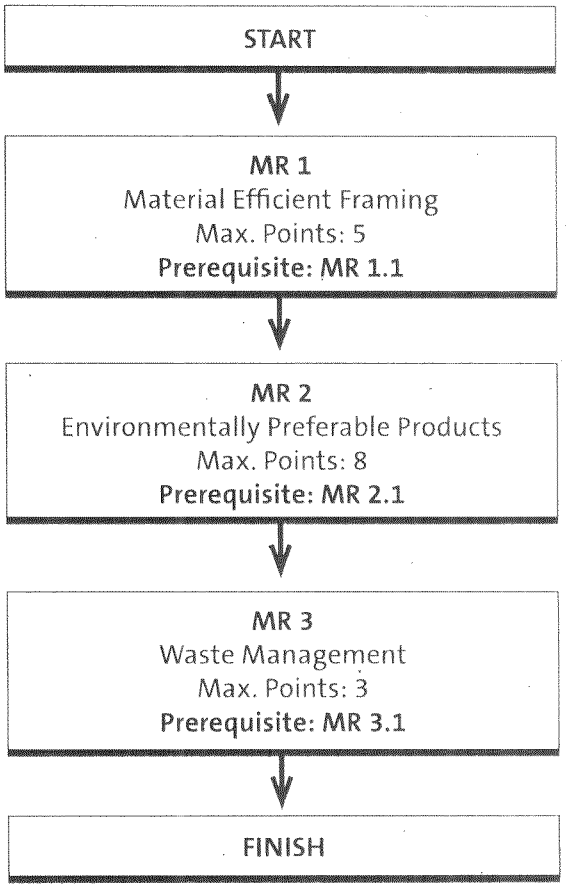
South Shore Iron Works, Inc.
CONFIDENTIAL

