

Capital Assessment Equipment

Golf Enterprise Program

Equipment

- ▶ Golf Course Maintenance requires the use of highly specialized equipment to properly manage the various playing surfaces.

Type of Equipment	Number of Units
Greens Mower “Tri Plex” (including rollers)	24
Fairway Mower	12
Tee/Collar Mower	4
Trim Mower	11
Large Area Mower	8
Sprayer	3
Blower	4
Topdresser	3
Aerifier	4
Trap Rakes	9

Mowing Equipment

The differences between mower types:

- ▶ Reel Cutting Units -

- ▶ Units provide high quality finish cut of turf at low heights. Allowing for better playing conditions and faster green pace.
- ▶ Cutting heads on machines used to cut tees, fairways and greens.

- ▶ Rotary Cutting Units -

- ▶ Similar to residential grade
- ▶ Units used one - two times weekly for cutting the “rough” or higher cuts.



Mowing Equipment

▶ Greens mower or Tri Plex -

- ▶ Maneuverable, lightweight machine equipped with three reel cutting units to provide a close cut.
 - ▶ Types: Toro 3150, Jacobsen Eclipse (hybrid), Jacobsen Greens King

▶ Fairway Mower -

- ▶ Machines containing 5 -7 reel cutting units on each machine. The larger size and width provide for efficiencies of operations.
 - ▶ Types: Jacobsen LF-3400, Jacobsen LF557, Toro 5210

▶ Tees and Collars -

- ▶ Machines with 5 reel lightweight mowers allow for faster turn around when mowing collars and approaches to greens. Provide higher height of cut than greens, but lower than fairways.
 - ▶ Types: Jacobsen 1880



Mowing Equipment

▶ Small Area or Trim Cut Area Mower

- ▶ These mowers are rotary cutting units with smaller cutting decks than the large area mowers. They are used to cut around trees or intricate areas for easier maneuverability.

- ▶ John Deere 1435, Toro 3500D

▶ Large Area Mowers

- ▶ The large area mowers used to cut rough at the golf courses are rotary based cutting units. Usually containing 9 cutting units meant to cover area in a fast and efficient manner.

- ▶ Jacobsen 9016

▶ Tri Plex Rollers

- ▶ Same machine as Tri Plex greens mowers containing heads with weighted roller bar instead of reel cutting units. Rolling greens reduces turf stress and disease pressure and provides a smoother green surface.

- ▶ Jacobsen Greens King



Other Equipment—Used Daily

▶ Blower

- ▶ Blowers are used to move leaves, grass clippings, and any debris off playing surfaces. Removes unneeded debris and allows turf to gather oxygen and sunlight, and improves aesthetics.

- ▶ Buffalo Blower

▶ Sand Trap Rakes

- ▶ Groom the sand for a consistent playing condition and remove all unwanted debris from within the bunker.

- ▶ Toro Sandpro, Cushman Traprake



Other Equipment—Used Seasonally

▶ Aerifier -

- ▶ Aeration is essential to keeping playing surfaces healthy and in good condition by relieving soil compaction, increasing air flow, stimulating root growth and improving drainage.
- ▶ Used in spring and fall to “punch” holes into the turf grass, through the thatch/organic layer and soil.
- ▶ Type: Ryan GA30 & 60, Toro ProCore 648, Wiedenmann 72

▶ Topdresser -

- ▶ Topdressing improves playing conditions, thatch dilution, turf recovery, firmness, and improves root zone for healthier sub-surface.
- ▶ Used to apply small layers of materials (specialized sand, compost) to the turf.
- ▶ Type: Turfco Widespread Topdresser, Toro Dropdresser

▶ Sprayer -

- ▶ Machine equipped with GPS and foam indicators, used to apply herbicides, insecticides, and fertilizers directly to turf areas, providing for precise and efficient applications.
- ▶ Used Spring, Summer, Fall according to needs of course
- ▶ Type: John Deere HD300



