EXECUTIVE SUMMARY
SUSTAINABLE NEIGHBORHOODS
HEARING DATE: JANUARY 9, 2020

Date: December 23, 2019
Case No.: 2019-023145CWP
Project: San Francisco Sustainable Neighborhoods Program
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Reviewed by: Adam Varat, 415-558-6405, adam.varat@sfgov.org
Recommendation: Informational

BACKGROUND
San Francisco has a strong history of initiating, strengthening, and implementing policies that support sustainability. Today’s global climate crisis expands the need and scope of this work to help reduce global heating through greenhouse gas emissions reductions (mitigation) and protect the city and its people from the unavoidable impacts of climate change (adaptation). Although numerous City plans, policies, and regulations support these aims, they are often distributed across multiple documents and City codes. This current regulatory reality can result in missed opportunities for projects to increase the effectiveness, efficiency, and benefits of their investments to sustainability, resilience, climate—as well as support equity, affordability, housing, financial, and other challenges. Likewise, it can be difficult for individual project sponsors and decision makers to connect design and construction decisions to the attainment of citywide goals, like achieving a net-zero city by 2050 per the 2016 Paris Climate Accords. In today’s complex world, additions and evolutions to our built environment are either part of these needed solutions or costly future retrofits.

The Sustainable Neighborhood Program has been particularly inspired by the opportunities and challenges presented in area planning, as well as the myriad of design, review, and approval processes associated with major development projects and their agreements. San Francisco Planning initiated, and has been leading, the Program’s development in collaboration with fellow agencies over the past few years. It has evolved through our “eco-district” work (e.g., Central SoMa Area Plan, Mission Rock, etc.), the Sustainable Systems Framework, and global best practices. The Program is intended as a comprehensive approach to amplifying environmental performance, quality of life, and community co-benefits in any scale plan or project.

Sustainable Neighborhood Program Summary
The Program is comprised of four main elements or tools: a vision framework; program summary; road map/project worksheets; and online guide. It aims to synthesize sustainability, climate, and resilience initiatives and regulations across City agencies in order to enable public and private investments in the built environment to achieve net-positive projects that support broader citywide initiatives.
The Framework is centered on five goals for any project or neighborhood to achieve (healthy air, renewable energy, clean water, robust ecosystems, and zero waste) through the pursuit of 15 sub-targets (see diagram below). Its development employed five guiding principles: people-centered, built on best practices, effective & efficient, compelling & easy-to-use, and flexible/scalable. The Framework also embeds three critical imperatives to be considered and supported throughout any strategy or combination thereof:

- **Equity.** Adopting more sustainable practices can help address health and prosperity disparities faced by communities of color. Sustainability strategies should be pursued with thoughtful procedural, structural, and distributional considerations and explicitly intend to benefit vulnerable populations.

- **Climate.** Well-designed sustainability strategies/actions can help minimize climate change by eliminating carbon emissions. Per the City’s Climate Action framework, this includes co-benefits to renewable energy, sustainable mobility, zero waste, and carbon sequestration. Likewise, by following the dynamic framework, inadvertent increases to greenhouse gas emissions can be avoided.

- **Resilience.** Resilient communities include people, buildings, and infrastructure that can withstand and recover from severe shocks and slower-to-accumulate stressors. As the effects of climate change are already here, investing in resilience today protects against current challenges (often while reducing energy and operational expenses) while reducing costly future repairs.
As a platform, the overall **Sustainable Neighborhood Framework** and tools seek to:

- Provide a bold vision and set of priorities for sustainable development throughout the City
- Identify and leverage system-based approaches to achieving one target in a way that benefits others
- Help identify opportunities, constraints, best practices, and potential partnerships for success
- Advance equity and climate resilience through the thoughtful, integrated, and innovative pursuit of environmental sustainability regulations
- Streamline (not add to) inter-agency review by providing a consistent platform for iterative design and decision making with project sponsors around environmental sustainability topics

