

HOW TO LAY OUT A 111.12 Meter Track for Speedskating



Ken Hart, IndySpeed

The regulation size for a shorttrack speedskating track is 111.12 meters. This distance is used for state, national, international, and Special Olympics competition.

This size allows for races of the following distances & numbers of laps.

| Length of Race | Number of Laps |
|----------------|------------------|
| 55 meters | $\frac{1}{2}$ |
| 111 meters | $1 \frac{1}{2}$ |
| 166 meters | 1 |
| 222 meters | 2 |
| 333 meters | 3 |
| 500 meters | $4 \frac{1}{2}$ |
| 777 meters | 7 |
| 1000 meters | 9 |
| 1500 meters | $13 \frac{1}{2}$ |

Local athletes should always use this size track. This ensures that they will be familiar with the shape of the track at other competitions and ensures that their preliminary or local seed times are comparable to other skaters outside of their local rink.

Ice rinks come in several standard sizes, with the most common being: 85' x 185', 85' x 200' (NHL standard), 100' x 200', also called 30m x 60m (international standard). This size track (111.12m) is always used, and is independent of the size of the ice rink.

Get Permission From Rink Management

Speedskating is a popular sport, especially in northern climates. With approximately 50 speedskating clubs in the USA, there are around 100 ice rinks marked for speedskating. If you are painting a rink for the first time, odds are that the rink staff, and rink management have never seen a speedskating track painted at their venue.

Ice rink managers are very protective of their ice. After all, that is how they make their money. The fear of the unknown can be great, and you may find some rinks are resistant to something they feel might damage their ice. Talk to the staff. Explain to them what you are doing, and state that your marking does not damage the rink, does not require them to take down the ice, will not interfere with any other markings / artwork already on the ice, and gives them a new source of revenue. If they have concerns, show them this article, or have them talk to a rink near you that is already marked for speedskating.

EQUIPMENT NEEDED

To mark the rink, you need to be able to 1) layout the track, and 2) mark the track, once it has been measured.

1) Equipment to lay out the track

To lay out a track, the following items are needed:

100 foot tape measure

(pre-marking the tape at 26'3" , 47'4" , 52'6" , and 73'7" really speeds the process)

Magic markers

2) Equipment to mark the track

A) Before the ice is laid

OR

B) After the ice is in place

Rink paint

1" Paint brushes

Spray bottle full of water

Rags, paint scraper, and water for cleanup

Dark, unsweetened powdered drink mix

Water and Water bottle for drink mix

Battery powered drill (or hand drill)

1 ½" drill bit for wood.

A) Before the ice is laid

The ideal way to mark the track is to paint the floor of the rink, before the ice rink is flooded with water, and at the same time that the hockey marks are placed on the floor. To do this, ice rink paint is used, and your rink should be able to provide this to you. Bring 1" disposable paint brushes. To clean up, bring a paint scraper, some water, and rags, as rink paint is water soluble. Since rink paint is water soluble, you need to be careful after the marks are placed, and before the rink is flooded. Use a spray bottle filled with water to mist several thin coats of water over your markings to "seal" them.

B) After the ice is in place

For most of us, we need to mark the track after the ice is already in place. To mark the rink this way, we drill a hole into the ice then fill the hole with colored water. Unsweetened kool-aid is great for this, or a generic version of "country-time" drinks.

Ken Hart

<http://www.IndySpeed.org>

Pick a dark color, such as grape, or black cherry. I use artificially sweetened Blackberry Tea flavored Country-time. Use a drill bit that is 1 ½” in diameter and designed for wood, and fit it into a battery powered drill. Rink ice is normally 2” – 4” thick.

The tape measure and markers are used to layout the track. Don't worry about using magic markers on the ice. The first time the zamboni resurfaces the ice, it will scrape off any marks left on the ice. If you use a battery powered drill, remember to bring extra batteries, as the cold air in the rink will shorten battery life.

Drill a hole into the ice then brush away all the ice shavings so that they are not near the hole. Pour the colored water into the hole. As the colored water slowly freezes in the holes, it will shrink slightly. After you have drilled and filled all the holes, go back a second time to “top off” the holes. Don't worry if the colored water overflows onto the ice. The first time the zamboni resurfaces the ice, it will scrape off any overflow. These markings will last 1-3 months, depending on how the ice is treated and maintained.

Touching Up The Track

Over time, the ice thickness may change. For most rinks, the ice slowly builds up in thickness. As the ice becomes thicker, the marks will become harder to see. The marks are still there, but are underneath the new ice. As the ice becomes thicker, consider drilling holes into your existing, but fading marks, and filling with colored water.

If you re-drill and mark the track before the marks fade away, (While you can still see the markings), you will not need to bring out the tape measure to set a new track.

If you wait too long, the ice will become so thick that you will be unable to see the markings underneath. This will require using the tape measure to identify where the markings go.

