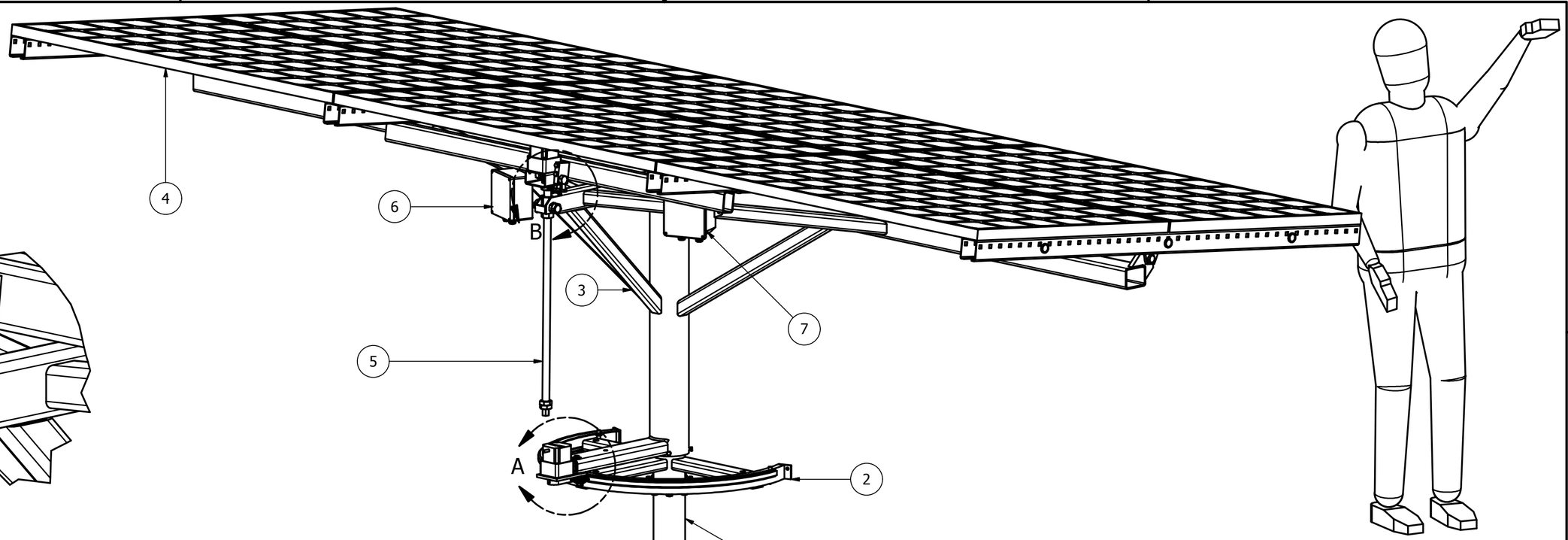
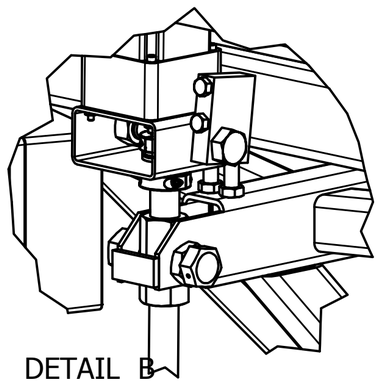
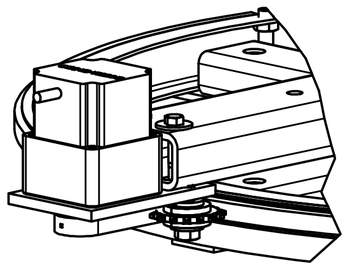




DETAIL B
SCALE 1 / 4



DETAIL A
SCALE 1 / 4

Electronics:

1. The sun seeking algorithm is driven by a microcontroller. The array follows the sun rain or shine. A GPS tells the microcontroller the latitude, longitude, and time. From this, the sun's azimuth and elevation is computed. The sequence of operation is as follows: parked during the night hours. Adjust to the sun's position at a prescribed time in the morning, follow it through the day, to a end of day time, then re-park the array. Repeat.
2. The operational modes, besides the "Run" mode, are "Stopped" and the "Jog" Mode. The latter is for cleaning.
3. The motors are 72 RPM synchronous motors, that run from 110 volts.
4. In the parked mode, proximity sensors, stop the elevation motion when the array is flat. For the azimuth motion, there are 3 proximity sensors. 2 are at the end of travel, and one is tripped when the array faces south.
5. 2 junction boxes are used. The high voltage box includes the pass through of the panel AC output. From this,12 volts is made for the microcontroller. This box also includes relay's to operating the motors. The microcontroller lives in a second low voltage junction box. Limit switches terminate in this box. Motor move signals go to the high voltage box.
6. An alternative drive method, is to have a sun intensity sensor move the array toward the hot spot in the sky. A controller for this available at www.theanalogguy.com.

