FEATURE 213
AUXILIARY LANES

Roadway Side	Allows Tie	LRS Package	Feature Type	Interlocking	Secured
R/L	Yes	No	Length	Yes	Yes
Responsible Party for Data Collection	District Planning & Maintenance				

Definition/Background: Auxiliary lanes are lanes adjacent to Feature 212 Through Lanes that provide turning movements, exclusive vehicle lane usage, and identify where speed changes are required. Effective June 2017.

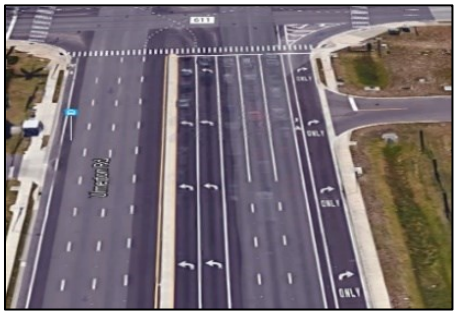
At an intersection, an auxiliary lane does not exist where a through lane continuing to the intersection only allows for turning movement. That is a through lane drop off. See Feature 212—Through Lanes for instructions and example for coding those situations.

Feature 213 Auxiliary Lanes cannot be coded "C" composite. The right and left sides must be coded separately for auxiliary lanes.

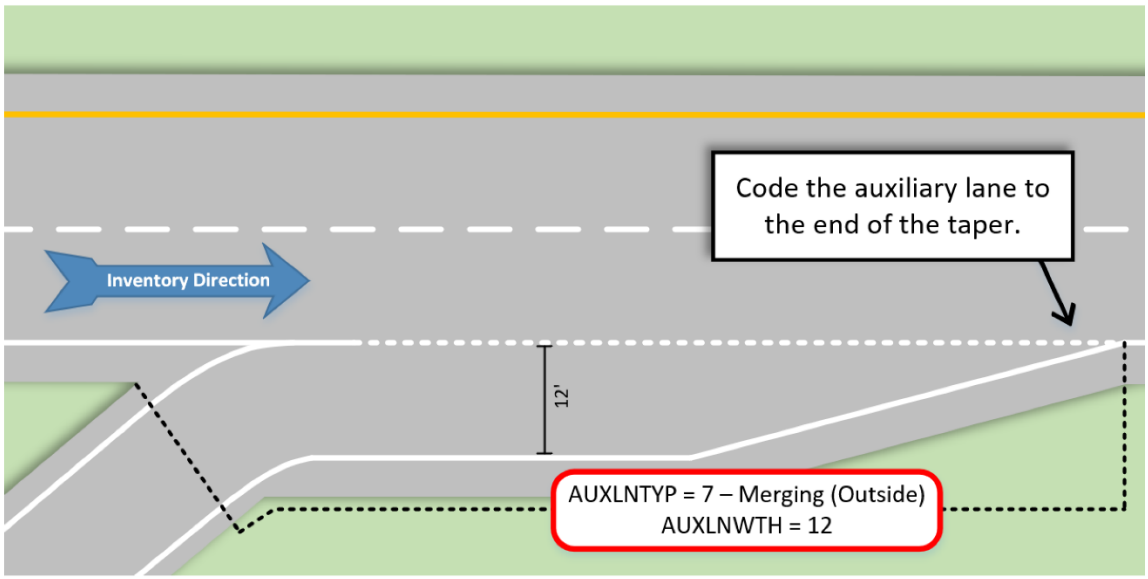
AUXLNTYP | AUXILIARY LANE TYPE

HPMS	MIRE	Who/What uses this Information	Required For	Offset Direction	Offset Distance
	36, 37, 136, 140, 160	Planning, Maintenance, Work Program, Traffic Operations, HPMS	All functionally classified roadways On or Off the SHS, and Active Exclusive roadways.	N/A	N/A

How to Gather this Data: At typical intersections, auxiliary lanes provide vehicle storage for turning movements. Code auxiliary lanes under Feature 213 for each side of the roadway and the number of through lanes under Feature 212. When determining the type of lanes, consider the number of through lanes first before auxiliary lanes. The through lanes will carry the majority of the traffic volume. The sum of the through lanes and auxiliary lanes are the total lanes present.



Measurements start or end at the taper, physical gore, or stop bar. For merge lanes that do not begin at an intersection, measurements start at the pavement marking or at the change in striping (use the first indication). The posted sign may be used if the former are not present. The length of auxiliary lanes will include the taper if any is present. Regardless of whether the auxiliary lane is merging outside or inside, inventory the width of the lane from the edge of the yellow stripe lane separator at the intersection to the taper merging with the through travel lane.



