

PROPOSAL:

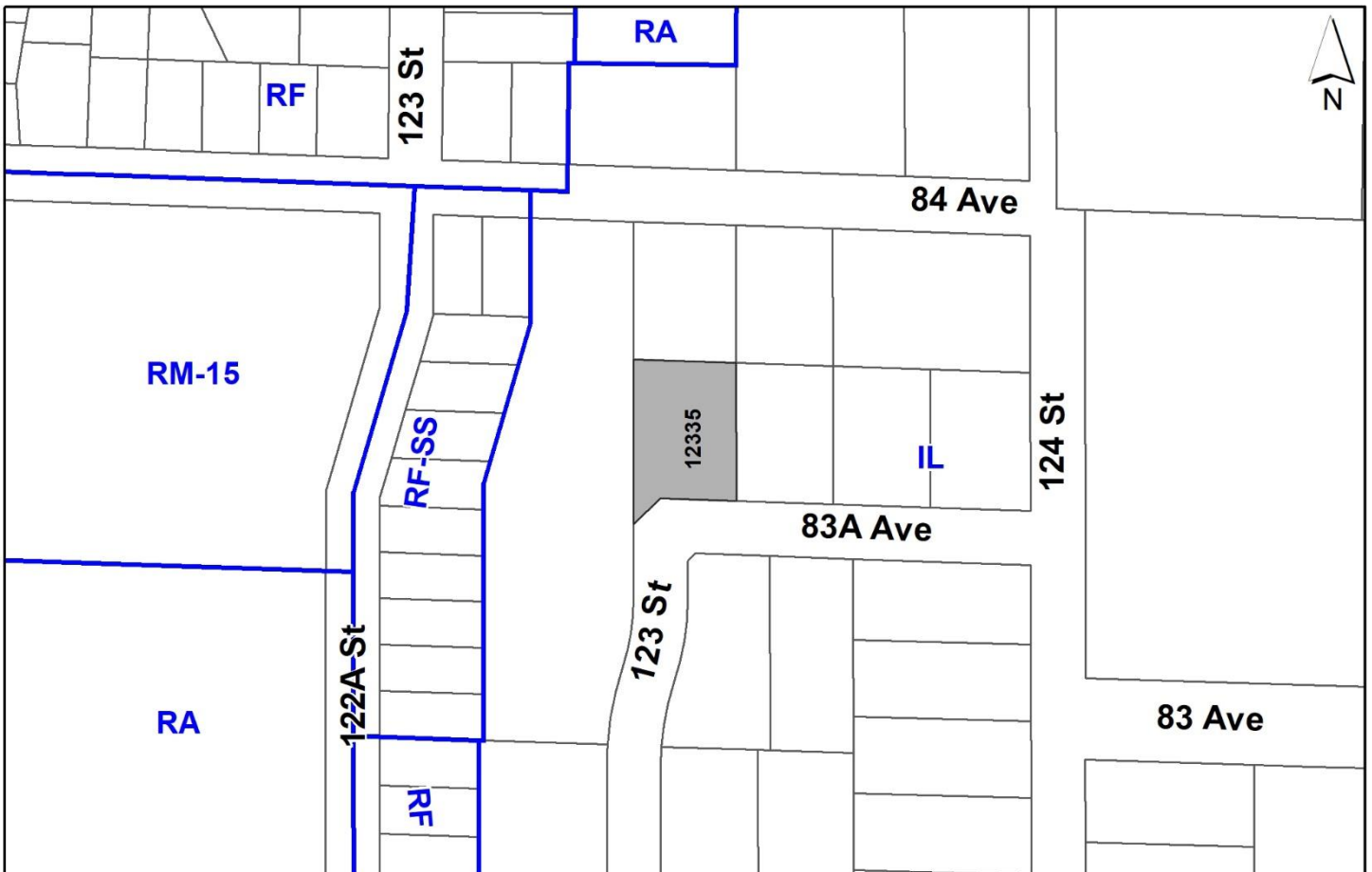
- **Development Variance Permit**

to increase the maximum height of an external dust collector system.

LOCATION: 12335 - 83A Avenue

ZONING: IL

OCP DESIGNATION: Industrial



RECOMMENDATION SUMMARY

- Approval for Development Variance Permit to proceed to Public Notification.

