



Universitatea Tehnică de Construcții București

**Facultatea  
de Hidrotehnică**



# BIM ÎN CONSTRUCȚIILE HIDROTEHNICE

ing. Mircea Nicolau – **BIM Manager / Infrastructure Application Engineer**

21 Martie, 2024, ora 9.00

Amfiteatrul Radu Prișcu (sala II-7), Facultatea de Hidrotehnică

**man machine**  
Software

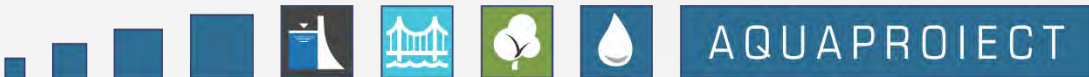
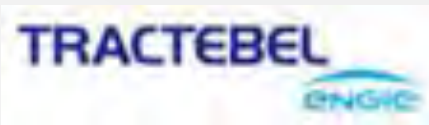


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Facultatea de Hidrotehnică – Promoția 2007  
Studii Aprofundate: Ingineria Protecției Mediului

Facultatea de Hidrotehnică – Promoția 2006  
Specializarea: Construcții Hidrotehnice

Am mai lucrat la:



## Despre mine



BIM Manager



Infrastructure Application Engineer

Certificari profesionale Autodesk



Membru supleant în BIM TASKFORCE ROMANIA



MINISTERUL DEZVOLTĂRII,  
LUCRĂRILOR PUBLICE ȘI  
ADMINISTRAȚIEI



Vicepreședinte  
și  
Instructor in Poligon de Tragere

# MAN AND MACHINE GROUP



# Man and Machine Romania

MAN AND MACHINE ROMANIA  
ESTE MEMBRU AL  
ASOCIATIEI DE  
STANDARDIZARE DIN  
ROMANIA SI MEMBRUL IN  
COMITETUL TEHNIC CT 335  
“BIM SI SUSTENABILITATEA  
MEDIULUI CONSTRUIT” –  
EUROPEAN COMMITTEE  
CEN/TC 442 BUILDING  
INFORMATION MODELLING

MAN AND MACHINE ROMANIA ESTE  
PRIMUL CENTRU DE  
CERTIFICARE #BUILDINGSMART DIN  
ROMANIA

PROGRAMUL DE STUDII  
UNIVERSITARE DE MASTERAT  
REPREZENTARE DIGITALA ȘI  
MANAGEMENTUL INFORMATIILOR  
ÎN CONSTRUCTII (BIM)

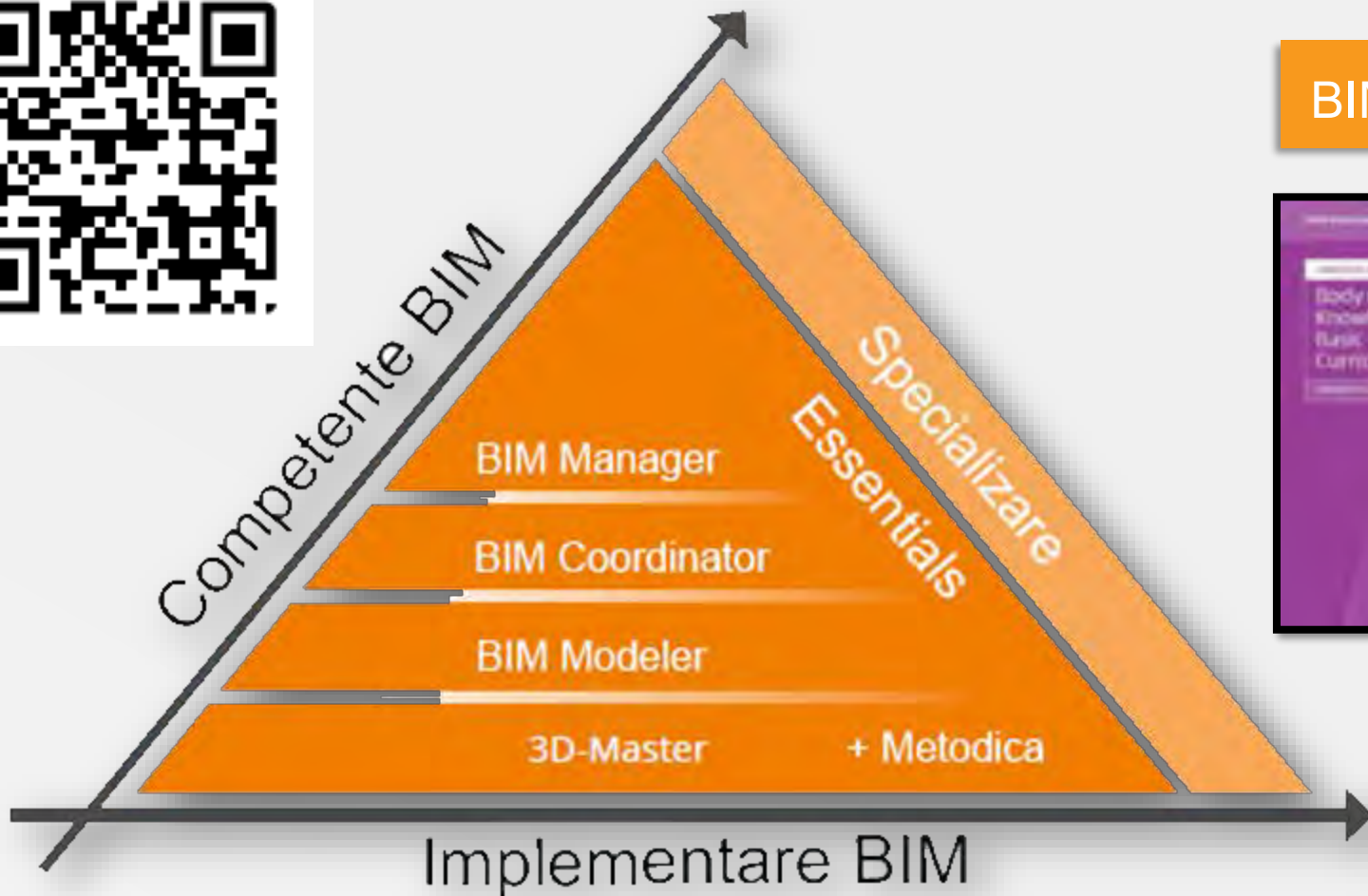


MAN AND MACHINE ROMANIA  
ESTE MEMBRU #CLUSTERTEC





# BIM MANAGEMENT SI CERTIFICARE BS

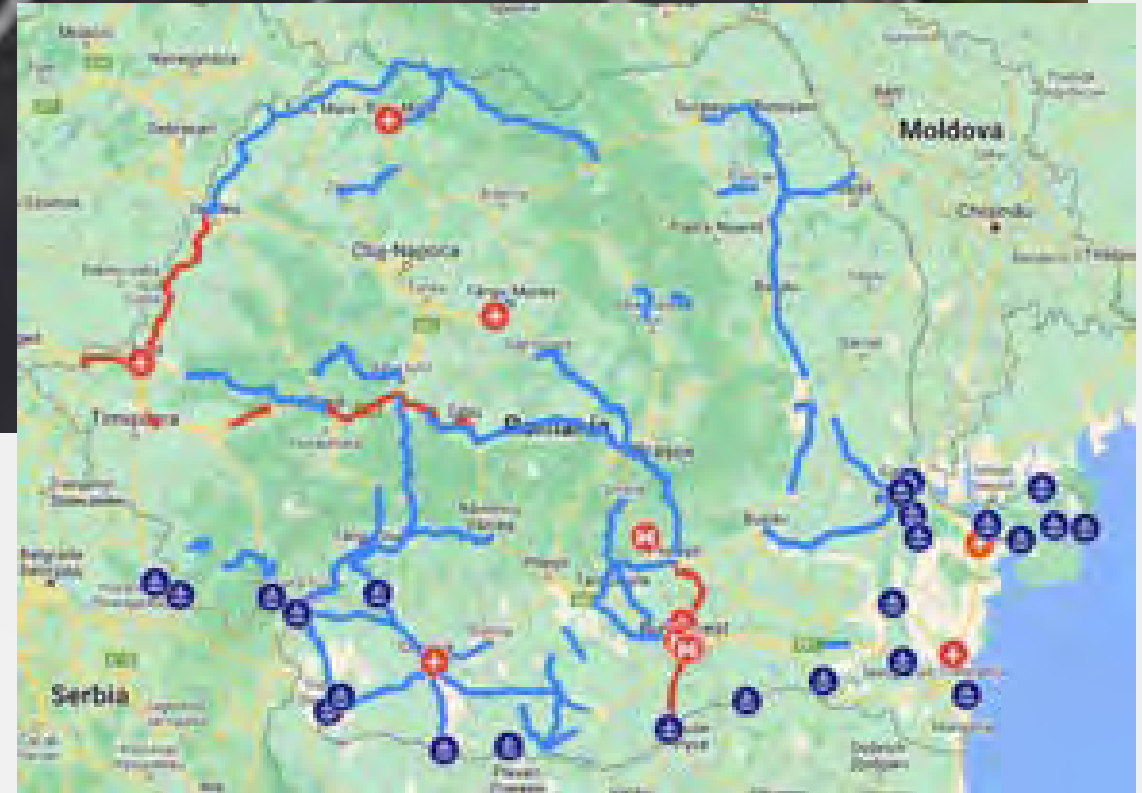




# Consitrans - Proiectare si Consultanță

## Consitrans furnizează servicii de Proiectare și Management de Proiect

- ☑ Autostrăzi și Drumuri
- ☑ Poduri și structuri
- ☑ Aeroporturi
- ☑ Porturi
- ☑ Căi Navigabile
- ☑ Managementul Apei
- ☑ Mediu