Specifically, the **Sustainable Neighborhood Road Map** (see below) is a set of five worksheets, one for each goal. Each table is organized around the three targets relevant to that goal. The columns summarize core approaches or pathways through which the project can achieve results (vertical vs. horizontal decisions), key existing regulations (at the time of publication), specific objectives the City urges the project to achieve by build-out (non-binding but driven by existing or anticipated citywide goals, policies, and/or regulations), and a suite of recommended strategies. As the road map strives to set inspiring targets but not be prescriptive about how a project may achieve them, especially important for quickly evolving technologies, the strategy sets are merely a starting place.

<table>
<thead>
<tr>
<th>GOAL 1</th>
<th>EQUITY</th>
<th>RESILIENCE</th>
<th>CLIMATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>HEALTHY AIR</td>
<td>OPPORTUNITIES: Reduced health impacts of cumulative indoor &amp; outdoor air pollution (respiratory and cardiovascular) and associated hospital visits, increased co-benefits from air quality improvements &amp; infrastructure investments (e.g.)</td>
<td>OPPORTUNITIES: Ensure occupant can shelter in place during extreme heat and poor air quality days; support local climate-smart manufactured building materials in business, reduce operations emissions that help community stabilization</td>
<td>OPPORTUNITIES: Eliminate GHG emissions from building systems, materials, and operations; increased renewable energy demand, reduced displacement of GHG emissions to communities where materials are produced or transported</td>
</tr>
<tr>
<td>ENSURE NON-TOXIC &amp; COMFORTABLE AIR INDOORS &amp; OUT</td>
<td>CONSIDERATIONS: exposure to sustainable transportation &amp; EV charging; potential disproportionate costs implications (e.g. for renter and climate justice burdens)</td>
<td>CONSIDERATIONS: pressure of increased renewable electricity demands on systems and markets, increased use of air conditioning and related GNF</td>
<td>CONSIDERATIONS: Potential for electric vehicle prevalence to increase VMT and congestion; potential unknown impacts of new technologies and materials</td>
</tr>
</tbody>
</table>

**ZERO-EMISSION environments**

<table>
<thead>
<tr>
<th>TARGETS</th>
<th>APPROACHES</th>
<th>EXISTING REQUIREMENTS</th>
<th>ENHANCEMENTS (CITY COMMITMENTS)</th>
<th>BEST-PRACTICE STRATEGY DIRECTORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIVELIVE USE</td>
<td>Proximity of density to transit</td>
<td>On-site grocery &amp; childcare</td>
<td>Design ground-floor space to appeal to tenants that provide needed neighborhood services</td>
<td></td>
</tr>
<tr>
<td>SYSTEMS &amp; OPERATIONS</td>
<td>All-electric preferred (GEA, 36)</td>
<td>100% fuel-free lighting, cooking, hot water, appliances</td>
<td>Use building or development-scale electric heat pump systems</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION PRACTICES</td>
<td>Construction air filtration (GEA)</td>
<td>100% diesel-free generators</td>
<td>Eliminate diesel emissions from generators</td>
<td></td>
</tr>
<tr>
<td>MATERIAL SELECTION</td>
<td>GHG Emissions checklist (CCEA)</td>
<td>50% local sourcing</td>
<td>Source materials at least 50% of construction materials from &lt;500 miles</td>
<td></td>
</tr>
<tr>
<td>SUSTAINABLE TRIPS</td>
<td>Transportation Demand Management</td>
<td>Bike parking space per bedroom, bike parking space availability, bike share</td>
<td>Design bike parking areas scalable to 1 stall per bedroom</td>
<td></td>
</tr>
<tr>
<td>ELECTRIC VEHICLES</td>
<td>100% EV-ready off-street parking, EV chargers 50% of spaces</td>
<td>Design flexible spaces for telecommuting or remote working for occupants</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MATERIAL SELECTION</td>
<td>Low-emitting materials (GBC, LEED)</td>
<td>Zero-VOC interior materials</td>
<td>Use formaldehyde-free wood products and glues</td>
<td></td>
</tr>
<tr>
<td>AIR FILTRATION</td>
<td>High-quality air filtration (IAQ)</td>
<td>100% of occupants can remain during unhealthy air quality events</td>
<td>Implement energy recovery ventilation and passive ventilation</td>
<td></td>
</tr>
<tr>
<td>COMFORTABLE micro-climates</td>
<td>Passive exterior cooling</td>
<td>10% open space area contains heat source, 10% of open space</td>
<td>Integrated, permanent, and flexible shading (trees, canopies, screens, PV panels) on roofs and open spaces</td>
<td></td>
</tr>
</tbody>
</table>

