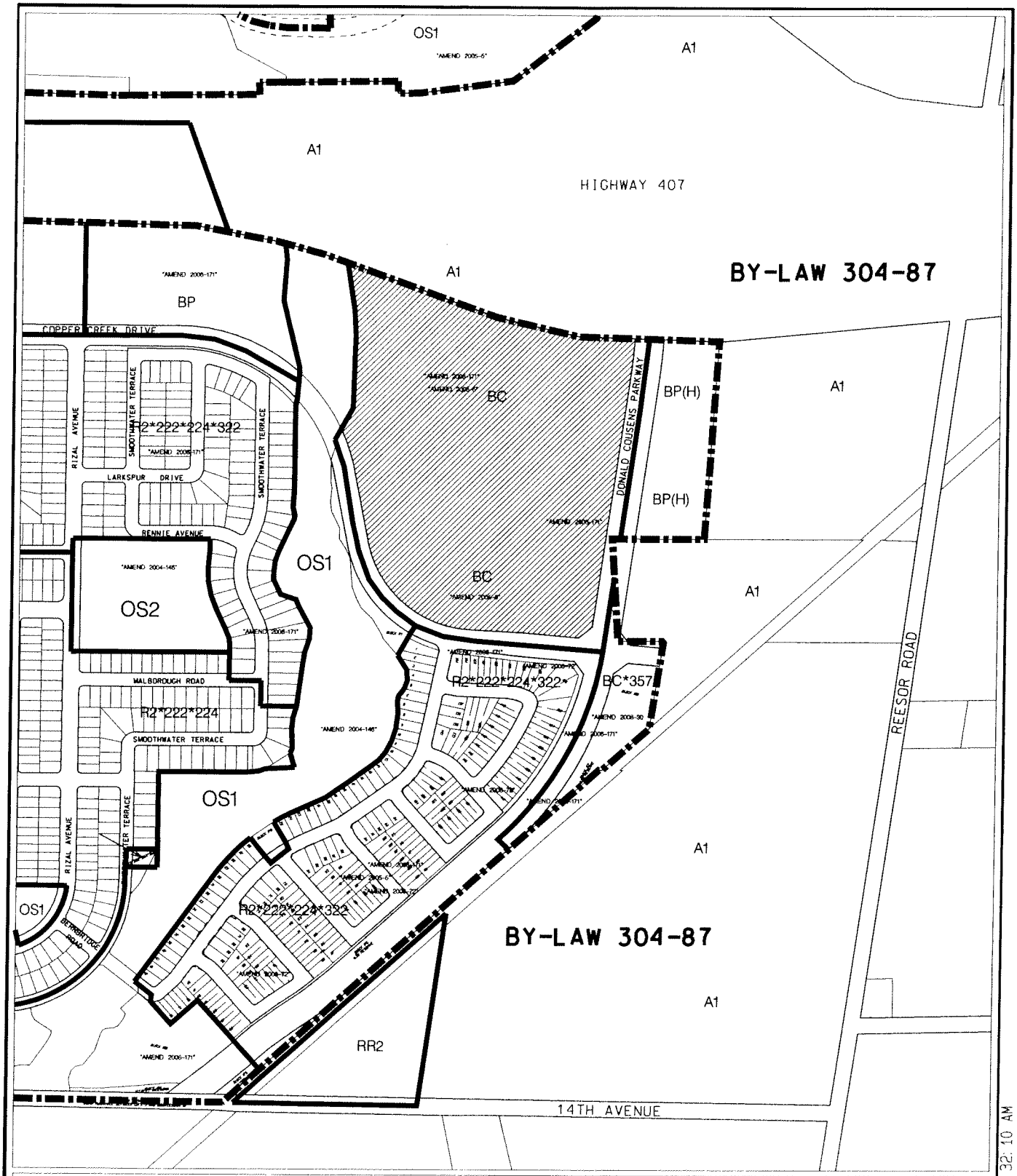


AREA CONTEXT /ZONING

APPLICANT: BOX GROVE DEVELOPMENTS INC.
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

