

**SUMTER COUNTY BOARD OF COMMISSIONERS
EXECUTIVE SUMMARY**

SUBJECT: Ordinance to Amend Sumter County Land Development Code – Appendix 13-D to Allow Alternative Roadway Curb and Gutter Section (Staff recommends approval).

REQUESTED ACTION: Approve Ordinance

Work Session (Report Only) **DATE OF MEETING:** 10/26/2010
 Regular Meeting Special Meeting

CONTRACT: N/A Vendor/Entity: _____
Effective Date: _____ Termination Date: _____
Managing Division / Dept: Planning

BUDGET IMPACT: _____
 Annual **FUNDING SOURCE:** _____
 Capital **EXPENDITURE ACCOUNT:** _____
 N/A

HISTORY/FACTS/ISSUES:

On August 24, 2010, the County received a request from Farner-Barley & Associates, Inc. for the County to consider allowing for a revised curb and gutter section on roadways. See attached letter.

Currently, the County’s Land Development Code requires the design of roadway sections, unless otherwise provided for in the Land Development Code, to be consistent with the “Manual of Uniform Minimum Standards for Design, Construction and Maintenance for Streets and Highways” published by the Florida Department of Transportation (FDOT) (aka “Florida Greenbook”). In addition, the County utilizes the FDOT design standards for roadway design.

Based on these FDOT standards, the typical cross-section of curb & gutters for roadways includes a 24” base. See attached FDOT 2010 Design Standards for Curb & Gutter – Type “F”. Farner-Barley requests that the minimum base for the curb & gutter be reduced from 24” to 18”. According to Farner-Barley the benefit of reducing the base to 18” is significantly decreased cost of construction of the roadways. Farner-Barley provided an email from the City of Jacksonville, Florida attesting to this cost saving.

The request to reduce the curb & gutter base was reviewed by Public Works and Planning & Development. The primary issues identified for the reduction in curb & gutter base width are the potential reduction in ability to carry stormwater and the potential need to re-design or design new stormwater systems to mitigate the change in stormwater flow. Also, the transition between previously permitted and constructed roadway sections with a 24” curb & gutter base to an adjacent new roadway section with a 18” curb & gutter base would need to be designed to mitigate the discrepancy. The issues identified by Public Works and Planning & Development could be resolved with the appropriate engineered design of the roadway section and related stormwater infrastructure.

The ordinance to allow for the revised curb & gutter section is attached. The change is highlighted in the ordinance as **bolded and underlined text**.

The ordinance was reviewed by the Zoning & Adjustment Board on October 18, 2010, and recommended approval.

SUMTER COUNTY ORDINANCE 2010-__

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF SUMTER COUNTY, FLORIDA; AMENDING THE SUMTER COUNTY CODE TO ALLOW FOR ALTERNATIVE CURB & GUTTER DESIGN, PROVIDING FOR SEVERABILITY; AND PROVIDING FOR AN EFFECTIVE DATE.

WHEREAS, the Board of County Commissioners of Sumter County, Florida have determined that practical amendments to the curb and gutter requirements of the Sumter County Code will have a beneficial legal, economic and logistical effects.

NOW, THEREFORE, BE IT ORDAINED by the Board of County Commissioners of Sumter County, Florida, that Chapter 13, Appendix 13D is hereby amended to read as follows:

SECTION 1: Section D.2.1.9 of Appendix 13D is hereby stricken in its entirety and replaced with the following language:

D.2.1.9 *Curb and gutter:*

- (a) Type. Standard FDOT Curb, FDOT curb and gutter, Miami Curb and gutter, and header curb allowed. **An alternative curb and gutter section may be allowed subject to approval by Sumter County Public Works.**
- (b) Material. Concrete shall have a minimum compressive strength of three thousand (3,000) psi, unless noted otherwise.
- (c) Testing. For concrete compressive strength.

SECTION 2. *Codification.* It is the intention of the Sumter County Board of County Commissioners that the provisions of this Ordinance shall become and be made a part of the Sumter County Code and the word "ordinance" may be changed to "section," "article," or other appropriate word or phrase and the sections of this Ordinance may be renumbered or relettered to accomplish such intention.