Anul fondării

1,991

Angajați

200+

Cifra de afaceri în ultimii 3 ani

€15,445,000+

# PILONI BIM

## STANDARDE

Specificatii  
Recomandari  
Normative

## PROCES

Management  
Flux de lucru  
Strategie

## OAMENI

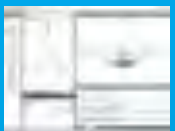
Structura  
Organizatie  
Training

## TEHNOLOGIE

Hardware  
Software  
Infrastructura



Civil 3D



Subassembly  
Composer



Part  
Builder



HEC-RAS



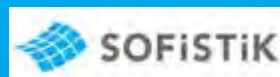
Urbano



Infraworks



Revit



Navisworks

NWD

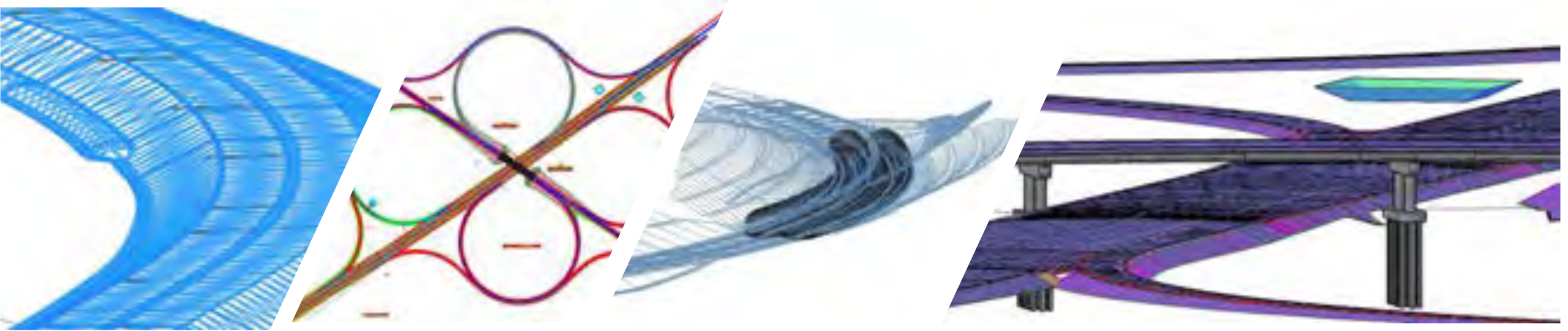


IFC



CDE





## Civil 3D

- Modelul digital al terenului
- Axul in plan
- Axul vertical (Linie rosie, Talveg, Niveleta)
- Profiluri Longitudinale
- Sectiuni tip
- Coridoare (lucrari de specialitate)
- Sectiuni transversale curente
- Elemente de trasare a lucrarilor
- Cantitati de lucrari

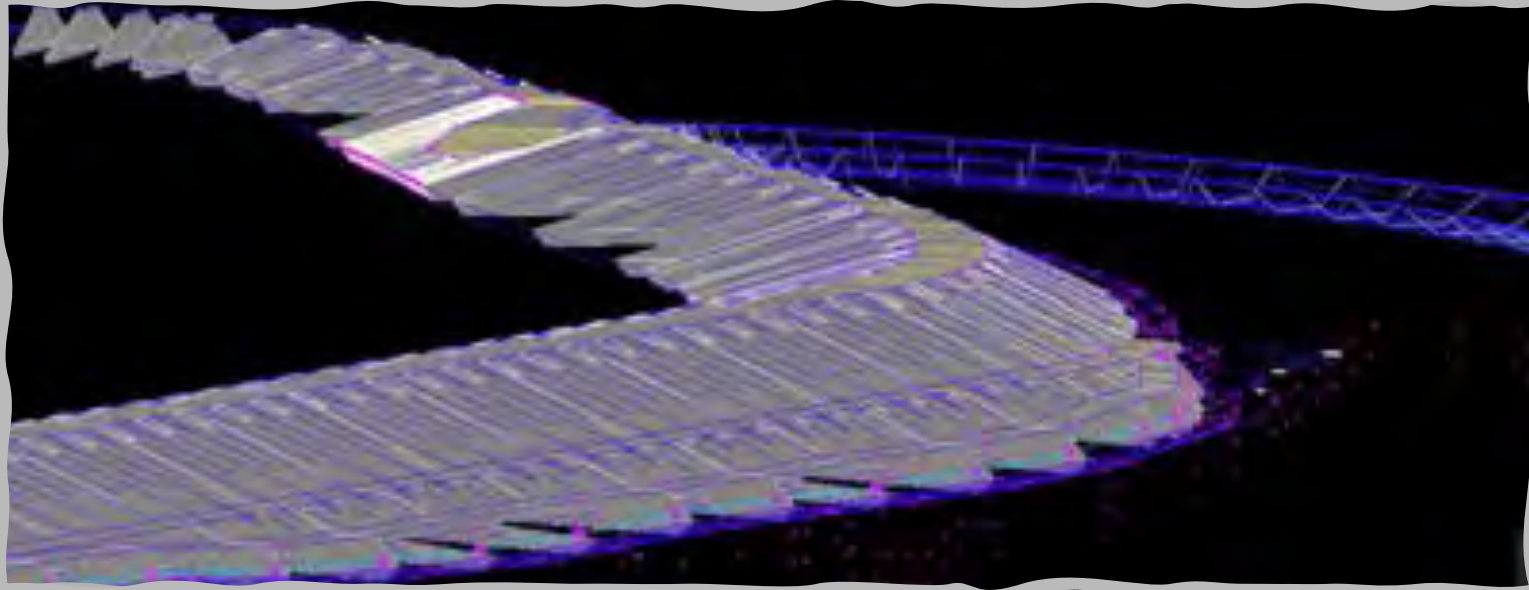
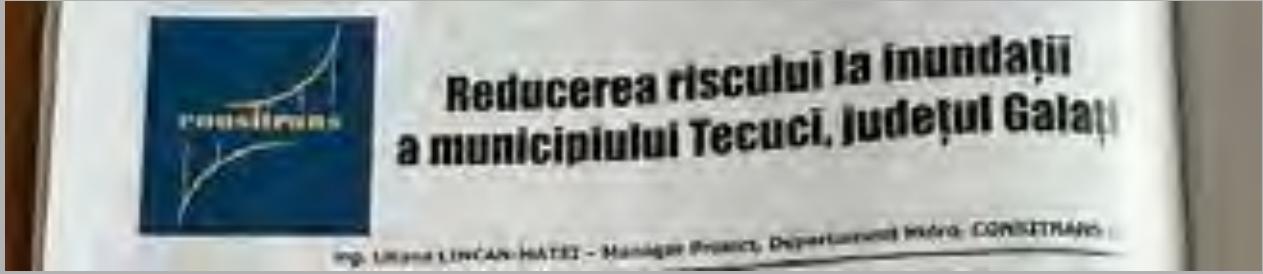
UT  
CB



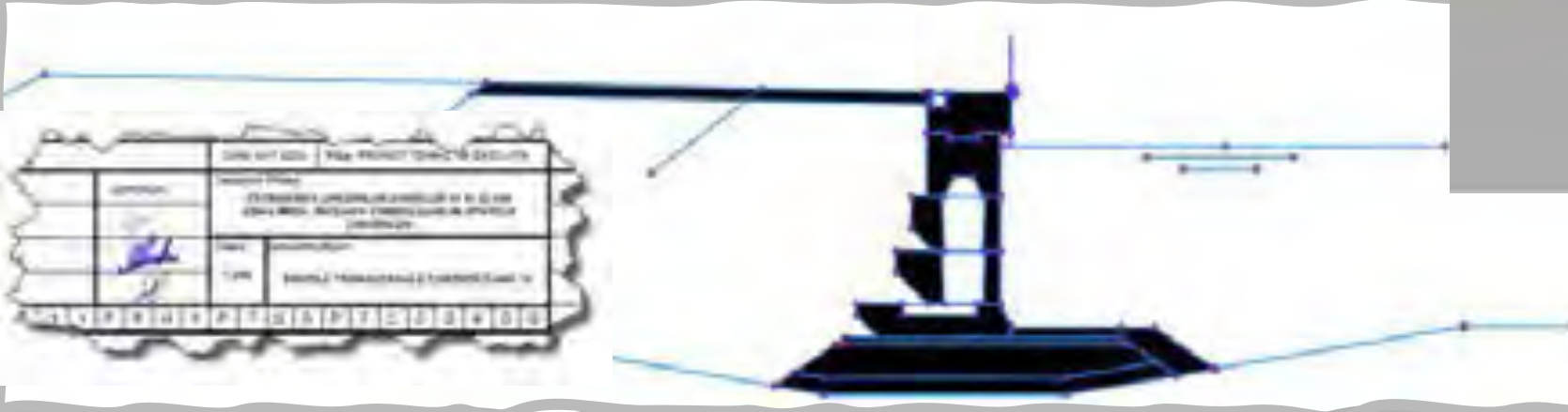
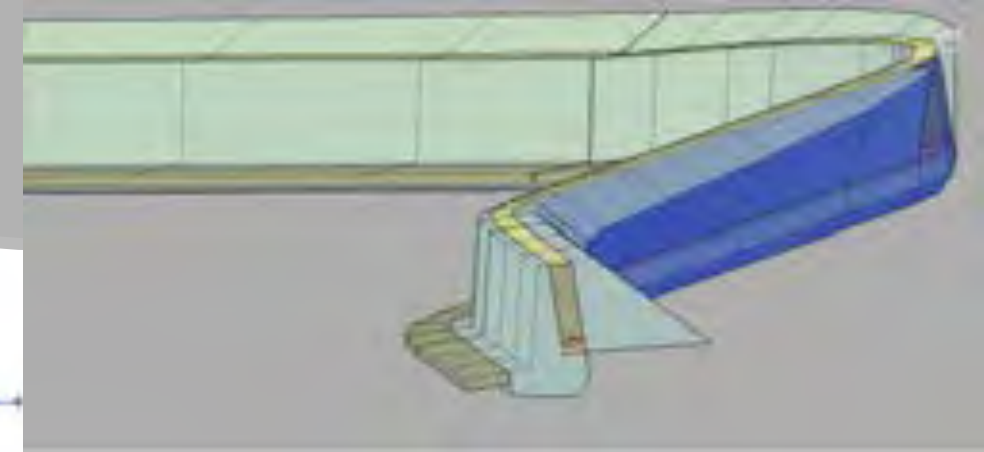
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man  machine  
Software

