STRUCTURAL GENERAL NOTES

1. DESIGN BASIS:

1.1 BUILDING CODE: 1997 UNIFORM BUILDING CODE

1.2 ANTENNA FOOTING DESIGN LOADS (DEAD, LIVE, SEISMIC, WIND) PER MINEX ENGINEERING, CORP. DRAWING 30.12.G2

1.3 SEISMIC PARAMETERS OTHER THAN ANTENNA FTG'S STRUCTURAL LOAD:

A. SEISMIC ZONE = 3
B. SOIL PROFILE TYPE = Sd

1.4 WIND PARAMETERS:

A. WIND SPEED = 80 MPH
B. EXPOSURE D

1.5 DESIGN LOADS (ALLOWABLE STRESS DESIGN) ON PIER FOOTING:

A. AXIAL COMPRESSION = 31 k
B. AXIAL UPLIFT = 26.5 k
C. LATERAL FORCE = 5.8 k

2. GENERAL:

2.1 ALL MATERIALS AND WORKMANSHIP SHALL BE OF A QUALITY COMPATIBLE WITH THE REQUIREMENTS OF THE 1997 EDITION OF THE UNIFORM BUILDING CODE AND ALL LOCAL CITY AND COUNTY ORDINANCES, WHICHEVER MAY APPLY.

2.2 ALL WORK SHOWN ON THESE DRAWINGS IS NEW UNLESS NOTED EXISTING (E).

2.3 THE CONDITIONS SHOWN FOR EXISTING CONSTRUCTION REFLECT INFORMATION SHOWN ON THE ORIGINAL CONSTRUCTION DRAWINGS FOR THE SITE. THE CONTRACTOR SHALL REFER TO ALL AVAILABLE DRAWINGS AND FIELD OBSERVATIONS FOR VERIFICATION OF EXISTING CONDITIONS AS REQUIRED.

2.4 THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS AND CONDITIONS BEFORE THE START OF ANY CONSTRUCTION, ORDERING OR FABRICATING ANY MATERIAL. ANY DISCREPANCIES BETWEEN THE CONDITIONS FOUND AND THOSE SHOWN ON THE PLANS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER FOR CLARIFICATION BEFORE WORK PROCEEDS.

2.5 ALL OMISSION AND CONFLICTS BETWEEN THE VARIOUS ELEMENTS AND/OR SPECIFICATIONS SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT MANAGER BEFORE PROCEEDING WITH ANY WORK SO INVOLVED.

2.6 IT SHALL BE THE CONTRACTORS SOLE RESPONSIBILITY TO DESIGN AND PROVIDE ADEQUATE SHORING, BRACING, FORMWORK, ETC., AS REQUIRED FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION, AND TO HOLD ALL NEW OR REVISED ELEMENTS IN PLACE UNTIL FINAL SUPPORT CONDITIONS ARE COMPLETED.

2.7 THE CONTRACTOR SHALL PROTECT ALL PIPES, DUCTS, ARCHITECTURAL FINISHES, AND UTILITIES FROM DAMAGE DURING CONSTRUCTION AND RESTORE ALL DAMAGED ITEMS TO ORIGINAL CONDITION, UNLESS NOTED OTHERWISE.

2.8 IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES WHETHER SHOWN HEREON OR NOT, AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT IN CONJUNCTION WITH THE PROSECUTION OF THIS WORK.

2.9 THE CONTRACTOR SHALL EXERCISE EXTREME CAUTION WHEN WELDING NEAR WOOD OR OTHER FLAMMABLE MATERIALS AND MUST OBTAIN BURN PERMIT FOR WELDING OUTDOORS.

2.10 THE CONTRACTOR IS RESPONSIBLE TO FURNISH AND MAINTAIN NECESSARY BARRICADES, COVERINGS OR OTHER PROTECTIVE DEVICES AS NEEDED TO PROTECT EQUIPMENT, ADJACENT SURFACES AND MEET SAFETY REQUIREMENTS. THE CONTRACTOR SHALL REMOVE THESE MATERIALS ONCE THE PROJECT HAS BEEN COMPLETED.

