

# Best Practices for School Traffic Design



*A Construction and Renovation Guide  
for Seattle Public Schools*

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2/18/2021

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<https://www.seattle.gov/school-traffic-safety-committee>



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# Why This Guide?

The City of Seattle School Traffic Safety Committee was created by Ordinance 104344 in 1975 and codified in SMC 3.80 to bring together Seattle Public Schools, the City, and parents to improve safe routes to school. This board of 11 members brings together Seattle Public Schools (SPS), Seattle Department of Transportation (SDOT), Seattle Police Department (SPD), King County Metro, and volunteer pedestrian and bicycle safety representatives, and parents.

One of the committee's core functions is to review proposed circulation plans for school construction and renovation projects and consider how new facilities will help students be safe and active. We have written this guide to assist designers in avoiding some common design pitfalls and to help create optimal site and circulation plans. The following guidance is compiled from the School Traffic Safety Committee's experience dealing with persistent traffic and circulation problems at a wide variety of schools. Our hope is that this guide will be used to provide direction early in the design process so that projects can avoid later design revisions and wasted effort.

We are starting from the position that every school in Seattle should be safe for children to walk or roll to and enter. All site planning must start with this as a fundamental requirement. Seattle Public Schools expects that more than half of students will get themselves to school; school facilities must reflect this expectation by providing safe and convenient routes for pedestrians and bicyclists. Each child must be able to move safely within the walk-zone surrounding the school without depending on luck or decision-making skills beyond their years.

The focus for school site design should be on creating safe, pleasant campuses that facilitate child learning. Every study that has looked at active transport and learning has found that walking – even a few blocks – boosts attention and retention, to the point where children who walk or bike to school have been found to be a half grade ahead [1].



Additionally there is a very limited amount of space available for schools. Seattle is an increasingly dense city with high property values. SPS is continuously renovating and rebuilding existing school sites to accommodate increasing enrollment without purchasing additional property. This means that space on school property is at a premium and should be allocated to maximize educational potential and public benefit.

Transportation is an equity issue. Affluent families are far more likely to own cars and have the schedule flexibility to drop kids off at school. A site plan that devotes scarce land resources to circulation for privately owned cars is inequitable. A site plan that provides safe and inviting spaces for pedestrians and bicyclists is one that can be equally accessed by all of Seattle's residents.

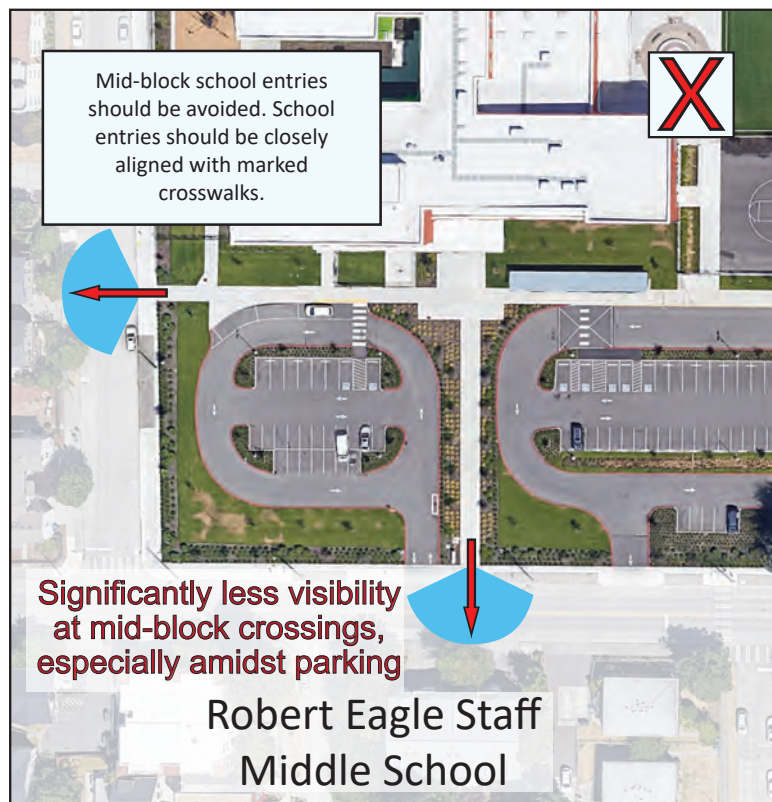
Many of these best practices will necessitate working closely with the Seattle Department of Transportation during the earliest conceptual site design processes.