Inventory of an Auxiliary Lane with a Taper

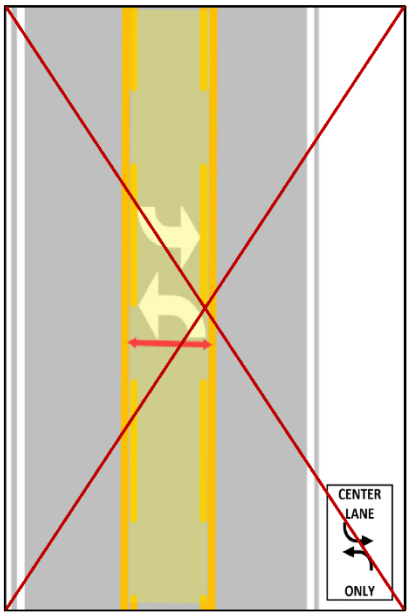
Codes	Descriptions	Additional Information and Guidance
1	Continuous Left Turn Lane **Obsolete**	Added December 2017; **Obsoleted** September 2019—see Feature 215—RDMEDIAN.
2	Continuous Right Turn Lane	Inventory the turn lane from the beginning of the taper to the stop bar, or its approximate intended location when missing. If there is any break within the turn lane that forces the vehicle to make a right turn, such as cross hatching, stop bars, or positive barriers, stop the aux lane at that location, and begin a new aux lane on the other side of the break (if needed). This type of turn lane extends beyond a single intersection or driveway. Added December 2017.
3	Left Turn Lane	Inventory turn lanes from the beginning of the taper to the stop bar, or its approximate intended location when missing. This includes turn lanes that may or may not be a part of a paved, two-way, or physical median.
4	Right Turn Lane	Inventory turn lanes from the beginning of the taper to the stop bar, or its approximate intended location when missing.
5	Bus Preference Lane	Inventory the bus pull in/out within a designated transit stop from the beginning of the taper to the end of the next taper, stop bar, or approximate intended location when missing.
6	Merging Inside Lane	Inventory the lane from the end of the white stripe (lane separator) at the intersection to the taper merging with the through lane (from inside lane/inside shoulder). For merge lanes that do not begin at an intersection, inventory from the pavement marking or at the change in striping (use the first indication). The posted sign may be used if the former are not present.

Codes	Descriptions	Additional Information and Guidance
7	Merging Outside Lane	Inventory the lane from the end of the white stripe (lane separator) at the intersection to the taper merging with the through lane (from outside lane/outside shoulder). For merge lanes that do not begin at an intersection, inventory from the pavement marking or at the change in striping (use the first indication). The posted sign may be used if the former are not present.
8	Turn Lane with Bike Slot **Obsolete**	**Obsoleted** May 2014—use code 4.
9	Special Enforcement Lane	Inventory the special enforcement lane from the beginning of the taper to the end of the next taper, stop bar, or approximate intended location when missing.
A	Continuous Merge Lane (Inside)	Inventory the continuous merge lane from the end of the on ramp to the beginning of the off ramp.
B	Continuous Merge Lane (Outside)	Inventory the continuous merge lane from the end of the on ramp to the beginning of the off ramp.
C	Offset Left Turn Lane	Inventory turn lanes from the beginning of the taper to the stop bar or its approximate intended location.

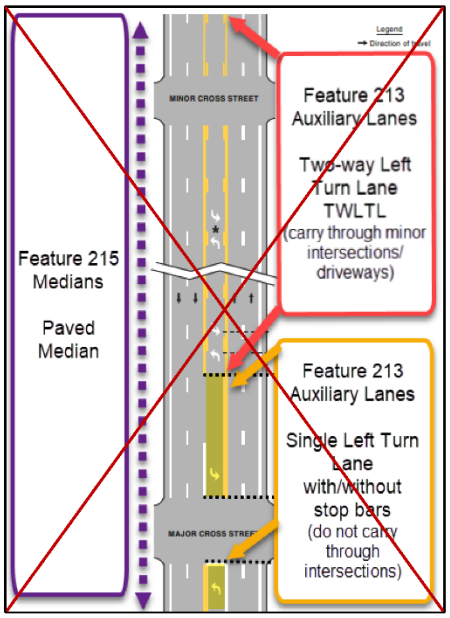
Special Situations:

- For auxiliary lanes on one-way roadways, always code the roadway side as right. Code Left turn lanes as Code 3 and Right turn lanes as Code 4, on roadway side right.
- For through lane drop offs, do not code as Left turn lanes or Right turn lanes. These are coded as through lanes that extend to the center of the associated intersection.
- For DDI crossover areas, the inventory direction is on the left side of the roadway. The road side of auxiliary lanes as defined approaching and leaving the crossover area is reversed within the crossover area.

