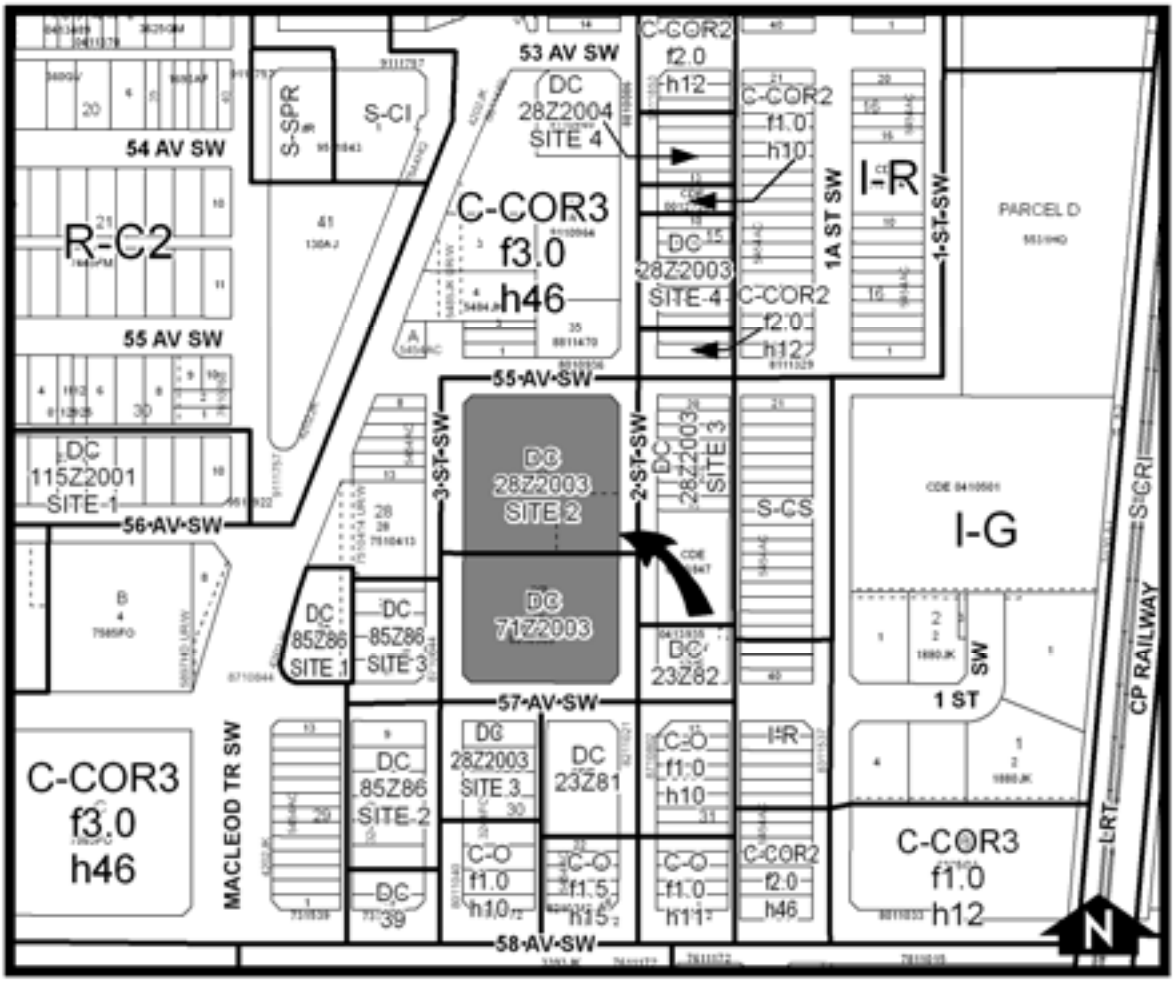
REPORT TO THE CALGARY PLANNING COMMISSION

DEVELOPMENT PERMIT	**ITEM NO: 03**	
	CPC DATE:	2009 May 14
	DP NO:	DP2009-0040

MANCHESTER
(Ward 9 - Alderman Joe Ceci)



PROPOSAL:
New: Apartment Building (3 buildings, 318 units), Retail Stores and parking revisions to existing development.

APPLICANT:	OWNER:
Kanas Corporation	The City of Calgary
MUNICIPAL ADDRESS: 307 55 Avenue SW & 300 57 Avenue SW	LEGAL DESCRIPTION: 0010983;27;41 & 0010983;27;42 (Map 34S)
EXISTING LAND USE DISTRICTS: DC28Z2003 & DC71Z2003	
AREA OF SITES: 1.25 ha ± (3.09 ac ±)	
CURRENT DEVELOPMENT: 307 55 Avenue SW: 14 storey apartment building (132 units) & special care facility (70 beds) 300 57 Avenue SW: Vacant	

ADJACENT DEVELOPMENT:	
NORTH:	Commercial (MacLeod Trail S corridor)
SOUTH:	High density residential (Existing development - Calgary Housing Company)
EAST:	Low and medium density residential
WEST:	Commercial (MacLeod Trail S corridor)

DEVELOPMENT SUMMARY – 300 57 Avenue SW – Building A			
DC71Z2003	**BYLAW STANDARD**	**PROPOSED**	**RELAXATION**
FRONT YARD PROJECTION	Maximum 0.6 metres	2.43 metres (at front entry)	1.83 metres
PARKING one stall/unit except no parking stall required for units < 37.16 square metres (400 sq ft)	206 stalls	111 stalls	95 stalls
AMENITY SPACE Each dwelling unit shall be provided with a private outdoor amenity space	Typically balconies but may be provided as on-site common or private outdoor space.	Common outdoor and indoor amenity space.	Partial relaxation required.
EXTERIOR FINISH MATERIALS **Walls**: Masonry, acrylic stucco and corrugated steel. **Roof**: Corrugated steel and pre-finished aluminium flashing **Windows**: Vinyl – triple glazed			

DEVELOPMENT SUMMARY – 307 55 Avenue SW (Building B &C))			
DC28Z2003	**BYLAW STANDARD**	**PROPOSED**	**RELAXATION**
REAR YARD	7.5 metres	At grade - 3.09 metres Above – 5.48 metres	4.41 metres 2.02 metres
HEIGHT	46 metres to any eaveline	48.15 metres to penthouse eaveline	2.15 metres
UNIT SIZE	25% of the dwelling units may be 37.16 square metres or less in area (57 units)	58 Units	1 unit
COMMERCIAL COMPONENT	Commercial uses must front onto a local street	Six of 12 units front do not front onto a local street	50%
EXTERIOR FINISH MATERIALS **Walls**: Masonry, acrylic stucco and corrugated steel. **Roof**: Corrugated steel and pre-finished aluminium flashing **Windows**: Vinyl – triple glazed			

SUMMARY OF CIRCULATION REFEREES	
CPTED ASSESSMENT Crime Prevention Through Environmental Design	Comments provided – See appendix V
ENVIRONMENTAL MANAGEMENT	Not applicable
URBAN DESIGN REVIEW COMMITTEE	Not applicable
COMMUNITY ASSOCIATION **Windsor Park**	No comments received.

PLANNING EVALUATION

Introduction

The proposed development is located within the community of Manchester and is approximately 400 metres north of the Chinook Shopping Centre and 700 metres north of the Chinook LRT Station. The proposed development comprises two existing sites:

- 307 55 Avenue SW – North Manchester - vacant
- 300 57 Avenue SW – South Manchester – existing apartment building and seniors care facility

For ease of reference the sites are referred to as the North Manchester site and the South Manchester site for the remainder of this report.

On 2008 July 28 City Council approved the disposition of (a portion of) the North Manchester site to facilitate the development of a residential development that would incorporate affordable housing units. The development, as presented to Council, would provide a total of 318 dwelling units in three separate buildings.

A re-subdivision is required to accommodate the proposed development. A "portion" of the North Manchester site will be subdivided off and consolidated with the South Manchester site. This "portion" will be developed as the City owned Building A and will share the existing parking on the South Manchester site. The residual North Manchester site will be developed as the privately owned Buildings B and C.

South Manchester site (City owned):

- Proposed 88 unit apartment building (Building A)
- Existing 132 unit apartment building
- Existing 70 bed care facility
- Existing two storey parkade (111 stalls)

North Manchester site (privately owned)

- Proposed 110 unit apartment building (Building B)
- Proposed 120 unit apartment building (Building C)

Site Context

The existing South Manchester site development was approved in 2003. It is operated by the Calgary Housing Company.

Land Use District

North Manchester site:

The site is designated as a Direct Control District under Bylaw 28Z2003 with RM-7 Residential High Density Multi-Dwelling District as the base district. See Appendix III.

South Manchester site:

The site is designated as a Direct Control District under Bylaw 71Z2003 with RM-7 Residential High Density Multi-Dwelling District as the base district. See Appendix III.

The uses and guidelines for both sites are essentially the same except:

- The South Manchester includes the additional uses of apartment-hotels, assisted living accommodation and special care facilities.
- The South Manchester sites allows a maximum of 50 percent of the dwelling units on site to be 37.16 square metres (400 sq ft) or less, whereas the North Manchester site allows a maximum of 25 percent to be 37.16 square metres (400 sq ft) or less.

Site Characteristics

The vacant North Manchester site is undeveloped and with a cross fall from west to east of approximately three metres.

Legislation & Policy

Locational Guidelines for Non-Market Housing:

On 2008 July 28 Council approved the "Locational Guidelines for Non-Market Housing". These guidelines are to be used for broad policy guidance and not as strict rules for operators and the development authority. A summary of the guidelines are included in Appendix IV.

The guidelines discourage very large scale single use developments and the over concentration of non-market housing in one area. The North and the South Manchester sites on completion will be occupied as follows:

Manchester Tower 132 existing units	Tenancy is for period of two years on the basis of a graduated rent linked to income. The intent is for the tenant to progress to other accommodation (at the low end of the market) at the end of the two years.
Building A – proposed 88 units	Intended to operate as per the Manchester Tower.
Building B – proposed 110 units	Building B has Provincial funding which requires rental at market less 10%.
Building C – proposed 120 units	Building C will be at market, with opportunities for home ownership (as per applicant).

Chinook House, comprising 57 affordable units and 60 market units is located immediately to the south of the existing South Manchester site.

This development will ultimately include a variety of housing options that will create the opportunity for residents to move through the spectrum from deep subsidy to home ownership whilst remaining within the same community.

Manchester Area Redevelopment Plan (ARP) - approved by City Council March 2003:

The ARP identifies the site for medium to high density residential development.

The ARP promotes a "vital residential community with local commercial uses" in close proximity to the downtown and encourages the development of affordable housing units where feasible.

The ARP promotes the development of the 2 Street SW frontage as an enhanced pedestrian area through building design, the provision of wider sidewalks and street furniture and minimisation of vehicular access from 2 Street SW.

The sidewalk has been extended the full length of 2 Street SW. Boulevard tree planting and seating areas are proposed at street level.

Site Layout & Building Design

Plans are attached as Appendix I.

Building A:

The proposed building is a 14 storey apartment complex comprising 88 residential units – 77 two bedroom and 11 one bedroom units. The lower floor, main floor and penthouse floor provide office accommodation, an in-house daycare, laundry facilities, bike storage and resident amenity space.

There is no private outdoor amenity space (balconies) provided. As an alternative a structured at grade play area is provided at grade. In addition, quality common amenity has been provided within the building as follows:

- Community hall – 600 square metres
- Exercise room – 40 square metres
- Penthouse flex area – 420 square metres
- In-house daycare – 230 square metres

The principal access is at grade from 2 Street SW with alternative access from the plaza level.

Building B

The proposed building is a 13 storey mixed use complex comprising 110 residential units – 84 two bedroom units and 26 studio units. The main floor consists of the entry lobby and six small retail units (less than 75 square metres) and resident amenity space. Additional indoor residential amenity space is provided at the penthouse level and each unit has a private balcony.

Building C

The proposed building is a 15 storey mixed use complex comprising 120 residential units –62 two bedroom units, 26 one bedroom units and 32 studio units. The main floor consists of the entry lobby and six small retail units (less than 75 square metres). Additional indoor residential amenity space is provided at the penthouse level and each unit has a private balcony.

Parkade

The partially below grade parkade structure provides parking for Buildings B and C only with access from Second Street, the lowest at grade entry point on the site. A two storey building is incorporated into the parkade structure on the east side which contains secure bicycle stalls, storage and a central garbage pickup location for all three buildings.

Finishes

The buildings make use of a common unifying theme through the selection of finish materials and colours. A deeper toned masonry finish is utilized at the base of the buildings. The vertical elements are accentuated through design elements, finish material and colour. The façade finishes are predominantly masonry, acrylic stucco and vertical corrugated steel cladding.

Subdivision and Easements

Subdivision application, SB2009-0004, is pending approval. The application is an integral requirement of the proposed development. The key elements are as follows (see Appendix II):

- The subdivision will result in two reconfigured parcels, one City owned and the other privately owned.
- A strata subdivision is required to accommodate vehicular circulation and parking for Buildings B & C at the parkade level. This will occur immediately adjacent to and west of Building A at the parkade level. In addition, it enables Alberta Building Code requirements to be met.

The development as proposed requires a number of easements and these requirements are part of this Development Permit application. The requirements include:

- Mutual Access Agreement for garbage and vehicle movement at the parkade level – provides vehicular access to Building A for maintenance, etc. and provides Building A with access to the shared garbage collection facility.
- Mutual Access Agreement for garbage and loading at the Second Street SW frontage – provides access, for Building A, to the garbage pick-up area. In addition, this area will also be used as a loading zone for Building A.
- Mutual Access Agreement for the play area at the plaza level – allows for a more useable play area associated with the in-house day care associated with Building A.
- Mutual Access Agreement for pedestrian flow – provides a more direct barrier free access from the upper level of the existing parking on the South Manchester site to Building A.

Environmental Site Assessment

Not required.

Landscaping

The landscaping is located primarily at the plaza level and includes grassed areas, shrubs and tree planting. The hard landscaping provides for pedestrian circulation on site and seating areas are provided throughout the site. A focal seating area is provided at the east end of the site. A basketball court is incorporated as an active amenity area. A playground area is provided adjacent to the Building A in-house day care facility. Pedestrian access to the site is from 55 Avenue SW and from 3 Street SW.

In addition the applicant is proposing twenty boulevard trees on the perimeter of the site and seating areas on the 2 Street SW frontage.

Site Access & Traffic

There are two vehicle access points to the site – one from 3 Street SW to the surface parking at the plaza level and the other from 2 Street SW to the parkade. A vehicle lay-by is proposed adjacent to the entrance to Building A for resident pickup and drop off.

Access to the central garbage pickup is from 2 Street SW.

A traffic impact assessment was not required.

Parking

The Direct Control Districts for each site require parking to be provided as follows:

- one parking stall per residential unit greater than 37.16 square metres (400 sq ft).
- one parking stall per 92 square metres net floor area for commercial uses.

The residential parking requirement includes for visitor parking.

Building A:

A parking relaxation is required. As noted earlier, Building A will be consolidated with the existing South Manchester development. There is no additional parking proposed as part of Building A. Building A will utilise existing parking on the South Manchester site. Parking will be provided as follows:

Required:	Existing South Manchester		118 stalls
	Proposed Building A		88 stalls
		Total required	206 stalls
Provided			111 stalls
		Deficient	95 stalls

Factors supporting the relaxation are as follows:

- Proximity to the Chinook LRT Station – less than 700 metres.
- Proximity to bus service (MacLeod Trail) – 150 metres
- Historically the parking for the existing Manchester South Site is substantially underutilised – approximately 25 percent.
- The operator of Building A, Calgary Housing Company (CHC), has indicated that the proposed parking will adequately meet their needs. Also, CHC is able manage their tenant list to ensure sufficient parking is always available.

Buildings B and C:

The parking requirements are as follows:

Residential:	Bldg B – 1 stall/unit	110 stalls
	Bldg C – 1 stall/unit	120 stalls
		230 stalls
	Less: Stalls not required for units < 37.13 m^2 (58 units)	58 stalls
		172 stalls
Commercial	Stalls required –1 stall/92 m^2 NFA	8 stalls
	Total required stalls – residential & commercial	180 stalls

A total of 208 stalls are provided, 38 stalls at the plaza level and 170 stalls in the parkade. The applicant has indicated that two of the stalls will be utilised for car share purposes. The surface parking will be utilised by the retail units and for residential visitor parking.

Site Servicing for Utilities

A stormwater extension is required. The applicant will need to submit a design for City approval prior to construction.

Environmental Sustainability

City Council requirement for Building A is Built Green Silver. The applicant has committed to building the entire project to a Platinum Built Green rating. See Appendix VI.

Community Association Comments

Manchester does not have a community association. The application was circulated as a courtesy to the closest residential community, Windsor Park. No response was received.

Adjacent Neighbour Comments

The property was notice posted and no written comments were received.

CONCLUSION:

The proposal is supported for the following reasons:

1. The development provides much needed range of affordable housing.

2. The development complies with the intent of Manchester Area Redevelopment Plan, i.e. encouraging the development of affordable housing.

3. The development complies with the intent of the Direct Control District.

CORPORATE PLANNING APPLICATIONS GROUP RECOMMENDATION: APPROVAL

The Corporate Planning Applications Group recommends APPROVAL with the following conditions:

PRIOR TO RELEASE REQUIREMENTS:

Planning:

1. Submit a total of six (6) complete sets of amended plans (file folded and collated) to the File Manager that comprehensively address the prior to release conditions of all Departments as specified below. In order to expedite the review of the amended plans, three (3) sets shall highlight all of the amendments. Please ensure that all plans affected by the revisions are amended accordingly. In the event that the prior to release conditions are not resolved, an $886 recirculation fee may apply.

Urban Development:

2. Amend the plans to:

   Water Resources – Sanitary and Stormwater Servicing

   a. Provide single sanitary tie-in to City mains and on-site service connections on Lot 'B' for building 'B' and 'C' complete with a test manhole located at public right of way. Provide detail on the DSSP plans.

   b. Provide storm extension required from 55 Av. SW on 2 St. SW. to service proposed lot 'A' and lot 'B'. Submit 3 sets of storm extension design plans for approval from Water Resources.

   Contact Lam Huynh, Water Resources, Development Approvals @ 403-268-3730 for further details.

3. Submit a Sanitary Servicing Study prepared by a qualified professional engineer under seal and permit to practice stamp. The report shall identify potential impact and/or "pinch points" within the public sanitary sewer system caused by the ultimate flows generated by the proposed development. Associated costs will be at the expense of the developer. For further information, contact the Leader – Development Approvals in Water Resources at 268-3730.

4. The developer must apply for a line assignment from Utility Line Assignments for storm extension alignment in the City road right-of-way along 2 St. SW. This application consists of a cover letter and six (6) scaleable site servicing plans (1:250 or 1:500 preferred) indicating the following information:

   Property lines
   Curb/sidewalks
   Existing utilities along the road right of way
   Existing features (e.g. streetlight poles, hydrants, existing trees, etc.)
   Dimensions from property line to all of the above features

   Due to the number of applications reviewed by this office, it will typically take two weeks for a response. The letter can be addressed to: Supervisor, Utility Line Assignments, 6th Floor – 800 Macleod Trail S.E., Calgary, Alberta, T2P 2M5, Location #8026.

5. Enter into an Indemnification Agreement for the construction of watermain upgrade and storm sewer extension on 2 St. SE. Contact the Water Resources, Leader Inspection Services at 403-268-4385 and Lam Huynh, Water Resources, Development Approvals @ 403-268-3730. The existing 150mm mains on 2 St. SW. and 3 St. SW. are undersized for today's standard.

   The following documentation is required to execute the agreement:
   a. A contract is signed and executed by both parties,
   b. A security deposit is received by the City, and
   c. An insurance policy is received that protects the City against any unforeseen accidents.

6. Provide a letter to confirm the owner will remove the benches from within the City road right-of-way, at the owner's expense within 30 days' notice from the City of Calgary requesting removal.

7. Remit a performance security deposit (certified cheque, bank draft, letter of credit) for the proposed infrastructure listed below within the public right-of-way to address the requirements of the Business Unit. The amount of the deposit is calculated by Roads and is based on 100% of the estimated cost of construction.

   The developer is responsible arrange for the construction of the infrastructure either with their own forces or may elect to have the City construct the infrastructure on their behalf.

   If the developer elects to construct the infrastructure with their own forces, the developer will need to enter into an Indemnification Agreement at the time of construction and the deposit will be used to secure the work.

   Roads

   a. Construction of new driveway crossings on 3 St. SW.
   b. Closure and removal of existing driveway crossings on 55 Av. SW.
   c. Construction of new sidewalks adjacent to 3 St. SW.
   d. Rehabilitation of existing driveway crossings, sidewalks, curb and gutter, etc., should it be deemed necessary through a site inspection by Roads personnel,

8. Remit payment (certified cheque, bank draft) for the proposed infrastructure listed below within the public right-of-way to address the requirements of the Business Units. The amount is calculated by the respective Business Unit and is based on 100% of the estimated cost of construction.

   The developer is responsible to coordinate the timing of the construction by City forces. The payment is non-refundable.

   Roads

   a. Street lighting upgrading adjacent to the site.

9. Remit payment (certified cheque, bank draft) for the proposed infrastructure listed below within the public right-of-way to address the requirements of the Business Units. The amount is calculated by the respective Business Unit and is based on 100% of the estimated cost of construction.

   The developer is responsible to coordinate the timing of the construction by City forces. The payment is non-refundable.

   Water Resources

   a. New sanitary test manhole,
   b. Storm sewer redevelopment ($84 / m frontage),
   c. New storm sewer connection,

d. New sanitary sewer connection.

10. Submit to the Manager of Urban Development two (2) copies of an Erosion and Sediment Control Report prepared by a qualified consultant or certified professional erosion and sediment control (CPESC) in accordance with the City of Calgary *Guidelines for Erosion and Sediment Control*.

11. Submit three (3) sets of Development Site Servicing Plan to the Building Grades Supervisor, Engineering Services, for approval from Water Resources, as required by Section 5 (2) of the *Utility Site Servicing Bylaw 33M2005*. The scope and details of the plans are found in both the *Stormwater Management and Design Manual (December 2000)* and the *Design Guidelines for Development Permits and Development Site Servicing Plans (June 2007).*

12. Amend the plans to:

Water Resources – Water Servicing

a. Indicate an adequate water meter room adjacent to an exterior wall where the services (100mm and larger) enters each proposed building,

13. Submit a letter accepting responsibility for the transportation of garbage containers to and from the permanent storage location(s) and staging / collection location(s) on the scheduled collection day to the satisfaction of the Manager, Urban Development and/or the Director, Waste & Recycling Services.

Transportation:

14. As indicated in the development application, the developer/owner/manager shall appoint a traffic demand management (TDM) coordinator to develop strategies for a TDM program that will achieve reductions in motor vehicle use. These strategies should be implemented in the development and management of the site.

15. As indicated in the development application, the developer and future site managers shall provide a written commitment to promote and monitor the TDM program to reduce peak hour site-generated vehicle traffic and report on the TDM program to the Director of Transportation Planning annually.

16. Amend the plans to include signs advising motorists of the available visitor parking. Signs must be prominently displayed in front of the building and a visitor parking sign placed in front of each visitor parking stall.

- Provide signage details and include details on site plans.

17. Amend the plans to include signs advising motorists of the available commercial parking. Signs must be prominently displayed in front of the building and a commercial parking sign placed in front of each commercial parking stall.

- Provide signage details and include details on site plans.

18. Amend the plans to provide on-site signage to prevent regular traffic (other than garbage and loading vehicles) from entering the 2 St SW directional driveway.

    - Sign to be located on-site.
    - Provide signage details and refer to details on site plans.
    - Sign shall not prohibit all traffic. Garbage and loading vehicles permitted.

19. Amend the plans to relocate the lay-by wheel chair ramp to the north end of the lay-by.

20. The removable bollards located at the egress of the garbage collection area shall remain in place except for when removal is required for garbage collection and loading vehicles. This will require coordination with a site superintendant.

    - Provide an operational protocol with respect to the temporary removal of the bollards when required for garbage removal and other loading.

21. Provide a parkade access protocol.

22. Provide further information to ensure that garbage movement activities will not block the drive aisles.

PERMANENT CONDITIONS

Planning:

1. The development shall be completed in its entirety, in accordance with the approved plans and conditions.

2. No changes to the approved plans shall take place unless authorized by the Development Authority.

3. The necessary Access Easement Agreements for the play area and for pedestrian traffic flow shall be registered on all affected titles prior to the issuance of the development completion permit for any phase of the development. The City of Calgary shall be named a party to the Agreements to secure access in perpetuity. At this time, the Agreements shall be submitted to Development & Building Approvals and approved by the City Solicitor to ensure that the signatories do not amend, terminate or discharge the agreements without the City's consent.

4. This approval recognizes three (3) phases on the approved plans which shall be completed in sequence. All the road works, landscaping, surface parking and provisions for garbage collection shown within each phase shall be completed and construction of the subsequent phase shall have commenced and be ongoing prior to the issuance of a Development Completion Permit for the completed phase. Call Development Inspection Services at 268-5491 to request site inspections for the Development Completion Permits.

5. A Development Completion Permit shall be issued for each phase before the use is

commenced or the building occupied. A Development Completion Permit is independent from the requirements of Building Permit occupancy. Call Development Inspection Services at 268-5491 to request a site inspection for the Development Completion Permit.

The required subdivision and necessary easements must be registered on all affected parcels prior to the issuance of the development completion permit for any phase of the development to the satisfaction of the Approving Authority.

6. All roof top mechanical equipment shall be screened by the building parapet as shown on the approved plans released with permit and shall not be visible from thoroughfares or sidewalks.

7. The grades indicated on the Development Permit approved plans must match the grades on the development site servicing plan ("DSSP") for the development site. Prior to the issuance of the Development Completion Permit, the Consulting Engineer must confirm, under seal, that the development was constructed in accordance with the grades submitted on the Development Permit.

8. All areas of soft landscaping shall be provided with an underground sprinkler irrigation system as identified on the approved plans.

9. Parking and landscaping areas shall be separated by a 150 mm (6 inch) continuous, poured in place, concrete curb, where the height of the curb is measured from the finished hard surface.

10. A lighting system to meet a minimum of 10 LUX for uncovered parking areas with limited public access and 22 LUX for shopping areas with uncovered parking areas and 54 LUX for parkades with a uniformity ratio of 4:1 on pavement shall be provided.

11. The walls, pillars and ceiling of the underground parkade shall be painted white or a comparable light colour.

12. The light fixtures in the parkade shall be positioned over the parking stalls (not the drive aisles).

13. All stairwell doors and elevator access areas shall be installed with a transparent panel for visibility.

14. Each parking stall, where located next to a sidewalk, shall have a properly anchored **concrete** wheel stop (100 mm in height and 600 mm from the front of the parking stall).

15. Handicapped parking stalls shall be located as shown on the approved plans released with this permit.

16. The garbage enclosure shall be kept in a good state of repair at all times and the doors shall be kept closed while the enclosures are not actively in use for delivery or removal of refuse.

17. Loading and delivery shall take place in the designated loading stall as shown on the approved plans and shall, at no time, impede the safety of pedestrian movements and use of the parking lot.

Urban Development:

18. If during construction of the development, the developer, the owner of the titled parcel, or any of their agents or contractors becomes aware of any contamination,

    a. the person discovering such contamination shall immediately report the contamination to the appropriate regulatory agency including, but not limited to, Alberta Environment, the Calgary Health Region and The City of Calgary (311).
    b. on City of Calgary lands or utility corridors, the City's Environmental Assessment & Liabilities division shall be immediately notified (311).

19. The developer shall be responsible for the cost of public work and any damage during construction in City road right-of-ways, as required by the Manager, Urban Development. All work performed on public property shall be done in accordance with City standards.

20. The developer understands that he is responsible to ensure that approved driveways required for this development must be constructed to the ramp grades shown on plan that have been approved by Roads. Negative sloping of the driveway within the City boulevard is not acceptable to the City. The developer shall be responsible for all costs to remove and reconstruct the entire driveway ramp if actual grades do not match the approved grades.

21. The grades indicated on the approved Development Permit (DP) plans must match the grades on the Development Site Servicing Plan (DSSP) for the subject site. Prior to the issuance of the development completion permit (DCP), the developer's Consulting Engineer must confirm under seal that the development was constructed in accordance with the grades submitted on the development permit (DP).

22. Execute an Easement Agreement to the satisfaction of the Manager of Urban Development to address common storm surface run-off areas at the plaza level, common sanitary drainage areas in the parkade, garbage container movement from lot 'A' to lot 'B' and garbage collection vehicle access to lot 'B'.

23. In accordance with the *Encroachment Policy* adopted by Council on June 24, 1996, and as amended on February 23, 1998, encroachments of retaining walls, planters, entry features, building projections, etc. are not permitted to extend into the City right-of-way. New encroachments that are a result of this development are to be removed at the developer's expense.

24. The owner, and those under their control, shall ensure good erosion and sediment control (ESC) housekeeping practices and the timely implementation, inspection and maintenance of all controls and practices specified in the ESC report and/or drawing(s) in accordance with the current edition of the *Guidelines for Erosion and Sediment Control*. The developer, or their representative, shall designate a person to inspect all controls and practices every seven days and within 24 hours of precipitation or snowfall events. Controls and practices shall be adjusted to meet changing site and winter conditions. Notify the Erosion Control Coordinator, Water Resources at 268-2655 of changes to the controls and practices specified in the report and/or drawing(s).

25. Contain storm run-off on site.

Transportation:

26. The necessary Access Easement Agreements for the shared access, loading, parking arrangements etc. shall be registered on all affected titles prior to the issuance of the development completion permit for any phase of the development. The City of Calgary shall be named a party to the Agreements to secure vehicular access in perpetuity. At this time, the Agreements shall be submitted to Transportation Planning and approved by the City Solicitor to ensure that the signatories do not amend, terminate or discharge the agreements without the City's consent.