# Specific Design Guidance

## Locate school entrances near safe places to walk across the street.

School children and parents seek to take the shortest route possible, even when it involves unsafe street crossings. School sites in Seattle with existing mid-block entrances are plagued by unsafe student and parent behavior. SPS and SDO'T have struggled to control unsafe mid-block crossings at Viewlands Elementary, Mercer Middle School, and Robert Eagle Staff Middle School among others. While schools will continue to improve their site specific guidance on intended traffic safety routes it is generally much easier to encourage safe traffic behavior through site design.

Locating school entrances near an intersection (1) makes more block faces convenient for drop-off, spreading out and distributing traffic rather than concentrating it, and (2) makes safely using the corner crosswalk the most convenient route for kids. Also, many parents report that it is important to them to watch their kids enter the school or playground fence to be sure that they arrive at school safely. Generally corners have the best visibility from multiple directions.

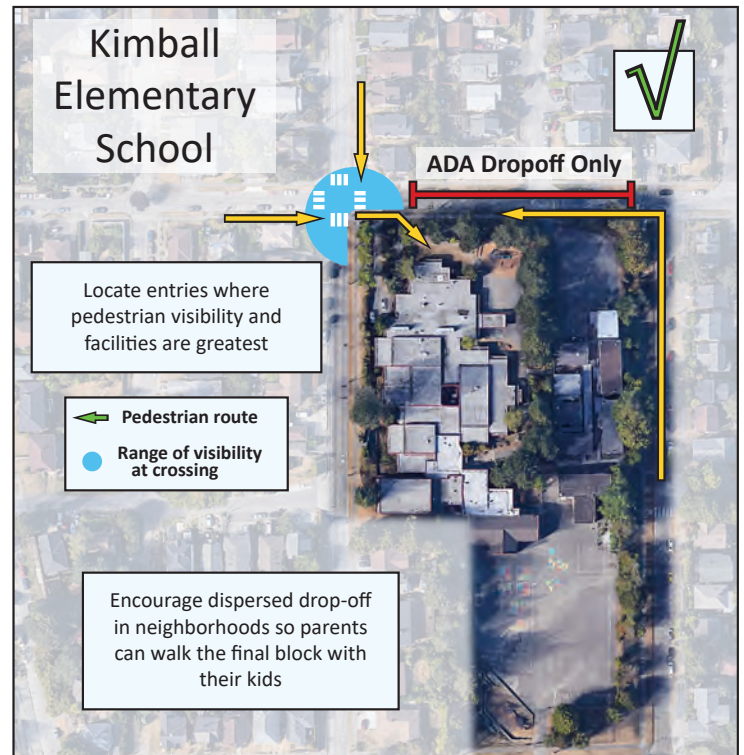


1. **Locate school entrances immediately adjacent to a safe, legal street crossing.**
  - a. A street corner is the best location for an entrance.
  - a. Locate entrances on the most convenient corner for families, taking into account the travel routes families will use to get to the school.
  - a. Locate entrances near the corner that has the best visibility and pedestrian facilities.
  - a. For sites with steep slopes grade is also a prime consideration in locating the entrance. Locate entrances on a corner that is at a similar grade with the street in order to provide good visibility at the entrance and to comply with ADA.



