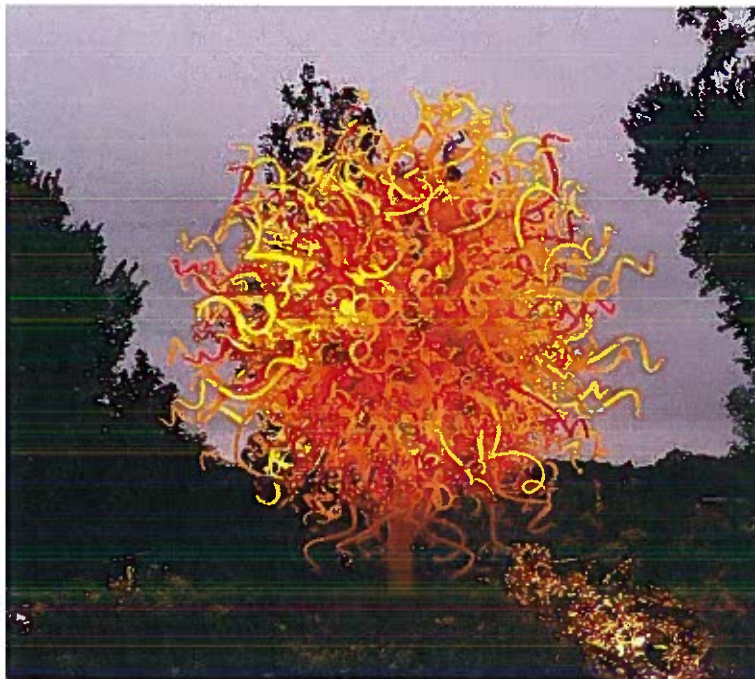


Dallas Arboretum and Botanical Garden Parking Garage Feasibility Assessment

City of Dallas, Texas



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The Projects Group

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Chicago, IL

June 24, 2013

**Dallas Arboretum and Botanical Garden
Parking Garage Feasibility Assessment**

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**Dallas Arboretum and Botanical Garden
Parking Garage Feasibility Assessment**

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Dallas Arboretum and Botanical Garden Parking Garage Feasibility Assessment

INTRODUCTION

The City of Dallas Park and Recreation Department (“City”) has retained DESMAN Associates, along with The Projects Group and C.H. Johnson Consulting as sub-consultants, to perform a demand and financial feasibility analysis related to a proposed parking garage to be built to serve visitors to the Dallas Arboretum and Botanical Garden (“Arboretum” or “Dallas Arboretum”). Based on information provided by the Arboretum and the City, initial plans for the parking garage call for a structure containing between 750 and 1,200 spaces in as many as 4 levels above grade and 2 levels below grade, to be constructed on the site of the current employee parking lot on Garland Road. This parking lot, commonly referred to as the “Booziotis Lot” and hereafter referred to as the “B-1 Lot”, is located directly across Garland Road from the future entrance to the Children’s Garden, set to open in 2013. In addition to the parking garage, the current plans call for a pedestrian connection between the garage and the entrance to the Children’s Garden via either an elevated walkway or an underground tunnel.

Based on conversations with Arboretum and City staff, the decision to explore the need for and feasibility of a structured parking facility arose due to several factors: 1) a desire to solve the parking problem that currently exists at the Arboretum; 2) the need to accommodate the projected growth in attendance expected from the new Children’s Garden and the overall growth in attendance at the Arboretum, which has accelerated over the past several years; 3) an insufficient supply of on-site or proximate parking to satisfy the demand; 4) not enough land on-site to increase the supply of parking strictly through building/expanding surface parking, and; 5) the impending loss of use of the off-site Gaston & Garland parking lot. Despite several on-site parking expansion projects which are currently underway, based on these factors, the Arboretum determined that a parking shortfall will still exist at the opening of the Children’s Garden and beyond, if additional parking supply is not created. With attendance expected to be almost 50% higher in the first full year of operations (2014) as compared with 2011, an additional 15% growth in the following year, and ongoing attendance growth projected to continue at a 2% annual rate for at least the next 8 years after the Children’s Garden opens, it is the desire of the Arboretum and the City to create sufficient additional parking supply to accommodate this additional demand. It is envisioned that the proposed garage could also satisfy the demand for parking should one or more of the on-site parking lots be taken out of service temporarily or permanently for construction of additional parking facilities or Arboretum buildings/exhibits.

Due to the quantity and type of data available from previous studies conducted by the Arboretum, the City, and other outside consultants, the DESMAN Team’s assignment focused

on the following: 1) projecting future parking demand; 2) determining the quantity of parking needed to satisfy various demand thresholds; 3) estimating the potential future revenue of the Arboretum with an expanded parking system, and; 4) estimating operating costs and net revenue performance of the expanded parking system, including the proposed parking garage, through 2023.

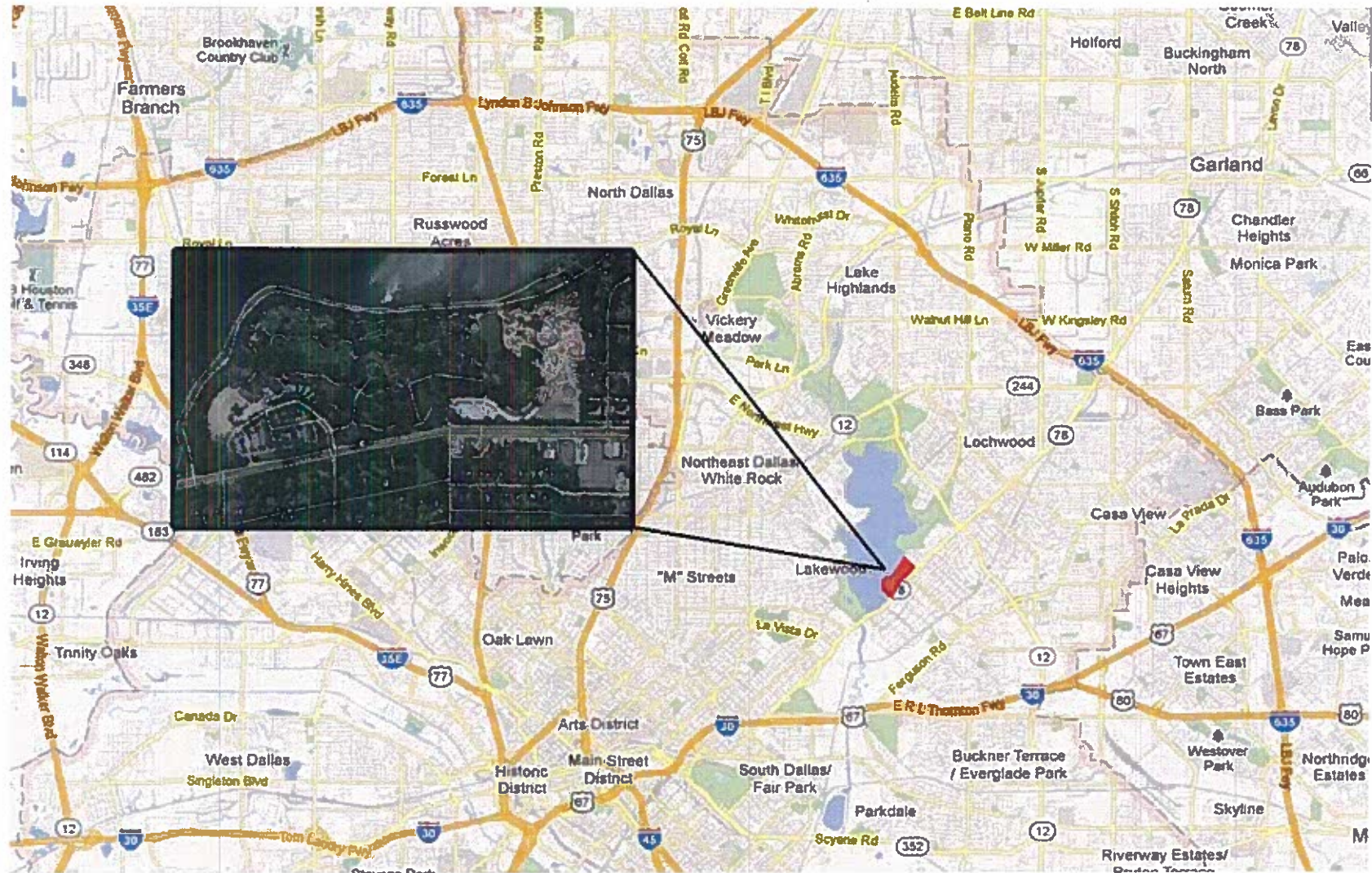
ABOUT THE DALLAS ARBORETUM

The Dallas Arboretum and Botanical Garden is located approximately 4.6 miles northeast of downtown Dallas on the shores of White Rock Lake. The arboretum is easily accessible via several interstate and state highways. **Exhibit 1** depicts the location of the Arboretum in relation to the major roadways in Dallas.

The Dallas Arboretum and Botanical Society is one of the premier attractions in the Dallas/Fort Worth area. The Property consists of approximately 66 acres of gardens, fountains and trails the majority of which (44 acres) was originally the estate of geophysicist, Everette Lee DeGolyer. The DeGolyer Home is a registered national historic home built in 1940 and is a popular event space at the Arboretum. The Arboretum offers a wide range of programming that focuses on family oriented activities and education. Attendance is highly seasonal and weather dependent, with the peak seasons in the Fall and Spring where patrons take advantage of the favorable north Texas temperatures.

