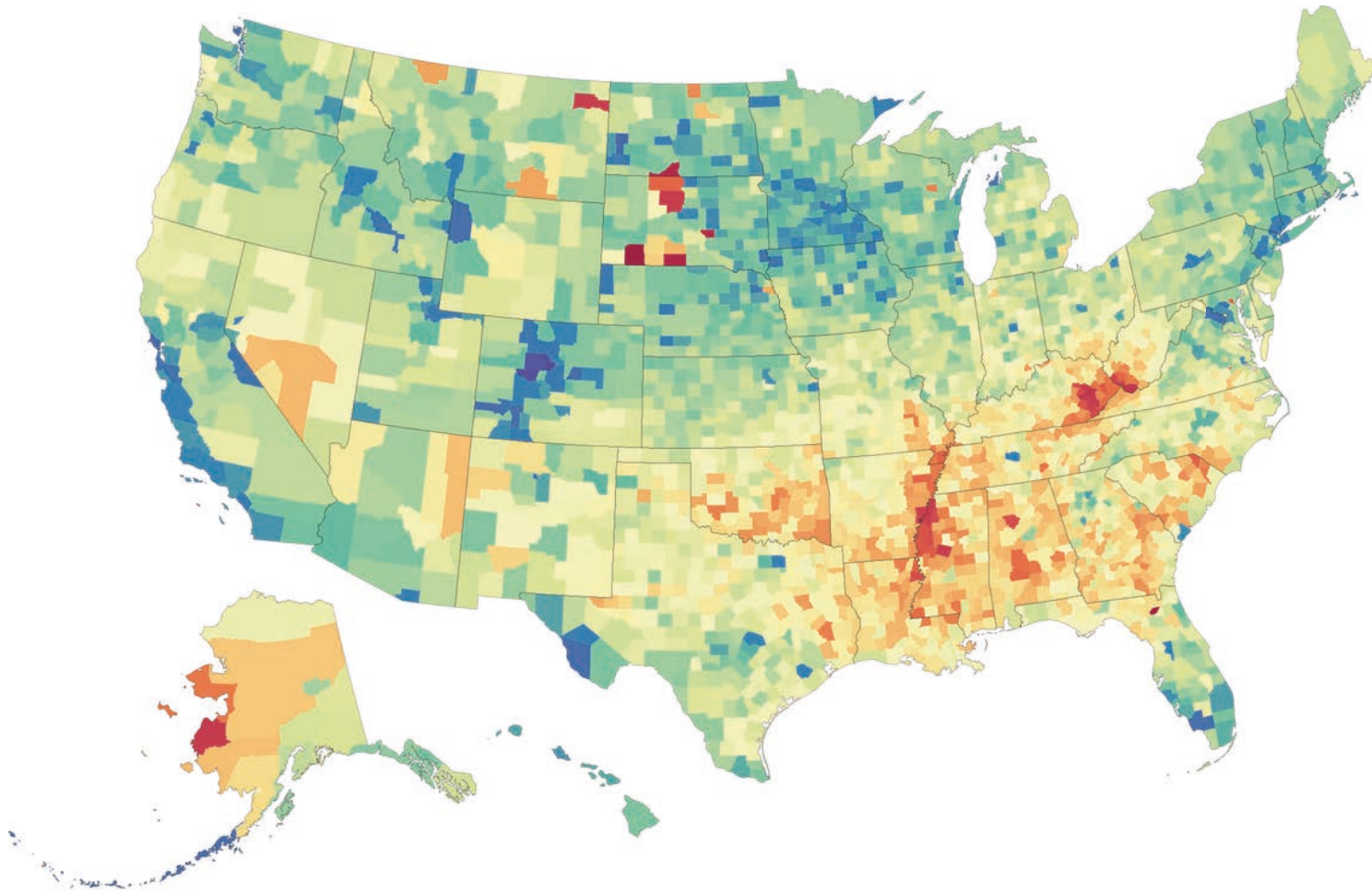




Healthcare Design and the Urban Environment

WHERE you live can impact health outcomes as much as HOW you live



Life Expectancy in US by County

Robert Wood Johnson Foundation

US Average: 78.6

Chatham NC: 97.5

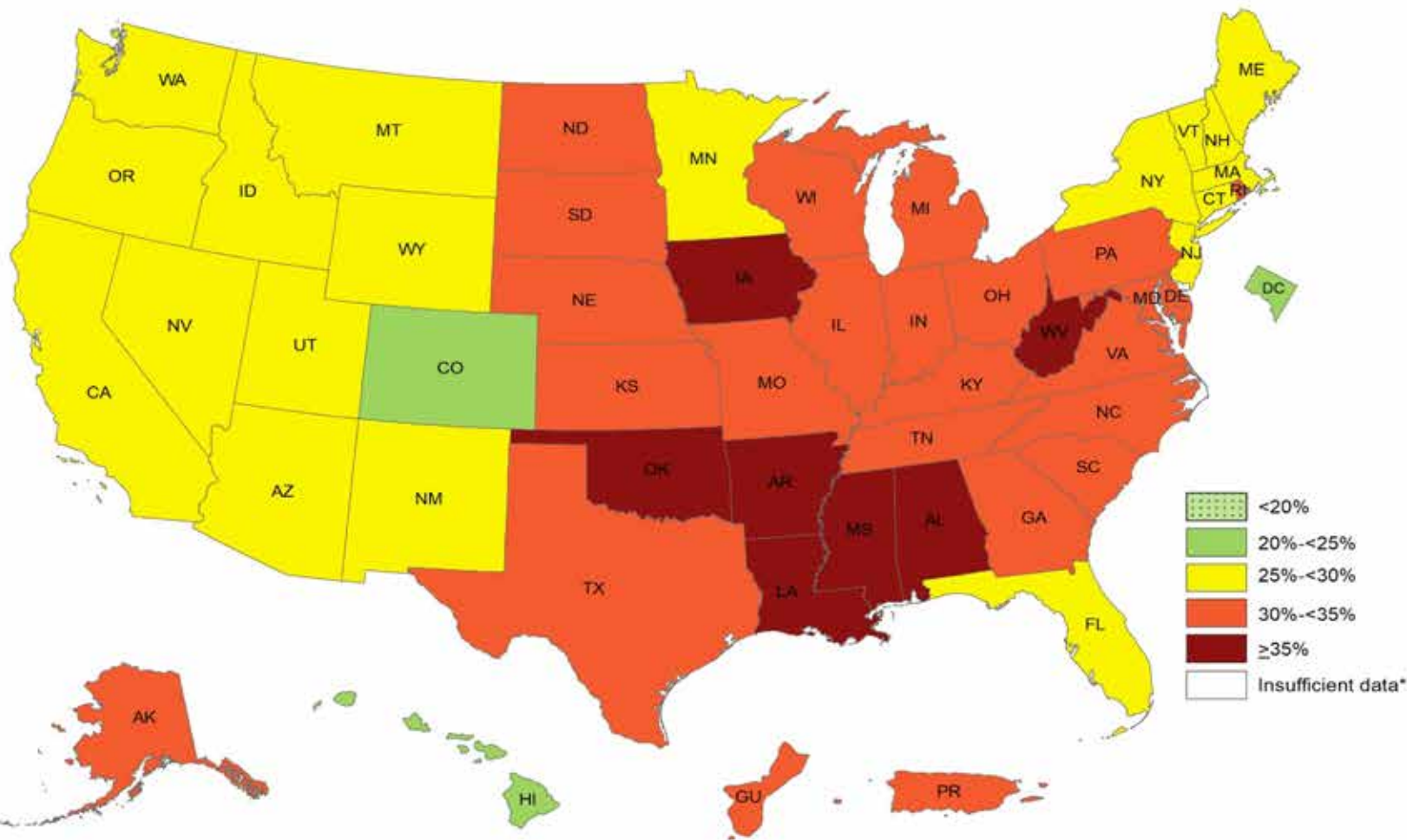
Stilwel OK: 56.3

Delta: 41.2!!!

