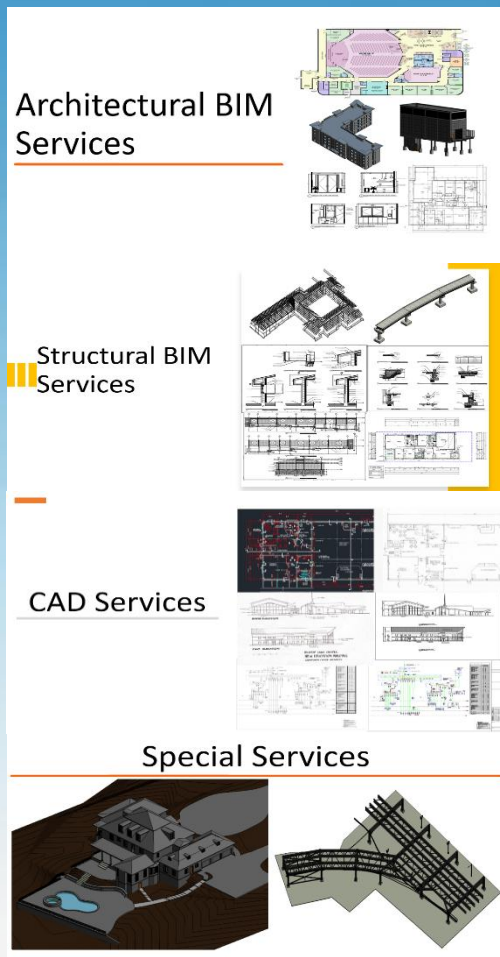


BIM, CAD Services for Architectural & Structural Design & Construction



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- **About us**
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About us

Design and Drawing Solution offers BIM, CAD services for Architectural and Structural design and construction.

Our team is having good knowledge of USA construction document process of Architectural and Structural services.

We are familiar with USA permit design and construction standard practice and requirement of Architectural and Structural design for buildings and infrastructure like single family apartment, residential housing, commercial buildings, church, restaurant and infrastructure like railways, metro stations and high road tunnels, bridges.

Codes used is Building regulation, building code including the special departmental requirement for buildings and infrastructure.

We are providing our services worldwide and specially USA architect, Structural consultant and General for new and renovation project contractors.

Using our BIM and 2D CAD outsourcing services, our clients have numerous advantages i.e. including time and cost savings which are realized during the design phase and more importantly, during the installation and build stages of construction projects. We are certified Autodesk users and started in Mumbai, India from early 2018 and having our representative in US as well as channel Partner.



6+
Years' Experience

300+
Completed Projects

150+
Customer world wide

Services We provide

- Architectural Drafting
- MEP Pre-Construction
- Mechanical Construction
- Plumbing Construction
- Fire Protection Design
- Electrical Construction
- Heating & Plumbing Design
- General Construction
- Industrial-Construction Services

(New)

Architectural BIM Services

- Concept Design
- Design model @ LOD 300
- Permit Drawing
- Construction Model @ LOD 400
- Construction document
- As built Model and Drawing (LOD 500)

Structural BIM Services

- 3D model @ LOD 300 /400
- Construction Drawing
- As built Model & Drawing (LOD 500)

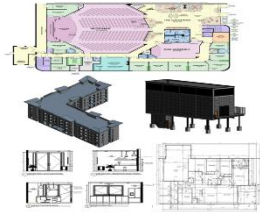
CAD Services

- CAD drafting
- CAD conversion

Special Services

- Point Cloud Services

Architectural BIM Services



Architectural BIM Concept Design @ LOD 200

Concept design stage is the first stage of architectural design. This type of model is commonly used for presentation purpose. We have our internal team to work closely with our existing clients and prepare the base presentation and space planning for Clients to approval.

Concept design model is the basic space planned with presentable format to highlight the spaces of different zones as per the client requirement.

Input

Based on the project requirement and services, we use to receive the basic space planning from the architect which we use to produce.



