SITE NUMBER: CLV1424
SITE NAME: HAWTHORNE & 105TH

at&t

PROJECT: NEW SITE BUILD (NSB)
SITE TYPE: SHELTER/MONOPALM
SITE ADDRESS: 10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

CODE COMPLIANCE

2013 CALIFORNIA BUILDING CODE
2013 CALIFORNIA TITLE 24
2013 CALIFORNIA FIRE CODE
2013 CALIFORNIA RESIDENTIAL CODE
2013 CALIFORNIA ENERGY CODE
2013 CALIFORNIA PLUMBING CODE
2013 CALIFORNIA MECHANICAL CODE
2013 CALIFORNIA ELECTRIC CODE
ANSI/TIA-222-G OR LATEST EDITION
LOCAL CODES AND AMENDMENTS

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT DISTURBANCE OR EFFECT ON DRAINAGE; NO SANITARY SEWER SERVICE, POTABLE WATER, OR TRASH DISPOSAL IS REQUIRED AND NO COMMERCIAL SIGNAGE IS PROPOSED.

DIGALERT
DIAL TOLL FREE 811 AT LEAST TWO WORKING DAYS BEFORE YOU DIG
USA NORTH UNDERGROUND SERVICE ALERT SERVING CALIFORNIA AND NEVADA

SITE INFORMATION

PROPERTY OWNER: ADDRESS:	James & Anna Sutherland 512 NEVADA ST. EL SEGUNDO, CA 90245 (310) 322 8514
APPLICANT: ADDRESS:	AT&T 12900 PARK PLAZA DRIVE CERRITOS, CA 90703
APPLICANT REPRESENTATIVE: ADDRESS:	EUKON GROUP 65 POST, SUITE 1000, IRVINE, CA 92618
LATITUDE (NAD 83):	33°56'28.58"N
LONGITUDE (NAD 83):	118°21'11.62"W
LONGITUDE/LATITUDE TYPE:	NAD83
GROUND ELEVATION:	77.30 A.M.S.L.
APN #:	4036-016-009
ZONING JURISDICTION:	CITY OF LOS ANGELES
CURRENT ZONING:	C3
CURRENT BLDG. USE:	N/A
POWER COMPANY	SCE JERRY CHAMBERLAIN (714) 870-3134
TELCO COMPANY	AT&T (800) 222-0400
OCCUPANCY:	U-UNMANNED TELECOMMUNCIATIONS FACILITY
LEASE AREA (SF):	954 (SF)

PROJECT TEAM

PROJECT MANAGER:
AT&T
12900 PARK PLAZA DRIVE
CERRITOS, CA 90703
CONTACT: RYAN YOUNG
PHONE:
E-MAIL:

ENGINEERING:
NATIONAL ENGINEERING & CONSULTING, INC.
27 ORCHARD, SUITE 200
LAKE FOREST, CA 92630
PHONE: (949) 716-9990
FAX: (949) 716-9997

SITE ACQUISITION MANAGER:
EUKON GROUP
65 POST, SUITE 1000
IRVINE, CA 92618
CONTACT: JERRY AMBROSE
PHONE: (805) 637-7407
E-MAIL: jambrose@wireless01.com

SITE ACQUISITION/ZONING:
EUKON GROUP
65 POST, SUITE 1000
IRVINE, CA 92618
CONTACT: JERRY AMBROSE
PHONE: (805) 637-7407
E-MAIL: jambrose@wireless01.com

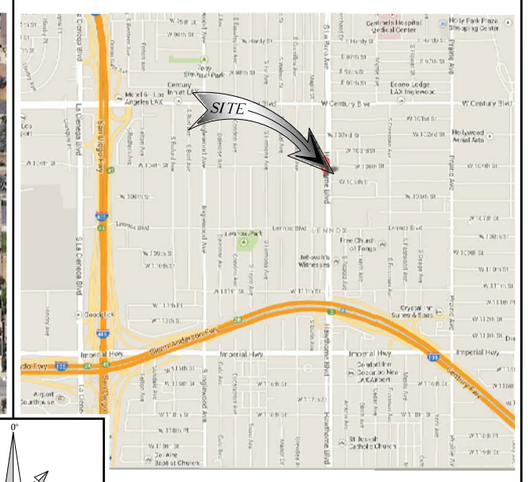
RF ENGINEER:
AT&T
12900 PARK PLAZA DRIVE
CERRITOS, CA 90703
CONTACT: DARPAN TANDON
PHONE:
EMAIL: dt2318@att.com

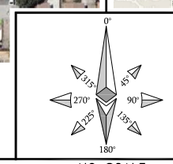
CONSTRUCTION MANAGER:
OVERLAND CONTRACTING
12750 CENTER COURT DR, SUITE 600
CERRITOS, CA 90703
CONTACT: JAKE SOWERS
PHONE: (678) 849-4663
EMAIL: sowersj@overlandcontracting.com

LOCATION MAPS

VICINITY MAP

LOCAL MAP





NO SCALE

DRIVING DIRECTIONS

DIRECTIONS FROM AT&T OFFICE:

START OUT GOING EAST ON PARK PLAZA DR. TOWARD SHOEMAKER AVE. TURN LEFT ONTO SHOEMAKER AVE. TURN LEFT ONTO ARTESIA BLVD. MERGE ONTO CA-91 W. MERGE ONTO I-605 N TOWARD ALONDRA BLVD. MERGE ONTO I-105 W. TAKE THE PRAIRIE AVE/HAWTHORNE BLVD EXIT, EXIT 3. KEEP LEFT TO TAKE THE HAWTHORNE BLVD RAMP. TURN LEFT ONTO HAWTHORNE BLVD. MAKE A U-TURN AT W 104TH ST ONTO HAWTHORNE BLVD. 10423 HAWTHORNE BLVD IS ON THE RIGHT.

CONSTRUCTION DRAWING

IF USING 11"X17" PLOT, DRAWINGS WILL BE HALF SCALE

APPROVALS

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS & AUTHORIZE THE SUBCONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT & MAY IMPOSE CHANGES OR MODIFICATIONS.

AT&T RF ENGINEER: _____
AT&T OPERATIONS: _____
SITE ACQUISITION MANAGER: _____
PROJECT MANAGER: _____
ZONING VENDOR: _____
LEASING VENDOR: _____
CONSTRUCTION MANAGER: _____
A/E MANAGER: _____
PROPERTY OWNER: _____

PROJECT DESCRIPTION

AT&T WIRELESS SCOPE WILL CONSIST OF THE FOLLOWING:

- INSTALL (1) PROPOSED AT&T (20'-0" X 11'-5") PRE-FABRICATED EQUIPMENT SHELTER
- INSTALL (1) PROPOSED AT&T 59' HIGH MONO-PALM
- INSTALL (12) PROPOSED AT&T 8' ANTENNAS
- INSTALL (2) PROPOSED AT&T GPS ANTENNAS
- INSTALL (24) PROPOSED AT&T RRU's, (8 PER SECTOR)
- INSTALL (1) PROPOSED AT&T GENERATOR
- INSTALL PROPOSED LANDSCAPING

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
T-2	GENERAL NOTES & SPECIFICATIONS
T-3	GENERAL NOTES & SPECIFICATIONS
T-4	GENERAL NOTES & SPECIFICATIONS
RF-1	SIGNATURE REQUIREMENTS & EQUIPMENT SHEDULES
LS-1	TOPOGRAPHIC SURVEY
LS-2	TOPOGRAPHIC SURVEY
A-1	SITE PLAN
A-2	DEMO PLAN
A-3	ENLARGED SITE PLAN
A-4	NEW EQUIPMENT & ANTENNA LAYOUT PLANS
A-5	ARCHITECTURAL ELEVATIONS
A-6	ARCHITECTURAL ELEVATIONS
A-7	ARCHITECTURAL DETAILS
A-8	ARCHITECTURAL DETAILS
A-9	ARCHITECTURAL DETAILS
S-1	STRUCTURAL DETAILS
S-2	STRUCTURAL DETAILS
E-1	ELECTRICAL NOTES & SPECS, PANEL SCHED. & SINGLE LINE DIAGRAM
E-2	ELECTRICAL DETAILS
E-3	ELECTRICAL DETAILS
E-4	ELECTRICAL GROUNDING
L-1	LANDSCAPING PLANS

DO NOT SCALE DRAWINGS

SUBCONTRACTOR SHALL VERIFY ALL PLANS & EXISTING DIMENSIONS & CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

at&t
12900 PARK PLAZA DRIVE
CERRITOS, CA 90703

PLANS PREPARED BY:
NATIONAL ENGINEERING & CONSULTING, INC
27 ORCHARD, SUITE 200 LAKE FOREST, CA 92630
PHONE: (949) 716-9990 | FAX: (949) 716-9997

CLIENTS
EukonGroup
It's all about Communication
65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

SEAL:

SHEET TITLE:

TITLE SHEET

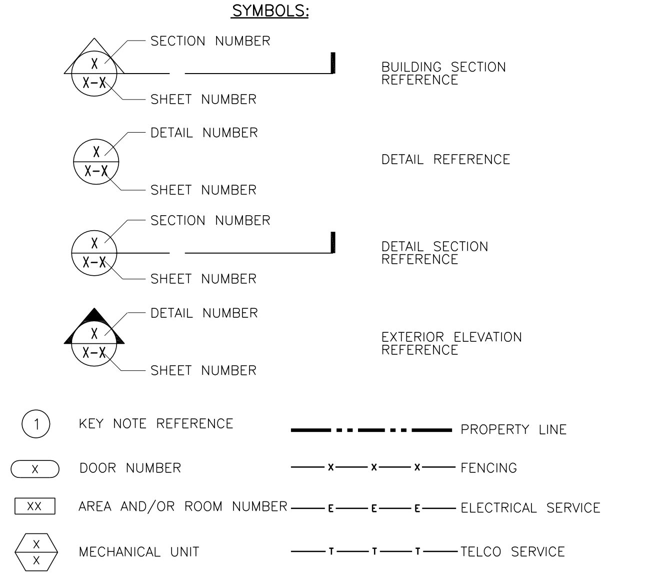
SHEET NUMBER:

T-1

ABBREVIATIONS

AB	ANCHOR BOLT
AC	ASPHALTIC CONCRETE
A/C	AIR CONDITIONING
ADJ	ADJUSTABLE
A.F.F.	ABOVE FINISH FLOOR
ARCH	ARCHITECTURAL
APPROX	APPROXIMATELY
A.G.L.	ABOVE GRADE LEVEL
A.M.S.L.	ABOVE MEAN SEA LEVEL
BD	BOARD
BLDG	BUILDING
BLKG	BLOCKING
BOT	BOTTOM
BSMT	BASEMENT
BTS	BASE TRANSCEIVER STATION
C	COURSE(S)
CEM	CEMENT
CL	CHAIN LINK
CLG	CEILING
CLR	CLEAR
COL	COLUMN
CONC	CONCRETE
CONST	CONSTRUCTION
CONT	CONTINUOUS
CORR	CORRIDOR
CO	CONDUIT ONLY
DIA	DIAMETER
DBL	DOUBLE
DEPT	DEPARTMENT
DEMO	DEMOLITION
DIM	DIMENSION
DN	DOWN
DR	DOOR
DTL	DETAIL
DWG	DRAWING
(E)	EXISTING
EA	EACH
ELEC	ELECTRIC
ELEV	ELEVATION
EQUIP	EQUIPMENT
EXP	EXPANSION
EXT	EXTERIOR
FA	FIRE ALARM
FB	FLAT BAR
FF	FINISH FLOOR
FH	FLAT HEAD
FIN	FINISH(ED)
FLR	FLOOR
FOS	FACE OF STUDS
FS	FINISH SURFACE
FT	FOOT, FEET
FTG	FOOTING
FW	FINISH WALL
F.G.	FINISH GRADE
FUT	FUTURE
GA	GAUGE
GALV	GALVANIZED
GL	GLASS
GR	GRADE
GYP	GYPSUM
GFCI	GROUND FAULT CIRCUIT INTERRUPT
GND	GROUND
HC	HOLLOW CORE
HDW	HARDWARE
HTR	HEATER
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HR	HOUR
HSS	HOLLOW STRUCTURAL SECTION
HT	HEIGHT
HV	HIGH VOLTAGE
ID	INSIDE DIMENSION
INS	INSULATION
INT	INTERIOR
JT	JOINT
LAM	LAMINATED
LBS	POUNDS
LT	LIGHT
LA	LIGHTNING ARRESTOR
LNA	LOW NOISE AMPLIFIER
MFR	MANUFACTURER
MAT	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MIN	MINIMUM
MISC	MISCELLANEOUS
ML	METAL LATH
MO	MASONRY OPENING
MS	MACHINE SCREW
MTD	MOUNTED
MTL	METAL
(N)	NEW
NIC	NOT IN CONTRACT
NO	NUMBER
NTS	NOT TO SCALE
OA	OVERALL
O.C.	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
PARTN	PARTITION
PL	PLATE
PLAS	PLASTER
PLYWD	PLYWOOD
POC	POINT OF CONNECTION
PROP	PROPERTY
PT	PRESSURE TREATED
R	RISER
REQD	REQUIRED
RD	ROOF DRAIN
RM	ROOM
RMS	ROOMS
RO	ROUGH OPENING
SC	SOLID CORE
SCHED	SCHEDULE
SECT	SECTION
SHT	SHEET
SIM	SIMILAR
SPECS	SPECIFICATIONS
SS	STAINLESS STEEL
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURAL
SUSP	SUSPENDED
SW	SWITCH
SWBO	SWITCHBOARD
THK	THICK
TI	TENANT IMPROVEMENT
TMA	TOWER MOUNTED AMPLIFIER
TOS	TOP OF SURFACE
TS	TUBE STEEL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VCT	VINYL COMPOSITION TILE
VERT	VERTICAL
V.I.F.	VERIFY IN FIELD
VG	VERTICAL GRAIN
W/	WITH
WD	WOOD
WR	WATER RESISTANT
WT	WEIGHT
XFMR	TRANSFORMER
@	AT
[	CHANNEL
℄	CENTERLINE
∠	ANGLE
℗	PROPERTY LINE

SYMBOLS:



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GENERAL

1. ALL MATERIALS AND CONSTRUCTION SHALL BE IN CONFORMANCE WITH THE BUILDING CODE AND ALL OTHER GOVERNING CODES. THESE NOTES SHALL BE CONSIDERED A PART OF THE WRITTEN SPECIFICATIONS.

2. THE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS, SPECIFICATIONS, & NOTES PRIOR TO STARTING CONSTRUCTION, INCLUDING BUT NOT LIMITED BY DEMOLITION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERROR, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAS NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT/ENGINEER.

3. PRIOR TO STARTING CONSTRUCTION THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK. WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, UTILITIES SHALL BE RELOCATED AS DIRECTED BY ENGINEERS. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR PIER DRILLING AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW.

4. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND SHALL BE CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF THE ENGINEER.

5. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY, AND BY LAW SHALL BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL CONSTRUCTION SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDUMS, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT/HIRED DRAWINGS TO THE ARCHITECT/ENGINEER AT THE CONCLUSION OF THE PROJECT.

6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE.

7. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER, AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH ALL SAFETY PRECAUTIONS AND REGULATIONS DURING THE WORK. THE ENGINEER WILL NOT ADVISE ON, NOR PROVIDE DIRECTION, AS TO SAFETY PRECAUTIONS AND PROGRAMS.

9. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT. FURTHERMORE, THE STRUCTURE IS DESIGNED AS A UNIT UPON COMPLETION. THE CONTRACTOR IS RESPONSIBLE FOR FURNISHING ALL TEMPORARY BRACING AND/OR SUPPORT THAT MAY BE REQUIRED AS THE RESULT OF THE CONTRACTOR'S CONSTRUCTION METHODS. THE INVESTIGATION, DESIGN, SAFETY, ADEQUACY AND INSPECTION OF BRACING, SHORING, TEMPORARY SUPPORTS, ETC. IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

10. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN AND PAY FOR ALL PERMITS, LICENSES AND INSPECTIONS WITH RESPECT TO THE WORK TO COMPLETE THE PROJECT. BUILDING PERMIT APPLICATIONS SHALL BE FILED BY THE OWNER OR HIS REPRESENTATIVE. CONTRACTOR SHALL OBTAIN THE PERMIT AND MAKE FINAL PAYMENT OF SAID DOCUMENT(S).

11. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF LOAD IMPOSED ON THE STRUCTURAL FRAMING AND STRUCTURE DURING CONSTRUCTION. CONSTRUCTION LOADS SHALL NOT EXCEED THE DESIGN CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT. THE CONTRACTOR SHALL ALSO RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PERIOD.

12. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE UNLESS OTHERWISE NOTED.

13. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY FRAMING, BACKING, HANGERS, BLOCKING OR SUPPORTS FOR INSTALLATION OF ITEMS INDICATED ON THE DRAWINGS.

14. THE CONTRACTOR SHALL PROVIDE FIRE MARSHALL APPROVED MATERIALS TO FILL/SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES.

15. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.

16. WHERE SPECIFIED, MATERIALS TESTING SHALL BE TO THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR RECORDING THE RESULTS.

17. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.

18. ALL DEBRIS AND REFUGE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.

19. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED FOR CLARIFICATIONS.

20. CONTRACTORS SHALL VISIT THE SITE PRIOR TO BID TO ASCERTAIN CONDITIONS WHICH MAY ADVERSELY AFFECT THE WORK OR COST THEREOF.

21. THE CONTRACTOR SHALL FIELD VERIFY THE DIMENSIONS, ELEVATIONS, ETC. NECESSARY FOR THE PROPER CONSTRUCTION AND ALIGNMENT OF THE NEW PORTION OF THE WORK TO THE EXISTING WORK. THE CONTRACTOR SHALL MAKE ALL MEASUREMENTS NECESSARY FOR FABRICATION AND ERECTION OF STRUCTURAL MEMBERS. ANY DISCREPANCY SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER.

22. REPRESENTATIONS OF TRUE NORTH, OTHER THAN THOSE FOUND ON THE PLOT OF SURVEY DRAWING (SHEET LS1), SHALL NOT BE USED TO IDENTIFY OR ESTABLISH THE BEARING OF TRUE NORTH AT THE SITE. THE CONTRACTOR SHALL RELY SOLELY ON THE PLOT OF SURVEY DRAWING AND ANY SURVEYOR'S MARKINGS AT THE SITE FOR THE ESTABLISHMENT OF TRUE NORTH, AND SHALL 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 CIVIL SURVEY, THE CONTRACTOR SHALL ASSUME SOLE LIABILITY FOR ANY FAILURE TO NOTIFY THE ARCHITECT/ENGINEER.

23. NO CHANGES ARE TO BE MADE TO THESE PLANS WITHOUT THE KNOWLEDGE AND WRITTEN CONSENT OF THE ARCHITECT/ ENGINEER. UNAUTHORIZED CHANGES RENDER THESE DRAWINGS VOID. THIS INCLUDES THAT THE CONTRACTOR SHALL NOT BE RELIEVED OF ANY DEVIATION FROM THE PLANS BY THE PROFESSIONAL'S OF RECORD REVIEW OF SHOP DRAWINGS, PRODUCT DATA, ETC. UNLESS THE CONTRACTOR HAS SPECIFICALLY INFORMED THE PROFESSIONAL OF RECORD OF SUCH DEVIATION IN WRITING AT THE TIME OF SUBMISSION, AND THE PROFESSIONAL OF RECORD HAS GIVEN WRITTEN APPROVAL TO THE SPECIFIC DEVIATION.

24. ANY REFERENCE TO THE WORDS "APPROVED" OR "APPROVAL" IN THESE DOCUMENTS SHALL BE HERE DEFINED TO MEAN GENERAL ACCEPTANCE OR REVIEW AND SHALL NOT RELIEVE THE CONTRACTOR AND/OR HIS SUB-CONTRACTORS OF ANY LIABILITY IN FURNISHING THE REQUIRED MATERIALS OR LABOR SPECIFIED.

25. STAIR TREADS SHALL BE MARKED BY A STRIP OF CLEARLY CONTRASTING COLOR AT LEAST 2-INCHES WIDE AND PLACED PARALLEL TO AND NOT MORE THAN 1 INCH FROM THE NOSE OF THE STEP. ALL TREAD SURFACES SHALL BE SLIP RESISTANCE. NOSING SHALL NOT PROJECT MORE THAN 1-1/2 INCHES PAST THE FACE OF THE RISER BELOW.

SITE PREPARATION NOTES:

1. THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE NEW STRUCTURE.

2. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.

3. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE ARCHITECT/ENGINEER SHALL BE NOTIFIED AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.

4. THE SURFACE OF THE EXPOSED SUBGRADE SHALL BE INSPECTED BY PROBING OR TESTING TO CHECK FOR POCKETS OF SOFT OR UNSUITABLE MATERIAL. EXCAVATE UNSUITABLE SOIL AS DIRECTED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY.

5. PROOFROLL THE SURFACE OF THE EXPOSED SUBGRADE WITH A LOADED TANDEM AXLE DUMP TRUCK. REMOVE ALL SOILS WHICH PUMP OR DO NOT COMPACT PROPERLY AS DIRECTED BY THE GEOTECHNICAL ENGINEER/TESTING AGENCY.

6. FILL ALL EXCAVATED AREAS WITH APPROVED CONTROLLED FILL. PLACE IN 8" LOOSE LIFTS AND THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-698. COMPACT TO A MINIMUM OF 90% RELATIVE COMPACTION. ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS AFTER THESE RECOMMENDATIONS ARE APPROVED BY THE ARCHITECT/ENGIENEER.

7. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING ANY DAMAGED AREAS.

8. BEFORE PROCEEDING WITH ANY WORK WITHIN THE EXISTING FACILITY, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH EXISTING STRUCTURAL AND OTHER CONDITIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL NECESSARY BRACING, SHORING AND OTHER SAFEGUARDS TO MAINTAIN ALL PARTS OF THE EXISTING WORK IN A SAFE CONDITION DURING THE PROCESS OF DEMOLITION AND CONSTRUCTION AND TO PROTECT FROM DAMAGE THOSE PORTIONS OF THE EXISTING WORK WHICH ARE TO REMAIN.

SUBMITTALS

SUBMITTALS: SUBMITTALS FOR SHOP DRAWINGS, MILL TESTS, PRODUCT DATA, ETC. FOR ITEMS DESIGNED BY THE ARCHITECT/ ENGINEER OF RECORD SHALL BE MADE TO THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL REVIEW THE SUBMITTAL BEFORE FORWARDING TO THE ARCHITECT. SUBMITTALS SHALL BE MADE IN TIME TO PROVIDE A TWO-WEEK REVIEW PERIOD FOR THE ARCHITECT/ ENGINEER. SUBMITTALS REQUIRED FOR EACH SECTION OF THESE NOTES ARE SPECIFIED IN THAT SECTION.

SHOP DRAWING REVIEW

REVIEW BY THE ARCHITECT/ENGINEER IS FOR GENERAL COMPLIANCE WITH THE DESIGN CONCEPT AND THE CONTRACT DOCUMENTS. MARKINGS OR COMMENTS SHALL NOT BE CONSTRUED AS RELIEVING THE CONTRACTOR FROM COMPLIANCE WITH THE PROJECT PLANS AND SPECIFICATIONS, NOR DEPARTURES THEREFROM. THE CONTRACTOR REMAINS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND CORRELATING ALL QUANTITIES AND DIMENSIONS, FOR SELECTING FABRICATION PROCESSES, ETC. WHEN SHOP DRAWINGS DIFFER FROM OR ADD TO THE REQUIREMENTS OF THE STRUCTURAL DRAWINGS THEY SHALL BE DESIGNED AND STAMPED BY A SPECIALTY STRUCTURAL ENGINEER (SSE)

FIRE DEPARTMENT NOTES

1. SCHEDULE REQUIRED FINAL FIRE DEPARTMENT INSPECTION 2 DAYS IN ADVANCE.

2. A UNIFORM FIRE CODE PERMIT TO OPERATE BATTERY SYSTEMS WITH STATIONARY LEAD-ACID BATTERIES MAY BE REQUIRED AND ISSUED BY FIRE INSPECTOR.

3. AN APPROVED METHOD TO NEUTRALIZE SPILLED ELECTROLYTE SHALL BE PROVIDED IN THE BATTERY ROOM (IF APPLICABLE)

4. LOCATIONS AND CLASSIFICATIONS OF FIRE EXTINGUISHERS SHALL BE IN ACCORDANCE WITH THE UNIFORM FIRE CODE STANDARD 10-1 AND PLACEMENT IS SUBJECT TO THE APPROVAL OF THE FIRE INSPECTOR.

5. CONTRACTOR SHALL POST PERMANENT SIGNAGE IN A CONSPICUOUS LOCATION AT THE SITE IDENTIFYING WHOM SHOULD BE CALLED IN AN EMERGENCY WITH PHONE NUMBERS AND SITE-IDENTIFYING INFORMATION (SUCH AS ADDRESS, SITE #, ETC.) FOR FIRE DEPARTMENT EMERGENCY USE.

6. A HAZARDOUS MATERIALS IDENTIFICATION SIGN IS REQUIRED FOR ALL ENTRANCES INTO BATTERY STORAGE AREAS. LETTERS MUST BE 1" IN HEIGHT AND IN A COLOR WHICH CONTRASTS WITH THE BACKGROUND OF THE SIGN AND LIST THE FOLLOWING: "BATTERY CABINET, LEAD ACID BATTERIES INSIDE"

7. PROVIDE 2A:40BC FIRE EXTINGUISHER, OR OTHER EQUIVALENT, IN RECESSED OR SEMI-RECESSED CABINET MOUNTED AT 48" AFF MAXIMUM TO TOP OF CABINET. IF CONSTRUCTION MATERIALS ARE NOT AMENABLE TO RECESSING THE CABINET, SURFACE MOUNTED CABINETS MAY BE APPROVED. CABINETS SHALL HAVE AN OPENABLE DOOR THAT DOES NOT REQUIRE BREAKAGE OF GLASS. EXTINGUISHERS SHALL BE HUNG ON THEIR HOOKS IN THE CABINETS.

FLASHING AND SHEET METAL

1. ALL FLASHING, COUNTER FLASHING, COPING AND ALL OTHER SHEET METAL SHALL BE OF NOT LESS THAN NO. 20 U.S. GAUGE CORROSION-RESISTANT METAL U.N.O. ALL METAL MUST BE GALVANIZED AFTER FABRICATION.

2. FLASH AND COUNTER FLASH AT ALL ROOF TO WALL CONDITIONS. G.I. FLASH AND CAULK WOOD BEAMS AND OUTLOOKERS PROJECTING THROUGH EXTERIOR WALLS OR ROOF SURFACES.

3. FLASH ALL EXTERIOR OPENINGS WITH APPROVED WATERPROOFING, WHICH CONFORMS TO THE STANDARDS OF LOCAL AND STATE CODES.

4. ALL CONNECTIONS TO BUILDING WALLS OR ROOFS MUST BE FLASHED AND MADE WATERTIGHT USING LIKE MATERIALS IN ACCORDANCE WITH NRCA ROOFING STANDARDS AND DETAILS. CONTRACTOR SHALL OBTAIN DETAILING CLARIFICATION FOR SITE-SPECIFIC CONDITIONS FROM ARCHITECT/ENGINEER, IF NECESSARY, BEFORE PROCEEDING. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE.

PAINTING

1. THE CONTRACTOR SHALL PREPARE SURFACES, FURNISH ALL PAINT, MATERIAL, LABOR AND EQUIPMENT FOR THE PAINTING OF ALL SURFACES AS REQUIRED.

2. ALL PAINTS TO BE APPLIED IN WORKMANLIKE MANNER. AT COMPLETION, REMOVE ALL MATERIALS AND DEBRIS CAUSED BY THIS CONTRACTOR. ALL FLOORS, GLASS, HARDWARE, FRAMES, FIXTURES, ETC SHALL BE THOROUGHLY CLEANED OF PAINT.

3. ALL STEEL COLUMNS AND MISC. METALS SHALL BE PRIMED AND PAINTED.

4. FIRE PREVENTION: TAKE EVERY PRECAUTION AT THE END OF THE DAY TO REMOVE OILY RAGS AND COMBUSTIBLE MATERIALS FROM THE SITE OR STORE IN METAL CONTAINER WITH TIGHT COVERS.

5. FINAL TEXTURE & COLOR PER OWNER'S INSTRUCTIONS.

6. SHOP PAINTING: CONFORM TO AISC SPECIFICATION SEC M2 AND AISC CODE SEC. 6.5. DO NOT PRIME SURFACES TO BE FIREPROOFED, IN CONTACT WITH CONCRETE, OR FIELD WELDED. STEEL WORK TO BE CONCEALED BY INTERIOR BUILDING FINISHES OR IN CONTACT WITH CONCRETE DOES NOT REQUIRE PAINTING. ALL OTHER STEEL WORK SHALL BE GIVEN ONE COAT OF SHOP PAINT.

7. ALL VISIBLE ANTENNAS, ANTENNA SUPPORT STRUCTURES, CABLE TRAYS, EQUIPMENT MUST BE PAINTED TO BLEND WITH SURROUNDING ELEMENTS – U.N.O

GYP BOARD SHEATHING NOTES

1. 5/8" TYPE "X" FIRE RESISTANT TAPERED EDGE BOARDS SHALL BE USED WHERE REQUIRED FOR RATED FIRE PROTECTION.

2. CORNER BEADS: STANDARD WALLBOARD CORNER BEADS MANUFACTURED OF GALVANIZED STEEL WITH PRE FORMED FLANGES, ANSI-CB-PF.

3. EDGE TRIM OR CASTING: STANDARD WALLBOARD EDGE TRIM 126 MANUFACTURED OF GALVANIZED STEEL WITH PERFORATED FLANGES, ANSI-US, SQUARE NOSE, SIZE AS REQUIRED FOR THICKNESS OF WALLBOARD.

4. FASTENERS: 1-1/4" USG OR EQUAL TYPE W BUGLE HEAD DRYWALL SCREWS, 1-1/4" GWB-54 ANNULAR RING NAILS, OR 1-5/8" COOLER NAILS.

5. INSTALLATION SHALL CONFORM TO REQUIREMENTS OF GYPSUM ASSOCIATION "GA-216-78R". ELECTRICAL BOX AND OTHER ROUGH-IN OPENINGS MUST BE CLEANED OF EXCESS SPACKLE BEFORE PAINTER STARTS. USE METAL CORNER BEAD ON OUTSIDE CORNERS. USE METAL EDGE BEAD ON UNEXPOSED EDGES. BENT OR RUSTY MATERIAL IS NOT ACCEPTABLE. SPACKLED AREAS SHALL BE SANDED SMOOTH AND EVEN.

6. DRYWALL TEXTURE SHALL BE SPRAY-ON SPATTER/KNOCKDOWN TYPE.

7. TAPING AND FINISHING: APPLY JOINT TAPE AND JOINT COMPOUND AT JOINTS (BOTH DIRECTIONS). APPLY COMPOUND AT NECESSARY FLANGES, PENETRATIONS, FASTENERS, HEADS AND SURFACE DEFECTS. INSTALL COMPOUND IN 3 COATS, SANDING AFTER EACH OF LAST 2 COATS.

8. WALLS AND CEILINGS SHALL BE PRIMED AND PAINTED WITH (2) COATS OF FRAZEE SEMI-GLOSS PRIOR TO WALL ATTACHMENT OF ANY EQUIPMENT OR ELECTRICAL CONDUITS. (U.N.O.)

