

# Seattle Traffic Garden Handbook

A guide for  
communities,  
organizations, and  
local officials



STOP



STOP



Seattle  
Department of  
Transportation



cascade  
BICYCLE CLUB

## Seattle Traffic Garden Handbook

The funding for this handbook was provided by the Seattle Department of Transportation's Safe Routes to School program.

The handbook was created by Discover Traffic Gardens for Cascade Bicycle Club, Seattle, Washington.

### Project Team



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### Supporting Organizations



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# Introduction

The **Seattle Traffic Garden Handbook** is a comprehensive resource for community members, organizations, and local officials interested in creating traffic gardens in the City of Seattle. The handbook is divided into three sections to provide detailed information and guidance for different types of traffic garden projects.

**Section I** provides a step-by-step guide for planning and installing a pop-up or temporary traffic garden. This section covers everything from traffic garden templates to selecting materials and planning for a do-it-yourself (DIY) installation. It is designed to be user-friendly, serving community members who would like to create a pop-up or temporary traffic garden in their neighborhood.

**Section II** is focused on how to locate, plan, design, and install a permanent traffic garden on Seattle Public School grounds. This section includes information on site criteria, design principles, and emerging practices for creating a long-lasting traffic garden that supports biking programs in different settings.

Finally, **Section III** is full of useful information for those conducting traffic garden projects. This section includes details on materials, equipment, and costs, as well as examples drawn from existing traffic gardens.

Cascade Bicycle Club would like to extend our sincere thanks and appreciation to the Seattle Department of Transportation, Seattle Public Schools, Outdoors for All, and other organizations that have supported and assisted with the creation of this guide. Their expertise, guidance, and input have been invaluable in creating a comprehensive and useful resource for the community.

We hope this guide will inspire and empower community members to create safe and comfortable spaces for pedestrians and bicyclists in the City of Seattle and support the exciting work already taking place on behalf of local young people.

**Advocacy. Community. Education.**

**Cascade Bicycle Club**

# Abbreviations & Acronyms

**ADA** – Americans with Disabilities Act

**Cascade** – Cascade Bicycle Club

**DIY** – Do-it-yourself

**ES** – Elementary school

**MS** – Middle school

**MUTCD** – Manual of Uniform Traffic Control

**PE** – Physical education

**PK** – Pre-kindergarten

**SDOT** – Seattle Department of Transportation

**SPS** – Seattle Public Schools

**SRTS** – Safe Routes to School

**STEM** – Science, Technology, Engineering and Math





# Section I: Do-it-Yourself (DIY) Traffic Gardens



# Section I Overview

Traffic gardens are popping up all around the Seattle region. Local champions are planning and installing these fun projects to create safe places for kids to play outside and practice biking.

Knowing how to ride a bike equips a child with the skills to enjoy a lifetime of healthful physical activity and the joy that comes with it. But the child must know how to navigate roadways safely. The City of Seattle is working hard to prioritize safe walking and biking for the city's youth and traffic gardens are dedicated places that make a great impact on walking and biking safety for our youngest residents. Though small in scale and simple in concept, traffic gardens have the power to shape a child's experience of the built world and help them grow their safety knowledge.

Back in 2016, Cascade Bicycle Club (Cascade) and King County Parks teamed up with Alta Planning + Design to build Washington State's first traffic garden at Dick Thurnau Memorial Park in White Center. With its colorful appearance and clever layout designed for learning, this traffic garden has been the inspiration for many more installations all over the U.S.

Section I of this handbook is designed to help local community groups and members of the public plan, design, and install a **pop-up** or **temporary** traffic garden. Traffic gardens are a great community resource, but it takes careful planning to get them right. Consulting Section I will help you go through the process without having to reinvent the wheel. We hope that with our help, your project will be a joy from the very beginning.

## Section I at a Glance

### What is a Traffic Garden?

### Steps to Your Traffic Garden Project

1. Assemble a Team
2. Identify the Purpose and Goals
3. Decide the Traffic Garden Type
4. Create a Project Plan and Timeline
5. Explore Project Funding Options
6. Determine the Location
7. Visit and Document the Site
8. Develop a Street Layout
9. Plan for Installation
10. Launch the Traffic Garden
11. Maintain the Traffic Garden
12. Recognize Project Success

### Traffic Garden Fun!



# What is a Traffic Garden?

A traffic garden is a fun play and learning space consisting of reduced-sized streets and scaled-down traffic elements assembled into a network. It is a small world for active play and a purpose-designed space for children to learn bicycling skills and roadway safety. Traffic gardens introduce kids to traffic rules and interactions, and, through the knowledge and self-awareness developed, make them better and safer users of the transportation system as they practice and get older.

**White Center Bike Playground is a great example of a traffic garden. Located on former tennis courts, it features a small-scale colorful streetscape, complete with realistic road markings and obstacles. Bicyclists of all ages come to have fun riding bikes and learn about roadway safety in a safe, comfortable setting. Cascade and its partners have made use of the park to offer bicycling camps, community riding events, and more.**



*White Center Bike Playground opened in 2016 in Dick Thurnau Memorial Park, Seattle.*

# Steps to Your Traffic Garden Project

## PLANNING YOUR VISION

- 1 Assemble a Team**

to plan and implement the traffic garden. This may include community members, educators, biking instructors, and others.
- 2 Identify the Purpose and Goals**

of the traffic garden. What type of experience do you want people to have?
- 3 Decide the Traffic Garden Type**

based on available resources and the type of installation you envision.
- 4 Create a Project Plan and Timeline**

of all steps and tasks to complete the traffic garden, including planning, design, installation, and supplies.
- 5 Explore Project Funding Options**

such as grants, donations, or other in-kind resources.
- 6 Determine the Location**

of the traffic garden or event site. Consider factors such as accessibility, size, and available resources.

## MAKING IT A REALITY

### **7 Visit & Document the Site**

by looking closely at all existing details and making an outline of the site and surrounding features.

### **8 Develop a Street Layout**

for the traffic garden. Outline the streets, intersections, and other features such as pedestrian crossings, and road signs.

### **9 Plan for Installation**

of the traffic garden. This may include gathering supplies, preparing the site, measuring and chalking the site, and adding striping and pavement markings.

### **10 Launch the Traffic Garden**

and thank all involved. Hold a celebration and invite local media. Observe use and make any needed adjustments.

### **11 Maintain the Traffic Garden**

through regular visits, touch-ups, and clean-up to ensure that it remains in good condition and attractive for users.

### **12 Recognize Project Success**

and consider how to grow this into future community projects.

# 1 Assemble a Team

Assembling a team to plan a traffic garden project can be a great way to engage the community and ensure that the project meets the needs and interests of the local people. Here are some steps you can take to put together such a team.

## Assemble a Group of Champions

These are the people who see the need for the traffic garden. They will support the vision and may step in with help or resources at key moments to make the project happen.

## Identify Key Stakeholders

Find people in the community who may be interested in the traffic



garden project and willing to provide their insights. This could include parents, grandparents, caregivers, teachers, community leaders, advocates, and other individuals supporting children's health and wellbeing.

## Recruit Volunteers

Reach out and ask them for help in planning and installing the traffic garden. Consider offering a range of roles and responsibilities to ensure that everyone's talents and interests are utilized.

## Prioritize Diversity

It's important to ensure that the team represents a range of backgrounds and perspectives. This will help the project meet the needs of the entire community and enhance the overall success.

## Involve Young People

Children should be an integral part of the planning

process. They will love to be asked for input and to test ideas, and they will provide great feedback.

## Organize the Team

Once you have recruited a diverse group, consider organizing into committees to focus on specific tasks or areas of the project. This can help to ensure that everyone's efforts are coordinated and that the project stays on track.

## Provide Support and Encouragement

It's important to work with the team to ensure that they have the tools and resources they need and that they are kept up to date on progress and successes.



## 2

## Identify the Purpose and Goals

### What do you want to achieve through the project?

Do you want to install a new amenity for kids who have nowhere to learn to bike? Or do you want to spotlight walking and biking issues in the neighborhood?

Consult other community members about their ideas too, and with this information in hand, rank the following possibilities to help identify your purpose and goals:

| YOUR RANKING | PURPOSE OR GOALS  | HOW ACHIEVED BY THE PROJECT  |
|--------------|---|--|
| _____        | Create a continuum of foundational Physical Education programming | Traffic gardens serve as a valuable tool for promoting and achieving safety awareness, physical activity, cognitive development, and practical life skills among children.                   |
| _____        | Promoting everyday physical activity                              | Traffic gardens provide children with a fun and safe place to engage in physical activity like biking, which can help improve their health and well-being.                                   |
| _____        | Encouraging active transportation                                 | Traffic gardens can encourage children to walk, bike, or use other forms of active transportation, which can help to reduce traffic congestion and improve air quality in the community.     |
| _____        | Fostering independence  | Traffic gardens can help children to develop independence and confidence by giving them the opportunity to practice navigating traffic and making decisions on their own.                    |
| _____        | Enhancing learning  | Traffic gardens can provide children with an engaging and interactive learning environment, where they can learn about traffic rules and the importance of safety in a fun and hands-on way. |
| _____        | Building community connections                                    | Traffic gardens can bring people together and foster a sense of community pride and ownership. They can also provide a gathering place for community events and activities.                  |
| _____        | Demonstrating the concept to local officials                      | By installing a short-term installation and showing how it works, you may create the support for a permanent traffic garden in the community.  |
| _____        | Add your own ideas here:  |  |

# 3 Decide the Traffic Garden Type

Before moving forward, decide which is the best type of traffic garden for your project:

## POP-UP VS. TEMPORARY TRAFFIC GARDEN??

### POP-UP

Pop-up traffic gardens are typically set up for a few hours or a day at a time.



### TEMPORARY

Temporary traffic gardens are intended to be in place for a longer period of time, usually a few weeks to a few months.



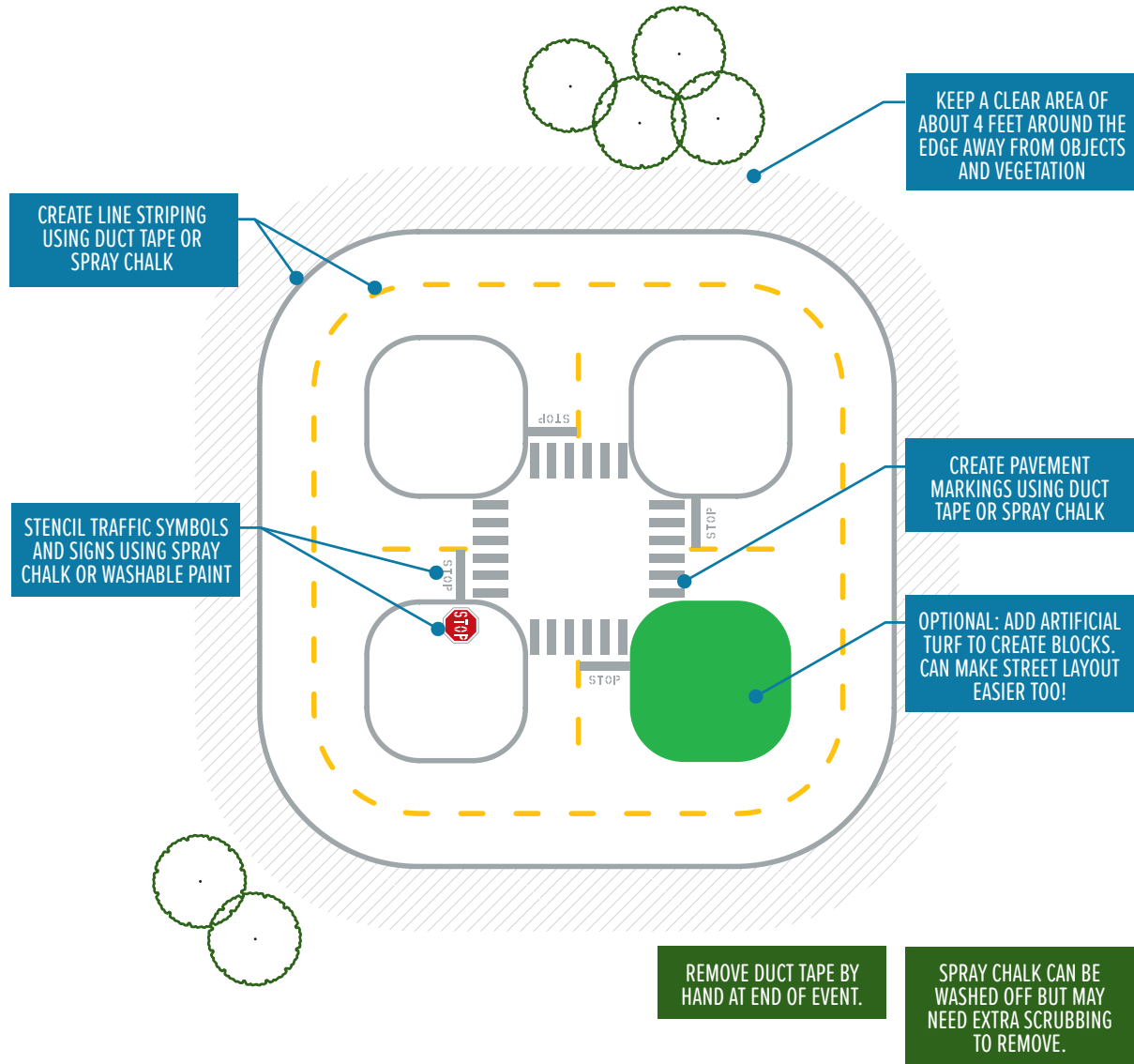
**BOTH** can be put together by a team of volunteers using tools and supplies available from the hardware store. The key difference is whether the type of materials used are completely removable or can stay on an outdoor hard surface for a while.

# ANATOMY OF A POP-UP TRAFFIC GARDEN

## Definition

- A short-lived small set of streets created from **removable materials**
- Typically stays in place for a few hours or days
- Created from hardware store materials and tools
- Can be located on school yards, park courts, parking lots, or temporarily closed-off streets
- Involves extensive volunteer assistance to install quickly
- May be part of a larger event like Bike to School Day or Open Streets
- The short timeframe for the installation limits the overall size of the project.

PLANNING YOUR VISION

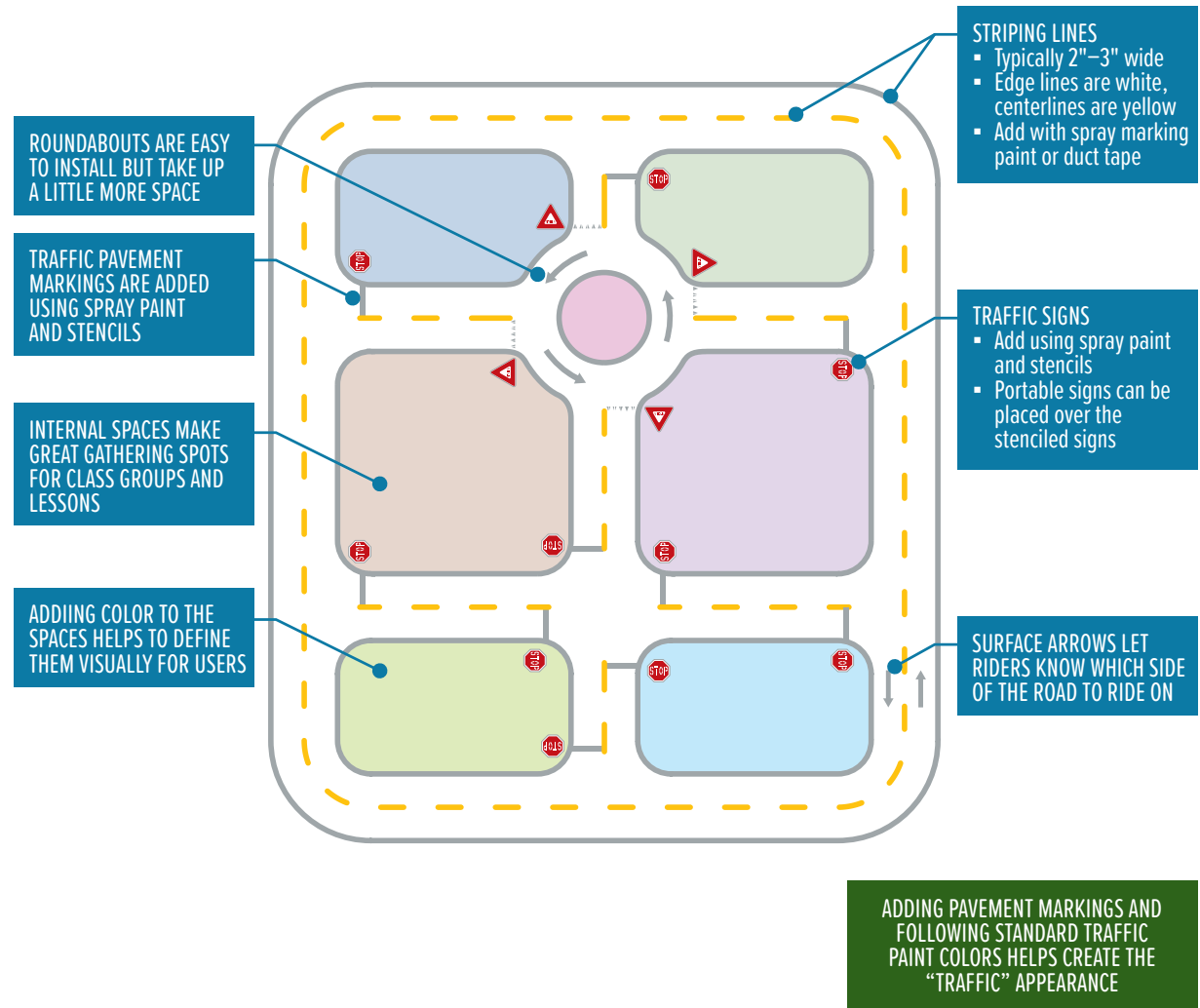




# ANATOMY OF A TEMPORARY TRAFFIC GARDEN

## Definition

- A temporary set of street outlines created using **materials that wear away over time**
- Typically stays in place for 2–6 months, or longer
- Street outlines can be created using multiple methods and materials
- May be located on school yard, park court, or parking lot
- May involve extensive volunteer assistance for larger sites
- Life of the installation depends on materials used and weathering



# 4

## Create a Project Plan and Timeline

### POP-UP TRAFFIC GARDEN TIMELINE

#### Month 1

- Find event partners
- Confirm site
- Conduct field visit
- Line up funds



#### Month 2

- Prepare base drawing
- Prepare street layout template
- Gather supplies and materials
- Recruit volunteers



Create a project plan and timeline to complete the traffic garden, including planning, design, installation, and supplies.

#### Month 3

- Plan for installation event
- Mark and measure surface and install striping and other features
- Hold pop-up traffic garden event
- Remove materials and restore site
- Send thank you's

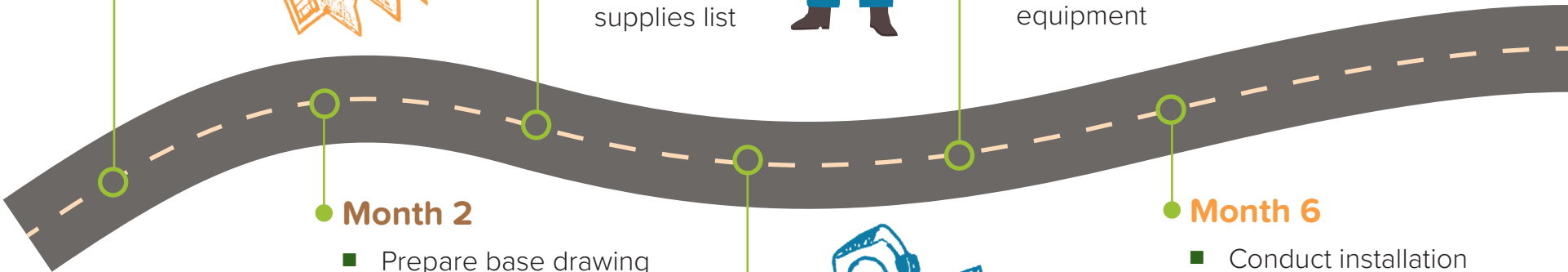


# TEMPORARY TRAFFIC GARDEN TIMELINE

Even for a short-term or small project, you will find that having a plan is helpful for figuring out the details of what needs to be done and staying on track.



PLANNING YOUR VISION



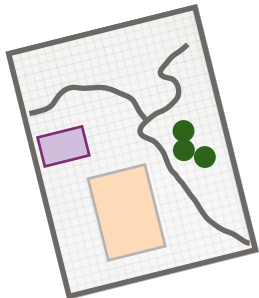
- Month 1**
  - Organize a team
  - Pick site
  - Get permissions
  - Find funding



- Month 3**
  - Finalize layout template
  - Plan for installation
  - Prepare supplies list

- Month 5**
  - Prepare instructions
  - Go over final details with team
  - Monitor weather forecast
  - Stage supplies and equipment

- Month 2**
  - Prepare base drawing
  - Prepare street layout template
  - Add traffic details and features
  - Select final layout
  - Decide on materials and signs



- Month 4**
  - Gather supplies and materials
  - Locate equipment
  - Make signs and banners
  - Inform team and volunteers



- Month 6**
  - Conduct installation
  - Hold celebration
  - Send thank you's and photos
  - Monitor condition



## 5

# Explore Project Funding Options

Even when starting with a low-cost traffic garden, a game plan for funding or acquiring resources is key. Traffic gardens can be put together with a small budget, and teams have been creatively tapping into a variety of funding options including Safe Routes to School, roadway safety, and healthy activity grants.

Due to general goodwill towards traffic gardens, some communities have successfully funded their project using donated services, sponsorship, or other contributions to cover elements of their budget and help get the project done.

**The Pop-up Traffic Garden at the Earth Day Roanoke Festival in Roanoke, Virginia, was funded through the local active transportation encouragement agency. The pop-up was created from low-cost materials and installed using volunteer assistance from City staff and local community members. The pop-up was run by a team of community volunteers. Hundreds of local children came by to ride bikes at the pop-up over the course of the 6-hour event.**



# 6 Determine the Location

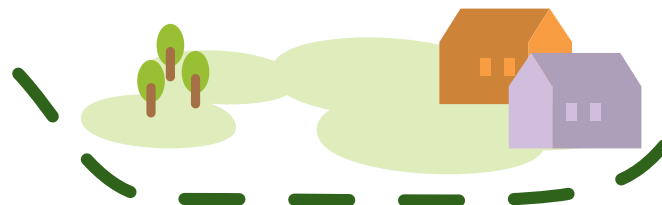
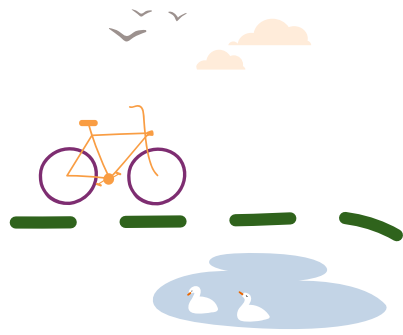
Decide on the spot to install your traffic garden whether it's a pop-up or temporary. If you are seeking a pop-up opportunity, approach organizers of established community events that are likely to welcome an additional family-friendly feature. Make sure you know exactly where your installation will be located within the larger event site.

## Basic Traffic Garden Site Considerations

|                | POSITIVE FEATURES   | WHAT TO WATCH OUT FOR   |
|----------------|---|---|
| <b>SIZE</b>    | Mostly flat hard surface with clear open space free of hard fixtures (45'–50' wide minimum) | Steep slopes, poles, drainage fixtures, adjacent building corners, steep drop-off at edge |
| <b>SURFACE</b> | Reasonable to excellent asphalt or concrete surface quality (some cracking is okay)         | Severely cracked or potholed asphalt/concrete   |
| <b>ACCESS</b>  | Good sidewalk and trail connectivity  | Poor pedestrian, bike, and wheelchair connectivity  |

## Traffic Garden Site Possibilities

- Abandoned sites
- Partnerships with site owners
- Seasonal spots
- Weekend/weekday uses
- Restoration/covering up
- Revitalization
- Leftover segments
- Underused spaces
- Distant ends of sites
- Tennis courts
- Basketball courts
- Parking lots
- Places of worship overflow parking
- Recreation centers
- Elementary and preschools
- Day cares
- Fairgrounds
- Colleges and universities
- Sports court surrounds
- Next to playgrounds
- Next to regional trails
- Shuttered shopping centers
- Under highways



Pop-ups work as part of festivals, street events, and fairs too!

When you have found a likely site for your project, it's time to request permission from the property owner. When making the initial approach, it's good to be ready with information about other successful traffic gardens. Also, once you've received the go-ahead from the property owner, make sure to keep them informed throughout the process. If the first request doesn't work out, don't get discouraged, as many suitable spaces are scattered throughout the community. If you already have a site identified for your temporary traffic garden, double-check that it meets the basic considerations before moving on with more planning.

### Traffic Garden Examples



**Pop-up** traffic garden at a street event in Rutland, Vermont



**Pop-up** traffic garden in Garland Elementary School in Olympia, Washington



**Temporary** traffic garden at Pat Pfiefer Park in Portland, Oregon



**Temporary** traffic garden at Harrison Park in Portland, Oregon

## 7 Visit & Document the Site

Whether you are planning a pop-up or a temporary traffic garden, it's important to visit your site to document the existing conditions. You may be tempted to skip this step—especially with a site that is familiar to you—but

don't! The site visit is an opportunity to closely inspect an unfamiliar site or to look at a familiar site with new eyes. Don't be surprised when you see features that have always been there, but that you've never noticed before.



### CONDUCTING YOUR SITE VISIT

Invite team members on a field trip to the site or event location so you can start thinking through how the traffic garden could work at this spot. Your goal is to have an aerial image of the site with all of the important physical features and dimensions noted by the end of your visit.

#### What to Bring

- Clipboards
- Pens & markers
- Measuring tools
- Aerial image of the site (bring one for each team member!)
- Blank graph paper and/or notepaper
- Optional: Copies of the provided templates will be useful to have on hand for planning!

#### HOW TO FIND & PRINT AN AERIAL IMAGE

1. Go to a website that offers aerial imagery, such as Google Maps or Google Earth.
2. Enter the site's address in the search bar.
3. If necessary, switch from map view to aerial view.
4. Zoom in to get a closer view of the area.
5. Center your site on screen and print out the image.
6. In the print dialog box, select the option to print full size or at a scale that is good for your needs.

The quality of the image may vary, but you want an aerial that shows the site and the surrounding area well enough to mark it up and make notes.

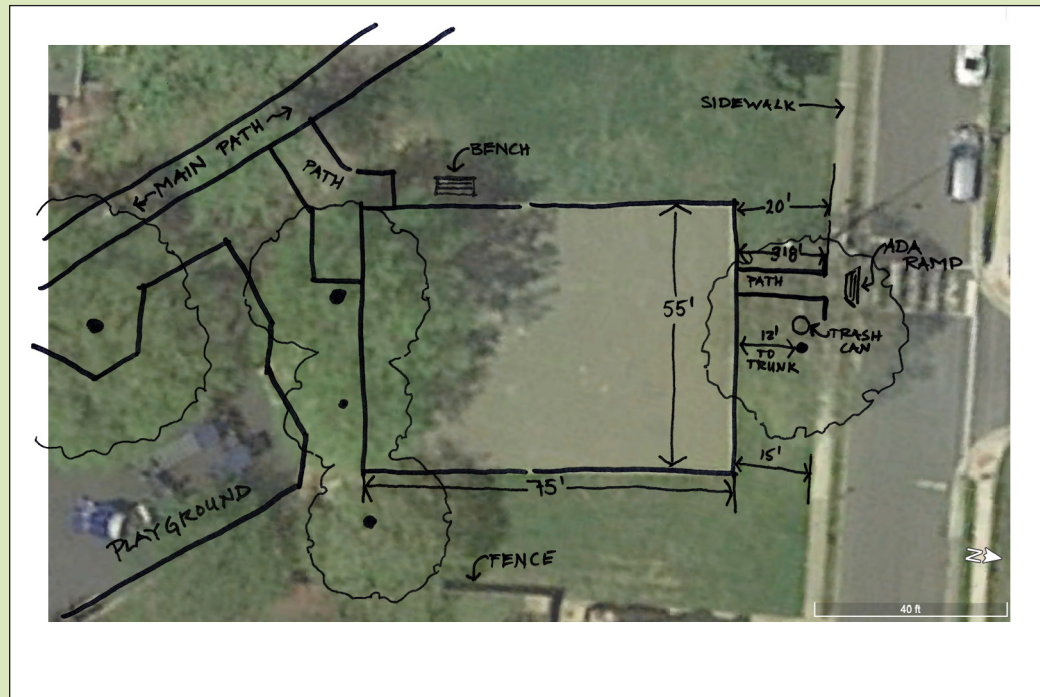
## What to Mark on Your Aerial

- The dimensions of the surface you want to use for your traffic garden (remember, you want a surface that's at least 45', or even better 50', in each direction)
- Any obstructions on the surface that will need to be avoided, such as grates, curbs, poles, etc.
- Adjacent physical features like buildings and doorways, trees and shrubs, walls and fences. Be sure to note the size of each feature, as well as the distance from the planned traffic garden.

**TIP: TAKE LOTS OF PHOTOS OF EVERYTHING!!**

## Aerial Mark-Up Example

Here's an example of what your aerial might look like at the end of your site visit. All of the important dimensions and physical features and potential hazards have been marked. You will use this information to develop your traffic garden layout in the next step.



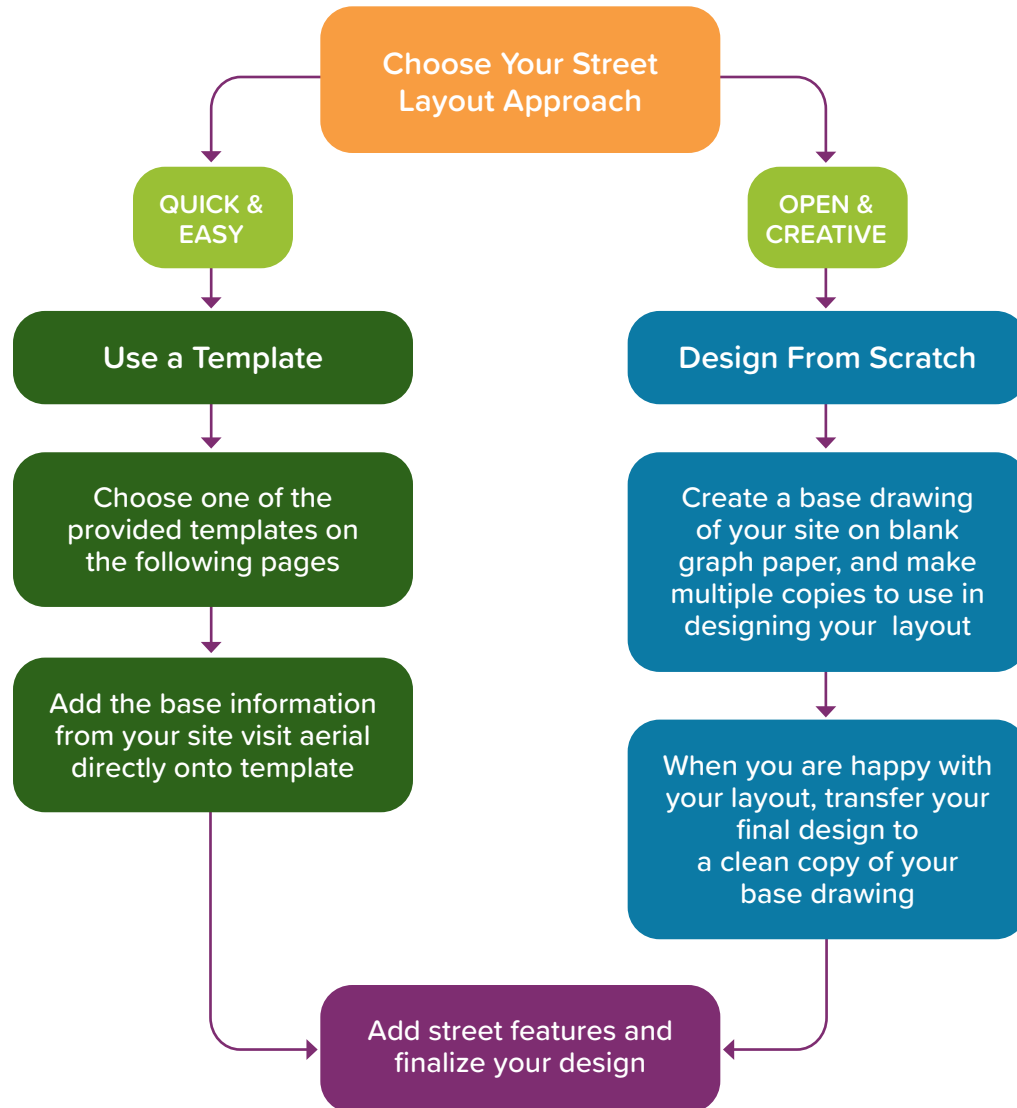


## 8 Develop a Street Layout

Your traffic garden street layout drawing will serve as the blueprint for the traffic garden you install. The first decision to make is whether you want to use a pre-designed template or develop a design of your own.

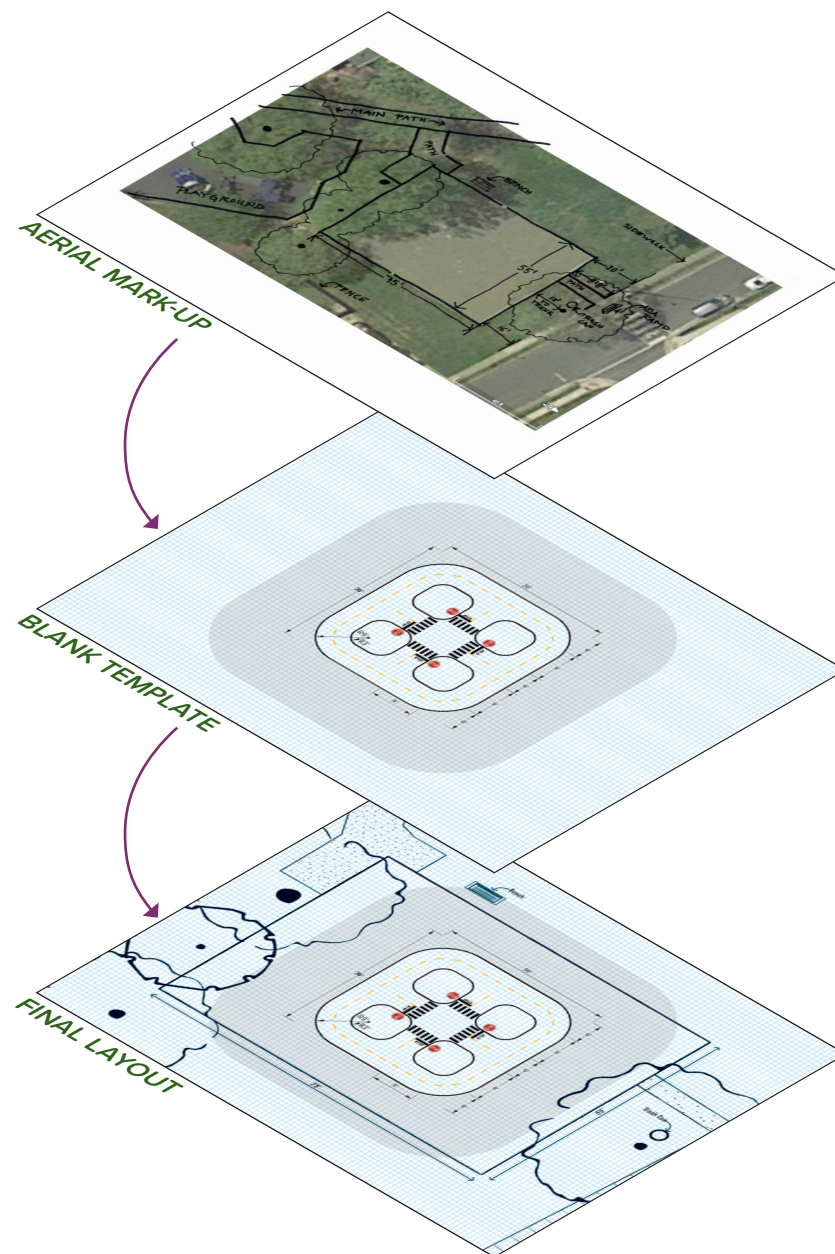
The provided templates will save time and ensure that the design provides all the basic elements needed.