DEVIATION FROM PLANS, POLICIES OR REGULATIONS

- The applicant is proposing to vary the requirements of the “Light Impact Industrial Zone” (IL), by increasing the maximum height of a Structure from 6 metres to 7.4 metres.

RATIONALE OF RECOMMENDATION

- The proposal complies with the Industrial designation in the Official Community Plan (OCP).
- The varied height of 7.4 metres for a dust collector is a marginal increase to the 6 metres permitted in the IL Zone for structures within the zoning bylaw.
- The subject site abuts other light industrial zoned lots that also specialize in the manufacturing and supply of industrial based products and services.
- The external dust collector is integral for the business which operates a cabinet and door manufacturing company. The dust collector functions to collect and remove air born particulates.

RECOMMENDATION

The Planning & Development Department recommends that Council approve Development Variance Permit No. 7923-0277-00 (Appendix III) to increase the maximum height of a Structure permitted in the Light Impact Industrial Zone (IL) from 6 metres to 7.4 metres, to proceed to Public Notification.

REFERRALS

Engineering: The Engineering Department has no objection to the project.

SITE CONTEXT & BACKGROUND

Direction	Existing Use	OCP/NCP Designation	Existing Zone
Subject Site	Light Industrial (Cabinet and door manufacturing,	Industrial	IL
North:	Light Industrial (Collision repair, metal works, patio cover and railing supplier)	Industrial	IL
East:	Light Industrial (Autobody works, Diesel maintenance, logistics company)	Industrial	IL
South (Across 83A Ave.):	Light Industrial (Truck & trailer repair facility)	Industrial	IL
West:	Light Industrial (Automotive works, sign manufacturing, truck and trailer repair)	Industrial	IL

Context & Background

- The subject site is located at 12335 83A Avenue in the Newton community. The property is designated “Industrial” in the Official Community Plan (OCP), zoned “Light Impact Industrial Zone (IL) and is 2,005 square metres in area.
- The subject property contains one light industrial building, which is comprised of 4 separate units that include industrial based supply and manufacturing businesses.

DEVELOPMENT PROPOSAL

Planning Considerations

- The dust collector is located on the southwest corner of the lot, adjacent to 83A Avenue, the public road to the south. The dust collector sits adjacent to other industrial buildings. The industrial building to the west lies between and buffers the subject site from residential homes located approximately 50 metres away (average).
- The applicant is seeking to a building permit for a tenant improvement to allow the existing dust collector and additional tenant improvements for the building. These cannot be approved without a Development Variance Permit first being issued to allow the unpermitted accessory structure.
- If Council determines that this variance should be granted, then the applicant may continue with their tenant improvement application. The application review process will ensure that the building is operating according to current policies and standards.

Height Variance

- The applicant is requesting the following variance:
 - To vary the requirements of the “Light Impact industrial Zone” (IL) by increasing the maximum height of a Structure from 6 metres to 7.4 metres.
- The proposal complies with the Industrial designation in the Official Community Plan (OCP).
- The varied height of 7.4 metres is a marginal increase to the 6 metres permitted in the IL Zone for structures within the zoning bylaw.
- The external dust collector functions to collect air born particulates and is integral for the business that operates a cabinet and door manufacturing company.
- The subject site abuts other light industrial zoned lots that also specialize in the manufacturing and supply of industrial based products and services.
- Staff support the requested variance to proceed for consideration.

PUBLIC ENGAGEMENT

- Pre-notification letters were sent on November 7th, 2023. Staff received 1 response from an occupant of a neighbouring industrial property.
- An industrial tenant expressed concerns about the external dust collector, noting it was installed before receiving Building Permit issuance. The person also noted it is a potential safety hazard and creates nuisance impacts such as noise, dust, and vibrations.

- Through the submitted Building Permit, staff will ensure that the dust collector is compliant with applicable regulations such as the BC building code and Fire code and will be required to go through necessary building and electrical inspections before any permits can be issued. Specific air flow calculations will be provided and reviewed by Building staff to confirm the system is up to applicable standards.

