Small Commercial Green Building Checklist

GREEN BUILDING in Alameda County

This Small Commercial Checklist is intended to address small new construction and renovations/expansions projects in Alameda County. Projects are required to meet all applicable measures on the checklist including "A" and "B" portions of numbered measures (unless otherwise stated). To aid in verification, include references in the *Notes* column where compliance with the applicable measures can be found in the submitted plans and/or specifications. For measures that are not applicable or are not in the project's scope of work, select "N/A" and make a note of why the measure does not apply. If more space is needed, use the space provided on page 10 or attach additional pages. For appendices, electronic copies of this checklist, and other green building resources, visit www.StopWaste.org/SmallCommercial.

Note: Some new construction projects will trigger the California Green Building Standards Code (CALGreen, Title 24, Part 11) mandatory requirements. Several of the green strategies in this Checklist are similar or equivalent to CALGreen. These measures are identified with a reference to the CALGreen code section.

Project:

Address: **Date:**

Site

Access to alternative transportation sources reduces the number of single passenger vehicle trips, reduces traffic congestion, and saves fuel and associated greenhouse gas emissions. Allowing space for bike parking increases participation in alternative transportation services. Cool sites and roofs reduce the amount of heat stored and re-radiated during summer days in urban environments that contribute to higher energy use and pollution.

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes
☐	☐	☐	**0. Required for All Projects: Include This Checklist on Plans**		
			Include a copy of the completed Small Commercial Checklist on building plans.	The Small Commercial Checklist is available as an editable PDF document. Download and complete the form and insert it into the building plan set. Indicate the location of the Checklist within the plans in the box at right.	
			1. Alternative Transportation Access (both "A" and "B" are required to be addressed)		
☐	☐	☐	**A. Public transit**		
			Project is located within 1/4 mile of two or more bus lines AND/OR within 1/2 mile of a light rail or commuter rail transit stop (BART, Amtrak, etc.).	Provide a simple map showing distances to public transit stops from the main entry of the buildings. Use the "Nearby Routes & Services" calculator on the www.511.org website or other transit agency website to calculate distances from the project address.	
☐	☐	☐	**B. Bicycle parking*** **This credit is required regardless of the project's scope of work*		
			Project includes bicycle racks or storage areas for use by building occupants (workers) and visitors (if applicable). *For new construction projects:* Meet the requirement of CALGreen 5.106.4 for short-term and long-term bicycle parking, based on motorized vehicle parking capacity. *For existing building improvements or renovations:* Meet the same thresholds as CALGreen 5.106.4 for new construction, -OR- Provide at least 1 bike rack for every 2,000 sf of the total building footprint/interior area (with a min. of 1 rack) as occupied by the tenant/owner. This requirement is independent of the project scope of work square footage (i.e. if the scope of work is only 2,000sf of a 10,000sf office, then provide racks for the entire 10,000sf space). Existing racks within 200 feet of a building entrance can count towards compliance. Additionally, for projects over 7,500 square feet, a designated changing area must be provided.	*For all projects:* Bike racks and storage areas must be placed in a secure and covered area for use by building occupants within 200 feet of the building entrance. If the project anticipates visitor traffic, provide permanently anchored bike racks within 200 feet of the visitor's entrance, readily visible to passers-by (or provide proof of adequate existing racks for existing building improvements/renovations). Construction documents (plans & specifications and/or site plan) must reflect the location of the required number of short-term and long-term bike parking facilities. Provide a calculation table or note on the plans showing the calculated number of spaces required as per CALGreen or based on total building square footage. Round-up to the next whole number for calculations. *For projects over 7,500 square feet (total site):* Provide a floor plan noting the designated changing area. A changing area is any space that allows privacy but does not cause lengthy wait times or other privacy concerns to occupants (such as single occupant restrooms in small buildings).	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes
☐	☐	☐	**2. Reduced Parking**		
			Project does not exceed minimum local parking requirements -OR- the project does not provide any new parking.	1. Provide proof of the minimum local parking requirements for the site -OR- provide proof that no parking will be added. Minimum parking requirements usually come from the City. 2. If parking is added, provide a site plan with parking areas highlighted. Total and highlight the number of existing and new parking spaces.	
			3. Reduced Heat Island Effect (both "A" and "B" are required to be addressed)		
☐	☐	☐	**A. Nonroof heat islands**		
			Combine cool site techniques for 75% of site area being impacted by construction (including all landscaping/hardscapes on site). Cool site techniques include pervious surfaces (including open grid pavement and vegetation) and light colored concrete. Hardscape alternatives: Use one of a combination of strategies 1 through 3 for 50% of site hardscaping or put 50% of parking underground. 1. Provide shade (calculated for trees/plants that mature within 5 years of occupancy). 2. Use light-colored/high-albedo materials (light colored concrete instead of asphalt, for example). 3. Use open-grid/pervious pavers or other pervious paving system.	1. Site plan with the following areas calculated and clearly visible (if applicable): total site area, landscape area, area of hardscapes under shade (from trees or awnings, etc.), and hardscape area. 2. Calculate the percent of the total site area that includes cool site techniques. Where hardscape alternatives are used in lieu of 75% of total site, provide a site plan showing each of the paving materials used and calculations that demonstrate compliance with the applicable strategy(ies).	
☐	☐	☐	**B. Roof heat islands**		
			Provide a cool roof for at least 75% of the roof area being impacted by construction. Cool roofs are reflective surfaces applied to the roof. To find cool roof products, go to www.coolroofs.org and use the "Rated Products Directory". *Note: A roofing materials having a minimum aged Solar Reflectance Index (SRI) of 78 to be considered a "Cool Roof" for this measure.*	1. Roof plan with the following areas calculated and clearly visible: total building/roof area, photovoltaic array area. 2. Calculate the percent of the total area that includes a cool roof. Photovoltaic panels are exempt from the calculation if mounted on the roof (subtract the photovoltaic array area from the total site area). For low-sloped roofs (<2:12), eligible cool roof materials must have a Solar Reflective Index (SRI) of 78 or higher. If SRI is not available for the cool roof product, then products with an initial solar reflectance of 0.70 or higher AND an initial thermal emittance of 0.75 or higher are acceptable. Steep sloped roofs (>2:12) do not need to comply and should have their square footage removed from calculation. 3. Provide manufacturer literature stating the cool roof SRI.	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes

Water

Water-efficient fixtures reduce water use and sewer costs and reduce demand on water supplies and treatment facilities. For sites that have landscapes, see the Bay-Friendly for Permitted Landscapes checklist at www.stopwaste.org/smallcommercial .

4. Water Efficient Plumbing Fixtures

Choose 1 of 2 Paths Below (not both)

☐ ☐ ☐ **Path 1: Prescriptive measures**

The following maximum thresholds are required for all new fixtures (same as CALGreen requirements): 1. Toilets (water closets): High Efficiency Toilets (HETs) with flush rate ≤1.28 gallons per flush (gpf). 2. Urinals: Waterless or low-flow with flush rate ≤ 0.5 gpf. 3. Lavatory Faucets: flow rates ≤ 0.4 gallons per minute (gpm) @ 60 psi for all faucets except kitchen sinks. 4. Kitchen faucets: flow rates 1.8 gpm @ 60 psi. 5. Wash fountains: flow rates 1.8 [rim space (in.)/20 gpm @60 psi] 6. Metering faucets: flow rates 0.2 gallons/cycle 7. Metering faucets for wash fountains: 0.20 [rim space (in)/20 gpm @60 psi] 7. Pre-rinse Spray Valves: flow rates ≤ 2.0 gpm. 8. Showerheads: flow rates 2.0 gpm @80 psi	1. Floor plan(s) showing location of all new toilets, urinals, faucets and kitchen pre-rinse spray valves in the project. 2. Specification sections or fixture schedules showing that low-flow fixtures are specified for all new fixtures (if specifications are created for the project). 3. Manufacturer literature (cut sheets) showing flush rate of toilets and urinals to be installed, and flow rates for faucets and spray valves. *See the CALGreen code section 5.303.2 for more on the prescriptive requirements for water efficient fixtures.*	