Places at bottom 25% had in common:

- Lower education
- Bottom 25% income level
- Predominantly black
- Predominantly in the south

WHERE you live can impact health outcomes as much as HOW you live



Prevalence of Self-Reported Obesity Among States

CDC / BRFSS 2017

Mississippi: 37.3%

Colorado: 22.6%

All states had >20% of adults with obesity

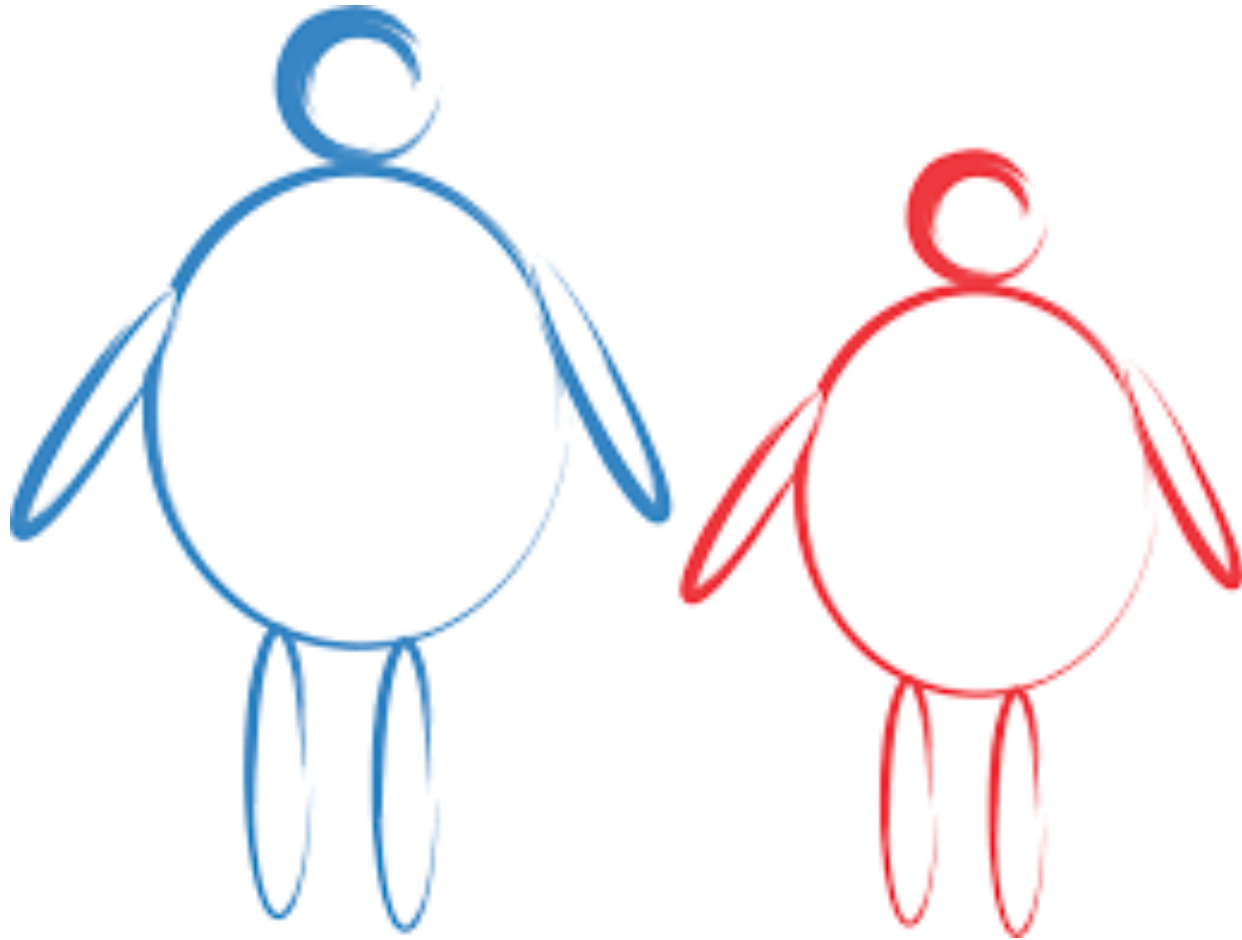
20% - 25% 3 states (CO, HI, DC)

25% - 30% 19 states

30% - 35% 22 states, Guam & Puerto Rico

> 35% 7 states

Understanding the COST and the PERSONAL IMPACTs



The Cost of Obesity

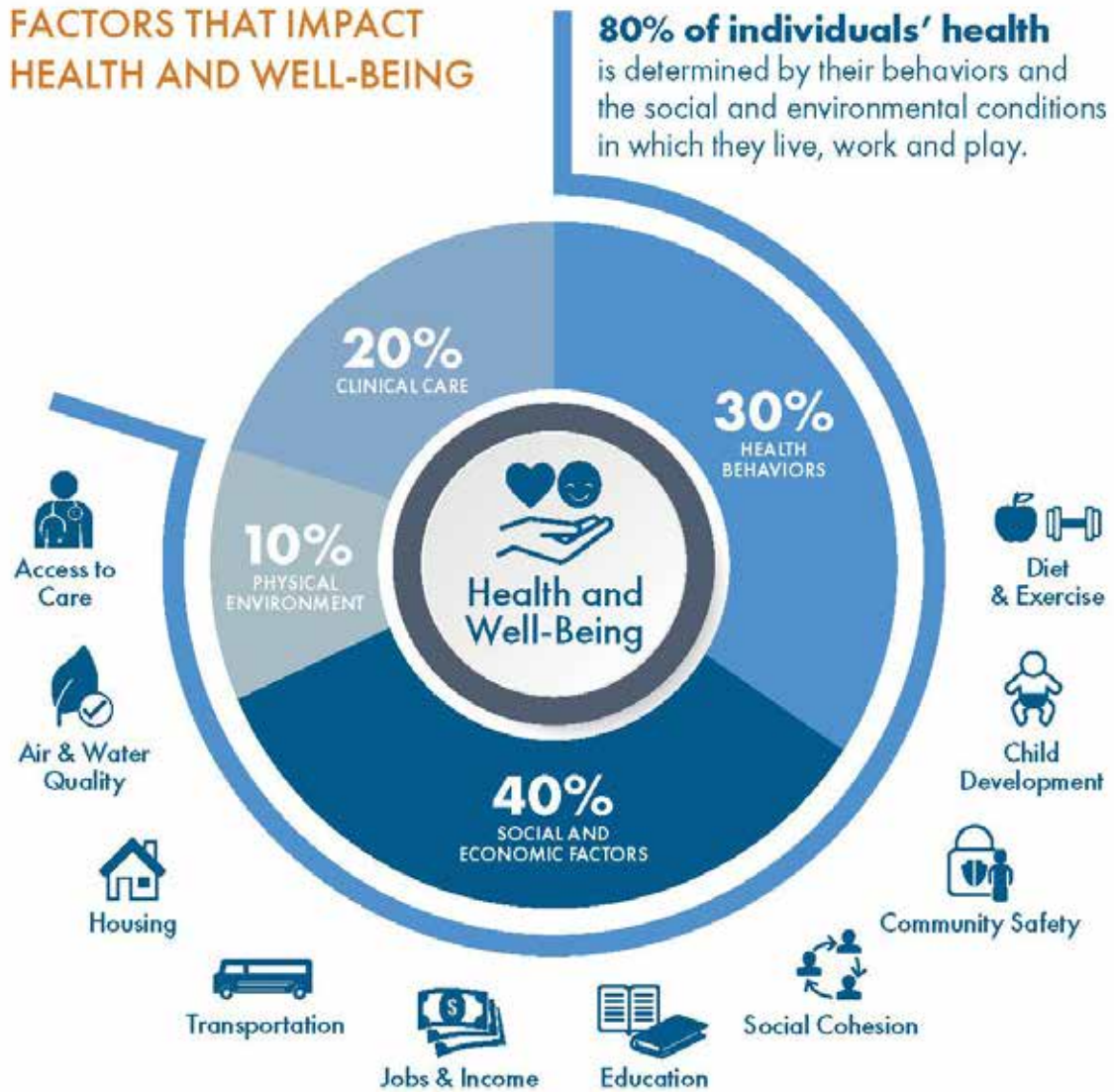
Health Impacts:

- All causes of death
- High blood pressure
- High LDL, low HDL
- Type 2 diabetes
- Coronary heart disease
- Stroke
- Osteoarthritis
- Some cancers
- Low quality of life

Annual productivity costs: \$3.8 B - \$6.38 B
(est \$79 - \$132 per individual)

PREVENTATIVE vs CURATIVE

FACTORS THAT IMPACT HEALTH AND WELL-BEING



20% of our health is shaped by clinical care

50% is determined by social and economic factors and the physical Environment

30% of health is influenced by our individual behaviors

Source: On the Path to Health Equity
NeighborWorks America and Enterprise

Population Health Management Definition



“Population health is a systematic approach to healthcare **that aims to prevent and cure disease by keeping people healthy.**”

-Kenneth Kizer, Director of the Institute for Population Health Improvement at the University of California at Davis Health System – quoted at the American College of Healthcare Architects (ACHA) Summer Leadership Summit, July 2016

