8.4.1.6 Direction Indicator Data List

name [Direction Indicator Data List]

No.	offset	Data length	Data type	Item name	Remarks	Classification
1	0	B1		A Sequence of Direction Indicator Data Records		

8.4.1.6.1 Direction Indicator Data Record

Records are created according to the number of direction indicator data records in the basic distribution header.

name [Direction Indicator Data Record]

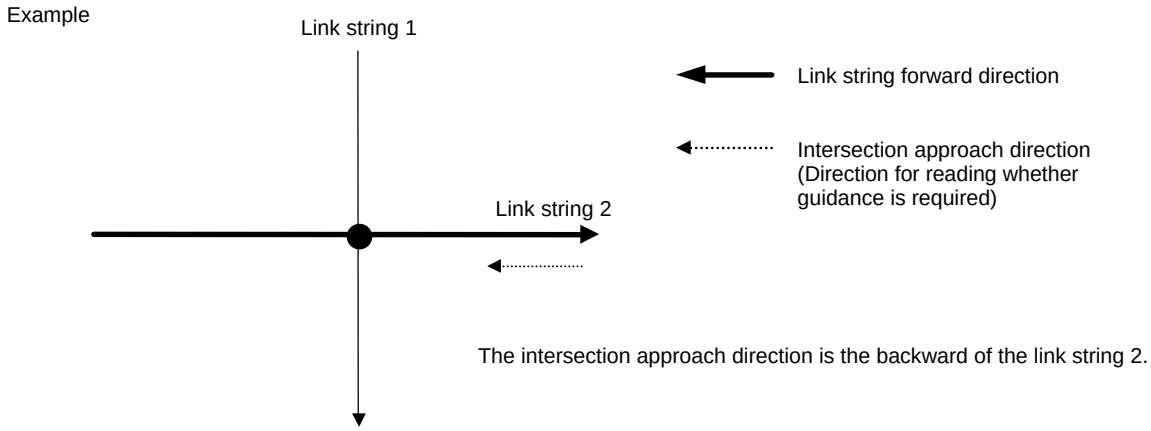
No.	offset	Data length	Data type	Item name	Remarks	Classification
1	0	2	B:	Direction Indicator Attribute Header	(1)	a
2	2	2	N	Number of Guidance Point Management Records	(3)	a
3	4	B1		Guidance Point Management List		a

(1) Direction Indicator Attribute Header

No.	bit	Description			
1	15 to 14	Link Direction	bit15	bit14	Meaning
			0	0	All directions
			0	1	Forward direction (same as for the node record accommodation order)
			1	0	Backward direction (backward of the node record accommodation order)
			1	1	Both directions
2	13 to 10	Number of Intersection Approach Lanes			
3	9 to 8	Number of Lanes that increase immediately before the intersection (left side)			
4	7 to 6	Number of Lanes that increase immediately before the intersection (right side)			
5	5 to 4	Number of Lanes that decrease immediately before the intersection (left side)			
6	3 to 2	Number of Lanes that decrease immediately before the intersection (right side)			
7	1	Bifurcation Flag (4)	bit1	Meaning	
			0	Not bifurcated.	
			1	Bifurcated.	
8	0	（RESERVED）			

(2) Link Direction

This field describes the link direction that applies to the intersection approach direction that can be read as the direction indicator information (intersection exit direction reference, etc.) in the link string data record that directly specifies the relevant basic data by the guidance data offset in the additional node record.



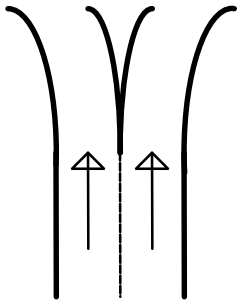
(3) Number of Guidance Point Management Records

This field describes the number of guidance point management records constituting the guidance point management list. If there is no entity, 0(16) is used.

(4) Bifurcation Flag

Set the bifurcation flag to ON when the lanes of an approach link form a fork according to the actual roads.

Example



8.4.1.6.1.1 Guidance Point Management List

name [Guidance Point Management List]

No.	offset	Data length	Data type	Item name	Remarks	Classification
1	0	B1		A Sequence of Guidance Point Management Records		

8.4.1.6.1.1.1 Guidance Point Management Records

Records are created according to the number of guidance point management records.

name [Guidance Point Management Record]

No.	offset	Data length	Data type	Item name	Remarks	Classification
1	0	4	N:B:B:⋯:B:	Guidance Point Management Attribute Header	(1)	a
2	4	2	N:	Number of Connected Nodes in the Exit Direction	(6)	a
3	6	2	:B:N	Intersection Information	(7)	b
4	8	2	D	Offset to the Character String Data	(12)	c
5	10	B1		Connected Node Information Table		c

