

# Course Consulting Service ON-SITE VISIT REPORT



## **Cranberry Valley Golf Course Harwich, Massachusetts**

Visit Date: July 16, 2015

Present: Mr. Shawn Fernandez, Superintendent  
Mr. Roman Greer, Director of Golf  
Mr. Clem Smith, Green Chairman  
Mr. John Crook, Harwich Golf Committee  
Mr. Chris Clark, Town Administrator  
Mr. Robert Donovan, Assistant Superintendent  
Mr. James E. Skorulski, USGA

### **United States Golf Association**

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*USGA Green Section Mission: The USGA Green Section develops and disseminates sustainable management practices that produce better playing conditions for better golf.*

It was my pleasure to make a half day Course Consulting Service visit to Cranberry Valley Golf Course on Thursday, July 16, 2015. The following report is offered as a summary of the major points discussed during the visit.

I was pleased to find the golf course in such good agronomic and playing conditions at the time of this visit. Fortunately, the golf course came through the winter season without any turf injury. I attribute the winter success to the cultural practices in place and also to good fortune. I was also pleased to see the extent of the tree removal work that was completed since our last visit. The staff has also done a good job of repairing several large sink holes that impacted rough areas. We used our time together to tour the golf course and review the programs and practices in place. We discussed a number of agronomic programs as well as reviewed the progress of those that have been implemented. Recommendations for grooming green surfaces were provided. We also discussed additional tree removal work that would benefit putting greens and the entire golf course. Recommendations were also provided for some of the tee boxes in regards to their location and their impacts on play, pace of play and safety. We discussed some mowing contour changes that should benefit the fairway and playability of the golf course. We also discussed the use of growth regulators and the need for drainage, cart path work, the new cart barn, pond management and several other topics that will be covered in this report.

## **GREENS**

### Surface Quality

The greens were healthy with a good root system. The surfaces appeared smooth and uniform and there were no major concerns either from an agronomic or playing perspective. The only recommendation I can provide is to try to reduce some of the grain that now exists in the greens. This can be accomplished with continued brushing that would be done prior to mowing. The new groomer attachments that have been added to the inventory will also help to reduce the grainy texture and produce a more upright and fine textured surface. Set the groomers at bedknife height and complete the practice on consecutive days when weather conditions permit. The greens will also benefit from a light topdressing application. Increasing the frequency of the topdressing is one of the more beneficial practices that would improve not only the playing quality of the greens but also the health of the turf. The greens should be topdressed every three weeks through the season. That can be done in conjunction with lighter vertical mowing in the spring season. The topdressing practice can be difficult to implement with the high quantity of traffic the course receives. Utilizing dry bagged sand during the busy summer season will speed the operation. Rolling the greens is also an option to provide surface smoothness and green speed without having to lower the height of cut. Rolling greens 2-3 days per week should not have any negative impacts on the greens as long as the rollers are operated carefully around the green perimeters. The growth regulator programs in place are sound and no changes are recommended there.

## Trees

I was impressed with the tree removal work that was done since our last visit. The 11<sup>th</sup>, 14<sup>th</sup> and 17<sup>th</sup> greens have all benefited from that work. The additional sun has improved turf quality on the 17<sup>th</sup> green and those benefits will become noticeable on the other greens as well as the green surround areas. Additional tree work was recommended on the back right side of No. 17 green to increase morning sun exposure later in the summer season and in the fall. Sun exposure is critical for the vigorous growth of the turf. Cut back the wood line and thin smaller trees and brush around the green's perimeter to improve air circulation.

Additional tree work was also discussed for the southwest side of No. 14 green to improve air circulation there. Generally, dense tree plantings near green sites should be cut back and thinned to allow prevailing winds to cool and dry the surfaces. Thin the tree stand on the right side of No. 18 green to expose a good quality oak tree there and to improve the growing environment for the green site. There are some unsightly shrub plantings along the back right side of the 7<sup>th</sup> green that should also be removed.

## Tees

We revisited the 10<sup>th</sup>, 13<sup>th</sup> and 14<sup>th</sup> tee complexes. The tree work that has been done adjacent to the 10<sup>th</sup> and 14<sup>th</sup> tees has now made it possible to renovate both tee complexes to improve the playability of both holes. We discussed adding a new tee to left side of the cart path on the 10<sup>th</sup> hole. That would be constructed at a lower elevation using fill taken from the existing tee box. The lower elevation should reduce concerns with errant shots reaching the 13<sup>th</sup> hole. The angle from the new tee's location should steer shots away from the 13<sup>th</sup> hole and should make the hole more enjoyable for the golfers. The renovation of the back tee on the 14<sup>th</sup> hole would also create a more effective angle to that hole. I recommended making two separate tees for each of the holes. Some additional tree work should be completed along the right side of the 14<sup>th</sup> fairway. Eventually, trees would be removed from both the left and right sides of the fairway to make the hole play more easily from the back and middle tees. Work with an architect to help sight the new tees.

