King County

South Magnolia CSO Control Project




Community Meeting

June 13, 2012

TETRA TECH
and Team

Agenda

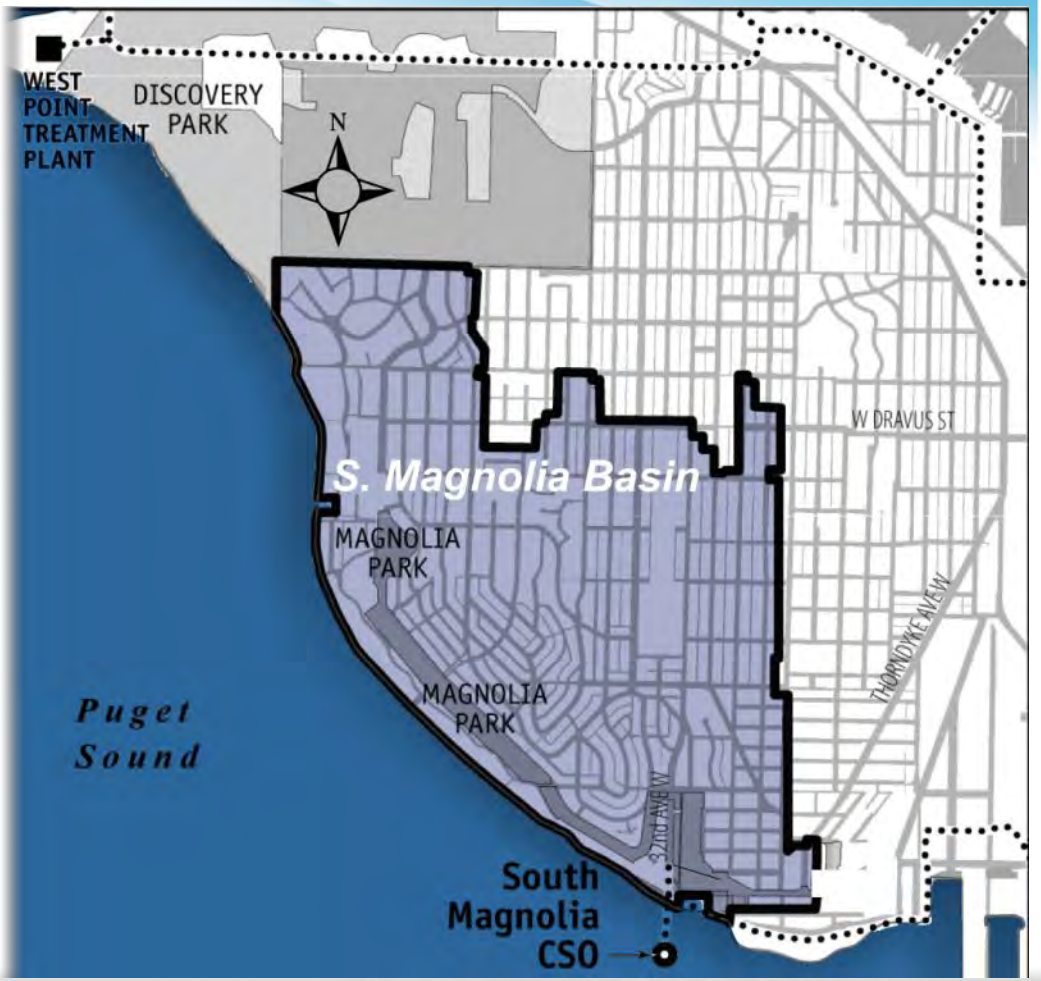
- Introductions
- Project background & status
- How we used community input in early design
- Design concept
  - Landscape
  - Architecture
- Working with the community
- Next steps
- Discussion with design team

Working with the Magnolia Community

- Design team continues community discussions in meetings, workshops, briefings
- Early design considered future uses for the adjacent property
- Current design based on updated assumptions
- Discussions continue among King County, the Port of Seattle and the City of Seattle

Why is this Project Needed?

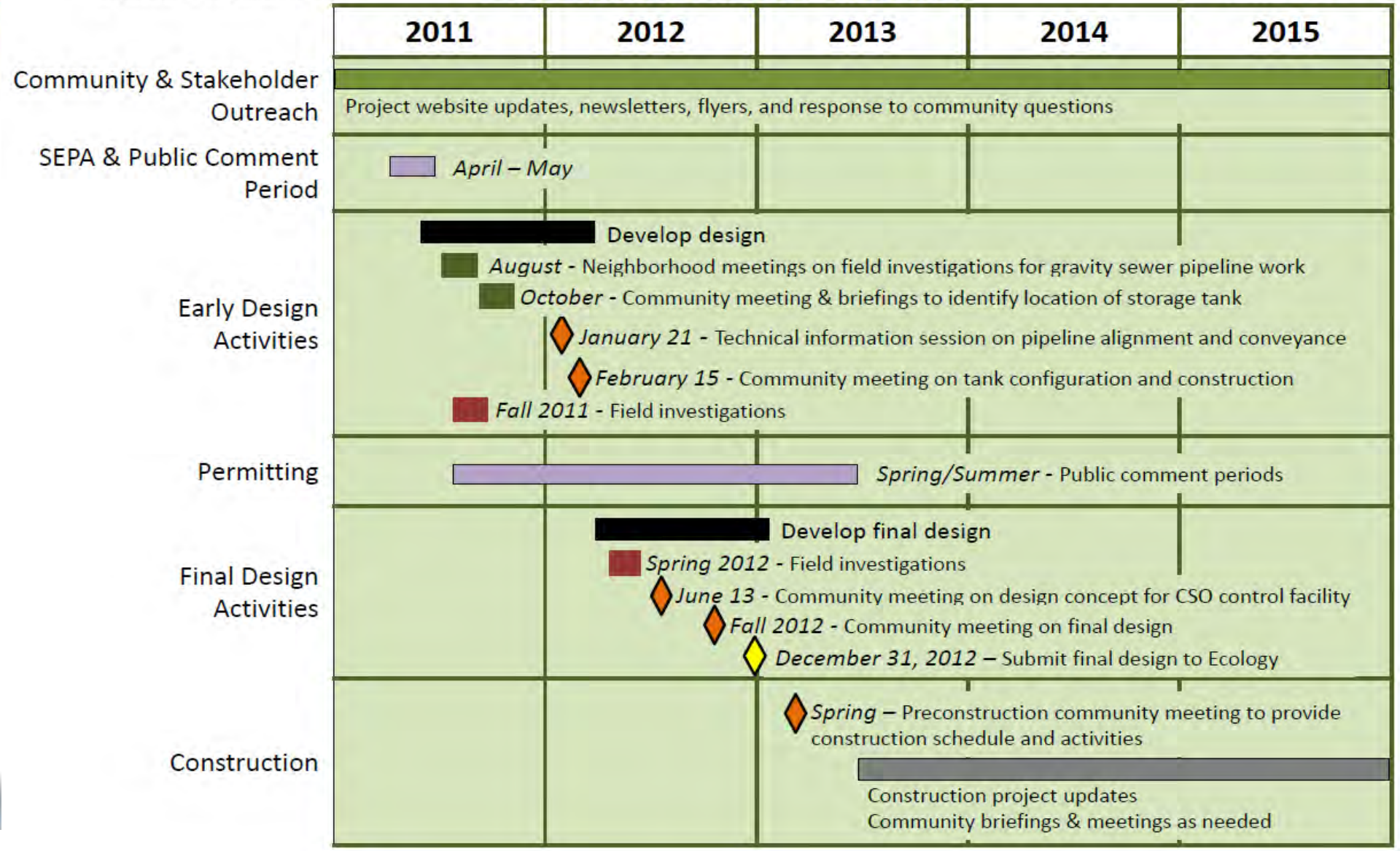
- From January-November 2011, 21 CSOs occurred in the South Magnolia system
- WA Dept. of Ecology allows no more than one untreated event per year on average
- This CSO control project will help protect Puget Sound water quality



King County
Department of Natural Resources and Parks
Wastewater Treatment Division

SOUTH MAGNOLIA
CSO CONTROL PROJECT TIMELINE

JUNE 2012

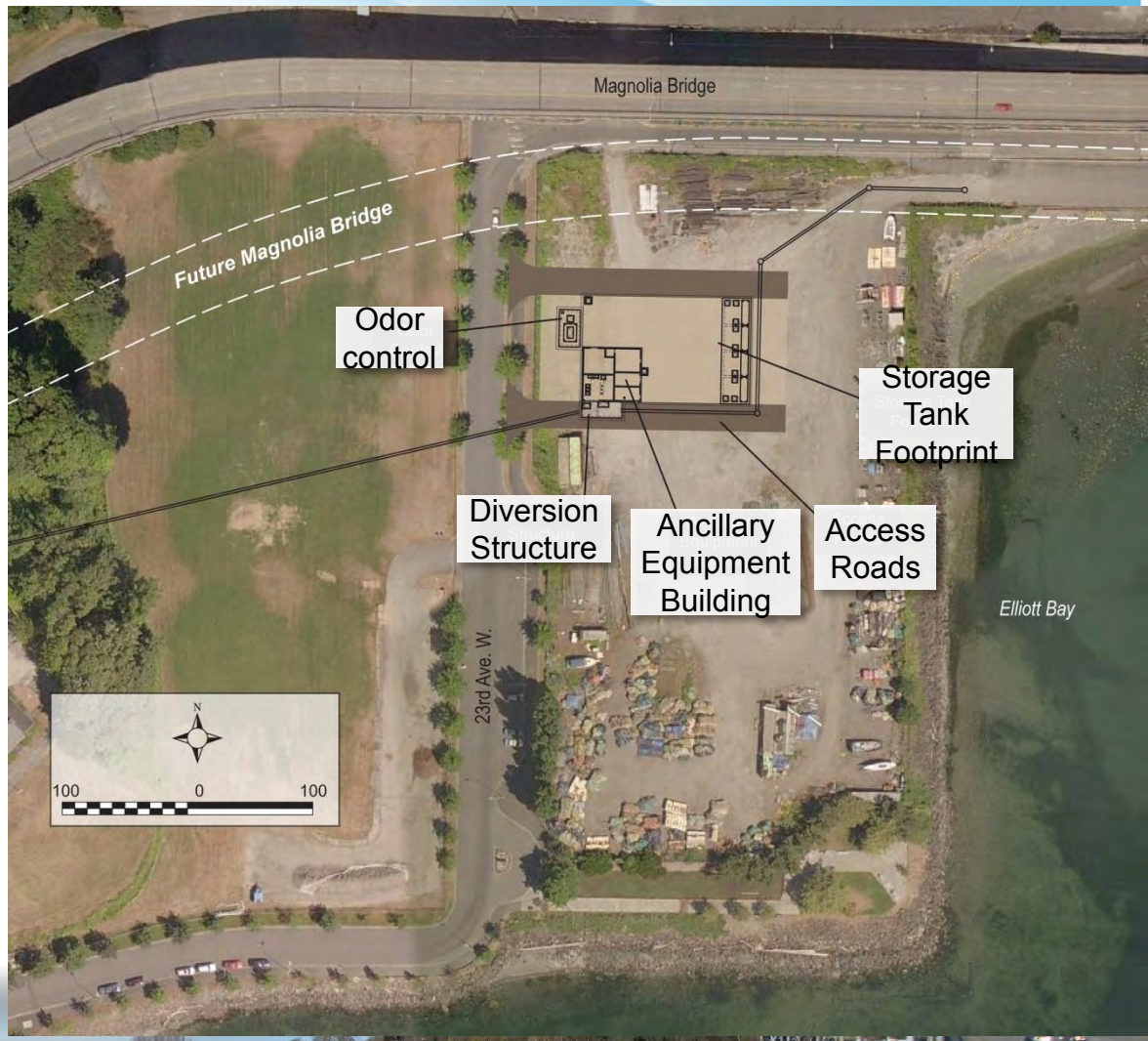


Overview of Design Elements

- Underground storage tank
- Gravity sewer pipeline
- Diversion structure

King County's Tank Location:
Terminal 91 West Yard

- Facility sited to maximize future land use opportunities:
  - Shoreline access
  - Proximity to future bridge
  - Position building to reduce footprint