DOORS

1. PROVIDE SEAMLESS FLUSH TYPE DOORS, 18 GAUGE, WELDED CONSTRUCTION SHOP PRIMED, PREPARED FOR HARDWARE WITH TOP AND BOTTOM CLOSURES. WELD EXPOSED JOINTS CONTINUOUSLY, GRIND, DRESS AND MAKE SMOOTH, FLUSH AND INVISIBLE. PREPARE FRAME TO RECEIVE MORTISED AND CONCEALED FINISH HARDWARE DOOR FRAME.

2. WHERE REQUIRED TO BE RATED, PROVIDE FIRE-RATED DOORS WITH UL LABEL ATTACHED IN AN INCONSPICUOUS LOCATION. WHERE DOORS ARE EXPOSED TO OUTSIDE WEATHER CONDITIONS. PROVIDE DOORS FABRICATED WITH G60 GALVANIZING.

3. INTERIOR: 20 GAUGE THICK MATERIAL, COMMERCIAL SERIES "C", TO SUIT GRADE AND MODEL OF DOOR, LABELED FRAME WHERE REQUIRED.

4. IN GENERAL INSTALL DOORS AND FRAMES PER SDI 100 AND 105, RESPECTIVELY.

5. DOORS SHALL BE WEATHER-STRIPPED AGAINST AIR INFILTRATION IN COMPLIANCE WITH TITLE 24 OF THE STATE ADMINISTRATION CODE.

6. KEYING: ALL LOCKS ARE TO BE KEYED AS PER OWNER'S INSTRUCTIONS.

THERMAL & MOISTURE PROTECTION INSULATION

1. COMPLY WITH ALL APPLICABLE REQUIREMENTS OF THE STATE ENERGY REGULATIONS.

2. PROVIDE R-13 MINIMUM KRAFT-FACED BATT. INSULATION AT WALLS UNLESS NOTED OTHERWISE, AND R-19 MINIMUM AT CEILINGS TO COMPLETELY ENCLOSE EQUIPMENT ROOM. PLACE VAPOR BARRIERS ON WARM SIDE OF WALL.

3. INSULATE WALLS BETWEEN EQUIPMENT ROOM AND ADJACENT ROOMS. INSULATE BETWEEN JAMBS AND FRAMING, BEHIND HEADER JOISTS AND IN SOFFITS OVER EXTERIOR SPACE.

4. PENETRATIONS OF ROOF MEMBRANES SHALL BE PATCHED/FLASHED AND MADE WATERTIGHT USING LIKE MATERIALS IN ACCORDANCE WITH NRCA ROOFING STANDARDS AND DETAILS. CONTRACTOR SHALL OBTAIN DETAILING CLARIFICATION FOR SITE-SPECIFIC CONDITIONS FROM ARCHITECT/ENGINEER, IF NECESSARY, BEFORE PROCEEDING. PLANS ARE NOT TO BE SCALED AND ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY, UNLESS NOTED OTHERWISE.

FIBER REINFORCED PLASTIC (FRP)

1. FIBER REINFORCED PLASTIC (FRP) PULTRUDED FLAT SHEETS SHALL BE PROVIDED BY STEALTH CONCEALMENT SOLUTIONS, INC. (LARR# 25400) , FIBERGATE COMPOSITE STRUCTURES (LARR# 25536), OR APPROVED EQUAL, SHALL CONFORM TO THE ASTM DESIGNATION D-638, D-695, D-790, D-792, AND SHALL COMPLY WITH THE FOLLOWING MECHANICAL PROPERTIES (LENGTHWISE):

FLEXURAL STRENGTH =	35,000 PSI
FLEXURAL MODULUS =	1.80 X 10^6 PSI
TENSILE STRENGTH =	24,000 PSI
COMPRESSIVE STRENGTH =	24,000 PSI
DENSITY =	0.062 – 0.070 LBS/IN^3

2. ALL MATERIAL SHALL BE CLASS I FIRE RATED WITH FLAME SPREAD OF 25 MAXIMUM, TESTED IN ACCORDANCE WITH ASTM E84. THE USE OF ANTIMONY OXIDE IS NOT PERMITTED.

3. FRP BOLTS, THREADED RODS, AND RELATED NUTS AND WASHERS SHALL BE PROVIDED BY STEALTH OR APPROVED EQUAL, UNLESS OTHERWISE NOTED.

4. SURFACES OF PANELS SHALL BE COATED WITH SUITABLE PAINT FOR U.V. PROTECTION. ALL FOAM EDGES OF PANELS MUST BE COVERED OR COATED FOR U.V. PROTECTION AND WATER. COAT ANY CUT OR DRILLED EDGES OF FRP STRUCTURAL MEMBERS WITH HETROLAC OR EQUAL RESIN OR ACRYLIC SEALER.

5. PANEL FASTENERS TO BE SPACED PER BELOW AND LOCATED 6" HORIZONTALLY FROM EACH EDGE AT TOP AND BOTTOM OF PANEL. MAINTAIN 1-1/2" MINIMUM CLEARANCE FROM ALL EDGES.

6. WHEN FASTENER BOLT-HEAD OR NUT BEARS DIRECTLY ON SURFACE OF PANEL, TIGHTEN BOLTS 1/4 TURN PAST SNUG, USE A THIN BEAD OF EPOXY TO LOCK THREADS OF FRP BOLTS/NUTS. USE WASHER OF FLANGED HEAD BOLTS WITH LARGE BEARING SURFACE.

7. PANELS WILL EXPAND AND CONTRACT DUE TO TEMPERATURE. WHEN INSTALLING PANELS IN COLD TEMPERATURES, EVENLY SPACE PANELS TO ALLOW FOR EXPANSION DURING WARM TEMPERATURES.

8. ADJACENT FLAT PANELS ARE JOINED BY A VERTICAL FOAM SPLINE THAT IS INSERTED IN THE THE GROOVES CUT INTO THE SIDE OF EACH PANEL. DO NOT LIFT PANELS BY GROOVES. PANELS MUST BE LIFTED WITH FORCE DIRECTED ONTO THE PANEL SURFACE.

9. AS NOTED IN THE LARR REPORT, PANELS SHALL BE BONDED TO THE SUPPORTING FRAME USING A QUICKSET URETHANE CONTINUOUS BEAD ADHESIVE AROUND THE ENTIRE PERIMETER OF THE PANEL, AND ATTACHED TO THE PERIMETER FRAME VIA #8 STEEL SCREWS AT 12" OR LESS SPACING AROUND THE PERIMETER OF THE PANEL (24 MIN SCREWS PER 4' X 8' PANEL). DO NOT LOCATED STEEL SCREWS IN FRONT OF AN ANTENNA. ALTERNATIVELY, THE PANELS SHALL BE BONDED TO THE SUPPORTING FRAME USING A QUICKSET URETHANE CONTINUOUS BEAD ADHESIVE AROUND THE ENTIRE PERIMETER OF THE PANEL, AND ATTACHED PER THE LARR REPORT WITH 1/2" DIAMETER THREADED FRP RODS CUT TO LENGTH AND INSERTED THROUGH 9/16" DIAMETER HOLES DRILLED AT 24" OR LESS SPACING AROUND THE PERIMETER OF THE PANEL (12 MINIMUM PER 4' X 8' PANEL). THE FRP RODS SHALL HAVE AN FRP NUT PLACED ON EACH END. ALL PANEL EDGES SHALL BE BLOCKED.

10. ALL EXPOSED EXTERIOR PANEL SURFACES SHALL BE COVERED WITH A MINIMUM 1" THICK LAYER OF EIFS (DRYVIT OR EQUAL) THAT SHALL BE TEXTURED, FINISHED, AND PAINTED TO MATCH THE EXISTING STRUCTURE. ALL OTHER EXPOSED SURFACES INCLUDING ANCILLARY FRAMING AND HARDWARE SHALL BE PAINTED TO MATCH.

11. PLACE WEATHER TIGHT FRP CAP AT ENDS OF ALL OPEN, EXPOSED FRP POSTS.

ACCESSIBILITY NOTE

THE TELECOMMUNICATIONS EQUIPMENT SPACE SHOWN ON THESE PLANS IS NOT CUSTOMARILY OCCUPIED. WORK TO BE PERFORMED IN THIS FACILITY CANNOT REASONABLY BE PERFORMED BY PERSONS WITH A SEVERE IMPAIRMENT: MOBILITY, SIGHT, AND/OR HEARING. THEREFORE, PER 2010 CALIFORNIA BUILDING CODE SECTION 1105B.3.4, EXCEPTION 1, THIS FACILITY SHALL BE EXEMPTED FROM ALL TITLE 24 ACCESS REQUIREMENTS.

at&t
12900 PARK PLAZA DRIVE
CERRITOS, CA 90703

PLANS PREPARED BY:
NATIONAL ENGINEERING & CONSULTING, INC
27 ORCHARD, SUITE 200 LAKE FOREST, CA 92630
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CLIENTS
EukonGroup
It's all about Communication
65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

SEAL:

SHEET TITLE:

GENERAL NOTES & SPECIFICATIONS

SHEET NUMBER:

T-2

FRAMING

1. ALL LUMBER SHALL BE GRADE MARKED DOUGLAS FIR-LARCH AND SHALL HAVE THE FOLLOWING MINIMUM GRADES:

JOISTS AND RAFTERS	#1
BEAMS AND STRINGERS	#1
PLATES	#2
STUDS (2X4, 3X4, 2X6)	#1
POSTS, COLUMNS AND TIMBER	#1

2. ALL FRAMING EXPOSED TO THE WEATHER OR IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE-TREATED IN ACCORDANCE WITH THE AMERICAN WOOD PRESERVERS ASSOCIATION SPECIFICATIONS. WHERE POSSIBLE, ALL CUTS AND HOLES SHOULD BE COMPLETED BEFORE TREATMENT. CUTS AND HOLES DUE TO ON-SITE FABRICATION SHALL BE BRUSHED WITH 2 COATS OF COPPER NAPHTHENATE SOLUTION CONTAINING A MINIMUM OF 2% METALLIC COPPER IN SOLUTION (PER AWPA STD. M4).

3. CUTTING OR NOTCHING OF WOOD STUDS OR PLATES SHALL NOT EXCEED 25% OF THE STUD/PLATE WIDTH AT EXTERIOR OR BEARING WALLS AND SHALL NOT EXCEED 40% OF THE STUD/PLATE WIDTH IN NONBEARING PARTITIONS. BORED HOLE DIAMETERS ARE LIMITED TO 40% OF THE STUD WIDTH IN ANY STUD AND MAY BE 60% IN NONBEARING PARTITIONS OR WHEN THE BORED STUD IS DOUBLED.

4. DO NOT NOTCH JOISTS, RAFTERS, OR BEAMS EXCEPT WHERE SHOWN ON THE DETAILS. BORED HOLES THROUGH JOISTS SHALL NOT EXCEED 1/3 OF MEMBER DEPTH AND BE LOCATED AT LEAST 2" FROM THE TOP AND BOTTOM OF THE MEMBER.

5. ALL BLOCKING AND BRIDGING SHALL BE PROVIDED AS REQUIRED PER GOVERNING CODE OR STANDARD OF PRACTICE.

6. ALL JOIST, RAFTER & MISC. FRAMING SHALL HAVE FULL-DEPTH (OR METAL) BRIDGING AT ALL SUPPORTS, MIDSPAN AND AT A MAXIMUM SPACING OF 8'-0" O/C IN BETWEEN UNLESS NOTED OTHERWISE.

7. PROVIDE DOUBLE JOISTS UNDER ALL PARTITIONS THAT ARE PARALLEL TO JOISTS. USE 2-16D NAILS AT 16" O.C. TO NAIL DOUBLE JOISTS TOGETHER.

8. THE CONTRACTOR SHALL CAREFULLY SELECT LUMBER TO BE USED IN LOADBEARING APPLICATIONS. THE LENGTH OF SPLIT ON THE WIDE FACE OF 2" NOMINAL LOADBEARING FRAMING SHALL BE LIMITED TO LESS THAN 1/2 OF THE WIDE FACE DIMENSION. THE LENGTH OF SPLIT ON THE WIDE FACE OF 3" (NOMINAL) AND THICKER LUMBER SHALL BE LIMITED TO 1/2 OF THE NARROW FACE DIMENSION.

9. BOLT HOLES SHALL BE CAREFULLY CENTERED AND DRILLED NOT MORE THAN 1/16" LARGER THAN THE BOLT DIAMETER. PROVIDE WASHERS BETWEEN BOLT HEADS OR NUTS AND WOOD. BOLTED CONNECTIONS SHALL BE SNUGGED TIGHT BUT NOT TO THE EXTENT OF CRUSHING WOOD UNDER WASHERS.

10. ALL BOLTS SHALL BE RE-TIGHTENED PRIOR TO APPLICATION OF PLASTER, PLYWOOD, ETC. AND BEFORE CLOSING IN COMPLETION OF THE JOB.

11. PREFABRICATED METAL JOIST HANGERS, HURRICANE CLIPS, HOLD-DOWN ANCHORS AND OTHER ACCESSORIES SHALL BE AS MANUFACTURED BY "SIMPSON STRONG-TIE COMPANY" OR APPROVED EQUAL. INSTALL ALL ACCESSORIES PER THE MANUFACTURER'S REQUIREMENTS. ALL STEEL SHALL HAVE A MINIMUM THICKNESS OF 0.04 INCHES (PER ASTM A446, GRADE A) AND BE GALVANIZED (COATING G60).

12. STRUCTURAL STEEL PLATE CONNECTORS SHALL CONFORM TO ASTM A-36 SPECIFICATIONS AND BE 1/4" THICK UNLESS OTHERWISE INDICATED.

13. ALL PLATES, ANCHORS, NAILS, BOLTS, NUTS, WASHERS, AND OTHER MISCELLANEOUS HARDWARE THAT ARE EXPOSED OR IN CONTACT WITH PRESSURE TREATED LUMBER SHALL BE HOT DIP GALVANIZED.

14. BOLTS IN WOOD SHALL BE A MINIMUM OF 7 BOLT DIAMETERS FROM THE ENDS AND 4 BOLT DIAMETERS FROM THE EDGES.

15. ALL SILL BOLTS SHALL BE PLACED STARTING 9" FROM THE ENDS OF A BOARD OR FROM A NOTCH AND SPACED AT INTERVALS AS NOTED ON THE PLANS.

16. ALL SILL PLATE ANCHOR BOLTS AND HOLD-DOWN CONNECTOR BOLTS AT ALL PLYWOOD SHEAR PANELS SHALL HAVE THE FOLLOWING PLATE WASHERS.

BOLT SIZE	PLATE WASHER SIZE (ASTM A-36)
5/8"	0.229" X 3" X 3"
3/4"	5/16" X 3" X 3"
7/8"	5/16" X 3" X 3"
1"	3/8" X 3-1/2" X 3-1/2"

17. TOP PLATES FOR ALL STUD WALLS SHALL BE 2-2X. MINIMUM TOP PLATE LAP SHALL BE 48" WITH 16d NAILS AT 4" O.C. EACH SIDE OF SPLICE U.N.O. SPLICES IN UPPER AND LOWER PLATES SHALL BE STAGGERED 10' MINIMUM.

18. ALL WOOD STUD WALLS SHALL HAVE 2X4 STUDS AT 16" O.C. WHEN HEIGHT BETWEEN LATERAL SUPPORTS IS LESS THAN 10'-0". WHEN HEIGHT BETWEEN LATERAL SUPPORTS MORE THAN 10'-0", USE 2X6 STUDS AT 16" O.C. WITH FULL DEPTH BLOCKING AT NOT MORE THAN 8' VERTICAL INTERVAL.

19. ALL NAILS SHALL BE COMMON WIRE NAILS U.N.O. SEE FRAMING PLANS OR DETAILS FOR NAIL SIZES AND SPACING. NAILS THAT ARE NOT DETAILED OR NOTED SHALL BE IN ACCORDANCE WITH IBC TABLE 2304.9.1. FASTENING SCHEDULE. HOLES FOR NAILS SHALL BE PREDRILLED AT A SMALLER DIAMETER THAN THE NAIL WHERE NECESSARY TO PREVENT SPLITTING.

20. LAG BOLTS SHALL HAVE LEAD HOLES BORED AS FOLLOWS:

SHANK PORTION	SAME DIAMETER AND LENGTH AS SHANK
THREADED PORTION	0.6-0.75 OF DIAMETER OF THREAD

PLYWOOD SHEATHING NOTES

1. ALL PLYWOOD CONSTRUCTION SHALL BE IN ACCORDANCE WITH (APA) AMERICAN PLYWOOD ASSOCIATION SPECIFICATIONS AND COMPLY WITH PS1-95 OR PS2-92.

2. ALL ROOF PANEL SHEATHING SHALL BE 5/8" (NOM.) TYPE CDX. EXP. 1 APA RATED SHEATHING. SUITABLE EDGE SUPPORT SHALL BE PROVIDED BY USE OF PANEL CLIPS OR BLOCKING BETWEEN FRAMING. CONNECT ROOF SHEATHING WITH 8d COMMON NAILS AT 6" O/C AT SUPPORTED PANEL EDGES AND 12" O/C AT INTERMEDIATE SUPPORTS U.N.O.

3. ALL WALL PANEL SHEATHING SHALL BE 1/2" (NOM.) TYPE CDX. EXP. 1 APA RATED SHEATHING ATTACHED WITH 10d COMMON NAILS SPACED 6" O/C AT SUPPORTED PANEL EDGES AND 12" O/C AT INTERMEDIATE SUPPORTS U.N.O.

4. INSTALL ALL PLYWOOD SHEATHING WITH THE LONG DIMENSION OF THE PANEL ACROSS SUPPORTS AND WITH PANEL CONTINUOUS OVER TWO OR MORE SPANS. STAGGER PANEL END JOINTS. ALLOW 1/8" SPACING AT PANEL ENDS AND EDGES UNLESS OTHERWISE RECOMMENDED BY THE SHEATHING MANUFACTURER.

5. ALL NAILING SHALL BE CAREFULLY DRIVEN AND NOT OVERDRIVEN. THE USE OF STAPLES AND PNEUMATIC NAIL GUNS ARE PROHIBITED FROM USE.

6. ALL EXTERIOR EXPOSED PLYWOOD SHALL BE MARINE GRADE.

FIRE RESISTANCE REQUIREMENTS

1. CONTRACTOR TO PROVIDE FLAME STOP I-DS (OR OTHER APPROVED METHOD OF FIRE PREVENTION) TO TOWER, BRANCHES, AND/ OR OTHER COMBUSTIBLE MATERIALS AS OUTLINED IN SECTIONS 602 & 603 OF 2013 CBC.

MASONRY

1. ALL MASONRY SHALL HAVE MINIMUM COMPRESSIVE STRENGTH f'm OF 1,500 PSI.

2. MASONRY UNITS SHALL BE NORMAL WEIGHT BLOCK CONFORMING TO ASTM C90, GRADE N, TYPE 1, AND SHALL HAVE A MINIMUM NET AREA COMPRESSIVE STRENGTH OF 1900 PSI. CONCRETE MASONRY UNITS MUST BE TESTED IN ACCORDANCE WITH ASTM C140.

3. MORTAR SHALL BE MACHINE MIXED CONFORMING TO ASTM C270, TYPE S. MORTAR SHALL BE FRESHLY PREPARED AND UNIFORMLY MIXED AND SHALL BE TO BUILDING CODE SECTION 2103.8.

4. GROUT SHALL CONFORM TO ASTM C476 AND BE PROPORTIONED PER BUILDING CODE TABLE 2103.12. MINIMUM GROUT COMPRESSIVE STRENGTH SHALL EQUAL OR EXCEED THE GREATER OF 2,000 PSI OR THE REQUIRED f'm.

5. REINF'G BARS SHALL CONFORM TO ASTM A706 OR ASTM A615, GRADE 60 U.N.O.

6. CONTINUOUS WIRE REINFORCING (JOINT REINFORCING) SHALL BE GALVANIZED TRUSS OR LADDER TYPE FORMED FROM 9 GAUGE COLD-DRAWN STEEL WIRE COMPLYING WITH ASTM A82.

7. ALL MASONRY BLOCKS SHALL CONFORM WITH EACH OTHER IN COLOR, TEXTURE AND SIZE WHERE APPLICABLE. BLOCK SIZE, COLOR, TYPE AND TEXTURE SHALL BE AS INDICATED ON THE DRAWINGS. PROVIDE ACCESSORY BLOCKS AS INDICATED AND REQUIRED. WHERE CUTTING IS REQUIRED, BLOCKS SHALL BE SAWCUT.

8. COURSING SHALL BE COMMON RUNNING BOND (UNLESS NOTED OTHERWISE), WITH 3/8" GROUT JOINT. JOINTS SHALL BE TOOLED CONCAVE AND BE UNIFORM IN SIZE. USE CARE TO PREVENT MORTAR AND GROUT SPILLAGE ON THE FACE OF THE MASONRY. CLEAN SUCH SPILLAGE IMMEDIATELY. REPAIR ANY DAMAGE OR INTERSTICES BETWEEN BLOCKS AND REMOVE STAINS AT THE COMPLETION OF WORK.

9. TIE INTERSECTING WALLS BY OVERLAPPING UNITS IN ALTERNATE COURSES. ROUGHEN AND CLEAN CONCRETE BEARING SURFACES FOR THE PLACEMENT OF THE FIRST COURSE. VERTICAL HEAD JOINTS SHALL BE FILLED SOLID AND SHOVED TIGHTLY TO PROVIDE BOND TO BOTH BLOCKS.

10. AT VERTICAL REINFORCING LOCATIONS, PROVIDE DOWELS FROM FOOTING TO MATCH SIZE AND SPACING OF VERTICAL WALL REINFORCING. DOWELS SHALL BE EMBEDDED INTO THE FOOTING A MINIMUM OF 9" AND SHALL HAVE A 90 DEGREE HOOK. DEEPEN FOOTING WHERE REQUIRED FOR DOWEL. WHEN A FOUNDATION DOWEL DOES NOT LINE UP WITH A VERTICAL BLOCK CORE, IT SHALL NOT BE SLOPED MORE THAN ONE HORIZONTAL IN 6 VERTICAL.

11. SPLICED BARS (INCLUDING DOWELS) SHALL BE LAPPED 48 BAR DIAMETERS MINIMUM OR 24", WHICHEVER IS GREATER. SPLICED BARS SHALL BE WIRE-TIED.

12. VERTICAL REINFORCING BARS SHALL HAVE A MINIMUM CLEARANCE OF 3/4" FROM THE MASONRY AND NOT LESS THAN ONE DIAMETER BETWEEN BARS.

13. BOND BEAMS WITH A HORIZONTAL BAR OR BARS SHALL BE PROVIDED AT 48 INCHES ON CENTER AND AT ALL FLOOR AND ROOF LINES AND AT THE TOP OF THE WALL. PROVIDE A BOND BEAM WITH A HORIZONTAL BAR OR BARS OVER ALL OPENINGS, AND EXTEND THESE BARS 2'-0' PAST THE OPENING AT EACH SIDE. PROVIDE A BAR OR BARS VERTICALLY FOR THE FULL HEIGHT OF THE WALL AT EACH SIDE OF OPENINGS, WALL ENDS AND INTERSECTIONS. PROVIDE CORNER BARS TO MATCH THE HORIZONTAL WALL REINFORCING AT WALL INTERSECTIONS.

14. REINFORCING STEEL SHALL BE SECURED IN PLACE BEFORE GROUTING BEGINS. VERTICAL BARS SHALL BE HELD IN POSITION AT THE TOP, BOTTOM AND AT INTERVALS NOT EXCEEDING 200 DIAMETERS OF THE REINFORCING BAR, NOR 10 FEET.

15. SEE DRAWINGS FOR LOCATION OF VERTICAL CONTROL JOINTS. HORIZONTAL BOND BEAM AND LINTEL REINFORCING SHALL BE CONTINUOUS ACROSS VERTICAL CONTROL JOINTS.

16. ALL CELLS SHALL BE GROUTED SOLID. GROUTING OF MASONRY BEAMS AND LINTELS SHALL BE DONE IN ONE CONTINUOUS OPERATION. GROUTING SHALL BE STOPPED 1-1/2" BELOW THE TOP OF A COURSE SO AS TO FORM A KEY AT THE POUR JOINT. FILL CELLS WITH GROUT WITH MAXIMUM 4'-0" LIFTS. VERTICAL CELLS SHALL HAVE A VERTICAL ALIGNMENT TO MAINTAIN A CONTINUOUS UNOBSTRUCTED CELL AREA NOT LESS THAN 3"X4".

17. ALL ISOLATED BOLTS EMBEDDED IN MASONRY SHALL BE GROUTED SOLIDLY IN PLACE WITH NOT LESS THAN 2" OF GROUT SURROUNDING THE BOLT.

18. PROVIDE BOND BEAM LINTELS AND BRICK SHELF ANGLES ABOVE ALL WALL OPENINGS PER DETAILS. SEE THE ARCHITECTURAL DRAWINGS FOR LOCATIONS OF ALL OPENINGS.

19. THE MASONRY CONTRACTOR SHALL PROVIDE ALL REQUIRED TEMPORARY WALL BRACING DURING CONSTRUCTION

20. ALL RETAINING WALLS SHALL HAVE AT LEAST 12" OF FREE-DRAINING GRANULAR BACKFILL, FULL HEIGHT OF WALL. PROVIDE CONTROL JOINTS IN RETAINING WALLS AT APPROXIMATELY EQUAL INTERVALS NOT TO EXCEED 25 FEET NOR 3 TIMES THE WALL HEIGHT. PROVIDE EXPANSION JOINTS AT EVERY FOURTH CONTROL JOINT, UNLESS OTHERWISE INDICATED. SEAL RETAINING FACE OF WALL AND FOOTING WITH 2 COATS OF HENRY'S 502 ASPHALTIC MASTIC. PROVIDE CONTINUOUS INSPECTION.

FOUNDATIONS - GENERAL

1. BOTTOM OF EXTERIOR FOOTINGS SHALL BEAR A MINIMUM OF 18" BELOW FINAL GRADE AND BEAR ON FIRM NATIVE OR PROPERLY COMPACTED SOILS.

2. FOOTINGS MAY BE POURED INTO AN EARTH-FORMED TRENCH IF SOIL CONDITIONS PERMIT.

3. ALL BEARING MATERIAL SHALL BE INSPECTED BY THE INDEPENDENT TESTING AGENCY PRIOR TO CONCRETE PLACEMENT. THE INDEPENDENT TESTING AGENCY SHALL BE THE SOLE JUDGE AS TO THE SUITABILITY OF THE BEARING MATERIAL. FOOTING ELEVATIONS SHALL BE ADJUSTED AS REQUIRED.

4. FOUNDATION CONCRETE SHALL HAVE REACHED A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI BEFORE BEING LOADED. STRENGTHS SHALL BE VERIFIED BY TEST.

5. FOUNDATION WALLS THAT RETAIN EARTH SHALL BE BRACED AGAINST BACKFILLING PRESSURES UNTIL THE SLABS AT TOP AND BOTTOM ARE IN PLACE AND CURED AS REQUIRED.

6. WHERE WALLS ARE TO HAVE EARTH PLACED ON EACH SIDE, SIMULTANEOUSLY PLACE FILL SO AS TO MAINTAIN A COMMON ELEVATION ON EACH SIDE OF WALL.

7. CONTRACTOR SHALL PROVIDE ALL SHORING AS REQUIRED.

8. ALL RETAINING WALLS SHALL HAVE AT LEAST 12" OF FREE-DRAINING GRANULAR BACKFILL FULL HEIGHT OF WALL. SEAL RETAINING FACE OF WALL AND FOOTING WITH 2 COATS OF HENRY'S 502 ASPHALTIC MASTIC. PROVIDE CONTINUOUS INSPECTION.

9. CONTRACTOR SHALL PROVIDE TEMPORARY AND PERMANENT DEWATERING FOR SURFACE WATER, GROUND WATER AND SEEPAGE WATER AS REQUIRED.

10. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC ENCOUNTERED DURING EXCAVATIONS AND BACKFILLING. ALL BACKFILL SHALL BE PROPERLY COMPACTED.

11. ALL FOOTINGS HAVE BEEN DESIGNED BASED UPON AN ASSUMED SOIL BEARING PRESSURE OF 1,000 PSF UNLESS NOTED OTHERWISE.

STRUCTURAL STEEL

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE LATEST REVISED EDITION OF THE AISC MANUAL OF STEEL CONSTRUCTION, WHICH INCLUDES SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, CODE OF STANDARD PRACTICE AND AWS STRUCTURAL WELDING CODE. IDENTIFY AND MARK STEEL PER CBC 2203.

2. STRUCTURAL STEEL SHOP DRAWINGS SHALL BE REVIEWED BY THE ENGINEER/ ARCHITECT PRIOR TO FABRICATION.

3. GROUTING OF COLUMN BASE PLATES: BASE PLATES SHALL BE DRYPACKED OR GROUTED WITH NON-SHRINK, NON-FERROUS GROUT. MINIMUM COMPRESSIVE STRENGTH SHALL BE 4,000 PSI AT 28 DAYS. ALL SURFACES SHALL BE PROPERLY CLEANED OF FOREIGN MATERIAL PRIOR TO GROUTING.

4. ALL EXPOSED WELDS SHALL BE FILLED AND GROUND SMOOTH WHERE METAL COULD COME IN CONTACT WITH THE PUBLIC.

5. NO HOLES OTHER THAN THOSE SPECIFICALLY DETAILED SHALL BE ALLOWED THRU STRUCTURAL STEEL MEMBERS. BOLT HOLES SHALL CONFORM TO AISC SPECIFICATION, AND SHALL BE STANDARD HOLES UNLESS OTHERWISE NOTED. NO CUTTING OR BURNING OF STRUCTURAL STEEL WILL BE PERMITTED WITHOUT PRIOR CONSENT OF THIS ENGINEER. HOLES IN STEEL SHALL BE DRILLED OR PUNCHED. ALL SLOTTED HOLES SHALL BE PROVIDED WITH SMOOTH EDGES. BURNING OF HOLES AND TORCH CUTTING AT THE SITE IS NOT PERMITTED.

6. WELDING: CONFORM TO AWS D1.1. WELDERS SHALL BE CERTIFIED

7. BOLTING: ASTM A307 BOLTS SHALL BE INSTALLED "SNUG TIGHT" PER AISC SECTION RCSC 8(c), ASTM A325 BOLTS SHALL CONFORM TO RCSC SECTION 8 (D).

8. FABRICATION: CONFORM TO AISC SPECIFICATION SEC M2 "FABRICATION" AND AISC CODE SEC 6 "FABRICATION AND DELIVERY" PERFORM WORK ON PREMISES OF A FABRICATOR APPROVED BY THE BUILDING OFFICIAL.

9. GALVANIZING: ALL EXPOSED STEEL OUTSIDE THE BUILDING ENVELOPE SHALL BE HOT-DIPPED GALVANIZED. APPLY FIELD TOUCH-UPS PER ASTM A153.

10. ALL FRAMING CONNECTORS SUCH AS CONCRETE ANCHORS, HOLD-DOWNS, POST BASES, FRAMING CAPS, HANGER AND OTHER MISCELLANEOUS STRUCTURAL METALS SHALL BE AS MANUFACTURED BY SIMPSON STRONG TIE CO. OR APPROVED EQUAL.