2.11 THE STRUCTURAL SYSTEMS HAVE BEEN DESIGNED TO CARRY THE SUPERIMPOSED LIVE LOADS AS PRESCRIBED BY THE BUILDING CODE AND IN ACCORDANCE WITH STANDARD ENGINEERING PRACTICES WITH NO SPECIAL PROVISIONS FOR CARRYING CONCENTRATED LOADS FROM STORAGE AND HANDLING OF CONSTRUCTION MATERIALS OR FROM OPERATION OF CONSTRUCTION EQUIPMENT.

2.12 SEE ALSO SPECIFICATION.

3. SPECIAL INSPECTION:

3.1 SPECIAL INSPECTION SHALL BE PERFORMED IN ACCORDANCE WITH SECTION 1701 OF THE 1997 UBC, AND IS REQUIRED FOR THE FOLLOWING UNLESS SPECIFICALLY NOTED OTHERWISE:

A. AUGER CAST-IN-PLACE PIER INSTALLATION
B. CONCRETE REINFORCING STEEL PLACEMENT
C. PLACEMENT OF CONCRETE
D. CONCRETE SLUMP TEST AND COMPRESSION TEST CYLINDERS
E. NON-SHRINK GROUT INSTALLATION
F. FIELD WELDING
G. SHOP WELDING UNLESS PERFORMED AT AN I.C.B.O. CERTIFIED SHOP
H. INSTALLATION OF EMBEDDED ANCHOR BOLTS
I. HIGH STRENGTH BOLTING
J. OBSERVATION OF FOUNDATION CONSTRUCTION OPERATION BY GEOTECHNICAL ENGINEER.

3.2 THE SPECIAL INSPECTOR SHALL BRING ALL DISCREPANCIES IMMEDIATELY TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF NOT CORRECTED TO THE SATISFACTION OF THE INSPECTOR, THE DISCREPANCIES SHALL BE BROUGHT IMMEDIATELY TO THE ATTENTION OF THE STRUCTURAL ENGINEER AND BUILDING OFFICIAL.

3.3 THE SPECIAL INSPECTOR SHALL FURNISH TIMELY INSPECTION REPORTS TO THE STRUCTURAL ENGINEER, THE OWNER, AND THE BUILDING OFFICIAL FOR REVIEW AND ACCEPTANCE. THE INSPECTOR SHALL ALSO SUBMIT A FINAL REPORT, SIGNED BY HIMSELF AND BEARING THE SEAL AND SIGNATURE OF A CIVIL ENGINEER REGISTERED IN CALIFORNIA, STATING WHETHER THE WORK REQUIRING INSPECTION WAS IN CONFORMANCE WITH THE APPROVED PLANS AND SPECIFICATIONS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE UBC.

3.4 THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND REPLACING ALL WORK WHICH IS DETERMINED BY TESTING AND INSPECTION NOT TO COMPLY WITH SPECIFIED STANDARDS.

4. SUBMITTALS:

4.1 PRIOR TO PROCEEDING WITH THE WORK, THE CONTRACTOR SHALL SUBMIT THE FOLLOWING TO THE STRUCTURAL ENGINEER FOR REVIEW:

A. DESCRIPTION OF PIER DRILLING AND PUMPING EQUIPMENT
B. DESCRIPTION OF ANTICIPATED PRODUCTION IN LINEAR FEET OF COMPLETED PILING PER RIG, PER DAY
C. PIER GROUT MIX DESIGN
D. CERTIFIED MILL TEST REPORTS FOR REINFORCING STEEL
E. COMPLETE PILE INSTALLATION PROCEDURE
F. DETAILS OF METHODS TO BE USED FOR CENTERING REINFORCING IN THE PILES
G. SHOP DRAWINGS FOR ALL CONCRETE REINFORCING STEEL
H. CONCRETE MIX DESIGN
I. ERECTION AND SHOP DRAWINGS FOR ALL STRUCTURAL STEEL
J. CERTIFIED MILL TEST REPORTS FOR ALL STRUCTURAL STEEL
K. MANUFACTURERS CATALOG DATA, TOGETHER WITH I.C.B.O. CERTIFIED TEST DATA, FOR ANY PROPRIETARY PRODUCT PROPOSED AS A SUBSTITUTE FOR SPECIFIED MATERIALS.