Alternatively, you may enjoy designing your own traffic garden from scratch, which will allow you to incorporate fun extra features into the traffic garden and otherwise make it your own.



## DEVELOPING YOUR STREET LAYOUT USING A TEMPLATE

- Take out the aerial from your site visit.
- Make a clean working copy of your chosen template.
- Transfer the dimensions of the surface you plan to use for your traffic garden onto the template graph paper so that the street layout is located where you want it on your site.
- Be sure to transfer the dimensions at the correct scale on the template: e.g., 1 square = 1 foot.
- Transfer any important physical elements you noted on your site visit to the template. Include anything within 15 feet from the edge of the traffic garden.
- Now you have your final traffic garden layout!

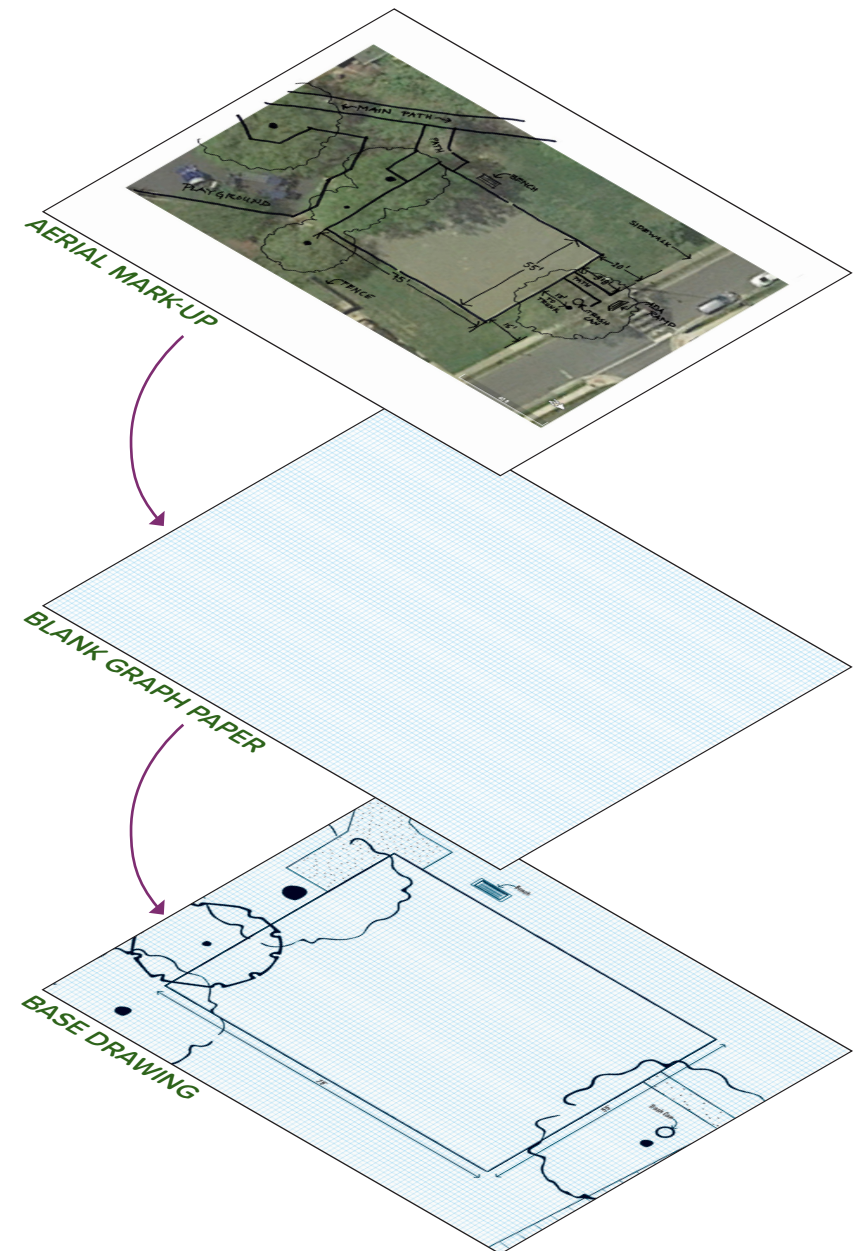


## DEVELOPING YOUR STREET LAYOUT USING YOUR OWN ORIGINAL DESIGN

Designing a unique traffic garden from scratch is a bit more challenging than using a pre-designed template, but it can be a fun and satisfying process.

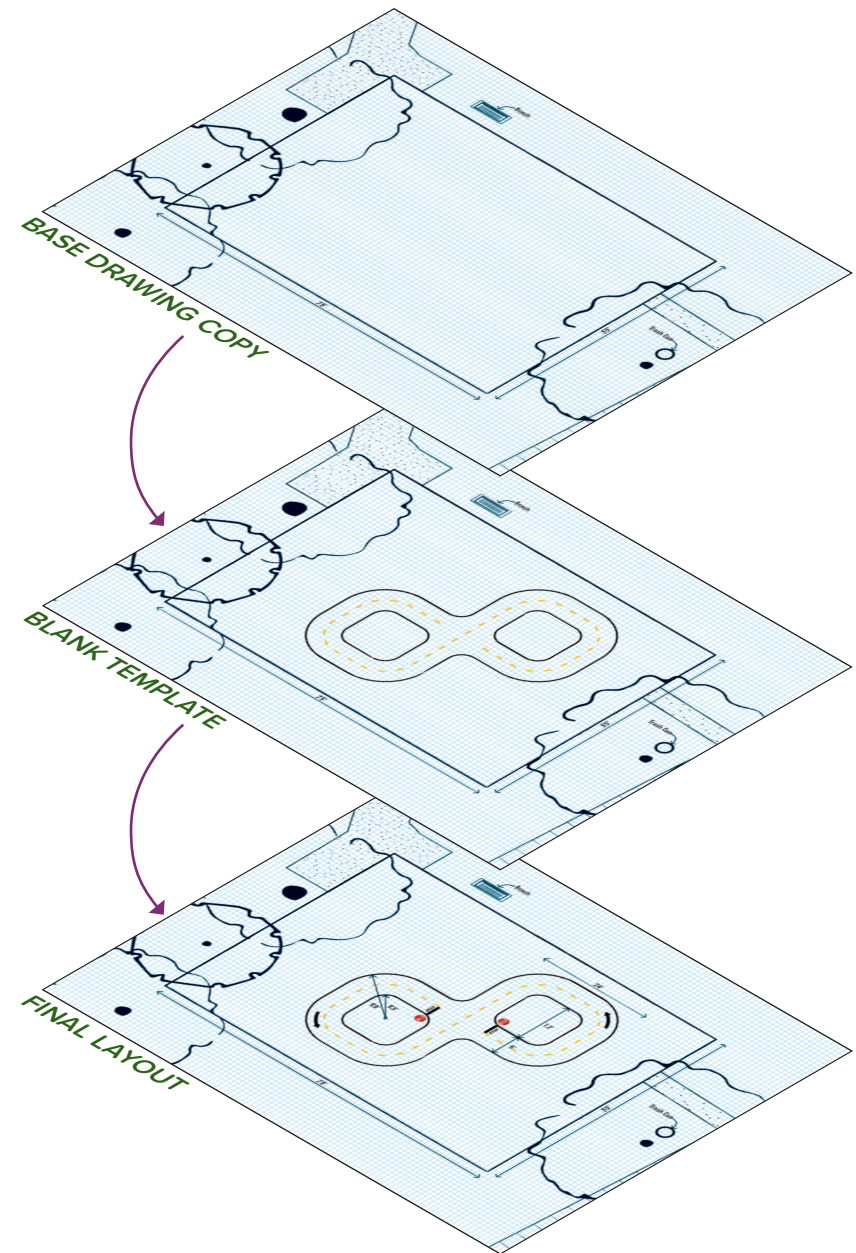
### Create Your Base Drawing

- Take out the aerial from your site visit and a blank sheet of graph paper.
- Referring to the aerial, determine the scale you want to work at and mark it on your graph paper: 1 square = \_\_\_\_\_ feet.
- Transfer the dimensions of the surface you plan to use for the traffic garden the graph paper, as well as the other important physical elements you noted on your site visit. Include anything within 15 feet from the edge of the traffic garden.
- Now you have your base drawing! Save the original and make copies to work on as you develop your street layout.

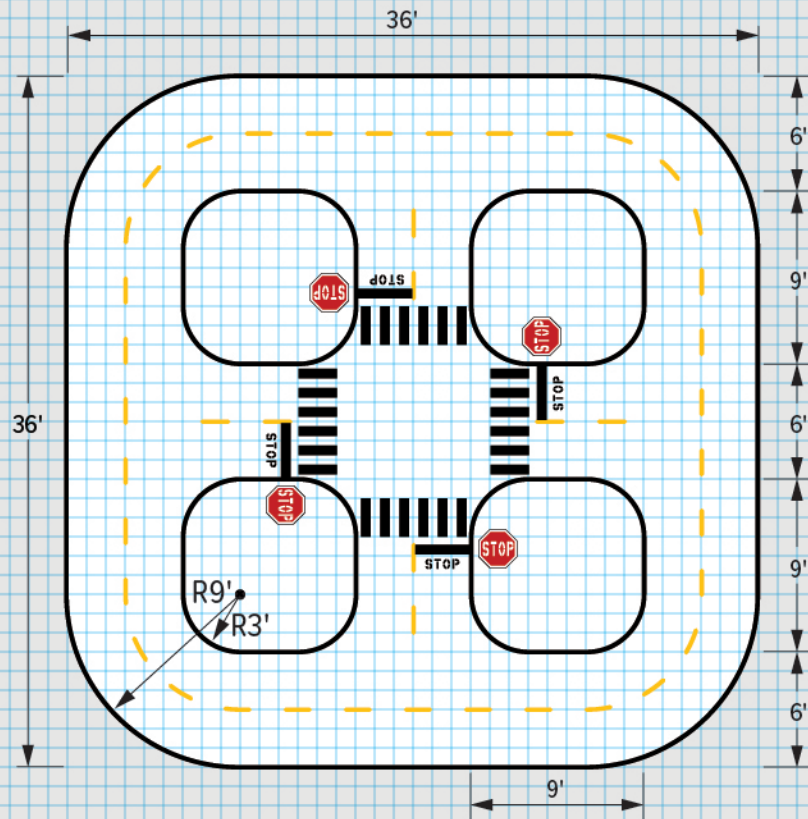


## Add Your Street Layout

- Take out a clean copy of your base drawing.
- Sketch out your street layout, fitting it within the boundaries of the surface you plan to use for your traffic garden.
- Use the templates and information on page 1-27 as a reference for technical requirements such as lane widths, roundabout radii, and traffic markings.
- Include a minimum 4-foot buffer around your street layout that is clear of obstructions or vegetation.
- Add dimensions and final details to your drawing.
- Now you have your final traffic garden layout!



# Town Square Template



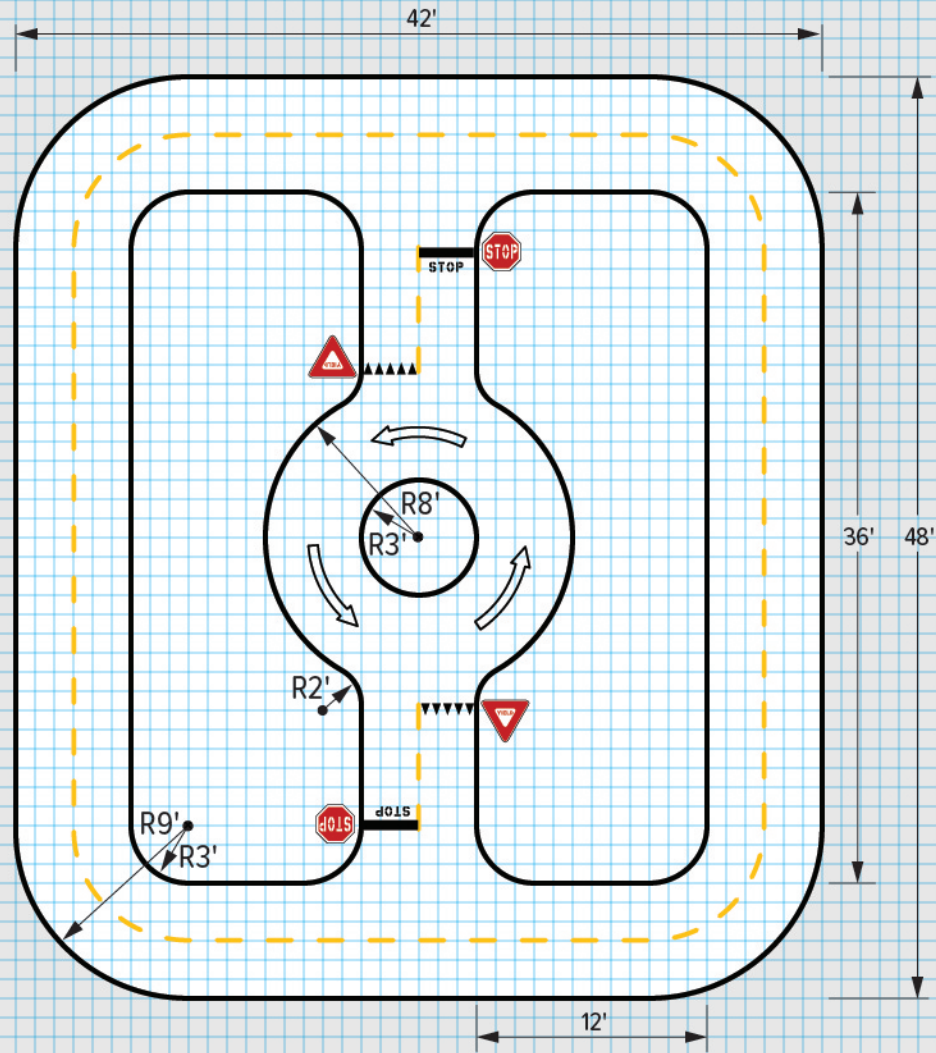
Scale: 1 square ■ = 1 foot

Project: \_\_\_\_\_

Date: \_\_\_\_\_

Location: \_\_\_\_\_

# Roundabout World Template



Scale: 1 square ■ = 1 foot

Project: \_\_\_\_\_

Date: \_\_\_\_\_

Location: \_\_\_\_\_

Blank Graph Paper

Scale: 1 square ■ = \_\_\_\_\_

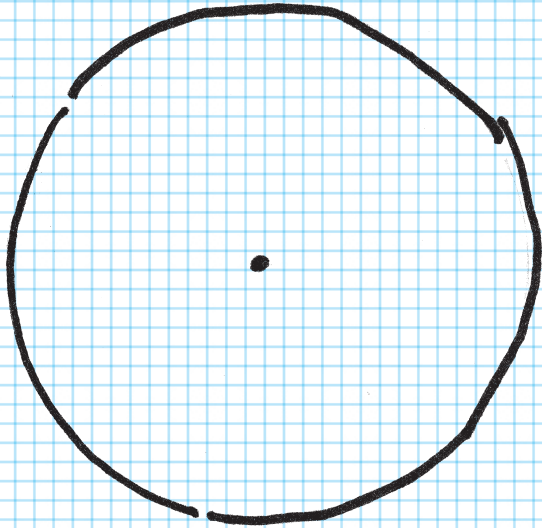
Project: \_\_\_\_\_

Date: \_\_\_\_\_

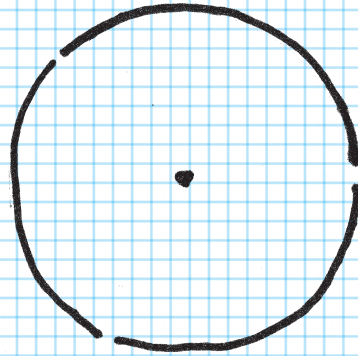
Location: \_\_\_\_\_

# Common Landscape Symbols for Base Drawings and Layouts

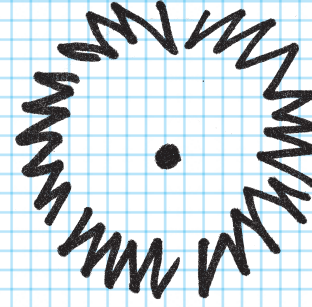
Large Deciduous Tree



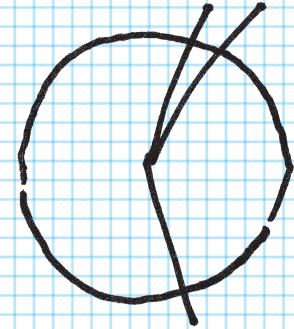
Small Deciduous Tree



Evergreen Tree



Flowering Tree



Bench



Telephone Poles & Wires



Sign



Basketball Hoop



Site Boundary



Fence



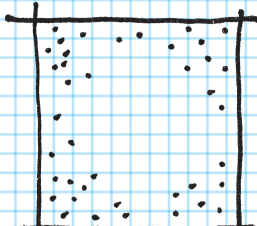
Building Outline



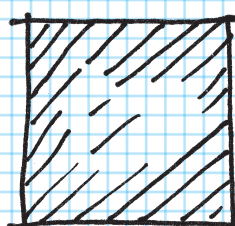
Storm Drain Inlet



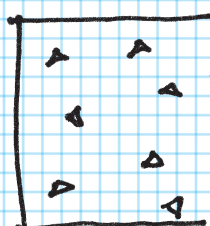
Sand



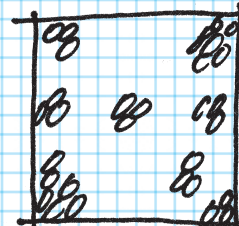
Asphalt



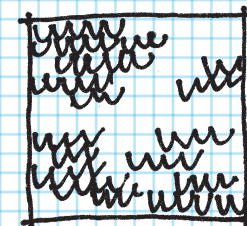
Concrete



Gravel



Grass



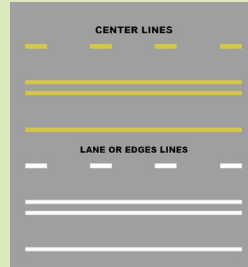


## ADD STREET FEATURES AND FINALIZE YOUR TRAFFIC GARDEN LAYOUT

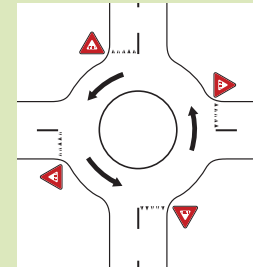
Whether you are working from a template or designing a traffic garden from scratch, adding details and using standard colors will help create the “traffic” appearance.

- Add any other street features to your street layout.
- Mark and add notes about street signs or any other elements you plan to include.
- Label the striping and pavement marking stencil colors to help wrap up the design.
- Add a title (for instance, “Traffic Garden for the Open Streets Event”) and the date.
- If you are working on a computer, save the drawing. If you are hand drawing, make copies for distribution.

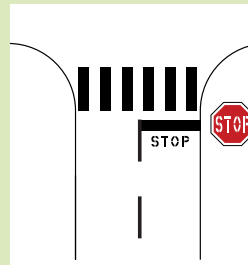
### Street Features



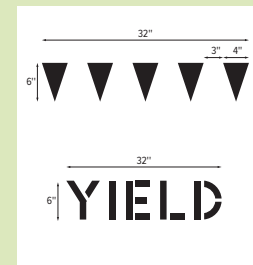
**Lane Lines** that separate travel directions are yellow. All other lines are white.



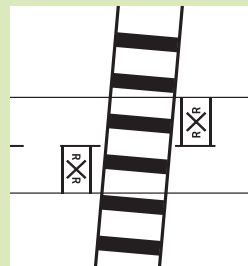
**Roundabouts** are a favorite feature. Arrows let kids know which direction to travel.



**Stop Bars** and the word “STOP” are stenciled at the intersection.



**Yield Markings**, also called “shark’s teeth,” can be painted at roundabout entrances.



**Railroad Tracks and Markings** add a fun play element to the traffic garden.



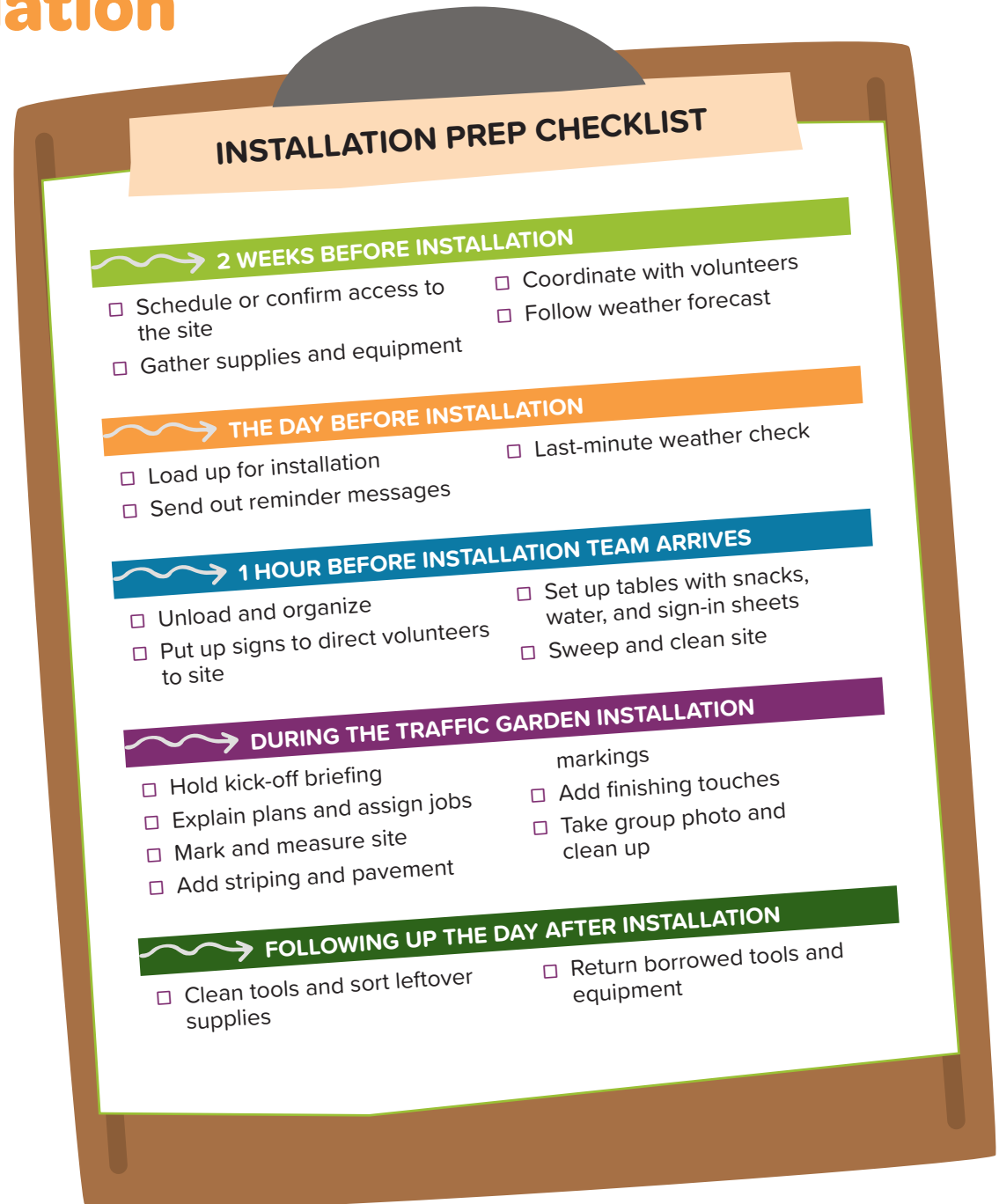
**Traffic Signs** can be added as portable and/or stenciled signs at intersections.

## 9 Plan for Installation

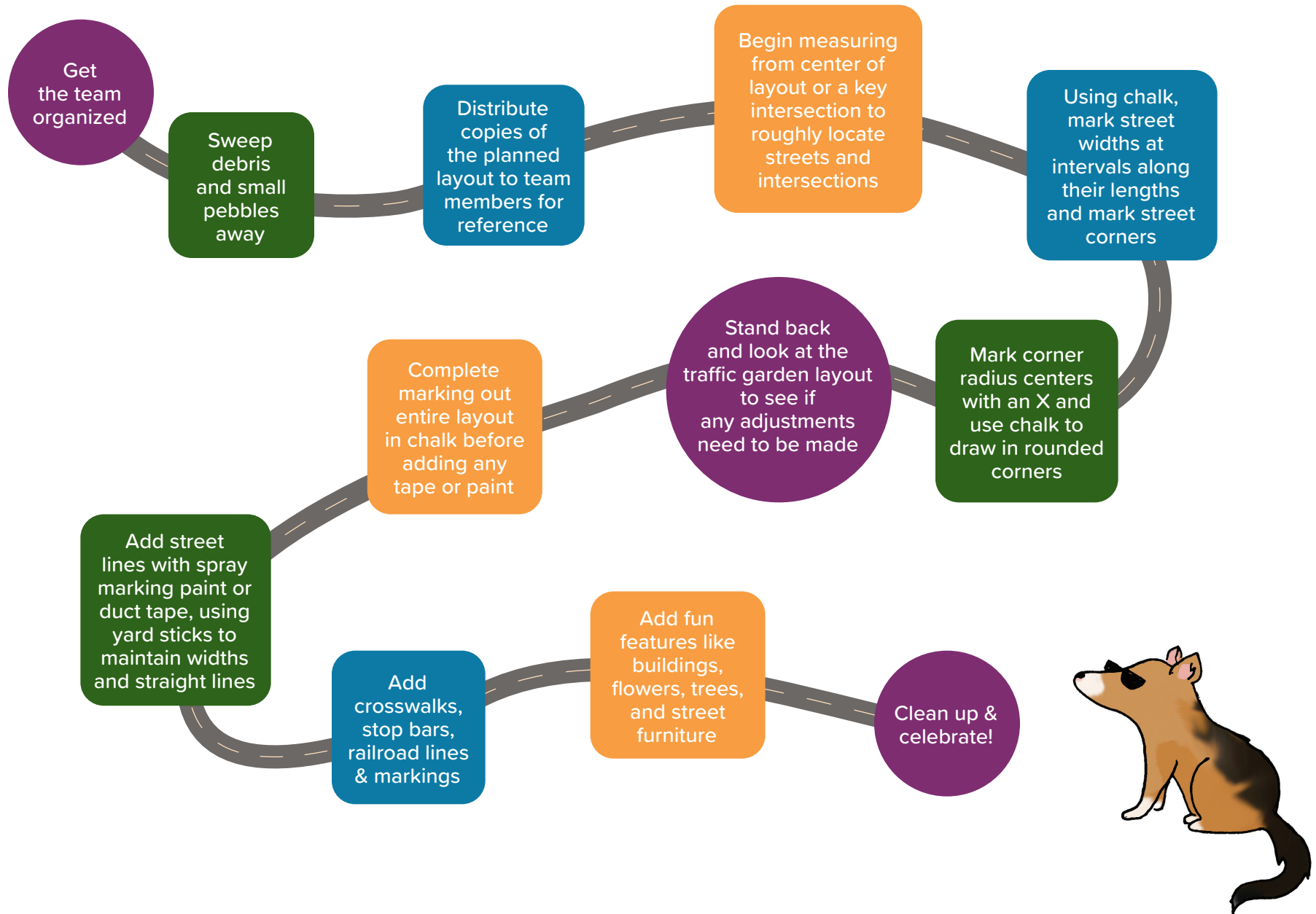
Now that you've designed your traffic garden layout, it's time to make it a reality! The following pages will cover the basics of how to install a temporary or pop-up traffic garden, including:

- Installation prep checklist
- Installation process overview
- Installation toolkit with each tool's cost
- Installation tips for getting the most out of your tools

Having many hands to help makes this a great community experience!



## AN OVERVIEW OF THE INSTALLATION PROCESS

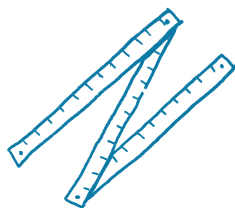


MAKING IT A REALITY

## TRAFFIC GARDEN INSTALLATION TOOLKIT

### Measuring Tools

A variety of measuring tools for measuring out the traffic garden layout.



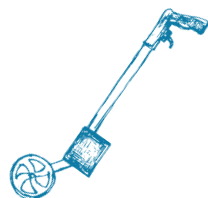
**Yard Stick** to measure street widths and use as a straight edge  
**Cost:** \$1–\$3



**Retractable Locking Tape Measure** to measure streets and features  
**Cost:** \$6+



**Open Reel Measuring Tape (50'/100')** to measure streets  
**Cost:** \$15 +



**Measuring wheel** to measure site  
**Cost:** \$30+

### Preliminary Marking Tools

Chalk-based marking tools make it easy to make adjustments or corrections before painting.



**Chalk Reel & Line Chalk** to mark long, straight lines  
**Cost:** \$7–\$10

**TIP:**  
Make sure that the line chalk for the chalk reel is for temporary marking



**Spray Chalk** to mark pavement  
**Cost:** \$10+



**Stick Chalk & String** to draw circles and rounded corners  
**Cost:** Under \$10

## Painting Tools

Use these tools to paint stripes, lane lines, and traffic details.



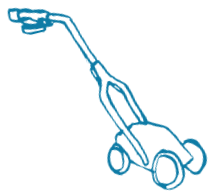
**Spray Marking Paint** to paint surface with temporary material  
**Cost:** \$10/can



**Heavy Duty or Artist Grade Spray Chalk** is long-lasting  
**Cost:** \$10+



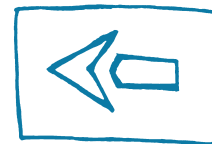
**Tempera Paint** for adding colorful details  
**Cost:** \$10/bottle



**Rolling Striper** that holds paint cans to make striping easier  
**Cost:** Varies



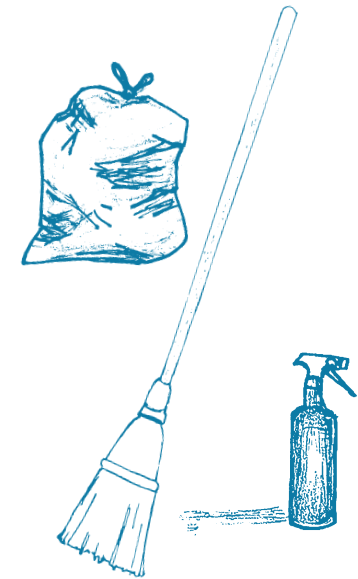
**Duct Tape** to mark long, straight lines  
**Cost:** \$10 per 60yd Roll



**Traffic Stencils** to add pavement markings  
**Cost:** \$15+ (Varies)

## Cleaning Supplies

To clean the site and tools after installation.

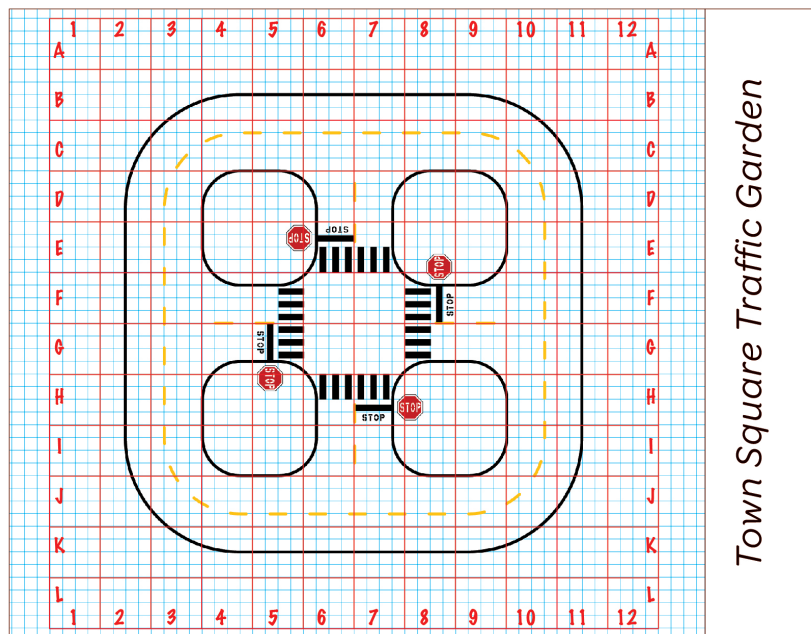


Brooms, water spray bottles, solvent spray, trash bags  
**Cost:** varies

## HOW TO GET THE MOST OUT OF THOSE TOOLS

### How to Use a Grid to Transfer Your Traffic Garden Layout to Your Surface

People needed: 2–3



The grid technique is used to transfer an enlarged version of an original reference image onto a large surface. While not used for every project, it can be an easy way for you to transfer your traffic garden layout drawing onto your hardscape surface.

1. Draw a grid over top of your traffic garden layout drawing, evenly spacing the parallel lines 4 or 5 feet apart.
2. Mark the squares along the top and bottom edges with numbers (1, 2, 3, ...) and the squares along the left and right edges with letters (A, B, C, ...).
3. Using a chalk reel, lightly draw a grid on the ground of your site using the same line spacing you used on your drawing. Label the squares the same as on your drawing.
4. Transfer the features from your drawing to the ground, working square by square.

## How to Use a Chalk Reel to Mark Long Straight Lines

People needed: 2–3



1. Make sure chalk reel is loaded with chalk by shaking the tool or opening the small door to check it has chalk powder.
2. Wind up the chalk line fully and tap it on a hard surface to help coat the string.
3. Secure one end of the string and unwind to where you'd like the chalk line to end.
4. Stretch and hold line tight at both ends.
5. Holding the chalk line in place, pull it straight up about 4 inches from the surface and snap it.
6. Keep snapping the chalk line at points along its length to make sure it's continuously visible.
7. If no helpers are available, use a rigid tape measure or yard sticks and draw the lines by hand with chalk.

## How to Draw a Circle or Curve On a Surface

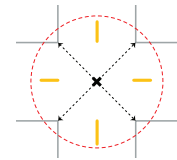
People needed: 2–3



1. Mark the center point of the circle or curve with an X:



For a **Curved Corner**, measure an equal distance, such as 3 feet, from each intersecting street to set the corner radius.



