

# AdonisBIMsolutions

Mahindra - Eminente

# Scope of work

## Adonis Designs

- BIM Model coordinated with SMEP
- CCD Revit & Navisworks
- BIM model embedded with all SMEP drawings
- Value Additions
- Emergent BIM areas

# Overview of work

2D

- Design Interpretation
- Coordination

3D

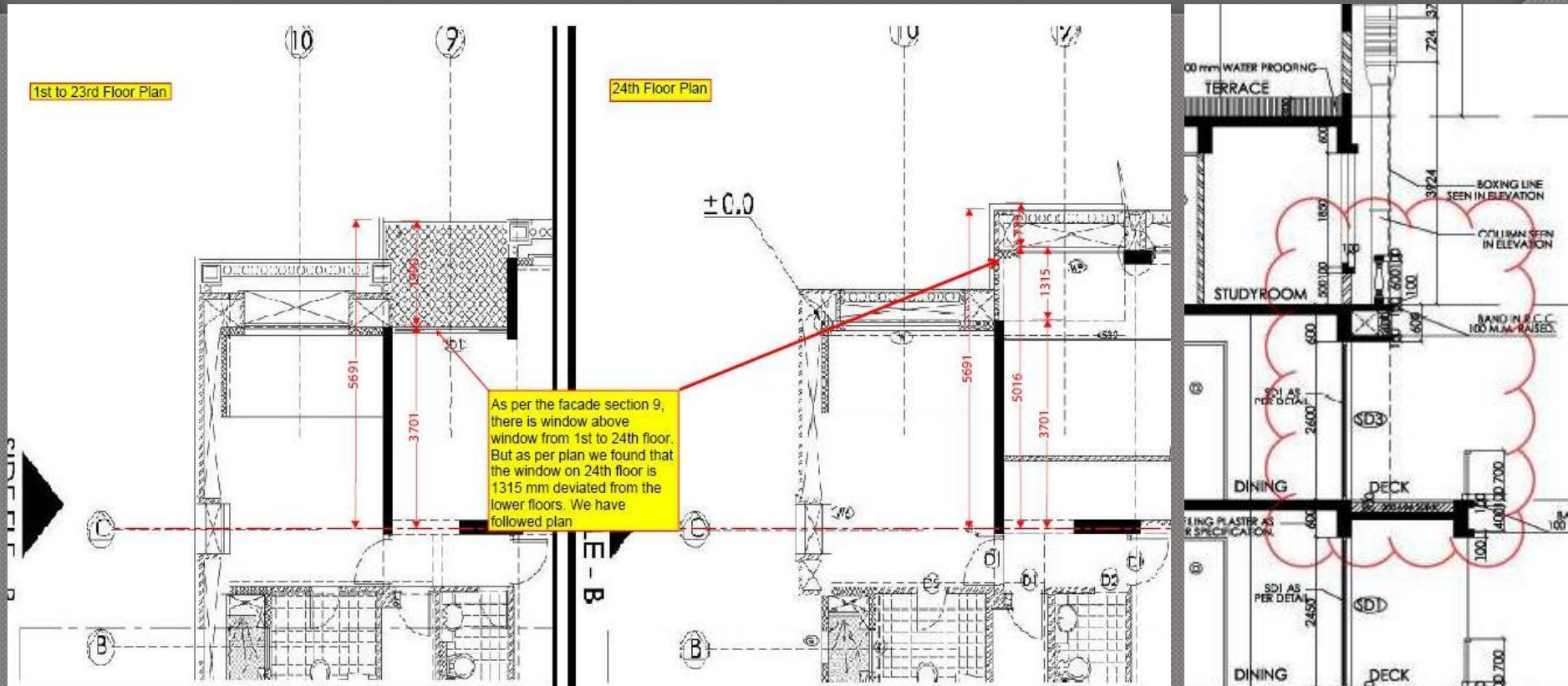
- BIM-Arch. Production
- BIM-MEP Coordination
- Clash Detection

4D

- Constructability Issues /Value Additions
- 4D Sampling
- Facilities Mgmt.

