



City of Richmond
Planning and Development Department

**Report to
Development Permit Panel**

To: Development Permit Panel **Date:** May 4, 2012
From: Brian J. Jackson, MCIP **File:** DV 12-603451
Director of Development
Re: **Application by British Columbia Marine Employers Association for a
Development Variance Permit at 11000 Twigg Place (formerly part of 11060 and
11200 Twigg Place)**

Staff Recommendation

That a Development Variance Permit be issued which would vary the provisions of Richmond Zoning Bylaw 8500 to increase the maximum height for accessory structures from 20.0 meters to 50.0 meters, at 11000 Twigg Place (formerly part of 11060 and 11200 Twigg Place) on a site zoned "Industrial (I)".

Brian J. Jackson, MCIP
Director of Development

BJJ:dj
Att.

Staff Report

Origin

The British Columbia Marine Employers Association has applied to the City of Richmond for permission to develop a container handling training facility at 11000 Twigg Place (formerly 11060 and 11200 Twigg Place) (**Schedule A**). The site is currently vacant of any buildings or structures.

A Development Permit was issued in 1997 to facilitate the subdivision of land at the western part of Mitchell Island, as well as set development limits due to the proximity of the Fraser River.

The City is in the final stages of processing a subdivision application (SD 11-594667) for the lands which includes the subject property. A Servicing Agreement for the site servicing, road and frontage improvements is secured through this subdivision application.

Development Information

Please refer to attached Development Application Data Sheet (**Attachment 1**) for a comparison of the proposed development data with the relevant Bylaw requirements.

Background

Development surrounding the subject site is as follows:

- To the north: across from Twigg Place, a two storey Industrial Office Building on a lot zoned "Industrial (I)";
- To the east: a two storey Industrial Office Building on a lot zoned "Industrial (I)";
- To the south: the Fraser River and a mixed use commercial and residential complex beyond, on a site zoned "Residential mixed Use Commercial (ZMU17) – River Drive/No. 4 Road (Bridgeport) and a "School and Institutional Use (SI)"; and
- To the west: a vacant lot zoned "Industrial (I)".

Staff Comments

The applicant represents one of the main sources for training of shoreline operators for the major ports in the Province. The subject site has been selected to provide the applicant the ability to centralise the training of crane operators and other port management functions, which is currently scattered throughout the Lower Mainland.

The operation of this facility is to house movement of containers and other cargo within the site for training purposes. No activity on the river itself is proposed and all operations is anticipated to occur during typical weekday hours.

The site is to support two cranes. One is a Pedestal Crane which is intended to be located at the western side of the movement area. This crane has a swing arm which rotates around when in use and is locked down when it is not being used. The proposed variance takes into consideration when the arm of the crane is at its highest vertical position. The second crane is a container crane which is seen at all water ports in the Greater Vancouver area. The movement of the containers is contained within the area of the frame and has no movement beyond this area.

A Development Permit (DP 96-114) was completed for the western properties (including the subject site) to determine the impact of the riverfront with the industrial uses in the area. The result was a registered covenant to restrict any buildings being constructed within 30 meters from the water's edge. This setback may be adjusted, but is subject to a review by the Regional Water Manager. This application does not propose any buildings to be located within the 30 meter setback as per the covenant.

The condition of the site meets the City's Flood Protection Bylaw (8204) where the lowest point on the site is at the described level of 4.35 meters GSC. The floor level of the classroom and administrative buildings are expected to be higher, and will be verified at the time of the Building Permit.

The proposed height of these cranes meets the height limitations of the Vancouver International Airport Zoning Regulations.

Overall, the proposal complies with the Official Community Plan and is in compliance with the Industrial (I) zone (Section 12.1) of Zoning Bylaw 8500 except for the zoning variance noted below.

Zoning Compliance/Variations (staff comments in bold)

The applicant requests to vary the provisions of the Richmond Zoning Bylaw 8500 to:

- 1) Allow a variance to increase the maximum allowable height for accessory structures from 20.0 meters to 50.0 meters to support the installation and operation of cargo handling cranes.

Staff supports the proposed variance as the cranes are of steel construction and will allow visibility beyond the site. The proposed use of the cranes is intended to be conducted during weekday business hours and is not anticipated to cause a disturbance to adjacent properties.

Mitchell Island is a designated industrial area, and therefore is an appropriate location for a training facility which supports port related activities within the City.

Advisory Design Panel Comments

The proposed structure, buildings and landscaping in this proposal are considered limited in scope and therefore was not presented to the Advisory Design Panel for review and comment.

