

# Archery Park Guide

The Archery Trade Association is dedicated to making the archery and bowhunting industry profitable by decreasing business overhead, reducing taxes and government regulation, and increasing participation. With this guide, the ATA puts its focus on archery participation by reaching out to archery park enthusiasts.


The Archery Park Guide is a detailed blueprint for parks and recreation agencies looking to build an archery park in their community. From site plans and recommendations to input from those who have already built parks, this guide features a broad offering of useful information. There are even case studies and information on risk management along with a breakdown of each park's amenities and costs. From big to small and everything in between, you'll find what you're looking for!

If you've had only just a fleeting thought about adding an archery park to your community, this is the perfect place to start. For more information, contact Michelle Doerr at (866) 266-2776 Ext. 5 or [michelledoerr@archerytrade.org](mailto:michelledoerr@archerytrade.org).

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## CASE STUDIES:

Click the  [CASE STUDY](#) symbol to see working examples from archery parks across the country.



## Archery Safety

Throughout its long history, archery ranks as one of the safest activities offered in any organized group setting. In fact, evidence shows that archery is safer than golf and even baseball.

[VIEW THE FULL ARCHERY SAFETY BROCHURE PDF](#)

## Frequently Asked Questions

### I. Do I need a permanent archery-only facility to start conducting archery programs?


No, beginning archery programs can be conducted in any gym by hanging special netting to protect walls and other property. Tennis courts can be utilized using the same technique.

Existing walking trails may be used for field/3-D events, and archery courses can be used for cross-country skiing, snowshoeing or other winter sports, or even for ski-archery during off months.

Of course an open field, such as those used for soccer or football, could accommodate many archery programs.

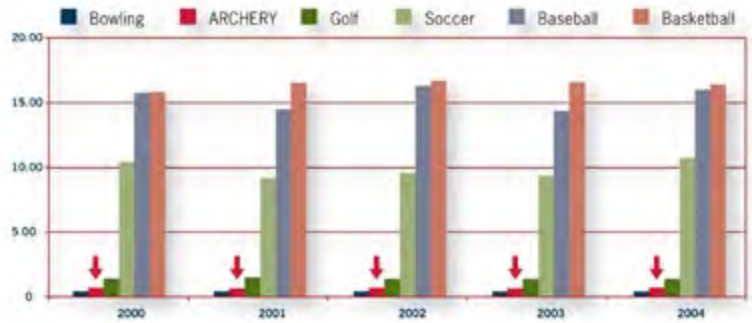
Indoor archery ranges can be added to one side of a recreation center so the entire gym area and range can be used for archery events and programs, or the archery area can be used as part of events being held in other parts of the recreation center.

Archery facilities can be designed so that targets can be covered with curtains and the range used for events like weddings, parties and other rental activities.

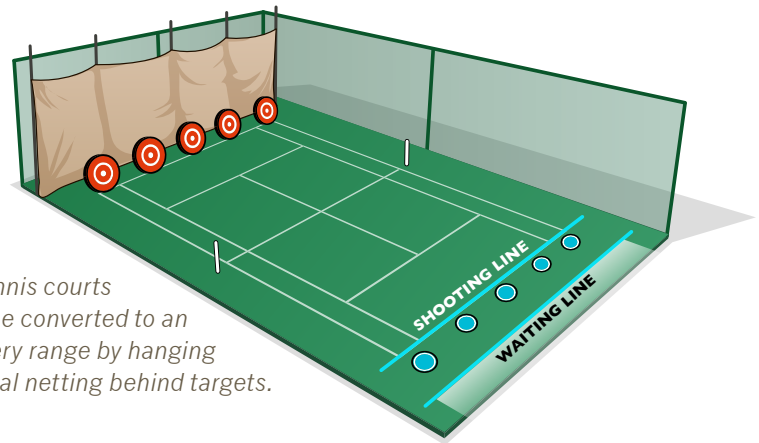
 [BUNKER HILLS ARCHERY COMPLEX](#)



↑ Any indoor activity that requires open space could be compatible with archery, like event or community centers. Covering targets with netting would allow the same space to be used for wedding and other income generating events. Bunker Hills Archery Complex, Anoka County, Minn.



↑ Injury rates per 1,000 participants in youth sports from 2000 through 2004.



→ Tennis courts can be converted to an archery range by hanging special netting behind targets.

→ With use of special netting, beginning archery programs can be conducted in a gym.



Photo courtesy of Arizona Game & Fish Dept.

↑ Archery and airgun are very compatible recreational activities. Ben Avery Shooting Facility, Phoenix, Ariz.

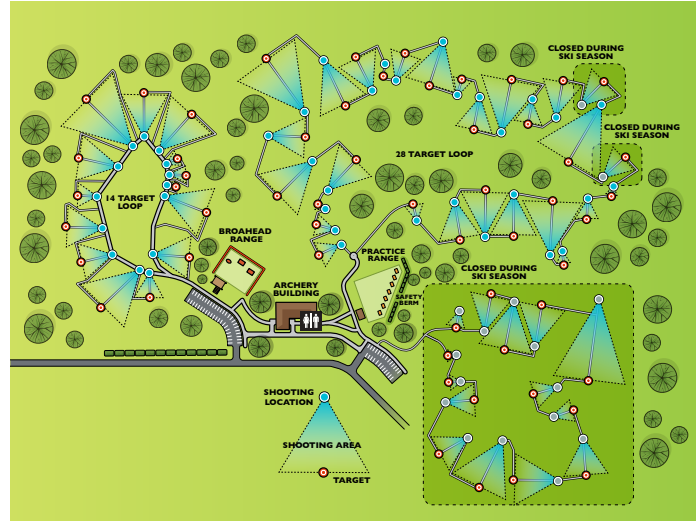
## 2. What are the space requirements for archery?

Although it would seem an archery range would take a lot of space, a high-quality shooting facility can fit just about anywhere. The space needed for archery is dependent upon available natural or manmade backstops, budget and the types of shooting being considered; the more shooting options available, the larger the park needs to be. Half-acre, fully contained facilities are not uncommon 📍 [STARING LAKE PARK](#). A small community range in open space can utilize as little as 2 acres 📍 [DEMOPOLIS SPORTS-PLEX](#), but 5 acres is a good starting point for most moderately sized ranges. The more targets offered, the more space needed.

📍 [BUNKER HILLS ARCHERY COMPLEX](#)



↑ Archery pavilion/containment range utilizing only ½ acre and located next to a dog park. 📍 [STARING LAKE PARK](#), Eden Prairie, Minn.



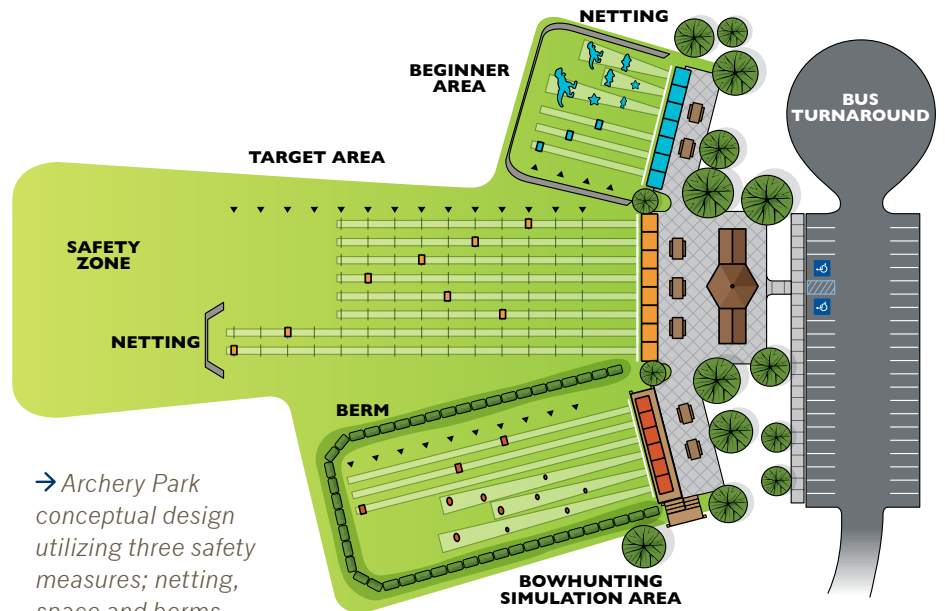
📍 [BUNKER HILLS ARCHERY COMPLEX](#), Anoka County, Minn.

## 3. What shooting features do I need to consider?

**Beginner area:** A separate area should be considered for beginning archers and classes. Beginners often shoot low draw-weight bows that are best shot into targets where low-velocity arrows will not bounce back from the target. These targets are often slightly different than those used for more advanced archers shooting higher velocity arrows. In addition, more targets can be placed at shorter distances (5-20 yards) to ensure shooting success. Moveable targets will also make it easier to conduct classes.

**Target practice area:** A minimum of five targets, staggered from 10 to 40 yards will serve a majority of recreational archers. Where space is available, longer distances should be considered for local target archers (Olympic competition is 90 meters for men – almost 100 yards) or bowhunters who hunt in western states (and shoot longer distances). Again, having moveable targets means the area could be used for intermediate and advanced shooting programs such as [Junior Olympic Archery Development \(JOAD\)](#), where participants shoot almost 80 yards in competitions.

**Bowhunting simulation area:** In eastern states, most bowhunters use treestands or ground blinds with a majority of shot opportunities presented at 40 yards or less. A platform design can simulate these common hunting scenarios.



→ Archery Park conceptual design utilizing three safety measures; netting, space and berms.

## ARCHERY PARK DEVELOPMENT GUIDELINES

In western states, most bowhunters utilize the spot-and-stalk method of hunting where shot opportunities are at longer distances. Distances at a practice range should reflect the most common hunting scenarios in that area. Broadhead use should be considered in this area and this topic is addressed later (refer to page 13).

**Walking course:** An archery trail should be considered where 3-D and field competitions are popular ([Archery Shooters Association](#), [National Field Archery Association](#), [International Bowhunting Organization](#)). This type of facility is also frequently used by hunters as it often

simulates natural hunting conditions, although it does require more land than other shooting areas (approximately 1 – 1.5 acres per target). Refer to the table on the top of page 5. 📍 [BUNKER HILLS ARCHERY COMPLEX](#), 📍 [ELM CREEK PARK RESERVE AND CARVER PARK RESERVE](#), 📍 [CULLMAN COMMUNITY ARCHERY PARK](#)

**Indoor archery:** Indoor facilities should be considered in any location where cold weather prevents use of outdoor ranges for more than three months. For more information on indoor range ideas and specifications, [Easton Foundations](#) has a guide. 📍 [BUNKER HILLS ARCHERY COMPLEX](#), 📍 [DEMME CENTER](#)

### 4. Where should the archery park be located?

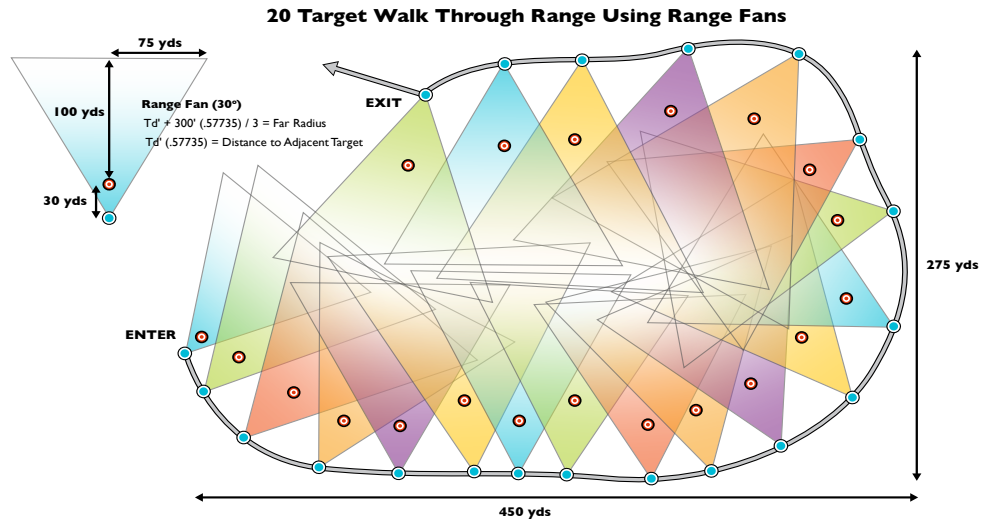
To ensure frequent use, archery facilities should be considered in and near other common park facilities to provide the most access and opportunity for residents in any community. These parks should be just as visible as other recreational opportunities and accessible via common travel routes (trails, roads etc.). Placing a few targets in a remote area without typical park amenities is unlikely to attract youth or families.

The best locations are where topography and other natural barriers can be used to improve safety. First, look for existing parks where space might not be fully utilized. If nothing is available in existing parks, locate archery facilities near other recreation hubs, like baseball and other sports complexes.

### 5. What archery activities and programs should I consider to aid in design of my facility?

**Programs:** Besides avid bowhunters and recreational archers, Boy and Girl Scouts, church, home school and other youth-oriented groups have great potential as users of an archery facility. Birthday parties and one-day events where residents can come out and try archery are other examples of programs that can be offered. Some specific programs to consider:

- [4-H Shooting Sports](#)
- [After School Archery Program](#)
- [Boy Scouts – archery merit badge](#)
- [Centershot Ministries](#)
- [Explore Bowhunting](#)
- [Hunter Education](#)
- [Junior Olympic Archery Development](#)
- [National Archery in the Schools Program](#)
- [USA Archery Adult Achievement Program](#)
- [US Collegiate Archery Program](#)



↑ This is a photo from an event in Athens, Ala., where they used the city trail to put up a temporary walking course.

**Tournaments:** Local tournaments can bring in anywhere from a handful of archers to several thousand. Facilities should consider additional space and target requirements if tournaments are part of the long-term plan. Some larger tournaments require a bid process that will outline minimum needs for a facility. A permanent facility may not necessarily need to meet tournament requirements, however, if nearby open fields and wooded areas can be used to temporarily accommodate the additional space needs 🎯 [CULLMAN COMMUNITY ARCHERY PARK](#). Tournament participation is likely to increase if sanctioned by a state or national archery organizations and a good marketing plan is developed.

**Games:** Many archery games exist and can add value to your range or excitement to your programs. Some additional risk management issues may have to be considered, depending on the game.

→ Paper targets can be purchased or other items, like balloons and playing cards, used for fun and additional challenge.



← Target throwers can be used for events and are a great way to provide extra income, but requires use of special arrows.



→ Motion/Pop-up target systems are another exciting shooting opportunity, especially for experienced archers. Systems can be expensive and require staff to operate. However, events and tournaments using the system can provide income back into the facility.



↑ Several manufacturers make paper targets with different games.



← Bowfishing is a popular activity in many states and setting up an area to simulate the activity could make an exciting addition. Special equipment is required.