According to the Arboretum's official website, "More than 660,000 visitors from 50 countries came through the gates in 2011. The Arboretum was listed among the top three arboretums in the nation in Southwest Spirit Magazine, offering the public a complement of dedicated gardens, an array of popular annual events, educational programs for children and adults, and an emphasis on family-oriented activities. In 2007, we were named one of MSN's Top Ten Places to Visit in the Country in the spring, and this year, MSN named us one of the 14 best places in the world to see spring flowers. Ground-breaking horticultural research conducted in our Trial Gardens continues to contribute to an important body of knowledge, both regionally and nationally. The Arboretum's 66 acres on White Rock Lake provide a complete life science laboratory with endless potential for discovery. During 2011, the Arboretum provided more than 90,000 visitors, mostly children, with educational programs, and in 2012, the Arboretum's educational program is expected to top 100,000. The Arboretum has a 65-member Board of Directors, 75 full-time paid staff members, 32 part-time paid staff members, and more than 400 year-round volunteers."

Exhibit 1 Location of the Dallas Arboretum and Botanical Garden



DESMAN Associates

Programming

Concert Series

Concerts at the Arboretum have become one of the more popular activities since beginning in 2009. Starting in late Spring and ending on July 4th, Spring concerts are held every Tuesday and Thursday on the terraced amphitheater lawn. Fall concerts are held every Thursday from September through October. Tickets to the concerts are sold separately from general admission and can be purchased in bulk for the series. Families and young adults enjoy bringing in their own food and beverages for the concerts for picnics. Free parking is provided for concert patrons in order to prevent parking in the surrounding neighborhood.

Dallas Blooms

The Dallas Blooms Festival takes place in March every year and features over 500,000 blooming bulbs, cherry blossoms, azaleas and other spectacular seasonal flowers. The festival lasts five weeks and is one of the Arboretum's most popular events.

Autumn at the Arboretum

Autumn at the Arboretum is their signature Fall Event which takes place from the end of September to early November. The festival includes over 50,000 pumpkins, a children's maze, and topiary pumpkin houses depicting childhood fairytales. The festival helps boost attendance levels in October dramatically, making it one of the most visited seasons of the year.

Chihuly

The Chihuly Exhibition at the Dallas Arboretum is the Artist's 12th outdoor garden exhibition and is highly regarded as one of the best outdoor art exhibitions in the world. The artist's signature blown glass installations are scattered throughout the property in various formats and sizes. The exhibition began on May 5th and has been extended through December. The Chihuly exhibition has had a tremendous impact on attendance at the Arboretum and has brought people in from across the region to view the unique installations. Chihuly Nights is a program that was created by illuminating the art pieces after hours, allowing visitors a much different experience of the garden than during the normal day hours.

Private Events

The Dallas Arboretum has numerous private events daily that range from weddings to corporate parties. In addition to the gardens and outdoor spaces to hold events, there are indoor spaces such as the DeGolyer House, Alex Camp House and Rosine Hall. The variety and number of different spaces available allows the Arboretum to be flexible and accommodating for almost any size event. In addition to the rental fees generated from these events, the Arboretum also takes a commission of between 10% and 20% on all 3rd party caterers.

Attendance History

As shown in **Table 1**, overall attendance has seen a healthy rise over the past five years in part due to the increase and diversification of programming as well as overall recognition and notoriety within North Texas.

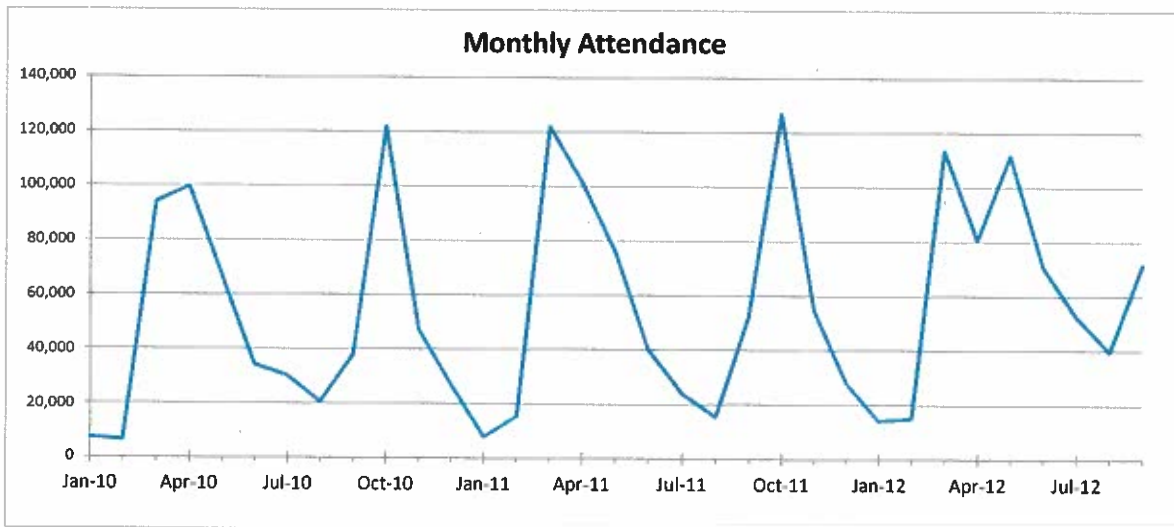
Table 1 Historical Arboretum Attendance

	2007	2008	2009	2010	2011	2012(through Sept.)
Paid Gate Tickets	265,504	317,016	309,381	291,546	313,600	242,383
Members & Comps	123,587	151,659	165,709	198,611	220,547	196,420
Rentals	42,366	42,593	47,694	37,396	42,073	45,361
Other	5,697	10,509	6,440	5,499	2,836	1,963
Under 2	na	na	na	11,851	37,364	17,936
Concerts	na	na	na	20,824	43,730	62,507
Total	437,154	521,777	529,224	565,727	660,150	566,570

Source: Dallas Arboretum

Exhibit 2 shows the typical seasonal attendance swings as October and March have consistently been the busiest months of the year during the peak of the Fall and Spring festivals. Conversely, August and January are significantly slower months for the Arboretum due to the poor seasonal weather.

Exhibit 2 Historical Monthly Attendance Patterns



The Projects Group

Membership

Membership support makes up a substantial percentage of the revenue generated at the Arboretum. Levels of annual membership range in cost from \$73-\$10,000 and offer benefits

such as free admission, complimentary parking, and discounted ticketed events. Membership levels have increased over the last four years and maintain an average renewal rate of 75-80%.

Table 2 presents detailed membership data from 2008 – 2011.

Table 2 Arboretum Memberships, 2008 – 2011

Member Level	2008	2009	2010	2011
Associate	11	13	29	21
Caroline Rose Hunt Society	17	13	22	38
Family	8,470	10,499	12,397	13,613
Family PLUS Kids Club	1	249	952	1,026
Jr Friend - Premium	-	-	15	11
Jr. Friend	-	-	17	27
Member - Individual	5,100	7,505	7,917	8,046
Partner	126	129	170	178
Patron	80	72	91	106
Supporter	22	24	24	27
Sustaining	421	398	472	536

Source: Dallas Arboretum

Historical Revenue Data

The Arboretum relies on both earned revenue, such as ticket sales and rental space, as well as private donations and a strong membership program. Historically, paid gate tickets and rental income have been the largest source of earned revenue accounting for between 30-35% of all revenue generated at the Arboretum annually for the past 5 years. **Table 3** presents the historical revenue generated by the Dallas Arboretum from 2007 – 2011, by source.

Table 3 Arboretum Revenue by Source, 2007 – 2011

	2007	2008	2009	2010	2011
Earned Revenue					
Gate receipts	\$1,334,541	\$1,633,568	\$1,842,181	\$1,795,807	\$2,487,700
Concert Revenue	na	na	na	\$380,915	\$422,880
Education	\$326,128	\$365,748	\$394,694	\$406,720	\$383,787
Investment Income	\$209,329	\$54,409	\$55,349	\$45,050	\$36,281
Rental Income	\$953,591	\$1,368,722	\$1,281,885	\$1,123,975	\$1,177,165
Group Sales Net Profit	\$111,589	\$114,794	\$135,153	\$155,536	\$80,551
Gift Shop Sales	\$536,482	\$599,348	\$572,760	\$361,479	\$396,529
Parking Fees	\$345,929	\$404,932	\$390,983	\$500,600	\$551,119
Other Revenue	\$207,843	\$364,300	\$273,504	\$334,498	\$572,887
Subtotal	\$4,025,432	\$4,905,821	\$4,946,509	\$5,104,580	\$6,108,899
Public Support					
Membership Dues	\$1,209,373	\$1,403,019	\$1,618,452	\$1,933,995	\$2,164,035
Friends & Distinguished Advisors	\$595,867	\$690,147	\$738,642	\$836,371	\$1,001,119
City of Dallas Support	\$342,051	\$342,060	\$274,525	\$218,057	\$270,000
Contributions	\$1,393,366	\$1,005,621	\$925,178	\$898,956	\$1,092,445
Subtotal	\$3,540,657	\$3,440,847	\$3,556,797	\$3,887,379	\$4,527,599
Total Revenue	\$7,566,089	\$8,346,668	\$8,503,306	\$8,991,959	\$10,636,498

Source: Dallas Arboretum

EXISTING PARKING INVENTORY

Presented in **Exhibit 3** is an aerial photograph of the Arboretum depicting the locations of the parking facilities owned by the Arboretum, comprised of on-site surface parking lots and the B-1 Lot.