# Subassembly Composer

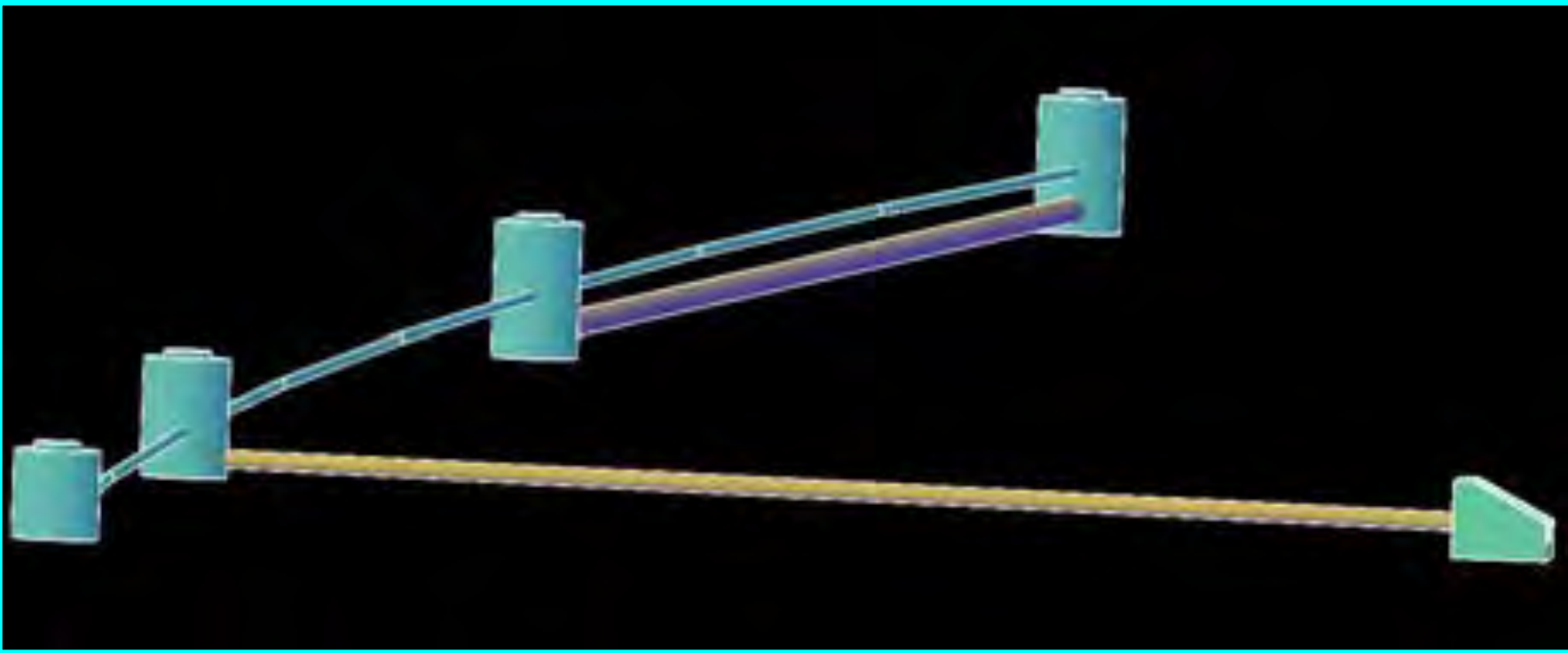
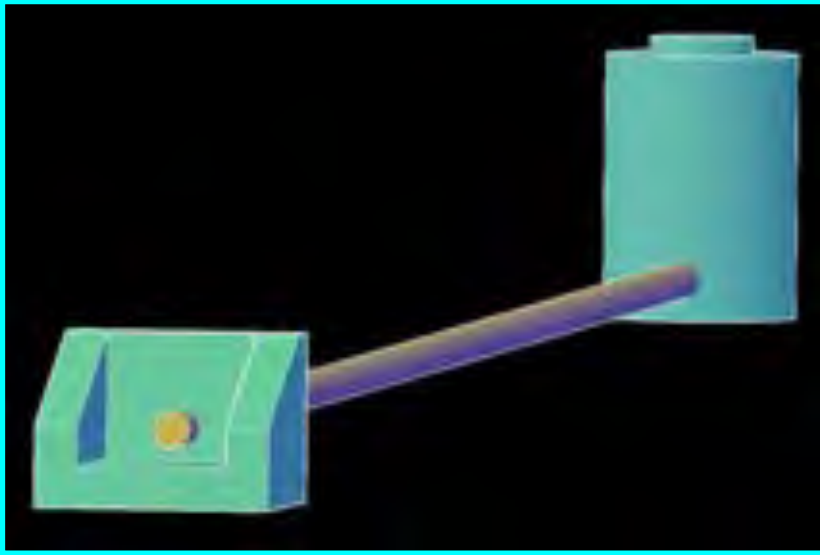
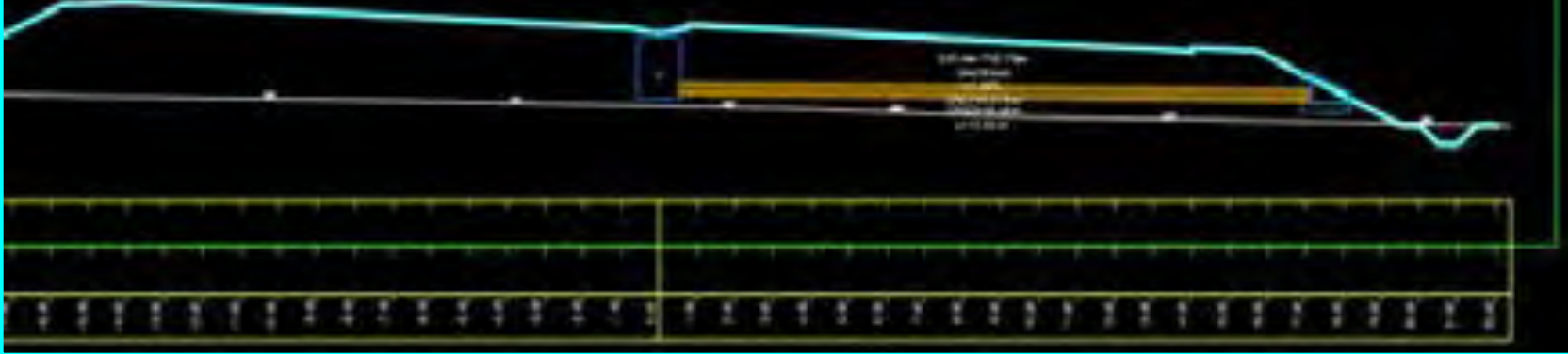


