

**DESIGN BUILD OUTLINE SPECIFICATION  
PROPOSED PLANT ADDITION & INTERIOR RENOVATIONS 2010  
PROMINENT FLUID CONTROLS LTD.  
GUELPH, ONTARIO, CANADA**

DIVISION 1.00 GENERAL REQUIREMENTS

1.1 INTRODUCTION & SCOPE

- .1 ProMinent Fluid Controls Ltd. (ProMinent) is a manufacturer of specialized chemical feed metering systems.
- .2 ProMinent is planning an expansion of approximately 10,618 square feet (sf) which will include;
  1. New plant addition including new loading docks and interior renovations; and
  2. Landscape and Site Grading and Servicing.  
(Note: Site plan approval has been obtained from City of Guelph, including the approval of the site grading and servicing plan).
- .3 This Design Build Outline Specification has been prepared to provide information to Design-Build General contractors (hereinafter referred to as the "D-B General Contractor") to provide a lump sum design-build quotation to complete the proposed building addition and renovations including design, building permit, co-ordination, construction services, record information reporting, and warranty.

*The design information is provided to meet the design intent of the Owner. Solutions that improve value and design are encouraged.*

Overview of Design:

- a. Architectural & Structural - Tacoma Engineers was retained by ProMinent to provide guidance design-build drawings. The architectural concept drawings have been completed in advanced detail to minimize the time and resources of the D-B General Contractor to complete the construction drawings ready for permit. The structural drawings are engineered and ready for stamping by Tacoma Engineers. D-B General Contractors are given authority to engage Tacoma Engineers to complete the design to construction drawing detail, including professional engineers stamps, or use independent professionals at their discretion.
- b. Mechanical – no concept design, scope to be designed as design-build with record information for previous addition included.
- c. Electrical - no concept design, scope to be designed as design-build with record information for previous addition included.
- d. Landscaping design (Reynolds & Associates) completed and included, have been stamped and are approved by the City of Guelph.
- e. Site Grading and Servicing design (Gamsby and Mannerow Engineers) have been stamped and are approved by the City of Guelph.

DESIGN BUILD OUTLINE SPECIFICATION

Proposed Addition - 2010

ProMinent Fluid Controls Ltd.

Guelph, Ontario, Canada

- .4 The scope of work includes the complete turnkey design and construction of the following improvements:
1. Plant addition of approximately 10,618 sq. ft including interior renovations, including complete building systems to match the construction of the existing building or as described on the drawings and/or in the outline specifications;
  2. All siteworks described on the site grading and servicing plans; and
  3. Landscaping.
- .5 The Owner and Owner's representative:  
ProMinent Fluid Controls Ltd.  
Mr. Latchman Boodram, Operations Manager  
490 Southgate Drive, Guelph, Ontario, Canada N1G 4P5  
Phone: 519-780-3014  
Toll Free: 1-888-709-9933 ext. 3014; Fax: 519-836-5226  
eMail: [latchmanb@prominent.ca](mailto:latchmanb@prominent.ca)
- .6 Owner's Evaluation Consultant and Payment Certifier:  
Mr. Robert Baxter, P. Eng.  
Baxter I.C.I. Corp., 342 Chandos Court, Kitchener, Ontario, N2A 3C2  
Phone: 519-590-0020; Fax: 519-894-9931;  
eMail: [robert@baxterici.com](mailto:robert@baxterici.com)
- .7 Questions regarding design intent during tendering should be directed to both:  
Mr. Mike Gilles (email: [mikeg@tacomaengineers.com](mailto:mikeg@tacomaengineers.com)) and  
Mr. Chris Moore (email: [chrisM@tacomaengineers.com](mailto:chrisM@tacomaengineers.com))  
Tacoma Engineers  
176 Speedvale Avenue West  
Guelph, ON, N1H 1C3  
(519) 763-2000; Fax (519) 824-2000; [www.tacomaengineers.com](http://www.tacomaengineers.com)

- .9 The project control after award will be between the D-B General Contractor and the Owner. Robert Baxter's role will be limited to providing support to Owner and approving payment certificates and reviewing project information and cost.

