

LEED v4 for BD+C: New Construction and Major Renovation

Project Status Report by Green Reason Inc.

Project Name: TRCA Head Office

January 23, 2019



Target Points Possible	Target Points Possible	Target Points Possible	STATUS	ACTION	ACTION BY	
1	0	0	Integrative Process 1			
1	0	0	Credit Integrative Process 1	Energy analysis being documented by Transsolar. Water analyses for site water/cistern being completed by S&C. Plumbing portion by Integral.	Green Reason to complete the Integrative Process Worksheet and to follow up with the consultants for further information as needed.	Green Reason
9	0	7	Location and Transportation 16			
1	0	0	Credit Sensitive Land Protection 1	New building is on previously developed portion of site.	No action at this time.	n/a
2	0	3	Credit Surrounding Density and Diverse Uses 5	Building situated close to Shoreham to provide direct pedestrian access towards plaza at Jane and Shoreham. Confirmed at least 8 uses are within 800 m walking distance from the main entrance.	No action at this time.	n/a
3	0	2	Credit Access to Quality Transit 5	3 points based on current bus schedules (August 2018). Next threshold is likely out of reach.	Green Reason to review bus schedule at a later date.	Green Reason
1	0	0	Credit Bicycle Facilities 1	Bike network within 180m. Current design meets requirements in terms of number of bicycle parking spaces and showers, based on finalized building occupants count (473). 24 covered long-term bike parking and 4 showers will be provided. Short-term bike parking is driven by TGS requirements (24 short-term bicycle parking provided)	No action at this time.	n/a
1	0	0	Credit Reduced Parking Footprint 1	40% reduction from Parking Consultants Council baseline met with 113 dedicated parking, min. bylaw is not exceeded; LEED calculation based on 44 parking spaces provided onsite: required 3 carpool spaces (5%) which are indicated on DD drawings.	Ensure site plan shows 3 carpool spaces (that do not overlap with green vehicles)	ZAS
1	0	0	Credit Green Vehicles 1	Based on 44 onsite parking spots, required (5%) 3 green vehicle spots (in preferred location) plus 1 charging stations (2%) (more required by code.) that needs to be separated from green vehicles or carpool parking spaces.	No action at this time.	ZAS
8	2	0	Sustainable Sites 10			
Required	Prereq	Required	Construction Activity Pollution Prevention	Requires ESC plan conforming to EPA General Construction Permit 2012 or local code if more stringent.	No action at this time.	n/a
1	0	0	Credit Site Assessment 1	Documentation on soils, topography, hydrology provided by S&C. Green Reason completing review to confirm compliance.	Green Reason to complete review and follow up with the team as necessary.	Green Reason
2	0	0	Credit Site Development - Protect or Restore Habitat 2	S&C considers it achievable to preserve 40% of greenfield and ensure 30% of rest of site is planted with native/adapted species with restored soil.	S&C to confirm if targets are achievable based on current design.	S&C
1	0	0	Credit Open Space 1	Initial design indicated more than 30% of site as pedestrian-oriented open space, with more than 25% vegetated (non-turf grass).	S&C to confirm if targets are achievable based on current design.	S&C
2	1	0	Credit Rainwater Management 3	As part of value engineering, the green roof size was reduced to 30% (minimum required bylaw) but the project was no longer able to manage the stormwater runoff for the 98th percentile of rain (29.5mm). The green roof has then been increased to 60%. However, TMIG estimates that even with the current design, it is unlikely to achieve the third LEED point. The team is currently reviewing other options (increasing the size of the cistern)	TMIG to update analysis and LEED Rainwater Event Calculator and confirm current volume of managed stormwater runoff.	TMIG
2	0	0	Credit Heat Island Reduction 2	Green roof will cover 2/3 of the roof, the remaining roof will be covered with SRI membrane. High SRI unit pavers will be provided for parking, with some shade trees. Parking will not be covered.	S&C to confirm if current landscape design is meeting credit requirements for site areas.	S&C
1	0	0	Credit Light Pollution Reduction 1	MBII indicated the credit is achievable and design will comply.	MBII to provide updates and confirm if design is meeting credit requirements.	MBII