## Renovation

We also discussed relocating at least the middle and forward tee on the 13<sup>th</sup> hole further to the right. Room is currently available to move the forward tee on a knoll along the existing cart path. The middle tee would be installed near the current location of the cart path. Moving both tees right should place them further from errant shots off No. 10 tee. This project would require relocating the cart path. Review the tees with your golf course architect.

We also looked at the impact of tee boxes and the length of holes on the pace of play. I am in complete agreement that adding forward tees on the longer par 3 4<sup>th</sup> and 17<sup>th</sup> holes would be valuable in maintaining a good pace of play, but also to make those holes play more enjoyably for a wider range of golfers. Adding forward tee boxes even

to some of the longer par 4 holes would also make the golf course more appealing to a wider range of golfers.

The article [Move Forward, Not Back!](#) discusses the benefits of forward tees and recommended distances.

### General Maintenance

Turf quality in the fairways was very good. The solid tine cultivation, hollow tine aeration in the spring, and late summer overseeding have all been beneficial for producing good playing surfaces. Root development in the fairways was also vigorous at the time of this visit. Well done!

Consider using the growth regulator Cutless on the fairway to help manage clippings. The higher populations of perennial ryegrass are very tolerant of the growth regulator. Use the growth regulator in a trial application at a 6 oz./acre rate (combined with iron or soluble N) to one or two fairways in early September. A second application can be made in late September or early October. Further use of the product can be considered based on the results of the trial application. The rates might be adjusted upward to 8 oz. per acre or reduced if necessary. Lower rate applications would be made at closer intervals. The growth regulator will improve the quality of cut obtained from regular mowing and will also make the perennial ryegrass even more competitive with annual bluegrass.

### Drainage

The right side of the 10th fairway requires drainage. We did not examine the area closely during the visit, but the need for drainage there has been discussed in the past. Consideration can be given to expanding the fairway to the right once the drainage is completed.

### Fairway Contours

We looked at a number of fairways and some contour changes that might benefit the golf course. We discussed widening areas of Nos. 12, 15 and 18 fairways to bring fairway bunkers more into play and to provide wider shot selection to putting greens. You can examine other fairways in this regard.

### Trees

We have discussed some of the benefits that can be obtained from initiating a more aggressive tree removal program, especially on the back nine holes where the holes are located amongst tree stands. In some cases the trees aligning the holes would be cut back to re-establish the original site lines across the golf course. This would involve removing pitch pine and some scrub white oak. Any better quality white oaks growing amongst the edge of the tree stands would be left in place and would become specimen type trees. An example of this was observed along the right side of the 15<sup>th</sup> hole as well as the 18<sup>th</sup> hole.

I also recommended removing two Norway maple trees growing on the right side of the 18<sup>th</sup> fairway. The maple trees are growing near the second dogleg. The trees are invasive and will impact the original design intent of the hole as they mature. They should be removed.



*The line along the right side of the 15<sup>th</sup> hole should be cut back to provide more sun exposure in this high traffic area. Several mature oaks can be left to frame the hole.*

We also discussed removing trees from the right side of the 15<sup>th</sup> hole to expose the fairway bunker there but also to increase sun exposure to the turf in the right rough where cart traffic enters the cart path. The tree line should be cut back to increase the sun exposure to the rough area. A better quality oak tree can be left there as a specimen tree. The large tree stand that separates the 17<sup>th</sup> and 18<sup>th</sup> holes should be thinned by as much as 70%. This will provide agronomic benefits by increasing air circulation between both holes. Significantly thinning this tree stand and others like it will also expose the surface contours that are an integral part of the golf course. Examples of this were discussed for the right side of the 5<sup>th</sup> hole and right side of the 14<sup>th</sup> hole. Removing the trees and regrassing those areas with native grasses and fine fescue would accentuate the contouring and provide a seaside look to the golf course. The fine fescue and native grasses would be kept far from the centerline of the fairways for minimal impact on play.

A project to remove the larger amount of trees would best be completed by a land clearing company who has the equipment necessary to complete the project quickly and can utilize the wood that is generated from the project. The trees would be flush cut and the areas would then be transitioned back to grassland areas through periodic mowing and interseeding where necessary.

## **ADDITIONAL COMMENTS**

### Sand Bunkers

The grass-faced bunker faces with southern exposures continue to struggle. The banks dry quickly and the turf is exposed to high temperatures. Trying to maintain moisture in those banks is a challenge. Sand that is blown up onto the bunker faces from heavy play also impacts the ability to maintain turf cover. We discussed several options that might make managing turf on the banks easier during the summer season. The first would be to regrass the banks with turf type tall fescue. The turf type tall fescue will develop a deep root system that will help it tolerate the heat and dry conditions. Utilize wetting agents to maintain more uniform moisture in the soils. We also discussed installing drip irrigation as a trial in one or two of the southern exposed banks. The drip irrigation is the most efficient means to maintain sufficient moisture in the banks.

