Roschmann GROUP

FTI DIALOGUES

Collaborative Project Delivery Reloaded:

Meeting Future Requirements of the Building Industry

Facade Tectonics

Featured Speaker

DIRK SCHULTE

Pre-Construction Executive, Roschmann Steel & Glass Constructions

19 March | FRIDAY

3:00 – 5:00 PM EST

The Specialty Subcontractors Perspective:

Collaborative Project Delivery

Preloaded with Design Assist

Roschmann GROUP

Content

- The Roschmann Group
- The Design Assist Model
- Collaborative Project Delivery
- Reference Case

The Roschmann Group

The German Roschmann Group is an internationally operative facade specialist focusing on bespoke and innovative construction solutions for engineered building envelopes.

- ✓ 69 years facade experience
- ✓ 350+ dedicated employees
- ✓ 4 locations, part of RSBG Group
- ✓ 120,000+ sf in-house factory floor
- ✓ one 12-story HQ tower

Integrative Project Delivery

Turning vision into reality

Vision
The project starts with your vision.

Planning & design
We develop an appropriate and innovative facade design solution.

Mock-up & testing
Sampling and testing ensure the best possible execution.

Fabrication
Our in-house production facilities guarantee the highest quality standards.

Installation
We ensure perfectly coordinated installation processes with smooth logistics.

Completion
The project ends with your bespoke building envelope.

The Design Assist Model

In a Design Assist delivery system, the architect, engineer, builder and enclosure contractor are mutually developing the enclosure system. Subcontractors and material suppliers are getting involved early or become participants at some stages of the design process. The Design Assist model is predicated on an Integrated Design and Construction team. The enclosure system design, engineering and details, construction methods and costs are being developed concurrently as the design progresses.