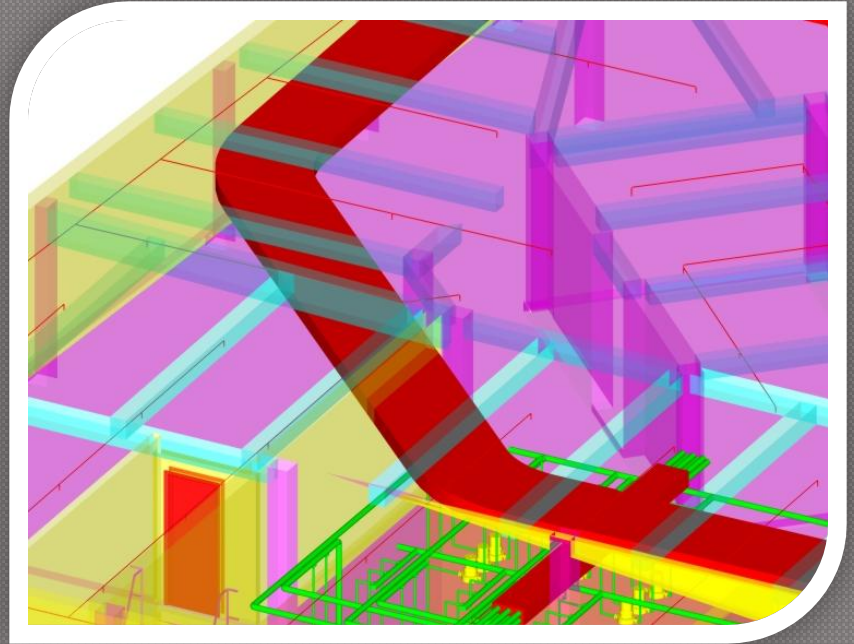
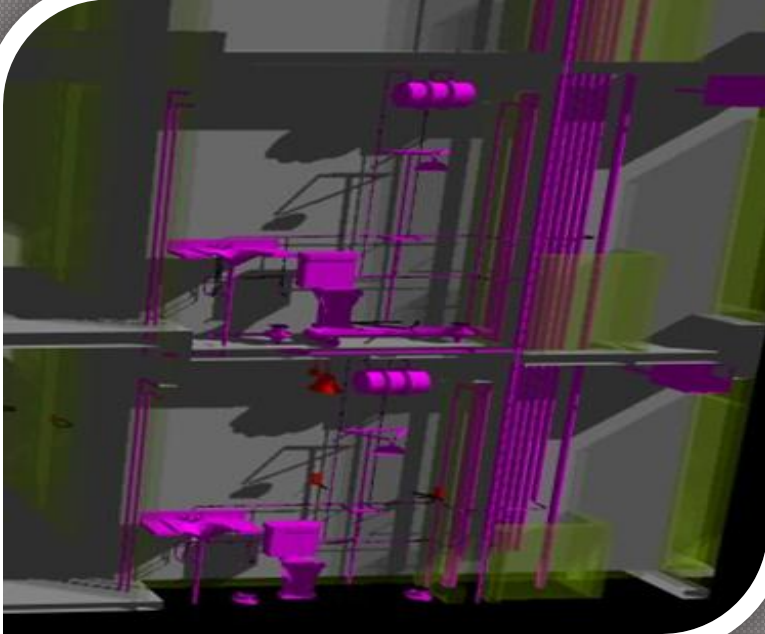
# 2D

- Design Interpretation
- Coordination



3D

- BIM-Arch. Production
- BIM-MEP Coordination
- Clash Detection



# BIMisVE

## Principals

- Gather Information
- Measure
- Analyze
- Evaluate

## Evaluation

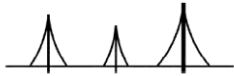
- First Cost Reduction (FCR)
- Life Cycle Cost Reduction
- Value Improvement
- Reporting

# Evaluation hi5 FCR

## Types of Analytic Checks:

- Regulatory/Bylaws
- Coordination-External
- Coordination-Internal
- On Hold
- Design
- Incomplete Information
- Manufacturer/Contractor

# Evaluation hi5 FCR



**ADONIS DESIGNS**

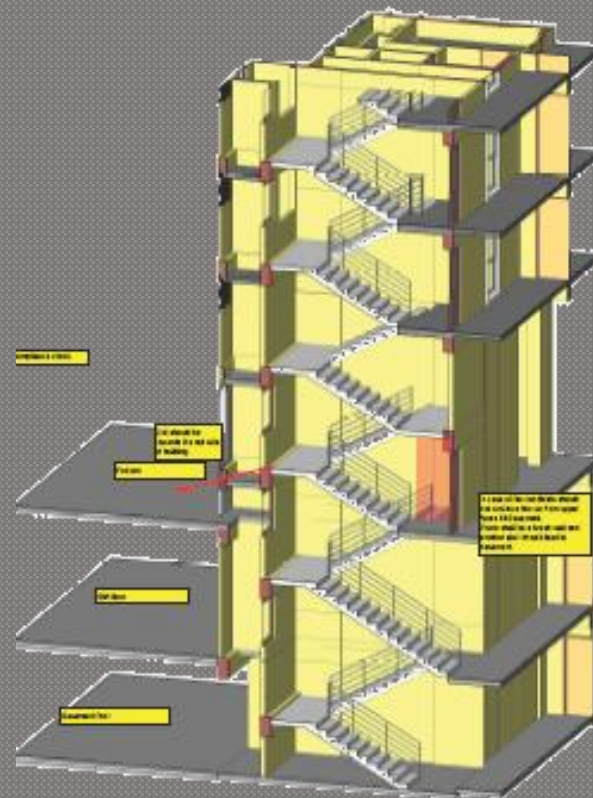
## Mahindra Eminent Aspen : Clash Control and Detection Report

