



Frontenac Square & The Grove in Frontenac

Proposed Residential Community and Assisted Living Facility

March 31, 2015- Public Meeting Before The Board of Alderpersons
Frontenac, Missouri

Development Team:

George Stock, P.E. – President - Stock & Associates Consulting Engineers, Inc.

Larry Butts - Director of Construction – Pulte Homes of St. Louis

Matthew Segal – Land Acquisition Manager - Pulte Homes of St. Louis

Robert Brinkmann - CEO- Brinkmann Constructors - The Grove in Frontenac, LLC

Chris Beard, P.E., PTOE – Lochmueller Group – Transportation Consultant

Rusty Saunders, ASLA – Loomis Associates, Inc. – Landscape Architect



Project History- Planning Commission

The following is a brief summary of the process we have gone through with the City Staff, Planning Commission & Residents who attended the meetings:

- a) Filed application for rezoning for the "Frontenac Square & The Grove in Frontenac" on May 5, 2014.
- b) We provided an "Open House Invitation" to all residents of the City of Frontenac for an open house at the Frontenac Hilton on May 20, 2014 to introduce the project & receive input.
- c) The first Public Meeting before the Planning Commission was on June 12, 2014. This meeting was the presentation of Pulte's "Frontenac Square" development.
- d) The second Public Meeting before the Planning Commission was on June 24, 2014. This meeting was the Presentation of "The Grove in Frontenac", the Assisted Living Project.
- e) The third Public Meeting before the Planning Commission was July 22, 2014. This meeting was a presentation of our responses to questions & comments raised by the Planning Commission & Residents at the June 12



- e) & 24 meetings. In addition, at this meeting we provided information taken from the "Clayton & Spoede Land Use Analysis Memo" prepared by PGAV and information from the City of Frontenac 2006 Comprehensive Plan. Site photo's of the existing site conditions including the adjoining City Public Works buildings, outside storage & telecommunication towers. Lastly, architectural perspective of the Villas at Clayton Road & Townhomes were presented & reviewed.
- f) The fourth Public Meeting before the Planning Commission was August 26, 2014. This meeting was a presentation of the revised Preliminary Plan that reduced the density of Townhomes from 66 units to 62 units creating an overall density of Villas and Townhomes at 6.85 units/Acre. This plan increased the open space within the Townhomes from 46.13% to 49.50 %. This Plan increased the roof pitches of the Villas. Stone was added to the masonry design of the Villas & Townhomes. Lastly, the Heights of the Townhomes were (33.5' to 38.5') & the Assisted Living were (60.67' to 72.67' at the loading dock).
- g) The fifth Public Meeting before the Planning Commission was September 23, 2014. This meeting was a presentation of a second reduction in density. The Townhomes were reduced from 66 units to 54 units, creating an overall density of 5.96 units/Acre. The open space with the Townhomes was increased from 46.13% to 57.3%



- h) The sixth Public Meeting before the Planning Commission was November 12, 2014. This meeting included a presentation by the City's Consultant (Development Strategies) who reviewed & presented their professional opinions to the merits of the rezoning request & project being considered. In addition, we presented larger & taller Townhomes. The Townhomes increased from a minimum area of 1,523 s.f. to 1,890 s.f. and the height increased to 39 feet, pushing the starting price over \$500,000 dollars. The open space of the Townhomes decreased from 57.3% to 55.4% due to the increase in size of the Townhomes. Regarding the Assisted Living Facility the finish floor was lowered three (3) feet & parking lot configuration was revised. The "Round-A-Bout" was incorporated at Spoeede Road. Photos of comparable Townhomes were presented as well as "Architectural Perspective on the Grove".
- i) The seventh Public Meeting before the Planning Commission was on December 9, 2014. This meeting included the submission of a revised Assisted Living building. The height was reduced to an average height of 55.7 Feet. And the overall size was adjusted to approximately 82,000 s.f. with 86 beds. The Townhomes were reconfigured into three (3) building clusters. At this meeting we believe through eight (8) months of hard work & careful consideration the Planning Commission voted 5 to 1 to recommend to you our rezoning request & approval of the project with conditions.



Project History- Board of Alderman

- a) A public hearing was held before the Board of Alderman on January 20, 2015 and a detailed presentation was presented. Citizen comments & Board of Alderman comments were noted. On February 24, 2015 we came before the Board & requested a continuance to revise the project plan further in response to the Public Hearing comments made by both residents & the Board of Alderman on January 20, 2015.

The major changes are as follows:

Frontenac Square:

1. Elimination of all "Townhomes".
2. 36 Villas for an overall density reduction from 54 units as recommended for approval by the Planning Commission on 12/9/15
3. Villas along Clayton Road were reversed to Front Clayton Road vs. backup to Clayton Road & increase setback from 25.17 feet to 112 feet.
4. Villa heights increased from 25 feet to 29 feet. Stone has been added as well as carriage doors.
5. Villas have been placed in area of Assisted Living & Townhomes.



The Grove in Frontenac:

1. The building location has moved to west of City Hall & setback from Clayton Road equivalent to City Hall.
2. The height of The Assisted Living Building has been lowered from 55.7 feet to 38 feet. (Building Code definition of High-Rise is greater than 75 feet). The former school "building area" has been lowered ten (10) feet for the placement of the Assisted Living Building.
3. The architecture of the Assisted Living Building has been revised to be compatible with the City Hall, Villas & Frontenac.
4. Spode Road vehicular access has been eliminated, including deletion of the round-a-bout. Only connection proposed is a sidewalk to Spode continuing through the development & connecting to Clayton Road.



A.) PROJECT SUMMARY

1.) Preliminary Plan (dated 12/15/2014).