Analysis

Conditions of Adjacency

- The subject site is surrounded by Industrial uses and the North Arm of the Fraser River. The proposed use will have minimal impact on adjacent sites as long as care in its operations to mitigate annoyances (such as dust) onto adjacent properties.
- The installation of the handling cranes will have a visual impact on the area, but is not anticipated to be extensive. Activity on the site is anticipated to occur during normal business hours and night time illumination of the property is to avoid direct illumination onto adjacent properties. There hasn't been much activity on this site for a few years, but the land has been designated for Industrial use for some time.

Urban Design and Site Planning

- The applicant is proposing a site design where there is an obvious separation between the administrative, classroom and storage areas, and the training area where the cranes and other cargo movement activities will take place.
- The access to the site is off Twigg Place for both smaller individual vehicles and larger trucks. The parking lot is located to the west of the access point, running adjacent to the street.
- The two administrative and classroom buildings are small, single storey structures located further west of the parking lot. Storage tents are located just beyond.
- The cargo movement area to the south and west is where the bulk of the container and material movement will take place.
- The number of parking stalls meet the requirements of the Zoning Bylaw and the buildings meet the setback, density, height and site coverage requirements.
- The applicant will be adding landscaping within the three (3) meter wide buffer fronting the property that will provide a more pleasant view of the site.

Architectural Form and Character

- The administration buildings are too small to incorporate some of the design considerations that are in the Urban Design Guidelines of the OCP. The location of the buildings are along the street front for easy identification.
- The storage tents located beyond the administration buildings and provide a good buffer to the cargo movement area beyond.

Landscape Design and Open Space Design

- In addition to the street trees that are along Twigg Place, the applicant is proposing a good landscaping plan within the three (3) meter buffer fronting the site with the planting of trees and shrubs that will provide a good visual buffer from the street and add to the permeability to the site.
- Additional landscaping is proposed to border the parking lot and the administrative buildings from the other uses on the site.
- As a condition of this Development Variance Permit, for the purpose of securing the survival of the proposed landscaping, a security deposit of \$8,500.00 in form of either cash or a Letter of Credit is to be made prior to the issuance of this permit.

Crime Prevention Through Environmental Design

- The site will have perimeter fencing and will be gated off at the access point.
- Within the site, the use of landscaping will promote border areas to help identify how the site is to be used and where, creating identifications of safety areas.

Conclusions

Staff support the proposed height variance to the cargo handling cranes as they will not block the visibility through the site. The additional landscaping along the street and around the parking and administrative buildings will improve the visual impact on the site, the on site permeability and the overall safety of the site.



David Johnson
Planner 2

DJ:cas

The following are to be met prior to forwarding this application to Council for approval:

- Receipt of a Letter-of-Credit for landscaping in the amount of \$8,500.00.
- Completion of the subdivision application (SD 11-594667) to create the subject development lot.

Prior to future Building Permit issuance, the developer is required to complete the following:

- The applicant is required to obtain a Building Permit for any construction hoarding associated with the proposed development. If construction hoarding is required to temporarily occupy a street, or any part thereof, or occupy the air space above a street or any part thereof, additional City approvals and associated fees may be required as part of the Building Permit. *For further information on the Building Permit, please contact Building Approvals Division at 604-276-4285.*
- Submission of a construction traffic and parking management plan to the satisfaction of the City's Transportation Division (<http://www.richmond.ca/services/ttp/special.htm>).



City of Richmond

6911 No. 3 Road
Richmond, BC V6Y 2C1
www.richmond.ca
604-276-4000

Development Application Data Sheet

Development Applications Division

DV 12-603451

Attachment 1

Address: 11000 Twigg Place (formerly 11060 and 11200 Twigg Place)

Applicant: British Columbia Marine Employers Association Owner: Mitchell Island Holdings Inc.

Planning Area(s): Bridgeport Area Plan (OCP Schedule 2.12)

Floor Area Gross: 1,243.0m² Floor Area Net: 1,243.0m²

	Existing	Proposed
Site Area:	19,163.8 m ²	19,163.8 m ²
Land Uses:	General Industrial	General Industrial
OCP Designation:	Industrial	Industrial
Zoning:	Industrial (I)	Industrial (I)

On Future Subdivided Lots	Bylaw Requirement	Proposed	Variance
Floor Area Ratio:	1.0 FAR	0.06 FAR	none permitted
Lot Coverage:	Max. 60.0%	6.0%	none
Setback – Front Yard:	Min. 3.0 m	3.0 m	none
Setback – Side Yard:	No minimum requirement		none
Setback – Rear Yard:	No minimum requirement		none
Building Height (m):	Max. 12.0 m	7.62 m	none
Accessory Structure Height (m):	Max. 20.0 m	50.0 m	30.0 m
Off-street Parking Spaces – Regular/Commercial:	13	30	none
Off-street Parking Spaces – Accessible:	1	1	none
Total off-street Spaces:	14	31	none