☐ ☐ ☐ **Path 2: Performance measures**

Provide a calculation demonstrating a minimum 20% reduction in the building "water use baseline" based on the following flow rates (same as CALGreen): 1. Showerheads: 2.5 gpm @ 80 psi 2. Lavatory faucets: 0.5 gpm @ 60 psi 3. Kitchen faucets: 2.2 gpm @ 60 psi 4. Wash fountains: 2.2 [rim space (in.)/20 gpm @ 60 psi] 5. Metering faucets: 0.25 gallons/cycle 6. Metering faucets for wash fountains: 0.25 [rim space (in.)/20 gpm @60 psi] 7. Gravity tank type water closets, flushometer tank water closets, flushometer valve water closets, electromechanical hydraulic water closets: 1.6 gallons/flush 8. Urinals: 1.0 gpf	Provide a plumbing calculation on the plans demonstrating an overall minimum 20% water use reduction for all fixture types 1-8. *Utilize the CALGreen water calculation guidelines to determine percent savings, found in code section table 5.303.2.2.*	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes

Energy

Exceeding energy efficiency minimums results in reduced greenhouse gas emissions, lower utility costs and increased comfort. Another benefit is higher quality construction, thanks to better air sealing, increased insulation, and high efficiency equipment.

5. Improved Energy Efficiency

There are 2 paths for achieving this measure (choose one path):
Path 1. Performance: Buildings for which Title 24 energy modeling is performed, complete Path 1. Check "N/A" in the Path 2 box.
Path 2. Prescriptive: Projects for which energy modeling is not employed, complete Path 2. Check "N/A" in the Path 1 box.

Path 1: Building Energy Modeling

☐ ☐ ☐	Beat California minimum energy efficiency standards (Title 24, Part 6) by 10% or more.	Submit Title 24 report for whole building or by component. Percent better than code is determined by TDV from ECON-1 report.	

Path 2: For projects that DO NOT require building energy modeling: Complete A&B below.

