

# CEDRA-AVsand™

Storm & Waste Water Applications  
Using ESRI's ArcGIS® or ArcView® GIS Software



## A Productivity Tool For:

### Building the database from within AVsand

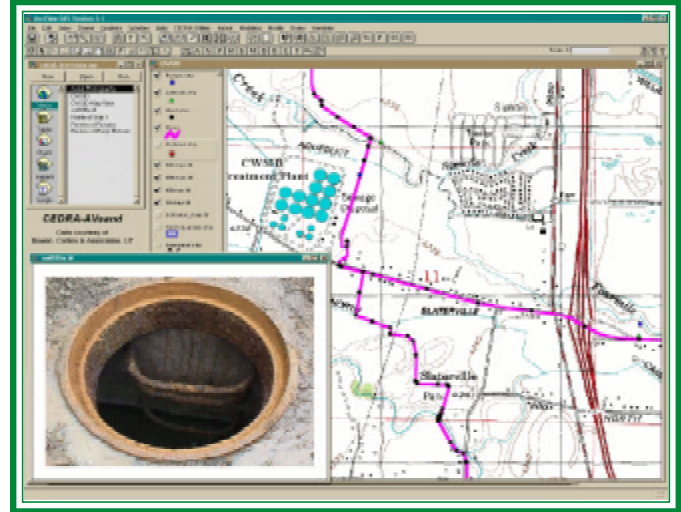
- Define the geometric configuration.
- Establish the materials inventory.
- Introduce storm and waste water loads as flow rates, inflow hydrographs and/or land polygons.

### Import existing databases

- Closed and open conduit systems.
- Topographic features.
- Land parcels and land use polygons.
- Waste and storm contribution data.
- Other ancillary coverages.
- dxf, dwg, dgn & Cedra drawings.
- Arc/Info coverages and libraries thereof.

### Hydraulic modeling

- Sanitary, Storm, Combined and Infiltration-Inflow.
- Land Use polygon based contributions option.
- Static and dynamic modeling using inflow hydrographs.
- System capacity and backwater analysis.
- Siphons, diversions, parallel pipes & loops.
- Flow hydrograph & detention routing.
- Over 30 built-in, and custom pipes shapes.



- User-Defined Peaking Curve Equation.
- User-Defined Pipe Material Codes.
- User-Defined Pipe Sizes for re-design.
- Ability to handle large drops in manholes.
- Ability to customize the annotation strings used in annotating the pipe material in a profile.
- SAND and SWMM interfaces.

### Database queries

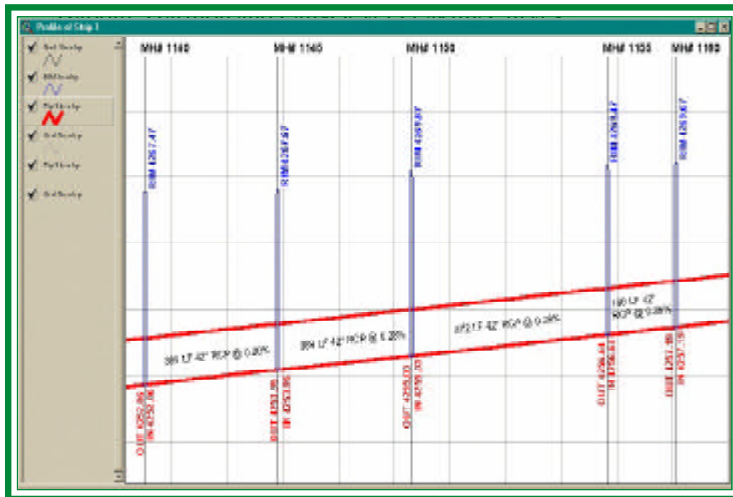
- Hydraulic computational results.
- Inventory features.
- Operational and historic data.

### Database editing

- Maintain inventory & hydraulic attributes.
- Precise geometric location.
- Modeling control and other parameters.
- Storm and waste contributions.

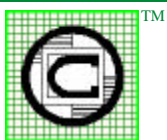
### Graphic display and or reports

- Hydraulic and quality charts and tables.
- Flow hydrograph generation.
- Conduit and energy grade line profiles.
- Annotation of pipes and nodes.
- CAD functionality.



