7.1

HALIFAX
REGIONAL MUNICIPALITY

Richard Harvey, Senior Planner
Planning Applications
Community Development
PO Box 1749
Halifax, Nova Scotia, B3J 3A5

(t) 902-490-5637
(f) 902-490-4406
harveyri@halifax.ca

MEMORANDUM

TO: Design Review Committee

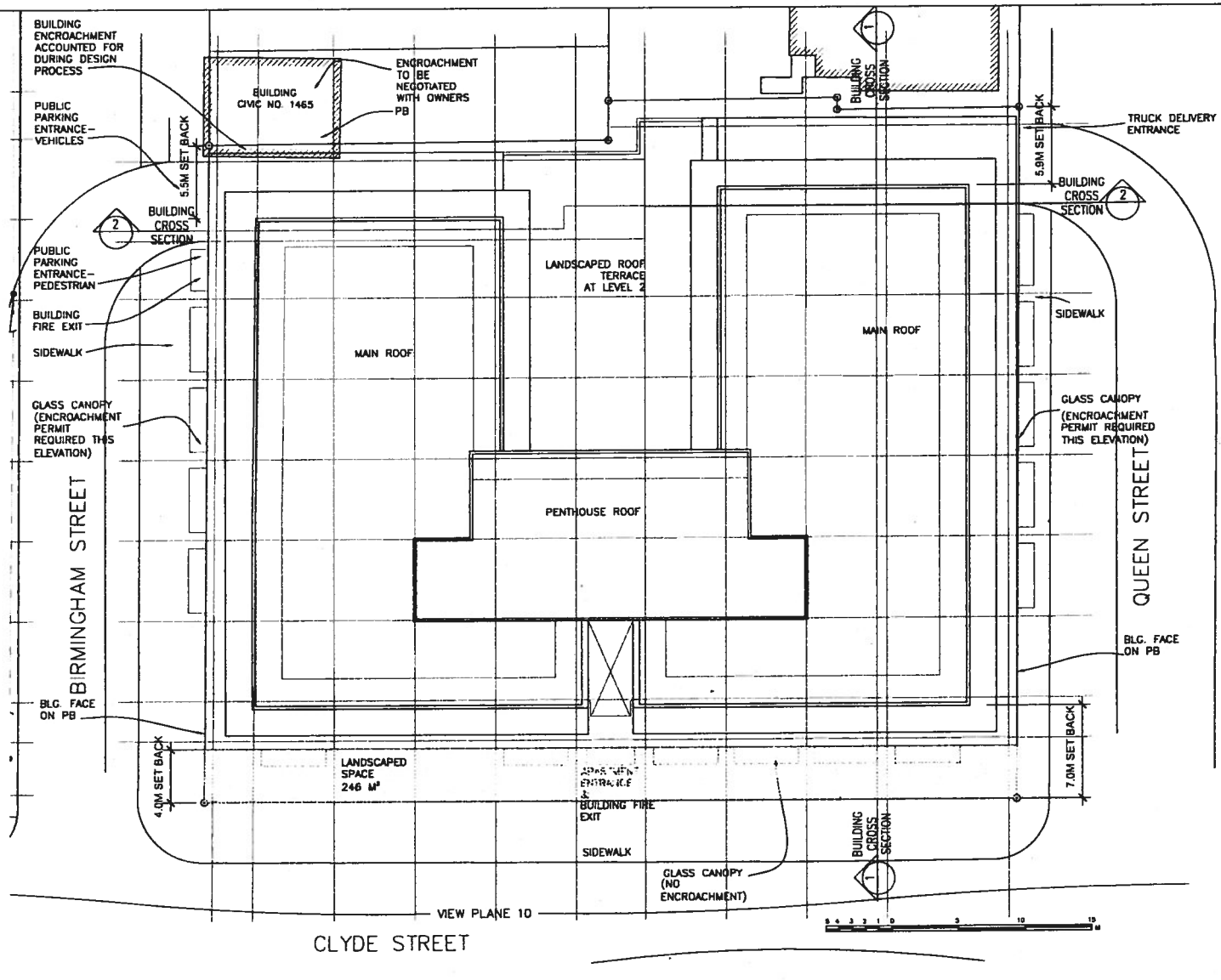
CC: --

FROM: Richard Harvey, Senior Planner

DATE: July 30, 2012

SUBJECT: 1452 Queen Street, Substantive Site Plan Approval Application

An application for Substantive Site Plan Approval has been submitted for this site (north side of Clyde Street, between Queen Street and Birmingham Street). The attached documents have been submitted for the Committee's review and will be the subject of a presentation by the proponent at the August 9, 2012 meeting. Following this, Staff will devise a full report to the Committee for its consideration.



LEGEND

PB PROPERTY BOUNDARY

TERRACE/ DECK

BALCONY

ELEVATOR

BARRIER FREE PARKING ELEVATOR

BUILDING FIRE EXIT

PROJECT NORTH:

WM FARES GROUP

Duffus Romans Kundzins Rounsefell

ARCHITECTS LIMITED HALIFAX NOVA SCOTIA

MARY ANN SITE

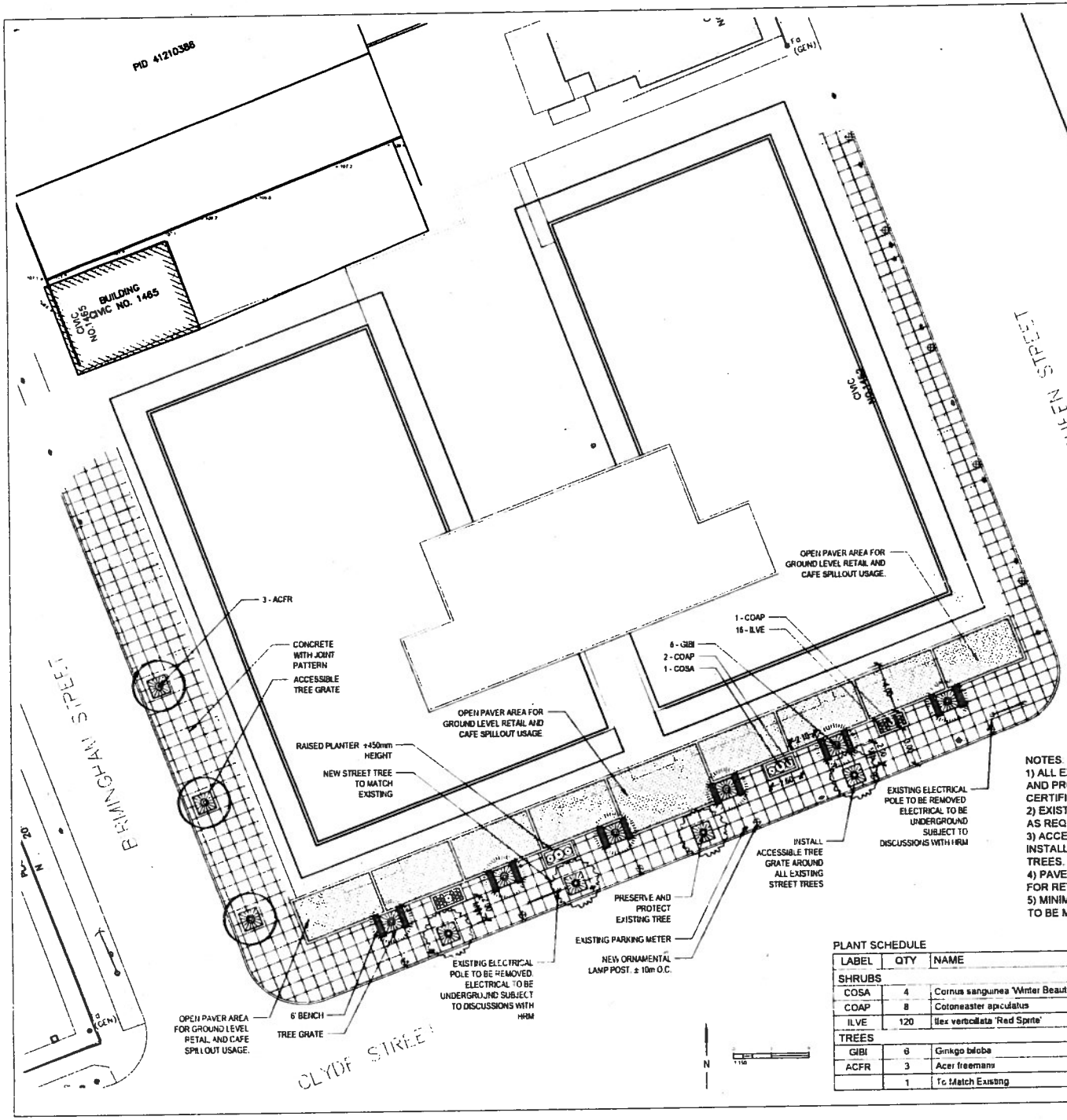
CLYDE / BIRMINGHAM / QUEEN STREET

SITE PLAN

Date
23 MAY 2012

Scale
1: 300

Drawing
A-01



NOTES.
1) ALL EXISTING TREES TO BE PRESERVED AND PROTECTED OR AS RECOMMENDED BY CERTIFIED ARBORIST.
2) EXISTING STREET TREES TO BE REPLACED AS REQUIRED.
3) ACCESSIBLE TREE GRATES TO BE INSTALLED AROUND ALL NEW AND EXISTING TREES.
4) PAVER AREA TO BE LEFT OPEN TO ALLOW FOR RETAIL / CAFE OUTDOOR USE.
5) MINIMUM 2m LANE OF PEDESTRIAN TRAVEL TO BE MAINTAINED ALONG LENGTH OF WALK

PLANT SCHEDULE

LABEL	QTY	NAME	COMMON	SIZE	TYPE
SHRUBS					
COSA	4	Cornus sanguinea 'Winter Beauty'	Winter Beauty Dogwood	50 cm	3 gal
COAP	8	Cotoneaster apiculatus	Cranberry Cotoneaster	50 cm	3 gal
ILVE	120	Ilex verticillata 'Red Sprite'	Red Sprite Winterberry	60 mm	3 gal
TREES					
GIBI	6	Ginkgo biloba	Ginkgo	60 mm	WB
ACFR	3	Acer freemanii	Freeman Maple	60 mm	WB
	1	To Match Existing		50 cm	3 gal

EXISTICS PLANNING & DESIGN
1 STARR LANE, DARTMOUTH
PH (902)461-2525 FAX (902)465-3131

WM FARES GROUP

NO.	REVISION	DATE

PROJECT
SISTERS SITE, CLYDE STREET

DRAWING
CONCEPTUAL LANDSCAPE PLAN

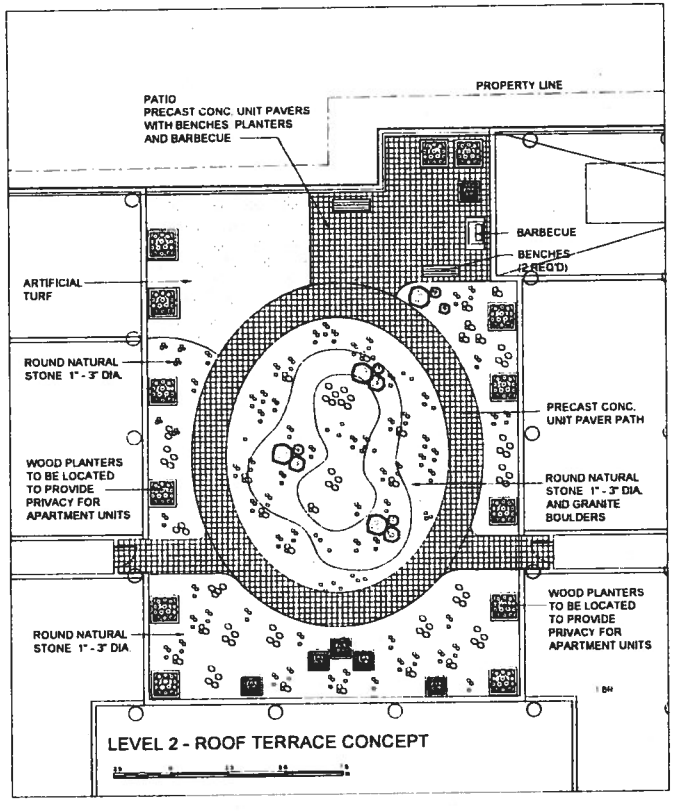
SCALE	DATE
1:150	JULY 25, 2012

DRAWN BY	CHECKED	REVIEWED
-	-	-

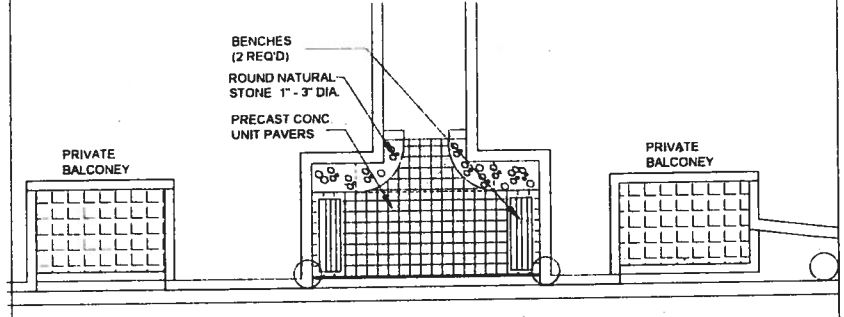
APPROVED	DEPT. APPROVAL
-	-

SEAL

DEPT. PROJECT NO.	DRAWING NO.
-	L001
CONSULTANT'S NO.	
-	
TENDER NO.	
-	



Typical Roof Terrace Concept at Levels 5,6,7,8 and 9



Gordon Ratcliffe
LANDscape ARCHITECTS

PROJECT NORTH:

WM FARES GROUP

Duffus
Romans
Kundzins
Rounsefell
ARCHITECTS LIMITED
HALIFAX, NOVA SCOTIA

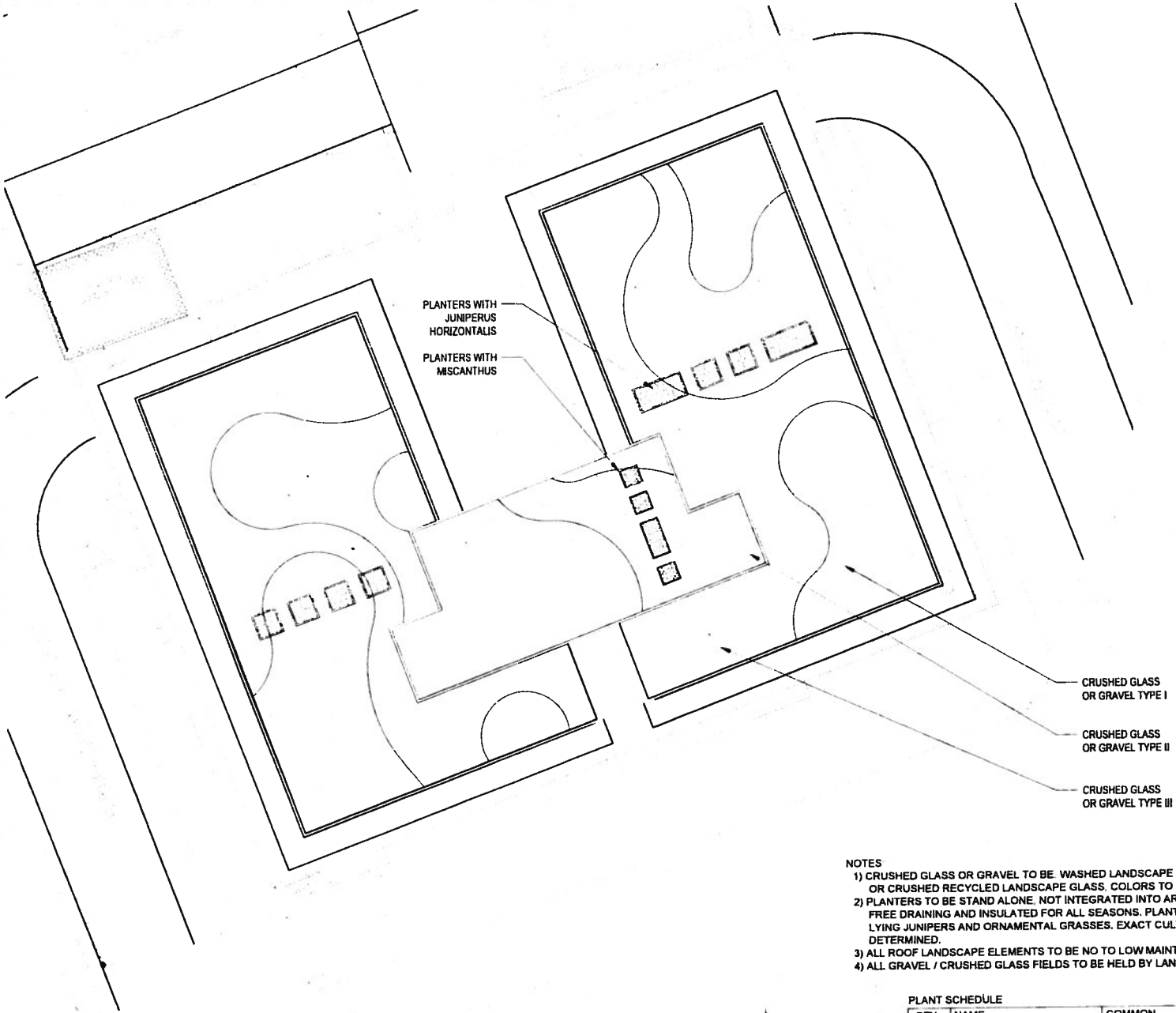
MARY ANN SITE
CLYDE / BIRMINGHAM /
QUEEN STREET

LEVEL 2,5,6,7,8,9 ROOF TERRACE LANDSCAPE PLAN

Date
03 FEBRUARY 2012

Scale
AS NOTED

Drawing
L-02



NOTES
1) CRUSHED GLASS OR GRAVEL TO BE. WASHED LANDSCAPE GRAVEL 1 - 2"., OR CRUSHED RECYCLED LANDSCAPE GLASS. COLORS TO BE DETERMINED.
2) PLANTERS TO BE STAND ALONE. NOT INTEGRATED INTO ARCHITECTURE. FREE DRAINING AND INSULATED FOR ALL SEASONS. PLANTS TO BE LOW LYING JUNIPERS AND ORNAMENTAL GRASSES. EXACT CULTIVAR TO BE DETERMINED.
3) ALL ROOF LANDSCAPE ELEMENTS TO BE NO TO LOW MAINTENANCE.
4) ALL GRAVEL / CRUSHED GLASS FIELDS TO BE HELD BY LANDSCAPE EDGER

PLANT SCHEDULE

QTY	NAME	COMMON	SIZE
SHRUBS			
40	Juniperus horizontalis	Spreading Juniper	3 gal
20	Miscanthus	Miscanthus Grass	3 gal

BIOTRICS PLANNING & DESIGN
1 STARR LANE DARTMOUTH
PH (902)461-2525 FAX (902)465-3131

WM FARES GROUP

NO.	REVISION	DATE

PROJECT
SISTERS SITE, CLYDE STREET

DRAWING
CONCEPTUAL
ROOF LANDSCAPE PLAN

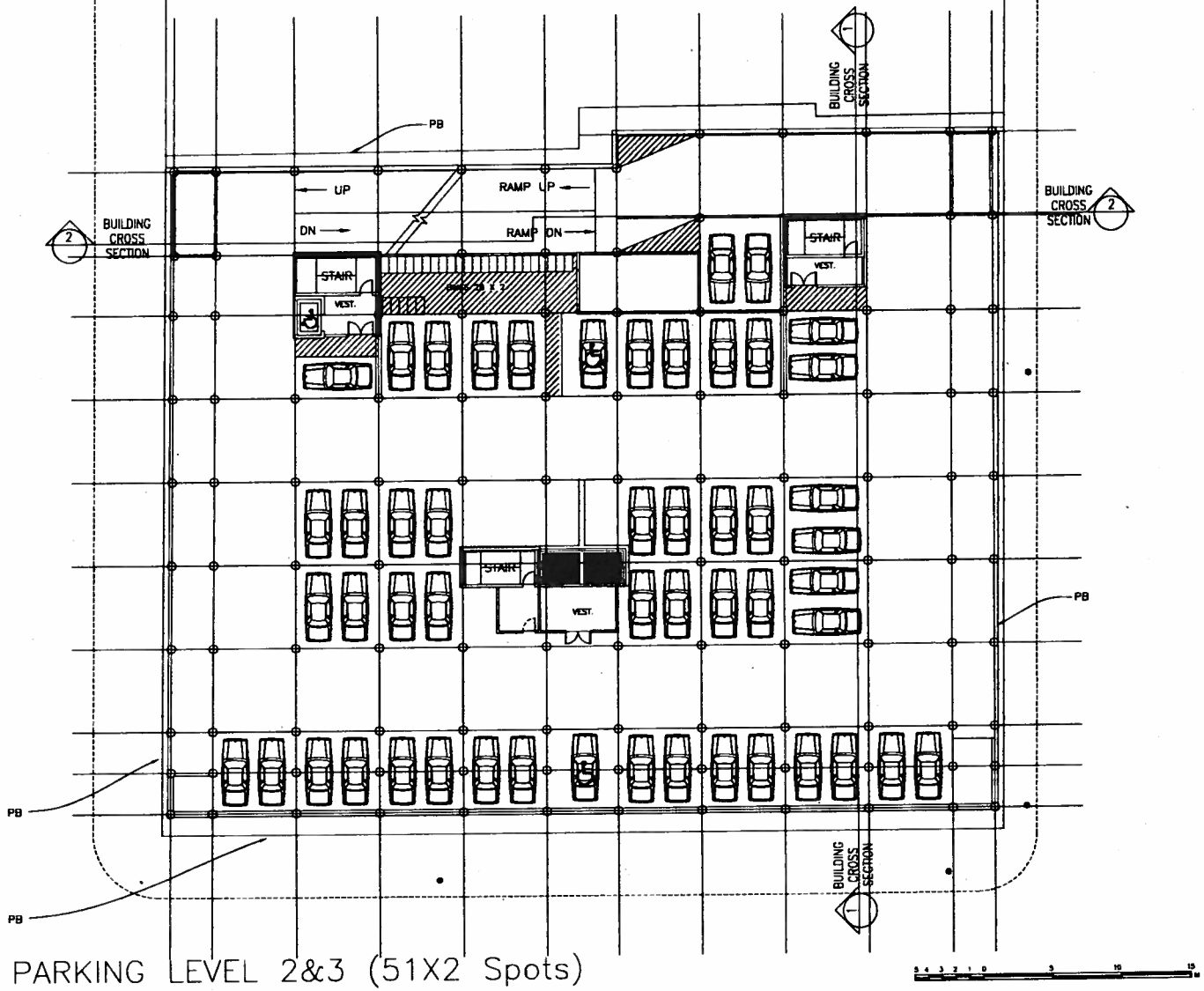
SCALE	DATE
1:150	JULY 25, 2012

DRAWN BY	CHECKED	REVIEWED
-	-	-

APPROVED	DEPT. APPROVAL
-	-

SEAL

DEPT. PROJECT NO.	DRAWING NO.
-	L003
CONSULTANT'S NO.	
-	
TENDER NO.	
-	



PARKING LEVEL 2&3 (51X2 Spots)

LEGEND

PB PROPERTY BOUNDARY

TERRACE/ DECK

BALCONY

ELEVATOR

BARRIER FREE PARKING ELEVATOR

BUILDING FIRE EXIT

PROJECT NORTH:

WM FARES GROUP

Duffus Romans Kundzins Rounsefell

ARCHITECTS LIMITED
HALIFAX, NOVA SCOTIA

MARY ANN SITE

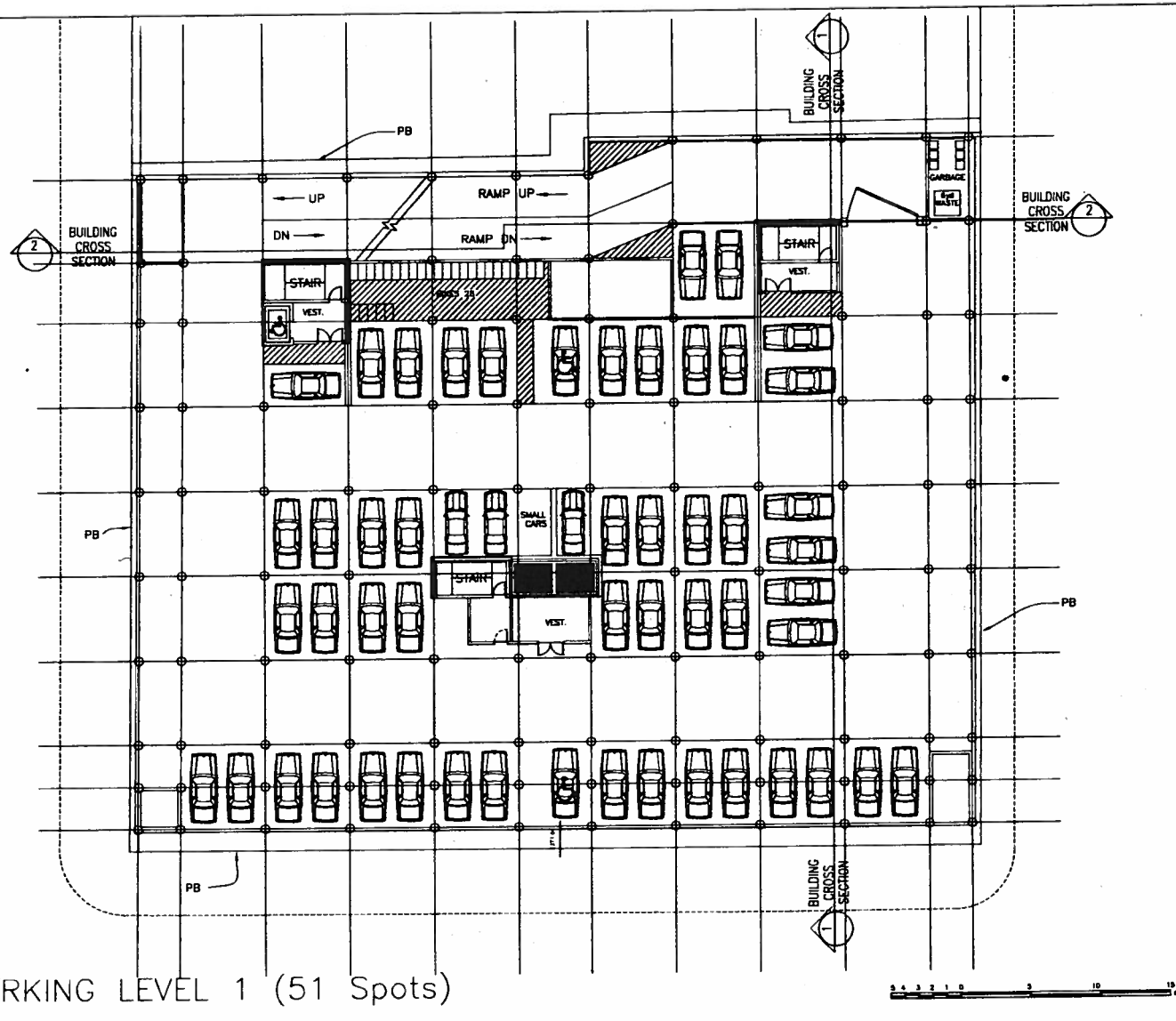
CLYDE / BIRMINGHAM / QUEEN STREET

PARKING LEVEL 2 & 3 PLAN

Date
23 MAY 2012

Scale
1: 300

Drawing
A–02



PARKING LEVEL 1 (51 Spots)

LEGEND

PB PROPERTY BOUNDARY

TERRACE/ DECK

BALCONY

ELEVATOR

BARRIER FREE PARKING ELEVATOR

BUILDING FIRE EXIT

PROJECT NORTH:

WM FARES GROUP

Duffus Romans Kundzins Rounsefell

ARCHITECTS ENGINEERS NOVA SCOTIA

MARY ANN SITE

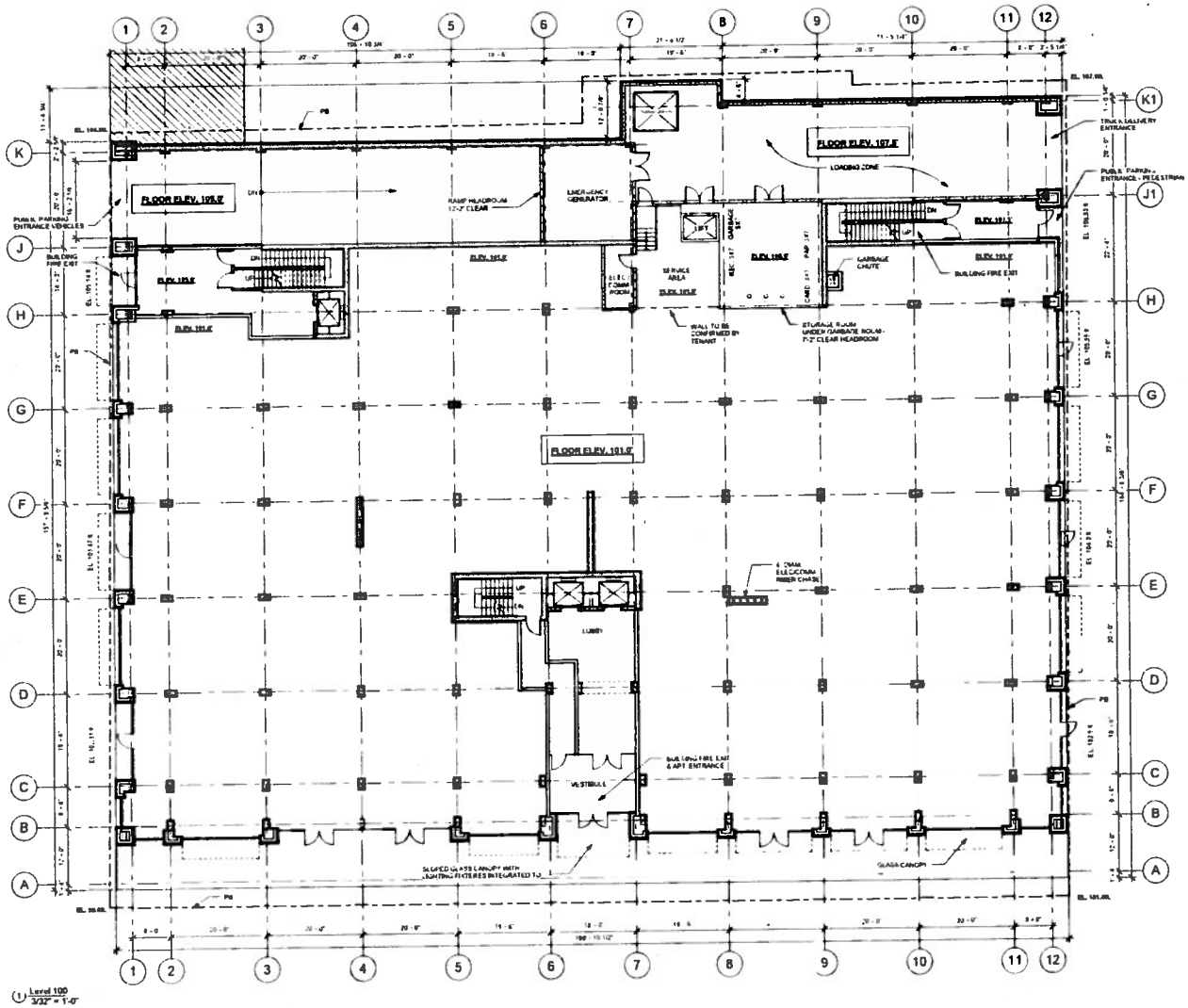
CLYDE / BIRMINGHAM / QUEEN STREET

PARKING LEVEL 1 PLAN

Date
23 MAY 2012

Scale
1: 300

Drawing
A-03



1 Level 100
3/32" = 1'-0"

WM FARES GROUP
ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant
Griffiths Rankin Cunningham Rounsefell

No.	Description	Date

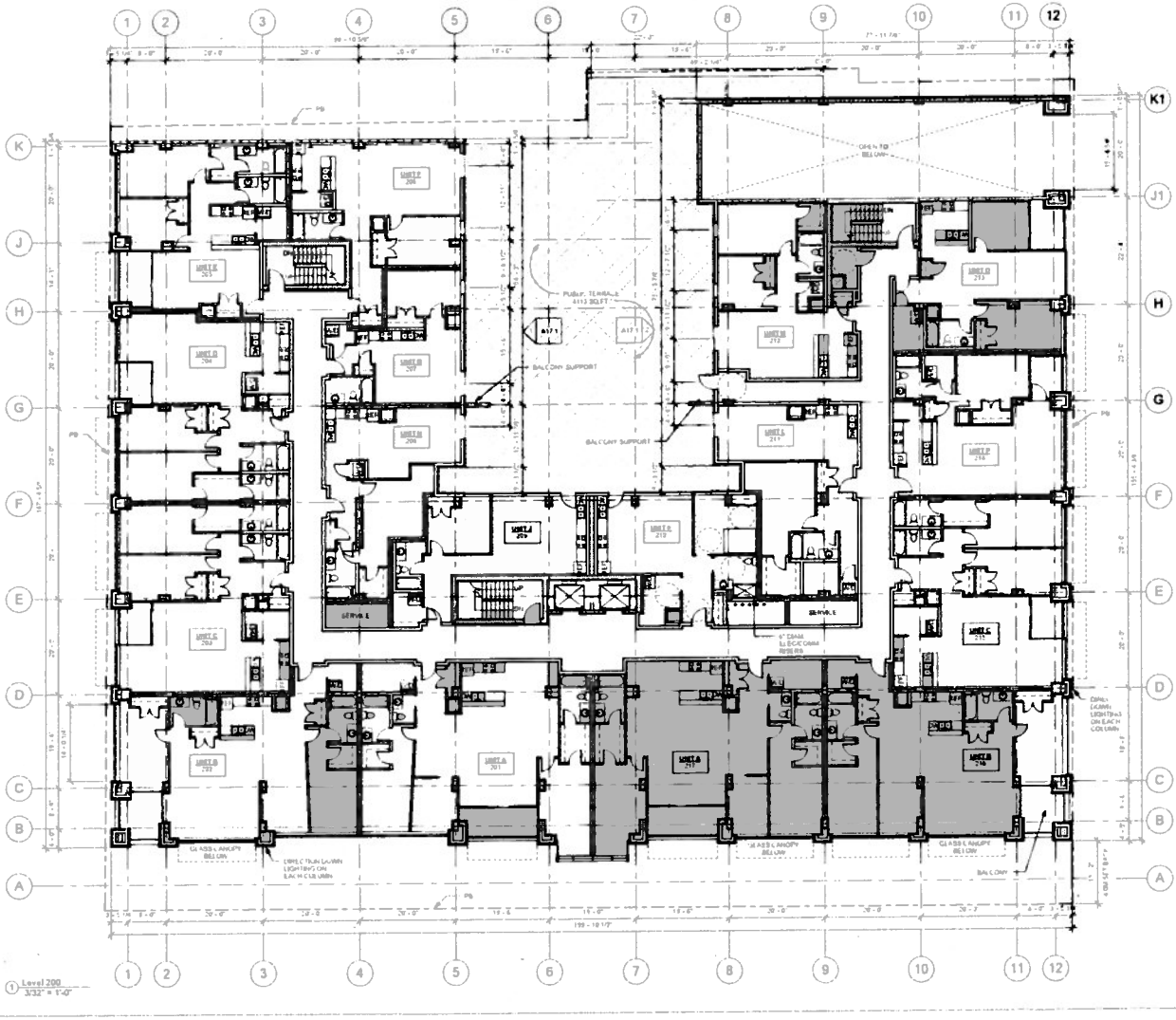
Stamp

Proposed
Mary Ann Site
Clyde / Birmingham / Queen Street

Title
Level 100 Floor Plan - Ground Level Retail

Reference
WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: ENS	Sheet: A4
Checked by: ST	
Project number: 2011-05	



1 Level 200
3/32" = 1'-0"

WM FARES GROUP

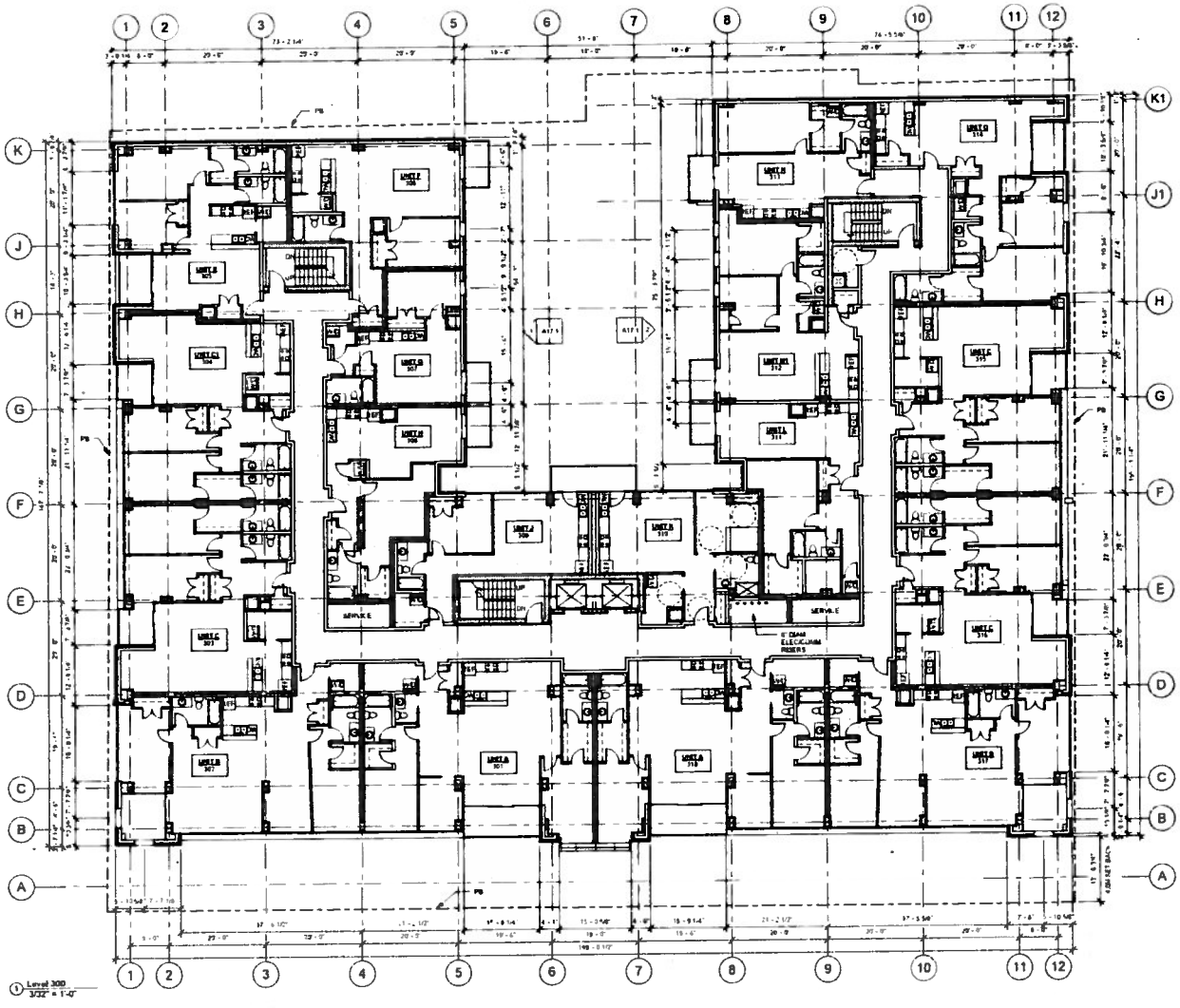
No.	Description	Date

Project
Mary Ann Site
Clyde / Birmingham / Queen Street

Title
Level 200 Floor Plan - Residential

Architecture
WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: ENB	
Checked by: RM	
Project number: 2011-05	Sheet: A5



1 Level 300
3/32" = 1'-0"

WM FARES GROUP
ARCHITECTS LANDSCAPE PLANNERS

No.	Description	Date

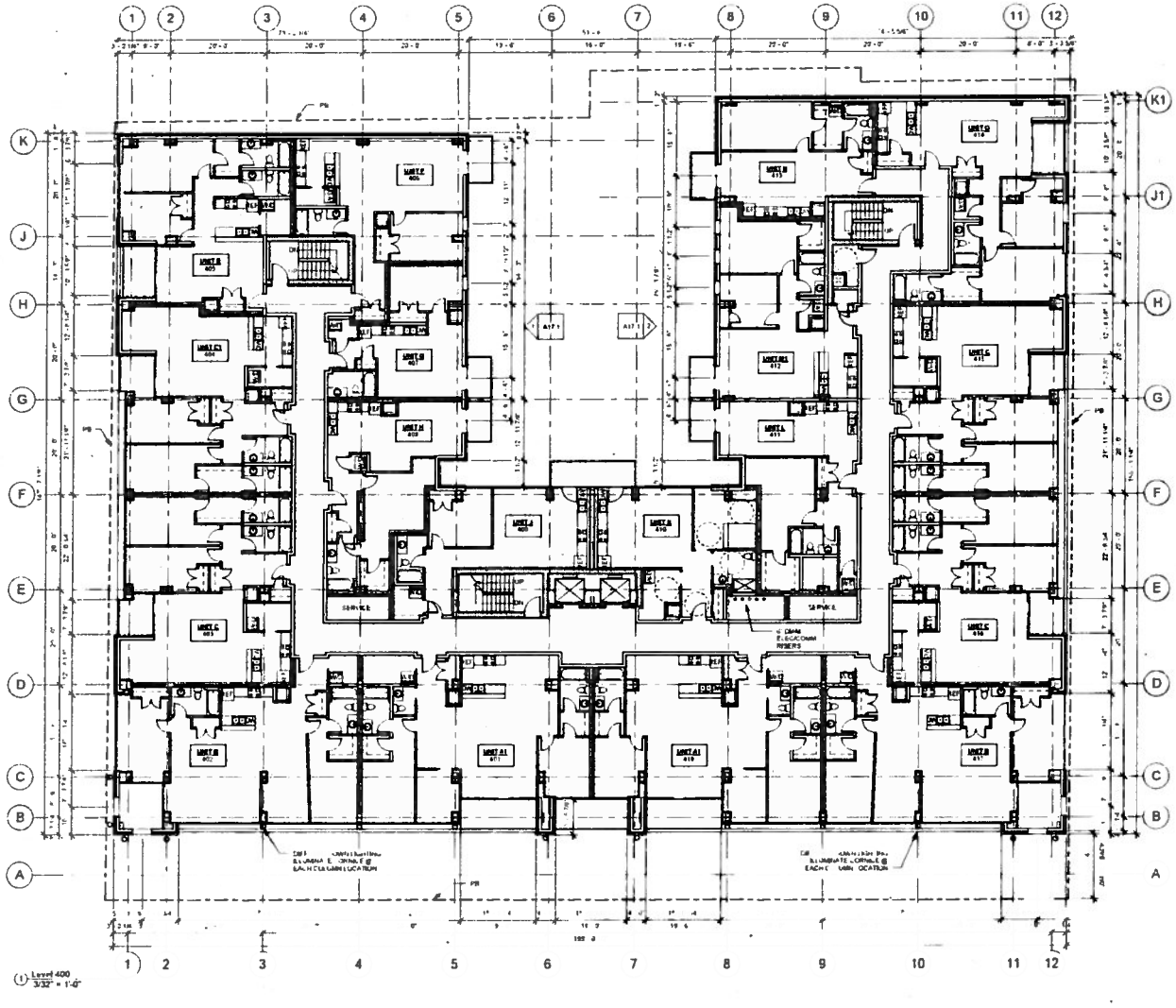
Stamp

Proposed
Mary Ann Site
Clyde / Birmingham / Queen Street

Title
Level 300 Floor Plan - Residential

Reference
WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Issued by: ENB	Sheet: A6
Checked by: RM	
Project Number: 2011-05	