Community Concerns that Informed Design

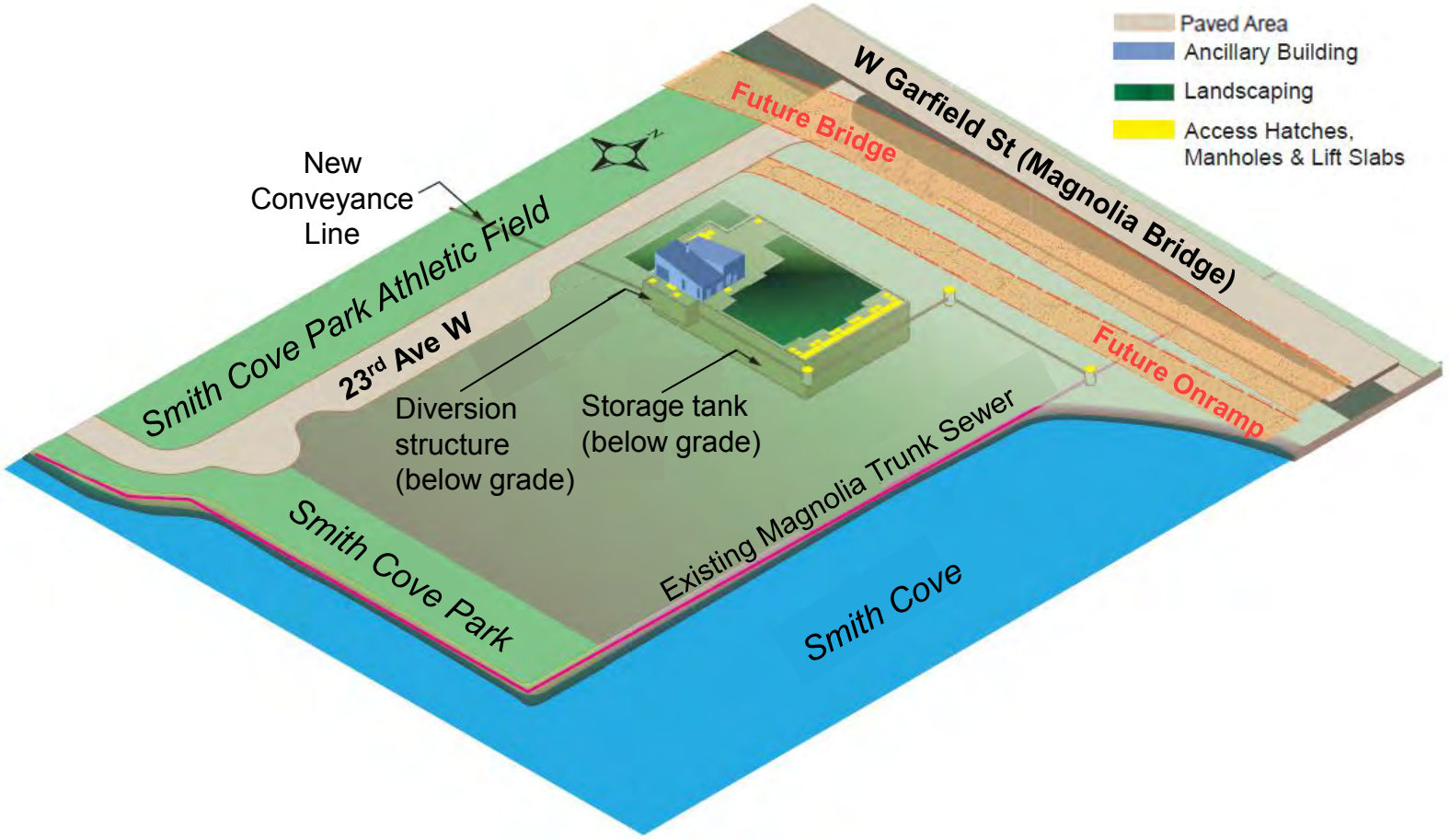
- Limit light and glare
- Include odor control
- Design redundant controls for operations
- Consider future use of adjacent land

Public meeting, February 15, 2012

Incorporating Community Input in Early Design

- Reduced the number of surface hatches
- Reduced the size of the above ground building compared to the Facility Plan
- Positioned the building to buffer the surrounding space from County vehicle access and maintenance activities
- Designed about 50% of the facility site to be vegetated

Facility Configuration at the West Yard Site

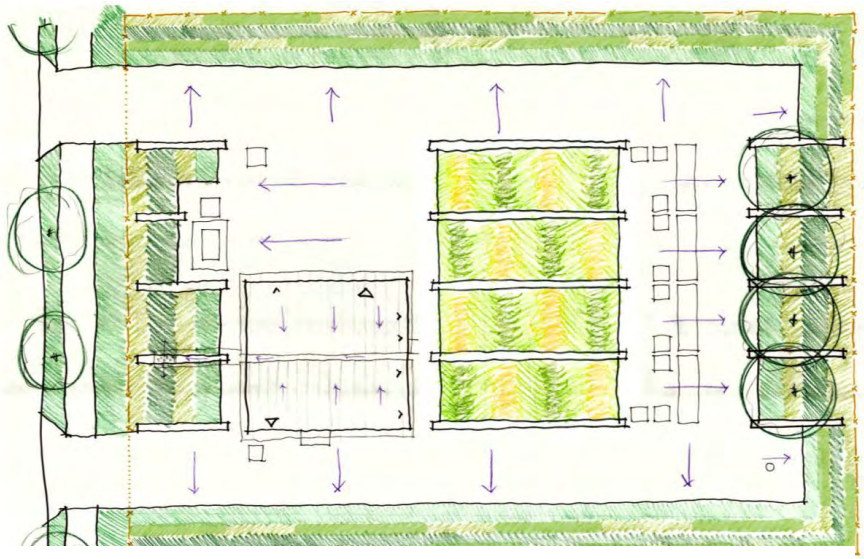


Current Design Requirements

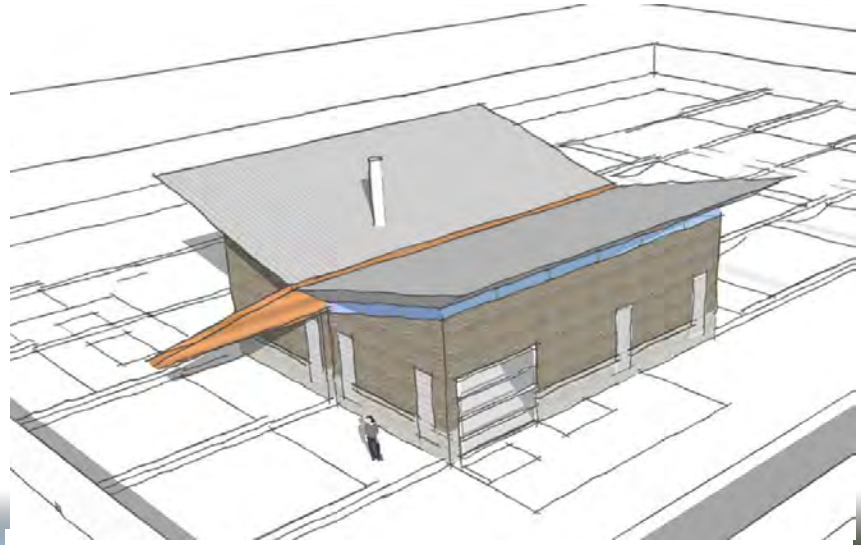
- Provide 24/7 safe access for operations & maintenance to all facilities
- Ensure site security & public safety through appropriate lighting, fencing & visibility

Site Vision

Acknowledging that the CSO control facility is a distinct part of an as-yet un-designed whole, we will design the landscape and architecture to express King County Wastewater Treatment Division's mission of protecting water quality.