Lumino

307 55TH AVE. SW CALGARY, AB

LOT 41 BLOCK 27 PLAN 001 0983

LIST OF DRAWINGS

KANAS CORPORATION BUILDINGS of Distinction

PROJECT: Lumino
307 55th AVE. SW
CALGARY, AB
LOT 41 BLOCK 27
PLAN 001 0983

PLAN No: 2007-002

DRAWING TITLE: COVER PAGE

SCALE:

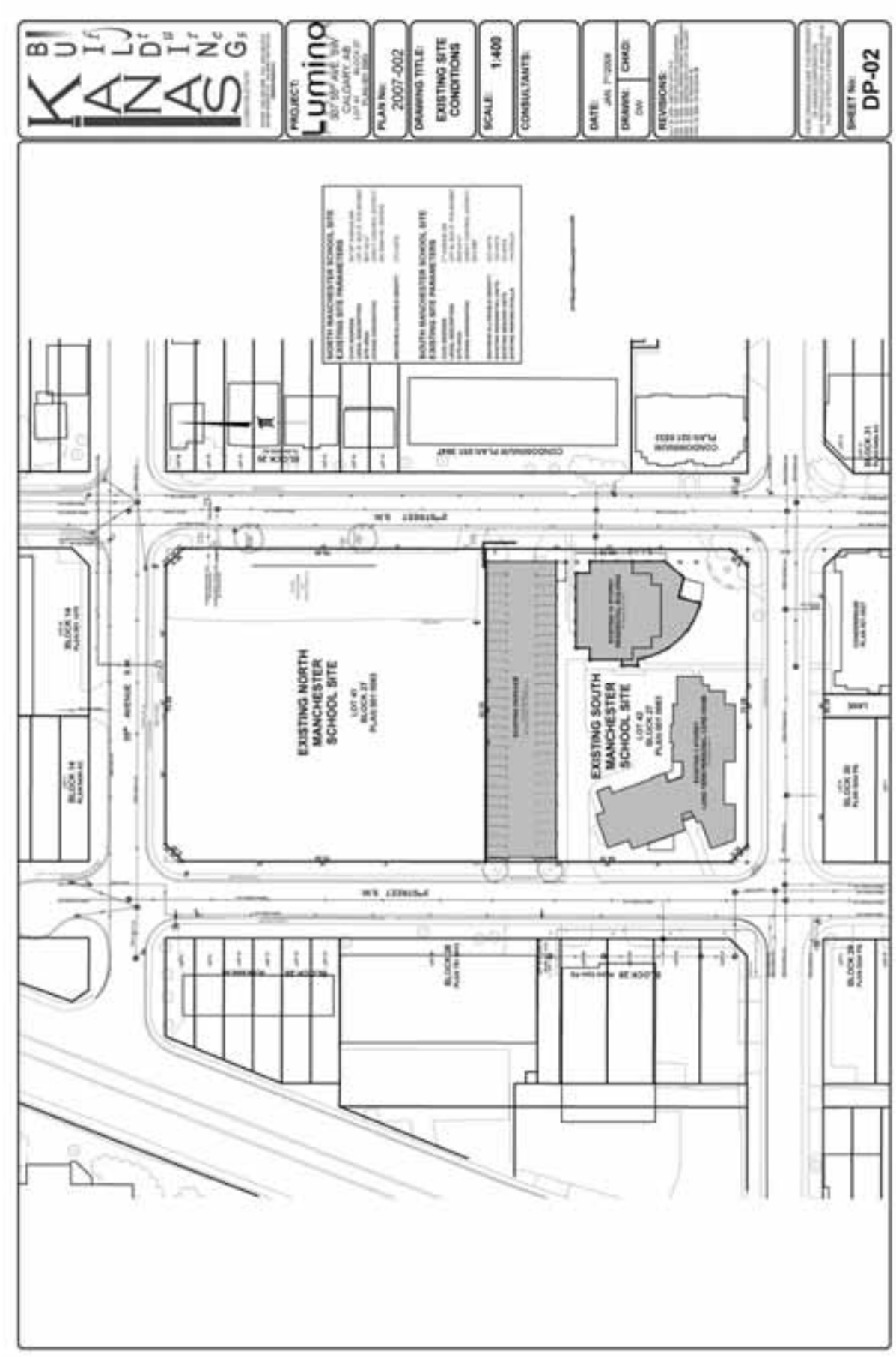
CONSULTANTS:

DATE: JAN. 7TH 2009

DRAWN: DW | CHKD:

REVISIONS:

SHEET No: DP-01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Lumino
PLAN No:
2007-002
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CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-02
EXISTING NORTH MANCHESTER SCHOOL SITE
EXISTING SOUTH MANCHESTER SCHOOL SITE

KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
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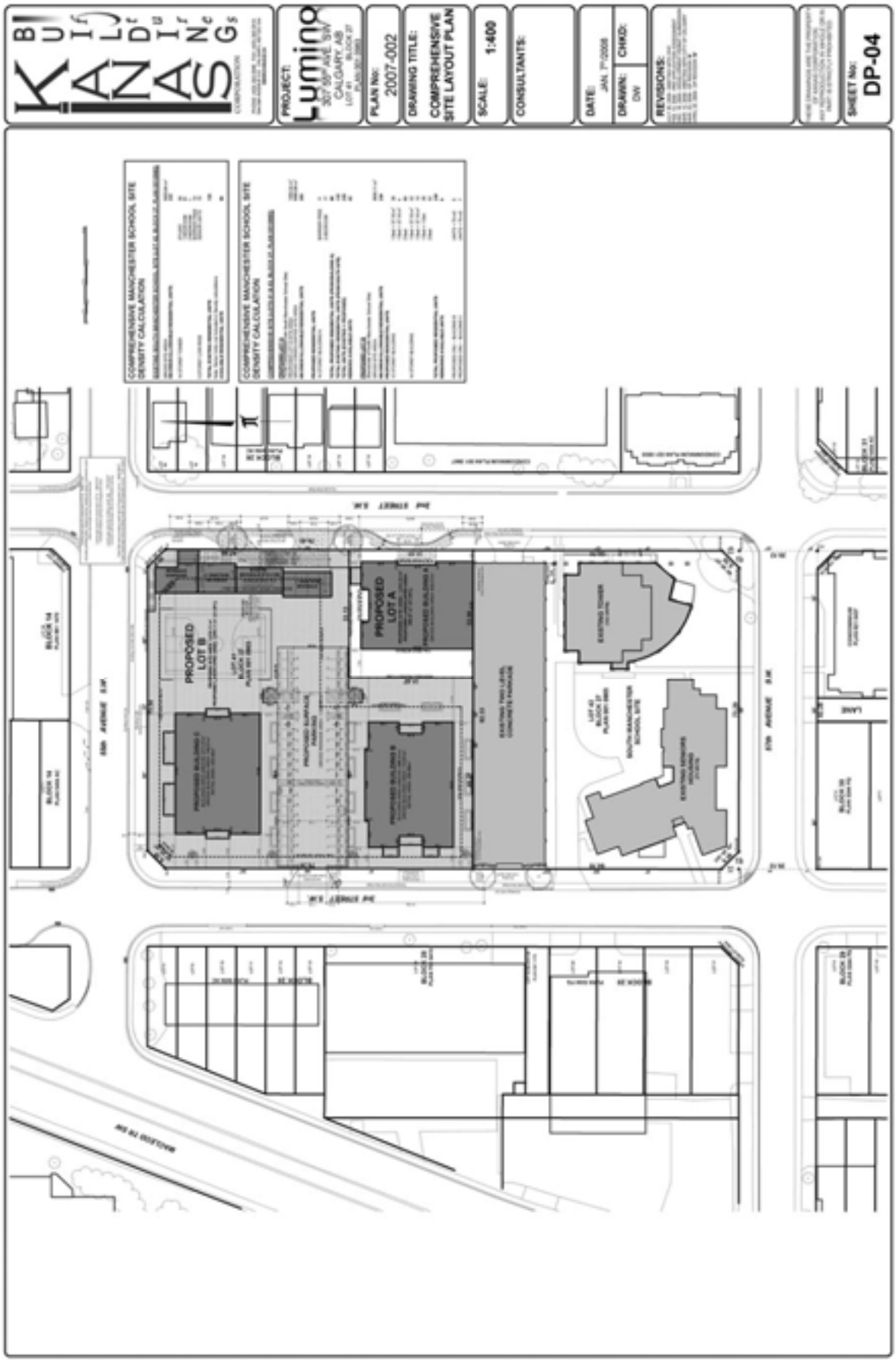
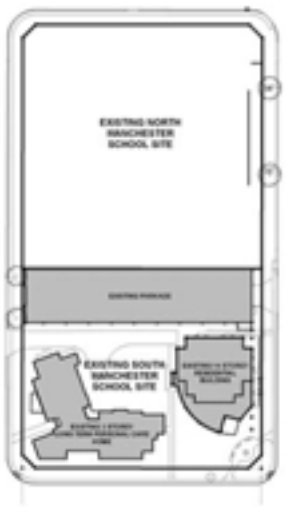
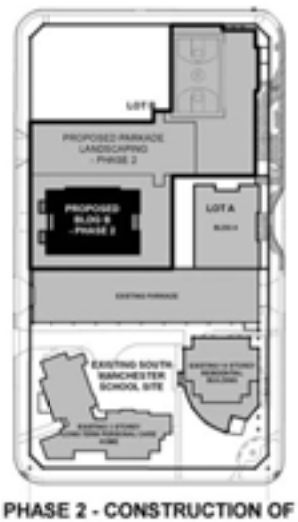
SCALE:
1:400
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-03
THE CITY OF CALGARY
KANAS CORPORATION
LOT 41 BLOCK 27 PLAN 001 0903
NW 1/4 SEC 34 TWP 23 RGE 1 W5M
69th AVENUE S.W.
LANE
BLOCK 14
BLOCK 27
BLOCK 28
BLOCK 31

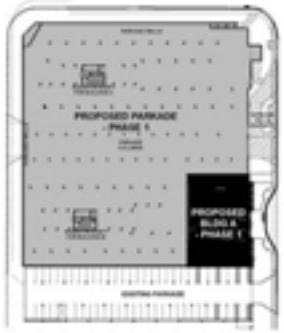

KASIAS BUILDING
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: COMPREHENSIVE SITE LAYOUT PLAN
SCALE: 1:400
CONSULTANTS:
DATE: JAN. 7th/2008
DRAWN: DW
CHKD:
REVISIONS:
SHEET No: DP-04
COMPREHENSIVE MANCHESTER SCHOOL SITE DENSITY CALCULATION
PROPOSED LOT A
PROPOSED LOT B
EXISTING TOWER
EXISTING SCHOOL BUILDING
EXISTING TWO LEVEL CONCRETE PARKADE
PROPOSED SURFACE PARKING
SOUTH MANCHESTER SCHOOL SITE
24th STREET S.W.
25th AVENUE S.W.
26th AVENUE S.W.
LANE



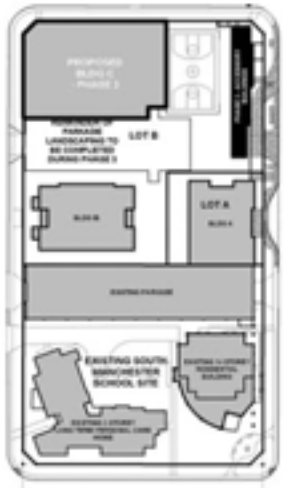
PHASE 0 - EXISTING SITE



PHASE 2 - CONSTRUCTION OF BUILDING B & PARTIAL PARKADE LANDSCAPE



PHASE 1 - CONSOLIDATION OF PROPERTIES & CONSTRUCTION OF BUILDING A & PARKADE



PHASE 3 - CONSTRUCTION OF BUILDING C & COMPLETION OF PLAZA LANDSCAPING

KANAS BUILDINGS CORPORATION

PROJECT: Lumino
307 55th AVE. SW
CALGARY, AB
LOT 41 BLOCK 27
PLAN 30[illegible]

PLAN No: 2007-002

DRAWING TITLE: CONSTRUCTION PHASING DIAGRAM

SCALE: 1:400

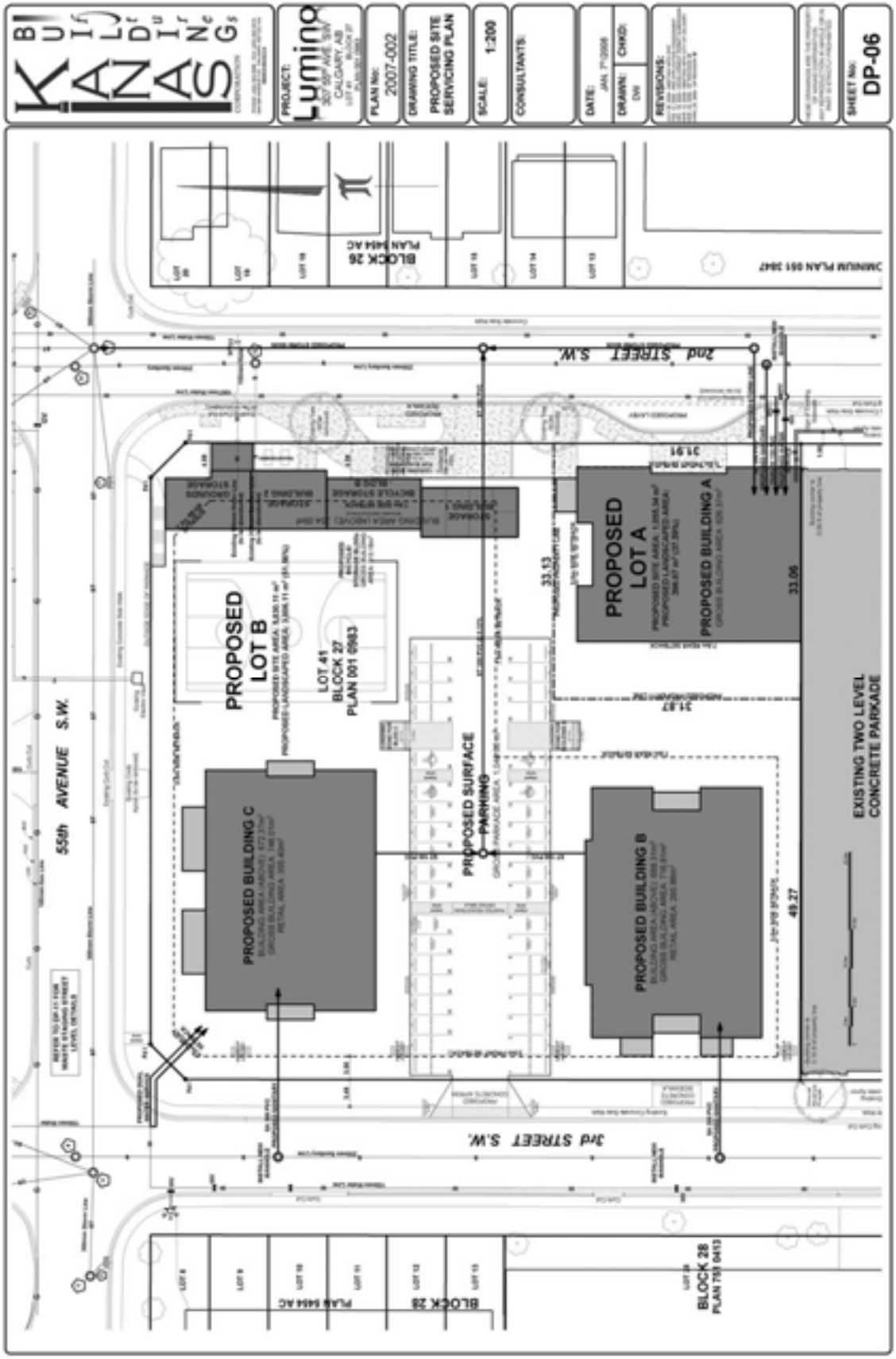
CONSULTANTS:

DATE: JAN. 7th/2008

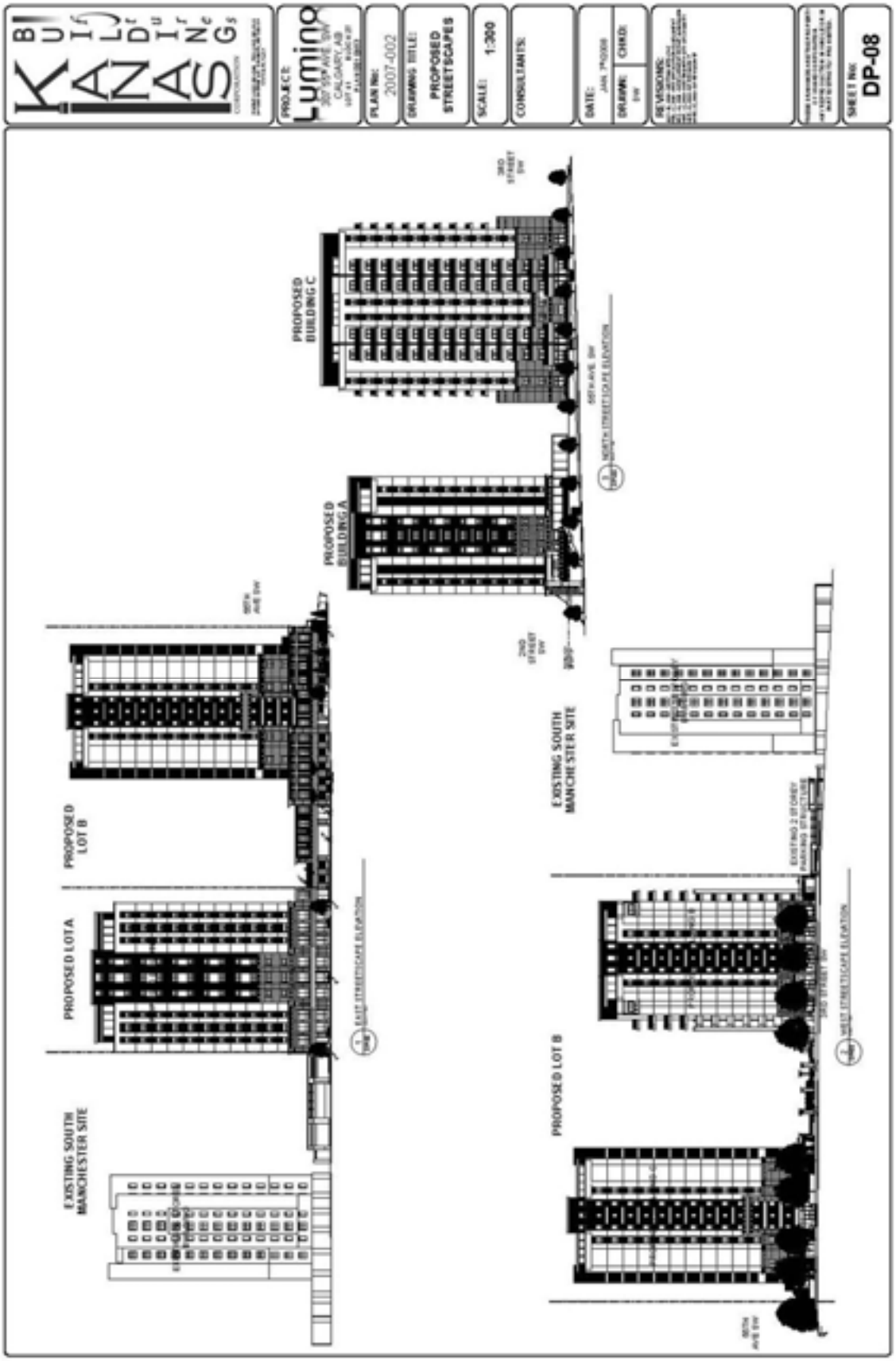
DRAWN: DW | CHKD:

REVISIONS:

SHEET No: DP-05


PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
PROPOSED SITE SERVICING PLAN
SCALE:
1:200
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-06
PROPOSED LOT A
PROPOSED BUILDING A
PROPOSED LOT B
LOT 41 BLOCK 27 PLAN 001 6983
PROPOSED SURFACE PARKING
PROPOSED BUILDING C
PROPOSED BUILDING B
EXISTING TWO LEVEL CONCRETE PARKADE
55th AVENUE S.W.
2nd STREET S.W.
3rd STREET S.W.
BLOCK 26 PLAN 3464 AC
BLOCK 28 PLAN 3464 AC
BLOCK 28 PLAN 750 0413
33.13
33.06
31.91
31.87
49.27


PROJECT:
Lumino
DRAWING TITLE:
PROPOSED EASEMENTS PLAN
SCALE:
1:200
SHEET No:
DP-07
PROPOSED EASEMENTS
LOT A
LOT B
UNIT 1
UNIT 2
EXISTING PLAZA PARKING
EDGE OF PAVEMENT


KANAS BUILDINGS
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: PROPOSED STREETSCAPES
SCALE: 1:200
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No: DP-08
PROPOSED BUILDING C
PROPOSED BUILDING A
PROPOSED LOT B
PROPOSED LOT A
EXISTING SOUTH MANCHESTER SITE
EXISTING SOUTH MANCHESTER SITE
PROPOSED LOT B
EAST STREETSCAPE ELEVATION
SOUTH STREETSCAPE ELEVATION
WEST STREETSCAPE ELEVATION

1 DP-09 EAST STREETSCAPE ELEVATION

KANAS BUILDINGS CORPORATION

PROJECT: Lumino
307 55th AVE. SW
CALGARY, AB
LOT 41 BLOCK 27
PLAN 301 0963

PLAN No: 2007-002

DRAWING TITLE: EAST STREETSCAPE ELEVATION

SCALE: 1:150

CONSULTANTS:

DATE: JAN. 7th/2008

DRAWN: DW | CHKD:

REVISIONS:

SHEET No: DP-09

1 DP-09 NORTH STREETSCAPE ELEVATION

KANAS CORPORATION BUILDINGS

PROJECT: Lumino
307 55th AVE. SW
CALGARY, AB

PLAN No: 2007-002

DRAWING TITLE: NORTH STREETSCAPE ELEVATION

SCALE: 1:150

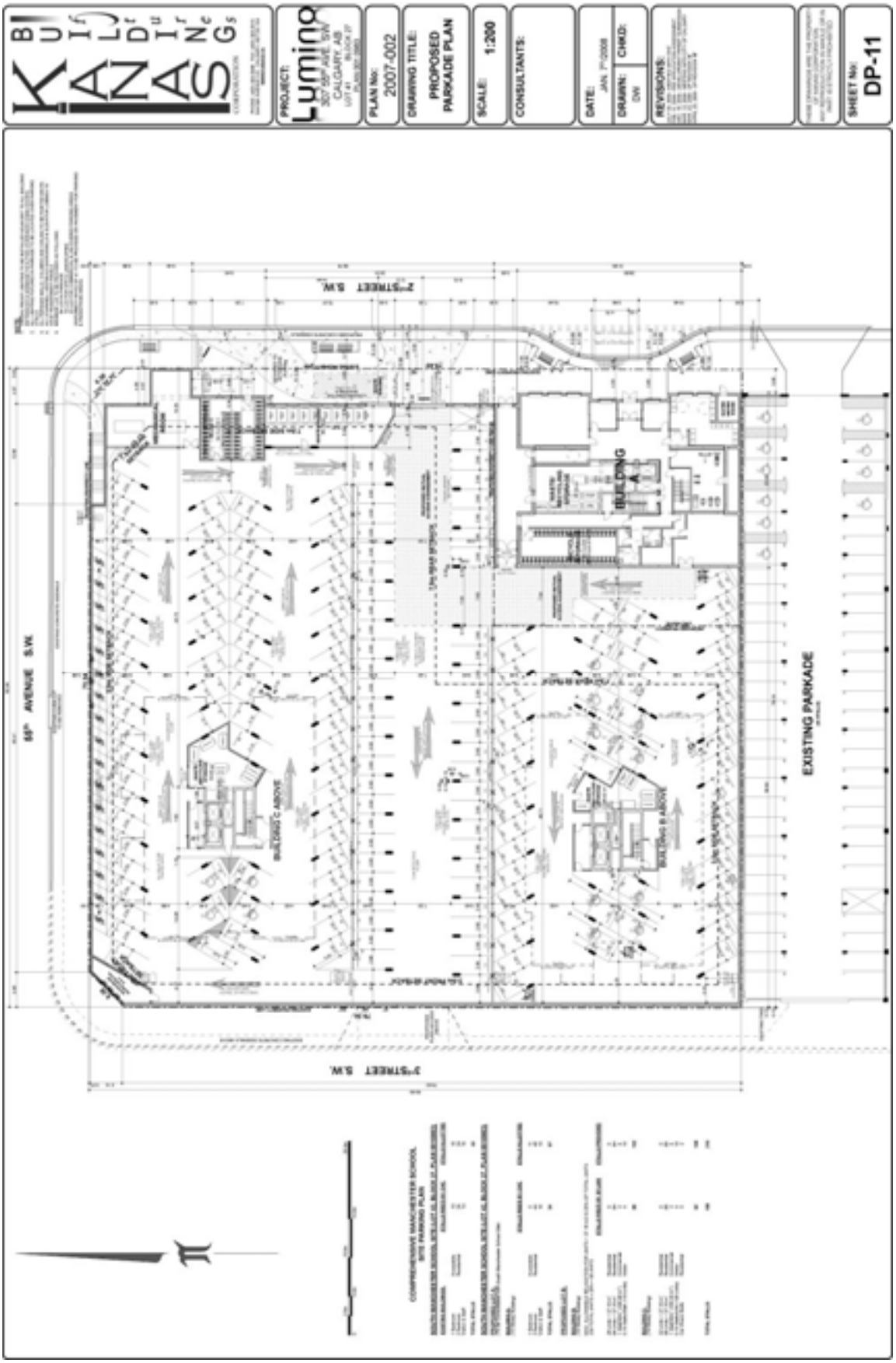
CONSULTANTS:

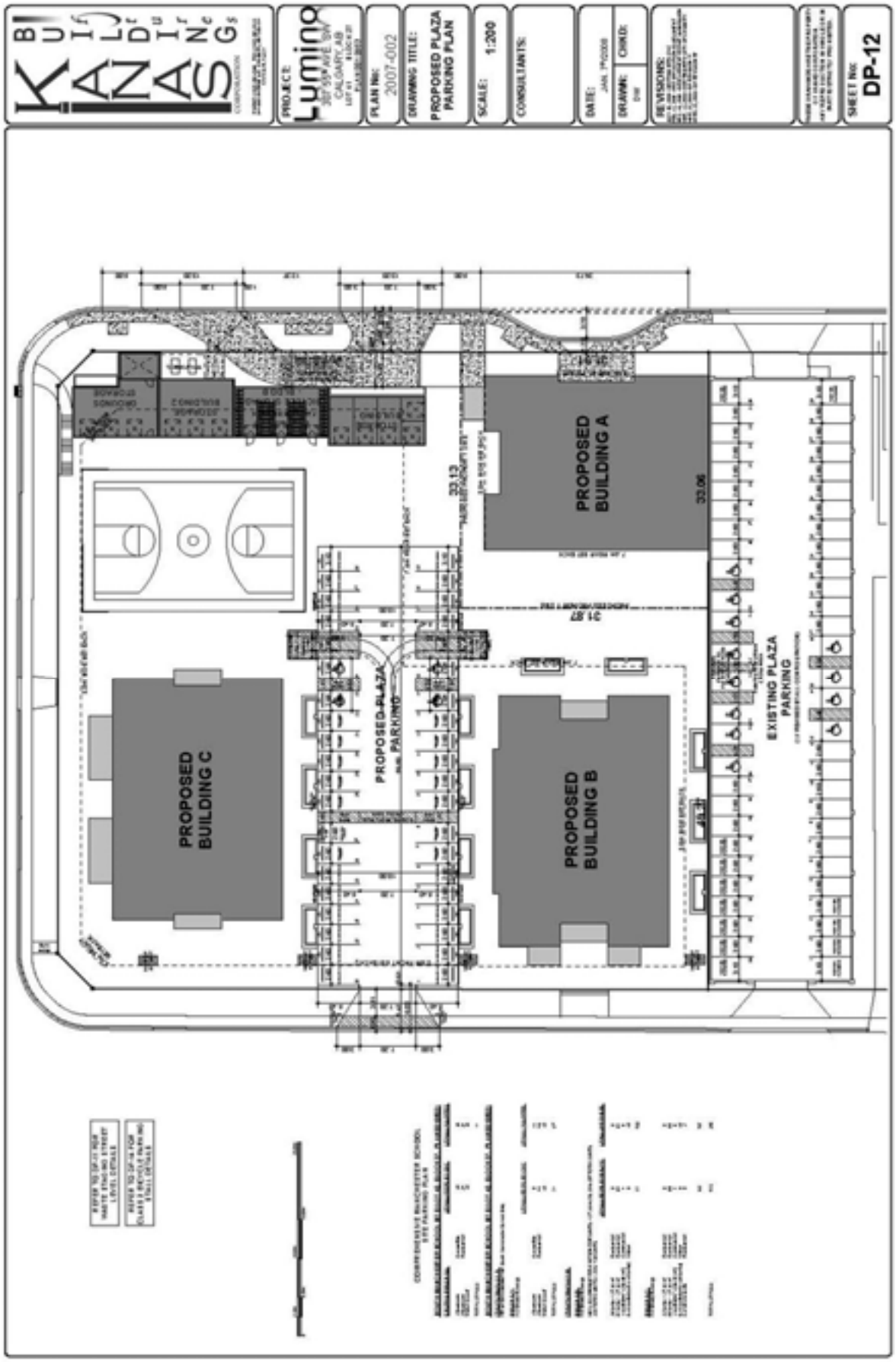
DATE: JAN. 7th 2008

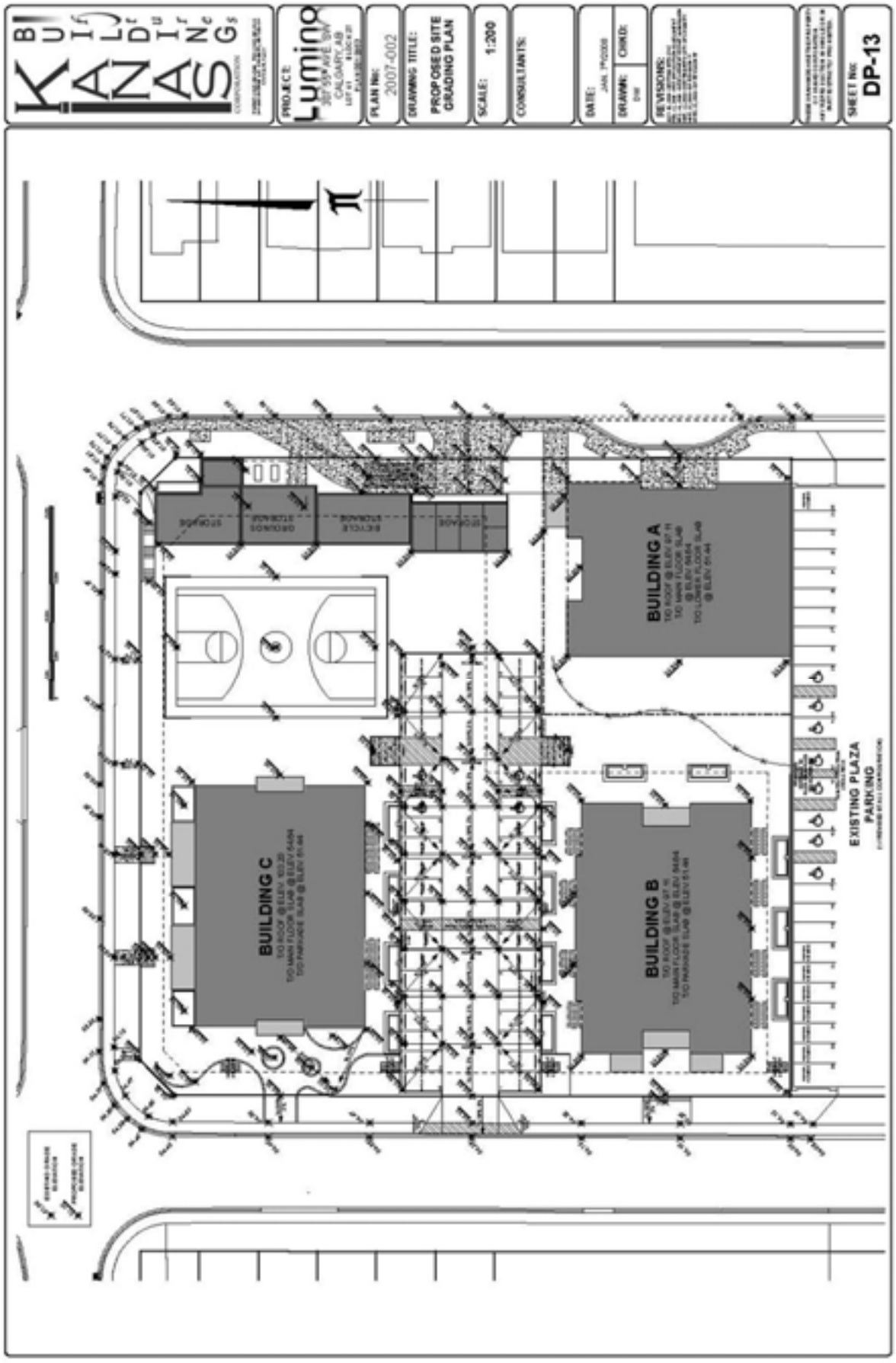
DRAWN: DW | CHKD:

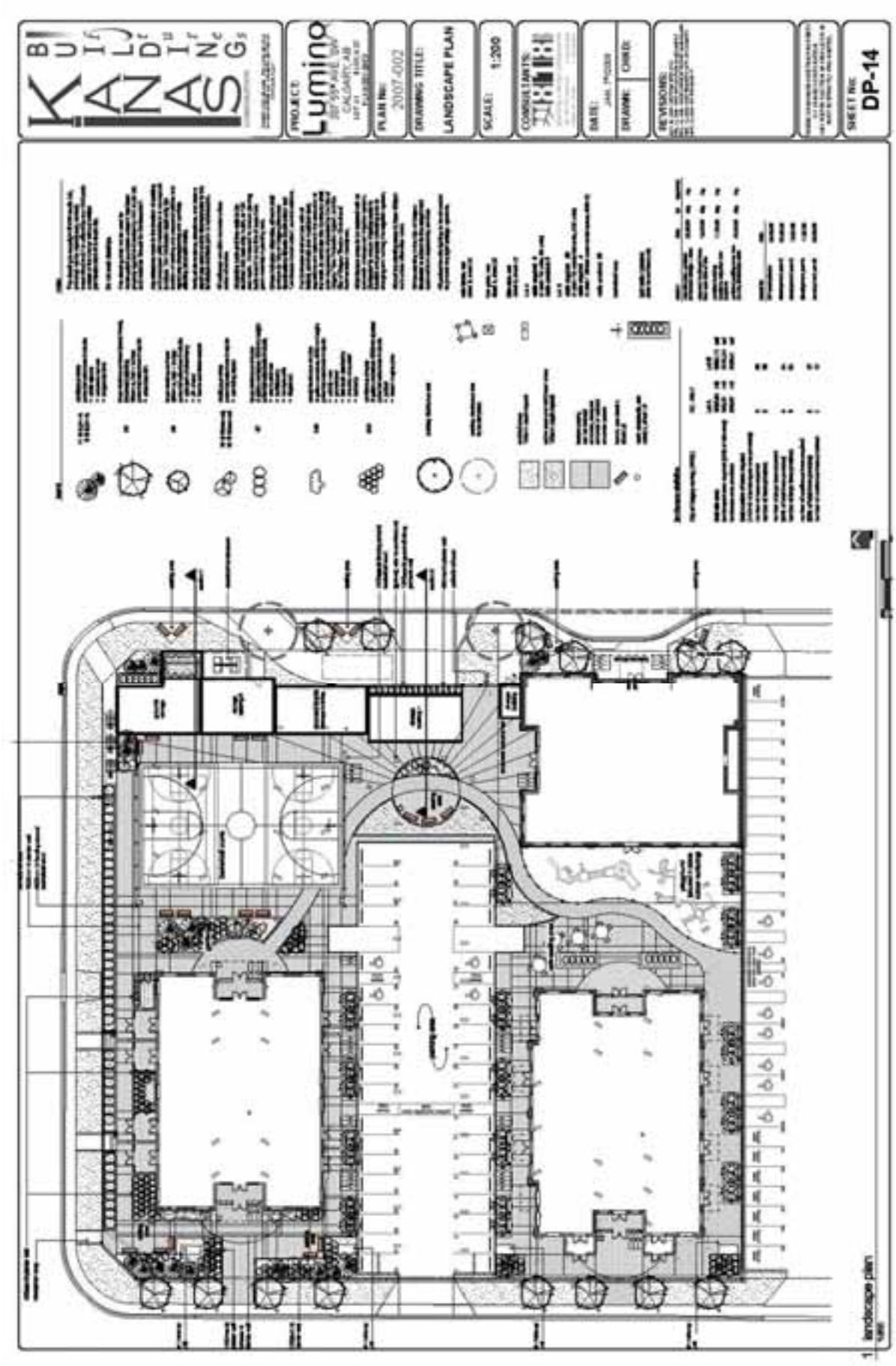
REVISIONS:

SHEET No: DP-10


PROJECT:
Lumino
CALGARY, AB
PLAN No:
2007-002
DRAWING TITLE:
PROPOSED PARKADE PLAN
SCALE:
1:200
CONSULTANTS:
DATE:
DRAWN:
CHKD:
DW
REVISIONS:
SHEET No:
DP-11
BUILDING A
EXISTING PARKADE
68th AVENUE S.W.
7th STREET S.W.
2nd STREET S.W.


PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
PROPOSED PLAZA PARKING PLAN
SCALE:
1:200
CONSULTANTS:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-12
PROPOSED BUILDING A
PROPOSED BUILDING B
PROPOSED BUILDING C
PROPOSED PLAZA PARKING
EXISTING PLAZA PARKING


KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
PROPOSED SITE GRADING PLAN
SCALE:
1:200
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-13
BUILDING A
BUILDING B
BUILDING C
EXISTING PLAZA PARKING


KASIAS
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: LANDSCAPE PLAN
SCALE: 1:200
DRAWN:
CHKD:
SHEET No: DP-14
1 landscape plan

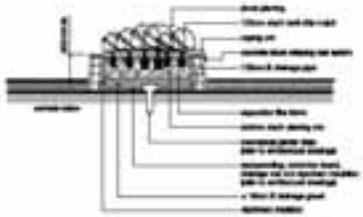
1 bench

2 trash receptacle

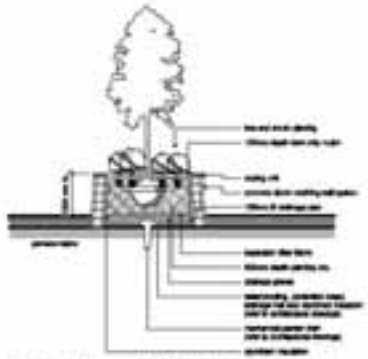
3 cafe table

4 tree grate

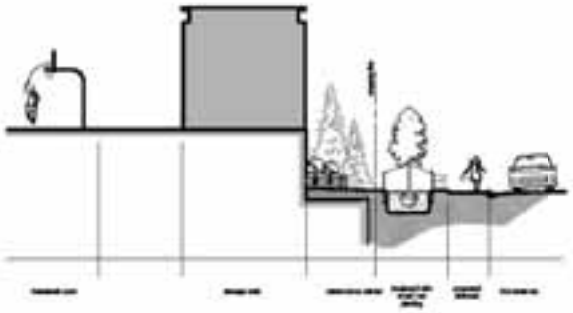
5 bike rack



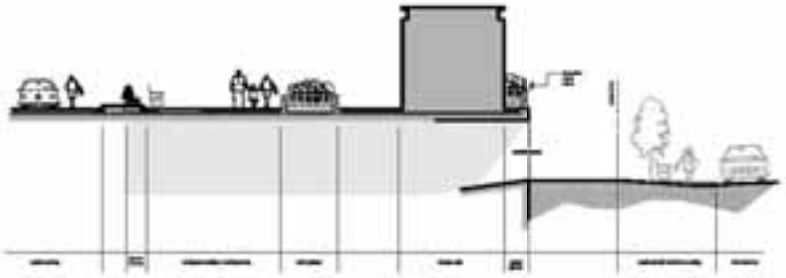
6 typical shrub planter over parkade



7 typical tree and shrub planter over parkade



8 section 1



9 section 2

KANAS BUILDINGS

PROJECT: Lumino

PLAN No: 2007-002

DRAWING TITLE: LANDSCAPE PLAN

SCALE:

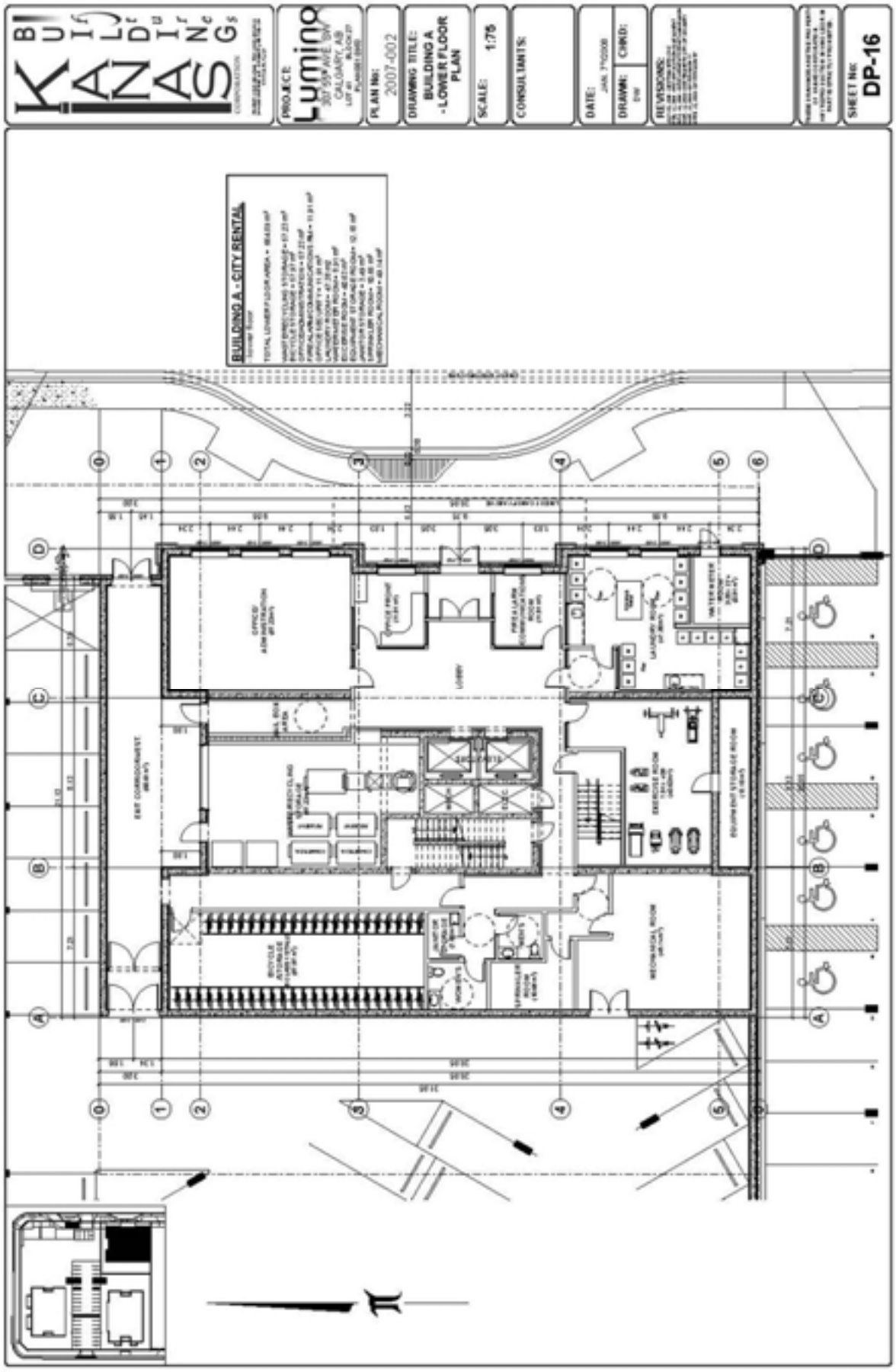
CONSULTANTS:

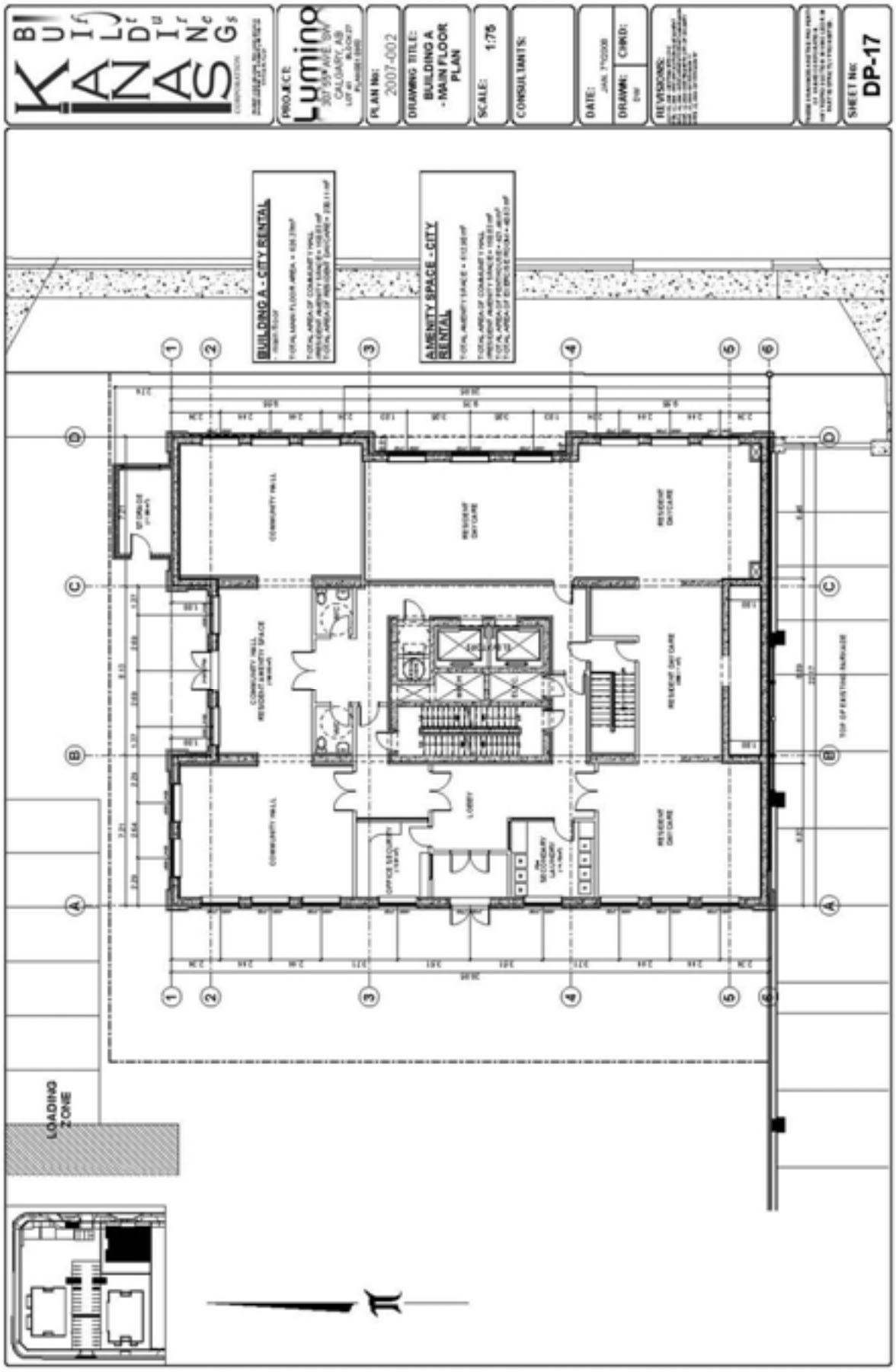
DATE:

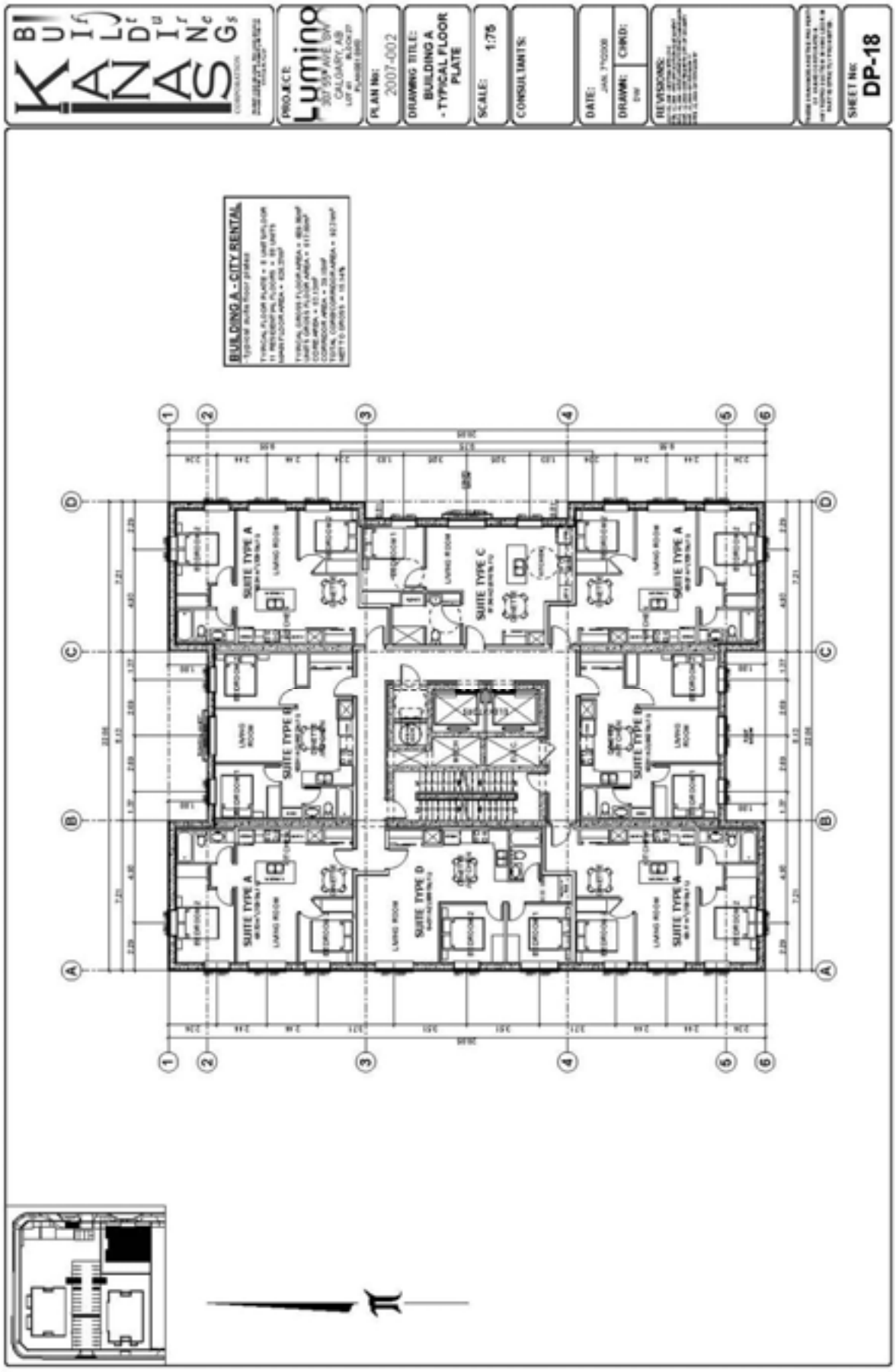
DRAWN: | CHKD:

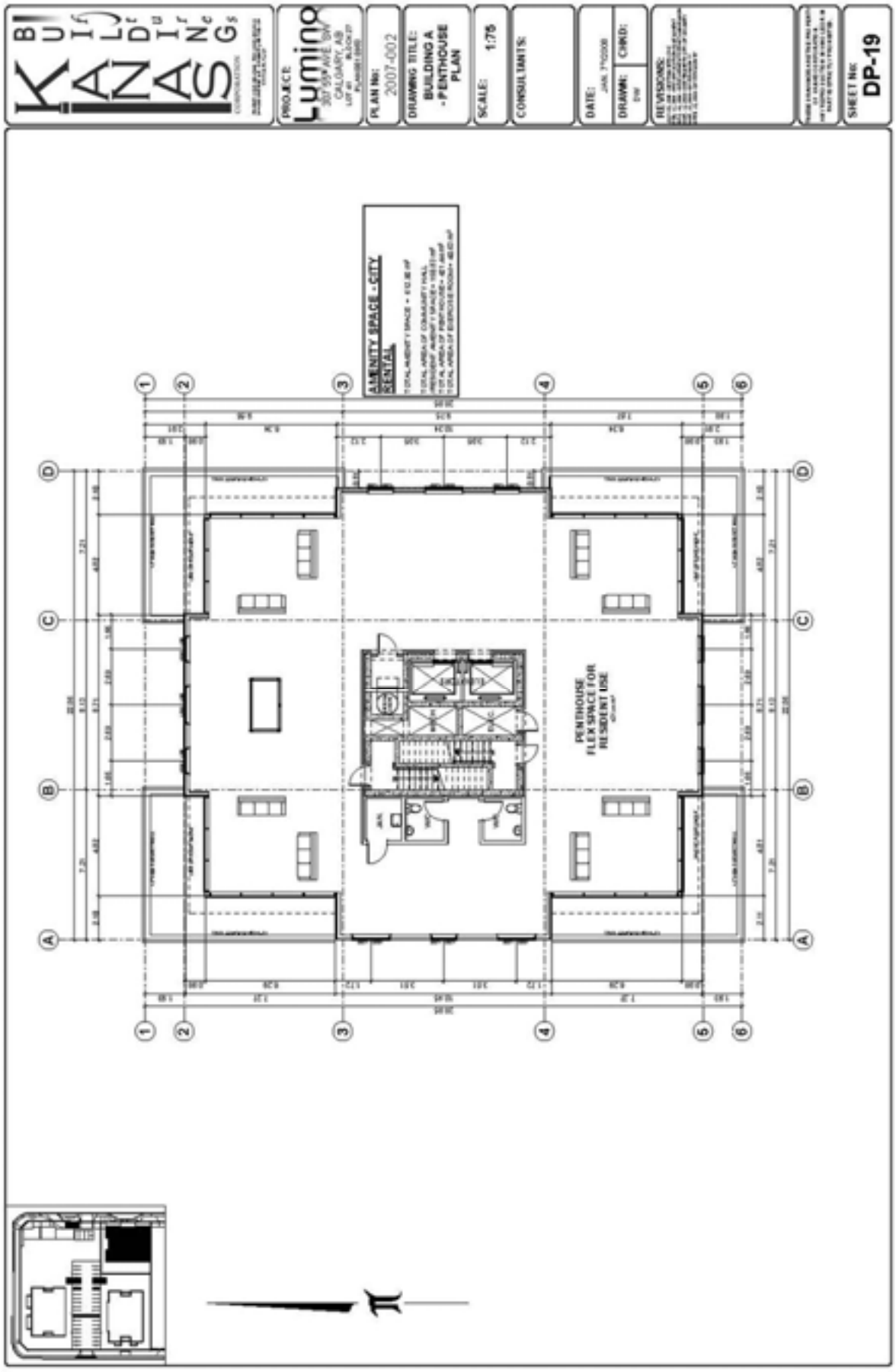
REVISIONS:

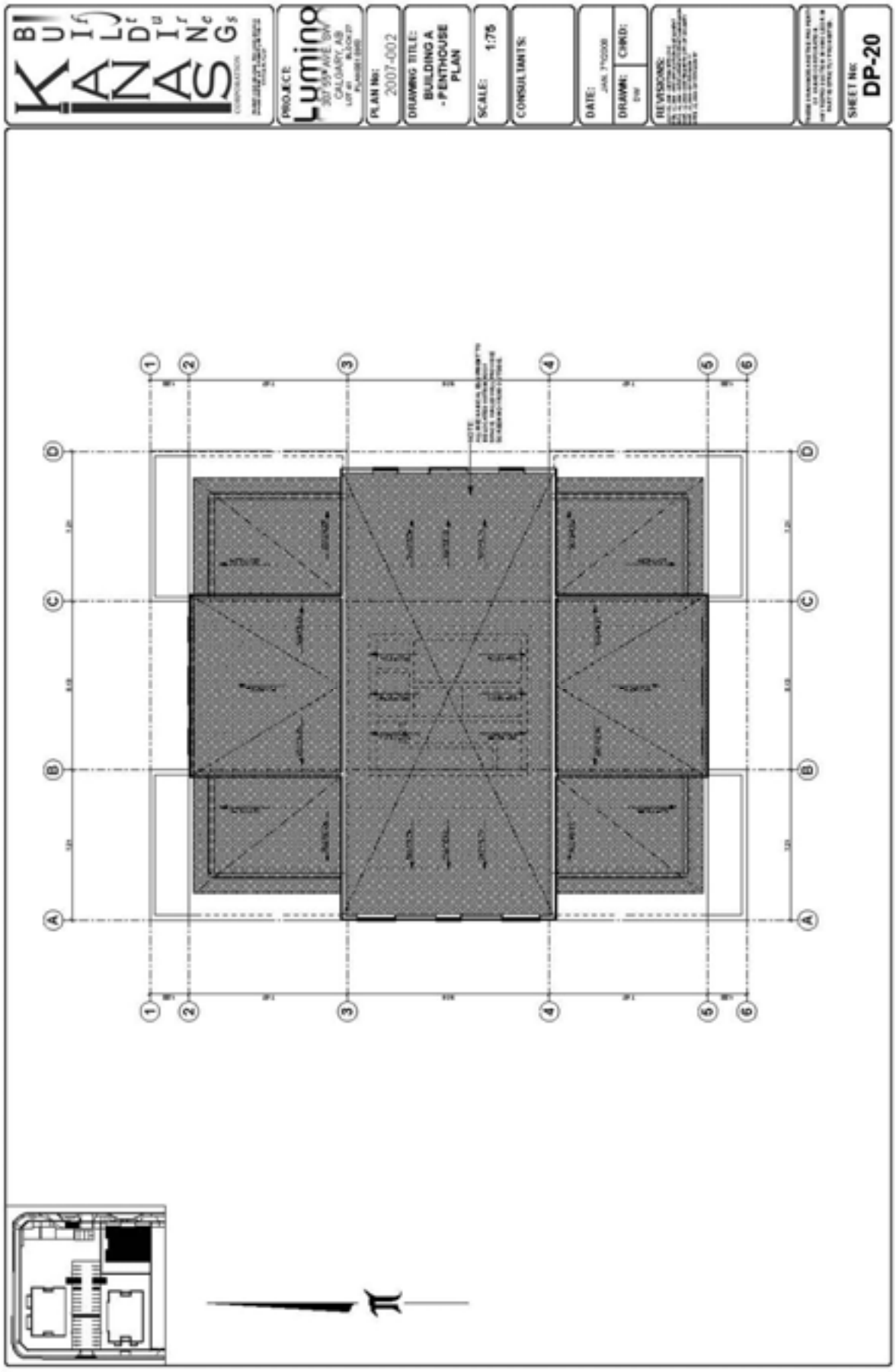
SHEET No: DP-15

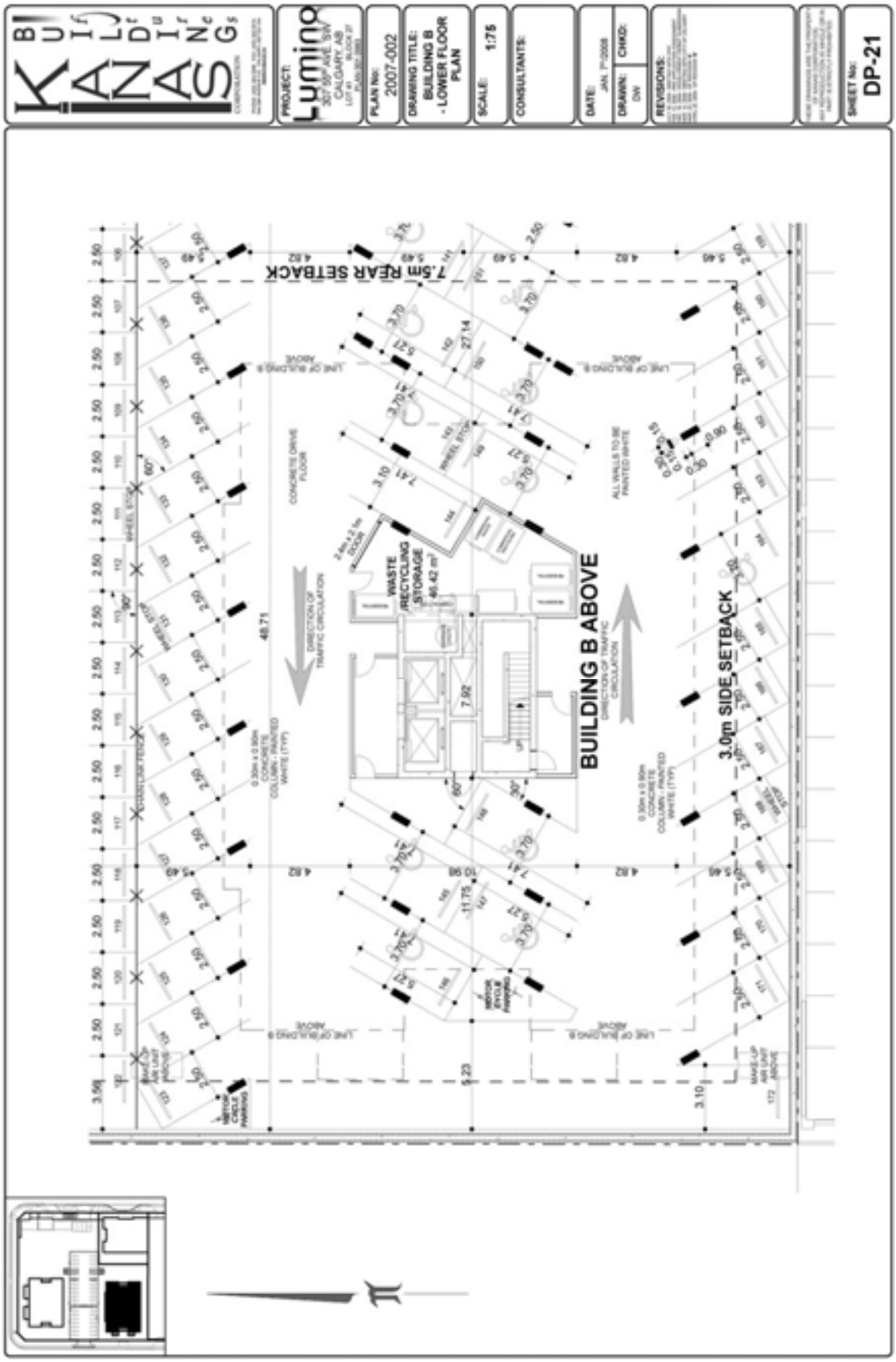

KASIAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING A
-LOWER FLOOR
PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-16
BUILDING A - CITY RENTAL

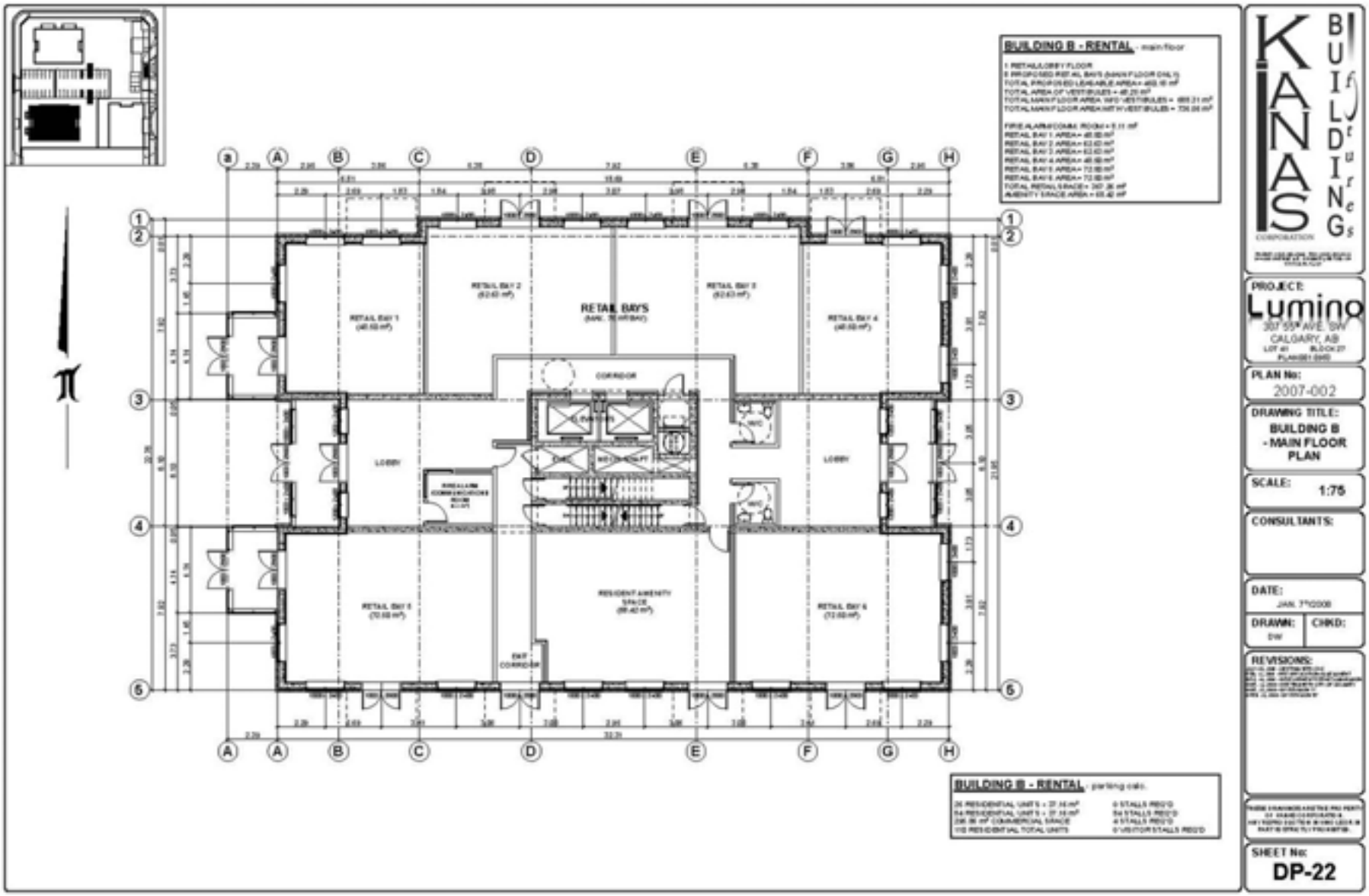

KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING A
- MAIN FLOOR
PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-17
BUILDING A - CITY RENTAL
AMENITY SPACE - CITY
RENTAL
LOADING
ZONE