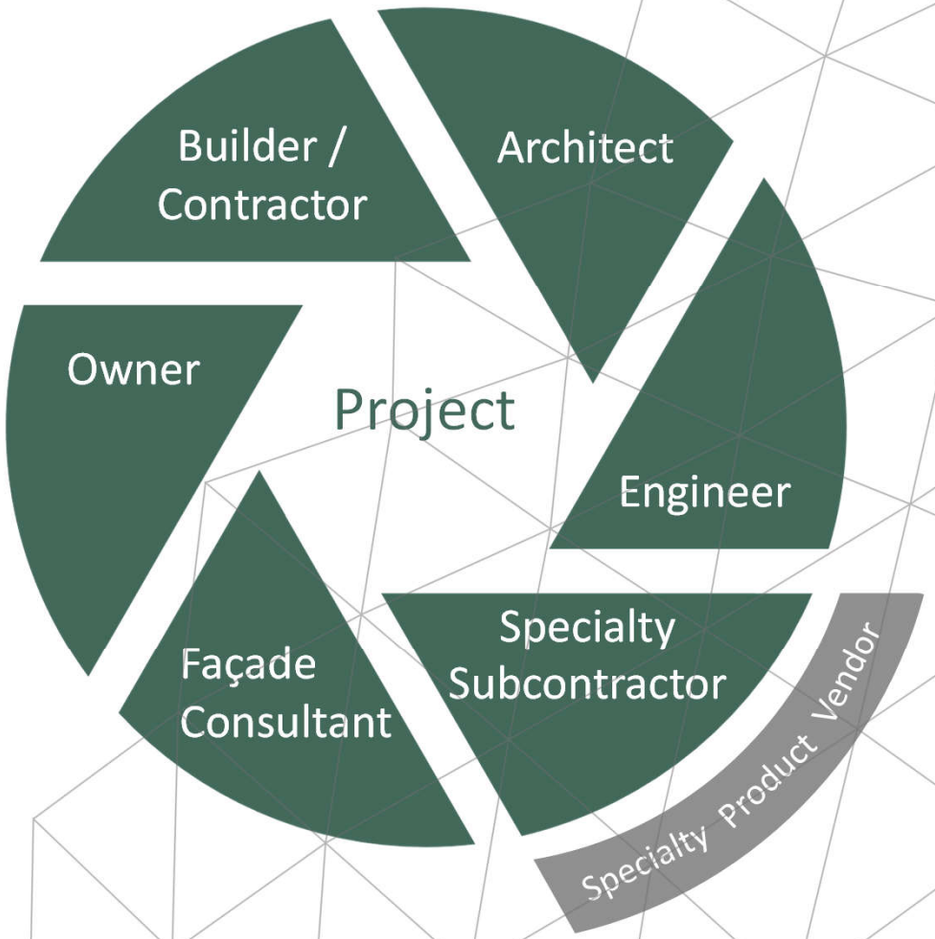
Quote: Keith Boswell, SOM Architetcs

Refining Project Delivery

Design Assist at a Glance

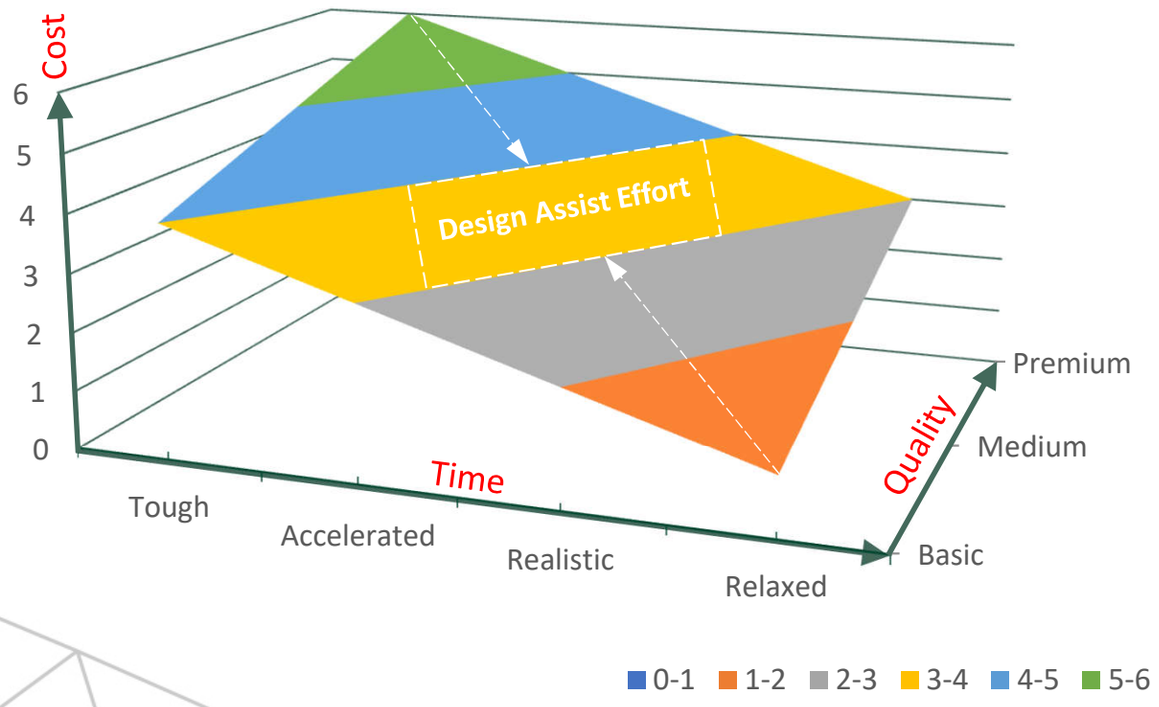
Design Assist is intended to shine brightest when the nature of the project requires early engagement of the construction team.

