AGGIE STADIUM: REDESIGNING FOR THE SPECTATOR EXPERIENCE

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GLOSSARY

Stadium (pl. Stadia): 1.) a large, usually roofless building with tiered seating for spectators at sports events (Agnes 618). 2.) A huge theatre for the presentation of heroic feats (John, Sheard, and Vickery 1). 3. A meeting place for people through sport (Sturzebecher and Ulrich 84).

Spectator: “individuals who actively witness a sporting event in person or through some form of media (radio, television, etc.)“ (Wann et al. 2)

Team identification: “the extent to which a fan feels psychologically connected to a team... Fans with a low level of team identification exhibit mild reactions to a team’s performances. Conversely, fans with a high level of team identification consider the role of team follower as a component of their identity. Many times the team becomes an extension of the individual” (Wann et al. 4).

Experience: 1.) something personally encountered, undergone, or lived through. 2.) the act or process of directly perceiving events or reality (Agnes 223).

Multi-use: the ability to support many activities.

Agora: a gathering place (Agnes 13)

Gunrock: the horse mustang mascot of UC Davis. Gunrock has historic roots as he was named for a famed horse brought to the university farm in the 1920’s to supply stock for the U.S. Army Calvary.

Aggie Pride: 1.) support of UC Davis and UC Davis Athletics. 2.) Wearing “Aggie Blue” to athletic events and being a highly team involved and identified spectator.
INTRODUCTION

When asked about stadia, what comes to mind? Is it the historic Roman “Coliseum” where epic naval battles and fierce gladiator fights entertained blood-thirsty spectators? The revered local team overcoming a deficit and winning the game against their despised archrival? Humorous mascots showcasing their deplorable, out-of-date, and uncoordinated dance talent? The intoxicating aroma of hot dogs, popcorn, garlic fries, beer, and body odor saturating the musky air? Baking in unrelenting and intense sunlight while trying to watch the game from the nosebleed section? Beginning the “Wave” with your newly befriended section buddies? Needless to say, stadia arouse an abundance of positive and negative feelings, memories, and experiences. There are multiple factors that lead to the formation of such sentiment - the most influential being the stadium environment, architectural elements, and landscaping. Stadium architectural and environmental design and landscaping can be used to inspire experiences and team identification. A rambunctious, boisterous, and energized crowd can mean the difference between a win and a loss (image 1.1). Seating arrangement can either unify or polarize a crowd. Many stadia utilize the landscape, architecture, and environment to influence and persuade spectators to a certain way of thinking, believing, and acting. Some stadium designs are better than others in achieving such objectives. When thinking about UC Davis’ newly constructed Aggie Stadium adjectives like typical, incomplete, simple, and bare come to mind. How can such plain and bland descriptions conjure up attitudes of raw excitement and passion? Does such a simple and basic stadium design maximize spectator experience and team identification? Or can UC Davis Aggie Stadium do better?

To many, a stadium is more than just a stadium – it is a monument, icon, symbol, and most of all a platform in which unbelievable feats are performed. Some even argue that spectating is a religious experience and go on to describe stadia as “folk cathedrals” (Bale 3). With “two-thirds of Americans considering themselves a sports fan,” a stadium should embody the greatness it represents and contains (Wann et al. 10). However, what defines greatness? Is it revolutionary technology, bold architectural statements and landscaping, or is it the athletes or spectators who attend the game? According to John, Sheard, and Vickery a mark of a great stadium is how it caters and provides for the spectator – a stadium “design begins and ends with the spectator”
Essentially a stadium needs to provide a broad spectrum of activities and functions for the spectators and athletes (image 1.2). Stadia must acknowledge that spectators come from a variety of backgrounds and attend for various reasons (image 1.3). To resist building facilities that generalize and offer all spectators the same experiences, stadia must provide a “variety of spectating options” (Wann et al. 65).

Sometimes the role of the stadium is not necessarily about the game; many spectators come for the social aspect and atmosphere of the stadium (image 1.4). Assembly areas with seating, spacious circulation corridors, as well as areas to host game time activities and events must be included in the design to support this aspect of spectating (Wann et al. 64; Center for Inclusive Design and Environmental Access 2). Conversely, some spectators solely attend to watch the game in the stadium, thus seating must be comfortable and protected against weather elements, and sightlines must be clear of obstruction (John, Sheard, and Vickery 60) (image 1.5). These elements represent a few of many that designers must take into account while creating a supportive stadium master plan.

Does UC Davis Aggie Stadium satisfy the numerous spectator requirements thus affirming its prowess as a great stadium? To fully evaluate UC Davis Aggie Stadium, a brief overview is necessary.

Photos 1.4 and 1.5: Spectators may come to watch come and watch their cheerleading friends on the sidelines (top). Conversely, others may solely come to watch the game (bottom).
Aggie Stadium is located in the central portion on the University of California, Davis campus in Davis, California (Image 1.6). The approximately 20-acre parcel is bordered to the north by Hutchison Dr. and to the east by La Rue Rd. (UC Davis Office of Resource Management and Planning 1; image 1.7). Schaal Aquatic Center is situated to the south of the Stadium and to the southwest is the Genome and Biomedical Sciences Facility and School of Medicine.

Aggie Stadium’s location makes it accessible by many means of transportation (UC Davis Office of Resource Management and Planning 18). Highways I-80 and SR 113 are relatively close and provide major car and bus transportation routes. Twenty-one parking lots and a parking structure nearby provide ample parking for cars (UC Davis Office of Resource Management and Planning 18). ASUCD City of Davis Unitrans Bus route “D” stops on Hutchison Dr. to the north of the Stadium (ASUCD City of Davis Unitrans). Networks of bike paths connect paths to the Stadium and provide pedestrians and cyclists with a variety of access routes (image 1.8).
BACKGROUND

Before there was UC Davis Aggie Stadium, there was Toomey Field. With the first game played in 1949, Toomey field represented the beginning of an Aggie football and track legacy that would span decades (Jones). Over time however, Toomey Field became outdated and archaic - “the amenities at Toomey [Field] are so bad. Restrooms, concessions, parking, access to it, handicap, just about you name it… it’s too decrepit” (Bullis; image 1.9).

