



THE **trend**

THE OFFICIAL QUARTERLY NEWSLETTER OF RELIABLE CONTROLS<sup>®</sup> CORPORATION



## DOCKSIDE GREEN



Houle Electric, a Reliable Controls<sup>®</sup> Authorized Dealer in greater Victoria, British Columbia has been contracted to install controls in the prestigious Dockside Green project. Reliable Controls<sup>®</sup> is honoured to contribute to Dockside Green's quest to become the first LEED Platinum *community...* in the world.



# DOCKSIDE GREEN

A DIFFERENT KIND OF HARBOURFRONT COMMUNITY



## The Future of Green Living

While there have been eco-residential and eco-industrial developments in the past, none have incorporated such a broad expanse of sustainable designs as Dockside Green.

A model for holistic, closed-loop design, Dockside Green's 15-acre, 26-building multi-use site will function as a total environmental system in which form, structure, materials, mechanical, and electrical systems will be interrelated and interdependent. It will be a self-sufficient, sustainable, net-zero energy use community where waste from one area will provide fuel for another.

Committed to achieving the highest level of certification under the LEED™ green building program, Dockside Green will be the first planned community to accomplish a goal that has so far eluded an entire development, and has only been achieved by four buildings in the world.

What's more, Dockside Green is spearheading a pilot project, LEED™-ND, a Neighbourhood Rating System currently under development. LEED™-ND will provide a rating system for sustainable neighbourhood development, effectively setting the benchmark for future LEED™-ND certification.

## Energy Efficiency

- 60% more energy efficient than the Model National Energy Code
- 100% fresh air system with heat recovery ventilator
- energy efficient fan coil system
- low-e double-glazed, thermally isolated, aluminum windows
- superior building envelop to minimize heat loss and gain
- external shading on south and west windows
- Energy Star® appliances and high efficiency lighting fixtures
- high efficiency, zoned, occupancy-controlled lighting in common areas
- enhanced "day-lighting" strategies to provide daylight in suites

## MACH-Stat: A New Application

Each residential unit at Dockside Green will have a MACH-Stat™ installed. Traditionally, MACH-Stat™ controllers have been commonplace in commercial real estate, but the Dockside Green application will transform the MACH-Stat™ into an environmental control system. Residents of Dockside Green will be able to control their suite's environment, from anywhere in the world, with access through RC-WebView™.

The MACH-Stat's intuitive display offers Dockside Green residents the opportunity to program occupancy and monitor room and outdoor temperatures, electrical consumption, hot and total water consumption, heating consumption, and the residential unit's carbon footprint. Communicating energy, water, and carbon consumption to each occupant is an important aspect of a sustainable community.

With the MACH-Stat™ environmental control system, Dockside Green is one step closer to the principles of **New Urbanism** – considered by many to be the most important urban planning movement of our century, not to mention our best chance of achieving a bright and sustainable future.



NEW URBANISM promotes the creation and restoration of diverse, walkable, compact, vibrant, mixed-use communities composed of the same components as conventional development, but assembled in a more integrated fashion, in the form of complete communities.

[www.docksidegreen.com](http://www.docksidegreen.com)



**ANOTHER GREAT YEAR**

The end of 2006 marked another excellent year of growth for Reliable Controls®. Overall revenues for the year closed at approximately 14% ahead of 2005, with outstanding growth in overseas and domestic markets. In its inaugural year, the MACH-Stat™ made unit sales history by surpassing the three-year unit sales total of its predecessor, and posting the highest annual unit sales volume ever for a new product. Unit sales of microprocessor-based products closed at just over 20,000 pieces, 10% ahead of 2005. At 60 people strong, we are ready to forge ahead with an ambitious schedule of new product releases for 2007. Your continued patronage and excellent product suggestions are the keystone of our success.



Thank You.

**NEW RELIABLE CONTROLS® WEBSITE**



Our new website will be launched on January 29<sup>th</sup>, 2007. The completely re-designed web presence is rich with enhanced functionality such as an improved search tool, streamlined navigational system, quote request service, new project profiles, and an intuitive sales locator.

**FREE UPDATE FOR RC-STUDIO® 2.0**

The official fall-release of RC-Studio® 2.0 is now posted on our website and is available as a free update to registered users. The new release (update 1.20) contains a wide range of enhanced BACnet® services including, support for the upcoming MACH-ProCom™ building controller, trig functions for Control-BASIC, and a completely updated context-sensitive help resource.

Log in to the secured area of our website and download your free update today.



**AHR EXPO 2007 – HOSPITALITY**



For those attending the AHR Expo in Dallas, Texas, please reserve Tuesday evening January 30<sup>th</sup>, 2007, to join us for our hospitality event. This year we will be holding the event in the breath-taking Reunion Tower at the Hyatt Regency.