- Complicated Architecture
- New Technologies
- Aggressive Project Schedule
- Budget Constrains
- Specialty Construction

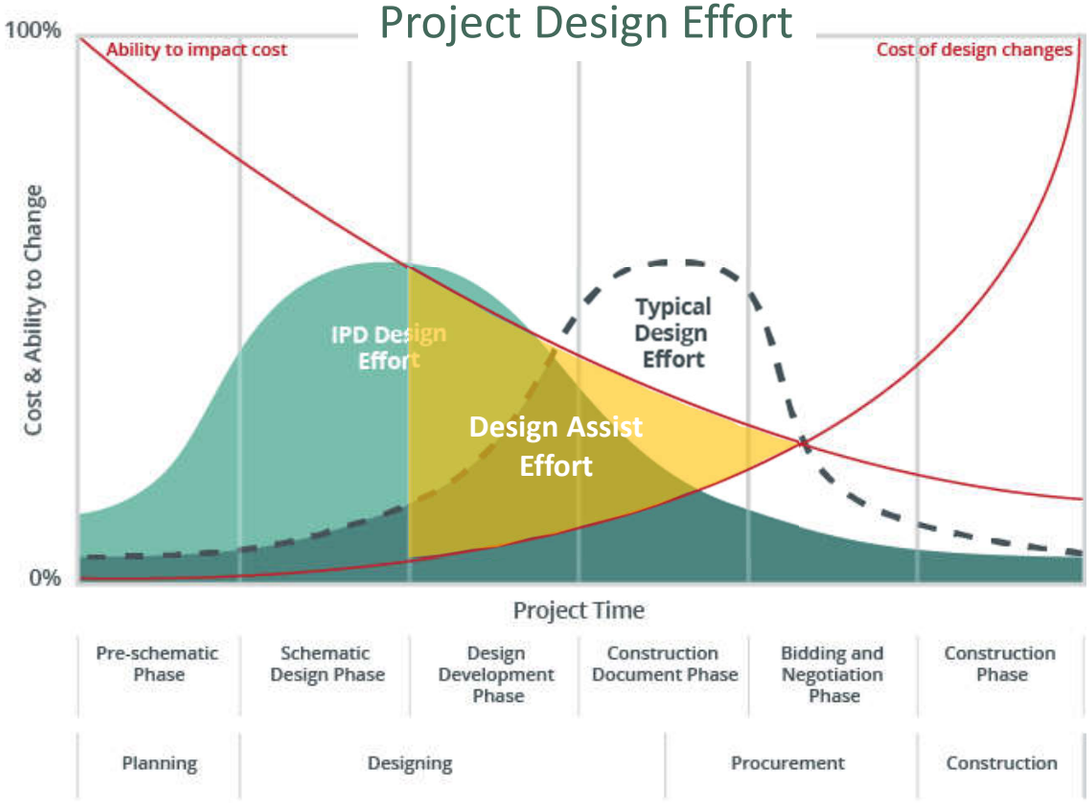


Design Assist vs. Project Cost

Project Delivery Cost



Project Design Effort



Design Assist Benefits & Draws

Design Assist performed with a specialty constractor **BENEFITS** the project process & delivery, if started at the right time, leading to ...

- Optimized Project Delivery
- Integrative Design Coordination
- Real-Time Cost Control
- Increased Product Quality
- Innovative Material Selection
- Value Engineering

Contrary to the beneficial impact a Design Assist has on a typical project process, there are **RISKS & ISSUES** to be considered, such as ...

- Design Responsibility
- Difference in Expectations
- Qualification & Resources
- Scope Gaps not identified
- Willingness to Compromise
- Discipline to Schedule