For a **Roundabout**, measure diagonally across the intersection to find the center.

2. Cut a piece of string 18 inches longer than your desired radius.
3. Tie one end of the string around a piece of chalk and the other around a rock or dowel, so that the distance between them equals your desired radius.
4. Place the rock at center of the desired circle or curve and have a helper hold it in place.
5. Holding the chalk upright on the surface, and keeping the string taut, draw with a steady hand.



## MORE GENERAL TOOL TIPS

### Choosing the Right Paint—Spray MARKING Paint



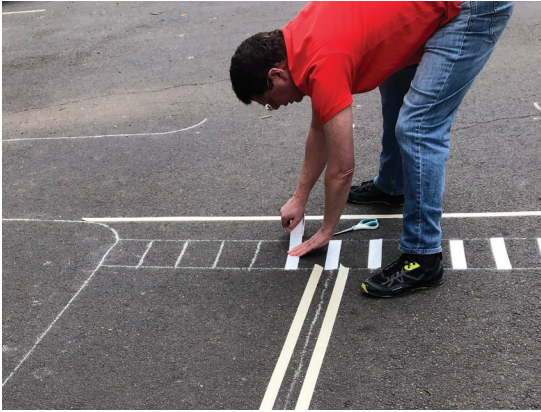
- Spray MARKING paint is the type of paint used for temporary applications. It is specifically formulated for use on outdoor surfaces but is also designed to weather away over several months. Always look for the word MARKING on the can.
- Also look for cans with inverted nozzles that are designed to be used upside down. These are best for painting pavement lines and traffic markings.
- If you are using a paint striping device, double check which brands of inverted spray cans work with your striper. The nozzle design differs between brands and your striper may only work with certain spray cans.

### Working with Spray Chalk or Spray Marking Paint



- Hold spray can vertically about 6 inches above surface.
- Do not spray too much chalk or paint on surface as it may soak under stencil edges—less is more!
- Prevent overspray with cardboard or by using a spray box—a cardboard box with an open top and bottom that sits flat on the surface.

## Working with Duct Tape



- Cut tape rather than ripping to help it lay evenly and prevent distortions.
- Use multiple short segments to create long lines to limit damage if a segment lifts off the surface.
- Use solvent spray or wipes to clean duct tape glue residue from the edge of scissors.

## Working with Stencils



- Use rigid stencils—whether purchased or handmade.
- Keep stencils firmly in place when spraying or painting.
- Leave stencils in place until the marking paint or chalk dries, approximately 5 minutes.
- Wipe stencils with a rag between each use.

## Working with Tempera Paint



- Use masking tape or painters tape on the surface to define edges or lines.
- Asphalt soaks up tempera paint so have plenty on hand! Purchase in gallon containers to reduce cost.
- Keep supplies—rags, cup of water, tool container—right next to you as you are working.

# Launch the Traffic Garden!

## HOLD A CELEBRATION AND INVITE LOCAL MEDIA



## POST-CELEBRATION FOLLOW-UP



### Send Thank Yous

to everyone who contributed to the success.



### Post on Social Media

to celebrate your team's success with photos, videos, and stories. Create a hashtag and encourage others to post as well.



### Issue a Press Release

with stories, quotes, and pictures.



### Update Property Owners and Funders

to let them know about the successful launch. Share photos of the transformation and of people having fun. Thank them for their contribution.



### Share Story with Community Groups

and invite them to tour the traffic garden to let people know about the local success.

## 2

## Maintain the Traffic Garden

If you've set up a temporary traffic garden, it's a good idea to stop by the traffic garden regularly to see how the materials are holding up, check on the general conditions, and remove any debris and trash. How much repair or touch up is needed to keep the lines and markings looking good depends on the materials used and the local weather conditions as well as how they were initially applied.

### Maintenance Tips

- Make a touch-up kit with all the supplies, stencils, and other tools needed
- Extend the life of the traffic garden by refreshing striping lines and pavement markings while they are still fully visible
- **Duct Tape** can last for weeks or months, but may lift off in spots after heavy rain or winds. High-grade industrial duct tapes (10mm or thicker) will last longer when applied well.

- **Spray Marking Paint** lasts months before gradually wearing away. Repaint periodically to extend life.
- **Spray Chalk** lasts a few weeks, but heavy rain will wash it away sooner. Colors may fade to white over time and require periodic respraying to keep fresh. Heavy-duty and Artist Grade spray chalks will last longer (check the label for specifics).



## Recognize Project Success

It's been a lot of work to get to this point, so take a moment to recognize all that you've achieved. There are many ways you can use what you've accomplished to build on your success:

- Use your knowledge and experience to repeat the project at other events and location
- Create a toolkit for future projects
- Leverage the positive responses and support to pursue a permanent traffic garden

### Additional Resources

If you want to delve deeper into planning and laying out your pop-up or temporary traffic garden, there are several useful DIY resources and community engagement tools available online, including guidance on community projects in general:

#### [Planting Seeds for Regional Roadway Safety, One Traffic Garden at a Time](#)

Detailed information resource for permanent, temporary, pop-up, and mobile traffic gardens.

#### [Safe Routes Philly Traffic Garden Guide, City of Philadelphia](#)

A guide for creating a temporary or semi-permanent traffic garden.

#### [Traffic Playground Toolkit, Metro Portland](#)

Detailed information resource including worksheets.

#### [Where the Duct Tape Meets the Road: How To Create Pop-Up Safe Routes to School Projects, SRNP](#)

Short guide about how to go about conducting a pop-up project in your community.

#### [Let's Get Together, A Guide for Engaging Communities and Creating Change, Safe Routes National Partnership](#)

Guide about inspiring community engagement.

#### [DIY Community Cookbook, AARP Vermont and Community Workshop](#)

A hands-on guide for community-based DIY projects.

#### [Discover Traffic Gardens](#)

General information plus some traffic garden items for purchase including stencils and STEM kits.

# Traffic Garden Fun!

Traffic gardens add a neighborhood amenity and popular local destination for children, families and community groups. Here are a few of the ways to maximize the community use of your traffic garden.

## Types of Experiences

1. Physical activity
2. Imaginative play
3. Outdoor fun and games
4. Bike riding
5. Life skills lessons
6. Independence
7. Community building





# Section II: Traffic Gardens on School Grounds



STOP



# Section II Overview

Section II of the Seattle Traffic Garden Handbook addresses the design and installation of school-based traffic gardens. Working through each unit in Section II will give you the knowledge and tools you need to plan and design an educational traffic garden project for your school site.

Traffic Garden installation on school grounds differs from other locations, as it must be planned specifically for school-related programming, staffing and usage patterns, and school-specific considerations.

The traffic garden should be:

- Age-appropriate for the students attending the school.
- Easily accessible for students and staff.
- Compatible with school facilities and operations.
- Able to accommodate equipment staging and storage.

Installing a traffic garden on your school grounds adds an exciting new amenity that will support and enhance the instructional programs and school staff work at your school.

## Section II at a Glance

### Unit 1: Starting Up a School Traffic Garden Project

Assemble Your Team and Involve Stakeholders  
The Community of Traffic Garden Users  
Learning Programs for the Traffic Garden  
Traffic Garden Criteria  
Choosing Your Site  
The Field Visit

### Unit 2: Understanding the Elements of a Traffic Garden

Streets—The Essential Element  
Intersections—Adding Roadway Interactions  
Painted Crossings—Including Pedestrian Interactions  
Sidewalks and Pathways—Adding Complexity  
Pavement Markings—More Traffic Details  
Traffic Signs—Creating “Traffic Feel”

### Unit 3: Designing the Traffic Garden

Creating the Base Drawing  
Preparing a Layout Drawing  
Addressing Small or Awkward Sites  
Tips for Success!

### Unit 4: Planning for Installation

Using Stencils  
Surface-applied Products  
The Installation Process

### Unit 5: Maintaining the Traffic Garden

### Unit 6: Making the Most of the Traffic Garden



# Unit 1

## Starting Up a School Traffic Garden Project

Congratulations on your new traffic garden project! After working through Unit 1, your traffic garden planning team will know:

- Where there is hard surface suitable for a traffic garden on your school grounds.
- What the traffic garden's maximum size can be given the site constraints.
- What will have to be done to the site to accommodate the traffic garden.

The information in this unit can support a range of traffic garden projects whether an architect firm working on a school remodel or playground specialists working on an outdoor area reimagining. The first stop for any community group traffic garden project should be the SPS Self Help program: <https://www.seattleschools.org/departments/self-help-project/>. They will remain the point of contact between the community and SPS.

### ASSEMBLE YOUR TEAM AND INVOLVE STAKEHOLDERS

Before anything else, assemble a diverse traffic garden planning team that reflects the school community. Your team will remain involved throughout the iterative process of planning, installing, programming, and maintaining the traffic garden. It is important that you have your team together at the beginning before you choose the traffic garden location on the school grounds. Team members will have varied insights into how outdoor areas are ordinarily used and what is needed to support programs, and these observations will help inform the final site decision. If the idea of a traffic garden is new, you may want to circulate the Traffic Garden Explainer handout from Section III to familiarize potential team members with the concept and its benefits to students.

Involving people with a range of backgrounds on your team or in stakeholder consultations will ensure everyone has an opportunity to offer insights into their communities' unique challenges and provide suggestions for how the traffic garden can meet their needs.

Here are some of the people to consider including on your traffic garden dream team



## THE COMMUNITY OF TRAFFIC GARDEN USERS

The true value of the traffic garden is in how well it serves the people using it. Consider the wide range of people who will be interacting with the traffic garden, including those of differing ages and abilities, and students with extra mobility needs or low vision:

- Program participants
- Program educators and instructors
- Other students and staff
- Family visitors
- Traffic garden volunteers
- Attendees of traffic garden events
- Facilities and maintenance staff

People will have varied reasons for using the traffic garden, and their needs will differ:

- Educators or facilities staff will be working, and they will need places to stage equipment and set up for classes.
- Family members will be visiting and observing, and they will need places to gather and sit.
- Some children will be taking their first wobbly steps toward learning to ride a bicycle, while others may already be confident and competent riders.
- Some students will be using non-standard bicycles adapted to their needs.
- People will need information about where to go, what the rules are, and where to report things.

Keep the range of user needs in mind when considering:

- The traffic garden location
- Material and supply choices
- Distances to doorways and the gym
- Access to the site
- The location of informational signs and places to sit

Traffic gardens are meant to be comfortable, welcoming places that provide lessons at the intersection of transportation, health, and equity. Make a plan that reflects and contributes to the City of Seattle's focus on better supporting communities of color in walking and biking, whether through stakeholder engagement, added features like rainbow or Pan-African crosswalks, or outreach programming and events.



## LEARNING PROGRAMS FOR THE TRAFFIC GARDEN

The traffic garden is an outdoor classroom shaped into a miniature version of the built world that engages students in a fun and interactive way. SPS students learn through several existing instructional programs, so these should be examined as part of your planning process. In addition, instructional programs and curricula include differentiation for students with adaptive needs. These programs are aligned with state physical education (PE) standards intended to:

- Instill the joy of walking and rolling.
- Encourage bicycling and walking as a means of everyday transportation and recreation.
- Explain basic traffic safety and roadway rules.

- Increase safe behavior and decrease injury while walking and rolling.
- Increase confidence on a bike and help develop better bike handling skills.
- Instill a sense of self-responsibility about safety and respect for other street and trail users.

The following table summarizes the various programs for SPS students that are in place or coming soon, as well as other ways the traffic garden may be used for fun learning. Section III covers the SPS biking program background and the adaptive equipment in more detail.

### Seattle Public Schools Walking and Biking-related Programs

| PROGRAM  | EQUIPMENT  |
|--|--|
| <p><b>Let's Go</b></p> <ul style="list-style-type: none"> <li>• 3rd, 4th, and 5th grades</li> <li>• Walking and biking safety curriculum in PE classes</li> </ul> <p><b>Let's Go Further</b></p> <ul style="list-style-type: none"> <li>• Middle school</li> <li>• Walking and biking safety curriculum consisting of 8 instructional lessons, including on-bike activities</li> </ul> | <ul style="list-style-type: none"> <li>• Fleet of two-wheel pedal bikes stored at the school for the duration of the program.</li> </ul> |



## Outdoors for All

- 3rd, 4th, 5th grades and middle school (supporting Let’s Go and Let’s Go Further)
- Program for students with extra mobility and vision needs.
- Contractor assesses students and provides suitable adaptive devices that allow them to participate in the programs.



- Range of adaptive bikes for use by students for whom standard bikes are not suitable.
- Selected devices are stored at the school for the duration of the program.

## All Kids Bike

- Kindergarten
- New program starting in the 2023–2024 school year.
- Accompanying curriculum for teaching pre-pedal biking skills, especially balance, in PE classes.



- Fleet of balance bikes that will stay at each elementary school and be stored between lessons.
- Balance bikes have no pedals or chain.
- Pedals can be attached to these bikes as students advance.

## Other Walking and Biking-related Activities, Programs and Events Taking Place on School Grounds

| ACTIVITY / PROGRAM   | PARTICIPANTS   |
|--|--|
| <b>Walk to School Day:</b> a locally organized annual voluntary program usually held in October, supported by SRTS Coordinator and others. | Students plus local families   |
| <b>Bike to School Day:</b> a locally organized annual voluntary program usually held in May, supported by SRTS Coordinator and others.     | Students plus local families   |
| Locally organized community programs, events and use   | After-school programs, summer camps, scouting troops, play groups, local organizations |

## TRAFFIC GARDEN CRITERIA

Understanding the criteria for a traffic garden site will allow you to choose the site wisely and form a good idea of the project’s ultimate goals early in the planning process.

### Physical Criteria for Your Traffic Garden

| PROJECT CRITERIA         | SCHOOL SITE CONSIDERATIONS  |
|--------------------------|---|
| Site dimensions          | <ul style="list-style-type: none"> <li>• Minimum site dimensions: 44' x 44' (includes a minimum 4' buffer zone).</li> <li>• Optimal possible size is in the range of 60' x 80' or larger.</li> <li>• The more space available, the more opportunity to add different learning elements.</li> </ul>  |
| Possible types of spaces | <ul style="list-style-type: none"> <li>• Hardscape surface including playground surface play areas.</li> <li>• Existing sports courts or their surrounds.</li> <li>• Trail or path network (if sufficiently wide).</li> <li>• Vacated/stubbed street.</li> <li>• Parking lot (not in active use) or former trailer pad.</li> </ul>  |
| Surface type             | <ul style="list-style-type: none"> <li>• Asphalt is the most desirable surface base material.</li> <li>• Permeable pavement is suitable but requires special consideration of surface-applied products.</li> <li>• Other hard surfaces are possible but require special consideration.</li> </ul>   |
| Surface conditions       | <ul style="list-style-type: none"> <li>• Good condition and smooth.</li> <li>• No wide cracks (greater than ½”) or potholes unless there are plans to repair them.</li> <li>• Preferably not an alligator-cracked surface, as it is a sign that the sub-surface is deteriorating.*</li> <li>• No embedded elements (e.g., cut-off metal poles) unless they will be removed, and the surface will be fully restored.</li> </ul> <p>*Since alligator cracking is common on asphalt surfaces, assessing the condition and identifying possible solutions may be a next step.</p> |

|                        |   |
|------------------------|---|
| Site slopes            | <ul style="list-style-type: none"> <li>• Generally, no greater than 2% slope.</li> <li>• No slopes downward toward buildings and hard corners, fixed objects, or edge drop-offs.</li> </ul>   |
| Site geometry          | <ul style="list-style-type: none"> <li>• Wide range of shapes possible if size meets minimum width.</li> <li>• Can work around existing features like basketball poles by providing adequate buffer zones.</li> </ul>   |
| Buffer zone            | <ul style="list-style-type: none"> <li>• Ensure adequate space to accommodate buffer zone and clear space around the street network.</li> <li>• Wider buffer zones needed adjacent to walls or building corners.</li> </ul>   |
| Drainage conditions    | <ul style="list-style-type: none"> <li>• Well-drained without storm drain grates or raised fixtures in or near the space.</li> <li>• Sufficient space to design around low points in the surface.</li> </ul> <p>*SPS specification storm drains in surface may work</p>   |
| Access                 | <ul style="list-style-type: none"> <li>• Well-connected and easy to find access.</li> <li>• No barriers to access for users of mobility devices or strollers (such as steps).</li> </ul>  |
| Vehicle access to site | <ul style="list-style-type: none"> <li>• No vehicles crossing, turning, or backing into the site on a routine basis.</li> <li>• Ability to add a system to block and prevent vehicular access.</li> <li>• Ready access for maintenance and emergency vehicles.</li> </ul> |

## Additional Considerations for Your Traffic Garden

|   |   |
|---|---|
| Site Capacity                               | <ul style="list-style-type: none"> <li>• Design for maximum class group size (25+).</li> <li>• A larger site will facilitate more users.</li> </ul>   |
| Companion uses                              | <ul style="list-style-type: none"> <li>• Existing painted activities such as four-square, hopscotch, world map can be reworked into layout.</li> <li>• May be possible to overlay traffic garden street on basketball key.</li> </ul>   |
| Grade/age range of users                    | <ul style="list-style-type: none"> <li>• Mainly PK–5th grade</li> <li>• Middle school grades and potentially all ages (if applicable).</li> </ul>   |
| What types of wheeled devices will be used? | <ul style="list-style-type: none"> <li>• Bikes: balance bikes, two-wheel pedal bikes, adaptive bikes.</li> <li>• Scooters.</li> <li>• Wheelchairs and other mobility devices.</li> </ul>  |
| Existing amenities and features             | <ul style="list-style-type: none"> <li>• Benches and picnic tables.</li> <li>• Water (for installation and maintenance).</li> <li>• Close-by places to park bikes and strollers.</li> <li>• Lighting.</li> <li>• Shade for observers.</li> </ul>  |
| Other less desirable features               | <ul style="list-style-type: none"> <li>• Extensive existing pavement markings that cannot be worked around, concealed, resealed, painted over.</li> <li>• Concrete site (because of joints and light background color).</li> <li>• A hard-to-find location distant from access, gym, or storage.</li> </ul> |

## CHOOSING YOUR SITE

After you've assembled your team, considered learning programs, and gained an understanding of the physical requirements of your future traffic garden, your next big step is choosing a suitable site on the grounds.

The planning committee can start by examining a school site plan—a bird's eye representation of the school grounds that also includes outlines of buildings and other features. Get in touch with SPS to request a PDF of the school site plan that includes all grounds and existing features. Examine the site plan for a flat, hard surface (asphalt is best) that does not see routine vehicle use. If there is no site plan available, an aerial image from Google Maps or Google Earth may also show the site and the surrounding area well enough for your purposes.

There are many physical features located in the outdoor grounds of schools including play equipment, running tracks, sports courts, and surface-marked games. Schools vary considerably in how much outdoor hard-surface space exists and the geometry of that space. While a large rectangular asphalt space may be ideal, traffic garden layouts are very flexible. It's possible to design them to conform to a wide range of available hard surfaces and integrate them

with other school playground features. So, if nothing pops out at first, take another look at your site plan and see what possibilities you can spot around the grounds. Once you've identified a site—or narrowed it down to a few options—you will visit it in person to confirm the site's suitability.





## THE FIELD VISIT

Now that you've identified potential sites for the traffic garden on the school grounds, it's time to visit in person. The field visit is an exciting step in the project, as it is often the first time that the team can visualize how the project could take shape. Invite several team members to encourage multiple perspectives on the selected spot and let the school principal and other parties know about the site visit.

The following is a list of items to distribute to the team members for the field visit. After visiting the site, collect the notes and marked-up drawings for reference when working on the design.

- Traffic Garden Physical Criteria table
- School site plan and/or aerial image
- Field Visit Preparation and Checklist from Section III
- Measuring tapes, chalk, clipboards, and notebooks.

Once you are at the location being considered, take time to observe how it works in everyday use. Consider which class groups and programs will be using the site and where they'll gather. Look for key adjacencies such as proximity to the gym or storage.

Take lots of photos of the site and make special note of irregularities or cracks in the asphalt and any physical obstacles in or around it—anything that could potentially complicate the installation or subsequent use. Although the site might not meet some of the traffic garden criteria, these

challenges are almost always resolvable. Your photos will prove invaluable in considering how to address them.

By the end of your first field visit, you should have a clear idea of the potential location and maximum size of the traffic garden. You'll also have a record of any irregularities that will need adjustment or project criteria that need to be addressed so that the site can be considered.

*Visits to the site should continue throughout the project so that you see it under different conditions. Make a point of visiting during or soon after a rainstorm to see if water pools on the surface. Continue to stop by to see if seasonal conditions alter the site (e.g., excessive weed growth, leafed-out trees, wind exposure) or if anything has been changed about the adjacent uses which might impact the site. Continue taking lots of photos.*

### If You Can't Find a Good Site

You may not have a space on your school grounds that is an obvious good fit for a traffic garden. But schools across the US have found success designing their traffic gardens around unusual spaces or combining them with other features. You will find more tips on how to design for unusual spaces in Section III. Working through this additional information can help you creatively find a spot on the school grounds where a traffic garden can be added.

# Unit 2

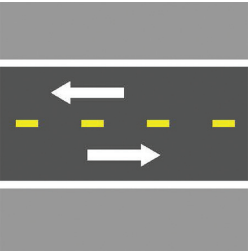
## Understanding the Elements of a Traffic Garden

This unit teaches you the whys and wherefores of the six main traffic elements—streets, intersections, crossings, sidewalks, pavement markings, and traffic signs—and how to fit them together into a fun and instructive network. After Unit 2, your traffic garden planning team will know:

- The street and traffic elements that can be assembled into a traffic garden network.
- Where to get reference information about each element.
- Which street and traffic elements you plan to include in your project.

### STREETS—THE ESSENTIAL ELEMENT

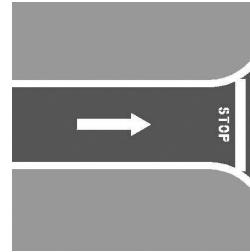
Streets are fundamental to a traffic garden and are striped on the hard surface using a readily available surface-marking material. For permanent traffic gardens, the traffic striping and pavement marking palette and appearance are based on public streets, creating a realistic “traffic feel”.

| ELEMENT   | DETAILS   |
|---|---|
| <p><b>Two-lane Street Segments</b></p> <ul style="list-style-type: none"><li>• Create the street-like small-world experience.</li><li>• Follow the conventions of real-world travel lanes</li></ul> |  <ul style="list-style-type: none"><li>• Two-way street or multi-lane segment: 3'–4' wide travel lanes</li></ul> |

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## One-way Street Segments

- Can add more routes to a network where space is constrained.
- Require extra precautions to stop children from going the wrong way, even with arrows and signs.

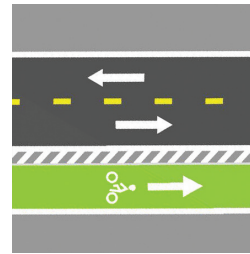


- One-way street (single through lane): 4' wide travel lane (minimum).

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## Bike Lanes

- Added by striping an additional lane next to a travel lane.
- Tricky to include in a constrained site.
- Adds another set of parallel lines and may lead to short cross streets.
- Good learning addition where space allows.

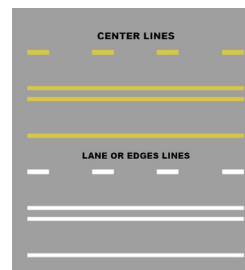


- Bike lane: 2'–3' wide
- Add painted buffer, green color, and bike symbol to enhance legibility.

---

## Lane Striping

- Follows real-world conventions
- Solid lines indicate the travel lanes
- Dashed lines indicate where people can change lanes, pass, or cross over a line.
- Double solid lines are hardest to stripe within the confines of a small street, where any errors will be amplified.



- Striping lines: 2"–3" wide
- Lane striping, between lanes going the same direction: white.
- Centerline, island, median or central hatching striping: yellow.

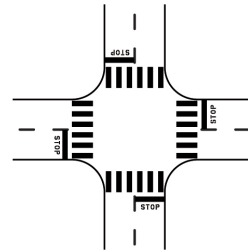
## INTERSECTIONS—ADDING ROADWAY INTERACTIONS

Intersections add interactions and dramatic play to the traffic garden and are key to making a functional network. They are the heart of biking and roadway safety programs, and make a miniature world come to life. At minimum, one 4-way intersection and one roundabout should be included in your design. Learning to use both types of intersections is fundamental to roadway safety as well as biking skills programs. Roundabouts are great for safety in real streets, and your traffic garden can teach a generation to understand how to navigate them!

### ELEMENT

#### Four-way Stop Intersection

- Streets intersect at 90 degrees whenever possible.
- Include pedestrian crossings when there is room on some or all approaches.
- Use stop intersections sparingly as students may be slow to restart and cause backups
- Where possible, locate in the interior of the traffic garden and leave outside streets free flowing (only yields)

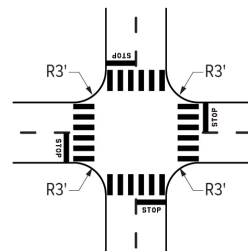


### DETAILS

- Ideally a stop intersection should be located at least 15'–20' from the closest nearby intersection.
- Street lanes: 3' minimum width
- Left-turn lane: 3' minimum width

#### Corner Radius

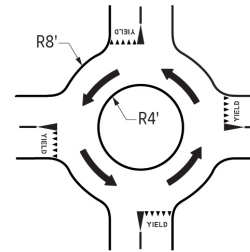
- The rounded corner where two streets meet. Also known as “curb radius”.
- The size of the corner radius can vary widely.
- Bicycling speeds are usually low so curb radii can generally remain small.
- Avoid sharp turns with small corner radii.
- There should be no square corners where streets intersect.
- All corner radii should be dimensioned on the layout.



- Consider larger corner radii where students are using adaptive devices or where teen or adult learners are also to be accommodated.

## Roundabout

- Circular intersection design that facilitates continuous movement.
- Roundabouts serve as a key learning element as well as a popular biking feature.
- Riders can enter and exit the roundabout without coming to a complete stop, which helps new riders to keep moving.
- Roundabouts expand the continuous route options for riders



- Center circle: 3'–5' (typical) but can be increased to create a larger roundabout.
- Roundabout travel lane width: 4'–5' (as measured from outside edge of central circle)
- Painting the center circle a solid color will make the intersection more legible.
- Always include arrows showing the counterclockwise direction of travel

## Project Tip—Add Other Desirable Features to Your Traffic Garden

Adding features above and beyond the basic traffic elements will elevate your traffic garden, expand the learning opportunities, and make it a beloved space.

### Non-Traffic Elements

- Traffic Garden Name Sign
- Bus Stop sign
- School identity Building (City Hall, library)
- Tree/lake
- Traffic garden map

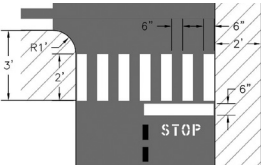
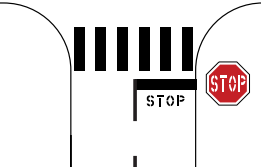
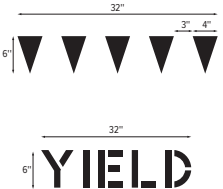
### Companion Equipment

- Bench/picnic table
- Bike rack
- Storage shed or bins
- Challenge ramp
- Speed hump
- Bike teeter totter



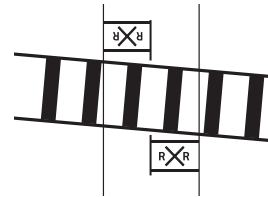
## PAINTED CROSSINGS—INCLUDING PEDESTRIAN INTERACTIONS

Painted crossings add fun details, create opportunities for lessons and interactions between those walking and biking on the small street network, and are easy to add to a traffic garden. Each of these painted crossings is made up of several elements, typically scaled down to fit within the traffic garden’s miniature streets. Many of these painted crossing elements can be created using professional-grade stencil sets now available and scaled specifically for traffic garden projects.

| ELEMENT   | DETAILS   |
|---|---|
| <p><b>Crosswalks</b></p> <ul style="list-style-type: none"> <li>• Located at intersections and/or between intersections.</li> <li>• Mid-block crossings can be added after installation of the rest of the traffic garden.</li> </ul>   |  <ul style="list-style-type: none"> <li>• Maintain equal distance between stop bar and crosswalk on each approach at an intersection.</li> <li>• Crosswalks can be created using wide painters tape or with stencils.</li> </ul> |
| <p><b>Stop Markings</b></p> <ul style="list-style-type: none"> <li>• The word STOP is centered within the travel lane and precedes the stop bar.</li> <li>• Used in coordination with crosswalks on intersection approaches.</li> </ul>   |  <ul style="list-style-type: none"> <li>• STOP letter height: 6"</li> <li>• STOP word width: 21"</li> </ul>   |
| <p><b>Yield Markings or “Shark’s Teeth”</b></p> <ul style="list-style-type: none"> <li>• Used at roundabout entrances and mid-block crossings.</li> <li>• Shark’s teeth are a row of solid white triangles painted with the pointed end opposite to the direction of travel.</li> <li>• The word YIELD is added ahead of the shark’s teeth, centered in the approach lane.</li> </ul> |  <ul style="list-style-type: none"> <li>• Triangle base: 4”–6”</li> <li>• Triangle height: 1.5x base dimension</li> <li>• Triangle spacing: 3”–4” apart.</li> <li>• YIELD word width: 24”</li> </ul>                           |

## Railroad Crossing

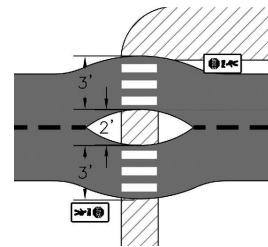
- Popular for imaginative play
- Located mid-block and includes the standard railroad symbol on the approach lanes from each direction.
- Learning how to approach them at the correct angle is a key safety skill.



- Place railroad tracks at a slight angle, not quite perpendicular to the direction of travel.
- Leave a gap in dashed centerline markings to accommodate rail crossing.
- Apply railroad tracks on top of edge striping.

## Painted islands and medians

- Incorporated along traffic garden streets and at intersections as part of a crossing.
- Can be indicated by evenly spaced hatched striping lines, with yellow paint denoting areas separating travel directions.
- Medians are crucial to the creation of left-turn lanes, which are an important element for biking and roadway safety programs.
- Circles within roundabouts are a special type of island that can be painted in a solid color or decoratively.



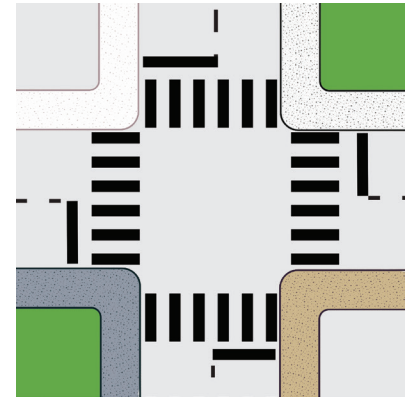
- Hatched lines: evenly spaced diagonal lines the same width as other striping
- Islands and median hatching: yellow paint

## Project Tip

Use STOP markings sparingly to minimize stop/starts for riders. It may be better to locate all the stop intersections internally in the layout while keeping the exterior streets along the edge of the network free of 'stops.' This provides riders with an easy continuous riding route without stops where they can practice their biking skills. It also provides a central area for class groups to practice stops and starts.

## SIDEWALKS AND PATHWAYS—ADDING COMPLEXITY

Sidewalks and paths add further detail and complexity to the streets. Most importantly, they enhance street crossing lessons and help teach students on bicycles where to stop and yield to people traveling on foot. Because sidewalks and paths can be difficult to fit into an already constrained area, they are not always included in traffic gardens. However, there are approaches to representing sidewalks that reduce the space needed. In some cases, there is resulting payoff of a street network that is easier to read.



### ELEMENT

#### Striped Sidewalk

- Created with white or gray striping line parallel to the lane edge.
- Easiest means of representing a sidewalk.
- Closely spaced parallel striping lines may be hard for young learners to interpret correctly.
- Optional: Add green background paint, as shown in bottom right, to help make the sidewalk easier to distinguish.



### DETAILS

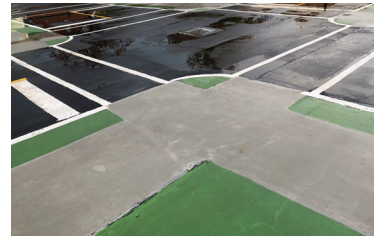
- Sidewalk width: 2' minimum
- Sidewalk striping width: 2" minimum



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## Solid Sidewalk

- Created with solid white or gray paint for full sidewalk width.
- Optional: add green background paint, as shown below, to help make the sidewalk easier to distinguish.

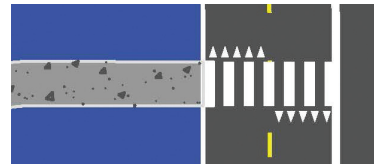


- Sidewalk width: 2' minimum
- Recommended colors: gray or white (depending on the surface color)

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## Mid-block Pathway

- Paths can be added that go across the traffic garden internal blocks and then cross streets mid-block.
- Good for adding spots for pedestrian crossing lessons to a site that is too tight for sidewalks along streets or at intersections.

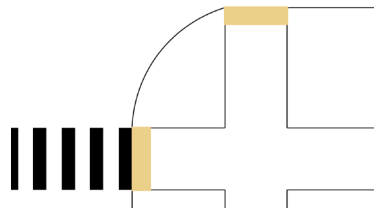


- Pathway width: 2' minimum
- Can be added with striping lines or solid block painting.

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## Curb Ramps

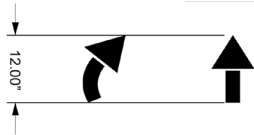
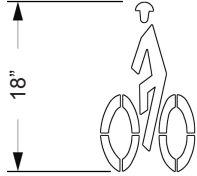
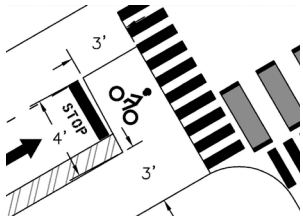
- Placed where sidewalks intersect with crosswalks.
- Teaching tool to increase student awareness of the importance of street design that accommodates people with different mobility and vision abilities.



- Ramp width: 2' or match sidewalk
- Color: yellow

## PAVEMENT MARKINGS—MORE TRAFFIC DETAILS

As seen with street striping and crossing markings, pavement markings convey messages about how the street works. They teach students on which side of the street to travel, what direction to ride on a roundabout and who goes first when meeting someone at an intersection or crossing. Students may not be familiar with these markings or fully understand their meaning, so traffic gardens are a safe and comfortable way to learn and practice. Many of these additional pavement marking elements can be created using professional-grade stencil sets now available and scaled specifically for traffic garden projects.

| ELEMENT  | DETAILS  |
|--|--|
| <p><b>Arrows</b></p> <ul style="list-style-type: none"> <li>• Straight ahead, roundabout, and left-turn arrows</li> </ul>  |  <ul style="list-style-type: none"> <li>• Color: white</li> <li>• Size: Proportional in the lane. Suitably sized stencils are available as part of traffic garden stencil sets</li> <li>• Position: centered within the lane</li> </ul> |
| <p><b>Bike Symbols</b></p> <ul style="list-style-type: none"> <li>• Added to bike lanes or bike boxes to clarify the designation of these spaces.</li> </ul>   |  <ul style="list-style-type: none"> <li>• Color: white</li> <li>• Size: Suitably sized stencils are available as part of traffic garden stencil sets</li> <li>• Position: center within lane or box</li> </ul>                         |
| <p><b>Bike Box</b></p> <ul style="list-style-type: none"> <li>• Designated on-street space at the head of a travel lane.</li> <li>• Used only at stop-controlled intersections.</li> <li>• Allows for lessons about on-street infrastructure.</li> </ul> |  <ul style="list-style-type: none"> <li>• Color: green box with white bike symbol</li> <li>• Size: full lane width and 2'–3' deep</li> </ul>  |

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## Bus Stop and Bus Lane Markings

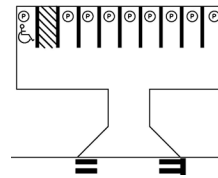
- Added to increase dramatic play and to incorporate transit education lessons.
- May allow the traffic garden to serve a wider range of student experiences, including students who use paratransit.