City of Richmond
Planning and Development Department

Development Variance Permit

No. DV 12-603451

To the Holder: BRITISH COLUMBIA MARINE EMPLOYERS ASSOCIATION

Property Address: 11000 TWIGG PLACE
 (FORMERLY 11060 AND 11200 TWIGG PLACE)

Address: SUITE 500, 349 RAILWAY STREET
 VANCOUVER, BC V6A 1A4

1. This Development Variance Permit is issued subject to compliance with all of the Bylaws of the City applicable thereto, except as specifically varied by this Permit.
2. This Development Variance Permit applies to and only to those lands shown cross-hatched on the attached Schedule "A" and any and all buildings, structures and other development thereon.
3. The "Richmond Zoning Bylaw 8500" is hereby varied as follows:
 - a) Allow a variance to increase the maximum allowable height for accessory structures from 20.0 meters to 50.0 meters to support the installation and operation of cargo handling cranes as shown on Plan #1-3 attached hereto.
4. As a condition of the issuance of this Permit, the City is holding the security in the amount of \$5,000.00. to ensure that development is carried out in accordance with the terms and conditions of this Permit. Should any interest be earned upon the security, it shall accrue to the Holder if the security is returned. The condition of the posting of the security is that should the Holder fail to carry out the development hereby authorized, according to the terms and conditions of this Permit within the time provided, the City may use the security to carry out the work by its servants, agents or contractors, and any surplus shall be paid over to the Holder. Should the Holder carry out the development permitted by this permit within the time set out herein, the security shall be returned to the Holder. The City may retain the security for up to one year after inspection of the completed landscaping in order to ensure that plant material has survived.
5. The land described herein shall be developed generally in accordance with the terms and conditions and provisions of this Permit and any plans and specifications attached to this Permit which shall form a part hereof.
6. If the Holder does not commence the construction permitted by this Permit within 24 months of the date of this Permit, this Permit shall lapse.

This Permit is not a Building Permit.

No. DV 12-603451

To the Holder: BRITISH COLUMBIA MARINE EMPLOYERS ASSOCIATION

Property Address: 11000 TWIGG PLACE
(FORMERLY 11060 AND 11200 TWIGG PLACE)

Address: SUITE 500, 349 RAILWAY STREET
VANCOUVER, BC V6A 1A4

AUTHORIZING RESOLUTION NO.
DAY OF , .

ISSUED BY THE COUNCIL THE

DELIVERED THIS DAY OF , .