### Eminent - Hi5 Clash Control Detections

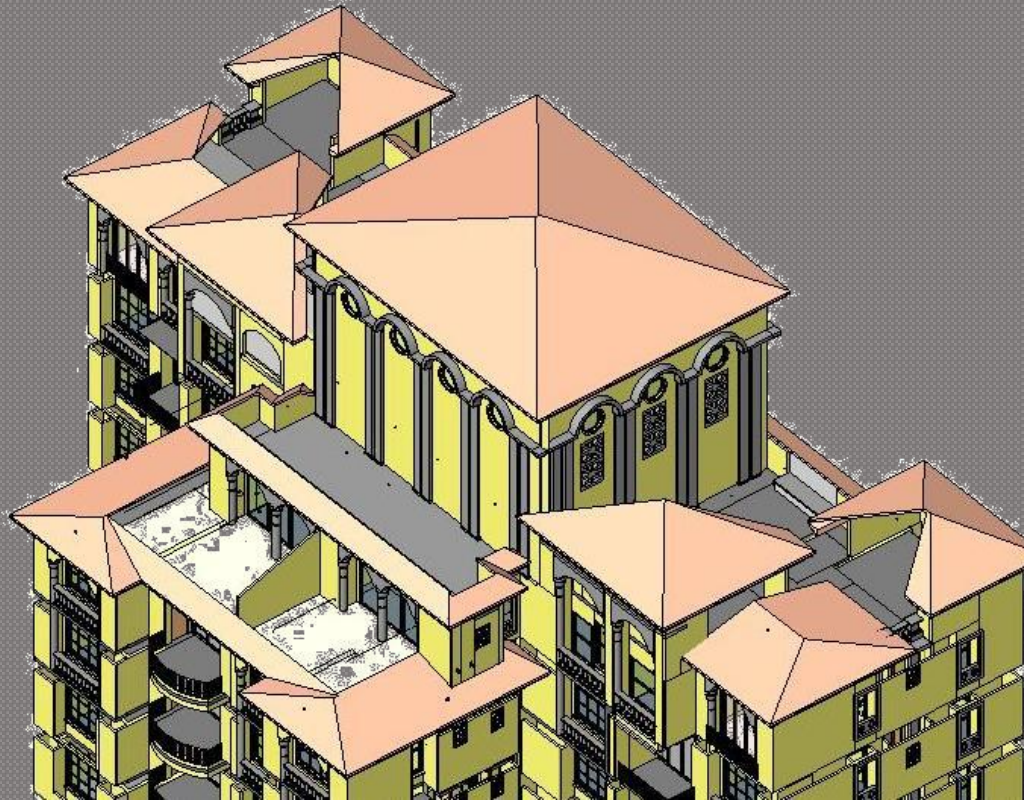
S.No	Type	Owner	Problem	Value	VE Category	Resolution
1	Regulatory By Laws – Fire Safety	Architecture,  Plumbing, Mechanical	Refuge Detail Design ,Egress Staircase, Fire escape route, Signage's, Smoke stop door, FHC, Wall fire Rating etc	<b>High</b>	First Cost Reduction	Compliance Check to be done Life safety drawings for Egress Staircase, Escape Routes, Refuge Floor to be developed to avoid objections from regulatory authority and site approval delays
2	Design	Architecture,  Plumbing,	Rainwater Collection/Harvesting not shown, OHT pipe connection not shown	<b>High</b>	First Cost Reduction	Design check list or switch to BIM platform
3	Coordination External	Structure,  Architecture  Plumbing	Beam conditions, Unsupported Walls, Slab Conditions Service Cutouts	<b>High</b>	First Cost Reduction	Improve Coordination and introduce Interdiscipline CCD meetings and CCD drawing ,Refer to Hi 5 Drawing Set
4	Coordination Internal	Structure,  Architecture	Beam conditions, Beam Naming, Parapet Sizes Door Window Numbering and Schedule Missing Information	<b>High</b>	First Cost Reduction	Improvisation of Internal sheet wise Coordination amongst individual discipline, Refer to Hi 5 Drawing Set
5	Incomplete Information , On Hold	All discipline	Basement & Stilt stairs Open ended information, Non Connected pipes, On Hold areas, Electrical Cable Routing	<b>High</b>	First Cost Reduction	All the drawing details to be completed and independently checked by an Audit Team or Virtual Construction Team before sending to site or use the power of BIM, Refer to Hi 5 Drawing Set



