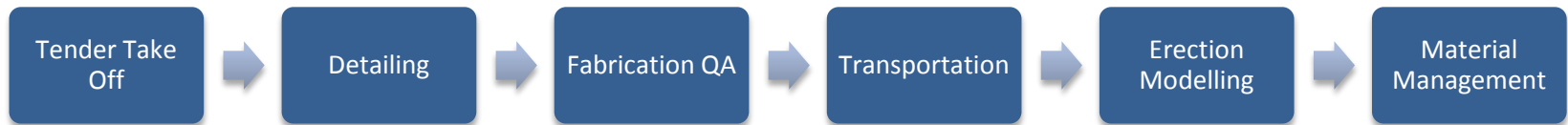
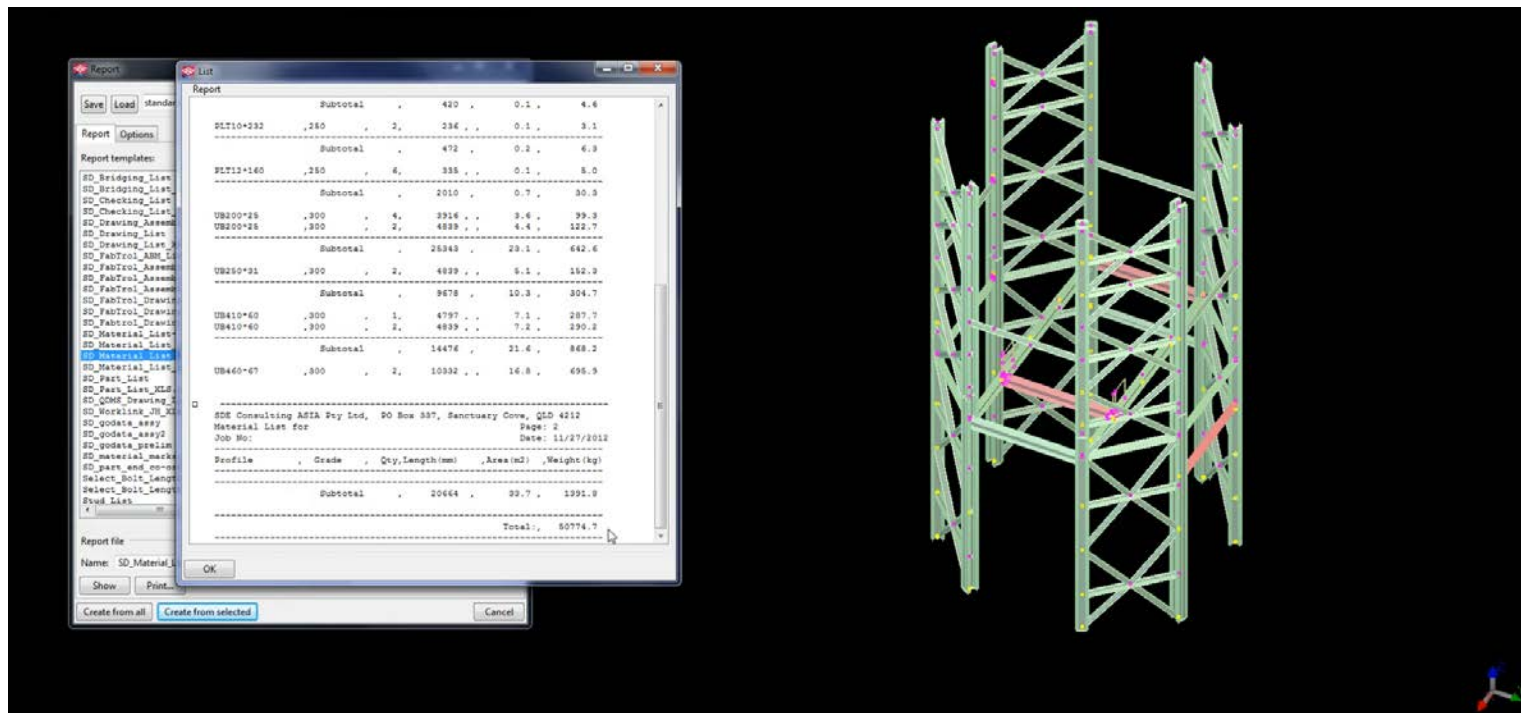


# SDE Services

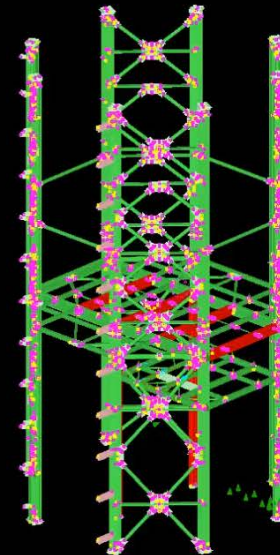
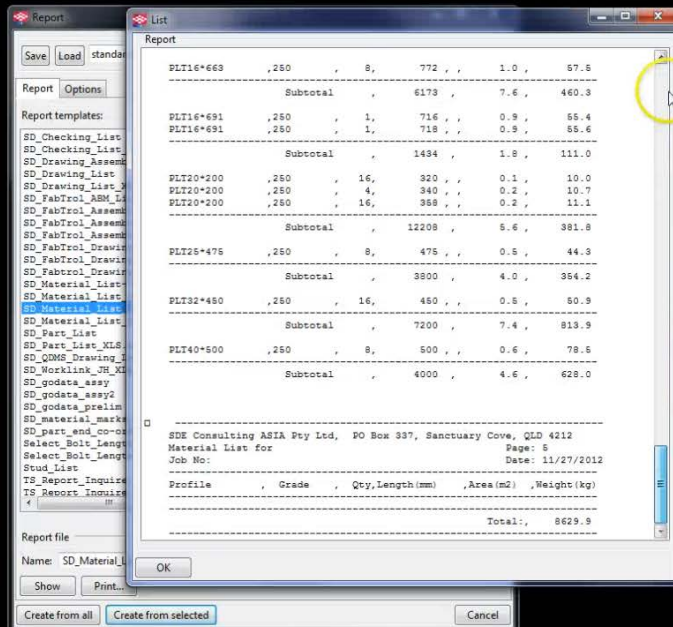


# Tender Take Off

Members are stick modelled in for early material take off. All members are modelled in to touching faces to minimise waste and produce extremely accurate material take off.



Members are macro connected to tender drawings to provide plate weights and take offs, bolts take offs are also provided.



Client:  
Project Number:  
Project Name:  
Phase:

Date: 05.12.2012

## Material List

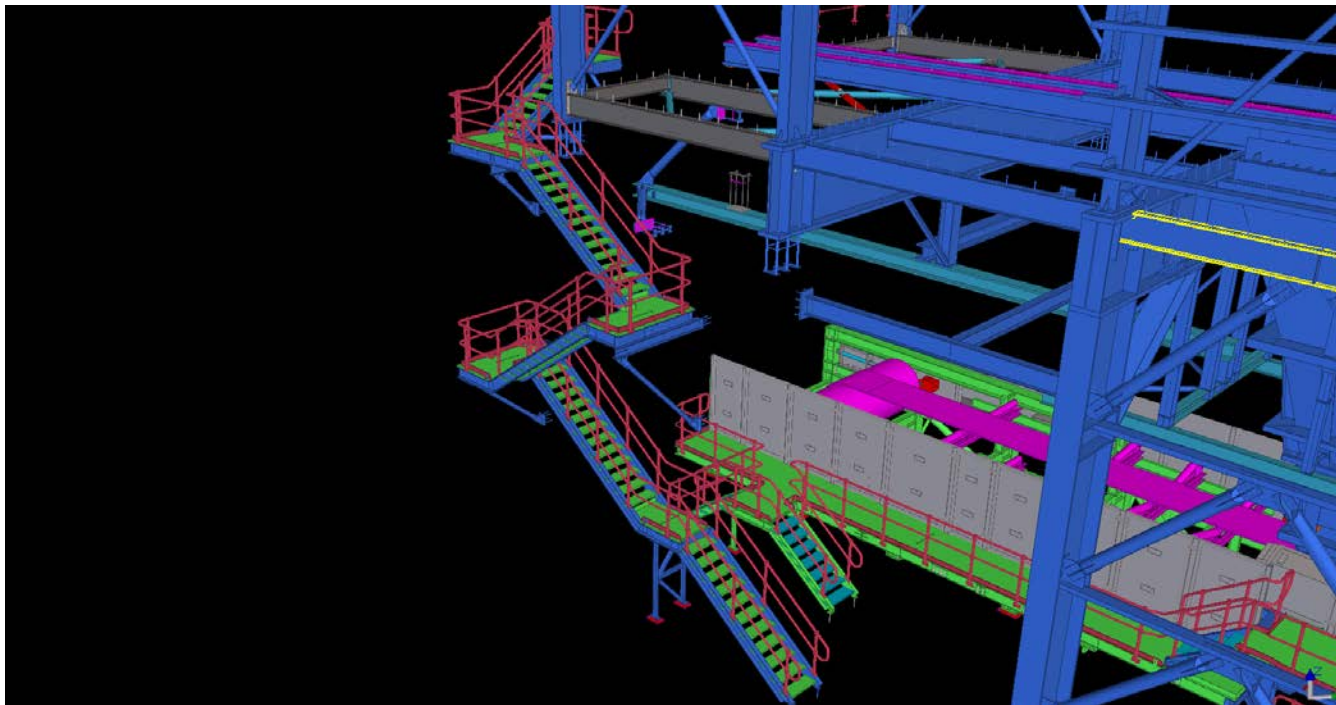
[illegible]

SDE provide Excel format material take offs for client manipulation.

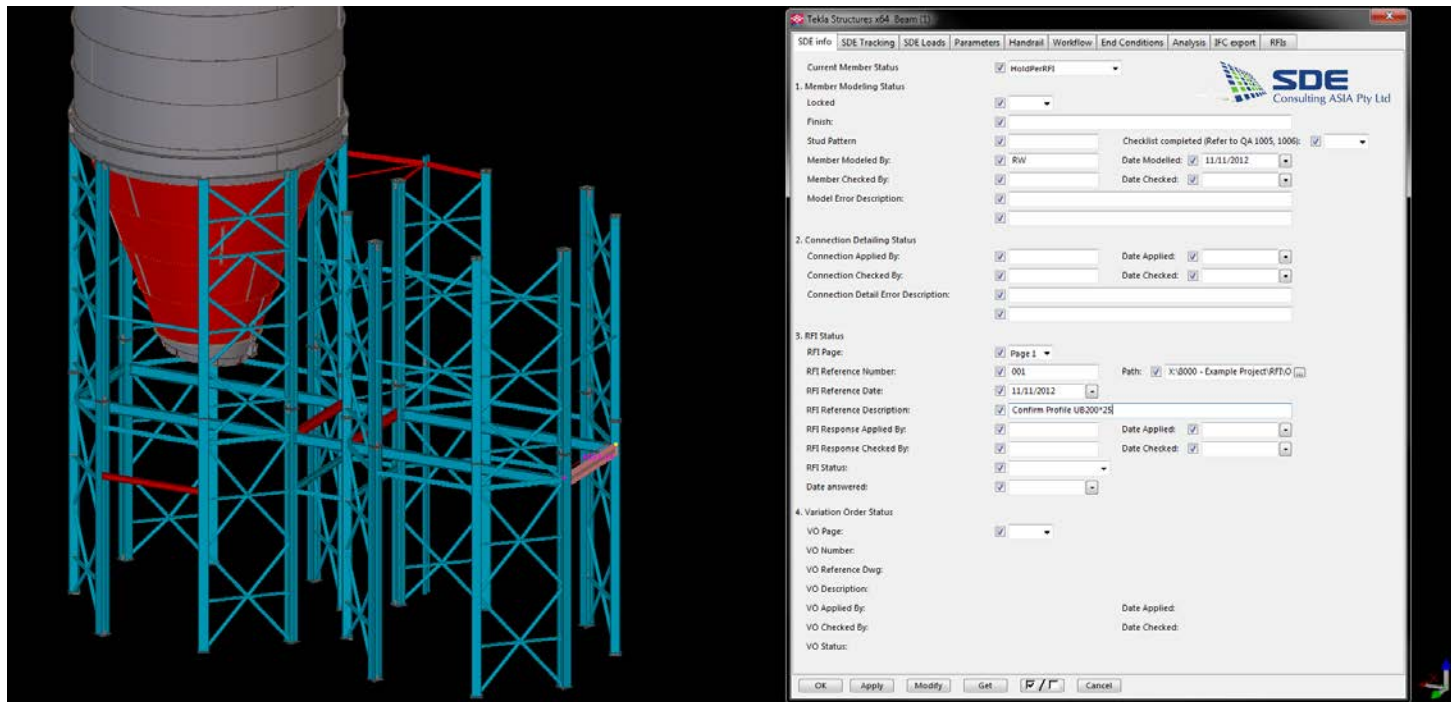
# Detailing

SDE Consulting produces high quality shop detailing drawings, achieved by modelling the project as a 3D model from the engineering drawings to overcome any conflict/clashes. This is then directly converted into shop detailing drawings to issue to the fabricators.