4.2 REVIEW OF SUBMITTALS BY THE STRUCTURAL ENGINEER IS ONLY FOR GENERAL CONFORMANCE WITH DESIGN INTENT. REVIEW OF THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLETING THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

4.3 SUBMIT SHOP DRAWINGS UNDER PROVISIONS OF SECTION 01300. ALLOW 14 DAYS FOR STRUCTURAL ENGINEER'S REVIEW, AS PER AISC – CODE OF STANDARD PRACTICE. REVIEW OF SUBMITTALS BY THE STRUCTURAL ENGINEER IS ONLY FOR GENERAL CONFORMANCE WITH DESIGN INTENT. REVIEW OF THE DRAWINGS DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY FOR COMPLETING THE WORK IN ACCORDANCE WITH THE DRAWINGS AND SPECIFICATIONS.

4.4 INDICATE PROFILES, SIZES, SPACING, AND LOCATIONS OF STRUCTURAL MEMBERS, CONNECTIONS, ATTACHMENTS, FASTENERS, CAMBERS, HOLES AS PER CONSTRUCTION DRAWINGS.

4.5 INDICATE WELDED CONNECTIONS USING STANDARD AWS WELDING SYMBOLS. INDICATE WELD SIZES, EFFECTIVE SIZES AND NET LENGTHS.

4.6 SHOP DRAWINGS SHALL SHOW CONNECTIONS AS INDICATED ON CONSTRUCTION DRAWINGS. WHERE ALTERNATIVE CONNECTIONS ARE SUBSTITUTED FOR THOSE INDICATED ON THE CONSTRUCTION DRAWINGS, SUBMIT DATA (CALCULATIONS OR TEST) DEMONSTRATING THAT THEY ARE OF EQUIVALENT OR SUPERIOR STRENGTH, STIFFNESS AND DUCTILITY TO THOSE SHOWN ON THE CONSTRUCTION DRAWINGS FOR STRUCTURAL ENGINEER'S APPROVAL. CLEARLY INDICATE ALL ALTERNATIVELY DETAILED CONNECTIONS ON SHOP DRAWINGS.

4.7 SUBMIT THE FOLLOWING TO THE STRUCTURAL ENGINEER FOR RECORD PURPOSES:

A. MILL CERTIFICATES AND TEST REPORTS FOR ALL STRUCTURAL STEEL
B. MILL CERTIFICATES AND TEST REPORTS FOR ALL REINFORCING STEEL
C. RESULTS OF CONCRETE SPECIMENT COMPRESSION TEST.

5. FOUNDATIONS:

5.1 THE FOUNDATION DESIGN HAS BEEN BASED ON THE SOILS REPORT PREPARED BY SAGE, INC., REPORT 01-068, DATED JULY 23, 2002.

5.2 FOUNDATION STRATA PARAMETERS, SEE DRAWING S201.

5.3 THE CONTRACTOR SHALL REFER TO THE PROJECT SOILS REPORT FOR ALL SITE WORK, GRADING, SHORING, COMPACTION, AND EXCAVATION REQUIREMENTS AND PROCEDURES.

5.4 THE SOILS ENGINEER SHALL REVIEW THE FOUNDATION PLAN PRIOR TO CONSTRUCTION TO ENSURE THAT ALL RECOMMENDATIONS PROVIDED IN THE SOILS REPORT HAVE BEEN MET.

5.5 THE SOILS ENGINEER SHALL BE RETAINED TO PROVIDE OBSERVATION AND TESTING SERVICES DURING GRADING AND FOUNDATION PREPARATION IN ACCORDANCE WITH THE SOILS REPORT RECOMMENDATIONS. THE SOILS ENGINEER SHALL SUBMIT INSPECTION AND TESTING REPORTS TO THE PROJECT MANAGER AND ENGINEER OF RECORD

5.6 STRUCTURAL FILL AND BACKFILL SHALL CONSIST OF A NON-EXPANSIVE GRANULAR AND NON-FROST-SUSCEPTIBLE MATERIAL

5.7 STRUCTURAL FILL UNDERNEATH FOUNDATIONS AND SLABS SHALL BE COMPACTED WITH A SMOOTH VIBRATORY COMPACTION DEVICE PRIOR TO CONCRETE PLACEMENT.

