

Stormwater Node US74 Resiliency Study, August 2024 - NC Department of Transportation

Geodatabase Feature Class



Tags Simulator, Stormwater, Node, Modeling, Resiliency, Flooding, Infrastructure, Critical Facilities, Critical, US74, Resiliency, Transportation, NCDOT, biota, Environment, Location, North Carolina, ATLAS

Summary

This dataset was originally created in April 2024 as part of the Project ATLAS initiative at NCDOT to support the Hydraulics Unit with project delivery in the development phase.

This data layer represents points identified as potentially vulnerable to flooding and is summarized in a 2023 report titled "US 74 Resiliency Study" prepared by AtkinsRéalis. These data are provided to Project Atlas to allow for consideration of the findings during the typical project development process.

Description

The StormwaterNodeUS74 ResiliencyStudy layer is a points layer that represents the location of all stormwater tracking points limited to a corridor surrounding US74 between Charlotte NC and Wilmington NC. These are point identified as potentially vulnerable to flooding. Locations include the intersection of culverts and pipes with the transportation network, bridges over water, and low points in each road segment in the network. There were 3,262 bridge, culvert, and pipe assets that were cost-modeled in the study. Additionally, there were 766 flood-prone road points modeled. This gave a total of 4,028 stormwater tracking points. The asset data was provided by the NCDOT from their GIS-based National Bridge Inventory System (NBIS) and non-NBIS databases. For the simulation, assets only above 54 inches in diameter were considered. Note that while flood modeling was included for all tracking points, cost modeling was only done for water-crossing transporting assets (culverts, bridges, and pipes). Road maintenance and installation costs were not modeled. The various assets went through condition decay and forecasted maintenance events during the model prediction cycle so that scenarios evaluating the overall cost of infrastructure improvements could be considered and compared.

Datasets developed under Project ATLAS do not replace any NRTR work for future projects and may not be used as a replacement for site visits / field surveys by licensed professionals and hence should be used only as a supporting platform for decision making. Use of this dataset for project scoping or screening is merely pre-decisional.

Credits

The Hydraulics Unit and Transportation Planning Division (TPD) unit within NCDOT were tasked to create this dataset. Support and maintenance of the enterprise spatial database where this data resides is handled by NCDIT's Transportation GIS Unit.

Use limitations

The North Carolina Department of Transportation shall not be held liable for any errors in this data. This includes errors of omission, commission, errors concerning the content of the data, and relative and positional accuracy of the

data. This data cannot be construed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data.

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Extent

West -80.847737

East -77.745222

North 35.242473

South 34.090973

Scale Range

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:625,000

Topics and Keywords

Themes or categories of the resource Society, Biota, Utilities & Communication, Location, Planning & Cadastral, Transportation, Structure, Environment

Content type Downloadable Data

Export to FGDC CSDGM XML format as Resource Description No

Theme keywords Simulator, Stormwater, Node, Modeling, Resiliency, Flooding, Infrastructure, Critical Facilities, Critical, US74, Resiliency, Transportation, NCDOT, biota, Environment, Location, North Carolina, ATLAS

Thesaurus

Title User

Creation date 2024-04-24 00:00:00

Publication date 2024-08-08 00:00:00

Place keywords North Carolina

Thesaurus

Title User

Creation date 2024-04-24 00:00:00

Publication date 2024-08-08 00:00:00

Citation

Title Stormwater Node US74 Resiliency Study, August 2024 - NC Department of Transportation

Creation date 2024-04-24 00:00:00

Publication date 2024-08-08 00:00:00

Presentation formats digital map

FGDC geospatial presentation format vector digital data

Citation Contacts

Responsible party - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6146

Address

Type

Delivery point Century Center Building B, 1020 Birch Ridge Drive

City Raleigh

Administrative area NC

Postal code 27610

Country US

e-mail address ATLAS@ncdot.gov

Hours of service

9:00am – 5:00pm Monday - Friday

Contact instructions

Please send an email with any issues, questions or comments regarding the ATLAS Data Search Tool, ATLAS Screening Tool or ATLAS Workbench. If it is an immediate need, please call the contact number or indicate as such in the subject line in an email.