SUBJECT LANDS

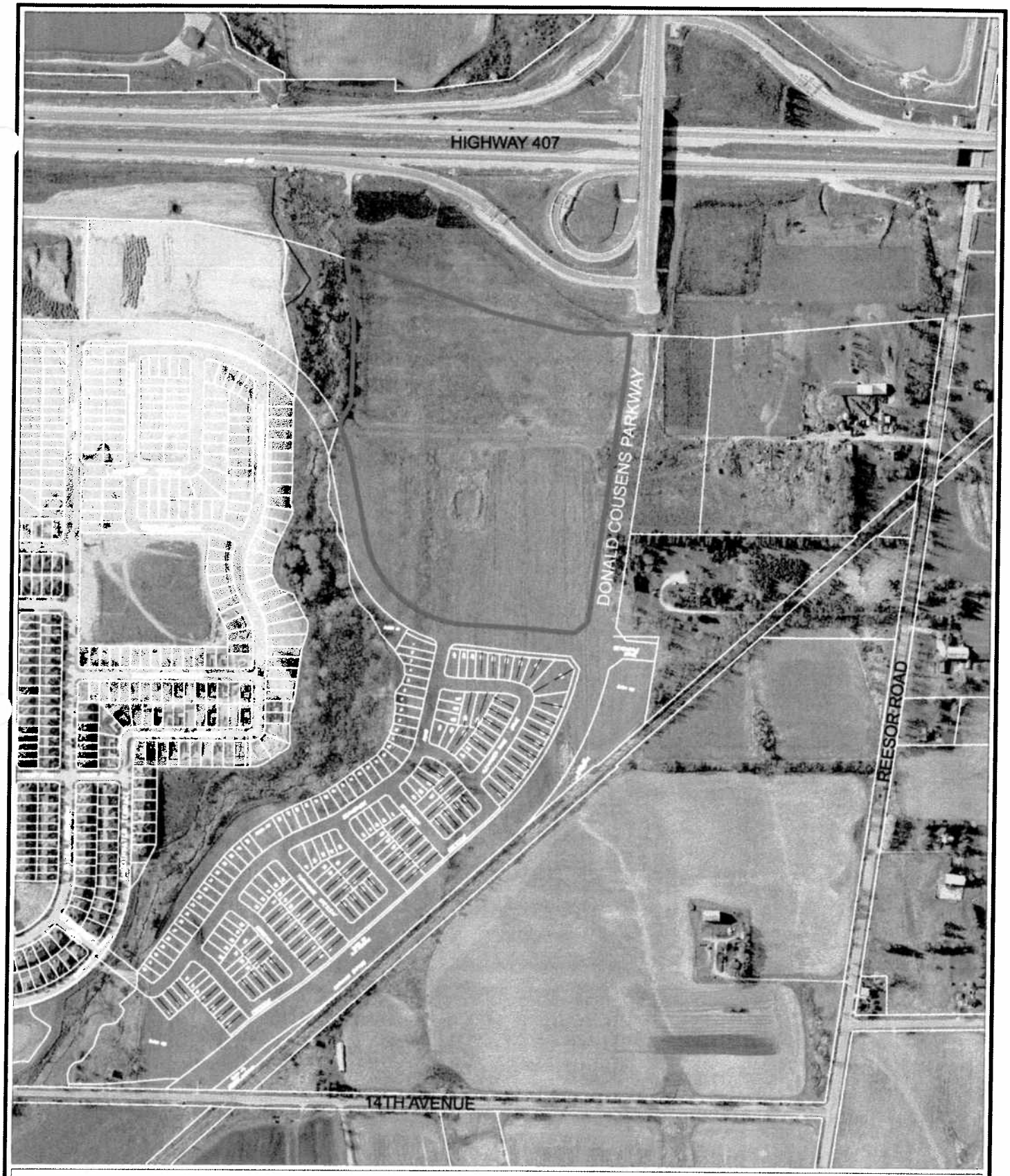
DATE: 190808

MARKHAM DEVELOPMENT SERVICES COMMISSION

DWN BY: CPW CHK BY: NS SCALE 1:

FIGURE No.2

SC08121694.dgn 19/11/2009 10:32:10 AM



AIR PHOTO (2007)

APPLICANT: BOX GROVE DEVELOPMENTS INC.
500 COPPER CREEK DRIVE

FILE No: SC08121694 (DC)