## Lucrari Hidrotehnice Portuare



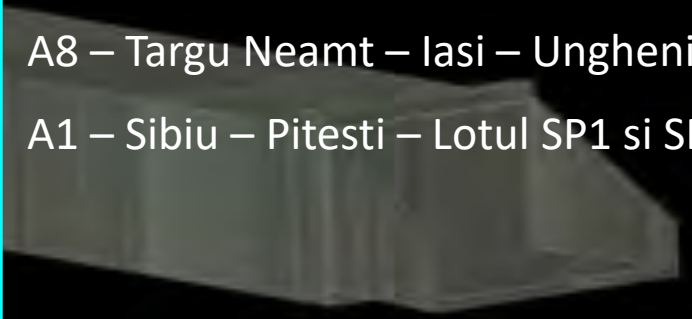


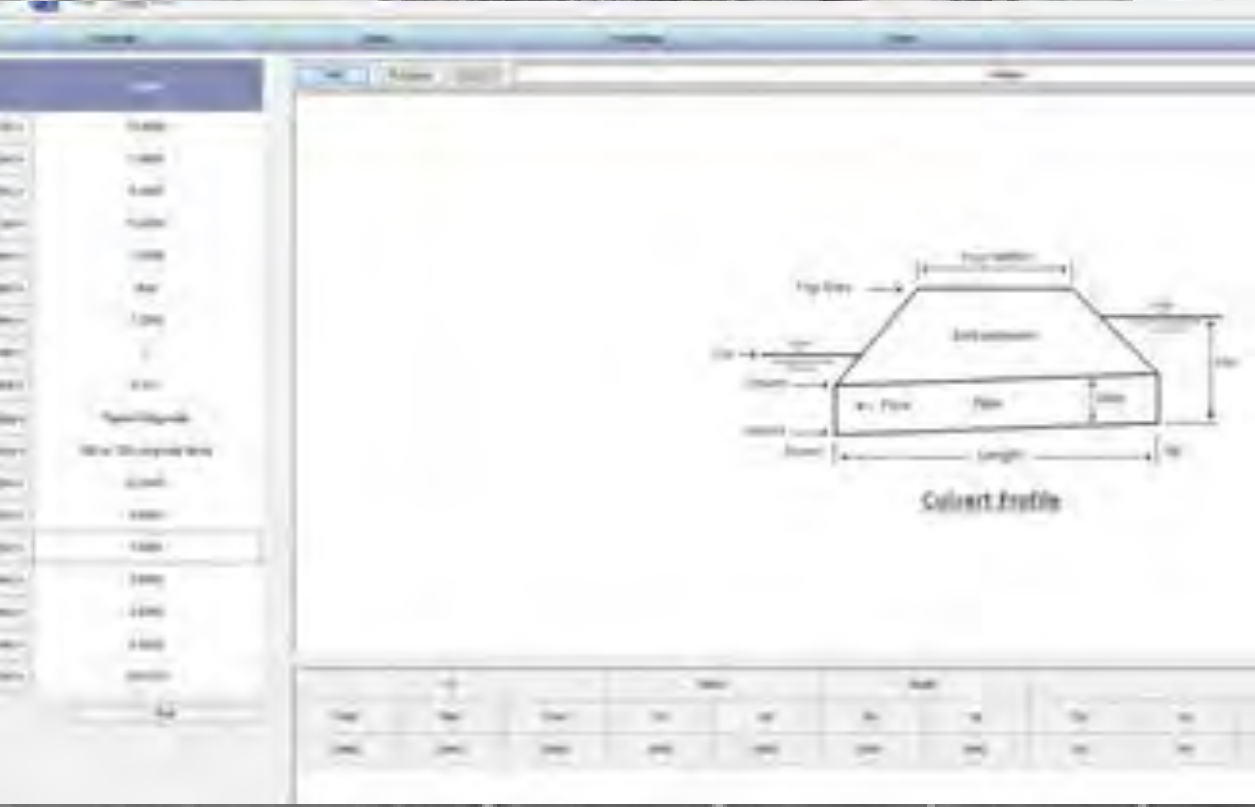
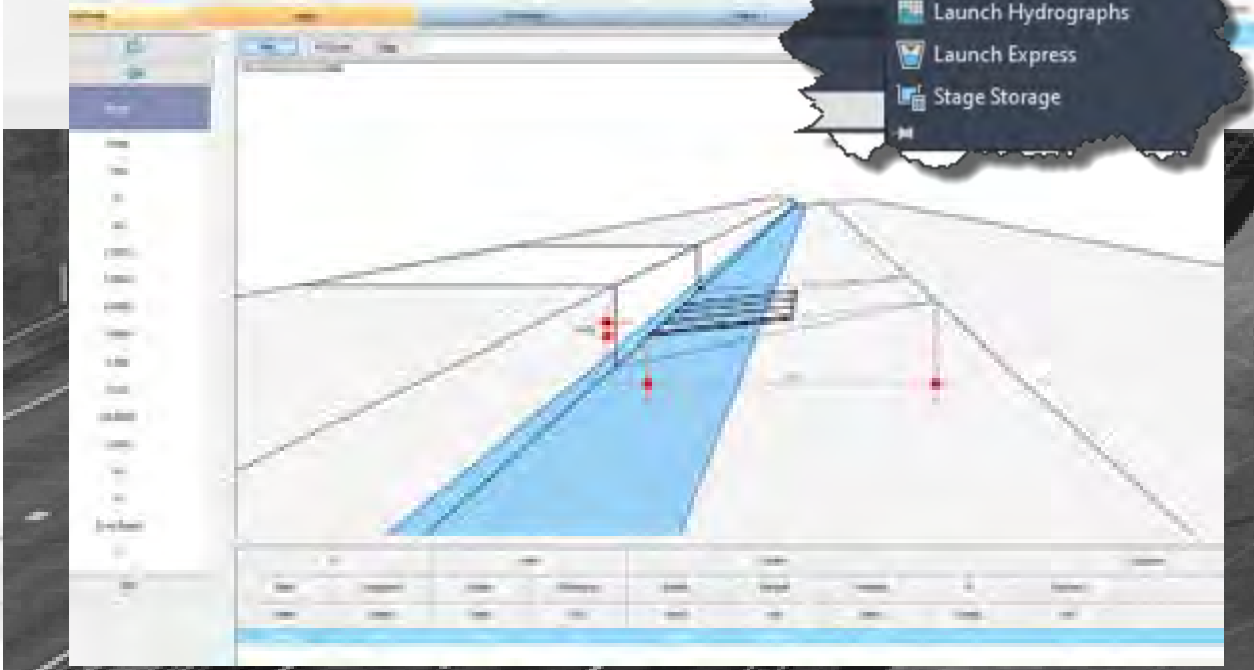
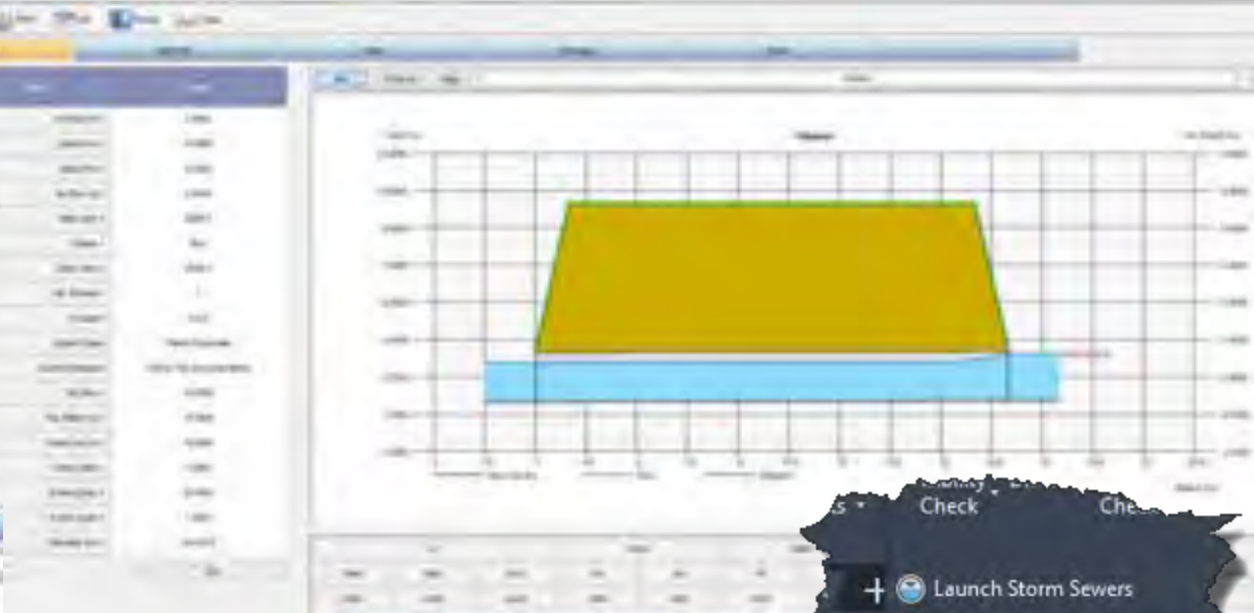
# Part Builder



Lucrari Hidrotehnice Autostrazi

- A7 – Varianta ocolitoare Techirghiol
- A7 – Focsani - Bacau
- A8 – Targu Neamt – Iasi – Ungheni
- A1 – Sibiu – Pitesti – Lotul SP1 si SP5





# FLUX DE LUCRU – Civil 3D si HecRAS

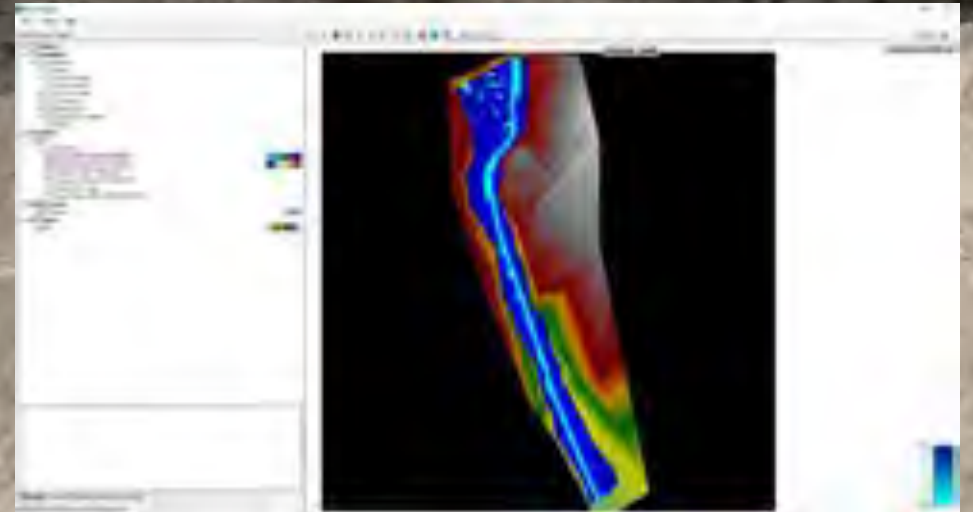


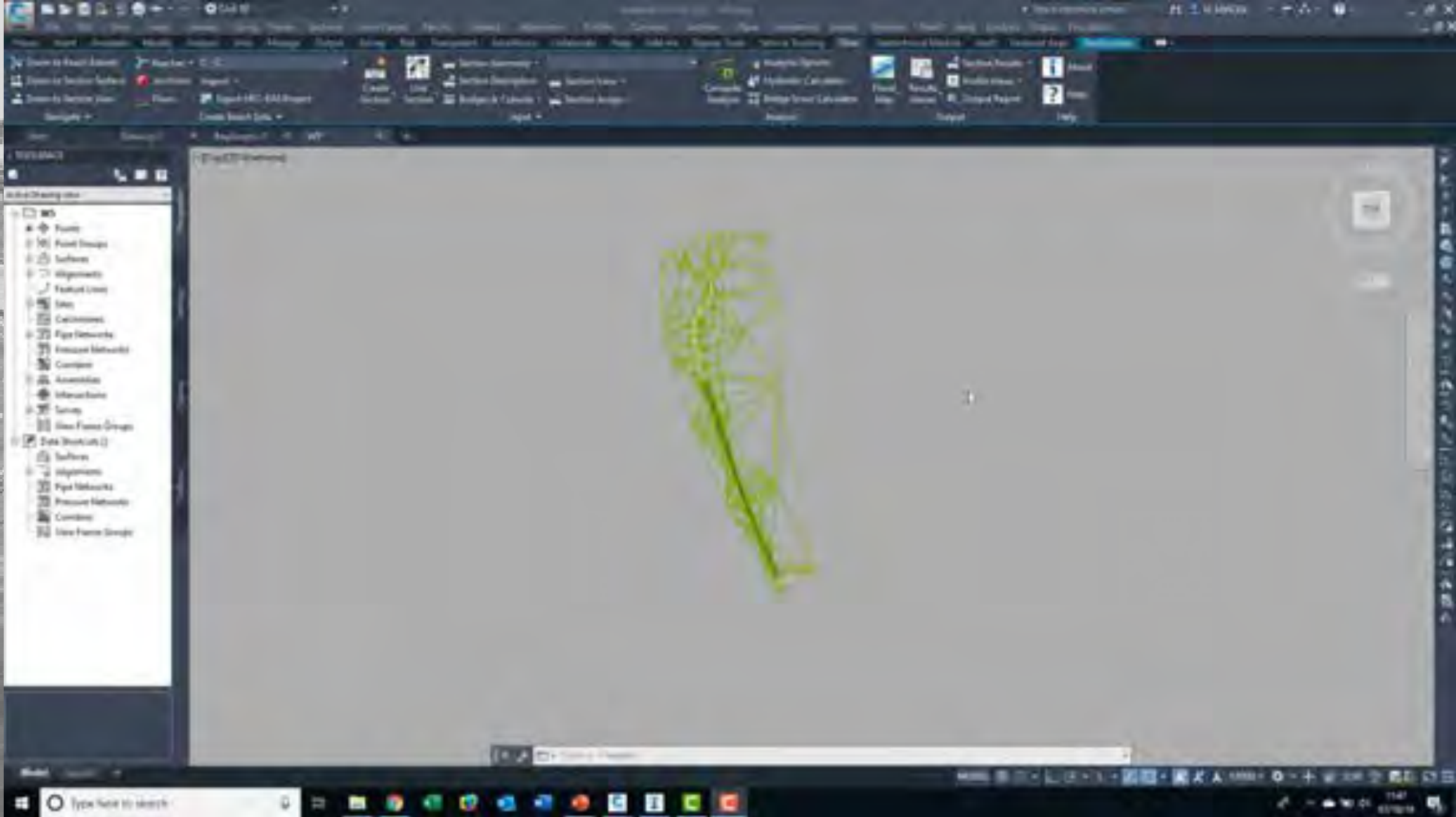
Regularizarea cursurilor de rauri

HEC – Ras



Calcul hidraulic







Urbano (Hydra si Canalis)

