

## NORMAN J. TOBERMAN & ASSOCIATES, LLC

A Parking and Traffic Study has been prepared for the proposed Westgate Dental facility. In brief it was found that there is more than sufficient parking provided for the existing Esplanade Center and proposed Westgate Dental with no need to share parking between facilities. Traffic observations concluded that the Esplanade center's traffic and parking are well distributed across the day due to the varying uses of the leased spaces. It is expected that Westgate Dental traffic and parking demands will be distributed equally between mid-morning and late afternoon time periods. Business plans suggest that Westgate Dental practice will grow slowly over a three to five year period allowing for considerable time to integrate with the Esplanade center. Under full operation Westgate Dental should add less than 10% to the existing Esplanade center peak morning/design traffic which was determined to be the most important time period for the Esplanade center.

The Starbucks peak traffic arrives between 7:30-8:30 AM with more than 75% of the Starbucks traffic using Salt Creek Lane entrance and 25% using the Euclid Ave. entrance. Westgate Dental peak business hours will typically occur immediately after the peak morning Starbucks traffic however there may be occasions when the combination of employee and customer arrivals add 10% to the traffic volume at this time. Therefore, it is recommended that the Esplanade's Salt Creek Lane entrance be expanded to 2 inbound lanes from one with one lane dedicated to Starbucks drive-thru traffic accessing the Esplanade's rear drive aisle and the second lane for right turns into the Esplanade center and Westgate Dental. Added signage and striping improvements should facilitate traffic flow at each entrance & between the facilities.

During the morning peak hour approx. 35% of the vehicles entering from Euclid Ave. used the east bypass drive to access the rear drive aisle and Starbucks drive-thru (i.e., approx. 18 vehicles or 1 vehicle every 3 minutes). The remainder of the day "cut-thru" traffic subsided substantially. The Westgate Dental site design will discourage "cut-thru" traffic using added directional signage and striping and the new west drive aisle will easily accommodate expected traffic. Equally important, Westgate Dental patrons will be using the customer south parking lot and will not have to cross the west drive aisle to enter the facility. Also, added signage is proposed to slow the west aisle traffic flow adjacent the Westgate Dental entrance.

To conclude, Westgate Dental will be a complimentary addition to the Esplanade center with the added benefits of an improved Salt Creek Lane entrance, surplus

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PLANNING & COMMUNITY  
DEVELOPMENT DEPARTMENT

parking and added site signage and striping. If you have any questions or require additional information feel free to call me.

Sincerely,

Cliff Toberman, P.E.

**PARKING &  
TRAFFIC STUDY**

for

**WESTGATE DENTAL**

2900 W. Euclid Avenue  
Arlington Heights, IL 60005

in

**Esplanade Shopping Center**

NE Corner Euclid Avenue & Salt Creek Lane  
Arlington Heights, IL 60005

by

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NJT File#: 15-6464

Date: April 26, 2016

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## **1. Executive Summary**

Norman J. Toberman Assoc. LLC has prepared on behalf of Westgate Dental, a Parking & Traffic Study and Preliminary Civil Engineering Plans for a new Westgate Dental facility adjacent the existing Esplanade retail center pursuant to Village of Arlington Heights (VAH) Code (Chapter 28, Section 6.12). The project site is located in Arlington Heights at the northeast corner of Euclid Avenue and Salt Creek Lane. The new dental facility will consist of a separate building located on an adjacent and vacant parcel east of the existing Esplanade Shopping Center parcel. The Esplanade center owner has entered into a real estate contract to sell the adjacent vacant parcel to Westgate Dental. The Esplanade owners are creating a Planned Unit Development (PUD) to accommodate the new Westgate Dental facility. The new site will share existing Esplanade entrances off Euclid Ave. and Salt Creek Lane and have cross-access agreements between the two parcels. A traffic study was performed to establish the Esplanade center's traffic flow and patterns across two-3 day periods (Thursday-Saturday) during mid-December, 2015 and mid-January, 2016. Furthermore, an assessment was made of Westgate Dental traffic impacts to the overall Esplanade development.

Westgate Dental hours of operation will be: Monday thru Friday 7am-7pm and Saturday 8 AM - 5 PM. The facility will be closed on Sundays. The peak hours of operation are typically from 9AM to 11AM and 4PM to 7PM with Monday, Thursday's and Saturday's typically being the busiest. The facility will accommodate several dental specialists. The Westgate Dental building will be located at the far eastern quarter of the vacant parcel with front setback similar to the Esplanade Shopping Center. The front portion of the building will be two-story and all glass and face south overlooking Euclid Avenue and have building mounted signage and lighting. Adjacent to and east of the building is an existing 15' public utility and drainage easement and further east an existing detention basin for the Esplanade's drainage. Total first-floor area of the building boasts 6,513 sqft and provides for 19 treatment rooms for its patients. The building will be centered between the north and south proposed parking lots and adjacent the west parking lot and drive aisle. The parking lots will interconnect with the existing and adjacent Esplanade parking lot front and rear drive aisles. Landscaped islands and perimeter landscaping for parking lot screening will be provided per VAH code. Storm water management will include underground storm water detention and limited parking lot surface storage with storm water outlet into the existing east detention basin that accommodates the existing Esplanade shopping center. Both sanitary sewer and water services will simply be extended east to the new building from the existing Esplanade mains. Parking lot lighting will also be provided consistent with the Esplanade parking lot lighting and VAH code requirements.

The new dental office building will have a 1st floor area of 6,513 sqft and with 2nd floor space included the total usable space will be approx. 9,367 sqft. In comparison, the Esplanade retail center has an approximate footprint of 18,500 sqft and includes four restaurant tenants that include a Starbucks Coffee, Subway, Aurelio's restaurant and a soon to be Savory Salads restaurant. There is also a DeCarlo's Hair Design, Esplanade Wine & Spirits store, Arlington Down's Management Co. and two vacant retail spaces at the east end. The Westgate Dental Bldg. is proposed to be located along the east side of the parcel approx. one foot setback from the existing east 15' Public Utility Easement.

