BUILDINGENERGY NYC

Design for Freedom: A Call to Action

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Northeast Sustainable Energy Association (NESEA)
September 15, 2022


design for FREEDOM
designing a more just and humane future in the built environment

Grace Farms Foundation's interdisciplinary humanitarian mission aims to end modern slavery and gender-based violence, while creating more grace and peace in our local and global communities.

Grace Farms' SANAA-designed site breaks down barriers between people and across sectors.

The built environment is inextricably linked to nature and people.

The built environment has a relationship with nature and people

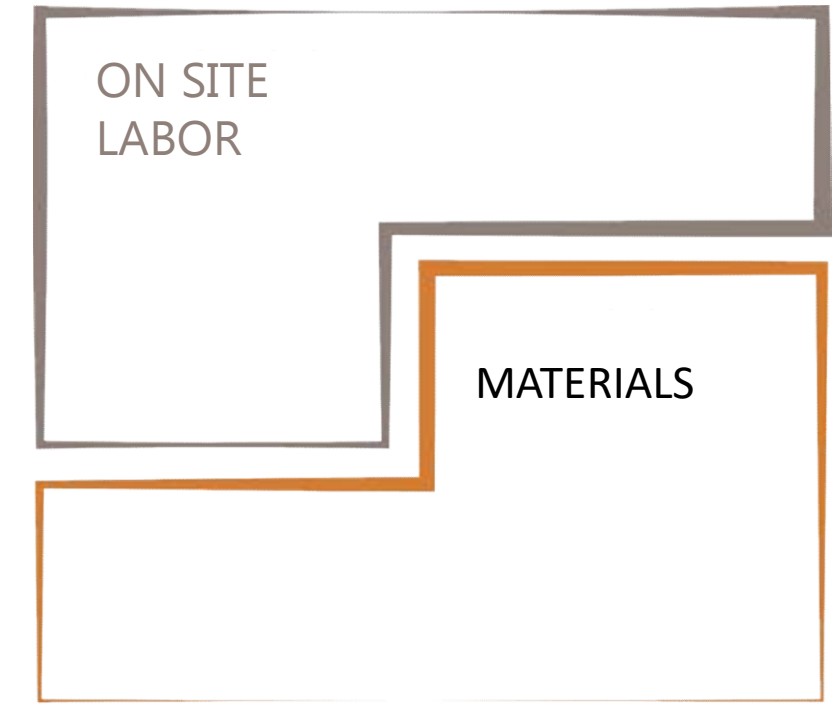
Is your building ethically sourced, forced labor-free, as well as sustainably designed?

design for FREEDOM by grace farms

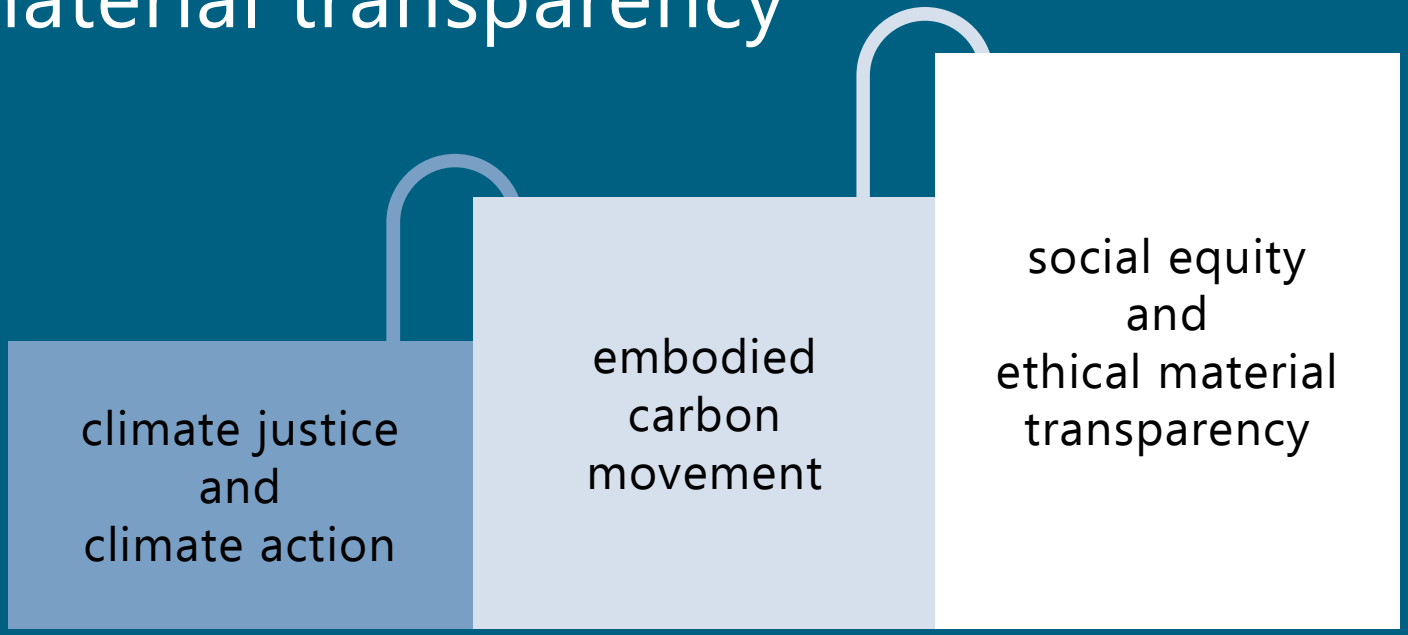
a movement to create a radical paradigm shift and remove slavery from the built environment

Addressing on-site labor is only half of the equation

Forced labor in the building materials supply chain must also be addressed



The next step in architecture justice must include social equity and ethical material transparency



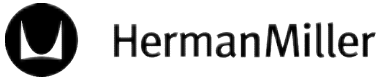
Construction lags other industries in supply chain transparency

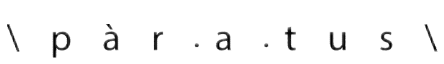
first food ..... **then clothing** ..... **shelter will be next**

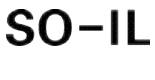
milestones: Working Group | Report | Pilot Projects | Toolkit

