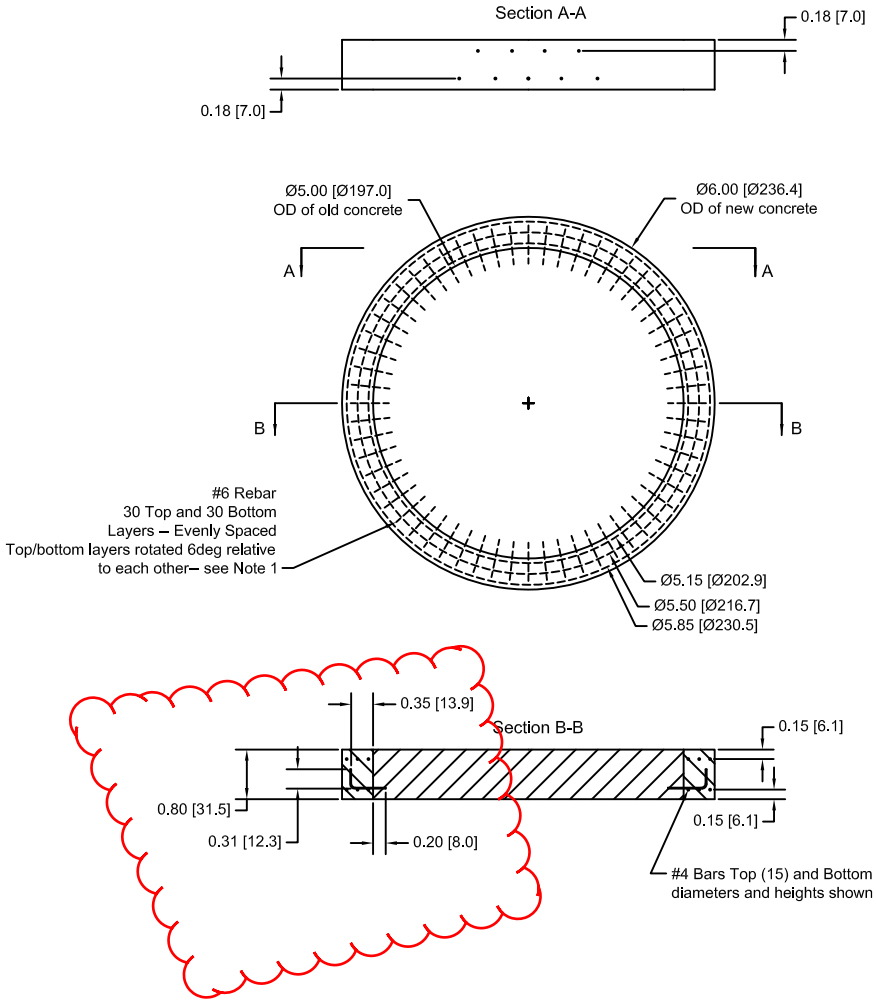


Note 1: Radial #6 rebar secured in existing concrete using Hilti HVA Capsule Adhesive Acnhoring System. HIT-RE500 Epoxy Adhesive. 7/8" Diameter hole drilled 8" deep into existing concrete.

Note 2: Use Grade 60 rebar. Use standard hook details

Note 3: Any imported engineering fills shall have the following gradation by weight:
- 100% passing 150mm sieve
- 70-100% passing 75mm sieve
- 50-1005 passing #4 sieve
- Plasticity index 15 max

Slab base course shall have compaction to 95% and:
- 100% passing 38mm sieve
- 45-90% passing #4 sieve
- no more than 12% passing #200 sieve

Note 4: Concrete shall be ready mixed conforming with ASTM C-94 and attain a minimum strength of 4000 psi after 28 days.

Revise Foundation design (see 02260s1 comments) to accommodate slope? Also do we need to ground the rebar and add additional grounding rods using the old spec?