Responsible party - resource provider

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

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Contact's position Environmental Program Consultant

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Resource Details

Dataset languages English (UNITED STATES)

Dataset character set utf8 - 8 bit UCS Transfer Format

Status completed

Spatial representation type vector

Processing environment Version 6.2 (Build 9200) ; Esri ArcGIS 10.8.1.14362

Credits

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ArcGIS item properties

Name GdbGisuPubC.ATLAS.StormwaterNodeUS74

Location Server=dot-sqlsazp03.dot.nc.net; Service=sde:sqlserver:dot-sqlsazp03.dot.nc.net\EGIS_01; Database=GdbGisuPubC; User=atlas; Version=sde.DEFAULT

Access protocol ArcSDE Connection

Extents

Extent

Description

Data collection is complete.

Geographic extent

Bounding rectangle

West longitude -84.422109
East longitude -75.416032
South latitude 33.730554
North latitude 36.617254
Extent contains the resource Yes

Temporal extent

Beginning date 2022-04-25 00:00:00
Ending date 2022-04-25 00:00:00

Extent

Geographic extent

Bounding rectangle

Extent type

Extent used for searching

West longitude -80.847737
East longitude -77.745222
North latitude 35.242473
South latitude 34.090973
Extent contains the resource Yes

Extent in the item's coordinate system

westBL -8999928.882300
eastBL -8654558.473600
southBL 4041024.033300
northBL 4196881.267900
exTypeCode Yes

Resource Points of Contact

Point of contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit
Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6146

Address

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Resource Maintenance

Resource maintenance

Update frequency not planned

Scope of the updates dataset

Other maintenance requirements

Updates are not planned unless the US 74 Resiliency Study is re-evaluated with new data. Support and maintenance of the enterprise spatial database where this data resides is handled by NCDIT's Transportation GIS Unit.

Maintenance contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6146

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Resource Constraints

Legal constraints

Limitations of use

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Security constraints

Classification unclassified

Classification system None

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Spatial Reference

ArcGIS coordinate system

Type Projected

Geographic coordinate reference GCS_WGS_1984

Projection WGS_1984_Web_Mercator_Auxiliary_Sphere

Coordinate reference details

ProjectedCoordinateSystem

WKID 102100

XOrigin -20037700

YOrigin -30241100

XYScale 10000

ZOrigin 0

ZScale 1

MOrigin 0

MScale 1

XYTolerance 0.001

ZTolerance 0.001

MTolerance 0.001

HighPrecision true

LatestWKID 3857

WKT

```
PROJCS["WGS_1984_Web_Mercator_Auxiliary_Sphere",GEOGCS["GCS_WGS_1984",DATUM["D_WGS_1984",SPHEROID["WGS_1984",6378137.0,298.257223563]],PRIMEM["Greenwich",0.0],UNIT["Degree",0.0174532925199433]],PROJECTION["Mercator_Auxiliary_Sphere"],PARAMETER["False_Easting",0.0],PARAMETER["False_Northing",0.0],PARAMETER["Central_Meridian",0.0],PARAMETER["Standard_Parallel_1",0.0],PARAMETER["Auxiliary_Sphere_Type",0.0],UNIT["Meter",1.0],AUTHORITY["EPSG",3857]]
```

Reference system identifier

Value 2264

Codespace EPSG

Version 8.8(9.3.1.2)

Spatial Data Properties

Vector

Level of topology for this dataset geometry only

Geometric objects

Feature class name GdbGisuPubC.ATLAS.StormwaterNodeUS74

Object type composite

Object count 4718

ArcGIS Feature Class Properties

Feature class name GdbGisuPubC.ATLAS.StormwaterNodeUS74

Feature type Simple

Geometry type Polygon

Has topology FALSE

Feature count 4718

Spatial index TRUE

Linear referencing FALSE

Data Quality

Scope of quality information

Resource level dataset

Data quality report - Completeness omission

Data quality measure reference

Measure description

After processing, the dataset is checked for drawing display and number of records and file sizes compared with source materials.

