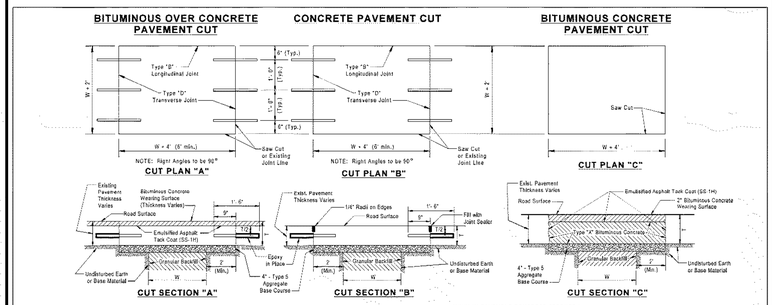

GENERAL NOTES

1) Refer to Standard Drawing CS02.13 "Concrete Joints" for joint details.
2) Longitudinal and transverse joints. Do not drill concrete pavement less than 7 inches thick.
3) A gang-mounted drill shall be used for drilling holes in existing pavement for longitudinal joints.
4) Tie bars shall be installed no closer than 15 inches from transverse joints.
5) For trenching operations on roadways with an asphalt wearing surface, restoration of asphalt pavement shall be required as follows. The contractor shall mill and overlay the full width of the (impacted lane(s) or shoulder(s) for trench excavations that exceed 50-ft longitudinally. When 5-ft or less of pavement remains between the excavation and the nearest joint or pavement edge, the contractor shall mill and overlay to the joint or pavement edge.
6) Epoxy Anchoring Material is in accordance with Section 1039.30, "Epoxy or Polyester Bonding Agents for Dowels".

MINIMUM PAVEMENT COMPRESS STRENGTH REQUIREMENTS:

COMPRESSIVE STRENGTH FOR OPENING TO TRAFFIC, PSI		
PAVEMENT REPAIR THICKNESS INCHES	PAVEMENT REPAIR LENGTH 6 - 10 FEET	PAVEMENT REPAIR LENGTH > 10 FEET
T_H 8	3,000	3,600
8<T_H 9	2,400	2,700
9<T<10	2,200	2,300
T_H10	2,000	2,000

MINIMUM DOWEL BAR REQUIREMENTS:

DOWEL BARS - EPOXY COATED		
PAVEMENT THICKNESS*	BAR SIZE DIAMETER	BAR SIZE LENGTH
7 Inches	1 Inch	18 Inches
8 Inches	1 Inch	18 Inches
9 Inches	1-1/4 Inches	18 Inches
10 Inches	1-1/4 Inches	18 Inches
11 Inches or Greater	1-1/2 Inches	18 Inches

DATE	REVISIONS
03-06-2020	

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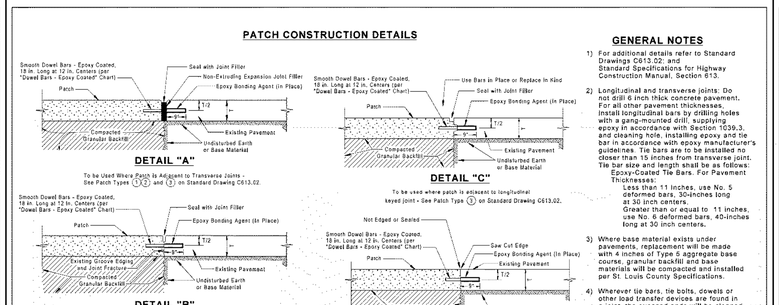
St. Louis COUNTY TRANSPORTATION — "AS SAME AMENDED BY LAW" — "AS SAME AMENDED BY LAW"

PAVEMENT CONSTRUCTION DETAILS
CONSTRUCTION DETAILS OF FULL DEPTH PAVEMENT REPAIR

EFFECTIVE	SHEET	DRAWING
05/01/2020	1 OF 1	C613.00



MINIMUM PAVEMENT COMPRESS STRENGTH REQUIREMENTS:

