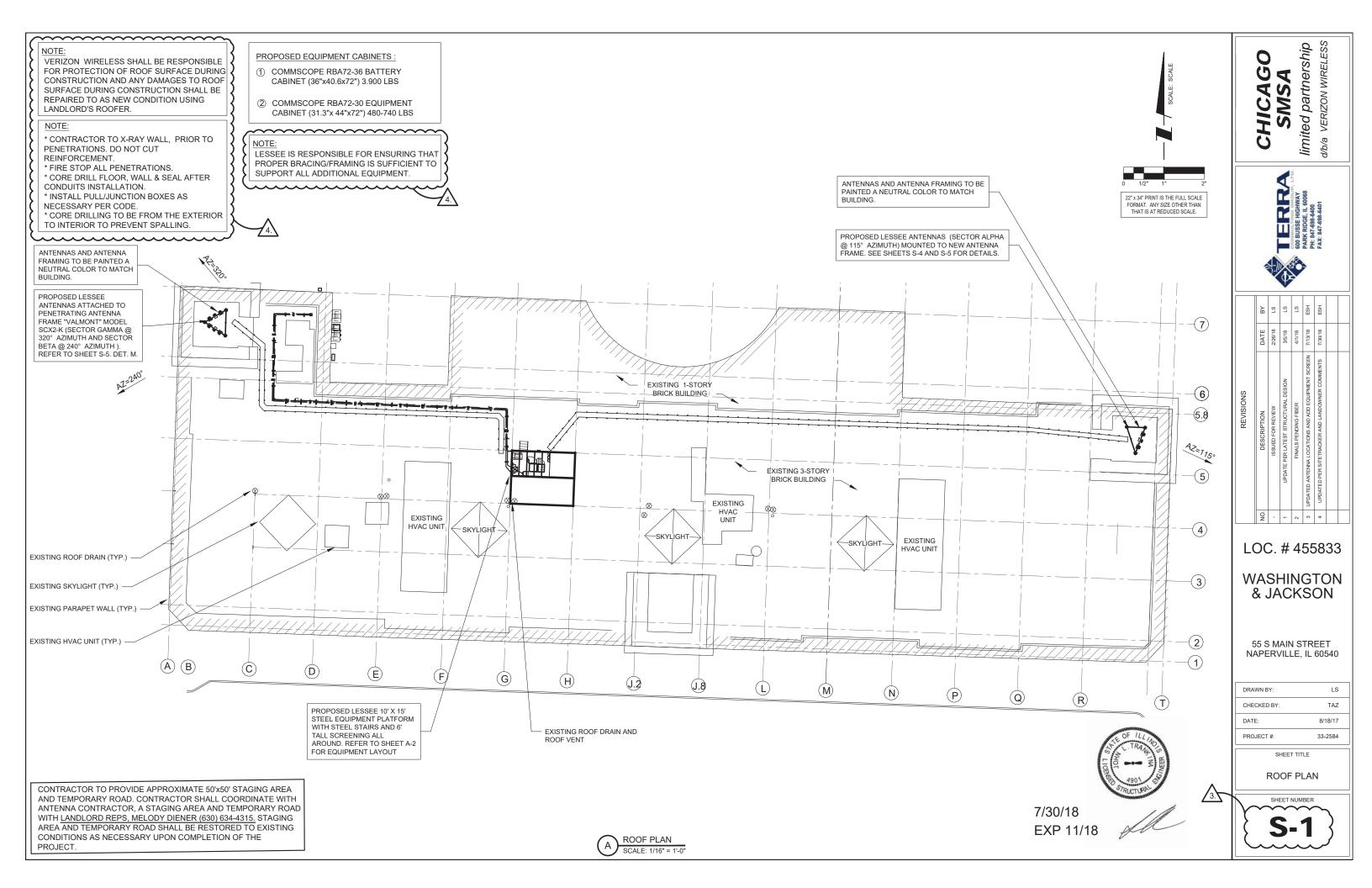
55 S MAIN STREET NAPERVILLE, IL 60540

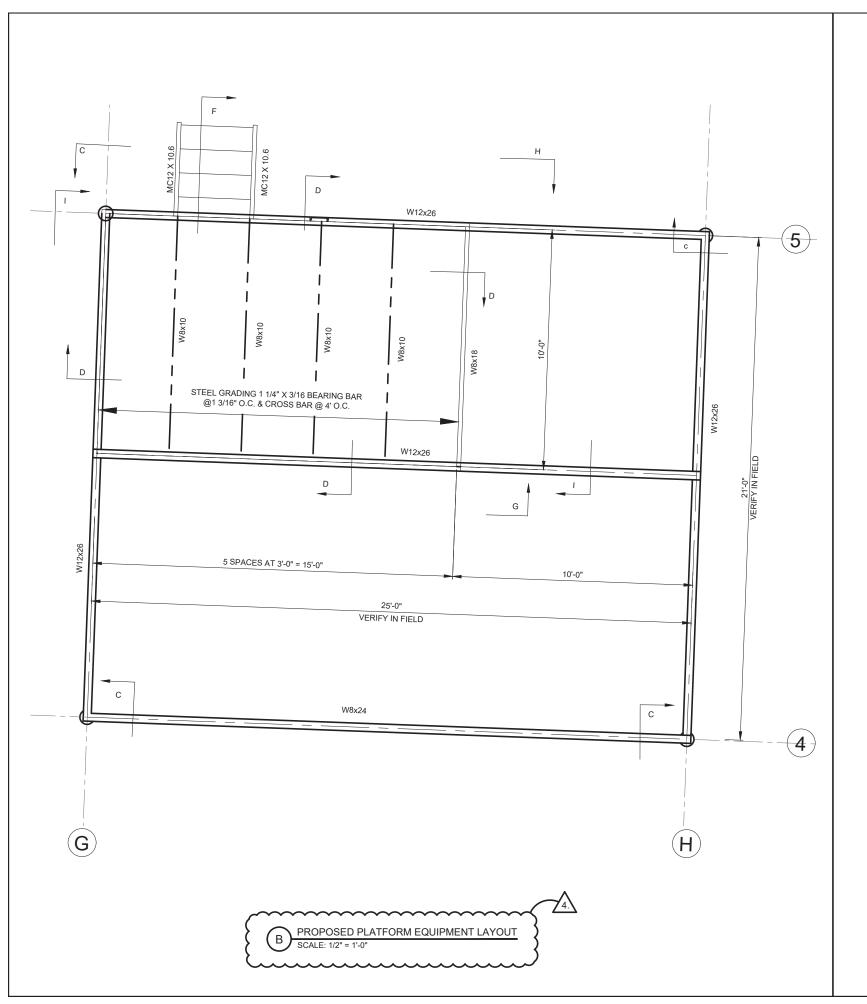
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| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |

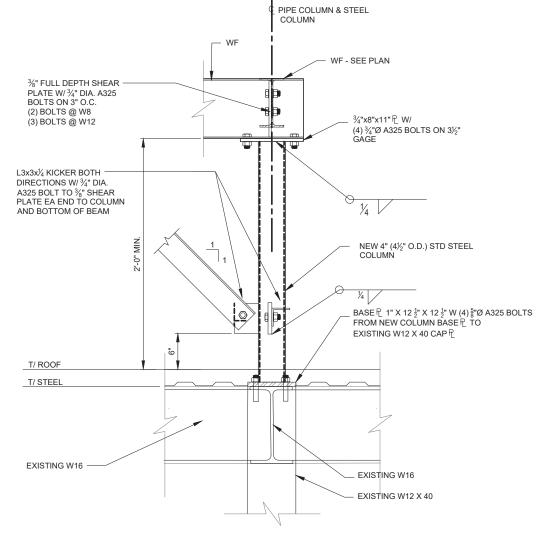
SHEET TITLE
EQUIPMENT
DETAILS

SHEET NUMBER

**EQ-2** 







GENERAL CONTRACTOR TO VERIFY CENTERLINE OF NEW STEEL COLUMN ALIGNS WITH CENTERLINE OF EXISTING CONCRETE COLUMN. GENERAL CONTRACTOR TO WATERPROOF PENETRATION. USE LANDLORD'S ROOFER FOR ANY ROOF PENETRATIONS.



7/30/18 EXP 11/18

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| _         | _           |                   |                                     | _                    |                                                    |                                                |  |
|-----------|-------------|-------------------|-------------------------------------|----------------------|----------------------------------------------------|------------------------------------------------|--|
|           | ВУ          | ST                | ST                                  | S                    | ESH                                                | ESH                                            |  |
|           | DATE        | 2/26/18           | 3/5/18                              | 4/1/18               | 7/13/18                                            | 7/30/18                                        |  |
| REVISIONS | DESCRIPTION | ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL DESIGN | FINALS PENDING FIBER | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |  |
|           | ON          |                   | -                                   | 2                    | 9                                                  | 4                                              |  |

LOC. # 455833

# WASHINGTON & JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

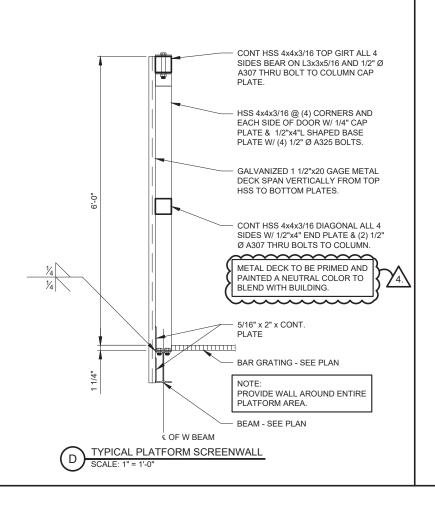
| DRAWN BY:   | LS      |
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| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |

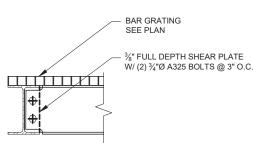
SHEET TITLE

DETAILS

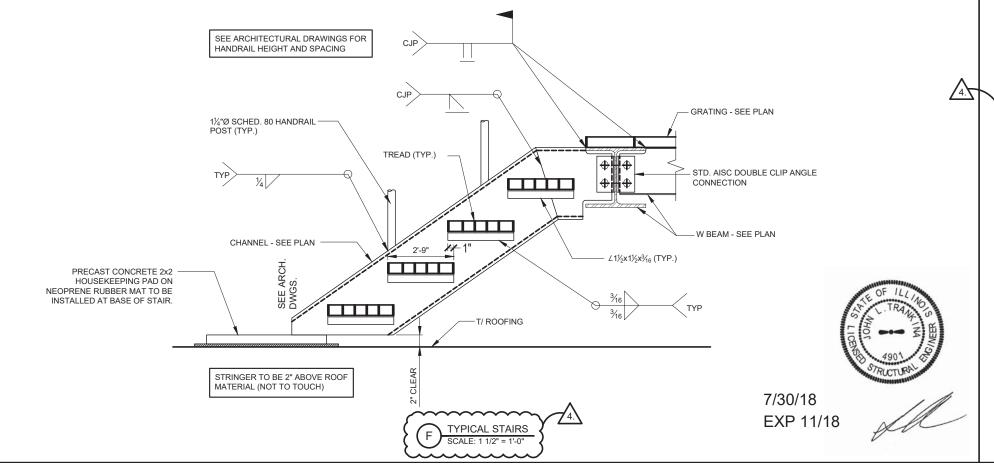
SHEET NUMBER

**S-2** 





TYPICAL BEAM CONNECTION
SCALE: 1 1/2" = 1'-0"



#### PLATFORM DESIGN LOADS:

ROOF

= 25 PSF + DRIFT

ELEVATED PLATFORM
GRATING LIVE LOAD = 100 PSF
GRATING DEAD LOAD = 11 PSF

#### **MISCELLANEOUS NOTES:**

- I. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED WITH ARCHITECTURAL AND MECHANICAL DRAWINGS. CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS OF ALL DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.
- NO OPENINGS, OTHER THAN THOSE SHOWN ON DESIGN DRAWINGS AND APPROVED SHOP DRAWINGS, SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT
- NO CHANGE IN SIZE OR DIMENSION OF STRUCTURAL MEMBERS SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT.
- 4. OPENINGS OF 1'-4" AND LESS ON A SIDE ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL AND MECHANICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF THOSE OPENINGS. PROVIDE REINFORCING AROUND OPENINGS PER TYPICAL DETAILS SHOWN ON STRUCTURAL DRAWINGS.
- THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOADS SHALL NOT EXCEED THE CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.
- THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. THE CONTRACTOR SHALL FURNISH ALL TEMPORARY BRACING AND / OR SUPPORTS REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS AND / OR SEQUIENCES.
- 7. DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS.
- CONTRACTOR'S CONSTRUCTION AND / OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD. EXPANSION JOINTS SHOWN ON THE DRAWINGS HAVE BEEN DESIGNED TO ACCOMMODATE ANTICIPATED THERMAL MOVEMENT AFTER THE BUILDING IS COMPLETE.
- 9. THE CONTRACTOR SHALL INFORM THE ARCHITECT IN WRITING OF ANY DEVIATION FROM THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE RELIEVED OF THE RESPONSIBILITY FOR SUCH DEVIATION BY THE ARCHITECTS APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, ETC., UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE ARCHITECT OF SUCH DEVIATION AT THE TIME OF SUBMISSION, AND THE ARCHITECT HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.
- 10. ALL THING WHICH, IN THE OPINION OF THE CONTRACTOR, APPEAR TO BE DEFICIENCIES, OMISSIONS, CONTRADICTIONS AND AMBIGUITIES, IN THE PLANS AND SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT. PLANS AND / OR SPECIFICATIONS WILL BE CORRECTED, OR A WRITTEN INTERPRETATION OF THE ALLEGED DEFICIENCY, OMISSION, CONTRADICTION OR AMBIGUITY WILL BE MADE BY THE ARCHITECT BEFORE THE EFFECTED WORK PROCEEDS.
- 11. PRIOR TO INSTALLATION OF ANTENNA MOUNTS OR SUPPORT FRAMES INTO MASONRY, THE SURROUNDING AREA IS TO BE SOUNDED BY A QUALIFIED MASON. ALL LOOSE AND/OR CRACKED BRICK SHALL BE REPLACED AND DAMAGED MORTAR JOINTS TUCK POINTED. THE MASONRY SHALL BE IN GOOD WORKING CONDITION PRIOR TO THE INSTALLATION OF ANY ITEMS.