Equipment

Location	Purchase Cost*	Replacement Cost**
Glenway	\$93,438	\$147,500
Monona	\$183,951	\$347,874
Odana Hills	\$457,719	\$701,883
Yahara Hills	\$792,756	\$1,190,899
Shared Items	\$93,222	\$185,783
Fleet Equipment	\$462,913	\$800,000
Totals	\$2,083,999	\$3,373,939

- ▶ *Purchase Cost spent by Golf on current on-site equipment
- ▶ **Replacement Cost reflects 2019 prices for new units

Equipment

Amount	Item	Ave Age	Value Paid	Cost in 2020	Useful Life	Need	Ave Cost	Deferred Costs
24	Tri Plex	2008	\$550,047	\$776,000	7 Years	10	\$32,000	\$320,000
12	Fairway	2010	\$514,224	\$708,000	7 Years	5	\$74,000	\$370,000
4	Tees	2009	\$62,495	\$184,000	7 Years	3	\$46,000	\$138,000
11	Trim Cut	2006	\$222,768	\$334,500	7 Years	4	\$51,000	\$204,000
9	Trap Rake	1998	\$86,386	\$187,000	7 Years	8	\$20,000	\$160,000
8	Rough	2011	\$462,913	\$800,000	7 Years	7	\$100,000	\$700,000
14	Misc Equip	2001	\$185,166	\$384,439	10 Years	6	Varies	\$168,234
82		2006	\$2,083,999	\$3,373,939		43		\$2,060,234

Capital Assessment Courses

Golf Enterprise Program

Capital Needs Courses

ITEM	YEARS
Greens (1)	15 – 30 years
Bunker Sand	5 – 7 years
Irrigation System	10 – 30 years
Irrigation Control System	10 – 15 years
Pump Station	15 – 20 years
Cart Paths – asphalt (2)	5 – 10 years (or longer)
Cart Paths – concrete	15 – 30 years (or longer)
Practice Range Tees	5 – 10 years
Tees	15 – 20 years
Corrugated Metal Pipes	15 – 30 years
Bunker Drainage Pipes (3)	5 – 10 years
Mulch	1 – 3 years
Grass (4)	Varies

NOTES: (1) Several factors can weigh into the decision to replace greens: accumulation of layers on the surface of the original construction, the desire to convert to new grasses and response to changes in the game from an architectural standpoint (like the interaction between green speed and hole locations). (2) Assumes on-going maintenance beginning 1 - 2 years after installation. (3) Typically replaced because the sand is being changed – while the machinery is there to change sand, it's often a good time to replace the drainage pipes as well. (4) As new grasses enter the marketplace – for example, those that are more drought and disease tolerant — replanting may be appropriate, depending upon the site.

ASGCA thanks those at the USGA Green Section, Golf Course Builders Association of America, Golf Course Superintendents Association of America and various suppliers for their assistance in compiling this information.

The materials presented on this chart have been reviewed by the following Allied Associations of Golf:



- ▶ Recommended life spans of golf course construction and materials used.
- ▶ Approximate life spans is provided via research from the below reputable agencies. These life spans can vary based on geographical location and quality of product used.
- ▶ All mentioned items in following slides are original to construction of each course.







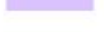

Course Capital Needs - Yahara Hills

Priority	Need
1	Increase Stormwater Capacity
2	Increase Drainage and Replace Storm Culvert
3	Pumphouse and Irrigation System Replacement
4	Bunker Renovation
5	Install New Tees
6	Cart Path Addition

