

# Increased Well-being for Building Occupants with the WELL Standard

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- 2) What is WELL?
- 3) WELL goes hand-in-hand with other green building rating tools
- 4) A more detailed view of WELL
- 5) Highlighted WELL credits & examples



# Humans are naturally drawn towards nature....

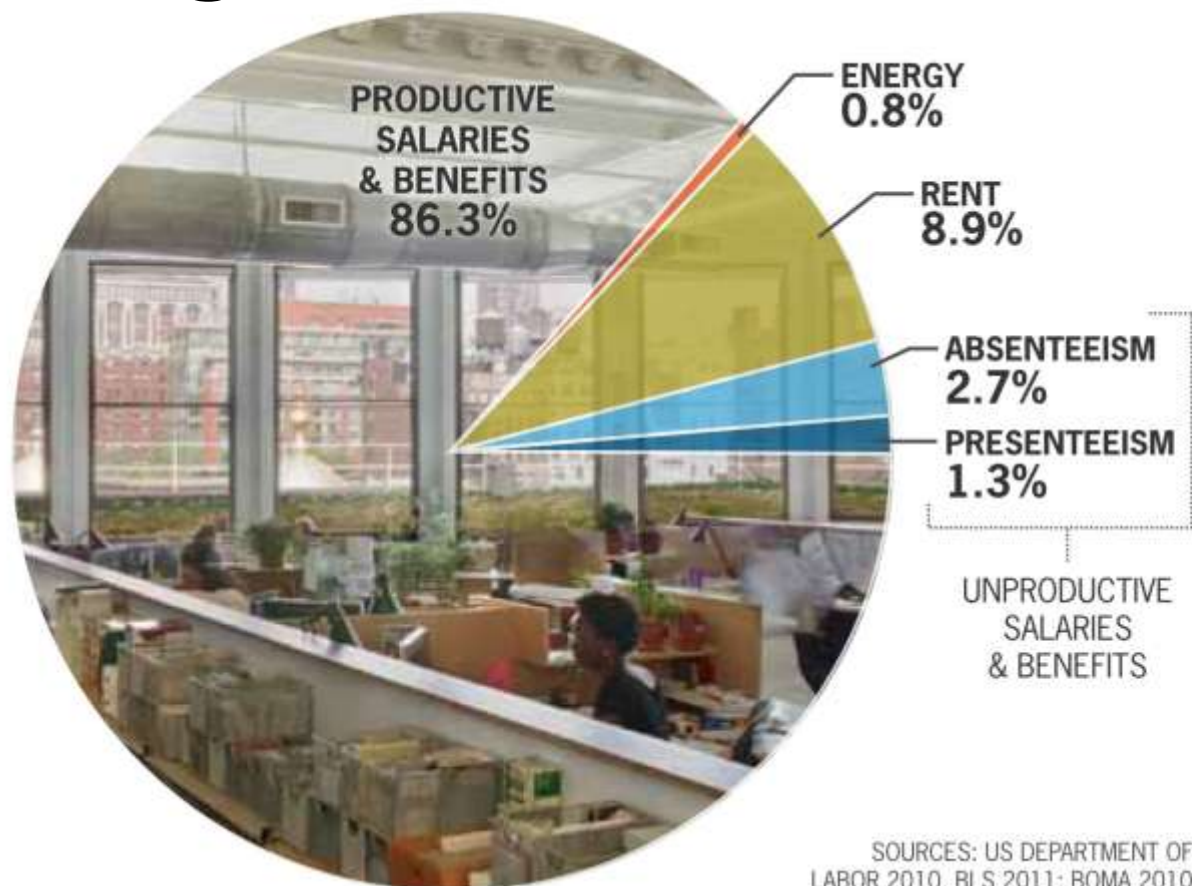


...yet, we spend **90%** of our time indoors

...so, better make our time spend indoors worthwhile



# Human Health & Well-being have significant economic implications



## BIOPHILIA CAN RE-ENGAGE LOSSES FROM UNPRODUCTIVE OPERATING COSTS

More than 90% of a company's operating costs are linked to human resources, and **financial losses due to absenteeism and presenteeism account for 4%**. Commercial spaces that give occupants access to nature serve as a release to outside stresses, and tend to cause less environmental stress themselves. It makes fiscal sense for companies to try to eliminate environmental stress that cost them thousands of dollars per year in employee costs.

