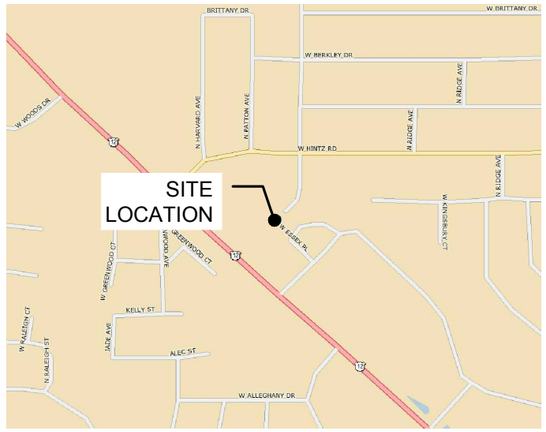
CONSULTANT TEAM

PROJECT CONSULTANT:	TERRA CONSULTING GROUP, LTD. 600 BUSSE HIGHWAY PARK RIDGE, IL 60068 (847) 698-6400
SURVEYOR:	WILLIAMS AND WORKS 549 OTTAWA AVE NW GRAND RAPIDS, MI 49503 (616) 224-1500

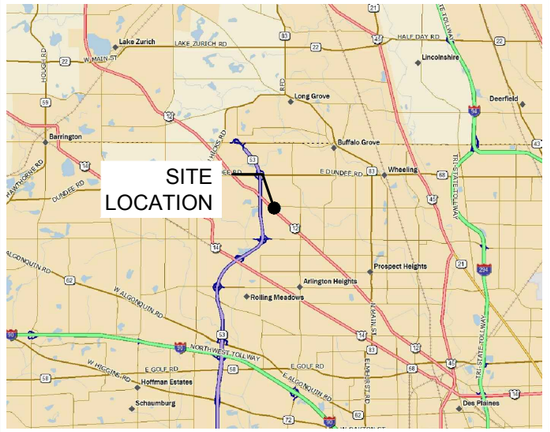
VICINITY MAP

N.T.S.



REGIONAL MAP

N.T.S.



PROJECT TYPE

PROPOSED LESSEE ANTENNAS TO BE MOUNTED ON PROPOSED UNIPOLE TOWER WITH PROPOSED 8'-0" x 9'-4" EQUIPMENT CONCRETE PAD AT BASE.

PROJECT INFORMATION

SITE COORDINATES:	LATITUDE: 42° 07' 26.62" N (1A CERTIFICATION) LONGITUDE: 87° 59' 44.29" W (1A CERTIFICATION)
ELEVATION:	±721' (1A)
P.I.N. #:	03181020070000
ADDRESS:	1122 WEST RAND ROAD ARLINGTON HEIGHTS, IL 60004
UTILITIES:	POWER: COMED TRACY WASH (630) 691-4691 ACCT: #0079051095 FIBER: ONE FIBER MARK ZOLTEK 312-989-2025
JURISDICTION:	VILLAGE OF ARLINGTON HEIGHTS
OCCUPANCY:	UNINHABITED
ZONING:	R-1
CONSTRUCTION TYPE:	CO LO
PROPERTY OWNER:	CROSS AND CROWN LUTHERAN CHURCH 1122 WEST RAND RD ARLINGTON HEIGHTS, IL 60004
CONTACT PERSON:	DICK KROPEL (FINANCIAL ELDER) RANDY THOMPSON (PASTOR) (847) 394-0362
APPLICANT:	CHICAGO SMSA limited partnership d/b/a Verizon Wireless 1515 WOODFIELD ROAD SCHAUMBURG, IL 60173
CONSTRUCTION MANAGER:	MICHAEL EISENMENGER (847) 619-3043
REAL ESTATE MANAGER:	DANNY PEREZ (847) 706-1765
GENERATOR TYPE:	DIESEL (PENDING ENVIRONMENTAL VERIFICATION)
MAKE:	GENERAC
MODEL #:	6671-WI/ILTANK 30KW DIESEL 120/240 1-PH OUTDOOR 190 GALLON WI/IL STYLE TANK W/ CWK SSM

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P-1	EXISTING SITE PHOTOS	-
EX-1	GENERATOR CUT-SHEET	3,8
	22" x 34" IS FULL SCALE. 11" x 17" IS HALF SCALE.	
	ATTACHMENTS	
PS-1	SITE SURVEY	-

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: 455871

SITE NAME: ARLINGTON HEIGHTS NW

1122W RAND RD.
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062-047267
OF ILLINOIS
2/13/2019
EXP- 11/30/2019

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PARK RIDGE, IL 60068
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FAX: 847-698-6401

REVISIONS

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7	UPDATE PER VILLAGE COMMENTS	01/14/19	JTM
8	UPDATE WITH NEW PAD LAYOUT	02/13/19	TJS

DRA IL-1010
LOC. # 455871

ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

DRAWN BY:	DMS
CHECKED BY:	TAZ
DATE:	12/07/17
PROJECT #:	33-2567

SHEET TITLE
TITLE SHEET

SHEET NUMBER
T-1

LEGEND

- TRAVERSE POINT
- WELL
- HIGHWAY
- MONUMENT
- MONUMENT BOX
- RIGHT OF WAY MARKER
- SET WOODSTAKE
- +CUT – XCUT
- PK – PK NAIL
- FOUND IRON STAKE
- SET IRON STAKE
- SIGN
- RR – RR SIGN
- GUY POLE
- GUY ANCHOR
- UTILITY POLE
- LIGHT POLE
- ORNAMENTAL LIGHT POLE
- POST
- U.G. UTILITY MARKER
- SB#BORE – SOIL BORING
- MB – MAILBOX
- SATELLITE DISH
- HAND HOLE
- AC – AC UNIT
- U.G. UTILITY MARKER
- FIRE HYDRANT
- PIV – POST INDICATOR VALVE
- WATER VALVE
- GAS VALVE
- UST FILL PORT
- GAS PUMP
- G – GAS METER
- W – WATER METER
- T – TELEPHONE RISER
- ELECTRIC TRANSFORMER
- TV – CABLE TV RISER
- CATCH BASIN
- ROUND CATCH BASIN
- UTILITY MANHOLE
- ST – STORM MANHOLE
- S – SANITARY MANHOLE
- E – ELECTRIC MANHOLE
- T – TELEPHONE MANHOLE
- W – WATER MANHOLE
- HANDICAP PARKING SPACE
- SHRUB
- TREE
- PINE TREE

PROPERTY LINE

FENCE

OVERHEAD POWER LINE — OHE — OHE

UNDERGROUND TELCO — UGT — UGT

UNDERGROUND POWER — UGE — UGE

BURIED WATER LINE — W — W

BURIED GAS LINE — G — G — G

EDGE OF BUSH/TREES

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.

SURVEY PERFORMED BY:

williams&works
engineers | surveyors | planners

616.224.1500 phone
549 Ottawa Ave NW
http://williams-works.com
Grand Rapids, MI 49503

BM#1) ELEV. 722.87'

TOP OF RAILROAD SPIKE IN SOUTH SIDE OF POWER POLE, ±27' NORTH OF PARKING LOT ±218' EAST OF EAST FACE OF CHURCH BUILDING.

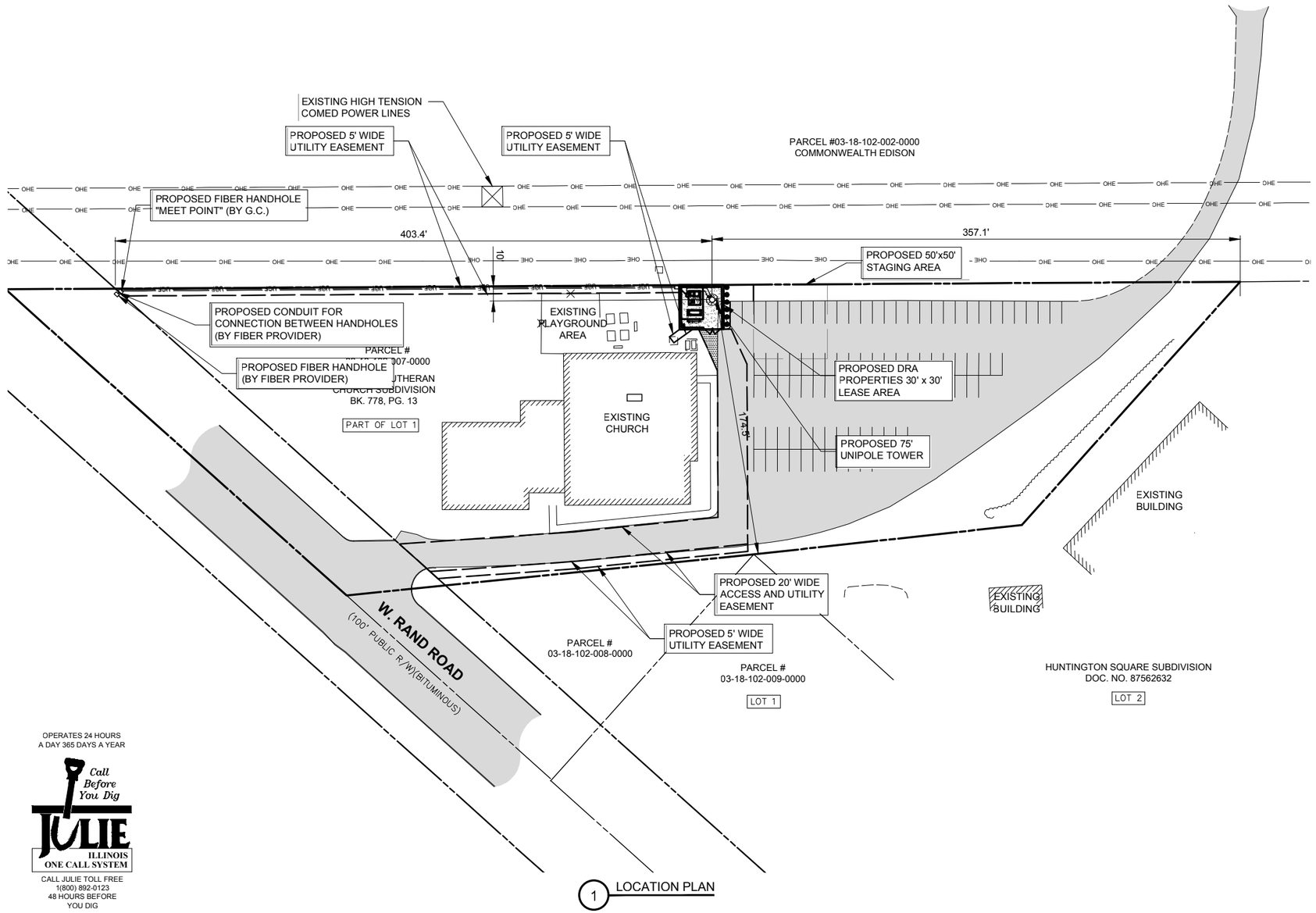
	R-1 District Code/Commercial Antenna Requirements	Proposed
Setbacks		
North	R-1	10'
South	PUD & B-2	174.5'
East	PUD	357.1'
West	R-3 & R-6 & PUD	403.4'
Building Lot Coverage		121,184 SF (existing)
Impervious Surface Coverage		50,768 SF (existing with proposed)
Building Height		80' (tower w/lightning rod)
Off-street Parking Spaces*	n/a	n/a

7

SCALE 1" = 40'

0 20' 40' 80'

22" x 34" IS FULL SCALE.
11" x 17" IS HALF SCALE



1 LOCATION PLAN

GENERAL SITE NOTES

1. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING PAVEMENT. CONTRACTOR SHALL PHOTOGRAPH AND VIDEOTAPE EXISTING PAVEMENT PRIOR TO CONSTRUCTION. ANY DAMAGE CAUSED DURING CONSTRUCTION SHALL BE REPLACED TO EXISTING OR BETTER CONDITION AT NO ADDITIONAL COST.
2. THE CONTRACTOR WILL, UPON BECOMING AWARE OF SUBSURFACE OR LATENT PHYSICAL CONDITIONS DIFFERING FROM THOSE DISCLOSED BY THE ORIGINAL SOIL INVESTIGATION WORK, PROMPTLY NOTIFY THE OWNER VERBALLY AND IN WRITING, AS TO THE NATURE OF THE DIFFERING CONDITIONS. NO CLAIM BY THE CONTRACTOR FOR ANY CONDITIONS DIFFERING FROM THOSE ANTICIPATED IN THE PLANS AND SPECIFICATIONS AND DISCLOSED BY THE SOIL STUDIES WILL BE ALLOWED UNLESS THE CONTRACTOR HAS SO NOTIFIED THE OWNER, VERBALLY AND IN WRITING, AS REQUIRED ABOVE, OF SUCH DIFFERING SUBSURFACE CONDITIONS.
3. CONTRACTOR TO PROVIDE APPROXIMATE 50'X50' STAGING AREA AND TEMPORARY ROAD. CONTRACTOR SHALL COORDINATE WITH ANTENNA CONTRACTOR, A STAGING AREA AND TEMPORARY ROAD THAT IS ACCEPTABLE TO THE OWNER. STAGING AREA AND TEMPORARY ROAD SHALL BE RESTORED TO EXISTING CONDITIONS AS NECESSARY UPON COMPLETION OF THE PROJECT.
4. BEFORE AND DURING CONSTRUCTION, THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL AS NECESSARY IN THE FORM OF SILT FENCES FOR THE SITE AND BALES AROUND ANY EXISTING MANHOLES, INLETS, OR CATCH BASINS SUSCEPTIBLE TO EROSION. EROSION CONTROL MEASURES SHALL BE PERIODICALLY INSPECTED TO ENSURE PROPER FUNCTION. EROSION CONTROL SHALL BE REMOVED UPON COMPLETION OF WORK.

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DRA IL-1010
LOC. # 455871

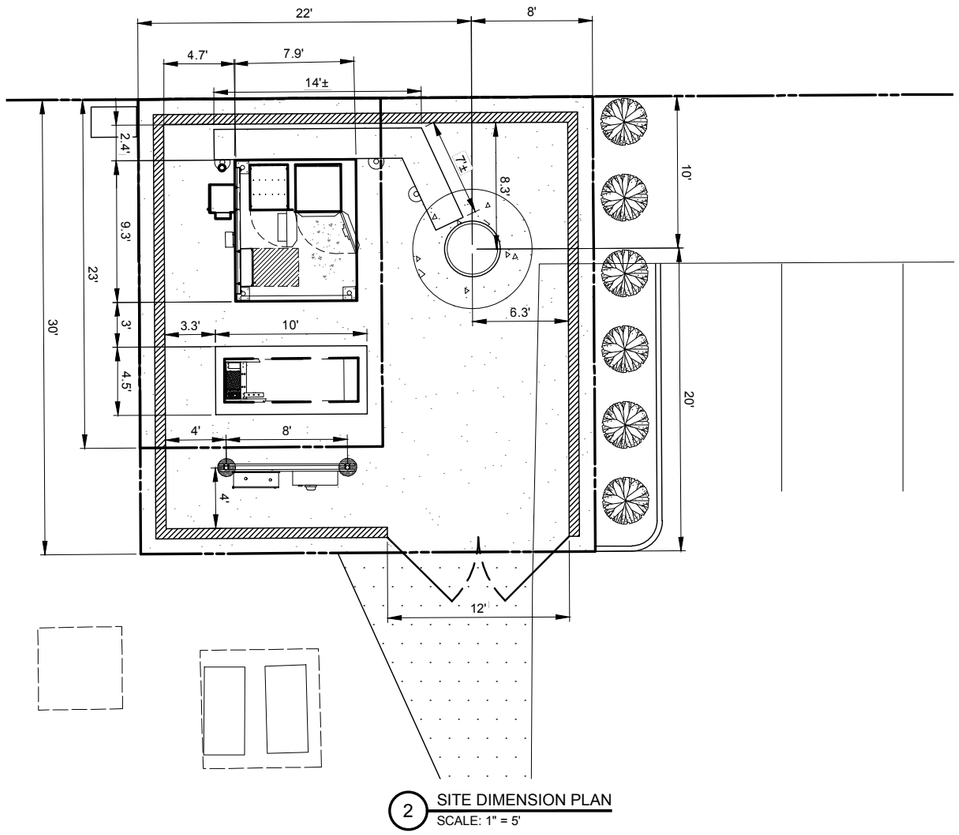
ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

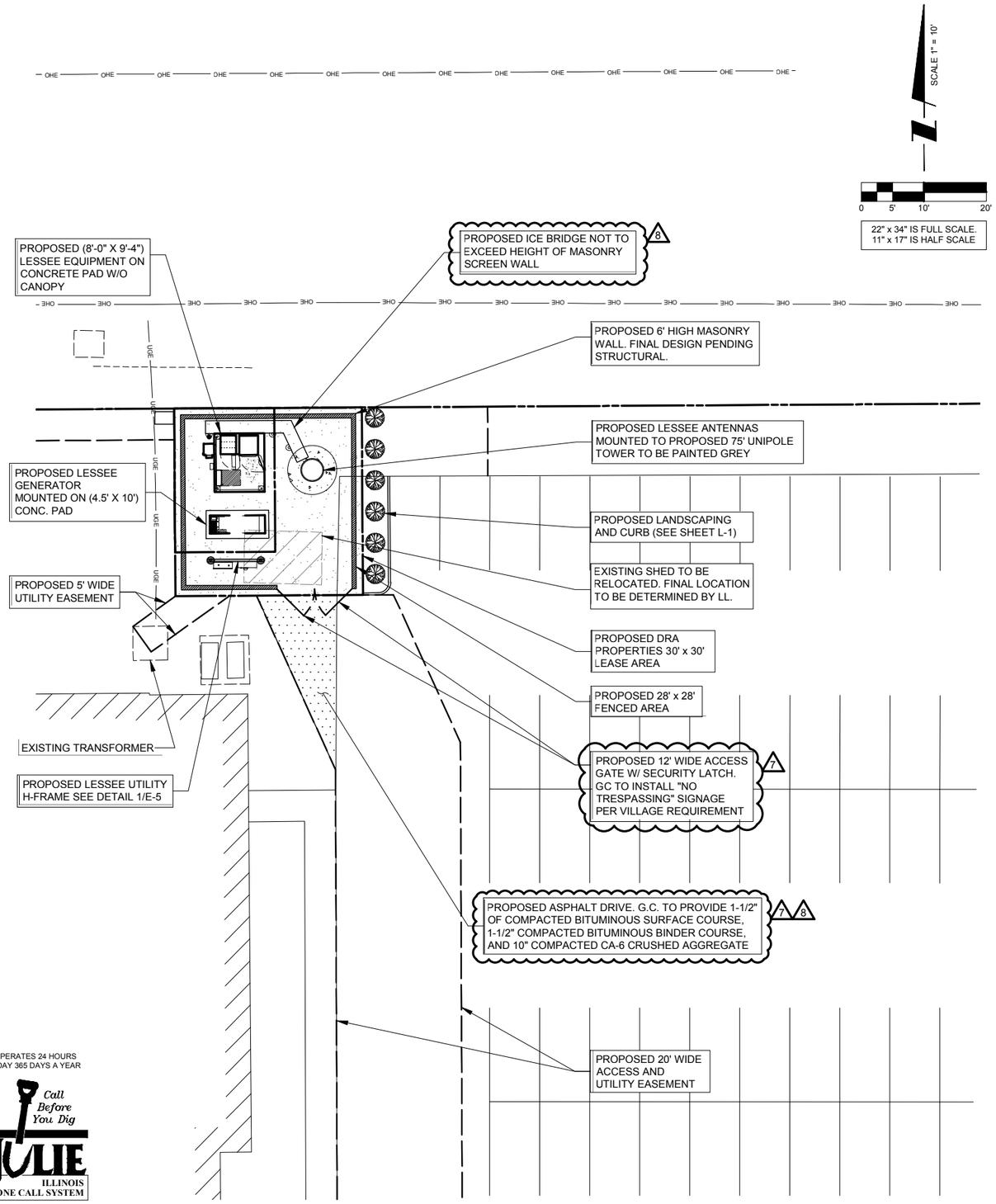
DRAWN BY:	DMS
CHECKED BY:	TAZ
DATE:	12/07/17
PROJECT #:	33-2567

SHEET TITLE
LOCATION PLAN

SHEET NUMBER
LP



2 SITE DIMENSION PLAN
SCALE: 1" = 5'



1 SITE PLAN

SCALE 1" = 10'

0 5' 10' 20'

22" x 34" IS FULL SCALE.
11" x 17" IS HALF SCALE

NOTE:
G.C. TO RESTORE ANY DISTURBED PAVEMENT TO CURRENT VILLAGE STANDARDS OF 1-1/2" COMPACTED SURFACE COURSE, 1-1/2" COMPACTED BINDER COURSE AND 10" COMPACTED CA-6 CRUSHED AGGREGATE.
7

PLATFORM TYPE: CONCRETE SKID

PAVEMENT MATERIAL

FENCED AREA
88 S.Y.
8" COMPACTED AGGREGATE BASE COURSE, WITH 3/4" CRUSHED AGGREGATE, NO FINES. OR APPROVED EQUAL. MIRAFI 500X SUBGRADE GEOTEXTILE FABRIC OR APPROVED EQUAL
112 L.F. OF FENCING

ACCESS ROAD (HATCHED)
20 S.Y.
1-1/2" HMA SURFACE COURSE, 1-1/2" ASPHALT COURSE, 0.30 GAL/SY. BITUMINOUS PRIME COAT (MC-30), 10" AGGREGATE BASE COURSE, 3/4" CRUSHED STONE WITH FINES COMPACTED SUBGRADE
8

THE CONTRACTOR SHALL INCLUDE AS PART OF THE BID, THE COST OF REMOVAL OF ANY SURFACE VEGETATION AND ORGANIC SOILS OR OTHER DELETERIOUS MATERIALS AND THE REPLACEMENT WITH ENGINEERED BACKFILL FOR THE AGGREGATE ACCESS DRIVE AND LEASE SITE, IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT.

SURVEY PERFORMED BY:

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Grand Rapids, MI 49503

BM#1) ELEV. 722.87'

TOP OF RAILROAD SPIKE IN SOUTH SIDE OF POWER POLE, ±27' NORTH OF PARKING LOT ±218' EAST OF EAST FACE OF CHURCH BUILDING.