DWG NO

ITEM NO	NEXT ASSEMBLY	REQD

THIS DRAWING IS THE PROPERTY OF
ARGONNE NATIONAL LABORATORY

SYM	CHANGE	BY	CHKD	DATE	APVD	DATE

MICRO-FILMED DATE

UNLESS OTHERWISE NOTED
ALL DIMENSIONS ARE INCHES
DECIMAL TOLERANCE
.X ± .1
.XX ± .02
.XXX ± .005
ANGULAR TOL ±1/2°
FRACTIONAL TOL ±1/64
REMOVE ALL BURRS AND SHARP EDGES
SURFACES TO BE IN ACCORDANCE WITH LATEST ANSI B46.1
DIMENSIONS & TOLERANCES IN ACCORDANCE WITH LATEST ANSI Y14.5

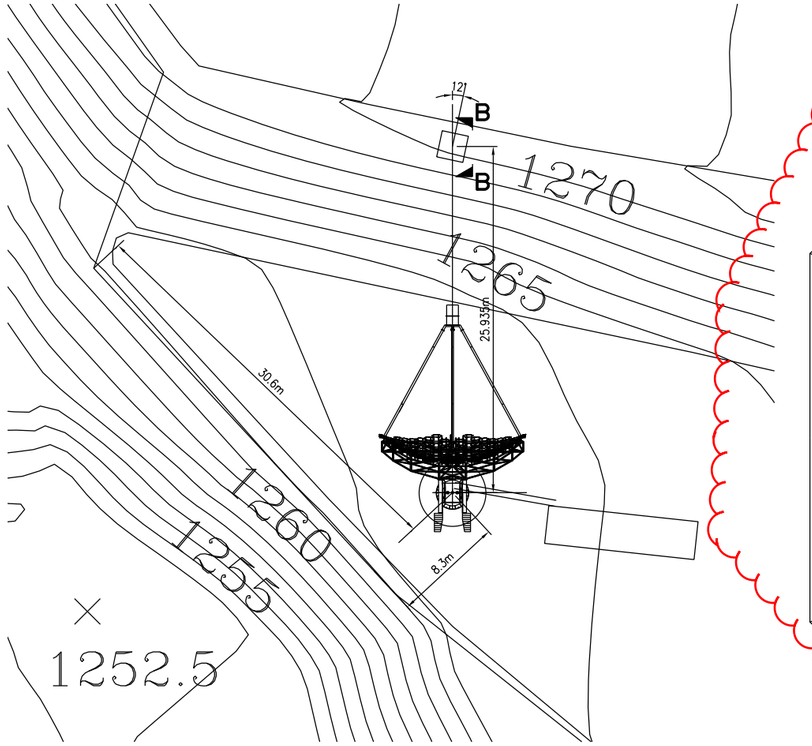
RECORD NUMBER

DRAWN BY	DATE	GP LEADER	DATE
vjg	1/9/14		
CHECKED		PROJECT MGR	
RESPONSIBLE ENGINEER		APVD/RELEASED	

MATERIAL: NA

TITLE: Modifications to VERITAS Foundation

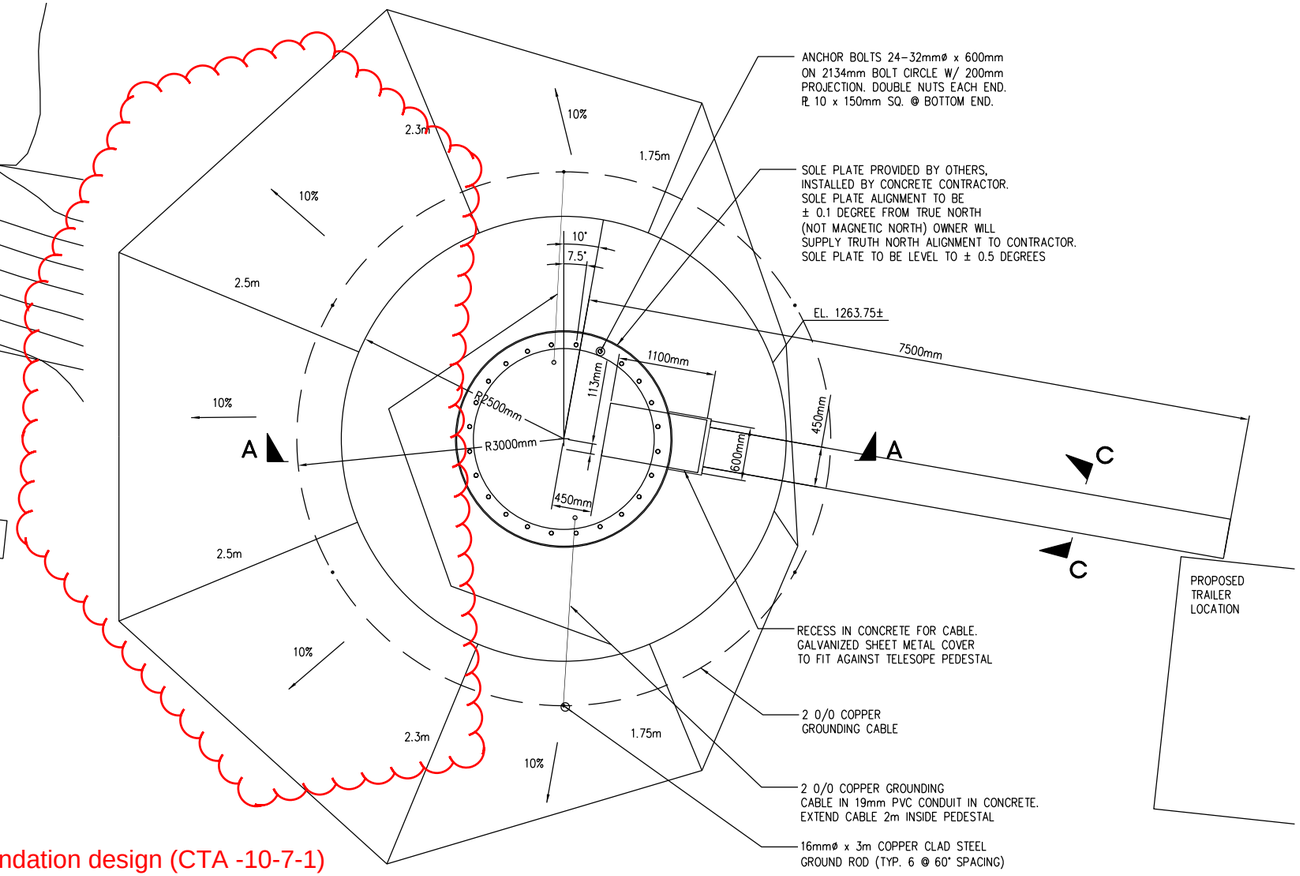
SCALE	SHEET OF	DRAWING NUMBER	REV
		CTA-10-7-1	



FOUNDATION SITE PLAN

SCALE: 1 : 200

NORTH



ANCHOR BOLTS 24–32mmø x 600mm
ON 2134mm BOLT CIRCLE W/ 200mm