Conformance test results

Test passed Yes

Result explanation

Pass

Product specification

Title NCDOT Geospatial Data Specifications

Creation date 2019-01-01 00:00:00

Publication date 2019-08-28 00:00:00

Data quality report - Conceptual consistency

Data quality measure reference

Measure description

The dataset is converted to file geodatabase (FGDB) format using tools in ArcGIS. The geometry is checked, and if needed repaired

Conformance test results

Test passed Yes

Result explanation

Pass

Product specification

Title NCDOT Geospatial Data Specifications

Creation date 2019-01-01 00:00:00

Publication date 2019-08-28 00:00:00

Data quality report - Quantitative attribute accuracy

Data quality measure reference

Measure description

In general, QC was accomplished through a combination of:

- Reviewing charts of the stormwater nodes that showed the flood elevations superimposed on a profile (elevation drawing) of the structure including the top of deck and bed elevation. These charts helped to quickly spot discrepancies.
- Reviewing flood hotspot results: where flooding occurred in unexpected places – or did not occur in expected places – the attributes were reviewed carefully to ensure reasonable results. The NCDOT TIMS dataset was also used as a post-check to verify if flooding simulated is actually experienced.
- Reviewing overall corridor results: comparing total cost to maintain the corridor to historical total cost helped to ensure individual attributes were accurate.

Conformance test results

Test passed Yes

Result explanation

Pass

Product specification

Title NCDOT Geospatial Data Specifications

Creation date 2019-01-01 00:00:00

Publication date 2019-08-28 00:00:00

Lineage

Lineage statement

This layer contains locations that include the intersection of culverts and pipes with the transportation network, bridges over water, and low points in each road segment in the network. The data were imported into the City Simulator geodatabase primarily from the NCDOTStructureLocations layer provided by NCDOT at the start of the project. This layer contained all pipes, bridges, and culverts in the system. To find road low points, AtkinsRéalis used the City Simulator “find low road locations” tool (described in the final US74 report). Key attributes for each data point were added to prepare for simulation. These included:

- Top of the road deck elevation and the bed elevation: The top of road deck was estimated by using the so-called “ribbon,” which is a digital elevation model providing elevations only for roadways in the NC system. This was

provided by NCDOT. Bed elevations were estimated using a corridor-wide DEM as described in the final report.

- **Replacement Cost:** This was used in the lifecycle cost simulation portion of the simulation. The replacement costs estimates were derived from bid estimates for culverts and from SAP database estimates for bridges, using a custom query developed by NCDOT staff.

The AtkinsRéalis 2023 report will have the most details, but in general these data underwent collection and extraction from NCDOT NBIS and non-NBIS datasets, a cross walk of condition categorization between the two, modeling of condition decay, and modeling of maintenance requirements using different weather forecasting over the simulation period.

Process step

Description

Data was reviewed in ESRI's Data Reviewer tool to verify geometry.

Process contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6146

Address

Type

Delivery point Century Center Building B, 1020 Birch Ridge Drive

City Raleigh

Administrative area NC

Postal code 27610

Country US

e-mail address ATLAS@ncdot.gov

Hours of service

9:00am – 5:00pm Monday - Friday

Contact instructions

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Process step

Description

Geodatabase was forwarded on to the GIS Unit for publishing as part of data for project ATLAS.

Process contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6146

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Distribution

Distributor

Contact information - distributor

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit

Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6146

Address

Type

Delivery point Century Center Building B, 1020 Birch Ridge Drive

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Distribution format

Name SDE Feature Class

Version 10.5

Fields

Details for object GdbGisuPubC.ATLAS.StormwaterNodeUS74

Type Feature Class

Row count 4718

Definition

Points identified as potentially vulnerable to flooding

Definition source

NCDOT

Field OBJECTID

Alias OBJECTID

Data type OID

Width 4

Precision 10

Scale 0

Field description

Internal feature number.

Description source

Esri

Description of values

Sequential unique whole numbers that are automatically generated.

Field SHAPE

Alias SHAPE

Data type Geometry

Width 4

Precision 0

Scale 0

Field description

Feature geometry.