Currently, the Arboretum has four surface parking lots located on the grounds of the Arboretum, as well as the B-1 Lot located across Garland Road. As shown in Exhibit 2, the parking lots on the Arboretum grounds are identified as the Main Lot, the Overflow Lot, the Bus Lot, and the Camp Lot. The Main Lot and Overflow Lot are used to accommodate typical visitor parking demand, while the Bus Lot is used for school buses, charter buses, etc.; for the purposes of this report, a “typical visitor” is generally described as any visitor to the Arboretum coming during normal business hours. In certain instances, when demand warrants, the Camp Lot is also used to accommodate typical visitor parking demand. Typically, the Camp Lot is kept at least partially unoccupied in order to accommodate demand generated by various groups, including, but not limited to: high-level donors (Friends of the Arboretum), special event attendees, meeting participants, etc. The B-1 Lot is intended for employee and volunteer parking. Given the distance from the B-1 Lot to the main buildings on the grounds of the Arboretum, a shuttle runs regularly between the Arboretum and the B-1 Lot. While this parking lot is intended for use by employees and volunteers only, it has also been used to accommodate visitor parking demand on occasion.

Exhibit 3 Locations of Existing Parking Facilities Owned by the Dallas Arboretum



DESMAN Associates

Table 4 presents the parking space inventory available to the Arboretum, by facility, at the time of this study.

Table 4 Current Parking Inventory by Facility

	SPACES
MAIN LOT	360
OVERFLOW LOT	225
CAMP LOT	110
B-1 LOT	275
ON-SITE TOTAL	970
ON-SITE VISITOR SPACES	695
GASTON & GARLAND LOT	710
TOTAL VISITOR SPACES	1405
BUS LOT ¹	9

(1) The Bus Lot is striped for 9 school or charter buses; the lot can accommodate approximately 28 cars when the space is not occupied by buses.

Source: "Parking Status/Summary – Fall 2012 to Spring 2013"

As you can see in Table 4, the total current supply of parking on-site is 970 spaces, not including the Bus Lot spaces as these are striped for larger vehicles. However, given that the 275 spaces in the B-1 Lot are generally used by employees, there are only 695 total spaces currently available on-site for visitor parking.

In addition to the Arboretum's on-site and proximate parking, per agreements with the YMCA and Far West, the Arboretum also has use of a large (approximately 710-space) off-site parking lot when the demand cannot be satisfied on-site. This auxiliary parking lot, located at 7305 & 7331 Gaston Avenue, about 1 mile from the Arboretum, is referred to as the Gaston & Garland Lot and is provided to the Arboretum free-of-charge. Arboretum visitors who park in these locations are not charged a parking fee by the Arboretum and shuttle buses are used to transport visitors from the lot to the Arboretum itself. With this additional supply, the total space available for Arboretum visitor parking is approximately 1,405 spaces.

The location of the Gaston & Garland Lot in relation to the Arboretum can be seen in **Exhibit 4**.

Exhibit 4 Location of Gaston & Garland Lot in Relation to the Arboretum



DESMAN Associates

HISTORICAL PARKING DEMAND

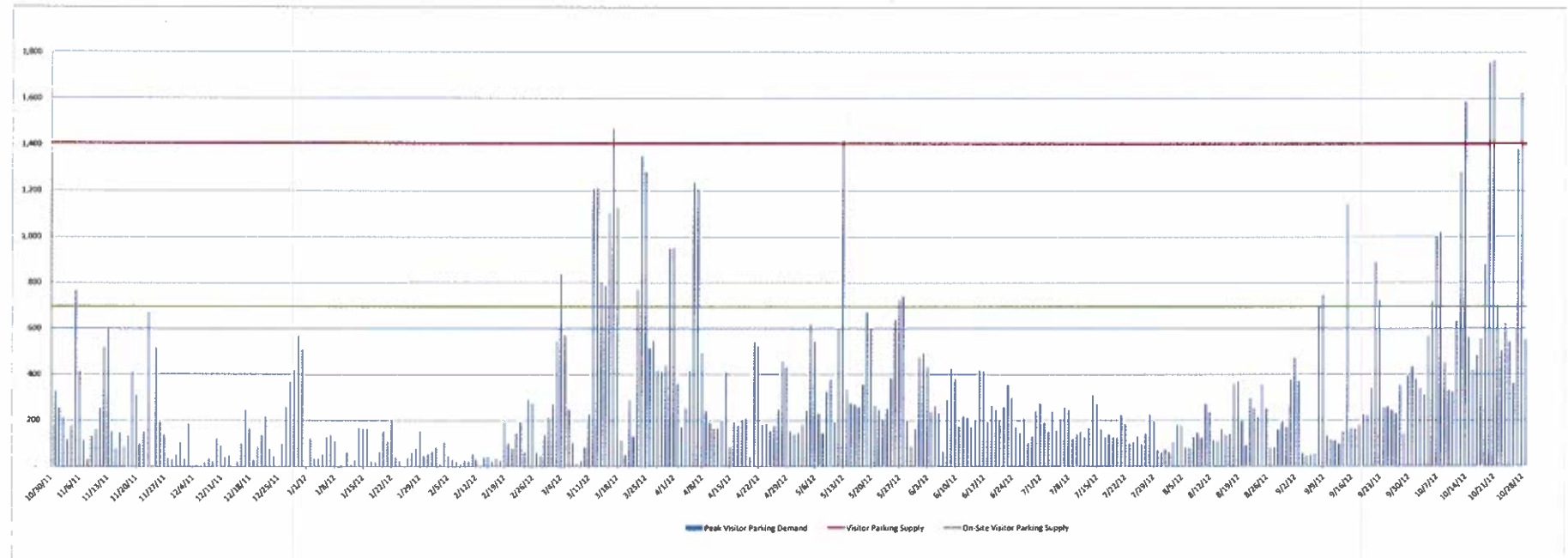
Based on observations of historical attendance and parking demand, the Arboretum has determined that each personal vehicle used to transport visitors to the Arboretum arrives with 2.7 occupants, on average. In other words, for every 10 personal vehicles that park, approximately 27 visitors will enter the Arboretum. Historically, counts of vehicles parking on- and off-site at the Arboretum have not been maintained, making it very difficult to directly correlate actual attendance with actual parking demand. In addition, due to the fact that Arboretum Members do not pay for parking, it is impossible to determine the exact historical demand for parking from the stand-point of revenue. For these reasons, the 2.7 “attendees-per-vehicle factor” plays a vital role in determining future parking demand based on projections of future attendance.

In order to validate the 2.7 attendees-per-vehicle factor, DESMAN conducted a site visit to the Arboretum from Thursday, October 25, 2012 to Saturday, October 27, 2012, in order to observe actual visitor parking demand, which could then be compared to actual attendance figures from those days. Based on these observations, as well as on the actual attendance figures provided by the Arboretum, each personal vehicle parking on- or off-site at the Arboretum arrived with approximately 2.6 attendees. It should be noted that, this 2.6 attendees-per-vehicle factor is based strictly on those visitors arriving via personal vehicle and not those arriving by school bus, community group shuttle bus, etc. Given the fact that the demand for bus parking does not typically compete with the demand for personal vehicle parking, this analysis of attendees-per-vehicle is focused strictly on personal vehicle parking demand.

Exhibit 5 presents a picture of historical peak visitor parking demand at the Arboretum based on historical attendance data provided by the Arboretum, the 2.6 attendees-per-vehicle factor, and a peak demand factor of .46. The peak demand factor represents the percentage of personal vehicles parked during the peak hour (46%) as compared to the total number of personal vehicles parking on any given day; this factor was established based on DESMAN’s on-site observations and closely matches the .44 factor put forth in the Parking Master Plan developed by DeShazo, Tang & Associates, Inc. in 2008.

As shown in the table, when compared to the available supply of visitor parking spaces on-site of 695 plus the 710 spaces at the Gaston & Garland Lot (a total of 1,405 spaces), the peak demand for visitor parking likely exceeded the total supply available to the Arboretum on 6 days over that time period. Also, based on the available supply of visitor parking on-site at the Arboretum, the Gaston & Garland Lot had to be used approximately 33 days, during which shuttle buses would have been used to transport visitors from the Lot to the Arboretum.

Exhibit 5 Historical Peak Visitor Parking Demand vs. Supply, October 2011 – October 2012



DESMAN Associates

CURRENT PARKING REVENUE AND EXPENSES

Parking revenue has increased from \$500,611 in the year 2010 to \$786,437 through October 2012 and is expected to top \$900,000 by year's end. Revenue is generated entirely from fees charged to Arboretum visitors. The current parking fee is set at \$10 per vehicle for all-day parking, which was recently increased from \$7 earlier this year. Visitors who come to the Arboretum for nighttime events, such as the Thursday concerts and the Chihuly at Night exhibit, are able to park for free. Arboretum Members, who pay a tiered annual fee, have the benefit of free parking. Each level pays a different annual membership fee, but all memberships include unlimited free parking.