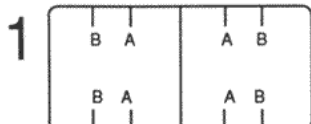
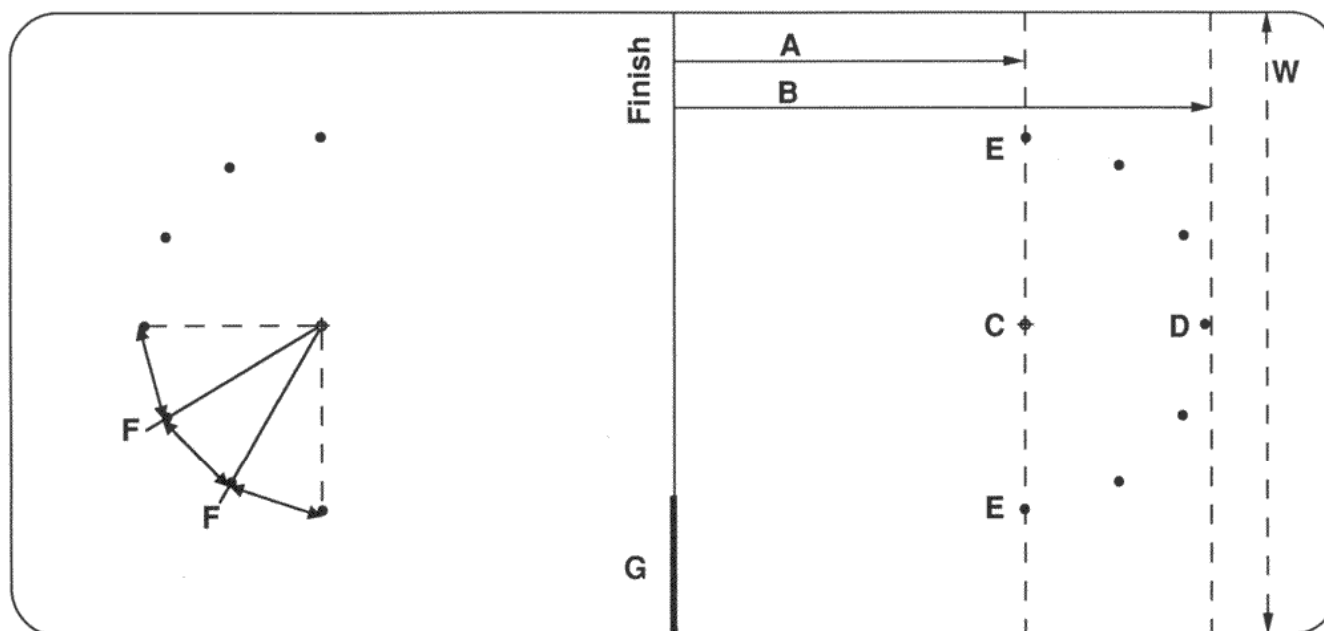
HOW MANY TRACKS WILL I MARK ON THE ICE?

Since skaters skate the same track, lap after lap, the ice will degrade quickly. To run the zamboni to repair the ice takes both time and money. Because of this, it is common practice to have more than 1 set of track markings on the ice. Each track is painted a different color so that they can be distinguished quickly. At the national / international level, there are 5 tracks marked onto the ice, with each track shifted 1 meter away from the track next to it. National and Internal tracks are painted using the 5 colors in the Olympic flag: blue, red, black, yellow, green. Depending on volume, you may want to paint 1, 3, or 5 tracks on the ice. Having fresh tracks to skate on will improve the enjoyment of your skaters. The marking process in this document takes about 45 minutes per track. With experience, the time may be reduced by up to 50%.

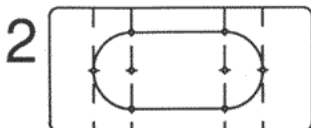
HOW MANY VOLUNTEERS WILL BE NEEDED?

You should have 3-4 volunteers. Most of the steps below require 2 people, basically one person at each end of the tape measure. However, steps 6 and step 7, below, require 3 people. Normally, I have 2 people marking the track, and 1 person painting the track, and then have the painter assist with marking during steps 6 and 7.

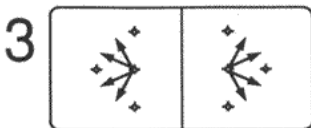
HOW TO LAY OUT THE 111.12M OVAL TRACK



Indicate along the boards lateral reference points "A" and "B". The diagram shows only the first track (red). Consult the table for the blue and green tracks (i.e. A-, A+, etc.). The different tracks should be .75m apart.



By running your measuring tape from the reference points across the rink, measure dimensions C, D and E and mark your ice surface at points indicated.



From point C, trace points F on an arc so as to mark your other eight reference points on the ice. These points must be equal distance from one another. Finally, trace starting lines (G) on the opposite side of the finish line.

Metric measurements

- A- = 13.675m from centre line
- A = 14.425m from centre line
- A+ = 15.175m from centre line
- B- = 21.675m from centre line
- B = 22.425m from centre line
- B+ = 23.175m from centre line
- C = $\frac{\text{width of rink}}{2}$ on A axis
- D = $\frac{\text{width of rink}}{2}$ on B axis
- E = 8.00m from C on A axis
- F = 8.00m from C and separated by 4.14m
- G- = 1.50m behind centre line
- G = on centre line
- G+ = 1.50m in front of centre line

