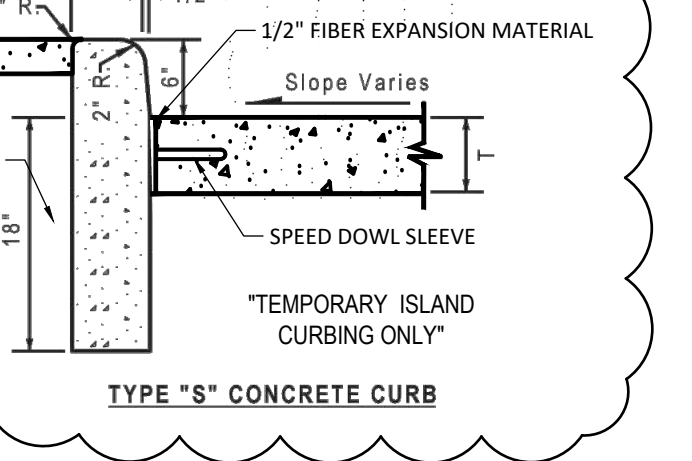
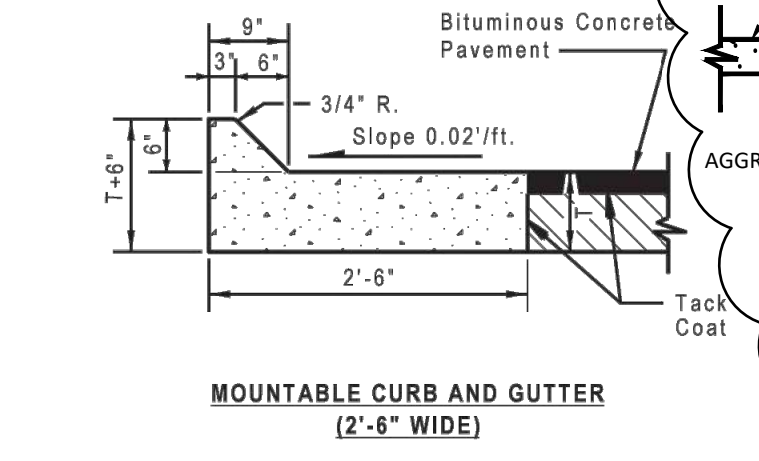
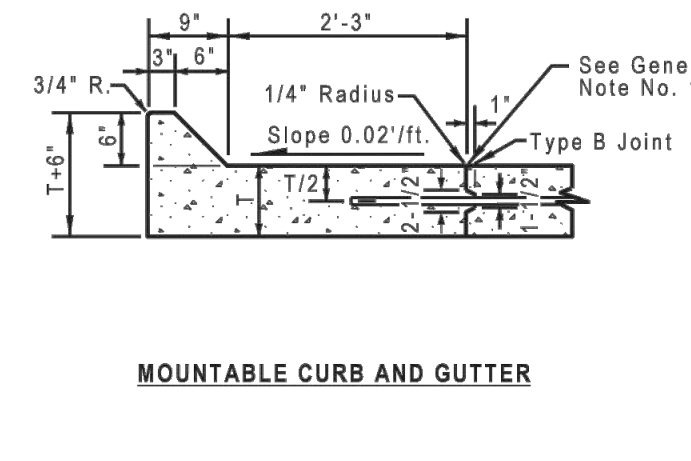
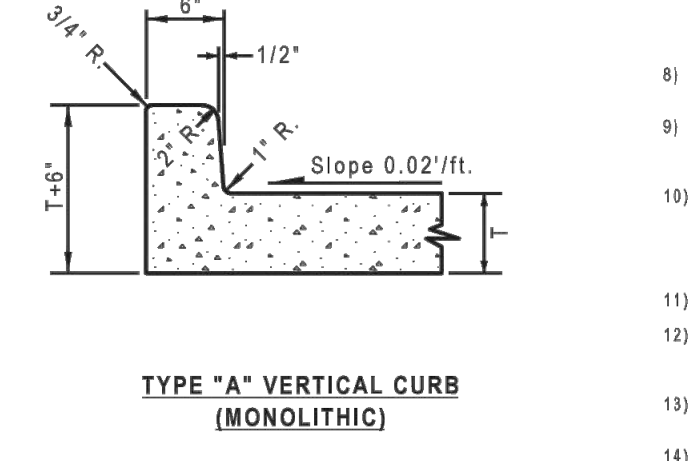
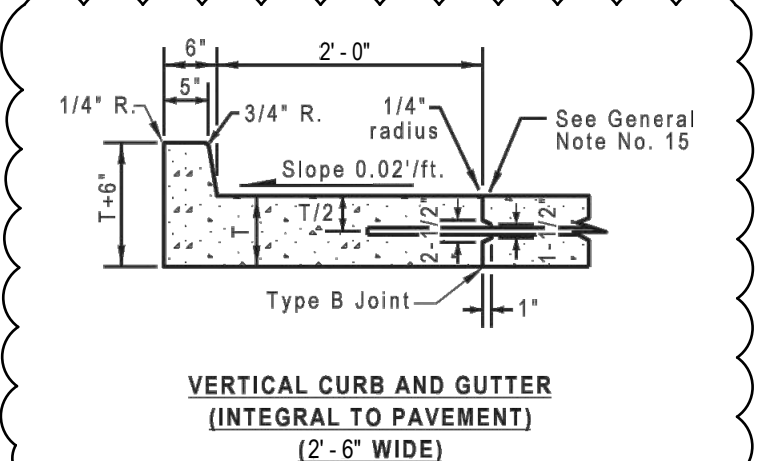
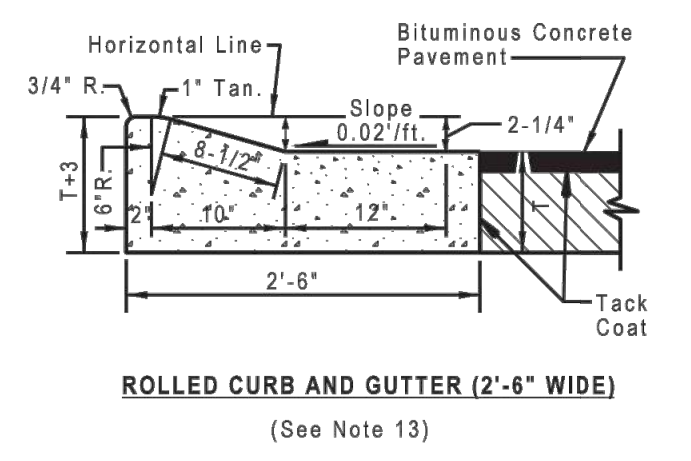
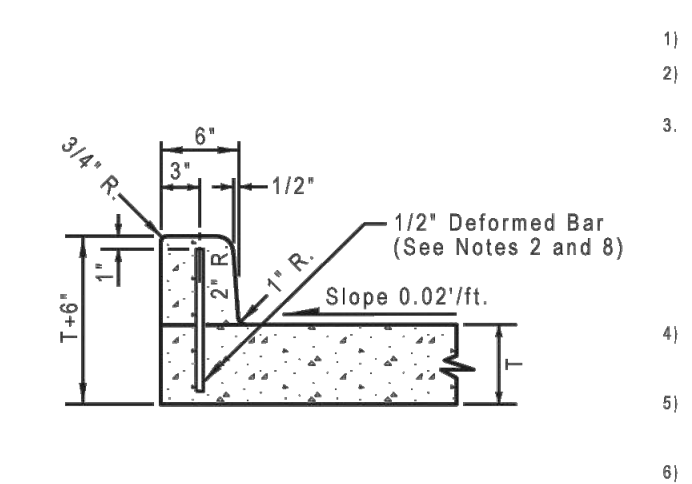
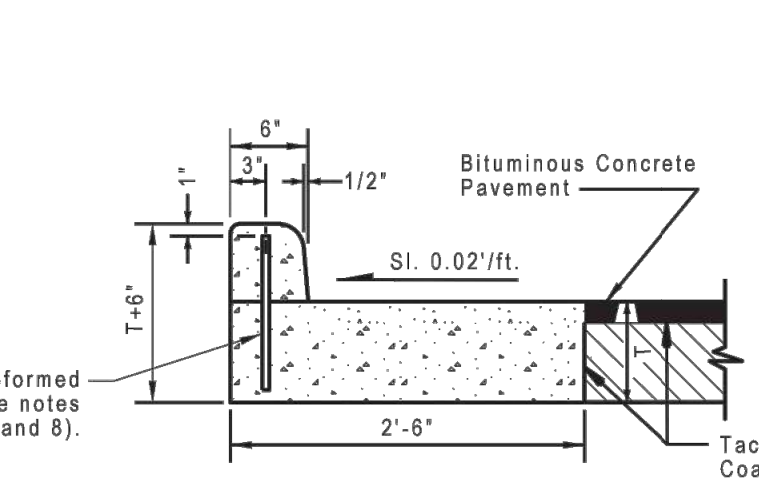
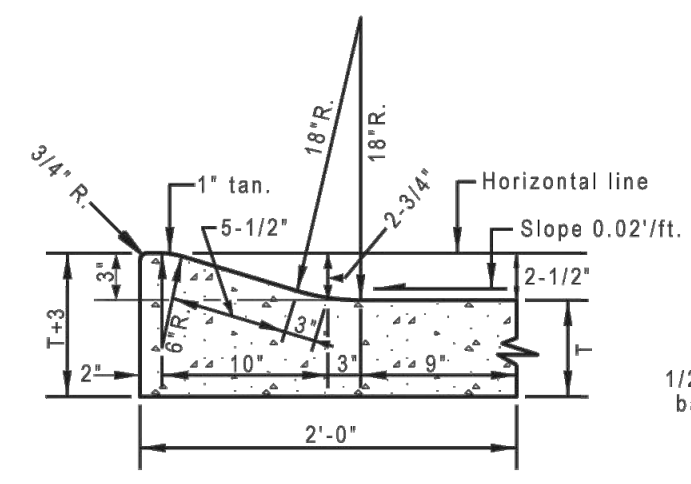