The current parking expenses for the Arboretum include personnel costs associated with the Parking Services Manager, shuttle bus costs, valet costs, etc. In addition, in order to ensure that visitors are able to enter and leave the Arboretum property safely and efficiently, the Arboretum has hired a parking operator (Platinum Parking) which provides personnel who direct traffic towards available spaces on entry. Dallas Police Officers are also hired to help manage entering and exiting traffic due to high vehicle volumes on Garland Road. The year-to-date total paid by the Arboretum for Police Officers is \$218,080, at a rate of \$42 per hour. However, this total includes not only parking-related costs but also the costs associated with Police Officers who provide on-site security to the Arboretum during certain events. For the purposes of our analysis, it is assumed that about half of the cost associated with the Police Officers is attributable to the operation of parking.

When all of the on-site parking becomes full, cars are led to the off-site Gaston & Garland Lot. From there, visitors take shuttle buses back to the Arboretum. The cost to the Arboretum for each shuttle is about \$90 per hour, with a 4 hour minimum. Given that the buses are often in use for more than four hours per day, per the Parking Services Manager, it is not uncommon for the daily cost of all of the shuttle buses to exceed \$3,000. This does not include the handicapped shuttle which costs about \$360 per day. When visitors park in the off-site overflow lot, they are not required to pay the parking fee, so there is no extra revenue to offset the cost of the shuttle buses.

The Arboretum also offers a valet service in the Camp Lot on certain occasions, such as during concerts and special event. Typically, there are 8-10 valet employees working each night at a rate of \$15.25 an hour per person.

Based on the 2012 budget figures provided by the Arboretum, and assuming that half of the Dallas Police costs are attributable to parking, **Table 5** was created to show the anticipated financial performance of the Arboretum's parking system in 2012.

Table 5 Budgeted Financial Performance of the Arboretum Parking System, 2012

Budgeted Revenue	\$904,515
Budgeted Expenses	
Parking Services Manager	\$54,000
Parking Personnel	\$153,000
Dallas Police	\$109,040
Valet	\$12,125
Shuttle Buses	\$120,000
Facility Maintenance	\$5,000
Total Expenses	\$453,165
Net Parking Income	\$451,350

Source: Dallas Arboretum

FUTURE PARKING SUPPLY WITHOUT A PARKING GARAGE

Given that there are currently several projects underway or soon to be underway that will increase the on-site/proximate supply of parking at the Arboretum before the end of 2013, it is logical that the parking space inventory upon completion of these projects be used as the baseline for our analysis of future parking conditions. The expansion of the existing Overflow Lot, which began at the end of October, will increase the inventory of spaces in that lot from 225 to 425. An additional 90 surface parking spaces will be constructed as part of the Children's Garden project. And a further 60 spaces are to be added in the area referred to as Pecan Grove. **Exhibit 6** shows the locations of these new/expanded facilities in relation to the existing parking lots.

Despite the on-site supply of visitor parking growing by 350 spaces before the end of 2013, the Arboretum is still facing a parking crisis due to the fact it will soon lose the ability to park visitors in the Gaston & Garland Lot. While the Arboretum has been permitted to use the Gaston & Garland Lot for additional parking for more than 15 years, in June 2013, this property is set to be redeveloped, making it impossible for the Arboretum to continue to use the parking lot to accommodate visitor parking demand that cannot be accommodated on-site. The net result of the increase in on-site parking of 350 spaces and the loss of 710 spaces in the Gaston & Garland Lot will be a loss of 360 spaces, leaving only 1,320 parking spaces to accommodate Arboretum parking demand. The net loss of spaces is one of the major reasons that the Arboretum and the City are exploring the need for and feasibility of constructing a parking garage on the site of the B-1 Lot.

Exhibit 6 Locations of Underway/Planned Parking Expansion Projects



DESMAN Associates

Table 6 presents the parking space inventory available to the Arboretum, by facility, both at the time this study commenced and once the in-progress projects are completed.

Table 6 Parking Inventory by 2013, by Facility

	EXISTING	NEW SPACES	2013 TOTAL
MAIN LOT	360	0	360
OVERFLOW LOT	225	200	425
CAMP LOT	110	0	110
B-1 LOT	275	0	275
CHILDREN'S GARDEN	0	90	90
PECAN GROVE	0	60	60
ON-SITE TOTAL	970	350	1320
GASTON & GARLAND LOT	710	-710	0
TOTAL SPACES	1680	-360	1320
BUS LOT ¹	9	0	9

Source: "Parking Status/Summary – Fall 2012 to Spring 2013"

Despite the availability of 1,320 spaces in 2013, ideally, parking facilities and systems are designed with some amount of excess capacity (5-15%) in order to ensure that they can still operate safely and efficiently and drivers are not circulating excessively looking for the last available space. In the case of the Arboretum, an excess capacity factor of 5% will be used when evaluating future parking needs. In other words, in 2013 and beyond, if the peak demand for Arboretum parking exceeds 1,254 spaces ($1320 \times .95$), we will consider the system to have reached its "practical capacity", or the point at which circulation of vehicles searching for spaces becomes excessive and potentially dangerous.

FUTURE ATTENDANCE PROJECTIONS

In order to project the future demand for parking at the Arboretum with the end of the Chihuly exhibit and the opening of the Children's Garden, it was first necessary to develop projections of future attendance based on these programmatic and infrastructure changes. For that reason, DESMAN teamed with specialty consultant C.H. Johnson Consulting, Inc. Founded in 1996, Johnson Consulting specializes in conducting comparative destination analyses, strategic planning, market and feasibility studies, tax projections, financial plans, and organizational studies for convention/conference centers, performing arts centers, hotels, convention and visitors bureaus, expo centers, and visitor attractions.

Johnson Consulting analyzed historical demand for the Dallas Arboretum and a number of comparable arboreta and botanical gardens nationally. From this primary research, several assumptions were made regarding future demand levels at the Dallas Arboretum.

Attendance at comparable facilities throughout the U.S., including the Chicago Botanic Garden, the Atlanta Botanical Gardens and the Morton Arboretum, all fall in the range of 1 million attendees or less, a target that the Dallas Arboretum is going to approach in 2012, largely as a result of the Chihuly exhibit that began in May and will run until the end of 2012. It is anticipated that the opening of the new Children's Garden will have a similar or larger effect on future attendance, as was seen when the Morton Arboretum opened a \$48 million children's garden and maze in 2006.

Prior to opening their children's garden, the average annual attendance at the Morton Arboretum was approximately 350,000 people. Post opening, attendance at the Morton Arboretum doubled to 800,000 attendees in subsequent years and has since stabilized at 831,500 people in 2011. This attendance level makes it the 4th most visited public garden in the U.S. and indicates the scale of impact a similar children's garden can have on attendance in the short-term and how, after the new product has been absorbed by the market, growth does not continue at such a high rate. This phenomenon is known as the novelty effect and applies to all attraction developments and indicates that, for growth to continue at a high pace, there continually needs to be high-impact, new product added to the attraction.

In addition to the Morton Arboretum, the Chicago Botanic Gardens has seen its attendance increase from 670,000 in 2006 to 954,000 in 2011, an increase of 284,000 attendees, largely due to significant additions to the campus with new exhibits and facilities. From a broader national perspective, there is data that indicates that average attendance for very large public gardens in the U.S. is 800,000 people.

Given the above facts, it is difficult for Johnson Consulting to project a long-term growth rate that has attendance at the Dallas Arboretum growing significantly in excess of national comparable gardens and averages for very large national public gardens, especially in excess of 1.5 million annual attendees without funding allocated for future large scale development projects. For this reason it was determined that, in the first stabilized year after the Children's Garden opens (2014), when compared to the last full year for which attendance data is available (2012), attendance will be approximately 985,000 versus 883,000, or an increase of approximately 11.5%. In 2015, attendance is projected to increase by an additional 8% to 1,066,000 attendees. After an additional 6% growth in attendance in 2016, it is anticipated that attendance growth will then level-off at a rate of 3.5% annually through 2023. Projected attendance figures for 2014 – 2023 are presented on in **Table 7**.

Further background information used in the formulation of the attendance projections can be found in **Appendix A** of this report.

Table 7 Future Attendance Projections by Group, 2014 – 2023

Dallas Arboretum & Botanical Society, Inc. Projected Attendance										
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Paid Tickets										
Paid Gate	339,993	368,170	390,261	403,919	418,056	432,688	447,832	463,506	479,728	496,519
Group Sales	4,822	5,222	5,535	5,729	5,930	6,138	6,353	6,575	6,805	7,043
School Groups	74,853	81,056	85,919	88,926	92,038	95,259	98,593	102,044	105,615	109,312
Subtotal	419,668	454,448	481,715	498,574	516,024	534,085	552,778	572,125	592,148	612,874
Members and Comps										
Members	316,714	342,961	363,539	376,262	389,431	403,061	417,168	431,769	446,880	462,521
Comp	23,372	25,309	26,828	27,767	28,739	29,745	30,786	31,864	32,979	34,133
Subtotal	340,086	368,270	390,367	404,029	418,170	432,806	447,954	463,633	479,859	496,654
Rental	78,539	85,048	90,151	93,306	96,572	99,952	103,450	107,071	110,818	114,697
Other/ Adult Education	3,399	3,681	3,902	4,039	4,180	4,326	4,477	4,634	4,796	4,964
Under 2	31,055	33,629	35,647	36,895	38,186	39,523	40,906	42,338	43,820	45,354
Concerts	108,226	117,195	124,227	128,575	133,075	137,733	142,554	147,543	152,707	158,052
Reciprocal Garden	3,295	3,568	3,782	3,914	4,051	4,193	4,340	4,492	4,649	4,812
Rainy Day	680	736	780	807	835	864	894	925	957	990
State Fair	0	0	0	0	0	0	0	0	0	0
Total	984,948	1,066,575	1,130,571	1,170,139	1,211,093	1,253,482	1,297,353	1,342,761	1,389,754	1,438,397

C.H. Johnson Consulting, Inc.