Population Health Management: GOALS

1 Provide a **forum** for betterment of individual healthcare.

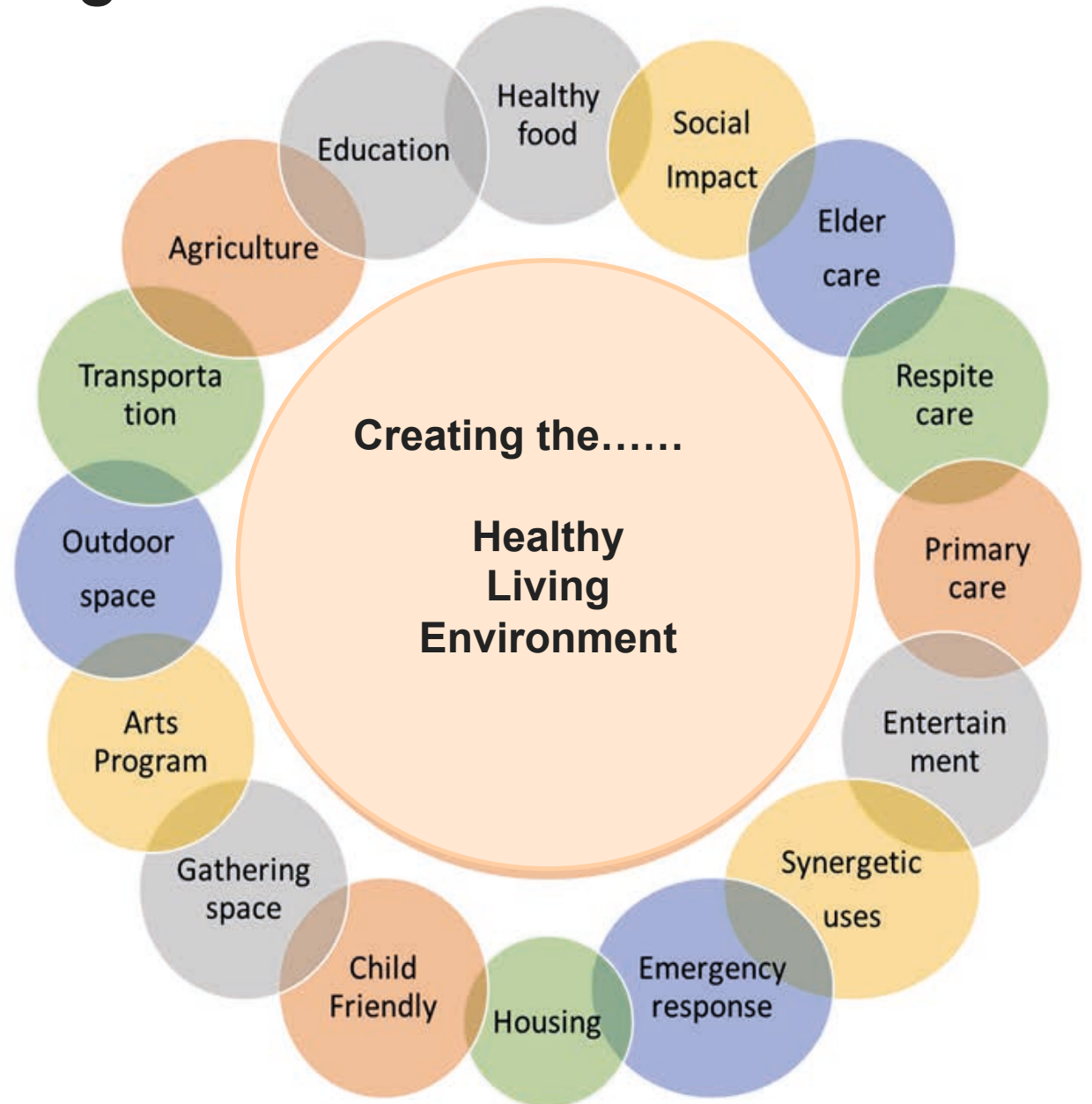
2 Reduce healthcare **costs**.

3 Address **impediments** to seeking healthcare.

Transportation, Follow up on doctor's instructions, Medication dosage completion

4 Keep healthcare **staff happy** with their work environment.

Population Health Management: PLANNING + DESIGN



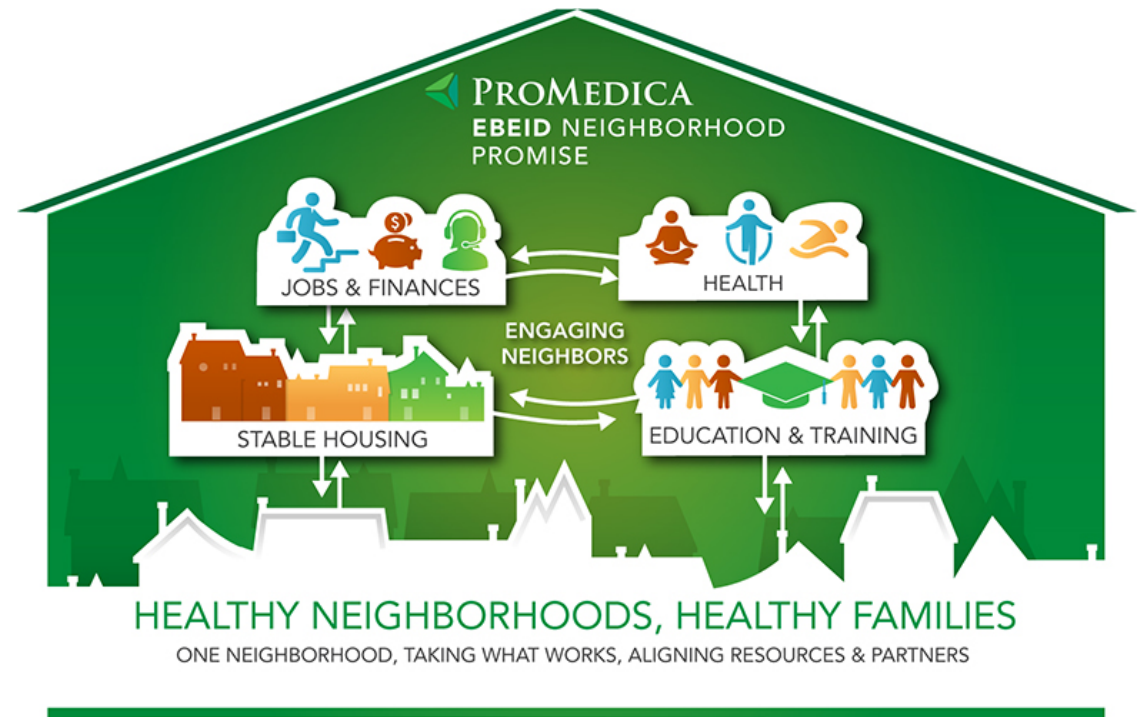
Strategy 1: Creating Affordable Housing

Affordable
Housing/Multi
Family Housing





Should doctors write the homeless prescriptions for housing in Seattle?

by: Andrew Lanier, KIRO Radio Updated: Mar 7, 2017 - 3:22 PM



Strategy 2 – Healthy Food Options/ Urban Farming



CULINARY MEDICINE SERIES

WHEN: TUESDAYS, 5:30 - 6:00PM
WHERE: Demonstration Kitchen
COST: FREE to members, CU Anschutz Medical Campus students, and clinic referrals
\$8 for non-members
REGISTRATION: Eventbrite [eventbrite.anschutzwellness.com](https://www.eventbrite.com/venues/anschutz-wellness-center)
Members, students, and clinic referrals: get your free code at the front desk

Culinary medicine blends the art of food and cooking with the science of medicine. Culinary medicine helps people make good decisions about accessing and eating high-quality meals that can help prevent and treat disease, while restoring wellbeing.

Join Registered Dietitians in our Demonstration Kitchen each Tuesday as we explore meal planning and cooking tips, learn new recipes, and try delicious samples!

RECIPE THEMES & DIETITIANS

Support Nutrition	Sarah Frank, RD, Center for Digestive Health
Meet Me in the Medicare room	Molly Prehn, RD, Center for Integrative Medicine
Healthy Diabetic Cooking	Kristina Corner, RD, UC Health Internal Medicine
Cancer Care	Lisa Wingrove, RD - Anschutz Health & Wellness Center
State of Soul Friendly	Maryke Miller, RD - Anschutz Health & Wellness Center
Weight Management	Cristina Rebellon, RD - Anschutz Health & Wellness Center

WELLNESS CHANGES EVERYTHING

Anschutz Health and Wellness Center
UNIVERSITY OF COLORADO ANSCHUTZ MEDICAL CAMPUS



Food is Medicine: Boston Medical Center produces 7000 lbs of organic veggies per year on their rooftops. – Reuters -Sept 19, 2019.



Homestead Hospital says its garden has potential to grow 30,000 pounds of produce annually.

Strategy 3: Promote Community Agricultural Initiatives

Grenada Replacement Hospital, St. George's, Grenada



Strategy 4: Leverage Conference Area for Community Education and Training



Strategy 5: Healthcare Transportation, Leveraging Transit Based Developments

Transportation

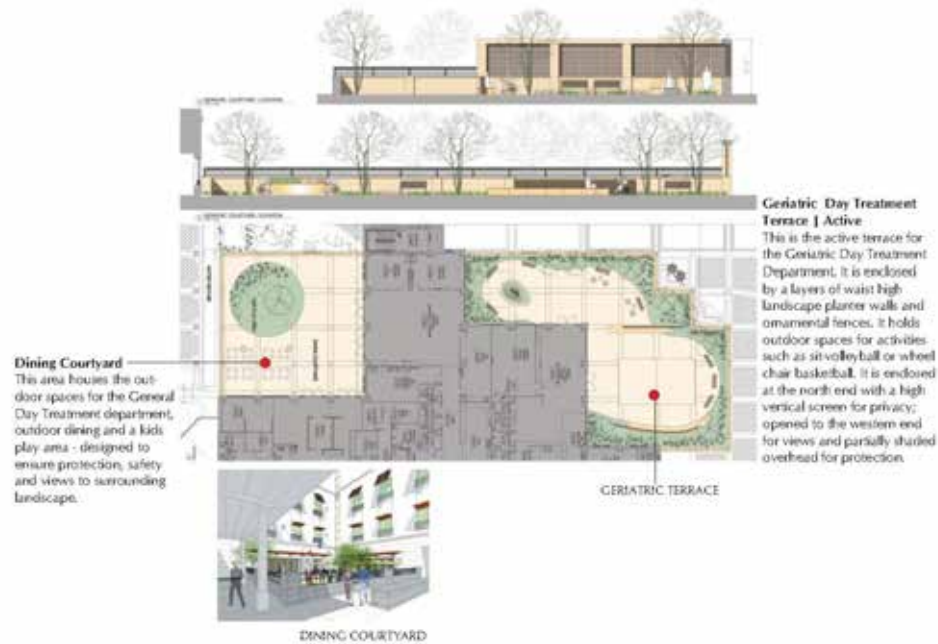
Lyft and Uber offering rides to the hospital.