Aplicatie pentru proiectarea retelelor de alimentare cu apa si canalizare



Rețele de alimentare cu apă

Rețele de canalizare

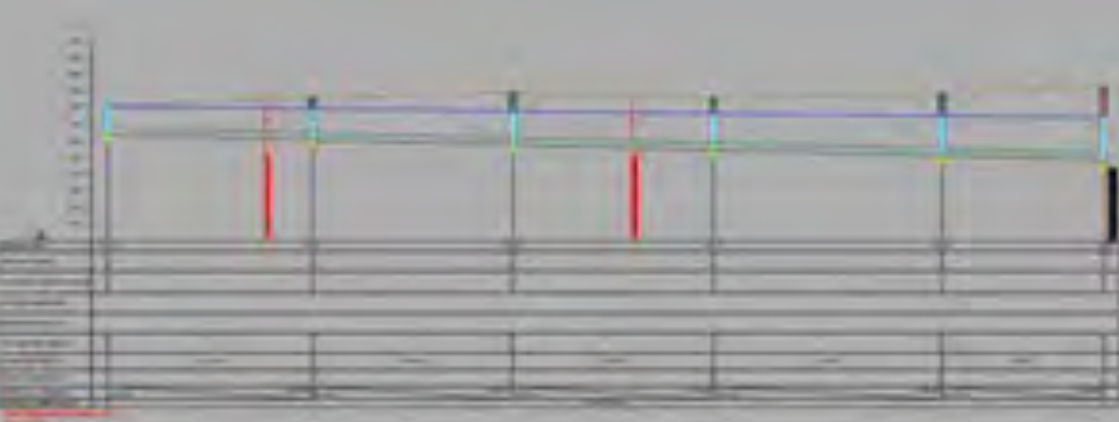
Calculul hidraulic șanțuri

Calcule hidraulice conducte

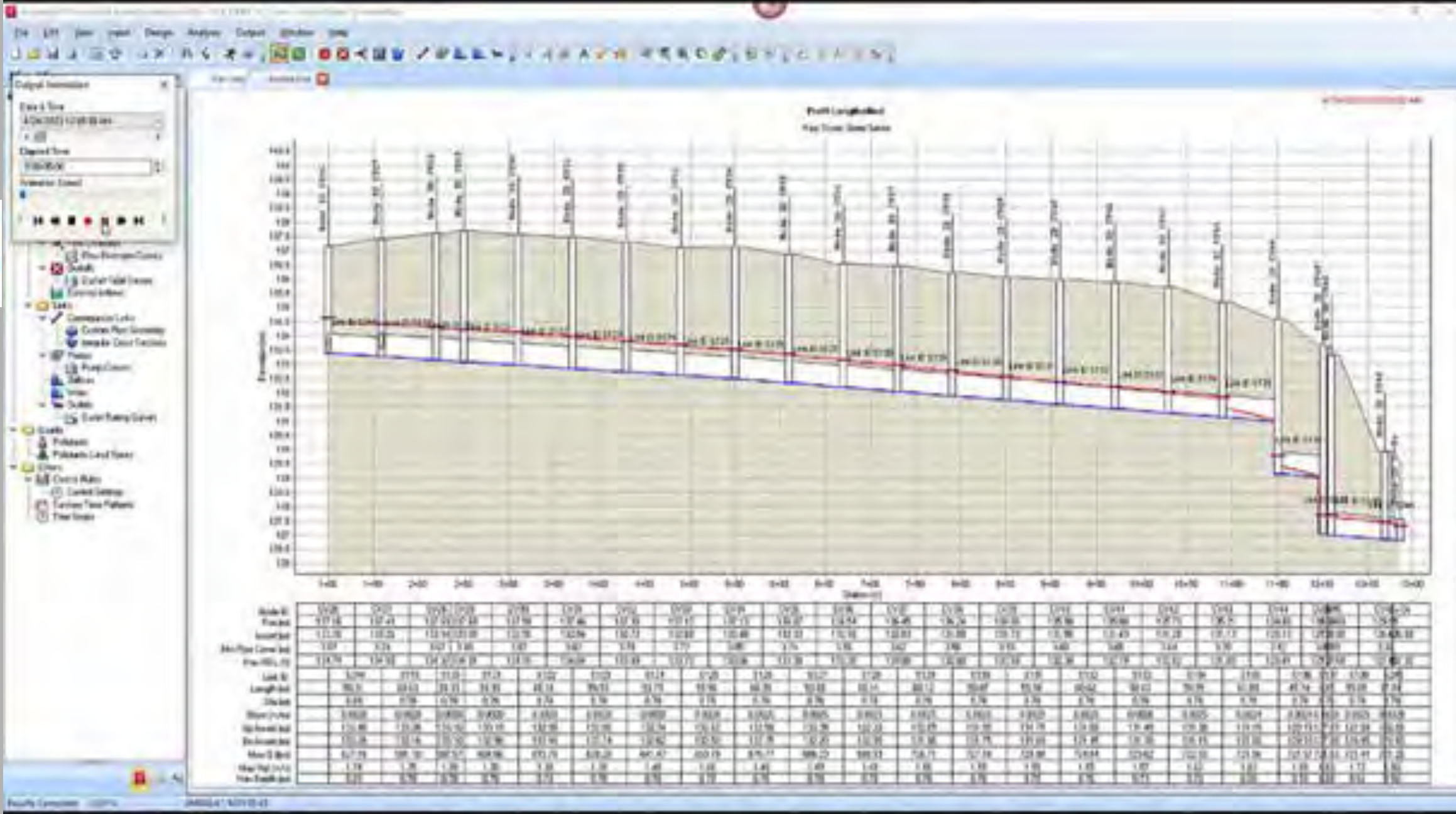
Modelare hidraulică dinamică

Cantități de lucrări

Automatizare încadrare planșe

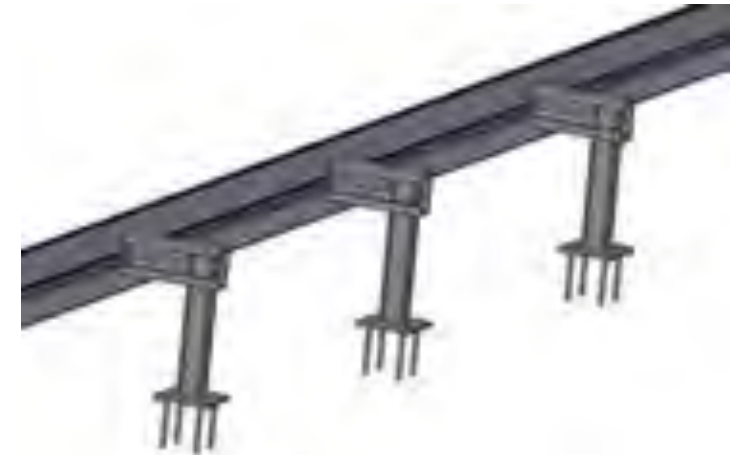
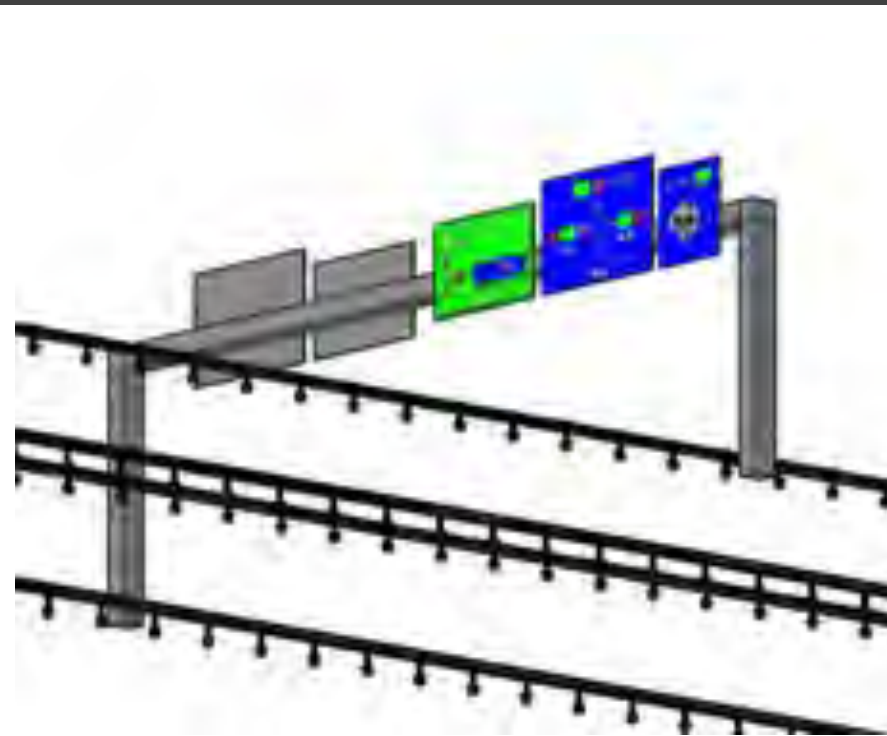
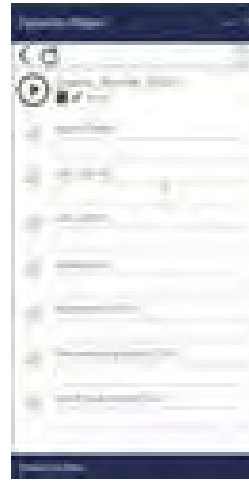