SECTION 3. *Severability.* If any provision of this Ordinance or the application thereof to any person or circumstances is held invalid, the invalidity shall not effect other provisions or applications of the Ordinance which can be given the effect without the invalid provision or application, and to this end, the provision of this act are declared severable.

SECTION 4. *Effective Date.* This Ordinance shall take effect on November 1, 2010.

ATTEST: GLORIA HAYWARD
CLERK OF CIRCUIT COURT

SUMTER COUNTY, FLORIDA
BOARD OF COUNTY COMMISSIONERS

Deputy Clerk

By: Doug Gilpin
Chairman

(SEAL)
{00235624}



FARNER ENGINEERS ▲ SURVEYORS ▲ PLANNERS
BARLEY
AND ASSOCIATES, INC.

Via U.S. and e-mail

August 24, 2010

Mr. Bradley Arnold
SUMTER COUNTY ADMINISTRATOR
910 North Main Street
Bushnell, Florida 33513

RE: ROADWAY CURB AND GUTTER DESIGN SECTIONS

Dear Brad:

In an effort to create more cost efficiencies in our urban street sections within Sumter County and The Villages, we have researched the feasibility and cost effectiveness of a modified curb section that requires only 75% of the concrete material presently utilized in our standard Miami and "F" Curb Sections.

During our research and investigations, we contacted the City of Jacksonville/Duval County, Florida with regard to their standard Miami and "F" Curb Sections (See Attached), which are 18-inches wide at the base instead of the 24-inches we have historically used in Sumter County. The Manager of Paving and Drainage Design for the City of Jacksonville/Duval County stated that they have utilized this curb cross-section for over thirty five (35) years in all of their subdivision developments and have not experienced any failures or maintenance issues with this section. (See attached e-mail correspondence). When asked their reason for utilizing this modified section, he stated that it was for cost efficiencies in building roads.

Utilizing this modified curb section, a savings of \$2.20 per linear foot for all urban street section construction will be realized. When evaluating the remaining roads to be constructed at The Villages within Districts 9 and 10, the savings generated by this modified curb section would allow the construction of approximately 4 miles of roadways.

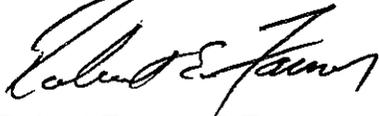
When considering the economic times that we live in, it is prudent and wise to consider alternative designs available that are sound from an engineering standpoint and that have been tested over time. Based upon the above we feel this design modification should be seriously considered as an approved standard for local subdivision streets within Sumter County and The Villages.

Mr. Bradley Arnold
Page Two
August 24, 2010

Should you have any questions concerning this matter, please feel free to contact me.

Sincerely,

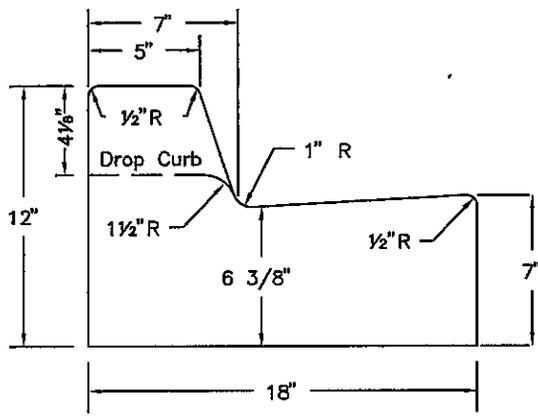
FARNER, BARLEY & ASSOCIATES, INC.



