

Engineering Software Research Center

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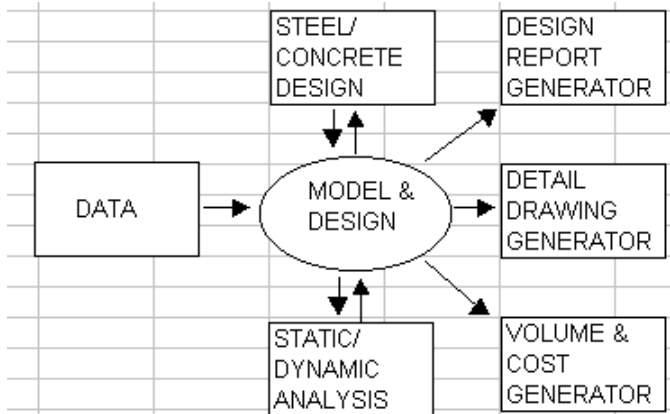
Tel: (62)-21-6003595, Mobile: (62)-878-25670070

SANSPRO V.5.10 (since 1989)

Fully Integrated Structures and Buildings Analysis,
Design, Volume & Cost, and Drawing Generator

- Model Oriented Approach
- Preliminary Design
- Easy to create building and other structures model (Layout based model)
- Load Generator: DL, LL, Wind Load, Earthquake Load, Earth pressure
- Latest 2012 Indonesian Earthquake Map
- Finite Element Model: Truss, Frame, Shell (DKQ)
- Large Scale Static and Dynamic Analysis
- Direct Integration and Impact / Blasting Load
- Construction Stage and Nonlinear Static Analysis
- Multiple Towers, Multiple Diaphragms
- Floor Slab Design (CIP, HCS, Metal Deck)
- Prestressed Beam Design
- Steel and Concrete Design, Shearwall Design
- Concrete Capacity Design
- Automatic Pile and Raft Foundation, Tie Beam and Pilecap Design and Cost Calculation
- Strip Foundation Design for Bearing Wall
- Volume and Cost Estimation
- Automatic Detail Drawing Generator

Model Oriented Approach

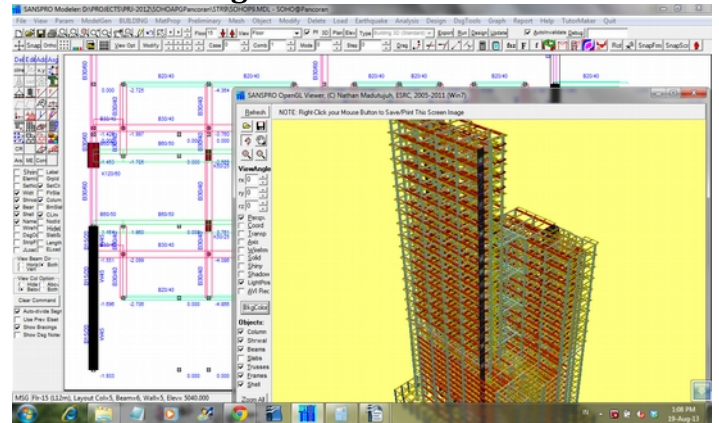


Building Model is the center of SANSPRO design procedures.

Some building design examples:

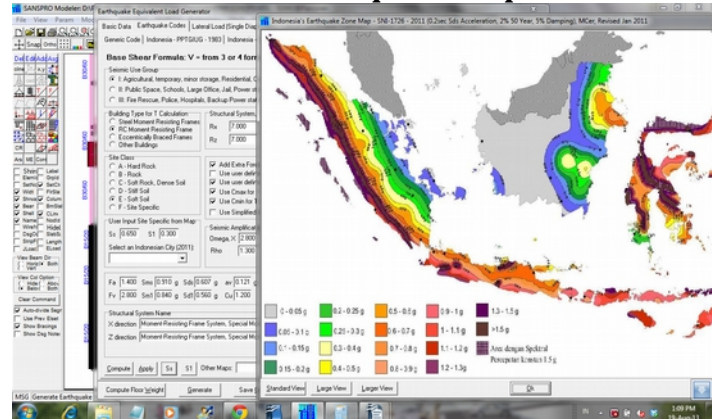


Visual Modeling



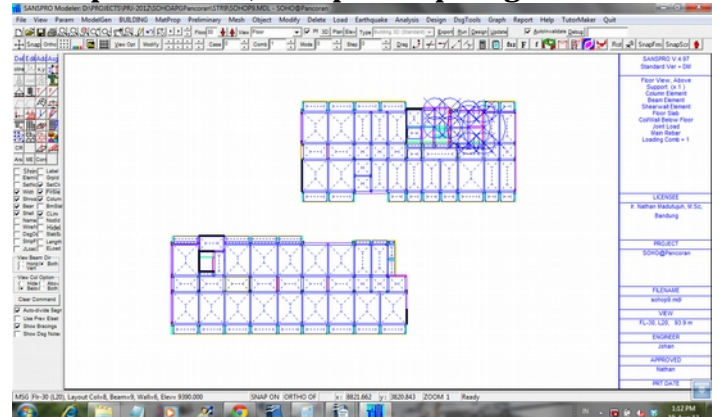
What you see is what you get

Latest Indonesian Earthquake Map 2012



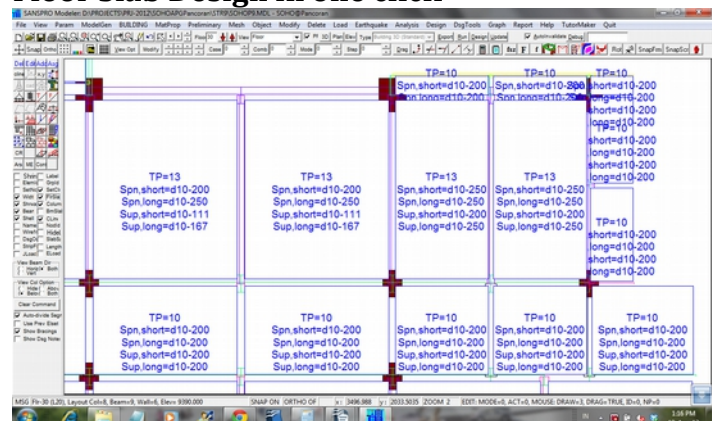
Automatic calculation of: $F_a, F_v, S_m, S_m1, S_d, S_d1, a_v, c_u, T_o, T_s$

Multiple Towers, Multiple Diaphragms



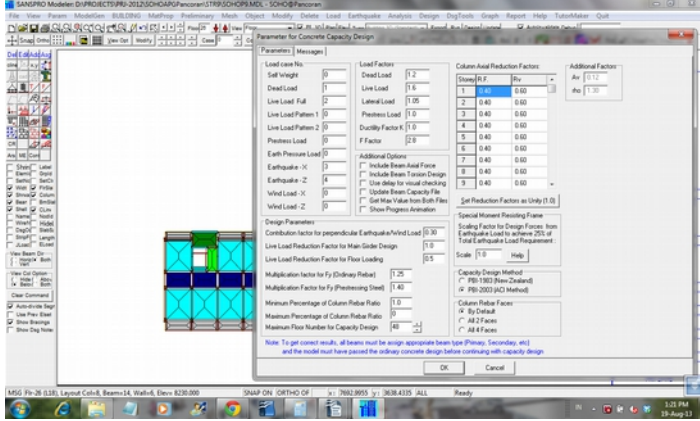
Multiple towers, with multiple diaphragms per tower

Floor Slab Design in one click



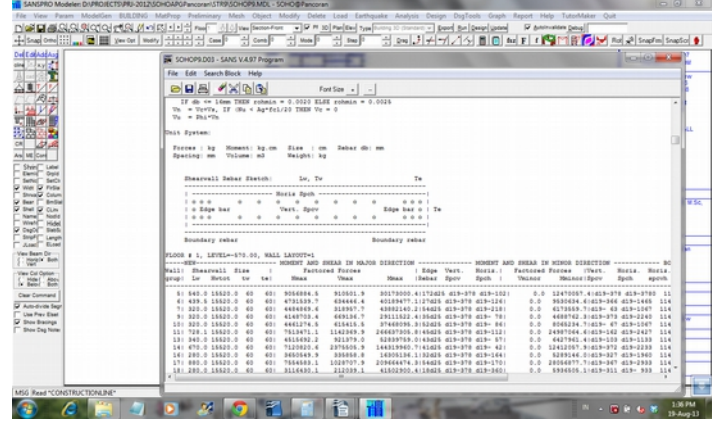
Concrete Slab rebar, bent bar, short and long span