COMPRESSIVE STRENGTH FOR OPENING TO TRAFFIC, PSI		
PAVEMENT REPAIR THICKNESS INCHES	PAVEMENT REPAIR LENGTH 6 - 10 FEET	PAVEMENT REPAIR LENGTH > 10 FEET
T_H 8	3,000	3,600
8<T_H 9	2,400	2,700
9<T<10	2,200	2,300
T_H10	2,000	2,000

MINIMUM DOWEL BAR REQUIREMENTS:

DOWEL BARS - EPOXY COATED		
PAVEMENT THICKNESS*	BAR SIZE DIAMETER	BAR SIZE LENGTH
7 Inches	1 inch	18 inches
8 Inches	1 inch	18 inches
9 Inches	1-1/4 inches	18 inches
10 Inches	1-1/4 inches	18 inches
11 inches or Greater	1-1/2 inches	18 inches

GENERAL NOTES

1) For additional details refer to Standard Drawings C613.02: and Standard Specifications for Highway Construction Manual, Section 613.
2) Longitudinal and transverse joints: Do not drill 6 inch thick concrete pavement. For all other pavement thicknesses, install longitudinal bars by drilling holes with a gang-mounted drill, supplying epoxy in accordance with Section 1039.3, and cleaning hole, installing epoxy and tie bar in accordance with epoxy manufacturer's guidelines. Tie bars are to be installed no closer than 15 inches from transverse joint. Tie bar size and length shall be as follows:
   Epoxy-Coated Tie Bars. For Pavement Thicknesses:
   Less than 11 inches, use No. 5 deformed bars, 30-inches long at 30 inch centers.
   Greater than or equal to 11 inches, use No. 6 deformed bars, 40-inches long at 30 inch centers.
3) Where base material exists under pavements, replacement will be made with 4 inches of Type 5 aggregate base course, granular backfill and base materials will be compacted and installed per St. Louis County Specifications.
4) Wherever tie bars, tie bolts, dowels or other load transfer devices are found in a joint, the exposed ends will be cleaned and left in place. All smooth slip dowels should be straightened if necessary and greased prior to placing in patch.
5) Refer to Standard Drawing CS02.13, Type "D" joint at transverse joints.

DATE	REVISIONS
03-06-2020	

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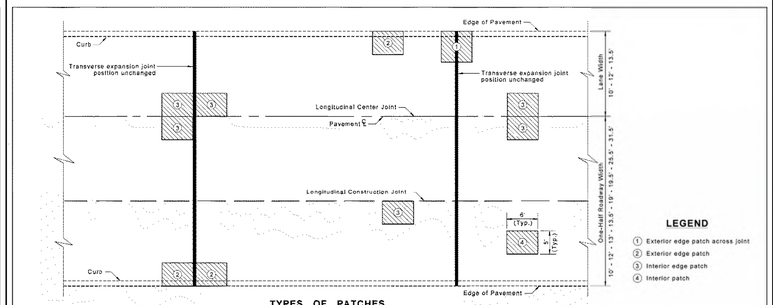
St. Louis COUNTY TRANSPORTATION — "AS SAME AMENDED BY LAW" — "AS SAME AMENDED BY LAW"

PAVEMENT CONSTRUCTION DETAILS
CONSTRUCTION JOINT DETAILS FOR CONCRETE CONSTRUCTION PATCHES

EFFECTIVE	SHEET	DRAWING
05/01/2020	1 OF 1	C613.01



GENERAL NOTES

1) For additional details refer to Standard Drawings C613.00, C613.01 and C613.04.
2) The position of transverse expansion joints with respect to patches is not important, but all transverse expansion joints must be reproduced in their original position through patches of Types 1 2 and 3.
3) If the repair exceeds 5 ft. x 5 ft. in size, full slab replacement will be required.
4) Full depth sawcut required on all sides.
5) If patch is within 2 feet of joint, extend patch to joint.
6) A minimum distance of 6 feet from repair joint to nearest transverse crack or joint.
7) No longitudinal sawcutting of slabs will be permitted.
8) Half slab replacement not allowed on slabs less than 20 feet.