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DRA IL-1010
LOC. # 455871

ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

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CHECKED BY:	TAZ
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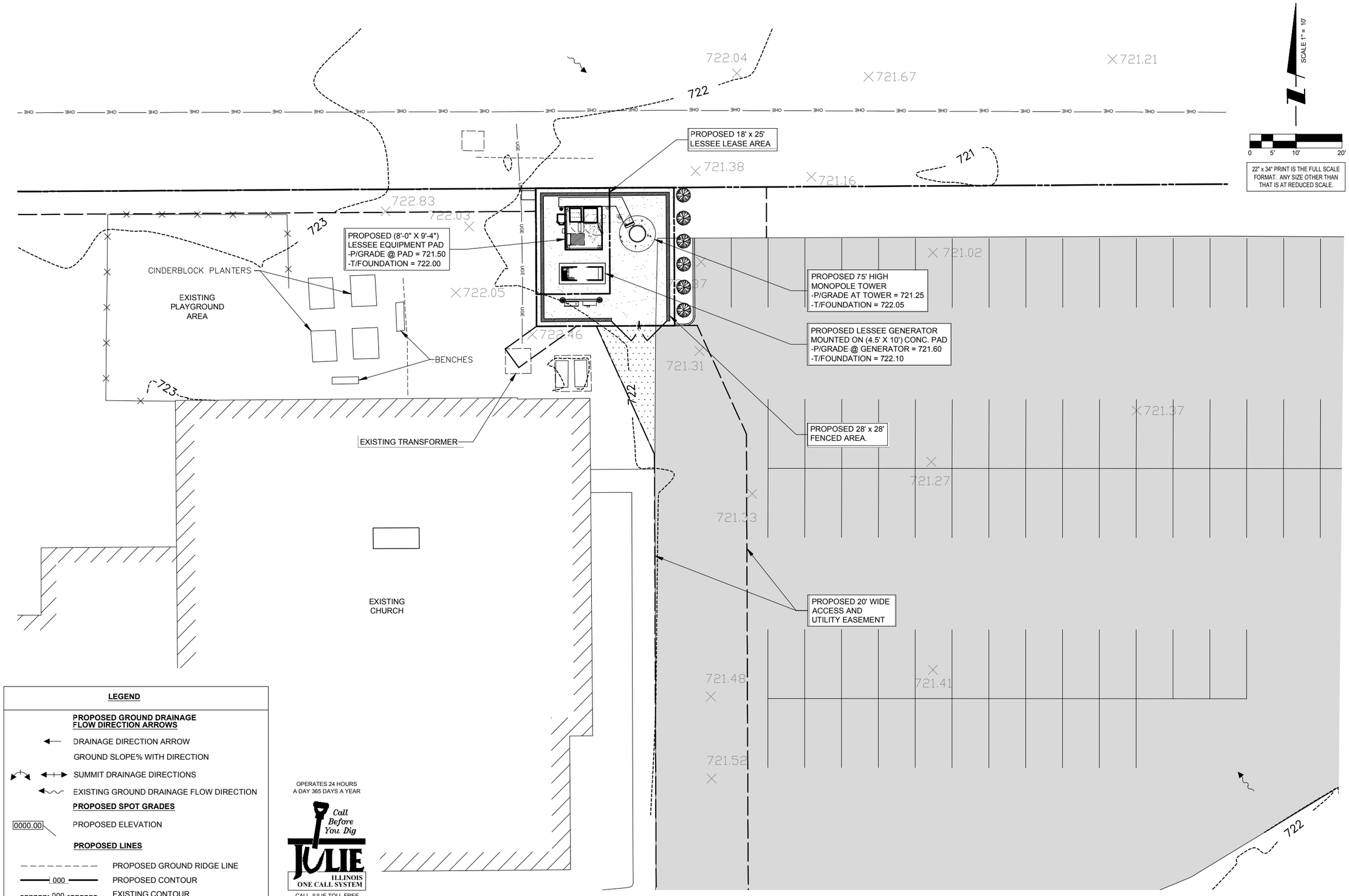
SHEET TITLE
ENLARGED SITE PLAN

SHEET NUMBER
C-1



LEGEND

PROPOSED GROUND DRAINAGE FLOW DIRECTION ARROWS

- DRAINAGE DIRECTION ARROW
- GROUND SLOPE% WITH DIRECTION
- SUMMIT DRAINAGE DIRECTIONS
- EXISTING GROUND DRAINAGE FLOW DIRECTION

PROPOSED SPOT GRADES

- 0000.00 — PROPOSED ELEVATION

PROPOSED LINES

- PROPOSED GROUND RIDGE LINE
- 000 — PROPOSED CONTOUR
- 000 — EXISTING CONTOUR
- PROPOSED CULVERT & END SECTIONS

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1 SITE GRADING PLAN
SCALE: 1" = 10'

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PROJECT #:	33-2567

SHEET TITLE
SITE GRADING PLAN
(SHEET 1 OF 1)

SHEET NUMBER
C-2

FINAL WALL DETAILS
PENDING STRUCTURAL DESIGN

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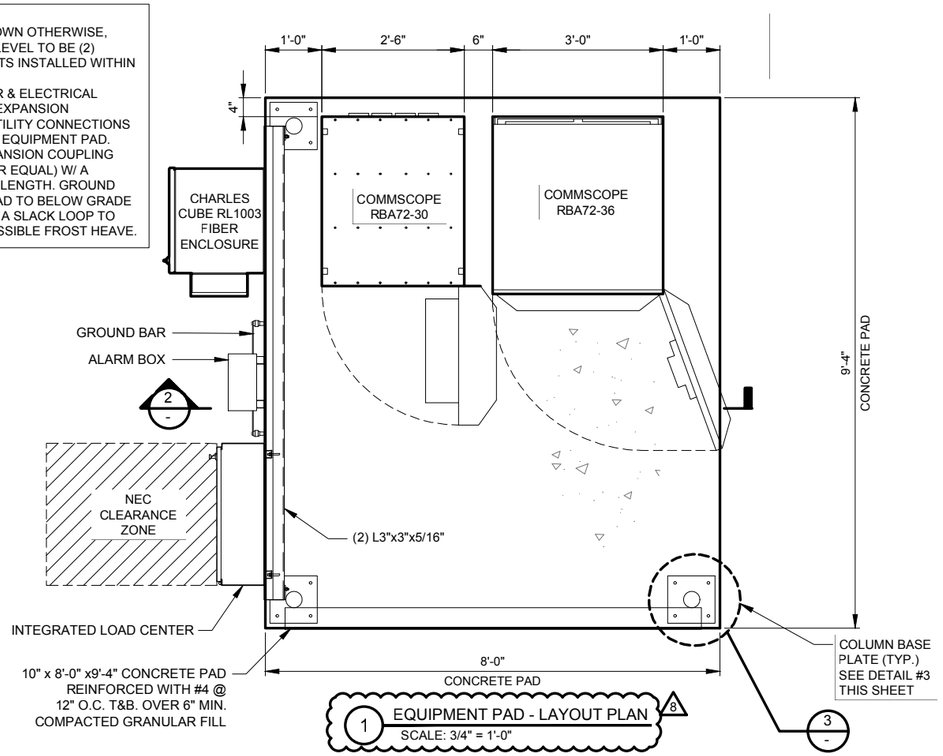
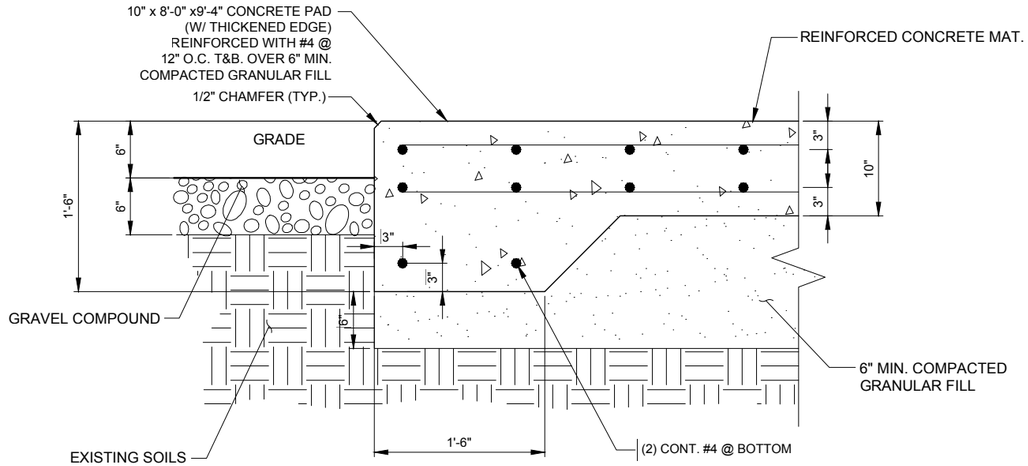
SHEET TITLE
WALL DETAILS

SHEET NUMBER
C-3

NOTES:
- UNLESS NOTED OR SHOWN OTHERWISE, RAYCAPS AT GROUND LEVEL TO BE (2) RCMDC-4520-RM-48 UNITS INSTALLED WITHIN EQUIPMENT CABINET
- GENERAL CONTRACTOR & ELECTRICAL CONTRACTOR TO USE EXPANSION COUPLINGS FOR ALL UTILITY CONNECTIONS ASSOCIATED WITH THE EQUIPMENT PAD. UTILIZE A CARLON EXPANSION COUPLING (WWW.CARLON.COM, OR EQUAL) W/ A MINIMUM OF 4" TRAVEL LENGTH. GROUND CONDUCTORS FROM PAD TO BELOW GRADE TO BE INSTALLED WITH A SLACK LOOP TO ACCOUNT FOR ANY POSSIBLE FROST HEAVE.

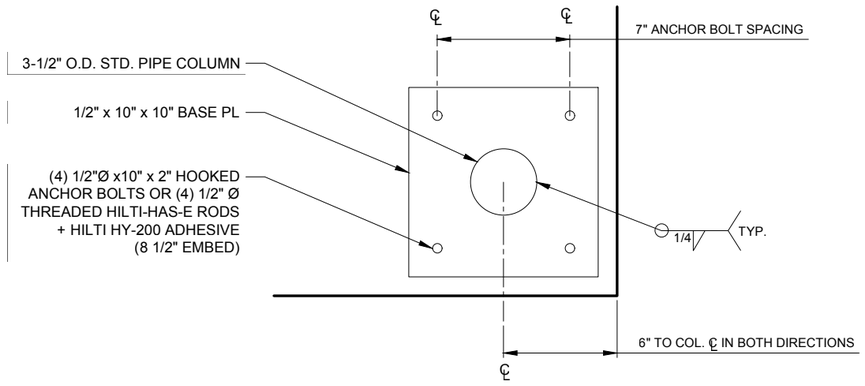


1 EQUIPMENT PAD - LAYOUT PLAN 8
SCALE: 3/4" = 1'-0"



2 CONCRETE PAD SECTION VIEW
SCALE: 1 1/2" = 1'-0"

NOTE:
ANCHOR BOLTS TO BE INSTALLED AT TIME OF CANOPY INSTALLATION BY THE CONTRACTOR INSTALLING BASE PLATES. PRE-INSTALLING THE ANCHOR BOLTS AT THE TIME OF FOUNDATION INSTALLATION MAY RESULT IN BOLT PATTERNS NOT MATCHING UP WITH BASE PLATE OF PLATFORM



3 COLUMN BASE PLATE DETAILS
SCALE: 3/4" = 1'-0"

CONCRETE NOTES:

1, ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 AND ACI 301, LATEST EDITION. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.

2. EXCEPT WHERE OTHERWISE INDICATED, CONCRETE SHALL BE NORMAL WEIGHT AND WITH MINIMUM 28-DAY COMPRESSIVE STRENGTHS OF F'c=4000 PSI. ALL EXTERIOR EXPOSED CONCRETE SHALL BE AIR ENTRAINED WITH 6% AIR CONTENT.

3. REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

5. CONCRETE MIX DESIGN SHALL BE SUBMITTED TO ARCHITECT / ENGINEER FOR REVIEW.

NOTE:
LOCALIZED AREAS OF SOFT OR LOOSE MATERIALS MAY BE ENCOUNTERED AT THE PROPOSED BEARING ELEVATION. THE SOILS MAY REQUIRE COMPACTION USING A PLATE COMPACTOR IN THE FOOTING TRENCH IF FIELD CONDITIONS INDICATE LOOSE GRANULAR SOILS. THE SOILS MAY REQUIRE REMOVAL AND REPLACEMENT WITH AN APPROVED ENGINEERED FILL. FOUNDATION DEPTH AND OVER DIG REQUIREMENTS SHALL BE VERIFIED WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL REPORT AND INCLUDED IN THE BID BEFORE CONSTRUCTION. THE EVALUATION OF THE SUB GRADE AND SELECTION OF FILL MATERIALS SHALL BE MONITORED AND TESTED BY A QUALIFIED REPRESENTATIVE OF THE SOILS ENGINEER.

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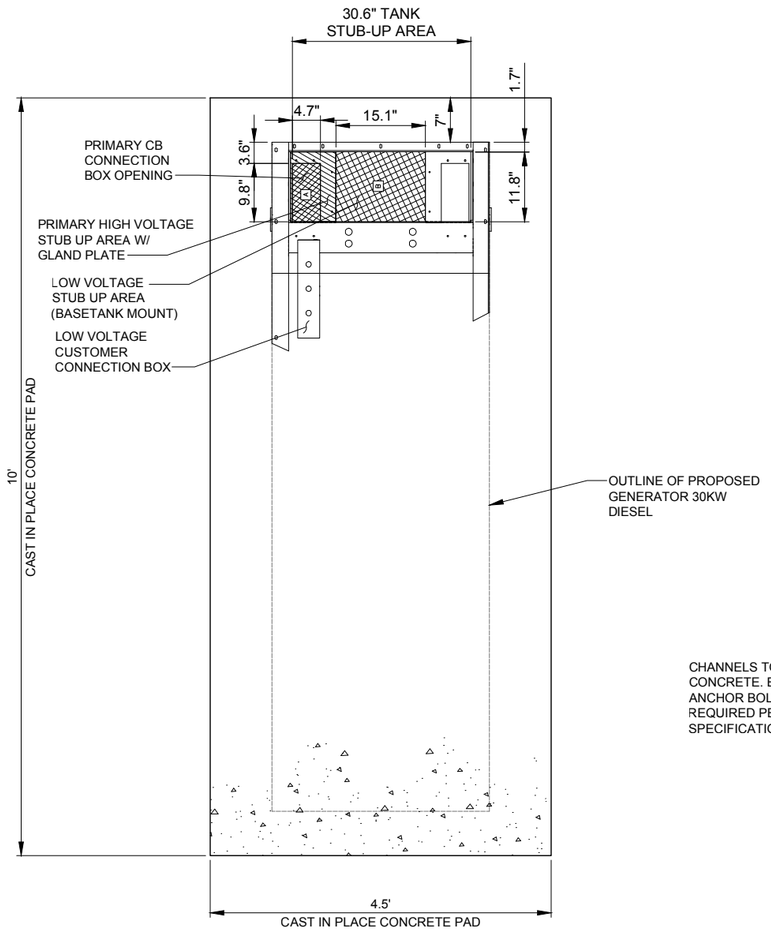
SHEET TITLE
EQUIPMENT PAD FOUNDATION PLAN

SHEET NUMBER
C-4

RECOMMENDED ELECTRICAL STUB-UPS
(SEE DETAILED VIEW & TOP VIEW)

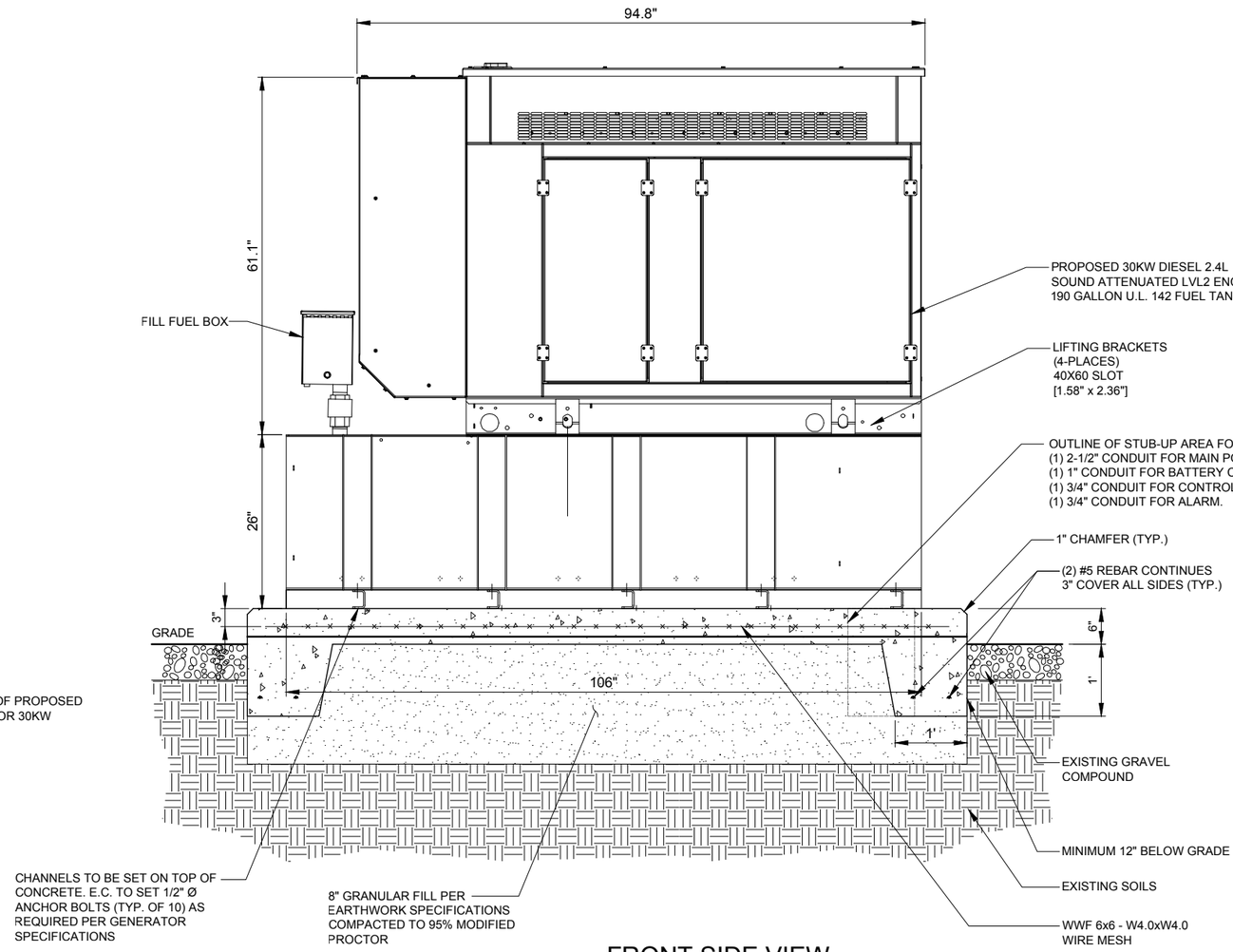
(LOW VOLTAGE STUB UP)
1. TRANSFER SWITCH/COMMUNICATIONS CONDUITS. COMMUNICATIONS AND 2-WIRE START MUST NOT BE RUN IN CONDUIT W/ AC WIRING.

(HIGH VOLTAGE STUB UP)
1. AC LOAD LEAD CONDUIT AREA.
2. 120/240 VAC FROM UTILITY FOR OPTIONAL LOADS SUCH AS GFCI OUTLET, BLOCK HEATER, BATTERY CHARGER, AND OTHER 120/240 VAC OPTIONS. (GLAND PLATE INCLUDED)



PLAN VIEW

1 TYPICAL GENERAC FOUNDATION DETAIL
SCALE: 1" = 1'



FRONT SIDE VIEW

2 TYPICAL GENERAC FOUNDATION DETAIL
SCALE: 1" = 1'

NOTES:
1. SEE GENERATOR MANUFACTURE'S DRAWINGS FOR PHYSICAL LOCATION OF FUEL LINES, CONTROL AND POWER INTERCONNECTIONS AND OTHER INTERFACES THAT ARE TO CAST INTO THE CONCRETE. THE PREFERRED METHOD IS TO BRING THE CONDUIT THROUGH THE PAD TO THE UNDERSIDE OF THE GENERATOR (MINIMIZES RODENT DAMAGE). FINISH CONNECTIONS WITH FLEXIBLE CONDUIT PER GENERATOR MANUFACTURES SPECS. RIGID CONDUITS SHALL BE SECURED TO THE EXISTING SLAB, THEN BURIED BETWEEN SLAB AND SHELTER.
2. -THE GENERATOR SHALL BE LOCATED A MIN 5' AWAY FROM A COMBUSTIBLE WALL.
-THE GENERATOR SHALL BE LOCATED A MIN OF 3' AWAY FROM A NON-COMBUSTIBLE WALL.

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PARK RIDGE, IL 60068
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FAX: 847-698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
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4	UPDATE WITH POWER COORDINATION	10/25/18	JJR
5	UPDATE PER VILLAGE COMMENTS	11/14/18	JTM
6	UPDATE PER FIBER COORDINATION	01/09/19	RA
7	UPDATE PER VILLAGE COMMENTS	01/14/19	JTM
8	UPDATE WITH NEW PAD LAYOUT	02/13/19	TJS

DRA IL-1010
LOC. # 455871

ARLINGTON
HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

DRAWN BY:	DMS
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DATE:	12/07/17
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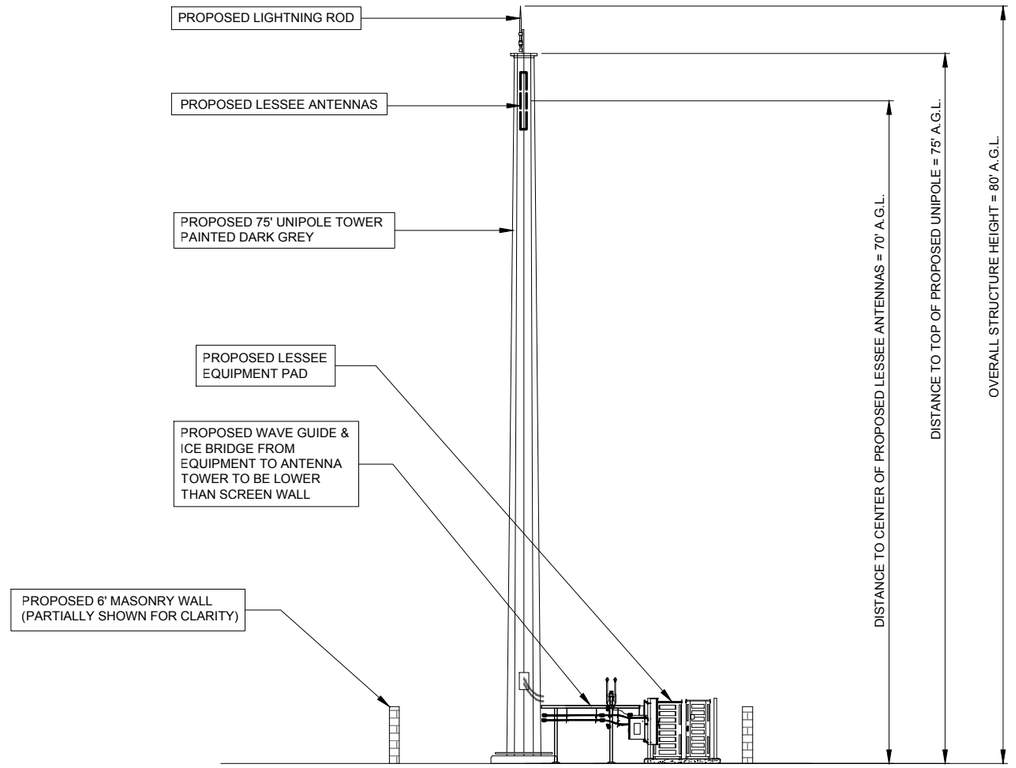
SHEET TITLE
GENERATOR
FOUNDATION DETAILS

SHEET NUMBER
C-5



1 NORTH ELEVATION
SCALE: 1/8" = 1'-0"

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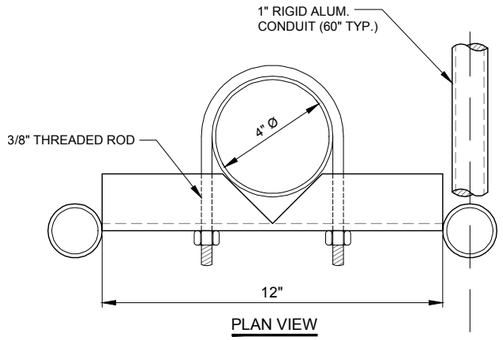
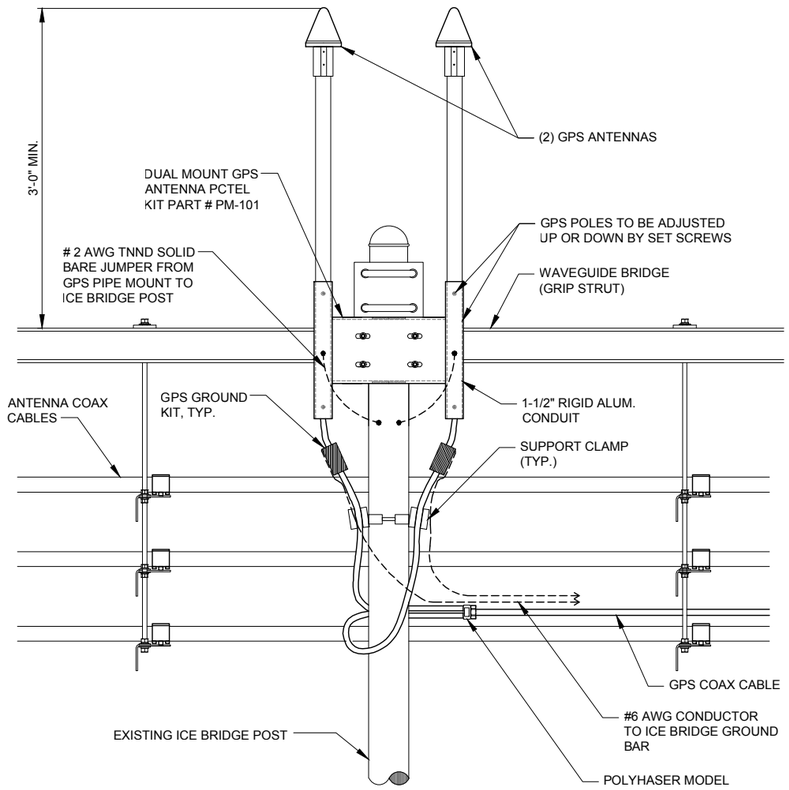
SHEET TITLE
SITE ELEVATION

SHEET NUMBER
ANT-1

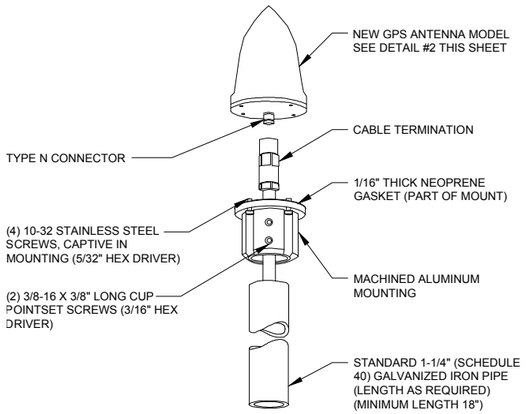


PLAN VIEW

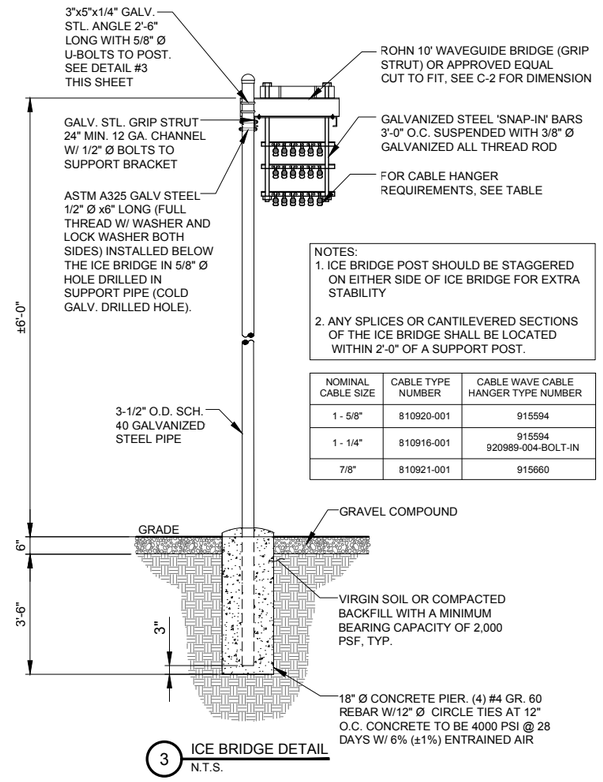


1 GPS MOUNTING DETAIL
N.T.S.

NOTE:
INSTALL EACH GPS ON THE CLOSEST ICE BRIDGE POSTS TO SHELTER (TYP. AT 2 LOCATIONS).