### **GENERAL STEEL NOTES:**

- ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AISC "SPECIFICATION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION, AND THE AISC "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES", LATEST EDITION, EXCEPT AS MODIFIED BELOW OR IN THE SPECIFICATIONS
- 2. ALL STRUCTURAL STEEL W SHAPES SHALL CONFORM TO ASTM A572 OR A992 GRADE 50. ALL STEEL TO BE GALVANIZED. ALL OTHER STRUCTURAL STEEL SHAPES, PLATES, AND BARS SHALL CONFORM TO ASTM A36 OR 36, UNLESS NOTED OTHERWISE. COLD FORMED TUBING SHALL CONFORM TO ASTM ASOD GRADE B. PIPES SHALL CONFORM TO ASTM A53 TYPE E OR S. ANCHOR BOLTS SHALL CONFORM TO ASTM F1554 GRADE 36 & BE COMPATIBLE WITH ETOXX ELECTRONICS.
- ALL WELDING SHALL BE DONE BY QUALIFIED WELDERS AND SHALL CONFORM TO AWS D1.1 "STRUCTURAL WELDING CODE", LATEST EDITION. ALL WELDING ELECTRODES SHALL BE E70XX.
- . THE CONTRACTOR SHALL FIELD VERIFY ALL MEASUREMENTS AND EXISTING CONDITIONS.
- 5. IF CONDITIONS VARY FROM THOSE ON THE DRAWINGS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY.
- 6. THE CONTRACTOR SHALL OBSERVE ALL SAFETY RULES DICTATED BY CODE AND GOOD PRACTICE.
- 7. SHOULD UNFORESEEN CONDITIONS OR OTHER CAUSE NECESSITATE THE CONSTRUCTION DETAILS TO BE MODIFIED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER BEFORE PERFORMING THESE CHANGES.
- 8. ALL STEEL MEMBERS AND BOLTS TO BE GALVANIZED/NON-CORROSIVE

# CHICAGO SMSA limited partnership



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|           | DATE        | 2/26/18           | 3/5/18                              | 4/1/18               | 7/13/18                                            | 7/30/18                                        |  |
| REVISIONS | DESCRIPTION | ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL DESIGN | FINALS PENDING FIBER | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |  |
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LOC. # 455833

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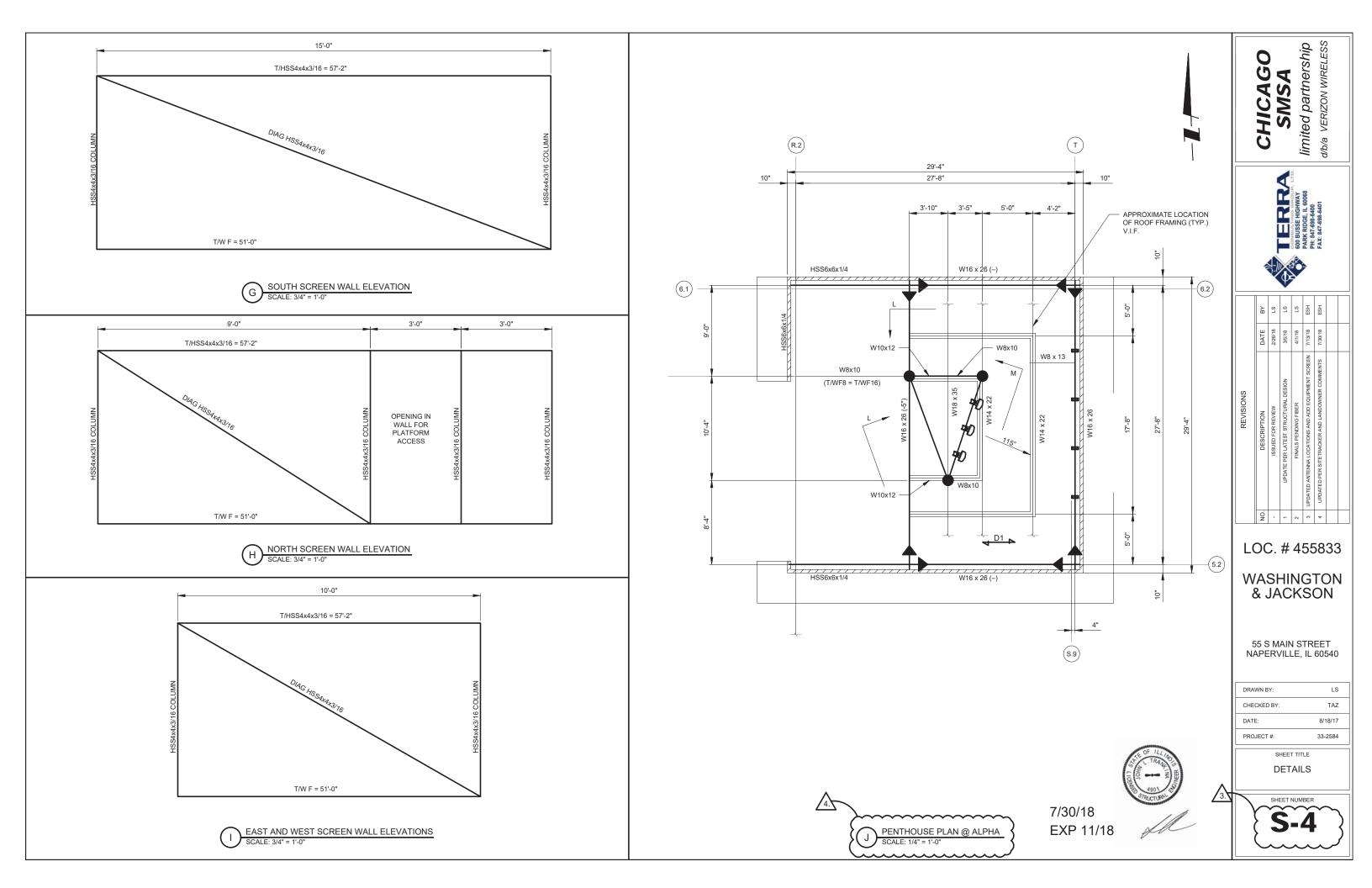
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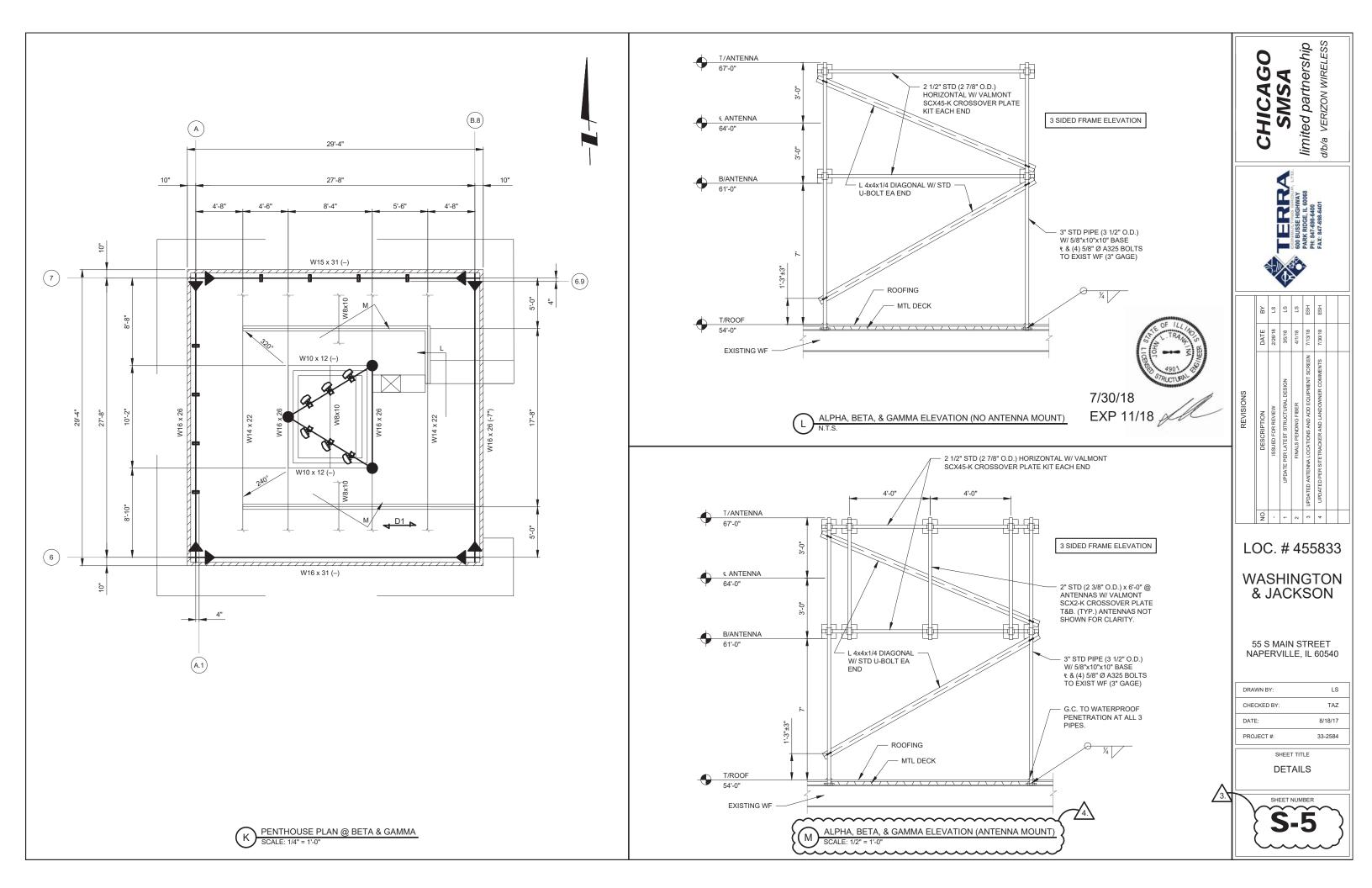
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| PROJECT #:  | 33-2584 |