					Max Points Available	Project Points Y / Pts	No	Maybe
Water Efficiency (WE) (Minimum of 3 WE Points Required)				*OR*				
1. Water Reuse		1.1	Rainwater Harvesting System	WE 1.3	4			
		1.2	Graywater Reuse System	WE 1.3	1			
	☐	1.3	Use of Municipal Recycled Water System		3			
2. Irrigation System	☐	2.1	High Efficiency Irrigation System	WE 2.3	3			
		2.2	Third Party Inspection	WE 2.3	1			
	☐	2.3	Reduce Overall Irrigation Demand by at Least 45%		4			
3. Indoor Water Use		3.1	High-Efficiency Fixtures and Fittings		3			
		3.2	Very High Efficiency Fixtures and Fittings		6			
				Sub-Total for WE Category:	*15*		*0*	
Energy and Atmosphere (EA) (Minimum of 0 EA Points Required)				*OR*		Y / Pts	No	Maybe
1. Optimize Energy Performance		1.1	Performance of ENERGY STAR for Homes		Prerequisite			
		1.2	Exceptional Energy Performance		34			
7. Water Heating	☐	7.1	Efficient Hot Water Distribution		2			
		7.2	Pipe Insulation		1			
11. Residential Refrigerant Management		11.1	Refrigerant Charge Test		Prerequisite			
		11.2	Appropriate HVAC Refrigerants		1			
				Sub-Total for EA Category:	*38*		*0*	
Materials and Resources (MR) (Minimum of 2 MR Points Required)				*OR*		Y / Pts	No	Maybe
1. Material-Efficient Framing		1.1	Framing Order Waste Factor Limit		Prerequisite			
		1.2	Detailed Framing Documents	MR 1.5	1			
		1.3	Detailed Cut List and Lumber Order	MR 1.5	1			
		1.4	Framing Efficiencies	MR 1.5	3			
		1.5	Off-site Fabrication		4			
2. Environmentally Preferable Products	☐	2.1	FSC Certified Tropical Wood		Prerequisite			
	☐	2.2	Environmentally Preferable Products		8			
3. Waste Management		3.1	Construction Waste Management Planning		Prerequisite			
		3.2	Construction Waste Reduction		3			
				Sub-Total for MR Category:	*16*		*0*	
Indoor Environmental Quality (EQ) (Minimum of 6 EQ Points Required)				*OR*		Y / Pts	No	Maybe
1. ENERGY STAR with IAP		1	ENERGY STAR with Indoor Air Package		13			
2. Combustion Venting		2.1	Basic Combustion Venting Measures	EQ 1	Prerequisite			
		2.2	Enhanced Combustion Venting Measures	EQ 1	2			
3. Moisture Control		3	Moisture Load Control	EQ 1	1			
4. Outdoor Air Ventilation	☐	4.1	Basic Outdoor Air Ventilation	EQ 1	Prerequisite			
		4.2	Enhanced Outdoor Air Ventilation		2			
		4.3	Third-Party Performance Testing	EQ 1	1			
5. Local Exhaust	☐	5.1	Basic Local Exhaust	EQ 1	Prerequisite			
		5.2	Enhanced Local Exhaust		1			
		5.3	Third-Party Performance Testing		1			
6. Distribution of Space Heating and Cooling	☐	6.1	Room-by-Room Load Calculations	EQ 1	Prerequisite			
		6.2	Return Air Flow / Room by Room Controls	EQ 1	1			
		6.3	Third-Party Performance Test / Multiple Zones	EQ 1	2			
7. Air Filtering		7.1	Good Filters	EQ 1	Prerequisite			
		7.2	Better Filters		1			
		7.3	Best Filters	EQ 7.2	2			
8. Contaminant Control	☐	8.1	Indoor Contaminant Control during Construction	EQ 1	1			
		8.2	Indoor Contaminant Control		2			
	☐	8.3	Preoccupancy Flush	EQ 1	1			
9. Radon Protection	☐	9.1	Radon-Resistant Construction in High-Risk Areas	EQ 1	Prerequisite			
	☐	9.2	Radon-Resistant Construction in Moderate-Risk Areas	EQ 1	1			
10. Garage Pollutant Protection		10.1	No HVAC in Garage	EQ 1	Prerequisite			
		10.2	Minimize Pollutants from Garage	EQ 1	2			
		10.3	Exhaust Fan in Garage	EQ 1	1			
		10.4	Detached Garage or No Garage	EQ 1, 10.2, 10.3	3			
				Sub-Total for EQ Category:	*21*		*0*	
Awareness and Education (AE) (Minimum of 0 AE Points Required)						Y / Pts	No	Maybe
1. Education of the Homeowner or Tenant	☐	1.1	Basic Operations Training		Prerequisite			
	☐	1.2	Enhanced Training		1			
	☐	1.3	Public Awareness		1			
2. Education of Building Manager	☐	2	Education of Building Manager		1			
				Sub-Total for AE Category:	*3*		*0*	
				LEED for Homes Point Totals:	*136*		*0*	
				(Certification level)			Not Certified	

Materials and Resources (MR)

Pathway through the MR Category

Important Note: A minimum of **2 points** must be achieved in the MR Category



MR 1: Material-Efficient Framing
Maximum points: 5

Intent

Optimize the use of framing materials.

Requirements

Prerequisites

1.1 Framing Order Waste Factor Limit. Limit the overall estimated waste factor to 10% or less. If the waste factor on any portion of the framing order exceeds 10%, calculate the overall waste factor as shown in **Table 22**.

Waste factor is defined as the percentage of framing material ordered in excess of the estimated material needed for construction.

Table 22: Sample Framing Order Waste Factor Calculation

Framing component	Total cost	Waste factor	Waste cost
Random lengths	$1,000	15%	$150
Studs	$2,000	5%	$100
Beams and headers	$500	20%	$100
Roof deck	$2,000	0%	$0
Wall sheathing	$0	0%	$0
Rafters	$2,000	0%	$0
Ceiling joists	$1,500	10%	$150
Cornice work	$3,000	10%	$300
TOTAL	**$12,000**		**$1,000**
Overall waste factor (waste $ / cost $)			**8.3%**

Credits

1.2 Detailed Framing Documents (1 point). Prior to construction, create detailed framing plans or scopes of work and accompanying architectural details for use on the job site. Indicate the specific locations, spacing, and sizes of all framing members in the floors, walls, roof, and ceiling (if different from the roof).