2 TYPICAL GPS DETAIL
N.T.S.

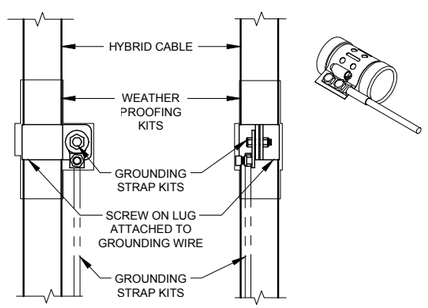


NOTES:
1. ICE BRIDGE POST SHOULD BE STAGGERED ON EITHER SIDE OF ICE BRIDGE FOR EXTRA STABILITY
2. ANY SPLICES OR CANTILEVERED SECTIONS OF THE ICE BRIDGE SHALL BE LOCATED WITHIN 2'-0" OF A SUPPORT POST.

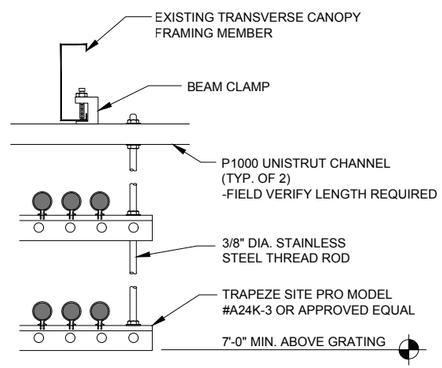
NOMINAL CABLE SIZE	CABLE TYPE NUMBER	CABLE WAVE CABLE HANGER TYPE NUMBER
1 - 5/8"	810920-001	915594
1 - 1/4"	810916-001	915594 920989-004-BOLT-IN
7/8"	810921-001	915660

3 ICE BRIDGE DETAIL
N.T.S.

NOTES:
1. 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 CABLE WHERE IT IS SPECIFIED TO BE GROUNDED
3. CABLE TO BE GROUNDED AT ANTENNA LEVEL AND PRIOR TO ENTERING SHELTER ENTRY PANEL.
4. CABLE ALSO TO BE GROUNDED TO GROUND BAR AT TOWER BASE IF APPLICABLE.
5. USE ONLY TIN PLATED GROUNDING KITS.



4 COAX/ HYBRID GROUND KIT DETAIL
N.T.S.



4 COAX TRAPEZE DETAIL (AT PLATFORM)
N.T.S.

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ARLINGTON HEIGHTS
IL 60004

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SHEET TITLE
SITE
DETAILS

SHEET NUMBER
ANT-2

UTILITY NOTES:

WORK INCLUDES:

THESE NOTES AND ACCOMPANYING DRAWINGS COMPLEMENT THE PROVISIONS AND INSTALLATIONS BY THE ELECTRICAL CONTRACTOR, OF ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO INSTALL THE ELECTRICAL WORK COMPLETE IN CONNECTION WITH THIS VERIZON WIRELESS SITE AND SHALL INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:

1. THE PROVISIONS, INSTALLATION, AND CONNECTION OF A GROUNDING ELECTRODE SYSTEM COMPLETE WITH A BUILDING AND SECONDARY GROUNDING, CELLULAR TELEPHONE COMMUNICATIONS TOWER AND CONNECTIONS TO THE INCOMING ELECTRICAL DISTRIBUTION EQUIPMENT.
2. THE PROVISION AND INSTALLATION OF AN OVERHEAD ELECTRICAL SERVICE OR UNDERGROUND ELECTRICAL SERVICE AND ALL ASSOCIATED WIRE AND CONDUIT AS REQUIRED AND/OR INDICATED ON PLANS.
3. THE PROVISION, INSTALLATION OF CONDUIT AND CONNECTIONS FOR LOCAL TELEPHONE SERVICE.
4. THE FURNISHING AND INSTALLATION OF THE ELECTRICAL SERVICE ENTRANCE CONDUCTORS, CONDUITS, METER SOCKET, AND CONNECTIONS TO THE SERVICE EQUIPMENT WITHIN THE ENCLOSURE.
5. TWO INCH (2") AND THREE INCH (3") DIAMETER PVC CONDUITS SCHEDULE 40.
6. ALL PVC CONDUITS SHOULD BE LEFT WITH NYLON PULL CORD FOR FUTURE USE.
7. EXCAVATION, TRENCHING, AND BACKFILLING FOR CONDUIT(S), CABLE(S), AND EXTERNAL GROUNDING SYSTEM.

CODES, PERMITS, AND FEES:

1. ALL REQUIRED PERMITS, LICENSES, INSPECTIONS AND APPROVALS SHALL BE SECURED AND ALL FEES FOR SAME PAID BY CONTRACTOR.
2. THE INSTALLATION SHALL COMPLY WITH ALL APPLICABLE CODES: STATE, LOCAL AND NATIONAL, AND THE DESIGN, PERFORMANCE CHARACTERISTICS AND METHODS OF CONSTRUCTION OF ALL ITEMS AND EQUIPMENT SHALL BE IN ACCORDANCE WITH THE LATEST ISSUE OF THE VARIOUS APPLICABLE STANDARD SPECIFICATIONS OF THE FOLLOWING AUTHORITIES:

N.E.C.	NATIONAL ELECTRIC CODE
A.N.S.I.	AMERICAN NATIONAL STANDARDS INSTITUTE
I.E.E.E.	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
A.S.T.M.	AMERICAN SOCIETY FOR TESTING MATERIALS
N.E.M.A.	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
U.L.	UNDERWRITERS LABORATORIES, INC.
N.F.P.A.	NATIONAL FIRE PROTECTION ASSOCIATION

RACEWAYS AND WIRING:

1. WIRING OF EVERY KIND MUST BE INSTALLED IN CONDUIT, UNLESS NOTED OTHERWISE, OR AS APPROVED BY THE ENGINEER.
2. UNLESS OTHERWISE SPECIFIED, ALL WIRING SHALL BE COPPER (CU) TYPE THWN, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
3. RACEWAYS SHALL BE GALVANIZED STEEL, SIZED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE, UNLESS OTHERWISE NOTED. ALL RACEWAYS SHALL BE APPROVED FOR THE INSTALLATION.
4. PULL OR JUNCTION BOXES SHALL BE PROVIDED AS REQUIRED TO FACILITATE INSTALLATION OF RACEWAYS AND WIRING. PROVIDE JUNCTION AND PULLBOXES FOR CONDUIT RUNS WITH MORE THAN (360) DEGREES OF BENDS.
5. PROVIDE A COMPLETE RACEWAY AND WIRING INSTALLATION, PERMANENTLY AND EFFECTIVELY GROUNDED IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE AND LOCAL CODES.
6. ELECTRICAL PANELBOARD SHALL BE FURNISHED AND INSTALLED BY OTHERS. ELECTRICAL CONTRACTOR SHALL FIELD VERIFY EXACT LOCATION.
7. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.

GENERAL NOTES:

SEE DETAILS AND SCHEDULES ON DRAWINGS AND SPECIFICATIONS FOR MEANING OF ABBREVIATIONS AND ADDITIONAL REQUIREMENTS AND INFORMATION. CHECK ARCHITECTURAL, STRUCTURAL AND OTHER MECHANICAL AND ELECTRICAL DRAWINGS FOR SCALE, SPACE LIMITATIONS, COORDINATION, AND ADDITIONAL INFORMATION, ETC. REPORT ANY DISCREPANCIES, CONFLICTS, ETC. TO ENGINEER BEFORE SUBMITTING BID. ALL EQUIPMENT FURNISHED BY OTHERS (FBO) SHALL BE PROVIDED WITH PROPER MOTOR STARTERS, DISCONNECTS, CONTROLS, ETC. BY THE ELECTRICAL CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE. THE ELECTRICAL CONTRACTOR SHALL INSTALL AND COMPLETELY WIRE ALL ASSOCIATED EQUIPMENT IN ACCORDANCE WITH MANUFACTURER'S WIRE DIAGRAMS AND AS REQUIRED FOR A COMPLETE OPERATING INSTALLATION. ELECTRICAL CONTRACTOR SHALL VERIFY AND COORDINATE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF (FBO) EQUIPMENT PRIOR TO ROUGH-IN OF CONDUIT AND WIRING TO AVOID CONFLICTS.

COORDINATION WITH UTILITY COMPANY:

THE ELECTRICAL CONTRACTOR SHALL COORDINATE COMPLETE ELECTRICAL SERVICE WITH LOCAL UTILITY COMPANY FOR A COMPLETE OPERATIONS SYSTEM, INCLUDING TRANSFORMER CONNECTIONS, CONCRETE TRANSFORMER PADS, IF REQUIRED, METER SOCKETS, PRIMARY CABLE RACEWAY REQUIREMENTS, SECONDARY SERVICE, ETC. PRIOR TO SUBMITTING BID TO INCLUDE ALL LABOR AND MATERIALS. THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN THE BID ANY OPTIONAL OR EXCESS FACILITY CHARGES ASSOCIATED WITH PROVIDING ELECTRICAL SERVICE FROM LOCAL UTILITY COMPANY. VERIFY BEFORE BIDDING TO INCLUDE ALL COSTS. THE ELECTRICAL CONTRACTOR SHALL VERIFY THE AVAILABLE FAULT CURRENT WITH THE LOCAL UTILITY COMPANY PRIOR TO SUBMITTING BID. ADJUST A.I.C. RATINGS OF ALL OVER CURRENT PROTECTION DEVICES IN DISTRIBUTION EQUIPMENT AS REQUIRED TO COORDINATE WITH AVAILABLE FAULT CURRENT FROM LOCAL UTILITY COMPANY. ALL GROUNDING RODS PROVIDED BY THE POWER OR TELEPHONE UTILITY COMPANIES MUST BE TIED INTO THE MAIN EXTERNAL GROUND RING.

UTILITY CONTACTS:

POWER: COMED
TRACY WASH
(630) 691-4691
ACCT: #0079051095

FIBER: ONE FIBER
MARK ZOLTEK
312-989-2025

ELECTRICAL CONTRACTOR SHALL COORDINATE WITH POWER COMPANY FOR ENTRY INTO FENCED AREA BY EITHER MAILING A KEY TO A SLAVE LOCKED CHAIN AT THE FENCE GATE OR CALLING AND LEAVING A COMBINATION.

FOR CONTINUATION AND CONNECTION OF ELECTRIC AND FIBER SERVICE. COORDINATE WITH ELECTRIC AND FIBER COMPANY.

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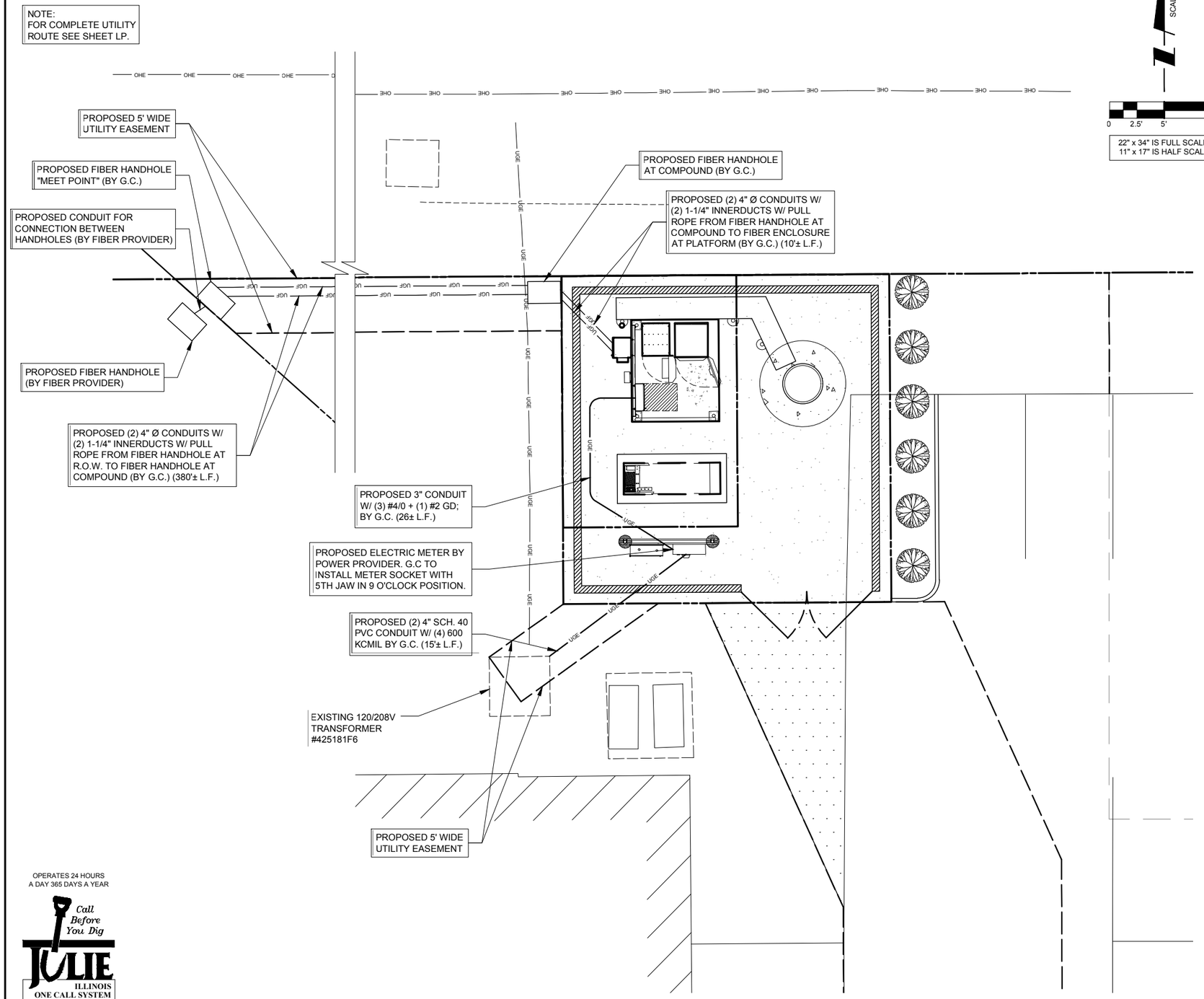

1 SITE UTILITY ROUTING PLAN

NOTE:
CONTRACTOR TO VERIFY ROUTES WITH LOCAL UTILITY COMPANY PRIOR TO INSTALLATION.

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DRA IL-1010
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ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
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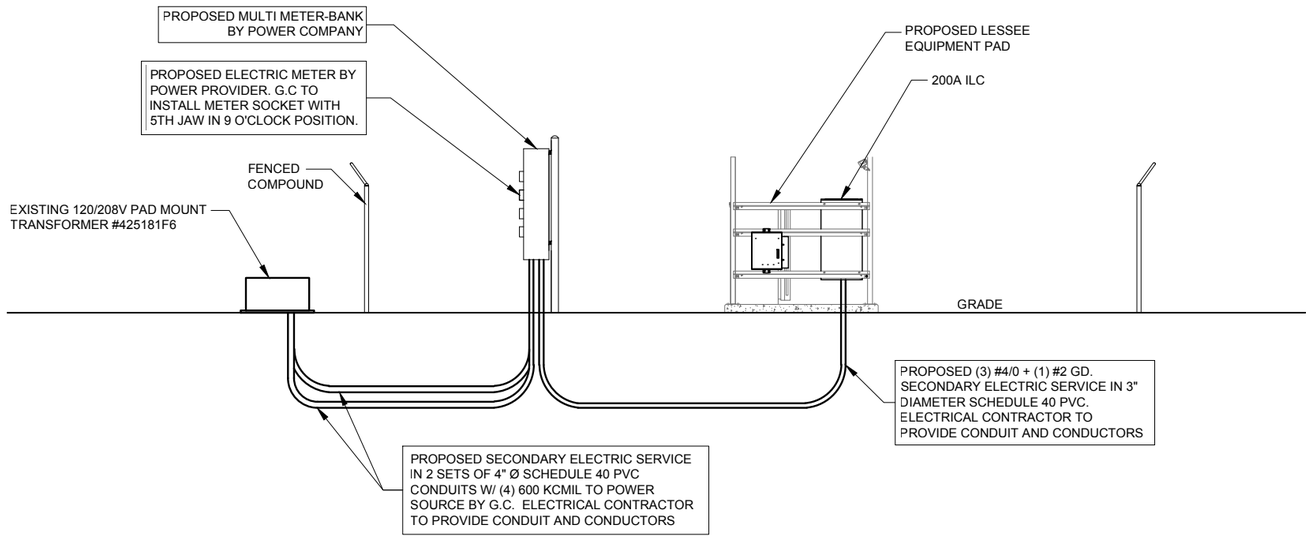
SHEET TITLE

UTILITY ROUTING PLAN

SHEET NUMBER

E-1

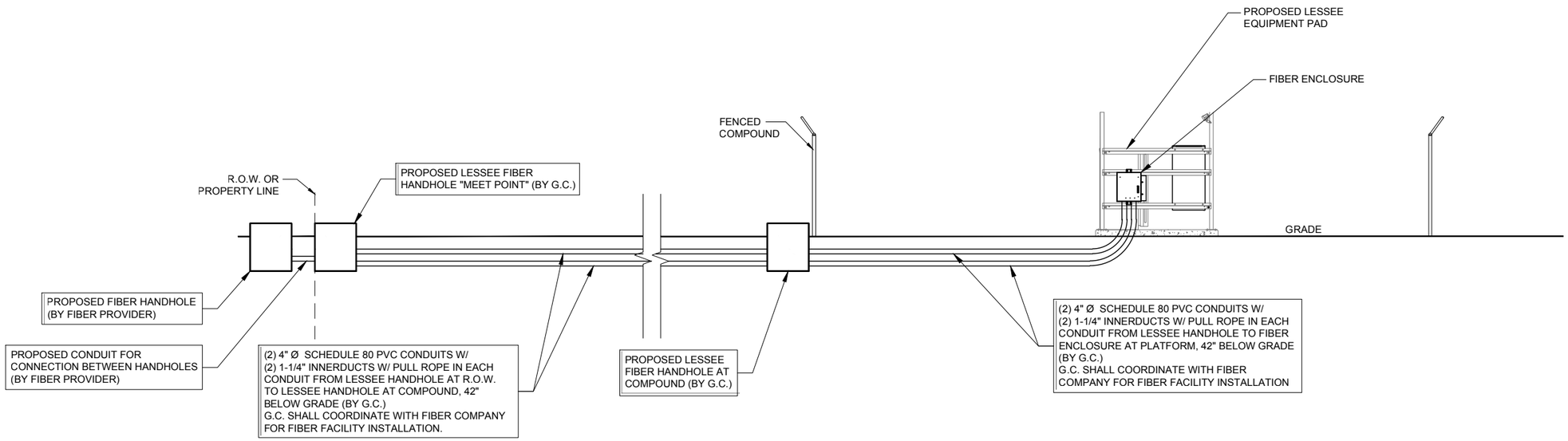


ELECTRICAL SERVICE: 200 AMP 120/240V SINGLE PHASE 3 WIRE

1 POWER RISER DIAGRAM
SCALE: N.T.S.

CONTRACTOR SHALL BUILD INTO THE PRICE OF THE BID
THE COST OF TWO (2) MOBILIZATIONS:

1) POWER/FIBER PERMIT PULLED PRIOR TO BUILDING PERMIT AND PRELIMINARY WORK (SMART JACK ON A STICK, ETC) COMPLETED PRIOR TO GENERAL CONSTRUCTION
2) RETURN TO COMPLETE GENERAL ELECTRICAL CONSTRUCTION



NOTE: VERIFY FIBER ROUTING REQUIREMENTS WITH FIBER COMPANY

2 FIBER RISER DIAGRAM
SCALE: N.T.S.

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UTILITY RISER DIAGRAMS

SHEET NUMBER
E-1A

NOTES:

1) EXISTING MANUAL TRANSFER SWITCH TO BE REMOVED BY THE ELECTRICAL CONTRACTOR (E.C) AND TURNED OVER TO LESSEE. REMOVED EXTERNAL GROUND TERMINATION AND RECONNECT TO NEW TRANSFER SWITCH USING EXISTING GROUND LUG.

2) ALL UNDERGROUND GROUND TERMINATIONS AND TERMINATIONS TO EXISTING BUILDING GROUND GRID TO BE HEAVY DUTY EXOTHERMIC (CAD WELD).

3) NEW AUTOMATIC TRANSFER SWITCH, INSTALLED AND WIRED BY E.C. CONNECT EXTERNAL GROUND LUG AND GROUNDING CONDUCTOR THAT WAS REMOVED FROM MANUAL TRANSFER SWITCH.

