

FAIRMOUNT CEMETERY



KOMATSU
ARCHITECTURE

MASTER PLAN
July 2, 2012

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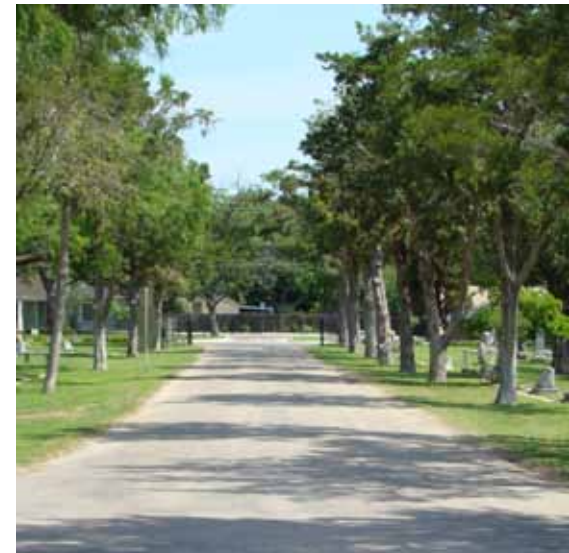
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Fairmount Cemetery is San Angelo's 119 year old, city owned cemetery. The Friends of Fairmount (FOF) was established in 2005 as a non-profit, auxiliary group supported by over 400 community members. The Fairmount Cemetery Board (FCB) oversees the cemetery's operations and maintenance along with the cemetery staff employed by the city.

The FOF and the FCB felt a Master Plan was important at this time to assess and define the cemetery's physical, economic, and longevity needs and to suggest improvements for meeting those needs in ways which not only maintain Fairmount's historical significance but also extend its economic life.

The FOF engaged the services of Komatsu Architecture, a Texas firm specializing in historic cemeteries, in April 2011 to research and prepare a Master Plan for Fairmount Cemetery. Komatsu Architecture suggested the addition of the Austin-based landscape architecture firm of RVi to identify the cemetery's predominate tree species and provide an assessment of the overall landscape health.

Fairmount was established in 1893 and over the years grew to the current size of 56 acres. It is a perpetual care cemetery and

is designated as a Texas Historic Cemetery by the Texas Historical Commission. In 1930, the cemetery was deeded to the City and placed under the supervision of the Parks Commission. Within the cemetery are areas identified as Pleasant View, Independent Order of Odd Fellows, Greek Orthodox Cemetery, as well as unidentified remains originally interred at the old City Cemetery.

The cemetery has almost 2,000 feet of street frontage on West Avenue N. It is bordered on the west by the Calvary Cemetery which was also established in 1893 and is owned by the Catholic Diocese of San Angelo. The Angelo State University intramural fields are located to the south, and the university's physical plant occupies the property to the southwest. Various light commercial properties are located to the east.

Over 33,000 persons are buried in Fairmount. An archeological survey performed in 2006 located 575 available grave sites on the property bringing the total empty individual plots to 612. The cemetery holds approximately 100 funeral services each year.



Summary

To meet the future burial needs for the City of San Angelo as well as enhance the ceremonial experience, the FOF and FCB envisioned a long-range plan that would:

- Optimize the economic and physical longevity of the cemetery
- Utilize sustainable features and trends
- Embrace the future prospects of the cemetery as a significant historic city park space
- Identify and prioritize potential capital improvement projects

To meet these goals, the Master Plan proposes the addition of a columbaria for more burial space, new and remodeled buildings and features, enhanced landscaping along view corridors, technological and convenience concepts to enhance the visitor experience, and the establishment of an architectural theme for all future improvements.

Based on discussions with participants in the Master Plan process and Komatsu Architecture's analysis of the existing conditions, six architectural concepts are presented for both existing and proposed cemetery features and structures:

- Main Entrance Feature
- Columbaria

- Restroom Facility
- Gazebo
- St. Francis Area
- Multi-Use Building and Maintenance Facility

In addition to the architectural concepts, a tree survey and narrative is included to help manage the landscape.

The Master Plan establishes an architectural theme based on the features and details found on the gazebo:

- Buff colored brick
- Green glazed clay barrel tile roofing
- Cast stone
- Stucco
- Exposed timber
- Arches



The FOF hosted a design charrette in 2007 which identified the historic significance and needs of the cemetery as well as recommendations for its future. The comprehensive, three-day exploration focused on Fairmount's past and potential.

The 2007 charrette highlighted the following:

Fairmount Cemetery importance:

- Youth outreach
- Knowledge base of local history
- Event celebration
- Collaboration opportunities

Fairmount Cemetery needs:

- Comprehensive landscape plan
- Sustainability

Recommendations:

- Establish design guidelines
- Relocate the main entrance and traffic flow
- Build a columbarium
- Build a chapel / public facility
- Provide public restrooms
- Create a water source for wildlife

In 2011, the Master Plan process began with Komatsu Architecture analyzing the information presented in the charrette. Based on this analysis, research, and

investigations of the existing conditions, FOF and City Staff determined the following concepts should be included in the Master Plan:

- Address safety issues at the present main entrance on West Avenue N
- Find a location for columbaria
- Find a location for a chapel/large gathering/multi-use building
- Provide a location for restroom facilities
- Provide a water feature at the St. Francis statue and enhance the landscaping in the triangle at Block 84

Based on these five conceptual elements, Komatsu developed the Master Plan.

Komatsu developed an architectural theme for each of the concepts presented. For this very important aspect of the Master Plan, the designers looked to the cemetery Gazebo for inspiration. The Gazebo was built in 1911 and lies on an axis with the main entrance and at the heart of the cemetery. The simple and elegant structure was designed in the Italian Renaissance style made popular in America from the mid-1800's and early 1900's. The restrained detailing includes bracketed eaves, round top arches, cast stone trim, stucco, interleaved brick detailing, and a barrel clay tile roof.



Existing Site Plan



Overall Master Plan





Main Entrance Feature



The current main entrance is well positioned as the primary approach to the cemetery because of its close proximity to the administrative office, West Avenue N and the direct axis to the Gazebo on the tree-lined drive. Both the links to the administrative office and the Gazebo offer visitors landmarks to help orient them to the cemetery layout.

Several features should be considered to address safety issues for cars exiting the cemetery. The gates should be relocated at least 25 feet south of West Avenue N with curb radii of at least 30 feet. This will allow cars more room to maneuver and increase the site lines to oncoming traffic. The full extent of this relocation will be based on the proximity of nearby grave sites and the completion of a site topography and utility survey.

No traffic light, stop, or yield sign is suggested for this location because of the limited amount of traffic exiting and entering the cemetery; however, provisions for accent pavers extending across West Avenue N will help identify this intersection to oncoming motorists. The addition of a new sidewalk at the curb in front of the entrance would contribute to improved safety and heighten awareness of the entrance.