EXAMPLES



1: Two-way Left Turn Lane (**Obsolete** September 2019)



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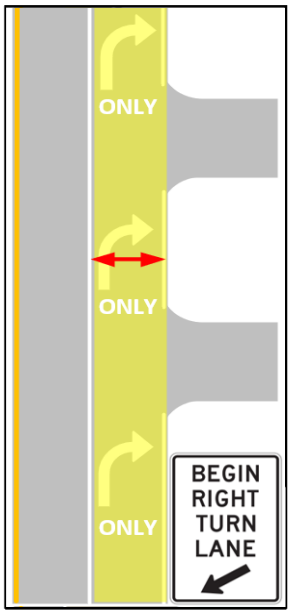
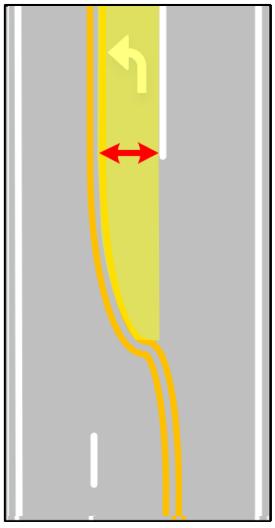
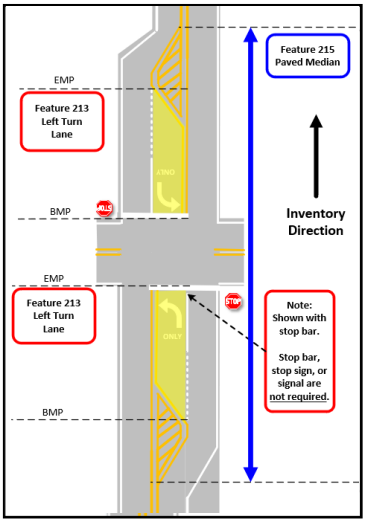


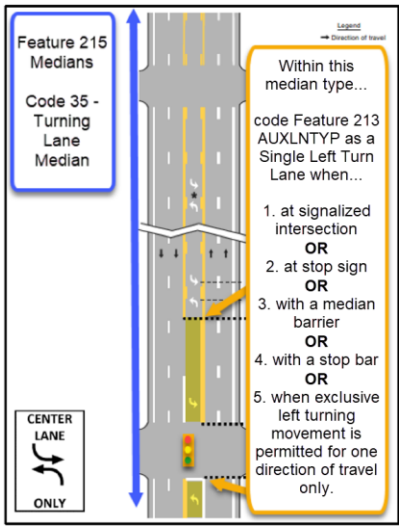
2: Continuous Right Turn Lane



3: Left Turn Lane (within Feature 215—Paved Median)

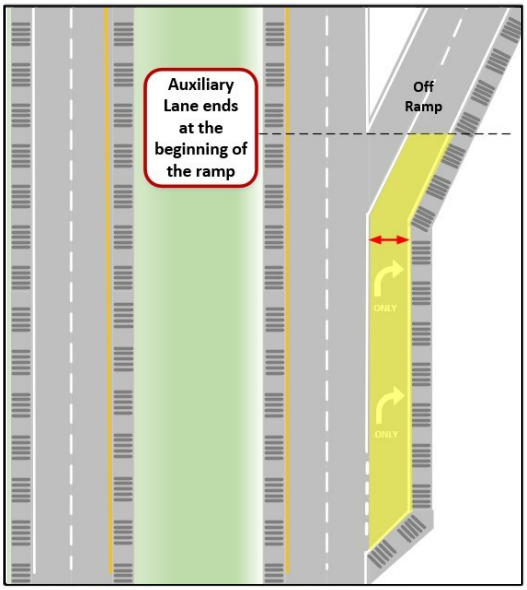


3: Left Turn Lane (within Feature 215—Paved Median) with stop bar, stop sign, or stop signal (not shown)

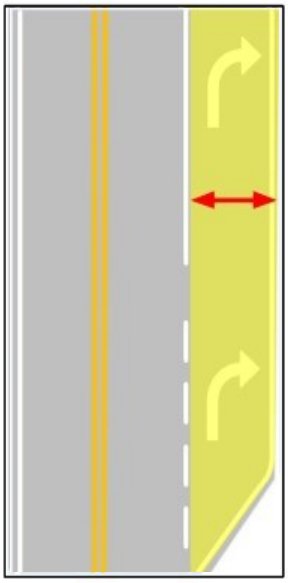


3: Left Turn Lane (within Feature 215—Two-way Turn Median) with stop bar, stop signal, stop sign (not shown), or median barrier (not shown)

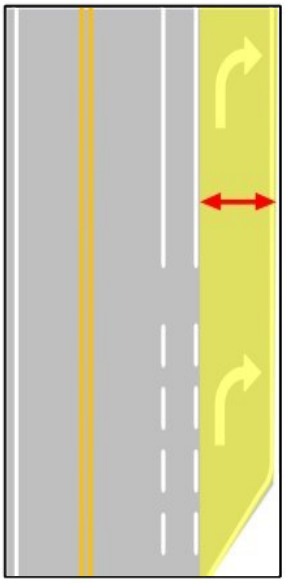
EXAMPLES



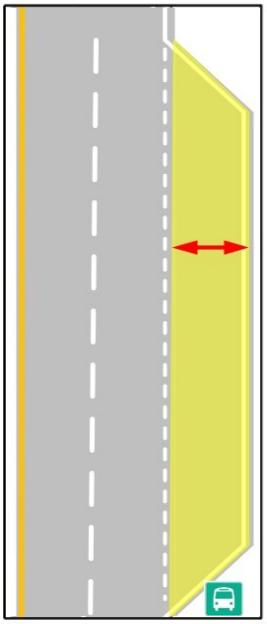
4: Right Turn Lane (prior to ramp)



