ISSUE	REVISION	DATE
0	INITIAL ISSUE	10/25/10
1	REVISED PER ZONING COMMENTS	12/08/10
2	ADDITIONAL LANDSCAPING	03/25/11

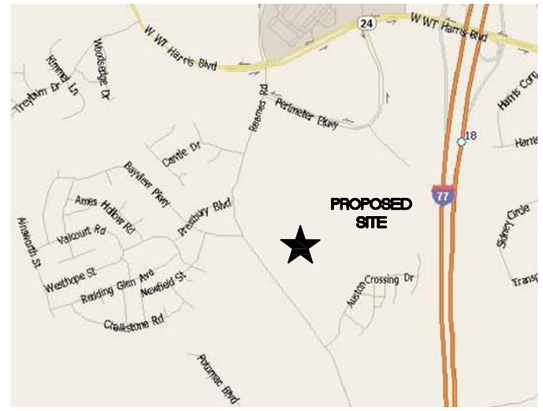
A PROJECT FOR:

BERKLEY GROUP LLC

NORTH LAKE MALL
9002 REAMES ROAD
CHARLOTTE, NC 28216
MECKLENBURG COUNTY

DIRECTIONS:

FROM CHARLOTTE, NC:
START OUT GOING SOUTH ON PROVIDENCE RD/NC-16 TOWARD ALEXANDER VALLEY DR. (APPR. 0.4 MI), MERGE ONTO I-485 W TOWARD PINEVILLE. (APPROX. 30.6 MI) TAKE THE NC-24/HARRIS BLVD EXIT, EXIT 21. (APPROX. 0.4 MI) TURN RIGHT ONTO VANCE RD/NC-24/W. WT HARRIS BLVD. CONTINUE TO FOLLOW NC-24 E/W WT HARRIS BLVD. (APPROX. 0.5 MI) TURN RIGHT ONTO REAMES RD. (APPROX. 0.4 MI) 9200 REAMES RD IS ON THE LEFT.



VICINITY MAP

N

SITE INFORMATION:

PROPERTY OWNER:
CHARTER PROPERTIES, INC.
1520 SOUTH BOULEVARD, SUITE 215
CHARLOTTE, NC 28203

PARCEL ID #:
02511305

SURVEYOR:
LAWRENCE ASSOCIATES
106 W. JEFFERSON STREET
MONROE, NC 28112
(704) 289–1013

APPLICANT:
BERKLEY GROUP LLC
10612–D PROVIDENCE ROAD, PMB 742
CHARLOTTE, NC 28277
BONNIE NEWELL – PROJECT MANAGER
TEL: (704) 907–7104

POWER:
DUKE ENERGY
(800) 777–9898

TELCO:
AT&T
(866) 620–6000

TOWER INFORMATION:
PROPOSED 190' STEALTH POLE
PROPOSED RAD CENTER – 190.0'
LATITUDE: 35°20'28.31" N
LONGITUDE: 80°51'07.41" W
GROUND ELEVATION: 773.7'

ZONING INFORMATION:
JURISDICTION: CITY OF CHARLOTTE ETJ
CLASSIFICATION: R–12MF(CD)S.P.A.
OCCUPANCY: VACANT
PROPOSED APARTMENT COMPLEX

BUILDING INSPECTIONS:
MECKLENBURG COUNTY
700 NORTH TRYON STREET
CHARLOTTE NC, 28202
(704) 336–5242

ACS Engineering, Inc.
3 Marcus Drive
Greenville, SC 29615
Ph. (864) 288-0553
Fax. (864) 288-0559

DRAWING INDEX

A

A	ACRE
A/C	AIR CONDITIONING
AB	ANCHOR BOLT
ABV	ABOVE
AC	ALTERNATING CURRENT
ACC	ACCESSIBLE, AIR COOLED CHILLER
ACCU	AIR COOLED CONDENSING UNIT
ACI	AMERICAN CONCRETE INSTITUTE
ACM	ANALOG CONTROL MODULE
ACS DR	ACCESS DOOR
ACS PNL	ACCESS PANEL
ACST	ACOUSTIC
ADA	AMERICAN WITH DISABILITIES ACT
ADAAG	AMERICAN DISABILITIES ACT ACCESSIBILITIES GUIDE LINES
ADDL	ADDITIONAL
ADJ	ADJACENT, ADJUSTABLE
AF	AMPERE FRAME
AFC	ABOVE FINISHED CEILING
AFF	ABOVE FINISHED FLOOR
AFFF	AQUEOUS FILM FORMING FOAM
AFG	ABOVE FINISHED GARAGE
AGA	AMERICAN GAS ASSOCIATION
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLING UNIT
AIC	AMPERE INTERRUPTING CURRENT
AIM	ADDRESSABLE INPUT MODULE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ALUM	ALUMINUM
AMB	AMBIENT
AMP	AMPERE
API	AMERICAN PETROLEUM INSTATE
APPROX	APPROXIMATE
ARCH	ARCHITECT
ARI	AIR CONDITIONING AND REFRIGERATION INSTITUTE
ARM	AGENT RELEASE MODULE
ASHRAE	AMERICAN SOCIETY OF HEATING, REFRIGERATION, AND AIR CONDITIONING ENGINEERS
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPH	ASPHALT
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AT	AMPERE TRIP
ATC	ACOUSTICAL TILE CEILING
ATO	AUTOMATIC THROWOVER
ATS	AUTOMATIC TRANSFER SWITCH
AUX	AUXILIARY
AV	AIR VENT
AVG	AVERAGE
AWG	AMERICAN WIRE GAUGE
AWS	AMERICAN WELDING SOCIETY
AWWA	AMERICAN WATER WORKS ASSOCIATION

B

B PL	BASE PLATE
B/	BOTTOM OF
B/B, B-B	BACK TO BACK
BAT	BATTERY
B-B	BACK TO BACK OF CURBS
BC	BACK OF CURB
BC	BOTTOM CHORD, BUILDING CONTRACTOR
BDD	BACKDRAFT DAMPER
BEG	BEGIN
BEV	BEVEL
BFF	BELOW FINISH FLOOR
BFV	BUTTERFLY VALVE
BFW	BOILER FEED WATER
BLDG	BUILDING
BL	BASE LINE
BLWDN	BLOWDOWN
BM	BENCH MARK
BMS	BUILDING MANAGEMENT SYSTEM
BOD	BOTTOM OF DUCT
BOF	BOTTOM OF FOOTING
BOP	BOTTOM OF PIPE
BOS	BOTTOM OF STRUCTURE
BRG	BEARING
BRG PL	BEARING PLATE
BRKR	BREAKER
BRKT	BRACKET
BS	BOTH SIDES
BSMT	BASEMENT
BTU	BRITISH THERMAL UNIT
BV	BALL VALVE
BW	BOTH WAYS

C

C	CELSIUS
C/S	CONCRETE SLAB
CAB	CABINET
CB	CURB
CC	CENTER TO CENTER
CCT	CHLORINE CONTACT TANK, CIRCUIT
CCTV	CLOSED CIRCUIT TELEVISION
CCU FT	CUBIC FEET
CD	CONDENSATE DRAIN (COLD)
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHKV	CHECK VALVE
CHWR	CHILLED WATER RETURN
CHWS	CHILLED WATER SUPPLY
CI	CAST IRON, CURB INLET
CIP	CAST IN PLACE
CIRC	CIRCULATING
CJ	CONTROL JOINT
CL	CENTER LINE, CLASS
CLG	CEILING
CLR	CLEAR
CM	CENTIMETER
CMP	CORRUGATED METAL PIPE
CMU	CONCRETE MASONRY UNIT
CND	CONDUIT
CNG	COMPRESSED NATURAL GAS
CO	CLEAN OUT
COL	COLUMN
CONC	CONCRETE, CONCENTRIC
CONN	CONNECT

C (CONTINUED)

CONNX	CONNECTION
CONST	CONSTRUCTION
CONT	CONTINUOUS, CONTINUATION, CONTROLLER
CONTR	CONTRACTOR
CORR	CORRIDOR
CPH	CONTROL POINT HORIZONTAL
CPP	CORRUGATED POLYETHYLENE PIPE
CPV	CONTROL POINT VERTICAL
CPVC	CHLORINATED POLYVINYL CHLORIDE
CRAC	COMPUTER ROOM AIR CONDITIONING UNIT
CRR	CONDENSATE RETURN
CRS	COLD ROLLED STEEL
CRT	CATHODE RAY TUBE
CSK	COUNTER SUNK
CT	CERAMIC TILE, CURRENT TRANSFORMER
CTB	CEMENT TREATED BASE
CTR	CENTER
CTV	CABLE TELEVISION
CU	CONDENSER UNIT
Cu	COPPER
CW	COLD WATER
CWR	CONDENSER WATER RETURN
CWS	CONDENSER WATER SUPPLY

D

D	DEPTH
DA	DRAINAGE AREA
dB	DECIBEL
DC	DIRECT CIRCUIT
DDC	DIRECT DIGITAL CONTROL
DEF	DEFLECTION, DEFORM, DEFORMED
DEG	DEGREE
DES	DESIGNATION
DET	DETAIL
DI	DUCTILE IROM
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DIP	DUCTILE IRON PIPE
DISC	DISCONNECT
DISTR PNL	DISTRIBUTION PANEL
DL	DEAD LOAD
DMPF	DAMPPROOFING
DN	DOWN
DOT	DEPARTMENT OF TRANSPORTATION
DPDT	DOUBLE POLE, DOUBLE THROW
DPST	DOUBLE POLE, SINGLE THROW
DR	DRIVE
DR OPNG	DOOR OPENING
DS	DOWNSPOUT
DW	DOMESTIC WATER
DWG	DRAWING
DWL	DOWEL
DX	DIRECT EXPANSION

E

E	EAST (FOR COORDINATES)
EA	EACH
EAT	ENTERING AIR TEMPERATURE
EC	ELECTRICAL CONTRACTOR
ECC	ECCENTRIC
ECU	ENHANCED CONTROL UNIT
EDBT	ENTERING DRY BULB TEMPERATURE
EF	EACH FACE
EG	EDGE OF GRAVEL
EJ	EXPANSION JOINT
EL	ELEVATION
ELB	ELBOW
ELEC	ELECTRIC
EMER	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
ENTR	ENTRANCE
EOL	END OF LINE RESISTOR
EP	EDGE OF PAVEMENT
EPA	ENVIRONMENTAL PROTECTION AGENCY
EPDM	ETHYLENE PROPYLENE DIENE MONOMER
EPO	EMERGENCY POWER OFF
EQ	EQUAL
EQL SP	EQUALLY SPACED
EQUIP	EQUIPMENT
ESH/E	EMERGENCY SHOWER AND EYEWASH
ESP	EXTERNAL STATIC PRESSURE
ETR	EXISTING TO REMAIN
EW	EACH WAY
EWBT	ENTERING WET BULB TEMPERATURE
EWC	ELECTRICAL WATER COOLER
EWEF	EACH WAY EACH FACE
EWT	ENTERING WATER TEMPERATURE
EXH	EXHAUST
EXH FN	EXHAUST FAN
EXIST	EXISTING
EXP	EXPANSION
EXP BT	EXPANSION BOLT
EXT	EXTERNAL

F

F	FAHRENHEIT
F/F	FACE TO FACE
FA	FIRE ALARM
FAB	FABRICATION
FACP	FIRE ALARM CONTROL PANEL
FAV	FIRE ALARM VALVE
FB	FACE OF BUILDING
FBO	FURNISHED BY OWNER
FCO	FLOOR CLEAN OUT
FCU	FAN COIL UNIT
FD	FLAME DETECTOR, FLOOR DRAIN
FDMPR	FIRE DAMPER
FDV	FIRE DEPARTMENT VALVE
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FHR	FIRE HOSE RACK
FHSMS	FLAT HEAD SHEET METAL SCREW
FHV	FIRE HOSE VALVE
FI	FUEL ISLAND
FIN	FINISH
FIN FLR	FINISH FLOOR

F (CONTINUED)

FIN GR	FINISH GRADE
FL	FLOW LINE
FLG	FLANGE
FL SW	FLOW SWITCH
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE
FLG	FLANGE
FLL	FLOW LINE
FLR	FLOOR
FLUOR	FLUORESCENT
FM	FORCE MAIN
FMA	FACILITY MANAGEMENT AND ALARM SYSTEM FACTORY MANUAL
FND	FOUNDATION
FO	FRAME OPENING
FOC	FACE OF CURB
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FP	FIRE PROTECTION
FPC	FIRE PROTECTION CONTRACTOR
FPLP	FIRE POWER LIMITED PLENUM
FPM	FEET PER MINUTE
FPR	FIRE PROTECTION USER
FR	FUEL RETURN, FIRE RATING
FRP	FIBERGLASS REINFORCED PIPE
FS	FINISHED SURFACE, FRONT SIDE, FUEL SUPPLY, FAR SIDE
FT	FLOW TRANSMITTER, FOOT
FTG	FOOTING
FTL	FEED-THROUGH LUGS
FW	FULL VOLTAGE NON-REVERSING
FWR	FIRE WATER

G

G	GAS (NATURAL), GALVANIZED IRON
GA	GAUGE
GAL	GALLON, GALVANIZED
GALV	GALVANIZED
GC	GENERAL CONTRACTOR
GCO	GRADE CLEANOUT
GCU	GLAZED CLAY UNITS
GFI	GROUND FAULT
GFR	GROUND FAULT RELAY
GND	GROUND
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GRADE
GR BM	GRADE BEAM
GRS	GALVANIZED RIGID STEEL
GUT	GUTTER
GYP	GYPSUM
GYP BD	GYPSUM BOARD
GV	GATE VALVE

H

H	HEIGHT
HA	HECTARE
HB	HOSE BIB
HC	HANDICAP, HANDICAPPED
HD	HUB DRAIN
HDW	HARDWARE
HDWL	HEADWALL
HEX	HEXAGONAL
HGL	HYDRAULIC GRADE LINE
HID	HIGH INTENSITY DISCHARGE
HM	HOLLOW METAL
HMAC	HOT MIX ASPHALT CONCRETE
HOA	HAND-OFF-AUTO
HORIZ	HORIZONTAL
HPS	HIGH PRESSURE SODIUM
HPST	HIGH PRESSURE STEAM
HP	HORSEPOWER
HPT	HIGH POINT
HR	HOUR, HANDICAPPED RAMP
HSTAT	HUMIDISTAT
HSZBT	HORIZONTAL SINGLE-ZONE BLOW-THROUGH
HSZDT	HORIZONTAL SINGLE-ZONE DRAW-THROUGH
HT	HEIGHT
HTG	HEATING
HTR	HEATER
HTWR	HEATING WATER RETURN
HTWS	HEATING WATER SUPPLY
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
HVU	HEATING AND VENTILATING UNIT
HW	DOMESTIC HOT WATER
HYD	HYDRANT
HZ	HERTZ, FREQUENCY

I

ID	INSIDE DIAMETER, INTERNAL DIAMETER
IEEE	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS
IES	ILLUMINATING ENGINEERING SOCIETY
IF	INSIDE FACE
IG	ISOLATED GROUND
IN	INCH
IN WC	INCHES OF WATER
INCAND	INCANDESCENT
INSUL	INSULATION
INT	INTERIOR
INV	INVERT OF FLOW LINE
INV EL	INVERT ELEVATION
IW	INDUSTRIAL WASTE LINE

J

JAN	JANITOR
JB	JUNCTION BOX
JST	JOIST
JT	JOINT
JRCP	JOINTED REINFORCED CONCRETE

K

K	KIPS (1000 LBS)
KCMIL	1000 CIRCULAR MILS
Kg	KILOGRAM

K (CONTINUED)

KO	KNOCKOUT
KSI	KIPS PER SQUARE INCH
kv	KILOVOLT
KVA	KILOVOLT-AMPS
KVAR	KILOVOLT-AMPS REACTIVE
kW	KILOWATT
kWH	KILOWATT HOUR

L

L	LENGTH, LITER
LAT	LEAVING AIR TEMPERATURE
LAV	LAVATORY
LB,#	POUNDS
LD	DEVELOPMENT LENGTH
LDBT	LEAVING DRY BULB TEMPERATURE
LDG	LANDING
LF	LINEAR FEET (FOOT)
LG	LONG
LH	LEFT HAND
LL	LIVE LOAD
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LM	LINEAR METER
LONG	LONGITUDINAL
LP	LOW PRESSURE (MECHANICAL), LOW POINT
LPD	LOW POINT DRAIN
LPM	LITERS PER MINUTE
LPS	LOW PRESSURE STEAM
LT	LOW POINT
LRA	LOCKED ROTOR AMPS
LS	LIME STABILIZED
LT	LIGHT, LEFT
LTG	LIGHTING
LW	LONG WAY
LWBT	LEAVING WET BULB TEMPERATURE
LWC	LIGHTWEIGHT CONCRETE

M

M	METER
MAS	MASONRY
MATL	MATERIAL
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MB	MACHINE BOLT, METAL BUILDING
MBC	METAL BUILDING CONTRACTOR, MULTIPLE BARREL CULVERT, MULTIPLE BOX CULVERT
MBH	1000 BTU PER HOUR
MC	MECHANICAL CONTRACTOR
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MOTORIZED DAMPER
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MEP	MECHANICAL, ELECTRICAL, PLUMBING
MET	METAL
MEZZ	MEZZANINE
MFG	MANUFACTURE
MFR	MANUFACTURER
MG	MOTOR GENERATOR
MGR	MANAGER
MH	MANHOLE
MI	MALLEABLE IRON
MIC	MICROPHONE
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MJ	MECHANICAL JOINT
MK	MARK
MLO	MAIN LUGS ONLY
MO	MASONRY OPENING
MPA	MEGAPASCAL
MRV	MANUAL RELIEF VALVE
MS	MIDDLE STRIP
MSB	MAIN SWITCHBOARD
MT	STRUCTURAL TEE CUT FROM
MISC STL	MISCELLANEOUS STEEL
MTD	MOUNTED
MU	MAKE-UP
MV	MERCURY VAPOR
MW	MONITOR WELL
MZU	MULTI-ZONE UNIT

N

N	NORTH (FOR COORDINATES)
NA	NOT APPLICABLE
NC	NOISE CRITERIA, NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
N/F	NOW OR FORMERLY
NF	NEAR FACE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN, NUMBER
NOM	NOMINAL
NS	NEAR SIDE
NTS	NOT TO SCALE

O

OA	OUTSIDE AIR OR OVERALL
OBD	OPPOSED BLADE DAMPER
OC	ON CENTER
OCEW	ON CENTER EACH WAY
OCV	ON CENTER VERTICALLY
OD	OUTSIDE DIAMETER
OF	OUTSIDE FACE
OHE	OVERHEAD ELECTRIC
OHT	OVERHEAD TELEPHONE
OPH	OPPOSITE HAND
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
ORBK	OFFICIAL RECORD BOOK
OS&Y	OUTSIDE STEM AND YOKE
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION

P

P	PAGE
PAVT	PAVEMENT
PB	POND BOTTOM
PC	POINT OF CURVATURE
PCC	PRECAST CONCRETE
PCF	POUNDS PER CUBIC FOTT
PCHR	PRIMARY CHILLED WATER RETURN
PCHS	PRIMARY CHILLED WATER SUPPLY
PCR	PUMPED CONDENSATE RETURN
PD	PRESSURE DROP OR DIFFERENCE
PDF	POWER DISTRIBUTION FEED
PDI	PLUMBING AND DRAINAGE INSTITUTE
PDU	POWER DISTRIBUTION UNIT
PERIM	PERIMETER
PERP	PERPENDICULAR
PF	POWER FACTOR
PG	PRESSURE GAUGE, PRE STRESSED GRINDER
PH	PHASE
PHWR	PRIMARY HEATING WATER RETURN
PHWS	PRIMARY HEATING WATER SUPPLY
PI	POINT OF INTERSECTION
PIS	PRESSURE INDICATOR SWITCH
PIV	POST INDICATOR VALVE
PL	PLATE, PROPERTY LINE
PLBG	PLUMBING
PLYWD	PLYWOOD
PM	PRESSED METAL
PNEU	PNEUMATIC
PNL	PANEL
POL	POLISHED
POV	PRIVATELY OWNED VEHICLE
PP	POWER POLE
PR	PAIR
PRCST	PRECAST
PREFAB	PREFABRICATED
PRELIM	PRELIMINARY
PRMLD	PREMOLDED
PROJ	PROJECTION
PRV	PRESSURE REDUCING VALVE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PSV	PRESSURE SAFETY VALVE, RELIEF
PT	PRESSURE TRANSMITTER, POINT, POINT OF TANGENCY
PTD	PAINTED
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE PIPE, POINT OF VERTICAL CURVE
PVI	POINT OF VERTICAL INTERSECTION
PVT	POINT OF VERTICAL TANGENCY
PVMT	PAVEMENT

Q

QT	QUARRY TILE
QTY	QUANTITY

R

R	RELIEF, RIGHT, RADIUS, RISER
Ra	RADIUM
RA	RETURN AIR
RAD	RADIUS
RCP	REFLECTED CEILING PLAN, REINFORCED CONCRETE PIPE
RD	ROOF DRAIN, ROAD
RE	REFER TO, REFERENCE
RECIRC	RECIRCULATE
RECPT	RECEPTACLE
RECT	RECTIFIER
RED	REDUCER
REF	REFERENCE
REINF	REINFORCING, REINFORCEMENT
REM	REMAINDER, REMOVE
REQ	REQUIRE
REQD	REQUIRED
RET	RETAINING
REV	REVISION, REVISE
RFAT	RADIO FIRE ALARM TRANSMITTER
RGC	RIGID CONDUIT
RH	RELATIVE HUMIDITY, RIGHT HAND
RHG	REFRIGERANT HOT GAS
RJ	RUSTICATION JOINT
RL	REFRIGERANT LIQUID
RLA	RUNNING LOAD AMPS
RM	ROOM
RMC	RIGID METALLIC CONDUIT
RN	RISER NIPPLE
RND	ROUND
RO	ROUGH OPENING
ROW	RIGHT OF WAY
RP	RADIUS POINT
RPM	REVOLUTIONS PER MINUTE
RS	REFRIGERANT SUCTION
RT	RIGHT
RTU	ROOF TOP UNIT
RV	RELIEF VALVE
RVS	REVERSE
RW	RETAINING WALL, RAW WATER