NEW	REVISIONS			
1-11-90	11-2-98	7-31-07	1-1-10	10-1-12



GENERAL NOTES

- Do not scale drawing, follow dimensions.
- Construction joint and tie bars may be omitted when curb is poured integral with pavement.
- Minimum thickness for pavement is:

Concrete pavement thickness (ft)	(ft)
All residential minor and local streets	6 in. 9 in.
Residential collector, residential major collector, all County and non-residential streets	7 in. 10-1/2 in.
All Arterial Streets	8 in. 12 in.
- Type "G" transverse joint is required for Arterial, County, non-residential and major collector streets. Use Type "C" transverse joint for all others.
- For subdivision or minor streets having 6 inch thick concrete pavement, 1/2 inch deformed bar may be used in lieu of 30 inch centers, shall be used for Type "B" longitudinal joints.
- Refer to pavement construction details for "Integral Vertical Curb and Concrete Pavement Typical Sections and Details", Standard Drawing C502.01 and "Integral Rolled Curb and Concrete Pavement Typical Sections and Details", Standard Drawing C502.02 for joint and bar requirements for different street classifications. Note that width and location of each poured portion of the pavement may change the type and location of joint required.
- All deformed bars for joints and curbs shall be in accordance with ASTM A 631, Grade 40 and epoxy coated, conforming to the requirements in Section 1057.4 of the "St. Louis County Standard Specifications" manual.
- Length of tie bars shall be equal to the thickness of pavement plus the height of curb less 3 inches. Tie bars shall be placed at 24 inch centers.
- Transverse or longitudinal construction joints in site formed pavements may be made with a groover or lock, if such device has been approved in advance by the Department.
- The free end of the dowel bar for a length of at least 11 inches shall be coated with an approved graphite grease conforming to Section 1057.3.1 of the "St. Louis County Standard Specifications" manual, or may substitute completed basket units pre-dipped in an approved bond breaker solution conforming to Section 1057.3.2.
- All dowel bars 15 inches long at 12 inch centers shall be epoxy coated.
- Supereave SP 125 is to be used in lieu of Type "C" bituminous concrete on Arterial roads, when directed by the Department or when specified in the County contract documents.
- Certain streets will be required to overlay the gutter with 2 inches of Type "C" bituminous concrete wearing surface as directed by the Department.
- JOINT SEALANT - The shape factor (depth/width) for liquid joint sealants should be no more than 1.0 for hot-pour sealants and no more than 0.5 for cold-pour sealants. Sealants shall be recessed between no less than 1/8 inch but no more than 1/4 inch below the pavement surface to avoid extrusion problems (when the joint closes and squeezes the material up through the reservoir exposing it to traffic). Backer rod with a diameter two times the width of the joint is required to accomplish this when expansion joint filler is not specified. Joint filler shall be recessed to accomplish the above for the specified joint sealant material.
- Sawcut to achieve shape factor = 1.