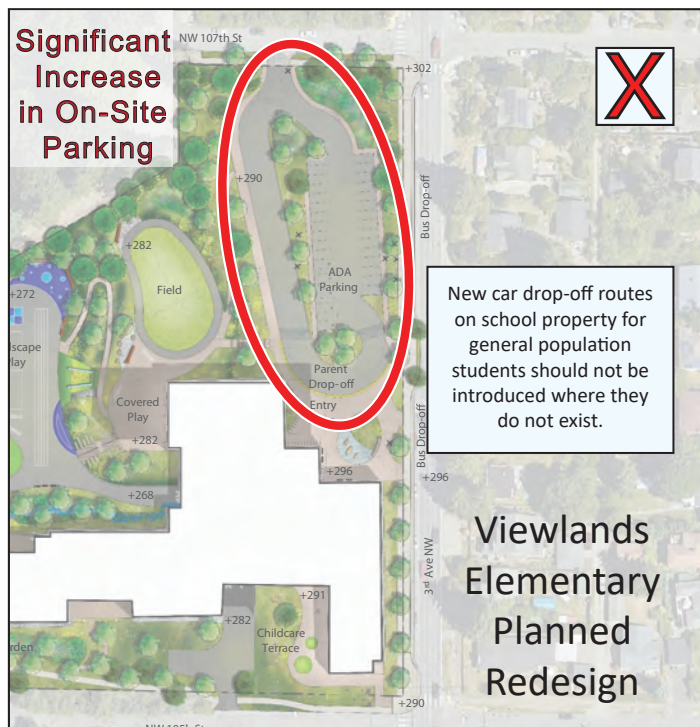
## 2. Mid-block entrances should be avoided.

- a. Existing schools with mid-block entrances have long-standing problems with parents crossing unsafely.
- a. A mid-block entrance could be acceptable only if there is an existing immediately adjacent mid-block controlled stop sign with excellent visibility or a stop light with a pedestrian signal.



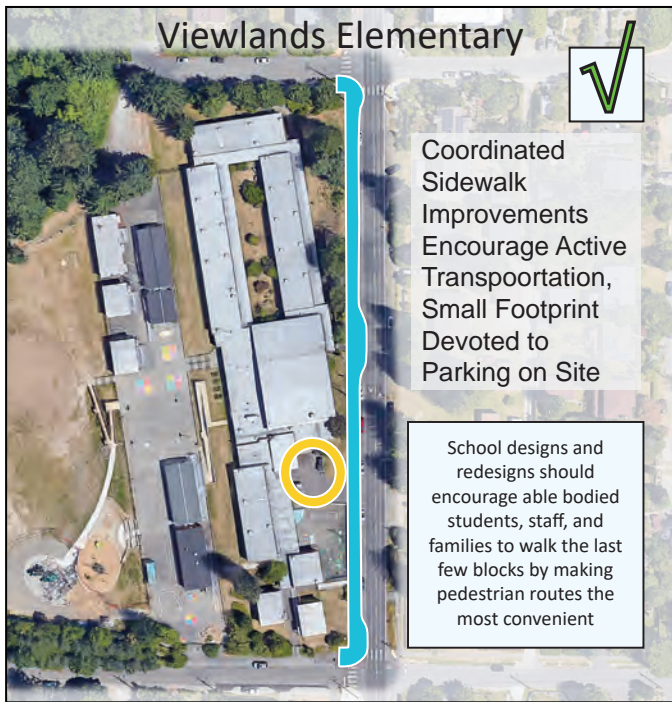
## Allocate space to education and community, not private car infrastructure.

New car drop-off routes for general population students should not be introduced where they do not currently exist. The best solution for parent drop-offs is to encourage a dispersed traffic pattern where parents park in the neighborhood and walk the final block with their kids.



Creating new private car infrastructure inequitably favors more affluent families while also setting up the expectation that families will be able to easily drive to and from the school at arrival and departure times. Given the logistics of moving many children at the same time this is rarely true. Importantly, it makes more visible the gap between those who can afford to drive their kids to school and those who cannot, increasing and reinforcing the gap that exists between disparate groups. And it reinforces a sedentary, car-oriented lifestyle during the period in children's lives when they are acquiring life-long habits.

Schools with existing dedicated drop-off routes report that managing the drop-off area is staff intensive and parents behave in unruly ways that cause traffic jams and injuries. The highest number of student traffic injuries perennially occur inside parking lots. There have also been incidents of parents driving into teachers who were directing traffic.