SOURCES: US DEPARTMENT OF LABOR 2010; BLS 2011; BOMA 2010

Graphics credit: Catie Ryan for Terrapin Bright Green

*There's great economic value in the positive effects of human well-being from stress reduction, reduced sick-leave and increased productivity at work*

# Well-being

(image search on Google)



clean air | contact with nature | calming effect on people

# Well-being

(image search on Google)



clean environment | beautiful view of nature | relaxed state of mind

# What is the WELL Standard?

Focus on  
**Human Health**  
and  
**Well-being**



Skeletal



Cardiovascular



Digestive



Immune



Respiratory



Reproductive



Nervous



Endocrine



Integumentary

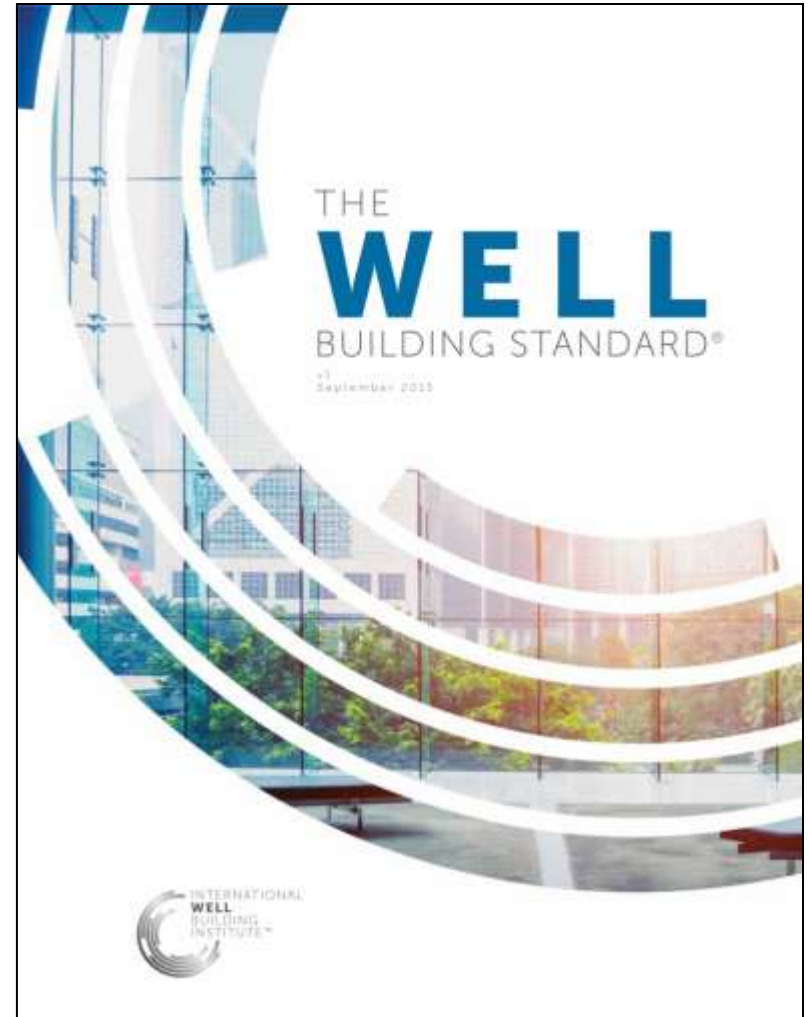


Muscular



# What is the WELL Standard?

- “Improves the way people live by developing spaces that enhance occupant health and quality of life”
- Based on 7 years of research in partnership with scientists, doctors and architects
- Addresses the connection between the buildings where people spend their time, and the health and well-being impacts those buildings have on their occupants