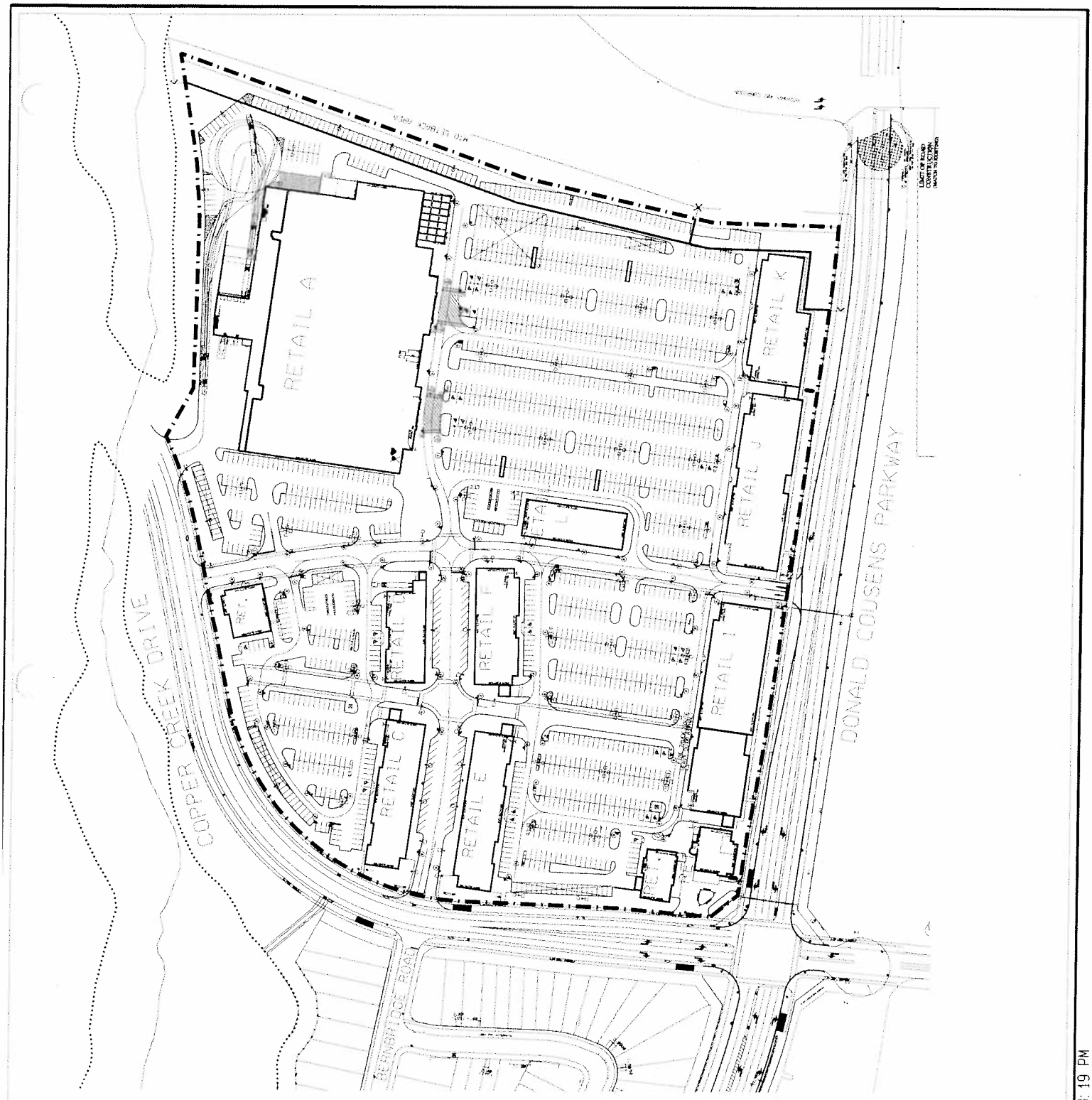
SUBJECT LANDS

DATE: 19/08/08

MARKHAM DEVELOPMENT SERVICES COMMISSION

DWN BY: CPW CHK BY: NS SCALE 1:

FIGURE No.3



SITE PLAN DETAIL

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

SUBJECT LANDS

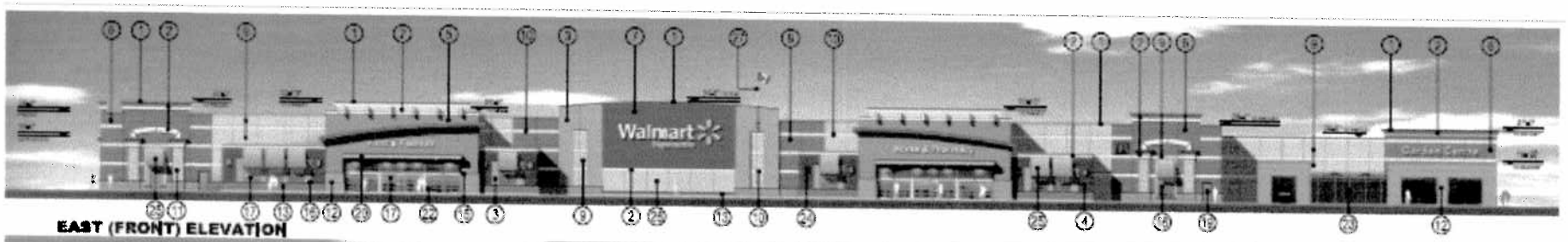
DATE: 11/25/09

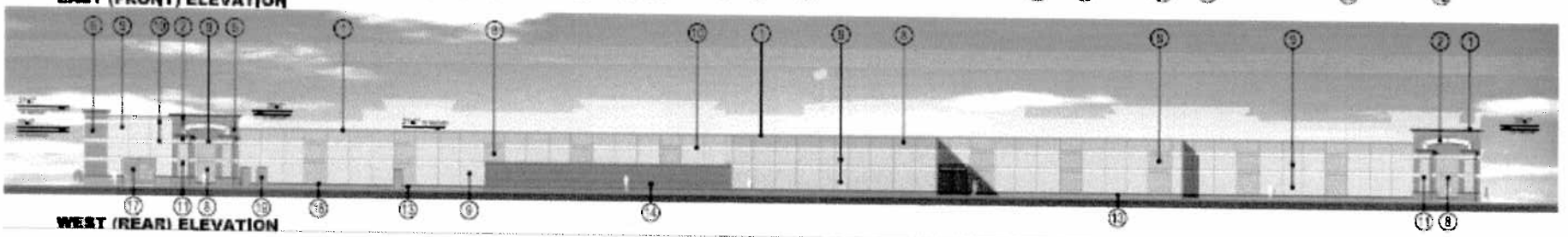
MARKHAM DEVELOPMENT SERVICES COMMISSION

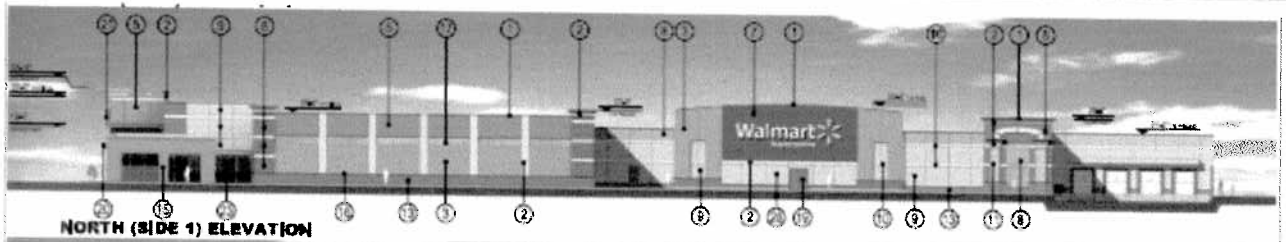
DWN BY: DD CHK BY: DC SCALE 1:

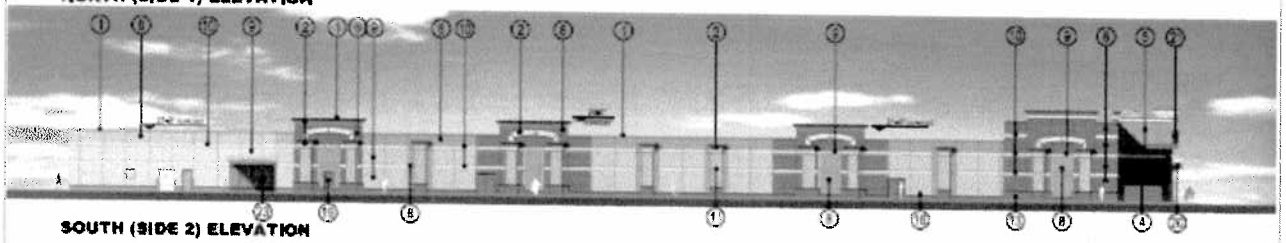
FIGURE No. 4

SC08121694.dgn 27/11/2009 2:14:19 PM









ELEVATIONS (WALMART)