Landscape Concept

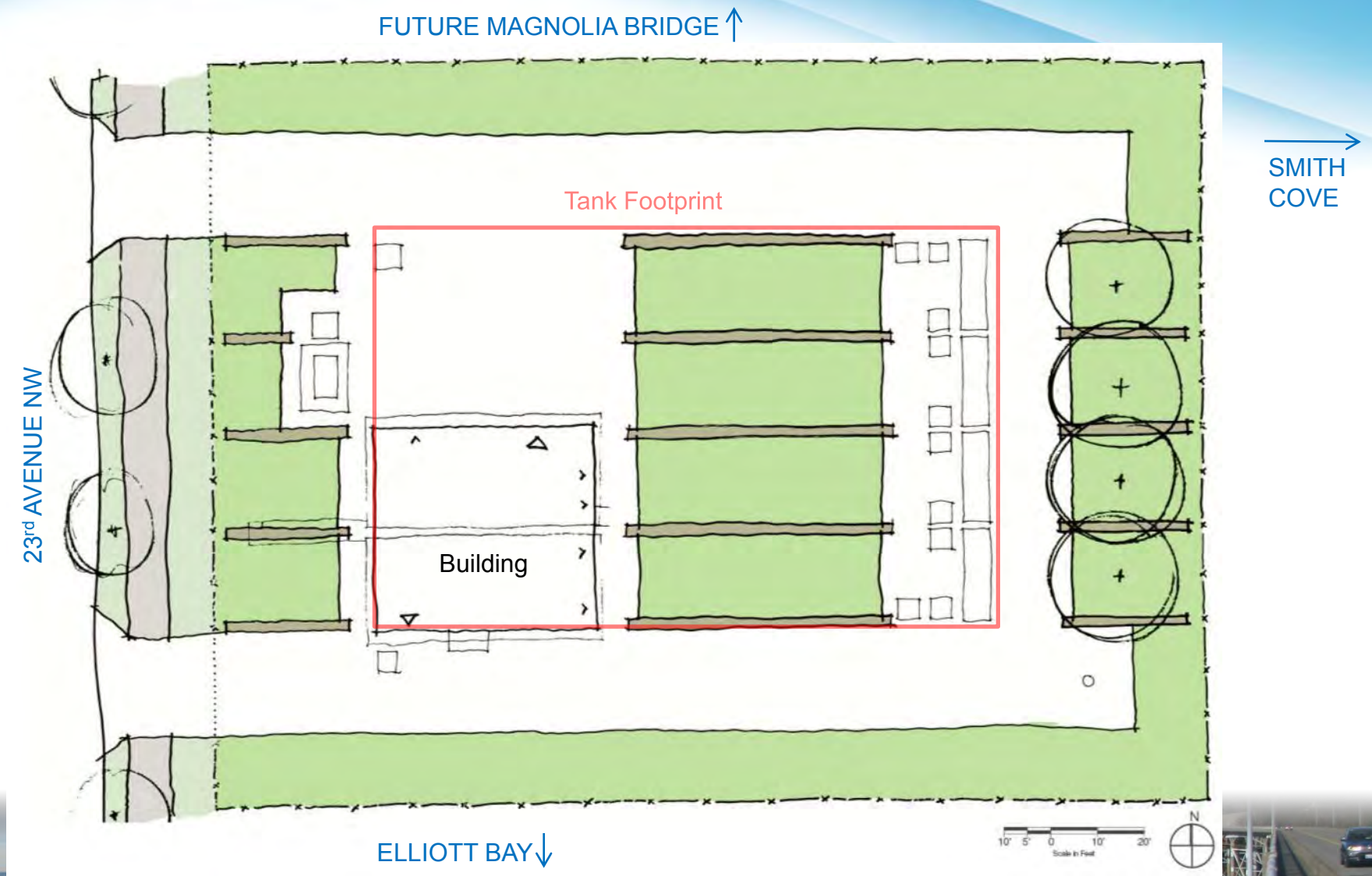


Architectural Concept

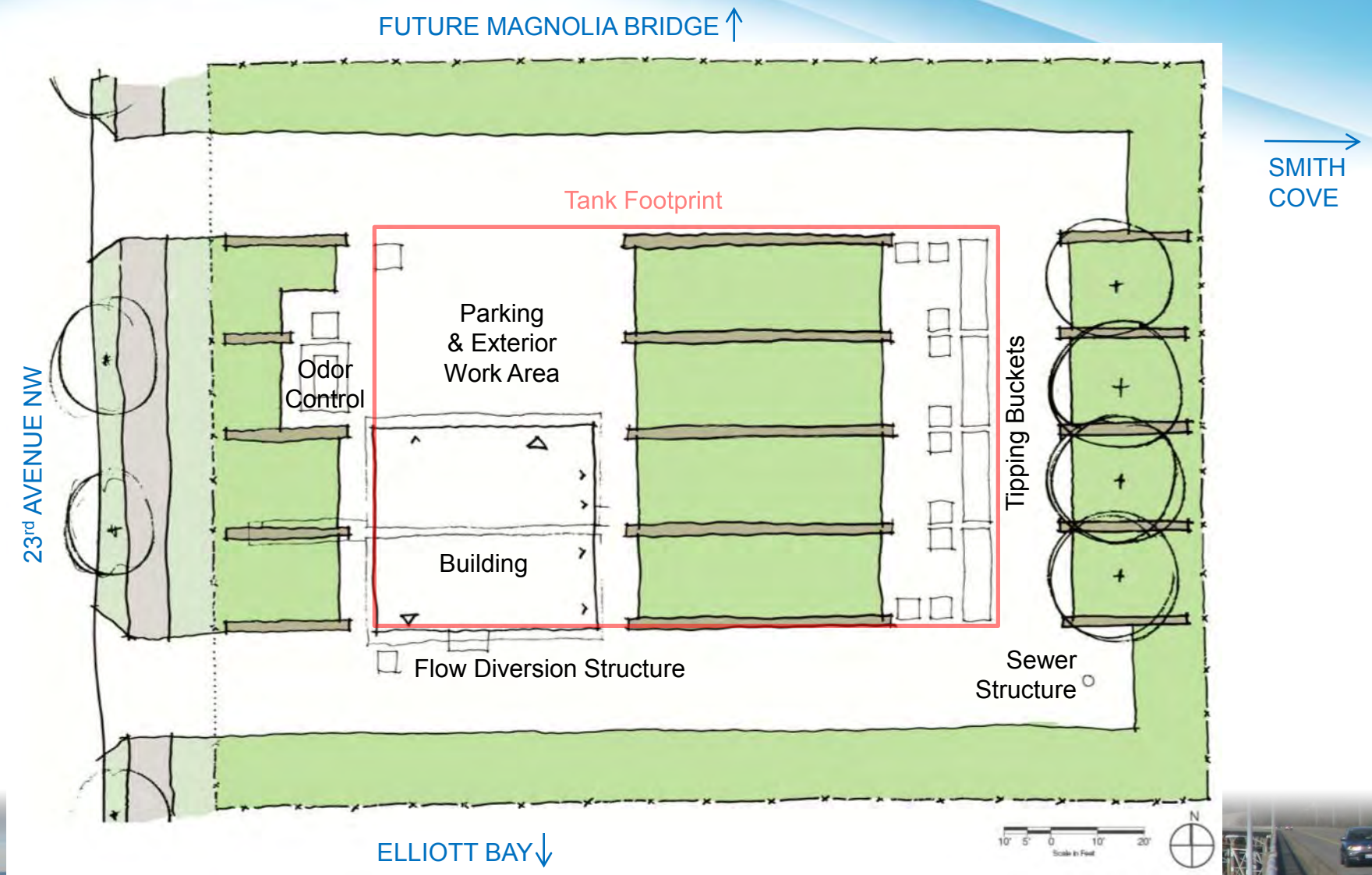
Landscape Guiding Principles

- Consider sightlines and views towards Puget Sound
- Develop an engaging design that is compatible with future adjacent use
- Balance vision with cost-effective solutions for implementation and maintenance
- Incorporate sustainable, wildlife-friendly design
- Meet City green stormwater infrastructure (GSI) requirements
- Meet County and City landscape design guidelines for:
  - low maintenance
  - drought tolerant plantings
  - use of native plants

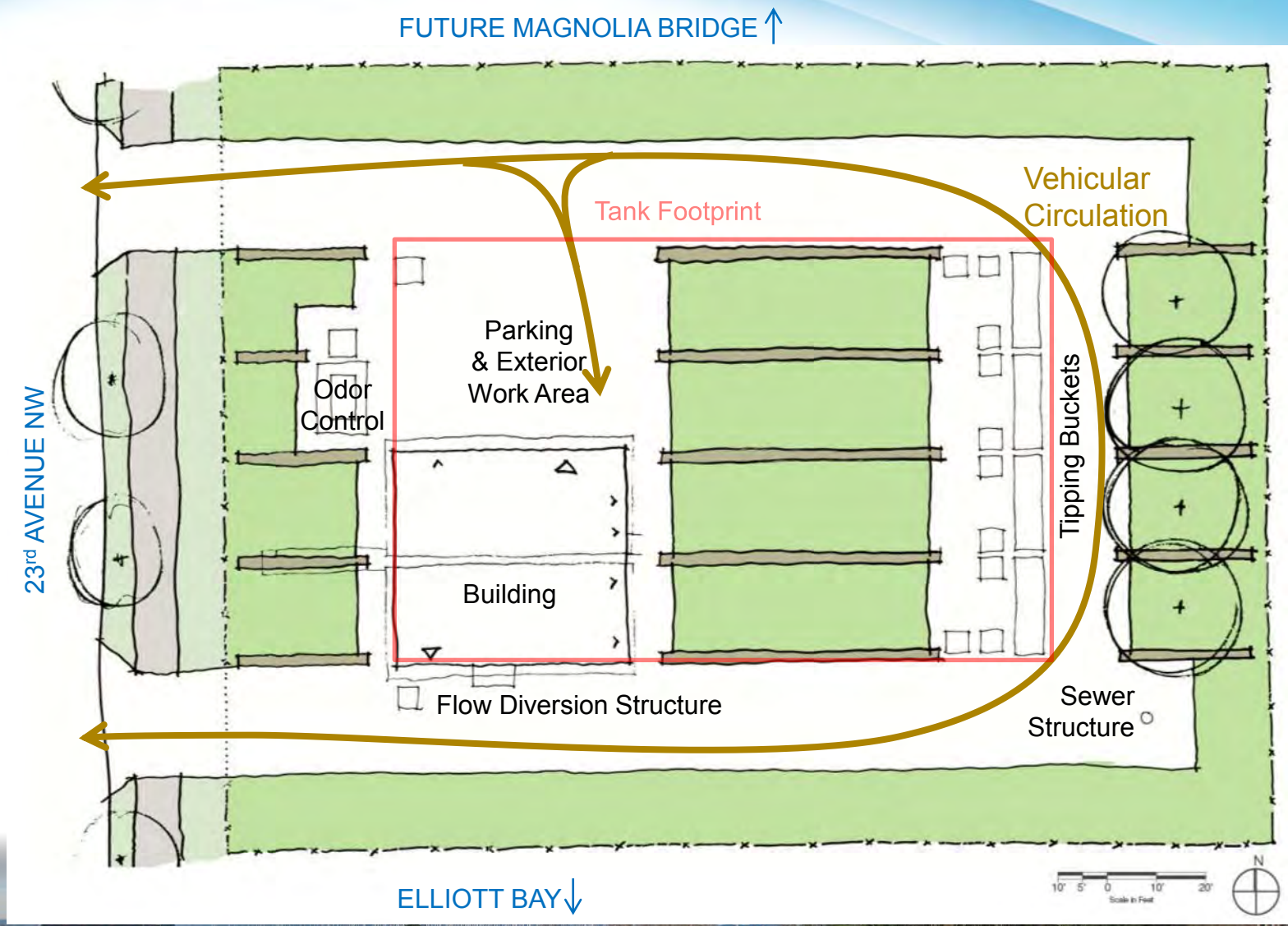
Tank and Building



Exterior Operations



Circulation



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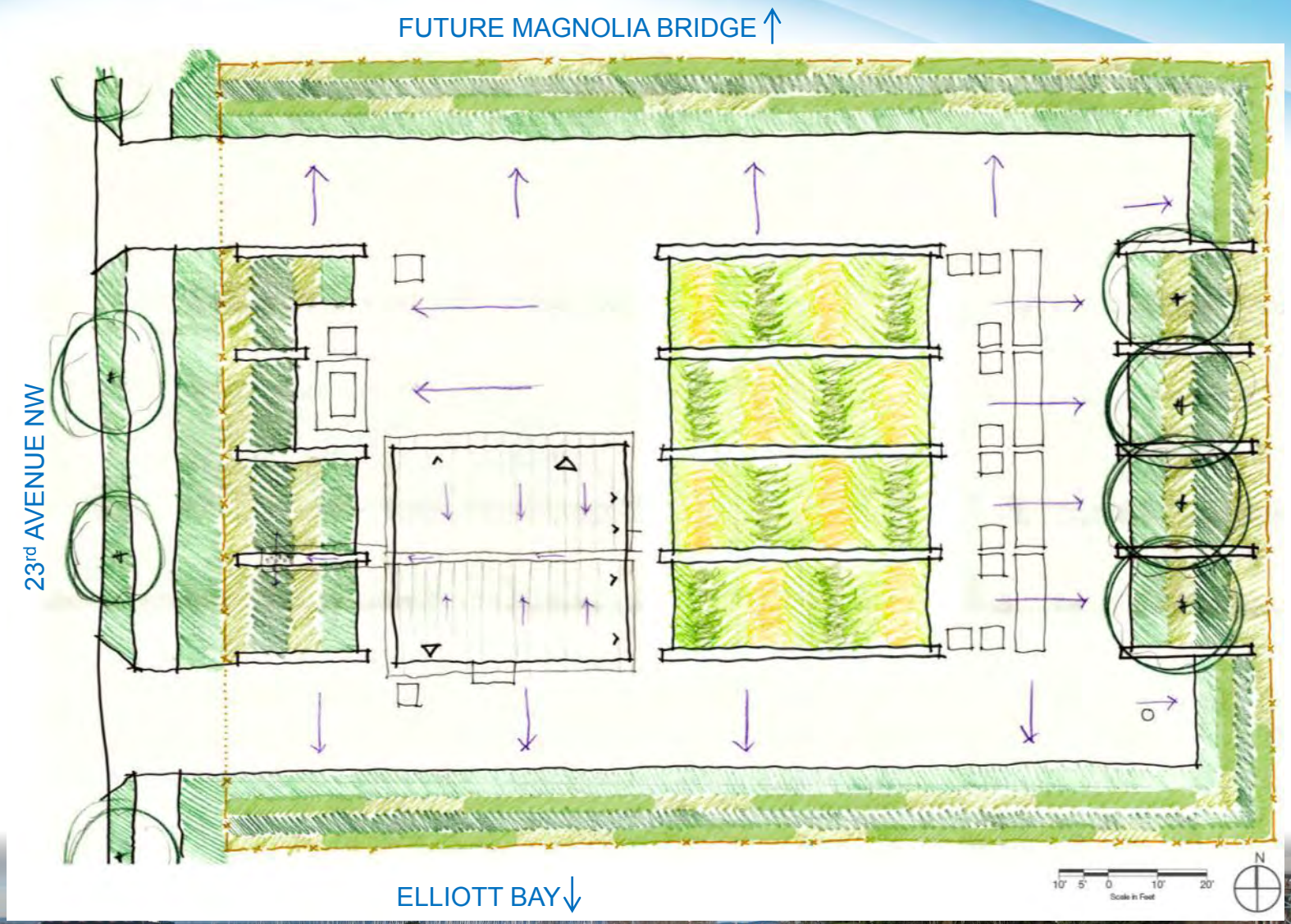