A. Select at least 2 of the following prescriptive energy efficiency measures

☐ ☐ ☐	i. Reduce Lighting Power Density (LPD) in the facility to 90% of code.	1. Provide lighting design plans and/or specifications. 2. Calculate the total LPD and include on plans or in other format. The LPD can be calculated from lighting design plans or from Title 24 submissions. Must be a maximum of 90% of Title 24 LPD. Do not include occupancy sensor or other switches/control strategies in this calculation. 3. Where display lighting is used it must be calculated separately and installed lighting shall not exceed the 90% of the maximum display lighting allowed by Title 24 (Part 6).	
☐ ☐ ☐	ii. High performance windows - for all windows replaced. All new windows must have a U-factor no higher than 0.47. Solar Heat Gain Coefficient (SHGC) is dependent on glazing percentage and climate zone. Climate Zone 3, for buildings with: - less than 20% glazing*, SHGC ≤ 0.41. - more than 20% glazing*, SHGC ≤ 0.35. Climate Zone 12, for buildings with: - less than 20% glazing*, SHGC ≤ 0.35. - more than 20% glazing*, SHGC ≤ 0.31. **Glazing percentages are defined as non-north window-wall ratio.*	1. Provide plans and/or specifications with a window schedule. 2. On the window schedule, include the non-north window-wall ratio as a percentage of glazing. Do not include north-facing windows in this ratio since north-facing windows do not factor into the glazing percentage calculation for SHGC. 3. Provide manufacturer cut sheets, NFRC label or other documentation showing U-factor and SHGC for windows chosen.	
☐ ☐ ☐	iv. High Efficiency HVAC Equipment. All new HVAC equipment must comply with the Consortium for Energy Efficiency (CEE) Tier 1 commercial HVAC standards. See www.stopwaste.org/smallcommercial for a link to the CEE standards or download them at www.cee1.org/com/com-main.php3.	1. Provide plans and specifications showing equipment schedule and performance specifications. 2. Provide manufacturer literature confirming compliance with CEE Tier 1 standards.	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes
☐	☐	☐	v. High efficiency heating: Furnace Replacement. For furnace replacements to units manufactured after 2001 (<10 years old), replace with units that have a minimum energy efficiency of 92 AFUE. For furnace replacements to units manufactured before 2001 (>10 years old), replace with at least the code required minimum efficiency units. If furnaces are replaced, they will have a minimum energy efficiency of 92 AFUE.	1. Submit plans or specifications highlighting efficiency of forced air furnace(s). 2. Submit manufacturer cut sheet for furnace(s) and highlight efficiency.	
☐	☐	☐	vi. Provide on-site renewable energy generation (solar, wind, etc) system capable of producing at least 5% of the building's total electrical load OR at least 10% of the building's hot water demand (based on annual use or cost).	1. Provide estimated output and percent of building load to be offset with renewable energy system. Calculations to be provided by a licensed solar installer, electrical contractor, or from the CEC rebate application. 2. Provide manufacturer cut sheets for generation equipment including inverters.	
			B. Select at least 3 of the following prescriptive energy efficiency measures		
☐	☐	☐	i. Automatic daylight sensors are installed in at least 75% of interior spaces with exterior windows. Automatic sensors must turn lights on, off, or dim depending on amount of daylight coming into the building.	1. Highlight areas to be daylit on plans (those areas or rooms within 15 feet of skylights or exterior windows). 2. Highlight locations of daylight sensors. 3. Provide calculation showing that 75% or more of the space in daylit areas (by square feet or rooms) are under daylighting control.	
☐	☐	☐	ii. HVAC Tune-up: Verify outside air economizer operation. Note: *For HVAC replacements to units <10 years old, install new CEE Tier 1 units. For HVAC >10 years, replace units with at least standard efficiency units.*	1. Evaluate economizer operation upon startup. Confirm operation of actuator from minimum position to 100% open. 2. Verify economizer operates per control sequence (outside air, room set point) to meet space requirements.	
☐	☐	☐	iii. Locate occupancy sensors in 40% of intermittent or non-regularly occupied spaces (hallways, bathrooms, closets, conference rooms). Exclude areas containing mechanical equipment or electrical panels which require light for maintenance activities.	1. Provide lighting plans with intermittent/non-regularly occupied spaces highlighted. 2. Highlight occupancy sensors on plans that serve these spaces. 3. Provide calculation showing that 40% or more of the spaces are controlled by occupancy sensors.	
☐	☐	☐	iv. All new exit signs in the project are to be LED or luminescent. Recommend replacing all existing exit signs as well, even if not in project scope.	Provide lighting plans specifying correct signage product.	
☐	☐	☐	v. Install ENERGY STAR rated office equipment and appliances. For eligible equipment, at least 75% of all new office equipment and 90% of all new appliances must be ENERGY STAR rated. See www.energystar.gov for product lists.	1. Submit list of all planned new office equipment and appliances. 2. Calculate the percent of planned office equipment and appliances that are to be ENERGY STAR. If ENERGY STAR products are not available for a particular appliance or piece of equipment, note that on the list and do not include those in the percentage calculation.	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes
☐	☐	☐	vi. High efficiency water heating: Specify gas water heaters above 0.65 EF or preferably a condensing water heater at 0.86. Specify boilers with efficiency of 90% or more. (This excludes all tankless water heaters and any small kitchen or bathroom water heaters under 5 gallons.)	1. Submit plans or specifications highlighting efficiency of water heater(s) or boiler(s). 2. Submit manufacturer cut sheet for water heaters/boilers and highlight efficiency.	
☐	☐	☐	vii. Tight ducts: Duct testing and sealing for all ductwork.	1. Submit evidence (HERS duct testing contract or report or other documentation that ducts will been sealed and tested) that duct sealing and testing will be performed. 2. Provide final Title 24-2008 Non-Residential Acceptance Form for Duct Testing.	
☐	☐	☐	vii. Develop and implement an Operations & Maintenance (O&M) Plan for the building. Download a guide to green O&M at www.stopwaste.org/docs/greenmaintguide.pdf.	1. Develop an O&M plan for the project. The plan should address all that apply: building lighting, heating, cooling, plumbing, solar, rainwater catchment, irrigation/landscaping practices and other systems as well as more general building policies (such as green cleaning, environmental purchasing, etc). The plan should describe accessibility of units, proper maintenance techniques, descriptions of proper use, model numbers & cut sheets, manufacturer contact information for replacement/repair/questions. The plan should include switching/controls diagrams, lighting plans, heating, cooling, plumbing, solar, rainwater, irrigation/landscaping practices. 2. Submit signed O&M plan from the owner saying that the O&M plan will be followed once occupied.	