Yahara Hills Golf Course Capital Needs Assessment

01/07/2020

Legend

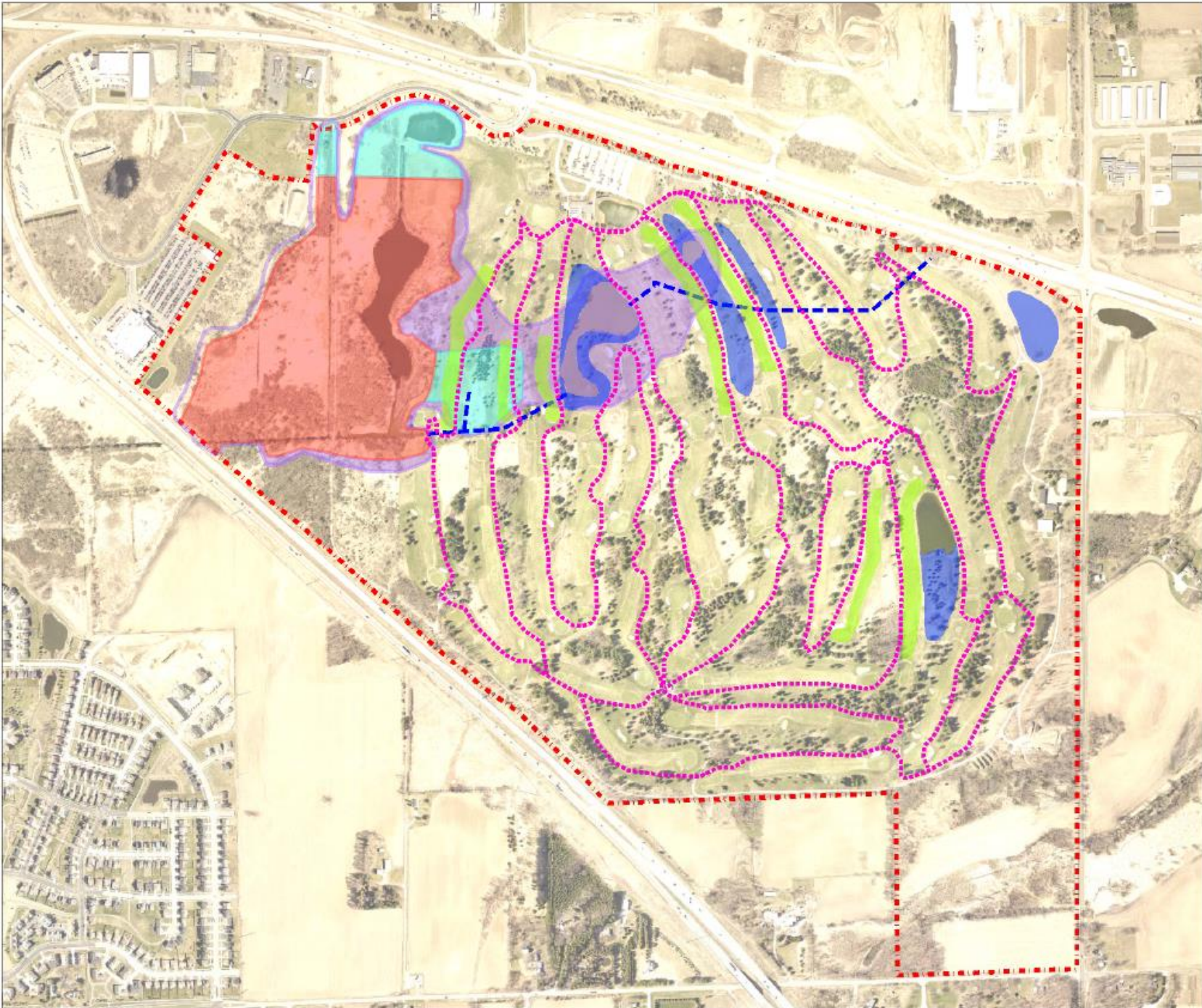
-  Proposed Fairway Restoration
-  Proposed Pond Improvements
-  Proposed Cart Path
-  Proposed Storm Pipe Improvements
-  Park Boundary
-  FEMA 500 yr Flood Zone
-  FEMA 100 yr Flood Zone
-  FEMA Floodway

Additional items not shown on plan include:

- Pumphouse replacement
- Bunker renovation
- Renovate existing tees
- Install new tees

Graphical Scale

0 1000 ft



Yahara Hills Golf Course Capital Needs Assessment

01/07/2020

Legend

- Proposed Fairway Restoration
- Proposed Pond Improvements
- Proposed Cart Path
- Proposed Storm Pipe Improvements
- Park Boundary

Additional items not shown on plan include:

- Pumphouse replacement
- Bunker renovation
- Renovate existing tees
- Install new tees

Graphical Scale
0 1000 ft



Course Capital Needs - Yahara Hills

▶ #1. Increase Stormwater Capacity

- ▶ Concern: Course cannot handle amount of water it is receiving during large rain events, causing significant course closures.
- ▶ Solution: Enlarge existing retention ponds and create new basins to aid in stormwater management. Use available fill to increase low problematic areas.

▶ #2. Increase Drainage and Replace Storm Culvert

- ▶ Concern: Low lying areas of course are frequently saturated for extended periods of time following rain events. Excessive water is the driving factor in course closures. Large culvert running across course is failing and undersized for current flow. Disrupts flow of stormwater and contributes to course closures.
- ▶ Solution: Raise and re-grade fairways of 6 lowest holes and add drainage tile to improve drainage. West: 1 & 18. East: 1,5,6,18. Replace 24" culvert with 36" plastic pipe and restore connections as necessary.



Yahara #18's pond overflow due to max capacity 10/2/2019

Yahara East #5 standing water due to lack of drainage 7/26/17



#1

#2

#3

Course Capital Needs - Yahara Hills

June 23rd 2017

Picture #1 - East 12. Water is flowing on site from Eastern properties. Water must travel across entire course to exit

Picture #2 - East 12, 11, 9, 18. West 18 & 9. Water from offsite continues across all six holes creating a blockage of all holes to the clubhouse

Picture #3 - West 10 pond at max capacity and overflowing onto holes West 10 and East 1

