The curbed residential area includes the majority of 34th Avenue in Magnolia, as outlined in red on the map on the lower right. The area consists mostly of single-family residences, with 20-foot-wide parking strips. Most parking strips are grass lawns, with some street trees or shrub beds. Utility wires run overhead along the west side of 34th. Surface water flow direction varies depending on the block’s topography. There are bus stops on every block, and parallel parking along both sides of street, but no bike lane along the corridor.

The following design alternatives address multiple scales, from simple lot- or home-scale designs to components that are meant to be applied along a whole block or the entire 34th Avenue corridor. Simpler designs are intended to be achievable with a modest amount of work by an individual homeowner, whereas the intermediate and involved options will require greater levels of involvement between neighbors as well as the City. Ideally all designs will serve to inspire interest and promote broader action by those who see and experience them.

These designs are specific to many of the conditions found along 34th Ave, such as exceptionally broad parking strips; however they are meant to be applicable on a broader scale. Many of the basic ideas, such as building community through cooperation on yard waste composting, or working to connect swales and other ecological functions between lot boundaries can be carried over to other parts of the city. In order to demonstrate alternative configurations of many of the ideas proposed, we have included a number of “prototype” designs in the following pages.
GOALS

IMPLEMENTATION BY SINGLE HOME OWNER
• Designs focus on single lot, and involve little or no permitting

ENHANCE COMMUNITY ENVIRONMENT
• Provide compost facilities that can be shared among neighbors
• Enhance pedestrian experience by providing more visual interest and improving air quality along street
• Surfaced gathering areas that create community interaction and gathering spaces
• Promote safety with vegetation that better separates street from pedestrians

CONSERVE RESOURCES & IMPROVE ECOLOGICAL FUNCTIONS
• Designs keep rainfall on the planting strip, reducing runoff to street & sewer system
• Local yard waste composting reduces need for waste removal
• Improve quantity, quality, and connectivity of wildlife habitat
• Increase tree canopy cover

PUBLIC EDUCATION & INSPIRATION
• Provide demonstration models to inspire broader action
**CONCEPT**
The Go Native plan is aimed at the individual homeowner to increase resource conservation in a small area. Through small interventions, an individual can make a positive impact on water conservation and habitat, subsequently adding to the aesthetic beauty of their yard and neighborhood.

**GOALS**
1. Catch all rainfall reducing runoff to street & sewer system
2. Adaptable to small scale and existing street trees
3. Use native vegetation
4. Improve quantity, quality, and connectivity of wildlife habitat
5. Enhance pedestrian experience, screen street
6. Promote safety through separation of street and pedestrians

**HOW IT WORKS**
1. Soil acts as sponge for rainwater.
2. Vegetation attracts hummingbirds.
3. Native vegetation well suited for wet and dry conditions.
4. Path allows for easy access.

**REQUIREMENTS**
1. Soil amendment, 12” deep
2. Vegetation to match theme (native, color, low maintenance)
3. Path material (mulch, stepping stones, crushed rock, etc.)

**PLANTING PALETTE**
- *Vine maple*
- *Serviceberry*
- *Red flowering currant*
- *Mock orange*
- *Trillium*
- *Deer fern*
CONCEPT  FLOW is movement, the movement of water and of people through the urban landscape. The interconnected environmental design flows effortlessly through the neighborhood and in the process creates new habitats fed by the interconnected demands of urban water runoff, healthy ecosystems, and community livability.

GOALS
• Achievable design for the individual homeowner
• Reveal natural drainage & improve water quality
• Create a healthy ecosystem/habitat
• Inspire surrounding community involvement & adaptation.

BERM & BUTTERFLY GARDEN PLANTING PALETTE

- *Cornus mas* Cornelian Cherry
- *Rudbeckia cultivars* Black Eyed Susan
- *Echinacea purpurea* Purple Coneflower
- *Amelanchier alnifolia* Serviceberry
- *Asclepias tuberosa* Butterfly Milkweed
- *Carex aurea & Nasturtium*

DOWNSPOUT & WATER RUNNEL TEMPLATES

BERM & BUTTERFLY GARDEN (EAST-WEST)
CONCEPT Based on the concept of cooperation between neighbors, Resource Gardens provide composting structures and planting areas for neighbors to share. Whether a vegetable patch, perennial garden, composting fence, or seating plaza, neighbors can cooperate to use, share, and maintain resources provided in the gardens.

