

SkillsUSA

2010 Contest Projects

Residential Wiring

Click the “Print this Section” button above to automatically print the specifications for this contest. Make sure your printer is turned on before pressing the button.

Please see the attached "Contestant Information" Sheets.

Please make 100 copies of each page on 8 1/2" x 11" paper and collate and staple.

Please have copies available at 2:00 PM on Monday, June 21' 2010.

2010 SKILLS USA CHAMPIONSHIPS

RESIDENTIAL WIRING

CONTEST INFORMATION SHEET

MATERIALS – All is provided for contest. Wire is limited, it is important that you plan your installation per the specifications included, without waste; you'll have just enough to complete your project.

SPECIAL INSTRUCTIONS:

- ❖ ***DO NOT SCREW DEVICES TO BOXES.***
- ❖ ***DO NOT BACK STAB (BACK WIRE) DEVICES.***
- ❖ ***POINTS WILL BE DEDUCED IF BOXES AND/OR DEVICES ARE NOT LOCATED AS SPECIFIED.***
- ❖ ***DO NOT PLUG IN YOUR WORK STATION FOR ANY REASON.***
- ❖ ***USE ALL MATERIAL PER INDUSTRY STANDARDS, SUCH AS BOX SUPPORT DEVICES, GROUNDING FITTINGS, CONNECTORS etc..***

WHEN YOUR WORK IS COMPLETE:

- ✓ **RETURN ALL TOOLS PER YOUR TOOL LIST, ALONG WITH THE TOOL LIST, TO THE CHECKOUT TABLE LOCATED IN THE REAR OF THE CONTEST AREA. CONTESTANTS WILL BE RESPONSIBLE FOR RETURNING ALL THE TOOLS LISTED ON THE TOOL LIST.**
- ✓ **PLACE ALL UNUSED MATERIAL IN THE MATERIAL BOX AND PICK UP YOUR AREA.**
- ✓ **ONCE YOU HAVE CHECKED OUT OF THE CONTEST YOU CAN NOT RE-ENTER THE CONTEST AREA FOR ANY REASON.**

2010 SKILLS USA CHAMPIONSHIPS

RESIDENTIAL WIRING

CONTEST INFORMATION SHEET

Study the attached drawing and specifications. Note the different layout of the work stations (left and right sides). All boxes and devices have specified locations and heights, all wiring sizes and cable types are specified and must be installed as specified.

1. **CHECK MATERIALS**: Take inventory of all your stock, any missing items need to be collected before 10 am (Including TOOLS)
2. **CHECK YOUR TOOLS**: Account for all the tools listed on your tool list, if your missing any item notify the Chairperson immediately.
3. **MEASUREMENTS**- All measurements must be within 1/16" of the specified height.
4. **CODE REQUIREMENTS**- Must meet the 2008 National Electric Code.
5. **CLOTHING CHECK**- Must meet the SKILLS USA requirements.
6. **SPECIAL NOTES**:
 - a. There will be no talking allowed once the contest has started.
 - b. NO person(s) will be allowed in the CONTEST AREA at any time during the contest.
 - c. ALL questions regarding the contest shall be directed to the CONTEST CHAIRPERSON(S).
 - d. Any contestant who must leaves the work area for any reason shall notify the CONTEST CHAIRPERSON(S) prior to leaving the area.
 - e. There will be NO Cellular Telephone(s) allowed in the CONTEST AREA at any time during the contest.

SAFETY – EACH CONTESTANT IS REQUIRED TO WORK IN A SAFE AND ORDERLY MANNER. ALL CONTESTANTS ARE REQUIRED TO WEAR HARDHATS, SAFETY GLASSES AND PROPER WORK SHOES AT ALL TIMES. ANY CONTESTANT NOT WEARING THE REQUIRED SAFETY EQUIPMENT MAY BE DISQUALIFIED AND REMOVED FROM THE CONTEST AREA.

TIME – Actual contest will begin at 8:00 am on Wednesday and Thursday and break for lunch at 11:30 am on Wednesday and 12:00 noon on Thursday. The contestants will have 60 minutes for lunch both Wednesday and Thursday. Contestants are not permitted to work on their project, but may review their paper work during lunch. The contest will continue at 1:00 pm on both Wednesday and Thursday and end at 3:00 pm on Wednesday and 5:00 pm on Thursday. No actual work will be permitted prior to 8:00 am. The contest chairman will start the contest.