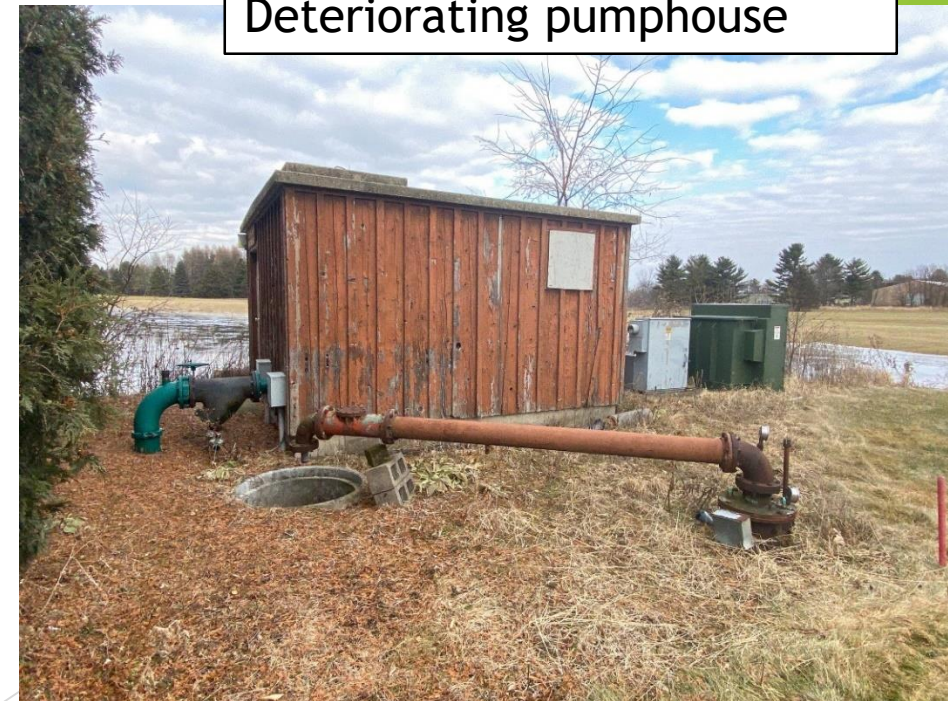
Course Capital Needs - Yahara Hills

▶ #3. Pumphouse and Irrigation System Replacement

- ▶ Concern: Two pump stations are original to course (50 years old) and experiencing growing issues/reliability, computer control system experiencing shutdowns. Irrigation system was last renovated 20 years ago and is approaching end of useful life.
- ▶ Solution: Rebuild pumphouse; replace control unit, 2 Pump stations and Control Satellite Units and rebuild in-ground irrigation system.



Yahara's well pump
Deteriorating pumphouse



Course Capital Needs - Yahara Hills

▶ #4. Bunker Renovation

- ▶ Concern: With 90 bunkers total on the course, there are too many oversized bunkers, which are costly to maintain, and many are experiencing failing drainage, causing them to retain water, impacting playability of course and customer satisfaction.
- ▶ Solution: Reduce size of bunkers and reshape throughout entire course, using Better Billy Bunker system to rebuild to provide consistency and reduce maintenance requirements and increase longevity of system.



East #6 bunker collapse from overtime failure



Yahara #18's bunker following overnight rains 9/23/16



West #12 bunker drainage collapse, resulting in compaction, poor drainage and excessive weed growth.

Course Capital Needs - Yahara Hills

▶ #5. Install New Tees

- ▶ Concern: Course has many long holes. Existing tees result in longer play, and can be too challenging for novice players and others, which can deter play.
- ▶ Solution: Install new, shorter tee boxes to longer holes in order to enhance golfer experience and generate new clientele.

▶ #6. Cart Path Addition

- ▶ Concern: Drainage issues and highly organic soil result in wet conditions that prevent use of carts and impact amount of play.
- ▶ Solution: Install asphalt cart path system throughout the course, which will allow for cart use at all times, resulting in less downtime due to weather related events.



Tee box at Yahara post-rain event.



Regular cart traffic causing wear on course. East #11.

Course Capital Needs - Yahara Hills

Priority	Need	Estimated Cost
1	Increase Stormwater Capacity	\$13,234,100
2	Increase Drainage and Replace Storm Culvert	\$3,787,200
3	Pumphouse and Irrigation System Replacement	\$3,005,300
4	Bunker Renovation	\$1,792,200
5	Install New Tees	\$191,500
6	Cart Path Addition	\$8,379,200
	Entire Project Estimate Range	\$21M - \$32M

Capital Needs - Odana Hills

Priority	Need
1	Fairway Restoration Hole #15
2	Pond Improvements
3	New Well and Pumphouse, Irrigation Updates
4	Improve Drainage
5	Clubhouse Replacement and Parking Lot Renovation
6	Green Renovation
7	Install New Tees and Expand Driving Range Tee
8	Cart Path Installation
9	Covered Storage for Bulk Materials

Odana Hills Golf Course Capital Needs Assessment

01/09/2020



Legend

- Proposed Fairway Restoration
- Proposed Pond Improvements
- Proposed Clubhouse Replacement
- Proposed Parking Lot Renovation
- Proposed Cart Path
- Park Boundary

Additional items not shown on plan include:

- New covered bulk storage building
- Bunker renovation
- Renovate existing tees
- Install new tees
- New well and pumphouse
- Green renovation



Course Capital Needs - Odana Hills

▶ #1. Fairway Restoration Hole #15

- ▶ Concern: Hole #15 floods after every rainfall and is unable to recover. The hole is now lower than the existing retention pond running along the hole, not allowing for the area to drain.
- ▶ Solution: Raise the entire hole out of flood zone with fill and increase drainage of entire area.



#15 rainwater remains in fairway and in bunker.

Odana pond on #13 overflow.

