# Data Integrity: What Syncs Between MiTS and Civil 3D (And What Doesn’t)

Utilities · https://mes100.com/docs/data-integrity-what-syncs-between-mits-and-civil-3d-and-what-doesnt/

In the synchronization of gravity and pressure pipe networks, the transfer of data between MiTS and Civil 3D is a selective process.

The software is designed to copy particular **physical attributes** to maintain consistency in the model's geometry while leaving some properties unaltered.

The table below presents properties involved in the data exchange.

## Copied Properties

### Manholes / Sumps / Fittings

| Parameters in MiTS | Equivalent Parameters in Civil 3D |
|---|---|
| Location X | Structure Easting for **Gravity Pipe Networks** (Sewerage & Drainage)<br>Insertion Point Easting for **Pressure Pipe Networks** |
| Location Y | Structure Northing for **Gravity Pipe Networks** (Sewerage & Drainage)<br>Insertion Point Northing for **Pressure Pipe Networks** |
| Ground Level | Surface Elevation At Insertion Point for **Gravity Pipe Networks** (Sewerage & Drainage)<br>Insertion Point Elevation for **Pressure Pipe Networks** |

| | |
|---|---|
| Manhole/Symp/Fitting Type | Structure Shape & Material (**Gravity Pipe Networks**)<br>Pressure Part Type & Material (**Pressure Pipe Networks**) |
| Manhole/Sump/Fitting Profile | Inner or Outer Diameter of the structures |

## Gravity Pipes (Sewer & Drain)

| Parameters in MiTS | Equivalent Parameters in Civil 3D |
|---|---|
| Mark | Start Structure and End Structure |
| From Node Invert Levels | Start Invert Elevation |
| To Node Invert Levels | End Invert Elevation |
| Length & Length 3D | 2D Length & 3D Length |
| Pipe Type / Drain Type | Part Type and Material |
| Diameter / Dimension | Inner Diameter (Circular) / Inner Pipe Width & Inner Pipe Height (Rectangular) |

## Pressure Pipes (Water Reticulation)

| Parameters in MiTS | Equivalent Parameters in Civil 3D |
|---|---|
| Mark | Start Part & End Part |

| | |
|---|---|
| From Node Invert Levels | Start Invert Elevations |
| To Node Invert Levels | End Invert Elevations |
| Length & Length 3D | 2D Length & 3D Length |
| Pipe Type | ID Material |
| Diameter (Outer) | Diameter Outside |

# Unaltered Properties in MiTS

## Gravity Pipe Networks

| Sewerage |
|---|
| Population Equivalent (PE) |
| Manning Coefficient |
| Gradient (Unless there are changes to the invert levels) |
| Pipe Flow |
| Constraint Parameters |
| Running Network |

| Drainage |
| --- |
| Gradient (Unless there are changes to the Invert Levels) |
| Overland Time |
| Drain Time (Td) and Time of Concentration (Tc) |
| Rainfall Intensity |
| Offset |
| Previous Flow Ratio |
| Constraint Parameter |
| Running Network |

## Pressure Pipe Networks

| Nodes | Pipes |
| --- | --- |
| Water Demand | Head Loss Coefficients |
| Tank Water Level & Highest Supply Level | Pumps/Valve |
| Fix Head & Node Head | Running Pipe System |
| Hydrant Settings | |

| | |
|---|---|
| Flow Factors | Minor Loss Coefficients |
| Custom Loss | |

## *Related*



Ngu Soon Hui

I’m the Benevolent Dictator for Life for MiTS Software cum Editor of this website. Read more here.

You can also contact me at soonhui@mes100.com