



# 3D Modeling And Rendering For Retaining Wall Design By Hi-Tech Helps Consultant Impress Clients

## Case Study Highlights

### The Client

Company: Environment consultants for construction projects  
Location: Los Angeles, USA  
Industry: Building design and construction

### The Objective:

Develop a 3D model for retaining wall design plan meant to block the flood water from a nearby river

### The Solution:

Several elements as specified by client were incorporated to design a retaining wall and a detailed 3D model was developed.

### The Challenges:

- Client expected a design improvement based on a landscape PPT & some handmade designs developed in 2008.
- Files were without any exact dimensions or additional inputs from the client
- No plans, elevations and CAD files were given to support the team for further design revisions and 3D modeling
- Client's verbal explanations were to be used as a base to analyze and understand the requirements.
- Numerous brainstorming sessions, repeated iterations and approvals.
- Client was accessible only through email and conference call

Architectural design backed by 3D modeling, rendering and animation, has become the trend across the AEC industry. 3D modeling and photorealistic rendering gives the stakeholder an exact idea of the final construction and design. This makes it easy to iterate and develop a final plan that suits the client's requirements.

An environmental consultant had to assess a site and provide a plan to the client for retaining wall design meant to block the flood water from a nearby river from entering the site. Some old hand drawn sketches of a retaining wall structure and a PPT with landscaping plans, was all that was provided. Improvising the basic design and preparing a well rendered 3D model, to facilitate the consultant to give final presentation of the design to the client, was the task.

## Technology / Software Used

3DS MAX

## The Solution

Retaining the wall to stop flood water from a nearby river entering the area filling it with debris

- Hi-Tech team deftly handled the communication, approvals and design development process.
- Built a retaining wall to extend the useful area towards the flood plain of the river.
- Retaining wall was designed as a 3 stepped structure with property (7 – 8 homes and a swimming pool) at the top.
- Terraces with trees and shrubs were included. This design feature made the entire wall look like a natural retaining boulder covered with greenery.
- Narrow walkways and stairs that led to the terrace were incorporated in the design
- Subterranean garage under the flat ground surface of the property was also included as a part of the design

## Benefits

- In a short span of one month, the team managed to develop a fully fledged design and plan for the retention wall.
- Vacant space was effectively utilized; the stepped wall not only stooped the flood water from entering the client's property, but also created space for 7-8 homes.
- The designed structure looked very much a part of the natural terrain, and in fact added to the beauty of the surround



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