▶ #2. Pond Improvements

- ▶ Concern: Course cannot handle amount of water it is receiving during large rain events, causing significant course closures.
- ▶ Solution: Increase stormwater capacity, by enlarging existing retention ponds and creating new basins to aid in stormwater management. Use available fill to increase low problematic areas. Study is underway and there is potential for cost sharing/collaboration with Stormwater Engineering.



Course Capital Needs - Odana Hills

▶ #3. New Well and Pumphouse, Irrigation Updates

- ▶ Concern: Treated City water is used to irrigate the course. The water costs to irrigate the golf course are rising yearly. The pump station has outlived its useful life and needs to be replaced and relocated.
- ▶ Solution: Install well to increase sustainability and reduce water costs. A new pump station is necessary for reliability and to move water from well.



Odana irrigation pump

Drainage issues on hole #12 (view from green toward tee box)

▶ #4. Improve Drainage

- ▶ Concern: Low lying areas of course are frequently saturated for extended periods of time following rain events. Contributing to course closures.
- ▶ Solution: Install new drainage in areas of holes 8,11,12,15,& 16 to allow for faster turn around after rain events.



Course Capital Needs - Odana Hills

▶ #5. Clubhouse Replacement and Parking Lot Renovation

- ▶ Concern: Current clubhouse is not ADA accessible, is extremely outdated and running on original (1956) boiler. Small size restricts size/number of events. Parking lot does not meet current code requirements and is in need of overall replacement.
- ▶ Solution: Build a multi-use facility that will allow for added revenue streams for the Golf Enterprise Program, community space for various uses and user group needs on the West Side. Rebuild parking lot to meet code.



Odana original-to-building boiler (1956)

▶ #6. Green Renovation

- ▶ Concern: Greens (20 Total) are compacted due to regular traffic and significant play, and require extensive maintenance (ie. topdressing, deep-tine aerification) due to varying compositions. Excessive maintenance can interfere with play in the most critical area of the course and can lead to increased disease/insect pressure.
- ▶ Solution: Renovate all greens to improve quality and consistency of playing areas.



Odana is not ADA Accessible for meetings, events, outings or as a polling location.

Course Capital Needs - Odana Hills

▶ #7. Install New Tees and Expand Driving Range Tee

- ▶ Concern: Course has many long holes. Existing tees result in longer play, and can be too challenging for novice players and others, which can deter play. The driving range tee is currently too small for amount of use and requires significant ongoing maintenance.
- ▶ Solution: Install new shorter tee boxes to longer holes in order to enhance golfer experience and generate new clientele. Enlarge the current driving range tee box and resurface for improved playing conditions.

▶ #8. Cart Path Installation

- ▶ Concern: Drainage issues and highly organic soil result in wet conditions that prevent use of carts and impact amount of play.
- ▶ Solution: Install cart path system throughout the course, which will allow for cart use at all times, resulting in less downtime due to weather related events.



New tee box on hole #16. Built in 2018 to diversify level of play.

Deteriorating foot bridge and cart path - hole #16 Odana. Wear due to high cart traffic.



Course Capital Needs - Odana Hills

▶ #9. Covered Storage for Bulk Materials

- ▶ Concern: Currently no storage for bulk products, such as soil, sand and topdressing. Material is stored on pavement and tarped. Material can be damaged, washed or blown away by rain and wind.
- ▶ Solution: Build a structure to contain these soils and sands to avoid loss and keep items in correct working order.