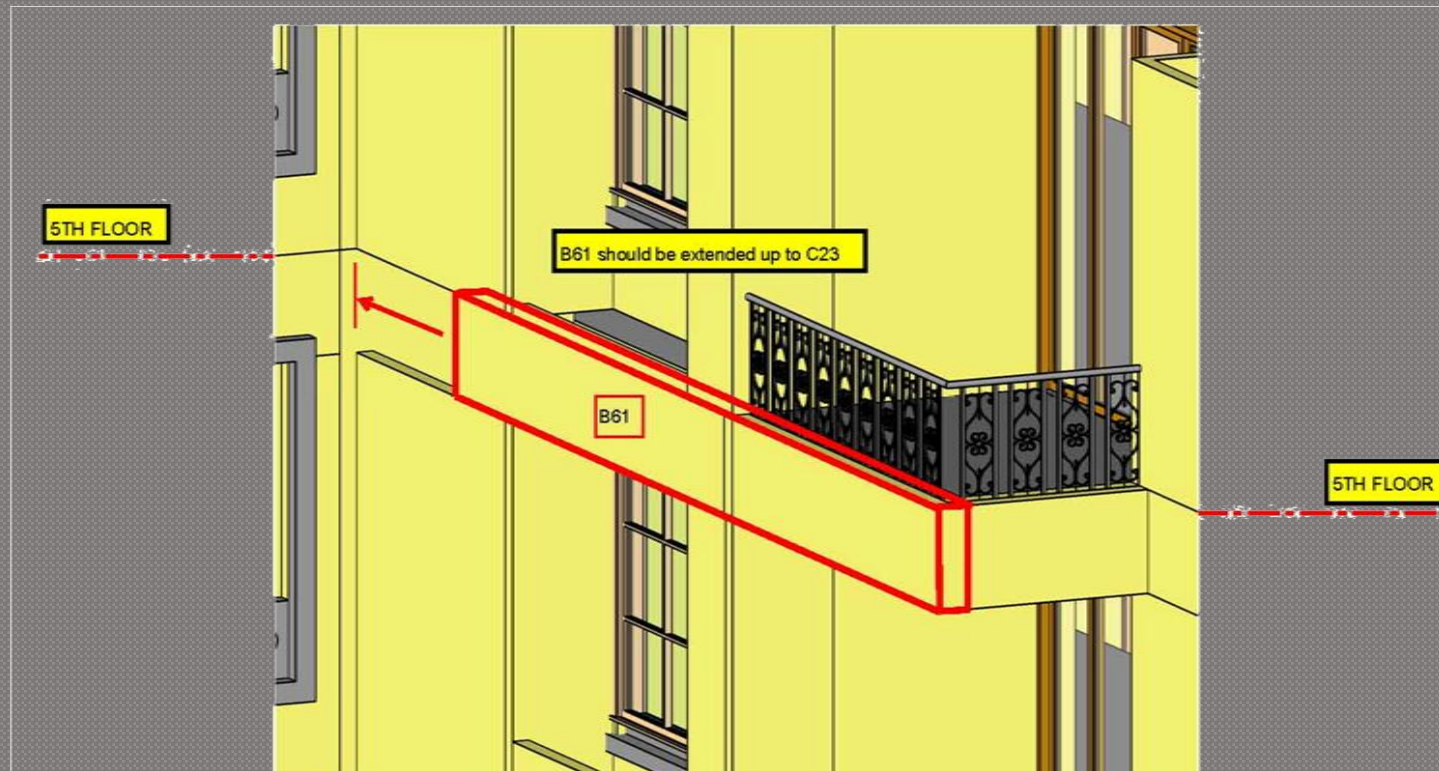
# Evaluation hi1 FCR



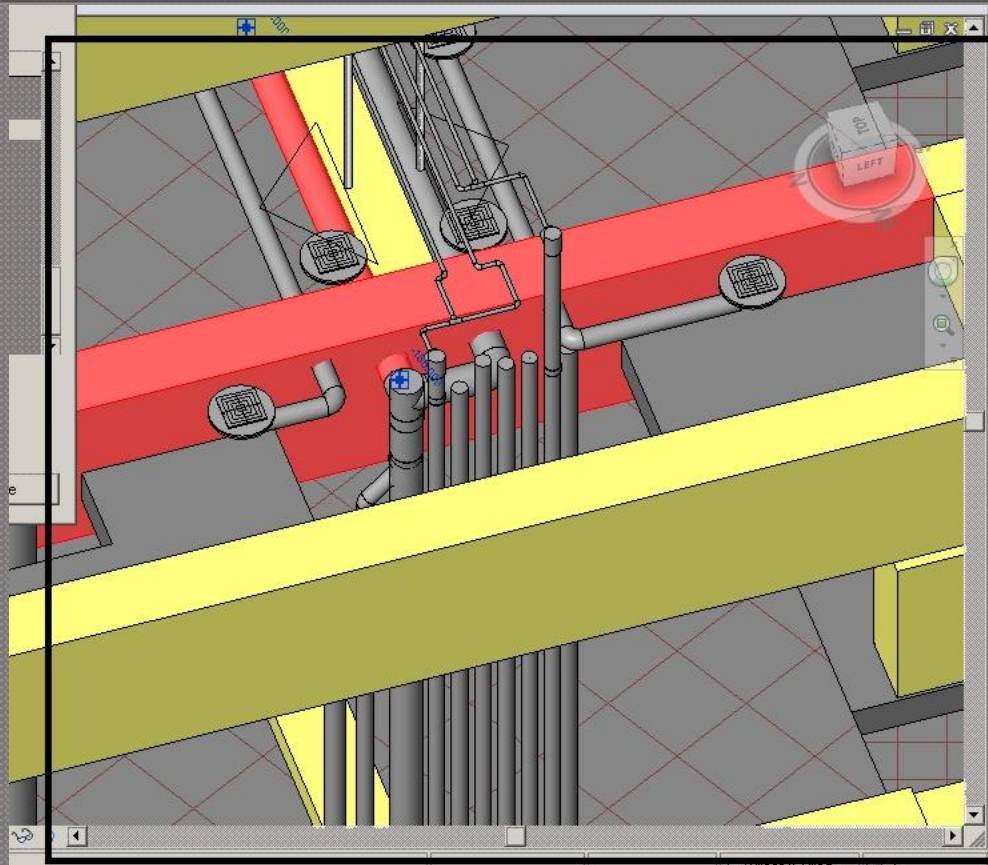
# Evaluation hi2 FCR



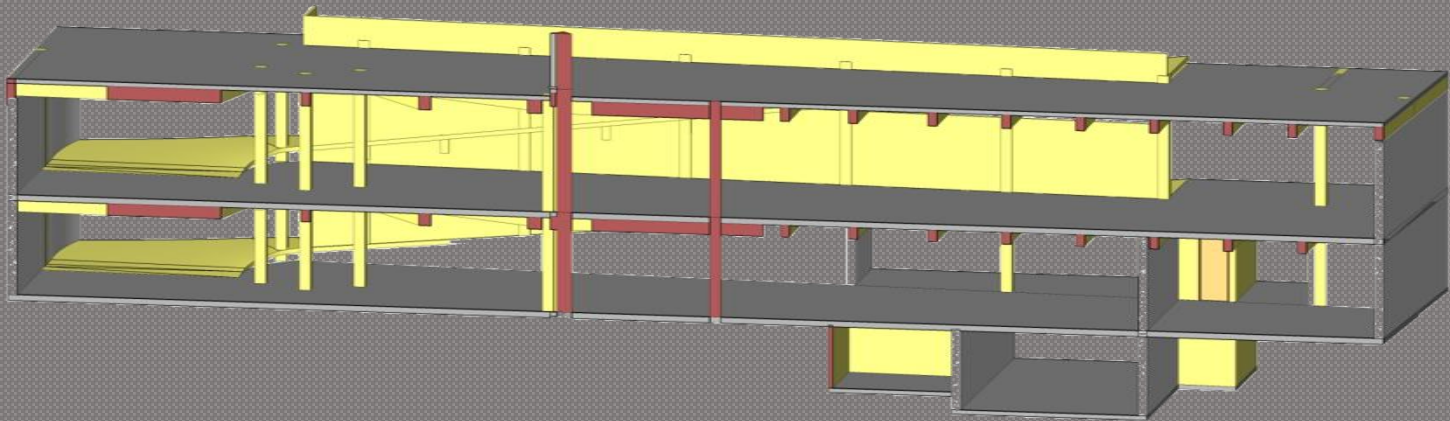