1.3 Detailed Cut List and Lumber Order (1 point). The requirements in MR 1.2 must be met to earn this credit. Prior to construction, create a detailed cut list and lumber order that corresponds directly to the framing plans and/or scopes of work.

AND/OR

1.4 Framing Efficiencies (maximum 3 points). Implement measures from **Table 23**.

OR

1.5 Off-Site Fabrication (4 points). Use either of the following alternatives to on-site framing:

a) Panelized construction. Wall, roof, and floor components are delivered to the job site preframed.

b) Modular, prefabricated construction. All principal building sections are delivered to the job site as prefabricated modules.

Table 23: Efficient Framing Measures

Measure	Points
Precut framing packages	1.0
Open-web floor trusses	1.0
Structural insulated panel (SIP) walls	1.0
SIP roof	1.0
SIP floors	1.0
Stud spacing greater than 16" o.c	1.0
Ceiling joist spacing greater than 16" o.c.	0.5
Floor joist spacing greater than 16" o.c.	0.5
Roof rafter spacing greater than 16" o.c.	0.5
Implement any 2 of the following: ■ Size headers for actual loads ■ Use ladder blocking or drywall clips ■ Use 2-stud corners	0.5

Note: Alternative measures not listed in Table 23 may be eligible to earn points if they save comparable amounts of framing material. A formal credit interpretation request with full justification of any alternative measure's potential savings must be submitted by the Provider to USGBC.

Synergies and Trade-Offs

Reduced framing can reduce the number and size of thermal breaks and increase the amount of insulation installed, leading to better energy performance (EA 1 and 2).

Credit MR 1.2 is a prerequisite for MR 1.3. A home that earns points for MR 1.2, 1.3 and 1.4 cannot earn points for MR 1.5, and vice versa.

Optimizing the use of framing will reduce the amount of construction waste (MR 3.2).

MR 2: Environmentally Preferable Products
Maximum points: 8

Intent

Increase demand for environmentally preferable products and products or building components that are extracted, processed, and manufactured within the region.

Requirements

Prerequisites

2.1 FSC Certified Tropical Wood. Meet the following two requirements, as applicable:

a) Provide all wood product suppliers with a notice (see **Figure 6**, below) containing all the following elements:

i. a statement that the builder's preference is to purchase products containing tropical wood only if it is FSC-certified;

ii. a request for the country of manufacture of each product supplied; and

iii. a request for a list of FSC-certified tropical wood products the vendor can supply.

b) If tropical wood is intentionally used (i.e., specified in purchasing documents), use only FSC-certified tropical wood products. Reused or reclaimed materials are exempt.

Note: A species of wood is considered tropical for the purposes of this prerequisite if it is grown in a country that lies between the Tropics of Cancer and Capricorn.

Credits

2.2 Environmentally Preferable Products (0.5 point each, maximum 8 points). Use building component materials that meet one or more of the criteria below. Except as noted in **Table 24**, a material must make up 90% of the component, by weight or volume. A single component that meets each criterion (i.e., environmentally preferable, low emissions, and local sourcing) can earn points for each.

a) Environmentally preferable products (0.5 point per component). Use products that meet the specifications in **Table 24**.

Note: Recycled content products must contain a minimum of 25% postconsumer recycled content, except as noted in **Table 24**. *Postindustrial (preconsumer) recycled content must be counted at half the rate of postconsumer content.*

AND/OR

b) Low emissions (0.5 point per component). Use products that meet the emissions specifications in **Table 24**.

AND/OR

c) Local production (0.5 point per component). Use products that were extracted, processed, and manufactured within 500 miles of the home.