PROJECTION. DOUBLE NUTS EACH END.
PL 10 x 150mm SQ. @ BOTTOM END.

SOLE PLATE PROVIDED BY OTHERS,
INSTALLED BY CONCRETE CONTRACTOR.
SOLE PLATE ALIGNMENT TO BE
± 0.1 DEGREE FROM TRUE NORTH
(NOT MAGNETIC NORTH) OWNER WILL
SUPPLY TRUTH NORTH ALIGNMENT TO CONTRACTOR.
SOLE PLATE TO BE LEVEL TO ± 0.5 DEGREES

RECESS IN CONCRETE FOR CABLE.
GALVANIZED SHEET METAL COVER
TO FIT AGAINST TELESOPE PEDESTAL

2 0/0 COPPER
GROUNDING CABLE

2 0/0 COPPER GROUNDING
CABLE IN 19mm PVC CONDUIT IN CONCRETE.
EXTEND CABLE 2m INSIDE PEDESTAL

16mmø x 3m COPPER CLAD STEEL
GROUND ROD (TYP. 6 @ 60° SPACING)

**GROUNDING CABLE NOTE:
ALL CONNECTIONS SHALL BE CADWELDED.

FOUNDATION PLAN

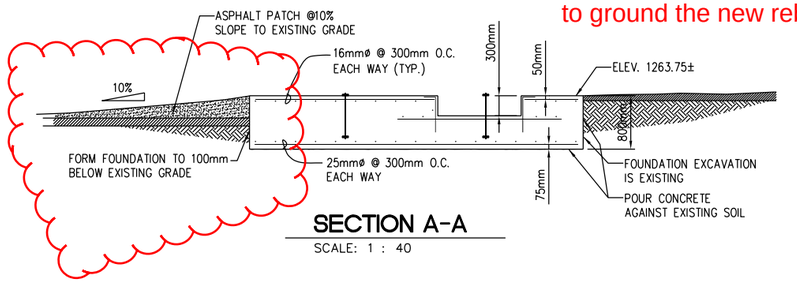
SCALE: 1 : 30

NORTH

Revise Foundation design (CTA -10-7-1)
to accommodate slope? Do we we need
to ground the new rebar using this spec?