# Evaluation hi3 FCR



# Evaluation hi4 FCR



# Evaluation hi5 FCR



# Evaluation hi5 FCR



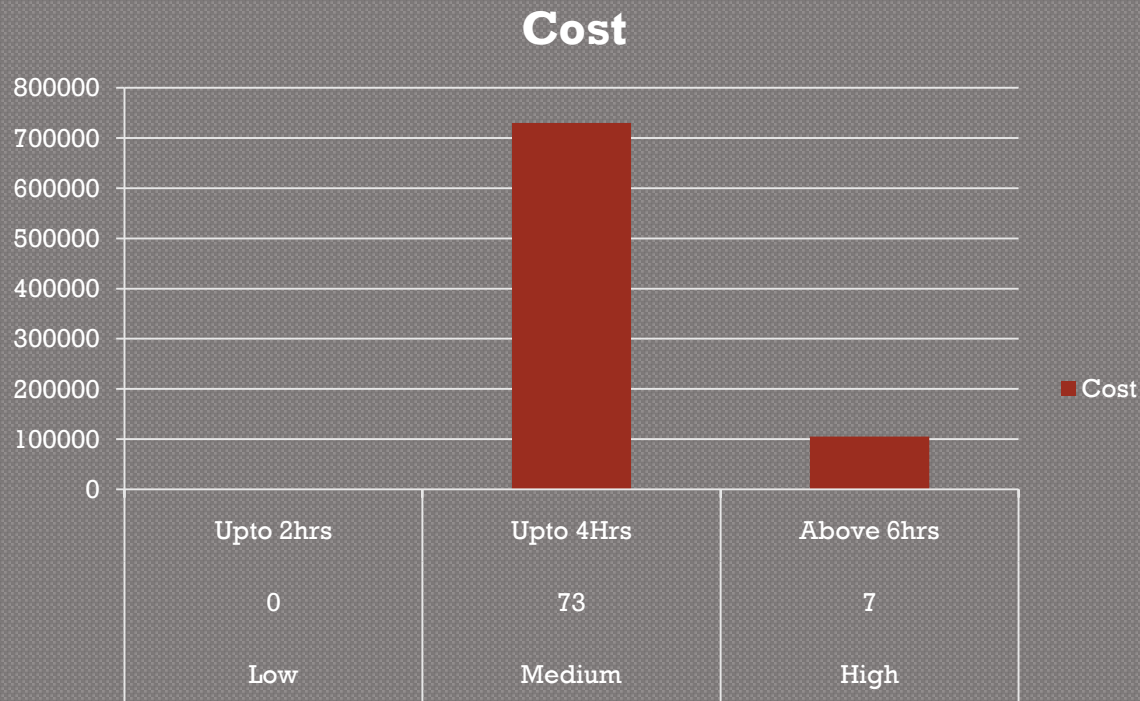
## Mahindra Eminent Aspen : Clash Control and Detection Report