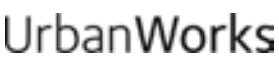
Design for Freedom Working Group

80+ CEOs, principals, industry experts



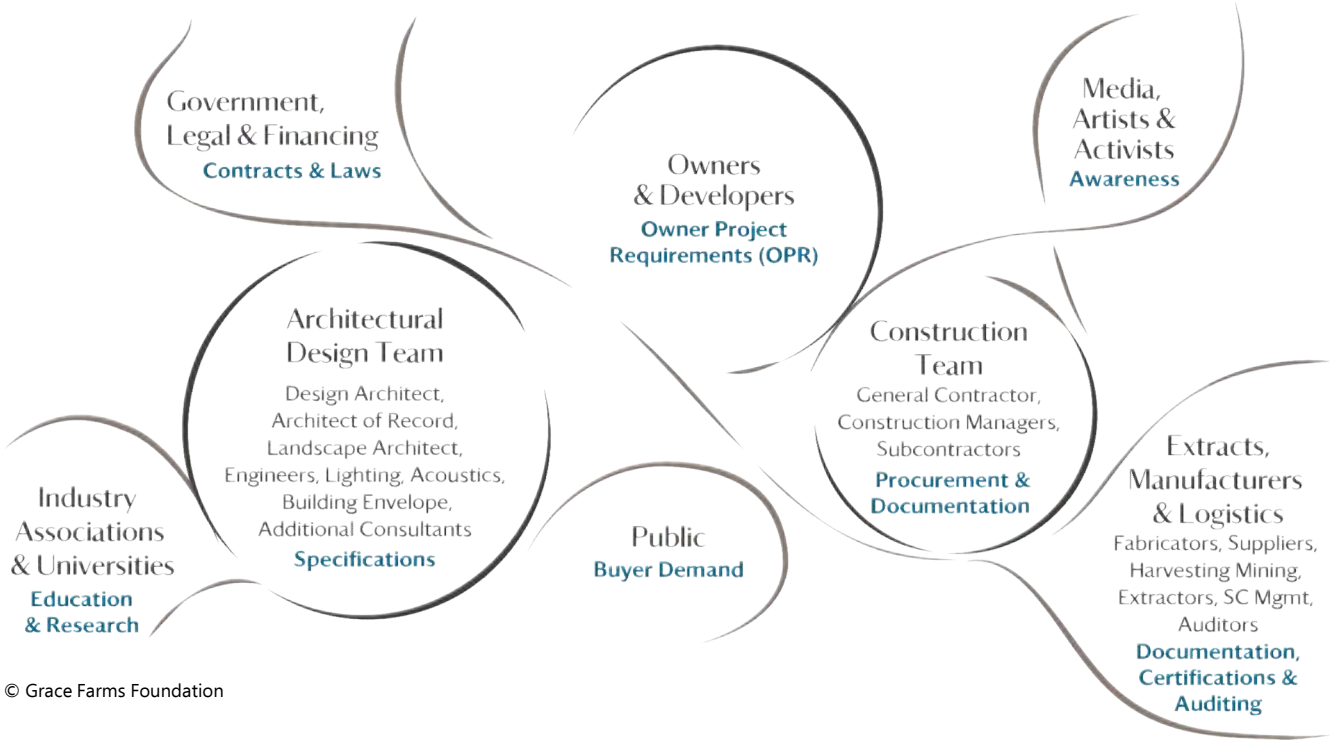






Ecosystem of the built environment

Means and methods to ethically influence the building material supply chain



Global laws forbid the use of slave labor in the built environment, yet our buildings and the materials that go into our buildings, are heavily reliant on slave labor

Forced labor is all work or service that is performed involuntarily and under the threat of any penalty

Occurs in every region of the world

Global estimates are currently at **28 million** people enslaved (ILO)

forced labor

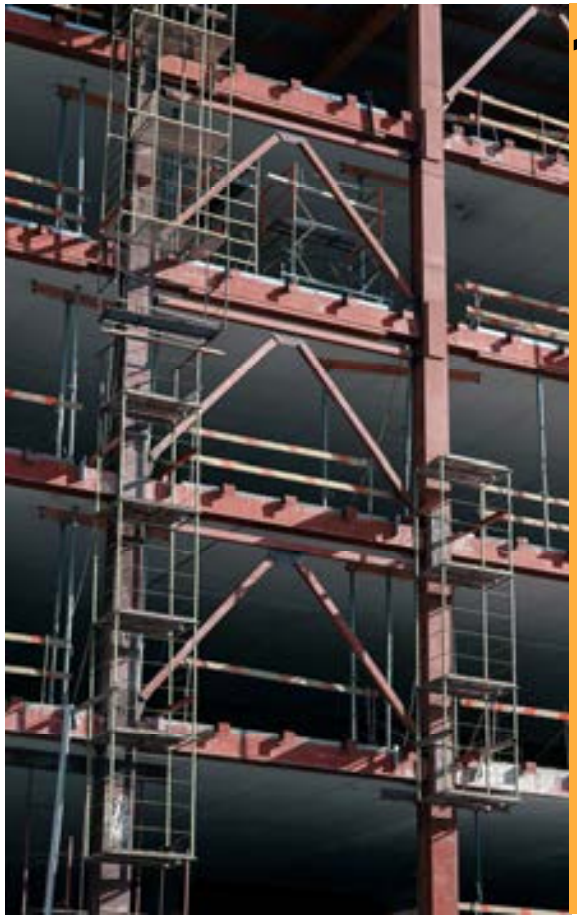
Child labor is work that deprives children of their childhood and is mentally, physically, socially, or morally dangerous and harmful to children and/or interferes with their schooling

Estimates for children, between the ages of 5 and 17 years old, are **160 million** (ILO)

child labor

All forced labor-produced goods as well as illegally logged timber are prohibited from importation into the U.S.