Description source

Esri

Description of values

Coordinates defining the features.

Field SWID

Alias SWID

Data type Integer

Width 4

Precision 10

Scale 0

Field description

Unique stormwater ID assigned by City Simulator.

Description source

NCDOT

Field Type

Alias Type

Data type String

Width 255

Precision 0

Scale 0

Field description

Type of stormwater feature - can be either stormwater tracking node or stormwater control node.

Description source

NCDOT

Field ReplacementCost

Alias ReplacementCost

Data type Double

Width 8

Precision 38

Scale 8

Field description

Cost to replace the asset in base year dollars. Calculated in various ways on a study-by-study basis.

Description source

NCDOT

Field DateInstalled

Alias DateInstalled

Data type Date

Width 8

Precision 0

Scale 0

Field description

Date asset was first installed.

Description source

NCDOT

Field Description

Alias Description

Data type String

Width 255

Precision 0

Scale 0

Field description

Text description of the asset.

Description source

NCDOT

Field DecayParameters

Alias DecayParameters

Data type String

Width 255

Precision 0

Scale 0

Field description

A text blob describing the type of decay model and parameters for that model.

Description source

NCDOT

Field RelatedRoadID

Alias RelatedRoadID

Data type Integer

Width 4

Precision 10

Scale 0

Field description

OID of the transportationLink that the asset is related to.

Description source

NCDOT

Field OvertopCurve

Alias OvertopCurve

Data type String

Width 1028

Precision 0

Scale 0

Field description

A text blob that contains a series of triplets of return period, rain depth, and flood depth. Collectively describes the riverine flood response to rain events of set probabilities.

Description source

NCDOT

Field SubType

Alias SubType

Data type String

Width 255

Precision 0

Scale 0

Field description

Works with the Type attribute. Further specifies the type of asset (eg. culvert, bridge, pipe).

Description source

NCDOT

Field SourceID

Alias SourceID

Data type String

Width 255

Precision 0

Scale 0

Field description

An alphanumeric ID that is used in the database(s) provided by the data source.

Description source

NCDOT

Field BaseYearCondition

Alias BaseYearCondition

Data type String

Width 255

Precision 0

Scale 0

Field description

The condition rating of the asset in the base year of the simulation run. Typically Good, Fair, Poor, Failing (or some other scheme defined by the source agency).

Description source

NCDOT

Field LifeSpan

Alias LifeSpan

Data type Double

Width 8

Precision 38

Scale 8

Field description

Number of years the asset is expected to operate before replacement.

Description source

NCDOT

Field PipeType

Alias PipeType

Data type String

Width 255

Precision 0

Scale 0

Field description

For culvert/pipe assets, this specifies the pipe material.

Description source

NCDOT

Field PipeLength

Alias PipeLength

Data type Double

Width 8

Precision 38

Scale 8

Field description

For culvert/pipe assets, this specifies the pipe length.

Description source

NCDOT

Field PipeDiameter

Alias PipeDiameter

Data type Double

Width 8

Precision 38

Scale 8

Field description

For culvert/pipe assets, this specifies the pipe diameter.

Description source

NCDOT

Field BarrelHeight

Alias BarrelHeight

Data type Double

Width 8

Precision 38

Scale 8

Field description

For culvert assets, this specifies the barrel height.

Description source

NCDOT

Field BarrelWidth

Alias BarrelWidth

Data type Double

Width 8

Precision 38

Scale 8

Field description

For culvert assets, this specifies the barrel width.

Description source

NCDOT

Field HydraulicOpeningSqFt

Alias HydraulicOpeningSqFt

Data type Double

Width 8

Precision 38

Scale 8

Field description

Area of flow for a culvert/pipe asset, manually calculated from the diameter and/or barrel height and width.

Description source

NCDOT

Field SuperStructure

Alias SuperStructure

Data type String

Width 255

Precision 0

Scale 0

Field description

Specifies the group of assets this asset belongs to.

Description source

NCDOT

Field SubStructure

Alias SubStructure

Data type String

Width 255

Precision 0

Scale 0

Field BridgeDeckArea

Alias BridgeDeckArea

Data type Double

Width 8

Precision 38

Scale 8

Field description

For bridges, the area of the deck in square feet.