- **Bays**
- **Filters**
- **Frames**
- **Fence**

Bays

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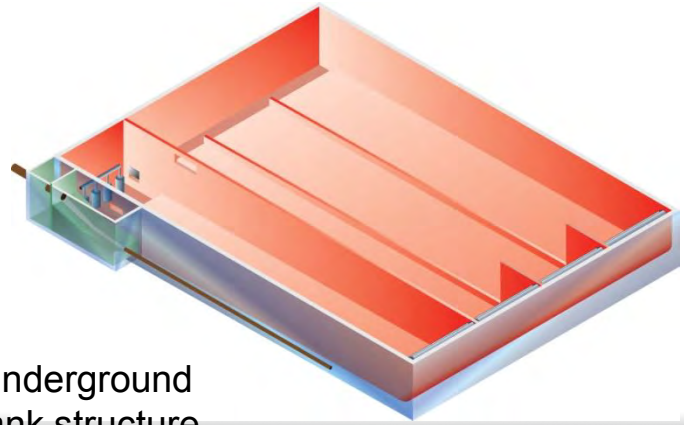
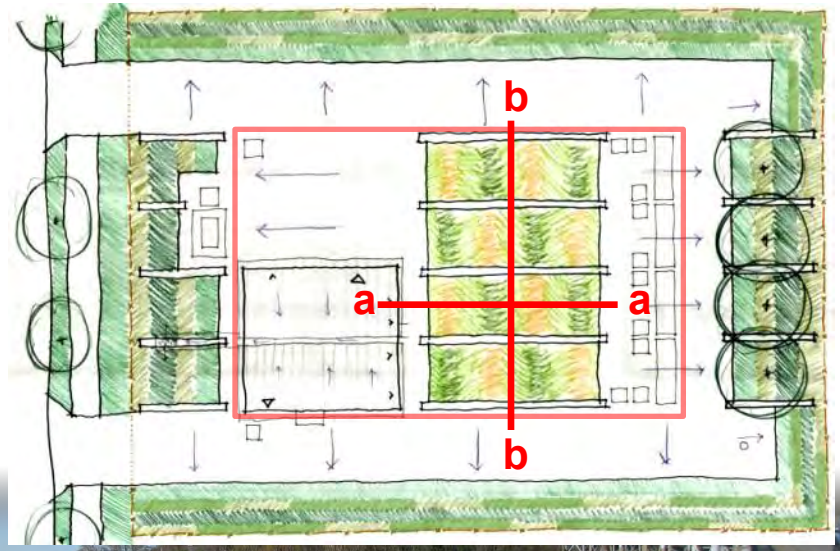
bb



underground
tank structure



Bays: Gabion Walls

Mercer Slough Environmental Education Center, Bellevue

Olympic College, Bellevue

Bays: Grassland Tops

Calamagrostis x acutiflora 'Karl Foerster' feather reed grass

Deschampsia caespitosa tufted hair-grass

Deschampsia flexuosa 'Aurea' golden crinkled hair-grass

Pennisetum alopecuroides 'Hameln' dwarf fountain grass

Elymus mollis dune wildrye

Deschampsia flexuosa 'Aurea' golden crinkled hair-grass

Bays: Grassland Bottoms

Carex morrowii 'Ice Dance' Ice Dance variegated sedge

Juncus balticus Baltic rush

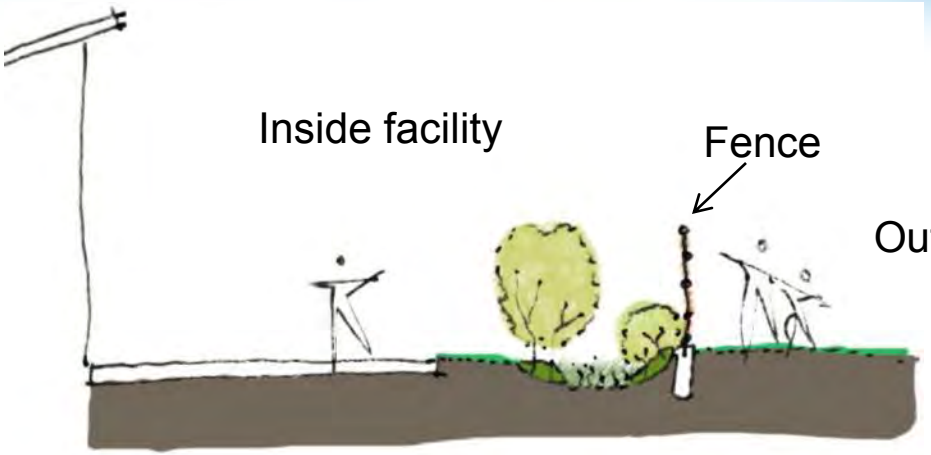
Festuca idahoensis 'Siskiyou Blue' Siskiyou Blue Idaho fescue