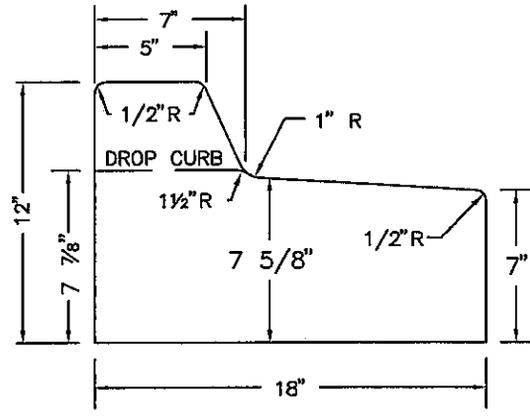
Robert Farner, P.E.
President
REF/km

Enclosures

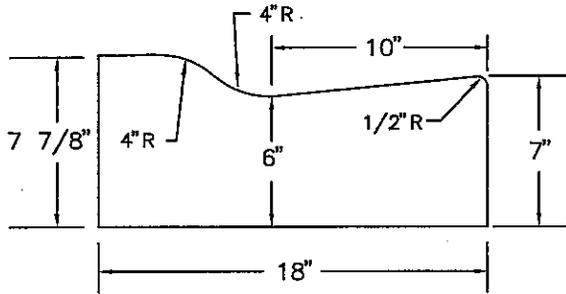
cc: Mr. Gary Moyer, The Villages of Lake-Sumter, Inc.



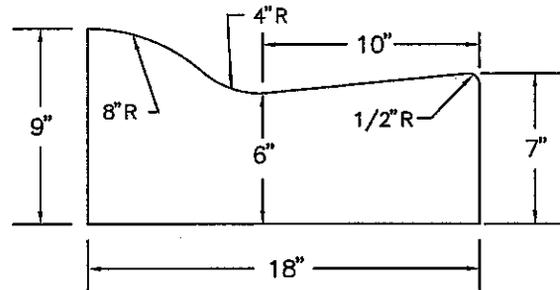
CITY STANDARD



MEDIAN CURB

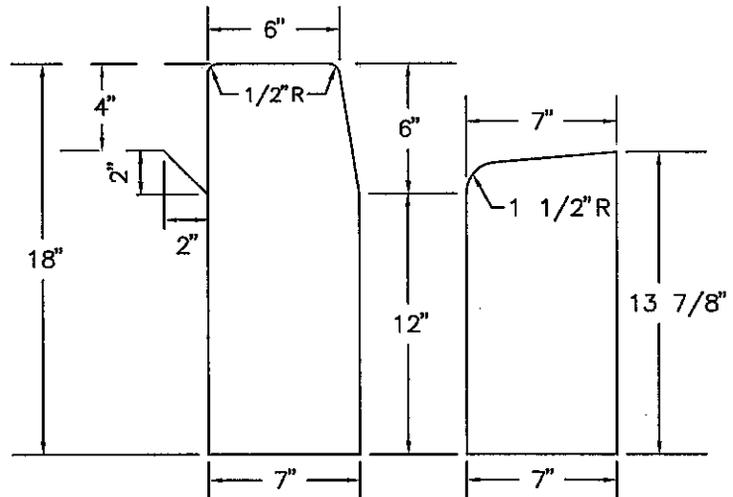


DROP CURB



MIAMI CURB

MONOLITHIC CURB
& SIDEWALK



HEADER, DROP,
& MONOLITHIC CURB

CONCRETE QUANTITIES

| | |
|--------------------|---------------------------|
| CITY STANDARD CURB | .0388889 CU. YD./LIN. FT. |
| STANDARD DROP CURB | .0322222 CU. YD./LIN. FT. |
| MEDIAN CURB | .0411111 CU. YD./LIN. FT. |
| MIAMI CURB | .0325926 CU. YD./LIN. FT. |
| HEADER CURB | .0314815 CU. YD./LIN. FT. |
| HEADER DROP CURB | .0244444 CU. YD./LIN. FT. |

CITY STANDARD
CURB TEMPLATES

CITY OF
JACKSONVILLE
STANDARD

N.T.S.