Description source

NCDOT

Field MajorRefurbishmentSpan

Alias MajorRefurbSpan

Data type Double

Width 8

Precision 38

Scale 8

Field description

Number of years between major refurbishments

Description source

NCDOT

Field MinorRefurbishmentSpan

Alias MinorRefurbSpan

Data type Double
Width 8
Precision 38
Scale 8

Field description

Number of years between minor refurbishments

Description source

NCDOT

Field DeckElevation

Alias DeckElevation
Data type Double
Width 8
Precision 38
Scale 8

Field description

Elevation of the deck in feet.

Description source

NCDOT

Field MaxOTDepth

Alias MaxOTDepth
Data type Double
Width 8
Precision 38
Scale 8

Field description

Maximum overtopping depth from riverine flood model (ft) - calculated by City Sim.

Description source

NCDOT

Field MaxOTDepthPluvial

Alias MaxOTDepthPluvial
Data type Double
Width 8
Precision 38
Scale 8

Field description

Maximum overtopping depth from pluvial flood model (ft) - calculated by City Sim.

Description source

NCDOT

Field MaxFloodDepthOverall

Alias MaxFloodDepth_Overall

Data type Double

Width 8

Precision 38

Scale 8

Field description

Maximum flood depth from any model (ft) - calculated by City Sim.

Description source

NCDOT

Field HydraulicDeckWidth

Alias BridgeDeckWidth

Data type Double

Width 8

Precision 38

Scale 8

Field description

Width of the bridge deck (ft) that conveys water - ie. in direction of flow, approach not included.

Description source

NCDOT

Field HydraulicLength

Alias BridgeLength

Data type Double

Width 8

Precision 38

Scale 8

Field description

Length of the bridge deck (ft) that conveys water - ie. across direction of flow, approach not included.

Description source

NCDOT

Field HydDeckWidthUsed

Alias HydDeckWidthUsed

Data type Double

Width 8

Precision 38

Scale 8

Field description

Width used to calculate the bridge deck area - used to record final value used, if width parameter is subject to change.

Description source

NCDOT

Field NumBarrels

Alias NumBarrels

Data type SmallInteger

Width 2

Precision 5

Scale 0

Field description

For culverts/pipes, number of barrels/pipes included in a single asset.

Description source

NCDOT

Field Temp

Alias Temp

Data type String

Width 50

Precision 0

Scale 0

Field description

Temporary field - used for storing data temporarily.

Description source

NCDOT

Field HydVolume

Alias HydVolume

Data type Double

Width 8

Precision 38

Scale 8

Field description

Calculated maximum volume asset provides for water conveyance.

Description source

NCDOT

Field RelatedTransportLinkOID

Alias RelatedTransportLinkOID

Data type Integer

Width 4

Precision 10

Scale 0

Field description

OID of the transportationLink that the asset is related to.

Description source

NCDOT

Field AADTemp

Alias AADTemp

Data type Integer

Width 4

Precision 10

Scale 0

Field description

Used in manual calculations.

Description source

NCDOT

Field AADTruckTemp

Alias AADTruckTemp

Data type Integer

Width 4

Precision 10

Scale 0

Field description

Used in manual calculations.

Description source

NCDOT

Field AATDEst

Alias AATDEst

Data type Integer

Width 4

Precision 10

Scale 0

Field description

Estimate of Average Annual Trips Disrupted - calculated by City Simulator.

Description source

NCDOT

Field AADaysDisrupted

Alias AADaysDisrupted

Data type Integer

Width 4

Precision 10

Scale 0

Field description

Estimate of Average Annual Days Disrupted - calculated by City Simulator.

Description source

NCDOT

Field AADTruckEst

Alias AADTruckEst

Data type Double

Width 8

Precision 38

Scale 8

Field description

Populated in TransportationLinks layer.

Description source

NCDOT

Field AAFreightDisrupted

Alias AAFreightDisrupted

Data type Integer

Width 4

Precision 10

Scale 0

Field description

Populated in TransportationLinks layer.