7	2	2	Water Efficiency		11			
Required	Prereq		Outdoor Water Use Reduction	Required	Irrigation will only be provided for green roof, with no site irrigation. This should result in more than 30% water reduction in LEED calculation.	- S&C to provide updates on outdoor water use reduction - Integral to provide calculations and volumes for rainwater cistern and above ground rainwater tank for food garden irrigation	- S&C - Integral	
Required	Prereq		Indoor Water Use Reduction	Required	Mechanical design brief and discussions to date confirms very low flow plumbing fixtures will be specified.	No action at this time.	n/a	
Required	Prereq		Building-Level Water Metering	Required	Water metering will be provided for whole-building water usage.	No action at this time.	n/a	
1	1		Credit	Outdoor Water Use Reduction	2	Cistern to be provided for roof irrigation - expected to achieve at least 50% reduction for 1 pt. 2nd pt is typically difficult to achieve. Above ground rainwater tank will provide irrigation for the vegetable garden.	Please refer to prerequisite "Outdoor Water Use Reduction" above.	- S&C - Integral
5	1		Credit	Indoor Water Use Reduction	6	Current design with proposed ultra-low flow fixtures indicates water use reduction of 48.41% (5 points). The team is considering the option of using urinals for further water use reduction, equal or higher than 50% (6 points)	ZAS to confirm if urinals will be installed.	ZAS
1			Credit	Water Metering	1	Integral have confirmed that metering achievable for at least 2 of irrigation, reclaimed water, indoor plumbing fixtures, DHW, etc. Review of 50% CD drawings located only water meter for domestic cold water.	Integral to confirm how design meets the credit requirements	Integral

30	2	1	Energy and Atmosphere		33			
Required	Prereq		Fundamental Commissioning and Verification	Required	JLSR have provided a review of the DD report.	Design Team and TRCA to address comments/questions of the DD Review and provide clarification.	ZAS / TRCA / Integral / MBII	
Required	Prereq		Minimum Energy Performance	Required	DD stage energy model report confirms prerequisite is achievable.	No action at this time.	n/a	
Required	Prereq		Building-Level Energy Metering	Required	MBII indicated this is achievable.	No action at this time.	n/a	
Required	Prereq		Fundamental Refrigerant Management	Required	HVAC equipment will not contain CFCs as all new equipment being provided.	No action at this time.	n/a	
6			Credit	Enhanced Commissioning	6	Monitoring-based Cx and Building Envelope included in Cx RFP.	Please refer to prerequisite "Fundamental Commissioning and Verification".	Please refer to prerequisite "Fundamental Commissioning and Verification".
18			Credit	Optimize Energy Performance	18	As per Transsolar's DD Report, current design expected to achieve 57% energy cost savings over ASHRAE 90.1-2010 baseline design and achieve all the 18 points of the credit.	Please refer to the Prerequisite "Minimum Energy Performance" above,	Transsolar
1			Credit	Advanced Energy Metering	1	MBII indicated it is achievable to capture all points that represent 10% or more of total annual consumption.	MBII to confirm if target is still achievable and provide updates	MBII
	2		Credit	Demand Response	2	MBII confirmed that systems can be designed for credit but will not be a lot of load to shed.	Green Reason to provide information on available load-shedding programs.	Green Reason
2		1	Credit	Renewable Energy Production	3	Currently targeting 5% based on Net Zero Carbon Building Standard.	No action at this time.	n/a
1			Credit	Enhanced Refrigerant Management	1	Integral confirmed refrigerants will be HFCs which have low ODP and GWP values.	To provide details on selected refrigerants and confirm if design is meeting credit requirements.	Integral
2			Credit	Green Power and Carbon Offsets	2	TRCA have confirmed they will purchase green power and carbon offsets as necessary. TRCA have noted that they have existing agreements with Bullfrog for electricity and natural gas which meets the credit requirements.	No action at this time.	n/a