→ Foam animals, monsters, and dinosaurs are used at tournaments or to add fun to any program.



→ Some companies even make targets that flip or have action, which is used to create an exciting competition.



## Professional Tournament Groups and Their Basic Requirements

	MAXIMUM DISTANCE	MINIMUM # OF TARGETS	TARGET TYPE
<b>OUTDOOR</b>			
ASA	known & unknown distances out to 45 yards	20-30 <sup>a</sup>	3D
IBO	unmarked distances out to 50 yards	30	3D
NFAA	80 yards	14 (a 28-target course, but 14 targets can be shot twice)	field & 2D
USA Archery Field	60 meters	24	field
USA Archery FITA	70 & 90 meters	space available	target
<b>INDOOR</b>			
NFAA	20 yards	space available	target
USA Archery	18 meters	space available	target

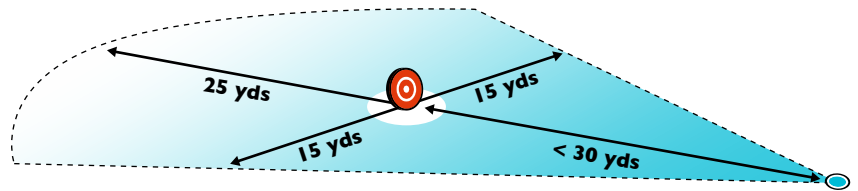
<sup>a</sup> State Qualifiers are 20 targets and State Championships are 30 (may use 15 twice for a State Championship)

↑ For more information about starting a tournament, visit [ASA](#), [IBO](#), [NFAA](#) and [USA Archery](#).

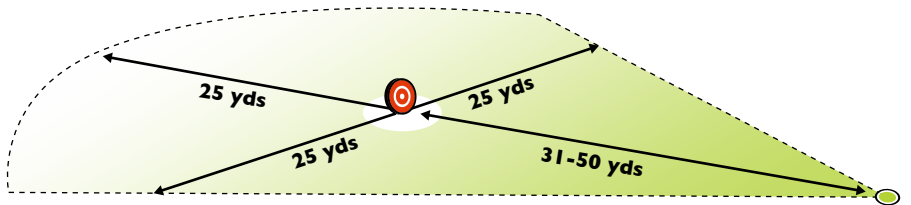
### 6. What can I do to manage risk/liability?

#### Using space as a safety buffer

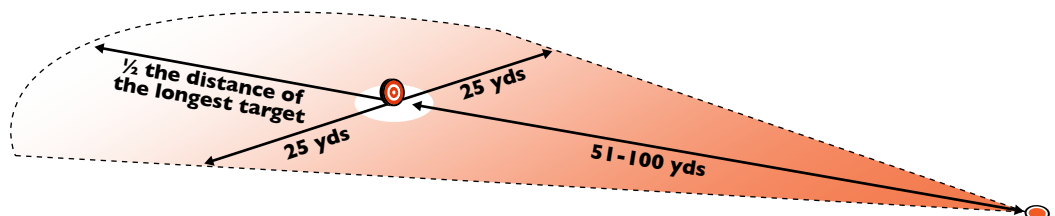
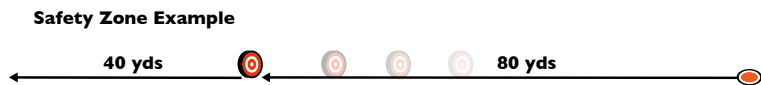
- For targets at distances less than 30 yards: Use a 15-yard safety buffer to the side and 25 yards beyond the targets.



- For shooting from 31 to 50 yards: Use a 25-yard safety buffer to the side and beyond the targets.

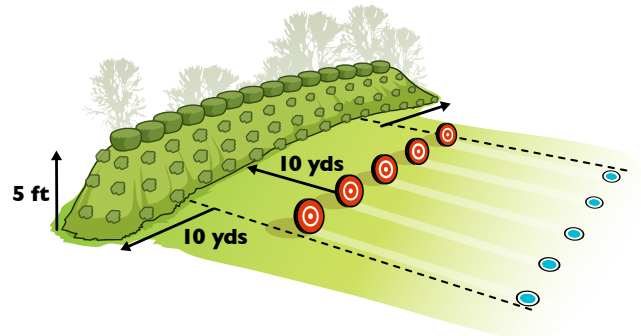


- For shooting distances longer than 50 yards: Use a 25-yard safety buffer to the side. Beyond the targets use a buffer that is half the distance of the longest target (for example: if the target is placed at 80 yards, the safety buffer should be 40 yards).

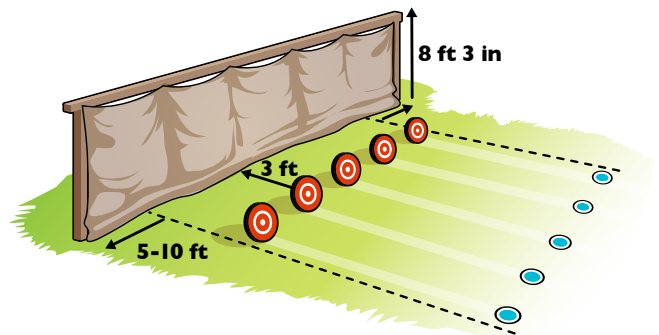


## Using manmade or natural barriers for safety

- **Earthen berm:** An earthen or stone berm built 5 feet or higher positioned within 10 yards beyond and to the sides of the targets.
- **Netting:** A net hung 3 feet behind the targets and extending 5 to 10 feet to the sides of the outermost targets is sufficient. Typical netting is made of kevlar and is 8-feet, 3-inches in height. Netting should be loosely hung and on well-secured metal or wooden posts. Wind and sun will break netting down faster than if used indoors. Netting should **ONLY** be used in a beginner area featuring bows with less than 30 pounds of draw weight and larger diameter arrows.
- **Natural barriers:** Shooting toward a hill or ravine will help restrict arrow movement beyond targets. Landscaping, especially dense species such as cedar and arborvitae, can be used to aid in reducing arrow loss.
- **Walls:** Walls can be built downrange taking wind and other weather conditions into account. A small neighborhood range can be entirely contained by a combination wall/baffle system.



↑ Earthen berms make great natural safety barriers. Adding shrubs and other landscaping material is ideal to keep the range looking like other parks.



↑ For beginner areas, special netting hung behind targets makes an ideal safety barrier.

→ A fully contained neighborhood facility.  
 📍 [STARING LAKE PARK](#), Eden Prairie, Minn.



↑ Hills make great natural barriers. Ben Avery Shooting Facility, Phoenix, Ariz.



↑ Walls can not only make great barriers, but can be used for advertising during events. 📍 [CULLMAN COMMUNITY ARCHERY PARK](#), Cullman, Ala.

## Controlling Access

Access should always be controlled so the entrance is behind the shooting line.

- **Fences/Gates:** Gates and fencing is not necessary, but should be considered where residential or other recreational uses exist downrange.
- **Natural Barriers:** Landscaping, hillsides and other natural barriers can be utilized to direct safe access to the range.



↑ Fencing can be utilized to control access. Marsden Archery Range, Ramsey County, Minn.



# ARCHERY PARK DEVELOPMENT GUIDELINES

- **Signs:** A welcome sign should include range rules, procedures, ordinance language and emergency phone numbers. Warning signs should be posted around the perimeter of any outdoor shooting range. Signs may also be placed on walking courses to indicate unsafe zones when searching for arrows.

## ↓ Sample Welcome Sign

↓ Warning signs should be posted around the perimeter of outdoor ranges



### Graniteville Archery Park

**Rules:**

- Follow archery shooting procedures.
- Number of arrows in = number of arrows out.
- Only shoot at designated targets.
- Always be aware of the target and what is beyond the target.
- Always keep bow pointed toward targets.
- Always draw bow with arrow parallel to the ground.
- Only nock arrows at the shooting line.
- Always have an arrow knocked when drawing to eliminate the possibility of a dry fire.
- Broadhead shooting is only allowed at specified targets and/or during special "sight-in" days.
- Anyone 16 and under must be under adult supervision.

**Shooting Procedures:**

- Verify that the range is clear.
- Give "Range is Hot" or similar command to indicate shooting may commence.
- When finished shooting, place bow on rack or set it down and wait behind the shooting line until all archers are finished shooting.
- Give a "Cease Fire" or similar command to indicate all shooting should stop.
- Verify all equipment is put down and remains behind the shooting line.
- Proceed to the targets to retrieve arrows.
- When using whistle commands: use one (1) whistle blast (i.e. "shoot") to indicate shooting may commence; three (3) blasts (i.e. "go get arrows") to indicate arrows may be retrieved, and four (4) or more blasts if an emergency exists. Two (2) whistle blasts (i.e. "get bows") are used during programs to indicate participants can pick up their equipment. This command is not necessary during open shooting.

**Hours of Operation:**

Monday - Thursday: 8 AM - 7 PM  
 Saturday: 8 AM - 8 PM  
 Sunday: 12 PM - 5 PM

**Contact:**

John Doe, Director of Parks & Recreation  
 123 Fake Street, Graniteville, State 29829  
 Phone: (123) 456-7890



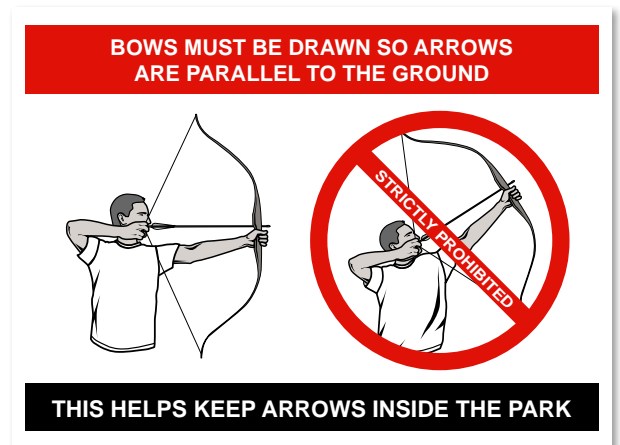
↑ Where possible, include a place on your sign to insert announcements. Ben Avery Shooting Facility, Phoenix, Ariz.

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## Additional range etiquette

- When people are waiting to shoot, keep shooting time under 30 minutes or take turns shooting no more than six arrows.
- When bringing your own paper targets to the range, attach the paper with easily removable adhesive and take everything with you when you leave.
- Always check your equipment – bow and arrows included – for damage to avoid injury.
- Archers should police themselves to ensure safety.

## Other ways to minimize risk

- Create a waiver that states all range rules and procedures will be followed. The best time to ask participants to sign the waiver is when fees are paid or passes handed out.
- Rental of equipment to adults, parents or guardians could be allowed after signing a waiver.
- Develop a set of operating procedures for the facility, including a regular maintenance schedule.
- Make sure the facility becomes a regular part of a staff security or police route.
- Post emergency procedures on entrance and informational signs.

## 7. Are most archery parks staffed?

No, most public and private outdoor archery ranges are not staffed. Some ranges allow users and/or members access to facilities via keys, pass-codes or similar entry systems. Larger facilities are often staffed to manage and run programs, classes, events and operational activities.

## 8. What should be included in my budget for the facility?

View the table at right for a samplet budget.

[CLICK HERE FOR A PRINTABLE SAMPLE BUDGET](#)

## 9. What user fees should be considered?

User fees for archery should be consistent with other recreational facilities, and daily fees may be considered. Annual passes for individuals and families are often easier to administer, especially where facilities are not staffed. Some facilities use a pay box located at the entrance based on the honor system. Group rates should also be considered, especially for school, church, Boy and Girl scouts, 4-H and other youth groups that may want to utilize the facility. Refer to individual case studies for sample fee structures.



→ Fee boxes are ideal for unstaffed facilities

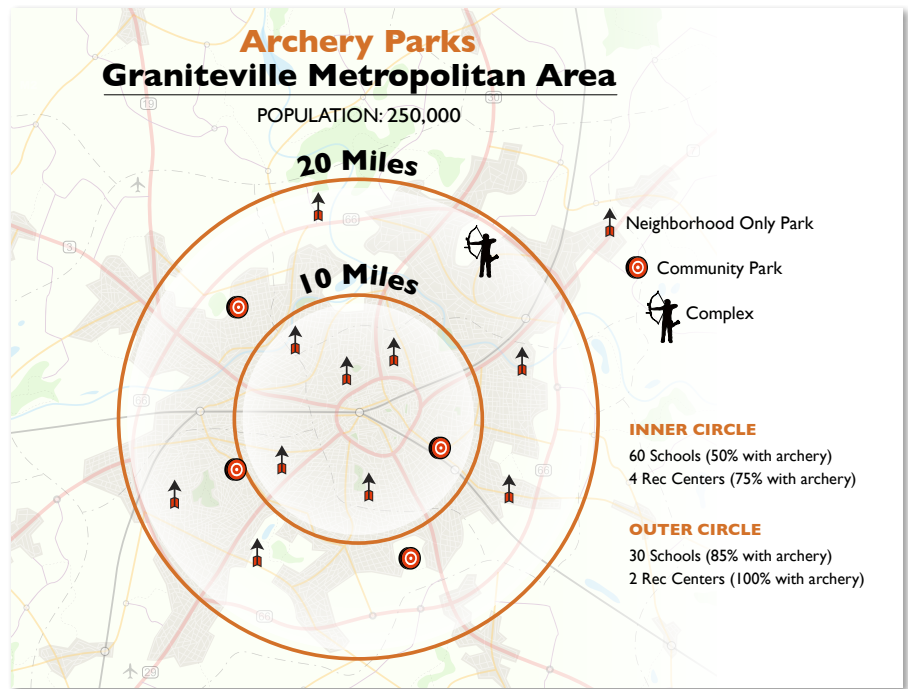
	TOTAL BUDGET	LOCAL ENTITY CONTRIBUTION	LOCAL 3 <sup>RD</sup> PARTY CONTRIBUTIONS	GRANTS	FUNDING NEEDED
<b>Recreation Programs</b>					
Equipment					
Training costs					
Staff & benefits					
<b>Programs sub-total</b>					
<b>Construction</b>					
Land (cost or value)					
Engineering/Site design contractor					
Staff & benefits					
Travel					
Site preparation					
land prep					
roads					
walkways					
utilities					
<b>Non-archery costs - outdoor</b>					
restrooms					
shelters					
storage buildings					
picnic tables					
benches					
signs					
bike racks					
playground					
Landscaping					
<b>Archery costs - outdoor</b>					
targets					
platforms					
ground quivers					
bow racks					
safety netting and poles					
berms					
range and rules signs					
Building costs - indoor					
<b>Archery Park sub-total</b>					
<b>Operations &amp; Maintenance (annual)</b>					
Staff & benefits					
Utilities					
Equipment & Target maintenance					
General facilities maintenance					
<b>O&amp;M sub-total</b>					
<b>Marketing</b>					
Mailings					
Media					
Brochures/Maps					
Grand opening event					
<b>Marketing sub-total</b>					
<b>TOTAL</b>					

## 10. How do I know there are enough archers to support an archery facility?

The best way to determine your archery market is to research existing archery retailers, clubs and organizations in the area. The Archery Trade Association lists its retail members at [www.archerysearch.com](http://www.archerysearch.com). These retailers are likely to be familiar with the archery market in the area. You may also contact your state archery association to find archery clubs near you. Call your state coordinator for the [National Archery in the Schools Program](#) to find how many schools include archery as part of their physical education curriculum. In addition, local 4-H programs sometimes run archery programs and the Boy Scouts have a merit badge for archery.