## 1.2 EXISTING BUILDING

- .1 The existing building was constructed in approximately 3 phases and includes approximately 17,346 sq ft. Refer to drawing SP.1 for the Ontario Building Code (OBC) matrix. .
- .2 Reference Drawings and specifications of the original building are available for review at the offices of Tacoma Engineers, and can be viewed on request. This information is being made available for reference only, and D-B General Contractors shall be aware that any inaccuracies due to this information being different from the actual "as-constructed" facility will not constitute extras to contract. Therefore D-B General Contractors shall visit the site to review "as-constructed" conditions.
- .3 The existing building structure is constructed with open web steel joists supported by interior structural steel columns and beams and exterior loadbearing masonry construction.
- .5 The building mechanical system includes packaged roof-top heating, ventilating, and cooling units for complete air conditioning to all areas.
- .6 Electrical service is described on the record electrical drawings included with the package, and the demand load from Guelph Hydro is provided in section 16.

## 1.3 GUIDANCE AND/OR DESIGN DRAWINGS

- .1 a) Architectural & Structural:  
SP.1 Architectural Site Plan – Tacoma Engineers, dated March 15, 2010  
SP.2 OBC Matrix – Tacoma Engineers, dated March 15, 2010  
A.1 Floor Plan - Tacoma Engineers, dated March 15, 2010  
A.1.1 Mezzanine Floor Plans - Tacoma Engineers, dated March 15, 2010  
A.2 Elevations - Tacoma Engineers, dated March 15, 2010  
A.3.1 Building Sections - Tacoma Engineers, dated March 15, 2010  
A.3.2 Building Section - Tacoma Engineers, dated March 15, 2010  
A.3.3 Building Section - Tacoma Engineers, dated March 15, 2010  
A.3.4 Building Section - Tacoma Engineers, dated March 15, 2010  
A.4.1 Wall Sections - Tacoma Engineers, dated March 15, 2010  
A.5.1 Door, Window, Room Finish Schedule & Millwork Elevations - Tacoma Engineers, dated March 15, 2010

b) Landscape & Site Grading and Servicing Drawings:

- L.1 Landscape Master Plan – Reynolds & Associates dated 12/16/09;
- 1 Site Grading and Servicing Plan – Gamsby and Mannerow Engineers, dated 01/21/10; and
- 2 General Notes & Details - Gamsby and Mannerow Engineers, dated 01/21/10.

c) Record Drawings:

- M1 Plumbing Layout – Robb Engineering Ltd. Dated 10/Oct/02 (for reference only);
- M2 HVAC – RCR dated Oct / 02 (for reference only);
- E101 Electrical Floor Plan & Elevations – Oct/02 (for reference only); and
- E201 Electrical Riser & Schedules – Oct / 02 (for reference only).

- .2 Existing drawings for original building are available for review by appointment with Tacoma Engineers.

#### 1.4 CONTRACTS & TERMS OF PAYMENT

- .1 Form of contract shall be the latest version of CCDC 2 with all general conditions and supplementary conditions prepared by the D-B General Contractor including the tender documents and final accepted cost and specifications attached as part of the contract. D-B General Contractors will be responsible for all aspects of construction administration, job site minutes, preparation of notice of changes and change orders for approved changes.
- .2 Payment shall be made to the D-B General Contractor on a monthly progress draw basis less 10% Holdback. D-B General Contractors shall submit a contract breakdown (on the appropriate Canadian Construction accepted forms) for review by ProMinent. D-B General Contractors shall submit a monthly progress draw, including a statutory declaration confirming accounts from previous month are up to date and an up to date certificate from Workers Compensation, for work completed during the current month by the last day of the current month. Upon acceptance of the progress amount by ProMinent, Payment (less 10% Holdback) shall be made to the D-B General Contractor within 15 days of receiving the invoice.