SDE assign statuses to all members in the 3D model, this allows the steel detailers to visibly see the model in different stages from which members have been stick modelled, connected, checked, issued etc.

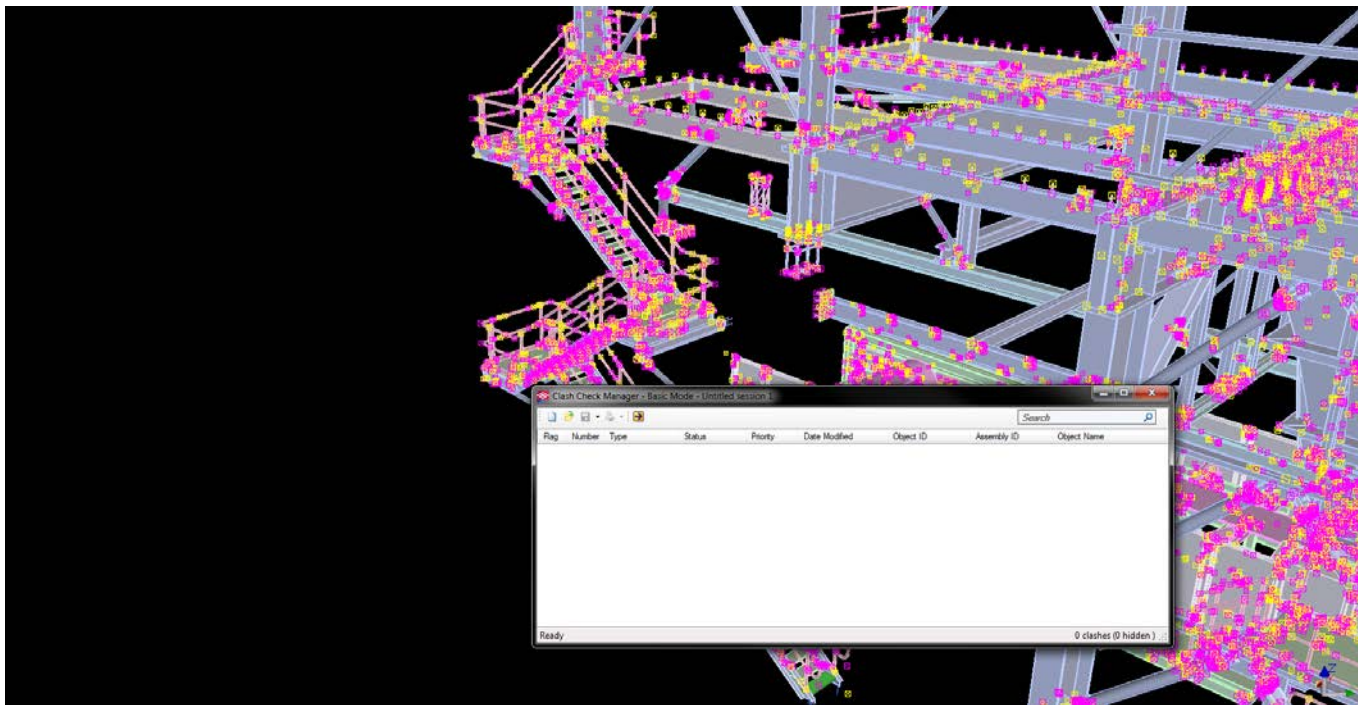


SDE steel detailers attach RFI information to the steel, by using the 'current member status' mode we can visibly see which members are still on hold.





SDE performs clash checks on the model to ensure no re-work is required. Any clashes will appear in the clash check manager box which will notify the steel detailer of its location.

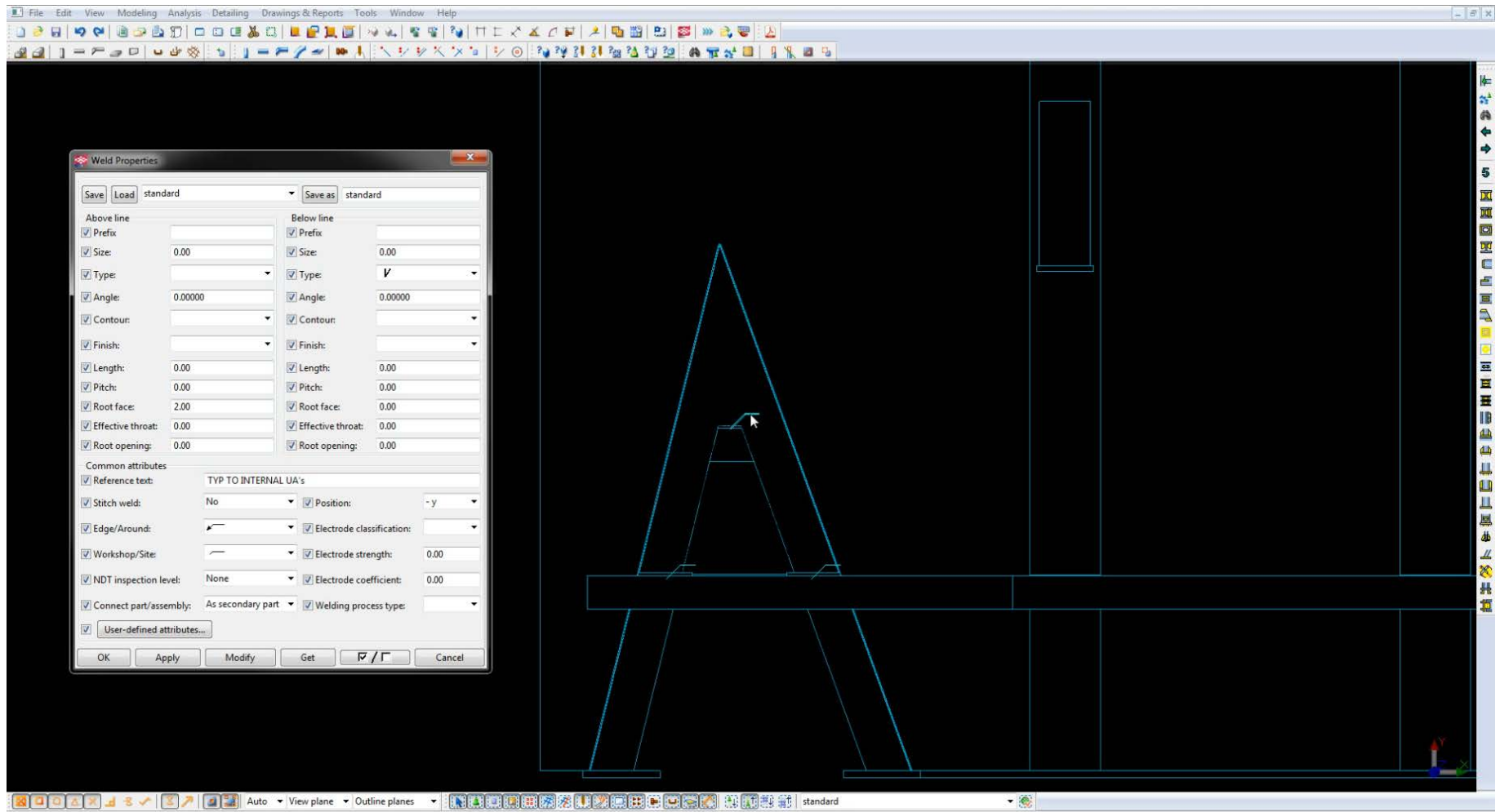




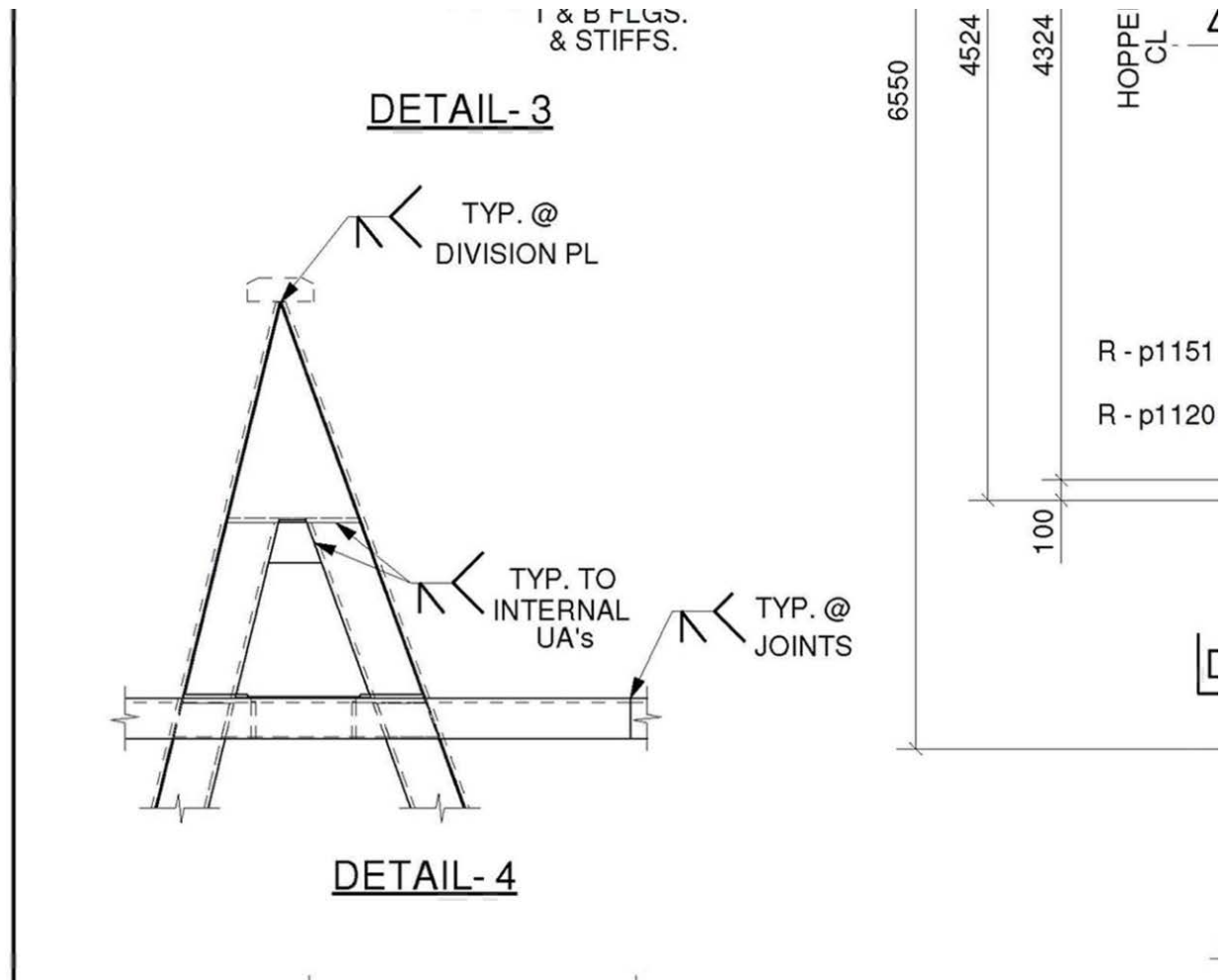
# FABRICATION QA

SDE can place workshop QA staff any where in the world to ensure that all fabrication work are to the highest standards.





