



STAFF REPORT

DATE: June 11, 2019

DISCUSSION

AGENDA ITEM: City Curb and Gutter Standards and Use (Ribbon Curb vs. Highback Curb)

SUBMITTED BY: Jack Griffin, City Engineer

REVIEWED BY: Kristina Handt, City Administrator

ISSUE BEFORE COUNCIL:

Does the Council have any questions about the City standards for curb type along city streets? Should the City review alternative curb types/placement policy?

BACKGROUND AND PROPOSAL DETAILS/ANALYSIS:

Concrete curb and gutter is a design tool used to manage stormwater runoff along city streets and the public right-of-way. The style and type of curb is chosen by the City Engineer based on the drainage characteristics and requirements for each project.

Highback curb is used when the adjacent areas are higher than the street and therefore drain onto the paved surfaces of the roadway. The highback curb is used to manage storm water runoff that accumulates on the city street. Runoff is captured on the street and directed to the curb lines by the crown of the road. Once in the curb line a longitudinal grade is designed along the street to drain the curbs to selected areas (low points) where the runoff is discharged into a storm water ditch, pond or infiltration area. Catch basins are installed periodically along the street to keep water from causing vehicles to hydroplane during large rain events.

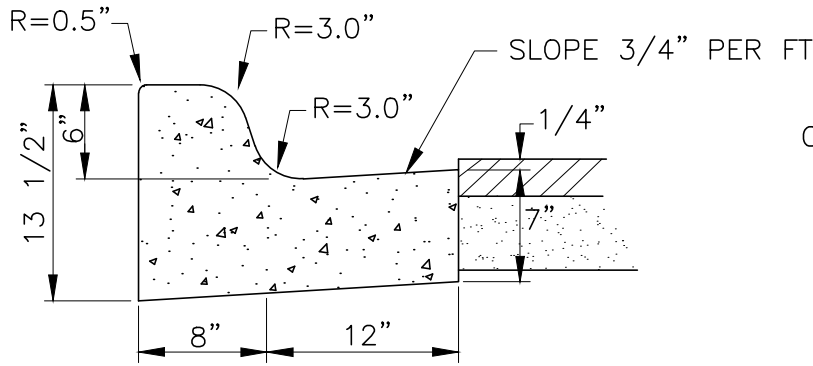
Ribbon curb is used when the adjacent areas are lower than the street and therefore the street runoff may be allowed to follow the crown of the road directly off the entire paved surface. When ribbon curb is used, street and right-of-way runoff is managed by a system of ditches that run along the roadway. The ditches are designed with a longitudinal grade to drain the runoff to selected areas (low points) where the runoff is discharged into a storm water ditch, pond or infiltration area. Ditches often require more use of the public right-of-way and can also be expensive to construct and maintain.

Highback curb can also be used when the adjacent areas are lower than the street but the runoff must be captured and directed to a storm water pond or infiltration area to treat the runoff prior to discharging to a lake, river or stream.

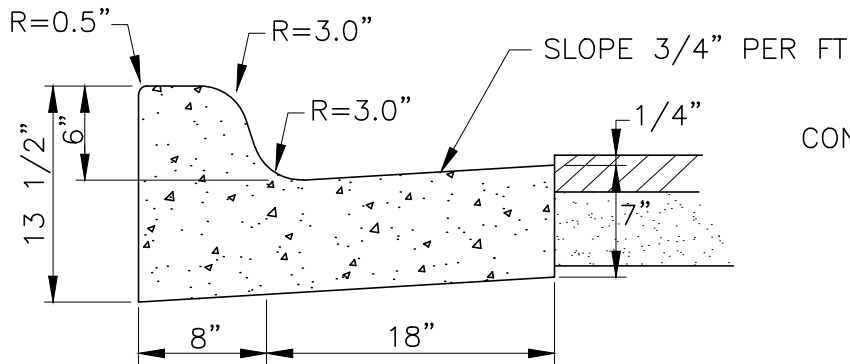
Highback curb comes in multiple designs including B6 (6-inches high), B4 (4-inches high), and surmountable. Surmountable curb is used in new subdivisions since the driveway locations are not set at the time of street construction.

ATTACHMENTS:

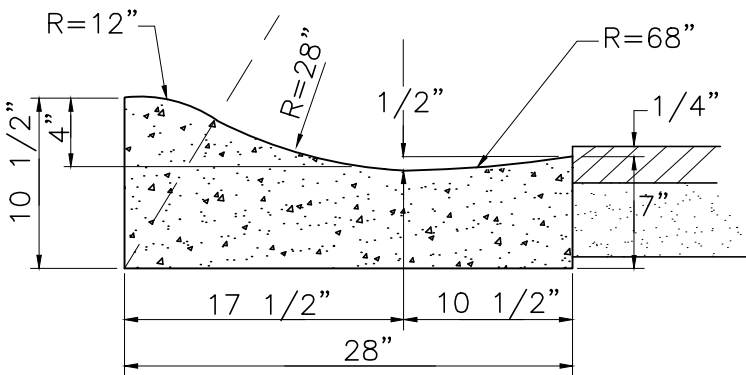
- City Standard Detail 501. Concrete Curb and Gutter.
- City Standard Detail 801. Typical Local Residential Street Section.
- City Standard Detail 804. Typical Local Residential Rural Street Section.