Capital Needs - Odana Hills

Priority	Need	Estimated Cost
1	Fairway Restoration Hole #15	\$4,100,000
2	Pond Improvements	\$1,800,500
3	New Well and Pumphouse, Irrigation Updates	\$1,725,300
4	Improve Drainage	\$12,800
5	Clubhouse Replacement and Parking Lot Renovation	\$4,019,900
6	Green Renovation	\$2,140,100
7	Install New Tees and Expand Driving Range Tee	\$145,600
8	Cart Path Installation	\$3,554,100
9	Covered Storage for Bulk Materials	\$40,600
	Entire Project Estimate Range	\$12.2M - \$18.4M

Course Capital Needs - Monona

Priority	Need
1	New Well and Pumphouse, Irrigation System Upgrades
2	Bunker Renovation
3	New Driving Range Tee Box
4	Clubhouse Replacement and Parking Lot Renovation
5	Fairway Restoration
6	Reseed Tee Boxes and Fairways

Monona Golf Course Capital Needs Assessment

01/09/2020

Legend

- Proposed Fairway Restoration
- Proposed Range Tee Box
- Park Boundary
- Proposed Clubhouse Replacement
- Proposed Parking Lot Renovation

Additional items not shown on plan include:

- Bunker renovation
- Renovate existing tees
- Tee and fairway restoration
- New well and pumphouse

Graphical Scale
0 500 ft



Course Capital Needs - Monona

▶ #1. New Well and Pumphouse, Irrigation System Upgrades

- ▶ Concern: System and pump dates back to the 1960's and operates on outdated controls. Experiencing growing issues/reliability, computer control system experiencing shutdowns. Glue joints failing near sprinkler heads will need to be addressed. Treated City water is used to irrigate the course. The water costs to irrigate the Golf Course are rising yearly.
- ▶ Solution: Replacement of control unit, pump station, and Control Satellite Units. Install well to increase sustainability and reduce water costs.

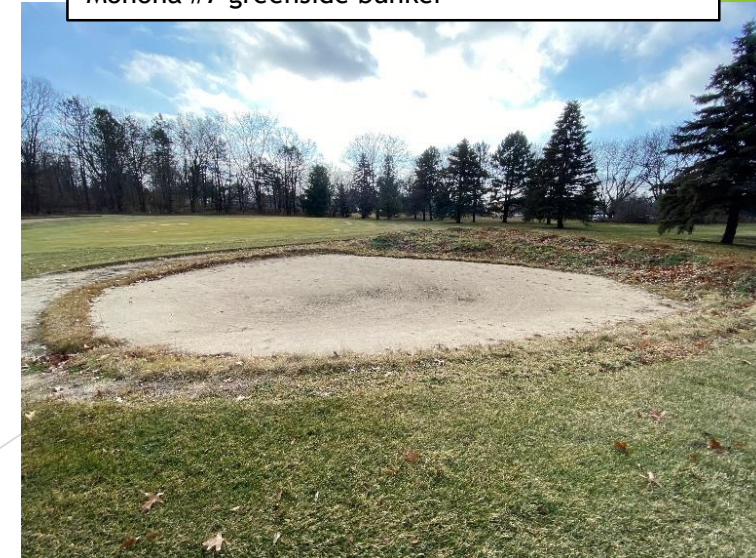
▶ #2. Bunker Renovation

- ▶ Concern: There are too many oversized bunkers (18 Total), which are costly to maintain with failing drainage and water retention impacting playability of course and customer satisfaction.
- ▶ Solution: Reduction of bunker size and reshaping throughout entire course, using Better Billy Bunker system to rebuild will provide consistency and reduce maintenance requirements and increase longevity of system.



Monona irrigation head leak area visible in many areas of course.

Monona #7 greenside bunker



Course Capital Needs - Monona

▶ #3. New Driving Range Tee Box

- ▶ Concern: Current driving range tee box has reached end of useful life and has sustained damage due to significant amount of use.
- ▶ Solution: Rebuild driving range tee box using existing soil and adding new soil where needed to create a level playing surface, reestablish area. Install new all-season mats on existing concrete slab.



Monona grass driving range tee area.

Monona HVAC system is outdated and does not work in half of the clubhouse.

▶ #4. Clubhouse Replacement and Parking Lot Renovation

- ▶ Concern: HVAC system does not work on half of the clubhouse, thus cannot keep the building cool in the summer months when needed for staff and customer satisfaction and comfort. Current building is aging and inefficient, HVAC system is in need of replacement. Parking lot is failing and must be brought to code with building replacement.
- ▶ Solution: Replace clubhouse and mechanicals, renovate parking lot to meet current code.