11. ALL STRUCTURAL STEEL EXPOSED TO EARTH SHALL HAVE 3" CONCRETE COVER.

12. MATERIALS SHALL CONFORM TO THE FOLLOWING SPECIFICATIONS:

ANCHOR BOLTS/ RODS:	ASTM F1554, GRADE 36
BARS & PLATES:	ASTM A36
BOLTS IN WOOD: BOLTS - HIGH STRENGTH:	ASTM A307 ASTM A325SC OR A325N
C-, M-, AND ANGLE SHAPES:	ASTM A36
DEFORMED WELDED WIRE FABRIC:	ASTM A497
GROUT:	EMBECO OR EQUIVALENT
OTHER STRUCTURAL SHAPES:	ASTM A36
REINFORCING BARS (WELDED): REINFORCING BARS (REGULAR):	ASTM A706, GRADE 60, DEFORMED BARS ASTM A615, GRADE 60, DEFORMED BARS
SMOOTH WELDED WIRE FABRIC:	ASTM A185
STEEL GRATING:	ANSI/NAAMM MBG 531-00
STEEL PIPE:	ASTM A53, GRADE B
TIE WIRE:	16.5 GAGE OR HEAVIER, BLACK ANNEALED
TUBE STEEL & PIPE COLUMNS:	ASTM A500, GRADE B
W - SHAPES:	ASTM A992, GRADE 50
WELDING ELECTRODES:	E70XX FOR STRUCTURAL STEEL E80XX FOR REINFORCING BARS E60XX FOR LIGHT GAUGE AND METAL DECK

EPOXY AND EXPANSION ANCHORS

1. EPOXY OR EXPANSION ANCHORS SHALL NOT BE USED EXCEPT WHERE SPECIFICALLY SHOWN ON THE PLANS OR WHEN APPROVED IN ADVANCE BY THE STRUCTURAL ENGINEER.

2. DRILLED HOLES SHALL BE PREPARED AND ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND THE CURRENT ICC REPORT.

3. SPECIAL INSPECTION SHALL BE DONE IN ACCORDANCE WITH BUILDING CODE AND THE SPECIFIC INSPECTION REQUIREMENTS SET FORTH IN THE CURRENT ICC REPORT.

4. ANCHOR RODS USED FOR EPOXY ANCHORS SHALL BE THE TYPE SPECIFIED IN THE REFERENCED ICC REPORT.

5. THE ANCHOR SIZE AND EMBEDMENT SHALL BE AS INDICATED ON THE PLANS.

6. WHERE PERMITTED, EPOXY ANCHORING SHALL BE COMPLETED WITH THE FOLLOWING ALLOWED PRODUCT(S):
   - HILTI RE-500 SD (ICC# ESR-2322, LARR-25700) - CONCRETE ONLY
   - HILTI HIT-HY 150 (ICC# ER-5193, LARR-25652M) - MASONRY WALL ONLY.
   - HILTI HIT-HY 20 (ICC# ER-4815, LARR-24564) - BRICK WALL ONLY.

7. WHERE PERMITTED, THE FOLLOWING EXPANSION ANCHORS MAY BE USED:
   - HILTI KWIK BOLT TZ (ICC# ESR-1917, LARR-25701) - CONCRETE ONLY.
   - SIMPSON STONG-BOLT (ICC# ESR-1771, LARR-25705) - CONCRETE ONLY.
   - HILTI KWIK BOLT 3 (ICC#ESR-1385, LARR-25577)GROUTFILLED MASONRY ONLY
   - SIMPSON WEDGE-ALL (ICC# ESR-1396, LARR-24682) - GROUT FILLED MASONRY ONLY.

SEISMIC GAS SHUT-OFF VALVE

1. WHEN THE LOCAL JURISDICTION REQUIRES, THE CONTRACTOR SHALL SUPPLY A "GAS SHUTOFF DEVICE" DOWNSTREAM OF GAS UTILITY METER(S) OR LIQUID PETROLEUM GAS STORAGE TANK(S) AT NO ADDITIONAL CHARGE TO THE OWNER.

2. "GAS SHUTOFF DEVICE" MAY CONSIST OF A "SEISMIC GAS SHUTOFF DEVICE "OR AN "EXCESS FLOW GAS SHUTOFF DEVICE". CONSULT WITH LOCAL JURISDICTION FOR THEIR REQUIREMENTS.

3. GAS SHUTOFF DEVICES SHALL BE CERTIFIED BY THE STATE ARCHITECT AND BE LISTED BY AN APPROVED LISTING AND TESTING AGENCY SUCH AS IAS, IAMPO, UL OR THE OFFICE OR THE STATE ARCHITECT. THE GAS SHUTOFF DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS INSTRUCTIONS AND HAVE A THIRTY (30) YEAR WARRANTY WHICH WARRANTS THAT THE VALVE OR DEVICE IS FREE FROM DEFECT AND WILL CONTINUE TO PROPERLY OPERATE FOR THIRTY (30) YEARS FROM THE DATE OF INSTALLATION.

4. IN THE CASE OF SEISMIC GAS-SHUT-OFF DEVICES (MOTION SENSITIVE) ONLY, SUCH DEVICES MUST BE MOUNTED RIGIDLY TO THE EXTERIOR OF THE BUILDING OR STRUCTURE CONTAINING THE FUEL GAS PIPING. THIS REQUIREMENT NEED NOT APPLY IF THE BUILDING AND SAFETY DIVISION DETERMINES THAT THE SEISMIC GAS SHUTOFF DEVICE (MOTION SENSITIVE) HAS BEEN TESTED AND LISTED FOR AN ALTERNATE METHOD OF INSTALLATION.

REINFORCING STEEL

1. ALL REINFORCING SHALL BE NEW DEFORMED BARS CONFORMING TO ASTM A615, GRADE 60 OR ASTM A706, GRADE 60. ALL WELDED REINFORCING BARS SHALL CONFORM TO ASTM A706.

2. REINFORCING STEEL SPLICE/DEVELOPMENT LENGTHS SHALL CONFORM TO THE FOLLOWING MINIMUM LENGTHS UNLESS NOTED OTHERWISE: SPLICED BARS SHALL BE WIRED TOGETHER.

SPLICE/DEVELOPMENT LENGTH (INCHES)

BAR SIZE	TOP BAR	OTHER BAR
#3	28	22
#4	37	29
#5	47	36
#6	56	43
#7	81	63
#8	93	72
#9	105	81
#10	116	89

TOP BAR LENGTHS APPLY TO HORIZONTAL REINFORCEMENT PLACED WITH MORE THAN 12" OF FRESH CONCRETE CAST BELOW THE SPLICE OR DEVELOP LENGTH.
COMPRESSION DOWEL EMBEDMENT: 22 BAR DIAMETERS.
LAP WELDED WIRE FABRIC ONE SPACING OF CROSS WIRES PLUS 2".

3. MINIMUM CONCRETE COVER UNLESS NOTED OTHERWISE:

UNFORMED SURFACE IN CONTACT WITH THE GROUND:	3"
FORMED SURFACES EXPOSED TO EARTH OR WEATHER	
#6 BARS AND LARGER:	2"
#5 BARS AND SMALLER:	1.5"
FORMED SURFACES NOT EXPOSED TO EARTH OR WEATHER	
BEAMS, GIRDERS AND COLUMNS:	1.5"
SLABS, WALLS AND JOISTS	
#11 BARS AND SMALLER:	0.75"

4. BARS SHALL BE CLEAN OF MUD, OIL, OR OTHER COATINGS LIKELY TO IMPAIR BONDING.

5. ALL REINFORCING SHALL BE SECURED IN PLACE PRIOR TO INSPECTIONS, PLACING CONCRETE, OR GROUTING MASONRY.

6. WELDING: BARS SHALL NOT BE WELDED UNLESS AUTHORIZED. WHEN AUTHORIZED, CONFORM TO ACI 301 SEC 3.2, 2.2, AND AWS D1.4 "WELDING" AND PROVIDE ASTM A706, GRADE 60 REINFORCEMENT.

7. FIELD BENDING: CONFORM TO ACI 301 SEC 3.3.2.8 "FIELD BENDING OR STRAIGHTENING". BAR SIZES #3 THROUGH #5 MAY BE FIELD BENT COLD THE FIRST TIME. OTHER BARS REQUIRE PREHEATING. DO NOT TWIST BARS

8. SPLICE ALL BARS IN MASONRY WITH A MINIMUM OF 48 BAR DIAMETER LAPS (2'-0" MINIMUM).

9. ALL VERTICAL WALL REINFORCEMENT SHALL BE CONTINUOUS BETWEEN SPLICE LOCATIONS SHOWN IN THE DETAILS.

CONCRETE

1. MIX DESIGN REQUIREMENTS: (UNLESS NOTED OTHERWISE)
   - A. CEMENT SHALL CONFORM TO ASTM C-150, TYPE V.
   - B. COMPRESSIVE STRENGTH = 3,000 PSI
   - C. CONCRETE SLUMP SHALL BE 3"+/-1" FOR SLABS AND 4"+/-1" FOR ALL OTHER WORK.
   - D. WATER CEMENT RATIO = 0.45 MAX

2. AGGREGATES FOR NORMAL WEIGHT CONCRETE SHALL CONFORM TO ASTM C-33 (1" MAXIMUM SIZE), AND ASTM C-330 FOR STRUCTURAL LIGHT WEIGHT CONCRETE.

3. WHERE CONCRETE WILL BE IN CONTACT WITH NATIVE OR IMPORTED SOIL WHICH HAS A VERY SEVERE SULFATE CONTENT, POZZOLAN SHALL BE ADDED AS REQUIRED.

4. EXTERIOR CONCRETE EXPOSED TO FREEZING TEMPERATURES AND/OR SALT OR DEICING CHEMICALS SHALL HAVE AIR ENTRAINMENT AND THE CEMENT CONTENT APPROPRIATE FOR THE EXPECTED EXPOSURE.

5. WATER SHALL BE POTABLE OR CLEAN, FREE FROM DELETERIOUS AMOUNTS OF ACIDS, ALKALIS OR ORGANIC MATERIALS, OILS, AND SALTS.

6. READY-MIX CONCRETE SHALL BE MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C-94.

7. FLOOR SLABS SHALL CONFORM TO ASTM C-38 STANDARDS AND SHALL BE AT LEAST 3 1/2 INCHES THICK- SEE FOUNDATION PLANS FOR REINFORCEMENT, BASE, UNDERLAYMENT, VAPOR BARRIER OR OTHER SPECIFIC REQUIREMENTS.

8. FLOOR SLABS SHALL BE LEVEL OR TRUE SLOPES AS SHOWN ON DRAWINGS. TOLERANCE: 1/8 INCH IN 10 FEET.

9. PROVIDE LIGHT BROOM FINISH ON ALL EXPOSED CONCRETE UNLESS NOTED OTHERWISE.

10. PRIOR TO COMMENCING ANY FOUNDATION WORK, COORDINATE WORK WITH ANY EXISTING UTILITIES. FOUNDATIONS SHALL BE LOWERED WHERE REQUIRED TO AVOID UTILITIES.

11. ALL EDGES OF PERMANENTLY EXPOSED CONCRETE SURFACES SHALL BE CHAMFERED 3/4" UNLESS NOTED OTHERWISE.

12. FORMWORK SHALL REMAIN IN PLACE UNTIL CONCRETE HAS OBTAINED AT LEAST 90% OF COMPRESSIVE STRENGTH. THE CONTRACTOR SHALL PROVIDE ALL SHORING AND RESHORING.

13. PROVIDE CONCRETE SLABS OVER A 10 MIL POLYETHYLENE VAPOR BARRIER OVER 4" OF POROUS FILL UNLESS NOTED OTHERWISE.

14. ALL POROUS FILL MATERIAL SHALL BE A CLEAN GRANULAR MATERIAL. POROUS FILL SHALL BE COMPACTED TO 90% MAX. DRY DENSITY .

15. WALKWAYS AND OTHER EXTERIOR SLABS ARE NOT INDICATED ON THE STRUCTURAL DRAWINGS. SEE THE SITE PLAN AND ARCHITECTURAL DRAWINGS FOR LOCATIONS, DIMENSIONS, ELEVATIONS, JOINTING DETAILS AND FINISH DETAILS. PROVIDE 4" WALKS REINFORCED WITH 6x6 - W1.4xW1.4 WWF UNLESS OTHERWISE NOTED.

16. ALL CONCRETE MATERIALS AND WORKMANSHIP SHALL CONFORM TO CHAPTER 19 OF THE CBC AND TO ALL REQUIREMENTS OF ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS," EXCEPT AS SPECIFIED HEREIN.

17. ALL FOOTINGS SHALL REST ON FIRM NATURAL SOIL OR APPROVED COMPACTED FILL.

18. MONOPOLE CAISSONS ARE DESIGNED BY OTHERS. PROVIDE ADEQUATE SEPARATION AND/OR COMPRESSIBLE MATERIAL AROUND THE TOP OF THE CAISSON AS DIRECTED BY THE CAISSON ENGINEER TO PROTECT ADJACENT NEW AND EXISTING FOUNDATIONS AND OTHER ELEMENTS.

19. CONTROL JOINTS SHALL BE PLACED IN ALL CONCRETE SLABS PER THE SCHEDULE BELOW. SAWCUT WITHIN 4 HOURS AFTER THE POUR USING THE "SOFF-CUT" PROCEDURE.

SLAB THICKNESS	MAXIMUM SPACING
4"	10'-0"
5"	12'-0"
6" AND LARGE	15'-0"

at&t
12900 PARK PLAZA DRIVE
CERRITOS, CA 90703

PLANS PREPARED BY:
NATIONAL ENGINEERING & CONSULTING, INC
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It's all about Communication
65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

SEAL:

SHEET TITLE:

GENERAL NOTES & SPECIFICATIONS

SHEET NUMBER:

T-3

STATEMENT OF SPECIAL INSPECTIONS PER THE 2013 CBC

1. THE OWNER OR REGISTERED DESIGN PROFESSIONAL OF RECORD WILL EMPLOY THE SERVICES OF ONE OR MORE SPECIAL INSPECTORS TO PROVIDE SPECIAL INSPECTIONS DURING CONSTRUCTION FOR THE ITEMS IN THE SPECIAL INSPECTION TABLE BELOW.
2. THE SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL AND THE REGISTERED DESIGN PROFESSIONAL RESPONSIBLE FOR THE DESIGN OF THE STRUCTURE, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
3. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR:
   A. THE SPECIAL INSPECTOR SHALL OBSERVE THE WORK ASSIGNED FOR CONFORMANCE WITH THE APPROVED DESIGN DRAWINGS AND SPECIFICATIONS. THE INSPECTOR MAY NOT ALTER, MODIFY, ENLARGE OR WAIVE ANY OF THE REQUIREMENTS OF THE DOCUMENTS.
   B. THE SPECIAL INSPECTOR SHALL FURNISH INSPECTION REPORTS TO THE BUILDING OFFICIAL, THE PROFESSIONAL OF RECORD, AND THE CONTRACTOR. ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION, THEN, IF UNCORRECTED, SUBMIT A COMPLETE LIST OF ALL OUTSTANDING DISCREPANCIES ON A WEEKLY BASIS TO THE OWNER, THE BUILDING OFFICIAL, AND THE PROFESSIONAL OF RECORD UNTIL ALL CORRECTIONS HAVE BEEN COMPLETED.
   C. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT STATING WHETHER THE WORK REQUIRING SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE, IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE CODE.
4. WHERE SPECIAL INSPECTION REQUIREMENTS DUPLICATE THE REQUIREMENTS OF SPECIFIED QUALITY ASSURANCE TESTING, DUPLICATE INSPECTIONS SHALL NOT BE REQUIRED.
5. OBSERVATIONS OR SITE VISITS PERFORMED BY THE ENGINEER OR ARCHITECT DUE NOT CONSTITUTE SPECIAL INSPECTIONS.
6. THE CONTRACTOR SHALL PROVIDE ADEQUATE NOTIFICATION OF SCHEDULE OF WORK REQUIRING INSPECTION OR TESTING TO THE SPECIAL INSPECTION TO ALLOW COORDINATION.
7. THE MATERIALS, SYSTEMS, COMPONENTS AND WORK REQUIRED TO HAVE SPECIAL INSPECTION OR TESTING ARE OUTLINED ON THESE DRAWINGS ALONG WITH THE TYPE AND EXTENT OF EACH INSPECTION AND TEST AND WHETHER IT IS CONTINUOUS OR PERIODIC IN NATURE. IF IT IS NOT INDICATED OTHERWISE, INSPECTION SHALL BE CONTINUOUS.
8. EACH CONTRACTOR RESPONSIBLE FOR THE CONSTRUCTION OF A MAIN WIND- OR SEISMIC-FORCE-RESISTING SYSTEM, DESIGNATED SEISMIC SYSTEM OR A WIND- OR SEISMIC-RESISTING COMPONENT SHALL PROVIDE A WRITTEN STATEMENT OF RESPONSIBILITY TO THE OWNER AND THE BUILDING OFFICIAL PRIOR TO COMMENCEMENT OF WORK ON THE SYSTEM OR COMPONENT AS REQUIRED BY CBC SECTION 1704.

ADDITIONAL SEISMIC RESISTANCE CASES:

SEISMIC DESIGN CATEGORIES REQUIRED IN	THE FOLLOWING IS A SUMMARY OF THE SEISMIC SYSTEMS, SEISMIC COMPONENTS AND SEISMIC-FORCE-RESISTING SYSTEMS
SEISMIC FORCE RESISTING SYSTEMS	
C, D, E, F	A. ALL MOMENT FRAMES, BRACED FRAMES, CANTILEVERED COLUMNS, SHEARWALLS, AND THEIR FOUNDATIONS, AND DRAGS, CHORDS, FLOOR AND ROOF DIAPHRAGMS
C, D, E, F	B. ALL DRAGS, CHORDS, FLOOR AND ROOF DIAPHRAGMS
D, E, F	C. ALL FREE STANDING MASONRY WALLS
ADDITIONAL SYSTEMS AND COMPONENTS	
C, D, E, F	A. ANCHORAGE OF ELECTRICAL EQUIPMENT USED FOR EMERGENCY OR STANDBY POWER SYSTEMS INCLUDING TELECOM CABINETS
D, E, F	B. EXTERIOR WALL PANELS AND THEIR ANCHORAGE
D, E, F	C. SUSPENDED CEILING SYSTEMS AND THEIR ANCHORAGE

SPECIAL INSPECTION	FREQUENCY	REFERENCED STANDARD	
		ACI 530/ ASCE 5/ TMS 402	ACI 530.1/ ASCE 5/ TMS 602
MASONRY			
1. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:			
a. SITE PREPARED MORTAR PROPORTIONS	PERIODIC		ART. 2.6A
b. CONSTRUCTION OF MORTAR JOINTS	PERIODIC		ART. 3.3B
c. LOCATION OF REINFORCEMENT AND CONNECTORS.	PERIODIC		ART. 3.4
2. THE INSPECTION PROGRAM SHALL VERIFY:			
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	PERIODIC		ART. 3.3G
b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION	PERIODIC	SEC. 1.15.4,2.1.2	
c. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT.	PERIODIC	SEC. 1.12	ART. 2.4, 3.4
d. WELDING OF REINFORCING BARS.	CONTINUOUS	SEC. 8.5.7 & SEC. 8.5.7.2	
e. PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	PERIODIC		ART. 1.8
3. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:			
a. GROUT SPACE IS CLEAN.	PERIODIC		ART. 3.2D
b. PLACEMENT OF REINFORCEMENT AND CONNECTORS.	PERIODIC		ART. 3.4
c. PROPORTIONS OF SITE-PREPARED GROUT	PERIODIC		ART. 2.6B
d. CONSTRUCTION OF MORTAR JOINTS	PERIODIC		ART. 3.3B
4. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE WITH CODE AND CONSTRUCTION DOCUMENT PROVISIONS.	CONTINUOUS		ART. 3.5
5. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	CONTINUOUS		ART. 1.4
6. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND APPROVED SUBMITTALS SHALL BE VERIFIED	PERIODIC		ART. 1.5

SPECIAL INSPECTION	FREQUENCY	REFERENCED STANDARD
CONCRETE (APPLICABLE TO STRUCTURAL CONCRETE OVER F'C = 2,500 PSI)		
1. INSPECT BOLTS TO BE INSTALLED IN CONCRETE PRIOR TO AND DURING PLACEMENT OF CONCRETE WHERE ALLOWABLE LOADS HAVE BEEN INCREASED	CONTINUOUS	
2. INSPECT EPOXY ANCHORS AND EXPANSION ANCHORS INSTALLED IN HARDENED CONCRETE.	CONTINUOUS	PRODUCT ICC-ES REPORT

SPECIAL INSPECTION	FREQUENCY	REFERENCED STANDARD
STEEL CONSTRUCTION		
1. MATERIAL VERIFICATION OF HIGH-STRENGTH BOLTS, NUTS, AND WASHERS:	PERIODIC	APPLICABLE ASTM MATERIAL SPECIFICATIONS: AISC ASD. SECTION A3.4: AISC LRFD. SECTION A3.3
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.		
2. INSPECTION OF HIGH-STRENGTH BOLTING:		AISC LRFD SECTION M2.5
a. BEARING TYPE CONNECTIONS	PERIODIC	
b. SLIP-CRITICAL CONNECTIONS	CONTINUOUS	
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL:		ASTM A 6 OR ASTM A 568
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.		
b. MANUFACTURER'S CERTIFIED MILL TEST REPORTS. REQUIRED		
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		AISC. ASD. SECTION A3.6 AISC LRFD. SECTION A3.5
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.		
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED		
5. INSPECTION OF WELDING:		
a. STRUCTURAL STEEL		
1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS	CONTINUOUS	AWS D1.1
2) MULTI-PASS FILLET WELDS	CONTINUOUS	
3) SINGLE-PASS FILLET WELDS GREATER THAN 5/16" (7.9mm)	CONTINUOUS	
4) SINGLE-PASS FILLET WELDS LESS THAN OR EQUAL TO 5/16" (7.9mm)	PERIODIC	
5) FLOOR AND DECK WELDS	PERIODIC	AWS D1.3
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE WITH APPROVED CONSTRUCTION DOCUMENTS:	PERIODIC	
a. DETAILS SUCH AS BRACING AND STIFFENING		
b. MEMBER LOCATIONS.		
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.		
INSPECTION OF FABRICATORS	PERIODIC	
1. APPLICABLE ELEMENT (FABRICATOR CERTIFICATION REQUIREMENTS)		
a. STRUCTURAL STEEL (AISC CERTIFIED FOR CONVENTIONAL STEEL BUILDING) b. STEEL JOISTS/ JOIST GIRDERS (SJI MEMBER) c. STEEL ROOF DECK (SDI MEMBER) d. PRECAST CONCRETE WALLS PANELS (PCI GROUP C MANUFACTURER WITH C3 CERTIFICATION) e. LOAD BEARING CONCRETE MASONRY (NCMA MEMBER)		
2. WHEN SPECIAL INSPECTIONS ARE REQUIRED BY BUILDING OFFICIAL		
a) FABRICATION AND IMPLEMENTATION PROCEDURES: THE SPECIAL INSPECTOR SHALL VERIFY THAT THE FABRICATOR MAINTAINS DETAILED FABRICATION AND QUALITY CONTROL PROCEDURES THAT PROVIDE A BASIS FOR INSPECTION, CONTROL OF THE WORKMANSHIP, AND THE FABRICATOR'S ABILITY TO CONFORM TO APPROVED CONSTRUCTION DOCUMENTS AND REFERENCED STANDARDS. THE SPECIAL INSPECTOR SHALL REVIEW THE PROCEDURES FOR COMPLETENESS AND ADEQUACY RELATIVE TO THE CODE REQUIREMENTS FOR THE FABRICATOR'S SCOPE OF WORK.		
3. WHEN SPECIAL INSPECTIONS ARE NOT REQUIRED BY THE BUILDING OFFICIAL		
a) UPON COMPLETION OF FABRICATION, THE APPROVED FABRICATOR SHALL SUBMIT A CERTIFICATE OF THE COMPLIANCE TO THE BUILDING OFFICIAL STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS.		

SPECIAL INSPECTION	FREQUENCY	REFERENCED STANDARD
DRILLED PIERS		
1. OBSERVE DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH PIER.	CONTINUOUS	GEOTECHNICAL ENGINEERING REPORT
2. VERIFY PLACEMENT LOCATIONS AND PLUMBNESS, CONFIRM PIER DIAMETERS (IF APPLICABLE), LENGTHS, EMBEDMENT INTO BEDROCK (IF APPLICABLE) AND ADEQUATE END BEARING STRATA CAPACITY.		
3. FOR CONCRETE PIERS, PERFORM ADDITIONAL INSPECTIONS IN ACCORDANCE WITH SECTION 1704.4.	SEE SPECIAL INSPECTION NOTES FOR CONCRETE ALSO	

SPECIAL INSPECTION	FREQUENCY	REFERENCED STANDARD
SOILS:		
1. SITE PREPARATION-VERIFY THAT THE SITE SUBGRADE SOILS ARE PROPERLY PREPARED	CONTINUOUS	GEOTECHNICAL ENGINEERING REPORT
2. FILL PLACEMENT 12" THICK OR GREATER - VERIFY MATERIAL BEING USED AND LIFT THICKNESS	CONTINUOUS	
3. EVALUATION OF IN-PLACE DENSITY OF COMPACTED FILL 12" THICK OR GREATER	PERIODIC	
4. SUB-GRADE IMPROVEMENTS INVOLVING SOIL MIXING, COMPACTION GROUTING, DYNAMIC COMPACTION, OR PLACEMENT OF STONE COLUMNS	CONTINUOUS	

STRUCTURAL OBSERVATION:

1. STRUCTURAL OBSERVATIONS BY AN INDEPENDENT ENGINEER OR THE ENGINEER OF RECORD SHALL BE MADE IN ACCORDANCE WITH SECTION 1704 OF THE 2013 CALIFORNIA BUILDING CODE AT THE EXPENSE OF THE OWNER TO REVIEW THE CONSTRUCTION OF THE PROJECT. STRUCTURAL OBSERVATION IS THE VISUAL OBSERVATION OF THE ELEMENTS AND CONNECTIONS OF THE STRUCTURAL SYSTEM AT SIGNIFICANT CONSTRUCTION STAGES, AND THE COMPLETED STRUCTURE FOR GENERAL CONFORMANCE TO THE APPROVED PLANS AND SPECIFICATIONS. STRUCTURAL OBSERVATION DOES NOT WAIVE THE RESPONSIBILITY FOR THE INSPECTIONS REQUIRED OF THE BUILDING INSPECTOR OR THE DEPUTY INSPECTOR(S).
2. THE OWNER SHALL EMPLOY THE CIVIL OR STRUCTURAL ENGINEER OR THE ARCHITECT OF RECORD OR THEIR DESIGNATED AGENT TO PERFORM THE STRUCTURAL OBSERVATION.
3. EVIDENCE OF EMPLOYMENT BY THE OWNER SHALL BE PROVIDED TO THE BUILDING INSPECTOR BEFORE THE FIRST SITE VISIT.
4. WHEN A PRECONSTRUCTION MEETING IS REQUIRED, IT SHALL BE ATTENDED BY THE GENERAL CONTRACTOR, APPROPRIATE SUBCONTRACTORS, AND DEPUTY INSPECTORS. THE MAJOR STRUCTURAL ELEMENTS AND CONNECTIONS WHICH REQUIRE STRUCTURAL OBSERVATION WILL BE IDENTIFIED. A RECORD OF THE MEETING SHALL BE INCLUDED IN THE FIRST OBSERVATION REPORT.
5. REQUIRED OBSERVATIONS ARE TO OCCUR AT THE FOLLOWING STAGES OF CONSTRUCTION AS A MINIMUM, FOR EACH BUILDING OR STRUCTURE AS APPLICABLE. NOTIFY THE ENGINEER 72 HOURS PRIOR TO EACH OBSERVATION.

REQUIRED IF CHECKED	ITEMS
	A. PRECONSTRUCTION MEETING SHALL BE ATTENDED BY THE STRUCTURAL OBSERVER OF RECORD.
	B. PRIOR TO PLACEMENT OF CONCRETE FOR THE FIRST FOUNDATION POUR.
	C. PRIOR TO PLACEMENT OF CONCRETE IN WALL FORMS.
	D. UPON COMPLETION OF WELDING AT STEEL MOMENT FRAMES.
	E UPON COMPLETED ERECTION OF ALL STRUCTURAL STEEL.
	F. PRIOR TO PLACEMENT OF GROUT IN FIRST LIFT.
	G. PRIOR TO GROUTING THE TOP 48" OF MASONRY WALLS AT FLOOR AND ROOF LINE. (CHORD REINFORCING)
	H. AFTER NAILING OF ALL PLYWOOD SHEAR WALLS AND ALL HOLDOWNS, DRAGS, STRAPS ARE IN PLACE, AND PRIOR TO COVERING ANY OF THE SHEAR WALLS.
	K. AFTER NAILING OF FLOOR PLYWOOD DIAPHRAGM(S); PRIOR TO COVERING.
	J. AFTER NAILING OF ROOF PLYWOOD DIAPHRAGM(S); PRIOR TO COVERING.
	K. PRIOR TO ROOFING OR PLACEMENT OF CONCRETE FILL OVER METAL DECK ROOFS OR FLOORS.
	L. FINAL WALK THROUGH UPON COMPLETION OF ALL STRUCTURAL ASPECTS OF THE PROJECT PRIOR TO ARCHITECTURAL FINISHES.
●	M. NO STRUCTURAL OBSERVATION REQUIRED

6. A REPORT PREPARED ON DEPARTMENT FORMS OR FORMS PREPARED BY THE ENGINEER OR ARCHITECT OF RECORD FOR EACH SIGNIFICANT STAGE OF CONSTRUCTION OBSERVED, SHALL BE LEFT AT THE PROJECT SITE FOR THE CONTRACTOR TO FORWARD TO THE BUILDING INSPECTOR. THE FORMS SHALL BE WET SIGNED AND SEALED BY THE RESPONSIBLE STRUCTURAL OBSERVER, ONE SIGNED COPY OF THE REPORT SHALL BE PROVIDED TO THE OWNER, CONTRACTOR, AND DEPUTY INSPECTOR, AS REQUESTED.
7. A FINAL OBSERVATION REPORT MUST BE SUBMITTED WHICH SHOWS THAT ALL OBSERVED DEFICIENCIES WERE RESOLVED AND THE STRUCTURAL SYSTEM GENERALLY CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS.
8. IF THE OWNER ELECTS TO CHANGE THE STRUCTURAL OBSERVER OF RECORD, THE OWNER SHALL:
   A. NOTIFY BUILDING INSPECTOR IN WRITING BEFORE THE NEXT INSPECTION.
   B. CALL AN ADDITIONAL PRECONSTRUCTION MEETING, AND FURNISH THE REPLACEMENT STRUCTURAL OBSERVER WITH A COPY OF PREVIOUS OBSERVER'S REPORTS.
   C. THE NEW OBSERVER SHALL BE RESPONSIBLE FOR APPROVAL OF THE CORRECTION OF ALL THE ORIGINAL OBSERVED NOTED DEFICIENCIES.
9. THE ENGINEER OR ARCHITECT OF RECORD SHALL DEVELOP ALL CHANGES TO THE STRUCTURAL SYSTEMS AT THE CONTRACTOR'S EXPENSE.
10. STRUCTURAL OBSERVATION SHALL BE PERFORMED BY NATIONAL ENGINEERING & CONSULTING, INC.