Concrete Capacity Design



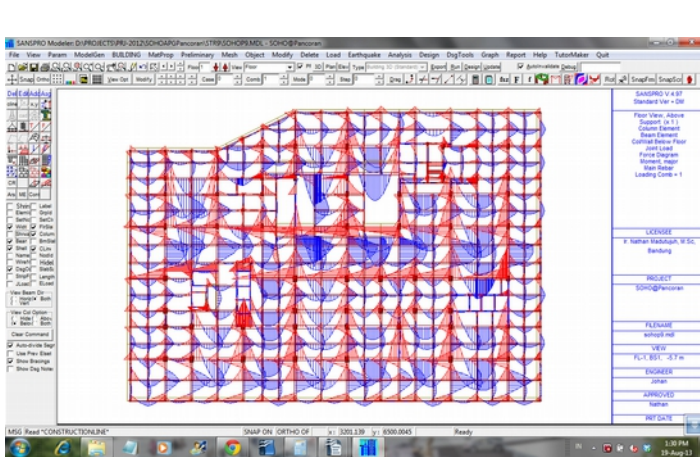
Changeable Capacity design parameters

Shearwall Design



Edge, horizontal, vertical rebar, and Boundary rebar

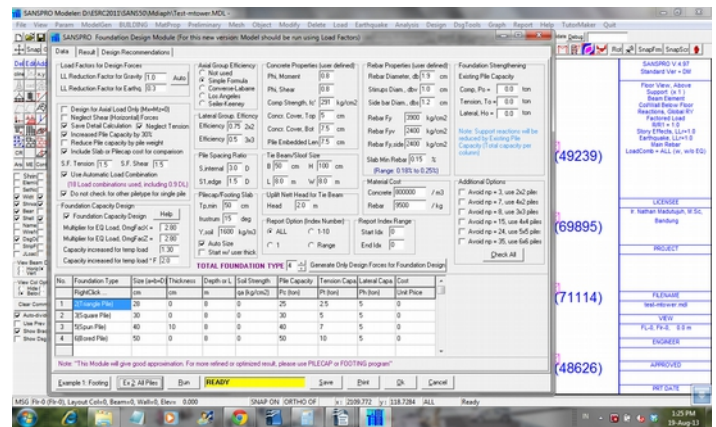
Visual Design Report



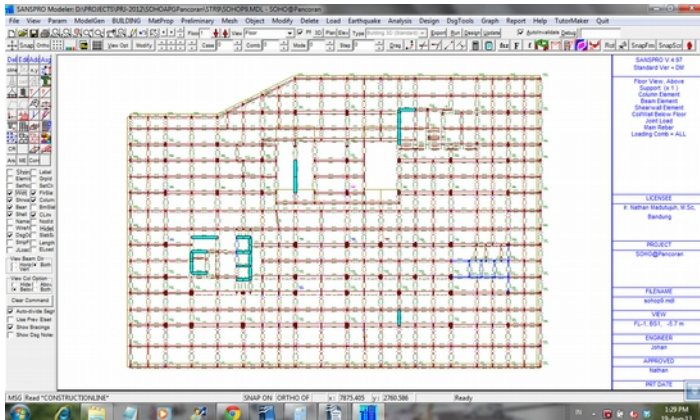
Moment Diagram

Automatic Pile Foundation Design

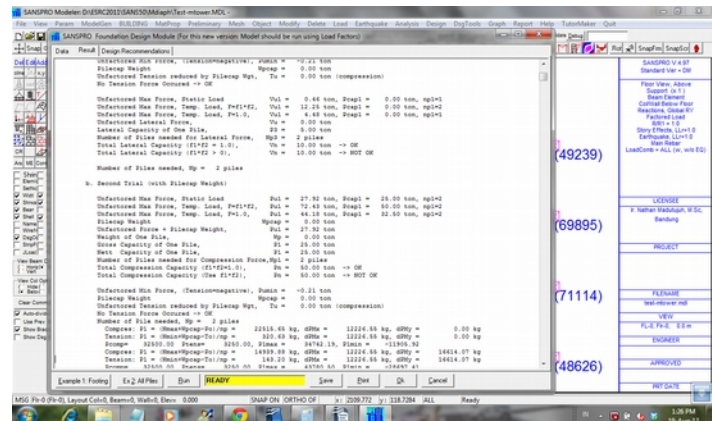