# What is the WELL Standard?

“The World’s first building standard (2013) focused exclusively on human health and wellness. It marries best practices in design and construction with evidence-based medical and scientific research – harnessing the built environment as a vehicle to support human health and well-being”

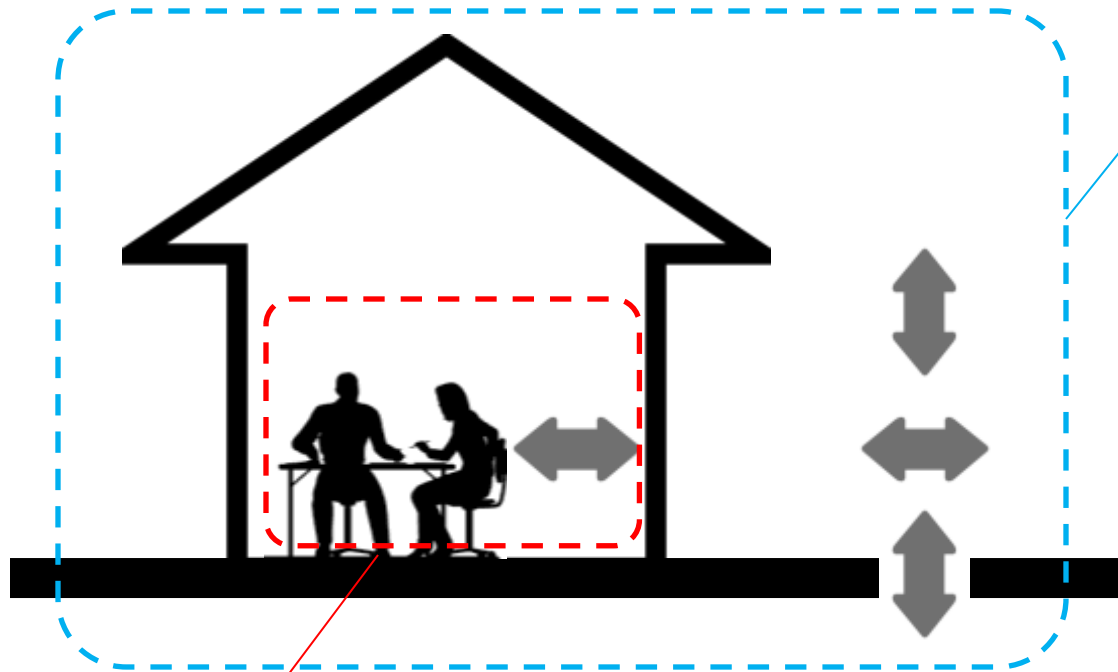


## THE SEVEN CONCEPTS OF THE WELL BUILDING STANDARD



# WELL and other green building tools

WELL is a rigorous subset of other green building tools



## Green Building Standards

Interaction of built environment on humans and the environment



*Exemplified with LEED*

## WELL Standard

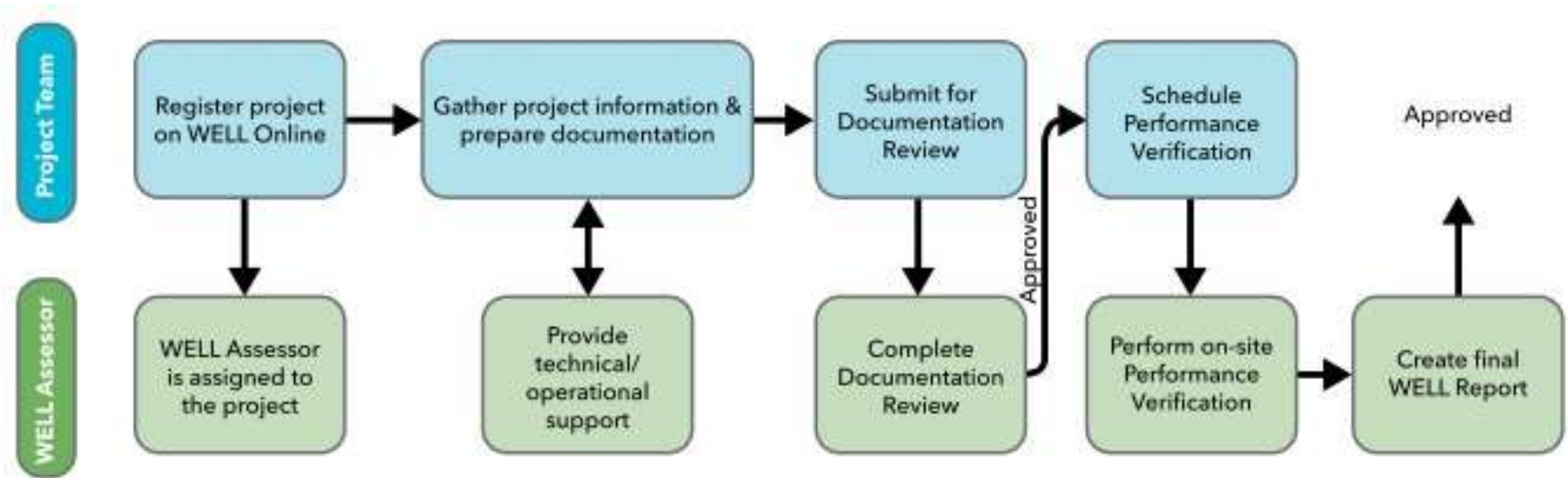
Interaction of built environment on humans



# WELL Certification of Buildings

Similar certification process and scoring to other green building tools

## WELL certification process



## WELL certification levels



Download the WELL Standard here:

<https://www.wellcertified.com/standard>

# Mandatory Requirements ('preconditions') in all the WELL Categories

MANDATORY points

Optional points

Concept	Preconditions		Optimizations		Wellness Score
	Applicable	Achieved	Applicable	Achieved	
Air	12	12	17	3	5.9
Water	5	5	3	0	5.0
Nourishment	8	8	7	7	10.0
Light	4	4	7	2	6.4
Fitness	2	2	6	3	7.5