Materials

Construction materials constitute about 22% of the disposed waste stream statewide. Many of these materials can be reduced, reused or recycled. Recycling reduces the amount of material entering landfills and can save money for building owners through reduced disposal and operating fees. Buying environmentally preferable new products can reduce the impact on raw materials extraction and disposal at end of life.

☐ ☐ ☐ **6. Construction Waste Management**

Measure & Requirement	Documentation	Reference/Notes
During construction, divert 100% of concrete, dirt and asphalt and divert at least 65% of remaining job site construction and demolition waste from landfill via recycling or reuse. *Note: For new construction, 50% of construction and demolition waste is required to be recycled in CALGreen [section 5.408].*	1. Prior to construction, complete a construction waste management plan. The City should provide a sample template, or one can be downloaded at www.stopwaste.org/C&D. 2. After construction, provide final waste management plan and verification (service provider weight tags and/or receipts) that 100% of concrete, dirt and asphalt were diverted and at least 65% of remaining job site construction waste diverted from landfill via recycling or reuse. If material was taken to a transfer station, a facility average recycling rate must be applied to the amount of material sent to that facility. See www.stopwaste.org/C&D for a list of mixed-waste diversion recycling rates and locations.	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes

7. Environmentally Preferable Materials

New Construction projects: Achieve at least 7 measures from below.
Renovation projects: Achieve at least 5 measures from below.
Materials or finishes listed below meet at least one of the following environmentally preferable criteria (unless otherwise noted): Plywood/MDF/wood is FSC certified; salvaged/reclaimed materials (including onsite materials); rapidly renewable materials (bamboo, etc); recycled content materials (at least 30% post consumer); exposed concrete (for flooring only); or low-emitting 2009 Collaborative for High Performance Schools (CHPS) VOC criteria and listed on its Low-Emitting Materials List or certified under the FloorScore program of the Resilient Floor Covering Institute). Under CALGreen code, some of these measures are required for new construction projects.
See www.StopWaste.org/SmallCommercial for links and resources on Environmentally Preferable Materials.