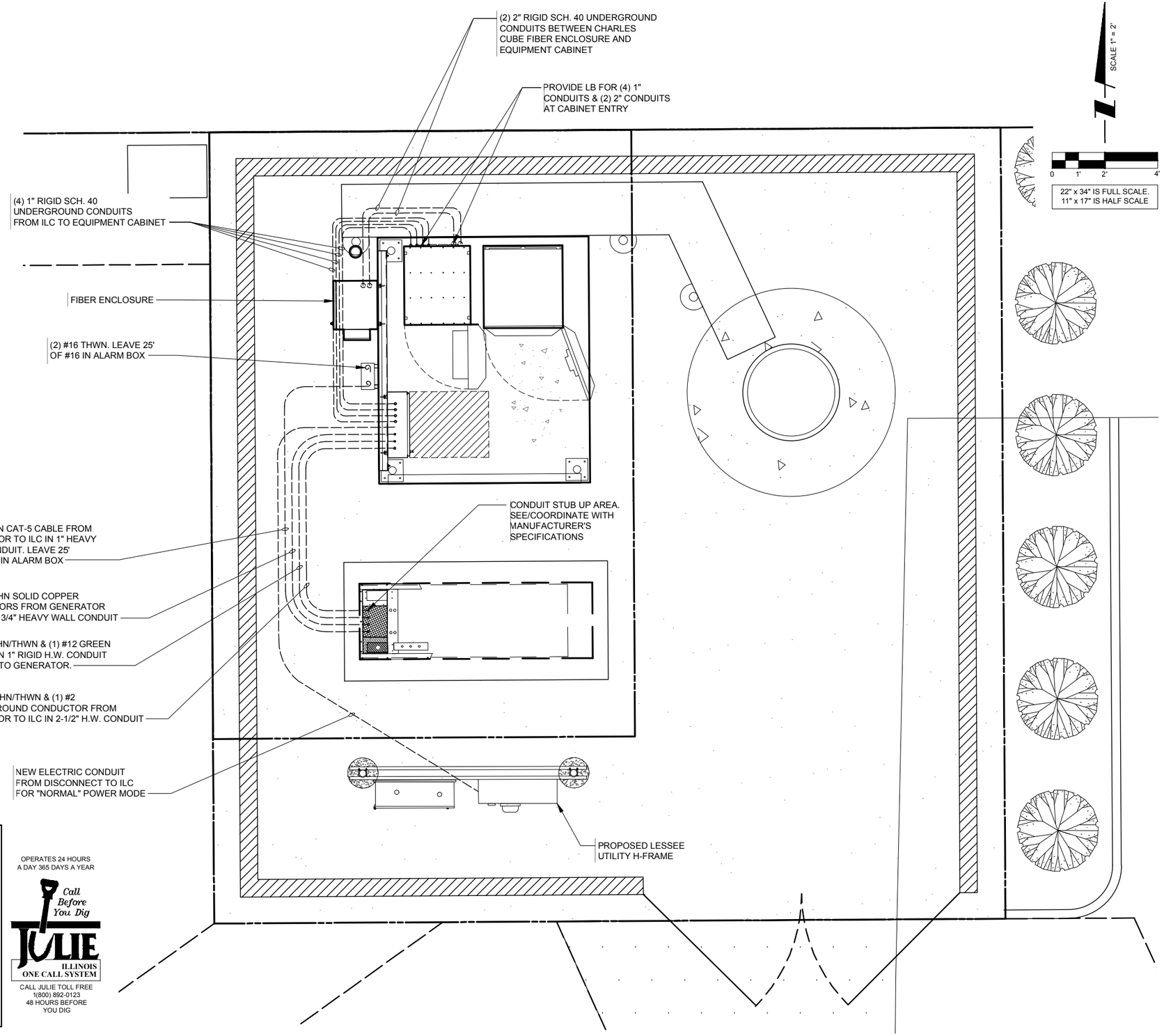
4) EXISTING BUILDING GROUND GRID IS INDICATED ON THE NEW PLAN. HOWEVER, EXACT LOCATION IS NOT KNOWN. E.C. MUST LOCATE THIS GROUND GRID TO PROVIDE THE ATTACHMENT OF THE GENERATOR GROUND GRID. ALSO THE UNDERGROUND CONDUITS FROM THE GENERATOR TO THE BUILDING WILL CROSS OVER THIS GROUND GRID. CARE MUST BE TAKEN NOT TO DAMAGE THE GROUND GRID. IF ANY DAMAGE OCCURS IT MUST BE REPAIRED SO THAT THE COMPLETE GRID SYSTEM REMAINS INTACT.

5) E.C. TO EXTEND #2 TINNED SOLID COPPER GROUND CONDUCTORS FROM (2) LOCATIONS ON GENERATOR FRAME (SEE MANUFACTURERS RECOMMENDATIONS) PROVIDE GROUND LUGS ON GENERATOR AS REQUIRED. EXTEND #1/0 STRANDED GROUND CONDUCTOR AND CONNECT TO COPPER CLAD GROUND RODS VIA HEAVY DUTY EXOTHERMIC TERMINATIONS AND THEN EXTENDED AND ATTACH TO BUILDING GROUND GRID VIA EXOTHERMIC TERMINATIONS.

6) NEW GENERATOR FURNISHED BY LESSEE. INSTALLED AND WIRED BY E.C. DELIVERED AND SET BY CONTRACTOR.

7) EXISTING PANEL BOARD - E.C. TO PROVIDE (2) IP20A BREAKERS AND EXTEND CIRCUITS OUT TO GENERATOR LOCATIONS FOR WIRING OF 1800 WATT WATER JACKET HEATER, AND BATTERY CHARGER. PROVIDE RECEPTACLES OR TERMINATIONS AS REQUIRED. VERIFY EXACT LOCATIONS WITH GENERAC.

8) E.C. MUST MONITOR DC POWER WHEN ON BATTERY BACK-UP DURING PORTIONS OF CONSTRUCTION. IF LEVEL FALLS BELOW RECOMMENDED LEVEL 2256 DC, E.C. MUST TURN ON THE MAIN POWER. THE CELL SITE CANNOT GO OFF LINE AT ANYTIME.



NOTE:
CONTRACTOR TO VERIFY ROUTES WITH LOCAL UTILITY COMPANY PRIOR TO INSTALLATION.

NOTES:

1) SEE DETAILS ON EXISTING GROUND GRID AND GENERATOR GROUND GRID FOR REQUIRED GROUNDING SYSTEM.

2) PROVIDE NEW FEEDER CONDUCTORS FROM MAIN SERVICE SWITCH TO TRANSFER SWITCH FROM TRANSFER SWITCH TO EXISTING TAP BOX AND FROM TAP BOX TO EXISTING PANELBOARD.

3) CARE MUST BE TAKEN INTHE PLACEMENT OF NEW AUTOMATIC TRANSFER SWITCH SO THAT ENTRANCE OF THE FEEDER THRU THE BACK OF THE TRANSFER SWITCH DOES NOT INTERFERE WITH EQUIPMENT INSIDE TRANSFER SWITCH OR WITH TRANSFER SWITCH OPERATION.

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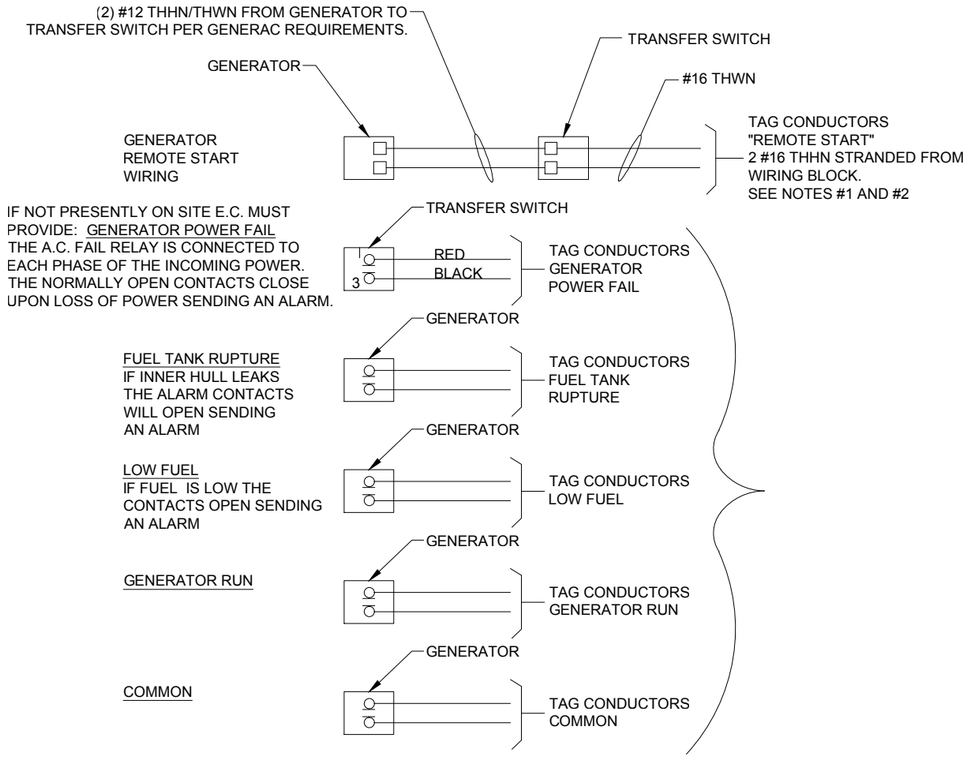
E-1B



1 ALARM WIRING
N.T.S.

NOTES:

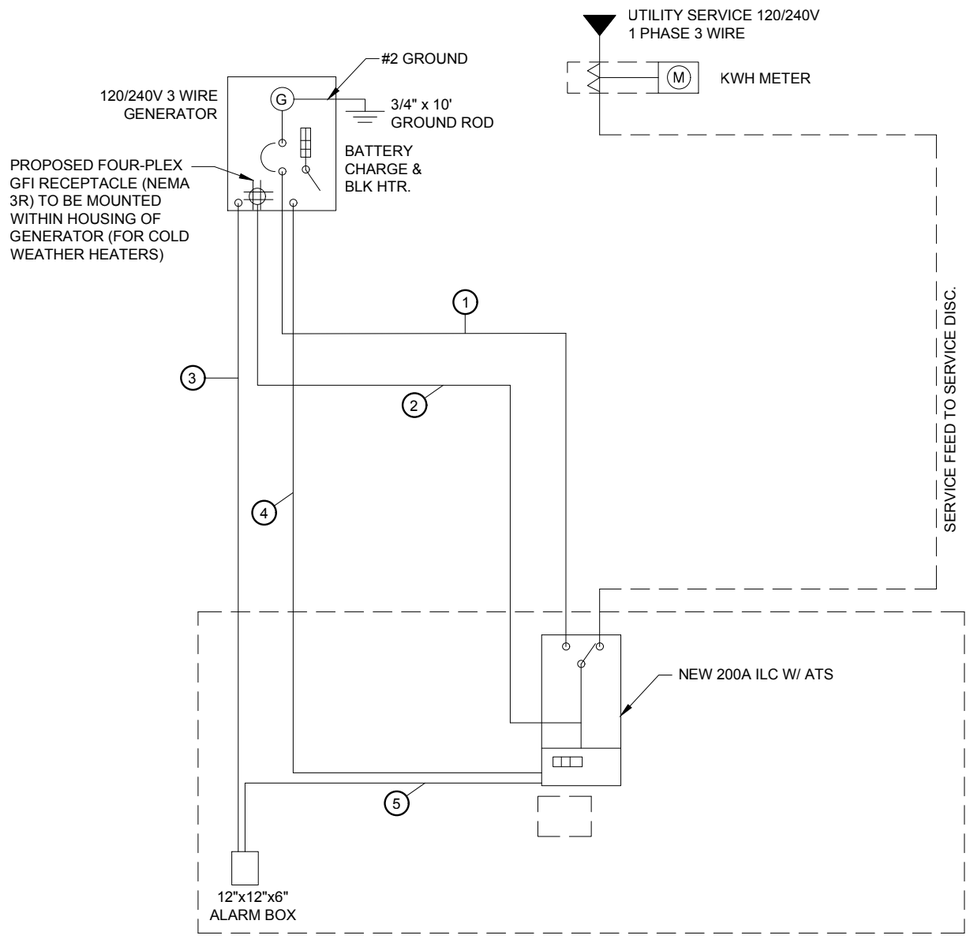
1) E.C. TO PULL A #16 AWG SOLID RED AND A #16 AWG SOLID BLACK FROM THE TRANSFER SWITCH TO ALARM WIRING BLOCK FOR REMOTE START.

2) E.C. TO PULL ALL ALARM LEADS TO EXISTING ALARM WIRING BLOCK. LEAVE A MINIMUM OF 24" PIGTAILS AT ALARM WIRING BLOCK AND TAG CONDUCTORS AS INDICATED, TERMINATIONS ON ALARM POINT WIRING BLOCK BY OTHERS. CONDUCTORS CAN BE RUN EXPOSED. THEY SHALL BE NEATLY BUNDLED USING NYLON TIES AND SUPPORTED AT 2'-0" INTERVALS FOR A NEAT INSTALLATION.

KEY

1. (3) #3/0 & (1) #2 GND IN 2-1/2" C
2. (4) #12 & (1) #12 GND IN 1" C (SEE NOTE)
3. (2) CAT-5 BELDEN IN 1" C FROM GENERATOR TO ALARM BOX. LEAVE 25' SPOOLED IN ALARM BOX
4. (2) #12 THWN IN 3/4" C
5. (2) #16 THWN. LEAVE 25' OF #16 IN ALARM BOX

NOTE:
E.C. TO PROVIDE (2) 20A 1-POLE CIRCUIT BREAKERS FOR BATTERY CHARGER AND JACKET HEATER



2 NEW SINGLE LINE DIAGRAM
N.T.S.

verizon
1515 WOODFIELD ROAD, SUITE 1400
SCHAUMBURG, ILLINOIS 60173
PHONE: (847) 619-5397
FAX: (847) 706-7415

TERRA CONSULTING GROUP, LTD
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
2	ADDITION OF ECR	04/27/18	TJS
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4	UPDATE WITH POWER COORDINATION	10/25/18	JJR
5	UPDATE PER VILLAGE COMMENTS	11/14/18	JTM
6	UPDATE PER FIBER COORDINATION	01/09/19	RA
7	UPDATE PER VILLAGE COMMENTS	01/14/19	JTM
8	UPDATE WITH NEW PAD LAYOUT	02/13/19	TJS

DRA IL-1010
LOC. # 455871

ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

DRAWN BY:	DMS
CHECKED BY:	TAZ
DATE:	12/07/17
PROJECT #:	33-2567

SHEET TITLE
GENERATOR SINGLE LINE DIAGRAM & ALARM WIRING

SHEET NUMBER
E-1C

GROUNDING ELECTRODE SYSTEM NOTES:

1. ALL GROUNDING CONNECTIONS SHALL BE MADE BY THE EXOTHERMIC PROCESS CONNECTIONS SHALL INCLUDE ALL CABLE TO CABLE, SPLICES, ETC. ALL CABLE TO GROUND RODS, GROUND RODS SPLICES AND LIGHTNING PROTECTION SYSTEM AS INDICATED. GROUND FOUNDATION ONLY AS INDICATED BY PM. ALL MATERIALS USED (MOLDS, WELDING, METAL, TOOLS, ETC.) SHALL BE BY EXOTHERMIC PROCESS AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS AND PROCEDURES. GROUND CONDUCTOR SHALL HAVE A MINIMUM 24" BENDING RADIUS.
2. ALL EXOTHERMIC CONNECTIONS ON GALVANIZED SURFACES SHALL BE CLEANED THOROUGHLY AND COLORED TO MATCH SURFACE WITH (2) TWO COATS OF SHERWIN-WILLIAMS GALVITE (WHITE) PAINT B50W3 (OR EQUAL) OR SHERWIN- WILLIAMS SILVERBRITE (ALUMINUM) B59S11 (OR EQUAL).
3. ALL ELECTRICAL & MECHANICAL GROUND CONNECTIONS SHALL HAVE ANTI-OXIDANT COMPOUND APPLIED TO CONNECTION
4. FENCE/GATE: GROUND FENCE POSTS WITHIN 6 FEET OF PLATFORM AND 25 FEET OF TOWER AS INDICATED ON DRAWINGS. GROUND EACH GATE POST AND CORNER POST. GROUND CONNECTIONS TO FENCE POSTS SHALL BE MADE BY THE EXOTHERMIC PROCESS AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES. ALL OTHER CONNECTIONS FOR THE GROUND GRID SYSTEM SHALL BE MADE BY THE EXOTHERMIC PROCESS, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES.
6. UTILITY COMPANY COORDINATION: ELECTRICAL CONTRACTOR SHALL CONFIRM THAT ALL WORK IS IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY BEFORE SUBMITTING THE BID, THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN THE BID.
7. GROUND TEST: GROUND TESTS SHALL BE PERFORMED AS REQUIRED BY LESSEE STANDARD PROCEDURES. GROUND GRID RESISTANCE SHALL NOT EXCEED 5 OHMS.
8. CONTRACTOR SHALL SUBMIT THE GROUND RESISTANCE TEST REPORT AS FOLLOWS:
   1. ONE (1) COPY TO OWNER REPRESENTATIVE
   2. ONE (1) COPY TO ENGINEER
   3. ONE (1) COPY TO KEEP INSIDE EQUIPMENT ENCLOSURE

TYPICAL KEYED GROUNDING NOTES △

(1) #2 AWG TNND SOLID BARE COPPER CONDUCTOR 42" BELOW GRADE (TYPICAL) MINIMUM 24" BENDING RADIUS

(2) PAD CORNER POST, STEEL COLUMN, STEEL BEAM & CANOPY GROUND

(3) CABINET GROUND

(4) DISCONNECT AND ELECTRIC SERVICE GROUND TO GROUND ROD

(5) 5/8" x 10' COPPER CLAD GROUND ROD

(6) GROUND CHAIN LINK FENCE (TYPICAL) EXOTHERMIC CONNECTION (TYPE VS) GROUND FENCE POSTS WITHIN 6 FEET OF PLATFORM AND 25 FEET OF TOWER. (SEE DETAIL, SHEET E-5.)

(7) MAINTAIN TWO FOOT DISTANCE OFF OF STRUCTURES.

(8) GROUND COAXIAL ANTENNA CABLES TO GROUND BAR BY ANTENNA CONTRACTOR TERMINATE CABLES 1'-0" FROM PLATFORM AND INSTALL LIGHTNING SURGE ARRESTORS ON EACH CABLE GROUND.

(9) EXOTHERMICALLY WELD COPPER GROUND BAR TAIL TO HALO GROUND RING (EXOTHERMIC CONNECTION TYPE TA) BY ANTENNA CONTRACTOR. FINAL CONNECTION BY ELECTRICAL CONTRACTOR.

(10) 4"X20"X1/4" TNND INSULATED COPPER GROUND BAR, NON ISOLATED WITH 10.0' LONG #2 AWG TNND SOLID COPPER WIRE WELDED TAILS (HARGER GBIT 14420VW)

(11) GROUND CABLE WAVEGUIDE BRIDGE (TYP.) BY ELECTRICAL CONTRACTOR.

(12) PROPOSED PERIPHERAL GROUND RING SHOULD BE INSTALLED 1' TO 2' INSIDE THE FENCE LINE, THE TOWER GROUND RING SHOULD BE INSTALLED A MINIMUM 2' OFF OF ANY STRUCTURES.

(13) PROPOSED TOWER GROUND RING

(14) GATE JUMPERS (SEE DETAIL, SHEET E-4)

(15) BOND EXISTING/ PROPOSED TOWER GROUND RING TO PROPOSED PLATFORM GROUND RING WITH #2 AWG TNND SOLID COPPER CONDUCTOR IN 2 LOCATIONS.

(16) TWO #2 LEADS FROM THE EGR TO THE GROUND BAR AT UTILITY FRAME LOCATED ON PLATFORM STEEL. CADWELD AT EGR AND DOUBLE HOLE LUGS ON PLATFORM.

(17) BOND RAYCAP TO MGB.

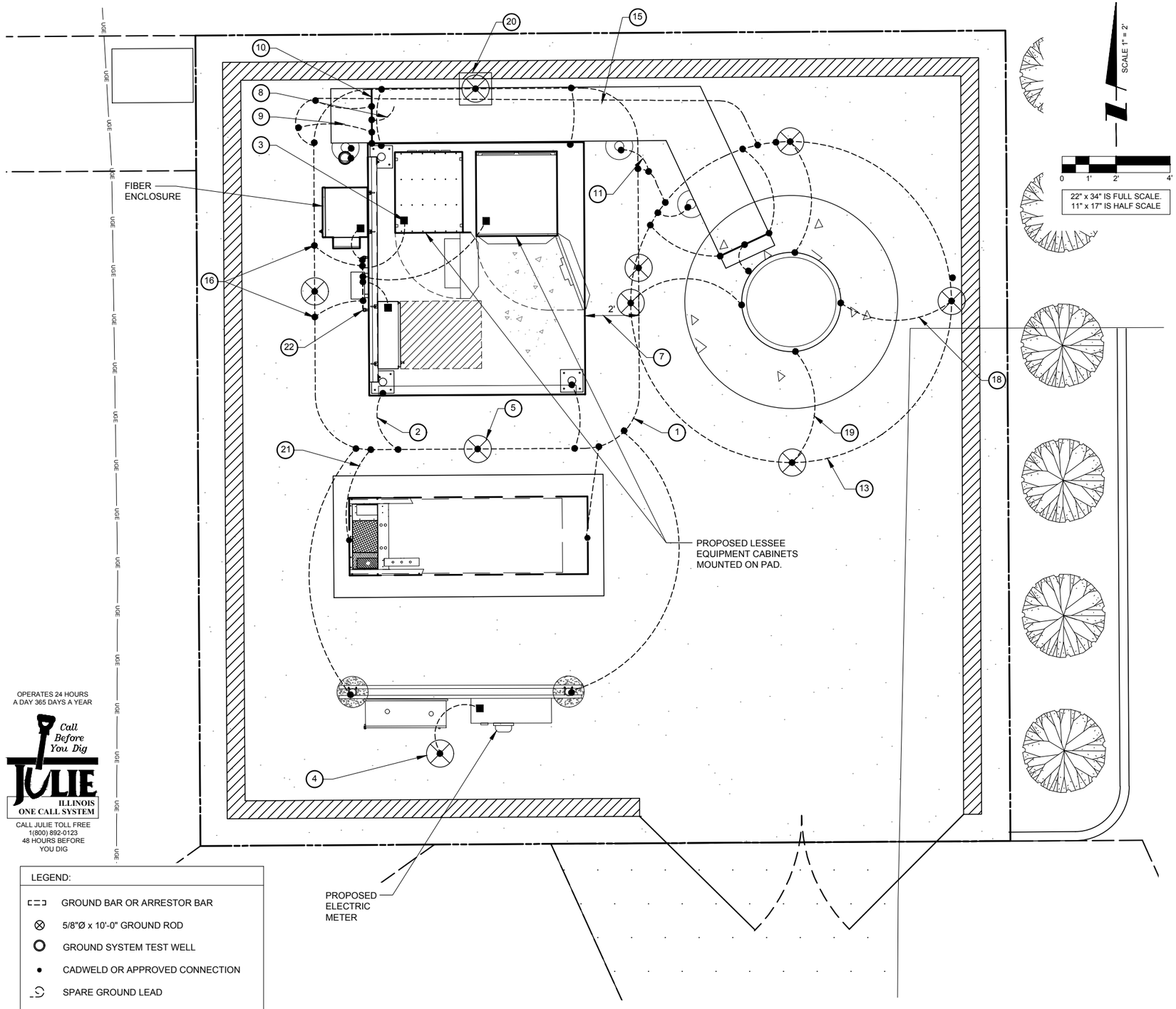
(18) EACH TOWER FOUNDATION REBAR MESH/CAGE TO BE BONDED TO TOWER GROUND RING WITH #2 TINNED SOLID COPPER CONDUCTOR

(19) EACH TOWER FOUNDATION TO HAVE AT LEAST ONE ANCHOR BOLT BONDED TO TOWER GROUND RING WITH #2 TINNED SOLID COPPER CONDUCTOR

(20) COPPER CLAD GROUND ROD WITH INSPECTION WELL TOP OF GROUND ROD MAX 24" BURY.