5.8 CONSTRUCT THE SIDES OF THE STRIP FOOTING FOUNDATION STRAIGHT AND VERTICAL TO REDUCE THE RISK OF FROZEN SOIL ADHERING TO THE CONCRETE AND LIFTING THE FOUNDATION. THE USE OF FORMS AT THE TOP OF THE STRIP FOOTING MAY BE NECESSARY TO PREVENT THE CREATION AN ENLARGED AREA OF CONCRETE (MUSHROOM). IF A MUSHROOM OF CONCRETE OCCURS, HEAVE OF THE FOUNDATION CAN TAKE PLACE FROM FROZEN SOIL BENEATH THE MUSHROOM HEAVING UP AND CARRYING THE FOUNDATION WITH IT.

6. CONCRETE & GROUT:

6.1 ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318-95, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE".

6.2 CONCRETE MIXES SHALL BE DESIGNED BY A TESTING LABORATORY APPROVED BY THE ENGINEER. MIXES SHALL CONFORM TO APPLICABLE BUILDING CODE REQUIREMENTS, REGARDLESS OF OTHER REQUIREMENTS SPECIFIED HEREIN OR ON THE DRAWINGS. MIX DESIGNS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE USE. DESIGNS SHALL SHOW PROPORTIONS OF CEMENT, FINE AND COARSE AGGREGATES, WATER, AND GRADATION OF COMBINED AGGREGATES.

6.3 REINFORCING BARS AND DOWELS SHALL BE DEFORMED BARS AND SHALL CONFORM TO ASTM SPECIFICATION A615 OR A706, GRADE 60.

6.4 MINIMUM CLEAR DISTANCES BETWEEN REINFORCING STEEL AND FACE OF CONCRETE ARE AS FOLLOWS:

A. CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:
ALL BAR SIZES 3"

B. CONCRETE EXPOSED TO EARTH OR WEATHER:
#6 THROUGH #11 BARS 2"
#5 BAR AND SMALLER 1-1/2"

C. CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND:
#11 BAR AND SMALLER 1"

6.5 WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE, THE EXISTING SURFACE SHALL BE SOUND, CLEAN, FREE OF PAINT AND LAITANCE, AND ROUGHENED TO EXPOSE AGGREGATE. A CONCRETE BONDING ADHESIVE SHALL BE APPLIED TO EXISTING CONCRETE SURFACE PRIOR TO PLACING NEW CONCRETE AGAINST EXISTING CONCRETE.

6.6 CONCRETE SHALL HAVE A MINIMUM TWENTY-EIGHT DAY COMPRESSIVE STRENGTH (f'c) OF 3,000 PSI. WITH AGGREGATE MAX. SIZE 1 1/2", EXCEPT PIERS.

6.7 CONCRETE FOR PIERS IN ALLUVIUM SHALL HAVE COMPRESSIVE STRENGTH f'c = 4,000 AND AGGREGATE SIZE 3/4". CONCRETE FOR PIERS IN SOLID ROCK SHALL HAVE COMPRESSIVE STRENGTH f'c = 4,000 AND AGGREGATE MAX. SIZE 3/8"

6.8 AGGREGATES SHALL BE HARD ROCK AND SHALL CONFORM TO ASTM C-33.

6.9 AGGREGATES FOR CONCRETE USED IN ROCK PIERS SHALL HAVE A MAXIMUM SIZE OF 3/8ø .

6.10 CEMENT SHALL BE ASTM C150, TYPE II.

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

6.12 PROJECTING CORNERS SHALL BE FORMED WITH A 3/4-INCH CHAMFER UNLESS OTHERWISE NOTED.

6.13 MAKE REINFORCEMENT LAPS, HOOKS AND DEVELOPMENT PER DETAILS ON S002 PROVIDE WIRE TIES CONNECTING BARS TOGETHER AT EACH END OF LAPS.