Input : Pile capacity (axial, lateral, tension), cost
Output : Pile design report calculation, Foundation drawing, volume and cost



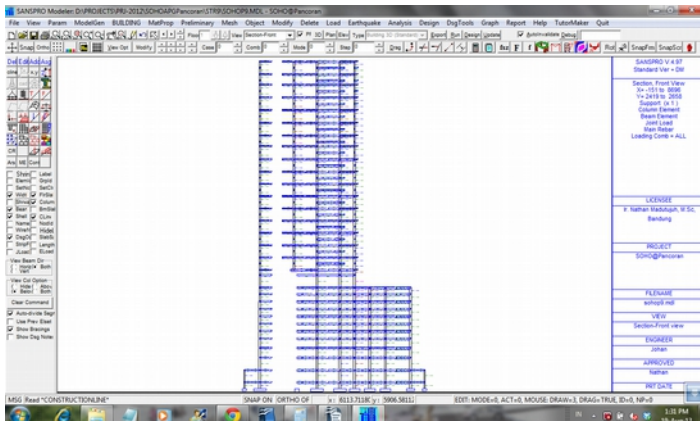
Foundation Design Parameters (Capacity Design)



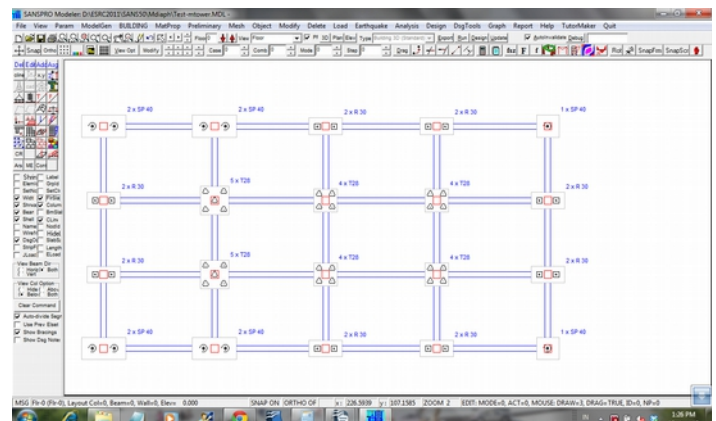
Color coded stress ratio and rebar percentage



Foundation Design Report (Capacity Design)