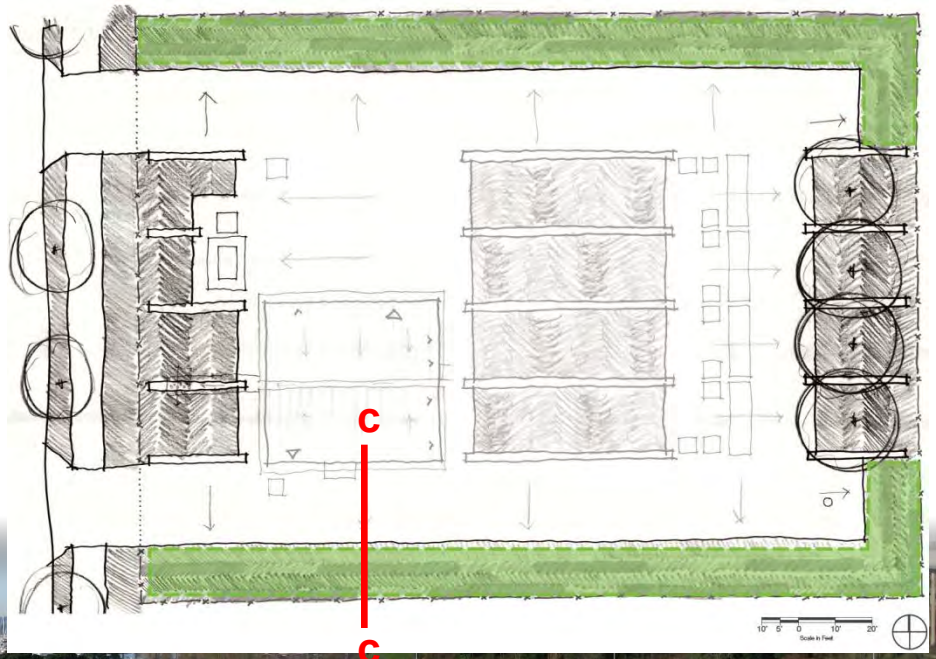
Mahonia repens creeping mahonia

Iris missouriensis Rocky Mountain iris

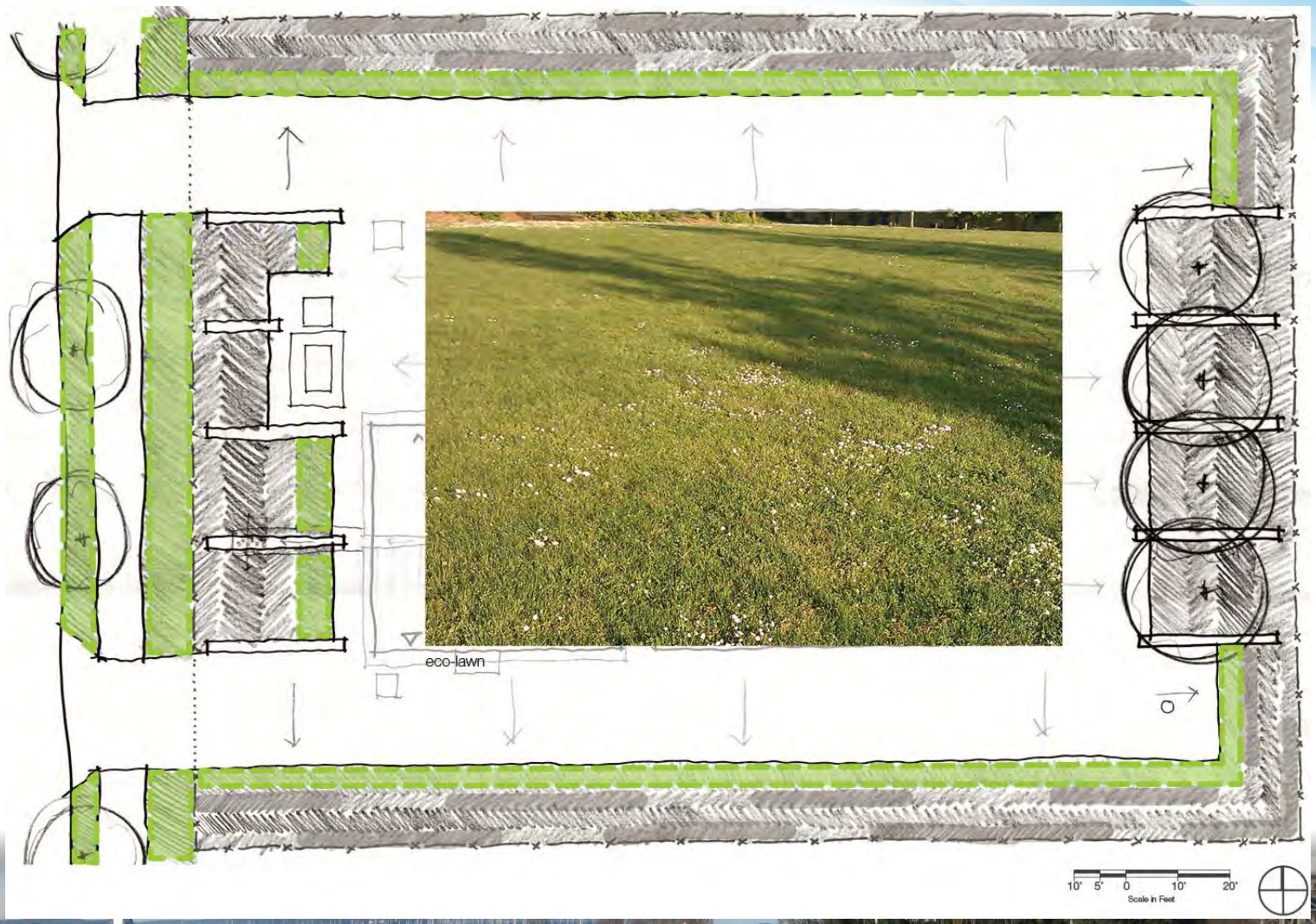
Liriope muscari lily turf

Filters

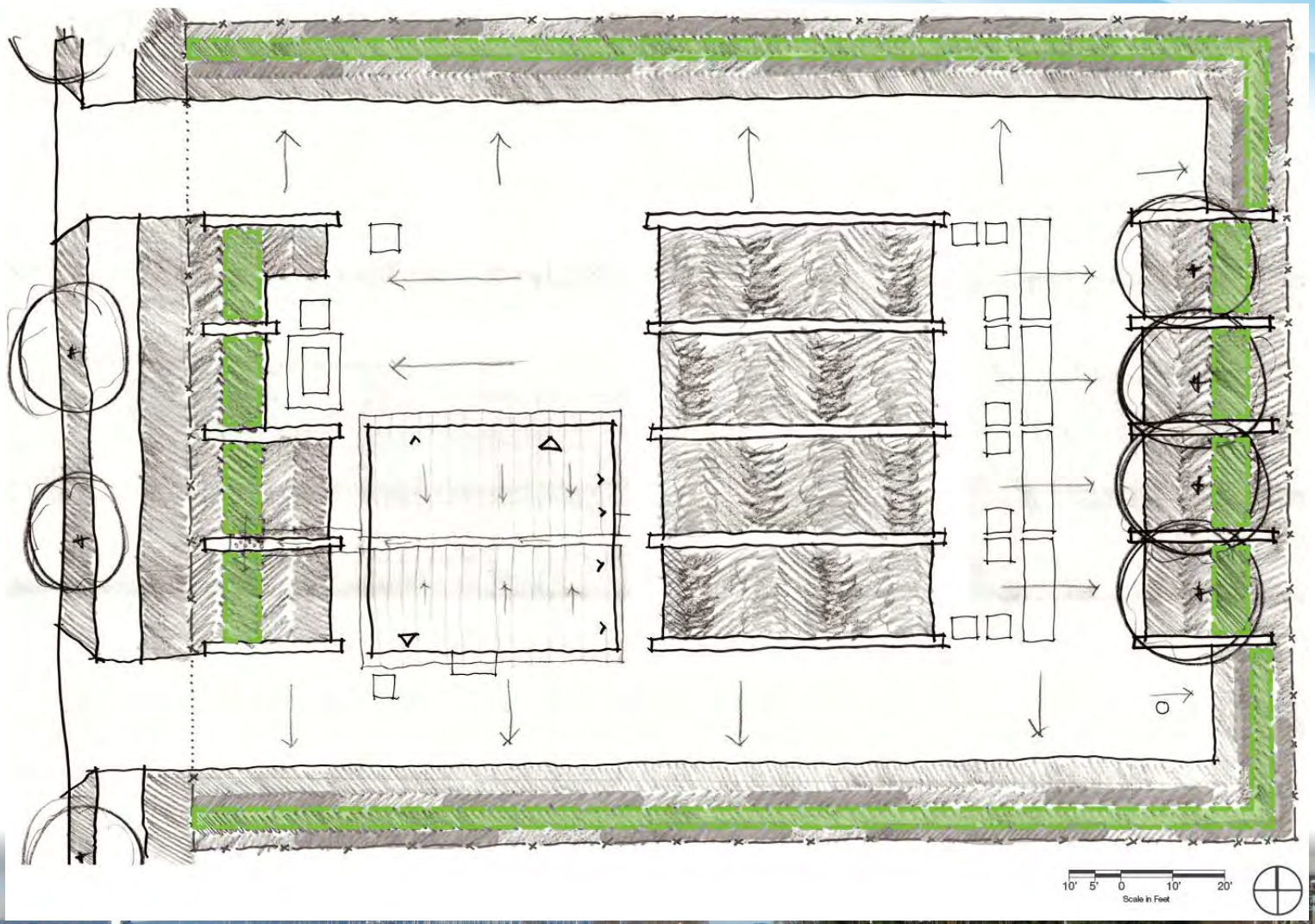




Filters: Eco-lawn



Filters: Swale Bottoms



Filters: Swale Bottoms

Camassia quamash common camas

Carex obnupta slough sedge

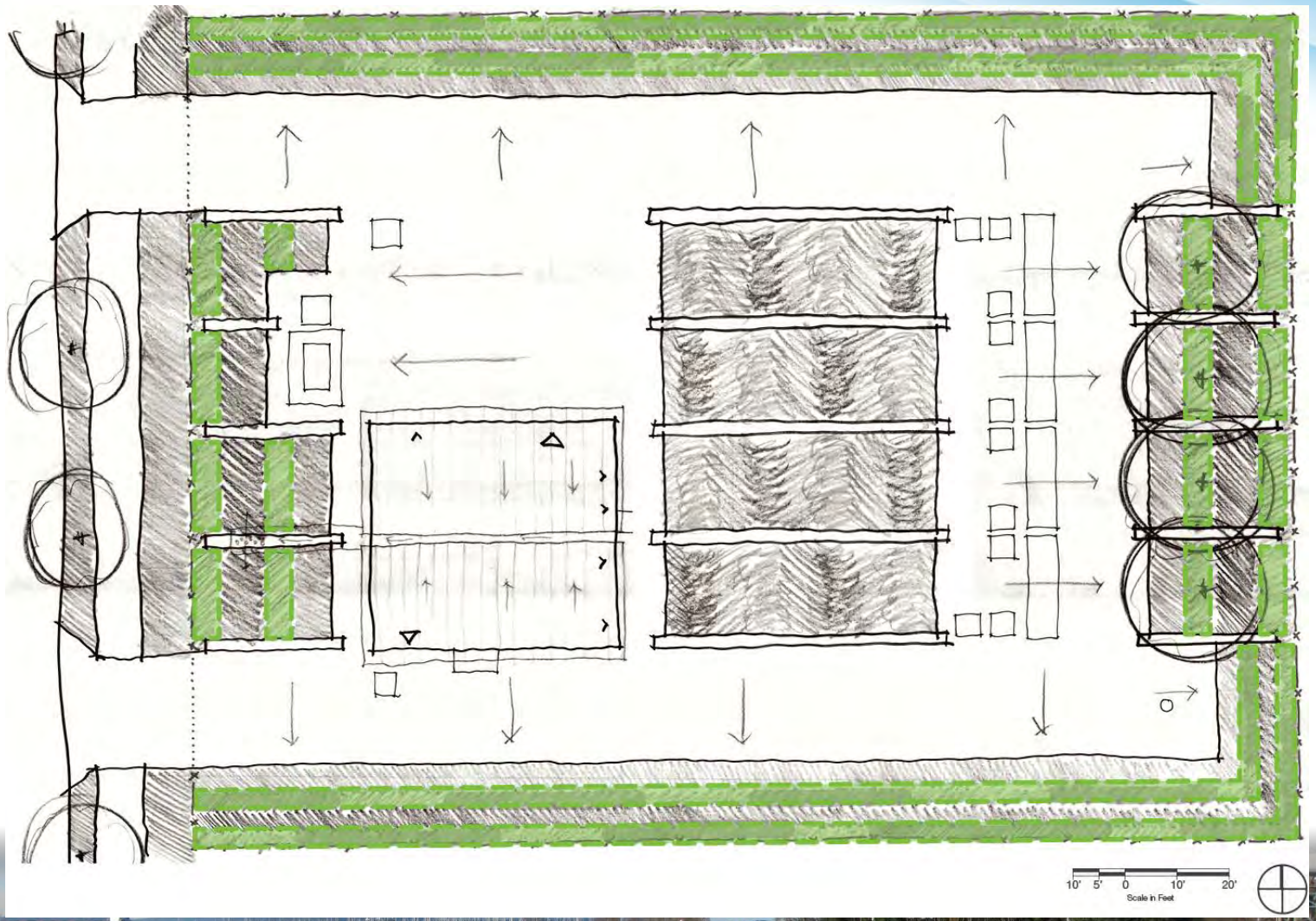
Cornus sericea 'kelseyi' Kelsey's dwarf red-twig dogwood