PLATE P-301

DATE DRAWN 11-07-72

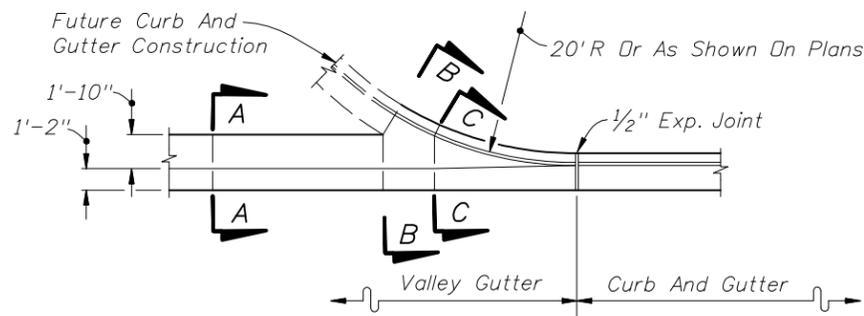
REVISED DATE 08-12-81

Bob Palmer

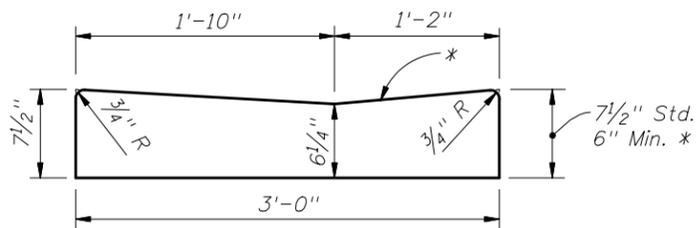
From: Hahn, David [HAHN@coj.net]
Sent: Wednesday, February 13, 2008 7:15 AM
To: Bob Palmer
Subject: RE: 18" Curb & Gutter Sections

The City of Jacksonville has been using curbing with the 12" gutter pan for over 35 years. The only time we use a different standard is when we have a project in State right of way and then we use the FDOT's standard curb and gutter. I have been working for the City for almost 16 years, first as a Design Project Manager, then as Manager of Construction Administration and now a Manager of Paving and Drainage Design. During my employment with the City I have repeatedly been involved with revising and updating our standard details and standard specifications. At no time have we seen any problems with our standard curb design or had any comments from our maintenance department that would indicate there are problems with our curb and gutter standards.

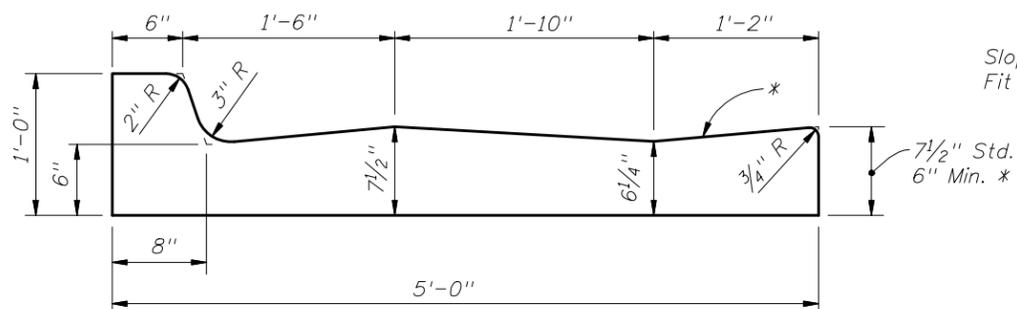
David D. Hahn, P. E., Manager
Paving & Drainage Design Section
Department of Public Works
214 N. Hogan Street, 10th Floor
Jacksonville, FL 32202
(904) 255-8793



