Illinois Department of Transportation

Memorandum

To:	Studies & Plans Squads		PPM 40-06
From:	Phillip A. Tegeler	Revised By:	Tim Brandenburg
Subject:	Sideroad/Sidestreet Returns		
Date:	November 23, 1992	Revision Date	December 4, 2006

PLAN PREPARATION MEMORANDUM 40-06

BACKGROUND

This memorandum supercedes Plan Preparation Memorandum 92-107.P, Sideroad/Sidestreet Returns, dated September 23, 1992 and supplements the BDE Manual Chapters 36 & 49, IDOT policy on Permits For Access To State Highways, and the Bureau of Local Roads and Street's policies in providing uniformity of District preference concerning sideroad & sidestreet returns.

PROCEDURE

The "Standards" shown in this memorandum are intended for construction or reconstruction jobs for which right-of-way and budget are programmed to allow new returns.

For "3R" projects, we will generally use the following "rules of thumb":

1.) Existing width of sideroad/sidestreet return should be measured at the end of radius return or right-of-way line, whichever distance is greater from the edge of traveled way.
2.) If the existing width of the sideroad return is 20 ft. or greater, resurface the existing configuration to the completion of the radius return or right-of-way line, whichever distance is greater from the edge of traveled way.
3.) If the existing width of the sideroad return is less than 20 ft., reconstruct the sideroad return to the "Standards", shown. Acquisition of right-of-way should be completed if necessary to construct the minimum 24 ft. width, and 50 ft. taper of sideroad as shown in the applicable District Details. Improvements such as these should only be undertaken if other right-of-way is to be purchased and this should be shown and discussed in the Phase I Study prior to completion of the Project Report. If program funding limitations are encountered, the "20 ft. rule" should be ignored and the existing configuration should be resurfaced to the completion of the radius return or right-of-way line, whichever distance is greater from the edge of traveled way.

When improvements to sideroads include tapers, the tapers should generally be of bituminous concrete. Class A-3 surface treatments should only be considered for the tapers when there are other significant quantities of seal coat work on the job.

For "3P" improvements, we will generally resurface the existing configuration to the completion of the radius return. Major sideroad/sidestreets (>400 ADT) shall have "butt joints" constructed whether the existing entrance is bituminous or PCC. Minor sideroad/sidestreets (<400 ADT) shall have "featheredge rundowns" as shown in the applicable District Detail.

For "SMART" and "Contract Maintenance" improvements we will generally resurface the existing configuration with the completion of a 10 ft. featheredge rundown.

These are general "rules of thumb" which are implemented to provide design and construction consistency between similar types of projects. Consistency between projects will also aid in keeping cost for similar projects equivalent. Squad leaders and members should consult their respective Project Engineer when conditions lend to job-specific changes to this Plan Preparation Memorandum.

STANDARDS FOR SIDEROADS AND SIDESTREETS (1)

Illinois Department of Transportation

Region 3 / District 5

SIDEROADS (Rural)	MIN.	DESIRABLE	MAX
Surface Width	24'	24'	(2)
Surface Radius	30' (7)	30'	(2)
Shoulder Width	4'	8'	10'
Shoulder Slope ("/')	¼	½	1½
Grade (3)	-1%	-1% to -4%	-4%
Breakover	0%	5%	10%
Side Slope	10:1	6:1	(6)4:1 Steepest
Surface Type (4)	4" Bituminous on 8" Granular	8" PCC on 4" Granular	
Angle of Intersection	60° Exist.	75°-90°	
SIDESTREETS (Urban)			
Surface Width (5)	30' F/F	30' F/F	(2)
Surface Radius	30'	30'	(2)
Grade (3)	-1%	-1% to -4%	-4%
Breakover	0%	5%	10%
Surface Type (4)	4" Bituminous on 8" Granular	8" PCC on 4" Granular	
Angle of Intersection	60° Exist.	75°-90°	

NOTES:

1. Standards are intended for new construction or for reconstruction. For 3R work, sideroad configurations will be resurfaced as previously indicated. Unless addressed in the Project Report, improvements will be made within existing right-of-way. Every effort consistent with the scope of work should be made to assure that sideroad-street grades slope away from the mainline.