Strategy 6: Therapeutic Outdoor Spaces

Bay Pines VAMC, Mental Health Center - Bay Pines, Florida

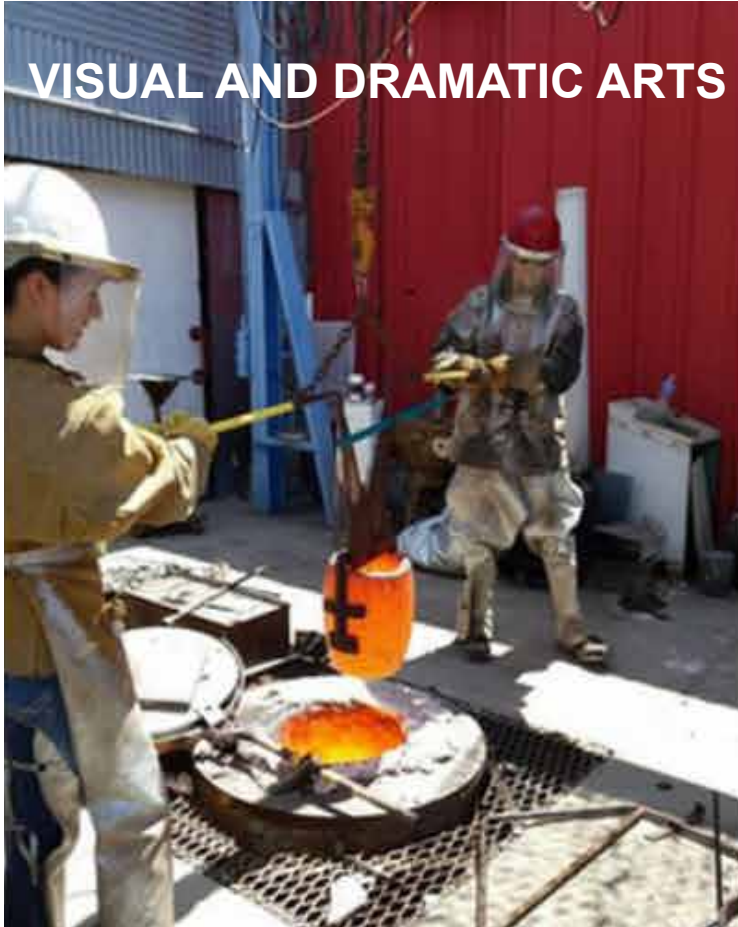
Community
Planning, Urban
Spaces



Strategy 7: Embracing the Healing Arts

Cultural, Urban
Spaces, Higher
Education, K-12
Education

VISUAL AND DRAMATIC ARTS



HEALING ARTS

FOR MILITARY &
VETERAN
FAMILIES



operationwearehere.com



Helping veterans pursue
their Hollywood dream.

Strategy 8: Embracing a Child-Friendly Healthcare Facility....everywhere.

Education- K-12

Child-Friendly Patient Room



Strategy 9: Providing Entertainment and Patient Education

Movies, Resource Centers and Libraries in Hospitals for Patient Engagement



Luis Borges

Tech and Media Coordinator - Kravis Children's Hospital at Mount Sinai

Engaging Through
the Power of
Movies.



Using Movie Magic
to Soothe for Eleven
Years.



Movies Helped
Raise Comfort and
Lower Anxiety.

Strategy 10: Gathering Spaces- responding to how people behave.

Urban Places,
Education, Higher
Education

Northwestern Medicine Shop and Dine

**Kiku Obata & Co and Stantec Architecture*



Strategy 11: Access to Affordable Healthcare, Mental Health and Dental

Heartland Health Centers, on Devon Street - Chicago, Illinois
A Federally Qualified Healthcare Center (FQHC)

**Devon Clinic - MDT Architects*



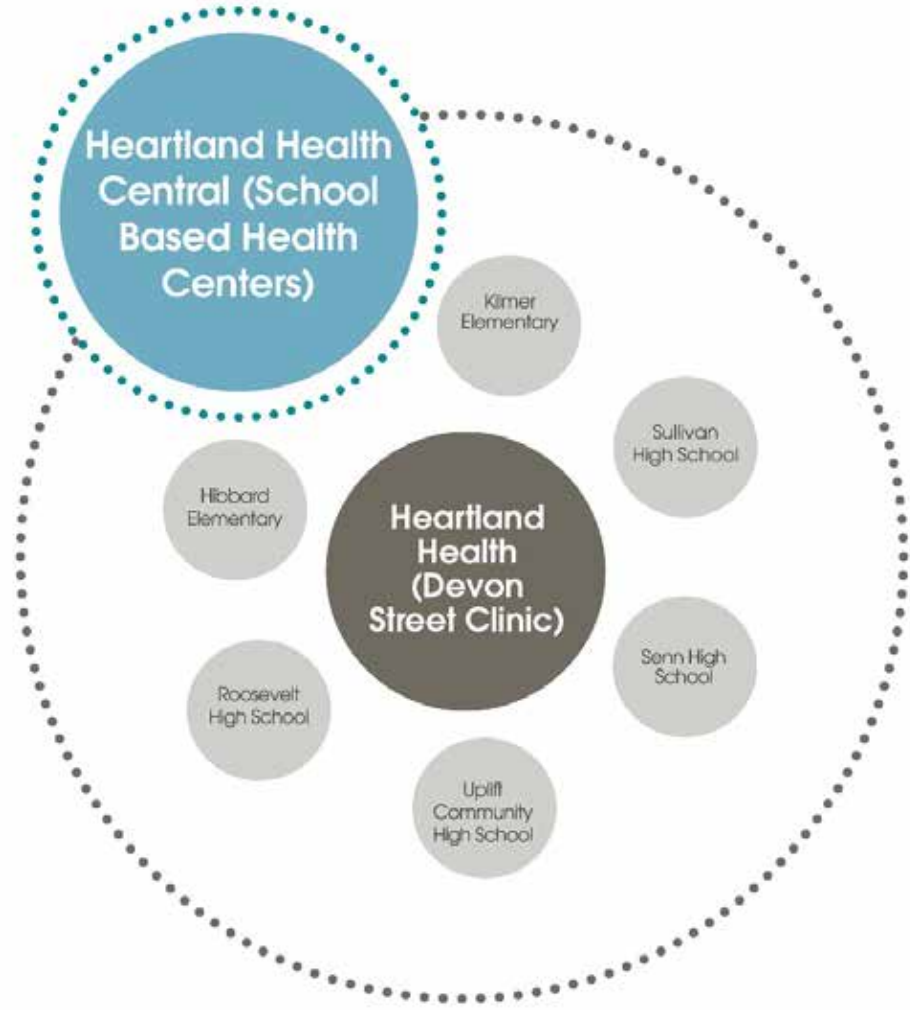
Strategy 12: Addressing “Burnout” Respite Care for Families and Staff

OSF Lynn & Jerry Flaherty Respite Care Garden
**Stantec and Hitchcock Design Group*



Strategy 13: Developing Symbiotic Partnerships in the Community....

Healthcare beyond the hospital walls



Strategy 14: Community Based - Emergency Response/Resiliency

Resiliency
Planning,
Community
Planning

Biloxi Mississippi VA Facility



Puerto Rico



Multi Family
Housing, Elder
Care Design,
Community
Planning,
Recreational

Strategy 15: Embracing Elder Care and Aging in Place – “Addressing Loneliness”

“Aging in Place”
Convergence with
“Home Healthcare”
and Telemedicine

Promoted by the
proliferation of 5G
technology and
Internet of Things.

Loneliness is the
next Epidemic.

