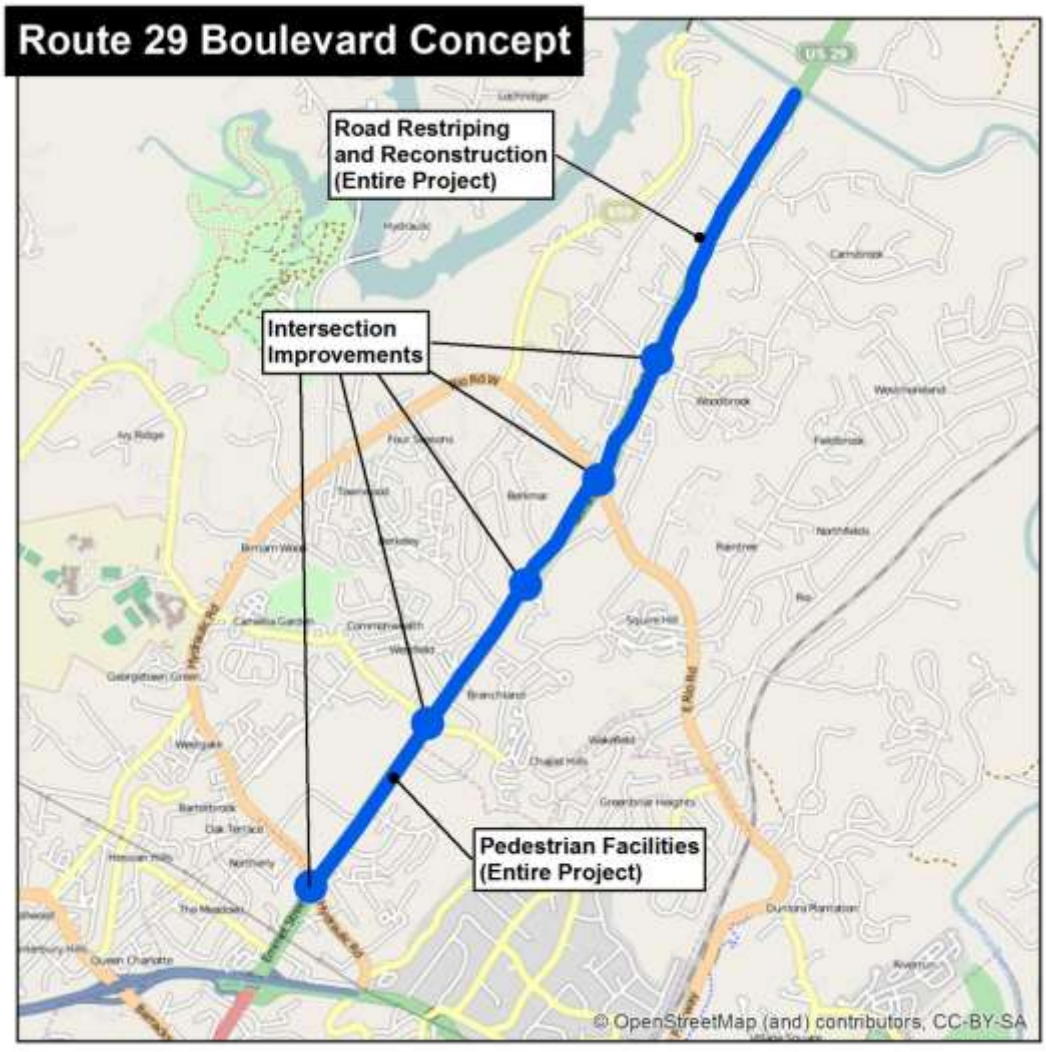
Route 29 Boulevard Concept

Project Summary	The Route 29 Boulevard concept would entail decreasing the number of lanes on the existing US 29 alignment. This decrease would occur for the portions of US 29 that will be bypassed by the Western Bypass. This lane/speed decrease would create a more urban-boulevard, cross-section. The roadway will remain 8 lanes wide but 2 existing lanes (1 lane in each direction) will be repurposed for a BRT/Express Bus lanes. The major cost will be to add curb and gutter along the roadway. Other costs will include restriping for transit and adding new signage. The Boulevard improvement will also include additional landscaping to the existing median, a separated multi-use bike/pedestrian path, and pedestrian crossings at each signal intersection.			
Project Cost Estimates	Total Preliminary Eng./Env.	$	6,469,125	
	Total Right-of-way	$	9,056,775	
	Total Construction	$	19,407,375	
	Repurpose road for transit	$	15,238,125	Includes road reconstruction for new curb and gutter & restriping the road for transit.
	Intersection improvements	$	2,137,500	Hydraulic, Greenbrier, Fashion Square Dr, Rio Rd, Woodbrook Dr
	Bike/Pedestrian Facilities	$	2,031,750	10 Foot Multi-Use Path (Entire Length)
	Additional Pedestrian Facilities		*Inclu. In Costs*	Sidewalks included in cost estimates
	20-year Maintenance	$	10,699,075	25.1 lane miles
	TOTAL	**$**	**45,632,350**	
Usage Over 20 Years	PMT		1,439,376,527	Total Person Miles Traveled
	Cost per PMT	**$**	**0.03**	PMT=Person Miles Traveled