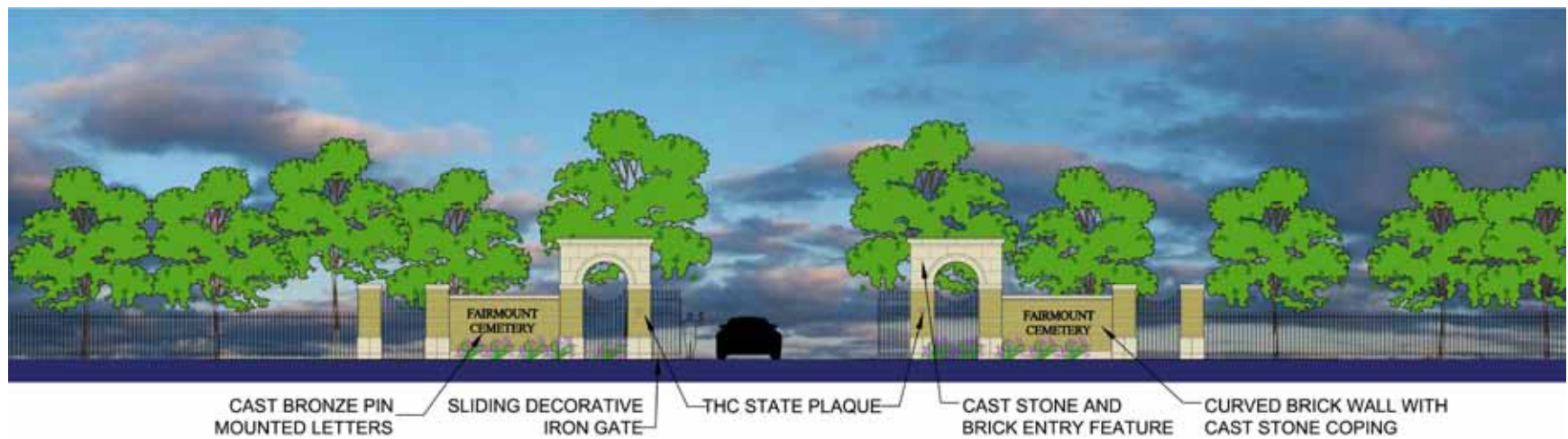
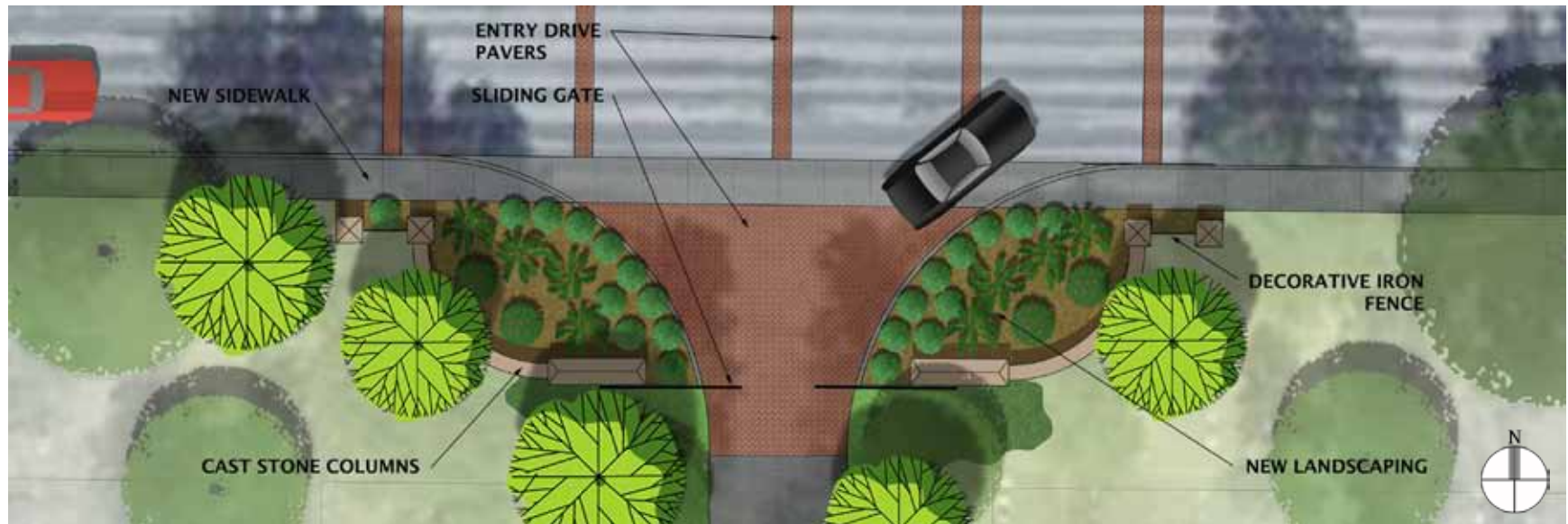
A broader and more prominent façade element with signage, lighting, and native landscaping will create an identifying focal point and provide an entrance that is helpful, safe, and beautiful.

The architectural theme of the Entrance Feature and other new additions to the cemetery are elements taken from the existing Gazebo. The theme blends brick and cast stone as well as larger scale honed limestone forming the arches.

The Entrance Feature should include lighting elements for safety, identity, and aesthetics. The landscaped areas will provide opportunities for low native and drought tolerant plants to further enhance the identity of the cemetery. Prominent signage and ample space for the Texas Historical Commission medallion designating the cemetery as a Texas Historic Cemetery will also be provided.

In addition to identifying the ingress and egress point to the cemetery, this feature also sets the tone for the overall cemetery experience, one of permanence, stability, and civic pride.

Main Entrance Feature



Main Entrance Feature



Columbaria



A columbarium is a vault with niches for cinerary urns. There are many manufacturers of columbarium niches. The niches are generally constructed of pre-cast concrete and are offered in a variety of configurations. The concept for the Fairmount Columbaria is a linear path using a 4-niche-high by 9-niche-wide pattern. The pre-manufactured vaults will be placed on a concrete foundation. Exterior cladding materials will be installed on site.





When Fairmount was established over 100 years ago, fewer than one in one hundred of all deaths used cremation. In 2006 about one-third of deaths in the U.S. used cremation as the burial option. This national rate continues to climb and is expected to reach one-half by 2025. Cremain burials increased significantly at Fairmount Cemetery in 2011, reflecting this nationwide increase.