This local market analysis is important to determining your final plan for archery in the community. For instance, if there are a large number of schools participating in archery programs, beginner shooting areas may need to be larger. If 3-D archery is popular locally, a walking course should be considered.

A larger community could actually support several small neighborhood archery parks that could be used for archery programs and minor events along with a larger facility that could support many types of tournaments and competitions.



↑ Depending on a community's size, a variety of archery parks may be necessary to meet the needs of residents. In this example, we used a ratio of 15 archery parks per 250,000 people (approximately the current ratio used when infusing golf into a community's recreational menu). A majority of archery parks (say 60-75%) would be small neighborhood venues providing introduction and practice opportunities similar to the size and uses of a neighborhood ball field. Fewer (say 20-30%) could be midsized community parks large enough to support programs and small competitions. At least one destination park should be considered to accommodate larger events and competitions.

## 11. How do I fund the construction of my facility?

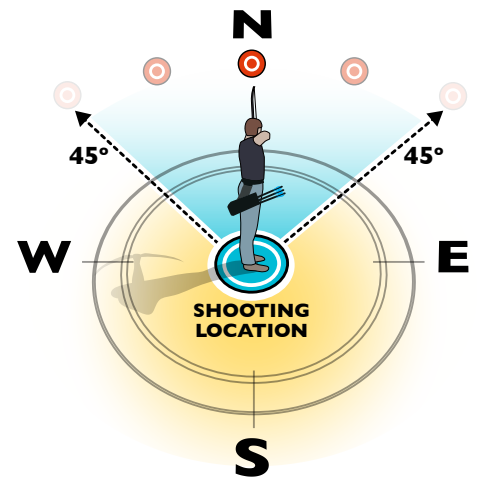
Funding can be found in the same places you would look to fund other recreational facilities. The Easton Foundations offer grants for archery facilities (<http://www.esdf.org/archery-facilities>), as do some state wildlife agencies. Contact your state's hunter education coordinator for more information (<http://www.ihea.com/instructors/directory-of-administrators.php>).

The Archery Trade Association has funded facilities. However, we work in partnership with the state wildlife agencies because they are the recipients of a federal excise tax levied on the archery industry to generate revenues for the enhancement of archery and bowhunting opportunities. Our funding will also only be considered if a full plan that includes archery programs is developed.


# Archery Range Design Elements

## 1. Sun Angles

A north-facing range is ideal, however, safety should be foremost. World Archery - formerly known as FITA - requires archers participating in its sanctioned events to shoot within 45 degrees of north ([www.worldarchery.org](http://www.worldarchery.org)). Permanent shade structures over the shooting line will also protect shooters from rain or excessive heat (note that some competitions do not allow shooters under covered structures).



## 2. Topography

Except for walking courses, most archery ranges are located on level ground. Take advantage of areas where shooting can be conducted toward hills, heavily wooded areas with no walking trails or shooting downward into ravines or valleys.  [DEMME CENTER](#)




→ Utilizing topography that allows for shooting downhill will increase archery safety.

## 3. Access Recommendations

1. Have a well-defined entrance and exit.
2. Informational signs that describe hours of operation, where to get range passes (where applicable), range rules, range procedures, emergency procedures and where to get information about local archery programs (where applicable) should be placed at the entrance.
3. Entrance to the range should be from behind the shooting line.
4. Provide adequate parking for vehicles, bikes and buses.
5. Walkways should connect all sections of the range.
6. Bathrooms, shelters, picnic tables, garbage receptacles, beverage machines and similar amenities should be provided, like at any public park.
7. Consider ADA accessibility:
  - Grade should be 5 percent or less (with ramping conditions can be increased to 8.33 percent).
  - Walkways should be hard-packed or paved.
  - Handicapped parking and drop off should be closest to range.



↑ A paved platform at the top of a hill on the first target of the walking course. Shooters with disabilities utilize friends to help retrieve arrows.  [CARVER PARK RESERVE](#), Laketown Township, Minn.



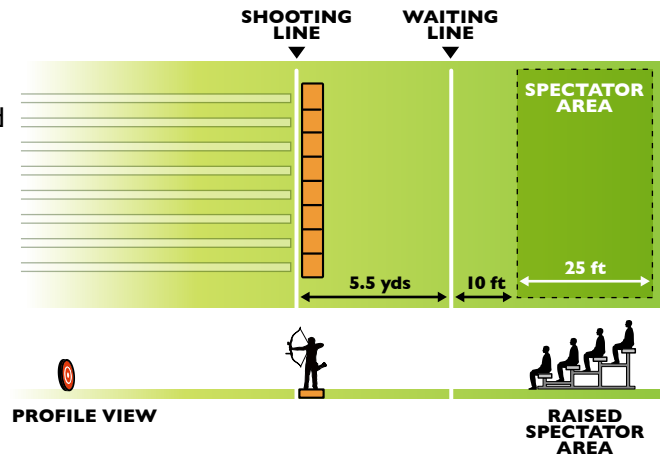
↑ Accessible range. Pontiac Lake Shooting Range, Oakland County, Mich.



↑ Accessible lift. Rose Lake Shooting Range, Clinton County, Mich.

## 4. Room for archer movement and spectators.

- A waiting area should extend at least 10 feet (3 meters) behind the shooting line indoors and 16½ feet (5 meters) outdoors.
- Spectator areas should be a minimum of 10 feet behind the waiting line. Up to 25 feet or more space should be considered if larger events or competitions will be held, especially for youth events that tend to bring in more spectators.
- If competitions or classes are held it would be ideal for spectators to be slightly raised to see downrange over the archers.
- For more information on spectator space, go to the following links:  
[www.esdf.org/archery-facilities/archery-facility-planning-guide](http://www.esdf.org/archery-facilities/archery-facility-planning-guide)  
[www.archery.org](http://www.archery.org)



## 5. Well-marked shooting lanes

- Distinguishing line of pavement or packed gravel.
- A platform at each shooting lane to help keep facility clean.
- Where ground quivers and/or bow racks are located.
- Paint.



↑ Paved shooting line. [BUNKER HILLS ARCHERY COMPLEX](#), Anoka County, Minn.



↑ Use of landscape blocks for shooting lines. [PASEO VISTA RECREATION AREA](#), Chandler, Ariz.



↑ Ground quivers serve as the shooting line. Athens Community Archery Park, Athens, Ala.



↑ Raised platform. Carver Park Reserve, Victoria, Minn.

## 6. Distance markers

This should be consistent with the look and feel of other signs and amenities at other parks in the area.

→ Quiver and distance marker. Ben Avery Shooting Facility, Phoenix, Ariz.



↑ Distance marker. Boosalis Shooting Park, Lincoln, Neb.



↑ Bow rack and distance marker. Spring Lake Park Reserve, Dakota County, Minn.

## 7. Shooting lanes

- Common widths are 24 to 30 inches, therefore a 5-foot shooting lane for each target is sufficient to accommodate 2 archers per target at most ranges.
- If the range is intended to support World Archery competitions, then each lane needs to be at least 32 inches wide for each shooter. With 2 archers per lane, each lane should be 5-feet, 4-inches.



↑ Bow racks should appear near all shooting lines, including shooting from platforms. 📍 [CARVER PARK RESERVE](#), Victoria, Minn.

## 8. Shooting equipment accessibility

- Bow racks may be placed at or behind the shooting line. At beginner ranges, however, bow racks should be placed well behind the shooting line to make it easier for the instructor to maintain visual control of the shooting line. Bow hangers should also be placed on platforms.
- Quivers should be placed at the shooting line and can be as simple as a metal ring on a post or pvc pipe. It can also be attached directly to the bow rack where they are placed on the shooting line.
- Archers often carry their equipment in cases, along with many shooting accessories and tools. If parking is not directly behind the shooting line, additional tables and/or benches should be considered for archers to keep extra equipment nearby.



Photo Courtesy of Arizona Game & Fish Dept.



↑ PVC ground quiver. Ben Avery Shooting Facility, Phoenix, Ariz.

↑ PVC quiver attached to bow rack. 📍 [CARVER PARK RESERVE](#), Victoria, Minn.

## 9. Targets

- There are several manufacturers that make targets specifically for shooting ranges. Each of the case studies associated with this guide will list the types of targets used and how often they are replaced.
- Refer to the manufacturers guidelines for recommendations on target frame design. Some targets require shelter to prolong target life and others need rain to help expand target materials.
- Often times, the front of target frames are also covered with rubber, used fire hose or other materials to help protect wood from damage caused by arrows.



Photo courtesy of Arizona Game & Fish Dept.

↑ Layered carpet target often used in southwestern states, Ben Avery Shooting Facility, Phoenix, Ariz.



↑ Protected target frame. Lake Elmo Park Reserve, Washington County, Minn.



↑ Simple target frame. 📍 [CARVER PARK RESERVE](#), Victoria, Minn.

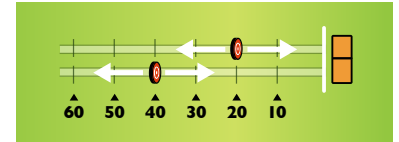
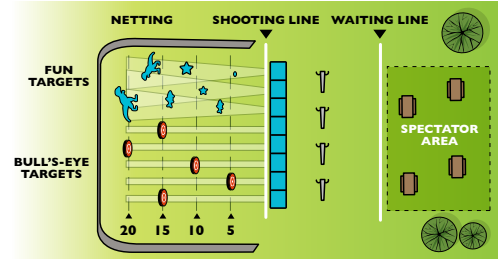


↑ Double target frame. Athens Community Archery Park, Athens, Ala.

## Specific shooting areas

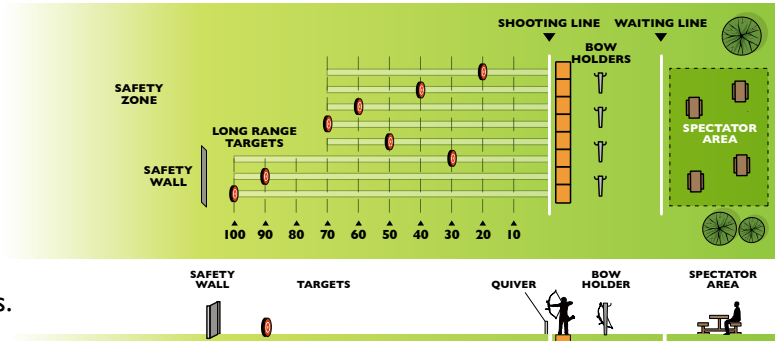
### 1. Beginner area

- Targets should be placed from 5 to 20 yards to ensure success.
- Targets for low draw-weight bows should be used (usually less than 30 pounds).
- Moveable targets are ideal so distances can be increased or decreased based on the skill level of the archer while keeping the shooting line in one place.
- Five bull's-eye targets would accommodate a class of 10 easily. Additional participants can shoot in turns.
- When running programs, bow racks are often placed between shooting line and waiting line to aid in safety and range control. This should be considered at a permanent range as well.
- A few fun targets could be located in the beginner area to the side of other targets. Targets may resemble monsters, cartoon characters or dinosaurs. These can be arranged so that more than one target can be shot from a single shooting location.



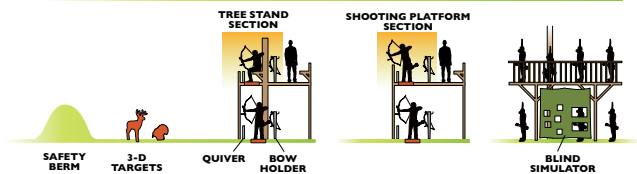
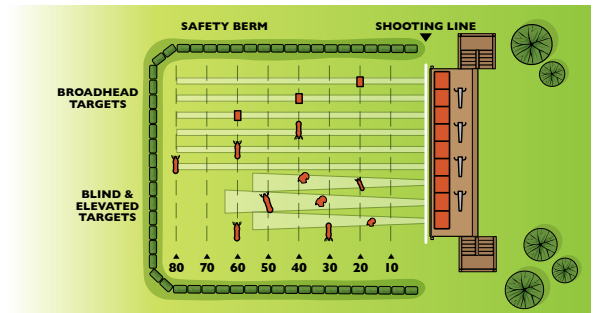
### 2. Target area


- A minimum of five targets placed from 10 to 40 yards.
- It is a good idea to double the most frequently used targets, which are usually at 20 and 30 yards.
- Targets out to 100 yards (90 meters) are necessary for competitive archers or bowhunters who need to practice for western hunting conditions.
- If a separate area is not being considered for bowhunters, this area is where special broadhead targets (refer to page 14) could be placed to the side of other targets.
- Targets should ideally be designed for higher draw weight bows and crossbows.
- Moveable targets would be ideal, especially if the range is to accommodate competitions.



### 3. Bowhunter area

- A minimum of five targets placed from 10 to 40 yards minimum.
- Targets out to 100 yards for bowhunters who need to practice for western hunting conditions.
- This area is where special broadhead targets (refer to page 14) could be placed to the side of other targets.
- Targets used should ideally be designed for higher draw weight bows and crossbows.
- An elevated platform that can accommodate at least two shooters at a time should be considered.
- A simulated blind should also be considered for this area and can be incorporated into the platform, or set up as a separate lane.



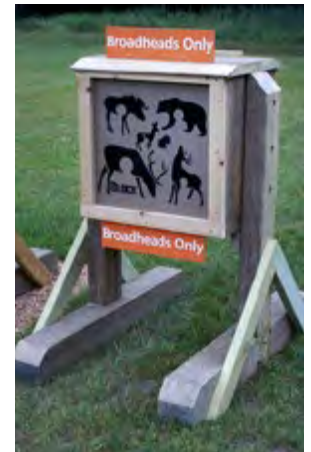
→ Elevated platform (L) and simulated blind (R).  [CULLMAN COMMUNITY ARCHERY PARK](#), Cullman, Ala. and Lake Elmo Park Reserve, Washington County, Minn.