S

S	SOUTH
SA	SUPPLY AIR
SAN	SANITARY
SB	SECURITY BARS
SC	SHEAR CONNECTORS OR SITE CONTRACTOR
SCH	SCHEDULE
SCHED	SCHEDULED
SCHR	SECONDARY CHILLED WATER RETURN
SCHS	SECONDARY CHILLED WATER SUPPLY
SD	SMOKE DAMPER, STORM DRAIN
SEC	SECURITY
SECT	SECTION
SF	SQUARE FEET
SFI	SIGHT FLOW INDICATOR
SG	STATIC GROUND
SHT	SHEET, SLOW HOLDING TANK
SHWR	SECONDARY HEATING WATER RETURN
SHWS	SECONDARY HEATING WATER SUPPLY
SI	SURFACE INLET
SIM	SIMILAR
SJ	SAW JOINT
SLP	SLOPE

S (CONTINUED)

SM	SHEET METAL
SMACNA	SHEET METAL AND AIR CONDITIONING CONTRACTOR'S NATIONAL ASSOCIATION
SP	SPACE, SAMPLE POINT OR SPARE
SPCL	SPECIAL
SPEC	SPECIFICATION
SQ	SQUARE
SS	SANITARY SEWER
SST	STAINLESS STEEL
ST	SOUND TRAP, STEAM TRAP, STREET
STA	STATION, STATIONING
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STIF	STIFFNER
STIR	STIRRUP
STL	STEEL
STM	STEAM
STN	STRAINER
STRUCT	STRUCTURAL
SURF	SURFACE
SUSP	SUSPEND
SVC	SERVICE
SW	SHEAR WALL OR SIDE WALK
SYMM	SYMMETRICAL

T

T	TREAD, TOP, THERMOSTAT, TELEPHONE, TANGENT
T/PIPE	TOP OF PIPE
T&B	TOP AND BOTTOM
TBD	TO BE DETERMINED
TBM	TEMPORARY BENCH MARK
TC	TOP OR CURB
TDH	TOTAL DYNAMIC HEAD
TE	TOP ELEVATION
TEL	TELEPHONE
TEMP	TEMPERATURE
TFD	TOP OF FLOOR DRAIN
TFF	TOP OF FINISHED FLOOR
THK	THICKNESS
THRD	THREADED
THRU	THROUGH
TMPD	TEMPERED
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CURB
TOC	TOP OF CONCRETE
TOF	TOP OF FOOTING
TOJ	TOP OF JOIST
TOP	TOP OF PAVEMENT
TOS	TOP OF STEEL
TOS	TOP OF SLAB
TOW	TOP OF WALL
TRNV	TRANSVERSAL
TS	STRUCTURAL TUBING
TSS	TUBILAR STEEL SYSTEM
TSP	TOTAL STATIC PRESSURE
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
TW	TOP OF WALL
TWU	THROUGH WALL AIR CONDITIONING UNIT
TYP	TYPICAL

U

U/F	UNDERFLOOR
U/S	UNDERSLAB
UC	UNDERGROUND CONDUIT
UG	UNDERGROUND
UGE	UNDERGROUND ELECTRIC
UGND	UNDERGROUND
UGT	UNDERGROUND TELEPHONE
UL	UNDERWRITERS LABORATORIES, INC.
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UST	UNDERGROUND STORAGE TANK
UR	URINAL

V

V	VOLT
VA	VOLT-AMPERE
VAC	VOLTS ALTERNATING CURRENT VACUUM
VAR	VARIES
VAV	VARIABLE AIR VOLUME
VB	VAPOR BARRIER
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VCT	VINYL COMPOSITION TILE
VD	VOLUME DAMPER
VEL	VELOCITY
VERT	VERTICAL
VEST	VESTIBULE
VLD	VAPOR LEAK DETECTOR
VOL	VOLUME
VP	VENEER PANELING
VR	VAPOR RETARDER
VSZBT	VERTICAL SINGLE-ZONE BLOW-THROUGH
VSZDT	VERTICAL SINGLE-ZONE DRAW-THROUGH
VT	VINYL TILE
VTR	VENT THROUGH ROOF

W

W	WATT,WIDTH, WEST, WIDE FLANGE, WATER
W/	WITH
W/O	WITHOUT
WB	WET BULB
WC	WATER CLOSET
WCO	WALL CLEANOUT
WF	WIDE FLANGE
WG	WATER GONG
WH	WATER HEATER
WP	WORKING POINT (WORK POINT)
WPD	WATER PRESSURE DROP
WPJ	WEAKENED PLANE JOINT
WR	WATER RESISTANT
WS	WATER SURFACE
WT	WATERTIGHT, WEIGHT STRUCTURAL TEE CUT FROM WIDE FLANGE BEAM
WV	WATER VALVE
WWF	WELDED WIRE FABRIC
WWTP	WASTE WATER TREATMENT PLANT

X

XFMR	TRANSFORMER

Y

Y	YEAR

ACE ENGINEERING, INC.
3 Marcus Drive
Greenville, SC 29615
Ph. (864) 288-0553
Fax. (864) 288-0559

NORTH CAROLINA PROFESSIONAL SEAL 029239 ENGINEER THERESA M. ALDRICH 10-25-10

BERKLEY GROUP LLC

BASE TRANSCEIVER SITE
NORTH LAKE MALL
9200 REAMES ROAD
CHARLOTTE, NC 28216
MECKLENBURG COUNTY

ISSUE	REVISION	DATE
1	INITIAL ISSUE	10/25/10

PROJECT NUMBER:
10049.002

SHEET CONTENTS:
GENERAL ABBREVIATIONS

SHEET NUMBER:
G1

2009 APPENDIX B
BUILDING CODE SUMMARY
FOR ALL COMMERCIAL PROJECTS
(EXCEPT 1 AND 2-FAMILY DWELLINGS AND TOWNHOUSES)

(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: North Lake Mall

Address: 9002 Reames Road, Charlotte, NC Zip Code 28216

Use: Cellular Communications Equipment

Owner/Authorized Agent: Berkley Group – Bonnie Newell Phone # (704) 907- 7104

E-Mail b_newell@bellsouth.net

Owned By: ☐ City/County ☒ Private ☐ State

Code Enforcement Jurisdiction: ☐ City ☒ County ☐ State

LEAD DESIGN PROFESSIONAL:

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
N/A	N/A	N/A	N/A		
Civil	AC&S Engineering, Inc.	Theresa Aldrich	029239	(864)288-0553	
Electrical	Sturkie & Assoc. Eng., PC	Chris Sturkie	024170	(864)363-4855	
Fire Alarm	N/A	N/A	N/A	N/A	
Plumbing	N/A	N/A	N/A	N/A	
Mechanical	N/A	N/A	N/A	N/A	
Sprinkler-Standpipe	N/A	N/A	N/A	N/A	
Structural	N/A	N/A	N/A	N/A	
Retaining Walls >5' High	N/A	N/A	N/A	N/A	
Other	N/A	N/A	N/A	N/A	

☒ **2009 EDITION OF NC CODE FOR:** ☒ New Construction ☐ Addition ☐ Upfit

EXISTING: ☐ Reconstruction ☐ Alteration ☐ Repair

CONSTRUCTED _____ **ORIGINAL USE** _____ **RENOVATED** _____ **CURRENT USE** _____

☐ **2006 NC REHAB CODE Information**: Scope of work / work area must be listed and delineated on the plans.

Check all that apply: Repair ☐ Alteration ☐ Renovation ☐ Reconstruction ☐ Change of use ☐ Addition

☐ **Last known legal Occupancy**_____ **Historic Property: Yes** ☐ No ☐

Original Building Construction Date: _____

Justifications for using the REHAB code:

Reviewers Notes for Field Inspector:

BUILDING DATA

Construction Type: ☒ I-A ☐ I-B ☐ II-A ☐ II-B ☐ III-A ☐ III-B ☐ IV ☐ V-A ☐ V-B

Mixed construction: ☐ No ☐ Yes Types _____

Sprinklers: ☒ No ☐ Partial ☐ Yes ☐ NFPA 13 ☐ NFPA 13R ☐ NFPA 13D

Standpipes: ☒ No ☐ Yes Class ☐ I ☐ II ☐ III ☐ Wet ☐ Dry

Fire District: ☐ No ☐ Yes **Flood Hazard Area:** ☐ No ☐ Yes

Building Height: Feet _____ Number of Stories _____ **Mezzanine:** ☐ No ☐ Yes

Gross Building Area:

FLOOR	EXISTING (SQ FT)	NEW (SQ FT)	SUB-TOTAL
6th Floor	N/A		
5th Floor	N/A		
4th Floor	N/A		
3rd Floor	N/A		
2nd Floor	N/A		
Mezzanine	N/A		
1st Floor	N/A		
Basement	N/A		
TOTAL			

ALLOWABLE AREA

Primary Occupancy: Assembly ☐ A-1 ☐ A-2 ☐ A-3 ☐ A-4 ☐ A-5
☒ Business ☐ Educational Factory ☐ F-1 Moderate ☐ F-2 Low
Hazardous ☐ H-1 Detonate ☐ H-2 Deflagrate ☐ H-3 Combust ☐ H-4 Health ☐ H-5 HPM
Institutional ☐ I-1 ☐ I-2 ☐ I-3 ☐ I-4
I-3 Condition ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5
☐ Mercantile Residential ☐ R-1 ☐ R-2 ☐ R-3 ☐ R-4
Storage ☐ S-1 Moderate ☐ S-2 Low ☐ High-piled
☐ Utility and Miscellaneous ☐ Parking Garage ☐ Open ☐ Enclosed ☐ Repair Garage

Secondary Occupancy: N/A

Special Uses: ☐ 402 ☐ 403 ☐ 404 ☐ 405 ☐ 406 ☐ 407 ☐ 408 ☐ 409 ☐ 410 ☐ 411 ☐ 412 ☐ 413 ☐ 414 ☐ 415 ☐ 416 ☐ 417 ☐ 418 ☐ 419 ☐ 420 ☐ 421

Special Provisions: ☐ 508.2 ☐ 508.3 ☐ 508.4 ☐ 508.5 ☐ 508.6 ☐ 508.7

Mixed Occupancy: ☐ No ☐ Yes Separation: ____ Hr. Exception: _____

☐ Incidental Use Separation (302.1.1)
This separation is not exempt as a Non-Separated Use (see exceptions).

☐ Non-Separated Use (302.3.1)
The required type of construction for the building shall be determined by applying the height and area limitations for each of the applicable occupancies to the entire building. The most restrictive type of construction, so determined, shall apply to the entire building.

☐ Separated Use (302.3.2) - See below for area calculations
For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

$$\frac{\text{Actual Area of Occupancy A}}{\text{Allowable Area of Occupancy A}} + \frac{\text{Actual Area of Occupancy B}}{\text{Allowable Area of Occupancy B}} \leq 1$$

$$\frac{N/A}{} + \frac{N/A}{} + \ldots = \frac{N/A}{} \leq 1.00$$

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 503[5] AREA	(C) AREA FOR FRONTAGE INCREASE[1]	(D) AREA FOR SPRINKLER INCREASE[2]	(E) ALLOWABLE AREA OR UNLIMITED[3]	(F) MAXIMUM BUILDING AREA[4]

[1] Frontage area increases from Section 506.2 are computed thus:
a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (F)
b. Total Building Perimeter = _____ (P)
c. Ratio (F/P) = _____ (F/P)
d. W = Minimum width of public way = _____ (W)

e. Percent of frontage increase $I_f = 100 [F/P - 0.25] \times W/30 =$ _____ (%)

[2] The sprinkler increase per Section 506.3 is as follows:
a. Multi-story building $I_s = 200$ percent
b. Single story building $I_s = 300$ percent

[3] Unlimited area applicable under conditions of Group B, F, M, S, A-4 (507); Group A motion picture (507.9); Malls (402.6); and H-2 aircraft paint hangers (507.7).

[4] Maximum Building Area = total number of stories in the building x E (506.4).

[5] The maximum area of open parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT

N/A

	ALLOWABLE (TABLE 503)	INCREASE FOR SPRINKLERS	SHOWN ON PLANS	CODE REFERENCE
Type of Construction	Type _____		Type _____	
Building Height in Feet	Feet _____	Feet = H + 20' = _____		
Building Height in Stories	Stories _____	Stories + 1 = _____	Stories	

FIRE PROTECTION REQUIREMENTS

Life Safety Plan Sheet #, if Provided N/A

N/A

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (FEET)	RATING REQ'D	RATING PROVIDED (W/ * REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	DESIGN # FOR RATED PENETRATION	DESIGN # FOR RATED JOINTS
Structural Frame, including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing Walls and Partitions Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Roof Construction Including supporting beams and joists							
Shaft Enclosures - Exit							
Shaft Enclosures - Other							
Corridor Separation							

Occupancy Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Tenant Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ☐ No ☐ Yes
Exit Signs: ☐ No ☐ Yes
Fire Alarm: ☐ No ☐ Yes
Smoke Detection Systems: ☐ No ☐ Yes
Panic Hardware: ☐ No ☐ Yes

EXIT REQUIREMENTS

NUMBER AND ARRANGEMENT OF EXITS

N/A

FLOOR, ROOM OR SPACE DESIGNATION	MINIMUM[2] NUMBER OF EXITS REQUIRED	MINIMUM[2] NUMBER OF EXITS SHOWN ON PLANS	TRAVEL DISTANCE ALLOWABLE TRAVEL DISTANCE (TABLE 1015.1)	TRAVEL DISTANCE ACTUAL TRAVEL DISTANCE SHOWN ON PLANS	ARRANGEMENT MEANS OF EGRESS[1,2] (SECTION 1014.2) REQUIRED DISTANCE BETWEEN EXIT DOORS	ARRANGEMENT MEANS OF EGRESS[1,2] (SECTION 1014.2) ACTUAL DISTANCE SHOWN ON PLANS

[1] Corridor dead ends (Section 1016.3)
[2] Single exits for Building (Table 1018.2); Single Exits for Room or Space (Section 1014.1)
[3] Common Path of Travel (Section 1013.3)

EXIT WIDTH

N/A

USE GROUP OR SPACE DESCRIPTION	(a) AREA[1] sq. ft.	(b) AREA[1] PER OCCUPANT (TABLE 1004.1.2)	CALCULATED OCCUPANT LOAD (a÷b)	(c) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1) STAIR	(c) EGRESS WIDTH PER OCCUPANT (TABLE 1005.1) LEVEL	EXIT WIDTH (in)[2,3,4,5,6] REQUIRED WIDTH (SECTION 1005.1) (a÷b) x c STAIR	EXIT WIDTH (in)[2,3,4,5,6] REQUIRED WIDTH (SECTION 1005.1) (a÷b) x c LEVEL	EXIT WIDTH (in)[2,3,4,5,6] ACTUAL WIDTH SHOWN ON PLANS STAIR	EXIT WIDTH (in)[2,3,4,5,6] ACTUAL WIDTH SHOWN ON PLANS LEVEL

[1] See Table 1004.1.2 to determine whether net or gross area is applicable. See definition "Area, Gross" and "Area, Net" (Section 1002)
[2] Minimum stairway width (Section 1009.1); min. corridor width (Section 1016.2); min. door width (Section 1008.1.1)
[3] Minimum width of exit passageway (Section 1020.2)
[4] See Section 1004.5 for converging exits.

G2

SHEET NUMBER:

BUILDING CODE APPENDIX B (SHEET 1 OF 2)

PROJECT NUMBER: 10049.002

SHEET CONTENTS:

ISSUE	REVISION	DATE
0	INITIAL ISSUE	10/25/10

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[5] The loss of one means of egress shall not reduce the available capacity to less than 50 percent of the total required (Section 1005.1)
[6] Assembly occupancies (Section 1024)

STRUCTURAL DESIGN

DESIGN LOADS:

Importance Factors: Wind (I_W) 1.00
Snow (I_S) 1.00
Seismic (I_E) 1.00

Live Loads: Roof 20 psf
Mezzanine N/A psf
Floor (see equip. info.) psf

Ground Snow Load: (Pg) 15 psf

Wind Load: Basic Wind Speed 100 mph (ASCE-7-05)
Exposure Category B
Wind Base Shears (for MWFRS) Vx = (see equip. info.) Vy = (see equip. info.)

SEISMIC DESIGN CATEGORY A
Compliance with Section 1616.4 only? ☐ Yes ☐ No

SEISMIC DESIGN CATEGORY ☒ **B** ☐ **C** ☐ **D**
Provide the following Seismic Design Parameters:
Seismic Use Group I
Spectral Response Acceleration S_S 19.7 %g S_1 7.7 %g
Site Classification D ☐ Field Test ☒ Presumptive ☐ Historical Data
Basic structural system (check one) N/A – slab mounted equipment only
_____ Bearing Wall _____ Dual w/Special Moment Frame
_____ Building Frame _____ Dual w/Intermediate R/C or Special Steel
_____ Moment Frame _____ Inverted Pendulum
Seismic base shear V_X = 1600 lb. V_Y = 1600 lb.
Analysis Procedure _____ Simplified X Equivalent Lateral Force _____ Modal
Architectural, Mechanical, Components anchored? X

LATERAL DESIGN CONTROL: N/A Earthquake _____ Wind _____

SOIL BEARING CAPACITIES:
Field Test (provide copy of test report) _____ psf
Presumptive Bearing capacity 1500 psf
Pile size, type, and capacity N/A

PLUMBING FIXTURE REQUIREMENTS

N/A

USE		WATERCLOSETS		URINALS	LAVATORIES		SHOWERS/ TUBS	DRINKING FOUNTAINS	
		MALE	FEMALE		MALE	FEMALE		REGULAR	ACCESSIBLE
	EXISTING								
	NEW								
	REQUIRED								

ACCESSIBLE PARKING

N/A

LOT OR PARKING	TOTAL # OF PARKING SPACES	# OF ACCESSIBLE SPACES PROVIDED	TOTAL #

AREA	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	ACCESSIBLE PROVIDED
TOTAL					

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DFS, ICC, etc., describe below)

N/A

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If energy cost budget method, state the annual energy cost budget vs allowable annual energy cost budget.

THERMAL ENVELOPE

Method of Compliance:
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

Roof/ceiling Assembly (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Skylights in each assembly
U-Value of skylight
total square footage of skylights in each assembly

Exterior Walls (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Openings (windows or doors with glazing)
U-Value of assembly
shading coefficient
projection factor
low e required, if applicable
Door R-Values

Walls adjacent to unconditioned space (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation
Openings (windows or doors with glazing)
U-Value of assembly
Low e required, if applicable
Door R-Values

Walls below grade (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation

Floors over unconditioned space (each assembly)
Description of assembly
U-Value of total assembly
R-Value of insulation

Floors slab on grade
Description of assembly
U-Value of total assembly
R-Value of insulation
Horizontal/vertical requirement
slab heated

ELECTRICAL SUMMARY

ELECTRICAL SYSTEM AND EQUIPMENT

Method of Compliance:
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

Lighting schedule
lamp type required in fixture
number of lamps in fixture
ballast type used in the fixture
number of ballasts in fixture
total wattage per fixture
total interior wattage specified vs allowed
total exterior wattage specified vs allowed

Equipment schedules with motors (not used for mechanical systems)
motor horsepower
number of phases
minimum efficiency
motor type
# of poles

MECHANICAL SUMMARY

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

Method of Compliance
☐ Prescriptive ☐ Performance ☐ Energy Cost Budget

Climate Zone _____

Thermal Zone
winter dry bulb
summer dry bulb

Interior design conditions
winter dry bulb
summer dry bulb
relative humidity

Building heating load

Building cooling load

Mechanical Spacing Conditioning System
Unitary
description of unit
heating efficiency
cooling efficiency
heat output of unit
cooling output of unit
Boiler
total boiler output. If oversized, state reason.
Chiller
total chiller capacity. If oversized, state reason.

List equipment efficiencies

Equipment schedules with motors (mechanical systems)
motor horsepower
number of phases
minimum efficiency
motor type
# of poles

SCHEDULE OF SPECIAL INSPECTION SERVICES

☒ No special inspections required for this project ☐ Special inspections required

The following sheets comprise the required schedule of special inspections for this project. The construction divisions which require special inspections for this project are as follows:

Fabricators
☐ IT-1 Verification of Soils
☐ IT-2 Excavation and Fill
☐ IT-3 Piling and Drilling Piers
☐ IT-4 Modular Retaining Walls
☐ IT-5 Reinforced Concrete
☐ IT-6 Post Tension Slab
☐ IT-7 Pre-cast Concrete Erection
☐ IT-8 Pre-stressed Concrete
☐ IT-9 Inspection of Pre-Cast Fabricators
☐ IT-10 Inspection of Structural Steel
☐ IT-11 Structural Masonry
☐ IT-12 Welding
☐ IT-13 High Strength Bolts & Steel Framing Insp.
☐ IT-14 Sprayed Fire-Resistance Materials
☐ IT-15 Exterior Insulation and Finish system
☐ IT-16 Seismic Resistance
☐ IT-17 Smoke Control
☐ IT-18 Detention Basin
☐ IT-19 Special Cases

Check the above boxes for the special inspection required for this project and list below specific special inspections required under Chapter 17.