1 Level 400
3/32" = 1'-0"

Prime Consultant

WM FARES
GROUP
ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant

No.	Description	Date

Stamp

Proposed

Mary Ann Site

Clyde / Birmingham / Queen Street

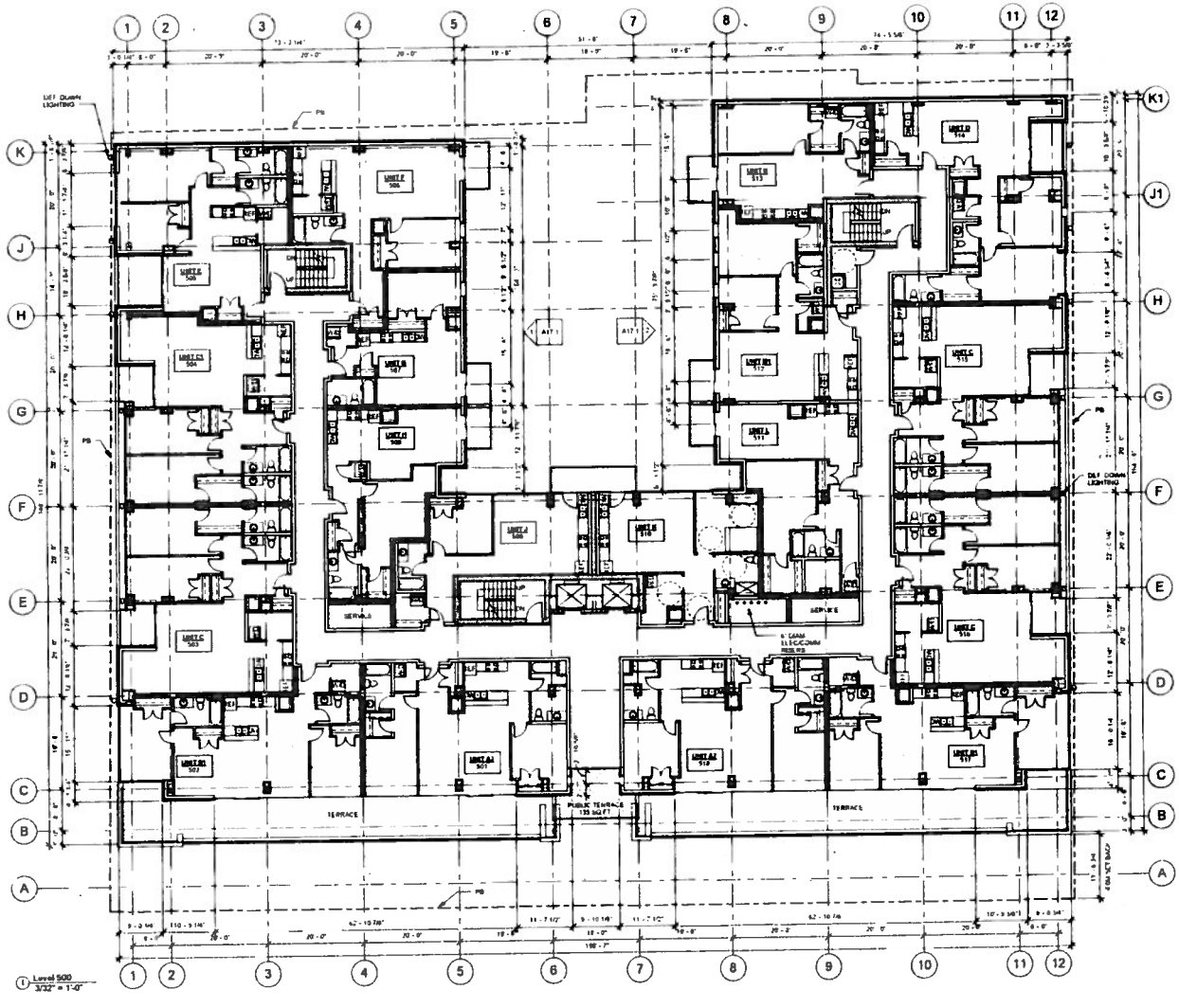
Title

Level 400 Floor Plan - Residential

Reference

WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: ENB	Sheet: A7
Checked by: ST	
Project number: 2011-05	



Prime Consultant

WM FARES GROUP

ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant

Duffus Ramsay Kinoshita Mounsteven

No.	Description	Date

Stamp

Proposed

Mary Ann Site

Clyde / Birmingham / Queen Street

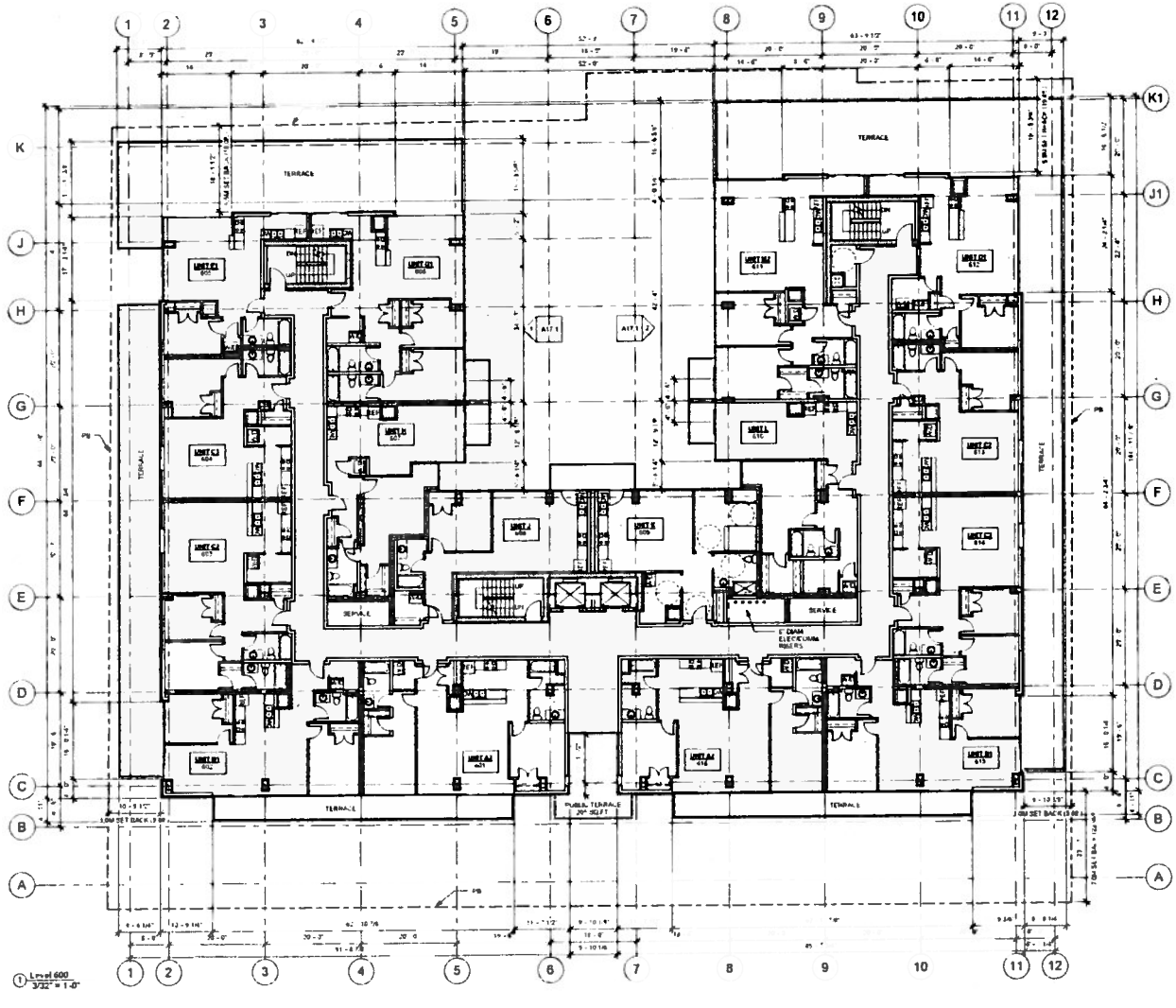
Title

Level 500 Floor Plan - Residential

Performance

WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: ENB	Sheet: A8
Checked by: ST	
Project number: 2011-05	



WM FARES GROUP

No.	Description	Date

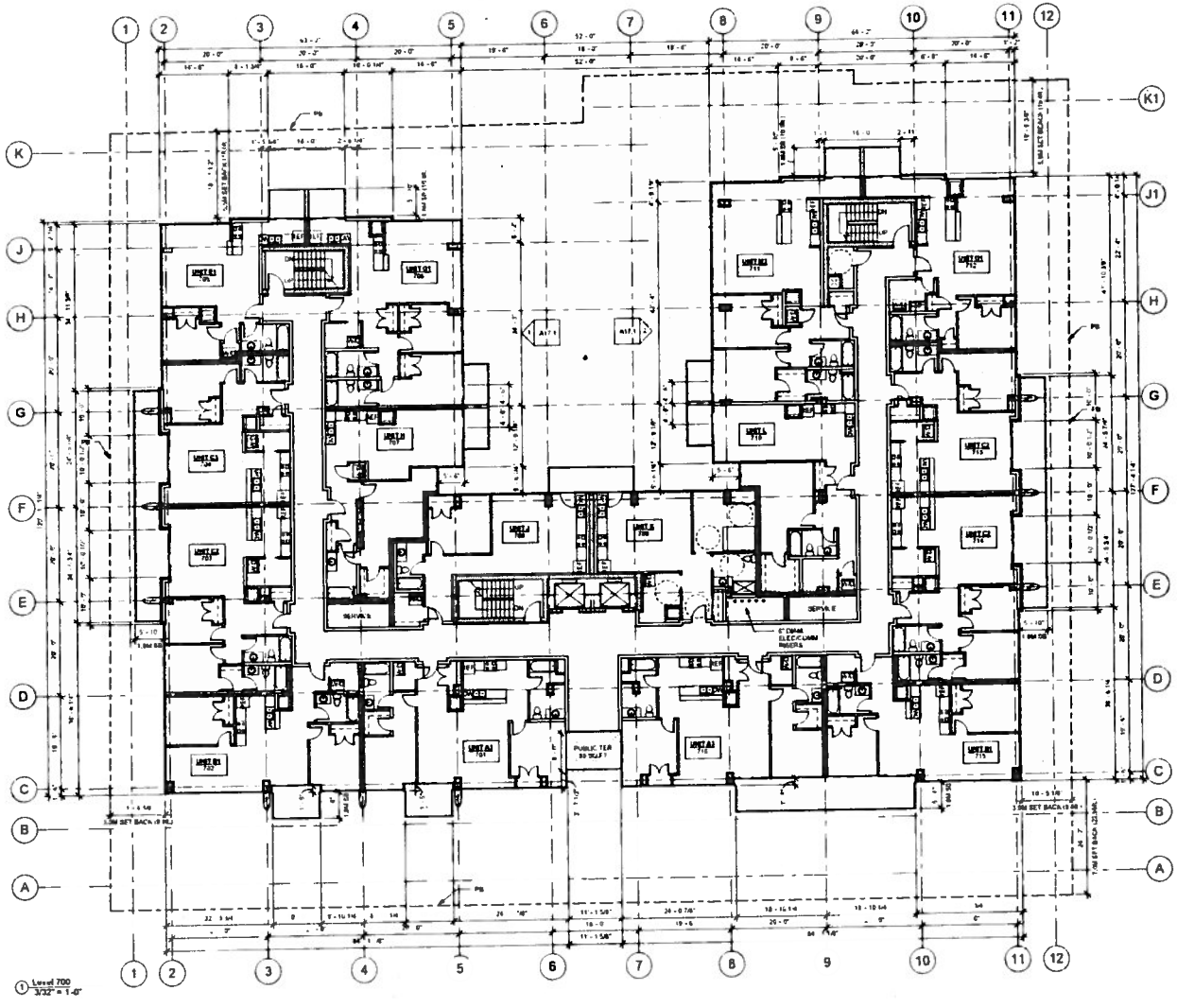
Mary Ann Site

Clyde / Birmingham / Queen Street

Level 600 Floor Plan - Residential

WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: EHB	Sheet: A9
Checked by: ST	
Project number: 2011-05	