Finishing before the allotted time will not be a factor in the contest scoring, however an incomplete project will.

Please see the attached "Contestant Material" List.

Please make 100 copies of each page on 8 1/2" x 11" paper and collate and staple.

Please make available at 2:00 PM on Monday, June 21' 2010.

2010

Skills USA Championship

Residential Wiring Contestant Material List

QUANTITY PER CONTESTANT				DESCRIPTION		
14 ft.				#14/2 w/ground MC Cable		
25 ft.				#14 THHN SOLID RED		
35 ft.				#14 THHN SOLID WHITE		
25 ft.				#14 THHN SOLID BLACK		
25 ft.				#14 THHN SOLID GREEN		
12 ft.				#14-3 Romex w / ground		
50 ft.				#14-2 Romex w / ground		
20 ft.				#12 THHN Solid Black		
10 ft.				#12 THHN Solid White		
15 ft.				#12 THHN Solid Green		
4				15 Amp, Single Pole Switch		
4				15 Amp 3 - way toggle switch		
1				120 volt 15amp GFCI Receptacle		
2				15amp 120volt Duplex Receptacle		
30				Red Wire Nuts		
15				Yellow Wire Nuts		
15				Green Grounding Wire Nuts		
4				3/8" MC Cable Connectors		
6				Low Voltage Staples		
14				Insulated Romex Staples		
3				3/8" 1-Hole MC Cable Straps		
11				Green Ground Screwa		
44				#10 x 1/2" Pan Head Wood Screw		

2010

SkillsUSA NLSC

Residential Wiring Contestant Material list

QUANTITY PER CONTESTANT				DESCRIPTION		
3				15 Amp Sq. D Breaker type HOM		
1				20 Amp Sq. D Breaker type HOM		
1				120/240 Volt, 125 Amp MLO 16 Ckt. Main Panel		
1				4" Round Non-Metallic Box with Bar Support		
4				1 Gang Switch Box Non-Metallic Nail-On Box		
1				4" Oct 1-1/2" Deep Metal Box w/ Romex Clamps		
1				Metal 1 Gang O.W. Box w/ Ears & RX Clamps		
3				4" Sq x 1 1/2" Deep Box w/ 1/2" & 3/4" K.O.'s		
3				4" Sq x 1 1/2" Deep Box w/Mounting Bracket		
1				1-Gang Retrofit Low Voltage Bracket		
1				1-Gang New Construction Low Voltage Bracket		
1				2 Gang Non-Metallic Nail-Up Box		
12				1/2" EMT Set Screw Connector		
3				1/2" Romex Connector		
2				4" Round Non-Metallic Nail-On Box		
4				1 Gang Device Ring		
2				Madison Strap		
1				2 Gang Device Ring		
10				1/2" EMT One Hole Straps		
30 ft.				1/2" EMT		
4				Keyless Lampholders		
2				Telephone Jack		
10 ft.				Cat- 5e Telephone Cable		
4				8" Ty-Wraps		

Please see the attached "Tool Check List".

Please make 100 copies on 8 1/2" x 11" paper.

Please make available at 2:00 PM on Monday, June 21' 2010.