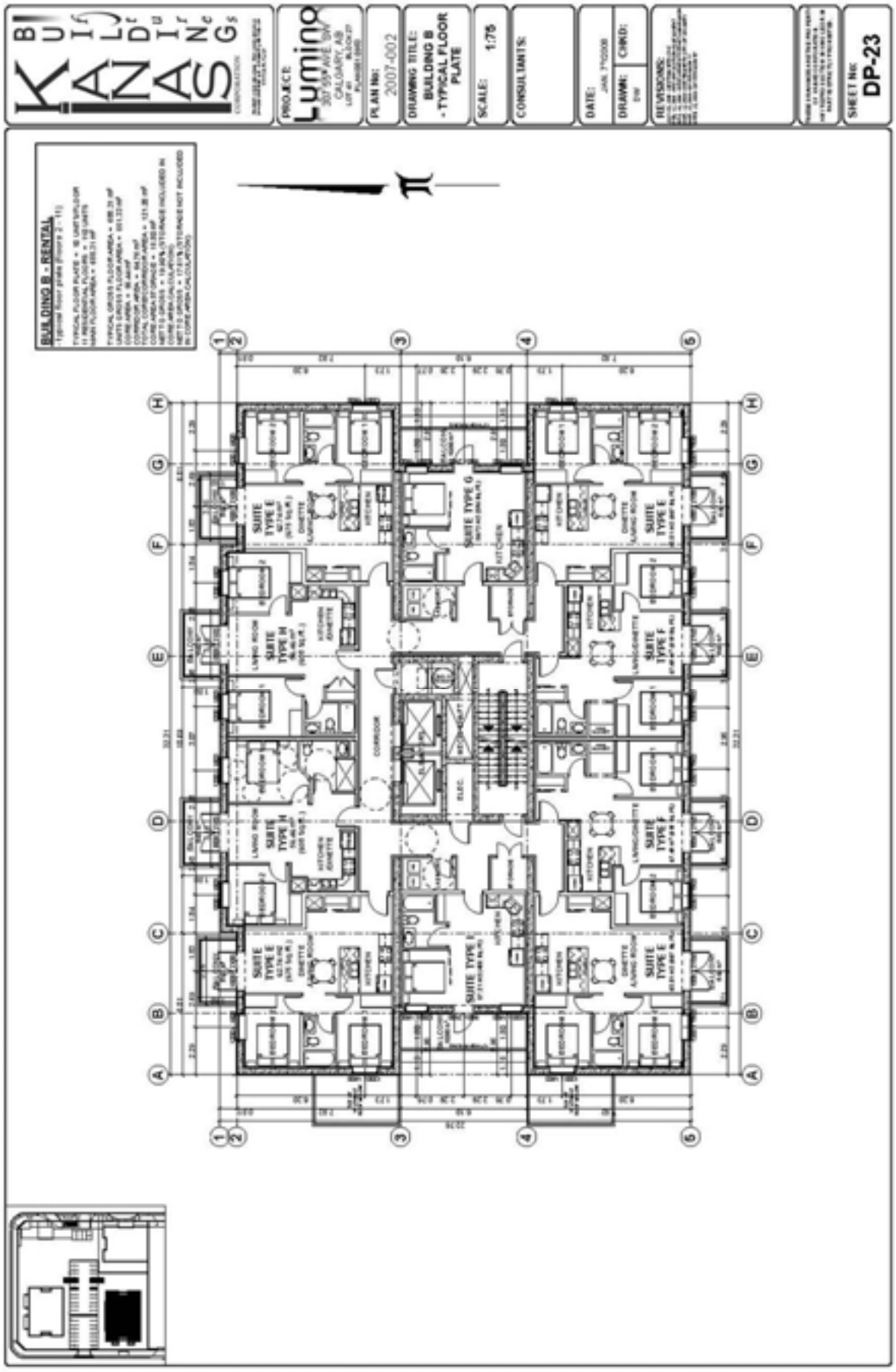

BUILDING A - CITY RENTAL
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING A
- TYPICAL FLOOR PLATE
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-18
SUITE TYPE A
SUITE TYPE C
SUITE TYPE B
SUITE TYPE D

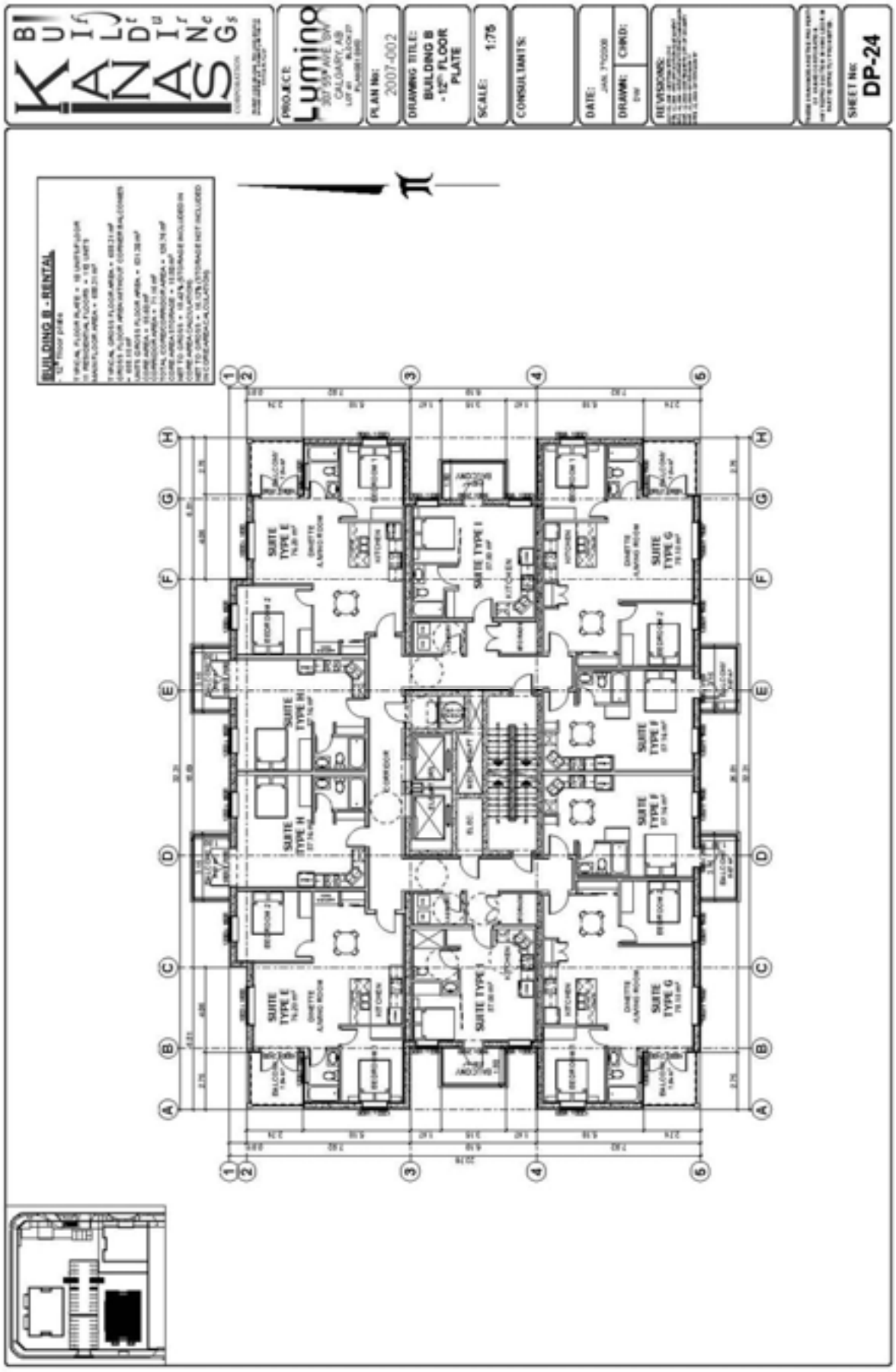

BUILDING A
PENTHOUSE PLAN
SCALE: 1:75
SHEET No: DP-19
AMENITY SPACE = CITY RENTAL
PENTHOUSE FLEX SPACE FOR RESIDENT USE

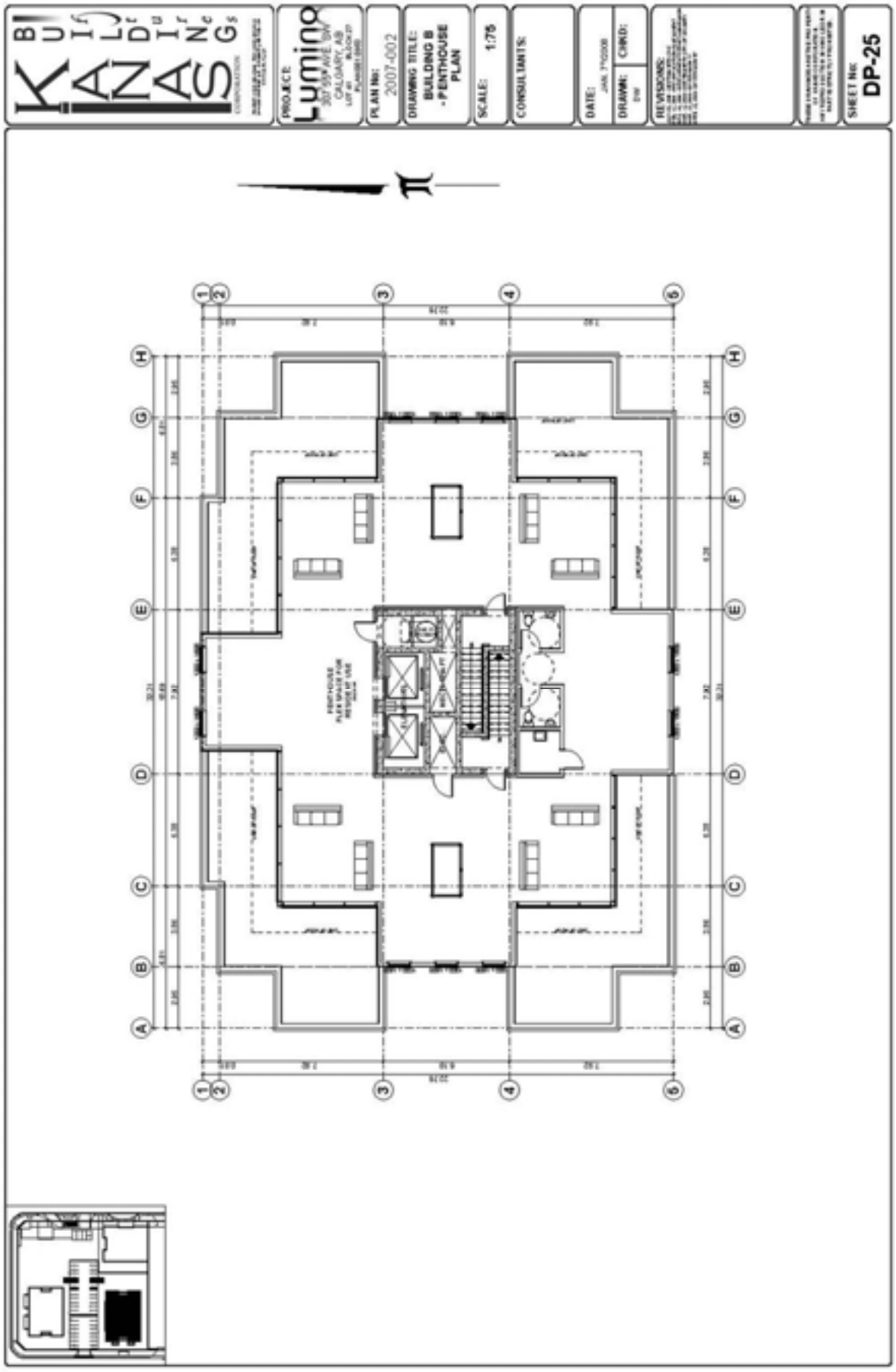

KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING A
- PENTHOUSE
PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-20

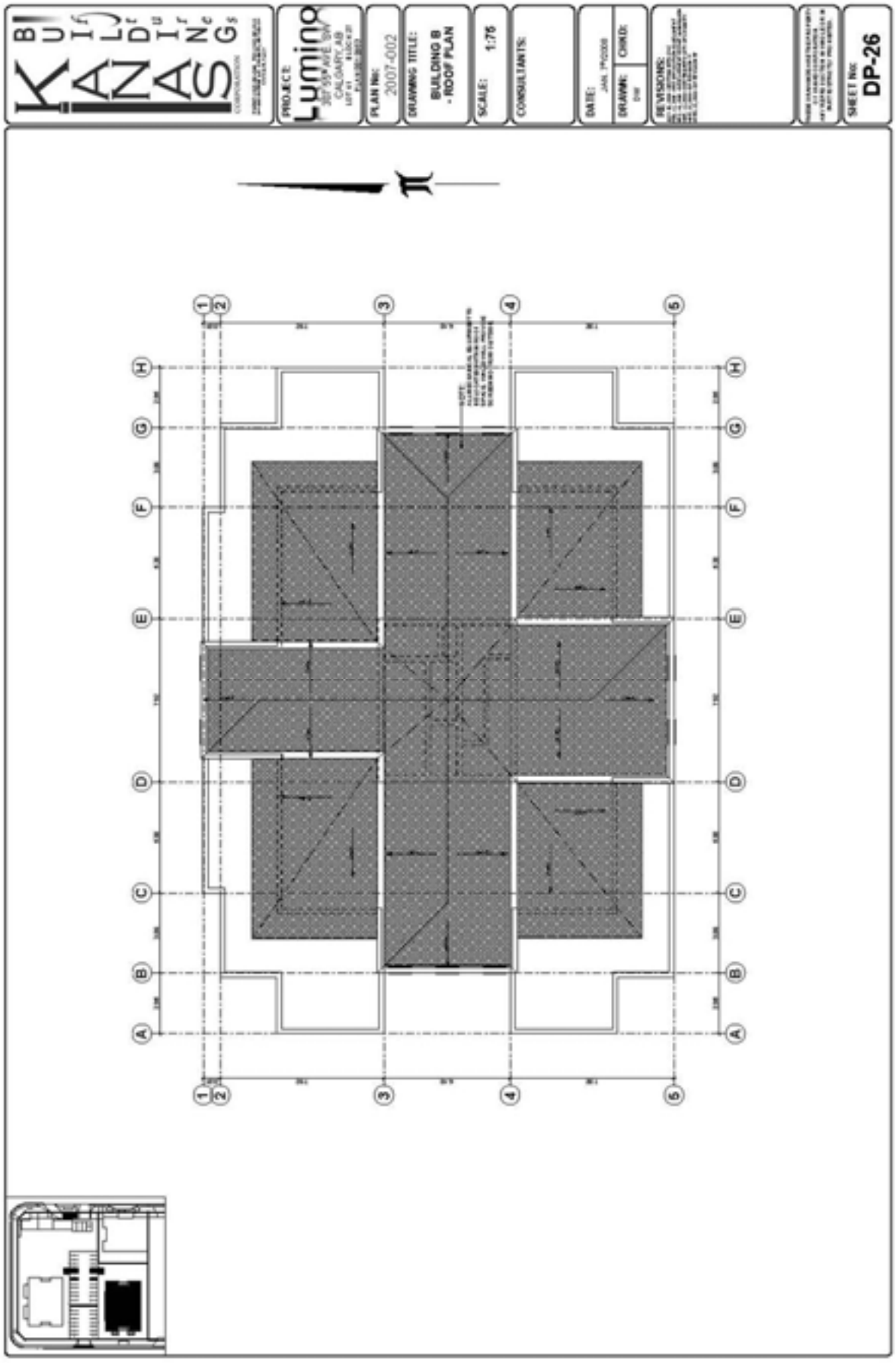

KANAS
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: BUILDING B - LOWER FLOOR PLAN
SCALE: 1:75
CONSULTANTS:
DATE: JAN. 7th 2008
DRAWN: DW
CHKD:
REVISIONS:
SHEET No: DP-21
7.5m REAR SETBACK
BUILDING B ABOVE
3.0m SIDE SETBACK
WASTE RECYCLING STORAGE 46.42 m²
CONCRETE DRIVE FLOOR
ALL WALLS TO BE PAINTED WHITE
DIRECTION OF TRAFFIC CIRCULATION
LINE OF BUILDING B ABOVE
MAKE-UP AIR UNIT ABOVE
48.71
7.92
27.14
11.75

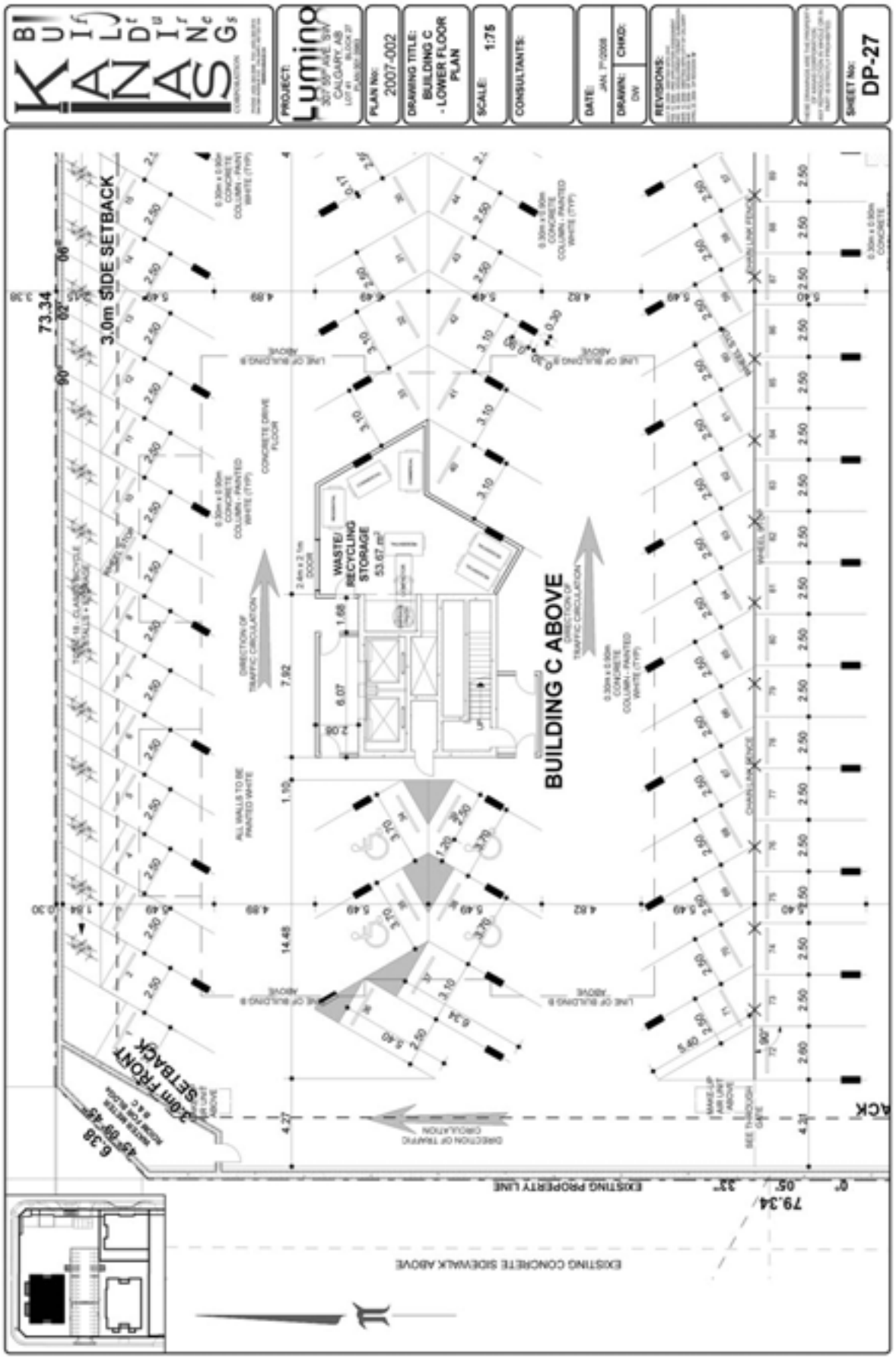

BUILDING B - RENTAL - main floor
RETAIL BAY 1
RETAIL BAY 2
RETAIL BAYS
RETAIL BAY 3
RETAIL BAY 4
CORRIDOR
LOBBY
LOBBY
RETAIL BAY 5
RESIDENT AMENITY SPACE
RETAIL BAY 6
EXIT CORRIDOR
BUILDING B - RENTAL - parking calc.
KANAS BUILDINGS
PROJECT:
Lumino
337 55th AVE. SW
CALGARY, AB
PLAN No:
2007-002
DRAWING TITLE:
BUILDING B - MAIN FLOOR PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
JAN. 7TH2008
DRAWN:
DW
CHKD:
REVISIONS:
SHEET No:
DP-22

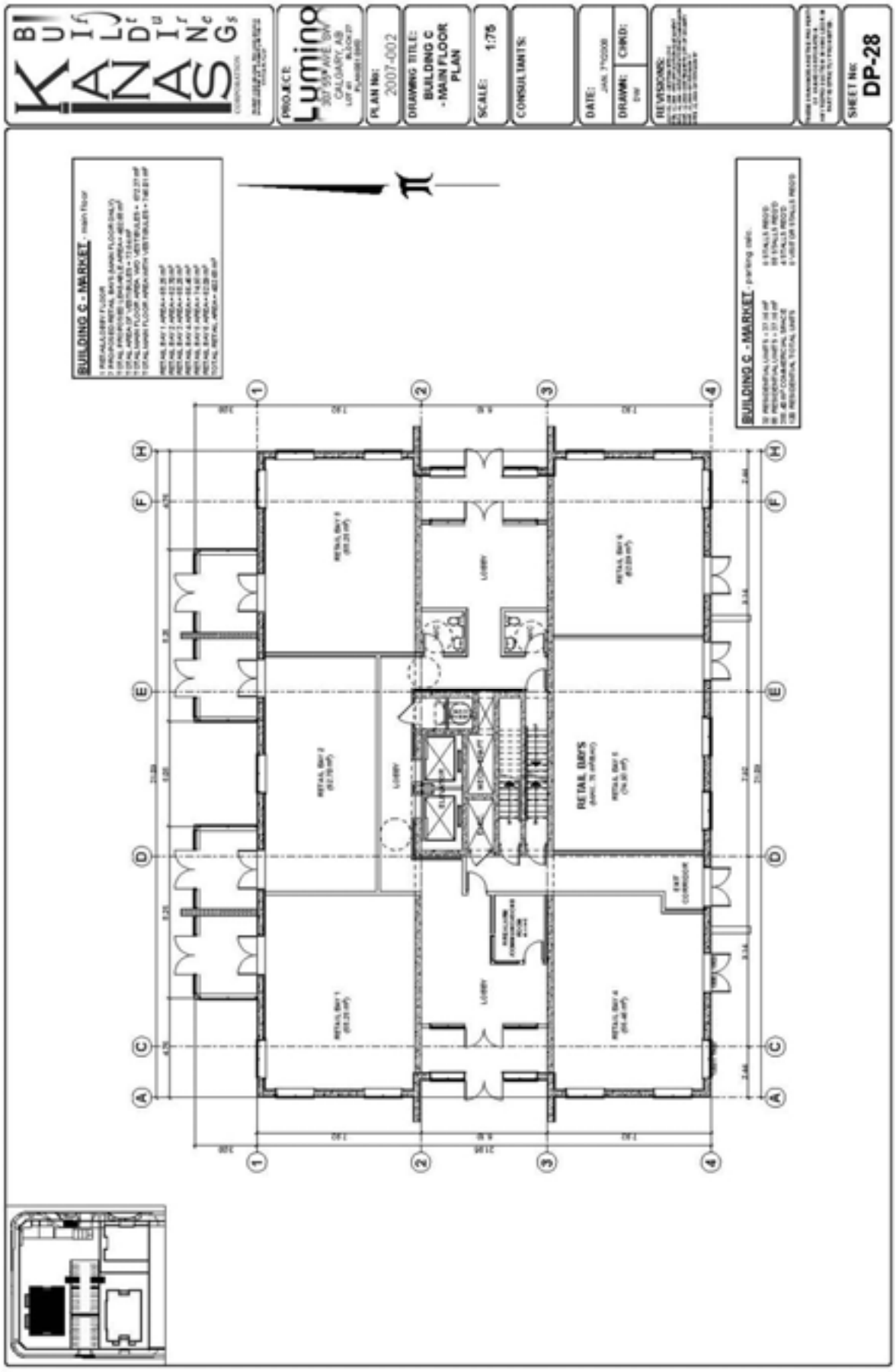

BUILDING
KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING B
- TYPICAL FLOOR PLATE
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-23
BUILDING B - RENTAL
SUITE TYPE E
SUITE TYPE G
SUITE TYPE H
SUITE TYPE F
KITCHEN
LIVING ROOM
BEDROOM
CORRIDOR
ELEC.

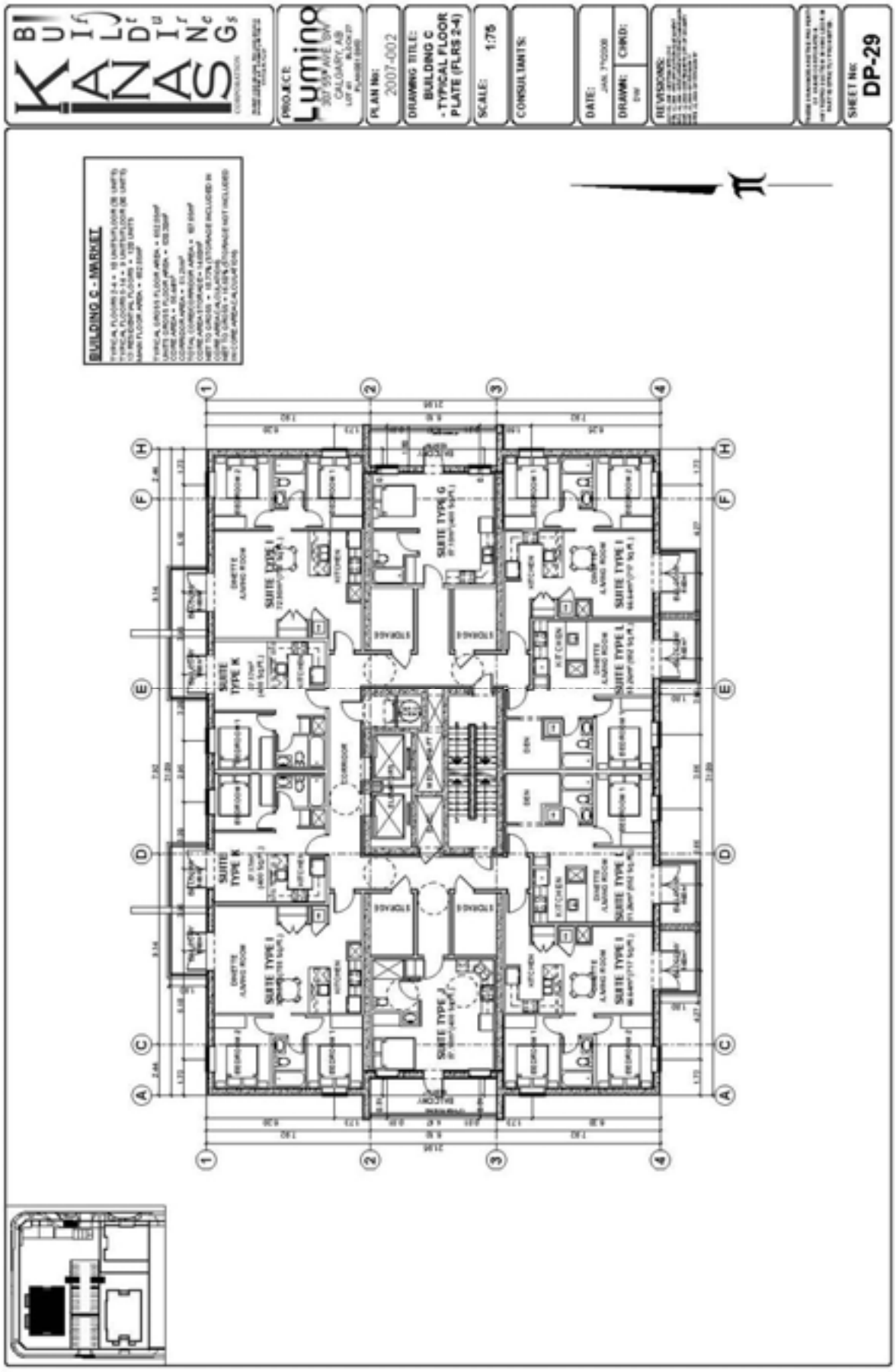

KANAS
PROJECT:
Lumino
DRAWING TITLE:
BUILDING B
- 12TH FLOOR
PLATE
SCALE:
1:75
SHEET No:
DP-24
BUILDING B - RENTAL
SUITE TYPE E
SUITE TYPE I
SUITE TYPE G
SUITE TYPE H
SUITE TYPE F

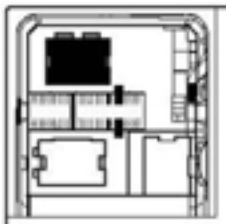

KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING B
- PENTHOUSE
PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-25

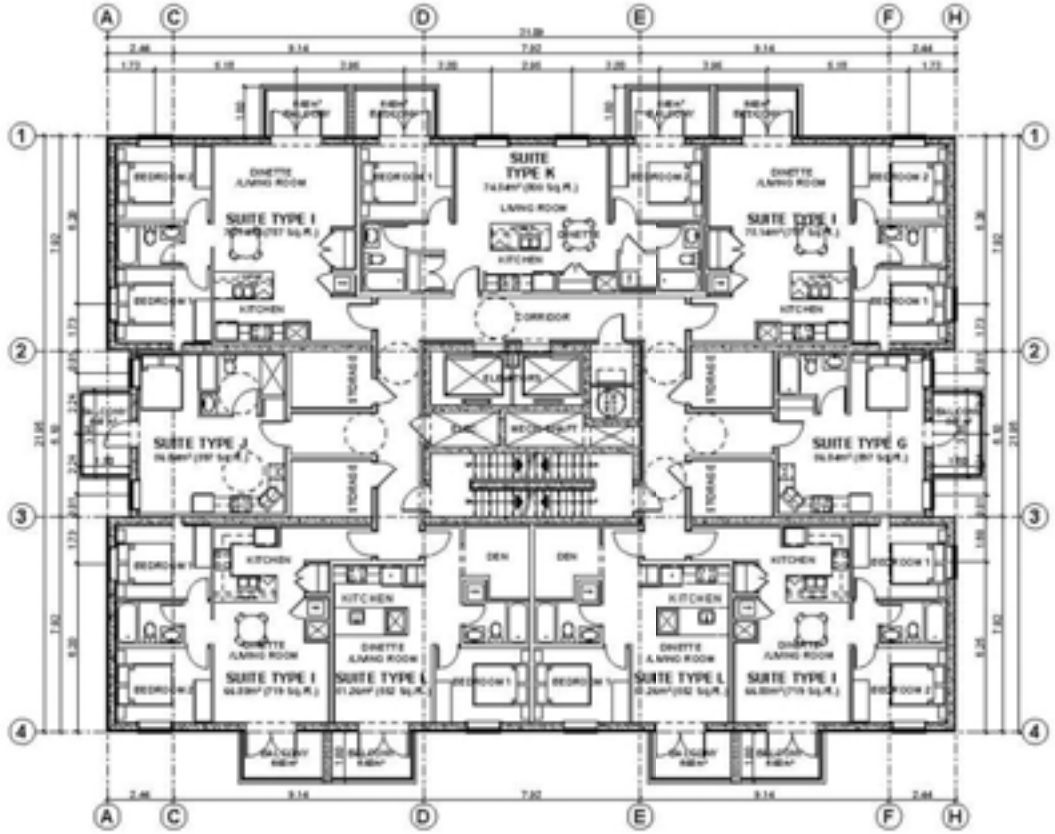

BUILDING DESIGNS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING B
- ROOF PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-26