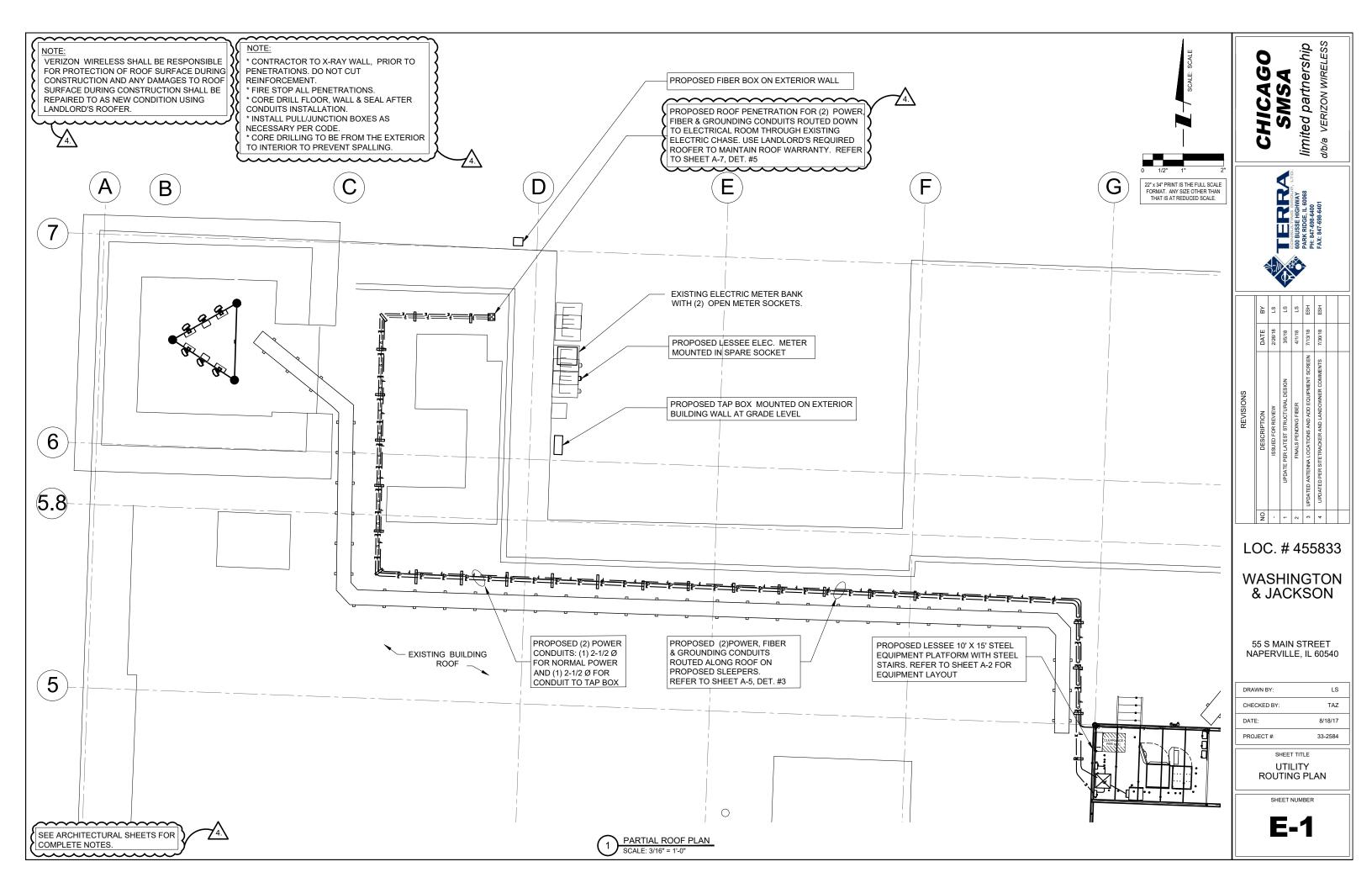
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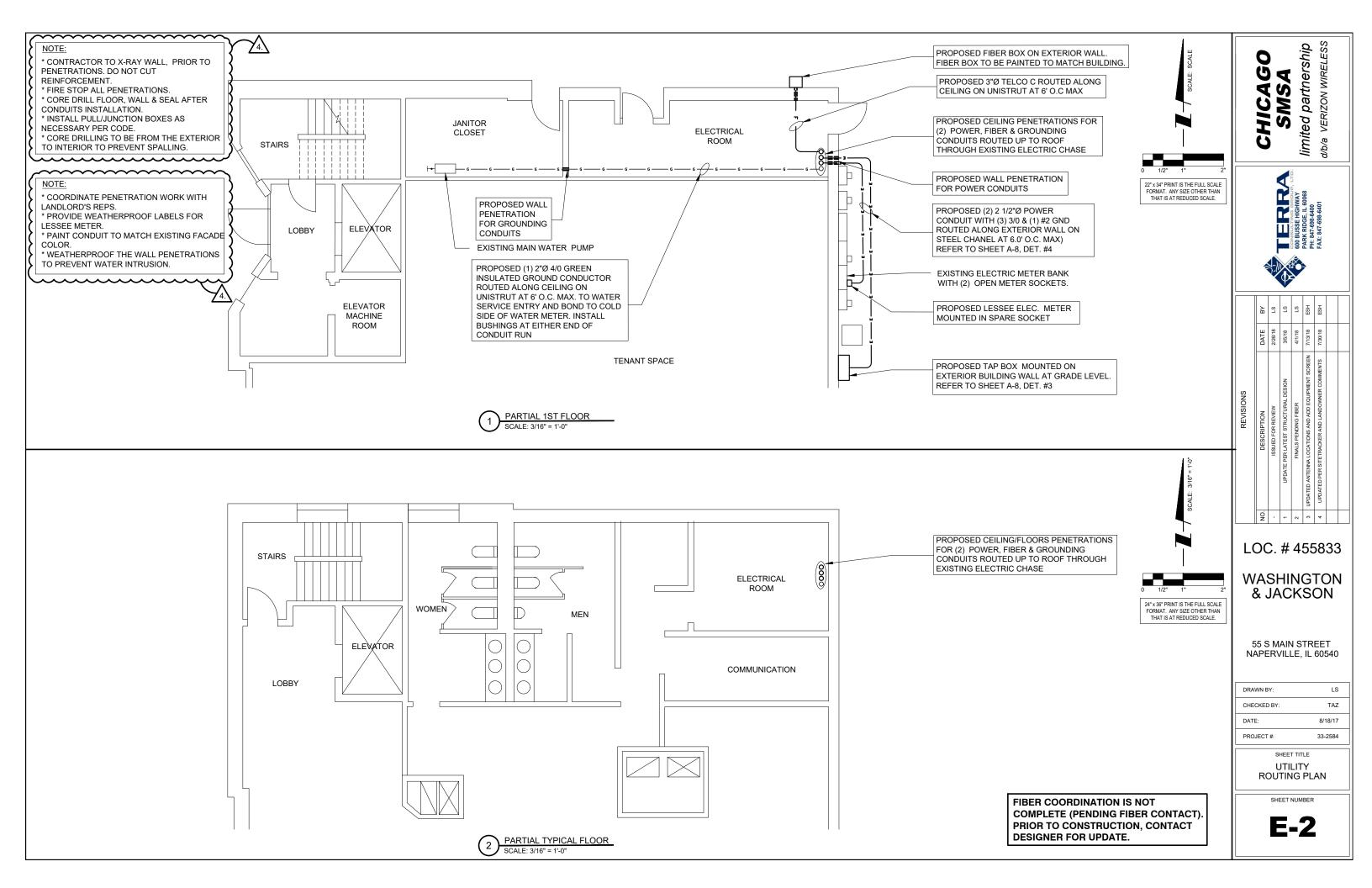
DETAILS AND NOTES

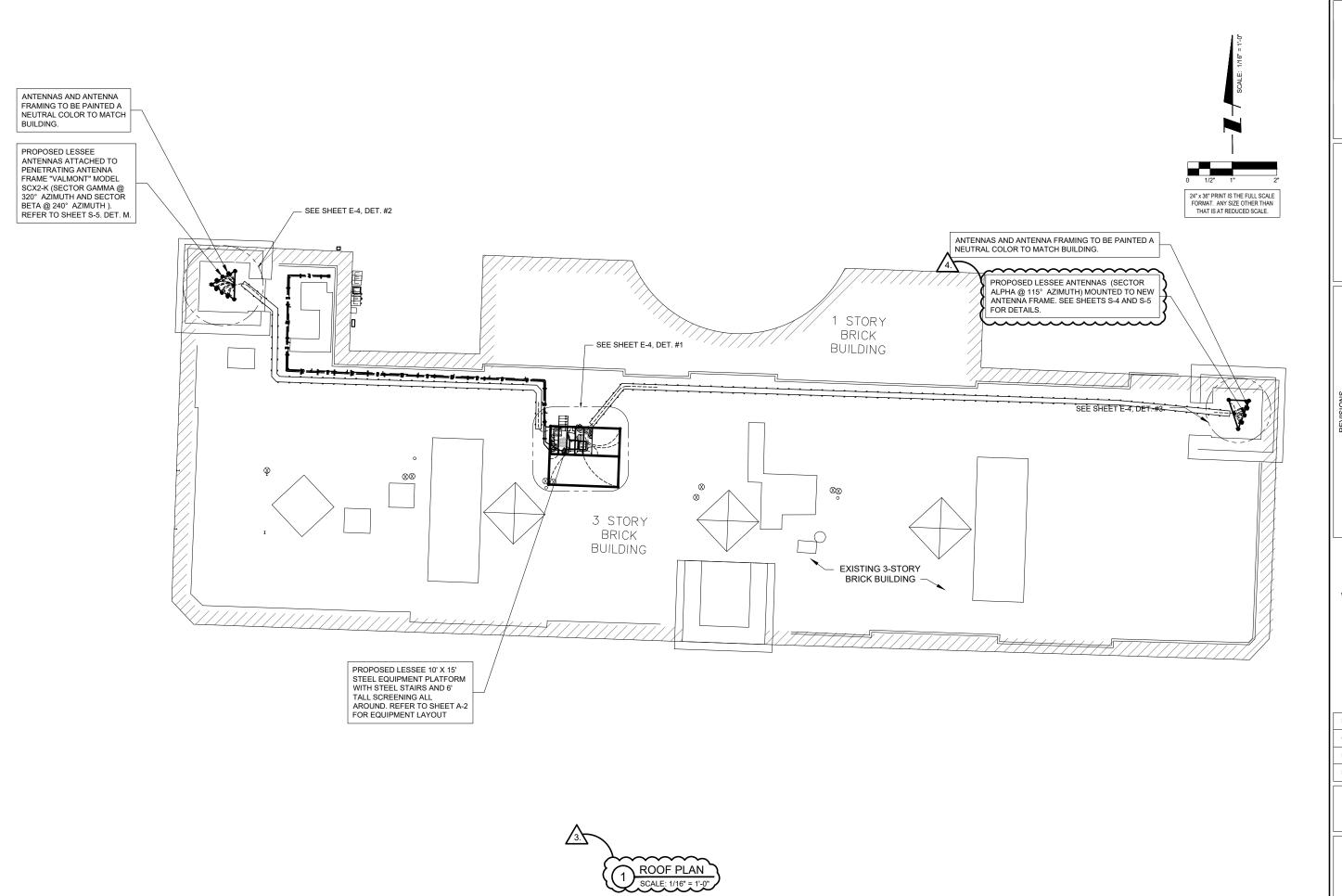
S-3











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|    | REVISIONS                                          |         |     |  |
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|    | ISSUED FOR REVIEW                                  | 2/26/18 | rs  |  |
| -  | UPDATE PER LATEST STRUCTURAL DESIGN                | 3/5/18  | ST  |  |
| 2  | FINALS PENDING FIBER                               | 4/1/18  | rs  |  |
| 8  | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | 7/13/18 | ESH |  |
| 4  | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS     | 7/30/18 | ESH |  |
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| ı | PROJECT #:  | 33-2584 |

SHEET TITLE

GROUNDING ROUTING PLAN

SHEET NUMBER

**E-3** 

#### **GROUNDING REFERENCE NOTES**

1 REFER TO STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR EXACT LOCATION OF ANTENNA(S), PLATFORM AND ANTENNA SUPPORT FRAMES.