## 4. Dealing with crossbows and broadheads on the range

- We do not recommend equipment bans of any kind and encourage ranges to accommodate crossbows and broadheads at every facility. Many range operators will tell you that bans don't prevent use, therefore, we recommend several options for incorporating broadhead use at the facility.
- Crossbows have become more broadly legalized for hunting and a small segment of archers use them for competition. Today's crossbows and high-performance compound bows produce similar arrow speeds. However, arrows shot from crossbows are heavier and have a higher overall kinetic energy resulting in faster target wear. A target with a worn center might still stop an arrow shot from a compound bow if there is 20 inches of penetration. Because crossbow arrows are much shorter than normal arrows, however, a worn target center could result in the inability to easily retrieve them from the target or result in a pass-through. Planning and budgeting for target replacement and repair is the best solution. Crossbow use on any beginner range is strongly discouraged except for programs using crossbows with less than 30lbs of draw weight.
- Broadheads have cutting surfaces which can affect the longevity of the targets on the range. The following considerations should be made to accommodate for the use of broadheads:
  - Provide a clearly labeled, manufactured target specifically designed for shooting with broadheads and place it at 20 yards (the most common distance used to practice).
  - Provide a separate area with broadhead pits that can be used whenever the range is open.
  - Set up "sight-in" days, set out broadhead-specific targets during the hours open for broadhead shooting and advertise for hunters to come out and use the range during those dates and times.



↑ Broadhead Pit. Ben Avery Shooting Facility, Phoenix, Ariz.



↑ Clearly labeled broadhead only target. 📍 [CARVER PARK RESERVE](#), Laketown Township, Minn.

### Indoor facilities

- Indoor archery facilities should be considered where weather prevents outside shooting from occurring for 3 or more months per year and where populations can support its daily use and maintenance.
- Because indoor facilities usually include many more supporting elements like lobbies, meeting rooms, bathrooms and storage as well as engineering, they are not addressed in this document.
- Please refer to the [Easton Foundations Archery Facility Planning Guide](#) for guidance in building your indoor facility. The Archery Trade Association can also refer you to several indoor facility designs. 📍 [BUNKER HILLS ARCHERY COMPLEX](#), 📍 [DEMME CENTER](#)

### Non-archery design elements to consider

**Lighting:** Bowhunters and other recreational shooters often like to practice before work or in the evenings. Having a lighted facility can significantly extend shooting hours.

**Storage:** Consider having a place to store replacement targets, program targets and equipment, repair kits, signs, carts to move equipment around, places to hang bows and store arrows.

**Use tracking:** Incorporate people counters, lasers at archery park entrance or cameras into design where facilities are not staffed. Where facilities are staffed, the same system used to track use at a recreation center can be utilized. Occasional on-site counts at varying times of the year, month, week and day could be used to determine use patterns.

**Public announcement system:** Should be considered if larger events are to be held at the range.

**Fee boxes:** Ideal for unstaffed facilities.



↑ Fee boxes are ideal for unstaffed facilities





## Operational Procedures

An operations manual should be prepared, especially for an indoor facility. The following are items to contain in this manual:

1. Mission and Vision for facility
2. Facility attributes
  - Location and address
  - Access/Common areas
  - Archery range (indoor and/or outdoor) description
3. Copy of local ordinances (if applicable)
4. Staff and Management
  - Full-time staff
  - Part-time staff
  - Volunteers
  - Advisory Committee
  - Training requirements
5. Customer Relations
  - Individuals and User Groups defined
  - Orientation/safety training (if applicable)
  - Customer service and feedback
6. Programs and Events Management
  - Public open shooting
  - Introductory classes and camps
  - Skill Development classes, camps and year-round programs
  - Leagues and tournaments
  - Organization uses
  - Corporate uses
  - Scheduling policy
7. Hours and Fees
  - Hours of Operation
  - Membership fees
  - Daily use fees
  - Annual pass fees
  - Group fees
8. Range rules and procedures
  - Range rules
  - Archery range procedures (with and without whistle commands)
9. Maintenance plans
  - Janitorial (trash and cleaning schedules)
  - Grounds Maintenance
  - Monthly building checks
  - Landscaping
  - Snow removal
  - Annual maintenance schedules (painting, etc.)
  - Archery Maintenance
  - Target and frame repair and maintenance
  - Program equipment repair and maintenance
  - Inventory of equipment (when purchased, installed, fixed/repaired/rotated and replaced)
  - Insurance and legal issues

## Ordinances

You do not have to consider adding or adjusting ordinances to build an archery park, especially if the risk management issues presented in this document have been addressed. The following is language to be considered when shooting in back yards or for hunting.

### **A person may shoot a bow and arrow on private property in the city if these requirements are met:**

- (1) All shots must be aimed toward a target owned by the property owner or tenant, and the target must be on the archer's property. The target must be maintained in good condition, which means capable of stopping arrows no matter where they strike.
- (2) A backstop must be used and positioned on the archer's property to prevent any arrow missing a target from crossing into or over neighboring property, unless the neighbor has provided written permission for the archer to trespass. Archers can use a building on their own property as a backstop. All backstops must prove capable of stopping arrows no matter where they strike.
- (3) An adult (at least 18 years old) must be present and supervising any archer under age 16 who is shooting a bow with a draw weight of 30 pounds or more. The archer and the supervising adult are responsible for the impact of all shots.
- (4) An archer of any age can shoot a bow with a draw weight less than 30 pounds under these conditions: a) An adult must be on the premises and aware the archer is practicing; b) The archer must use field or target points; c) The archer must comply with Section 1 and Section 2.
- (5) As an added precaution, the city suggests archers practice from an elevated position whenever possible so they are aiming down into the target.

### **If your community is considering hunting within city limits, these ordinances could help provide guidelines.**

- (1) All hunters must follow state hunting laws and license requirements to bowhunt within city limits.
- (2) The discharge of a bow must be on the hunter's own land or the hunter must have express written permission of the property's owner to discharge such a bow on the property of another.
- (3) Hunting is not allowed within 150 feet of any public park land, public trail, public right of way or any land or building not owned by the landowner.
- (4) If discharging a bow within 150 feet from a property line, any such discharge shall be toward the interior of the parcel upon which the discharge is occurring

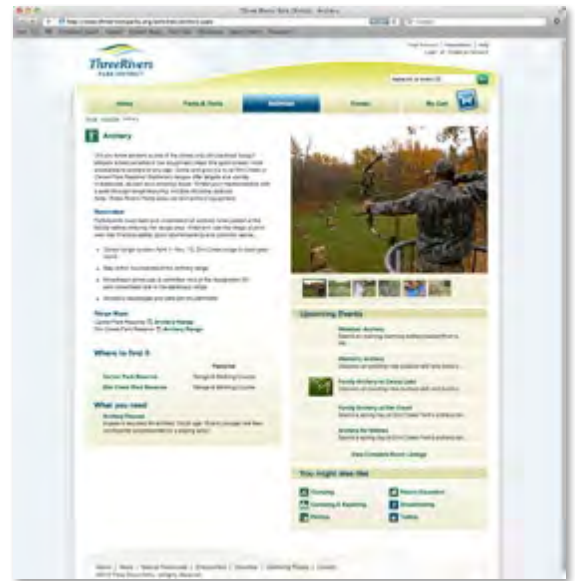
## Insurance

Archery is generally covered under any community's general liability policy. Some companies offer insurance for club ranges and individuals not covered under such policies.

- <http://www.burrcompany.com/ArcheryRanges.aspx>
- <http://www.outdoorsinsurance.com/ussa.aspx>
- <http://www.sadlersports.com/nfaa>
- ASA, IBO, NFAA and USA Archery all offer insurance for their clubs.

## Marketing and Web sites

- Archery facilities and programs should be located on community Web sites and program brochures like other recreational opportunities in the community.
- Good sample Web site:  
<http://www.threeriversparks.org/activities/archery.aspx>



↑ Archery website for Three Rivers Park District, Minn.

## Construction drawings available:

- Target stands (two designs)
- Broadhead pit
- Platforms (three designs)
- Buffer fence
- Archery Pavilion/Containment Range

CONTACT:  
Archery Trade Association  
[www.archerytrade.org](http://www.archerytrade.org)  
[info@archerytrade.org](mailto:info@archerytrade.org)  
(866) 266-2776

## Disclaimer:

The information contained is not a guarantee of safety or accident prevention. Like with any sport, safety information is provided to minimize risk of incident or liability. Case studies are meant to be examples, not endorsements.

## List of Case Studies

### [BUNKER HILLS ARCHERY COMPLEX](#)

Anoka County, Minn. – Indoor range, broadhead range, target range and three walking courses.

### [CULLMAN COMMUNITY ARCHERY PARK](#)

Cullman, Ala. – Outdoor archery park with youth area, target area, bowhunting area, walking course and small indoor range.

### [DEMOPOLIS SPORTS-PLEX](#)

Demopolis, Ala. – Outdoor archery park with youth area, target area and bowhunting area incorporated into city's Sportsplex.

### [STARING LAKE PARK](#)

Eden Prairie, Minn. – Fully contained neighborhood range/archery pavilion.

### [ELM CREEK PARK RESERVE AND CARVER PARK RESERVE](#)

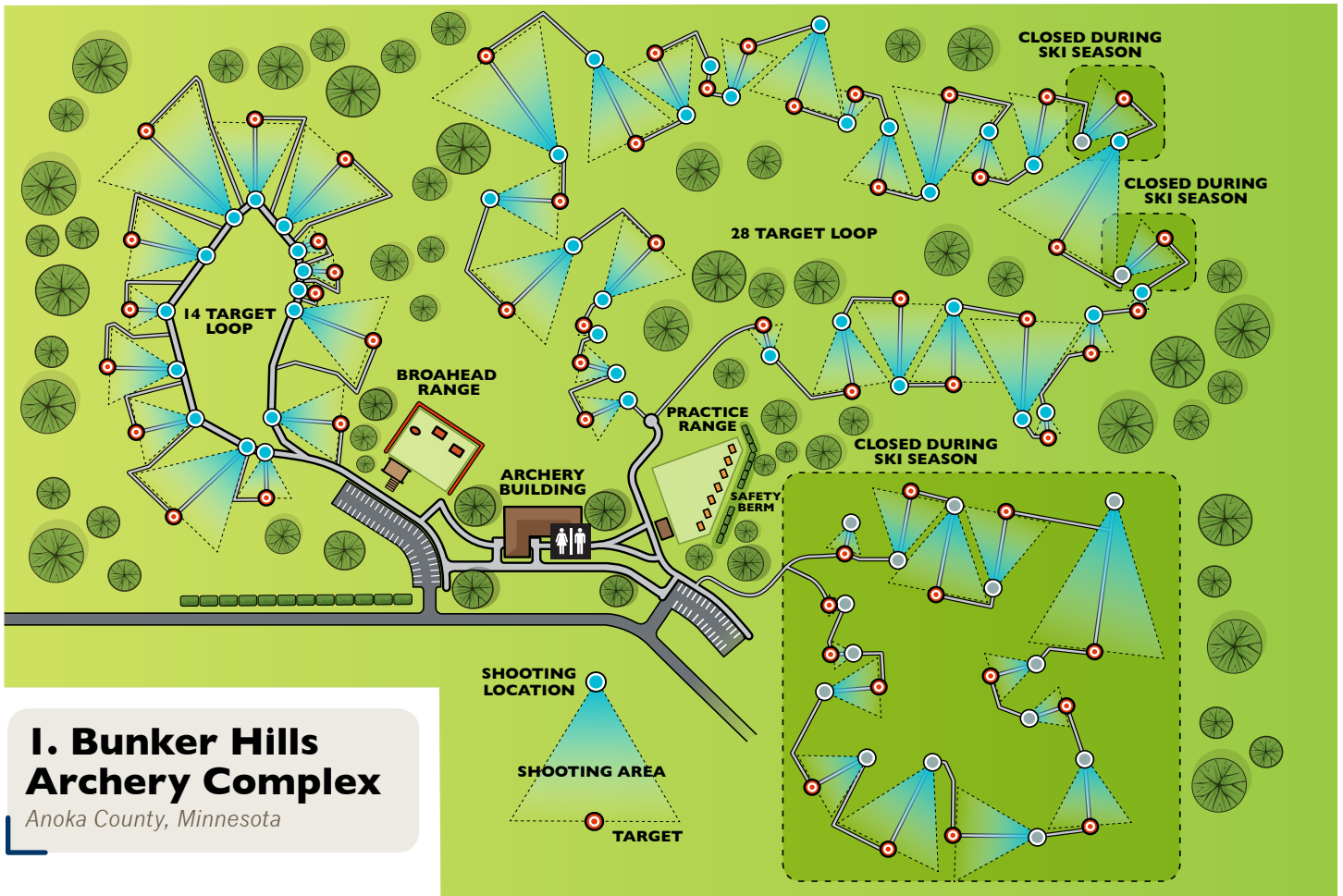
Three Rivers Park District, Minn. – Two archery ranges, each with target range and walking course.

### [JOHN AND MARNIE DEMMER SHOOTING SPORTS, EDUCATION & TRAINING CENTER, MICHIGAN STATE UNIVERSITY](#)

Lansing, Mich. – A combination archery and firearms indoor facility and outdoor archery park with youth area, target area, bowhunter area and 3-D walking course.

### [PASEO VISTA RECREATION AREA](#)

Chandler, Ariz. – A static archery range was part of the master plan of the park which also includes a dog park, disc golf, playground and running trails.



## I. Bunker Hills Archery Complex

Anoka County, Minnesota

### Community Background

- Anoka County is a part of the 7 County Minneapolis/St. Paul Metropolitan area with a population of more than 330,000.

