

# CITY OF KIRKWOOD

## R.O.W IMPROVEMENTS

### STANDARD DRAWINGS

### AND SPECIFICATIONS




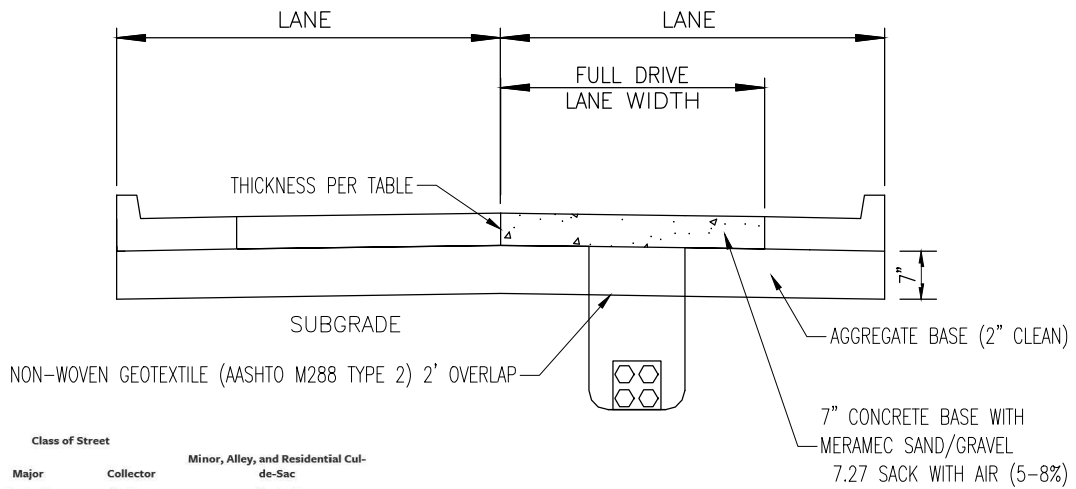
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**NOTE:**

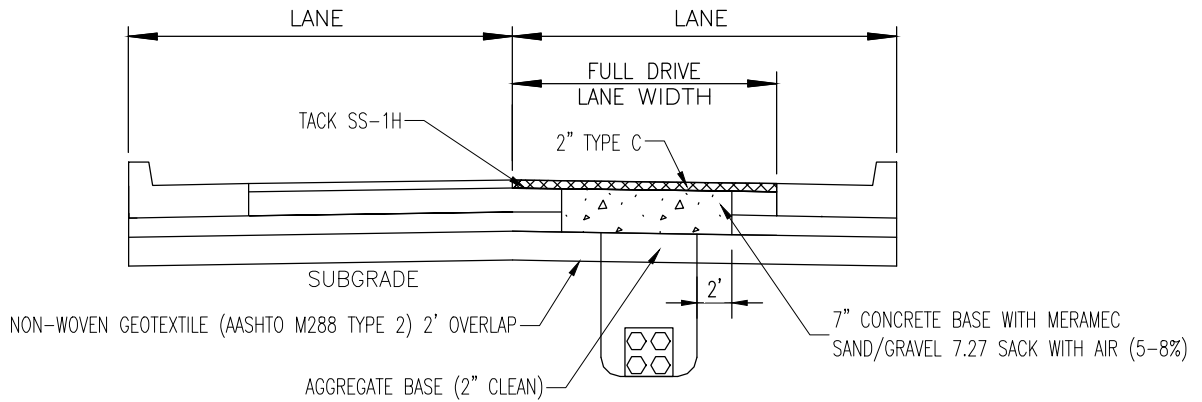
- ALL EXCAVATIONS WITHIN THE CITY OF KIRKWOOD RIGHT-OF-WAY REQUIRE AN EXCAVATION PERMIT. CONTACT THE ENGINEERING DEPARTMENT AT 314.822.5822.
- ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION STANDARD DRAWINGS AND SPECIFICATIONS SHALL APPLY EXCEPT AS MODIFIED BY THE CITY CODE AND/OR THESE STANDARD DRAWINGS AND SPECIFICATIONS.
- ALL CONCRETE WITHIN THE CITY OF KIRKWOOD RIGHT-OF-WAY SHALL USE MERAMEC LARGE AND FINE AGGREGATES.
- ANY EXCESS CONSTRUCTION AND/OR EXCAVATION MATERIALS SHALL BE REMOVED FROM THE RIGHT-OF-WAY AT THE END OF EACH WORK DAY.
- CONTRACTOR TO DISTURB AFFECTED AREAS THE MINIMUM AMOUNT NECESSARY TO COMPLETE THE WORK AND TO TAKE EXTRA CARE NOT TO DISTURB ANY AREAS OUTSIDE THE CONSTRUCTION AREA.
- ALL BACKFILL SHALL BE GRANULAR FILL WITH 1" NOMINAL MAX AGGREGATE SIZE.
- MECHANICALLY COMPACT ALL BACKFILL IN EXCAVATED AREAS AND SOD DISTURBED AREAS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING EROSION CONTROL DEVICES AS NECESSARY TO CONTROL EROSION FOR THE DURATION OF THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING & MAINTAINING TRAFFIC CONTROL, IN ACCORDANCE WITH THE MUTCD.

STANDAR DRAWINGS		DATE: 10/01/24				
SHEET NO.	<b>CITY OF KIRKWOOD</b> TITLE PAGE 139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	CHECKED: JDB				
<b>TITLE</b>		DRAWN: JDB				
		SCALE: NONE				
1 OF 13				NO.	DATE	REMARKS
				ISSUE / REVISION DESCRIPTIONS		



CONCRETE

Class of Street	Minor, Alley, and Residential Cul-de-Sac		
	Major (inches)	Collector (inches)	(inches)
Concrete pavement:			
Concrete thickness	8	8	7
Rolled stone base	4	4	6
Asphaltic concrete:			
Surface course	2	2	2
Asphaltic concrete base	10	10	8
Rolled stone base	0	0	0

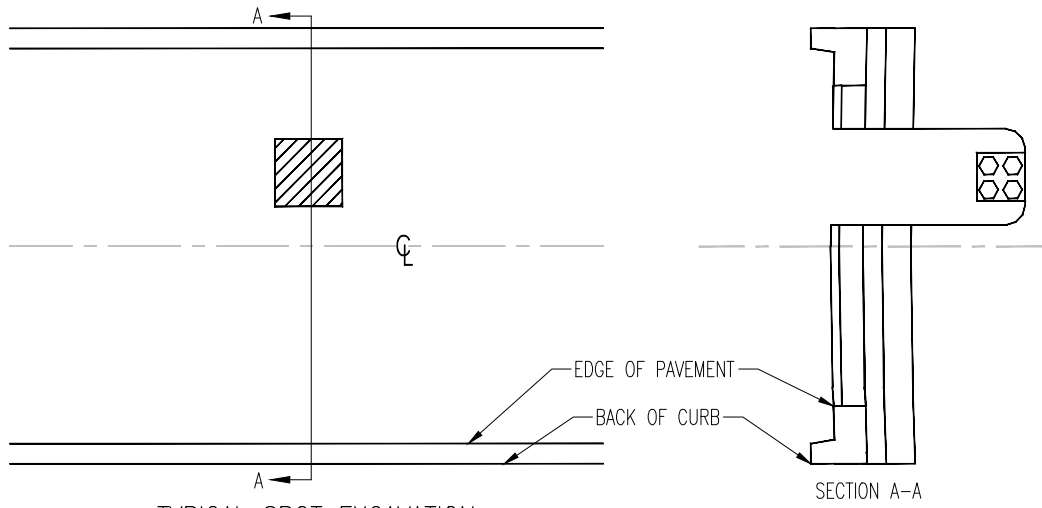


ASPHALT

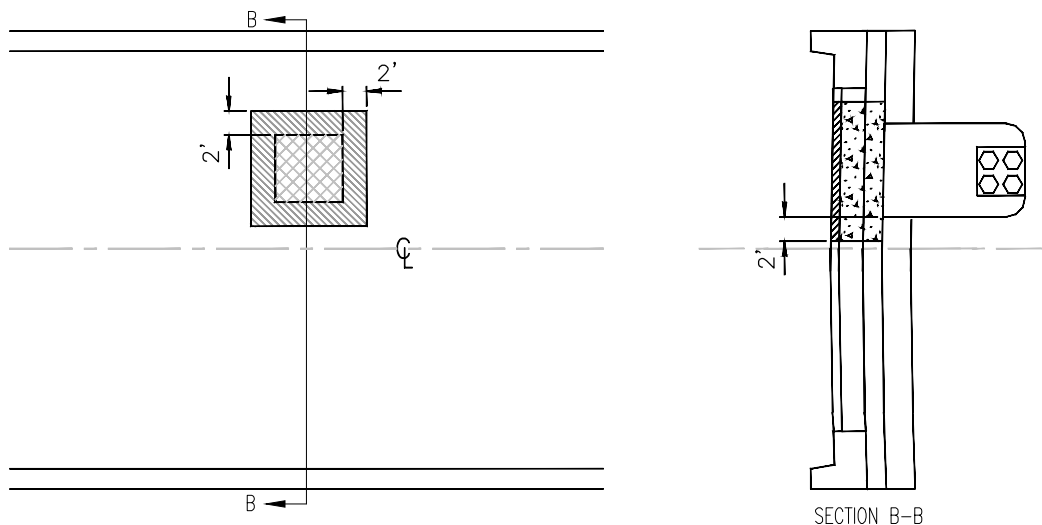
NOTES:

1. CONCRETE PAVEMENT: FULL PANEL REPLACEMENT IF ONE OR MORE OF THE FOLLOWING EXIST:
  - A. ANY ARTERIAL STREET LESS THAN 15 YEARS OLD OR ANY STREET LESS THAN 10 YEARS OLD.
  - B. ANY SLAB WHERE THE CUT REMOVES MORE THAN 1/3 OF THE SLAB.
  - C. ANY DIAGONAL CUT.
  - D. ANY SLAB WHERE THE PROPOSED CUT WILL LEAVE THE SLAB WITH 3 OR MORE PIECES.
  - E. ANY TRENCHING THAT TRANSVERSES ANY ARTERIAL.
2. ASPHALT PAVEMENT:
  - A. MINIMUM WIDTH OF REPLACEMENT OVERLAY SHALL BE TO THE CENTERLINE ON TWO LANE ROADS.
3. JOINT REINFORCEMENT
  - A. 30" LONG, LONGITUDINAL TIE BAR #5 GRADE 40 EPOXY COATED (12" ON CENTER)
  - B. 18" LONG, 1" GRADE 40 SMOOTH EPOXY, SHALL BE INSTALLED IN ALL TRANSVERSE JOINTS SPACED ON 24" CENTERS.
4. SEE ENGINEER FOR PAVEMENT REQUIREMENTS
5. UNDERDRAIN SHALL BE INSTALLED WHEN NEXT TO STORM INLET (SEE SHEET 6)
6. EXCAVATION IN CENTER OF STREET SHALL BE FULL STREET WIDTH REPAIR

	STREET RESTORATION - FULL LANE	DATE: 10/01/2024		
SHEET NO.	<b>CITY OF KIRKWOOD</b> STANDARD DRAWINGS 139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	CHECKED: JDB		
1		DRAWN: JDB		
2 OF 13		SCALE: NONE		
				NO. DATE REMARKS
				ISSUE / REVISION DESCRIPTIONS



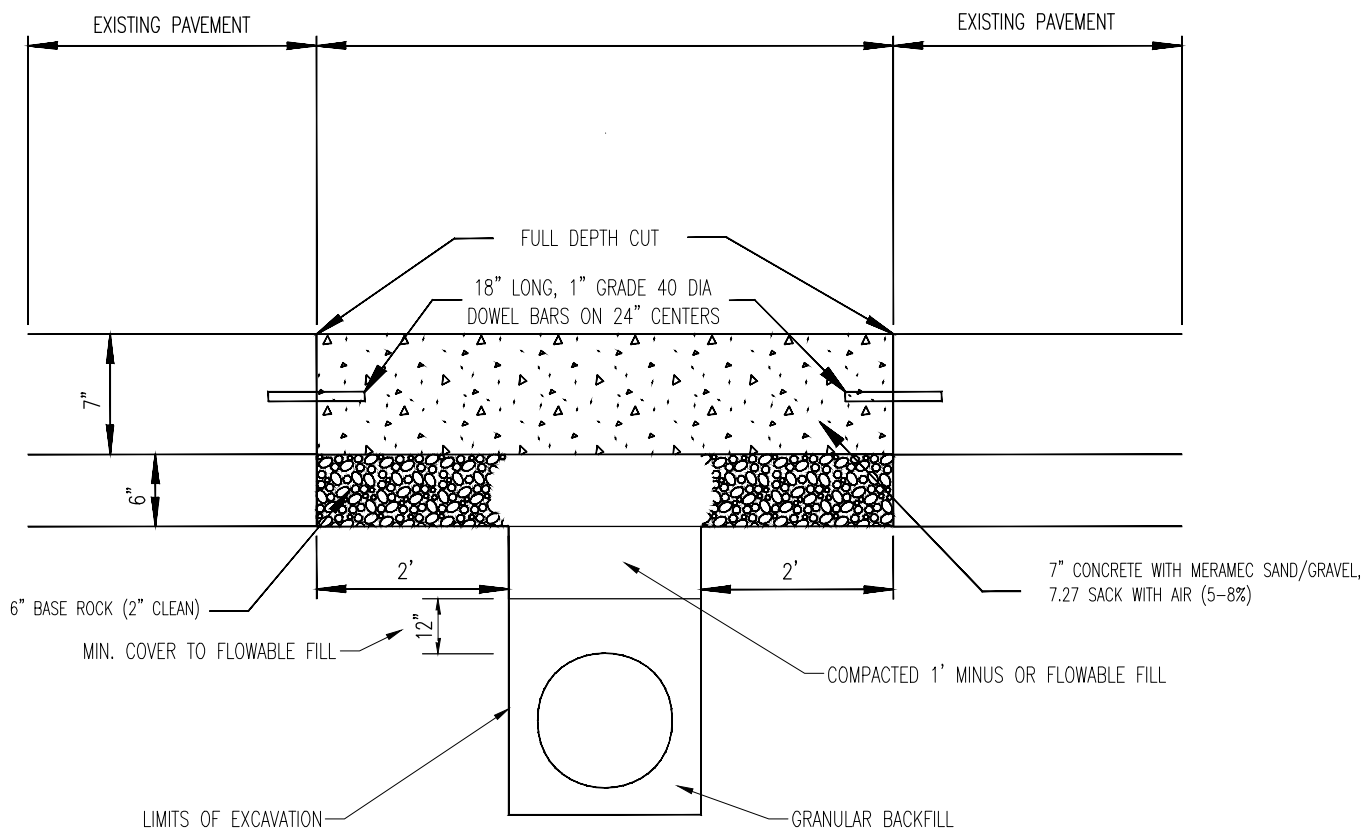
TYPICAL SPOT EXCAVATION



TYPICAL SPOT RESTORATION


1. CONCRETE PAVEMENT (SHEET 4): WHERE PARTIAL PANEL REPLACEMENT IS ALLOWED, ADDITIONAL PAVEMENT REPLACEMENT BEYOND THE EXCAVATION WILL BE REQUIRED UNDER THE FOLLOWING CONDITIONS:
  - A. CUTS LESS THAN 18 SQUARE FEET AND WHERE THE DEPTH OF THE EXCAVATION IS 6 FEET OR LESS BELOW GRADE AND NOT WITHIN IT'S INITIAL SIZE.
  - B. MINIMUM RESTORATION SLAB SHALL BE 3 FEET WIDE IN THE LONGITUDINAL DIRECTION AND 5 FEET LONG IN TRANSVERSE DIRECTION.
  - C. IF CUT IS LESS THAN 3 FEET FROM THE LONGITUDINAL OR 5 FEET FROM THE TRANSVERSE JOINT OR OTHER PATCHES OR CRACKS, THE INTERVENING PORTION OF THE SLAB MUST BE REMOVED.
  - D. 18" SMOOTH 1" DIAMETER EPOXY COATED DOWELS WILL BE USED ON 24' CENTERS.
2. ASPHALT PAVEMENT (SHEET 5):
  - A. THE LENGTH OF REPLACEMENT SHALL BE THE LENGTH OF THE EXCAVATION PLUS 24 INCHES ALL THE WAY AROUND. SEAL JOINTS WITH SS1-H AND SAND MIXTURE.
  - B. WHERE EXISTING CONCRETE BASE IS PRESENT, 30" #5 GRADE 40 TIE BARS SHALL BE INSTALLED IN ALL JOINTS SPACED 24" ON CENTER.

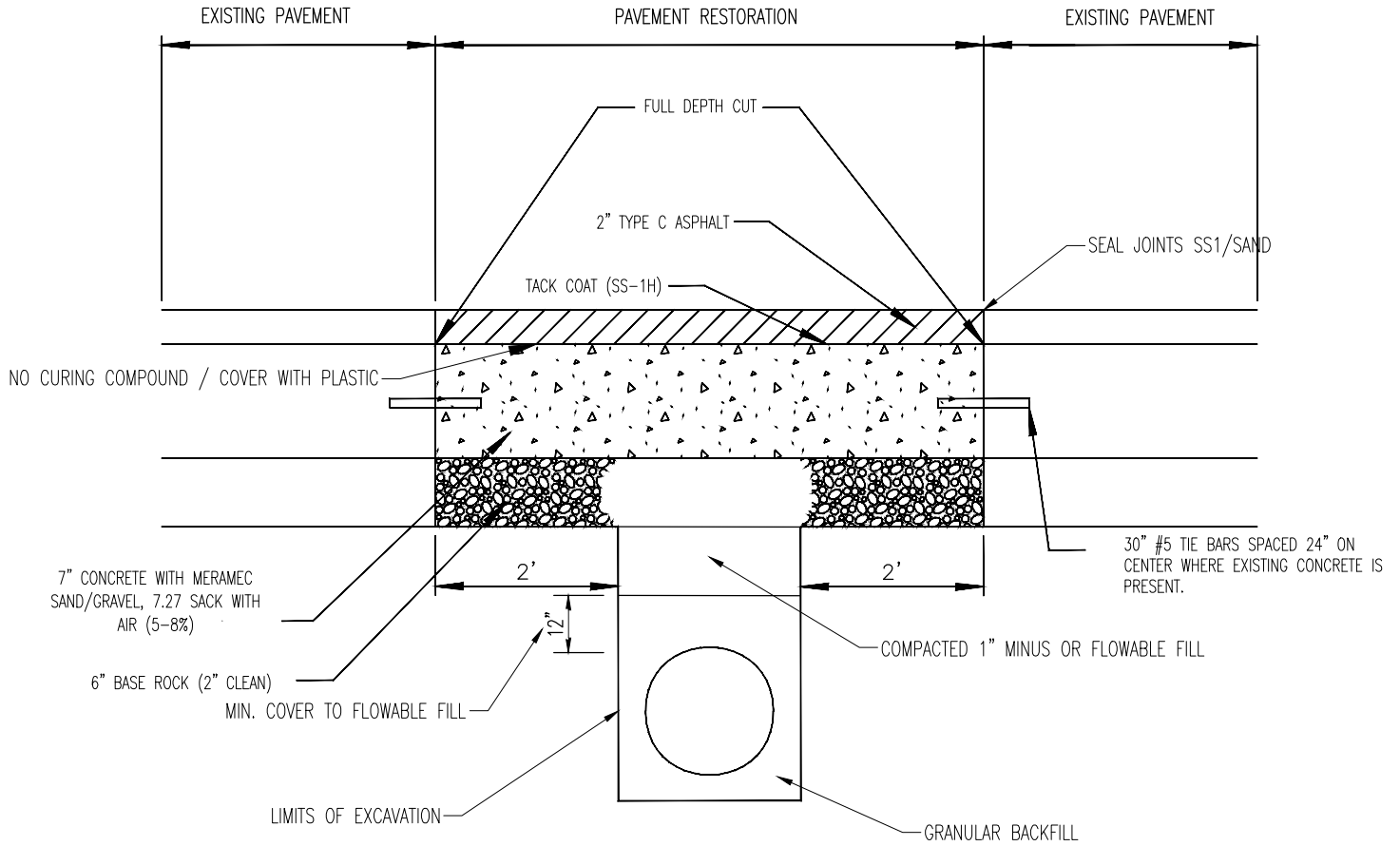
SPOT - STREET RESTORATION		DATE: 1/21/20		
SHEET NO.	<b>CITY OF KIRKWOOD</b> STANDARD DRAWINGS 139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	CHECKED: C.A.K.		
<b>2</b>		DRAWN: M.T.S		
3 OF 13		SCALE: NONE		NO. DATE REMARKS
			ISSUE / REVISION DESCRIPTIONS	