This study examines the existing Esplanade parking patterns and availability as well as proposed parking for Westgate Dental. It also examines the existing retail centers traffic volume and circulation across peak morning, lunch and late afternoon time periods. The study projects traffic patterns and trip generation for the Westgate Dental facility onto existing Esplanade retail center's observed traffic and parking use. Most important, the study will enable Village staff and board members as well as Esplanade and Westgate Dental ownership to better understand and plan for the integration of Westgate Dental projected traffic and parking with the Esplanade center. This includes not only movements for automobiles but also for trucks and pedestrian traffic. Also included are recommendations for site striping and signage improvements for the Esplanade center entrances, parking lots, and Starbucks drive-thru as well as the new dental facility. Thus, the report addresses the combined Westgate Dental and Esplanade center parking and traffic demands in their entirety.

In brief, it was concluded that sufficient parking is available to meet Village requirements for both the Esplanade development and the proposed Westgate Dental using their own separate but interconnected parking lots. Westgate Dental provided parking will be much greater than requirements, with a total of 64 parking spaces to accommodate the dental office employees and their patients vs. the 47 spaces required by the Village of Arlington Heights. Drive aisles will be maintained as well as traffic patterns in general.

On-site observation and traffic counts determined that traffic generation and parking demands were well distributed across the day due to the variety of businesses and hours of operation at the Esplanade center. The main traffic generator for the Esplanade is the Starbucks with its morning peak hour occurring when the other existing Esplanade space users are not open. However, it is evident that Starbucks inbound and outbound drive-thru traffic turning movements contribute to much of the observed morning traffic. Starbucks drivers were very mindful of the drive-thru turning movements and safely navigated through occasional congestions that occurred from outbound drive-thru "U-turn" movements. No accidents were observed during the study nor did Starbucks staff make mention of any historical accidents when asked.

Equally important, an estimated maximum 40 trips could be generated for the new Westgate Dental facility during peak operation that is relatively small when compared to the existing 450+/- total trips generated during the morning peak hour of the Esplanade center/Starbucks. It is anticipated that Westgate Dental very early 7-8 AM morning patient arrivals and employees will arrive concurrently with Starbucks morning peak traffic. However, the Westgate Dental facility operation will peak later morning (after 9 AM) will occur after the very early morning Starbucks customer arrivals. Moreover, with proper signage and striping, traffic flow will be satisfactory and any potential conflicts can be minimized. Westgate Dental later afternoon peak

traffic will occur when the Esplanade Shopping Center is operating at much lower parking and traffic demands (lunch hour peak of 350+/- trips and late afternoon peak hour of 250+/- trips).

Traffic observations/counts noted that 30% of the peak-hour morning traffic enters/exits (i.e., 100+/- trips) at the right-in-right out Esplanade intersection and 70% (i.e. 350 +/- trips) enter/exist at the northwest full entrance. Approximately 35% of the Euclid Ave. right-inbound vehicles (i.e., 20+/- vehicles) proceeded north along the east perimeter drive aisle (one vehicle every three minutes). These vehicles proceed west along the rear drive aisle to enter the Starbucks drive-thru queue. Thus, it is expected that a portion of this existing traffic will proceed in similar fashion past the Westgate Dental facility between 7:00 and 9 AM, although there will be signage directing Starbucks traffic to use the front drive aisles instead. Furthermore, signage will be added to slow "cut-thru" traffic.

Based on traffic observations, it is recommended that the 16' wide existing Salt Creek Lane inbound entrance be expanded to 24' wide to accommodate two lanes to separate Starbucks drive-thru traffic from Esplanade and Westgate Dental bound traffic, thus improving overall site traffic flow. This would be accomplished by reconstructing the south curb 8' further south to "free-up" drivers wanting to park at the Starbucks after noticing that the queue to be lengthy. Thus, Starbucks drive-thru traffic can back up and still not affect entrance to the main shopping center and no parking spots would be lost in doing so.

It is also recommended that Westgate Dental develop a policy for very early morning customers to avoid the use of the Esplanade Shopping Center's "rear aisle" due to potential congestion caused by east-bound lane queuing from Starbucks drive-thru traffic. Likewise, caution should be exercised for westbound rear aisle traffic movements when daily morning truck deliveries occur along the rear drive aisle. However, by later morning the rear drive aisle is no longer congested and free for employee and customer use for both eastbound and westbound traffic movements.

Furthermore, to integrate the Westgate Dental facility traffic into the overall Esplanade development a significant number of signage and striping improvements are recommended to facilitate safe movements of traffic thru and between the Esplanade Center and Westgate Dental Facility. The overall design allows for inbound traffic to be unimpeded while outbound traffic is more controlled at the drive exits. As a result, 'Yield' signs are proposed adjacent the east/west Esplanade front drive aisles. Also, a stop sign is proposed at the Salt Creek Lane entrance for the outbound western drive aisle lane (i.e., similar to most shopping centers where inbound traffic flow gets the right-of-way and is protected from cross-traffic movements). Equally important, a 'Yield' sign is recommended for outbound Starbucks drive-thru traffic as well as a 'Stay in Lane' sign as the driver proceeds north toward the Salt Creek Lane exit lane. This should lessen vehicle conflicts between outbound Starbucks drive-thru

traffic and inbound Esplanade/Westgate Dental traffic. Also, a driver wishing to by-pass the drive-thru window can still proceed across the striping.

Also signs were added to direct inbound traffic for Starbucks and Westgate Dental at the Salt Creek Lane drive entrance and at the right-in-right out entrance as well. Also Westgate Dental would have an exit sign in the far northwest parking lot corner to alert patrons that they can use the rear shopping center drive aisle if need be. However, the preferred "inbound route" for Westgate Dental facilities is the right-in off Euclid and the "new right inbound lane" off Salt Creek Lane entrance. The above 'Westgate Dental' and 'Starbucks' directional signs will lessen confusion for customers entering the site.

