

Built Green Single[^]Family Handbook

Version 2021

Interim Credit Supplemental

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INTRODUCTION

This interim supplemental handbook contains specific, detailed interpretation information about some of the new credits in the 2021 Single-Family/Townhome New Construction Checklist. The Built Green team determined that the credits featured in this supplement urgently need more interpretation information prior to the full handbook release scheduled for June 2021.

HOW TO USE THE INTERIM SUPPLEMENTAL HANDBOOK

For ease of use, the 2021 Single-Family/Townhome New Construction Checklist directly corresponds with Handbook Sections 1–7. The checklists are key-coded to help you find information about each measure. The first number indicates what section to look in followed by a second number indicating the order in which it appears.

Here's how it works, using 2-29 from the checklist as an example: The action “Use pervious materials for driveways, parking areas, walkways, and patios” is described in Section Two (Site and Water), and is the 29th measure under the section.

Credit # and Description

Responsible Party: Those who are responsible for ensuring the credit requirements are met in the finished project. This may be both design and construction personnel.

Intent: The desired outcome resulting from meeting the requirements of the credit. This may be educational for the project team but is also helpful for the verifier in determining if the intent has been met.

Performance Requirement: Describes what the project team must do, as definitively as possible, to earn points for the credit. This gives the project team something clear to aim at, and the verifier something specific to measure against.

Points Breakdown: Points available, and how to earn different levels.

When Verified: Guidance on the most effective time and method for verification, helping both project team and verifier to plan site inspections and review meetings. This is a way to help teams and verifiers scope their verification plans for a project—it is a guide, not an absolute.

Cross References: Referencing other relevant Credits in the checklist.

Resources: Specific, reliable resources for reference.

THE FOLLOWING CREDITS ARE INCLUDED IN THIS INTERIM HANDBOOK**Section 1: Equity and Social Justice**

All credits

Section 2: Site and Water

2-51: Document a water efficiency score through WERS or WRI of 70 or less; OR document at least 30% reduction in total water use, using a baseline of 53 gallons per occupant per day for indoor use.

2-52: Bonus: achieve Water Efficiency Rating Score (WERS) certification of 70 or less.

Section 3: Energy Efficiency

3-1: Document an Energy Rating Index (ERI) of 62 or less, before PV solar generation is included.

3-2: Document a reduction in overall home energy use using approved energy modelling software; minimum 6% improvement above 2018 WSEC (use UDRH).

3-3: Built Green Net Zero Certified; requires an ERI of 0 or lower.

3-4: Built Green Net Zero Certified; requires an ERI of 0 or lower.

3-5: Prescriptive path: Earn additional credits on R406.3 table worth at least 1.0pt, maximum of 1pt for PV solar.

3-8: Take PTCS Commissioning trainings from Bonneville Power Administration's Performance Tested Comfort Systems team. University of Washington offers courses on refrigeration handling in the HVAC realm that, when taken, qualify for this credit.

3-13: Submit design using ACCA Manual D, J, and S or BetterBuiltNW HVAC Sizing Tool for the sizing and selection of space conditioning and distribution systems; or submit compliance with Grade I of RESNETs Standard 310-2020.

Section 5: Materials Efficiency

5-11: Use deconstruction to dismantle existing building and salvage materials for reuse (requires professional salvage assessment).

5-14: Use a three-bin waste separation system: one for landfill, one for commingled recycling, one for phase-appropriate source-separated recycling.

5-15: Send at least 90% of jobsite waste (by weight, excluding concrete, brick and asphalt) to a commingled recycling facility with a minimum of 50% diversion rate.

5-97: Use materials with Environmental Product Declaration (EPD).

5-98: Request product-specific EPDs from vendors or manufacturers for materials that do not have one.

5-99: Calculate the embodied carbon of the new building OR Calculate an embodied carbon baseline and show at least a 10% reduction.

5-100: Use a minimum of 250 square feet of carbon-neutral, carbon-negative, or climate-positive materials.

FOR ALL OTHER CREDITS NOT COVERED IN THIS SUPPLEMENTAL HANDBOOK

1. Review 2017 Single-Family/Townhome New Construction for previous interpretations that correspond to unchanged credits.
2. Contact your Built Green Verifier for assistance with credit interpretation.
3. All credits will be included in the upcoming 2021 Single-Family/Townhome New Construction to be released in June 2021.

SECTION ONE: EQUITY AND SOCIAL JUSTICE

CREATING SPACES OF BELONGING

When people feel like they belong to a community, they feel like they're at home. Building a home has always been more than a construction project on a plot of land. It's the creation of a place of physical and psychological safety where hopes and dreams can flourish, a place to make connections with others, raise families and grow old, a place to call home. It's the foundation for building community.

All of us must work together to create spaces of belonging. It begins with imagining what could be and encompasses all phases of development, from site selection, to design, to construction, to homeownership. For some, this may be a new business approach offering new concepts, additional revenue streams, and opportunities for growth. Getting it right requires understanding the surrounding community and prospective homeowners, and a willingness to learn about and confront the obstacles that keep homeownership out of reach for many community members.

Despite the myriad benefits of owning a home, many community members don't have access to homeownership. Many also lack living-wage jobs that would make homeownership more attainable. In order to overcome these disparities, an equitable, just, and inclusive approach is required, one that opens the door to homeownership as well as living-wage jobs in the building trades.

That's where equity comes in. The organization Americans for the Arts states, "equity embodies the values, policies, and practices that ensure that all people—including but not limited to those who have been historically underrepresented based on race/ethnicity, age, disability, sexual orientation, gender, gender identity, socioeconomic status, geography, citizenship status, or religion—are represented..."

As we commit to working for equity and inclusion in housing and the building trades, we must value the voices, experiences, cultures, knowledge, and multi-dimensionality of all people, including community members impacted by discrimination, bias, and systemic barriers. Understanding their perspectives is essential to removing these barriers.

The following section is intended to support architects, builders, and developers in their efforts to promote equity and inclusion, one home at a time. This work will require a common language. Adopting the following terms and definitions is the first step.

Equity: A system of fairness. Equity is the full and equal access to opportunities, power, and resources so that all people achieve their full potential and thrive. Equity is an ardent journey toward wellbeing as defined by those most negatively affected.¹

Social Justice: This includes all aspects of justice—legal, political, economic, and environmental—and requires the fair distribution of and access to public goods, institutional resources, and life opportunities for all people.¹

Underserved Communities: Community groups, such as Black, Indigenous, people of color, LGBTQ+ members, people with disabilities, immigrants and refugees, and others who have consistently and historically been impacted by inadequate services and limited access to opportunity (limited access to quality schools, safe neighborhoods, reliable transportation, or higher-paying jobs) in comparison to dominant culture community members.

Marginalized Populations or Communities: Groups and communities that experience discrimination and exclusion (social, political, and economic), because of unequal power relationships across social, political, economic, and cultural dimensions.

BIPOC – Black, Indigenous, and People of Color: Black commonly refers to people of African or Afro-Caribbean ancestry, often the descendants of people who were enslaved.

¹ King County Equity and Social Justice Strategic Plan: <https://www.kingcounty.gov/~media/elected/executive/equity-social-justice/documents/201609-ESJ-SP-FULL.ashx?la=en>

Indigenous refers to groups native to the Americas who were here before European colonization. This includes Native Americans, as well as Indigenous peoples from the Americas who later immigrated to the U.S.

People of color (POC) is an umbrella term to refer to non-white individuals who often face discrimination. Non-white people include those who have Asian, Middle Eastern, Indian, and Pacific Island heritage, among others.

CBS News has also reported on the BIPOC acronym recently, saying, “People are using the term to acknowledge that not all people of color face equal levels of injustice. They say BIPOC is significant in recognizing that Black and Indigenous people are severely impacted by systemic racial injustices.”

Structural Inequality: Structural inequality occurs when the fabric of organizations, institutions, governments, or social networks contains an embedded bias which provides advantages for some members and marginalizes or produces disadvantages for other members. This can involve property rights, status, or unequal access to health care, housing, education, and other physical or financial resources or opportunities. Structural inequality is believed to be an embedded part of the culture of the United States due to the history of slavery and the subsequent suppression of equal civil rights of BIPOC individuals.

Environmental Racism: Environmental racism refers to the institutional rules, regulations, policies, or government and/or corporate decisions that deliberately target certain communities for locally undesirable land uses and lax enforcement of zoning and environmental laws, resulting in communities being disproportionately exposed to toxic and hazardous waste based upon race.

Environmental Justice: A movement centered on creating legislation and policies to directly address environmentally racist policies and institutional decision-making processes to improve and maintain clean and healthy communities, typically in BIPOC and lower income communities who live and work closest to pollution sources.

Culturally Enriched Communities: Culturally Enriched Communities recognize the potential that lies within each individual and therefore include spaces that support diverse ways of living and being in the world. Culturally Enriched Communities allow for the creation of municipalities that can contribute to the prosperity and wellbeing of all people. Their creation relies on planners, policy leaders, housing developers, and others who feel an obligation to understand those they are working with and are interested in the lives of others.

The Beloved Community: Martin Luther King’s Beloved Community is a global vision in which all people can share in the wealth of the earth. In the Beloved Community, poverty,

hunger, and homelessness will not be tolerated because international standards of human decency will not allow it. Racism and all forms of discrimination, bigotry, and prejudice will be replaced by an all-inclusive spirit of sisterhood and brotherhood.

Resources:

Yes, There's a Difference Between 'BIPOC' and 'POC' — Here's Why It Matters:

<https://www.healthline.com/health/bipoc-meaning#learn-more>

ULI-Towards Culturally Enriched Communities:

<https://metro council.org/Handbook/PlanIt/Files/Workshop-Housing-ULI-MN.aspx>

Culturally Enriched Communities Design: <https://www.cec-design.com/>

Martin Luther King's Beloved Community: <https://thekingcenter.org/#the-beloved-community>

Economic Justice Project: <http://economicjusticeproject.org/>

PROJECT TEAM

1-1: Emphasize use of Built Green® member subcontractors, vendors, service providers, and real estate agents that are committed to equity and inclusion.

Responsible Party: Builder/Developer

Intent: Cultivate relationships among the green building community to ensure alignment of Built Green principles, expertise, and experience of green practices to support the Built Green movement. Emphasize members that have an Equity and Social Justice vision, mission, and values statement publicly shared on their website.

Performance Requirement: Document all Built Green members hired or retained during design, construction, and marketing phases. If feasible, include their public commitment to Equity and Social Justice. The professional or company must be a current Built Green member at the time of contracting with them. Project Builder and Built Green Verifier are not applicable.

Points Breakdown: 1 point for each Built Green member. Maximum of 5 points.

Cross Reference: 1-4

Resources: Built Green Member Search: <https://builtgreen.net/find-a-member>

1-2: Expand stakeholder involvement to create diverse teams to guide equitable development and culturally enriched spaces while expanding interest and capacity-building among priority populations, consultants, and in-house staff.

Responsible Party: Architect, Builder/Developer

Intent: In addition to creating teams to advance Built Green efforts, builders/developers should cultivate a diverse, multicultural team to offer new and different perspectives on a project. Having a more diverse team is a win-win proposition, adding new dimensions to the team while also creating employment opportunities for people historically excluded from the building trades. A team can include diverse staff, consultants, and other construction trade members as well as potential homeowners, community-based equitable development organizations, and community members with a vested interest in their neighborhood—all who offer different perspectives and types of expertise.

Imagine building in a historically Black neighborhood. What site and building elements can honor those roots or address systemic disadvantages such as food insecurity or health disparities? How is belonging best conveyed in the built environment? By connecting with local community-based organizations, Black community members and artists, the builder may learn of and incorporate important design elements otherwise missed.

Performance Requirement: Build a diverse team representing multiple viewpoints and perspectives. Find opportunities to work together on current projects and, more importantly, new projects where design and construction decisions can be made in advance. If augmenting your team with community members or prospective homeowners, use the project to build a lasting relationship that will continue beyond the immediate work.

Document what steps were taken to build a diverse team, what perspectives were added to the team, and how a more inclusive team approach benefitted the design and/or construction of the project.

Points Breakdown:

5 points: A diverse and inclusive design team (architect, designers, engineers etc.) or construction team.

10 points: Entire design and construction teams are inclusive of diverse team members.

15 points: A diverse team representing both design and construction teams, plus community members or homeowners.

When Verified: Design and construction phase

Cross Reference: 1-33 and 1-34

Resources:

Why You Need Diversity on Your Team and 8 Ways to Build It:

<https://www.entrepreneur.com/article/338663>

How to Build Diverse Teams at Work: <https://www.achievers.com/blog/diverse-teams-at-work/>

The Business Case for Diversity and Inclusion in the Construction Industry:

<https://www.agc.org/sites/default/files/Files/Advocacy/AGC%20Report%20on%20Biz%20Case%20for%20D%26I%20FINAL.pdf>

1-3: Offer equity-focused trainings and workshops to staff, subcontractors, and other building partners.