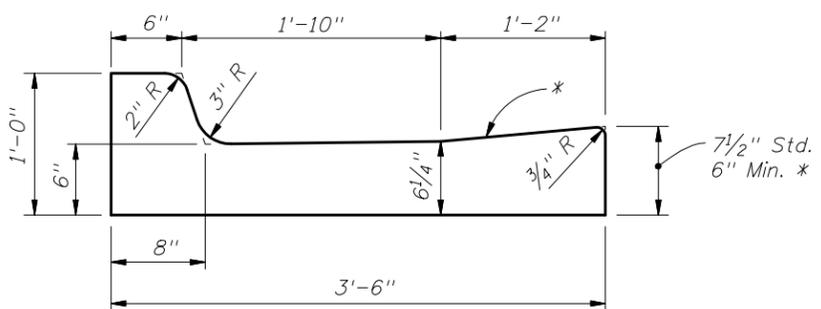
PLAN



SECTION AA



SECTION BB

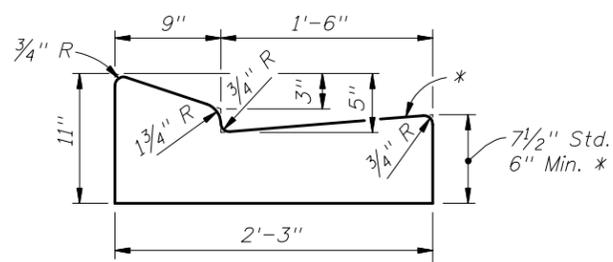


SECTION CC
VALLEY GUTTER

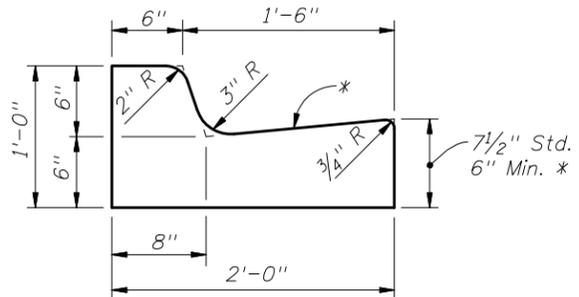
* When used on high side of roadways, the cross slope of the gutter shall match the cross slope of the adjacent pavement. The thickness of the lip shall be 6", unless otherwise shown on plans.

■ Rotate entire section so that gutter cross slope matches slope of adjacent circulating roadway pavement.

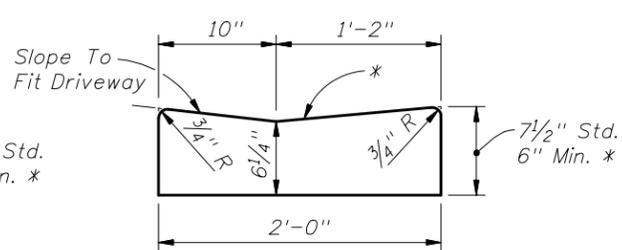
For use adjacent to concrete or flexible pavement. For details depicting usage adjacent to flexible pavement, see Sheet 2. Expansion joint, preformed joint filler and joint seal are required between curb & gutter and concrete pavement only, see Sheet 2.