While Toomey served well as a Division II facility the transition to Division I warranted a bigger and better facility, the 2003 UC Davis “Long Range Development Plan” (LRDP) proposed the addition of a new and improved multi-use stadium facility (Marshall-Manriquez). Not only would the stadium cater to the growing student body and campus size, it would increase accessibility for patrons and campus police and fire departments (UC Davis Office of Resource Management and Planning 1), and signal UC Davis’ progress as an up and coming Division I powerhouse.

The initial vision for Aggie Stadium was to be a structure built above ground and composed of steel (Bullis). Facilities, concessions, restrooms, locker rooms, and storage would be located under the elevated seating tiers (image 2.0 and 2.1). Although this was a great design initially, the increasing price of steel caused designers to go back to their drawing boards.

Eventually a plan was developed to put Aggie Stadium below grade, thus avoiding the use of costly steel. UC Davis, with a new plan in hand, submitted their stadium concept for approval by the University of California Regents.

The proposal of the stadium became a reality on January 20, 2005 when the Regents authorized the “design and financing plan for the $29.75 million complex” (Dateline Staff). The stadium would be the new home for Aggie football and lacrosse, and due to its multi-use nature would also host a variety of other events: high school graduations, community events, and even international soccer games (Dateline Staff; Bullis) One roadblock remained in the way however: funding.

Although UC Davis began campaigning for funding in 2001, it still did not have enough by 2005. Luckily for the University, a student-approved referendum would cover the majority of the cost – the Facilities and Campus Enhancement (F.A.C.E.) Initiative (image 2.2). With 2/3 of the Stadium costs being covered by the students themselves, many questioned the fundraising capability of UC Davis. Lieutenant Governor Cruz Bustamante even commented, “Many campuses do a much better job of raising external funds for major capital projects,” he said. “It doesn’t seem right to put the burden on the students” (qtd. in Dateline Staff). Despite the controversy, the combination of the F.A.C.E. Initiative...
and private funding covered the cost of the initial construction of Aggie Stadium (Date-line Staff).

Due to limited and uncertain funding, UC Davis segmented construction of Aggie Stadium into phases. The first phase of construction included the bare essentials of the stadium: “playing surface, the press box, concession stands, restrooms, locker rooms, an initial core of bleachers, the entryways and the scoreboard” (“Future of Aggie Stadium” Foster 5; image 2.3). Aggie Stadium has currently competed this phase of building. Phase II can begin after the completion of Phase I: stadium lights and bleachers in the end zones. Lights are being installed at this very instant (image 2.4; See “Aggie Stadium Lights” in Appendix). Lastly, the third and final phase of the project: lighted synthetic turf practice fields, upper tiers of seating on the east and west sides, weight room, coaches’ locker rooms and offices, conference rooms, and eventually the widening of Hutchinson Road into 4 lanes to accommodate the increased traffic (Bullis). Until funding is available however, Aggie Stadium will remain in transition between Phase I and Phase II.

Image 2.2: Plaques acknowledging the F.A.C.E. Initiative are posted throughout Aggie Stadium.

Image 2.3: Synthetic field, tiers of seating, scoreboard, press box, locker rooms, restrooms, and the surrounding paving represent elements of phase I construction.

Image 2.4: Stadium lights have recently been added as of May 29, 2008.
Despite it’s constant transformation, there is a lot that Aggie Stadium offers. Now, let’s close our eyes and think. Let’s take an imaginary trip to Aggie Stadium. It’s opening day of UC Davis Aggie Football season. We have been waiting for this day for a whole year. Our origin is San Francisco, California. We pack our gas-conserving Toyota Prius and head off toward the Central Valley. Our drive is very monotonous as we drive past scores and scores of barren fields, hills, suburbs, and shopping malls. Finally, the Mapquest directions we printed out are giving us guidance again – merge onto CA-113 N towards Woodland. We exit the freeway, and begin driving on the highway. Our emotions intensify as we get closer and closer to our destination. Mapquest tells us that we will take the Hutchison Dr. exit toward UC Davis. With bated breath we begin our lane change towards the exit. We exit the freeway and are presented with a sign – UC Davis to the right and Hutchison Dr. to the right and left. Unable to locate a specific sign to Aggie Stadium, we throw the Mapquest directions out the window and begin our self-guided adventure. We assume that we are heading to UC Davis and take the right. We merge onto Hutchison Dr. and look around, waiting for any sign of a stadium. Curiosity sets in as we are confronted with a hyperbole: low-profile stadium. To many, this dramatization, or lack of drama, is a reality.

Aggie Stadium is set in a landscape bowl that gives it an enigmatic appearance (image 2.5). For some, the connotation of “stadium” arouses thoughts of behemoth, domineering, towering structures; UC Davis Aggie Stadium on the other hand is a complete opposite. Gentle grassy and paved slopes leading to the brim of the bowl give the Stadium a subtle appearance; at some points the Stadium is only 4’ higher than the existing grade (University of California, Davis C102.1). Its low profile makes the Stadium melt into the landscape: “when you come up to it you have no idea what’s there and you walk up on that berm and look in there and pretty much everybody’s reaction was ‘oh my gosh look at this, this is great!” (Bullis).

Signage around the Stadium is discrete: the title “AGGIE STADIUM” is only located above the main entrance and scoreboard (image 2.6). The trademark “Mustang C” sits atop the pillars at the entrance plazas. Posters and banners printed with the images of the running UC Davis mustang and adorned with the phrase “Aggie Pride” are only legible when close. Buildings and structures located within the Stadium, such as the scoreboard (rising a mighty 52’) and press box (a modest 26’- 8”), represent some of the tallest points of the Stadium (University of California, Davis A301 A303).
Landscaping also contributes to the reduced visual impact of the Stadium but also adds a few surprises. Large asphalt and concrete paths circumvent the Stadium for ease of access. Colorful paving in entrance areas and plazas signals importance and interest (image 2.8). The largest plaza, the East Plaza, is the home of pregame festivities – live bands, games, raffles, and rallies. The Tavernetti Bell, a bell dedicated to the memory of Thomas Frederick Tavernetti (the Assistant Dean of the School of Agriculture for many years) is the focal point of the plaza as it has historical importance (image 2.9). Before it had it’s new home at Aggie Stadium, the bell served its time near Toomey Field. The bell played a major part in Aggie Football, as the Cal Aggie Marching Band-Uh rang the bell once for every point scored by the Aggies. To continue the tradition into Aggie Stadium, the Tavernetti Bell was removed from Toomey and transported to the East Plaza of Aggie Stadium.