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## Bike Parking Spaces

- Added for imaginative play and as a practical way of organizing bikes before and during biking instruction.
- Number and location depend on class group sizes and available space.



- Size: Can vary, typically 3' x 18"
- Position: Along edges and close to where bikes will be coming from storage

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## Disabled Parking Symbols

- Added to bike parking spaces.
- While non-functional, this feature can be used as an instructional tool for lessons and programs.

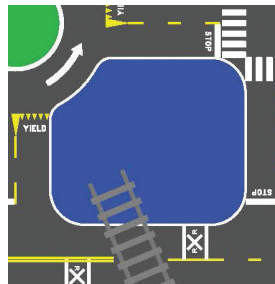


- Color: blue background square with white wheelchair symbol
- Size: Suitably sized stencils are available as part of traffic garden stencil sets
- Position: center within parking spot

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## Gathering Spots

- Denoted using color or imagery.
- Provide a designated area for instructors to gather students before starting a lesson or activity.
- Help direct students to the appropriate location or activity within the traffic garden.
- Color and imagery enhance the look of the traffic garden and put streets in relief making them easier to read



- Color can be added in different ways.

## TRAFFIC SIGNS—CREATING “TRAFFIC FEEL”

Signs are a key traffic garden learning element and turn the street network into a real operating system. They also make the space more fun and allow kids to feel more grown-up as they play and use the site. Traffic garden learning is primarily associated with intersection interactions, and signs play a key role in clarifying how an intersection is supposed to work.

### Traffic Sign Types

Here are common traffic signs for use in your traffic garden. Always follow standard sign color and appearance for traffic signs. The alphanumeric MUTCD identifier is given for each sign; these will be useful when it comes time to order your signs.

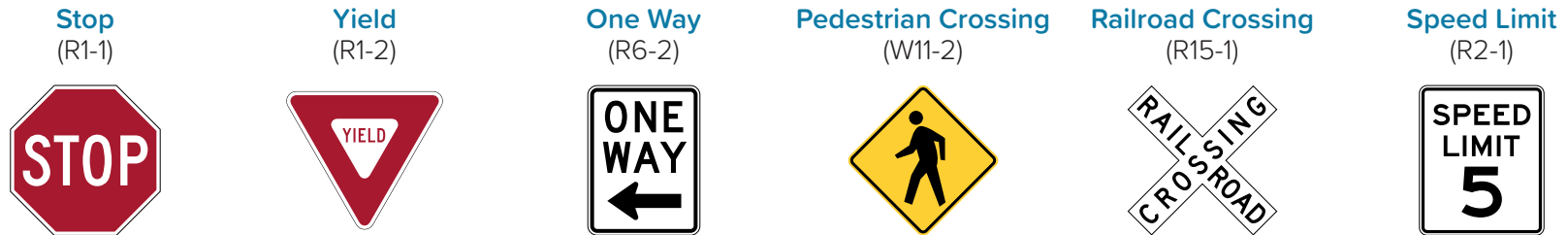


Image source: [https://commons.wikimedia.org/wiki/Road\\_signs\\_of\\_the\\_United\\_States](https://commons.wikimedia.org/wiki/Road_signs_of_the_United_States)

### Stenciled Traffic Signs

One approach to adding traffic signs is to paint them on the surface using stencils, thereby ensuring the signs are always in place for the users of the traffic garden.

Professional-grade stop and yield stencils are available scaled specifically for traffic garden projects, and custom stencils can also be created. Spray acrylic traffic paint is used with stencils over several steps to build up a sign with the correct colors and appearance. Section III includes further details about available traffic garden stencil sets.

Traffic signs can also be hand-painted on the surface.



## Portable Traffic Signs

Portable signs are popular and really help the traffic garden come to life. However, they are a lot more expensive than stenciled signs and involve more handling and maintenance.



### Sign head (10–12" wide)

Made from various materials meant for outdoor use. If metal, file edges smooth and add a bead of silicon.

### Sign post (44–48" tall)

Made from a range of materials to create a steady and secure connection to head and base.

### Portable sign base (15–25 lbs.)

Heavy to keep the sign steady and upright. Wheeled bases are available to assist in moving signs to/from storage and between positions in the traffic garden.

Ensure signs have no protruding bolts.

Place signs a minimum of 1' clear of street or painted sidewalk edge.

Storage is needed for portable sign sets to protect them from the elements and theft. Size and locate the storage based on the needs. Make sure that there is a way to lock and access the equipment being stored. Post a sign that lets staff know where to get information or report maintenance issues.



# Unit 3

## Designing the Traffic Garden

Now that you have a strong grasp of the basic elements of a traffic garden and their sizing, it's time to fit them all together and come up with the plan for your traffic garden. The process of coming up with a layout drawing, and then seeing it in real-life is enormously satisfying. After Unit 3, your traffic garden planning team will have:

- Prepared a drawing or sketch that shows the site where your traffic garden will go.
- Prepared a traffic garden layout drawing—the detailed blueprint which will guide the traffic garden installation.

### CREATING THE BASE DRAWING

The first step in preparing your layout drawing is to find a high-quality aerial image of the site you chose in Unit 1, such as those available on Google Maps or Google Earth. If you have difficulty finding an image with an unobstructed view of your site (e.g., trees overshadow the area you are interested in), ask your local officials whether they have more accurate satellite imagery or GIS drawings available in-house. An alternative approach is to use an up-to-date site plan of the school grounds as described previously.

Any of the above image types should come with the scale indicated, and it's a good idea to make the image as large as possible to make it easier to work with. The first step, whether working by hand or with digital software, is to draw a grid over top of the image to keep proportions front of

mind. Next, draw a line around the perimeter of the site, always keeping at least 4' (more for sharp objects) of buffer zone space between the line and the nearest physical structure, post, tree, or slope. This line marks the extreme edge of the space that the traffic garden proper will occupy. The image with this perimeter line drawn is your base drawing. With the base drawing finished, you can move on to preparing the layout drawing.

#### Project Tip

Add the date each time you edit the base drawing.

## PREPARING A LAYOUT DRAWING

There are, broadly speaking, two different approaches to preparing your layout drawing:

- **Approach 1—Use a Template:** Use one of the already-prepared layout templates provided in this guide and layer it straight onto the base drawing, fitting it within the boundaries of the perimeter line.
- **Approach 2—Create Your Own Design:** Custom design the layout on the base drawing using specific guidance details in Unit 2 to establish street dimensions and to determine how to locate features.

There are several reasons why you might pick one approach over the other:

- Approach 1 is the faster, more straightforward option. While the level of design involved in Approach 2 is not extraordinary, some teams will not have design-minded members among them—or they may be pressed for time—making Approach 1 the way to go. The templates provided on the following pages include dimensions, colors, and other details to help wrap up the design.
- Approach 2 is the more exciting and collaborative approach; you may have a budding designer, or someone with a design background, on your team who will greatly enjoy the design and drafting process. It is also more flexible. If your site location is sufficiently unusual, your only choice will be to create a custom

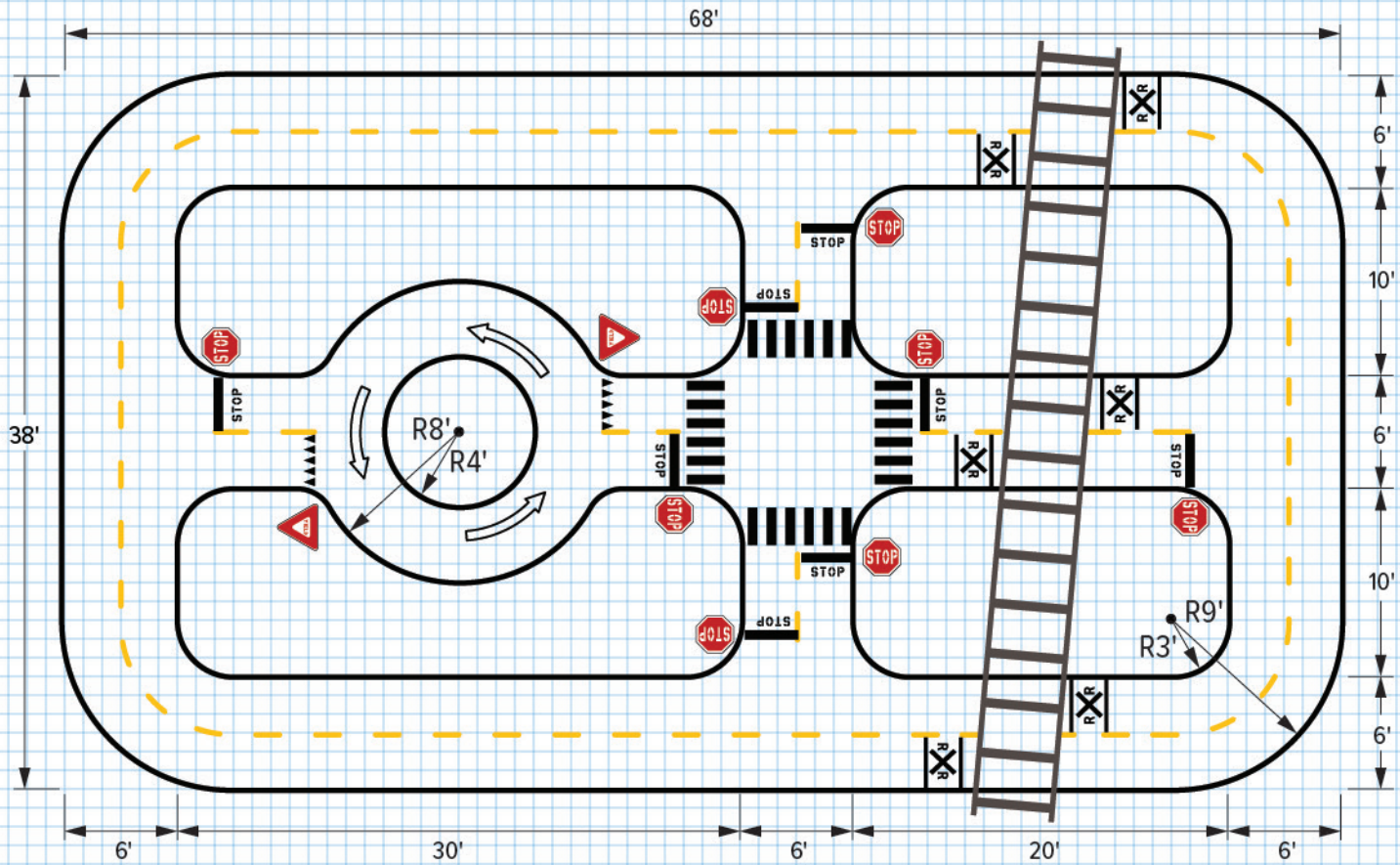
traffic garden design that fits within the perimeter. Regardless of what your site location looks like, Approach 2 will allow you to incorporate fun extra features into the traffic garden and otherwise make it your own.

### Project Tip

Remember to leave space for benches and a bike rack nearby the traffic garden.

## Traffic Garden Layout Template: Railroad Fun

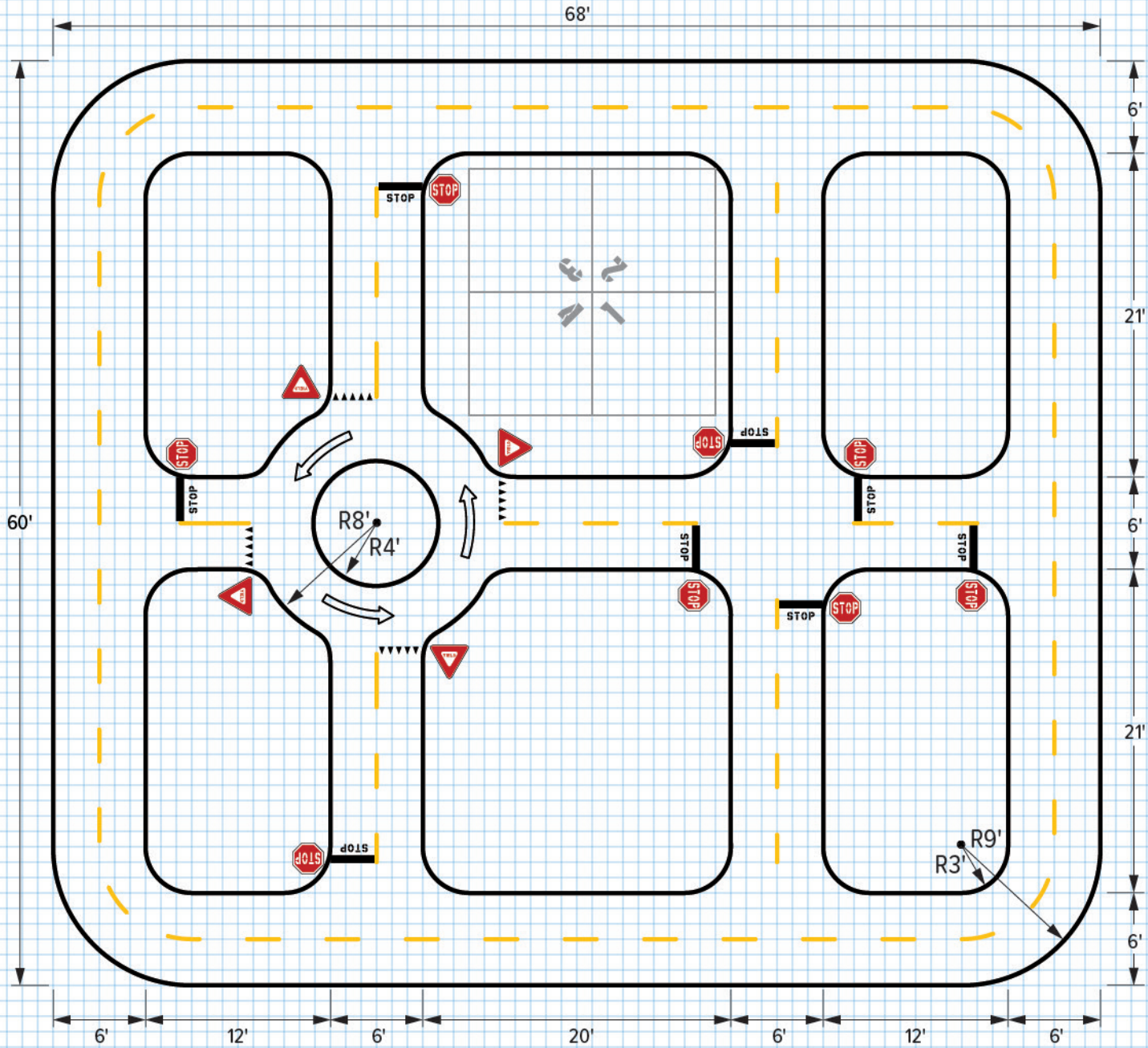
The Railroad Fun template needs a space of 46' x 76' including the buffer zone. This template can be extended lengthwise or widthwise to create a larger traffic garden on the surface.





## Traffic Garden Layout Template: Big City

The Big City template needs a space of 68' x 76' including the buffer zone. This template can be extended lengthwise or widthwise to create a larger traffic garden on the surface.



## ADDRESSING SMALL OR AWKWARD SITES

If you don't have a clear space for one of the traffic garden templates, you may still be able to capture some space and make it work. With a little bit of creativity, you can fit a traffic garden or some of the learning elements into an unusual or smaller space. You may also be able to work with existing play areas to incorporate them into the traffic garden design.

As you look at your school site, ask yourself:

- Can the traffic garden coexist with another use?
- Can surface-marked elements be relocated or incorporated into the traffic garden layout?
- Can pathways be reimagined as streets?

The following specific suggestions will help spark ideas if you are faced with site challenges.

### Small Area Below Minimum Dimensions

Create discrete learning spaces by adding elements such as:

- Individual intersections with stop and yield details.
- Skills-based lesson areas alongside streets.
- Street segments or learning features that expand into adjacent playground spaces.
- Striping on existing paths, turning them into streets that connect learning areas.

### Long Narrow Space (under 40' wide and much longer)

Create long street segments and add:

- Mid-block crossings along a street segment to add bicycle and pedestrian interactions.

- Roundabouts at ends of street segment to create riding circuit and way to turn around.
- Mid-street roundabouts (with only two approaches).

### Circuit Around Turf or Playground Area (any size)

Create a loop on the circuit and add interactions where possible including:

- Intersections at locations where surface space widens.
- Mid-block crossings at spots where students cross over to central area.

### Limited Space or No Asphalt

Focus on alternative ideas for adding biking practice and roadway safety elements. Consider other open space options on school grounds including:

- Existing school pathways (asphalt or concrete, 6' minimum width, no obstacles). These can be turned into streets with the addition of a yellow dashed centerline. Add stop intersections and crosswalks where pathways intersect.
- School corridors, which can be turned into streets using commercial grade duct tape and other traffic features.

If the school grounds still cannot accommodate a traffic garden, consider off-site locations such as an adjacent public park or recreation center, or a Mobile Traffic Garden Kit. Refer to Section III for more information about how kits are put together.

## TIPS FOR SUCCESS!

### 7 Tips for Designing a Traffic Garden

**Don't overlook the importance of buffer zones.** Having a recovery zone for new learners is fundamental to the safety of the traffic garden layout.

**Do make it fun!** The traffic garden should be a fun and engaging place to learn. Incorporate games, activities, and other creative elements into the programming.

**Don't break traffic flow conventions.** Students are learning how real-world streets and intersections work, so the traffic garden should reflect public street operation.

**Do vary the difficulty level.** The traffic garden should be designed to challenge learners of all ages and skill levels. This can be done by including a variety of streets, features and crossings.

**Don't invent traffic markings.** Creative elements can be added to the other features but the traffic features should reflect the real world.

**Do involve the community.** Getting input and inviting the community can help ensure that the traffic garden becomes a beloved local amenity.

**Don't create confusing intersections.** Intersections should reflect real-world layouts; otherwise new riders will end up making up their own rules.

### Your Traffic Garden Drawings

Keep in mind that there are several different uses for the drawings:

1. To communicate ideas within the project team as you work through the layout process.
2. To gather ideas from stakeholders as they respond to the drawings.
3. Ultimately, to communicate with whomever is conducting the installation so that they add the layout details accurately to the school grounds surface.

When creating your traffic garden street network layout, graphic software programs can be a very useful way to express your traffic garden layout ideas. If there is someone on your team who has these skills, they can create easy-to-read drawings that will help communicate the ideas. Commonly used programs that could be used for preparing a traffic garden base drawing or street network layout include AutoCAD, Illustrator, InDesign, or Photoshop. Even Canva, which is more widely available, may be suitable for many of your project graphical needs.

Always add names and titles to drawings. Including the date and updating it whenever there are changes to the drawing is key to preventing errors and misunderstandings about what's planned.



## SURFACE-APPLIED PRODUCTS

A key element of the traffic garden is the type of material applied to the surface to create the lines and features. Appearance is important to traffic gardens, so a high-quality product that represents the real-world traffic color palette and will look good over time is required. The general recommendation is to use acrylic traffic paint, the same product used to stripe and mark the public streets. If your surface is brand-new or being seal-coated, follow manufacturer recommendations to allow plenty of time for drying and/or curing before applying any surface markings. Acrylic traffic paint can be applied to permeable asphalt surfaces, but it may not be the best option for this type of surface. Your pavement marking specialist will advise you on the best products for your specific project. Refer to Section III for more information about specifications for surface-applied products on SPS grounds.

### Surface-Applied Products

|                          |   |
|--------------------------|---|
| <b>ASPHALT</b>           | <p><b>Acrylic traffic paint</b></p> <ul style="list-style-type: none"> <li>• Widely available and economical</li> <li>• Available palette is suitable for most striping and pavement marking needs.</li> <li>• Water-based product that cleans up with water.</li> <li>• Fast drying and durable</li> </ul>   |
| <b>PERMEABLE SURFACE</b> | <p><b>Waterborne epoxy coatings</b></p> <ul style="list-style-type: none"> <li>• Designed for use on permeable surfaces.</li> <li>• Excellent adhesion and durability</li> </ul> <p><b>Thermoplastic markings</b></p> <ul style="list-style-type: none"> <li>• Made from a mixture of plastic binder, pigment and glass beads.</li> <li>• Applied at high temperature to bond to the pavement surface.</li> </ul> |

### Standard Traffic Paint Colors

| PAINT COLOR |   | WHERE TO USE   |
|-------------|---|--|
|             | Traffic White<br>Federal Standard 595:<br>Color FS 17875  | <ul style="list-style-type: none"> <li>• Lane striping, between one-way lanes, arrows, crosswalks, railroad markings, STOP (word), stop bar, YIELD (word), yield markings</li> </ul> |
|             | Traffic Yellow<br>Federal Standard 595:<br>Color FS 33538 | <ul style="list-style-type: none"> <li>• Center line, island, median</li> <li>• Optional: curb ramp color block marking</li> </ul>   |
|             | Bike Lane Green<br>Pantone 349c                           | <ul style="list-style-type: none"> <li>• Bike box, “grass” buffer zones</li> <li>• Optional: central area of roundabout</li> </ul>   |
|             | Adobe Red or<br>Bus Lane Red                              | <ul style="list-style-type: none"> <li>• Curb ramp color block marking</li> </ul>  |
|             | Mix white and black to<br>desired shade of gray           | <ul style="list-style-type: none"> <li>• Sidewalk and railroad track representation</li> <li>• To cover over existing markings on asphalt</li> </ul>                                 |
|             | Handicap Blue<br>Federal Standard 595:<br>Color FS 15180  | <ul style="list-style-type: none"> <li>• Disabled parking, water bodies and streams</li> </ul>   |

## THE INSTALLATION PROCESS

Congratulations on arriving at installation day! Most schools will choose to have a traffic garden installed during a school break. Installation may only take a few days, but the area will need to be kept clear of people during—and a short time after—installation. There may also need to be some last-minute rescheduling around weather conditions, which will require flexibility regarding the days the site is available.

### Installation Checklist

#### Planning for Installation

- ❑ Select or secure installation crew.
- ❑ Provide layout drawings with material details.
- ❑ Meet with installers at site to discuss project.
- ❑ Make any adjustments based on installers input.
- ❑ Ensure any fixes or repairs are completed.
- ❑ Consult school calendar.

#### Getting Ready to Install

- ❑ Schedule dates and make plans with school administration.
- ❑ Organize for access to site and staging areas.
- ❑ Confirm installer needs, including supplies and access to water spigot or bathrooms.
- ❑ Watch the forecast and confirm plans are a go.

The first step of installation is measuring out and marking the planned traffic garden street network in chalk lines before painting begins. Once the site is fully marked up, look it over with the installers to make sure that everything seems to line up correctly and is properly positioned. The installers should only start painting the actual street lines after the entire layout has been chalked, so that any problems that become apparent at the chalking stage can be resolved.

There are priorities in installing a traffic garden that differ from painting real street markings. The small scale of a traffic garden requires very straight lines for the roads and precise intersection markings. It is important to communicate these priorities to the installation team, as they may not have experience putting down traffic garden markings. The flip side of placing a high priority on the precision of intersections and roads, is that you can be quite flexible about other aspects of the layout. The length of roads, for instance, can be varied to preserve these two priorities.

It's important to remain on site and to view the installation team as collaborators throughout the installation process. The stripers bring their own experience to the table, and it is not terribly unusual to encounter a hitch or two on installation day that were overlooked before. Ask the team throughout the process where they expect the installation to be trickiest, and what adjustments to the layout they would recommend, if necessary. Do not be afraid to change the layout according to their input. In fact, in some of the most successful projects the installation team was involved from the beginning.



### Your Role on the Day

- Arrive before the installation crew to ensure everything is set.
- Greet the crew and orient them to the staging area, water spigot, and bathroom access, answering any questions.
- Make sure work is performed in accordance with the plans, keeping an eye out for errors.
- Sort out any problems that arise. This may include making

decisions on the fly about the fit of the striping and errors that happen during installation.

- Confirm that work is complete, and the site is restored at the end of the installation.
- Take photos of installation work and keep other team members and school administration informed about progress.

### The Installer's Role on the Day

- Arrive and unload supplies and equipment.
- Clean and prepare the site for the work.
- Measure and mark up the site with chalk.
- Review the chalked layout with you for accuracy.
- Start painting striping.
- Stencil pavement markings.

# Unit 5

## Maintaining the Traffic Garden

Traffic gardens are a relatively low-maintenance installation due to the lack of moving elements and the limited wear associated with use. The surface markings should remain in place much longer than on ordinary roads because motor vehicles will not be routinely crossing them. After Unit 5, your traffic garden planning team will understand:

- The main factors that cause wear and tear to the traffic garden.
- Necessary routine and periodic maintenance.
- Strategies for keeping on top of maintenance, including engaging assistance from others.

### Traffic Garden Maintenance

| ITEM   | ROUTINE  | PERIODIC  |
|--|--|---|
| Asphalt Base   | <ul style="list-style-type: none"><li>• Remove leaf &amp; branch debris</li><li>• Limited needs when new or sealed asphalt</li></ul> | <ul style="list-style-type: none"><li>• Spot repair and fill cracks that develop (greater than 0.5”).</li></ul>   |
| Surface Markings<br>(Striping, Pavement Markings, Color Areas) | <ul style="list-style-type: none"><li>• Limited routine needs, especially when high-quality materials used</li></ul>                 | <ul style="list-style-type: none"><li>• Touch up as needed to keep the installation looking its best.</li><li>• Repaint striping after 5–10 years, depending on initial materials.</li><li>• Use stencils to repaint pavement markings after 4–5 years.</li></ul> |
| Storage Facility   | <ul style="list-style-type: none"><li>• Keep area tidy and clean</li></ul>   | <ul style="list-style-type: none"><li>• Depends on type and quality of storage space.</li></ul>   |



## Other Aspects of Maintenance

| CONSIDERATION                              | RECOMMENDATION   |
|--|--|
| Primary site-maintenance impacts           | <p>The main impacts are from:</p> <ul style="list-style-type: none"> <li>• Weathering and exposure to the elements.</li> <li>• Motor vehicles driving across the surface.</li> <li>• Trash, silt, or tree debris.</li> </ul>   |
| Maintenance-related recommendations        | <p>Create the following:</p> <ul style="list-style-type: none"> <li>• Checklist for routine and periodic maintenance that includes inspection, cleaning, and spot repairs for the surface.</li> <li>• Checklist for routine and periodic maintenance that includes inspection, cleaning, and adjustment for associated equipment (e.g., any storage, supplies, etc.).</li> <li>• Reporting procedure for traffic gardens maintenance needs and completion.</li> <li>• Signs at the traffic garden site letting people know how to report maintenance needs.</li> </ul> |
| Possible Volunteer Maintenance Stewardship | <p>Prepare the following:</p> <ul style="list-style-type: none"> <li>• Traffic garden refreshment kit with paint supplies and traffic garden stencil set.</li> <li>• Instructions to enable community service organizations to assist with refreshing surface markings and clean up.</li> </ul>  |

# Unit 6

## Making the Most of the Traffic Garden

There is great scope to add fun features and a creative appearance to a traffic garden. Unit 6 covers additional features and elements that can be added to the traffic garden to enhance the fun and learning of the traffic garden experience.

### Add Placemaking Features

A traffic garden is like a miniature world. Filling out the features of this world beyond the street and traffic elements will nourish students' imaginations and can be a creative collaborative activity. Places students recognize such as the post office or corner market can be represented in 2-D along the edges of the streets or in the roundabout circles and can be used for fun play scenarios. Streets can be named after real people and local community features.

### Add Asphalt Art

Traffic gardens can be enhanced through art projects organized within the school or in partnership with community arts organizations and artists. Public art can help elevate traffic gardens from a practical facility to a cherished local space. Artwork can include murals on the traffic garden surface or on adjacent walls. This is an opportunity to reflect local community stories in or alongside the traffic garden. The Asphalt Art Guide by Bloomberg Associates, available for free online, is a great source of guidance and informative tips on installing these features.



Photo courtesy of BikeAAA, copyright © Jeff Adler

## Enhance with STEM Learning

Traffic gardens are an opportunity to introduce STEM activities and concepts at a large scale. The traffic garden is an outdoor tool to develop lessons about:

- Distances, measuring, and lengths.
- Angles and area calculations
- Mapping
- Shapes and signs
- Designers at work



Reach out to teachers to develop a project around the layout of the traffic garden, and invite students on a field trip to their own school grounds. It is a great opportunity to involve them in a real-life STEM project where they will see how ideas come together and where they can use the final product. This makes the project meaningful, and the kids will have great suggestions.

## Collect Information from the Traffic Garden

Once your traffic garden is up and running, make sure to document your success! The data and information that you collect will help spread the word about your traffic garden, teach other schools how to create their own, and improve the programs you run at the site.

### Counts and Data

- Count the number of students using the site.
- Conduct observations and collect anecdotal reports.
- Record information about the equipment used.

### Surveys and Interviews

You can ask students or community members to fill out online and in-person surveys and set up a feedback box on site. Ask questions like:

- How they experience, value, and perceive safety before and after using the traffic garden.
- How far they came and how they got to the site.
- How often they have come and whether they will return.

## Offer Open Hours and Use by Others

The plan or access policy for opening hours and use by others may be a topic for the school principal. Signs are helpful to inform and/or invite other users who may be interested in accessing this resource including:

- After-school programs
- Summer camps
- Community groups
- Scouting programs
- Local families



## Inspire Others

Document your traffic garden with photos and videos taken during and after installation.

- Take photos and videos of students using the site.
- Make a stop motion video of the installation.
- Take before and after drone photos (if possible!) of the traffic garden site.
- Make biking safety videos with the site as the backdrop.

For any photos or video images, always make sure that student and school permissions are in place for recording and subsequent use.



# Section III: Traffic Garden Reference Information



STOP



STOP



# Section III Overview

Section III of the Seattle Traffic Garden Handbook provides detailed reference information about traffic gardens in general, as well as the SPS biking program and locating facilities on school grounds. Beyond the layout of the traffic garden, it is important to consider the context of school programs, companion equipment and the available school grounds as you put your project together. Discussions in this section will expand upon information introduced in Section II. The goal is to support SPS programs and school operations by providing comprehensive resources and information that can help make traffic gardens a reality in your community.

Creating a traffic garden can be a complex and involved process. When taking on a traffic garden project, you may find yourself having to explain the concept to many people in different roles before you start your work. That is why Section III opens with a 2-page Traffic Garden Explainer

for use as a handout or attachment when introducing the idea. Section III also includes a matrix of ES and K-8 school grounds and their suitability for locating a traffic garden.

SPS is a national leader in providing in-school biking and pedestrian education for all students to prepare them to be knowledgeable and safe users of the streets. The school system is unique nationally in having so comprehensive a set of programs to meet the needs of students at different ages and stages in their learning, including students with mobility and other needs. Adding traffic gardens to schools brings together these programs and companion learning in a way that helps SPS students further understand and practice the lessons. The aim of traffic safety and mobility education is to positively influence behaviors and provide the skills and knowledge needed to safely navigate the streets, now as young people and in the future as adults.

## Section III at a Glance

**Traffic Garden Explainer**

**SPS Mobility Education**

**Traffic Garden Site Worksheets**

**Traffic Garden Site Types**

**Traffic Garden Layouts**

**Surfaces and Materials**

**Traffic Garden Installation**

**Traffic Garden Maintenance**

**Portable Traffic Signs**

**Mobile Traffic Garden Kits**

**Traffic Garden Do's and Don'ts**

**SPS Elementary and K-8 Schools**

**Glossary**

# Traffic Garden Explainer

## What is a Traffic Garden?

Traffic gardens are miniature versions of real-world streets and traffic systems that serve as play and learning places for children and adults alike.

## Purpose of Traffic Gardens

Traffic gardens serve multiple purposes. They provide a place to teach and practice biking skills, an interactive course for teaching roadway safety, and a place for children and their families to experience independence and fun on wheels. They are a family-friendly community amenity for outdoor physical activity, as well as a continuum of the foundational physical education programming during the school day.



## Benefits of Traffic Gardens

For new bike riders, traffic gardens are a dedicated place to learn and practice skills away from motor vehicles. Not only do children learn to keep themselves safe, they carry their knowledge of traffic rules with them as they grow older, promoting better and safer use of transportation systems.

## Why Children Love Traffic Gardens

Children love traffic gardens because they offer a fun and exciting way to learn in a place that feels comfortable and is tailored to them. They are naturally drawn to models of the real world because it allows them to engage in imaginative play and explore their understanding of the world around them. In a traffic garden world, they develop confidence by navigating the mini-streets, intersections, and crossings while feeling safe. Learning in a space that resembles the real world can make children feel more adult-like and independent while retaining a feeling of control over their environment. Children experience success and achievement at a broad range of ability levels in this small world.

## How are Traffic Gardens Typically Used?

Traffic gardens are places for both formal and informal instruction. Physical education teachers can use the street network for instructional programs; preschool teachers can

deploy them for outdoor play and roadway lessons. Parents and local biking instructors can teach beginning learners and adaptive riding.

## Traffic Gardens in Schools

There are many mutual benefits to putting traffic gardens on school grounds. Educators and instructors can use these gardens to provide physical education instruction and outdoor active play while also teaching roadway safety. In them, children of all ages can learn about collaboration, teamwork, and transportation through active play and movement. Students can learn these lessons repeatedly over time as their understanding of ideas evolve and



develop cognitively. They develop problem-solving skills, creativity, and critical thinking as they navigate and manipulate the mini-world.

## Community Traffic Gardens

Traffic gardens are a positive way to bring communities together. Kids of all ages can be involved in the process of building and using the traffic garden. The community can come together to talk about the importance of traffic safety and how everyone can do their part in keeping kids safe. Traffic gardens provide an opportunity to transform existing places into useful amenities for families to engage in physical activity.





# SPS Mobility Education

## Background

Traffic gardens on school grounds are an element of a much broader effort to provide mobility education for Seattle’s young people. The Seattle Department of Transportation (SDOT) has a long-term Vision Zero initiative to end traffic deaths and serious injuries on city streets by 2030. With 62 elementary schools and ten K-8 schools serving 48,000 students, the SPS system is a great place to address Vision Zero policy goals. Traffic collisions are a leading cause of death for for Seattle residents age 5–24, and the SPS mobility education programs are targeted at reducing the number of bike and pedestrian injuries and fatalities among Seattle’s students.

