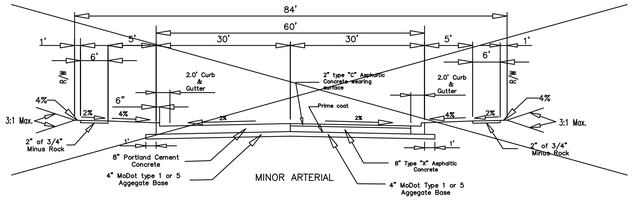
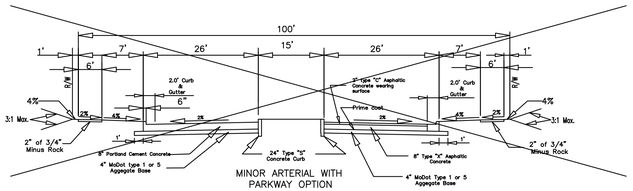
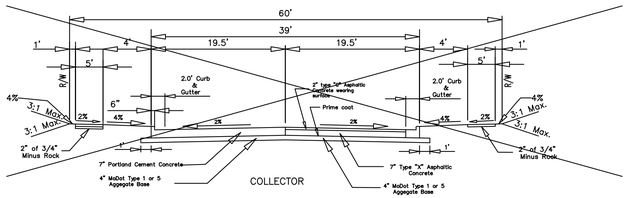
ISSUE	DATE / REMARKS
1	5-22-2020 Initial Submittal
2	7-14-2020 City Comment Revisions
3	8-13-2020 City Comment Revisions
4	9-01-2020 City Comment Revisions
5	12-02-2020 City Approval



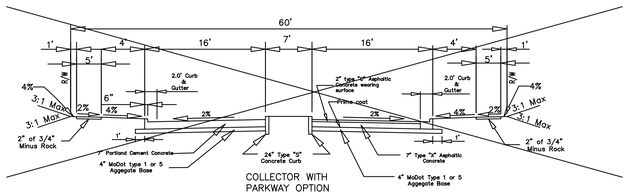
MINOR ARTERIAL



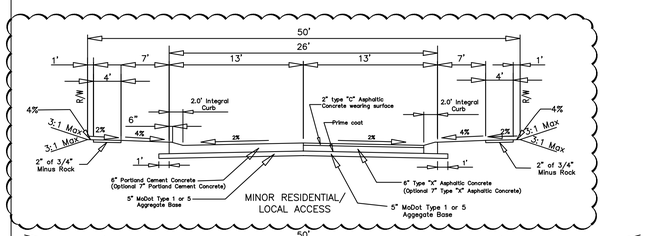
MINOR ARTERIAL WITH PARKWAY OPTION



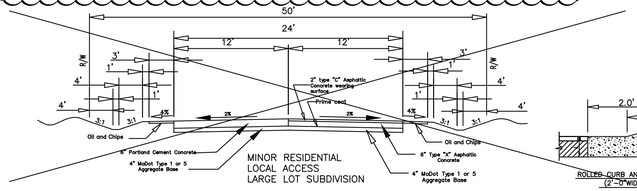
COLLECTOR



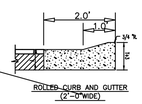
COLLECTOR WITH PARKWAY OPTION



MINOR RESIDENTIAL/ LOCAL ACCESS



MINOR RESIDENTIAL LOCAL ACCESS LARGE LOT SUBDIVISION



ROLLED CURB AND GUTTER (2'-6"WIDE)

	ROW Width	Pavement Width	Lane Width	No. of Drive Lanes	Utility Easement	Design Speed
Minor Arterial	84	60	12	5	10	40
Collector	60	39	12	3	10	35
Residential Collector	56	32**	N/A	2	10	25
Minor Residential Local Access	50	26	N/A	2	10	25*

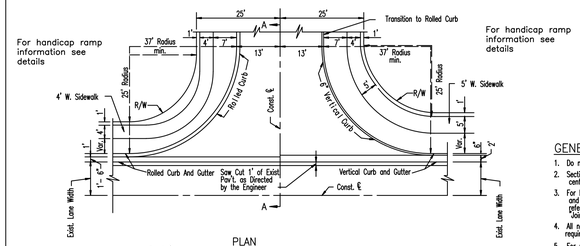
Notes: * = Can be varied with City Engineer's approval
** = Detail to match minor residential street with wider pavement
– these requirements may be varied by other City ordinances
– these standards are minimum standards
– Parkway options can be provided as indicated above

Designer will provide roadway cross section and joint locations in a seperate detail drawing.