SPECIAL INSPECTION	FREQUENCY	REFERENCED STANDARD
COLD-FORMED STEEL FRAMING		
1. DURING WELDING OPERATIONS OF ELEMENTS OF THE SEISMIC-FORCE-RESISTING SYSTEM.	PERIODIC	CBC 1705.10.2
2. SCREW ATTACHMENT, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN THE SEISMIC-FORCE RESISTING SYSTEM, INCLUDING STRUTS, BRACES & HOLD-DOWNS.	PERIODIC	

SPECIAL INSPECTION	FREQUENCY	REFERENCED STANDARD
WOOD		
1. DURING FIELD GLUING OPERATIONS OF ELEMENTS OF THE SEISMIC-FORCE-RESISTING SYSTEM.	CONTINUOUS	CBC 1705.10.1
2. NAILING, BOLTING, ANCHORING AND OTHER FASTENING OF COMPONENTS WITHIN SEISMIC-FORCE-RESISTING SYSTEM, INCLUDING WOOD SHEAR WALLS, WOOD DIAPHRAGMS, DRAG STRUTS, BRACES, SHEAR PANELS & HOLD-DOWNS.	PERIODIC	
EXCEPTION		
SPECIAL INSPECTION IS NOT REQUIRED FOR WOOD SHEAR WALLS, SHEAR PANELS & DIAPHRAGMS, INCLUDING NAILING, BOLTING, ANCHORING & OTHER FASTENING TO OTHER COMPONENTS OF THE SEISMIC-FORCE-RESISTING SYSTEM, WHERE THE FASTENER SPACING OF THE SHEATHING IS MORE THAN 4 INCHES ON CENTER.		

SPECIAL INSPECTION CONTACT INFORMATION:

GEOTECHNICAL INSPECTIONS SHALL BE PERFORMED BY THE GEOTECHNICAL ENGINEER. ALL OTHER INSPECTIONS SHALL BE PERFORMED BY NATIONAL ENGINEERING & CONSULTING, INC. TO SCHEDULE AN INSPECTION PLEASE CALL (949) 716-9990, OR EMAIL: INSPECT@NATIONALENG.COM

GOVERNING CODE: 2013 CALIFORNIA BUILDING CODE

ROOFTOP

1. NEW DEAD LOADS (EQUIPMENT PLATFORM)
   FRAMING VARIES, SEE CALCS
   CABINETS VARIES, SEE CALCS
2. MINIMUM ROOF LIVE LOADS
   A. SHEATHING / DECK = 20 PSF
   B. FRAMING COMPONENTS
      TRIBUTARY AREA 0 TO 200 SF., MINIMUM LIVE LOAD = 20 PSF
      TRIBUTARY AREA 201 TO 600 SF.,
      MINIMUM LIVE LOAD VARIES FROM 12-20 PSF
      TRIBUTARY AREA 601 SF. AND GREATER,
      MINIMUM LIVE LOAD = 12 PSF
3. SNOW LOADS
   NOT APPLICABLE - NO SNOW LOAD
4. WIND LOADS
   A. BASIC WIND SPEED = 110 MPH
   B. WIND LOAD IMPORTANCE FACTOR Iw = 1.0
   C. WIND EXPOSURE CATEGORY 'C' FOR MAIN WINDFORCE-RESISTING SYSTEM
   D. WIND EXPOSURE CATEGORY 'C' FOR COMPONENTS AND CLADDING
   E. ENCLOSURE WIND DESIGN PRESSURES (ASCE 7-10 CHAPTER 30)
      GUST-EFFECT FACTOR G: 0.85
      FORCE COEFFICIENT Cf: VARIES
   F. EQUIPMENT / CABINETS WIND DESIGN PRESSURES (ASCE 7-10 CHAPTER 30)
      GUST-EFFECT FACTOR G: 0.85
      FORCE COEFFICIENT Cf: 1.4
   G. PARAPET WIND DESIGN PRESSURES (ASCE 7-10 CHAPTER 30)
      COMBINED NET PRESSURE COEFF GCpn: +1.5 / -1.0
5. EARTHQUAKE DESIGN DATA (NONSTRUCTURAL COMPONENTS - ASCE 7-10 CHAPTER 30)
   A. SEISMIC IMPORTANCE FACTOR, I = 1.0
   B. OCCUPANCY CATEGORY = II
   C. MAPPED SPECTRAL RESPONSE ACCELERATIONS
      Ss = 1.69 g
      S1 = 0.62 g
   D. SITE CLASS = D
   E. CUMULATED SPECTRAL RESPONSE COEFFICIENTS
      SDS = 1.10
      SD1 = 0.00
   F. SEISMIC DESIGN CATEGORY = D
   G. EQUIPMENT CABINETS
      BATTERIES & COMMUNICATION EQUIPMENT (ASCE 7-10 TABLE 13.6-1)
      AMPLICATION COEFFICIENT ap: 1.0
      RESPONSE COEFFICIENT Rp: 2.5
      DESIGN ACCELERATION Fp: 0.48 x SDs x I x W
6. DESIGN LOAD COMBINATIONS
   A. D
   B. D + Lr
   C. D + (W OR 0.7E)
   D. D + 0.75(W OR 0.7E) + 0.75(Lr OR S OR R)
   E. 0.6D + W
   F. 0.6D + 0.7E

   ALLOWABLE STRESS INCREASES ARE NOT PERMITTED WHEN USING THE ABOVE LOAD COMBINATIONS.

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65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

SEAL:

SHEET TITLE:

GENERAL NOTES & SPECIFICATIONS

SHEET NUMBER:

T-4

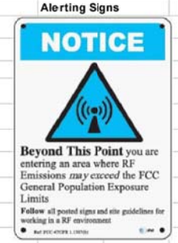
GENERAL SIGNAGE REQUIREMENTS

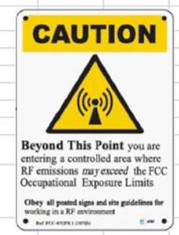
Structure Type	INFO SIGN #1	INFO SIGN #2	INFO SIGN #3	INFO SIGN #4	Striping	NOTICE SIGN	CAUTION SIGN
Towers							
Monopole/Monopine/Monopalm	entrance gates, shelter doors **OR** on the outdoor cabinets	climbing side of the Tow er	On backside of Antennas	On the side of Antennas			At the height of the first climbing step, min. 9ft above ground
SCE Tow ers/ Tow ers w ith high voltage	entrance gates, shelter doors **OR** on the outdoor cabinets	climbing side of the Tow er	On backside of Antennas	On the side of Antennas			At the height of the first climbing step, min. 9ft above ground
Light Poles / Flag Poles	entrance gates, shelter doors **OR** on the outdoor cabinets	on the pole, no less than 3ft below the Antenna and no less than 9ft above ground	On backside of Antennas	On the side of Antennas			
Utility Wood Poles (JPA)	entrance gates, shelter doors **OR** on the outdoor cabinets	on the pole, no less than 3ft below the Antenna and no less than 9ft above ground	On backside of Antennas	On the side of Antennas		If GP max value of MPE at antenna level is: 0-99%: Notice sign; over 99%: Caution sign at no less than 3ft below antenna and 9ft above ground	
Microcells mounted or non-JPA poles	entrance gates, shelter doors **OR** on the outdoor cabinets	on the pole, no less than 3ft below the Antenna and no less than 9ft above ground	On backside of Antennas	On the side of Antennas		Notice or Caution sign at no less than 9ft above ground: only if the exposure exceeds 90% of the General Public exposure at 6ft above ground or at outside surface of adjacent buildings	
Roof Tops							
At all access points to the roof	X						
On Antennas	X		X	X			
Concealed Antennas	X	X					
antennas mounted facing outside the building	X	X					
antennas on support structure	X	X					
Roofview Graph:							
Radiation area is w ithin 3ft from antenna	X	adjacent to each antenna				either Notice or Caution sign (based on Roofview results) at antennas/barrier	
Radiation area is beyond 3ft from antenna	X	adjacent to each antenna			diagonal, yellow striping as to Roofview graph		
Church Steeples	Access to steeple	adjacent to antennas if antennas are concealed	On backside of Antennas	On the side of Antennas			Caution sign at the antennas
Water Stations	Access to ladder	adjacent to antennas if antennas are concealed	On backside of Antennas	On the side of Antennas			Caution sign beside Info sign #1, min. 9ft above ground

Notes for Rooftop sites:

1. Either NOTICE or CAUTION signs need to be posted at each sector as close as possible to: the outer edge of the striped off area or the outer antennas of the sector.
2. If Roofview show s: only blue = Notice Sign, blue and yellow = Caution Sign, only yellow = Caution Sign to be installed.
3. Should the required striping area interfere w ith any structures or equipment (A/C, vents, roof hatch, doors, other antennas. dishes, etc.), please notify AT&T to modify the striping area, prior to starting the w ork

Alerting Signs





Info sign #1

Info Sign #2

Info sign #3

Info sign #4

GENERAL SIGNAGE GUIDELINES

SCALE: NONE | 1

PROPOSED ANTENNA AND TRANSMISSION CABLE REQUIREMENTS

SECTOR		PROPOSED TECHNOLOGY	ANTENNA AIR / HEX / 8-Port	ANTENNA SIZE (8', 6', 4')	ANTENNA AZIMUTH	RAD CENTER	TRANSMISSION LINES (LENGTH FT. +/-) JUMPER	TRANSMISSION LINES (LENGTH FT. +/-) DC CABLE (AWG #8)
SECTOR "A"	A1	LTE	HEX	8'	80	50'-0"	<12'	+/- 130'
	A2	LTE	HEX	8'	80	50'-0"	<12'	+/- 130'
	A3	UMTS	HEX	8'	80	50'-0"	<12'	+/- 130'
	A4	LTE	HEX	8'	80	50'-0"	<12'	+/- 130'
SECTOR "B"	B1	LTE	HEX	8'	200	50'-0"	<12'	'+/- 130'
	B2	LTE	HEX	8'	200	50'-0"	<12'	'+/- 130'
	B3	UMTS	HEX	8'	200	50'-0"	<12'	'+/- 130'
	B4	LTE	HEX	8'	200	50'-0"	<12'	'+/- 130'
SECTOR "C"	C1	LTE	HEX	8'	320	50'-0"	<12'	'+/- 130'
	C2	LTE	HEX	8'	320	50'-0"	<12'	'+/- 130'
	C3	UMTS	HEX	8'	320	50'-0"	<12'	'+/- 130'
	C4	LTE	HEX	8'	320	50'-0"	<12'	'+/- 130'

REMOTE RADIO UNITS (RRU'S)

SECTOR		RRU UP or DOWN	RRU COUNT	RRU LOCATION (DISTANCE FROM ANTENNA)	RRU MIN. CLEARANCES ABOVE	BELOW	SIDES
SECTOR "A"	A1	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	A2	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	A3	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	A4	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
SECTOR "B"	B1	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	B2	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	B3	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	B4	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
SECTOR "C"	C1	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	C2	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	C3	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"
	C4	UP	2	VARIES FROM 2'-0" TO 12'-0" RESPECTIVELY	18"	8"	0"

NOTES TO CONTRACTOR:

1. CONTRACTOR IS TO REFER TO AT&T 'S MOST CURRENT RADIO FREQUENCY DATA SHEET (RFDS) PRIOR TO CONSTRUCTION.
2. CABLE LENGTHS WERE DETERMINED BASED ON VISUAL INSPECTION DURING SITE-WALK. CONTRACTOR TO VERIFY ACTUAL LENGTH DURING PRE-CONSTRUCTION WALK.

SURGE SUPRESSION SYSTEM

MANUFACTURER	PART NUMBER	QTY.	LOCATION
RAYCAP	DC6-48-60-18-8F	2	MOUNTED TO ANTENNA MONOPALM STRUCTURE
RAYCAP	DC12-48-60-RM	1	MOUNTED INSIDE PROPOSED LTE RACK

ANTENNA, RRU, & SURGE SUPRESSION SCHEDULES

SCALE: NONE | 2

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NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
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8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

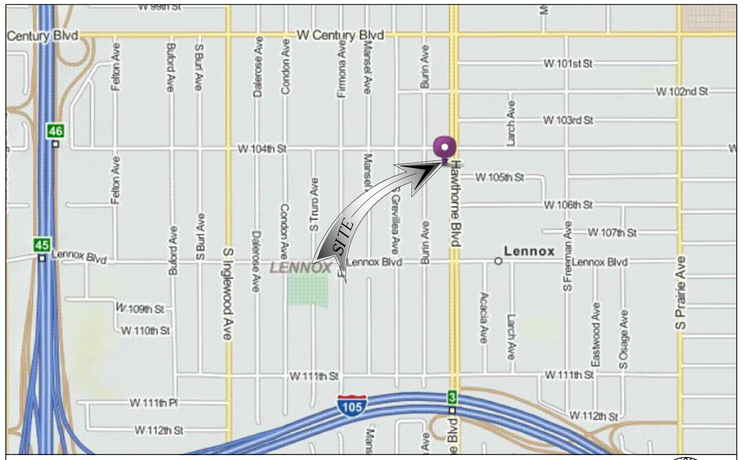
SEAL:

SHEET TITLE:

SIGNAGE REQUIREMENTS & EQUIPMENT SCHEDULES

SHEET NUMBER:

RF-1



VICINITY MAP

LEGAL DESCRIPTION

ALL THAT CERTAIN REAL PROPERTY SITUATED IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, DESCRIBED AS FOLLOWS:
THE NORTH 39 FEET OF THE SOUTH 89 FEET OF THE EAST 135 FEET OF LOT 19 OF TRACT NO. 288, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP RECORDED IN BOOK 14, PAGES 162 AND 163 OF MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

SITE ADDRESS

10423 HAWTHORNE BOULEVARD, INGLEWOOD, CA

APN

4036-016-008

RECORD OWNER

JAMES R. SUTHERLAND AND ANNA SUTHERLAND, AS TRUSTEES OF THE SUTHERLAND 2004 FAMILY TRUSTDATED JUNE 18, 2004, AS TO AN UNDIVIDED (1/2) ONE-HALF INTEREST; AND ANNA L. SUTHERLAND AS TRUSTEE OF THE ROBERT L. LEFLER TRUST FOR THE BENEFIT OF MICHAEL THOMAS LEFLER, AS TO AN UNDIVIDED (1/2) ONE-HALF INTEREST.

TITLE REPORT

LEGAL DESCRIPTION AND EXCEPTIONS WERE TAKEN FROM
PRELIMINARY TITLE REPORT PREPARED BY COMMONWEALTH LAND
TITLE COMPANY ORDER NO. 08020732 DATED OCTOBER 18, 2013

SCHEDULE B EXCEPTION

ITEMS A AND B ARE TAXES & LIEN RELATED
ITEM 2 IS COVENANT & AGREEMENT RELATED
ITEMS 4 & 5 ARE TITLE RELATED

1. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: PIPES
RECORDING NO: IN BOOK 2635, PAGE 172, OF DEEDS
AFFECTS: BLANK IN NATURE
THE EXACT LOCATION AND EXTENT OF SAID EASEMENT IS NOT DISCLOSED OF RECORD.

MAY OR MAY NOT AFFECT THE CONSTRUCTION AREA

3. EASEMENT(S) FOR THE PURPOSE(S) SHOWN BELOW AND RIGHTS INCIDENTAL THERETO AS SET FORTH IN A DOCUMENT:
PURPOSE: PUBLIC ROAD AND HIGHWAY PURPOSES
RECORDED: IN BOOK 3509, PAGE 78, AND IN BOOK 3811, PAGE 271, BOTH OF OFFICIAL RECORDS
AFFECTS: THE EAST 15 FEET OF SAID LAND

DOES NOT AFFECT THE CONSTRUCTION AREA

BASIS OF BEARING

THE CENTER LINE OF HAWTHORNE BLVD BEARING N00°01'20" E WAS USED AS BASIS OF BEARING FOR THIS SURVEY.

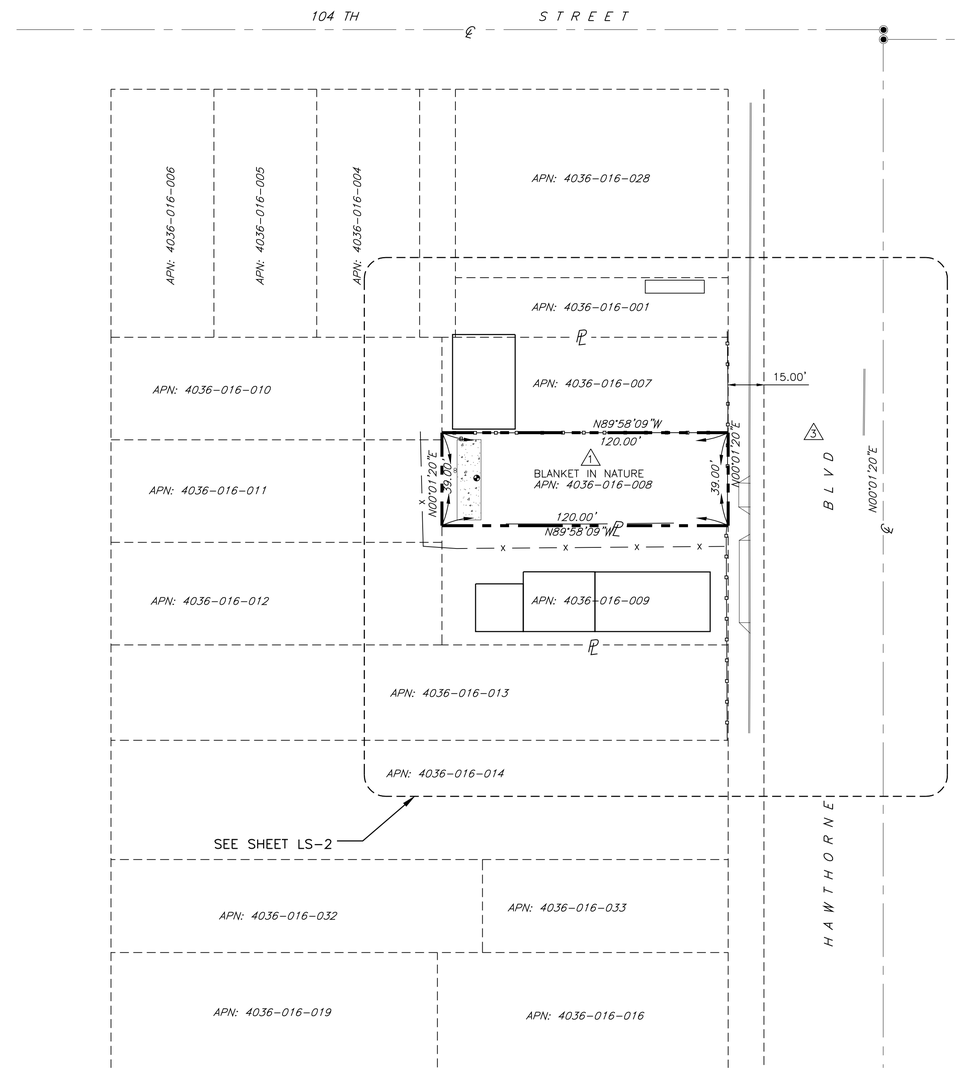
BENCH MARK

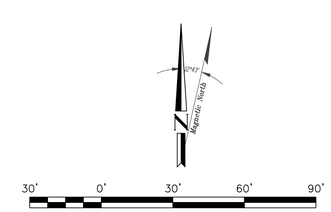
SOURCE: NATIONAL GEODETIC SURVEY C.O.R.S. "CRHS"

FLOOD ZONE

SITE IN LOCATED WITHIN FLOOD ZONE X, AS PER F.I.R.M.
MAP NO. 06037C1780E, DATED SEPTEMBER 26, 2008

BOUNDARY DETAIL





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65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	10/31/13	PRELIM	JP
1	11/15/13	FINAL	JP

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BOULEVARD,
INGLEWOOD, CA

SEAL:

REGISTERED PROFESSIONAL ENGINEER
ANDREW J KOLTANOV
No. 26571
Exp. 03/31/14
CIVIL
STATE OF CALIFORNIA

SHEET TITLE:

TOPOGRAPHIC SURVEY

SHEET NUMBER:

LS-1

SHEET 1 OF 2

LEGEND

	CENTER LINE
	PROPERTY LINE
—x —x —x —x —	CHAIN-LINK FENCE
	WOOD FENCE
	EASEMENT LINE
—G— G—	GAS LINE
—S— S—	SEWER LINE
—W— W—	WATER LINE
—T— T —T— T—	TELEPHONE CABLE
	WOOD WALL
	CMU WALL
	EDGE OF PVM'T
EG	EXISTING GROUND
FD	FOUND
GUY	GUY WIRE ANCHOR
EP	EDGE OF PAVEMENT
FL	FLOW LINE
FS	FINISH SURFACE
HT	HEIGHT
NG	NATURAL GRADE
RF	ROOF GRADE
RP	RAISED PLATFORM
MB	MAIL BOX
PL	PROPERTY LINE
PP	POWER POLE
PB	PULL BOX
SSCO	SANITARY SEWAGE CLEANOUT
SS	STREET SIGN/STOP SIGN
SDCB	STORM DRAIN CATCH BASIN
SDMH	STORM DRAIN MAN HOLE
SGN	SIGN
TC	TOP OF CURB
TW	TOP OF WALL
TA	TOP OF ANTENNA
UA	UNDERGROUND ACCESS
BFP	BACK FLOW PREVENTER
WM	WATER METER
WV	WATER VALVE
	EXISTING LIGHT
ELEC	EXISTING ELECTRICAL MANHOLE
POLE	EXISTING POLE
	EXISTING STREET LIGHT
	EXISTING SATELLITE DISH
	EXISTING CONDENSER
	ROOF DRAIN
T	EXISTING TELE. MANHOLE
WM	EXISTING WATER METER
BP	EXISTING BACKFLOW PREVENTER
	EXISTING SIGN
	EXISTING TRAFFIC SIGNAL
	EXISTING ANTENNA
	EXISTING MICROWAVE DISH
SMH	EXISTING SEWER MANHOLE
	POWER POLE
	GUY WIRE ANCHOR
	CATCH BASIN
	FIRE HYDRANT
	VALVE (UTILITY)
	TREE
	PINE TREE
	BUSH
	PALM TREE
	EXISTING CONCRETE WALK/PATH
	EXISTING GRASS/TURF

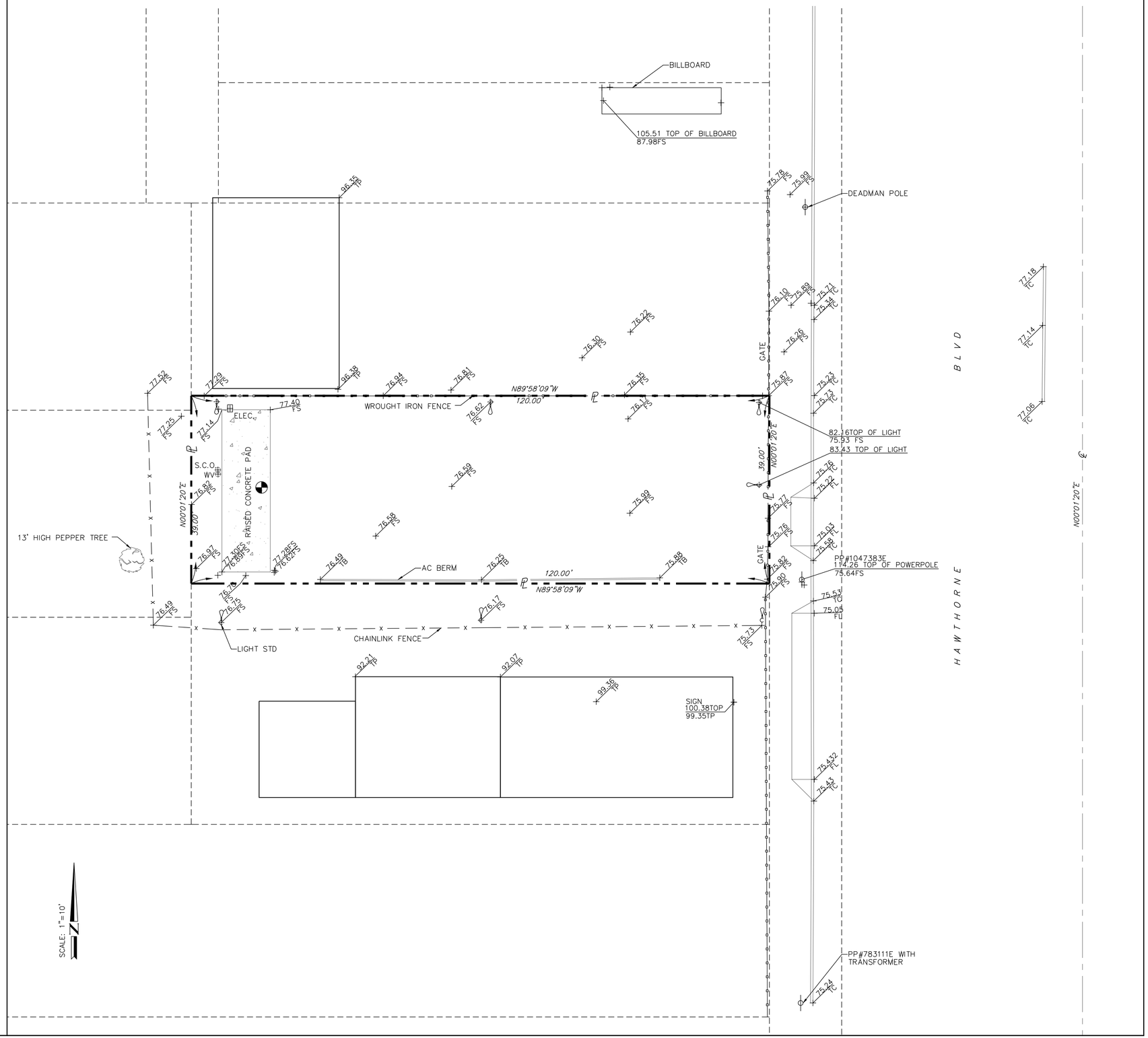
MONUMENTS

MONUMENT FD.
(AS NOTED)

GEOGRAPHIC COORDINATES AT CENTER OF PROPOSED TOWER

LATITUDE: 33°56'28.58"N
LONGITUDE: 118°21'11.62"W

SITE SURVEY DETAIL



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12900 PARK PLAZA DRIVE
CERRITOS, CA 90703

PLANS PREPARED BY:
NATIONAL ENGINEERING & CONSULTING, INC
27 ORCHARD, SUITE 200 LAKE FOREST, CA 92630
PHONE: (949) 716-9990 | FAX: (949) 716-9997

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It's all about Communication
65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	10/31/13	PRELIM	JP
1	11/15/13	FINAL	JP

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BOULEVARD,
INGLEWOOD, CA

SEAL:

REGISTERED PROFESSIONAL ENGINEER
ANDREW J. KOLTAVARY
No. 26571
Exp. 03/31/14
CIVIL
STATE OF CALIFORNIA

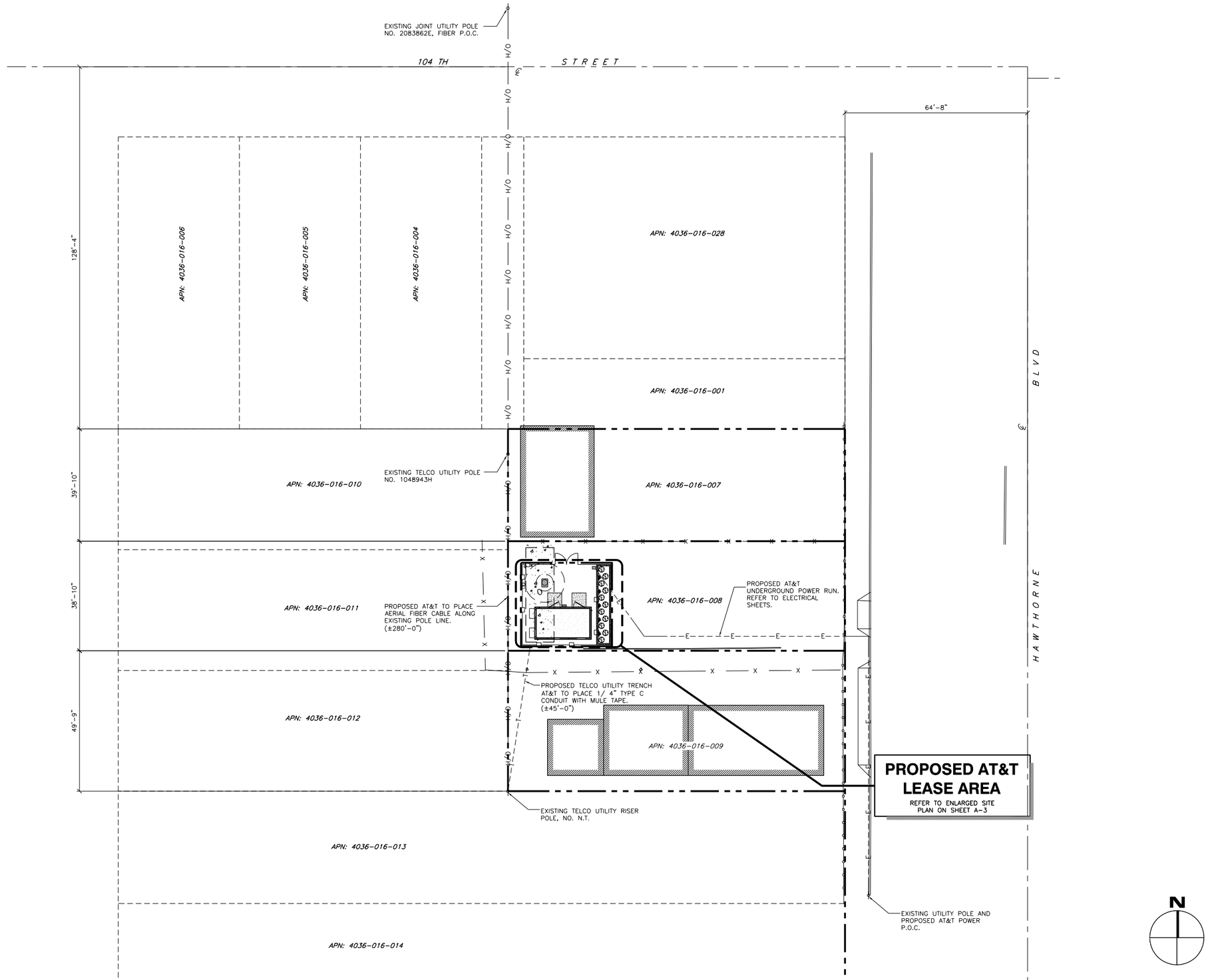
SHEET TITLE:

TOPOGRAPHIC SURVEY

SHEET NUMBER:

LS-2

SHEET 2 OF 2



SITE PLAN

0 4' 8' 16'

SCALE: 1/16"=1'-0"

1

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1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