S.NO.	LEVEL	OWNER	SUB OWNER	TYPE	VALUE CATEGORY	INSTANCES	TOTAL COUNT	DESCRIPTION	REFRAL DOCUMENT
1	UGR							OK	
2	BASEMENT							OK	
3	STILT	Architecture	Architecture	Coordination-Internal	High	1		Levels are not matching	Y:\Mahindra\Working\Clarifications\Final clarifications\1_Arch to Arch\Stilt\3
		Architecture	Architecture	Incomplete Information	High	1	1	Stair with incomplete information	Y:\Mahindra\Working\Clarifications\Final clarifications\1_Arch to Arch\Stilt\1
		Architecture	Architecture	Regulatory/Bylaws	High	1	1	fire escape routing/signage not defined	Y:\Mahindra\Working\Clarifications\Final clarifications\1_Arch to Arch\Stilt\2
4	PODIUM	Architecture	Architecture	Incomplete Information	High	1X2 = 2	2	Stairs with incomplete information	Y:\Mahindra\Working\Clarifications\Final clarifications\1_Arch to Arch\Podium
5	FLOOR (TYP. 1st to 5th)	Architecture	Architecture	Coordination-Internal	Medium	1X12 = 12(x5)	12	Parapet wall @ service slab.	Y:\Mahindra\Working\Clarifications\Final clarifications\1_Arch to Arch\Typical floor\1
		Architecture	Architecture	Regulatory/Bylaws	High	1X3	1	Core area ( egress, lift, electrical service shaft, refuge area)	
		Architecture	Architecture	Coordination-Internal	High	1(x23)	1	Annotation, window schedule error.	
6	FLOOR (TYP. 6th to 10th)	Architecture	Architecture	Coordination-Internal	Medium	1X12 = 12(x5)	12	Parapet wall @ service slab.	
7	FLOOR (TYP. 11th to 15th)	Architecture	Architecture	Coordination-Internal	Medium	1X12 = 12(x5)	12	Parapet wall @ service slab.	
8	FLOOR (TYP. 16th to 20th)	Architecture	Architecture	Coordination-Internal	Medium	1X12 = 12(x5)	12	Parapet wall @ service slab.	
9	FLOOR (TYP. 21st & 22nd)	Architecture	Architecture	Coordination-Internal	Medium	1X12 = 12(x2)	12	Parapet wall @ service slab.	
10	23rd	Architecture	Architecture	Coordination-Internal	Medium	1X12 = 12	12	Parapet wall @ service slab.	
11	24th	Architecture	Architecture	Coordination-Internal	High	1	1	Balcony mismach @ grid 9.	Y:\Mahindra\Working\Clarifications\Final
12	TERRACE								
13	LMR & OHT								
14	TOP ROOF								
							Sum of Counts	75	

<b>Cost Factor</b>	5500		
<b>RESULTS</b>			
<b>Category</b>	<b>Total Counts</b>	<b>Value</b>	<b>Cost</b>
Low	0	Upto 2hrs	0
Medium	73	Upto 4Hrs	1606000
High	7	Above 6hrs	231000
<b>Total Value On Site</b>	1837000		