## Equity

SPS recognizes that it is the right of every student to have an equitable educational experience within the Seattle Public School District. SPS has developed an Equity Tier method to identify schools that serve large numbers and/or high proportions of historically underserved students. There are four equity tiers,<sup>1</sup> Tier 1 through Tier 4. Tier 1 schools are

the highest on the scale (i.e., serve the largest proportion of underserved students) and Tier 4 schools are the lowest on the scale. The Equity Tiers provide a method to prioritize how facility resources are assigned to schools with a focus on schools in Equity Tiers 1 and 2 first.

## Self Help Project

In addition to SPS mobility education programs, the Self Help Project may have relevance for implementing traffic gardens on school grounds. The Self Help Project allows individuals or groups—such as students, parents, and community members—to initiate projects improving school buildings or grounds. For traffic garden projects in SPS schools, the Self Help Project could provide support for maintenance and enhancement, encouraging stewardship and volunteer service. This would contribute to traffic gardens becoming beloved local amenities that the community is invested in, while promoting awareness about how biking and traffic safety are being fostered within the school system. If you are interested in this type of project path, go to the Self Help web page as a first step as early as possible:

<https://www.seattleschools.org/departments/self-help-project/>

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1. SPS Equity tiers method uses data for six student groups (Black/African American males, students of color furthest from educational justice, Low-income students, Multilingual learners, Students born outside U.S., and Students experiencing homelessness) and calculates two measures for each student group (Count of students enrolled and Percent of students enrolled). This method yields up to 12 measures for each school, which are averaged to create an Equity Index (1.0 to 10.0) and then converted to Equity Tiers (1-4) using cutpoints based on standard deviations. (source: <https://mysps.seattleschools.org/wp-content/uploads/2023/01/Overview-of-School-Equity-Tiers-2022-23-1.pdf>)

## SPS MOBILITY PROGRAMS AND ASSOCIATED EQUIPMENT

SPS offers a diverse range of mobility programs tailored to accommodate various grade levels, student abilities, and individual needs. Many aspects of these programs, including equipment management, are handled by external organizations contracted with SPS. However, some programs involve equipment fleets that are maintained on-site at elementary schools. The contracted partners work closely with individual schools to coordinate program dates and fulfill equipment requirements. Additionally, schools play a vital role in providing professional development opportunities for teachers to effectively integrate biking and pedestrian education into their curricula. Schools are also responsible for overseeing bike maintenance, collaborating with Outdoors for All to meet adaptive equipment needs, and facilitating continuous professional development for PE teachers involved in delivering the program.

### Mobility Program: All Kids Bike

All Kids Bike is a new kindergarten program. Through a grant from the Washington State Department of Transportation, SPS is adding fleets of balance bicycles to schools and initiating a Kindergarten Learn-to-Ride PE Program.

#### Associated Equipment

- Fleet of 24 balance bikes, 24 pedal conversion kits, and 24 helmets, per school. Pedals can be added as student skills develop.

- Balance bike fleets are located permanently at each school and are kept in purpose-built storage when not in programmatic use.

### Mobility Program: Let's Go

Let's Go serves all 3rd, 4th, and 5th graders, including students with disabilities. The program is funded by SDOT and provides PE teachers with the resources to implement this in-school bicycle and pedestrian safety program. Cascade Bicycle Club provides the curriculum, teaching materials, teacher training, bicycles, helmets, maintenance, and logistics to support the program, which has expanded to include every public elementary school in the system. The Let's Go curriculum includes adaptations and learn-to-ride instructions for students with additional mobility and cognitive needs. The program curriculum aligns with Washington state education standards.

#### Associated Equipment

- Two wheelers with pedals, no gears.
- Bikes are brought in for 3 weeks and stored in an onsite bike trailer.
- Portable Mobility Kits: Each elementary school has a pedestrian kit that was provided in 2022 to be housed at the school year round. The kits include signs and other supports for learning. Physical Education Specialists can set space up in a limited way either indoors or outdoors

during the lessons. While these kits serve a very useful learning purpose, they are limited in their capabilities to create a fully functional mobile traffic garden experience.

### **Mobility Program: Let's Go Further**

Let's Go Further started in fall 2022, expanding Let's Go to cover middle school students in grades six through eight. This program is also funded by SDOT, and it is part of an effort to build a base for a lifetime of traffic safety and mobility education by providing six consecutive years of safety education for every SPS student. The Let's Go Further curriculum was introduced to increase and expand students' bicycle skills and knowledge and educate them about multi-modal transportation. It encourages students to power themselves to their destinations and learn to walk and roll safely through the built environment. The program provides suggestions for adaptations for students who may have balance difficulties, behavioral challenges, or a need for physical fitness and learn-to-ride instructions.

#### **Associated Equipment**

- Youth hybrid bikes with gears, 24" and 26" wheel size.
- Bikes are brought in for program and stored onsite in bike trailer.

### **Mobility Program: Outdoors for All**

Outdoors for All is a foundation that provides adaptive devices tailored to the specific needs of students with disabilities, including three-wheel, four-wheel, and hand-crank cycles to allow them to participate in the Let's Go instruction. SPS staff assess each child's needs and contact Outdoors for All to determine appropriate support.

#### **Associated Equipment**

Outdoors for All selects adaptive bikes tailored to the student's needs. Common options include:

- Therapy trikes
- Recumbent trikes
- Upright handcycles
- Adult-piloted tandems

Details about the most common adaptive devices provided by Outdoors for All for use in SPS programs appears on the following pages. This information can assist with determining storage requirements as well as turning radii and other aspects of sizing around adaptive devices.

## OUTDOORS FOR ALL ADAPTIVE DEVICE DETAILS

### Therapy Trikes

Therapy trikes are specialized, fixed-gear tricycles that are highly adaptable to meet the needs of riders with lower limb impairments such as low muscle tone or limited mobility. These trikes can support the rider’s legs, torso, and head with various attachments and can be outfitted with rear steering for students who need assistance. They are suitable for independent riders or those who require a guide.

| Make and Model          | Turning Diameter | Width | Sizing                  |
|-------------------------|------------------|-------|-------------------------|
| Rifton R120             | 91"              | 28"   | Small—Elementary School |
| Freedom Concepts DCP 12 | 113"             | 28"   |                         |
| Rifton R130             | 94"              | 28"   | Medium—Middle School    |
| Freedom Concepts DCP 16 | 113"             | 28"   |                         |



### Upright Handcycles

Handcycles are trikes that are powered by hand and typically have gears like a standard bike and a coaster brake. They are suitable for students with disabilities affecting leg mobility, such as para- or quadriplegia, or limb differences. Many hand adaptations are available to assist with brake and shifting control. Handcycles are ideal for independent students who can safely operate a bike.

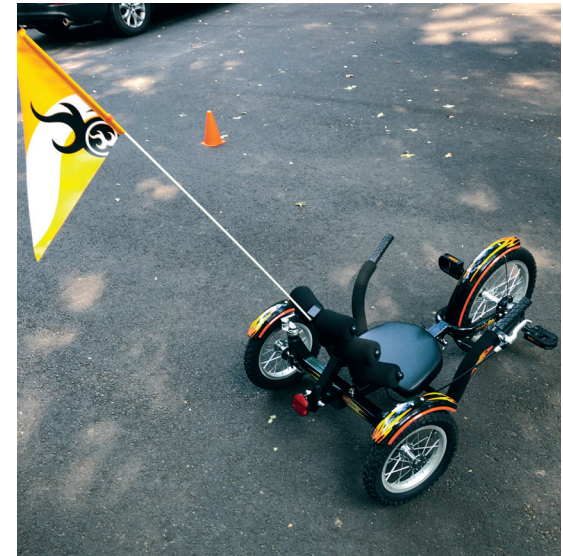
| Make and Model           | Turning Diameter | Width | Sizing                         |
|--------------------------|------------------|-------|--------------------------------|
| Top End Exceleator       | 115"             | 28"   | Medium/Large—Middle School     |
| Top End Youth Exceleator | 110"             | 28"   | Small/Medium—Elementary School |



## Recumbent Trikes

Recumbent trikes have gears and brakes like standard bicycles but offer a more comfortable, laid-back riding position that provides maximum support for the back and hips. This makes these bikes an excellent choice for students with reduced muscle tone or who have trouble maintaining an upright riding position. Recumbent trikes can also be adapted with standard bike parts, making them suitable for riders with limb differences. They are ideal for independent students who can control their bike safely.

| Make and Model | Turning Diameter | Width | Sizing                      |
|----------------|------------------|-------|-----------------------------|
| Hase Trets     | 115"             | 30"   | Small— Elementary School    |
| Sun EZ3        | 100"             | 30"   | Medium/Large— Middle School |



## Tandems

Tandems are ideal for students who are not able to safely operate a bike independently. The Duet bike provides students with a riding experience like a standard bike. Tandems are large and require a large area to turn around. Side-by-side tandems allow for easy communication between the rider and captain. These bikes are an excellent option for students with vision impairments and can support students of any age as long as there is an adult captain.

| Make and Model              | Turning Diameter | Width | Sizing   |
|-----------------------------|------------------|-------|----------|
| Huka Duet                   | 234"             | 26"   | One size |
| Just Two Bikes Side-by-Side | 132"             | 58"   | One size |



# Traffic Garden Site Worksheets

The process of examining and selecting the location for a traffic garden on the school grounds is a critical step in creating a safe and effective learning environment for students. Several worksheets have been designed to aid the process of site examination and selection. Each worksheet covers a different aspect of the process, and by using these worksheets together, information can be gathered and considered as part of making informed decisions about the site and future layout:

- **SPS School Grounds Initial Site Assessment Worksheet**

Use the initial site assessment worksheet to conduct preliminary evaluations of potential traffic garden sites on school grounds. The worksheet is a valuable tool for keeping track of information and details about each site. It will aid you in making comparisons between sites and narrowing down the candidate sites when several spots are under consideration.

- **Traffic Garden Field Visit Preparation Checklist**

A well-planned field visit is a valuable step in the planning process. Refer to the field visit preparation checklist when planning your visit to school grounds for the purpose of conducting a detailed examination of a potential traffic garden site.

- **Traffic Garden Field Visit Worksheet**

Use the field visit worksheet as your essential tool for making a thorough examination of your candidate site for a traffic garden on school grounds. The worksheet covers a wide range of details that are relevant to the siting of a traffic garden and serves as a reminder about factors that could affect the traffic garden's success. By tracking the information on the worksheet, you ensure that nothing is overlooked. This collected information contributes to the subsequent design process and serves as a reference when making decisions.

# SPS SCHOOL GROUNDS INITIAL SITE ASSESSMENT WORKSHEET

Use this worksheet to conduct preliminary evaluations of all candidate sites for your traffic garden on school grounds.

|              |                                  |                 |
|--------------|----------------------------------|-----------------|
| School Name: | Site Name / Location on Grounds: | Your Name/Date: |
|--------------|----------------------------------|-----------------|

|                | Is the Desired Feature Present? |     |    | Condition of Feature |      |      |       | Notes |
|----------------|---------------------------------|-----|----|----------------------|------|------|-------|-------|
|                | Feature                         | Yes | No | Great                | Good | Poor | Mixed |       |
| <b>Access</b>  | Sidewalk/trail/path access      |     |    |                      |      |      |       |       |
|                | Wheelchair/stroller access      |     |    |                      |      |      |       |       |
|                | No steps or barriers            |     |    |                      |      |      |       |       |
|                | Closed to motor vehicles*       |     |    |                      |      |      |       |       |
|                | Proximity to gym                |     |    |                      |      |      |       |       |
|                | Easily found/visible spot       |     |    |                      |      |      |       |       |
| <b>Site</b>    | Adequate space available        |     |    |                      |      |      |       |       |
|                | Mostly flat surface             |     |    |                      |      |      |       |       |
|                | No nearby fixed objects         |     |    |                      |      |      |       |       |
|                | No adjacent drop offs           |     |    |                      |      |      |       |       |
|                | Existing amenities              |     |    |                      |      |      |       |       |
|                | Compatible adjacent uses        |     |    |                      |      |      |       |       |
| <b>Surface</b> | Hard surface                    |     |    |                      |      |      |       |       |
|                | No playground markings**        |     |    |                      |      |      |       |       |

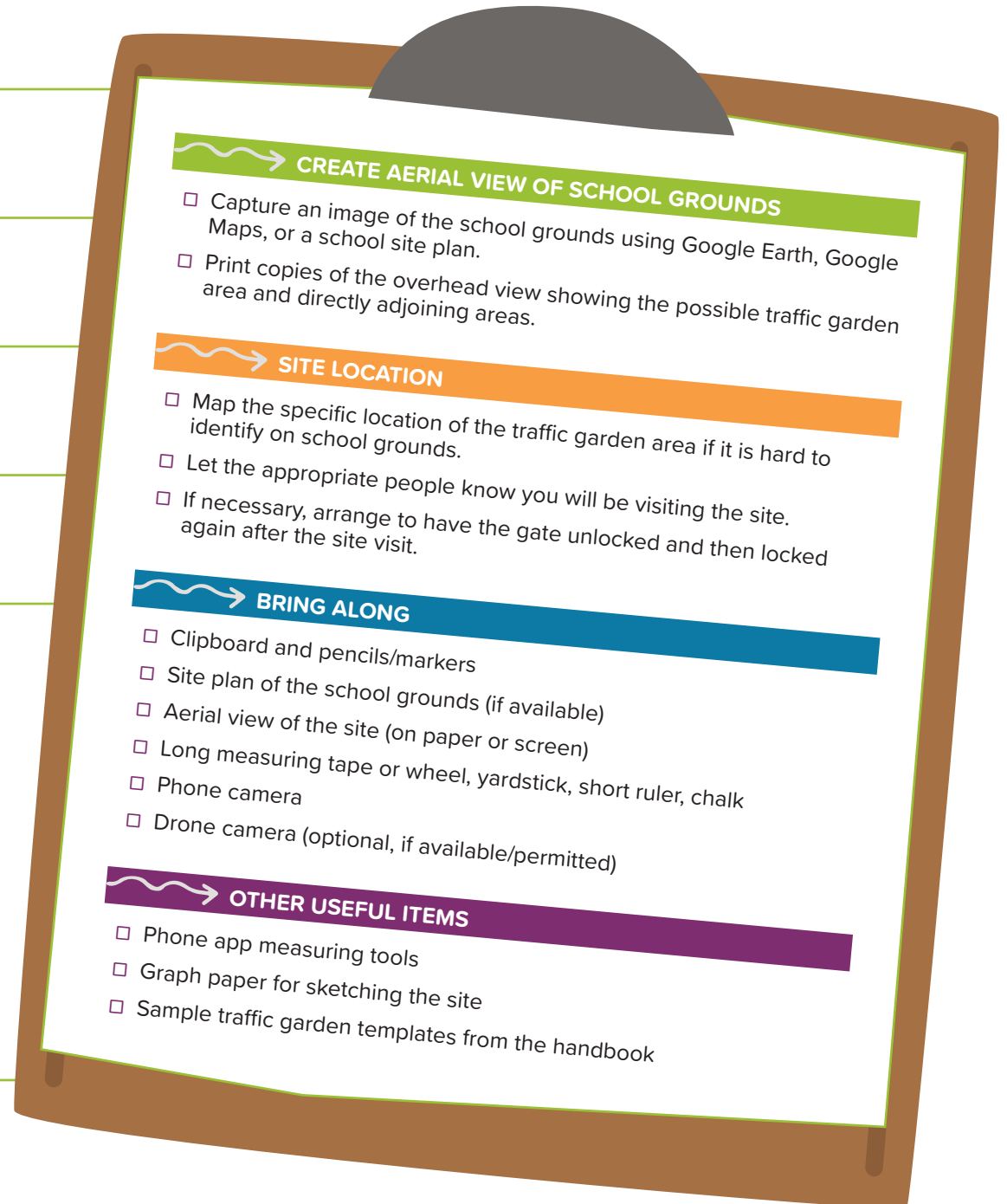
\*Closed or there is a plan for keeping vehicles from entering the space when the traffic garden is open to students or the public.

\*\* No existing playground markings or else markings that can be easily incorporated into a new traffic garden.

# TRAFFIC GARDEN FIELD VISIT PREPARATION CHECKLIST

Use this checklist to prepare for the field visit to your candidate traffic garden site.

|                                |
|--------------------------------|
| School Name:                   |
| Site Name/Location on Grounds: |
| Planned Field Visit Date:      |
| Your Name:                     |
| Others Planning to Attend:     |





# TRAFFIC GARDEN FIELD VISIT WORKSHEET

Use this worksheet to conduct a detailed examination of the proposed site for your traffic garden. Check all items that apply and make detailed notes. Locate information about infrastructure and issues of note on your aerial or site plan. Take lots of photos of details for reference later.

|              |                                 |                       |
|--------------|---------------------------------|-----------------------|
| School Name: | Site Name /Location on Grounds: | Date:                 |
| Your Name:   | Others Present:                 | Weather During Visit: |

| GENERAL SITE CONDITIONS                           |  |       |
|---|--|-------|
| CATEGORY  | SELECT ALL THAT APPLY  | NOTES |
| Climate   | <input type="checkbox"/> full sun on site <input type="checkbox"/> parts of site always in shade<br><input type="checkbox"/> comfortable shade area for onlookers  |       |
| Available amenities                               | <input type="checkbox"/> trash can(s) <input type="checkbox"/> bench(es) <input type="checkbox"/> near storage<br><input type="checkbox"/> near bathrooms  |       |
| Available utilities/services                      | <input type="checkbox"/> electrical supply and outlets <input type="checkbox"/> water spigots<br><input type="checkbox"/> outdoor lighting   |       |
| Doorways / openings adjacent to site              | <input type="checkbox"/> building doorways <input type="checkbox"/> shed access<br><input type="checkbox"/> gates for paths and trails   |       |
| Vertical elements in or adjacent to site          | <input type="checkbox"/> light poles <input type="checkbox"/> fencing <input type="checkbox"/> sign posts<br><input type="checkbox"/> bollards <input type="checkbox"/> vertical drop-offs next to site  |       |
| Other fixed infrastructure in or adjacent to site | <input type="checkbox"/> buildings <input type="checkbox"/> sheds <input type="checkbox"/> kiosks <input type="checkbox"/> walls<br><input type="checkbox"/> protruding grates or manholes<br><input type="checkbox"/> electrical boxes <input type="checkbox"/> shipping containers |       |
| Elements overhanging site                         | <input type="checkbox"/> large trees <input type="checkbox"/> building air conditioners (i.e., drips)<br><input type="checkbox"/> lighting <input type="checkbox"/> basketball hoops   |       |
| Slope   | <input type="checkbox"/> mostly flat <input type="checkbox"/> some slope <input type="checkbox"/> entire site slopes   |       |

## ACCESSING THE SITE

| CATEGORY  | SELECT ALL THAT APPLY   | NOTES |
|---|---|-------|
| Means of access                                 | <input type="checkbox"/> by foot <input type="checkbox"/> by bike <input type="checkbox"/> with mobility device<br><input type="checkbox"/> EMS access <input type="checkbox"/> installation/maintenance access   |       |
| How site is entered?                            | <input type="checkbox"/> no gate/open <input type="checkbox"/> unlocked gate(s) <input type="checkbox"/> locked gates(s)<br><input type="checkbox"/> at-grade <input type="checkbox"/> ramp <input type="checkbox"/> steps or other barrier<br><input type="checkbox"/> ability to prevent motor vehicle entry? |       |
| Companion activities on or surrounding the site | <input type="checkbox"/> recess activities <input type="checkbox"/> access to play areas<br><input type="checkbox"/> access to sports courts/fields<br><input type="checkbox"/> access to dumpsters <input type="checkbox"/> access to service loading  |       |
| Proximity to building(s)                        | <input type="checkbox"/> near ADA accessible doorway <input type="checkbox"/> other doorways<br><input type="checkbox"/> easy route to/from gym   |       |

## SURFACE CONDITIONS

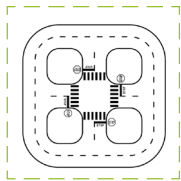
| CATEGORY                                 | SELECT ALL THAT APPLY   | NOTES |
|--|---|-------|
| Material                                 | <input type="checkbox"/> asphalt <input type="checkbox"/> permeable asphalt <input type="checkbox"/> concrete<br><input type="checkbox"/> rubberized surface <input type="checkbox"/> unknown   |       |
| Paving condition                         | <input type="checkbox"/> new/excellent <input type="checkbox"/> good <input type="checkbox"/> poor <input type="checkbox"/> mixed<br><input type="checkbox"/> even surface <input type="checkbox"/> uneven surface (seams, tree roots)        |       |
| Widespread connected cracks (alligating) | <input type="checkbox"/> no evidence of failure <input type="checkbox"/> limited alligating<br><input type="checkbox"/> widespread alligating   |       |
| General cracks                           | <input type="checkbox"/> minor (< ¼") <input type="checkbox"/> moderate (¼"–1") <input type="checkbox"/> serious (> 1")<br><input type="checkbox"/> widespread <input type="checkbox"/> limited <input type="checkbox"/> weeds/silt in cracks |       |
| Embedments in surface                    | <input type="checkbox"/> stubs of poles, posts, or bollards <input type="checkbox"/> metal hook<br><input type="checkbox"/> locking devices <input type="checkbox"/> maintenance holes/drains   |       |
| Surface drainage                         | <input type="checkbox"/> pooling water or surface silt observed<br><input type="checkbox"/> well drained (no silt) <input type="checkbox"/> unknown <input type="checkbox"/> drainage grates  |       |
| Erosion                                  | <input type="checkbox"/> potholes <input type="checkbox"/> soil or gravel washed onto surface<br><input type="checkbox"/> crumbling edge(s) <input type="checkbox"/> gully near pavement  |       |
| Edges                                    | <input type="checkbox"/> crumbling <input type="checkbox"/> lip (> ½") <input type="checkbox"/> drop-off  |       |

# Traffic Garden Site Types

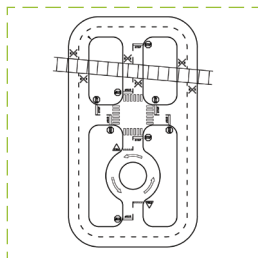
Schoolyard areas vary in shape, size, and hard surface availability. Traffic garden layouts are adaptable and can be designed for various sites and companion uses. The following examples demonstrate how traffic gardens can be tailored to available surfaces. The recommendations by site type help create a layout that accommodates school program needs and utilizes available space. For smaller sites, it may be necessary to seek creative ways to add a traffic garden to available space.

## Typical Traffic Garden Sizes

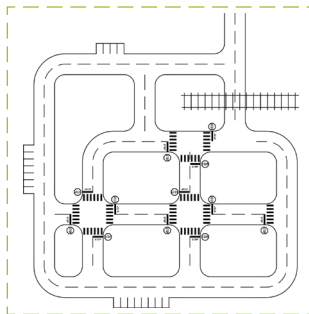
Small Site  
45' x 45'



Medium Site  
65' x 65'



Large Site  
80' x 80'+



## Comparing Traffic Gardens to Familiar Sports Layouts

### How many traffic gardens could fit on a sports court?

NBA basketball court (94' x 50'):

- 2 x small traffic gardens

Mini-soccer court (ranges from 60'x90' to 90'x150'):

- 1 x medium or large traffic

Doubles tennis court (78' x 36'):

- 1 x narrow traffic garden

Pickleball court (20' x 44'):

- 1/2 x small traffic garden

### How many small traffic gardens fit on a sports field side-by-side?

Regulation football field (360' x 160'):

- 28 x small traffic gardens

Soccer pitch (360' x 225', varies):

- 40 x small traffic gardens

Regulation baseball infield (90' x 90'):

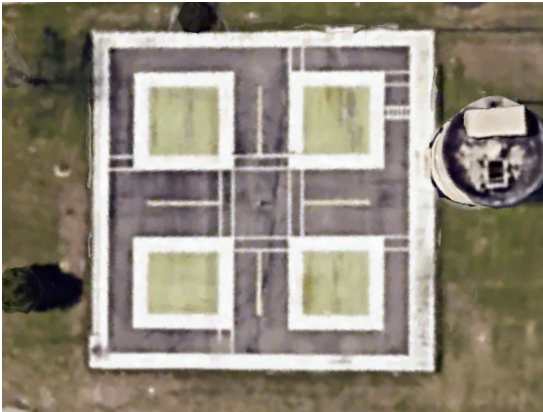
- 4 x small traffic gardens

Fair territory of the Seattle Mariners ballpark (~98,000 sq. ft.):

- 48 x small traffic gardens

## SMALL SITE EXAMPLES

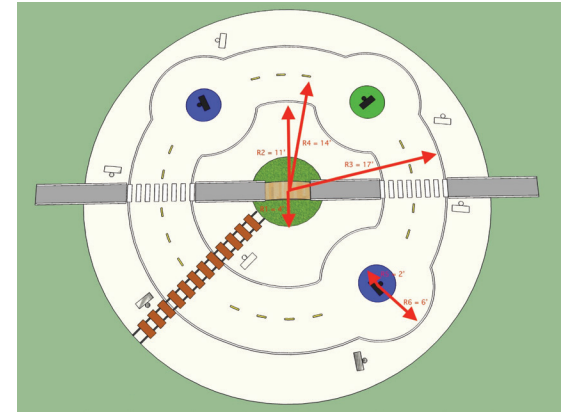
These are compact traffic garden layouts with only a few intersections. Use creative designs to keep the riders moving in the traffic garden layout and include spots where riders can change directions (e.g., roundabouts). Watch out for overly short cross streets in the layout design. Generally, sites need to be a minimum of around 45' wide in both directions to ensure room for a buffer zone.



*Hamilton Safety Village, OH: Asphalt pad next to municipal water tower.*



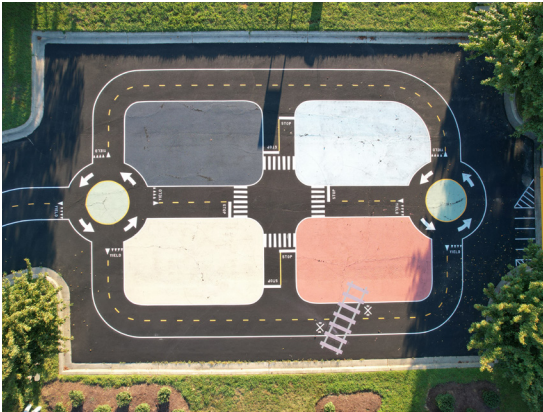
*Brecksville Safety Town, OH: Purpose-built concrete pad on municipal property.*



*Earth Day Roanoke, VA: Pop-up installation on circular concrete pad.*

## MEDIUM SITE EXAMPLES

A site that is at least 65' width in one direction is considered medium size. Emphasize intersections and provide both 4-way stop intersections and roundabouts. Test various grid layouts with different intersection styles, mindful of not creating short cross streets. To save space, shift roundabouts to site corners or ends. Consider optimizing overlap with playgrounds, pathways, and running tracks.



*Seven Oaks Traffic Garden, MD: Existing closed-off parking lot next to open recreational area.*



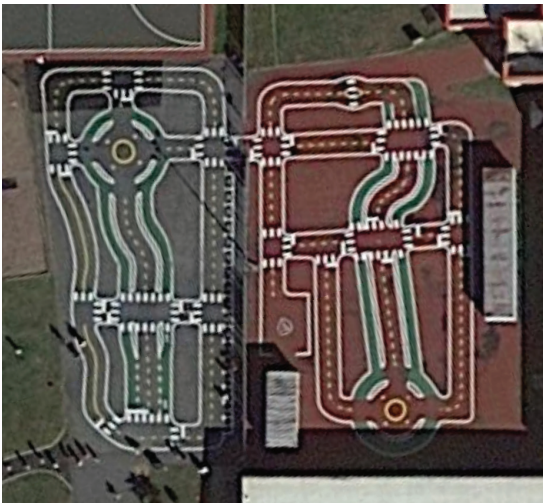
*Jefferson Playground Traffic Garden, MD: Unused sport court located next to playground.*



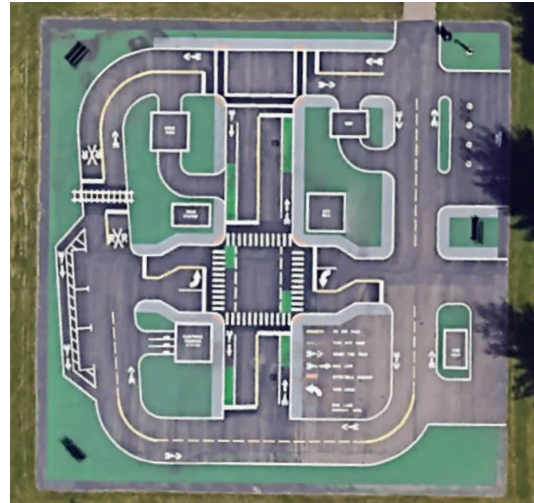
*Westlake Safety Town, OH: In front of police station, next to parking area and other facilities.*

## LARGE SITE EXAMPLES

Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a free-flow circuit around outer streets and concentrated intersections in the middle area. A site that is 80' wide or longer in both directions is considered large.



*Cora Kelly STEM Elementary Traffic Garden, VA: Site on existing school playground and adjacent public park.*



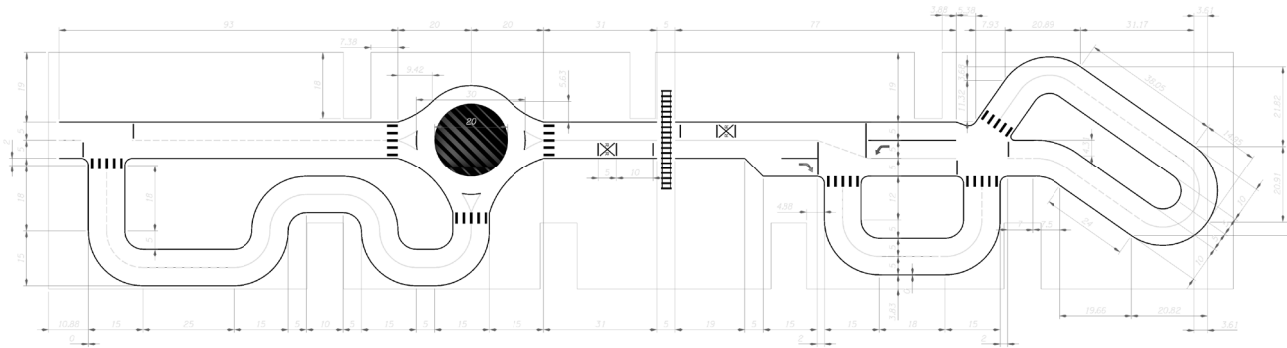
*Garbutt Park Safety Town, MI: Purpose-built asphalt pad built within neighbor park.*



*Fort Collins Walk & Wheel Hub, CO: Overflow church parking lot directly next to trail network.*

## NARROW SITE EXAMPLES

Orient layouts of narrow sites with the site's geometry. Ensure buffer zones are maintained and crossing paths don't interfere with operations. Focus on adding points of interaction such as mid-block crossings, mid-stream roundabouts and T-intersections.



*Lents Park Traffic Playground, OR: The traffic garden was installed through the middle of the parking lot.*



*Montbello Bicycle Course, CO: An area behind the recreation center used for parking and food trucks events.*



*Cascade Bicycle Club Traffic Garden, WA: The network is designed to fit into an alley between buildings.*

## UNUSUAL CONFIGURATIONS

It can sometimes be challenging to find a traffic garden location, especially for schools with limited outdoor space. However, it's possible to identify an area that can be shared with other uses or surface elements to create a traffic garden that still includes the necessary learning features. By maximizing the available space and utilizing creative solutions, it's possible to tailor the layout to the available hard surfaces. The following examples showcase various creative ways in which traffic gardens have been integrated with other uses.

### Traffic Gardens Integrated with Play Features

School play features and traffic gardens can be combined by using the interior spaces of the layout or overlapping their functions.



*Auburn Elementary Traffic Garden, CA: The interior spaces serve as four-square courts.*



*Gilchrist Elementary School Educational Bike Park, FL: The interior spaces incorporate play features.*

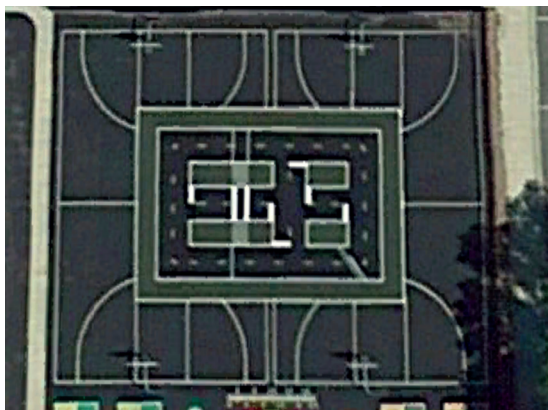


*Clemyjontri Park, VA: The playground network is integrated with the street network for inclusive play.*



## Integrating Traffic Gardens with Basketball Courts and Keys

Traffic gardens can be integrated with basketball in various ways.



*Bucyrus Elementary Safety Town, OH: A traffic garden has been painted in the central area of two adjacent basketball courts.*



*Charlotte Bike Playground, NC: The edges of basketball courts can also be used to create a shared space for a traffic garden.*

| More Site Examples                       | Siting Location or Previous Use                                      |
|--|--|
| Alexandria Bike Campus, Alexandria, VA   | Unused asphalt pavement under interstate bridge.                     |
| Hillcrest Park, Winterville, NC          | Stubbed street/parking lot   |
| Lindale Middle School Traffic Garden, MD | Existing basketball courts at middle school.                         |
| MAK Town Safety Village, Dayton, OH      | In parking lot behind community center, next to bike hub.            |
| Oceano Bicycle Playground, Oceano, CA    | Part of elementary school playground.                                |
| Perrywood Traffic Garden, MD             | Court behind school and community center, adjacent to playground.    |
| Sabal Palm Elementary Bike Park, FL      | Partially-used basketball court next to school.                      |
| Warminster Safety Town, Warminster, PA   | Repurposed airplane landing strip within a park next to playground   |
| Warrenton Safety Town, VA                | Pair of basketball courts next to playground and Head Start building |
| Westside Traffic Garden, Roanoke, VA     | Parking lot next to baseball diamond at elementary school            |

Zoom in on the [North American Permanent Traffic Garden Map](#) for many examples of existing traffic gardens in the U.S. and Canada.