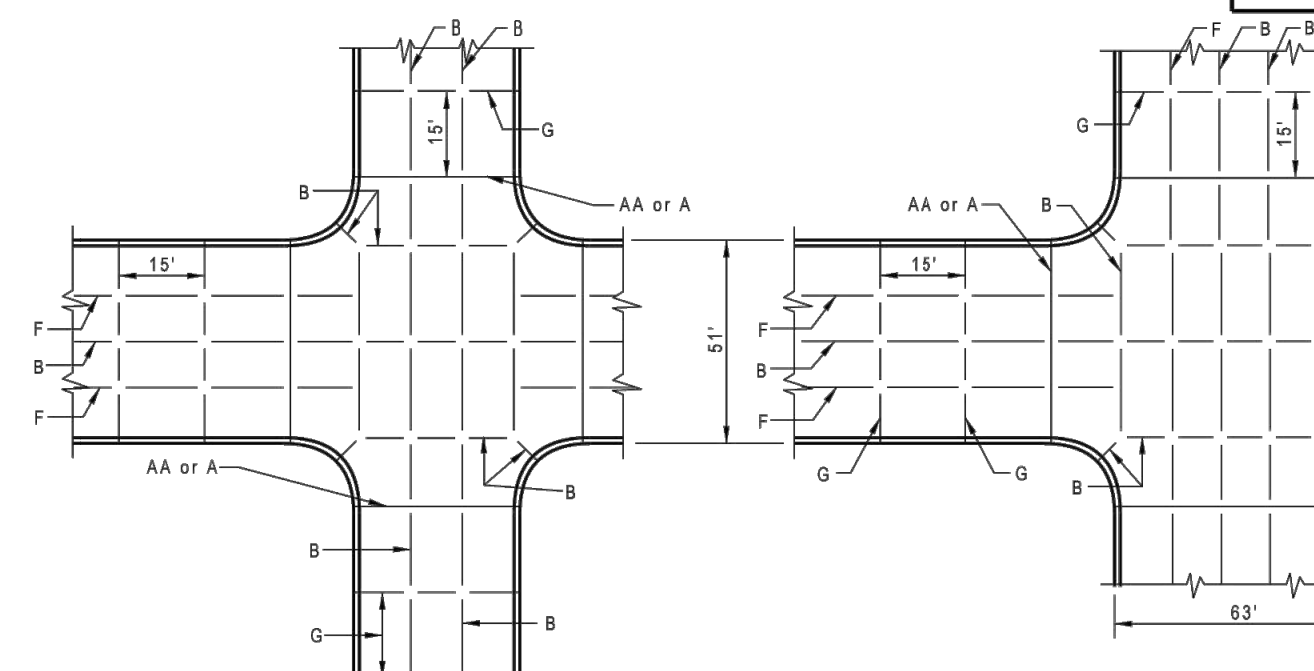
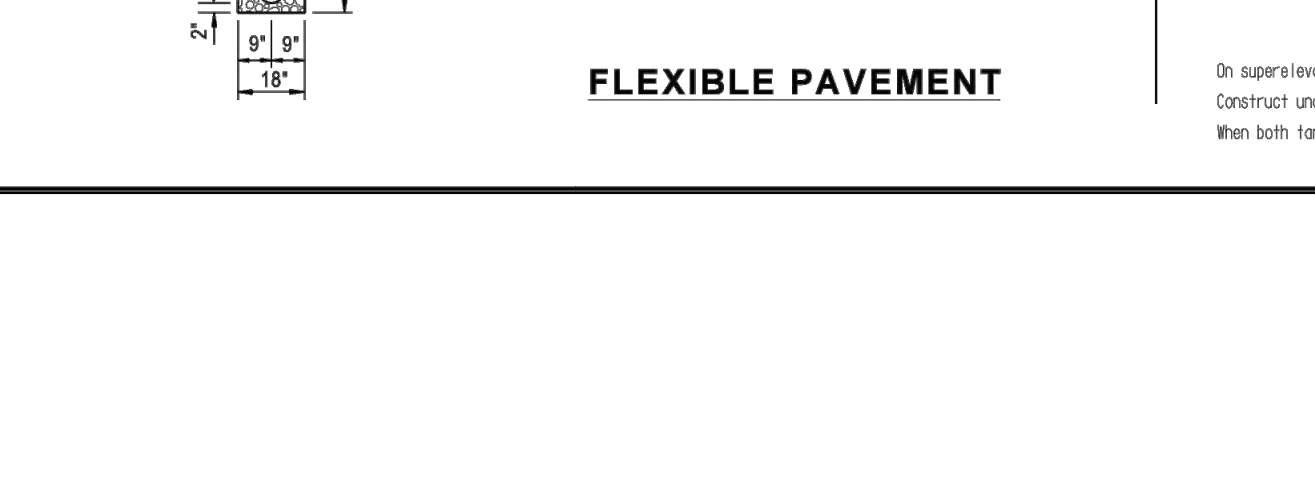
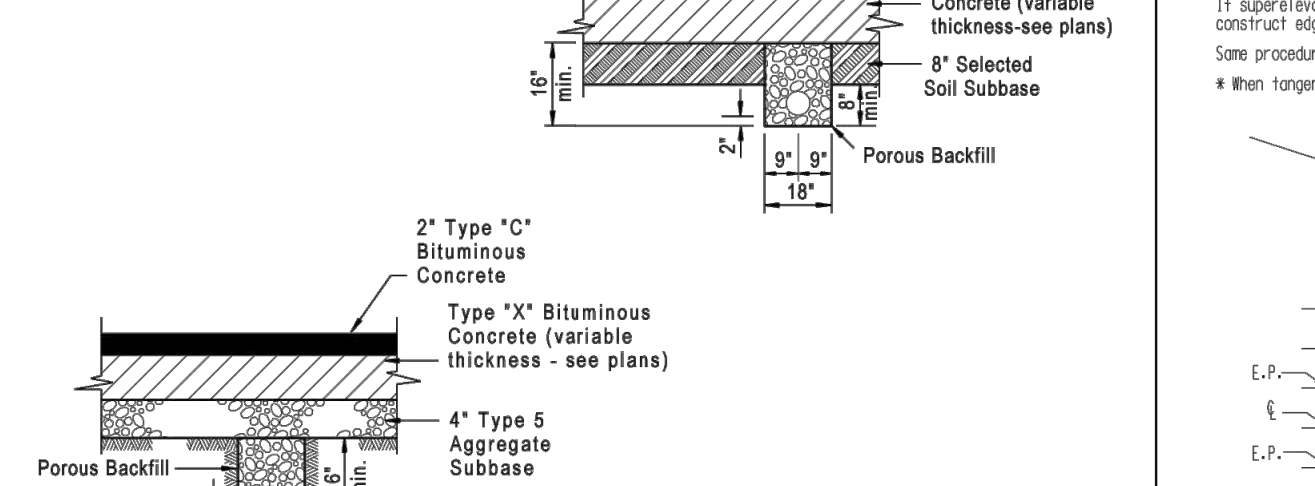
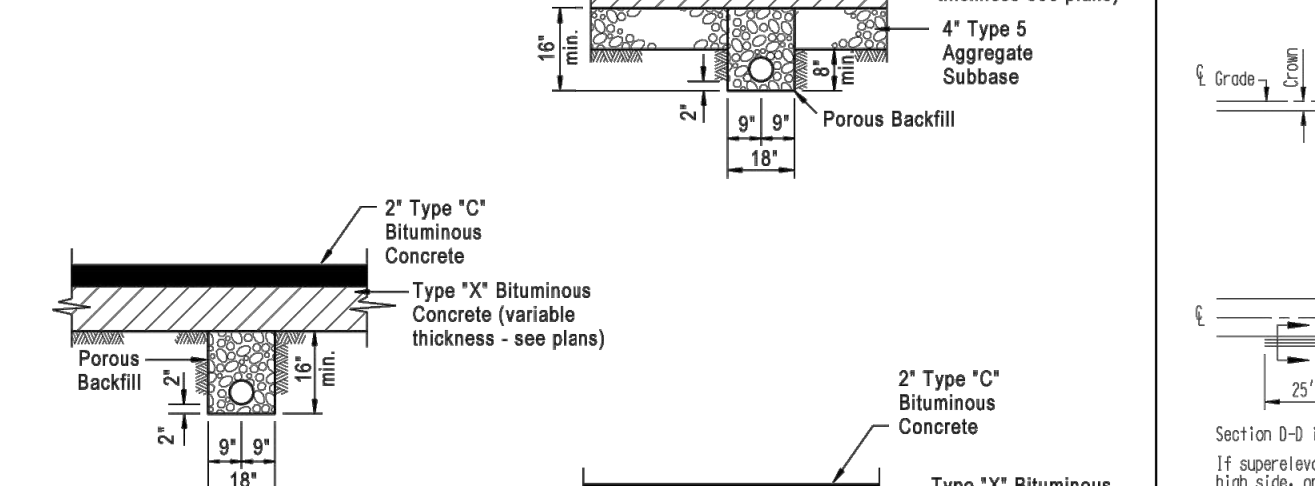
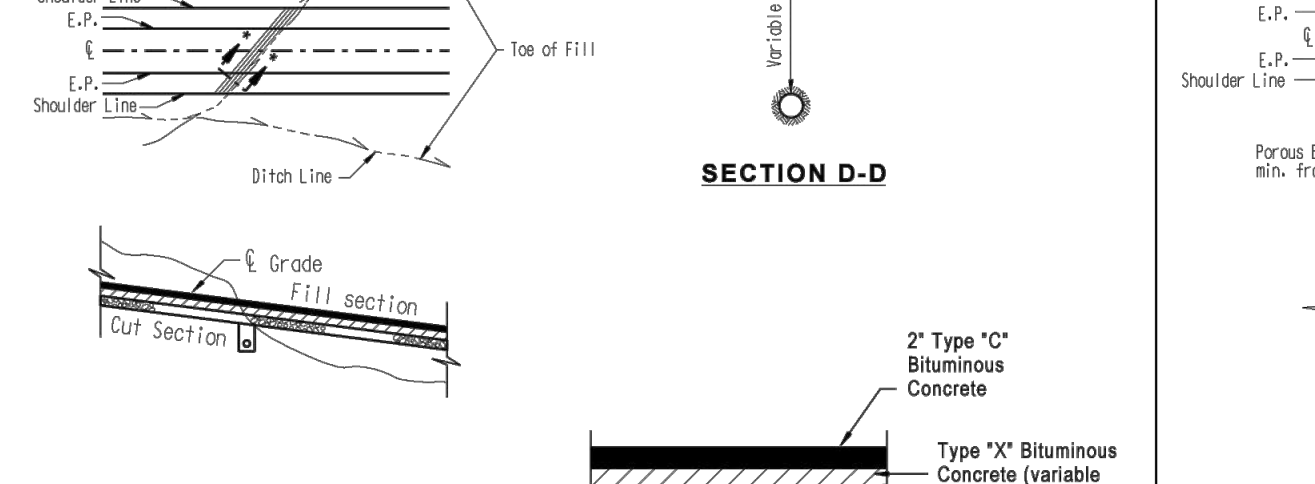
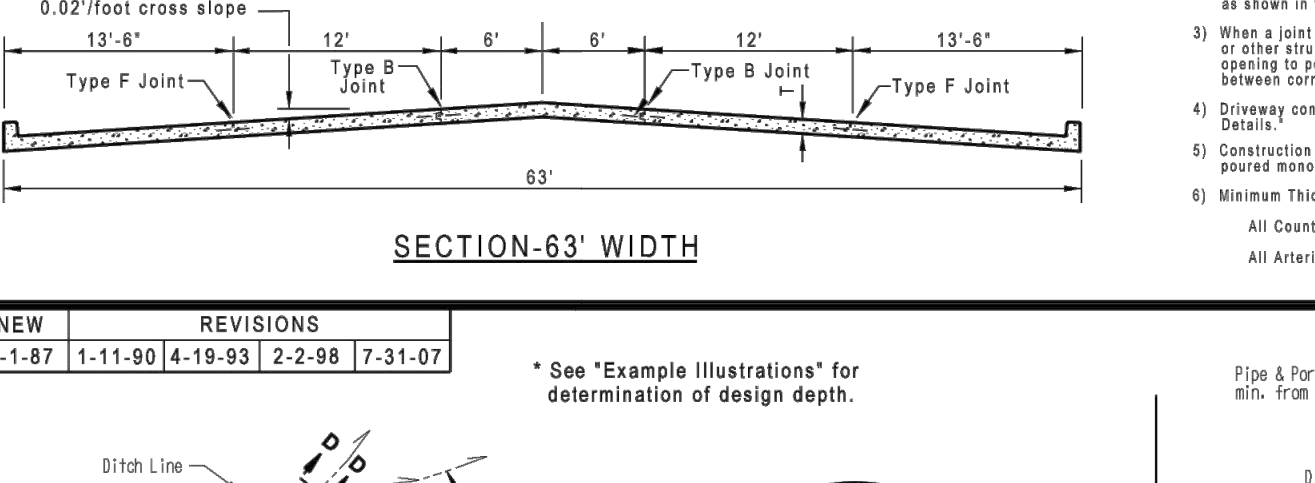
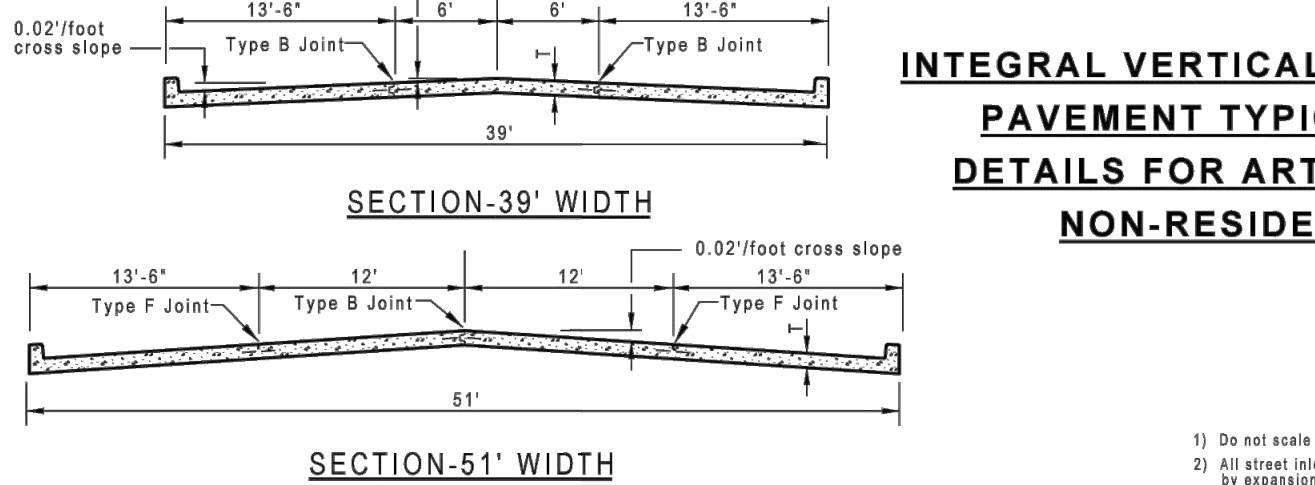
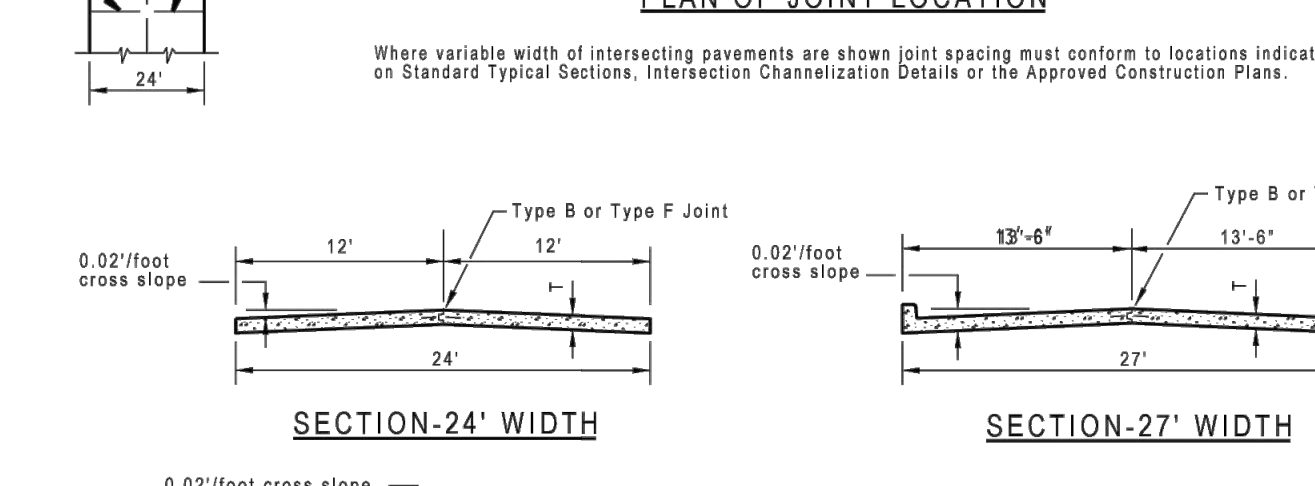
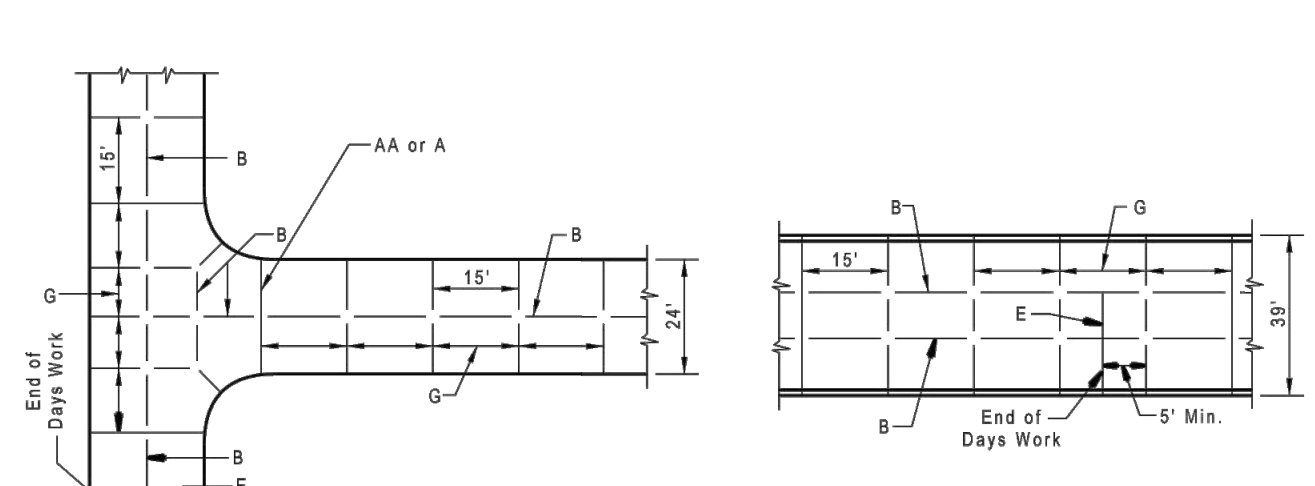
SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS

CURBS

REVISION DATE: October 1, 2012
DRAWING C502.14

NEW	REVISIONS			
1-11-90	7-31-07	10-1-07	7-1-09	10-1-12



JOINT REQUIREMENTS FOR CONCRETE PAVEMENT

Pavement Thickness (ft)	Transverse Dowel Bars				Longitudinal Tie Bars	
	Joint Type	Dowel Diameter x Length, inches	Dowel Spacing CTR-CTR, inches	Joint Type	Tie Bar Spacing x Length, inches CTR-CTR, inches	Tie Bar Spacing
T < 7	A	None	None	B, E, F, H	No. 5 x 30	30
7 & T < 9	A	None	None	B, E, F, H	No. 5 x 30	30
9 & T < 11	AA, D, G, J	1 x 18	12	B, E, F, H	No. 5 x 30	30
T ≥ 11	A	None	None	B, E, F, H	No. 5 x 30	30
	AA, D, G, J	1-1/4 x 18	12	B, E, F, H	No. 6 x 40	30
	AA, D, G, J	1-1/2 x 18	12	B, E, F, H	No. 6 x 40	30

- ### GENERAL NOTES
- Do not scale drawing. Follow dimensions.
 - All street curbs shall be separated from the pavement and curb by expansion joint material extending completely through curb and into pavement. Material shall be recessed into the pavement as shown in the "Sewer Construction Details", (Drawing 804.37).
 - When a joint falls within 6" of a contact inlet, manhole, or other structure, extending one or more feet on either side of the joint is required to be installed.
 - Driveway configurations are shown in the "Entrance Construction Details".
 - Construction joint and tie bars may be omitted when curb is poured monolithic with pavement.
 - Minimum Thickness for Pavement is:

Pavement (ft)	7 inches	8 inches
All County and Non-Residential Streets:		
 - Refer to "Pavement Construction Details for Joints" (Standard Drawing C502.01) and "Pavement Construction Details for Curb" (Standard Drawing C502.14) for joint and bar requirements for different street classifications. Note that width and location of each poured portion of the pavement may change the type and location of joint required.
 - Transverse or longitudinal construction joints in site formed pavements may be made with a groover or lock, if such device has been approved in advance by the Department.
 - The locations of the Type B and Type F longitudinal construction joints in the sections are to be indicated for different widths of construction as approved by the Department.
 - All reinforcing steel to be epoxy coated. Dowels shall be either Grade 40 or 60. The bars shall be Grade 60, except the bars which are to be bent and straightened shall be Grade 40.