INFORMATION ATTACHED TO THIS REPORT

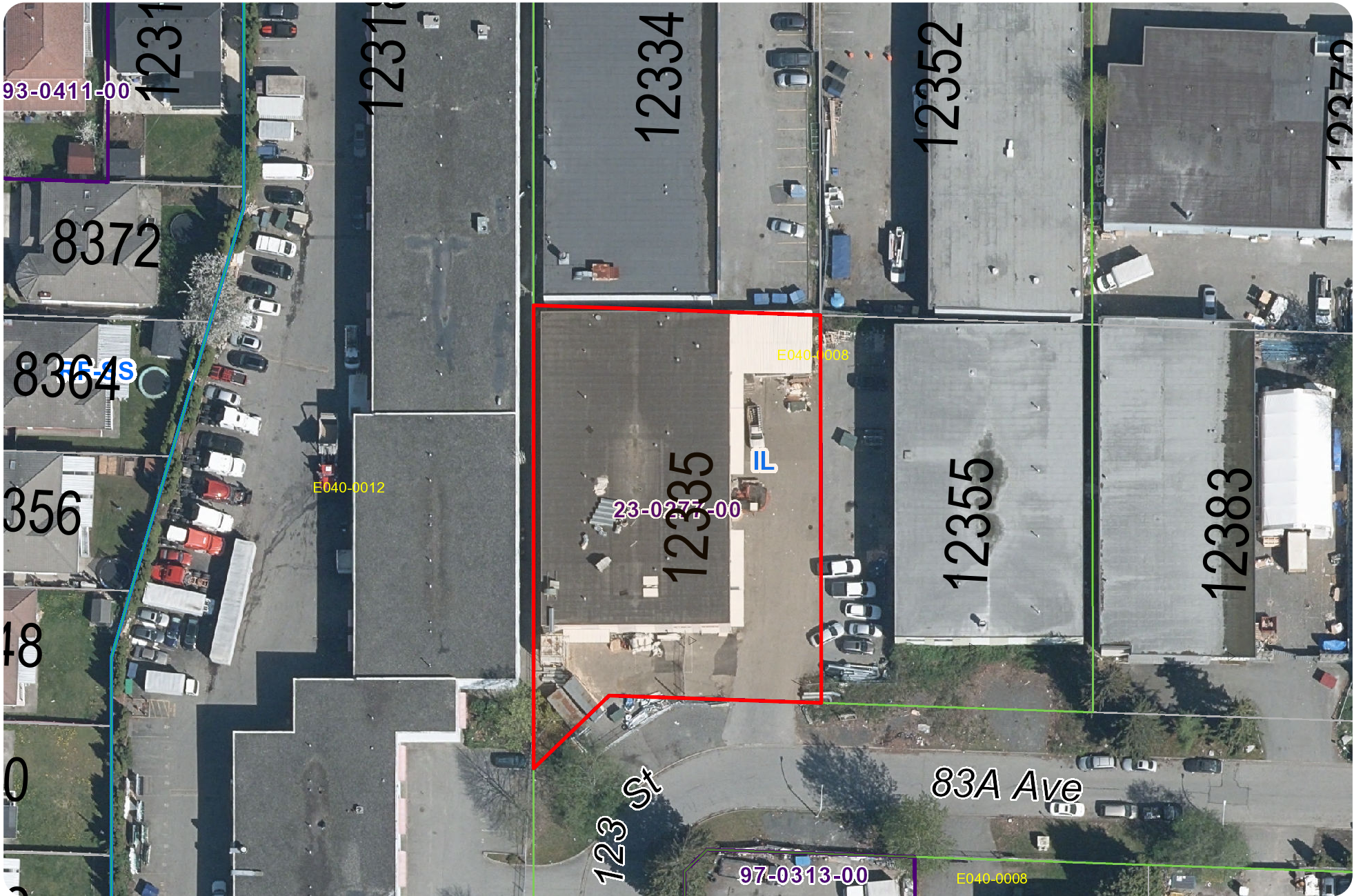
The following information is attached to this Report:

Appendix I.	Site Context
Appendix II.	Site Plan and Dust Collector Drawings
Appendix III.	Development Variance Permit 7923-0277-00

approved by Shawn Low

Don Luymes
General Manager
Planning and Development

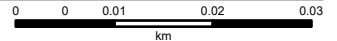
TS/ar



Site Context

Scale: 1:691

The data provided is compiled from various sources and is NOT warranted as to its accuracy or sufficiency by the City of Surrey. This information is provided for information and convenience purposes only. Lot sizes, legal descriptions and encumbrances must be confirmed at the Land Title Office. Use and distribution of this map is subject to all copyright and disclaimer notices at cosmos.surrey.ca