6.14 NON-SHRINK GROUT SHALL BE SIKAGROUT 212 OR APPROVED EQUAL. INSTALL IN ACCORDANCE WITH MANUFACTURER'S REQUIREMENTS.

6.15 COLD WEATHER AND HOT WEATHER CONCRETE PLACEMENT SHALL BE IN ACCORDANCE WITH ACI 305 AND 306.

6.16 AFTER PLACEMENT THE CONCRETE SHALL BE COVERED WITH BURLAP, OR OTHER MOISTURE-RETAINING MATERIAL, AND SHALL BE KEPT MOIST CONTINUOUSLY FOR A 7 DAY INITIAL CURING PERIOD.

7. STRUCTURAL STEEL:

7.1 ALL STRUCTURAL STEEL WORK SHALL CONFORM TO THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) PUBLICATION "SPECIFICATION FOR THE DESIGN, FABRICATION, AND ERECTION OF STRUCTURAL STEEL BUILDINGS".

7.2 AT CONTRACTORS OPTION, SHEAR TABS FOR STEEL BEAMS MAY BE FIELD WELDED TO BEAM WEBS TO FACILITATE ERECTION.

7.3 COMPLETE WELDING PROCEDURE SHALL BE SUBMITTED TO AND APPROVED BY THE STRUCTURAL ENGINEER OF RECORD BEFORE ANY WELDING IS COMMENCED.

7.4 STRUCTURAL STEEL SHALL BE AS FOLLOWS:

BEAMS AND COLUMNS	ASTM A572 GRADE 50 OR ASTM A992
GUSSET PLATE	ASTM A36
ANGLES	ASTM A36
CHANNELS	ASTM A36
TUBE STEEL	ASTM A500 (GRADE B)
CONTINUITY PLATES	ASTM A572 (GRADE 50)
BASE PLATES (LESS THAN 4" THK.)	ASTM A572 (GRADE 50)
BASE PLATES (GREATER THAN 4" THK.)	ASTM A572 (GRADE 42)
MISC. PLATES	ASTM A36
PIPE COLUMNS	ASTM A53 TYPE 'E' OR TYPE 'S' (GRADE B)
STIFFENER/SHEAR PLATES	ASTM A36

7.5 FABRICATE STRUCTURAL STEEL MEMBERS IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS AND AISC CODE OF STANDARD PRACTICE.

7.6 FABRICATE STRUCTURAL ELEMENTS IN THE LARGEST SECTIONS PRACTICAL, CONSIDERING TRANSPORT AND ERECTION REQUIREMENTS.

7.7 ALL WELDING SHALL BE PERFORMED UNDER A PRE-QUALIFIED OR QUALIFIED BY TEST WELDING PROCEDURE, PER AWS D1.1. SUBMIT WRITTEN WELDING PROCEDURES FOR EACH CLASS OF WELD (POSITION, PROCESS, MATERIAL TYPE, FILLER METAL TYPE, JOINT PREPARATION, PRE-HEAT, POST-HEAT AND THICKNESS) FOR BOTH PRE-QUALIFIED AND QUALIFIED BY TEST PROCEDURES AS PER AWS D1.1. FOR QUALIFIED BY TEST PROCEDURES, SUBMIT TEST DATA AS PER AWS D1.1.

7.8 ALL WELDING SHALL BE DONE BY THE SHIELDED ARC PROCESS USING APPROVED ELECTRODES PER AWS SPECIFICATION E70XX (LOW HYDROGEN ELECTRODES). WELDING SHALL CONFORM TO THE LATEST EDITION OF AWS D1.1 AND SHALL BE PERFORMED BY CERTIFIED WELDERS QUALIFIED UNDER THE PROCEDURES CONTAINED THEREIN.