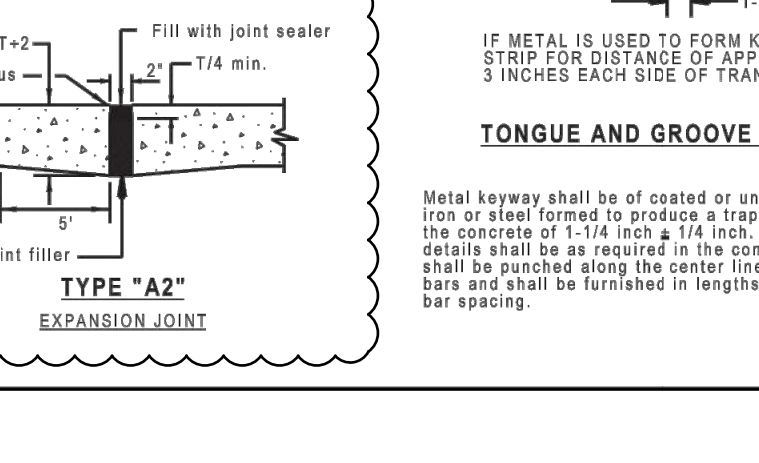
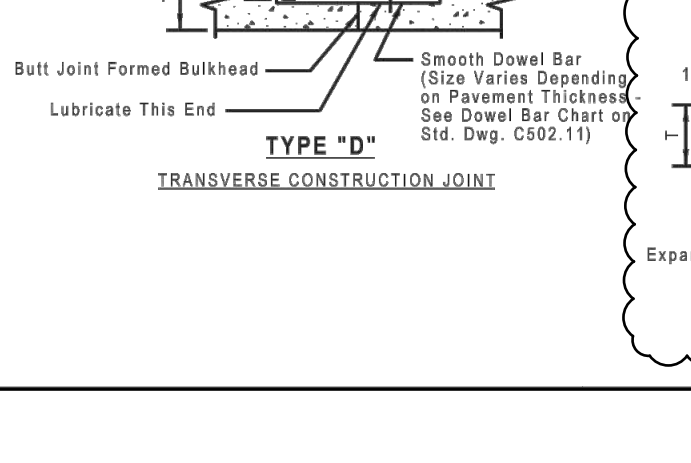
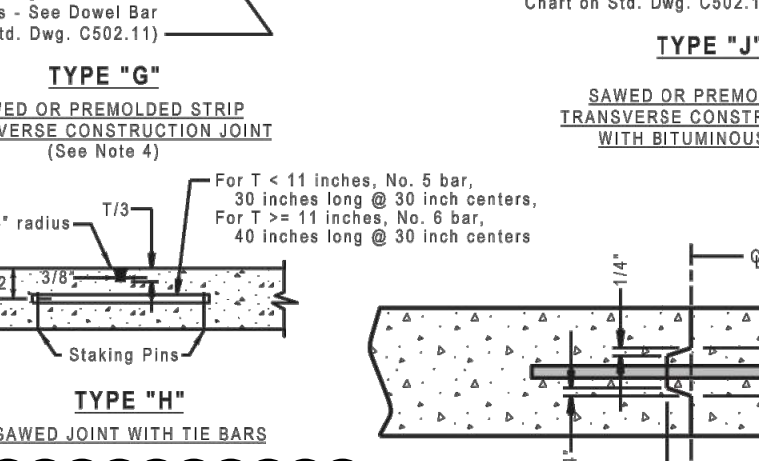
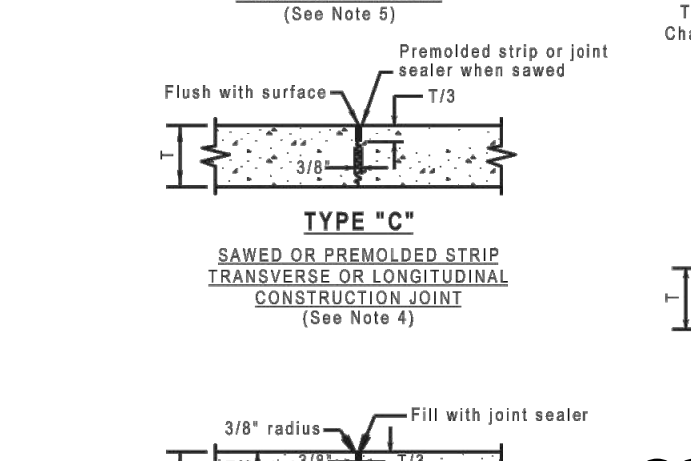
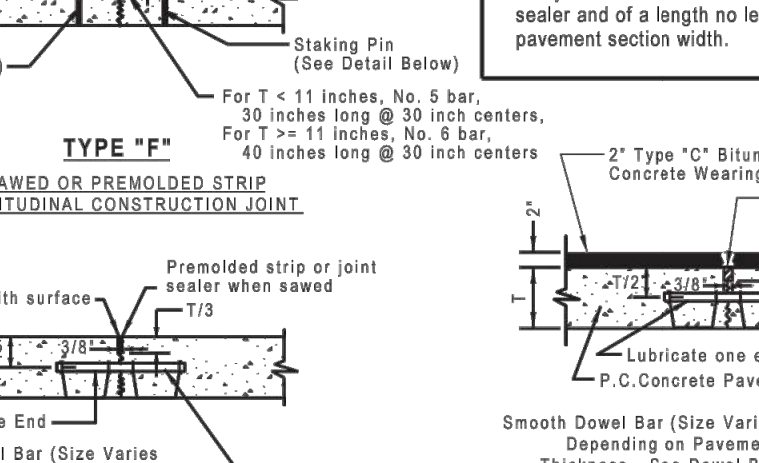
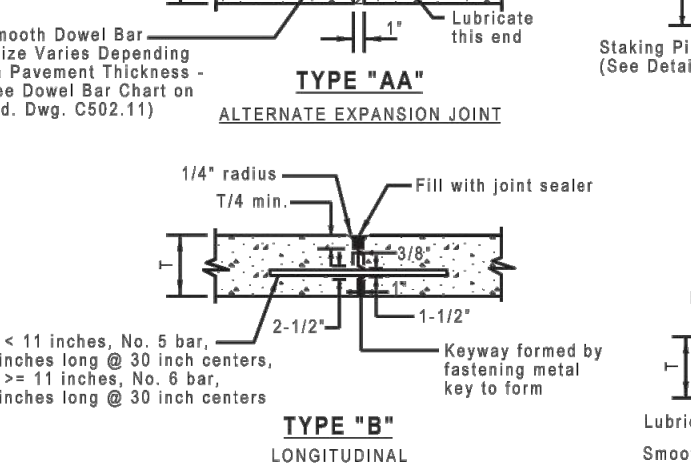
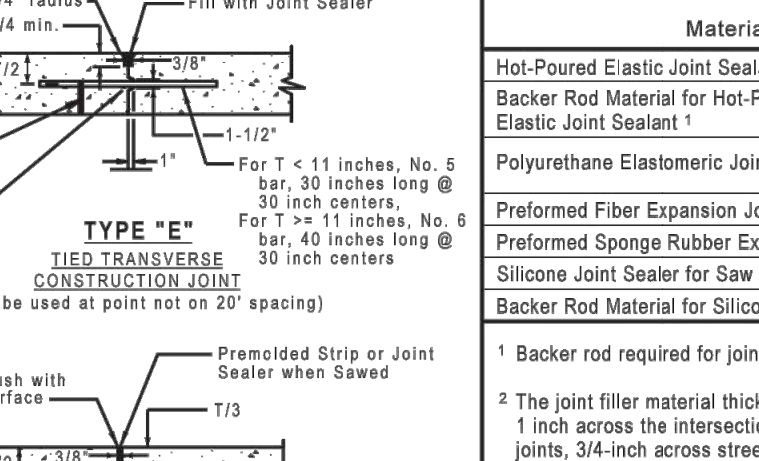
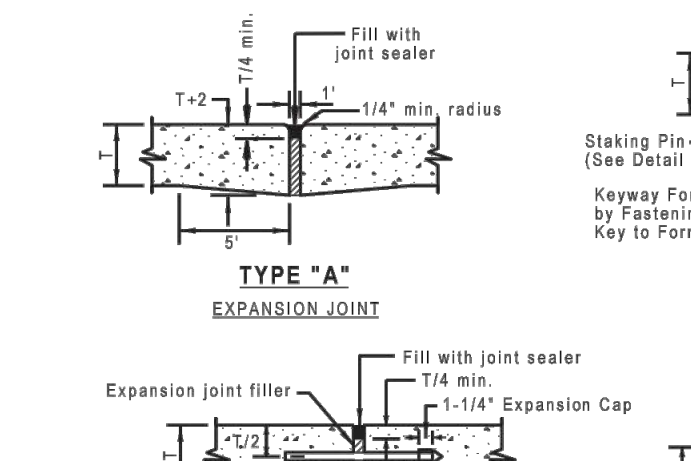
SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS

INTEGRAL VERTICAL CURB AND CONCRETE PAVEMENT TYPICAL SECTIONS & DETAILS

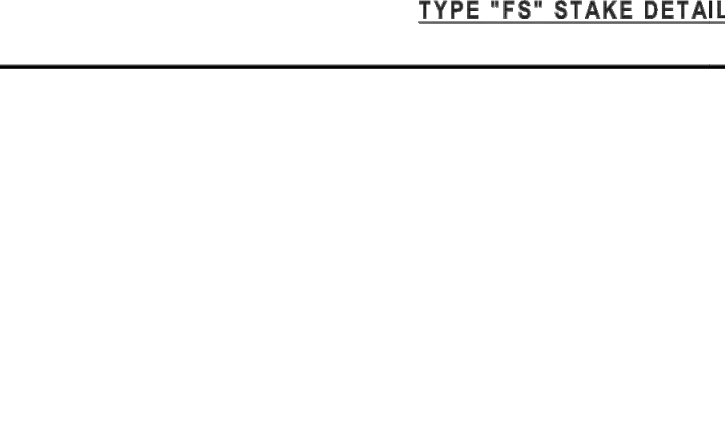
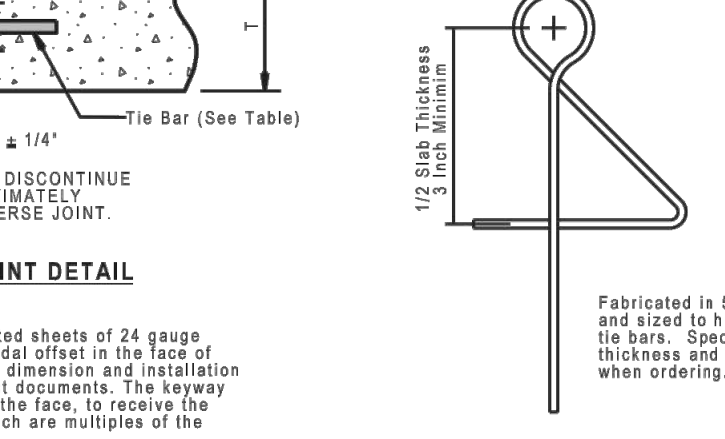
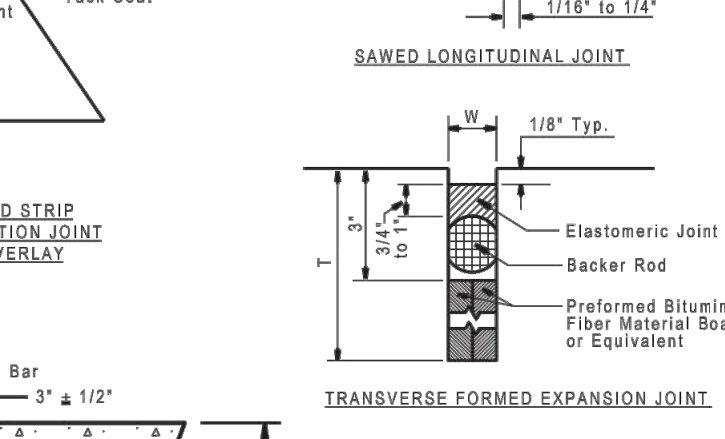
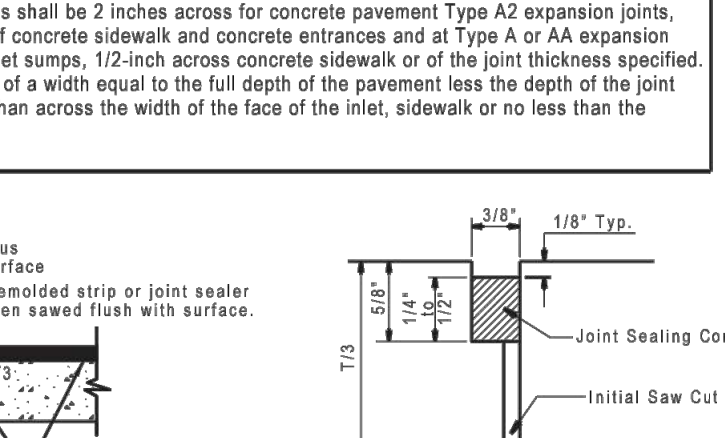
REVISION DATE: October 1, 2012
DRAWING C502.01

NEW	REVISIONS			
1-11-90	11-2-98	7-31-07	1-1-10	10-1-12



JOINT FILLER AND SEALING MATERIAL SHALL MEET THE FOLLOWING:

Material	Standard Specification	ASTM Test Method
Hot-Poured Elastic Joint Sealant	Section 1057.5	D 8690, Type I
Backer Rod Material for Hot-Poured Elastic Joint Sealant	Section 1057.5.3	D 5249, Type I
Polyurethane Elastic Joint Sealant	Section 1057.6	C 920, Type S, Grade P, Class 25, Use 11
Premolded Fiber Expansion Joint Filler	Section 1057.6.2	D 1751
Premolded Sponge Rubber Expansion Joint Filler	Section 1057.7.4	D 1752, Type I
Silicone Joint Sealer for Saw Cut and Formed Joints	Section 1057.11	D 5893, Type NS
Backer Rod Material for Silicone Joint Sealant	Section 1057.12	D 5249, Type 3

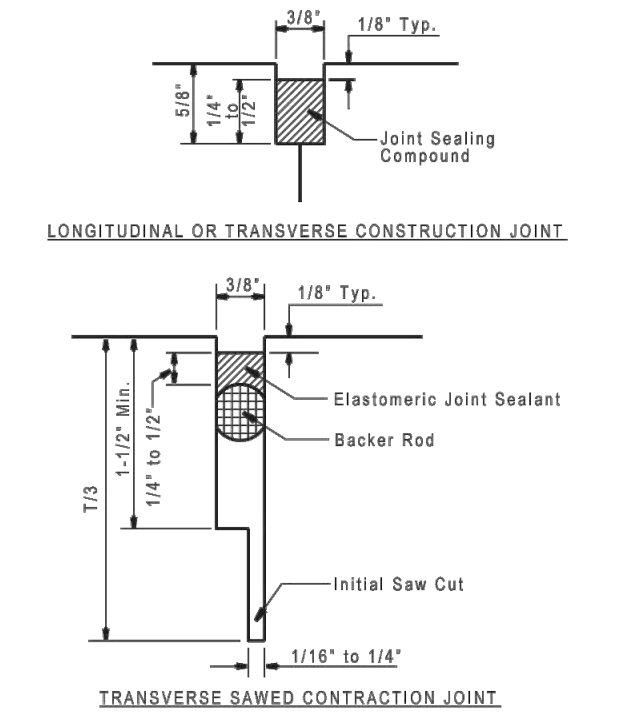


GENERAL NOTES

- Use General Notes on Standard Drawing C502.14.

SAW CUTTING

- When a standard (water cooled diamond bladed) concrete saw is used, the blade shall be set to cut to a minimum depth of one-fourth (1/4) the specified pavement thickness.
- For pavements < 7 inches thick, saw the joint to a minimum depth of one-fourth (1/4) the specified pavement thickness.
- For pavements > 7 inches thick, saw the joint to a minimum depth of one-fourth (1/4) the specified pavement thickness.
- Saw joints 3/8 inch - 1 1/8 inch wide as measured at the time of sawing.
- When using early-entry (dry cut, light weight) saws, only use saw blades and acid plates as recommended by the manufacturer. Perform the early entry sawing reaches 150 psi compressive strength (after initial set and before final set) as follows:
 - Saw the joint 2-1/4 to 2-1/2 inches deep.
 - Saw joint approximately 1/8 inch - 1/16 inch wide as measured at the time of sawing.