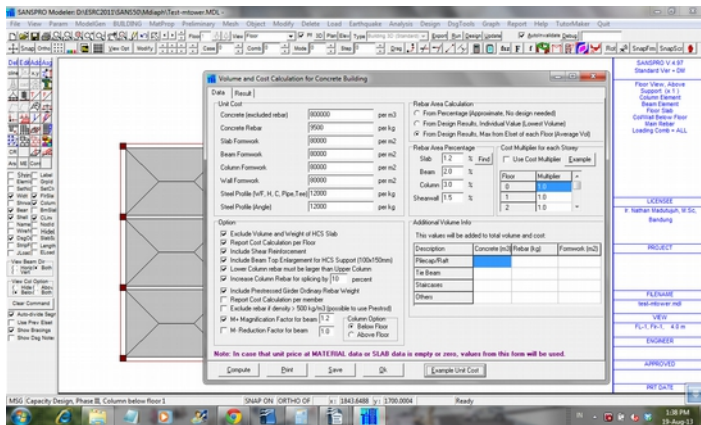
Design Results View by Section



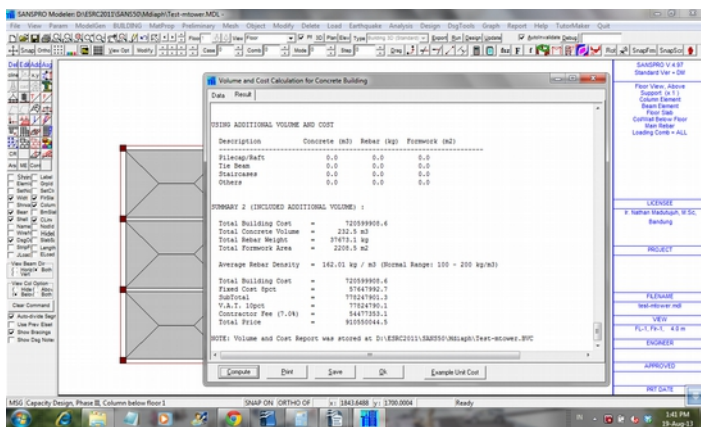
Pile Foundation Drawing in seconds

Volume and Cost

Input : Unit Cost (Concrete, Rebar, Formwork)
Output : Cost of Concrete, Rebar, Formwork per floor, Rebar requirement per size, Steel/Concrete Ratio, Price per m2



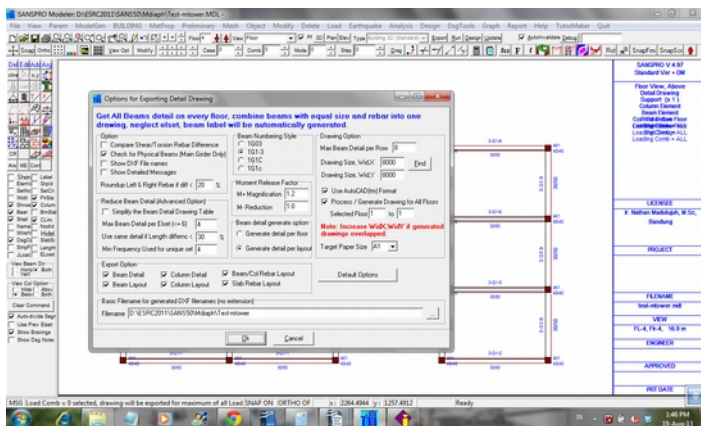
Parameter Unit cost: Concrete, Rebar, Formwork



Total price, equivalent thickness, rebar ratio

Drawing Generator

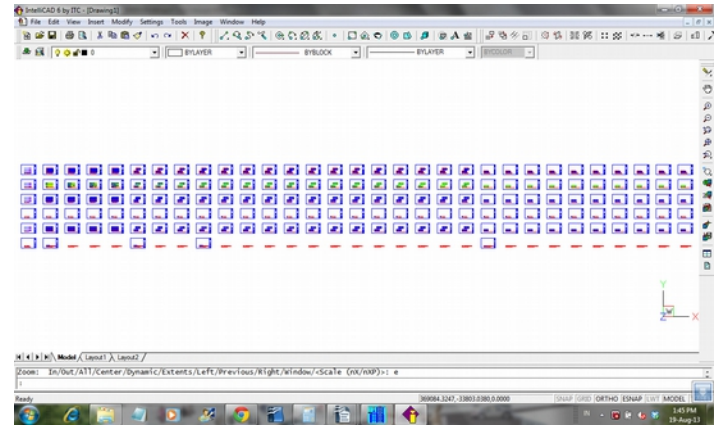
Generate whole floor layout, column and beam layout, column and beam detail into one big DXF file