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

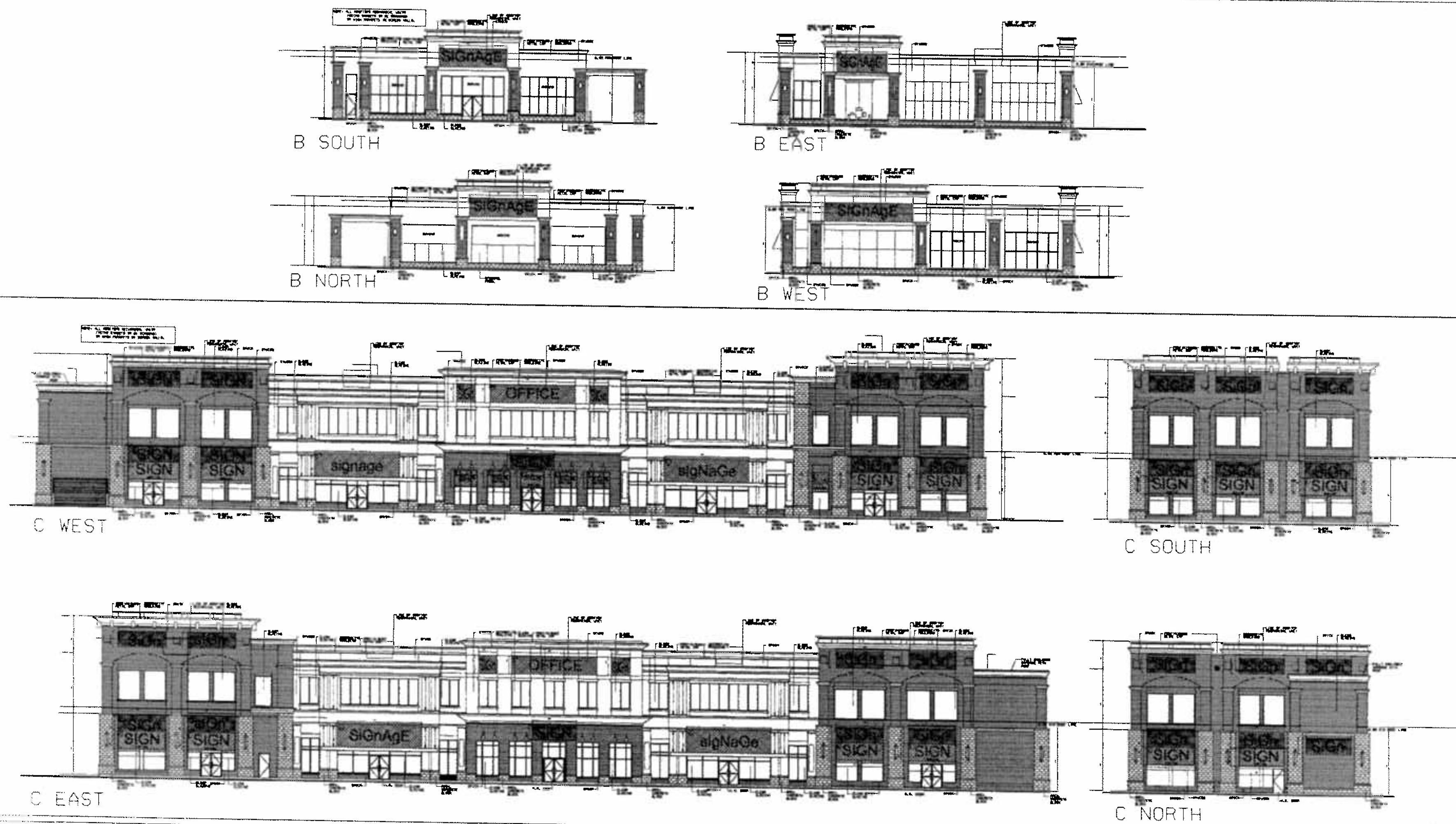
DATE: 11/25/09

MARKHAM DEVELOPMENT SERVICES COMMISSION

DRAWN BY: DD CHECKED BY: DC

FIGURE No.5

SC08121694.dgn 26/11/2009 11:40:32 AM



ELEVATIONS (B & C)