Groundcover surrounds the plazas and paving areas of the Stadium. Bonsai Fescue, a tough, drought resistant grass represents the major groundcover used (Brenzel 349). Here, children, students, and spectators can sit, relax, play, and enjoy the surroundings. Some grassy areas are reserved for special events at game time. The Streng, Taormino, Warren Grove located in the southwest corner of the Stadium becomes the highly acclaimed beer garden and dining area prior to the start of the game. Bark mulch is spread in areas adjoining to the existing grade and conditions. In the large field to the north of the site, wild plant growth has taken hold.

Shrubs border Aggie Stadium, taking the harsh, hard edges off of the buildings and fence (image 3.0). Yellow Carpet Rose (Rosa ‘Flower Carpet Yellow’) and Dwarf Myrtle (Myrtus communis ‘Compacta’) add a nice vegetation flourish and gracefully blend Stadium edges. New Zealand Flax (Phormium tenax ‘Yellow Wave’) rounds out the exterior shrubs by providing year round color as well as visual interest at the southwest entry gate (Brenzel 518). Trees play into the discrete nature of Aggie Stadium by shrouding it with foliage but also create visual stimulation (image 3.1). Valley Oaks (Quercus lobata) surround the site, continuing an oak theme of La Rue Rd. as well as fostering beauty with their graceful and picturesque structure (Brenzel 561). A handsome winter tree with a beautiful branching pattern, London Plane (Platanus x acerifolia) trees bespeckle the west side of Aggie Stadium (Brenzel 531). Interspersed amongst the London Planes is the Maidenhair Tree (Ginkgo biloba), with its prehistoric look and stylish foliage. These trees are an attractive addition to the Stadium landscape.

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(Brenzel 366). Picturesque bark and a beautiful round, spreading crown exemplifies the Common Hackberry (*Celtis occidentalis*) trees which decorate the south side of the Stadium. The California native Coast Redwood (*Sequoia sempervirens*) is also planted on the site to give a fresh look and woody scent (Brenzel 607). Interlaced amongst the Coast Redwoods providing a lovely arrangement of white flowers and “handsome gray-brown bark” is the Chinese Fringe Tree (*Chionanthus retusus*) (Brenzel 270). Goldenrain Tree (*Koelreuteria paniculata*) also joins the mix with its showy, long clusters of yellow flowers. The main entry and plaza are planted with Chinese Pistache (*Pistacia chinensis*) creating luminous orange, red, and yellow foliage during the fall (Brezel 530). Deodar Cedars (*Cedrus deodara*) create an impact on the landscape and skyline with their elegant branching structure (Brenzel 258). Evergreen Pear (*Pyrus kawakamii*) borders the southeast plaza disbanding winter gloom with a profuse show of white flowers (Brenzel 558). The combined efforts of the plant species create a diverse environment as well as artfully blend Aggie Stadium into the surrounding landscape.

Juxtaposed to the landscape and the main entry gates are the various plazas located around the Stadium perimeter. Four plazas compose the major points of access for Aggie Stadium. The main entry plaza, the East Plaza, is the largest plaza on site and is the premier location of pregame activities, as it is adjacent to “Gunrock’s Gridiron Festival” which occupies the open fields to the north. A doughnut-shaped, mercury colored paving area encircles the Tavernetti Bell. A 18” retaining wall borders the circle and provides seating for spectators. The circle is surrounded by terracotta, tangential lines whose destination is the center of the Stadium. The linear axial pattern continues radially around the entire east side of the Stadium and are interrupted by intermittent planting areas.

On the southeast side of the Stadium lies a grey, concrete semicircle. The concrete of the plaza has a light broom finish to give it uniqueness and visual appeal. Although this is not the main entry for football games, this is the sole entry for lacrosse games.

Clockwise from the southeast gates lies the southwest plaza and gates. This plaza is the home of the Pat and Dick Raycraft Gate and is the entrance for those partaking in the beer garden experience (image 3.3).

The plaza points toward Aggie Stadium and is dissected by an oval shaped planting area. Bands of terracotta-colored paving create a horizontal striping pattern and also run along the border.

Press, concessions, and other gamday workers enter through the west gate. The plaza form is similar to that of the southeast gate.

The last plaza is located at the juncton of the field access tunnel and the exterior circulation path. The plaza is very modest, consisting of a paved square. Although this is not a formal plaza by any means, it is the assembly area for the Cal Aggie Marching Band-Uh before the game. While many of these plazas are very basic in nature, they provide the spectators with a broad range of available activities and experiences and also identifies access points for the Stadium.

The plazas are bordered on their interior by gates and fences. A large 7’-4” ornamental, black painted steel perimeter fence encloses the Stadium. The fence is draped with a black cloth to obscure view from the outside as well as provide a little privacy (image 3.4). Gates are intentionally placed in various places to allow admittance. Above the main entry, the blue...
and gold words “AGGIE STADIUM” span the length of 5 gates and are accented with an “Mustang C Mark” in the middle. Gates are set between oyster pink-colored concrete block pillars topped with precast concrete caps (image 3.5). Signs adorn the pillars, giving directions to the ticketing office and field ramp, and dictating the rules of Aggie Stadium - “Do the Right Thing.” Sitting atop the pillar caps is the Mustang C Mark conjuring school and team pride and also adding a little flair to the environment. The fence and gates contain the prime attraction of Aggie Stadium: the field, scoreboard, buildings, seating, and concourse.

When entering the Stadium the most noticeable and grandiose structure is the Dorothy and Melvin J. Olsen Scoreboard (image 3.6). The words “Aggie Stadium” sit at the very top of the scoreboard and are visible from miles away! Advertisements (Coca-cola, Les Schwab Tires, UC Davis Health Systems, and PG&E Climate Smart) and Aggie icons decorate the scoreboard. The scoreboard is a behemoth 52’ tall by 50’ wide and one of the main attractions of the Stadium – with a state of the art sound system and color screen, how could it help but be? During football games, fans go bananas when they see themselves on the huge screen. The scoreboard also casts a large area of shade, which seems to be very popular amongst spectators. Laurustinus (Viburnum tinus) engulfs the scoreboard’s large support pylons with its dense foliage, making it appear as though it is emerging from vegetation (Brenzel 647). Along with the scoreboard, the Stadium’s buildings are some of the biggest structures in Aggie Stadium.