SDE fully model all weld information into the model form the engineers drawings.



This information is carried through automatically to the 2D shop drawings.

[illegible]

SDE uses a comprehensive QA inspection sheet to cover all aspects of fabrication in the workshop.

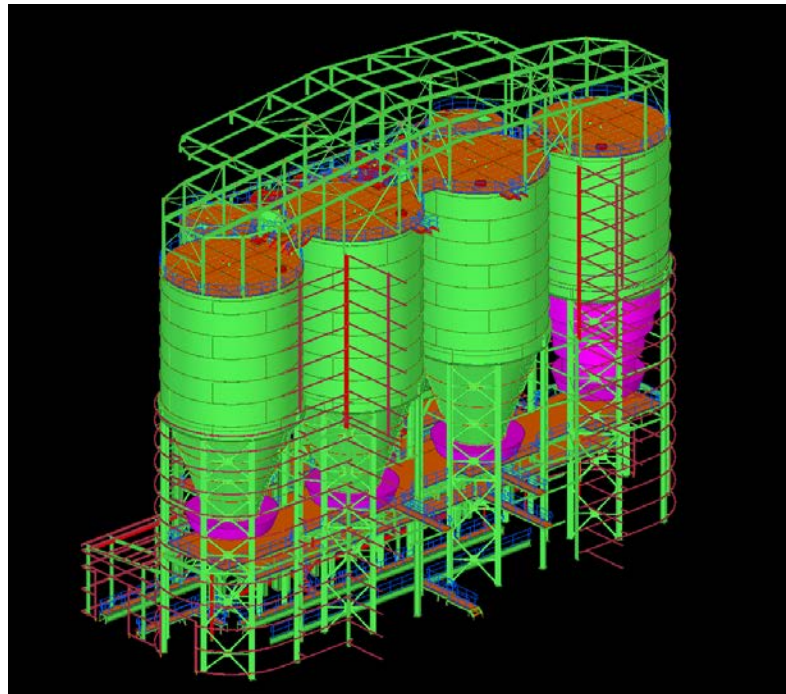




SDE can supply Workshop tablets with software to mark-up any shop detailing drawings for QA.

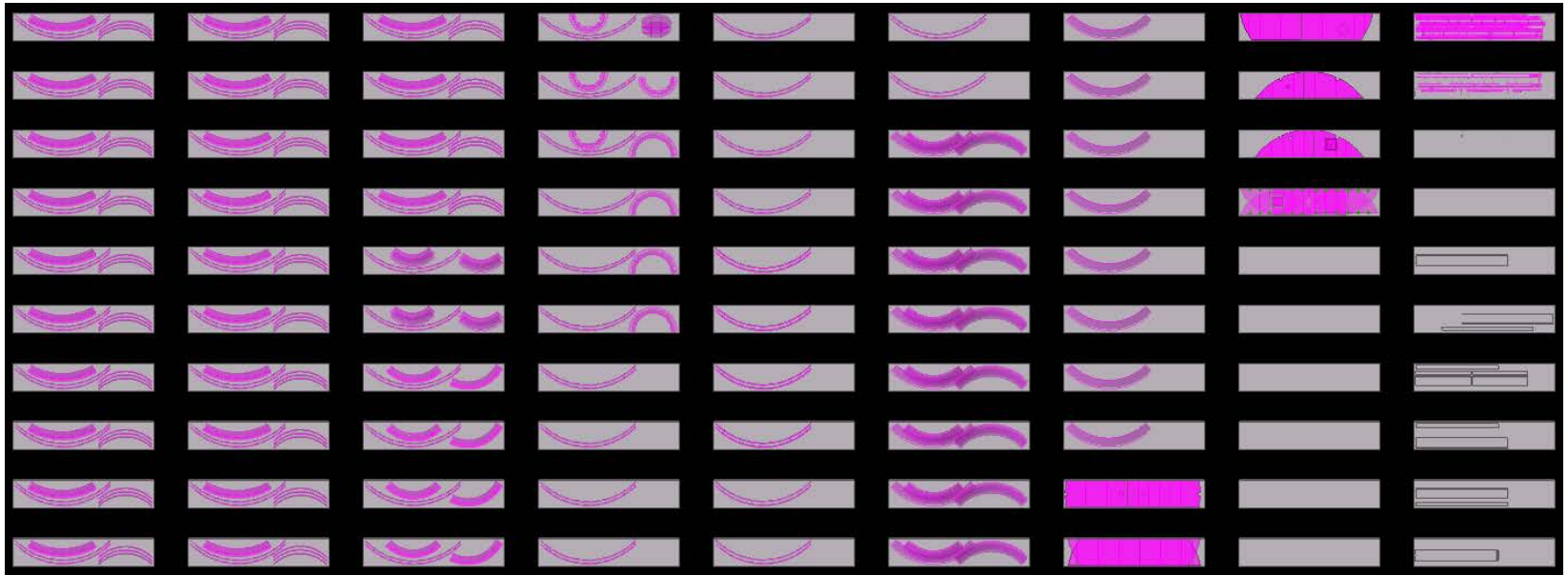
# Transportation

SDE Consulting can model the project parts into available container sizes, reports can be created from each container content and container quantity can be determined for shipping costs.





Model can be colour coded to show steel assigned to containers. Steel shown in purple has been assigned. This ensures all steel is covered and accounted for when calculating exact container amount for tendering.

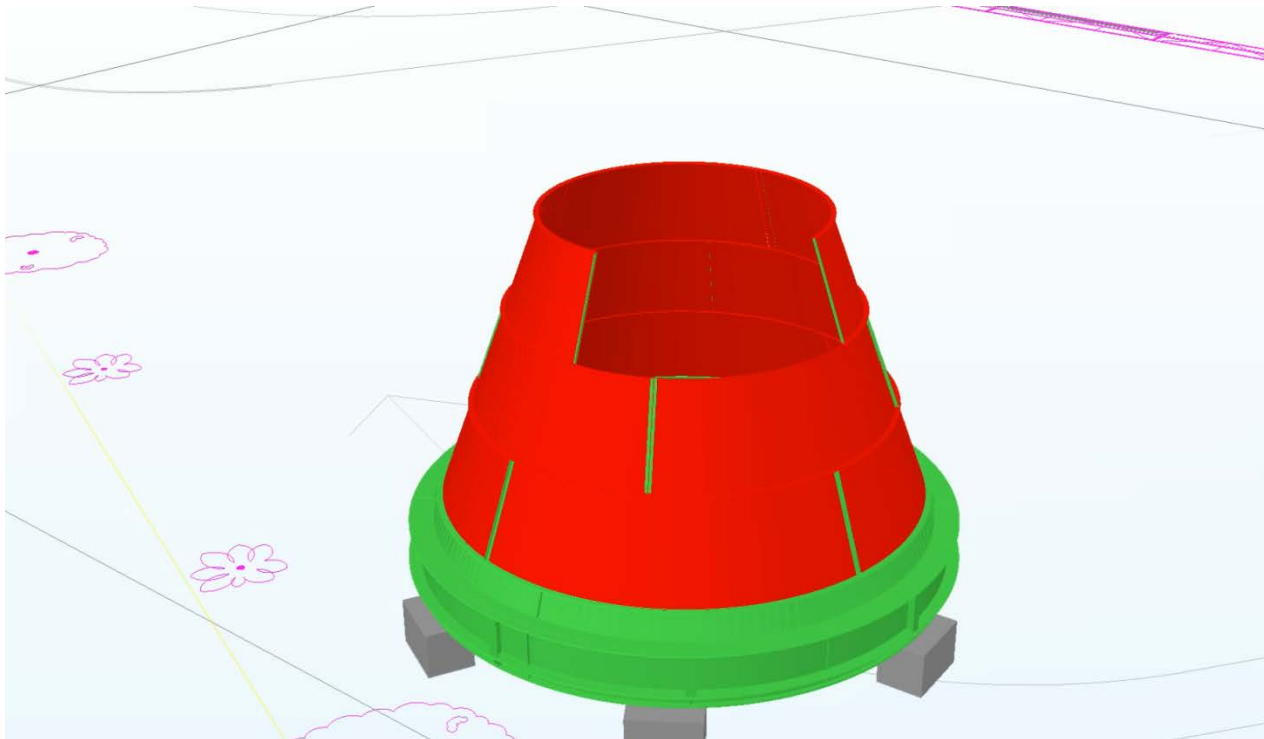


## Transportation Method Assistance:-

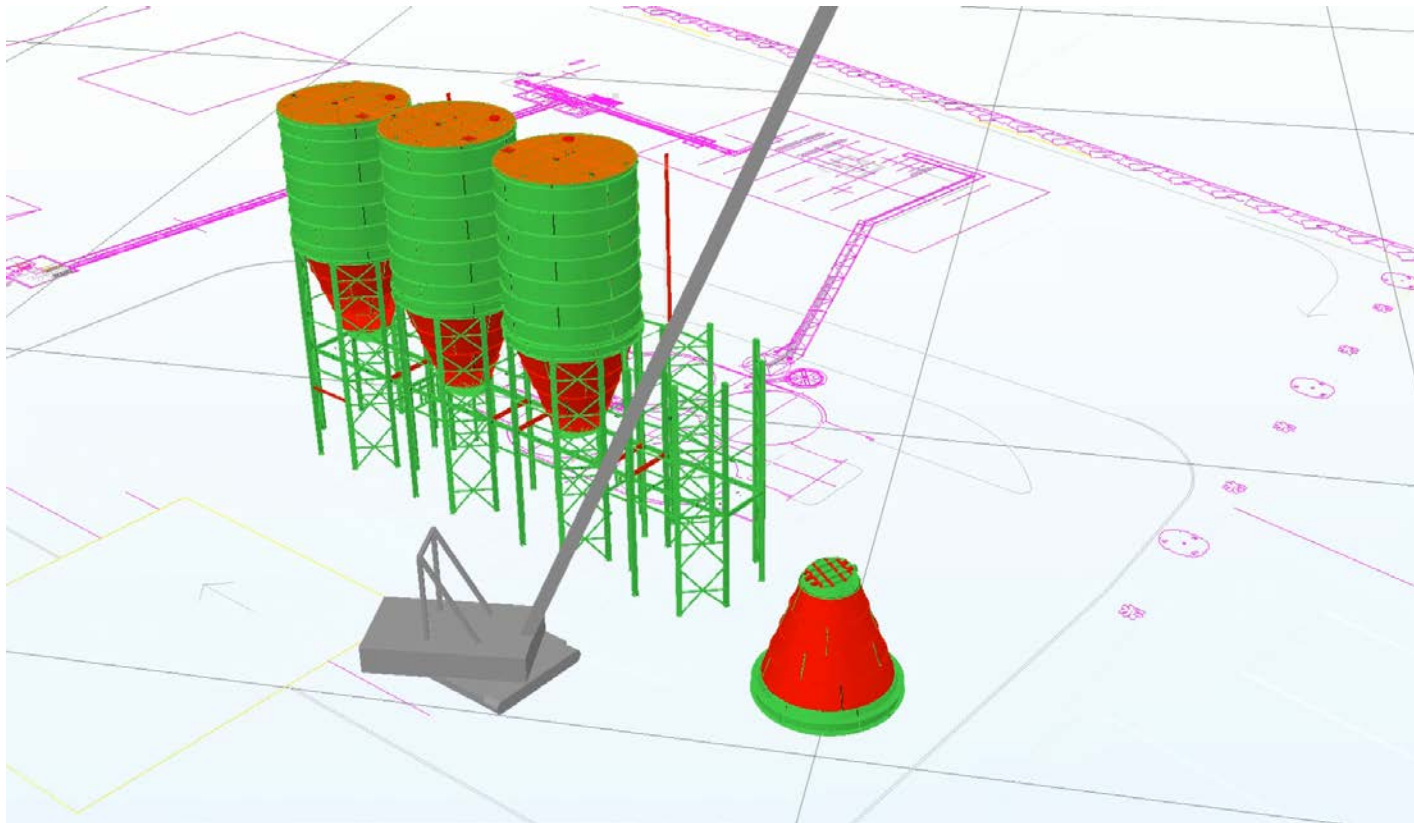
- Steel checked for transportation sizes
- Steel containerised to exact quantities required
- Reports created for each container content
- Contained steel is tagged with ship numbers
- Contained steel is tagged with container reference number
- Contained steel tracked from workshop to site