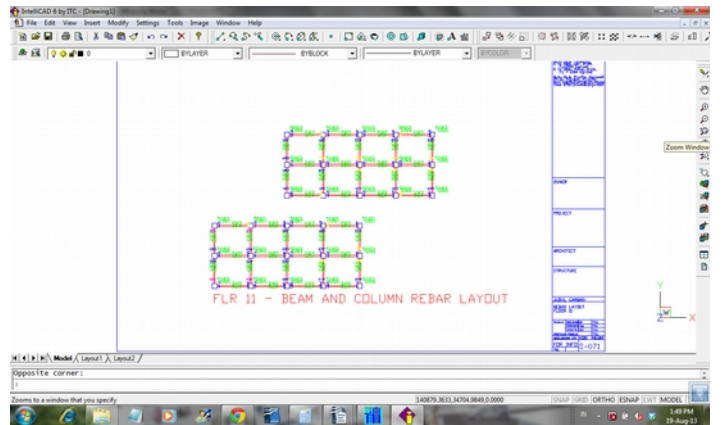
Parameters for SANSIRO Drawing Generator:

- Paper size and margin
- Spacing between drawing
- Numbering format: 1-G12 or G30
- Rebar number modification
- Moment Redistribution Factor
- Output format : Autocad™ DXF Format

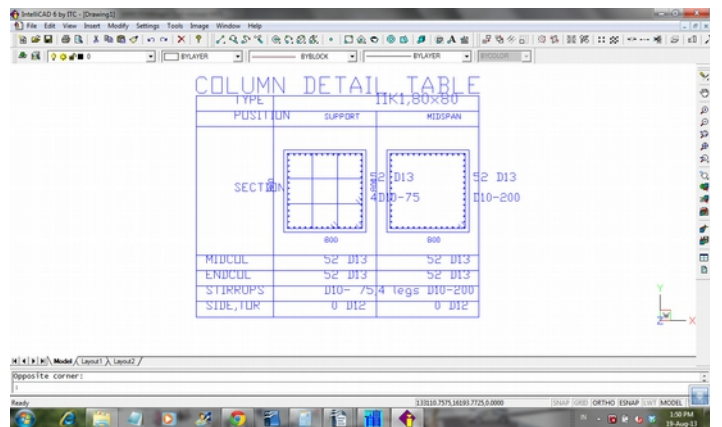
Generated layout and detail drawing at CAD



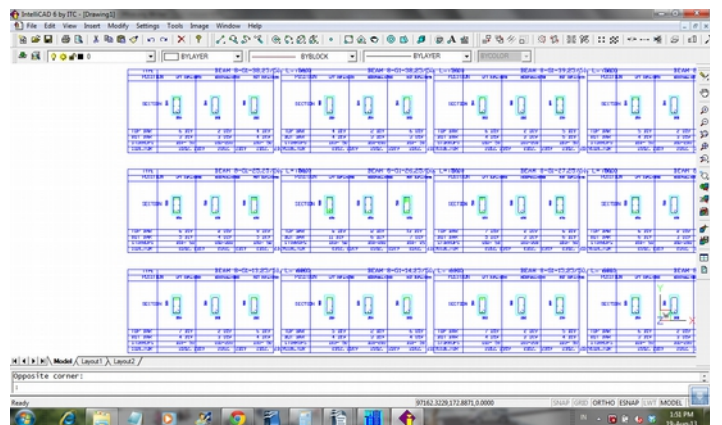
Overall view of all drawings generated in seconds