Responsible Party: Builder/ Developer

Intent: “No matter where you live in the United States, no matter who you are, race has been relevant to your life.” — Winona Guo, cofounder of [CHOOSE](#) and author of "Tell Me Who You Are"

Take time to broaden and deepen your understanding of race and racism, the importance of belonging, and our individual and collective role in building communities of belonging. In order to address racial, ethnic, and other disparities, we must understand the challenges and possible solutions.

We are all better off when we grow together. Offering trainings and workshops to staff and other team members sends the message that equity is a valued principle in your business and that each team member is responsible for advancing equity. Staff-wide trainings provide a foundation and common language for subsequent discussions and action steps.

Performance Requirement: There are many types of trainings, workshops, and seminars that advance race and social justice awareness. Investigate the type of training most appropriate to your business and consider inviting team members, subcontractors, and other building partners to participate—learning together fosters collective action.

Submit the sign-in sheet from the training that documents the date, duration, type of training, third-party training provider, number of attendees, and their employer. Requires at least 100% of project builder's direct reports to attend at least one training over one calendar year. Trainings may be applied to multiple checklists/projects submitted over the course of a calendar year.

Points: 5 points

When Verified: Design and/or construction phase

Resources:

Equity Matters offers trainings, assessments, skill-building, and other services:

<https://www.equitymattersnw.com/services-1>

ANEW's RISE Up (Respect, Inclusion, Safety and Equity in the Construction Trades) offers trainings geared to the construction trades: https://img1.wsimg.com/blobby/go/d66c1945-9e3c-45ab-a825-4f236211ff16/ANEW_RISEUp_Technical%20Assistance%20Form.pdf

Race Forward's Racial Justice Trainings:

https://www.raceforward.org/trainings?utm_term=Building%20Racial%20Equity%20training&utm_campaign=Doubling%20Down%3A%20Upcoming%20Virtual%20Building%20Racial%20Equity%20Trainings&utm_content=email&utm_source=Act-On+Software&utm_medium=email

Trainings offered by: Education for Racial Equity:

<https://www.educationfornacialequity.com/>

1-4: Develop a racial equity vision, mission, and values statement and prominently display and share with staff, building partners, clients, and general public.

Responsible Party: Architect, Builder

Intent: Just like in other areas of business and building, if we don't write it down it can't be that important. Imagine building a home without a contract, architectural plans, specifications, or basic construction principles to guide the process. If it's not written down and stated publicly how would you be able to hold vendors, subcontractors, and your direct reports accountable for their actions and deliverables on a project? Having an Equity and Social Justice (ESJ) vision, mission, and values statement—in addition to existing vision, mission, and values statement—makes clear to all (including team members) that the business is committed to dismantling the barriers to employment and homeownership and achieving equity for all. Publicly displaying these values holds everyone in an organization

accountable to the values codified in these statements. The following definitions and examples may be useful:

A **vision statement** succinctly states what the business would like to achieve, in this case, designing and building spaces where all people belong. A good vision statement should be short, simple, specific to your business, and leave nothing open to interpretation.

A **mission statement** sets forth what the business will do to achieve its vision. It is a statement describing the organization's specific role in creating spaces of belonging, removing racial and other barriers, and promoting equity in housing.

Values are principles the business is committed to observing and following. The values are embedded in all aspects of the business, both its internal operations and its community-facing endeavors. A set of values are unique to a business—you get to choose which values resonate with your business and represent your best practices. [Race Forward](#), a national organization working to advance racial justice offers the following core values:

- **People of Color:** We value the voices, experiences, cultures, knowledge, and multi-dimensionality of people of color.
- **Justice:** We value fairness, the best foundation for unity among all people.
- **Transformation:** We value the ability of individuals and systems to change in ways that make racial justice possible. We recognize the importance of struggle in fueling transformation.
- **Bridging:** We value the insights, relationships, and holistic understandings that are deepened when divergent paths come together.
- **Expression:** We value voicing and sharing our viewpoints with integrity even when difficult, unpopular, or risky.
- **Adaptability:** We value relevance and resourcefulness in the face of changing social, economic, political, and ideological environments.
- **Delight:** We value making space for laughter, beauty, and joy in the work of social change.

Performance Requirement: Provide a screenshot of your company website or marketing materials that prominently display your ESJ vision, mission statement, and core values.

Points: 5 points

Resources:

Partnership for a Healthy Durham, examples of racial equity mission statements: <https://healthydurham.org/cms/wp-content/uploads/2018/10/Racial-Equity-mission-statement-1.pdf>

Race Forward, Vision, Mission and Core Values: <https://www.raceforward.org/about>

Racial Equity Tools: <https://www.racialequitytools.org/>

1-5: Develop an annual ESJ workplan to focus internal and external equity efforts.

Responsible Party: Architect, Builder/Developer

Intent: No organization can achieve all of its goals and objectives in a single year. If you don't develop and implement a realistic workplan, accounting for all the daily pressures and tasks, it's unlikely you'll find time for equity work unless you plan accordingly.

The purpose of the annual ESJ workplan is to identify equity action steps that will impact your entire business. With your team, set aside time to develop a workplan that will prioritize the year's equity activities. For example, your team may identify action steps such as:

- Creating a more diverse staff, team, subcontractor, and vendor pool, etc.
- Examining your pay structure to ensure that all members are paid fairly and equitably (staff conducting similar work are paid consistent to skill and tenure).
- Working with a design team that intentionally focuses on building elements demonstrating cultural awareness, community/neighborhood stories, other community concepts.
- Providing information to prospective buyers about pathways to homeownership.
- Engaging local community organization (design phase, housing opportunities, etc.).
- Using your social media platforms to inform others of your equity efforts, share your ESJ mission, etc.
- Partnering with job training organizations to provide meaningful apprenticeship opportunities to youth of color and other underserved populations.
- Taking advantage of low-income, affordable, and attainable home construction opportunities.
- Looking for and contracting with Just-labelled vendors, subcontractors, and others.

The workplan, akin to a project management tool, should identify and document the specific equity tasks you intend to accomplish, the timeframe for action steps, responsible parties, any necessary resources, and anticipated date of completion. Be realistic and allow sufficient time to complete each identified action step—it's better to successfully complete

fewer tasks than to take on too many and fail. Many of the elements of this workplan will also earn you additional project-specific ESJ Section 1 credits.

Performance Requirement: Document and manage the workplan by including its calendar year, action items, timeframe, and any other critical information (e.g., Gantt chart). Must be reviewed and updated annually for the duration of the project. If using this plan over multiple projects/checklists it should document progress or completion of items with each resubmission.

Points: 5 points

Cross Reference: 1-2, 1-3, 1-4, 1-9, 1-12, 1-34 through 1-45

Resources:

How to Write an Action Plan: <https://creately.com/blog/diagrams/how-to-write-an-action-plan/>

Racial Equity Tools: <https://www.racialequitytools.org/>

How to Make a Gantt Chart in Excel: <https://youtu.be/un8j6QqpYa0>

Guide to Developing a Strategic Diversity, Equity and Inclusion Plan: <https://www.shrm.org/resourcesandtools/tools-and-samples/hr-forms/pages/guide-to-developing-a-strategic-diversity-equity-and-inclusion-plan.aspx>

1-6: Use Just-labelled firms.

Responsible Party: Architect, Builder, Other Team Members

Intent: The Just program was created by the International Living Futures Institute to help organizations optimize policies that improve social equity and enhance employee engagement. It is a voluntary disclosure tool for organizations, providing a transparency platform to disclose an organization's operations, including how they treat their employees and where they make financial and community investments.

Just labeling allows building teams to identify and choose other businesses with a similar social equity commitment with which to work, partner, and engage.

Performance Requirement: Use the Just program to identify and hire/retain contractors, vendors, and others associated with the building trades. Just labels must be active and

unexpired at time of hire/contracting to qualify. Certified B Corporations are also accepted for this credit.

Points Breakdown: 1 point per firm. Maximum of 3 points.

Resources:

International Living Future Institute, Just Program: <https://living-future.org/just/>

Certified B Corporations: <https://bcorporation.net/>

OVERALL DESIGN

1-7: Project is affordable housing (25 pts) or workforce housing or attainable housing (15 pts).

Responsible Party: Builder/Developer

Intent: More community members can become homeowners if affordable housing and additional ownership pathways are offered. As the Aspen Institute has noted, “An ugly and central aspect of the history of public policy in housing is its purposeful, race-based exclusion and marginalization of many people, particularly Native American and black populations.” Policies impacting BIPOC communities included redlining, certain zoning practices, placement of public housing, and the disparate allocation of infrastructure dollars, all leading to impoverished, underserved neighborhoods.

Affordable Housing: Building affordable housing opens the door to community members whose social-economic status blocks traditional avenues toward homeownership. Housing is considered affordable to a household if rent or mortgage costs no more than 30% of the household's income. Household income is shown as a percentage of the Area Median Income (AMI), and is typically limited to 60% AMI. Builders and developers may find that local cities and counties provide incentives for affordable housing construction.

Workforce Housing: Workforce housing is defined as housing affordable to households earning between 60% and 120% of AMI. Workforce housing targets middle-income workers and includes professions such as police officers, firefighters, teachers, health care workers, retail clerks, etc.

Attainable Housing: Endeavors to create market-rate housing that is accessible to a wider range of prospective homeowners. The industry definition of attainable, for-sale housing is unsubsidized, profitable housing developments that meet the needs

of those with incomes between 80% and 120% AMI. The price points for attainable housing vary by metro area depending on the AMI, with FHA Loan Limits typically hovering around 115% AMI.

Performance Requirement: Work with financial institutions, nonprofit organizations, and local governmental agencies to identify subsidized and unsubsidized housing development opportunities and participate by developing or constructing one of these housing projects.

Document the local AMI and unit sale price for each unit that is achieving this credit. In the verifier's cover letter identify the below-market-priced unit addresses. If there are multiple units being represented by one checklist, with a mixture of market and below-market units, then the minimum number of below-market units required is 10% of all units or one unit, whichever is greater. Should the local jurisdiction or incentive program require a project to provide more below-market units than Built Green requires for this credit, the builder needs to comply with those requirements.

Points Breakdown:

25 points: Building and selling/leasing of affordable housing units.

15 points: Building and selling/leasing of workforce or attainable housing units.

When Verified: Completion

Resources:

RCLCO, Attainable Housing: Challenges, Perceptions and Solutions:

<https://www.rclco.com/publication/attainable-housing-challenges-perceptions-and-solutions/>

Strong Towns, Want to Make Housing More Affordable? Start by designing neighborhoods, not just buildings: <https://www.strongtowns.org/journal/2020/6/11/affordable-housing>

The Aspen Institute: Strong Foundations: Financial Security Starts With Affordable, Stable Housing: <https://mbaks.app.box.com/s/q84ry2cx1mbyhusncyga4bjpmkumee00>

Poor Households Spend Nearly Four Times as Much on Utilities as Well-Off Ones:

<https://earthier.gizmodo.com/poor-households-spend-nearly-four-times-as-much-on-util-1845010294>

1-8: Provide accessory dwelling unit or accessory living quarters intended to serve as permanent residences and not short-term rentals.

Responsible party: Architect, Developer/Builder

Intent: An accessory dwelling unit (ADU), also known as a “mother-in-law” apartment or “granny flat,” is a small, secondary unit on a single-family lot. ADUs can be attached to the main living quarters via shared walls or be a separate structure on the same lot. Attached accessory dwelling units (AADU) are ADUs that share one or more walls with the main house or its garage. Detached accessory dwelling units (DADU) are ADUs that do not share any walls with the main house.

ADUs contribute to the versatility of the home/site, diversity of the neighborhood, and increased affordable housing options. For example, they can be used to support multigenerational living arrangements such as older parents moving in with their children or grown children moving back into the house after college. Units can also be rented to those with lower incomes. For homeowners on a fixed income, long-term rentals can provide stable income to help with a mortgage. Mixing this type of less expensive housing into established neighborhoods reduces the demand for large apartment projects, provides greater variety of housing choices, and promotes density in urban areas.

Check with the local jurisdiction for requirements including minimum or maximum size or setbacks. Be sure to include ADUs in your permit process.

Performance requirement: Document with pictures the ADU or DADU that was built. Materials and waste management credits need to account for the materials and amounts used in the construction of the unit. Points are allocated for any number of ADUs on a single-family lot, not per ADU. If there are multiple units being represented by one checklist, please identify which unit addresses include an ADU in the verifier’s cover letter. If the DADU has its own address separate from the main house or can be sold as an individual unit, it needs to be enrolled and certified under a separate project and single-family checklist.