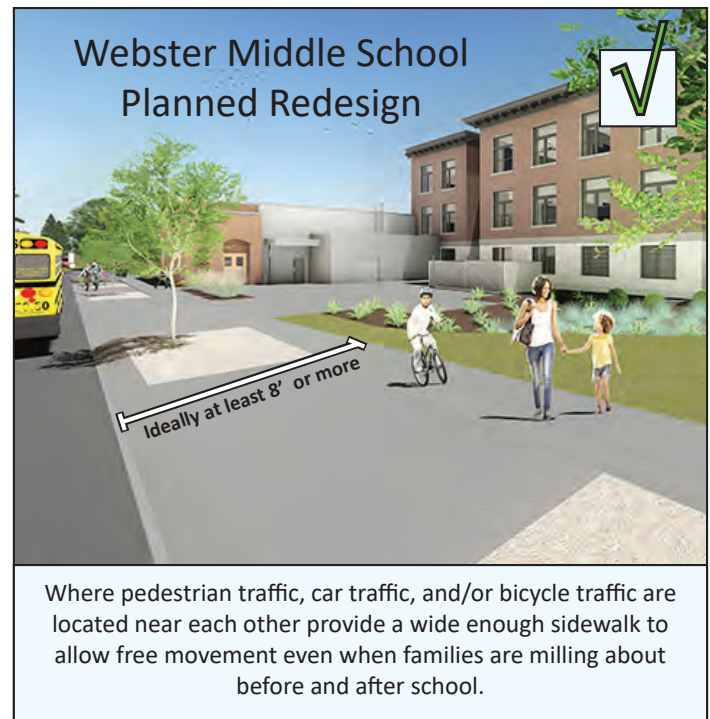


1. School designs and redesigns should encourage able bodied students, staff, and families to walk the last few blocks by making the pedestrian routes the most convenient way to access the school.
2. **New car drop-off routes on school property for general population students should not be introduced where they do not currently exist.**
  - a. Car drop-off routes require allocating space away from education and community uses to facilitate private car operation.
  - b. Car drop-off routes generate the highest number of student traffic injuries.
  - c. Car drop-off routes require intensive staff oversight.

## Pedestrian routes should not be crossed by car traffic

**Pedestrian routes should be easily accessible and convenient.** We should anticipate that people will walk in generally straight lines and cut across car circulation routes if pedestrian routes are not convenient.

1. Parking lot/drop-off entrances should not cross main pedestrian routes.
2. Bicycle routes should not cross main pedestrian routes.
3. Pedestrian routes should allow people to travel the shortest route possible.
4. Where pedestrian traffic, car traffic, and/or bicycle traffic are located near each other provide a wide enough sidewalk to allow free movement even when families are milling about before and after school.





## Preschool drop-off areas should be safe and convenient for all users.

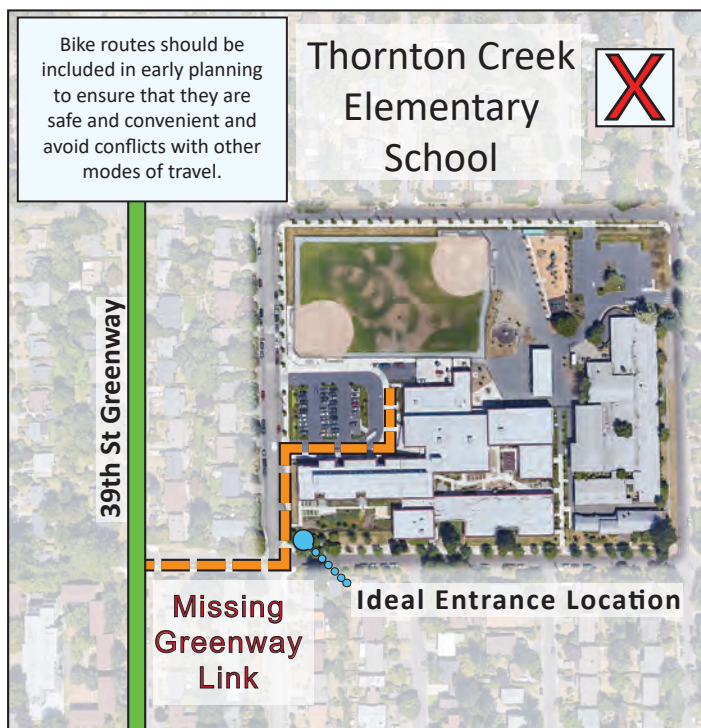
Pre-school families use all modes of transportation.