Course Capital Needs - Monona

▶ #5. Fairway Restoration

- ▶ Concern: Fairways on many holes have a washboard-like terrain, causing issues with playability and ability to mow fairways at a low height of cut.
- ▶ Solution: Re-grade, fill and reestablish fairways.

▶ #6. Reseed Tee Boxes and Fairways

- ▶ Concern: Tees and fairways can only be cut at current height of cut due to turf species, which is higher than other courses and requires more frequent mowing. Height can interfere with playability of course and can result in increased stress to turf and increased insect and disease pressure.
- ▶ Solution: Using a slit seeder reseed all areas as necessary with new blend of turf seed.



Monona hole #5 fairway with washboard terrain

Monona hole #6 tee box. Small, narrow tee boxes add to wear of the course.



Capital Needs - Monona

Priority	Need	Estimated Cost
1	New Well and Pumphouse, Irrigation System Upgrades	\$1,028,000
2	Bunker Renovation	\$445,800
3	New Driving Range Tee Box	\$54,200
4	Clubhouse Replacement and Parking Lot Renovation	\$1,885,300
5	Fairway Restoration	\$73,600
6	Reseed Tee Boxes and Fairways	\$91,000
	Entire Project Estimate Range	\$2.5M - \$3.8M

Capital Needs - Glenway

Priority	Need
1	Patio Replacement
2	Renovate Existing Tees
3	Well and Pumphouse Installation
4	Clubhouse Replacement and Parking Lot Renovation

Glenway Golf Course Capital Needs Assessment

01/09/2020

Legend

- Proposed Patio Replacement
- Park Boundary
- Proposed Clubhouse Replacement
- Proposed Parking Lot Renovation

Additional items not shown on plan include:

- Renovate existing tees
- New well and pumphouse

Graphical Scale
0 500 ft



Course Capital Needs - Glenway

#1. Patio Replacement

- ▶ Concern: Patio at Glenway is paved with bricks, but is currently sinking and falling apart, posing serious safety concern and may result in closure of patio. Failure could damage the 9th hole's playing surface and will impact the user experience.
- ▶ Solution: Remove and rebuild existing patio.

#2. Renovate Existing Tees

- ▶ Concern: Tee boxes can only be cut at its current height of cut and have recovery issues due to over use and small size. Quality impacts play and user experience as well as makes turf susceptible to weed and pest pressure.
- ▶ Solution: Repair and renovate existing tees.



Glenway patio bricks falling apart.

Small, narrow tee boxes add to wear of the course.



Course Capital Needs - Glenway

▶ #3. Well and Pumphouse Installation

- ▶ Concern: Water costs to irrigate the golf course have risen at a high rate making expense inflation difficult. Along with this is an outdated pump station that has outlived its useful life and needs to be relocated with well addition.
- ▶ Solution: Install well to increase sustainability and reduce water costs. A new pump station is necessary for reliability and to move water from well.



Glenway pump is outdated and would need relocating if on well.

Glenway clubhouse is smallest of all four clubhouses.

▶ #4. Clubhouse Replacement and Parking Lot Renovation

- ▶ Concern: Current clubhouse is extremely outdated and beginning to have rot and water damage throughout. In addition, it is undersized for amount of use and size limits retail offerings to customers. Parking lot is failing and must be brought to code with building replacement.
- ▶ Solution: Replace clubhouse and mechanicals, renovate parking lot to meet current code.



Capital Needs - Glenway

Priority	Need	Estimated Cost
1	Patio Replacement	\$40,000
2	Renovate Existing Tees	\$83,200
3	Well and Pumphouse Installation	\$345,600
4	Clubhouse Replacement and Parking Lot Renovation	\$1,870,000
	Entire Project Estimate Range	\$1.7M - \$2.5M