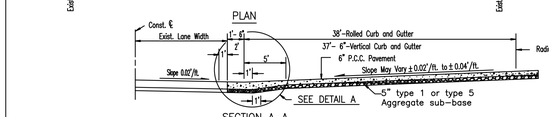
RESIDENTIAL STREETS SHALL BE A MINIMUM OF 6" P.C. CONCRETE OVER 4" ROCK BASE ON COMPACTED SUBGRADE PER ORDINANCE NUMBER 4875.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

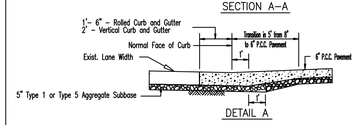
Typical Pavement Design
SECTION NO. 405.370



PLAN



SECTION A–A



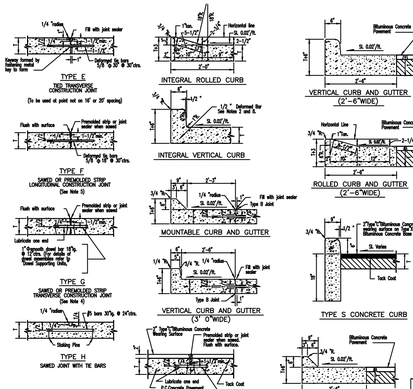
DETAIL A

GENERAL NOTES

1. Do not scale drawing. Follow dimensions.
2. Sections are symmetrical about construction centerline.
3. For longitudinal and transverse joints, dowel and tie bar requirements and curb dimensions refer to the Pavement Construction Details for Joints and Curbs.
4. All necessary pavement markings shall be as required by City of O'Fallon.
5. For roadway cross slope, pavement types and thickness refer to "Standard Typical Sections."

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS
STANDARD RESIDENTIAL STREET ENTRANCE



GENERAL NOTES

1. Do not scale drawing. Follow dimensions.
2. Longitudinal joint and tie bars may be omitted when curb is poured integral with pavement.
3. Minimum Thickness for Pavement is:

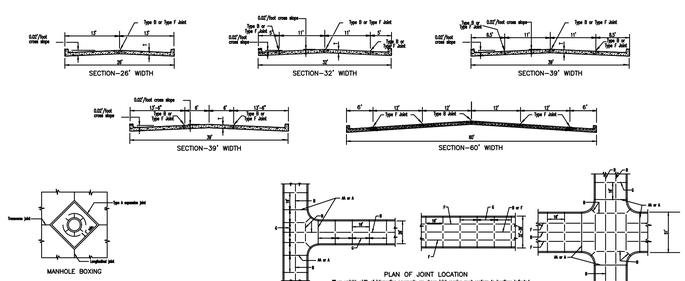
Concrete Pavement Thickness =	(T)
All Residential Minor Streets	6" 7-1/2"
All Collector and Residential Collector and Non-Residential Streets	7" 9-1/2"
All Arterial Streets	8" 12"

4. Type "C" Transverse Joint is required for Arterial and Non-Residential streets. Use Type "C" Transverse Joint for all others.
5. For Installation on Minor Streets having 6" thick pavement, Type "A" Transverse Joint, 30" long and 1/2" diameter shall be used for Type "B" Longitudinal Joint and 1/2" diameter tie bars 30" long shall be used for Type "F" Longitudinal Joint.
6. Refer to Pavement Construction Details for Integral Rolled Curb and Concrete Pavement Expansion Joints and Curb.
7. Refer to Pavement Joint and Concrete Pavement Dowel Bar and Tie Bar Details for dowel bar and tie bar requirements for different pavement thickness. Note that the pavement may change the type and thickness of joint required.
8. All deformed bars for joints and curb shall meet ASTM A615 Bars conforming to Class 40, Grade 60.
9. Length of the tie bars shall equal the thickness of the pavement less 3" of cover, but not less than 30" or greater than 36" in length.
10. Transverse or longitudinal construction joints in slip formed pavements may be made with a groover or tool, if such device has been approved in advance by the Superintendent.
11. The free end of the dowel bar for a length of 6" shall be painted or treated with an approved bondbreaker.
12. All dowel bars 1/2"ϕ @ 12"ctrs. shall be epoxy coated.
13. Expansion joint A-2 from St. Louis County Standard Specifications may be installed, shall be allowed in addition to Type A and AA expansion joints.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS
JOINTS AND CURBS

INTEGRAL VERTICAL CURB AND CONCRETE JOINT DETAILS



GENERAL NOTES

1. Do not scale drawing. Follow dimensions.
2. Refer to Pavement Construction Details/Joints and Curbs for joint and bar requirements. Note that the type and location of each joint pattern of the pavement may change the type and location of joints required.
3. The locations of the Type B and Type F longitudinal construction joints in the sections may be interchanged for the different widths of construction if approved by the Department.
4. All 1/2"ϕ smooth dowel bars 18"ϕ @ 12"ctrs. shall be epoxy coated.