SHEET NUMBER: G2A

BUILDING CODE APPENDIX B (SHEET 2 OF 2)

PROJECT NUMBER: 10049.002

SHEET CONTENTS:

ISSUE	REVISION	DATE
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Engineering, Inc.
3 Mauldin Road
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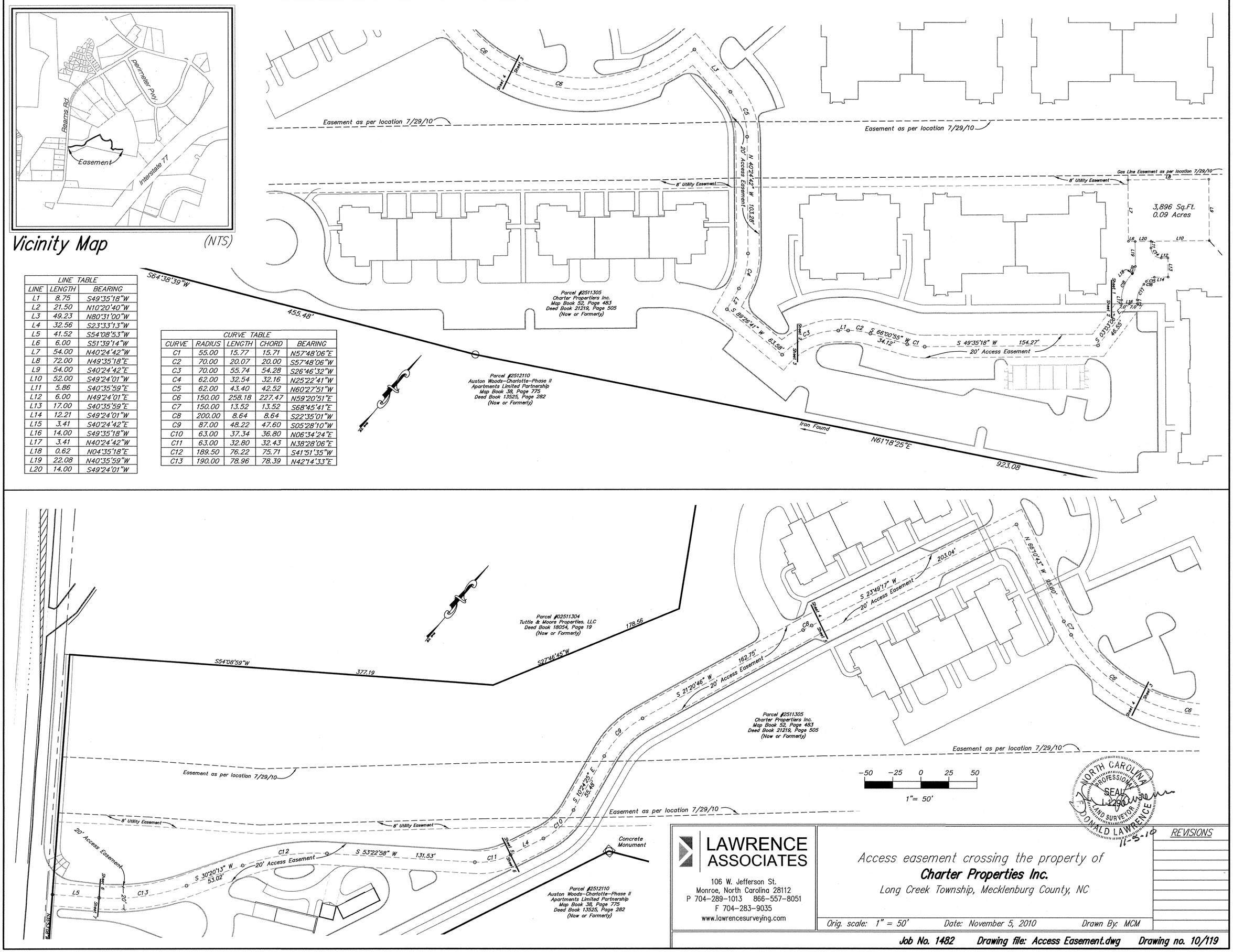
Vicinity Map (NTS)

LINE TABLE		
LINE	LENGTH	BEARING
L1	8.75	S49°35'18"W
L2	21.50	N10°20'40"W
L3	49.23	N80°31'00"W
L4	32.56	S23°33'13"W
L5	41.52	S54°08'53"W
L6	6.00	S51°39'14"W
L7	54.00	N40°24'42"W
L8	72.00	N49°35'18"E
L9	54.00	S40°24'42"E
L10	52.00	S49°24'01"W
L11	5.86	S40°35'59"E
L12	6.00	N49°24'01"E
L13	17.00	S40°35'59"E
L14	12.21	S49°24'01"W
L15	3.41	S40°24'42"E
L16	14.00	S49°35'18"W
L17	3.41	N40°24'42"W
L18	0.62	N04°35'18"E
L19	22.08	N40°35'59"W
L20	14.00	S49°24'01"W

CURVE TABLE				
CURVE	RADIUS	LENGTH	CHORD	BEARING
C1	55.00	15.77	15.71	N57°48'06"E
C2	70.00	20.07	20.00	S57°48'06"W
C3	70.00	55.74	54.28	S26°46'32"W
C4	62.00	32.54	32.16	N25°22'41"W
C5	62.00	43.40	42.52	N60°27'51"W
C6	150.00	258.18	227.47	N59°20'51"E
C7	150.00	13.52	13.52	S68°45'41"E
C8	200.00	8.64	8.64	S22°35'01"W
C9	87.00	48.22	47.60	S05°28'10"W
C10	63.00	37.34	36.80	N06°34'24"E
C11	63.00	32.80	32.43	N38°28'06"E
C12	189.50	76.22	75.71	S41°51'35"W
C13	190.00	78.96	78.39	N42°14'33"E



NORTH CAROLINA PROFESSIONAL SEAL L-2290 LAND SURVEYOR DONALD LAWRENCE
11-5-10

LAWRENCE ASSOCIATES
106 W. Jefferson St.
Monroe, North Carolina 28112
P 704-289-1013 866-557-8051
F 704-283-9035
www.lawrencesurveying.com

Access easement crossing the property of
Charter Properties Inc.
Long Creek Township, Mecklenburg County, NC

REVISIONS

Orig. scale: 1" = 50' Date: November 5, 2010 Drawn By: MCM

Job No. 1482 Drawing file: Access Easement.dwg Drawing no. 10/119

CIVIL SYMBOLS

EXISTING	ITEM	NEW
	POWER POLE WITH LIGHT	
	LIGHT POLE	
	POWER POLE	
	GUY ANCHOR	
— OHE —	OVERHEAD ELECTRIC	— OHE —
E	ELECTRIC MANHOLE COMMUNICATIONS MANHOLE UTILITY BOX	
	BUILDING	
	POST	
	SIGN	
G	GAS METER	
G	GAS VALVE	
—G—	GAS LINE	2" G
—SS—Ⓢ	SANITARY SEWER LINE & MANHOLE	8" SS
sco	SANITARY SEWER CLEAN OUT	
	FIRE HYDRANT	
	POST INDICATOR VALVE	
W	WATER LINE & VALVE	6" W
W	WATER METER	Ⓦ
	FIRE WATER LINE	6" FW
X X	ABANDONED UTILITY	
	CULVERT WITH HEADWALLS	24"
— SD —	STORM DRAIN	24"
	STORM DRAIN HEADWALL	
	AREA INLET	
Ⓓ	STORM DRAIN MANHOLE	Ⓓ
	℄ DRAINAGE DITCH	
	FLOW DIRECTION	
	CONTOURS	— 170 —
X 712.13	SPOT ELEV.	713.1
	SIDEWALK/GRAVEL	
	CONCRETE PAVING	
	ASPHALT SURFACE COURSE	
	CURB & GUTTER	
	EDGE OF PAVEMENT	
—X—	CHAIN LINK FENCE	— X —
	ITEM TO BE REMOVED	
	PARKING STRIPING / HC PARKING	
	HC RAMP	
	BOLLARD	
	IRON PIN SET	
	WOODS	
	SILT FENCE	SF

GENERAL NOTES

1. THE FACILITY IS AN UNOCCUPIED WIRELESS FACILITY.
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK WILL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
3. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS WILL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
4. WRITTEN AUTHORIZATION IS REQUIRED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
5. CONTACT LOCAL DIGGERS HOTLINE 48 HOURS PRIOR TO PROCEEDING WITH ANY EXCAVATION, SITE WORK OR CONSTRUCTION.
6. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
7. ALL WORK PERFORMED AND MATERIALS INSTALLED WILL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. THE CONTRACTOR WILL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. MECHANICAL AND ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
8. THE GENERAL CONTRACTOR WILL SUPERVISE AND DIRECT THE WORK, USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE PROJECT ENGINEER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
9. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS WILL BE INCLUDED AS PART OF THE WORK.
10. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLAT OF THE SURVEY DRAWING, WILL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR WILL RELY SOLELY ON THE PLAT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND WILL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE PLAT OF SURVEY. THE CONTRACTOR WILL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.

NOTE :
THIS IS A GENERAL LEGEND. SOME ITEMS MAY NOT APPLY.

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Fax. (864) 288-0559

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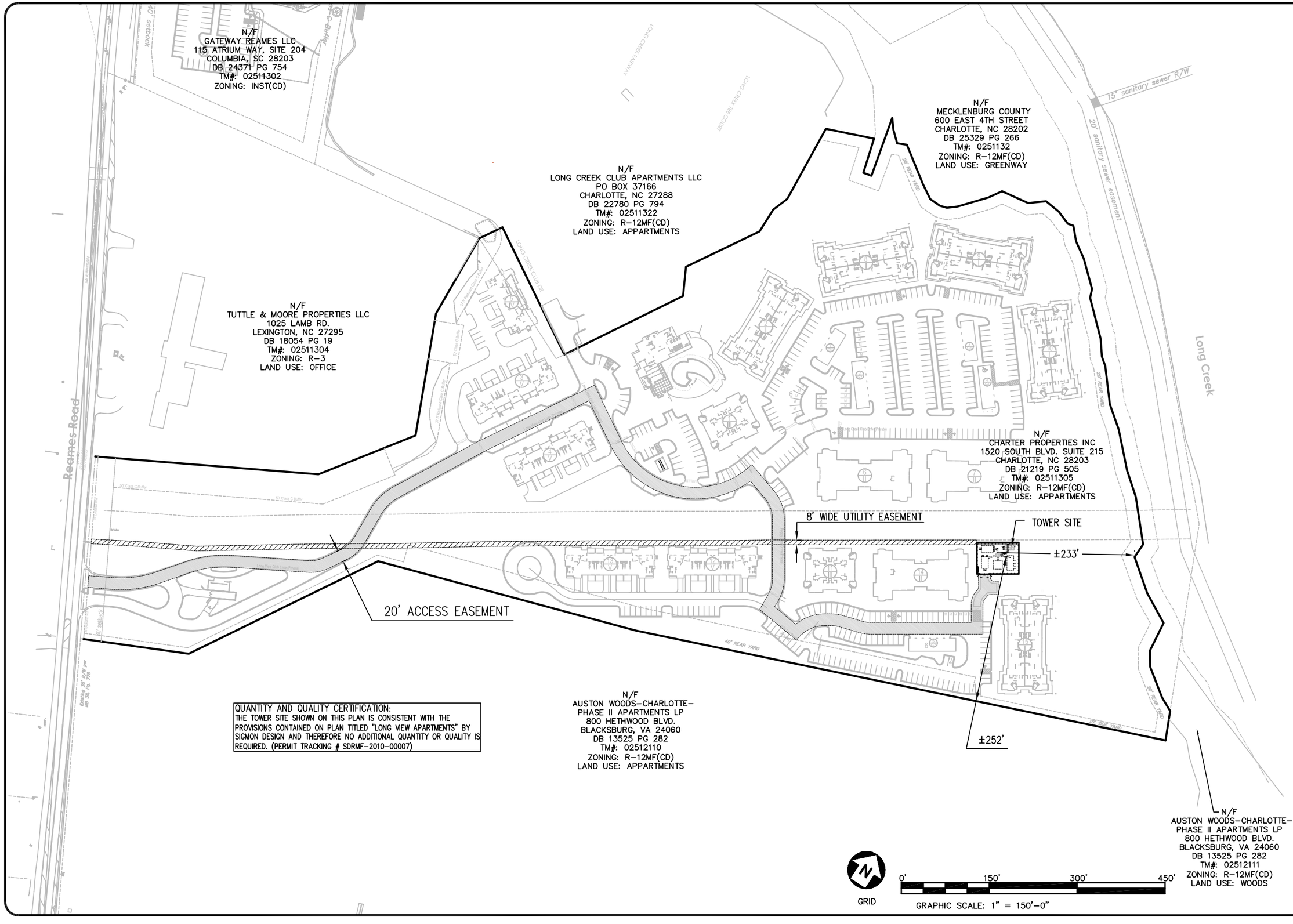
MECKLENBURG COUNTY

ISSUE	REVISION	DATE
1	INITIAL ISSUE	10/25/10

PROJECT NUMBER:
10049.002

SHEET CONTENTS:
GENERAL NOTES AND SYMBOLS

SHEET NUMBER:
C1



QUANTITY AND QUALITY CERTIFICATION:
THE TOWER SITE SHOWN ON THIS PLAN IS CONSISTENT WITH THE PROVISIONS CONTAINED ON PLAN TITLED "LONG VIEW APARTMENTS" BY SIGMON DESIGN AND THEREFORE NO ADDITIONAL QUANTITY OR QUALITY IS REQUIRED. (PERMIT TRACKING # SDRMF-2010-00007)

N/F
AUSTON WOODS-CHARLOTTE-
PHASE II APARTMENTS LP
800 HETHWOOD BLVD.
BLACKSBURG, VA 24060
DB 13525 PG 282
TM#: 02512110
ZONING: R-12MF(CD)
LAND USE: APPARTMENTS

N/F
AUSTON WOODS-CHARLOTTE-
PHASE II APARTMENTS LP
800 HETHWOOD BLVD.
BLACKSBURG, VA 24060
DB 13525 PG 282
TM#: 02512111
ZONING: R-12MF(CD)
LAND USE: WOODS

GRID

0' 150' 300' 450'
GRAPHIC SCALE: 1" = 150'-0"

ACE ENGINEERING, INC.
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NORTH CAROLINA PROFESSIONAL SEAL 029239 ENGINEER THERESA M. ALDRICH 3-25-11

BERKLEY GROUP LLC

BASE TRANSCEIVER SITE
NORTH LAKE MALL
9002 REAMES ROAD
CHARLOTTE, NC 28216
MECKLENBURG COUNTY

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1	INITIAL ISSUE	10/25/10
2	ADDITIONAL LANDSCAPING	03/25/11

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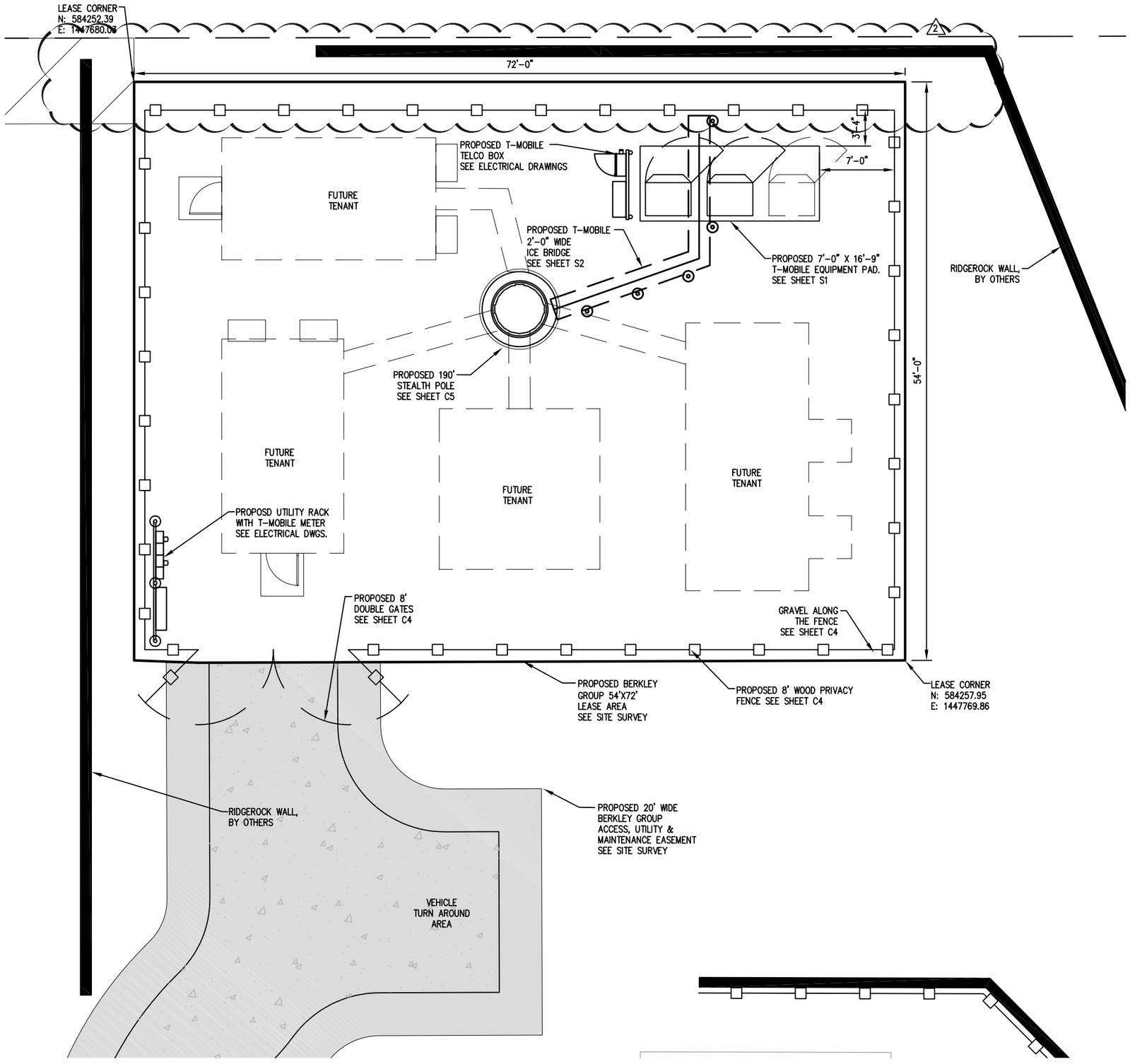
SHEET CONTENTS:
OVERALL SITE PLAN

SHEET NUMBER:
C2



GENERAL NOTES

1. SEE G1 FOR GENERAL ABBREVIATIONS.
2. SEE C1 FOR GENERAL NOTES AND SYMBOLS.
3. SEE SITE SURVEY FOR LIMITS OF LEASE AREA AND ADDITIONAL SURVEY INFORMATION.
4. PARKING FOR SERVICE VEHICLES WILL BE PROVIDED IN THE VEHICLE TURNAROUND AREA.
5. AFTER ALL HEAVY TRAFFIC IS COMPLETE (CONCRETE, TRUCKS, TRAILERS, DRILL RIG, ETC.) CONTRACTOR SHALL REGRADE THE ROAD/PARKING AREA COMPLETELY, ADDING AND COMPACTING ADDITIONAL CRUSHED STONE AS NECESSARY.

NORTH LAKE MALL
PROPOSED 190' STEALTH POLE
LAT. = 35° 20' 28.31" N
LONG. = 80° 51' 07.41" W
ELEV.=773.71'

GRID

0' 10' 20' 30'

GRAPHIC SCALE: 1" = 10'-0"

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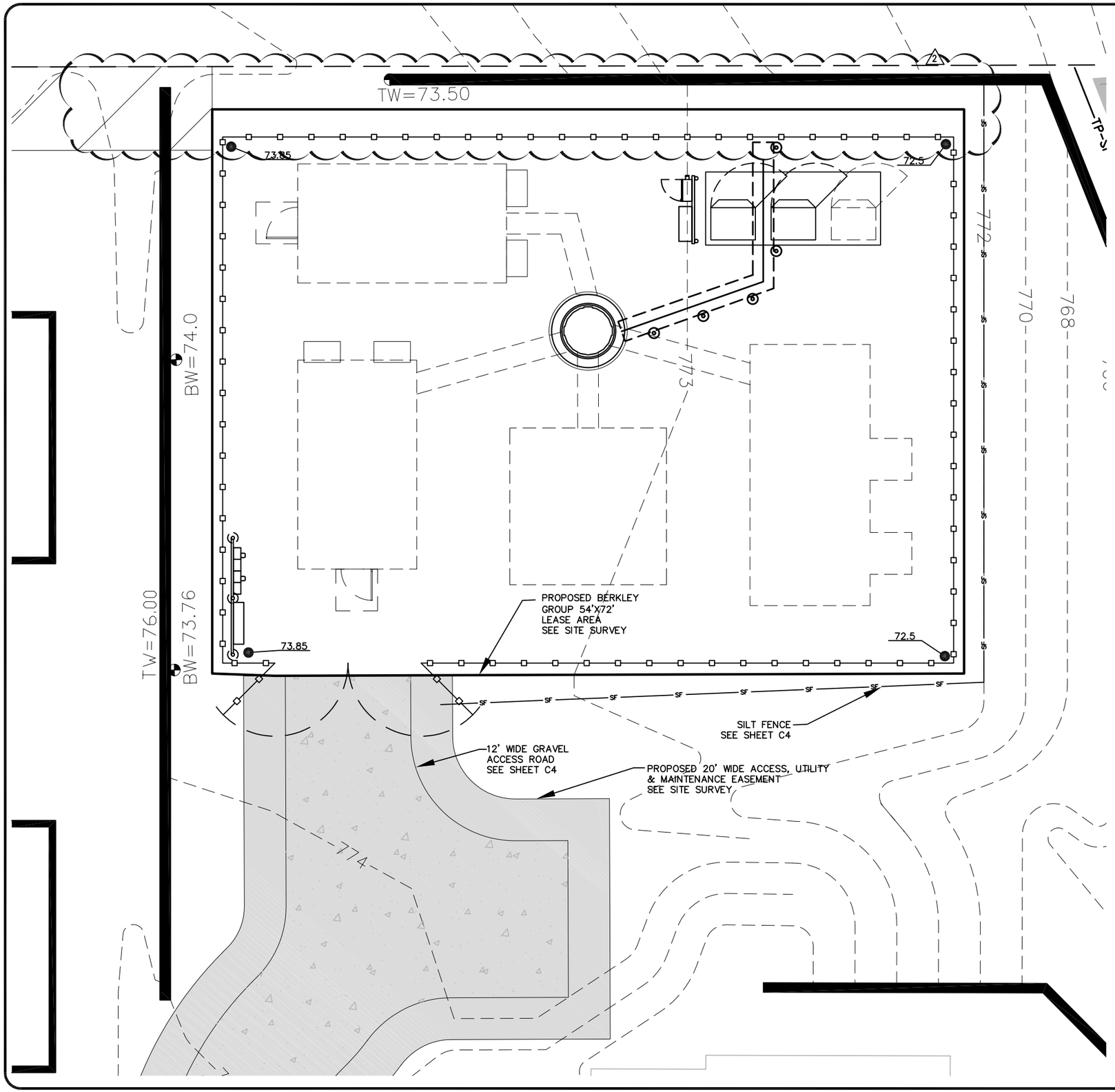
SHEET CONTENTS:

SITE
LAYOUT PLAN

SHEET NUMBER:

C2A



GENERAL NOTES

1. SEE G1 FOR GENERAL ABBREVIATIONS.
2. SEE C1 FOR GENERAL NOTES AND SYMBOLS.
3. SEE SITE SURVEY FOR LIMITS OF LEASE AREA AND ADDITIONAL SURVEY INFORMATION.
4. DISTURBED AREAS TO BE SEEDED AND MULCHED IMMEDIATELY AFTER COMPLETION OF CONSTRUCTION.
5. PLACE STONE TO ENSURE PROPER DRAINAGE AWAY FROM CONCRETE PAD AND EQUIPMENT.