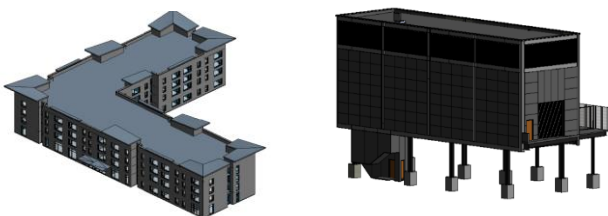
Design model @ LOD 300 & Permit Drawing

After confirmation from the client, we use to go ahead of details model @ LOD 300 of all the items like,

1. Wall Floor/ Slab / Roof
2. Door / Window / Sky light
3. Ceiling Fixture / Furniture / Louvers

Including all the items required to developed the permit design drawing for approval.

LOD 300 models include all architectural elements where specific size and details as per the required standards. After completion of model & basic co-ordination, design drawings use to produce to complete the design sets for local authority approval.



Following plans & details included in the standard permit approval sets.

1. Site Plan
2. Floor Plan
3. Finish Floor Plan
4. RCP
5. Elevation
6. Sections
7. Details & Schedule

Input

Based on the project requirement and services with approved concept design or mark-ups or sample drawings, we develop 3D model with specific details of wall, floor, slab, partition, window, door etc. to complete the 3D model @ LOD 300.

Construction 3D Model & Document @ LOD 400

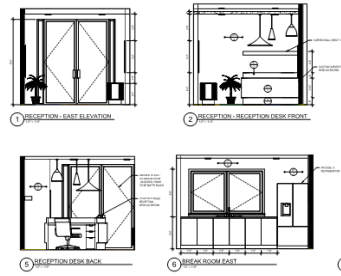
After getting permit approval from local authority, we start our Construction Document Production phase. In the architectural and construction process where more detailed and comprehensive documents are created to guide the construction and realization of a building or structure.

These documents serve as a set of instructions, specifications, and drawings that contractors and construction teams use to carry out the design as envisioned by architects and designers.

The goal is to communicate the design intent accurately and provide all the necessary information for construction, regulatory compliance, and coordination among various parties involved in the project.

- Overall Floor Plan
- Enlarged Floor Plans
- Floor Finish Plans
- Reflected Ceiling Plans & Details
- Furniture Layout plans
- Landscape plans & Details (As required)
- Interior Elevations
- Typical room layouts
- Elevations (All 4 Sides)
- Building sections
- Architectural details
- Door & window Details & schedule

Input – Approved permit set with design model @ LOD 300.

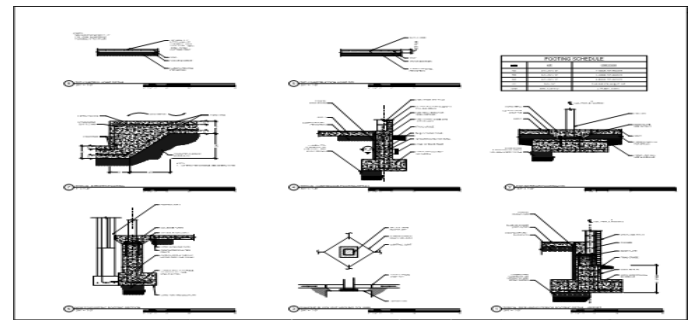
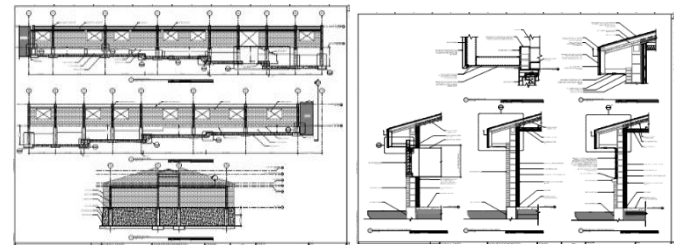


Structural BIM Services



construction documentation package. They convey the necessary details for builders and contractors to construct the building's structural elements in accordance with the design and engineering specifications.