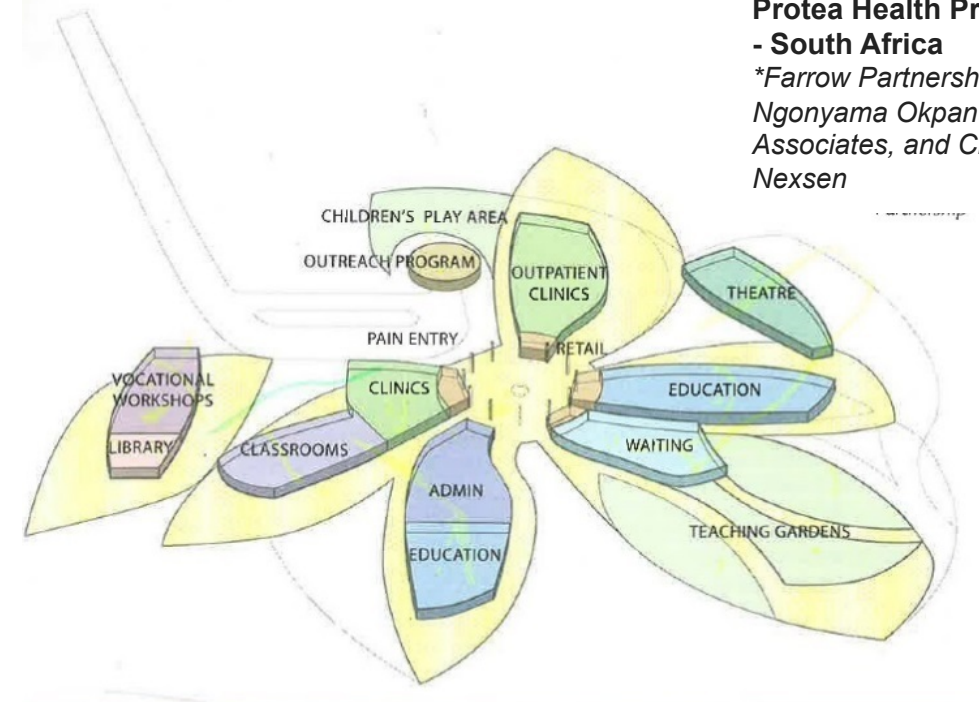
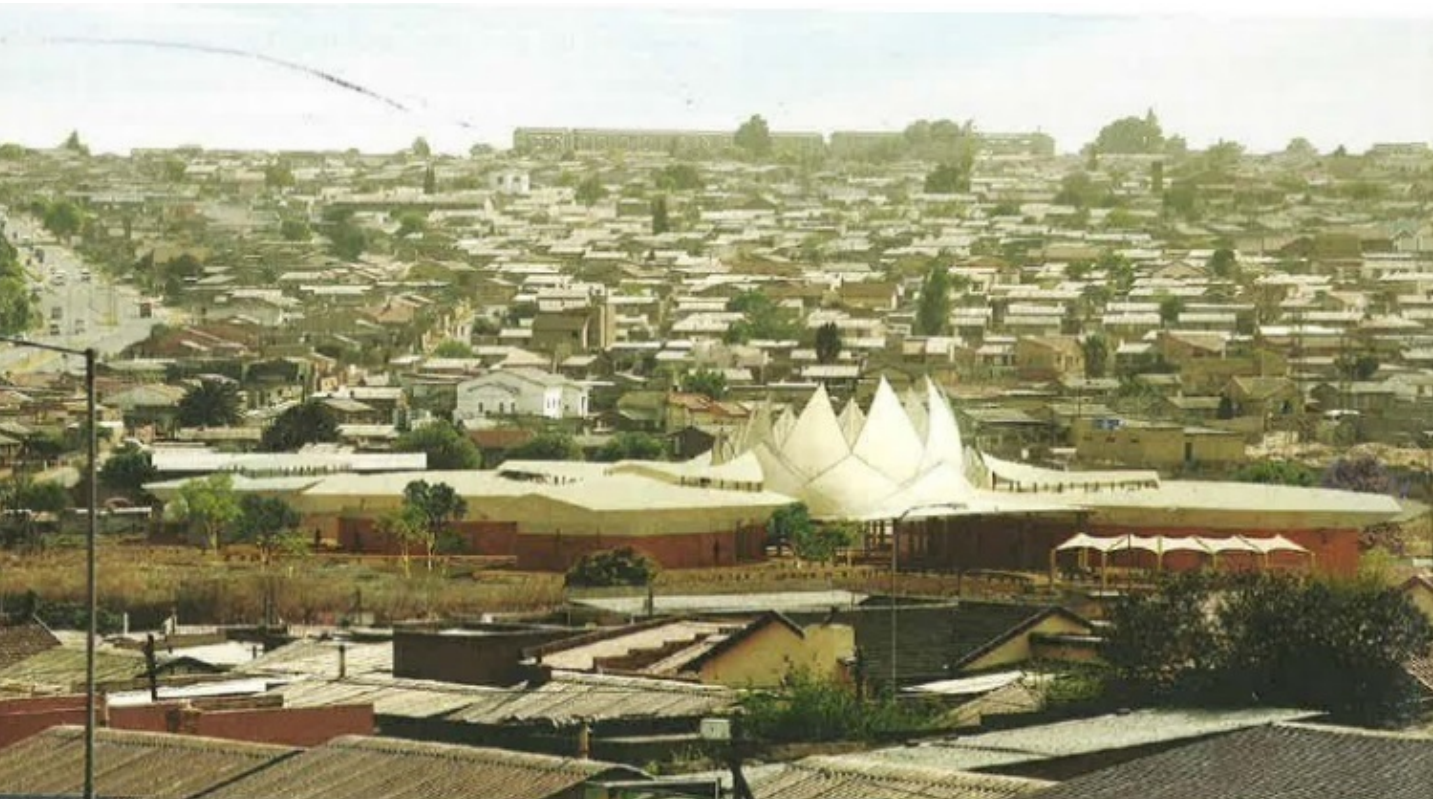
* *Center on Halsted - Gensler*



Strategy 16: Achieving Socially Sustainable

....from *Sustainable Healthcare Architecture* by Robin Guenther and Gail Vittori

All of Us.



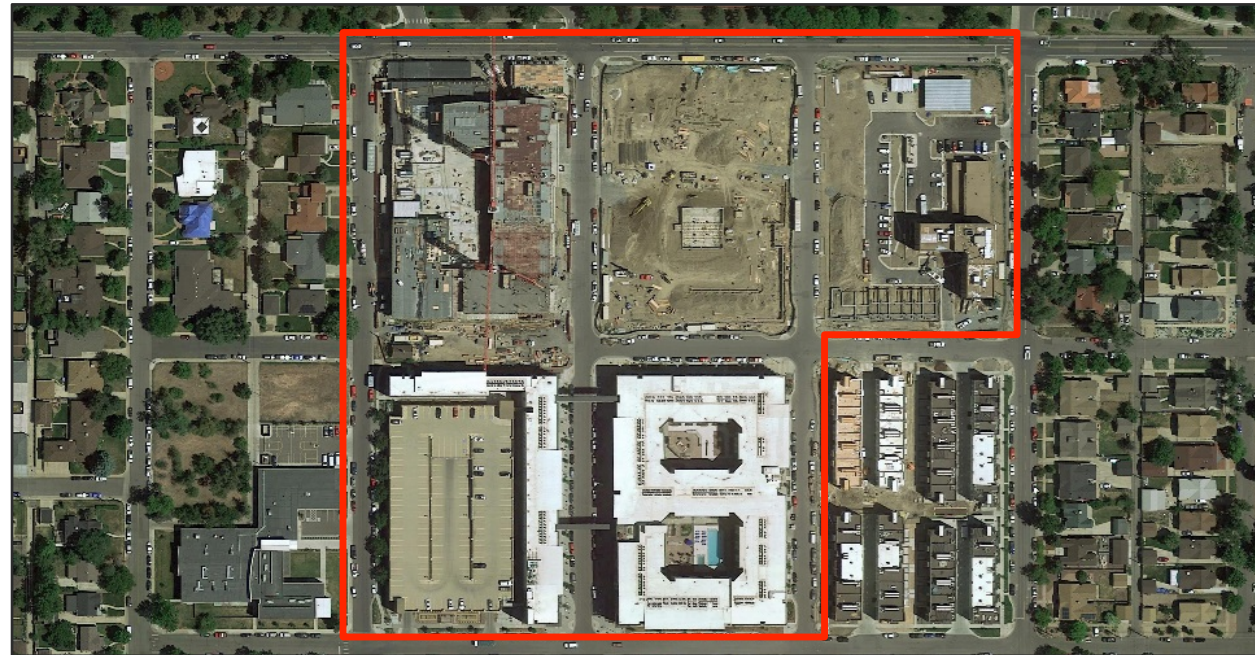
**Protea Health Prototype
- South Africa**
**Farrow Partnership,
Ngonyama Okpanum and
Associates, and Clark
Nexsen*

Urban Scales

City Scale



Project Scale



City Scale

Integrate health, wellness and happiness Key Performance Indicators and strategies into broadscale planning and design to guide future growth policy and design. Tools include Happy Cities Index, LEED ND, Well Communities.