FLOOD INSURANCE RATE MAP
MECKLENBURG COUNTY, NC
AND INCORPORATED AREAS
MAP #: 3710454800J
EFFECTIVE: MARCH 02, 2009
FLOOD ZONE: X

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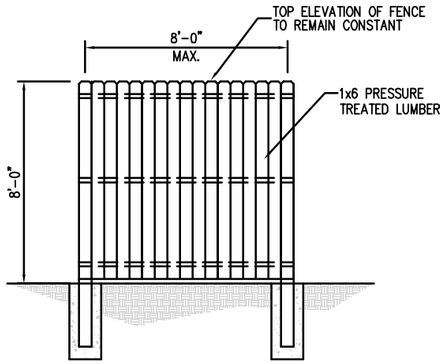
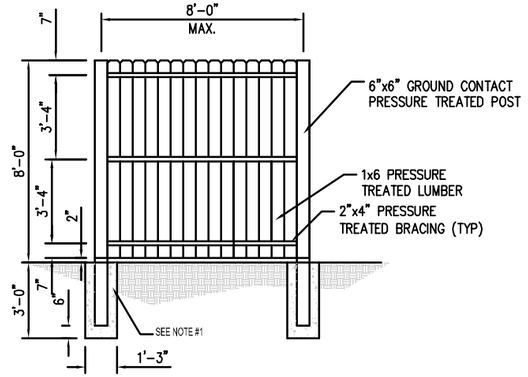
SHEET CONTENTS: SITE GRADING PLAN

SHEET NUMBER: C3

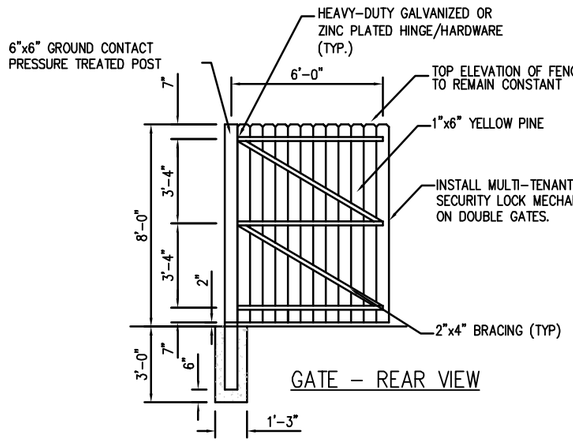


WOOD FENCE – FRONT VIEW



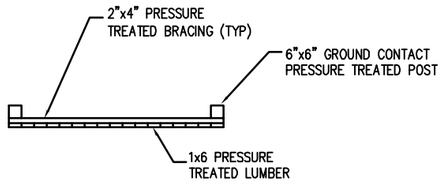
WOOD FENCE – REAR VIEW

1 C4 WOODEN SECURITY FENCE
SCALE:NTS



GATE – REAR VIEW

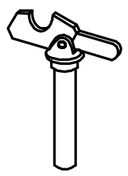
2 C4 WOODEN SECURITY FENCE GATE
SCALE:NTS



WOOD FENCE – PLAN VIEW

FENCE NOTES

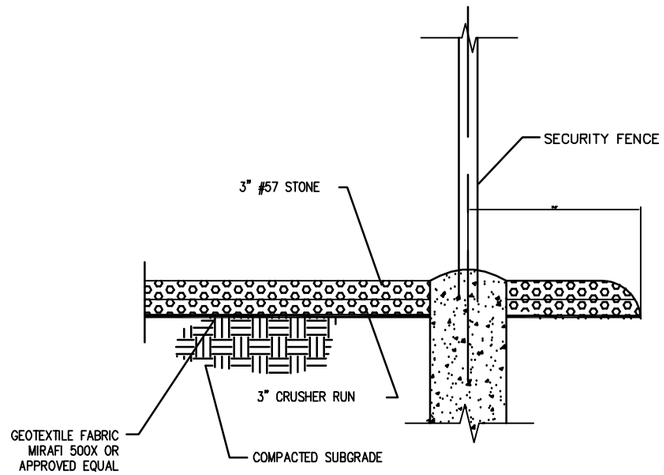
1. POSTS TO SET IN 3000 PSI (MIN.) CONCRETE. BOTTOM OF CONCRETE TO BE 6" MIN. FROM BOTTOM OF POST.
2. PROVIDE TWO GATE KEEPER HOLD OPEN DEVICES FOR SWING GATES. GATE KEEPERS TO ALLOW GATES TO OPEN APPROX. 180 DEGREES. SEE DETAIL ON THIS SHEET



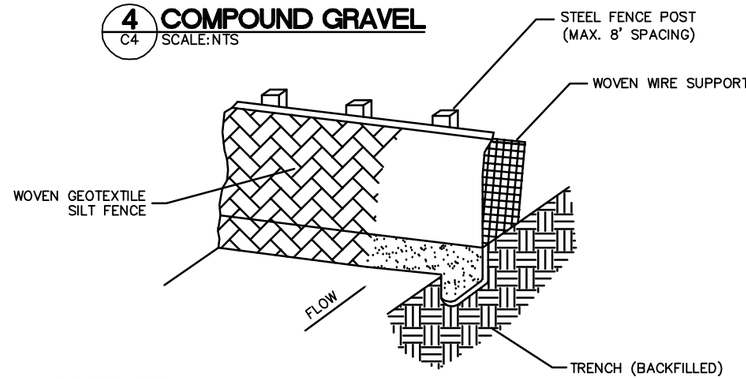
3 C4 GATE KEEPER DETAIL TO HOLD GATES OPEN
SCALE:NTS

GENERAL NOTES

1. SEE G1 FOR GENERAL ABBREVIATIONS.
2. SEE C1 FOR GENERAL NOTES AND SYMBOLS.



4 C4 COMPOUND GRAVEL
SCALE:NTS



SILT FENCE NOTES:

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE.
2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW.
3. THE TRENCH SHOULD BE A MINIMUM OF 6 INCHES DEEP AND ALLOW FOR THE SILT FENCE TO BE LAID IN THE GROUND AND BACKFILLED.
4. SILT FENCE SHOULD BE SECURELY FASTENED TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POSTS.
5. INSPECTION SHALL BE FREQUENT AND REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.
6. SILT FENCE SHALL BE REMOVED WHEN IT HAS SERVED ITS USEFULNESS, SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES AND DISPOSED OF IN AN APPROVED SPOIL SITE.
8. SILT FENCE SHALL BE A MINIMUM HEIGHT OF 30" MEASURED FROM THE EXISTING OR GRADED GROUND.
9. SILT FENCE SHALL BE BURLAP, POLYPROPYLENE FABRIC, NYLON REINFORCED WITH POLYESTER NETTING OR OTHER MATERIAL (AS APPROVED & IF APPLICABLE). THE MULLEN BURST STRENGTH SHALL BE GREATER THAN 150 PSI. THE EDGES SHALL BE TREATED TO PREVENT UNRAVELING.

5 C4 SILT FENCE DETAIL
SCALE:NTS

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BERKLEY GROUP LLC

BASE TRANSCEIVER SITE
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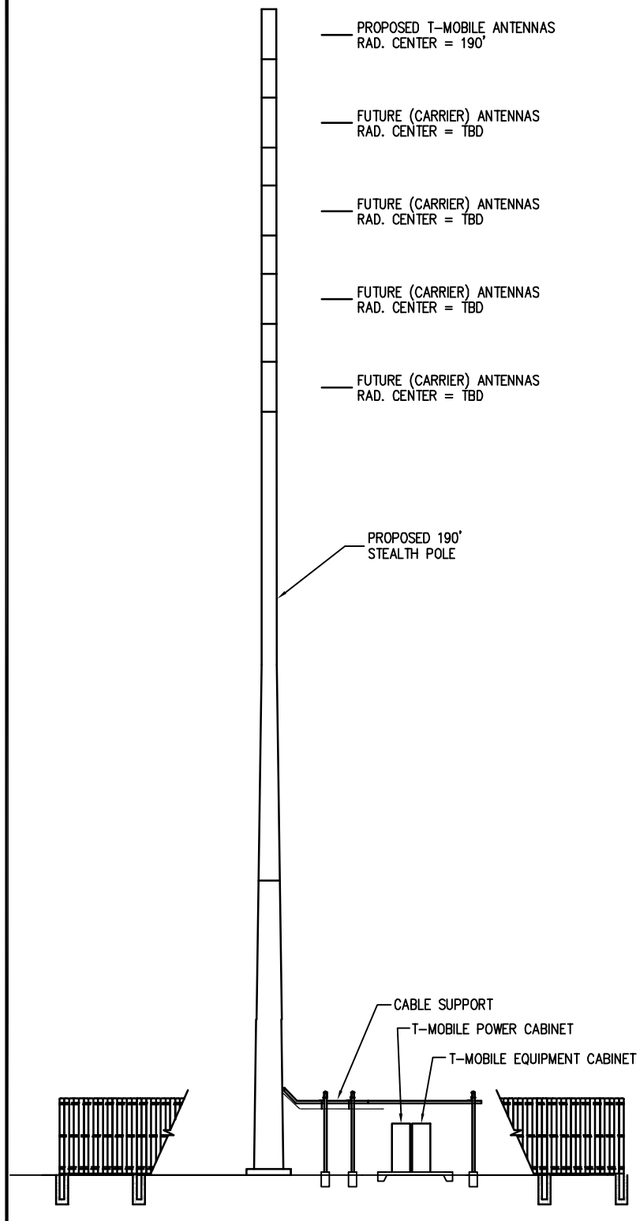
SHEET CONTENTS:

COMPOUND FENCE AND SITE DETAILS

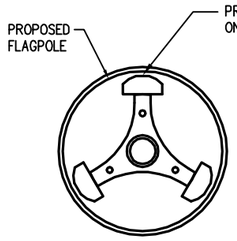
SHEET NUMBER:

C4

NOTE :
THE TOWER DRAWING IS ONLY A GRAPHIC REPRESENTATION OF THE STRUCTURE. THE ACTUAL TOWER IN THE FIELD MAY VARY.



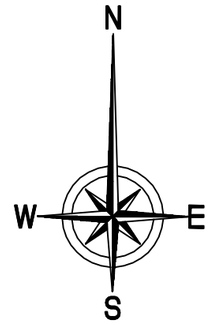
1 C5 **TOWER ELEVATION**
SCALE:NTS



GENERAL NOTES

1. ANTENNA CENTERLINE HEIGHT BASED ON TOP OF FOOTING ELEVATION.
2. ALL ANTENNA BRACKETS PER ANTENNA MANUFACTURER, OR EQUAL. CONTRACTOR TO COORDINATE REQUIRED MECHANICAL DOWNTILT WITH APPROPRIATE CARRIER.
3. ALL ANTENNA INFORMATION TO BE CONFIRMED WITH CARRIER PRIOR TO INSTALLATION.

2 C5 **ANTENNA LAYOUT**
SCALE:NTS



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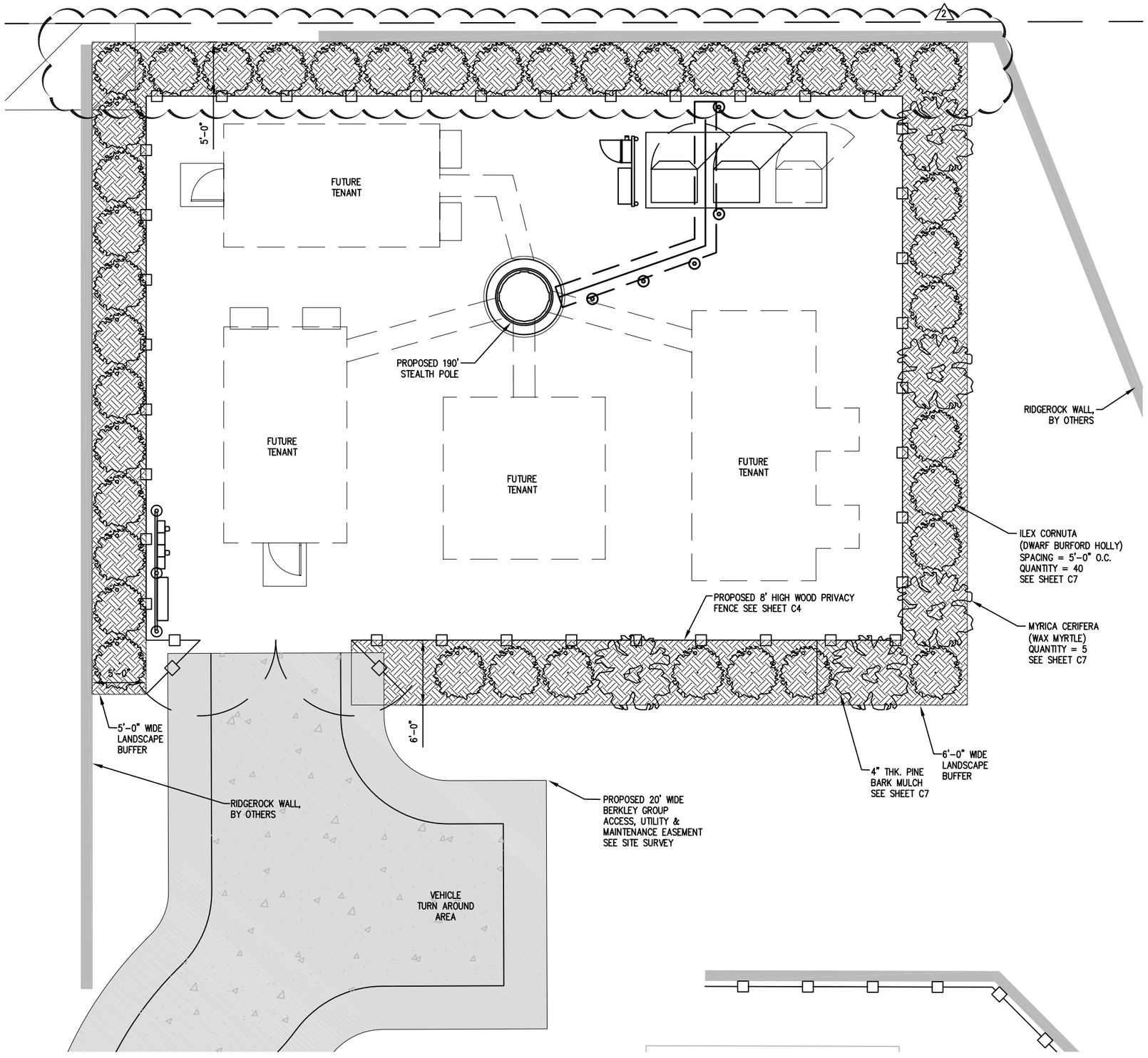
SHEET CONTENTS:

TOWER ELEVATION, ANTENNA LAYOUT, COAXIAL CABLE SCHEDULE AND NOTES

SHEET NUMBER:

C5



GRID

0' 10' 20' 30'

GRAPHIC SCALE: 1" = 10'-0"

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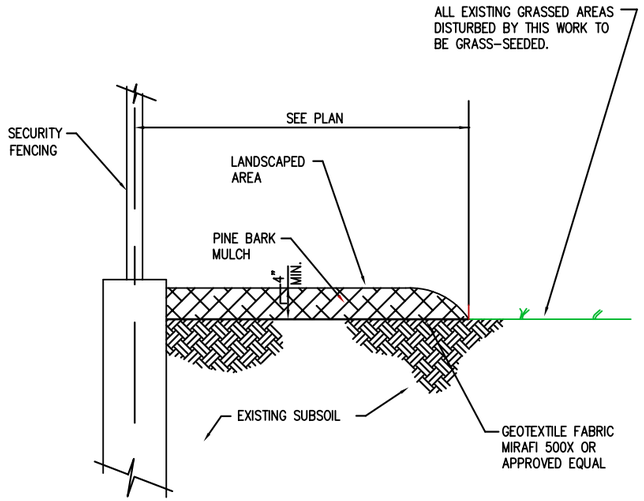
SHEET CONTENTS:

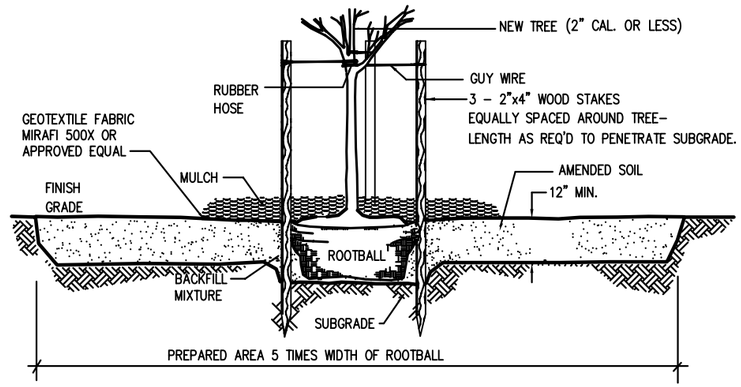
LANDSCAPING PLAN

SHEET NUMBER:

C6



1 C9 **MULCH DETAIL AT FENCE**
SCALE:NTS



2 C9 **TREE PLANTING DETAIL**
SCALE:NTS

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NORTH CAROLINA PROFESSIONAL SEAL 029239 ENGINEER THERESA M. ALDRICH
12-08-10

BERKLEY GROUP LLC

BASE TRANSCEIVER SITE
NORTH LAKE MALL
9002 REAMES ROAD
CHARLOTTE, NC 28216
MECKLENBURG COUNTY

ISSUE	REVISION	DATE
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PROJECT NUMBER:
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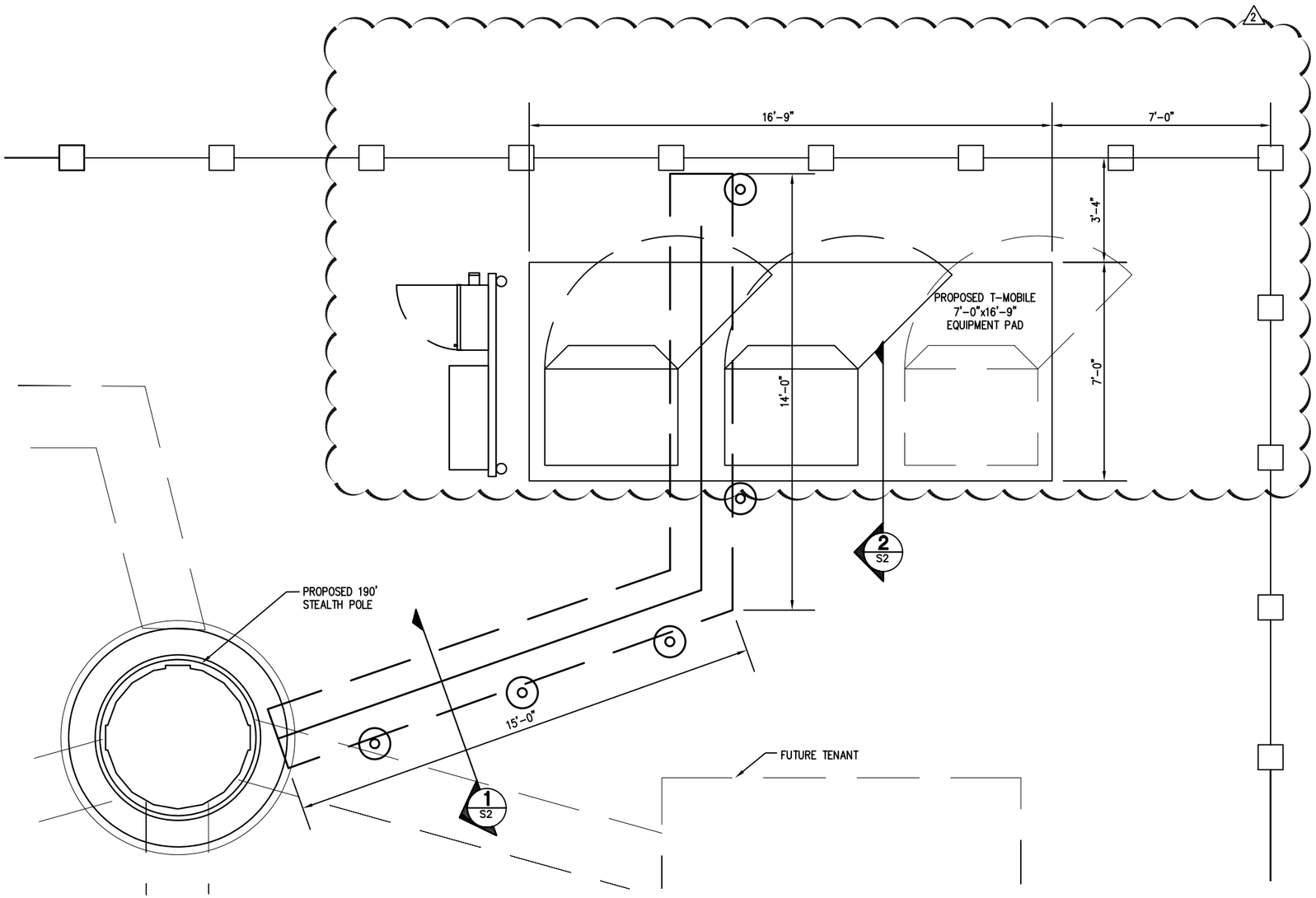
SHEET CONTENTS:
LANDSCAPE DETAILS