Construction is the largest global industrialized sector and at the highest risk of forced labor



150 billion
dollar value of the modern slavery criminal industry worldwide

16 million
children aged 5 to 17 are subjected to child labor

9 materials
(raw and composite) at highest risk of forced labor in buildings

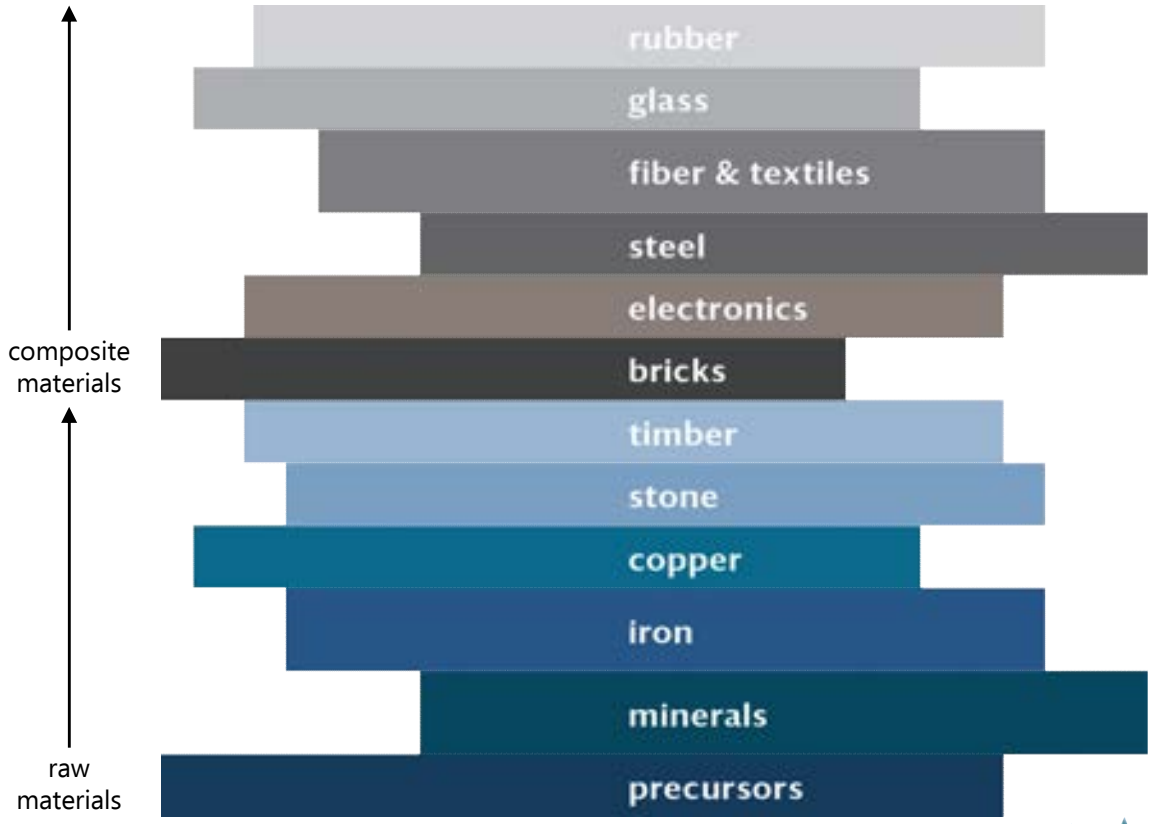
12 trillion
construction-related spending globally (USD)

Are owners subsidizing their ROI with slavery?

Likely, yes

what are products?

Raw and composite materials at the highest risk of embedded slavery



Source: Verité *Commodities Atlas* and the U.S. Department of Labor's List of Goods Produced by Child Labor or Forced Labor, Grace Farms analysis

textiles

relevant certifications

- Better Cotton
- Fairtrade Cotton Mark
- Fairtrade Textile Standard
- FSC Certified Viscose
- Global Organic Textile Standard
- Good Weave
- Leather Standard by Oeko-Tex
- Responsible Wool Standard
- Step by Oeko-Tex

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Textiles, pg 28

Global hotspots[1]

Bangladesh Child labor | **Cambodia** Child labor |
China Child and forced labor | **North Korea** Forced labor
Turkmenistan Child and forced labor | **Vietnam** Child labor

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Textiles, pg 28

TEXTILES

Bangladesh Children perform dangerous tasks in garment and leather goods supply chains.[2]

Turkmenistan On May 18, 2018, CBP issued a Withhold Release Order (WRO) banning the importation of all Turkmenistan cotton or products produced in whole or in part with Turkmenistan cotton.[3]

China Xinjiang is undergoing an expansion of the textile industry. Victim testimonies, news media, and think tanks report that textile factories frequently engage in coercive recruitment, limit workers' freedom of movement and communication, and subject workers to constant surveillance, retribution for religious beliefs, exclusion from community and social life, and threaten family members.[4] Textile output from China accounts for more than 50% of the global market.[5]

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Textiles, pg 29

timber

relevant certifications

American Tree Farm System (ATFS)

Forest Stewardship Council (FSC) Certifications

Programme for the Endorsement of Forest Certification (PEFC)

Sustainable Forestry Initiative (SFI)

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Timber, pg 30

Global hotspots[1]

Brazil | **Cambodia** | **Peru** | **North Korea** | **Russia** | **Vietnam**

High-risk illegal logging which can include forced labor:

West Africa Nigeria, Cameroon, Senegal, Gambia

East Africa Tanzania, Mozambique, Madagascar

Central Africa Democratic Republic of the Congo

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Timber, pg 30

TIMBER

At-risk sawn wood timber[19]

Brazil softwood

Pine

Brazil & Peru hardwood

Peru: White Oak
Walnut

Brazil: Tropical Lumber (i.e., Teak, Mahogany, Ipe)

Russia softwood

Pine
Spruce
Fir

Russia hardwood

Oak
Birch
Aspen
Elm

Source: Grace Farms Foundation

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Timber, pg 32

bricks

Brick is one of the most used at-risk materials. Children and adults producing bricks are often held in debt bondage and breathe hazardous dust all day.[1]

left: ©Sushavan Nandy/NurPhoto via Getty Images; right: ©Dennis Gilbert/ View Pictures/Universal Images Group via Getty Images

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Bricks, pg 7

Global hotspots[2]