TYPE E

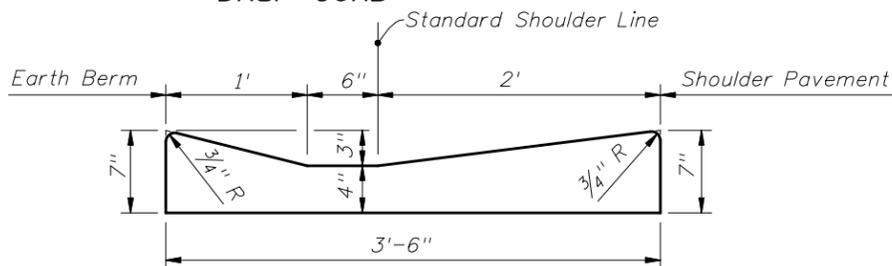


TYPE F

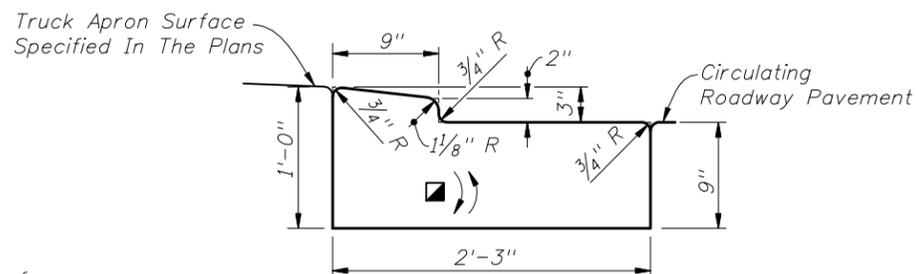


DROP CURB

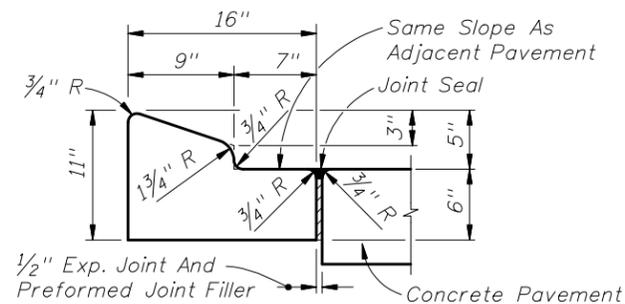
Note: To be paid for as parent curb.



SHOULDER GUTTER

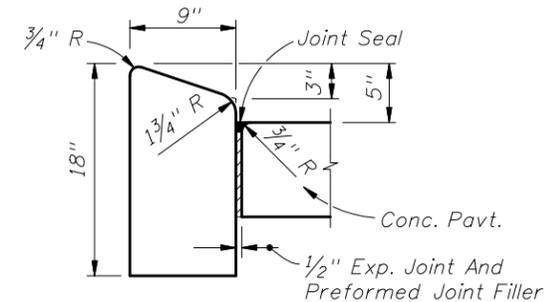


TRAFFIC BEARING SECTION FOR USE IN
ROUNDABOUT CENTRAL ISLAND CONSTRUCTION
TYPE RA

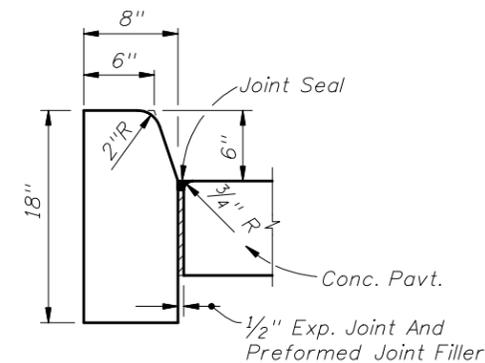


TYPE A

For details depicting usage adjacent to flexible pavement, see diagram right.