MAYOR

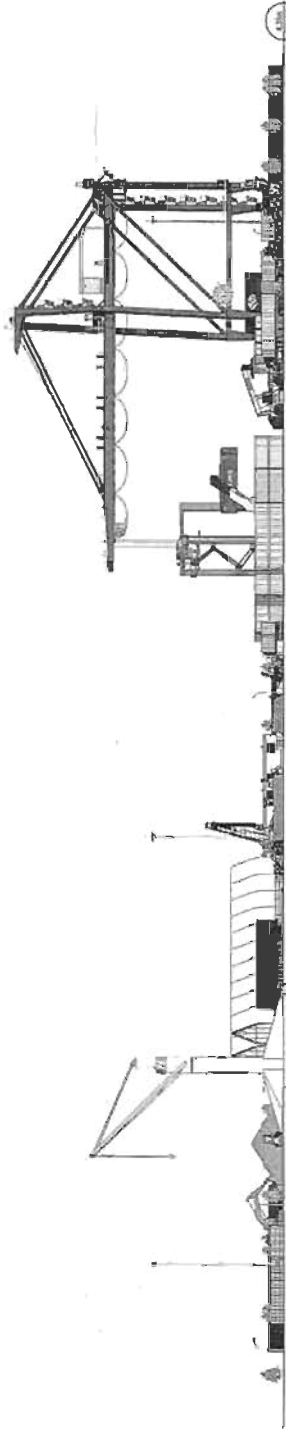


North Arm Fraser River

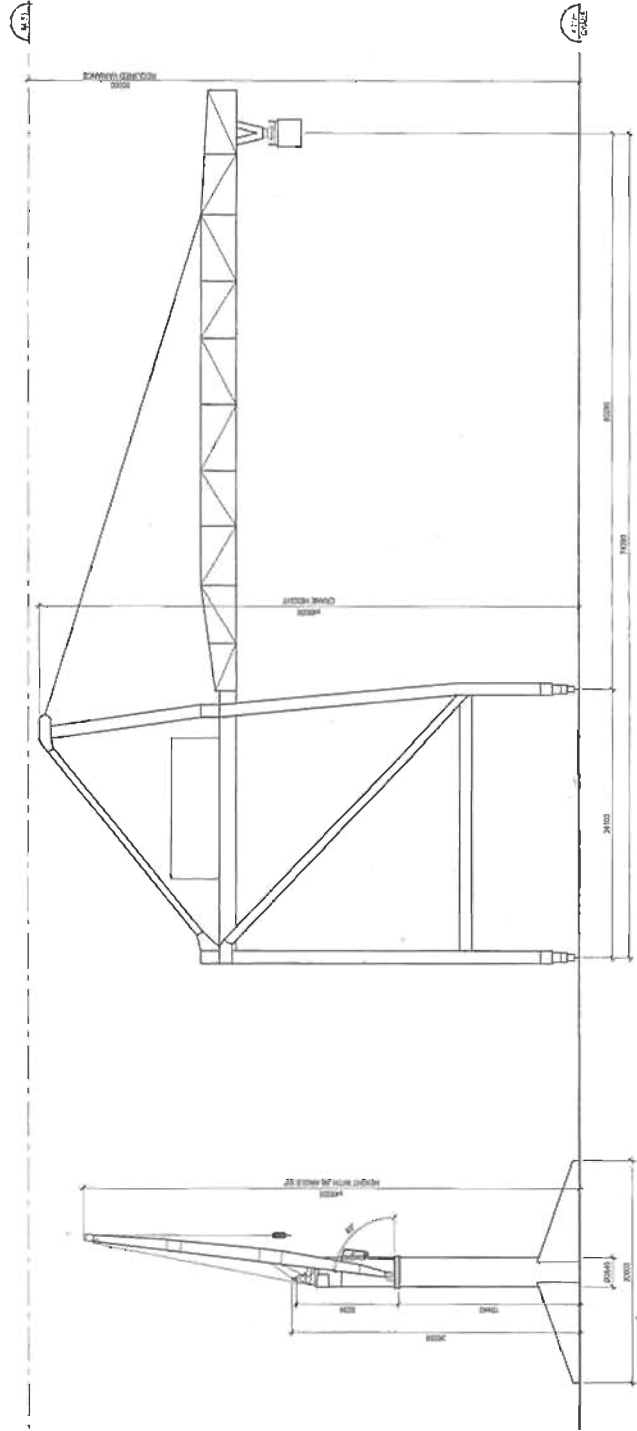


Note: Dimensions are in METRES

KEY PLAN



SECTION 1



SECTION 2

SECTION 3

DVP 12603451
PG. 001

Rev.	Description	Date	By
1	Issued for construction	01/11/11	BCMECA
2	Revised for construction	01/11/11	BCMECA
3	Revised for construction	01/11/11	BCMECA
4	Revised for construction	01/11/11	BCMECA
5	Revised for construction	01/11/11	BCMECA
6	Revised for construction	01/11/11	BCMECA
7	Revised for construction	01/11/11	BCMECA
8	Revised for construction	01/11/11	BCMECA
9	Revised for construction	01/11/11	BCMECA
10	Revised for construction	01/11/11	BCMECA
11	Revised for construction	01/11/11	BCMECA
12	Revised for construction	01/11/11	BCMECA
13	Revised for construction	01/11/11	BCMECA
14	Revised for construction	01/11/11	BCMECA
15	Revised for construction	01/11/11	BCMECA
16	Revised for construction	01/11/11	BCMECA
17	Revised for construction	01/11/11	BCMECA
18	Revised for construction	01/11/11	BCMECA
19	Revised for construction	01/11/11	BCMECA
20	Revised for construction	01/11/11	BCMECA
21	Revised for construction	01/11/11	BCMECA
22	Revised for construction	01/11/11	BCMECA
23	Revised for construction	01/11/11	BCMECA
24	Revised for construction	01/11/11	BCMECA
25	Revised for construction	01/11/11	BCMECA
26	Revised for construction	01/11/11	BCMECA
27	Revised for construction	01/11/11	BCMECA
28	Revised for construction	01/11/11	BCMECA
29	Revised for construction	01/11/11	BCMECA
30	Revised for construction	01/11/11	BCMECA
31	Revised for construction	01/11/11	BCMECA
32	Revised for construction	01/11/11	BCMECA
33	Revised for construction	01/11/11	BCMECA
34	Revised for construction	01/11/11	BCMECA
35	Revised for construction	01/11/11	BCMECA
36	Revised for construction	01/11/11	BCMECA
37	Revised for construction	01/11/11	BCMECA
38	Revised for construction	01/11/11	BCMECA
39	Revised for construction	01/11/11	BCMECA
40	Revised for construction	01/11/11	BCMECA
41	Revised for construction	01/11/11	BCMECA
42	Revised for construction	01/11/11	BCMECA
43	Revised for construction	01/11/11	BCMECA
44	Revised for construction	01/11/11	BCMECA
45	Revised for construction	01/11/11	BCMECA
46	Revised for construction	01/11/11	BCMECA
47	Revised for construction	01/11/11	BCMECA
48	Revised for construction	01/11/11	BCMECA
49	Revised for construction	01/11/11	BCMECA
50	Revised for construction	01/11/11	BCMECA
51	Revised for construction	01/11/11	BCMECA
52	Revised for construction	01/11/11	BCMECA
53	Revised for construction	01/11/11	BCMECA
54	Revised for construction	01/11/11	BCMECA
55	Revised for construction	01/11/11	BCMECA
56	Revised for construction	01/11/11	BCMECA
