



IMPLEMENTATION SUMMARY

Questions?

Contact research.dot@state.mn.us.

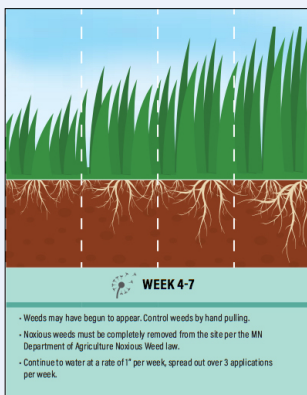
Technical Liaison:

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Principal Investigator:

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LRRB COST:
\$42,978



A two-page flyer includes clear graphic presentations and text about caring for new turf after installation.



Putting Research Into Practice: Boulevard Turfgrass Guides Promote Successful Installations

What Was the Need?

The grassy areas adjacent to curbs of Minnesota’s urban roadways—known as boulevards—are most often planted with turfgrasses. These areas provide a buffer space from the roadway, serving as areas for snow removed from roads and sidewalks, natural infiltration for rain and runoff, and attractive green space. Well-established turfgrass also prevents weed growth.

However, the curbside is a challenging place for grass to grow. Sun, drought, foot traffic and especially salt from winter maintenance create a harsh environment for turfgrasses. Across Minnesota, local agencies have noted that maintaining successful boulevard turfgrass installations after road construction projects was an ongoing challenge, requiring much time, effort and expense.

Research into turfgrasses that are resilient to the state’s harsh conditions, including work by the University of Minnesota’s Turfgrass Science group, has led to many [discoveries and advances](#). However, frequently research results take time to reach practitioners in the field. The Local Road Research Board (LRRB), supported by investigators and an advisory panel, sought to bring current best practices to all stakeholders involved in establishing boulevard turfgrass after completion of construction projects.

Investigators developed a set of tools that identify best practices for establishing and maintaining new boulevard turfgrass after road construction projects. Guides and a video provide step-by-step instructions for soil requirements, seeding or sodding, watering, fertilizing and mowing.

What Was Our Goal?

The LRRB sought to incorporate both established best practices and new research findings about turfgrass installation into a set of informational tools. Easy-to-use guides would need to be accessible to everyone involved in establishing boulevard turfgrass after construction projects, from agencies and contractors to residents.

What Did We Do?

Investigators collaborated with local government practitioners, researchers from the University of Minnesota’s Turfgrass Science group, members of the MnDOT Office of Environmental Services and other experts in the field to identify best practices information about turfgrass species. Investigators learned, for example, that Minnesota turfgrass research revealed that Kentucky bluegrass is not as tolerant of salt as turf mixes primarily composed of fine fescues. A salt-tolerant seed mix—MNST-12—that incorporates several fine fescue species is available for sod production, but is not yet standard in MnDOT guidelines.

Detailed information was also collected about proper soil composition and site preparation, timing of seeding or sodding, watering methods, fertilizing, weed control and mowing techniques that together promote successful turfgrass establishment.

While gathering this material, investigators also considered appropriate formats for delivering this information to various stakeholders, such as technical details for designers and contractors, and general care information for residents, who will care for the boulevard turf once it is established.

“One of the most challenging items of road construction projects can be successfully establishing boulevard turfgrasses. The new guidebook, instructional handout and video provide designers, contractors and homeowners with best practices for successfully establishing boulevard grass.”

—Paul Oehme,
Public Works Director,
City of Lakeville

“Our progress on the set of guidance tools was wholly validated late in the process when a Technical Advisory Panel member, who was also an active practitioner, said, ‘I wish I’d had this information earlier.’”

—Michael Marti,
Senior Principal,
SRF Consulting Group,
Inc.

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The new LRRB-funded design and maintenance guides will help county road departments ensure that new boulevard turfgrass installed after roadway construction projects will thrive.

Three informational tools were developed. An easy-to-access, two-page [flyer](#) shows residents how to establish and care for new turf plantings near their homes. A short [YouTube video](#) also created for residents clearly and quickly illustrates how homeowners can care for newly planted boulevard turfgrass after road construction projects are completed. A [more detailed guide](#) provides agencies and contractors with design, construction and maintenance practices along with resources for more information.

What Was the Impact?

The new suite of informational tools promotes successful boulevard turfgrass installations to all stakeholders:

- **Best Practices for Boulevard Turf Design and Maintenance**, the technical guide directed to agencies and contractors, begins with a discussion of design phase considerations. Topics include seed versus sod, salt tolerance of turf species, and optimum planting times for seed and for sod installation. The guide also presents crucial information to agencies and contractors about soil preparation and placement, including composition of topsoil and soil testing for pH and nutrients. Seeding installation guidance describes mulch cover. Fertilizer recommendations are followed by watering regimens, weed control and mowing practices. Details about warranties, communication and turf restoration protocols are also provided along with additional resources and links to the other tools developed through this project.
- **Boulevard Turf Establishment—Best Practices**, which will be distributed to residents, is a week-by-week timeline for establishing turf, with detailed steps for care and maintenance.
- **Growing Green Grass Along Your Street: How to Maintain Residential Boulevard Turfgrass**, the short video for residents, presents easy-to-follow information about watering, mowing and fertilizing. Also included is guidance for applying weed or pest control products.

What’s Next?

County agencies may use these informational products as best practices guides for highway construction contractors, designers and residents with the aim of successfully establishing and maintaining new boulevard turfgrass wherever it is needed. The YouTube video is currently available online. The guides for contractors, designers and residents will be available on the LRRB website.

This Implementation Summary pertains to Report 2019RIC09, “Best Practices for Boulevard Turf Design and Maintenance,” and Report 2019RIC09H, “From Seed to Turf” and “Boulevard Turf Establishment—Best Practices,” published May 2019. The full report can be accessed at mndot.gov/research/reports/2019/2019RIC09.pdf.