Some factors contributing to this trend are:

- Economic hardships that create a need for less expensive burials
- More cemeteries offering columbarium burials
- Acceptance of cremation by more religions
- Increased receptivity to non-traditional burial ceremonies
- Fewer people with reserved spaces in family burial plots
- Heightened environmental awareness about full body burial and land use

Komatsu Architecture found an appropriate location for building columbaria structures by closing three east-west cross drives. This location provides for a three-phased construction effort, allowing time for fund-raising and budgeting.

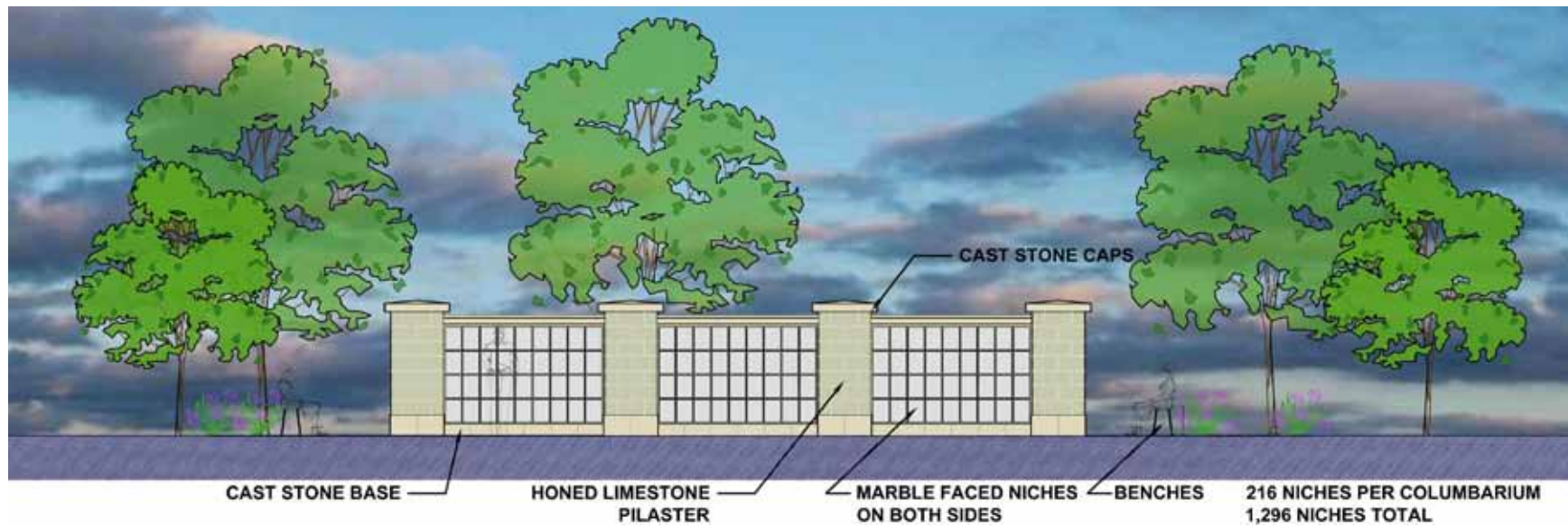
This location also allows north-south car access to remain open; east-west drive closures will not adversely affect traffic patterns. The columbaria location in the cemetery is easily found southwest of the Gazebo off the primary entrance drive. It offers areas for privacy and reflection. The plan includes landscaped pathways with benches and locations for accessible parallel parking.

The material selections for the columbarium include honed natural limestone pilasters with cast stone copings. The columbarium niches will be faced with marble or granite held in place with brass or stainless steel fittings.

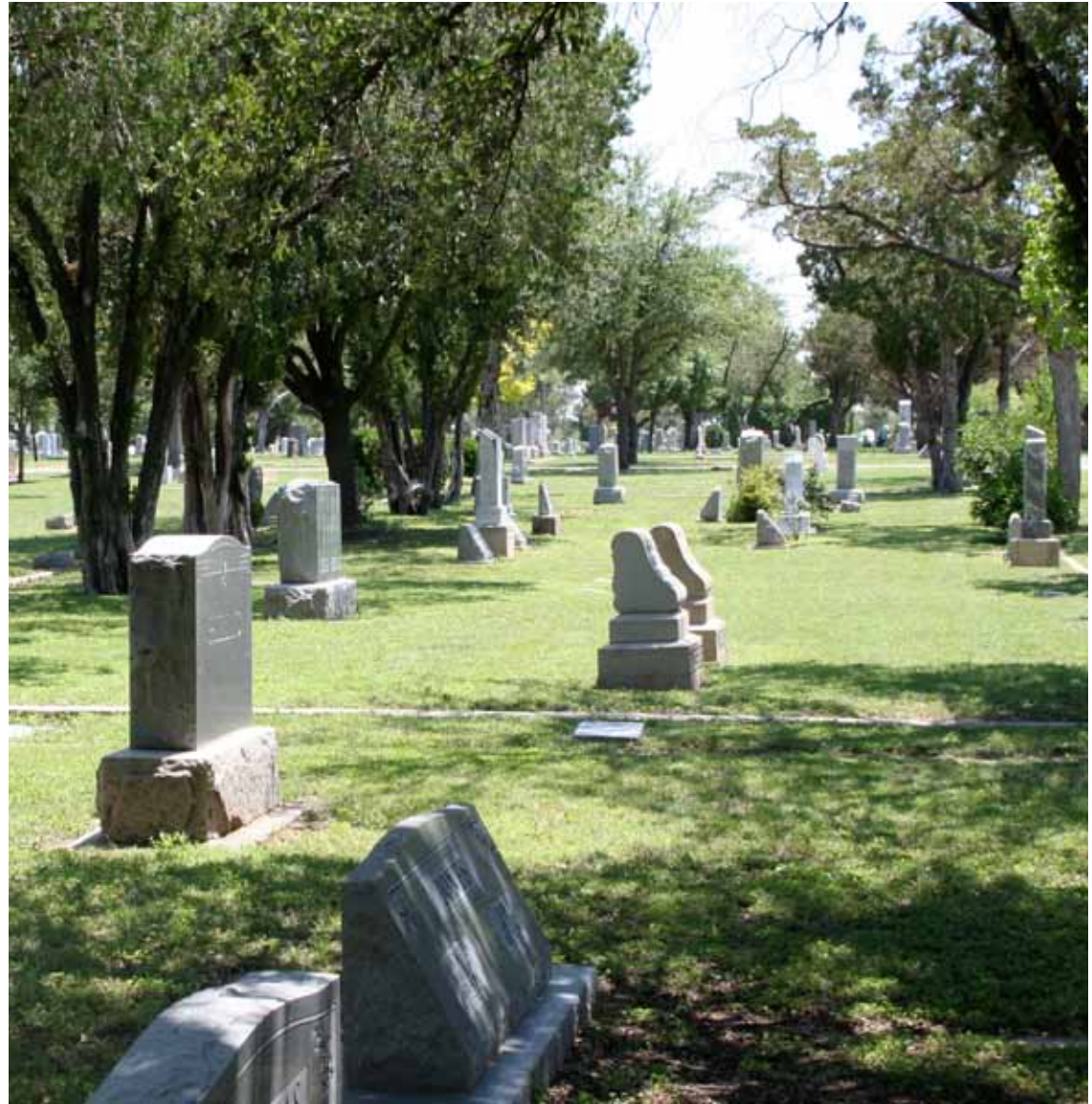
The plan envisions space for 6 two-sided columbaria with a total niche count of 1,296 and the potential to generate revenue.