#### 1.5 STANDARDS, WORKMANSHIP and TRADES

- .1 All work to conform to applicable codes, by-laws, regulations and ordinances.
- .2 All work shall be in conformance with regulatory standards, common trade practice and methods.
- .3 All work to be performed by trades specialized in the work.

## 1.6 DESIGN

- .1 The building and facility shall comply with requirements of the Ontario Building Code, with the latest amendments and the requirements of all authorities having jurisdiction.
- .2 The total building and services are to be constructed to the current requirements of the applicable Municipal Building Codes and By-Laws.
- .3 The work and project is to be in keeping and in accordance with the standards set out in these outline specifications.
- .4 The D-B General Contractor shall pay for the services of the appropriate design professionals to design and prepare working drawings for the project. D-B General Contractors are invited to negotiate a completion fee schedule with Tacoma Engineers to complete the drawings and apply the requisite professional stamps and complete OBC reviews. The Owner will engage directly the site civil engineer for construction reviews and the landscape architect.
- .5 Except as otherwise herein specified, provide all materials, equipment, products and services normal to a facility herein described.

## 1.7 PERMITS

- .1 The D-B General Contractor shall apply and pay for The City of Guelph Building permit, Ministry of Labour approval, occupancy permit, City service connections and boulevard works and obtain and pay for all other approvals required by the local codes and by-laws for the construction of the project and services.

## 1.8 INSURANCE

- .1 The D-B General Contractor and all subcontractors shall provide and maintain public liability and property damage insurance to fully protect the Owner, The D-B General Contractor and subcontractors against damages. The coverage's shall include as a minimum; 1. Commercial General Liability - \$2,000,000. 2. Fleet Automobile Insurance - \$1,000,000. 3. Umbrella Liability insurance - \$4,000,000.

## 1.9 WORKERS' COMPENSATION

- .1 The D-B General Contractor and all subcontractor must be in good standing regarding all payments due to the Workers' Compensation Board.

## 1.10 TEMPORARY FACILITIES

- .1 The D-B General Contractor shall be responsible for providing temporary sanitary facilities, job office facilities and telephone, storage sheds, temporary lighting and temporary heating, as may be required.

## 1.11 USE OF PERMANENT SERVICES

- .1 The permanent water, electrical and mechanical services may be used by the D-B General Contractor for construction purposes.

- .2 The D-B General Contractor shall leave all permanent equipment in good order on completion of the project.
- .3 The Owner shall pay for all fuel, electricity and water used during construction based on Owner approving in advance operations of the D-B General Contractor regarding energy useage. For example, construction lights shall be turned off after each work day and openings in building envelopes shall be done efficiently to minimize disruption to Owner and useage of energy.

#### 1.12 MATERIALS AND EQUIPMENT

- .1 All materials used in the project are to be of top quality, new, and match the existing materials or be an equivalent alternative.
- .2 The D-B General Contractor shall provide all labour, materials, equipment and incidentals required to construct the project in accordance with the intent of the concept design drawings, review of original design drawings and the outline specifications.

#### 1.13 SAFETY REGULATIONS

- .1 All safety regulations required by law are to be observed on the site.
- .2 The D-B General Contractor shall be responsible for the protection of the building, facility, the site, adjacent properties and the public.

#### 1.14 RECORD (AS-BUILT) DRAWINGS

- .1 Provide the Owner with one complete set of "Record" (As-built) drawings and maintenance manuals upon completion of the project which shall be generated from updated Autocad drawings files generated by the D-B General Contractor, and a complete electronic file set of updated Autocad drawings. Owner shall hold back \$20,000 from final invoice until Record information submitted.

### 1.15 CLEANING

- .1 The D-B General Contractor shall remove from the site all debris arising from the construction.
- .2 On completion, clean all floors, glass, mirrors, aluminum, all fixtures and leave building broom clean.
- .3 The D-B General Contractor shall demonstrate and describe its waste management system proposed for the site.