57	Revised for construction	01/11/11	BCMECA
58	Revised for construction	01/11/11	BCMECA
59	Revised for construction	01/11/11	BCMECA
60	Revised for construction	01/11/11	BCMECA
61	Revised for construction	01/11/11	BCMECA
62	Revised for construction	01/11/11	BCMECA
63	Revised for construction	01/11/11	BCMECA
64	Revised for construction	01/11/11	BCMECA
65	Revised for construction	01/11/11	BCMECA
66	Revised for construction	01/11/11	BCMECA
67	Revised for construction	01/11/11	BCMECA
68	Revised for construction	01/11/11	BCMECA
69	Revised for construction	01/11/11	BCMECA
70	Revised for construction	01/11/11	BCMECA
71	Revised for construction	01/11/11	BCMECA
72	Revised for construction	01/11/11	BCMECA
73	Revised for construction	01/11/11	BCMECA
74	Revised for construction	01/11/11	BCMECA
75	Revised for construction	01/11/11	BCMECA
76	Revised for construction	01/11/11	BCMECA
77	Revised for construction	01/11/11	BCMECA
78	Revised for construction	01/11/11	BCMECA
79	Revised for construction	01/11/11	BCMECA
80	Revised for construction	01/11/11	BCMECA
81	Revised for construction	01/11/11	BCMECA
82	Revised for construction	01/11/11	BCMECA
83	Revised for construction	01/11/11	BCMECA
84	Revised for construction	01/11/11	BCMECA
85	Revised for construction	01/11/11	BCMECA
86	Revised for construction	01/11/11	BCMECA
87	Revised for construction	01/11/11	BCMECA
88	Revised for construction	01/11/11	BCMECA
89	Revised for construction	01/11/11	BCMECA
90	Revised for construction	01/11/11	BCMECA
91	Revised for construction	01/11/11	BCMECA
92	Revised for construction	01/11/11	BCMECA
93	Revised for construction	01/11/11	BCMECA
94	Revised for construction	01/11/11	BCMECA
95	Revised for construction	01/11/11	BCMECA
96	Revised for construction	01/11/11	BCMECA
97	Revised for construction	01/11/11	BCMECA
98	Revised for construction	01/11/11	BCMECA
99	Revised for construction	01/11/11	BCMECA
100	Revised for construction	01/11/11	BCMECA

BCMECA
MITCHELL ISLAND

DA
Design Associates
1000 West 10th Street, Vancouver
British Columbia, Canada V6B 1W9
Tel: 604 685 6312
Fax: 604 685 6313
www.dacorp.com

Project Name	12603451
Client	BCMECA
Design	BCMECA
Drawn	BCMECA
Checked	BCMECA
Scale	1:100
Sheet	1

12603451 Submittal



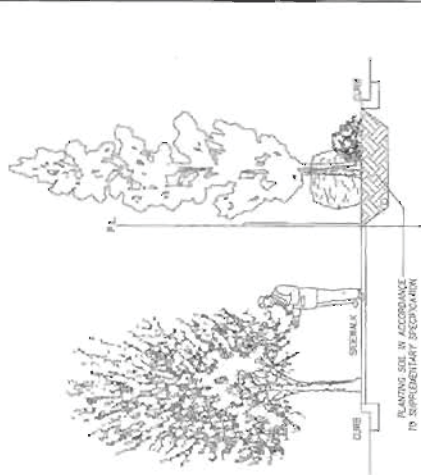
LANDSCAPE ARCHITECTURE
1811 Falcon Drive
Zooatlam, British Columbia
V2H 2C2
tel: 604.341.5268
fax: 604.434.3088

[illegible]

BCMEA
MITCHELL ISLAND
1060 TWO PLACE
RICHMOND, B.C.

LANDSCAPE
PLAN[illegible]

GROUP



PLANTING SOIL IN ACCORDANCE WITH VARIOUS AGRICULTURAL & SUPPLEMENTARY RECOMMENDATIONS IN THIS CATALOGUE

PLANTING TREES: CONTIGUOUS EXCEPT AT TRANSFORMERS. SERVICE VAULTS AND STREET LIGHTS.

