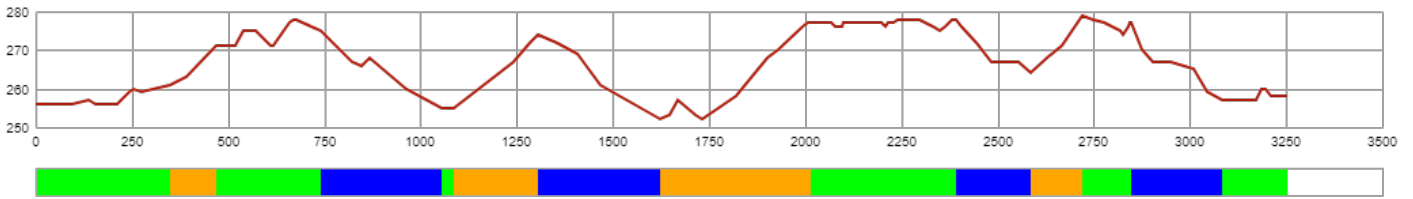




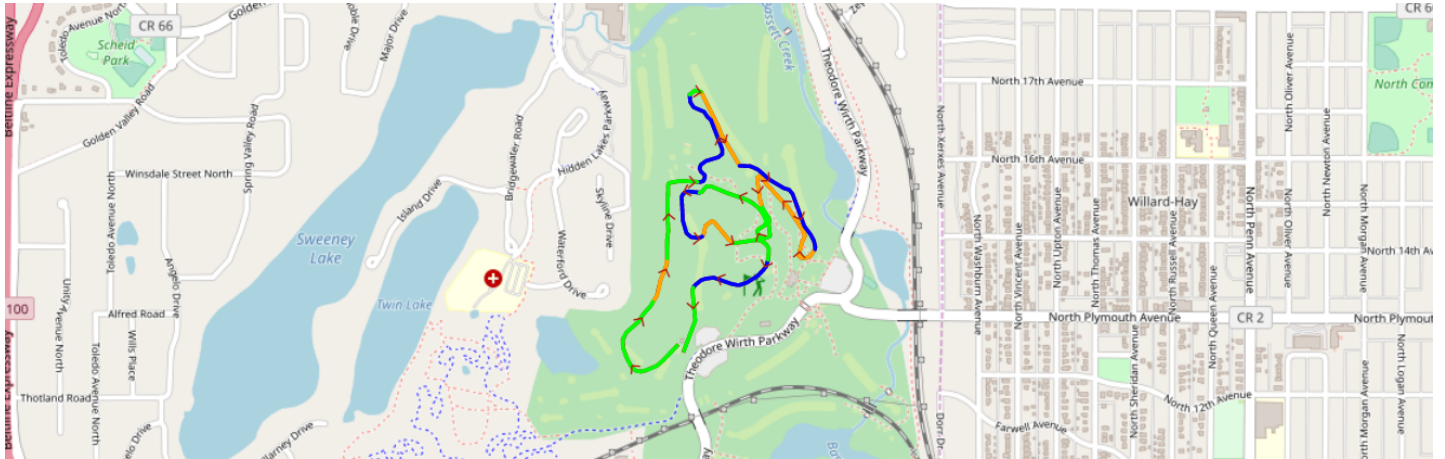
**CERTIFICATE
OF FIS HOMOLOGATED CROSS-COUNTRY COURSE
FIS CROSS-COUNTRY COMMITTEE**

- | | |
|---|----------------------|
| (1) Registration number: | |
| (2) Name of the competition site: | Theodore Wirth Park |
| (3) Name of city/region: | Minneapolis, MN, USA |
| (4) Organizer: | Loppet Foundation |
| (5) National ski association: | USSA |
| (6) Contact person in the organizing committee: | Issac Kasper |
| (7) Homologation inspector: | Al Maddox |
| (8) Name of course: | 3.3 km WC |
| (9) Competition level for course: | WC |

Course length:	3,253m	Height difference (HD):	27m	Lowest point:	252m
Course category:	D	Maximum climb (MC):	30m	Highest point:	279m
		Total climb (TC):	106m		



A-climb B-climb C-climb descent undulated terrain



FIS Office

FIS Stamp

FIS Homologation
Responsible

Date of Issue

Valid until

(10) Overview of the uphill:

	No.	PTC	% of TC
- shorter climbs	4	74	69.8
- descents	4	2	1.9
- undulated terrain	6	30	28.3

(11) Stadium area:

		Indoor working room:	
Fixed stadium area	no	Timekeeping	yes
Fixed building	no	Announcer	yes
Temporary stadium	yes	Jury	yes
Temporary building	yes	Race office	yes
Good infrastructure (access, parking, media, etc.)	yes		
Skitesting area along course/near stadium	yes		
Warm up track near the stadium	yes		

(12) Category for the stadium and course layout:

	Interval	Sprint	Skiathlon	Relay	Mass start
Stadium suitable for following competition formats	yes	yes			yes
Course suitable for following competition formats with					
a) Classical technique	yes				yes
b) Free technique	yes				
Course suitable for relay and skiathlon competition					
a) On same course					
b) Combined on different courses (C+D or D+D)					

(13) Possibility of snow making:

All parts of this course can be covered

(14) Map Material:

GPS tracks and way points

(15) Source of accurate elevation data:

DEM based on LiDar

(16) Safety considerations:

On the long downhill prior to the major climb there is a large tree just before they exit onto the fairway, it causes an unexpected narrowing and re-alignment at a high speed, this tree must be well padded; or removed completely. This situation has impacted the none certification for Mass Start Free Technique format and also is challenging for track setting in classic competitions.

(17) General remarks:

A good 3.3 course, using a B climb as its major uphill with PHD = 25 and PTC = 30

The stadium is only capable of Mass Start with small numbers of competitors (100 or less). This course could be improved with additional snow making that would allow it to follow the 3.75 course longer before they diverge.

(18) Date of first inspection: 2019/9/27

(19) Date of final inspection: 2019/11/17

(20) Summary of terrain characteristics

	#	at m	PHD (m)	PTC (m)	grad. (%)	avg. grad.(%)	
A-climb		total		0			0.0% part of TC
B-climb	1	349	10	10	4.9 - 10.0	8.3	
	2	1,088	19	19	7.8 - 11.9	8.8	
	3	1,623	25	30	-9.3 - 16.5	6.4	
	4	2,586	15	15	7.6 - 15.5	11.3	
		total		74			69.8% part of TC
C-climb		total		0			0.0% part of TC
undulated terrain		total		30			28.3% part of TC
		total climb		106			