PAVEMENT RESTORATION

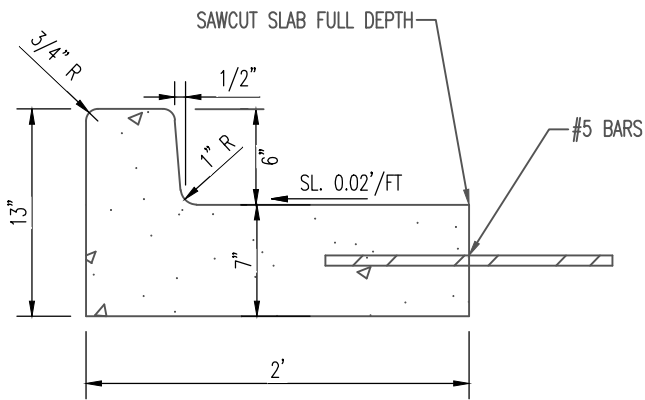
1. ADDITIONAL INFORMATION FOR LIMITS OF REPAIR AND REINFORCEMENT CAN BE FOUND ON SHEET 2.

SHEET NO. <b>3</b>	SPOT REPAIR - CONCRETE	DATE: 1/21/20		
	<b>CITY OF KIRKWOOD</b>	CHECKED: C.A.K.		
STANDARD DRAWINGS	DRAWN: M.T.S.			
139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	SCALE: NONE			
4 OF 13				NO.   DATE   REMARKS
				ISSUE / REVISION DESCRIPTIONS

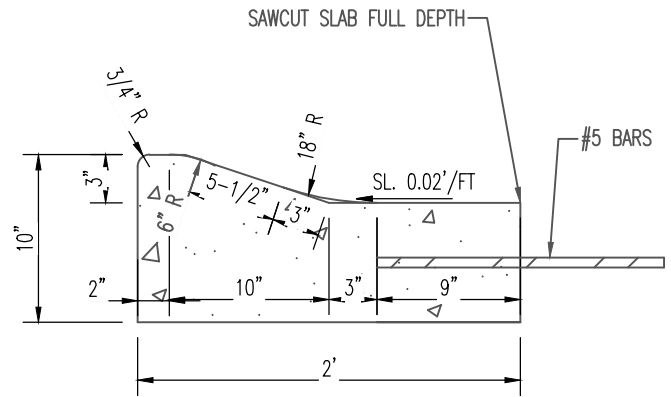


1. ADDITIONAL INFORMATION FOR LIMITS OF REPAIR AND REINFORCEMENT CAN BE FOUND ON SHEET 2.

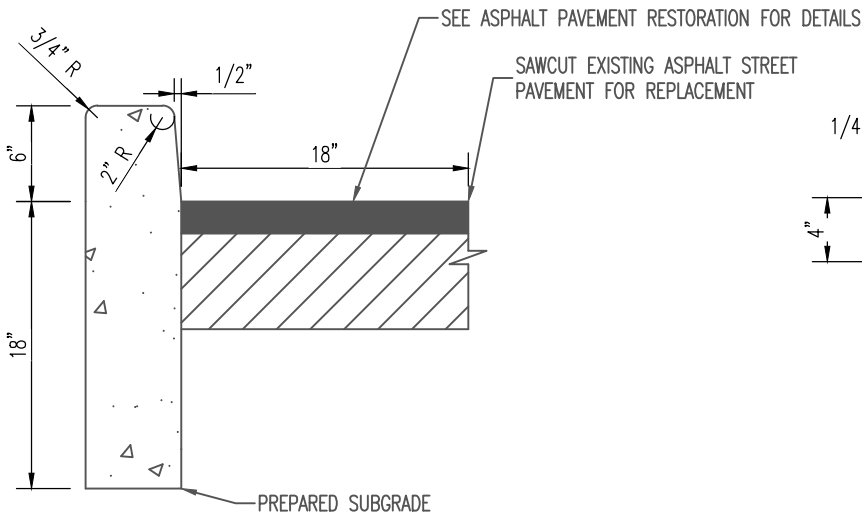
SPOT REPAIR-ASPHALT DETAIL		DATE: 1/21/20										
SHEET NO.	<b>CITY OF KIRKWOOD</b> STANDARD DRAWINGS 139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	CHECKED: C.A.K.										
4		DRAWN: M.T.S.										
		SCALE: NONE										
5 OF 13					<table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>REMARKS</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td colspan="3">ISSUE / REVISION DESCRIPTIONS</td> </tr> </tbody> </table>	NO.	DATE	REMARKS				ISSUE / REVISION DESCRIPTIONS
NO.	DATE	REMARKS										
ISSUE / REVISION DESCRIPTIONS												