# Traffic Garden Layouts

## PROPOSED SPS TRAFFIC GARDEN LAYOUTS

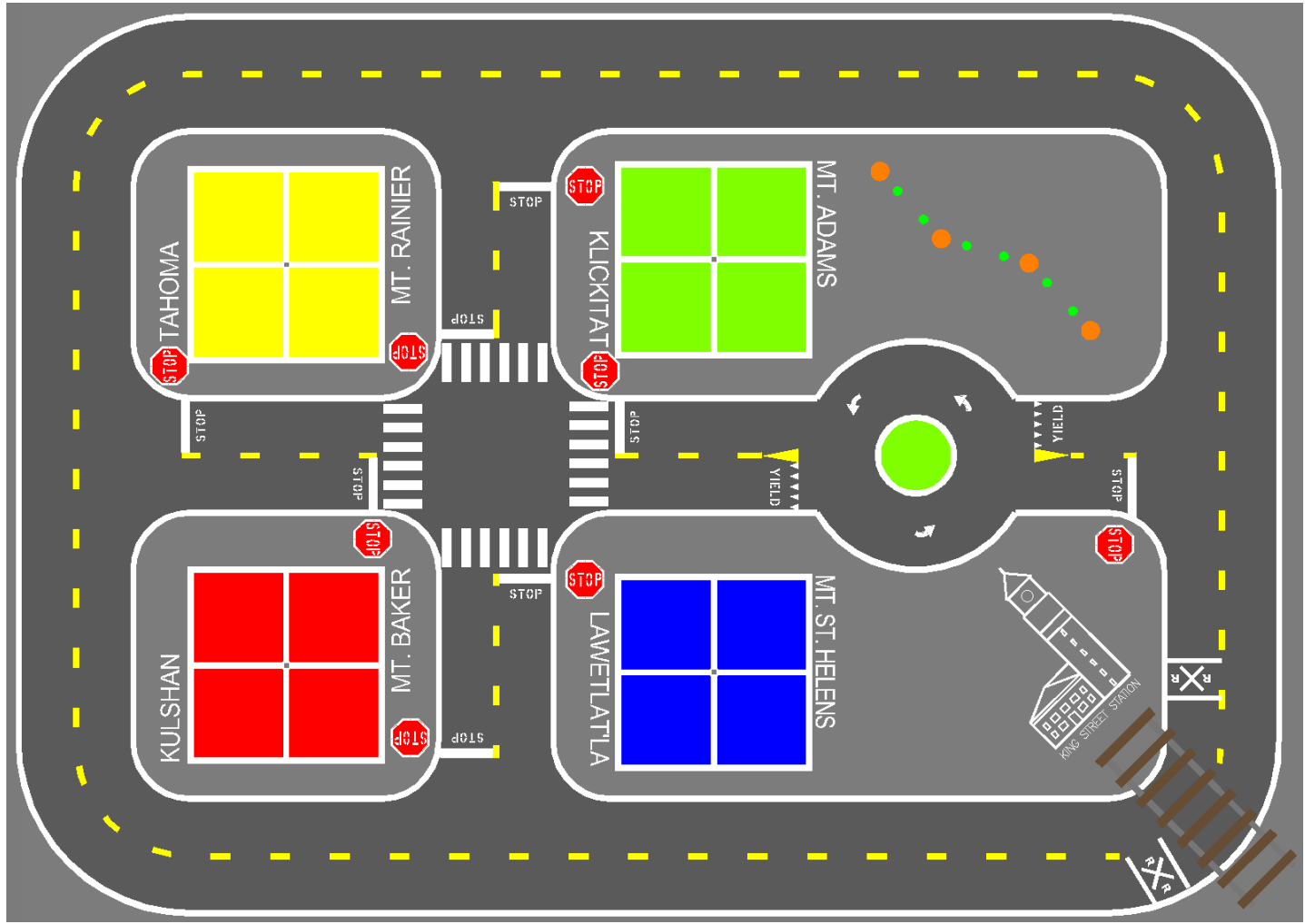
In 2022, Seattle Public Schools started planning a first set of traffic gardens for elementary schools currently undergoing redevelopment. Collaborating with school staff and architect teams, Discover Traffic Gardens developed the proposed traffic garden layouts that follow. For each project, an individual process was undertaken where three conceptual layouts were developed for each school, and these were then refined based on a variety of factors. The elements considered included input from the school, how the traffic garden would complement other planned activities on the school grounds, and considerations like slope, access points, and distance from the gym. Some layouts even incorporated themed elements, by reflecting the local natural environment or the school's color schemes. Each team developed a distinct design in response to their site's differing opportunities and constraints.

The planning for implementing these designs is currently underway, and several are showcased here for inspiration.

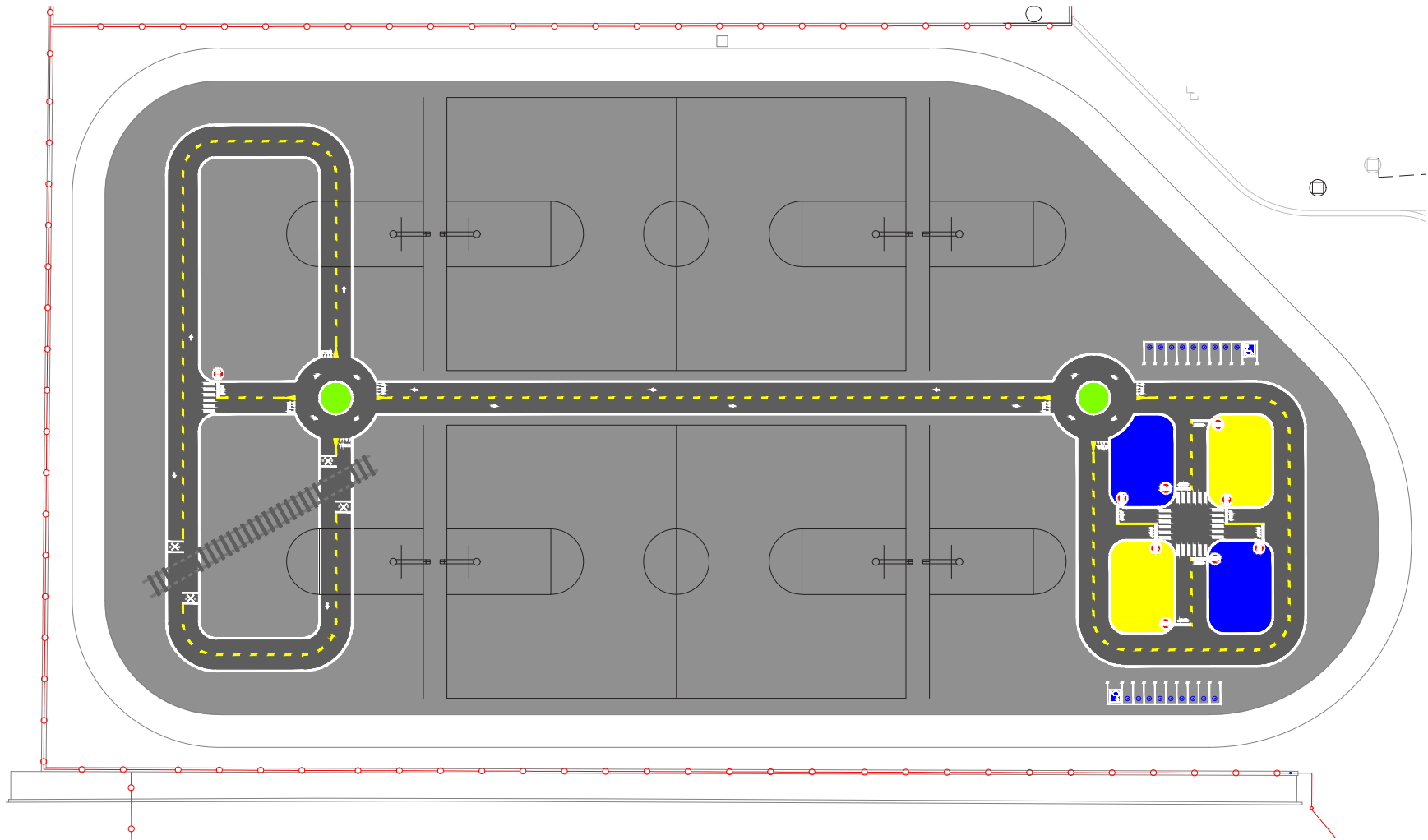




# Kimball Elementary Traffic Garden (installed 2023)



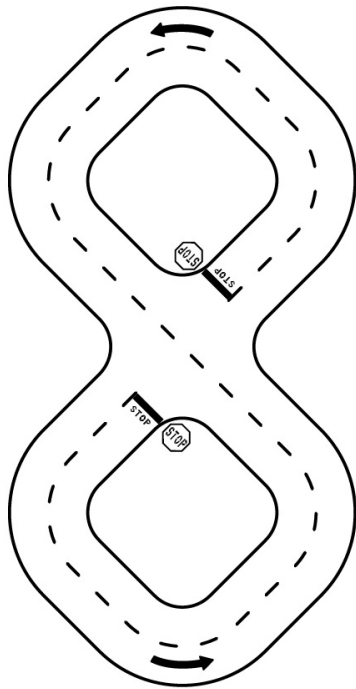
# West Seattle Elementary School (installed 2023)



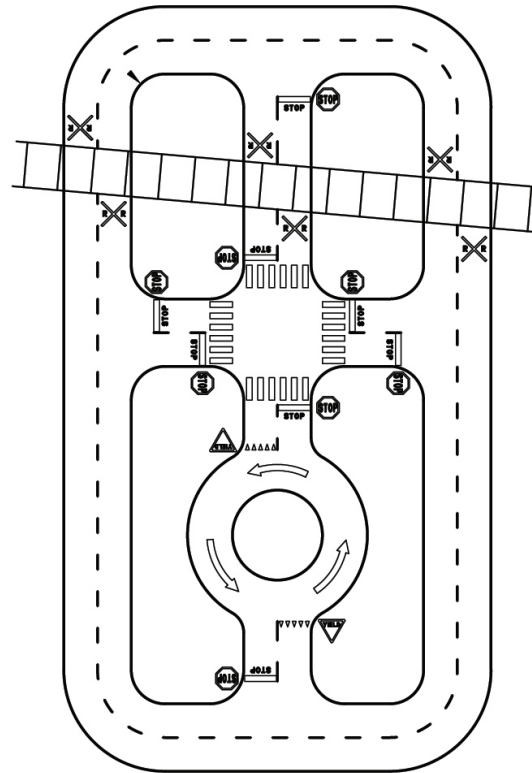
## ADDITIONAL SAMPLE TRAFFIC GARDEN LAYOUTS

The following street layouts may serve as inspiration for your traffic garden. Use them as they are or modify them to create a unique design customized for your site. Note that buffer zones are not included in the overall measurements; allow for at least 4' all the way around.

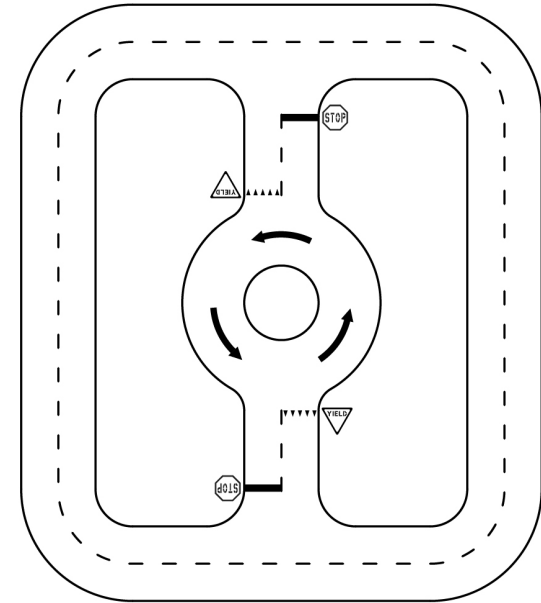
**Double Diamond**  
53'x40'



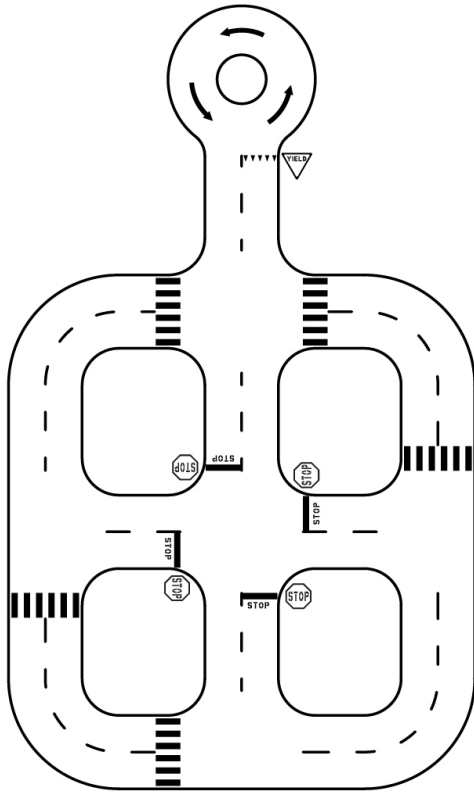
**Railroad Fun**  
68'x38'



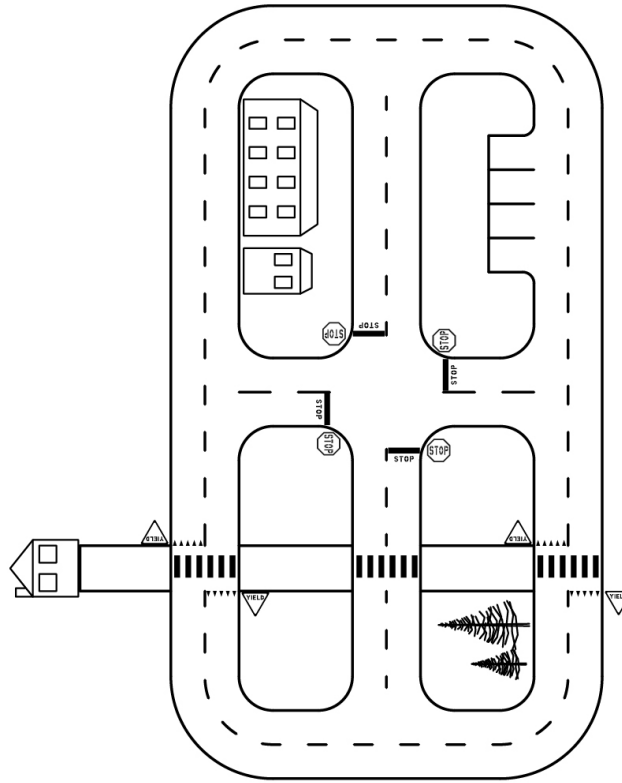
**Roundabout World**  
48'x42'



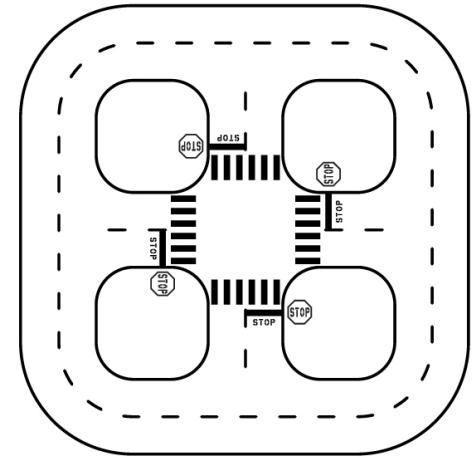
Places to Go  
64'x38'



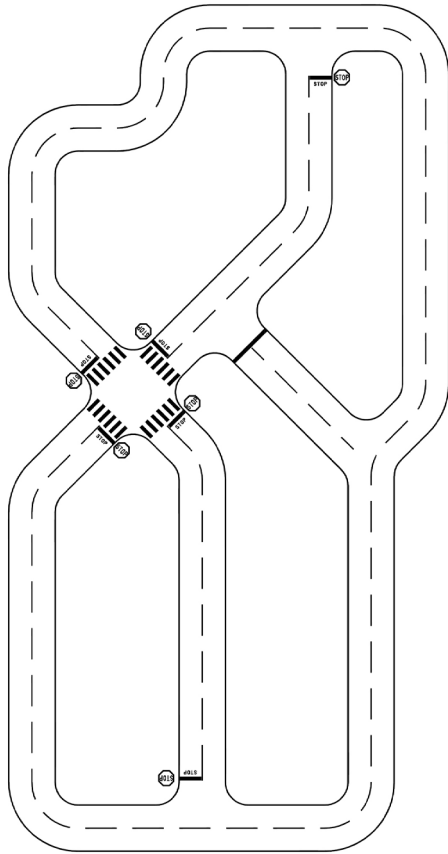
Town Plaza  
68'x38'



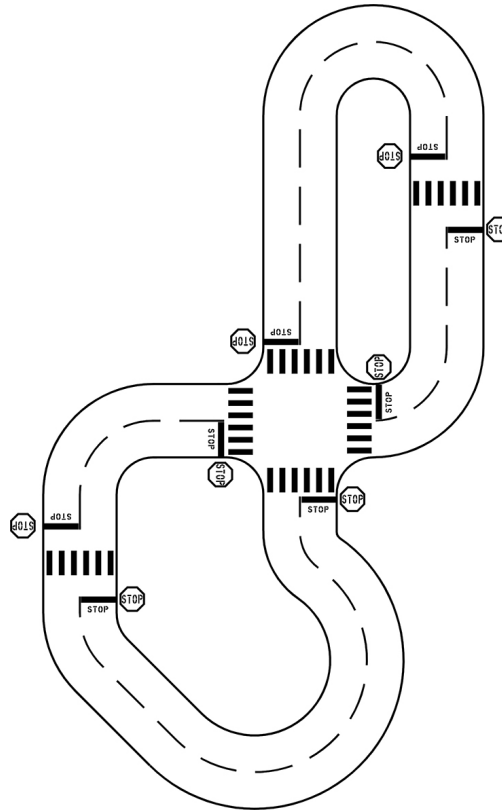
Town Square  
36'x36'



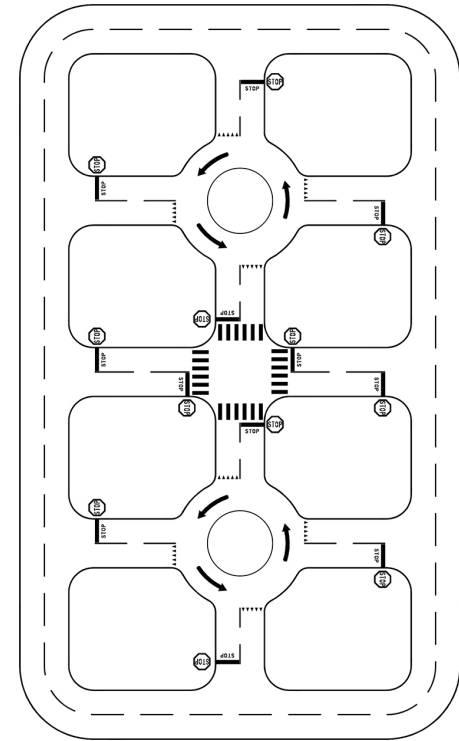
**Bike Boulevard**  
118' x 62'



**Bike Track**  
67' x 38'



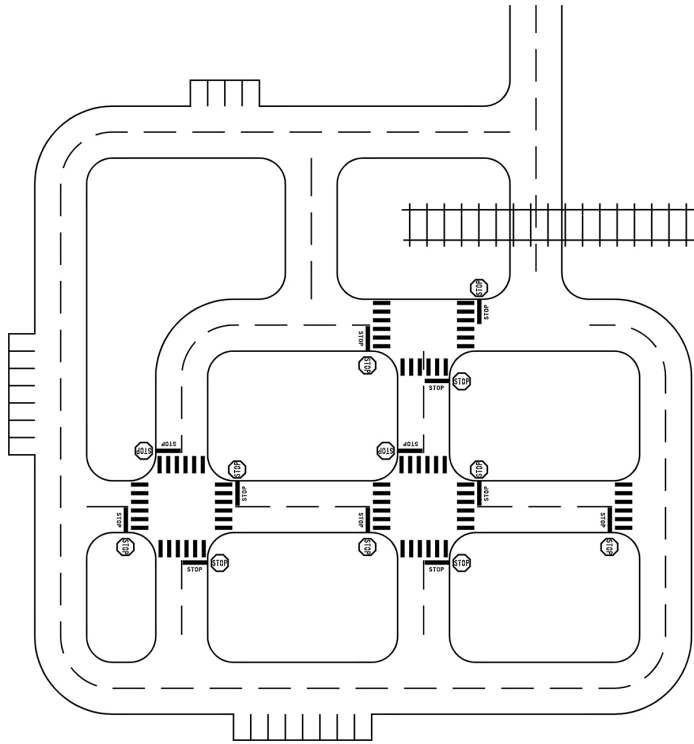
**City Blocks**  
92' x 55'





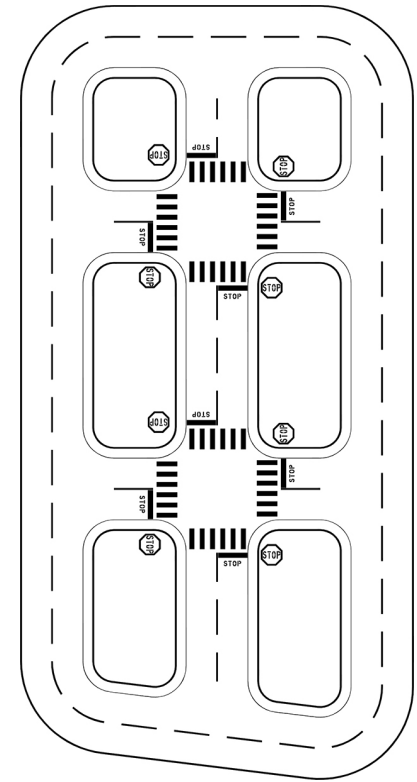
### Active Village

63' x 58'



### Community Circuit

80' x 41'



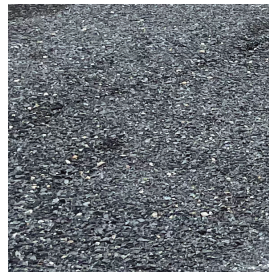
# Surfaces and Materials

## Working with Different Surfaces

As bike riders are sensitive to the quality of the surface they ride on, attention to the surface is critical for a successful experience. Before applying traffic markings, the surface must be assessed and any repairs made to ensure a smooth, level surface that is free of cracks greater than  $\frac{1}{2}$ ". Repairs should be scheduled well in advance of traffic garden installation to allow time for curing and any weather delays. A field inspection is a must to identify repair needs and to understand any drainage concerns.

### Asphalt

Asphalt is the most common traffic garden surface due to its affordability, durability, and availability on school grounds. It provides a smooth surface that is suitable for bike riding and pedestrian activities, but it can become hot and uncomfortable during summers if it is not shaded. Alligatoring is a severe cracking pattern on asphalt surfaces characterized by interconnected cracks resembling alligator scales. It compromises structural integrity and durability, necessitating remediation for affected sites.



### Permeable Asphalt

Permeable asphalt is an alternative to traditional asphalt with a porous surface that allows water to pass through into the ground. It's cooler than traditional asphalt, providing more comfort in hot weather. Surface preparation includes ensuring the area is free of debris and contaminants. Professional contractor and manufacturer guidance can help ensure the successful installation of traffic gardens on permeable asphalt surfaces. Appropriate surface-applied products must be selected for this type of surface.



### Concrete

Concrete is a durable and low-maintenance option for traffic gardens, but its hard surface can be harsh for falls, and the expansion joints can be jarring for bikes or scooters and those using wheelchairs. Surface repairs may require specialized grinding equipment to level and smooth the joints or concrete patching compounds to fill holes or cracks. To improve visibility of white striping and pavement markings, colored coatings or reflective materials can be applied to the concrete surface.



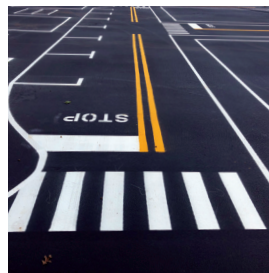
## Typical Surface-Applied Materials

When choosing surface-applied materials for traffic gardens, consider factors such as cost, availability, suitability, durability, and appearance. Consulting manufacturers and researching previous successful applications can provide helpful insights.

The field of surface-applied materials is continually evolving, and there are emerging solutions that offer desirable attributes—including coatings with cooling properties! New products may require approval for use on SPS grounds.

### Paint

**Acrylic traffic paints** are the most popular choice for traffic gardens due to their durability, cost, and ability to provide a “traffic-style” appearance. These paints come in a range of formulations specifically designed for asphalt surfaces. They clean up easily with water and dry quickly while maintaining durability. Parking lot installers and street striping contractors are already familiar with these products and have appropriate equipment and supplies for the job.



In colder climates, **oil-based paints** may be preferred. Solvents such as mineral spirits or toluene are required for cleanup, but they are known for their durability and come

in various formulations. Oil-based paints have a higher cost compared to acrylic traffic paints.

## Specialized Surface-Applied Products

**Thermoplastic** is a polymer surface marking material that offers excellent appearance with vibrant and long-lasting colors. Thermoplastic products are very durable and fast-drying. Applying thermoplastic requires specialized training, expertise, and the use of specific equipment to melt the material and adhere it to the asphalt surface. Costs are higher for this material than for basic products.



**StreetBond** is a pavement coating with a wide color selection that bonds to both asphalt and concrete surfaces, including permeable surfaces. StreetBond is applied by certified installers, and it has low maintenance requirements. Costs are higher for this material than for basic products.



Credit: Equus Striping, DC

Other specialized products include SportMaster, Plexipave, ColorPave and Laykold Masters Color.

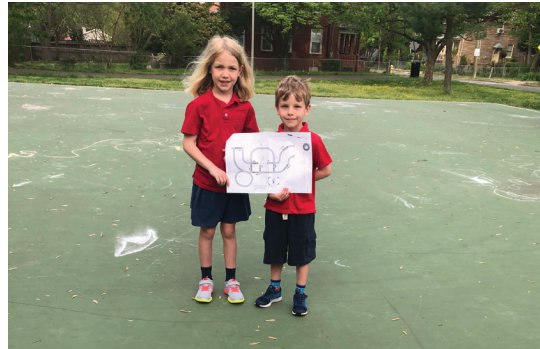


### Jefferson Park Traffic Garden, Virginia

**Surface:** Painted asphalt sports court

**Material:** Acrylic paint

**Note:** Paint was applied directly to the existing green surface. However, despite the good condition of the underlying surface, the paint has worn considerably after four years.



### Seven Oaks Traffic Garden, Maryland

**Surface:** Disused asphalt parking lot

**Material:** Acrylic traffic paint

**Note:** The surface was sealed to safeguard it and provide a base for the traffic garden markings.



### Montbello Bicycle Course, Colorado

**Surface:** Asphalt parking lot

**Material:** Acrylic traffic paint

**Note:** The traffic garden layout was designed to work around the existing parking space lines. Traffic garden striping and markings were applied directly to the existing parking lot surface.



# Traffic Garden Installation

## Working with Contractors

While there are very few traffic garden installation specialists yet, several categories of contractors have the skills, equipment, and knowledge to install traffic garden layouts, including:

- Parking lot striping contractors
- Street striping contractors
- Playground surface contractors

Different contractors use varying installation methods and techniques. However, they all have the following needs:

- Clear drawing instructions showing existing site plus new markings with dimensions and colors.
- Include precise details regarding the materials to be used and clear instructions on materials handling.
- Specific directions about standards of work and site preparation.
- Flexibility and guidance during the layout process to make site fit correctly.
- Access to water and bathrooms.
- Staging areas for trucks and painting equipment.
- Ability to conduct installation when school is not in session or where site can be completely closed off from other uses and access.

Any contractor working on any school site must follow state statutes for public works contracting. Self-Help can assist.

## Weather Considerations

Weather is a crucial factor to consider when planning installation. The hardscape surface must be dry before any work can begin as wet surfaces will not allow the surface-applied materials or paint to adhere properly, leading to poor results. Additionally, if it rains during the installation process, any chalk marks made for layout purposes will be washed away, leading to confusion and potential errors.

Rain can also wash away freshly applied paint, leading to an additional waste of resources and additional work.

Traffic gardens usually involve stenciling, a process that demands a calm, wind-free environment. Even a gentle breeze can result in overspray, leading to imprecise markings.

To manage these weather-related risks, it is essential to keep an eye on the weather forecast and plan accordingly. If rain is predicted, it may be necessary to postpone the installation until the weather clears up. Similarly, if winds are forecast, it may be necessary to delay the project or add the stenciled features on a later day.

During installation, it is essential to continue to monitor the weather conditions. If rain or high winds occur, it may be necessary to pause work temporarily to avoid damage to the project. Make sure there is a plan for who can call a halt to the work.

## DEVELOPING INSTRUCTIONS FOR INSTALLERS

The following information will assist you in creating instructions for the installers. While installers may already be familiar with these type of requirements from their previous work, it is crucial to emphasize the specific considerations for traffic gardens in certain areas.

**Site Advance Preparation:** Existing hardscape surface preparation varies but may involve repair, sealing, and cleaning. Any cracks, potholes, or other surface defects should be repaired in advance. Repair work should be scheduled early in the project planning process with ample time allowed for new asphalt or sealants to cure prior to traffic garden installation. Check with surface material manufacturer on specific curing requirements and build this time into the schedule.

**Site Cleaning Prior to Material Application:** Prior to applying any products, the hardscape surface should be cleaned thoroughly to remove all dirt, debris, oil, grease, and other contaminants. Surfaces can be cleaned with backpack blowers, or power washed with an acceptable biodegradable cleaner. Make sure the surface is dry prior to applying any products.

**Testing the Product in Advance of Application:** Conduct a surface test of any applied products at the planned application rate on the surface prior to their use to ensure that they do not cause any damage and that they are compatible with the surface.

**Confirming Colors:** Before installation, ask the installer to present a 1' x 1' test patch of all required colors for approval.

**Field Verification of Layout Information during Installation:** Since traffic garden layouts are designed without the aid of a topographic survey, it is crucial to field-verify all measurements and dimensions during the installation process. Installers can mark and measure accurately by referring to the drawing sheets and using commonly available tools such as measuring tapes, levels, and string lines to transfer dimensions and alignments from the drawing to the surface. They can also use marking paint to indicate key points and create a layout plan on the ground for added clarity and accuracy. By combining these techniques and ensuring regular checks, striping contractors can efficiently and precisely install traffic garden layouts without the need for topographical information. Before the installer applies any permanent products to the surface, verify that all markings are properly aligned and correspond to the provided drawings.

### **Typical Surface-applied Material Application Instructions:**

- Check the manufacturer's instructions for the minimum ambient temperature required to apply the product. Apply when temperatures are expected to be warm enough and no precipitation is forecast for 24 hours. Ensure surface temperature requirements are also met.

- Before starting the application process, mask off any areas where surface-application or overspray is not wanted using plastic sheeting, tarps, paint shield, paper, or other suitable products.
- Apply surface-applied materials or coatings per the manufacturer’s recommendations and at the application rate specified. Use appropriate application equipment and apply in the pattern and layout shown in the drawings. Ensure that materials are applied uniformly, taking care to avoid puddling or uneven application.
- Keep traffic off the surface until it is completely dry. This will help to ensure that the applied materials adhere well and do not get damaged during the drying process.

**Typical Safety Precautions:** Appropriate safety precautions should be taken during the preparation and application of the surface-applied materials. This may include the use of protective clothing, gloves, respirators, and other equipment.

**Typical Post-Installation Site Clean-up and Restoration:**

- Remove all materials, tools, equipment, and trash from the work area.
- Dispose of any waste material in compliance with school regulations.
- Clean the surface of any debris or residue left behind during the installation process.
- Use appropriate cleaning products and techniques, taking care not to damage any existing infrastructure or

landscaping.

- Restore the site to its original condition.
- Add safety tape around the site and post “Wet Paint” signs for at least 24 hours.
- Conduct a final inspection of the site to ensure that everything is in order and meets the project requirements. Any remaining issues should be addressed immediately, before the installers leave the site.

**Typical Instructions for Stenciled Features:**

- Mark areas where the stenciled markings will be placed using layout plan or typical details as a guide to ensure proper placement.
- Secure the stencil in place using tape or other suitable method to prevent movement during application.
- Use a stencil spray box or paint shield to reduce overspray.
- Apply paint using a roller, brush, or spray equipment in thin, even coats, taking care not to allow paint to pool or run under the stencil.
- Once the paint has dried sufficiently, remove the stencil carefully to avoid smudging or damaging the newly applied markings.
- Wipe stencil surface clean before positioning it again for next pavement marking.
- Conduct a final inspection of stenciled markings to ensure they are clear and that none have been omitted.