SKILLS USA 2010 TOOL LIST

Contestant # _____

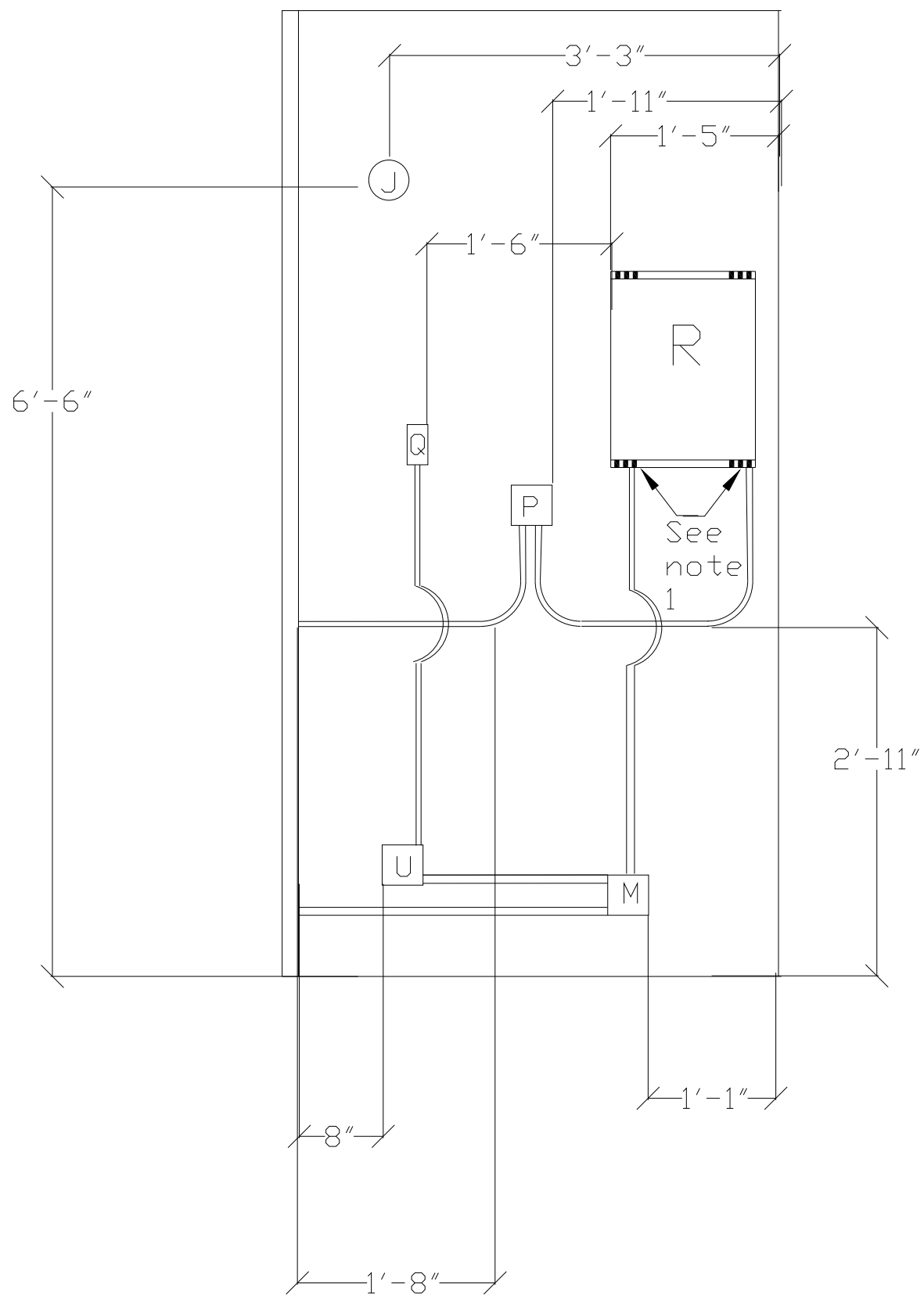
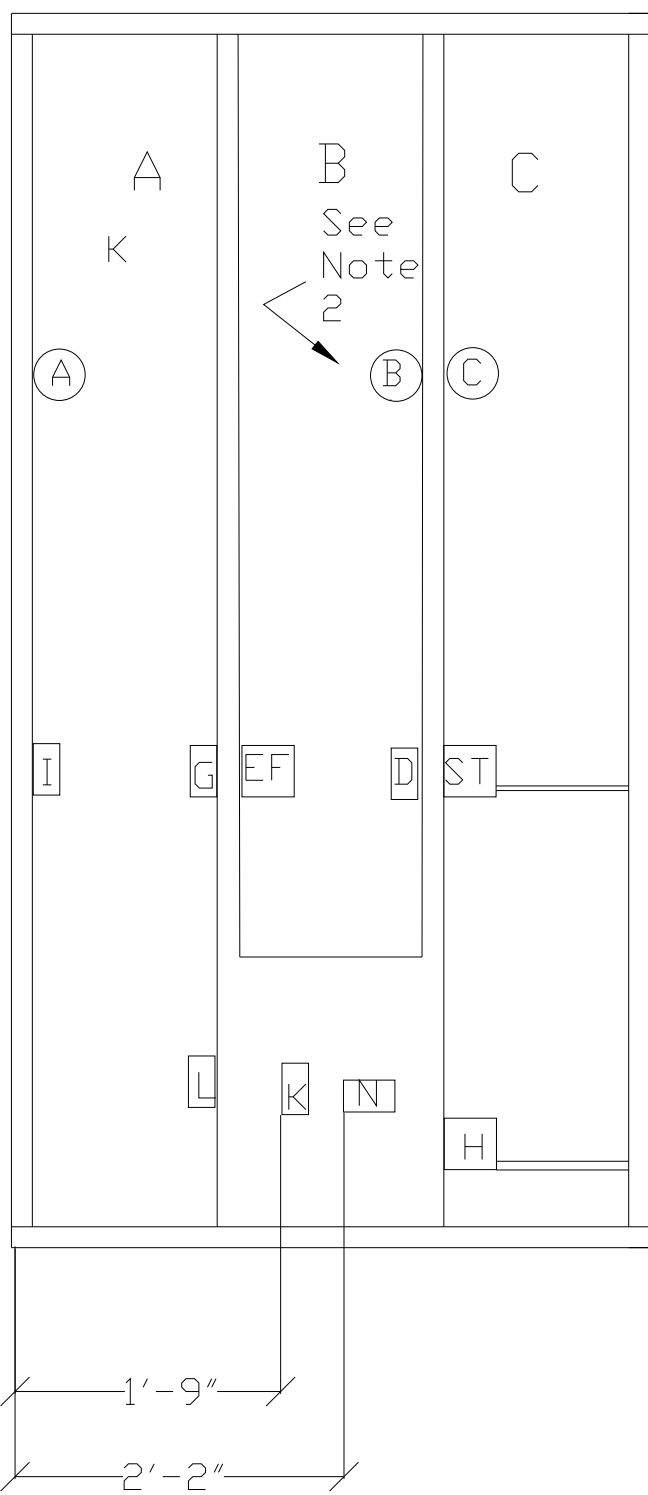
QUANTITY	TOOL DESCRIPTION	RECEIVED	RETURNED	Check By
1	8" Diagonal cutters (angle head)			
1	9" Linesman Pliers			
1	16 oz. Claw Hammer			
1	8" Needle Nose Pliers			
1	10" Pump Pliers			
1	Torpedo Level			
1	603-3 Phillips screwdriver #1			
1	603-4B Phillips Screwdriver #2			
1	605-4 1/4" Screwdriver 4"			
1	605-6 1/4" Screwdriver 6"			
1	725 Keyhole Saw			
1	25' tape Measure			
1	11045 Wire Stripper/Cutter			
1	1550-11 Electricians knife			
1	85191 Reaming Screwdriver			
1	650 Scratch Awl			
1	1412 Dual Cable Stripper/Cutter			
1	32476 Screw/Nut Driver			
1	70570 Hex Key Set			
1	Tool Pouch			
1	Tool Belt			
1	Cordless Drill			
1	Auger drill Bit			
1	1/2" EMT Bender			
1	Hack Saw			
1	Hammer Holder			
1	1/8" Cabinet Rd. shank screw driver # 608-3			