1. Plan pedestrian and bike routes for pre-school drop-off.
2. Car circulation, including parking lot access, should not cross pedestrian and bicycle access routes.



## Bicycle Access Should Be Convenient

1. Bike routes should be included in early planning to ensure that they are safe and convenient and avoid conflicts with other modes of travel.
2. Bike routes should not cross service paths or playgrounds.
3. Bicycle parking should be located in a convenient place near the main student entrance.
4. Bicycle parking should be located under cover, secure inside the school perimeter, and where there will be eyes on it during the day.
5. Catch basin grates and other similar items should be selected and located with bike access in mind to avoid injuries.





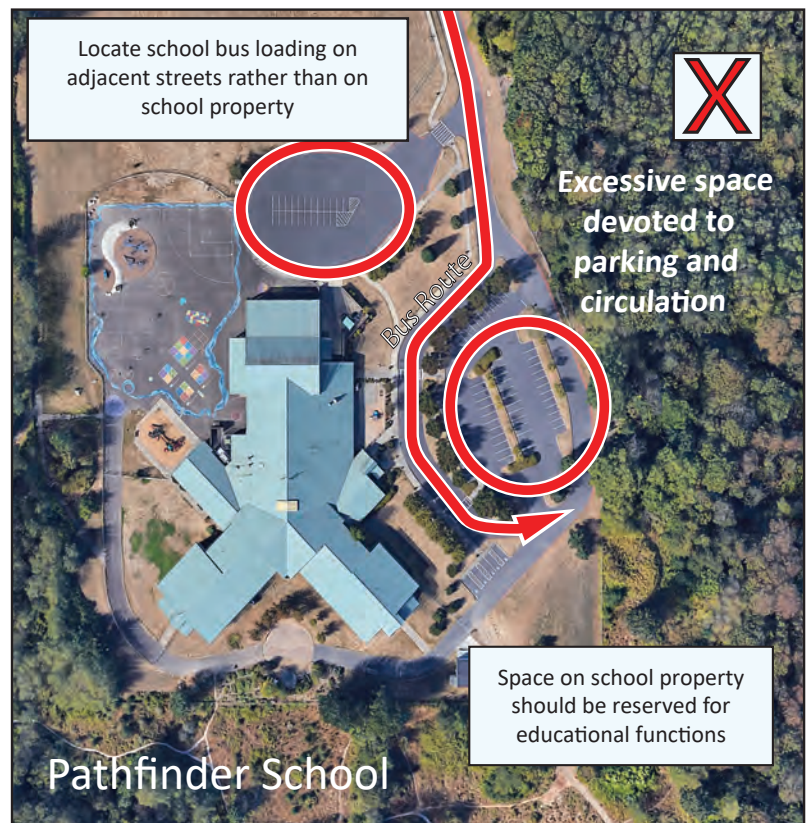
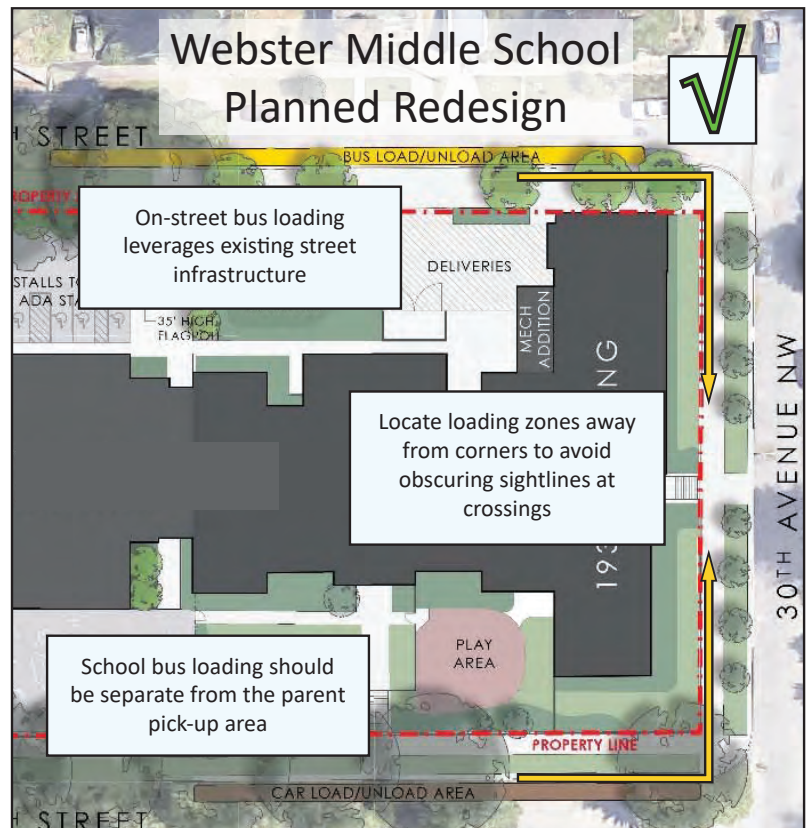
# School Bus Loading and Unloading