- Foundation Plans
- Framing Plans
- Detail Drawings
- Reinforcement Plans
- Foundation Details
- Stairs and Elevator Details
- Schedules of beam



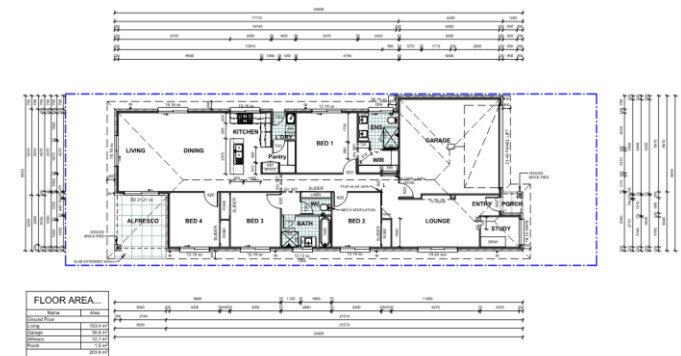
As Built Model & Drawing @ LOD 500

After completion of Construction, site team use to mark-ups the changes made in site based on the actual execution.

Based on the mark-ups, we produce the as built model & drawing @ LOD 500 inline with client requirement.

Input

Mark-ups from site team



Structural 3D model @ LOD 300, 400

A Structural 3D model is a digital representation of the structural components and systems of a building or structure created using three-dimensional computer graphics. This model serves as co-ordination with all other services, production of construction drawing like foundation plans, framing detail drawings etc.

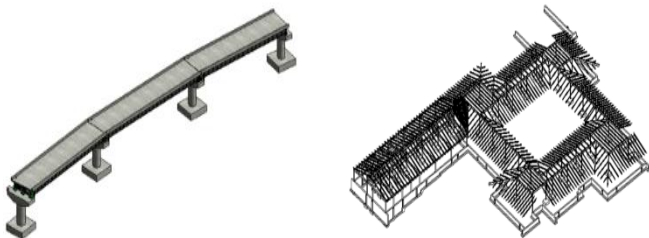
Structural major elements which we use to models are as follows.

1. Beam/Column/ Footing
2. Concrete/ Steel/ Dowel / Lintel
3. Reinforcement/ Roof Farming/ Floor Farming

Input

Client use to share us the all plan set with details and specification for develop the 3D model of structural.

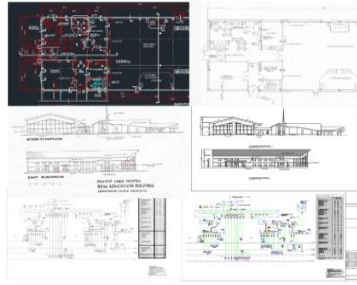
For steel, structural, we use to follow the standard practice for detailing and 3D model production.



Structural Construction Document

Structural construction documents are a set of detailed drawings and specifications that provide comprehensive information about the structural components of a building. These documents are created by structural engineers and are an essential part of the overall

CAD Services



CAD Drafting & CAD Conversion Services

CAD Drafting

We at D & D, produce the CAD floor plans, sections, details inline with client sample plan, sketch-up, hand markups or any as built drawing.

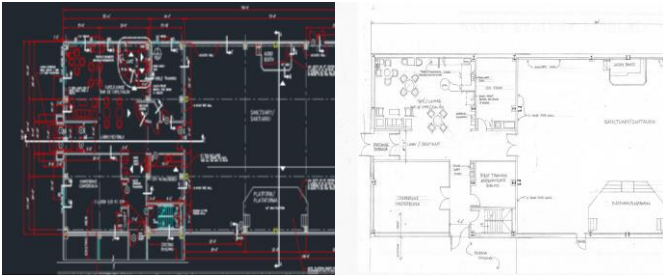
We produce complete set architectural, structural drawings in CAD as per client requirement.

- Overall Floor Plan
- Enlarged Floor Plans
- Typical room layouts
- RCP plans
- Building sections
- Building Elevation
- Details, Schedule

Input Files

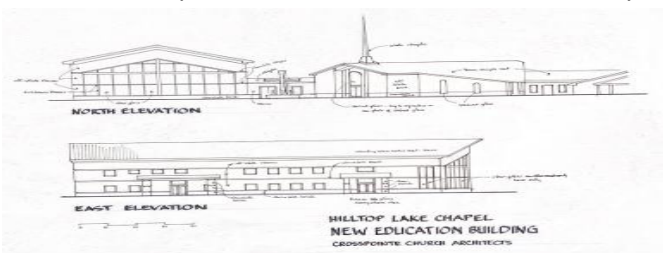
Architects use to share us the as-built or Mark-ups to produce the desired drawing sets.