It should be noted that, for the purposes of this parking feasibility study, the attendance figures used to calculate parking revenue do not include concert attendees. While these visitors will contribute to the revenue generated by the Arboretum, from a peak demand perspective, these events do not typically affect peak daytime parking demand, given that concerts are always held after normal Arboretum operating hours. As currently operated, the Arboretum visitor parking facilities are emptied after the Arboretum closes, then refilled with concert parking demand. It was assumed that this practice would continue in the future.

FUTURE PARKING DEMAND

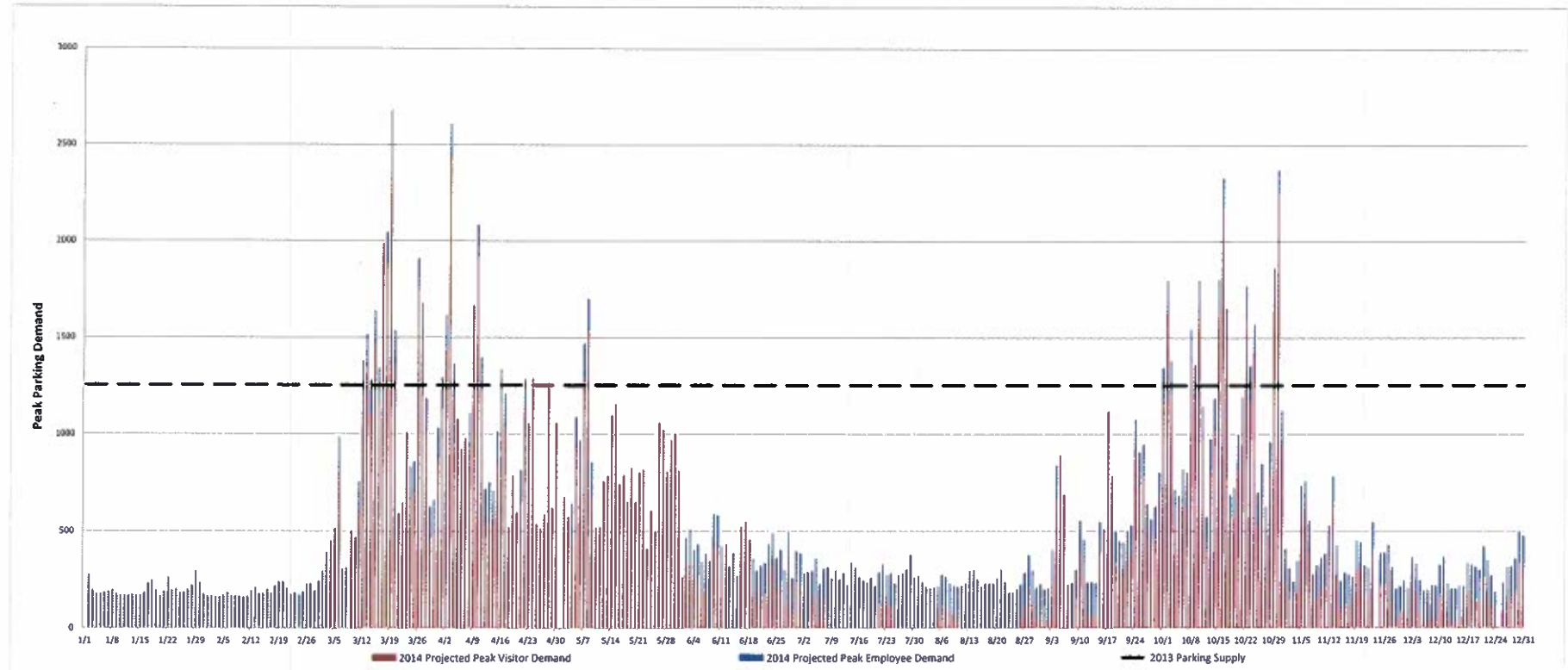
In order to project daily and peak future parking demand based on future attendance projections, it was first necessary to determine what portion of the typical visitor population has historically arrived via personal automobile, as opposed to those arriving by school bus, community shuttle bus, etc. Beginning with historical attendance figures provided by the Arboretum for 2010 and 2011, DESMAN was able to strip out the volume of attendees arriving with school groups, community groups, and others arriving via bus. This provided a picture of the historical day-by-day volumes of visitors arriving via personal vehicle as a factor of the total visitor volumes (“personal vehicle factor”).

After distributing the attendance projections produced by Johnson Consulting over the course of the year in a pattern similar to the historical attendance figures and future projections provided by the Arboretum, we applied the personal vehicle factor in order to determine the anticipated number of visitors arriving at the Arboretum via personal vehicle on a day-by-day basis in the future. By applying the 2.6 attendees-per-vehicle factor confirmed through our field observations, the result is the anticipated number of personal vehicles expected to arrive and park at the Arboretum over the course of each day in the future. Finally, by applying the .46 peak demand factor, the result is the anticipated peak visitor parking volumes that can be expected at the Arboretum over the course of the year.

For illustrative purposes, **Exhibit 7** shows the anticipated peak parking volumes generated by the Arboretum in the year 2014, including the daily peak employee/volunteer demand of 160 vehicles, as compared to the practical capacity of the parking supply of 1,254 spaces (“practical parking supply”), discussed previously.

This exhibit shows that, despite the ongoing expansion of on-site parking, the loss of the Gaston & Garland Lot in June 2013 will mean that, if no additional parking is constructed or no alternative remote parking option is found, in 2014, the peak demand for parking at the Arboretum is anticipated to exceed the available practical supply on 36 out of the 362 days that the Arboretum is open for business, or about 10% of operating days. Going forward, as visitor volumes and employee numbers continue to increase, without additional parking supply, this problem would only get worse.

Exhibit 7 Projected Daily Peak Parking Demand Compared to Practical Parking Supply, 2014



DESMAN Associates

Additional exhibits provided in **Appendix B** of this report show the projected future parking demand from 2014-2023 as compared to the practical parking supply.

PROPOSED PARKING GARAGE OPTIONS

In order to help satisfy the future parking demand which cannot be accommodated at the improved, on-site Arboretum parking lots, the City and Arboretum have proposed constructing a parking garage on the site of the B-1 Lot. According to information provided by the Arboretum and the City, preliminary designs have been created showing a garage that can be built with a maximum of 4 levels above ground and 2 levels below ground. A 4-level, above ground garage would contain approximately 750 spaces, a garage with 4 levels above ground and 1 below ground would contain approximately 925 spaces, and a garage with 4 levels above ground and 2 below ground would contain approximately 1,200 spaces.

In addition, regardless of the size of the parking garage that is constructed, it is intended that either an above-ground pedestrian walkway which is elevated over Garland Road or a pedestrian tunnel under Garland Road will be built in order to connect the garage to the Children's Garden entrance across the street.

According to estimates provided by the City and Arboretum, the pedestrian bridge/tunnel will cost approximately **\$3.5MM** to construct. Additionally, per their estimates, in Dallas, above ground structured parking costs **\$8,500-\$14,000** per space, while underground, structured parking costs **\$18,000-\$22,500** per space. Based on these construction costs, **Table 8** was created to show the potential construction costs for each of the proposed parking garage options.

Table 8 Anticipated Capital Cost of Each Parking Garage Option

Garage Size	Garage Design	Estimated Capital Cost of Garage and Pedestrian Connector
750 Spaces	4 Levels Above Ground	\$9,875,000 - \$14,000,000
925 Spaces	4 Levels Above & 1 Below Ground	\$13,925,000 - \$19,062,500
1,200 Spaces	4 Levels Above & 2 Below Ground	\$17,975,000 - \$24,125,000

Source: "Parking Status/Summary – Fall 2012 to Spring 2013"

It is important to note that, regardless of the size of the parking garage that is constructed, the net gain in parking spaces will be less than the total spaces contained in the garage. Because the parking garage is to be constructed on the site of the existing B-1 Lot, the 275 spaces in that lot will no longer be available for use by Arboretum patrons or employees. This means that a 750-

space parking garage will yield a net gain of 475 spaces, a 925-space garage will yield a net gain of 650 spaces, and a 1,200-space garage will yield a net gain of 925 spaces.