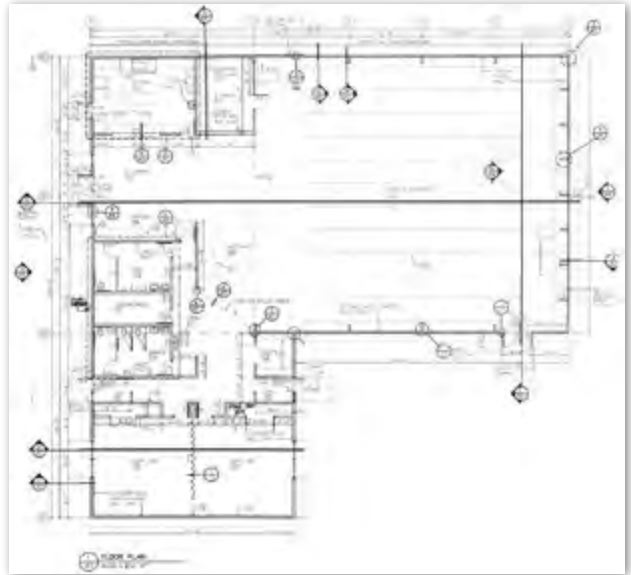
### Location, Ownership and Contact Information

- Owned by Anoka County.
- Archery Complex is located northwest corner of Bunker Hills Regional Park
- Anoka County Parks  
550 Bunker Lake Blvd NW  
Andover, MN 55304  
(763) 757-3920  
[http://www.anokacountyparks.com/parks/bunker\\_hills\\_regional\\_park/about.html](http://www.anokacountyparks.com/parks/bunker_hills_regional_park/about.html)
- Rapids Archery Club  
1255 133rd Ave NW,  
Andover, MN 55304  
(763) 862-8163  
<http://www.rapidsarchery.org/index.html>



**Design & Description**

- Outdoor Archery Park
  - General target range: 18 targets from 10-80 yards and 4 targets from 50-90 meters to accommodate both recreational and target competitors.
  - Broadhead range: 5 sod bale targets out to 40 yards with small tower.
  - Fourteen target semi-accessible walking course (NFAA field) from 10-80 yards.
  - Fourteen target walking course (NFAA field) from 10-80 yards.
  - Twenty-eight target walking course (NFAA field) from 10-80 yards.
- Indoor Archery
  - 8400 sq ft
  - Archery range
  - Kitchen
  - Restrooms
  - Classroom
- General Access Area
  - Parking  Paved  Gravel
  - Bus turn-around capability  Yes  No
- Family-friendly amenities
  - Shelter  Yes  No
  - Benches  Yes  No
  - Picnic Tables  Yes  No
  - Play Area  Yes  No – in park
  - Restrooms  Yes  No
  - Nearest beverage or snack vending or convenience store: Indoor archery range. When indoor range is closed, within 1/2 mile.
- Bunker Hills Regional Park: 1600 acres
  - Activities Center
  - Bunker Beach water park
  - Horse trails
  - Biking/Hiking
  - Cross Country skiing
  - Golf Course
  - Camping
  - Playground



**Hours of Operation**

- Outdoor range open 6 a.m. to 1/2 hour after sunset, March-November. Closed during cross country skiing.
- Indoor range open via Rapids Archery Club partnership:
  - From November to mid-April; Tuesdays and Thursdays 6-9 p.m., Saturdays 5-9 p.m. and Sundays 1-5 p.m.
  - From November to January, open Mondays from 6-9 p.m.
  - From January to mid-April open Tuesdays from 9 a.m.-1 p.m.
- The indoor range is staffed when open by volunteers from the club.

**Budget & Fee Structure**

- Land is valued at approximately \$600,000.
- Construction budget was \$825,000 in 2001 and included \$550,000 for the building and \$275,000 for outdoor areas.
- Operating expenses are approximately \$15,000 per year for staff and \$20,000 for operations and maintenance.
- The archery center provides about \$20,000 in annual income to the county. Additional income is generated by the Rapids Archery Club.
- \$25 annual vehicle pass for parks.
- \$3 per visit to any of the archery ranges or \$60 for annual pass (unless a member of Rapids Archery Club).



**Timeline**

- Rapids Archery Club owned 20 acres of land shortly after they were formed in 1959. The land was sold to Anoka County in 1972 and the first archery building was built in 1977.
- 1998 Master plan suggested moving archery.
- 1999 fire in park led to a settlement of \$800,000 which was used to for the indoor archery complex and was opened in 2001.



**Maintenance**

- 30 year partnership between Anoka County and Rapids Archery Club. The current license agreement is for 10 years.
- Anoka County pays utilities and some herbicide, cuts grass, plows snow and maintains the building.
- Rapids Archery Club maintains the archery ranges, sprays weeds, spreads wood chips and pays for additional herbicide when needed.
- All members (\$59 for 1st year and \$32 annually after that) are required to work a minimum of 20 hours per year. After the first year, members are allowed a “non-working” membership of \$132 annually (2011).
- Indoor range targets (Block) are replaced about every 3 years. Outdoor targets (Pacific Bow Butt) are replaced at varying times depending on their distance on the range; 20-30 yard targets are replaced every year, 30-50 yard targets are replaced every 2-3 years and targets over 50 yards are replaced every 3-4 years. Sometimes the 30-50 yard targets can get moved over to the 50+ yard area to get another year out of them.



**Safety**

- There have been no safety concerns or accidents.
- Vandalism issues: Every year one or two targets are destroyed by people shooting broadheads into them and a sign or two will be damaged.
- Wood target stands need occasional repair. Material is supplied by the county and labor is provided by the club.

**Program & Event elements**

- Beginning Archery: 6 weeks for 1.5 hours each week, offered twice per year.
- Beginning classes are limited to 50 students per class and often have a waiting list.
- Archery Camps in conjunction with Wargo Nature Center.
- Boy and Girl Scout, Homeschool Archery classes and church programs offered throughout the year.
- Bowhunter Education classes offered twice per year.
- Rapids Archery JOAD club (Bandits) runs throughout the year (\$30 for 8 weeks) on Saturday mornings, 1½ hours each for the Standard and Advanced groups. To reach the Advanced group, a participant may be invited by the head coach.
- Rapids Archery Club offers at least ½ dozen archery tournaments and events each year, including several outdoor 3D shoots and an indoor 300.
- Approximately 200-230 students are reached through their scouting programs, 30 per class through home-schooled classes (2 times per year) and 50 per class through Bowhunter Education (2-4 time per year).

- Facility is also utilized by local 4-H shooting sports program.
- Special hunts occur in some Anoka County parks, but not at the range.

**Storage Elements**

Indoor building storage room, outdoor storage shed near general target range.

**Marketing and Web sites**

- [www.anokacountyparks.com/recreation/archery.html](http://www.anokacountyparks.com/recreation/archery.html).
- [www.rapidsarchery.org](http://www.rapidsarchery.org).
- Archery classes are a part of the recreation brochure.
- Rapids Archery Club does outreach at local festivals and events.

**Answer to the question; if we had to do over again, what would we do differently?**

The indoor range should have been longer to accommodate a larger waiting area behind the shooting line. A place for outdoor vending machines is needed. A sprinkler system should have been installed indoors. Without the sprinkler system, maximum capacity is 50 people for any one event, which limits the income that can be derived from larger events and building rental.

**Any issues with neighbors, working with council etc. that others could learn from:**

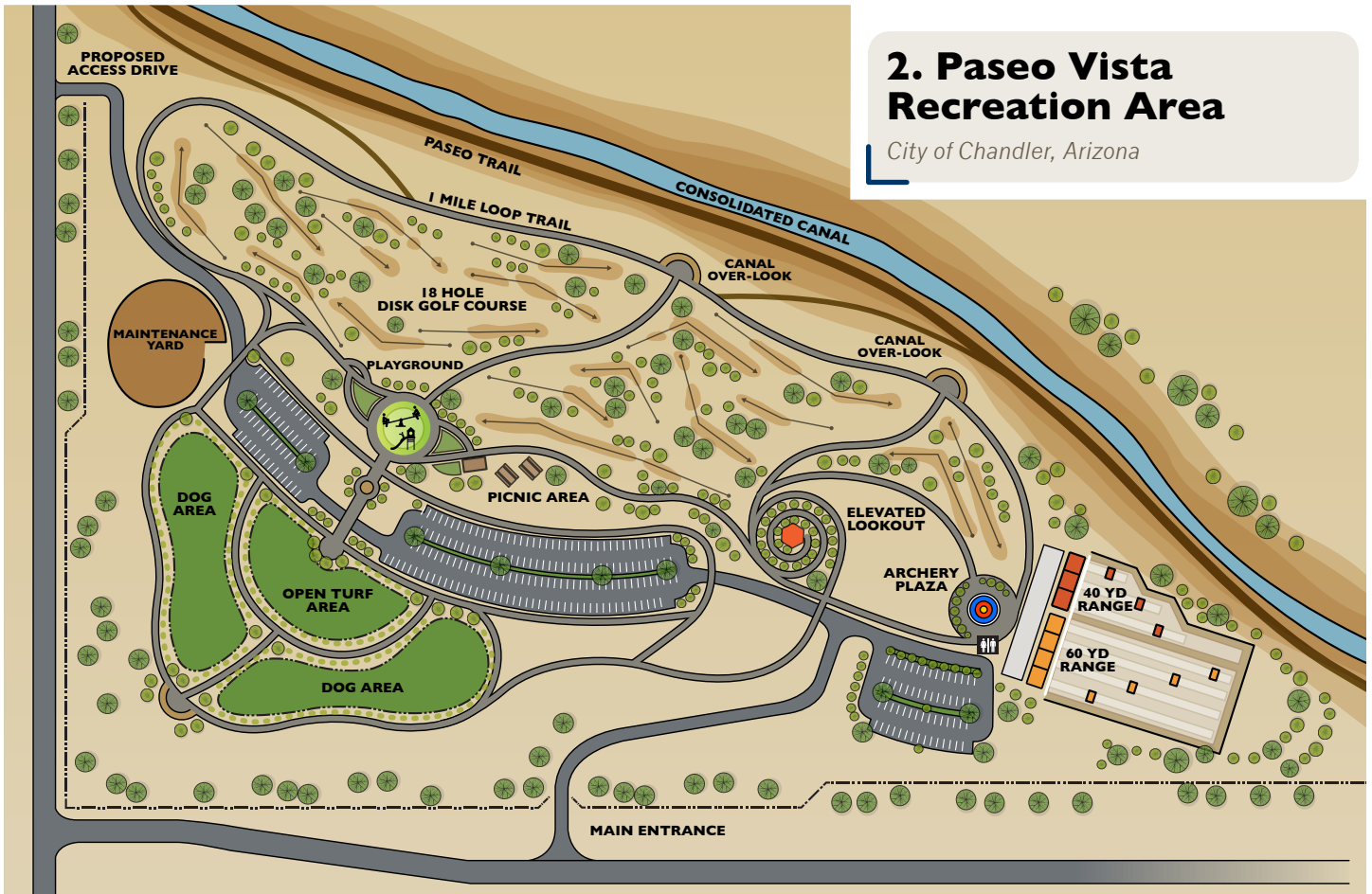
Because the archery facility is located inside a large park that was master-planned, there have been no issues.

**Partnership**

The 10 year license agreement outlines maintenance as per above. The club is also responsible to offer programs at the facility. In exchange for their labor, the club has exclusive access to the indoor range for 2.5 uses per week per year and to the outdoor range for leagues for 2 evenings per week from May through September and 4 days per month for tournaments.

## 2. Paseo Vista Recreation Area

City of Chandler, Arizona



### Community Background

- Chandler is a suburb of Phoenix with a population of more than 200,000.

### Location, Ownership & Contact Information

- Owned by City of Chandler, 64 acres total.
- Facility is part of the Paseo Vista Recreation Area.
- City of Chandler Parks  
P.O. Box 4008, Chandler, AZ 85244-4008  
(480) 782-2727
- [www.chandleraz.gov/default.aspx?pageid=755](http://www.chandleraz.gov/default.aspx?pageid=755)
- Paseo Vista Archery Club  
[www.paseoarchery.org](http://www.paseoarchery.org)



Photo Courtesy of Arizona Game & Fish Dept.

### Design & Description

- Outdoor Archery Park
  - General target range: 14 targets from 10-80 yards.
- General Access Area
  - Parking  Paved  Gravel
  - Bus turn-around capability  Yes  No
- Family-friendly amenities
  - Shelter  Yes  No
  - Benches  Yes  No
  - Picnic Tables  Yes  No
  - Play Area  Yes  No



- Restrooms ■ Yes □ No
- Nearest beverage or snack vending or convenience store: within half-mile.
- **Paseo Vista Recreation Area**
  - Dog park
  - Disc Golf
  - Playground
  - Walking trails
  - Due to landfill regulations, site development was limited to activities and structures that did not require digging. Permanent structures, such as restrooms, were limited in size. Shade ramadas were built on large “floating” concrete slabs, and asphalt and concrete use was held to a minimum.



Photo Courtesy of Arizona Game & Fish Dept.

**Hours of Operation**

- Open 6 a.m. to sunset, year-round.
- The range is unstaffed during public shooting hours.

**Budget & Fee Structure**

- The project was funded through the sale of General Obligation Bonds approved by Chandler voters. A separate budget for archery is not available.
- City provided \$15,000 worth of program equipment to the Paseo Vista Archery Club and the club runs programs.
- City received a \$500 NRPA grant in April 2010 that was used for transportation and instructor fees for Youth Summer Camp.

**Timeline**

- Park development approved: 2004
- Landfill closed and public meeting held where archery was approved: 2005
- Construction began: January 2008
- Range opened: December 2009

**Maintenance**

- The city of Chandler provides regular maintenance (bathrooms, weed control, etc.). The Paseo Vista Archery Club maintains the archery targets, distance markers and other archery equipment.
- Targets (Big Green Targets) are replaced or repaired annually at a cost of about \$2,600.

**Safety**

- Special safety concerns: Even though well-signed, people occasionally walk up to the back of the range.
- Security: Patrolled with the rest of the park.
- Vandalism issues: some copper wire was stolen from electrical boxes and some equipment was stolen from the storage area.

**Program & Event Elements**

- Introduction to Archery: 1 ½ hour “taste of archery” held on Saturday mornings for \$3 per day.
- Beginning Archery: Saturdays mornings, 1 hour each week for 8 weeks. \$11 resident fee, \$40 instructor fee and \$16 material fee (total = \$67). Held at Archery Headquarters – local archery shop.
- Beginning Family Archery Class: Saturday mornings, 1 hour each week for 6 weeks. \$17 resident fee plus \$60 instructor fee (total = \$67).



- Intermediate Archery Class: Saturday mornings, 1½ hours each week for 6 weeks. \$21 resident fee and \$75 instructor fee (total = \$96).
- The Paseo Vista Archery Club offers the above programs and programs for homeschool groups, charter schools and Boy and Girl Scout troops. A Junior Olympic Archery Development club is also held year round for youth more serious about the sport.
- A weeklong JOAD camp and state JOAD championship are held annually.
- A local homeschool group utilizes the facility to conduct their National Archery in the Schools Program program.
- The average beginner class has about 25 participants and intermediate class has 20.
- Instructor Certification classes.

**Storage Elements**

- A storage trailer holds extra targets and program equipment.

**Marketing and Web Sites**

- [www.chandleraz.gov/default.aspx?pageid=755](http://www.chandleraz.gov/default.aspx?pageid=755)
- [www.paseoarchery.org](http://www.paseoarchery.org)
- Archery classes part of recreation brochure.