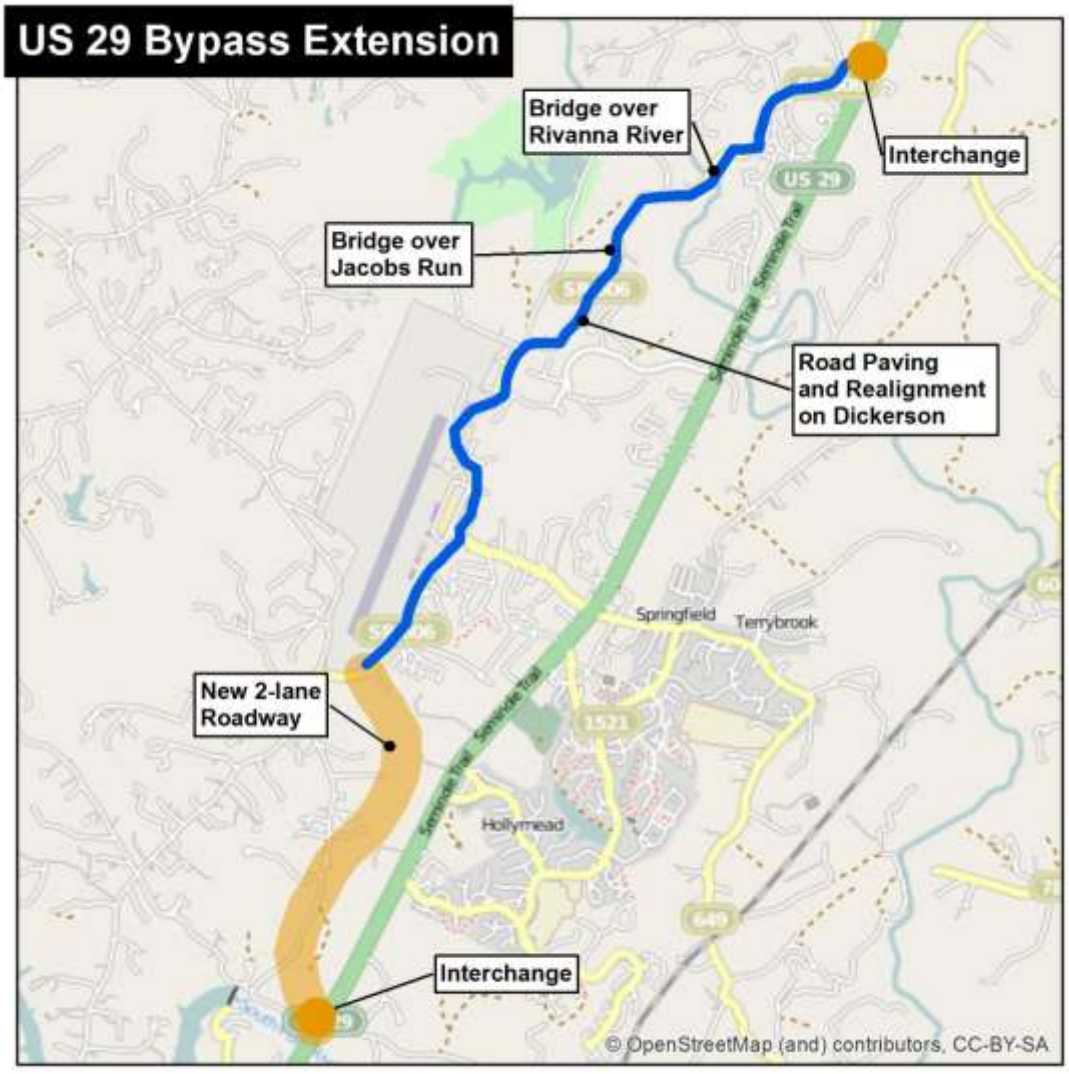


Western Bypass Extension

Project Summary

The Western Bypass Extension project would connect with the planned US 29 Western Bypass and extend north from Rio Mills Road to where Dickerson Road intersects with US 29. This new roadway would roughly follow the existing Dickerson Road alignment.The project would include improvements to the pavement and alignment of Dickerson Road to allow for higher traffic volumes and speed. Two bridges would also have to be upgraded. Also interchanges would need to be constructed at Rio Mills Road andDickerson/US 29. This project alignment was developed by MPO staff at the request of the MPO Policy Board.

Project Costs Estimates	Total Preliminary Eng./Env.	$	23,602,970	
	Total Right-of-way	$	33,044,157	
	Total Construction	$	70,808,909	
	Interchange (Rio Mills/Western Bypass)	$	13,432,500	Not a complete new interchange. 1/2 the cost of new.
	New 2-Lane Roadway/Paving	$	25,077,900	Includes costs for constructing a new roadway from Rio Mills Interchange to Dickerson Rd. Also includes the cost for realigning and paving existing Dickerson Road.
	New Bridge over the North Rivanna River	$	3,802,096	Included in TIP
	New Bridge over Jacobs Run	$	1,631,413	Included in TIP