Description source

NCDOT

Field OTCurveSource

Alias OTCurveSource

Data type String

Width 255

Precision 0

Scale 0

Field description

Specifies model or model set used to estimate riverine overtopping curve (file path).

Description source

NCDOT

Field OvertopCurvePluvial

Alias OvertopCurvePluvial

Data type String

Width 255

Precision 0

Scale 0

Field description

A text blob that contains a series of triplets of return period, rain depth, and flood depth. Collectively describes the pluvial flood response to rain events of set probabilities. Typically source is Atkins Pluvial Model Run.

Description source

NCDOT

Field OvertopCurvePluvialSourceFile

Alias OvertopCurvePluvialSourceFile

Data type String

Width 1024

Precision 0

Scale 0

Field description

Specifies model or model set used to estimate riverine overtopping curve (file path).

Description source

NCDOT

Field OvertopCurvePluvialSourceTitle

Alias OvertopCurvePluvialSourceTitle

Data type String

Width 1024

Precision 0

Scale 0

Field description

Specifies model or model set used to estimate riverine overtopping curve (title of model).

Description source

NCDOT

Field RegionalPrecipitationAdjustment

Alias RegionalPrecipitationAdjustment

Data type Double

Width 8

Precision 38

Scale 8

Field QCResult

Alias QCResult

Data type String

Width 1024

Precision 0

Scale 0

Field description

Result populated by City Simulator QC algorithm when it is run, primarily targeted at checking flood response curves.

Description source

NCDOT

Field OvertopCurveCoastal

Alias OvertopCurveCoastal

Data type String

Width 1024

Precision 0

Scale 0

Field description

A text blob that contains a series of triplets of return period, rain depth, and flood depth. Collectively describes the coastal flood response to rain events of set probabilities. Typically source is a hydrodynamic surge model.

Description source

NCDOT

Field OvertopCurveCoastalSourceFile

Alias OvertopCurveCoastalSourceFile

Data type String

Width 1024

Precision 0

Scale 0

Field description

Specifies model or model set used to estimate coastal overtopping curve (file path).

Description source

NCDOT

Field OvertopCurveCoastalSourceTitle

Alias OvertopCurveCoastalSourceTitle

Data type String

Width 1024

Precision 0

Scale 0

Field description

Specifies model or model set used to estimate coastal overtopping curve (title of model).

Description source

NCDOT

Field OvertopCurveROG

Alias OvertopCurveROG

Data type String

Width 1024

Precision 0

Scale 0

Field description

A text blob that contains a series of triplets of return period, rain depth, and flood depth. Collectively describes the Rain on Grid flood response to rain events of set probabilities. Typically source is a HECRAS 2D model.

Description source

NCDOT

Field OvertopCurveROGSourceFile

Alias OvertopCurveROGSourceFile

Data type String

Width 1024

Precision 0

Scale 0

Field description

Specifies model or model set used to estimate rain on grid overtopping curve (file path).

Description source

NCDOT

Field OvertopCurveROGSourceTitle

Alias OvertopCurveROGSourceTitle

Data type String

Width 1024

Precision 0

Scale 0

Field description

Specifies model or model set used to estimate rain on grid overtopping curve (title of model).

Description source

NCDOT

Field MaxOTDepthCoastal

Alias MaxOTDepthCoastal

Data type Double

Width 8

Precision 38

Scale 8

Field description

Maximum flood depth over the road deck based on coastal flood model (ft).

Description source

NCDOT

Field MaxOTDepthROG

Alias MaxOTDepthROG

Data type Double

Width 8

Precision 38

Scale 8

Field description

Maximum flood depth over the road deck based on ROG flood model (ft).

Description source

NCDOT

Field OvertopCurveArchive

Alias OvertopCurveArchive

Data type String

Width 2048

Precision 0

Scale 0

Field description

Used to store obsolete riverine overtop curves.

Description source

NCDOT

Field OvertopCurveSourceFolder

Alias OvertopCurveSourceFolder

Data type String

Width 255

Precision 0

Scale 0

Field description

Source folder/file path of archived riverine overtop curve.