Juncus balticus Baltic rush

Juncus ensifolius dagger-leaved rush

Cornus sanguinea 'Midwinter Fire' bloodtwig dogwood

Filters: Short Plantings



Filters: Short Plantings

Arctostaphylos uva-ursi kinnikinnick

Potentilla fruticosa 'Sunset' frosty potentilla

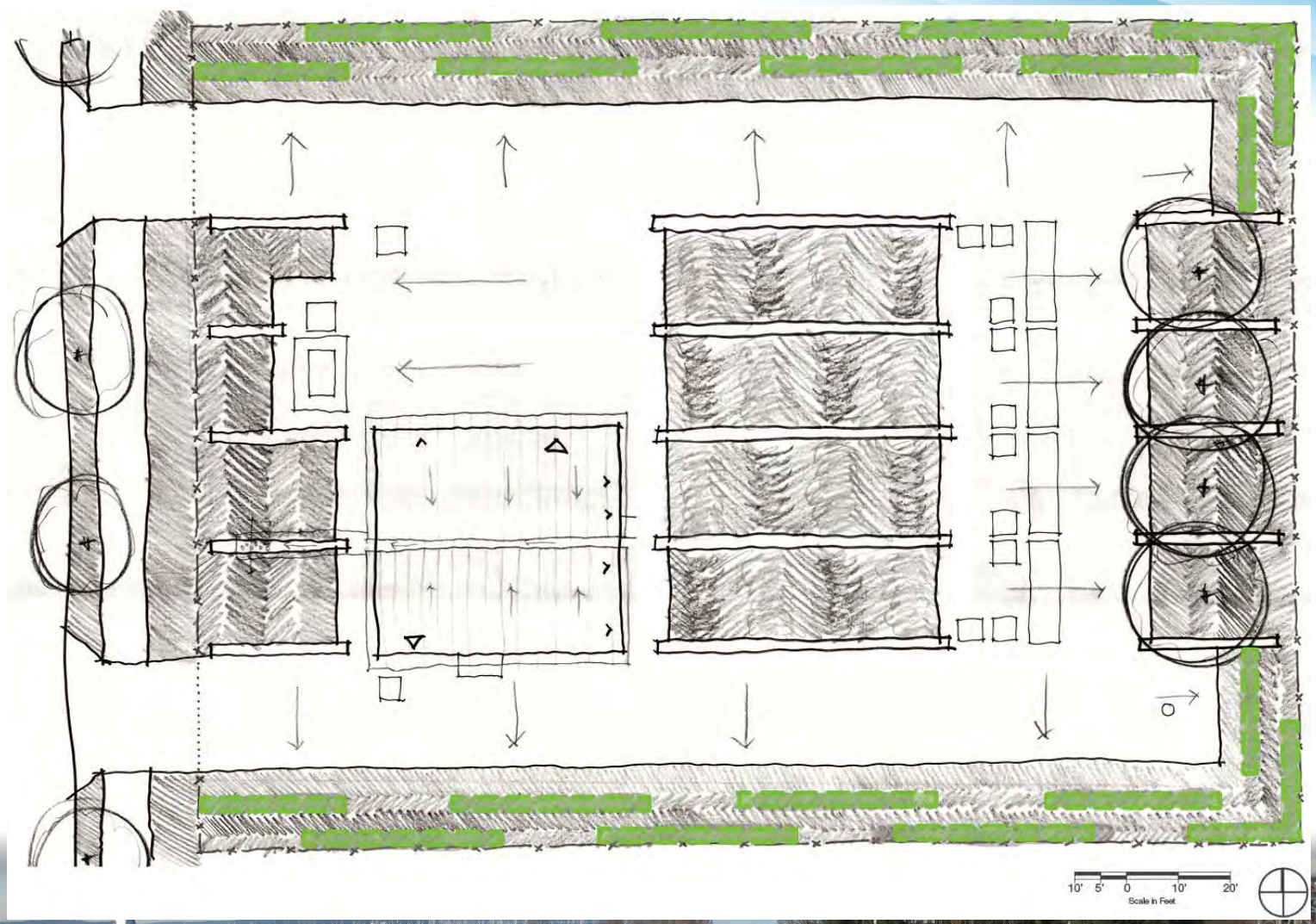
Rubus pentalobus creeping raspberry

Polystichum munitum sword fern

Cornus sericea 'Isanti' Isanti redtwig dogwood

Prunus laurocerasus 'Mount Vernon' Mount Vernon cherry laurel

Filters: Tall Plantings



Filters: Tall Plantings

Amelanchier alnifolia Western serviceberry

Physocarpus captiatus Pacific ninebark

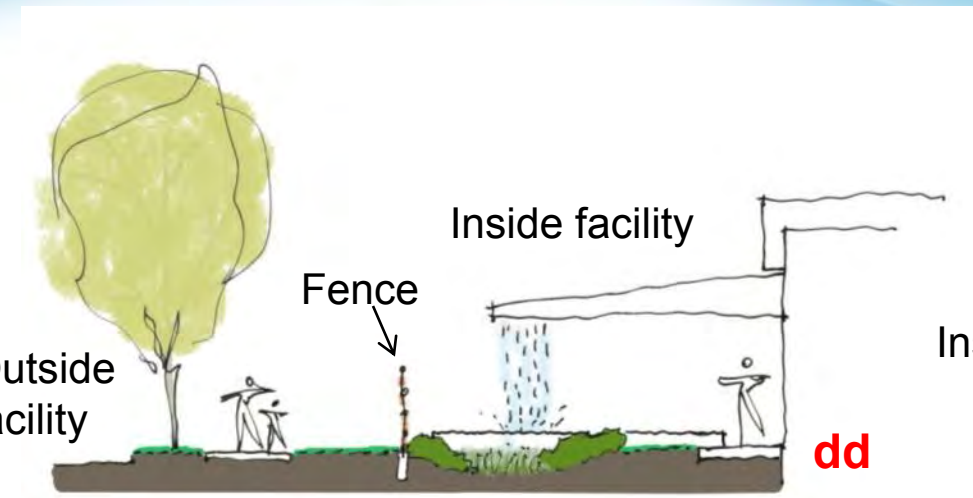
Rosa nutkana Nutka rose

Vaccinium ovatum evergreen huckleberry

Hydrangea quercifolia oakleaf hydrangea

Pinus mugo Mugo pine

Frames


Outside facility
Fence
Inside facility
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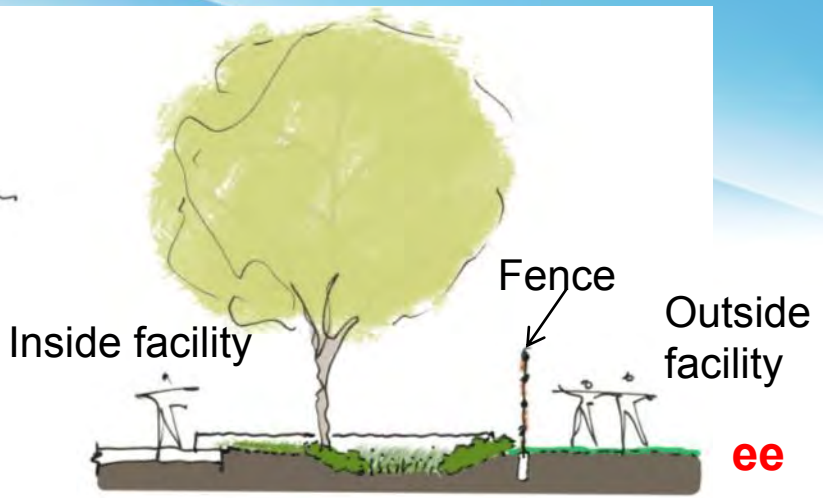
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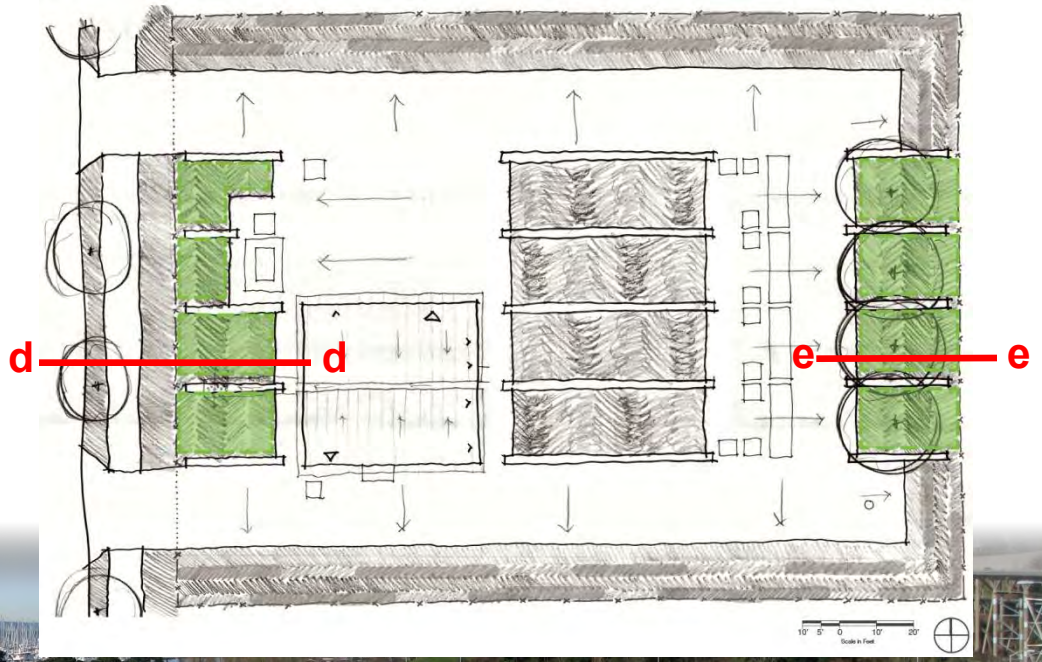
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Frames: Trees

Magnolia grandiflora Southern magnolia

Quercus phellos willow oak

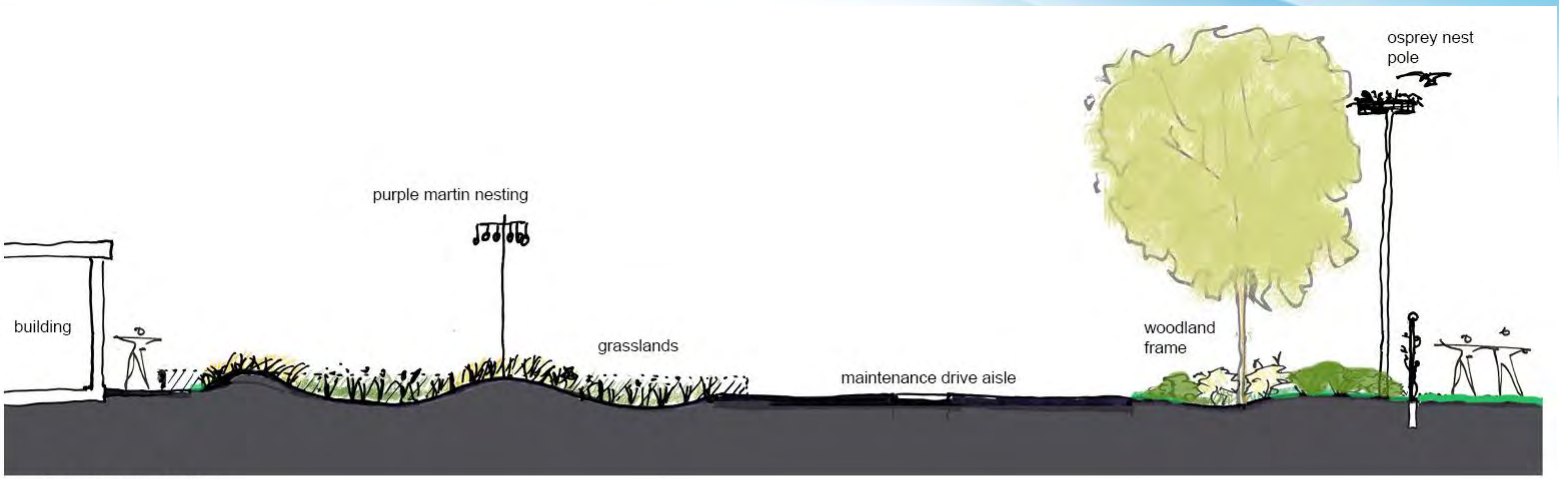
Thuja plicata Western redcedar

Liriodendron tulipifera tulip poplar

Pinus contorta var. contorta shore pine

Metasequoia glyptostroboides dawn redwood

Frames: Habitat Structures



SECTION LOOKING NORTH

purple martin nesting

purple martin nesting

osprey nest pole

Fence

- Facility will be fenced for both public and O&M safety
- Criteria:
  - Non-climbable
  - Height = 8’
  - Visually permeable
  - Low maintenance
- Added benefit includes sheltered area for wildlife in a busy area

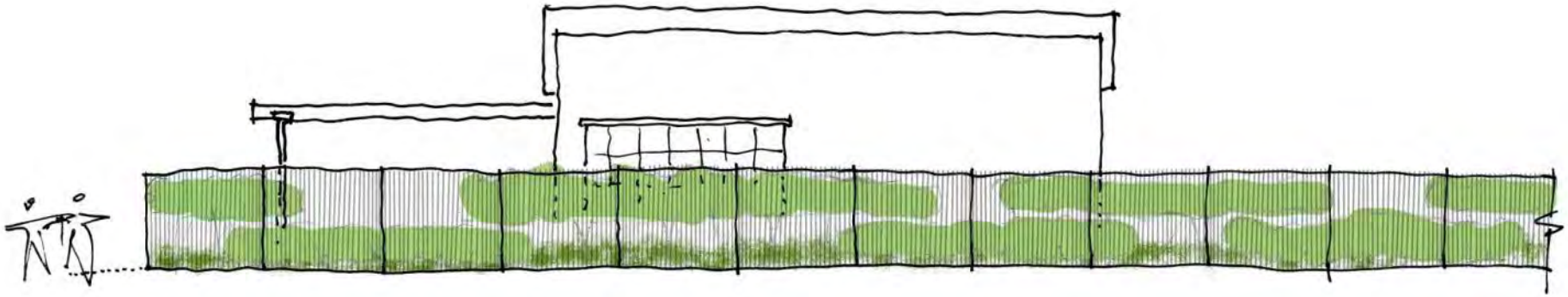
Basic

Abstract

Supergraphic

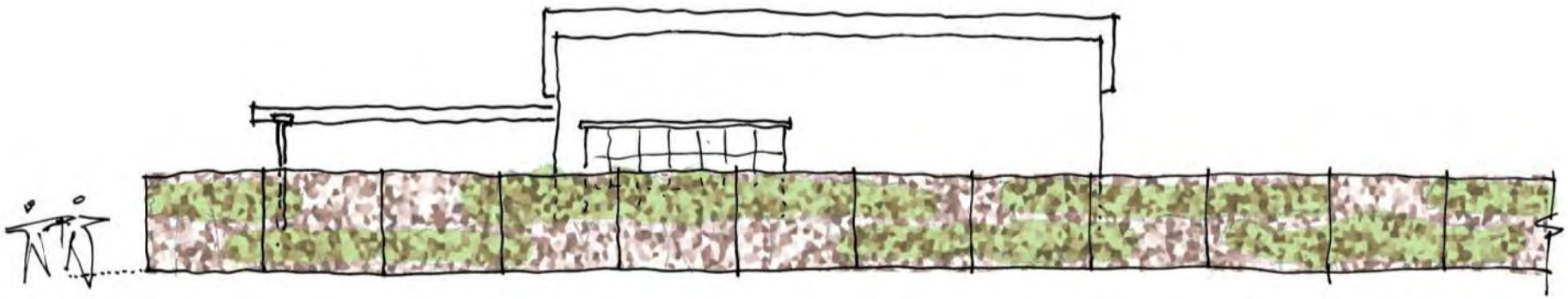
Narrative

Fence: Basic



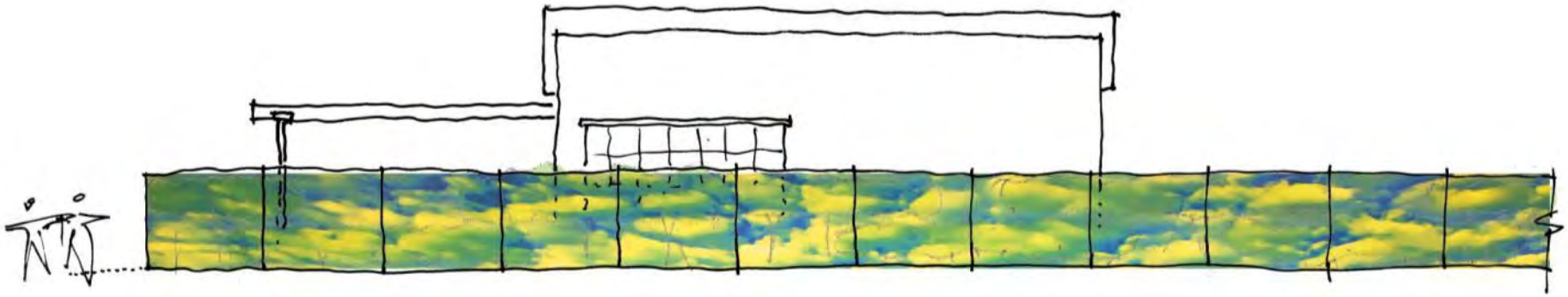
- Basic fencing that meets criteria for low maintenance and deterrent to climbing