PARTS LIST

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	Ground	Ground Column
2	1	PoleBaseV3	Pole Base
3	1	OuterColumnV1	Outer Column and Azinuth Drive
4	1	Racking3	Racking and Array
5	1	ElMotorMount2	Elevation Drive
6	1	ControlBox1	Contains microcontroller,LCD,Keypad,GPS
7	1	Power box	Contains 220 v,Relays,12v DC to Control Box

DRAWN	Bill Swann	3/4/2012
CHECKED		
QA		
MFG		
APPROVED		

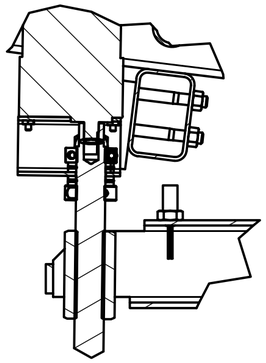
HS Technology
Houston,Texas,Ph 832-338-3080

TITLE
1500 Watt Array

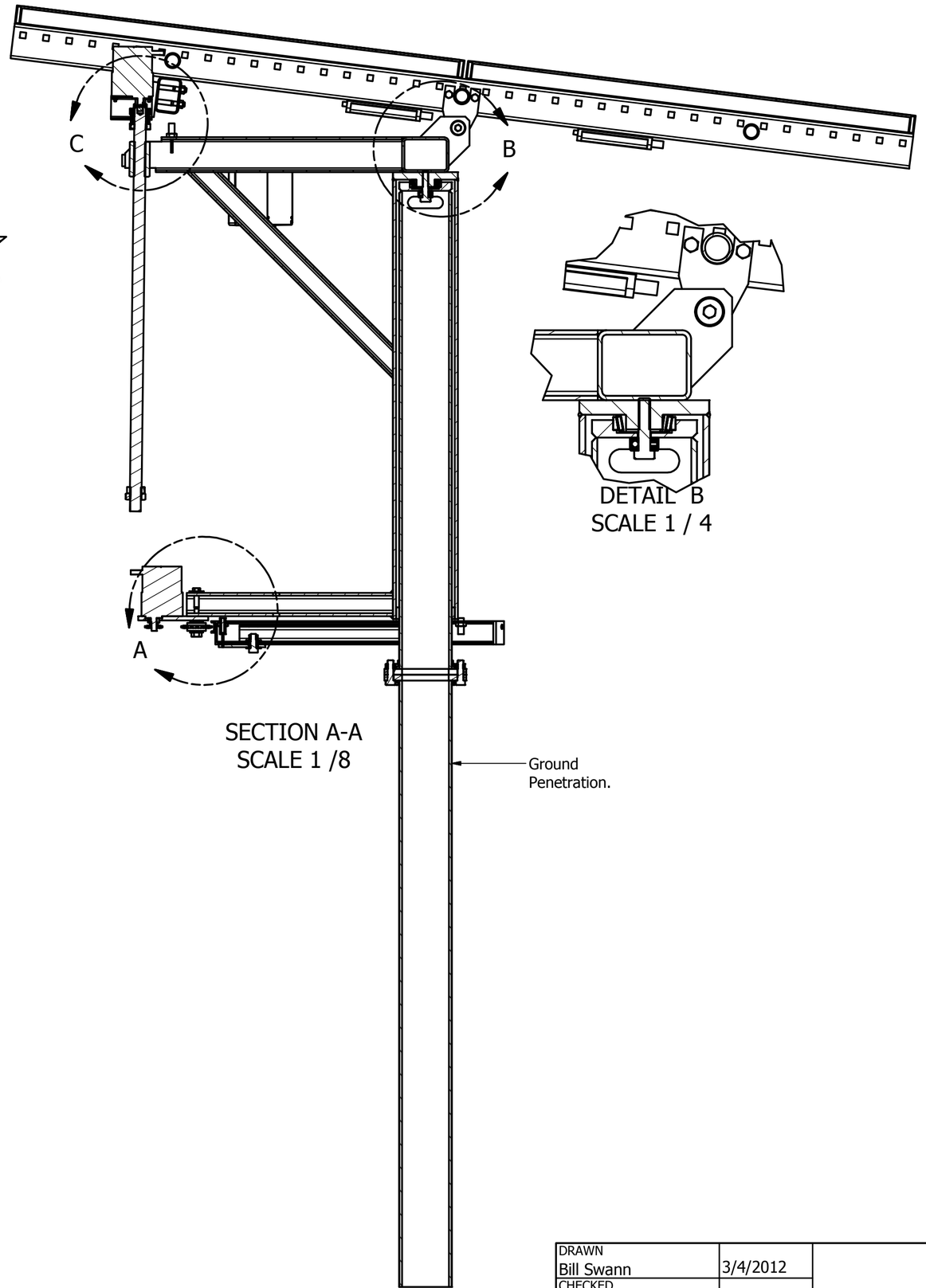
SIZE	DWG NO	REV
C	1500WattAssy	1

SCALE

SHEET 1 OF 43

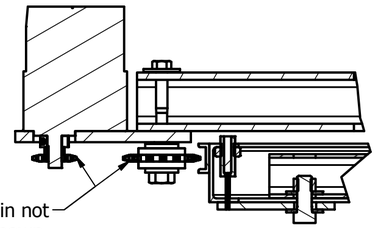


DETAIL C
SCALE 1 / 4



SECTION A-A
SCALE 1 /8

DETAIL B
SCALE 1 / 4



DETAIL A
SCALE 1 /4

Ground Penetration.

DRAWN Bill Swann	3/4/2012	HS Technology Houston,Texas,Ph 832-338-3080		
CHECKED		TITLE Section View		
QA				
MFG				
APPROVED		SIZE C	DWG NO 1500WattAssy	REV 1
		SCALE	SHEET 2 OF 43	