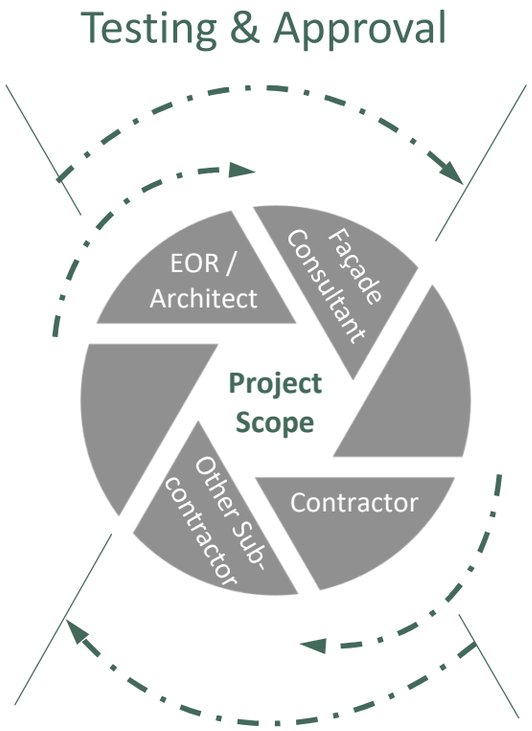
Collaborative Project Delivery
RELOADED

- Starts with Design Assist & GMP Target
  - Ideally from 100% SD, but latest at 50% DD
  - Results in pre-approved System Design by 100% CD
- Requires clearly identified ...
  - Communication among CM, Owner, Architect, Sub
  - Responsibilities (design, BIM & contractual)
  - Goals, Deliverables & Milestones
- Accelerates Schedule through ...
  - Delegated Design by Subcontractor
  - Optimized review and approval durations
- Controls Budget & Quality

Collaborative Project Delivery

Post- Design Assist Actions

Delegated Design



Custom Fabrication

Timely Installation

Integrated Logistic Plan

Case Study

https://roschmann.group/en/projects/duke-university-west-campus-union/

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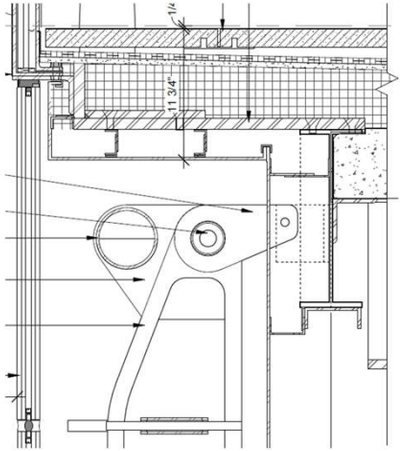
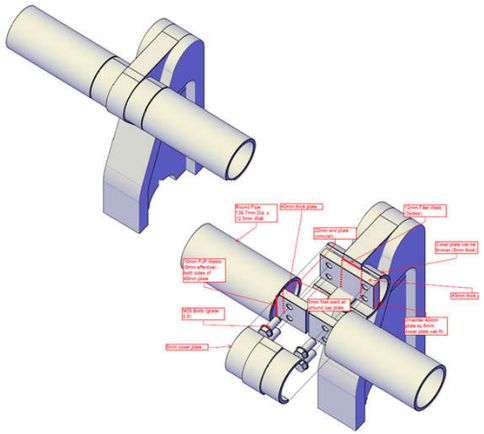
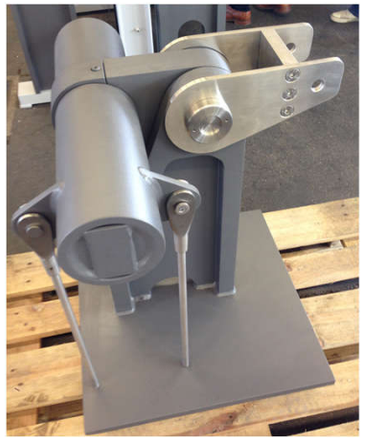
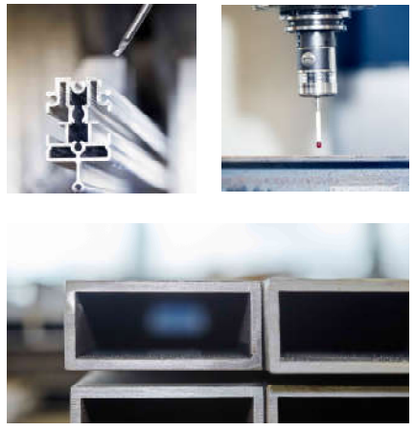
Duke University
Durham, NC, USA