$$A = 47'4''$$

$$A- = 47'4'' - 36'' = 44'4''$$

$$A+ = 47'4'' + 36'' = 50'4''$$

$$B = 73'7''$$

$$B- = 70'7''$$

$$B+ = 76'7''$$

$$E = 26'3''$$

$$F = 13'7''$$

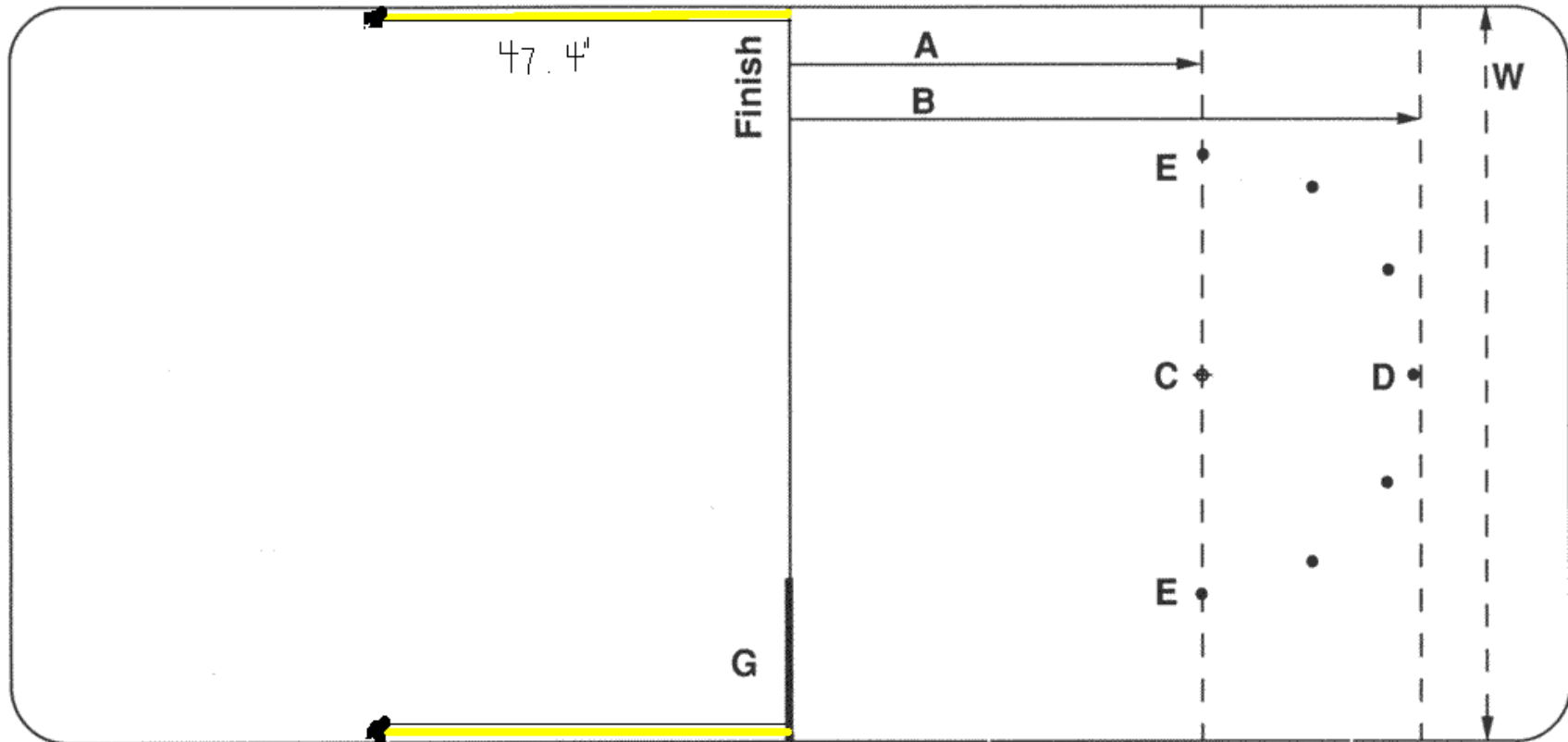
ANNEX "C-2"

G- = +6'

G+ = -6'

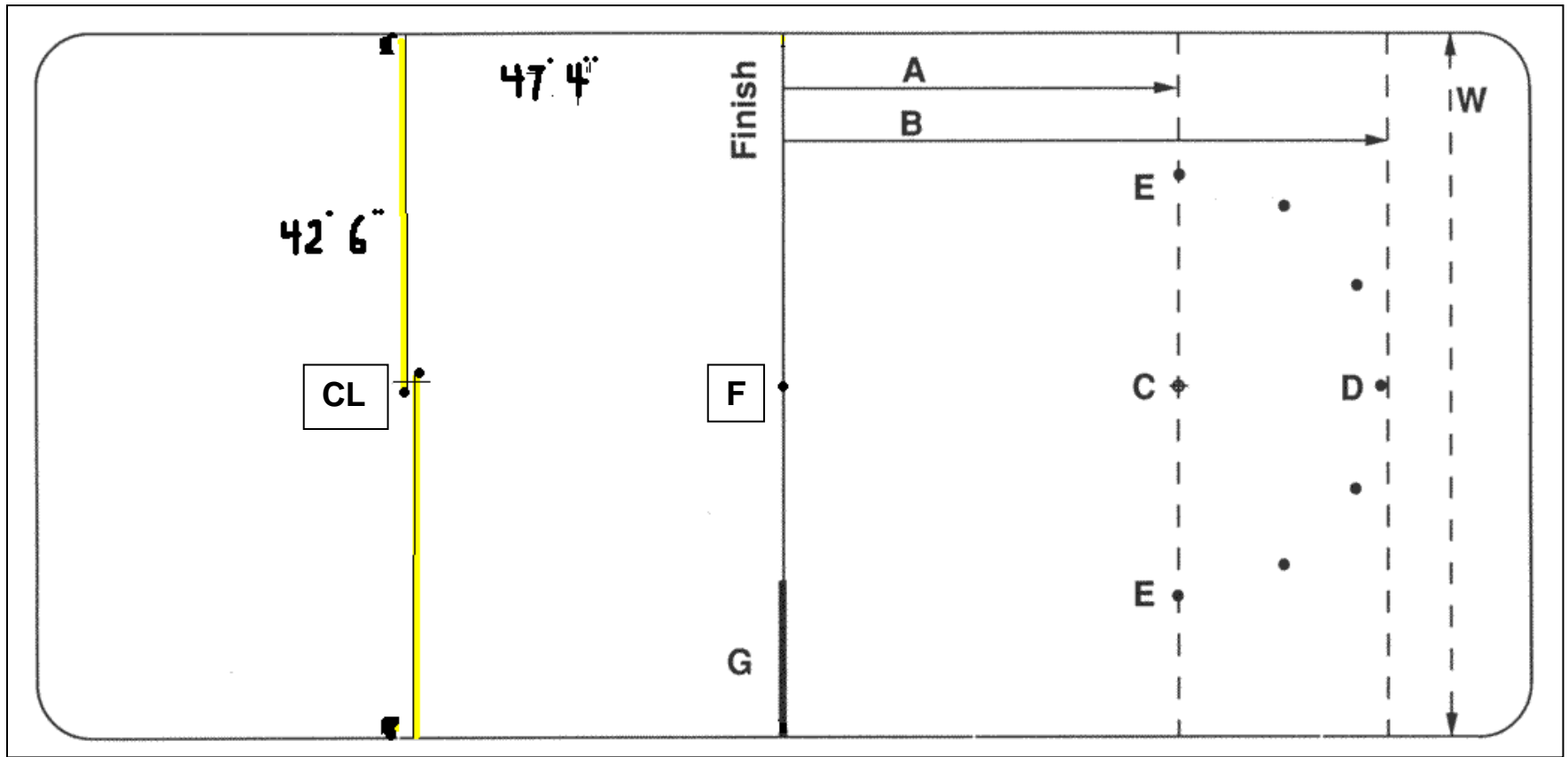
These drawings show how to lay out three tracks at the same time (Blue, Red, Green)
If you only need one track, use the dimensions for the "RED", center track.