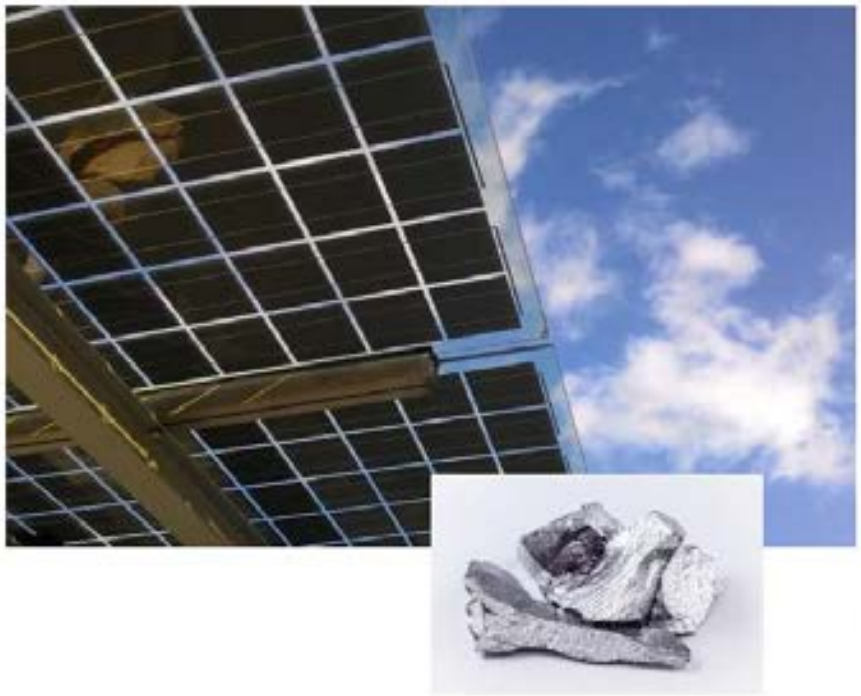
Child and forced labor **Afghanistan** | **Burma** | **Cambodia** | **China** | **India** | **Nepal** | **Pakistan**

Limestone bricks Child labor **Egypt** | **Paraguay** | Forced labor **Brazil**

Excerpt from *Design for Freedom Toolkit*: High-risk Materials, Bricks, pg 7

Solar panels are not a sustainable solution if human rights violations are embedded in them

- Polycrystalline silicon is a main component of solar panels; 45% is sourced from China's Xinjiang Uyghur Autonomous Region
- More than 1 million are held in forced labor conditions and detained in camps
- Only 5% of global supply is provided by U.S.-owned companies
- Cheaper materials embedded with forced labor hinder innovation



What can we do as owners, designers, engineers and construction professionals?

Call to action

– construction

– interiors

– landscape

Without inspection, there is no accountability

ask

ask where materials come from, trace at least one material on your next project

add

add Design for Freedom material requirements to contracts, specs, procurement, material libraries, technologies, and platforms

use

use certifications in *Design for Freedom Report* and *Design for Freedom Toolkit* as a starting point

reduce

reduce risk in extractives through material reuse and circularity

design for freedom

pilot projects

Black Chapel

by Theaster Gates

(21st Serpentine Pavilion)

June 10 through
October 16, 2022

Shadow of a Face by Nina Cooke John

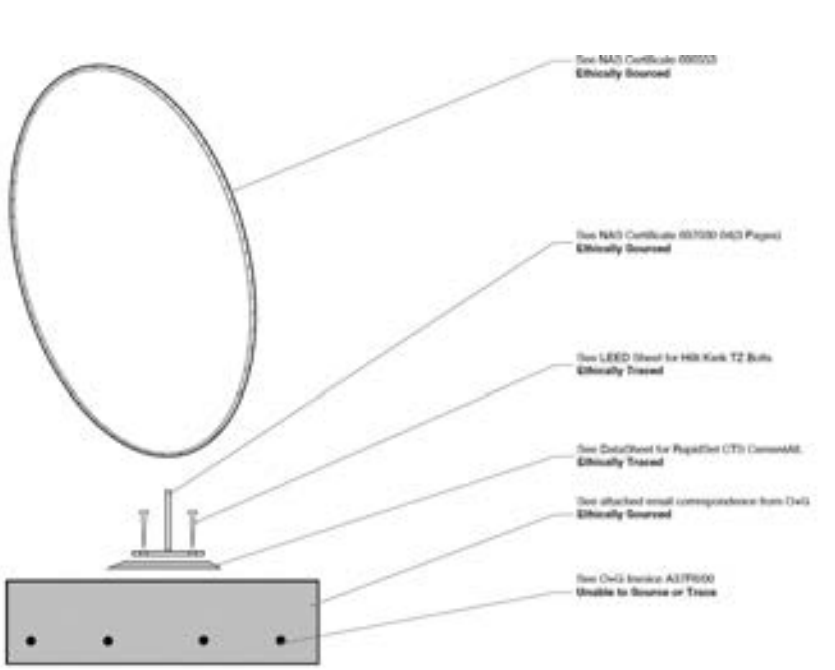
Harriet Tubman Monument

New Canaan Library by Centerbrook Architects

featuring Turner Construction

Temporal Shift by Alyson Shotz
at Grace Farms


ALYSON SHOTZ
Sciame LERA
NAS NORTH AMERICAN STAINLESS



Alyson Shotz's *Temporal Shift*

The commission and installation of *Temporal Shift*, the new sculptural work by Alyson Shotz on view at Grace Farms through September 2022, presented a unique opportunity to align the process of bringing this exciting artwork to the public with the ever-expanding framework of analysis, inquiry, and collaboration demonstrated by the Design for Freedom movement.