All buildings in Aggie Stadium were designed with international architectural style in mind: smooth wall surface, flat roof with coping at roof line, windows with metal casements set flush with the exterior wall, and cantilevered projections (McAlester and McAlester 469). The oyster pink and muesli-colored walls reflects the nearby architecture and hues of the Schaal Aquatic Center and Genome and Biomedical Sciences Facility. Despite the similar architecture, many of the buildings supply a different function for the Stadium. The Bob Foster Team Center, which houses team facilities (locker rooms, offices, storage, and athletic training room), ticketing, and the Aggie Pride Outlet are housed in the buildings to the north (image 3.7). To the east, concessions, first aid, restrooms. Plaques describing the F.A.C.E Initiative funding and a giant number representing the number of home game wins are attached the field-side face of those buildings. The press box, Bruce Edwards Club Room, restrooms, first aid, and concessions are contained in the building set to the west.

Connecting all the buildings of the facility is the concourse. With widths varying from 20’-40’, the oval concourse is easy to navigate and maneuver even when it is congested with spectators. Trash, recycling, and composting receptacles line the concourse to encourage spectators to reduce waste (Blumenstyk; image 3.8). Grassy patches located in the corners invite spectators to kick back and relax during the game-time madness.
Three New Zealand Flax (Phormium tenax ‘Yellow Wave’) planters are situated between the buildings on the east side and provide seating. The concourse provides ample space for free circulation during the game and also provides equal access for all of the seating areas around the Stadium.

Aggie Stadium has many different types and styles of seating dependent on budget and personal needs – a total of 10,000 seats are available (“Future of Aggie Stadium” Foster 5). Handicap seats are located on the edge of concourse level to provide comfort and a clear view of the game (John, Sheard, and Vickery 123). Loveseat style, aluminum benches or seats are adjacent to wheelchair ports. Aluminum, backless benches – as they can withstand the wear and tear of jumping, slightly intoxicated students - provide seating for the student, Aggie Pack, and general admission sections that compose the east side of the bowl (John, Sheard, and Vickery 139; UC Davis Athletics). On the west side, blue-painted aluminum backed seats are available for visitors and spectators who have reserved seats (UC Davis Athletics). In the middle of the visiting and reserved seats is the Team Aggie section – blue plastic flip-up seats with arm rests (UC Davis Athletics). The lovely, soft, fescue berms complete the bowl in the north and south portion of the Stadium. During the 2007 Aggie football season the berms were public and a great place to pitch a parasol and enjoy the game on a sunny afternoon, however for the 2008 football season, the berms have changed into a ticketed area to which family end zone season tickets are sold (Bullis; UC Davis Athletics; image 4.0). All seats provide a clear sight of the main feature of the Stadium: the field.

Although Jim Sochor Field may look green and grassy from an angle, it is essentially fibrous green plastic strands packed between rubber pellets. The surface is revolutionary as it drains well and does not succumb easily to weathering (Bullis). White numbers and lines create the standard football boundaries and yard numbering. The endzones have the enormous words “UC DAVIS” and “AGGIES” to add visual appeal and home team identification. A colossal Mustang C Mark fills out the center, letting spectators know that this is Aggie Country.

The combined efforts of the aforementioned elements create the new, exciting, and discrete Aggie Stadium. As it stands, the Stadium satisfies the most basic and functional needs of a stadium. However, there are flaws; Aggie Stadium is not perfect by any means and still unfinished. Many additions can be made to drastically improve the facility and the experience for the spectator.
SUGGESTED ADDITIONS AND MODIFICATIONS

Comfort is one of the main concerns of a stadium (Culley and Pascoe 93). Shading from the elements is necessary for spectator ease, safety, and even decreasing spectator aggression (Wann et al. 113). Aggie Stadium completely lacks ample shade or cover structures. During the summer, the temperature can reach to a wallop 105° Fahrenheit in Davis (image 4.2 and 4.3). Prior to opening day of Aggie Stadium for the football season, Davis Enterprise writer Michael Mirer commented that “there was no shade anywhere” and even the Aggie football program wanted to be on the press box side in order to be in the shade (“Stadium News”). Lack of shade lead to 85 people needing treatment for heat-illness and 8 needing transportation to the hospital on the grand opening day of Aggie Stadium football (“Lights” Mirer). To help alleviate problems concerning shade, some suggestions can be made.

A relatively inexpensive and natural way of introducing shade into the Stadium is through vegetation. Plantings can provide more than just shade however, they can “greatly ameliorate the problem of scale and unfriendly looking finishes […] help define circulation patterns and help to screen […] structure[s],” and also “make any stadium look better” (John, Sheard, and Vickery 47-48). This tree implementation tactic is not uncommon, it has been used in the Washington Nationals Ballpark in Washington, D.C. where cherry trees line Center Field Plaza creating a shaded and natural environment in a stadium of steel and recycled materials (Washington Nationals; image 4.4).

The original construction documents of Aggie Stadium called for the planting of Valley Oak (Quercus lobata) trees in the grassy areas on the concourse; these trees are known for their lovely shading ability (University of California, Davis L301-L304; Brenzel 561). Due to budget cuts and maintenance issues concerning dropped litter, the trees were deleted from the Stadium plan (Mezger; Brenzel 258). This proved to be a catastrophic error. To date, there are still no trees planted in these grassy areas (image 4.5). If trees were planted in these areas, it would greatly increase the amount of shade within the Stadium. Deodar Cedars (Cedrus deodara) are a fast-growing, low litter, elegant shade tree that would be perfect for the lawn areas (Mezger; Brenzel 197; image 4.6). When time comes to stack the upper tier of seating, of which the grassy areas will be removed and support pylons installed, the trees can just be transplanted or

Image 4.2 and 4.3: Football players hide in the shade during a scrimmage (right). Spectators even bring their own shade to Aggie Stadium (left).

Image 4.4: The trees in Center Field Plaza bring a natural element to Washington Nationals Ballpark.

Image 4.5: The red areas represent the concourse planting zones.

Image 4.6: Deodar Cedars (Cedrus deodara) are a fast-growing, low litter, elegant shade tree that would be perfect for the lawn areas.
removed (Mezger).