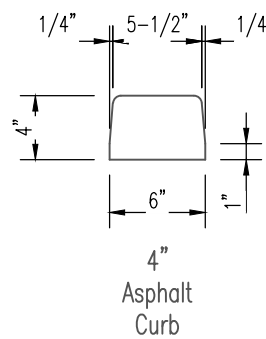
CURB AND GUTTER REPLACEMENT



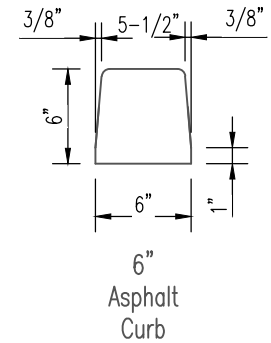
ROLLED CURB AND GUTTER REPLACEMENT



VERTICAL CURB REPLACEMENT / FULL DEPTH ASPHALT



4" Asphalt Curb



6" Asphalt Curb

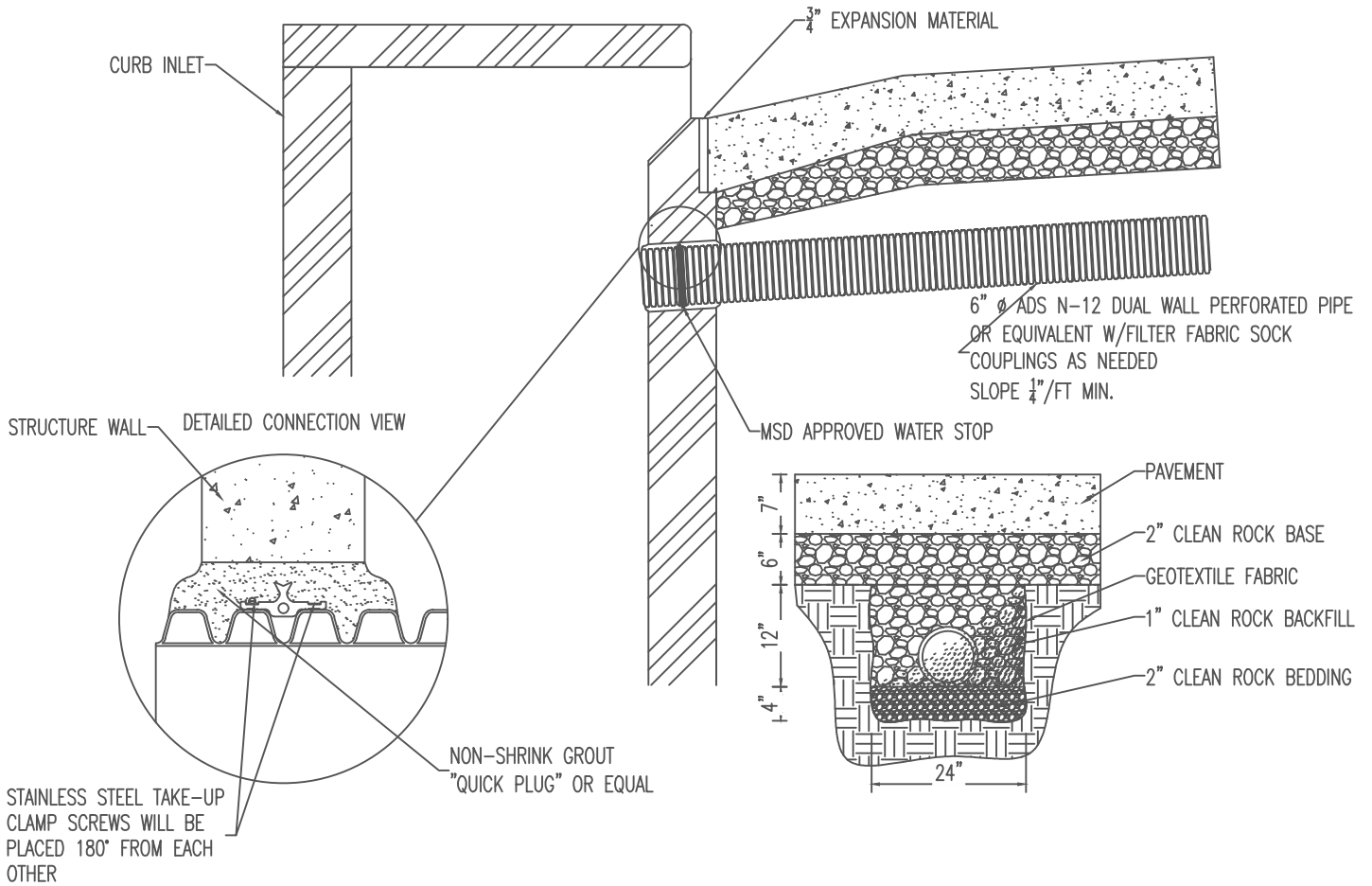
ASPHALT CURB REPLACEMENT

- \* MOLDS AVAILABLE WITH STREET DEPARTMENT
- \* TACK CURB TO PAVEMENT SURFACE

NOTES:

1. CONCRETE CURBS SHALL BE REPLACED JOINT TO JOINT.
2. CONCRETE STREETS LESS THAN 5 YEARS IN AGE SHALL REQUIRE REPLACEMENT OF THE ENTIRE SLAB. VERIFY WITH ENGINEERING DEPARTMENT.
3. DOWEL BARS REQUIRED WHEN REPLACING CURBS ON EXISTING CONCRETE PAVEMENT.
  - A. 18" LONG, #5 GRADE 40 EPOXY COATED BAR
  - B. SHALL BE INSTALLED IN ALL TRANSVERSE JOINTS SPACED ON 24" CENTERS
  - C. CONCRETE SHALL MEET CONCRETE PAVEMENT STANDARDS

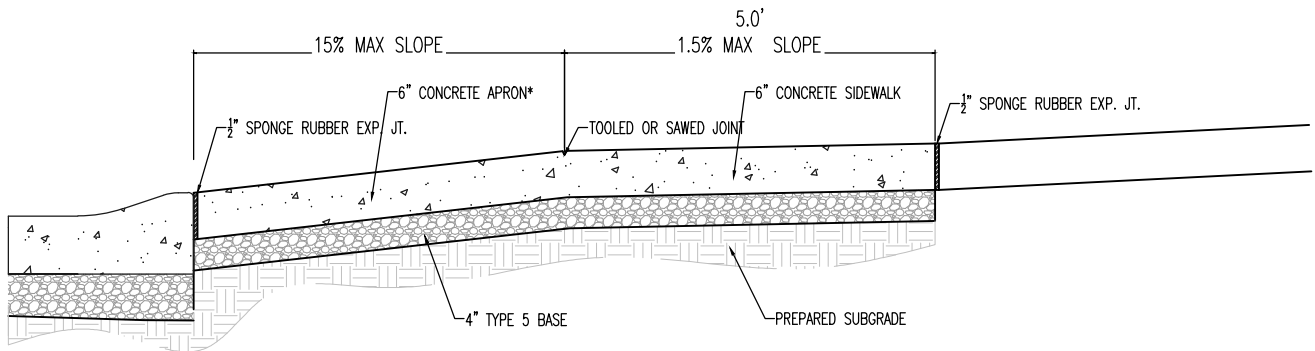
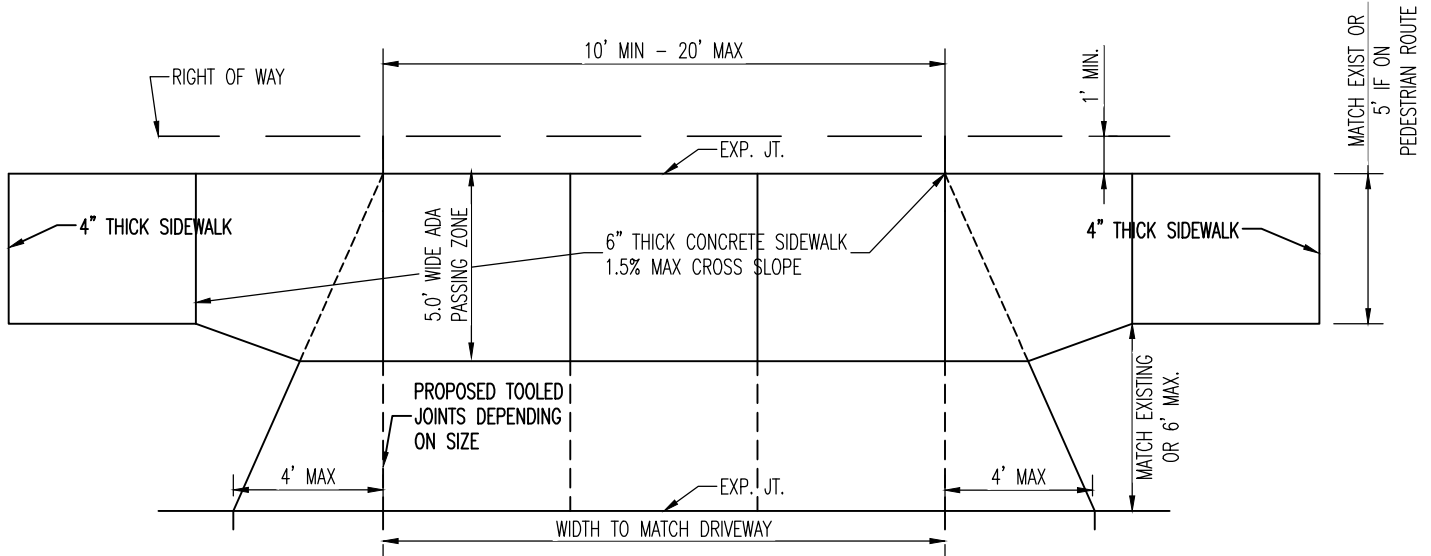
CURB RESTORATION DETAILS		DATE: 1/21/20		
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		SCALE: NONE		
6 OF 13				NO. DATE REMARKS
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1. ADD END CAP AND RODENT SCREEN TO PIPE.
2. FULL ROADWAY WIDTH WHEN POSSIBLE OR AS WIDE AS EXCAVATION IS.

PAVEMENT UNDERDRAIN		DATE: 1/21/20		
SHEET NO.	<b>CITY OF KIRKWOOD</b> STANDARD DRAWINGS 139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	CHECKED: C.A.K.		
<b>6</b>		DRAWN: M.T.S.		
7 OF 13		SCALE: NONE		
				NO.   DATE   REMARKS
				ISSUE / REVISION DESCRIPTIONS

# RESIDENTIAL



\*APRON MAY ALSO BE 2" ASPHALTIC CONCRETE OVER 6" TYPE 5 BASE. SIDEWALK MUST BE 6.25 SACK MERAMEC SAND/GRAVEL CONCRETE CONCRETE.

- 1.) COMMERCIAL ENTRANCES AND ENTRANCES TO MULTIFAMILY UNITS (OVER TWO UNITS) SHALL BE CONSTRUCTED OF 6.25 SACK CONCRETE WITH MERAMEC SAND AND GRAVEL. WITH A MINIMUM THICKNESS OF SEVEN INCHES.
- 2.) COMMERCIAL ENTRANCES SHALL NOT BE MORE THAN 35 FEET WIDE OR LESS THAN 12 FEET WIDE FOR ONE-WAY TRAFFIC. THE OPENING AT THE CURB OR PAVEMENT EDGE SHALL NOT BE LESS THAN A RADIUS OF 10 FEET NOR MORE THAN 20 FEET.

DRIVEWAY DETAIL - ROLLED CURB

SHEET NO.

7

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**CITY OF KIRKWOOD**  
STANDARD DETAILS  
139 S. KIRKWOOD ROAD  
KIRKWOOD, MISSOURI 63122

DATE:  
10/01/24  
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DRAWN:  
JDB  
SCALE:  
NONE