Recommended for approval by the Planning Commission 12/09/2014 & presented to the Board of Aldermen on 1/20/2015 was as follows:

FRONTENAC SQUARE:

Proposed Villas:

- Overall Area = 5.82 ac.
- Total Lots = 30 lots (5,808 sf min.)
- Open Space = 1.23 ac (inlc. green areas, walking trails, sidewalks, & detention)
- % Open Space = 21.13%
- Setback from Clayton Rd. 25.17' to 27.18'

Proposed Townhomes:

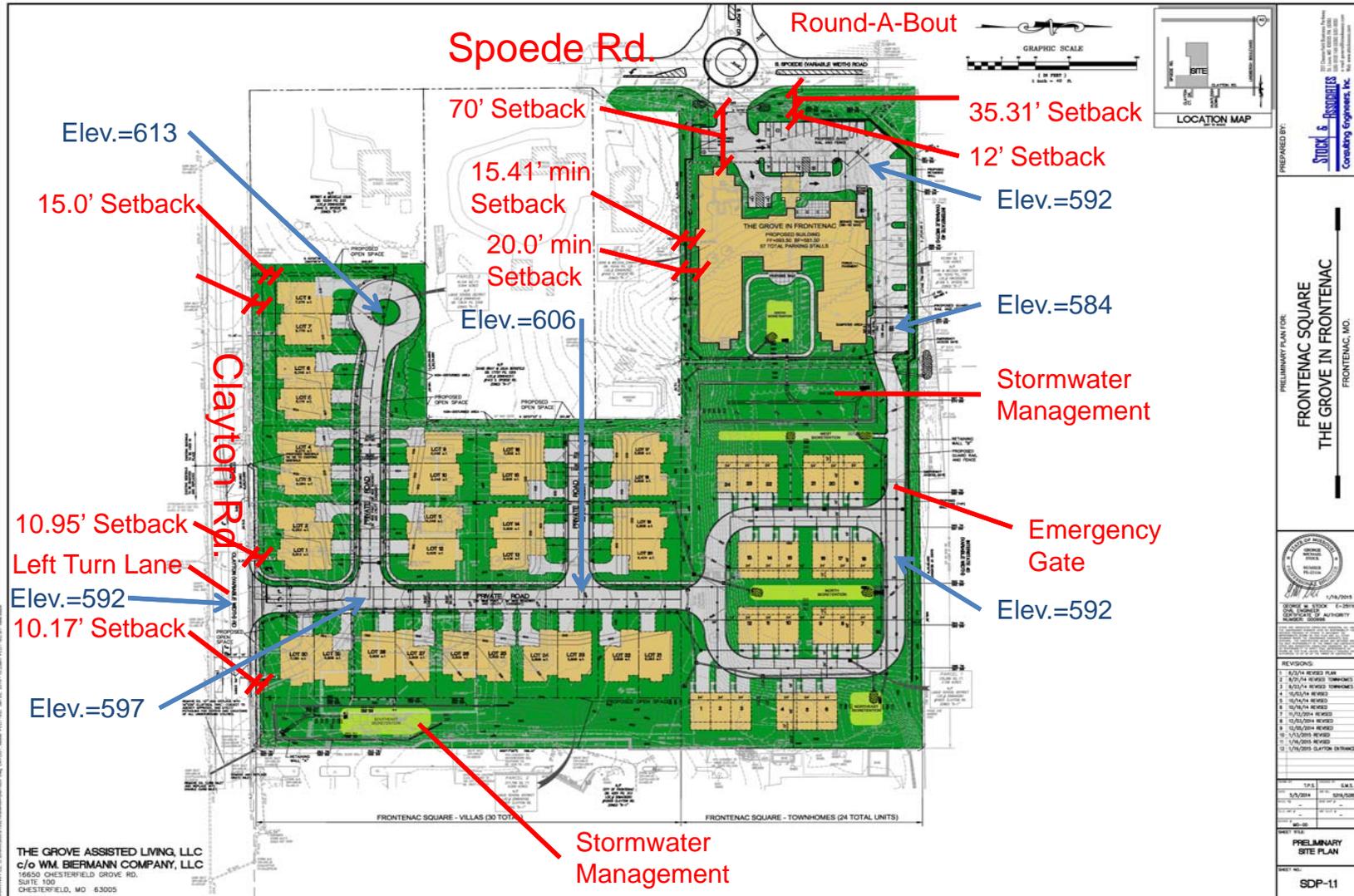
- Overall Area = 3.23 ac.
- Total Units = 24 lots (8 - 3 unit buildings)
- Total Parking = 2 sp/unit (2 car garage)
- Open Space = 1.77 ac (inlc. green areas, walking trails, sidewalks, & detention)
- % Open Space = 54.80%
- Density Villas+Townhomes: $54/9.05\text{ac} = 5.97$ unit/ac

Proposed Assisted Living:

- Overall Area = 2.00 ac.
- Total Beds = 86
- Total Parking = 57 (incl. 3 H.C.)
- Open Space = 0.68 ac (inlc. green areas, walking trails, sidewalks, & detention)
- % Open Space = 34.00%
- Setback from Spuede Rd. = 70'
- Avg. Height = 55.7'