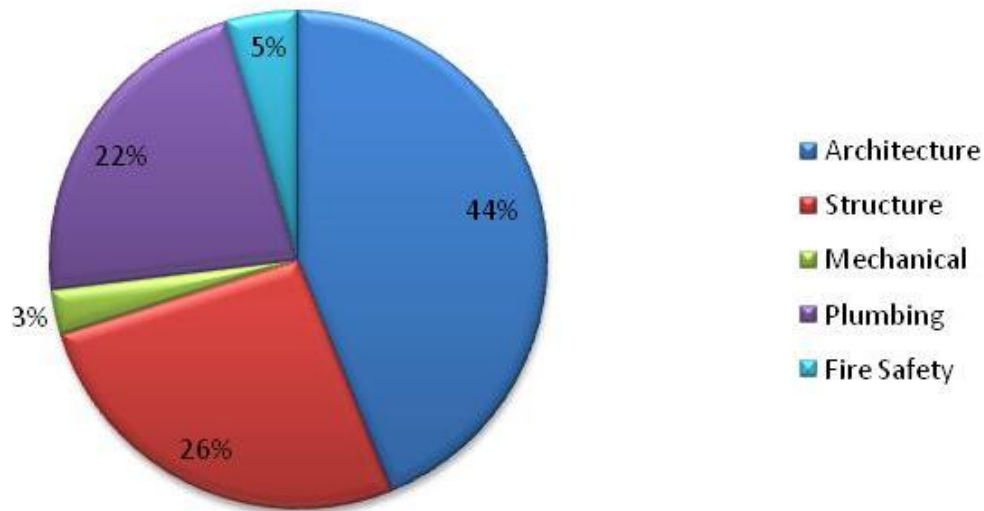
# Evaluation hi5 FCR

## Cost Vs Time



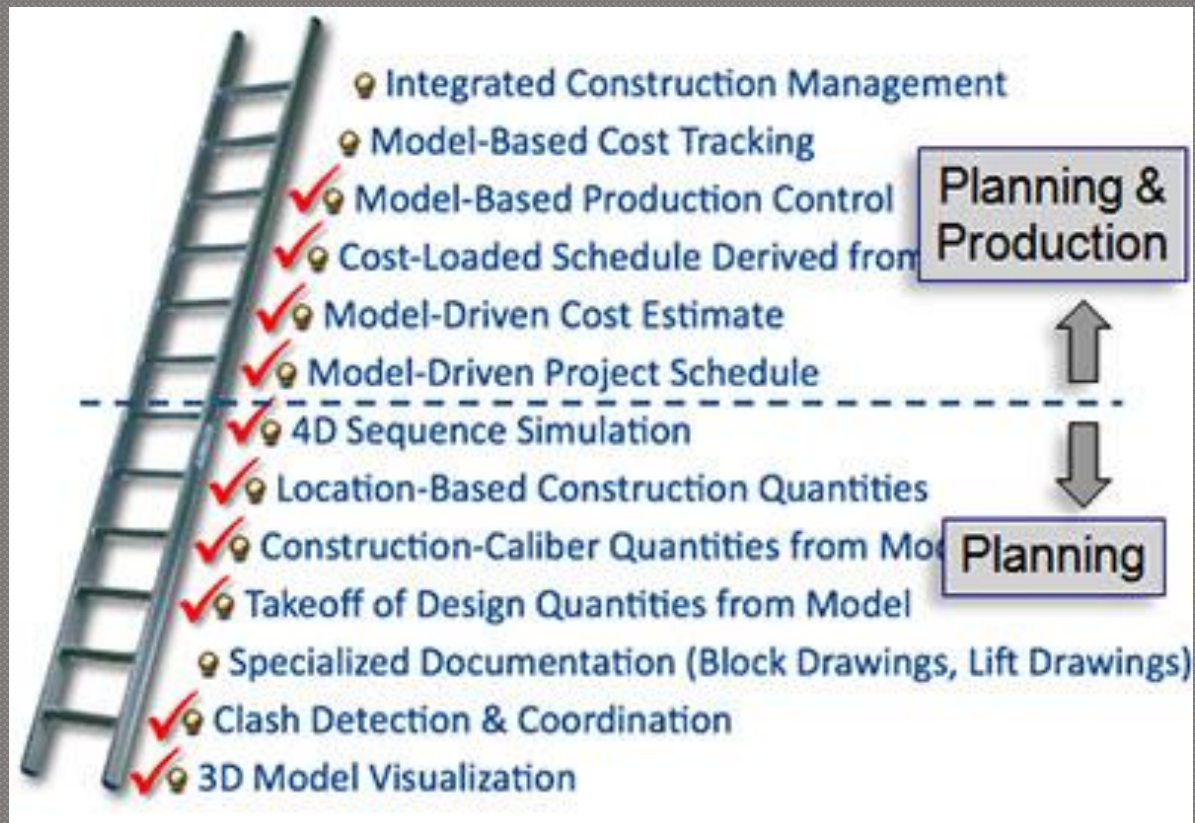
# BIM VE final evaluation

Total Costructability Issues





# BIM VE climbing the ladder





4D

- Constructability / Value Additions
- 4D Sampling/Mock Construction
- Facilities Mgmt.