*Sustainable Neighborhood Framework (22 December 2019 draft)*
RECENT PROCESS & PILOTS

Neighborhood- or district-sized developments are often an ideal scale for maximizing the effectiveness and efficiency of environmental sustainability and climate resilience aims. In late 2017/early 2018, the Potrero Power Station and Balboa Reservoir projects were invited to help pilot the Sustainable Neighborhood Framework beta during in their developments. Leading up to and throughout these processes, Planning convened separate content working sessions with SF Environment, SFPUC, the Mayor’s Office, OEWD, and SPUR. Both projects were provided an overview presentation and a customized Road Map. In practice, the development teams have been using the road maps to determine project-specific goals and the standards and guidelines (required) and considerations (recommendations) included in their approval documents. The comprehensive five-page Road Map lives as a compendium in the design standard’s appendix. Throughout, the project sponsor and City family teams have worked with Planning staff in an iterative process to use and refine the framework to inspire best project outcomes.

NEXT STEPS

Planning Department staff look forward to hearing discussion and suggestions from the Planning Commission. Over the next months, we aim to: finish the pilots with Potrero Power Station and Balboa Reservoir; conduct stakeholder workshops with designers, developers, environmental groups; and refine the contents and evolve the spreadsheet-based tools into dynamic online formats. We propose to return to the Planning Commission in the summer with a resolution for action.

REQUIRED COMMISSION ACTION

Planning staff brings this item as information for the Commission to consider and provide guidance on how to best leverage this Planning Department tool to best support environmental sustainability, resilience, climate, and equity aims.

RECOMMENDATION: INFORMATIONAL

Attachments:
none
1. Climate Challenge Overview

2. Proactive Climate Resilience in San Francisco

3. Sustainable Neighborhood Program & Tools

4. Next Steps
CLIMATE CHALLENGE

OVERVIEW
THE GLOBAL CLIMATE CRISIS HAS HIT HOME

Drought & Wildfire

Poor Air Quality

Sea Level Rise & Flooding

Extreme Heat
Alongside other challenges & Current City Priorities

/ Housing & community stabilization
/ Equity & environmental justice
/ Public health & safety
/ Responsive & smart public investment
Impacts are disproportionate.
Continued emission reductions are not a given.

Graph showing emission trends from 1990 to 2050. The trend shows a decrease in emissions with a focus period from 2020 to 2030, aiming for a net-zero goal by 2050. The emissions are measured in million MTCO2e. The graph indicates a 15% decrease by 2020, a 68% decrease by 2030, and a 90% decrease by 2050. The SF BAU line shows a continuous increase in emissions from 1990 to 2050.
CLIMATE RESILIENCE
SAN FRANCISCO PRO-ACTION
Charting a Holistic & Coordinated View for Action

Climate Resilient City
- People
- Buildings
- Infrastructure
- Nature
- Communities

Climate Adaptation
- Flood Protection
- Sea Wall Strengthening
- Air Quality & Heat Safety
- Greening
- Water Security