Map created on: 2023-12-08

DUST COLLECTION NOTES:
 - THIS DUST COLLECTION SYSTEM DESIGN CONFORMS TO ALL APPLICABLE REQUIREMENTS OF SECTION 5.3 OF THE BC FIRE CODE 2018 (BCFC)

- THE FOLLOWING STANDARDS ARE REFERRED TO
 BC FIRE CODE 2018
 BC BUILDING CODE 2018
 NFPA 664: Standard for the Prevention of Fires and Explosions in Wood Processing and Woodworking Facilities (2017 ed)
 NFPA 654: Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids (2017 ed)
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 NFPA 499: Recommended Practice for the Classification of Combustible Dusts and of Hazardous (Classified) Location for Electrical Installations in Chemical Process Areas (2021 Ed)

- THE DUST COLLECTOR WILL OPERATE AT A MAXIMUM 22000 CFM (37,378 m³/hr) @ 11.8 INH₂O (0.029 BAR)

- THE DUST COLLECTOR IS LOCATED OUTSIDE THE BUILDING (BCFC 5.3.1.4(1); NFPA 664:7.13.1.1.1)

- ALL DUCTING AND RELATED EQUIPMENT SHALL BE BONDED AND GROUNDED WITH A RESISTANCE OF LESS THAN 1.0 MO. (BCFC: 5.3.1.5; NFPA 664: 7.9.1, 8.2.2.3.1.8; NFPA 654: 9.3.2.3.)

- ALL PLANT EQUIPMENT ATTACHED TO THE DUST COLLECTING SYSTEM IS ELECTRICALLY INTERLOCKED TO PREVENT ANY MACHINES FROM OPERATING IF THE DUST COLLECTING SYSTEM IS NOT IN OPERATION. (BCFC 5.3.1.8)

- THE REQUIREMENTS OF BCFC 5.3.2.1 ARE MET AS EVERY DUST PRODUCING PROCESS IS CONNECTED TO THE DUST COLLECTING SYSTEM

- FIRE EXTINGUISHERS MUST BE PROVIDED AS REQUIRED BY BCFC 5.3.2.3: A PORTABLE FIRE EXTINGUISHER SHALL BE PROVIDED WITHIN 7.5 M (24'-7") OF ANY MACHINE PRODUCING WOODDUST, PARTICLES, OR SHAVINGS.

- ALL DUCT SUPPORTS SHALL BE DESIGNED TO CARRY THE WEIGHT OF THE DUST SYSTEM ITSELF PLUS THE ANTICIPATED WEIGHT OF THE DUCT HALF FULL OF PRODUCT OR WATER IF DUCT IS SPRINKLED- WHICHEVER IS HEAVIER (NFPA 91: 4.2.3, 4.2.4). DUCTS MUST NOT BE SUPPORTED BY CONNECTED EQUIPMENT (NFPA 91 4.5.3).

- MEANS TO INSPECT THE DUCTING SYSTEM MUST BE PROVIDED (NFPA 91: 4.3.1)

- CHANGES TO THE SYSTEM INCLUDING THE ADDITION, DISCONNECTION OR ALTERING THE LENGTH OF BRANCHES SHALL BE PERFORMED ONLY AFTER A REASSESSMENT OF THE SYSTEM DESIGN BY QUALIFIED PERSONS. (NFPA 654: 7.3.2.2, 7.3.2.6.4 TO .6) CHANGES TO THE LENGTHS AND DIAMETERS OF DUCTS CAN HAVE SIGNIFICANT EFFECTS ON OVERALL SYSTEM PERFORMANCE AS WELL AS ON INDIVIDUAL PICKUP PERFORMANCES.

- ANY PENETRATIONS OF WALLS CEILINGS OR FLOORS SHALL MEET NFPA 664: 6.2.2.1, WHICH STATES: "PENETRATIONS OF WALLS, FLOORS, OR CEILINGS THAT PROVIDE A REQUIRED FIRE SEPARATION SHALL BE PROTECTED BY LISTED SYSTEMS OR APPROVED MATERIALS THAT HAVE A FIRE RESISTANCE RATING EQUAL TO THAT OF THE WALL, FLOOR, OR CEILING AND SHALL CONFORM TO THE RELEVANT REQUIREMENTS OF NFPA 221, STANDARD FOR HIGH CHALLENGE FIRE WALLS, FIRE WALLS, AND FIRE BARRIER WALLS".