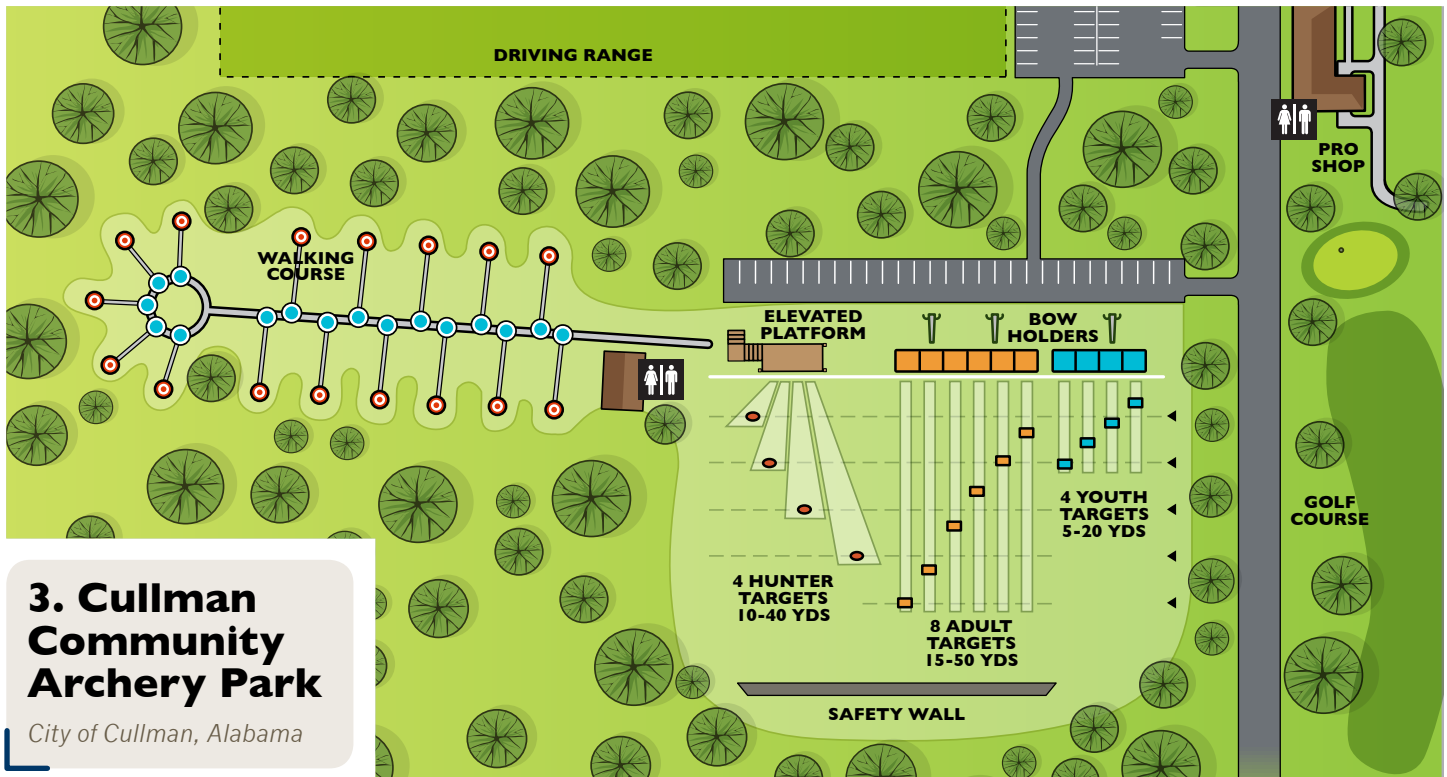
**Answer to the question; if we had to do over again, what would we do differently?**

- Add lighting.

**Any issues with neighbors, working with city council, etc., that others could learn from?**

- When proposing non-traditional recreational amenities in any park, two things are important. First, the need for such a facility should be documented. Second is education. Citizens, city staff and elected officials need to understand the benefits to the community of building such a facility.
- Tying “Olympic” target archery to the range seemed to make it a more acceptable activity.





### 3. Cullman Community Archery Park

City of Cullman, Alabama

#### Community Background

- Located 50 miles north of Birmingham and 55 miles south of Huntsville, No. 1 and No. 4 most-populated cities in the state, respectively.
- Population of city: 60,000

#### Location, Ownership and Contact information

- Owned by City of Cullman and leased by Alabama Div. of Wildlife and Freshwater Fisheries (ALDWFF) for 25 years; 18 acres total.
- Location is immediately adjacent to City of Cullman Golf Course.
- Cullman Parks and Recreation  
P.O. Box 278, Cullman, AL 35056-0278  
(256)734-9157  
<http://www.cullmanrecreation.org>



Photo Courtesy of Alabama Div. of Wildlife & Freshwater Fisheries

#### Design & Description

- Outdoor Archery Park
  - Beginner range: 8 targets from 5-20 yards.
  - General target range: 8 targets from 15-50 yards.
  - Bowhunting range: 4 targets from 10-40 yards with 12-foot platform.
  - Other: 16-target walking course up to 70 yards
- Indoor range
  - Basement of Cullman Civic Center
  - Maximum shooting distance is 25 yards
- General Access Area
  - Parking  Paved  Gravel
  - Bus turn-around capability  Yes  No

- Family-friendly amenities
  - Shelter ■ Yes □ No
  - Benches ■ Yes □ No
  - Picnic Tables ■ Yes □ No
  - Play Area ■ Yes □ No
  - Nearest beverage or snack vending or convenience store:  
Golf pro shop located 200 yards from archery range.
- Site includes pavilion/restroom with storage. Small shelter on walking course.



**Hours of Operation**

- Outdoor park: sunrise to sunset
- Indoor range: Monday-Thursday 4-7:30 p.m.
- The indoor range is staffed, while the outdoor range is unstaffed.

**Budget & Fee Structure**

- Total was \$138,550 for facility (2009)
  - City of Cullman - \$142,000 (which includes \$85,000 in land value).
  - ALDWFF - \$57,690 for facility construction
  - ATA - \$6,800 for targets and \$50,000 (provided through Easton Foundations) for a bathroom/shelter.
- Estimated \$5,000 to convert basement to indoor archery range. This includes painting, lighting, new targets and wall materials behind targets. Fees are \$6 for one night or \$65 for 12 visits.
- Anyone with a current hunting license can use the park. Others may purchase a Wildlife Heritage License, annually, for \$10. The Wildlife Heritage License can be purchased at the Cullman County Courthouse probate office or any state license agent, online or by phone.

**Timeline**

- Idea pitched to city by ALDWFF: Early 2008
- Date land leased: April 2008
- Date site plan completed: July 2008
- Operations & Maintenance plan completed: July 2008
- Date construction to begin: July 2008
- Completion date: April 2009 (outdoor) and May 2011 (indoor)

**Maintenance**

- Maintained by city with golf course. General maintenance is estimated at approximately \$8,000 per year and includes groundskeeping and utilities. The state agency and local club help maintain the targets, which are an additional maintenance expense.
- Targets (Pacific Bow Butts and Morrell) on the outdoor range need to be replaced about every 3 years.

**Safety**

- Special safety concerns: a wall was added downrange.
- Security: the entrance gate is closed when the park is closed and the area is patrolled at the same time as the golf course.
- A sign was created to help reduce what is called “sky drawing” - when a bow is drawn higher than parallel to the ground.

**Program & Event Elements**

- ATA provided \$45,000 for archery programs – National Archery in the Schools Program in all local schools and program equipment for parks and recreation.



## ARCHERY PARK DEVELOPMENT GUIDELINES

- After School Archery Program (Beginners) - 12 maximum, 1 hour/twice per week for 6 weeks (12 hours) at a cost of \$65 (2011). Multiple sessions are held throughout the year.
- Junior Olympic Archery Development Program (Intermediate and Advanced): 12 maximum, 1 hour/twice per week for 6 weeks (12 hours) at a cost of \$65 (2011). Several sessions are held throughout the year.
- Adult lessons: 12 maximum, 1 hour/twice per week for 6 weeks (12 hours) at a cost of \$65 (2011). Several sessions are offered throughout the year.
- Open Night (non-instructional): Twice/week throughout the fall/winter. Range is open for 1 hour, twice per week. Maximum of 12 shooters at a cost of \$5/night with own equipment or \$10/night if city equipment is used.
- Summer Camp: Two, week-long day camps (8 a.m. to 3 p.m.) offered per summer. \$100 per week. Maximum of 50.
- Heritage Archery Club holds several shoots at the outdoor range each summer. In exchange, clubs help with programs and occasional maintenance.
- JOAD club also attends several local shooting events each year.
- City is utilizing additional park and open space areas to host a national tournament; the Archery Shooters Association Classic Pro/AM.

### Storage Elements

- A storage room is part of a pavilion building at the park and is used by the local club to store 3-D targets for events.

### Marketing and Web sites

- <http://www.cullmancityarchery.com/index.html>
- Archery classes/leagues part of summer recreation brochure and on web site.

### Answer to the question; if we had to do over again, what would we do differently?

The city is considering covering the shooting line on the general target range.

### Any issues with neighbors, working with city council, etc., that others could learn from:

A neighbor did sue the city and state for issues related to the range and a judge ruled in favor of the city and state.



Photo Courtesy of City of Cullman



## 4. Demmer Center

*Michigan State University, Lansing, Michigan*

### Community Background

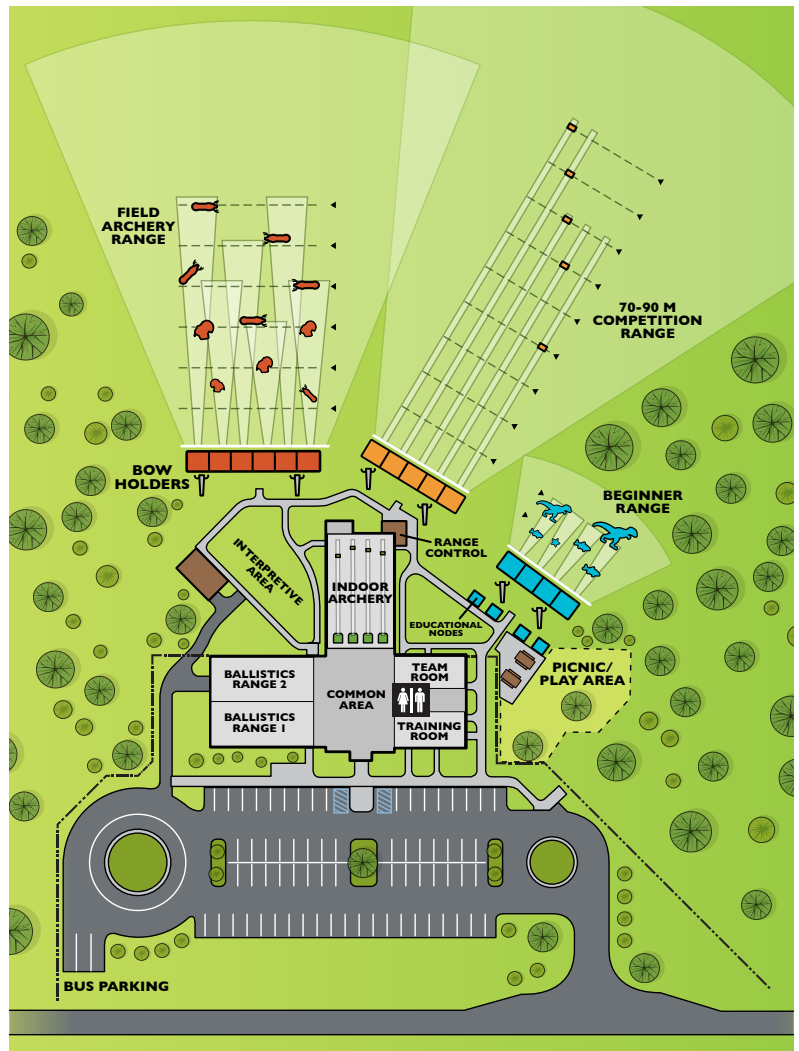
- More than half a million people within 25 miles and 1.8 million within 50 miles.

### Location, Ownership and Contact information

- Owned by Michigan State University (MSU) and located on south end of campus.
- Demmer Shooting Sports, Education and Training Center  
4830 East Jolly Rd, Lansing, Mich. 48910  
(517) 884-0550  
<http://demmercenter.msu.edu>

### Design & Description

- Outdoor Archery Park -
  - Beginner range with 15 lanes offers 30 shooting points with a target distance up to 33 yards (30 meters).
  - Competition range containing 15 lanes offering 30 shooting points with a target distance up to 98 yards (90 meters). This range also has a few heated shooting points in winter.
  - Field/3-D range containing 20 lanes offering 40 shooting points with a target distance up to 76 yards (70 meters).
  - Walking 3-D Archery Course contains more than 30 3-D animals with 3 shooting points: beginner, intermediate and expert.
- Indoor Archery Range
  - Eleven lanes offering 22 shooting points with a distance up to 25 meters. This range can also be used as a 10-meter air rifle/air pistol range with 24 firing points.
  - Storage, lockers, restrooms, conference rooms and offices.
- General Access Area
  - Parking  Paved  Gravel  
Enough to accommodate 120 vehicles
  - Bus turn-around capability  Yes  No
- Family-friendly amenities
  - Information kiosks
  - Learning stations
  - Shelters and seating
  - Gift shop
  - Archery technician available
  - Free wireless Internet
  - Concessions



**Hours of Operation**

- Public hours are Friday 4:30-9 p.m., Saturday 11 a.m.-8 p.m. and Sunday 1-7 p.m.
- Member hours are Tuesday, Wednesday, Thursday and Friday from 1-8 p.m. as well as Saturday and Sunday hours when open to the public.
- Mornings and afternoons may be reserved for private instruction, organized group activities, classes, camps and clinics.
- Facility is staffed at all times when open using both full and part-time staff.

**Budget & Fee Structure**

- \$3.5 million: Approximately \$3 million for the shooting center and \$0.5 million for the outdoor archery park. No itemized final budget available.
- Full-time staff includes manager, firearms coordinator and archery coordinator.
- Annual memberships
  - Archery Single ..... \$19/month (come 3-5 times/ month to pay off)
  - Archery Family ..... \$29/month
  - Firearms Single..... \$39/month
  - Firearms Family ..... \$59/month
  - VIP (all range access) Single..... \$49/month
  - VIP (all range access) Family..... \$79/month
- Non-member fees
  - Indoor/Outdoor Archery Ranges .... \$8/session
  - Field/3-D ..... \$10 non-member (\$4 members)
  - Firearms Range..... \$14/session

**Timeline**

- Site plan drafted in September 2006.
- MSU Board of Trustees approved the project in October 2001.
- Michigan Natural Resources Trust Fund (developed through the Michigan DNR) grant received in December 2006 with fundraising completed in October 2007.
- Construction bids out to contract in Spring 2008.
- Groundbreaking July 18, 2008.
- Completed August 2009.

**Maintenance**

- Maintained by facility staff/MSU
- Target (Block, Hipps, R&W, Morrell and American Whitetail) replacement is expected every 2 years.

**Safety**

- All users must register indoors.
- All first-time visitors are required to have a safety briefing.
- Rules and caution signs are posted
- The entire facility is fenced for security.

**Program & Event elements (archery only – for firearms classes, visit web site)**

- Classes
  - Basic Archery 101: 6 weeks, 2 hours each week, \$95
  - Advanced Archery 201: 5 weeks, 2 hours each week, \$95
  - Bowfishing 101: 4 weeks, \$65
  - Bowhunting 101: 4 weeks, \$65



↑ An Interpretive Area has signs with archery information and history.



Photo Courtesy of Michigan State Univ.