Last, significant lane striping and lane labels were added along with painted arrows across the large drive aisle width just north and beyond the Euclid Ave. right-in-right-out entrance between the Esplanade and Westgate Dental facilities. Island striping is provided (vs. landscaped concrete curb island) since the large width is needed to accommodate vehicle movements for a large fire truck or occasional semi-truck. It should be noted that most delivery trucks were smaller than semi-trucks and would easily remain in drive aisles/lanes.

Thus, implementation of the above Site improvements should help control and manage traffic between the facilities and lessen conflicts and possible driver confusion. The following sections of the study offer analyses in greater detail of the existing conditions and future traffic movements, provides data and analyzes traffic impact, operational aspects, on-site issues, and recommendations already briefly mentioned above.

## **2. Existing Esplanade Center**

The Esplanade parcel (Pin# 02-25-100-034) is legally described as, LOT 9 (except the north 40 feet thereof) in Arlington Park Office Centre, being a subdivision of part of the northwest  $\frac{1}{4}$  of section 25 and part of the northeast  $\frac{1}{4}$  of section 26, township 42 north, range 10, east of the third principal meridian, according to the Plat thereof recorded May 23, 1980 as document 25466742, in Cook County, Illinois, also known as, 2920-2964 West Euclid Avenue, and is a 4.67 acre lot. Access onto the property by means of vehicle comes from the south entrance off Euclid Avenue and west entrance off Salt Creek Lane. Directly north of the subject property is a 6.56 acre parcel (Pin#: 02-25-100-033), known as 3030 Salt Creek Lane. Directly east of the subject property is Swan Lane, immediately followed by Salt Creek and Arlington International Racecourse. The Parcel belongs to the B-3 classification of the zoning district map. Presently, Lot 9 consists of a partially developed space consisting of a building, parking areas and drive aisles, walkways, and aboveground and underground utilities & structures. The remaining undeveloped space consists of grass, plantings, and mature trees.

The Esplanade at Arlington Heights is an upscale shopping center in the context of the adjacent Arlington Park race course and business center. The building exterior features a combination of



brick veneer, storefront glass and aluminum composite panels, in addition to an architecturally distinctive tower. The 18,832 square foot shopping center is located on the 4.67 acre site west of the Arlington Park Race Track with vehicle access to the subject site with a right-in-right out entrance off Euclid Avenue at the south end and full access off Salt Creek Lane at the west end. The building consists of 9 individual units. Existing tenants include Starbucks, Subway, De Carlo's Hair Design, Esplanade Wine & Spirits, Aurelio's Pizza, Savory Salads, & Arlington Downes Management Company. Two of the nine units within the shopping center are presently vacant.

The parking areas and drive aisles for the shopping center (~275-feet long x ~70-feet wide) consist of a 23-stall North Parking Lot, 21-stall South Parking Lot, and 94-stall West Parking Lot, drive aisles throughout. A U-shaped two-way drive at the east end interconnects the South Lot with the North Lot. For access to and from the subject site, at Salt Creek Lane entrance there is a one-lane entrance and two-lane exit with a 500-square feet landscape island in-between the opposing lanes and single-head light pole. The entrance lane diverges into a right-turn directional and straight-ahead directional. The right-turn directional merges onto a two-way drive west drive aisle that is between the west perimeter parking spaces and the Starbucks drive-thru interior lane. A 10-foot landscape island having 8 mid-size trees lies between as shown below.

### **Esplanade at Arlington Heights 2920 – 2964 W. Euclid Avenue**



The Starbucks drive-thru single lane expands to two lanes at the drive-thru window of their coffee shop. There, emerging vehicles make for the south Parking Lot or make a roundabout/u-turn onto the west Esplanade drive aisle to exit north to the Salt Creek Lane exit. A walkway traverses the drive-thru at the Starbucks' storefront, extending from the Starbucks' patio toward Salt Creek Lane, converging with the public walkway.

The rear two-way drive aisle for the North Parking Lot, at the rear of the shopping center, extends from the Salt Creek Lane entrance, past the shopping center, and continues on for ~115-feet before changing direction towards the shopping center front and converging with the Esplanade's South Parking Lot. The Starbucks' drive-thru entrance begins mid-way of the shopping center and is in-between a 31-foot wide landscape island having 5 mature trees and ~20-foot landscape area with walkway along the rear end of the shopping center at the opposite side. The total length of the drive-thru is approximately 255-feet long. A designated truck-loading area is between the drive-thru and east end of the Esplanade center. Four single-head light poles, spaced equally, provide light for the North Parking Lot. The green area along the North Parking Lot is modestly landscaped with evergreens and deciduous trees, plantings and bushes.

The existing South Parking Lot extends the full length of the shopping center and beyond. It is divided up into 4 rows of parking spaces with back-to-back parking between the two two-way drive aisles. The South Parking Lot provides 5 accessible spaces for all parking on site. The green area along the South Parking Lot is modestly landscaped with evergreens and deciduous trees, plantings and bushes, planters in walkways and landscape islands. Six single-head light poles, spaced equally in two rows, provide light for the existing North Parking Lot. For access to and from the South Parking Lot, a right-in-right out entrance off Euclid Ave is provided with a landscape island division between the two lanes.

The existing West Parking Lot extends the full width of the shopping center and beyond. At the entrance onto the subject site off Salt Creek Lane, the first section of the three sections of parking spaces angle away from street at the widest point, while at the other end of first section, the gap between parking spaces and street lessens going towards the shopping store front. The remaining two sections of parking parallel Salt Creek Lane. The green area along the West Parking Lot is modestly landscaped with grass, trees, plantings, and bushes. A fire hydrant exists near the entrance.

The existing East Area with Roundabout/U-shaped two-way drive connects the existing North and South Parking Lots. The drive is 30-feet wide and 255-feet long. Three single-head light poles, spaced equally, provide light for the East Area with Roundabout Drive. The green area within the East Area is landscaped with grass with the ground slope uniformly increasing to ~2.5-feet above the shopping center's finish floor near the center of the East Area.