CLIMATE ADAPTATION: Safeguard for Current & Future Hazards: PROTECT

Climate Mitigation
- Renewable Energy
- Energy Efficiency
- Sustainable Trips
- Zero Emission Mobility
- Carbon Sequestration
- Zero Waste

CLIMATE MITIGATION: Eliminate & Capture Emissions: DRAWDOWN
INTER-AGENCY EFFORTS: PLANS & PROJECTS

- Hazard & Climate Resilience Plan
- Climate Action Strategy
- Waterfront Resilience Program / Flood Study
- Sea Level Rise Vulnerability & Consequences Assessment
- Major Development Projects (SNF pilots)
PLANNING DEPARTMENT’S AVENUES OF SUPPORT & ACTION

**Early Interface**
Entitlements, PPAs, CEQA, DAs & General Plan referrals

**Tools**
Planning Code, PIM, Better Roofs, Better Streets, UDGs, TDM, SFPlantFinder, Sustainable Neighborhood FW

**Integrated Planning & Partnerships**
Area & community plans, IPIC engagement, inter-agency, General Plan updates

**Design Review**
Inter-agency / disciplinary: urban design & architecture, open space & streetscapes
CITYWIDE DIVISION
WORK PROGRAM
& INTEGRATION

LEGEND
- Key Work Plan Elements
- Focus Integration to Date
- Existing Integration
- Integration Opportunity
SUSTAINABLE NEIGHBORHOOD PROGRAM & TOOLS
AMPLIFY PERFORMANCE, EFFICIENCY & SYSTEMS; EVOLVE “ECO-DISTRICTS”
MAXIMIZE CO-BENEFITS OF INVESTMENTS
WHILE MEETING NEEDS & REGULATIONS

Stormwater Management / Flood Protection

Valencia Green Gateway
PROGRAM ELEMENTS & GUIDING PRINCIPLES

- Vision Framework
- Program Summary
- Project Road Map / Worksheet
- Online Guide

/ People-centered & compelling
/ Built on best practices
/ Effective & efficient
/ Compelling & easy-to-use
/ Flexible & scalable
VISION FRAMEWORK: INTER-CONNECTED GOALS & TARGETS

- Zero Emissions
- Non-Toxic
- Carbon-Free
- Biodiverse
- High Quality
- Responsible
- Healthy
- Regenerative
- Flood Safe
- Reduced
- Recovered

HEALTHY AIR
- Comfortable
- Efficient

RENEWABLE ENERGY
- Efficient

ROBUST ECOSYSTEMS
- Healthy

CLEAN WATER
- Regenerative
- Flood Safe

ZERO WASTE
- Reduced
- Recovered

Integrating & Supporting EQUITY - RESILIENCE - CLIMATE Benefits & Considerations
**Program Summary:** WHAT, WHY, HOW + USER GUIDE

**Sustainable Neighborhood Program**

**Introduction**

The Sustainable Neighborhood Program is a comprehensive approach to-positive trends, to amplify environmental performance, quality of life, and communities as benefits. It integrates sustainability, climate, and resiliency improvements across City agencies and develops public and private partnerships to support important citywide goals.

**Purpose**

San Francisco’s broad commitment to help reduce global warming by achieving a zero-emissions city by 2020 requires thoughtful and urgent action by 2030. To achieve this ambitious, comprehensive goal while accommodating population growth and economic growth, it’s estimated that every new building or major renovation is part of the solution rather than a costly future retrofit. Thus the Program aims to maximize synergies between sometimes isolated efforts to maximize outcomes and efficiencies.

