Neilsoft
The Engineering Knowledge-smiths

Design based Solutions for a Precast Concrete Manufacturer

Requirement:
- To reduce design time for a box culvert assembly

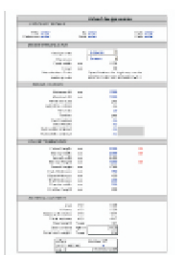## Technologies:
VB, Inventor

Solution:
- Developed an application to automate the process of creating Unit & Assembly drawings
- Application is capable of creating 3D models of units and complete assembly drawings with joints & reinforcements, while managing constraints & standards
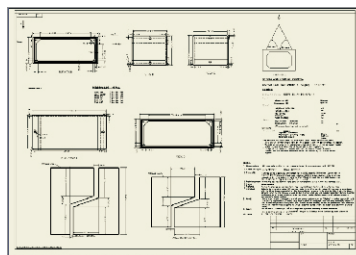- Provides easier & faster creation if assembly drawings

Result:
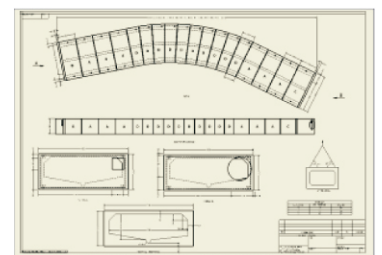Achieved a reduction of approximately 80% in the overall assembly design time

Customized Settings	Design Data	Unit Drawing	Assembly drawing

Engineering Design Office Manager for a Building Materials Company

Requirement:
- Unified view of project & production data across various projects & production facilities based out of multiple locations, to reduce manual error and to receive real-time updates for faster decision making

Technologies:
ASP.Net (C#), Ajax, Oracle, Microsoft Excel, Windows XP, IIS Web Server

Solution:
- Delivered a centralized web-based application with multiple access/ security levels, catering to various levels of management within organization
- The application produces reports in various formats for a comprehensive view of the overall health of various projects and production status
- Availability of updated data related to rework, employee attendance and time taken to complete a task/job

Result:
- Integration of CAD, ERP & MIS systems
- Faster decision making to due accurate & real-time availability of data

Product Development for a leading Precast Manufacturing Company based out of United Kingdom (UK)

Requirement:

To overcome the below mentioned problems in the existing pre-stressed Hollowcore Design Software:

- Functionalities in the software were not user friendly
- It lacked multiple functionalities and information required for detailing, designing and production
- Rules in the software were hardcoded which made it difficult to be tailored, as per specific requirements of a particular production site
- The turnaround time required by the existing developers of the software for implementing any new functionality was pretty high
- Performance issues were significantly affecting the overall productivity
- Multiple defects in the existing functionalities

Technologies:

AutoCAD 2014 .NET API, VB .NET, Embarcadero, Delphi, SQLite
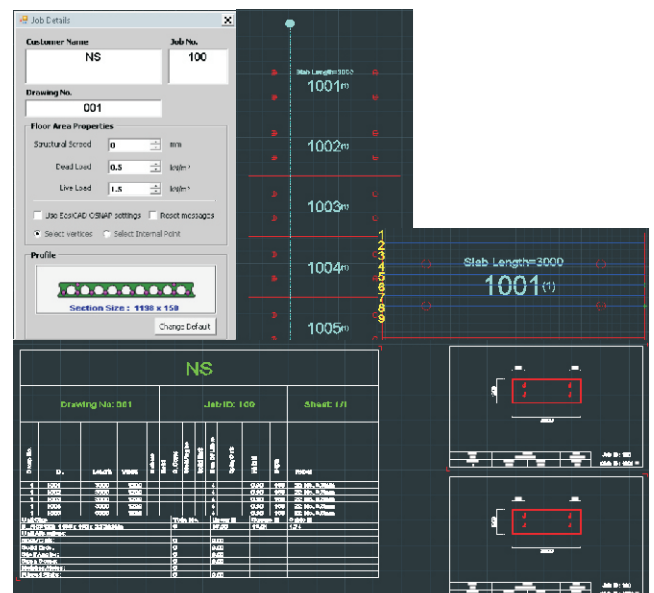
Solution:

- Developed brand new user friendly functionalities
- Modified Erection & Shop Drawings
- Database driven rules that enable the addition of Lifting Hooks
- Move/Edit/Delete functionalities for Lifters
- Significant performance improvement
- Revamped user interface to make it more agile, clear and intuitive
- Rapid development through agile methodologies

Result:

- Database driven rules that enable the addition of Lifting Hooks
- Improved performance, productivity and ease of operation

Application Development for a Market Leader into Manufacturing, Supply and Delivery of Precast Concrete Solutions

Requirement:

- Managing product inventory by category and locations
- Inventory control process that involved the identification of new opportunities, registering a quote, converting to a order and making a dispatch docket
- Manage production schedules and load schedules for precast products
- Generate various stock and inventory reports

Technologies:

VB.Net, SQL Server 2008, DevExpress UI Library & ORM XPO

Solution:

- Developed an application which segregates the functionalities into 11 modules
- Revamped functionalities in the Opportunities, Quotes and Dispatch modules
- Rich, clear and intuitive user interface
- Increased unification, centralization and homogeneity to the existing system

Result:

- New, clear and intuitive user interface
- Centralized database

Automation of Design & Detailing Process for Single and Twin RCC Arch Bridges & Portal Frames

Requirement:

- Automate the design and analysis process of a single span portal and single/double span arch bridges
- Provide support in relation to BS, Euro, Polish, Czech and Slovakia design standards
- Generate localized reports supporting English, Polish & Czech

Technologies:

VB.NET, Autodesk Robot, Structural CADS RC

Solution:

- Developed an application which accommodates all the required design calculations for portal and arch bridges, while taking into account BS, Euro, Polish, Czech and Slovakia design standards
- Integrated results from Robot Structure to CADS RC
- Implemented report generation module, which generates reports automatically in 3 different languages
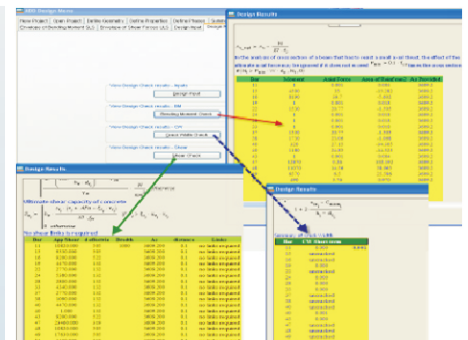
Result:

Reduced bridge design & analysis process from 2-3 weeks to 2-3 days
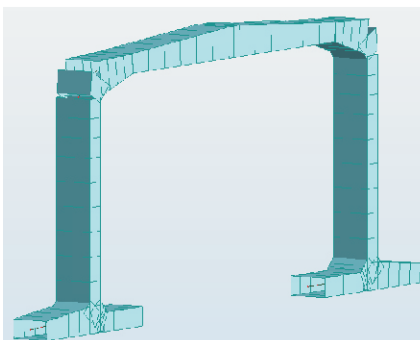
Single Span Portal bridge
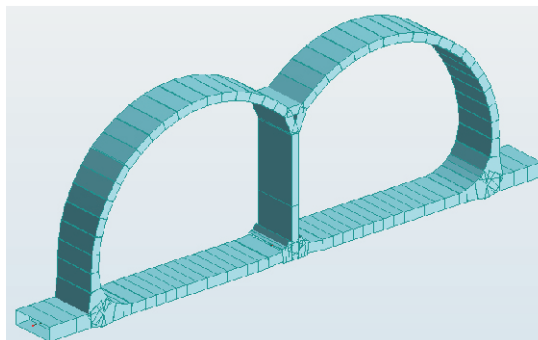
Twin Span Arch bridge

Automated Design check results using MathCAD