### **3. Proposed Westgate Dental**

The new dental office building will have a 1st floor area of 6,513 sqft and with 2nd floor space included the total usable space will be approx. 9,367 sqft. Westgate Dental Facility will have approximately 35 employees during peak operation which typically occurs on Thursday and Saturday's. Appointment schedules are heavier in early morning and late afternoon hours. The dental office will be open from 7 AM thru 7 PM Monday thru Friday and 8 AM-5 PM on Saturday and 9 AM to 3 PM on Sundays. Westgate Dental will have 19 treatment rooms on the 1st floor with main entrance for customers adjacent the building's southwest building corner facing west towards the Esplanade's retail center. The customer waiting room and administrative service desk will be adjacent the main entrance area. The treatment rooms will be along the west, north and east building's perimeter.

The ADA parking spaces have been located at the shortest accessible travel routes from adjacent parking to the main entrance and the front southeast building entrance. The Westgate Dental main entrance will have two ADA spaces located in the west parking lot across the main drive aisle in the west parking lot. The west parking lot is adjacent the side of the Esplanade's east building face with proposed vehicle parking along a new concrete walk adjacent the Esplanade. A cross-walk/ADA route will be extended from the ADA spaces across the main west drive aisle to the Westgate Dental entrance. The ADA spaces will be visible to drive aisle traffic that will be moderated by use of yield signs and 'SLOW' pavement labeling. The front/southeast building entrance will provide for immediate emergency dental care access. The building's front/south walk will be ADA accessible and serve the adjacent ADA space located in the northeast corner of the south parking lot.

The building will include a partial basement for storage and building utilities. Three rear entrances will be provided for employee entrance, dental supply deliveries as well as access to the rear refuse area located adjacent the northeast building corner. Most supply deliveries will occur at the rear's center entrance. The rear portion of the building will have basement stairs while 2<sup>nd</sup> floor stairs will provide access to the second story at the front of the building. Also, the main west drive aisle will be 26' wide and sufficient to accommodate Fire Truck and Semi-Truck Turning movements to and from the rear of the Esplanade center.

### **4. Parking Study**

Parking and driveway access will be shared between the Esplanade center and the new dental office building. A cross access and shared parking agreement will be enacted to enable the retail center patrons/employees and dental office patients/employees to share the site driveways, parking stalls, drive aisles and walkways as necessary. The current Esplanade center has 147 existing parking stalls with two additional stalls being proposed for a total of 149 stalls. However, 9 stalls along the northeast rear parking area will be allocated to Westgate Dental leaving 140 stalls for the Esplanade center. The Village of Arlington Heights code requires 128

parking spaces based on the current approved center uses leaving a surplus of 12 parking stalls for Esplanade's future use.

A parking study was conducted at the Esplanade center over two (2)- three day periods on Thursday, Dec. 17 thru Saturday, Dec. 19 and Thursday, January 14th thru Saturday January 16th. Each day, two observers counted and observed parking space usage at 15 minute intervals throughout the Esplanade center. Parking counts occurred from early morning 7-9 AM, lunch hour from 11:30-1:30 PM, and late afternoon/dinner hours from 3:30-6+PM. Parking lot usage figures are included as part of the parking study and are provided in the appendices.

The existing parking count and analyses showed that there is more than sufficient parking to accommodate the Esplanade center. In the morning, the west portion of the Esplanade's main parking lot was occupied by patrons of Starbucks. In the evening, parking in front of Aurelio's Pizzeria was occupied. Employee parking was predominately in the north/rear and west parking areas. For all days studied there was ample parking to accommodate both customers and employees for the Esplanade center (See attached Parking Exhibits in the Appendices). There were parking spaces available and visible at a distance during the entire study period. Drivers never had to circulate the parking lot excessively in search of parking. Therefore, the study showed no issue with lack of available parking spaces including ADA spaces.

Regarding the Westgate Dental facility, the Village of Arlington Heights Zoning Regulations Code for Office-Dental requires providing 1 space for every two hundred square feet of floor area for employees, patients, and visitors. Therefore, VAH code requires 47 parking spaces (that includes 2 ADA spaces) vs. a provided 65 spaces as described below (18 space surplus). Furthermore, based on a study completed by the ITE for 50 medical facilities it was concluded that 4.5 spaces should be provided per 1,000 gross square feet. With the new dental office building having a 1st floor area of 6,513 sqft and 9,367 sqft of gross usable floor space when 2nd floor space is included a total number of 42 spaces would be required according to this study. Thus, this is similar to the 47 spaces required by the VAH.

Westgate Dental provided parking will be much greater than requirements, with a total of 64 parking spaces to accommodate the dental office employees and their patients. The parking lots will occupy over 50% of the parcel (approx. 26,325 sqft ). The proposed parking configuration will be along the south, west and north sides of the building. Three (3) ADA spaces are included per Illinois accessibility requirements. The North/rear Parking Lot will have 19 spaces and be dedicated for employee use parking that includes 9 former Esplanade parking spaces now provided for Westgate Dental use. Parking configuration at the North Lot is configured consistent with the existing parking spaces along the Esplanade's north property line with 6' landscape setback. The South/Front Parking Lot will have 34 spaces (that includes 1 ADA space) dedicated for customer use. The West Parking Lot will have 12 spaces (that includes the 2 ADA spaces described previously) for both employees and customers.

A new stamped concrete walkway similar to the existing Esplanade stamped brick walk extends along the south, west and north sides of the new building ending at the refuse enclosure area. In similar fashion, a new, 5.5' wide concrete walk 150'+ in length is also planned along the east side of the existing Esplanade building to provide ease of access between the front and rear of the Esplanade center. The walk is of sufficient width to allow pedestrian and bicycle traffic while having cars parked against it. In summary, the proposed dental facility parking lots meet both the minimum parking spaces and accessible parking space and configuration requirements with a parking surplus to more than complement any Esplanade center's future parking needs.