PROPOSED EQUIPMENT PLATFORM GROUNDING

- (2) PROVIDE #2 GROUND RING ATTACHED BOTTOM OF PROPOSED PLATFORM
- (3) PROVIDE MASTER GROUND BAR AT BASE OF CABINET MOUNT TO STEEL PLATFORM.
- (4) GROUND GPS ANTENNA TO MAIN GROUND BAR
- (5) (2) #2 GND. LEAD FOR EQUIPMENT CABINET GROUND BAR

- PROVIDE ANTENNA SECTOR GROUND BAR (AGB) (HARGER 1/4" X 4" X 12") BOND ANTENNA CABLE GROUNDING KITS TO GROUND BAR. CONNECTION SHALL BE THE RESPONSIBILITY OF THE ANTENNA CABLE INSTALLER. BOND ANTENNA GROUND BAR TO NEAREST USING ONE(1) #2 AWG SOLID TINNED COPPER CONDUCTOR. PROVIDE A U.L. LISTED CONNECTOR SUITABLE FOR
- GROUND ANTENNA SUPPORT FRAME TO SECTOR GROUND BAR
- 9 PROVIDE #2 GROUNDING CONDUCTOR FROM GROUND BAR TO GROUND RING TYPICAL OF 2
- 2"Ø CONDUIT, 4/O GREEN INSULATED GROUND CONDUCTOR ROUTED ALONG BUILDING ROOF ON PROPOSED NON-PENETRATING PVC SLEEPERS, THAN DOWN TO EXISTING

- (11) GROUND PROPOSED PLATFORM STRUCTURAL SUPPORT FRAME TO GROUND RING
- (12) GROUND PROPOSED METAL GRATING TO PROPOSED GROUND RING
- (13) GROUNDING CONNECTION TO PROPOSED LLC
- (14) GROUNDING CONNECTION TO PROPOSED SCREENING
- (15) GROUNDING CONNECTION TO PROPOSED FIBER BOX
- (16) GROUNDING CONNECTION TO LIGHT

PROPOSED ANTENNA GROUNDING SECTOR ALPHA

ATTACH GROUND KITS TO ANTENNA CABLES AT MOUNT LOCATION AND BOND TO SECTOR GROUND BAR (TYP)

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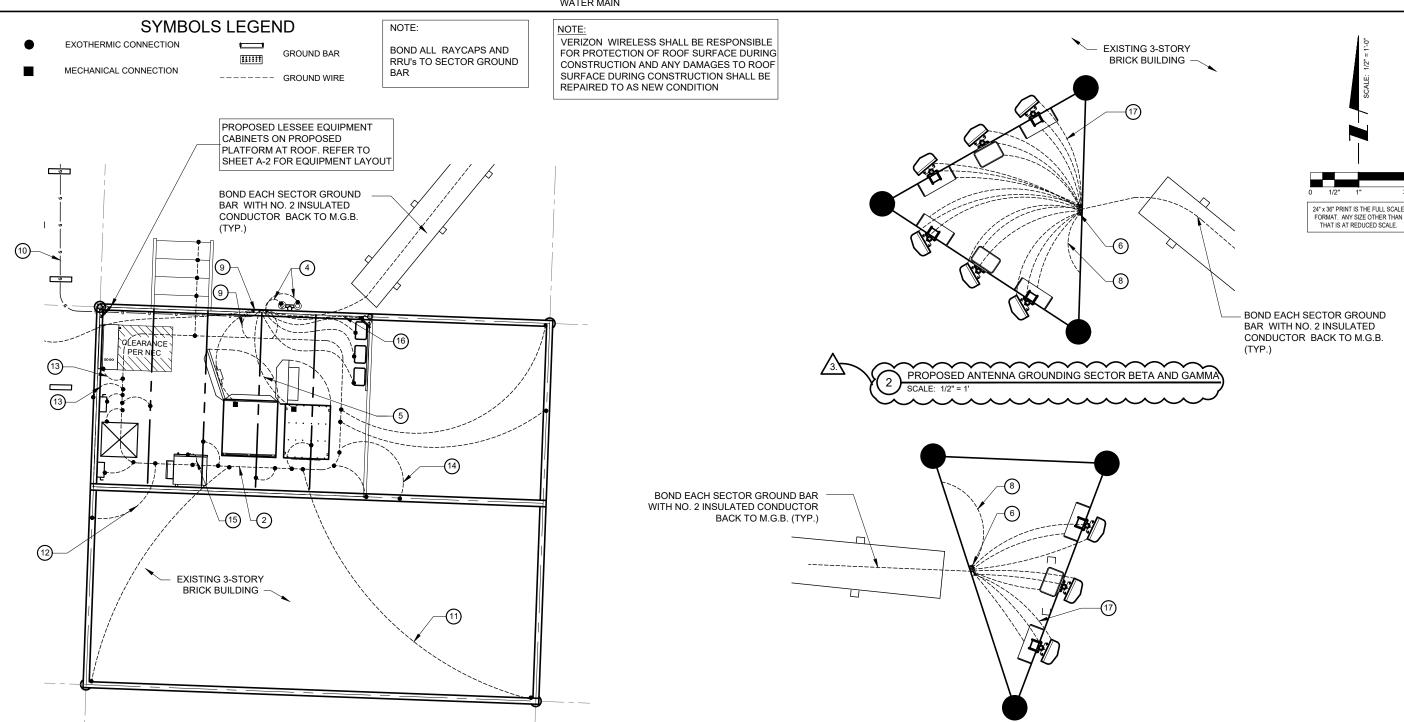
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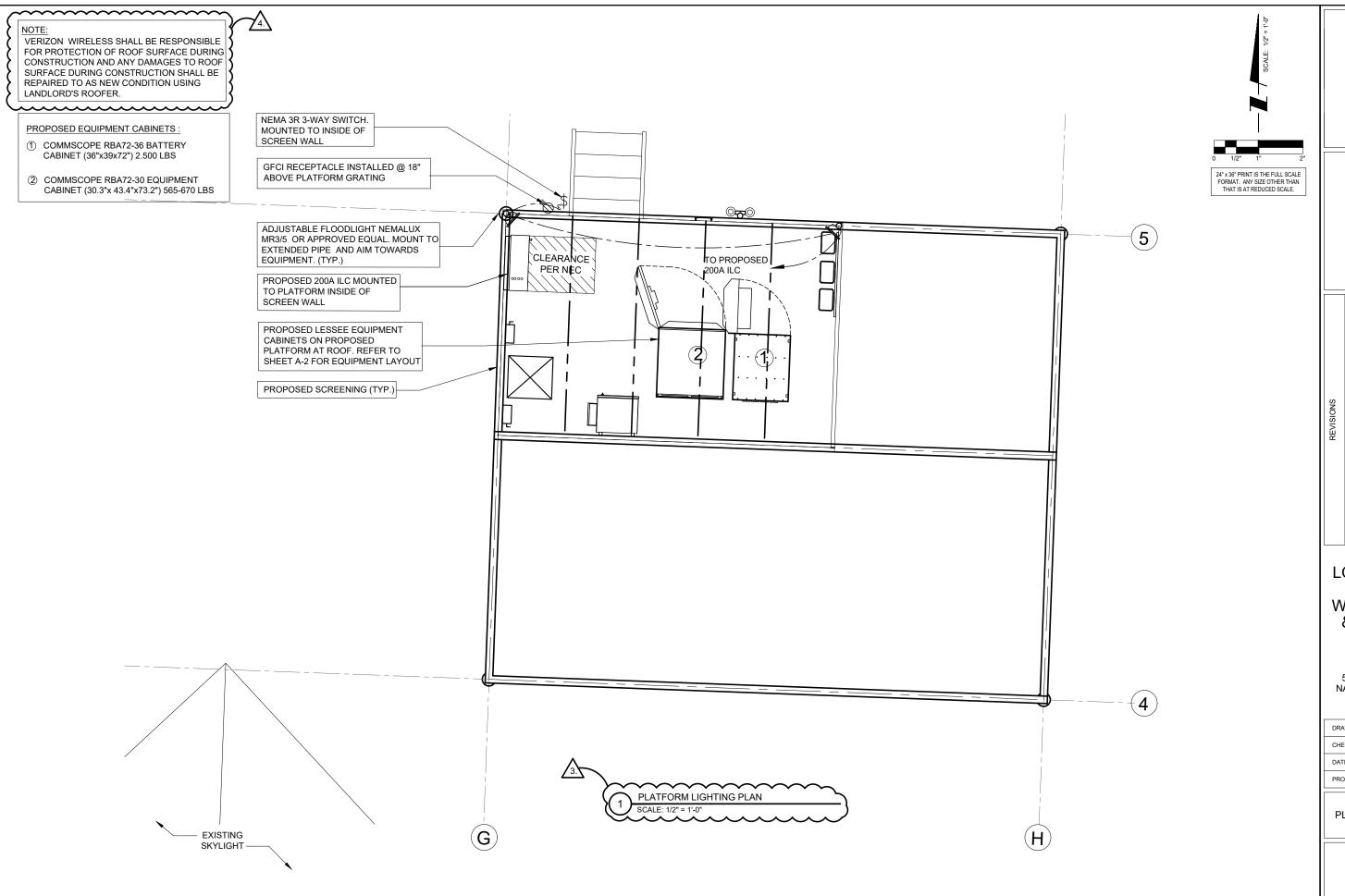
> UTILITY **ROUTING PLAN**

SHEET NUMBER



THE MATERIALS BEING CONNECTED. PROVIDE EXOTHERMIC WELDS (7) EXTEND GROUNDING CONDUCTOR TO ANTENNA, RAYCAP OR RRU MODULE EXOTHERMIC WELD AT ANTENNA SUPPORT FRAME. SUPPORT CONDUCTOR AS REQUIRED EVERY TWO (2) FEET MINIMUM.

WATER MAIN



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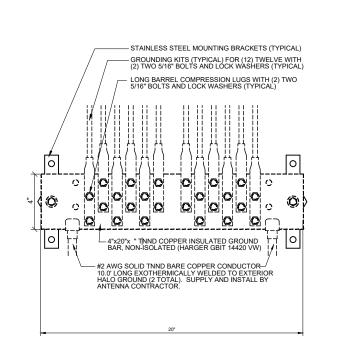
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PLATFORM LIGHTING PLAN

SHEET NUMBER

**E-5** 



EXTERIOR GROUND BAR DETAIL

(POS.- RED) (NEG.- BLK) (GND.- GRN)

COPPER BUSS

1. ALL HARDWARE 18-8 STAINLESS STEEL INCLUDING BELLEVILLES. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.

2. FOR GROUND BOND TO STEEL ONLY: INSERT A DRAGON TOOTH

WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH

S/S BOLT (1 OF 2)

S/S NUT -

S/S BELLEVILLE-

WASHER

WASHER S/S FLAT -

NOTES:

KOPR-SHIELD.



THROUGH CABLE TO TOP OF GROUND ROD.



TEE OF HORIZONTAL RUN AND TAP CABLES.



HORIZONTAL CABLE TAP TO HORIZONTAL STEEL SURFACE OR PIPE. CABLE OFF SURFACE



THROUGH VERTICAL CABLE TO VERTICAL STEEL SURFACE OR TO THE SIDE OF EITHER HORIZONTAL OR VERTICAL



CROSS OF HORIZONTAL CABLES. LAPPED AND NOT



Type VN HORIZONTAL CABLE TAP TO VERTICAL STEEL SURFACE OF THE SIDE OF HORIZONTAL PIPE



Type VS CABLE TAP DOWN AT 45° TO VERTICAL STEEL SURFACE OR SIDE OF HORIZONTAL OR VERTICAL PIPE.



ROD



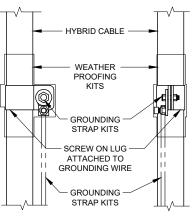
THROUGH AND TAP CABLES



EXOTHERMIC WELD DETAILS

EXOTHERMIC AND HARGER ULTRAWELD APPROVED EQUAL

- DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR
- 2. THIS DETAIL IS TYPICAL FOR EACH COAX CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
- CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING PLATFORM ENTRY PANEL
- CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE.
- USE ONLY TIN PLATED GROUNDING KITS.

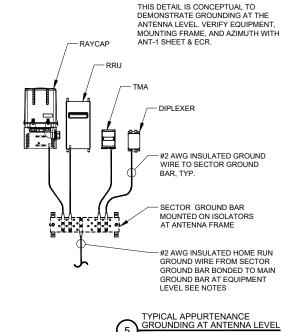




COAX/ HYBRID GROUND KIT DETAIL

NOTES:

GROUND CONNECTIONS MUST BE DOUBLE HOLE CONNECTION. SPECIAL EXCEPTION ONLY TO EQUIPMENT THAT WILL NOT ALLOW FOR A DOUBLE HOLE CONNECTION.