As we know the standards and process, we do the kick off meeting and start our works.



CAD Conversion

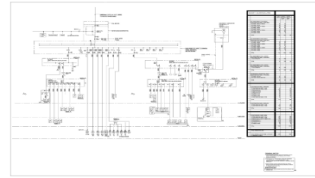
CAD Conversion refers to the process of converting analog information into a digital format. In other words, it involves the conversion of physical objects, documents, or data into a digital representation that can be stored, processed, and accessed electronically.



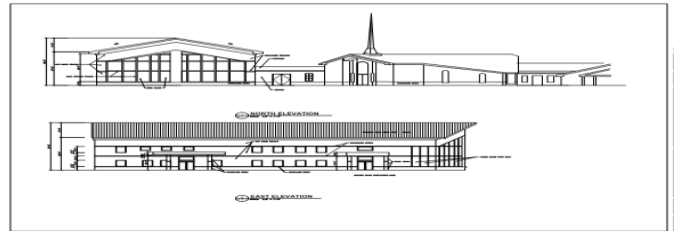
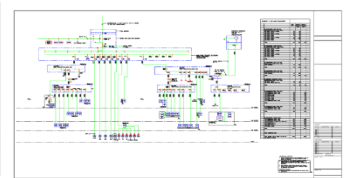
Input

We use receive the files as SCAN document or PDF version to work on the conversion process to convert the files in CAD.

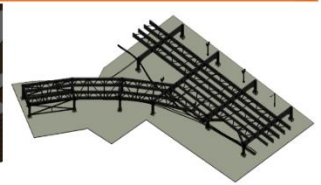
INPUT



OUTPUT



Special Services



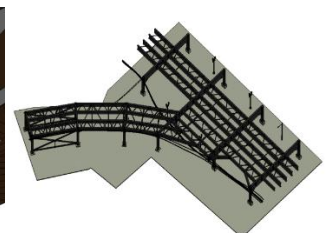
Point Cloud Services (Scan to BIM)

We offer scan point cloud BIM services to create 3D model from scan document. It helps for creation, of visualization, animation, rendering and quality inspection. This services is required by most of AEC professionals like architect and structural to have the co-ordination.

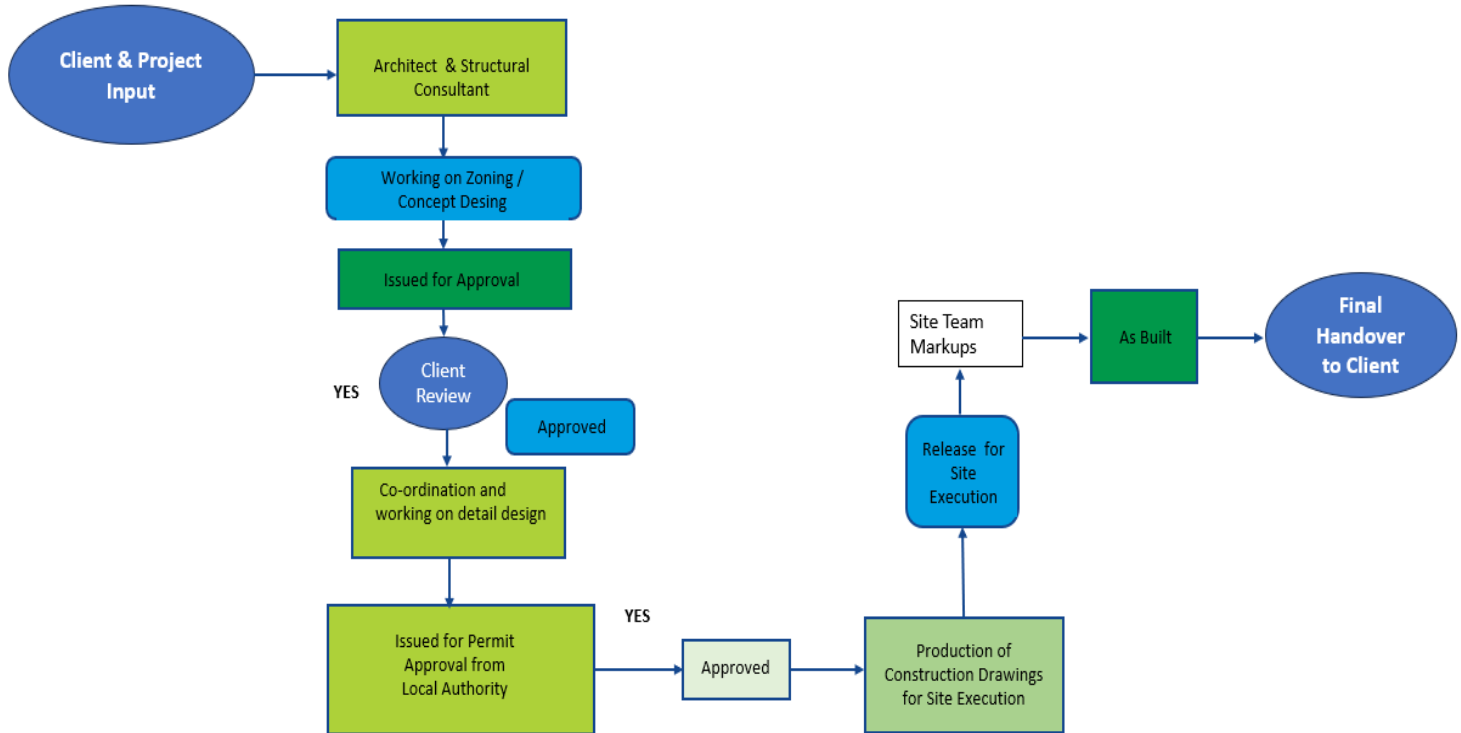
Supporting Software Applications (Revit & Autodesk Recap 360 Pro) for Point Cloud help to visualize and navigate the point cloud files properly. Moreover, by using these software platforms, files can be compressed and dimensions can be easily obtained for BIM model.