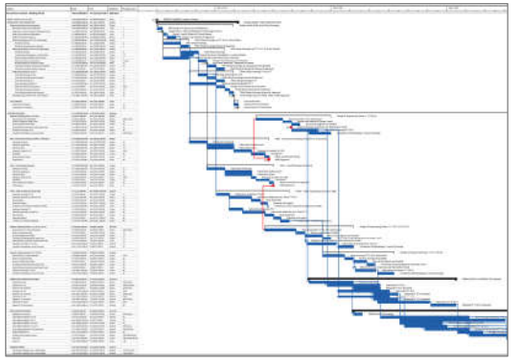
Project Workflow – Design Assist











SYSTEM DESIGN

- Sketches & Studies
- Technical Consulting
- Constructability
- System Evaluation
- Initial System PD

CONSTRUCTABILITY PRE-ENGINEERING

- Structural/Thermal Checks
- 3D Modeling
- Integrative Assembly
- Building Movements
- Connections to Building

PROTOTYPING / MATERIAL

- Finishing Samples
- Glass Analysis & Selection
- Standard Glass Samples
- Material Selection
- Table-Top Mock-Up’s

COST CONTROL / VE

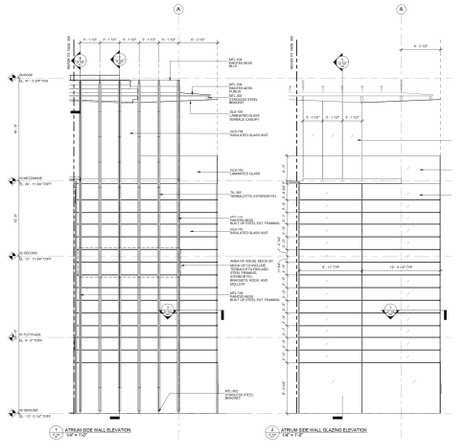
- Scope vs. Specification
- Real-time Cost Track
- Value Engineering
- Product Evaluation
- Cost Check & Forecast

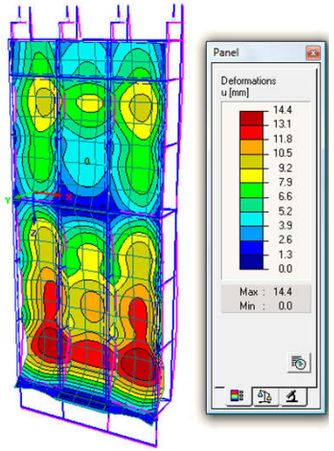
SCHEDULE & LOGISTIC CONCEPT

- Schedule Alignment
- QA/QC Plan
- Critical Path Development
- Preliminary Logistic Plan
- Sequence Coordination

RESULT: SIMPLIFICATION IN CONSTRUCTION DETAILS & FABRICATION LEADING TO -18% COST, +15% SCOPE COVERAGE & 3M SCHEDULE IMPROVEMENT

Project Workflow – Construction





DELEGATED DESIGN

- Shop Drawings
- Scope Verification
- Interface Coordination
- 3D Model Revision
- BIM integration

ENGINEERING

- Façade Engineering
- Full scale Mock-Up
- Performance Testing
- Scheduling
- Benchmark Samples

MANUFACTURING

- Steel Fabrication
- Glass Fabrication
- Curtain Wall Fabr.
- Metal Workshop
- Finishing

LOGISTICS

- On & Off-site deliveries
- Sea / Air Freight
- Local Storage
- Just in time deliveries
- Local Fabrication/Finishing

FACADE INSTALLATION

- Field Equipment
- Technical Supervision
- Erection/Glazing
- QA/QC, Safety
- Inspection & Testing

RESULT: COORDINATED DESIGN DETAILS RESULTING INTO EFFICIENT APPROVALS, EARLY FABRICATION RELEASE OF LONG LEADS, ADHERENCE TO SCHEDULE

Duke University
Durham, NC, USA

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Reloaded with Design Assist

Thank You!

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