Preliminary Site Plan dated 12/05/2014





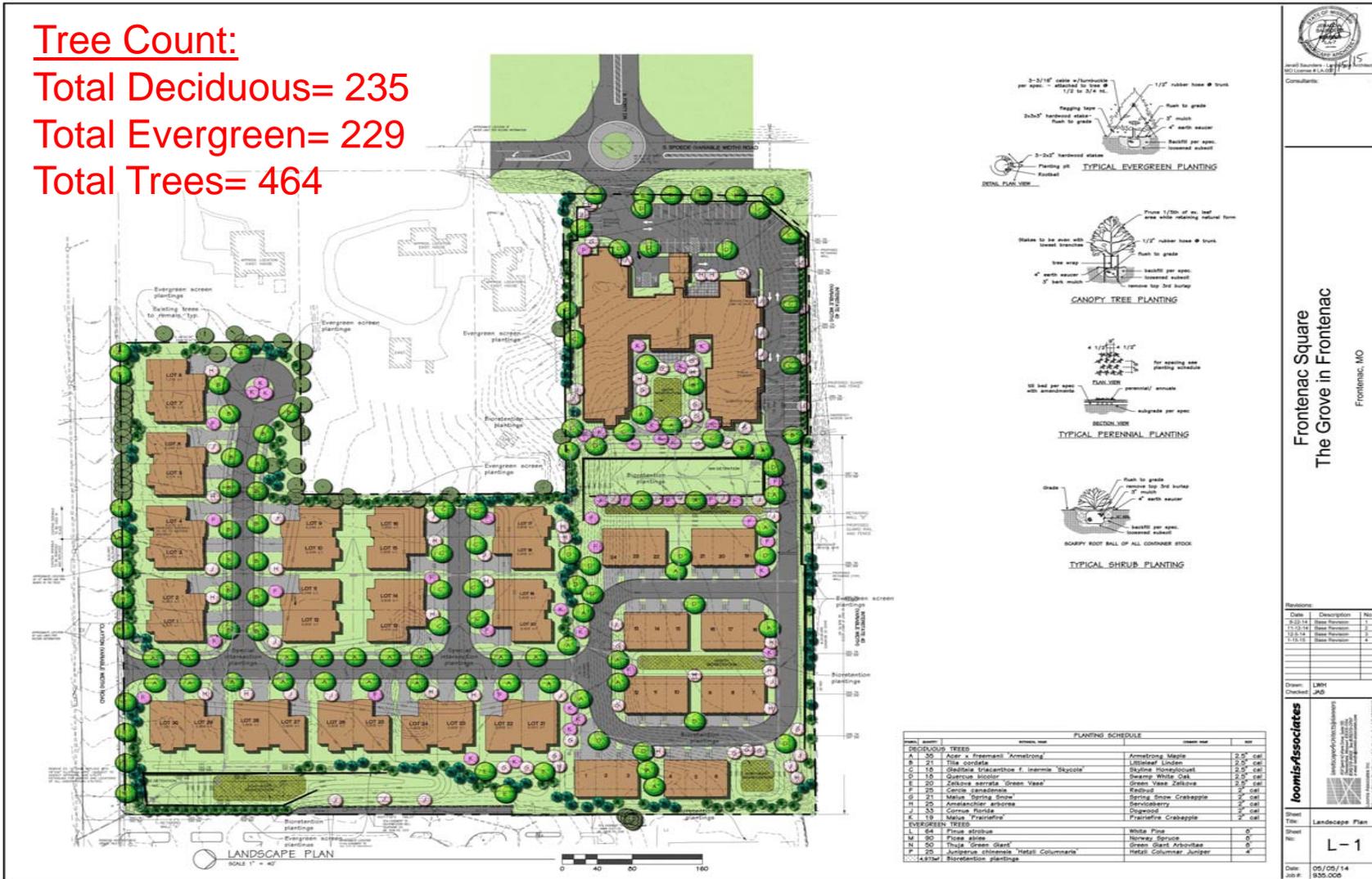
Landscape Plan

Tree Count:

Total Deciduous= 235

Total Evergreen= 229

Total Trees= 464



Frontenac Square
The Grove in Frontenac
Frontenac, MO

Revisions

Date	Description	No.
11.10.14	Issue Revision	1
11.11.14	Issue Revision	2
11.11.14	Issue Revision	3

Drawn: LWH
Checked: JAD

loomisAssociates
www.loomisassociates.com
1000 North Lincoln, Suite 100
St. Louis, MO 63102
Phone: 314.433.8800
Fax: 314.433.8801

Sheet Title: Landscape Plan
Sheet No.: L-1
Date: 05/08/14
Job #: 936.006



Landscape Plan on Aerial

Proposed Single Family Residential & Assisted Living Community



Frontenac Square – 2 Unit Villa Elevation 1 (Ht. 25 feet)





Frontenac Square – 2 Unit Villa – Elevation 2 (Ht. 25' feet)





Clayton Road Before





Clayton Road After (8 Units backing to Clayton Road)

Reflects 15ft. Rear Yard Setback plus variable Buffer (12.8'-10.17')





Clayton Road After (8 Units backing to Clayton Road)

Reflects 15ft. Rear Yard Setback plus variable Buffer (12.8'-10.17')



The Grove in Frontenac: North & East Elevations

(Avg. Ht. 55.7 ft)



1 CONCEPT ELEVATION EAST
556'-11"



2 CONCEPT ELEVATION NORTH
519'-11"

KEYNOTE LEGEND	
KEY VALUE	KEYNOTE TEXT
500	REAL STONE VENEER
600	CEDAR SHAKES
604	PREF-FINISHED CEDAR LAP SIDING
315	GLAZED WINDOWS

PRELIMINARY - NOT FOR CONSTRUCTION



The Grove in Frontenac

OPTION 1 ROOF PITCH 9:12

Frontenac, Missouri

11.26.2014

Lantz Boggio Architects, P.C.



B.) PROJECT SUMMARY

1.) Preliminary Plan (dated 3/30/2015).

FRONTENAC SQUARE:

Proposed Villas

- Overall Area = 8.03 ac. vs. 5.82 ac
- Total Units/Lots = 36
- Density $36/8.03ac = 4.48 \text{ unit/ac}$ vs. 5.82 unit/ac
- Total Parking = 2 sp/lot (2 car garage)
- Open Space = 3.96 ac (incl. green areas, walking trails, sidewalks, & detention)
- % Open Space = 49% vs. 21.13%
- Setback from Clayton Rd. = 112' to 122' vs. 25.17' - 27.18'

THE GROVE IN FRONTENAC: Proposed Assisted Living

- Overall Area = 3.02 ac. vs. 2.0 ac
- Total Beds = 108 vs. 86 beds
- Total Parking = 63 (incl. 2 H.C.) vs. 57 spaces
- Open Space = 1.5 ac (incl. green areas, walking trails, sidewalks, & detention)
- % Open Space = 49% vs. 34%
- Avg. Height = 38' vs. 55.7'
- Setback from Clayton Rd. = 127', 182' & 164'
- City Hall Setback from Clayton Rd. = 165' & 185'

C.) PROJECT ACCESS

- All access & improvements at Spoede Rd. have been eliminated.
- Access is a three (3) lane street at Clayton Rd. for the 36 Villas & Assisted Living parking (North lot).
- Assisted Living South lot & deliveries is an improved existing driveway serving City Hall. To accomplish this access, the existing school building site which has a FF elevation 605.21 will be lowered to FF 594.75. This will eliminate the existing retaining wall along the City's West property line.
- Pedestrian access is interconnected between Spoede & Clayton Roads.



Spoede Rd.

Clayton Rd.

El. 597

Left Turn Lane

Stormwater Management

El. 590

El. 583



Stormwater Management

THE GROVE AT FRONTENAC ASSISTED LIVING

D.) ASSISTED LIVING OPERATION:

Staffing levels by shift (number of staff and position – e.g. caregivers, kitchen staff) and maximum employees at any one time (e.g. shift overlap).