## CONDUCTING INSTALLATION

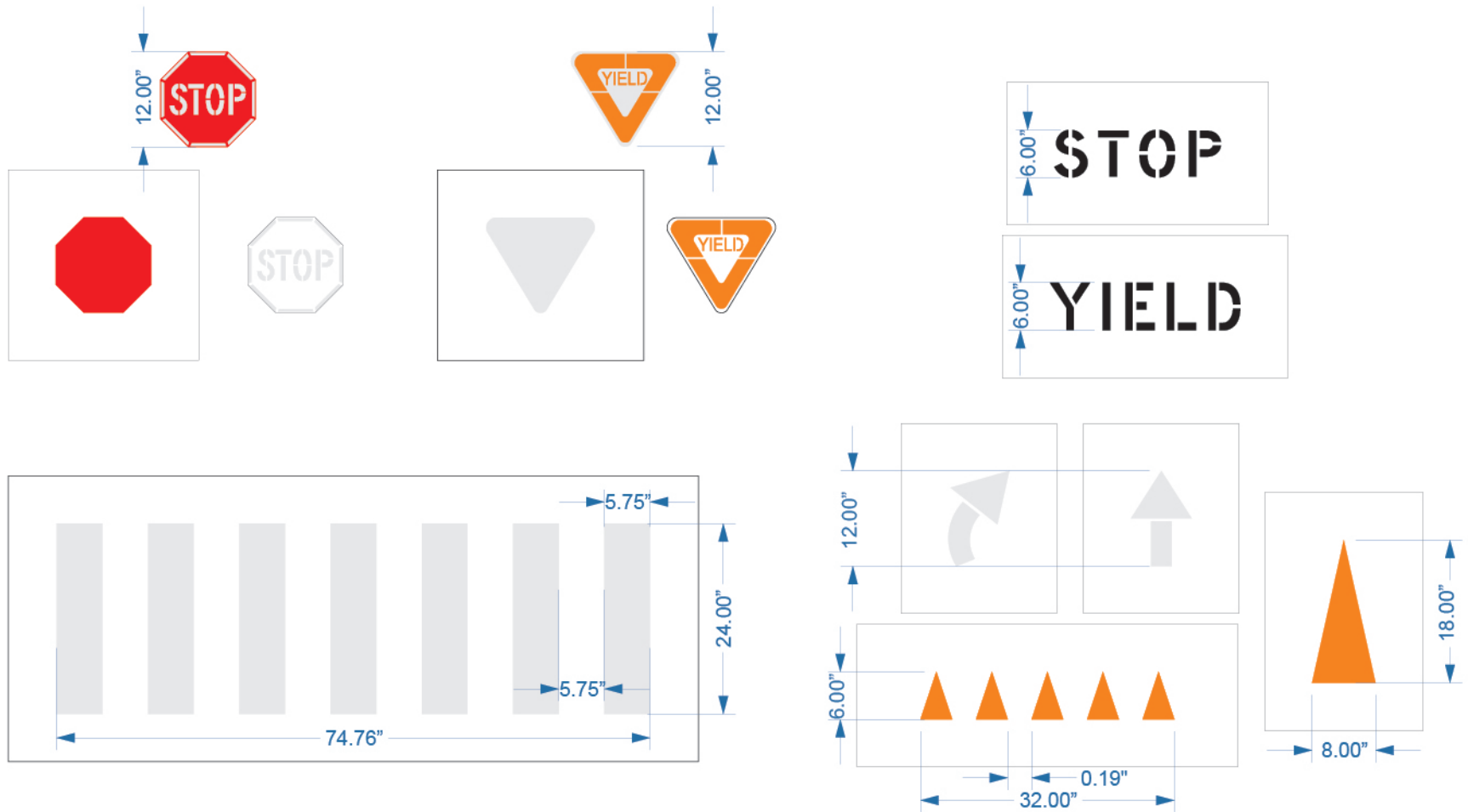


## SURFACE-APPLICATION EQUIPMENT

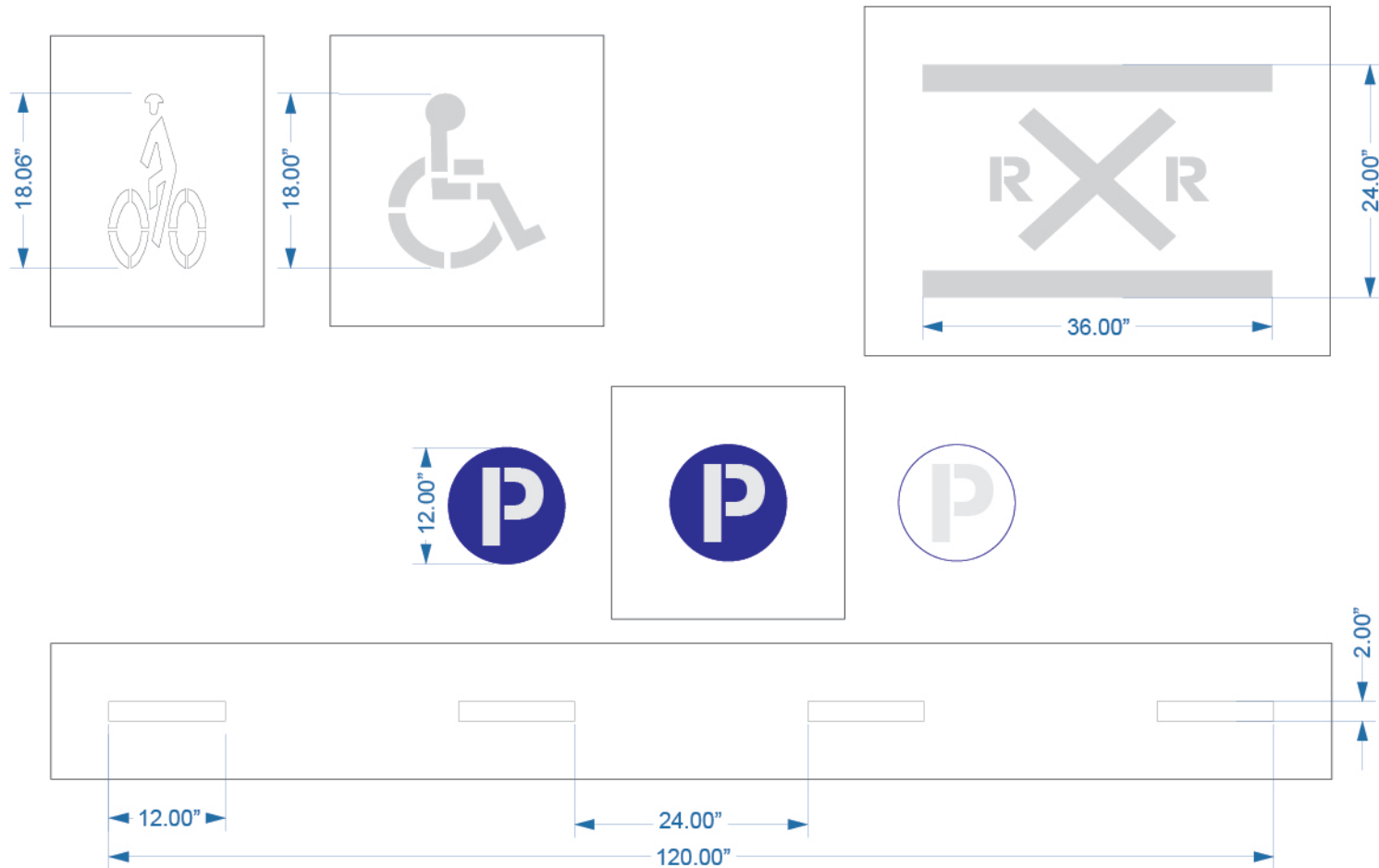


# TRAFFIC GARDEN STENCILS

Basic Set available from [PavementStencil.com](http://PavementStencil.com)



Deluxe Set available from [PavementStencil.com](http://PavementStencil.com)



# Traffic Garden Maintenance

Setting up a traffic garden maintenance system is an essential step in ensuring that the traffic garden remains safe and effective for its users. This may include creating a maintenance schedule, assigning tasks to specific teams, and establishing a reporting system for any issues or concerns. Traffic gardens are a relatively low-maintenance installation due to the lack of moving elements and the limited wear associated with use.

| ITEM                      | ROUTINE   | PERIODIC  |
|---------------------------|---|---|
| Hardscape Base            | <ul style="list-style-type: none"> <li>Remove leaf &amp; branch debris</li> <li>Limited needs when new or sealed asphalt</li> </ul> | <ul style="list-style-type: none"> <li>Spot repair and fill cracks that develop (greater than 0.5")</li> </ul>  |
| Surface-applied Materials | <ul style="list-style-type: none"> <li>Limited routine needs, especially when high-quality materials used</li> </ul>                | <ul style="list-style-type: none"> <li>Touch up may be needed occasionally</li> <li>Repaint striping after 5–10 years, depending on initial materials. High grade materials such as StreetBond may not need touch up</li> </ul> |
| Storage Facility          | <ul style="list-style-type: none"> <li>Keep area tidy and clean</li> </ul>  | <ul style="list-style-type: none"> <li>Depends on type and quality of storage space</li> </ul>  |

## OTHER ASPECTS OF MAINTENANCE

|  |  |
|--|--|
| Primary site-maintenance impacts           | <ul style="list-style-type: none"> <li>Weathering and exposure to the elements</li> <li>Motor vehicles driving across the surface</li> <li>Trash, silt, or tree debris</li> </ul>  |
| Maintenance-related recommendations        | <ul style="list-style-type: none"> <li>Checklist for routine and periodic maintenance that includes inspection, cleaning, and spot repairs</li> <li>Create a reporting procedure</li> </ul>  |
| Possible volunteer maintenance stewardship | <ul style="list-style-type: none"> <li>Create a traffic garden refreshment kit with paint supplies and traffic stencils</li> <li>Prepare instructions to enable community service organizations to assist with refreshing surface markings and clean up</li> </ul> |

## SAMPLE TRAFFIC GARDEN MAINTENANCE CHECKLIST

- Inspect and repair the traffic garden surface on a regular basis.
- Check and maintain the traffic signs and road markings to ensure they are clear, visible, and accurate.
- Keep the traffic garden free from debris and litter.
- Check and maintain the traffic garden equipment such as bikes, helmets, and safety gear.
- Check the hardscape base condition and schedule spot repairs, if applicable.
- Check the surface-applied product condition and schedule touch up in wear areas, if applicable.
- Regularly inspect and maintain any plantings or other features in and around the traffic garden.
- Check the fences and access around the traffic garden to ensure they are safe and in good condition.
- Ensure that the traffic garden is free from trash.
- Schedule regular inspections of the traffic garden to identify and repair any potential safety hazards.

Any checklist should be reviewed periodically to ensure that all maintenance activities are being carried out regularly and that the traffic garden is being kept in good condition and available for use.

## SAMPLE TRAFFIC GARDEN MAINTENANCE REPORTING FORM

By using a reporting form, schools can quickly identify and address any maintenance issues that arise in the traffic garden. The form can be made readily available to staff, volunteers, and users of the traffic garden to ensure that issues are reported promptly and accurately. By addressing maintenance issues in a timely manner, schools can ensure that the traffic garden remains safe and enjoyable for all its users.

|  |                       |
|--|-----------------------|
| Date:  | School Name:          |
| Time of day:   | Description of issue: |
| Please describe the issue you have encountered in the traffic garden in as much detail as possible, including the exact location where the issue occurred. Attach image (if applicable): |                       |
| Name:  | Email:                |
| Role:  | Phone:                |
| Please describe any action taken to address the issue, including any repairs or maintenance work done.   |                       |
| Please add any additional comments or suggestions for how the traffic garden maintenance can be improved.  |                       |

# Portable Traffic Signs

Scaled-down traffic signs really make a traffic garden come to life and add greatly to the real-world experience while also being useful for lessons and interactions. While it is possible to purchase portable signs commercially, most of the products available are targeted at one of the following uses: children’s play or parking lots. Those of the former type are usually lightweight and prone to falling over easily. They are often sold in sets that don’t match up with traffic garden sign needs, plus the posts can be too short, as they are often intended for preschool-age children. In contrast, the types of portable signs aimed at parking lot settings can be expensive as well as too heavy for easy use and moving around on school grounds. However, there are quite a few products on the market, and many have assembled sets by carefully selecting from the available products and sometimes customizing elements such as the posts.

| EQUIPMENT SUPPLIER   | PRODUCT NOTES  |
|--|--|
| My Parking Sign<br><a href="http://MyParkingSign.com">MyParkingSign.com</a>  | <ul style="list-style-type: none"> <li>• Wide range of portable signs and bases at many cost points, sizes, and weights</li> <li>• Weighted sign bases (including types with small wheels)</li> <li>• Custom sign options</li> </ul> |
| Magic Master<br><a href="http://MagicMaster.com">MagicMaster.com</a>         | <ul style="list-style-type: none"> <li>• Range of portable signs and bases at many cost points, sizes, and weights</li> <li>• Weighted sign bases (including versions with wheels)</li> </ul>  |
| Noah’s Park & Playground<br><a href="http://NoahsPlay.com">NoahsPlay.com</a> | This preschool supply site includes commercial-grade play equipment, including: <ul style="list-style-type: none"> <li>• Portable roadway sign sets</li> </ul>   |
| Kaplan<br><a href="http://KaplanCo.com">KaplanCo.com</a>                     | This preschool supply site includes commercial-grade play equipment, including: <ul style="list-style-type: none"> <li>• Traffic sign kits (\$105/9 signs)</li> <li>• Village traffic signs set (\$241/4 signs + signal)</li> </ul>  |
| Guidetime<br><a href="http://GuideCraft.com">GuideCraft.com</a>              | This preschool supply site includes a set of portable signs: <ul style="list-style-type: none"> <li>• Drivetime signs kit: \$75/ 6 signs</li> </ul>  |



# Mobile Traffic Garden Kits

Where it is just not feasible to install an outdoor traffic garden on school grounds, a possibility to consider instead is a mobile traffic garden kit. A mobile traffic garden kit is a portable set of materials that can be used to create a small-scale traffic garden either indoors or outdoors and that can be easily dismantled and packed away after a session or program. It is designed to provide a reduced version of a street network while considering practical aspects such as portability and storage. Although there are currently no commercially available mobile traffic garden kits in the U.S., many communities create their own kits using a range of off-the-shelf products that are customized to suit their needs.

One of the main challenges when assembling a kit is making it truly portable so that it can be easily set up and taken down without too much staff effort. To achieve this, the choice of materials, storage containers, and carrying system is critical. While the process of moving and setting up the traffic garden may take some time and effort, careful planning and smart material selection can result in a useful and effective kit.

In partnership with Cascade, SPS has provided each school with a bike and pedestrian kit that is kept on site year round as part of the Physical Education curriculum options. To transform the existing kits into true traffic garden learning experiences, several notable expansions would be required.

The following elements should be included in a mobile traffic garden kit:

- Physical components to represent a street network in one or more layout configurations.
- Intersection elements and pedestrian crossings.
- Simplified traffic-style features such as pavement markings and arrows.
- Portable traffic signs.



*Mobile Traffic Garden Kit, New Jersey (Photo: Avenues in Motion, NJ)*

As the kit can be customized to suit specific needs, several key questions should be addressed when putting it together. These include:

- Will the layout be set up indoors, outdoors, or both?
- What is the size of the space where the kit will be set up?
- How much time should be allocated for setting up and repacking the kit?
- What is the maximum weight for any single element of the kit?
- Where will the kit be stored when not in use?

Make sure to test materials for different criteria and performance factors such as weight, folding, ability to stay on the surface without shifting, impact on the surface beneath, cleaning, appearance, wear, appropriate colors and appearance.



*Mobile Traffic Garden Kit, York County, Virginia*

## Selecting Materials and Components for Mobile Kits

Once the following factors have been taken into account, use the information to select the appropriate materials and components and begin assembling your mobile traffic garden kit.

### Layout

- Decide on the desired layout of the traffic garden.
- Consider how the layout will support instruction and education.

### Indoor/Outdoor Use

- Determine whether the kit will be used indoors, outdoors, or both.
- Consider how the materials will hold up in different weather conditions.

### Space

- Measure the space where the kit will be set up.
- Consider the size of the components and how they will fit within the space.

### Set-Up

- Decide on the amount of time and effort that will be required/available to set up the kit.
- Consider how the materials will be assembled and disassembled.

### Weight and Portability

- Determine the maximum weight of any single element of the kit.
- Consider how the materials will be transported to and from the set-up location.

### Storage

- Determine where the kit will be stored when not in use.
- Consider how the components will be stored and transported.

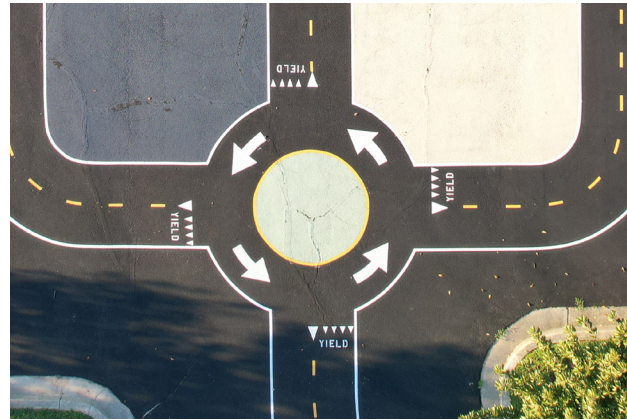


Mobile Traffic Garden Kit (Photo: Avenues in Motion, NJ)

# Traffic Garden Do's and Don'ts

## Roundabouts

Roundabouts are a fun and engaging feature in traffic gardens that help maintain continuous flow and also allow riders to change their direction. However, they need to be easy for the riders to 'see' so they can properly understand how they work.



**DO!** This roundabout is clear and easy to “read” due to the painted center and arrows. It is easy for riders to know what to do.



**DON'T!** The proliferation of lines and markings makes this roundabout much harder for a rider to know what to do and stay in motion.

## Stop Intersections

Good stop intersections will have clear and legible markings. Judicious use of stop intersections minimizes stops and starts for students. Brand-new riders often find it particularly challenging to restart a pedal bike after coming to a complete stop.



**DO!** This stop intersection has clear and legible markings. Stops are used sparingly so students can stay in motion through the course.



**DON'T!** The stop markings are unclear and they are employed too frequently, causing students to stop and start many times in too short a distance.

## Buffer Zones

A buffer zone beyond a painted traffic garden street creates space between physical hazards like corners of buildings, curbs, fences, and other potential obstacles, while also providing a recovery zone for bicyclists.



**DO!** This traffic garden has a comfortable buffer beyond the painted street features.



**DON'T!** This traffic garden has street edges that are directly against the building, creating a potential hazard for students.

## Surface-applied Products

Highly-visible and crisp markings effectively create the illusion of a real street in a traffic garden and also last longer. Using the correct high-quality products and applying them to a properly cleaned surface according to manufacturers' recommendations are essential steps.



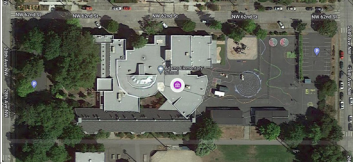
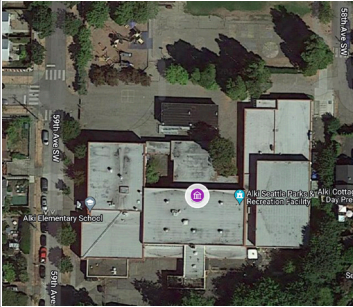

**DO!** The use of high-quality surface-applied products has resulted in crisp markings that will withstand wear and weathering over time.





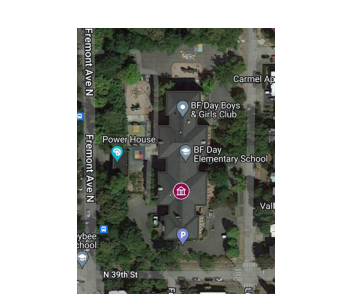
**DON'T!** While it is unclear why the lines are so faded on this recent installation, the poor appearance makes the traffic garden less appealing and difficult to use.

# SPS Elementary and K-8 Schools


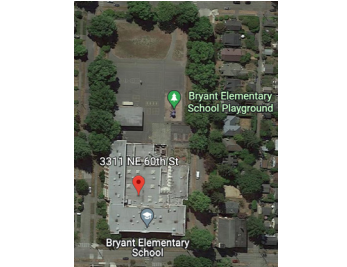


In the 2022–2023 school year, an evaluation of elementary and K-8 school grounds was undertaken using aerial imagery. The table below provides assessment information for each location and initial ideas for siting traffic gardens. The SY 22–23 Equity Tier is provided to assist in prioritizing traffic garden implementation. (Equity Tiers are updated annually.) Any initiatives led by the community must be coordinated through the SPS Self Help Program.

| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|---|--|---|
| <b>Adams Elementary School</b><br>6110 28th Ave. NW<br>Seattle, WA 98107  | 4           |    | This large open continuous asphalt area offers both existing pavement markings and unmarked space. There is ample room to accommodate a traffic garden, making it a good choice for such a purpose. This qualifies as a large site.  | It may be possible to work around existing painted markings or incorporate them into a street network layout. Large sites offer flexibility to include 4-way stops, roundabouts, and other traffic features. They provide various layout options, including a free-flow circuit around outer streets and concentrated intersections in the middle area. |
| <b>Alki Elementary</b><br>3010 59th Ave. SW<br>Seattle, WA 98116          | 4           |   | This large open continuous asphalt area offers both existing pavement markings and unmarked space. There is a vehicular access gate opening directly into the site. There is ample room to accommodate a traffic garden, making it a good choice for such a purpose. This qualifies as a large site. | Large sites offer flexibility to include 4-way stops, roundabouts, and other traffic features. Various layout options are possible, including a free-flow circuit around outer streets and concentrated intersections in the middle area.   |
| <b>Arbor Heights Elementary</b><br>3701 SW 104th St.<br>Seattle, WA 98146 | 4           |  | The grounds have many narrow unmarked asphalt areas, and several painted pavement markings, including four-square courts. There is room to fit a narrow traffic garden by extending between the available areas. Examine possible inclusion of concrete walkways.                                    | There is potential to create long street segments with mid-block crossings to add interactions. Roundabouts at either end would create a riding circuit with convenient turnaround points. Consider removing the existing markings and incorporating into the new layout.   |

Assessment undertaken SY 22–23. Equity Tiers are updated annually.

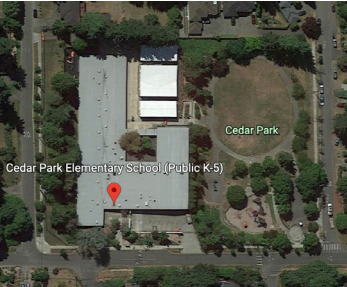


| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|--|---|---|
| <p><b>Bailey Gatzert Elementary</b><br/>1301 E Yesler Way<br/>Seattle, WA 98122</p>           | <p>1</p>    |   | <p>This large open asphalt area consists of both existing pavement markings and unmarked space. In addition, surrounding the field with a baseball diamond, there is an asphalt circuit that could potentially be turned into a riding loop. Ample room is available to accommodate a traffic garden, making it potentially a suitable site.</p>  | <p>Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a free-flow circuit around outer streets and concentrated intersections in the middle area. If the riding loop is added, included points of intersection such as mid-block crossings and two-approach roundabouts.</p> |
| <p><b>Beacon Hill International Elementary</b><br/>2025 14th Ave. S<br/>Seattle, WA 98144</p> | <p>3</p>    |   | <p>These grounds comprise various narrow asphalt sections with extensive painted pavement markings, including vibrant four-square courts that occupy most of the available space. The area for accommodating even a narrow traffic garden is limited, requiring an extension across the existing areas. To create sufficient room for the traffic garden, it will be necessary to relocate the current painted features including tetherball.</p> | <p>There is potential to create long street segments, incorporating mid-block crossings to add interactions. Add roundabouts where possible to provide convenient turnaround points.</p>  |
| <p><b>B. F. Day Elementary</b><br/>3921 Linden Ave. N<br/>Seattle, WA 98103</p>               | <p>4</p>    |  | <p>The grounds have a long and narrow layout, with extensive painted pavement markings covering much of the available space. Due to the limited area, accommodating a narrow traffic garden would require innovative space utilization. In order to make enough room for the traffic garden, it may be necessary to relocate the existing painted features.</p>   | <p>Orient layouts of narrow sites with the site's geometry. Ensure buffer zones are maintained and crossing paths don't interfere with operations. Use creative layouts to stitch together narrow areas.</p>  |

Assessment undertaken SY 22–23. Equity Tiers are updated annually.

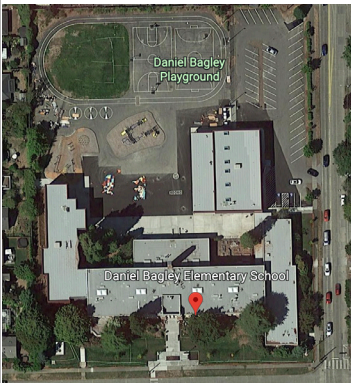

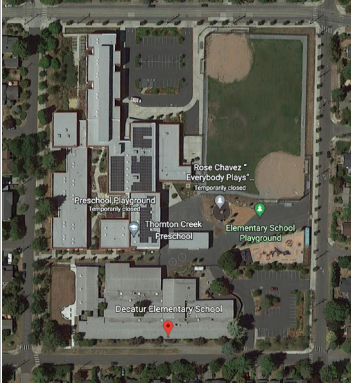
| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES  |
|---|-------------|---|--|--|
| <b>Broadview-Thomson K-8</b><br>13052 Greenwood Ave. N<br>Seattle, WA 98133 | 2           |    | <p>This large open continuous asphalt area offers both existing pavement markings and unmarked space. There is ample room to accommodate a traffic garden, making it a good choice for such a purpose. This qualifies as a large site.</p> | <p>Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a free-flow circuit around outer streets and concentrated intersections in the middle area.</p>                   |
| <b>Bryant Elementary</b><br>3311 NE 60th St.<br>Seattle, WA 98115t          | 4           |    | <p>Spacious open asphalt area with extensive pavement markings, including a basketball court. Additional space available beyond the basketball court, as well as in the surrounding area.</p>  | <p>Large sites provide flexibility for incorporating features such as 4-way stops, roundabouts, and more. They offer diverse layout options, including a free-flow circuit along the outer streets and concentrated intersections in the central area.</p> |
| <b>Cascadia Elementary</b><br>1700 N 90th St.<br>Seattle, WA 98103          | 4           |    | <p>This site is large and includes existing pavement markings for basketball keys and four-square. Additionally, there is an unmarked area in proximity to the buildings that could be suitable for a medium-sized layout.</p>             | <p>There is enough space available to accommodate a 4-way stop and roundabout. It is also possible to extend routes from this layout onto the remaining asphalt, utilizing a roundabout as a turnaround point for a return path.</p>                       |
| <b>Catharine Blaine K-8</b><br>2550 34th Ave. W<br>Seattle, WA 98199        | 4           |  | <p>This site features a spacious open asphalt area with extensive pavement markings, including a basketball court. It offers ample space beyond the basketball court and in the surrounding area. It qualifies as a large site.</p>        | <p>Large sites offer flexibility to include features like 4-way stops, roundabouts, and more. They provide diverse layout options, including a free-flow circuit along the outer streets and concentrated intersections in the central area.</p>           |

Assessment undertaken SY 22–23. Equity Tiers are updated annually.


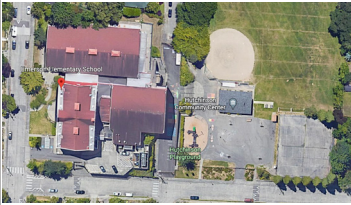
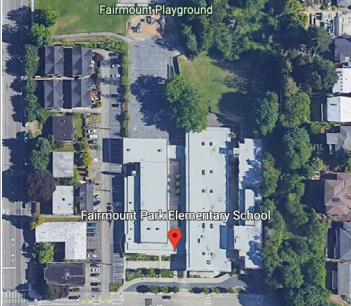


| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|---|---|---|
| <p><b>Cedar Park Elementary</b><br/>3737 NE 135th St.<br/>Seattle, WA 98125</p>             | <p>4</p>    |    | <p>This site features a limited asphalt area with a basketball hoop, complemented by extensive concrete trails and several small expanded stopping spots. It qualifies as a site with an unusual shape.</p>   | <p>Consider utilizing the existing hard surfaces in a more creative manner. One possibility is transforming pathways into streets by adding yellow dashed centerlines and traffic markings at intersecting points, effectively converting them into a network of streets. This approach has proven successful in other locations and can result in an enjoyable and playful street environment.</p> |
| <p><b>Coe Elementary</b><br/>2424 7th Ave. W<br/>Seattle, WA 98119</p>                      | <p>4</p>    |    | <p>This site features a large, open asphalt area with a variety of spread-out pavement markings, including a map, multiple 4-square courts, and a tetherball area. Additionally, there are two basketball hoops with keys. The site offers plenty of space beyond the basketball area and in the surrounding areas of the pavement markings. Overall, it qualifies as a large site.</p> | <p>Large sites offer flexibility to include features like 4-way stops, roundabouts, and more. They provide diverse layout options, including a free-flow circuit along the outer streets and concentrated intersections in the central area.</p>  |
| <p><b>Concord International Elementary</b><br/>723 S. Concord St.<br/>Seattle, WA 98108</p> | <p>2</p>    |  | <p>This large site spans multiple areas and features a basketball court located in the middle. It includes extensive pavement markings, such as a map, hopscotch, and multiple four square courts. There is a potential opportunity to narrow or moderate a section of the site (specifically the western side) to accommodate the replacement of four four-square courts.</p>          | <p>There are various layout options available within the space. When designing narrow sites, it is important to align the layouts with the site's geometry. Adequate space allows for the inclusion of a 4-way stop and roundabout in a narrow-medium layout. To replace four-square courts, consider incorporating them into the internal spaces of the traffic garden.</p>                        |


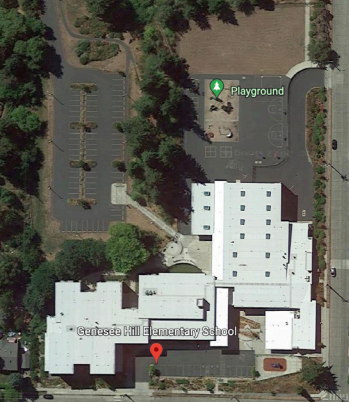

Assessment undertaken SY 22–23. Equity Tiers are updated annually.

| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES  |
|---|-------------|--|---|--|
| <p><b>Daniel Bagley Elementary</b><br/>7821 Stone Ave. N<br/>Seattle, WA 98103</p>              | <p>4</p>    |   | <p>This large recently repaved site offers numerous internal play spaces, courts, and a grass area. Despite the abundance of asphalt, it is organized in the form of circuits around the various play spaces. Additionally, the edges of the basketball courts can be repurposed to create a shared space suitable for a traffic garden. Furthermore, there is ample width between the play spaces, allowing for the addition of streets.</p> | <p>By optimizing the available space and employing creative routes, a large traffic garden can seamlessly integrate with other features. There are multiple layout options to explore while considering other relevant factors. 4-way stops and roundabout intersections can be incorporated in areas where the hard surface widens. The layout can be tailored to fit the existing hard surfaces.</p> |
| <p><b>Dearborn Park International Elementary</b><br/>2820 S Orcas St.<br/>Seattle, WA 98108</p> | <p>3</p>    |   | <p>This large open continuous asphalt area offers both pavement markings and extensive unmarked space. There is ample room to accommodate a traffic garden, making it an ideal choice for such a purpose. The site qualifies as a large area suitable for this project.</p>   | <p>Large sites provide flexibility for incorporating features such as 4-way stops, roundabouts, and other desirable elements. They offer diverse layout options, including the possibility of a free-flow circuit along the outer streets and concentrated intersections within the central area.</p>  |
| <p><b>Decatur Elementary</b><br/>7711 43rd Ave. NE<br/>Seattle, WA 98115</p>                    | <p>4</p>    |  | <p>The site features a wide area with extensive asphalt strips interspersed among other features like a play field, playground, and covered play area. The pavement markings are scattered across the surface. To maximize the size of the traffic garden, it is possible to position the main body in different spots and creatively utilize strips of asphalt to expand its footprint.</p>  | <p>Consider a medium-sized traffic garden located near the covered play area. There is enough space available to accommodate a 4-way stop and roundabout. It is also possible to extend routes from this layout onto the remaining asphalt, utilizing a roundabout as a turnaround point for a return path.</p>  |

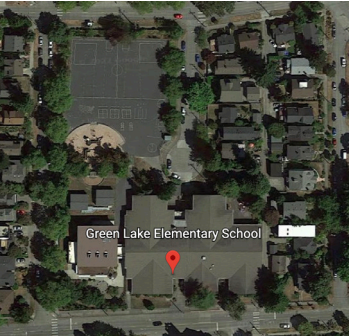


Assessment undertaken SY 22–23. Equity Tiers are updated annually.

| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|---|--|---|
| <p><b>Dunlap Elementary</b><br/>4525 S Cloverdale St.<br/>Seattle, WA 98118</p>       | <p>1</p>    |    | <p>The site features an extensive continuous asphalt area adorned with colorful pavement markings spread across the surface. Additionally, there are tetherball and soccer ball net installations. It may be possible to incorporate traffic garden streets alongside the existing pavement markings. Alternatively, a few pavement markings can be replaced and added to the interior spaces of the traffic garden. Overall, this is a large site with ample potential for development.</p> | <p>Suggest a large, spread-out installation that harmonizes with the existing playground features. There is ample space available to incorporate a 4-way stop and roundabout in currently unmarked areas, and then add streets in open pavement sections. This approach would enable the creation of extensive routes around the playground, enhancing the overall play experience and integrating seamlessly with the existing features.</p>   |
| <p><b>Emerson Elementary</b><br/>9709 60th Ave. S<br/>Seattle, WA 98118</p>           | <p>1</p>    |   | <p>The site features a limited narrow asphalt area with existing colorful pavement markings. Students have access to the adjacent Hutchinson Playground for play, which is currently being planned for rehabilitation.</p>   | <p>There is potential to create long street segments and incorporate mid-block crossings to enhance bicycle and pedestrian interactions. Adding roundabouts at either end would create a riding circuit and provide a convenient turnaround point. Implementing this plan would require removing existing markings from the space. Alternatively, another option to explore would be utilizing an off-site location such as the adjacent playground. Note that planning is currently underway for the adjacent playground site.</p> |
| <p><b>Fairmount Park Elementary</b><br/>3800 SW Findlay St.<br/>Seattle, WA 98126</p> | <p>4</p>    |  | <p>The site features a large, open, and contiguous asphalt area with existing pavement markings. A segment of the asphalt adjacent to the building offers an opportunity to create a sizable traffic garden while minimizing disruption to the existing pavement markings. Overall, this is a large site suitable for such a project.</p>  | <p>Large sites provide flexibility when it comes to incorporating features like 4-way stops, roundabouts, and other elements. They offer diverse layout options, including the possibility of a free-flow circuit along the outer streets and concentrated intersections in the central area.</p>   |





Assessment undertaken SY 22–23. Equity Tiers are updated annually.

| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|---|---|---|
| <p><b>Gatewood Elementary/The Cottage School in W. Seattle</b><br/>4320 SW Myrtle St.<br/>Seattle, WA 98136</p> | 4           |    | <p>The site features a vast expanse of continuous asphalt with colorful pavement markings widely distributed across its surface. Additionally, there are tetherball and three basketball hoops present. The play areas are situated around the edge of the hard surface. It may be feasible to incorporate traffic garden streets around the existing pavement markings. Alternatively, a few markings can be replaced and added to the interior spaces of the traffic garden. Overall, this site is large and holds significant potential for development.</p> | <p>Suggest a large spread-out installation that complements the existing surface markings of the playground. There is enough space available to incorporate a 4-way stop and roundabout in currently unmarked areas, and then add streets in open pavement sections. Ample space allows for the concentration of a large traffic garden away from the basketball area. It may also be worth considering switching the locations of the tetherball and four-square courts.</p> |
| <p><b>Genesee Hill Elementary</b><br/>5013 SW Dakota St.<br/>Seattle, WA 98116</p>                              | 4           |   | <p>The site is relatively large, hosting a playground and two basketball keys that break up the available asphalt. It also features four-square courts in two different locations, along with a map on the surface. There is sufficient unmarked asphalt to accommodate a medium-sized traffic garden. However, it may be necessary to reinstall a couple of the four-square courts in the interior spaces to optimize the layout.</p>  | <p>Recommend considering a medium-sized traffic garden located between the basketball court and the play area, utilizing the space next to the building where two of the four-square courts are currently situated. There is enough room to incorporate a 4-way stop and roundabout. Additionally, it is possible to extend routes from this layout onto the remaining asphalt, utilizing a roundabout as a turnaround point for the return path.</p>                         |
| <p><b>Graham Hill Elementary</b><br/>5149 S Graham St.<br/>Seattle, WA 98118</p>                                | 2           |  | <p>Large open contiguous asphalt area with extensive existing pavement markings. If pavement markings can be relocated or repainted as part of the traffic garden installation, there is room for a large-scale traffic garden.</p>   | <p>Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the middle area.</p>  |


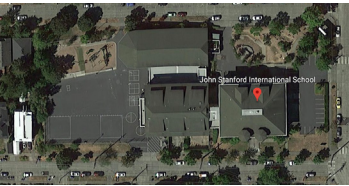

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| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES  |
|---|-------------|--|--|--|
| <p><b>Green Lake Elementary</b><br/>2400 N 65th St.<br/>Seattle, WA 98103</p> | <p>4</p>    |   | <p>Large open contiguous asphalt area with extensive existing pavement markings. Because of the relatively spread-out markings, it may be possible to add a medium-large traffic garden with limited disruption to the existing markings. By reinstalling some four-square courts, that will extend the layout possibilities.</p>  | <p>Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the middle area.</p> |
| <p><b>Greenwood Elementary</b><br/>144 NW 80th St.<br/>Seattle, WA 98117</p>  | <p>4</p>    |   | <p>Large contiguous site that is occupied by a basketball court and a set of four-square courts plus a map on surface. Adequate unmarked asphalt to install a medium size traffic garden although possibly need to reinstall a couple of the four-square courts in the interior spaces. If the four-square can be installed as part of the layout, there is a large L-shaped area that could accommodate a large layout.</p> | <p>Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the middle area.</p> |
| <p><b>Hawthorne Elementary</b><br/>4100 39th Ave. S<br/>Seattle, WA 98118</p> | <p>4</p>    |  | <p>Large irregular shaped site that is occupied by courts, map, and other painted features. There is a middle area with limited markings that is sufficiently large to accommodate a layout with a narrow long orientation that would follow the site geometry. Ensure buffers are maintaining and that activities don't conflict.</p>   | <p>Relatively narrow site can focus on mid-block crossings, roundabouts and T-intersections. The site is large enough to seek an option with a four-way stop and roundabout.</p>   |