	New Interchange (Dickerson/US29)	$	26,887,500	Provide new grade separated interchange (Rural) LOW
	20-year Maintenance	$	5,239,150	12.34 lane miles
	TOTAL	**$**	**132,695,185**	
Usage Over 20 Years	PMT		522,090,586	Total Person Miles Traveled
	Cost per PMT	**$**	**0.25**	PMT=Person Miles Traveled



Route 250-29 Widening

Project Summary

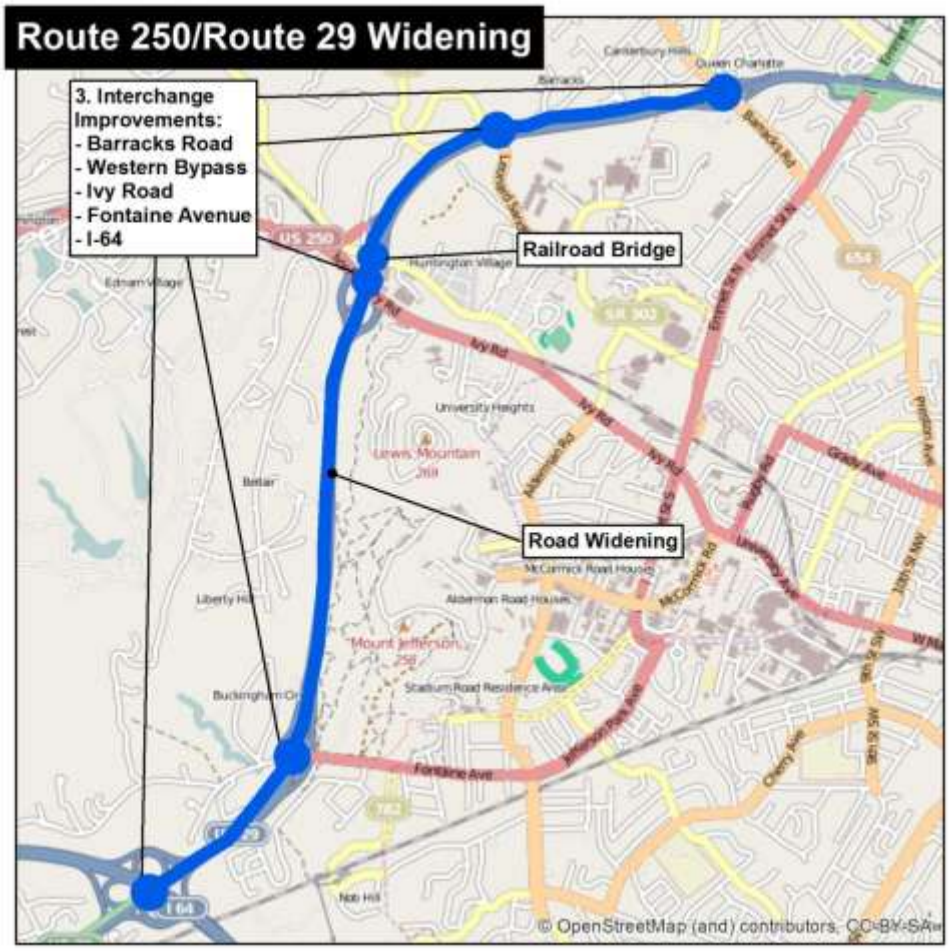
Widen US 250/29 from 4 to 6 lanes from Old Ivy Rd to Fontaine Ave. Improvements at six interchanges are necessary to accommodate this project: Barracks Road, Western Bypass, Old Ivy Road, Ivy Road/Route 250, Fontaine and I-64. Improvements to the interchanges at Barracks Road, Western Bypass and Old Ivy Road are incorporated into the Western Bypass project. Improvements to the I-64 interchange are already included in the adopted Long Range Transportation Plan, but at a funding level far below likely cost. The conceptual cost estimate below incorporates only the cost for replacement of the Old Ivy Road Bridge spanning the US250/29 bypass and the costs for improvements to the interchanges at Ivy Road/US250 and at Fontaine Ave. In addition, the conceptual cost estimate also includes the cost of replacement of the railroad bridge over US250/29 bypass between Ivy Road and Old Ivy Road.