- FLEXIBLE DUCTING IS USED FOR FINAL MACHINE CONNECTION IN A LENGTH NOT EXCEEDING THE MINIMUM REQUIRED FOR MACHINE CONNECTION (NFPA 664: 8.2.2.3.1.1).

- A BLOWBACK DAMPER IS INSTALLED IN THE MAIN LINE TO PREVENT ANY POSSIBLE DEFLAGRATION FROM TRAVELING UP THE DUCTING TO MACHINERY. NFPA 664: 8.2.4.1

- A ROTARY AIRLOCK IS INSTALLED ON THE DISPOSAL OUTLET OF THE DUST COLLECTOR AS AN ISOLATION DEVICE (NFPA 664: 8.2.4.1)

- COLLECTED MATERIAL = VARIOUS WOOD PARTICULATES OF VARYING SIZE

- ALL DUCTING SHALL BE RATED TO WITHSTAND 13.0 INH₂O (0.032 BAR) VACUUM

- THE DUST COLLECTOR IS EQUIPPED WITH EXPLOSION VENTING MEETING THE REQUIREMENTS OF NFPA 68.

- ALL COMPONENTS OF THE DUST COLLECTION SYSTEM SHALL BE CONSTRUCTED AND INSTALLED AS PER APPLICABLE INDUSTRY CODES AND STANDARDS INCLUDING BUT NOT LIMITED TO BCFC, SMACNA, NFPA AND MANUFACTURER'S RECOMMENDATIONS.

- FILTERED AIR IS NOT RECIRCULATED BACK INTO THE BUILDING

- STRUCTURAL ENGINEERING AND CONCRETE PAD DESIGN BY OTHERS

- ALL AREAS IN WOODWORKING AREAS ARE ELECTRICALLY UNCLASSIFIED WITH THE EFFICIENT USE OF DUST COLLECTION ALONG WITH GOOD HOUSEKEEPING (NFPA 499: 6.5)

- A DOCUMENTED TRAINING AND MAINTENANCE PROGRAM SHALL BE IMPLEMENTED FOR ALL PERSONNEL INVOLVED IN THE WOODWORKING PROCESS. (NFPA 664: 10 - 11)

THE TRAINING SHALL COVER

- POTENTIAL SAFETY AND HEALTH HAZARDS
- OPERATIONAL, MAINTENANCE, AND EMERGENCY PROCEDURES REQUIRED
- IMPORTANCE OF CONSTANT OPERATOR AWARENESS
- MAINTENANCE SCHEDULES AND RECORD KEEPING

Duct Weight Schedule

ALL HORIZONTAL DUCT AND THEIR SUPPORTS MUST BE CAPABLE OF SUPPORTING THE WEIGHT OF THE DUCT HALF FILLED WITH MATERIAL (NFPA 664: 8.2.2.3.1.3). SEE Table 1 FOR DETAILS
 ALL WEIGHT IS IN POUNDS PER LINEAR FOOT.

Duct Diameter (in)	Duct Weight (lbs/ft)
3	2
4	4
5	5
6	8
7	10
8	13
9	16
10	20
11	24
12	28
14	37
15	44
16	49
18	62
20	76
22	92
24	109
26	131
28	149
30	170