Fence: Abstract



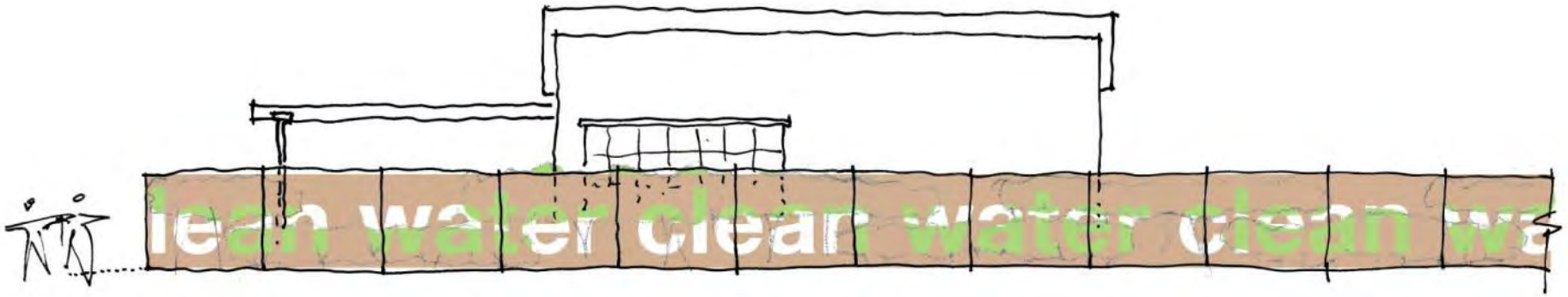
- Abstract pattern for visual interest

Fence: Supergraphic



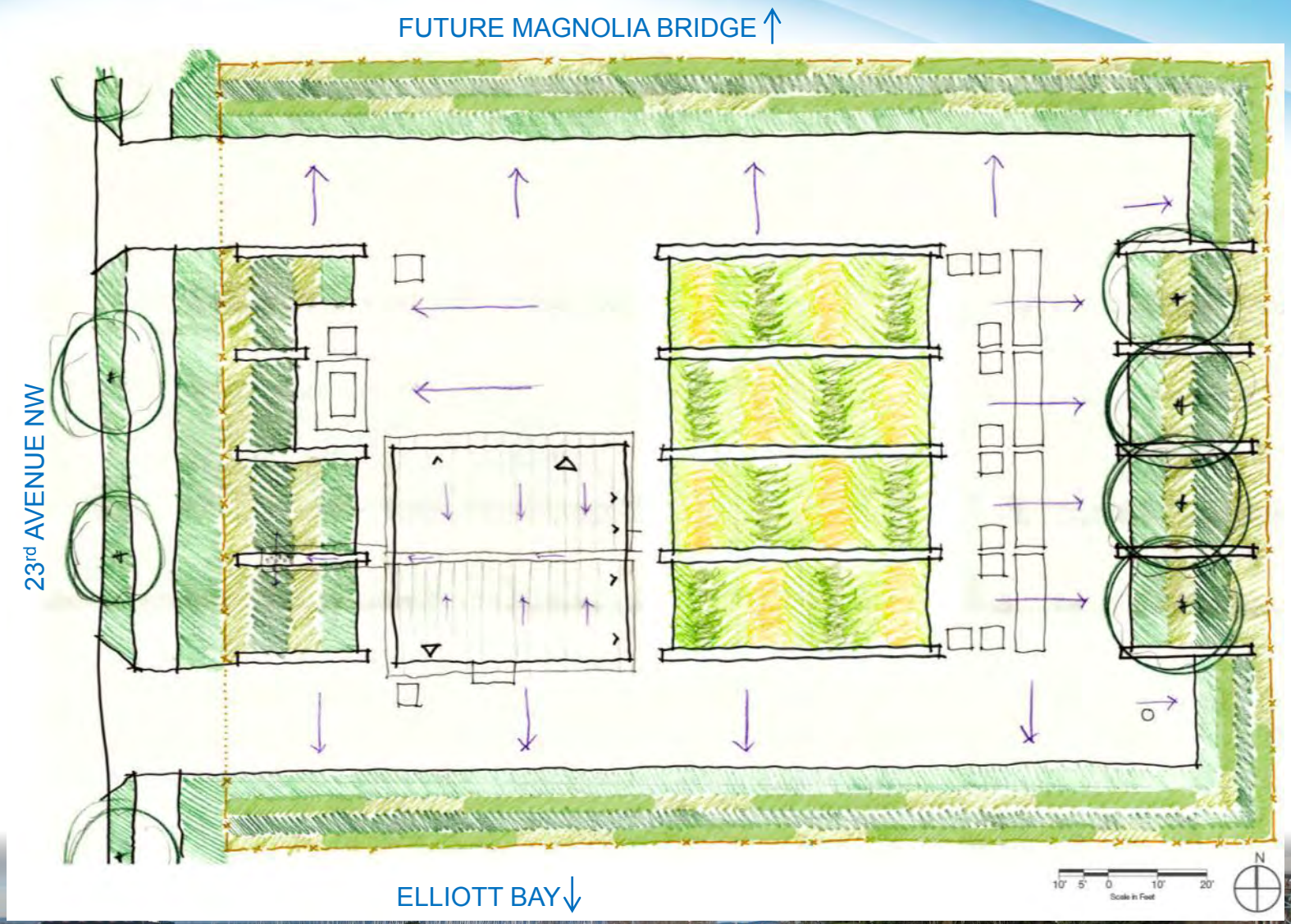
- Reads as image when viewed from distance, transparent pattern from nearby

Fencing: Narrative



- Interpretive or inspirational message incorporated into materials

Landscape Concept

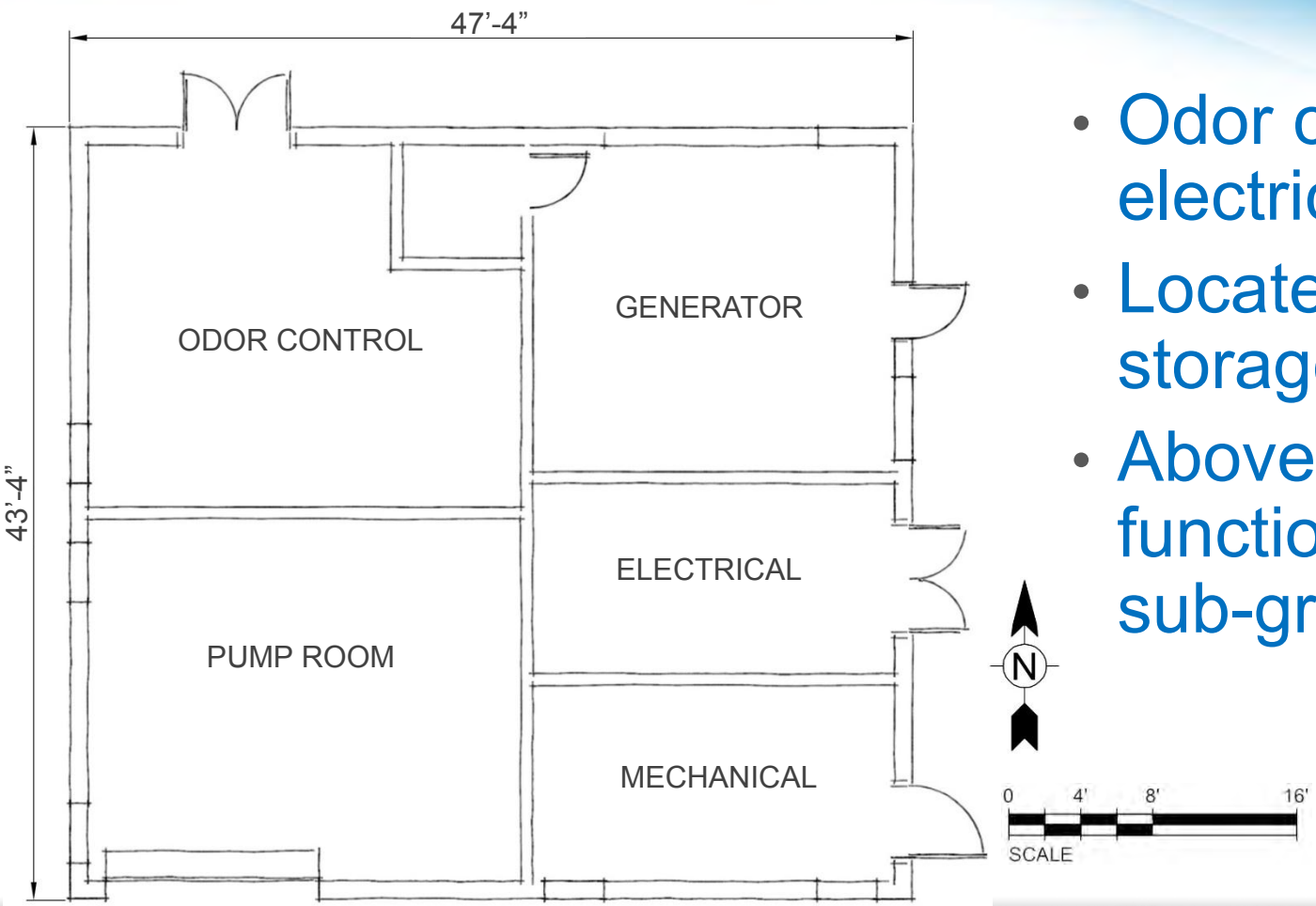


- **Bays**
- **Filters**
- **Frames**
- **Fence**

Guiding Principles: Architecture

- Limit building height and visual impact
- Use natural and muted color palette and materials
- Specify durable and low maintenance materials
- Harmonize building with landscape design
- Emphasize WTD mission of protecting water quality
  - Utilize roof to collect and direct rainwater
  - Integrate custom gutter as educational feature

Building Layout



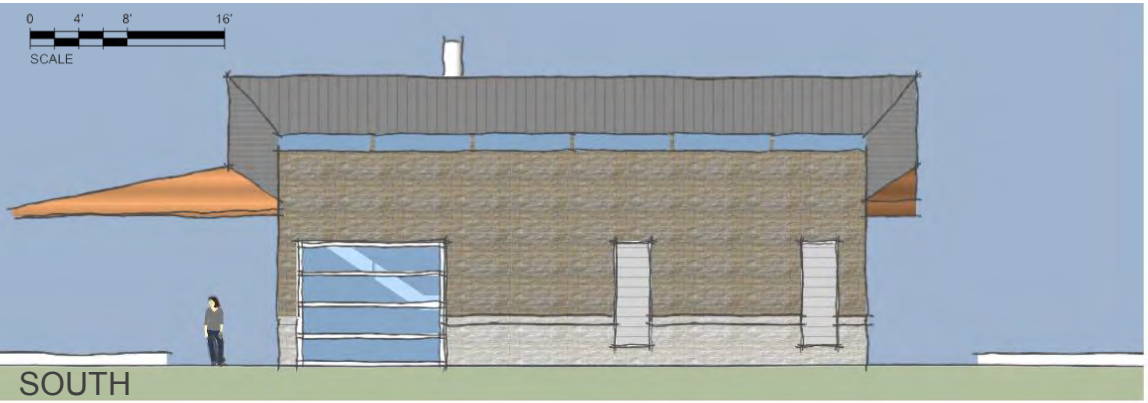
- Odor control and electrical facility
- Located on top of storage tank
- Above ground functions support sub-grade activities

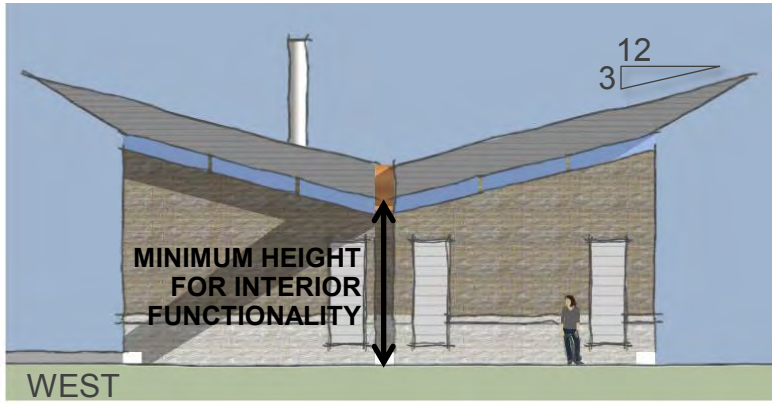
Building Concept

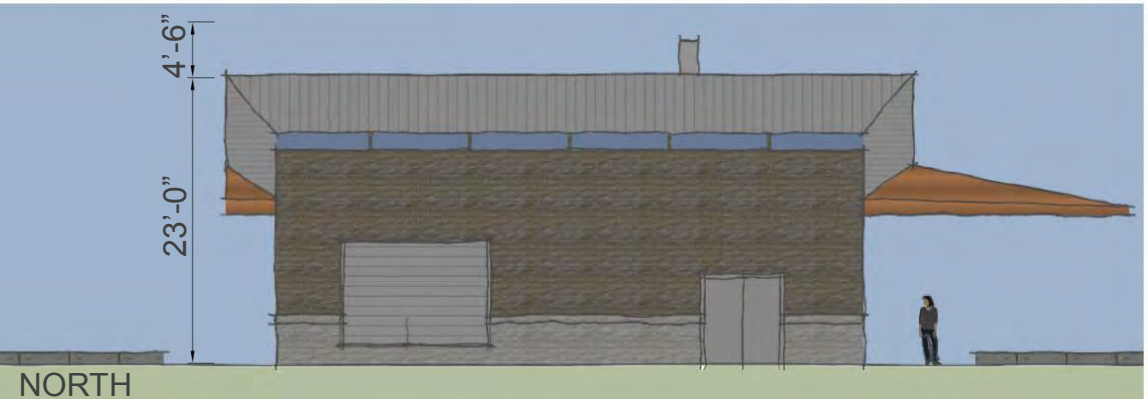
- Building aligns with bays to integrate building and landscape design
- Roof form collects and center gutter directs rainwater to the west for infiltration
- Visible expression of sustainable stormwater

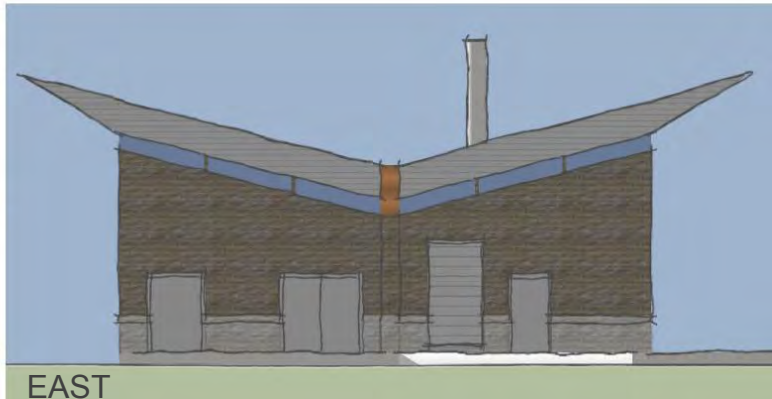
What you will see

- Building height limited
- Exhaust vent projects above roofline
- Roof sloped for adequate drainage