## 1. Locate school bus loading on adjacent streets rather than on school property.

- Space on school property should be reserved for educational functions.
- The presence of school buses slows traffic and makes drivers more aware of school bell times - it is more effective than school zone signs and blinking beacons.
- On-street bus loading leverages existing street infrastructure and avoids the need to pay for additional circulation infrastructure.
- On-street bus loading currently requires a departure. These departures are habitually granted. The costs of the departure are lower than the cost of constructing additional driveways and the opportunity cost of permanently allocating scarce real estate to bus circulation. SPS and the School Traffic Safety Committee will continue working with SDCI to pursue code changes that would allow on-street bus loading without needing a departure.

## 2. Location of school bus loading:

- School bus loading should be separate from the parent pick-up area.
- Locate loading zones away from corners to avoid obscuring sightlines where kids cross.
- Locate bus loading/unloading where it is easily accessed and observed from the school building.



# Medically Fragile and Special Needs Students

Loading and unloading for medically fragile and special needs students should be separated from general parent pickup and general school bus loading. Administrators at Green Lake Elementary report that there were frequent unintentional conflicts between medically fragile students and rambunctious kids after school until the school circulation pattern was revised to separate these groups at pickup time. Generally space at public school sites should not be allocated to private car circulation, but medically fragile and special needs students are an exception. These students and families have inherent challenges to equally accessing public space and should be given accommodations to ensure equal access.

1. **Locate medically fragile and special needs student loading/unloading at easily accessible locations from entrances, both in terms of distance and grade change.**
  - a. Many medically fragile students are dropped off in private vehicles. Provide an accessible vehicle loading/unloading area near the special needs bus loading area.
  - b. When site conditions make locating an accessible entrance on the street difficult, consider an onsite driveway loading area for special needs buses and parent vehicles.
  - c. Locate medically fragile and special needs student loading/unloading where it is easily observed from the school building.
  - d. Wheelchair vans drop off from either the side or the back depending on the model. Ensure that there is accessible drop-off space for either kind of van and that children dropped off from a rear-loading van will not have to travel through traffic to reach a curb-ramp.

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## Resources

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1. Goodyear, Sarah. "The Link Between Kids Who Walk or Bike to School and Concentration." [www.citylab.com/transportation/2013/02/kids-who-walk-or-bike-school-concentrate-better-study-shows/4585/](http://www.citylab.com/transportation/2013/02/kids-who-walk-or-bike-school-concentrate-better-study-shows/4585/) *CityLab*, February 5, 2013.