

Exhibit 7 Fire Dept. Letter



Peninsula Township Fire Department 14247 Center Rd. Traverse City, Michigan 49686 PH: 231-223-4443

firechief@peninsulatownship.com



May 7, 2019

Re: Bowers Harbor Vineyards

Proposed Projects

Dear Board,

I have received from planner Randy drawings of proposed projects for Bowers Harbor Vineyards. All proposed projects will be required to be reviewed by the fire department using the International Fire Code (IFC) (2015). The owners will need to submit sealed drawings for each project for review. Below is a list of items that the owner will have to comply with prior to receiving a certificate of occupancy after projects are completed.

Proposed 20x65 addition to tasting room:

- Comply with all IFC code requirements for a business occupancy: egress, emergency exits, emergency lighting, fire extinguishers, fire separation, use of proper rated fire material as stated in the code and a determined fire lane with signage. Compliance with all other IFC codes as it relates to the proposed occupancy type.
- Fire department review of complete set of sealed plans prior to start of work to assure complete compliance with the fire code.
- Occupancy load to be recalculated and posted once work is complete.

Proposed addition to the pavillon:

- Comply with all IFC code requirements for an assembly occupancy: egress, emergency exits, emergency lighting, fire extinguishers, fire separation, use of proper rated fire material as stated in the code and all other IFC codes related to building use.
- Fire department review of complete set of sealed plans prior to start of work to assure complete compliance with the fire code.
- Occupancy load to be recalculated and posted once work is complete.

Proposed new shuttle bus parking:

- 503.2.1- The access road shall be a minimum of 20 feet wide.
- 503.2.3- The access road shall be constructed to support the weight of fire apparatus.
- 503.2.4- The turning radius will be determined by the fire department; this will entail the fire
 department taking apparatus to the location and assuring the apparatus can make turns easily
 without stopping and backing up.



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June 19, 2018

Christina Dereen,

On June 19, 2018 the fire department calculated an occupancy load for Bowers Harbor Vineyards according to the International Fire Code guidelines. The main building has an occupancy of 62 people, the patio is set at 36 and the pavilion 50. Occupancy signs were delivered to the vineyard and are to be posted in each appropriate area. If you have any questions, feel free to contact me.

Sincerely,

Fire Chief Fred Gilstorff



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- Signage shall be posted to show the proper direction of travel as to limit the chance of a vehicle obstructing the path of an emergency vehicle to the location.
- Place "NO PARKING" signs on the section of drive which leads to the winery process facility
 Between the main drive and the proposed shuttle bus parking.
- It is recommended that the existing circular drive leading to the tasting room be widened by at least 3 feet. The current situation creates a very narrow access for emergency vehicles.

Proposed Sparkling Wine Facility (New):

- Comply with all IFC code requirements for the occupancy: fire department access, egress, emergency exits, emergency lighting, fire extinguishers, fire separation, use of proper rated fire material as stated in the code, storage and use of chemicals and compliance with all related IFC codes.
- Fire department review of complete set of sealed plans prior to start of work to assure complete compliance with the fire code. A final inspection when work is complete will be completed by the fire department.

Proposed Gazebo:

 Primary concern for the proposed Gazebo is access for the fire department vehicles. The same rules apply in this situation that apply to the bus shuttle parking. The fire department shall have access within 150 feet of the structure. Fire extinguishers will need to be placed properly.

If you have any further questions, please feel free to contact me.

Sincerely.