Comfort	5	5	7	2	6.4
Mind	5	5	14	12	9.3
<b>Total</b>	<b>41</b>	<b>41</b>	<b>61</b>	<b>29</b>	<b>7.4</b>
Final Wellness Score:					<b>7</b>

Example of Category scoring:



Example of whole building scoring:





# WELL BUILDING STANDARD® FEATURES MATRIX

COMPLIANCE	PRECONDITION	OPTIMIZATION	Core & Shell	Tenant Improvement	New Construction
CERTIFICATION	PRECONDITION	OPTIMIZATION			

## Air

01	Air quality standards	P	P	P
02	Smoking ban	P	P	P
03	Ventilation effectiveness	P	P	P
04	VOC reduction	P	P	P
05	Air filtration	P	P	P
06	Microbe and mold control	P	P	P
07	Construction pollution management	P	P	P
08	Healthy entrance	P	O	P
09	Cleaning protocol		P	P
10	Pesticide management	P		P
11	Fundamental material safety	P	P	P
12	Moisture management	P	O	P
13	Air flush		O	O
14	Air infiltration management	O	O	O
15	Increased ventilation	O	O	O
16	Humidity control		O	O
17	Direct source ventilation		O	O
18	Air quality monitoring and feedback		O	O
19	Operable windows	O	O	O
20	Outdoor air systems		O	O
21	Displacement ventilation		O	O
22	Pest control		O	O
23	Advanced air purification	O	O	O
24	Combustion minimization	O	O	O
25	Toxic material reduction		O	O
26	Enhanced material safety		O	O
27	Antimicrobial surfaces		O	O
28	Cleanable environment		O	O
29	Cleaning equipment		O	O