SHEET NUMBER:
C7



1 S1 PLAN - EQUIPMENT SLAB
SCALE:1/4" = 1' - 0"

GRID

CONCRETE NOTES

1. PROVIDE CONCRETE THAT COMPLIES WITH THE FOLLOWING SCHEDULE:

ELEMENT	COMPRESSIVE STRENGTH @ 28 DAYS (PSI)	UNIT WEIGHT (PCF)	MAX. COARSE AGGREGATE SIZE (INCHES)
FOOTINGS	4,000	150	3/4
SLABS, TRENCHES & CONDUIT ENCASEMENTS	3,500	150	3/4

2. PROVIDE NEW BILLET STEEL REINFORCING CONFORMING TO THE STANDARDS OF ASTM A615, GRADE 60.
3. NOT USED.
4. PROVIDE ANCHOR BOLTS CONFORMING TO THE STANDARDS OF ASTM A36 UNLESS OTHER WISE NOTED.
5. PROVIDE DETAILING, FABRICATION, AND INSTALLATION OF REINFORCING IN ACCORDANCE WITH ACI 315 AND ACI 318.
6. PROVIDE CLASS "B" REINFORCEMENT SPLICES. PROVIDE STANDARD 90 DEGREE HOOKS IN ACCORDANCE WITH ACI 318, UNLESS NOTED OTHERWISE. STAGGER SPLICES UNLESS SPECIFICALLY NOTED.
7. MAINTAIN THE FOLLOWING COVERAGE FOR REINFORCING STEEL UNLESS ITS OTHERWISE NOTED:
   CONCRETE CAST AGAINST EARTH . . . . . 3"
   CONCRETE EXPOSED TO WEATHER OR EARTH:
   NO. 6 AND LARGER . . . . . 2"
   NO. 5 AND SMALLER . . . . . 1 1/2"
   CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
   SLABS, WALLS & JOISTS
   NO. 11 AND SMALLER . . . . . .3/4"
   BEAM STIRRUPS & COLUMN TIES
   SHELLS AND FOLDED PLATE MEMBERS
   NO. 6 AND LARGER . . . . . .3/4"
   NO. 5 AND SMALLER . . . . . 1/2"
8. ALL EXPOSED CONCRETE EDGES TO HAVE TOOLED FINISH.
9. DO NOT WELD OR BEND ANY REINFORCEMENT IN THE FIELD UNLESS SPECIFICALLY SHOWN.
10. WHERE REQUIRED, PROVIDE DOWELS TO MATCH THE SIZE AND SPACING OF THE MAIN REINFORCING.
11. WIRE BRUSH AND CLEAN CONSTRUCTION JOINTS IMMEDIATELY PRIOR TO POURING NEW CONCRETE.
12. CAREFULLY COORDINATE THE PLACEMENT OF CAST-IN-PLACE EMBEDS AND ANCHOR BOLTS. SET ANCHOR BOLTS WITH A TEMPLATE. SECURELY ATTACH ALL EMBED ITEMS TO FORM WORK OR REINFORCING.

GENERAL NOTES

1. VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO BEGINNING WORK OR FABRICATING MATERIALS. NOTIFY A/E OF DISCREPANCIES BEFORE PROCEEDING WITH ANY PHASE OF WORK.
2. DO NOT SCALE CONTRACT DRAWINGS FOR THE PURPOSE OF ESTABLISHING DIMENSIONS.
3. DETAILS LABELED "TYPICAL DETAILS" ON DRAWINGS APPLY TO SITUATIONS OCCURRING ON THE PROJECT THAT ARE THE SAME OR SIMILAR TO THOSE SPECIFICALLY DETAILED. SUCH DETAILS TO APPLY WHETHER OR NOT THEY ARE KEYED IN AT EACH LOCATION. QUESTIONS REGARDING APPLICABILITY OF "TYPICAL DETAILS," TO BE DETERMINED BY THE ENGINEER.
4. CONTRACTOR TO BE RESPONSIBLE FOR DESIGN, ADEQUACY AND SAFETY OF ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND OTHER METHODS OF CONSTRUCTION.
5. PROVIDE MEASURES NECESSARY TO PROTECT THE STRUCTURE AND SAFETY OF WORKMEN DURING CONSTRUCTION. COMPLY WITH APPLICABLE REQUIREMENTS OF OSHA AND OTHER GOVERNING BODIES HAVING JURISDICTION AT THE SITE.
6. STRIP EXISTING GRADE OF ALL TOPSOIL, VEGETATION AND OTHER UNDESIRABLE MATERIALS. REPLACE ANY SOFT AREAS WITH WELL-COMPACTED FILL.
7. DO NOT PLACE CONCRETE AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE.
8. OPEN EXCAVATIONS MUST REMAIN DRY. BACKFILL AGAINST FOUNDATIONS AS SOON AS PRACTICAL. PUMP OPEN EXCAVATIONS OF WATER IF EXCAVATIONS ARE FLOODED PRIOR TO BACKFILLING. KEEP WATER OR DRAINAGE LINES AT LEAST 10 FT AWAY FROM THE LOCATION OF THE PROPOSED FOUNDATION.

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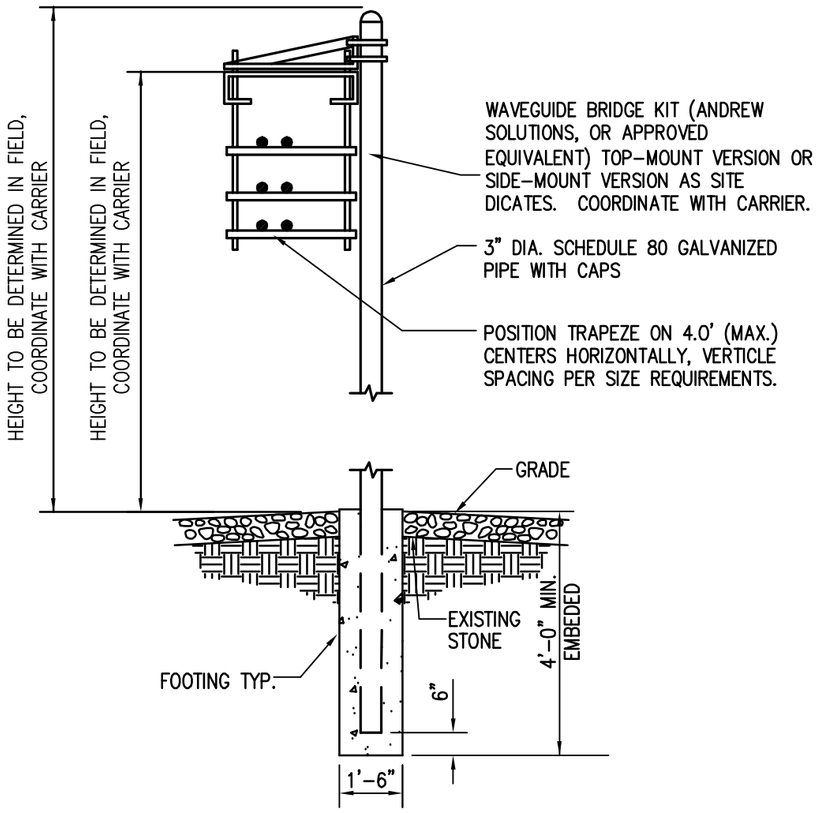
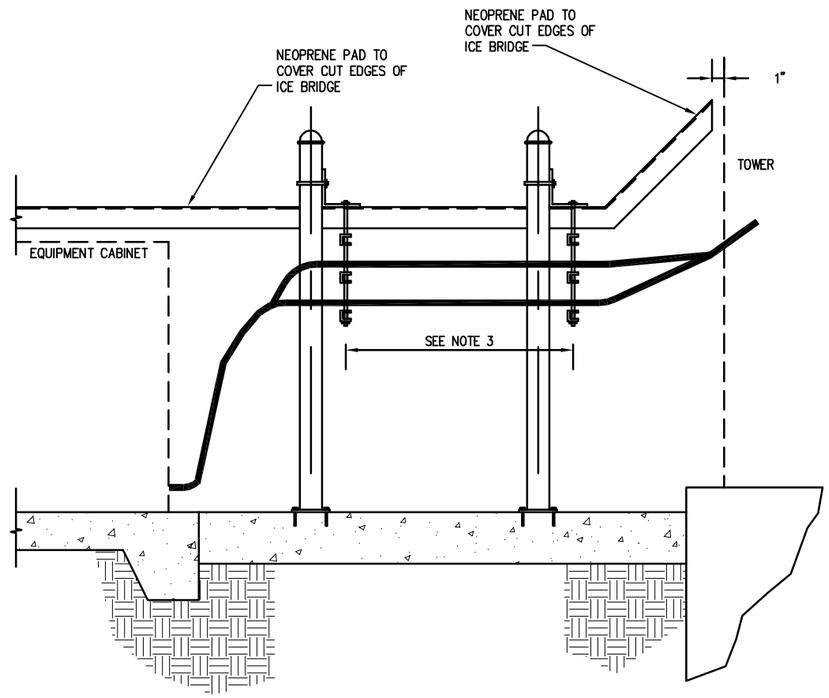
SHEET CONTENTS:
EQUIPMENT SLAB PLAN AND NOTES

SHEET NUMBER:
S1

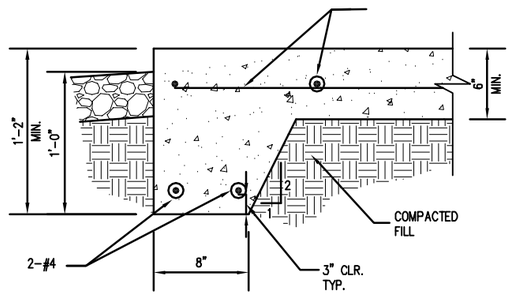




NOTES

1. SUPPORT SHALL BE AS REQUIRED FOR SHELTER (12'-0" MAX.).
2. SUPPORT POSTS TO BE SPACED @ 4'-0" MAX.
3. CADWELD EACH SUPPORT LEG TO GROUND RING.
4. COAX SUPPORT SPACING TO BE 3'-0" O.C. MAX.
5. ICE BRIDGE SHALL BE GALVANIZED GRIP-STRUT.
6. CONTRACTOR TO SUPPLY CABLE SUPPORT STRUCTURE.

1 S2 SECTION AT CABLE SUPPORT/ICEBRIDGE
SCALE: N.T.S.



2 S2 SLAB EDGE DETAIL
SCALE: N.T.S.

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SHEET CONTENTS:
SECTIONS AND DETAILS

SHEET NUMBER:
S2

GENERAL CONSTRUCTION NOTES:

1. THE FACILITY IS AN UNOCCUPIED WIRELESS FACILITY.
2. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE. THE WORK WILL INCLUDE PROVIDING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
3. ALL EXISTING UTILITIES, FACILITIES, CONDITIONS, AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ARCHITECT/ ENGINEER AND OWNER ASSUME NO RESPONSIBILITY AS TO SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF EXISTING UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY, DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING EXISTING UTILITIES.
4. PRIOR TO THE SUBMISSION OF BIDS, THE CONTRACTORS WILL VISIT THE JOB SITE AND BE RESPONSIBLE FOR ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS, AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES ARE TO BE BROUGHT TO THE ATTENTION OF THE IMPLEMENTATION ENGINEER AND ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK.
5. WRITTEN AUTHORIZATION IS REQUIRED BEFORE STARTING WORK ON ANY ITEM NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.
6. PRIOR TO SITE EXCAVATION, CONTRACTOR SHALL LOCATE EXISTING SERVICES. DAMAGE CAUSED TO EXISTING SERVICES SHALL BE REPAIRED BY CONTRACTOR AT CONTRACTOR'S EXPENSE.
7. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY INDICATED OTHERWISE OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.
8. ALL WORK PERFORMED AND MATERIALS INSTALLED WILL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES INCLUDING THE 2009 NC BUILDING CODE, 2008 NEC AND 2006 IBC WITH NC AMENDMENTS. THE CONTRACTOR WILL GIVE ALL NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ELECTRICAL SYSTEMS SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS, AND LOCAL AND STATE JURISDICTIONAL CODES, ORDINANCES, AND APPLICABLE REGULATIONS.
9. THE GENERAL CONTRACTOR WILL SUPERVISE AND DIRECT THE WORK USING THE BEST SKILLS AND ATTENTION. THE CONTRACTOR WILL BE SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT INCLUDING CONTACT AND COORDINATION WITH THE OWNER AND WITH THE LANDLORD'S AUTHORIZED REPRESENTATIVE.
10. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR CONDITIONS, AND SUCH MODIFICATIONS WILL BE INCLUDED AS PART OF THE WORK.
11. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLAT OF THE SURVEY DRAWING, WILL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR WILL RELY SOLELY ON THE PLAT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND WILL NOTIFY THE ARCHITECT/ENGINEER PRIOR TO PROCEEDING WITH THE WORK IF ANY DISCREPANCY IS FOUND BETWEEN THE VARIOUS ELEMENTS OF THE WORKING DRAWINGS AND THE TRUE NORTH ORIENTATION AS DEPICTED ON THE PLAT OF SURVEY. THE CONTRACTOR WILL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.
12. COORDINATE WORK WITH LOCAL UTILITY COMPANY AND CONSTRUCT TO UTILITY COMPANY ENGINEERING PLANS AND SPECIFICATIONS. PROVIDE TRENCHING AND BACKFILL, AND PAY ALL UTILITY FEES UNLESS NOTED OTHERWISE. THE WORK WILL INCLUDE PROVIDING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
13. BEFORE PURCHASING EQUIPMENT, THE ELECTRICAL CONTRACTOR SHALL CONTACT THE POWER COMPANY AND GET IN WRITING THE MAXIMUM SHORT CIRCUIT CURRENT THE POWER COMPANY IS FURNISHING TO THE POINT OF SERVICE. ALL EQUIPMENT SHALL BE RATED AND COORDINATED TO NO LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT PROVIDED BY POWER COMPANY, WITH A MINIMUM SHORT CIRCUIT RATING OF 10,000 AMPS.

SERVICE ROUTING NOTES: (DWG E2)

1. CONTRACTOR SHALL TERMINATE THE POWER CABLES AT THE UTILITY METER LOCATED AT THE METER CENTER. COORDINATE EXACT METER BASE TYPE AND REQUIREMENTS WITH LOCAL UTILITY.
2. CONDUIT LINES SHALL HAVE A CONTINUOUS SLOPE DOWNWARD AND AWAY FROM THE EQUIPMENT TO THE PROPERTY LINE SO THAT WATER WILL FLOW AWAY FROM THE EQUIPMENT. TRENCHES SHALL BE EXCAVATED ALONG STRAIGHT LINES BEFORE CONDUITS ARE LAID SO THAT THE ELEVATION CAN BE ADJUSTED, IF NECESSARY, TO AVOID UNSEEN OBSTRUCTIONS. MANUFACTURED BENDS SHALL HAVE A MINIMUM RADIUS OF 36" FOR CONDUITS.
3. ALL CONDUITS SHALL BE SEALED WEATHER TIGHT ON INTERIOR AND EXTERIOR OF EQUIPMENT TO PREVENT MOISTURE INFILTRATION. SEALANTS SHALL BE IDENTIFIED FOR USE WITH THE CABLE INSULATION SHIELD OR OTHER COMPONENTS.
4. CELLULAR EQUIPMENT SHELTER SHALL BE FURNISHED BY RESPECTIVE CARRIER AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL OBTAIN SHELTER DRAWINGS AND SPECIFICATIONS TO VERIFY EXACT INSTALLATION DETAILS AND REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY ADDRESSED WITHIN THESE DRAWINGS.
5. CONTRACTOR SHALL FURNISH AND INSTALL PULL BOXES IN CONDUIT RUNS AT EACH OCCURRENCE WHERE EXCEEDING 360 DEGREES IN TOTAL BENDS OR 300' IN LENGTH AT A CONVENIENT INTERMEDIATE LOCATION. PULL BOXES SHALL BE SIZED PER NEC 370.
6. ON SPARE CONDUITS, PROVIDE 2 PULL STRINGS SECURELY FASTENED AT EACH END OF THE CONDUITS. PULL STRINGS SHALL BE 200LB TEST POLYETHYLENE CORD. PROVIDE CAP ON END OF THE CONDUITS AND MARK AS SHOWN ON THE SERVICES ROUTING PLAN.
7. MAINTAIN MINIMUM BENDING RADIUS FOR CONDUIT INSTALLATIONS PER CONDUIT/FIBER MANUFACTURER RECOMMENDATIONS.
8. REFERENCE E4 FOR ONE-LINE, CONDUIT AND WIRE SIZE, AND SPECIFICATIONS.
9. PROVIDE MINIMUM OF 36 INCHES WORK CLEARANCE IN FRONT OF EQUIPMENT AND EQUIPMENT RACKS.
10. WARNING TAPE SHALL BE PLACED IN TRENCHES AND SHALL READ EITHER "UTILITIES" OR "ELECTRIC".
11. ENDS OF WARNING TAPE SHALL EXTEND 6" MINIMUM ABOVE FINAL GRADE.
12. ALL CONDUIT SHALL BE SCHEDULE 40 OR 80 PVC UNLESS NOTED OTHERWISE. EXPOSED CONDUIT SHALL BE UV RESISTANT.

GROUNDING NOTES: (DWG E3)

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION REQUIREMENTS AND CONSTRUCTION MAY VARY ACCORDING TO SITE CONDITIONS. VERIFY EXACT EQUIPMENT GROUNDING WITH EQUIPMENT MANUFACTURER AND OWNER.
2. GROUND RODS SHALL BE DRIVEN AT 10'-0" INTERVALS OF THE GROUND RING OR RADIALS. GROUND RODS SHALL NOT BE PLACED CLOSER THAN 6'-0" APART PER NEC 250-56.
3. INSTALL GROUND CONDUCTORS AND GROUND RODS A MINIMUM OF 24" (MAXIMUM 36") FROM EQUIPMENT CONCRETE SLAB, SPREAD FOOTING, OR FENCE.
4. ALL BELOW GRADE CONNECTIONS: EXOTHERMIC WELD TYPE; ABOVE GRADE CONNECTIONS: EXOTHERMIC WELD TYPE (FENCE AND TOWER) OR MECHANICAL TYPE (2-HOLE LUGS WITH MECHANICAL CONNECTORS AT EQUIPMENT). ALL HARDWARE SHALL BE STAINLESS STEEL WITH LOCKWASHERS.
5. CLEAN EXOTHERMIC WELD CONNECTIONS ON GALVANIZED SURFACES THOROUGHLY AND COVER W/ (2) TWO COATS SHERWIN WILLIAMS GALVITE PAINT B350W3 (OR EQUIVALENT).
6. ALL ELECTRICAL AND MECHANICAL GROUND CONNECTIONS SHALL BE TO BARE BRIGHT SURFACES AND HAVE ANTI-OXIDATION COMPOUND APPLIED TO CONNECTION (THOMAS AND BETTS KOPR-SHIELD).
7. THE MINIMUM BEND RADIUS FOR GROUND CONDUCTORS SHALL BE 8 INCHES FOR #6 AWG WIRE AND 12 INCHES FOR #2 AWG AND GREATER WIRE.
8. ITEMS TO BE BONDED TO THE GROUND RING INCLUDE BUT ARE NOT LIMITED TO: CORNER FENCE POSTS AND FENCE POSTS WITHIN 6' OF GROUND RING, GROUND BUS BARS, EQUIPMENT CABINETS, EQUIPMENT RACKS, CABLE SUPPORT STRUCTURES, TOWER, GENERATOR, ANY OTHER METAL OBJECTS WITHIN 6' OF GROUND RING.
9. GROUNDING INSTALLATIONS AND CONNECTIONS SHALL BE MADE BY ELECTRICAL CONTRACTOR.
10. OBSERVE N.E.C. AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.
11. GROUNDING ATTACHMENT TO TOWER SHALL BE PER MANUFACTURER'S RECOMMENDATIONS OR AT GROUNDING POINTS PROVIDED (3 MINIMUM).
12. GROUND COAXIAL RF CABLES USING GROUND KITS TO GROUND BARS AT TOP, MIDDLE, AND BOTTOM OF TOWER, SEE DRAWING E7 FOR DETAILS.
13. ALL EXPOSED GROUND LEADS SHALL BE ROUTED INSIDE 1/2" (MIN.) PVC OR FLEXIBLE PVC CONDUIT (NON-METALLIC), TO 18" (MIN.) BELOW GRADE.