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

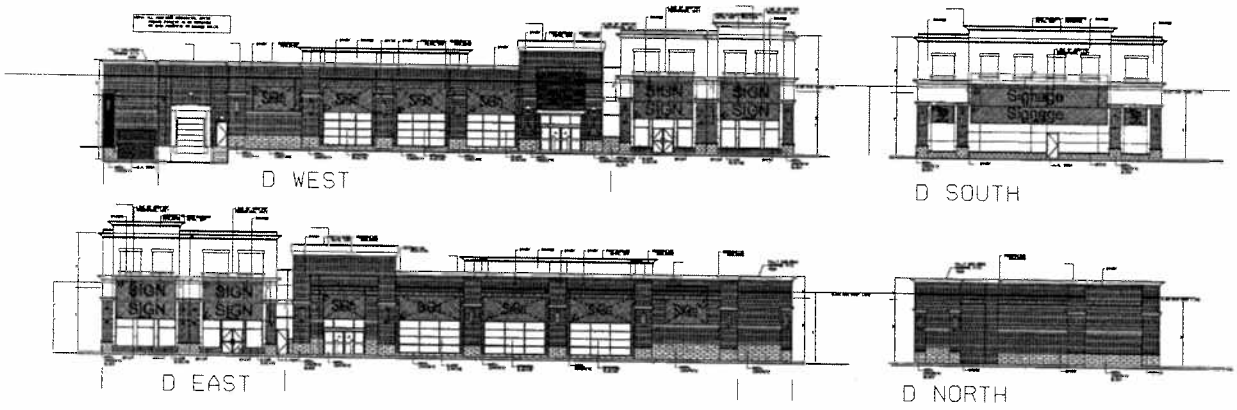
MARKHAM DEVELOPMENT SERVICES COMMISSION

DRAWN BY: DD CHECKED BY: DC

DATE: 11/25/09

FIGURE No.6

SC08121694.dgn 26/11/2009 9:36:02 AM



ELEVATIONS (D & E)

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

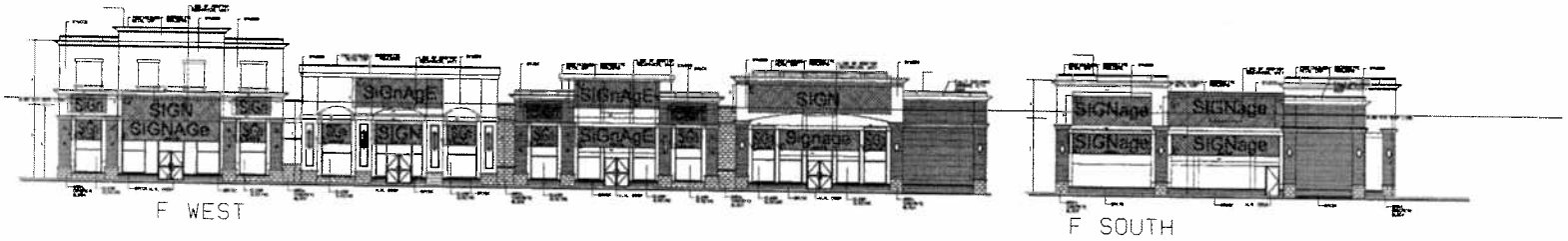
MARKHAM DEVELOPMENT SERVICES COMMISSION

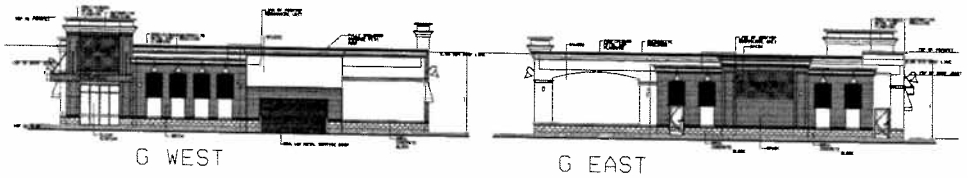
DATE: 11/25/09

DRAWN BY: DD CHECKED BY: DC

FIGURE No.7

SC08121694.dgn 26/11/2009 9:54:06 AM





ELEVATIONS (F & G)