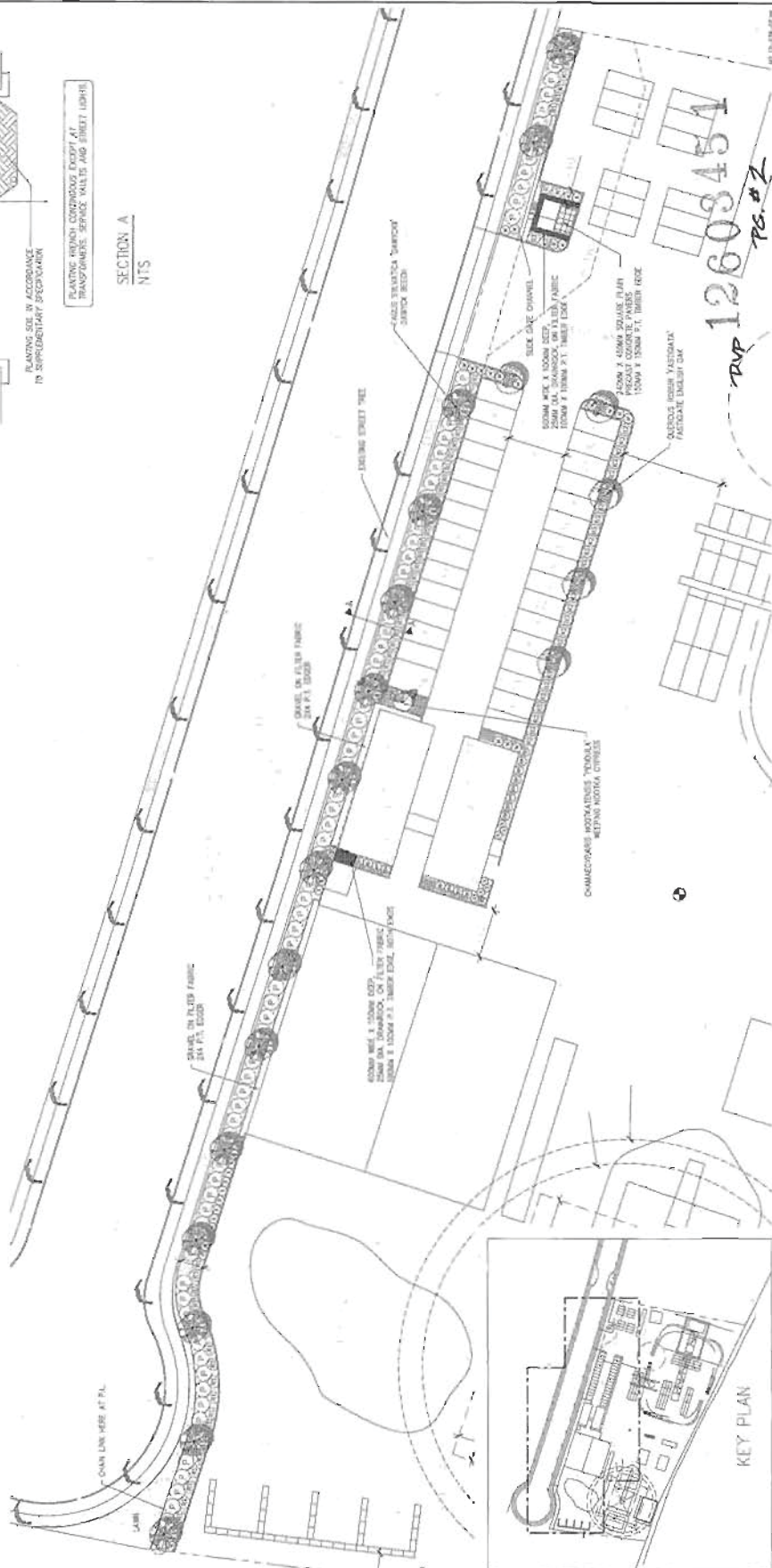
SECTION A

[illegible]

STRENGTH, STIFFNESS, AND STABILITY

Albula parva (Forsk.)