KANAS
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: BUILDING C - LOWER FLOOR PLAN
SCALE: 1:75
CONSULTANTS:
DATE: JAN. 7th/2008
DRAWN: DW
CHKD:
REVISIONS:
SHEET No: DP-27
3.0m SIDE SETBACK
73.34
BUILDING C ABOVE
WASTE/ RECYCLING STORAGE 53.67m²
CONCRETE DRIVE FLOOR
ALL WALLS TO BE PAINTED WHITE
DIRECTION OF TRAFFIC CIRCULATION
EXISTING PROPERTY LINE
EXISTING CONCRETE SIDEWALK ABOVE
3.0m FRONT SETBACK
79.34


BUILDING C - MARKET - main floor
BUILDING C - MARKET - parking calc.
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING C
- MAIN FLOOR
PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-28
RETAIL DAYS
LOBBY


KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING C
- TYPICAL FLOOR
PLATE (FLRS 2-4)
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-29
BUILDING C - MARKET
SUITE TYPE G
SUITE TYPE K
SUITE TYPE I
SUITE TYPE J
KITCHEN
LIVING ROOM
BEDROOM
DEN
STORAGE
CORRIDOR
BALCONY





BUILDING C - MARKET

TYPICAL FLOORS 2-4 = 10 UNITS/FLOOR (30 UNITS)
TYPICAL FLOORS 5-14 = 9 UNITS/FLOOR (90 UNITS)
C RESIDENTIAL FLOORS = 120 UNITS
MAIN FLOOR AREA = 672.37m²

TYPICAL GROSS FLOOR AREA = 672.37m²
UNITS GROSS FLOOR AREA = 535.36m²
CORE AREA = 56.44m²
CORRIDOR AREA = 51.21m²
TOTAL CORE/CORRIDOR AREA = 107.65m²
CORE AREA-STORAGE = 14.60m²
NET TO GROSS = 16.73% (STORAGE INCLUDED IN CORE AREA CALCULATION)
NET TO GROSS = 18.02% (STORAGE NOT INCLUDED IN CORE AREA CALCULATION)

KANAS BUILDINGS for future

PROJECT:
Lumino
307 55th AVE. SW
CALGARY, AB
LOT 41 BLOCK 27
PLAN 081 0440

PLAN No:
2007-002

DRAWING TITLE:
BUILDING C
- TYPICAL FLOOR PLATE (FLRS 5-14)

SCALE: 1:75

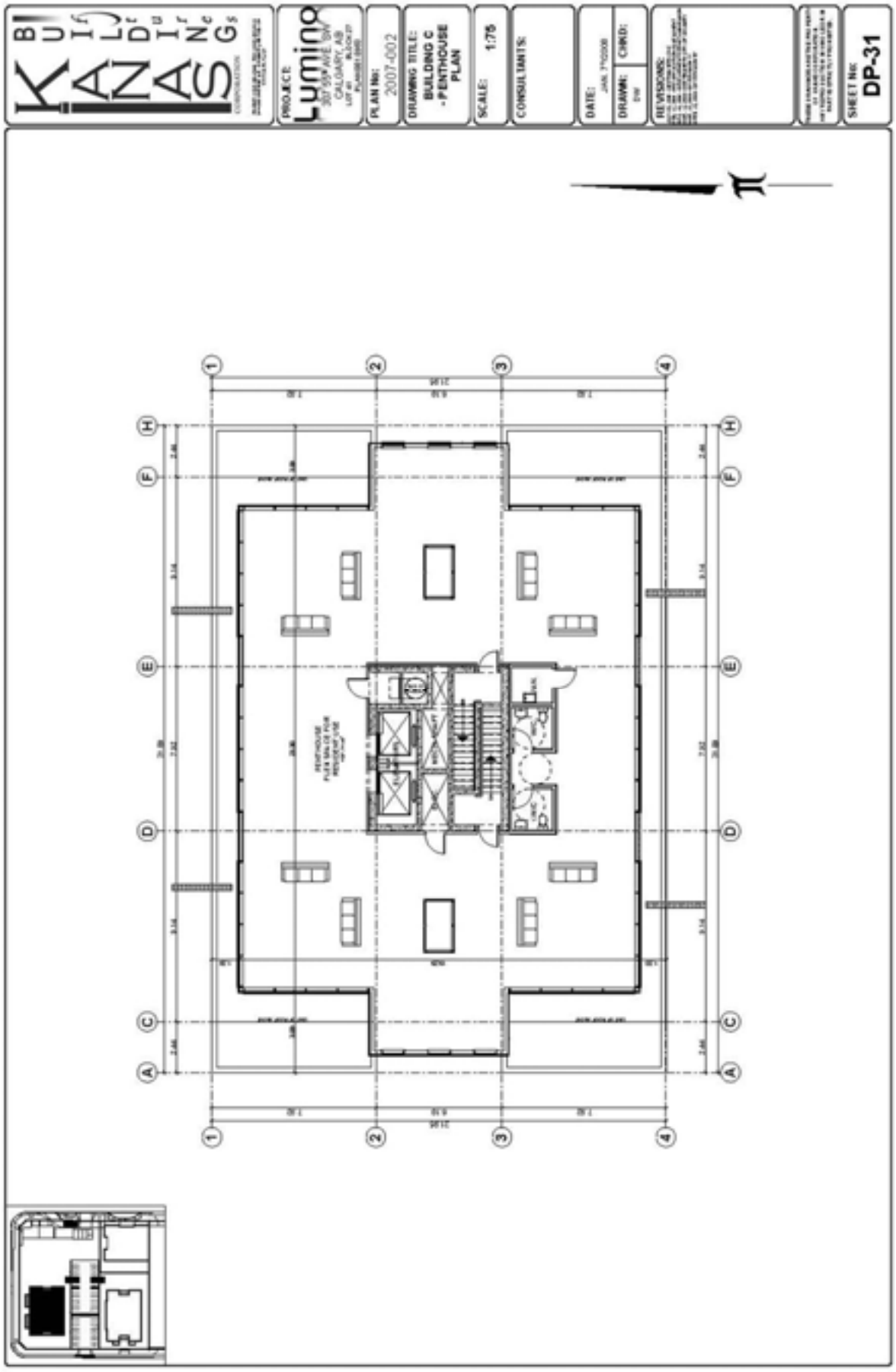
CONSULTANTS:

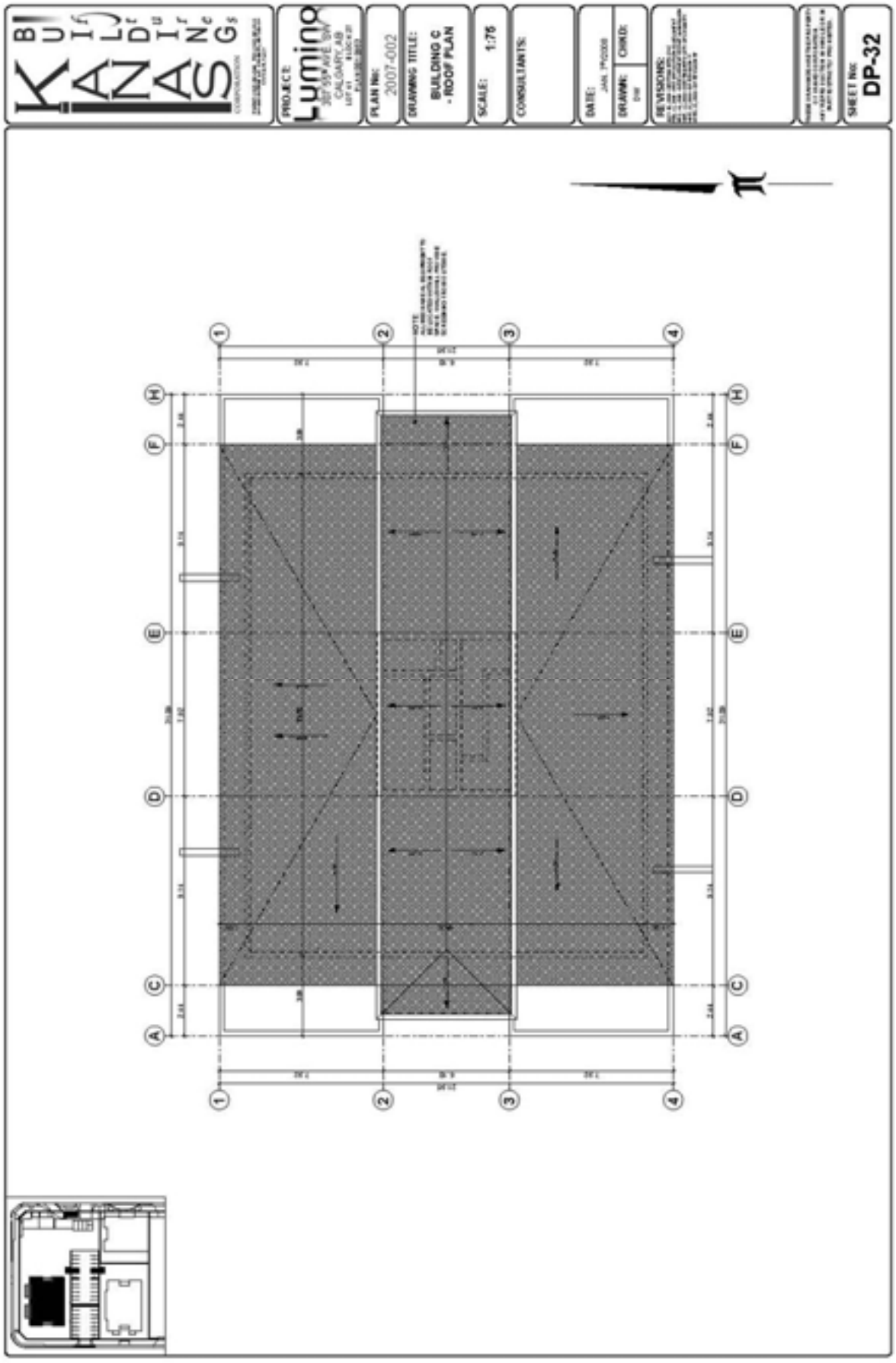
DATE: JAN. 7TH 2008

DRAWN: DW | CHKD:

REVISIONS:

SHEET No:
DP-30


BUILDING IDEAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING C
- PENTHOUSE
PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-31


KANAS BUILDING
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING C
- ROOF PLAN
SCALE:
1:75
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-32

BUILDING DESIGNS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING A
- ELEVATIONS
SCALE:
1:100
CONSULTANTS:
DATE:
JAN. 7th/2008
DRAWN:
DW
CHKD:
REVISIONS:
SHEET No:
DP-33
BUILDING A - RIGHT/NORTH ELEVATION
BUILDING A - FRONT/EAST ELEVATION

KANAS CORPORATION
BUILDINGS of Futures

PROJECT:
Lumino
307 55th AVE. SW
CALGARY, AB
LOT 41 BLOCK 27
PLAN 901 0963

PLAN No:
2007-002

DRAWING TITLE:
BUILDING A
- ELEVATIONS

SCALE: 1:100

CONSULTANTS:

DATE:
JAN. 7th/2008

DRAWN: DW | CHKD:

REVISIONS:

SHEET No:
DP-34

BUILDING B - FRONT/NORTH ELEVATION
BUILDING B - LEFT/EAST ELEVATION
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING B
-ELEVATIONS
SCALE:
1:100
CONSULTANTS:
DATE:
JAN. 7th/2008
DRAWN:
DW
CHKD:
REVISIONS:
SHEET No:
DP-35

1 DP-36 BUILDING B - RIGHT/WEST ELEVATION

2 DP-36 BUILDING B - REAR/SOUTH ELEVATION

KANAS BUILDINGS CORPORATION

PROJECT: Lumino
307 55th AVE. SW
CALGARY, AB
LOT 41 BLOCK 27
PLAN 301 0963

PLAN No: 2007-002

DRAWING TITLE: BUILDING B - ELEVATIONS

SCALE: 1:100

CONSULTANTS:

DATE: JAN. 7th/2008

DRAWN: DW | CHKD:

REVISIONS:

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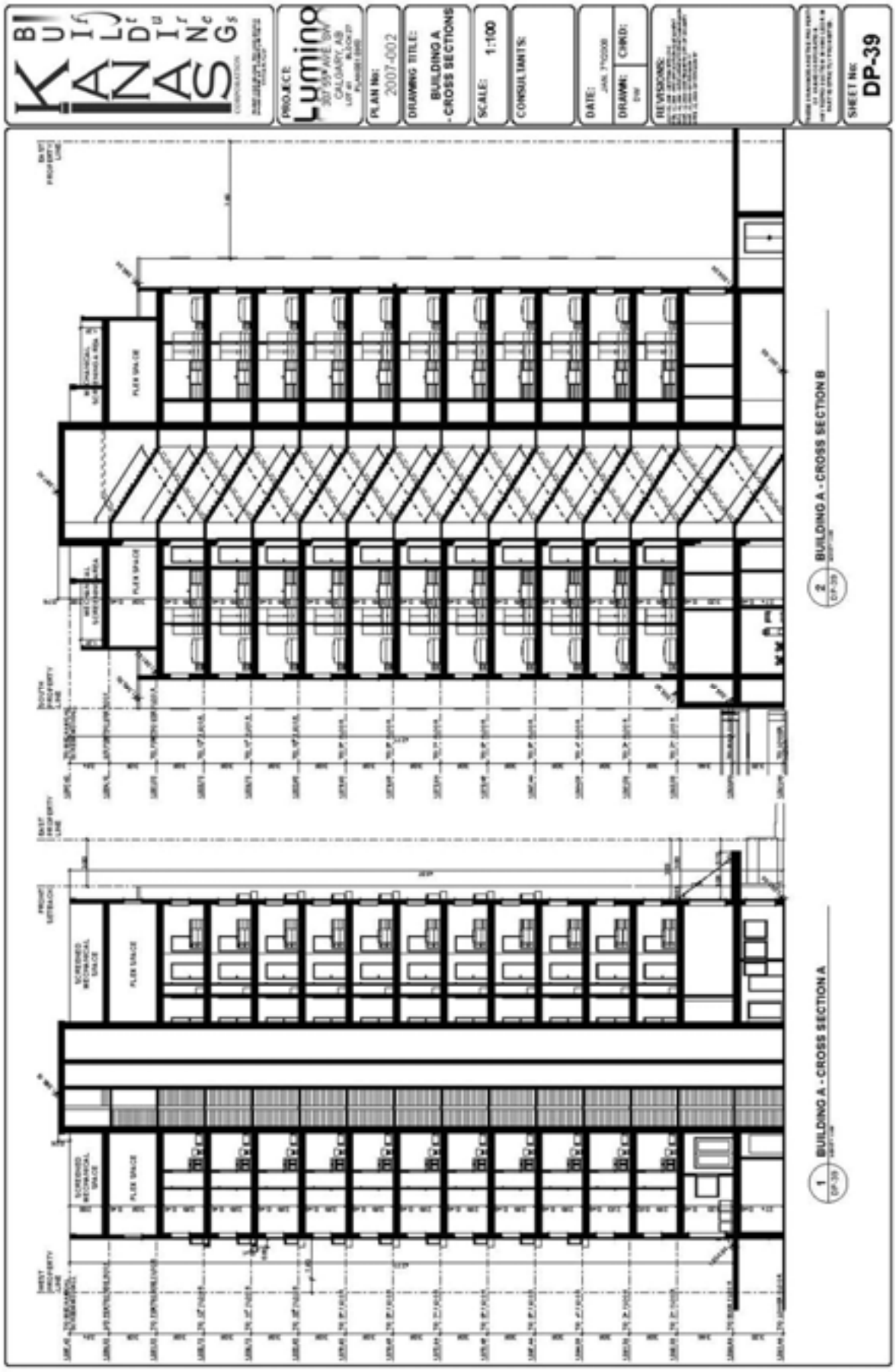
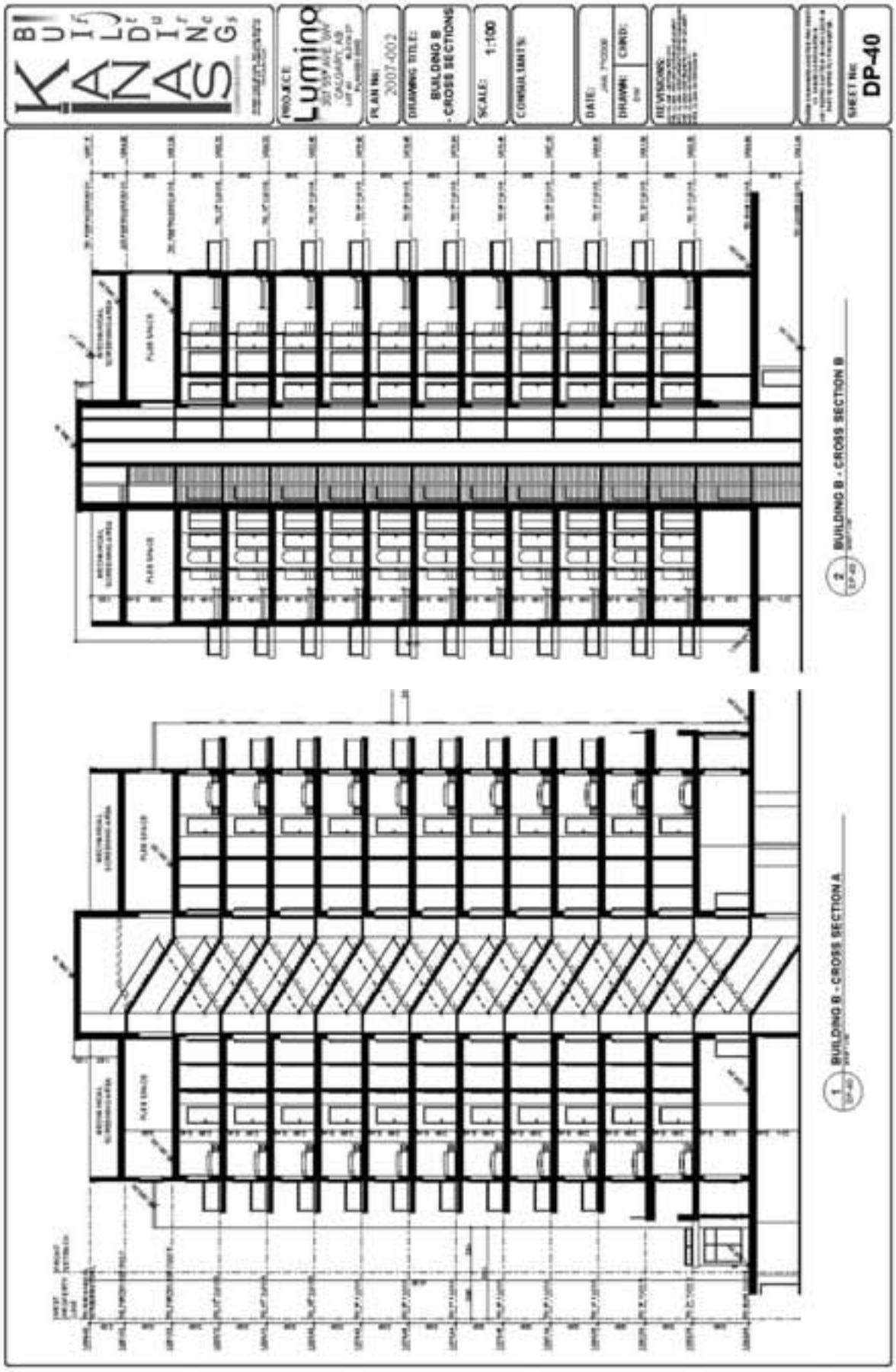
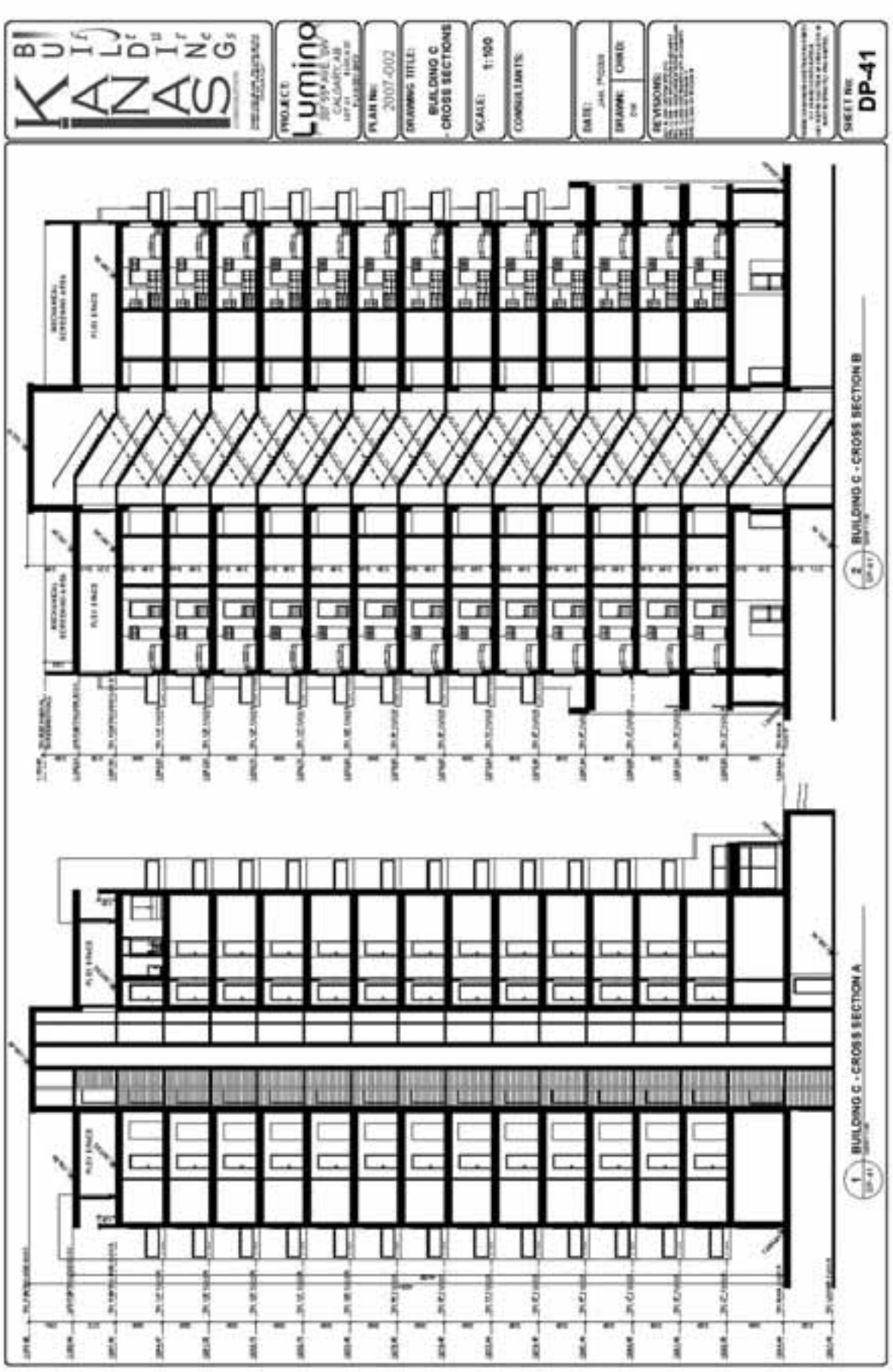
SHEET No: DP-36

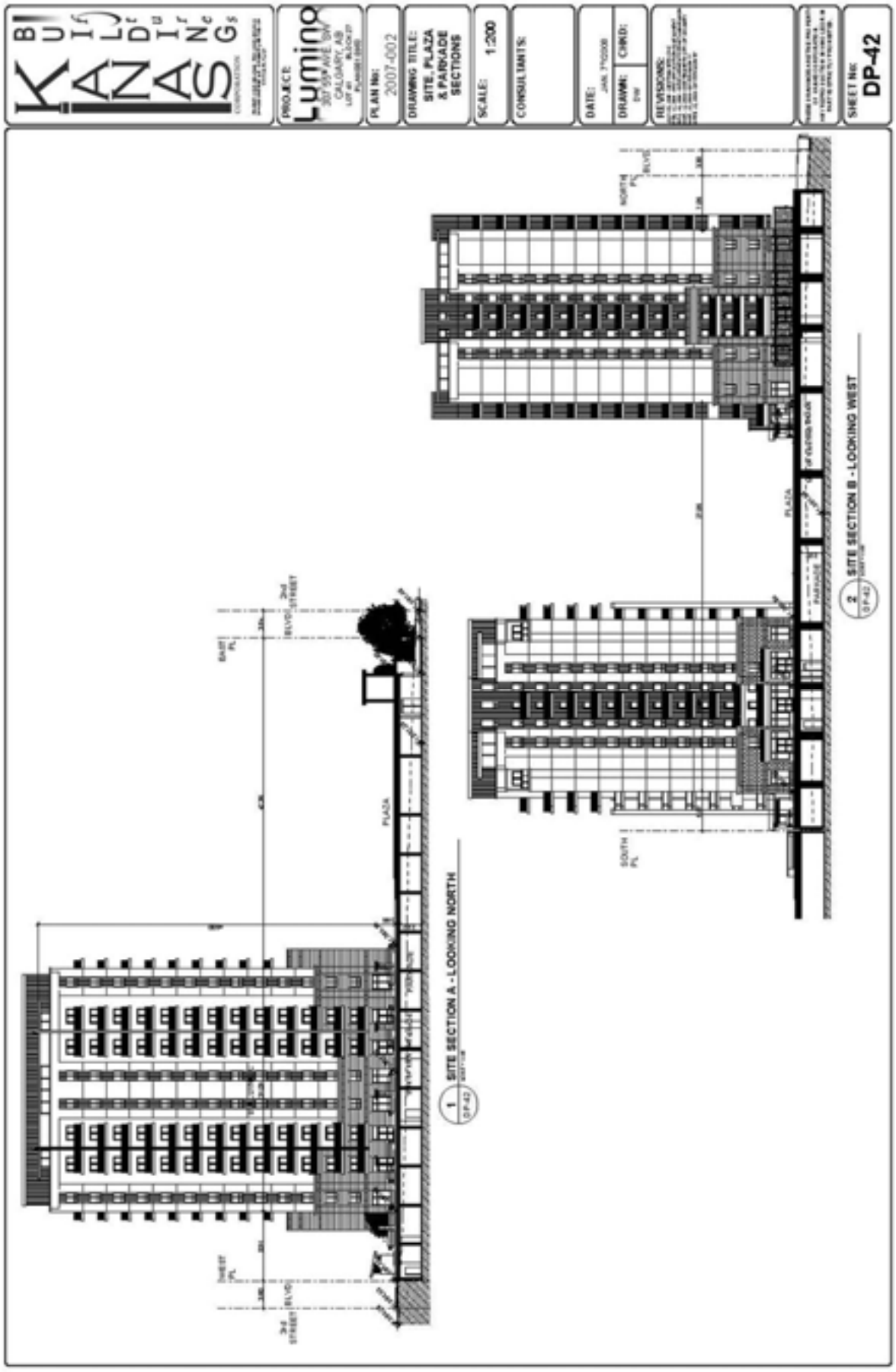
BUILDING C - FRONT/NORTH ELEVATION
BUILDING C - LEFT/EAST ELEVATION
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING C
- ELEVATIONS
SCALE:
1:100
CONSULTANTS:
DATE:
JAN. 7th/2008
DRAWN:
DW
CHKD:
REVISIONS:
SHEET No:
DP-37

KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING C
- ELEVATIONS
SCALE:
1:100
CONSULTANTS:
DATE:
JAN. 7th/2008
DRAWN:
DW
CHKD:
REVISIONS:
SHEET No:
DP-38
BUILDING C - REAR/SOUTH ELEVATION
BUILDING C - RIGHT/WEST ELEVATION

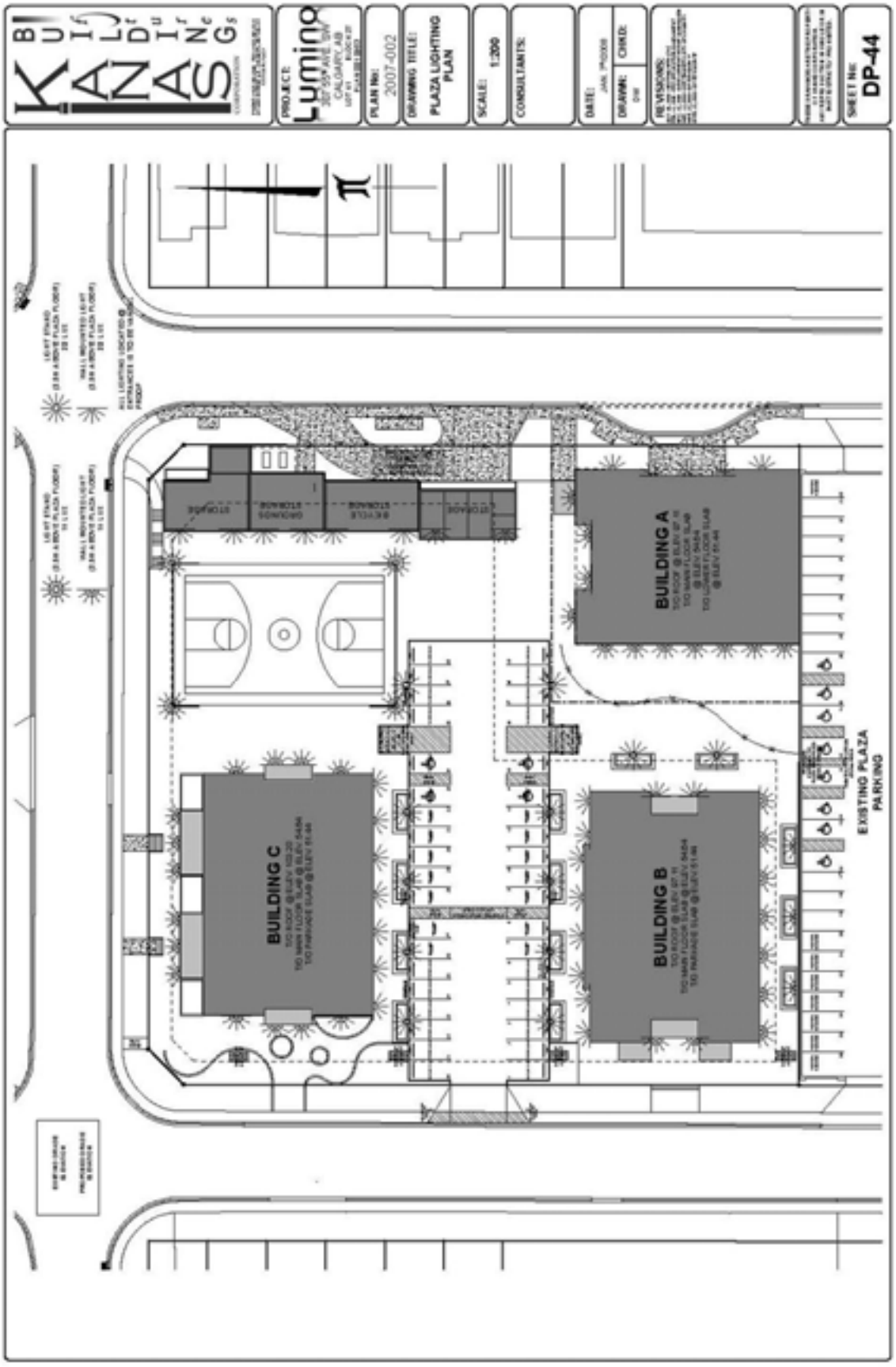

BUILDING A - CROSS SECTIONS
PROJECT:
Lumino
PLAN No:
2007-002
SCALE:
1:100
SHEET No:
DP-39
1 BUILDING A - CROSS SECTION A
2 BUILDING A - CROSS SECTION B