Floor Layout Drawing with Beams and Columns index



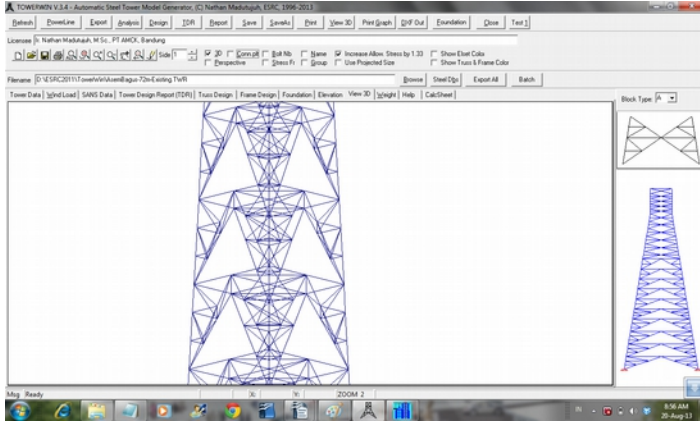
Column Detail Drawing



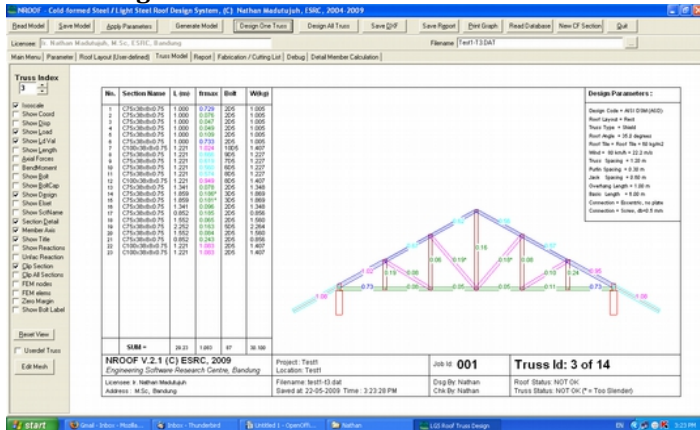
Beam Detail Drawing

OTHER ESRC PRODUCTS :

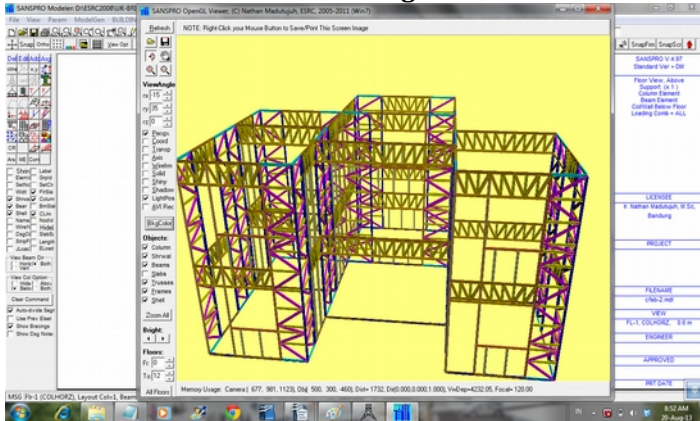
TOWERWIN - Steel Telecommunication Tower