Points: 10 points

Resources:

ADUs in Seattle: <https://www.seattle.gov/sdci/permits/common-projects/accessory-dwelling-units>

Accessory Dwelling Units explained: <https://www.buildinganadu.com/what-is-an-adu>

‘Grannie Units’ Are All the Rage as Multigenerational Households Grow:

<https://www.forbes.com/advisor/mortgages/grannie-units/>

1-9: Develop a project-specific ESJ plan clearly indicating equity objectives; identifying priority elements.**Responsible Party:** Architect, Builder, Other Team Members

Intent: Every project is an opportunity to further the goals of building green and creating spaces of belonging for all people, particularly historically underserved communities. A project-specific ESJ plan is one tool to document the different equity action steps appropriate to a specific project, particularly the priority elements (those most important to the project). In addition to listing, tracking, and managing equity activities, a plan helps a team stay focused, and provides a guidepost so project decisions align with goals and objectives, meet project deadlines, and hold everyone accountable.

For example, a project equity plan may call for: diversifying the design team, employing an apprentice, engaging the community, satisfying affordable and/or attainable housing requirements, adopting universal design elements, including cultural elements, etc. Many of these elements will also earn you additional points in the ESJ Section 1 credits.

Performance Requirement: Of the many possible equity-building efforts, choose elements most appropriate for the specific project and building team. Your plan should include the following for each equity element: the specific action step(s), responsible party, and anticipated completion timeline/project phase. Priority equity efforts (those with the greatest possible impact) should be identified and highlighted. Project-specific ESJ plans should be documented on the builder's letterhead.

Points: 5 points**When Verified:** Design**Cross Reference:** 1-10 and 1-11**Resources:**

Section 1 Equity and Social Justice credits 1-1 through 1-45

How to Develop a Diversity, Equity, and Inclusion Initiative:

<https://www.shrm.org/resourcesandtools/tools-and-samples/how-to-guides/pages/how-to-develop-a-diversity-and-inclusion-initiative.aspx>

1-10: Implement priority elements of project's ESJ plan (7 pts); implement all elements or calculate local economic and equity impact of implemented actions (12 pts).

Responsible Party: Architect, Builder, Other Team Members

Intent: A project-specific ESJ plan is only as valuable as the elements and actions that are implemented. While our goal may be to accomplish all elements in an ESJ Plan, there may be situations where an element, for one reason or another, cannot be realized. The best way of ensuring completion of an ESJ plan is to continuously monitor implementation efforts.

Performance Requirement: Use a Gantt chart or other project management software to track project-specific ESJ plan elements and action items and document whether each element listed was implemented and completed. For any element not implemented, include a short explanation as to why the team was unable to complete it.

Points Breakdown:

7 points: implementing all priority elements.

12 points: implementing all elements; OR implementing any number of elements and calculating the local economic and equity impact (LM3) of those actions.

When Verified: Completion

Cross Reference: 1-9 and 1-11

Resources:

Calculate your local economic and equity impact- Local Multiplier (LM3):

<https://www.nefconsulting.com/our-services/evaluation-impact-assessment/local-multiplier-3/>

How to Make a Gantt chart in Excel: <https://youtu.be/un8j6QqpYa0>

1-11: Conduct internal review of ESJ plan implementation.

Responsible Party: Architect, Builder, Other Team Members

Intent: Conducting an internal review of your project-specific or organizational ESJ plan efforts will provide valuable insights and information for future projects. Were you able to

implement all identified action steps? Did the equity action steps meet your expectations? Did they benefit the project? If not, why? What action step did you not include that might have been a valuable addition?

A Practice Example: Action Step – In year 20XX, we will seek to diversify by 20% (remember: goals should be measurable) our sub-contractor pool to include women, BIPOC, and members of LGBTQ communities. A team member is identified who will be responsible for the implementation of the action steps. We will identify potential subcontractor vendors and take time to meet and discuss possible business opportunities. We will track our use of subcontractors and on a quarterly basis, we will evaluate progress towards our goal of diversifying our subcontractor pool. On a quarterly basis, we will make adjustments (such as increasing recruitment efforts, reviewing the composition of building teams, obtaining feedback from diverse subcontractors, and reporting findings to our internal team) to ensure we meet our annual goal. If best efforts were not successful, we will reevaluate, seek external advice, and implement alternative or additional strategies if necessary.

Performance Requirement: Document the findings of the internal review with the ultimate goal of creating a menu of effective equity elements; use the findings to evaluate the efficacy of implementation and strategies associated with the equity elements chosen for the particular project.

Points: 2 points

When Verified: Completion

Cross Reference: 1-5, 1-9, and 1-10

Resources: 6 Steps to Measure Your Diversity, Equity & Inclusion Initiatives:
<https://everfi.com/blog/workplace-training/measuring-your-dei-initiatives/>

1-12: Site, design, and construct to counter known disparities identified through engagement with community stakeholders.

Responsible Party: Builder, Verifier

Intent: The Center for American Progress reports, “While Native Americans have long been the primary target of government-sponsored land redistribution, other communities of color—especially Black communities—have experienced and continue to experience displacement as well. For Black communities in urban areas, public policies have often been enacted under the guise of creating new public spaces, combating urban blight, or bolstering economic development. But over time, these policies have stripped Black

communities of the wealth and financial stability found in property ownership and affordable rental housing.”

To make matters worse, [Forbes magazine reports that](#), “according to listing site Zillow, Covid-19-spurred job losses are disproportionately impacting Latino, Asian and Black workers, who make up the majority of the workforce in the hospitality, tourism and service industries, which have borne the largest economic brunt of the pandemic so far.” Moreover, compounding the impact of job losses is the fact that people of color shoulder higher housing costs as a portion of their incomes, while earning less than whites.

In general, during times of economic downturns, Black, Indigenous, Latin, and Hispanic communities suffer disproportionately. According to the Urban Institute, history has shown that once the economy rebounds, the racial gaps in income, home equity, and wealth do not shrink.

Examples of known disparities in communities of color and underserved populations:

- Food deserts and food insecurity
- Displacement
- Lack of affordable housing
- Housing segregation
- Lack of affordable, accessible transportation
- Poorly maintained infrastructure, lack of resilient systems
- Higher proportion of income spent on utilities
- Poor indoor and outdoor air quality
- Higher exposure to environmental pollutants or hazards
- Higher instances of asthma, obesity, diabetes, and other health issues
- Lack of tree canopy or access to green space/nature
- Higher than average commute times for necessities (food, health services, and employment)

So how do we confront or address these and other disparities that continue to burden BIPOC individuals and families? A first step is to engage community stakeholders to learn more about the challenges they face and possible remedies or solutions.

Community engagement serves multiple purposes, including gaining vital information about site, design, and construction elements as well as other concerns, such as the impact of gentrification, the construction of non-affordable homes, and the loss of small businesses that have played a key role in the community.

By learning from a community's feedback and concerns, the builder/developer has the opportunity to eliminate or mitigate inequities or other harms associated with development. For example, imagine a 30-home development in a historically Black neighborhood. By engaging community stakeholders, the developer/builder may learn about concerns over gentrification exacerbated by the cost of market-priced homes. One way to counter gentrification would be offering some of the properties as affordable or attainable homes, thereby creating opportunity for lower-income community members to qualify for homeownership.

Performance Requirement: Document the actions taken to counter at least three known disparities and the outcomes of each action item.

Points: 15 points

Cross Reference: 1-7 through 1-11, 1-28 through 1-32, 1-34, and 1-43

Resources:

Racial Disparities in Home Appreciation:

<https://www.americanprogress.org/issues/economy/reports/2019/07/15/469838/racial-disparities-home-appreciation/>

Racial Inequities in Housing Fact Sheet:

<https://www.opportunityhome.org/resources/racial-equity-housing/>

Centering Equity in the Sustainable Building Sector: <https://naacp.org/climate-justice-resources/centering-equity-sustainable-building-sector/>

This Project Is Trying To Reverse Gentrification by Bringing People Back to Seattle's Central District: <https://www.seattletimes.com/seattle-news/politics/this-project-is-trying-to-bring-reverse-gentrification-by-bringing-people-back-to-seattles-central-district/>

Environmental Health Disparities in Housing:

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3222490/>

Rethink Resilience for the Era of COVID-19 and Climate Change:

<https://nextcity.org/daily/entry/rethink-resilience-for-the-era-of-covid-19-and-climate-change>

About Climate Safe Neighborhoods: <https://groundworkusa.org/focus-areas/climate-safe-neighborhoods/about/>

Missing Middle Housing: <https://missingmiddlehousing.com/>

Tacoma's Missing Middle Housing: Planning for Access, Affordability, and Mobility:
<https://www.theurbanist.org/2021/01/22/tacomas-missing-middle-housing-planning-for-access-affordability-and-mobility>

1-13: Submit a Code Innovation case study on this project and be selected by the Building Innovations Database.

Responsible Party: Builder, Verifier

Intent: Share your innovative practices and outcomes with others in the building trades to help those who are embarking on a similar path and increase positive impacts of Built Green homes. Case studies can cover any topic represented in the Built Green checklist.

Performance Requirement: Submit a case study to www.buildinginnovations.org and have it selected for publishing by the Building Innovations Database.

Points: 1 point

When Verified: When submission and selection has occurred

Resources: Submit a case study here: <http://www.buildinginnovations.org/for-builders/>

UNIVERSAL DESIGN

NC State University's Center for Universal Design defines [universal design](#) as, "an approach to design that incorporates products as well as building features and elements which, to the greatest extent possible, can be used by everyone. While accessible or adaptable design requirements are specified by codes or standards for only some buildings and are aimed at benefiting only some people (those with mobility limitations), the universal design concept targets all people of all ages, sizes, and abilities and is applied to all buildings."

To truly create spaces of belonging we must design and build spaces that are universally accessible to and inclusive of a broad range of human abilities and life stages. Universal and inclusive design can be leveraged to address barriers faced by people with disabilities, older people, children, and other populations that are typically overlooked in the design process to reduce stigma and provide benefits for all users.

Eight Goals of Universal Design (© Steinfeld and Maisel, 2012)

- Body Fit: Accommodating a wide range of body sizes and abilities.

- Comfort: Keeping demands within desirable limits of body function and perception.
- Awareness: Ensuring that critical information for use is easily perceived.
- Understanding: Making methods of operation and use intuitive, clear, and unambiguous.
- Wellness: Contributing to health promotion, avoidance of disease, and protection from hazards.
- Social Integration: Treating all groups with dignity and respect.
- Personalization: Incorporating opportunities for choice and the expression of individual preferences.
- Cultural Appropriateness: Respecting and reinforcing cultural values, and the social and environmental contexts of any design project.

Resources:

What is Universal Design: <http://idea.ap.buffalo.edu/about/universal-design/>

8 Goals of Universal Design: http://idea.ap.buffalo.edu/wp-content/uploads/sites/110/2019/10/UDGoals_DigitalDistribution.pdf

Universal Design Training and Resources: <http://universaldesign.com/>

Americans Need Home Design That Welcomes Everyone:
<https://www.architecturaldigest.com/story/universal-design-living-laboratory>

Universal Design in Housing:
https://projects.ncsu.edu/ncsu/design/cud/pubs_p/docs/UDinHousing.pdf

Designed for Inclusivity

1-14: Stepless front entry (2 pts), Stepless other entry (1 pt); max threshold height of one-half inch.

Responsible Party: Architect

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer and encouraging visits from a broader range of friends and family who might otherwise not be able to visit their home. The design will never need to be changed to accommodate lifecycle changes by current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a larger population that is growing by the day (e.g., boomers).

Performance Requirement: Photo documentation of entrances with maximum threshold heights of one-half inch.

Points Breakdown: 2 points - Stepless front entry. 1 point - Stepless other entries. Maximum 3 points.

When Verified: Design and completion

1-15: Hard-surface stepless grade changes at exterior to allow access to essential maintenance locations, like garbage cans, etc.

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by encouraging visits from a broader range of friends and family participating in hosted outdoor events (e.g., BBQ) who might otherwise not be able to navigate outdoor living spaces. Promotes healthier lifestyles by extending the years that residents remain active and busy nurturing their yards, gardens, and socializing with family and friends in lifespan-designed outdoor spaces. Promotes smarter and more functional outdoor spaces that better accommodate wheeled items that are found in most of our homes, such as:

- Shop Vac
- BBQ
- Lawnmower
- Generator
- Wheelbarrow
- Furniture dolly
- Garbage bin
- Recycle bin
- Yard waste bin
- Yard cart
- Pressure washer
- Strollers
- Bikes, trikes, wagons, scooters
- Luggage
- Wheelchair
- Other

Performance Requirement: Photo documentation of site finished grading and pavement.

Points: 1 point

When Verified: Design and completion

1-16: Install exterior accessible hard-surface gathering area.

Responsible Party: Architect, Builder

Intent: Landscape hard-surface gathering areas (e.g., paved at-grade patio areas) should be considered an upgrade and complement to stepless grade changes throughout and considered for additional earned checklist point value.

Performance Requirement: Photo documentation of site finished grading and pavement. Must be combined with credit 1-15, Hard-surface stepless grade changes at exterior to allow access to essential maintenance locations, like garbage cans, etc.

Points: 1 point

Cross Reference: 1-15

When Verified: Design and completion

1-17: Provide accessible guest bathroom on main floor of home (requires stepless front entry).

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Performance Requirement: Must be combined with credit 1-14 of stepless front entry.