(21) EXTEND GROUND CONDUCTORS IN 1/2" RIGID H.W. CONDUIT ADJACENT TO PAD, OFFSET AND ATTACH TO EXTERIOR OF GENERATOR HOUSING AND EXTEND TO GROUND LUGS AS REQUIRED, VERIFY LOCATION WITH GENERAC.

(22) MGB MOUNTED UNDER PERIMETER BEAM



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ILLINOIS ONE CALL SYSTEM
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LEGEND:

- GROUND BAR OR ARRESTOR BAR
- 5/8"Ø x 10'-0" GROUND ROD
- GROUND SYSTEM TEST WELL
- CADWELD OR APPROVED CONNECTION
- SPARE GROUND LEAD
- MECHANICAL CONNECTION
- EXISTING GROUNDING
- NEW GROUNDING

NOTE:
SEE GROUNDING DETAILS ON SHEETS E-3 & E-4

(1) SITE GROUNDING PLAN 8
SCALE: 1" = 2'

verizon
1515 WOODFIELD ROAD, SUITE 1400
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ARLINGTON HEIGHTS
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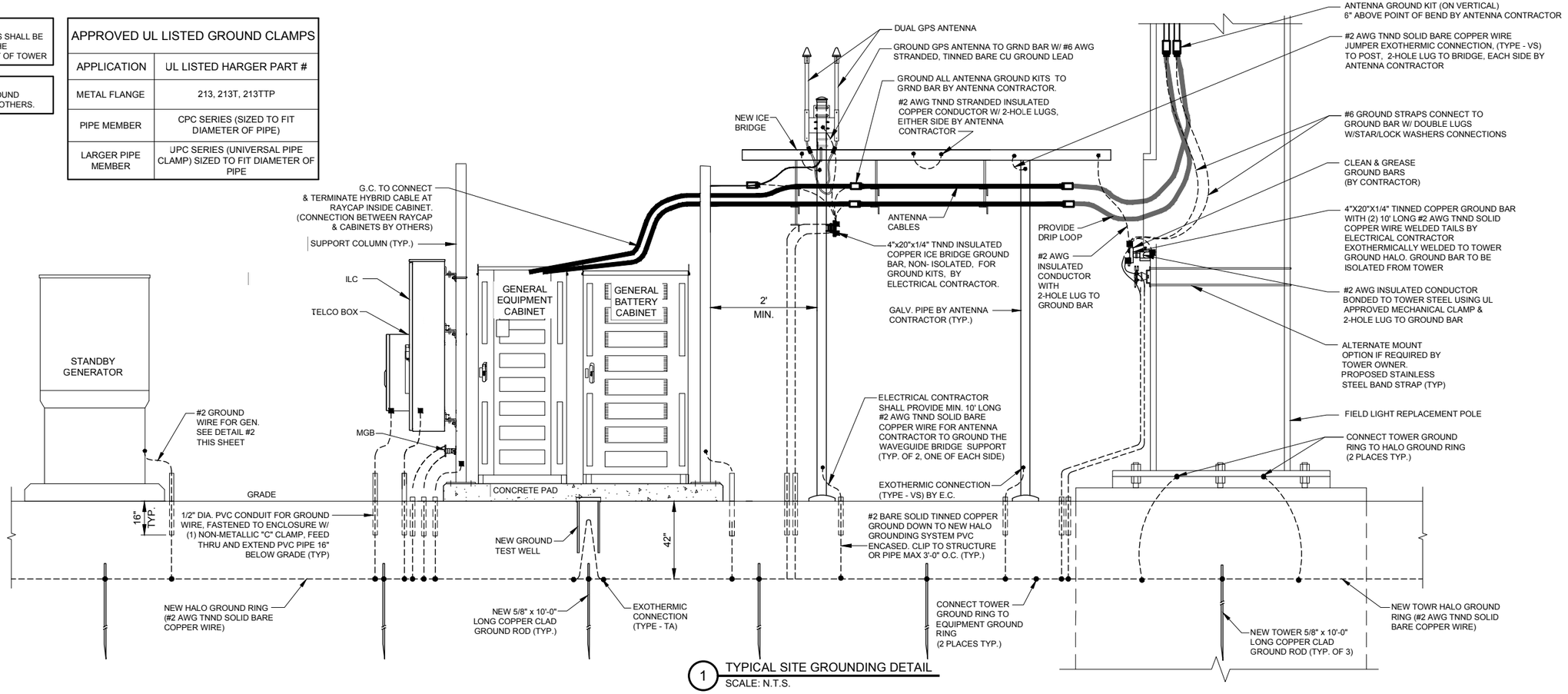
SHEET TITLE
SITE GROUNDING PLAN

SHEET NUMBER
E-2

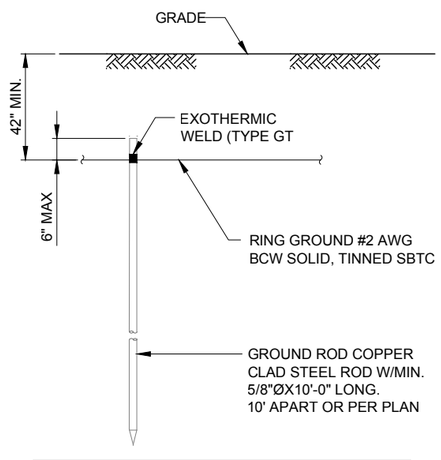
NOTE:
ANTENNA CABLES SHALL BE GROUNDED AT THE ANTENNA HEIGHT OF TOWER

NOTE:
ALL CABINET GROUND CONNECTION BY OTHERS.

APPROVED UL LISTED GROUND CLAMPS	
APPLICATION	UL LISTED HARGER PART #
METAL FLANGE	213, 213T, 213TTP
PIPE MEMBER	CPC SERIES (SIZED TO FIT DIAMETER OF PIPE)
LARGER PIPE MEMBER	UPC SERIES (UNIVERSAL PIPE CLAMP) SIZED TO FIT DIAMETER OF PIPE

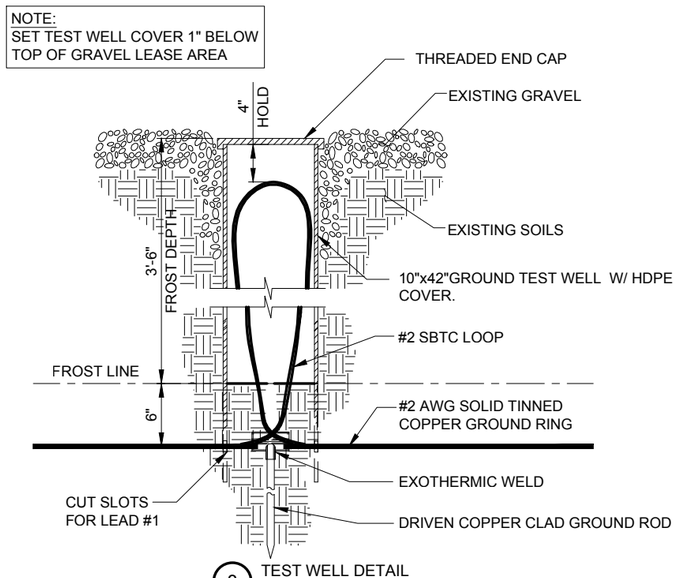


1 TYPICAL SITE GROUNDING DETAIL
SCALE: N.T.S.

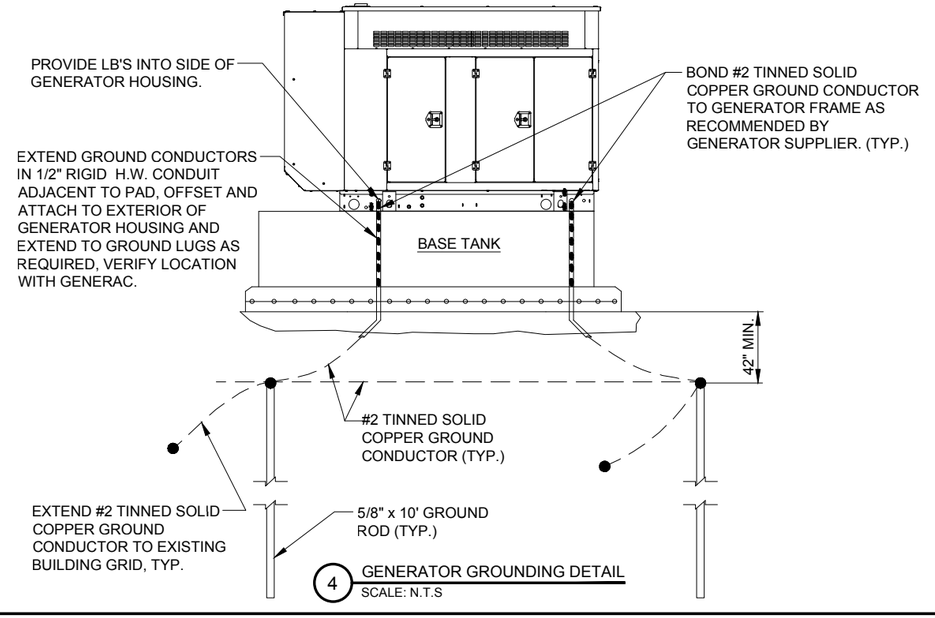


NOTE:
GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.

2 GROUND ROD DETAIL
SCALE: N.T.S.



3 TEST WELL DETAIL
SCALE: N.T.S.



4 GENERATOR GROUNDING DETAIL
SCALE: N.T.S

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SCHAUMBURG, ILLINOIS 60173
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1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

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SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
E-3

GROUNDING ELECTRODE SYSTEM NOTES:

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5. AFTER INSTALLATION OF THE CANOPY AT THE DOOR, GC/EC IS TO BOND THE CANOPY TO THE DOOR FRAME WITH A #2 CONDUCTOR. USE DOUBLE-LUG CONNECTION. PREP AND PAINT SURFACE TO MATCH AFTER INSTALLATION.
6. UTILITY COMPANY COORDINATION: ELECTRICAL CONTRACTOR SHALL CONFIRM THAT ALL WORK IS IN ACCORDANCE WITH THE RULES OF THE LOCAL UTILITY COMPANY BEFORE SUBMITTING THE BID, THE CONTRACTOR SHALL CHECK WITH THE UTILITY COMPANIES SUPPLYING SERVICE TO THIS PROJECT AND SHALL DETERMINE FROM THEM ALL EQUIPMENT AND CHARGES WHICH THEY WILL REQUIRE AND SHALL INCLUDE THE COST IN THE BID.
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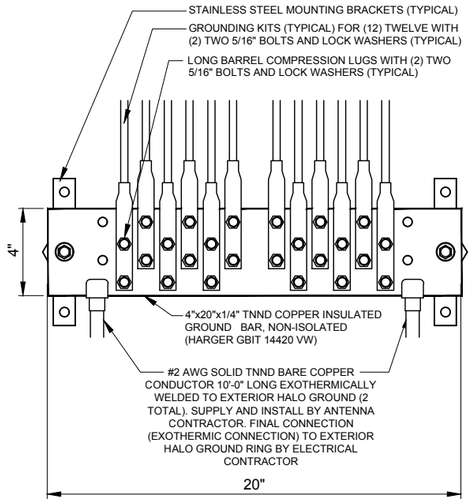
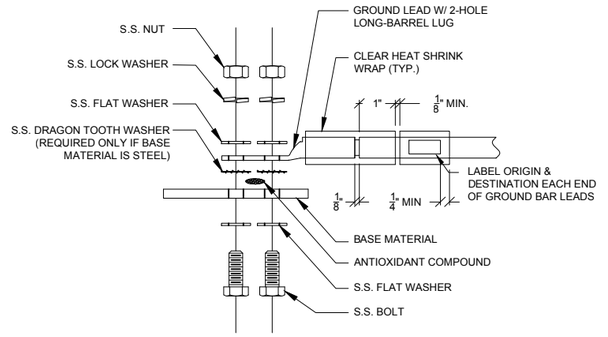
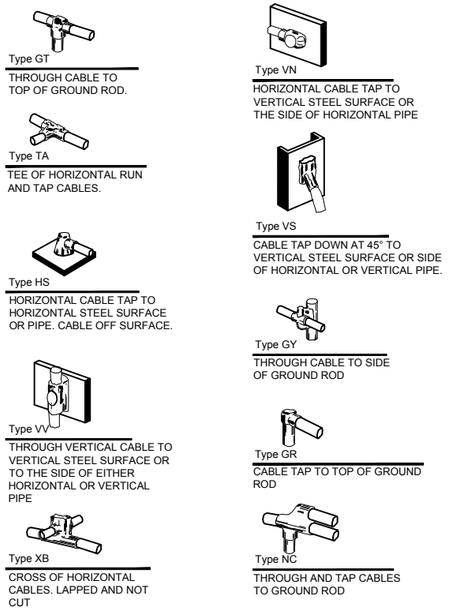


1 EXTERIOR GROUND BAR DETAIL
N.T.S.

NOTES:
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 KOPR-SHIELD.
3. GROUND BARS, INSTALL BOLT HEAD TOWARD WALL
4. ENCLOSURES, INSTALL BOLT HEAD ON OUTSIDE OF ENCLOSURE



2 GROUND LUG INSTALLATION DETAIL
N.T.S.



3 EXOTHERMIC WELD DETAILS
EXOTHERMIC AND HARGER ULTRAWELD OR APPROVED EQUAL

verizon
1515 WOODFIELD ROAD, SUITE 1400
SCHAUMBURG, ILLINOIS 60173
PHONE: (847) 619-5397
FAX: (847) 706-7415

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DRA IL-1010
LOC. # 455871

ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

DRAWN BY:	DMS
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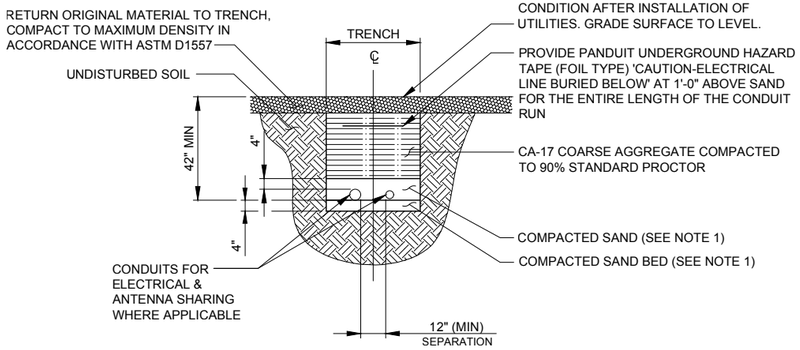
SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
E-4

NOTES:

1. LEAN CONCRETE, RED-COLORED TOP, MAY BE USED IN PLACE OF COMPACTED SAND.
2. BURY CONDUITS 42" BELOW GRADE OR 6" BELOW FROST LINE, WHICHEVER IS GREATER
3. CONDUIT SIZE, TYPE, QUANTITY AND SEPARATION DIMENSION TO BE VERIFIED WITH LOCAL UTILITY COMPANY REQUIREMENTS



3 UTILITY TRENCH DETAIL
SCALE: N.T.S.

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A DAY 365 DAYS A YEAR

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VERIZON WIRELESS PANEL "A" SCHEDULE

MAIN: 200/2 VOLTAGE: 120/240 PHASE: 1 WIRE: 3

TO AUTOMATIC TRANSFER SWITCH

200A

DESCRIPTION	BRKR.	WATTS	S/G	A	B	S/N	WATTS	BRKR.	DESCRIPTION
RECTIFIER 1	20/1	1000	1			2	1000	20/1	RECTIFIER 5
RECTIFIER 2	20/1	1000	3			4	1000	20/1	RECTIFIER 6
RECTIFIER 3	20/1	1000	5			6	1000	20/1	RECTIFIER 7
RECTIFIER 4	20/1	1000	7			8	1000	20/1	RECTIFIER 8
SPACE			9			10	3000	30/1	HVAC
SPACE			11			12			
SPACE			13			14			SPACE
SPACE			15			16			SPACE
SPACE			17			18			SPACE
SPACE			19			20			SPACE
SPACE			21			22			SPACE
SPACE			23			24			SPACE
SPACE			25			26			SPACE
SPACE			27			28			SPACE
SPACE			29			30			SPACE
EXTERIOR LIGHTS *	20/1	1800	31			32			SPACE
GFCI RECEPTACLE *	20/1	1800	33			34	1800	20/1	GFCI RECEPTACLE *
GEN BATTERY CHARGER *	20/1	1800	35			36	1850	20/1	GEN. BLOCK HEATER& CHARGER *

SURGE ARRESTOR

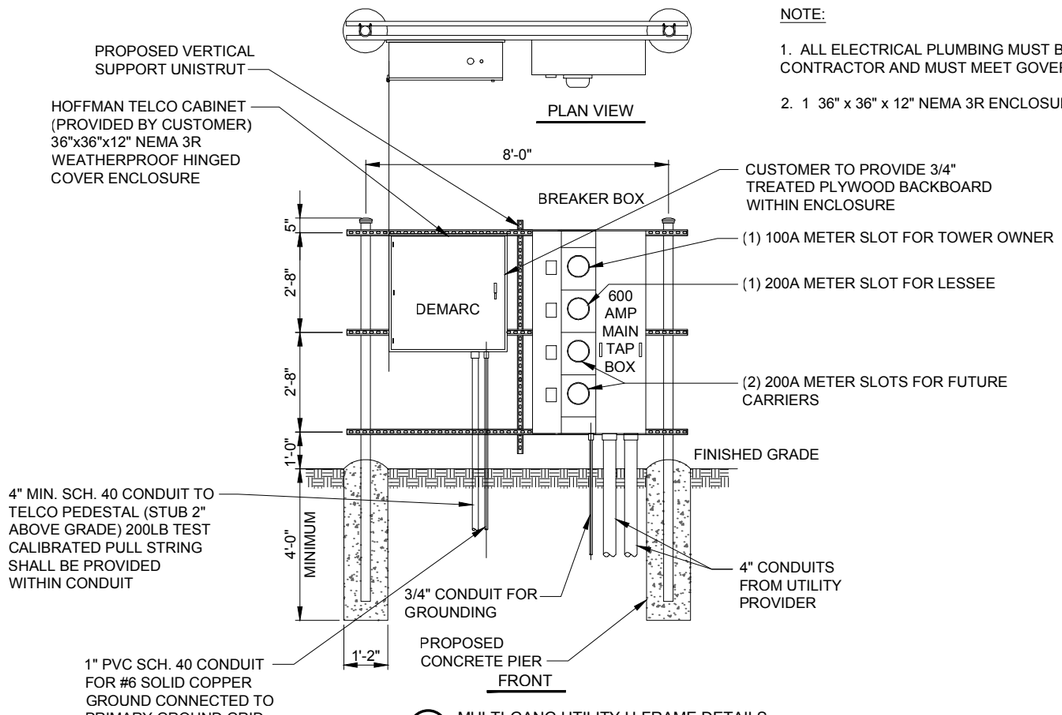
SURFACE MOUNTED NEMA 3R w/DOOR
22K AIC BREAKERS
(CONTRACTOR SHALL VERIFY AIC RATINGS W/LOCAL POWER CO.)

NOTE:
1. VERIZON WIRELESS EQUIPMENT ENGINEERING TO SUPPLY BREAKER FOR RADIO AND POWER CABINETS
2. GENERAL CONTRACTOR TO SUPPLY BREAKERS NOTED WITH " * "

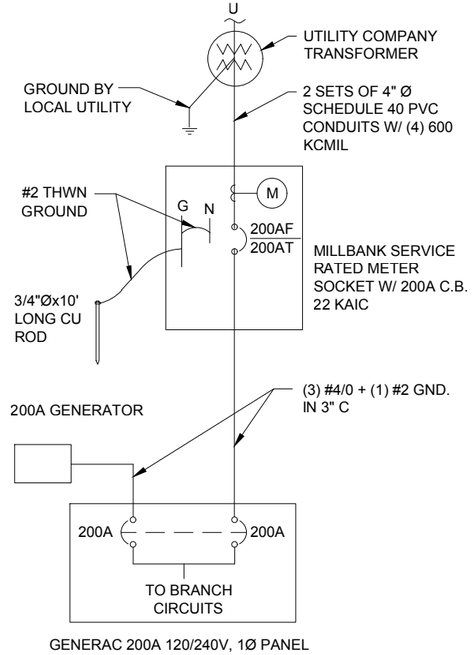
4 PANEL BOARD SCHEDULE
N.T..S

NOTE:

1. ALL ELECTRICAL PLUMBING MUST BE VERIFIED PRIOR TO INSTALLATION BY CONTRACTOR AND MUST MEET GOVERNING CODES, NO EXCEPTIONS.
2. 1 36" x 36" x 12" NEMA 3R ENCLOSURE (HOFFMAN A-20R20BHCR OR SIMILAR)



1 MULTI-GANG UTILITY H-FRAME DETAILS
N.T.S.



GENERAC 200A 120/240V, 1Ø PANEL BOARD WITH AUTOMATIC TRANSFER

2 SINGLE LINE DIAGRAM
N.T.S.

verizon
1515 WOODFIELD ROAD,
SUITE 1400
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SHEET TITLE
ELECTRICAL DETAILS

SHEET NUMBER
E-5

GENERAL LANDSCAPE NOTES

1. PRUNE NEWLY INSTALLED SHRUBS. WORK SHALL BE DONE BY EXPERIENCED PERSONNEL TO THE ACCEPTED HORTICULTURAL AND ARBORICULTURAL STANDARDS. PRUNING SHALL RESULT IN A LOOSE OUTLINE CONFORMING TO THE GENERAL SHAPE OF THE SHRUB TYPE. DO NOT USE HEDGE SHEARS.

2. ALL PLANTING STOCK SHALL BE NURSERY-GROWN IN ACCORDANCE WITH GOOD HORTICULTURAL PRACTICE. PLANTS SHALL BE FREE OF DISEASE, INSECTS EGGS, LARVAE AND DEFECTS SUCH AS KNOTS, SUN-SCALD, INJURIES, ABRASIONS OR DISFIGUREMENT. THEY SHALL HAVE SOUND, HEALTHY VIGOROUS AND UNIFORM GROWTH TYPICAL OF THE SPECIES AND VARIETY, WELL-FORMED, FREE FROM IRREGULARITIES, WITH THE MINIMUM QUALITY AND SIZE CONFORMING TO AMERICAN STANDARD FOR NURSERY STOCK.

3. GUARENTEE: WARRANT ALL PLANT MATERIAL TO BE TRUE TO BOTANICAL NAME AND SPECIFIED SIZE. AFTER COMPLETION OF PLANTING, ALL PLANT MATERIALS SHALL BE WARRANTED AGAINST DEFECTS, INCLUDING DEATH AND UNSATISFACTORY GROWTH FOR A WARRANTY PERIOD OF ONE YEAR. THE CONTRACTOR WILL NOT BE RESPONSIBLE FOR DEFECTS RESULTING FROM NEGLECT ABUSE, DAMAGE BY OTHERS, OR UNUSUAL PHENOMENA OR INCIDENTS BEYOND THE CONTRACTORS CONTROL WHICH RESULT FROM NATURAL CAUSES SUCH AS FLOODS STORMS, FIRES OR VANDALISM.
REPLACEMENTS: DURING THE WARANTY PERIOD, REPLACE ONE TIME, AT NO ADDITIONAL COST TO THE OWNER, PLANT MATERIALS THAT ARE DEAD, OR IN THE OPINION OF THE LANDSCAPE ARCHITECT, IN AN UNHEALTHY OR UNSIGHTLY CONDITION. REJECTED PLANT MATERIALS SHALL BE REMOVED FROM THE SITE AT CONTRACTOR'S EXPENSE. REPLACEMENTS ARE TO BE MADE NO LATER THAN THE SUBSEQUENT PLANTING SEASON. RESTORE AREAS DISTURBED BY REPLACEMENT OPERATIONS.