Day shift staffing PROJECTIONS based on 108 residents:

1 administrator
1 office worker
2 nursing manager/director of nursing
3 medication technicians
6 caregivers
3 dietary staff
2 housekeepers
2 activity person
1 marketing person
1 maintenance person
1 dietary manager
23 Total

Evening shift PROJECTIONS based on 108 residents:

2 nurse supervisor
3 medication technicians
6 caregivers
3 dietary
14 Total

Night shift PROJECTIONS based on 108 residents:

3 medication technicians
6 caregivers
9 Total

Day and evening shifts will overlap for about 30 minutes around 3:00 PM.

Evening and night shifts overlap for about 30 minutes around 11:00 PM.

Night and day shifts overlap for about 30 minutes around 7:00 AM.

Between 8 AM and 5 PM

Types of deliveries to the facility, frequency and size/type of truck typically used.

Food delivery 2 times per week (short trailer semi, not a 53' trailer).

Medical supplies 2 times per week (large box truck or short trailer semi).

Cleaning and paper supplies 2 times per week (large box truck or short trailer semi).

Trash pick-up twice a week.

10 to 12 small package deliveries per week (UPS, pharmacy van, etc.).

The facility will have 1 van.

Safety

Type of security system(s) that will be used to ensure residents do not wander off premises.

Devices commonly used in memory care facilities to protect against elopements (these devices are allowed by local, state and national fire and building codes):

All exit doors are alarmed. When a door is opened an alarm sounds or the alarm is sent to a device (typically a pager) carried by a staff member. By design, the alarm cannot be reset remotely so a staff member must physically go to the door to see why it alarmed. These alarms can be turned off or set up on a timer so that main entry doors that are monitored by staff such as an office worker or receptionist do not alarm every time the door is opened.



- Features:
- Higher pitched roof
 - Carriage Doors
 - Stone

(Max. ht. 29 ft)



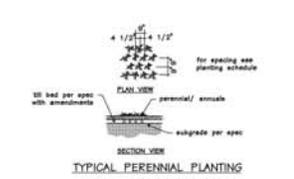
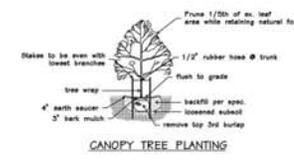
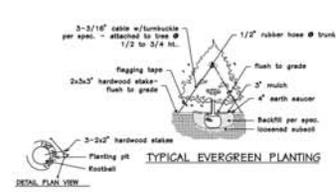


- Features:
- Higher pitched roof
 - Carriage Doors
 - Stone

(Max. ht. 29 ft)



Deciduous Trees = 254
 Evergreen = 243
 Total = 497



Code	Quantity	Species	Notes	Planting Date	Size
DECIDUOUS TREES					
A	35	Acer x freemanii	Armstrong	Armstrong Maple	2.5' cal
B	21	Tilia cordata		Littleleaf Linden	2.5' cal
C	24	Gleditsia triacanthos f. inermis	'Skyline'	Skyline Honeylocust	2.5' cal
D	20	Quercus bicolor		Swamp White Oak	2.5' cal
E	15	Zelkova serrata	'Green Vase'	Green Vase Zelkova	2.5' cal
F	25	Cercis canadensis		Redbud	2' cal
G	29	Malus 'Spring Snow'		Spring Snow Crabapple	2' cal
H	23	Amelanchier alabamica		Shadblow	2' cal
J	40	Cornus florida		Dogwood	2' cal
K	19	Malus 'Prairiefire'		Prairiefire Crabapple	2' cal
EVERGREEN TREES					
L	87	Pinus strobus		White Pine	0'
M	101	Pinus glabra		Norway Spruce	0'
N	50	Thuja 'Green Giant'		Green Giant Arborvitae	0'
P	25	Juniperus chinensis 'Natali Columnaris'		Natali Columnar Juniper	4'
... 00.0000 Retention plantings					

Jerril Saunders - Landscape Architect
 MCI License # LA-007
 Consultants:

Frontenac Square The Grove in Frontenac

Frontenac, MO

Revisions:

Date	Description	No.
11-21-14	Issue Revision	1
11-21-14	Issue Revision	2
11-21-14	Issue Revision	3
11-21-14	Issue Revision	4
11-21-14	Issue Revision	5