Original Stadium sketches and renderings done by Ellerbe Becket, the architectural firm, showed trees lining the top of the berms which could be another area that could benefit from tree plantings (University of California, Davis, “Regents” 13-15; image 4.7). Here, the trees would shade not only spectators on the berms but also shade the concourse path, thus reducing the temperature of the pavement and the temperature of the area. A perfect tree for this area is the Strawberry Tree (*Arbutus unedo*) – an evergreen, slow growing, 8’-35’ tree with handsome leaves and bark that can take partial shade and has beautiful flowers in springtime (Brenzel 197; image 4.8). This tree does not reach a very tall height within its lifespan, thus blockage of views to the scoreboard should be minimal (image 4.9). Berries produced by this tree are also edible, so they do not pres-
ent a toxicity issue if consumed by children. Like the Deodar Cedars, these trees can be transplanted or removed when the endzone seating sections need to be built. There are multiple physical benefits provided by the addition of trees to Aggie Stadium as well as intangible benefits.

Trees can be symbols of UC Davis and the community of Davis and inspire an agricultural and natural theme to Aggie Stadium (Sturzebecher and Ulrich 94). UC Davis has an illustrious agricultural history such as being the agricultural extension for UC Berkeley (Holder). With the addition of trees, Aggie Stadium acknowledges and embraces its agricultural roots. Likewise, the community of Davis has a long history of agriculture, for example Davis, or Davisville as it was known, used to be solely a farming community (Holder). It has been said that a stadium can shape cities and towns, but how about a community shaping a stadium (John, Sheard, and Vickery 21)? The Stadium would gain many advantages with the addition of trees within its landscape.

Another way to resolve the Stadium’s shade issue is by creating a roof structure over the seating sections. Although a costly modification, a roof would greatly increase current spectator comfort by providing shade and protection from the elements, decrease the amount of spectator aggression caused by heat, as well as creating a calming effect of the air inside the Stadium (Culley and Pascoe 93; Wann et al. 113; John, Sheard, and Vickery 61-62, 128). In a study conducted by Coss and Harkins on the Mondavi Center for the Performing Arts to determine landscape use by patrons, there was a drastic difference of usage between the sunny landscape area and the shaded Mondavi area, thus proving that shade is a vital element in dictating the use of an area: more shade = more comfort = more use (image 5.0 and 5.1; See “Mondavi Study” in Appendix).

A suitable roof structure for Aggie Stadium is a “membrane structure” roof (image 5.2). Here, the PVC-coated polyester fabric or Teflon-coated glass fiber fabric (PTFE) provides both the support and covering of the roof (John, Sheard, and Vickery 69). The materials can be molded into distinct forms and shapes, are relatively durable, can withstand winds, and can provide an “airy, festive appearance to a stadium, especially when seen from a distance” (John, Sheard,
If a translucent membrane is used, some sunlight is still allowed through the fabric giving an open, lighter feel than complete shading and avoids harsh shaded contrasts on the field which affects television coverage (John, Sheard, and Vickery 69-70).

The roof structure would also provide a much needed visible profile to the Stadium. Although many love the low-profile bowl for the harmony that it creates with the surrounding landscape, Aggie Stadium would be given its own identity, a pronounced, artistic architectural image – a series of “graceful roof forms hovering over green landscape” (John, Sheard, and Vickery 51; image 5.3). Emirates Stadium (London, England) and Estádio da Luz (Lisbon, Portugal) are current stadia that utilize this roof form (John, Sheard, and Vickery 276-277; image 5.4). The comforts provided by a roof would be a valuable asset to Aggie Stadium.

Although shade is a vital comfort component to a stadium, so is seating. Seating provides a space to rest, relax, wait, chat, and play among other things (Coss and Harkins). Remember that stadium games are not only about sports but also about socializing (John, Sheard, and Vickery 16-17; Wann et al. 65.) Strategically placed seating around the Stadium can create meeting, people watching, and semi-private zones that play a role in the social aspect of a Stadium visit (John, Sheard, and Vickery 33; image 5.5 and 5.6).

Witholding the reserved and designated seating sections, there is very little seating provided within the Stadium. Ideally, areas just beyond the gates (named “waiting
are available: ceramic, metal, plastic, and wood. Wooden planters are typically the standard as they come in many different styles and finishes and are relatively durable but fall apart over time. Although expensive, metal planters can come in many different shapes and forms and are sturdy. Reminiscent of malls, insulated plastic planters can withstand a beating but come in limited styles. Ceramic planters are elegant, come in many different colors, but can be fragile. Arthur Ashe Stadium in New York, New York utilizes planters and seating successfully to create festive and bustling plaza and promenade areas. Shade and seating are vital to providing comfort for spectators. With the implementation of such modifications, Aggie Stadium could provide spectators with paramount relief on despicable, hot, sunny days. Keeping spectators comfortable is important, but so are aesthetics.

The appearance ofagos" so special care should be taken to support associated activities (Seward 8). Perfect seating areas would be plazas, walkways, and the large boundary path. Durable steel benches could be installed by trees to resolve the seating issue and also take advantage of existing shade (Mezger). A backless variety would be less comfortable thus enticing users to spend less time on them, so that worries about unwarranted visitors would be alleviated (image 5.8). Moveable planters, although costly and maintenance intensive, could be placed next to seats, highlighting or privatizing the space as well as diminishing the harsh edges of the Stadium (Mezger; Sturzebecher and Ulrich 94; John, Sheard, and Vickery 48; image 5.9). Vegetation within the planters could also continue the agricultural theme to Aggie Stadium. Dwarf varieties of citrus (oranges and lemons), apple trees and fig trees “adapt well to life in larger containers” (Brenzel 124). Once again the planters would shade bench users as well as reduce the temperature of the area by cooling the nearby pavement. Many planter varieties and styles

Image 5.8: A backless variety of seating can be used around the Stadium’s exterior as more of a waiting zone compared to a resting zone

Image 5.7: A comfortable bench similar to this would provide valuable seating within Aggie Stadium’s borders.

Image 5.9: Planters cast some shade, add a beautiful natural touch to the hard- scape of the Stadium, and also create private spaces for spectators.