Description source

NCDOT

Field OvertopCurveSourceTitle

Alias OvertopCurveSourceTitle

Data type String

Width 255

Precision 0

Scale 0

Field description

Title of archived riverine overtop curve.

Description source

NCDOT

Field OverTopCurveOnlyNonZero

Alias OverTopCurveOnlyNonZero

Data type String

Width 2048

Precision 0

Scale 0

Field description

Riverine overtop curve with zero flooding triplets removed.

Description source

NCDOT

Field SubAreaID

Alias SubAreaID
Data type Integer
Width 4
Precision 10
Scale 0

Field description

The OID of the sub area that the asset lies in. Typically, subareas are census block groups or traffic analysis zones (TAZ). Depends on the study.

Description source

NCDOT

Field ResultAATDBaserun

Alias ResultAATDBaserun
Data type Integer
Width 4
Precision 10
Scale 0

Field description

Average annual trips disrupted by the asset in the baserun - used to compare to other scenarios.

Description source

NCDOT

Field DOTDivision

Alias DOTDivision
Data type String
Width 255
Precision 0
Scale 0

Field description

Division Number of the division that the asset falls into.

Description source

NCDOT

Field ReplacementCostTIP

Alias ReplacementCostTIP
Data type Double
Width 8
Precision 38
Scale 8

Field description

Replacement cost as estimated in the NCDOT transportation improvement plan.

Description source

NCDOT

Field BridgeDeckWidthFile00001

Alias BridgeDeckWidthFile00001

Data type Double

Width 8

Precision 38

Scale 8

Field description

Width of Bridge Deck from file provided by NCDOT.

Description source

NCDOT

Field BridgeDeckLengthFile00001

Alias BridgeDeckLengthFile00001

Data type Double

Width 8

Precision 38

Scale 8

Field description

Length of Bridge Deck from file provided by NCDOT.

Description source

NCDOT

Field BridgeDeckAreaFile00001

Alias BridgeDeckAreaFile00001

Data type Double

Width 8

Precision 38

Scale 8

Field description

Area of Bridge Deck from file provided by NCDOT.

Description source

NCDOT

Field ReplacementCostBasedOnFile00001

Alias ReplacementCostBasedOnFile00001

Data type Double

Width 8

Precision 38

Scale 8

Field description

Replacement Cost from file provide by NCDOT.

Description source

NCDOT

Field Label1

Alias Label1

Data type String

Width 255

Precision 0

Scale 0

Field description

Temporary field - not used in City Simulator Runs.

Description source

NCDOT

Field SFHApplus50ft

Alias SFHApplus50ft

Data type SmallInteger

Width 2

Precision 5

Scale 0

Field description

Zero or One field indicating if the asset/tracking point is within the NFHL SFHA plus a 50ft buffer (not used in NCDOT resiliency studies)

Description source

NCDOT

Field BedElevation

Alias BedElevation

Data type Double

Width 8

Precision 38

Scale 8

Field description

Elevation of the river/creek bed at the location of an asset (as pulled from bare earth DEM).

Description source

NCDOT

Field AATDEst2

Alias AATDEst2

Data type Integer

Width 4

Precision 10

Scale 0

Field description

Copy of AATD, which is generated by City Simulator.

Description source

NCDOT

Field PluvialRaster100yrDepth

Alias PluvialRaster100yrDepth

Data type Double

Width 8

Precision 38

Scale 8

Field description

Depth of flooding for 100 year pluvial event, extracted from pluvial depth raster.

Description source

NCDOT

Field OTCurve100yearPluvial

Alias OTCurve100yearPluvial

Data type Double

Width 8

Precision 38

Scale 8

Field description

Overtopping curve for 100 year pluvial event; obsolete - the OvertopCurvePluvial attribute is used as of NCDOT resiliency studies

Description source

NCDOT

Field PluvialAdjust

Alias PluvialAdjust
Data type Double
Width 8
Precision 38
Scale 8

Field description

Adjustment to make to pluvial curve; Need further review

Description source

NCDOT

Field RemotenessIndex

Alias RemotenessIndex
Data type Integer
Width 4
Precision 10
Scale 0

Field description

Remoteness Index of the road segment related to the asset/tracking point. The index is inversely proportional to the density of road segments in the subarea (usually census block group) in which the road segment lies.