Table 24: Environmentally Preferable Products

Assembly	Component	EPP specifications (0.5 point per component)	Emission specifications (0.5 point per component)	Local production (0.5 point per component)
Exterior wall	Framing/wall structure	Concrete wall structure: Use 30% fly ash or slag wood frame: FSC-certified or reclaimed or finger joint studs	*N/A*	Eligible
Exterior wall	Siding or masonry	Recycled content, reclaimed, or FSC-certified	*N/A*	Eligible
Floor	Flooring (45% of total floor area)	Linoleum, cork, bamboo, FSC-certified or reclaimed wood, sealed concrete, recycled-content flooring, or *combination*	Carpet & pad: all carpet & pad complies with Carpet & Rug Institute Green Label Plus program Hard flooring: automatic 1/2 point for 100% hard surface flooring Hard flooring: additional 1/2 point for using a product that is SCS FloorScore certified	Eligible
Floor	Flooring (90% of total floor area)	Meet specifications above to receive *additional* 0.5 point		Eligible (*additional* 0.5 point)
Floor	Framing	FSC-certified or reclaimed	*N/A*	Eligible
Foundation	Aggregate	*N/A*	*N/A*	Eligible
Foundation	Cement	Use 30% fly ash or slag	*N/A*	Eligible
Interior wall	Framing	FSC-certified or reclaimed	*N/A*	Eligible
Interior walls AND ceilings	Gypsum board	*N/A*	*N/A*	Eligible
Interior walls AND ceilings AND millwork	Paints and coatings	Recycled paint that meets Green Seal standard GS-43	Use products that comply with all applicable standards in Table 25.	Not eligible
Landscape	Decking or patio material	Recycled content, FSC-certified, or reclaimed	*N/A*	Eligible
Other	Cabinets	Recycled content, FSC-certified, or reclaimed AND composite materials must contain no added urea-formaldehyde resins	*N/A*	Eligible
Other	Counters (kitchens and bathrooms)	Recycled content, FSC-certified, or reclaimed AND composite materials must contain no added urea-formaldehyde resins	*N/A*	Eligible
Other	Doors (not including garage or insulated doors)	Recycled content, FSC-certified, or reclaimed	*N/A*	Eligible
Other	Trim	Recycled content, FSC-certified, or reclaimed AND composite materials must contain no added urea-formaldehyde resins	*N/A*	Eligible
Other	Adhesives and sealants	*N/A*	Use products that comply with all applicable standards in Table 26.	Not eligible
Other	Window framing	Recycled content, FSC-certified, or reclaimed	*N/A*	Eligible
Roof	Framing	FSC-certified	*N/A*	Eligible
Roof	Roofing	Recycled content	*N/A*	Eligible
Roof AND floor AND wall	Insulation	Recycled content of 20% or more	Comply with California Practice for Testing of VOCs from Building Materials Using Small Chambers: www.dhs.ca.gov/ehib/IAQ/VOCS/Practice.htm	Eligible
Roof, floor, wall (2 of 3)	Sheathing	Recycled content, FSC-certified, or reclaimed	*N/A*	Eligible

Figure 6: Example Notice to Wood Products Suppliers

Notice to Vendors: [The company] prefers to purchase products that contain tropical wood only if they are certified according to the guidelines of the Forest Stewardship Council (FSC). Please provide the country of manufacture of each product you expect to supply to us. Also please provide a list of FSC-certified products you can supply.

Table 25: Standards for Environmentally Preferable Paints and Coatings

Component	Applicable standard (VOC content)	Reference
Architectural paints, coatings and primers applied to interior walls and ceilings	Flats: 50 g/L Nonflats: 150 g/L	Green Seal Standard GS-11, Paints, 1st Edition, May 20, 1993
Anticorrosive and antirust paints applied to interior ferrous metal substrates	250 g/L	Green Seal Standard GC-03, Anti-Corrosive Paints, 2nd Edition, January 7, 1997
Clear wood finishes	Varnish: 350 g/L Lacquer: 550 g/L	South Coast Air Quality Management District Rule 1113, Architectural Coatings
Floor coatings	100 g/L	
Sealers	Waterproofing: 250 g/L Sanding: 275 g/L All others: 200 g/L	
Shellacs	Clear: 730 g/L Pigmented: 550 g/L	
Stains	250 g/L	

Synergies and Trade-Offs

Products with low emissions of volatile organic compounds (VOCs) may improve indoor air quality. Such products are included in this credit rather than in the EQ section in order to consolidate information pertaining to materials selection, specification, and purchase.