Abu Dhabi

Mirfa

A Planning and design process aimed at promoting community happiness

Al Dhafra 2030 Planning Framework Principles (2015):



Final Draft
July 2011
Volume 1



Environment and Cultural Heritage:

- a) Hospitality and Culture
- b) Nature Preservation

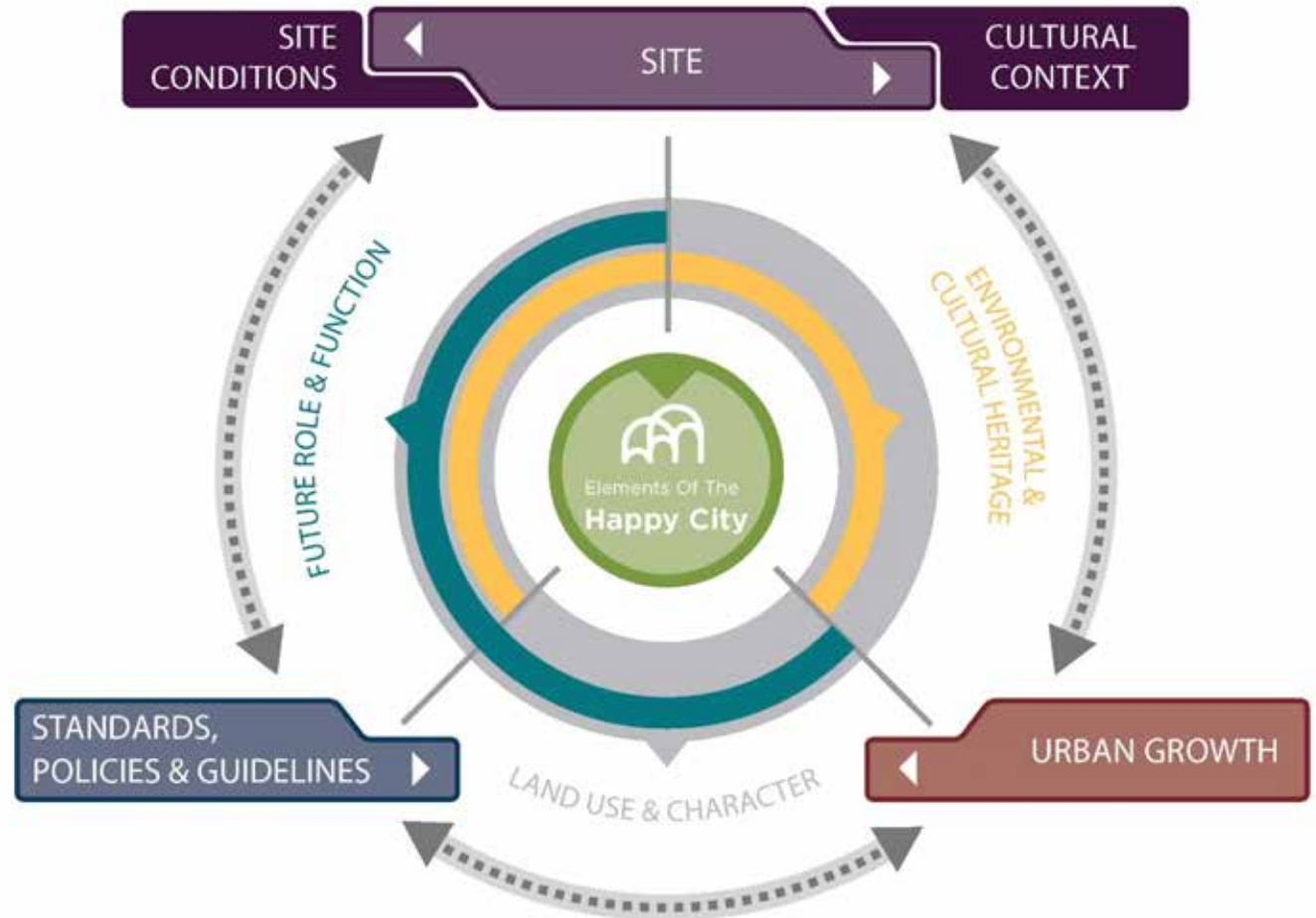
Future Role and Function:

- c) Economic and Urban Sustainability
- d) Facilities and Services

Land Use and Character:

- e) Land-Use Mix and Open Space
- f) Connectivity and Mobility

The planning process was guided by the original intent established in Plan Al Dhafra 2030 Planning Principles.



The Planning/Design Realm derived from Al Dhafra 2030 Planning Framework



Figure C.3a Mirfa Master Plan Design Realms

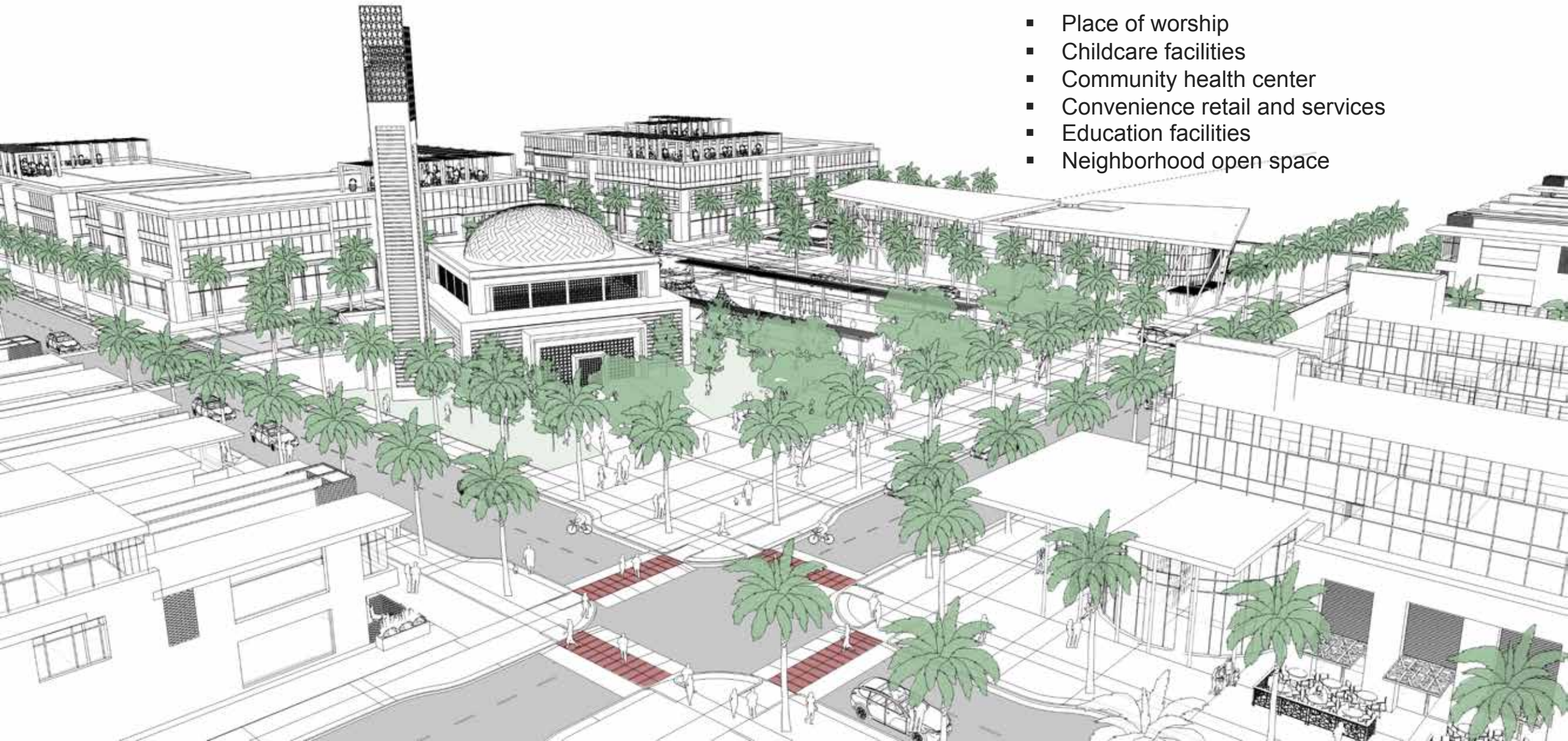
SOURCE: Shutterstock.com

10/2021 Update: mirfa.ae

Neighborhood Structure

Cluster community facilities and amenities to function as the heart of each neighborhood

- Place of worship
- Childcare facilities
- Community health center
- Convenience retail and services
- Education facilities
- Neighborhood open space



Neighborhood Framework

LEGEND:

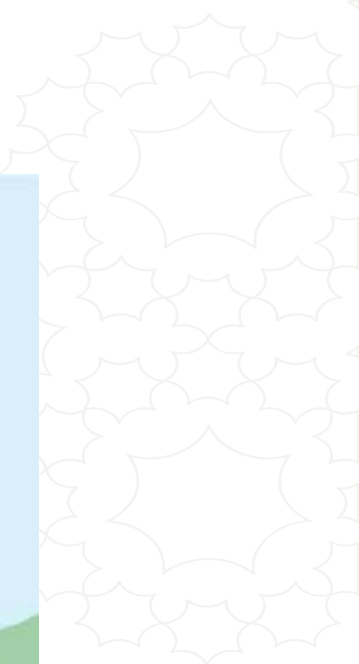
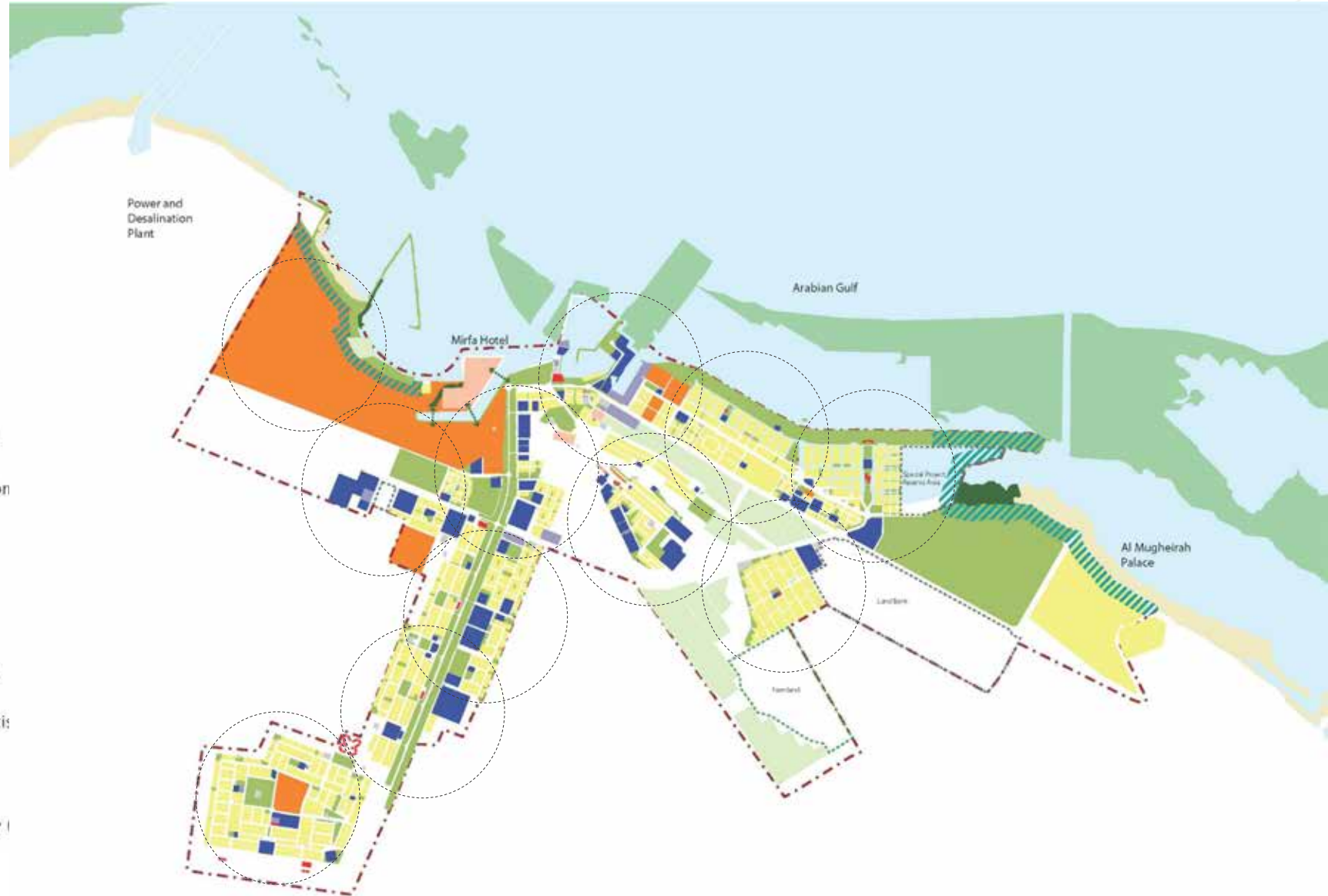
Existing - Built:

- Residential
- Mixed Use
- Commercial
- Community Facilities
- Open Space and Recreation
- Utilities

Future Planned:

- Residential
- Retail
- Mixed use
- Hospitality
- Recreation
- Open Space and Recreation
- Community Facilities
- Transportation Infrastructure
- Utilities

- Land Bank for Future Expansion
- Existing Farmland
- Farmland Expansion Area
- Intertidal Mudflats
- Mangroves
- Seagrass Bed
- Coastal Buffer (150m)
- Power Station Buffer (1500m)
- Avian Areas
- Proposed connections with exis
- Proposed Roads
- Existing Roads
- ADNOC Plot Boundary
- Mirfa Urban Growth Boundary



Hospitality & Culture

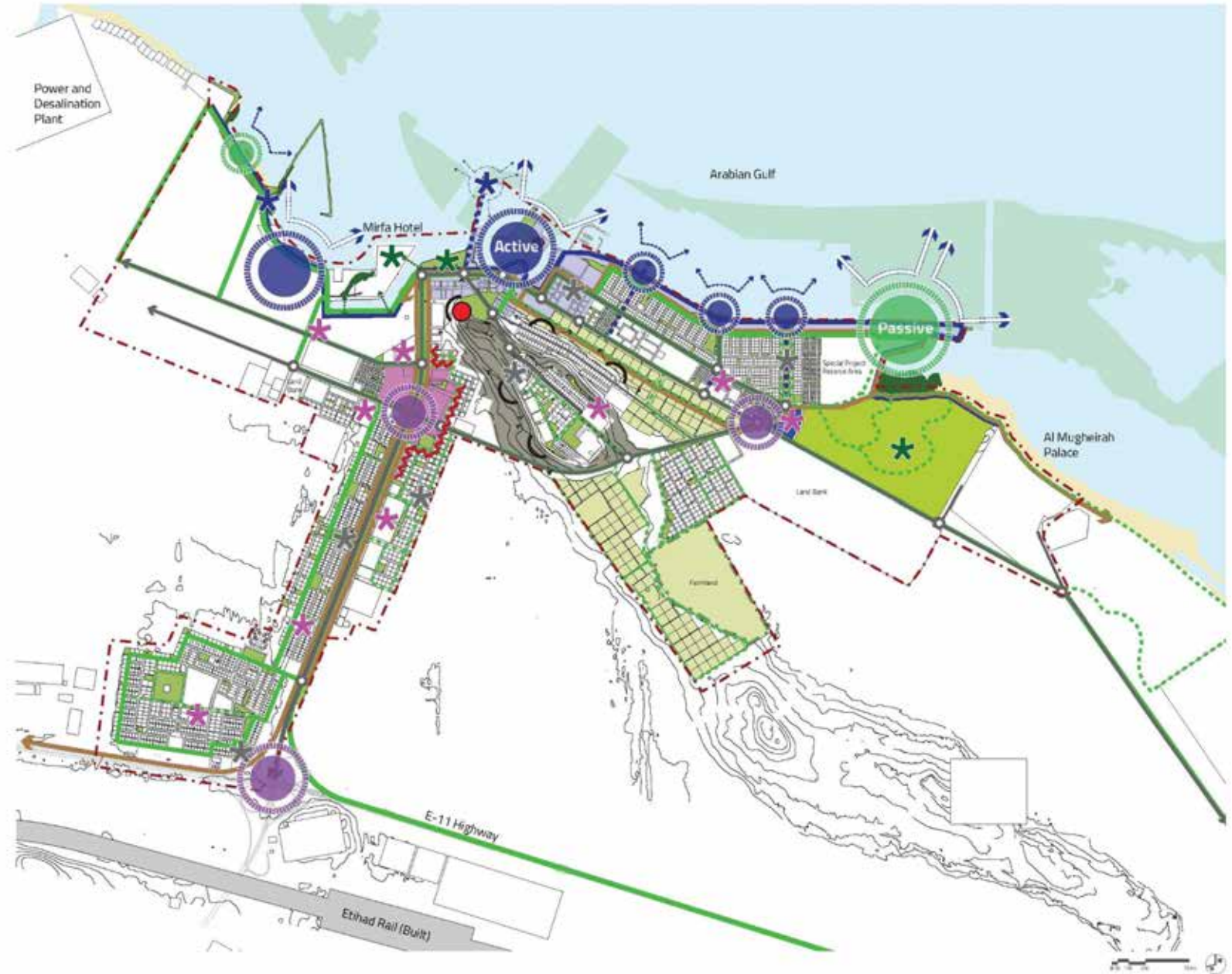


Hospitality and Culture

Framework of Activity Nodes.

LEGEND:

-  Waterfront Activity Node (Active)
-  Waterfront Feature/ Activity Node
-  Major Waterfront Pedestrian/ Bike Route
-  Secondary Waterfront Pedestrian Route
-  Major District Recreation Activity Node (Passive)
-  Recreation Activity Node
-  National Trail
-  Major Recreation Pedestrian/ Bike Route
-  Secondary Pedestrian/ Bike Route
-  Settlement/ Town Gateway
-  Settlement Landmark
-  Major Retail F&B Activity Node
-  Neighbourhood Religious Activity Node
-  Major Educational/ Recreation Node
-  Jebel Protection Area
-  Continuous Waterfront
-  Farms
-  Farm Expansion Area
-  Roundabouts
-  Entrance Avenue
-  Settlement Avenue
-  Viewing Overlooks (Jebel Edge Parks)
-  Primary Sea views
-  Mangroves
-  Intertidal Mudflats
-  Sea grass
-  Mirfa Urban Growth Boundary (UGB)



Hospitality and Culture

Marina Redevelopment Vision

Demonstrating the associated master planning guidelines that the Marina Redevelopment Vision responds to.

- 🔄
 a) Establish diverse hospitality offering.
- 🏞️
 b) Develop and implement a branded signage and wayfinding strategy to draw visitors to key public spaces
- 🎨
 c) Set up incentives to encourage and local public art
- 🎭
 d) Establish the identity of Mirfa Port to allow the local culture and current activities associated to fishing /sailing to be part of public life and enhance visitor experience
- 🌿
 e) Provide accessibility to waterfronts maintaining this valuable public amenity free for all to enjoy
- ❤️
 f) Provide diverse opportunities for active and passive recreation



Figure K.4: Mirfa Marina Area - Illustrative Plan

Marina Redevelopment Area Streetscape Improvements



Figure C.20b. Typical Main Road - Proposed Happy City Intervention

(5) Provision of community facilities / mosques to provide an focal point to the community in the area

(4) Pedestrian Realm enhancement (sidewalks, vegetation etc) to encourage walkability in and around the district.