**LONDON CALLING – DEALER WANTED**

If you know of a reputable controls contractor in London, England who would be interested in becoming a Reliable Controls® Authorized Dealer, please forward the contact information to Tom Zaban (tzaban@reliablecontrols.com).



# The new MACH-Pro™ Series

**Reliable Controls®** takes the building controller to new heights.

The first in a new series of sleek, powerful and durable 32-bit devices, the Reliable Controls MACH-ProCom™ provides unprecedented value in a high performance, scalable building controller.

*The MACH-Pro™ Series empowers you to achieve your goals.*

## Quality

Designed entirely in-house, by a team of highly skilled and dedicated engineers the MACH-Pro™ Series is the culmination of 20 years of innovation excellence.

## Freedom

Enjoy the freedom of choice. Choose from a pool of open protocols, and build a network architecture that best fits your way of thinking. The MACH-Pro™ Series gives you the freedom to change protocol whenever you want, wherever you want.

## Confidence

Expand your building controls with confidence. The MACH-Pro™ Series is backed by an industry-best, no-nonsense, 5-year warranty. Sold and serviced through a strong network of independent Reliable Controls Authorized Dealers, we are dedicated to helping you succeed.

**ColdFire**  
[32-bit]

Powered by Freescale's, 32-bit, RISC ColdFire microcontroller.

**PC/Modem**  
Simple and dependable serial communications.

**SMART-Net**  
Network SMART-Sensors™ together and pickup temperature, setpoint and occupancy values from individual spaces.

**MS/TP-Net**  
The workhorse of the controls industry - BACnet Master Slave/Token Passing.

**AUX-Net**  
Unprecedented flexibility. Choose any one of three powerful network configurations: a second MS/TP-Net; Modbus RTU-Net; or I/O-Net for connecting up to eight versatile MACH-ProPoint™ I/O expansion cards.

**Ethernet 10/100**  
High speed connectivity for BACnet, RCP, SMP and SNMP.

24VAC/VDC Power

[MACH ProCom™]  
A powerful, 32-bit BACnet® Building Controller for the Reliable Controls® MACH-System™.

Better by design

# performance

We deliver scalable, interoperable building automation, intuitively and economically.



Health Care

Finance

Government



Concerned about the environmental, health and safety performance aspects of your facility?

We can help.

We design the tools that empower building owners and facility executives to stand at the helm of sustainability.

[www.reliablecontrols.com](http://www.reliablecontrols.com)



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controls



**A CAPITAL IDEA:**

After an ambitious 30-month construction program that began in February 2004, the new US Department of Transportation (DOT) headquarters opened its doors on schedule in September, 2006. The first cabinet-level headquarters to be designed and constructed in the US capital in over three decades, the DOT complex consists of a shared underground parkade and two similar towers of eight and nine storeys that accommodates over 5,000 federal employees. Located in Washington's Southeast Federal Center, the DOT complex sits on two city blocks near the banks of the Anacostia River, within the 55-acre Washington Navy Yard -- America's first naval shore station which began operations in 1799.

The DOT's new administrative hub is instrumental in transforming the Southeast Federal Center and adjacent Washington Navy Yard into a lively waterfront of offices, restaurants, shops, and marinas. Only two miles from the U.S. Capitol Building, the DOT anchors a larger neighborhood revitalization project which will eventually include over 6,000 residential housing units and a new baseball stadium for the Washington Nationals. Revitalization efforts began with the demolition of eleven buildings and the renovation of eight buildings of historic significance.

In designing the DOT complex, world-renowned architect Michael Graves found guidance in Pierre L'Enfant's original street plan for the city of Washington. The design team split the headquarters' 1.35 million ft<sup>2</sup> of office and public space into two separate nine and eight-storey towers on opposite sides of Third Street, which has been converted into a pedestrian promenade. The western tower is one storey taller to emphasize its public entrance along New Jersey Avenue (a boulevard within view of the U.S. Capitol Building). By reopening New Jersey Avenue, Third Street, and Fourth Street south of M Street, L'Enfant's original design of Washington was restored.

Estimated to cost in the neighbourhood of \$600 million, the DOT complex features a 50-foot courtyard and plaza with retail kiosks. Matching 70-foot-wide central linear atria provide a visual connection between the two towers, while heavy landscaping softens the mandated 50-foot security setbacks. The M Street side also features an outdoor *walking museum* spotlighting the nation's transportation history. Chief among the finishing touches is a 68,000-ft<sup>2</sup> green roof, one of the largest on the East Coast, and renovation of a nearby historic brick building that once housed a large electrical transformer into an 11,000-ft<sup>2</sup> restaurant and retail center.