# Erection Modelling

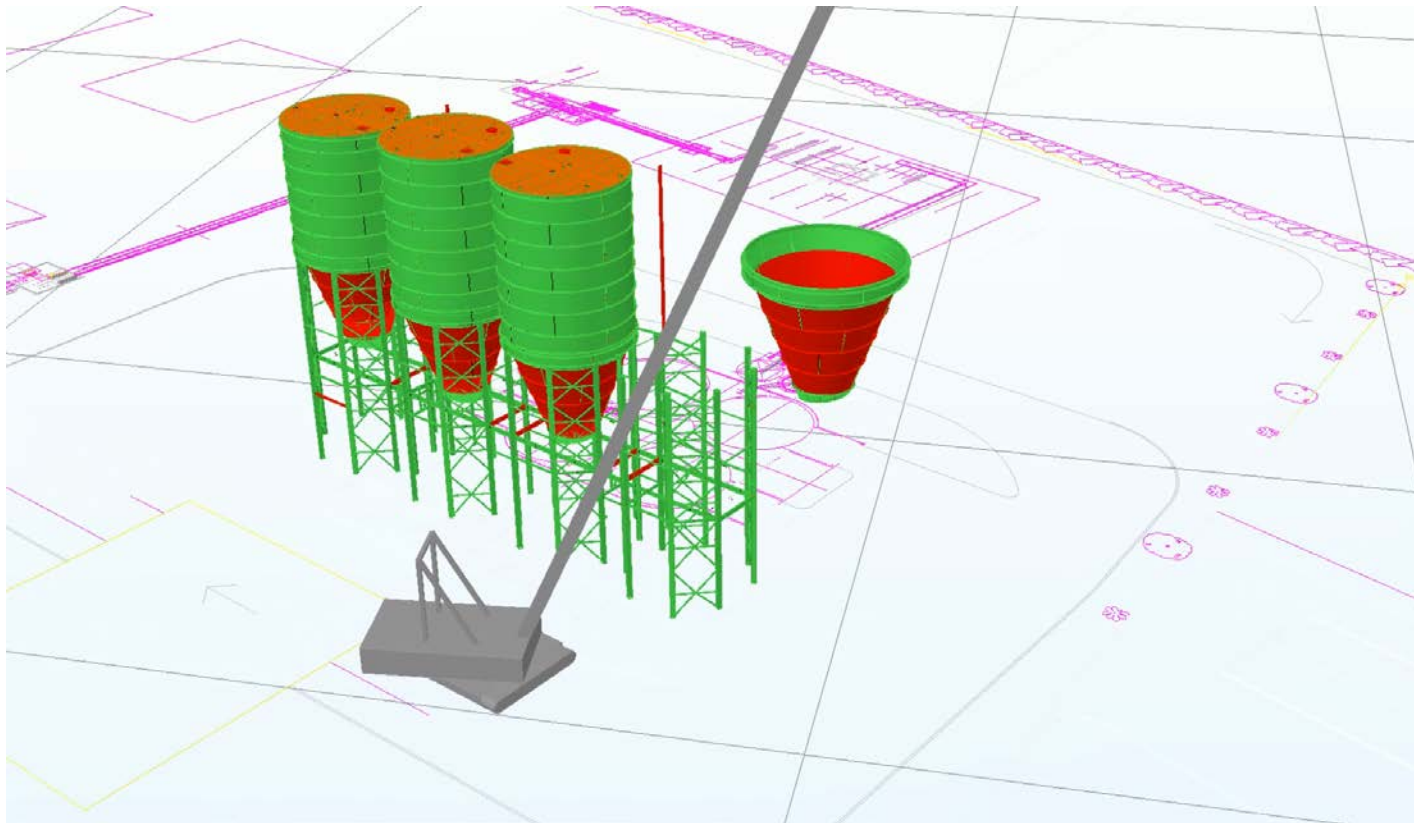
SDE Consulting provide erection sequencing assistance ensuring laydown area, site space and site difficulties are spotted pre-tender stage.



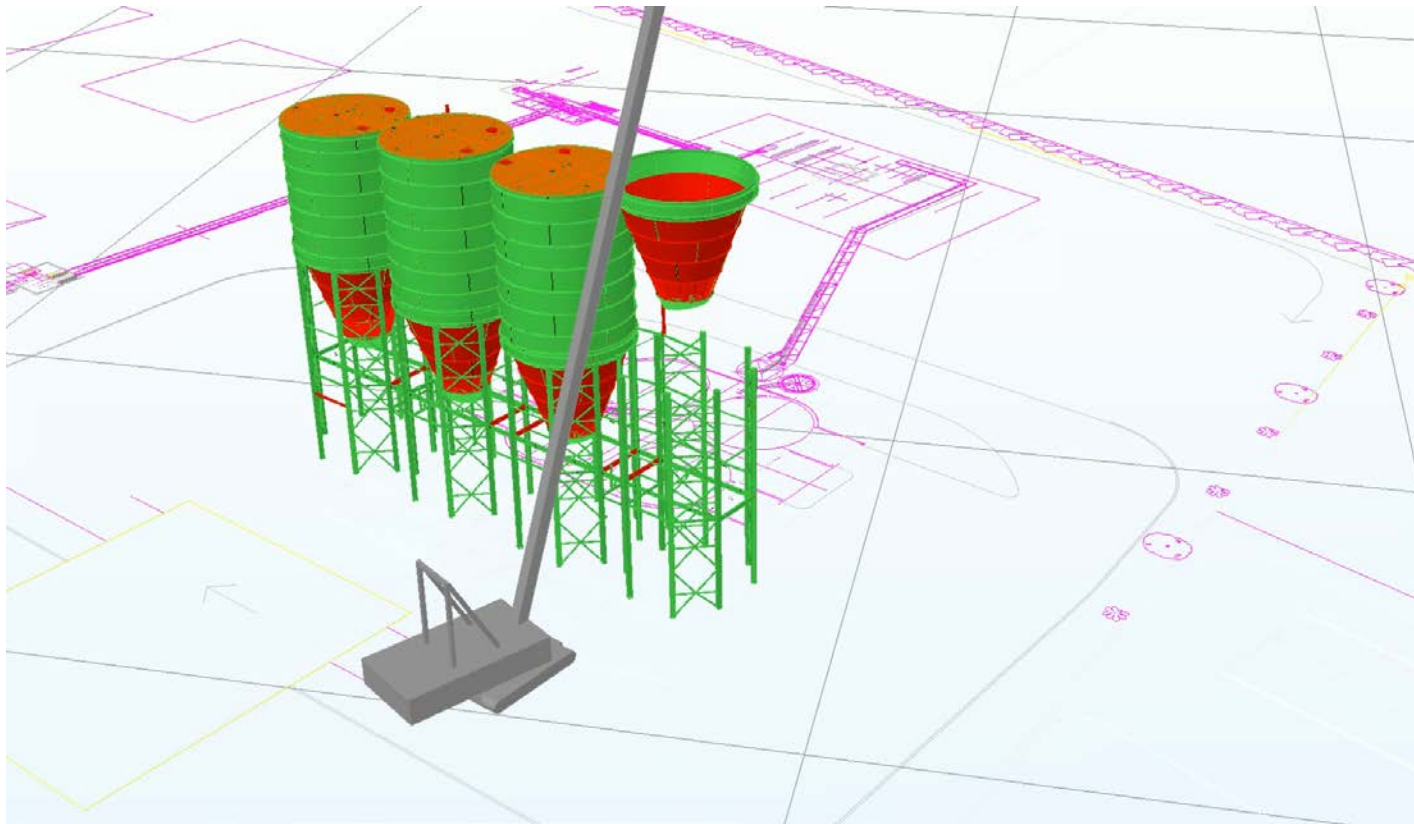
SDE provides 3D lifting assistance to plan heavy lifting to ensure crane position is optimised to reduce site costs.



SDE provides 3D lifting assistance to plan heavy lifting to ensure crane position is optimised to reduce site costs.

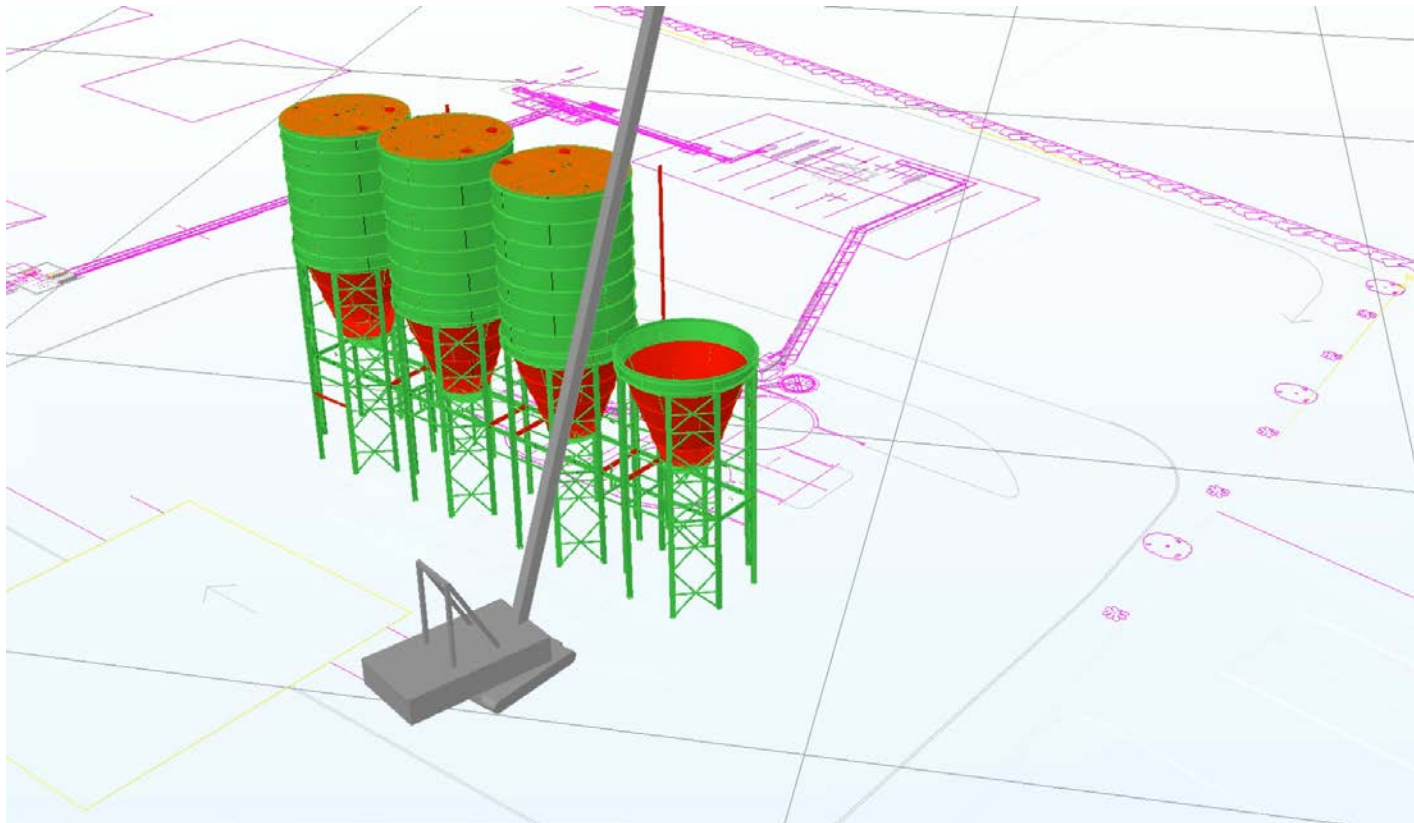


SDE provides 3D lifting assistance to plan heavy lifting to ensure crane position is optimised to reduce site costs.