Points: 2 points

Cross Reference: 1-14

When Verified: Design and completion

1-18: Accessible bathroom with curbless shower (grab-bar blocking required in all bathrooms).

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Points: 2 points

When Verified: Design and completion

1-19: Install cabinets with removable or slide-away lower doors for roll-up access to kitchen sink and upper cabinets that lower to countertop height for access, etc. (1 pt per feature).

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Performance Requirement: Customized cabinetry with special features such as upper cabinets that lower to counter level accessible to a wheelchair user or person of short stature or sink-base doors that slide away with no cabinet bottom shelf, allowing rollup access to the kitchen sink.

Points Breakdown: 1 point per fixture. 3 points maximum.

When Verified: Design and completion

1-20: Install fire and CO alarms that include visual alarm features.

Responsible Party: Builder

Intent: Research shows that people who are deaf or have hearing loss will not be awakened from a deep sleep by an audible smoke alarm. It is critical that deaf and hard of hearing individuals have a visual smoke alarm in their homes. Using alarms with strobe lights increases the likelihood that a hearing-impaired person will be able to quickly respond and escape unharmed.

Performance Requirement: Strobe lights should be LEDs and alarms should be hardwired with battery back-up. Minimum required locations for visual alarms include the kitchen and outside of each separate sleeping area in the immediate vicinity of the bedrooms.

Points: 1 point

When Verified: Design and completion

1-21: Minimum door width 2'10" for all rooms requiring entry (small closets excepted).

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Performance Requirement: Rooms not requiring entry by homeowners are exempted from this requirement. Rooms requiring entry means any room that a person would need to enter in order to use the room. Only small, shallow closets where reach-in access is the normal use of the room and special equipment rooms for furnaces or similar equipment normally accessible to only qualified technicians would be exempted from this requirement.

Points: 3 points

When Verified: Design and completion

1-22: Install touchless or motion sensor plumbing fixtures.

Responsible Party: Architect, Builder

Intent: For most this would be seen as a luxury or convenience when dealing with dirty hands; for many people with different abilities or physical constraints, however, these fixtures mean greater comfort and lower physical effort to function in their home.

Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Points: 1 point

When Verified: Design and completion

1-23: Bedroom, bathroom, kitchen, and laundry appliances on main floor (requires stepless access to house).

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Performance Requirement: Provide first floorplan detailing required elements. Must be combined with credit 1-14 of a stepless entry.

Points: 8 points

Cross Reference: 1-14

When Verified: Design and completion

1-24: Locate closets or other spaces directly above each other on all floors that can be used for future elevator installation.

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Performance Requirement: Requires that the rooms have been sized according to manufacturer's data to ensure that a residential elevator will fit in the designated space. Requires a concrete slab with a drain at the bottom. Requires 38" rough-opening door framing width and door openings lined up from floor to floor.

Points Breakdown:

3 points: Stacking closets engineered to receive a future elevator

5 points: Adequate electrical circuits are provided in attic

When Verified: Design and during framing and electrical phases

1-25: Use of lever-style handles for all interior and exterior doors.

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Points: 1 point

When Verified: Design and completion

1-26: Design low-maintenance outdoor spaces.

Responsible Party: Landscape Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home. Low-maintenance outdoor spaces have the added benefit of using less resources (water, fertilizers, herbicides, and pesticides) to maintain beauty and functionality.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population. While many enjoy gardening, not all homeowners have the time, ability, or financial resources to maintain it.

Performance requirements: Select plants and foliage that are slower growing, require minimal trimming and grooming over multiyear cycles, grow deep drought-resistant root systems, emphasizing hardy native perennials. Install easy to maintain, long-lasting hardscaping materials that do not require annual application of sealant or stain. Designs that greatly reduce permeable surface area by covering all exterior surfaces in rock gardens lined by impermeable liners, artificial grass, compacted decomposed granite, or pavement are not aligned with the intent of this credit.

Points: 1 point

When Verified: Design and completion

Cross Reference: 2-35 through 2-40

Resources:

Plants and techniques for a low-maintenance garden:

https://www.oregonlive.com/homesandgardens/2010/06/plants_and_techniques_for_a_lo.h tml

Landscape Design for the Elderly: A Golden Plan for Aging in Place:

<https://www.earthturfwood.com/landscaping-blog/landscape-design-for-the-elderly-a-golden-plan-for-aging-in-place>

1-27: Install smart technology (e.g., electronic blinds, programmed environmental controls, etc.) (1 pt per installed item).

Responsible Party: Architect, Builder

Intent: Promotes equity and social sustainability by allowing homeowners to live in their home and communities longer; the design will never need to be changed to accommodate lifecycle changes of current, temporary, or future occupants of the home.

Improves resale value and marketability (i.e., economic sustainability) as your home will be considered for purchase by a broader population that is growing by the day (e.g., boomers).

Points Breakdown: 1 point per fixture. 3 points maximum.

When Verified: Design and completion

Community Connectivity

We all benefit from living in walkable, pedestrian-oriented, mixed-use communities centered around high-quality transportation systems. We benefit from a cleaner environment, more active lives, and less dependence on cars for transportation.

1-28: Build within one-quarter mile of a transit stop.

Responsible Party: Developer/Builder

Intent: When selecting sites for development, consider access to public transportation. Selecting sites that are within one-quarter mile of a transit stop promotes the use of public transportation, which in turn provides environmental and community benefits.

Points: 3 points

When Verified: Design

1-29: Build on a lot that is within one-half mile of at least six essential services, (e.g., grocery store, post office, place of worship, community center, daycare center, bank, school, restaurant, medical/dental office, laundromat/dry cleaner, etc.).

Responsible Party: Developer/Builder

Intent: Walkable neighborhoods increase accessibility of necessary services to those who have limited access to transportation. Higher walkability in neighborhoods is associated with decreased rates of obesity and diabetes, improved air quality, and decreased noise pollution. Increased foot traffic can support local businesses and neighborhood economies and increase property values. Walk Score, a service that measures the walkability of addresses, has shown that for each point of a home's walkability, its value typically increases by \$500 to \$3,000.

Examples:

- Grocery store (excluding convenience or quickie-mart style stores)
- Post office
- Place of worship
- Community center
- Daycare center
- Bank
- School
- Restaurant
- Medical/dental office
- Laundromat/dry cleaner
- Transit Station (Facility with several routes or modes of transit)

Points: 3 points

When Verified: Design

Resources: Walk Score: <https://www.walkscore.com/>

1-30: Install EV charging stations available to public at street parking strip.

Responsible Party: Builder

Intent: Increase EV charging infrastructure for the general public in residential areas and to homeowners who lack off-street parking and EV charging for their personal vehicle.

Performance Requirement: EV charging station must be located in a publicly accessible street parking area.

Points: 8 points

When Verified: Design and completion

1-31: Provide raised garden beds in publicly accessible area for community garden space and community interactions.

Responsible Party: Landscape Architect, Builder

Intent: Public garden spaces provide numerous benefits, including decreasing food insecurity by increasing access for fresh produce that maybe unavailable in some underserved communities, providing space for community members to interact and nurture something together, and overall beautification of a neighborhood and added curb appeal.

Ideally locate the raised beds along city sidewalks and in public easements as a welcoming and productive landscape design, utilizing space that cannot otherwise be developed. When designing the boxes consider a design that will allow the most people with the widest range of abilities to use them (ask yourself, can people of different heights use the boxes comfortably if standing? Could someone sitting in a chair use them?). The beds should not impede access to the home for those with limited mobility (do not block street-to-sidewalk access). Construct the beds using salvaged materials from deconstruction of the original structure for additional materials credits.

Please check with local jurisdictions for guidelines for gardening in planting strips, such as required setbacks and size and material restrictions for raised beds.

Points: 1 point

When Verified: Completion

Cross-reference: 1-32, 5-11, 5-20, 5-88

Resources:

Seattle's Gardening in the Planting Strip: <https://www.seattle.gov/transportation/permits-and-services/permits/planting-in-the-right-of-way>

How to Farm Your Parking Strip: <https://www.seattlemag.com/home-and-garden/how-farm-your-parking-strip>

1-32: Design to promote and encourage pedestrian-friendly and safe neighborhoods.

Responsible Party: Builder, Architect or Landscape Architect

Intent: There are many ways to create more pedestrian friendly and safe neighborhoods. The following are examples of design innovations eligible for points toward this credit:

- Good visibility in front yard (no fences 5' or higher) and front door visibility from street
- Accessibility for bicycles (at least 1 access point with no steps or curbs)
- Special bike storage designed into garage OR separate storage outside
- Edible landscaping in front yard/in planting strip/or vegetable garden planter boxes
- Street trees planted in courtesy strip
- North area of the lot built first; south area retained for outdoor activities

Points Breakdown: 1 point per measure. 5 points maximum.

Cross Reference: 1-31, 2-35, and 2-41

When Verified: Design and completion

STAKEHOLDER ENGAGEMENT

1-33: Use integrated design process.

Responsible Party: Project Team – Architect, Builder, Engineers, Landscaper, Deconstructor, Subcontractors, Homeowner

Intent: Conduct an eco-charrette with the homeowner before the project begins, using the checklist to determine Built Green features to be included in the home. Goal setting and commitment to a green approach to the project can help ensure successful implementation of green strategies and actions. Review this checklist with all parties (e.g., owner, designer, engineer, general contractor, landscape professional) at an early stage in the design process. An integrated approach can help identify innovative solutions and ensure that team members are not working at cross purposes.

A knowledgeable team is established, and team member roles are identified with respect to lot design, preparation, and development. A written mission statement that includes the project's goals and objectives is developed.

One of the earliest challenges for a builder in developing a green lot is assembling an effective team to help them implement best green practices throughout the process. Examples of possible team members include staff, site superintendents, utilities, excavators, landscape architects, wildlife biologists, ecologists, and arborists.

Those involved in the development phase must understand what the mission of the site is, what it means to be a green lot, and why green practices should be followed. Once the green intent of the builder is communicated to the lot development team, the builder should work with the team throughout the development process to identify and delegate

responsibilities of team members, as well as facilitate coordination between the members to achieve best green practices.

Performance Requirement: Incorporate Built Green early in the design by conducting an eco-charrette with the homeowner and team to determine Built Green features to be included in the home. Identify team member roles and how they relate to various phases of green lot design, prep, and development. Create a mission statement that includes the project's goals and objectives.

Points: 5 points

Cross Reference: 1-2 and 1-34

When Verified: Design

Resources: Integrated Design for Green Homes:

<https://www.greenbuildingadvisor.com/green-basics/integrated-design>

1-34: Engage with local community groups to assess community needs to inform the project-specific ESJ plan, Built Green checklist and project goals, or developer's overall equity workplan.

Responsible Party: Architect, Builder, Developer

Intent: Community engagement pays dividends in multiple ways. While it may seem like a task outside the scope of work, it is well worth the effort. It is first and foremost about relationship building. The developer is actively seeking to establish a relationship with a new community organization, a new neighborhood, or community members. Often, community engagement is tied to a specific project, but the process can blossom into workforce development opportunities, neighborhood support, new friendships, and often, a greater awareness of the diverse world in which we live.

According to PolicyLink, "Transformative engagement can be the difference between a successful initiative and one that falls well short of its potential." One benefit of engagement is "legitimacy and increased support for plans and projects."

Engaging with the community can take many forms. Here, the credit is related to conducting a project-specific community needs assessment, or seeking feedback on a ESJ plan or, on a larger scale, a developer's portfolio of projects. A note of caution: Asking community organizations and/or community members to donate their time and energy without some recognition of their investment will not help future relationship building or engagement. Remember, you are seeking out their involvement. Ask the community-based organization what you can do in exchange for their effort. Similarly, think of ways to

recognize and compensate community members for their time. A hosting organization may be able to assist you in that regard.

Practice Example: The organization [Forterra](#) has a long and successful history of using its expertise in real estate, development, and coalition building to support communities to grow equitably within their existing footprint. Forterra recently partnered with a community for the Tacoma Hilltop attainable housing development. In Forterra's own words: "We are working with Fab-5, a hyper-local Hilltop-based nonprofit, to guide community engagement for this project. Fab-5 has actively been engaged with the Hilltop community on housing for several years. Together, Tacoma Housing Authority and Fab-5 worked with the Hilltop residents on the Hilltop Community Framework Plan, which expanded to #DesignTheHill, a grassroots development initiative that empowered the community to shape the future of Hilltop. Building on this work, Fab-5 is partnering with us on our community engagement strategy, community design lab meetings, a Community Investment Council, and more."

Performance Requirement: Document the type of community engagement, the group(s) engaged, and the outcome of the engagement activities. Documentation should be a memo on company letterhead describing the engagement activity, date of event, community group(s) involved, summary of the event activities, and the outcomes and actionable items that came from the event.