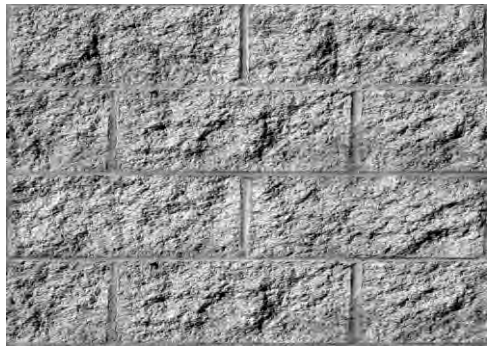


Material Palette: Walls

- Concrete Masonry Unit (CMU)
- Durable
- Low maintenance
- Natural look and colors
- Acoustic isolation

Material Palette: Walls



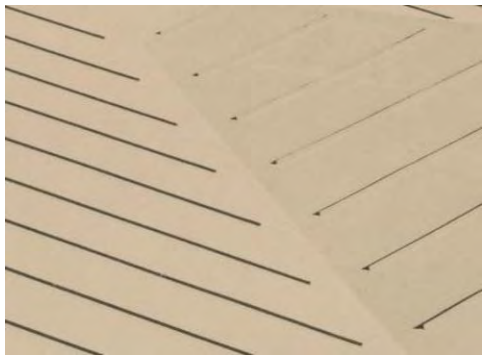
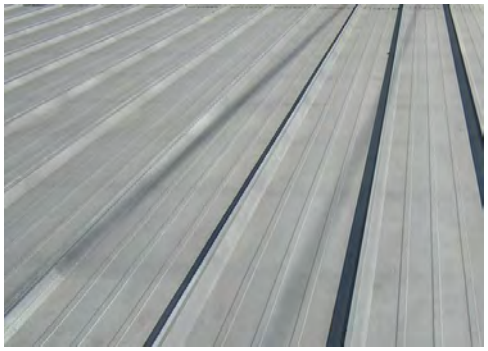



Material Palette: Roof

- Metal roof
- No glare from views above
- Durable
- Low maintenance
- Long life span
- Reflect heat

Material Palette: Roof



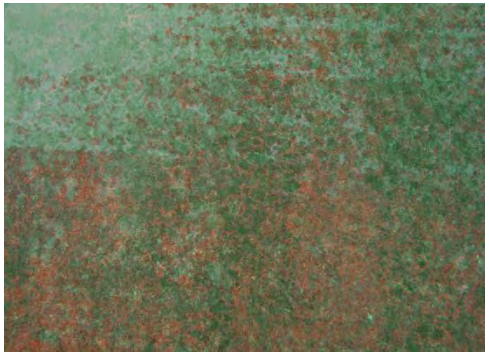
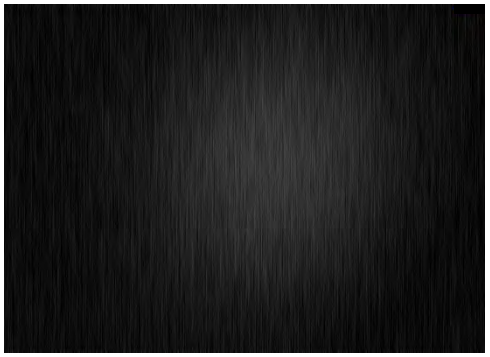
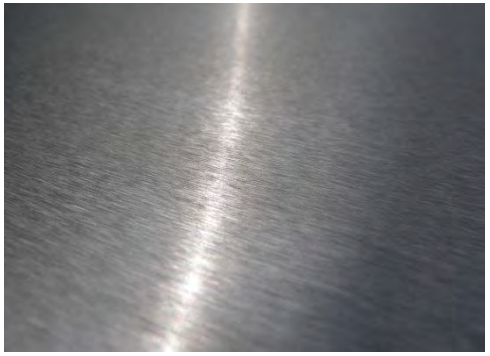





Material Palette: Rain Gutter

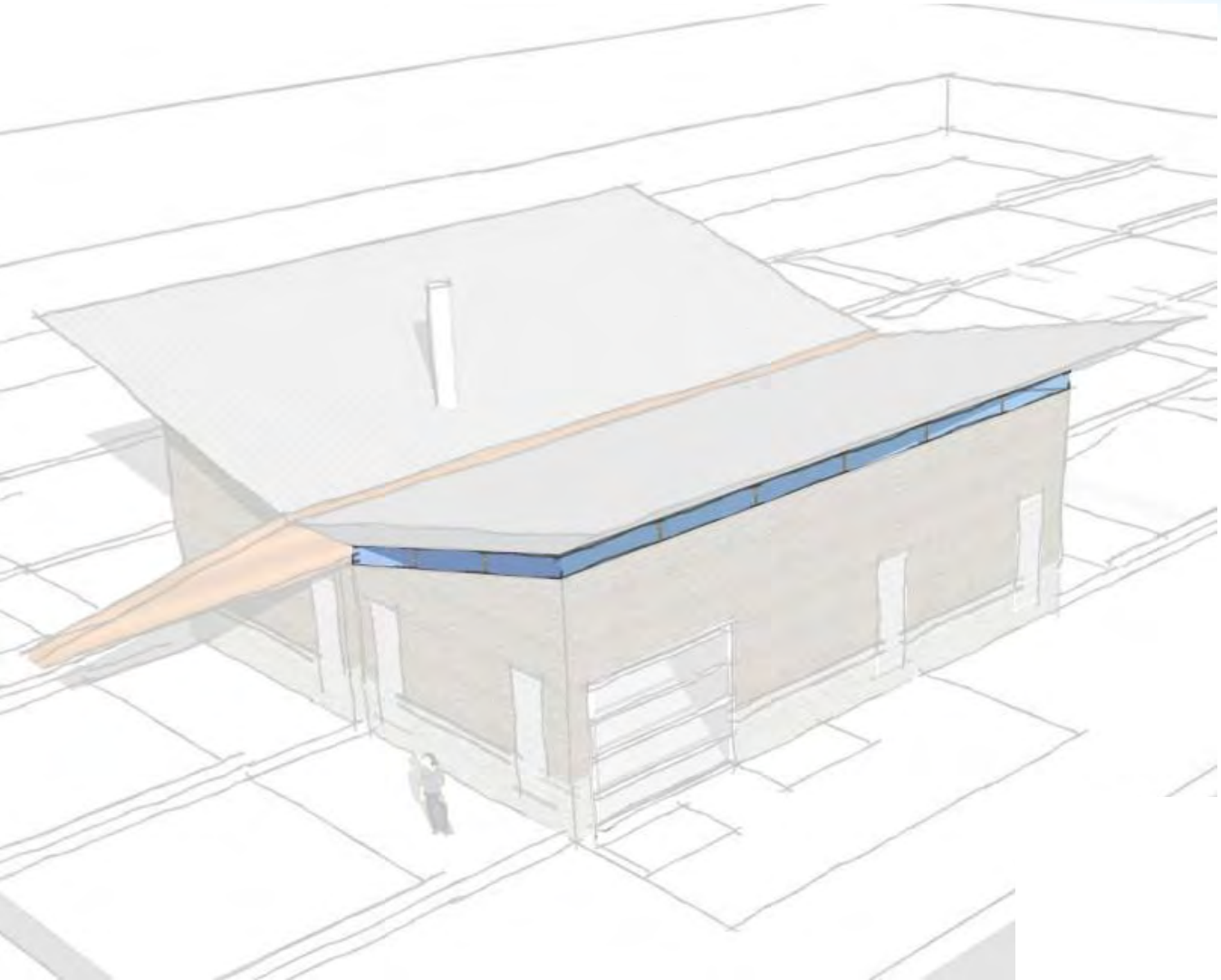
- Distinct feature
- Convey rainwater
- Create water feature
- Educational opportunity

Material Palette: Rain Gutter



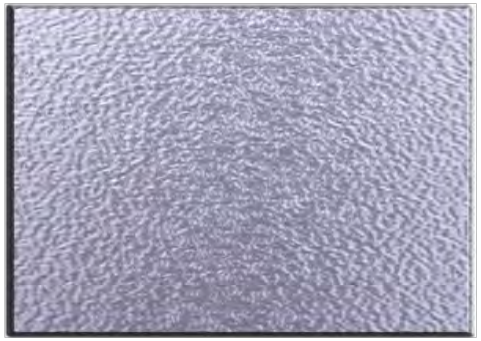
Material Palette: Windows



- Bring natural light inside
- Reduce need for artificial light
- Sized to avoid bird interference

Material Palette: Windows






Site Vision

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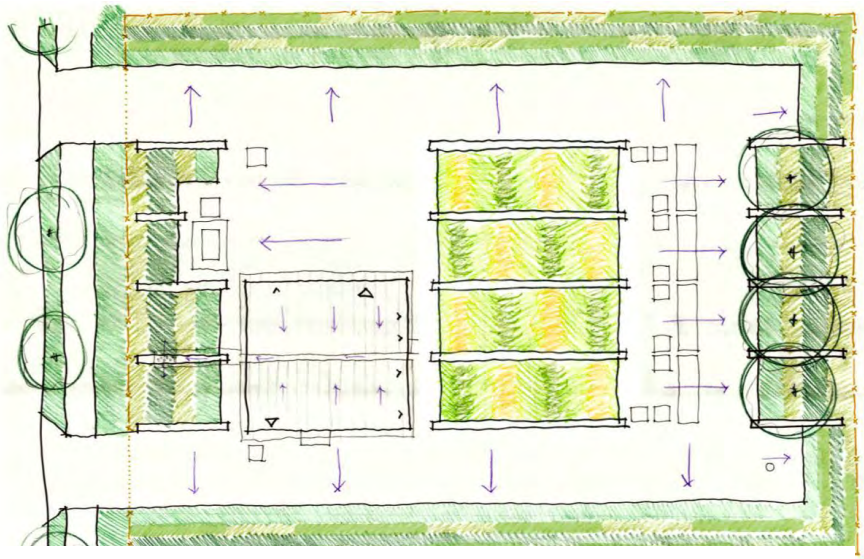
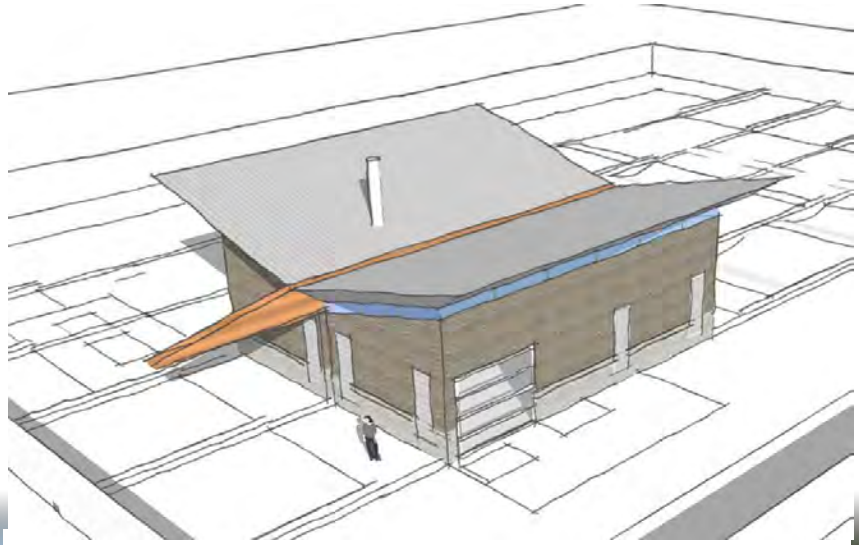


Landscape Concept



Architectural Concept

What's Next for the Community?

- Follow up on evolving issues:
  - Site lighting
  - Restoration on 23rd Avenue Northwest
  - Construction issues
- Web and newsletter update on landscape and architecture summer 2012
- Meetings with project neighbors and community groups as requested
- Community meeting to provide storage and conveyance project update in fall 2012

Questions?

Open house

- *Talk with the team*

Contact us:

Website:
www.kingcounty.gov/environment/wtd/Construction/Seattle/SMagnoliaCSOStorage

Monica Van der Vieren:

- Phone: 206-263-7301
- Email: monica.vandervieren@kingcounty.gov

For hard copies of the website, please contact Monica Van der Vieren