MnDOT B612
CONCRETE CURB AND GUTTER



MnDOT B618
CONCRETE CURB AND GUTTER



SURMOUNTABLE
CONCRETE CURB AND GUTTER

NOTE:
CONSTRUCT B618 CURB & GUTTER AT
INTERSECTION RADII FROM P.C. TO P.T. PROVIDE
10-FOOT TRANSITION FROM SURMOUNTABLE
CURB & GUTTER TO B618 CURB & GUTTER AT
INTERSECTIONS AND CATCH BASINS.

CONCRETE CURB & GUTTER

MARCH 2017

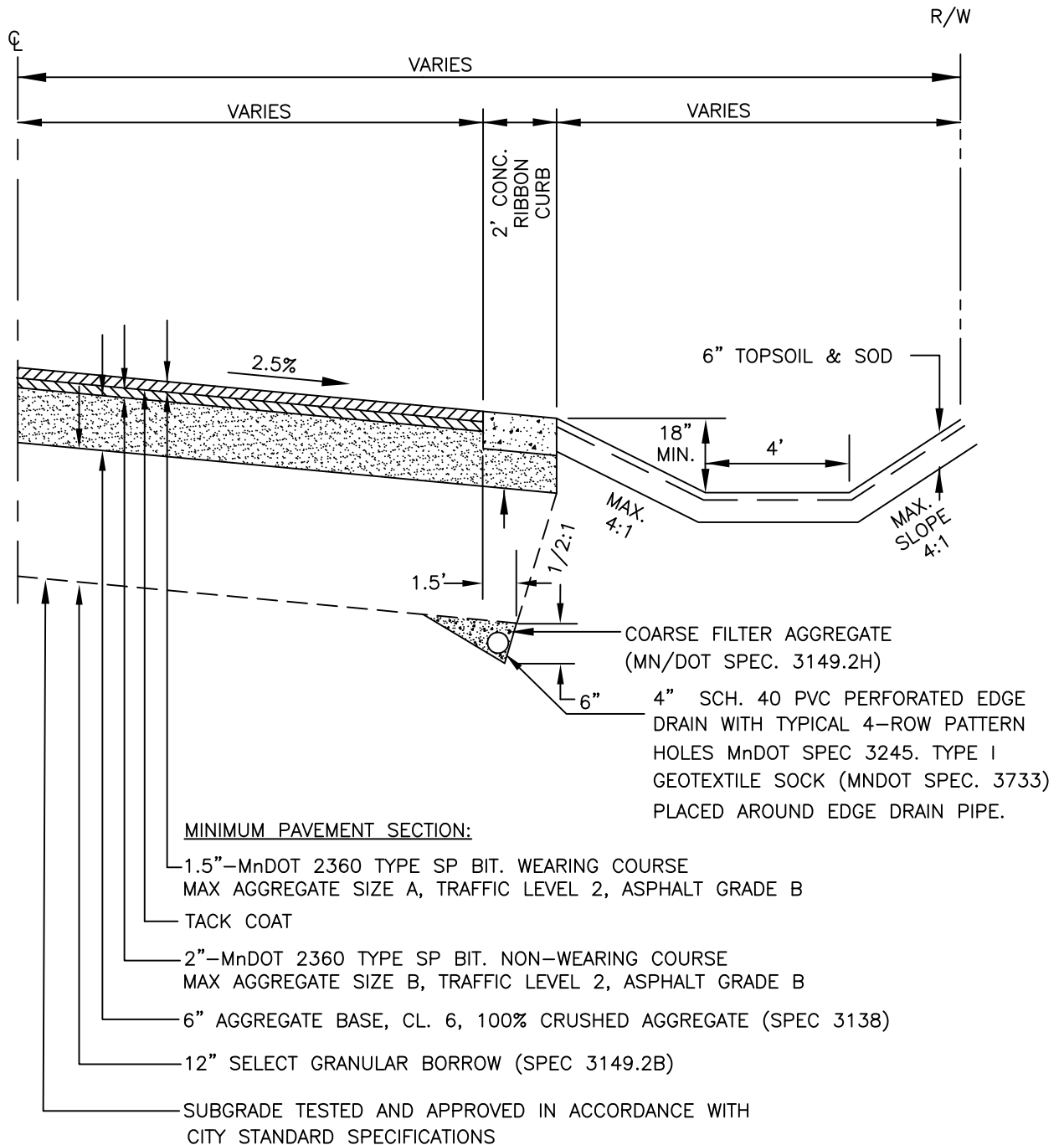


CITY OF LAKE ELMO

STANDARD DRAWING NO.

501

LAKE ELMO



NOTE:

1. PLACE TOPSOIL AND SOD IMMEDIATELY AFTER SHOULDERING
2. MINIMUM DITCH GRADE SHALL BE 2%
3. 4" SCH. 40 PVC PERFORATED EDGE DRAIN REQUIRED AT ALL LOW POINTS.
EDGE DRAIN DESIGN PER APPROVAL OF CITY ENGINEER

TYPICAL LOCAL RESIDENTIAL RURAL STREET SECTION (MINIMUM 7-TON DESIGN)

MARCH 2017



CITY OF LAKE ELMO

STANDARD DRAWING NO.

804

LAKE ELMO