Trees will be added to provide shade, and perennial planting beds will be placed to accent the decomposed granite or other porous material pathways and seating areas.

Columbaria







Restroom Facility



Public restrooms were identified as a need in the 2007 design charrette. This need was reinforced in the more recent discussions with the FOF and FCB.

There is a non-accessible restroom facility within the cemetery which is not well identified, nor is it constructed to current code standards. This cinder block building offers little opportunity for reuse; however, the site is centrally located and therefore a good candidate for a new structure.

The Master Plan proposes that this building be demolished and a new accessible restroom facility be constructed. The site offers enough space to include a storage room as well as two parking spaces.



Architectural elements from the Gazebo will be incorporated into the design of the Restroom Facility. The Restroom Facility will also incorporate a breezeway design linking the parking spaces to the grave sites. The breezeway will lend itself to the use of exposed timber roof framing. This breezeway will also provide additional opportunities for natural ventilation into the toilet rooms. The exterior walls will consist of a buff brick wainscot capped by cast stone with stucco extending to the roof rafters. Translucent glazed arched windows will be used to provide natural light into the interior. A green glazed clay barrel roof will be used on the roof.

Sustainable features of the Restroom Facility will include a well insulated wall and roof system, low-water use plumbing fixtures, occupancy-sensor lights, natural ventilation and lighting, pervious paving, and generous roof overhangs for shading. Landscaping materials will be selected from the region and will be drought tolerant. New trees will be locally selected and positioned for optimal shading. Capturing and collecting rainwater from the roof to use for drip irrigation should also be considered. Criteria for a LEED® Silver rating will be the design and construction goal for the Restroom Facility.

Restroom Facility



Restroom Facility



Gazebo



The Gazebo is the focal point of the entire cemetery and is the first landmark that the visitor encounters. The Master Plan suggests capitalizing on this location by better defining the roundabout surrounding it. Because of the relationship to the main entrance, the Gazebo lends itself to being the main orientation feature. The Gazebo also offers the most appropriate location for an electronic grave site locator. The expanded roundabout will allow the cemetery visitor the opportunity to park and enter the Gazebo to use the grave site kiosk. In addition to parking, the roundabout will include enhanced landscaping, seating area, and sites for memorials or public art.

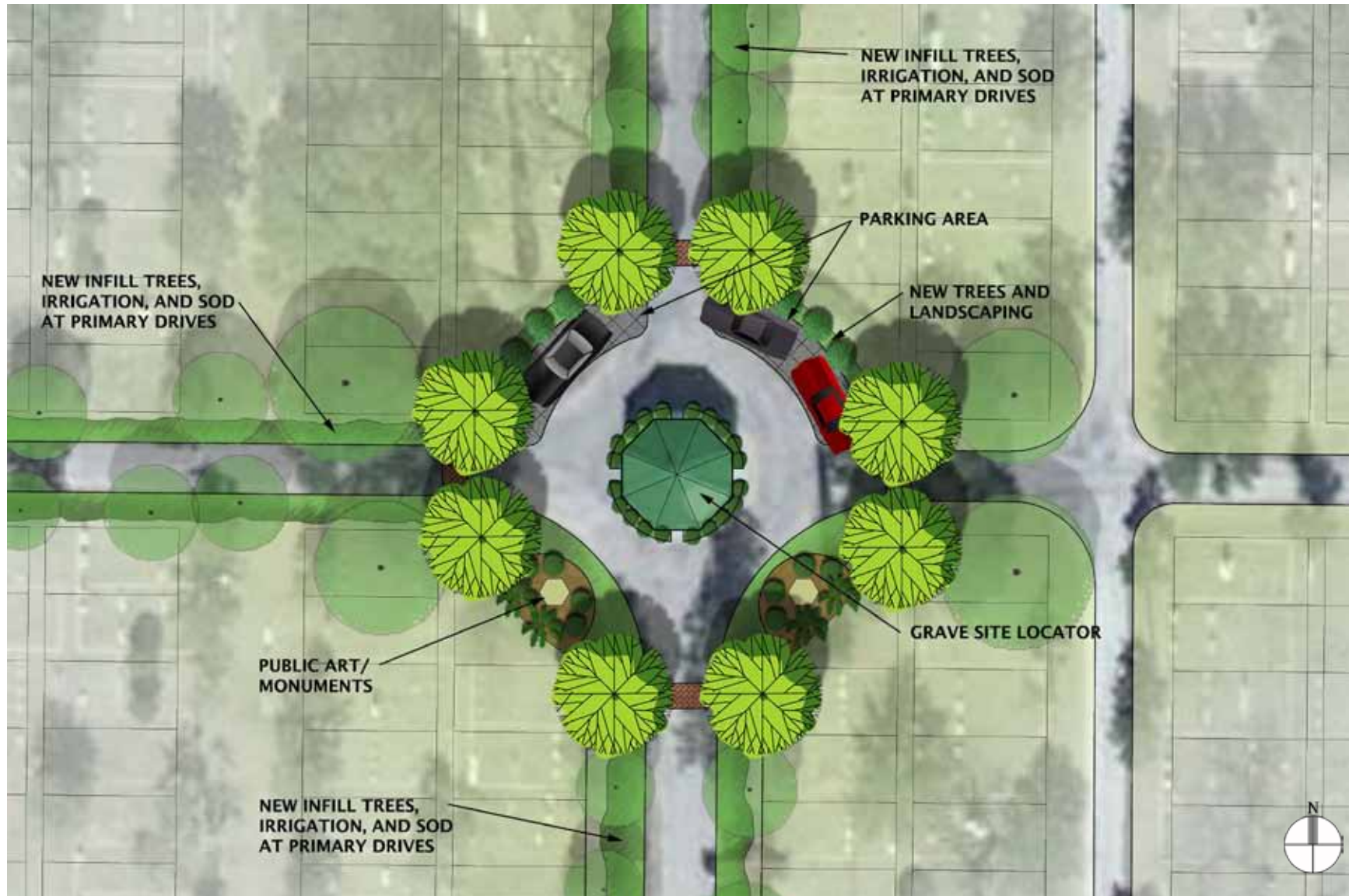
As noted throughout the Master Plan, the architectural elements already established by the Gazebo will be used as the basis for the design features of the other cemetery concepts.