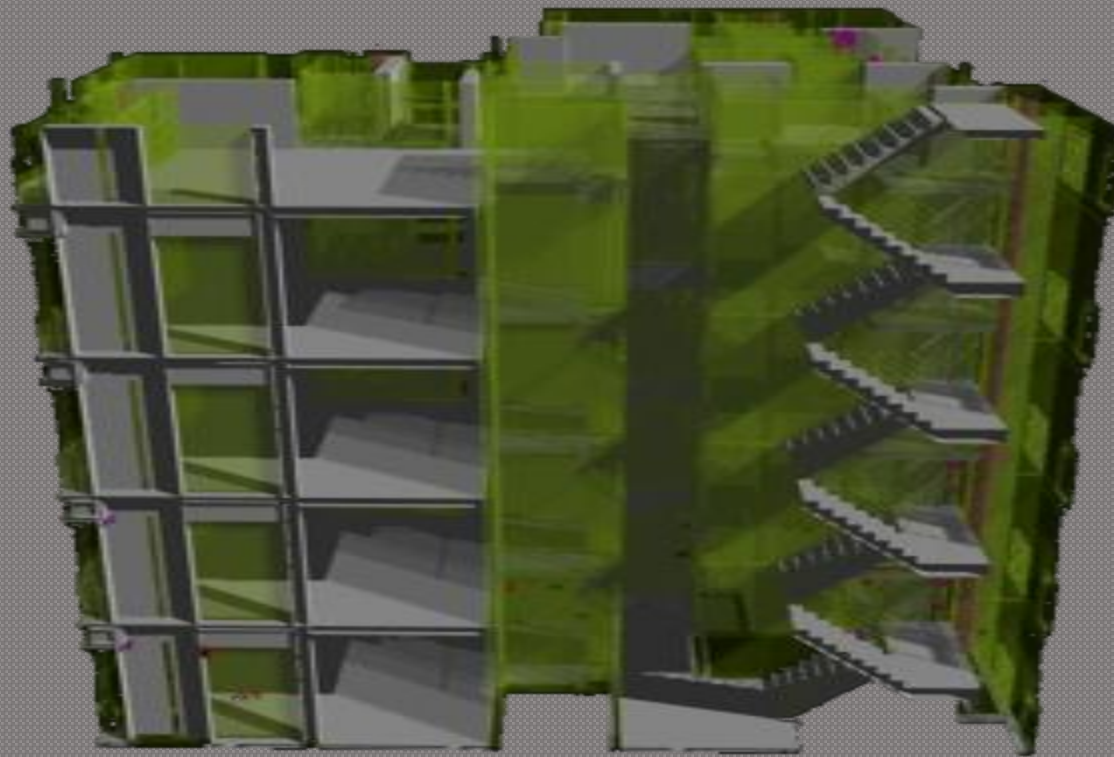
## Emergent categories of BIM evolution

1. Visualization – Sectional Perspectives, Renderings
2. Production – Schedules, Area Calculations, Annotation
3. Coordination – Interference Detection, 3D from consultants
4. Analysis – Structural, Thermal, Egress
5. Supply Chain Integration – 4D Simulation, CNC Fabrication, FM, Intelligent Site

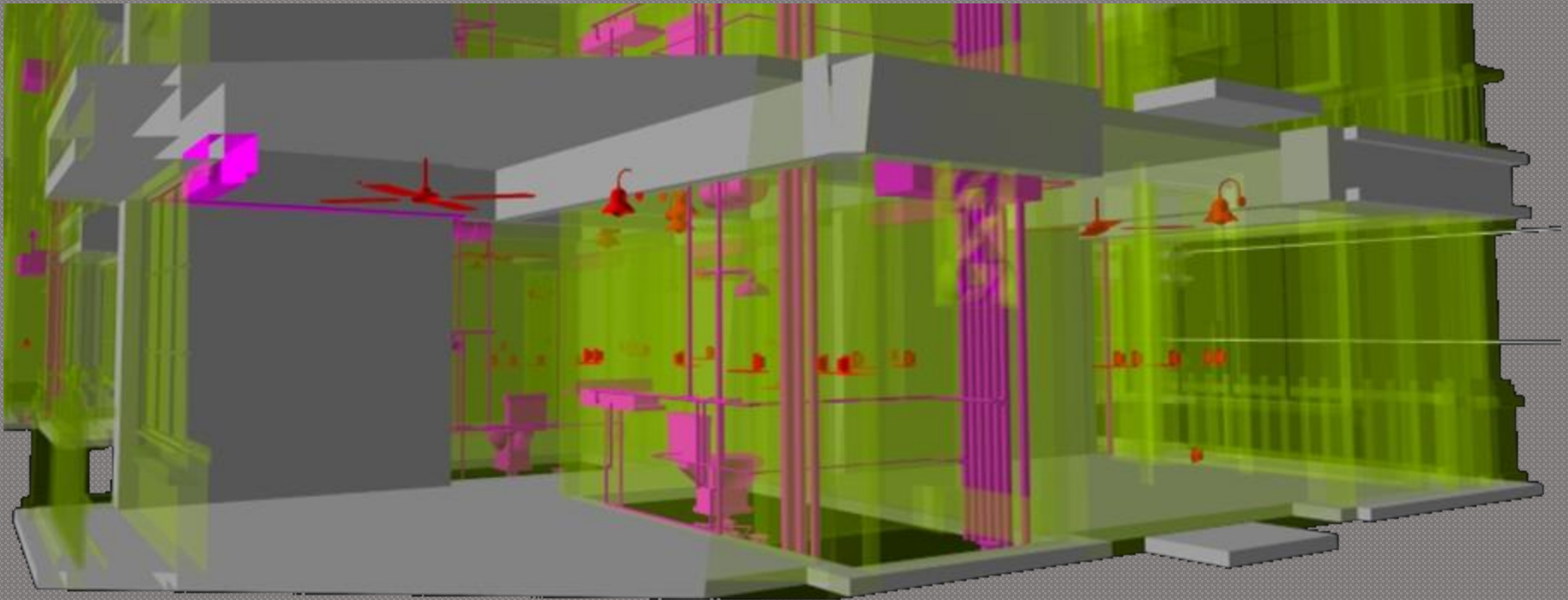
# BIM VE images



# BIM VE images



# BIM VE images



# Adonis Eminent Team

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## Ishtiaq Masoodi

Director Production

**Project Profile: Production Supervision, Technical Support**

**Production Team Members: Kashif Khan, Amarpal Kaur**

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## M. Keshav

Project Architect/BIM Specialist

B Arch

**Project Profile: BIM & MEP Support , Visualization, 3Dservices**

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## Pritpal Singh

Project Architect/Sustainability Specialist

MCIAT, IGBC AP, BBA

**Project Profile: Tech Support , Navis Works –CCD, Value additions, 4D services**

# Adonis Green Thanks

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