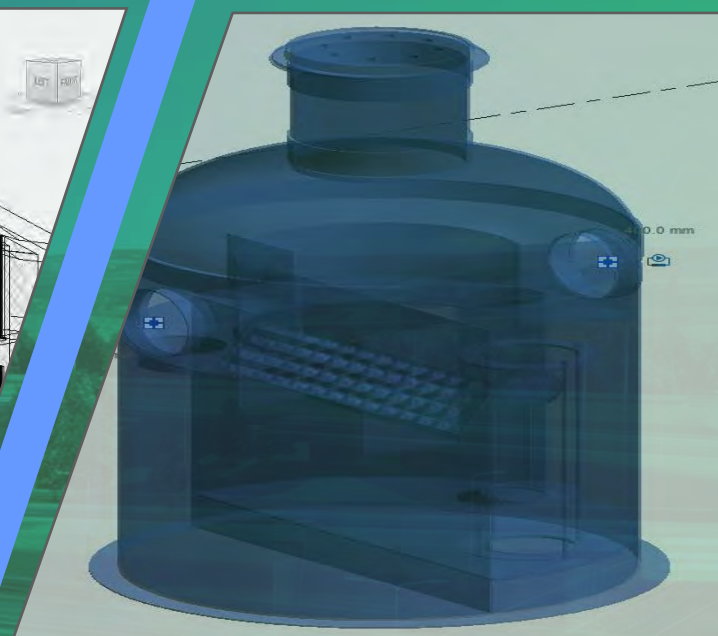




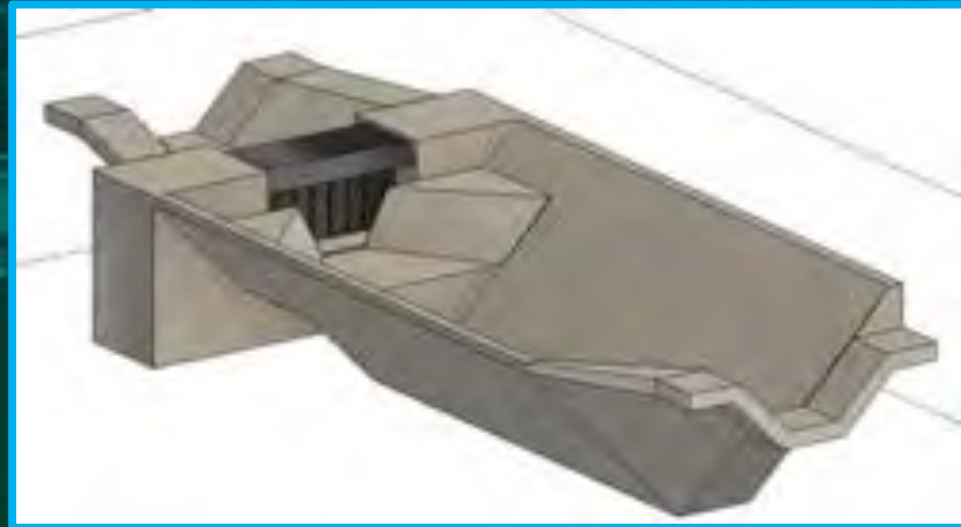
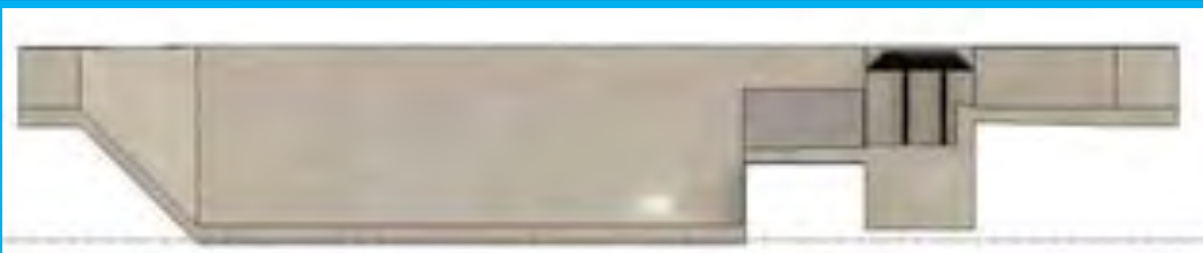


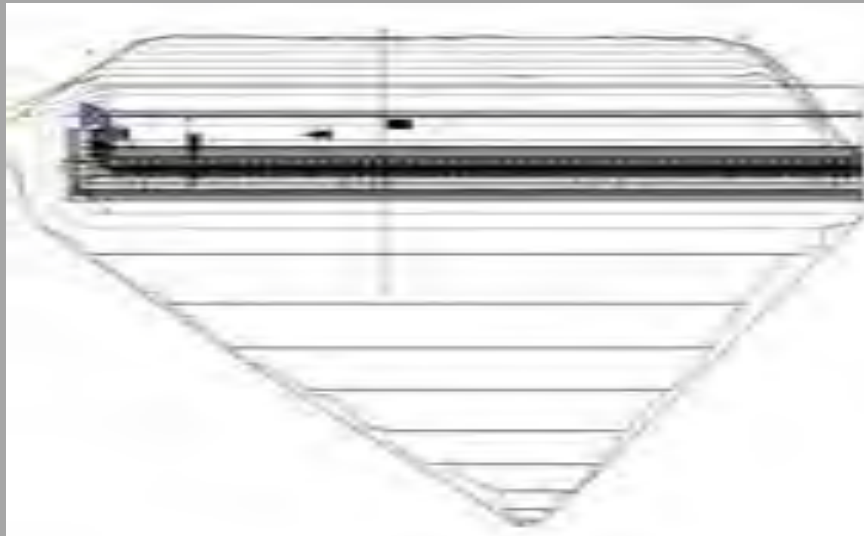
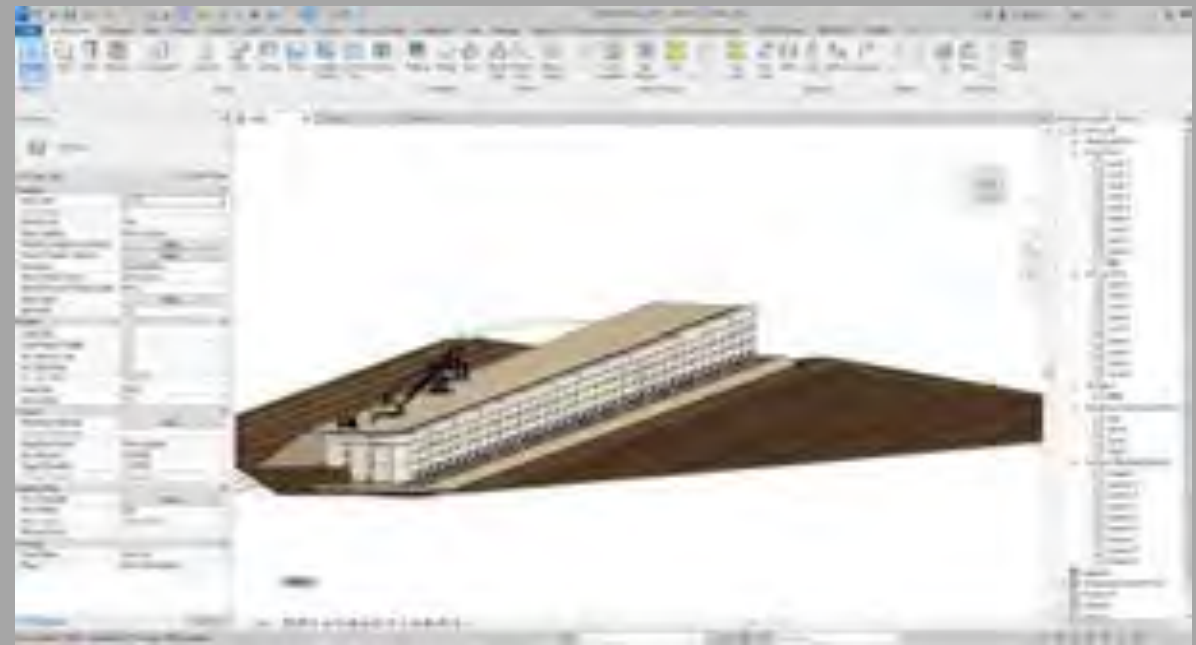
Dynamo C3D

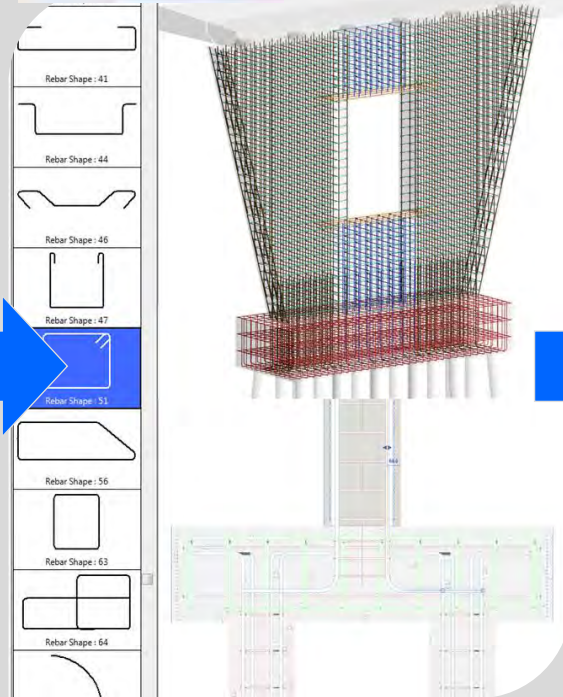
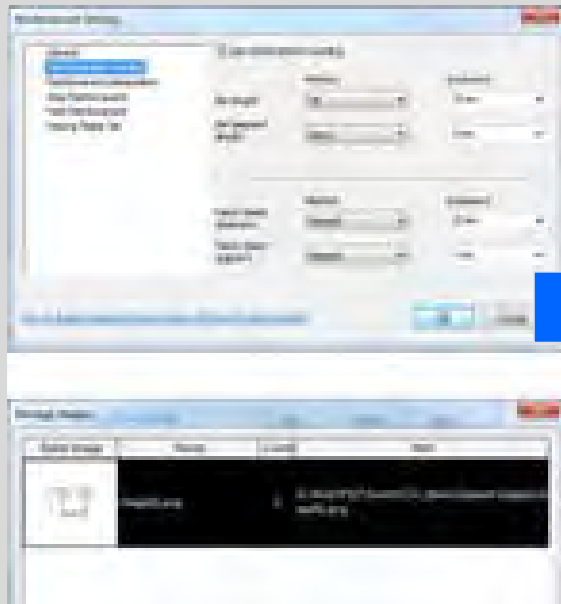