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03-06-2020	

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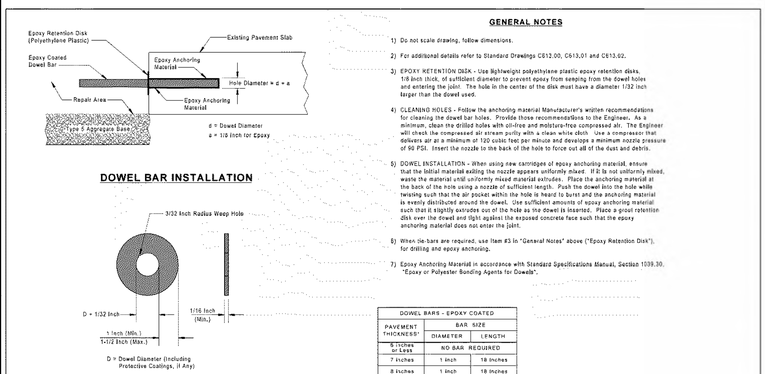
St. Louis COUNTY TRANSPORTATION — "AS SAME AMENDED BY LAW" — "AS SAME AMENDED BY LAW"

PAVEMENT CONSTRUCTION DETAILS
CONSTRUCTION DETAILS FOR CONCRETE REPAIR

EFFECTIVE	SHEET	DRAWING
05/01/2020	1 OF 1	C613.02



GENERAL NOTES

1) Do not scale drawing, follow dimensions.
2) For additional details refer to Standard Drawings C612.00, C613.01 and C613.02.
3) EPOXY RETENTION DISK - Use lightweight polyethylene plastic epoxy retention disks, 1/8 inch thick, of sufficient diameter to prevent epoxy from seeping from the dowel holes and entering the joint. The hole in the center of the disk must have a diameter 1/32 inch larger than the dowel used.
4) CLEANING HOLES - Follow the anchoring material Manufacturer's written recommendations for cleaning the dowel bar holes. Provide those recommendations to the Engineer. As a minimum, clean the drilled holes with oil-free and moisture-free compressed air. The Engineer will check the compressed air stream purity with a clean white cloth. Use a compressor that delivers air at a minimum of 120 cubic feet per minute and develops a minimum nozzle pressure of 90 PSI. Insert the nozzle to the back of the hole to force out all of the dust and debris.
5) DOWEL INSTALLATION - When using new cartridges of epoxy anchoring material, ensure that the initial material exiting the nozzle appears uniformly mixed. If it is not uniformly mixed, waste the material until uniformly mixed material extrudes. Place the anchoring material at the back of the hole using a nozzle of sufficient length. Push the dowel into the hole while twisting such that the air pocket within the hole is heard to burst and the anchoring material is evenly distributed around the dowel. Use sufficient amounts of epoxy anchoring material such that it slightly extrudes out of the hole as the dowel is inserted. Place a grout retention disk over the dowel and tight against the exposed concrete face such that the epoxy anchoring material does not enter the joint.
6) When tie-bars are required, use Item #3 in "General Notes" above ("Epoxy Retention Disk"), for drilling and epoxy anchoring.
7) Epoxy Anchoring Material in accordance with Standard Specifications Manual, Section 1039.30, "Epoxy or Polyester Bonding Agents for Dowels".

DOWEL BARS - EPOXY COATED		
PAVEMENT THICKNESS*	BAR SIZE DIAMETER	BAR SIZE LENGTH
6 Inches or Less	NO BAR REQUIRED	
7 Inches	1 Inch	18 Inches
8 Inches	1 Inch	18 Inches
9 Inches	1-1/4 Inches	18 Inches
10 Inches	1-1/4 Inches	18 Inches
11 Inches or Greater	1-1/2 Inches	18 Inches