1 Level 700
3/32" = 1'-0"

Prime Consultant

WM FARES
GROUP
ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant

No.	Description	Date

Stamp

Proposed

Mary Ann Site

Clyde / Birmingham / Queen Street

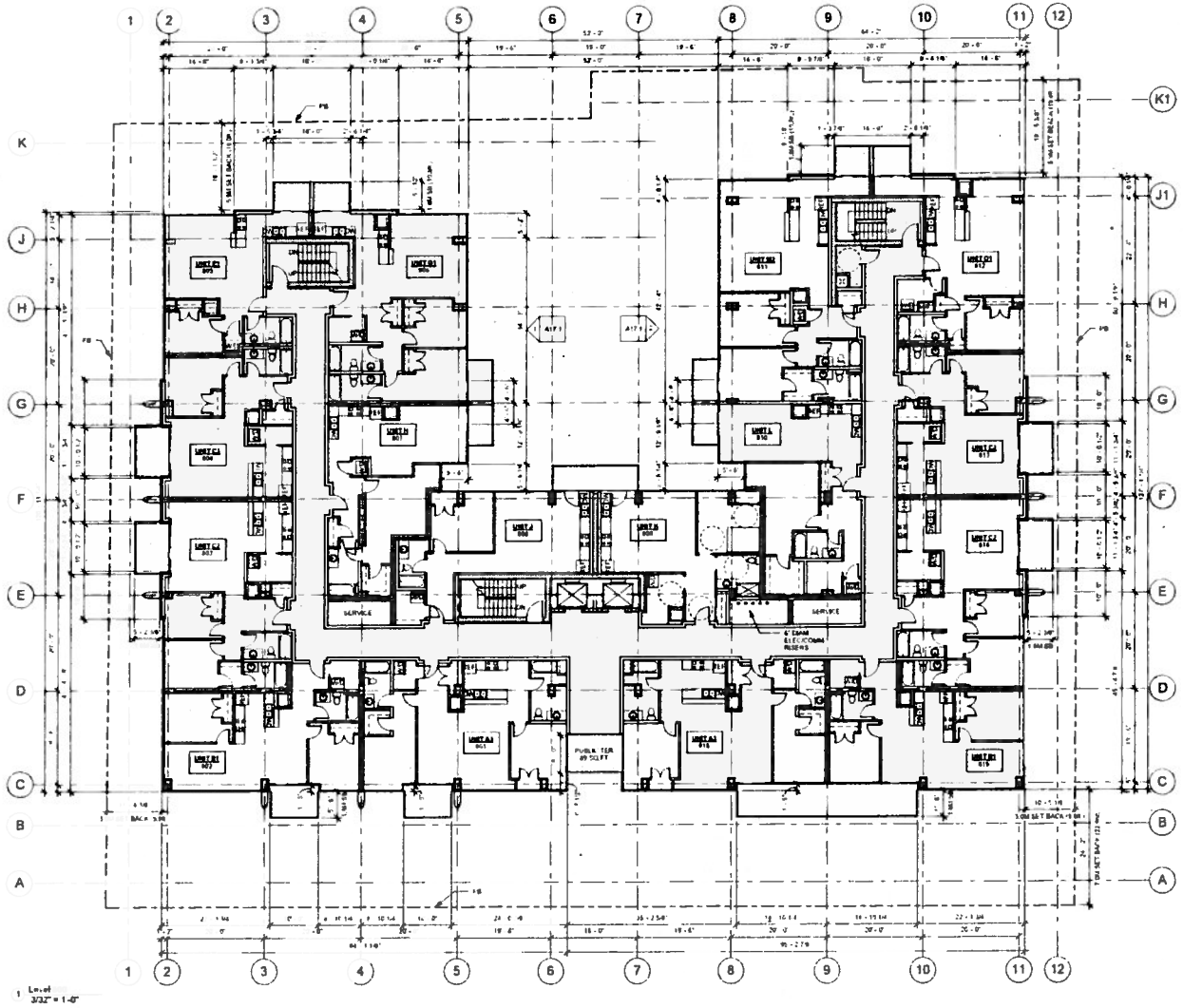
Title

Level 700 Floor Plan - Residential

Reference

WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: ENB	Sheet: A10
Checked by: RM	
Project number: 2011-05	



1 Level 800
3/32" = 1'-0"

Prime Consultant

WM FARES GROUP

ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant

No.	Description	Date

Stamp

Proposed

Mary Ann Site

Clyde / Birmingham / Queen Street

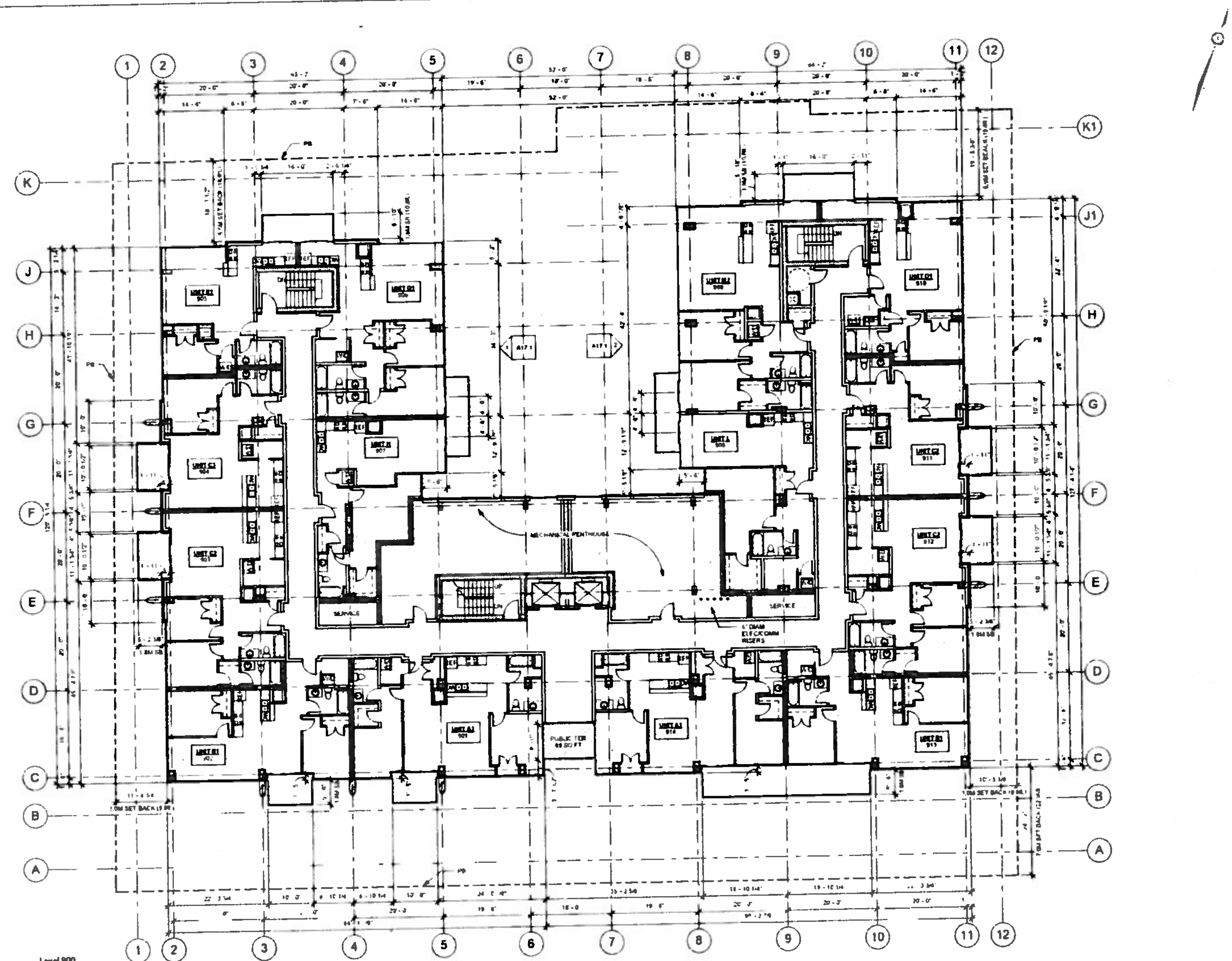
Title

Level 800 Floor Plan - Residential

Architecture

WM FARES

Scale	Date
3/32" = 1'-0"	JUNE 2011
Drawn by: ENB	Sheet
Checked by: ST	A11
Project number: 2011-05	



1 Level 900
3/32" = 1'-0"

Prime Consultant

WM FARES
GROUP
ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant

Dufius
Romans
Kundzins
Rounsefell

No.	Description	Date

Stamp

Proposed

Mary Ann Site
Clyde / Birmingham / Queen Street

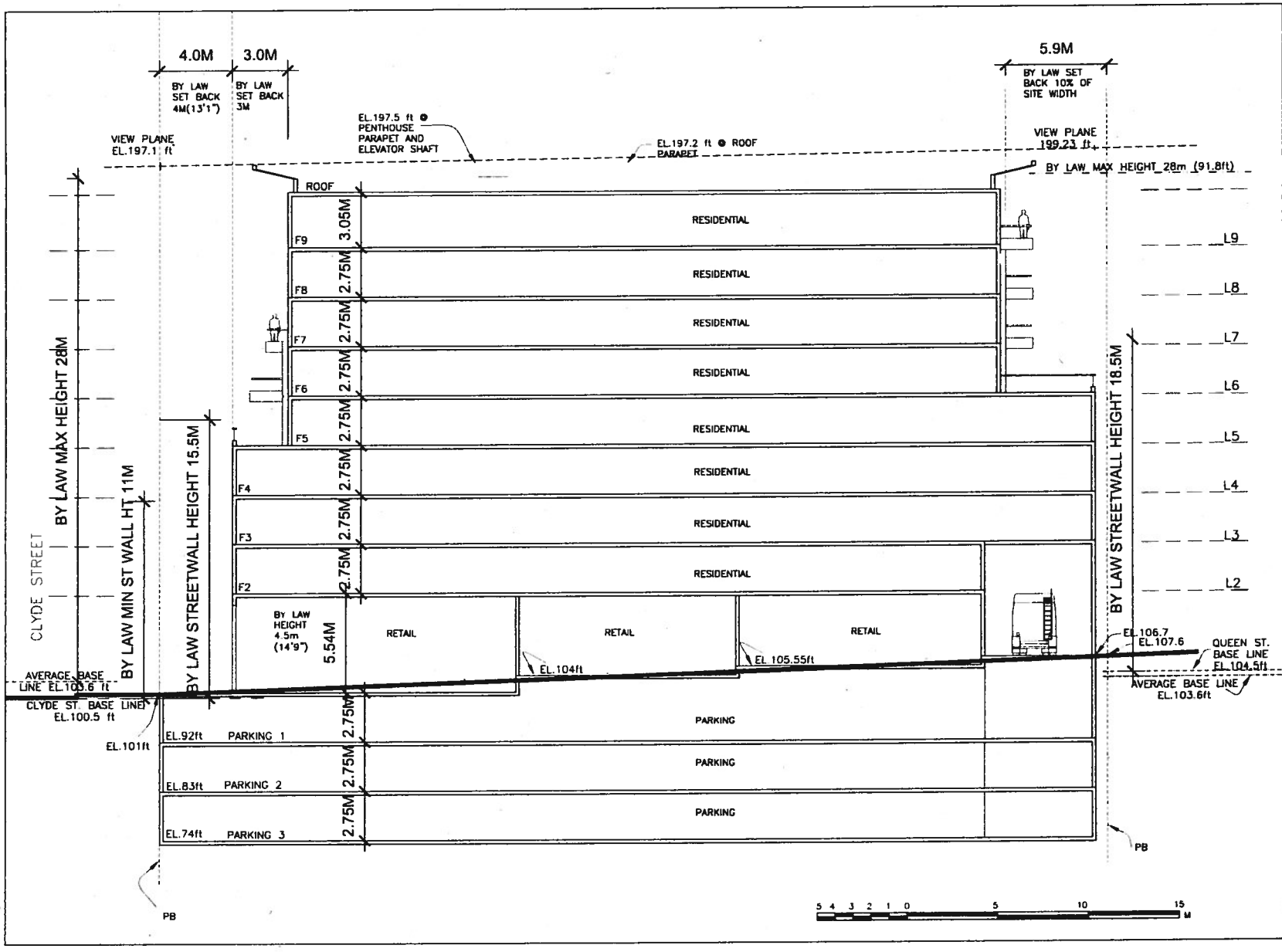
Title

Level 900 Floor Plan - Residential

Reference

WM FARES

Scale	3/32" = 1'-0"	Date	JUNE 2011
Drawn by	ENB	Sheet	A12
Checked by	ST		
Project number	2011-05		