NOTE
Joint filler material shall meet ASTM designations as follows:

Bituminous type	ASTM	D-994-52
Non extruding & resilient non bituminous type (cork)	ASTM	D-1751-52T
Non extruding & resilient non bituminous type (rubber)	ASTM	D-5249

NOTE
Joint sealant material shall meet ASTM and AASHTO designations as follows:

ASTM D-3405	AASHTO M-301	or
ASTM D-1190-74	AASHTO M-173-84	

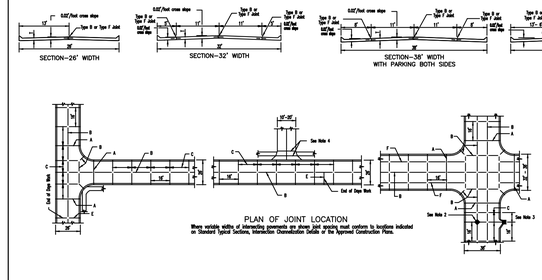
or latest revisions thereof.

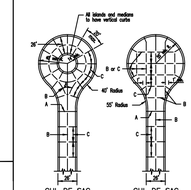
JOINT REQUIREMENTS FOR CONCRETE PAVEMENT		
STREET	JOINT TYPE	JOINT AND BAR REQUIREMENTS
All Arterial, Non-Residential	Transverse	TYPE C 1"ϕ smooth dowel bars 18"ϕ @ 12" ctrs.
26'-56' wide pavement	Longitudinal	With a sawed section: TYPE F 5/8"ϕ deformed tie bars 18"ϕ @ 30" ctrs.
		At the slip between two poured sections: TYPE B 5/8"ϕ deformed tie bars 30"ϕ @ 30" ctrs.
7"-8" thick concrete	Expansion	TYPE A or Type A Modified

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS
INTEGRAL VERTICAL CURB AND CONCRETE PAVEMENT TYPICAL SECTIONS AND DETAILS

INTEGRAL ROLLED CURB AND CONCRETE PAVEMENT TYPICAL SECTIONS AND DETAILS





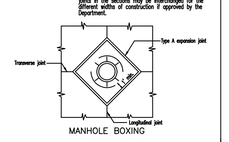
GENERAL NOTES

1. Do not scale drawing. Follow dimensions.
2. All street islands shall be separated from the pavement and curb by expansion joint material extending completely through curb and islands. Manhole casting within the pavement limits shall be boxed as shown.
3. When a joint falls within 3ft. of, or contacts inlets, manhole, or other structures, shorten one or more panels either side of structure or opening to permit joint to fall on round structures, or at or between corners of rectangular structures.
4. Driveway configurations are shown in the "Entrance Construction Details".
5. Construction joints and tie bars may be omitted when curb is poured monolithic with pavement.
6. Minimum Thickness for Pavement is:

Residential Streets	26'–33' wide	6"
Residential Streets	39' wide	7"

7. For joint and bar requirements refer to the Pavement Construction Details for Joints and Curbs. Note that the width and location may change the type of joint required.
8. Transverse or longitudinal construction joints in slip formed pavements shall be a saw cut joint. at a max. 14' spacing
9. The locations of the Type B longitudinal construction joints in the sections may be interchanged for the different widths of construction if approved by the Department.

JOINT REQUIREMENTS FOR CONCRETE PAVEMENT		
STREET	JOINT TYPE	JOINT AND BAR REQUIREMENTS
3 LANE RESIDENTIAL 32'–38' wide pavement	Transverse	TYPE C 1" smooth dowel bars 18"ϕ @ 12" ctrs.
	Longitudinal	With a sawed section: TYPE F 5/8"ϕ deformed tie bars 18"ϕ @ 30"ctrs.
		At the slip between two poured sections: TYPE B 5/8"ϕ deformed tie bars 30"ϕ @ 30"ctrs.
7" thick concrete pavement	Expansion	TYPE A no steel bars
RESIDENTIAL 2 LANE 26' wide pavement	Transverse	TYPE C no steel bars
	Longitudinal	Half Width Construction: TYPE F modified with 1/2"ϕ deformed tie bars 18"ϕ @ 30"ctrs.
		Half Width Construction: TYPE B modified with 1/2"ϕ deformed tie bars 30"ϕ @ 30" ctrs.
6" thick concrete	Expansion	TYPE A no steel bars



NOTE
Joint filler material shall meet ASTM designations as follows:

Bituminous type	ASTM	D-994-52
Non extruding & resilient non bituminous type (cork)	ASTM	D-1751-52T
Non extruding & resilient non bituminous type (rubber)	ASTM	D-5249