STEP1



Starting at the middle of the center line of rink, use tape to mark the wall at 47' 4"

STEP 2

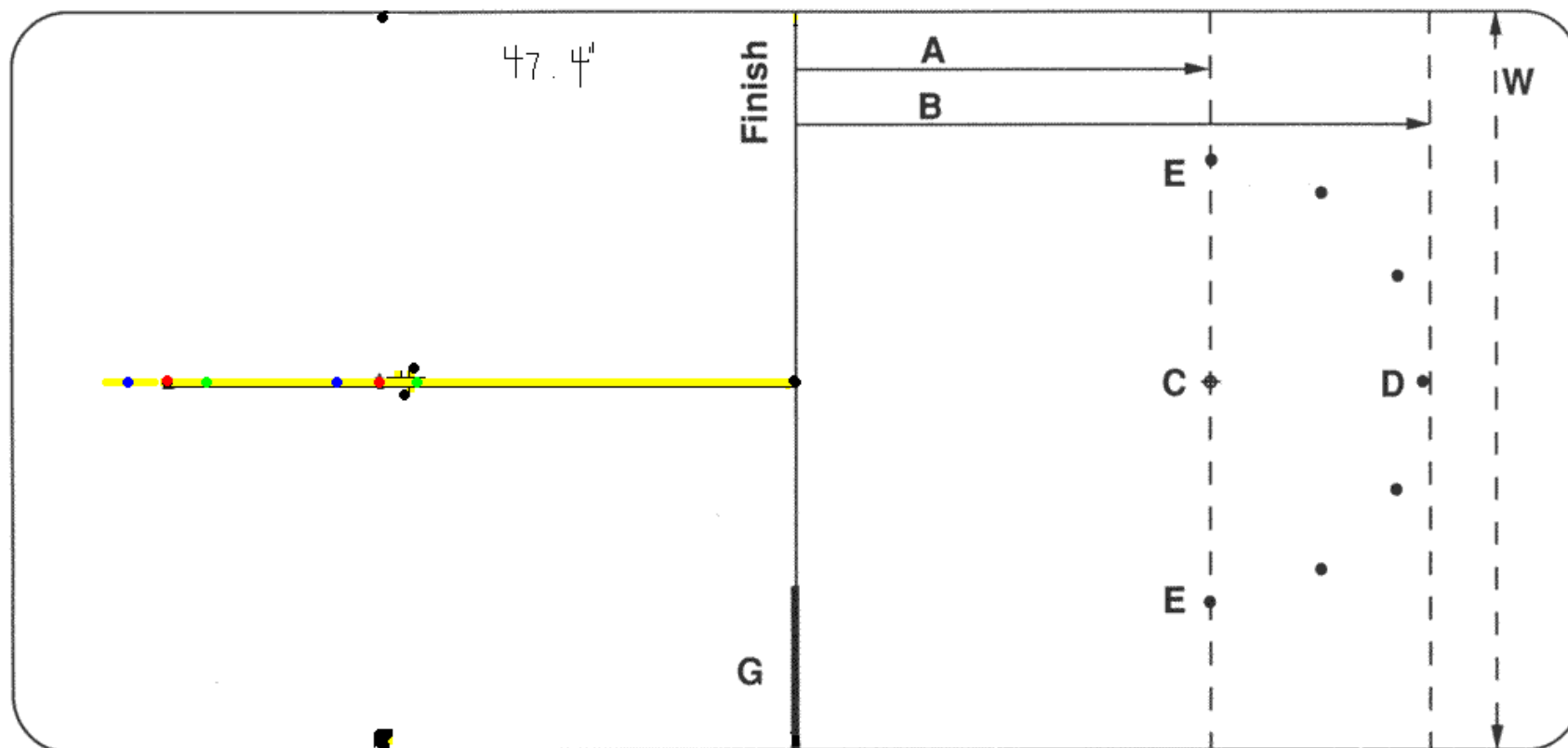


Find Centerline of rink by coming towards center of rink 42' 6".
Do this twice. Once from each side of the rink.