Drawn: LWJ
 Checked: JAS

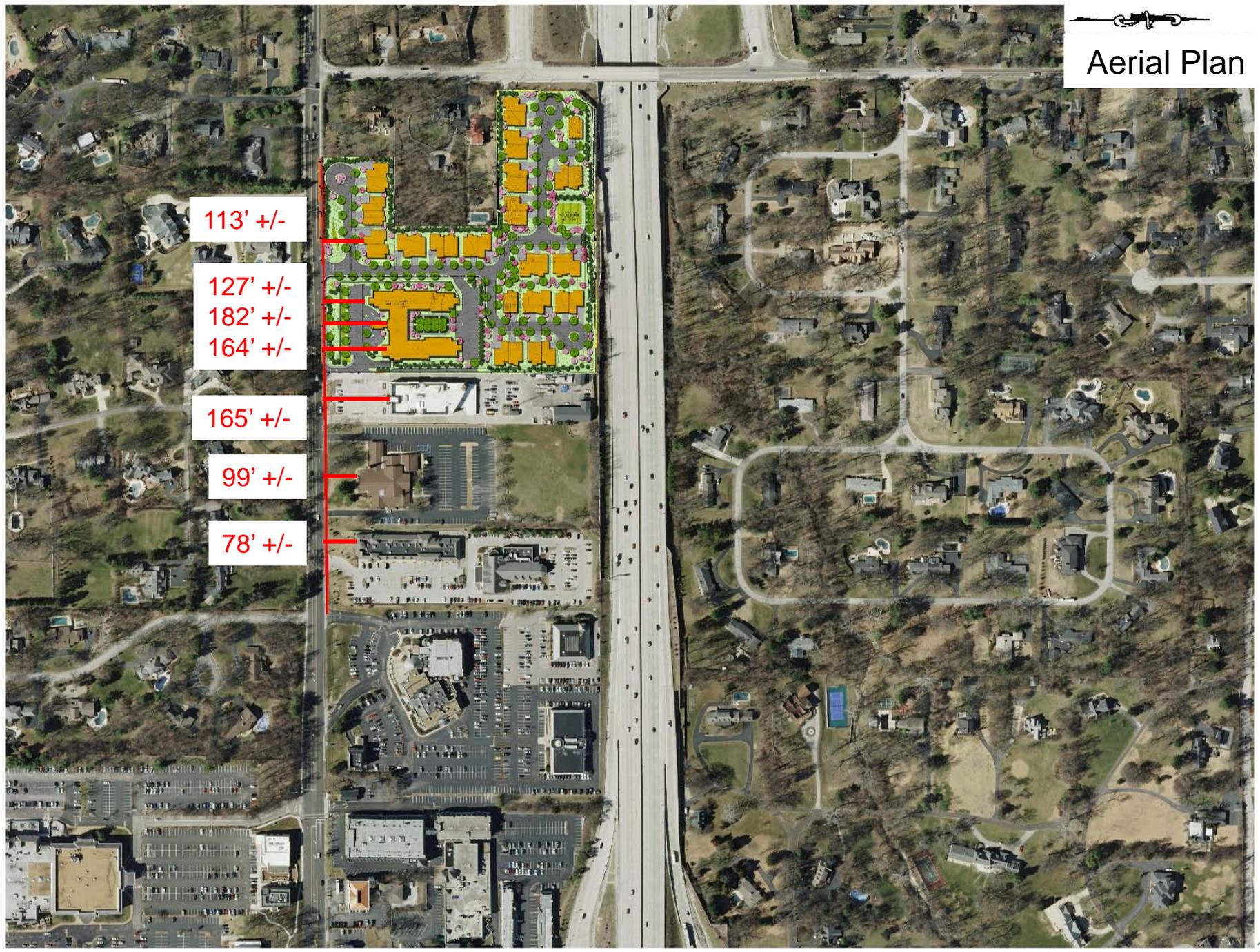
loomisAssociates
 10000 N. Highway 100, Suite 100
 Overland Park, KS 66213
 Phone: 913.241.1000
 Fax: 913.241.1001
 www.loomisassociates.com

Sheet Title: Landscape Plan
 Sheet No: L-1

Date: 05/05/14
 Job #: 935.006



Aerial Plan



113' +/-

127' +/-

182' +/-

164' +/-

165' +/-

99' +/-

78' +/-



Existing School
Shown in red



View from Clayton Road

Villa F.F. +/- 602
+ 29'
Roof El. 631.00

Assisted Living F.F. +/- 594.75
+ 38'
Roof El. 632.75

City Hall F.F. +/- 591.25
+ 44.12'
Roof El. 635.37/632.02



Wall (to be removed)

635.37

44.49'

590.88

632.06

40.81'

591.25

11/16/2013



March 31, 2015

Mr. George Stock, PE
Stock & Associates, Inc.
257 Chesterfield Business Parkway
St. Louis, Missouri 63005

RE: Traffic Access Assessment
The Grove in Frontenac and Frontenac Square
Frontenac, Missouri
514-0045-0TE

Dear Mr. Stock:

Lochmueller Group has completed the following traffic assessment for the proposed "The Grove in Frontenac" and "Frontenac Square" developments located in Frontenac, Missouri. The development site includes the former Ladue Early Childhood School (currently vacant) and adjoining single-family residences. The site is generally located in the northeast quadrant of Clayton Road and Spoede Road. The Grove proposes a 108-bed senior living facility and the Square proposes 36 residential villas. A preliminary site plan is shown in **Exhibit 1**.

Access to the site would be provided via a new main driveway on Clayton Road and a new connection to the adjacent Frontenac City Hall site, which would enable shared usage of City Hall's existing 'west' driveway onto Clayton Road. Access to the villas and the rear parking area for the Grove would be provided via the main driveway onto Clayton Road, whereas only the front parking area for the Grove would connect to the City Hall site. Hence, the shared-use and main driveways would not be connected internally through the site. The two existing site driveways would be removed.

The purpose of this assessment was to forecast the amount of traffic that would be generated by the proposed development, assess the relative impact of the site-generated traffic upon Clayton Road, and identify appropriate access configurations for the site.

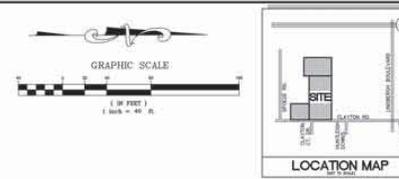
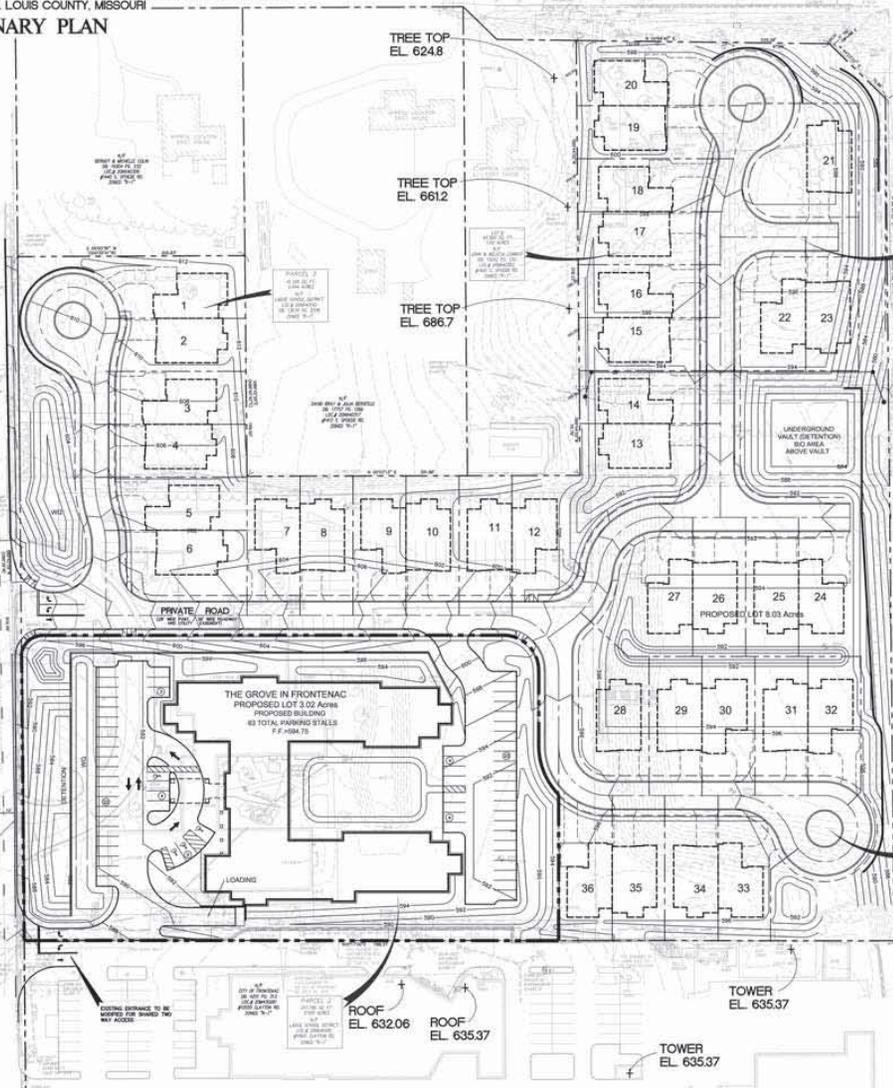
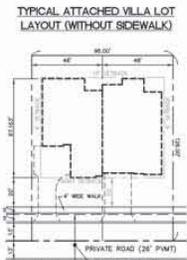
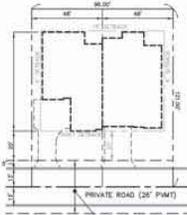
Existing Roadway and Traffic Conditions