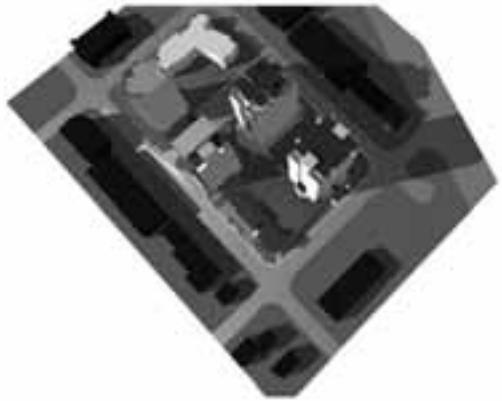

KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING B
- CROSS SECTIONS
SCALE:
1:100
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-40
BUILDING B - CROSS SECTION A
BUILDING B - CROSS SECTION B


KANAS
PROJECT:
Lumino
PLAN No:
2007-002
DRAWING TITLE:
BUILDING C
- CROSS SECTIONS
SCALE: 1:100
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No:
DP-41
1 BUILDING C - CROSS SECTION A
2 BUILDING C - CROSS SECTION B

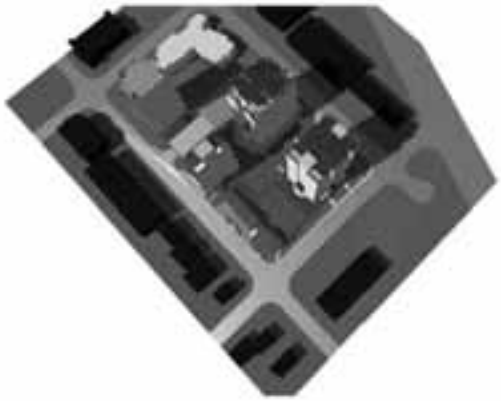

KASIAS BUILDING GROUP
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: SITE, PLAZA & PARKADE SECTIONS
SCALE: 1:200
CONSULTANTS:
DATE:
DRAWN:
CHKD:
REVISIONS:
SHEET No: DP-42
1 SITE SECTION A - LOOKING NORTH
2 SITE SECTION B - LOOKING WEST
PLAZA
PARKADE

KANAS
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: ACCESSORY BUILDINGS & STRUCTURES
SCALE: AS SHOWN
CONSULTANTS:
DATE: JAN. 7th/2008
DRAWN: DW
CHKD:
REVISIONS:
SHEET No: DP-43
1 PLAZA LEVEL PLANTERS
2 MAKE-UP AIR UNIT BUILDINGS
PROPOSED LOT A
PROPOSED BUILDING A
PROPOSED LOT A SITE AREA EXCHANGE FOR PLAYGROUND
2nd STREET S.W.
MECHANICAL ROOM
7.5m REAR SETBACK
7.5m SIDE SETBACK
PARKADE ENTRANCE/GARBAGE REMOVAL AREA
PROPOSED MUTUAL ACCESS AGREEMENT
SLOPE 2%

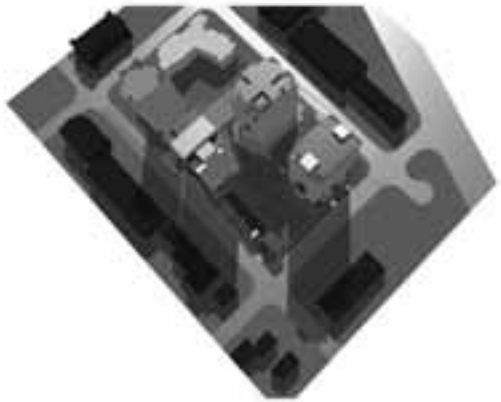

BUILDING A
BUILDING B
BUILDING C
EXISTING PLAZA PARKING
PROJECT: Lumino
PLAN No: 2007-002
DRAWING TITLE: PLAZA LIGHTING PLAN
SCALE: 1:200
CONSULTANTS:
DRAWN:
CHKD:
SHEET No: DP-44



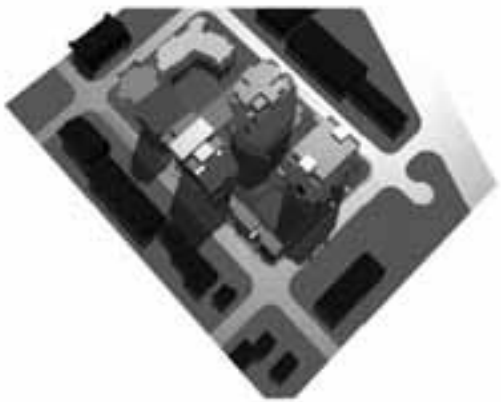
SEPT 21 - 10:00am



JUNE 21 - 10:00am



SEPT 21 - 4:00pm



JUNE 21 - 4:00pm

KANAS BUILDINGS

PROJECT:
Lumino
207 55th AVE. SW
CALGARY, AB

PLAN No:
2007-002

DRAWING TITLE:
SUN STUDY

SCALE:

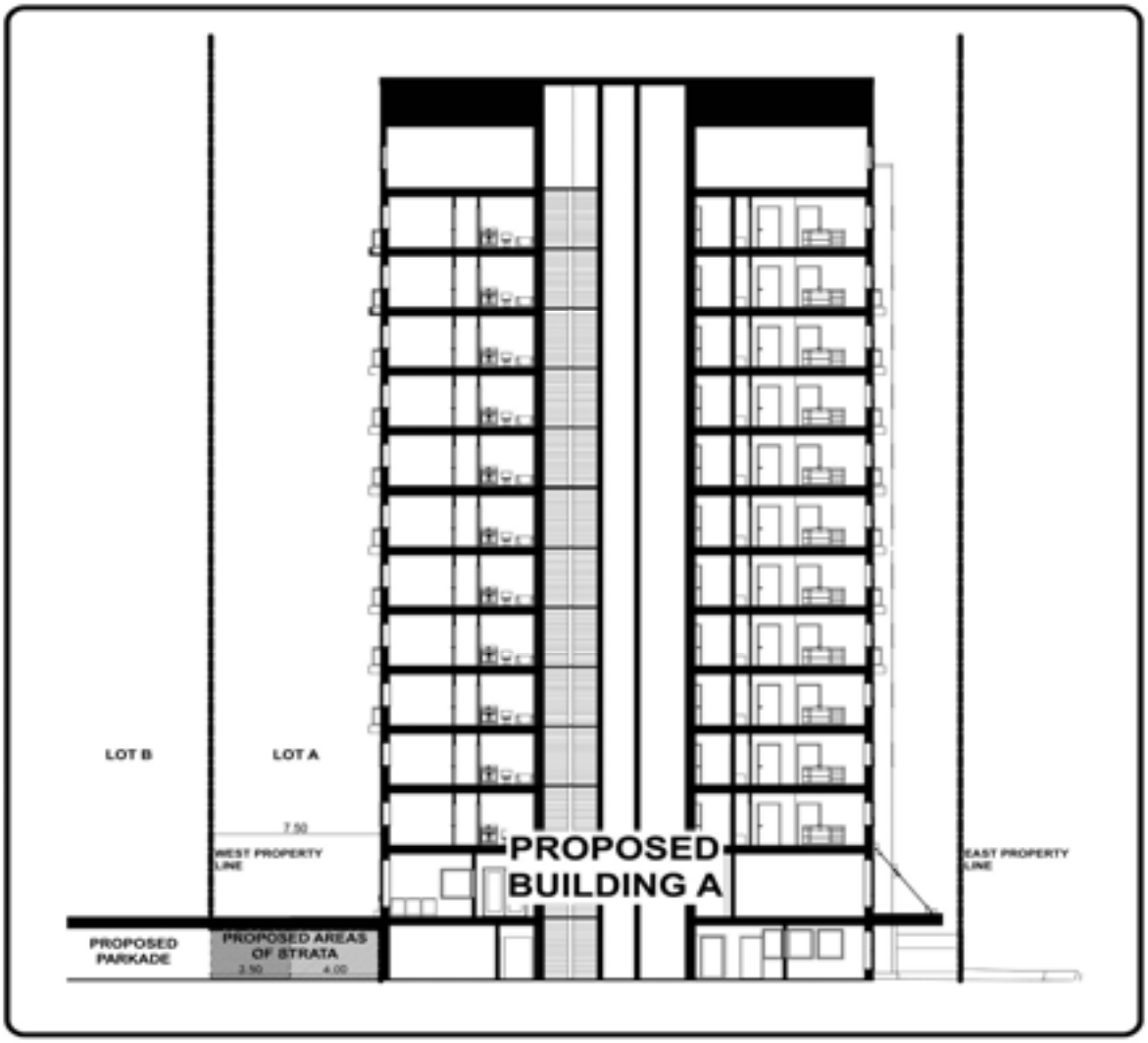
CONSULTANTS:

DATE:

DRAWN: | CHKD:

REVISIONS:

SHEET No:
DP-45



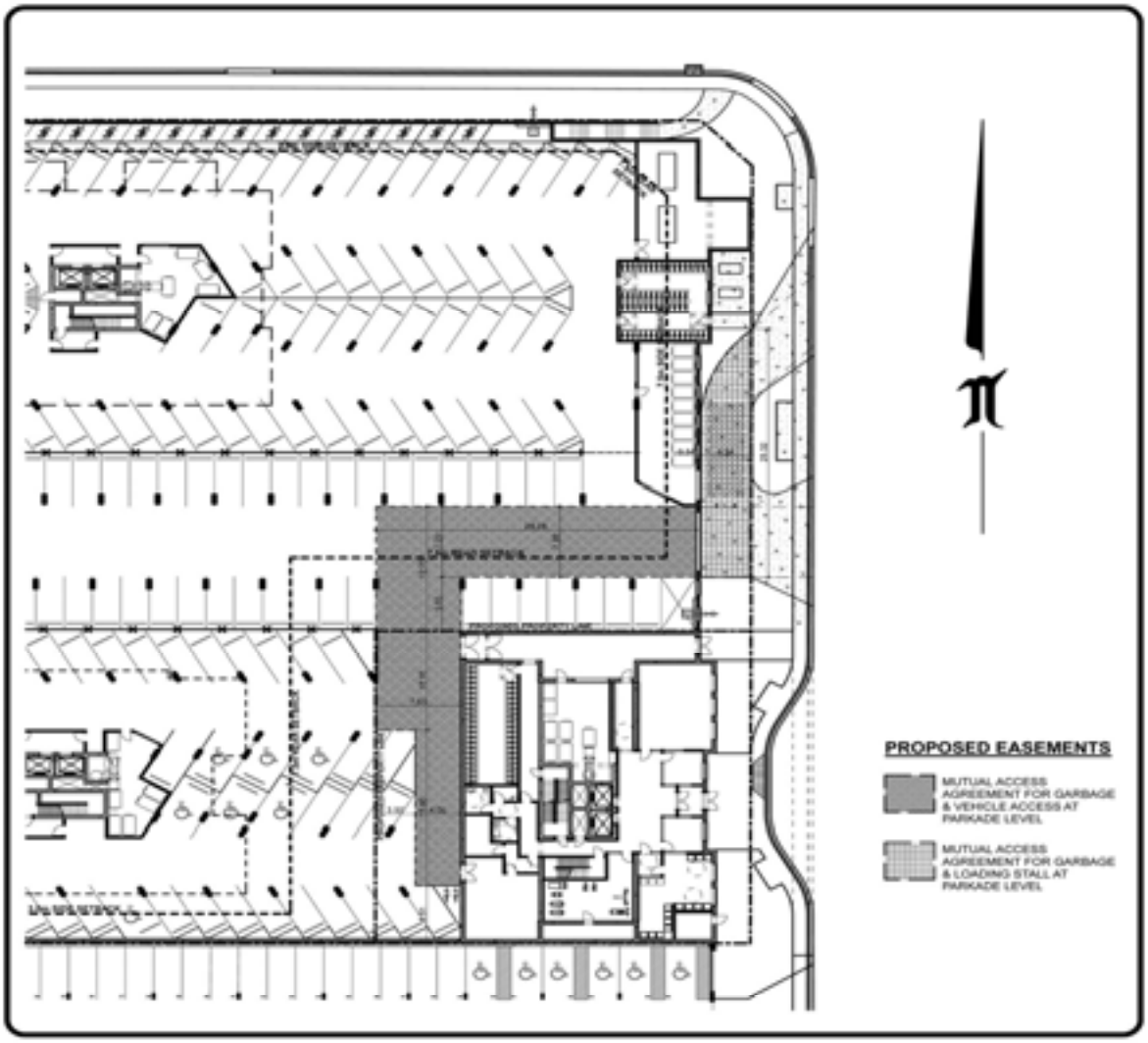
KANAS CORPORATION
PHONE (403) 283-2566 FAX (403) 283-2515
544 - 38A AVENUE S.E. CALGARY, AB
T2G 1X4
WWW.KANAS.CA
Lumino

SECTION THROUGH PROPOSED STRATA

LOT 41 BLOCK 27 PLAN 001 0983

307 55th AVE. SW CALGARY, AB

SCALE: 1:250 **DATE: April 15th, 2009**



KANAS CORPORATION
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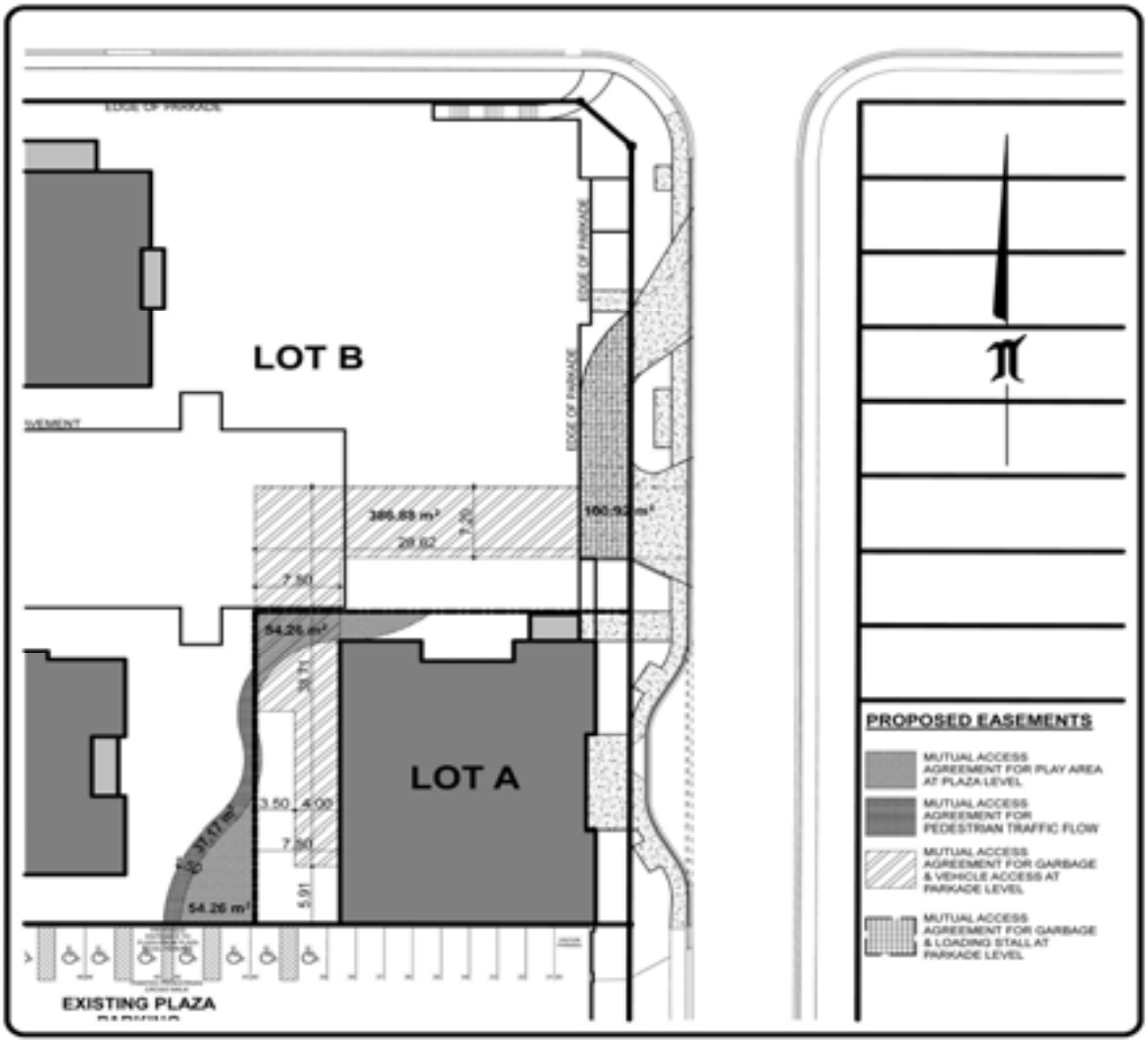
544 - 38A AVENUE S.E. CALGARY, AB
T2G 1X4
WWW.KANAS.CA
Lumino

PROPOSED MUTUAL ACCESS AGREEMENT AT PARKADE LEVEL

LOT 41 BLOCK 27 PLAN 001 0983

307 55th AVE. SW CALGARY, AB

SCALE: 1:500 **DATE: April 15th, 2009**



KANAS CORPORATION
PHONE (403) 283-2566 FAX (403) 283-2515
544 - 38A AVENUE S.E. CALGARY, AB
T2G 1X4
WWW.KANAS.CA
Lumino

PROPOSED MUTUAL ACCESS AGREEMENT AT PLAZA LEVEL

LOT 41 BLOCK 27 PLAN 001 0983

307 55th AVE. SW CALGARY, AB

SCALE: 1:500 **DATE: April 15th, 2009**

Amendment # LOC2002-0101
Bylaw # 28Z2003
Council Approval: March 19 2003

SCHEDULE B

DC DIRECT CONTROL DISTRICT

Site 1 0.56 hectare ± (1.4 acres ±)

1. Land Use

Permitted Uses:

Home occupations – Class 1

Discretionary Uses:

Accessory buildings
Apartment buildings
Apartment-hotels
Home occupations – Class 2
Parks and playgrounds
Stacked townhouses
Townhouses

In addition, the following uses shall be Discretionary within buildings primarily intended for residential use:

Grocery stores
Offices
Outdoor cafes
Personal service businesses
Restaurants – food service only
Restaurants/drinking establishments
Retail stores

2. Development Guidelines:

The General Rules for Residential Districts contained in Section 20 of Bylaw 2P80 and the Permitted and Discretionary Use Rules of the RM-7 Residential High Density Multi-Dwelling District shall apply unless otherwise noted below:

(a) Residential Uses

(i) Front Yard

A minimum depth of 3.0 metres.

(ii) Side Yard

(A) A minimum width of 3.0 metres; and

(B) No side yard is required for a parking structure which does not require external maintenance and which is located to the side or rear of the building.

(iii) Landscaping and Amenity Space

(A) Each dwelling unit shall be provided with a private outdoor amenity space in accordance with Section 20(17) of Bylaw 2P80;

(B) Sideyards shall be designed to function as private outdoor amenity space;

(C) A minimum of 35 percent of the site area plus all adjoining City boulevards shall be landscaped; and

(D) All landscaped areas may be at grade or within 3 metres of grade, provided the average elevation of any raised area does not exceed 2 metres.

For the purposes of this Bylaw, "private outdoor amenity space" means an area comprised of on-site common or private outdoor space, designed for passive recreational use.

(iv) Density

(A) For sites up to and including 4,000 square metres in area, there shall be a minimum of 148 units per hectare (60 units per acre) and a maximum of 321 units per hectare (130 units per acre); and

(B) For sites in excess of 4,000 square metres in area, there shall be a minimum of 321 units per hectare (130 units per acre) and a maximum of 395 units per hectare (160 units per acre).

(v) Unit Size

A maximum of 50 percent of the dwelling units on a site may be 37.16 square metres (400 square feet) in area or less.

(vi) Parking

(A) One parking stall per residential unit; and

(B) Notwithstanding (A) parking stalls are not required for dwelling units that are 37.16 square metres (400 square feet) or less in area.

(b) Commercial Uses

(i) The parking requirements for commercial uses, contained in Section 18 of Bylaw 2P80, may be reduced by 50 percent;

(ii) Commercial uses shall be limited to the first storey of a building and each commercial use shall have its own separate entry from that of the residential component of the building;

(iii) Dwelling units shall not be located below any storey used for commercial use;

(iv) The requirements of Section 32 (5) (d) of Bylaw 2P80 shall not apply;

(v) Each of the following uses shall have a maximum individual gross floor area of 75 square metres: grocery store, office, outdoor cafe, personal service business, restaurant – food service only, restaurant/drinking establishment and retail store; and

(vi) Commercial uses shall front on a local street.

Site 2 0.69 hectare ± (1.7 acres ±)

1. Land Use

Permitted Uses:

Home occupations – Class 1

Discretionary Uses:

Accessory buildings
Apartment buildings
Home occupations – Class 2
Parks and playgrounds
Stacked townhouses
Townhouses

In addition, the following uses shall be Discretionary within buildings primarily intended for residential use:

Grocery stores
Offices
Outdoor cafes
Personal service businesses
Restaurants – food service only
Restaurants/drinking establishments
Retail stores

2. Development Guidelines:

The General Rules for Residential Districts contained in Section 20 of Bylaw 2P80 and the Permitted and Discretionary Use Rules of the RM-7 Residential High Density Multi-Dwelling District shall apply unless otherwise noted below:

(a) Residential Uses

(i) Front Yard

A minimum depth of 3.0 metres.

(ii) Side Yard

(A) A minimum width of 3.0 metres; and

(B) No side yard is required for a parking structure which does not require external maintenance and which is located to the side or rear of the building.

(iii) Landscaping and Amenity Space

(A) Each dwelling unit shall be provided with a private outdoor amenity space in accordance with Section 20(17) of Bylaw 2P80;

(B) Sideyards shall be designed to function as private outdoor amenity space;

(C) A minimum of 35 percent of the site area plus all adjoining City boulevards shall be landscaped; and

(D) All landscaped areas may be at grade or within 3 metres of grade, provided the average elevation of any raised area does not exceed 2 metres.

For the purposes of this Bylaw, "private outdoor amenity space" means an area comprised of on-site common or private outdoor space, designed for passive recreational use.

(iv) Density

(A) For sites up to and including 4,000 square metres in area, there shall be a minimum of 148 units per hectare (60 units per acre) and a maximum of 321 units per hectare (130 units per acre); and

(B) For sites in excess of 4,000 square metres in area, there shall be a minimum of 321 units per hectare (130 units per acre) and a maximum of 395 units per hectare (160 units per acre).

(v) Unit Size

A maximum of 25 percent of the dwelling units on a site may be 37.16 square metres (400 square feet) in area or less.

(vi) Parking

(A) One parking stall per residential unit; and

(B) Notwithstanding (A) parking stalls are not required for dwelling units that are 37.16 square metres (400 square feet) or less in area.

(b) Commercial Uses

(i) The parking requirements for commercial uses, contained in Section 18 of Bylaw 2P80, may be reduced by 50 percent;

(ii) Commercial uses shall be limited to the first storey of a building and each commercial use shall have its own separate entry from that of the residential component of the building;

(iii) Dwelling units shall not be located below any storey used for commercial use;

(iv) The requirements of Section 32 (5) (d) of Bylaw 2P80 shall not apply;

(v) Each of the following uses shall have a maximum individual gross floor area of 75 square metres: grocery store, office, outdoor cafe, personal service business, restaurant – food service only, restaurant/drinking establishment and retail store; and

(vi) Commercial uses shall front on a local street.

Site 3 0.64 hectare ± (1.6 acres ±)

1. Land Use

Permitted Uses:

Home occupations – Class 1

Discretionary Uses:

Accessory buildings
Apartment buildings
Home occupations – Class 2
Stacked townhouses
Townhouses
Uses existing on-site as of the date of passage of this Bylaw

In addition, the following uses shall be Discretionary within buildings primarily intended for residential use:

Grocery stores
Offices
Outdoor cafes
Personal service businesses
Restaurants – food service only
Restaurants/drinking establishments
Retail stores

2. Development Guidelines:

The General Rules for Residential Districts contained in Section 20 of Bylaw 2P80 and the Permitted and Discretionary Use Rules of the RM-7 Residential High Density Multi-Dwelling District shall apply unless otherwise noted below:

(a) Residential Uses

(i) Front Yard

A minimum depth of 3.0 metres.

(ii) Side Yard

(A) A minimum width of 3.0 metres; and

(B) No side yard is required for a parking structure which does not require external maintenance and which is located to the side or rear of the building.

(iii) Landscaping and Amenity Space

(A) Each dwelling unit shall be provided with a private outdoor amenity space in accordance with Section 20(17) of Bylaw 2P80;

(B) Sideyards shall be designed to function as private outdoor amenity space;

(C) A minimum of 35 percent of the site area plus all adjoining City boulevards shall be landscaped; and

(D) All landscaped areas may be at grade or within 3 metres of grade, provided the average elevation of any raised area does not exceed 2 metres.

For the purposes of this Bylaw, "private outdoor amenity space" means an area comprised of on-site common or private outdoor space, designed for passive recreational use.

(iv) Density

(A) For sites up to and including 4,000 square metres in area, there shall be a minimum of 148 units per hectare (60 units per acre) and a maximum of 321 units per hectare (130 units per acre).

(B) For sites in excess of 4000 square metres in area, there shall be a minimum of 321 units per hectare (130 units per acre) and a maximum of 395 units per hectare (160 units per acre).

(v) Unit Size

A maximum of 25 percent of the dwelling units on a site may be 37.16 square metres (400 square feet) in area or less.

(vi) Parking

(A) One parking stall per residential unit; and

(B) Notwithstanding (A) parking stalls are not required for dwelling units that are 37.16 square metres (400 square feet) or less in area.

(b) Commercial Uses

(i) The parking requirements for commercial uses, contained in Section 18 of Bylaw 2P80, may be reduced by 50 percent;

(ii) Parking for commercial uses within a residential building shall have access only from the lane;

(iii) Commercial uses shall be limited to the first storey of a building and each commercial use shall have its own separate entry from that of the residential component of the building;

(iv) Dwelling units shall not be located below any storey used for a commercial use;

(v) The requirements of Section 32 (5) (d) of Bylaw 2P80 shall not apply;

(vi) Each of the following uses shall have a maximum individual gross floor area of 75 square metres: grocery store, office, outdoor cafe, personal service business, restaurant – food service only, restaurant/drinking establishment and retail store; and

(vii) Commercial uses shall front on a local street.

Site 4 0.77 hectare ± (1.9 acres ±)

1. Land Use

Permitted Uses:

Home occupations – Class 1

Discretionary Uses:

Accessory buildings
Grocery stores
Home occupations – Class 2
Live-work units
Offices
Outdoor cafes
Personal service businesses
Restaurants – food service only
Restaurants/drinking establishments
Retail stores
Uses existing on-site as of the date of passage of this Bylaw

For the purpose of this Bylaw, "live-work units" means the use of a dwelling unit by the resident for work purposes which may include, but is not limited to, offices, personal service businesses, retailing of goods produced on-site, craft production, or other similar small scale production activities, excluding any automotive related uses.

2. Development Guidelines:

The General Rules for Commercial Districts contained in Section 33 of Bylaw 2P80 and the Permitted and Discretionary Use Rules of the C-1A Local Commercial District shall apply unless otherwise noted below:

(a) Floor Area

Each of the following uses shall have a maximum individual gross floor area of 75 square metres: grocery store, outdoor cafe, personal service business, restaurant – food service only, restaurant/drinking establishment and retail store.

(b) Parking

The parking requirements for commercial uses contained in Section18 of Bylaw 2P80 may be reduced by 50 percent.

(c) Live-Work Units

(i) Dwelling units shall have a common entrance with any work component of the unit;

(ii) The work component shall only be located on the first storey and shall not exceed 50 percent of the total floor area;

(iii) The resident shall be the operator of the live-work unit;

(iv) A minimum of two on-site parking stalls shall be provided for each live-work unit;

(v) Signage shall be non-illuminated and should be limited in size, design and location and is to be compatible with the residential neighbourhood;

(vi) Accessory buildings may be allowed but only to serve the residential uses on the site;

(vii) There shall be no outside storage of materials, goods or equipment on, or immediately adjacent to, the site;

(viii) One non-resident employee or business partner may work on-site; and

(ix) No use shall create a nuisance by way of electronic interference, dust, noise, odour, smoke, bright light or anything of an offensive or objectionable nature that is detectable to normal sensory perception outside the building containing the live-work unit.

Amendment # LOC2003-0069
Bylaw # 71Z2003
Council Approval: 2003 July 21

SCHEDULE B

DC DIRECT CONTROL DISTRICT

1. Land Use

(a) Permitted Uses

Home occupations – Class 1

(b) Discretionary Uses

Accessory buildings
Apartment buildings
Apartment hotels
Assisted living accommodation
Home occupations – Class 2
Parks and playgrounds
Special care facilities
Stacked townhouses
Townhouses

In addition, the following uses shall be discretionary within buildings primarily intended for residential use:

Grocery stores
Offices
Outdoor cafes
Personal service businesses
Restaurants – food service only
Restaurant/drinking establishments
Retail stores

For the purpose of this bylaw, assisted living accommodation means dwelling units modified in terms of kitchens and living space as a result of the provision of such facilities as communal dining, social/recreational activities and housekeeping within the complex.

2. Development Guidelines

The General Rules for Residential Districts contained in Section 20 of Bylaw 2P80 and the Permitted and Discretionary Use Rules of the RM-7 Residential High Density Multi-Dwelling District shall apply unless otherwise noted below:

(a) Residential Uses

(i) Front Yard

A minimum depth of 3.0 metres.

(ii) Side Yard

(A) A minimum width of 3.0 metres; and

(B) No side yard is required for a parking structure which does not require external maintenance and which is located to the side or rear of the building.

(iii) Landscaping and Amenity Space

(A) Each dwelling unit shall be provided with a private outdoor amenity space in accordance with Section 20(17) of Bylaw 2P80;

(B) Sideyards shall be designed to function as private outdoor amenity space;

(C) A minimum of 35 percent of the site area plus all adjoining City boulevards shall be landscaped; and

(D) All landscaped areas may be at grade or within 3 metres of grade, provided the average elevation of any raised area does not exceed 2 metres.

For the purpose of this Bylaw, "private outdoor amenity space" is defined as an area comprised of on-site common or private outdoor space, designed for passive recreational use.

(iv) Density

(A) For sites up to and including 4,000 square metres in area, there shall be a minimum of 148 units per hectare (60 units per acre) and a maximum of 321 units per hectare (130 units per acre); and

(B) For sites in excess of 4,000 square metres in area, there shall be a minimum of 321 units per hectare (130 units per acre) and a maximum of 395 units per hectare (160 units per acre).

(v) Unit Size

A maximum of 50 percent of the dwelling units on a site may be 37.16 square metres (400 square feet) in area or less.

(vi) Parking

(A) One parking stall per residential unit; and

(B) Notwithstanding subparagraph (A), parking stalls are not required for dwelling units that are 37.16 square metres (400 square feet) or less in area.

(b) Commercial Uses

(i) The parking requirements for commercial uses, contained in Section 18 of Bylaw 2P80, may be reduced by 50 percent;

(ii) Commercial uses shall be limited to the first storey of a building and each commercial use shall have its own separate entry from that of the residential component of the building;

(iii) Dwelling units shall not be located below any storey used for commercial use;

(iv) The requirements of Section 32 (5) (d) of Bylaw 2P80 shall not apply;

(v) Each of the following uses shall have a maximum individual gross floor area of 75 square metres: grocery store, office, outdoor cafe, personal service business, restaurant – food service only, restaurant/drinking establishment and retail store; and

(vi) Commercial uses shall front on a local street.