Fire Chief Fred Gilstorff

Exhibit 8 Lighting

Pathway Lighting

Features

Product Type Deck, Step, or Rail Light

Dry, Damp or Wet Location

Listed

Wet

Fixture Finish Black

Number of Lights 1

Replaceable Bulb Included Yes

Bulb Type Incandescent

Bulb Base Bi Pin

Wattage 7 Watts

Fixture Material Metal

Fixture Material Details Stamped Aluminum

Dusk to Dawn Yes

Dimmable No

Voltage 12 Volts

Country of Manufacture China

Transformer Required Yes

Transformer Included No

Color Temperature 5000 Kelvin

Light Range 6 Square Feet

Bulb Shape T5

Compatible Transformer Part

Number

GL33120

Freestanding No

Ground Spike Included No

Hardware Finish Black

Pre-Wired Yes

Fade Resistant Yes Heat Resistant Yes

Impact Resistant Yes

Mildew Resistant Yes

Rust Resistant Yes

UV Resistant Yes

Warp Resistant Yes

Weather Resistant Yes

Weather Resistant Details Weather resistant finish

Shade Included Yes

Shade Material Metal

Light Direction Ambient

Assembly

Assembly Required Yes

Additional Parts Required Yes

Parts Needed Low voltage transformer

Warranty

Product Warranty 1 year



Exhibit 9 Grape Tonnage



Winery-Chateau Special User Permit Application Peninsula Township

Capacity for Guest Activity Use per Ordinance - not to exceed 111 guests

Based on Peninsula Township grapes

Name	Property Tax ID	Address	Atreage	Varietal	Tonnage
Linda & Daniel Dohm	11-110-032-00	16006 Center Rd	7	Riesling	9.757
Dale & Lynn Boersema	11-110-031-00	16095 Smokey Hollow Rd	11	Chard, Riesling, Pinot Grigio	22.18
Linnander/Topp	11-111-007-65	16842 Smakey Hollow Rd	1	Pinot Blanc	0
Michael & Elizabeth Wells	11-115-001-00	125966 Smokey Hollow Rd	7	Pinot Grigio	0
Rob & Lois Manigold	11-104-001-00	2876 Old Mission Rd	8	Chard, Gewurz	14.37
Jeff & Kelsie Manigold	11-234-018-55	3117 Old Mission Rd	4	Dornfelder	9.74
Cummings Vineyard LLC (Chris Fifarek)	11-128-023-00	13101 Center Rd	24	Chard, Ries, Pinot Noir	8.25
Urtel Family Trust	11-004-001-01	12120 Center Rd	3	Ries, Pinot Grigio	11.14
Tom & Claudine Petzold	11-235-045-05	4300 Happy Hour Ln	2	Ries, Chard	5.7
JTC Holdings LLC (Vince Johnson)	11-235-039-00	4401 Happy Hour Ln	3	Chard, Blaufrankisch	2.93
Island View Orchards LLC (Lyons)	11-133-009-00	2211 Island View Rd	4	Pinot Grigio	0
			74		84.067
		84.067 / 1.25 = 67 guests	 	<u> </u>	

Crop Calculations

Based on 45.77 acres (3 Bowers Harbor Vineyards parcel combined)

Area	Acres in Production 2019	Acres in Future	Total	Percent
Estate grapes	14.75	0.6		
Maples- syrup wine	10.5			
Cold air drainage	8			
Fruit trees - 2020 season		0.4		
	33.25	1	34.25	75%

Exhibit 10 Health Department



GRAND TRAVERSE COUNTY ENVIRONMENTAL HEALTH WELL & SEPTIC STATUS FORM - \$25

linda (a bewersharber. com

DEMOLITION DE REMODEL ADDITION DE HOME RE	EPLACEMENT []
Property Address: 2896 Bowers 7derbor R	d.
	wnship: Peninsula
Owner Name: Linda Stegenge Ow	vner Phone(23) 218 - 117 /
Owner Address: Same as above	
Contractor's Name: tentative: Fournier Consq	otractor Phone:
Contractor's Address:	
Please include a brief summary of the proposed changes to the	property. For residential, please
include current bedrooms, proposed bedrooms and whether or	not the property has/will have a
garbage disposal. For commercial, please state number of bat	hrooms, employees, and max
customers/day.	
Commercial - Wine Tasting facility	
Proposed 2 new bathrooms N 3	toilets each
1 handicas bathroom 20/	1 toilet à 1 sink
Maximum of 15 employees / day	during busy season
·	
Kinda Stegenga	5-8-19
Signature of Owner/Contractor	Date