ABILITY TO ACCOMMODATE FUTURE PARKING DEMAND

As shown in Exhibit 7 and in the additional exhibits provided in Appendix B, the 1,320 on-site and proximate parking spaces to be provided by 2013 will be insufficient to accommodate peak parking demand at the Arboretum within the first year after the Children's Garden opens. In order to determine the proper number of parking spaces to be built to best satisfy the anticipated future parking demand, it was necessary to determine a metric that could be applied to each parking garage option in order to provide a fair comparison. It was determined that the best measure to be used for comparison was the number of days during which the anticipated peak demand for parking could not be satisfied under each garage construction scenario and how the number of days grew over time. **Table 9** was created to show this comparison of the three potential garages.

Table 9 Anticipated Number of Days Peak Parking Demand Exceeds Peak Practical Supply based on the Size of the Proposed Parking Garage

Garage Size	Number of Days Per Year when Peak Demand Exceeds Practical Supply									
	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
750 Spaces	13	21	22	23	23	26	28	32	34	39
925 Spaces	7	12	13	17	17	19	21	22	23	23
1,200 Spaces	4	7	8	8	10	12	13	15	17	19

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As shown in the table, any of the three garage options will result in a few days per year when the peak demand for parking exceeds the practical supply. These occurrences are clustered around Dallas Blooms in the spring and Autumn at the Arboretum in the fall.

When examining a proposed parking facility to determine the proper number of spaces to be built, it is common practice to design the facility not around a few days of extraordinary demand, such as the Christmas season at a retail shopping center, but rather around typical peak demand. By doing this, it is possible to realize significant capital cost savings upfront by avoiding building a garage or surface lot which will only be fully utilized a few days per year. Measures typical in the parking industry indicate that a parking garage or surface lot should be sized to accommodate peak parking demand anywhere from 80-95% of the time.

That being said, there are customer service and operations components which have to be factored in when making the decision as to what is an acceptable size for a parking facility. Based on the type of land use or institution being served, reducing customer anxiety about parking or

enhancing their parking experience is more of a driving factor than the increased capital cost of building a larger facility. Additionally, reducing the operational issues and costs associated with shuttling patrons from remote parking lots may be worth the additional upfront cost of constructing more parking spaces. Or, as is the case with the Arboretum, the lack of viable shuttling options (which is exacerbated by the loss of the Gaston & Garland Lot in June 2013) means that building additional spaces may be necessary so that demand will not be turned away due to a lack of parking.

According to the Arboretum, they can operate efficiently if the peak demand for parking exceeds the practical parking supply on no more than 8 days per year. On these 8 days, although operationally a challenge, the additional parking demand will be accommodated through a variety of other means including remote parking.

Based on this assertion by the Arboretum, the 1,200-space parking garage appears to be the only viable option to satisfy the institution's projected parking needs beyond 2014. A parking garage of this size should enable the Arboretum to accommodate peak parking demand on all but 4 days in 2014, increasing to 8 days in 2017. By building a garage that will satisfy the Arboretum's needs for the next several years, it will allow the Arboretum time to develop a strategy for adding additional parking supply to satisfy the parking demand further into the future. While future parking demand could be satisfied beyond 2017 through the construction of additional structured parking on one or more of the existing on-site parking lots in conjunction with the B-1 Lot garage, this could not be accomplished without seriously disrupting the operations of the Arboretum or without incurring millions of dollars in additional costs. For these reasons, this two-tiered approach to building additional parking to satisfy future demand appears to be the best option available to the Arboretum.

PROJECTED FUTURE PARKING REVENUES

As discussed previously, projections of daily visitor vehicle volumes were produced based on anticipated future attendance, the split between visitors arriving in personal vehicles versus those arriving via bus, and the average number of visitors per personal vehicle. In order to translate these daytime vehicle volumes into revenue, it was necessary to determine the proportion of vehicles presently parking at the Arboretum that are charged directly for parking (i.e. regular visitors paying for parking when they enter the Arboretum) versus those that do not directly pay for parking (i.e. Members, participants in Adult Education, certain event attendees, etc.). Due to the fact that, at present, no portion of the amount paid by Members, event sponsors, etc. to come to the Arboretum is directly attributed to parking, it was assumed that this practice would continue in the future. In other words, projections of future parking revenue were based solely on the patrons required to pay for parking at the time they enter the Arboretum.

From the attendance projections, first the attendees that typically do not arrive in personal vehicles were stripped out in order to arrive at the total number of attendees arriving by personal vehicle. Then, concert attendees were removed from the population as they do not typically contribute to the demand for daytime parking, nor are they currently charged for parking. This figure of total daytime attendees that arrive by personal vehicle was then translated into a total number of parked vehicles based on the 2.6 attendees-per-vehicle factor discussed previously. Finally, a factor of .374 was applied to the total parked vehicles to determine the portion of those vehicles that have historically paid for parking. This factor is showing that, historically, approximately 37.4% of vehicles parking at the Arboretum are occupied by visitors required to pay for parking at the time they enter the Arboretum. This means that the other 62.6% of vehicles are occupied by Members, event attendees, Adult Education participants, etc. that do not directly pay for parking.

Table 10 shows the projected total parking demand generated by the Arboretum during regular business hours from 2014-2023, as well as the anticipated number of paid parkers that the Arboretum can capture based on the above analysis. Based on conversation with the Arboretum, in addition to the projected demand growth, it was assumed that parking rates would increase over time as well. For the purposes of the revenue projections presented in Table 10, it was assumed that parking rates will increase to \$15 in 2015, \$20 in 2019, and \$25 in 2023.

Table 10 Projected Total Daytime Parkers and Total Paid Parkers, 2014-2023

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Daytime Parking Demand	320,300	358,721	367,690	376,882	386,304	395,961	405,860	416,007	426,407	437,067
Paid Parkers	99,664	132,522	135,577	138,687	141,875	145,143	148,447	151,789	154,351	157,537
Gross Revenue	\$ 996,641	\$1,987,834	\$2,033,655	\$2,080,309	\$2,128,129	\$2,902,859	\$2,968,942	\$3,035,772	\$3,087,030	\$3,938,431

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The “Paid Parker” numbers presented in this table also account for the fact that, if the Arboretum chooses to construct a 1,200-space garage on the site of the B-1 Lot, there will still be a handful of days in each year when a portion of the parking demand cannot be captured or cannot be captured in a pay parking facility. In addition, while the parking garage is under construction, it is presumed that a portion of the demand will continue to be satisfied at off-site locations and shuttled in, meaning that they will not be charged for parking; it is assumed that this will continue at the Gaston & Garland Lot until June 2013 and then this demand will be transferred to one or more of the alternate remote parking sites. For the purposes of these projections, it was assumed that construction of the parking garage would begin in mid-2013 and be completed prior to the busy fall season in 2014.

As you can see from the table, in 2014, the number of paid parkers is dramatically lower than in the subsequent years. This is due to the fact that, during construction of the garage, a number of parkers will still be forced to park in a shuttle lot. Once the garage is complete and in full operation for the entire year beginning in 2015, the number of paid parkers that can be accommodated will grow as the overall attendance at the Arboretum grows.

It should be noted that, despite the loss of the B-1 Lot during construction, the additional spaces currently under construction on-site at the Arboretum will be able to accommodate the daily volume of employee and volunteer vehicles currently parking in the B-1 Lot, while also capturing additional daytime parking demand. That is why, in addition to attendance growth, the projected 2014 revenue is greater than the projected 2012 revenue of \$904,515, shown previously in this report in Table 5.

PROJECTED PERFORMANCE OF THE PARKING OPERATION

Just as parking revenues will increase in the future with attendance growth and the construction of additional parking spaces, the expenses associated with operating and maintaining the parking system will also increase.

As shown in Table 5 earlier in the report, operating and maintenance expenses are projected to be approximately \$453,000 in 2012. The construction of additional surface lot spaces on-site as well as the construction of a parking garage will result in increased operating expenses. These expenses come from many sources including, but not limited to: additional personnel, utilities for the garage, garage cleaning, insurance, etc. For the purposes of this analysis, the annual costs associated with operating the garage were estimated using the factors seen in **Table 11**, below.

Table 11 Per Space Operating Costs for the Proposed Garage

OPERATING EXPENSES:

Payroll	\$ 22.95 /space
Uniforms	\$ 0.25 /space
Utilities	\$ 44.25 /space
Insurance	\$ 18.15 /space
Garage Supplies	\$ 8.23 /space
General R&M	\$ 39.66 /space
Elevator R&M	\$ 27.14 /space
Miscellaneous	\$ 0.66 /space

Total Cost per Space \$ 161.29 /space

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There are three items of note related to expenses: 1) the Payroll figure assumes that the garage will be staffed a total of 6 hours per day at the current rate of \$15.25 per hour, 2) the per space Utilities cost reflects the fact that the garage will be open almost exclusively during daylight hours, and 3) typically, \$50-\$100 per space per year should be set aside for future capital repairs and maintenance of the garage, however this amount is not considered an operating expense, so it was not included in Table 11.

Based on these per space costs, the projected cost to operate and maintain the garage will be approximately \$193,500 per year.

Due to the fact that the new on-site spaces and the proposed parking garage are within walking distance of the Arboretum, there will be a reduction in the use of shuttle buses once the new garage is built, and an associated cost savings. Assuming that, once the garage is built, shuttle buses will only be used 8 days per year at an average cost of \$3,000 per day, this equates to an annual cost of \$24,000 versus the 2012 budgeted cost of \$120,000, a savings of \$96,000 per year.