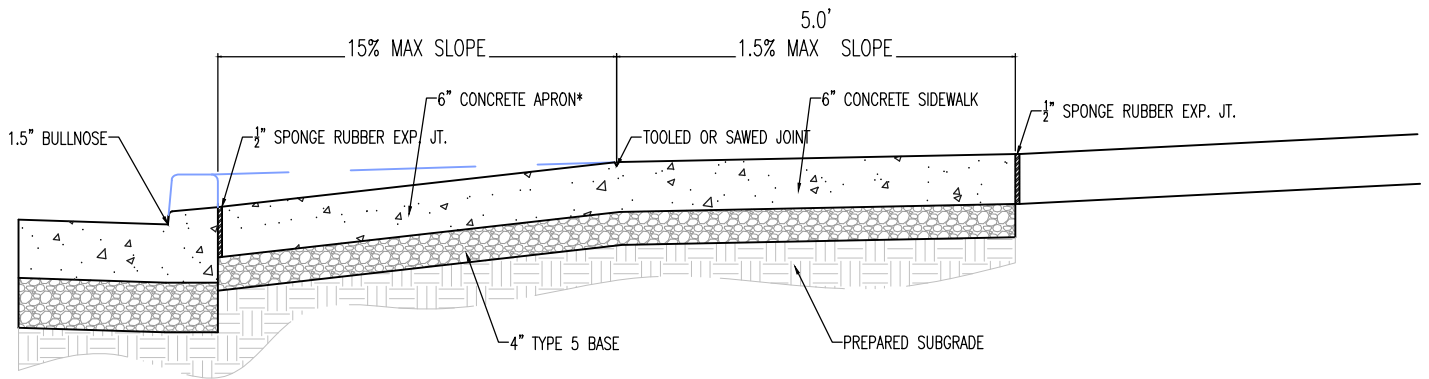
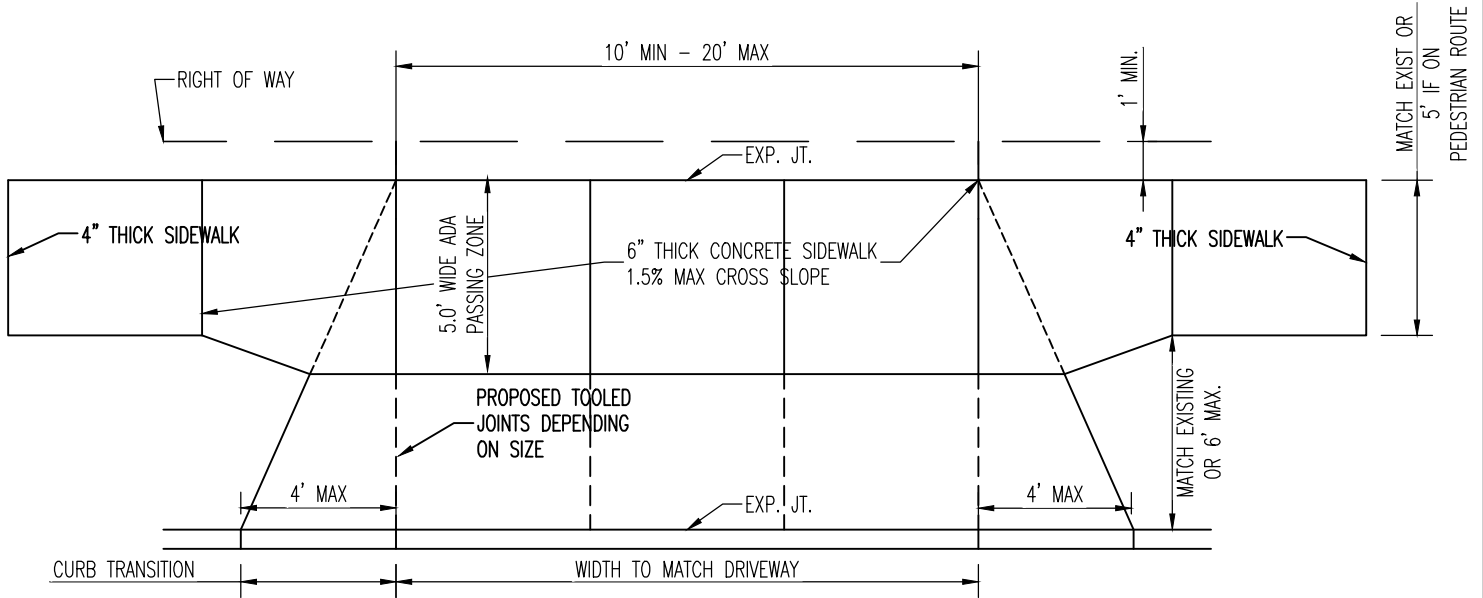


NO.	DATE	REMARKS

ISSUE / REVISION DESCRIPTIONS



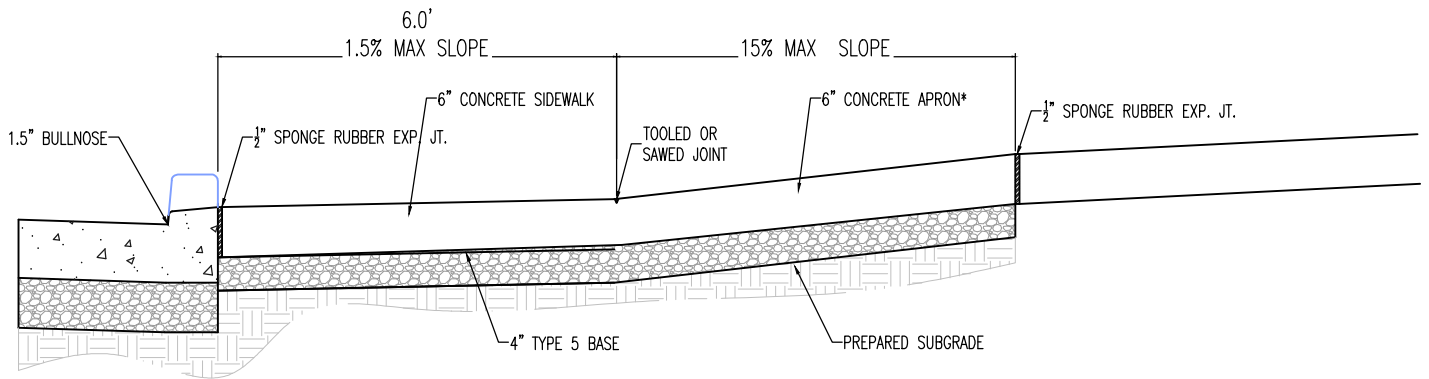
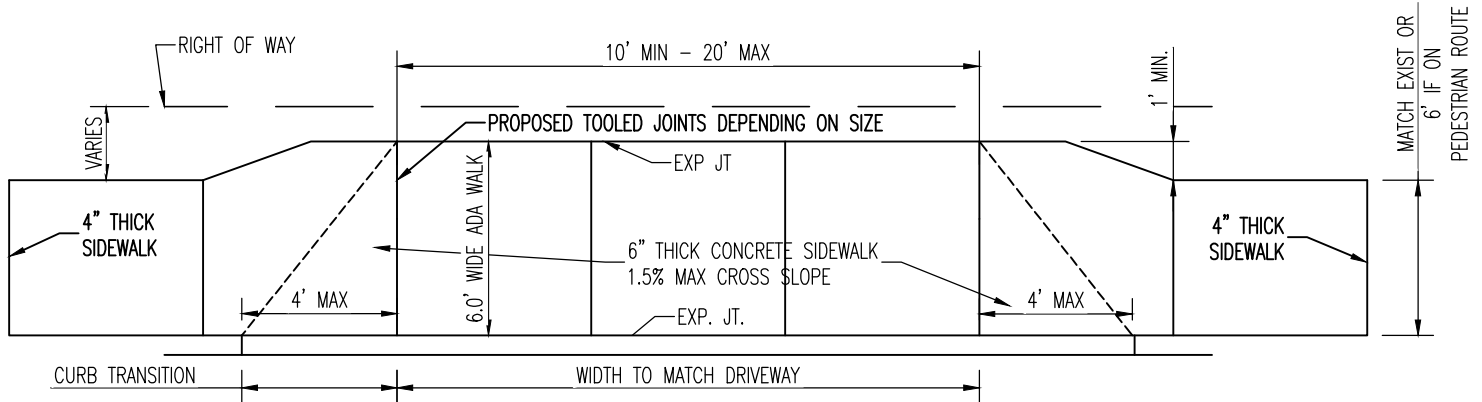
# RESIDENTIAL



\*APRON MAY ALSO BE 2" ASPHALTIC CONCRETE OVER 6" TYPE 5 BASE. SIDEWALK MUST BE 6.25 SACK MERAMEC SAND/GRAVEL CONCRETE CONCRETE.

- 1.) COMMERCIAL ENTRANCES AND ENTRANCES TO MULTIFAMILY UNITS (OVER TWO UNITS) SHALL BE CONSTRUCTED OF 6.25 SACK CONCRETE WITH MERAMEC SAND AND GRAVEL. WITH A MINIMUM THICKNESS OF SEVEN INCHES.
- 2.) COMMERCIAL ENTRANCES SHALL NOT BE MORE THAN 35 FEET WIDE OR LESS THAN 12 FEET WIDE FOR ONE-WAY TRAFFIC. THE OPENING AT THE CURB OR PAVEMENT EDGE SHALL NOT BE LESS THAN A RADIUS OF 10 FEET NOR MORE THAN 20 FEET.