Locational Guidelines for Non-Market Housing: Approved by City Council on 2008 July 28

These guidelines are to be used for broad policy guidance and not as strict rules for operators and the development authority. The guidelines are summarised below:

1.	The existing policies of the *Calgary Plan* that "social housing projects be located in a variety of areas throughout the city and be small scale in nature" be reconfirmed and implemented.
2.	Non-market housing should be allowed wherever market housing is allowed.
3.	Buildings should be of a density, form, design, and external appearance to complement the neighbourhood, and non-market housing units should not be distinguishable from market housing units.
4.	Over-concentration of non-market housing in one area should be discouraged.
5.	Very large single-use projects should be avoided. While the appropriate size and scale of any project will vary with its context, as a general principle, a limit of 150 rent-geared to-income units per project is encouraged, except for seniors' projects;
6.	For smaller projects (up to 40-60 units), up to 100% of units may be rent-geared-to income.
7.	Any project over 40-60 units should be encouraged to have a mix of market and non-market housing, preferably with at least a 1:1 ratio for units over 40 in number, except for seniors' projects.
8.	Locations close to public transit, recreation facilities, parks, schools and commercial nodes should be encouraged for non-market units serving families.
9.	Locations close to public transit, commercial nodes, and appropriate services should be encouraged for non-market housing serving individual adults.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (C.P.T.E.D.)

ASSESSMENT

DP#:2009-0040

Location: 307-55 Av. S.W., Calgary AB

Completed by: Gerry Bailey #11095, Crime Prevention Unit

Date Completed: 2009 February 9

MEMORANDUM

DATE: 2009-02-09

TO: David Lupton

FROM: Gerry Bailey, CPS Crime Prevention Unit

RE: DP#2009-0040

As requested, Gerry Bailey from the Crime Prevention Unit has reviewed application DP#2009-0400, site location 307 – 55 Av. S.W., Calgary, AB., Lumino Project, and reviewed it from the perspective of personal safety and building security. This security audit is based on the crime prevention strategy known as Crime Prevention Through Environmental Design (C.P.T.E.D).

As you are aware, C.P.T.E.D. recognizes the relationship between the built environment and incidences of crime. Please find attached a matrix with recommendations that we hope will provide you with helpful information and guidelines with respect to your project.

We look forward to your reply and comments, if you have any questions or require any further information; please call me at [403-206-8141].

Yours truly,

Mr. Gerry Bailey #11095
Calgary Police Service
Crime Prevention Unit

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN (C.P.T.E.D.) ASSESSMENT

REQUESTED BY:	David Lupton
POSITION:	City of Calgary, Development and Building Approvals (#8073)
CONDUCTED BY:	Mr. Gerry Bailey Calgary Police Service
LOCATION:	307-55 Av. S.W., Calgary

Applicant Name:	Kanas Corp
Contact Name:	Robert SIPKA
Company Ph. No.:	403-283-2566
Company Address:	544 38A Av. S.E. Calgary AB T2G1X4

Statement of Purpose

This survey and the enclosed recommendations are not intended to completely eliminate the crime risk to the subject property. They will however enhance the personal safety and reduce the probability of attacks against the property if properly applied and maintained.

Implementation of these recommendations should not be fragmented. Many times the incorporation of one phase depends upon the implementation of other security recommendations and the failure to utilize the systems approach can breach all elements of the system.

Background/History *(i.e. recent incidents)*

Of most concern is the underground parking area, parkades are secluded areas where crimes are of committed due to isolation. Crimes involving assaults, theft, vandalism and robbery often occur.

This area is a high traffic area for pedestrian and motor vehicles, especially during the hours between 7:00 AM and 6:00 PM.

Scope

This report is based on the crime prevention strategy known as Crime Prevention Through Environmental Design or CPTED (pronounced sep-ted for short.) CPTED is a strategy that recognizes that a relationship exists between the built environment and incidence of crime.

The most attractive feature of CPTED as a strategy is that it, unlike other strategies such as target hardening, attempts to accomplish a high level of personal security without imposing a fortress like structure on the environment.

Subject Facility

Location: 307-55 Av. S.W. This is an Application to build 3 building's which will house 318 Units for residential and mixed use. There is a 2 storey Parkade which is to be used for resident and visitor Parking as well as some surface parking which is to accommodate all parking requirements.

Recommendations

- **Elevator Lobby's and Stairwells should have as much clear storefront glazing as possible to enhance personal safety through natural surveillance of the area. (Personal Safety Issue)**
- **Parkades should have white painted walls and ceilings with light designed and placed for pedestrian safety and the safe movement of vehicles. Often these areas are designed with the main concern for the movement of vehicles but personal safety should be the priority.**
- **Public areas should be designed with tamperproof and vandal proof fixtures, which would include but is not limited to lights, furniture and signage. It is also prudent to graffiti proof walls floors and ceilings in these areas. This will reduce maintenance costs.**
- **A good CCTV system which is monitored by security personnel should be deployed throughout the building, especially in areas that are accessible to the public and border on private space, like the lobby's, main reception, parkades, and elevators. If this is not affordable in the building phase, wiring and mounting locations should be afforded as well as a centralized area in the security office for addition at a later date.**

Personal safety of the individuals that will be using and occupying the PARKADE is paramount. A number of different elements must be reviewed and seriously considered to ensure that the design provides a safe and comfortable environment. All planning and design development must acknowledge the need to enhance the users' sense of

personal safety and reduce design features which provide opportunities for intimidation, threat or assault. The addition of an underground parkade requires special attention and serious scrutiny of the design of the structure when it comes to satisfying the needs of user safety.

A camera monitoring system and security access controls should be implemented in the original design of the building interior and exterior including parking areas. If the hardware portion is too costly to implement at the time of construction, wiring and setup utilities should be done to accommodate easy implementation of hardware at a later date.

Lighting and Visibility

Light fixtures should be placed so as to eliminate entrapment spots and should provide a uniform level of lighting minimizing the contrast between light and shadow. Light fixtures which can withstand vandalism and which can be easily maintained should be utilized. Wall and floor surfaces should be light in colour, which would improve visibility in interior public spaces. Often lighting in Parkades is used to light the movement areas of vehicle traffic; this should continue to the Parking Stalls and illuminate pedestrian user space once the vehicle is parked. Lighting should be directed and provide sufficient illumination to allow users a clear view in a manner that does not create glare.

Sightlines

The structure should be designed so as to maximize lines of sight ahead, behind and to the sides. Barrier materials should be visually permeable and use reflective surface at corners to improve visibility. Clear glazing in areas such as stairwells, elevator lobbies and entrances should be built into the design. Landscape material should be selected and located so as not to impede long views. Building exterior design and placement should maximize overlook and casual surveillance of public spaces.

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AREAS of SPECIAL ATTENTION

Corridor

Hidden recesses in corridors should be eliminated. In curved or angled corridors, mirrors or mirrored surfaces should be provided to allow a view further ahead. Corridors with unlit recess shall be avoided. Long corridors should have midway exit possibilities. There should be a choice for exiting or going back.

Wheelchair ramps are to be as open and transparent as possible. The sides of Ramps should not be constructed of a solid material. A transparent material or pickets providing views through and beyond the ramp should be used. If the ramp is placed adjacent to a solid wall, the other side should be transparent.

Entrapment and Movement Predictors

Areas of entrapment are to be avoided. Potential areas of entrapment are: unlit recesses, corners or alcoves; small structures (sheds, storage areas) which are unlit or unlocked. Washrooms which are located in low activity areas can be entrapment areas, especially if the entrance configuration is complicated and communication to a corridor is difficult. Single use washrooms are better choices.
Quadrangles and courtyards must be so designed so that there are no entrapment areas.

The use of clear glass panels is recommended in all doors to stair wells, corridors and entrances. All unnecessary corners, planters, walls and fences which could produce entrapment spots should be eliminated. In enclosed public spaces, columns, rather than shear walls, should be used as structural members. Alternative pedestrian routes, multiple exits and choices in direction should be provided wherever possible.

Structures which create entrapment spots must be avoided. In any area where entrapment is an issue, consideration must be given to communication needs, particularly for emergency assistance.

Pathways which force users to go past entrapment areas should be avoided. Paths should be designed to allow users several alternate means of movement and a means of escape.

External paths

External paths should be designed and located to avoid entrapment areas. Appropriate signage should be located so as to identify a choice in direction or route, and where each will lead.

Edges of Buildings

Recesses and unlit areas should be avoided. Reflective surfaces should be provided at corners where appropriate. Proper lighting should be provided to avoid dark entrapment areas.

Isolation

In areas of low pedestrian traffic, clear, concise and highly visible signage should be used. Clear directions to the nearest communication device must be given. Wherever it is deemed necessary, alert stations (emergency telephones) should be used to aid in emergency situations. Surface parking lots located behind or beside buildings must have sightlines to nearby assistance within the building. Clear, concise, diagrammatic building plans should be provided inside the building
Entrance identifying the location of washrooms, telephones, reception areas, public spaces, cafeterias and lecture halls. Sufficient information, identifying the nearest staffed area or exit should be provided at major decision points within the building.

Access Control

The issue of access control is important. A number of buildings are occupied during normal working hours and are locked for the evening and during the night. Some of the items to be considered should include:
- Access control needs to be designed in a way that permits staff to maintain a separation between public, semi-public and private areas.
- A system should have wide flexibility and the ability to accommodate immediate change, at relatively low cost.
- Main entrances should be designed to be barrier free and easily used by all.
- Systems should be designed for the long term and not become obsolete shortly after installation.
- The main lobby and entrance shall open onto a properly staffed reception / office area allowing casual surveillance of the entrance to the building.

Communication

The need to communicate and to be able to call for assistance in cases of emergency is extremely important. A means of communication shall be provided in areas of greatest vulnerability where confrontation may potentially occur such as:

- cash collection locations;
- reception counter areas;
- parking kiosk;
- Other areas where confrontational discussions may occur.

. Some of the design options should include:
- providing emergency phones in problematic areas or isolated areas and connecting to the Security.
-providing a public address system in buildings to facilitate internal building Communication.

Activity Generators / Activity Mix

In planning of a project, the concept of locating high risk or low volume activities next to high volume activities should be implemented. This should be considered in the following situations:

There are situations where the office areas and reception areas are far removed from the main doors or entrances to the building. This allows for anyone to enter the building at anytime and leaves the reception area in a very isolated situation. This should be avoided. Special attention shall be paid to the location of pathways, entrances and exits for people with mobility difficulties.

Graffiti Proofing and Anti Vandalism

Graffiti proofing and anti vandalism design should be added to those areas of the building which creates the most risk for these types of crimes.

Underground Parking/Parkade

Of most concern is the underground parking area, parkades are secluded areas where crimes are of committed due to isolation. Crimes involving assaults, theft, vandalism and robbery often occur. Surface parking lots located behind or beside buildings must have sightlines to nearby assistance within the building. Good directional signage and lighting will enhance pedestrian and vehicle flow, and add to personal safety.

Washrooms

Washrooms which are located in low activity areas can be entrapment areas, especially if the entrance configuration is complicated and communication to a corridor is difficult. Single use washrooms are better choices. Washrooms that are designed for several users should have a maze entrance, this allows for privacy, but also allows users to sound for help if trapped.

Drawing CPTED Review

307 – 55Av. S.W., Calgary, Alberta

LOCATION	POSITIVE FEATURES	AREAS OF CONCERNS	RECOMMENDATIONS
Drawings / Page DP13 and DP14		**Personal Safety and Privacy** Benches	Benches should all be fitted with split seating. This will encourage more use by residence and discourage laying down on the benches.
Drawing / DP15	Washrooms	**Personal Safety** Design of Washroom	Please refer to drawings for recommendation of single use private washrooms.
Drawing / DP21 and DP27	Washrooms	**Personal Safety** Access/Egress to washrooms.	Please refer to drawings for recommendation on Washrooms. Washrooms should be accessible directly

LOCATION	POSITIVE FEATURES	AREAS OF CONCERNS	RECOMMENDATIONS
			from the LOBBY.
Parkade	Parking for residents, visitors and users	**Personal Safety, protection of property and natural surveillance.** The Parkade is some distance from the buildings and may create opportunities for users to be victimized at a higher incident rates. There is virtually no site lines into the Parkade Structure, which will add increased risks to the users. Opportunities for vehicle theft and break ins will also increase.	Normally in structures of this magnitude, which house a large amount of residential properties there is underground parking beneath each tower. Recommend underground Parkades below each tower. If this cannot be accomplished, there will need to be an in depth risk assessment and the integration of strategies to mitigate the associated risks of the Parkade. This should also include a safe-walk program, which residents / users can opt to use should they feel at risk.

BUILT GREEN MULTI PILOT™ CHECKLIST

Effective January 1, 2007

The Built Green Multi™ program has four levels of achievement, shown below as Bronze, Silver, Gold and Platinum. Energy efficiency targets must be met as well as point minimums for each labeled level. Each separate category has minimum point totals that must be selected.

Checklist Categories			Bronze	Silver	Gold	Platinum
Energy Performance better than the MNECB by			10%	25%	35%	50%
I.	Operational Systems	Min. 32/111	81 Points	90 Points	100 Points	120 Points
II.	Building Materials	Min. 10/73				
III.	Exterior & Interior Finishes	Min. 10/74				
IV.	Indoor Air Quality	Min. 15/68				
V.	Waste Management	Min. 7/30				
VI.	Water Conservation	Min. 7/35				
VII.	Business Practices	Min. 9/40				

CHECKLIST REQUIREMENTS

In order to properly verify the Built Green™ program, for each item chosen from the checklist, a verification must be ready to be supplied, if the home is randomly chosen to be audited. The Builder will be given a short amount of time to compile verifications and supply them to the auditor. Forms of verification include: Installing Contract Letter, Supplier Verification Letter, Invoice or Purchase Order as well as an On-Site visual verification. Please ensure each verification has the required information included, as verifications missing required details will be rejected.

CHECKLIST CRITERIA

Five fundamental pillars serve as a basis for each item to be considered in the checklist. Each line item must meet at least one of the criteria listed in the left hand column, where two or more of the subsidiary points listed on the right must be addressed.

- Resource Use
- Energy Efficiency
- Recycled Content
- Indoor Air Quality
- Durability
- Innovation
- Alternative Construction
- Measurable or Validated
- Promotion of greater use
- Environmental Impact

ENERGUIDE RATING

This rates the energy efficiency and energy consumption of the home using the *EnerGuide for Houses* software, HOT2000. Information such as home orientation, home dimensions, insulation values, type of heating system, construction material, window type and window design are input into HOT2000 in order to calculate a rating. An average rate of air changes per hour (ACH) is initially used for the calculation. Prior to completion of each house, a mandatory blower door test is performed and the actual rate of air changes per hour is then input into HOT2000 and the final *EnerGuide* rating is calculated. This standard applies to low-rise detached, semi-detached and row houses covered by Part 9 of the *National Building Code of Canada* that do not share heated areas, ventilation systems or heating systems with other dwelling units.

AUDIT VERIFICATION REQUIREMENTS

Built Green™ will conduct random verifications of the Built Green™ Checklist to maintain quality control and program credibility. The goal of the program is to perform random verifications on 5% of certified homes. If deficiencies are found, follow-up inspections will be done to verify corrections at the expense of the Builder. Random testing will include the builder producing the documentation to support checklist selections. The checklist selections must be supported by at least one of the following criteria: on-site verification or documentation stating when and from whom the product was purchased, as well as when, where and by whom it was installed.

BuiltGreen™

BUILDING ENROLLMENT FORM
Multi-Story & Residential Tower PILOT

BUILDER INFORMATION

Application Date:	Jan 8th, 2009	HBA Member ID #:		Company Name:	Kanas Corporation		
Full Mailing Address:	544 38A Ave SE, Calgary AB T2G 1X4			Main Contact:	Robert Sipka		
Phone:	403-283-2566	Fax:	403-283-2515	Email:	rsipka@kanas.ca		
On-Site Contact #1:		Phone:		On-Site Contact #2:		Phone:	

BUILDING INFORMATION

Community:	Manchester			Construction Start Date:	01-June-2009	Completion Date (Expected):	01-December-2009
Address:	307 55th Ave SW			City:	Calgary	Building code classification:	Part 3
Project Name:	Lumino			Floor area ratio:		Approx. Project value:	
Square Footage:		Parkade below grade?	Yes or no?	Units below grade?	Type number of units below grade	Any other feature below grade?	Please specify other below grade features

BUILT GREEN™ LEVEL Click here to choose level PLATINUM **TOTAL CHECKLIST POINTS** 207

# of units: 88 # of Storeys: 13 Mixed use? YES

Summary of Sustainable Features:

THE FOLLOWING ITEMS ARE REQUIRED TO COMPLETE THE BUILDING ENROLLMENT:

1) Completed Checklist with Scoring ... 2) Energy Modeling Files

I have agreed to the terms of payment and to submit all required documentation (Checklist and Modeling files) in order to complete the project labelling Click here to express your consent

Built Green™ Society of Canada, Administration
Room T245, 1301-16th Avenue NW, Calgary, Alberta, Canada, T2M 0L4

Built Green™ Multi Checklist

Items selected must be applied to every unit, except where noted otherwise (i.e.: central systems).
Version 6 -August 14, 2007 - ONLY FOR USE BY BUILDERS PARTICIPATING IN PILOT
NOTE: THIS IS NOT A FINAL DRAFT AND IS LIKELY TO CHANGE

BuiltGreen™ Section 1: 0 Section 2: 0 Section 3: 0 Section 4: 0 Section 5: 0 Section 6: 0 Section 7: 0 TOTAL POINTS: 0

Builder Name: Kanas Corporation

House Address: 307 55th Ave SW

I. OPERATIONAL SYSTEMS

This section awards points for construction methods and types of products that contribute toward lower energy consumption as well as alternative heating and electrical systems.
Minimum 32 (UNDER REVIEW)

1-1	All ductwork joints and penetrations sealed with low toxic mastic or aerosolized sealant system. Duct mastic is a preferred flexible sealant that can move with the expansion, contraction, and vibration of the duct system components. A high quality duct system greatly minimizes energy loss from ductwork. The additions to the system should be sized and designed to deliver the correct airflow to each room.	3	3
1-2	Install individual unit programmable ENERGY STAR thermostat (2 pts. total for all units). A set back thermostat regulates the heating/cooling system to provide optimum comfort when the unit is occupied and to conserve energy when it is not. Builders are encouraged to install a override system to ensure adequate temperatures for building durability.	2	2
1-3	Install high efficiency, sealed combustion heating systems, all units or common system (min. 92% AFUE). High efficiency furnaces or boilers such as condensing systems, reduce energy consumption and consequently fossil fuel reliance.	3	3
1-4	Calculate design heat loss and properly size HVAC equipment and/or implement a boiler management system to match the system operation to building loads and optimize controls for maximum energy savings. A properly sized heating and cooling system can reduce costs as well as conserve energy. When properly sized, HVAC equipment will run for longer periods which increases the efficiency and durability of the equipment due to less cycling on and off.	2	2
1-5	Centrally locate HVAC systems inside the building's heated envelope and reduce duct length. Roof top units are poorly insulated and waste heat is lost to the evironment rather that added to the building. High efficiency heating systems with shorter distribution distances require less energy.		1
1-6	Install HVAC systems with variable speed motors (ECM). A variable speed fan motor is designed to vary its speed based on the buildings heating and air conditioning requirements. Working in conjunction with the thermostat, it keeps the appropriate air temperature circulating through the home, reducing temperature variances in the home. It also provides greater air circulation and filtration, better temperature distribution, humidity control, higher efficiency and quiet performance.	3	3
1-7	Units contain mulitple heating/cooling zones, thermostatically controlled zones (2 zones = 2pts., 3 zones = 3pts., 4 zones = 4pts.). Efficiency can be significantly improved by only heating or cooling when occupants are present and by only heating/cooling to the exact desired temperature. Different desired temperatures can be set in each room or space and an individual zone can be turned off when not occupied. This type of system results in a dramatic reduction of energy consumption and operating costs.		2 to 4
1-8	Install ground/ air/water/solar source heat pump system, either radiant or forced air to supply majority of space heating and cooling loads. Heat pumps can significantly reduce primary energy use for building heating and cooling. The renewable component displaces the need for primary fuels, which, when burned, produce greenhouse gases and contribute to global warming. Please Note: Effectiveness of heat pums is related to climate zone and energy costs. Please consult with specialist or engineer to confirm effectiveness.	10	10
1-9	Provide electricity (1 pt.) and/or natural gas (1 pt.) direct metering for each unit. Direct metering in a Multi Context may require significant additional expenses above and beyond prorated condominium energy fees and holds individuals responsible for energy use.	1	1 to 2
1-10	Install and balance an individually controlled active Heat Recovery Ventilator (HRV) and/or solar/geo fresh air pre-heating for each unit (4 pts.) and/or common area (2 pts.) and/or buildings exhaust air (3 pts.) HRVs exhaust return air out of the home while bringing in fresh air for ventilation. The process used to do this takes advantage of the heat in the exhaust air to preheat the incoming air, saving energy.	4	2 to 9
1-11	Install and balance an active Heat Recovery Ventilator (HRV) and/or solar/geo fresh air pre-heating for building common area. HRV exhaust returns air out of the home while bringing in fresh air for ventilation. The process used to do this takes advantage of the heat in the exhaust air to preheat the incoming air, thereby saving energy.	2	2
1-12	Install and balance an active Heat Recovery Ventilator (HRV) and/or solar/geo fresh air pre-heating for the building's exhaust air. This would apply when a building has a large amount of exhaust air (ie. from a restaurant or health club). A HRV would help to recapture much of the heat in the air being exhausted.		3
1-13	Install district high efficiency domestic hot water heating system (3 pts.) or an instantaneous "tankless" domestic hot water system in each unit (3 pts.). Hot water heater is direct vented with a closed combustion system. All air for combustion is taken directly from the outside. A direct system utilizes a co-axial vent pipe (pipe inside a pipe) draws combustion air in through the outer pipe, and exhausts the products of combustion through the inner pipe. A power vented heater exhausts air out of the building via a positive exhaust during main burner operation. Both systems eliminate the need for conventional chimneys or flue systems. A tankless water heater does not have a storage tank to keep heated all day, or a pilot light; it burns gas only when you need hot water. This eliminates standby heat loss and its higher efficiency will save on utility costs.	3	3
1-14	Hot water storage tanks insulated by manufacturer to a minimum R-15.	2	2

An insulation blanket will reduce the standby heat loss of the hot water in the tank.

1-15	Install solar/air/water/geo (solar fraction >50%) DHW Heating System to supply a minimum of 25% of the peak DHW heating load and 70% of the total DHW energy load. A substantial amount of energy is wasted heating water in a traditional gas system. Using renewable sources will reduce the consumption of non-renewable energy and also reduce green house gas emissions.		2
1-16	Provide roof area (min. 10% area of total) designed for future solar collector (Make solar ready; with solar or PV conduit installed). A roof area with an appropriate slope allows for the effective addition of future solar air, water heating or photovoltaics.	1	1
1-17	Install urban wind/photovoltaic electrical generation system which supplies (10%-2 pts., 20%-4 pts., 50%-8 pts., 100%-10 pts.) of design electrical load for the private area(s) of the building. This does not include electric heat. Urban wind and photovoltaics use renewable energy to generate electricity for the home, greatly reducing reliance on non-renewable energy sources and also reducing green house gas emissions.		2 to 10
1-18	Install photovoltaic electrical generation system which supplies 50% (1 pt.) or 100% (2 pts.) of electrical needs for the common areas. This does not include electric heat. Photovoltaics use the sun's energy to generate electricity for the home, greatly reducing reliance on non-renewable energy sources and also reducing green house gas emissions.		1 or 2
1-19	50% (2 pts.) or 100% (4 pts.) of electricity used during construction of the project is generated by wind power or equivalent green power certificate. This practice encourages and promotes the use of renewable, sustainable energy resources as well as reducing green house gas emissions.		2 or 4
1-20	50% (2 pts.) or 100% (4 pts.) of electricity used by homeowner during first year of occupancy is generated by wind power or equivalent green power certificate (prepaid by builder). This practice encourages and promotes the use of renewable, sustainable energy resources as well as reducing green house gas emissions.		2 or 4
1-21	Install a central drainwater heat recovery system (1 pt.) or individual units at each shower (1 pt. per shower max 3 pts.). Drainwater heat recovery units enable an exchange of heat from greywater to the incoming water. This pre-heating reduces the amount of energy required for the hot water tank.	3	1 to 3
1-22	Sealed combustion gas fireplace with electronic ignition or electric fireplace for all fireplaces. Sealed combustion fireplaces involve a double-walled special vent supplied by the manufacturer that normally vents through a sidewall in a horizontal position. The inner surface removes the flue gases and the outer container provides for passage of combustion air.		2
1-23	Install fireplace fan kit to circulate warm air into room on all fireplaces. A fan kit allows the heat generated by a fireplace to be transferred into the home more effectively.		2
1-24	All windows in the project are ENERGY STAR labeled. ENERGY STAR labelled windows save energy by insulating better than standard windows, making the home more comfortable all year round, reducing outside noise and can result in less condensation forming on the window in cold weather.	2	2
1-25	All Electric ranges use below 480 kwh/yr. based on EnerGuide rating system. EnerGuide label often reduces fuel consumption by approximately 20%.	1	1
1-26	Refrigerators(1 pt.), Dishwashers (1 pt.), clothes washers (1 pt.) and/or combo washer dryer (2 pts.) are all ENERGY STAR labeled products. An ENERGY STAR label for refrigerator indicates the product has met strict requirements to reduce energy consumption.	4	1 to 4
1-27	All Clothes dryers have an energy performance auto sense dry setting which utilizes a humidity sensor for energy efficiency. Sensor saves energy by shutting dryer off when clothes are dry rather than leaving it on for a specified time.	1	1
1-28	Other building appliances (ie. TV, LCDs, security systems) are energy efficient/Energy Star rated. An ENERGY STAR label indicates the product has met strict requirements to reduce energy consumption.	1	1
1-29	Exposed Exterior Accessibility Ramps heated with renewable energy or waste heat. This practice encourages and promotes the use of renewable, sustainable energy resources as well as reducing green house gas emissions.	2	2
1-30	Install properly supported ceiling fan wired rough-in for each unit. Intended to allow for future temperature equalization .	1	1
1-31	Install interior motion sensor light switches. 1 point for every 10 switchs for a maximum of 3 points. Motion sensor switches prevent lights from staying on in rooms that are unoccupied. This helps reduce electricity consumption.		1 to 3
1-32	Install lighting with an automation control system capable of unified automation control of lighting loads for all common areas Lighting and automation control systems prevent lights from staying on in rooms without occupants, thereby reducing electricity consumption.		2
1-33	Install automatic lighting system (2 pts.) and/or ventilation system (2 pts.), which are triggered by movement or CO levels, for garages/ parkade. Automating will allow better control and energy efficiency.	4	2 to 4
1-34	Exterior Lighting follows IESNA illumenance requirements for recommended practice manual: Lighting for Exterior Environments. This addresses light pollution issues. The Illuminating Engineering Society of North America can be found online at: iesna.org and the "Lighting for Exterior Environments" guide (IESNA RP-33-99) can be purchased there.	2	2

1-35	Common Area lit with high efficiency lamps. Incandescent lights lose much of their energy as heat rather than light and therefore are not as energy efficient as many of the other options available.	1	1
1-36	Minimum 25% (1 pt.), 50% (2 pts.) or 100% (4 pts.) of light fixtures are L.E.D., fluorescent or have compact fluorescent light bulbs installed in each unit. Fluorescent, compact fluorescent and L.E.D bulbs use 50% less energy than standard bulbs and last up to ten times longer.	4	1, 2 or 4
1-37	Minimum 50% of recessed lights in the entire building use halogen bulbs. Halogen bulbs are slightly more energy efficient, last longer and provide a more effective task light than conventional bulbs.	1	1
1-38	All EXIT signs are photoluminescent or LED. Photoluminescent exit signs use no power as the light is supplied by a phosphorous chemical that absorbs light until needed and then emits it.	2	2
1-39	Air tight, insulation contact-rated recessed lights are used in all insulated ceilings, or insulated ceilings have no recessed lights. Prevent heated air from exhausting through ceiling. Air tight light fixtures lead to a more airtight, energy efficient home.	1	1
	TOTAL SECTION POINTS	66	

II. BUILDING MATERIALS

This section deals with building components that make up the structure of the home. Items involve alternatives to using large dimensional lumber, products with a recycled component, utilizing wood products that come from sustainable managed forests and reducing the overall amount of lumber used.
Minimum 10 (UNDER REVIEW)

2-1	Insulated Concrete Forming system (ICF's) used below grade (2 pts.) and/or above grade (2 pts.). Insulating Concrete Forms (ICFs) are hollow building elements made of plastic foam that are assembled, often like building blocks, into the shape of a building's exterior walls. The ICFs are filled with reinforced concrete to create structural walls. Unlike traditional forms, the ICFs are left in place to provide insulation and a surface for finishes.	4	2 to 4
2-2	Minimum of R-7.5 insulation installed under entire basement/foundation slab under conditioned space. Insulation installed under the basement slab will reduce the downward heat transfer into the ground below the slab, especially when hydronic in-slab heating is installed. Insulation under the slab can reduce temperature swings in the heated space and respond quicker to new changes in thermostat settings.	2	2
2-3	Attached garage, parking and/or loading dock overhead doors are insulated with R8 to R12 (1 pt.) or greater than R12 (2 pts.). An insulated overhead garage door will reduce heat loss.	2	1 or 2
2-4	Attached garage/parking walls and ceiling are insulated to NBC minimum (R12 for walls, R34 for ceilings). A fully insulated garage acts as a buffer zone, reducing heat loss.	1	1
2-5	Non-solvent based damp proofing (seasonal application). Water based damp proofing products use water as a thinner. Oil based dampproofing give off a number of volatile organic compounds (VOCs) as the solvent evaporates after application. These VOCs can be a strong irritant and can add to air pollution.	1	1
2-6	Paint Parkade semi gloss white to reduce number of required lighting fixtures. Using high reflectance white paint allows for fewer lights to be used in the parkade area.	1	1
2-7	Steel studs made from a recycled steel (min. 75%) is used to replace wood studs (min.15%). Recycling steel reduces landfill waste and saves on wood consumption.	1	1
2-8	Use Optimum Value Engineering (OVE) to reduce wood use in framing: - Exterior and interior wall stud spacing at 24" on-center (2 points) or 19.2" on-center (1 pt.). - Elimination of headers at non-bearing interior and exterior walls. (1 pt.) - Use of header hangers instead of jack studs. (1 pt.) - Elimination of cripples on hung windows. (1 pt.) - Elimination of double plates, use single plates with connectors by lining up roof framing with wall & floor framing (1 pt.) - Use of two stud corner framing with drywall clips or scrap lumber for drywall backing instead of studs. (1 pt.) For more details on Optimum Value Engineering (OVE) framing principles see www.buildingscience .com.	7	1 to 7
2-9	Walls and roof designed as 24" module to reduce waste. A 24" module takes into account the size of sheets of OSB or plywood, stud spacing, carpet size etc.	2	2
2-10	Use of insulated headers (either manufactured or site built open insulated single headers) with minimum insulation value of R10. Headers can either be insulated on site or can be a pre-manufactured product (often insulated with a foamed plastic).	1	1
2-11	Install manufactured insulated rim/band joist or build on site by setting back joists to allow rigid insulation filler of a minimum R10. Rim and band joists can either be insulated on site or can be pre-manufactured (often insulated with a foamed plastic).		2
2-12	Structural insulated panel system (SIPS) used for walls (3 pts.) and/or for roofs (2 pts.). Reduces thermal migration and controls air leakage – Keeps heating and cooling costs to a minimum compared to a conventionally framed wall.		2 to 5
2-13	All insulation used in the project is certified by a third party to contain a minimum recycled content: 40% (1 pt.) or 50% (2 pts.). Recycled content means less landfill waste and raw material use. Also, according the the North American Insulation Manufacturer's Association, insulation with recycled content takes less energy to produce than using all raw materials.	2	1 or 2

2-14	Insulation levels meet or exceed the MNECB (may include Roof-R28, Walls R14, Floor R14). Model New Energy Code minimums will help to keep heating and cooling costs to a minimum compared to a conventionally framed wall.	1	1
2-15	Replace exterior wood sheathing with installed insulating sheathing. Using less materials when not required saves the forest reserves, reduces thermal migration and controls air leakage; it also keeps heating and cooling costs to a minimum compared to a conventional wall.	2	2
2-16	Deck (1pt.),balcony surfaces (1pt.), and/or veranda structure (1 pt.) made from a third-party certified sustainable harvested wood source or third-party certified sustainable concrete. The issue of sustainable forest management (SFM) is considered to be of such importance by the Canadian forest industry that, in 1993, a group of 22 organizations representing virtually all of the industry came together to form the Canadian Sustainable Forestry Certification Coalition. The coalition regroups several different certification standards that each have their strengths and weaknesses. For more information, see www.sfms. com. Concrete produced from aggregates derived from a pit or quarry with a valid reclamation plan approved by Materials and Resources Canada or the governing provincial body.	1	1 to 3
2-17	Dimensional lumber from a third-party certified sustainable harvested source used for floor framing (1 pt.), wall framing (2 pts.), and/or roof framing (1 pt.). Saves old growth forests by using trees from a second generation forest.		1 to 4
2-18	Environmentally engineered flooring system (ie. Uses reclaimed/recycled/rapidly renewable wood waste, flyash concrete (1pt-30%), recycled steel (1pt-90%)). Use of Engineered floor system saves old growth forest by using components from second generation forests and the use of recycled materials.	1	1
2-19	Environmentally engineered products for all load bearing beams (ie. Uses reclaimed/recycled/rapidly renewable wood waste, flyash concrete, recycled steel). Engineered products include wood products, concrete and recycled steel.	2	2
2-20	Environmentally engineered products for all exterior window and door headers. Engineered products include wood products, concrete and recycled steel.		1
2-21	Engineered stud material for 10% of stud wall framing. Use of Engineered lumber products saves old growth forest by using components from second generation forests and recycled materials.		1
2-22	Engineered plate material and/or finger-jointed plate material. Use of recycled materials saves old growth forest.		1
2-23	Finger-jointed studs for 90% of non-structural stud wall framing. Use of recycled materials saves old growth forest.		2
2-24	Recycled and/or recovered content gypsum wallboard, recycled content (min. 15%). Recycled content reduces landfill waste and the use of new materials.	1	1
2-25	Recycled content exterior wall sheathing (min. 50% pre or post consumer). Recycled content reduces landfill waste and the use of new materials.		2
2-26	Replace exterior wood sheathing (if applicable) and use external rigid insulation as sheathing or installed insulating sheathing (2pts.) Using this system replaces the need for use of additional OSB product, saving the forest reserves, reduces thermal migration and controls air leakage; it also keeps heating and cooling costs to a minimum compared to a conventional wall.	2	2
2-27	100% Recycled content rainscreen attachment system. Use of recycled content polypropelene, steel or aluminium rainscreen strapping may replace the traditional use of treated wood strapping on rainscreen systems.		2
2-28	Advanced sealing package, non-HCFC expanding foam around window, door openings and all exterior wall penetrations (2 pts). All sill plates sealed with foam gaskets or a continuous bead of acoustical sealant (1 pt.). Controls air leakage and keeps heating and cooling costs to a minimum.	3	1 to 3
2-29	Builder has installed a green roof over 50% (3 pts.), 75% (5 pts.) or 100% of total roof area (7 pts.). Green roofs are defined as a system of plants, growing medium and roof/waterproof membrane that acts as a whole to maximize the available environmental benefits of improving air temperature (reduced heat island effect), air pollution, storm water management and green space. Extensive or 2-6" Thickness typically requires 30-40 lbs/sqft structural support, while Intensive roofs (8"-4') require significant structural support.	3	3, 5 or 7
2-30	Builder has incorporated exterior horizontal and/or vertical shading devices for glazing (2 pts.), or exterior operational shading devices (4 pts.). Shading windows from solar heat gain is a key design strategy for passive cooling and to reduce cooling loads on active HVAC systems in multi buildings. Light shelves and/or louvres can be optimized to allow for winter solar gain, while reducing overheating during the summer.		2 or 4
2-31	All decks or balconys are thermally broken from the envelope by R10 (1 pt.), or fully separated (3 pts.).		1 or 3
	TOTAL SECTION POINTS	40	

III. EXTERIOR and INTERIOR FINISHES

This section focuses on the finish materials used both inside and outside of the project. The items listed include using longer lasting products, products with recycled content and products that are harvested from third party certified managed forests.
Minimum 10 (UNDER REVIEW)

3-1	Exterior doors with a minimum of 15% recycled and/or recovered content. Recycled or recovered content ensures we keep our landfill use to a minimum.		1
3-2	All exterior doors manufactured from fiberglass.	1	1

Fiberglass doors insulate better than steel skinned or wood doors, have a longer lifespan, do not warp, twist or crack, and therefore reduce landfill use.