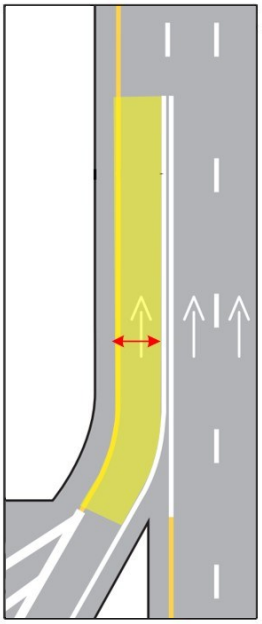
4: Right Turn Lane



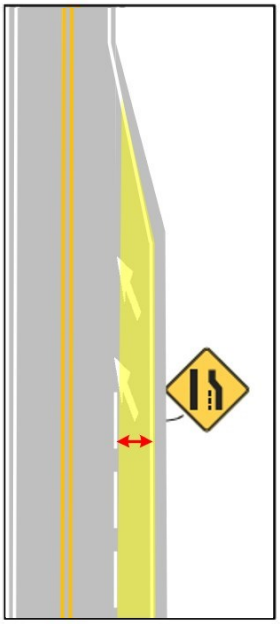
4: Right Turn Lane adjacent to Bicycle Keyhole Lane



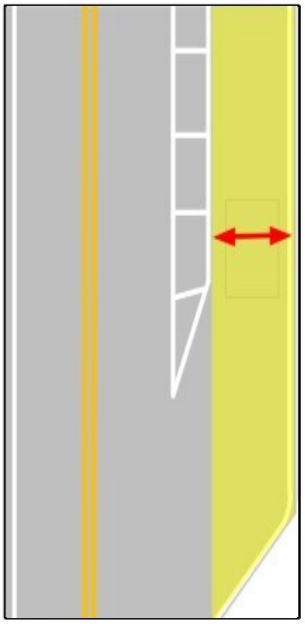
5: Bus Preference Lane



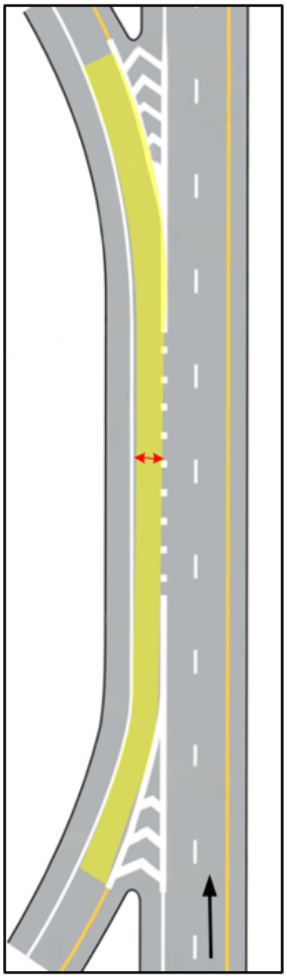
6: Merging Inside Lane



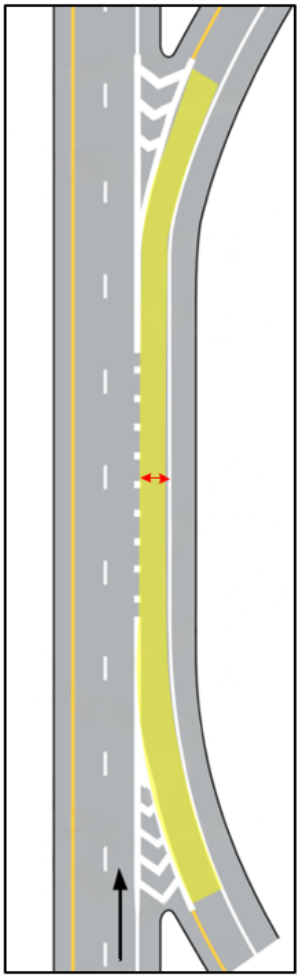
7: Merging Outside Lane



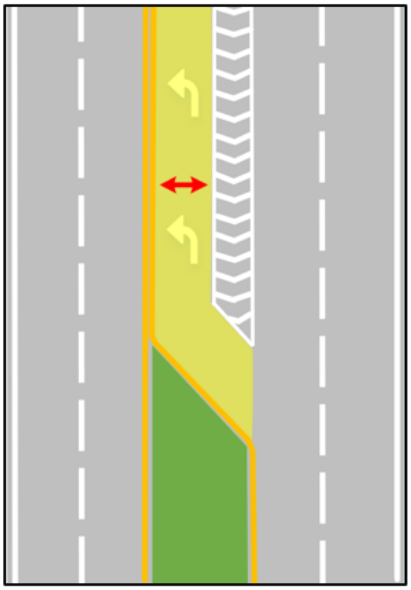
9: Special Enforcement Lane



A: Continuous Merge (Inside)