# WELL BUILDING STANDARD® FEATURES MATRIX

COMPLIANCE	PRECONDITION	OPTIMIZATION	Core & Shell	Tenant Improvement	New Construction
CERTIFICATION	PRECONDITION	OPTIMIZATION			

## Water

30	Fundamental water quality	P	P	P
31	Inorganic contaminants	P	P	P
32	Organic contaminants	P	P	P
33	Agricultural contaminants	P	P	P
34	Public water additives	P	P	P
35	Periodic water quality testing		O	O
36	Water treatment	O	O	O
37	Drinking water promotion	O	O	O

## Nourishment

38	Fruits and vegetables		P	P
39	Processed foods	P	P	P
40	Food allergies	P	P	P
41	Hand washing		P	P
42	Food contamination		P	P
43	Artificial ingredients	O	P	P
44	Nutritional information	O	P	P
45	Food advertising	O	P	P
46	Safe food preparation materials		O	O
47	Serving sizes		O	O
48	Special diets		O	O
49	Responsible food production		O	O
50	Food storage		O	O
51	Food production	O	O	O
52	Mindful eating		O	O

# WELL BUILDING STANDARD® FEATURES MATRIX

COMPLIANCE	PRECONDITION	OPTIMIZATION	Core & Shell	Tenant Improvement	New Construction
CERTIFICATION	PRECONDITION	OPTIMIZATION			

## Light

53	Visual lighting design		P	P
54	Circadian lighting design		P	P
55	Electric light glare control		P	P
56	Solar glare control	O	P	P
57	Low-glare workstation design		O	O
58	Color quality		O	O
59	Surface design		O	O
60	Automated shading and dimming controls		O	O
61	Right to light	O	O	O
62	Daylight modeling	O	O	O
63	Daylighting fenestration	O	O	O

## Fitness

64	Interior fitness circulation	P		P
65	Activity incentive programs		P	P
66	Structured fitness opportunities		O	O
67	Exterior active design	O	O	O
68	Physical activity spaces	O	O	O
69	Active transportation support	O	O	O
70	Fitness equipment	O	O	O
71	Active furnishings		O	O

# WELL BUILDING STANDARD® FEATURES MATRIX

COMPLIANCE	PRECONDITION	OPTIMIZATION	Core & Shell	Tenant Improvement	New Construction
CERTIFICATION	PRECONDITION	OPTIMIZATION			

## Comfort

72	ADA accessible design standards	P	P	P
73	Ergonomics: visual and physical		P	P
74	Exterior noise intrusion	P	O	P
75	Internally generated noise	O	P	P
76	Thermal comfort	P	P	P
77	Olfactory comfort		O	O
78	Reverberation time		O	O
79	Sound masking		O	O
80	Sound reducing surfaces		O	O
81	Sound barriers		O	O
82	Individual thermal control		O	O
83	Radiant thermal comfort	O	O	O

## Mind

84	Health and wellness awareness	P	P	P
85	Integrative design	P	P	P
86	Post-occupancy surveys		P	P
87	Beauty and design I	P	P	P
88	Biophilia I - qualitative	O	P	P
89	Adaptable spaces		O	O
90	Healthy sleep policy		O	O
91	Business travel		O	O
92	Workplace health policy		O	O
93	Workplace family support		O	O
94	Self-monitoring		O	O
95	Stress and addiction treatment		O	O
96	Altruism		O	O
97	Material transparency	O	O	O
98	JUST organization		O	O
99	Beauty and design II		O	O
100	Biophilia II - quantitative	O	O	O
101	Innovation feature I	O	O	O
102	Innovation feature II	O	O	O