2. Coordinate with Geometrics Engineer to serve anticipated turning movements. See BDE Manual Chapter 36.

3. See BDE Manual Chapter 49-3-06(C). Where significant right-of-way or budget impacts occur and no history of accidents exists, grades for sideroads and sidestreets may be designed on a case-by-case basis and in special cases may slope toward mainline.

4. For 3R improvements, generally use the same resurfacing thickness as on the mainline with a base equivalent to the existing (min. 6" aggregate).

5. With and/or without parking.

6. Sideslopes shall be re-graded to 4:1 or flatter when they are disturbed by sideroad/street or culvert work.

7. For sideroad with <400 ADT may reduce to 25'.

RURAL SIDEROAD DESIGN STANDARDS (PPM 40-06)									
	New Construction & 3R (Existing Width Less Than 20 ft)			3R (Existing Width 20 ft or Greater) & 3P			SMART & Contract Maintenance		
DESIGN ELEMENT	min.	des.	max.	min.	des.	max.	min.	des.	max.
SURFACE WIDTH (FT); (measured at end of radius or row line; greatest distance from edge of traveled way)	24	24	Coordinate with Geometrics Engineer	resurface existing configuration to completion of radius return or row line; greatest distance from edge of traveled way; major sideroads (> 400 adt) shall have "butt joints" constructed whether the entrance is hma or pcc; minor sideroads (< 400 adt) shall have "featheredge rundown" as shown in district cadd detail 406AAAAA			resurface existing configuration with the completion of a 10 ft. featheredge rundown for ALL sideroads as shown in district cadd detail 406AAAAA		
RADIUS (FT)	30	30							
SHOULDER WIDTH (FT)	4	8	10						
SHOULDER SLOPE (%)	2	4	12						
ENTRANCE GRADE (%)	1	1 to 4	4						
BREAKOVER (%)	0	5	10						
SIDE SLOPE	10:1	6:1	4:1						
INTERSECTION ANGLE	60	75 to 90							
SURFACE TYPE									
INCIDENTAL HMA SURFACING (INCH)	4			taper from 2 1/4" to 1 1/2" or featheredge			taper from 1 1/2" to featheredge		
AGGREGATE BASE COURSE, TYPE A (INCH)	8	4		if applicable use item: 35800100 Preparation of Base					
PCC PAVEMENT (INCH)		8							

URBAN SIDEROAD DESIGN STANDARDS (PPM 40-06)									
	New Construction OR 3R (Existing Width Less Than 20 ft)			3R (Existing Width 20 ft or Greater) OR 3P			SMART or Contract Maintenance		
DESIGN ELEMENT	min.	des.	max.	min.	des.	max.	min.	des.	max.
SURFACE WIDTH (FT); (measured at end of radius or row line; greatest distance from edge of traveled way)	30 f-f	30 f-f	Coordinate with Geometrics Engineer	resurface existing configuration to completion of radius return or row line; greatest distance from edge of traveled way; major sideroads (> 400 adt) shall have "butt joints" constructed whether the entrance is hma or pcc; minor sideroads (< 400 adt) shall have "featheredge rundown" as shown in district cadd detail 406AAAAA			resurface existing configuration with the completion of a 10 ft. featheredge rundown for ALL sideroads as shown in district cadd detail 406AAAAA		
RADIUS (FT)	30	30							
ENTRANCE GRADE (%)	1	1 to 4	4						
BREAKOVER (%)	0	5	10						
INTERSECTION ANGLE	60	75 to 90							
SURFACE TYPE									
INCIDENTAL HMA SURFACING (INCH)	4			taper from 2 1/4" to 1 1/2" or featheredge			taper from 1 1/2" to featheredge		
AGGREGATE BASE COURSE, TYPE A (INCH)	8	4		if applicable use item: 35800100 Preparation of Base					
PCC PAVEMENT (INCH)		8							