Image 5.5 and 5.6: The red represents suggested seating areas within Aggie Stadium’s boundaries (left) and beyond (right)
and legible football and lacrosse schedule. Many other collegiate stadia use the back of their scoreboards to their advantage. The University of Oregon (Eugene, Oregon) “O” dominates the back of the scoreboard and can be seen from a distance. A football schedule and school “W” graces the back of the University of Washington’s (Seattle, Washington) scoreboard. The back of a scoreboard is like a gigantic blank canvas to which an ancestor of a stadium can actually improve and enhance a spectator’s experience of a facility as well as increase residents’ appreciation for the structure (Peterson 53). Similarly, when spectators are satisfied with stadium aesthetics and amenities it strongly correlates with attendance (Wann et al. 65). Luckily for Aggie Stadium it has a new, clean, and fluid appearance and amenities to boast compared to Toomey Field that will keep the spectators coming…right? No, unless a spectator is enticed to return to games on a regular basis through marketing, or by a team’s better performance, attendance numbers will “revert to earlier figures” (John, Sheard, and Vickery 124). Proper management and marketing can also raise support for the home team, thus increasing team identification (Wann et al. 128). The degree to which somebody identifies with a team strongly determines their involvement with a team (Wann et al. 3–4). In essence, successful marketing of a team and stadium, as well as a stadium’s appearance, determine attendance and spectator involvement, thus both aspects must be thoroughly considered. Some measures can be taken to increase Stadium aesthetics and also inspire and market UC Davis and Aggie Pride.

A stadium should look flawless and faultless regardless of what entrance is used. This does not hold true for Aggie Stadium. The back of the sizeable Aggie Stadium scoreboard is visible from the south entrances. It would seem like this should pose no problem, as there is nothing special about the back of a scoreboard. However, there literally is no “back” to the Aggie Stadium scoreboard and air conditioners, wiring, a utility ladder, and the white, colorless backside of the front facade are visible. A quick and easy way to fix this blight would be to cover the rear of the scoreboard (image 6.9). For example, the back of the scoreboard could be painted with the Mustang C Mark, Mustang Head, “UCD,” “UC DAVIS,” or even “AGS” – many different options are available. The scoreboard could also provide information by displaying a large image 6.0: The back of the scoreboard can display Aggie Images to inspire Aggie Pride.
informative or school spirit-inspiring message or remarkable image could be displayed. Like the scoreboard, the berms can be treated as an empty canvas.

The grassy berm seating areas make Aggie Stadium unique from other stadia. The vast green expanse of fescue grass is one of the most cherished seating areas within Aggie Stadium’s perimeter. Envision this, the kicker for the opposing team looks pensively down at the football as he calculates the trajectory for a field goal, as soon as he looks up, the image of Gunrock and UC Davis is staring him straight in the eye through the goal posts. To help spruce up the berm, an Mustang C Mark could be placed in the middle – Aggie Pride would be center stage (image 6.1)! Not only would it be an artistic statement, but also an advertisement for UC Davis and Aggie Stadium. A simple and easy approach would be to spray paint the symbol on the grass (Mezger; image 6.2). Brilliant gold, white and blue hues would impress and inspire. Spectators can still sit on the emblem though there is a slight chance some paint will get on skin and clothes (Mezger). Another more discrete method involves using different types of fertilizers to achieve different grass colors (Mezger; image 6.3). Here, the Mustang C Mark would be different shades of green, creating a subtle and powerful appearance. Over time, the fertilizer amount diminishes and the grass reverts to its original color (Mezger). Last but not least, the use of different species of grass could be used to create different colors. Washington Nationals Park utilizes 3 species of grass to create an impressive and gorgeous quilt work of differing green tones (Washington Nationals). In this approach color does not fade over time but intense management is needed to ensure that one species of grass does not overtake the other (Mezger). A picturesque scene of the Mustang C Mark in the center of the berm and goalposts could be achieved if any one of these suggestions was implemented.

Currently, seat color in Aggie Stadium consists of this: silver for Aggie Pack and navy blue for reserved and Team Aggie. In many stadia, a myriad of colors are implemented to designate seating sections, simulate the ap-

[Image 6.1: The red area represents the areas of the berm that could be modified.]

[Image 6.2 and 6.3: The painted (left) and the grass (right) Mustang C Mark on the berm would create a striking and powerful image.]
With the augmentations of gold coloring to the Aggie Pack seating section, UC Davis school colors would be proudly represented when juxtaposed to the existing navy seating sections (image 6.4). Another option could be the simple, yet symbolic “Ca.” Hailing back to Toomey Field, this icon is representative of the University of California (a giant “C” used at UC Berkeley’s Memorial Stadium) and although not uniquely UC Davis, it definitely adds another dimension to monotonous seating (image 6.5). A more complicated but bold design could spell UC DAVIS, UCD, AGS, AGGIES, or even portray the “Mustang Head.” These options represent the most exciting and visually stimulating designs – Aggie Stadium is without doubt the property of the Aggies. There are many options, all forging an Aggie Pride state of mind and unique and potent Aggie Stadium identity. Seating design and color can greatly enhance the atmosphere of a stadium and so can signage.

A stadium must be expressive and stimulate imagination to compel spectators to return (Seward 7; Sturzebecher and Ulrich 87). What better way to do so than through the power and influence of art! Signage is an art form in many respects – it stirs emotions and excitement, gives a sense of belongingness to spectators, and also skillfully markets the team and stadium. The Washington Nationals post banners and large signs on parking garage walls and street lamps to prompt such feelings (Washington Nationals).

Signage around the perimeter of Aggie Stadium is minimal (image 6.6). The addition of banners to light posts would inspire Aggie Pride during a spectator’s approach to the Stadium’s gates. Although the attachment of banners may seem difficult, it is quite easy and simple (image 6.7). A metal “rod-holder” device holds the ends of the banner poles while a ring specifically fastens the banner to the rod-holder. The banner contraption is then mounted onto existing light posts with the augmentations of gold coloring to the Aggie Pack seating section, UC Davis school colors would be proudly represented when juxtaposed to the existing navy seating sections (image 6.4). Another option could be the simple, yet symbolic “Ca.” Hailing back to Toomey Field, this icon is representative of the University of California (a giant “C” used at UC Berkeley’s Memorial Stadium) and although not uniquely UC Davis, it definitely adds another dimension to monotonous seating (image 6.5). A more complicated but bold design could spell UC DAVIS, UCD, AGS, AGGIES, or even portray the “Mustang Head.” These options represent the most exciting and visually stimulating designs – Aggie Stadium is without doubt the property of the Aggies. There are many options, all forging an Aggie Pride state of mind and unique and potent Aggie Stadium identity. Seating design and color can greatly enhance the atmosphere of a stadium and so can signage.

