NCDOT GIS Unit Announcement – November 8, 2016

The GIS Unit is pleased to announce our first publication products from the new Roads and Highways System and the release of our Fourth Quarter 2016 Publication updates.

If you have any questions, please contact gishelp@ncdot.gov.

New Publication Products from Roads and Highways

The GIS Unit has created new "lrs arcs," "lrs routes" and "road characteristics" publication products from the Roads and Highways system to replace the existing products.

While these new products are similar to our old products and should remain relatively familiar, there are some differences as follows:

What Is the Same

- There are still three primary data sets containing lrs arcs, lrs routes, and road characteristics and they can continue to be used in the same way they are used today.

- The data sets contain the state road network as of the first quarter 2015 publication. The first quarter 2017 publication should contain updates to the state road network.

What's New

- The data schema (i.e. field names) of the publication products has changed. See below for a list of old and new field names.

- The route id used by the system is now 11 digits. See the information below for how the new route id is structured.

- The StreetName field now contains the local street name (e.g. Main Street). RouteName field contains the combined route class/route number name.

- The only county code included in the data is SAP 3-digit county code (values 1-100).

- All public roads are included. These roads are called "non-system" roads and replaces "LOC" routes. (Note: Some private roads are included at this time.)

What's New – Downloadable Data

- The data sets in our downloadable data has changed names.

Old Name	New Name
LRS_ROUTE_GDB & _SHP	NCRoutes_GDB & _SHP (Feature class name NCRoutes)
LRS_ARCS_GDB & _SHP	NCRouteArcs_GDB & _SHP (Feature class name NCRouteArcs)
RD_CHAR_MLPST_GDP & _SHP	NCRouteCharacteristics_GDB & _SHP (Feature class name NCRouteCharacteristics)

What's New – Geospatial Web Services and Web Maps

In order to provide time for users to change their maps and applications to use the new data services, we have created new map services. The current map services will remain available for a few months.

However, we encourage you to begin making the transition to the new map services as soon as possible. If you need assistance in this process, please contact gishelp@ncdot.gov.

The new map services are:

NCDOT_RoadCharacteristics**Qtr**
NCDOT_StateMaintainedRoads**Qtr**
NCDOT_AccessControl**Qtr**
NCDOT_BarePavement**Qtr**
NCDOT_FederalAidRoutes**Qtr**
NCDOT_FunctionalClass**Qtr**
NCDOT_PostedRaods_LightTraffic**Qtr**
NCDOT_SpeedLimit**Qtr**
NCDOT_TruckNetwork**Qtr**
NCDOT_Unpaved**Qtr**

When using to the new services, the only real difference you will see between the current map services and the new map services is in the attribute/fields.   However, this difference will require the service be removed and re-added to GO!NC/ArcGIS Online web maps to capture the field name changes.

What's New – SDV Desktop and SDV Online and GO!NC

- The new map services will be provided through SDV Desktop and SDV Online. Little will change while using these tools. The primary difference will be in the attribute/field names seen when viewing the table or feature popup.

- The GIS Unit web maps and service references in GO!NC/ArcGIS Online will point to the new map services. The primary difference will be in the attribute/field names seen when viewing the table or feature popup.

The data updated in the Fourth Quarter 2016 Publication Update

The Fourth Quarter 2016 Publication update includes updates to the following data set:

1. Rail System

As a result, the following GIS Unit products will reflect updates.

Geospatial Web Services

NCDOT North Carolina Rail System
NCDOT North Carolina Railroads

GO!NC/AGOL Web Maps
(available at http://ncdot.maps.arcgis.com)

NCDOT North Carolina Rail System Map
NCDOT Connecting North Carolina's Military and Families

SDV Desktop and SDV Online Layers

Rail System
Railroad (Reference)

Downloadable Data
(available at https://connect.ncdot.gov/resources/gis/Pages/GIS-Data-Layers.aspx)

NCDOT Rail Track Shapefile
NCDOT Rail Track File Geodatabase
NCDOT Rail Crossing Shapefile
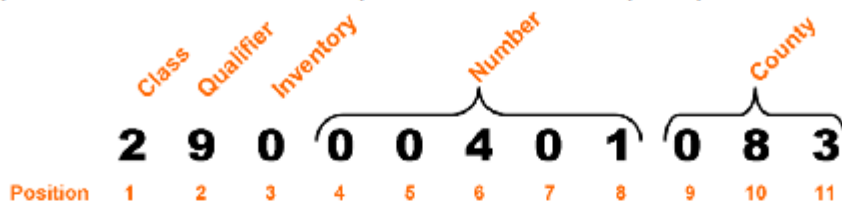NCDOT Rail Crossings File Geodatabase
NCDOT Rail Facility Shapefile
NCDOT Rail Facility File Geodatabase

Guide to the NCDOT Eleven-Digit Route Number

The 11-digit route number is a route naming convention used by NCDOT. It can be used to reference milepost locations along a route. Each digit has a different meaning. The last three digits of the route number are the SAP county code. The county code starts at 001 for Alamance County and ends with 100 for Yancey County.