Points: 8 points

When Verified: Design phase

Cross References: 1-5, 1-9, and 1-10

Resources:

The Sustainable Communities Initiative:

https://www.policylink.org/sites/default/files/COMMUNITYENGAGEMENTGUIDE_LY_FINAL%20%281%29.pdf

Big Idea: Let Community Engagement Surprise You:

<https://www.enterprisecommunity.org/blog/big-idea-let-community-engagement-surprise-you>

Communities of Opportunity: <https://www.coopartnerships.org/work>

A Guide to Engaging the Community in Your Project: <https://www.artscapediy.org/guide/a-guide-to-engaging-the-community-in-your-project/>

PRO-EQUITY SOURCING

1-35: Use suppliers, vendors, or subcontractors that are WMBE or MBE firms (1 pt per firm).

Responsible Party: Builder/Developer

Intent: Women and People of Color face an uphill battle in traditionally white-male-dominated industries, and WMBE and MBE businesses face a wide range of difficulties and challenges. These include facing biases and prejudices regarding their ability to complete a job and overcoming false views regarding their sophistication and capabilities. Such companies often have limited access to vital business, information networks, and capital. The misperception that small, BIPOC- and women-owned subcontractors are too risky to work with due to their size, limited resources, and portfolio is one of the main barriers to their growth and success. Although many of these companies have exactly what it takes to be successful, they aren't given the chance to compete for contracts. Shifting away from the practice of using "go-to" companies and into intentional efforts to build capacity, diversity, and inclusion in the building industry could lead to new ideas, new approaches, and accomplishments that benefit everyone.

WMBE: Women and Minority-Owned Businesses: small business state-certified or self-identified firms at least 51% owned by women and/or minorities.

MBE: Minority-Owned Business: small business state-certified or self-identified firms at least 51% owned by minorities.

Performance Requirement: Firm must have valid state or federal WMBE or MBE certification at time of contracting or purchase to qualify for this credit.

Points Breakdown: 1 point per firm. Maximum of 10 points.

When Verified: Construction phase

Resources:

One Woman on What It's Like to Run a Construction Company: <https://repeller.com/olay-female-construction-company-interview/>

A Key Challenge for Minority-Owned Subcontractors? Misperceptions: <https://www.messer.com/news-and-insight/a-key-challenge-for-minority-owned-subcontractors-misperceptions/>

Washington State Office of Minority & Women's Business Enterprises Directory: <https://omwbe.wa.gov/directory-certified-firms>

Supplier Diversity Best Practices: <https://omwbe.wa.gov/state-supplier-diversity-reporting/supplier-diversity-best-practices>

MBAKS Professional Women in Building (PWB) Council:
<https://www.mbaks.com/membership/councils-and-committees/professional-women-in-building-council>

1-36: Hire temporary employees or apprentices through Weld Works or ANEW (or equivalent mission-driven employment program); minimum 25% of temporary work hours (5-15 pts).

Responsible Party: Builder/Developer

Intent: Weld Works is a division of Weld Seattle, whose mission is to equip system-impacted individuals with housing, employment, and resources conducive to recovery and successful reintegration. *System-impacted* refers to a person who is legally, economically, or familially-affected in a negative way by his or her incarceration or the incarceration of a close relative. System-impacted also includes people who have been arrested and/or convicted without incarceration. Weld Works is an innovative staffing organization effectively serving the construction, manufacturing, and retail industries.

Apprenticeship & Nontraditional Employment for Women (ANEW) is dedicated to improving access and advancement of women in non-traditional career pathways such as construction and manufacturing. ANEW focuses on equity and inclusion in the construction industry for both women and people of color by offering pre-apprentice training and apprenticeship opportunities placement programs.

For projects outside of Weld Works' or ANEW's operational territories, similar non-profit, mission-driven organizations exist that focus on employment and training of marginalized populations. Look for an organization that can provide the appropriate labor type for your project and a program that provides participants with case management, mentoring, and/or retention services.

Performance Requirement: Hire temporary workers or apprentices from a program such as Weld Works or ANEW (or equivalent mission-driven employment program). Provide proof of the agreement with the organization and the number of hours the employee(s) were employed. This can apply for any category of temporary labor on a project (e.g., site cleanup, deconstruction, demolition, administrative, skilled or unskilled labor, etc.). May extend to first tier subcontractors and their direct hires. This credit is project-site-specific and non-transferable to other projects/checklists.

Points Breakdown:

5 points: At least 25% of temporary labor hours

8 points: At least 50% of temporary labor hours

12 points: 75% or more of temporary labor hours

15 points: 100% of temporary labor hours

Resources:

Weld Works: <https://weldworks.org/hire-us/>

Apprenticeship & Nontraditional Employment for Women (ANEW) programs:

<https://anewaop.org/programs/>

United Way of King County Organizations focused on employment and job training:

https://volunteer.uwkc.org/agency/index/?q=&cat_id=22106&distance=&zip=&name=&partners=&county=&s=1

Washington State Department of Social and Health Services- Community Based

Organizations: <https://www.dshs.wa.gov/esa/community-partnership-program/community-based-organizations-cbos-alphabet>

1-37: Permanently hire employees from Weld Works or ANEW (or equivalent mission-driven employment program) used during demolition or construction.

Responsible Party: Builder/Developer

Intent: Offer a space of belonging within your business by permanently hiring Weld Works temporary or ANEW apprentices that were utilized during demolition and construction. Your business will gain a new staff person who will bring new ideas and skills to your team and you will benefit from retaining trained employees. The employee will benefit from a stable living wage, and the community organization will benefit from positive outcomes for their participants and a stronger relationship with the industry.

Performance Requirement: Permanently hire workers from programs such as Weld Works or ANEW (or equivalent mission-driven employment program). Provide proof of a hiring agreement with Weld Works, ANEW, or similar organization, removing any confidential personal identification numbers, residential address and wage information. This credit is project site-specific and non-transferable to other projects/checklists.

Points: 2 points

Cross Reference: 1-36

1-38: Hire workers and apprentices who reside in one of the 43 Priority Hire ZIP codes (or equivalent economically distressed Washington ZIP codes); minimum 25% of work hours.

Responsible Party: Builder/Developer

Intent: Due to institutionalized racism and sexism, women and minorities have continued to be excluded from the construction trades. Economically distressed ZIP codes represent communities that are home to the most disenfranchised peoples, and people of color are disproportionately represented in those areas. Intentionally hiring from these low-income and underserved communities is a good step to ensure that economically distressed residents can begin to benefit from Washington's booming construction industry. By prioritizing these communities, we offer their residents an opportunity to grab that first rung on the economic ladder with living-wage careers.

King County has 43 Priority Hire ZIP codes that are considered *economically distressed* due to having high concentration of the following three criteria:

- People living under 200% below the Federal Poverty Level (FPL)
- High unemployment
- People without a college degree

For projects located at least 20 miles outside of King County, please search for your local city or county jurisdiction's list of economically distressed ZIP codes, or locate local ZIP codes listed as Mid-tier, At-Risk, or Distressed on the Economic Innovation Group's Distressed Communities Index.

Performance Requirement: Provide a report that documents permanent employee's name, residential ZIP code, labor classification, job title, and number of hours worked on the project. Do not disclose employee's address, wages, or other confidential personal identification information. This can apply for any category of labor on a project (e.g., site cleanup, deconstruction, demolition, administrative, skilled or unskilled labor, etc.). May extend to first tier subcontractors and their direct hires. This credit is project-site-specific and nontransferable to other projects/checklists. May be combined with credit 1-36 and 1-37.

Points Breakdown:

5 points: At least 25% of labor hours

8 points: At least 50% of labor hours

10 points: 75% or more of labor hours

Cross Reference: 1-36 and 1-37

Resources:

Priority Hire in the City of Seattle and King County:

https://www.seattle.gov/Documents/Departments/FAS/PurchasingAndContracting/Labor/Zip_Codes.pdf

City of Tacoma Economically Distressed ZIP codes:

<https://cms.cityoftacoma.org/CBCFiles/CommunityWorkforceAgreementTaskForce/Meeting%201/Economically%20Distressed%20ZIP%20Codes%20Chart.pdf>

Economic Innovation Group's Distressed Communities Index:

<https://eig.org/dci/interactive-map?path=state/WA>

ADVANCE ECONOMIC JUSTICE

1-39: Offer vacant properties to Weld Seattle (or similar organization) for use as temporary housing prior to demolition.

Responsible Party: Builder

Intent: Weld Seattle, a nonprofit organization, serves formerly incarcerated and system-impacted individuals by offering housing and job placement in construction trades. *System-impacted* refers to a person who is legally, economically, or familially-affected in a negative way by his or her incarceration or the incarceration of a close relative. System-impacted also includes people who have been arrested and/or convicted without incarceration.

According to Weld Seattle, 77% of former prisoners are rearrested within 5 years. However, Weld Seattle's program, which includes employment pathways, clean and sober housing, and community re-engagement, has resulted in a less than 4% rearrest rate for Weld Seattle members. By partnering with builders and developers, Weld Seattle receives vacant properties which serve as temporary housing for its members. The developer/builder benefits because the Weld program maintains the property and prevents these otherwise unoccupied spaces from becoming magnets for squatters and crime.

Performance Requirement: Offer and provide the vacant property scheduled for demolition to Weld Seattle (or similar mission-driven organization) to serve in the organization's temporary housing program. Provide proof of the agreement with WELD or similar organization. This credit is project-site-specific and non-transferable to other projects/checklists.

Points: 8 points

When Verified: Pre-demolition

Resources: Weld Seattle: <https://www.weldseattle.org/housing>

1-40: Offer mentorship program to employees, interns, and apprentices.

Responsible Party: Builder/Developer

Intent: Mentoring employees, interns, and apprentices can mean the difference between continued employment or a higher-than-average turnover rate. Moreover, according to the Association for Talent Development, “Unlike other tactics companies have used to improve diversity, mentoring is proven to make a difference. [One 2016 study in the American Sociological Review](#) found that mentoring, in comparison to other corporate tactics (such as mandatory diversity training, grievance systems or job tests), increased BIPOC representation among managers in the workplace anywhere from 9 to 24 percent.” When we mentor staff, particularly underrepresented staff members, their likelihood of advancing to higher levels increases as does the value of their contribution to the company.

Performance Requirement: Create and implement a mentorship program and include underrepresented staff members, interns, and apprentices; must be maintained for the duration of the project. Provide a memo that describes the program, benchmarks used to determine success, and outcomes. This program does not need to be project-specific, but if it is reused across multiple projects/checklists it should be updated each time to reflect progress and outcomes.

Points: 3 points

Cross Reference: 1-5, 1-38, and 1-42

Resources:

Building Mentorship Programs for People of Color:

<https://rvcseattle.org/2018/03/21/building-mentorship-programs-people-color/>

4 Ways Mentoring Can Empower Your Diversity and Inclusion Initiatives:

<https://www.td.org/insights/4-ways-mentoring-can-empower-your-diversity-and-inclusion-initiatives>

The 7 Benefits of a Structured Workplace Mentorship Program: <https://www.gqrgm.com/7-benefits-structured-workplace-mentoring-program/>
<https://wabuildingtrades.org/community/apprenticeship-programs/>

Construction and Trades Apprenticeship information:
<http://www.futuresnw.org/apprenticeships>

1-41: Participate in recruitment or career development events in underserved communities.

Responsible Party: Builder

Intent: The goal is to broaden recruitment and hiring functions to more fully include people of color and other underrepresented communities impacted by bias and discrimination. By participating in organized recruitment efforts or career development events, individuals seeking employment in the construction trades will have an opportunity to meet potential employers while builders are able to meet their workforce needs and diversify their teams.

Career development events may include:

- Youth mentorship programs
- Participation in a WorkSource or community organization's career fair
- A recruitment or career development workshop targeting underserved community residents organized by your business.
- Job site tours and educational activities with local architecture, engineering, or construction students

Performance Requirement: Participate in at least one recruitment or career development event designed to reach an underserved community per calendar year throughout the duration of the project. Also accepted: voluntary participation and mentorship activities through partnerships with youth-focused organizations that focus on enrolling youth, POC, and women into pre-apprenticeship programs or helping them pursue careers in architecture, construction, or engineering. This may be reused across multiple projects/checklists per calendar year.

Points: 1 point

Cross reference: 1-5 and 1-38

Resources:

ACE Mentorship Program: <https://www.acementor.org/>

WorkSource career fairs:

<https://secure.esd.wa.gov/home/WorkSourceWA/Employer/Account>

MBAKS workforce development: <https://www.mbaks.com/workforce-development>

1-42: Offer job training, job assistance, or job retention programs to underserved community members.

Responsible Party: Builder

Intent: Creating a diverse, equitable, and inclusive organization often starts with offering job opportunities to individuals who have faced racial and other forms of discrimination. Low-barrier job entry, job training, and retention programs are effective and economical ways to provide pathways to living-wage jobs. At the same time, the builder may benefit by expanding his/her team and achieving a more diverse workforce.