Please see the attached "Left Side Packet" and "Right Side Packet" of the drawings.

Please make me 50 copies on 11" x 17" paper of each packet, I need them collated and stapled and available for pick-up at 2:00 PM on Monday, June 21' 2010.

2010 SkillsUSA NLSC National Competition Residential Wiring Drawing is NOT to Scale

Right Side



2010 SkillsUSA NLSC
National Competition
Residential Wiring
Drawing is NOT to Scale

NOTES

1. Last 1/2" K.O., 1/2 EMT w/#12
2. Center Of box in the Center between studs
3. Telephones to be Interconnected with Blue Pair as primary.
4. Device "N" to be Left Half Switched from "T" and Right Half hot all the time.
5. GFCI "L" to Control Device "G", "F", and "C"
6. Wire between "D" and "N" should be 14/2 with ground MC
7. No shared Neutral Wires.
8. All Metal Boxes shall be Grounded
9. Circuit 1 shall be 20amp 120volt, all other circuits shall be 15amp 120volt.
10. Box offsets at all EMT Terminations.
11. All Saddles Shall be 3-Point Saddles.
12. "U" shall be Switch from "Q"
13. EMT Fittings not of Grounding Type

Materials

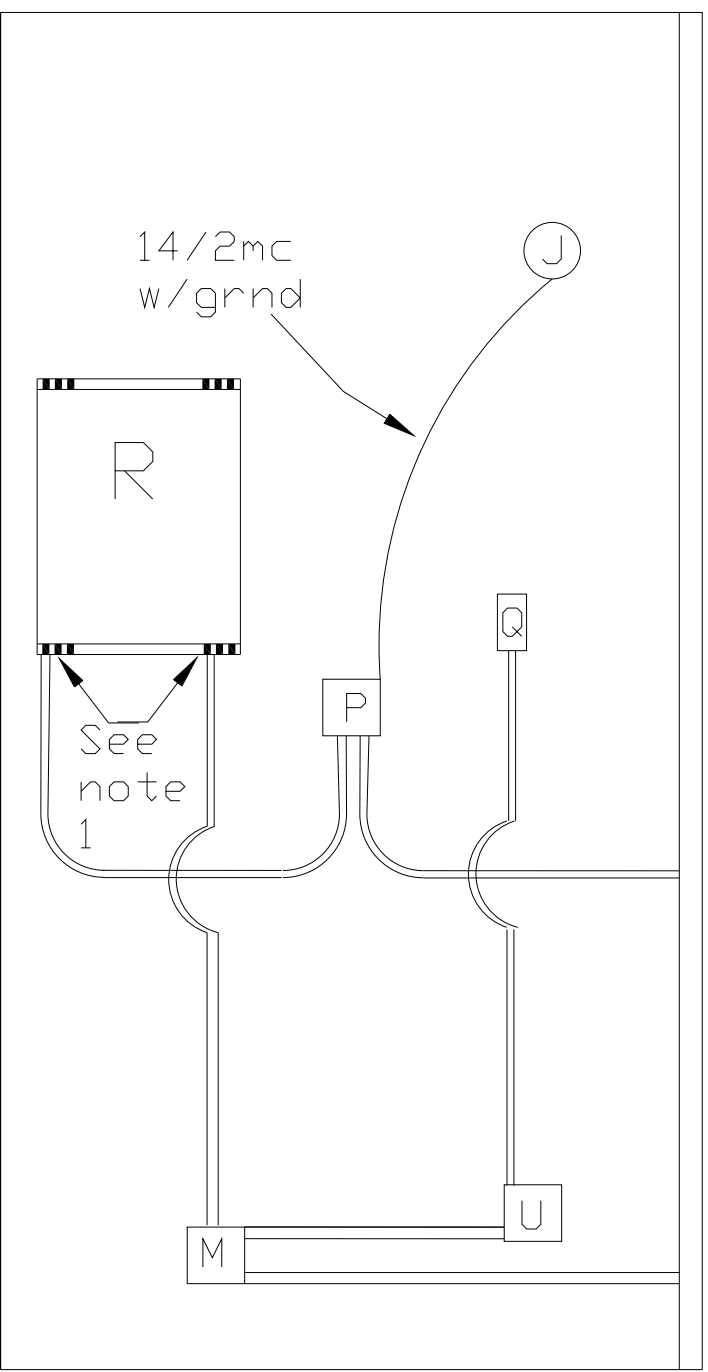
LETTER	DESCRIPTION	BOX TYPE	HEIGHT	LOCATION	BOX MTG.	CIRCUIT
A	Keyless Receptacle	4" Round Plastic/Nail On	5'-7" Center	Wall A	Nail On	4
B	Keyless Receptacle	4" Round Plastic/Nail On	6' Top	Wall C	Nail On	2
C	Keyless Receptacle	4" Round Plastic/Bar Hgrs	6' Top	Wall B	Nail On	3