Cemetery grave site locator kiosks provide a way of displaying a cemetery map along with burial information and grave locations. Kiosks are constructed with durable materials, are weather resistant, and provide easy access for handicapped persons. A list of people and a map of the cemetery plots will allow visitors to easily find their friends and family.

The computer touch screen digital kiosks are the most advanced, expandable, and dynamic directories. These directories are run from a computer, are housed in the kiosk structure, and use a touch screen and a software program that will search and navigate through the cemetery's information. The program displays cemetery maps and locations of graves as well as personal photos, obituaries and genealogy information.





St. Francis Area



The current setting of the St. Francis statue offers the cemetery visitor a shady place with an atmosphere of serenity and contemplation. The Master Plan suggests several features to be added to this area. The statue is well located on one of the cemetery's major drives. Adding parallel parking spaces will help identify this area as a destination. A small, low-maintenance water feature will not only add tranquility to this area, it will also offer a water source for the cemetery's wildlife. Comfortable benches will be located at the statue, affording visitors opportunities for rest and reflection. Native and drought-tolerant landscape materials will be used as well as walking surfaces using pervious paving materials.



The triangle of ground at the transition of the drive at Block 84 is currently free of grave sites and therefore offers a well positioned space for a memorial and place of meditation. This location is the termination of a major view corridor on an axis with the Gazebo. This use will establish the area as a cemetery landmark, drawing visitors to the west and giving them a point of reference. Similar landscaping and paving proposed for the St. Francis statue will be used.

St. Francis Area





Multi-Use Building and Maintenance Facility

The new Multi-use Building will allow the option for on-site burial services in an enclosed, temperature-controlled, chapel-like setting. The building also will be a convenient place for gatherings after graveside services.

For non-cemetery functions, the facility will serve as the location and starting point for city-wide events such as Memorial Day and Veterans' Day as well as historical walking tours of the cemetery. It can also generate revenue as a fee-based, general meeting space.

The Master Plan design concept of this building is one of a simple yet elegant structure which will fit comfortably into the cemetery setting. The suggested steeply pitched roof form and timber construction will present a ceremonial structure while not exhibiting an overly ecclesiastical design. The material selections and design features for the Multi-use Building will be borrowed from the Gazebo and give an opportunity to feature the use of a glazed green clay barrel tile for the roof.

At 3,050 gross square feet, the building will seat 168 people. For catered events, approximately 90 people can be accommodated. Handicap accessible toilets will be provided on either side of

the vestibule. Additional functions such as a conference room and storage space can be accommodated as well as a small preparation kitchen.

Site amenities include an 18 car parking area and a water feature with outdoor seating and planting beds. A living screen wall of trees and shrubs will be located between the Multi-use Building and the new Maintenance Facility. Overflow parking will be accommodated on the adjacent drives.

Sustainable features of the Multi-use Building will include a well insulated wall and roof system, low-water use plumbing fixtures, and occupancy-sensor lighting.

Windows will offer natural lighting and views out of the building; generous roof overhangs will shade these windows. Landscaping materials will be selected from the region and will be drought-tolerant. New trees will be selected and positioned for optimal shading of the building and the parking area. Consideration should be given to paving the parking area with pervious material. A geothermal heating and air conditioning system should also be considered. Another sustainable feature is capturing and collecting rainwater from the roof to use for drip irrigation of the landscape beds. A LEED® Silver rating is the goal for design and construction of the project.



Multi-Use Building and Maintenance Facility



Multi-Use Building and Maintenance Facility





Recommendations and Phasing



It is not possible for the City of San Angelo to implement all of the concept ideas presented in this Master Plan in a single construction project; therefore, a phasing plan is presented here. The following prioritized list should be considered:

- The new Main Entrance Feature will greatly enhance the visibility, safety and marketability of the cemetery and should be a top priority.
- Increasing the number of burial opportunities by adding the Columbaria will increase the longevity and economic viability of the cemetery. To lessen the financial burden, the Columbaria could be separated into three or more phases.
- The accessible Restroom Facility will enhance the cemetery visitor's experience and should be among the top priorities.
- Placing an electronic grave site locator in the Gazebo will positively impact the visitor's experience and cemetery's functionality. The roundabout could be a phased construction effort by providing parking, new paving surfaces, landscaped areas and memorials as funds are available.

- Enhancing the St. Francis area with landscaping, a water feature, and a Memorial Triangle will also enhance the visitor's experience. It offers a contemplative space and a refuge for wildlife.
- The new Multi-use Building and Maintenance Facility are important additions to the cemetery. By providing a location for the funerals/memorials, meetings, ceremonies, receptions, and educational opportunities the Multi-use building and Maintenance Facility will better meet the growing needs of the Fairmount Cemetery. The services will also provide additional sources of income.



Statement of Probable Cost



The following statement of probable construction costs are based on 2012 labor and materials rates. These statements should be considered preliminary in nature and used for discussion purposes only. Many items may fluctuate because the level of detail has not been established. Once each concept is designed and engineered, a more accurate estimate will be established. A yearly escalation factor past 2012 should be added, as this will most likely be a long range, phased set of construction projects.

The Master Plan provides statements of probable costs for the six concepts presented. Internal street paving improvements, grave site irrigation repairs, additions and updates, cemetery tree removal and replacement, as well as primary drive landscape enhancements, are not included.

Other exclusions are site topographic and utility surveys, geotechnical reports, architectural and engineering fees, and city administrative costs.

Statement of Probable Cost

Main Entrance Feature

PROJECT: Fairmount Cemetery
 LOCATION: San Angelo, Texas
 SIZE: 3,800 AREA
 CLIENT: Friends of Fairmount PROJECT # 2010.161

ACCOUNT NO.	MAIN ENTRANCE FEATURE DESCRIPTION	TOTAL COST	AREA COST
2	SITE WORK	\$ 106,975	\$ 28.15
3	BUILDING CONCRETE	\$ 7,875	\$ 2.07
4	MASONRY	\$ 39,900	\$ 10.50
5	METALS	\$ -	\$ -
6	CARPENTRY	\$ -	\$ -
7	MOISTURE PROTECTION	\$ -	\$ -
8	DOORS/GLASS & GLAZING	\$ -	\$ -
9	FINISHES	\$ -	\$ -
10	SPECIALTIES (LETTERS)	\$ 2,550	\$ 0.67
15	MECHANICAL	\$ -	\$ -
16	ELECTRICAL	\$ 8,250	\$ 2.17
TOTAL DIRECT COST		\$ 165,550	\$ 43.57