Performance Requirement: Develop or partner with a local organization or academic program to offer a job training, job assistance, and/or job retention program for underserved community members. Program must be maintained for the duration of the project. Document the type of program and the individual(s) served, including length of time and relevant outcome (such as, the trainee found employment in the construction field, individual hired by builder, program led to retention of employee or employee promotion). This may be reused across multiple projects/checklists.

Points: 1 point

When Verified: Construction phase

Cross Reference: 1-36 and 1-40

Resources:

ANew Apprenticeship Programs: <https://anewaop.org/programs/>

Youth Build: <https://youthcare.org/homeless-youth-services/employment/youthbuild/>

MBAKS workforce development: <https://www.mbaks.com/workforce-development>

1-43: Partner with organizations and/or financial institutions to create pathways to investment and homeownership, especially for individuals and families facing the most pressing disparities.**Responsible Party:** Developer/Builder

Intent: In 2020, Citibank acknowledged persistent housing disparities impacting people of color. “Homeownership is a key way to build wealth and equity, and safe, affordable housing is an important platform for financial stability. However, Black homeownership is at [its lowest level since the 1960s](#). In addition, rental housing in many urban areas across the country is scarce and too expensive. Compounding this crisis is the near-absence of minority-owned real estate developers in the affordable housing industry.” As a result, Citi and other institutions are working to identify new funding streams dedicated to confronting racial disparities. Specifically, Citi promises to “expand access to its mortgage products and services among minority borrowers in low- and moderate-income neighborhoods and provide \$200 million of equity and preferential financing through Citi Community Capital to affordable and workforce housing projects by minority developers who either are the sole equity owners or are in a joint venture with meaningful equity participation. Some of this funding will also be invested in minority developers to increase their capacity and allow them to compete for larger affordable housing projects.”

Citi is not alone in their commitment to closing the racial wealth gap and housing disparities. Builders and developers can benefit by obtaining funding to build affordable/attainable housing and by helping individuals and families find pathways to investment and homeownership opportunities like the one described below.

Practice Example: A community-based organization based in South Seattle, El Centro de la Raza, offers a Home Purchase program including workshops and one-on-one consulting to community members. Their website states: “As a HUD-approved housing counseling agency, ECDLR’s Home Purchase Program is designed for potential homebuyers. We evaluate your current financial and credit capacity to determine your mortgage readiness. Workshops are also available to inform participants of the homebuying process (finding lenders and real estate agents, budgeting, and different loan products).” This program has been effective in assisting community members in fulfilling their dream of homeownership. Partnering with an organization like El Centro de la Raza could offer valuable information to prospective homeowners and possible new business to the builder/developer.

Performance Requirement: Document the partnership effort leading to creating or expanding pathways to investment or homeownership. Specifically, document the builder or developer’s role in the process.

Points: 8 points

Resources:

Announcing the Release of the Housing Pathways Proposal - Coming Home: Providing a Pathway to Housing for All: <https://prosperitynow.org/blog/announcing-release-housing-pathways-proposal-coming-home-providing-pathway-housing-all>

A Financial Institution's Action Plan for Racial Equity: <https://www.citigroup.com/citi/racial-equity/>

Building for Tomorrow: Innovative Infrastructure Solutions: <https://www.nahb.org/-/media/NAHB/advocacy/docs/industry-issues/land-use-101/infrastructure/building-for-tomorrow-innovative-infrastructure-solutions.pdf>

Habitat for Humanity Seattle-King County: <https://www.habitatskc.org/>

Green Choice and Affordable Loan programs from Olympia Federal Savings: <https://www.olyfed.com/personal/home-loans/>

Study: How Diverse is the Real Estate Investing Community?: <https://www.millionacres.com/research/real-estate-investor-diversity/>

1-44: Annually provide pro bono or substantially reduced rate services, resources, or trainings to nonprofit or historically marginalized community organizations.

Responsible Party: Builder/Developer

Intent: Providing free or substantially reduced services or materials and/or supporting local organizations, particularly those that serve people of color and other marginalized groups, is a great way of demonstrating your commitment to community and for serving others in need. Set aside time to provide construction services to a local community organization. MBAKS organizes 2-3 community stewardship events each year, such as our annual [Rampathon](#) and [Painting a Better Tomorrow](#). Organizations like United Way King County's Day of Caring or Rebuilding Together organize events where volunteers are dispatched to community organizations in need of remodeling or construction services (such as new paint, new playground, etc.). Similarly, Habitat for Humanity seeks volunteers and material suppliers to help build houses for individuals and families who are unable to purchase a home without assistance. Alternatively, you could also offer a training or DIY clinic at a community-based organization related to homeowner education, water and energy conservation, or indoor air quality.

Performance Requirement: Document services provided with date, description of services, and the organization that you worked with. May be resubmitted for multiple project checklists in a given calendar year.

Points: 5 points

When Verified: Upon completion of service.

Resources:

Habitat for Humanity: <https://www.habitatskc.org/>

United Way Day of Caring: <https://www.uwkc.org/events/day-of-caring/>

MBAKS Community Stewardship: <https://www.mbaks.com/community>

Rebuilding Together Seattle: <http://www.rtseattle.org/>

1-45: Use alternative development and ownership models (e.g., land trust, co-ownership) to create additional pathways to homeownership.

Responsible Party: Builder/Developer

Intent: Traditional paths to homeownership are not sufficient and prevent too many community members from owning their own home. Alternatives to development, alternative ownership models, and alternative financing create additional pathways to address this problem.

Performance Requirement: Work with organizations and financial institutions promoting innovative alternative development opportunities and/or different ownership models.

Points: Earn 8 points for use of alternative development or ownership model leading to homeownership.

When Verified: Upon completion of project.

Cross reference: 1-7

Resources:

Community Land Trusts and Stable Affordable Housing:
<https://www.huduser.gov/portal/pdredge/pdr-edge-featd-article-110419.html>

Shared Equity Models of Ownership: <https://nhc.org/policy-guide/shared-equity-homeownership-the-basics/shared-equity-models-of-ownership/>

SECTION TWO: SITE AND WATER

WATER CONSERVATION

Occupant Water Reduction

Performance Pathway

2-51: Document a water efficiency score through WERS or WRI of 70 or less; OR document at least 30% reduction in total water use, using a baseline of 53 gallons per occupant per day for indoor use.

Responsible Party: Builder, Plumbing Engineer, Landscape Architect, Verifier

Intent: Climate change is making historic precipitation patterns less reliable and increasing occurrences of drought in Washington. While we can't predict which years will see drought, we know that climate change will increase pressures on existing water resources for both people and wildlife. In order to better measure our efforts and impacts in this area we have developed a performance pathway to demonstrate and communicate the impact water-conscious design can have in a measurable way.

Just like using energy performance models that predict and measure a home's energy efficiency, a water efficiency score can do the same for a home's water consumption. Having a measurable water use reduction metric is beneficial for builders, homeowners, and Built Green. Builders and realtors will be able to effectively communicate the expected water bill savings they are providing to potential buyers. Homeowners will be better equipped to compare prospective homes by their expected cost of upkeep. Built Green will be able to accurately measure the water savings of all Built Green homes and draw on those metrics to help local jurisdictions develop more green building incentives for our members.

Performance Requirement: Use one of the following modeling options to document the required reduction in total water use. Food production areas are excluded. For 4-star and 5-star projects it is expected, like the prescriptive pathway requirements, that landscaping requires no potable water irrigation beyond establishment periods (approximately 1 year for vegetation and 3 years for new trees). Rainwater harvesting and greywater systems can be utilized to offset potable water consumption.

Modeling options:

1. Use WRI calculator OR WERS Calculator. Provide final WRI or WERS score summary report.
2. Model using protocols and formulas described in National Green Building Standards 2020 Appendix D: Water Rating Index. Provide an Excel spreadsheet that includes calculations and final WRI score.
3. Submit an Excel file that includes the following three worksheets: Built Green Indoor Water modeling worksheet [indoor use], EPA WaterSense Water Budget Tool, and WA Dept of Ecology Water Harvesting Calculator [outdoor water use]. Total water use from all worksheets is used to determine reduction from baseline. For indoor water use, reduction must be from a baseline of 53 gallons/person/day. For outdoor use, reduction must be from a baseline of irrigated turf grass for all exterior landscaping.

Points Breakdown:

20 points: WERS/ WRI of 70 or less; or 30% reduction of total water use

50 points: WERS/ WRI of 60 or less; or 40% reduction of total water use

80 points: WERS/ WRI of 50 or less; or 50% reduction of total water use

When Verified: <https://www.mbaks.com/advocacy/evergreen-campaign-institute>

Resources:

WERS Certification and calculator: <https://www.wers.us/>

Water Rating Index (NGBS):

https://www.homeinnovation.com/services/certification/green_homes/certified_water_rating

2020 National Green Building Standard guidebook (Appendix D - pg. 245):

https://www.nahbclassic.org/fileUpload_details.aspx?contentID=272893

2020 NGBS Appendix D Water Rating Index interpretation guidance:

https://www.homeinnovation.com/-/media/Files/Certification/Green_Building/NGBS-Interpretation-2020-NGBS-Appendix-D-WRI.pdf

EPA WaterSense Water Budget Tool: <https://www.epa.gov/watersense/water-budget-tool>

Washington Department of Ecology Rainwater Harvesting Calculator:

https://fortress.wa.gov/ecy/wrdocs/WaterRights/wrwebpdf/ecy_rwcalc.xlsm

Built Green Indoor Water modeling spreadsheet:

<https://builtgreen.net/certification/#checklistandhandbook>

2-52 Bonus: achieve Water Efficiency Rating Score (WERS) certification of 70 or less (5 pts).

Responsible Party: Builder, Verifier

Intent: Just like using energy performance models that predict and measure a home's energy efficiency, a water efficiency score can do the same for a home's water consumption. Having a measurable water use reduction metric is beneficial for builders, homeowners, and Built Green. Builders and realtors will be able to effectively communicate the expected water bill savings they are providing to potential buyers. Homeowners will be better equipped to compare prospective homes by their expected cost of upkeep. Built Green will be able to accurately measure the water savings of all Built Green homes and draw on those metrics to help local jurisdictions develop more green building incentives for our members. Incorporating an independent certification provides an additional level of quality assurance to the water efficiency score of a home.

Performance Requirement: Achieve additional certification through WERS with a score of 70 or less. Provide certificate in verification packet.

Points: 5 points

When Verified: Design and completion

Resources:

WERS Verifiers, Certification, and calculator: <https://www.wers.us/>

SECTION THREE: ENERGY EFFICIENCY

PERFORMANCE PATHWAY

3-1: Document an Energy Rating Index (ERI) of 62 or less, before PV solar generation is included.

Responsible Party: Energy Modeler or Verifier

Intent: Provide flexibility in design choices for going beyond code. This includes both more flexibility and providing credit for proper commissioning. The Energy Rating Index (ERI) is a scale with numbers that range from 0 (to represent net-zero energy) to 100 (to represent the approximate efficiency of a home built to the 2006 IECC). Each number on the ERI scale

represents a 1% change in the relative energy efficiency of the building. Each point higher is 1% less efficient, and each point lower is 1% more efficient. Using ERI for compliance allows for more flexibility in how builders obtain energy efficiency in their projects than the prescriptive energy code credits. It also allows for easier comparison and appraisals by homeowners and realtors of green homes across markets and different certifications.

Performance Requirement: Follow RESNET/ANSI Standards as well as IECC ERI Guidance; see resource documents below. Required documentation: summary modeling report showing the pre-solar ERI and post-solar ERI (if applicable). The base ERI requirement of 62 or less must be met before any additional gains to ERI from PV solar are included. Cannot be combined with credits 3-2 or 3-5.

Approved Modeling Software:

- REM/Rate
- Other software may be allowed upon prior approval

Points Breakdown:

30 points: ERI 62-56

60 points: ERI 55-48

90 points: ERI 47 or less

When Verified: Design, commissioning, and completion

Resources:

Implementation Guidelines for the ERI Performance Path: <https://www.resnet.us/wp-content/uploads/Implementation-Guidelines-for-the-ERI-Performance-Path.pdf>

RENET Standards Technical Requirements:

[https://standards.resnet.us/#t=minhers_adv%2FCh_3%2FTechnical_Requirements.htm&rsearch=Table%204.5.2\(1\)&rhlterm=Table%204.5.2\(1\)&rhsyns=](https://standards.resnet.us/#t=minhers_adv%2FCh_3%2FTechnical_Requirements.htm&rsearch=Table%204.5.2(1)&rhlterm=Table%204.5.2(1)&rhsyns=)

Standard for the Calculation and Labeling of the Energy Performance of Low-Rise Residential Buildings using an Energy Rating Index: <https://www.resnet.us/wp-content/uploads/PDS-01-of-BSRRESNETICC-301-2014-Addendum-D-201x.pdf>

Standard for Grading the Installation of HVAC Systems: http://www.resnet.us/wp-content/uploads/archive/resblog/2019/03/WD02_RESNETACCA_310-2019-03-24_clean.pdf

Standard for Testing Airtightness: https://www.resnet.us/wp-content/uploads/ANSIRESNETICC_380-2019_vf1.24.19_cover%5E0TOC-2.pdf

The IECC Energy Rating Index and HERS Index: What's the Difference?:

<https://www.resnet.us/articles/the-iecc-energy-rating-index-and-hers-index-whats-the-difference/>

3-2: Document a reduction in overall home energy use using approved energy modelling software; minimum 6% improvement above 2018 WSEC (use UDRH).