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

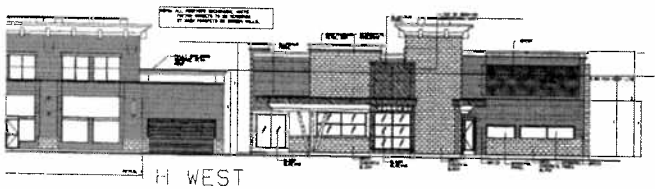
MARKHAM DEVELOPMENT SERVICES COMMISSION

DRAWN BY: DD CHECKED BY: DC

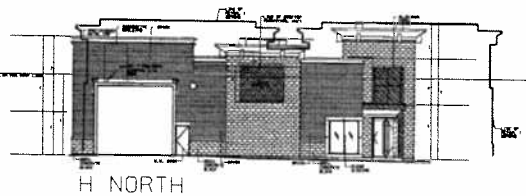
DATE: 11/25/09

FIGURE No.8

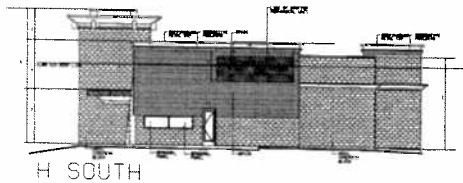
SC08121694.dgn 26/11/2009 10:32:49 AM



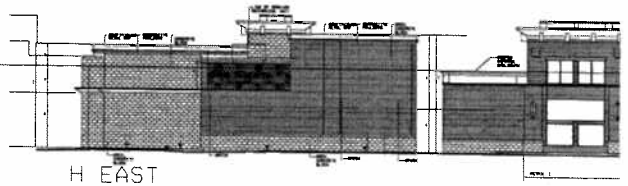
H WEST



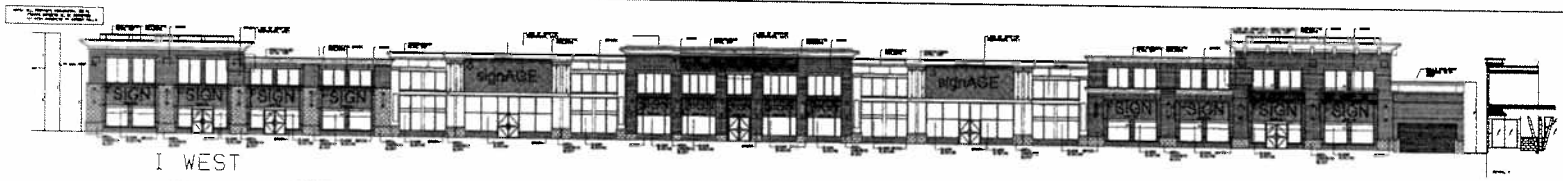
H NORTH



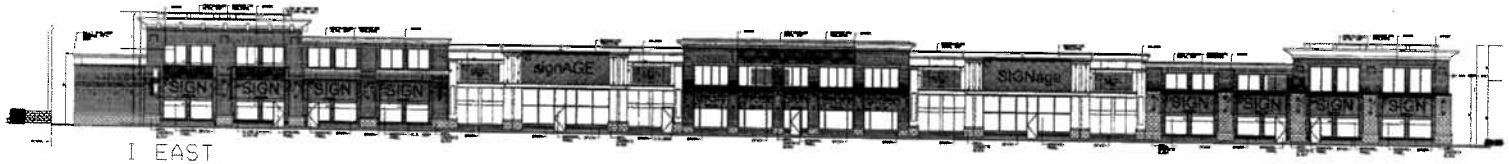
H SOUTH



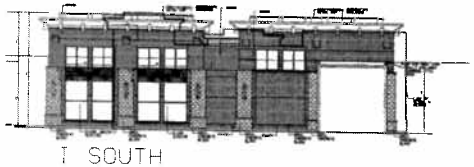
H EAST



I WEST



I EAST



I SOUTH

I NORTH

ELEVATIONS (H & I)

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

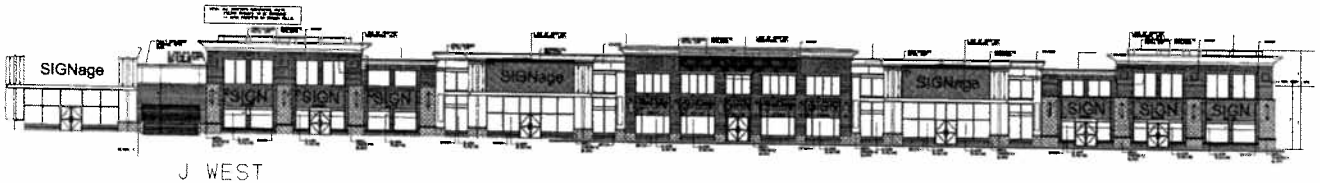
MARKHAM DEVELOPMENT SERVICES COMMISSION

DRAWN BY: DD CHECKED BY: DC

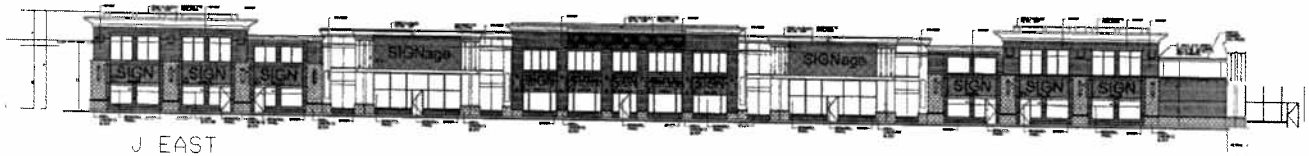
DATE: 11/25/09

FIGURE No.9

SC08121694.dgn 26/11/2009 2:51:46 PM

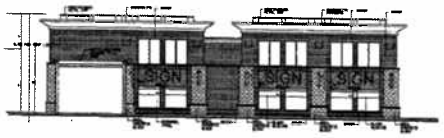


J WEST



J EAST

J SOUTH



J NORTH

ELEVATIONS (J)

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

MARKHAM DEVELOPMENT SERVICES COMMISSION

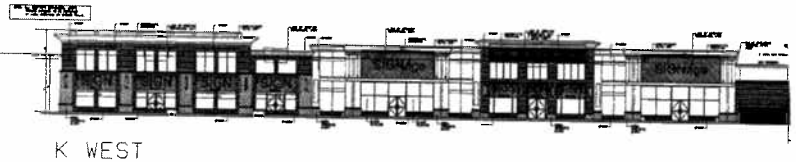
DATE: 11/25/09

DRAWN BY: DD CHECKED BY: DC

FIGURE No.10

SC08121694.dgn 26/11/2009 10:59:29 AM

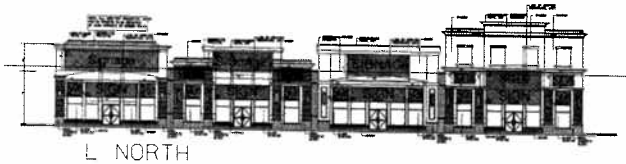
K NORTH



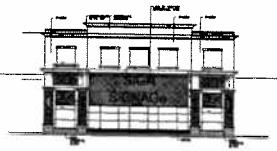
K WEST

K EAST

K SOUTH



L NORTH



L EAST

L SOUTH

L WEST

ELEVATIONS (K & L)

APPLICANT: BOX GROVE DEVELOPMENTS INC
500 COPPER CREEK DRIVE

FILE No: SC08121694(DC)

MARKHAM DEVELOPMENT SERVICES COMMISSION

DRAWN BY: DD CHECKED BY: DC

DATE: 11/25/09

FIGURE No.11

SC08121694.dgn 26/11/2009 11:49:13 AM

MARKHAM

APPENDIX 'A'

RECOMMENDED CONDITIONS OF SITE PLAN APPROVAL
500 COPPER CREEK DRIVE
(Box Grove Developments Inc.)

TOWN OF MARKHAM FILE NUMBER SC 08-121694

1. Endorsement shall relate to a site plan and elevations prepared by Turner Fleischer Architects Inc. identified as Project Number 08.056, dated June 2008 and with a last revision date of November 25, 2009.