Contact **The CEDRA Corporation** on how to order:

**CEDRA-AVcad™** for general feature editing, annotation and CAD tools, **CEDRA-AVcogo™** for comprehensive COGO tools, **CEDRA-AVland™** for roadway and site engineering, **CEDRA-AVparcel™** for parcel mapping and maintenance, **CEDRA-AVsand™** for sanitary, storm and combined sewer modeling, **CEDRA-AVwater™** for water distribution and quality modeling, **CEDRA-DataEditor™** for data entry and maintenance, **CEDRA-DxfExport™** for DXF file exporting.



## The CEDRA Corporation

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Bridging Engineering and GIS™

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AUTHORIZED ESRI  
DEVELOPER  
and  
RESELLER



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# THE CEDRA-AVsand™ MENUS

## Modify Features

### Modify

- Control Data
- Attribute
- MH nsump
- Output Table
- Classification
- Node/Pipe Numbers
- Set Pipe Inverts

## Query Attributes

### Query

- Range
- Highs
- Lows
- Node
- Pipe
- Strips
- Show Ind'q Pipes
- Show % Inadequacy

## Annotate Graphics

### Annotate

- Ann Node
- Ann Pipe
- Len., Dia., + Slope
- Profile
- EPS Graphs
- User Text
- Parcel Area

## Modeling Controls

### Modeling

- Control Data
- Curve Data
- Xtran Data
- Hydrograph Data
- User Hydrographs
- User Shapes
- User Shapes to SWMM
- SAND Loads to Hydrographs
- Update Model Geometry
- Load Generation
- Execute
- Re-Execute

## POINT TOOLS

### Establish Points



- of known coordinates
- with direction & distance
- with plus and offset

# THE CEDRA-AVsand™ VIEW DOCUMENT BUTTONS

## UNITS OF MEASURE

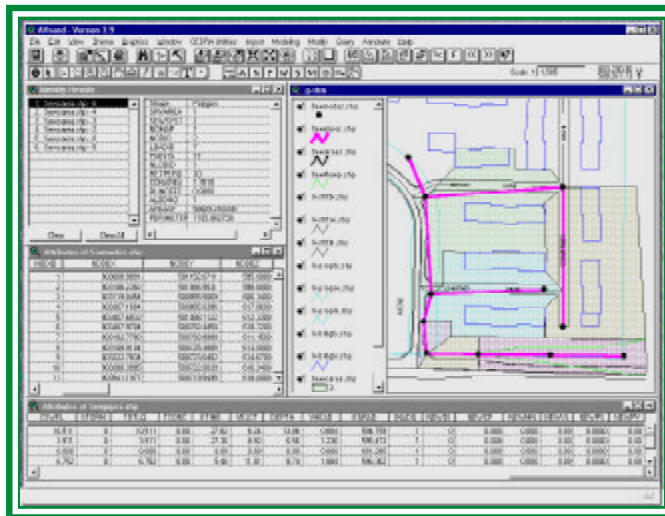
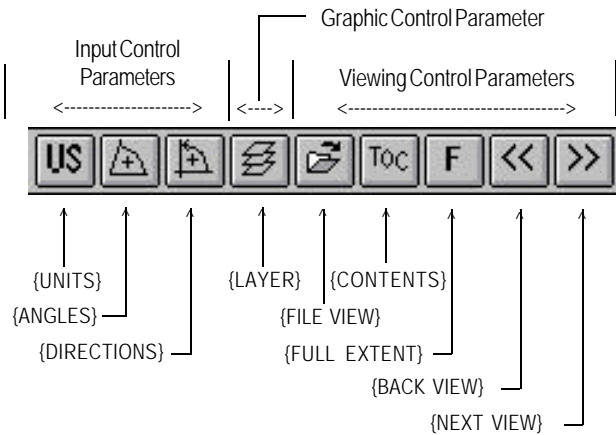
- US** U.S. standard units
- SI** S.I. units

## POSITIVE ANGLES

- Left angle is (+)
- Right deflection is (+)
- Left deflection is (+)
- Right angle is (+)

## DIRECTIONS

- North azimuths
- Bearings
- Cartesian rotations



# THE CEDRA-AVsand™ VIEW DOCUMENT TOOLS



- Point Tools
- Service Area Tool
- Node Definition Tool
- Pipe Definition Tool
- Wastewater Contribution Tool
- Storm Water Contribution Tool
- Node and Pipe Modification Tool
- Node and Pipe Deletion Tool
- Break a Pipe Tool
- Assign Strip ID's Tool
- Assign Polygon-Based Loads to Nodes Tool
- Dimensioning Tool
- Translation, Rotation and Scaling Tool