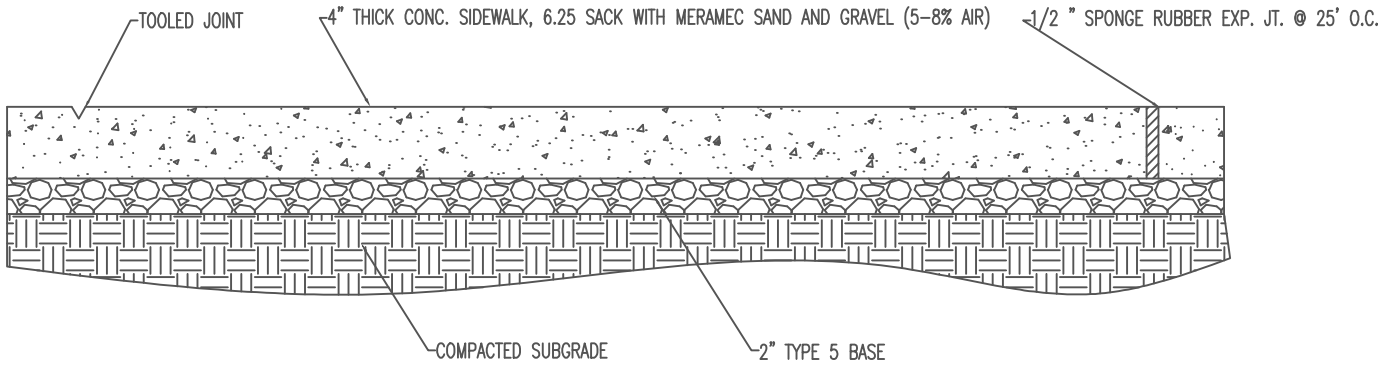
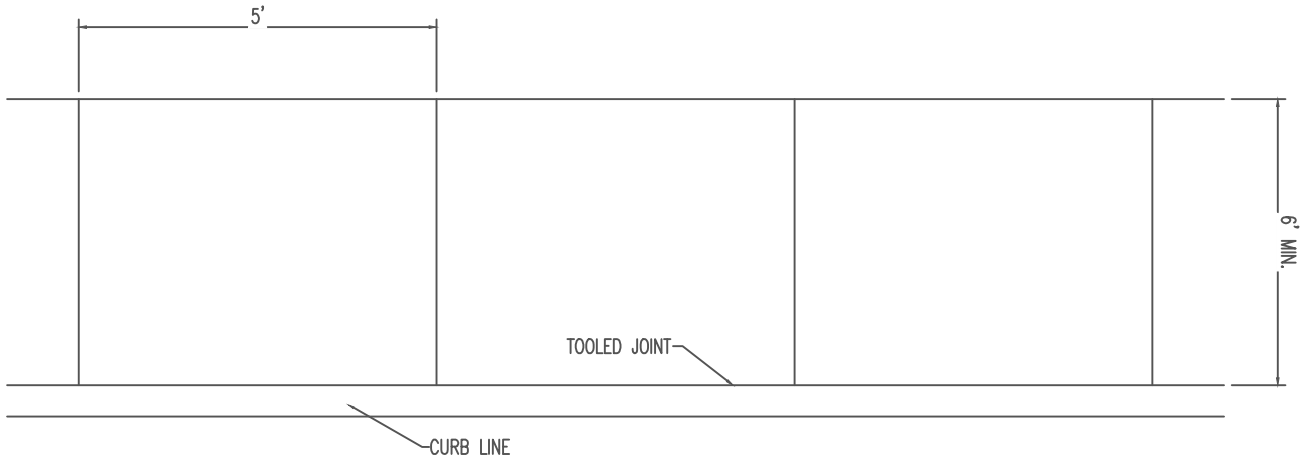
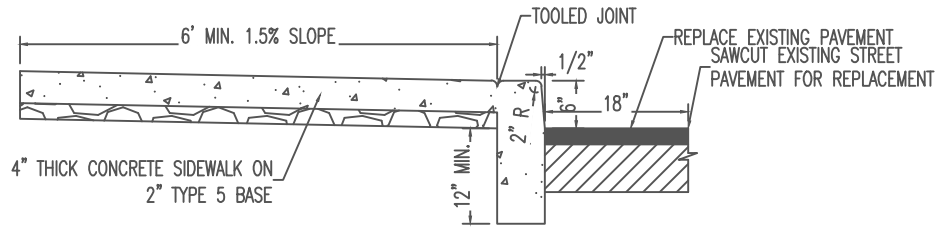
DRIVEWAY DETAIL - VERTICAL CURB		DATE: 10/01/24			
SHEET NO.	<b>CITY OF KIRKWOOD</b> STANDARD DETAILS 139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	CHECKED: JDB			
<b>8</b>		DRAWN: JDB			
9 OF 13		SCALE: NONE.			
			NO.	DATE	REMARKS
			ISSUE / REVISION DESCRIPTIONS		



\*APRON MAY ALSO BE 2" ASPHALTIC CONCRETE OVER 6" TYPE 5 BASE. SIDEWALK MUST BE 6.25 SACK MERAMEC SAND/GRAVEL CONCRETE CONCRETE.

- 1.) COMMERCIAL ENTRANCES AND ENTRANCES TO MULTIFAMILY UNITS (OVER TWO UNITS) SHALL BE CONSTRUCTED OF 6.25 SACK CONCRETE WITH MERAMEC SAND AND GRAVEL. WITH A MINIMUM THICKNESS OF SEVEN INCHES.
- 2.) COMMERCIAL ENTRANCES SHALL NOT BE MORE THAN 35 FEET WIDE OR LESS THAN 12 FEET WIDE FOR ONE-WAY TRAFFIC. THE OPENING AT THE CURB OR PAVEMENT EDGE SHALL NOT BE LESS THAN A RADIUS OF 10 FEET NOR MORE THAN 20 FEET.

DRIVEWAY DETAIL- WALK NEXT TO ROADWAY		DATE: 10-01-2024		
SHEET NO.	<b>CITY OF KIRKWOOD</b> STANDARD DRAWINGS 139 S. KIRKWOOD ROAD KIRKWOOD, MISSOURI 63122	CHECKED: JDB		
<b>9</b>		DRAWN: JDB		1 10-01-24 ADDED PER CITY WALK STANDARD UPDATE
10 OF 14		SCALE: NONE		NO. DATE REMARKS
			ISSUE / REVISION DESCRIPTIONS	



TYPICAL SIDEWALK DETAIL AT EDGE OF ROADWAY

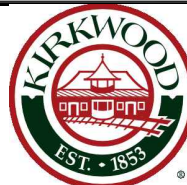
SHEET NO.

10

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**CITY OF KIRKWOOD**  
STANDARD DRAWINGS  
139 S. KIRKWOOD ROAD  
KIRKWOOD, MISSOURI 63122

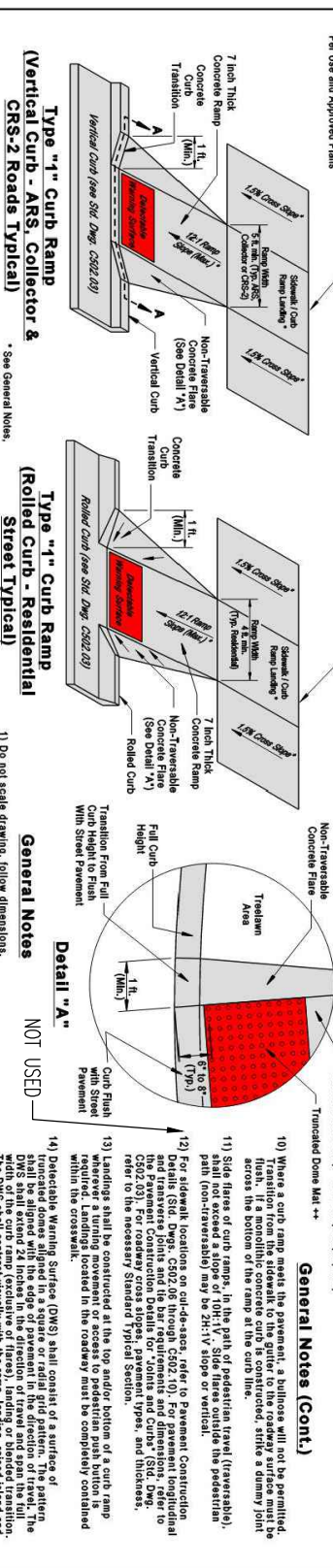
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10/01/2024  
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JDB  
DRAWN:  
JDB  
SCALE:  
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NO.	DATE	REMARKS
1	10/01/24	UPDATED PER NEW CITY STANDARD
ISSUE / REVISION DESCRIPTIONS		

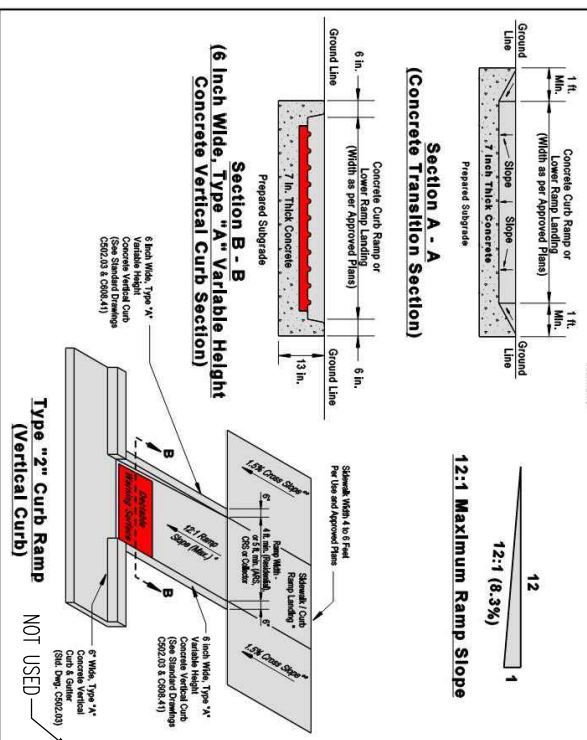
1.) ALL TRUNCATED DOMES SHALL BE CAST IN PLACE. DOMES SHOULD BE YELLOW EXCEPT FOR ON KIRKWOOD ROAD WHERE THEY SHALL BE RED.  
 2.) ADA STANDARDS NOT PROVIDED WITHIN SHALL BE FOLLOWED FROM THE ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