D	Single Pole Switch	4" Sq.Box with 1-Gang Device Ring.	44" Top	Wall B	2 - #10 X 1/2" with Mounting Bracket	2
E	Single Pole Switch	Plastic 2-Gang New Work	46" Top	Wall B	Nail On	4
F	Three Way Switch	Plastic 2-Gang New Work	46" Top	Wall B	Nail On	3
G	Three Way Switch	Plastic 1-gang New Work	49" Top	Wall A	Nail On	3
H	Junction Box	4" Square Metal Box	6" Top	Wall C	2 - #10 X 1/2"	N/A
I	Flush Mount Telephone Jack	1-Gang New Work Low Voltage Bracket	42" Bottom	Wall A	Nail On	N/A
J	Keyless Receptacle	4" Metal Octagon	5'-6" Top	Plywood	2 - #10 X 1/2"	2
K	Flush Mount Telephone Jack	1-Gang Retrofit Low Voltage Bracket	16" Bottom	Wall B	Cut-In	N/A
L	GFCI Receptacle	Plastic 1-gang New Work.	16" Bottom	Wall A	Nail On	3
M	Junction Box	4" Square Metal Box	6" Top	Plywood	2 - #10 X 1/2"	N/A
N	Duplex Receptacle	Metal 1-Gang Old Work Box	12" Bottom	Wall B	Cut-In With Madison Straps	2
P	Three Way Switch	4" Sq.Box with 1-Gang Device Ring.	3'9" Bottom	Plywood	2 - #10 X 1/2"	2
Q	Single Pole Switch	4" Sq.Box with 1-Gang Device Ring.	4'-7" Top	Plywood	2 - #10 X 1/2"	1
R	Main Panel	Main Panel	4'-3" Bottom	Plywood	2 - #10 X 1/2"	N/A
S	Three Way Switch	4" Sq.Box with 2-Gang Device Ring.	2'-9" Bottom	Wall C	2 - #10 X 1/2" with Mounting Bracket	2
T	Single Pole Switch	4" Sq.Box with 2-Gang Device Ring.	2'-9" Bottom	Wall C	2 - #10 X 1/2" with Mounting Bracket	2
U	Duplex Receptacle	4" Sq.Box with 1-Gang Device Ring.	9" Bottom	Plywood	2 - #10 X 1/2"	1