### 1.16 TESTING ALLOWANCE

- .1 The D-B General Contractor shall carry an appropriate amount for testing such as bore holes, soils test, concrete compression tests and compaction tests shall be carried out by an independent testing company. Identify testing amount included in tender.

### 1.17 GUARANTIES

- .1 Except where indicated below, the D-B General Contractor and all subcontractors shall guarantee their work against all defects in materials and workmanship for a minimum period of one year following substantial performance of the work. Extended guaranties shall be as follows:
  1. Roof - 2 years
  2. Sealed glazing units - 5 years

### 1.18 TENDERS

- .1 Design Build Tenders are due Thursday, April 1<sup>st</sup> at 4:30 PM in hard copy. Fax submissions will not be accepted. Tenders shall be delivered to Tacoma Engineers, 176 Speedvale Ave West, Guelph, ON, N1H 1C3 as an independent third party for protection of privacy of tenders. Tenders shall be to the attention of:

Mr. Latchman Boodram,  
Operations Manager  
ProMinent Fluid Controls Ltd.  
490 Southgate Drive, Guelph  
Ontario, Canada N1G 4P5

RE: 2010 Addition to ProMinent Fluid Controls Ltd.

Note regarding tender presentation – short, concise, thorough tender submissions are encouraged.

**1.19 QUOTATION BREAKDOWN** (Complete and Submit with quotation)

.1 Submit quotation in the breakdown for the scopes of work as follows:

<b>Description</b>	<b>Amount</b>
1. Landscaping	\$ _____
2. Sitework	
a. Building related excavation & backfill, floor granulars, etc.	\$ _____
b. Stone Storage gallery detail A-A	\$ _____
c. Storm and sanitary services incl cost of City work	\$ _____
d. Retaining Wall	\$ _____
e. Remainder of site work including grading, surface works, etc.	\$ _____
3. Building Systems	
a. New addition (divisions 3 through 14)	\$ _____
b. Building related excavation & backfill, floor granulars, etc.	\$ _____
c. Building related excavation & backfill, floor granulars, etc.	\$ _____
d. Skylights in Plant (supply, roofing, structural, install)	\$ _____
e. Trench drains in Plant (concrete and galvanized grating)	\$ _____
f. Plumbing	\$ _____
g. HVAC	\$ _____
h. Electrical	
i) Light supply (Plant)	\$ _____
ii) Light supply (office and renovation)	\$ _____
ii) Remainder of supply and install of electrical	\$ _____
<b>TOTAL AMOUNT</b>	<b>\$ _____</b>

**1.20 UNIT PRICES FOR EXTRA WORK** (Complete and Submit with quotation)

.1 Submit unit prices for extra work items as shown as follows:

1. Over excavation due to poor soils (replace structural fill)	\$ _____ /cu m.
2. Asphalt (cost to expand asphalt area with light duty)	\$ _____ /sq. m
3. Upgrade Heavy Duty Asphalt to include 2" of Base course asphalt and 1" of finish course asphalt. Lump Sum	\$ _____
4. Unit price to replace existing office light fixture with Non-glare fluorescent lights. (Unit cost each)	\$ _____
5. Alternate energy efficient HVAC system.	\$ _____

1.21 SCHEDULE TO COMPLETE WORK (Complete and Submit with quotation)

.1 Submit the completion dates of the following areas:

- 1. Addition \_\_\_\_\_
- 2. Renovations complete \_\_\_\_\_
- 3. Loading Dock and associated Building \_\_\_\_\_
- 4. Remaining Sitework, exterior work, etc. \_\_\_\_\_

1.22 LOWEST OR ANY PROPOSAL NOT NECESSARILY ACCEPTED

.1 D-B General Contractors and all Contractors or participants in this Request for Proposal are advised the lowest or any proposal will not necessarily be accepted and the Owner accepts no liability costs incurred in the preparation of designs, tenders, or proposals of any nature.