NEW	REVISIONS	ST. LOUIS COUNTY PROJ. NUMBER	TOTAL SHEETS
3-1-10	7-1-10		



**General Notes**

- Do not scale drawing, follow dimensions.
- All areas of the pedestrian access route must be compliant with ADAAG. Exceptions must be approved by the Engineer. Guidelines may be viewed online on the United States Access Board's website at [www.usaccess.gov](http://www.usaccess.gov). Contractor's responsibility to meet these guidelines. Areas of non-compliance shall be removed and corrected at the contractor's expense.
- The width for sidewalks shall be a minimum of 4 feet wide for residential streets and a minimum of 5 feet wide for collector or arterial streets. The width for sidewalks shall be a minimum of 6 feet wide for vertical or rolled curb shall be 6 feet wide (narrow width, right-of-way). Required sidewalk width will be determined during plan preparation. (See Standard Drawing C608.50, "Concrete Sidewalk Details").
- Dedicated ramp length may be defined in the field by the Collector, as approved by the Engineer based on actual measurements of street grade, using the curb ramp length tables on drawing C608.41.
- Ramp running slope shall be a maximum of 12:1 or 8.3%. Curb ramp landings shall have a minimum size of 4 ft. by 4 ft. (not including the direction of travel). (Slope: 1.0% Min. to 2.0% Max.). Sidewalk cross slope shall be 1.5% (+ or - 0.5%). (Slope: 1.0% Min. to 2.0% Max.).
- All sidewalk sections shall be 4 inches thick, except where required to be thicker such as driveway crossings, etc., as shown on other Standard Drawings or approved plans. All curb ramps, lower landings surfaces (truncated dome mat), shall be a minimum of 7 inches thick. Sidewalk joints shall be finished or sawn with a minimum 1/2 inch and does not pour water. Pedestrian access route shall continue across driveway.
- The running grade of a sidewalk shall not exceed 5.0% unless it is matching the grade of the adjacent roadway.
- Storm water inlets, signs, posts, manhole covers, pull boxes and other access lids should be placed within the sidewalk. If such a location is necessary, the feature must meet ADA standards. Mallows placement should also be avoided in the sidewalk. If it is necessary, use the standard shown on drawing C608.41. An accessible route must have minimum 5 foot (58 inch) clear width (ADAAG).
- All sidewalk curbs, bus stop pads, and landings at the top of curb ramps, shall be paid for as "Concrete Sidewalk". Curb ramps and landings at the bottom of curb ramps, shall be paid for as "Concrete Curb Ramp". No direct payment will be made for variable height curb, concrete flares for pedestrian expansion joint (MSJ with joint strips).
- When a curb ramp meets the pavement, a bulge will not be permitted. Transition from the sidewalk to the gutter or the roadway surface must be across the bottom of the ramp at the curb line.
- Side flares of curb ramps, in the path of pedestrian travel (traversable), shall be constructed with a 24:1 V slope to the vertical.
- For sidewalk locations on cut-decks, refer to Pavement Construction and Transverse Joints and the bar requirements and dimensions. Refer to the necessary Standard Typical Section, types, and thickness.
- Landings shall be constructed at the top and/or bottom of a curb ramp where a change in slope occurs. Landings shall be completely contained within the crosswalk.
- Detectable Warning Surface (DWS) shall consist of a surface of truncated domes aligned in a square or radial grid pattern. The pattern of the DWS shall extend 24 inches in the direction of travel and span the full width of the curb ramp (exclusive of flares), landing or tapered transition. DWS shall consist of truncated domes with a height of 0.15 inches and a diameter of 0.5 inches (exclusive of flares). Truncated domes shall be aligned parallel to the running slope of a ramp, in a square to roll between the domes. When installed on a landing or tapered transition, DWS shall be aligned perpendicular or radial to the break between the landing and the ramp. DWS shall be installed on the face of the curb in concrete cut-through islands. DWS shall be aligned with the face of the curb, 6 in. to 8 in. from the face of curb (see Detail "A" on this drawing). DWS shall be installed on the face of the curb, 6 in. to 8 in. from the face of curb (see Detail "A" on this drawing). DWS shall be installed on the face of the curb, 6 in. to 8 in. from the face of curb (see Detail "A" on this drawing). DWS shall be installed on the face of the curb, 6 in. to 8 in. from the face of curb (see Detail "A" on this drawing).
- The DWS type shall be "cast-in-place with Screw Anchor" (both new and existing) with the approved manufacturer listed on the "MDOOT Qualified Lists, Qualified Truncated Domes," ES-1087 Table 1" (also see Sid. Dwg. C608.51, General Note 5). The MDOOT Qualified Lists are located on Internet at: [www.mdot.org/contracts/qualified\\_lists](http://www.mdot.org/contracts/qualified_lists).
- Detectable Warnings (truncated domes) shall be installed per manufacturer's instructions. Truncated domes shall span the full width of the ramp, landing or cut-through island. Stamped concrete truncated domes or grooves will not be accepted.



SAINT LOUIS COUNTY DEPARTMENT OF HIGHWAYS AND TRAFFIC CLAYTON, MISSOURI
SIDEWALK & CURB RAMP DETAILS CONCRETE SIDEWALK AND CURB RAMP DETAILS (TYPES 1 & 2)
REVISION DATE: July 1, 2010
DRAWING C608.40



DATE:	1/21/20
CHECKED:	C.A.K.
DRAWN:	M.T.S
SCALE:	NONE

STANDARD DRAWINGS  
**CITY OF KIRKWOOD**  
 ADA CURB RAMP DETAILS  
 139 S. KIRKWOOD ROAD  
 KIRKWOOD, MISSOURI 63122

SHEET NO.  
**C-1**  
 12 OF 14

NO.	DATE	REMARKS

ISSUE / REVISION DESCRIPTIONS

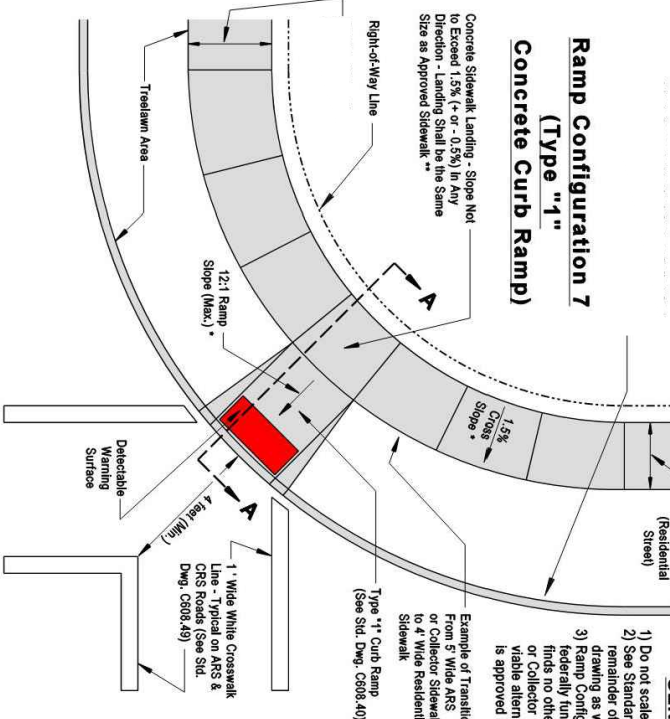


1.) ALL TRUNCATED DOMES SHALL BE CAST IN PLACE. DOMES SHOULD BE YELLOW EXCEPT FOR ON KIRKWOOD ROAD WHERE THEY SHALL BE RED.  
 2.) ADA STANDARDS NOT PROVIDED WITHIN SHALL BE FOLLOWED FROM THE ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

NEW	REVISIONS
3-1-10	

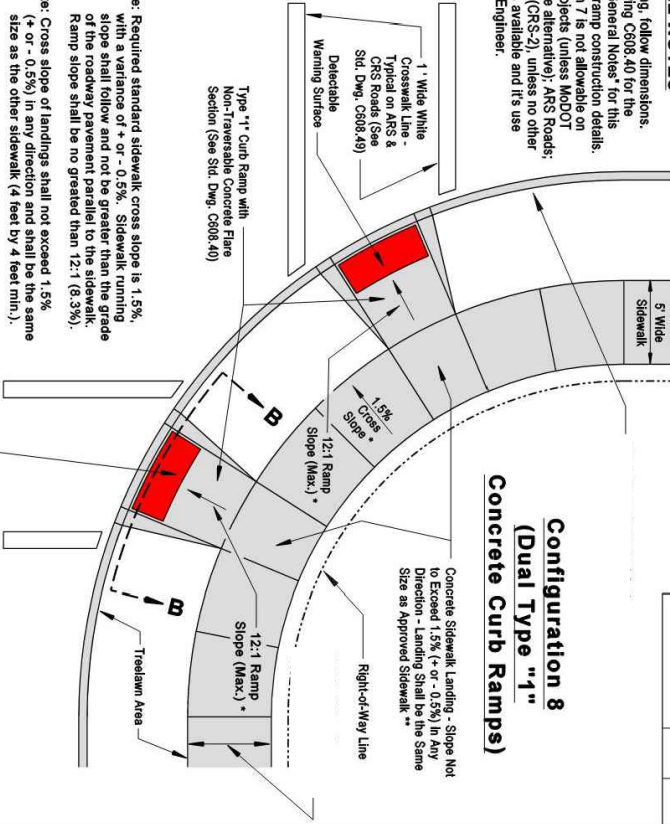
ST. LOUIS COUNTY PROJ.	
PROJECT NUMBER	TOTAL SHEETS

### Ramp Configuration 7 (Type "1") Concrete Curb Ramp

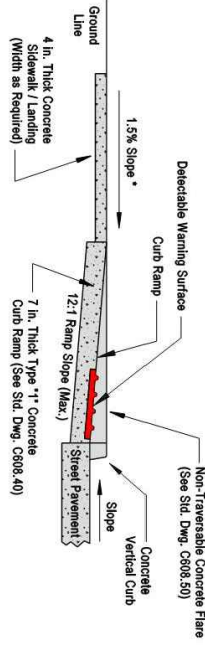


- GENERAL NOTES**
- 1) Do not scale drawing, follow dimensions.
  - 2) See Standard Drawing C608.40 for the remainder of the "General Notes" for this drawing as well as ramp construction details.
  - 3) Ramp Configuration 7 is not allowable on federally funded projects (unless MDDOT finds no other viable alternative); ARS Roads; or Collector Roads (CRS-2), unless no other viable alternative is available and it's use is approved by the Engineer.