(Most ice rinks are 85 feet wide. Another common rink width is 100 feet.
If your rink is 100 feet wide, use 50' instead of 42'6")

Split the difference to find the center of the rink, and use a marker to mark on the ice.
Do the above twice, once to create the mark at center ice "F", and again at mark "CL"

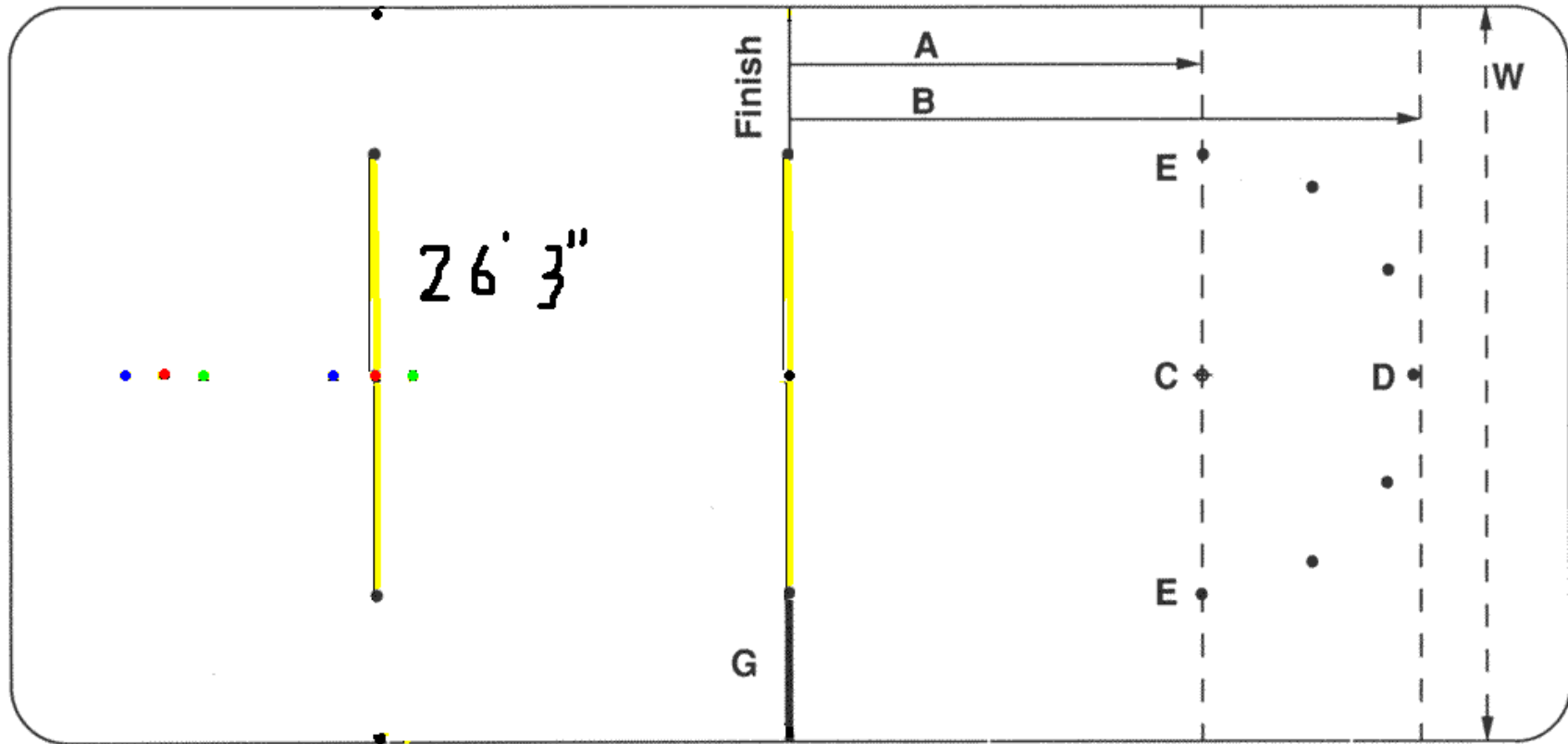
STEP 3



Stretch the tape from the center of the rink, towards the goalie box, passing over (through) the center – ice mark from above. Mark the Center of radius at 47'4", and the APEX block at 73'7".