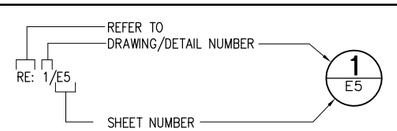
ABBREVIATIONS

A, AMP	AMPERES	LTG	LIGHTING
ABT	ABOUT	MIGB	MASTER ISOLATED GROUND BAR
AFF	ABOVE FINISHED FLOOR	MCB	MAIN CIRCUIT BREAKER
AFG	ABOVE FINISHED GRADE	MLO	MAIN LUGS ONLY
AWG	AMERICAN WIRE GAUGE	MTD	MOUNTED
BCW	BARE COPPER WIRE	N	NEUTRAL
BLDG	BUILDING	NEC	NATIONAL ELECTRICAL CODE
BTS	BASE TRANSMISSION SYSTEM	NIC	NOT IN CONTRACT
C	CONDUIT	NO	NUMBER
CAT	CATALOG	NTS	NOT TO SCALE
CIGBE	COAX ISOLATED GROUND BAR EXTERNAL	PPC	POWER PROTECTION CABINET
CKT	CIRCUIT	RECEPT	RECEPTACLE
DWG	DRAWING(S)	RGS	RIGID GALVANIZED STEEL
EQPT	EQUIPMENT	REQD	REQUIRED
EXIST	EXISTING	SCH	SCHEDULE
FBO	FURNISHED BY OTHERS	TYP	TYPICAL
FWE	FURNISHED W/ EQUIPMENT	UG	UNDERGROUND
GFI	GROUND FAULT INTERRUPTER	UNO	UNLESS NOTED OTHERWISE
GND	GROUND	V	VOLT(S)
GPS	GLOBAL POSITIONING SYSTEM	WP	INDICATES WEATHERPROOF
JB	JUNCTION BOX	XFMR	TRANSFORMER

ELECTRICAL LEGEND

(1)	DRAWING NOTE REFERENCE (NOTES BY SYMBOL)
⊗	5/8"ø X 8'-0" LONG COPPER CLAD STEEL GROUND ROD
⊠ ⊗	5/8"ø X 8'-0" LONG COPPER CLAD STEEL GROUND ROD IN INSPECTION SLEEVE
•	EXOTHERMIC WELD CONNECTION
■	MECHANICAL CONNECTION
(WH)	METER
	CIRCUIT BREAKER
GEN	GENERATOR
	GENERATOR RECEPTACLE
	DISCONNECT SWITCH
G	GROUND CONDUCTOR, TYPE AND SIZE AS NOTED, 18"-24" BELOW GRADE
G	EXISTING UNDERGROUND GROUND CONDUCTOR
	EXPOSED POWER CIRCUIT OR CONDUIT, TYPE AND SIZE AS NOTED
E	UNDERGROUND ELECTRIC POWER CONDUIT, TYPE AND SIZE AS NOTED
T	UNDERGROUND TELCO CONDUIT, TYPE AND SIZE AS NOTED
OHE	OVERHEAD ELECTRIC POWER LINE, TYPE AND SIZE AS NOTED
OHT	OVERHEAD TELCO LINE, TYPE AND SIZE AS NOTED

DETAIL REFERENCE KEY



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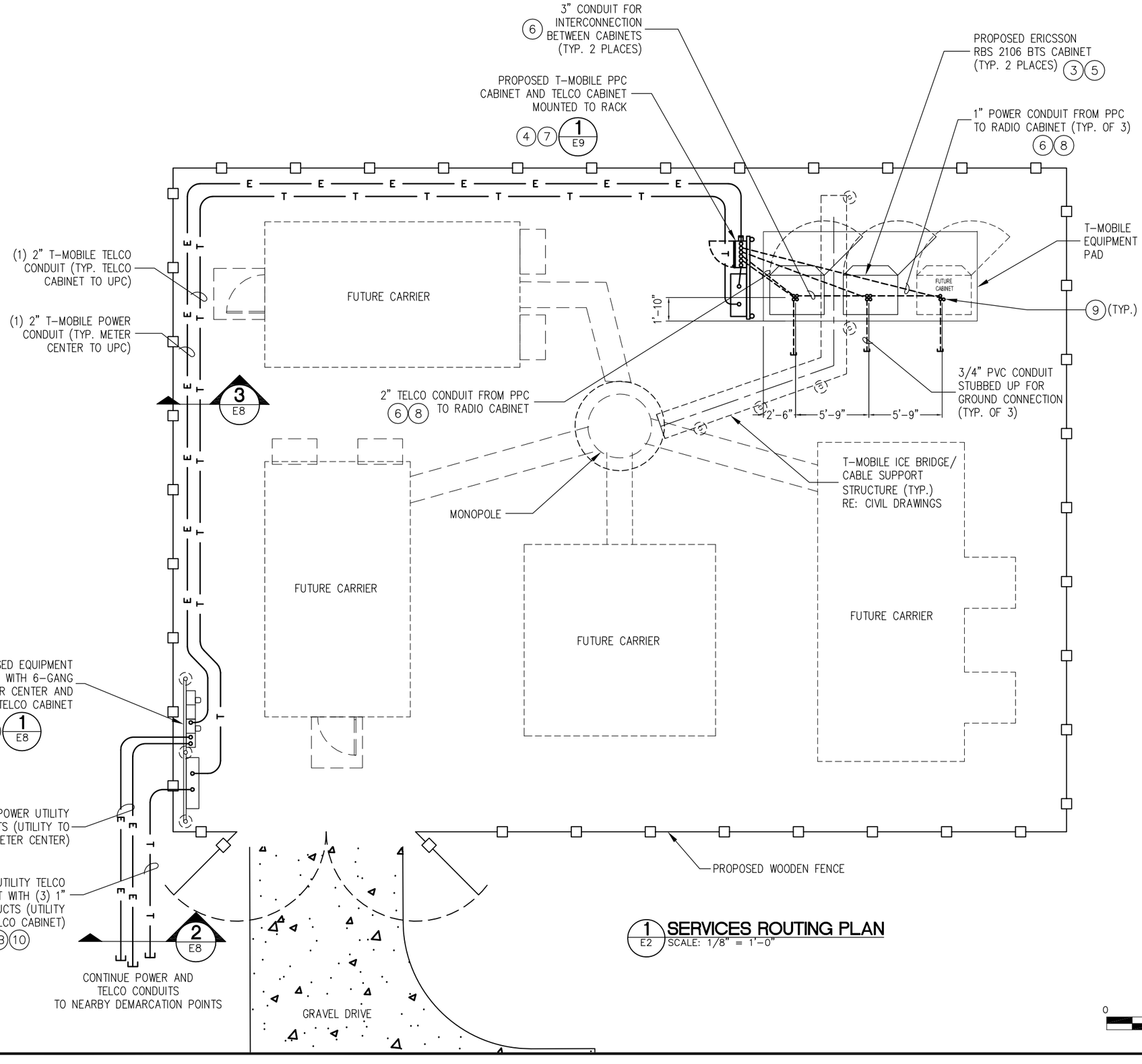
ISSUE	REVISION	DATE
1	INITIAL ISSUE	10/25/10

PROJECT NUMBER:
10049.002
SHEET CONTENTS:
GENERAL ELECTRICAL NOTES AND LEGEND
SHEET NUMBER:
E1



1 SERVICES ROUTING PLAN
E2 SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO DRAWING E1 FOR GENERAL NOTES PERTAINING TO THIS DRAWING.
2. PROVIDE TWO (2) SIGNS, 8" x 12", WHITE BACKGROUND WITH 4" BLACK LETTERS, ON POWER CABINET WITH NOTES AS FOLLOWS:
   (1.) SITE NUMBER [T-MOBILE SITE NUMBER]
   (2.) "IN CASE OF EMERGENCY CALL [PHONE NUMBER]"
   INSTALL ONE SIGN ON POWER CABINET DOOR CLOSEST TO GATE USING LIQUID NAILS OR EQUAL. OWNER MAY FURNISH AND CONTRACTOR SHALL INSTALL ADDITIONAL SIGNAGE AS REQUIRED. COORDINATE WITH CONSTRUCTION MANAGER FOR SITE NUMBER AND EXACT PLACEMENT LOCATIONS.
3. PROVIDE ONE (1) SIGN, 8" x 12", WHITE BACKGROUND WITH 4" BLACK LETTERS TO INCLUDE
   (1.) E-911 STREET ADDRESS
   INSTALL SIGN ON SITE MAIN GATE USING ALUMINUM HOG RINGS. FURNISH AND INSTALL ADDITIONAL SIGNAGE AS REQUIRED BY CONSTRUCTION MANAGER. REFER TO T-MOBILE SPEC. SECTION 10.
4. CONTRACTOR SHALL VERIFY EXACT CONDUIT ROUTING AND PENETRATION LOCATIONS WITH CONSTRUCTION MANAGER AND EQUIPMENT MANUFACTURER/SPECIFICATIONS.

NOTES BY SYMBOL "◯"

1A. ROUTE TWO (2) 3" POWER CONDUITS TO POWER DEMARCATION POINT AS DIRECTED BY LOCAL UTILITY. COORDINATE CONNECTION OF SERVICES WITH LOCAL UTILITY COMPANY.

1B. ROUTE ONE (1) 4" TELCO CONDUIT TO TELCO DEMARCATION POINT AS DIRECTED BY LOCAL UTILITY. COORDINATE CONNECTION OF SERVICES WITH LOCAL UTILITY COMPANY.

2. UTILITY RACK WITH 6-GANG METER CENTER AND TELCO CABINET, FURNISHED AND INSTALLED BY CONTRACTOR.
3. RBS 2106 CABINET SHALL BE FURNISHED BY T-MOBILE AND INSTALLED BY 3rd PARTY VENDOR.
4. POWER PROTECTION CABINET (PPC) SHALL BE FURNISHED BY T-MOBILE AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL OBTAIN PPC CABINET DRAWINGS AND SPECIFICATIONS FOR DETAILS AND REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY ADDRESSED IN THESE DRAWINGS.
5. CONTRACTOR SHALL OBTAIN EQUIPMENT DRAWINGS AND SPECIFICATIONS AND VERIFY EXACT CONDUIT STUB-UP LOCATIONS PRIOR TO TRENCHING.
6. CONTRACTOR SHALL PROVIDE TWO (2) PULL STRINGS LABELED "T-MOBILE" IN EACH CONDUIT. PULL STRINGS SHALL BE 200LB TEST POLYETHYLENE CORD.
7. T-MOBILE TELCO CABINET SHALL BE FURNISHED AND INSTALLED BY CONTRACTOR. VERIFY EXACT REQUIREMENTS WITH T-MOBILE.
8. REFER TO ONE LINE DIAGRAM E4 FOR CONDUCTOR SIZES.
9. CONTRACTOR SHALL TURN UP CONDUITS 6" ABOVE PAD, CAP AND LABEL. PROVIDE NEOPRENE GASKET AROUND CONDUITS WHERE THEY PENETRATE THE SLAB TO KEEP FROM BREAKING.
10. FIELD VERIFY EXACT LOCATION OF UTILITY SERVICES AND ROUTE CONDUITS AS REQUIRED TO MAKE CONNECTIONS. COORDINATE EXACT ROUTING AND CONNECTION OF CONDUITS WITH EXISTING FIELD CONDITIONS, OWNER, AND LOCAL UTILITIES.

APPROX.

0 8 16 24
GRAPHIC SCALE: 1/8" = 1'-0"

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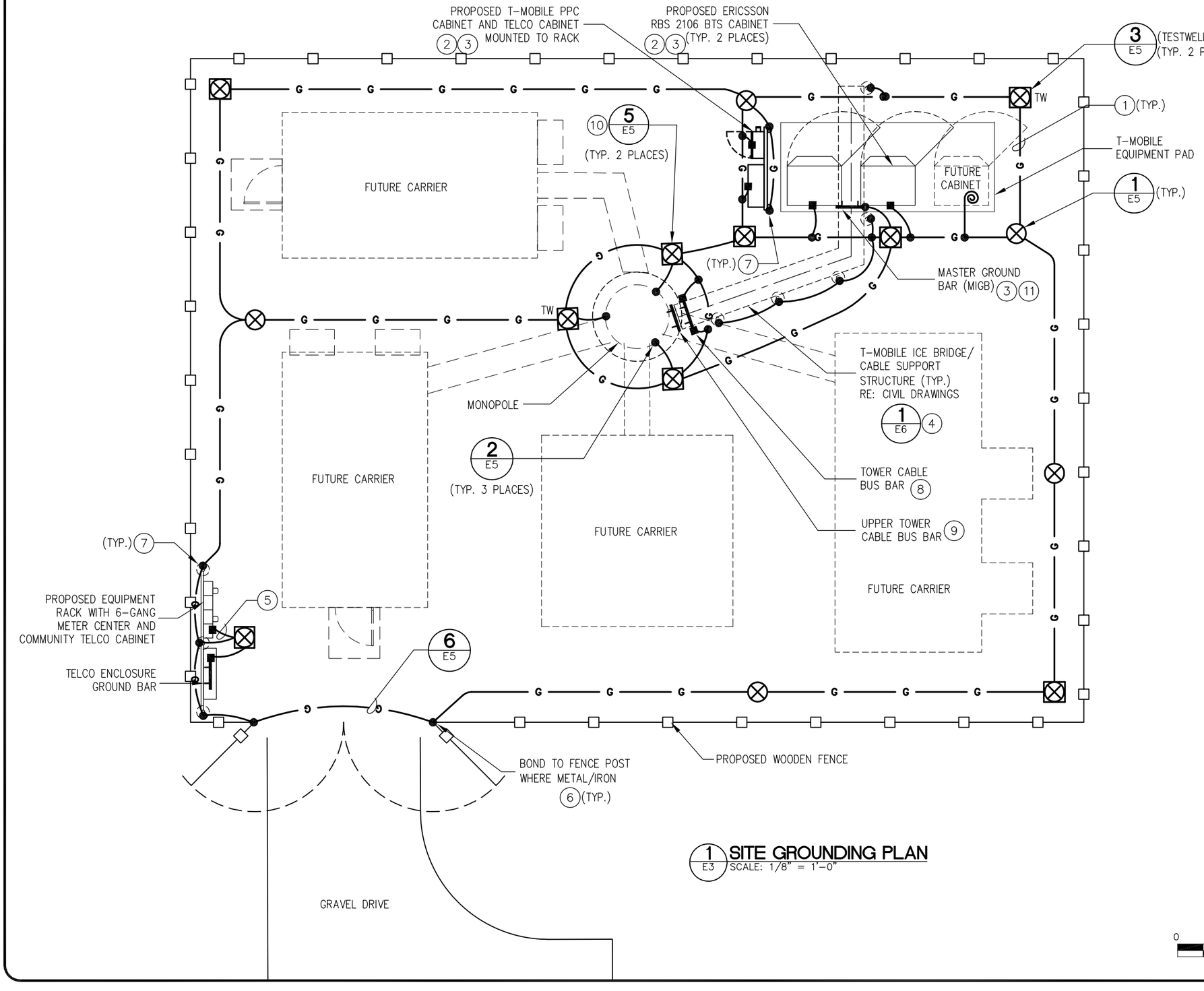
ISSUE	REVISION	DATE
1	INITIAL ISSUE	10/25/10

PROJECT NUMBER:
10049.002
SHEET CONTENTS:

SERVICES ROUTING PLAN

SHEET NUMBER:

E2



1 E3 SITE GROUNDING PLAN
SCALE: 1/8" = 1'-0"

GENERAL NOTES

1. REFER TO DRAWING E1 FOR GENERAL NOTES PERTAINING TO THIS DRAWING.

NOTES BY SYMBOL "◯"

1. GROUNDING SYSTEM SHALL BE COMPRISED OF #2 AWG SOLID TINNED BARE COPPER CONDUCTOR, UNLESS NOTED OTHERWISE, BURIED AT 18-24" BELOW FINISHED GRADE. ALL CONNECTIONS SHALL BE EXOTHERMIC WELD, UNLESS NOTED OTHERWISE.
2. BOND CABINETS TO EQUIPMENT GROUND RING PER MANUFACTURERS RECOMMENDATIONS. GROUNDING OF CABINETS SHALL BE ACCOMPLISHED BY ROUTING #2 AWG WIRE FROM GROUND RING, THROUGH 3/4" PVC CONDUIT, AND INTO BASE OF CABINET VIA PENETRATION PROVIDED.
3. CONTRACTOR SHALL GROUND CABINETS, TMA'S, ANTENNA'S AND RF CABLES PER T-MOBILE REQUIREMENTS. REFER TO DRAWING E8.02 AND T-MOBILE CONSTRUCTION MANAGER FOR EXACT REQUIREMENTS.
4. BOND ICE BRIDGE/CABLE SUPPORT POSTS FROM BASE TO GROUND RING USING #2 AWG SOLID BARE TINNED COPPER CONDUCTOR EXOTHERMICALLY WELDED AT EACH END. ADDITIONALLY BOND CENTER POST AND EACH ICE BRIDGE SECTION USING #2 AWG GREEN INSULATED STRANDED WIRE TO ENSURE CONTINUITY BETWEEN EACH MEMBER.
5. GROUNDING ELECTRODE. PROVIDE #2/0 GREEN INSULATED STRANDED COPPER GROUNDING ELECTRODE CONDUCTOR TO METER CENTER NEUTRAL-TO-GROUND BOND PER NEC 250. REFER TO ONE-LINE DIAGRAM ON E4.
6. WHERE REQUIRED, BOND TO METAL FENCE POSTS USING EXOTHERMIC WELD.
7. BOND LEGS OF UTILITY RACK TO GROUNDING SYSTEM WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR USING EXOTHERMIC WELD.
8. LOWER TOWER CABLE GROUNDING BUS BAR, RE: 1/E7, 5/E7. MOUNT TO TOWER AND BOND TO GROUND RING USING TWO (2) #2 AWG SOLID TINNED COPPER CONDUCTORS. BUS BAR WILL BE SUPPLIED BY CONTRACTOR.
9. UPPER TOWER CABLE GROUNDING BUS BAR. BOND DIRECTLY TO TOWER, RE: 1/E7, 4/E7. BUS BAR WILL BE SUPPLIED BY CONTRACTOR.
10. COORDINATE EXACT PLACEMENT OF GROUND RODS WITH FOUNDATION PROVIDED (i.e. SHIFT TO OUTSIDE OF MAT IF REQUIRED).
11. CONTRACTOR SHALL FURNISH AND INSTALL 24"X4"X1/4" COPPER TINNED MASTER GROUND BAR (MGB).

APPROX.