### Cart Paths

It was good to hear that changes will be made to the cart paths on the 12<sup>th</sup> hole. Changes will also have to be made with the cart path on the 10<sup>th</sup> and 13<sup>th</sup> holes. The new cart paths that are replacing the older system are being located further from play and in areas where they will be used in a practical fashion. The investment in cart paths is important to maintain the infrastructure of the golf course and integrity of the playing surfaces.

### Practice Tee

The practice tee is heavily used in the summer season. The practice tee was being aerated and overseeded at the time of this visit. The tee surface was also renovated in the off season and regrassed with Kentucky bluegrass. Well done.

We also discussed the option of installing one of the new cold tolerant Bermudagrass cultivars on a portion of the practice tee. The Bermudagrass would only be used in the busy summer season when the grass is growing vigorously. The Bermudagrass grows rapidly during warmer weather. It does have a high N requirement. Its growth rate will be slow in mid-late spring and as soil temperatures cool in the fall season. It would be interesting to use either Patriot or Latitude 36 cultivars on a portion of the tee to see how it performs in your climate. Its ability to recover rapidly from divoting and wear in summer make it an attractive option for a section of the tee. I will be happy to provide contact information for a commercial sod grower if there is interest in obtaining sod.

### Maintenance Facility/Cart Barn

It was good to hear that the plans will move forward with the new cart barn facility. That project will also include updating the maintenance facility and adding an equipment wash pad to contain and recycle rinsate water. This is an important part of the maintenance facility especially with the building's close proximity to the irrigation pond and ongoing concerns with groundwater contamination. I also observed the wetland wastewater system that is being researched at the University of Massachusetts.



*The picture illustrates the area that has been developed at the field plots near campus. These units are being installed for corporations and even as septic systems. They include two chambers that move rinsate water through sand filters and manufactured wetland area where plants help to clean the water. The system is new and is a potential alternative to the wash water recycling units that are now common in our industry.*

Contact Dr. Michelle Dacosta, (413-545-2547 Email: [mdacosta@umass.edu](mailto:mdacosta@umass.edu); Website: <http://ag.umass.edu/people/michelle-dacosta>), to discuss the units and perhaps schedule a trip to the UMASS campus to visit the unit that has been installed there.

I was also impressed with the idea to install solar panels on the new cart barn and even on the maintenance facility. The solar energy might be used to power both buildings and recharge electric carts. This seems to be an ideal opportunity to do that.

### Pond Management

Algae continues to be a concern in the irrigation pond. I have observed the water circulation pumps at golf courses in Florida and they are an effective means to aerate and circulate water in pond systems. Maintaining good aeration in the pond helps to maintain good water quality and also oxidizes the nutrients that algae uses for growth. I have heard of the floating water filtration systems that use aquatic plants to filter out nutrients. I have not personally seen those systems in place nor can I comment on their effectiveness. That concept is similar to the wetland filtration system that was discussed earlier.

## CONCLUSION

The golf course continues to improve each season. Hopefully, moderate summer weather conditions will continue to provide favorable growing conditions and to help in summer maintenance. I also continue to be impressed with the staff's ability to complete daily tasks around the early daily 6:00 am tee times. The early tee times make it difficult to complete the more disruptive practices such as topdressing, grooming, and vertical mowing, etc. It is also a challenge to spray the golf course. Delaying tee times even one morning per week to provide an additional hour would be most beneficial for the staff to complete maintenance without having to be rushed to complete them.

The Green Section appreciates your support of the Course Consultation Service and enjoys the opportunity to work with the facility to make sure that the resources that are available are used to provide the best playing conditions and turf quality possible. Do not hesitate to contact the office if there are any questions regarding recommendations in this report or should any questions arise through the remaining season.

The Green Section appreciates your support of CCS and we encourage visiting the website <http://www.usga.org/Content.aspx?id=26223> to access regional updates that detail our observations across the region and provide a snapshot of the types of problems and conditions we are seeing in our travels.

Sincerely,



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Green Section, Northeast Region

JES:dlo

cc: Mr. Shawn Fernandez, Superintendent  
Mr. Clem Smith, Green Chairman

Reprints:

A "New" Normal for Golf Course Maintenance  
<http://gsr.lib.msu.edu/article/mcclellan-normal-1-28-11.pdf>

I Know We Don't Have the Money, but Can We Afford NOT to Invest in a New  
Maintenance Facility?  
<http://gsr.lib.msu.edu/article/oatis-know-4-4-14.pdf>