(3) 3m Dual Cycle Track that connect the jebel with Marina Redevelopment Area

(1)/(2) Create refuge island and establish pedestrian walkway to enhance connectivity across the marina redevelopment area and adjacent approved development (Mirfa Corniche Improvement Project)



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Project Scale

Solutions at the individual building level aimed at healthy choices and encouraging socialization at a finer grain. Tools include Happy Homes, LEED, Well Building, Sustainable Sites.



10/2012



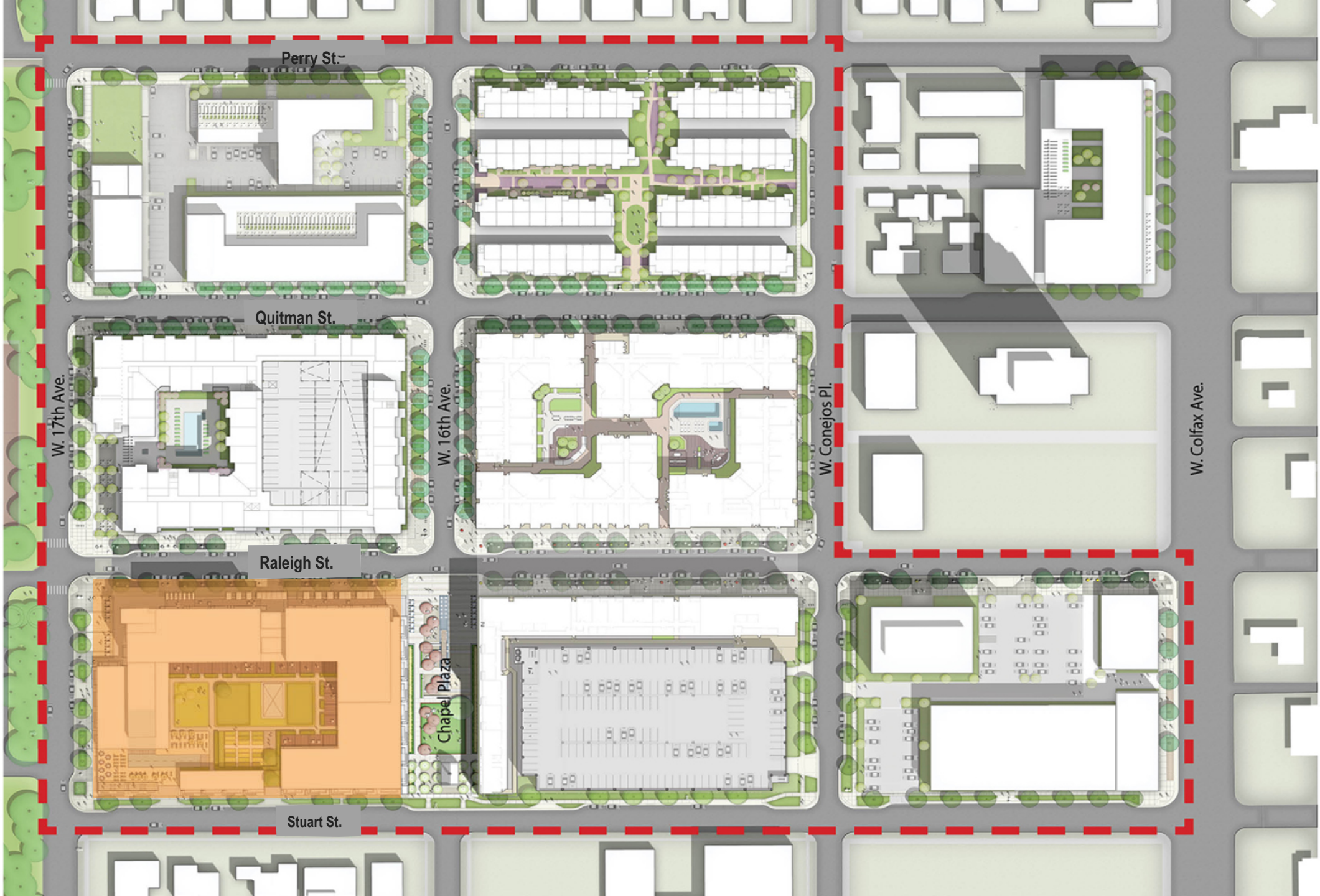
45

Perry St

W-16th Ave

W-16th Ave

W-17th Ave



Perry St.

Quitman St.

Raleigh St.

Stuart St.

W. 17th Ave.

W. 16th Ave.

W. Conejos Pl.

W. Colfax Ave.

Chapel Plaza



AIR



WATER



NOURISHMENT



LIGHT

- Healthy entrance
- Enhanced indoor air quality
- MERV-13 building air filtration
- Air quality monitoring
- Moisture and mold mitigation
- Balconies or patios for every home
- Operable windows in bedrooms
- Non-smoking environment

- WELL Building Standard water quality through City of Denver
- Hydration and beverage stations
- Low chlorine pool and hot tub
- Filtered water appliances (penthouses)
- Waterfront location and views of Sloan's Lake

- Urban Farm with fresh organic vegetables and herbs
- Professional farming support by Agriburbia
- Harvest Room to wash and store farm produce and local foods
- Indoor and outdoor kitchens with community table
- Pro-style grills
- Automated package delivery system with cold storage
- Fresh juicing station

- Floor-to-ceiling windows to maximize natural daylight
- Low-e glass exterior for comfort
- Light glare control
- LED lighting
- Open designs throughout
- Solar and blackout shades



FITNESS

- Active staircase in lobby
- 70' lap pool with year-round hot tub
- Wellness center with fitness lab, dry sauna and yoga & meditation studio
- Water sports, outdoor activities and 2.6 mile trail at Sloan's Lake Park
- Aquatics room with equipment for resident's use
- Sports workshop with tools for repairs
- Secure bike storage
- Sun deck for yoga



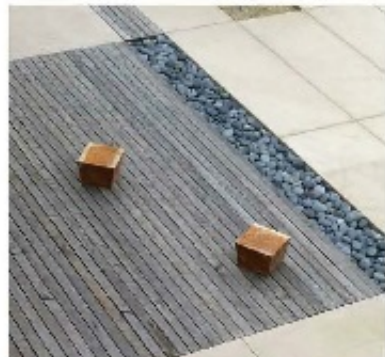
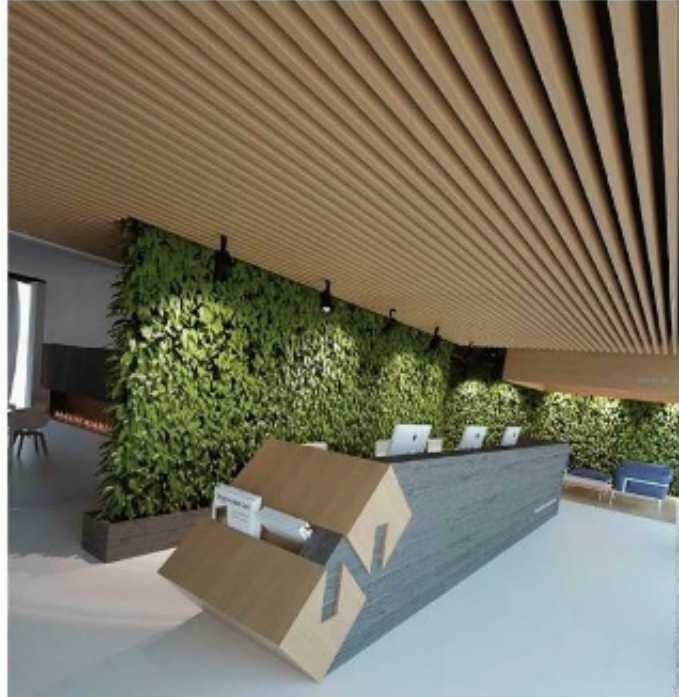
COMFORT

- Outdoor fire pit
- Natural and durable materials
- Enhanced thermal, visual and acoustical performance
- High-performance glazing
- Window soffit ventilation
- Pursuing Energy-Star certification



MIND

- Meditation gardens
- Connections to outdoor living environment
- Resident lounge with collaborative kitchen and media den
- Creative workshop with tools for multimedia arts
- Extensive landscaping to support biophilia—the human connection to nature
- Access to wellness experts, education and progress monitoring through Realwell
- Pet-friendly environment







A C O N S C I O U S L I F E

— *Built from the Inside Out* —



⁰¹ *Experience a Healthier Way to Live.*

Among the first in Colorado to be crafted with a true awareness of its surrounding environment, Lakehouse layers conscious design, plentiful amenities and an intense connection with nature to create a home for the body and the soul. New condominium and rowhome residences in Sloan's Lake are available for purchase now, with completion scheduled for late fall.

[Explore the Vision](#)

<https://lakehouse17.com/wellness/>