8	3	2	Materials and Resources		13			
Required	Prereq		Storage and Collection of Recyclables	Required	Dedicated storage and recycling for typical recycling streams, plus batteries, mercury-containing lamps and e-waste.	ZAS to indicate locations of collection bins for at least two waste stream (batteries, mercury lamps and e-waste)	ZAS	
Required	Prereq		Construction and Demolition Waste Management Plan	Required	Requirement for CWM plan with 5 waste streams.	No action at this time.	n/a	
3		2	Credit	Building Life-Cycle Impact Reduction	5	3 pts for Life-cycle assessment, 2 other pts for building reuse are not considered achievable. LCA study not currently included in project scope.	ZAS to coordinate with Green Reason on the next steps to initiate LCA.	ZAS / Green Reason
1	1		Credit	BPDO - Environmental Product Declarations	2	Products not yet specified, but expecting to incorporate at least 20 with EPDs, 2nd point considered low maybe.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
1	1		Credit	BPDO - Sourcing of Raw Materials	2	Products not yet specified, but expecting to incorporate many products with recycled content, regional content, FSC, etc.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
1	1		Credit	BPDO - Material Ingredients	2	Products not yet specified, HPDs and equivalent considered more difficult to achieve than EPDs.	Green Reason to coordinate with Eastern and ZAS to review credit requirements.	Green Reason / Eastern / ZAS / BMCEA
2			Credit	Construction and Demolition Waste Management	2	Divert demolition and construction waste in at least 4 streams and achieve 75% diversion - no visual inspection. The team is considering to re-use the concrete slab of the existing building as landscape element for some of the pathways. This could contribute to the waste diversion calculations as material diverted from landfills.	No action at this time.	n/a

6	9	1	Indoor Environmental Quality		16		
Required	Prereq		Minimum Indoor Air Quality Performance	Required	ASHRAE 62.1 2010 required by building code. USGBC CIR 10461 allows no airflow monitor for small systems under 1000 CFM.	No action at this time.	n/a
Required	Prereq		Environmental Tobacco Smoke Control	Required	No smoking near entrances, air intakes and operable windows plus compliant signage.	No action at this time.	n/a
1	1		Enhanced Indoor Air Quality Strategies	2	Integral/ZAS/BME have confirmed CO2 sensors, entryway systems (grilles), and MERV 13 filters (or equivalent).	No action at this time.	n/a
3			Low-Emitting Materials	3	Specify adhesives, sealants, paints, coatings, composite wood, flooring, insulation & furniture. Also a WELL precondition.	Green Reason to coordinate with Eastern and ZAS to review credit requirements.	Green Reason / Eastern / ZAS / BMCEA
1			Construction Indoor Air Quality Management Plan	1	IAQ management plan will be implemented during construction.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
	2		Indoor Air Quality Assessment	2	Construction schedule will affect achievability. New IAQ testing requirements are more stringent and include more contaminants.	Green Reason to coordinate with Eastern and ZAS to review credit requirements	Green Reason / Eastern / ZAS / BMCEA
	1		Thermal Comfort	1	UFAD system may be argued to provide control but combination radiant heat/cooling with UFAD ventilation may require a CIR to clarify credit requirements are being met. GRI drafted CIR and reviewing documentation.	Green Reason to finalize CIR.	Green Reason
1	1		Interior Lighting	2	MBII indicates that 1 pt for lighting quality is achievable as well as controllability in lighting design. Furnitures expected to include task lighting at workstations.	MBII to confirm how the current design is meeting the credit requirements for Option 2, Lighting Quality.	MBII
	2	1	Daylight	3	As per Transsolar's DD report, it may be not be possible to achieve the credit. ASE currently tracking at 36% over the threshold of 10%. Green Reason drafted CIR.	BMCEA to provide more details (photos, drawings, specs.) for proposed Mobile Glare Devices.	BMCEA
	1		Quality Views	1	Credit conflicts with TGS requirement -Views cannot be claimed for fritted or filmed glass - GRI drafted CIR and currently exploring the pilot credit Bird Collision Deterrence option.	Green Reason to finalize CIR.	Green Reason
	1		Acoustic Performance	1	Considered challenging as design does not include ceiling, but could be investigated further in tandem with WELL. Preliminary acoustic report to be revised based on current CD set and LEED/WELL requirements (provided by GRI).	ZAS to provide updates.	ZAS

6	0	0	Innovation		6		
5			Innovation	5	Green Reason currently exploring options for Innovation credits. Options under considerations are the Pilot Credit "Bird Collision Deterrence" and Innovation Credits "Green Building Education Program", "WELL Features", "O+M Starter Kit", "Purchasing Lamps", "Occupant Survey".	No action at this time.	n/a
1			LEED Accredited Professional	1	LEED BD+C APs are involved in project.	No action at this time.	n/a

4	0	0	Regional Priority		4		
1			RP: Rainwater Management (2+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a
1			RP: Heat Island Reduction (2+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a
1			RP: Optimize Energy Performance (10+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a
1			RP: Indoor Water Use Reduction (4+ pts)	1	Automatically awarded if corresponding credit is achieved.	No action at this time.	n/a

79	18	13	TOTALS		Possible Points: 110
Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110					

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