LEGEND

- PB PROPERTY BOUNDARY
- TERRACE/ DECK
- BALCONY
- ELEVATOR
- BARRIER FREE PARKING ELEVATOR
- BUILDING FIRE EXIT

WM FARES GROUP

Dutfus Romans Kundzins Rounsefell
ARCHITECTS LIMITED HALIFAX, NOVA SCOTIA

MARY ANN SITE

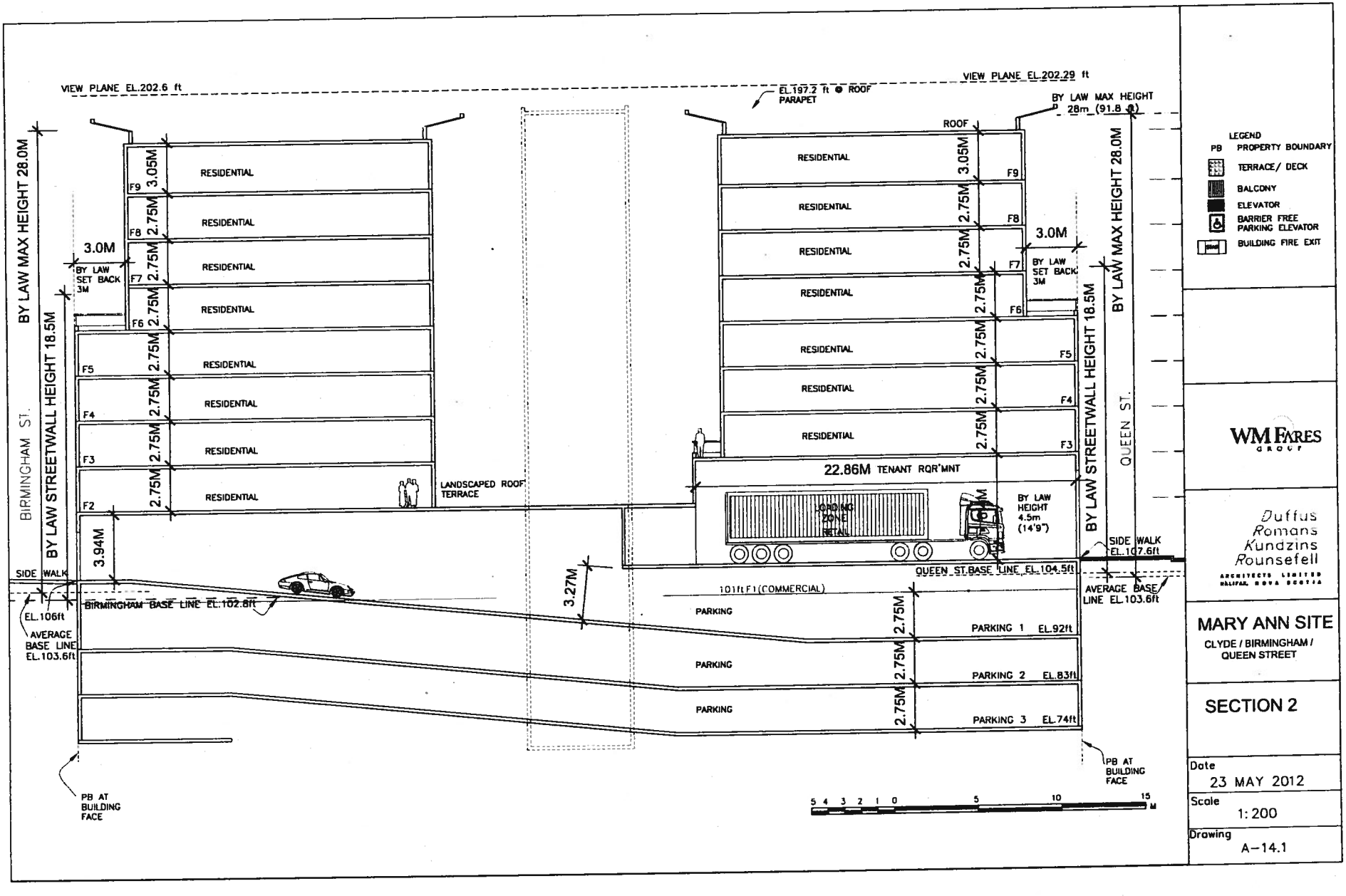
CLYDE / BIRMINGHAM / QUEEN STREET

SECTION 1

Date: 23 MAY 2012

Scale: 1: 200

Drawing: A–14



LEGEND

PB PROPERTY BOUNDARY

TERRACE/ DECK

BALCONY

ELEVATOR

BARRIER FREE PARKING ELEVATOR

BUILDING FIRE EXIT

WM FARES GROUP

Duffus Romans Kundzins Rounsefell

ARCHITECTS LIMITED HALIFAX, NOVA SCOTIA

MARY ANN SITE

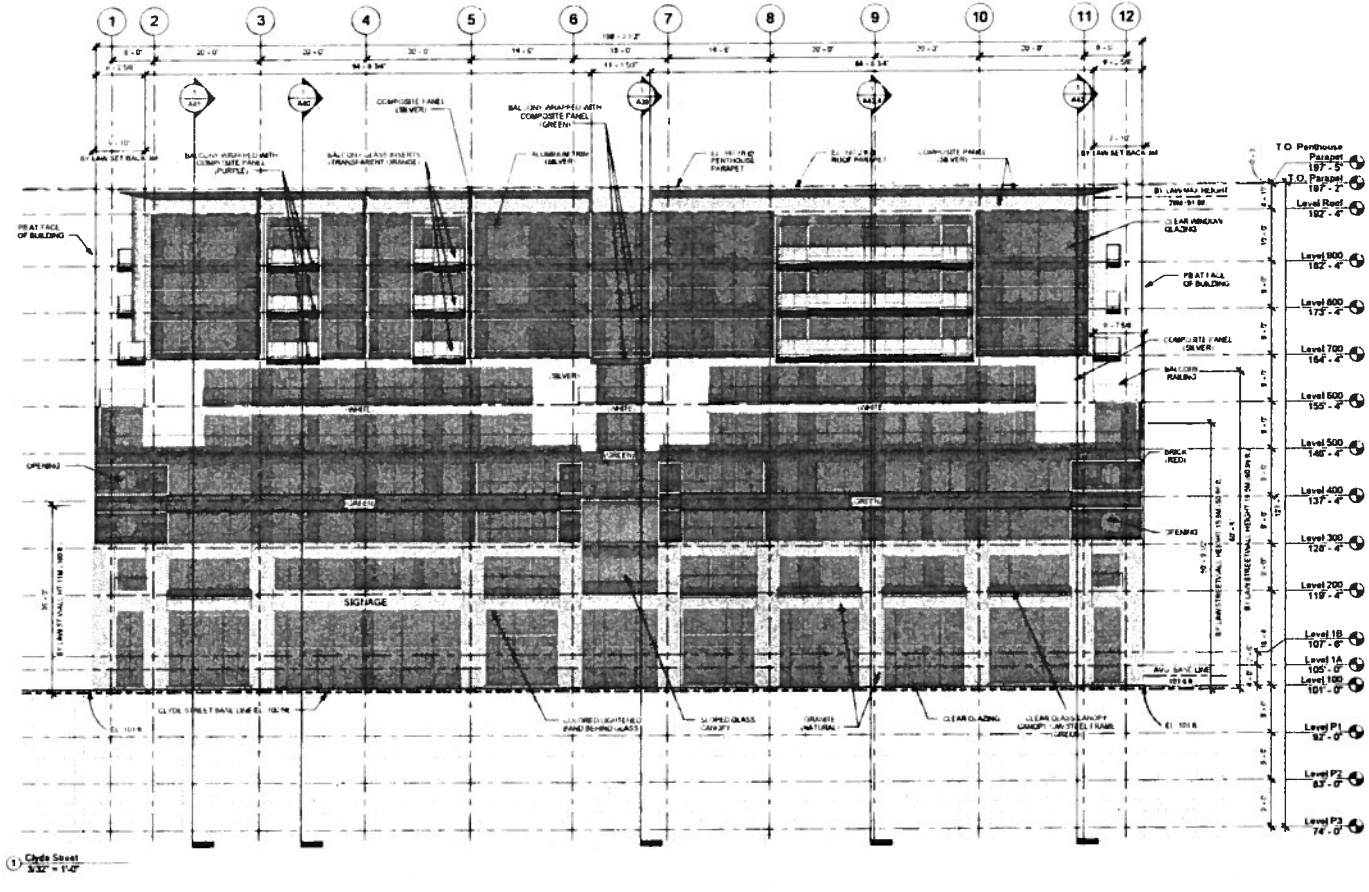
CLYDE / BIRMINGHAM / QUEEN STREET

SECTION 2

Date: 23 MAY 2012

Scale: 1:200

Drawing: A-14.1



WM FARES GROUP

ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant

No.	Description	Date
A	ISSUED FOR REVIEW	

Stamp

Proposed

Mary Ann Site

Clyde / Birmingham / Queen Street

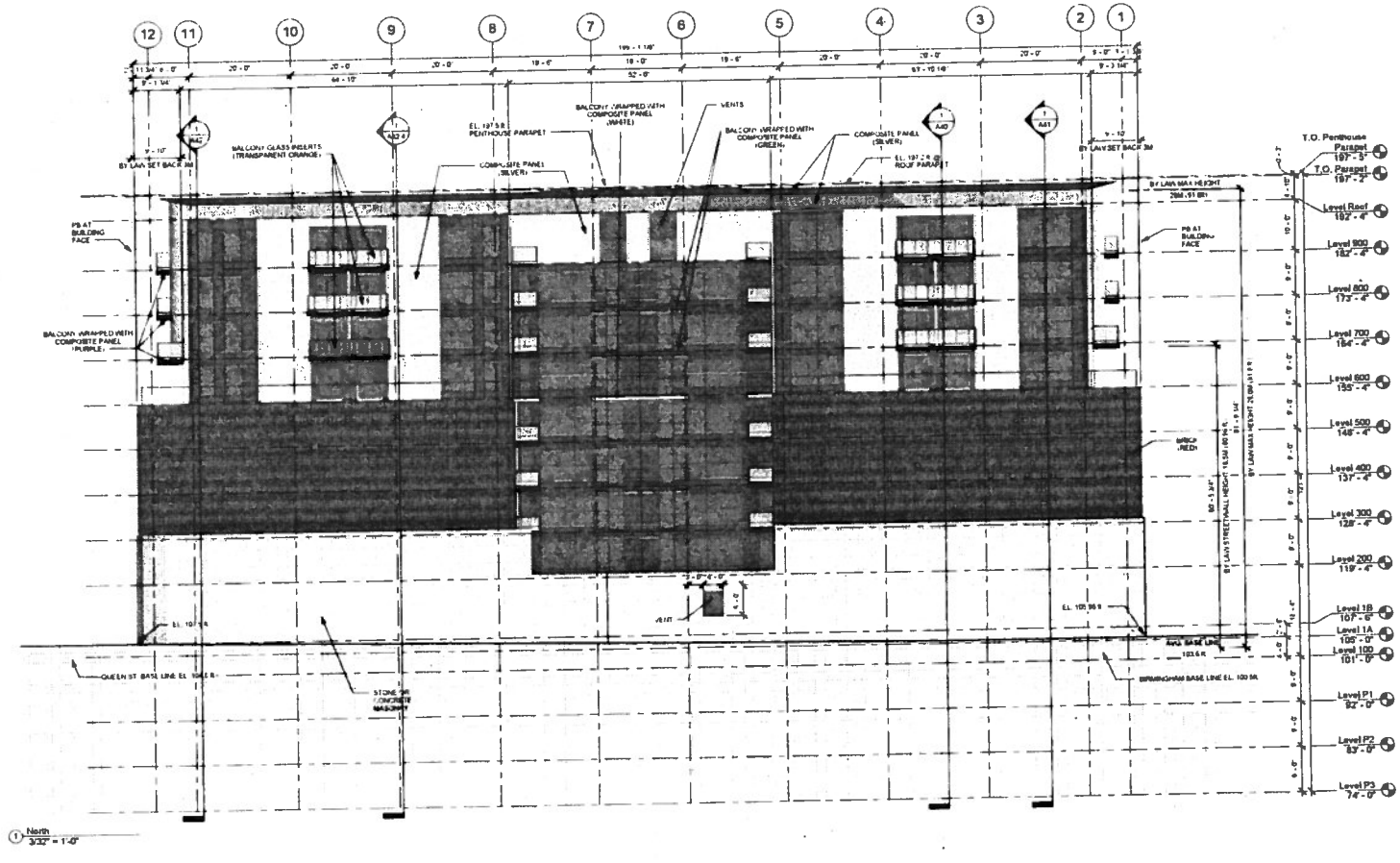
Title

Clyde Street Elevation - South

References

WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: EHB	Sheet: A15
Checked by: RM	
Project number: 2011-05	



Prime Consultant

WM FARES GROUP

ARCHITECTS ENGINEERS PLANNERS

Liaison Design Consultant

Dutton Kennedy Kundzins Architects

No.	Description	Date
A	ISSUED FOR REVIEW	2007/12

Stamp

Proposed

Mary Ann Site

Clyde / Birmingham / Queen Street

Title

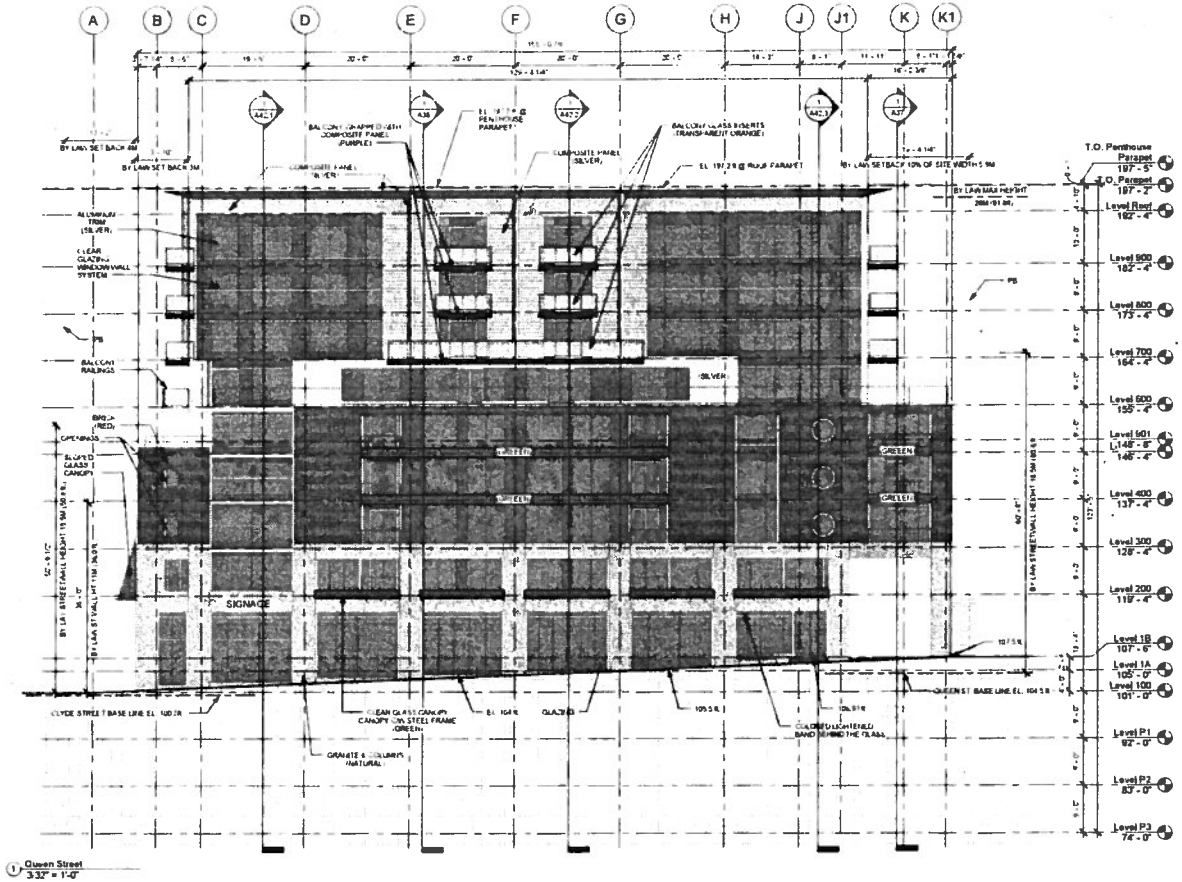
Elevations - North

References

WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: ENB	Sheet:
Checked by: ST	A16
Project number: 2011-05	