Grand Traverse County Environmental Health WELL & SEPTIC STATUS FORM

	EXISTING PERMIT AVAILABLE PERMIT # 36878 DATE OF ISSUE: 6/24/15 EXISTING PERMIT NOT AVAILABLE
	Well shall be properly plugged according to Part 127 of Act 368, P.A. 1978, as amended. Abandoned well plugging record shall be submitted to the Health Department. A new well may be required.
	Septic tank(s) and any other tank(s) associated with the wastewater system shall be pumped by a licensed septage hauler, crushed, and filled or removed. A new wastewater system may be required.
,pr	Existing well meets current well construction code requirements and is approved for use as an: Private Residential Well Irrigation Well Public Well Circle type: TYPE III
0	Existing septic system meets current design requirements for proposed use and meets all isolation requirements. Tank(s) Size(s): 12 × 1250 bl. 2000 Drainbed: 21 × 125 Existing septic system will serve: Residential home with bedrooms Garbage Disposal: YES NO Commercial facility with design daily flow of 900 gal/day Other use with design daily flow of gal/day
	Existing septic system does not meet current design requirements, but is considered "grand-fathered" for proposed use.
Com	ments:
	Well is to be recloseified as a Type II well, this will require quarterly bacteria and annual nitrate samplings
Signa	ature of Health Department Representative Date
OFFI	CE USE ONLY
Rece	ipt Date: 5 8 9 Receipt #: 47902 Initials: 4M

Exhibit 11 Cold Air Drainage

Agrivine, Inc.
Jennifer Bramer
13130 Center Road
Traverse City, MI 49686

April 25, 2019

Old Mission Peninsula Township Zoning Board Members 13235 Center Road Traverse City, MI 49686

As the vineyard managers for Bowers Harbor Vineyards and Winery we are writing to voice our concern regarding the township zoning boards request that additional vineyard acreage be planted in an area of their farm that has been intentionally not planted due to the topography of the site. This area that has been used for cold air drainage is the lowest site on their farm and also, in our opinion, is a cold air sink for a large part of Old Mission Peninsula. It has been our observation that during cold events (frosts or freezes) cold air (which is heavier than the warm air aloft) from the Northern part of Old Mission Peninsula, around Old Mission Road, flows South down Peninsula Drive and disperses to the West (towards West Bay) settling around Pyatt Lake and flowing down to Bowers Harbor Road and out to West Bay around Bowers Harbor. We feel that it would be not only financially detrimental but also an impairment to our wine region to have another vineyard planted on an inappropriate site. If vines were to be planted here they would likely never come to fruition and most would likely die. Therefore we would not recommend that vines, or a frost sensitive crop of any sort be planted on this site.

Sincerely,

Jennifer Bramer

Agrivine, Inc.

Kristy, Here would be one explanation:

The wine grape varietals (vitis vinifera) planted at BHV are cold sensitive, both for low temperatures in winter months and frost events in the spring following bud break. This means that significant damage can occur to the vines and fruiting buds at these times due to cold events. Damage equates directly to economic loss. Thus it is imperative to limit or mitigate against cold damage when planting new vines. Cold air gathers and moves similar to a liquid when there is limited to no wind present. The coldest events usually occur under low-to-no wind conditions. Because cold air is heavier than warm air, the coldest air settles at or near the lowest terrain present. For example, if there is a hill sloping down to a flat field and then sloping further to a low basin area, the lowest basin area would build up the coldest air temperature conditions. The hill and downward-sloping side of the hill would be warmest and the field in between sharing some warm and some cold, depending upon the ground condition in the field leading to the low basin. Ideally, one would plant vines on the hill, the slope and some of the flat field but not in or around the low basin, which we call a frost sink. Cold air drainage into the lowest area where no vines are planted is a valuable part of the vineyard risk-management design feature.

Hopefully, this is useful. Please let me know if you need more clarification. The others on this email are welcome to make improvements and corrections, of course. This text is not based on any professional, expertise, but on practical knowledge in vineyard practices use around the world for the *vinifera* varietals.

