

Pros of Using Non-Mountable Curb

Safety

- Non-mountable curbs have the potential to redirect errant vehicles and limit vehicle encroachment.

Design

- Non-mountable curbs make it more difficult for a homeowner to extend or widen a drive entrance without proper permitting.
- Provides access control by causing the locations of curb cuts for driveways to be determined during subdivision design.
- The bottom of low-clearance vehicles is less likely to scrape the curb when entering driveways.
- From a streetscape design perspective, a non-mountable curb with greenspace gives a sense of space. Having these greenspace areas allows for separated pedestrian and cycle traffic. This can be tied to local businesses looking for people to walk and shop—it creates a more enjoyable space to be in.

Sustainability

- Where there is high foot traffic, bike path traffic, or long stretches of other impervious surfaces, non-mountable curbs prevent soil compaction from those types of traffic crossing over into the greenspace. Compaction prevents water from moving through the soil.
- Non-mountable curbs prevent the build-up of winter salts in the soil. If these salts get into the soil in greenspace areas, it will eventually lead to a decline in tree/plant health.
- Non-mountable curbs increase soil volume per planting, which is the most important aspect for healthy plantings in urban environments.
- Allows for more continuous soil volumes (therefore, there is more room for roots). For any planting, if you can increase continuous soil volumes, either in a raised planting bed or tree lawns in a sub-division, the project will be more sustainable—especially if the greenspace infrastructure is properly maintained.

Drainage

- Non-mountable curbs provide better drainage control. With mountable curbs, homeowners often illegally modify the curb line by paving it to meet the edge of the travel lane, and then install a small pipe to allow drainage. These small pipes often clog, causing water to pond, which creates icing in the winter and stagnant water in warmer months. The pipes and the pavement above it often fail, causing extra service calls to the city engineers office.
- Non-mountable curbs can be used in combination with specialized soils that provide long term nutrients and good drainage. (Specialized soils would need to be used instead of construction soils, which are typically sub-soil with poor nutrients and drainage).
- If the planting beds are designed to bring in stormwater, you can increase stormwater-soil infiltration and percolation rates. This will prevent storm runoff from entering the storm sewer system. This is the number one reason we plant trees in urban environments—for tree canopies to prevent or slow down stormwater from hitting the ground and entering storm drains. Non-mountable curbs allow for a higher volume of stormwater runoff to enter the greenspace during a rain event, if the greenspace is designed to accept stormwater runoff.

Maintenance

- Replacement of pavement adjacent to non-mountable curbs is likely to be less expensive. To keep pavement flush with the edge of mountable curbs, more milling of pavement is required, which increases costs.

Cons of Using Non-Mountable Curb

Safety

- Non-mountable curbs are a potential tripping and falling hazard for pedestrians.

Design

- Creates parking issues, as most drivers avoid parking close to the non-mountable curb to avoid vehicle damage.
- Non-mountable curbs take up more space, especially when trying to fit in furnishings, signage, etc. into the right-of-way. This can be worked out in the design phase, but it takes more time and resources.
- Knowledge is required to select the best species for the greenspace at both the design and local level, as roots for some tree species are more invasive than others, which will create a maintenance issue in the future.
- Overall loss of livability in smaller lot, dense R1B subdivisions.
- It can be challenging for developers to meet maximum slope requirements when building pads are significantly higher than the curb line. This can lead to driveways being much steeper than desired.

Cost

- Added cost to the developer during subdivision construction and to the home builder when installing the driveway.

Construction

- It is harder to maintain a smooth curb flowline when cutting the curb. Additionally, raw aggregate can be exposed when making cuts in the curb.
- Non-mountable curbs require additional inspections because of the curb cuts. The County Highway Department estimates an average of two additional site visits per driveway cut.
- Non-mountable curbs are very hard to re-locate. When new drive entrances are constructed or drive entrances are relocated, non-mountable curbs have to be fully removed and rebuilt, which requires a substantial amount of material, time, and money.

Maintenance

- Potential added maintenance cost to the county caused by curb strikes that leave damage.
- Mountable curbs in urban sites allow for maintenance vehicles to pull out of the way from other traffic easily and quickly. When non-mountable curbs are installed, it is not as easy for maintenance vehicles to pull out of the way quickly.

Notes

- Run off the road crashes, which are the most dangerous to pedestrians, are not common in county subdivisions. Non-mountable curbs help to protect against this crash type, but with the small number of run off the road crashes, there is not much safety benefit to this.
- Parking issues are the source of most of the concerns received by the County Highway Department, with speeding in county subdivisions also being a prevalent issue.
- The use of non-mountable curbs gives the most benefit in locations where sidewalks or trails abut the curb; on internal collector streets without driveway connections, streets with restricted parking, streets with trees, and locations of platted No Vehicular Access.