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by metal fasteners. Designs of the banners can vary – the typical but widely recognized “Running Mustang” mounted against a blue and gold gradient is always a crowd pleaser, but so is the stout, powerful, and cute “Youth Gunrock” and the prestigious University of California Seal (image 6.8 and 6.9).

Like the Stadium exterior, the interior of Aggie Stadium lacks sufficient signage (image 7.0 and 7.1). Even though signs within Aggie Stadium are strictly informative, posters and banners applauding Aggie football and lacrosse stars would enliven and enhance the ambience as well as instill a sense of greatness (image 7.2, 7.3, 7.4, 7.5, 7.6) At UC Berkeley’s Memorial Stadium, posters of highly recognized football players are exploded to the size of SUVs and walls are painted with ferocious Grizzly Bears and bear claws; it’s hard not to feel like you entered a bear’s lair (image 7.7). Placement of posters by entrances to greet incoming spectators, as well as, the inward-facing walls of the buildings would inspire and motivate spectators and contestants to experience Aggie Pride.
There are many blank walls in Aggie Stadium that can be used for posting images of UC Davis athletics and athletes (left and right). A wide variety of styles are available for posters in the interior spaces of Aggie Stadium. The posters portray UC Davis athletes as heroes and idols and also depicts UC Davis and UC Davis Athletics on a epic and legendary level. The posters also add an aesthetic element to the Stadium and break the monotony of the pink oyster-colored walls (top right and next page). UC Berkeley utilizes signage throughout their Stadium to rouse team identification while also glorifying their athletes.
CONCLUSION

According to a noteworthy stadium design principle, a great stadium is “an intelligent modification of an existing model” (John, Sheard, and Vickery 50). Over the years, designers have been perfecting stadiums to the point to which stadiums can be considered “what skyscrapers were … – cathedrals of commerce, civic icons, and symbols of democratic values” (Seward 7). Stadiums are more than just stadiums, psychologically and socially they are the grounds where social interaction needs are satisfied, cultures are created, heroes are chosen, and interpersonal relationships are tested and made (Wann et al. 25-32). Physically they are testaments to modernizing technology, changing methods and practices in architectural and landscape design, and the ongoing race to increase functionality (John, Sheard, and Vickery 50).

Sadly, UC Davis’ Aggie Stadium lacks in many respects and does not reach among the ranks of a great stadium. Safety and comfort are compromised due a shortage of shade. With shade trees planted and a roof structure constructed, shading worries would be dispersed. Similarly, deficient internal and external seating presently hinders social function and comfort. Strategic placement of seating in high-use areas encourages and supports social aspects and needs and also provides comfort and support. On a different note, Aggie Stadium lacks in aesthetic quality and a distinctive signature. A “barebacked” scoreboard greets guests with its unsightly appearance. A simple covering could resolve the issue and also create an area to display information or school images. An untapped green grass canvas sits idly at both endzones. Various depictions of the UC Davis mustang could be painted or produced to instill Aggie Pride and market UC Davis and Aggie Stadium. Vacant, monochromatic seats give the appearance of an uninhabited and desolate place despite being prospective platforms for fanciful and decorative colors and designs. Lastly, motivational, artistic, and supportive team and stadium signage is close to nonexistent within and beyond the stadium perimeter fence. Banners and posters can be displayed to arouse feelings of excitement, pride, and pure emotion while covertly marketing Aggie Stadium and Aggie Pride. Dress it up whatever way you want, to many a stadium is just a stadium. Despite Aggie Stadium’s shortcomings it has one undeniable, unique, and intangible aspect: the creation of lifelong memories and experiences (image 7.8). Memories abound within its border: it is where you got your first kiss, learned the meaning of sharing and cooperation while eating a polish hotdog with your sibling, feeling the excitement for representing your team after a game winning touchdown, and where you learned how to curse, do the wave, scream until there is no tomorrow, and present yourself as “normal” despite complete intoxication (image 7.9). No matter how technically correct or perfect a stadium is, it is the memories and experiences that make it great. No engineer, architect, or planner can design that.

Image 7.8: Watching football on the Aggie Stadium end zone berms is a very unique and memorable experience.

Image 7.9: Being in the Aggie Pack is an experience within itself.
APPENDIX INDEX

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SENIOR PROJECT COPYRIGHT LICENSE A10
BIBLIOGRAPHY


Flickr - Photo Sharing, Yahoo Company. 5 June 2008 <http://www.flickr.com/>.


Mezger, Skip. Personal interview. 21 May 2008.


Arthur Ashe Stadium is located in Flushing Meadows Park in New York. It is the home to the U.S. Open Tennis Tournament and is the largest outdoor tennis venue in the world. Arthur Ashe has an elaborate system of plazas with exterior seating and fountains. The stadium is located within a park context so the surrounding areas and plazas have ample landscaping, some even having topiary. Signage beautifully decorates exterior walls of the Arthur Ashe Stadium.

Emirates Stadium is the home of the Arsenal Football Club. Don’t let the enclosed look deceive you, Emirates Stadium has a membrane structure roof that shades spectators. Emirates Stadium is also commended for its sizeable amenities and ability to cater to almost every need. The stadium is also sustainable, using passive environmental systems to heat and cool the facility. Signage is huge and lets the spectators know that they are entering the home turf of the Arsenal!
Estádio da Luz is aptly named the “Stadium of Light” as it has a translucent membrane roof. The elliptical bowl creates a strong architectural image with its elegant roof shape and structure. The stadium also boasts large community involvement as it hosts a wide range of activities and events when the Lisbon and Benfica Sporting Clubs are not competing. Different colored seating provides Estádio da Luz with an interesting design and a creative way of advertising. Believe it or not but this stadium was built in a phased construction sequence similar to Aggie Stadium.

Photos: Elaborate designs are created with the use of different colored seating and give the empty stadium a little personality (right). The stadium comes to life during games (below). Photos courtesy of Flickr - Photo Sharing.

WASHINGTON NATIONALS BALLPARK (WASHINGTON, D.C.)