Table 1

Duct Gauge Schedule

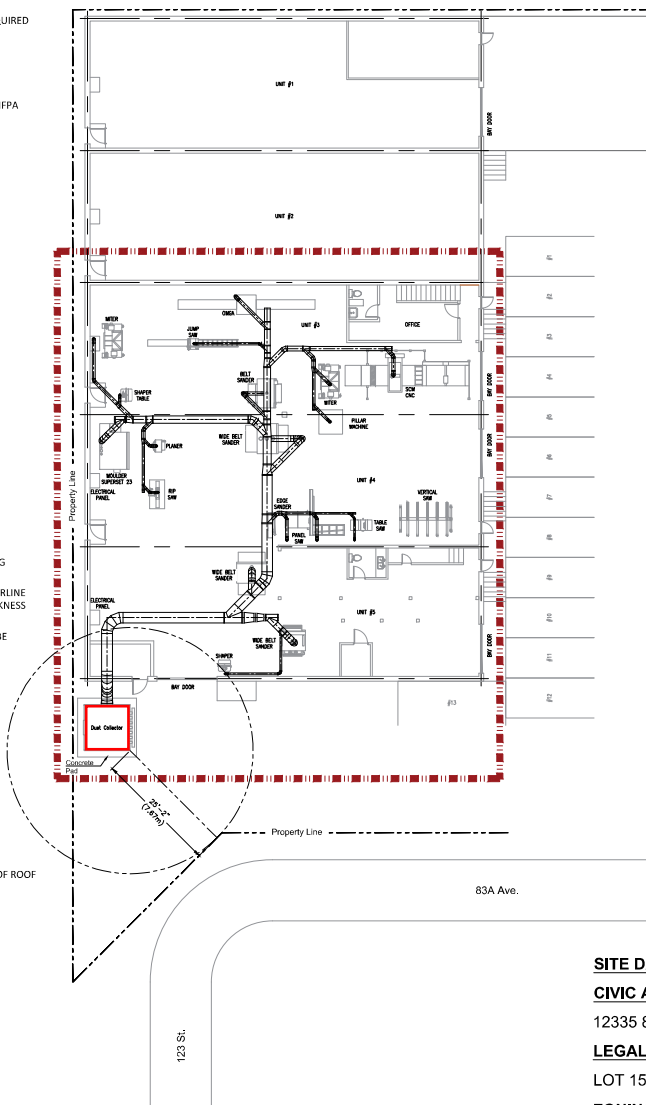
- FOR STRAIGHT DUCTING OF GALVANIZED STEEL THE MINIMUM DUCTING MATERIAL THICKNESSES CAN BE FOUND IN TABLE 2 BELOW
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 - DUCTING BETWEEN BLOWBACK DAMPER AND DUST COLLECTOR MUST BE FLANGED

Duct Diameter (in)	STRAIGHT PIPE	ELBOWS/ BRANCHES
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15-18	22	20
20-26	20	18
28-30	18	16

Table 2

BUILDING CODE NOTES

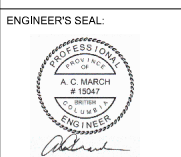
- BUILDING OCCUPANCY CLASSIFICATION WILL REMAIN UNCHANGED AS GROUP F DIV 2.
- NO NEW WALLS ARE BEING ADDED AND THE FIRE RESISTANCE RATING OF ROOF AND WALLS SHALL REMAIN THE SAME.
- NO PARKING SPOTS ARE BEING REMOVED BY THE DUST COLLECTOR



Permit To Practice: 1004400

#	YYYY-MM-DD	DESCRIPTION
1	2022-03-08	Preliminary Drawing
2	2022-03-08	Tenant Improvement Drawings
3	2023-01-18	Tenant Improvement Drawings