Clayton Road is a minor arterial maintained by the City of Frontenac. It has a posted speed limit of 35 miles per hour (mph). Adjacent to the site, Clayton Road has two westbound lanes, one eastbound lane, and a dedicated eastbound left-turn lane into the existing entrance to the vacant Ladue Early Childhood School.

FRONTENAC SQUARE AND THE GROVE IN FRONTENAC

A TRACT OF LAND BEING
LOCATED IN U.S. SURVEY 2675, TOWNSHIP 45 NORTH, RANGE 5 EAST OF THE 5TH PRINCIPAL MERIDIAN
CITY OF FRONTENAC, ST. LOUIS COUNTY, MISSOURI

PRELIMINARY PLAN



TOTAL TRACT DESCRIPTION:
A TRACT OF LAND BEING LOCATED IN U.S. SURVEY 2675, TOWNSHIP 45 NORTH, RANGE 5 EAST, IN THE CITY OF FRONTENAC, ST. LOUIS COUNTY, MISSOURI BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:
BEGINNING AT THE SOUTHWEST CORNER OF A TRACT OF LAND AS CONVEYED TO THE CITY OF FRONTENAC BY INSTRUMENT RECORDED IN BOOK 431, PAGE 313 OF THE ST. LOUIS COUNTY RECORDS FROM WHICH A FOUND CUT-UP MAP SHOWS 45 MINUTES 50 SECONDS EAST, 2 3/8 FEET, SAID POINT ALSO BEING LOCATED ON THE NORTH RIGHT-OF-WAY LINE OF CLAYTON ROAD, VARIABLE WIDTH, THENCE ALONG SAID RIGHT-OF-WAY LINE SOUTH 89 DEGREES 45 MINUTES 50 SECONDS WEST 2007.71 FEET TO A POINT 10 MINUTES WEST, 819.45 FEET TO THE SOUTHWEST CORNER OF A TRACT OF LAND AS CONVEYED TO COLIN W AND NICOLEE A REBERT BY INSTRUMENT RECORDED IN BOOK 304, PAGE 213 OF THE ABOVE SAID RECORDS, FROM WHICH A FOUND CONCRETE MONUMENT BEARS SOUTH 8 DEGREES 50 MINUTES 00 SECONDS WEST, 0.88 FEET, THENCE ALONG THE EAST LINE OF SAID REBERT TRACT NORTH 00 DEGREES 00 MINUTES 00 SECONDS EAST NORTH 00 DEGREES 35 MINUTES 41 SECONDS EAST, 204.5 FEET TO THE NORTHEAST CORNER OF SAID REBERT TRACT, SAID POINT ALSO BEING LOCATED ON SOUTH LINE OF A TRACT OF LAND AS CONVEYED TO DAVID D BRAY AND JALA DRUM BERGFELD BY INSTRUMENT RECORDED IN BOOK 1797, PAGE 1586 OF ABOVE SAID RECORDS, FROM WHICH A FOUND IRON PIPE BEARS SOUTH 91 DEGREES 38 MINUTES 00 SECONDS WEST, 0.29 FEET, THENCE ALONG SAID SOUTH LINE, NORTH 80 DEGREES 42 MINUTES 58 SECONDS EAST NORTH 89 DEGREES 40 MINUTES 40 SECONDS WEST, 189.80 FEET TO THE SOUTHWEST CORNER OF SAID DAVID D BRAY AND JALA DRUM BERGFELD TRACT FROM WHICH A FOUND CONCRETE MONUMENT BEARS SOUTH 15 DEGREES 30 MINUTES 00 SECONDS WEST, 0.26 FEET, THENCE ALONG THE EAST LINE OF SAID DAVID D BRAY AND JALA DRUM BERGFELD TRACT AND THE EAST LINE OF A TRACT OF LAND AS CONVEYED TO THOMAS AND SHARON COLLETT, BY INSTRUMENT RECORDED IN BOOK 7958, PAGE 221 OF ABOVE SAID RECORDS, NORTH 00 DEGREES 00 MINUTES 00 SECONDS EAST NORTH 00 DEGREES 07 MINUTES EAST, 301.96 FEET TO A POINT ON THE 43 DEGREE CORNER OF SAID COLLETT TRACT, THENCE ALONG THE NORTH LINE OF SAID COLLETT TRACT SOUTH 89 DEGREES 44 MINUTES 00 SECONDS WEST, 303.99 FEET TO THE EAST RIGHT-OF-WAY LINE OF SOUTH SPOON ROAD, VARIABLE WIDTH, THENCE ALONG SAID RIGHT-OF-WAY LINE NORTH 00 DEGREES 38 MINUTES 42 SECONDS EAST, 202.58 FEET AND NORTH 44 DEGREES 13 MINUTES 22 SECONDS EAST, 10.88 FEET TO THE SOUTH RIGHT-OF-WAY LINE OF ALTERNATE ROUTE 40, VARIABLE WIDTH, THENCE ALONG SAID RIGHT-OF-WAY LINE, NORTH 88 DEGREES 42 MINUTES 22 SECONDS EAST, 284.87 FEET AND NORTH 88 DEGREES 38 MINUTES 00 SECONDS EAST, 408.16 FEET TO A FOUND CONCRETE MONUMENT LOCATED ON THE WEST LINE OF SAID CITY OF FRONTENAC TRACT, THENCE ALONG SAID WEST LINE, SOUTH 00 DEGREES 17 MINUTES 00 SECONDS WEST (COURSE 9 DEGREES 19 MINUTES WEST), 718.13 FEET TO THE POINT OF BEGINNING AND CONTAINING 481,330 SQUARE FEET OR 11,049 ACRES.