## **5. Traffic Study**

This section provides information with regard to evaluation of existing traffic conditions. The scope of this section also includes providing analyses of projected conditions on existing traffic volume, circulation, safety, conflicts, signage, striping as well as drive aisle usage and entrances. Solutions are offered to improve existing and future traffic conditions and efficiencies. Also, automobile and truck turning movements are evaluated. This includes the estimation of directional distribution and overall traffic volumes for Westgate Dental. Resulting traffic impacts are assessed based on these analyses for both the Esplanade Center and Westgate Dental. Westgate Dental will begin operation in 2017 and be open Monday thru Friday from 7AM – 7PM and on Saturday's from 8AM to 5 PM. The peak hours of operation are from 9AM to 11AM and 4PM to 7PM with Monday, Thursday's and Saturday's being most busy. Note the Westgate Dental will keep the existing downtown Arlington Heights open thus there will be a very slow transition to new building use over an expected 3 to 5 year period. Full operation is not expected until 2022, thus traffic generation will occur very gradually which will allow for smooth integration of traffic into the Esplanade Center.

The study evaluated the traffic circulation on-site at the Esplanade center over two (2)-three day periods on Thursday, Dec. 17 thru Saturday, Dec. 19 including Monday, Dec. 21 and Thursday, January 14th thru Saturday January 16th. Each day, traffic data was collected by two observers to count and observe traffic movements in 15 minute intervals as well as parking space usage throughout the Esplanade center. Traffic counts occurred from early morning 7-9 AM, lunch hour from 11:30-1:30 PM, and late afternoon/dinner hours from 3:30-6+PM. Figures and Tables of the study are provided in the appendices. Westgate Dental hours of operation include these periods. Casual observations were made of traffic on Euclid Ave. and Salt Creek Lane and their intersection and for the above studied periods Euclid Ave. and Salt Creek Lane were freely moving with no obstructed traffic. It was also observed and documented that the Salt Creek Lane entrance handles a much greater share of existing traffic than the Euclid Ave. right-in-right out entrance.

Based on the existing traffic data and projected Westgate Dental facility traffic, it is estimated that the new dental facility will increase overall existing site traffic by approx. 10%+/- from addition of Westgate Dental's employees, patients, and visitors to the Esplanade center. Traffic

analyses suggest that this addition of dental patients and employees will not adversely impact the overall flow of traffic. This is due to the much smaller traffic volume generated (40 +/- trips per hour) in comparison to the existing Esplanade peak traffic volume (450 +/- trips per hour). However, it is suggested that some improvements be made to the Esplanade center to improve traffic flow and ensure better safety for all drivers that enter and exit the Esplanade from its two entrances. Those improvements include better signage/stripping and a reconstructed entrance from Salt Creek Lane (See Site Striping & Signage Plan C-4).

The traffic pattern at the Esplanade is primarily impacted by two businesses, Starbucks and to a much lesser extent Aurelio's Pizzeria. It was observed that traffic congestion occurs in the morning near the Esplanade center's Salt Creek Lane entrance and exit due to Starbucks generated traffic. Moreover, the Starbucks drive-thru morning queue occasionally builds into the Salt Creek Lane entrance inbound lane area. However, approximate 60% of the inbound cars went east to the drive-thru lane while 40% took a right and drove south to park in front of the Starbucks. The drive-thru queue was full the entire time (approx. 10-12 cars).

While Starbucks traffic peaks in the morning period as one would expect and easily observed, there is a second but much lesser peak during the lunch time period. Most important, during the lunch and afternoon and evening hours the Starbucks drive-thru queue remains in the separate drive-thru lane, thus not affecting the rear drive aisle. Aurelio's Restaurant peak traffic hour occurs late afternoon for dinner patrons with greater traffic volumes on Friday and Saturday evenings than on Thursday dinner hour. The Subway restaurant peak occurs at lunch time while the hair salon and spirits store traffic increases into the afternoon but is of relative low volume and consistent.

Peak hours for the studied periods varied slightly based on the day of the week but found that weekdays had earlier morning peak periods from 7:30 to 8:30 AM +/- 15 minutes or so. The peak hour for the lunch time period was relatively consistent regardless of the weekday and was between 11:30 AM and 12:30 PM. The late afternoon peak hour was more difficult to determine but usually occurred from 4:45-5:45 PM. Overall, site traffic volume and flow were much lower for the lunch and late afternoon periods than for the morning, further supporting the fact that Starbucks is the main driver of traffic volume at the Esplanade center of 450 +/- morning peak hour trips. The Esplanade Shopping Center is operating at much lower parking and traffic demands for the lunch hour peak hour of 350 +/- trips and late afternoon peak hour of 250 +/- trips. Thus Westgate Dental peak afternoon traffic will operate with ease during the afternoon into early evening.

The collected traffic study data provides for a means to understand the existing traffic conditions and help project future Westgate Dental traffic onto the existing Esplanade center as well the new Westgate Dental site layout. To begin the day, most employees will arrive before 9

AM as Westgate Dental practice becomes busier in staggered fashion. An average one-hour time period is estimated between patient arrival and departure that takes into account the patient check-in, waiting, dental services performed and payment.

During peak operation several years after opening, it is anticipated that the new dental facility will generate approximately 40+/- trips during the morning and afternoon peak hours. This is based on 17 of the 19 operatory rooms being fully occupied (i.e., assumes only 2 operatory rooms unoccupied at any one time and being readied for use). It also assumes the arrival/departure of 6 employees during peak hours. Thus, with 17 patients arriving and departing across a one hour time period approximately 34 patient generated trips would occur. Adding 6 employee trips to the patient trips provides for a total of 40 trips arriving and departing the Westgate Dental facility for the peak hours. This estimation is similar to ITE published trip generation data that shows an average of 2.4 (AM-Weekday) to 4.36 (PM-Weekday) trips per 1,000 sqft of building which equates to 22 to 40 trips for the 9,000 sqft+ Westgate Dental facility. Note that this trip generation represents a small number of trips relative to the peak 400 +/- vehicle trips that occur during the Esplanade center's peak morning hour.