Project Cost Estimates

Total Preliminary Eng./Env.		$	10,294,250	
Total Right-of-way		$	36,985,200	
Total Construction		$	35,062,125	
	Widening Existing Route 250-29	$	11,266,500	
	New Railroad Bridge over Route 250-29	$	2,100,750	
	Interchange Improvements	$	21,694,875	
	Barracks Road	*n/a*		Costs in Western Bypass Project (No Est.)
	Western Bypass	*n/a*		Costs in Western Bypass Project (No Est.)
	Old Ivy Rd	*$*	*4,179,375*	Bridge-Only. Other costs in WB Project
	Ivy Rd/250	*$*	*12,744,750*	
	Fontiane Ave	*$*	*4,770,750*	
	I-64	*n/a*		Project in current LRTP (No Est.) LRTP Under Est.
20-year Maintenance		$	3,770,150	8.88 lane miles
TOTAL		**$**	**86,111,725**	

Usage Over 20 Years

PMT		1,960,307,738	Total Person Miles Traveled
Cost per PMT	**$**	**0.04**	PMT=Person Miles Traveled

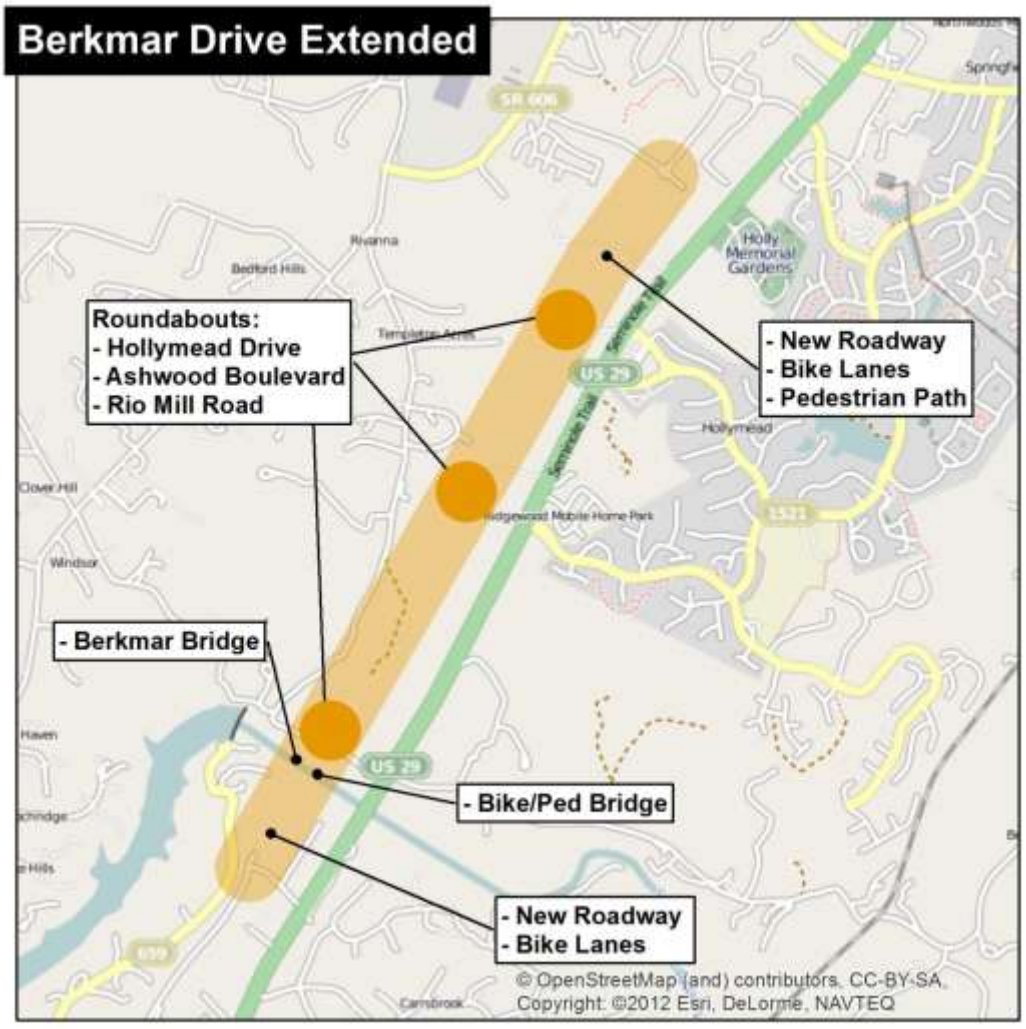


Pantops Master Plan Route 250 Widening

Project Summary	Widening of Route 250 at Free Bridge to the I-64 Interchange to six through travel lanes (2 travel lanes will be continuous right turn lanes). Provide for multi-modal transportation, including sidewalks and a bike/pedestrian path. Address signalization and improve turning lanes and turn movements with a center median from the Route 20 intersection to the top of the mountain. Reconstruct Route 250 as a boulevard with a planted median.				
	Total Preliminary Eng./Env.		$	4,852,750	
	Total Right-of-way		$	24,263,750	
	Total Construction		$	14,558,250	
Project Cost Estimates	Widening existing Route 250		$	11,184,750	Widening from Rt.20 (.5mi) to Hansen AND Westbound from Pantops Mountain Road to I-64 & Hansen to Rolkin (.7mi)
	Bike/Pedestrian Facilities		$	1,161,000	10 foot multi-use path
	Intersection Improvements (Rt.20/Rt.250)		$	2,212,500	
	20-year Maintenance		$	4,585,318	10.8 lane miles