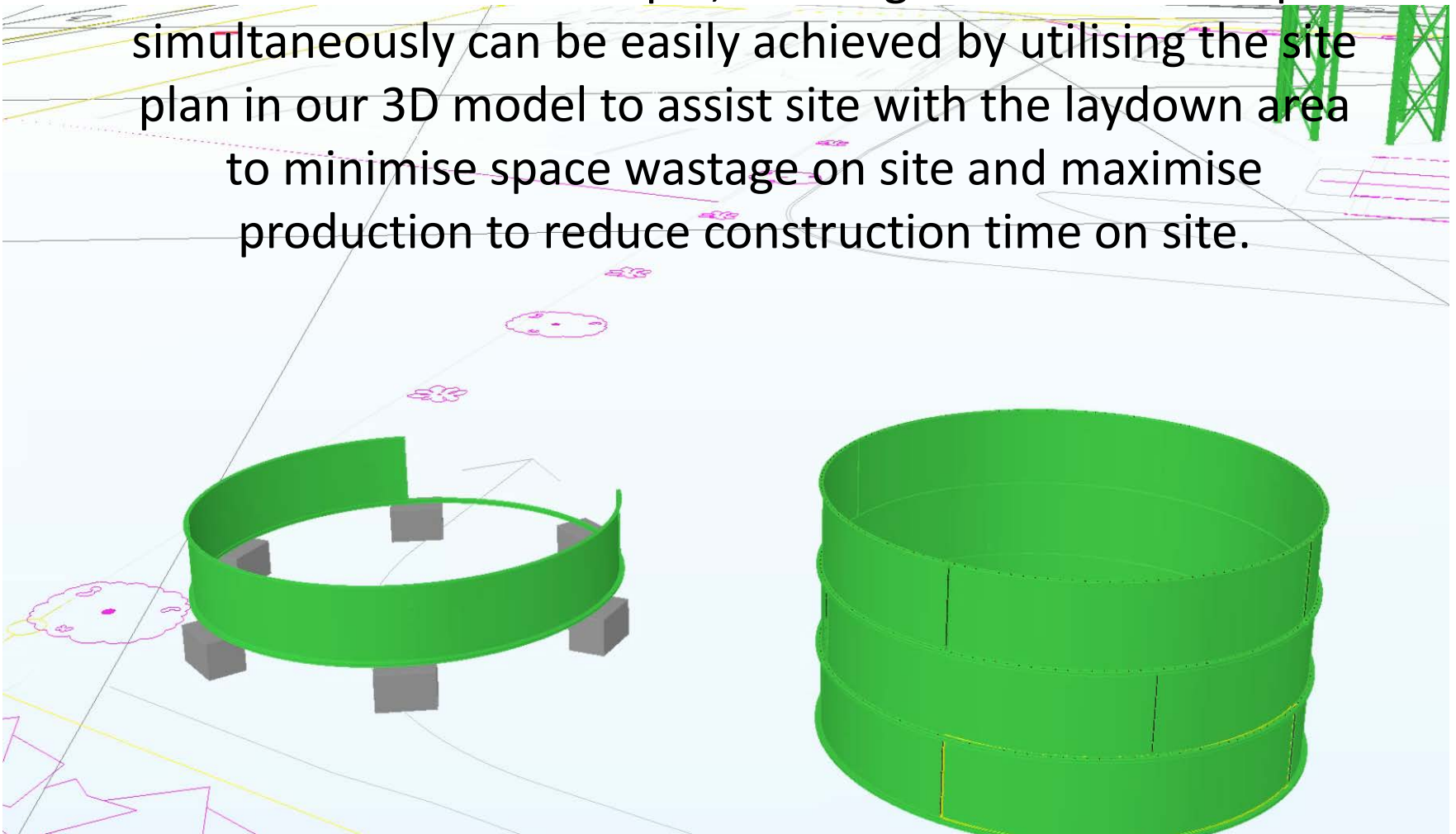




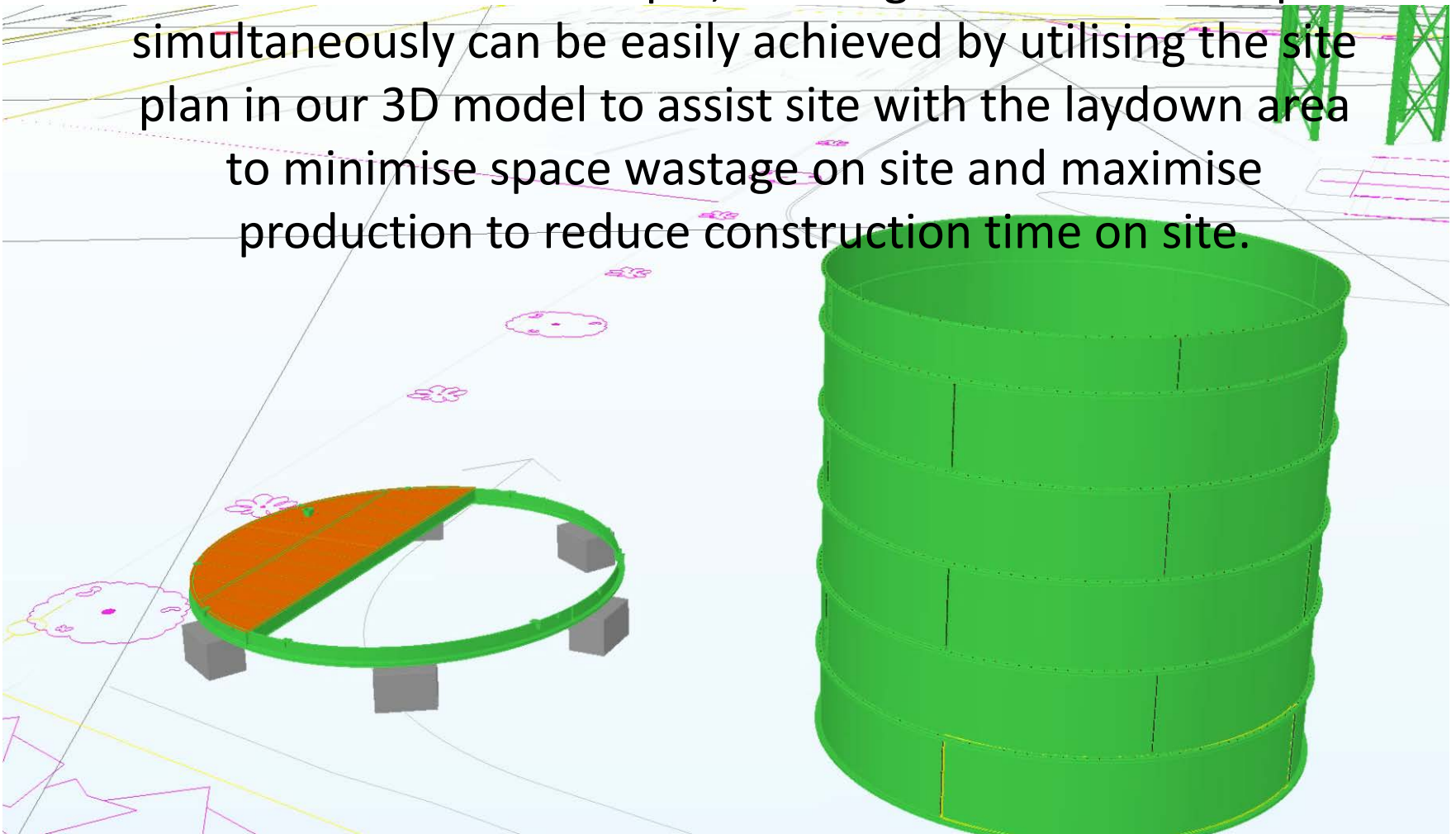
SDE provides 3D lifting assistance to plan heavy lifting to ensure crane position is optimised to reduce site costs.



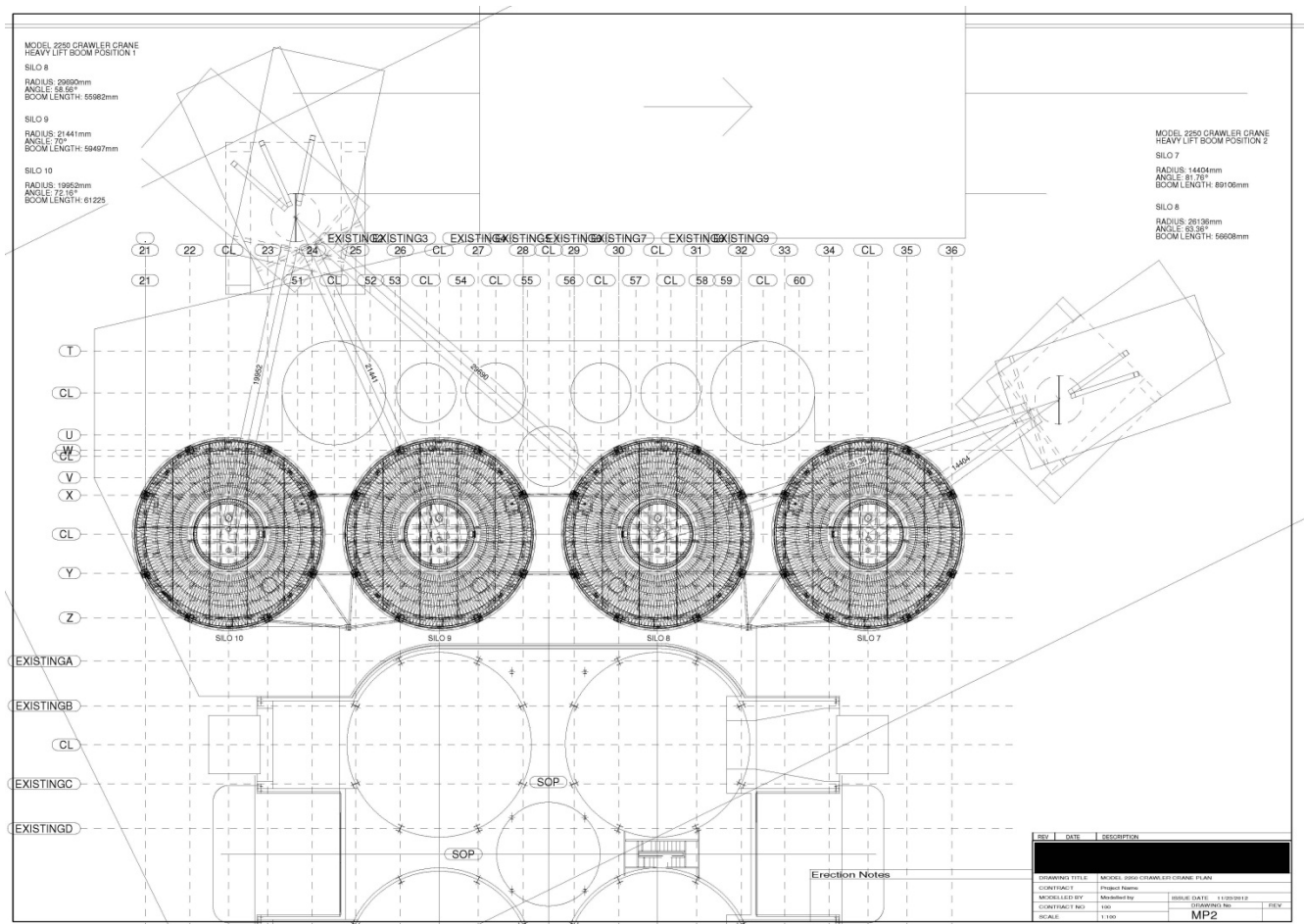
SDE provide laydown area planning in tandem with the site schedule for example, building 4 of these silo tops simultaneously can be easily achieved by utilising the site plan in our 3D model to assist site with the laydown area to minimise space wastage on site and maximise production to reduce construction time on site.