7.9 ALL BOLT HOLES IN STEEL SHALL BE 1/16" LARGER THAN THE NOMINAL BOLT DIAMETER UNLESS OTHERWISE NOTED.

7.10 ALL STRUCTURAL STEEL SHAPES EXPOSED TO WEATHER SHALL RECEIVE A GALVANIZED ZINC COATING OF 2.3 OUNCES PER SQUARE FOOT IN ACCORDANCE WITH ASTM A123 AFTER SHOP FABRICATION. ALL HARDWARE FOR SUCH STEEL SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.

7.11 REPAIR DAMAGED GALVANIZED SURFACES WITH GALVANIZING REPAIR METHOD AND PAINT CONFORMING TO ASTM A780 OR BY THE APPLICATION OF STICK OR THICK PASTE MATERIAL SPECIFICALLY DESIGNED FOR REPAIR OF GALVANIZING, AS APPROVED BY THE STRUCTURAL ENGINEER. CLEAN AREAS TO BE REPAIRED AND REMOVE THE SLAG FROM THE WELDS. HEAT SURFACES TO WHICH STICK OR PASTE MATERIAL IS APPLIED, WITH A TORCH TO A TEMPERATURE SUFFICIENT TO MELT THE METALLICS IN STICK OR PASTE; SPREAD THE MOLTEN MATERIAL UNIFORMLY OVER SURFACES TO BE COATED AND WIPE THE EXCESS MATERIAL OFF.

7.12 GRATING SHALL BE 1 1/4" X 3/16" SERRATED TYPE GW HD GALVANIZED STEEL AS MANUFACTURED BY MCNICHOLS CO. OR EQUAL, INSTALLED PER MANUFACTURER'S SPECIFICATIONS.

7.13 ALL GRATING OPENINGS 6" OR LARGER IN DIAMETER SHALL BE BANDED WITH 1/4" X 6" TOE PLATE.

8. "DRILLED-IN" ANCHORS AND DOWELS:

8.1 CONCRETE EXPANSION ANCHORS SHALL BE HILTI KWIK BOLT OR APPROVED EQUAL.

8.2 CONCRETE ADHESIVE ANCHORS SHALL BE INSTALLED USING HILTI HIT HY-150 EPOXY OR APPROVED EQUAL.

8.3 ALL CONCRETE ANCHORS AND DOWELS SHALL BE INSTALLED WITH PROPER TOOLS AND PROCEDURES IN STRICT ACCORDANCE WITH THE MANUFACTURERES RECOMMENDATIONS.

8.4 SUBSTATIONS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

8.3 ALL CONCRETE ANCHORS AND DOWELS SHALL BE INSTALLED WITH PROPER TOOLS AND PROCEDURES IN STRICT ACCORDANCE WITH THE MANUFACTURERES RECOMMENDATIONS.

8.4 SUBSTITUTIONS SHALL BE SUBMITTED TO ENGINEER FOR APPROVAL PRIOR TO INSTALLATION.

9. FIELD REPORTS & OBSERVATIONS:

9.1 PRIOR TO FINAL INSPECTION, THE STRUCTRUAL ENGINEER OF RECORD SHALL ISSUE A FINAL LETTER STATING THAT THE COMPLETED BUILDING STRUCTURE SUBSTANTIALLY CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS.

9.2 CONTRACTOR SHALL CONTACT ENGINEER FOR PERIODIC OBSERVATIONS OF THE FOLLOWING:

A. FOUNDATION REINFORCING. PRIOR TO PLACEMENT OF CONCRETE.

10. ERECTION:

10.1 ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, AISC CODE OF STANDARD PRACTICE AND AISC SPECIFICATION FOR HIGH STRENGTH BOLTED CONNECTIONS.

10.2 MAKE PROVISION FOR ERECTION LOADS, AND FOR SUFFICIENT TEMPORARY BRACING TO MAINTAIN STRUCTURE SAFE, PLUMB, AND IN TRUE ALIGNMENT UNTIL COMPLETION OF ERECTION AND INSTALLATION OF PERMANENT BRACING.

10.3 DO NOT FIELD CUT OR ALTER STRUCTURAL MEMBERS WITHOUT APPROVAL OF STRUCTURAL ENGINEER UNLESS SPECIFICALLY NOTED ON CONSTRUCTION DRAWINGS OR APPROVED SHOP DRAWINGS.