VR Tom Petzoid Ten Hands Vineyards Old Mission Peninsula

To Peninsula Township

We own a vineyard on the east side of Center Road south of Carrol Road in Peninsula Township (parcel #11-004-015-10). The vineyard has three separate plots of wine grapes. Regarding the issue of cold air drainage. In our case we have a low spot in the middle of the vineyard between the two largest vineyard plots. While this low spot is not suitable to plant wine grapes, it provides a very necessary function for the entire vineyard. This natural feature allows the cold air to collect and flow through this low spot thus protecting grapes from cold damage. This is especially important in the spring to protect the tender bud shoots from frost after bud break. I consider this low-lying area to be a very important component of the entire vineyard.

Feel free to contact me if you have any questions.

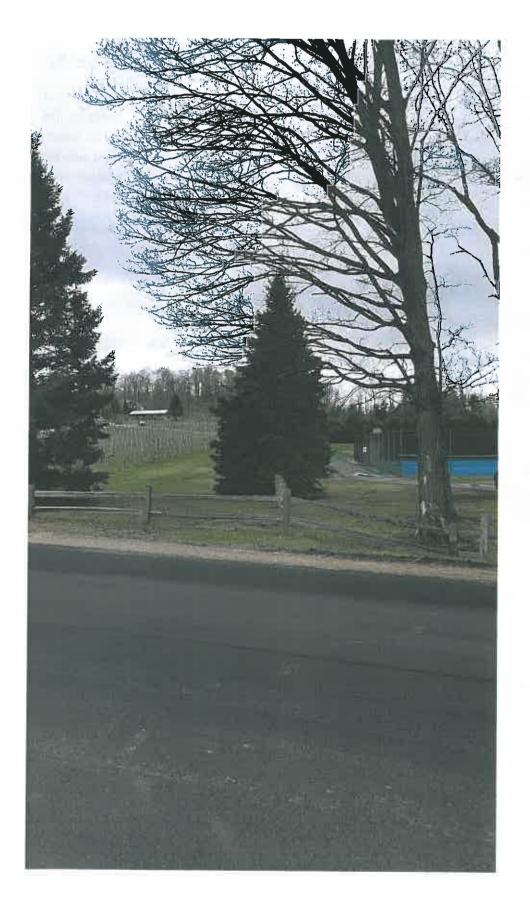
Sincerely,

William MacDonald

MacDonald Vineyards

(734) 730-0516

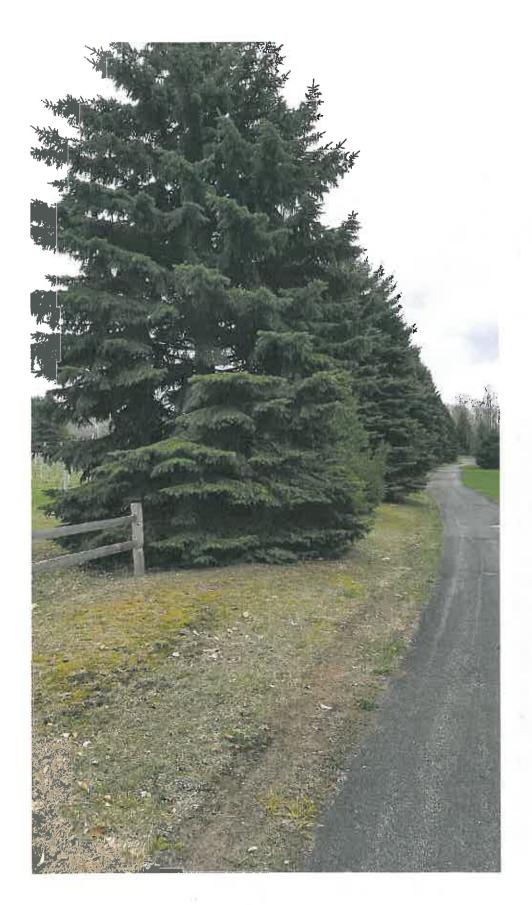
Exhibit 12 BHV/Park Prop. Line Pics



Start: Picture #1

Looking across Bowers Harbor Rd along property line toward the south. The park is on the right, winery on the left.