(1) Guidance Point Management Attribute Header

Word 0

No.	bit	Description					
1	15 to 12	Link Character String Data Record identification Information (2)					
2	11 to 10	Link Direction (3)	bit11	bit10	Meaning		
			0	0	All directions		
			0	1	Forward direction (same as for the node record accommodation order)		
			1	0	Backward direction (backward of the node record accommodation order)		
			1	1	Both directions		
3	9	Character String Data existence Flag	bit9	Meaning			
			0	No character string data offset information			
			1	Character string data offset information available			
4	8	(RESERVED)					
5	7 to 5	Intersection Type (4)	bit7	bit6	bit5	Meaning	
			0	0	0	(Unknown)	
			0	0	1	Simple Intersection	
			0	1	0	Complicated Intersection	
			0	1	1	Aggregated Intersection	
			1	0	0	Composite Intersection	
			1	0	1	101(2) and after not defined	
6	4 to 1	POI Type (branch or joining) (5)	bit4	bit3	bit2	bit1	Meaning
			0	0	0	0	None.
			0	0	0	1	SA and PA entrances
			0	0	1	0	Roundabout entrance
			0	0	1	1	Roundabout exit
			0	1	0	0	Highway entrance (Branch point from the general main road)
			0	1	0	1	Highway exit (Branch point from the highway main road)
			0	1	1	0	Branch of the highway main road (JCT branch point)
			0	1	1	1	Joining to the highway main road (Joining point from the JCT and IC)
			1	0	0	0	Enclosed Traffic Area
			1	0	0	1	1001(2) and after not defined
7	0	(RESERVED)					

Word 1

No.	bit	Description
1	15 to 0	Exit Direction Lane Flag (6)

(2) Link String Data Record Identification Information

This field describes where the link string data record appears from the relevant link string data record. (The appearance is specified by the same node information.) Number 0 is assigned to the link string data record that directly specifies the relevant basic data with the guidance data offset in the additional node record. Number 1 is assigned to the link string data record which is specified with the same node information of the link string data record assigned number 1 and which appears next. Numbers 2 to 14 are sequentially assigned to the subsequent records.

(3) Link Direction

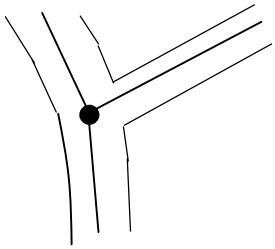
This field describes the link direction that applies to the exit direction from the node with regard to the exit-side link in the link string data record that can be specified with the link string data record identification information.

(4) Intersection Type

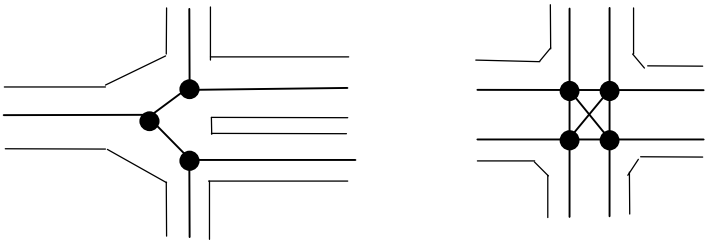
This field describes the intersection type that is represented by the relevant guidance point management record.

Intersection type	Meaning
(a) Simple Intersection	One intersection is represented with one node.
(b) Complicated Intersection	The intersection that can be assumed to be one at the site is represented with multiple nodes.
(c) Aggregated Intersection	Multiple intersections are represented with one node.
(d) Compound Intersection	Multiple intersections whose distances are short are sequentially represented with multiple nodes.