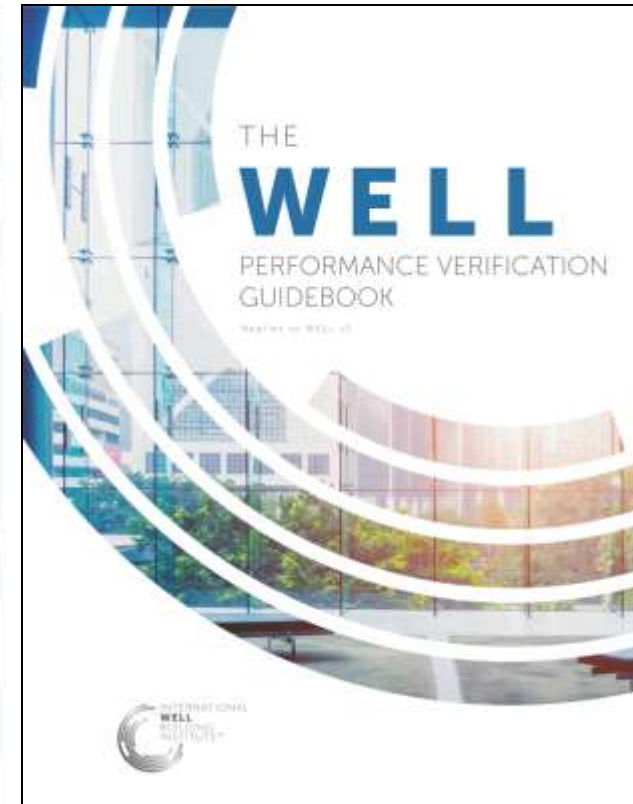


# Verification through Measurement

WELL has an elaborate and strict instrumentation requirement

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Download here:

<https://www.wellcertified.com>

# Example of Strict Measurement Requirement

For lighting, WELL requires both lux and optical spectrometer measurements

Table 7. Lux Meter Parameters

PARAMETER	MEASUREMENT RANGE	ACCURACY	RESOLUTION
Illuminance	5-50,000 lux	±5%	0.1 lux

## Sampling Points

- Measurements must be recorded at workstations and desks.
- The number of sampling points must provide 90% confidence that the mean of the measured illumination values falls within a confidence interval of  $\pm 5\%$ . (See appendix A on calculating the number of sampling points.)
- A proportionate number of each type of workstation/desk must be measured.

Table 8. Optical Spectrometer Parameters

PARAMETER	WAVELENGTH RANGE	ACCURACY	OPTICAL RESOLUTION
Spectral Power	380-780 nm	±5%	10 nm or less

## Sampling Points

- Measurements must be recorded at workstations.
- The number of sampling points must provide 90% confidence that the mean of the measured illumination values falls within a confidence interval of  $\pm 5\%$ . (See appendix A on calculating the number of sampling points.)
- A proportionate number of each type of workstation/desk must be measured.

# Highlighted WELL Categories

## Healthy food

38

### FRUITS AND VEGETABLES

Core &  
Shell

Tenant  
Improvement

New  
Construction

#### PART 1: FRUIT AND VEGETABLE VARIETY

-

P

P

If solid foods are sold or distributed on the premises by (or under contract with) the project owner, the following are provided or offered for sale:

- a. At least 5 varieties of fruits (containing no added sugar), at least 2 of which are non-dried.
- b. At least 5 varieties of non-fried vegetables.

#### PART 2: FRUIT AND VEGETABLE PROMOTION

-

P

P

Cafeterias operated or contracted by the project owner, if present, include the following design interventions:

- a.<sup>73</sup> A "healthy convenience" checkout line for only fruit and vegetable purchases.
- b.<sup>73</sup> Vegetable dishes placed in front of checkout counter.
- c.<sup>73</sup> Fruits placed in a bowl or in a stand at the checkout location.
- d.<sup>73</sup> Menu posted with color photos of fruits and vegetables served.