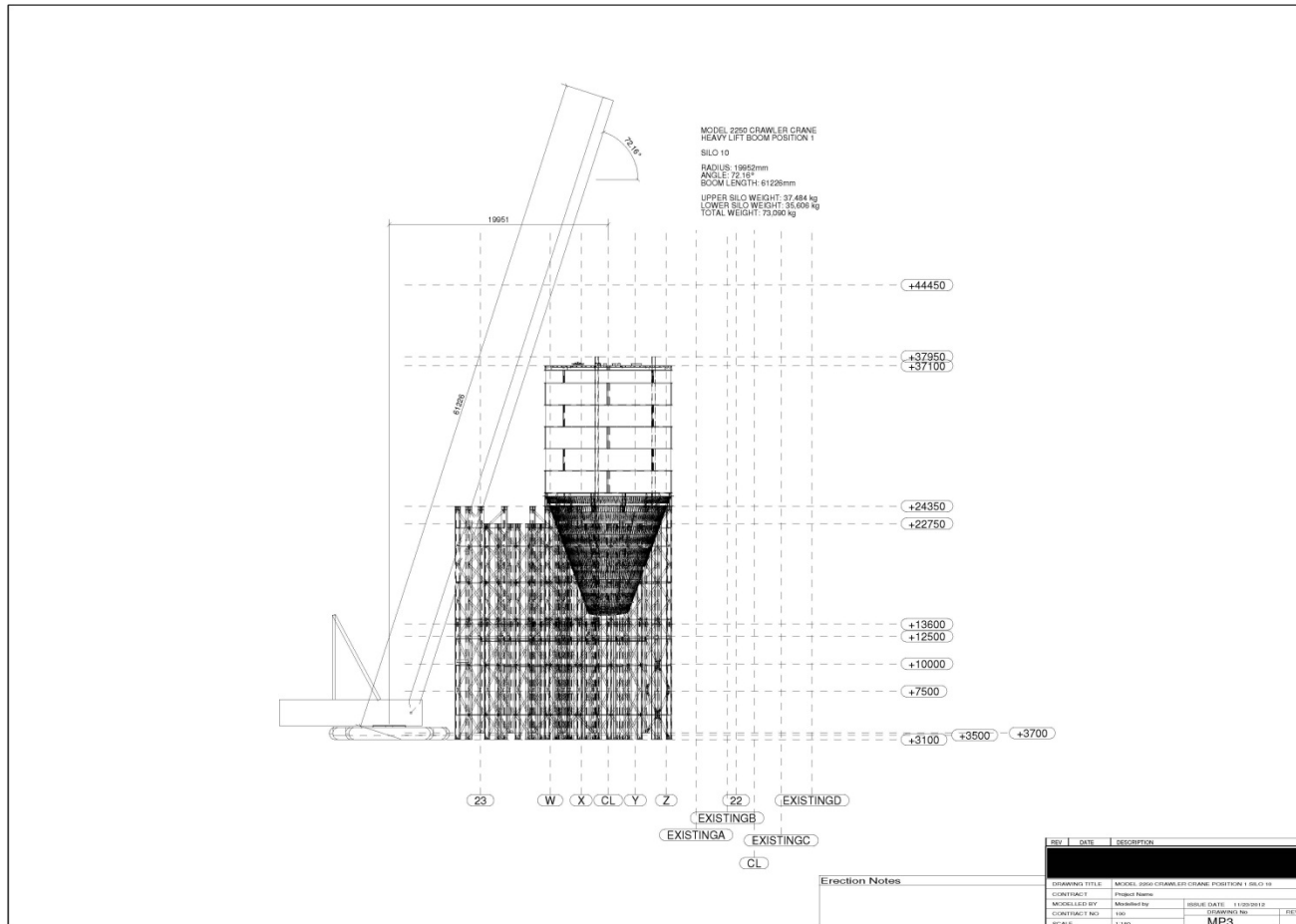
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SDE provide 2D lifting drawings nominating lift angles and slew dimensions