4. MULCHING SHALL BE DONE WITHIN 48 HOURS AFTER PLANTING. MULCH SHRUB BEDS TO A UNIFORM DEPTH OF THREE INCHES. MULCH SHALL BE CLEAN COMPOSTED PINE BARK MULCH FREE OF FOREIGN MATERIAL AND LARGE PIECES OVER THREE INCHES LONG. DO NOT MULCH TREE AND SHRUB PLANTING PITS.

5. TOPSOIL SHALL CONSIST OF FERTILE FRIABLE NATURAL LOAM, CONTAINING A LIBERAL AMOUNT OF HUMUS AND SHALL BE SUBJECT TO INSPECTION AND APPROVAL. IT SHALL BE FREE OF ADMIXTURES OF SUBSOIL AND FREE OF CRAB GRASS, ROOTS, STICKS AND OTHER EXTRANEOUS MATTER, AND SHALL NOT BE USED FOR PLANTING OPERATIONS WHILE IN A FROZEN OR MUDDY CONDITIONS.

6. REPAIR ALL TURF AREAS BY SEEDING. SEEDING INSTALLATION SHALL BE EXECUTED ONLY AFTER ALL FINISH GRADING HAS BEEN COMPLETED. NO SEEDING WORK SHALL BE DONE PAST SEPTEMBER 15, UNLESS APPROVED BY THE OWNER'S REPRESENTATIVE.
SEED: SEDD MIX SHALL MATCH EXISTING TURF, OR BE A 50/50 MIX OF CERTIFIED IMPROVED BLEND OF BLUEGRASS AND CERTIFIED IMPROVED PERENNIAL RYE. MIX SHALL BE APPROVED BY THE OWNER'S REPRESENTATIVE PRIOR TO PLANTING. SEEDING SHALL BE APPLIED AT A MINIMUM RATE OF 120 POUNDS PER ACRE. FUTERRA BLANKET, OR EQUAL, SHALL BE USED FOR EROSION CONTROL MULCH WHERE NECESSARY IN LIEU OF HYDRO MULCH.

7. PLANT MATERIAL SHALL CONFORM WITH THE CURRENT AMERICAN STANDARDS FOR NURSERY STOCK, PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN FOR THAT TYPE OF TREE OR SHRUB AT THE TIME OF INSTALLATION.

8. ALL TREES SHALL BE GROWN IN A NURSERY LOCATED IN THE NORTHERN HALF OF THE STATE OF ILLINOIS AND LICENSED BY THE STATE OF ILLINOIS.

9. THE PLANTING SEASON SHALL BE APPROXIMATELY OCTOBER 15 TO DECEMBER 1, AND MARCH 15 TO MAY 1.

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A DAY 365 DAYS A YEAR

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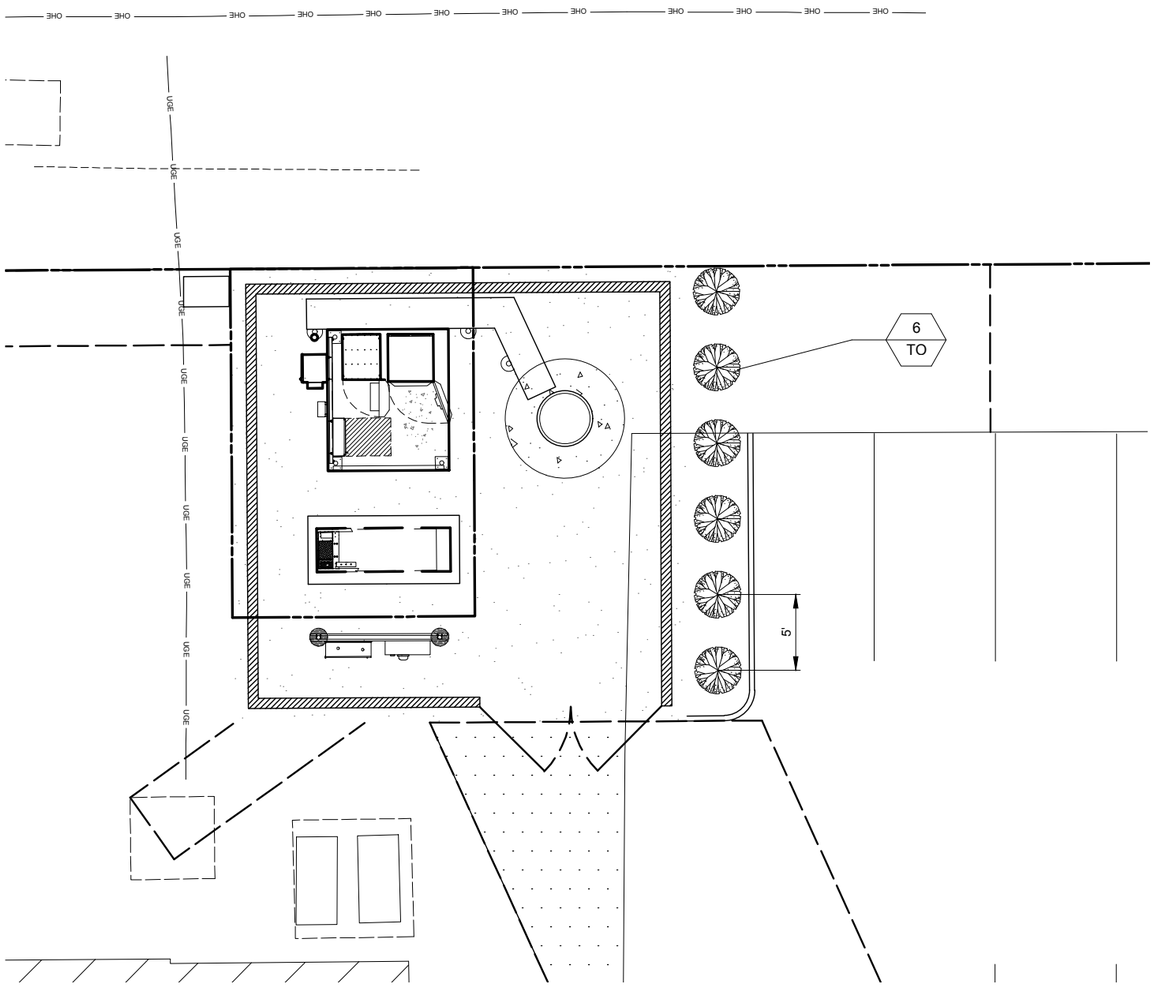

SCALE 1" = 5'

0 2.5' 5' 10'

22" x 34" IS FULL SCALE.
11" x 17" IS HALF SCALE

PLANT LIST

SYMBOL	BOTANICAL NAME	COMMON NAME	QUANTITY	SIZE	COMMENTS
TREES					
TO	THUJA OCCIDENTALIS	AMERICAN ARBORVITAE	6	5 FT. HT. MIN.	B & B (BALLED & BURLAPPED)

X — PLANT QUANTITY
XX — PLANT SYMBOL

verizon
1515 WOODFIELD ROAD,
SUITE 1400
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REVISIONS

NO.	DESCRIPTION	DATE	BY
2	ADDITION OF EGR	04/27/18	TJS
3	UPDATE SITE LAYOUT & NEW EGR	08/24/18	TJS
4	UPDATE WITH POWER COORDINATION	10/25/18	JJR
5	UPDATE PER VILLAGE COMMENTS	11/14/18	JTM
6	UPDATE PER FIBER COORDINATION	01/09/19	RA
7	UPDATE PER VILLAGE COMMENTS	01/14/19	JTM
8	UPDATE WITH NEW PAD LAYOUT	02/13/19	TJS

DRA IL-1010
LOC. # 455871

ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

DRAWN BY:	DMS
CHECKED BY:	TAZ
DATE:	12/07/17
PROJECT #:	33-2567

SHEET TITLE
LANDSCAPING PLAN

SHEET NUMBER
L-1

GENERAL

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

DIVISION 1: GENERAL REQUIREMENTS

SECTION 01700 - PROJECT CLOSEOUT

PART 1 - GENERAL

A. OBTAIN 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 SIMILAR FINAL RECORD INFORMATION.

C. COMPLETE FINAL CLEAN UP REQUIREMENTS. TOUCH UP AND OTHERWISE REPAIR AND RESTORE MARRED EXPOSED FINISHES.

PART 2 - FINAL CLEANING

1. 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 SMOOTH EVEN-TEXTURED SURFACE.
   b. REMOVE TOOLS, CONSTRUCTION EQUIPMENT, MACHINERY AND SURPLUS MATERIAL FROM THE SITE
   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.
   f. 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.
   g. LEAVE THE PROJECT CLEAN AND READY FOR OCCUPANCY
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 2: SITE WORK

SECTION 02200 - EARTHWORK AND DRAINAGE

PART 1 - GENERAL

1. WORK INCLUDED: SEE SITE PLAN.
2. SEQUENCING
   a. CONSTRUCT TEMPORARY CONSTRUCTION AREA ALONG EAST FENCE LINE.
   b. GRADE, SEED, FERTILIZE, AND MULCH ALL AREAS DISTURBED BY CONSTRUCTION (INCLUDING UNDERGROUND UTILITY EASEMENTS) IMMEDIATELY AFTER BRINGING LEASE AREA AND ACCESS DRIVE W/ TURNAROUND TO BASE COURSE ELEVATION, WATER TO ENSURE GROWTH

PART 2 - EXECUTION

1. INSPECTIONS: LOCAL BUILDING INSPECTORS SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS, UNLESS OTHERWISE SPECIFIED BY JURISDICTION.
2. PREPARATION
   a. CLEAR TREES, BRUSH AND DEBRIS FROM SITE AS REQUIRED.
   b. PRIOR TO OTHER EXCAVATION AND CONSTRUCTION, GRUB ORGANIC MATERIAL TO A MINIMUM OF SIX INCHES (6") BELOW GRADE.
   c. UNLESS OTHERWISE INSTRUCTED BY OWNER, TRANSPORT ALL REMOVED TREES, BRUSH AND DEBRIS FROM THE PROPERTY TO AN AUTHORIZED LANDFILL.
   d. PRIOR TO PLACEMENT OF FILL OR BASE MATERIALS, ROLL THE SOIL.
   e. WHERE UNSTABLE SOIL CONDITIONS ARE ENCOUNTERED, LINE THE AREAS WITH STABILIZER MAT PRIOR TO PLACEMENT OF FILL OR BASE MATERIAL.
3. INSTALLATION
   a. GRADE OR FILL THE SITE AS REQUIRED IN ORDER THAT UPON DISTRIBUTION OF SOILS, RESULTING FROM EXCAVATIONS, THE RESULTING GRADE WILL CORRESPOND WITH SAID SUB-BASE COURSE. ELEVATIONS ARE TO BE CALCULATED FROM BENCHMARK, FINISHED GRADES, OR INDICATED SLOPES.
   b. CLEAR EXCESS SPOILS, IF ANY, FROM JOB SITE AND DO NOT SPREAD BEYOND THE LIMITS OF PROJECT AREA UNLESS AUTHORIZED BY PROJECT MANAGER AND AGREED TO BY LANDOWNER.
   c. AVOID CREATING DEPRESSIONS WHERE WATER MAY POND.
   d. THE CONTRACT SHALL INCLUDE GRADING, BANKING, AND DITCHING, UNLESS OTHERWISE INDICATED.
   e. PLACE FILL OR STONE IN SIX INCH (6") MAXIMUM LIFTS, AND COMPACT BEFORE PLACING NEXT LIFT.
   f. THE TOP SURFACE COURSE, SHALL EXTEND A MINIMUM OF ONE FOOT (1') BEYOND THE SITE FENCE (UNLESS OTHERWISE NOTED) AND SHALL COVER THE AREA AS INDICATED.
   g. APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAP.
   h. UNDER NO CIRCUMSTANCES WILL DITCHES, SWALES, OR CULVERTS BE PLACED SO THAT THEY DIRECT WATER TOWARDS, OR PERMIT STANDING WATER IMMEDIATELY ADJACENT TO SHELTER OR EQUIPMENT. IF DESIGNS OR ELEVATIONS ARE IN CONFLICT WITH THIS, ADVISE CONSTRUCTION MANAGER IMMEDIATELY.
   i. APPLY SEED, FERTILIZER, AND STRAW COVER TO ALL OTHER DISTURBED AREAS, DITCHES, AND DRAINAGE SWALES, NOT OTHERWISE RIPRAP.
   j. UNDER NO CIRCUMSTANCES WILL DITCHES, SWALES, OR CULVERTS BE PLACED SO THAT THEY DIRECT WATER TOWARDS, OR PERMIT STANDING WATER IMMEDIATELY ADJACENT TO SHELTER OR EQUIPMENT. IF DESIGNS OR ELEVATIONS ARE IN CONFLICT WITH THIS, ADVISE CONSTRUCTION MANAGER IMMEDIATELY.
   k. IN DITCHES WITH SLOPES GREATER THAN 10% MOUND DIVERSIONARY HEADWALLS IN THE DITCH AT CULVERT ENTRANCES. POSITION THE HEADWALL AT AN ANGLE NO GREATER THAN THAT 60^ OFF THE DITCH LINE. RIPRAP THE UPSTREAM SIDE OF THE HEADWALL AS WELL AS THE DITCH FOR SIX FEET (6') ABOVE THE CULVERT ENTRANCE.
   l. APPLY SEED AND FERTILIZER TO SURFACE CONDITIONS WHICH WILL ENCOURAGE ROOTING. RAKE AREAS TO BE SEEDED TO EVEN THE SURFACE AND LOOSEN THE SOIL.
   m. SOW SEED IN TWO DIRECTIONS IN TWICE THE QUANTITY RECOMMENDED BY THE SEED PRODUCER.
   n. ENSURE GROWTH OF SEEDED AND LANDSCAPED AREAS, BY WATERING, UP TO THE POINT OF RELEASE FROM THE CONTRACT. CONTINUE TO REWORK THE BARE AREAS UNTIL COMPLETE COVERAGE IS OBTAINED.
4. FIELD QUALITY CONTROL: COMPACT SOILS TO MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D-1557. AREAS OF SETTLEMENT WILL BE EXCAVATED AND REFILLED AT CONTRACTOR'S EXPENSE. INDICATE PERCENTAGE OF COMPACTION ACHIEVED ON AS-BUILT DRAWINGS.
5. PROTECTION
   a. PROTECT SEEDED AREAS FROM EROSION BY SPREADING STRAW TO A UNIFORM LOOSE DEPTH OF 1-2 INCHES, STAKE AND TIE DOWN AS REQUIRED. USE OF EROSION CONTROL MESH OR MULCH NET WILL BE AN ACCEPTABLE ALTERNATIVE.
   b. PROTECT ALL EXPOSED AREAS AGAINST WASHOUTS AND SOIL EROSION. PLACE STRAW BALES AT THE INLET APPROACH TO ALL NEW OR EXISTING CULVERTS. WHERE THE SITE OR ROAD AREAS HAVE BEEN ELEVATED IMMEDIATELY ADJACENT TO THE RAIL LINE, STAKE EROSION CONTROL FABRIC FULL LENGTH IN THE SWALE TO PREVENT CONTAMINATION OF THE RAIL BALLAST. ALL EROSION CONTROL METHODS SHALL CONFORM TO APPLICABLE BUILDING CODE REQUIREMENTS.

SECTION 02830 - FENCING AND GATE(S)

PART 1 - GENERAL

1. WORK INCLUDED - SEE PLAN FOR SITE AND LOCATION OF FENCE
2. QUALITY ASSURANCE
   a. ALL STEEL MATERIALS UTILIZED IN CONJUNCTION WITH THIS SPECIFICATION WILL BE GALVANIZED OR STAINLESS STEEL. WEIGHT OF ZINC COATING ON THE FABRIC SHALL NOT BE LESS THAN 12 OUNCES PER SQUARE FOOT OF MATERIAL COVERED. POSTS SHALL BE HOT-DIPPED IN GRADE "E" ZINC, 18 OUNCES PER SQUARE FOOT.
3. SEQUENCING
   a. IF THE SITE AREA HAS BEEN BROUGHT UP TO SURFACE COURSE ELEVATION (PRIOR TO THE FENCE CONSTRUCTION), FENCE POST EXCAVATION SPOILS MUST BE CONTROLLED TO PRECLUDE CONTAMINATION OF SAID SURFACE COURSE.
4. SUBMITTALS
   a. MANUFACTURER'S DESCRIPTIVE LITERATURE.
   b. CERTIFICATE OR STATEMENT OF COMPLIANCE WITH THE SPECIFICATIONS.

PART 2 - PRODUCTS

1. FENCE MATERIAL
   a. ALL FABRIC WIRE, RAILS, HARDWARE, AND OTHER STEEL MATERIALS SHALL BE HOT-DIPPED GALVANIZED.
   b. FABRIC SHALL BE SEVEN-FOOT (7') HIGH OR TO MATCH EXISTING FENCE TWO-INCH CHAIN LINK MESH OF NO. 9 GAUGE (0.148") WIRE. THE FABRIC SHALL HAVE A KNUCKLED FINISH FOR THE TOP SELVAGES. FABRIC SHALL CONFORM TO THE SPECIFICATIONS OF ASTM A-392 CLASS 1.
   c. ALL POSTS SHALL BE SCHEDULE - 40 MECHANICAL SERVICE PIPE AND SHALL BE TYPE 1 ASTM A-128 AND OF THE FOLLOWING DIAMETER
      i. LINE 2" SCHEDULE 40 (2 3/8" O.D.)
      ii. CORNER 3" SCHEDULE 40 (3 1/2" O.D.)
      iii. GATE 3" SCHEDULE 40 (3 1/2" O.D.)
   d. ALL TOP AND BRACE RAILS SHALL BE 1 DIAMETER SCHEDULE - 40 MECHANICAL - SERVICE PIPE.
   e. GATE FRAMES AND BRACES SHALL BE 1.90 INCH DIAMETER SCHEDULE 40 MECHANICAL - SERVICE PIPE. FRAMES SHALL HAVE WELDED CORNERS.
   f. GATE FRAMES SHALL HAVE A FULL-HEIGHT VERTICAL BRACE, AND A FULL-WIDTH HORIZONTAL BRACE, SECURED IN PLACE BY USE OF GATE BRACE CLAMPS.
   g. GATE HINGES SHALL BE MERCHANTS METAL MODEL 64386 HINGE ADAPTER WITH MODEL 6409, 188-DEGREE ATTACHMENT.
   h. A NO. 7 GAUGE ZINC COATED TENSION WIRE SHALL BE USED AT THE BOTTOM OF THE FABRIC, TERMINATED WITH BAND CLIPS AT CORNER AND GATE POSTS.
   i. A SIX-INCH BY 1/2-INCH DIAMETER EYEBOLT TO HOLD TENSION WIRE SHALL BE PLACED AT LINE POSTS.
   j. STRETCHER BARS SHALL BE 3/16-INCH BY 3/4-INCH OR HAVE EQUIVALENT CROSS-SECTIONAL AREA.
   k. ALL CORNER GATE AND PANELS SHALL HAVE A 3/8-INCH TRUSS ROD WITH TURNBUCKLES.
   l. ALL POST EXCEPT GATE POSTS SHALL HAVE A COMBINATION CAP AND BARBED WIRE SUPPORTING ARM. GATE POSTS SHALL HAVE A DOME CAP.
   m. OTHER HARDWARE INCLUDES BUT MAY NOT BE LIMITED TO TIE CLIPS, BAND CLIPS, AND TENSION BAND CLIPS.
   n. ALL CAPS SHALL BE MALLEABLE IRON, DOME OR ACORN SHAPED AS REQUIRED BY PIPE SIZE.

PART 3 - EXECUTION

1. INSPECTION: TO CONFIRM PROPER DEPTH AND DIAMETER OF POST HOLE EXCAVATIONS. ALL POST HOLES WILL BE EXCAVATED AS PER CONSTRUCTION DOCUMENTS,
2. INSTALLATION
   a. FOUNDATIONS SHALL HAVE A MINIMUM SIX INCH (6") CONCRETE COVER UNDER POST.
   b. ALL FENCE POSTS SHALL BE VERTICALLY PLUMB; ON QUARTER INCH (1/4")
   c. AT CORNER POSTS, GATE POSTS, AND SIDES OF GATE FRAME, FABRIC SHALL BE ATTACHED WITH STRETCHER AND TENSION BAND-CLIPS AT FIFTEEN (15) INCH INTERVALS.
   d. AT LINE POSTS, FABRIC SHALL BE ATTACHED WITH BAND-CLIPS AT FIFTEEN (15) INCH INTERVALS.
   e. FABRIC SHALL BE ATTACHED TO BRACE RAILS, TENSION WIRE AND TRUSS RODS WITH TIE-CLIPS AT TWO FOOT (2') INTERVALS.
   f. A MAXIMUM GAP OF ONE INCH WILL BE PERMITTED BETWEEN TIE CHAIN LINE FABRIC AND THE FINAL GRADE.
   g. GATE SHALL BE INSTALLED SO LOCKS ARE ACCESSIBLE FROM BOTH SIDES.
   h. GATE HINGE BOLTS SHALL HAVE THEIR THREADS PEENED OR WELDED TO PREVENT UNAUTHORIZED REMOVAL.
   i. CONCRETE TO BE A MINIMUM OF 4,000 PSI AT 7 DAYS. CEMENT SHALL EXCEED ASTM C150, TYPE IIIA.
3. PROTECTION: UPON COMPLETION OF ERECTION, INSPECT FENCE MATERIAL AND PAINT FIELD CUTS OR GALVANIZING BREAKS WITH ZINC-BASED PAINT, COLOR TO MATCH THE GALVANIZED METAL. APPLICABLE STANDARDS:

ASTM-A120	SPECIFICATION FOR PIPE, STEEL, BLACK AND HOT-DIPPED ZINC COATED (GALVANIZED) WELDED AND SEAMLESS, FOR ORDINARY USES.
ASTM-A123	ZINC (HOT-DIP GALVANIZED) COATING ON IRON AND STEEL PRODUCTS.
ASTM-A153	STANDARD SPECIFICATION FOR ZINC COATING (HOT-DIP) ON IRON AND STEEL HARDWARE.
ASTM-A392	SPECIFICATION FOR ZINC-COATED STEEL CHAIN LINK FENCE FABRIC.
ASTM-A491	SPECIFICATION FOR ALUMINUM-COATED STEEL CHAIN LINK FENCE FABRIC
ASTM-A525	STANDARD SPECIFICATION FOR STEEL SHEET ZINC COATED (GALVANIZED) BY THE HOT-DIPPED PROCESS.
ASTM-A570	SPECIFICATION FOR HOT-ROLLED CARBON STEEL SHEET AND STRIP. STRUCTURAL QUALITY.

A. FEDERAL SPECIFICATION RR-F-191-FENCING, WIRE AND POST METAL (AND GATES, CHAIN LINK FENCE FABRIC, AND ACCESSORIES)

DIVISION 3: CONCRETE

SECTION 03000 - BASIC CONCRETE MATERIALS AND METHODS

PART 1 - GENERAL

1. WORK INCLUDED: FORMWORK, REINFORCEMENT, ACCESSORIES, CAST-IN-PLACE CONCRETE, FINISHING, AND CURING.
2. INSPECTIONS
   a. CONTRACTOR IS RESPONSIBLE FOR SCHEDULING BUILDING DEPARTMENT INSPECTIONS REQUIRED FOR HIS SCOPE OF WORK.
   b. ALL REINFORCING STEEL SHALL BE INSPECTED AND APPROVED BY THE LESSEE'S CONSTRUCTION MANAGER PRIOR TO PLACEMENT OF CONCRETE.
   c. THE LESSEE'S CONSTRUCTION MANAGER SHALL BE NOTIFIED NO LESS THAN 48 HOURS IN ADVANCE OF CONCRETE POURS.
3. QUALITY ASSURANCE
   a. CONSTRUCT AND ERECT CONCRETE FORMWORK IN ACCORDANCE WITH ACI 301 AND ASTM 318.
   b. PERFORM CONCRETE REINFORCING WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ASTM A184.
   c. PERFORM CAST-IN-PLACE CONCRETE WORK IN ACCORDANCE WITH ACI 301, ACI 318, AND ACI 117-90.
   d. OPEN FOUNDATION TRENCHES SHALL BE INSPECTED BY MES PRIOR TO CONCRETE INSTALLATION.
4. SUBMITTALS: SUBMIT CONCRETE MIX AND REINFORCING STEEL SHOP DRAWINGS FOR APPROVAL BY LESSEE CONSTRUCTION MANAGER/ENGINEER. THE SHOP DRAWING SHALL BE SUBMITTED IN THE FORM OF TWO (2) CONCRETE MIX DESIGN INFORMATION SHEETS AND TWO (2) BLUELINE DRAWINGS FOR REINFORCING STEEL.