PAULINE L. HUSTON
KIMBERLY A. HUSTON
KIMBERLY A. HUSTON



KEY PLAN

pc. #2

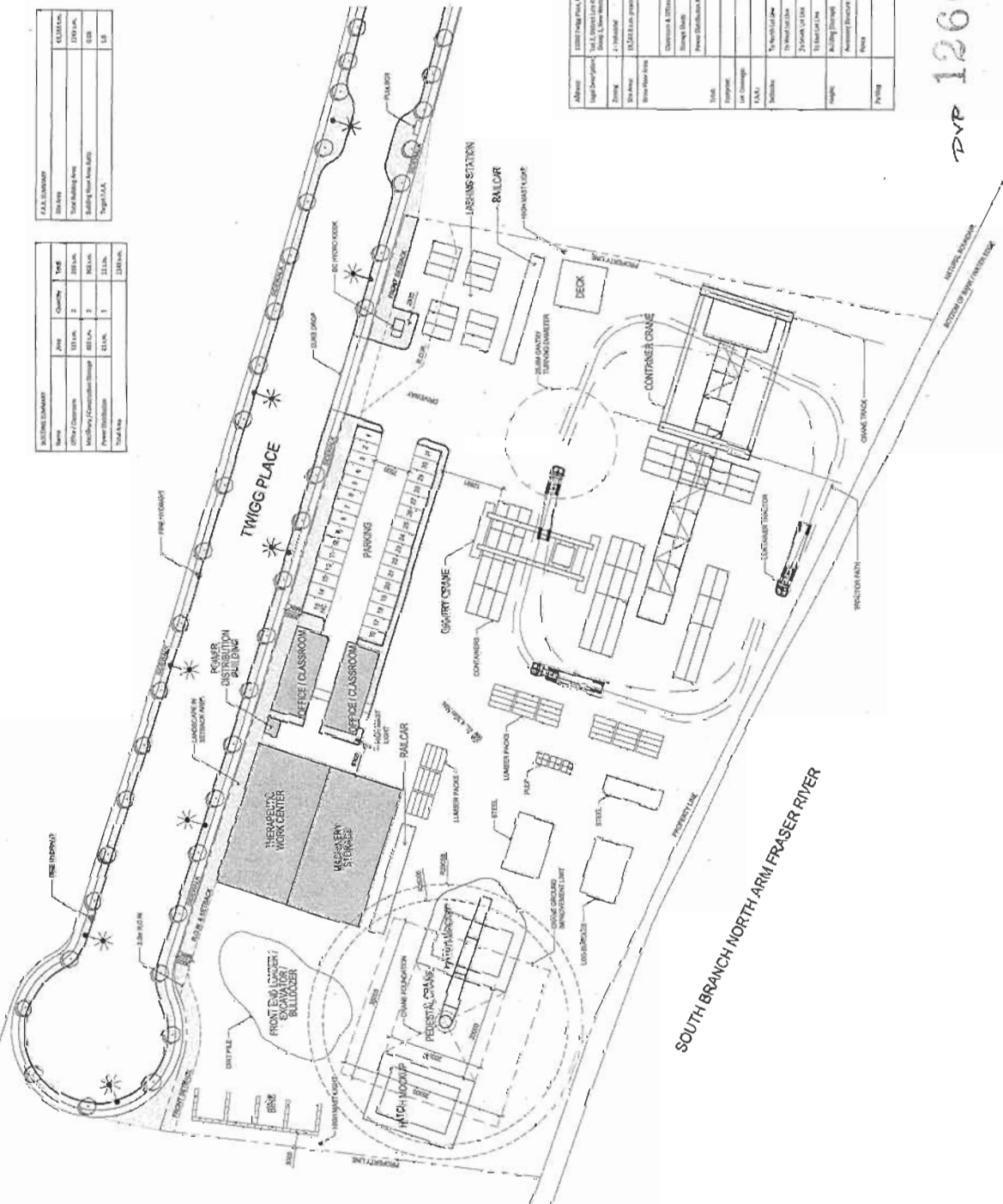
--	--

STATISTIC SUMMARY

FADING SUMMARY		
Type of Life	Requirement	Quantity
Marathon	1 (up to 18 months) *No. of Marathons based on consumption used in P.O.C.	18 Marathons
OTR	1 (up to 1200 Lbs)	10 Lbs. + 120 Lbs.
Total Requirement		18
Provided		18

P.A.S. UNIVERSITY	
Site Area	65,555 sq. m.
Teach Building Area	1200 sq. m.
Building Water Area Ratio	0.02
Target S.A.R.	5.0

30.000000			
Name	Area	Quantity	Total
Office / Classroom	137 s.m.	2	275 s.m.
Inventory / Construction Storage	402 s.m.	2	804 s.m.
Power Distribution	42 s.m.	1	42 s.m.
Total Area			1121 s.m.