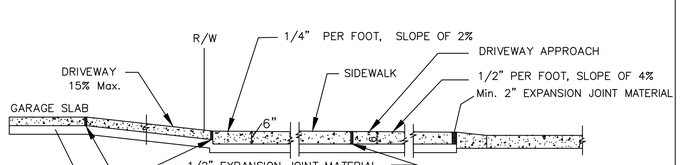
NOTE
Joint sealant material shall meet ASTM and AASHTO designations as follows:

ASTM D-3405	AASHTO M-301	or
ASTM D-1190-74	AASHTO M-173-84	

or latest revisions thereof.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

PAVEMENT CONSTRUCTION DETAILS
INTEGRAL ROLLED CURB AND CONCRETE PAVEMENT TYPICAL SECTIONS AND DETAILS



NOT TO SCALE

NOTES:

1- All driveway entrances shall be six (6) inches P.C.C. in depth from the curb to the property line.

2- All driveway approaches constructed in conjunction with sidewalk shall give the appearance that the sidewalk is continuous. That portion of the driveway approach that doubles as a sidewalk shall have a one-fourth (1/4) inch per foot cross slope the same as the abutting sidewalk.

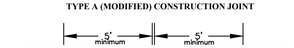
3- A two (2) inch expansion joint is required between the street and driveway approach. One (1) additional two (2) inch expansion joint is required between the garage floor and the termination of the driveway.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

Integral Curb Detail "B" at Driveway

SECTION NO. 505.080

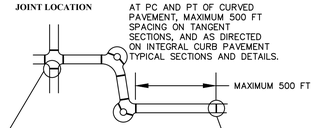
TYPE A (MODIFIED) CONSTRUCTION JOINT



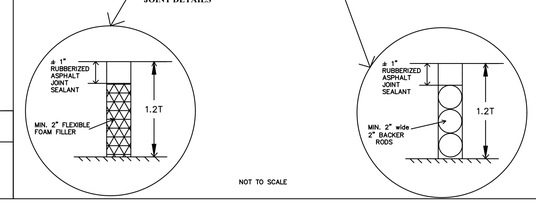
TYPE A (MODIFIED) CONSTRUCTION JOINT SAWED FULL DEPTH (2" WIDE)

JOINT LOCATION

AT PC AND PT OF CURVED PAVEMENT, MAXIMUM 500 FT SPACING ON TANGENT SECTIONS, AND AS DIRECTED ON INTEGRAL CURB PAVEMENT TYPICAL SECTIONS AND DETAILS.



JOINT DETAILS



NOT TO SCALE

NOTES:

1. THE NUMBER OF BACKER RODS REQUIRED WILL VARY WITH THE PAVEMENT THICKNESS. BACKER RODS AND FLEXIBLE FOAM FILLER MUST EXTEND THROUGH THE FULL DEPTH OF THE PAVEMENT.
2. JOINT FILLER SHALL BE A FLEXIBLE, NONABSORBENT, NON–GASSING, NON–STAINING, NON–SHRINKING MATERIAL, EXTRUDED FROM A CLOSED–CELL POLYMER, ASTM D–5249.
3. JOINT FILLER COMPOSED OF CELLULAR FIBERS, ASTM D–1751, MAY BE USED AT DRIVEWAY, SIDEWALK, AND SEWER INLET AND MANHOLE LOCATIONS.
4. SEE "INTEGRAL CURB DETAIL "B" AT DRIVEWAYS" FOR EXPANSION JOINT REQUIREMENTS AT DRIVEWAY CONNECTIONS TO THE STREET AND THE GARAGE.

CITY OF O'FALLON
ENGINEERING DEPARTMENT
O'FALLON, MISSOURI

PAVEMENT CONSTRUCTION DETAIL

CONCRETE NOTE:
ALL NON-REINFORCED CONCRETE SHALL BE 4,000 PSI AT 28 DAYS

PROJECT TITLE
SHADY CREEK ADDITION
O'FALLON, MISSOURI

THE STERLING CO.
ENGINEERS & SURVEYORS
5055 New Baumgartner Road
St. Louis, Missouri 63129
Ph 314-487-0440 Fax 314-487-8944
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STATE OF MISSOURI
RODNEY ARNOLD
NUMBER PE-2002016612
PROFESSIONAL ENGINEER

Date: 12/02/2020
RODNEY ARNOLD
LICENSE # PE-2002016612
Professional Engineer

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PAVEMENT DETAILS

P+Z No. P&Z NO
City No.
Date: 12/02/2020
Job No. 14-12-405

Page No.
DTL-10
IMP

"Final Plan" Approval Date: June 4, 2020 (19–002801)

Drawing name: V:\1412405 Shady Creek Addition\Drawings\Engineering\Improvements\2405 IMP-Details.dwg Plotted on: Dec 02, 2020 - 10:58am Plotted by: bmeitler