B: Continuous Merge (Outside)

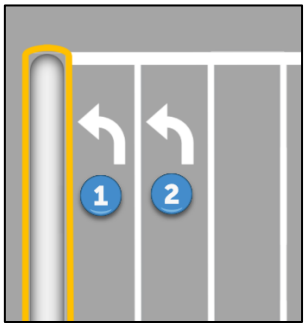


C: Offset Left Turn

AUXLNUM | NUMBER OF AUXILIARY LANES

HPMS	MIRE	Who/What uses this Information	Required For	Offset Direction	Offset Distance
	136, 140	Planning, Maintenance, Work Program, Traffic Operations, HPMS	All functionally classified roadways On or Off the SHS, Active Exclusive roadways and NHS.	N/A	N/A

Definition/Background: The total number of auxiliary lanes adjacent to the roadway for the roadway side (R/L).



How to Gather this Data: Count the number of auxiliary lanes adjacent to the through lanes. Do not include through lanes.

Value for Number of Auxiliary Lanes: 1 Byte: X—Total number of auxiliary lanes adjacent to the roadway.

AUXLNWTH | AVERAGE AUXILIARY LANE WIDTH

HPMS	MIRE	Who/What uses this Information	Required For	Offset Direction	Offset Distance
		Planning, Maintenance, Work Program, Traffic Operations, HPMS	All functionally classified roadways On or Off the SHS, Active Exclusive roadways, and NHS.	N/A	N/A

Definition/Background: Denotes the average width of each auxiliary lane.

Tolerance: Measured to the nearest 0.5 ft.

How to Gather this Data: Measure the width of auxiliary lane(s). The width is measured from the outside edge of the lane stripe to the outside edge of the outermost stripe. In other words, the measurement includes one stripe but not the other. If there is only one auxiliary lane, record the measurement. If there are multiple auxiliary lanes, sum the width of adjacent auxiliary lanes, and divide by the total number of lanes. Refer to the graphic below.

Do not include bike lanes or bicycle keyhole lanes in the measurement for AUXLNWTH. Bike lane width is captured under F214 (SLDWIDTH), and bicycle keyhole width is captured under F216 (BIKSLTWD).

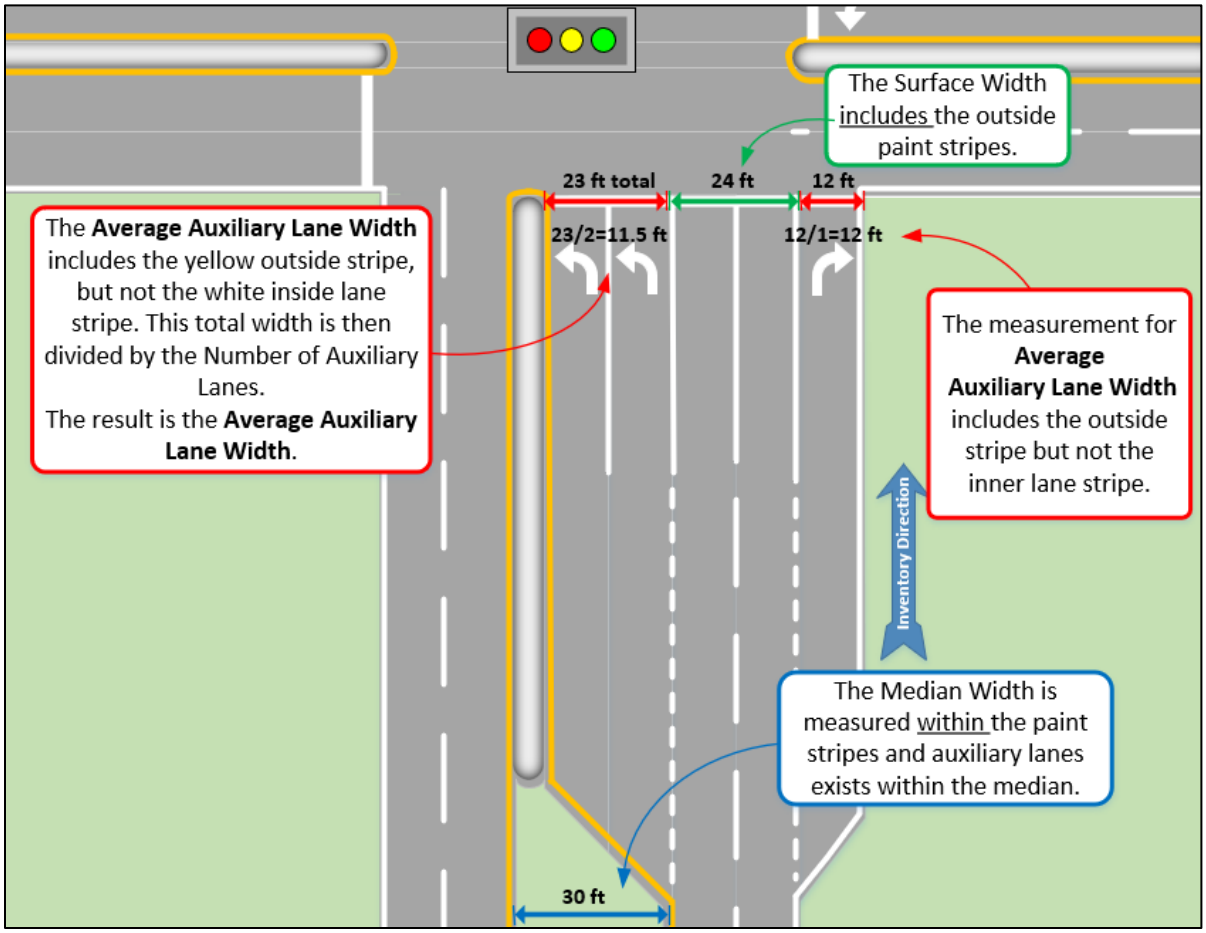
Measurements are taken as follows:

- At intersections, measure the auxiliary lanes at the stop bar.
- For a mid-block turn lane that has the stop bar perpendicular to the roadway, measure the auxiliary lane where it parallels the through lanes.
- Adjacent to ramps, measure at the widest point along the lane.

Value for Average Auxiliary Lane Width: 3 Bytes: XX.X—Average width of auxiliary lane(s)

Calculation for the Average Auxiliary Lane Width:

(Measured Width / Quantity = AUXLNWTH)
03 TURN LEFT: 23 feet / 2 Lanes = 11.5 feet
04 TURN RIGHT: 12 feet / 1 Lane = 12 feet



Special Situations:

INVENTORYING ROADWAYS WITH LEFT AND RIGHT TURN LANES THAT BEGIN AND END AT SAME MILEPOINTS AND ON THE SAME INVENTORY DIRECTION OF THE ROADWAY

Feature 213—Auxiliary Lanes
(Roadway Side = R/right side)

As inventoried

Turn Left = 1 at 12 ft wide

BMP = 7.250

EMP = 7.280

Turn Right = 1 at 12 ft wide

BMP = 7.250

EMP = 7.280

Both turn lanes are at the same milepoints and one must change to make it a unique entry.

As recorded in database

Turn Left = no changes from above

Turn Right = 1 at 12 ft wide

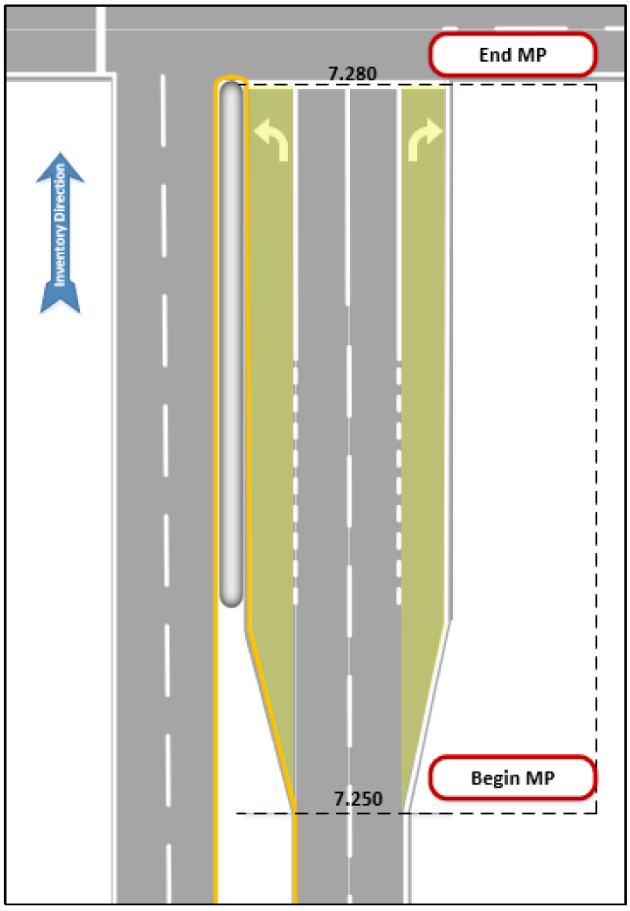
BMP = 7.250 7.251

EMP = 7.280

Feature 213—Number of Auxiliary Lanes
(Roadway Side = L/left side)

Turn Left = none

Turn Right = none



When both left and right turn lanes begin and end at the same milepoints then one of the auxiliary lanes is offset at the beginning milepoint by 0.001. The example above shows the Right Turn Lane being offset.