Input

We use receive the files of scan document or as point cloud files as per the formats like. Obj. Sbj to develop the Models of existing facilities including architectural, structural, MEP with all elements as required.



Execution Process



3D Model Checklist



AEC – ARCHITECTURAL & STRUCTURAL - 3D MODEL CHECKLIST Date: 28-12-2025 Rev: R0

ARCHITECTURE	STRUCTURAL	INTERIOR
1 GRID PLACEMENT & DIMENSION	1 PILE	1 INTERIOR WALL
2 LEVEL CREATION	2 FOOTING	2 WALL PANNELLING
3 EXTERNAL WALL, INTERIOR WALL	3 COLUMN	3 CEILING DESIGN, LIGHTING
4 DOOR, WINDOW	4 CONCRETE PIRE	4 FURNITURE
5 FOUNDATION (IF APPLICABLE)	5 PEDESTAL	
6 FLOOR SLAB & FINISH	6 PILASTER	
7 CEILING/ROOF	7 BEAM	
8 EXTERIOR TREATMENT (DIFF WALL PROFILE, SWEEP, REVEAL ETC.)	8 COLUMN CAP	
9 MILLWORK & FFE (IF APPLICABLE)	9 DROP PANEL	
10 SANITARY FIXTURES (IF APPLICABLE)	10 WALL	
11 SITE TOPOGRAPHY & RELEVANT FEATURES	11 LUNTEL	
12 WALL SECTIONS	12 CANOPY	
13 WALL JUNCTION DETAILS	13 PIT	
14 FOUNDATION DETAILS (IF APPLICABLE)	14 INSERT PLATE	
15 DOOR DETAIL (HEAD & JAMB DETAIL)	15 SLAB	
16 WINDOW DETAIL (HEAD, JAMB & SILL DETAIL)	16 FLOOR SLOPE	
17 CEILING DETAILS	17 FLOOR DROP / FOLD	
18 ROOF DETAILS	18 FLOOR DRAIN	
19 EAVE DETAILS	19 FLOOR DECK	
20 MILLWORK & FFE DETAILS (IF APPLICABLE)	20 JOINT	
21 SANITARY FIXTURES (IF APPLICABLE)	21 TRENCH	
	22 PAD	