Responsible Party: Energy Modeler or Verifier

Intent: Provide flexibility in modeling and design choices for going beyond code. This primarily includes aligning with processes for local building and utility incentive programs.

Performance Requirement: Follow Performance Path modeling guidance, current NEEA User Defined Reference Homes (UDRH), and REM/Rate libraries. Required documentation: summary modeling report showing percentage of improvement on consumption over the UDRH baseline model. Cannot be combined with credits 3-1 or 3-5.

Approved Modeling Software:

- REM/Rate
- Other software may be allowed upon prior approval

Points Breakdown:

30 points: Minimum 6% above 2018 WSEC

60 points: Minimum 12% above 2018 WSEC

90 points: 18% or more above 2018 WSEC

When Verified: Design, commissioning, and completion

Resources:

REM/Rate v15.7.1 Library Set: <https://betterbuiltnw.com/resources/performance-path-v15-7-1-user-defined-reference-homes-udrh-1>

Northwest Modeling Requirements v18.2: <https://betterbuiltnw.com/resources/northwest-modeling-requirements-v18-2-rem-ratetm-v15-7-1>

User-Defined Reference Homes (UDRH): <https://betterbuiltnw.com/resources/rem-rate-v15-7-1-library-set>

3-3: Built Green Net Zero Certified; requires an ERI of zero or lower.

Responsible Party: Energy Modeler, Verifier

Intent: A Zero Net Energy Home combines state-of-the-art, energy-efficient construction and appliances with renewable energy systems such as solar water heating and electricity, resulting in a house that produces as much or more power than it consumes. Generally, Zero Net Energy Homes are connected to the utility grid, with energy consumption measured on an annual basis, allowing for excess energy produced to be sold back to the utility. Zero Net Energy Homes optimize climate-specific design, passive solar heating and cooling, solar thermal and solar electric systems (active solar), and energy-efficient construction, appliances, and lighting. The goal of this strategy is performance-based, so you must use other credits in this section, as well as other sections from the checklist, as part of your plan to achieve net-zero energy consumption rate for the home. For instance, geothermal heating might help the house achieve net-zero along with photovoltaic power generation, an advanced shell design, a super-high-efficiency distribution system, and exceptional ventilation to reduce cooling loads.

Building a net-zero home is possible with Inland Northwest climate conditions but requires significant upfront planning to ensure the home's ultimate performance. Coordination with the local utility regarding the potential for feeding and selling excess energy into the grid is also required. To guarantee that the home achieves net-zero performance, consult with a Built Green verifier early on in the design process.

Performance Requirement: Follow RESNET/ANSI Standards as well as IECC ERI Guidance. Required documentation: summary modeling report showing pre-solar ERI and post-solar ERI. ERI must be 0 or lower. HERS scores of 0 or less will also be accepted. Net-zero energy homes must not include any use of combustible fuels inside the home. Cannot be combined with credit 3-4.

Approved Modeling Software:

- REM/Rate
- Other software may be allowed upon prior approval

Points: 20 points

When Verified: Design, commissioning, and completion

Cross Reference: Built Green Net Zero Certification requirements

Resources:

What are Zero Energy Homes: <https://zeroenergyproject.org/buy/zero-energy-homes/>

Built Green Net Zero Energy Label: <https://builtgreen.net/blog-detail/builtgreenblog/2018/01/17/spotlight-on-the-built-green-net-zero-energy-label>

Presentation on the What, Why, and How of Net Zero Energy Homes:

<https://builtgreen.net/blog-detail/builtgreenblog/2018/08/15/solar-power-happy-hour>

Mastering Built Green - From 2018 WSEC to Net Zero Homes webinar:

<https://youtu.be/hkcDtzLfT7E>

How to Design a Net-Zero Home: <https://www.architecturaldigest.com/story/how-to-design-a-net-zero-home>

Net-Zero Energy Homes Pay Off Faster Than You Think:

<https://insideclimatenews.org/news/10122018/net-zero-energy-efficiency-home-infographic-solar-pay-off-years-midwest-detroit-chicago-columbus/>

3-4: Net-positive energy produced; requires an ERI of -5 or lower.

Responsible Party: Energy Modeler, Verifier

Intent: Use industry approved standards and processes to showcase a modeled net-positive energy home. Net-positive energy buildings produce more energy from onsite renewable energy sources on average than they import from external energy sources over the course of a year. The additional energy can help offset the energy required for charging one or two electric vehicles, further reducing the homeowner's carbon footprint.

Performance Requirement: Follow RESNET/ANSI Standards as well as IECC ERI Guidance. Required documentation: summary modeling report showing the pre-solar ERI and post-solar ERI. ERI must be -5 or lower. HERS scores of -5 or less will also be accepted. Cannot be combined with credit 3-3.

Approved Modeling Software:

- REM/Rate
- Other software may be allowed upon prior approval

Points: 30 points

When Verified: Design, commissioning, and completion

Cross Reference: Built Green Net Zero Certification requirements

Resources: Pathways to Positive Energy Homes:

<https://zeroenergyproject.org/buy/positive-energy-homes/>

PRESCRIPTIVE PATHWAY

3-5: Prescriptive path: Earn additional credits on R406.3 table worth at least 1.0pt, maximum of 1pt for PV solar.

Responsible Party: Builder, Architect, and Verifier

Intent: Provides a prescriptive approach to incorporating above-code energy and carbon reductions. Each additional 1.0 energy efficiency credit earned from table R406.3 represents an additional 6% savings in building energy use.

Performance Requirement: Section Appendix RA/RB “Optional Energy Efficiency Measures” section of the 2018 WSEC (page 98 of code PDF language). Document which energy credits from table R406.3 were earned, including total amount of credits earned, with pictures and receipts as applicable. If claiming credit for PV solar, a maximum of 1.0 additional energy credits may be claimed for additional Built Green checklist points, and the size of the system (in kWh) must be documented. Cannot be combined with credits 3-1 or 3-2.

Points Breakdown:

30 points: 1.0 credit additional to 2018 WSEC or SEC requirements

60 points: 2.0 credits additional to 2018 WSEC or SEC requirements

90 points: 3.0 credits additional to 2018 WSEC or SEC requirements

When Verified: Design, commissioning, and completion

Resources:

2018 Washington State Energy Code Residential:

https://sbcc.wa.gov/sites/default/files/2021-01/2018%20WSEC_R%20Final%20package2.pdf

3-8: Take PTCS Commissioning trainings from Bonneville Power Administration’s Performance Tested Comfort Systems team. University of Washington offers courses on refrigeration handling in the HVAC realm that, when taken, qualify for this credit.

Responsible Party: HVAC Commissioning Agent or Verifier

Intent: Paul Hawken’s book, Drawdown, calculates and rates the environmental and financial impacts of addressing carbon output across various sectors. According to Drawdown, the number one action we can take to fix our greenhouse gas problem is reducing the impact of high-global-warming-potential (GWP) refrigerants.

According to the Bonneville Power Administration, heating and cooling systems consume nearly half of the energy used in the home. By upgrading to a high-efficiency heat pump system and addressing any leaks in the duct system, you can minimize heating and cooling costs. Yet not all technicians are equal when it comes to HVAC efficiency. When a heat pump is commissioned by a Performance Tested Comfort Systems (PTCS) certified technician, it helps ensure it is installed at the highest level of performance for home comfort and energy savings. A PTCS certified technician is trained to properly size your system and recommend the best equipment for your home, install heat pumps and seal ducts to standards significantly above code, and voluntarily submit work completed to third-party inspections. This ensures that systems are properly installed and capable of performing at the level of efficiency, comfort, and durability they're designed to achieve.

Along with the benefits of a quality installation, PTCS certified work also gives you access to financial benefits such as utilities incentive programs and tax credits.

Performance Requirement: Provide certification of completion of course(s) that includes the date of completion. Training must be completed prior to commissioning work to be performed on the units. Courses taken through the University of Washington require prior approval from Built Green Program Manager to be accepted.

Points: 2 points

When Verified: Design

Resources:

The Cost of Comfort: Climate Change and Refrigerants:

<https://www.buildinggreen.com/feature/cost-comfort-climate-change-and-refrigerants>

Performance Tested Comfort Systems: <https://ptcs.bpa.gov/About.aspx>

PTCS Certification for Builders: <https://www.bpa.gov/EE/Sectors/Residential/Pages/PTCS-Participation-and-Certification.aspx>

PTCS training for current certified RESNET raters:

<https://portal.resnet.us/?returnUrl=https%3A%2F%2Fportal.resnet.us%2FTP>

3-13: Submit design using ACCA Manual D, J, and S or BetterBuiltNW HVAC Sizing Tool for the sizing and selection of space conditioning and distribution systems; or submit compliance with Grade I of RESNET's Standard 310-2020.

Responsible Party: HVAC Designer or Energy Modeler or Verifier

Intent: Ensure that all installed heating, ventilation, and cooling equipment is properly sized, designed, and commissioned correctly. Performance is predicated on proper design within equipment tolerances.

Performance Requirement: Provide ACCA Manual J, D, and S reports to Verifier or BetterBuiltNWs HVAC ST report. Manufacturer selection tools typically qualify for the Manual S component of this requirement, but Manual J and D must be completed with ACCA or BetterBuiltNW approved software.

Points: 2 points

When Verified: Design

Resources:

BetterBuiltNW HVAC Sizing Tool: <https://betterbuiltnw.com/hvac-sizing-tool>

ACCA Approved Software: <https://www.acca.org/standards/approved-software>

SECTION FIVE: MATERIALS EFFICIENCY

5-11: Use deconstruction to dismantle existing building and salvage materials for reuse (requires professional salvage assessment).

Responsible Party: Builder

Intent: This credit is designed to salvage valuable, reusable building materials from existing onsite buildings through deconstruction for reuse in other projects. Reuse includes selling, donating, or reusing the materials onsite or for other projects.

Salvageable materials include but are not limited to:

- Lighting and hardware
- Mantels
- Timbers and framing
- Tongue and groove paneling
- Flooring
- Trim and molding
- Shelving
- Sinks
- Bathtubs
- Built-in china hutches
- Wrought iron railings
- Bricks
- Pavers
- Cabinets
- Tile
- Glass blocks
- Doors
- Countertops
- Mirrors and vanity cabinets
- Antique architectural elements

Also included, but consider energy and water efficiency tradeoffs:

- Faucets and toilets
- Windows
- Appliances (less than 5 years old)

Note: prior to beginning any renovation or demolition work, an asbestos survey must be performed by an accredited AHERA Building Inspector. In addition, a completed Notice of Intent must be submitted before any asbestos removal, and all asbestos-containing materials must be removed by asbestos workers prior to demolition. See your local jurisdictions to learn more about asbestos rules.

Performance Requirement: Requires salvage assessment conducted by a salvage professional with final amount of salvageable materials described by type and total weight (credit 5-10). Use deconstruction to dismantle existing buildings prior to any demolition work and salvage reusable materials for reuse. Determine amount salvaged by comparing the total weight in the assessment with the amount actually salvaged by weight.

Points Breakdown:

5 points: Deconstruct existing buildings or structures

8 points: Deconstruct and salvage at least 20% of all salvageable materials by weight

10 points: Deconstruct and salvage 50% or more of all salvageable materials by weight

When Verified: Demolition

Cross Reference: 5-10

Resources: Northwest Building Salvage Network: <https://www.nbsnseattle.org/>

5-14: Use a three-bin waste separation system: one for landfill, one for commingled recycling, one for phase-appropriate source-separated recycling.

Responsible Party: Builder

Intent: Recycle the greatest amount of construction and demolition “waste” materials possible while retaining value and quality of the materials for recycling. Utilizing three bins—one for comingled recycling, one for waste, and one for source-separated recycling—will result in cleaner, higher-quality, and pre-sorted materials sent to recycling facilities, ensuring that more materials are truly diverted from landfills.

Performance Requirement: Must demonstrate that an appropriately sized comingled C&D recycling container and a waste C&D container (for landfill) have been onsite for the duration of the construction project. A third phase-appropriate container should be utilized to facilitate source-separated recycling of specific materials, e.g., wood during framing,

gypsum board during drywalling, and cardboard during finish installation. Verification should be done by assessing C&D hauling receipts.

Points: 5 points

When Verified: Demolition and construction

Resources:

Construction and Demolition Debris Section of King County's "What Do I Do With....?" Database: <https://info.kingcounty.gov/services/recycling-garbage/solid-waste/what-do-i-do-with/Materials?cat=17>

Washington State regulations (WAC 173-345-040) require a separate collection container be provided for waste at jobsites that conduct recycling:

<https://apps.leg.wa.gov/WAC/default.aspx?cite=173-345-040>

5-15: Send at least 90% of jobsite waste (by weight, excluding concrete, brick, and asphalt) to a commingled recycling facility with a minimum of 50% diversion rate.