27/07/2011 11:21:11 AM



1 Queen Street
3/32" = 1'-0"

Prime Consultant

WM FARES GROUP

ARCHITECTS ENGINEERS PLANNERS

Urban Design Consultant

No.	Description	Date
A	ISSUED FOR REVIEW	

Stamp

Proposed

Mary Ann Site

Clyde / Birmingham / Queen Street

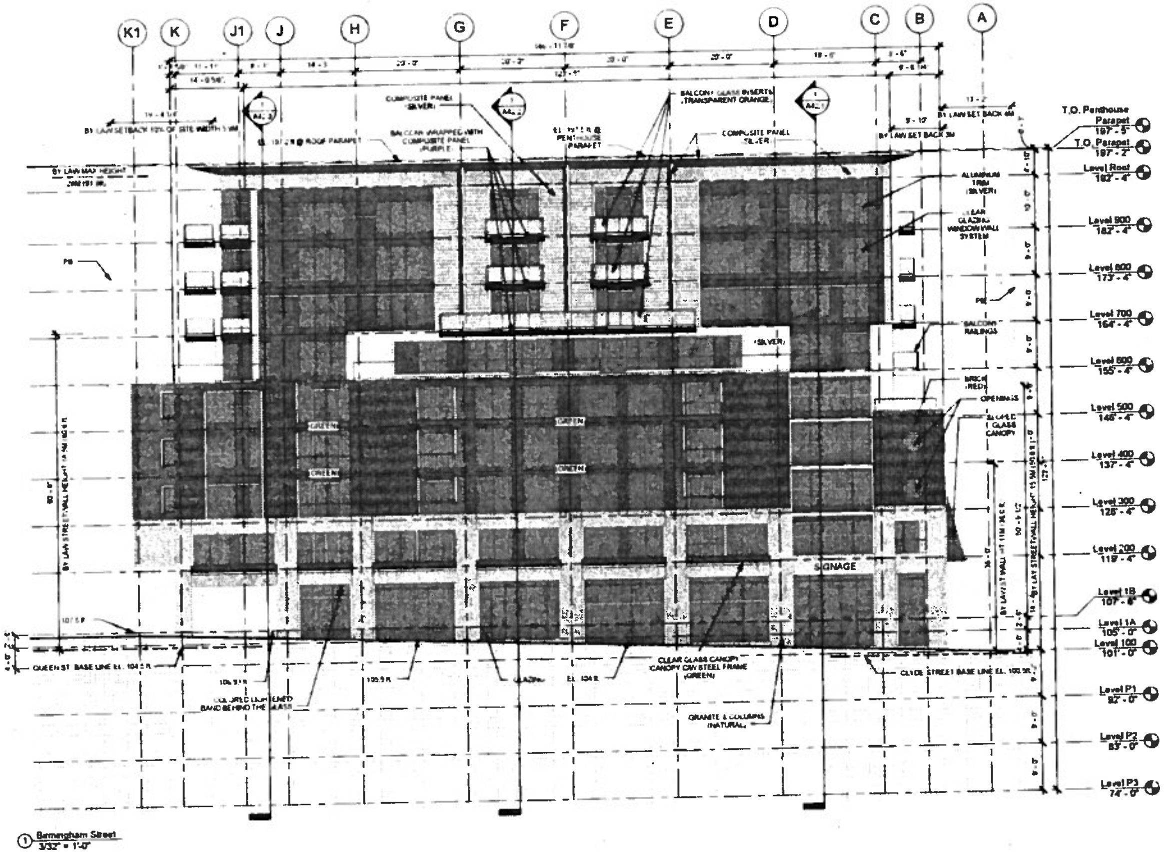
Title

Queen Street Elevation - East

References

WM FARES

Scale: 3/32" = 1'-0"	Date: JUNE 2011
Drawn by: ENB	Sheet: A17
Checked by: ST	
Project number: 2011-05	



1 Birmingham Street
3/32" = 1'-0"

Prime Consultant

WM FARES GROUP

ARCHITECTS · ENGINEERS · PLANNERS

Urban Design Consultant

Duffus Romans Kundzins Rounsefell

No.	Description	Date
A	ISSUED FOR REVIEW	2007/12

Stamp

Proposal

Mary Ann Site

Clyde / Birmingham / Queen Street

Title

Birmingham Street Elevation - West

References

WM FARES

Scale	3/32" = 1'-0"	Date	JUNE 2011
Drawn by	ENB	Sheet	
Checked by	ST		A18
Project number	2011-05		

Duffus Romans Kundzins Rounsefell ARCHITECTS LIMITED

February 7, 2012

Planning Applications
Planning & Development Services
PO Box 1749
Halifax, NS B3J 3A5

Attention: Mr. Richard Harvey

Dear Mr Harvey:

Reference: Proposed Clyde Street Project - Mary Ann Site
Design Rationale

The Design Rationale presented below applies to the proposed development on the Mary Ann Site bound on the south by Clyde Street and on the east and west by Queen and Birmingham Streets. Spring Garden Road is located on the north side of this same block. This development is a mid-rise, mixed use complex of 9 storeys with commercial on the ground floor and residential units located on the floors above. There are 3 under ground parking levels located beneath the project. The site is located in Precinct 3, Spring Garden Road Area with Schmidtville located on the south side of Clyde Street. The site slopes from north, southwards to Clyde Street.

The design of the project follows the Halifax Land Use Bylaw and Schedule S-1 Design Manual. The design guidelines with their requirement for setbacks, streetwalls and stepbacks, which fundamentally shape the building, have been followed. The architectural design work for this development has been performed by the firm of Duffus Romans Kundzins Rounsefell Ltd.

The south side of the project is setback 4 m from the Clyde Street property line as mandated and this street wall rises 4 storeys (15m) before stepping back 3m for the upper floors. The building face follows the property lines and city sidewalks along the Queen and Birmingham Street sides with a street wall of 5 storeys (16.5 m) where it then steps back 3m for the top storeys. The north side of the building (facing the interior of the block) is set back 0.6m from the property line and has a street wall height of 5 storeys with a step back of 5.5 m for the top storeys.

Projections above the maximum height are confined to the mechanical penthouse in a central location on the roof and some architectural features on tghe facades which rise slightly above the parapets. All elements of the building are below the View Planes.

Vertically the building is divided into a distinct base, middle and top expressed on all 3 street facades. The base and middle layers are constructed in stone or concrete masonry with an aluminum glazing and entrance system. The base level reflects the height of the adjacent Schmidtville and older Spring Garden Road buildings. The upper floors will be

Roy W. Willwerth
Gregory A. Starratt
Christopher J. Young

Consultants
Anthony P. Griffiths
Harold G. Rounsefell

1498 Lower Water Street
Telephone 902/429-6860

The Brewery

Halifax, Nova Scotia B3J 1R9
Fax 902/429-9609

clad with a glass facade to minimize the apparent height and massing of the building. The 3 vertical elements will also reference the new HRM Library, with its strong 3 level composition, which is now being constructed on the east side of Queen Street. The lower levels of the building are articulated to visually reduce the apparent mass and length of the development and to suggest multiple buildings, in keeping with the scale of existing buildings on adjacent streets.

The ground floor of the building will house retail space with storefront windows and doors fronting on virtually all of the entire 3 street facades. The only exceptions to the storefront are for the apartment lobby entrance, access to underground parking and one service bay. The 4 m setback along Clyde Street is a fully accessible terrace with walkways, terrace, benches and areas of planting. Along the street awnings and entrance canopies assist in providing shelter, identification, colour and animation for pedestrians. Trees are provided along the sidewalk in each street to HRM standards.

At grade access is at the mid point along both Queen and Birmjngham Streets and from a fully accessible terrace along the south side of the building on Clyde Street.The interior ground floor is level to maintain full access to retail spaces within the building.

All vehicle parking is provided for the resident and public use below grade with the number of spaces meeting HRM requirements for this site (a total of 210 spaces between the 2 Sister Sites). Bicycle Parking will be provided in the parking levels to meet HRM requirements for Class A and Class B spaces in quantities corresponding to the number of residential units and area of retail space.

The number of residential units currently intended is 68 one bedroom and 67 two bedroom units for a total of 135 units. Most residents will have direct access to a private terrace or balcony with glass guardrails for visibility and shelter. All residents will have access to Landscaped Open Space provided in the central courtyard formed by the wings of the building and the level 4 roof terrace facing south which is inset in the building face. The main roof and penthouse roof, accessible for service only, have hard landscaping consisting of coloured paver walkways framing central areas of coloured gravels installed in patterns.

The project will target LEED Silver (but not registered) to ensure sustainable practices and materials are incorporated into the project.

The design will continue to be refined in its details through the permit review period to ensure that this will be a quality development in keeping with the intent of the HRM Design Guidelines.

Sincerely

Chris Young NSAA, MRAIC

MEMORANDUM

DATE: Mr. Richard Harvey
HRM Planning & Development Services

FROM: Greg Starratt

DATE: May 17, 2012

RE: **Clyde Street Development**
Downtown Precinct Guidelines - Supplementary Information

The following guidelines are taken from Section 2.3 of the Guidelines, for Precinct 3: Spring Garden Road Area. Comments at right are given for each of the criteria.

· Development shall appropriately frame Citadel Hill,the Public Gardens, and Victoria Park through the provision of consistent, animated streetwalls of superior quality and design.	Not Applicable
· Ensure that there continues to be adequate sunlight penetration on Spring Garden Road.	Conforms
· Focus pedestrian activities at sidewalk level through the provision of weather protected sidewalks using well-designed canopies and awnings.	Conforms
· Prohibit new surface parking lots of any kind.	Conforms
· Improve the pedestrian environment in the public realm through a program of streetscape improvements as previously endorsed by Council (Capital District Streetscape Guidelines).	Conforms
· Development shall be in keeping with The Spring Garden Road/Queen Street Area Joint Public Lands Plan, including:	
- ensure that the Clyde Street parking lots are redeveloped with mid-rise development, underground parking, and massing that transitions to Schmidtville;	Conforms
- ensure that the existing parking supply on the two Clyde Street parking lots will be preserved as part of the redevelopment of those lots, and that in addition, the redevelopment provides adequate parking for the new uses being introduced;	Conforms
- reinforce a development pattern of "monumental" buildings on Spring Garden Road from Queen Street towards Barrington Street;	Not Applicable
- a new public open space, 2,000 square meters minimum, shall be established at the terminus of Clyde Street, on the east side of Queen Street;	Not Applicable
- Clyde Street and Brenton Place to become important pedestrian-oriented streets;	Conforms
- allow for a mid-rise development at the corner of Morris and Queen Streets, and;	Not Applicable
- to allow tall buildings on the western blocks of the precinct.	Not Applicable

Mary Ann Site

Exterior Lighting Concept

Exterior lighting will provide the building with presence and identity in the evenings as well as area lighting for safety and security. The lighting design will hi-lite the building form, materials and the rhythm of the structure and glazing patterns. Lighting will be provided by the use of different types of down light fixtures to prevent light pollution, keep the light on the building surfaces and illuminate the sidewalks, providing safety, enhance and animating the street. Typical light fixture locations are indicated on an elevation drawing and described as follows:

- The base of the building and sidewalks will be lit by narrow focus down lights on the top of each column pilaster lightly washing the walls, pilasters and providing a pool of light at the base of each column.
- All the light sources will be controlled and directed to prevent building lighting trespassing into neighbouring buildings and prevent glare for pedestrians or motorists.
- The commercial and residential main entrance canopies will be well lit for identity and convenience.
- Defused down-lighting will be on top of the cornices to define and enhance the street wall.
- A limited amount of feature lighting will be used on the upper part of the building to define the top of the building and hi-lite the dominant architectural elements. A strip of lights will be on top of the upper recess of the building to wash recessed glass above.
- Clear glass will be used on the upper floors allowing the random pattern of illumination characteristic of residential buildings. Balconies have wall sconces for exterior lighting.
- On the ground floor, the commercial level's large transparent display windows will provide some exterior illumination as well as animate the façade for passers-by.
- Street lighting will be provided to meet HRM requirements.
- Signage will be designed to meet HRM requirements and be well illuminated for identity, to animate the facades and reinforce the rhythm of the structure.

Post-Bonus Height Public Benefit

In response to the Post Bonus Height Public Benefit requirement as stipulated under section 12 of the Downtown Halifax Land Use Bylaw, the developer has opted to utilize the affordable housing stream by providing residential units at a subsidized cost to contribute to housing affordability in the Downtown Halifax Secondary Municipal Planning Strategy plan area. We understand that we are the first to utilize the affordability option in this context and we ask your collaboration to make it happen. The following outlines our understanding and proposed approach:

- The gross floor area that has been gained as a result of the post bonus height option is 3406 square meters;
- The value of the public benefit that is required as established under section 12 of the Halifax Land Use Bylaw is **$136,240.00**;
- We have opted to provide an affordable housing component within the proposed building to satisfy the public benefit criteria based on 10% of the residential units being 20% below fair market value for a period of 15 years;
- We have been in contact with the Nova Scotia Department of Community Services to establish a program with the developer that would administer the affordable housing component for the two sister sites. This program will form part of a legal agreement between the Province and the Developer. We anticipate this process to take between 4 to 6 months;
- We have researched the market place to establish the fair market value of dwelling units within new buildings in the downtown area and found them to be consistent with CMHC records. These records are published twice a year in the spring and Fall Market Survey and provide the level 1 (80th percentile) affordability rent levels by Zones. The subject site falls within Zone 1, which covers the Peninsula South Area. Our contact with CMHC is Charlie Aucoin, Senior Advisor, Federal/Provincial Relations & Affordable Housing;
- The rent levels below represent the 80th percentile of rents as recorded in the CMHC Fall 2011 Rental Market Survey for Peninsula South. For your reference, I have attached the Fall Rental Market Report which will give you more information on the various zones and how they are defined within HRM.

Bachelor	1-Bedroom	2-Bedroom	3-Bedroom +
$795	$1058	$1580	$2,250

- A level 1 affordable rent of $1058/month for a 1-bedroom apartment in the subject area represents $264 of subsidy. Using the pre-established approach noted above, we come up with the following calculations:
  - Total number of residential units: 135
  - 10% dedicated for level 1 affordability: 13 units
  - A 20% subsidy represents a total value of: **$617,760.00** ($264/unit/month x 13 units x 12 month x 15 years)

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Friday, 27 July, 2012

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Attn: Mr Richard Harvey, LPP

Dear Richard,

Re: Proposed Mary Ann Site (Clyde St) Wind Impact Qualitative Assessment

The proposed 9-storey mixed use development project at the corner of Clyde and Queen Street sits just south of the Spring Garden Road urban corridor. To the north and west of the site, the Spring Garden corridor has a wide range of mid and high rise building types (some up to 22 storeys) which typify the mixed use urban corridor. To the south, the residential neighbourhood of Schmidtville includes mostly low rise 2-3 storey residential and some commercial structures. To the east of the site, the new 5-storey Halifax Central Library is being constructed.

The following assessment looks to interpret the probable wind impacts on surrounding properties and sidewalks as a result of the proposed development. To that end, wind data from the Shearwater Airport was assembled and analyzed (1953 to 2000) using Windrose PRo 2.3 to understand the intensity, frequency and direction of winds at the Mary Ann Site. The resulting diagram (Fig 1.) shows that the highest and most frequent wind speeds come **from** the west and south. The relative distribution of higher wind speeds are somewhat constant from the north, north-west, and south-west. High winds from the north-east, east, and south-east are substantially infrequent when compared to other directions. This has visible implications for development on this site as is shown in Fig 2.