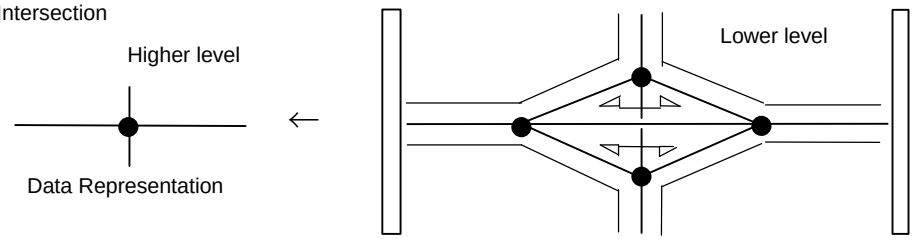
(a) Simple Intersection



(b) Complicated intersection



(c) Aggregated Intersection

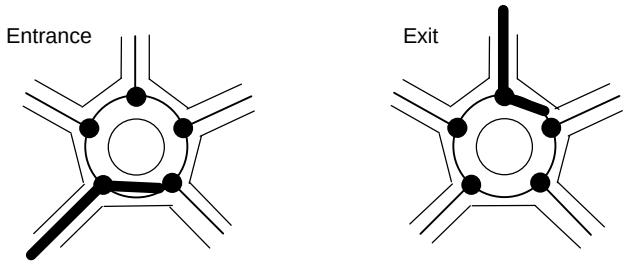


(d) Compound Intersection

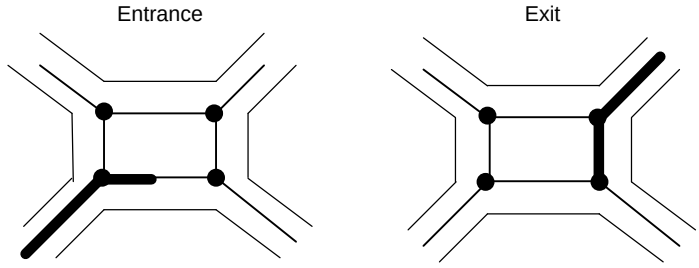
(5) POI Type 1 (branch and joining)

This field specifies the branch and joining identification information represented by the relevant guidance point management record.

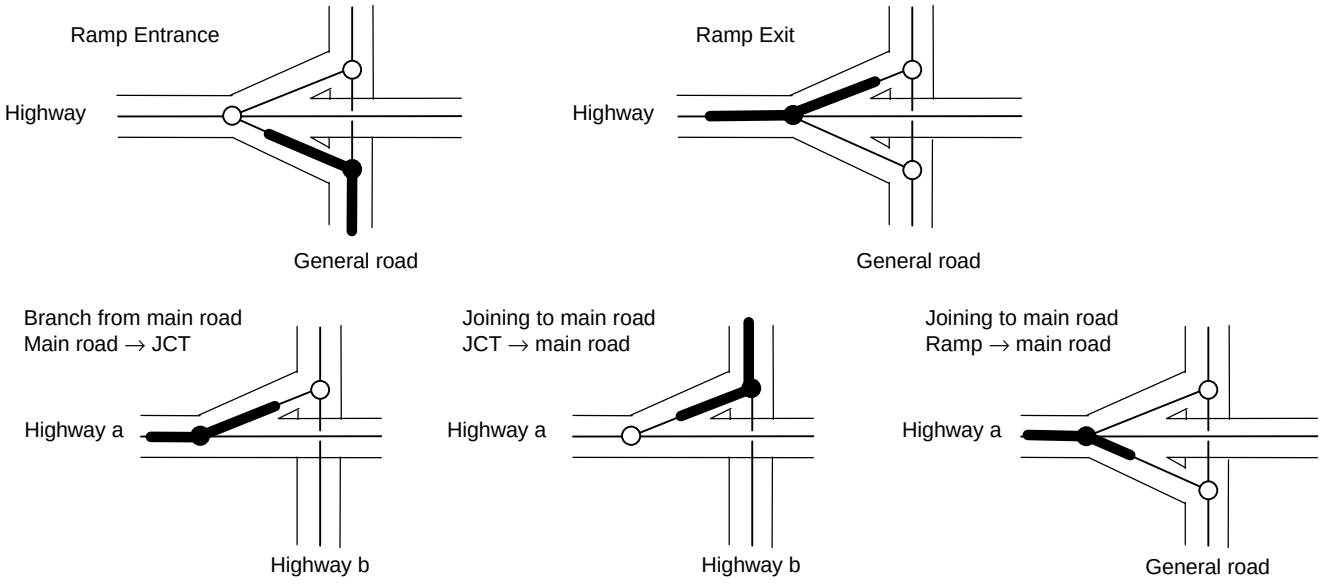
(a) Roundabout



(b) Enclosed Traffic Area



(c) Highway



(6) Exit Direction Lane Flag

Using "OR" of bits, this flag specifies the lane that goes in the exit direction indicated with the relevant guidance point management record.

Bit 15 is defined as the leftmost lane, and as many lanes as the number of intersection approach lanes are assigned sequentially to low-order bits. Passage is possible for 1(2).

(7) Number of Connected nodes in the Exit Direction

The field describes the number of nodes that connect to the exit-side link (including the node that directly specifies the relevant basic data with the guidance data offset). The exit-side link can be specified with the link string data record identification information and link direction. For example, this method is used when the exit direction is specified for multiple nodes as with the compound intersection. Number 0 is assumed when the exit-side link is specified only for the node that directly specifies the relevant basic data with the guidance data offset.