	TOTAL	**$**		**48,260,068**	
Usage Over 20 Years	PMT			850,249,065	Total Person Miles Traveled
	Cost per PMT	**$**		**0.06**	PMT=Person Miles Traveled

Berkmar Drive Extended

Project Summary	Extending Berkmar Drive from Hilton Heights to Towncenter Drive with a new bridge across the Rivanna River. Berkmar Drive Extended is proposed as a 2-lane minor arterial. Construction of Berkmar Extension will require three new connecting roads to provide adequate connections between Berkmar Drive Ext. and US 29. The connecting roads will require 3 roundabouts at Hollymead Dr, Ashwood Blvd, and Rio Mills Rd. The roundabouts are included in the cost estimate, while the connecting roadways are not included. Also included in the cost estimates is a 10 multi-use path north of the river, a bike/ped bridge, and bike lanes and sidewalks. It should be noted that the conceptual costs are lower than those in the adopted Places29 Master Plan because the road is only being planned with 2 lanes rather than 4 lanes.			
Project Costs	Total Preliminary Eng./Env.	$	10,443,050	
	Total Right-of-way	$	14,620,270	Developer-donated RW not included
	Total Construction	$	31,329,150	
	New 2-Lane Roadway	$	12,865,500	
	New Bridge over the Rivanna River	$	13,841,700	
	Bike Lanes	$	1,269,450	Entire project length
	Bike/Pedestrian Facilities	$	1,212,600	10 foot multi-use path, only North of River
	Bike/Pedestrian Bridge	$	1,020,000	Est. 1,200 per linear foot at 10 foot wide
	Pedestrian Facilities		*Inclu. In costs*	Sidewalks included in cost estimate (All except bridge)
	Roundabouts: 3	$	3,352,500	
	20-year Maintenance	$	540,320	4.66 lane miles
	TOTAL	**$**	**56,932,790**	
Usage Over 20 Years	PMT		82,501,577	Total Person Miles Traveled
	Cost per PMT	**$**	**0.69**	PMT=Person Miles Traveled