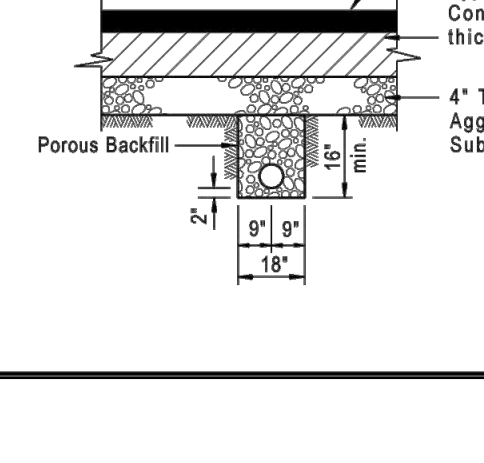
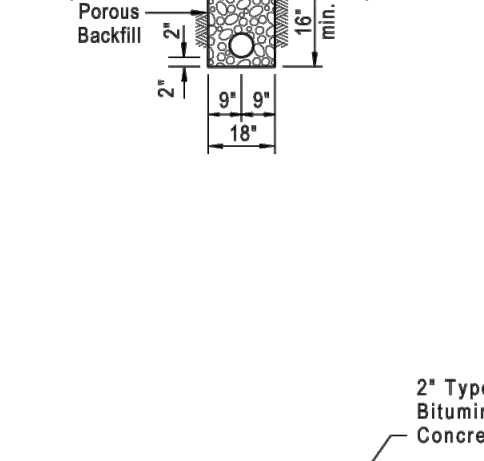
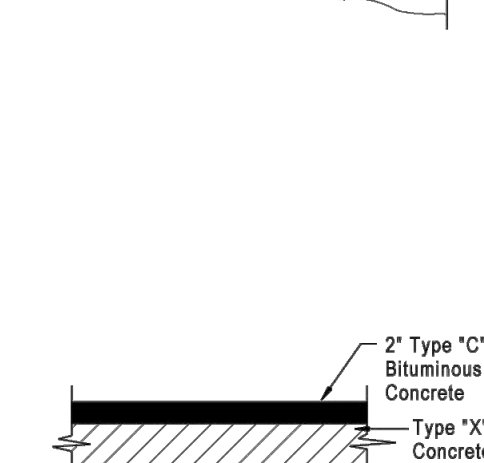
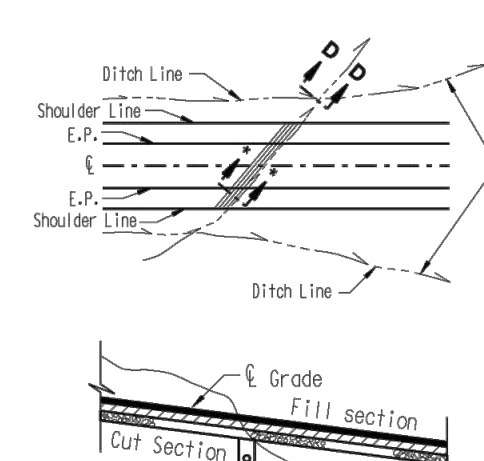
SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS

JOINTS

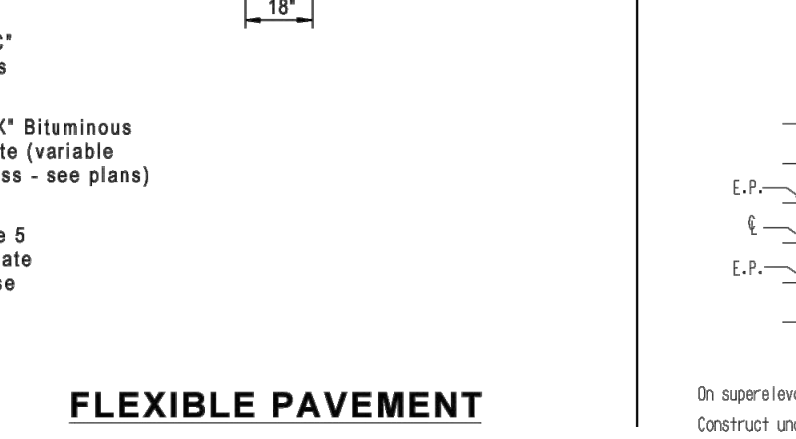
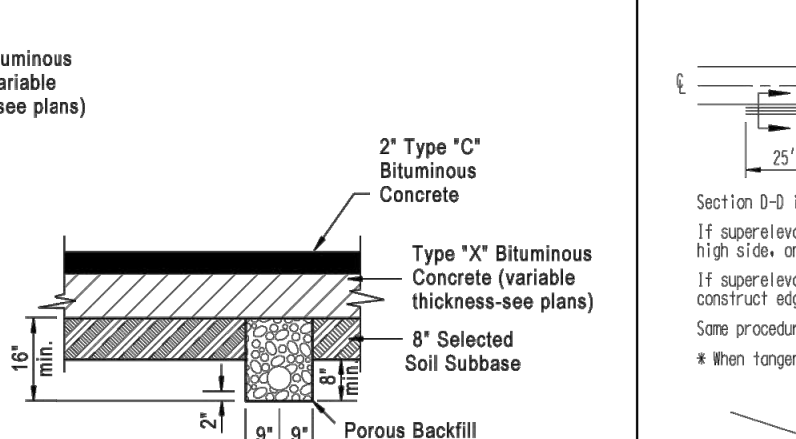
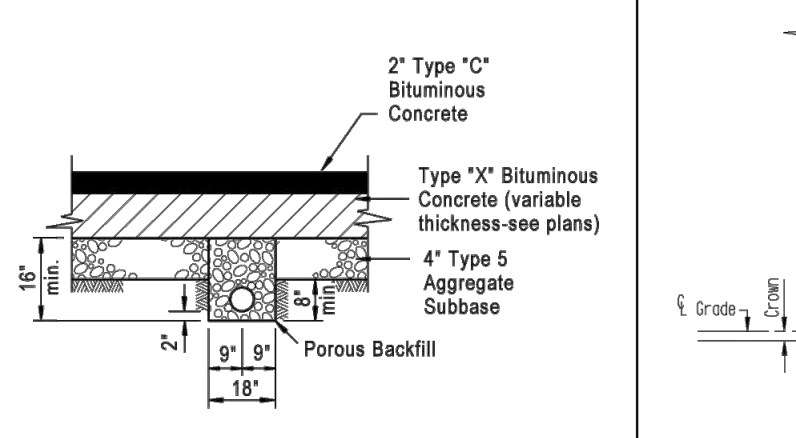
REVISION DATE: October 1, 2012
DRAWING C502.13

NEW	REVISIONS			
7-1-87	1-11-90	4-19-93	2-2-98	7-31-07



GENERAL NOTES

- * See "Example Illustrations" for determination of design depth.
- Section D-D indicates last crown section adjacent to super-elevated curve. If super-elevated curve is on tangent grade, construct edge drain on tangent high side, only on or grade and/or the super-elevated curve. If super-elevated curve extends each way from low point on vertical curve, construct edge drain on rising high side at each end of S.E. curve. See procedure shall be followed for each end of dual crowned pavement. * When tangent grade of Section D-D exceeds 2% on either side.