10.4 USE ASTM A325 HIGH STRENGTH BOLTS (HSB) TYPICAL U.O.N. BOLTS SHALL BE INSTALLED AS "SNUG TIGHT" WITH THREADS EXCLUDED FROM THE SHEAR PLAN.

10.5 AFTER ERECTION, INSPECTION AND TESTING OF STEEL (EXCEPT GALVANIZED STEEL, OR STEEL TO BE IN CONTACT WITH OR EMBEDDED IN CONCRETE), PRIME WELDS, ABRASIONS, AND SURFACES NOT SHOP PRIMED, OR DAMAGED. USE A PRIMER COMPATIBLE WITH SHOP COAT.

10.6 AFTER ERECTION, INSPECTION AND TESTING OF GALVANIZED STEEL, REPAIR DAMAGED GALVANIZED COATING AND GALVANIZE WELDS.

10.7 ERECTION TOLERANCES:

A. MAXIMUM VARIATION FROM PLUMB: 1/8 INCH PER TEN FEET.
B. MAXIMUM OFFSET FROM TRUE ALIGNMENT: 1/4 INCH.

ABBREVIATIONS

&	AND	LG.	LONG
∠	ANGLE	LLV	LONG LEG VERTICAL
@	AT	LLH	LONG LEG HORIZONTAL
℄	CENTERLINE		
ø	DIAMETER	MAX.	MAXIMUM
(E)	EXISTING	MECH.	MECHANICAL
ℙ	PLATE	M.B.	MACHINE BOLT
		MIN.	MINIMUM
A.B.	ANCHOR BOLT	MISC.	MISCELLANEOUS
ARCH.	ARCHITECTURAL		
		N.S.	NEAR SIDE
BLDG.	BUILDING	N.T.S.	NOT TO SCALE
BM	BEAM		
BOT.	BOTTOM	O.C.	ON CENTER
		OPNG.	OPENING
C.J.P.	COMPLETE JOINT PENETRATION	OPP.	OPPOSITE
C	CHANNEL		
CLR.	CLEAR	PL.	PLATE
CONC.	CONCRETE	PT.	POINT
CONN.	CONNECT		
CONT.	CONTINUOUS	REF.	REFERENCE
		REINF	REINFORCING
D	BAR DIAMETER	REQ'D	REQUIRED
DET.	DETAIL		
DIAG.	DIAGONAL	S.A.D.	SEE ARCHITECTURAL DRAWINGS
DO	DITTO	SIM.	SIMILAR
DWG.	DRAWING	SPA.	SPACE
		STD.	STANDARD
EA.	EACH	STIFF.	STIFFENER
EL.	ELEVATION		
ELEV.	ELEVATION	T.O.S.	TOP OF STEEL
EMBED.	EMBEDMENT	TS.	TUBULAR STEEL
E.S.	EACH SIDE	TYP.	TYPICAL
E.W.	EACH WAY		
		U.O.N.	UNLESS OTHERWISE NOTED
F.S.	FAR SIDE		
FIN.	FINISH	VERT.	VERTICAL
FLR.	FLOOR	V.I.F.	VERIFY IN FIELD
HORIZ.	HORIZONTAL	W	WIDE FLANGE
H.S.B.	HIGH STRENGTH BOLT	W/	WITH
HT.	HEIGHT	W/O	WITHOUT
		WT	STRUCTURAL TEE
		W.P.	WATERPROOF

Sym.	Description	Date	Drawn By	Appr. By
0	ISSUED FOR CONSTRUCTION	12-5-03	DK2	RAC

PH: (800) 889-WRMS
Fax: (925) 933-5167
WRMS ENGINEERING
Walnut Creek, CA
Seattle, WA
Boston, MA

Drawn By: CU
Designed By: GK
Date: 9/30/03
Proj. No.: 02-242

ALLEN TELESCOPE ARRAY
HAT CREEK RADIO OBSERVATORY
HAT CREEK, CA

STRUCTURAL
GENERAL NOTES & ABBREVIATIONS

One Inch at Full Scale (0 .5 1.0)
Dwg. No: S001
Rev.: 0