No.	Bit	Description
1	15 to 8	Number of Connected Node Information Records
2	7 to 0	Guidance Code (10)

(8) Intersection Information

No.	bit	Description			
1	15 to 14	Indicates whether guidance to the exit-side #out for the approach-side #in is required. (9)	bit15	bit14	Meaning
			0	0	No guidance is required.
			0	1	Guidance is required.
			1	0	(RESERVED)
			1	1	(RESERVED)
2	13 to 5	Angle of Intersection Exit Direction (11)			
3	4 to 0	(RESERVED)			

(9) Whether guidance to the exit-side #out for the approach-side #in is required

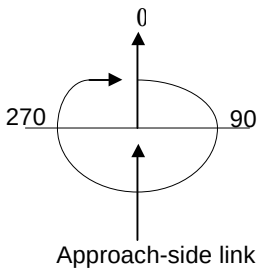
This field describes whether guidance is required when the passage is made from the approach-side link to the exit-side link.

(10) Guidance Codes

bit7 to bit0	Meaning
00h	Following the road (no direction guidance)
01h	Going straight (12 o'clock direction)
02h	Right-handed Direction (1 o'clock)
03h	Right-handed forward Direction (2 o'clock)
04h	Right turn (3 o'clock)
05h	Right-handed diagonal backward Direction (4 o'clock)
06h	Right return Direction (5 o'clock)
07h	Return Direction (6 o'clock)
08h	Left return Direction (7 o'clock)
09h	Left-sided diagonal backward Direction (8 o'clock)
0ah	Left turn (9 o'clock)
0bh	Left-handed forward Direction (10 o'clock)
0ch	Left-handed Direction (11 o'clock)
0dh - 1fh	(RESERVED)
20h - feh	User area
ffh	Not specified.

(11) Angle of Intersection Exit Direction

The approach-side link direction is defined as 0, and the clockwise direction is defined as the positive direction. The units are degrees. The range of values is from 0 to 359. "No investigation" is assumed for 1ff(16).



(12) Offset to the Character String Data

This field exists when the character string data existence flag indicates that the character string data offset information is available. It indicates the storage location of the character string data record corresponding to the guidance point management record in the relevant direction indicator data record. It represents the displacement from the beginning of the character string data frame to the beginning of the relevant character string data record.

8.4.1.6.1.1.1.1 Connected Node Information Table

name [Connected Node Information Table]

No.	offset	Data length	Data type	Item name	Remarks	Classification
1	0	B1		Connected Node Information Record List		

8.4.1.6.1.1.1.1.1 Connection Node Information Record

As many records as the number of connected node information records are created.

name [Connected Node Information Record]

No.	offset	Data length	Data type	Item name	Remarks	Classification
1	0	4	:B:N:N	Node Information	(1)	a
2	4	2	B:B:	Direction Information	(2)	a

(1) Node Information

This field describes the storage location of the relevant node. It indicates the location in which the node record in the node and link connected information of the road data list exists.

If the node to be noticed exists on the parcel boundary and indicates the accommodation location of the node on the parcel boundary of the adjacent parcel, the information for the same node record of the adjacent parcel is accommodated. If there is no entity (invalid), 4095(10) is accommodated for the intersection link string number.

No.	bit	Description				
1	31 to 29	(RESERVED)				
2	28	Parcel inside and outside Flag of the Node Information	bit28	Meaning		
			0	The relevant node exists inside the parcel.		
			1	The relevant node exists outside the parcel.		
3	27 to 25	Connected Parcel Position (2)	bit27	bit26	bit25	Meaning
			0	0	0	Upper
			0	0	1	Upper right
			0	1	0	Right
			0	1	1	Lower right
			1	0	0	Lower
			1	0	1	Lower left
			1	1	0	Left
			1	1	1	Upper left
4	24 to 21	Crossing Link Strings Display Class (0 to 15)				
5	20 to 9	Crossing Link Strings Number (0 to 4095)				
6	8 to 0	Node Number of the Intersection Link Strings (0 to 511)				

(2) Connected Parcel Position

This field describes the direction of the connected parcel in which the relevant node exists by using the location of the preceding node as the basis. It is valid only when the node information parcel inside and outside flag is 1(2).

(3) Direction Information

No.	bit	Description			
1	15 to 14	Link Direction (4)	bit11	bit10	Meaning
			0	0	Undefined (logical link that traverses the parcel boundary line)
			0	1	Forward direction (same as for the node record accommodation order)
			1	0	Backward direction (backward of the node record accommodation order)
			1	1	(RESERVED)
2	13 to 0	(RESERVED)			

(4) Link Direction

For the link string data that can be specified with the node information, this field indicates the link direction that applies to the exit direction from the node with regard to the exit-side link. Value 00(2) is used if a node that can be specified with the node information exists on the parcel boundary and holds a logical link whose direction is 0 and which traverses the parcel boundary or if it exists within the parcel and holds the logical link whose direction is 0 and which connects to another link string.