0 8 16 24
GRAPHIC SCALE: 1/8" = 1'-0"

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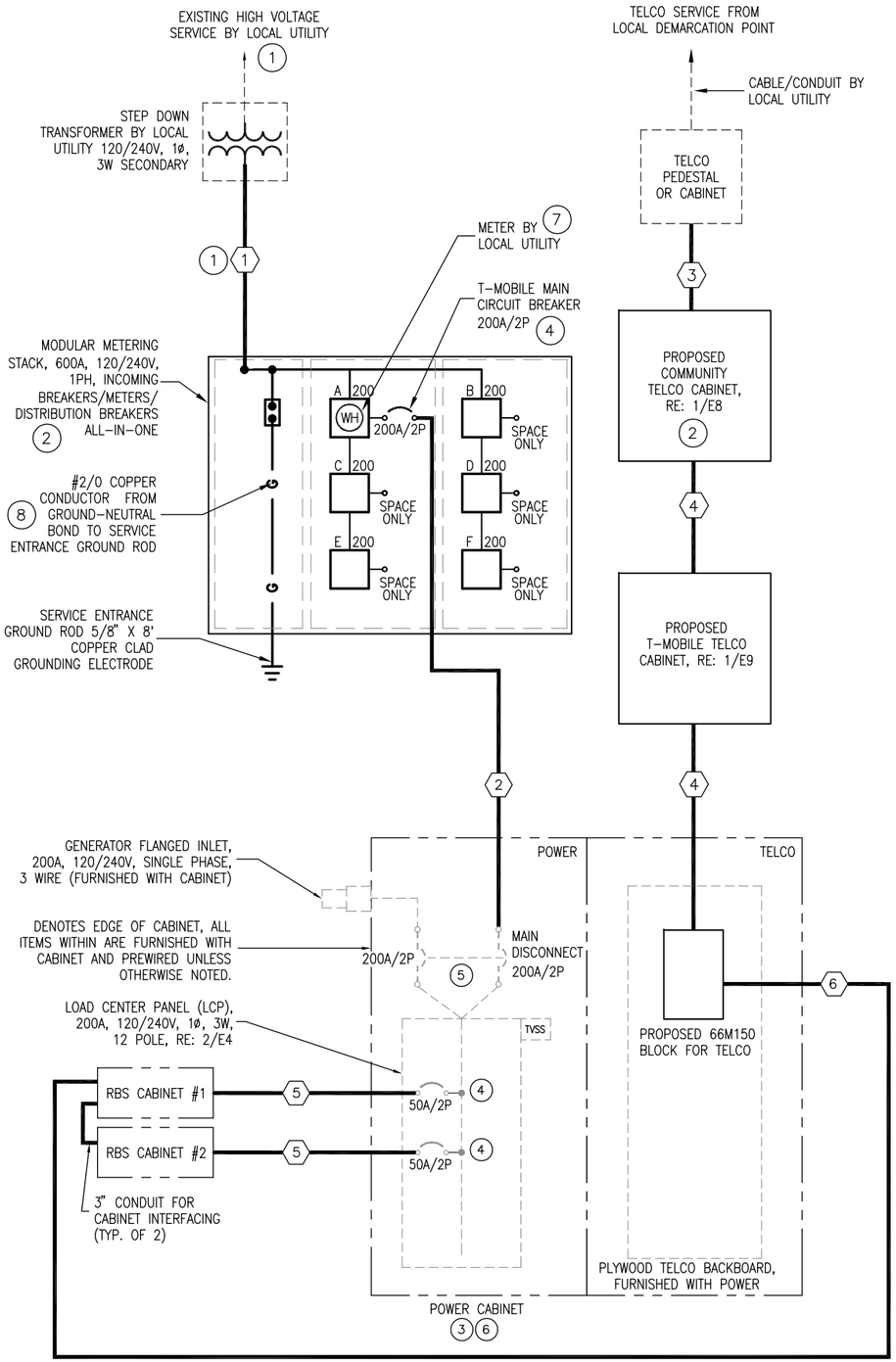
ISSUE	REVISION	DATE
1	INITIAL ISSUE	10/25/10

PROJECT NUMBER:
10049.002
SHEET CONTENTS:

SITE GROUNDING PLAN

SHEET NUMBER:
E3



1 ONE LINE DIAGRAM
E4 SCALE: NTS

ONE LINE DIAGRAM NOTES BY SYMBOL "◯"

1. CONTRACTOR SHALL FURNISH AND INSTALL NEW CONDUITS AND CONDUCTORS FROM EQUIPMENT TO POWER AND TELCO DEMARCATION POINTS AS INDICATED. COORDINATE WITH LOCAL UTILITIES FOR CONNECTION OF SERVICES.
2. CONTRACTOR SHALL PROVIDE METER CENTER, COMMUNITY TELCO CABINET, AND ASSOCIATED RACKS/CONDUITS. REFER TO E8 FOR RACK ELEVATION DETAILS AND EQUIPMENT SPECIFICATIONS.
3. POWER CABINET IS MANUFACTURED BY NORTHERN TECHNOLOGIES, DESIGN PRE-PACKAGED UNIT, RATED FOR 120/240VAC, 1 PHASE, 3 WIRE, 10K AIC (MIN.), NEMA 3R. POWER INCLUDES METER BASE (OPTIONAL), GENERATOR RECEPTACLE, SERVICE ENTRANCE AND GENERATOR BREAKERS, LOAD CENTER PANEL, SURGE ARRESTORS, RECEPTACLES, AND ALARM CONNECTIONS. ALL COMPONENTS ARE PRE-WIRED UNLESS NOTED OTHERWISE. POWER APPROVAL U.L. 891 AND U.L. 50. REFER TO CABNIET DRAWINGS AND SPECIFICATIONS FOR ADDITIONAL INFORMATION.
4. PROVIDE ALL CIRCUIT BREAKERS REQUIRED TO FEED T-MOBILE EQUIPMENT. LABEL ALL CIRCUIT BREAKERS WITH RESPECT TO LOAD SERVED.
5. POWER CABINET IS EQUIPPED WITH SQUARE D WALKING BEAM INTERLOCK WHICH PROHIBITS BOTH POWER SOURCES FROM BEING IN THE "ON" POSITION SIMULTANEOUSLY.
6. POWER CABINET WILL BE FURNISHED BY T-MOBILE AND SHALL BE INSTALLED BY CONTRACTOR.
7. CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATE ON METER TO INDICATE "T-MOBILE". NAMEPLATES SHALL BE PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND.
8. CONTRACTOR SHALL BOND NEUTRAL TO GROUND AT ONE LOCATION ONLY PER NEC 250 AND LOCAL CODE REQUIREMENTS.

GENERAL NOTES

1. CONTRACTOR SHALL COORDINATE INCOMING SERVICES WITH LOCAL UTILITIES PRIOR TO TRENCHING.
2. ALL CONDUCTORS SHALL BE COPPER, 75 DEGREES C RATED, AND CONDUCTOR INSULATION SHALL BE THWN OR THHN.
3. ALL TERMINATIONS SHALL BE LISTED AND IDENTIFIED FOR USE WITH 75°C RATED CONDUCTORS OPERATING AT 75°C.
4. GROUND FAULT PROTECTION REQUIRED FOR UTILITY RECEPTACLES.
5. SERVICE NEUTRAL SHALL BE GROUNDED AT ONE LOCATION ONLY.
6. WHITE/NEUTRAL, GREEN/GROUND SHALL BE MAINTAINED THROUGHOUT THE SITE ELECTRICAL SYSTEM (TAPE WILL NOT BE ACCEPTABLE).
7. EQUIPMENT LOCATED OUTSIDE OR EXPOSED TO MOISTURE SHALL BE NEMA 3R RATED.
8. CONTRACTOR SHALL USE SCHEDULE 40 OR 80 PVC CONDUIT THROUGHOUT, UNLESS OTHERWISE NOTED.
9. ALL NEWLY INSTALLED EQUIPMENT SHALL BE RATED AT 10K AIC MINIMUM. HIGHER RATINGS SHALL BE REQUIRED WHERE AVAILABLE FAULT CURRENT EXCEEDS THIS VALUE. EXACT FAULT CURRENT AVAILABLE SHALL BE COORDINATED WITH LOCAL UTILITY BASED ON EXACT CONDITIONS (XFMR SIZE, PERCENT IMPEDANCE, LENGTH OF CONDUCTORS, ETC).

CABLE AND CONDUIT SCHEDULE

MARK	CONDUIT QTY	CONDUIT SIZE	CONDUIT TYPE	WIRES EACH CONDUIT QTY	WIRES EACH CONDUIT SIZE	WIRES EACH CONDUIT GROUND	EQUIPMENT VOLTS	EQUIPMENT AMPS	EQUIPMENT SUB. CAT.	FROM	TO	RESPONSIBILITY	REMARKS
1	2	3"	PVC	3	350 kCMIL		240	600	AC POWER	XFMR/DEMARC	METER/ SERVICE DISC.	UTILITY/CONTRACTOR	INCOMING POWER BY LOCAL UTILITY
2	1	2"	PVC	3	#3/0	#4	240	200	AC POWER	SVC DISC	SHELTER PNL	CONTRACTOR	POWER TO SHELTER
3	1	4"	PVC	WITH (3) 1" INNERDUCTS					TELCO	DEMARC	HOFFMAN BX	UTILITY	INCOMING TELCO BY LOCAL UTILITY
4	1	2"	PVC	4	CAT 5				TELCO	COMMUNITY TELCO CAB.	T-MOBILE TELCO CAB.	CONTRACTOR	TELCO TO T-MOBILE TELCO CABINET
5	1	1"	PVC	3	#6	#8	240	50	AC POWER	PANEL LCP	RBS	CONTRACTOR	POWER - POWER CABINET TO RBS CABINET
6	1	2"	PVC						TELCO	T-MOBILE TELCO CAB.	RBS	CONTRACTOR	2 PAIR TO RBS DXU, TELCO CABINET TO RBS CABINET

FAULT CURRENT SUMMARY TABLE

FAULT LOCATION	AVAILABLE FAULT CURRENT (AMPS RMS SYMMETRICAL) SCA L-L	SCA L-N	REMARKS
TRANSFORMER SECONDARY (*)	13,021	19,533	ASSUMING INFINITE AVAILABLE ON PRIMARY
METER CENTER	10,935	12,420	IMPEDANCE - 40' INCOMING SERVICE CONDUCTORS
PPC MAIN CIRCUIT BREAKER	8,021	6,805	IMPEDANCE - 50' FEEDER CONDUCTORS, MC TO PPC

* USING 50KVA, 120/240V, 1 PHASE TRANSFORMER, 1.6% IMPEDANCE

PANEL LCP

VOLTAGE: 120/240V | 1 ø | 3 W | **AIC:** 10,000
MAINS: 200 AMPS ☐ MLO ☒ MCB ☒ SURFACE ☐ FLUSH
LUGS: ☐ SUB-FEED ☐ FEED-THRU ☐ NEMA 1 ☒ NEMA 3R

REMARKS:
*PROVIDE GFI BREAKER
**PANEL FURNISHED INTEGRAL WITH POWER CABINET
***PREWIRED INSIDE POWER CABINET

C"	WIRE	LOAD DESCRIPTION	KVA	BKR.	CKT	A B	CKT	BKR.	KVA	LOAD DESCRIPTION	WIRE	C"
1"	3#6, #8G	RBS CABINET #1	3.00	50/2	1*		2	30/2	0.10	A/C SURGE SUPPRESSION	3#10, #10G	***
			3.00		3		4		0.10			
1"	3#6, #8G	RBS CABINET #2	3.00	50/2	5		6					
			3.00		7		8	*15/1	0.20	GFCI RECPT-TELCO BOARD	2#12, #12G	***
		SPACE					10	20/1	0.20	LIGHT	2#12, #12G	***
							12	20/1	0.20	TELCO FAN	2#12, #12G	***

DEMAND AMPS: 53.3 | **DEMAND kVA:** 12.8 | **CONNECTED kVA:** 12.8

2 PANELBOARD SCHEDULE - LCP
E4 SCALE: NTS

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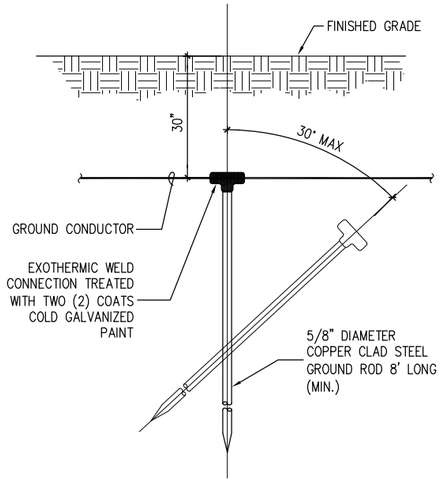
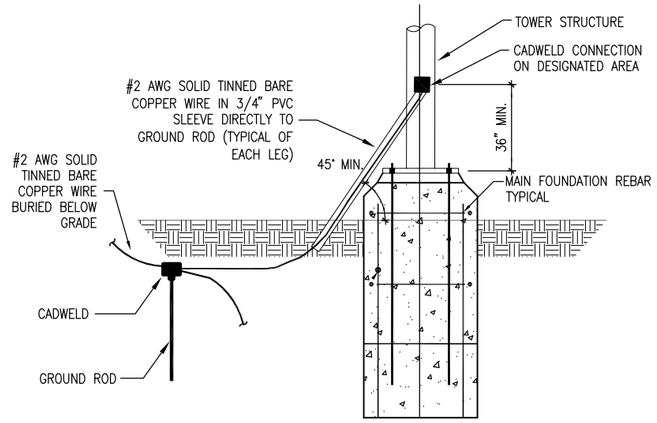
ISSUE	REVISION	DATE
1	INITIAL ISSUE	10/25/10

PROJECT NUMBER:
10049.002
SHEET CONTENTS:
ONE LINE DIAGRAM

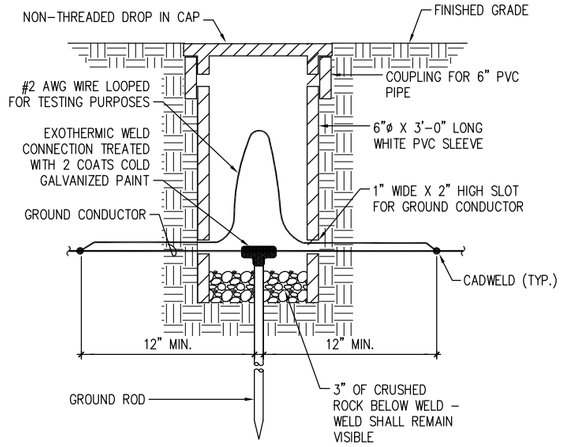
SHEET NUMBER:
E4



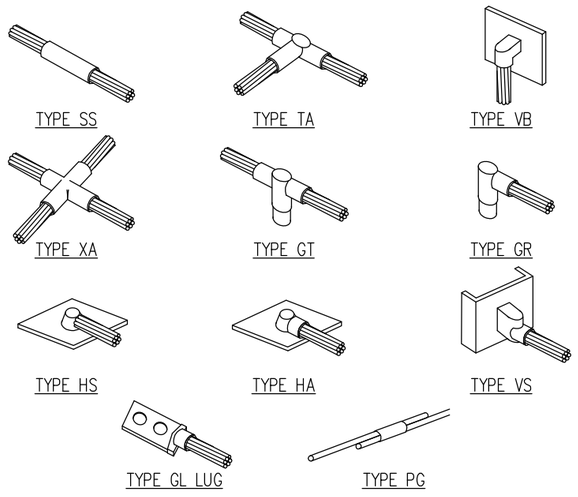
1 GROUND ROD DETAIL
E5 SCALE: N.T.S



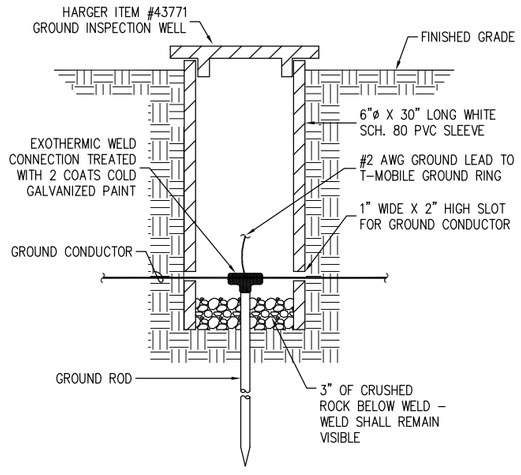
2 MONOPOLE GROUNDING DETAIL
E5 SCALE:N.T.S.



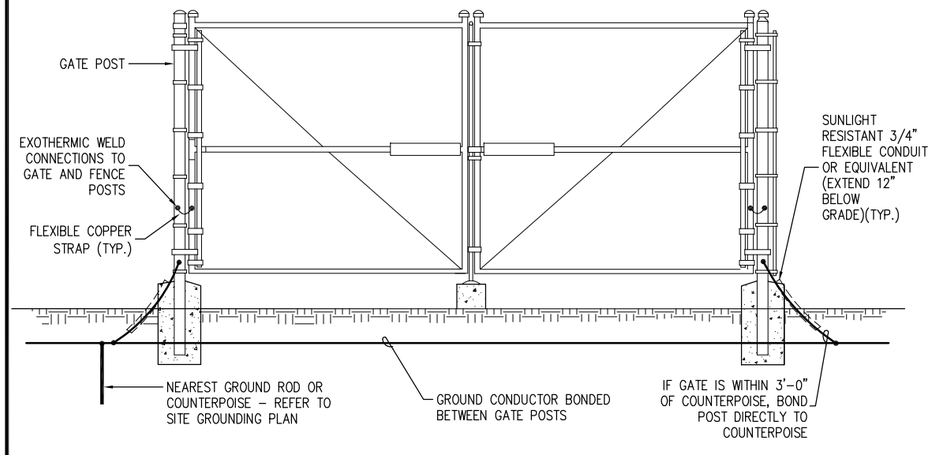
3 INSPECTION SLEEVE DETAIL-TESTING PURPOSES
E5 SCALE:N.T.S.



4 STANDARD EXOTHERMIC WELD DETAILS
E5 SCALE:N.T.S.



GROUND LEAD TO TOWER GROUND RING WITH INSPECTION SLEEVE
E5 SCALE:N.T.S.



6 GROUNDING AT METAL GATE POSTS
E5 SCALE:N.T.S.

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NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 024170 CHRISTOPHER D. STURKIE
10-25-10

BERKLEY GROUP LLC

BASE TRANSCEIVER SITE
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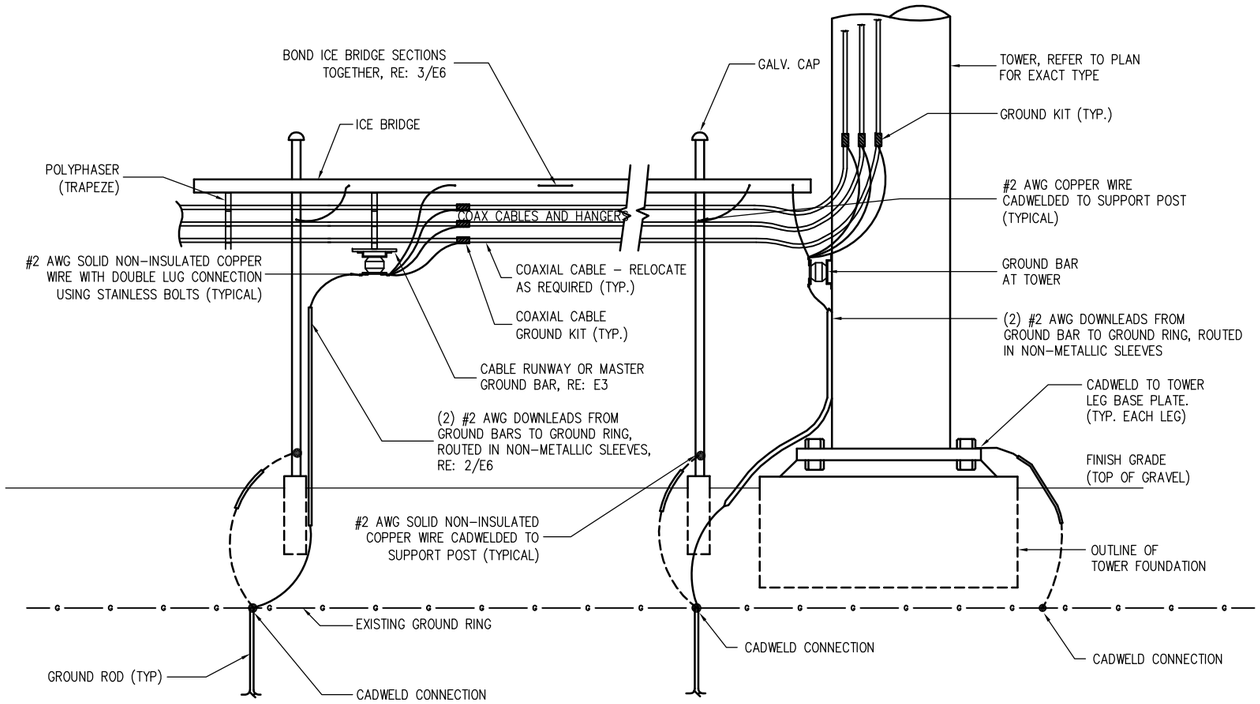
SHEET CONTENTS:

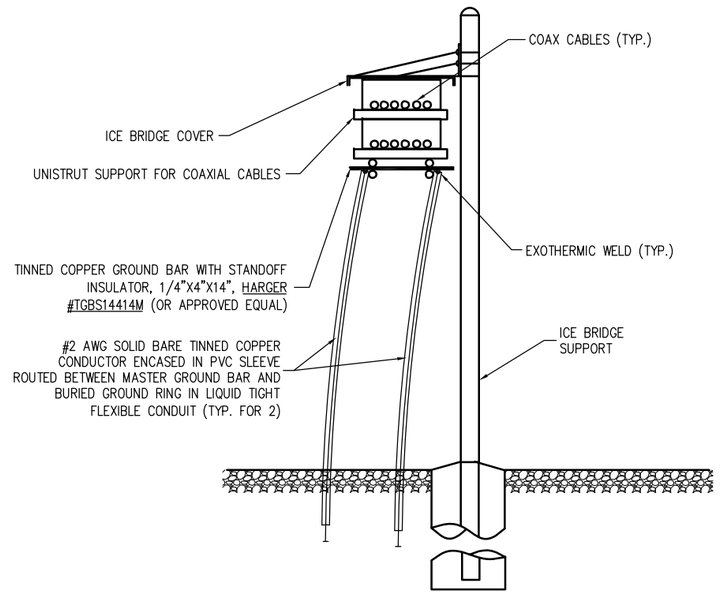
GROUNDING DETAILS

SHEET NUMBER:

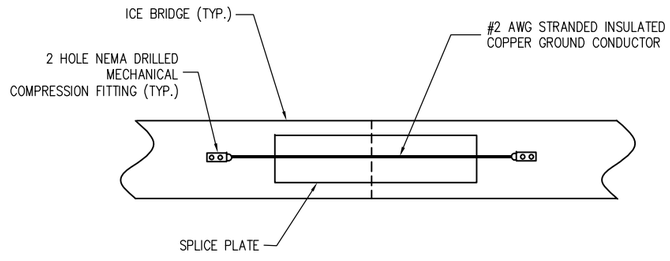
E5



1 TYPICAL ICE BRIDGE/TOWER GROUNDING
E6 SCALE:N.T.S.



2 ICE BRIDGE GROUNDING DETAIL
E6 SCALE:N.T.S.



3 ICE BRIDGE SPLICE GROUNDING DETAIL
E6 SCALE:N.T.S.

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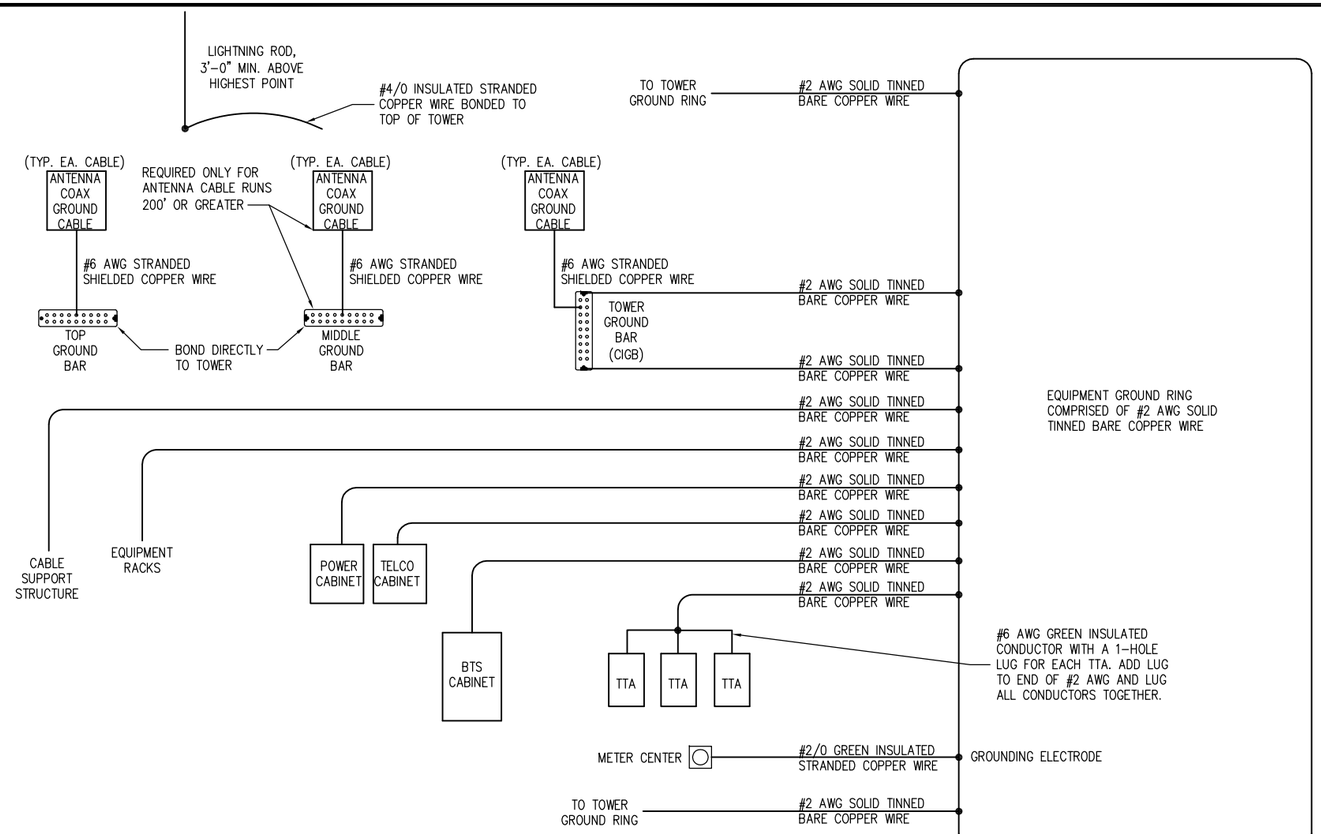
SHEET CONTENTS:

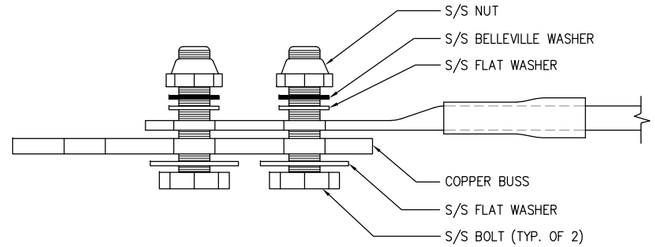
ICE BRIDGE AND GROUNDING DETAILS

SHEET NUMBER:

E6

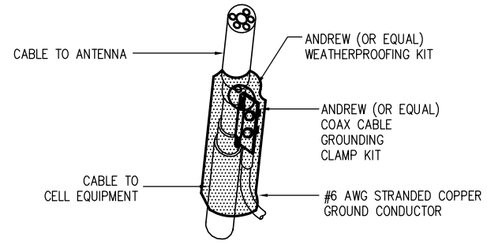


1 GROUNDING SCHEMATIC DIAGRAM
E7 SCALE: NTS



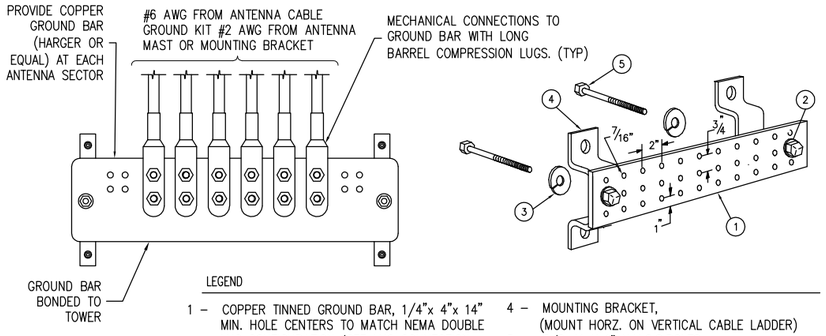
2 LUG DETAIL
E7 SCALE: NTS

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.



NOTES:
1. DO NOT INSTALL CABLE GROUND KIT AT A BEND IN CABLE.
2. ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
3. 2-1/2" DIA. MAX FOR TX/RX ANTENNA CABLES.
4. ALLOW FOR 1/2" DEFLECTION IN CABLES.

3 COAX CABLE GROUND KIT
E7 SCALE:N.T.S.

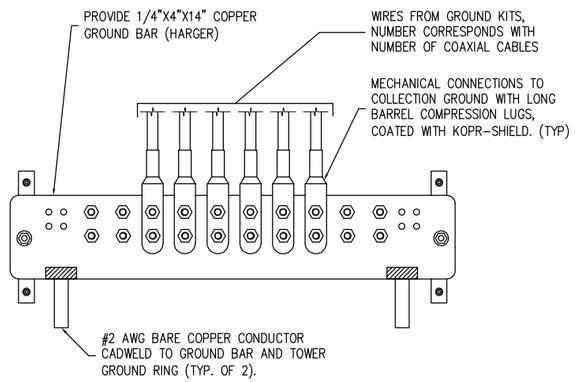


LEGEND

1 – COPPER TINNED GROUND BAR, 1/4"x 4"x 14" MIN. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION (SEE LUG CONNECTION DETAIL THIS SHEET)
2 – ANTI-OXIDATION APPLIED
3 – 5/8" LOCKWASHERS
4 – MOUNTING BRACKET, (MOUNT HORZ. ON VERTICAL CABLE LADDER)
5 – 5/8-11 X 1" H.H.C.S.BOLTS
6 – GROUND BAR SHALL BE SIZED TO ACCOMMODATE ALL GROUNDING CONNECTIONS REQUIRED PLUS PROVIDE 50% SPARE CAPACITY

4 UPPER AND MIDDLE ANTENNA GROUND BAR DETAILS
E7 SCALE:N.T.S.

NOTES:
1. COPPER GROUND BAR 1/4"x4"x14" 2-HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. ALL HARDWARE SHALL BE STAINLESS STEEL OR GALVANIZED UNLESS NOTED OTHERWISE.
3. STACKING OF LUGS IS NOT ACCEPTABLE. BACK-TO-BACK LUGS WILL ONLY BE ACCEPTED WHEN OTHER HOLES ARE UNAVAILABLE.
4. GROUND LEADS SHALL BE RUN IN DOWNWARD DIRECTION, IN THE STRAIGHTEST PATH POSSIBLE TO TERMINATION POINT.
5. ALL GROUND KIT WRAPPINGS SHALL BE SEALED WITH SCOTCHKOTE.
6. WRAPLOCK SHALL BE CABLEWAVE STRAPTITE PART #910061 OR EQUAL.
7. GROUND BARS LOCATED AT GROUND LEVEL SHALL BE INSULATED FROM MOUNTING SURFACE USING INSULATORS, AND BONDED TO THE GROUND RING. GROUND BARS LOCATED ON THE TOWER SHALL BE BONDED TO THE TOWER.



5 LOWER TOWER GROUND BAR DETAILS
E7 SCALE:N.T.S.

NOTES:
1. ALL #2 AWG CONDUCTORS SHALL USE 2 HOLE LUGS THOMAS A BETTS MODEL 54201.
2. ALL FIELD SIZED LUGS WILL CONFORM TO NEMA STANDARDS.
3. ALL HARDWARE SHALL BE STAINLESS STEEL. COAT ALL SURFACES WITH KOPR-SHIELD BEFORE MATING.
4. FOR GROUND BOND TO STEEL ONLY, INSERT AN EXTERNAL TOOTH LOCKWASHER BETWEEN LUG AND STEEL. COAT ALL SURFACES WITH KOPR-SHIELD.
5. ALL HOLES ARE COUNTER SUNK 1/16".

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SHEET CONTENTS:

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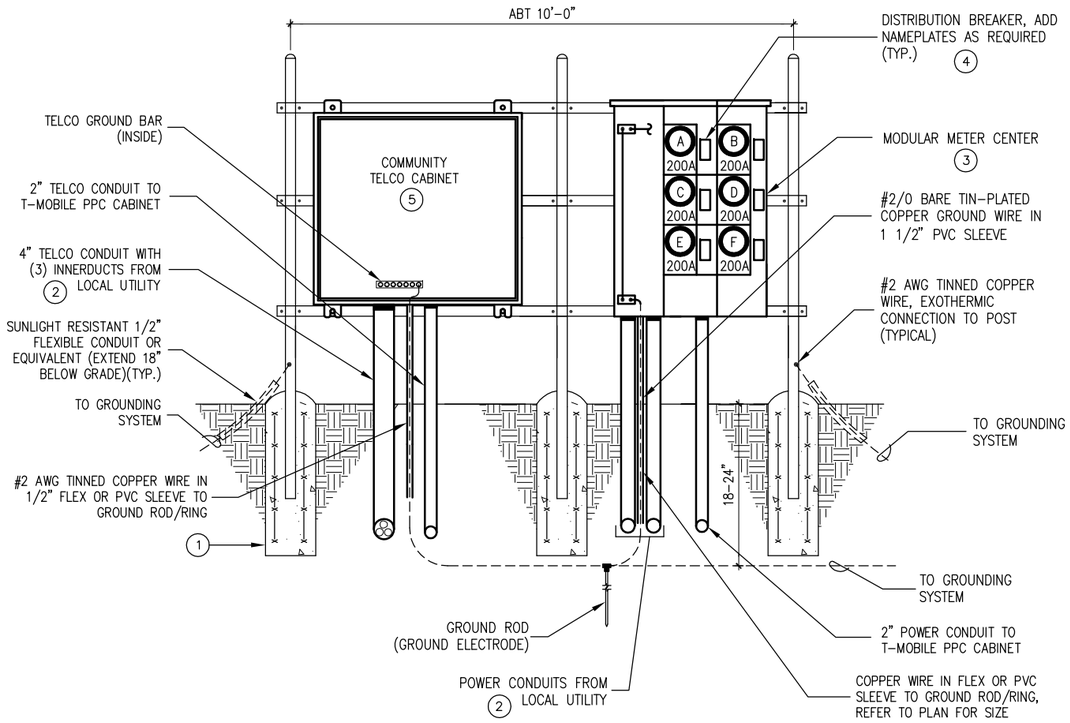
SHEET NUMBER:

E7



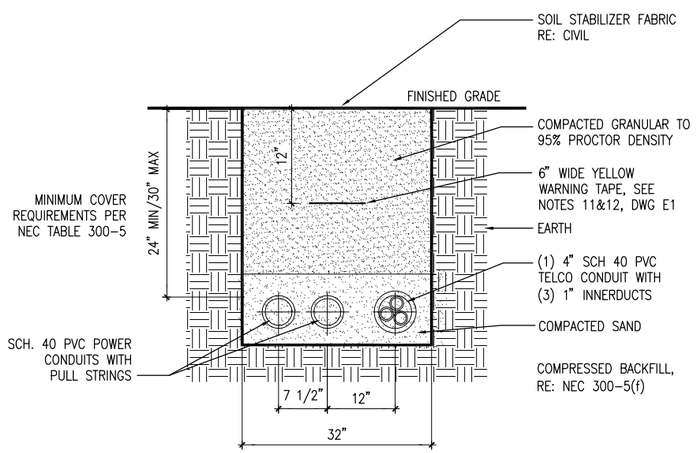
1 UTILITY RACK DETAIL
E8 SCALE:N.T.S.

GENERAL NOTES

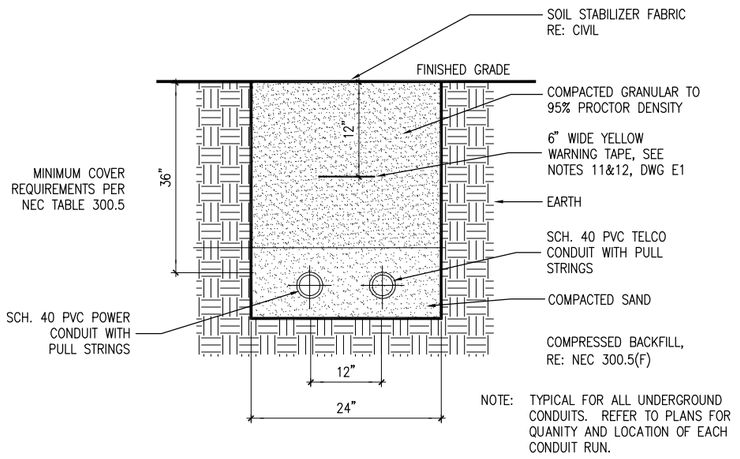
1. DIMENSIONS SHOWN ARE APPROXIMATE. EXACT DIMENSIONS MAY BE MODIFIED SLIGHTLY BASED ON EXACT EQUIPMENT OBTAINED, SITE CONDITIONS, AND OWNER PREFERENCES.
2. POWER EQUIPMENT SHALL BE SQUARE D, SIEMENS, CUTLER HAMMER, OR GENERAL ELECTRIC. ALL EQUIPMENT MUST BE OF ONE MANUFACTURER.
3. UNUSED CONDUITS SHALL BE SEALED TO PREVENT MOISTURE INSIDE CONDUITS. USED CONDUITS SHALL BE SEALED AFTER SERVICES HAVE BEEN RUN.

UTILITY RACK NOTES BY SYMBOL "◯"

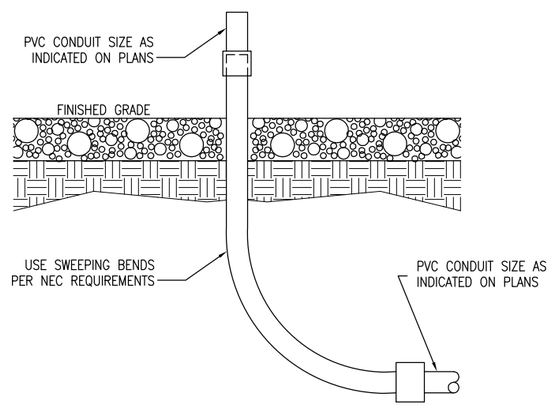
1. EQUIPMENT RACK SHALL BE APPROXIMATELY 10'-0" WIDE AND A MAXIMUM OF 6'-6" HIGH. POSTS SHALL BE 3" GALVANIZED STEEL PIPE WITH CAP. CONTRACTOR SHALL PROVIDE "END CAPS" ON HORIZONTAL UNISTRUT MEMBERS. CROSS MEMBERS SHALL BE UNISTRUT, ANCHORED TO POSTS WITH U-CLAMPS AND 3/8" STAINLESS STEEL BOLTS AND WASHERS. RACK FOUNDATION SHALL BE 1'-0" DIAMETER BY 3'-0" DEEP, CONCRETE REINFORCED WITH 6X6-W1.4XW1.4 WWF CAGE.
2. CONTRACTOR SHALL COORDINATE WITH LOCAL UTILITY COMPANY FOR INSTALLATION OF INCOMING SERVICE CONDUCTORS.
3. PROVIDE MODULAR METERING MAIN SERVICE CENTER RATED FOR 120/240V, 600A, SINGLE PHASE, 3 WIRE, 22K AIC (MIN), NEMA 3R, WITH SIX (6) 200A METER SOCKETS.
4. CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATE ON METER TO INDICATE "T-MOBILE". NAMEPLATES SHALL BE PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND.
5. CONTRACTOR SHALL PROVIDE AND INSTALL TELCO CABINET, 48"Hx48"Wx12"D WITH GROUND BAR. COORDINATE EXACT REQUIREMENTS WITH OWNER/BERKLEY GROUP CONSTRUCTION MANAGER.



2 UTILITY TRENCH DETAIL
E8 SCALE:N.T.S.



3 T-MOBILE TRENCH DETAIL
E8 SCALE:N.T.S.



4 CONDUIT TRANSITION DETAIL
E8 SCALE:N.T.S.

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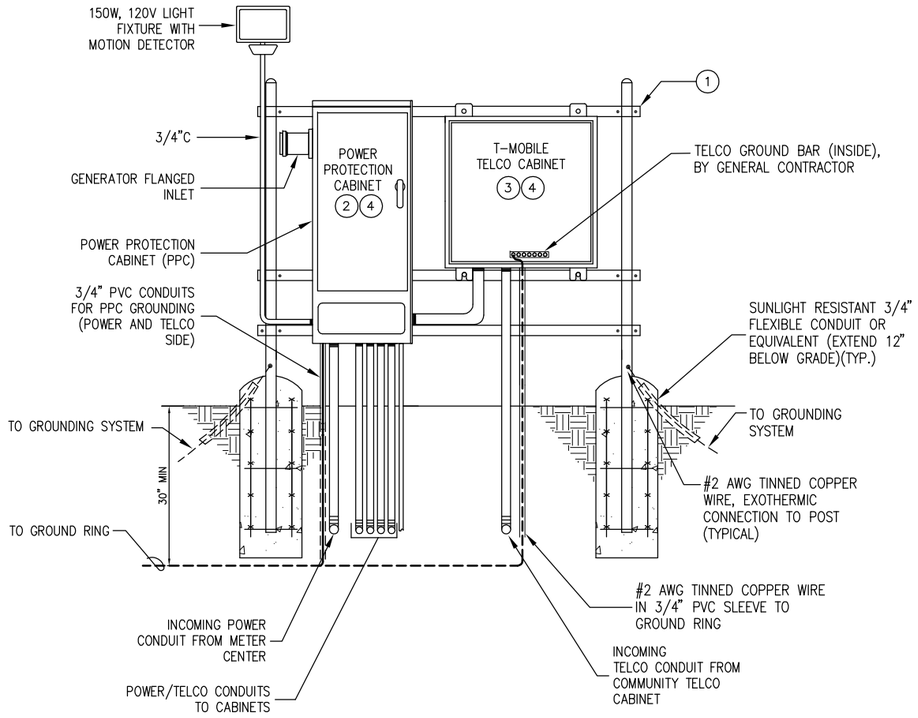
SHEET CONTENTS:

UTILITY RACK AND TRENCH DETAILS

SHEET NUMBER:

E8



1 E9 T-MOBILE EQUIPMENT RACK DETAIL

SCALE: N.T.S.

GENERAL NOTES

1. DIMENSIONS SHOWN ARE APPROXIMATE. EXACT DIMENSIONS MAY BE MODIFIED SLIGHTLY BASED ON EXACT EQUIPMENT OBTAINED, SITE CONDITIONS, AND OWNER PREFERENCES.
2. POWER EQUIPMENT SHALL BE SQUARE D, SIEMENS, CUTLER HAMMER, OR GENERAL ELECTRIC. ALL EQUIPMENT MUST BE OF ONE MANUFACTURER.
3. UNUSED CONDUITS SHALL BE SEALED TO PREVENT MOISTURE INSIDE CONDUITS. USED CONDUITS SHALL BE SEALED AFTER SERVICES HAVE BEEN RUN.

UTILITY RACK NOTES BY SYMBOL "◯"

1. PPC EQUIPMENT RACK SHALL BE ABOUT 6'-0" WIDE (MIN.) AND A MAXIMUM OF 6'-6" HIGH. POSTS SHALL BE 3" GALVANIZED STEEL PIPE WITH CAP. CROSS MEMBERS SHALL BE UNISTRUT, ANCHORED TO POSTS WITH U-CLAMPS AND 3/8" STAINLESS STEEL BOLTS AND WASHERS. RACK FOUNDATION SHALL BE 1'-0" DIAMETER BY 3'-0" DEEP, CONCRETE REINFORCED WITH 6X6-W1.4XW1.4 WWF CAGE. CONTRACTOR MAY USE EXISTING RACK AND EXTEND AS NECESSARY WHERE PRACTICAL AND APPROVED BY CONSTRUCTION MANAGER.
2. POWER PROTECTION CABINET (PPC) SHALL BE FURNISHED BY T-MOBILE AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL OBTAIN PPC CABINET DRAWINGS AND SPECIFICATIONS FOR DETAILS AND REQUIREMENTS WHICH MAY NOT BE SPECIFICALLY ADDRESSED IN THESE DRAWINGS.
3. CONTRACTOR SHALL FURNISH AND INSTALL TELCO CABINET COMPRISED OF 36"X36"X12" HOFFMAN TYPE ENCLOSURE, WITH PLYWOOD BACKBOARD AND GROUND BAR. COORDINATE EXACT REQUIREMENTS WITH T-MOBILE CONSTRUCTION MANAGER.
4. CONTRACTOR SHALL PROVIDE AND INSTALL NAMEPLATES ON PPC AND TELCO CABINET TO INDICATE "T-MOBILE". NAMEPLATES SHALL BE PHENOLIC, WHITE LETTERS ON BLACK BACKGROUND.

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0	INITIAL ISSUE	10/25/10

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SHEET CONTENTS:

T-MOBILE EQUIPMENT RACK DETAIL

SHEET NUMBER:

E9