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Drawing Checklist



AEC – ARCHITECTURAL & STRUCTURAL - DRAWING CHECKLIST Date: 28-12-2025 Rev: R0

Common Checklist	Architecture	Interior
Title Block		
1 Key Plan	1 Walls, Windows & Fixture Tags	1 Finishes, Ceiling and Wall designs
2 Revision Check	2 Walls, Windows & Fixture Annotations	2 Furniture and Fixtures, Lighting Design
3 Date	3 Standard Dimension	3 Standard Annotations
4 Scale	4 Schedule Detailed Sheet Legends & Notes	4 Required Sections & Elevations
5 Title	6 Elevations & Sections	5 Schedule Detailed Sheet
6 Consulting Details		6 Sheet Legends & Notes
7 Client Details		
8 Sheet Key Notes		
B General Notes and Sheet Key Notes		
1 General Notes		
2 Sheet Key Notes		
C Aesthetic Review / Grid Review		
1 Drawing Presentation		
2 Grid Check		
D Project Specific		
1 Sheets Referenced in Appendix A Present		
2 Schedules Present		
3 Finishes Present		
4 Elevations to Finish Schedules Proper		
5 Missing Key Drawing-Specific Information		
6 Proper Drawing Reference Details		
7 Relevant Annotation Information		



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Core Team

Irshad Ali Shaikh

CEO – Co-Founder

Mr. Irshad Ali is the co-owner & founder of DESIGN AND DRAWING SOLUTION. He is having more than 15 years of experience in Building services in construction Industry throughout AEC project execution process from Pre-construction, construction processes like MEP engineering consulting, Designing, installation and handover process of the project.

He has completed BE in Mechanical Engineering from Pune University with Post Graduation in Project Management (PGPPM) from NICMAR Pune, India. In his small journey, he has successfully delivered the more than hundred BIM/CAD project for his satisfied client with the best quality and unique team effort. He has experienced in all kinds of projects i.e., starting from Residential township, Commercial IT buildings and parks, Malls, High rise building, Hotel, Hospital & Institutional building. Including building Infrastructure projects like metro, airports, globally i.e. USA, Australia, New Zealand & India.

Karishma Bibi

Sales Head

She is the co-owner of DESIGN AND DRAWING SOLUTION and well experienced in offshore sales development initiatives. She is having a good knowledge of result-oriented sales development processes and customer retention. She is leading the complete sales team for B2B sales within the company and managing and monitoring the effectiveness of the entire sales cycle. She has implemented her interior design expertise to improve the technical expertise for client communication for offshore sales which helps her build a long-term relationship with new and existing clientele.

Rupam Mondal

Production Manager








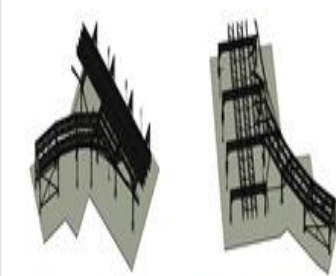
He holds a Mechanical Engineering diploma from WBSCTE, India and having more than 7 years' experience in Building construction Industry for MEP engineering, Drafting, of 3D, 4D, 5D & 6D BIM service.

He is having expertise in MEP engineering calculation, with all Autodesk BIM/CAD tools like Revit, Fabrication, AutoCAD MEP, Navis works and AutoCAD and has complete knowledge of engineering and drafting services for all stages (Pre/post) of construction process.

He is working in DESIGNING AND DRAWING SOLUTION since from starting period of the company.

With a short period of time, He has gained the managing process of the company, client communication, project management process and assisting with innovative (R & D) solution of new process, tools for new requirement of clients.

Project References

Architectural		Structural	Point Cloud
			
Harper House	MARTINSBURG VA MEDICAL CENTER	NICTD - Retaining Wall 301, Bridges SB101 & SB101A	Single family house 3860
Atlanta	Martinsburg, West Virginia	USA	USA
USA	USA	USA	USA
Residential	Healthcare Facility	Infrastructure Bridge	Residential
			
Zion Church	Morgan Station	NICTD WLC - North Bridges-N-ES204	2142 - CDOT - Damen Green Line
USA	USA	USA	Chicago, Illinois, USA
USA	USA	USA	USA
Commercial	Commercial	Infrastructure Bridge	Utility

Contact US


DESIGN AND DRAWING SOLUTION
ONE STOP BIM | CAD | MEP
ENGINEERING SOLUTIONS

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