Do we need to ground the new rebar
using this spec? Repull grounding cable
to base of fpedestal?

** SEE DRAWING S2 FOR CONCRETE CONSTRUCTION NOTES

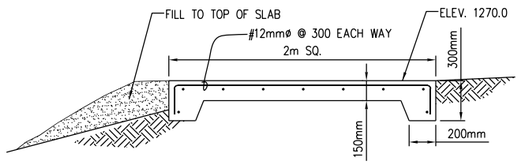


SECTION A-A

SCALE: 1 : 40

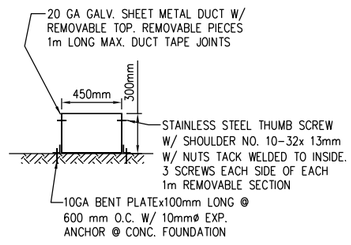
There is a possibility that the grounding
system may be disturbed or damaged
while doing the excavation, etc.

Revise Foundation design (CTA -10-7-1)
to accommodate slope?



SECTION B-B

SCALE: 1 : 20



SECTION C-C

SCALE: 1 : 20

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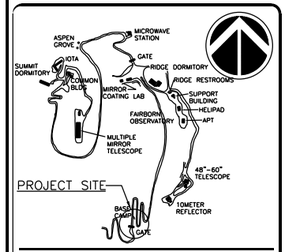

KEY PLAN

GRAPHIC SCALE(S)

DATE	SUBMISSION
01/10/03	FINAL (100%)

REVISION	REVISION
REVISION 1	
REVISION 2	
REVISION 3	
REVISION 4	
REVISION 5	
REVISION 6	
REVISION 7	

Smithsonian Institution

Office of Facilities Engineering and Operations
750 9th Street N.W. Suite 5200
Washington DC 20560-0908

BUILDING NAME / ADDRESS	670 MT. HOPKINS ROAD AMADO, ARIZONA
PROJECT TITLE	VERITAS PROTOTYPE FDN.
OFCO PROJECT NUMBER	0382102
A/E PROJECT NUMBER	M3 PN02260
DRAWING TITLE	FOUNDATION PLAN STRUCTURAL DETAILS
DRAWING TYPE	STRUCTURAL
WORKING STAFF	DN (DESIGNED BY) / AC (DRAWN BY) / DN (CHECKED BY)
SHEET NO. OF	S (DISCIPLINE) / 0 (TYPE) / 1 (SEQUENCE)

NAME: O:\2002\02260\Struc\02260s1.dwg LAST REV: 01/03/02 LAST UPDATE: JAN 09, 2003 TIME: 1:25 PM BY: oc375 PLOT SCALE: 1:25.4

STRUCTURAL NOTES:

I. GENERAL

A. GENERAL REFERENCE:
ALL WORK MUST CONFORM TO THE REQUIREMENTS OF THE UNIFORM BUILDING CODE, 1997 EDITION, AND OSHA, LATEST EDITION.

B. DESIGN LOADS:
1. WIND LOAD:
V = 34 m/sec
EXPOSURE "C"
2. SEISMIC DESIGN:
ZONE 2A

C. THE CONTRACT STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHOD OF CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING OF LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. OBSERVATION VISITS TO THE SITE BY THE STRUCTURAL ENGINEER SHALL NOT INCLUDE INSPECTION OF THE ABOVE ITEMS.

D. WHERE REFERENCE IS MADE TO VARIOUS TEST STANDARDS FOR MATERIALS, SUCH STANDARDS SHALL BE THE LATEST EDITION AND/OR ADDENDUM.

E. ESTABLISH AND VERIFY ALL OPENINGS AND INSERTS FOR STRUCTURAL, MECHANICAL, AND ELECTRICAL, DRAWINGS AND SUBCONTRACTORS PRIOR TO CONSTRUCTION.