# Separatoare de grăsimi și hidrocarburi







**Rebar Schedule P.3**

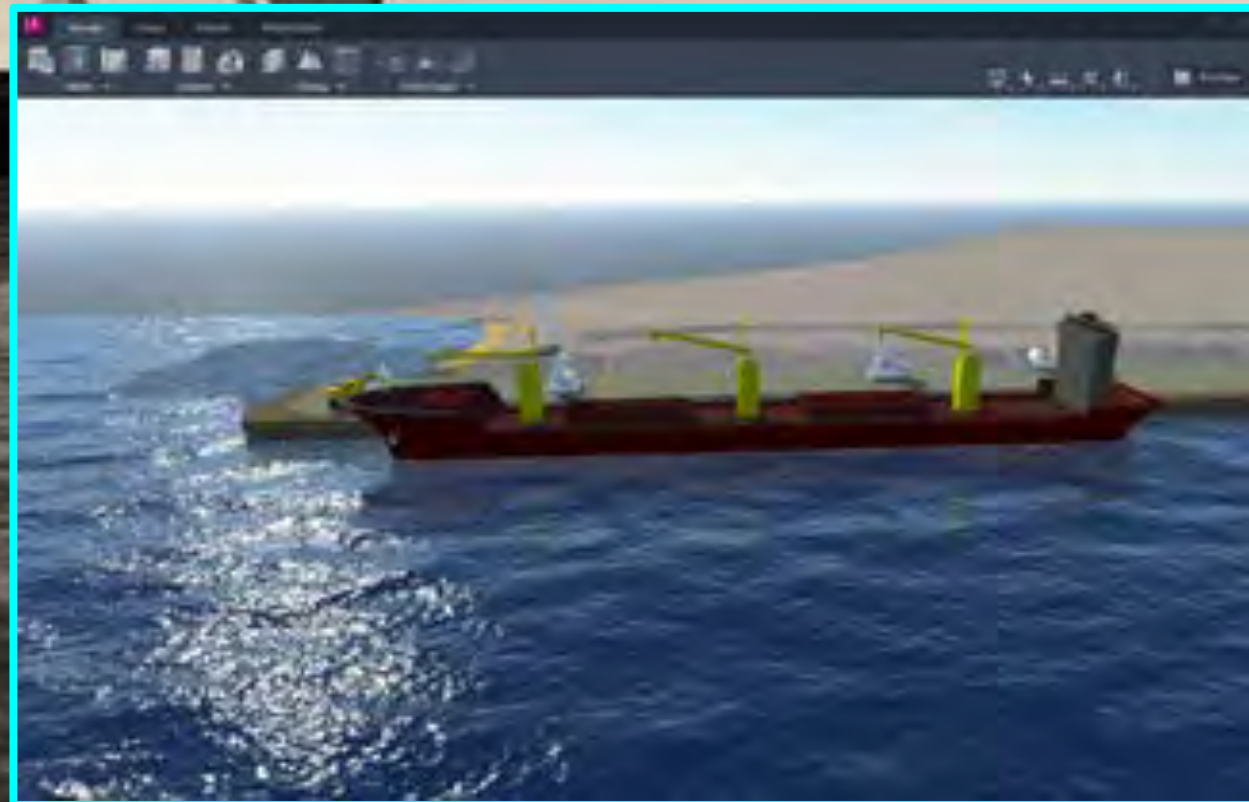
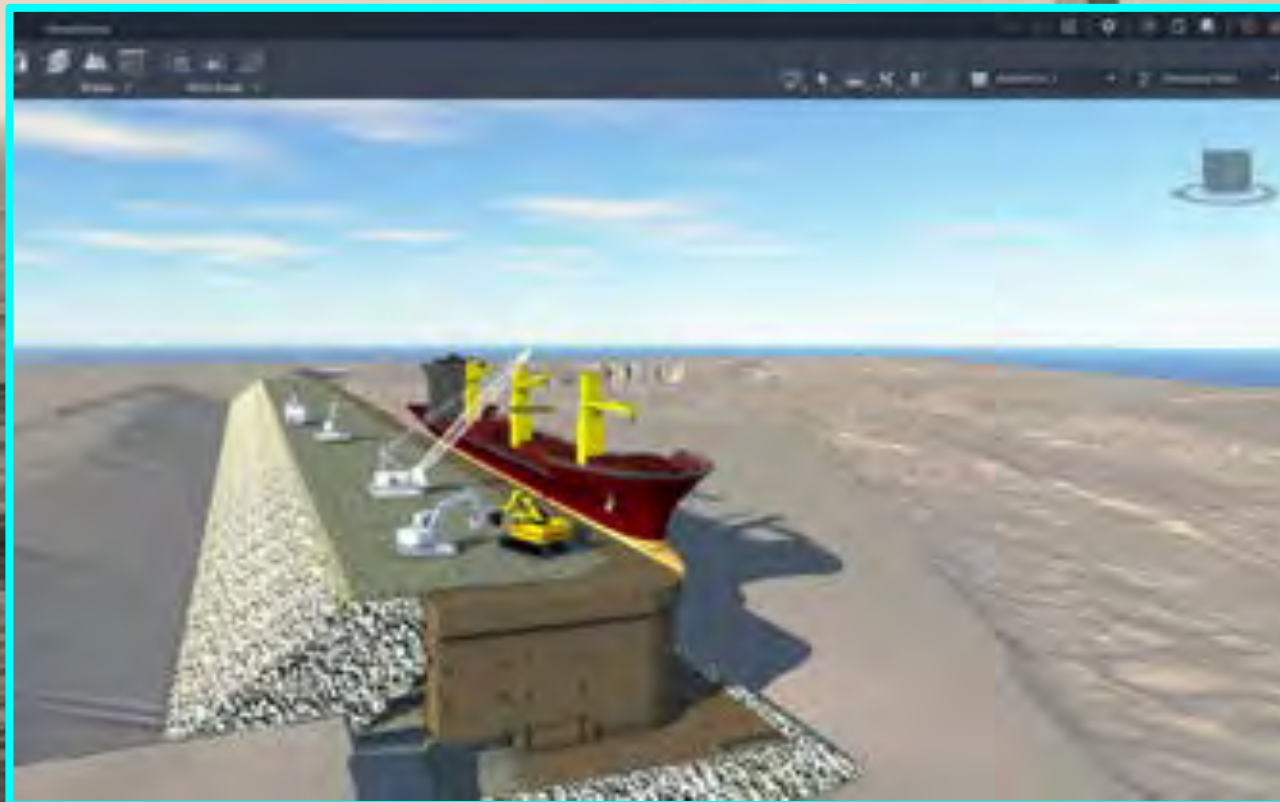
Bar Number	Diameter	A	B	C	E	T	Shape	Shape Area	Mark As	Mark At	Trans. Len	Quantity	Mass/Volume (kg)	Weight
P.3														
41	16 mm	3915 mm	1495 mm				51		None	None	16681 mm	11	11768.26 kg	32.34 kg
42	16 mm	4635 mm	1495 mm				51		None	None	16681 mm	11	13517.66 kg	34.46 kg
43	16 mm	4435 mm	2095 mm	0 mm	0 mm	0 mm	54		None	None	170263 mm	13	58339.20 kg	161.34 kg
44	16 mm	1495 mm	0 mm	0 mm	0 mm	0 mm	55		None	None	16681 mm	11	16638.48 kg	46.17 kg
45	16 mm	2495 mm	0 mm	0 mm	0 mm	0 mm	55		None	None	16681 mm	11	12798.31 kg	35.13 kg
46	20 mm	591 mm	1845 mm	0 mm	0 mm	0 mm	52		None	None	16681 mm	11	1467.23 kg	4.14 kg
47	20 mm	591 mm	3645 mm	0 mm	0 mm	0 mm	52		None	None	16681 mm	11	10359.44 kg	28.97 kg
48	20 mm	591 mm	3645 mm	0 mm	0 mm	0 mm	52		None	None	16681 mm	11	10359.44 kg	28.97 kg
49	16 mm	3915 mm	1495 mm	0 mm	0 mm	0 mm	51		None	None	16681 mm	11	11768.26 kg	32.34 kg