☐☐☐	i. Cabinets & Shelving (includes boxes, face frames and doors). *At least 50% of cabinets and shelving (by volume or linear feet) meet environmentally preferable criteria.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material (recycled content %, FSC certification, etc.). 3. Provide calculation of applicable material percentage.	
☐☐☐	ii. Interior Trim (includes all trim for floors, doors, walls, ceilings, windows, wainscot). *At least 50% of all interior trim (by volume or linear feet) meet environmentally preferable criteria.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.	
☐☐☐	iii. Doors and Door Cores *At least 50% of all doors (by count) meet environmentally preferable criteria.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.	
☐☐☐	iv. Countertops and Substrates. *At least 50% of all countertops and substrates (by volume or linear feet) meet environmentally preferable criteria.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.	
☐☐☐	v. Furniture (Includes systems and stand-alone furniture). *At least 75% of all furniture (by number of pieces or by cost) meet environmentally preferable criteria.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of furniture. 3. Provide calculation of applicable material percentage.	
☐☐☐	vi. Ceiling Tiles. *At least 75% of all ceiling tile (by square feet) meet environmentally preferable criteria.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.	
☐☐☐	vii. Insulation. *At least 75% of all insulation (by volume, square feet, or cost) contain 30% recycled content (post-consumer) and are low-VOC emitting. See www.stopwaste.org/smallcommercial for a list of eligible products.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes
☐	☐	☐	viii. Flooring. *At least 75% (by square feet) of all flooring (exposed or stained concrete) or floor coverings (carpet, resilient flooring, tile, hardwood, etc.) meet environmentally preferable criteria.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide calculation of applicable material percentage.	
☐	☐	☐	ix. Exterior Paint. *At least 50% of all exterior paint (by square footage or volume) is recycled content (40%+). For new construction projects, this credit is superseded by CALGreen's low-emitting paint requirements and may not be achievable.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature showing recycled content. 3. Provide calculation of applicable material percentage.	
☐	☐	☐	x. Low-Emitting Interior Paint. *All interior paints are low emitting:* *≤ 50 grams/liter for flat paints,* *≤ 150 g/L for non-flat high gloss coatings, and* *≤ 100 g/L for non-flat coatings.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide documentation that all paints and coatings are low-emitting. Provide MSDS sheets.	
☐	☐	☐	xi. Low-Emitting Adhesives & Sealants. *All adhesives and sealants are low-emitting according to the South Coast Air Quality Management District Rule 1168 (see www.aqmd.gov/rules/reg/reg11/r1168.pdf for VOC limits).*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide documentation that all adhesives and sealants are low-emitting. Provide MSDS sheets.	
☐	☐	☐	xii. Low-Emitting Carpeting. *All carpet installed in the building interior shall meet the testing and product requirements of one of the following:* *1. Carpet and Rug Institute's Green Label Plus Program. See www.carpet-rug.org for label requirements and product lists.* *2. California Department of Public Health Standard Practice for the testing of VOCs (Specification 01350).* *3. NSF/ANSI 140 at the Gold level* *4. Scientific Certifications Systems Sustainable Choice.* *All carpet cushion installed in the building interior shall meet the requirements of Carpet and Rug Institute Green Label Program.* *All carpet adhesive should meet 50 g/L VOC limit.*	1. Provide finish schedule or specifications with applicable material(s) highlighted. 2. Provide manufacturer literature to support environmental claims of material. 3. Provide CRI Green Label Plus, Spec 01350, NSF/ANSI 140 Gold, or SCS Sustainable Choice documentation.	
☐	☐	☐	xiii. Low-Emitting Composite Wood. *Where complying composite wood product is readily available for non-residential occupancies, meet current formaldehyde limits (ppm) as specified in ARB's Air Toxics Control Measure for Composite Wood (17 CCR 93120 et seq.):* *Hardwood plywood veneer core: 0.05* *Hardwood plywood composite core: 0.08* *Particle board: 0.09* *Medium density fiberboard: 0.11* *Thin medium density fiberboard: 0.21*	1. Provide finish schedule or specifications with applicable material(s) highlighted. (Specify levels of formaldehyde in composite wood products on the plans or in the project specifications.) 2. Provide manufacturer literature to support environmental claims of material. 3. Provide MSDS sheets of composite wood.	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes
☐	☐	☐	**8. Collection of Recyclables**		
			Encourage ongoing recycling by providing at least as much bin volume for recycling as for waste. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage, and collection of non-hazardous materials for recycling, including paper, corrugated cardboard, glass, plastics, and metals. *Note: this is required in new construction CALGreen per section 5.410.1.* In addition to the required recycling collection infrastructure, recycle at least 1 of the following material streams: food scraps, household hazardous waste (fluorescent lamps, batteries, oil, etc.), or e-waste (computer equipment).	1. Provide plans showing recycling receptacles and signage are provided in all applicable areas: offices, private rooms, meeting rooms, kitchens, etc. 2. Recycling areas shall be secure; be protected from the elements, such as rain; and be adequately separated from occupied spaces for protection against impacts such as noise, odor, and pests. 3. Where feasible, recycling areas should be located adjacent to solid waste collection areas. 4. Provide calculation of adequate recycling volume. 5. Provide evidence of recycling for at least 6 (the 5 required materials plus the additional 1) of the material streams. Submit recycling hauler information for recyclables and food scraps. Provide a short narrative on how the facility will collect and recycle hazardous and e-waste.	