New Center for Arts and Culture by Serendipity Arts
in New Delhi, India

design for freedom

toolkit

design for FREEDOM toolkit

A comprehensive resource for design and construction professionals to implement ethical, forced labor-free material sourcing strategies into their practices

First of its kind: *Design for Freedom Toolkit*

Education

- Provides deep analysis of more than a dozen most at-risk building materials
- Lists relevant certifications and standards that support ethical materials choices

Commitment

- Design for Freedom Principles and Overview

Implementation

- Supplier Questionnaire and Sample Specifications

Available at designforfreedom.org

design for FREEDOM by grace farms

knowledge and insight of our partners and team to advance a non-negotiable challenge:
that every building should be designed and built for freedom

Once you know
you can't un-know it

And now
there is a duty to act

design for
FREEDOM
by grace farms


"There is no sustainable future without an equitable future."
Mahesh Ramanujam
PRACTICING A MISSION

Stung Meanchey Landfill, 2004
Phnom Penh, Cambodia
Photo: Maciej Dakowicz

Neeson Cripps Academy, 2017
Phnom Penh, Cambodia
Photography by David Yeow


Photography by David Yeow


Photography by David Yeow

WHAT CAN WE DO?

MANIFESTO

COOKFOX Architects pledges to do our part to purge the building industry of unethical labor practices by shining a light on forced labor within the building supply chain. As we continue confront the social and racial injustices that surround us, we must use this same lens to focus on the injustices within the construction industry.

We believe:

Freedom is fundamental to the equity, health and well-being of humans.

The well-being of humanity depends on a healthy planet.

Sustainable buildings are vital to creating a healthier planet.

A sustainable future is meaningless without an equitable future.

We have a professional, ethical and moral responsibility to pursue sustainable, equitable design.

We must:

Eradicate the inhumane practices that permeate the supply chain and harm individuals and the global community.

Educate industry colleagues and consumers on the hidden and pervasive nature of forced-labor practices.

Establish resources that enable our studio to specify healthy, ethically sourced, forced labor-free building materials and products.

Create documentation and accountability practices.

Use our practice to set a new standard for forced labor-free buildings.

WHAT CAN WE DO?

EDUCATING OURSELVES

We can:

We can become aware of which Force Labor Free products are available to specify in project manuals and educate ourselves about slavery free labor in the building industry.

We must:

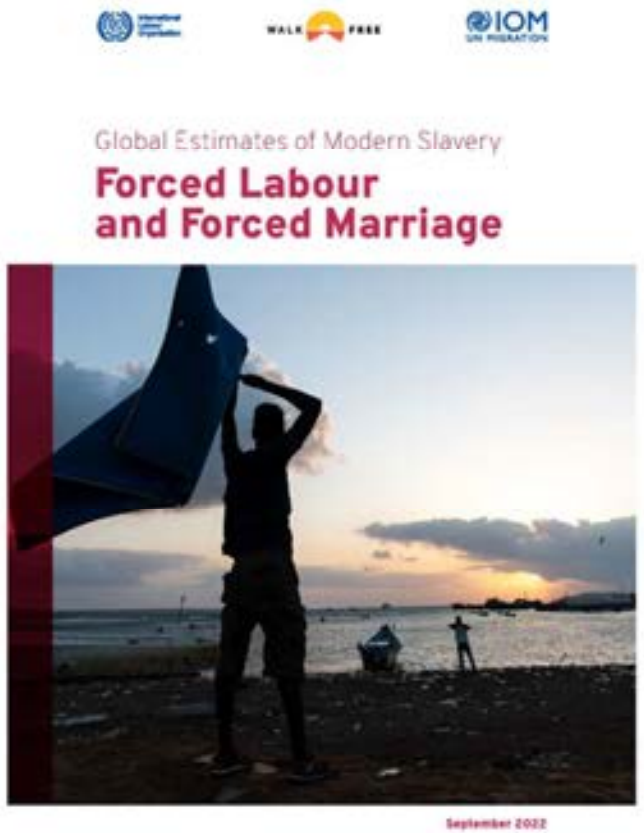
Commit early in the design process to ask where each material comes from and revise selections to avoid benefiting from slavery.

Enact a system for tracking and monitoring where materials and equipment originate

Collect, analyze, and share information about products.

Assess our materials library.

Get buy-in from all project stakeholders



WHAT CAN WE DO?

GOING PUBLIC

We can:

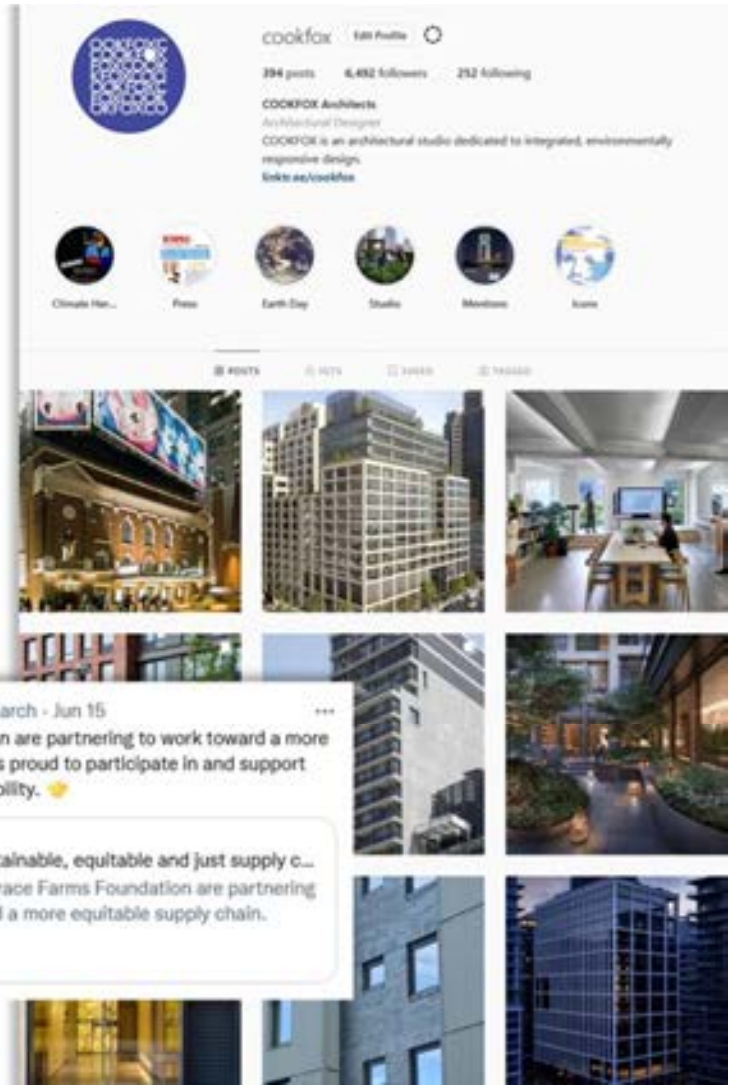
Join the Design For Freedom movement and social media campaign.