HOW IT WORKS (see diagram below)

1. It’s your planting strip, so you decide what LAYOUTS & PROTOTYPES best suit you.
2. Remove turf from area to be amended w/ COMPOST: a. sheet composting - lay cardboard over area & overlap, cover w/ 6” of compost/topsoil, top w/ 4-6” of wood chips and wait 3 - 5 months. Your soil will be ready to plant after a little tilling; b. sod cutter - rent a sod cutter and be sure to compost the sod you remove.
3. Layout and install PAVING.
4. Build / install composting COMPONENT (i.e.; composting fence).
5. PLANT trees, medium shrubs, short shrubs, annuals/perennials in that order (tallest to shortest).
6. Enjoy your resource conserving GARDEN!
CONCEPT  A simple streetscape design that could be implemented by an individual homeowner. The creation of a shallow meandering swale with amended soil will allow the site to absorb rainfall and minimize runoff to street and sewers. Plants in the swale are chosen for adaptability to moisture and drought tolerance as well as aesthetic appeal. Trees provide visual interest and increased urban canopy.

SAMPLE ‘RIVER OF TREES’ PALETTE

Heritage red birch  
Betula nigra ‘Heritage’

Variegated lilyturf  
Liriope muscari ‘variegata’

‘Elk Blue’ California gray rush  
Juncus patens ‘Elk Blue’

Tartarian dogwood  
Cornus alba
GOALS

IMPLEMENTATION BY MULTIPLE HOME OWNERS

ENHANCE COMMUNITY ENVIRONMENT
• Bring neighbors together to collaborate on streetscape plans
• Create gathering spaces along the street
• Help to create community identity through public art

CONSERVE RESOURCES & IMPROVE ECOLOGICAL FUNCTIONS
• Improve stormwater quality and quantity through filtration in swales
• Conserve water through rainwater harvesting
• Decrease load on sewer system by using roof runoff onsite
• Reduce waste and reuse material onsite through composting
• Improve quantity, quality, and connectivity of habitat through diverse planting palettes
• Increase canopy cover

PUBLIC EDUCATION & INSPIRATION
• Reveal natural drainage processes
PLANTING STRIP ALLEE & LAVENDER MOUNDS

WATER RUNNEL TEMPLATES

LAYERs OF FUNCTION

WATER

habitat / vegetation

landform

conservation / resources

circulation

RUNNELS, BERMS & SWALES (NORTH-WEST)
CONCEPT  FLOW is movement, the movement of water and of people through the urban landscape. The interconnected environmental design flows effortlessly through the neighborhood and in the process creates new habitats fed by the interconnected demands of urban water runoff, healthy ecosystems, and community livability. This “moderate” design adds rainwater harvesting via public art in the form of umbrellas.

GOALS
• Reveal natural drainage & improve water quality
• Create a healthy ecosystem/habitat
• Inspire surrounding community involvement & adaptation
• Educate community on water process
• Promote resource and water conservation through composting & water harvesting
• Encourage social interaction through neighborhood beautification, walkability, and individual expression
• Create a destination through public art and engaging design

RAINHARVESTING
UMBRELLA PUBLIC ART
BUTTERFLY GARDEN
Growing Connections  justin martin

CONCEPT  This plan illustrates various options that a homeowner or group of neighbors could implement, with additional funding and/or permits, to increase the environmental effectiveness of their streetscape designs.

A] GREEN DRIVEWAYS
Connecting driveways to a filtration swale or otherwise preventing runoff helps to eliminate vehicle pollutants from entering our streams and ocean.

B] CURB CUTS TO CONNECT TO STREET
Curb cuts (permitted or implemented by the City) can allow streetside swales to clean and absorb street runoff. They can also be an option for an overflow from a swale or bog garden out to the street.