PROJECT MARK-UPS*****

OVERHEAD 6% \$ 9,933
 PROFIT 8% \$ 13,244
 GEN. COND. 6% \$ 9,933
 CONTINGENC 15% \$ 24,833

TOTAL PROJECT **\$ 223,493** \$ 58.81

Statement of Probable Cost

Columbaria

PROJECT: Fairmount Cemetery
 LOCATION: San Angelo, Texas
 SIZE: 20,000 AREA
 CLIENT: Friends of Fairmount PROJECT # 2010.161

ACCOUNT NO.	COLUMBARIA DESCRIPTION	TOTAL COST	AREA COST
2	SITE WORK	\$ 231,050	\$ 11.55
3	BUILDING CONCRETE	\$ 31,500	\$ 1.58
4	MASONRY	\$ 107,400	\$ 5.37
5	METALS	\$ -	\$ -
6	CARPENTRY	\$ -	\$ -
7	MOISTURE PROTECTION	\$ -	\$ -
8	DOORS/GLASS & GLAZING	\$ -	\$ -
9	FINISHES	\$ -	\$ -
10	SPECIALTIES (NICHES)	\$ 259,200	\$ 12.96
15	MECHANICAL	\$ -	\$ -
16	ELECTRICAL	\$ 24,750	\$ 1.24
TOTAL DIRECT COST		\$ 653,900	\$ 32.70
***** PROJECT MARK-UPS*****			
	OVERHEAD 6%	\$ 39,234	
	PROFIT 8%	\$ 52,312	
	GEN. COND. 6%	\$ 39,234	
	CONTINGENCY 15%	\$ 98,085	
TOTAL PROJECT		\$ 882,765	\$ 44.14

Statement of Probable Cost

Restroom Facility

PROJECT: Fairmount Cemetery
 LOCATION: San Angelo, Texas
 SIZE: 850 BLDSF
 CLIENT: Friends of Fairmount PROJECT # 2010.161

ACCOUNT NO.	RESTROOM FACILITY DESCRIPTION	TOTAL COST	BLDSF COST
2	SITE WORK	\$ 93,738	\$ 110.28
3	BUILDING CONCRETE	\$ 8,400	\$ 9.88
4	MASONRY	\$ 35,000	\$ 41.18
5	METALS	\$ -	\$ -
6	CARPENTRY	\$ 6,000	\$ 7.06
7	MOISTURE PROTECTION	\$ 13,665	\$ 16.08
8	DOORS/GLASS & GLAZING	\$ 5,375	\$ 6.32
9	FINISHES	\$ 18,063	\$ 21.25
10	SPECIALTIES (TOILET ACCESSORIES)	\$ 1,488	\$ 1.75
15	MECHANICAL	\$ 15,300	\$ 18.00
16	ELECTRICAL	\$ 14,025	\$ 16.50
	TOTAL DIRECT COST	\$ 211,053	\$ 248.30
	*****	PROJECT MARK-UPS*****	
		OVERHEAD 6% \$ 12,663	
		PROFIT 8% \$ 16,884	
		GEN. COND. 6% \$ 12,663	
		CONTINGENC 15% \$ 31,658	
	TOTAL PROJECT	\$ 284,921	\$ 335.20

Statement of Probable Cost

Gazebo

PROJECT: Fairmount Cemetery
 LOCATION: San Angelo, Texas
 SIZE: 8,000 AREA
 CLIENT: Friends of Fairmount PROJECT # 2010.161

ACCOUNT NO.	GAZEBO DESCRIPTION	TOTAL COST	AREA COST
2	SITE WORK	\$ 177,438	\$ 22.18
3	BUILDING CONCRETE	\$ -	\$ -
4	MASONRY	\$ 2,500	\$ 0.31
5	METALS	\$ -	\$ -
6	CARPENTRY	\$ 15,000	\$ 1.88
7	MOISTURE PROTECTION	\$ 2,100	\$ 0.26
8	DOORS/GLASS & GLAZING	\$ -	\$ -
9	FINISHES	\$ 6,400	\$ 0.80
10	SPECIALTIES (LOCATOR)	\$ 40,000	\$ 5.00
15	MECHANICAL	\$ -	\$ -
16	ELECTRICAL	\$ 8,000	\$ 1.00
TOTAL DIRECT COST		\$ 251,438	\$ 31.43
***** PROJECT MARK-UPS*****			
	OVERHEAD 6%	\$ 15,086	
	PROFIT 8%	\$ 20,115	
	GEN. COND. 6%	\$ 15,086	
	CONTINGENCY 15%	\$ 37,716	
TOTAL PROJECT		\$ 339,441	\$ 42.43

Statement of Probable Cost

St. Francis Area

PROJECT: Fairmount Cemetery
 LOCATION: San Angelo, Texas
 SIZE: 7,500 AREA
 CLIENT: Friends of Fairmount PROJECT # 2010.161

ACCOUNT NO.	ST. FRANCIS AREA DESCRIPTION	TOTAL COST	AREA COST
2	SITE WORK	\$ 170,275	\$ 22.70
3	BUILDING CONCRETE	\$ -	\$ -
4	MASONRY	\$ -	\$ -
5	METALS	\$ -	\$ -
6	CARPENTRY	\$ -	\$ -
7	MOISTURE PROTECTION	\$ -	\$ -
8	DOORS/GLASS & GLAZING	\$ -	\$ -
9	FINISHES	\$ -	\$ -
10	SPECIALTIES	\$ -	\$ -
15	MECHANICAL	\$ 8,000	\$ 1.07
16	ELECTRICAL	\$ 8,000	\$ 1.07
TOTAL DIRECT COST		\$ 186,275	\$ 24.84
*****		PROJECT MARK-UPS*****	
	OVERHEAD 6%	\$ 11,177	
	PROFIT 8%	\$ 14,902	
	GEN. COND. 6%	\$ 11,177	
	CONTINGENCY 15%	\$ 27,941	
TOTAL PROJECT		\$ 251,471	\$ 33.53

Statement of Probable Cost

Multi-Use Building

PROJECT: Fairmount Cemetery
 LOCATION: San Angelo, Texas
 SIZE: 3,200 BLDSF
 CLIENT: Friends of Fairmount PROJECT # 2010.161