PART 2 - PRODUCTS

1. REINFORCEMENT MATERIALS
   a. REINFORCEMENT STEEL, ASTM A615, 60 ksi YIELD GRADE, DEFORMED BILLET STEEL BARS, PLAIN FINISH.
   b. WELDED STEEL WIRE FABRIC ASTM A185 PLAIN TYPE IN FLAT SHEETS, PLAIN FINISH.
   c. CHAIRS, BOLSTERS, BAR SUPPORTS, SPACERS. SIZED AND SHAPED FOR SUPPORTS OR REINFORCING.
   d. FABRICATE CONCRETE REINFORCING IN ACCORDANCE WITH ACI 315, ACI 318, ASTM A184.
2. CONCRETE MATERIALS
   a. CEMENT: ASTM C150, PORTLAND TYPE
   b. FINE AND COURSE AGGREGATES: ASTM C33 - MAXIMUM SIZE OF CONCRETE AGGREGATE SHALL NOT EXCEED; ONE INCH (1") SIZE SUITABLE FOR INSTALLATION METHOD UTILIZED OR ONE-THIRD (1/3) CLEAR DISTANCE BEHIND OR BETWEEN REINFORCING.
   c. WATER: CLEAN AND NOT DETRIMENTAL TO CONCRETE
   d. AIR ENTRAINING ADMIXTURE: ASTM C260
   e. BONDING AGENT: LATEX EMULSION FOR BONDING NEW TO OLD CONCRETE AS MANUFACTURED BY DAYTON SUPERIOR.
   f. NON-SHRINK GROUT: PREMIXED COMPOUND CONSISTING OF NONMETALLIC AGGREGATE. CEMENT, WATER REDUCING AND PLASTICISING AGENTS.
3. CONCRETE MIX
   a. CONCRETE MATERIALS SHALL CONFORM TO THE APPROPRIATE A.C.I. REQUIREMENTS FOR EXPOSED STRUCTURAL CONCRETE.
   b. MIX AND DELIVER CONCRETE IN ACCORDANCE WITH ASTM C94, ALT. 3.
   c. PROPORTIONS OF CONCRETE MATERIALS SHALL BE SUITABLE FOR THE INSTALLATION METHOD UTILIZED AND SHALL RESULT IN DURABLE CONCRETE FOR LOCAL ANTICIPATED AGGRESSIVE ACTIONS. THE DURABILITY REQUIREMENTS OF ACI 318 CHAPTER 4 SHALL BE SATISFIED BASED ON THE CONDITIONS EXPECTED AT THE SITE. PROVIDE CONCRETE AS FOLLOWS:
      i. COMPRESSIVE STRENGTH: 4000 psi AT 7 DAYS. SEE SHEET 2-1 FOR CAISSON CONCRETE COMPRESSIVE STRENGTH.
      ii. SLUMP: 3 INCHES

PART 3 - EXECUTION

1. INSERTS, EMBEDDED COMPONENTS AND OPENINGS
   a. THE CONSTRACTOR SHALL COORDINATE AND CROSS-CHECK ARCHITECTURAL, BUILDING & ELECTRICAL DRAWINGS FOR OPENINGS, SLEEVES, ANCHORS, HANGERS, AND OTHER ITEMS RELATED TO CONCRETE WORK AND SHALL ASSUME FULL RESPONSIBILITY FOR THE PROPER LOCATION BEFORE PLACING CONCRETE.
   b. PROVIDE FORMED OPENINGS WHERE REQUIRED FOR WORK TO BE EMBEDDED IN AND PASSING THROUGH CONCRETE MEMBERS.
   c. COORDINATE WORK OF OTHER SECTIONS IN FORMING AND SETTING OPENING, SLOTS, RECESSES, CHASES, SLEEVES, BOLTS, ANCHORS, AND OTHER INSERTS.
   d. INSTALL CONRETE ACCESSORIES STRAIGHT, LEVEL AND PLUMB.
2. REINFORCEMENT PLACEMENT
   a. PLACEMENT REINFORCEMENT, SUPPORTED AND SECURED AGAINST DISPLACEMENT.
   b. ENSURE REINFORCING IS CLEAN, FREE OF LOOSE SCALE, DIRT, OR OTHER FOREIGN COATINGS.
   c. WELDING IS PROHIBITED ON REINFORCING STEEL AND EMBEDMENTS.
   d. MINIMUM CONCRETE COVER FOR REINFORCING SHALL BE THREE INCHES (3") UNLESS OTHERWISE NOTED.
   e. CONCRETE COVER FROM TOP OF FOUNDATION TO ENDS OF VERTICAL REINFORCEMENT SHALL NOT EXCEED THREE INCHES (3") NOR BE LESS THAN TWO INCHES (2").
3. PLACING CONCRETE
   a. VIBRATE ALL CONCRETE.
   b. ALL CONCRETE WORK SHALL ADHERE TO THE LATEST A.C.I. STANDARDS FOR WINTER POURING AND CURING PROCECURES IF SEASONAL CONDITIONS APPLY.
4. CURING
   a. AFTER PLACEMENT, PROTECT CONCRETE FROM PREMATURE DRYING.
   b. MAINTAIN CONCRETE WITH MINIMAL MOISTURE LOSS AT RELATIVELY CONSTANT TEMPERATURE FOR A PERIOD NECESSARY FOR HYDRATION OF CEMENT AND HARDENING OF CONCRETE.
5. PROVIDE HAND RUBBED SMOOTH FINISH TO ALL EXPOSED VERTICAL FORMED CONCRETE SURFACES.
6. FIELD QUALITY CONTROL
   a. SUBMIT THREE (3) CONCRETE TEST CYLINDERS - TAKEN FOR EVERY 15 CUBIC YARD OR LESS. SUBMIT CONCRETE TESTS TO THE PROJECT MANAGER IN ACCORDANCE WITH ASTM, C-31 AND C-39.
   b. SUBMIT ONE (1) ADDITIONAL TEST CYLINDER - TAKEN DURING COLD WEATHER POURS, AND CURED ON JOB SITE UNDER SAME CONDITIONS AS CONCRETE IT REPRESENTS.
   c. SUBMIT ONE (1) SLUMP TEST - TAKEN FOR EACH SET OF TEST CYLINDERS TAKEN.
7. DEFECTIVE CONCRETE: MODIFY OR REPLACE CONCRETE NOT CONFORMING TO REQUIRED LINES, DETAILS OR ELEVATIONS AT COST OF GC, AS DIRECTED BY ARCHITECT/ENGINEER.

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REVISIONS

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DRA IL-1010
LOC. # 455871

ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

DRAWN BY:	DMS
CHECKED BY:	TAZ
DATE:	12/07/17
PROJECT #:	33-2567

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-1

DIVISION 5: METALS

PART1 1 - GENERAL

1. SECTION INCLUDES:

   STRUCTURAL STEEL FRAMING MEMBERS, BASE PLATES, PLATES, BARS, AND GROUTING UNDER BASE PLATES.

2. SUBMITTALS:

   SHOP DRAWINGS: INDICATE SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, OPENINGS, CONNECTIONS, CAMBERS, LOADS, AND WELDED SECTIONS.

3. QUALITY ASSURANCE

   A. 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

   B. STRUCTURAL TUBING: ASTM A500, GRADE B

   C. PIPE: ASTM A53, TYPE E OR S, GRADE B

   D. BOLTS, NUTS, AND WASHERS: ASTM A325

   E. ANCHOR BOLTS: ASTM A307

   F. WELDING MATERIALS: AWS 01.1, TYPE REQUIRED FOR MATERIALS BEING WELDED

   G. GROUT: NON - SHRINK TYPE, PREMIXED
   COMPOUND CONSISTING OF NONMETALLIC AGGREGATE, CEMENT, WATER REDUCING AND PLASTICIZING ADDITIVES, CAPABLE OF DEVELOPING A MINIMUM COMPRESSIVE STRENGTH OF 7000 PSI AT 28 DAYS.

   H. SHOP AND TOUCH-UP PRIMER: SSPC 15, TYPE 1, RED OXIDE

   I. TOUCH-UP PRIMER
   FOR GALV. SURFACES ZINC RICH TYPE

2. FABRICATION:

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

3. FINISH:

   A. PREPARE STRUCTURAL COMPONENT SURFACES IN ACCORDANCEWITH SSPC SP-1 TO SP-10 PROCEDURES.

   B. STRUCTURAL STEEL MEMBERS SHALL BE HOT DIPPED GALVANIZED.

PART 3 - EXECUTION

1. EXAMINATION AND PREPARATION:

   VERIFY THAT THE FIELD CONDITIONS ARE ACCEPTABLE.

2. ERECTION:

   A. 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 OF THE ARCHITECT/ENGINEER.

   D. AFTER ERECTION, TOUCH-UP WELDS, ABRASIONS, AND SURFACES NOT SHOP PRMED OR GALVANIZED WITH TOUCH-UP PRMERS AS SPECIFIED UNDER SECTION 05000, 0METALS, 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 TOURQUING

DIVISION 16: ELECTRICAL

SECTION 16050 - BASIC ELECTRICAL MATERIALS AND METHODS

1. 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 (O.S.H.A).
4. 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 MANUFACTURER 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.
6. PROVIDE PROJECT MANAGER WITH ONE SET OF COMPLETE ELECTRICAL "AS INSTALLED" DRAWINGS AT THE COMPLETION OF TH JOB, SHOWING ACTUAL DIMENSIONS, ROUTINGS, AND CIRCUITS.
7. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN INTERRUPTING SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
8. 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 COURSE OF THE ELECTRICAL WORK.
10. 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 1640 - SERVICE AND DISTRIBUTION

1. 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 "UL" APPROVED.
3. 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.
4. CONDUIT:

   A. 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 ½ LAPPED WRAPPED WITH HUNTS WRAP PROCESS NO. 3.

   B. ELECTRICAL METALLIC TUBING SHALL HAVE U.L. LABEL, FITTING SHALL BE GLAND RING COMPRESSION TYPE.

   C. 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.

   D. 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 J.U.L.I.E. AT 1-800-892-0123 OR OTHER SUCH NOTIFYING AGENCY FORTY-EIGHT (48) 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.
6. 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.
7. 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

1. SURFACE PREPARATION:

   ALL CONNECTIONS SHALL BE MADE TO BARE METAL. ALL PAINTS

   SURFACES SHALL BE FIELD INSPECTED AND MODIFIED TO ENSURE PROPER CONTACT. NO WASHERS ARE ALLOWED BETWEEN THE ITEMS BEING GROUND. ALL CONNECTIONS ARE TO HAVE A NO-OXIDIZING GENT APPLIED PRIOR TO INSTALLATION.

2. 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.

3. SLEEVES:

   ALL GROUNDING CONDUCTORS SHALL RUN THROUGH PVC SLEEVES WHEREVER CONDUCTORS RUN THROUGH WALLS, FLOORS OR CEILINGS. IF CONDUCTORS MUST RUN THROUGH EMT, BOTH ENDS OF CONDUIT SHALL BE GROUNDED. SEAL BOTH ENDS OF CONDUIT WITH SILICONE CAULK.

   B. GROUND BARS

1. ALL GROUND BARS SHALL BE ONE FORTH INCH (1/4" THICK TINNED COPPER PLATE AND OF AND OF SIZE INDICATED ON DRAWINGS.
2. ALL CONNECTIONS TO THE GROUND BAR SHALL OBSERVE THE FOLLOWING SEQUENCE:

   A. BOLT-HEAD

   B. 2-HOLE LUG

   C. TINNED COPPER BUSS BAR

   D. STAR WASHER

   E. NUT

   C. EXTERNAL CONNECTIONS

1. 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.
2. ALL ABOVE GRADE GROUNDING AND BONDING CONDUCTORS SHALL BE CONNECTED BY TWO HOLE CRIMP TYPE (COMPRESSION) CONNECTIONS (EXCEPT FOR THE ACEG AND GROUND ROD) MECHANICAL CONNECTIONS, FITTINGS OR CONNECTIONS THAT DEPEND SOLELY ON SOLDIER 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.

   D. GROUND RODS

   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.

   E. GROUND RODS

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

   F. LUGS

1. 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

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

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:

GROUNDING CONDUCTOR SIZE	MINIMUM BENDING RADIUS TO INSIDE EDGE
NO. 6 AWG TO NO. 4 AWG	6 INCHES
NO. 2 AWG TO NO. 1/0 AWG	8 INCHES
NO. 2/0 AWG TO 4/0 MCM	12 INCHES
250 MCM TO 750 MCM	24 INCHES

   G. GROUND RING

1. THE EXTERNAL GROUND RING ENCIRCLING THE TOWER (IF APPLICABLE) AND BETWEEN BETWEEN THE EQUIPMENT SHELTER PLATFORM ANCHORS SHALL BE MINIMUM NO. 2 A.W.G SOLID TINNED BARE COPPER CONDUCTOR IN DIRECT CONTACT WITH THE EARTH AT THE DEPTH INDICATED ON THE DRAWINGS. CONDUCTOR BENDS SHALL HAVE A MINIMUM BENDING RADIUS OF EIGHT INCHES (8").

2. ALL EXTERNAL GROUND RINGS ARE TO BE JOINED TOGETHER AND ALL CONNECTIONS MUST BE CADWELDED. NO LUNGS OR CLAMPS WILL BE ACCEPTED.

   H. FENCE/GATE

   GROUND EACH GATE POST, CORNER POST AND GATE AS INDICATED ON DRAWING GROUND CONNECTIONS TO FENCE POST AND ALL OTHER CONNECTIONS FOR THE GROUND GRID SYSTEM SHALL BE MADE BY EXOTHERMIC WELD PROCESS, AND INSTALLED PER MANUFACTURER'S RECOMMENDATIONS AND PROCEDURES, AND SPRAYED WITH COLD-GALVANIZED PAINT.

3. I.E.E.E. FALL POTENTIAL TESTS

   A. FOR RAW LAND SITE

1. GROUND TESTS SHALL BE PERFORMED AS INDICATED ON DRAWINGS. A BIDDLE GROUND OHMER OR THE METHOD OF USING TWO AUXILIARY GROUND RODS (AS DESCRIBED IN I.E.E.E. STANDARDS NO. 81-1983, PART 1) MAY BE USED. THE I.E.E.E. METHOD REQUIRES THE USE OF AN A.C. TEST CURRENT. THE AUXILIARY TEST RODS MUST BE SUFFICIENTLY FAR AWAY FROM THE ROD UNDER TEST SO THAT THE REGIONS IN WHICH THEIR RESISTANCE IS LOCALIZED DO NOT OVERLAP. THE TEST POINT WILL BE GROUND ROD AND WILL CONSIST OF THE THREE POINT FALL OF POTENTIAL MEGGER TEST METHOD, USING THE BIDDLE NULL-BALANCE EARTH TESTER (MEGGER #250220-2 OR EQUIVALENT)
2. CONTRACTOR TO CONDUCT GROUND RESISTANCE TEST IN THE FORMAT AS FOLLOWS:

   B. EQUIPMENT PAD

1. FIRST TEST - SHALL BE WITH FOUR GROUND RODS INSTALLED, ONE AT EACH CORNER OF THE PAD BUT NOT CONNECTED TO THE MAIN GROUNDING BUS. FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL FOUR GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS INDIVIDUALLY TESTED. IF ANY INDIVIDUAL ROD TESTS 35 OHMS OR MORE, THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL FOUR RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
2. SECOND TEST- SHALL BE WITH THE GROUND RODS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST TEN (10) DAYS. THE MAXIMUM ALLOWABLE READING IS 5 OHMS TO GROUND. IF THE RESISTANCE OF THE ENTIRE SYSTEM EXCEEDS 5 OHMS, NOTIFY THE CONTRACTOR AND OWNER'S REPRESENTATIVE SO THAT ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.

   C. TOWER

1. FIRST TEST - SHALL BE WITH THREE GROUND RODS INSTALLED (MINIMUM), EQUALLY SPACED AROUND THE TOWER FOUNDATION, BUT NOT CONNECTED TO THE SHELTER PAD EXTERNAL GROUND RING. FURNISH WIRE TO CONNECT (TEMPORARY CLAMP) ALL THREE GROUND RODS TOGETHER TO MAKE A SYSTEM TEST AFTER EACH ROD IS INDIVIDUALLY TESTED. IF ANY INDIVIDUAL ROD TESTS 25 OHMS OR MORE, NOTIFY THE CONTRACTOR AND OWNER'S REPRESENTATIVE SO THAT THE ROD CAN BE DRIVEN DEEPER UNTIL ALL THREE (3) RODS HAVE A RESISTANCE OF 10 OHMS OR LESS ON A DRY DAY.
2. SECOND TEST- SHALL BE WITH THE GROUND RODS CONNECTED, WITH DRY SOIL AND WHEN NO STANDING WATER HAS BEEN PRESENT FOR THE PAST (10) DAYS, THE MAXIMUM ALLOWABLE READING IS 5 OHMS THE ELECTRICAL CONTRACTOR AND OWNER'S REPRESENTATIVE SHOULD BE NOTIFIED SO THAT EITHER ADDITIONAL AND/OR DEEPER RODS CAN BE INSTALLED.

   D. EQUIPMENT PAD AND TOWER

1. AFTER THE EQUIPMENT PAD AND TOWER GROUND RESISTANCE TEST IS COMPLETED, CONTRACTOR SHALL TIE EQUIPMENT PAD EXTERNAL GROUND RING AND TOWER EXTERNAL GROUND RING TOGETHER. AFTER FIRST AND SECOND TEST ALL CONNECTIONS MUST BE MADE USING EXOTHERMIC WELD. NO LUGS OR CLAMPS WILL BE ACCEPTED.
2. AFTER ALL THE EXTERNAL GROUND RINGS ARE TIED TOGETHER, COMPETE A MEGGER CHECKER OF THE GROUND SYSTEM SHOULD BE DONE. THE MAXIMUM ALLOWABLE LEADING IS 5 OHMS TO GROUND.

10. GROUNDING RESISTANCE TEST REPORT

UPON COMPLETION OF THE TESTING FOR EACH SITE, A TEST REPORT SHOWING RESISTANCE IN OHMS WITH AUXILIARY POTENTIAL ELECTRODES AT 5 FEET AND 10 FEET INTERVALS UNTIL THE AVERAGE RESISTANCE STARTS INCREASING AND ALSO NOTE THAT 10-15 PHOTOS MUST BE TAKEN TO PROOF ENTIRE EXTERNAL GROUND RING SYSTEM BEFORE BACKFILL. TWO (2) SETS OF TEST DOCUMENTS AREA OF THE INDEPENDENT TESTING SERVICE TO BE BOUND AND SUBMITTED WITHIN ONE (1) WEEK OF WORK COMPLETION.

SECTION 16503 - POLES, POSTS, AND STANDARDS
(SINGLE MAST AND SELF SUPPORTING TOWERS)

1. GENERAL

   A. LIGHTNING ROD AND EXTENSION PIPE INCLUDING ALL APPURTENANCES, TO BE FURNISHED BY OWNER, IF REQUIRED

   B. PROVIDE TEMPORARY LIGHTING FOR TOWER AS PER FAA REGULATIONS DURING CONSTRUCTION, IF REQUIRED.

   C. GROUNDING:

   GROUND TOWER WITH A MINIMUM OF #2 AWG TINNED SOLID BARE COPPER CONDUCTOR CADWELDED TO TOWER BASE PLATE. TWO (2) GROUNDING LEADS PER TOWER BASE PLATE.

NO EXOTHERMIC WELDS SHALL BE ATTACHED DIRECTLY TO THE FIELD LIGHT REPLACEMENT POLE.

SECTION 16745- TELECOMMUNICATIONS WIRING COMPONENT
(COAXIAL ANTENNA CABLE)

1. GENERAL

   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 ITEMS). 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'-0" O.C. WEATHERPROOF ALL CONNECTORS BETWEEN THE ANTENNA AND EQUIPMENT PER MANUFACTURER'S REQUIREMENTS. TERMINATE ALL COAXIAL CABLE THREE FEET (3') IN EXCESS OF EQUIPMENT LOCATION UNLESS OTHERWISE STATED.
2. 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:

1. FIRST LOCATION IS AT THE END OF THE COAX NEAREST THE ANTENNA (WHERE THE COAXIAL CABLE AND JUMPER ARE CONNECTED).
2. SECOND LOCATION IS INSIDE THE EQUIPMENT SHELTER NEAR THE WAVEGUIDE ENTRY PORT.

   b. USE ANDREW CABLE TIES (PT. # 7290) 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.