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| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|---|--|---|
| <p>Hazel Wolf K-8<br/>11530 12th Ave. NE<br/>Seattle, WA 98125</p>            | <p>4</p>    |    | <p>Large open contiguous asphalt area with extensive existing pavement markings. If four-square courts can be removed and reinstalled in the interior spaces in the traffic garden, there is room for a large-scale traffic garden close to the buildings.</p> | <p>Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the middle area. Room for four-square in the interior spaces.</p> |
| <p>Highland Park Elementary<br/>1012 SW Trenton St.<br/>Seattle, WA 98106</p> | <p>3</p>    |    | <p>Large open contiguous asphalt area with extensive existing colorful pavement markings. If layout can be co-located with the markings, there is room for a large-scale traffic garden close to the buildings.</p>  | <p>Large sites offer flexibility to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the middle area. Room for four-square in the interior spaces.</p> |
| <p>John Hay Elementary<br/>201 Garfield St.<br/>Seattle, WA 98109</p>         | <p>4</p>    |   | <p>Large open contiguous asphalt area with extensive existing pavement markings and basketball court. If some of the foursquare can be repainted as part of the layout, there is room for a medium traffic garden close to the buildings.</p>                  | <p>With a medium layout, emphasize the intersections, providing a 4-way stop and full roundabout. Shift roundabouts to corners and reduce their size. Watch for overly short cross-streets.</p>   |
| <p>John Muir Elementary<br/>3301 S Horton St.<br/>Seattle, WA 98144</p>       | <p>2</p>    |  | <p>Large asphalt site includes existing playground markings. Shares site with adjacent park playground. This is considered a large site.</p>   | <p>Traffic garden is currently being designed for this site as part of the John Muir Early Childhood addition. Installation is planned for 2024.</p>  |

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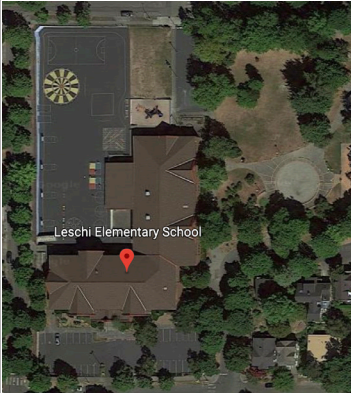
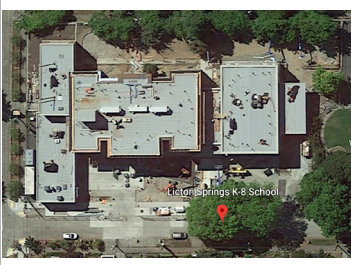

| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|--|---|---|
| <p><b>John Rogers Elementary</b><br/>4030 NE 109th St.<br/>Seattle, WA 98125</p>                | <p>3</p>    |   | <p>Limited available hard surface. Concrete is marked with surface markings and also includes basketball, foursquare and tether ball. It may be possible to add a small traffic garden depending on the buffer zones and whether some pavement markings can be moved. Watch out for overly short cross streets in the layout design. Site may need close examination to come up with creative solution.</p> | <p>Use creative designs to keep the riders moving in the traffic garden layout and include spots where riders can change directions (e.g., roundabouts).</p>                                    |
| <p><b>John Stanford International Elementary</b><br/>4057 5th Ave. NE<br/>Seattle, WA 98105</p> | <p>4</p>    |   | <p>Large open contiguous asphalt area with extensive existing pavement markings. If four-square courts can be removed and reinstalled in the interior spaces in the traffic garden, there is room for a medium traffic garden close to the buildings</p>  | <p>With a medium layout, emphasize the intersections, providing a 4-way stop and full roundabout. Shift roundabouts to corners and reduce their size. Watch for overly short cross-streets.</p> |
| <p><b>Kimball Elementary</b><br/>7201 Beacon Ave. S<br/>Seattle, WA 98108</p>                   | <p>3</p>    |  | <p>Large site with many features include play turf areas, four square, basketball keys, and tetherball. Site space is limited.</p>  | <p>The design for this traffic garden has been completed as part of the ongoing school redevelopment project. This traffic garden was recently installed on the school grounds.</p>             |

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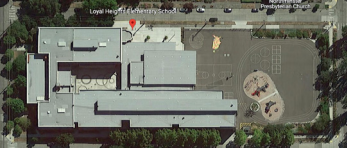
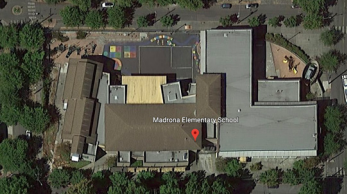
| SEATTLE PUBLIC SCHOOL  | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|--|-------------|--|---|---|
| <p><b>Lafayette Elementary</b><br/>2645 California Ave. SW<br/>Seattle, WA 98116</p> | 4           |   | <p>Very large site with many features including colorful markings, multiple basketball hoops and keys, and play areas. There is an open unmarked area that could accommodate a large traffic garden although it is at the far end of the grounds. There is the possibility of a circuit around the dirt area with room for intersections in some of the open areas closer to the buildings.</p>   | <p>With a large site such as this there is flexibility in how the layout could be installed so it should be possible to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the open area.</p>  |
| <p><b>Laurelhurst Elementary</b><br/>4530 46th Ave. NE<br/>Seattle, WA 98105</p>     | 4           |   | <p>School has two separate hard surfaces both of which are large and featuring painted pavement markings. The smaller of the two areas is closer to the gym but still would be considered large—this site is L-shaped so would require more creative layout style. If four-square courts can be reinstalled in the interior spaces, this site would be plenty big for a large traffic garden.</p> | <p>With a large site such as this there is flexibility in how the layout could be installed so it should be possible to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the open area.</p>  |
| <p><b>Lawton Elementary</b><br/>4000 27th Ave. W<br/>Seattle, WA 98199</p>           | 4           |  | <p>Large open contiguous asphalt area with extensive existing pavement markings. If four-square courts can be removed and reinstalled in the interior spaces in the traffic garden, there is room for a large traffic garden.</p>   | <p>With a large site such as this, there is flexibility in how the layout could be installed so it should be possible to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the open area.</p> |

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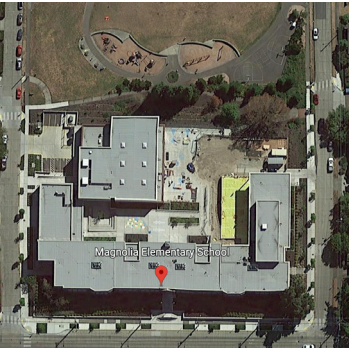
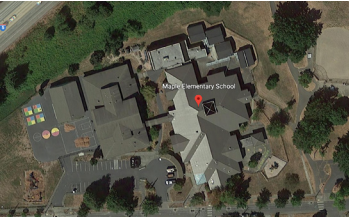


| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES  |
|---|-------------|--|---|--|
| <p><b>Leschi Elementary</b><br/>135 32nd Ave.<br/>Seattle, WA 98122</p>       | <p>3</p>    |   | <p>Large open contiguous asphalt area with extensive existing colorful pavement markings and a basketball court and multiple baseball keys. Using just the unmarked space, the site would likely fit a narrow traffic garden with several side areas. If four-square courts can be removed and reinstalled in the interior spaces in the traffic garden, or parts of the traffic garden can overlap with features like the basketball keys, there is room for a large traffic garden.</p> | <p>With a large site such as this there is flexibility in how the layout could be installed so it should be possible to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the open area.</p> |
| <p><b>Licton Springs K-8</b><br/>3015 NW 68th St.<br/>Seattle, WA 98117</p>   | <p>4</p>    |   | <p>Large open contiguous asphalt area with few pavement markings other than 2 x basketball keys. Using just the unmarked space, the site would likely fit a narrow long traffic garden.</p>   | <p>Orient the layout to site's geometry. Ensure buffer zones are maintained and crossing paths don't interfere with operations. Focus on adding points of interaction such as mid-block crossings and T-intersection. Given the size of the site, it should also be possible to include a 4-way stop and full-size roundabout.</p>   |
| <p><b>Louisa Boren K-8</b><br/>5950 Delridge Way SW<br/>Seattle, WA 98106</p> | <p>4</p>    |  | <p>School has two separate hard surfaces both of which are large and feature painted pavement markings. The smaller of the two areas is narrow with fewer markings. If four-square courts can be reinstalled in the interior spaces, this site would be plenty big for a large traffic garden. Alternatively if the narrow site is well-located relative to the gym, this may make a good spot for a creative layout.</p>   | <p>Orient the layout to site's geometry. Ensure buffer zones are maintained and crossing paths don't interfere with operations. Focus on adding points of interaction such as mid-block crossings and T-intersection. Given the size of the site, it should also be possible to include a 4-way stop and full-size roundabout.</p>   |




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| SEATTLE PUBLIC SCHOOL  | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|--|-------------|--|---|---|
| <p><b>Lowell Elementary</b><br/>1058 E Mercer St.<br/>Seattle, WA 98102</p>        | <p>2</p>    |   | <p>Narrow with colored pavement markings. There are a couple of pavement areas and they are both narrower than a small traffic garden site. It may be possible to create a narrow traffic garden if pavement markings can be relocated or integrated into the layouts.</p>  | <p>Orient the layout to site's geometry. Ensure buffer zones are maintained and crossing paths don't interfere with operations. Focus on adding points of interaction such as mid-block crossings and T-intersection.</p>   |
| <p><b>Loyal Heights Elementary</b><br/>7735 25th Ave. NW<br/>Seattle, WA 98117</p> | <p>4</p>    |   | <p>Large area even with the playground in the interior. There are surface pavement markings spread around the site and a large running track. Because of the size of the site, there is an open unmarked area within the running track that is close to the size that could accommodate a large traffic garden.</p> | <p>With a large site such as this there is flexibility in how the layout could be installed so it should be possible to include 4-way stops, roundabouts, and other features. They provide various layout options, including a desirable free-flow circuit around outer streets and concentrated intersections in the open area.</p>  |
| <p><b>Madrona Elementary</b><br/>1121 33rd Ave.<br/>Seattle, WA 98122</p>          | <p>4</p>    |  | <p>The medium-sized site boasts vibrant colored pavement markings throughout, except for the kickball court area. It is worth considering utilizing this space to accommodate both a small traffic garden and kickball lines simultaneously.</p>  | <p>With careful design considerations to incorporate buffer zones, the kickball court can be repurposed as a small traffic garden. The key focus should be on seamlessly integrating traffic features and fostering interactive experiences. Consider incorporating a 4-way stop intersection while reserving pedestrian crossings for mid-block locations instead of the intersection itself. This approach optimizes space utilization and ensures the desired length of cross streets is maintained.</p> |

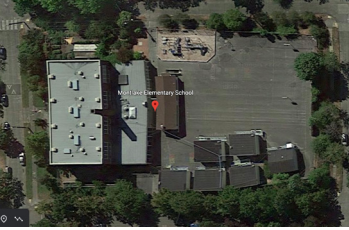
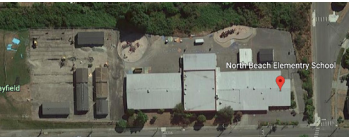
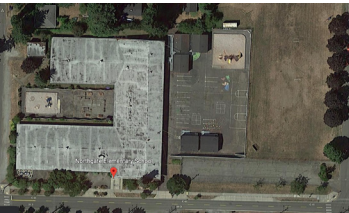

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| SEATTLE PUBLIC SCHOOL  | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)  | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES  |
|--|-------------|--|---|--|
| <p><b>Magnolia Elementary</b><br/>2418 28th Ave. W<br/>Seattle, WA 98199</p> | <p>4</p>    |   | <p>This site has a split-level concrete surface. The upper level is small and narrow, while the lower level is considerably larger. The surface features colorful markings, including foursquare and tetherball courts. However, there is limited unmarked space. Interestingly, the foursquare court has a street-track pattern that could be creatively redesigned to resemble a small set of streets. Another option worth exploring is researching the feasibility of adding a traffic garden to the connected public park, which features an asphalt circuit surrounding the play areas.</p> | <p>Even if there isn't a designated space for a traffic garden, it may still be possible to find and utilize some available space to create a smaller or non-standard version. The key is to prioritize discrete learning areas that include an intersection with clear stop or yield instructions. Additionally, consider incorporating street segments that extend into existing surface markings.</p>   |
| <p><b>Maple Elementary</b><br/>4925 Corson Ave. S<br/>Seattle, WA 98108</p>  | <p>3</p>    |  | <p>The site offers a large, open asphalt area with extensive colorful existing pavement markings, such as foursquare, tetherball, basketball, and more. By relocating the four-square courts to the interior spaces within the traffic garden, a medium-sized traffic garden could be accommodated, creating additional space.</p>  | <p>To enhance the effectiveness of the layout, a medium design can be implemented, emphasizing intersections through the inclusion of 4-way stops and full roundabouts. The relocation of roundabouts to corners, accompanied by a reduction in their size, will contribute to a more efficient traffic flow. It is also advisable to conduct experiments with various grid layouts, ensuring that cross-streets are not overly short. By strategically shifting roundabouts to the corners of the site, the utilization of space can be optimized, further enhancing the overall effectiveness of the layout.</p> |


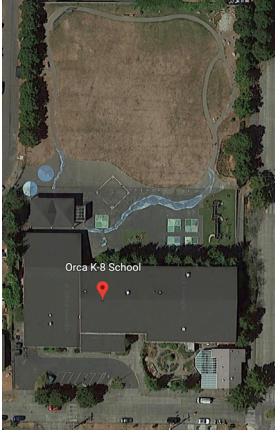

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|---|-------------|---|--|---|
| <p><b>Martin Luther King, Jr. Elementary</b><br/>6725 45th Ave. S<br/>Seattle, WA 98118</p> | <p>2</p>    |    | <p>The site offers a large, open asphalt area with extensive colorful existing pavement markings, such as foursquare, tetherball, basketball, and more. There are several posts for basketball and tetherball embedded in the interior which further limits use of the space for traffic garden streets. At the far end of the site, there is potential for a long and narrow traffic garden, located in an unmarked area. It is crucial to maintain buffer zones, particularly with regards to the posts.</p> | <p>Emphasize the inclusion of points of interaction, such as mid-block crossings and mid-stream roundabouts. The layout can be expanded wider at either end, with a specific focus on establishing a 4-way stop intersection and a full-roundabout.</p>   |
| <p><b>McDonald International Elementary</b><br/>144 NE 54th St.<br/>Seattle, WA 98105</p>   | <p>4</p>    |   | <p>The site features a spacious asphalt area with vibrant existing pavement markings, including foursquare, tetherball, basketball, and various outlined courts for different games. Additionally, there are a few ADA accessible parking spots available near the school, indicating some limited driving access across the site. Adjacent to the playground, there is a small unmarked area.</p>   | <p>By employing creative design techniques, it could be feasible to incorporate a compact traffic garden within the unmarked area adjacent to the playground. Furthermore, there may be opportunities to discover additional space for incorporating supplementary learning areas and street segments in the surrounding spaces around e painted courts. Emphasis should be placed on discreet learning spaces, achieved through the addition of individual intersections featuring stop and yield details.</p> |
| <p><b>McGilvra Elementary</b><br/>1617 38th Ave. E<br/>Seattle, WA 98112</p>                | <p>4</p>    |  | <p>This is a large site that encompasses multiple internal playground areas, and extensive asphalt with limited surface markings. Adjacent to the intersection, at the corner of the grounds, there is an unmarked space that presents an opportunity for a large traffic garden.</p>  | <p>A large traffic garden offers flexibility for incorporating various traffic features, such as 4-way stops, roundabouts, and more. Layout options allow for a free-flowing circuit along the outer streets, while concentrating the intersections in the central area.</p>  |



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| SEATTLE PUBLIC SCHOOL  | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES  |
|--|-------------|---|--|--|
| <b>Montlake Elementary</b><br>2409 22nd Ave. E<br>Seattle, WA 98112                                      | 4           |    | The school site is currently undergoing redevelopment.   | The design for this traffic garden has been completed as part of the ongoing school redevelopment project. The installation is scheduled for the near future.  |
| <b>North Beach Elementary</b><br>9018 24th Ave. NW<br>Seattle, WA 98117                                  | 4           |    | The site is a large, narrow area that features multiple playground areas, painted pavement markings, and various storage structures. Even with existing markings, there is still ample space available at the northern end of the grounds to create a medium to large traffic garden.                  | To enhance the effectiveness of the layout, a medium design can be implemented, emphasizing intersections through the inclusion of 4-way stops and full roundabouts. The relocation of roundabouts to corners, accompanied by a reduction in their size, will contribute to a more efficient traffic flow. |
| <b>Northgate Elementary (renamed James Baldwin Elementary)</b><br>11725 1st Ave. NE<br>Seattle, WA 98125 | 3           |   | The school site is currently undergoing redevelopment.   | The design for this traffic garden has been completed as part of the ongoing school redevelopment project. The installation is scheduled for the near future.  |
| <b>Olympic Hills Elementary</b><br>13018 20th Ave. NE<br>Seattle, WA 98125                               | 2           |  | The site offers a spacious, open asphalt area with well-established features such as foursquare courts, basketball keys, and other surface markings including hopscotch. By utilizing the unmarked spaces alone, it is highly probable that the site can accommodate a medium to large traffic garden. | To enhance the effectiveness of the layout, a medium design can be implemented, emphasizing intersections through the inclusion of 4-way stops and full roundabouts. The relocation of roundabouts to corners, accompanied by a reduction in their size, will contribute to a more efficient traffic flow. |



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|---|-------------|---|--|---|
| <p><b>Olympic View Elementary</b><br/>504 NE 95th St.<br/>Seattle, WA 98115</p> | <p>3</p>    |    | <p>The site boasts a spacious and open asphalt area featuring basketball keys, a running track, a vibrant mural, tetherball, and other painted features. Within the space, there are two basketball posts that help guide the layout for traffic garden streets. Despite the presence of these features, there is still sufficient room available to establish a sizeable traffic garden.</p>  | <p>A large traffic garden offers flexibility for incorporating various traffic features, such as 4-way stops, roundabouts, and more. Layout options allow for a free-flowing circuit along the outer streets, while concentrating the intersections in the central area.</p>  |
| <p><b>Orca K-8</b><br/>5215 46th Ave. S<br/>Seattle, WA 98118</p>               | <p>4</p>    |   | <p>This site consists of a spacious asphalt area with multiple play turf zones and colorful surface markings. Notably, there is a captivating mural depicting a river and stream, cutting through the site. Additionally, there are several unmarked areas that each offer sufficient space to accommodate a small traffic garden. With creative utilization of the surrounding surfaces, it may be possible to extend the small traffic garden and capture some additional space.</p> | <p>The emphasis should be on integrating traffic features and creating opportunities for interaction. Consider incorporating a 4-way stop intersection while avoiding pedestrian crossings at the intersection itself. Instead, place pedestrian crossings at mid-block locations to maximize space and maintain the desired length of cross streets.</p>                                     |
| <p><b>Pathfinder K-8</b><br/>1901 SW Genesee St.<br/>Seattle, WA 98106</p>      | <p>4</p>    |  | <p>This site consists of a large asphalt area with a large play zones, colorful surface markings, basketball posts, tetherball and other court markings. Notably, there is a captivating mural depicting a river surrounding the site. With creative utilization of the surfaces, it may be possible to locate a small to medium traffic garden. More space could be captured by incorporating court areas.</p>  | <p>A small-medium traffic garden can be marked on the open surface area. For a medium layout, prioritize the intersections by featuring a 4-way stop and a full roundabout. Consider shifting the roundabouts to the corners and reducing their size. Be mindful of cross-streets that might be too short in length. To extend the biking route, creatively utilize the court areas also.</p> |

Assessment undertaken SY 22–23. Equity Tiers are updated annually.




| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|--|--|---|
| <p><b>Queen Anne Elementary</b><br/>2100 4th Ave. N<br/>Seattle, WA 98109</p>       | <p>4</p>    |   | <p>The school grounds consist of two connected hard surfaces, one large and one medium-sized, which are currently occupied by a soccer court and basketball keys respectively. There is a third area covered with colorful play features including four-square courts. Although there are some narrow-unmarked areas, they are not spacious enough to accommodate a traffic garden. However, with a creative layout approach and potential incorporation of the soccer area, it might be feasible to establish a small to medium-sized traffic garden.</p> | <p>For a small-medium layout, prioritize the intersections by featuring a 4-way stop and a full roundabout. Consider shifting the roundabouts to the corners and reducing their size. Be mindful of cross-streets that might be too short in length. Add to the learning elements by creatively utilizing the additional parts of the site.</p> |
| <p><b>Rainier View Elementary</b><br/>11650 Beacon Ave. S<br/>Seattle, WA 98178</p> | <p>3</p>    |  | <p>The site is a large area that features multiple playground areas, colorful painted pavement markings, and various storage structures. Even with existing markings, there is still ample space available in the central area of the grounds to create a medium to large traffic garden.</p>  | <p>To enhance the effectiveness of the layout, a medium design can be implemented, emphasizing intersections through the inclusion of 4-way stops and full roundabouts. The relocation of roundabouts to corners, accompanied by a reduction in their size, will contribute to a more efficient traffic flow.</p>                               |

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|---|-------------|--|--|---|
| <p><b>Rising Star Elementary</b><br/>8311 Beacon Ave. S<br/>Seattle, WA 98118</p> | <p>1</p>    |   | <p>The site features a spacious, open asphalt area with a vibrant assortment of recreational options, including colorful foursquare courts, two basketball courts, tetherball, and more. The presence of embedded basketball posts restricts the use of the space for traffic garden streets. However, towards the far end of the grounds, there is an unmarked area that offers ample space to accommodate a medium to large-sized traffic garden. Maintain buffer zones, particularly with regards to the posts.</p>     | <p>For a medium layout, prioritize the intersections by featuring a 4-way stop and a full roundabout. Consider shifting the roundabouts to the corners and reducing their size. Be mindful of cross-streets that might be too short in length. To extend the biking route, creatively utilize the surrounding areas also.</p>   |
| <p><b>Roxhill Elementary</b><br/>7740 34th Ave. SW<br/>Seattle, WA 98126</p>      | <p>3</p>    |  | <p>The site is expansive and includes a large asphalt area with a variety of surface-marked features such as foursquare courts, basketball courts with four basketball keys, tetherball, and other courts. The basketball posts are strategically positioned along the edges to ensure they do not interfere with the utilization of the space for traffic garden streets. Additionally, there are several connected unmarked areas that when used together provide ample space to accommodate a large traffic garden.</p> | <p>The large traffic garden provides ample flexibility to incorporate diverse traffic features, including 4-way stops, roundabouts, and more. Due to the irregular shape of the layout, achieving a continuous, uninterrupted flow along the outer streets without any stops may be challenging. However, this allows for the implementation of a variety of engaging traffic features and intersection styles that can add interest to the design.</p> |

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| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE  | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|---|--|---|
| <p><b>Sacajawea Elementary</b><br/>9501 20th Ave. NE<br/>Seattle, WA 98115</p>  | <p>4</p>    |    | <p>The site is extensive, featuring a large asphalt area with a diverse range of surface-marked features, including foursquare courts and various other courts. The surface markings are well-distributed, leaving unmarked areas between the courts that are spacious enough to be utilized as streets. With a little creative design, it is possible to incorporate a network of streets within these spaces, with slightly larger unmarked spots serving as ideal locations for 4-way stop intersections and roundabouts.</p> | <p>A medium to large layout can incorporate a variety of stop intersections and roundabouts strategically placed between street segments. Take advantage of available space to introduce mid-block crossings and other traffic learning features wherever possible.</p>   |
| <p><b>Salmon Bay K-8</b><br/>1810 NW 65th St.<br/>Seattle, WA 98117</p>         | <p>4</p>    |    | <p>The site includes a large asphalt area featuring various colorful surface markings, courts and play turf zones. Notably, a mural depicts a stream, defining a portion of the site. In the northern corner, an area with fewer surface markings provides ample space for a large traffic garden. By creatively utilizing the adjacent foursquare courts, it is possible to extend the traffic garden and capture additional space.</p>   | <p>A large site like this offers flexibility in the layout design, allowing for the inclusion of 4-way stops, roundabouts, and other features. There are multiple layout options to consider, including a desirable free-flow circuit along the outer streets and concentrated intersections in the central area.</p> |
| <p><b>Sand Point Elementary</b><br/>6208 60th Ave. NE<br/>Seattle, WA 98115</p> | <p>4</p>    |  | <p>The site is expansive, comprising a large playground area, several surface-marked courts, and various structures. Despite the existing markings, there is still ample space within the central area of the grounds to establish a large traffic garden on the surface.</p>  | <p>A large site like this offers flexibility in the layout design, allowing for the inclusion of 4-way stops, roundabouts, and other features. There are multiple layout options to consider, including a desirable free-flow circuit along the outer streets and concentrated intersections in the central area.</p> |



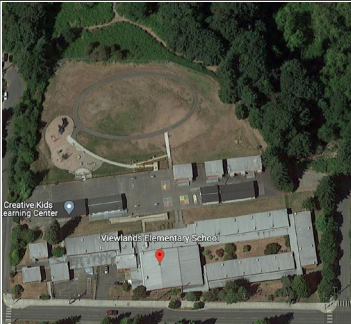
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| SEATTLE PUBLIC SCHOOL   | EQUITY TIER | SCHOOL GROUNDS IMAGE   | AVAILABLE SURFACE(S)   | POSSIBLE TRAFFIC GARDEN LAYOUT AND FEATURES   |
|---|-------------|--|--|---|
| <p><b>Sanislo Elementary</b><br/>1812 SW Myrtle St.<br/>Seattle, WA 98106</p> | <p>4</p>    |   | <p>The site boasts a large asphalt area adorned with a diverse array of colorful surface-marked features, including foursquare courts, basketball keys, tetherball, and other games. Strategically positioned basketball posts along the edges prevent interference with the space designated for traffic garden streets. Although there are limited unmarked areas to accommodate a traffic garden, it is worth exploring the adjacent asphalt circuit surrounding the turf area. This circuit can potentially serve as a street loop, allowing for the addition of surface-level interactions wherever possible.</p> | <p>The loop layout comprising streets with 4-way stop intersections and roundabouts can be enhanced with additional traffic learning lesson spots.</p>  |
| <p><b>South Shore PK-8</b><br/>4800 S Henderson St.<br/>Seattle, WA 98118</p> | <p>1</p>    |  | <p>The site comprises multiple small asphalt areas, each adorned with vibrant surface markings, such as foursquare courts, maps, and tetherball. There are limited unmarked areas that could potentially accommodate a small traffic garden. Additionally, there is a small circuit near the playground that shows promise for transforming into a biking loop. By creatively utilizing this space, additional traffic features and intersections can be added in areas where the surface widens out.</p>  | <p>By implementing thoughtful design to allow for buffer zones, the small spaces can be transformed into a small traffic garden. The emphasis should be on integrating traffic features and creating opportunities for interaction. Consider incorporating a 4-way stop intersection while avoiding pedestrian crossings at the intersection itself. Instead, place pedestrian crossings at mid-block locations to maximize space and maintain the desired length of cross streets.</p> |




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|---|-------------|--|--|---|
| <b>Stevens Elementary</b><br>1242 18th Ave. E<br>Seattle, WA 98112            | 4           |   | <p>This is a large site comprising a large playground, several surface-marked courts, maps, foursquare courts and tetherball. If some of the courts can be reorganized, there is space within the central area of the grounds to establish a medium traffic garden on the surface.</p>                         | <p>A medium to large layout can incorporate a variety of stop intersections and roundabouts strategically placed between street segments. Take advantage of available space to introduce mid-block crossings and other traffic learning features wherever possible.</p> |
| <b>Thornton Creek Elementary</b><br>7712 40th Ave. NE<br>Seattle, WA 98115    | 4           |   | <p>The site is expansive, featuring a large, covered playground situated in the center. The remaining asphalt areas are divided into several narrow sections. Adjacent to the building, there is a designated space with limited markings that can accommodate a medium-sized traffic garden.</p>              | <p>A medium to large layout can incorporate a variety of stop intersections and roundabouts strategically placed between street segments. Take advantage of available space to introduce mid-block crossings and other traffic learning features wherever possible.</p> |
| <b>Thurgood Marshall Elementary</b><br>2401 S Irving St.<br>Seattle, WA 98144 | 4           |  | <p>The large site features various pavement markings, such as maps, four-square courts, tetherball, basketball courts, and other courts with nets. Adjacent to the building and the long narrow extension of the site, there is an unmarked area that appears suitable for a creative medium-sized layout.</p> | <p>A medium to large layout can incorporate a variety of stop intersections and roundabouts strategically placed between street segments. Take advantage of available space to introduce mid-block crossings and other traffic learning features wherever possible.</p> |


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|--|-------------|---|---|--|
| <p><b>TOPS K-8</b><br/>2500 Franklin Ave. E<br/>Seattle, WA 98102</p>            | <p>4</p>    |    | <p>Due to limited space, the most viable option for a traffic garden is within the internal courtyard areas. However, it is worth exploring the possibility of locating the traffic garden in the larger open area of Rogers Playground, although this may pose challenges in terms of equipment handling convenience.</p>  | <p>By implementing thoughtful design to allow for buffer zones, the courtyard can be transformed into a small traffic garden. The emphasis should be on integrating traffic features and creating opportunities for interaction. Consider incorporating a 4-way stop intersection while avoiding pedestrian crossings at the intersection itself. Instead, place pedestrian crossings at mid-block locations to maximize space and maintain the desired length of cross streets.</p> |
| <p><b>View Ridge Elementary</b><br/>7047 50th Ave. NE<br/>Seattle, WA 98115</p>  | <p>4</p>    |    | <p>The large site is divided into three locations, featuring a variety of pavement markings like four-square courts, basketball keys, tetherball, and other courts. There are multiple suitable areas where a medium-large traffic garden can be placed with minimal impact on the existing surface markings. Factors such as the site's size and proximity to bike storage and the gym may influence the specific location chosen.</p> | <p>A large site like this offers flexibility in the layout design, allowing for the inclusion of 4-way stops, roundabouts, and other features. There are multiple layout options to consider, including a desirable free-flow circuit along the outer streets and concentrated intersections in the open area.</p>   |
| <p><b>Viewlands Elementary</b><br/>520 NE Ravenna Blvd<br/>Seattle, WA 98115</p> | <p>4</p>    |  | <p>The school site is currently undergoing redevelopment.</p>   | <p>The design for the traffic garden has been completed as part of the ongoing school redevelopment project. The installation is scheduled for 2023.</p>   |

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|---|-------------|--|---|--|
| <p><b>Wedgwood Elementary</b><br/>2720 NE 85th St.<br/>Seattle, WA 98115</p>                                | <p>4</p>    |   | <p>The large site is divided into two locations, featuring various pavement markings such as a running track, full-color maps, four-square courts, basketball keys, tetherball, and other courts. Within the open unmarked area of the running track, there is enough space to accommodate a large traffic garden by replacing some of the existing markings with the new installation.</p> | <p>Given the ample size of this site, there is flexibility in designing the layout to incorporate 4-way stops, roundabouts, and other features. This allows for various layout options, including a preferred free-flow circuit along the outer streets and concentrated intersections in the open area.</p>   |
| <p><b>West Seattle Elementary. Schmitz Park Elementary</b><br/>5000 SW Spokane St.<br/>Seattle WA 98116</p> | <p>2</p>    |   | <p>The school site is currently undergoing redevelopment.</p>   | <p>The design for this traffic garden has been completed as part of the ongoing school redevelopment project. The installation is scheduled for the near future.</p>   |
| <p><b>West Woodland Elementary</b><br/>5601 4th Ave NW<br/>Seattle, WA 98107</p>                            | <p>4</p>    |  | <p>The large site is divided into two locations, both of which are adorned with various pavement markings, including four-square courts, basketball keys, tetherball, and other courts and games.</p>   | <p>A small-medium traffic garden can be marked on the open surface area near the building. Additionally, there might be space to create a narrow traffic garden adjacent to the large green area and include a long street that encircles it. For a medium layout, prioritize the intersections by featuring a 4-way stop and a full roundabout. Consider shifting the roundabouts to the corners and reducing their size. Be mindful of cross-streets that might be too short in length. To extend the biking route, creatively utilize the additional parts of the site.</p> |

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|--|-------------|--|--|--|
| <p><b>Whittier Elementary</b><br/>1320 NW 75th St.<br/>Seattle, WA 98117</p>   | <p>4</p>    |   | <p>The large site consists of various pavement markings such as maps, four-square courts, tetherball and basketball courts, as well as other play equipment. Many of these markings are clustered around the edges, leaving open unmarked areas that could accommodate a medium-sized traffic garden, potentially incorporating the existing map.</p>  | <p>In a medium layout, prioritize the intersections by featuring a 4-way stop and a full roundabout. Consider positioning the roundabouts at the corners and reducing their size. Be mindful of cross-streets that might be too short in length.</p>   |
| <p><b>Wing Luke Elementary</b><br/>3701 S Kenyon St.<br/>Seattle, WA 98118</p> | <p>1</p>    |  | <p>The large site is divided into two locations and adorned with various pavement markings, such as a running track, full-color maps, four-square courts, basketball keys, tetherball, and other courts. To install even a small traffic garden, it would be necessary to replace some of the pavement markings, particularly the maps. If feasible, two of the four-square courts can be relocated within the layout. A creative approach is needed to maximize the available space and emphasize interactive elements. One possibility is to reimagine pathways as streets, adding paints to enhance the interactive experience.</p> | <p>For a site with limited options, the primary focus should be on establishing a 4-way intersection and a roundabout. This will provide a key structure for the layout. Additionally, it is recommended to create a circuit or loop specifically designed for biking activities. The key is to utilize the available space creatively and provide diverse opportunities for interaction and practical application of roadway education.</p> |

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# Glossary

**Aerial Photo** – Typically refers to bird’s-eye view images that focus on landscapes and surface.

**Access or Accessibility** – The extent to which a space can be entered by everyone, including those using wheelchairs, walkers, and strollers.

**AutoCAD** – Graphic design software for preparing layouts.

**Balance Bike** – A two-wheeled pedal-less bike that teaches young children to balance on two wheels.

**Design Charrette** – A collaborative workshop where participants sketch diverse designs, fostering idea-sharing and creativity.

**Erosion** – The process by which a surface gets worn down.

**Google Earth** – A website service that allows access to satellite aerial images of landscapes and surfaces.

**Grade** – A measure of how much the ground or road surface inclines.

**Intersection (road)** – A location in the network where two or more roads or streets meet or cross.

**Network (land)** – A system of interconnected elements enabling mobility by foot or wheeled devices.

**Safe Routes to School (SRTS)** – An approach that promotes walking and bicycling to school through infrastructure improvements, safety education, incentives, resources, and enforcement.

**Sealcoat** – A protective coating added to asphalt-based pavements to provide a layer of protection from the elements.

**Site Plan** – A detailed drawing illustrating the school ground layout, including structures and buildings.

**Stakeholder** – Those who are impacted by a project, have a role in it, or have an interest in its outcome.

**Survey (topographical)** – A gathering of information about the shape and features of the land surface.

**Traffic Garden** – Network of reduced-sized connected streets free of motorized vehicles where children can actively learn about roadways and safety.



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