CONDUIT INSULATED GROUNDING BUSHING O-Z GEDNEY TYPE HBLG SIZE TO SUIT #6 BUSHING GROUND #2/0 AWG GREEN STRANDED COPPER GROUND CONDUCTOR FROM MASTER GROUND BAR HUBS. TWO HOLE STRAIGHT TONGUE. T & B SERIES SIZE TO SUIT STREET SIDE WATER METER  $\triangle$ 5' MAX COLD WATER MAIN 4 <u>√</u> ⊿ HEAVY DUTY WATER PIPE GROUND CLAMP BURNDY TYPE NSNT/ NI + NT OR GAR-TC SIZE TO OUTSIDE OF INSIDE OF SUIT (TWO, ONE FOR EACH GROUND WIRE) BUILDING BUILDING

> SYSTEM GROUND TO COLD WATER MAIN SCALE: N.T.S.

d/b/a VERIZON WIRELESS limited partnership

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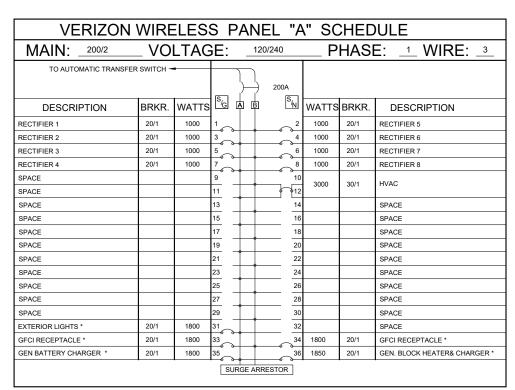
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> SHEET TITLE ELECTRICAL AND **GROUNDING DETAILS**

SHEET NUMBER



S/S FLAT WASHER CLEAR HEAT SHRINK



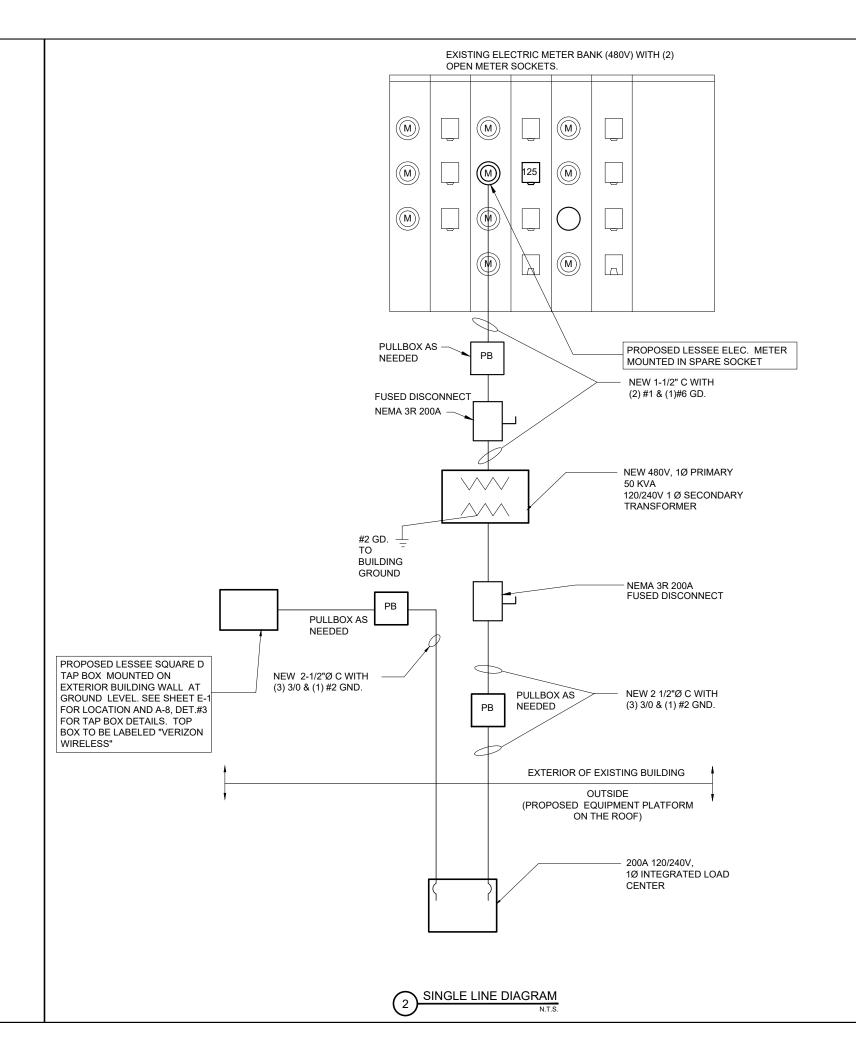
SURFACE MOUNTED NEMA 3R w/DOOR 22K AIC BREAKERS (CONTRACTOR SHALL VERIFY AIC RATINGS W/LOCAL POWER CO.)

PANEL BOARD SCHEDULE
N.T..S

NOTE:

VERIZON WIRELESS EQUIPMENT
 ENGINEERING TO SUPPLY BREAKER
 FOR RADIO AND POWER CABINETS

2. GENERAL CONTRACTOR TO SUPPLY BREAKERS NOTED WITH " \* "



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SHEET TITLE

PANEL BOARD AND SINGLE LINE DIAGRAM

SHEET NUMBER

**E-7** 

#### **GENERAL**

THE CONSTRUCTION DOCUMENT DRAWINGS ARE INTERRELATED WHEN PERFORMING THE WORK FACH CONTRACTOR MUST REFER TO ALL DRAWINGS COORDINATION IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

#### DIVISION 1: GENERAL REQUIRMENTS

#### SECTION 01700 - PROJECT CLOSEOUT

#### PART 1 - GENERAL

- A. ORTAIN AND SUBMIT RELEASES ENABLING THE OWNER UNRESTRICTED USE OF THE WORK AND ACCESS TO SERVICES AND UTILITIES; INCLUDE OCCUPANCY PERMITS, OPERATING CERTIFICATES AND SIMILAR RELEASES.
- B. SUBMIT RECORD DRAWINGS, DAMAGE OR SETTLEMENT SURVEY, PROPERTY SURVEY, AND
- C. COMPLETE FINAL CLEAN UP REQUIREMENTS, INCLUDING TOUCH—UP PAINTING. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

#### PART 2 - FINAL CLEANING

- 1. COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION
- COMPLETE THE FOLLOWING CLEANING OPERATIONS BEFORE REQUESTING INSPECTION FOR CERTIFICATION OF COMPLETION.

  A. CLEAN THE PROJECT SITE, YARD AND GROUNDS, IN AREAS DISTURBED BY CONSTRUCTION ACTIVITIES, INCLUDING LANDSCAPE DEVELOPMENT AREAS, OF RUBBISH, WASTE MATERIALS, LITTER AND FOREIGN SUBSTANCES. SWEEP PAVED AREAS BROOM CLEAN. REMOVE PETRO-CHEMICAL SPILLS, STAINS AND OTHER FOREIGN DEPOSITS. RAKE GROUNDS THAT ARE NEITHER PLANTED NOR PAVED, TO A SUCCESSION STAINS AND CONTROLLED THE STREET OF THE STAINS AND THE PROPERTY OF THE STREET OF THE STREE TO A SMOOTH EVEN-TEXTURED SURFACE.
- B. REMOVE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL
- C. REMOVE SNOW AND ICE TO PROVIDE SAFE ACCESS TO THE SITE AND EQUIPMENT ENCLOSURE.
- D. CLEAN EXPOSED EXTERIOR AND INTERIOR HARD-SURFACED FINISHES TO A DIRT-FREE CONDITION, FREE OF STAINS, FILMS AND SIMILAR FOREIGN SUBSTANCES. AVOID DISTURBING NATURAL WEATHERING OF EXTERIOR SURFACES.
- E. REMOVE DEBRIS FROM LIMITED ACCESS SPACES, INCLUDING ROOFS, EQUIPMENT ENCLOSURE, MANHOLES, AND SIMILAR SPACES.

  REMOVE LABELS THAT ARE NOT PERMANENT LABELS.
- TOUCH-UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES AND SURFACES. REPLACE FINISHES AND SURFACES THAT CAN NOT BE SATISFACTORILY REPAIRED OR RESTORED, OR THAT SHOW EVIDENCE OF REPAIR OR RESTORATION. DO NOT PAINT OVER "UL" AND SIMILAR LABELS, INCLUDING
- ELECTRICAL NAME PLATES.

  H. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY.
- I. DUST-OFF ALL EQUIPMENT, INCLUDING BATTERY PACKS, WITHIN EQUIPMENT
- J. WASH AND WAX FLOOR WITHIN EQUIPMENT ENCLOSURE
- 2. REMOVAL OF PROTECTION: REMOVE TEMPORARY PROTECTION AND FACILITIES INSTALLED DURING CONSTRUCTION TO PROTECT PREVIOUSLY COMPLETED INSTALLATIONS DURING THE REMAINDER OF THE CONSTRUCTION PERIOD.

#### DIVISION 5: METALS

#### SECTION 05000 - METALS

#### PART 1 - GENERAL

- STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATES, PLATES, BARS AND GROUTING UNDER BASE PLATES. SUBMITTALS:
- SHOP DRAWINGS: INDICATE SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, CONNECTIONS, CAMBERS, LOADS, AND WELDED SECTIONS.
- 3. QUALITY ASSURANCE
  - FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
  - B. PERFORM DESIGN UNDER DIRECT SUPERVISION OF A PROFESSIONAL STRUCTURAL ENGINEER LICENSED IN THE STATE.

#### PART 2 - PRODUCTS

#### 1 MATERIALS

- A. STRUCTURAL STEEL MEMBERS: ASTM A572, GRADE 50 STRUCTURAL TUBING: ASTM A500, GRADE B PIPE: BOLTS, NUTS, AND WASHERS: ASTM A53, TYPE E OR S, GRADE B
- ANCHOR BOLTS: ASTM A307
- WELDING MATERIALS:
- AWS D1.1, TYPE REQUIRED FOR MATERIALS BEING WELDED G GROUT: NON-SHRINK TYPE, PREMIXED COMPOUND
  - CONSISTING OF NONMETALLIC AGGREGATE. CEMENT WATER REDUCING AND PLASTICIZING ADDITIVES CAPARIE OF DEVELOPING MINIMUM COMPRESSIVE STRENGTH 7000 psi AT 28 DAYS.
- H. SHOP AND TOUCH-UP PRIMER: SSPC 15, TYPE 1, RED OXIDE
- TOUCH-UP PRIMER FOR GALV. SURFACES: ZINC RICH TYPE

#### 2. FABRICATION:

CONTINUOUSLY SEAL JOINTED MEMBERS BY CONTINUOUS WELDS. GRIND EXPOSED WELDS SMOOTH.

#### 3 FINISH:

- A. PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCE WITH SSPC SP-1 TO SP-10 PROCEDURES.
- B. STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.

#### PART 3 - EXECUTION

- EXAMINATION AND PREPARATION:
- VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE.
- - ALLOW FOR ERECTION LOADS. PROVIDE TEMPORARY BRACING TO MAINTAIN FRAMING IN ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRIDGING AND BRACING.
- B. FIELD WELD COMPONENTS INDICATED ON SHOP DRAWINGS.
- C. DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL
- AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED OR GALVANIZED WITH TOUCH-UP PRIMERS AS SPECIFIED UNDER SECTION 05000,-METALS, PART 2 PRODUCTS, H & I. SURFACES TO BE IN CONTACT WITH CONCRETE NOT INCLUDED.
- 3. FIELD QUALITY CONTROL:
  - FIELD INSPECTION OF MEMBERS, CONNECTIONS, WELDS AND TORQUING.

#### DIVISION 16: ELECTRICAL

#### SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

- CONTRACTOR SHALL REVIEW THE CONTRACT DOCUMENTS PRIOR TO ORDERING THE ELECTRICAL EQUIPMENT AND STARTING THE ACTUAL CONSTRUCTION. CONTRACTOR SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ARCHITECT LISTING ANY DISCREPANCIES OR CONFLICTING INFORMATION.
- 2. ELECTRICAL PLANS, DETAILS AND DIAGRAMS ARE DIAGRAMMATIC ONLY. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS OF ELECTRICAL EQUIPMENT WITH OWNER PRIOR TO INSTALLATION.
- 3. EACH CONDUCTOR OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN EACH PANELBOARD, PULLBOX, JUNCTION BOX, SWITCH BOX, ETC. THE TYPE OF TAGGING METHODS SHALL BE IN COMPLIANCE WITH OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (0.S.H.A.).
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN GOOD WORKING CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUPLACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED "J" WHERE APPLICABLE. MATERIALS SHALL MEET WITH APPROVAL OF ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, NBFU AND "UL" LISTED.
- 5. ALL CONDUIT SHALL HAVE A PULL CORD.
- PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF THE JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
- ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL FOUIPMENT SHALL HAVE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
- THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY UBC, NEC AND ALL APPLICABLE CODES.
- 9. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE
- PLASTIC PLATES FOR ALL SWITCHES, RECEPTACLES, TELEPHONE AND BLANKED OUTLETS SHALL HAVE ENGRAVED LETTERING WHERE INDICATED ON THE DRAWINGS. WEATHERPROOF RECEPTACLES SHALL HAVE SIERRA #WPD-8 LIFT COVERPLATES.