ACCOUNT NO.	DESCRIPTION	TOTAL COST	BLDSF COST
2	SITE WORK	\$ 183,875	\$ 57.46
3	BUILDING CONCRETE	\$ 116,025	\$ 36.26
4	MASONRY	\$ 38,000	\$ 11.88
5	METALS	\$ -	\$ -
6	CARPENTRY	\$ 92,750	\$ 28.98
7	MOISTURE PROTECTION	\$ 36,960	\$ 11.55
8	DOORS/GLASS& GLAZING	\$ 31,725	\$ 9.91
9	FINISHES	\$ 47,180	\$ 14.74
10	SPECIALTIES (TOILET ACCESSORIES)	\$ 5,600	\$ 1.75
15	MECHANICAL	\$ 103,200	\$ 32.25
16	ELECTRICAL	\$ 51,150	\$ 15.98
TOTAL DIRECT COST		\$ 706,465	\$ 220.77
***** PROJECT MARK-UPS*****			
	OVERHEAD 6%	\$ 42,388	
	PROFIT 8%	\$ 56,517	
	GEN. COND. 6%	\$ 42,388	
	CONTINGENC 15%	\$ 105,970	
TOTAL PROJECT		\$ 953,728	\$ 298.04

Statement of Probable Cost

Maintenance Area

PROJECT: Fairmount Cemetery
 LOCATION: San Angelo, Texas
 SIZE: 1,430 BLDSF
 CLIENT: Friends of Fairmount PROJECT # 2010.161

ACCOUNT NO.	MAINTENANCE AREA DESCRIPTION	TOTAL COST	BLDSF COST
2	SITE WORK	\$ 48,125	\$ 33.65
3	BUILDING CONCRETE	\$ 13,808	\$ 9.66
4	MASONRY	\$ 44,000	\$ 30.77
5	METALS	\$ 18,000	\$ 12.59
6	CARPENTRY	\$ 10,943	\$ 7.65
7	MOISTURE PROTECTION	\$ 8,978	\$ 6.28
8	DOORS/GLASS & GLAZING	\$ 13,760	\$ 9.62
9	FINISHES	\$ 8,500	\$ 5.94
10	SPECIALTIES	\$ 2,503	\$ 1.75
15	MECHANICAL	\$ 46,118	\$ 32.25
16	ELECTRICAL	\$ 7,150	\$ 5.00
	TOTAL DIRECT COST	\$ 221,883	\$ 155.16

	PROJECT MARK-UPS*****		
	OVERHEAD 6%	\$ 13,313	
	PROFIT 8%	\$ 17,751	
	GEN. COND. 6%	\$ 13,313	
	CONTINGENC 15%	\$ 33,282	
	TOTAL PROJECT	\$ 299,542	\$ 209.47



Tree Survey and Narrative

General

Mark Smith (RVI) visited the Fairmount Cemetery in San Angelo, Texas on June 20, 2011 for the purposes of inventorying and evaluating the condition of existing trees located on the cemetery site. During a meeting with the Friends of Fairmount Cemetery (Client) at the cemetery office, it was determined that the tree inventory should focus primarily on cemetery perimeters, main axial drives, the St. Francis Statue area, and the existing maintenance area.

The Tree Inventory Plan includes evaluation of each tree species, size (approx. diameter at breast height), and condition (excellent, good, poor), noted on a color aerial photo. The nomenclature used to identify and evaluate each tree is as follows:

18" QV (E) = 18" (DBH) Quercus Virginiana (Live Oak) in Excellent condition.

General Conditions

Conditions at the site were very dry, with San Angelo currently experiencing extreme drought. San Angelo has received very little rainfall and watering restrictions imposed by the City of San Angelo have limited the cemetery's ability to provide adequate supplementary irrigation. Turf throughout

the site was brown and dormant. There are very few shrubs in the cemetery, limited mainly to a perimeter border planting and accent/enclosure shrubs in the area of the gazebo. Trees throughout the cemetery appear to be stressed and showing signs of decline and, in a few cases, death. In general, the cemetery contains a diverse blend of shade, ornamental, and evergreen trees well-suited for this environment.

Tree Species Observed

Trees species observed at the cemetery during the site visit are identified on the Plan by the following abbreviations:

ARB = Arborvitae (*Thuja occidentalis*)

BALD CYP = Bald Cypress (*Taxodium distichum*)

BURR OAK = Burr Oak (*Quercus macrocarpa*)

CED = Ashe Juniper/Cedar (*Juniperus ashei*)

CM = Crape Myrtle (*Lagerstroemia indica*)

IC = Italian Cypress (*Cupressus sempervirens*)

QV = Live Oak (*Quercus Virginiana*)

MES = Mesquite (*Prosopis glandulosa*)

PEAR = Bradford Pear (*Pyrus bradfordii*)

PECAN = Pecan (*Carya illinoensis*)

PHOT = Photinia (*Photinia serrulata*)

PISTACHE = Pistachio chinensis (Chinese

Pistache)

REDBUD = Redbud (*Cercis canadensis*)

RO = Red Oak (*Quercus rubra* or *Quercus shumardii*)

TREE LIG = Tree Ligustrum (*Ligustrum lucidum*)

Evaluation of Tree Condition

Each tree within the study area was evaluated visually for size (estimated diameter at breast height), quality (overall form and appearance), and health (general health, deformities, injuries, cracks, age), all as noted on the Plan. General conditions were observed as follows:

ARB = Arborvitae (*Thuja occidentalis*): Very few observed but all in good health. Most are in need of minor pruning to reduce overall mass.

BALD CYP = Bald Cypress (*Taxodium distichum*): Several Cypress were observed. Only one was in good condition, others appear to be stressed by drought and/or missing significant branches and tops.

BURR OAK = Burr Oak (*Quercus macrocarpa*): All Burr Oak observed in good health.

Tree Survey and Narrative

CED = Ashe Juniper/Cedar (*Juniperus ashei*): Ashe Juniper is a co-dominant tree (with Live Oak) on the cemetery site. Most appear to be quite old and tolerating current drought conditions well. Though many are volunteers, most appear to have been intentionally planted as street trees, property markers, and shade trees throughout the cemetery. Many of the specimens observed, however, are in poor condition structurally with significant trunk cracks and rot and many were missing large branches, trunks, and leaders.

CM = Crape Myrtle (*Lagerstroemia indica*): Only a few observed, though all were tolerating current drought conditions well and in very good health.

IC = Italian Cypress (*Cupressus sempervirens*): All Italian Cypress observed were in good health.

QV = Live Oak (*Quercus Virginiana*): A co-dominant tree (with Ashe Juniper) on this site, the Live Oak is by far the healthiest tree species around the cemetery and, in almost every case, the most handsome. Most trees observed were mature and possessed an excellent form that provided excellent shade. More recently planted specimens appeared to be affected by the drought and in some cases, foliage was

thinning. It is anticipated that most of these trees will recover and flush out new growth as rain and supplemental irrigation provide much needed moisture.

MES = Mesquite (*Prosopis glandulosa*): Most of the Mesquite trees observed were quite old and in various states of poor health (trunk cracks, rot, large cavities, missing trunks and branches). Several appear to be questionable structurally and should be evaluated carefully to ensure that they do not present a public safety hazard.

PEAR = Bradford Pear (*Pyrus bradfordii*): Only three Pears were observed, on the drive near the maintenance facility. All were in fair health and appear to be tolerating current drought conditions.