A substantial amount of energy is used to transport materials from product manufacturing plants to home construction sites. Choosing local products will reduce the embedded transportation energy usage associated with construction.

Table 26: Standards for Low-Emissions Adhesives and Sealants (meet South Coast Air Quality Management District Rule #1168)

	Applicable standard (VOC content, g/L less water)
Architectural applications	
Indoor carpet adhesives	50
Carpet pad adhesives	50
Wood flooring adhesives	100
Rubber floor adhesives	60
Subfloor adhesives	50
VCT and asphalt adhesives	50
Drywall and panel adhesives	50
Cove base adhesives	50
Multipurpose construction adhesives	70
Structural glazing adhesives	100
Specialty applications	
PVC welding	510
CPVC welding	490
ABS welding	325
Plastic cement welding	250
Adhesive primer for plastic	550
Contact adhesive	80
Special-purpose contact adhesive	250
Structural wood member adhesive	140
Sheet-applied rubber lining operations	850
Top and trim adhesive	250
Substrate-specific applications	
Metal to metal	30
Plastic foams	50
Porous materials (except wood)	50
Wood	30
Fiberglass	80
Sealants	
Architectural	250
Nonmembrane roof	300
Roadway	250
Single-ply roof membrane	450
Other	420
Sealant primers	
Architectural nonporous	250
Architectural porous	775
Other	750

MR 3: Waste Management
Maximum points: 3

Intent

Reduce waste generation to a level below the industry norm.

Requirements

Prerequisites

3.1 Construction Waste Management Planning. Complete the following tasks related to management of construction waste:

a) Investigate and document local options for diversion (e.g. recycling, reuse) of all anticipated major constituents of the project waste stream, including cardboard packaging and household recyclables (e.g., beverage containers).

b) Document the diversion rate for construction waste. Record the diversion rate for land clearing and/or demolition, if applicable (e.g., on gut rehab project), separately from the rate for the new construction phase of the project.

Credits

3.2 Construction Waste Reduction (maximum 3 points). Reduce or divert waste generated from new construction activities from landfills and incinerators to a level below the industry norm. Use either of two options:

a) Reduced construction waste. Generate 2.5 pounds (or 0.016 cubic yards) or less of net waste (not including waste diverted for reclamation or recycling) per square foot of conditioned floor area. Use column 1 or 2 and column 5 of **Table 27** to determine the score.[2]

b) Increased waste diversion. Divert 25% of more of the total materials taken off the construction site from landfills and incinerators. Use column 3 or 4 and column 5 of **Table 27** to determine the score; calculate the percentage using either weight or volume.

Note: Land clearing and demolition waste (e.g., from removal of preexisting structures on the site) should not be counted in this calculation.

Synergies and Trade-Offs

Waste can be minimized by creating a detailed framing plan and using advanced framing techniques or off-site fabrication (MR 1).

The use of products with reclaimed or recycled content (MR 2.2) reduces both the production of new materials and the burden on landfills.

2. The industry average is 4.2 pounds (0.0265 cubic yards) of waste per square foot of conditioned floor area, based on data provided by the National Association of Home Builders' Research Center.

Table 27: Waste Diversion

Amount to landfills and incinerators				
Reduced construction waste		Increased waste diversion		
Pounds / ft²	Cubic yards / 1,000 ft²	Percentage waste	Percentage diverted	Points
4.0	25.5	100%	0%	0.0
3.5	22.3	88%	13%	0.0
3.0	19.1	75%	25%	0.5
2.5	15.9	63%	38%	1.0
2.0	12.8	50%	50%	1.5
1.5	9.6	38%	63%	2.0
1.0	6.4	25%	75%	2.5
0.5	3.2	13%	88%	3.0

No Waste all items made in Factory