Responsible Party: Builder

Intent: Divert valuable materials from landfill

Performance Requirement: The project must divert at least 50% of the jobsite waste (by weight, excluding concrete) to a Commingled Recycling Facility with an "appropriate for processing recycling rate of 50, 75, or 90%." Verification should be done by assessing C&D hauling receipts. See Built Green Recycling Guidelines for the approved facility diversion rates. Any use of a recycling facility not listed in the guidelines must be approved by the Built Green Program Manager prior to use. Verification should be completed by assessing C&D hauling receipts.

Points Breakdown:

8 points: Facility with a diversion rate of at least 50%

12 points: Facility with a diversion rate of at least 75%

15 points: Facility with a diversion rate of at least 90%

Resources:

Built Green Recycling Guidelines:

<https://builtgreen.net/certification/#checklistandhandbook>

EMBODIED CARBON

5-97: Use materials with Environmental Product Declaration (EPD)

Responsible Party: Architect, Builder

Intent: The intent of Environmental Product Declarations (EPD) is to increase transparency around the environmental performance or impact of any product or material over its entire life cycle. To create an EPD, a manufacturer must conduct a life cycle assessment of their product following ISO standards and have the assessment third-party verified. EPDs allow architects, engineers, and designers to compare materials and products to select the option that supports the most sustainable result and lowers embodied carbon. An EPD is not a claim of environmental superiority for a specific product or material. Some local jurisdictions, like Seattle, are now requiring the use of EPDs on all projects receiving green building incentives.

Performance Requirement: Specify and select materials and products that have EPDs. EPD must be third-party verified and valid at the time of specification and purchase.

Points: 1 point per EPD. Maximum of 10 points.

When Verified: Design and completion

Resources:

Simple guide to Environmental Product Declarations: <https://www.oneclicklca.com/simple-epd-guide/>

Model LCA Specifications: <https://www.buildingtransparency.org/en/ec3-resources/ec3-downloads/>

5-98: Request product-specific EPDs from vendors or manufacturers for materials that do not have one.

Responsible Party: Architect, Builder

Intent: Creating EPDs is a voluntary act by the manufacturer, and while many manufacturers have chosen to disclose the environmental impacts of their products, many still have not taken the step. One reason is that they don't see a business case for incurring the cost of creating an EPD. The lack of EPDs in the construction industry creates gaps in our understanding of the environmental impact of the products and materials used for Built Green projects, increases the difficulty of comparing similar products, and hinders the accurate calculation of embodied carbon emissions of a project. Our Built Green architects and builders can leverage their purchasing power to communicate the benefits of and

need for transparency concerning a product's life cycle to manufacturers and distributors so they can quantify the economic benefit of providing the EPD.

Performance Requirement: Prior to sending a letter, contact the sales representative or manufacturer to confirm they do not have an EPD available for the specific material or product. If using the Building Transparency letter template, please include a mention of Built Green where it says "LEED." Builder is limited to claiming one letter per product. Non-transferable or repeatable across multiple projects for the same product.

Points: 1 point per letter. Maximum 5 points.

When Verified: Design

Resources: EPD Request Letter templates: <https://www.buildingtransparency.org/en/ec3-resources/ec3-downloads/>

5-99: Calculate the embodied carbon of the new building OR Calculate an embodied carbon baseline and show at least a 10% reduction.

Responsible Party: Architect, Verifier

Intent: Embodied carbon is the sum of all the greenhouse gas emissions (mostly carbon dioxide) resulting from the mining, harvesting, processing, manufacturing, transporting, and installation of building materials. Current building codes and Built Green energy efficiency credits reduce operational carbon emissions, but do not typically address the impacts of embodied carbon from the materials and products used in new homes. Looking at total greenhouse gas emissions from new buildings to be built over the next ten years—the critical period for action on the climate emergency—Architecture 2030 estimates that 74% will come from embodied emissions. So, lowering embodied carbon emissions is even more urgent than lowering operating emissions.

As building operations become more efficient, these embodied impacts related to producing building materials become increasingly significant.

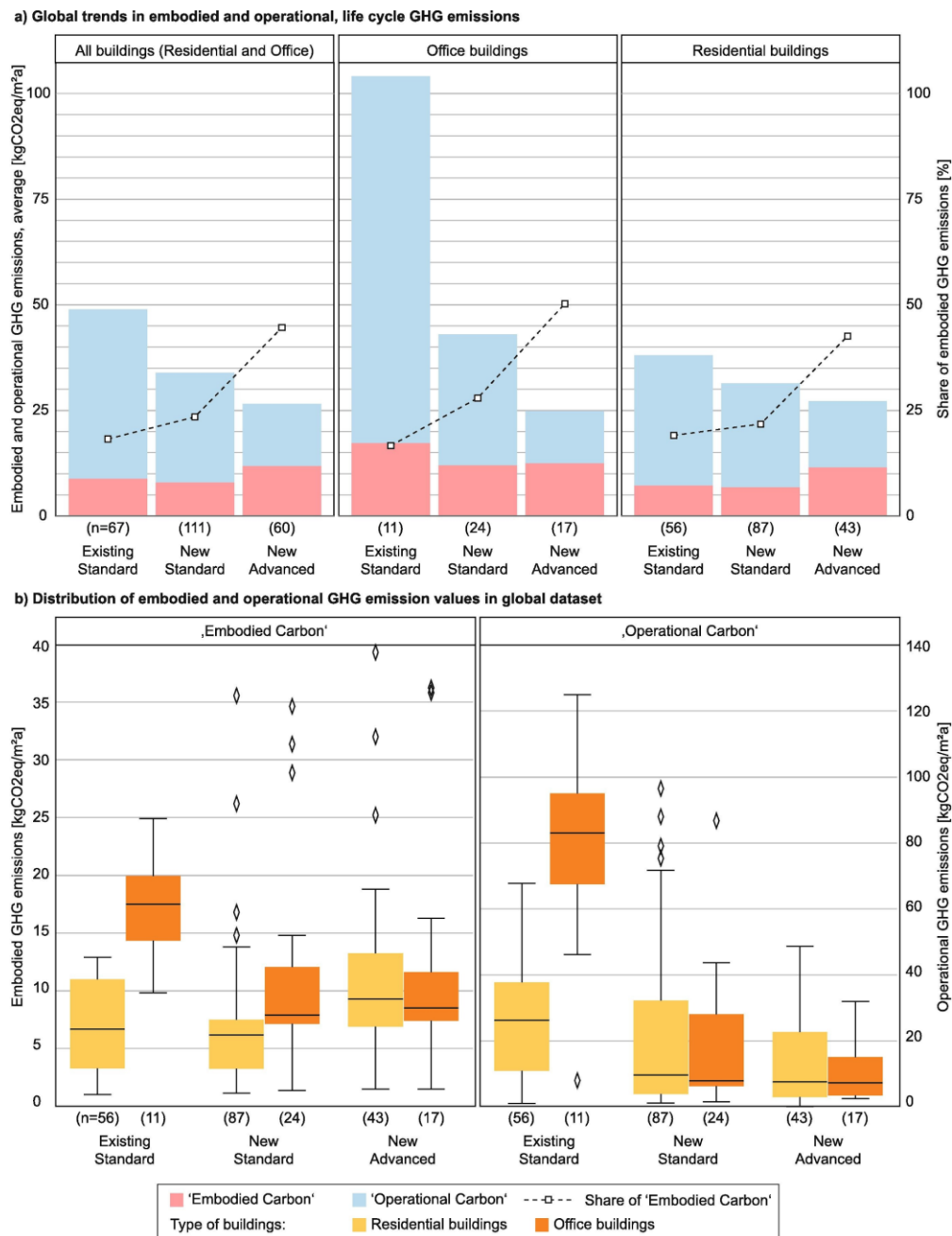


Fig. Global trends in buildings' life cycle GHG emissions (a), and distribution of GHG emission values (b) for residential and office buildings by energy performance class. Source: <https://doi.org/10.1016/j.apenergy.2019.114107>

Rock et al. (2020) found that, “there has been a global escalation of the contribution of embodied greenhouse gas (GHG) emissions in both residential and office buildings – from ~20% to ~50% in new advanced buildings, surpassing 90% in extreme cases. This relative increase in embodied GHG emissions is mainly because operational GHG emissions have dropped in the transition from existing buildings to buildings with new and advanced standards... buildings with newly advanced standards show a substantially higher share of

embodied GHG emissions, which means that most of the GHG emissions saved through energy efficiency measures have been lost or even outweighed through extra emissions from building materials and technical systems.”

Just having net-zero homes and buildings will not save us from the worst of the climate change forecasts, as studies have shown that over the next 20 years embodied carbon emissions will outweigh the operating emissions from buildings. As the saying goes, if you do not measure it, how do you hope to improve it?

Performance Requirement: The embodied carbon emissions of the project shall be calculated using one of the approved LCA modeling tools. Calculations should list the estimated carbon impact of each of the final construction materials and processes associated with the foundation, structure, enclosure, and interior of the project. All projects should use a standard 50-year lifespan when calculating embodied carbon for consistency and to ensure buildings with longer lifespans are not penalized for the carbon impacts of replacing materials over time.

For materials where there are no EPDs or product data in the LCA tool’s database you have the following two options:

1. Find a similar product (ingredients and manufacturing location) to use in the model as a stand-in and call out each material that was substituted in the overall assessment. Must meet ISO 21930:2017 standards for comparability. Please see EPD comparability video by the Carbon leadership Forum in Resources.
2. List excluded materials in the comments of the overall assessment with an explanation of why they are not included.

Preliminary embodied carbon should be calculated based upon the design and utilized to make design decisions resulting in the selection of lower embodied carbon materials, products, and mechanical systems. When construction has been completed, all materials and products and their quantities should be verified and updated as needed to calculate the final embodied carbon emissions.

Approved LCA modeling tools:

- Embodied Carbon Construction Calculator (EC3)
- Tally
- Athena Impact Estimator
- One-Click LCA

Points Breakdown:

20 points: calculate the embodied carbon of the building

30 points: create an embodied carbon baseline and show an embodied carbon reduction of at least 10%.

When Verified: Design and completion

Cross Reference: 5-97, 5-98, and 5-100

Resources:

Embodied GHG emissions of buildings – The hidden challenge for effective climate change mitigation: <https://doi.org/10.1016/j.apenergy.2019.114107>

The Urgency of Embodied Carbon and What You Can Do about It: <https://www.buildinggreen.com/feature/urgency-embodied-carbon-and-what-you-can-do-about-it>

Carbon Leadership Forum: <https://carbonleadershipforum.org/>

Architecture 2030: <https://architecture2030.org/new-buildings-embodied/>

Embodied Carbon Tools: Assessing the Options: <https://www.buildinggreen.com/news-analysis/embodied-carbon-tools-assessing-options>

Carbon Leadership Forum resources and EC3 tool videos: <https://carbonleadershipforum.org/resource-library/>

Carbon Leadership Forum- EPD Comparability for EC3 tool: <https://youtu.be/GgrifjsOE1Q>

Building Transparency (EC3 tool): <https://www.buildingtransparency.org/en/>

ULI Embodied Carbon in Building Materials for Real Estate: <https://americas.uli.org/research/centers-initiatives/greenprint-center/greenprint-resources-2/best-practices-in-sustainable-real-estate/embodied-carbon-in-building-materials-for-real-estate/>

Builders for Climate Action: <https://www.buildersforclimateaction.org/>

5-100: Use a minimum of 250 square feet of carbon-neutral, carbon-negative, or climate-positive materials.

Responsible Party: Architect, Builder

Intent: Carbon-neutral materials release net-zero carbon emissions into the atmosphere over their life cycle. Carbon-negative or climate-positive materials go beyond net-zero carbon and actually create an environmental benefit by sequestering or removing additional carbon dioxide from the atmosphere.

Examples of applicable products

- Salvaged and reused building materials
- Natural linoleum
- Sheep wool carpet and insulation
- Cork flooring, wall paneling, insulation
- Sustainably grown and harvested bamboo
- Locally harvested, third-party certified sustainably harvested wood products

Performance Requirement: Specify and install a minimum of 250 square feet of carbon-neutral, carbon-negative, or climate-positive materials.

Points: 1 point per product. 5 points maximum. May be combined with other Design and Material Selection credits.

When Verified: Design and completion

Cross Reference: See Design and Material Selection credits

Resources:

Carbon smart materials palette: <https://materialspalette.org/>

2030 Palette: <http://www.2030palette.org/>

The New Carbon Architecture-Building to Cool the Climate, Bruce King (2017):
<https://www.ecobuildnetwork.org/>

Greenhome Solutions: <https://www.ghsproducts.com/>

Habitat for Humanity ReStores: <https://www.habitat.org/restores>

Northwest Building Salvage Network: <https://www.nbsnseattle.org/>