PROJECT DATA

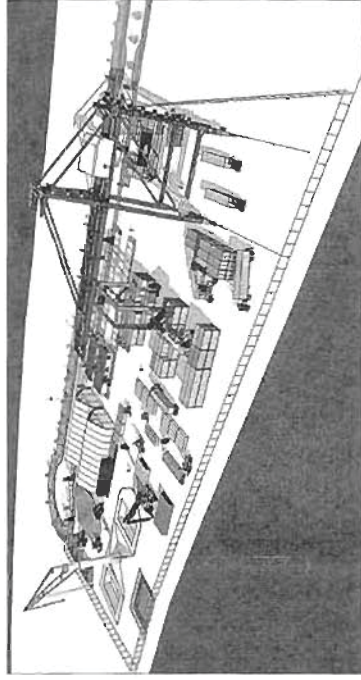
Address	15000 Pump Cove, Midvale Road, Chesham, DE
Usage Description	Tot. 4.0 Acres (Lot 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832,

Study Population	Age Range	Sample Size	Follow-up Period
Adults	18-65	100	12 months
Children	6-17	50	6 months
Elderly	65+	25	18 months

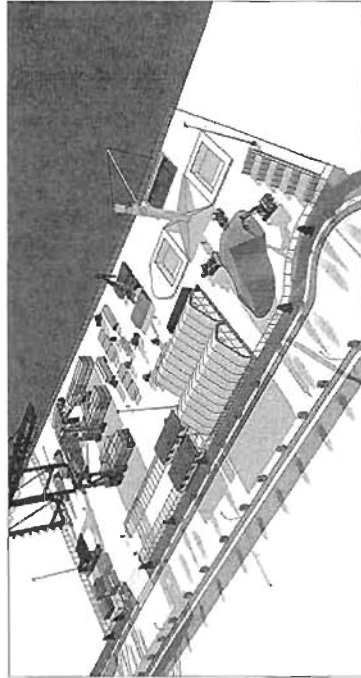
DVP 12603451 Pg. 43

KEY PLAN

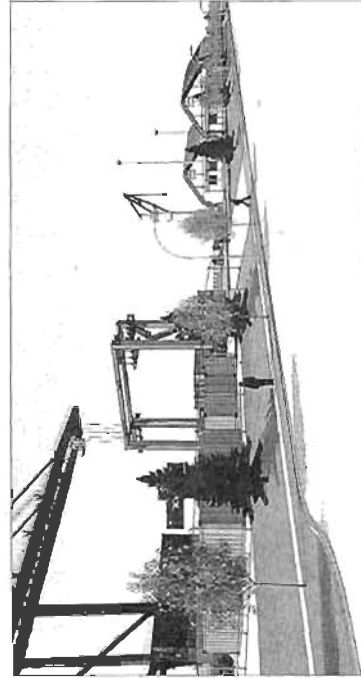
No.	Description	Date	By
1	Initial Design	10/10/00	DA
2	Revised Design	10/10/00	DA
3	Final Design	10/10/00	DA
4	Construction	10/10/00	DA
5	Operation	10/10/00	DA
6	Maintenance	10/10/00	DA
7	Renovation	10/10/00	DA
8	Demolition	10/10/00	DA
9	Reconstruction	10/10/00	DA
10	Rehabilitation	10/10/00	DA
11	Restoration	10/10/00	DA
12	Replacement	10/10/00	DA
13	Rebuilding	10/10/00	DA
14	Reconstruction	10/10/00	DA
15	Rehabilitation	10/10/00	DA
16	Restoration	10/10/00	DA
17	Replacement	10/10/00	DA
18	Rebuilding	10/10/00	DA
19	Reconstruction	10/10/00	DA
20	Rehabilitation	10/10/00	DA



2 SOUTH EAST AERIAL



1 NORTH WEST AERIAL



3 NORTH EAST STREET VIEW

DVP 12603451
REF. PG #1

BCMA
DA Architects & Planners
100-1014 10th Street, Vancouver
British Columbia, Canada V6B 1B9
1604 685 6312
Fax 604 685 6311
www.bcma.ca

BCMA
MITCHELL ISLAND

PERSPECTIVES

No.	Description	Date	By
1	Initial Design	10/10/00	DA
2	Revised Design	10/10/00	DA
3	Final Design	10/10/00	DA
4	Construction	10/10/00	DA
5	Operation	10/10/00	DA
6	Maintenance	10/10/00	DA
7	Renovation	10/10/00	DA
8	Demolition	10/10/00	DA
9	Reconstruction	10/10/00	DA
10	Rehabilitation	10/10/00	DA
11	Restoration	10/10/00	DA
12	Replacement	10/10/00	DA
13	Rebuilding	10/10/00	DA
14	Reconstruction	10/10/00	DA
15	Rehabilitation	10/10/00	DA
16	Restoration	10/10/00	DA
17	Replacement	10/10/00	DA
18	Rebuilding	10/10/00	DA
19	Reconstruction	10/10/00	DA
20	Rehabilitation	10/10/00	DA