Note that the fence/tree line directly in front is the property line.



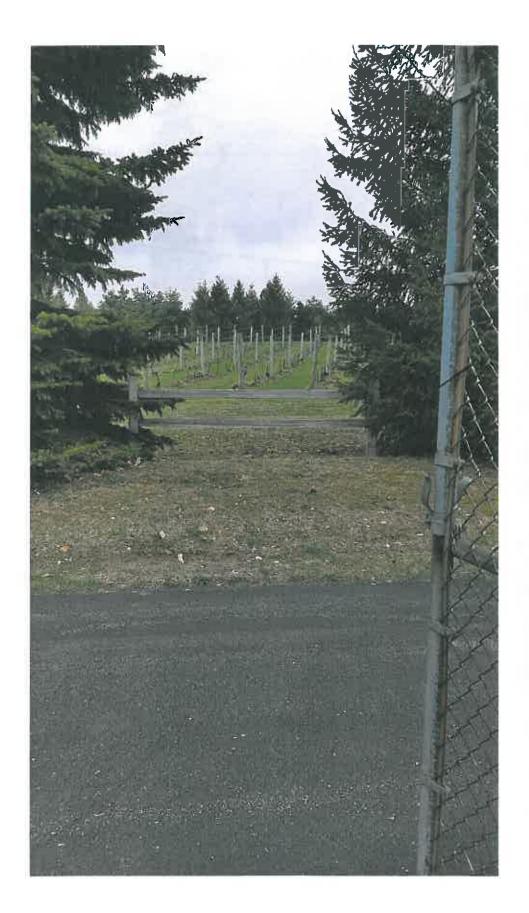
Looking south along property line close to tennis courts, park on right side of tree line and winery left of fence/tree line.

Note park walking path on right.



Looking west across property line from winery toward park tennis courts.

Note property stake in foreground.



Looking east from park tennis courts toward winery. Fence notes property line.

Note park walk path in foreground.



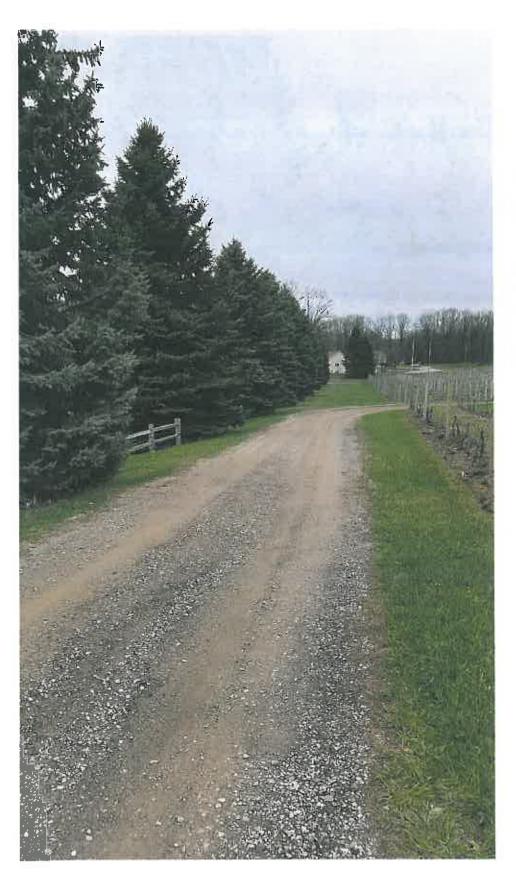
Looking south toward winery road bend on winery (east) side of property line.

Note road bends left (east) toward winery main entrance and drive.

Note fence / trees on right along property line.

Note winery structure in background left.

Note park walk path is seen across fence on right.



Looking back north toward Bowers Harbor Rd. on winery side (east) of property line.