C] INFILTRATION SWALE
A properly designed swale can help maintain year-round soil moisture, conserve water, and reduce pollution and treatment system demand. The size of swale shown in this plan (approx. 300 ft², 6” depth + 1” amended soil), has the capacity to infiltrate runoff from over 10,000 ft² of impervious surface, or more than 8 times the size of this lot-scale parking strip.

D] HARVEST ROOF RUNOFF
Roof runoff could be collected and piped to the streetside swale (with City permission). Conveyance options could include a ‘water arbor’ over the sidewalk, or piping under it.

STORMWATER COLLECTION
Clean runoff could be collected in large cisterns and stored to use for irrigation during drier times of the year, conserving drinking water and reducing peak storm runoff.

MODERATE RESIDENTIAL
The Wetland Wave establishes a language of form, color and texture while increasing pedestrian flow. Through forms and vegetation the design reveals its function, yet allows for the expression of the individual homeowner.

**GOALS**
1. Stormwater - reduce quantity of water into catch basins and improve quality of harvested water
2. Reveal natural drainage
3. Allow for individuality and owner programmed areas
4. Inspire surrounding community involvement and adoption
5. Encourage social interaction and walkability
6. Improve safety and pedestrian connectivity

**HOW IT WORKS**
Curb cuts direct street run-off
Sediment filters in gravel trough
Water level rises in trough and flows into wetland
Rushes and sedges act as bio-filtration
Trough is also path which allows for easy access to sidewalk

**REQUIREMENTS**
Curb cuts
Concrete
Gravel and soil amendment

**STORMWATER CALCULATION**
Typical parking strip: 20’ x 50’
1 parking strip could handle over 10,000 sq ft of impervious run-off assuming soil with good drainage
4 parking strips per block could handle a 2-year storm event

**PLANTING PALETTE**
- Juncus patens: Spreading Rush
- Carex deweyana: Dewey’s Sedge
- Carex obnupta: Slough Sedge
- Carex testacea: Orange Colored Sedge
- Juncus ensifolius: Dagger-leaf Rush
- Scirpus acutus: Hardstem Bulrush
- Scirpus microcarpus: Panicled Bulrush
- Carex albula: Frosty Curls Sedge
GOALS
IMPLEMENTATION THROUGH COMMUNITY AND CITY COLLABORATION

ENHANCE COMMUNITY ENVIRONMENT
• Create a unified aesthetic along entire block, enhancing experience for all users
• Improve safety by moving pedestrian crossings closer to corners at intersections
• Provide marked crosswalk mid-block to facilitate pedestrian movement and encourage walking
• Include curb bulb-outs and shift in-street centerline to promote traffic calming
• Addition of bike lane to provide safer and more enjoyable route for cyclists
• Improve bus stops as public spaces by making access easier and providing more space & visual interest
• Provide mid-block pocket park for gathering, play, and other community functions

CONSERVE RESOURCES & IMPROVE ECOCLOGICAL FUNCTIONS
• Capture and clean storm runoff from streets in streetside swales
• Natural drainage systems maintain more soil moisture to reduce or eliminate need for streetside irrigation
• Local yard waste composting structures reduce need for waste removal
• Improve quantity, quality, and connectivity of habitat through more plant diversity, including native plants
• Increase tree canopy cover

PUBLIC EDUCATION AND INSPIRATION
• Educate community on importance of and methods for conservation through local examples
CONCEPT  With bus stops every block, a unique opportunity to combine stormwater treatment, bus stop use, a new bicycle lane, and pedestrian safety presents itself. Pedestrian corners attempt to bring pedestrians closer to the street to increase crossing safety and promote walkability. A bump-out strategy is used to create room for the bike lane and calm traffic. Stormwater is integrated with a bus stop plaza, giving users an everyday look at stormwater management.
Water Gathering  justin martin

CONCEPT  A more involved option that would require city permitting and assistance. A curb bulb-out helps clean runoff from the street and also provides space and a safety buffer for a small block-park. A rain garden serves as a focal point for the gathering space and collects rainwater from a swale along the parking strip uphill.

PLANTS FOR A PUBLIC RAIN GARDEN

- Dwarf blue willow
- Columbine
- Oregon iris
- Deer fern
- Mock orange
- Dwarf blue willow
- Columbine
- Oregon iris
- Deer fern
- Mock orange