PECAN = Pecan (*Carya illinoensis*): Pecans observed were all in poor condition. These trees appear to be stressed by lack of water.

PHOT = Photinia (*Photinia serrulata*): There are only a few Photinia on the cemetery. These tree/shrubs appear to be in fair condition.

PISTACHE = Pistachio chinensis (Chinese Pistache): Pistache observed are in excellent health and do not appear to be

significantly affected by drought.

REDBUD = Redbud (*Cercis canadensis*): All Redbud observed were in very poor condition or dead. Most were quite small, indicating recent installation.

RO = Red Oak (*Quercus rubra* or *Quercus shumardii*): All Red Oak observed appeared to be in excellent health.

TREE LIG = Tree Ligustrum (*Ligustrum lucidum*): Very few are located on the property—mostly located in the curve in the drive near the apartment complex in the southwest corner of the cemetery. These shrub/trees were in fair condition but in need of pruning to remove suckers and generally clean up their form.

Tree Survey and Narrative

Recommendations

Overall, the tree planting at the cemetery is consistent with historic cemeteries where trees have been planted individually over many decades without the guidance of a landscape master plan. The Fairmount Cemetery has extensive tree cover, providing much needed shade, but lacks a discernible visual order or hierarchy to orient visitors and guide them to important cemetery features. The cemetery would benefit greatly from a “Landscape Master Plan” developed to identify long-range tree care and future planting efforts to achieve the following goals:

- Main entry identification and accent for important cemetery features
- Definition of primary circulation corridors
- Shade for outdoor use areas (statuary, gazebo, chapel, staff break area)
- Screening of undesirable views
- Visual definition of perimeter

Recommendations for existing tree inventory are as follows:

ARB = Arborvitae (*Thuja occidentalis*): Though Arborvitae is used extensively at the adjacent Catholic Cemetery, there are only a few plants on this site--none located

where they contribute significantly to the visual qualities of the cemetery. Arborvitae should be considered for more extensive use throughout the cemetery.

BALD CYP = Bald Cypress (*Taxodium distichum*): Though a lovely tree for urban conditions, the Bald Cypress is not well-suited to such intensive drought conditions. The existing good quality specimen should be maintained, others should be removed.

BURR OAK = Burr Oak (*Quercus macrocarpa*): Burr Oak is tolerating the drought well and should be considered for more extensive use on this site in burial sections and lawns where shade is desired and large acorns will not pose a pedestrian hazard on drives and walks.

CED = Ashe Juniper/Cedar (*Juniperus ashei*): Poor quality specimens should be removed over time and replaced with higher quality species with more consistent form for primary drives and important site features, such as a chapel.

CM = Crape Myrtle (*Lagerstroemia indica*): Crape Myrtle should be strongly considered for much more extensive use as an ornamental tree for seasonal color and shade in important cemetery use areas

such as entries, structures, gateways, and common areas.

IC = Italian Cypress (*Cupressus sempervirens*): An excellent tree that is historically associated with cemeteries and tolerant of local conditions, the Italian Cypress is a tree with an imposing, formal form. Restricted use as accent is possible. Widespread use should not be considered.

QV = Live Oak (*Quercus Virginiana*): The Live Oak is the “workhorse” tree for this cemetery and should be considered for more extensive planting on formal axial drives and as a replacement for Cedars in formal street tree plantings. Small caliper (30 and 65 gallon) matched specimens should be considered for street trees. Larger caliper specimens (100 and 200 gallon) should be considered for shade and outdoor use areas for immediate shade where budget permits.

MES = Mesquite (*Prosopis glandulosa*): Mesquite, generally a volunteer and considered a “weed”, is not considered a highly desirable tree for urban use. Mature existing trees should be maintained for their shade qualities as long as possible but removed as safety concerns and general decline merits removal. Replacement should not be considered.

Tree Survey and Narrative

PEAR = Bradford Pear (*Pyrus bradfordii*): Generally a formal upright ornamental, the Bradford Pear may be a useful flowering tree for areas where seasonal color is desired. The Pear should be used in limited quantities away from high-profile areas, due to its relatively short lifespan.

PECAN = Pecan (*Carya illinoensis*): Pecan is an excellent, though slow growing, shade tree. Given its large canopy and dropping significant amounts of fruit, we do not feel it is well suited for the Fairmount, a cemetery with an already extensive tree canopy. Pecan should be planted only where large shade canopy is desired and dropped fruit will not become a hazard for pedestrians.

PHOT = Photinia (*Photinia serrulata*): Photinia should be considered for more extensive use around the cemetery site for screening of maintenance areas and undesirable views. Texas Sage should also be considered for more extensive use where evergreen shrubs are desired.

PISTACHE = Pistachio chinensis (*Chinese Pistache*): This is an excellent ornamental tree that should receive more extensive consideration at the cemetery. Existing specimens look great and are tolerating conditions well. The tree should be considered for use in areas where a

small-canopy shade tree and fall color for accent (backdrop for cemetery statuary or structures, intersections, etc.) is desired.

REDBUD = Redbud (*Cercis canadensis*): Though Redbud is an excellent native tree that is typically tolerant of drought conditions, it does not appear to tolerate the extreme conditions at the Fairmount Cemetery well. Most specimens observed were dead or in very poor condition, we do not recommend its continued use on the site without a more reliable source of irrigation for grow-in. Texas Mountain Laurel, which appears to do well at the cemetery, should be considered in lieu of Redbud.

RO = Red Oak (*Quercus rubra* or *Quercus shumardii*): An excellent shade tree for the cemetery. Capable of providing excellent shade and beautiful fall color, the Shumard Oak should be considered for more extensive use throughout the cemetery.

TREE LIG = Tree Ligustrum (*Ligustrum lucidum*): While the Tree Ligustrum does appear to tolerate local conditions better than some other small evergreen tree/shrubs, it is invasive and short-lived and should not be considered for widespread use at the cemetery. Existing trees should be pruned to clean up canopies

and improve overall form. Consider more extensive use of Photinia for screening and edge definition in lieu of the Ligustrum.

Tree Survey and Narrative



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Tree Survey and Narrative

TREE SPECIES

- ARBORVITAE
- BALD CYPRESS
- BURR OAK
- ASHE JUNIPER
- CRAPE MYRTLE
- ITALIAN CYPRESS
- LIVE OAK
- MESQUITE
- BRADFORD PEAR
- PECAN
- PHOTINIA
- PISTACHE CHINENSIS
- REDBUD
- RED OAK
- TREE LIG

TREE CONDITION

- EXCELLENT
- GOOD
- POOR



Tree Survey and Narrative



Tree Survey and Narrative



FAIRMOUNT CEMETERY



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