	Class	Qualifier	Inventory		Number				County	
	2	**9**	**0**	**0**	**0**	**4**	**0**	**1**	**0**	**8**	**3**
Position	1	2	3	4	5	6	7	8	9	10	11

First Digit – Route Class

Value	Prefix	Route Class
1	I	Interstate
2	US	US Route
3	NC	NC Route
4	SR	Secondary route
5	LOC	Other non-system route (municipal or other)
6	SA	Other state agency route (State Parks, Wildlife Resources Commission, State Forests)
7	FED	Federal route (National Parks, Military, Fish and Wildlife Service, Indian Reservations)
8	RMP, RST, NML	Ramps, Rest Areas and non-mainline routes
9	PRJ	Projected route

Second Digit – Route Qualifier

Route Class	Value	Suffix	Route Qualifier
Primaries (I, US, NC)	0	None	Normal route
	1	ALT	Alternate route
	2	BYP	Bypass route
	5	EAST	East route (US-19 only)
	6	WEST	West route (US-19 only)
	7	CNCTR	Connector route
	8	TRCK	Truck route
	9	BUS	Business route
Other Routes (RMP, RST, NML)	0	None	Ramp
	1	None	Rest area
	9	None	Non-Mainline

Third Digit – Inventory Code

Route Class	Value	Inventory Code
Primaries (I, US, NC)	0	Inventory
	4	Non-inventory (southbound)
	6	Non-inventory (westbound)
	8	Inventory (clockwise)
	9	Non-inventory (counterclockwise)
All other routes	0	Inventory
	4	Non-inventory

Management Systems and Assessments Unit
June 9, 2014

NCRouteCharacteristcs

Old and New Field Names

Old Field	New Field
MAINT_CNTY_CD	MaintCntyCode
LOC_1_CNTY_CD	LocCntyCode
RTE_1_CLSS_CD	RouteClass
RTE_1_NBR	RouteNumber
RTE_1_PRIM_CD	RouteQualifier
RTE_1_DDIR_CD	RouteInventory
N/A	Direction
ONEWAY_DIR_FLG	TravelDirection
RTE_STATUS_CD	RouteMaintCode
STREET_NAME	RouteName
STREET_NAME	StreetName
SRCDOC_TYP_CD	SrcDocType
SRCDOC_NBR	SrcDocID
REVDOC_TYP_CD	GeoDocType
REVDOC_NUM	GeoDocID
Rte_Id	RouteID
MP_LENGTH	MPLength
LANE_MILES	LaneMiles
BegMp1	BeginMp1
EndMp1	EndMp1
Beg_Intersect	BeginFeatureID
End_Intersect	EndFeatureID
RouteX	RouteIDX
BegMpX	BeginMpX
EndMpX	EndMpX
ACS_CNTRL_TYP_CD	AccessCont
ADTN_DT	AddDate
ADTN_DCMT_ID	AddDocID
ADTN_DCMT_TYP_CD	AddDocType
N/A	AppaDevHwy
BARE_PVMNT_CD	BarePvmtRoute
BASE_DTL_TYP_CD	BaseDetail
BTHCK_HGT	BaseThickness
DS_NBR	DesignSpd
FCLTY_TYP_CD	FcltyType
FC_TYP_CD	FuncClass
N/A	FuncClassDate

Old Field	New Field
N/A	HOVAccess
HOV_LN_CNT	HOVLnCount
HOV_TYP_CD	HOVType
IMPTYP_DT	ImprvtDate
N/A	ImprvDocID
IMP_DCMT_ID	ImprvDocType
IMPTYP_CD	ImprvType
N/A	LaneWidth
SW_PVD_LFT_QTY	LftPvdShldrWidth
SHLDR_LFT_TYP_CD	LftShldrType
SHLDR_WID_LFT_QTY	LftShldrWidth
TRNLN_LFT_TYP_CD	LftTrnLnType
TRNLN_LFT_WID	LftTrnLnWidth
N/A	MaintOps
MDN_TYP_CD	MedianType
MDN_WID	MedianWidth
NHS_TYP_CD	NHS
NHS_DT	NHSDate
N/A	OwnerName
OWNR_TYP_CD	OwnerType
CNTR_PEAK_LANE_QTY	CounterPkLanes
PEAK_LNS_QTY	PeakLanes
PSTD_RTE_CD	PostedRoute
RW_WID	ROW
SW_PVD_RGT_QTY	RtPvdShldrWidth
SHLDR_RGT_TYP_CD	RtShldrType
SHLDR_WID_RGT_QTY	RtShldrWidth
TRNLN_RGT_TYP_CD	RtTrnLnType
TRNLN_RGT_WID	RtTrnLnWidth
SMPL_ID_NBR	SampleID
SPD_LMT_TYP_CD	SpeedLimit
SHS_TYP_CD	SHS
MLTRY_BASE_CD	MilitaryBase
N/A	STRAHNETDate
SHN_TYP_CD	STRAHNETType
N/A	StructurID
STRCTR_CD	StructurType
SRFC_DTL_TYP_CD	SrfcDetail
STHCK_HGT	SrfcThickness
SRFC_TYP_CD	SrfcType
SRFC_WID	SrfcWidth