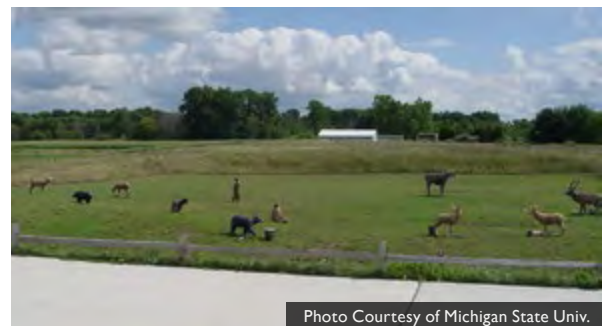


Photo Courtesy of Michigan State Univ.



Photo Courtesy of Michigan State Univ.

- Crossbow 101: 2 weeks, \$45
- Summer Archery Biathlon 101: 4 weeks, \$65
- Arrow Making 101: 1 week, \$40
- String Making: 1 week, \$10
- Camps
  - Archery 101: 10 hours, 5 days: \$95
  - Bowhunting: 10 hours, 5 days: \$95
  - Bowfishing: 10 hours, 5 days: \$95
- Group events
  - Brownies, Girl Scouts and Boy Scouts
  - Church groups
  - Upward Bound
  - Homeschool groups
  - Parks & Recs
  - Private Organizations
- Clubs
  - JOAD: Saturdays for 2 hours. \$35 up-front season fee for pins, T-shirt and banquet, plus free weekly session to members. Cost is \$8 per session for non-members. Equipment is included.
  - The University's archery club practices weekly during the school year.
  - Both JOAD and MSU archery club are \$35 up-front season fee for pins, T-shirt and banquet, plus free weekly session to members. Cost is \$8 per session for non-members. Equipment is included.
- Events
  - Traditional Archery Tournament
  - MSU Fall Classic Archery Tournament
  - X Factor Archery Tournament & Fun Shoot
  - Indoor Nationals: USA Archery
  - Equipment Demo Days (with local retailers)
  - Hunting Outfitters Expo
  - Women's EXPO
- Leagues
  - Traditional archery league - \$8 per session or free for members.
  - Compound/Traditional league - \$8 per session or free for members.



Photo Courtesy of Michigan State Univ.

**Marketing and Web sites**

- <http://www.demmercenter.msu.edu>
- Three (3) local communities partner with Demmer Center to offer archery that appears in each communities' recreation brochure.
- Commercial spots on local cable channel
- Mailings to MSU students and staff
- Staff promotion at local outdoor shows
  - Fliers distributed to local outdoor retailers
  - Partnered with archery retailers
  - Print media advertising

**Answer to the question; if we had to do over again, what would we do differently?**

Need to double the conference room space and double the size of the indoor archery range.

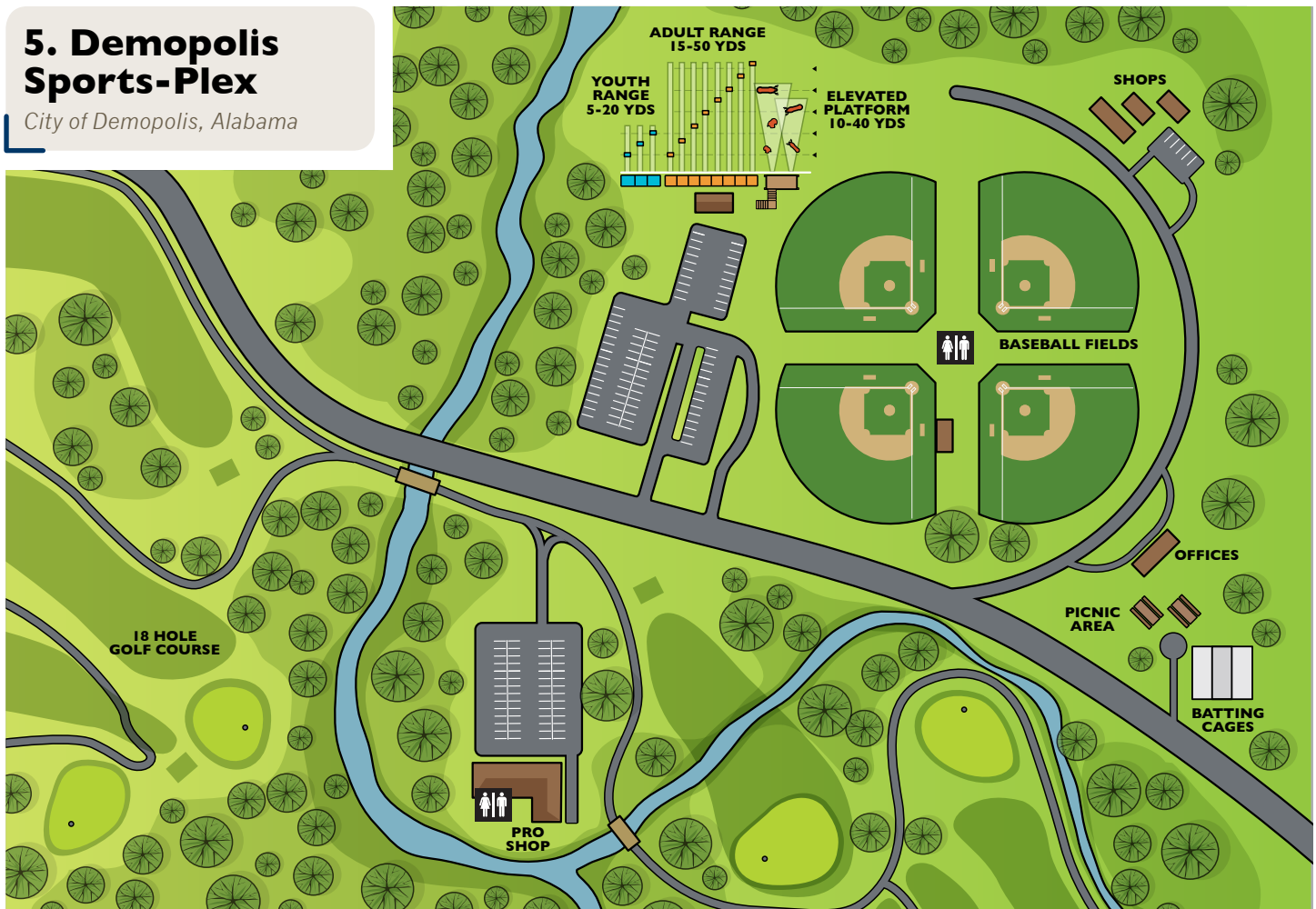
**Any issues with neighbors, working with council etc. that others could learn from?**

None.



## 5. Demopolis Sports-Plex

City of Demopolis, Alabama



### Community Background

- Demopolis is the largest city in Marengo County, Ala., with a population of 8,000

### Location, Ownership and Contact information

- Owned by City of Demopolis and leased by Alabama Div. of Wildlife and Freshwater Fisheries (ALDWFF) for 25 years in 2008; 3 acres
- Facility is located adjacent to Webb Field at the Sports-Plex.
- Demopolis Parks and Recreation  
957 Sportsplex Rd, Demopolis, AL 36732  
(334)289-2891  
[http://www.demopolisal.gov/park\\_rec.html](http://www.demopolisal.gov/park_rec.html)



Photo Courtesy of Alabama Div. of Wildlife & Freshwater Fisheries

### Design & Description

- Outdoor Archery Park
  - Beginner range: 8 targets from 5-20 yards.
  - General target range: 8 targets from 15-50 yards.
  - Bowhunting range: 4 targets from 10-40 yards.
  - Ten (10) 3-D targets are placed on the range is late summer through late spring, at which time they are usually replaced

- General Access Area
  - Parking  Paved  Gravel
  - Bus turn-around capability  Yes  No
- Family-friendly amenities
  - Shelter  Yes  No
  - Benches  Yes  No
  - Picnic Tables  Yes  No
  - Play Area  Yes  No – distance to play area: 450 yards
  - The Demopolis Sports-Plex is a 299-acre park featuring three lighted, four-field baseball/softball complexes with concession/restroom facilities, soccer/multi-use fields, a public pond for fishing, a picnic pavilion with playground, a 1/2-mile walking trail, an 18-hole golf course including pro shop, putting green and driving range, and offices and equipment shops for the Parks and Recreation Department. The newest addition to the Sports-Plex is the Demopolis University Center, an extension of the University of West Alabama.

**Hours of Operation**

- Open year round during daylight hours and unstaffed

**Budget & Fee Structure**

- \$20,000 site preparation and facility development
  - ALDWFF: \$12,926 (75 percent from Federal Aid)
  - City of Demopolis: \$15,310, which includes \$6,000 in land value;
  - ATA - \$3,400 for targets
- Anyone with a current hunting license can use the park. Others may purchase a Wildlife Heritage License, annually, for \$10.



**Timeline**

- The city became interested in archery when a firearms range was built in the county.
- Date land purchased or leased: City purchased property in 1991, archery range site was leased to ALDWFF in November 2008
- Date construction began: April 2009
- Completion date: September 2009



**Maintenance**

- City provides routine maintenance as part of the maintenance of the Sports-Plex.

**Safety**

- Special safety concerns: None
- Security: Patrolled with the Sports-Plex
- Vandalism issues: None

**Program & Event Elements**

- Local archery clubs will have periodic shooting competitions and demonstrations.
- ATA provided \$20,000 for archery programs – National Archery in the Schools Program in all local schools and program equipment for parks and recreation.



**Storage Elements**

- There is a small (6x12) storage shed nearby that holds equipment for programs and events

**Marketing and Web sites**

- [http://www.demopolisal.gov/park\\_rec.html](http://www.demopolisal.gov/park_rec.html)
- One local retailer promotes range through the store as does the local archery club.

**Answer to the question; if we had to do over again, what would we do differently?**

Would be nice to have a wooded piece of property nearby with shade. However, this is highly visible to the public and probably easier to maintain.

**Any issues with neighbors, working with council etc. that others could learn from?**

None.

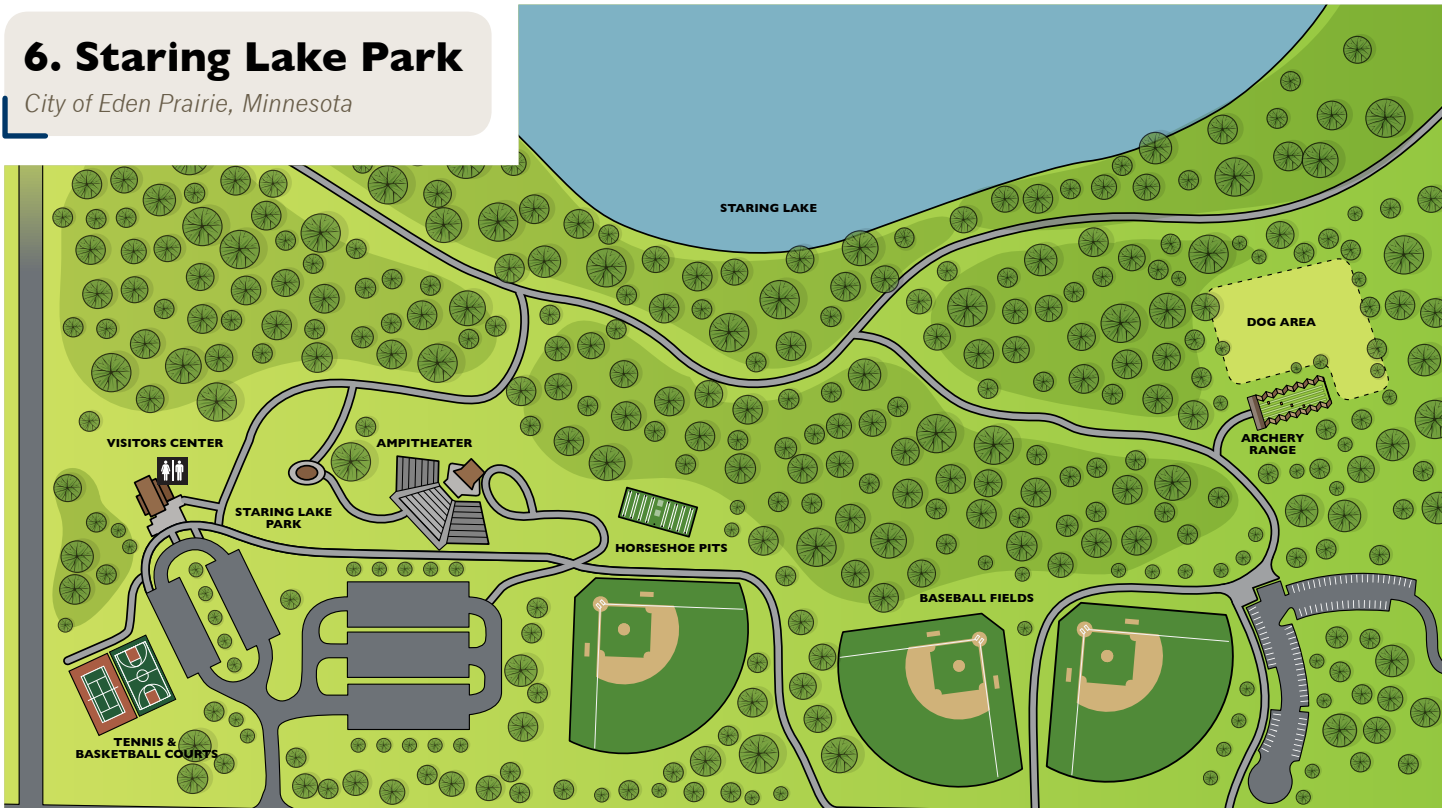


↑ *Simulated blind*



## 6. Staring Lake Park

City of Eden Prairie, Minnesota



### Community Background

- City of Eden Prairie is western suburb of the Twin Cities Metro area
- Population of city: 60,000
- More than 4,000 acres of parks, recreation and preserves, just under 3,000 owned by the city

### Location, Ownership and Contact information

- One of the city’s 6 community parks of more than 40 acres – this park is 185 acres – archery range takes up ½ acre (125 feet x 50 feet).
- Also has baseball fields, basketball, soccer, tennis, ice skating, playfields, picnic area, hiking and biking trails, lake with fishing, horseshoes, disc golf, sledding hill and ski trails.
- City of Eden Prairie  
8080 Mitchell Rd, Eden Prairie, MN 55334  
(952) 949-8442  
<http://edenprairie.org>



### Design & Description

- Outdoor Archery Park
  - Six targets placed at varying distances from 10-40 yards (one at 10, three at 20, one at 30 and one at 40).
  - Targets are on skids and can be moved with an ATV.
- General Access Area
  - Parking  Paved  Gravel
  - Bus turn-around capability  Yes  No

- Family-friendly amenities
  - Shelter  Yes  No
  - Benches  Yes  No
  - Picnic Tables  Yes  No
  - Play Area  Yes  No – in park
  - Nearest beverage or snack vending or convenience store: A couple blocks.
- Shooting pavilion and walls placed strategically along with conveyor belt overhead prevents arrows from leaving the space.