Description source

NCDOT

Field TempIndex

Alias TempIndex
Data type Double
Width 8
Precision 38
Scale 8

Field description

Temporary field - not used in City Simulator Runs

Description source

NCDOT

Field AATDRankInDivision

Alias AATDRankInDivision
Data type Integer
Width 4
Precision 10
Scale 0

Field description

Numeric rank of asset/tracking point in terms of average annual trips disrupted across the division in which the asset/tracking point lies.

Description source

NCDOT

Field DivisionOID

Alias DivisionOID

Data type SmallInteger

Width 2

Precision 5

Scale 0

Field description

ObjectID of the division from the division boundary map.

Description source

NCDOT

Field IsRailCrossing

Alias IsRailCrossing

Data type SmallInteger

Width 2

Precision 5

Scale 0

Field description

Zero or One field indicating if the asset/tracking point is a rail crossing.

Description source

NCDOT

Field OnUS74

Alias OnUS74

Data type SmallInteger

Width 2

Precision 5

Scale 0

Field description

Zero of One field indicating if the asset/tracking point is directly on US74.

Description source

NCDOT

Field SHAPE.STArea()

Alias SHAPE.STArea()
Data type Double
Width 0
Precision 0
Scale 0

Field SHAPE.STLength()

Alias SHAPE.STLength()
Data type Double
Width 0
Precision 0
Scale 0

Metadata Details

Metadata language English (UNITED STATES)
Metadata character set utf8 - 8 bit UCS Transfer Format

Scope of the data described by the metadata dataset
Scope name dataset

Last update 2024-09-19

ArcGIS metadata properties

Metadata format ArcGIS 1.0
Metadata style ISO 19139 Metadata Implementation Specification
Standard or profile used to edit metadata ISO19139

Created in ArcGIS for the item 2024-09-19 19:34:28
Last modified in ArcGIS for the item 2024-09-19 19:35:28

Automatic updates

Have been performed Yes
Last update 2024-09-19 19:35:28

Metadata Contacts

Metadata contact - point of contact

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit
Contact's position Environmental Program Consultant

Contact information

Phone
Voice 919-707-6146
Address
Type
Delivery point Century Center Building B, 1020 Birch Ridge Drive

City Raleigh
Administrative area NC
Postal code 27610
Country US
e-mail address ATLAS@ncdot.gov

Hours of service

9:00am – 5:00pm Monday - Friday

Contact instructions

Please send an email with any issues, questions or comments regarding the ATLAS Data Search Tool, ATLAS Screening Tool or ATLAS Workbench. If it is an immediate need, please call the contact number or indicate as such in the subject line in an email.

Metadata Maintenance

Maintenance

Update frequency not planned

Other maintenance requirements

Updates are not planned unless the US 74 Resiliency Study is re-evaluated with new data. Support and maintenance of the enterprise spatial database where this data resides is handled by NCDIT's Transportation GIS Unit.

Maintenance contact - originator

Organization's name North Carolina Department of Transportation - EAU Mitigation and Modeling Unit
Contact's position Environmental Program Consultant

Contact information

Phone

Voice 919-707-6146

Address

Type

Delivery point Century Center Building B, 1020 Birch Ridge Drive

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Metadata Constraints

Security constraints

Classification unclassified

Classification system None

Limitations of use

The North Carolina Department of Transportation shall not be held liable for any errors in this metadata. This includes errors of omission, commission, errors concerning the content of the data, and relative and positional accuracy of the data. This data cannot be construed to be a legal document. Primary sources from which this data was compiled must be consulted for verification of information contained in this data. Datasets developed under Project ATLAS do not replace any NRTR work for future projects and may not be used as a replacement for site visits / field surveys by qualified professionals and hence should be used only as a supporting platform for decision making. Use of this dataset for project scoping or screening is merely pre-decisional.

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Thumbnail and Enclosures

Thumbnail

Thumbnail type

Image file