DATE	REVISIONS
03-06-2020	

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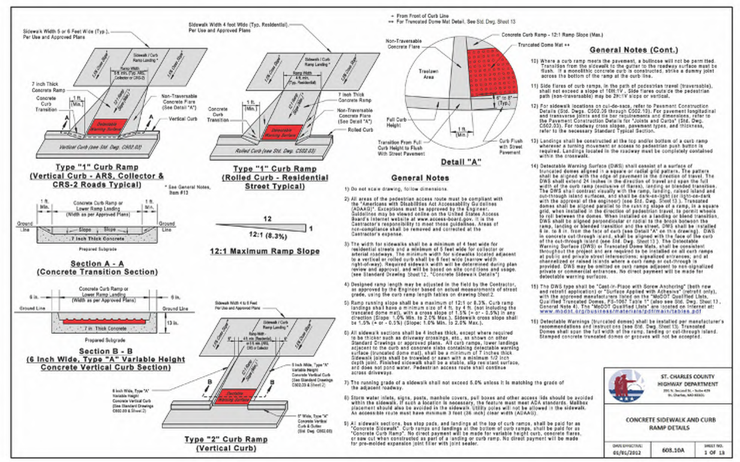
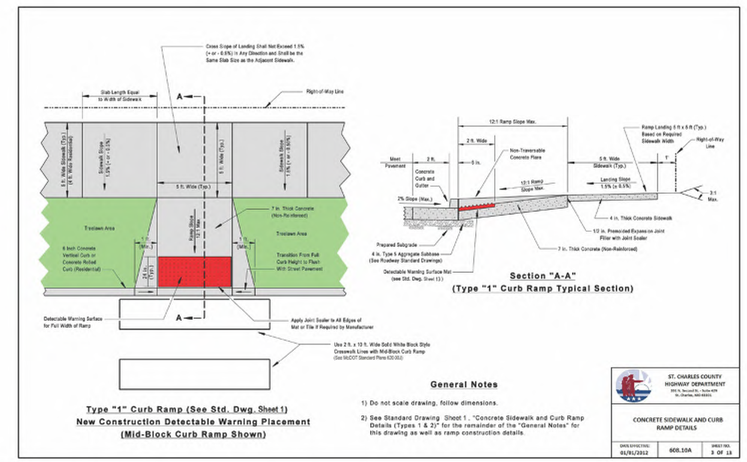
St. Louis COUNTY TRANSPORTATION — "AS SAME AMENDED BY LAW" — "AS SAME AMENDED BY LAW"

PAVEMENT CONSTRUCTION DETAILS
CONSTRUCTION DETAILS OF DOWEL INSTALLATION AND EPOXY RETENTION DISK

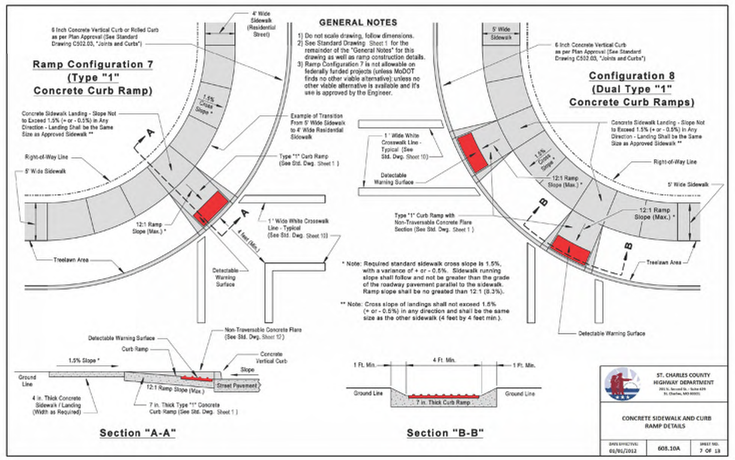
EFFECTIVE	SHEET	DRAWING
05/01/2020	1 OF 1	C613.04