# Highlighted WELL Categories

## Healthy food

39

### PROCESSED FOODS

#### PART 1: REFINED INGREDIENT RESTRICTIONS

Core &  
Shell

Tenant  
Improvement

New  
Construction

P

P

P

All food, beverages, snacks and meals sold or distributed on the premises by (or under contract with) the project owner meet the following conditions:

- a. <sup>78</sup> No beverage with more than 30 g of sugar per container is sold or distributed through catering services, vending machines or pantries. Bulk containers of 1.9 L (2 quart) or larger are exempt from this requirement.
- b. <sup>78</sup> In beverage vending machines and on food service menus, at least 50% of slots or listings are products that have 15 g or less of sugar per 240 mL [8 oz] serving.
- c. <sup>78</sup> No individually sold, single-serving, non-beverage food item contains more than 25 g of sugar.
- d. <sup>55</sup> In any foods that contain a grain flour, whole grain is the primary grain ingredient by weight.

#### PART 2: TRANS FAT BAN

P

P

P

All foods, beverages, snacks and meals sold or distributed on the premises by (or under contract with) the project owner do not contain:

- a. <sup>56</sup> Partially-hydrogenated oil.



# Highlighted WELL Categories

## Fitness

64

### INTERIOR FITNESS CIRCULATION

#### PART 1: STAIR ACCESSABILITY

Core &  
Shell

P

Tenant  
Improvement

-

New  
Construction

P

The following requirements are met at every major building entrance:

- a.<sup>87</sup> Wayfinding signage and point-of-decision prompts to encourage stair use. At least one sign per elevator bank and one per building entrance.

#### PART 2: STAIRS PROMOTION

P

-

P

In buildings of 4 or fewer floors, at least one staircase meets the following requirements:

- a.<sup>27</sup> Located within 7.5 m [25 ft] of the entrance of the building in its main orientation space or lobby.
- b.<sup>27</sup> Placed visually before the elevators, if present, upon entering from the main entrance.
- c.<sup>87</sup> Stair widths set at a minimum of 1.4 m [56 inches].
- d.<sup>27</sup> Stairs are accessible to all regular building occupants during all regular business hours.

# Highlighted WELL Categories

Healthy mental state

87

## BEAUTY AND DESIGN I

A physical space in which design principles align with an organization's core cultural values can positively impact employees' mood and morale. Integrating aesthetically pleasing elements into a space can help building occupants derive a measure of comfort or joy from their surroundings.

This feature is derived from the Beauty and Spirit Imperative of the Living Building Challenge and strives to construct thoughtfully designed environments that positively impact the mood and comfort level of occupants.



Nervous

# Highlighted WELL Categories

## Healthy mental state

88

### BIOPHILIA I - QUALITATIVE

#### PART 1: NATURE INCORPORATION

A biophilia plan is developed that includes a description of how the project incorporates nature through the following:

- a.<sup>13</sup> Environmental elements.
- b.<sup>13</sup> Lighting.
- c.<sup>13</sup> Space layout.

#### PART 2: PATTERN INCORPORATION

A biophilia plan is developed that includes a description of how the project incorporates the following:

- a.<sup>13</sup> Nature's patterns throughout the design.

#### PART 3: NATURE INTERACTION

A biophilia plan is developed that provides sufficient opportunities for human-nature interactions:

- a.<sup>13</sup> Within the building.
- b.<sup>13</sup> In the site space external to the building.

Core &  
Shell

Tenant  
Improvement

New  
Construction

O

P

P

O

P

P

O

P

P

# Highlighted WELL Categories

## Healthy mental state

90

### HEALTHY SLEEP POLICY

High-quality sleep is essential to good health. Adequate sleep improves mental health, is necessary for maintaining sustained mental and physical performance throughout the day, and can help to prevent unhealthy weight gain.

This feature sets reasonable work hour limits that reinforce a healthy sleep and wake rhythm, puts a time limit on engagement with work tasks, provides appropriate places for recovery and renewal, and formalizes explicit food and drink provisioning to bolster good sleep patterns. Adopting this feature demonstrates the organization values quality of sleep and understands its impact on overall worker productivity and well-being.