INVENTORYING ROADWAYS WITH LEFT AND RIGHT TURN LANES THAT BEGIN AND END AT SAME MILEPOINTS AND ON THE SAME INVENTORY DIRECTION OF THE ROADWAY

Feature 120 – Type of Road

0 = Undivided

Feature 212 – Through Lanes (Roadway Side = C/composite)

Left + Right = Total

2 + 3 = 5

Feature 213 – Auxiliary Lanes (Roadway Side = R/right)

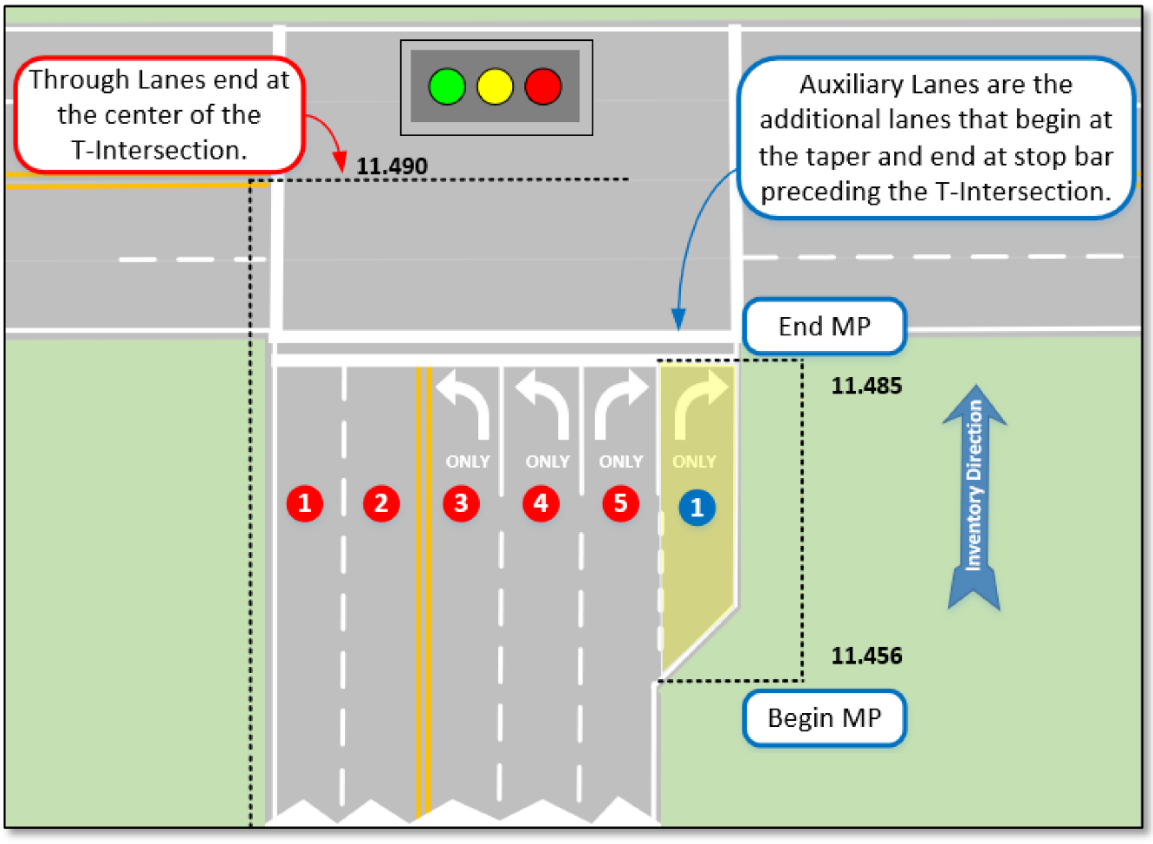
Left Turn Lane = none

Right Turn Lane = 1 at 12 ft wide

Feature 213 – Auxiliary Lanes (Roadway Side = L/left)

Left Turn Lane = none

Right Turn Lane = none



Through Lanes and Turn Lanes that occur at a "T-Intersection" are treated as shown in this example.

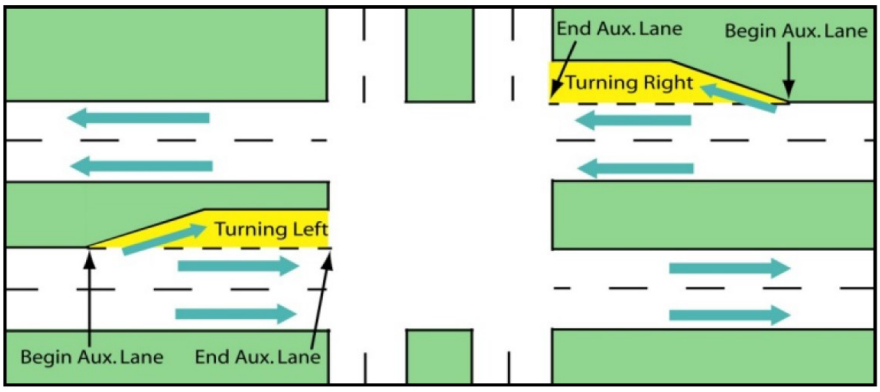
- Through Lanes end at the center of the intersection.
  - On the left, there are two through lanes (Red No. 1 & 2).