TYPE B



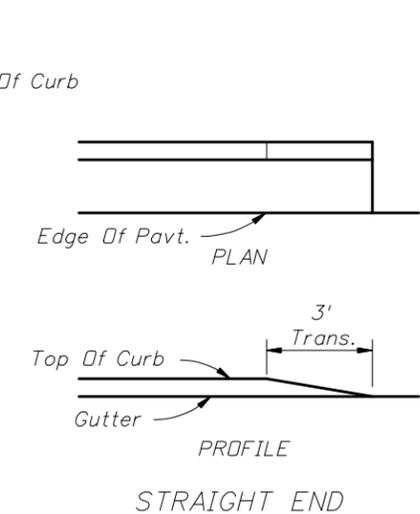
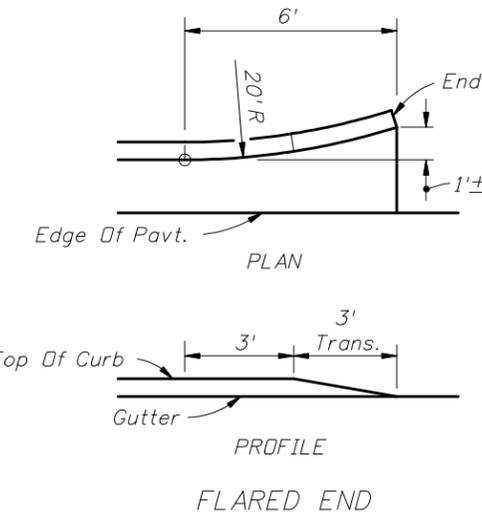
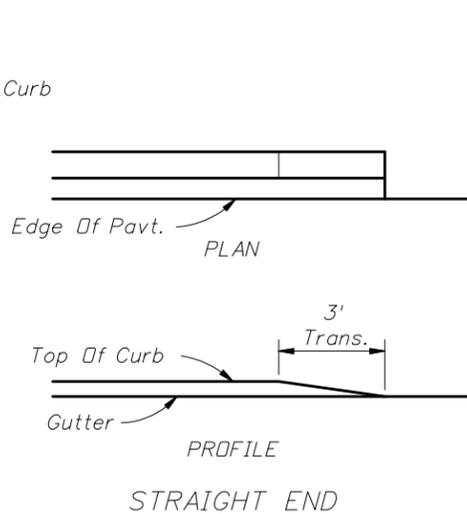
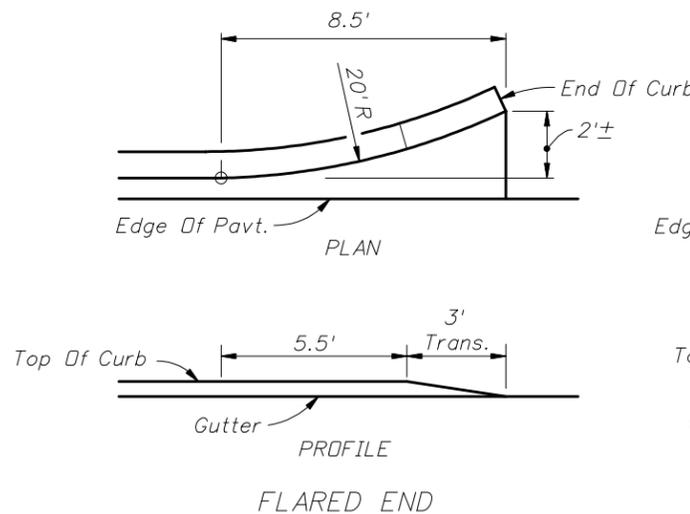
TYPE D

Note:

For use adjacent to concrete or flexible pavement, concrete shown. Expansion joint, preformed joint filler and joint seal are required between curbs and concrete pavement only, see Sheet 2.

CONCRETE CURB





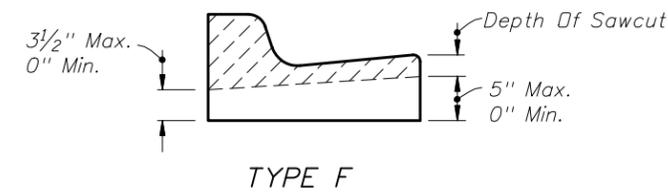
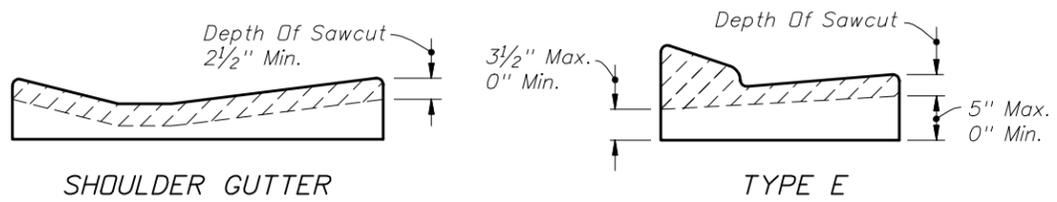
CURB TYPE A