#### SECTION 16400 - SERVICE AND DISTRIBUTION

- WIRE AND CABLE CONDUCTORS SHALL BE COPPER, 600V, TYPE THHN OR THWN. WITH A MIN. SIZE OF #12 AWG, COLOR CODED. ALL RECTIFIER DROPS SHALL BE STRANDED TO ACCEPT CRIMP CONNECTORS.
- 2 ALL CHEMICAL GROUND RODS SHALL BE "LIL" APPROVED
- METER SOCKET AMPERES, VOLTAGE, NUMBER OF PHASES SHALL BE AS NOTED ON THE DRAWINGS. MANUFACTURED BY MILBANK OR APPROVED EQUAL, AND SHALL BE UTILITY COMPANY APPROVED.

#### CONDUIT

- RIGID CONDUIT SHALL BE U.L. LABEL GALVANIZED ZINC COATED WITH GALVANIZED ZINC INTERIOR AND SHALL BE USED WHEN INSTALLED IN OR UNDER CONCRETE SLABS, IN CONTACT WITH THE EARTH, UNDER PUBLIC ROADWAYS, IN MASONRY WALLS OR EXPOSED ON BUILDING EXTERIOR. RIGID CONDUIT IN CONTACT WITH EARTH SHALL BE 1/2 LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.
- B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTING SHALL BE GLAND RING COMPRESSION TYPE.
- FLEXIBLE METALLIC CONDUIT SHALL HAVE U.L. LISTED LABEL AND MAY BE USED WHERE PERMITTED BY CODE. FITTINGS SHALL BE
  "JAKE" OR "SQUEEZE" TYPE. ALL FLEXIBLE CONDUITS SHALL HAVE
  FULL LENGTH GROUND WIRE.
- ALL UNDERGROUND CONDUIT SHALL BE AS NOTED ON THE DRAWINGS AT A MINIMUM DEPTH OF 42" BELOW GRADE. IT IS REQUIRED AND WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR TO NOTIFY DIGGERS HOTLINE AT 1-800-242-8511 OR OTHER SUCH NOTIFYING AGENCY THIRTY-SIX (36) HOURS PRIOR TO DIGGING.
- 5. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOKUP COSTS ARE TO BE PAID BY THE CONTRACTOR.
- ALL ELECTRICAL EQUIPMENT SHALL BE LABELED WITH PERMANENT ENGRAVED PLASTIC LABELS WITH WHITE ON BLUE BACKGROUND LETTERING (MINIMUM LETTER HEIGHT SHALL BE ONE FORTH INCH (1/4"). NAMEPLATES SHALL BE FASTENED WITH STAINLESS STEEL SCREWS, NOT ADHESIVE.
- UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND FALL POTENTIAL GROUNDING TESTS BY AN INDEPENDENT TESTING SERVICE ENGAGED BY THE CONTRACTOR SHALL BE SUBMITTED FOR APPROVAL. SUBMIT TEST REPORTS TO PROJECT MANAGER. CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
- 8. GROUNDING ELECTRODE SYSTEM

#### A. PREPARATION

- SURFACE PREPARATION: ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTED SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT. NO WASHERS ARE ALLOWED BETWEEN THE ITEMS BEING GROUNDED. ALL CONNECTIONS ARE TO HAVE A NON-OXIDIZING AGENT APPLIED PRIOR TO INSTALLATION.
- GROUND BAR PREPARATION:
- ALL COPPER GROUND BARS SHALL BE CLEANED, POLISHED AND A NON-OXIDIZING AGENT APPLIED. NO FINGERPRINTS OR DISCOLORED COPPER WILL BE PERMITTED.
- ALL GROUNDING CONDUCTORS SHALL RUN THROUGH PVC SLEEVES WHEREVER CONDUCTORS RUN THROUGH WALLS, FLOORS OR CELLINGS. IF CONDUCTORS MUST RUN THROUGH EMT, BOTH ENDS OF CONDUIT SHALL BE GROUNDED. SEAL BOTH ENDS OF CONDUIT WITH SILICONE CAULK.
- B. GROUND BARS
  - ALL GROUND BARS SHALL BE ONE FORTH INCH (1/4") THICK TINNED COPPER PLATE AND OF SIZE INDICATED ON DRAWINGS.
  - ALL CONNECTIONS TO THE GROUND BAR SHALL OBSERVE THE FOLLOWING SEQUENCE:

    - BOLT-HEAD 2-HOLE LUG
  - TINNED COPPER BUSS BAR
    - STAR WASHER

- C. EXTERNAL CONNECTIONS
- ALL BURIED GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC WELD PROCESS. CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, TEE'S, CROSSES, ETC. ALL CABLE TO GROUND RODS, GROUND ROD SPLICES AND LIGHTNING PROTECTION SYSTEMS ARE TO BE AS INDICATED. ALL MATERIALS USED (MOLDS, WELDING METAL, TOOLS, ETC.) SHALL BE BY "CADWELD" AND INSTALLED PER MANUFACTURER'S RECOMMENDED PROCEDURES.
- ALL ABOVE GRADE GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEP FOR THE ACEG AND GROUND ROD) MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDER SHALL NOT BE USED. ALL CABLE TO CABLE CONNECTIONS SHALL BE HIGH PRESSURE DOUBLE CRIMP TYPE CONNECTIONS. CONNECTIONS TO STRUCTURAL STEEL SHALL BE EXOTHERMIC WELDS.

ALL GROUND RODS SHALL BE 5/8—INCH DIAMETER X 10'-0" LONG "COPPERWELD" OR APPROVED EQUAL, OF THE NUMBER AND LOCATIONS INDICATED. GROUND RODS SHALL BE DRIVEN FULL LENGTH VERTICAL IN UNDISTURBED EARTH.

#### F. GROUND CONDUCTORS

ALL GROUND CONDUCTORS SHALL BE STANDARD TINNED SOLID BARE COPPER ANNEALED, AND OF SIZE INDICATED ON DRAWINGS UNLESS NOTED OTHERWISE.

LUGS SHALL BE 2-HOLE, LONG BARREL, STRAND COPPER UNLESS OTHERWISE SPECIFIED IN THE CONTRACT DOCUMENTS. LUGS SHALL BE THOMAS AND BETTS SERIES #548\_ BE OR EQUIVALENT

| Α. | 535 MCM DLO        | 54880  |
|----|--------------------|--------|
| В. | 262 MCM DLO        | 54872  |
| C. | #1/0 DLO           | 54862B |
| D. | #4/0 THWN AND BARE | 54866  |
| E. | #2/0 THWN          | 54862E |
| F. | #2 THHN            | 54207B |
| G. | #6 DLO             | 54205B |
|    |                    |        |

2. WHEN THE DIRECTION OF THE CONDUCTOR MUST CHANGE, IT SHALL BE DONE GRADUALLY. THE CURVATURE OF THE TURN SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING CHART:

#### MINIMUM BENDING GROUNDING CONDUCTOR SIZE RADIUS TO INSIDE EDGE

NO. 2 AWG TO NO. 1/0 AWG NO. 2/0 AWG TO 4/0 MCM 8 INCHES 12 INCHES 250 MCM TO 750 MCM 24 INCHES

#### SECTION 16745 - TELECOMMUNICATIONS WIRING COMPONENTS (COAXIAL ANTENNA CABLE)

- A ALL MATERIALS, PRODUCTS OR PROCEDURES INCORPORATED INTO WORK SHALL BE NEW AND OF STANDARD COMMERCIAL QUALITY.
- B. CERTAIN MATERIALS AND PRODUCTS WILL BE SUPPLIED BY THE OWNER (REFER TO GENERAL CONDITIONS FOR THE LIST OF OWNER FURNISHED EQUIPMENT, MATERIALS AND SUPPLIES FOR THESE IFLEMS). THE CONTRACTOR IS RESPONSIBLE FOR PICKUP AND DELIVERY OF ALL SUCH MATERIALS
- C. ALL OTHER MATERIALS AND PRODUCTS SPECIFIED IN THE CONTRACT DOCUMENTS SHALL BE SUPPLIED BY THE CONTRACTOR.

#### 2. MATERIALS:

- A. COAXIAL CABLE:
- 1. INSTALL COAXIAL CABLE AND TERMINATIONS BETWEEN ANTENNAS AND EQUIPMENT PER MANUFACTURER'S RECOMMENDATIONS
  WITH COAXIAL CABLES SUPPORTED AT NO MORE THAN 3'-O' O.C.
  WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND
  EQUIPMENT PER MANUFACTURERS' REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE FEET (3') IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
- ALL COAX RUN LENGTHS GREATER THAN 175 FEET SHALL BE 1-5/8", ALL COAX. RUN LENGTH BETWEEN 101 FEET AND 174 FEET SHALL BE 1-1/4", AND IN LENGTH LESS THAN OR EQUAL TO 100 FEET SHALL BE 7/8".
- 3. ANTENNA AND COAXIAL CABLE GROUNDING
- A. ALL COAXIAL CABLE GROUNDING KITS ARE TO BE INSTALLED ON STRAIGHT RUNS OF COAXIAL CABLE (NOT WITHIN BENDS)
- 4. COAXIAL CABLE IDENTIFICATION
- A. TO PROVIDE EASY IDENTIFICATION AND UNIFORM MARKING OF ANTENNA CABLING, PLASTIC TAGS SHALL BE USED AT THE FOLLOWING LOCATIONS:
  - FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER
- 2. SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT. B. USE ANDREW CABLE TIES (PT.# 27290) TO SECURE IDENTIFICATION TAGS.

#### 5. TESTING

LESSEE SHALL PROVIDE AN INDEPENDENT TESTING AGENCY TO PERFORM THE COAXIAL SWEEP TEST & REPORT, THE CONTRACTOR IS TO PROVIDE ONE CLIMBER / QUALIFIED PERSONNEL TO ASSIST IN ANY REPAIRS AND WEATHERPROOFING ONCE THE TEST IS COMPLETE. THE CONTRACTOR IS TO PROVIDE LESSEE WITH A MINIMUM OF 48 HOURS NOTICE PRIOR TO THE TIME OF THE SWEEP TEST

#### O D đ

VERIZON WIRELESS rship 0 partner SMS HIC limited , Ü d/b/a



|           | DATE        | 2/26/18           | 3/5/18                              | 4/1/18               | 7/13/18                                            | 7/30/18                                        |  |
|-----------|-------------|-------------------|-------------------------------------|----------------------|----------------------------------------------------|------------------------------------------------|--|
| REVISIONS | DESCRIPTION | ISSUED FOR REVIEW | UPDATE PER LATEST STRUCTURAL DESIGN | FINALS PENDING FIBER | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS |  |
|           | Ŏ.          |                   | -                                   | 7                    | 6                                                  | 4                                              |  |

LOC. # 455833

#### WASHINGTON & JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

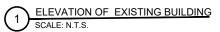
LS CHECKED BY DATE: 8/18/17 PROJECT # 33-2584

SHEET TITLE

**SPECIFICATIONS** 

SHEET NUMBER







2 ELEVATION OF EXISTING ROOF SCALE: N.T.S.



OVERVIEW OF EXISTING PARAPET (TYP.)
SCALE: N.T.S.





VIEW OF EXISTING MAIN WATER PUMP SCALE: N.T.S.

IICAGO SMSA d partnershig



|    | REVISIONS                                          |         |     | - |
|----|----------------------------------------------------|---------|-----|---|
| Š. | DESCRIPTION                                        | DATE    | ВУ  | _ |
|    | ISSUED FOR REVIEW                                  | 2/26/18 | ST  |   |
| -  | UPDATE PER LATEST STRUCTURAL DESIGN                | 3/5/18  | rs  |   |
| 7  | FINALS PENDING FIBER                               | 4/1/18  | ST  |   |
| ဗ  | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | 7/13/18 | ESH |   |
| 4  | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS     | 7/30/18 | HS∃ |   |
|    |                                                    |         |     |   |
|    |                                                    |         |     |   |

LOC. # 455833

# WASHINGTON & JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

| DRAWN BY:   | LS      |
|-------------|---------|
| CHECKED BY: | TAZ     |
| DATE:       | 8/18/17 |
| PROJECT #:  | 33-2584 |

SHEET TITLE
EXISTING SITE PHOTOS

SHEET NUMBER

P-1

#### SURVEYOR'S NOTE

THE PARENT PARCEL BOUNDARY OF THIS DRAWING IS ILLUSTRATED FROM RECORD INFORMATION AND IS APPROXIMATE

THE TOPOGRAPHICAL SURVEY FOR THIS MAP WAS PERFORMED ON JULY 27, 2017.