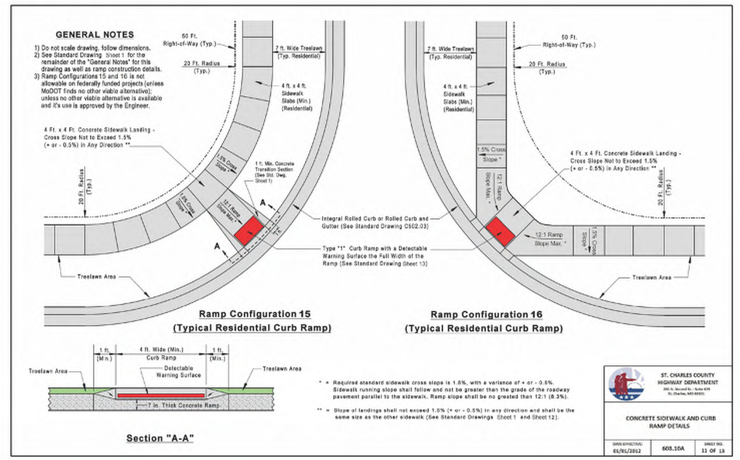
ST. CHARLES COUNTY HIGHWAY DEPARTMENT
CONCRETE SIDEWALK AND CURB RAMP DETAILS
DATE EFFECTIVE: 01/01/2012 | 608.10A | SHEET NO. 1 OF 13



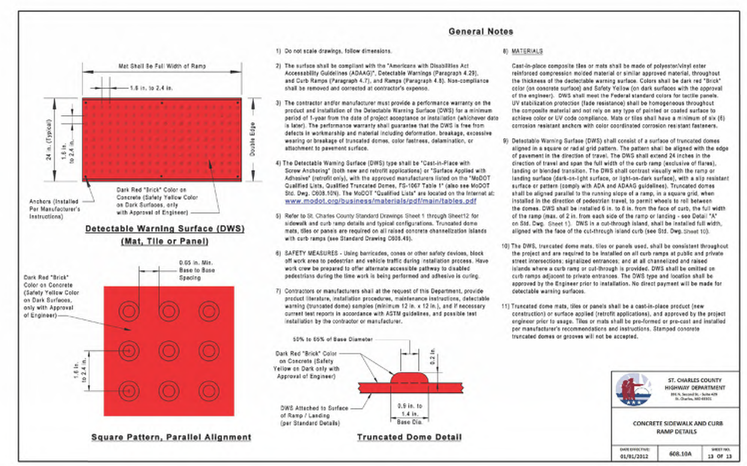
ST. CHARLES COUNTY HIGHWAY DEPARTMENT
CONCRETE SIDEWALK AND CURB RAMP DETAILS
DATE EFFECTIVE: 01/01/2012 | 608.10A | SHEET NO. 3 OF 13



ST. CHARLES COUNTY HIGHWAY DEPARTMENT
CONCRETE SIDEWALK AND CURB RAMP DETAILS
DATE EFFECTIVE: 01/01/2012 | 608.10A | SHEET NO. 7 OF 13



ST. CHARLES COUNTY HIGHWAY DEPARTMENT
CONCRETE SIDEWALK AND CURB RAMP DETAILS
DATE EFFECTIVE: 01/01/2012 | 608.10A | SHEET NO. 11 OF 13



GENERAL NOTES

1. ALL NON-REINFORCED CONCRETE SHALL BE 4,000 PSI AT 28 DAYS.

ST. CHARLES COUNTY HIGHWAY DEPARTMENT
CONCRETE SIDEWALK AND CURB RAMP DETAILS
DATE EFFECTIVE: 01/01/2012 | 608.10A | SHEET NO. 13 OF 13

O'fallon Planning and Development Division File No.: 20-005554 | Approved: January 7, 2021

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STATE OF MISSOURI — RYAN LEE HOLMES — NUMBER PE-2017018988 — PROFESSIONAL ENGINEER — 06-29-21
RYAN L. HOLMES
Professional Engineer
PE-2017018988

SOMERLIN

CONSTRUCTION DETAILS: SHEET 2

Design By: RLH
Drawn By: RLH
Checked By: RLH
Volz Project # 22074

06-28-21

C31

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