- NOTES:**
1. BEGINNING AND TERMINATING SURVEY BY STOCK & ASSOCIATES CONSULTING ENGINEERS, INC.
 2. SUBJECT PROPERTY LIES WITHIN FLOOD ZONE "X" (AREA DETERMINED TO BE OUTSIDE THE 100-YEAR FLOOD), ACCORDING TO THE NATIONAL FLOOD INSURANCE RATE MAP NUMBER 22180002E J WITH A MAP REVISED EAST OF AUGUST 23, 2006.
 3. GRADING AND STORM WATER PER CITY OF FRONTENAC, MISSOURI AND ST. LOUIS COUNTY STANDARDS AND SPECIFICATIONS. STORM WATER TO DISCHARGE AT AN ADEQUATE NATURAL DISCHARGE POINT. SHOULDS BE NOT ADEQUATE NATURAL DISCHARGE POINT.
 4. NO SLOPE GREATER THAN 3:1 ALLOWED ANYWHERE CITY AND SECTION APPROVAL. GRADING SHALL FOLLOW GEOTECHNICAL RECOMMENDATIONS.
 5. ALL UTILITIES SHOWN HAVE BEEN LOCATED BY THE ENGINEER FROM AVAILABLE RECORDS. THEIR LOCATION SHOULD BE CONFIRMED BY A UTILITY COMPANY. THE CONTRACTOR HAS THE RESPONSIBILITY TO NOTIFY ALL UTILITY COMPANIES, PRIOR TO CONSTRUCTION, OF THE EXISTING UTILITIES FIELD LOCATES.
 6. ALL UTILITIES WILL BE INSTALLED UNDERGROUND.
 7. THE APPLICANT SHALL SUBMIT IMPROVEMENT PLANS FOR REVIEW BY THE CITY OF FRONTENAC.
 8. PLAN SUBJECT TO CHANGE DURING AGENCY REVIEW & APPROVALS. THIS PLAN IS NOT FOR CONSTRUCTION.
 9. ALL GREEN AREA, EXCEPT WOODED AREAS, INCLUDING PARKING LOT LANDSCAPING FOR COMMERCIAL USES, PLANS AND TOWNSHIPS SHALL BE ORIGINATED BY THE CONTRACTOR.
 10. TRASH DUMPSTER IN SERVICE AREA OF SENIOR DWELLING. INDIVIDUAL UNIT TRASH PICKUP FOR THE VILLES AND TOWNHOUSES.

PERTINENT DATA

LOCATOR NUMBER	20648420, 20648420, 20648420, 20648420, 20648420
OVERALL AREA	11,049 ACRES ±
EXISTING ZONING	R-1, ONE-FAMILY RESIDENCE
PROPOSED ZONING	"R" DISTRICT
SEWER DISTRICT	MFD
TELEPHONE SERVICE	AT&T
GAS SERVICE	LANCIDE GAS COMPANY
WATER SERVICE	MISSOURI-AMERICAN WATER CO.
ELECTRIC SERVICE	AMUNDY
PHONE DISTRICT	CITY OF FRONTENAC
SCHOOL DISTRICT	LAUREL SCHOOL DISTRICT
F.I.E.M. No.	23880088 J
PROPOSED USE	VILLES AND TOWNHOUSES SENIOR LIVING

ST. LOUIS COUNTY BENCHMARK

TRICHOMY # 13-74
ELEV=572.16
15' ALONG THE NORTH SIDE OF CLAYTON ROAD IN FRONT OF 25' OVERHEAD WIRE CROSSING OVER THE WEST OF THE EAST ENTRANCE APPROXIMATELY 0.3 MILES WEST OF UNDERPASS OVERLAKE

PREPARED FOR:
FULTE HOMES OF ST. LOUIS, LLC
17107 CHESTERFIELD AIRPORT ROAD
SUITE 100
CHESTERFIELD, MO 63005

THE GROVE ASSISTED LIVING, LLC
16650 CHESTERFIELD GROVE RD.
SUITE 100
CHESTERFIELD, MO 63005

Exhibit 1: Site Plan (By Others)

PREPARED BY: **STOCK & ASSOCIATES**
Consulting Engineers, Inc.
227 Chesterfield Parkway
Chesterfield, Missouri 63005
636-851-1100
www.stockandassocs.com

PRELIMINARY PLAN FOR:
**FRONTENAC SQUARE
THE GROVE IN FRONTENAC**
FRONTENAC, MO.

3/23/2014

GEORGE W. STONE, E-25118
Civil Engineer
Certificate of Authority
Number: 00596

REVISIONS:

NO.	DATE	DESCRIPTION
18	5/15/2014	REVISED PLAN
19	1/23/2015	REVISED THE GROVE

PRELIMINARY SITE PLAN
SHEET NO. **SDP-11**

To quantify existing traffic volumes, machine traffic counts were conducted on Clayton Road adjoining the site on Thursday May 15, 2014. From the counts, weekday traffic volumes averaged 14,790 vehicles per day. The morning and afternoon peak hours of traffic occurred from 7:15 to 8:15 a.m. and from 4:45 to 5:45 p.m. as shown in **Chart 1**. Two-way traffic volumes amounted to approximately 1,070 vehicles during the morning peak hour and 1,450 during the afternoon peak hours.