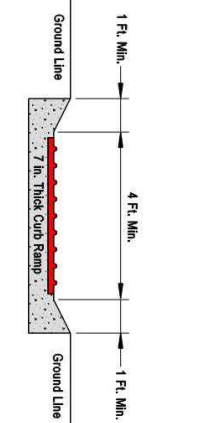
### Configuration 8 (Dual Type "1") Concrete Curb Ramps



#### Section "A-A"



#### Section "B-B"



\* Note: Required standard sidewalk cross slope is 1.5%, with a variance of + or - 0.5%. Sidewalk running slope shall follow and not be greater than the grade of the roadway pavement parallel to the sidewalk. Ramp slope shall be no greater than 12:1 (8.3%).

\*\* Note: Cross slope of landings shall not exceed 1.5% (+ or - 0.5%) in any direction and shall be the same size as the other sidewalk (4 feet by 4 feet min.).

SAINT LOUIS COUNTY DEPARTMENT OF HIGHWAYS AND TRAFFIC CLAYTON, MISSOURI
<b>STANDARD SIDEWALK &amp; CURB RAMP DETAILS (CONFIGURATIONS 7 &amp; 8)</b>
REVISION DATE: March 1, 2010
DRAWING C608.48

STANDARD DRAWINGS

**CITY OF KIRKWOOD**  
 ADA CURB RAMP DETAILS  
 139 S. KIRKWOOD ROAD  
 KIRKWOOD, MISSOURI 63122

SHEET NO.  
**C-2**

13 OF 14

DATE:	1/21/20
CHECKED:	C.A.K.
DRAWN:	COUNTY
SCALE:	NONE



NO.	DATE	REMARKS
ISSUE / REVISION DESCRIPTIONS		

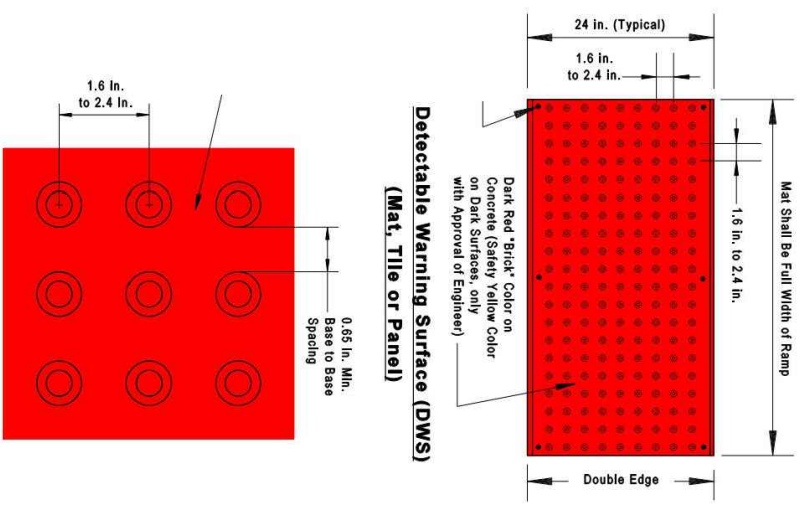
1.) ALL TRUNCATED DOMES SHALL BE CAST IN PLACE. DOMES SHOULD BE YELLOW EXCEPT FOR ON KIRKWOOD ROAD WHERE THEY SHALL BE RED.  
 2.) ADA STANDARDS NOT PROVIDED WITHIN SHALL BE FOLLOWED FROM THE ST. LOUIS COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

NEW	REVISIONS
7-24-03	7-31-07   10-22-08   3-1-10   7-6-11

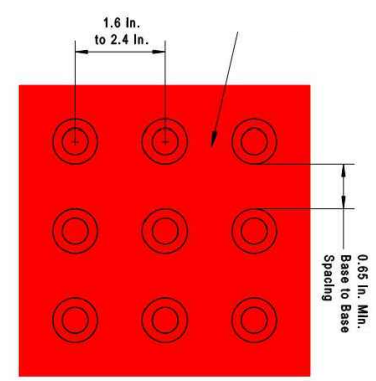
**General Notes**

- 1) Do not scale drawings, follow dimensions.
- 2) The surface shall be compliant with the Americans with Disabilities Act Accessibility Guidelines (ADAAG), Detectable Warnings (Paragraph 4.23) and Curb Ramps (Paragraph 4.7), and Ramps (Paragraph 4.5). Non-compliance shall be removed and corrected at contractor's expense.
- 3) The contractor and/or manufacturer must provide a performance warranty on the product and installation of the Detectable Warning Surface (DWS) for a minimum period of 1-year from the date of project acceptance or installation (whichever date is later). The performance warranty shall guarantee that the DWS is free from defects in workmanship and material including deformation, breakage, excessive wear or breakage of truncated domes, color fastness, delamination, or attachment to pavement surface.
- 4) The Detectable Warning Surface (DWS) type shall be "Cast-In-Place with Screw Anchoring" (both new and retrofit applications) with the approved manufacturers listed on the MoDOT Qualified Lists, Qualified Truncated Domes, FS-1067 Table 1\* (also see MoDOT Std. Dwg. C608.10N). The MoDOT "Qualified Lists" are located on the internet at: [www.mdot.org/business/materials/pdf/main/tables.pdf](http://www.mdot.org/business/materials/pdf/main/tables.pdf)
- 5) Refer to St. Louis County Standard Drawings C608.40 through C608.50 for sidewalk and curb ramp details and typical configurations. Truncated dome mats, tiles or panels are required on all raised concrete channelization islands with curb ramps (see Standard Drawing C608.49).
- 6) SAFETY MEASURES - Using barricades, cones or other safety devices, block off work area to pedestrian and vehicle traffic during installation process. Have work area prepared to offer alternate accessible pathway to disabled pedestrians during the time work is being performed and adhesive is curing.
- 7) Contractors or manufacturers shall at the request of this Department, provide product literature, installation procedures, maintenance instructions, detectable warning (truncated dome) samples (minimum 12 in. x 12 in.), and if necessary current test reports in accordance with ASTM guidelines, and possible test installation by the contractor or manufacturer.
- 8) MATERIALS  
 Cast-in-place composite tiles or mats shall be made of polyester/nylon ester reinforced compression molded material or similar approved material, throughout the thickness of the detectable warning surface. Colors shall be dark red "Brick" color (on concrete surface) and Safety Yellow (on dark surfaces with the approval of the engineer). DWS shall meet the Federal standard colors for tactile panels. UV stabilization protection (fade resistance) shall be homogeneous throughout the composite material and not rely on any type of painted or coated surface to achieve color or UV code compliance. Mats or tiles shall have a minimum of six (6) corrosion resistant anchors with color coordinated corrosion resistant fasteners.
- 9) Detectable Warning Surface (DWS) shall consist of a surface of truncated domes aligned in a square or radial grid pattern. The pattern shall be aligned with the edge of pavement in the direction of travel. The DWS shall extend 24 inches in the direction of travel and span the full width of the curb ramp (exclusive of flares), landing or blended transition. The DWS shall contrast visually with the ramp or landing surface (dark-on-light surface, or light-on-dark surface), with a slip resistant surface or pattern (comply with ADA and ADAAG guidelines). Truncated domes shall be aligned parallel to the running slope of a ramp, in a square grid, when installed in the direction of pedestrian travel, to permit wheels to roll between the domes. DWS shall be installed 6 in. to 8 in. from the face of curbs, the full width of the ramp (max. of 2 in. from each side of the ramp or landing - see detail A, on Std. Dwg. C608.40). DWS in a cut-through island, shall be installed 10 in. aligned with the face of the cut-through island curb (see Std. Dwg. C608.49).
- 10) The DWS, truncated dome mats, tiles or panels used, shall be consistent throughout the project and are required to be installed on all curb ramps at public and private street intersections; signalized entrances; and at all channelized and raised islands where a curb ramp or cut-through is provided. DWS shall be omitted on curb ramps adjacent to private entrances. The DWS type and location shall be approved by the Engineer prior to installation.
- 11) Truncated dome mats, tiles or panels shall be a cast-in-place product and approved by the project engineer prior to usage. Tiles or mats shall be pre-formed or pre-cast and installed per manufacturer's recommendations and instructions. Stamped concrete truncated domes or grooves will not be accepted.

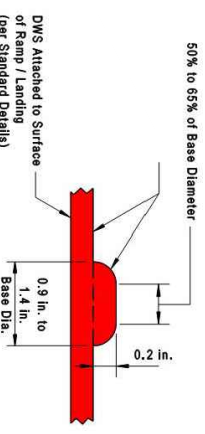
**Detectable Warning Surface (DWS)**  
 (Mat, Tile or Panel)



**Square Pattern, Parallel Alignment**



**Truncated Dome Detail**



SAINT LOUIS COUNTY DEPARTMENT OF HIGHWAYS AND TRAFFIC CLAYTON, MISSOURI	<b>DETECTABLE WARNING SURFACE FOR NEW CONSTRUCTION AND RETROFITTING OF CURB RAMPS</b>
REVISION DATE: July 6, 2011 DRAWING C608.51	

ST. LOUIS COUNTY PROJ.	NO.	TOTAL SHEETS

DATE:	1/21/20
CHECKED:	C.A.K.
DRAWN:	COUNTY
SCALE:	NONE



NO.	DATE	REMARKS
ISSUE / REVISION DESCRIPTIONS		

STANDARD DRAWINGS  
**CITY OF KIRKWOOD**  
 ADA CURB RAMP DETAILS  
 139 S. KIRKWOOD ROAD  
 KIRKWOOD, MISSOURI 63122

SHEET NO.  
**C-3**  
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