The house in the middle distance sits on Bowers Harbor Rd.

Note the winery road running parallel to property line. This road turns east toward the main entrance of the winery.

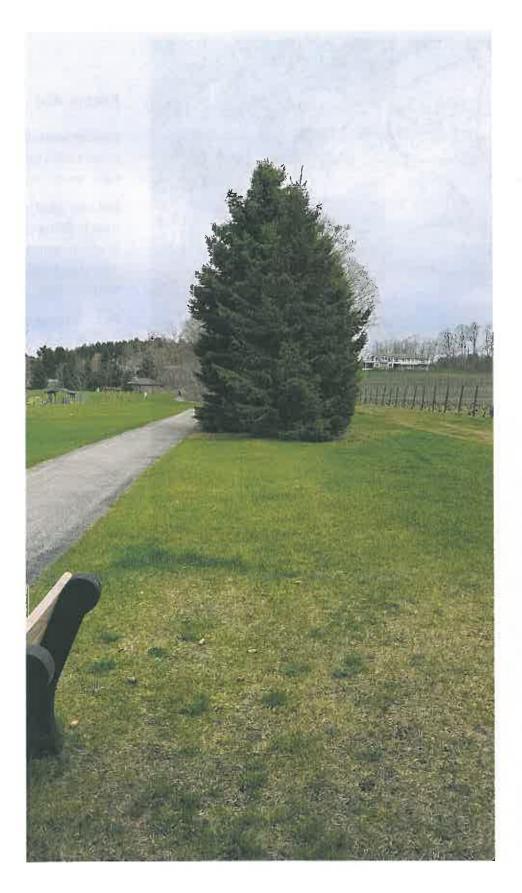
On right side of picture can also be seen cultivated vines.



Looking west along winery trail, park on right winery on left.

Note for position, white park building structure in south central park area is just right across property line.

Note park walk path on right in background with tree line and white sign marking property line.



Position is southwest corner of park, looking east along property line. Winery on right, park on left.

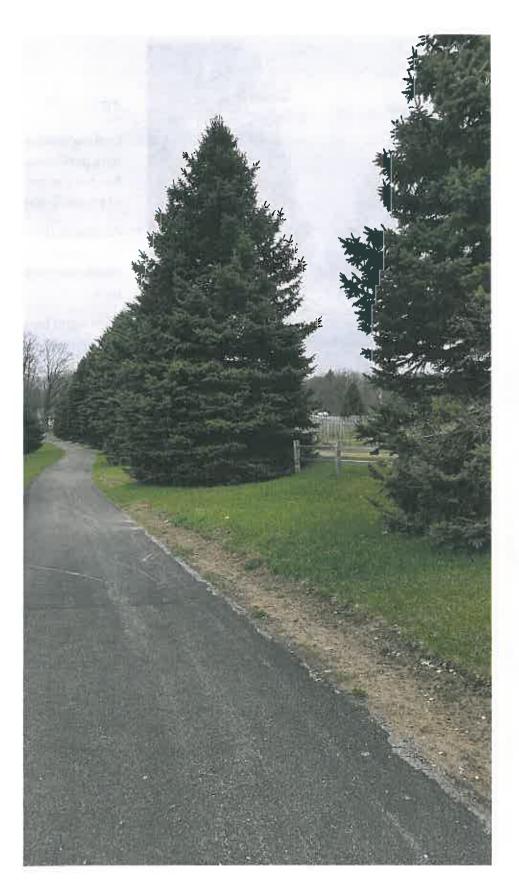
Note park walk path on left and park bench in left immediate foreground.



Looking north along park path toward Bowers Harbor Rd. west of property line.

Position is just north of the walk path bend in southeast corner of park.

Note again fence / tree line on right along property line.



Looking north toward Bowers Harbor Rd. along park walk path, west of property line.

Note tree / fence line on right along property line.

Winery dirt road can be faintly seen across fence in background.



Looking north across property line from winery (south) toward park.

Note tree line in foreground along property line.