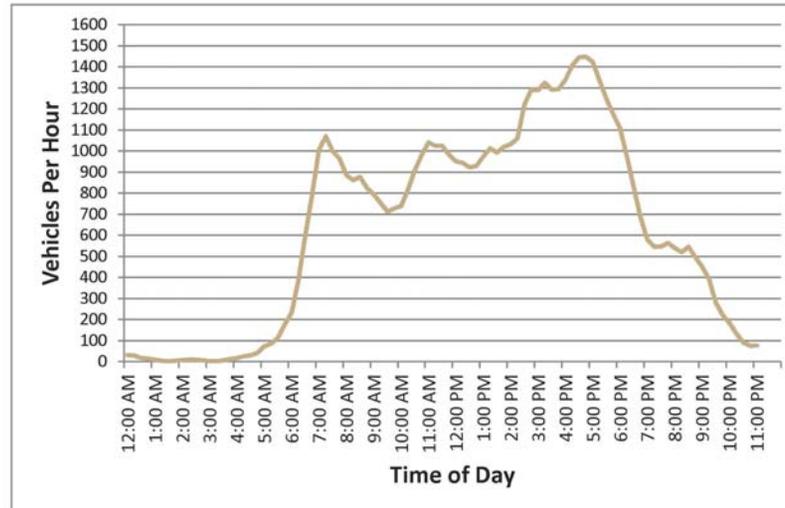


Chart 1: Weekday Traffic Volumes On Clayton Road

Trip Generation and Directional Distribution

The Grove would consist of a 108-bed senior living facility and the Square would include 36 residential villas. The number of trips that would be generated by the developments was forecasted based on information provided in the “Trip Generation Manual”, Ninth Edition, published by the Institute of Transportation Engineers (ITE).

This manual is a standard resource for transportation engineers and includes a compilation of nationwide studies documenting the trip generating characteristics of various land uses. Data for Assisted Living (ITE Land Use Code 254) was applied to the senior living facility and Residential Condominium/Townhouse (ITE Land Use Code 230) was applied to the Square. The resulting traffic projections for the proposed development is summarized in **Table 1**.



Table 1: Trip Generation Forecast

Use	Size	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Assisted Living	108 beds	13	7	20	15	16	31
Residential Villas	36 residences	2	14	16	13	6	19
Total		15	21	36	28	22	50

As summarized in **Table 3**, the proposed development would generate approximately 36 and 50 total trips during the morning and afternoon peak hours, respectively. This would amount to less than 1 trip per minute entering/exiting the site during the peak hours. Given this forecast, it stands to reason that the proposed development would almost certainly generate less traffic than the site's previous use – the Ladue Early Childhood School.

In total, the proposed development would increase peak hour traffic on Clayton Road by approximately 3 percent. Given that traffic volumes on a roadway can fluctuate as much as 5 to 10 percent on a daily basis, this increase would represent a nominal change in conditions on Clayton Road and would not noticeably impact traffic operations.

Proposed Access and Recommended Improvements

Access to the site is proposed via a new main driveway on Clayton Road and a new connection to the adjacent Frontenac City Hall site, which would enable shared usage of City Hall's existing 'west' driveway onto Clayton Road. The new driveway on Clayton Road would handle almost all of the site's traffic, as it would provide exclusive access to the residential villas and the rear parking area for The Grove.

Conversely, the cross access connection to Frontenac City Hall would only serve the front parking area of The Grove, which would primarily be used by visitors. Staff and residents would use the rear parking area, accessed via the site's main driveway. As a result, the anticipated increase in traffic using the 'west' driveway to City Hall as a result of the cross access connection would be minimal.

The site's main driveway on Clayton Road should provide separate left-turn and right-turn lanes exiting the site and one lane entering the site. Clayton Road at the main driveway should continue to have two eastbound lanes and one westbound lane for through traffic. In addition, a center two-way left-turn lane should be implemented to help facilitate left-turns into and out of the site. This lane could be accommodated with minimal or no pavement widening by removing the former eastbound left-turn lane into the Ladue Early Childhood School. In fact, the recommended cross-section on Clayton Road at the site's main driveway would mirror the section on Clayton Road in front of Frontenac City Hall.



Mr. George Stock, PE
March 31, 2015
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In order to accommodate shared usage, the Frontenac City Hall 'west' driveway would be converted from one-way entering to two-way traffic. Consequently, the driveway should be widened to provide at least one entering lane and one exiting lane. The existing cross-section on Clayton Road already provides a center left-turn lane at that location, so no modifications would be needed.

Conclusion

Lochmueller Group has completed the preceding traffic assessment for the proposed "The Grove in Frontenac" and "Frontenac Square" developments. The development site includes the former Ladue Early Childhood School (currently vacant) and adjoining single-family residences and is generally located in the northeast quadrant of Clayton Road and Spoede Road. The Grove proposes a 108-bed senior living facility and the Square proposes 36 residential villas.

The proposed development would generate approximately 36 and 50 total trips during the morning and afternoon peak hours, respectively. In total, the proposed development would increase peak hour traffic on Clayton Road by approximately 3 percent. This increase would represent a nominal change in conditions on Clayton Road and would not noticeably impact traffic operations.

The site's main driveway on Clayton Road should provide separate left-turn and right-turn lanes exiting the site and one lane entering the site. A center two-way left-turn lane should also be provided on Clayton Road at the site's main driveway to help facilitate left-turns into and out of the site. Frontenac City Hall's 'west' driveway would be converted from one-way entering to two-way traffic to accommodate cross access traffic to/from the proposed development.

It can be concluded that the proposed development would have a nominal impact upon traffic on Clayton Road and the proposed site access configuration would effectively serve entering and exiting traffic volumes. We trust that you will find this report useful in evaluating the traffic impacts associated with "The Grove in Frontenac" and "Frontenac Square". Please do not hesitate to contact me at (314) 621-3395 if you have any questions or comments regarding this information.

Sincerely,
Lochmueller Group, Inc.

A handwritten signature in black ink, appearing to read "Christopher W. Beard".

Christopher W. Beard, PE, PTOE
Manager of Transportation Planning, Associate