Cable List
 RX- Nonmetallic sheathed cable
 UF- Underground Feeder and branch circuit cable
 MC- Metal Clad Cable

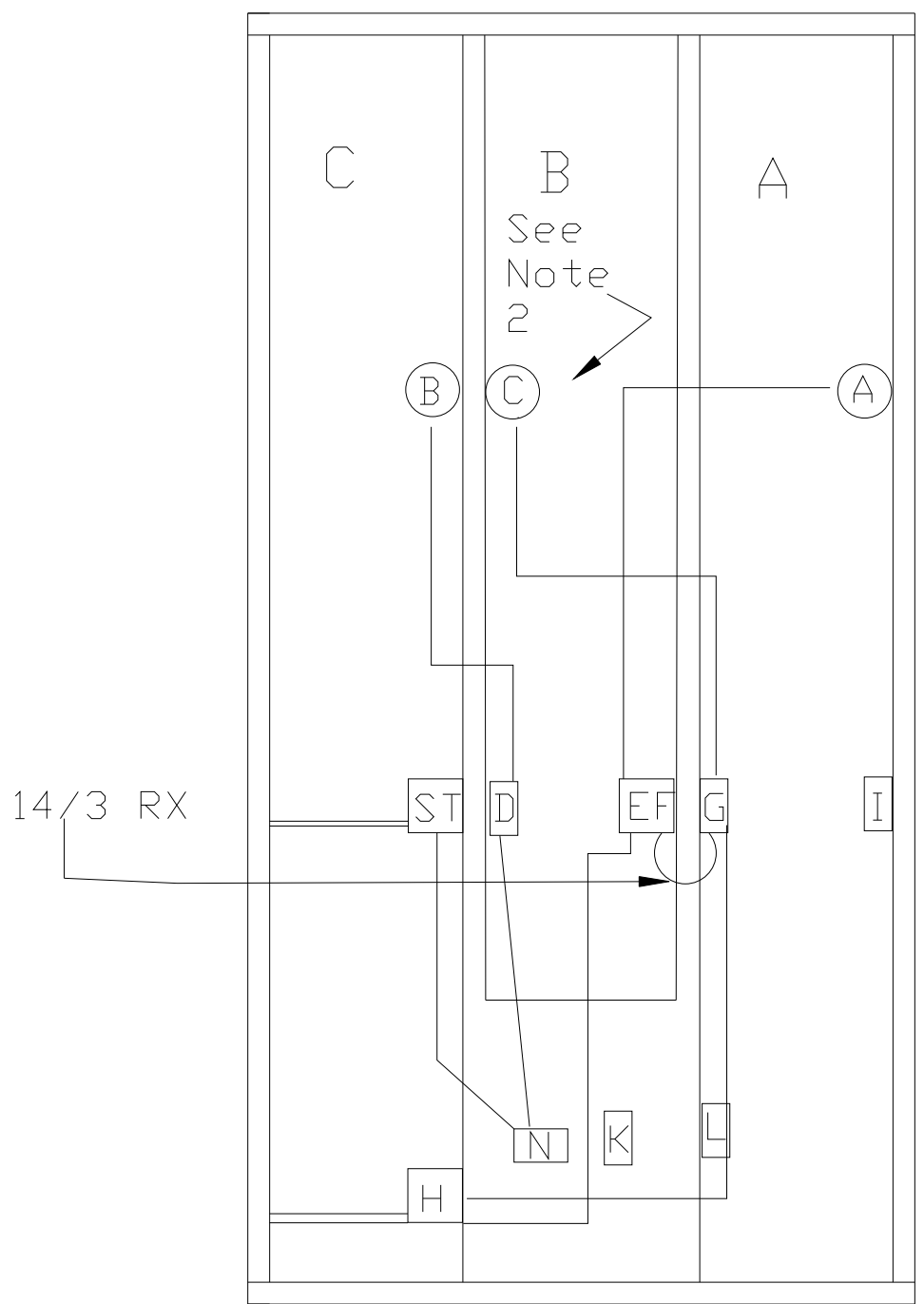
2010 SkillsUSA NLSC
National Competition
Residential Wiring
Drawing is NOT to Scale