**THE UNITED STATES DEPARTMENT OF TRANSPORTATION HEADQUARTERS**



Unusual encounters and obstacles underscored the evolution of the two towers from the government's acquisition strategy to numerous underground infrastructure issues. The excavation program alone required an archaeological search for artifacts from the Old Washington Canal, which connected the Anacostia and Potomac rivers in the 18<sup>th</sup> century. And more than 100,000 cubic yards of contaminated soil had to be removed from the site, which in its former life was a factory for fabricating battleship gun barrels. In constructing the two towers, more than 150,000 cubic yards of concrete and 14 tons of rebar were used.

To control the two million square feet of the US DOT headquarters, two large central plants serve 94 air handling units, 90 fan coil units, and over 2,000 variable air volume terminal units.

In the event of an opposite-building failure, each central plant is sized to serve mission-critical equipment in both wings. The native BACnet® system was selected after an exhaustive procurement process based heavily on the capabilities of the Reliable Controls® MACH System and Pritchett Controls, the local Reliable Controls® Authorized Dealer. In addition to providing local control for the equipment listed above, the Reliable Controls® MACH System integrates packaged pump skids, variable frequency drives, chillers, lighting controls and a power monitoring and control system via BACnet®.

The US DOT headquarters was the largest BACnet® project awarded in 2004.



**PRITCHETT**  
C O N T R O L S

**New Dealers**

**PACIFIC RIM REPORT**

**Australia**



**brisbane**



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Since 2002, Austec Building Automation has been a committed Reliable Controls® Authorized Dealer, serving the East coast of Australia. Partners Andy Henderson (right) and Trace Argo have instilled a corporate philosophy that focuses on delivering complete customer satisfaction, and treating people respectfully and honestly. As a result, Austec has commanded a significant market share in its trading area, and is regarded by the local workforce as a “preferred employer.”



With their head office strategically located, Austec is central to some of the finest beach resorts in the world. As you might expect, the business culture is sometimes influenced by the leisurely environment. The phrase “no worries” is a popular and very useful refrain. Once spoken it is invariably followed by an ingenious stroke of wit that completely diffuses even the most serious crisis. Speaking everyday placenames can alleviate tension too. Names like “Toowoomba”, “Boggabilla”, “Wagga Wagga,” and “Wooloomooloo”, are hard to say without a chuckle follow-up. Humour and wit are not the only tools Austechnicians have to disengage from the stress caused by long days of commissioning in the mechanical room. Balance can be achieved easily by enjoying the marvelous miles of white sand beach, the basketfuls of Morten Bay morsels, and the pails of iced, brown pints used to toast to the gold-lit coast.

In downtown Brisbane, instead of Park-N-Ride, commuters prefer Shade-N-Sail. After unfolding their solar windshield reflectors, and donning their dark sunglasses, mass-transit patrons cast-off on one of the many public City Cat water taxis, and make headway for the head office. It's a great way to get around the city, gliding along the refreshing river route from wharf street to wharf street. Downtown Brisbane is a wonderful place indeed.



# Project profile

## Pier 1 Imports Corporate Headquarters



The 90-million dollar, 20-storey corporate headquarters of Pier 1 Imports encompasses 460,000 square feet of office building space and an adjoining 260,000 square-foot parking deck. Completed in just 18 months, the Pier 1 Imports headquarters was Fort Worth's first high-rise built in the downtown core in nearly a quarter of a century.

The facility includes conference and training facilities, an employee fitness center, indoor and outdoor photo studios, a merchandise-sample room and executive suites. The office floors are designed on access flooring that is easily unscrewed from the subfloor. Panels are steel in honeycombed patterns filled with concrete for bearing weight. Beneath the removable panels are electricity and telecommunication connections as well as linkage to heating and cooling ventilation. As a floor's arrangement changes due to new work demands, electricity and technology outlets can be dropped beneath the panels for quick set-up and reconnection.

The Pier 1 Imports corporate headquarters features 241 MACH-Air™ variable air volume controllers, 27 MACH2™ controllers for Air Handler Units, 22 ETHER-Link™ portals (one per floor and central control), and 1 MACH-Global™ building controller for integration to chillers and central plant control.



ETHER-Link™ Portal



MACH-Air™ VAV Controller

### CORPORATE

**Project Name:**

Pier 1 Imports Corporate Headquarters

**Location:**

Fort Worth, Texas, USA

**Market Segment:**

Corporate

**Project Type:**

HVAC

**Installation:**

New Construction

**Total Area:**

67,000 m<sup>2</sup> (720,000 ft<sup>2</sup>)

**Equipment Installed:**

1 MACH-Global

22 ETHER-Link

27 MACH2™

241 MACH-Air™™

**Network:**

Ethernet

**Total System Points:**

2,500 points

**Reliable Controls® Dealer:**



...people and technology  
you can rely on™