**Value & Benefits**

The Planning Department’s unique open-process project incorporates real stakeholders, and these partnerships as inter-agency networks, position the agency to support and facilitate innovative and integrated sustainability initiatives. The Sustainable Neighborhood program includes:

- **Green building goals** that align with priorities for housing, mobility, open space, affordability, and community development.
- **Emits and advances equity, resilience, and climate imperatives across topics.**
- **Lowers City, community, and climate-sector risks for medium suppliers.**
- **Provides a consistent platform for market-ready reviews, engagement, and decision making.**
- **Helps identify opportunities, constraints, best practices, and potential partners for success—within and beyond individual sites and boundaries.**
- **Supports consistent and regular monitoring and reporting.**

**Sustainable Neighborhood Framework**

The Program’s key guiding principles, designed in concert with fellow agencies and global best practices, provide a comprehensive yet transformational vision. **ESSENTIAL** for any program in the neighborhood by employing **3 DRIVING PRINCIPLES** to weave all the actors (City staff, project sponsors, owners, designers, and community members) into a solid solution:

1. **PEOPLE-CENTRIC** because community-based validation minimizes sustainability while building collective social impact.
2. **DYNAMIC SYSTEMS** and SCALE AGGRESSIVELY consider and correct feedback from the boundaries and across goals to maximize co-benefits while meeting individual requirements.
3. **PLURALISTIC** to recognize today’s technologies and project realistic evidence quickly, so our targets can be met through feasible options.
## ROAD MAP / WORKSHEET: CONSISTENT BASE FOR ITERATIVE PROCESS

### HEALTHY AIR

**ENSURE NON-TOXIC & COMFORTABLE AIR INDOORS & OUT**

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<tr>
<td>SYSTEMS &amp; OPERATIONS</td>
<td>All-electric preferred [GBC ’20]</td>
<td>100% fossil-fuel free heating, cooling, hot water, appliances</td>
<td>Use building or development-scale electric heat pump systems</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION PRACTICES</td>
<td>Construction air filtration [GBC]</td>
<td>100% diesel-free generators</td>
<td>Eliminate diesel emissions from generators</td>
<td></td>
</tr>
<tr>
<td>MATERIAL SELECTION</td>
<td>GHG Emissions checklist (CEQA)</td>
<td>50% local sourcing</td>
<td>Source at least 50% of construction materials from &lt;500 miles</td>
<td></td>
</tr>
<tr>
<td>SUSTAINABLE TRIPS</td>
<td>Transportation Demand Management</td>
<td>Bike parking space per bedroom</td>
<td>Design bike parking areas scalable to 1 stall per bedroom</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sidewalk widening, bike racks [BSP, PC]</td>
<td>10% Class 1 spaces fit cargo bikes</td>
<td>Design flexible spaces for telecommuting or onsite co-working for occupants</td>
<td></td>
</tr>
<tr>
<td>ELECTRIC VEHICLES</td>
<td>100% EV-ready off-street parking [EC]</td>
<td>Off-street, public EV charging stations</td>
<td>Design at least 50% of off-street parking spaces to service electric vehicles and bicycles</td>
<td></td>
</tr>
<tr>
<td></td>
<td>EV chargers @ 5% of spaces [EC]</td>
<td>Zero-emission public realm &amp; open space</td>
<td>Use manual and/or electric powered landscape maintenance equipment</td>
<td></td>
</tr>
</tbody>
</table>

### EQUITY

**OPPORTUNITIES:** Reduced health impacts of cumulative indoor & outdoor air pollution (respiratory and cardiovascular) and associated hospital visits; increased co-benefits from just transition & infrastructure investments (solar)

**CONSIDEATIONS:** Access to sustainable transportation & EV charging, potential disproportionate cost implications (esp. for renters) & climate justice burdens

### RESILIENCE

**OPPORTUNITIES:** Ensure occupants can shelter in place during extreme heat and poor air quality days, support local climate-smart manufacturers remaining in business, reduce operations expenses that help community stabilization

**CONSIDEATIONS:** Pressure of increased renewable electricity demands on systems and markets, increased use of air conditioning and related CHG

### CLIMATE

**OPPORTUNITIES:** Eliminated GHG emissions from building systems, materials, and operations; increased renewable energy demand; reduced displacement of GHG emissions to communities where materials are produced or transported