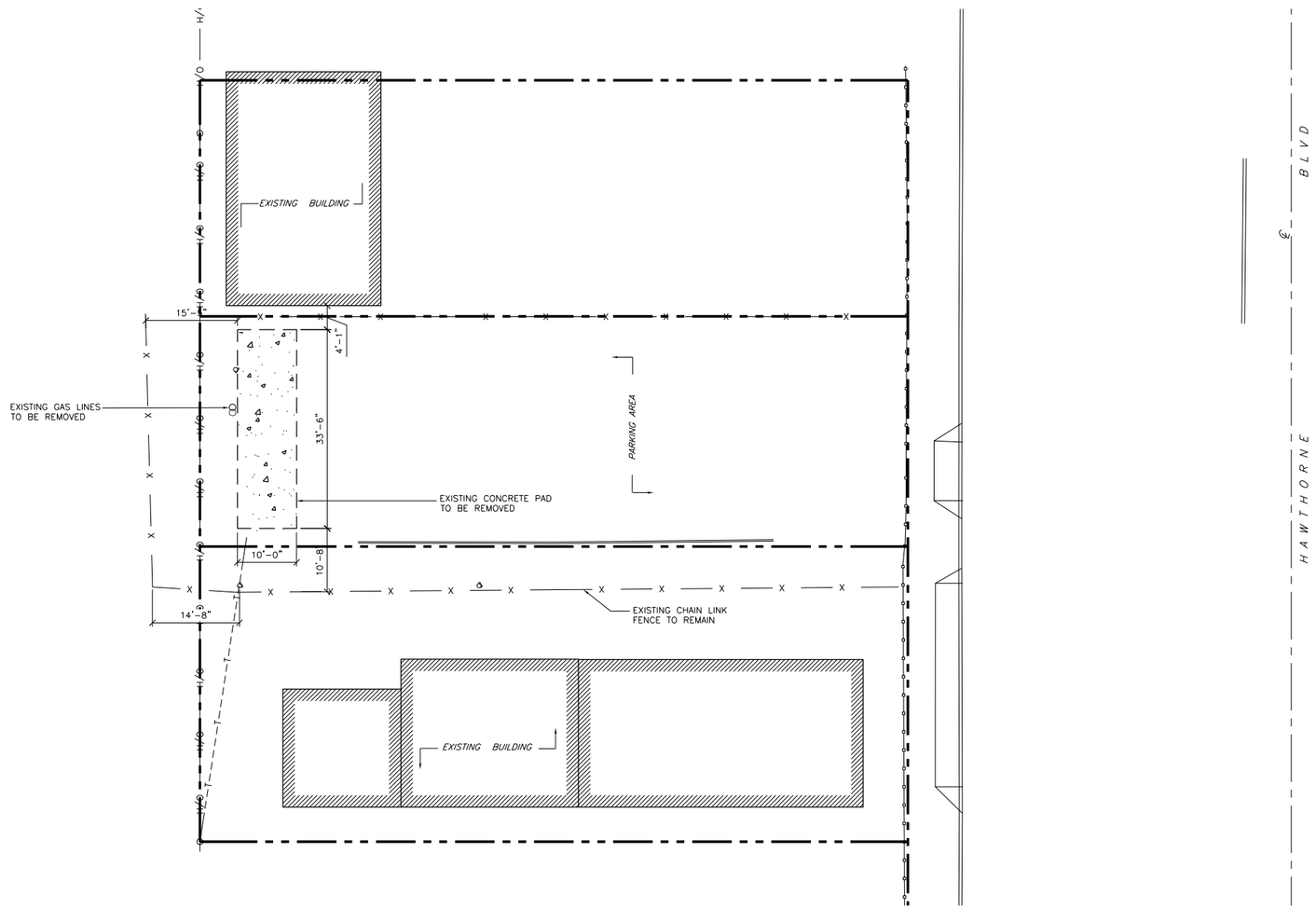
SEAL:

SHEET TITLE:

SITE PLAN

SHEET NUMBER:

A-1



N

DEMO PLAN

0 3' 6' 12'

SCALE: 3/32"=1'-0"

1

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9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

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HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

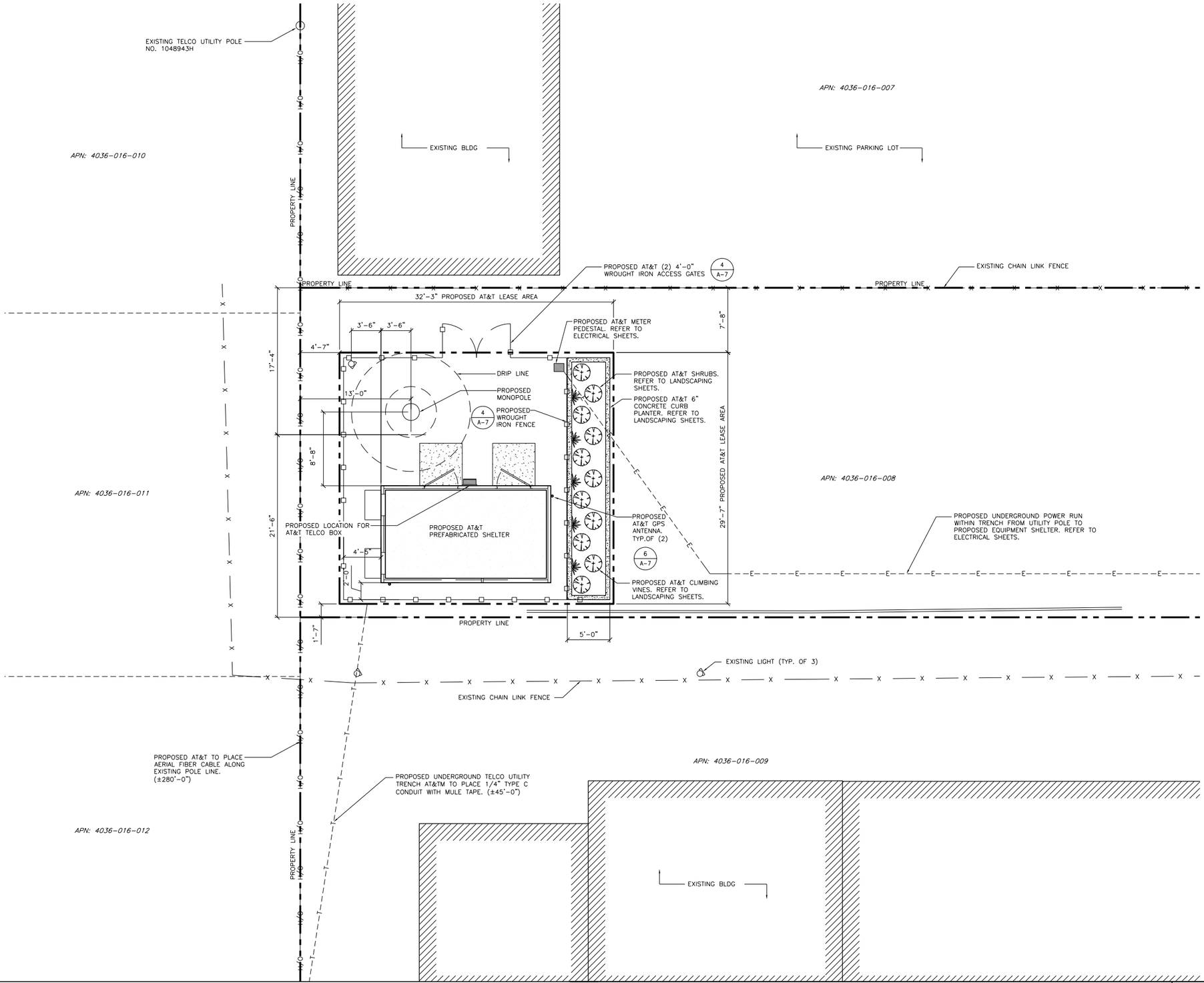
SEAL:

SHEET TITLE:

DEMO PLAN

SHEET NUMBER:

A-2



ENLARGED SITE PLAN

0 3' 6' SCALE: 3/16"=1'-0" 1

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10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

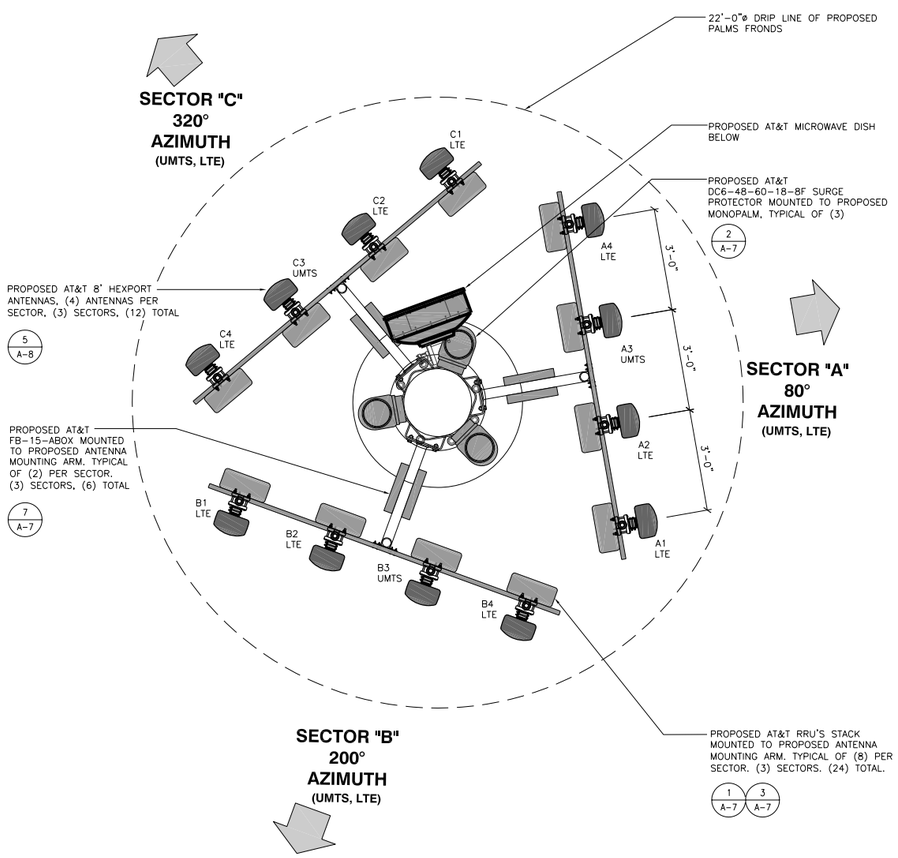
SEAL:

SHEET TITLE:

ENLARGED SITE PLAN

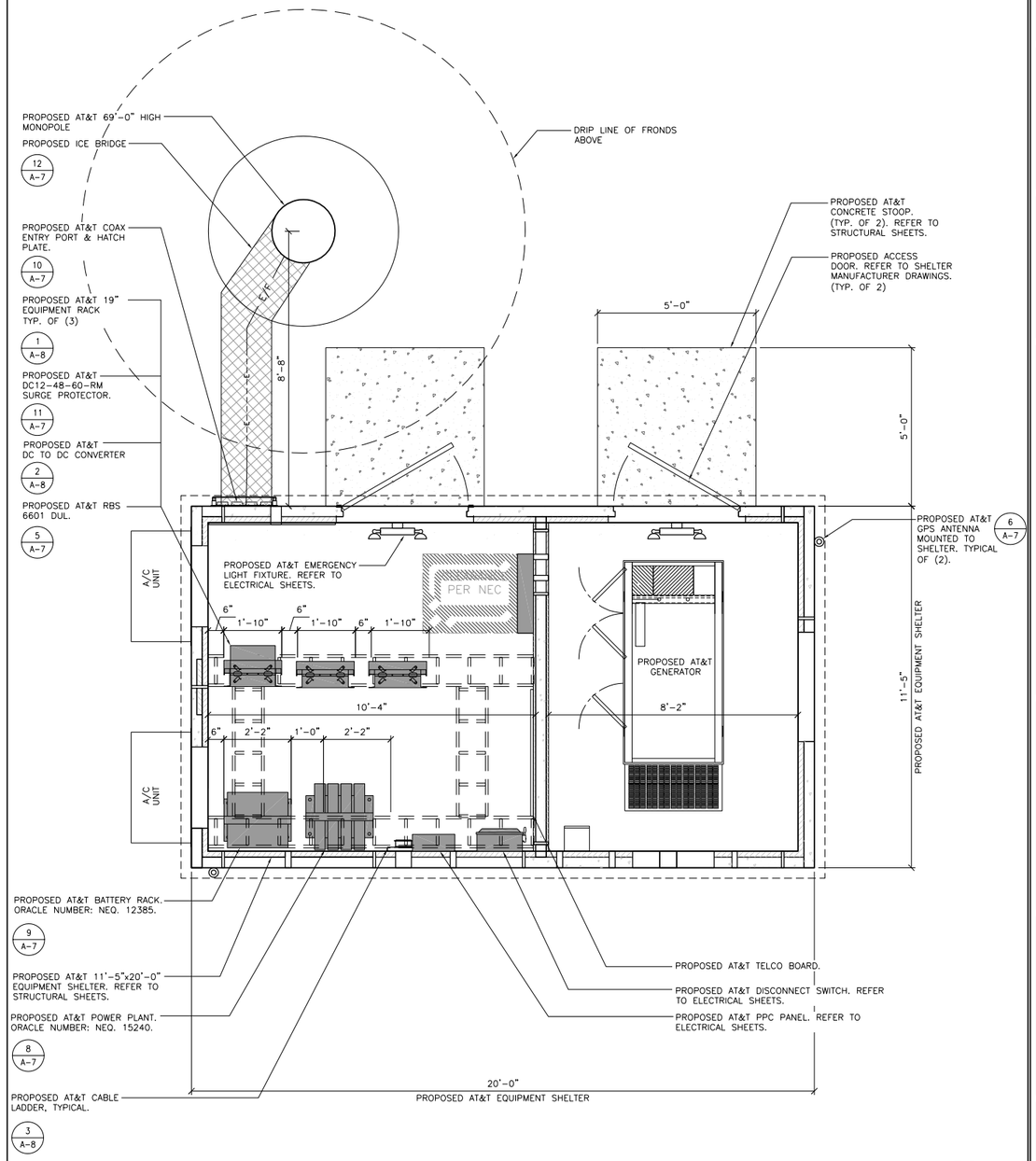
SHEET NUMBER:

A-3



PROPOSED ANTENNA LAYOUT PLAN

SCALE: 1/2"=1'-0" (0 1' 2') — 1



PROPOSED EQUIPMENT LAYOUT PLAN

SCALE: 1/2"=1'-0" (0 1' 2') — 2

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SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

SEAL:

SHEET TITLE:

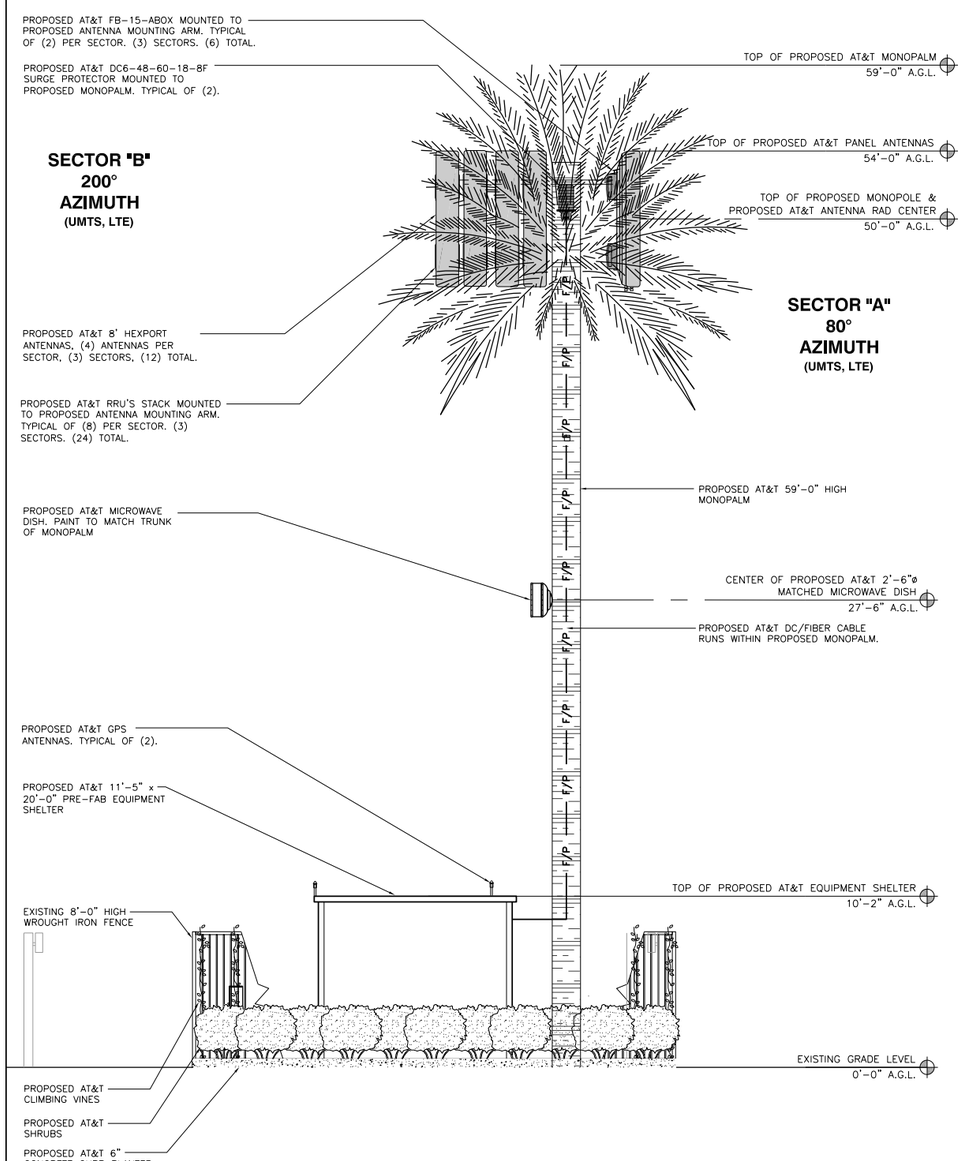
PROPOSED EQUIPMENT & ANTENNA LAYOUT PLAN

SHEET NUMBER:

A-4

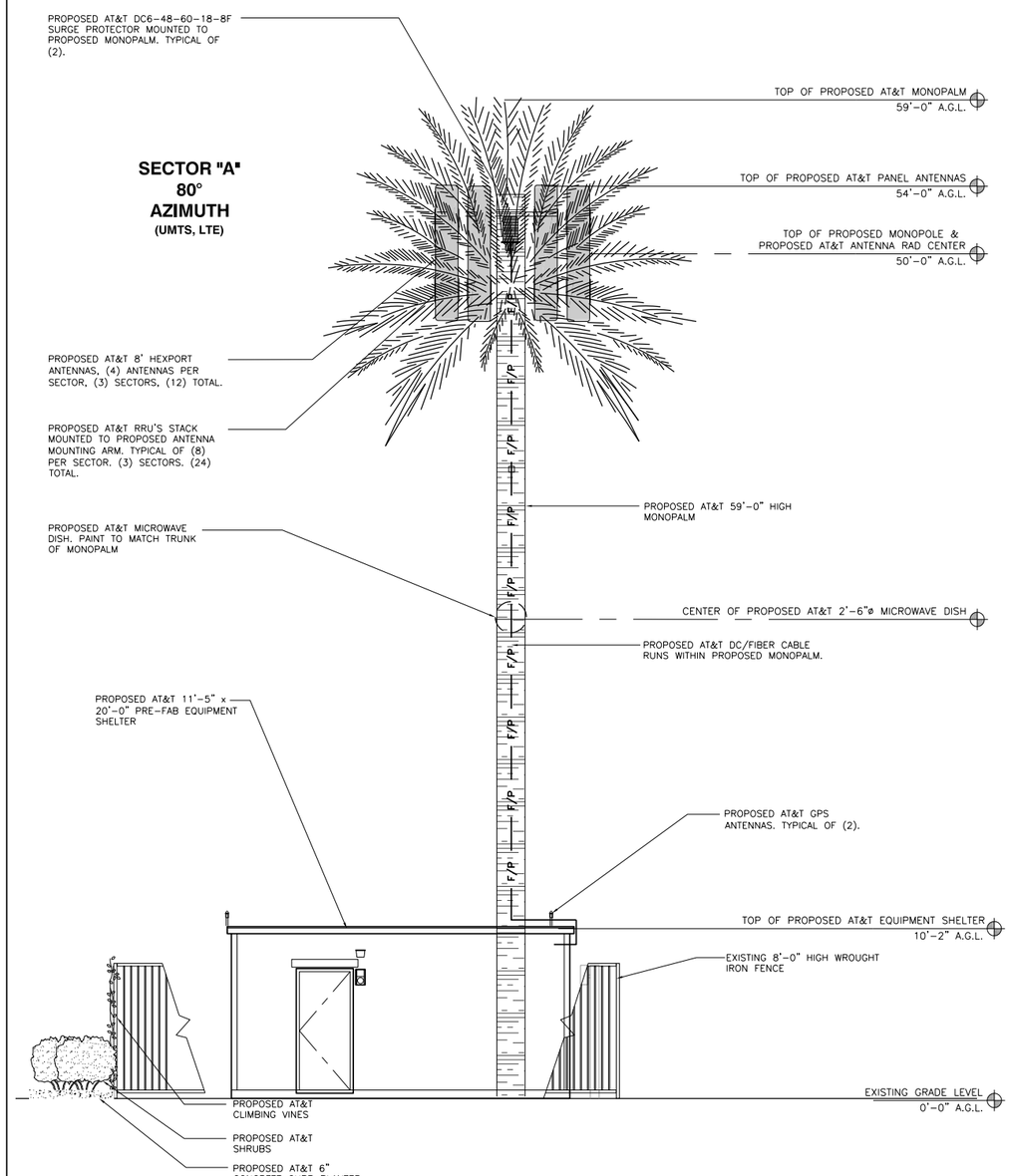
NOTE:

"THE PROPOSED INSTALLATION IS AN ARTISTIC REPRESENTATION OF A TREE, AND NOT INTENDED TO BE AN EXACT REPRODUCTION OF AN ACTUAL LIVING TREE. THE FINAL INSTALLATION WILL HAVE CABLES, CABLE PORTS, AND VARIOUS ATTACHMENTS, SUCH AS ANTENNAS, NUTS, AND BOLTS. EVERY EFFORT WILL BE MADE TO DISGUISE THESE COMPONENTS AND THEY WILL NOT BE READILY APPARENT TO THE CASUAL OBSERVER OR PASSERBY. HOWEVER, UPON CLOSE SCRUTINY, THE TRUE NATURE OF THE INSTALLATION WILL BE APPARENT."



EAST ELEVATION

0 2' 4' SCALE: 1/4"=1'-0" 1



NORTH ELEVATION

0 2' 4' SCALE: 1/4"=1'-0" 2

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SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

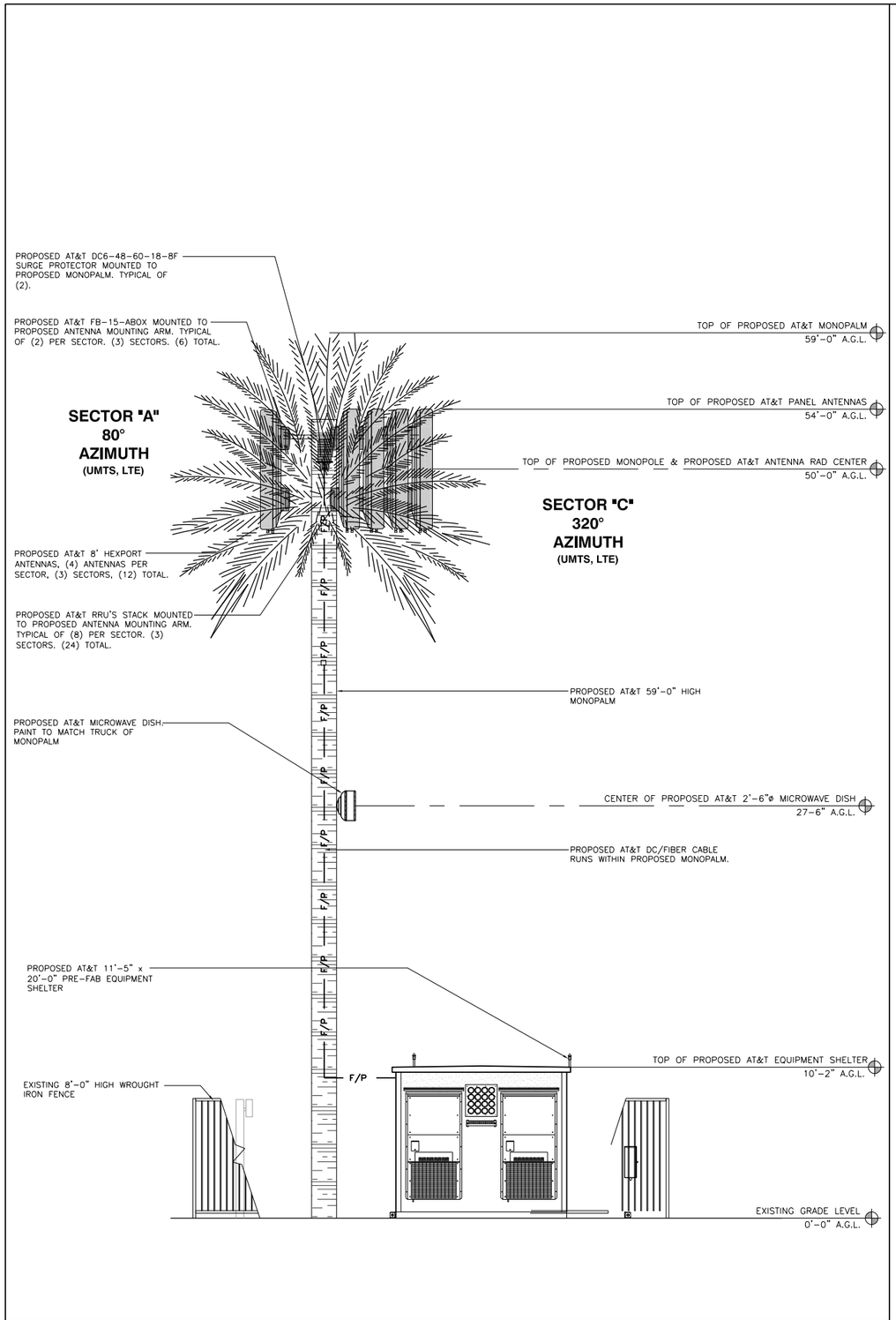
SEAL:

SHEET TITLE:

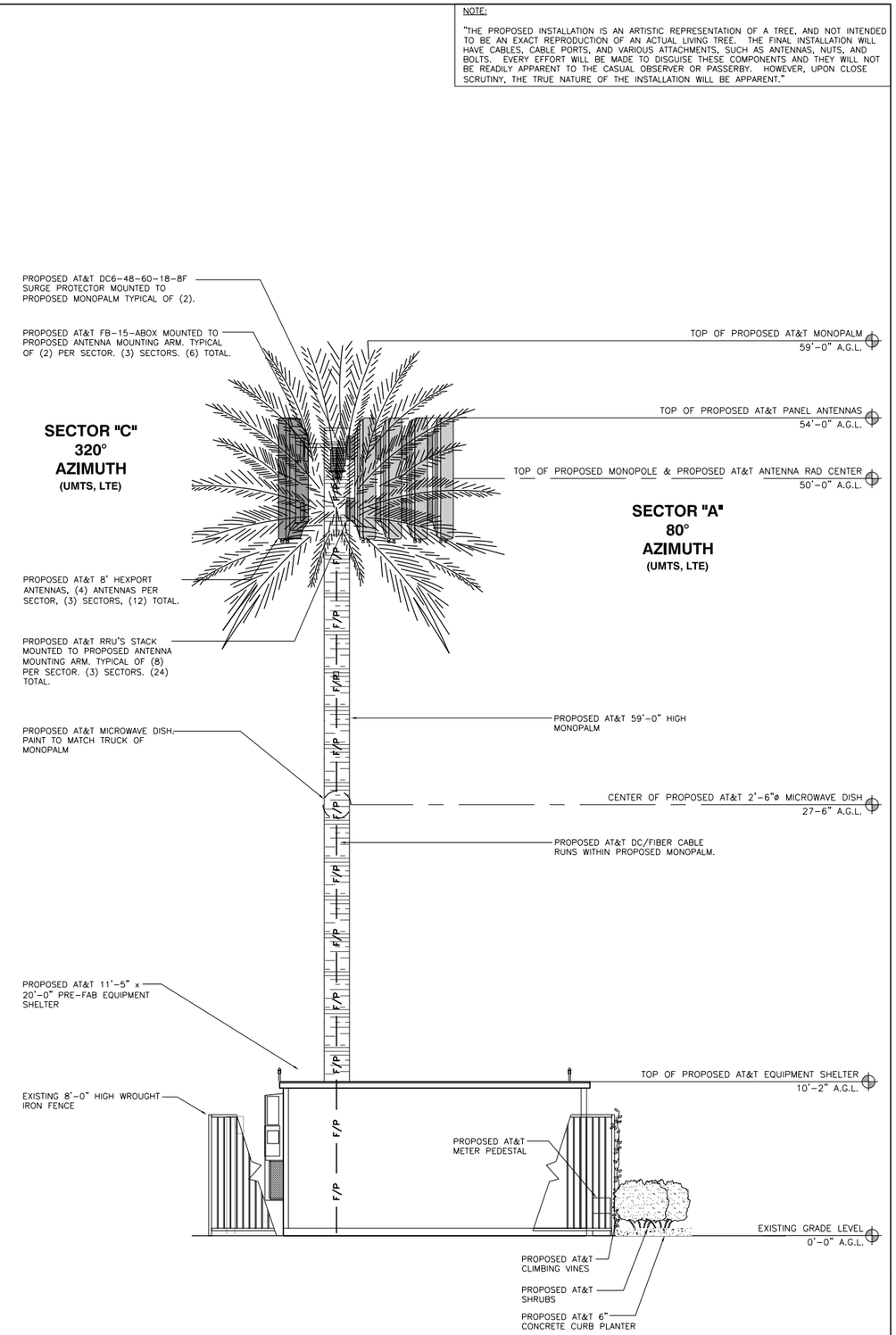
ARCHITECTURAL ELEVATIONS

SHEET NUMBER:

A-5



WEST ELEVATION 0 2' 4' SCALE: 1/4"=1'-0" 1



SOUTH ELEVATION 0 2' 4' SCALE: 1/4"=1'-0" 2

NOTE:

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SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

SEAL:

SHEET TITLE:

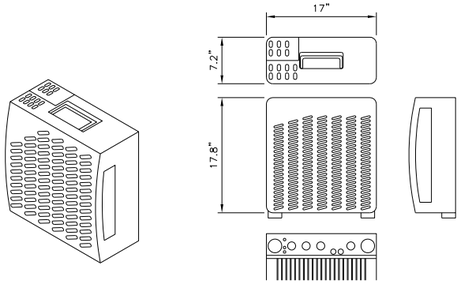
ARCHITECTURAL ELEVATIONS

SHEET NUMBER:

A-6

ERICSSON RRUS-11

DIMENSIONS, WxDxH:	431x184x452mm (17"x7.2"x17.8")
POWER CONSUMTION:	200 WATTS
TOTAL WEIGHT:	55 lbs
TEMPERATURE:	-40° TO 55° C

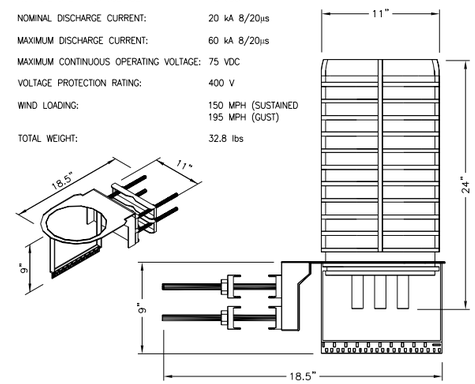


RRUS-11 DETAIL

SCALE: N.T.S. | 1

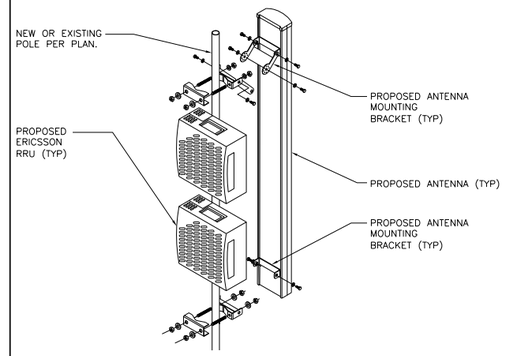
RAYCAP DC6-48-60-18-8F

DIMENSIONS, WxDxH:	280x610mm (11"x24")
NOMINAL OPERATING VOLTAGE:	48 VDC
NOMINAL DISCHARGE CURRENT:	20 kA 8/20µs
MAXIMUM DISCHARGE CURRENT:	60 kA 8/20µs
MAXIMUM CONTINUOUS OPERATING VOLTAGE:	75 VDC
VOLTAGE PROTECTION RATING:	400 V
WIND LOADING:	150 MPH (SUSTAINED 195 MPH (GUST)
TOTAL WEIGHT:	32.8 lbs



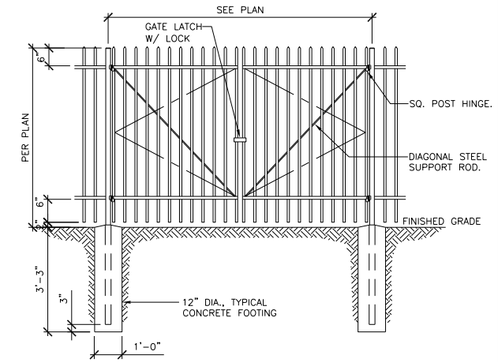
DC SURGE SUPPRESSOR DETAIL

SCALE: N.T.S. | 2



ANTENNA MOUNT W/ RRUS

SCALE: N.T.S. | 3



WROUGHT IRON GATE

SCALE: N.T.S. | 4

Key Features
- Multi-standard: GSM, WCDMA and LTE support
- Up to twelve RRU can be connected to one MU
- Can be installed with zero footprint
- Multiple power output options, up to 60 W/RRU
- Available for different frequency bands
- Supports dual-band configurations
- Prepared for HSPA evolution

The MU can also be installed in an outdoor site support cabinet, SSC-01 or an existing base station. The outdoor RRU can be installed on poles, walls, or in a tower. The RBS 6601 suits medium to large multi-standard capacity requirements. It supports multi-standard for both single- and dual-band configurations and supports the most common frequency bands.