Traffic observations/counts noted that 30% of the peak-hour morning traffic enters/exits (i.e., 100+/- trips) at the right-in-right out Esplanade intersection and 70% (i.e. 350 +/- trips) enter/exist at the northwest full entrance. Approximately 35% of the Euclid Ave. right-inbound vehicles (i.e., 20+/- vehicles) proceeded north along the east perimeter drive aisle (one vehicle every three minutes). These vehicles proceed west along the rear drive aisle to enter the Starbucks drive-thru queue. Thus, it is expected that a portion of this traffic will proceed in similar fashion past the Westgate Dental facility between 7:00 and 9 AM, although there will be signage directing Starbucks traffic to use the front drive aisles instead. Furthermore, signage will be added to slow "cut-thru" traffic.

Based on existing and proposed customer information provided by Westgate Dental owner as well as the convenient location of the new development adjacent Euclid Ave. and nearby Route 53, it is anticipated that 50% of Westgate Dental patients will arrive from the east and enter the site from Euclid Avenue. Furthermore, 50% of patients will arrive from the west and use the Salt Creek Lane entrance. This assumes an increase of patients from the west as the practice matures than what the practice experiences today.

A patient arriving from the east will enter at Euclid Ave. right-in and would most likely exit at the full entrance at Salt Creek Lane. Likewise, west arriving patients would have to use the Salt Creek Lane entrance. These patients would typically exit at the Euclid Ave. right out since the exit is immediately adjacent Westgate Dental's south customer parking lot. However, they would also have the option of using the Salt Creek Lane exit if desired as many Starbucks customers choose to do today. This allows them to avoid the traffic light at Salt Creek Lane. But since most dental visits are infrequent, this behavior is expected to occur less often than observed for Starbucks customers who are very time conscious and in routine driving patterns.

Regardless, inbound traffic movements will alternate between the two Esplanade center entrances while outbound traffic may slightly favor the Salt Creek Lane exit.

Thus, for the peak morning and afternoon hours, it is estimated that the 40 total trips calculated above would distribute equally between the Euclid Ave. right-in-right out entrance and Salt Creek Lane full entrance. This equates to a very minimal 10 inbound and 10 outbound traffic movements at each of these entrances across an hour. This averages out to one Westgate Dental generated vehicle trip either entering or exiting at each entrance/exit every 6 minutes during the peak hours.

However, the most important consideration is the initial morning arrival of Westgate Dental patrons for their 7-8 AM appointments. In worse case, approx. 10 to 20+/- patients could arrive between 6:45 and 7:45 AM (in close proximity to Starbucks peak morning traffic). In this case, 5-10 arrivals would occur at Euclid Ave.'s right-in-right out entrance and 5-10 arrivals at the Salt Creek Lane entrance (i.e., or one vehicle every 1.5 to 3+/- minutes). The Euclid Ave. entrance easily accommodates additional traffic while Salt Creek Lane entrance is more heavily used by Starbucks at this time. Since the Starbucks drive-thru traffic sporadically queues to Salt Creek Lane in early morning hours (up to a six vehicle queue in the eastbound rear drive aisle), it is recommended that the existing 16' inbound lane be widened to 24' to accommodate a second inbound entrance lane to increase the Salt Creek Lane entrance capacity. This would be accomplished by reconstructing the south curb 8' further south to "free-up" drivers wanting to park at the Starbucks after noticing that the queue to be lengthy. No parking spots would be lost in doing so. This would lessen the backup of vehicles, conflicts and congestion at the main entrance. In most cases, Starbucks patients would avoid such a large queue preferring to divert south to go inside the store instead. With the added lane, Starbucks inbound drive-thru traffic would separately use the existing/north inbound lane while the newly created second "south-lane" would accommodate both Westgate Dental patients and Starbucks "walk-in" traffic.

Equally important, due to existing geometrics at the Starbucks drive-thru outlet, larger vehicles (i.e., SUV's, small trucks etc.) have difficulty maneuvering out of the drive-thru and into the north aisle. This ends up affecting adjacent west drive aisle traffic circulation. It was observed that up to 3-5 conflicts occurred at the Starbucks drive-thru outlet during the peak morning hour when vehicles U-turned to exit the drive-thru and encountered an inbound vehicle in the west drive aisle. This forced both vehicles to either stop or slow considerably. These conflicts dissipated to 1 – 2 conflicts before and immediately after the peak hour. In all cases the conflict was temporary and did not cause vehicle back-ups. Also, on occasion vehicles entering the site at Salt Creek Lane entrance from the north mistakenly entered the site by means of the Esplanade outbound lane at Salt Creek Lane. Furthermore, Euclid Ave. entrance traffic driving along the rear drive aisle to enter the Starbucks drive-thru encountered a parked vehicle



(typically a delivery truck) in the north parking lot drive aisle that forced the driver into the opposing lane to circumvent the parked vehicle.

Although conflicts and congestions re-occurred, drivers were surprisingly mindful and flexible as to the occurring vehicle conflicts and congestions and safely navigated through them. No accidents were observed during the study nor did Starbucks staff make mention of any historical accidents when asked. However, it is evident that existing Starbucks traffic turning movements on-site contribute to most of the morning traffic conflicts and confusion in front of the Starbucks. Thus, adding Westgate Dental morning inbound traffic adjacent the Starbucks drive-thru area has the possibility of aggravating the situation. However, with entrance improvements, improved signage and striping these conflicts are expected to be lessened.