ISSUED FOR:
TENANT IMPROVEMENT APPLICATION



CLIENT:
 DM CABINET DOORS

PROJECT:
 C3254 DM Cabinet Doors Dust Collection System Design

ADDRESS:
 12335 83A Ave,
 Surrey, BC, V3W 9Y7

DRAWING DESCRIPTION:
 Notes and Site Plan

DRAWN BY:	EY
DESIGNED BY:	ACM
CHECKED BY:	ACM
TOLERANCE:	NA
DRAWING SCALE:	NTS
PAGE SIZE:	D

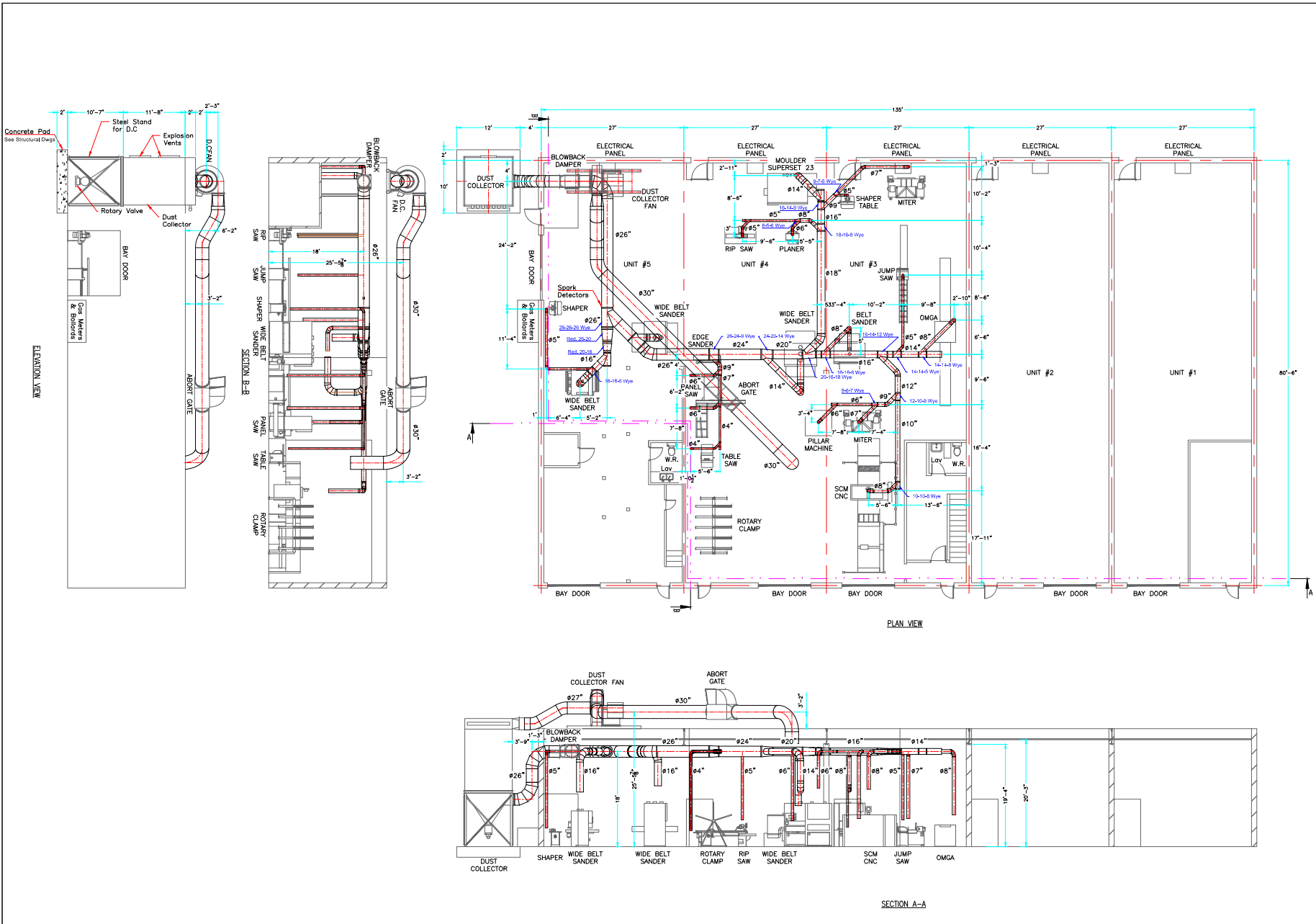
MARCH & ASSOCIATES ENGINEERING LTD.
 INCORPORATED IN BRITISH COLUMBIA
 100-10000 123rd Street, Surrey, BC V3W 1G7
 Tel: 604-581-1234 Fax: 604-581-1234
 E: info@marchandassociates.com

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DRAWING NUMBER:
C3254-M1

PROJECT #: C3254

SITE DATA
CIVIC ADDRESS
 12335 83A Ave, Surrey, BC, V3W 9Y7
LEGAL DESCRIPTION
 LOT 158 SECTION 30 TOWNSHIP 2 PLAN NWP 63064 NWD
ZONING
 IL: LIGHT IMPACT INDUSTRIAL



Permit To Practice: 1004400

#	YYYY-MM-DD	DESCRIPTION
1	2022-03-08	Preliminary Drawing
2	2022-03-08	Plan and Elevation Views
3	2023-01-18	Plan and Elevation Views

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MARCH & ASSOCIATES ENGINEERING LTD.
 1000 The Entrepreneur's Centre,
 Unit 303 - 2964 Eastley Ave. E. info@marchandassociates.com
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DRAWING NUMBER:

C3271-M2

PROJECT #: C3271

CITY OF SURREY

(the "City")

DEVELOPMENT VARIANCE PERMIT

NO.: 7923-0277-00

Issued To:

(the "Owner")

Address of Owner:

1. This development variance permit is issued subject to compliance by the Owner with all statutes, by-laws, orders, regulations or agreements, except as specifically varied by this development variance permit.
2. This development variance permit applies to that real property including land with or without improvements located within the City of Surrey, with the legal description and civic address as follows:

Parcel Identifier: 001-671-472
Lot 158 Section 30 Township 2 New Westminster District Plan 63064
12335 83A Avenue

(the "Land")
3. Surrey Zoning By-law, 1993, No. 12000, as amended is varied as follows:
 - (a) In section G.3. of Part 48 "Light Industrial Zone" to increase the maximum height of a structure from 6 metres to 7.4 metres for an external dust collector.
4. This development variance permit applies to only the portion of the Land shown on Schedule A which is attached hereto and forms part of this development variance permit. This development variance permit does not apply to additions to, or replacement of, any of the existing buildings shown on attached Schedule A, which is attached hereto and forms part of this development variance permit.
5. The Land shall be developed strictly in accordance with the terms and conditions and provisions of this development variance permit.
6. This development variance permit shall lapse if the Owner does not substantially start any construction with respect to which this development variance permit is issued, within two (2) years after the date this development variance permit is issued.

7. The terms of this development variance permit or any amendment to it, are binding on all persons who acquire an interest in the Land.

8. This development variance permit is not a building permit.

AUTHORIZING RESOLUTION PASSED BY THE COUNCIL/DELEGATED OFFICIAL, THE
DAY OF , 20 .

ISSUED THIS DAY OF , 20 .

Mayor – Brenda Locke

City Clerk – Jennifer Ficocelli

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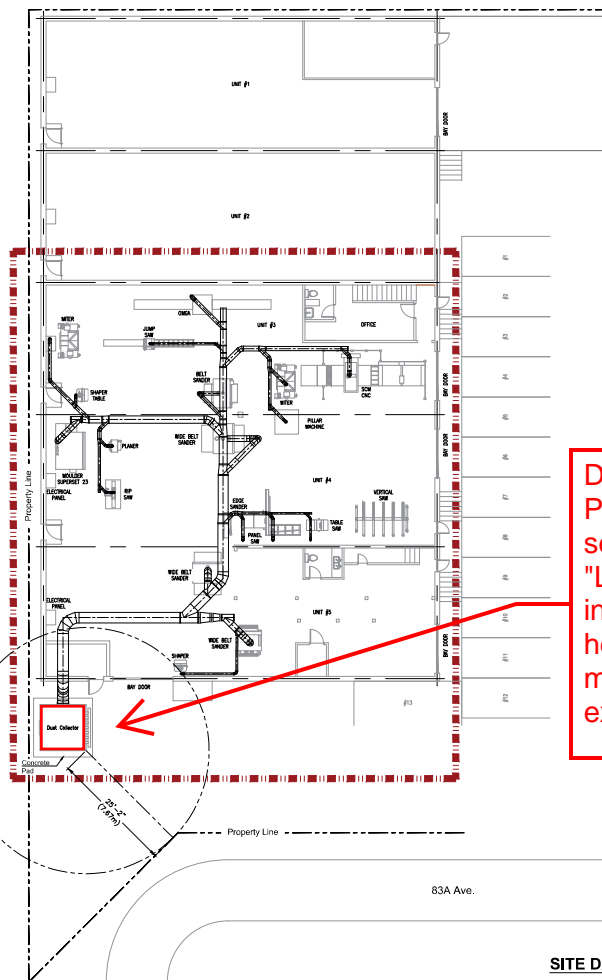
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Table 2

BUILDING CODE NOTES

- BUILDING OCCUPANCY CLASSIFICATION WILL REMAIN UNCHANGED AS GROUP F DIV 2.
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ENGINEER'S SEAL:

 A.C. MARCH
 # 19047
 ENGINEER
 PROVINCE OF BRITISH COLUMBIA

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TOLERANCE:	NA
DRAWING SCALE:	NTS
PAGE SIZE:	D

Development Variance Permit 7923-0277-00: In section G.3. of Part 48 "Light Industrial Zone" to increase the maximum height of a structure from 6 metres to 7.4 metres for an external dust collector.

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MARCH & ASSOCIATES ENGINEERING LTD.
 INCORPORATED IN BRITISH COLUMBIA
 100-1000 Eastway Court, Surrey, BC V3W 9Y7
 Phone: 604-591-4221 Fax: 604-591-4222
 E: info@marchandassociates.com
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