Old Field	New Field
TRRN_TYP_CD	TerrainType
NBR_LANE_QTY	ThruLaneCount
SPTLLN_TYP_CD	TollCharged
TOLL_ID_NBR	TollID
TOLL_TYP_CD	TollType
PPLTN_GRP_TYP_CD	MunPopGroup
TWN_CD	TownCode
N/A	TownName
TRCK_RTE_TYP_CD	TrkRoute
N/A	TrkRouteDate
N/A	UrbanType
URBN_ID_CD	UrbanID
RU_PPLTN_TYP_CD	UrbanPop

Removed Fields

- RouteX
- RTE_X_NBR
- RTE_X_PRIM_CD
- RTE_X_DDIR_CD
- LUPD_A_DATE
- LUPD_F_DA TE
- [RTE_RMP_CD]
- ShieldType
- G1_FtSeg_Id
- Frm_Evnt_Pct
- To_Evnt_Pct
- RTE_X_START
- RVRS_ATRBT_IND
- PVMT_QLTY_TYP_CD
- LOC_2_CNTY_CD

For more information about the new fields, refer to:

NCDOTRouteCharacteristicsFieldDescriptions.pdf

(http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData/NCDOTRouteCharacteristicsFieldDescriptions.pdf)

NCRouteArcs Old and New Field Names

Old and New Field Names

Old Field	New Field
MAINT_CNTY_CD	MaintCntyCode
LOC_1_CNTY_CD	LocCntyCode

Old Field	New Field
RTE_1_CLSS_CD	RouteClass
RTE_1_NBR	RouteNumber
RTE_1_PRIM_CD	RouteQualifier
RTE_1_DDIR_CD	RouteInventory
N/A	Direction
ONEWAY_DIR_FLG	TravelDirection
MP_LENGTH	MPLength
STREET_NAME	RouteName
STREET_NAME	StreetName
RTE_STATUS_CD	RouteMaintCode
SRCDOC_TYP_CD	SrcDocType
SRCDOC_NBR	SrcDocID
REVDOC_TYP_CD	GeoDocType
REVDOC_NUM	GeoDocID
RouteX	RouteXClass
RTE_X_NBR	RouteXNumber
RTE_X_PRIM_CD	RouteXQualifier
RTE_X_DDIR_CD	RouteXInventory
Rte_Id	RouteID
BegMp1	BeginMp1
EndMp1	EndMp1
Beg_Intersect	BeginFeatureID
End_Intersect	EndFeatureID
MaxMp1	MaxMP1
RouteX	RouteX
BegMpX	BeginMpX
EndMpX	EndMpX

Removed Fields

- G1_FtSeg_Id
- Beg_G1Factor
- End_G1Factor
- FTSEG
- TMPRY_FTSEG
- Hold
- RTE_X_START
- RTE_SUBCTGY_CD
- RVRS_ATRBT_IND
- LOC_2_CNTY_CD
- RTE_TYP_CD
- RTE_RMP_CD
- ArcID

- Beg_Node
- End_Node
- ShieldType
- LupdADate
- LupdFDate
- TIER_CD
- TIER_SRC
- TIER_STTS

For more information about the new NCRouteArcs fields, refer to:
NCDOTRouteArcsFieldDescriptions.pdf
(http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData/NCDOTRouteArcsFieldDescriptions.pdf)

NCRouteArcs Old and New Field Names

Old and New Field Names

Old Fields	New Fields
MAINT_CNTY_CD	MaintCntyCode
Rte_Id	RouteID
RTE_1_CLSS_CD	RouteClass
RTE_1_NBR	RouteNumber
RTE_1_PRIM_CD	RouteQualifier
RTE_1_DDIR_CD	RouteInventory
Rte_Nm	RouteName
BegMp	BeginMP
EndMp	EndMP
RTE_STATUS_CD	RouteMaintCode

Removed Fields

- NonMonotonic

For more information about the new NCRoute fields, refer to:
NCDOTRoutesFieldDescriptions.pdf
(http://dotw-xfer01.dot.state.nc.us/gisdot/DistDOTData/NCDOTRoutesFieldDescriptions.pdf)