Since the hardware is separated into small, lightweight units that can be carried to site, a main-remote solution is perfect for sites where any disturbance caused by installation work must be kept to a minimum or for locations where space or access is limited. Main-remote solutions are also ideal for specifically tailored coverage, because the highly flexible RRU can be spread over a very large area. The RBS 6601 suits a wide range of applications, e.g.: rooftop sites, metro and tunnel coverage, in-building solutions and highway coverage.

The minimal feeder loss reduces the need for tower mounted amplifiers, e.g.: TMA, WTMA, or ASC, which reduces capital expenditure.

RBS 6601 Technical Specifications

Configurations
Sectors: 1 to 6 sectors
Carriers/TRXs: 1 to 4 sectors

Output power classes
20, 40 or 60 W per RRU

Capacity per MU
GSM 24 TRXs
WCDMA 12 cell carriers
LTE 3 x 20 MHz (MIMO) dualband

Mechanical Dimension
Main Unit: 19 inch, 1.5 HU up to 10.5 kg
RRU: 23 liters, 20 kg

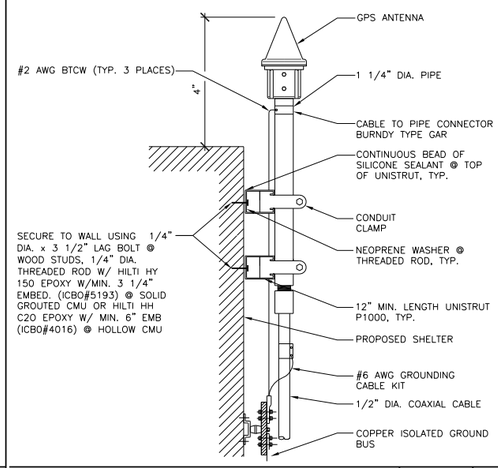
Site Power
MU and RRU –48 V DC / 100–250 V AC

Transmission
E1/T1/J1
Channelized STM-1
100/1000 Base-T Ethernet

Temperature range
Main Unit: +5°C to +50°C
RRU: -40°C to +55°C

6601 DUL SPECIFICATIONS

SCALE: N.T.S. | 5

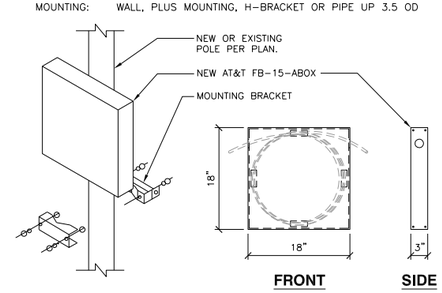


GPS ANTENNA MOUNT

SCALE: N.T.S. | 6

FB-15-ABOX:

DIMENSIONS:	(18"Wx18"Hx3"D)
MATERIAL:	ALUMINUM (NON PAINTED)
PROTECTION:	WEATHER PROTECTIVE
CAPACITY:	35 METERS OF 10mm CABLE
I/O:	CABLE CAN ENTER ANY OF THE 4 SIDES AND EXIT ANY OF THE 3 REMAINING SIDES
MOUNTING:	WALL, PLUS MOUNTING, H-BRACKET OR PIPE UP 3.5 OD



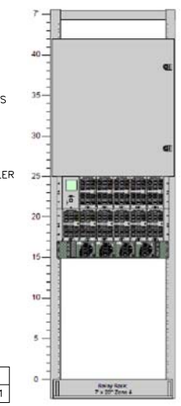
NOTE: FIBER CABLE ENCLOSURE IS DESIGNED FOR OUTDOOR.

FB-15-ABOX DETAIL

SCALE: N.T.S. | 7

ALPHA – POWER SYSTEM

WEIGHT:	448 LBS (RECTIFIER AND CONVERTERS NOT INCLUDED)
DIMENSIONS:	84"Hx25.5"Wx21"D
# OF RECTIFIER POSITIONS:	UP TO (11) 48V-4.0kW
SYSTEM CONTROLLER:	CXCM4 MODULAR CONTROLLER
# OF CONVERTER POSITIONS:	UP TO (4) 48-24V/2kW
# OF BREAKER POSITIONS:	24Vdc=20 (PLUG-IN) (1) TIERS, 20-pos 48Vdc=48 (PLUG-IN) (2) TIERS, 24-pos EXPANDABLE TO 3 TIERS
# OF FUSE POSITIONS:	10 (GMT TYPE)-48Vdc
# OF TEMP PROBES:	2



ORACLE NUMBER	NEQ.15240
ALPHA P/N	0540149-001

NOTE:
1. REFER TO STRUCTURAL SHEETS FOR ANCHORAGE.

INDOOR ARGUS POWER PLANT

SCALE: N.T.S. | 8

ALPHA – BATTERY RACK

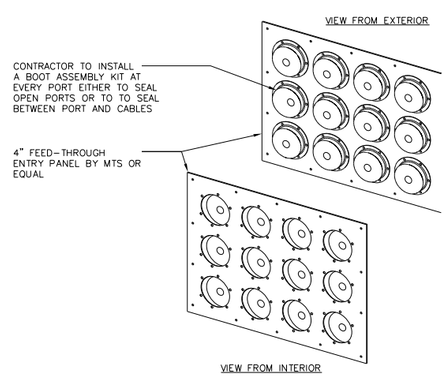
DIMENSIONS:	84"Hx25.5"Wx25"D (BATTERIES NOT INCLUDED) (DC CABLING IS INCLUDED #2 AWG)
EQUIPMENT MOUNTING:	23"
# OF RACK UNITS:	45
BATTERY STRINGS:	(5) 24V STRINGS
BATTERY MODEL #:	GNB M12V155FT
BREAKER DISCONNECT:	100A BREAKER PER STRING
WEIGTH:	355 LBS.

ORACLE NUMBER	NEQ.12385
ALPHA P/N	053-385-20

NOTE:
1. REFER TO STRUCTURAL SHEETS FOR ANCHORAGE.

INDOOR ARGUS BATTERY RACK

SCALE: N.T.S. | 9



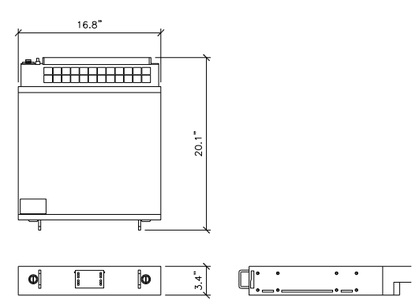
NOTES:
1. GROUND OUTSIDE WAVEGUIDE ENTRY WITH #2 SOLID DOUBLE-HOLE CRIMP ON CONNECTIONS TO MASTER BUS BAR.

ENTRY PORT

SCALE: N.T.S. | 10

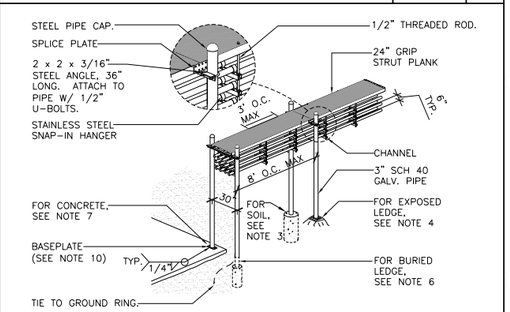
DC12-48-60-RM

DIMENSIONS, WxDxH:	16.8"x20.1x3.4""
NOMINAL OPERATING VOLTAGE:	48 VDC
TOTAL WEIGHT:	38 lbs
TEMPERATURE:	-40 ° TO 80 °C



DC12-48-60-RM DETAIL

SCALE: N.T.S. | 11



WAVEGUIDE BRIDGE NOTES

1. POSITION BRIDGE ASSEMBLY SO THAT WAVEGUIDE IS AT PORT CENTERLINE. HEIGHT ABOVE GROUND MAY VARY ACCORDING TO SHELTER AND SITE LAYOUT.
2. COAX SHALL BE SLOPED 1/8" TO THE FOOT, AWAY FROM EQUIPMENT.
3. FOR SOIL, USE 12" DIAM. 3'-6" DEEP PIER FILLED WITH 2500 PSI CONCRETE. INSTALL TOP OF PIER FLUSH WITH NEW GRADE, AND PROVIDE CROWN FOR DRAINAGE.
4. FOR EXPOSED LEDGE, PROVIDE GROUT LEVELING PAD. INSTALL (2) 5/8" EXPANSION ANCHORS, 6" LONG.
5. FOR CONCRETE, FASTEN BASEPLATE W/ (2) 5/8" EXPANSION ANCHORS, 6" LONG.
6. FOR BURIED LEDGE AT LESS THAN 3'-6" BELOW FINISH GRADE, CORE 8" DIAM. HOLE INTO LEDGE 18" DEEP. FILL AROUND PIPE WITH NON-SHRINK GROUT. USE COAL TAR ON BURIED LENGTH OF PIPE, AND BACKFILL TO FINISH GRADE.
7. FOR POSTS ON CONCRETE OR EXPOSED LEDGE, PROVIDE 4" x 8" x 3/8" BASEPLATE WITH (2) 11/16" HOLES 6" O.C.

WAVEGUIDE BRIDGE

SCALE: N.T.S. | 12

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65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

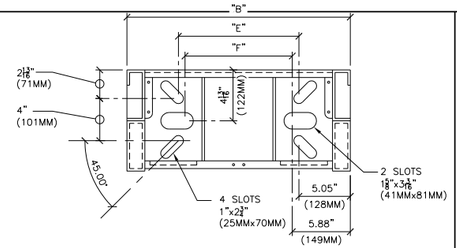
SEAL:

SHEET TITLE:

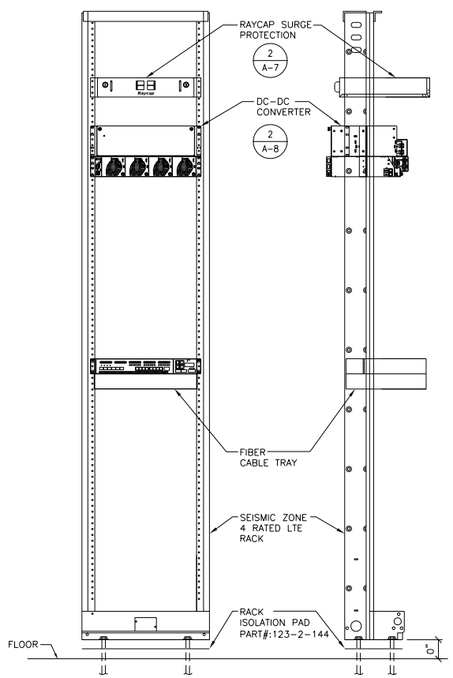
ARCHITECTURAL DETAILS

SHEET NUMBER:

A-7



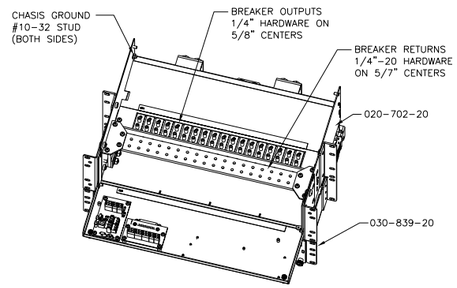
BOTTOM HOLE PATTERN

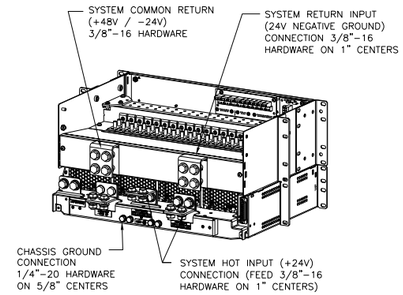


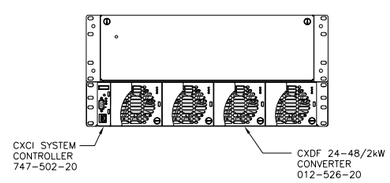
EQUIPMENT RACK ELEVATIONS

RACK SPECIFICATIONS

SCALE: N.T.S. | 1

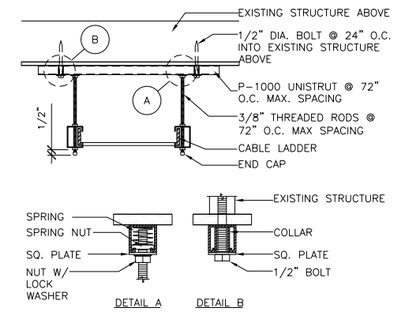




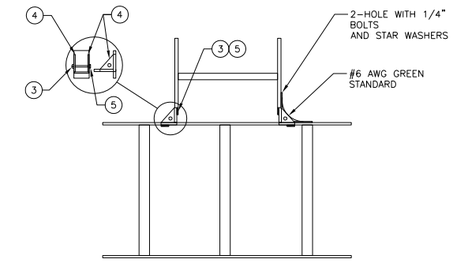


DC-DC CONVERTER

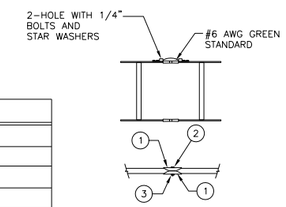
SCALE: N.T.S. | 2



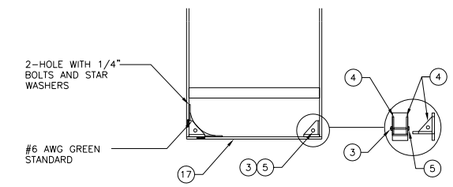
DETAIL 5
SUPPORTING CABLE RACK/GRID FROM CEILING



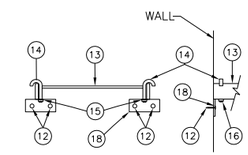
DETAIL 2
CONNECTING TWO CABLE RACKS BY "T" JUNCTION



DETAIL 1
CABLE RACK JUNCTION



DETAIL 3
CLOSING END OF CABLE RACK



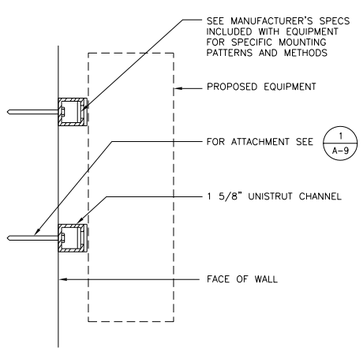
DETAIL 4
FASTENING CABLE RACK/GRID FROM CEILING

NO.	
1	SPLICE CLAMP
2	BOLT
3	NUT
4	CORNER CLAMP
5	BOLT
6	
7	
8	
	SQUARE WASHER
10	
12	TAP CON
13	
14	J - BOLT
15	LOCK WASHER
16	NUT
17	12" END CLOSING BAR
18	1 3/8" x 1/4" ANGLE 4" LONG

GENERAL NOTES:
1. ALL CABLE TRAY MEASUREMENTS ARE ACCURATE WITHIN ±1/4"
2. BOTTOM OF CABLE RACK TO MOUNTED 96" A.F.F.
3. CONNECT #6 AWG GROUNDING TO CABLE TRAY NEAREST INSTALLED WAVEGUIDE

COAX CABLE LADDER

SCALE: N.T.S. | 3



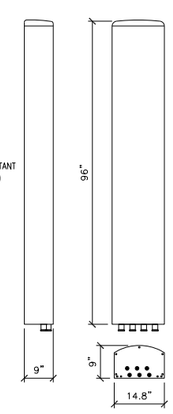
FOR MORE INFORMATION ON UNISTRUT CONNECTION, SEE 1 A-9

EQUIPMENT WALL MOUNT

SCALE: N.T.S. | 4

HPA-65R-BUU-H8

COLOR | RADOME MATERIAL:	LIGHT GRAY | FIBERGLASS, UV RESISTANT
DIMENSIONS, HxWxD:	2438.4x301x181mm (96"x14.8"x9")
NET WEIGHT:	68 lbs
SURVIVAL WIND SPEED	>150 MPH
FRONT WIND LOAD:	348 LBS. @ 100 MPH
SIDE WIND LOAD:	234 LBS. @ 100 MPH
CONNECTOR INTERFACE, LOCATION, QUANLITY:	(6) 7-16 DIN FEMALE LONG NECK, BOTTOM,



HEXPORT PANEL ANTENNA

SCALE: N.T.S. | 5

NOT USED

SCALE: N.T.S. | 6

NOT USED

SCALE: N.T.S. | 7

at&t

12900 PARK PLAZA DRIVE
CERRITOS, CA 90703

PLANS PREPARED BY:

NATIONAL ENGINEERING & CONSULTING, INC
27 ORCHARD, SUITE 200 LAKE FOREST, CA 92630
PHONE: (949) 716-9990 | FAX: (949) 716-9997

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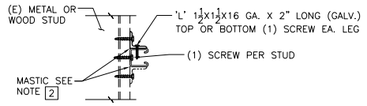
SEAL:

SHEET TITLE:

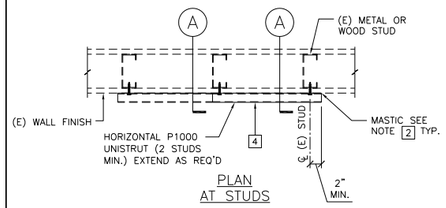
ARCHITECTURAL DETAILS

SHEET NUMBER:

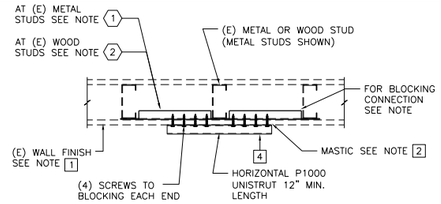
A-8



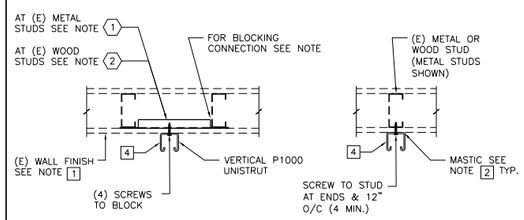
TYP. CONN. (A)



PLAN
AT STUDS

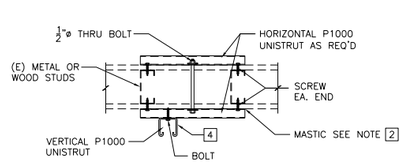


PLAN
BETWEEN STUDS SUPPORT
(HORIZ.)

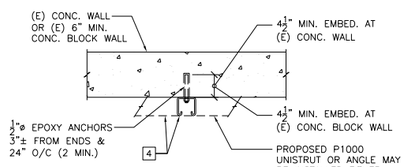


PLAN
BETWEEN STUDS
(VERTICAL)

AT STUD



PLAN
CAN'T REMOVE WALL FINISHES



PLAN
AT CONC. OR CMU

NOTES:
1. SPECIAL INSPECTION REQUIRED
2. EPOXY SHALL BE:
   HILTI RE-500 SD (ICC# ESR-2322, LARR-25700) AT CONCRETE
   HILTI HIT HY-150 (ICC# ER-5193, LARR-25257) AT MASONRY
   HILTI HIT HY-20 (ICC# ER-4815, LARR-24564) AT BRICK

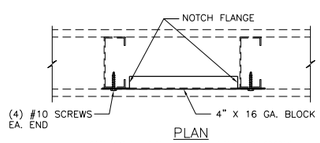
NOTES

1. REMOVE (E) WALL FINISH FOR INSTALLATION OF PROPOSED BLOCKING. PATCH & REPAIR WALL FINISH PRIOR TO INSTALLATION OF PROPOSED ATTACHMENTS.
2. APPLY MASTIC BEHIND ALL ANGLES, UNISTRUTS, ETC. APPLIED OVER (E) OR REPAIRED WALL SURFACES PRIOR TO APPLYING SCREWS, BOLTS, ETC.
3. SCREWS TO STEEL:
   SHALL BE #10 SMS AS SHOWN. SCREW LENGTH SHALL BE SUFFICIENT TO PROVIDE (3) THREAD PITCHES BEYOND THE STEEL SUBSTRATE.

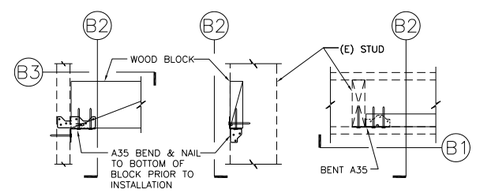
   SCREWS TO WOOD:
   SHALL BE #10 WOOD SCREWS. SCREW LENGTH SHALL BE SUFFICIENT TO PROVIDE 1 1/4" PENETRATION INTO WOOD SUBSTRATE.
4. IN LIEU OF UNISTRUT, ANGLE MAY BE USED

CONNECTION NOTES

1. AT (E) METAL STUD WALL
   PROVIDE 4" X 16 GA. METAL STUD BLOCKING TOP, BOTTOM & 24" O/C MAX. FOR (N) BLOCKING ATTACHMENTS TO (E) STUDS, SEE DETAILS D1 & D2
2. AT (E) WOOD STUD WALL
   PROVIDE 2X4 BLOCKING ON EDGE, TOP, BOTTOM, & 24" O/C MAX. FOR (N) BLOCKING ATTACHMENT TO (E) STUDS, SEE DETAILS B1, B2, B3, C1 & C2

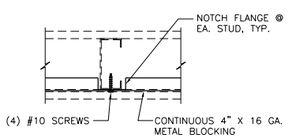


PLAN
SINGLE METAL STUD BLOCK
(D1)

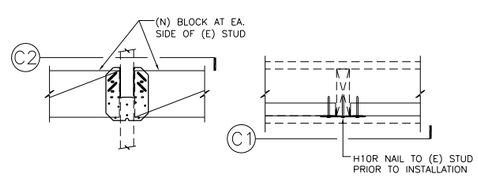


ELEVATION (B1) SECTION (B2) PLAN (B3)

SINGLE WOOD
STUD BLOCKING



PLAN
CONTINUOUS METAL STUD BLOCKING
(D2)



ELEVATION (C1) PLAN (C2)

CONTINUOUS WOOD
STUD BLOCKING

WALL ANCHORAGE DETAILS | SCALE: N.T.S. | 1

NOT USED | SCALE: N.T.S. | 2

NOT USED | SCALE: N.T.S. | 3

NOT USED | SCALE: N.T.S. | 4

NOT USED | SCALE: N.T.S. | 5

NOT USED | SCALE: N.T.S. | 6

NOT USED | SCALE: N.T.S. | 7

at&t
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27 ORCHARD, SUITE 200 LAKE FOREST, CA 92630
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HAWTHORNE & 105TH

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SEAL:

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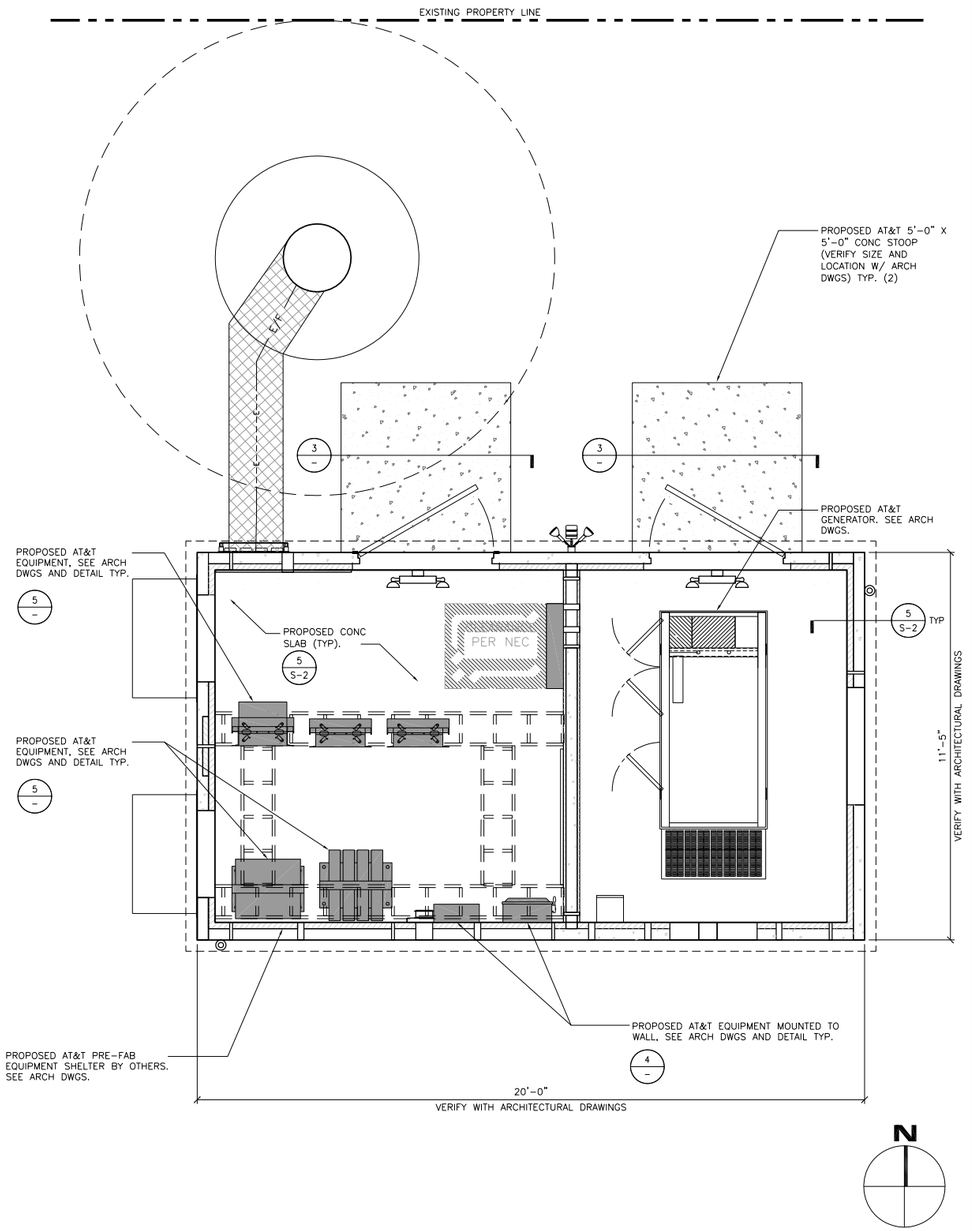
ARCHITECTURAL DETAILS

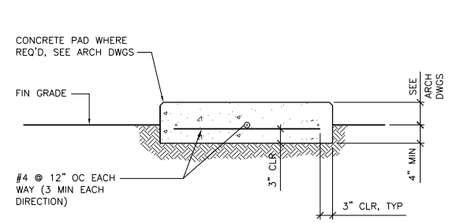
SHEET NUMBER:

A-9



STRUCTURAL SITE PLAN

SCALE: 1/2"=1'-0" (0, 1', 2') — 1

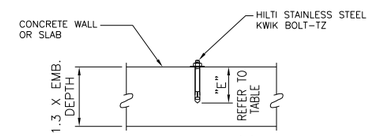


TYPICAL CONCRETE STOOP PAD

SCALE: N.T.S. — 3

NOTES:

1. THE CONTRACTOR SHALL ACCURATELY LOCATE ALL EXISTING REINFORCING BY X-RAY OR EQUIVALENT METHODS. NO REBAR OR TENDONS SHALL BE CUT. ALL EXPENSES RELATED TO REPAIR OF CUT REBAR OR TENDONS SHALL BE ENTIRELY AT THE EXPENSE OF THE CONTRACTOR.
2. SPECIAL INSPECTION IS REQUIRED FOR INSTALLATION OF ANCHORS.
3. INSTALLATION OF WEDGE ANCHORS IN MASONRY IS NOT ALLOWED.



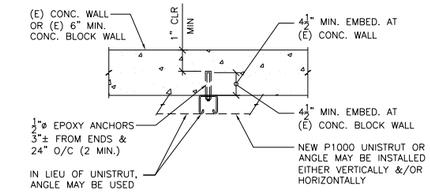
ANCHOR SCHEDULE (1)

BOLT DIA.	HOLE DIA.	"E" EMBEDMENT
3/8"	3/8"	2 1/2"
1/2"	1/2"	3 1/4"
5/8"	5/8"	4 1/2"
3/4"	3/4"	5"

(1) INFORMATION SHOWN IN THIS TABLE IS IN ACCORDANCE WITH: ICC ESR-1917 & LARR-25701
(2) PROVIDE MIN. (4) 1/2"ø ANCHORS FOR EQUIPMENT U.N.O. IF MANUFACTURER RECOMMENDED BOLT DIAMETER, QUANTITY OR EMBEDMENT VARIES FROM MIN. REQUIRED, CONTACT ENGINEER OF RECORD.

HILTI KWIK BOLT-TZ ANCHOR DETAIL

SCALE: N.T.S. — 5



PLAN
AT CONC. OR CMU

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   HILTI HIT HY-20 (ICC# ER-4815, LARR-24564) AT BRICK

WALL ANCHORAGE DETAIL

SCALE: N.T.S. — 4

NOT USED

SCALE: N.T.S. — 6

NOT USED

SCALE: N.T.S. — 7

NOT USED

SCALE: N.T.S. — 8

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SEAL:

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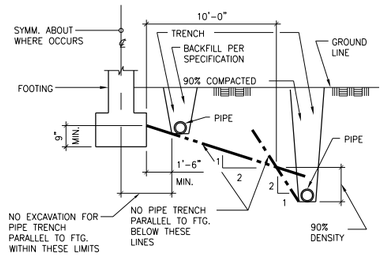
STRUCTURAL DETAILS

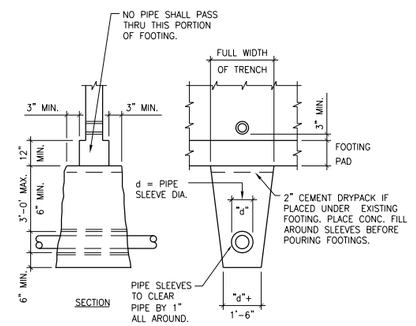
SHEET NUMBER:

S-1

NOTES:
1. ALL PIPE SLEEVES TO BE 2" LARGER THAN PIPE.
2. FOR PIPE MORE THAN 3'-0" BELOW BOTTOM OF FOOTINGS NOTIFY ARCHITECT PRIOR TO CONSTRUCTION.