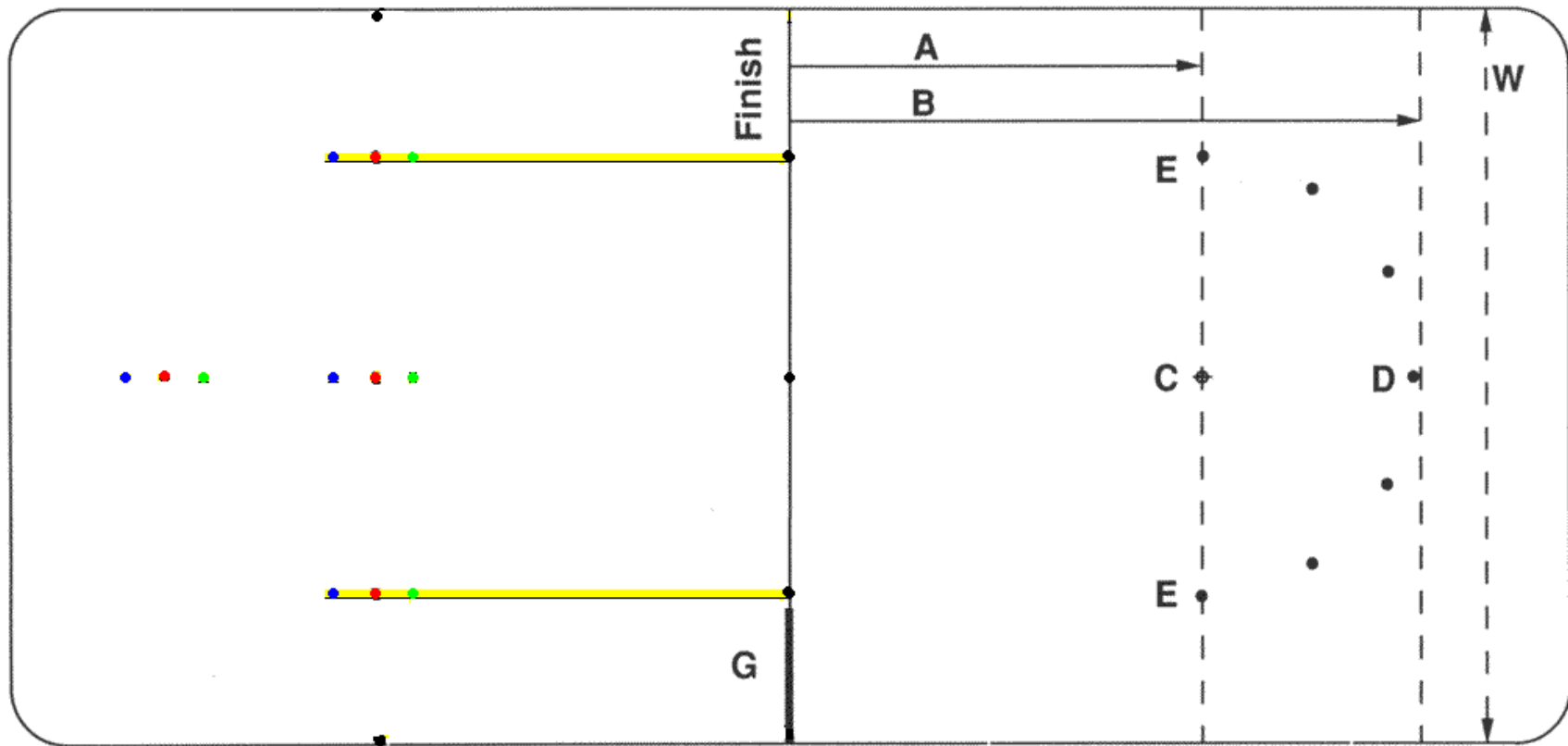
If you are marking more than 1 track, Add / subtract 36" (or 1 meter) from each of the 2 marks above for the 2nd and 3rd track.

STEP 4



From centerline of track, come out 26' 3", and place a mark on the ice.