2. That prior to execution of the site plan agreement, the Owner shall submit final drawings and studies, and comply with all requirements of the Town and authorized public agencies, to the satisfaction of the Commissioner of Development Services;

3. That the Owner shall enter into a site plan agreement with the Town agreeing to satisfy all conditions of the Town and Agencies, financial and otherwise, prior to final approval;

4. That the Owner shall enter into a site plan agreement with the Town that include provisions for the payment by the Owner of all applicable fees, recoveries, development charges, parkland dedications and financial obligations related to applicable Developers Group Agreements;

5. That the Owner shall submit revised drawings showing that the proposed garbage enclosures are fully enclosed roofed structures made of materials that match the main structures and integrated with the main building.

6. The Owner acknowledges and understands that prior to final approval of this site plan, any amendments to the zoning by-law to implement the plan shall have come into effect in accordance with the provisions of the Planning Act;

7. That the Owner shall finalize the design of the 'piazza' in consultation with the Town. The Owner further agrees to construct and maintain the 'piazza' and the architectural/sculptural feature, at no cost to the Town;

8. The Owner agrees to provide a letter of credit of $150,000.00 for the design of the architectural/sculptural element. The Owner acknowledges that the landscape letter of credit will not be reduced until the requirements for the 'piazza' and architectural/sculptural element have been satisfied to the satisfaction of the Commissioner of Development Services.

9. That the Owner agrees to continue to work with the Town to explore additional opportunities to implement additional landscape islands within the parking lot and other modifications to the site plan as may be appropriate, to the satisfaction of the Director of Planning and Urban Design or her designate;

10. That the Owner implement sustainable design initiatives as outlined in Appendix 'B' attached to the report dated December 14, 2009.

11. That the Owner implement design initiatives which shall include provisions for the Fatal Light Awareness Program (FLAP), outlined in the attached report dated December 14, 2009 and in the letter dated November 23, 2009 including, but not limited to:

    - Glazing is divided into smaller components and is not reflective. Where there is glazing, it is subdivided with vertical and horizontal mullions.
    - Articulation of the façade including solid and glazed areas with no large expanses of glass.
    - Retail uses will incorporate products behind the glazing which will project as a visual marker for birds, to be perceived as a solid object.
    - Awnings and canopies are used to aid in the muting of possible reflective images.
    - Lighting is designed and oriented towards the building facades and downwards, to minimize light spill and encourage dark skies.

12. That the primary entrances for the retail/commercial uses along the 'main street' shall remain the primary entrance and not be obstructed;

13. That the Owner shall provide 6 permanent taxi stands, to be shown on the site plan, in a location to the satisfaction of the Town;

14. That the Owner shall provide a minimum of one bicycle rack for each retail pad, in locations to the satisfaction of the Town;

15. That site plan endorsement shall lapse after a period of three years commencing December 14, 2009, in the event that the Owner does not enter into a site plan agreement with the Town during that period.

BOX GROVE HILL DEVELOPMENTS INC.

600 Applewood Crescent, Vaughan, ON L4K 4B4 TEL: 905-760-7300 FAX: 905-669-9600

September 18, 2009

Town of Markham
Development Services Commission
101 Town Centre Boulevard
Markham, Ontario
L3R 9W6

Attention: Mr. Biju Karumanchery, Senior Development Manager

Dear Sir:

Re: Box Grove Hill Developments Inc.
Application for Site Plan Approval – Mixed Use Office Retail Development at NW corner of Donald Cousens Parkway and Copper Creek Drive (File SC 08-121694)

Further to our letter of March 4, 2009, in respect to the above-referenced site, we are pleased to provide the following in respect to the Green Initiatives which have been incorporated into the site plan:

1. Rainwater Harvesting and Infiltration Gallery for Building A

Building A represents the largest rooftop area within the site. Clean rainwater will be collected from the rooftop of Building A through downspouts to be connected to a storm water system. This system will be connected to an underground cistern for storage and re-use as part of the site irrigation system. Once the cistern is full, additional flows will be routed through a groundwater infiltration trench system.

When the flows exceed the capacity of the irrigation and infiltration system, they will then be routed directly to Tributary B via a storm sewer outlet. The infiltration galley and irrigation cistern accounts for the majority of the 2-year design storm volume from the Building A rooftop. This promotes direct infiltration of clean water to the natural system as opposed to ponding in the parking lot and discharging to the downstream stormwater management pond.

This is consistent with the TRCA's Low Impact Development Manual (LID Manual) Table 2.2 which states that as a principle, "Where possible, roof drains should not be directed to end-of-pipe facilities in order to capitalize

on potential for reuse and infiltration..." The proposed system supports the principles of the LID manual and will require the approval of the TRCA.

In addition, there is the added benefit of reducing the volume of water being directed through the subdivision minor storm sewer system. Rainwater harvesting is recognized to help reduce the demand on water resources. As mentioned in Section 3.6.1 of the LID Manual, "By reducing the demand on water resources, rainwater harvesting can result in additional benefits such as:

- Delayed expansion of municipal water treatment and distribution systems; and,
- Lower energy use for pumping and treating water.

2. Stormwater Infiltration for Buildings B, C, and D

For the other areas of the site, clean rainwater from Buildings B, C, and D will be collected from a series of rooftop weirs and directed to an infiltration gallery located within the parking area. Once the infiltration gallery is full, any additional flows will be routed directly to Tributary B via a storm sewer outlet. The infiltration gallery has been sized to accommodate 50% of the 2-year design storm volume from buildings B, C and D.

Similar to item 1 above, the proposed system supports the principles of the TRCA LID manual and the reduction in the volume of water being directed through the subdivision minor storm system. This proposal requires approval by the TRCA.