F. TYPICAL DETAILS ARE NOT CUT ON DRAWINGS, BUT APPLY UNLESS NOTED OTHERWISE.

G. WHERE ANY DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

H. ALL CONSTRUCTION BRACING AND SHORING MUST BE DESIGNED BY THE CONTRACTOR.

II. SOILS

A. FILL MATERIAL:

1. ANY IMPORTED ENGINEERING FILLS SHALL HAVE THE FOLLOWING GRADATION BY WEIGHT:
100% PASSING 150 mm SIEVE
70–100% PASSING 75 mm SIEVE
50–100% PASSING #4 SIEVE
15% MAXIMUM PASSING #200 SIEVE
LIQUID LIMIT 30 MAX
PLASTICITY INDEX 15 MAX
MAXIMUM SOLUBLE SULFATES = 0.1%
MAXIMUM EXPANSION POTENTIAL OF 1.5%

2. SLAB BASE COURSE SHALL HAVE 100% PASSING 38 mm SIEVE, 45% TO 90% PASSING #4 SIEVE, NO MORE THAN 12% PASSING #200 SIEVE.
3. COMPACTION TO 95% OF ASTM D–1557 AS PER ABOVE.

B. FINISH GRADING SHALL BE ACCOMPLISHED IN SUCH A MANNER AS TO SLOPE GRADE (MINIMUM OF 5%) AWAY FROM FOUNDATIONS. GRADING SHALL ALSO ELIMINATE ANY POTENTIAL PONDING NEAR FOUNDATIONS.

III. CONCRETE

A. ALL CONCRETE SHALL BE READY MIXED CONFORMING WITH ASTM C–94 AND ATTAIN THE FOLLOWING MINIMUM STRENGTHS AT 28 DAYS:

1. FOOTINGS, GRADE BEAM AND SLAB ON GRADE 21 MPa

B. ALL CONSTRUCTION SHALL COMPLY WITH APPLICABLE PROVISIONS OF THE FOLLOWING LATEST ACI STANDARDS:
1. ACI 301–SPECIFICATIONS FOR STRUCTURAL CONCRETE BUILDING.
2. ACI 318–BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE.

C. CONCRETE FOOTINGS AND PADS MAY BE POURED AGAINST NEAT EXCAVATIONS.

D. MINIMUM CONCRETE COVER OVER REINFORCING BARS SHALL BE AS FOLLOWS:

1. CONCRETE POURED DIRECTLY AGAINST EARTH 75 mm
2. FORMED CONCRETE EXPOSED TO WEATHER OR EARTH 50 mm
3. AGAINST LEVELED BASE COURSE 50 mm

E. ALL REINFORCING BARS, ANCHOR BOLTS AND CONCRETE INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE.

F. PROVIDE SLEEVES FOR PLUMBING AND ELECTRICAL OPENINGS IN CONCRETE BEFORE PLACING CONCRETE. VERIFY OPENINGS WITH ELECTRICAL AND MECHANICAL DRAWINGS. DO NOT CUT ANY REINFORCING WHICH MAY CONFLICT.

G. NO CONSTRUCTION JOINTS (OTHER THAN THOSE SHOWN ON DRAWINGS) SHALL BE INSTALLED WITHOUT APPROVAL OF THE ENGINEER. PROVIDE 20 mm CHAMFER AT ALL EXPOSED CORNERS.

H. CONTRACTOR SHALL NOTIFY THE STRUCTURAL ENGINEER 24 HRS IN ADVANCE TO OBSERVE COMPLETED FOOTING EXCAVATION AND ALL REINFORCING BAR PLACEMENTS BEFORE ANY CONCRETE IS PLACED.

I. REINFORCING STEEL:

1. ALL REINFORCING STEEL SHALL BE DEFORMED BARS CONFORMING TO ASTM A–615M GRADE 40 (280 MPa) FOR 12 mm OR LESS, GRADE 60(420 MPa) FOR 16 mm OR GREATER.
2. ALL REINFORCING IN CONCRETE SHALL BE CONTINUOUS OR LAPPED IN ACCORDANCE WITH ACI 318, AND NOT LESS THAN 36 DIAMETERS.
3. ANCHOR BOLTS AND PLATE WASHERS SHALL CONFORM TO ASTM A36 OR A307.

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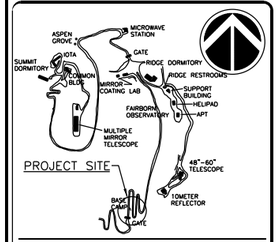

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SHEET NO. OF	S (DISCIPLINE) 0 (TYPE) 2 (SEQUENCE)

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Sheet 1 of 1

NAME: O:\2002\02260\Struc\0226052.dwg LAST REV: LAST UPDATE: JAN 09, 2003 TIME: 1:47 PM BY: ac375 PLOT SCALE: 1:25.4