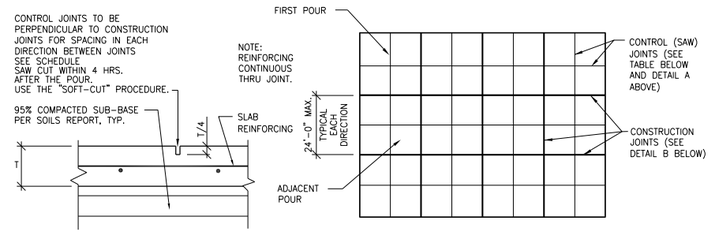
PARALLEL TO FOOTING



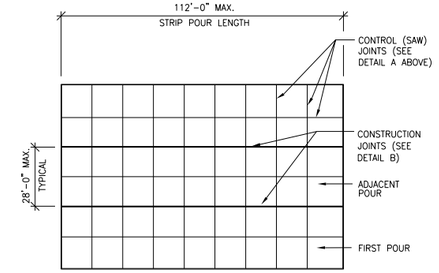
NORMAL TO FOOTING

TYPICAL DETAIL | SCALE: N.T.S. | 1

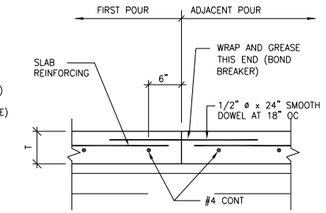
CONTROL SAW JOINT (CSJ) SPACING	
SLAB THICKNESS	MAXIMUM SPACING
4"	12'-0"
5"	15'-0"
6"	18'-0"
8" MIN	24'-0"



A **CONTROL SAW JOINT (CSJ)** — **CHECKERBOARD PATTERN JOINT LAYOUT**



STRIP POUR PATTERN JOINT LAYOUT



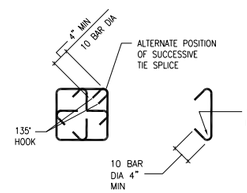
NOTE:
TYPICAL SLAB REINFORCING NOT CONTINUOUS THRU JOINT UON. PLACE SLAB-ON-GRADE AND LOCATE CONSTRUCTION JOINTS UTILIZING STRIP POUR METHOD OR CHECKERBOARD METHOD (SHOWN ON FOUNDATION PLAN), CONTRACTORS OPTION. AVOID REENTRANT CORNERS.

B **CONSTRUCTION JOINT (CJ)**

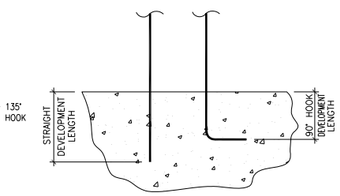
TYPICAL CONSTRUCTION JOINT / CONTROL (SAW) JOINT DETAILS

SCALE: N.T.S. | 2

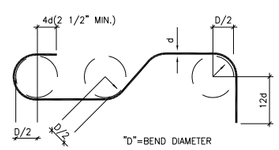
BEND DIAMETER SCHEDULE	
d = BAR DIAMETER	
BAR SIZE	BEND DIAMETER (D)
#3 THRU #5 (TIES AND STIRRUPS ONLY)	D = 4d
#3 THRU #8	D = 6d
#9 THRU #11	D = 8d
#14 THRU #18	D = 10d



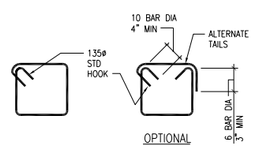
COLUMN TIE



DEVELOPMENT LENGTH

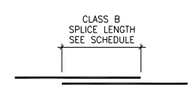


HOOKS & BENDS



OPTIONAL

BEAM STIRRUPS

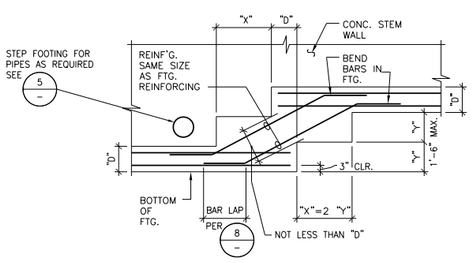


LAP SPLICE LENGTH

CONCRETE REINFORCING BAR DEVELOPMENT AND SPLICE LENGTHS					
NORMAL WEIGHT CONCRETE WITH COMPRESSIVE STRENGTH = 3000 PSI & REINFORCING YIELD STRENGTH = 60 KSI					
BAR SIZE	STRAIGHT DEVELOPMENT LENGTH INCHES		90° HOOK DEVELOPMENT LENGTH INCHES	CLASS B SPLICE LENGTH INCHES	
	TOP BARS	OTHER BARS	ALL BARS	TOP BARS	OTHER BARS
#3	22	17	6	28	22
#4	29	22	8	38	29
#5	36	28	10	47	36
#6	43	33	12	56	43
#7	63	48	14	81	63
#8	72	55	16	93	72
#9	81	62	18	105	81
#10	91	70	20	118	91
#11	101	78	22	131	101
#14	121	93	26	157	121
#18	161	124	35	209	161

NOTES:
1. TOP BARS ARE DEFINED AS HORIZONTAL REINFORCEMENT SO PLACED THAT 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE LENGTH OF DEVELOPMENT, OR SPLICE.
2. LAP SPLICE LENGTHS LISTED IN THIS TABLE APPLY WITH THE FOLLOWING CONDITIONS:
   - CLEAR SPACING OF BARS BEING SPLICED IS NOT LESS THAN 2 BAR DIAMETERS.
   - CLEAR COVER OVER THE BARS IS NOT LESS THAN THE BAR DIAMETER.
3. HOOK DEVELOPMENT LENGTHS LISTED IN THIS TABLE APPLY WITH THE FOLLOWING CONDITIONS:
   - FOR #11 BARS AND SMALLER, SIDE COVER (NORMAL TO PLANE OF HOOK) NOT LESS THAN 2 1/2".
   - COVER ON BAR EXTENSION BEYOND HOOK NOT LESS THAN 2".

TYPICAL DETAIL | SCALE: N.T.S. | 3

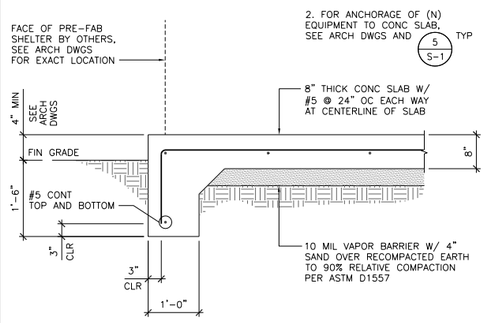


NOTE: NO PIPES ALLOWED IN STEP FOOTING.

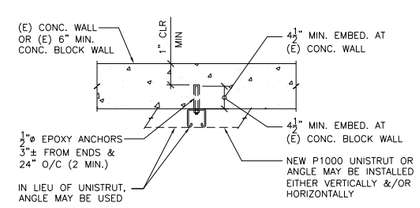
AT C.I.P. CONCRETE STEM WALL

TYPICAL DETAIL | SCALE: N.T.S. | 4

NOTES:
1. FOR ANCHORAGE OF PRE-FAB SHELTER, SEE PRE-FAB SHELTER DRAWINGS.
2. FOR ANCHORAGE OF (N) EQUIPMENT TO CONC SLAB, SEE ARCH DWGS AND 5/S-1 TYP



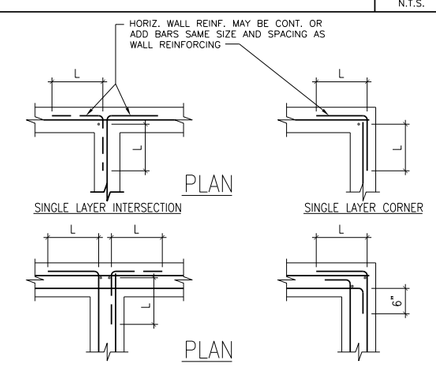
TYP FOOTING SECTION | SCALE: N.T.S. | 5



PLAN
AT CONC. OR CMU

NOTES:
1. SPECIAL INSPECTION REQUIRED
2. EPOXY SHALL BE:
   HILTI RE-500 SD (ICC# ESR-2322, LARR-25700) AT CONCRETE
   HILTI HIT HY-150 (ICC# ER-5193, LARR-25257) AT MASONRY
   HILTI HIT HY-20 (ICC# ER-4815, LARR-24564) AT BRICK

WALL ANCHORAGE DETAIL | SCALE: N.T.S. | 6



NOTES:
1. L = LENGTH
2. FOR BAR LENGTHS, BENDS AND LAPS SEE 8

TYPICAL DETAIL | SCALE: N.T.S. | 7

at&t
12900 PARK PLAZA DRIVE
CERRITOS, CA 90703

PLANS PREPARED BY:
NATIONAL ENGINEERING & CONSULTING, INC
27 ORCHARD, SUITE 200 LAKE FOREST, CA 92630
PHONE: (949) 716-9990 | FAX: (949) 716-9997

CLIENTS
EukonGroup
It's all about Communication
65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

SEAL:

SHEET TITLE:

STRUCTURAL DETAILS

SHEET NUMBER:

S-2

GENERAL NOTES & SPECIFICATIONS:

1. THE ENTIRE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE LATEST EDITION ACCEPTABLE BY THE JURISDICTION OF THE NATIONAL ELECTRICAL CODE, CALIFORNIA ELECTRICAL CODE, STATE FIRE MARSHALL REGULATIONS, AND ALL OTHER STATE AND LOCAL CODES, LAWS, AND ORDINANCES HAVING JURISDICTION ALBEIT NOT SHOWN ON DRAWINGS OR SHOWN OTHERWISE.

2. THE ELECTRICAL CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS AND INSPECTION REQUIREMENTS.

3. ELECTRICAL CONTRACTOR SHALL VISIT JOB SITE AND VERIFY EXISTING CONDITIONS BEFORE BIDDING AND SHALL INCLUDE IN HIS BID THE NECESSARY COSTS TO CONSTRUCT THIS PROJECT IN ACCORDANCE WITH INTENT OF THE ELECTRICAL DRAWINGS, SPECIFICATIONS, SERVING UTILITY COMPANY'S REQUIREMENTS AND ALL APPLICABLE CODES. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT BEFORE SUBMITTING BID. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, POWER AND TELEPHONE SERVICE REQUIREMENTS WITH UTILITY SERVICE PLANNER AND THE EXACT SERVING UTILITY POINTS OF CONNECTION AND PROVIDE ALL SERVICE RELATED EQUIPMENT AND INSTALLATION IN BID. UTILITY SERVICE REQUIREMENTS SHOWN ON THE DRAWINGS ARE BASED ON PRELIMINARY SITE VISIT AND INFORMATION AVAILABLE AT THIS TIME OF VISIT AND ARE NOT GUARANTEED BY ENGINEER OR SERVING UTILITY COMPANY. REFER TO ARCHITECTURAL DRAWINGS AND VISIT SITE PRIOR TO BID TO REVIEW EXISTING TOPOGRAPHY MAPS, LANDSCAPING AND CONSTRUCTION TO BECOME FAMILIAR WITH SLOPE CONDITIONS AND EXISTING CONSTRUCTION AND LANDSCAPING. ADJUST CONDUIT ROUTING INDICATED TO AVOID DISTURBING EXISTING CONDITION WHERE POSSIBLE. SAWCUT EXISTING SURFACE WHERE REQUIRED FOR CONDUIT AND STRUCTURE INSTALLATION AND PATCH TO MATCH EXISTING. REPAIR OR REPLACE ALL SOD, LANDSCAPING, SPRINKLER SYSTEMS, CONDUITS AND WIRING, PIPING ETC. ALTERED BY THE ELECTRICAL WORK TO MATCH EXISTING AND TO MAKE SYSTEMS OPERABLE.

4. THE INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF NECA MANUAL OF GOOD WORKMANSHIP" (STANDARD OF INSTALLATION).

5. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, INCLUDING BUT NOT LIMITED TO COMPLETE ELECTRICAL SYSTEMS, POWER AND LIGHTING, TELEPHONE CONDUIT SYSTEM, SIGNAL SYSTEMS, PANELBOARDS(S), CONTROL WIRING, GROUNDING, CONDUIT ONLY SYSTEMS ETC., FOR A COMPLETE AND PROPERLY OPERATING SYSTEM, ENERGIZED THROUGHOUT AND AS INDICATED ON THE DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.

6. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT 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 AND APPROVED BY UNDERWRITER'S LABORATORY AND SHALL BEAR THE INSPECTION LABEL UL WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, AND NBFU.

7. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING DIMENSIONS AND CONDITIONS. HE SHALL ISSUE A WRITTEN NOTICE OF ALL FINDINGS TO THE ENGINEER LISTING ALL MALFUNCTIONS, FAULTY EQUIPMENT AND DISCREPANCIES.

8. ALL WIRING SHALL BE IN METALLIC CONDUIT. RIGID GALVANIZED CONDUIT SHALL BE USED IN OR UNDER CONCRETE SLABS ON GRADE FIVE FEET BEFORE STUBBING UP, WHERE EXPOSED TO WEATHER, AND WHERE SUBJECT TO MECHANICAL DAMAGE. PVC SCHEDULE 80 SHALL BE USED IN OR UNDER CONCRETE OR BURIED UNDERGROUND. EMT CONDUITS SHALL BE USED INSIDE STRUCTURE OR BUILDINGS. FLEXIBLE CONDUIT SHALL BE USED WHERE THE STRUCTURAL CONDITIONS MAKE THE USE OF RIGID CONDUIT IMPRACTICAL, AND FOR SHORT CONNECTIONS TO VIBRATING EQUIPMENT. USE NEOPRENE JACKETED FLEXIBLE CONDUIT AND FITTINGS WHERE EXPOSED TO WEATHER.

9. ALL WIRING SHALL BE CONCEALED IN FINISHED AREAS. INSTALL EXPOSED RACEWAYS PARALLEL WITH OR PERPENDICULAR TO THE LINES OF BUILDING. PAINT RACEWAYS TO MATCH MOUNTING SURFACE. PENETRATIONS OF ALL WALLS OR CEILINGS SHALL BE SEALED AND FIRE RATING MAINTAINED IN ACCORDANCE WITH UL WL1001, UL WL5001 AND ALL LOCAL AND NATIONAL CODES. DO NOT PENETRATE OR RUN CONDUITS IN AND OUT OF RATED CORRIDOR OR STAIRWELL ENCLOSURE FOR CIRCUITS NOT INTENDED TO SERVE THE EQUIPMENT WITHIN THE ENCLOSURE. CONDUIT MUST BE RUN OUTSIDE OF RATED ENCLOSURE ENVELOPS.

10. ALL CONDUCTORS SHALL BE COPPER AND RATED 600 VOLTS. ALL BRANCH CIRCUIT CONDUCTORS SHALL BE 75°C RATED COPPER TYPE "DUAL RATED THHN/THWN" #12, & #10 SOLID, #8 AND LARGER STRANDED, CONTROLS AND SIGNAL WIRING SHALL BE STRANDED.

11. OUTLET BOXES SHALL BE CAST FERROUS METAL WITH WATERTIGHT GASKETED CAST FERROUS COVERS, THREADED HUBS, AND STAINLESS STEEL SCREWS. USE CROUSE-HINDS OR APPLETON TYPE FS OR FD BOXES OR APPROVED EQUAL BY ENGINEER.

12. VERIFY EXACT LOCATIONS AND MOUNTING HEIGHTS AND LOCATION OF ALL OUTLETS WITH LOCAL CODE REQUIREMENTS, AND CLIENT BEFORE ROUGH-IN.

13. ELECTRICAL LAYOUT DRAWINGS ARE DIAGRAMMATIC. INSTALL THE ELECTRICAL SYSTEMS WITHOUT INTERFERING WITH STRUCTURES OR OTHER SYSTEMS.

14. ALL SURFACE-MOUNTED ELECTRICAL EQUIPMENT AND DEVICES SHALL BE PROPERLY SECURED. PROVIDE STRUCTURAL SUPPORT AS NECESSARY FOR MOUNTING EQUIPMENT.

15. CONTRACTOR SHALL LABEL THE COVER PLATE OF EACH ELECTRICAL OUTLET AND JUNCTION BOX WITH INDELIBLE INK FELT PEN. THE LABEL SHOULD SHOW PANEL AND CIRCUIT NUMBER CONTAINED IN THE BOX.

16. GROUP CONDUITS TOGETHER AND SUPPORT WITH UNISTRUT.

17. REFER TO ARCHITECTURAL DRAWINGS FOR EXACT EQUIPMENT LOCATIONS. ALL EQUIPMENT AND STUB-UP LOCATIONS SHALL BE VERIFIED WITH ENGINEER BEFORE ROUGH-IN.

18. PROVIDE SEPARATE GROUND WIRE IN ALL FLEXIBLE AND PVC CONDUITS.

19. THE ELECTRICAL CONTRACTOR SHALL MAINTAIN THE UNIFORMITY AND CONTINUITY OF THE GROUNDING SYSTEM.

20. TEST THE ENTIRE SYSTEM TO DEMONSTRATE THAT THE ELECTRICAL COMPONENTS AND SPECIAL SYSTEMS ARE COMPLETE AND FUNCTION PROPERLY, INCLUDING BUT NOT LIMITED TO INSULATION AND GROUNDING TESTS. MAKE NECESSARY CORRECTIONS AND LEAVE SYSTEMS READY FOR OPERATION.

21. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR AFTER DATE JOB ACCEPTANCE BY OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.

22. AT COMPLETION OF THE JOB, THE ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER WITH SPARE PARTS, ALL THE EQUIPMENT MANUALS, SPARE PARTS LIST AS RECOMMENDED BY THE MANUFACTURER, EQUIPMENT REPRESENTATIVE ADDRESS AND PHONE NUMBER. FURNISH ONE (1) COMPLETED SET OF "AS-BUILT" ELECTRICAL PLANS SHOWING LOCATIONS OF OUTLETS, CONDUIT RUNS, AND PANELBOARD CIRCUIT NUMBERS. ELECTRICAL CONTRACTOR SHALL PROVIDE ACCURATE DIRECTORIES IN PANELBOARD FRONTS AT COMPLETION OF BUILD-OUT. PANELBOARD DIRECTORIES SHALL INCLUDE THE EQUIPMENT SERVED AND WATTAGE.

23. REFER TO CLIENT'S STANDARD SPECIFICATIONS AS PART OF THIS CONSTRUCTION DOCUMENT. ANY CONFLICT BETWEEN THESE DRAWINGS, CLIENT'S STANDARD SPECIFICATIONS, AND APPLICABLE CODES, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.

24. ALL WORK TO BE EXECUTED IN WORKMANLIKE MANNER AND SHALL PRESENT A NEAT MECHANICAL APPEARANCE WHEN COMPLETED.

25. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING AND PATCHING RELATED TO ELECTRICAL WORK, UNLESS NOTED OTHERWISE AND COORDINATED WITH THE GENERAL CONTRACTOR.

26. ALL ELECTRICAL EQUIPMENT SHALL BE BRACED OR ANCHORED TO RESIST A HORIZONTAL FORCE ACTING IN ANY DIRECTION.

27. THE CONTRACTOR AGREE THAT, IN ACCORDANCE WITH GENERALLY CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT AT ALL TIME. CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED IN CONNECTION WITH PERFORMANCE OF WORK ON THIS PROJECT.

GROUNDING NOTES:

1. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.

2. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #2 GROUND WIRES AND CONNECT TO SURFACE MOUNTED GROUND BUS BARS AS SHOWN. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS. GROUND COAX SHIELD AT BOTH ENDS USING MANUFACTURERS PRACTICES. ALL UNDERGROUND WATER PIPES, METAL CONDUITS AND GROUNDS THAT ARE A PART OF THIS SYSTEM SHALL BE BONDED TOGETHER.

3. ALL GROUND CONNECTIONS SHALL BE #2 AWG U.N.O. ALL WIRES SHALL BE COPPER THHN/THWN. ALL GROUND WIRE SHALL BE TIN COATED OR GREEN INSULATED WIRE.

4. CONTRACTOR TO VERIFY AND TEST GROUND TO SOURCE TO A RANGE OF 5 TO 10 OHMS MAXIMUM. PROVIDE SUPPLEMENT GROUNDING RODS AS REQUIRED TO ACHIEVE SPECIFIED OHMS READING. CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE GROUND CONDUCTOR FROM THE ANTENNA TO GROUNDING POINT. GROUNDING AND OTHER OPTIONAL TESTING WILL BE WITNESSED BY THE CLIENT REPRESENTATIVE.

5. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.

6. BARE GROUNDING CONDUCTOR SHALL BE HARD DRAWN COPPER SIZES AS NOTED ON PLAN.

7. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED MINIMUM 30" BELOW GRADE IN TRENCH WITHIN LEASE AREA, AND BACK FILL PER SOILS REPORT.

8. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.

9. ALL SUPPORT STRUCTURES, CABLE CHANNEL WAYS OR WIRE GUIDES SHALL BE BONDED TO GROUND SYSTEM AT A POINT NEAREST THE MAIN GROUNDING BUS "MGB" WITH A MINIMUM NO. 6 COPPER CONDUCTOR AND (2) 2-HOLE COMPRESSION CONNECTOR AT BUS.

10. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
   a. BURNDY, HY-GRADE U.L. LISTED CONNECTORS (MECHANICAL CONNECTIONS).
   b. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
   c. TWO -(2) HOLE COPPER COMPRESSION FITTINGS (BUS BAR CONNECTIONS).

11. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP.

12. ALL GROUND CONNECTIONS SHALL BE BURNISHED AND SHALL HAVE A COATING OF "KOPR-SHIELD" OR "NO-OX-ID" APPLIED TO THE CONNECTION.

13. ALL CONNECTION HARDWARE AT EQUIPMENT SHALL BE TYPE 316 SS, OR DURIEM BRONZE. "KOPR-SHIELD" OR "NO-OX-ID" APPLIED TO THE CONNECTION.

14. THE GROUND RING SHALL BE INSTALLED 24" MINIMUM BEYOND ANY BUILDING DRIP LINE.

15. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL EXISTING AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS, GROUND RING IF SERVICE IS WITHIN THE RADIO EQUIPMENT LOCATION, BUILDING STEEL IF APPLICABLE, COLD WATER PIPE WITHIN FIVE FEET OF WATER SERVICE IF APPLICABLE.

CONDUITS:

1. 1-2" MINIMUM DIAMETER DUCT OF APPROVED MATERIAL
A. WITHIN OR ON BUILDINGS-RIGID GALVANIZED STEEL (WHEN REQUIRED), OR ELECTRO-METALLIC TUBING(EMT).
B. IN UNDERGROUND - PVC SCHEDULE 40 OR EQUIVALENT FOR STRAIGHT SECTIONS, BENDS SHALL BE PVC SCHEDULE 80.
C. PULL ROPES IN ALL DUCTS (MIN. 3/8" POLY PULL ROPE) AND A MEASURING TAPE MUST BE IN PLACE TO DETERMINE "AS-BUILT" CONDUIT LENGTH; BOTH MUST BE IN ONE CONTINUOUS PIECE.
2) WITHIN BUILDINGS
A. ELECTRICAL LB'S AND CONDULETS ARE NOT ACCEPTABLE AS PULL BOXES.
B. NO 90 DEGREE TRANSITIONS AT OR IN PULL BOXES (UNLESS A 10" BENDING RADIUS CAN BE MAINTAINED)
C. IN-LINE PULL BOX MINIMUM DIMENSIONS = 24"L X 6"W X 6"D. 30"L X 6"W X 6"D PREFERRED.
D. PULL BOXES MUST BE EASILY ACCESSIBLE (TELEPHONE COMPANY WILL NOT REMOVE CEILING TILES).
E. VERTICAL SECTIONS OF CONDUIT WILL REQUIRE A PULL BOX EVERY 100 FEET AND APPROVED RESTRAINTS.
F. MAXIMUM OF 300 FEET HORIZONTAL BETWEEN PULL-BOXES.
G. MAXIMUM OF 2-90 DEGREE BENDS BETWEEN PULL-BOXES.
H. MINIMUM CONDUIT BEND RADIUS OF 10 CABLE DIAMETERS (12").
I. FIRE STOPPING REQUIRED WHEN OPENINGS ARE MADE IN ANY FIRE RATED BARRIER
J. ALL EXTERNAL CONDUIT TERMINATIONS SHALL BE WEATHER TIGHT.

3) IN UNDERGROUND CONSTRUCTION
A. CONDUIT LENGTH MAXIMUM OF 300 FEET BETWEEN PULL BOXES.
B. CONDUIT BENDS MUST HAVE A RADIUS 10 TIMES CONDUIT SIZE (20").

TRENCHING:

1. MINIMUM COVERAGE OF DUCT ON PRIVATE PROPERTY - 18" UNDER CONCRETE SURFACE OR AS SPECIFIED BY PERMITTING OWNER/AGENT.
2. MINIMUM COVERAGE OF DUCT ON PRIVATE PROPERTY = 24" UNDER DIRT SURFACE OR AS SPECIFIED BY PERMITTING OWNER/AGENT.
3. MINIMUM COVERAGE OR DUCT IN PUBLIC R/W = 30" BELOW GUTTER GRADE OR AS SPECIFIED BY PERMITTING AGENT.
4. MINIMUM 12" SEPARATION IN JOINT TRENCH BETWEEN POWER AND TELCO.
5. PULL BOXES - MINIMUM 17"W X 30"L.
6. SPLICE BOXES WILL BE SIZED BY SERVING TELEPHONE COMPANY: DETAILS WILL BE PROVIDED BY TELEPHONE COMPANY OR INTERCONNECT ENGINEER.

BONDING & GROUNDING:

1. # 6 AWG SOLID COPPER INSULATED GROUND WIRE (24" COILED IN TELCO SERVICE BOX) WITH BONDING CLAMPS IN PLACE. THE TELEPHONE GROUND MUST BE BONDED TO THE POWER GROUND. THE TELEPHONE SERVICE CABINET MUST BE BONDED TO THE TELEPHONE GROUND WIRE. ANY QUESTIONS REGARDING TELEPHONE GROUNDS SHOULD BE REFERRED TO THE INTERCONNECT ENGINEER.

SYMBOLS:

- —G— GROUNDING WIRE, DASHED LINE INDICATES UNDERGROUND
- —E— POWER LINE, DASHED INDICATES UNDER-GROUND, 3/4"C-2#12&1#12GND, UNO
- —T— TELEPHONE LINE, DASHED LINE INDICATES UNDERGROUND
- —A— COAXIAL CABLE, DASHED LINE INDICATES UNDERGROUND
- 2/E-3 DETAIL REFERENCE DETAIL NO. 2 ON SHEET E3
- GROUND ROD
- GROUND ROD WITH ACCESS
- FUSED DISCONNECT SWITCH, 240V, 2P, 30A, WEATHERPROOF, UNO
- UTILITY METER
- CIRCUIT BREAKER
- FUSE
- DUPLEX RECEPTACLE WITH GFCI IN WEATHERPROOF ENCLOSURE
- SWITCH, 120AC, 20A ab - SWITCH LEG M - MANUAL MOTOR STARTER
- CLAMP OR DOUBLE HOLE LUG TYPE GROUND CONNECTION
- EXOTHERMIC CONNECTION (CADWELD) TO GROUND RING AND COMPRESSION CONNECTION TO GROUND HALO

PANEL "A"

VOLTAGE, PHASE, WIRES: 120/208V, 1 PHASE, 3W
BUS RATING: 200A BUS
ENCLOSURE: NEMA 1
MAIN: 200A MBKR
BRACING: 10KAIC
MOUNTING: SURFACE MOUNT

NOTE	CKT NO	CKT BKR AMPS	CKT BKR P	QTY LTG	QTY REC	QTY MISC	DESCRIPTION	LOAD (WATTS) LOAD	A	B	LOAD	DESCRIPTION	QTY MISC	QTY REC	QTY LTG	CKT BRKR P	CKT BRKR AMPS	CKT NO	NOTE
	1								372		372	GENERAL LTS			6	1	20	2	
	3									540	540	GENERAL RCPTS		3		1	20	4	
	5	20	1		1		GFCI	180	680		500	TEL CO		1		1	20	6	
	7	20	1			1	GEN. BLOCK HEATER	500		4640	4140	AC#1	1			2	60	8	
	9	20	1			1	GEN. BATTERY CHARGER	500	4640		4140	---	-			-	-	10	
	11	20	1			1	SMOKE DETECTOR	60		4200	4140	AC#2	1			2	60	12	RD
	13								4140		4140	---	-			-	-	14	-
	15									0								16	
	17								0									18	
	19									0								20	
	21								0									22	
	23									0								24	
	25								0									26	
	27									0								28	
	29								0									30	
	31									0								32	
	33								0									34	
	35									0								36	
	37								0									38	
	39									0								40	

PHASE TOTAL LESS FUTURE AND REDUNDANT (RD) (WATTS)		5692	5240
PHASE BALANCE	4%	52%	48%
TOTAL CONNECTED LOAD (WATTS)		10932	
25% OF LONG CONTINUOUS LOAD (CL) AND LARGEST MOTOR (LML)		2070	
TOTAL LOAD (WATTS)		13002	
TOTAL LOAD (AMPS)		54	

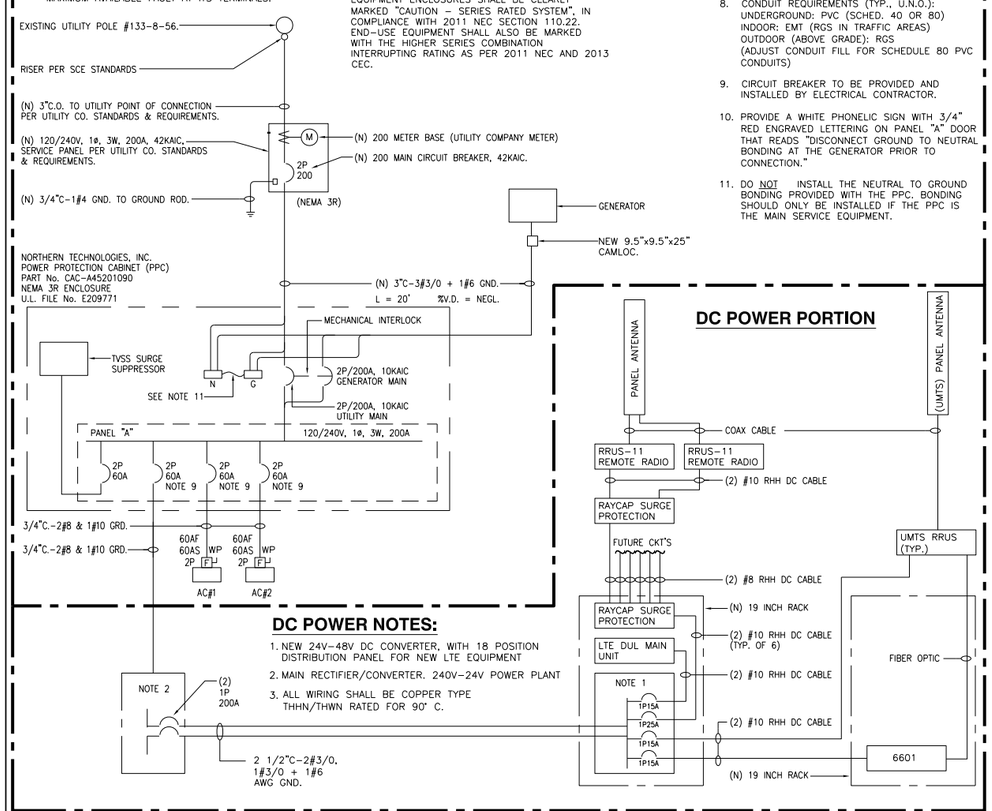
NOTE: CL = LONG CONTINUOUS LOAD
LML = LARGEST MOTOR LOAD
RD = REDUNDANT SYSTEM. ONLY ONE UNIT WILL OPERATE AT ANY GIVEN TIME

PANEL SCHEDULE

SCALE: N.T.S. | 1

SINGLE LINE DIAGRAM NOTES:

1. MAXIMUM AVAILABLE FAULT: SERVING UTILITY COMPANY'S STANDARD INDICATES THAT THE MAXIMUM AVAILABLE FAULT WILL NOT EXCEED 42 KA. CONTRACTOR IS REQUIRED TO VERIFY THE ACTUAL AVAILABLE FAULT AT THE TIME OF CONSTRUCTION WITH SERVING UTILITY CO.
2. ALL CURRENT CARRYING DEVICES SHALL BE U.L. LISTED AND BRACED TO WITHSTAND THE MAXIMUM AVAILABLE FAULT AT ITS TERMINALS.
3. SERIES/COMBINATION SHORT CIRCUIT RATING MAY BE USED WHEN OVERCURRENT DEVICE COMBINATIONS ARE LISTED UNDER U.L 67 STANDARD AND INSTALLATION SHALL COMPLY WITH NATIONAL ELECTRICAL CODE (N.E.C.) ARTICLE 110.9, 110.22 AND OTHER APPLICABLE SECTIONS.
4. APPLICABLE SERIES/COMBINATION RATED EQUIPMENT ENCLOSURES SHALL BE CLEARLY MARKED "CAUTION - SERIES RATED SYSTEM", IN COMPLIANCE WITH 2011 NEC SECTION 110.22. END-USE EQUIPMENT SHALL ALSO BE MARKED WITH THE HIGHER SERIES COMBINATION INTERRUPTING RATING AS PER 2011 NEC AND 2013 CEC.
5. POWER TO EQUIPMENT SHALL BE 200A, 240V, 1ø, 3W.
6. PROVIDE A MIN. 36" WORK CLEARANCE IN FRONT OF PANELS/ELECTRICAL EQUIPMENT.
7. ALL WIRING SHALL BE COPPER TYPE THHN/THWN RATED FOR 75° C.
8. CONDUIT REQUIREMENTS (TYP., U.N.O.): UNDERGROUND: PVC (SCHED. 40 OR 80) INDOOR: EMT (RGS IN TRAFFIC AREAS) OUTDOOR (ABOVE GRADE): RGS (ADJUST CONDUIT FILL FOR SCHEDULE 80 PVC CONDUITS)
9. CIRCUIT BREAKER TO BE PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR.
10. PROVIDE A WHITE PHONELIC SIGN WITH 3/4" RED ENGRAVED LETTERING ON PANEL "A" DOOR THAT READS "DISCONNECT GROUND TO NEUTRAL BONDING AT THE GENERATOR PRIOR TO CONNECTION."
11. DO NOT INSTALL THE NEUTRAL TO GROUND BONDING PROVIDED WITH THE PPC. BONDING SHOULD ONLY BE INSTALLED IF THE PPC IS THE MAIN SERVICE EQUIPMENT.