We must:

Publicize our policy

Participate in efforts to change the industry

Publicly disclose anti-slavery commitments



WHAT CAN WE DO?

CREATING A MOVEMENT

We must:

Participate in knowledge sharing.

Together, we can:

Work to make sure that the environments we design do not embody forced labor.

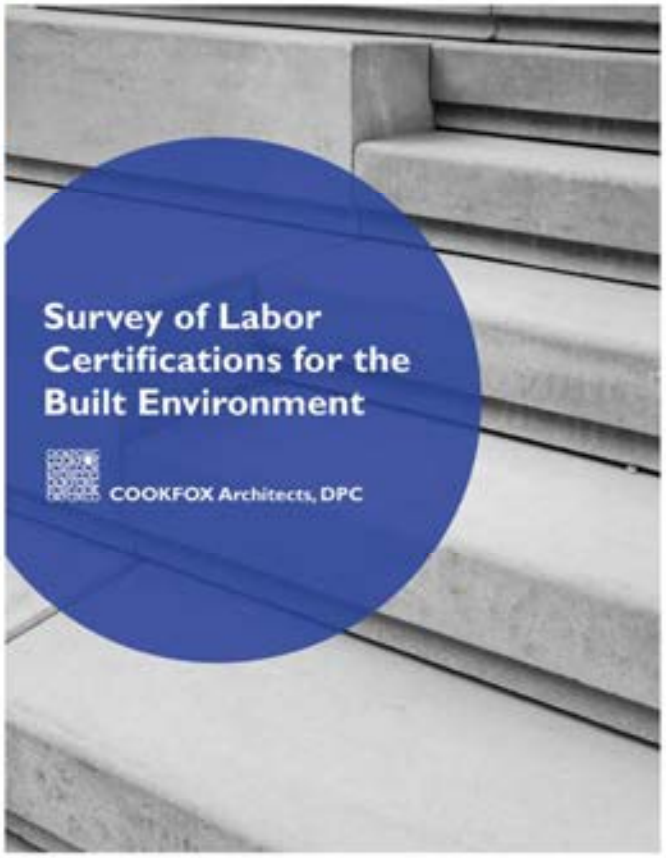
Educate our collaborators about force labor-free practices for the building industry.

Make every effort to effect positive and sustainable changes to eliminate forced labor in the built environment.

Photography by Eric Laignel

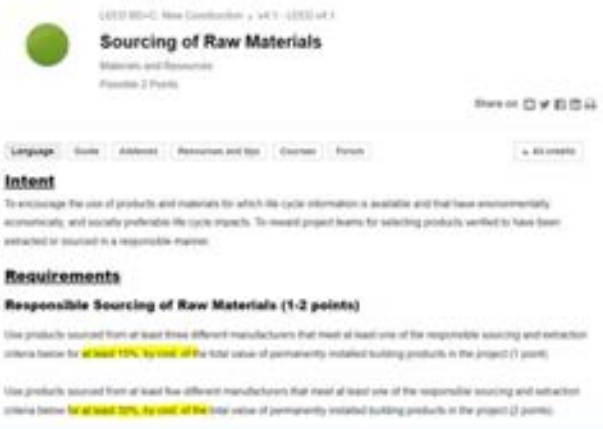
STEPS WE ARE TAKING

GATHERING TOOLS



ADOPTING STANDARDS

STEPS
WE
ARE
TAKING



Sourcing of Raw Materials

Materials and Resources

Possible 2 Points

Intent

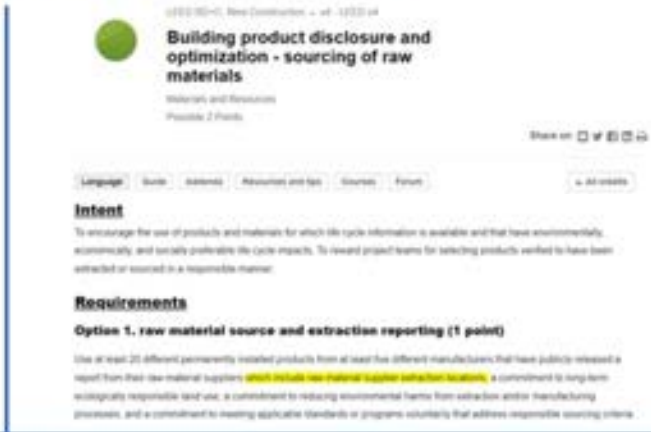
To encourage the use of products and materials for which life cycle information is available and that have environmentally, economically, and socially preferable life cycle impacts. To reward project teams for selecting products verified to have been extracted or sourced in a responsible manner.

Requirements

Responsible Sourcing of Raw Materials (1-2 points)

Use products sourced from at least three different manufacturers that meet at least one of the responsible sourcing and extraction criteria below for at least 15%, by cost, of the total value of permanently installed building products in the project (1 point)

Use products sourced from at least five different manufacturers that meet at least one of the responsible sourcing and extraction criteria below for at least 30%, by cost, of the total value of permanently installed building products in the project (2 points)



Building product disclosure and optimization - sourcing of raw materials

Materials and Resources

Possible 2 Points

Intent

To encourage the use of products and materials for which life cycle information is available and that have environmentally, economically, and socially preferable life cycle impacts. To reward project teams for selecting products verified to have been extracted or sourced in a responsible manner.

Requirements

Option 1. raw material source and extraction reporting (1 point)

Use at least 20 different permanently installed products from at least five different manufacturers that have publicly released a report from their raw material suppliers which include raw material supplier extraction locations, a commitment to long-term ecologically responsible land use, a commitment to reducing environmental harms from extraction and/or manufacturing processes, and a commitment to meeting applicable standards or programs voluntarily that address responsible sourcing criteria.