- On the right, there are three through lane drop offs (Red No. 3, 4, & 5). The through lanes are present before the auxiliary lane begins. These are not considered auxiliary lanes even though there are painted arrows indicating the turning movement.

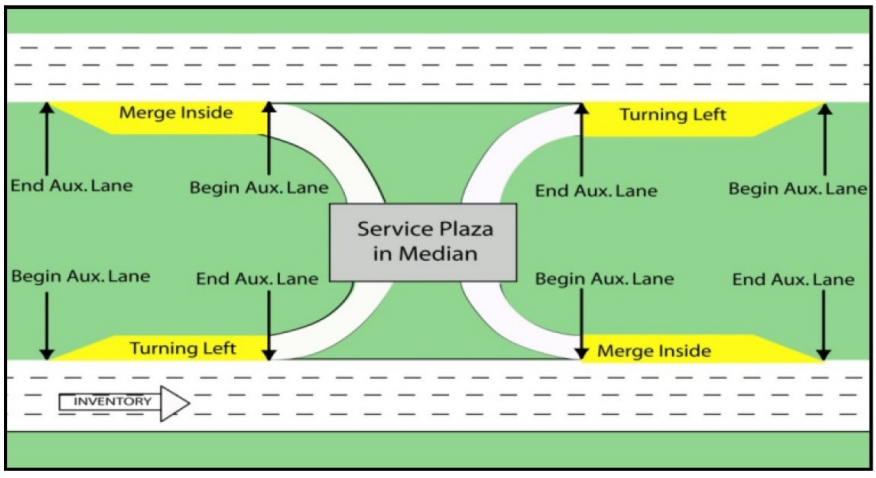
- On the right, the auxiliary lane (Blue No. 1) is a right turn lane that begins at the taper and ends at the stop bar.

The total lane count must not exceed the sum of through lanes plus auxiliary lanes.

TURN LANES/MERGING LANES WITH TAPERS



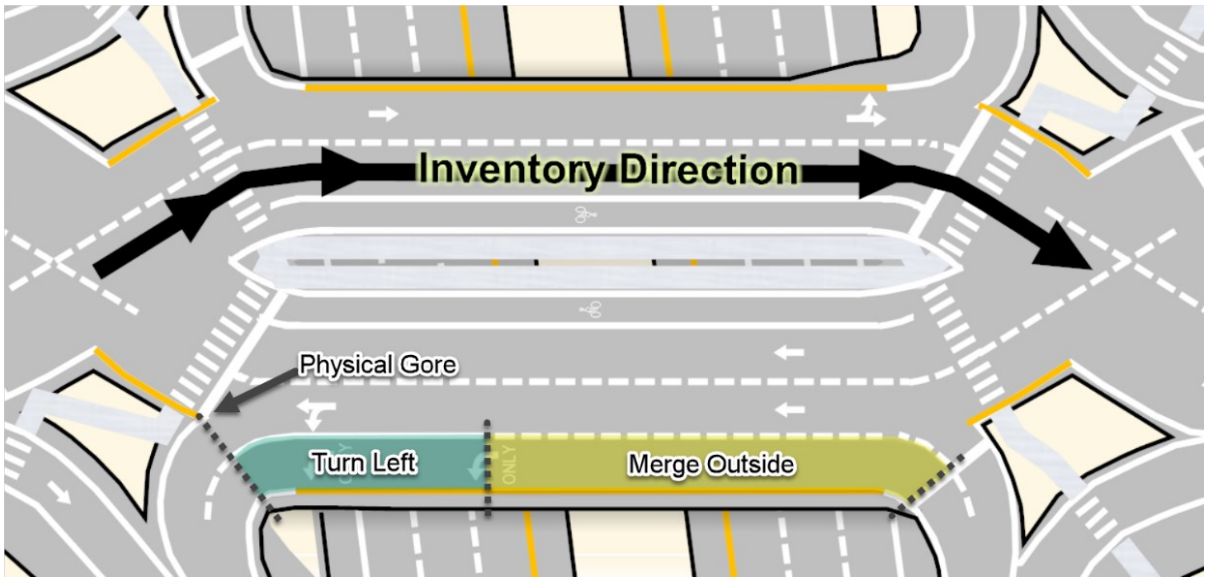
Intersections with Codes
4-Right and 3-Left Turns



Limited Access Roadway with Codes
6-Merge Inside and 7-Merge Outside

The beginning and ending locations for these auxiliary lanes are shown in the drawings above.

INVENTORYING AUXILIARY LANES AT A DDI CROSSOVER AREA



In this example, the merging lane on the non-inventory side of the roadway (indicated in yellow) begins at the stop bar and ends the solid white line. This lane is coded as Roadside = R, 7—Merging (from outside lane/shoulder). The left turn lane (indicated in green) begins at the start of the solid white line and ends at the beginning of the ramp.