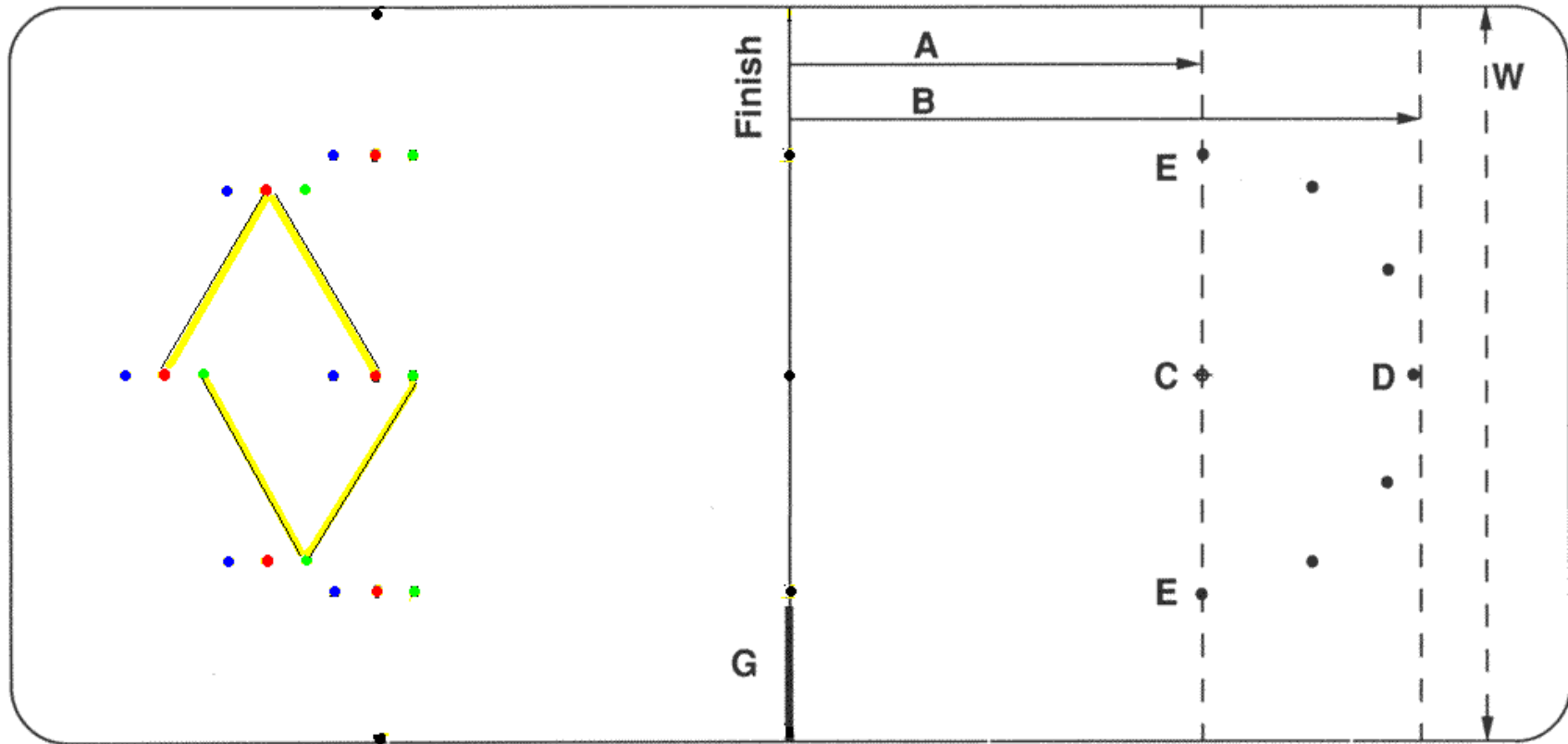
STEP 5



Mark entrance and exit blocks at 47'3"

If you are marking more than 1 track, Add / subtract 36" (1 meter) from each of the 2 marks above for the 2nd and 3rd track.

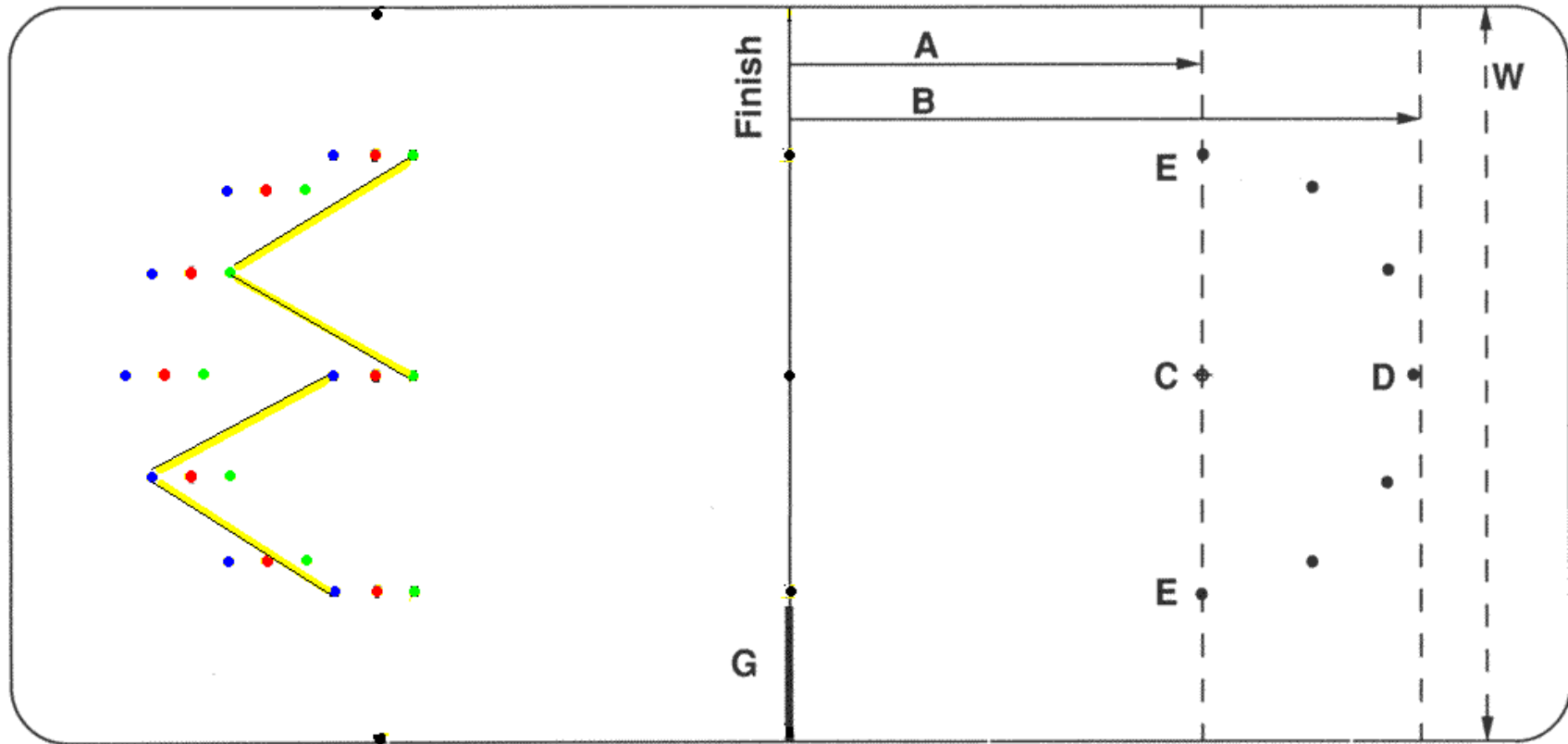
STEP 6



Use tape, doubled up, at 26'3" and 52'6" to create part of the curve of the track

Repeat for each track.