Athena Sustainable Materials Institute

www.athenasmi.org

A Cradle-to-Gate Life Cycle Assessment of Surfaced Dry Softwood Lumber Produced in British Columbia

Prepared for:
Forestry Innovation Investment

By:
Athena Sustainable Materials Institute

APPENDIX A – HPD TEMPLATE

STEPS
WE
ARE
TAKING

STRATEGY FOR CHANGE

Finding Common Goals

Parallels between green movement and forced-labor-free movement.

Leveraging Sustainability Goals to support Human Rights Goals.

Acoustical Plaster		092500	Recycled Glass (96%)		Pyrok, Inc - Star Silent - Superfine	
					Star Silent Fix	Pyrok --Manufactured: Errenteria, Spain (66-72% plaster of Paris, 22-25% limestone)
				Adhesive		
				Panels (Recycled Glass)	Star Silent Panel	Pyrok --96% recycled glass content (all recycled glass is 100% post-consumer waste) --2-3% fiberglass
				Base Coat Plaster	Star Silent Plaster	Pyrok --50% pre-consumer recycled marble aggregate --Production: Stuhlgen, Germany
				Finish Coat Plaster		

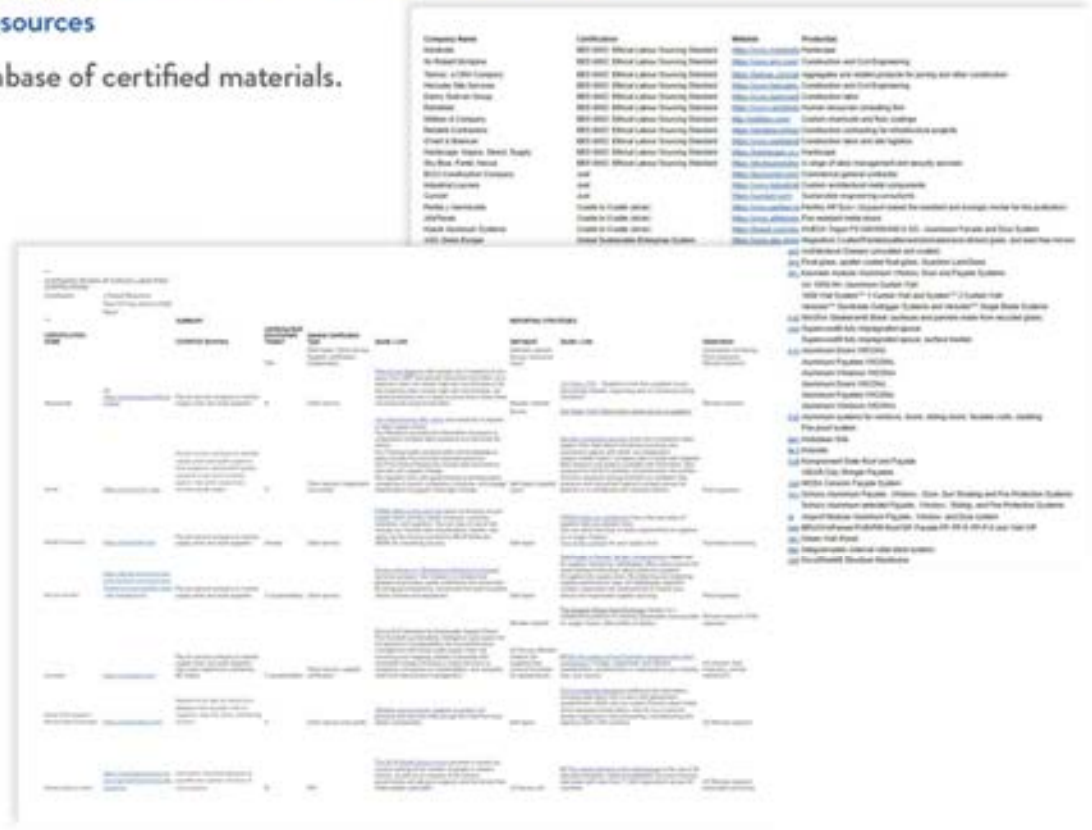
example: Increasing recycled content benefits both the environment and the level of embedded labor in a product

STEPS
WE
ARE
TAKING

BUILDING RESOURCES

Forced Labor Free Resources

We are creating a database of certified materials.



STEPS
WE
ARE
TAKING

PRACTICE

Pilot Project

We are working on a pilot project in a parallel path innovation model that will be documented with a white paper to investigate the ways COOKFOX can adapt the design and specification process of a speculative, developer-driven large-scale workplace building in NYC to reduce the impact of forced labor.

STEPS
WE
ARE
TAKING

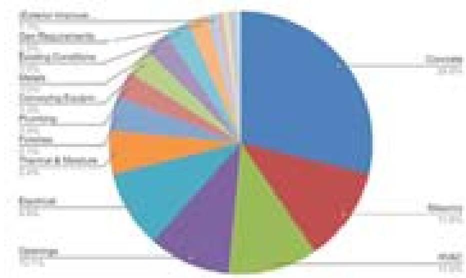
CASE STUDY

Studying our Impact

We are working on a pilot project in a parallel path innovation model that will be documented with a white paper to investigate the ways COOKFOX can adapt the design and specification process of a speculative, developer-driven large-scale workplace building in NYC to reduce the impact of forced labor.

Photography by Bruce Damonte

Identifying tangible target goals is the first step towards organizing a project's approach to establishing fair labor standards.