*General Notes: Outline Specification – the below description is not intended to be detailed. D-B General Contractors shall complete the work described on the drawings as necessary to construct the intended building systems and shall describe the materials and systems proposed.*

## DIVISION 2.00 SITE DEVELOPMENT

- 2.01 Demolish all structures as shown on drawings and dispose off-site. Describe the waste management strategy to be employed.
- 2.02 Provide all excavation and backfill necessary to complete foundation system as necessary.
- 2.03 Complete all work described on site grading and servicing plan and include THE City charges / cost and coordinate City work.
- 2.04 Provide any upgrades to fire protection systems such as fire hydrants (if necessary) to satisfy the Ontario Building Code and the local Fire Department.
- 2.05 Complete landscaping work as described on drawings.

## DIVISION 3.00 CONCRETE FOUNDATIONS AND FLOOR

- 3.01 Complete the foundations in accordance with design drawings.
- 3.02 Describe the concrete specifications included in tender. Describe preferred specification for control of shrinkage (i.e., wire mesh or fibre mesh). All sawcuts in warehouse and loading areas shall be filled with joint filler. Describe proposed curing compounds for floor in Plant and include a slip proof floor sealant. Floor design shall withstand following design loading:
  - a. Plant – 1,000 Kg/sq. m. minimum (describe concrete floor design);
  - b. Office – 300 Kg/sq. m. minimum (describe concrete floor design).

## DIVISIONS 4.00 MASONRY

- 4.01 Provide masonry or reinforced concrete foundations as necessary.
- 4.02 Complete the concrete block scope of work as shown on the drawings including cutting, patching, and finishing necessary to install openings in existing concrete block walls, new loading bearing walls, etc.

## DIVISION 5.00 STRUCTURAL & MISCELLANEOUS STEEL, & METAL SIDING

- 5.01 Provide complete structural steel system as necessary to complete the expansion as shown of which the design shall be completed by a professional engineer registered in the province of Ontario. The design of the east wall of the

new plant shall be designed for future expansion equal to the width identified on the dashed line on site plan. The structural steel for the office including open web steel joists, columns, and beams, metal decking, etc., shall be designed for future second floor.

- 5.02 Provide 5,000 Series, prepainted 26 ga. exterior metal siding to match profile CL-938 by Vic-West or owner approved equal matching the existing metal siding system. Insulation in metal sandwich panel shall be as described on drawings. Interior liner on north expansion wall shall be 26 ga prepainted metal. Provide all flashings as necessary to match siding.

#### DIVISIONS 6.00 & 7.00 WOOD, CARPENTRY THERMAL & ROOFING

- 6.01 Provide all treated rough blocking as necessary to complete the roof system and other building systems.
- 7.01 The roof construction shall be as described on drawings. Alternate solutions that provide benefits to the Owner are encouraged.
- 7.02 Provide thermal resistance of exterior wall and roofing/ceiling to match the existing building. Walls shall be minimum R-12 and roof shall be minimum R-20.

#### DIVISION 8.00 DOORS & HARDWARE, AND WINDOWS

- 8.01 Doors & Hardware:  
Doors & Frames  
Provide hollow metal doors and frames and wood doors as per door schedules.

##### Hardware

All hardware to be minimum commercial grade #2 hardware and in accordance with the Ontario Building Code. All doors to have floor stops. Provide door closers to all exits as per Ontario Building Code. Refer to door schedules. Confirm allowance included for Hardware supply.

- 8.02 Windows & Glazing:

Provide clear anodized aluminum window frames thermally broken by Kawneer or equivalent to match existing. Sealed glazing units shall be 1/4" double glazed insul glas to match existing.

Provide 5 year manufacturers warranty for coverage of sealed glass units from seal failure, interpane dusting or misting.

- 8.03 Provide overhead doors to the sizes and locations shown on the drawings by Richards Wilcox or equivalent. All doors to be have electric operators. Describe systems proposed.

## DIVISION 9.00 FINISHES

### 9.01 Offices

Provide interior finishes as described on drawings and schedules.

