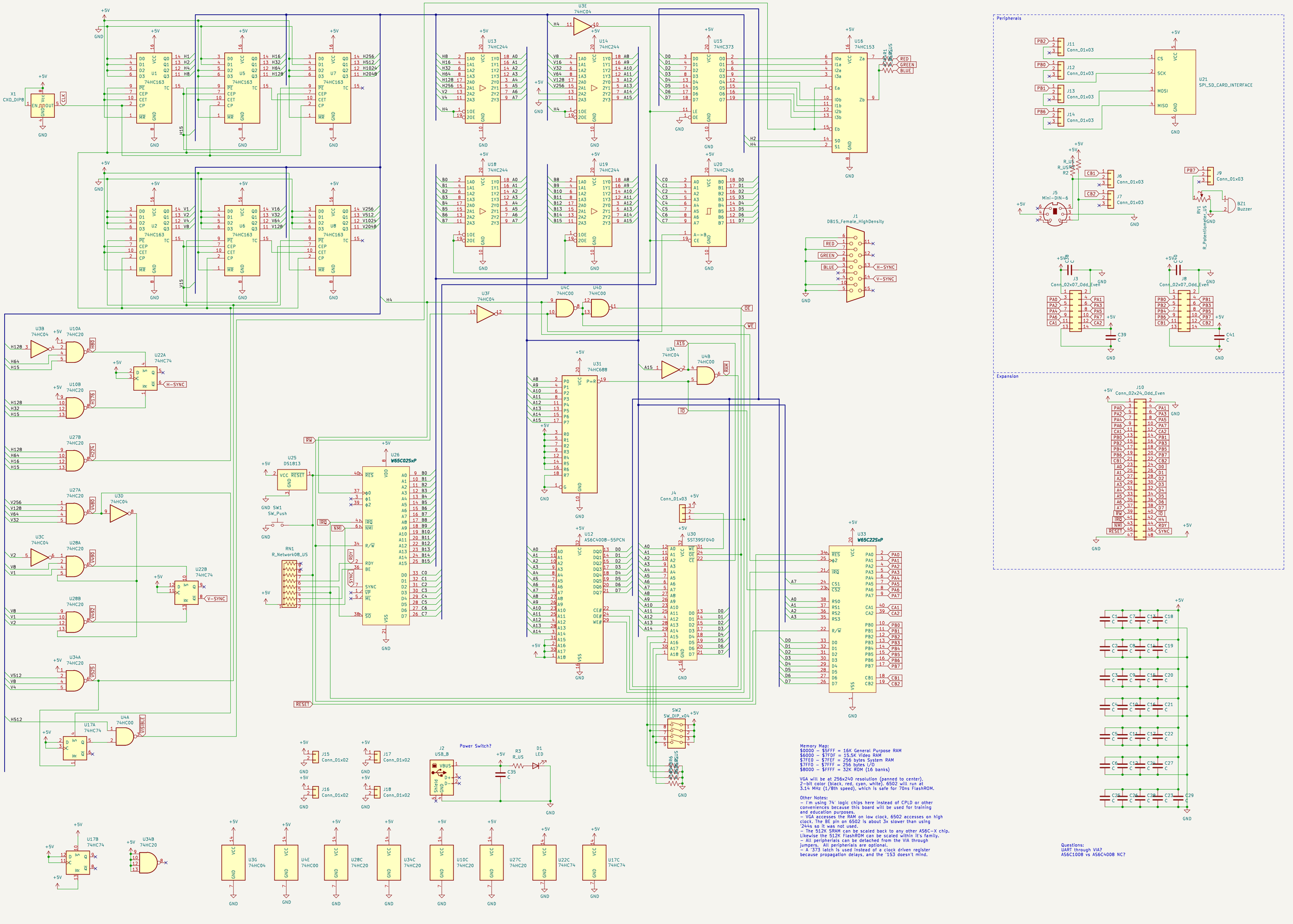
Peripherals
Expansion
Memory Map:
$0000 – $5FFF = 16K General Purpose RAM
$6000 – $7FDF = 15.5K Video RAM
$7FE0 – $7FEF = 256 bytes System RAM
$7FF0 – $7FFF = 256 bytes I/O
$8000 – $FFFF = 32K ROM (16 banks)
VGA will be at 256x240 resolution (panned to center).
2-bit color (black, red, cyan, white). 6502 will run at
3.14 MHz (1/8th speed), which is safe for 70ns FlashROM.
Other Notes:
– I'm using '74' logic chips here instead of CPLD or other
conveniences because this board will be used for training
and education purposes.
– VGA accesses the RAM on low clock, 6502 accesses on high
clock. The BE pin on 6502 is about 3x slower than using
'244s so it was not used.
– The 512K SRAM can be scaled back to any other AS6C–X chip.
Likewise the 512K FlashROM can be scaled within it's family.
– All peripherials can be detached from the VIA through
jumpers. All peripherials are optional.
– A '373 latch is used instead of a clock driven register
because propagation delays, and the '153 doesn't mind.
Questions:
UART through VIA?
AS6C1008 vs AS6C4008 NC?