Cardiovascular  
Endocrine  
Immune  
Muscular

Core &  
Shell

Tenant  
Improvement

New  
Construction

### PART 1: NON-WORKPLACE SLEEP SUPPORT

The following requirements are met:

- For non-shift work, introduce organizational cap at midnight for late night work and communications.
- Provide employees with a 50% subsidy on software and/or applications that monitor daytime sleep-related behavior patterns such as activity levels, caffeine and alcohol intake, and eating habits.



# Case Studies with WELL Certification



Residential



Hospitality



Office



Mixed-Use



Healthcare



Retail/Restaurant



Education



Student Housing

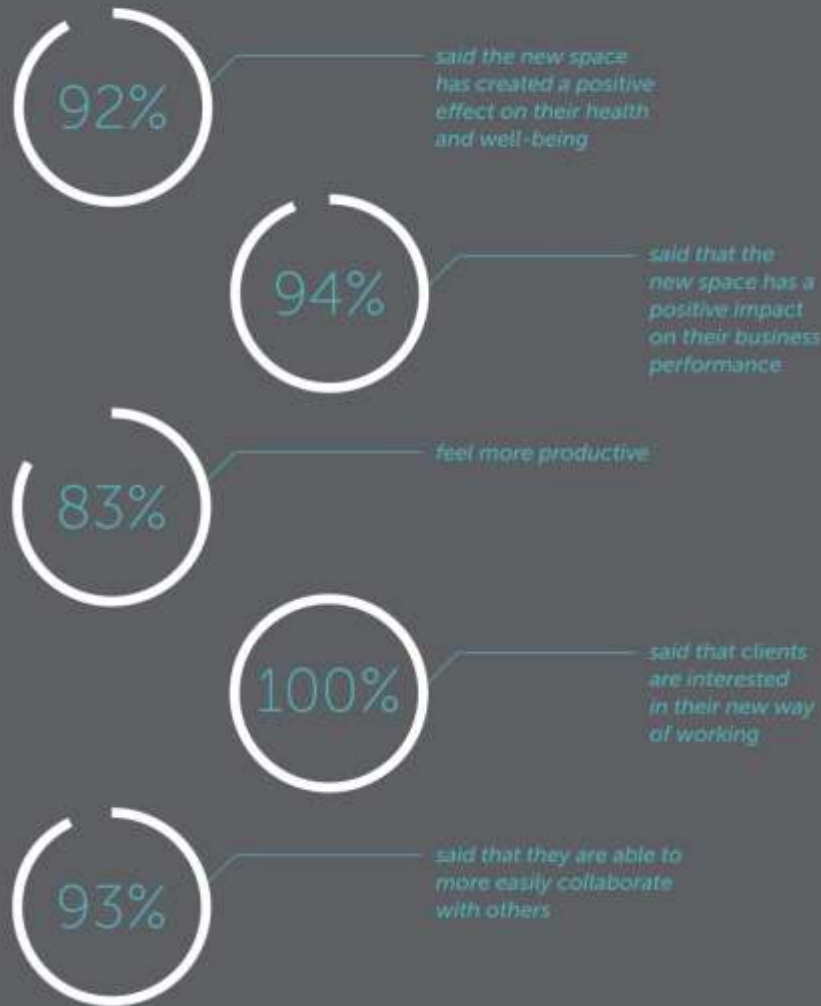
**Explore the case studies:**  
<https://www.wellcertified.com>

# Observed benefits from WELL building

## CBRE Headquarters

Los Angeles, California, USA

In the first WELL Certified office, CBRE Corporate Headquarters, employees responded with the following survey feedback:



Very satisfied building occupants

# Concluding remarks

- WELL standard puts humans in focus
- Economic sense, more healthy, happy and productive employees
- Good complement to existing green building tools





# Thank you



## ANY QUESTIONS?

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