DC POWER NOTES:

1. NEW 24V-48V DC CONVERTER, WITH 18 POSITION DISTRIBUTION PANEL FOR NEW LTE EQUIPMENT
2. MAIN RECTIFIER/CONVERTER. 240V-24V POWER PLANT
3. ALL WIRING SHALL BE COPPER TYPE THHN/THWN RATED FOR 90° C.

SINGLE LINE DIAGRAM

SCALE: N.T.S. | 2

at&t
12900 PARK PLAZA DRIVE
CERRITOS, CA 90703

PLANS PREPARED BY:
NATIONAL ENGINEERING & CONSULTING, INC
27 ORCHARD, SUITE 200 LAKE FOREST, CA 92630
PHONE: (949) 716-9990 | FAX: (949) 716-9997

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It's all about Communication
65 POST, SUITE 1000,
IRVINE, CA 92618

NO.	DATE:	DESCRIPTION:	BY:
1	11/08/13	90% ZD'S	EC
2	11/14/13	CLIENT REVISIONS	SA
3	11/21/13	RF REVISIONS	EC
4	12/16/13	RF REVISIONS	EC
5	12/24/13	CLIENT REVISIONS	EC
6	01/17/14	RF REDLINES	EC
7	03/12/14	COUNTY COMMENTS	RAG
8	03/18/14	SAQ REDESIGN	EC
9	04/14/14	90% CD'S	TN
10	05/23/14	90% CD'S	RAG

SITE INFORMATION:

CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

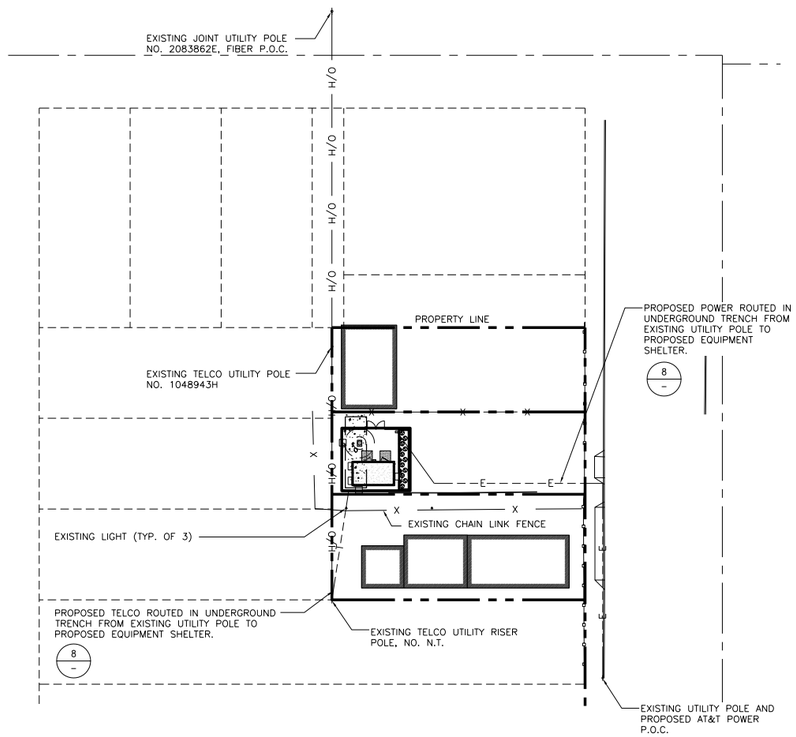
SEAL:

SHEET TITLE:

ELECTRICAL NOTES & SPECS, PANEL SCHED. & SINGLE LINE DIAGRAM

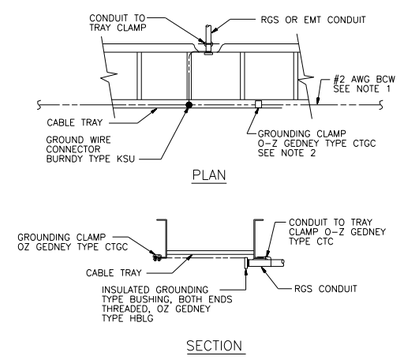
SHEET NUMBER:

E-1



ELECTRICAL SITE PLAN

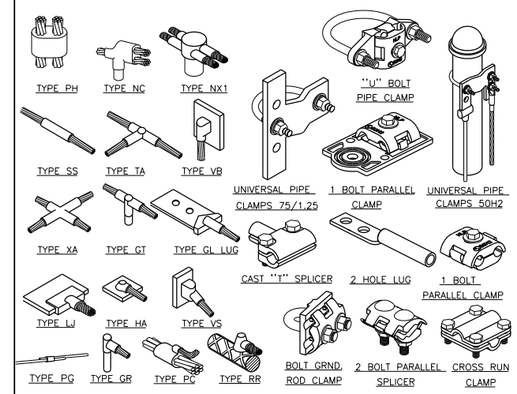
0 8' 16' 32' | SCALE: 1/32"=1'-0" | 1



NOTES:
1. GROUND WIRE CONNECTED TO RING GROUND.
2. TYPICAL FOR EACH SECTION OF TRAY.

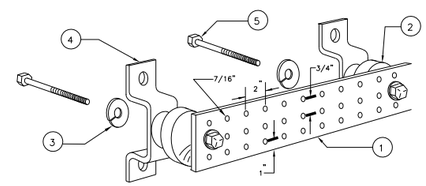
CABLE TRAY GROUNDING

SCALE: N.T.S. | 2



CALDWELD & MECH. CONNECTIONS

SCALE: N.T.S. | 3



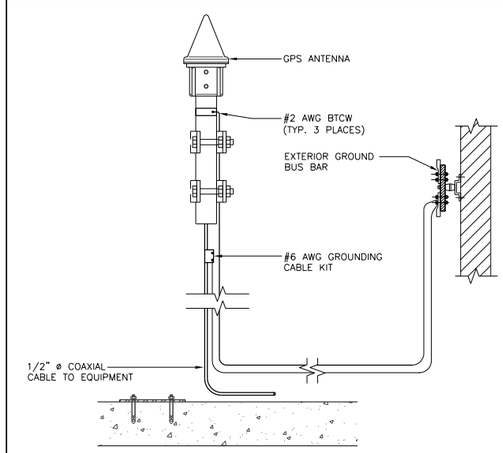
LEGEND

1. COPPER GROUND BAR, NEWTON INSTRUMENT CO. OR EQUIVALENT. HOLE CENTERS TO MATCH NEMA DOUBLE LUG CONFIGURATION.
2. INSULATORS, NEWTON INSTRUMENT CO. CAT. NO. 3061-4 OR EQUIVALENT.
3. 5/8" LOCKWASHERS, NEWTON INSTRUMENT CO. CAT. NO. 3015-8 OR EQUIVALENT.
4. WALL MOUNTING BRACKET, NEWTON INSTRUMENT CO. CAT. NO. A-6056 OR EQUIVALENT.
5. 5/8-11 x 1" H.H.C.S. BOLTS, NEWTON INSTRUMENT CO. CAT. NO. 3012-1 OR EQUIVALENT.

NOTE:
1) ALL MOUNTING HARDWARE CAN ALSO BE USED ON 6", 12", 18", ETC. GROUND BARS.
2) ENTIRE ASSEMBLY AVAILABLE FROM NEWTON INSTRUMENT CO. CAT. NO. 2106060010.
3) PROVIDE SECURITY HARDWARE TO PREVENT THEFT

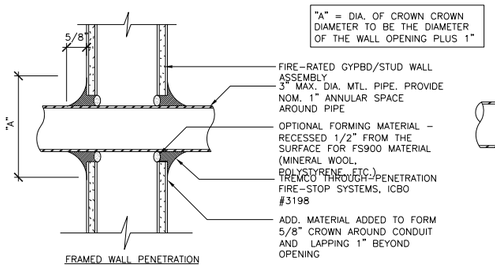
GROUND BUSS BAR

SCALE: N.T.S. | 4



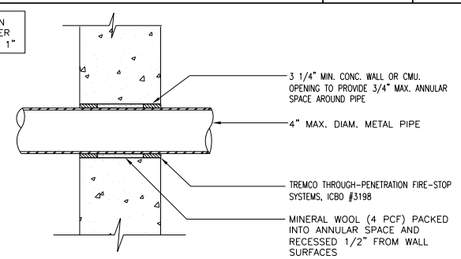
GPS GROUNDING

SCALE: N.T.S. | 5

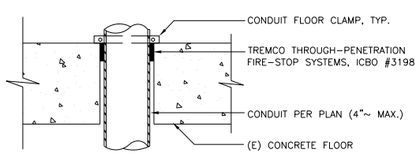


"A" = DIA. OF CROWN CROWN DIAMETER TO BE THE DIAMETER OF THE WALL OPENING PLUS 1"

FRAMED WALL PENETRATION



CONCRETE WALL PENETRATION



CONCRETE FLOOR PENETRATION

NOTE: 1. CONTRACTOR TO X-RAY PRIOR TO DRILLING OR CORING TO LOCATE (E) RE-BAR. DO NOT CUT RE-BAR.

2. PENETRATIONS THRU WALLS SHALL COMPLY WITH T24, CBC SECTION 709.6.

F RATING - PENETRATIONS 4" ~ OR LESS
T RATING - PENETRATIONS LARGER THAN 4" ~, PENETRATIONS @ CORRIDOR CLGS. WHICH ARE NOT RATED, BELOW

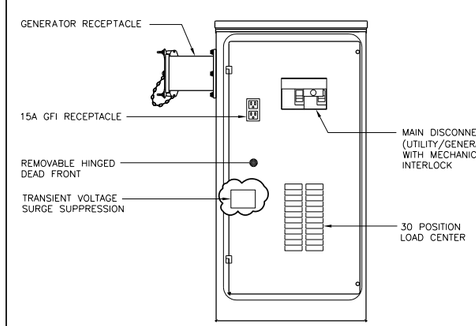
3. PENETRATIONS THRU FLOORS/ CEILINGS SHALL COMPLY WITH T24, CBC SECTION 710.3.

F RATING - PENETRATIONS 4" ~ OR LESS
T RATING - PENETRATIONS LARGER THAN 4" ~, PENETRATIONS NOT CONTAINED WITHIN A WALL.

4. ALL PENETRATIONS SHALL CONFORM TO TITLE 24, CALIF. BLDG. CODE, SECTION 714.

CONDUIT PENETRATION

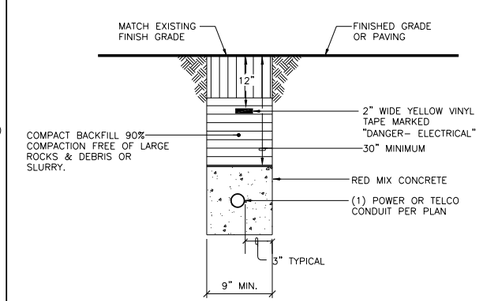
SCALE: N.T.S. | 6



NTI/EMERSON P/N# CAC-PED1
PPC (MINI)
UL LISTED # E209771

MINI-PPC CABINET

SCALE: N.T.S. | 7



SINGLE CONDUIT TRENCH

SCALE: N.T.S. | 8

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CLV1424

HAWTHORNE & 105TH

10417 HAWTHORNE BLVD.
INGLEWOOD, CA 90304

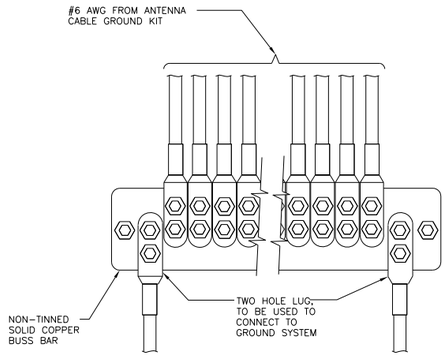
SEAL:

SHEET TITLE:

ELECTRICAL DETAILS

SHEET NUMBER:

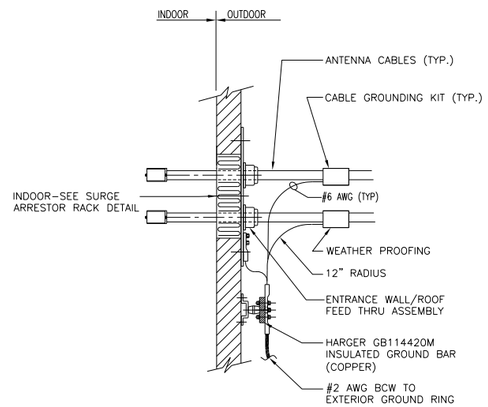
E-2



NOTE:
CONTRACTOR TO UTILIZE KOPR-SHIELD (THOMAS & BETTS) OR EQUIVALENT ON ALL LUG CONNECTIONS

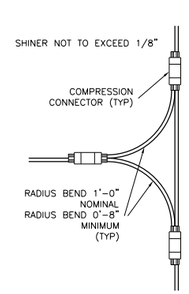
GROUND CONNECTION

SCALE: N.T.S. | 1



HATCH PLATE DETAIL

SCALE: N.T.S. | 2

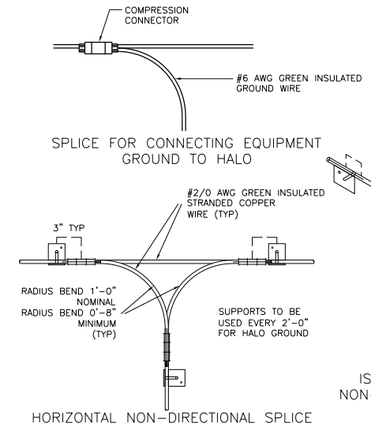


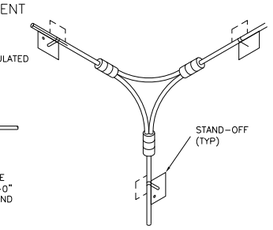
HORIZONTAL OMNI-DIRECTIONAL SPLICE FOR CONNECTIONS:

SUPPLEMENTARY BUS TO SUPPLEMENTARY BUS.

SUPPLEMENTARY BUS TO PRIMARY PERIPHERAL INTERIOR RING BUS.

HORIZONTAL NON-DIRECTIONAL SPLICE

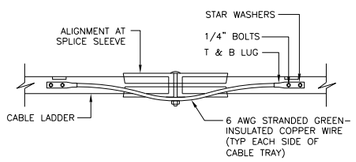


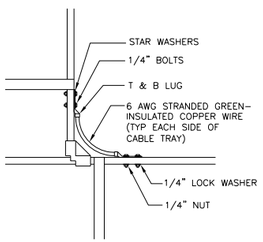


ISOMETRIC VIEW OF VERTICAL NON-DIRECTIONAL SPLICE CORNER INSTALLATION

GROUND HALO CONNECTION

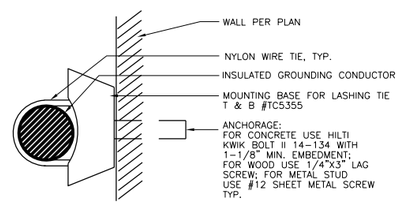
SCALE: N.T.S. | 3





CABLE LADDER GROUNDING

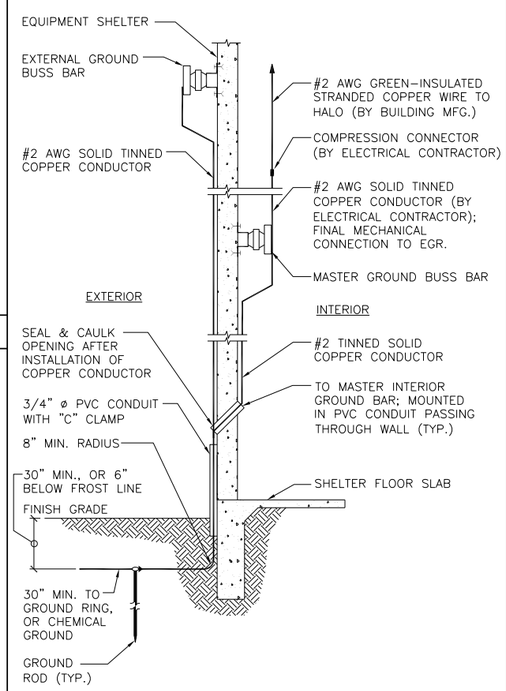
SCALE: N.T.S. | 4



NOTE:
THIS WALL ANCHOR SHALL BE USED FOR CONDUCTORS NOT IN CONDUIT. THE CONDUCTORS SHALL BE SUPPORTED ON 2'-0" CENTERS.

GROUND HALO STAND-OFF

SCALE: N.T.S. | 5



SHELTER GROUNDING

SCALE: N.T.S. | 10

General Data

Enclosure dimensions (H x W x D)
24.4 x 9.7 x 9.6 inches
Width from mounting plate to edge of open door front: 19.3 inches

Height
19 lbs (approx.)

UL
UL 1008, 5th Ed, rev October 2007
File E313837
- Single phase, rated 240/120, 200 amps, 10 kA Short Circuit
- Three phase, rated 208/120, 200 amps, 10 kA Short Circuit

Enclosure
- UL Type 3R aluminum enclosure
- "Lift-off" hinges for front door removal/installation
- Removable dead front panel protects breaker wiring connections
- Gaskets provided to match 4-hole mounting pattern for generator receptacles
- For retrofits, eight-hole pattern accommodates vertical or 45° mount, while knockout pattern accommodates "AW"-type mounting boxes
- Cable management for wiring conductors
- Captive sliding conduit entry hole cover for use when alternate power source is disconnected

Powder coat paint
UL Pantone (Ed Gray) 7GC polyester

Door
- "Lift-off" hinges
- Pad-lockable

Manufacturer's warranty
5 years

Series Number	Product Configuration[1]
IGL-1P	1Ø, left mount; L1, L2, N and G
IGL-3P	3Ø, left mount; L1, L2, L3, N and G
IGL-1P-R	1Ø, right mount; L1, L2, N and G
IGL-3P-R	3Ø, right mount; L1, L2, L3, N and G
IGL-1P-CBL	1Ø, left mount; L1, L2, N and G, with IGL-CBL accessory
IGL-3P-CBL	3Ø, left mount; L1, L2, L3, N and G, with IGL-CBL accessory
IGL-1P-CBL-R	1Ø, right mount; L1, L2, N and G, with IGL-CBL accessory
IGL-3P-CBL-R	3Ø, right mount; L1, L2, L3, N and G, with IGL-CBL accessory
Accessories	
IGL-CBL	18" or 30" 20° cable assembly for Deutsch-type alarm connectors
IGL-MB	18" or 30" mounting box (for use with left- or right-mount IGL)

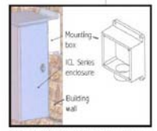
[1] All parts listed include male Cam Lok-style connectors. Units are UL 1008 Transfer Switch Power Inlet. Standard rated for use on 120/240 or 120/208 V up to 200 amp installations

Cam Lok-Style Connectors

Type
Male

Electrical
- UL Listed Cam Lok-style, 180° twist on/off single-pole receptacles
- Conforms to NEC
- Rated up to 400 A, 208/120 V
- May be used for 240/120 single phase applications
- Terminal acceptance
  - Plug: 200 A, #4 to 2/0 AWG
  - Receptacle: 200 A, #4 to 4/0 AWG

Power connectors
- Solid brass machined connectors
- Color coded:
  Green–Ground
  White–Neutral
  Black – Line 1
  Red– Line 2
  Blue–Line 3



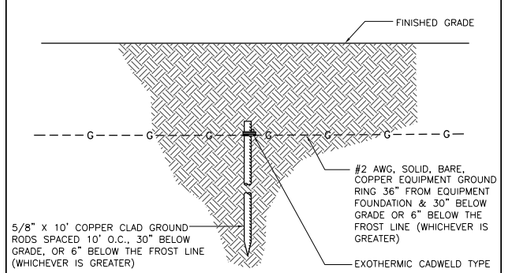
Accessory IGL-MB provides side, top or bottom conduit entry. Inside flush mounting is prohibited by space limitations.

Wiring and Installation

WARNING: Wiring and installation should only be performed by qualified personnel. Disconnect the generator star battery and open the generator disconnect switch before connecting or disconnecting the Cam Lok-style power connectors to prevent accidental generator start while servicing the equipment. Install a cabinet bonding jumper (ground) to the ground stud provided in accordance with NEC requirements.

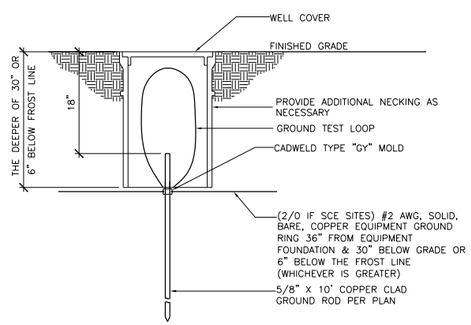
CAMLOCK DETAIL

SCALE: N.T.S. | 11



GROUND ROD

SCALE: N.T.S. | 8



TEST WELL

SCALE: N.T.S. | 9

at&t
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INGLEWOOD, CA 90304

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SHEET TITLE:

ELECTRICAL DETAILS

SHEET NUMBER:

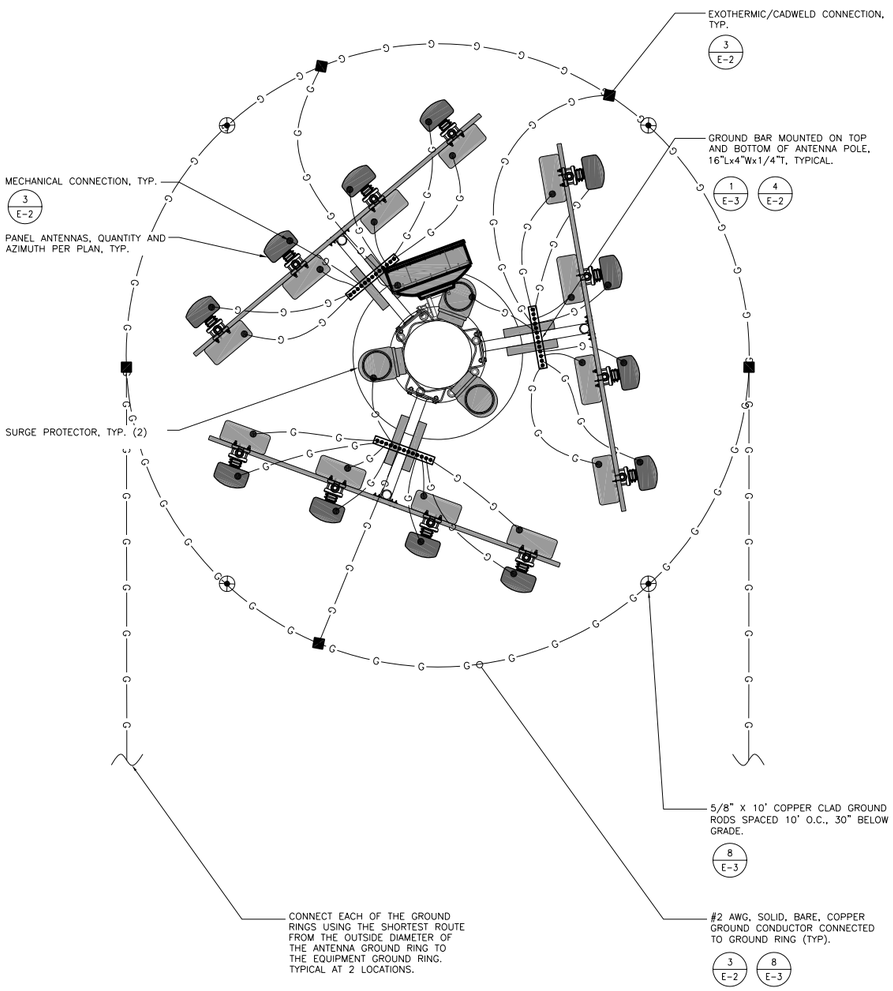
E-3

GENERAL NOTES:

1. THIS PLAN PROVIDES A DIAGRAMMATIC REPRESENTATION OF THE EQUIPMENT GROUNDING. SEE ARCHITECTURAL SHEETS FOR EQUIPMENT LOCATION & LAYOUT.
2. SEE GROUNDING KEY NOTES FOR ADDITIONAL INFORMATION.
3. GROUND RING AND EQUIPMENT MUST BE LOCATED IN LEASE AREA UNLESS NOTED OTHERWISE.
4. SEE THIS SHEET FOR ADDITIONAL GROUNDING DETAILS.

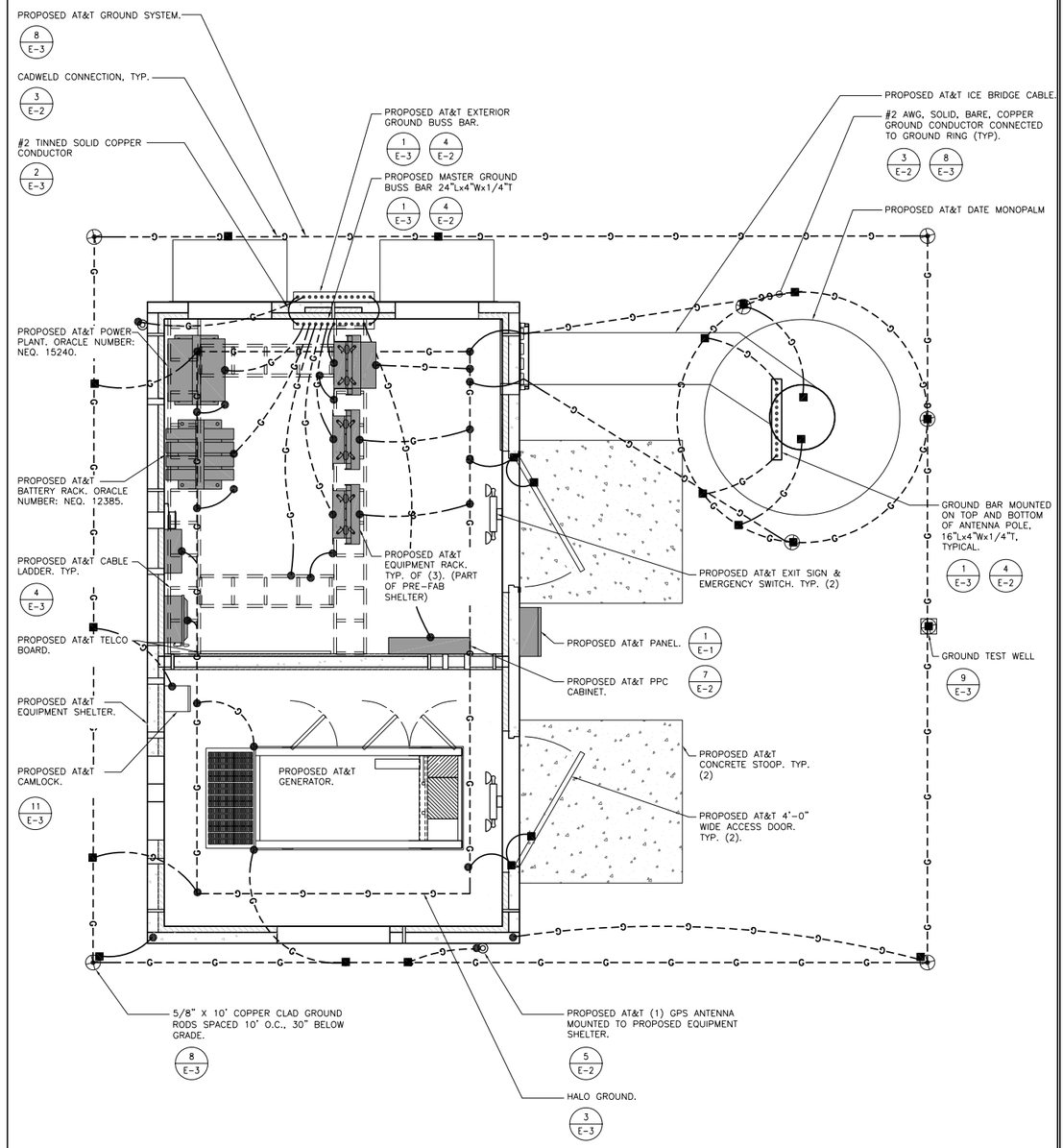
GROUNDING LEGEND:

SYMBOL	DESCRIPTION
G	GROUNDWIRE
■	CADWELD CONNECTION
●	MECHANICAL CONNECTION



ANTENNA GROUNDING PLAN

SCALE: 1/2"=1'-0" (0 1' 2') — 1



EQUIPMENT GROUNDING PLAN

SCALE: 1/2"=1'-0" (0 1' 2') — 2

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SEAL:

SHEET TITLE:

EQUIPMENT GROUNDING

SHEET NUMBER:

E-4