**CONSIDEATIONS:** Potential for electric vehicle prevalence to increase VMT and congestion, potential unknown impacts of new technologies and materials
**ROAD MAP / WORKSHEET: CONSISTENT BASE FOR ITERATIVE PROCESS**

### Project Targets
- Bike parking space per bedroom
- 10% Class 1 spaces fit cargo bikes
- Off-street, public EV charging stations
- Zero-emission public realm & open space

### Project-Specific Strategies
- Design bike parking areas scalable to 1:1 (bike:bedroom)
- Design flexible spaces for telecommuting or onsite co-working for occupants
- Coordinate with adjacent bicycle network design and construction
- Design at least 50% of off-street parking spaces to service electric vehicles and bicycles
- Use manual and/or electric powered landscape maintenance equipment
- Specify carbon-smart insulation (wood, straw, clay-straw, hemp, cork, sheep's wool, etc.)
- Use formaldehyde-free wood products and glues
- Implement energy recovery ventilators and passive ventilation
- Use HVAC systems that can adjust filter levels to manage wildfire smoke

### Zero-Emission Environments

<table>
<thead>
<tr>
<th>Targets</th>
<th>Approaches</th>
<th>Existing Requirements</th>
<th>Enhancements (City Commitments)</th>
<th>Best-Practice Strategy Directory</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAND USE</td>
<td>Proximity of density to transit</td>
<td>On-site grocery &amp; childcare</td>
<td>Design ground-floor space to appeal to tenants that provide needed neighborhood services</td>
<td></td>
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<tr>
<td>SYSTEMS &amp; OPERATIONS</td>
<td>All-electric preferred [GBC '20]</td>
<td>100% fossil fuel free heating, cooling, hot water, appliances</td>
<td>Use building or development-scale electric heat pump systems</td>
<td></td>
</tr>
<tr>
<td>CONSTRUCTION PRACTICES</td>
<td>Construction air filtration [GBC]</td>
<td>100% renewable energy (See Energy)</td>
<td>Specify all-electric appliances free of chemical refrigerants</td>
<td></td>
</tr>
<tr>
<td>MATERIAL SELECTION</td>
<td>GHG Emissions checklist [CEQA]</td>
<td>100% diesel-free generators</td>
<td>Eliminate delivery and passenger idling, providing plug-in areas for refrigerated delivery trucks</td>
<td></td>
</tr>
<tr>
<td>SUSTAINABLE TRIPS</td>
<td>Transportation Demand Management</td>
<td></td>
<td>Eliminate diesel emissions from generators</td>
<td></td>
</tr>
<tr>
<td>ELECTRIC VEHICLES</td>
<td>Transportation Demand Management</td>
<td></td>
<td>Require construction equipment to use clean fuels and minimize idling</td>
<td></td>
</tr>
<tr>
<td>MATERIAL SELECTION</td>
<td>Low-emitting materials [GBC/LEED]</td>
<td></td>
<td>Source at least 50% of construction materials from &lt;500 miles</td>
<td></td>
</tr>
<tr>
<td>AIR FILTRATION</td>
<td>High-quality air filtration [Art 38]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GOALS</td>
<td>TARGETS</td>
<td>EXISTING REQUIREMENTS</td>
<td>PLAN POLICY RECOMMENDATIONS (City Policy &amp; Plan Area Regulations)</td>
<td></td>
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<td>---------------------</td>
<td>-------------------------------------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>Healthy Air</td>
<td>Zero Emission</td>
<td>- Bike parking by unit [PC] &lt;br&gt; - 100% EV ready parking [GBC]</td>
<td>- Bike parking by bedroom, scaled for cargo bikes</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-Toxic</td>
<td>- Low-emitting materials [GBC]</td>
<td>- Zero-emitting materials</td>
<td></td>
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<tr>
<td></td>
<td>Comfortable</td>
<td>- High-quality air filtration [Art 38]</td>
<td>- Shading &amp; living walls</td>
<td></td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>Efficient</td>
<td>- Reduce energy use [Title 24/GBC]</td>
<td>- All-electric buildings &amp; systems</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Carbon Free</td>
<td>- 15% roof area solar PV or thermal [GBC]</td>
<td>- 15% roof area solar PV or thermal &lt;br&gt; - GHG-free (renewable) energy purchase</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Smart Operations</td>
<td></td>
<td>- Smart systems &amp; plug loads</td>
<td></td>
</tr>
<tr>
<td>Robust Ecosystems</td>
<td>Green</td>
<td>- 30% Living Roof alternative [PC]</td>
<td>- 50% living roof &lt;br&gt; - Plantings equivalent to 25% of site area</td>
<td></td>
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<tr>
<td></td>
<td>Biodiverse</td>
<td></td>
<td>- 100% climate appropriate species &lt;br&gt; - 50% minimum local and California natives</td>
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<tr>
<td></td>
<td>Healthy</td>
<td>- Bird Safe Buildings [PC]</td>
<td>- Non-toxic landscaping practices &lt;br&gt; - Access to healthy &amp; affordable food</td>
<td></td>
</tr>
<tr>
<td>Clean Water</td>
<td>Regenerative</td>
<td>- Non-potable water for flushing &amp; irrigation [Art 12C]</td>
<td>- Non-potable water for cooling &amp; street cleaning</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Flood Safe</td>
<td>- Stormwater/urban flood disclosure [PoIC]</td>
<td>- Build to 100-yr storm + SLR elevations</td>
<td></td>
</tr>
<tr>
<td></td>
<td>High Quality</td>
<td>- Slow &amp; reduce stormwater runoff [SMO]</td>
<td>- Prioritize green infrastructure</td>
<td></td>
</tr>
<tr>
<td>Zero Waste</td>
<td>Responsible</td>
<td>- LEED points [GBC]</td>
<td>- Sustainable, low-carbon materials</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Reduced Waste</td>
<td>- Recycling &amp; composting (buildings)</td>
<td>- Recycling &amp; composting (open spaces)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Recovered/Reused</td>
<td>- Construction waste diversion (65%)</td>
<td>- Construction waste diversion (75%) &lt;br&gt; - Maximum deconstruction / re-use</td>
<td></td>
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</tbody>
</table>
ONLINE GUIDE [DRAFT]: DYNAMIC PORTAL TO REGS & RESOURCES