Analyzing the construction requisition as a comparable case study for Pilot Project

Identifying key trades for targeting

Concrete

29% total construction value

Largest percentage of cost

Metals

3% total construction value

Opportunity for certification and recycled content

Openings

10% total construction value

Public-facing facade impact; high risk of forced labor in glass

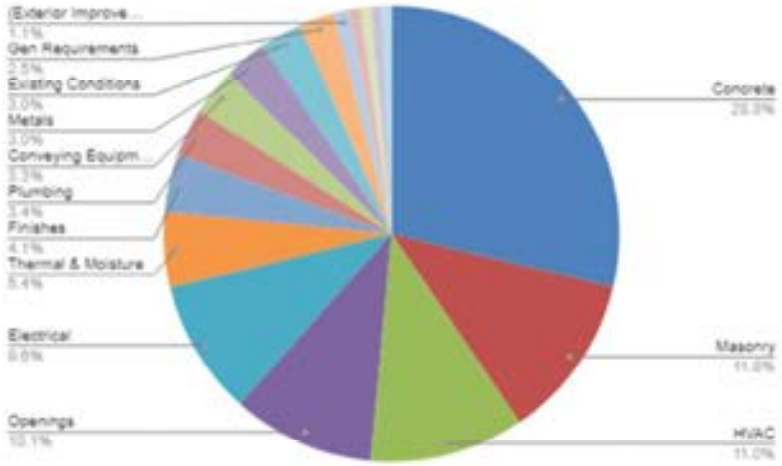
Finishes

4% total construction value

High-touch interior design within scope

Target Goal

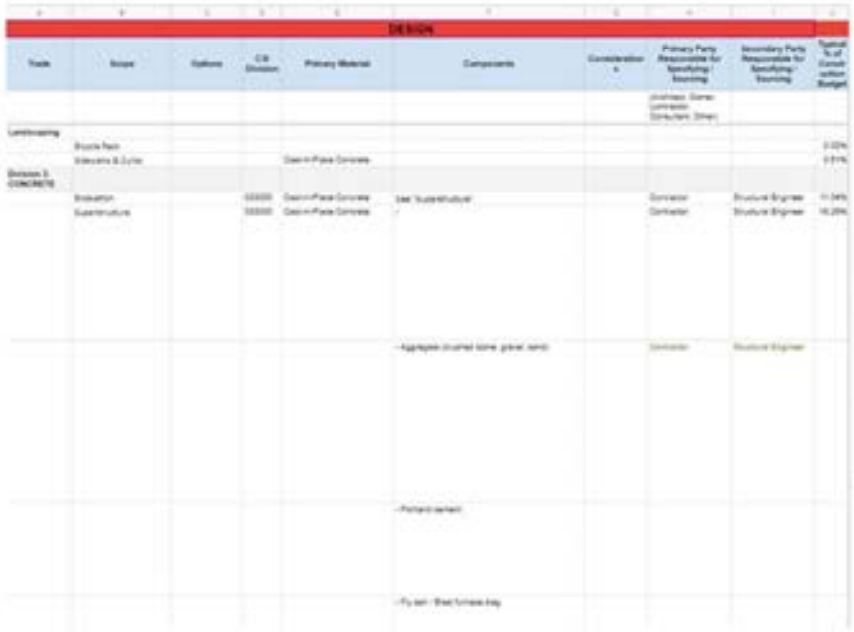
Concrete	28.8%
[Exterior Cladding] / Masonry	? 11.8%
[Structural Steel]	1.9%
Openings - Exterior Wall/Windows	7.7%
Gypsum	2.3%
[Ceramic Tile] / other specialty finish	0.9%
Total %	**53.4%**
Target FLF %	40%



In our research, building in a buffer was important due to difference in material design between Pilot Project and case study as well as inevitable variation in construction cost

Setting up the Matrix

Developing a roadmap for Pilot Project and beyond



DESIGN

Trade	Scope	Options	CSI Division	Primary Material	Components	Considerations	Primary Party Responsible for Specifying / Sourcing	Secondary Party Responsible for Specifying / Sourcing	Typical % of Construction Budget
							(Architect, Owner, Contractor, Consultant, Other)		
Landscaping									
	Bicycle Rack								0.02%
	Sidewalks & Curbs			Cast-in-Place Concrete					0.91%
Division 3: CONCRETE									
	Excavation		033000	Cast-in-Place Concrete	See 'Superstructure'		Contractor	Structural Engineer	11.34%
	Superstructure		033000	Cast-in-Place Concrete	-		Contractor	Structural Engineer	16.20%
					- Aggregate (crushed stone, gravel, sand)		Contractor	Structural Engineer	
					- Portland cement				
					- Fly ash - Blast furnace slag				

DESIGN

Trade	Scope	Options	CSI Division	Primary Material	Components	Considerations	Primary Party Responsible for Specifying / Sourcing	Secondary Party Responsible for Specifying / Sourcing	Typical % of Construction Budget
							(Architect, Owner, Contractor, Consultant, Other)		
Division 4: MASONRY									
	Unit Masonry	n/a	042200	Stabilized Concrete Block			Contractor	Architect	11.00%
					- Lightweight aggregate (shale, clay, slate)				
					- Portland cement				
					- Steel reinforcing, hot dip galvanized, mill galvanized, stainless steel wires				
					- Anchors & ties (hot dip galvanized, galvanized)				
					- Neoprene joint fillers				
					- Mortar (Portland cement, lime, sand, admixtures)				
					- Wrought steel bearing (stainless steel)				
					- plastic weep holes				
	Exterior Stone Cladding		044200	Granite (2" thick)			Architect	Contractor	2.17%
					Stainless Steel Anchors (50% recycled min)				
					Concrete Inserts (hot dip galvanized)				
					Fasteners (bolts, nuts, washers)				
					Setting shims & buttons (plastic)				
					Stainless steel flashing				
					Caulk (plastic sealer				
					Urethane joint sealant				
Division 5: METALS									
	Structural Steel (Alternate or in addition to Cast-in-Place Concrete superstructure)		051200	Steel				Structural Engineer	1.81%

Material Deep Dives

COOKFOX ARCHITECTS

03 CONCRETE
MATERIAL AND PRODUCT TRACING

STEPS
WE
ARE
TAKING

MARKET TRANSFORMATION

We must:

We are educating colleagues, clients, and peers about forced labor issues.

We are:

Including Design for Freedom principles in all discussions with clients and proposals for new projects.


Photography by Grace Farms Foundation

WHAT CAN YOU DO?

Our vision is to achieve forced labor free building supply chains. While it is easy to be overwhelmed by the enormity and complexity of this challenge, we believe that all of us can contribute, one building block at a time, to our vision of material transparency and reduced risk of forced labor in our buildings.

-excerpt from *Design for Freedom Toolkit*

STEPS
YOU
CAN
TAKE.

NOW YOU KNOW

HOW WOULD YOU BEGIN IN YOUR CONTEXT?