Left Side

Plywood



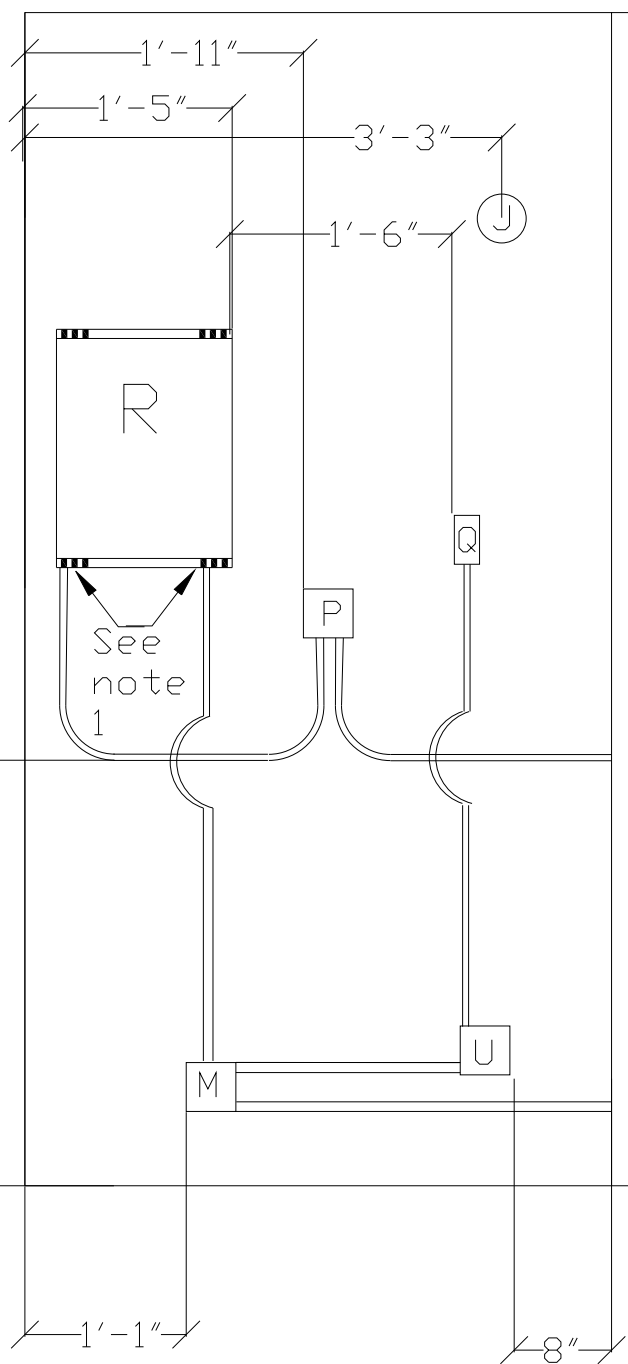
Studs



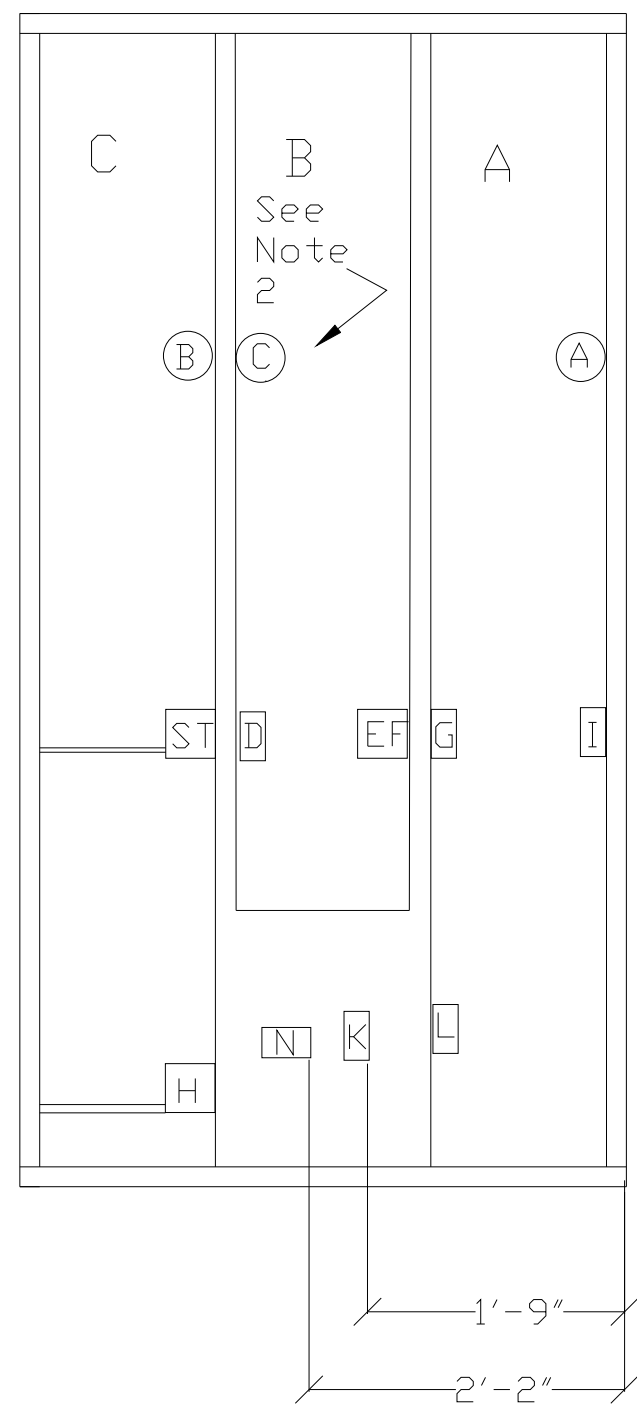
2010 SkillsUSA NLSC
 National Competition
 Residential Wiring
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Left Side

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Studs



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