NOT TO BE USED AS CONSTRUCTION DRAWNGS

#### **ELEVATION DATUM**

ALL ELEVATIONS ARE BASED ON NAVD 88 DATUM. CONTOURS ARE ILLUSTRATED AT 1.0' INTERVALS.

BM#1) ELEV. 679.52

DESCRIPTION: REBAR WEST SIDE OF WEBSTER STREET NORTH SIDE OF VAN BUREN AVENUE

#### BASIS OF BEARINGS

LATITUDE AND LONGITUDE OF SITE REFERENCE POINT ARE BASED ON THE HARN (HIGH ACCURACY REFERENCE NETWORK) NADB3 (CORS 96) BEARINGS ARE BASED ON ILLINOIS STATE PLANE, IL EAST 1201 TO ORIENT DRAWING TO TRUE NORTH, ROTATE CLOCKWISE 00'07'17.43".

#### EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS

THE TITLE COMMITMENT ISSUED BY NEAR NORTH NATIONAL TITLE LLC, ISSUING AGENT FOR CHICAGO TITLE INSURANCE COMPANY, AS FILE NO. IL1705617, DATED JULY 17, 2017 LISTS THE FOLLOWING EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS, THAT ARE MATTERS OF SURVEY, AFFECTING THE PARENT PARCEL UNDER "SCHEDULE B":

- The Land lies within the boundaries of a Special Service Area as disclosed by Ordinance recorded as document R2015—118379, and is subject to Additional taxes under the terms of said ordinance and subsequent related ordinances. AFFECTS SUBJECT PROPERTY, BLANKET IN NATURE (NOT A SURVEY RELATED ITEM)
- 4. Terms, provisions and conditions contained in Ordinance No. 02—173, approving the final planned unit development plans and the subdivision plat for Main Street Promenade, a copy of which was recorded February 26, 2004 as document R2004—052477 and in Ordinance no. 02—256, approving a revised final plat of subdivision, a copy said ordinance and final plat of subdivision of which was recorded February 26, 2004 as document R2004—052476.
  AFFECTS SUBJECT PROPERTY. BLANKET IN NATURE.
- 5. Public sight distance and sidewalk easement as shown and set forth on the plat of Main Street Promenade, recorded February 26, 2004 as document number R2004-052476, as follows: Affecting the Southeast and Southwest corners of the Land.

  AFFECTS SUBJECT PROPERTY AS SHOWN
- 6. Stormwater management easement as shown and set forth in the covenant provisions on the plat of Main Street Promenade, recorded February 26, 2004 as document number R2004—052476, as follows:

  Over the North 15 feet of the East 120 feet, as measured along the most Northerly line and a 23 feet wide strip of Land running North and South through

a central portion of lot 1. (For further particulars, see record.)

AFFECTS SUBJECT PROPERTY AS SHOWN

- "Promenade" area of Access Easement as shown and set forth on the plat of Main Street Promenade, recorded February 26, 2004 as document number R2004—052476. as follows:
- Affects an 18 foot strip running North and South through a central portion of the Land. (For further particulars, see record.)

  AFFECTS SUBJECT PROPERTY AS SHOWN
- 8. Public utility and drainage easement as shown and set forth on the plat of
- 8. Public utility and drainage easement as shown and set forth on the plat of Main Street Promenade, recorded February 26, 2004 as document number R2004-052476, as follows:

  5 feet along the North line and the South 17 feet of the North 26.5 feet and various other areas on the Land.

  AFFECTS SUBJECT PROPERTY AS SHOWN
- 9. Access easement as shown and set forth on the plat of Main Street Promenade, recorded February 26, 2004 as document number R2004—052476, as follower: follows: The South 18 feet of the North 23 feet (approximately) of the Land and an 18 feet wide strip of Land running North and South through a central portion of the

AFFECTS SUBJECT PROPERTY AS SHOWN

- 10. "Alley" area of access easement runs East/West, as shown and set forth on the plat of Main Street Promenade, recorded February 26, 2004 as document number R2004—052476, as follows:
  The South 18 feet of the North 23 feet (approximately) of the Land.
  AFFECTS SUBJECT PROPERTY AS SHOWN.
- 11. Terms, conditions, provisions and easement contained in easement and covenant for stormwater management agreement recorded January 30, 2007 as document R2007—18497.

  AFFECTS SUBJECT PROPERTY, BLANKET IN NATURE
- 12. Encroachment of the concrete and gutter located mainly on the Land onto the property East and adjoining by approximately 0.08 feet to 0.16 feet and of the brick wall located mainly on the Land and onto the property East and adjoining by approximately 0.08 feet, as shown on plat of survey prepared by Roake and Associates, Inc., dated October 24, 2016, job no. 842.001 (Main Street Promenade).

  MAY AFFECT SUBJECT PROPERTY: DOCUMENT NOT PROVIDED
- 13. Encroachment of the awnings located mainly on the Land and onto the public right of way South and adjoining by approximately 1.88 feet to 17.44 feet, of the 1st floor overhangs onto the public right of way East and adjoining by approximately 4.90 feet to 4.94 feet and onto the public right of way West and adjoining by approximately 4.60 feet to 4.65 feet, and of the 3rd floor balconies onto the public right of way West and adjoining by approximately 4.86 feet to 4.92 feet, as shown on plat of survey prepared by Roake and Associates, Inc., dated October 24, 2016, job no. 842.011.

  MAY AFFECT SUBJECT PROPERTY: DOCUMENT NOT PROMDED
- 14. Encroachment of the building located on the Land onto the access easement and the stormwater management easement referenced elsewhere in schedule b as shown on plat of survey prepared by Roake and Associates, Inc., dated October 24, 2016, job no. 842.001.

  MAY AFFECT SUBJECT PROPERTY: DOCUMENT NOT PROVIDED
- 15. Encroachment of the building located on the Land onto the public sight and sidewalk distance easement shown herein at exception reference 4 as shown on plat of survey prepared by Roake and Associates, Inc. dated October 24, 2016, job no. 842.001. MAY AFFECT SUBJECY PROPERTY: DOCUMENT NOT PROVIDED.
- 16. Encroachment of the building located mainly on the Land onto the public right of way South and adjoining by approximately 0.02 feet to 0.09 feet, as shown on plat of survey number 842.001 prepared by Roake and Associates, Inc. dated October 24, 2016.

  MAY AFFECT SUBJECY PROPERTY: DOCUMENT NOT PROVIDED
- 17. Encroachment of the pillars located mainly on the Land onto the property North and adjoining by approximately 0.02 feet to 0.13 feet, as shown on plat of survey number 842.001 prepared by Racke and Associates, Inc. ated October 24, 2016.

  MAY AFFECT SUBJECY PROPERTY: DOCUMENT NOT PROMDED

ZONING DATA

ACCORDING TO THE SITE CANDIDATE INFORMATION PACKAGE THIS SITE IS ZONED: C-COMMERCIAL BUILDING SETBACKS: FRONT: N/A SIDE: N/A

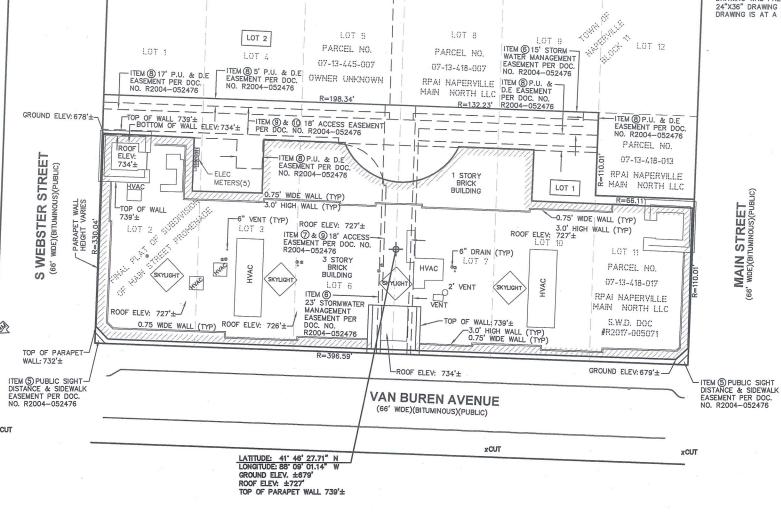
**WASHINGTON & JACKSON** LOC. #45583

LAURA PACINO 55 S. MAIN STREET NAPERVILLE, IL 60540

**PROPRIETOR** 

#### FLOOD PLAIN INFORMATION

WE HAVE CONSULTED THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE MAP AS PREPARED FOR DUPAGE, COUNTY, ILLINOIS, COMMUNITY PANEL NUMBER 17043C0706H DATED DECEMBER 16. 2004, AND FIND THAT THE PROJECT SITE IS ZONED X (UNSHADED)





NOTE: THE ORIGINAL SCALE (1"=30") OF THIS DRAWING WAS PREPARED AS A VICINITY MAP 24"X36" DRAWING ANY OTHER SIZE DRAWING IS AT A REDUCED SCALE.

POST

SB#XX

oGR - GROUND ROD

MB - MAILBOX

) - SATELLITE DISH

D - HAND HOLE

↓ – U.G. UTILITY MARKER

### NTS

F) - FI FCTRIC MANHOLF

W - WATER MANHOLE

- TREE

— · — · — · — - TELEPHONE UTILITY LINE

\_\_ · \_\_ · \_\_ · \_\_ - ELECTRIC UTILITY LINE

- - - STORM UTILITY LINE

- - - - - - - - - - - - FIBER OPTIC UTILITY LINE

— — — — — OVERHEAD UTILITY LINE

All utilities as shown are approximate locations derived from actual measurements and available records. They should not be interpreted to be in exact location nor should it be assumed that they are the only utilities in the area.

\* \* \* \* \* \* - GUARD RAIL

\_\_\_\_\_ - GAS UTILITY LINE

- PINE TREE

- EXISTING CONTOURS

- - SANITARY UTILITY LINE

T - TELEPHONE MANHOLE

是 - HANDICAP PARKING SPACE

#### LEGEND

|                                    |             |                        | 1 1                                      |         |
|------------------------------------|-------------|------------------------|------------------------------------------|---------|
| ▲ - TRAVERSE PO                    | NT Ad       | - AC UNIT              | Project Manager: Tom Zimme               | rmann   |
| ▲ - WELL                           | 0           | - U.G. UTILITY MARKER  |                                          |         |
| - HIGHWAY                          | Ω           | - FIRE HYDRANT         | REVISIONS                                |         |
| — MONUMENT                         | o PIV       | - POST INDICATOR VALVE | NO. DESCRIPTION                          | DATE    |
| ■ MONUMENT BO                      | -           | - WATER VALVE          | 1 . TITLEWORK ADDED 0-                   | 4/04/18 |
| ■ - RIGHT OF WAY                   | MARKER &    | - GAS VALVE            |                                          |         |
| n - SET WOODSTAI                   | O           | - UST FILL PORT        |                                          |         |
| +CUT - XCUT                        | 8           | - GAS PUMP             |                                          |         |
|                                    | G           | - GAS METER            |                                          |         |
| PK- PK NAIL                        | W           | - WATER METER          |                                          |         |
| <ul> <li>FOUND IRON S</li> </ul>   | TAKE        | - TELEPHONE RISER      |                                          |         |
| <ul> <li>SET IRON STATE</li> </ul> | KE E        | - ELECTRIC METER       | 2002                                     |         |
| SIGN                               |             | - ELECTRIC TRANSFORMER | l williams&wo                            | rks     |
| RR - RR SIGN                       | ī           | - CABLE TV RISER       | engineers surveyors planne               |         |
| o—< − GUY POLE                     | 目           | - CATCH BASIN          | 616.224.1500 phone http://williams-works |         |
| - GUY ANCHOR                       | <b>(1)</b>  | - ROUND CATCH BASIN    | 549 Ottawa Ave NW Grand Rapids, MI 48    |         |
| UTILITY POLE                       | 0           | - UTILITY MANHOLE      |                                          |         |
| → LIGHT POLE                       | 5           | - STORM MANHOLE        |                                          |         |
|                                    | JGHT POLE S | - SANITARY MANHOLE     | 2                                        |         |
|                                    |             |                        |                                          |         |

NW NE SW SE 13-38-9 DATE: 07/27/17 DWG. BY: A.G.G. SCALE: 1"=30" SURVEYED: D.S. PDATE: ECV040418 CHKD BY: R.J.K.