STEP 7

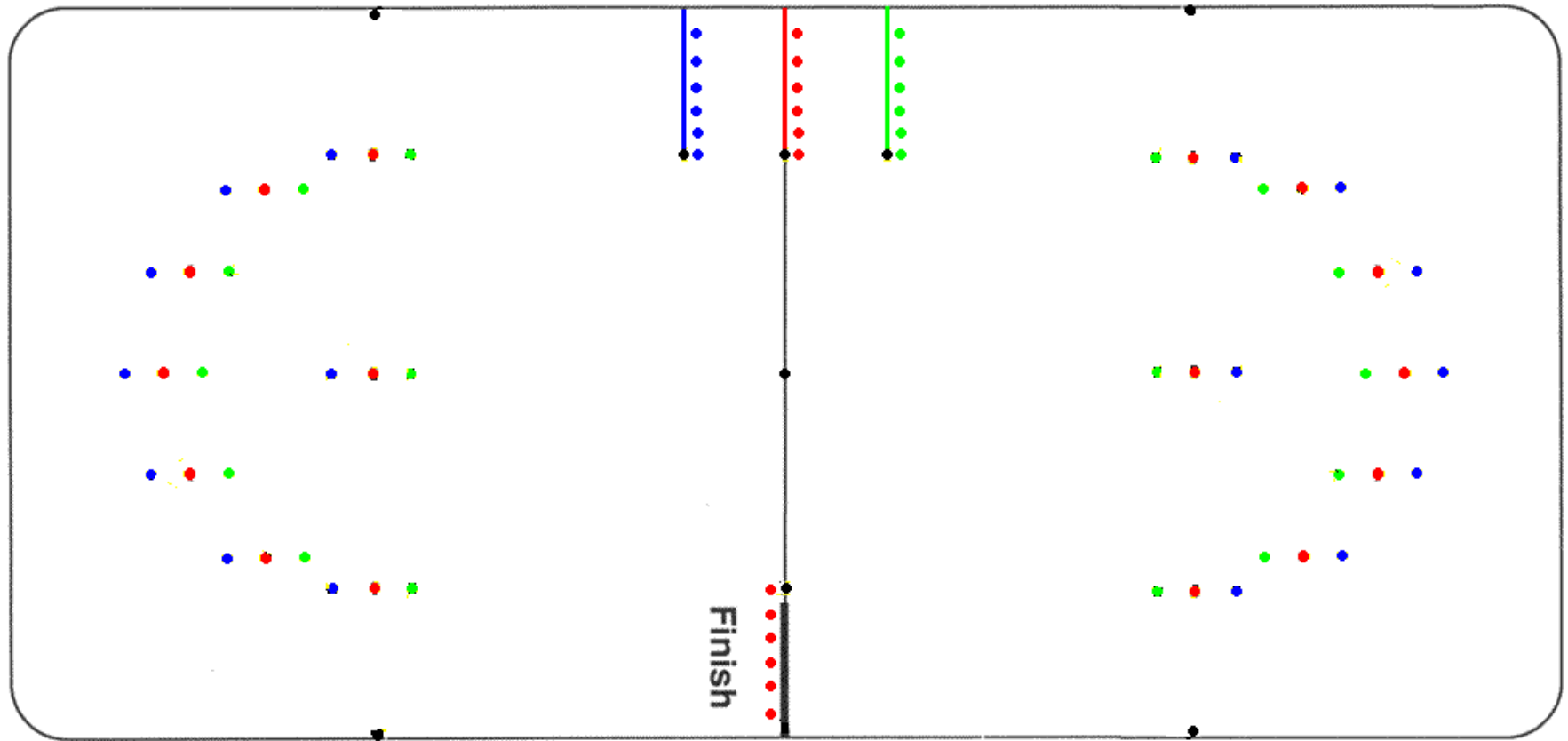


Use tape, doubled up, at 26'3" and 52'6" to finish the curve of the track

Repeat steps 1 through 7 to mark the other end of track. Remember to keep colors appropriate for each track

Add marks for circle drill, if wanted.

STEP 8



Mark starting blocks on both sides of rink (Remember that races that are 500m and 1500m start on the opposite side of the rink, and the spacing between the lines is doubled, 72 inches)

Depending on width of rink, the distance between marks is normally between 30" and 36" per dot. Layout with magic markers first, before painting blocks.

Starting position #1 (position closest to center of rink) is 26' 3" from center of track. There should already be a mark near position #1 from step 4 from above.



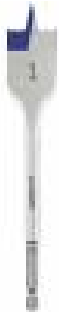
Using the tape to layout the track
Mark the ice with a magic marker



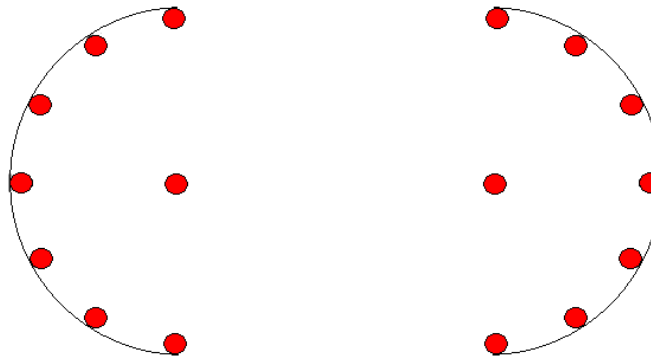
Use a hand drill to make
a hole in the ice



Brush away the ice shavings then fill
the hole with colored water



Typical drill bit for wood,
Available at any
Hardware store



When marking the track,
Place markings and blocks
inside the line that marks the edge of the track