Table 12 presents the projected financial performance of the parking operation from 2014-2023, based on the above analysis. Expenses are assumed to increase at a rate of 3% per year, or slightly higher than the historical rate of inflation.

In addition to the revenues and expenses, a line item has been included showing the anticipated annual debt service associated with the construction of the proposed 1,200-space garage based on the construction cost estimates provided by the City and Arboretum.

As you can see, based on the projected parking revenue, expenses and debt service, it is anticipated that there will be a significant annual shortfall until 2018, if the 1,200-space parking garage is built and funded entirely by debt. However, this shortfall does not take into account the non-parking revenue generated by the Arboretum. The projected overall financial performance of the Arboretum is presented later in this report.

Table 12 Projected Financial Performance of the Arboretum Parking System, 2014 – 2023

	2014 ¹	2015	2016	2017	2018	2019	2020	2021	2022	2023
Projected Parking Revenue	\$ 996,641	\$ 1,987,834	\$ 2,033,655	\$ 2,080,309	\$ 2,128,129	\$ 2,902,859	\$ 2,968,942	\$ 3,035,772	\$ 3,087,030	\$ 3,938,431
Current Operating Expenses ²	\$ 405,165	\$ 367,880	\$ 378,916	\$ 390,284	\$ 401,992	\$ 414,052	\$ 426,474	\$ 439,268	\$ 452,446	\$ 466,019
Additional Garage Operating Expenses ³	\$ 64,516	\$ 199,354	\$ 205,335	\$ 211,495	\$ 217,840	\$ 224,375	\$ 231,106	\$ 238,040	\$ 245,181	\$ 252,536
EBITDA	\$ 526,960	\$ 1,420,599	\$ 1,449,404	\$ 1,478,530	\$ 1,508,296	\$ 2,264,432	\$ 2,311,362	\$ 2,358,464	\$ 2,389,403	\$ 3,219,876
Anticipated Annual Debt Service ⁴	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852	\$ 1,935,852
Anticipated Shortfall	(\$1,408,893)	(\$515,253)	(\$486,449)	(\$457,323)	(\$427,556)	\$328,579	\$375,510	\$422,612	\$453,551	\$1,284,024

1) Expense figures are adjusted to account for continued full shuttle operations until garage completion.

2) Includes savings from reduction in shuttle bus usage.

3) Accounts for the garage only being in operation for approximately 4 months in 2014.

4) Assumes 5% interest on 20-year bonds.

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Note: Annual debt service is calculated based on the highest per space construction costs provided by the City/Arboretum as shown previously on Page 21.

PROJECTED PERFORMANCE OF THE ARBORETUM

Johnson Consulting has developed demand and financial projections for all other aspects of the Arboretum, except parking, based upon the research and analyses presented in prior sections of this report and in Appendix A. The projections consider the operations of peer gardens, projections provided by the client group and actual attendance results that occurred during the Chihuly exhibit at the Dallas Arboretum.

Table 13 shows projected attendance at the arboretum over a 10-year period, based upon actual demand from 2012.

Year 1 will be the first full year of operations that includes the Children's Garden, presumed to be 2014, based on the schedule provided by the Arboretum. Given the level of demand that was experienced at the Morton Arboretum with the opening of their Children's Garden, we anticipate a similar phenomenon to result. In Year 1, we project that attendance will increase by 11.5% from 2012 attendance, resulting in attendance of 984,948. In Year 2 we continue to project a significant increase in attendance at 8.3% given that the Children's Garden will still be a new product to the market. This results in attendance exceeding 1.066 million attendees in Year 2. Johnson Consulting anticipates that in Years 3 – Year 10, growth will still occur, but at a lower rate. This normalized growth rate will result in attendance in Year 5 (2018) of 1.221 million visitors and 1.438 million visitors by Year 10 (2023).

Operating Revenue and Expense Projections

Table 14 presents a summary of the projected operating statement for the first 10 full years of operation of the Dallas Arboretum beginning in 2014, based upon the operating projections as described in the preceding section of this report. Revenues and expense line items include all categories in the current revenue and expenses statement of the Dallas Arboretum.

Dallas Arboretum and Botanical Garden Parking Garage Feasibility Assessment
City of Dallas, Texas

Table 13 Historical and Projected Attendance by User Group

Dallas Arboretum & Botanical Society, Inc. Historical and Projected Attendance																	
	2007	2008	2009	2010	2011	2012	Est. 2013	Yr. 1 (2014)	Yr. 2 (2015)	Yr. 3 (2016)	Yr. 4 (2017)	Yr. 5 (2018)	Yr. 6 (2019)	Yr. 7 (2020)	Yr. 8 (2021)	Yr. 9 (2022)	Yr. 10 (2023)
Paid Tickets																	
Paid Gate	194,253	246,716	250,455	230,129	241,486	304,789	321,910	339,993	368,170	390,261	403,919	418,056	432,688	447,832	463,506	479,728	496,519
Group Sales	12,153	12,133	7,213	2,678	4,924	4,323	4,566	4,822	5,222	5,535	5,729	5,930	6,138	6,353	6,575	6,805	7,043
School Groups	59,098	58,167	51,713	66,184	67,190	67,102	70,872	74,853	81,056	85,919	88,926	92,038	95,259	98,593	102,044	105,615	109,312
Subtotal	265,504	317,016	309,381	298,991	313,600	376,214	397,348	419,668	454,448	481,715	498,574	516,024	534,085	552,778	572,125	592,148	612,874
Members and Comps																	
Members	109,231	134,279	152,593	191,445	196,775	283,920	299,869	316,714	342,961	363,539	376,262	389,431	403,061	417,168	431,769	446,880	462,521
Comp	14,356	17,380	13,116	21,325	23,772	20,952	22,129	23,372	25,309	26,828	27,767	28,739	29,745	30,786	31,864	32,979	34,133
Subtotal	123,587	151,659	165,709	212,770	220,547	304,873	321,998	340,086	368,270	390,367	404,029	418,170	432,806	447,954	463,633	479,859	496,654
Rental	42,366	42,593	47,694	41,084	42,073	70,407	74,362	78,539	85,048	90,151	93,306	96,572	99,952	103,450	107,071	110,818	114,697
Other/ Adult Education	5,697	10,509	6,440	5,598	2,836	3,047	3,218	3,399	3,681	3,902	4,039	4,180	4,326	4,477	4,634	4,796	4,964
Under 2	0	0	0	11,851	37,364	27,839	29,403	31,055	33,629	35,647	36,895	38,186	39,523	40,906	42,338	43,820	45,354
Concerts	0	0	0	20,824	43,730	97,020	102,470	108,226	117,195	124,227	128,575	133,075	137,733	142,554	147,543	152,707	158,052
Reciprocal Garden	0	0	0	803	2,189	2,954	3,120	3,295	3,568	3,782	3,914	4,051	4,193	4,340	4,492	4,649	4,812
Rainy Day	0	0	0	33	59	610	644	680	736	780	807	835	864	894	925	957	990
State Fair	0	0	0	641	699	0	0	0	0	0	0	0	0	0	0	0	0
Total	437,154	521,777	529,224	592,595	663,097	882,963	932,563	984,948	1,066,575	1,130,571	1,170,139	1,211,093	1,253,482	1,297,353	1,342,761	1,389,754	1,438,397

Source: Dallas Arboretum & Botanical Society, Inc.; Johnson Consulting

Dallas Arboretum and Botanical Garden Parking Garage Feasibility Assessment
City of Dallas, Texas