### 9.02 Plant and Loading Areas

Paint complete roof system including structural steel, metal deck, HVAC systems, and electrical systems with dryfall paint to match existing.

Provide paint finish to all concrete block, including cutting, patching, and finishing work.

### 9.02 Painting Specification (minimum):

Gypsum Board Walls-one coat latex primer and two coats satin latex.

Concrete Block Walls- one coat block filler, two coats semi-gloss latex enamel.

Hollow Metal Doors & Frames- one coat latex primer, two coats semi gloss latex enamel.

Wood Doors - stain to match existing.

Plant & Loading Area Ceiling- necessary primer and one coat of dryfall paint.

Exterior Metal -one coat latex primer, two coats semi gloss latex enamel.

## DIVISION 11.00 LOADING DOCK EQUIPMENT

11.01 Provide two 27,000 lb capacity mechanical dock leveller (poured in place), dock seals for 8 ft x 8 ft overhead door, and bumpers. Specify manufacturer proposed.

## DIVISION 15.00 PLUMBING, HEATING, VENTILATING, AND AIR CONDITIONING

15.01 Provide complete mechanical heating, ventilating, and air conditioning system to match existing system design, including upgrades as necessary to meet the Ontario Building Code, and provide design drawings as necessary.

15.02 Provide roof drainage to extend and match existing system.

15.03 Provide options to upgrade HVAC systems for energy efficiency.

15.04 Owner is interested in quality and efficient plumbing fixtures. All faucets and urinals to have automatic operation.

## DIVISION 16.00 ELECTRICAL

16.01 General - provide complete electrical system to match the design of the existing building including light fixtures (office, Plant, Training Rooms, etc.), receptacle layout, exit lights, and all other systems as per the Ontario Building Code and electrical codes. Provide all necessary design drawings. D-B General Contractor to specify a non-glare fluorescent fixture for office and training rooms.

Alternate Price – provide a unit replacement cost for all existing office light fixtures to match the non-glare fixture proposed for the addition. Owner will decide the extent of replacement during the evaluation period.

### 16.02 ELECTRICAL SERVICE:

Provide electrical service changes for the addition as necessary, and provide all plant feeds to the list of equipment to be provided by the Owner on Thursday March 18, 2010. The demand load has been obtained from Guelph Hydro and is provided below:

Location ID	Service	Address	Apt.	Pk Dmnd	List Rtdg
1	340020	E 490 SOUTHGATE DR		74.4	62.4

  

- Summary	
Num Of Customers Residential :	0
General Service :	1
12 Month Peak Demand :	74.4
Bank kVA :	150.0
% Util. :	50.0

Customer Info					
Information   Load Detail   Meter Info					
Reading Date	Number of Days	Consumption [kWh]	kW Demand	kVA Demand	Power Factor
20091016	29	13200	62.4		
20090917	30	16560	67.2		
20090818	27	16800	72.0		
20090722	34	18480	74.4		
20090618	28	13920	57.6		
20090521	31	16560	55.2		
20090420	33	18000	43.2		
20090318	27	16320	45.6		
20090219	29	18720	45.6		
20090121	36	22800	48.0		
20081216	29	16080	43.2		
20081117	32	15120	43.2		
20081016	30	14640	62.4		
20080916	26	13920	67.2		
20080821	35	21120	72.0		
20080717	29	18240	72.0		
20080618	33	19920	74.4		
20080516	28	15360	50.4		
20080418	30	16800	50.4		
20080319	27	15360	40.8		
20080221	34	19200	43.2		
20080118	31	15600	40.8		
20071218	32	17040	38.4		
20071116	28	14400	52.8		

16.03 Upgrade existing fire alarm system to code requirements and emergency lighting system to match existing as required.

16.04 Provide connections to all mechanical equipment.

16.05 OUTSIDE LIGHTING:

Provide extend exterior lighting system to match the light levels, fixture types, and layout of the existing building. Determine if additional site lighting is required by City and design, supply, and install site lighting to meet City light standards and criteria.