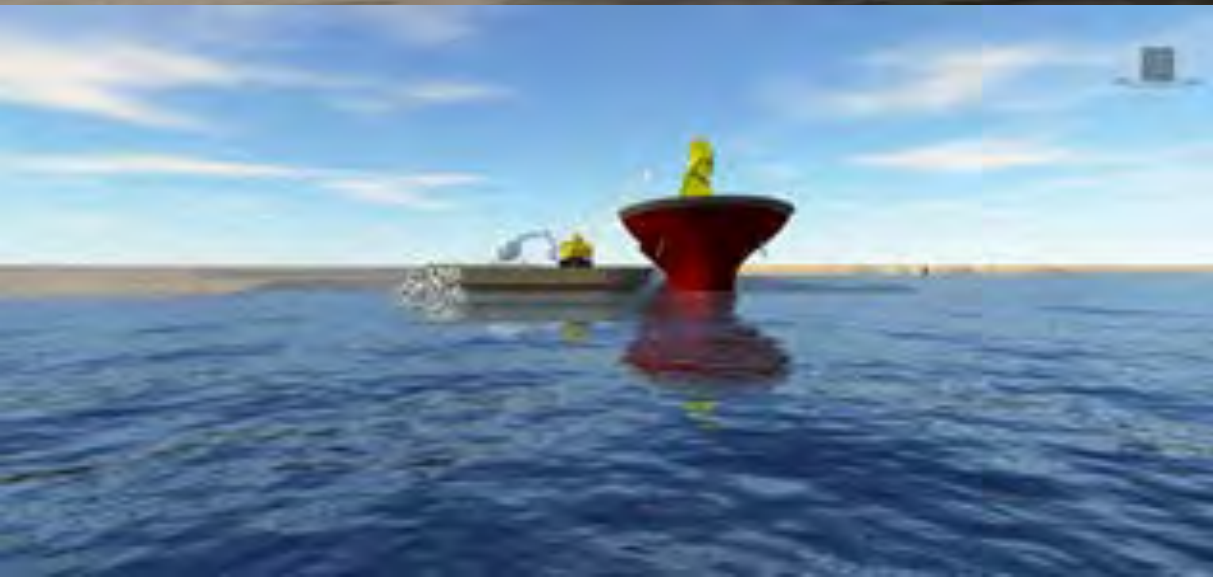
Setarea armaturilor

Modelarea armaturilor

Cotarea armaturilor

Desene de executie





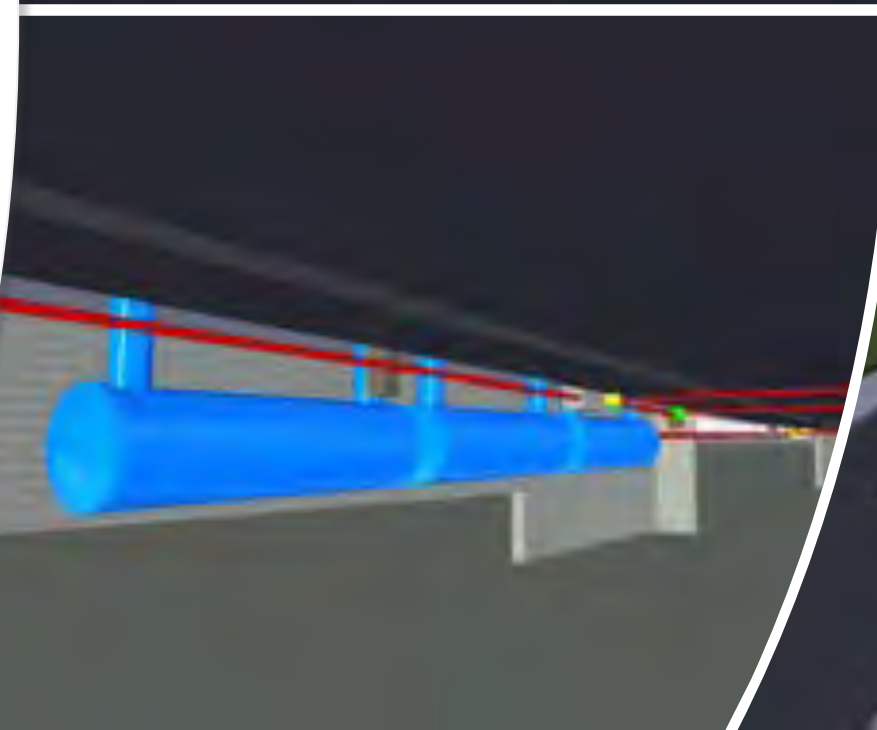


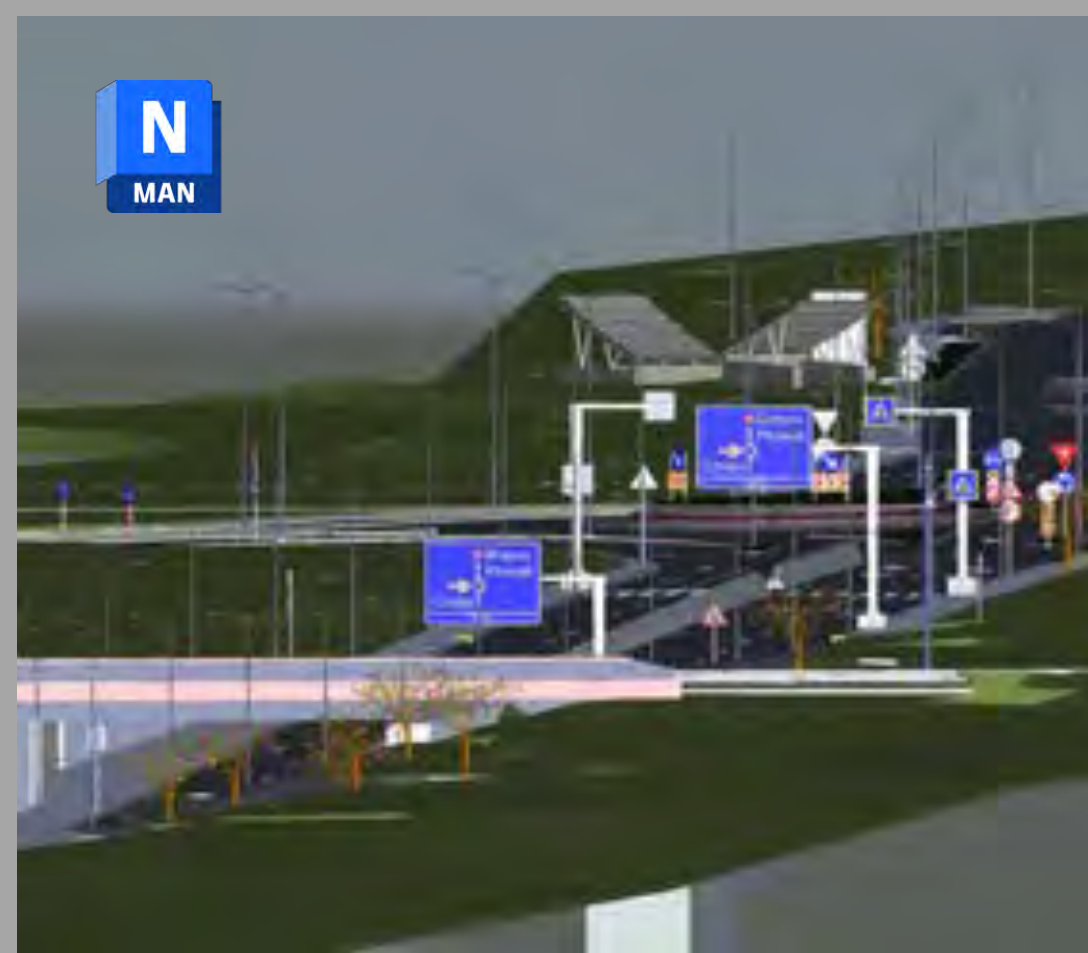


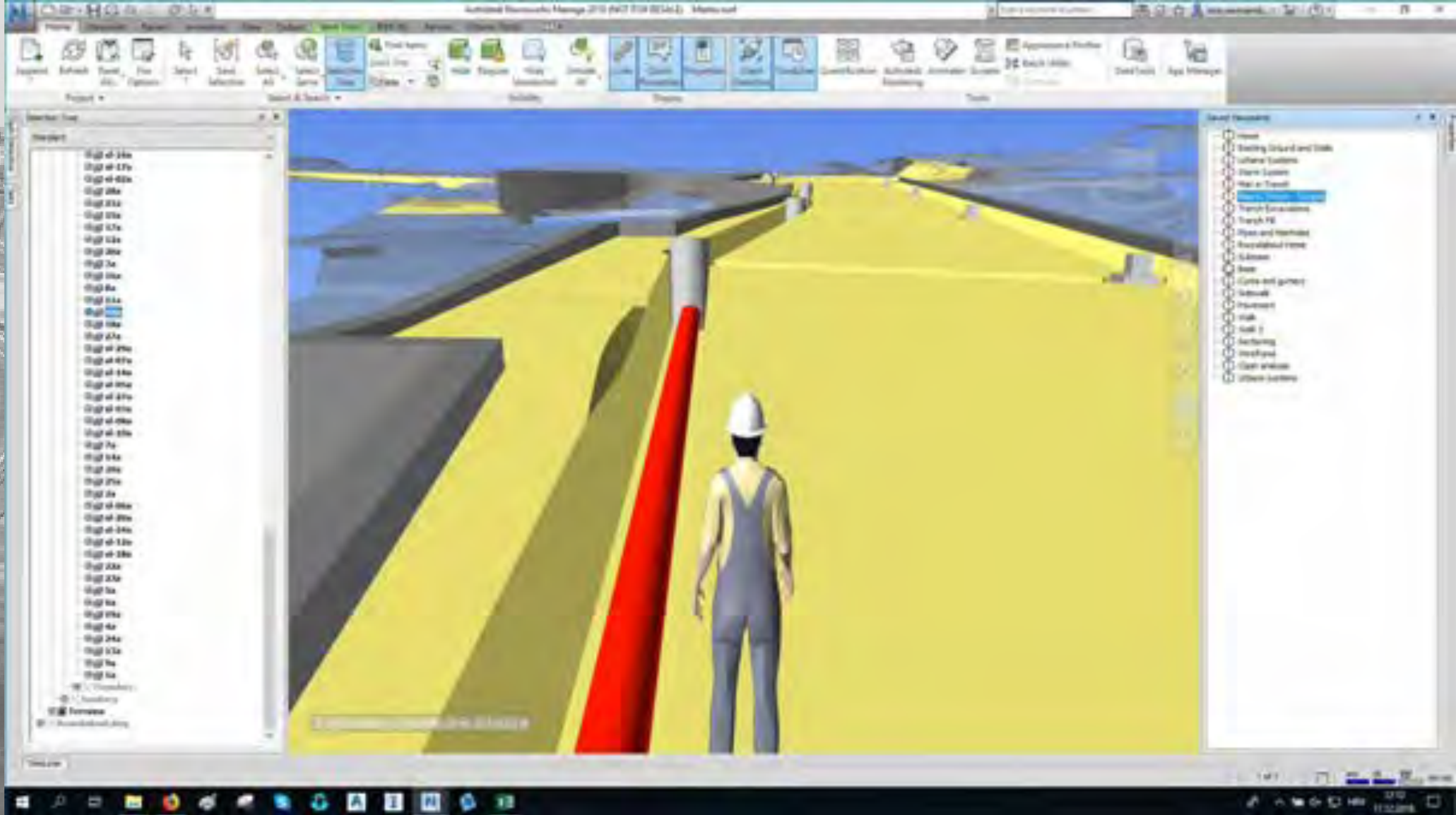
# Navisworks

man  machine  
Software

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**de Hidrotehnică**



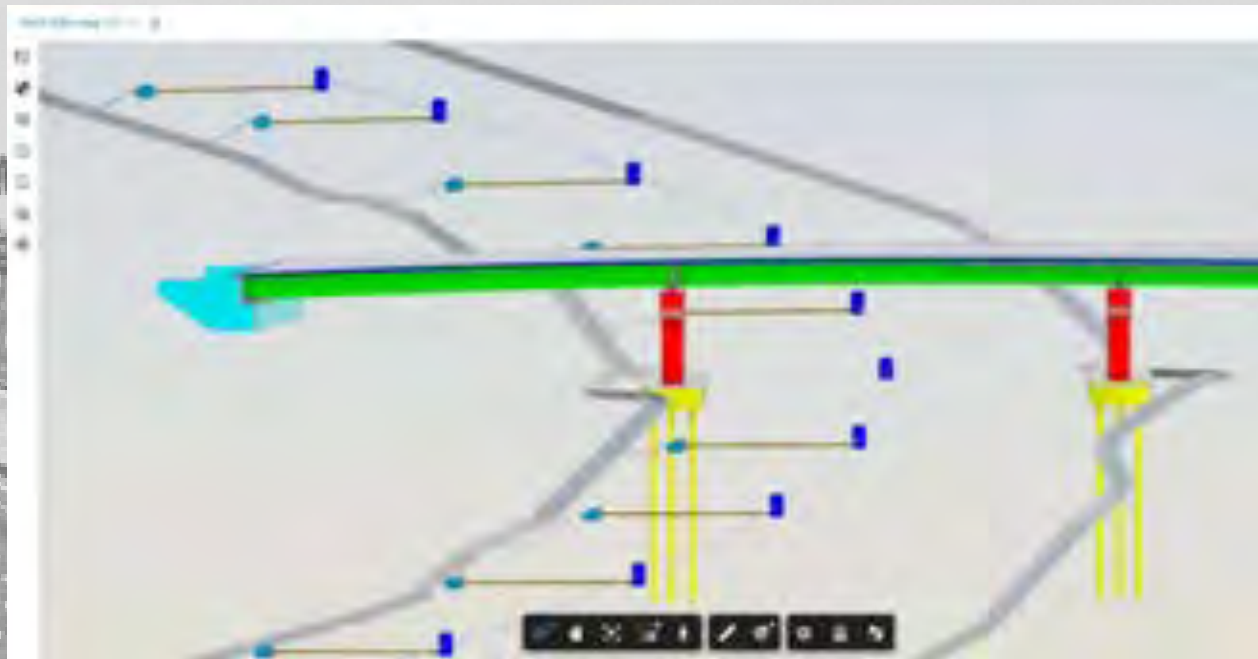






**CDE**







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# DEMO

Mulțumesc!



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man  machine  
Software