As mentioned above, Traffic Study observations highlighted known vehicle conflict areas during peak hours caused by Starbucks Drive-Thru outbound U-Turn movements. Adding Westgate Dental's inbound traffic would further aggravate this situation during Starbucks peak hours. One suggestion would be to add signage to prohibit/discourage these "U-turns". Then, Starbucks Drive-thru outbound traffic would be directed east preferably along the north front drive aisle. However, this would add congestion and conflict to Starbucks pedestrian traffic at the Starbucks entrance when customers are typically time limited and rushing.

There is an approx. equal split of Starbucks patrons exiting east and west onto Euclid Ave. Thus, if U-turns were prohibited, 50% of the Starbucks drive-thru traffic should be encouraged to proceed east and towards the Esplanade right-out exist at Euclid Ave. Observations showed only a very small percentage of patrons actually did this, instead preferring to U-Turn and exit onto Salt Creek Lane, then right-turn on Euclid (therefore avoiding any possible traffic signal delay on Euclid Ave.). The other 50% going eastbound on Euclid Ave. would have no choice but to cycle back thru the Shopping Center's south parking lot drive aisle and route north to the Salt Creek Lane exit. No doubt the current "U-Turn" behavior would be difficult to change regardless of any new signage imposed on their patrons.

As a result, 'Yield' signs are proposed adjacent the east/west shopping center drive aisles to protect inbound Esplanade center traffic from the Euclid Ave. R-I-R-O entrance. Also, a stop sign is proposed at the Salt Creek Lane entrance western drive aisle for outbound traffic (i.e., similar to most shopping centers with inbound traffic flow remaining unimpeded and protected by cross-traffic movements).

It is proposed to add lane striping at the Starbucks Drive-thru outlet in an attempt to direct outgoing drive-thru vehicles along the bldg. so as to maximize the turning radius for outbound right-turns out that 90% +/- of their customers do today; (the hope is to create a "two-step/two right-turn" outbound process vs. a single "U-Turn"). Regardless, an important objective is to

"slow-traffic" down in this conflict area especially with morning inbound drivers coming from the north/Salt Creek Lane entrance.

It is proposed to add traffic arrows at key conflict areas that should lessen driver confusion that was observed during the traffic study as well as be anticipated with the addition and integration of the Westgate Dental facility into the Esplanade center. Moreover, "SLOW" striping is shown being added to vehicle/vehicle and vehicle/pedestrian conflict areas.

Truck turning templates showed that with the extra width added to the Salt Creek Lane entrance Semi-trucks can now enter here if desired. Significant lane striping was added between the Esplanade and Westgate Dental common drive aisle just past the right-in-right out entrance. This should assist/better define traffic flow across the very wide 44' common drive aisle. A 'Yield' sign is recommended for inbound Westgate Dental (or erroneous Starbucks drive-thru) traffic to slow down vehicles before reaching the Westgate Dental ADA cross-walk. However, a very large semi-truck (larger than those observed) may have difficulty adhering to the defined striped lanes and present a potential conflict to Westgate Dental traffic as they proceed thru this "angled striping"/intersection. Smaller delivery trucks as typically observed during the study would satisfactorily proceed within the defined striping though.

### **Other Considerations**

While outside the scope of the Traffic Study and proposed improvements, if future conditions warranted it, it would be possible to add an additional Starbucks drive-thru "queue" lane thus freeing the rear drive aisle up to cross-traffic in the morning and lunch time periods. Another measure for improving traffic conditions and reducing traffic congestion, particularly near the Salt Creek Lane entrance and exit, would be to re-direct more of the traffic onto Euclid Ave., in hopes of dividing up the traffic. This can be partially accomplished re-directing Starbucks drive-thru outbound customers to only make left turns (i.e., no "U-turns" allowed) with the hope that westbound Euclid Ave. traffic would use the "right-out". Another consideration would be to add a new "outbound only" exit lane onto Salt Creek Lane from the south main Esplanade Shopping Center drive aisle.

Lastly, during the rudiment stages of construction of the proposed Westgate Dental development it is recognized that the improvements will have a disruptive impact to the daily operations of the existing businesses, especially the rear truck deliveries that drive thru the Westgate Dental site today. The Starbucks bound customers entering from Euclid Ave. at the right-in-right out intersection can be easily diverted to the west during construction since their "cut-thru route" will have been eliminated. Also, a widened inbound Salt Creek Lane entrance will allow for truck movements to occur at this entrance vs. the Euclid Ave. entrance during Westgate Dental facility development. Moreover, the west side of Westgate Dental's proposed west parking lot can be constructed initially and temporarily striped to facilitate traffic movement between the rear and front of the Esplanade center while the Westgate Dental building is constructed.

## **Conclusions**

The parking study determined that sufficient parking will be readily available for both Esplanade center and Westgate Dental. The traffic study concluded that several measures should be taken to help improve traffic circulation and reduce traffic congestion. One such measure recommended to improve existing morning congestion at the Esplanade's Salt Creek Lane entrance is to widen the inbound entrance lane from one to two lanes. This would provide separation between Westgate Dental traffic and Starbucks rear drive-thru traffic and associated entrance queuing. The north inner lane would accommodate the Starbucks drive-thru traffic as well as provide access for Westgate Dental vehicles traveling the Esplanade's rear east aisle to the new facility. The outer/south lane would be dedicated to vehicles traveling to the Esplanade's west and south parking lots. This lane would also facilitate Westgate Dental inbound traffic south to the Esplanade's front drive aisles taking them to the new dental facility. Inbound lane striping would be added along with arrow markings for the "straight-thru" entrance lane and for the "right-turn lane". The adjacent existing west parking would remain unaffected. However, the use of the rear drive aisle for Westgate Dental inbound traffic in the morning should be discouraged due to Starbucks traffic congestion and queuing in the eastbound rear drive aisle. However, congestion subsides considerably after the morning rush is over. Westbound rear drive aisle traffic is typically uncongested through-out the day.