**Hours of Operation**

- Open 6 a.m. to 10 p.m. and unstaffed.

**Budget & Fee Structure**

- \$20,000 for facility in 2004 (Capital Improvement funds)
- Included donation of some materials and installation by Minnesota Valley Electric Co-op of approximately \$10,000.
- The park is free to the public as are other park amenities.
- Additional grants for program equipment and range supplies were received; \$2,078 from Eden Prairie Foundation in 2005, \$3,796 from MN DNR in 2006, and \$500 NRPA After School Archery Grant in 2009.



**Timeline**

- Design was a result of the City’s Park Maintenance Supervisor attending a conference in Colorado, where the only other facility of this kind exists (Bear Creek Regional Park, El Paso County Parks).
- 2003 project received approval by Parks, Recreation and Natural Resources commission.
- The City Council did not approve until 2004 after staff directed to reduce cost (originally \$30,000).
- Construction began in summer 2004 and was completed in early 2005.

**Maintenance**

- Maintained by city with rest of park. No separate budget for archery.
- Targets (Block) are replaced approximately every 2 years.

**Safety**

- Special safety concerns: None, contained
- Security: Patrolled same as rest of park
- Any vandalism issues: No
- Archery is covered under general liability policy.
- Archery is covered under the city’s firearms discharge ordinance.



**Program & Event elements**

- Beginner lessons: 12 maximum, 1 hour, twice per week for 3 weeks (6 hours) at a cost of \$53 (2010). Five sessions are offered throughout the summer.
- Intermediate lessons: 12 maximum, 1 hour, twice per week for 3 weeks (6 hours) at a cost of \$53 (2010). Two sessions are offered throughout the summer.
- Adult/Child beginning lessons: must register as duo – maximum of 12 people. One hour, twice per week for 3 weeks (6 hours) at a cost of \$58 (2010). One session is offered throughout the summer.
- Adult archery lessons (16 and up): 8 maximum, 1 hour, twice per week for 3 weeks (6 hours) at a cost of \$60.

- Summer Archery league: 1 night per week throughout the summer. Range is open for 3 hours each of these nights. Three weeks to establish 80 percent handicap, 300 round, 60 arrows. Maximum of 40 shooters at a cost of \$62.
- There were 9 classes in 2011 with 85 participants.

**Storage Elements**

- Small storage building hold targets and program equipment.

**Marketing and Web sites**

- <http://edenprairie.org/index.aspx?page=189>
- Archery classes/leagues part of summer recreation brochure.

**Answer to the question; if we had to do over again, what would we do differently?**

New belting would have been used for the overhead baffles to improve appearance.

**Any issues with neighbors, working with council etc. that others could learn from?**

There were some initial concerns about the cost of the facility, but with donated poles and labor from the local power company as well as some labor provided by Institutional Correction Work Crew, those concerns quickly faded.



Photo Courtesy of City of Eden Prairie



Photo Courtesy of City of Eden Prairie



Photo Courtesy of City of Eden Prairie

## 7. Carver & Elm Creek Park Reserves

Western Twin Cities, Minnesota

### Community Background

- Western side of the Twin Cities Metropolitan Area.
- More than 1.4 million people within 20 miles of Elm Creek facility and more than 700,000 within 20 miles of Carver Park facility.
- Three Rivers Park District has nearly 27,000 acres of parks, reserves, trails and special use facilities.

### Location, Ownership and Contact Information

- Owned by Three Rivers Park District
- Elm Creek Park Reserve is located in Dayton, Minn. – nearly 100,000 people within 5 miles.
- Carver Park Reserve is located in Laketown Township, Minn. – 35,000 people within 5 miles.
- Three Rivers Park District  
(Elm Creek Chalet)  
12400 James Deane Parkway  
Maple Grove, MN 55369(763)694.7894  
[www.threeriversparks.org/parks/elm-creek-park.aspx](http://www.threeriversparks.org/parks/elm-creek-park.aspx)
- Three Rivers Park District  
(Lowry Nature Center)  
7025 Victoria Drive  
Victoria, MN 55386(763)694.7650  
<http://www.threeriversparks.org/parks/carver-park.aspx>

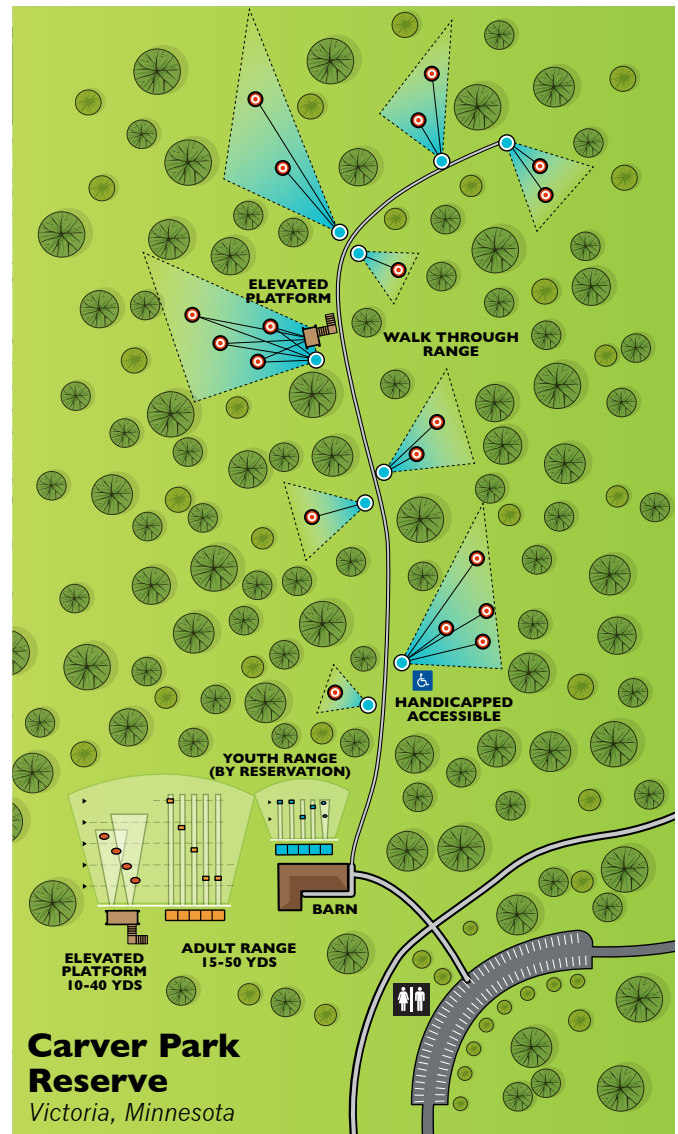
### Design & Description

#### Carver Park Reserve

- Outdoor Archery Park
  - Area for portable youth range: 10 targets from 5-20 yards, set up for supervised group instruction only.
  - General target range: 10 targets at 10-40 yards.
  - Other: 19 target walking course with 9 stations up to 70 yards.
  - Portions of the range are designed to accommodate individuals with mobility disabilities.
- General Access Area
 

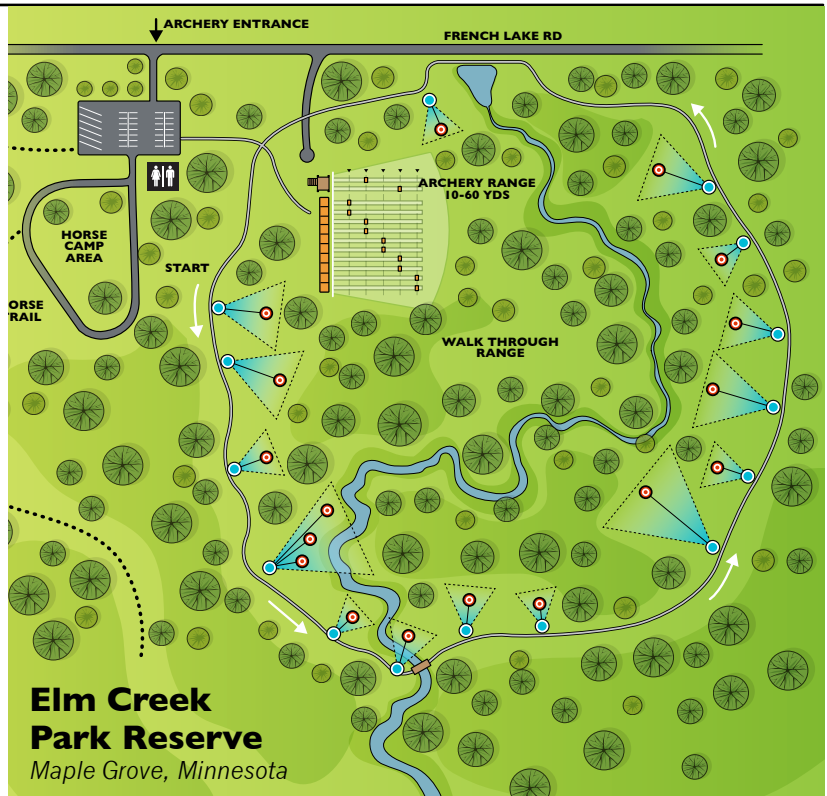
▪ Parking	■ Paved	□ Gravel
▪ Bus turn-around capability	■ Yes	□ No
- Family-friendly amenities
 

▪ Shelter	□ Yes	■ No
▪ Benches	■ Yes	□ No
▪ Picnic Tables	■ Yes	□ No
▪ Play Area	□ Yes	■ No
▪ Vaulted toilets and running water		
▪ Nearest beverage or snack vending or convenience store:		
2 miles		
- Park is 3,700 acres and includes a historic farm, nature center, water bird sanctuary and campground among many other trails and amenities.



**Elm Creek Park Reserve**

- Outdoor Archery Park
  - General target range: 11 targets at 10--50 yards, including an elevated platform.
  - Ten youth targets located permanently in the general target range, 10-20 yards.
  - Other: 17 target walking course (at 15 shooting stations) up to 60 yards.
- General Access Area
  - Parking  Paved  Gravel
  - Bus turn-around capability  Yes  No
- Family-friendly amenities
  - Shelter  Yes  No
  - Benches  Yes  No
  - Picnic Tables  Yes  No
  - Play Area  Yes  No
  - Vaulted toilets and running water
  - Nearest beverage or snack vending or convenience store: 2 miles
- Park includes swim pond, large play area, horse trails and camp, winter recreation area and nature center as well as trails and other park amenities. Park is 5,300 acres.



**Hours of Operation**

- Carver Park Reserve is open April 1 - Nov. 15, 5 a.m. – 10 p.m.
- Elm Creek Park Reserve is open year round 5 a.m. – 10 p.m.
- Both archery ranges are unstaffed.

**Budget & Fee Structure**

- \$60,500 including \$40,000 in labor (2009) for Carver Park Reserve. There is no budget available for Elm Creek Park Reserve.
- \$9,000 grant received from ATA for program equipment.
- Annual expenses to maintain ranges are about \$5,300.
- Daily pass is \$5, Annual pass is \$35.
- Total revenue for both archery ranges in 2010 was \$17,886.63.

**Timeline**

- Elm Creek Archery Range opened in 2004.
- Carver Park reserve preliminary site plan developed in June 2008.
- Board authorized in July 2008.
- Range opening in August 2009.





**Maintenance**

- Maintained by park district with other park activities.
- Targets (Block) are repacked one or two times a year to replace worn layers. Complete replacement of targets is no more than once per year, but may be two years.

**Safety**

- Special safety concerns: There are no major safety concerns, and the Carver Range is adjacent to a group reservation site. While this allows archery groups like Boy Scouts to stay overnight, it also allows unattended kids to occasionally walk to the range.
- Security: Patrolled same as rest of parks, no special security issues.
- Vandalism has been minimal.

**Program & Event elements**

- Family Archery: 2- to 3-hour program, \$10 each
- Introduction to archery: 2- to 3-hour program, \$7 each.
- Archery 101, 102 and 103: 3 sessions of 2-3 hours each.
- Women’s Archery: 2- to 3-hour program, \$10 each
- Advanced Archery: Olympic archery coach contracted for half a day.
- Several summer archery camps: half-day or all-day and a Forkhorn camp (in partnership with Minnesota Deer Hunters Association) that is 5 nights and campers earn bowhunter education certificate.
- Turkey Camp offers both archery and shotgun.
- Forkhorn II camp that includes bowhunter certification.
- Scheduled Groups: schools, scouts, 4-H, etc.
- It is estimated there were 1,500 participants and archery is one of the district's top 5 recreation programs.
- The Park District offers a two-hour beginner archery session to about 30 communities, park and recreation departments and non-profits. Beginner classes accommodate as many as 20 people. Advanced classes are 4 hours over 5 days. Advanced class size is limited to 10.
- Own a trailer with program equipment and targets that can be used at many park locations.



Carver Park Reserve



Carver Park Reserve



Carver Park Reserve

**Marketing and Web sites**

- <http://www.threeriversparks.org/activities/archery.aspx>
- All archery activities posted on the Web, in recreation brochures in conjunction with several communities and in local papers.
- Advertisement for the archery ranges are mailed to both bow and firearms hunters participating in our park hunts.

**Answer to the question; if we had to do over again, what would we do differently?**

I think we are pleased with the outcome for each site.

**Any issues with neighbors, working with City Council, etc., that others could learn from?**

Since the ranges are in the interior of large parks, there are no problems with neighbors.

## Archery Park Sample Budget

	TOTAL BUDGET	LOCAL ENTITY CONTRIBUTION	LOCAL 3 <sup>RD</sup> PARTY CONTRIBUTIONS	GRANTS	FUNDING NEEDED
<b>Recreation Programs</b>					
Equipment					
Training costs					
Staff & benefits					
<b>Programs sub-total</b>					
<b>Construction</b>					
Land (cost or value)					
Engineering/Site design contractor					
Staff & benefits					
Travel					
Site preparation					
land prep					
roads					
walkways					
utilities					
<b>Non-archery costs - outdoor</b>					
restrooms					
shelters					
storage buildings					
picnic tables					
benches					
signs					
bike racks					
playground					
Landscaping					
<b>Archery costs - outdoor</b>					
targets					
platforms					
ground quivers					
bow racks					
safety netting and poles					
berms					
range and rules signs					
Building costs - indoor					
<b>Archery Park sub-total</b>					
<b>Operations &amp; Maintenance (annual)</b>					
Staff & benefits					
Utilities					
Equipment & Target maintenance					
General facilities maintenance					
<b>O&amp;M sub-total</b>					
<b>Marketing</b>					
Mailings					
Media					
Brochures/Maps					
Grand opening event					
<b>Marketing sub-total</b>					
<b>TOTAL</b>					

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