The new and exciting Washington Nationals Ballpark is proving to be a major milestone in stadium design. To begin, Nationals Ballpark is LEED certified, sustainable, and is composed of recycled of materials. Nationals Ballpark also continues the green design into the stadium with symbolic and elegant Cherry trees lining Center Field Plaza. Different species of grasses are used to create an intricate green pattern and Washington Nationals “W” in the outfield. Signage is everywhere for the Nationals, even on parking garage facades! The stadium also utilizes its location in Washington, D.C. to create a patriotic and historical theme - all your favorite presidents race around the field during the 7th inning stretch!!

Photos: Planting of the cherry trees in Center Field Plaza (below). Signage inspires team spirit, even from a light post (left). Photos courtesy of Flickr - Photo Sharing.
HUSKY STADIUM (SEATTLE, WASHINGTON)

Husky Stadium sits gracefully on the edge of Lake Washington and utilizes scenic views of the Cascade Mountains. The lower portion of the stadium represents one of the oldest seating tiers in Division I-A football. The stadium is also the home to the University of Washington track team. Recent renovation has made Husky stadium iconic. The upper tier of seating is covered with a cantilevered roof to provide shade but also to protect spectators from the common Seattle rain. Large posters laud star football athletes and inspire University of Washington Pride. Colored seating signals different seating sections and also adds a little flair. The back of the scoreboard is also used to display the Husky’s football schedule.

Photos: A gigantic poster covers a wall of the stadium (left). The scoreboard is used a semi-“billboard” (below). Photos courtesy of Flickr - Photo Sharing.

GERALD J. FORD STADIUM (DALLAS, TEXAS)

UC Davis Aggie Stadium is modeled after Southern Methodist University’s General J. Ford Stadium. Different colored seating designates different seating areas but also displays school pride with the use of school colors. Plazas located around the stadium are the home to pregame events. Statues and paving patterns welcome spectators to Mustang Country. Behemoth posters are hung to recognize important football players.

Photos: Seating is red and blue to represent SMU school colors (below). Pregame activities provide spectators with fun opportunities (left). Photos courtesy of Flickr - Photo Sharing.
AUTZEN STADIUM (EUGENE, OREGON)

University of Oregon Autzen stadium is large and in charge. Large “O” are plastered all over the stadium even on the back of the scoreboard. The field, although synthetic, is composed of different green colors to create visual interest. The artificial crater shape amplifies the crowd noise, which has been said is so loud that it has to contribute to Duck victories. Autzen Stadium also hosts concerts and other activities.

Photos: The “O” greets spectators as they pass through the gates (below). The scoreboard although simple inspire U of O pride. (lower left). Fans go crazy and rush the field during a game (upper left). Photos courtesy of Flickr - Photo Sharing.

MEMORIAL STADIUM (BERKELEY, CALIFORNIA)

The unique and old-looking architecture make UC Berkeley’s Memorial Stadium different from the rest. Humongous posters of Cal football players hang around the exterior and bear claws are painted around the interior concourse to inspire Cal pride. Historic pictures recognize Memorial Stadium’s roots as well as educate spectators. The bowl shaped stadium is set in the Berkeley Hills and provides scenic views of San Francisco and the San Francisco Bay. A giant navy “C” is painted on the yellow benches on one side of the stadium to give character when empty.

Photos: A panoramic view of Memorial Stadium (below). Bear claws walk across the walls creating the feeling of being in a bear’s lair (left).
Monday Study

Question Posed: Do patrons use landscaped areas before entering an entertainment facility?

Study Site: Robert and Margrit Mondavi Center for the Performing Arts (Davis, California)

Observation Criteria: 2 areas within the Mondavi Center property represented observational zones. The landscape area (LA) was a landscaped plaza that was exposed to sunlight and glare. Users were documented when sitting, strolling, picture taking, admiring foliage, and people watching. The Mondavi area (MA) represents the planters situated directly in front of the entrance that were exposed to shade and wind. Users were documented when sitting, playing on or leaning against planters. Temperature was also recorded.

Results:

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<th>Predicted Proportions</th>
<th>Pearson Residuals</th>
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<td>0.3333</td>
<td>0.06</td>
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<tr>
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<td>MA high temp</td>
<td>0.6694</td>
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</tbody>
</table>

Interpretation:

There is no reliable interaction between temperature and differential use of the landscaped area and planter area based on temperature. Approximately twice as many people are staying near the planters as compared with the open, unshaded landscaped area. Sampling time was early evening when the sun was setting so the issue of shade or glare might be relevant.

Graph:

Graph 1.1: Despite very similar use among the different areas, it is the comfort of shade that causes almost a 2x increase of use of the Mondavi area (MA) to the Landscape area (LA).

Total Number of Patrons in Respect to Temperature

<table>
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<th>Study #</th>
<th>Total LA</th>
<th>Total MA</th>
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</tr>
<tr>
<td>Total</td>
<td>190</td>
<td>380</td>
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</tr>
</tbody>
</table>
Let there be light. And there was. On a balmy May 30th, 2008 evening the long awaited UC Davis Aggie Stadium lights illuminated Jim Sochor Field for the first time. Four 120’ tall steel light posts adorned with a 180 metal halide lights each shining a whopping 1,500 watts blazed in the twilight sky (“Stadium Lights” Foster). The $600,000 lighting system provides a 100-foot candlepower, “the brightness needed for television coverage of night events” (“Stadium Lights” Foster). Installation of the system was no easy feat by any means however. Gigantic cranes lifted the assembled poles and placed them on their precast concrete footing. Once installed, every light was precisely directed at different areas on the field (“Stadium Lights” Foster).

Playing into the multi-use function of the facility, the newly added lights provide a myriad of opportunities for Aggie Stadium. By allowing games to be played during the cooler evenings compared to the hotter afternoons, spectator comfort and safety is increased – UC Davis Football has taken advantage of this and has scheduled 5 of 6 home games at 6:00pm (UC Davis Athletics). Although the main purposed is to illuminate Aggie football and lacrosse games, the lights can also be utilized for campus and community events and concerts (“Stadium Lights” Foster).

The addition of lights to Aggie Stadium is a valuable asset. It offers spectator comfort and safety while also supplying Aggie Stadium with increased function.

Photos: The light poles tower 120’ over the surrounding landscape (right). Precast concrete footings secure the massive light posts to the ground (lower right). Jim Sochor Field comes to life during night time (left).
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Senior Project Title: **Aggie Stadium: Redesigning for the Spectator Experience**

Author’s Name: **Hilary Harkins**

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Executive Director
Technology Transfer Services

Date ____________________________  Date 6/11/08