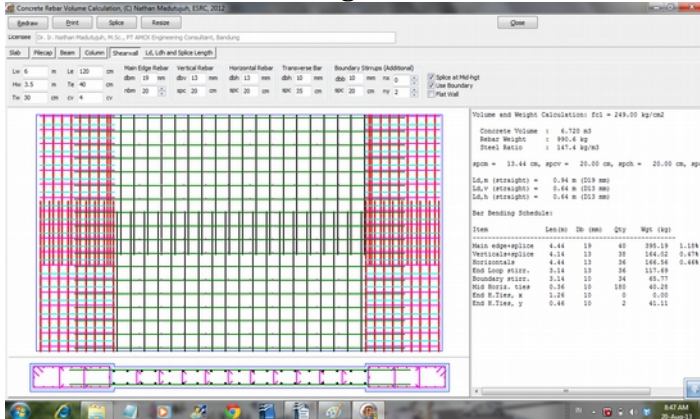
NROOF - Light Steel Roof Truss



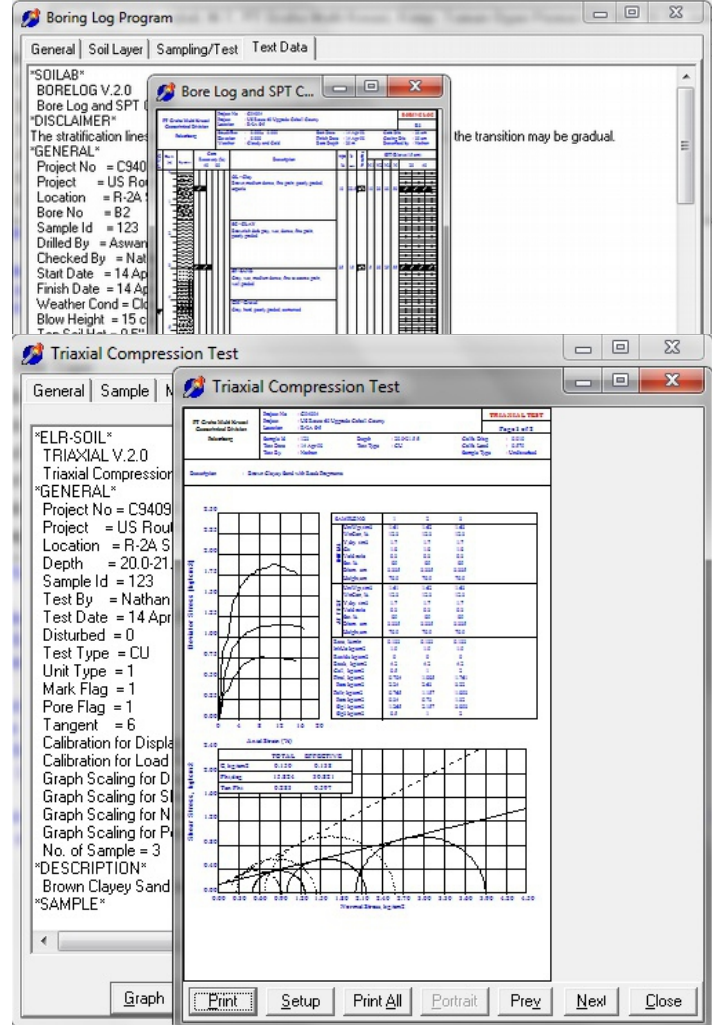
CFSB- Cold-Formed Steel Building



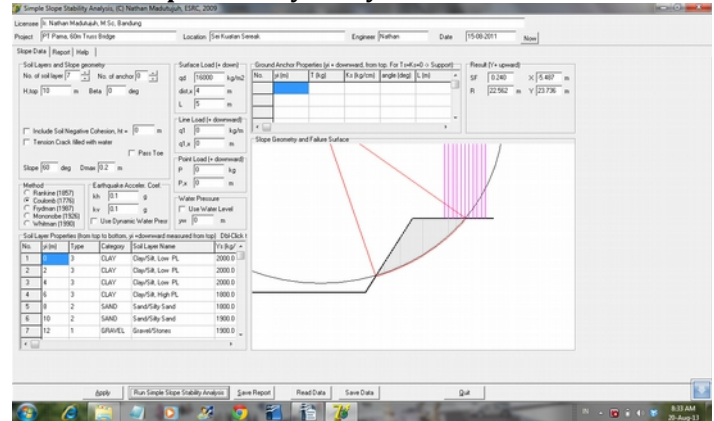
REBARVOL - Rebar Detailing and Estimation



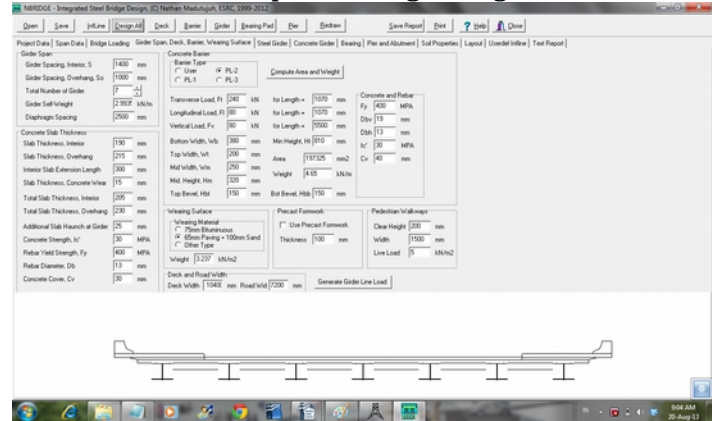
SOILWIN - Soil Laboratory Data Processing (12 Modules)



NSLOPE - Slope Stability Analysis



NBRIDGE - Steel Composite Bridge Design



ESRC provides services for developing special purpose engineering software for building industry and research/academic community.

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