SAINT LOUIS COUNTY
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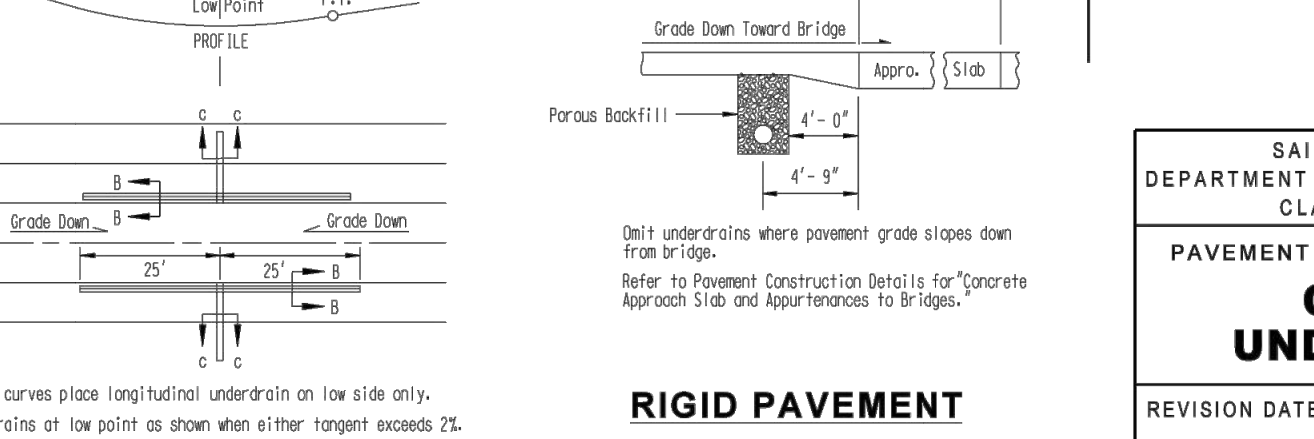
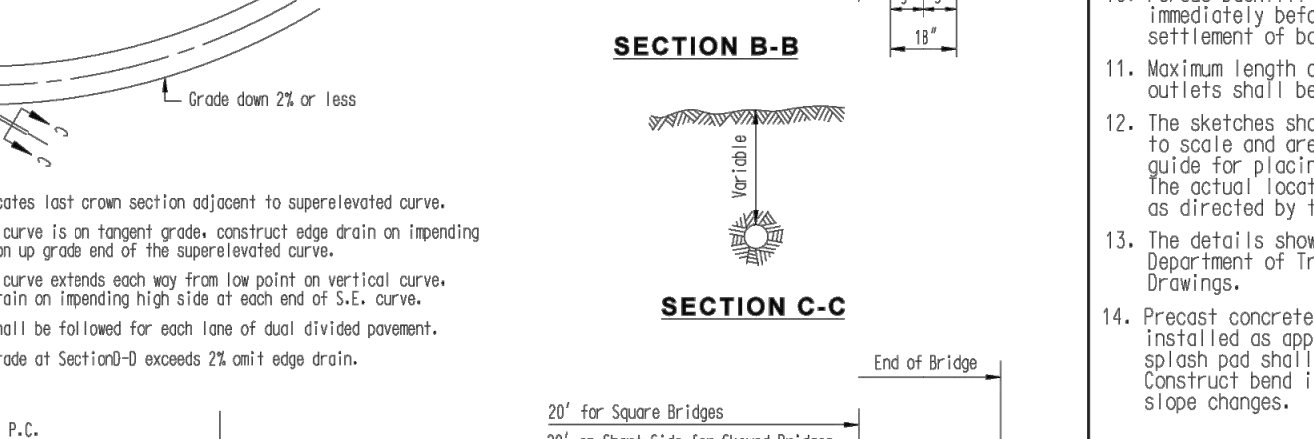
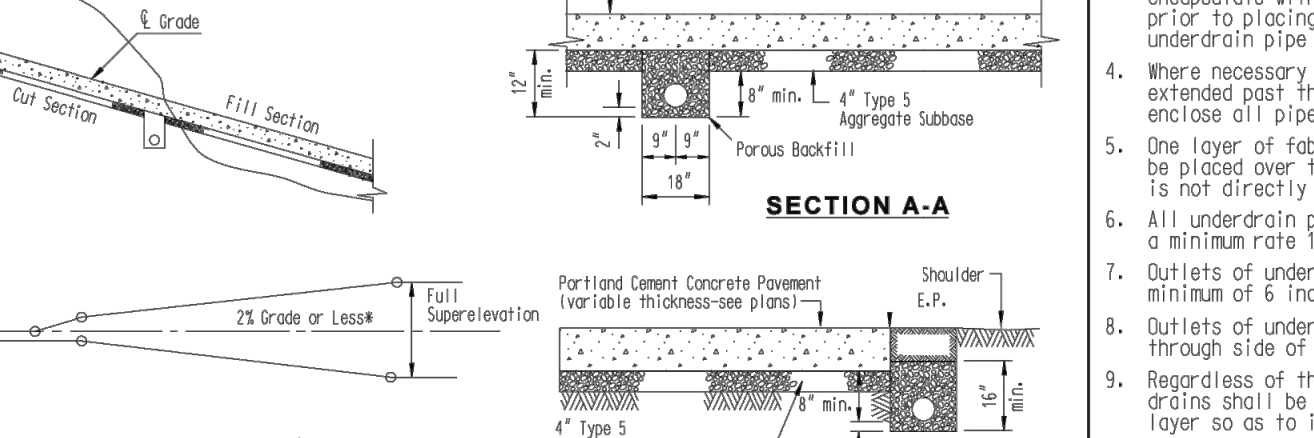
PAVEMENT CONSTRUCTION DETAILS

CLASS A UNDERDRAINS

REVISION DATE: July 31, 2007
DRAWING C605.10

GENERAL NOTES (RIGID AND FLEXIBLE PAVEMENTS)

- Porous backfill of transverse underdrains shall extend a minimum distance of shoulder line to shoulder line for flexible pavements and a minimum of 15 inches outside of each edge for rigid pavement slabs.
- All underdrain pipe within porous backfill shall be laid with perforations down.
- All underdrain pipe outside limits of porous backfill shall be laid with perforations up and encasement with fabric (Mifflin 1408 or equal) prior to placing earth backfill or shall be underdrain pipe that is not perforated.
- Where necessary, porous backfill shall be extended past the minimum limits to completely enclose all pipe (aid with perforations down).
- The layer of fabric (Mifflin 1408 or equal) shall be placed over top of all porous backfill which is not directly under the pavement or subbase.
- All underdrain pipe shall slope toward outlet a minimum rate 1 inch per 10 feet.
- Outlets of underdrain pipe in cuts shall be a minimum of 6 inches above bottom of ditch.
- Outlets of underdrain pipe in fill shall extend through side of fill.
- Regardless of the depth shown on plans, underdrains shall be set down into any impervious layer so as to intersect seepage.
- Porous backfill shall be ponded with water immediately before covering to effect maximum settlement of backfill material.
- Maximum length of underdrain pipe between outlets shall be approximately 100 feet.
- The sketches shown on this sheet are not drawn to scale and are only intended as a general guide for placing and constructing underdrains. The actual layout and construction shall be as directed by the engineer.
- The details shown are adopted from the Missouri Department of Transportation (MODOT) Standard Drawings.
- Precast concrete splash pads at outfall may be installed as approved by the engineer. Top of splash pad shall match existing cross slope construct bend in splash pad where cross slope changes.

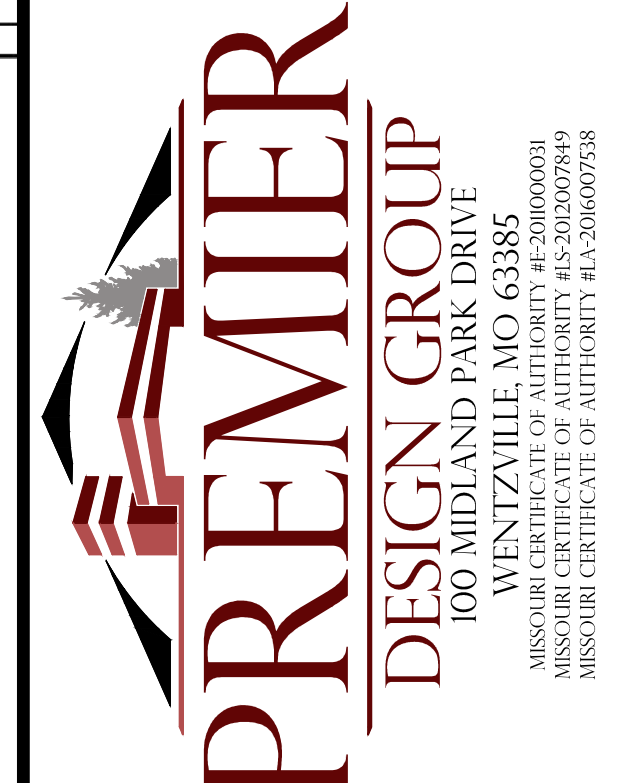


SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS

CLASS A UNDERDRAINS

REVISION DATE: July 31, 2007
DRAWING C605.10



ENGINEERS AUTHENTICATION
The responsibility for the professional engineering actions on this project is hereby limited to the set of plans authorized by the seal, signature, and date hereunder attached. Responsibility is disclaimed for all other engineering plans involved in this project and specifically excludes reviews after the date shown hereunder.

STEVEN D. MARON P.E.
PROFESSIONAL ENGINEER
PE 2006007195

SOUTH RIDGE SHOPPES, L.L.C.
OLD HIGHWAY N ROAD IMPROVEMENTS
8298 HWY N
OFALLON, MO
NEIL KERSTEN
16761 CONCORD HILL
MARTHASVILLE, MO 63357

SAINT LOUIS COUNTY
DEPARTMENT OF HIGHWAYS AND TRAFFIC
CLAYTON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS

CLASS A UNDERDRAINS

REVISION DATE: July 31, 2007
DRAWING C605.10

Project No. 168305
Drawn By A. JONES
Checked By J. WINTERS

NOT RELEASED FOR CONSTRUCTION