3-3	Exterior window frames contain a minimum of 10% recycled content.	1	1
	Reusing materials such as plastics reduces landfill usage, which may not be biodegradable.		
3-4	Exterior window frames are made from third-party certified sustainable harvested wood.		2
	Uses trees from a forest managed system that prevents clear cutting trees, and replants trees to replace from which they've been harvested.		
3-5	Concrete used in home has a minimum supplementary cementing material of 25% (1 pt.) and/or 40% (2 pts.) is within the scope of proper engineering practices.	2	1 to 2
	For every one tonne of Portland cement generated, eighth tenths of a ton of carbon dioxide is produced. Supplementary cementitious products include fly ash, blast furnace slag as well as metakaolin.		
3-6	Natural cementitious stone/stucco/brick or fiber cement siding – complete or combination thereof for 100% of exterior cladding.		4
	Battens are included in cladding. Strong, long lasting, fireproof material.		
3-7	Exterior trim and finish is made of recycled content (50% min., pre or post consumer) material, durable and fire rated; trim (1 pt.) and/or wall finish (4 pts.).		1 to 5
	Fiber cement fascia and soffit, made with recycled content from sawmill waste and Portland cement, is a strong, long lasting and fireproof material.		
3-8	Exterior trim (3 pts.) and /or siding materials (4 pts.) have recycled and/or recovered-content (min. 50% pre- or post-consumer).		3 to 4
	Recycled and/or recovered-content trim materials reduce the amount of new material used in production by gluing up miss scraps into large pieces, which conserves natural resources and reduces landfill usage.		
3-9	Exterior trim materials are manufactured from OSB .		1
	Trim materials manufactured from OSB uses a laminating process to make larger pieces from smaller pieces or strands of wood. The process saves old growth forests by using trees from forest managed systems that prevents clear cutting trees, and replants trees in areas from which they have been harvested.		
3-10	All exterior trim is clad with pre-finished metal (1 pt. over top wood backings, 2 pts. without wood backings).		1 to 2
	Trim clad with pre-finished metal is a durable long lasting product that requires no maintenance, reduces waste in landfills due to long life of product.		
3-11	Deck or balcony surfaces made from recycled materials: 50% (1 pt.), 75% (2 pts.), 100% (3 pts.), and/or from low maintenance materials (2 pts.) (Deck surfaces should not need maintenance of any kind, including painting, for a minimum of 5 years).	3	1,2,3 or 5
	Substituting recycled material outdoors avoids the use of pressure treated and high mildew resistant wood that may otherwise be harvested from disappearing old growth or rain forests. Material which lasts longer and reduces landfill usage tends to require little to no maintenance, saving replacement costs and reducing energy spent.		
3-12	Install 25-year (2 pts.), 30-year (3 pts.), 35-year (4 pts.), 40-year (5 pts.), or 50-year (6 pts.) roofing material -- with manufacturer's warranty.	4	2, 3, 4, 5 or 6
	A longer warrantied roof system saves money in replacement costs, and reduces the use of landfills due to the longevity of the product.		
3-13	Minimum 25% recycled-content roofing material.	3	3
	Recycled content roof material reduces the use of new resources, and waste in landfills.		
3-14	Interior doors made with recycled and/or recovered content (min. 15%-1 pt.) and/or from third-party certified sustainable harvested sources (2 pts.).		1 to 3
	Recycled or recovered content ensures we keep our landfill use to a minimum.		
3-15	Interior doors made from third-party certified sustainable harvested sources.		2
	Uses trees from a forest managed system that prevents clear cutting trees, and replants trees to replace from which they have been harvested.		
3-16	Domestic wood from reused/recovered or remilled sources – 500 square foot minimum for flooring or all cabinets or all millwork.		6
	Reused, recovered or re-milled sources eliminate the need for new resources, saves energy, transportation costs, and forestry from depletion.		
3-17	All carpet padding made from natural or recycled textile, carpet cushion or tire waste.	2	2
	Natural or recycled-content carpet padding is a good use of reuseable resources. Rebond still qualifies.		
3-18	Install carpet that has a minimum of 50% recycled content.	2	2
	Recycled-content carpet is a good use of renewable resources, lessens off gases, and improves air quality.		
3-19	100% recycled or recovered content underlayment or use of concrete finishes to enable the flooring to remain concrete.		1
	Concrete finishes such as stamped or stained concrete etc.		
3-20	Install a minimum of 300 square feet per unit of laminate flooring.		2
	Laminate flooring is made up of sustainable raw materials.		
3-21	Bamboo, cork or hardwood flooring used in home (min. 300 square feet installed). Products must be third-party certified to be from managed forests or from certified sustainable sources.		3
	Cork flooring comes from stripping the bark off cork oak, which regenerates itself. The cork tiles are moisture, rot and mold resistant, providing a floor that can last over 30 years. Bamboo flooring is a good use of natural resources because it is fast growing, durable and flexible.		
3-22	All ceramic tile installed in the project has a minimum of 25% recycled-content.		2
	Reduces landfill usage.		
3-23	MDF casing and baseboard used throughout the project.	1	1
	MDF casing is created from sawdust and glues, utilizing all wood waste to create usable product.		
3-24	Finger-jointed casings, baseboards and jambs used throughout the project.		1

Finger-jointed casing and baseboards maximize wood usage, buy using small pieces of wood glued together to create longer pieces. The process saves old growth forests by using trees from forest managed systems that prevents clear cutting trees, and replants trees in areas from which they have been harvested.

3-25	Solid hardwood trim from third party certified sustainable harvested sources approved for millwork (2 pts.) and/or cabinets (2 pts.). This process saves old growth forests by using trees from forest managed systems that prevents clear cutting trees, and replants trees in areas from which they have been harvested.		2 to 4
3-26	Paints or finishes with minimum of 20% recycled content. Paints or finishes made form recycled content are environmentally friendly because recycling paint reduces the hazardous waste in landfills.	1	1
3-27	Natural granite, concrete, recycled glass or stone countertops in 100% of the kitchen (2 pts.) and all other countertop areas (1 pt.). Natural product is more durable; easy to clean and maintain and is resistant to heat and scoring.		1 to 3
3-28	100% agricultural waste or 100% recycled wood particle board used for shelving. Products such as wheat board are made from agricultural waste.		2
3-29	PVD finish on all door hardware (1 pt.) PVD finish on all faucets (1 pt.). Physical Vapor Disposition (PVD) provides a more durable product; no toxic wastes are produced making it.		1 to 2
	TOTAL SECTION POINTS	20	

IV. INDOOR AIR QUALITY

This section focuses on the quality of the air within the finished project. Products listed here include materials that are low in VOC's, products made from all natural materials as well as various air cleaning and ventilation systems.
Minimum 15 (UNDER REVIEW)

4-1	Install pleated media filter (1 pt.) or an electrostatic air cleaner (2 pts.) or an electronic air cleaner (3 pts.) or a HEPA filtration system (6 pts.) or an ultraviolet air purifier (2 pts.) in conjunction with the HVAC system. *Pleated air filters* are made with material that has been pleated or folded to provide more surface area. These pleated air filters are often the most efficient of all the media air filter types and are a whole house air filter. By increasing the surface area for collecting dust, airflow through the pleated air filter is less restricted. The *electrostatic air cleaner* is a permanent washable air filter that traps and removes airborne particles from the air before being circulated through the furnace and into the home. An *Electronic Air Cleaner* offers a superior level of filtration by using advanced, 3-stage filtration technology to trap and filter airborne particles like dust, cat dander and smoke. It works by placing an electric charge on airborne particles, and then collecting the charged pollutants like a magnet. The air cleaner cells can be washed in your dishwasher or sink. *HEPA* stands for High-Efficiency Particle Arresting. HEPA filtration offers the highest particulate removal available - 99.97% of particles that pass through the system including dust, cat dander, certain bacteria, pollens and more. The system is connected to the cold air return of the forced air heating/cooling system which provides a whole house filtration system. *Ultraviolet (UV) Air Treatment Systems* kill mold spores and certain live, airborne bacteria passing by the lamp to prevent them from being re-circulated into the home's air.	1	1,2, 3 or 6
4-2	Install power drum humidifier (1pt.) or a drip type humidifier (2 pts.) in conjunction with the HVAC system. Proper humidity provides a more comfortable living environment at a lower temperature, so you can turn down your thermostat for energy savings. Controlling humidity also means moisturizing dry air to prevent damage to hardwood floors and woodwork. Power drum humidifiers direct the heated air through a water-laden evaporator sleeve which absorbs moisture and then returns to the heating system for distribution throughout the home.		1
4-3	Install drip type humidifier on HVAC system. Proper humidity provides a more comfortable living environment at a lower temperature, so you can turn down your thermostat for energy savings. Controlling humidity also means moisturizing dry air to prevent damage to hardwood floors and woodwork. Flow-through humidifiers direct the airflow from your heating and cooling system to pass through a moisture filled pad, so the airstream picks up moisture evenly and distributes it throughout the home.		2
4-4	Install in-line ventilation fan with programmable timer (separate switch from lighting) in each unit. A programmable timer ensures necessary, regular, automatic mechanical ventilation of the housing units.		1
4-5	Install passive Heat Recovery Ventilator (HRV-2 pts.) or and active Heat Recovery Ventilator/ Energy Recovery Ventilator (HRV or ERV- 4pts.) in each unit . A Heat Recovery Ventilator (HRV) is an air exchanger that exhausts humid, stale, polluted air out of the housing unit and draws in fresh, clean outdoor air. Invisible pollutants produced by common household substances, plus dust and excess humidity that get trapped in today's houses, can increase your risk of chronic respiratory illness and your home's risk of serious structural damage. A passive HRV unit does not have its own internal fan and is 100% furnace assisted. It works by tying the exhaust side of the unit to the supply air plenum which forces air to exhaust from the housing unit and at the same time fresh air enters from outside through the unit and into the cold air return duct work. Much like the HRV the ERV recovers heat, it also recuperates the energy trapped in moisture; this greatly improves the overall recovery efficiency. In dry climates and humidified homes the ERV limits the amount of moisture expelled from the home. In humid climates and air conditioned homes, when it is more humid outside than inside, the ERV limits the amount of moisture coming into the housing unit.	4	2 to 6
4-6	Install thermostat that indicates the need for the air filter to be changed or cleaned. This feature displays filter maintenance reminders on the thermostat. Regular furnace maintenance is required to keep your mechanical equipment running efficiently and problem free as well as ensuring a healthy indoor air environment.		1
4-7	All combustion appliances are sealed with no possibility of backdraft (if units are individualy heated). Sealed-combustion appliances draw all their combustion air from the outdoors, which eliminates any chance of back drafting. This feature is especially helpful in well sealed housing units. These types of appliances do not negatively affect indoor air quality.	3	3
4-8	Install hardwired carbon monoxide detector outside main sleeping areas, if combusion spillage susceptible appliances are used in the unit. Carbon monoxide detectors warn against high levels of toxic carbon monoxide.		1
4-9	Power vacuum all HVAC ducting prior to occupancy by homeowner. This process helps eliminate pollutants that drop into the HVAC ducting during the construction process from being circulated into the housing unit.	2	2
4-10	Central vacuum system vented to exterior has Carpet and Rug Institute (CRI) IAQ approval.		1

A central vacuum system collects dust centrally, while exhausting to the exterior so that dust mites and bacteria do not have the opportunity to re-circulate. The result is cleaner, healthier air.

4-11	All insulation in the project is third-party certified or certified with low or zero formaldehyde. Formaldehyde may cause eye, nose, and throat irritation, headaches, loss of coordination, nausea, damage to liver, kidney, and central nervous system .	2	2
4-12	Low formaldehyde sub floor sheathing. Formaldehyde is colorless gaseous organic compound, water soluble, with a characteristic pungent and stifling smell. Building materials low in or free of formaldehyde glues are used in the floor underlayment, cabinetry and elsewhere to protect the indoor air quality.	3	3
4-13	Low formaldehyde underlayment is used in the project. (ANSI A208.1 – 1993 concentration 0.3 ppm). Low formaldehyde (phenol) and formaldehyde-free binders (PMDI) are available and becoming more common. FSC certified OSB is becoming more common, reducing environmental impacts on air, water, social quality.	1	1
4-14	Low formaldehyde particle board/MDF used for cabinets (ANSI A208.2 – 1994 concentration 0.3 ppm). Urea formaldehyde-free fibreboard can be used in the same way as conventional fibreboard, but with the added caution of greater potential for water damage.		1
4-15	Low formaldehyde particle board/MDF used for shelving (ANSI A208.2 – 1994 concentration 0.3 ppm).		1
4-16	Zero formaldehyde particle board/MDF used for cabinets (2 pts.) and/or for shelving (2 pts.). Cabinets made from formaldehyde free particleboard or MDF eliminate the Volatile Organic Compounds (VOC) that offgas into the home, resulting in healthier indoor air quality.	2	2 to 4
4-17	All interior wire shelving is factory powder coated. Vinyl coating on conventional shelving units offgas VOC toxins.		2
4-18	Water-based urethane finishes used on all site-finished wood floors. Water-Based Epoxy: Generally referred to as "epoxy-modified finish," water-based epoxy finish differs from its solvent-based counterpart in that the epoxy resin is itself the catalyst for an acrylic or urethane resin.		2
4-19	All wood or laminate flooring in the project is factory finished. Installing a pre-finished floor eliminates the time, the dust and the odors associated with the on-site sanding and finishing of an unfinished product.		2
4-20	Water-based Lacquer or paints are used on all site built and installed millwork, including doors, casing and baseboards. Water based interior finish products reduces VOC off-gassing which improves indoor air quality.	3	3
4-21	Interior paints are used that have low VOC content (2 pts.--Standards are less than 250 grams/liter of VOCs) and/or interior paint is used that has no VOC's in base paint--prior to tint (3 pts.). Volatile Organic Compounds (VOC) are a class of chemical compounds that can cause short or long-term health problems. A high level of VOCs in paints/finishes off gas and can have detrimental effects to a building's indoor air quality and occupant health. Any paint with VOC's in the range of 5 grams/litre or less can be called "Zero VOC", according to an EPA standard. Some manufacturers may claim "Zero-VOC's", but these paints may still use colorants, biocides and fungicides with some VOC's. Adding a color tint usually brings the VOC level up to 10 grams/liter, which is still quite low.	5	2 to 5
4-22	Carpet and Rug Institute (CRI) IAQ label on all carpet used in unit (2 pts.) and/or on all underlay used in unit (1 pt.). To identify carpet products that are truly low-VOC, CRI has established a labeling program. The green and white logo displayed on carpet samples, of the CRI Indoor Air Quality Carpet Testing Program, in showrooms informs the consumer that the product type has been tested by an independent laboratory and has met the criteria for very low emissions.The adhesives used to install carpets and the latex rubber by some manufacturers to adhere face fibers to backing materials generate volatile organic compounds (VOCs). Carpets also cover large surfaces within an interior environment and can provide "sinks" for the absorption of VOCs from other sources.	2	1 to 3
4-23	Natural wool carpet in all living areas. Natural wool carpets are durable and use less secondary backing materials and chemicals. Offgassing is typically caused by the secondary backings and chemical additives in synthetic carpets, for controlling mildew, fungus, fire and rot.		2
4-24	All vinyl or linoleum sheet flooring is installed with low VOC adhesives (1 pt.--Low VOC = standard is less than 150 grams per litre) and/or are replaced by hard surface flooring (2pts.) and/or natural linoleum replaces vinyl (1pt.). Low VOC adhesive or backing minimizes the amount of VOC off-gassing, therefore improving IAQ.	1	1 to 4
4-25	Natural linoleum in place of any vinyl sheet flooring. Linoleum installed with low VOC adhesives. (Low VOC = standard is less than 150 grams per litre). Natural linoleum is made from natural linseed and other abundant renewable materials.	2	2
4-26	All ceramic tiles are installed with low VOC adhesives and plasticizer-free grout. (Low VOC = standard is less than 150 grams per litre). Most adhesives are still based on SB latex, which releases large quantities of volatile organic compounds (VOCs). The volatile solvents are used to emulsify (or liquefy) the resin that acts as the bonding agent. However, water-based adhesives emit far less VOCs than their conventional solvent based counterparts. There are three types of low-VOC formulas: water-based (latex and acrylics); reactive (silicone and polyurethane); and exempt solvent-based (VOC-compliant solvents). While all three technologies yield low- or zero-VOC caulks, sealants, and adhesives, their performance is slightly different.	1	1
4-27	All vinyl flooring in units are replaced by hard surface flooring. See detail below.		2
4-28	All carpet in units are replaced by hard surface flooring. Hard surface flooring is generally more durable and improves the IAQ within a building. Carpets collect dust, dust mites and other allergens which when disturbed become airborne particulates, directly affecting the health of the occupants.		4
	TOTAL SECTION POINTS	32	

V. WASTE MANAGEMENT

This section deals with the handling of waste materials on the construction site and encourages recycling.
Minimum 7 (UNDER REVIEW)

5-1	Comprehensive recycling program for building site including education, site signage and bins. A comprehensive recycling program that is strictly followed significantly reduces the amount of waste ending up in landfills. Currently it is estimated that up to 50% of landfill waste is construction related.	2	2
5-2	Collection of waste materials from site by a waste management company that is a current member of a provincial recycling council or equivalent association and verifies that a minimum of 10% of the materials collected from the construction site have been recycled. Not only does this reduce overall waste of product, it ensures that as much product as possible is being utilized for the production of future resources.	4	4
5-3	Suppliers and Trades recycle their own waste. (1 pt. per trade, max. 4 pts.). Trades being responsible for recycling and removal of waste not only reduces landfill waste, but also promotes a cleaner and safer working environment.		1 to 4
5-4	Minimum 25% (2 pts.) or 50% (4 pts.) by weight of waste materials collected from construction site is diverted from waste stream. Trades being responsible for recycling and removal of waste not only reduces landfill waste, but also promotes a cleaner and safer working environment.	2	2 or 4
5-5	Use of recycled materials derived from local construction sites (1 pt. for each different product used, max of 3 pts.). Products recycled from the construction site, such as mulched wood cut offs or mulched gypsum are often useable as either clay/ soil water retention additives or for organic burning.		1 to 3
5-6	Trees and natural features on site protected during construction. The protection of existing trees and other natural features such as streams, ponds and other vegetation reduces environmental impact, and ecosystem impact. Many of these features can be protected simply by following good waste management procedures.		1
5-7	Shared transportation benefits: provide one parking stall for a car-sharing vehicle (1 pt.), and/or a car sharing vehicle as one component of condimimum association (3 pts.) and/or bicycle storage on site (1 pt).	5	1 to 5
	Providing a vehicle to share allows occupants to live without their own vehicle and using the shared vehicle when needed. Provision of covered storage facilities for securing bicycles on site encourages the use of alternative transportation.		
5-8	Metal or engineered durable form systems used for concrete foundation walls. The use of metal forming systems reduces the requirement of lumber, a limited resource.	1	1
5-9	Reusable bracing is used for framing. The use of reusable bracing for framing reduces the requirement of lumber, a limited resource.	1	1
5-10	Install built-in recycling center in with two or more bins in each unit (2 pts.) and/or provide composter to each homeowner (1 additional pt.). By installing built in recycling centers, which can be as simple as labeled containers (paper, cardboard, cans, plastics, etc), homeowners are more likely to utilize the pre-existing facilities and thus contribute to the reduction in landfill waste. Providing a composter promotes a reduction in wastes heading to the landfill by giving homeowners an option for organic waste such as food leftovers.	2	2 to 3
5-11	Provide a central recycling center for the housing project (1 pt.--min. of paper, glass and tin recycling) and/or install trash compactor for unit or building (1 pt.). Providing a recycling center will promote recycling among the homeowners/occupants. Installing a trash compactor, while not actually reducing the mass of waste, does help by reducing it's volume, which over time can make a significant difference to landfill levels.	2	1 to 2
	TOTAL SECTION POINTS	19	

VI. WATER CONSERVATION

This section encourages a reduction in the amount of water used in the home or in individual units within multi story buildings.
Minimum 7 (UNDER REVIEW)

6-1	CSA approved single flush toilet averaging 1.6 GPF or less installed in all bathrooms. Lower flow toilets can save a substantial amount of water over time.		2
6-2	Install a dual flush or 1.2 GPF toilet in one or more bathrooms in each unit (2 pts. for one bathroom, 3 pts. for all) These toilets offer a choice between two water levels for every flush; 1.6 GPF (6 LPF) or 0.8 GPF (3 LPF).	2	2 or 3
6-3	Install waterless urinals in men's public facilities. The Average public urinal uses approximately 400 litres of water/day or 3.8- 10 litres per flush. Waterless urinals are more sanitary, reduce maintenance, installation costs and are only marginally more expensive to purchase.		1
6-4	Insulate the first three feet of the water lines on the hot water tank with flexible pipe insulation where units contain independent DHW system (1 pt.) and/or insulate all hot water lines to all locations (2 pts.). Minimizing the heat loss in the water line will decrease the initial water wasted by delivering hot water faster. Minimizing the heat loss in the water line will decrease the initial water wasted by delivering hot water faster.	1	1
6-5	Install hot water recirculation line. Having the hot water re-circulated from the hot water source to the fixture points will decrease the initial water wasted by delivery the hot water faster.	3	3
6-6	Install low flow faucet aerators on all bathroom and kitchen sinks (1 pt.) and/or install hands free lavatory or kitchen faucets in each unit (4 pts.).	1	1 to 5

Low flow faucets may be included if flow rate is a maximum of 3.8 L/ minute on bathroom sinks and/or 6.8 L/minute on kitchen sinks. Battery powered electronic sensor minimizes the spread of germs and saves water.

6-7	Supply front loading clothes washer in each unit. Front loading clothes washers conserve water by design, as they are only required to fill up the washing compartment 1/3 full to effectively wash clothing. Additionally they use up to 75% less environmentally damaging laundry detergent, AND they also conserve electrical or gas energy by significantly reducing drying time for clothes with a more thorough spin cycle.		3
6-8	Install water saving dishwasher that uses less than 26.0 L/water per load in each unit. Water saving dishwasher uses technology to reduce both the amount of water required as well as electrical energy requirements. The EnerGuide appliance directory put out by Natural Resources Canada has a comprehensive listing of all manufacturers and models of dishwashers and other appliances with water usage and energy efficiency ratings.	1	1
6-9	Install permeable paving materials for driveways and walkways. Permeable paving materials allow rainwater to flow back into the ground instead of into storm sewers.		2
6-10	Install a water meter in every unit. Installing a water meter in each unit makes the occupants more aware or and responsible for water use.		3
6-11	Install Efficient Irrigation Technology (1 pt.) in conjunction with a collection system (1 pt.)– 50% of irrigation needs; 3 pts. for all). Show Storm Water Management plan & design; water efficient irrigation systems, sensors, regulators, micro drip feed systems etc. Plan for neighbourhood storm water management principles and strategies including run-off and controlling rates.	3	1 to 3
6-12	Provide a list of drought tolerant plants and a copy of the local municipality water usage guide to homebuyers with closing package. Most municipalities provide a guide that gives the water requirements of various plants and grasses. When properly designed, landscaping choices can significantly contribute to water conservation.	1	1
6-13	Reduce lawn/turf to 50% of landscaped area. Lawns require a large amount of water to maintain. By reducing the amount of lawn, water use can also be reduced.	1	1
6-14	Builder captures rainwater for use in atrium, patio garden feature and/or landscaping.		1
6-15	Greywater is collected, treated and reused throughout the project		5
	TOTAL SECTION POINTS	13	

VII. BUSINESS PRATICE

This section deals more with manufacturers and builders office and business practices
Minimum 9 (UNDER REVIEW)

7-1	Products used for the project are manufactured within 800 km. (1 pt. for each product to a max. of 5 products). Products made closer to the location of use will have less embodied energy. Basically this means that the shorter the transportation distance the less energy used in moving the product. Less energy used means fewer emissions.	5	1 to 5
7-2	Builder provides Built Green homeowner manual and/or educational walkthrough and/or Green systems manual for building managers. Homeowner education is an important component to any high performance building. If the technology is not used correctly, it will diminish the efficiency.	2	2
7-3	Builders office and show homes purchase a minimum of 50% (1 pt.) up to 100% (2 pts.) solar, wind or renewable energy. Wind Energy is a cleaner way to provide energy. Lower emissions benefit the environment.		1 to 2
7-4	Manufacturers and/or suppliers purchase 50% or more solar,wind or renewable electricity. Wind Energy is a cleaner way to provide energy. Lower emissions benefit the environment.		1
7-5	Builder supplies a minimum of 8" of topsoil as finish grading throughout site. Compared to subsoil materials, topsoils usually have higher aggregate stability, lower bulk density, and more favourable pore size distributions which leads to higher hydraulic conductivity, waterholding capacity, and aeration porosity.		2
7-6	Development site provides community amenity space for not for profit community services. Floor area made available to the City for not-for-profit community use. (ie. Assemblies, offices, educational facilities etc).	2	2
7-7	Development site provides for Publically Accessible Private Space . ie. Atriums, open courtyards etc. which are part of the residential project but have links to/for public access.	1	1
7-8	Development includes a diversity of housing types including 20% live/work units (2pts.), 25% mixed use (2 pts.) facilities and/or 20% with separate basement suite units (2pts.) This type of development encourages neighborhoods where people can live, work, shop etc. without having to drive.	2	2 to 6
7-9	Builder has written environmental policy which defines their commitment (which must include an office recycling program and energy efficient lighting). A statement of commitment helps to emphasize priority and ultimately define a corporate culture.	1	1
7-10	Manufacturer and/or supplier has a written environmental policy which defines their commitment (this must include an office recycling program and energy efficient lighting). (1 pt. per supplier/manufacturer, max. of 2 pts.). Doing business with others committed to the environment helps to promote the ideals of being earth friendly.	2	1 to 2
7-11	Builder has written an environmental policy which prioritizes milestones for future net zero housing developments. The next step toward easing our reliance on non-renewable energy is net zero housing. Net zero houses produce as much energy as they consume using renewable sources such as solar, thermal, wind, geoexchange etc.		1

7-12	Make provision Truck Management Plan, to avoid high congestion areas during construction. A truck management plan would minimize the impact of trucks in the construction neighborhood. Features include scheduled arrivals/departures, reuse of materials to reduce truck traffic, communication with community and specific hours of work designated.	1	1
7-13	Delivery Area wheel washed/ treated during construction. Wheel wash area will cut down on dust pollution in the neighborhoods where construction is taking place.	1	1
7-14	Builder's company vehicles are hybrid or bio-diesel vehicles (1 pt. per vehicle to max. of 3 pts.). A commitment to the environment shouldn't stop at construction. Using a hybrid vehicle produces lower harmful emissions. Diesel construction vehicles converted to bio-diesel reduce fuel consumption by up to 75%.		1
7-15	Builder uses radiantly supplied cold weather construction practice. Propane heaters under tarps are often inefficient; this results in a great deal of wasted energy while reducing the quality of workmanship. Alternatives may include manufacturing components indoors.		1
7-16	Environmental certification for builder's place of business (building, office etc). Many commercial buildings have been rated with various energy efficiency standards. Does your company work within an ENERGY STAR or LEED certified office building?		3
7-17	Builder agrees to construct and label a min. of 50% of all projects to the Built Green™ standard per calendar year. (3 pts. for 50% or 5 pts. for 100%). A commitment to the environment from the builder can expand energy efficiency exposure to a large number of home owners and other home builders. Every Built Green project that is built is a reduction in material use, a reduction of green house gas emissions, less waste and better efficiency.		3 or 5
7-18	Contracted trades and/or suppliers have successfully taken Built Green™ Builder Training. (1 pt. per company, max 3 pts.). Using trades or suppliers who have successfully taken Built Green Builder Training means that there is common understanding about what needs to be done and how it will be accomplished, streamlining the process.		1 to 3
	TOTAL SECTION POINTS	17	
	TOTAL CHECKLIST POINTS	**207**	