CHICAGO

SMS4

limited partnership

d/b/a VERIZON WIRELESS

**WASHINGTON &** 

**JACKSON** 

LOC. #45583

TERRA

eco Buses Highway Park Ridge, IL eco Ph: 847/698-6400

SITE NAME

ROJECT NO.: 211005.690

WASHINGTON & JACKSON

LOCATION NUMBER

LOC. #45583

SITE ADDRESS

**55 S MAIN STREET** NAPERVILLE. IL 60540

SHEET TITLE

LEGAL DESCRIPTION

LOT 1 IN MAIN STREET PROMENADE, BEING A SUBDIVISION OF THE SOUTH 1/2 OF SECTION 13, TOWNSHIP 38 NORTH, RANGE 9, EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED FEBRUARY 26, 2004 AS DOCUMENT R2004-052476, IN DUPAGE COUNTY, ILLINOIS



l, Randy J. Kolehouse, do hereby certify that the drawing shown hereon is a correct representation of a survey performed at and under my direction.

Randy J. Kolehouse Illinois Professional Land Surveyor No. 2986 Expires November 30, 2018

Note: This certification only applies to improvements within the lease site and easements as shown hereon.

> ILLINOIS REGISTERED DESIGN FIRM LICENSE NUMBER 184.007034 LICENSE EXPIRES: APRIL 30, 2019

# verizon Radio Frequency Exposure FCC Compliance Assessment

#### **☑** Pre-Activation **☐** Post-Activation

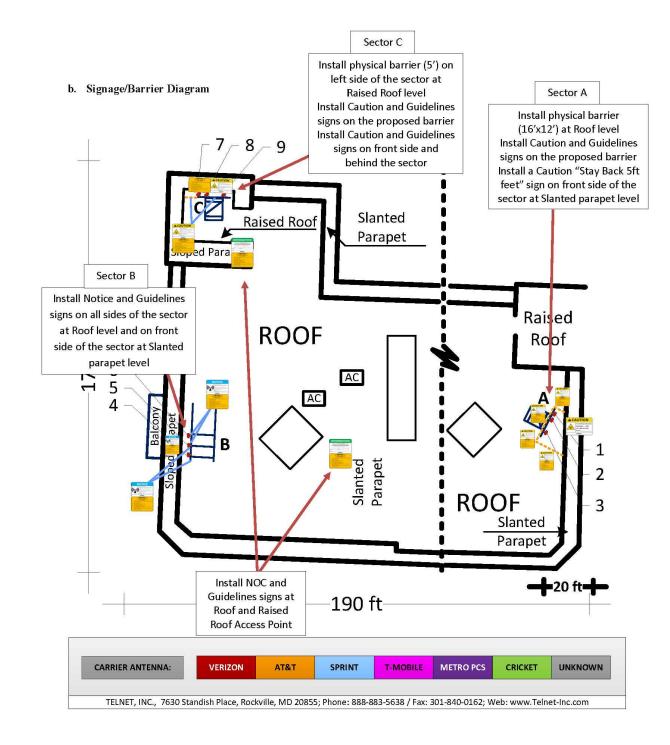
|                                                  | SITE-SPECIFIC-INFO                                                                         | RMATION                                                      |              |  |  |
|--------------------------------------------------|--------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------|--|--|
| Site Name                                        | WASHINGTON & JACKSON                                                                       | Multi-Licensee Facility                                      | ☐ YES ⊠ NO   |  |  |
| Street Address                                   | 55 S MAIN ST.                                                                              | Is Verizon a Significant                                     | □ YES □ NO   |  |  |
| City, State, Zip                                 | NAPERVILLE, IL 60540                                                                       | Contributor to <u>Co-Locator</u> Areas Requiring Mitigation? | ⊠ N/A        |  |  |
| Verizon's Max % MPE<br>(Measured - Occupational) | N/A                                                                                        | Verizon's Max % MPE<br>(Predictive - Occupational)           | 262.2 %      |  |  |
| Structure Type                                   | ROOFTOP                                                                                    | Assessment Date                                              | N/A          |  |  |
| Broadcast (AM/FM/TV)<br>Co-Locators              | $\square$ YES $\boxtimes$ NO                                                               | Assessment Purpose                                           | MODIFICATION |  |  |
| <b>Total Access Points</b>                       | 2                                                                                          | Total Report Revisions                                       | 1            |  |  |
| Original Report Date                             | 03/14/2018                                                                                 | Report Revision Date                                         | N/A          |  |  |
| Compliance Status                                | ☐ COMPLIANT AS DESIGNED ☐ COMPLIANT PER RF SAFETY PLAN SUBMISSION ☑ MITIGATION IS REQUIRED |                                                              |              |  |  |

|             | VERIZON'S WORST-CASE RF EMISSIONS IN ACCESSIBLE AREAS AT THIS FACILITY      |
|-------------|-----------------------------------------------------------------------------|
|             | BELOW the General Population MPE limit                                      |
|             | ABOVE the General Population MPE limit and BELOW the Occupational MPE limit |
| $\boxtimes$ | ABOVE the Occupational MPE limit and BELOW 10x the Occupational MPE limit   |
|             | ABOVE 10x the Occupational MPE limit                                        |

| Final<br>Compliant<br>Configuration | A NOTICE of the state of the st | NOTICE    Compared to the control of | A CAUTION    Section   Control   Con | WARNING  I CONTROL OF THE STATE | INFORMATION  Shi san ACCSS POOR to so, are not become first a result of the son of the s |             | M             |
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| Access Point(s)                     | ⊠[2]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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| Alpha                               | ⊠[4]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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| Beta                                | ⊠[5]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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| Gamma                               | ⊠[3]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             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                                                                                                                                                                                                                                                                                 | $\boxtimes$ | 5'            |

NOTE: The table above represents EVERY compliance item that MUST be implemented at this location; also in Sec. 4 (B)

| Additional Compliance F | Requirements(s):               |            |              |  |
|-------------------------|--------------------------------|------------|--------------|--|
| N/A                     |                                |            |              |  |
| Consultant Legal Name   | Telnet Inc.                    | Phone/Fax  | 301-840-7110 |  |
| Address                 | 7630 Standish Place, Rockville | , MD 20855 | (1)          |  |



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LOC. # 455833

# WASHINGTON & JACKSON

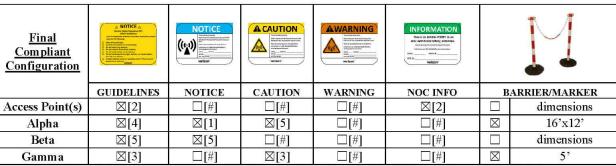
55 S MAIN STREET NAPERVILLE, IL 60540

| l | DRAWN BY:   | LS      |
|---|-------------|---------|
| l | CHECKED BY: | TAZ     |
| l | DATE:       | 8/18/17 |
| ı | PROJECT #:  | 33-2584 |

SHEET TITLE
RF SITE SAFE
COMPLIANCE REPORT
(FOR REFERENCE ONLY)

SHEET NUMBER

RF-1



NOTE: The table above represents EVERY compliance item that MUST be implemented at this location.

#### c. Signage/Barrier Installation Detail

| Mitigation Actions Required/Taken | Constitution of the Consti | pronty (MT)<br>And to be to | (( <u>~</u> )) | TICE  Integrational Control of Co |      | Hing Americal Proposition of the parts that Proposition of the parts Pr |      | RNING  White head of the control of | This is an ACC error with trans- | MATION  285 POINT to 2n miniting enformes.  305 v receivering.  (701 |             | M           |
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                                                                                                                                                                                                                                                                                                                | NOC                              | INFO                                                                 | BAR         | RIER/MARKER |
| Access Point(s)                   | ⊠[2]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| Beta                              | ⊠[5]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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| Gamma                             | ⊠[3]                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               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                                                                                                                                                                                                                                                                                                                | □[#]                             | □[#]                                                                 | $\boxtimes$ | 5'          |
|                                   | ADD                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                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                                                                                                                                                                                                                                                                                                                | ADD                              | REM                                                                  | A           | ADD ONLY    |

NOTE: The table represents either the signage/barriers installed / removed OR items required by the market (if mitigation is not installed by consultant/vendor).

|                               | SPECIAL MITIGATION INSTRUCTIONS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Items to be Installed         | Access Point: Install NOC and Guidelines signs at Roof and Raised Roof Access Point  Sector A: Install physical barrier (16'x12') at Roof level Install Caution and Guidelines signs on the proposed barrier Install a Caution "Stay Back 5ft feet" sign on front side of the sector at Slanted parapet level  Sector B: Install Notice and Guidelines signs on all sides of the sector at Roof level and on front side of the sector at Slanted parapet level  Sector C: Install physical barrier (5') on left side of the sector at Raised Roof level Install Caution and Guidelines signs on the proposed barrier Install Caution and Guidelines signs on front side and behind the sector |
| Items to be Removed           | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Items to be Repaired/Replaced | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

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#### c. RF Signage

Areas or portions of any transmitter site may be susceptible to high power densities that could cause personnel exposures in excess of the FCC guidelines. These areas must be demarcated by conspicuously posted signage that identifies the potential exposure. Signage MUST be viewable regardless of the viewer's position.

| GUIDELINES                                                                                                                                                                                                                                                                                                                                                                                                                                             | NOTICE                                                                                                                                                                                                                                                                                      | CAUTION                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | WARNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| This sign will inform<br>anyone of the basic<br>precautions to follow when<br>entering an area with<br>transmitting radiofrequency<br>equipment.                                                                                                                                                                                                                                                                                                       | This sign indicates that RF emissions may exceed the FCC General Population MPE limit.                                                                                                                                                                                                      | This sign indicates that RF emissions may exceed the FCC Occupational MPE limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | This sign indicates that RF emissions may exceed at least 10x the FCC Occupational MPE limit.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| ANOTICE A General Radio Frequency (RF) Safrety Guidelines Until ALL spelicable anteness have been deactivated, please observe the following: Assure all extensis are transmitting. A local placet signs. Do not outcom any atterna. Do not such in front of any atterna. Do not wish in front of any atterna. Do not wash beyond any tagin, barriers, or visual markers with the control of the property owner if there are any questions or contents. | NOTICE  Insomiting Arteonoly  (Carlo Transparery Failth separate that yee the former frequency failth separate that yee the former frequency failth separate to find.  Deby all posted sign and a sile guide fines. Lat arverace is 1804-024-040-0710. To working beyond this prior.  ISTIT | Tameriting Antonasis)  Tameriting Antonasis  Tameriting Anto | Transmitting Attentionally  Transmitting Attentionally  Transmitting Attentionally  Transmitting Attentionally  Transmitting Attentionally  Transmitting Attentionally  Transmitting Attentional in Attention Attention  To Attentional Information Attentional Information  To Attentional Information Attentional Informational Information  To Attentional Information Attentional Information  To Attention  To Atte |

#### NOC INFORMATION

Information signs are used as a means to provide contact information for any questions or concerns. They will include specific cell site identification information and the Verizon Wireless Network Operations Center phone number.



#### d. Physical Barriers

Physical barriers are control measures that require awareness and participation of personnel. Physical barriers are employed as an additional administration control to complement RF signage and physically demarcate an area in which RF exposure levels may exceed the FCC General Population limit. Example: chain-connected stanchions

#### e. Indicative Markers

Indicative markers are visible control measures that require awareness and participation of personnel, as they cannot physically prevent someone from entering an area of potential concern. Indicative markers are employed as an additional administration control to complement RF signage and visually demarcate an area in which RF exposure levels may exceed the FCC General Population limit. Example: paint stripes

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|    | REVISIONS                                          |         |     |  |
|----|----------------------------------------------------|---------|-----|--|
| Š. | DESCRIPTION                                        | DATE    | В   |  |
|    | ISSUED FOR REVIEW                                  | 2/26/18 | S7  |  |
| -  | UPDATE PER LATEST STRUCTURAL DESIGN                | 3/5/18  | rs  |  |
| 7  | FINALS PENDING FIBER                               | 4/1/18  | rs  |  |
| က  | UPDATED ANTENNA LOCATIONS AND ADD EQUIPMENT SCREEN | 7/13/18 | ESH |  |
| 4  | UPDATED PER SITETRACKER AND LANDOWNER COMMENTS     | 7/30/18 | ESH |  |
|    |                                                    |         |     |  |
|    |                                                    |         |     |  |

LOC. # 455833

WASHINGTON & JACKSON

55 S MAIN STREET NAPERVILLE, IL 60540

DRAWN BY: LS

CHECKED BY: TAZ

DATE: 8/18/17

PROJECT #: 33-2584

SHEET TITLE
RF SITE SAFE
COMPLIANCE REPORT
(FOR REFERENCE ONLY)

SHEET NUMBER

RF-2