Eastern Connector: 2-Lane

Project Summary	Eastern Connector: New, 2-Lane roadway that will connect the Pantops area to US 29 North via Route 20 and Rio Road. The road will include cycling and pedestrian facilities and a bridge over the Rivanna River. This project also includes a new road that would connect Route 250 and Route 20, an alternative to the existing Stony Point Road intersection.			
	Route 20: Intersection improvements for the existing intersection. Widening existing route 20 to 4-Lanes with a central left turn lane from route 250 to EC turn off.			
	Rio Road: Widening existing Rio Road to 4-Lanes from where the EC meets Rio to the MCP. Include an interchange at the intersection of Rio Road and US. 29.			
Project Cost Estimates	Total Preliminary Eng./Env.	$	10,183,850	
	Total Right-of-way	$	36,366,490	
	Total Construction	$	65,551,550	
Eastern Connector	New 2-Lane Roadway	$	5,611,500	
	New road 4-Lane Connection Spur	$	4,590,975	
	New Bridge over the Rivanna River	$	10,411,800	
	Bike Lanes	$	687,300	Eastern Connector Road and Bridge Only
	Pedestrian Facilities		*Incl. in Est.*	
Route 20	Intersections Improvements (20/250)	$	180,000	
	Widening Existing Rt. 20	$	9,181,950	Widen to 4-lanes with central left turn lane.
Rio Road	Widening Existing Rio Road	$	4,479,000	From Eastern Connector to MCP
	Interchange at Rio/US.29	$	35,000,000	Places29 Estimate
	Total 20-year Maintenance	$	857,838	
	TOTAL	**$**	**112,959,728**	
Usage Over 20 Years	Person Miles Traveled		377,792,257	Total Person Miles Traveled
	Cost per PMT	**$**	**0.30**	PMT=Person Miles Traveled

Eastern Connector: 4-Lane

Project Summary	Eastern Connector: New, 4-Lane roadway that will connect the Pantops area via Route 20. The road will include cycling and pedestrian facilities and a bridge over the Rivanna River. This project also includes a new road that would connect Route 250 and Route 20, an alternative to the existing Stony Point Road intersection.			
	Route 20: Intersection improvements for the existing intersection. Widening existing route 20 to 4-Lanes with a central left turn lane from route 250 to EC turn off.			
	Rio Road: Widening existing Rio Road to 4-Lanes from where the EC meets Rio to the MCP. Include an interchange at the intersection of Rio Road and US. 29.			
Project Cost Estimates	Total Preliminary Eng./Env.	$	14,252,425	
	Total Right-of-way	$	52,470,025	
	Total Construction	$	77,391,350	
Eastern Connector	New 4-Lane Roadway	$	12,989,100	Including connection spur
	New Bridge over the Rivanna River	$	14,874,000	
	Bike Lanes	$	687,300	Eastern Connector Road and Bridge Only
	Pedestrian Facilities		*Incl. in Est.*	
Route 20	Intersections Improvements (Rt.20/Rt.250)	$	180,000	
	Widening Existing Rt. 20	$	9,181,950	Widen to 4-lanes with central left turn lane.
Rio Road	Widening Existing Rio Road	$	4,479,000	From Eastern Connector to MCP
	Interchange at Rio/US.29	$	35,000,000	Places29 Estimate
	20-year Maintenance	$	1,156,804	9.8 lane miles
	TOTAL	**$**	**145,270,604**	
Usage Over 20 Years	PMT		626,053,138	Total Person Miles Traveled
	Cost per PMT	**$**	**0.23**	PMT=Person Miles Traveled

Eastern Connector: 2 Lane/4 Lane