It was concluded that additional signage should be added to facilitate the safe movement of traffic thru and between the Esplanade Shopping Center and Westgate Dental. The overall design allows for inbound traffic to be unimpeded while outbound is more traffic controlled at drive exits with added stop and yield signs. Also "direction related signage" was added for inbound Starbucks and Westgate Dental traffic at the Salt Creek Lane drive entrance and at the Euclid Ave. right-in-right out entrance. Also, Westgate Dental would have an exit sign in the far northwest parking lot corner to alert patrons that they can use the rear shopping center drive aisle if desired. Westgate Dental inbound routes would be either the Euclid Ave. or the "new right inbound lane" at the Salt Creek Lane entrance.

Additional measures to be considered to assist traffic flows and reduce congestion include adding a 'Do Not Enter' sign at the Salt Creek Lane entrance to prevent incorrect site entrance from the outgoing lane, have existing retailers avoid scheduling delivery pick/drop-offs during peak hours of operation and suggest to Westgate Dental patients enter the site from Euclid Avenue.

The Arlington Heights Municipal Code requires that Retail – Commercial and Services Uses – provide one space of parking dependent on the amount of square footage calculated for the type of use of space. The Table below summarizes the parking space required on-site for each business and business type based on the floor size requirement.

Westgate Dental, Temporary File 1516

Space	Use	CODE USE	SF	PARKING CALC (SF)	PARKING RATIO (1:X)	PARKING REQUIRED
3020 Salt Creek	Starbucks Coffee	Restaurant	1,788	935	45	21
2960 Euclid	Subway	Restaurant	1,130	386	45	9
2956 Euclid	Har Salon	Beauty	1,046	1,046	250	4
2948 Euclid	Wine Shop	Retail	2,974	2,974	300	10
2944 Euclid	Aurelio's Pizza	Restaurant	5,075	2,354	45	52
2932 Euclid	Savory Salads	Restaurant	1,756	770	45	17
2928 Euclid	Vacant	Retail	1,495	1,495	300	5
2924 Euclid	Vacant	Retail	1,476	1,476	300	5
2920 Euclid	ADR Office	Office	1,638	1,638	300	5
	Westgate Dental	Medical Office	6,921	6,921	200	35
	Total Required		25,299			163
	Total Provided					194
	Surplus / (Deficit)					31

### **Average Daily Traffic**

(12-17-2015) THURSDAY'S RESULTS OF AVERAGE DAILY TRAFFIC:

PEAK LUNCH	12:00AM – 1:00PM	~142 IN	~120 OUT	
PEAK AFTERNOON	3:45PM-4:45PM	~ 90 IN	~ 85 OUT	

(12-18-2015) FRIDAY'S RESULTS OF AVERAGE DAILY TRAFFIC:

PEAK MORNING	7:15AM-8:15AM	~190 IN	~160 OUT	
PEAK LUNCH	12:00AM – 1:00PM	~112 IN	~112 OUT	
PEAK AFTERNOON	3:45PM – 4:45PM	~105 IN	~105 OUT	

(12-19-2015) SATURDAY'S RESULTS OF AVERAGE DAILY TRAFFIC:

PEAK MORNING	8:15AM – 9:15AM	~105 IN	~100 OUT	
PEAK LUNCH	11:15AM – 12:15PM	~100 IN	~ 62 OUT	
PEAK AFTERNOON	3:30 AM – 4:30PM	~ 59 IN	~ 35 OUT	

(12-21-2015) MONDAY'S RESULTS OF AVERAGE DAILY TRAFFIC:

PEAK MORNING (RAINY MORNING/ NO SCHOOL)	8:15AM – 9:15AM	~135 IN	~130 OUT	

### **Average Directional Distribution Entry/Exit at Salt Creek Lane**

(12-17-2015) THURSDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK LUNCH	12:00AM – 1:00PM	~65 IN	~62 OUT	
PEAK AFTERNOON	3:45PM-4:45PM	~39 IN	~42 OUT	

(12-18-2015) FRIDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK MORNING	7:15AM-8:15AM	~95 IN	~75 OUT	
PEAK LUNCH	12:00AM – 1:00PM	~54 IN	~53 OUT	
PEAK AFTERNOON	3:45PM – 4:45PM	~40 IN	~41 OUT	

### Average Directional Distribution Entry/Exit at Euclid Avenue

(12-17-2015) THURSDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK LUNCH	12:00AM – 1:00PM	~18 IN	~12 OUT	
PEAK AFTERNOON	3:45PM-4:45PM	~34 IN	~40 OUT	

(12-18-2015) FRIDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK MORNING	7:15AM-8:15AM	~24 IN	~18 OUT	
PEAK LUNCH	12:00AM – 1:00PM	~18 IN	~14 OUT	
PEAK AFTERNOON	3:45PM – 4:45PM	~16 IN	~7 OUT	

(12-19-2015) SATURDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK MORNING	8:15AM – 9:15AM	~44 IN	~40 OUT	
PEAK LUNCH	11:15AM – 12:15PM	~24 IN	~15 OUT	
PEAK AFTERNOON	3:30 AM – 4:30PM	~9 IN	~24 OUT	

(12-21-2015) MONDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK MORNING (RAINY MORNING/ NO SCHOOL)	8:15AM – 9:15AM	~?? IN	~?? OUT	

(12-17-2015) THURSDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK LUNCH	12:00AM – 1:00PM	~18 IN	~12 OUT	
PEAK AFTERNOON	3:45PM-4:45PM	~34 IN	~40 OUT	

(12-18-2015) FRIDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK MORNING	7:15AM-8:15AM	~24 IN	~18 OUT	
PEAK LUNCH	12:00AM – 1:00PM	~18 IN	~14 OUT	
PEAK AFTERNOON	3:45PM – 4:45PM	~16 IN	~7 OUT	

(12-19-2015) SATURDAY'S RESULTS DIRECTIONAL DISTRIBUTION:

PEAK MORNING	8:15AM – 9:15AM	~44 IN	~40 OUT	
PEAK LUNCH	11:15AM – 12:15PM	~24 IN	~15 OUT	
PEAK AFTERNOON	3:30 AM – 4:30PM	~9 IN	~24 OUT	