Indoor Environment & Air

Effective daylighting and natural ventilation may improve indoor environmental quality. Natural ventilation can reduce heating and cooling requirements and may justify smaller, simpler HVAC systems, which can reduce the project's first costs. Ventilation (natural or mechanical) improves indoor air quality. Daylighting can offset some of the electric lighting load.

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes
☐	☐	☐	**9. Daylight, Views & Natural Ventilation**		
			Provide access to views to the outdoors (any window or skylight can provide a view) from 80% of regularly occupied areas (i.e. offices, reception areas, bedrooms, kitchens, show rooms, dining rooms, but not bathrooms or storage areas). Operable windows are recommended for all projects but are required in spaces where 2 or more walls have windows that are to be installed or replaced AND where the installation/replacement is in the scope of work. Exceptions can be made for sites where operable windows would compromise safety or security. At least 50% of occupants within 15 feet of a window must have access to operable windows.	1. Provide site plans with view areas highlighted (those areas within sightline of skylights or exterior windows). 2. Calculate percent of regularly occupied areas with/without access to views. *For spaces where windows are installed or replaced:* 3. Provide window schedule showing operable and non-operable windows. 4. Provide site plan and/or calculation on the number of occupants within 15 feet of windows, showing that at least half of the workers have access to an operable window. *If windows cannot be operable for security or safety reasons, describe the rationale in the Notes box at right or attach a separate narrative.*	
☐	☐	☐	**10. Fresh Air Monitors for Densely Occupied Spaces**		
			For new building systems with moveable outside air dampers: For all densely occupied spaces, such as multi-purpose rooms or conference rooms, provide CO2 monitors with alarms (example: small visual indicator such as a light to alert building occupants or building operator), and the ability to manually adjust air flow. *Note: for buildings equipped with demand control ventilation, CO2 sensors and ventilation controls are required under CALGreen section 5.506.2 and Title 24, Part 6, Section 121(c).*	1. Provide mechanical plans with CO2 monitors highlighted. 2. Confirm alarm function (user adjustable) of Building Automation System. Verify control sequence resulting from "alarm" in Sequence of Operations. 3. Provide Title 24 "Acceptance" forms. 4. Written confirmation that testing, adjusting and balancing (TAB) contractor will adjust and balance the moveable outside air damper to provide cooling as required for air conditioning the space. When CO2 monitor located within referenced AC unit's conditioned space sends an alarm signal the economizer damper actuator shall open outside air damper to provide 30% more air than the minimum damper setting.	

Yes	No	N/A	Measure & Requirement	Documentation	Reference/Notes

ADDITIONAL NOTES & REFERENCES

Use this section to provide additional comments, notes, or indicate references to plan or specification sheet numbers.

Measure Number/Title	Additional Notes or References