Urban Windbreak Impacts

The taller surrounding building shown on Fig 2 (red numbers represent # of stories) already have wind implications on this site and on Schmidtville. Since most of the taller buildings ring the site from the north to the south-west (the direction of prevailing winds in winter and summer), the area is already in the wake zone of the surrounding buildings. This wake zone usually extends 8-30 times the height of the building. So, a 10-storey building will have reduced wind speeds

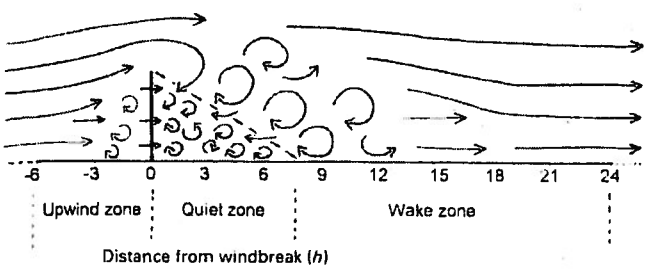


Fig. 6.4. Zones with altered airflow caused by a windbreak. Vertical dimension is magnified for illustration. Vertical line indicates windbreak; h = height of windbreak. Large eddies = strong turbulence. Uninterrupted airflow in the open is to the left of the upwind zone, and to the right of the wake zone. Widths of zones are approximate. Based on several sources.

Figure 1. Wind Rose for Shearwater Airport. Diagram shows winds in the FROM direction.

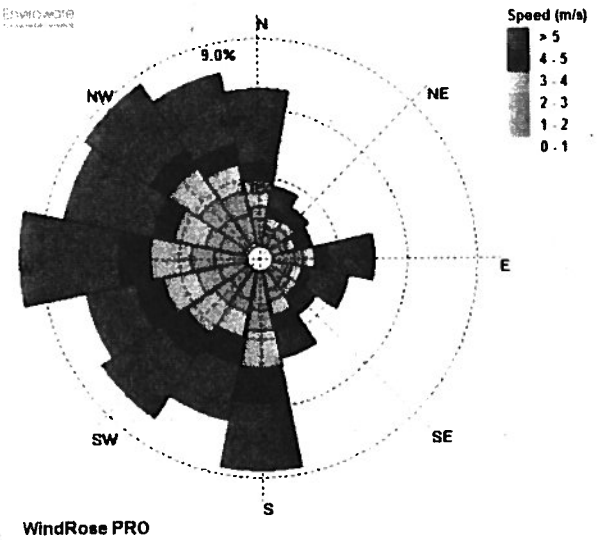
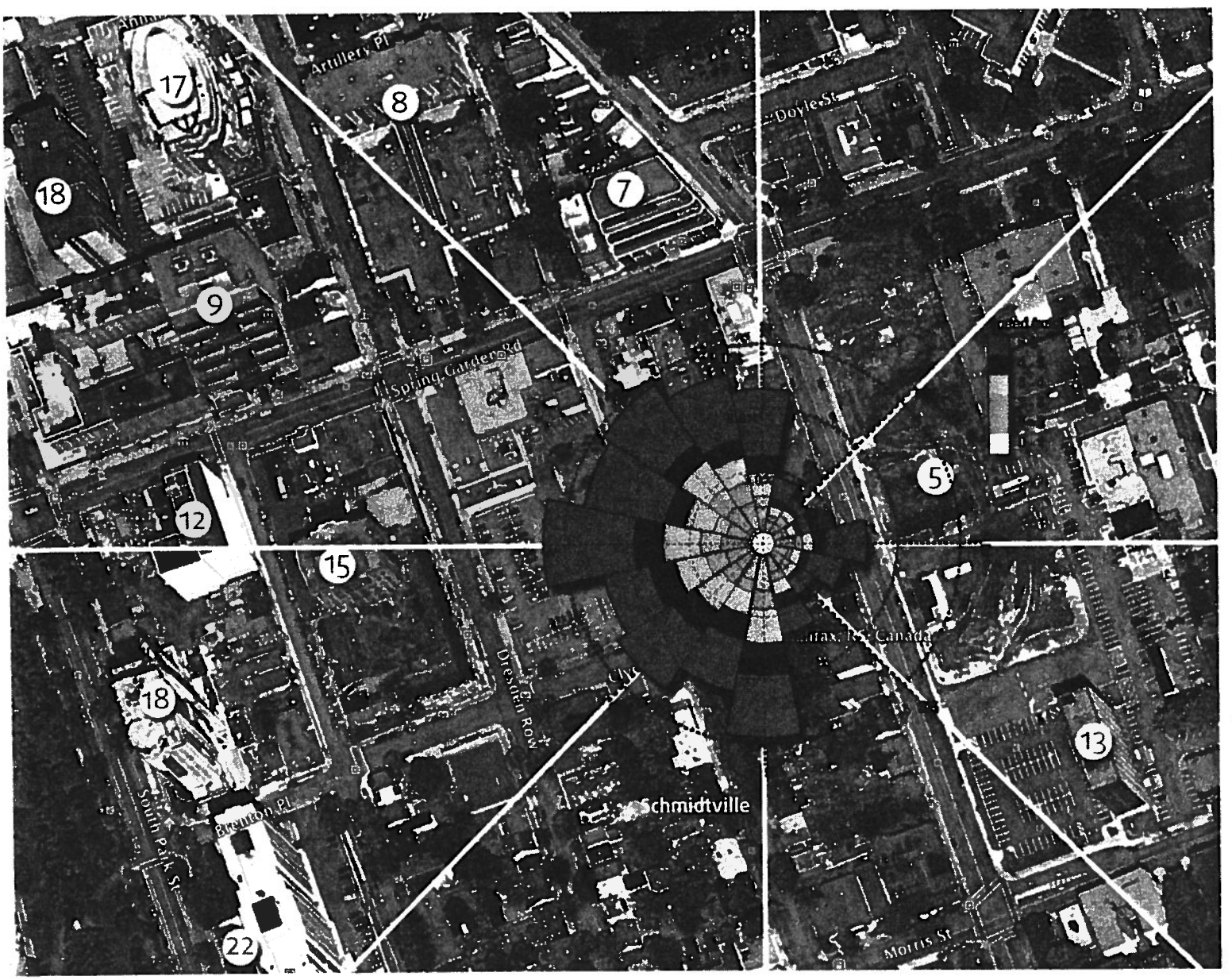


Figure 2. Wind Rose overlain on top of the proposed development site. Red #'s denote # storeys



for 800-3000 feet on the lee side of the building depending on prevailing wind. Beyond the 8-30 wake zone, there is typically more gusts and eddies as a result of more turbulent air. On the trailing edges of the building, wind strikes the building and concentrates the flow, accelerating the wind speed near the trailing fringes and on the windward side. The vertical stepped nature of the proposed building reduces the wind sheer at the sidewalk on the windward and trailing edge sides. Wind speed is actually reduced on the lee side of the building.

COMFA Model (Brown and Gillespie, 1995)

Dr. Robert Brown of the University of Guelph developed the COMFA model to model human thermal comfort as a result of a number of variables including wind speed. Human thermal comfort is more pronounced during low activity situations like site than during highly active situations like running. The model is explained in the attached paper by Brown and LeBlanc (2003). Mr. LeBlanc was also the co-author with Dr. Borwn in the 2008 ed. "Landscape Architectural Graphic Standards", Microclimate Chapter. This model is the basis for the theoretical assessment of human thermal comfort changes as a result of the building explained below.

Seasonal Wind Impacts

Looking at the seasonal wind impacts (Fig 3.), during the summer, most of the wind comes from the south (12% of the time) and southwest (10% of the time). Winds that may impact the sidewalk during the summer include the sidewalk on Queen Street just east of the development where winds will be funneled between the new library and the new building. In this location, dense street trees have been added to reduce wind speeds and provide human thermal comfort improvements. In the summer, there will be very little wind impacts on Schmidtville, Clyde Street or Birmingham Street. Winds at the corner of Spring Garden and Queen Street may be very slightly elevated.

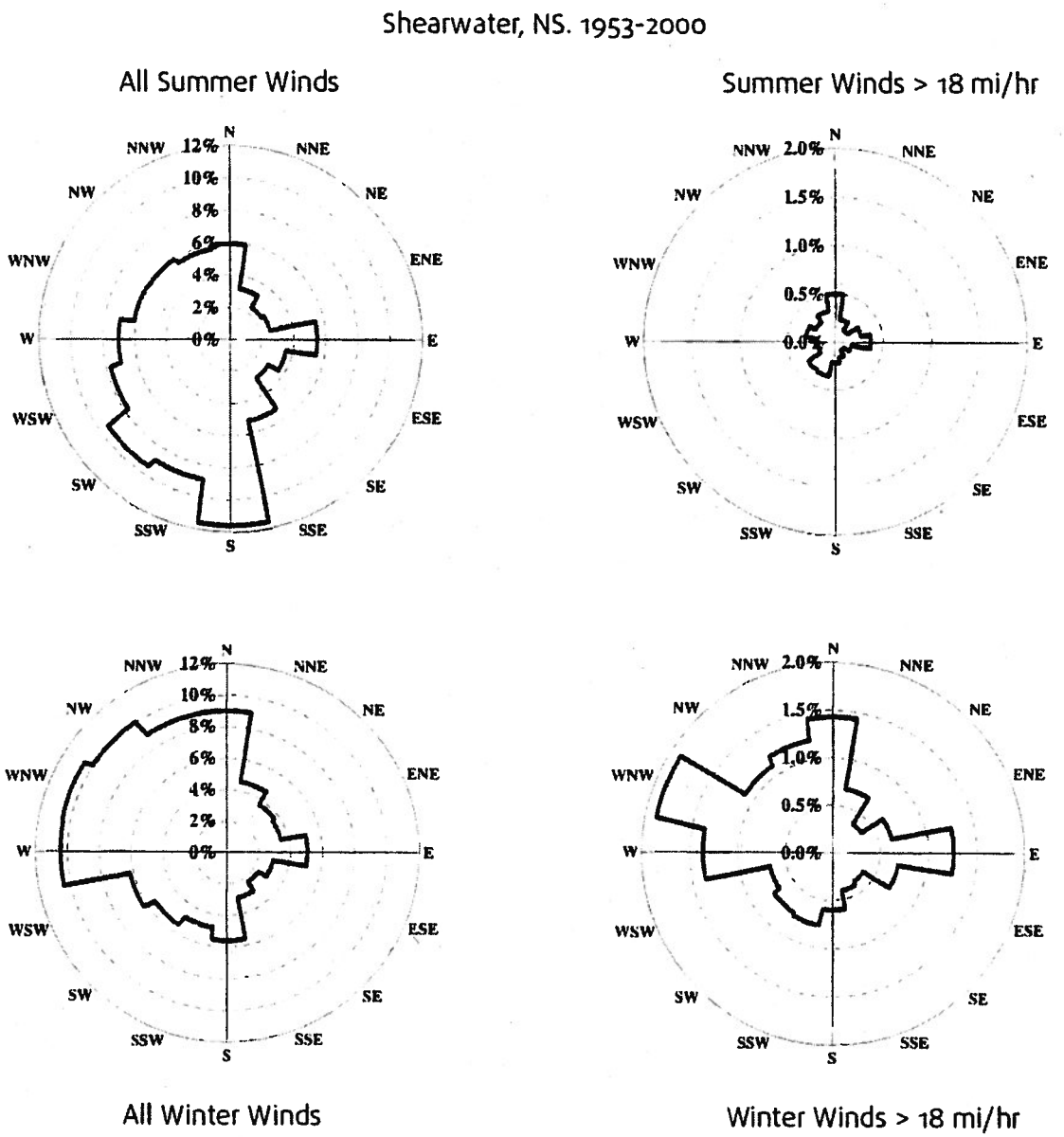
IN the winter, the prevailing winds shift from the west, north-west and north. These winds could elevate the wind speed for a portion of the corner of Birmingham and Clyde Street and the corner of Clyde Street and Queen Street. During high wind conditions (>18mi/hr), only the winds from the east (that occur 1.25% of the time) will impact pedestrians on the Clyde Street sidewalk. The north east corner of Schmidtville (corner of Queen and Clyde) will see periodic wind speed increases in the winter from north-west and northerly winds.

It should be noted that the building's stepped massing nature should significantly reduce wind impacts in the direct vicinity of the sidewalks. Wind down gusts from the upper storeys will hit the upper raised terraces, reducing the wind speed significantly at the sidewalk but causing slightly more turbulence. In addition, canopies have been added to the commercial base, again adding a second level of wind and weather protection.

Wind Comfort Assessment

Changes in wind speed as a result of buildings vary depending on wind direction and building morphology. On the upwind side of the building (west and north side; or on the Birmingham Street side) there can be more turbulent wind but little change in wind speed if the building is vertically stepped. On the downwind side of the building (south and east; or the Queen and Clyde St side), wind speed is often reduce up to 8x the height of the building in what is often referred to as the "quiet zone". On both sides of the new

Figure 3. Seasonal Wind Direction for Shearwater Airport



building, 'streamlines' can occur where the wind is accelerated through the openings between buildings. The taller the buildings, the greater the potential for increased wind speed. The area where this will be most impacted as a result of the new building will be the Queen Street area when winds prevail from the south (about 10% of the time during the summer) and from the north during the winter (about 9%) of the time. Even during these infrequent times, wind speeds will likely not increase more than 10% at the street or sidewalk level due to vertical stepping and the use of street trees. The main building entrance is recessed and located on the south side of the building which is in the quite zone in the winter, fall and spring months. The window canopies further reduce wind speed at the sidewalk. The fact that the new 5-storey library is pushed back from the street (and caliper street trees preserved) means the canyon effect of north winds will be reduced at the corner of Clyde and Queen Street. The area most likely to be impacted by the new building due

to increased winds is the corner of Queen and Clyde Street. This will only occur during prevailing north and south wind directions (10% of the time in the winter and 10% of the time in the summer). Even with these increases at this location however, we do not anticipate 'uncomfortable' human comfort increase as a result of the building. Uncomfortable wind conditions will still be uncomfortable on this corner, but the building should not create any additional 'uncomfortable' conditions for less than 1% of the time. Around other areas of the building, there will be no measurable change in wind speed as a result of the development. There will be no measurable change in discomfort for people walking on any of the sidewalks surrounding the development, and no measurable change in comfort for people sitting around the development. The corner of Queen and Clyde may experience occasional gusting when prevailing winds come from the north and south which, while not effecting walking, may make sitting at this corner location uncomfortable on occasion (the increase in discomfort as a result of the building will be less than 1% of the time).

Since Schmidtville lies directly south and southwest of the new development, the infrequent winds from the east and north east mean that there will be reduced potential for the building impacting Schmidtville and Clyde/Birmingham Street.

Summary

The 9-storey building is not anticipated to have any measurable change in human thermal comfort of a person sitting, standing, walking or running within the 8x impact zone of the building. The corner of Queen and Clyde streets may be occasionally windier than currently exists but this change in wind speed should not measurably change the comfort of people on this corner. Street trees on this corner should be planted with a smaller caliper tree that is wind tolerant. The smaller caliper allows the tree to acclimate to the site conditions better than a larger caliper tree.

If you have any questions please contact me at your convenience.

Sincerely,

Robert LeBlanc, president
Ekistics Planning & Design