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ARLINGTON HEIGHTS
IL 60004

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PROJECT #:	33-2567

SHEET TITLE

SPECIFICATIONS

SHEET NUMBER

SP-2

1 EXISTING ACCESS DRIVE
SCALE: N.T.S.

2 EXISTING POWER POLE
SCALE: N.T.S.

3 PROPOSED UTILITY ROUTE/ACCESS ROAD
SCALE: N.T.S.

4 EXISTING POWER POLE
SCALE: N.T.S.

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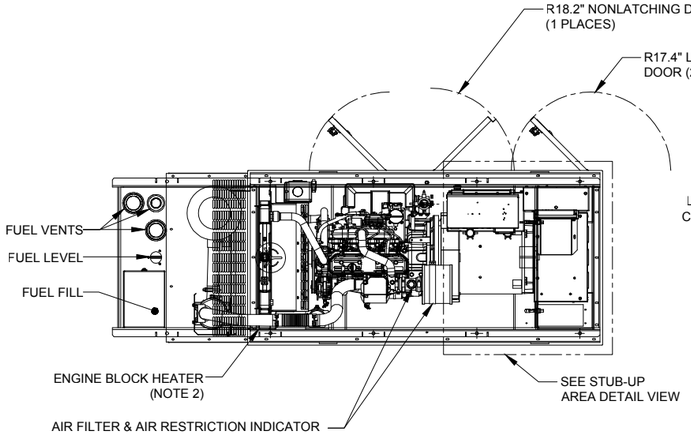
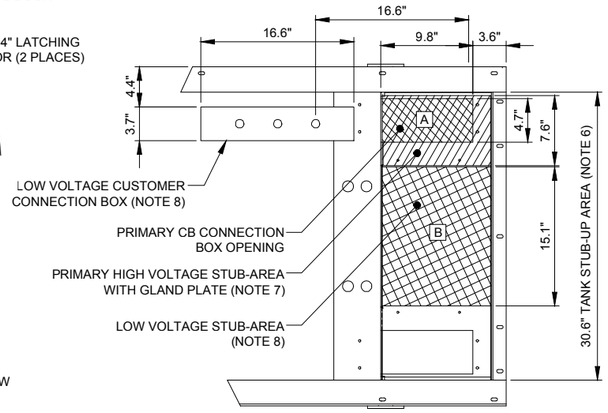
EXISTING SITE PHOTOS

SHEET NUMBER
P-1



TOP OR PLAN VIEW

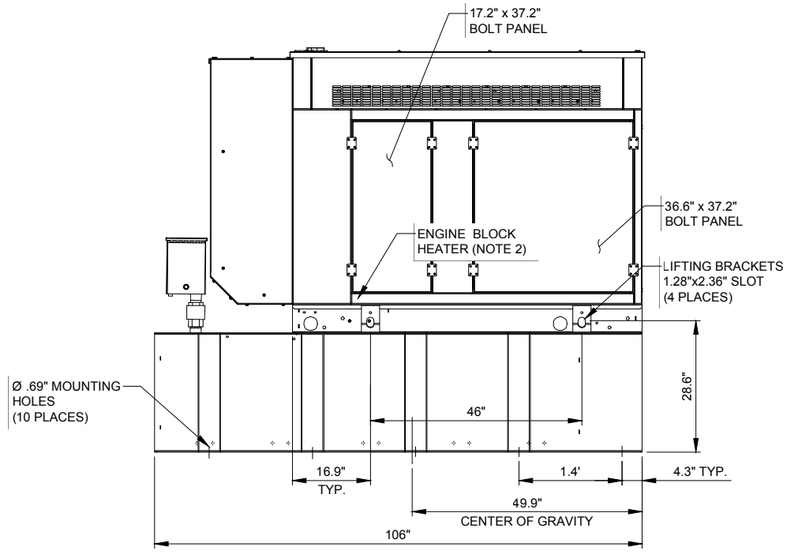


STUB-UP AREA DETAILED VIEW

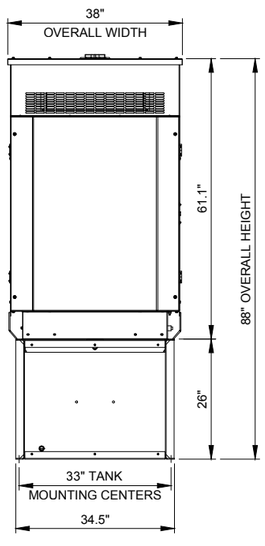
RECOMMENDED ELECTRICAL STUB-UPS (SEE DETAILED VIEW & TOP VIEW)	
DESCRIPTION	INSIDE BASE
(HIGH VOLTAGE STUB UP) 1. AC LOAD LEAD CONDUIT AREA. 2. 120/240 VAC FROM UTILITY FOR OPTIONAL LOADS. (GLAND PLATE INCLUDED)	A
LOW VOLTAGE STUB UP 1. TRANSFER SWITCH/ COMMUNICATIONS CONDUITS. COMMUNICATIONS AND 2-WIRE START MUST NOT BE RUN IN CONDUIT W/ AC WIRING. (SEE NOTE 8)	B

NOTES

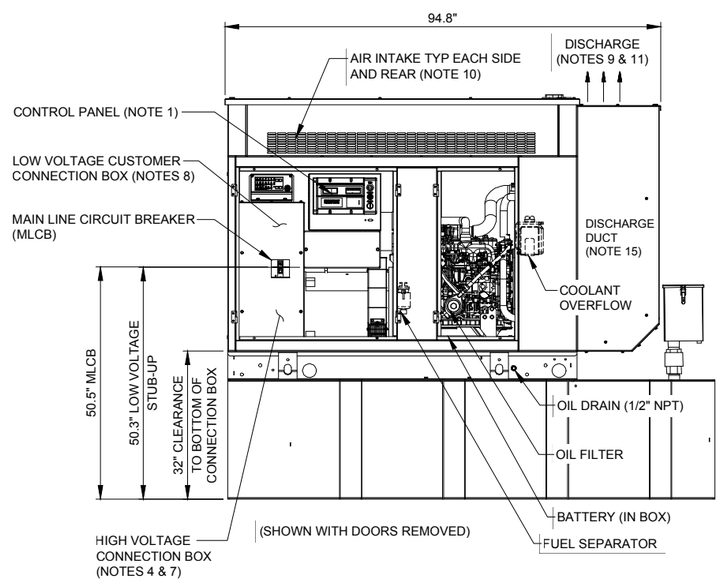
1. CONTROL PANEL INCLUDES BATTERY CHARGER WITH THREE PRONG CORD.
2. 1500W 120VAC ENGINE BLOCK HEATER WITH THREE PRONG CORD.
3. 12 VOLT NEGATIVE GROUND SYSTEM.
4. GENERATOR MUST BE GROUNDED.
5. CENTER OF GRAVITY & WEIGHT MAY BE SHIFTED SLIGHTLY DUE TO UNIT OPTION.
6. STUB-UPS: BASE TANK REQUIRES ALL STUB-UPS TO BE IN THE REAR TANK STUB UP AREA.
7. HIGH VOLTAGE STUB-UP AREA INCLUDES THE AC LOAD LEAD CONNECTION TO THE MAIN LINE CIRCUIT BREAKER, THE NEUTRAL CONNECTION, AND AUXILIARY 120/240V CONNECTION.
8. CONNECTION POINTS FOR CONTROL WIRES. BOTTOM OF LOW VOLTAGE CUSTOMER CONNECTION BOX HAS KNOCKOUTS FOR 1/2" AND 3/4" CONDUIT FITTINGS.
9. MUST ALLOW FREE FLOW OF DISCHARGE AIR AND EXHAUST. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
10. MUST ALLOW FREE FLOW OF INTAKE AIR. SEE SPEC SHEET FOR MINIMUM AIR FLOW AND MAXIMUM RESTRICTION REQUIREMENTS.
11. GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE AIR FROM THE RADIATOR IS NOT RECIRCULATED.
12. IT IS THE RESPONSIBILITY OF THE INSTALLATION TECHNICIAN TO ENSURE THAT THE GENERATOR INSTALLATION COMPLIES WITH ALL APPLICABLE CODES, STANDARDS, AND REGULATIONS.
13. 132 GALLON USEABLE CAPACITY BASETANK IS INCLUDED WITH GENERATOR.
14. UNIT IS SHIPPED WITH FUEL SUPPLY AND RETURN LINES DISCONNECTED AND PLUGGED BETWEEN ENGINE AND FUEL TANK. THIS HAS BEEN DONE TO FACILITATE PRESSURE TESTING OF THE TANK IN THE FIELD. FOR INFORMATION REGARDING CONNECTING THE FIELD TANK FIELD TESTING PROCEDURE (0E5082) SUPPLIED IN THE TANK LOOSE VENTS KIT, WHICH IS SHIPPED WITH THIS GENERATOR.
15. SEE DRAWING 0C3850 FOR DISCHARGE DUCT REMOVAL. REMOVAL OF DUCT WILL PROVIDE ACCESS TO MUFFLER FOR SERVICING.



LEFT SIDE VIEW



REAR VIEW



RIGHT SIDE VIEW

WEIGHT DATA: (INCLUDING EMPTY FUEL TANK)
GENERATOR : 3106 LBS

1 GENERAC DIESEL GENERATOR MODEL SD030
SCALE: N.T.S. GENERAC MODEL: 6671

verizon
1515 WOODFIELD ROAD,
SUITE 1400
SCHAUMBURG, ILLINOIS 60173
PHONE: (847) 619-5397
FAX: (847) 706-7415

TERRA CONSULTING GROUP, LTD
600 BUSSE HIGHWAY
PARK RIDGE, IL 60068
PH: 847-698-6400
FAX: 847-698-6401

REVISIONS

NO.	DESCRIPTION	DATE	BY
2	ADDITION OF ECR	04/27/18	TJS
3	UPDATE SITE LAYOUT & NEW ECR	08/24/18	TJS
4	UPDATE WITH POWER COORDINATION	10/25/18	JJR
5	UPDATE PER VILLAGE COMMENTS	11/14/18	JTM
6	UPDATE PER FIBER COORDINATION	01/09/19	RA
7	UPDATE PER VILLAGE COMMENTS	01/14/19	JTM
8	UPDATE WITH NEW PAD LAYOUT	02/13/19	TJS

DRA IL-1010
LOC. # 455871

ARLINGTON HEIGHTS NW

1122 W RAND RD.
ARLINGTON HEIGHTS
IL 60004

DRAWN BY:	DMS
CHECKED BY:	TAZ
DATE:	12/07/17
PROJECT #:	33-2567

SHEET TITLE
GENERATOR
CUT-SHEET

SHEET NUMBER
EX-1

ARLINGTON HEIGHTS NW
LOC. #455871

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 7, 2017.

NOT TO BE USED AS CONSTRUCTION DRAWINGS.

ELEVATION DATUM

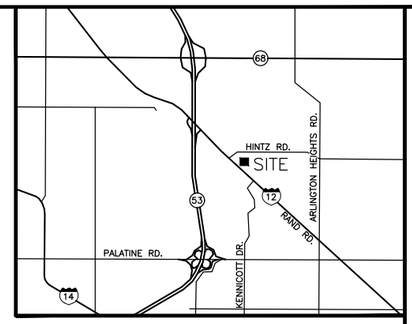
ALL ELEVATIONS ARE BASED ON NAVD 88 DATUM. CONTOURS ARE ILLUSTRATED AT 1.0' INTERVALS.

BM#1) ELEV. 722.87'
TOP OF RAILROAD SPIKE IN SOUTH SIDE OF POWER POLE, ±27' NORTH OF PARKING LOT, ±218' EAST OF EAST FACE OF CHURCH BUILDING

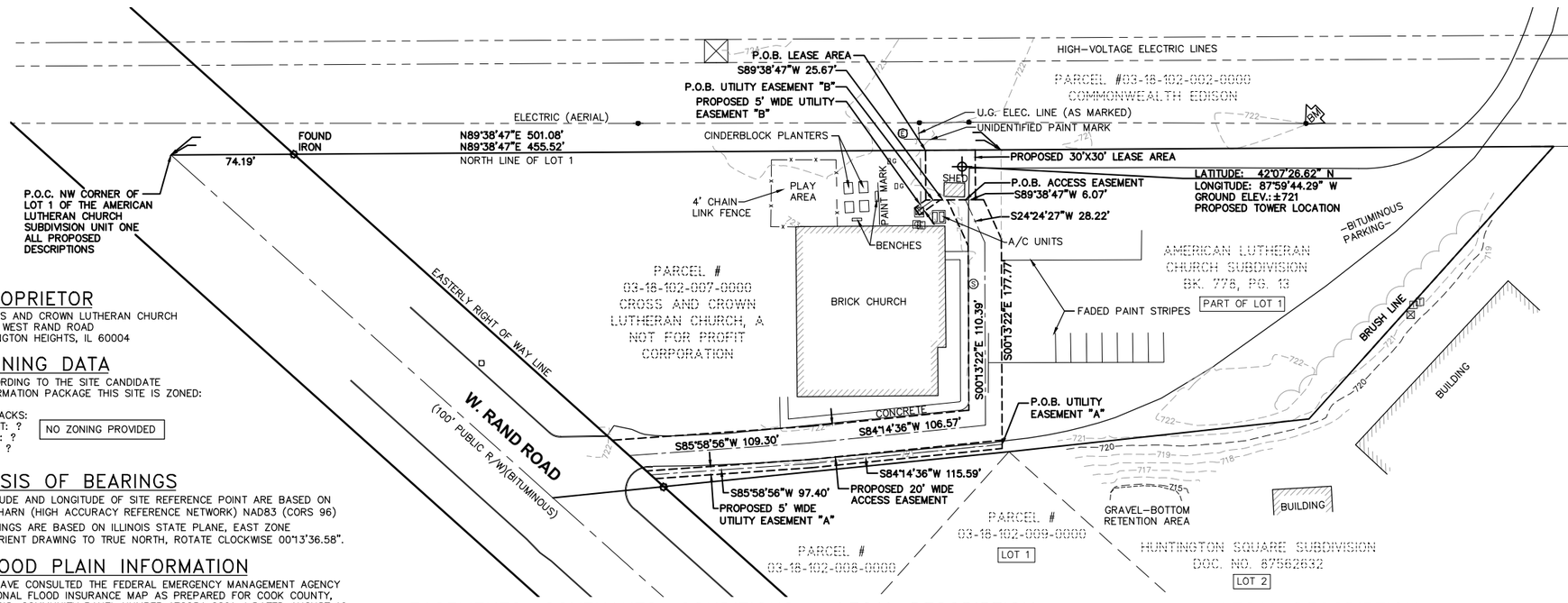
CALL C:ICAGO DIGGERS :OTLINE
OR :ULIE INC. TOLL FREE
REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

4°±
MAGNETIC
TRUE
TRUE NORTH
0 40 80
SCALE IN FEET

NOTE:
THE ORIGINAL SCALE (1"=40') OF THIS DRAWING WAS PREPARED AS A 24"X36" DRAWING ANY OTHER SIZE DRAWING IS AT A REDUCED SCALE.



VICINITY MAP
N.T.S.



LEGEND

- TRAVERSE POINT
- WELL
- HIGHWAY
- MONUMENT
- MONUMENT BOX
- RIGHT OF WAY MARKER
- SET WOODSTAKE
- XCUT
- PK NAIL
- FOUND IRON STAKE
- SET IRON STAKE
- SIGN
- RR SIGN
- GUY POLE
- GUY ANCHOR
- UTILITY POLE
- LIGHT POLE
- ORNAMENTAL LIGHT POLE
- POST
- U.G. UTILITY MARKER
- GROUND ROD
- SOIL BORING
- MAILBOX
- SATELLITE DISH
- HAND HOLE
- AC UNIT
- U.G. UTILITY MARKER
- FIRE HYDRANT
- POST INDICATOR VALVE
- WATER VALVE
- GAS VALVE
- UST FILL PORT
- GAS PUMP
- GAS METER
- WATER METER
- TELEPHONE RISER
- ELECTRIC METER
- ELECTRIC TRANSFORMER
- CABLE TV RISER
- CATCH BASIN
- ROUND CATCH BASIN
- UTILITY MANHOLE
- STORM MANHOLE
- SANITARY MANHOLE
- ELECTRIC MANHOLE
- TELEPHONE MANHOLE
- WATER MANHOLE
- HANDICAP PARKING SPACE
- SHRUB
- TREE
- PINE TREE
- EXISTING CONTOURS
- TELEPHONE UTILITY LINE
- ELECTRIC UTILITY LINE
- WATER UTILITY LINE
- GAS UTILITY LINE
- STEAM UTILITY LINE
- STORM UTILITY LINE
- SANITARY UTILITY LINE
- FIBER OPTIC UTILITY LINE
- OVERHEAD UTILITY LINE
- FENCE LINE
- GUARD RAIL

PROPRIETOR

CROSS AND CROWN LUTHERAN CHURCH
1122 WEST RAND ROAD
ARLINGTON HEIGHTS, IL 60004

ZONING DATA

ACCORDING TO THE SITE CANDIDATE INFORMATION PACKAGE THIS SITE IS ZONED:
?
SETBACKS:
FRONT: ?
REAR: ?
SIDE: ?

NO ZONING PROVIDED

BASIS OF BEARINGS

LATITUDE AND LONGITUDE OF SITE REFERENCE POINT ARE BASED ON THE HARN (HIGH ACCURACY REFERENCE NETWORK) NAD83 (CORS 96)

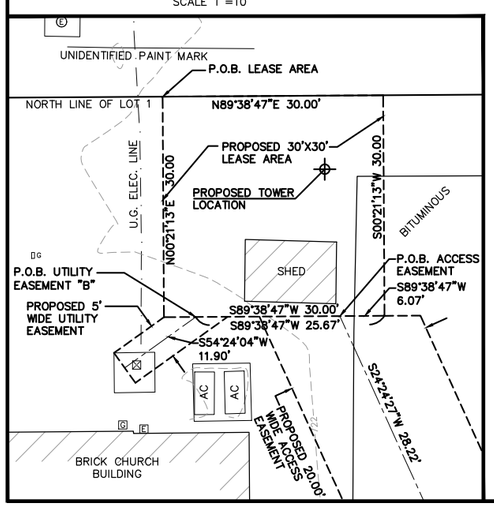
BEARINGS ARE BASED ON ILLINOIS STATE PLANE, EAST ZONE TO ORIENT DRAWING TO TRUE NORTH, ROTATE CLOCKWISE 00°13'36.58".

FLOOD PLAIN INFORMATION

WE HAVE CONSULTED THE FEDERAL EMERGENCY MANAGEMENT AGENCY NATIONAL FLOOD INSURANCE MAP AS PREPARED FOR COOK COUNTY, ILLINOIS, COMMUNITY PANEL NUMBER 170054 0291 J DATED AUGUST 19, 2008, AND FIND THAT THE PROJECT SITE IS ZONED X, UNSHADED (AREAS OUTSIDE THE 500-YEAR FLOODPLAIN)

LEASE AREA DETAIL

SCALE 1"=10'



EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS

THE TITLE REPORT ISSUED BY AMC SETTLEMENT SERVICES AS ORDER NO. 11650061, DATED 12/05/2017 LISTS THE FOLLOWING EASEMENTS, COVENANTS, CONDITIONS, AND RESTRICTIONS, THAT ARE MATTERS OF SURVEY, AFFECTING THE PARENT PARCEL UNDER "SCHEDULE B":

11. SUBJECT TO EASEMENT BETWEEN THE EXCHANGE NATIONAL BANK OF CHICAGO AND COMMONWEALTH EDISON COMPANY AS SET FORTH IN INST. NO. 17881277 RECORDED 06/14/1960, AND RE-RECORDED 07/08/1960 IN INST. NO. 17962237, COOK COUNTY RECORDS. DOES NOT AFFECT SUBJECT PROPERTY

12. SUBJECT TO PLAT OF THE AMERICAN LUTHERAN CHURCH SUBDIVISION RECORDED 12/24/1968 IN INST. NO. 20711993, IN COOK COUNTY RECORDS. NO EASEMENTS LISTED

LEGAL DESCRIPTION

PARENT PARCEL

ALL THAT PARCEL OF LAND IN COOK COUNTY, STATE OF ILLINOIS, AS MORE FULLY DESCRIBED IN DEED INST # 23807870, ID# 03-18-102-007, BEING KNOWN AND DESIGNATED AS:

LOT 1 OF THE AMERICAN LUTHERAN CHURCH SUBDIVISION UNIT ONE BEING A SUBDIVISION IN SECTION 18, *TOWNSHIP 4 NORTH, RANGE 11 EAST OF THE THIRD PRINCIPAL MERIDIAN, IN COOK COUNTY, ILLINOIS.

BY FEE SIMPLE DEED FROM THE AMERICAN LUTHERAN CHURCH, A NOT FOR PROFIT CORPORATION AS SET FORTH IN INST # 23807870 DATED 01/19/1977 AND RECORDED 02/02/1977, COOK COUNTY RECORDS, STATE OF ILLINOIS.

***SHOULD READ TOWNSHIP 42 NORTH**

This map was made from the above legal description which was given to us as a complete description of the property. Both map and description should be compared with the Abstract of Title or Title Policy for any exceptions, easements or differences in description.

LEGAL DESCRIPTION

PROPOSED 30'X30' LEASE AREA

All that part of Lot 1 of The American Lutheran Church Subdivision Unit One being a subdivision in Section 18, Township 42 North, Range 11 East of this Third Principal Meridian, Cook County, Illinois, as recorded in Instrument Number 20711993, Cook County Records, described as; Commencing at the northwest corner of said Lot 1; thence North 89°38'47" East 455.52 feet along the north line of said Lot 1, passing through a found iron on the Northeasterly right of way line of West Rand Road at 74.19 feet TO THE PLACE OF BEGINNING OF THIS DESCRIPTION; thence continuing North 89°38'47" East 30.00 feet; thence South 00°21'13" West 30.00 feet; thence South 89°38'47" West 30.00 feet; thence North 00°21'13" East 30.00 feet to the place of beginning of this description. Containing 900 square feet more or less.

LEGAL DESCRIPTION

PROPOSED ACCESS EASEMENT

A 20' wide easement in that part of Lot 1 of The American Lutheran Church Subdivision Unit One being a subdivision in Section 18, Township 42 North, Range 11 East of this Third Principal Meridian, Cook County, Illinois, as recorded in Instrument Number 20711993, Cook County Records, the centerline of which is described as; Commencing at the northwest corner of said Lot 1; thence North 89°38'47" East 455.52 feet along the north line of said Lot 1, passing through a found iron on the Northeasterly right of way line of West Rand Road at 74.19 feet to the northwest corner of a 30'x30' lease area; thence continuing North 89°38'47" East 30.00 feet to the northeast corner of said lease area; thence South 00°21'13" West 30.00 feet to the southeast corner of said lease area; thence S89°38'47"W 6.07 feet along the south line of said lease area TO THE PLACE OF BEGINNING OF THIS CENTERLINE DESCRIPTION; thence continuing South 24°24'27" West 28.22 feet; thence South 00°13'22" East 110.39 feet; thence South 84°14'36" West 106.57 feet; thence South 85°58'56" West 109.30 feet to the easterly right of way of West Rand Road for the place of ending of this centerline description. The sidelines to be lengthened and/or shortened to intersect at angle points and to terminate at said right of way line.

LEGAL DESCRIPTION

PROPOSED 5.00' WIDE UTILITY EASEMENT "A"

A 5.00 foot wide utility easement in that part of Lot 1 of The American Lutheran Church Subdivision Unit One being a subdivision in Section 18, Township 42 North, Range 11 East of this Third Principal Meridian, Cook County, Illinois, as recorded in Instrument Number 20711993, Cook County Records, the centerline of which is described as; Commencing at the northwest corner of said Lot 1; thence North 89°38'47" East 501.08 feet along the north line of said Lot 1, passing through a found iron on the Northeasterly right of way line of West Rand Road at 74.19 feet; thence South 00°13'22" East 177.77 feet TO THE PLACE OF BEGINNING OF THIS CENTERLINE DESCRIPTION; thence South 84°14'36" West 115.59 feet; thence South 85°58'56" West 97.40 feet to the easterly right of way line of West Rand Road for the place of ending of this centerline description. The sidelines to be lengthened and/or shortened to intersect at angle points and to terminate at said right of way line.

LEGAL DESCRIPTION

PROPOSED 5.00' WIDE UTILITY EASEMENT "B"

A 5.00 foot wide utility easement in that part of Lot 1 of The American Lutheran Church Subdivision Unit One being a subdivision in Section 18, Township 42 North, Range 11 East of this Third Principal Meridian, Cook County, Illinois, as recorded in Instrument Number 20711993, Cook County Records, the centerline of which is described as; Commencing at the northwest corner of said Lot 1; thence North 89°38'47" East 455.52 feet along the north line of said Lot 1, passing through a found iron on the Northeasterly right of way line of West Rand Road at 74.19 feet to the northwest corner of a 30'x30' lease area; thence continuing North 89°38'47" East 30.00 feet to the northeast corner of said lease area; thence South 00°21'13" West 30.00 feet to the southeast corner of said lease area; thence S89°38'47"W 6.07 feet along the south line of said lease area TO THE PLACE OF BEGINNING OF THIS CENTERLINE DESCRIPTION; thence South 24°24'27" West 28.22 feet along the south line of said lease area; thence S89°38'47"W 25.67' feet along the south line of said lease area TO THE PLACE OF BEGINNING OF THIS CENTERLINE DESCRIPTION; thence S54°24'04"W 11.90 feet for the place of ending of this centerline description. The sidelines to be lengthened and/or shortened to intersect at angle points and to terminate at said south line of lease area.

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.

PROFESSIONAL LAND SURVEYOR
RANDY J. KOLEHOUSE
2986
GRAND RAPIDS MICHIGAN
STATE OF ILLINOIS

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

All dimensions shown are in feet and decimal parts thereof.

Given under my hand and seal this 20th day of November, 2018.

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

CHICAGO SMSA
limited partnership
d/b/a [redacted]

ARLINGTON HEIGHTS NW LOC. #455871

Survey Prepared for:

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

Project Manager: Tom Zimmermann

REVISIONS		
NO.	DESCRIPTION	DATE
1	REVISED PROPOSED LEASE AREA & EASEMENTS	11/16/18

williams&works
engineers | surveyors | planners
616.224.1500 phone | http://williams-works.com
549 Ottawa Ave NW | Grand Rapids, MI 49503

NW | NE
SW | SE
18-42-11

DATE: 7/7/17	DWG. BY: J.S.L.
SCALE: 1"=40'	SURVEYED: D.S.
UPDATE: ECV111618	CHKD BY: R.J.K.
PROJECT NO.: 211005.682	

SITE NAME

ARLINGTON HEIGHTS NW

LOCATION NUMBER

LOC. #455871

SITE ADDRESS

1122 WEST RAND ROAD ARLINGTON HEIGHTS, IL 60004

SHEET TITLE

PS-1