Renewable Energy
Achieve and efficient and fossil fuel-free environment

Target 1: Maximize energy efficiency requirements
Target 2: Generate onsite renewable energy to support critical functions for 72-hours
Target 3: Use 100% greenhouse gas-free energy supply

Sourcing all energy needs from renewable sources is the most effective way to reach our goal of a zero emission city. It also creates job opportunities in the green economy and

Equity

Opportunities: healthier air; lower utility costs, improved indoor comfort through responsive smart systems; minimized rate volatility, retain energy revenue in the local economy; provide renters equal access to energy efficiency upgrades; increase job opportunities for energy upgrade work

Considerations: avoid passing upfront retrofit costs to residents; limited triggers/funding for existing building retrofits; explore opportunities for community-owned solar

Co-benefits

Target 1: Maximize energy efficiency requirements

The San Francisco Green Building Code requires new construction to reduce energy use by 5%, 3% for major renovations or 2% for core and shell projects.

With a few tweaks you can achieve much more!

Solar Orientation

Orient your buildings to reduce solar gain in summer and increase in winter (and for energy generation!)

Envelope

Minimize Energy loss through maximum insulation, window quality, and building envelope construction

- Orient the longest facade east to west
- Use skylights for passive heating
- Natural ventilation

- Use high performance windows
- Ensure tighter and better insulated building envelopes
NEXT STEPS

- Commission feedback
- Pilot wrap-ups
- Engagement
- Refinements
- Return to Commission (resolution) & launch
THANK YOU!