Note park playground in background past property line.

Exhibit 13 Parking Management and Calcs.

Parking Management

Operations:

Two (2) parking attendants will be stationed onsite prior to Events. Attendants are equipped with 2-way radios to coordinate parking.

- One (1) located near the entrance on Bowers Harbor Vineyard property.
 - o This parking attendant will:
 - Direct and instruct incoming traffic to applicable parking areas
 - o Shuttle bus routes
 - o Handicap parking
 - o Guest parking
 - o Overflow parking
- One (1) located at circle drive near tasting room This parking attendant will:
 - Handle incoming guests to applicable parking areas
 - Direct to overflow parking area as needed
- Parking areas on site include:
 - o Handicap spaces
 - o General parking
 - o Shuttle bus parking
 - o Long vehicle (i.e. Suburban) spaces
 - o Overflow grass parking
 - o Farm road parking for employees and guests
- Wine tasting hours and Event times will be limited to minimal overlap. It is in the best interest of Bowers Harbor Vineyard staff and guests to separate tasting hours and events in order to provide a pleasant guest experience by offering parking, attention and service.
- if parking is at full capacity, vehicles and busses are requested to return at specific time.
- Parking instructions and rules are provided to Bus, Van and Tour Operators prior and during the Season. Most group tours are scheduled in advance in order to accommodate them and prevent parking overload situations during Wine Tasting Hours.

Use of cold air drainage area for overflow parking:

Cold air drainage area has been noted as essential for growing production in the region. These areas allow for the collection of cold air (frost) during sensitive budding and harvesting season. It prevents damage to vegetation such as fruit trees and vines allowing for crop production on farmland.

In fact, MSU Extension notes: "Fruit sites should have large air storage areas within a half-mile or at least allow a general airflow to a storage area within one mile." (Mark Longstroth, Michigan State University Extension, March 16, 2012)

Bowers Harbor Vineyard has an area defined as cold air drainage onsite. This area can be utilized for another use, such as parking. Parking is needed for the business operation and the cold air drainage area is available for those times when the demand for event parking requires it. The benefit of this "pocket" becomes two-fold: promoting heathy fruit crops and vineyards AND offering parking for guest attendees.

Bulldings						
	Size	Size	Sq. Ft.	Required Parking Per Ordinace (1 per 150 Sq. Ft)	Fire Code Occupancy (People - Seated)	Implied Parking Needs Based on Fire Code Seated (1 space per 2.5 people in Public Space)
Existing Tasting Room	30.0	65.0	1950		62	25
Tasting Room Patro/Trellis	19.2	30.0	575	4	36	14
Existing Pavillion	18.33	46.5	1950	13	50	20
Guests By Bus (30%)					7.0	-18
	SubTota	ı				41
	People					
Completence	15	1 per person			15	
Employees						
Employees	People			1 100 1 100 1		

Buildings						
					Fire Code	Implied Parking Need
				Required Parking	Occupancy	Based on Fire Code Seated
				Per Ordinace (1 per	(People -	(1 space per 2.5 people in
	Size	Size	Sq. Ft.	150 Sq. Ft)	Seated)	Public Space
Existing Tasting Room	30.0	65.0	1950	13	62	2.
Tasting Room Patio/Trellis	19 2	30.0	575.0	4	36	14
Tasting Room Addition	20.0	65.0	1300	9	0	(
		L				
Existing Pavillion	18 33	46.5	852	6	50	20
Pavillion Addition	15	30	465	3	30	1
Deck	16	16	256		27	1:
Guests By Bus (30%)						-2!
	_ [SubTot	al			5
	People					
Employees	20	1 per person		20		
	People					
Events	111	.4 per person		44		
	PAR	KING	NEED	64		122

PARKING PROVIDED FOR EXISTING AND PROPOSED NEEDS

Dedicated spaces	86
Bus (Van, coach, tour bus)	8
Overflow	127
	221

This assumes the Winery Tasting Room areas and an Event attended by full capacity is occurring simultaneously.