STRAIGHT END

FLARED END

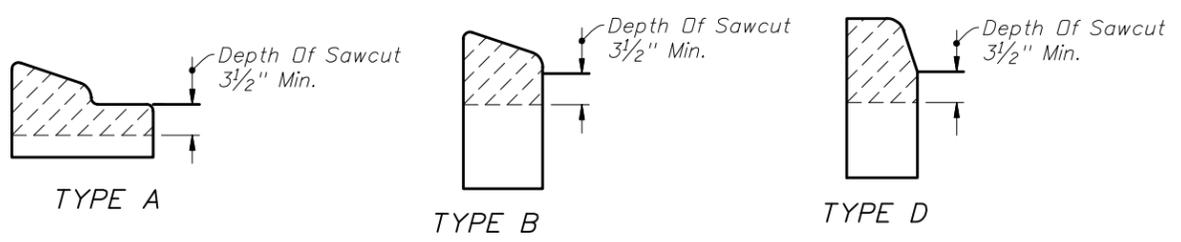
STRAIGHT END

CURB AND GUTTER ENDINGS



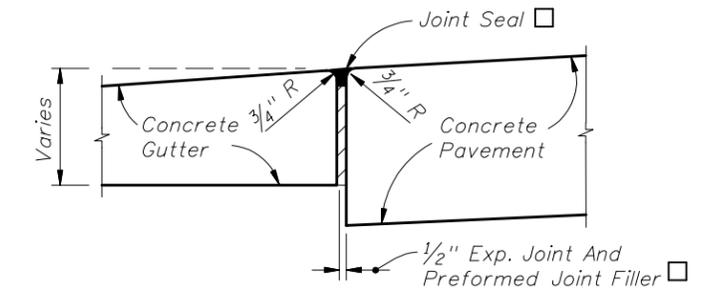
Sawcuts should be avoided within valley gutter and within curb and gutter endings.

CONTRACTION JOINT IN CURB AND GUTTER



△ Applies to both high and low sides of pavement, low side shown. Applies to shoulder gutter only where adjoining traffic lanes.

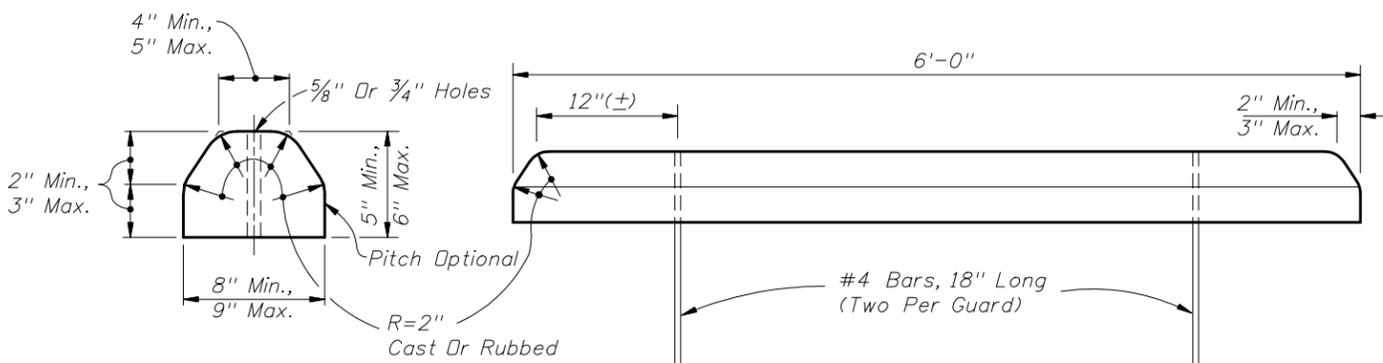
CURB AND GUTTER AND TYPE A CURB ADJACENT TO FLEXIBLE PAVEMENT



□ Applies to both high and low sides of pavement, low side shown.

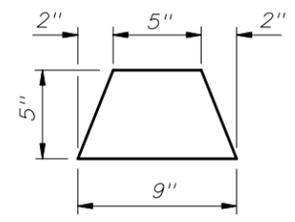
EXPANSION JOINT BETWEEN GUTTER AND CONCRETE PAVEMENT

CONTRACTION JOINT IN CURB



CONCRETE BUMPER GUARD

ASPHALTIC CONCRETE CURB



GENERAL NOTES

1. For curb, gutter and curb & gutter provide 1/8" - 1/4" contraction joints at 10' centers (max.). Contraction joints adjacent to concrete pavement on tangents and flat curves are to match the pavement joints, with intermediate joints not to exceed 10' centers. Curb, gutter and curb & gutter expansion joints shall be located in accordance with Section 520 of the Standard Specifications.
2. Ends of Curbs Types B and D shall transition from full to zero heights in 3'.