3. Bioswale (Bioretention)

Drainage adjacent to the north/west limit of the site will be directed overland to a bioswale.

The TRCA's Low Impact Development Manual (LID Manual) states that bioswales will provide water balance benefits through infiltration and improved water quality. This system will also provide the previously mentioned benefit of reducing the volume of water being directed through the subdivision minor storm sewer system and reducing the need for underground storage systems and associated maintenance. The proposed system supports the principles and design suggestions of the LID manual.

4. Infiltration Island Planters (Special Bioretention)

A number of infiltration island planters have been proposed throughout the site which will promote infiltration and reduce rainwater being directed to the minor system. This also has the added benefit of reducing the irrigation demand.

As described above, the proposed planters support the principles of the LID manual, the reduction in the volume of water being directed through the subdivision minor storm sewer system, and will reduce demand on municipal water resources.

5. Wal-Mart Energy Store Design

The Wal-Mart store will have enhanced R25 roofing insulation and a white roofing membrane over the entire store. The "white roof" reflects almost 90% of sunlight from the store thereby reducing the need for peak-load summer air conditioning. This technology reduces the "heat island" effect common with large roof areas.

The size of the proposed store has been reduced from other Wal-Mart stores resulting in more than 10% reduction of square footage. This has energy reductions relating to conditioned volume of space, lighting reductions, mechanical equipment etc. Another benefit is the reduction to material resources such as construction materials.

6. Refrigeration – Wal-Mart Store

a. The food refrigeration technology saves energy and incorporates new technologies utilizing refrigerant R404A which has no CFC's.
b. Redesigned compressors use less energy.
c. Film on glass of (no heat) doors in display cases to eliminate energy-intensive heated doors.
d. Night covers to capture air in open refrigerators during overnight non-operational hours.
e. LED lighting with motion detectors in closed refrigerated cases to turnoff when customers are not present.
f. Generally reduced refrigeration equipment and walk-ins.

7. Temperature, Ventilation and Lighting Control - Wal-Mart Store

a. Store heating and cooling will be centrally controlled to better manage energy use.

b. Interior lighting is scheduled to 33% lighting level during overnight stocking period for energy conservation.
c. Exterior lighting, signs, security and parking lot lights are on a photocell to activate upon dusk conditions and de-activate during daylight conditions.
d. Demand Control in place to shed equipment loads when peak KW spiking is present based on set targets.
e. In-store carbon dioxide monitors will determine need for ventilation to ensure it is used only as needed.
f. Energy recovery ventilation in sales floor.
g. Reduced range hood exhaust volumes.

8. Lighting - Wal-Mart Store

a. LED lights will be used in storefront signs, refrigerators and product display cases to reduce related energy use by as much as 90%.
b. Reduced lighting levels on sales floor by using lower wattage alternatives will save energy.

9. HVAC Design - Wal-Mart Store

a. Heat reclaimed from refrigeration will be re-used for spaceheating.
b. High efficiency roof top units utilizing heat pump/cool sections and modern refrigerant (R410) which has no CFC's.

10. Water - Wal-Mart Store

a. Low flow fixtures will be used in washrooms.
b. Use of native planting on site to reduce irrigation requirements.

11. Waste Diversion - Wal-Mart Store

a. The store will implement 3-stream recycling bins throughout the store for the customers to facilitate the recycling of paper, plastic and beverage containers.
b. The store will implement internal plastic and paper/cardboard recycling. New Wal-Mart stores across Canada have implemented waste management systems that divert up to 65% of all wastes to recycling rather than municipal landfill.

12. Tree Planting

a. The site plan contemplates the planting of approximately 500 trees, including deciduous trees, coniferous trees and boulevard trees which significantly exceeds the Town's Trees for Tomorrow target of 1 tree per 5 parking spaces.

b. Shade tree planting has been added to the parking areas throughout the plan to break up the hard surface area and reduce the "heat island" effect associated with parking areas.

c. Landscaping buffers adjacent to streets have been widened to 6m and wider in some locations thereby increasing infiltration potential and providing a disconnect with impervious areas. These buffers will also be planted with a variety of trees and shrubs as per plan.

13. Bicycle Network and Storage

The site is located within the Box Grove Secondary Plan area which has been developed with a planned network of provisions for bicycle travel. There are existing and planned bike lanes on the boundary roads which define this site namely, Copper Creek Drive and the Donald Cousens Parkway. The Donald Cousens Parkway will provide a multi-use trail immediately adjacent to this site. This connectivity extends to the valley system within Box Grove and ultimately to the Bob Hunter Park/Rouge Park complex and beyond. This site is designed to accommodate patrons who travel by bicycle and provides bicycle storage racks to make bike travel comfortable and practical.

14. Transit Oriented

Planned bus platforms are conveniently located on the Donald Cousens Parkway and Copper Creek Drive which connect seamlessly to the efficient pedestrian walkway network internal to the site. For employees who prefer to car-pool, the site will accommodate car pool parking areas, if required.

15. Proximity to the Community

The site is immediately adjacent to the existing and future planned phases of the Community of Box Grove and is well-served by pedestrian access routes. Proximity to the Community also provides efficient access to a

requisite labour force for the jobs that will be created by this project. Future employees of the site who live in the community will have a variety of alternative modes of transportation available to get to the site including walking, cycling and transit.

The foregoing reflects the green initiatives that are proposed to be implemented in the subject development. These matters can be further developed during the site plan review process.

Please contact me if you require further clarification on any of these initiatives.

Yours truly,

BOX GROVE HILL DEVELOPMENTS INC.

Per:
David Stewart, MES, MCIP, RPP

DS/sg

cc. Paula Bustard, SmartCenters