Table 14 Dallas Arboretum and Botanical Garden Operating Pro Forma, 2014 – 2023

Dallas Arboretum & Botanical Society, Inc. Historical and Projected Operations (\$000)															
	Historical				Budgeted	Projections									
	2001	2006	2011	2012	2013	Yr. 1 (2014)	Yr. 2 (2015)	Yr. 3 (2016)	Yr. 4 (2017)	Yr. 5 (2018)	Yr. 6 (2019)	Yr. 7 (2020)	Yr. 8 (2021)	Yr. 9 (2022)	Yr. 10 (2023)
Revenue															
Gate Receipts	\$959	\$1,303	\$2,389	\$3,843	\$4,142	\$4,506	\$5,026	\$5,487	\$5,850	\$6,236	\$6,648	\$7,087	\$7,555	\$8,054	\$8,586
Concert Revenue	0	0	416	469	721	777	858	928	980	1,034	1,092	1,153	1,217	1,285	1,356
Membership Dues	821	1,136	2,147	2,665	3,638	3,900	4,286	4,612	4,845	5,089	5,346	5,617	5,900	6,198	6,512
Friends and BDA's	297	538	823	1,002	1,234	1,333	1,440	1,555	1,679	1,813	1,904	1,999	2,099	2,204	2,314
Contributions	710	943	994	1,989	1,416	1,529	1,651	1,783	1,926	2,080	2,184	2,293	2,408	2,528	2,654
City of Dallas Support	380	342	270	270	270	265	259	254	249	244	239	234	230	225	221
Education	112	296	394	265	505	515	525	536	546	557	568	580	591	603	615
Investment Income	153	77	62	57	70	71	73	74	76	77	79	80	82	84	85
Rental Income	578	915	1,231	1,252	1,235	1,330	1,469	1,588	1,677	1,770	1,869	1,973	2,083	2,199	2,321
Group Sales Gross Profit	67	92	139	106	333	359	396	428	452	477	504	532	562	593	626
Gift Shop Sales	411	547	407	1,009	492	561	656	751	840	939	1,020	1,109	1,205	1,310	1,423
Parking Fees	177	269	459	905	878	997	1,987	2,034	2,080	2,128	2,903	2,969	3,036	3,087	3,938
Other Revenue	101	189	302	483	495	436	503	541	573	606	658	692	729	766	828
Total Operating Revenue	\$4,766	\$6,648	\$10,033	\$14,314	\$15,428	\$16,578	\$19,130	\$20,572	\$21,772	\$23,052	\$25,015	\$26,318	\$27,697	\$29,136	\$31,481
Expenses															
Gardens and Grounds	\$1,171	\$1,527	\$2,203	\$3,670	\$4,030	\$4,097	\$4,614	\$5,087	\$5,476	\$5,894	\$6,130	\$6,375	\$6,630	\$6,895	\$7,171
Public Events	362	491	904	2,939	671	735	828	913	982	1,057	1,138	1,225	1,319	1,420	1,528
Rentals	373	605	850	1,507	1,162	1,197	1,322	1,430	1,509	1,593	1,682	1,776	1,875	1,979	2,089
Marketing	542	487	884	283	980	1,019	1,060	1,102	1,146	1,192	1,240	1,290	1,341	1,395	1,451
Development	255	550	795	1,042	832	866	900	936	974	1,013	1,053	1,095	1,139	1,185	1,232
Gift Shop	305	419	161	1,027	250	281	328	376	420	469	510	554	603	655	712
Membership	199	261	461	554	458	507	557	600	630	662	695	730	767	806	847
Operations	330	548	869	731	2,529	2,370	2,670	2,943	3,168	3,410	3,670	3,951	4,253	4,577	4,927
Volunteers	91	95	137	225	157	174	196	216	232	250	269	290	312	336	361
Education	222	444	720	1,164	821	901	1,015	1,119	1,205	1,297	1,396	1,502	1,617	1,741	1,874
General and Administration	744	1,111	2,003	886	3,357	3,491	3,631	3,776	3,927	4,084	4,248	4,418	4,594	4,778	4,969
Additional Parking Expenses	na	na	na	na	na	17	103	106	109	113	116	119	123	127	130
Total Expenses	\$4,594	\$6,538	\$9,989	\$14,028	\$15,246	\$15,656	\$17,225	\$18,603	\$19,779	\$21,034	\$22,147	\$23,325	\$24,572	\$25,892	\$27,291
EBITDA	\$172	\$110	\$44	\$286	\$182	\$922	\$1,905	\$1,968	\$1,993	\$2,018	\$2,868	\$2,993	\$3,124	\$3,244	\$4,190
Anticipated Debt Service	\$0	\$0	\$0	\$0	\$0	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936	\$1,936
Net Income (Loss)	\$172	\$110	\$44	\$286	\$182	(\$1,014)	(\$31)	\$32	\$57	\$82	\$932	\$1,057	\$1,188	\$1,308	\$2,254

Source: Dallas Arboretum & Botanical Society, Inc.; Johnson Consulting; DESMAN Associates

As shown, the volume of revenues is projected to increase to \$23 million by Year 5 and \$31 million by Year 10. The largest increase in revenue categories will occur in Gate Receipts, Concert Revenue, Membership Dues, Rental Income, and Parking Income. In 2012, total operating revenue was \$14.314 million with total expenses of \$14.028 million, resulting in an EBITDA of \$286,000. In the first year of the projection period, revenues are projected to increase to \$16.578 million with expenses of \$15.656 million, resulting in a projected EBITDA of \$922,000. Year 5 EBITDA is anticipated to be approximately \$2.018 million and Year 10 EBITDA is anticipated to be approximately \$4.190 million.

Operating Revenue and Expense Assumptions

The information provided in **Table 15** is a summary of the assumptions applied to the revenue and expense line items included in the Arboretum's operating pro forma.

Table 15 Revenue and Expense Growth Assumptions

Dallas Arboretum & Botanical Society, Inc. Revenue and Expense Assumptions		
		Assumptions
Revenue		
General Inflation Rate	per year	2.5%
Attendance-based Revenue Growth Rate		
Gate Receipts	per year	3.0%
Concert Revenue	per year	2.0%
Membership Dues	per year	1.5%
Rental Income	per year	2.0%
Group Sales Gross Profit	per year	2.0%
Gift Shop Sales	per year	3.0%
Parking Fees	per year	2.0%
Friends and BDA's	per year	0.0%
Contributions	per year	2.0%
City of Dallas Support	per year	(2.0%)
Education	per year	2.0%
Investment Income	per year	2.0%
Other Revenue	of total revenue	2.6%
Expense		
Annual Increase	per year	4.0%
Gardens and Grounds	per regular (daily) attendee	\$4.00
Public Events	per event-based attendee	\$6.30
Rentals	of Rental Income	90.0%
Gift Shop	of Gift Shop Sales	50.0%
Membership	of Membership Dues	13.0%
Operations	per regular (daily) attendee	\$3.00
Volunteers	per regular (daily) attendee	\$0.22
Education	per Other/ Adult Education attendee	\$255
General and Administration	per year	4.0%

Source: Dallas Arboretum & Botanical Society, Inc.; Johnson Consulting

RECOMMENDATIONS

Capacity of the Proposed Parking Garage

In terms of accommodating the future demand for parking at the Arboretum, the most desirable option is the 1,200 space garage. Based on projections, the 1,200 space garage will be able to accommodate future parkers at a level that does not exceed supply more than 8 days per year, as desired by the Arboretum, until the year 2018. Because attendance at the Arboretum is expected to continue growing, by 2019, it is anticipated that peak parking demand will exceed supply an estimated 11 days and will reach 17 days by 2023.

As parking demand increases beyond the available supply of parking, it will become necessary for the Arboretum to either find an off-site lot for remote parking or build an additional parking structure, in order to accommodate the increased demand. Based on a cursory examination, there appear to be a number of potential sites for off-site parking within 3 miles of the Arboretum. These lots may or may not be available for use by the Arboretum. However, it is recommended that the potential to use these lots for remote parking, both while the garage is under construction and in the future, be investigated.

Additional Parking Revenue

Concerts – Spring and Fall concerts are held at night after the Arboretum has closed its main attractions. At present, visitors coming to the park for nighttime concerts are not being charged for parking. In 2011, if concertgoers had been charged the same \$7 rate (this was the parking fee before it was raised in early 2012) for parking as daytime visitors, the Arboretum could have potentially generated an additional \$118,000 in parking revenue (43,730 concertgoers/2.6 occupants per vehicle X \$7). If the Arboretum continues the policy of free parking for concerts, at a rate of \$10 per car, the potential lost revenue could be as high as \$416,000 in 2014. Additionally, if concert demand continues to grow as expected, this number will only increase in the future.

It is our recommendation that the Arboretum institute a policy of charging concertgoers for parking. So as not to negatively impact concert attendance, a nighttime parking rate of \$5 could be charged initially in order to gauge its impact on attendance. If concert attendance levels are maintained despite the parking charge, there is the potential that the rate could be increased over time. Also, in order to limit the potential negative impact that a parking fee might have on concert attendance, the fee could be included in the price of the ticket instead of being charged as guests enter the Arboretum.

Special Events – Visitors coming to the Arboretum for special events, such as weddings, family events, and corporate events, also have the benefit of free parking. In 2011, free parking resulted

in estimated lost revenue of \$113,000. If all attendees were required to pay for parking, in 2014, this could lead to estimated revenue of \$302,000 at the current rate of \$10. Because of the nature of the parking demand associated with special events, it is our recommendation that parkers are not charged directly for parking, but rather a parking fee is added to the total cost of each event. This charge can be tailored to the size and type of event and the expected parking demand.

Members – As mentioned earlier, all membership levels include free parking with the membership package. There are two potential methods for generating parking revenue from member parking demand, without directly charging for parking as members enter the Arboretum. The first is to limit the number of times per year that members are allowed to park for free. Once they have hit the limit, they could then be required to pay for parking. The second option is add a parking surcharge onto the cost of each membership. Even if the number of members remains at 2011 levels in the future, a \$10 parking surcharge on each membership could result in \$236,000 of additional parking revenue each year.

CONCLUSION

The Arboretum has a supply of 1,405 spaces that are currently available for visitors. In 2013, the number of available spaces will drop to 1,320 for all Arboretum visitors, employees, and volunteers, 1,045 of which will be on-site visitor spaces. Even with the addition of the 90 spaces from the Children's Garden, the 60 spaces from Pecan Grove, and 200 spaces from the Overflow Lot expansion, the loss of the 710 spaces from the Gaston & Garland lot will drastically reduce the number of parking spaces for visitors. If no additional spaces are added and attendance grows as projected, the peak period demand for parking is projected to exceed the available supply on 34 days in 2014.

The projected Net Loss of the Arboretum in the first full year when the 1,200 space garage is expected to be operational (2015) is expected to be \$31,000. However, after 2015, it is anticipated that the Arboretum will generate sufficient revenue to cover the debt service associated with the proposed parking garage. For the purposes of debt financing, if a Debt Service Coverage ratio of 1.25 is assumed as a requirement, the Arboretum will have to generate EBITDA of \$2.42 million, which is not anticipated to occur until 2019.