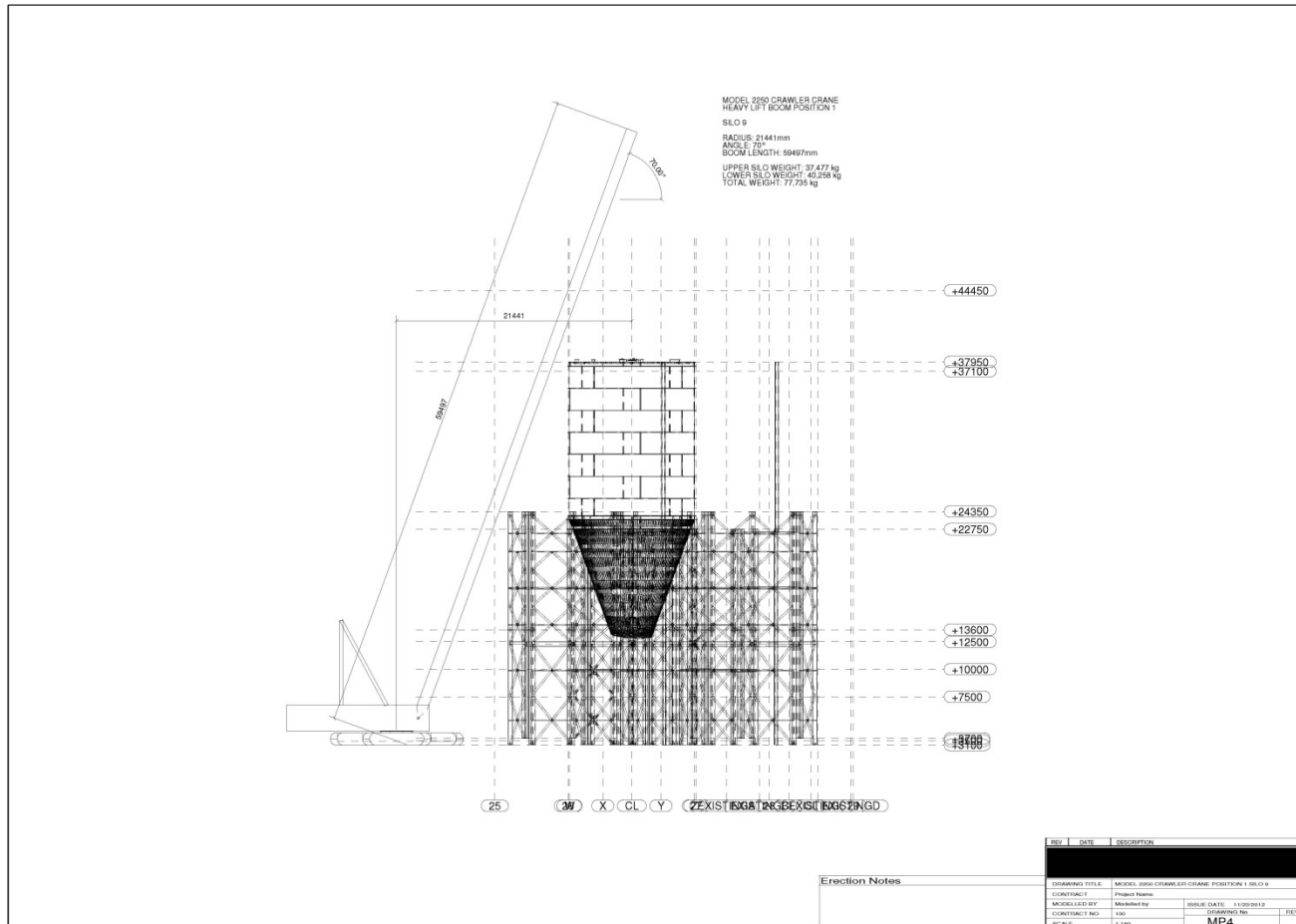


# SDE provide 2D lifting drawings nominating lift angles and slew dimensions



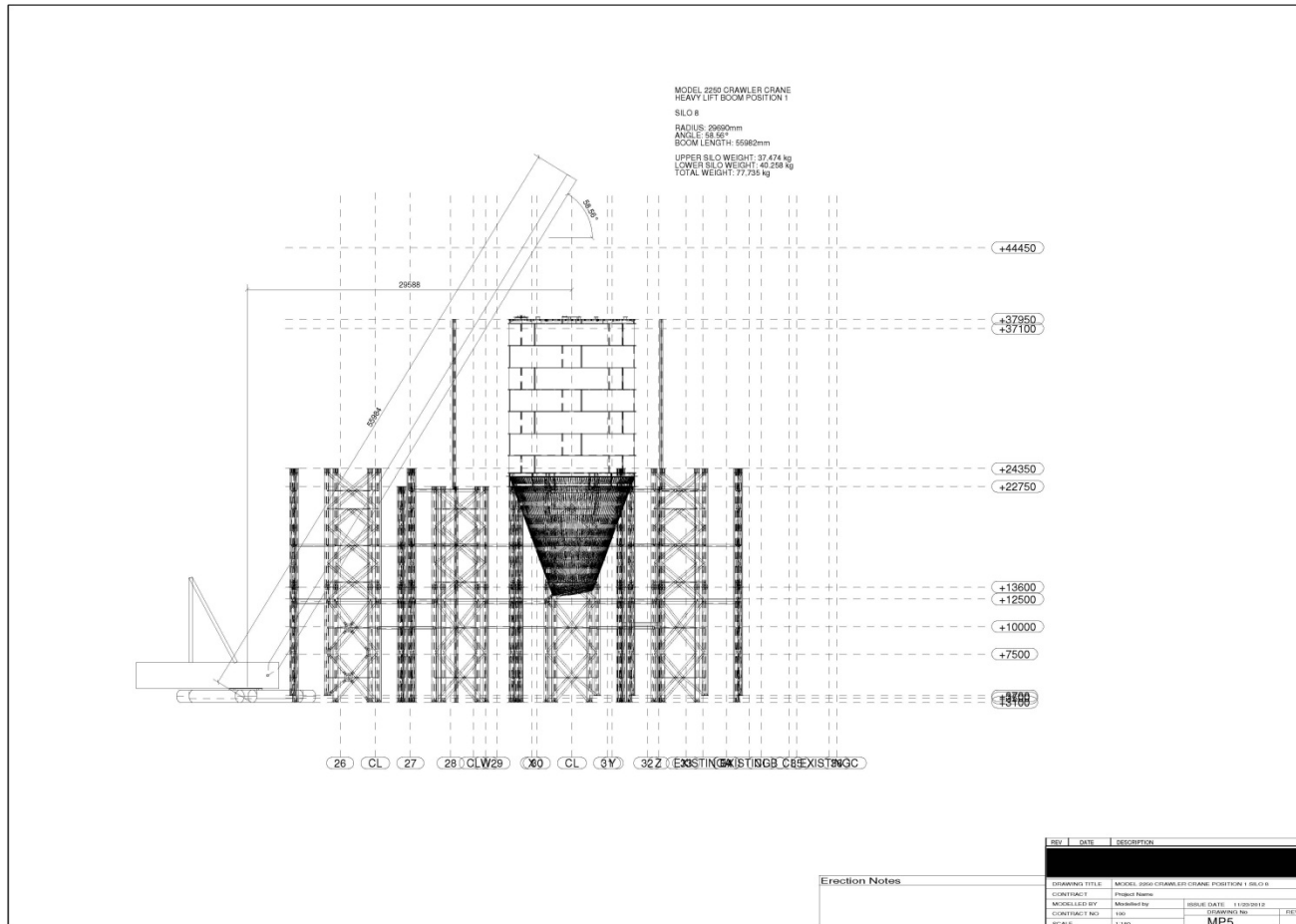


# SDE provide 2D lifting drawings nominating lift angles and slew dimensions





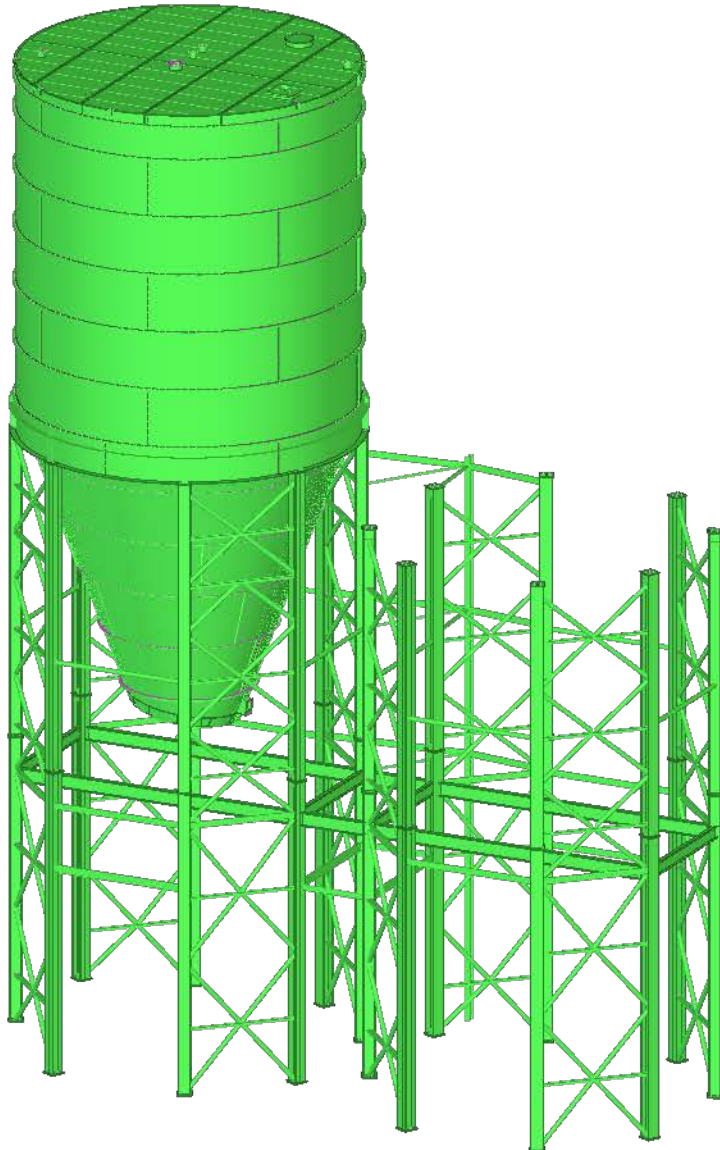
# SDE provide 2D lifting drawings nominating lift angles and slew dimensions



# **MATERIAL MANAGEMENT**

## **LIVE TRACKING OF STEEL**


SDE Consulting utilise the latest data software on the market to “push” status of steel members into the model from external sources. This in conjunction with the SDE cloud server creates live updates straight into our 3D model from workshops or site.



Class colour	Class code	Member Status
Green	Class 3	Modelling Completed
Blue	Class 4	Material Ordered
Cyan	Class 5	Shop Detailing Completed
Yellow	Class 6	Assembly Fabrication Completed
Magenta	Class 7	Surface Treatment Completed
Grey	Class 8	Assembly in Transit
Red	Class 9	Assembly on Site
Olive	Class 10	Assembly Erected

SDE can customise the member status to suit the clients needs.

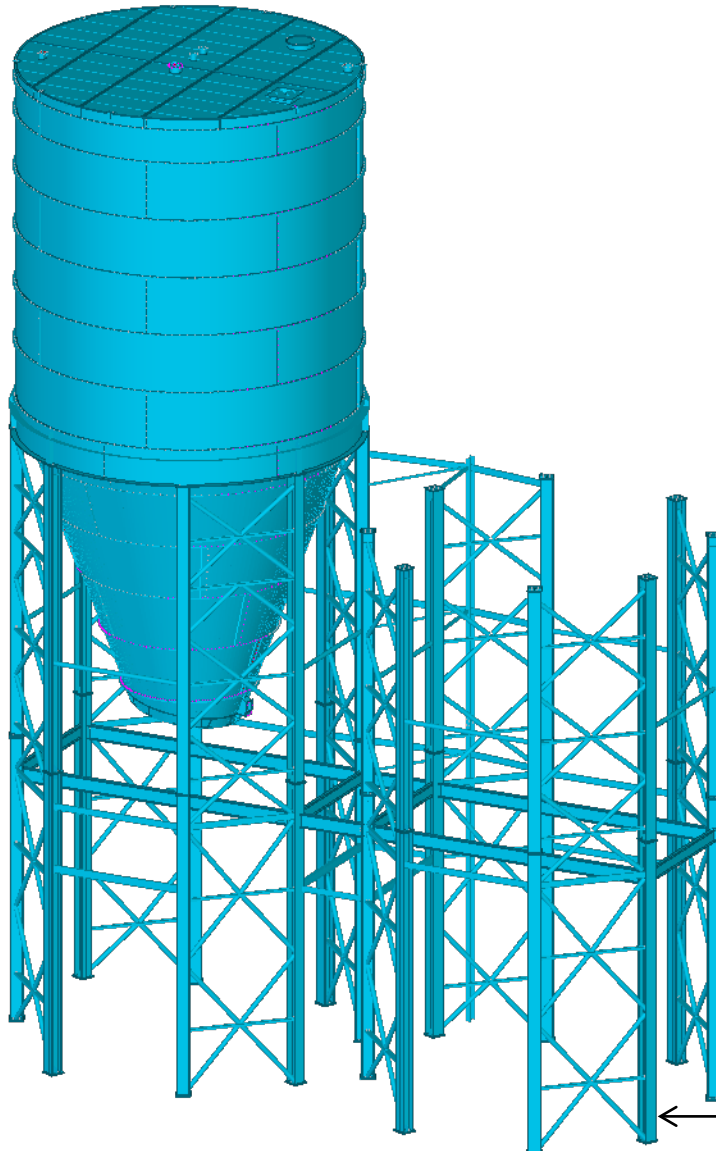
← Class 3 = Modelling Completed

 <b>SDE</b> Consulting ASIA Pty Ltd					
Material List for Trestles					
Job No:			Date:		
Profile	Grade	Qty	Length(mm)	Area(m2)	Weight(kg)
CHS101.6*4.0	300	2	2834	0.9	27.4
		<b>Subtotal</b>	5668	1.8	54.7
CHS168.3*4.8	300	2	2690	1.4	54.3
CHS168.3*4.8	300	4	3096	1.6	62.5
CHS168.3*4.8	300	2	3329	1.8	67.2
CHS168.3*4.8	300	2	3353	1.8	67.7
CHS168.3*4.8	300	2	3628	1.9	73.2
CHS168.3*4.8	300	2	3685	1.9	74.3
CHS168.3*4.8	300	2	3966	2.1	80
CHS168.3*4.8	300	2	4040	2.1	81.5
CHS168.3*4.8	300	1	4316	2.3	87.1
CHS168.3*4.8	300	1	4319	2.3	87.1
CHS168.3*4.8	300	2	4462	2.4	90
CHS168.3*4.8	300	2	4592	2.4	92.6
CHS168.3*4.8	300	2	4756	2.5	96
CHS168.3*4.8	300	2	4889	2.6	98.6
CHS168.3*4.8	300	2	5082	2.7	102.5
CHS168.3*4.8	300	2	5107	2.7	103
CHS168.3*4.8	300	2	5492	2.9	110.8
CHS168.3*4.8	300	2	5904	3.1	119.1
		<b>Subtotal</b>	150966	79.9	3045.7
PFC380*100	300	1	4540	5.1	250.5
PFC380*100	300	1	5283	6	291.6
PFC380*100	300	1	6027	6.8	332.6
PFC380*100	300	1	6750	7.6	372.5
PFC380*100	300	1	7085	8	391
PFC380*100	300	1	7507	8.5	414.3
PFC380*100	300	1	7724	8.7	426.2
PFC380*100	300	1	8257	9.3	455.7
PFC380*100	300	1	8362	9.4	461.5
		<b>Subtotal</b>	61534	69.5	3395.8
UC310*118	300	1	10187	18.4	1199.5
UC310*118	300	1	10214	18.5	1202.7
		<b>Subtotal</b>	20401	36.9	2402.2
WB800*192	300	2	8126	22.8	1556.4
WB800*192	300	2	9865	27.7	1889.5
		<b>Subtotal</b>	35981	101.1	6891.8
WB900*257	300	2	10440	35.6	2679.9
WB900*257	300	2	12241	41.7	3142.3
WB900*257	300	2	12856	43.8	3300
WB900*257	300	2	14987	51.1	3847.1
WB900*258		<b>Subtotal</b>	101048	344.6	25938.4
				<b>Total:</b>	<b>39326.4</b>

SDE then issues a material list for pre-ordering.




← Class 4 = Material Ordered



Tekla Structures x64 Column (1)

SDE info | SDE Tracking | SDE Loads | Parameters | Handrail | Workflow | End Conditions | Analysis | IFC export | RFIs

 SDE Consulting ASIA Pty Ltd

1. Workshop Status  
 Workshop used: ☒ Blenco Welding  
 Steel Status: ☒ Containerised

2. Transportation Status  
 Delivery Status: ☒ In Transit  
 Date Shipped: ☒ 03/12/2012  
 LOT Number: ☒ TD07  
 Ship Number: ☒ IMO 7320545  
 Container Number: ☒ CSDU4556636  
 Estimated Arrival Date: ☒ 12/12/2012

3. Site Status  
 Sequence Number: ☒  
 Site Status: ☒  
 Erection Date: ☒

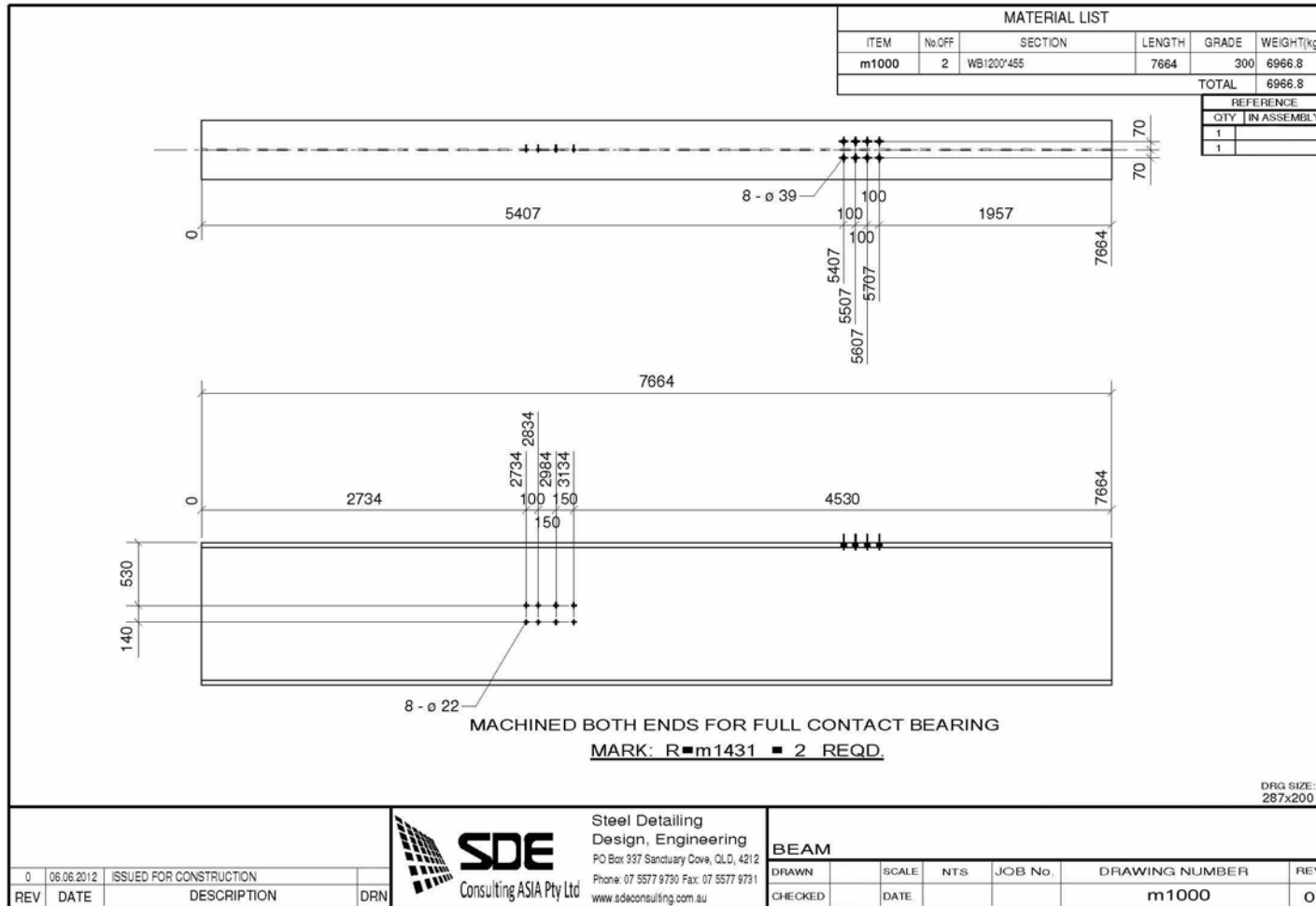
SDE will customise the 'UDA' (user defined attributes) to the clients requirements. This can be customised to show:

- Purchase order
- Suppliers
- Transport
- Completion Data
- Material Data
- Or any other comment required for the project

OK Apply Modify Get ☒ / ☐ Cancel

← Class 5 = Shop Detailing Complete

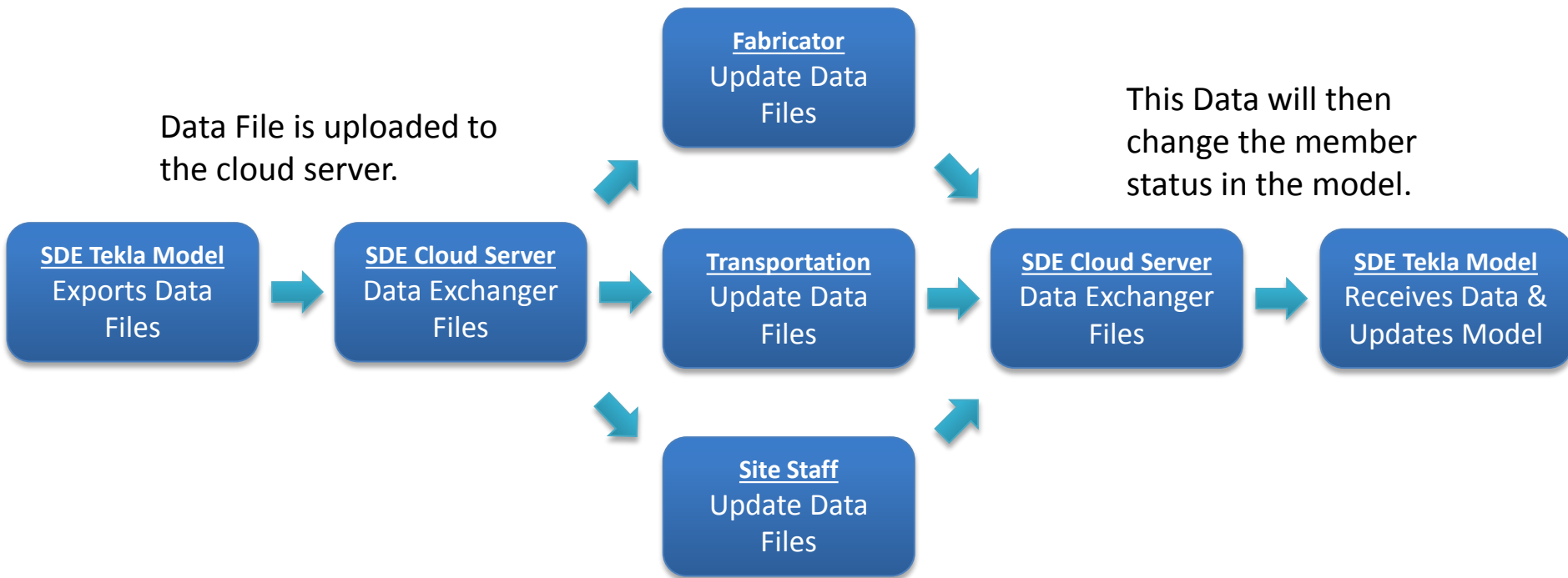




SDE issue shop detailing drawings to fabricators workshop.



The fabrication is now complete



Fabricators, Transportation and Site staff update the model information utilising the Tablet which simultaneously synchronises to the 3D model through the cloud server.

Client: EXAMPLE  
Project Number: 8000  
Project Name: SDE CONSULTING EXAMPLE  
Phase: 17

Date: 05.12.2012

Drawing No.	Dwg Rev	Description	Length (mm)	Mass (kg)	Main Section	Paint System	Paint Area	Workshop Status
8000-SDE-S-BR1000	REV.0	BRACING	4890	117.5	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	2.6	FABRICATED
8000-SDE-S-BR1001	REV.0	BRACING	2341	56.2	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.2	FABRICATED
8000-SDE-S-BR1001	REV.0	BRACING	2341	56.2	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.2	FABRICATED
8000-SDE-S-BR1002	REV.0	BRACING	2372	57	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.3	FABRICATED
8000-SDE-S-BR1002	REV.0	BRACING	2372	57	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.3	FABRICATED
8000-SDE-S-BR1003	REV.0	BRACING	2382	57.2	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.3	FABRICATED
8000-SDE-S-BR1003	REV.0	BRACING	2382	57.2	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.3	FABRICATED
8000-SDE-S-BR1004	REV.0	BRACING	2373	57	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.3	FABRICATED
8000-SDE-S-BR1004	REV.0	BRACING	2373	57	CHS168.3*6.0	SYSTEM B - Y14 LIGHTBOX GREY N33	1.3	FABRICATED
8000-SDE-S-BR1005	REV.0	BEAM SECONDARY	3927	90	PFC200*75	SYSTEM B - Y14 LIGHTBOX GREY N33	2.7	QA CHECKED
8000-SDE-S-BR1005	REV.0	BEAM SECONDARY	3927	90	PFC200*75	SYSTEM B - Y14 LIGHTBOX GREY N33	2.7	QA CHECKED
8000-SDE-S-BR1006	REV.0	COLUMN	9093	2269.6	HW414*405*18*28	SYSTEM B - Y14 LIGHTBOX GREY N33	21.9	PAINTED
8000-SDE-S-BR1006	REV.0	COLUMN	9093	2269.6	HW414*405*18*28	SYSTEM B - Y14 LIGHTBOX GREY N33	21.9	PAINTED

SDE provides custom reports containing unlimited client specific requirements to suit their workshop/transport/site processes and systems.



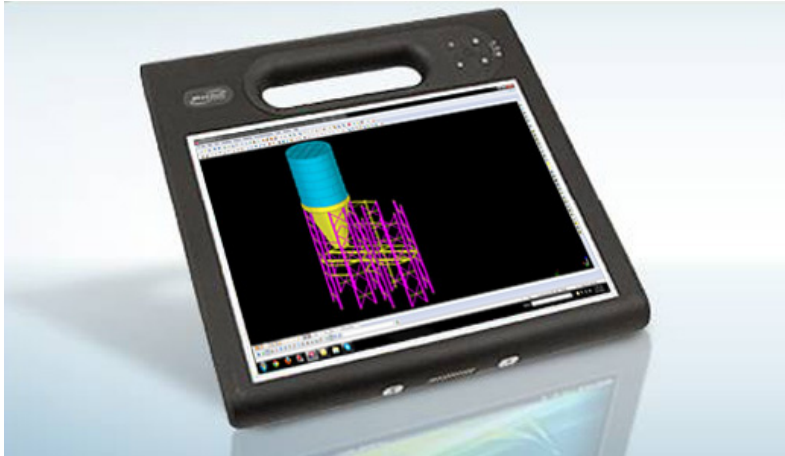
Data Exchanger LITE

Type	NAME	MATERIAL	PROFILE	PART_POS	ASSEMBLY_POS	Workshop used	Steel Status (int)	Delivery Status (int)	Date Shipped (date)	LOT Number	Ship Number	Container Number
beam (16 (s))												
beam	BRACING	C350	CHS168.3*6.0	m10043	BR10010		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10043	BR10010		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10042	BR10009		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10042	BR10009		Fabricated					
beam	COLUMN	Q345	HW414*405*18*28	m10579	C10058		Fabricated					
beam	COLUMN	Q345	HW414*405*18*28	m10579	C10057		Fabricated					
beam	BEAM_SECOND...	300	PFC200*75	m10241	BS10001		Fabricated					
beam	BEAM_SECOND...	300	PFC200*75	m10241	BS10001		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10041	BR10008		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10041	BR10008		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10040	BR10007		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10040	BR10007		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10043	BR10010		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10043	BR10010		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10042	BR10009		Fabricated					
beam	BRACING	C350	CHS168.3*6.0	m10042	BR10009		Fabricated					
contour_plate (4 (s))												
contour_plate	PLATE	250	PL12*90	p10872	C10058		Fabricated					
contour_plate	PLATE	250	PL12*90	p10872	C10057		Fabricated					
contour_plate	PLATE	250	PL12*90	p10872	C10058		Fabricated					
contour_plate	PLATE	250	PL12*90	p10872	C10057		Fabricated					

1 selected C:\Users\SDE\Desktop\test 2.xml Steel Status : -2147483648

Using a simple drop down box the 'Site fabricator', 'Site staff' or 'Transportation staff' can quickly change the member status. This will then update the model utilising cloud server technology for everyone to see the progress of the job.





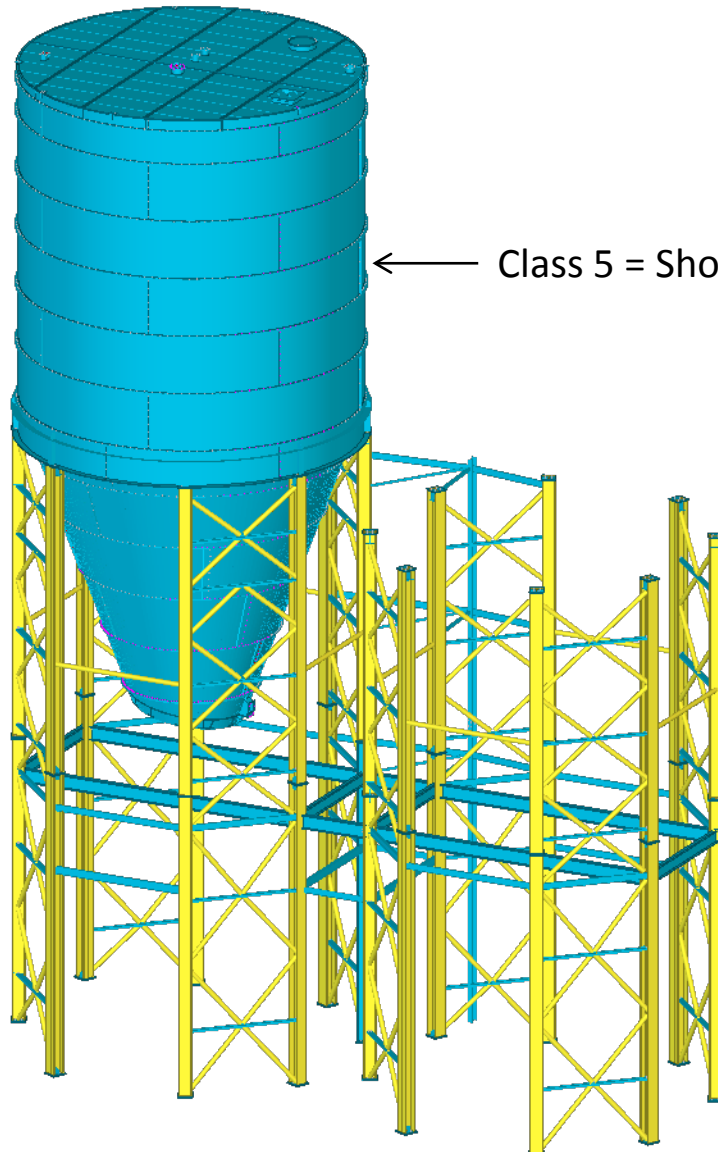
The previous process will be completed on the new motion tablets or desktop computers all supplied with current software and technology by SDE.



This will allow workshop/site managers to update the status of the steel on a portable device through the cloud server.

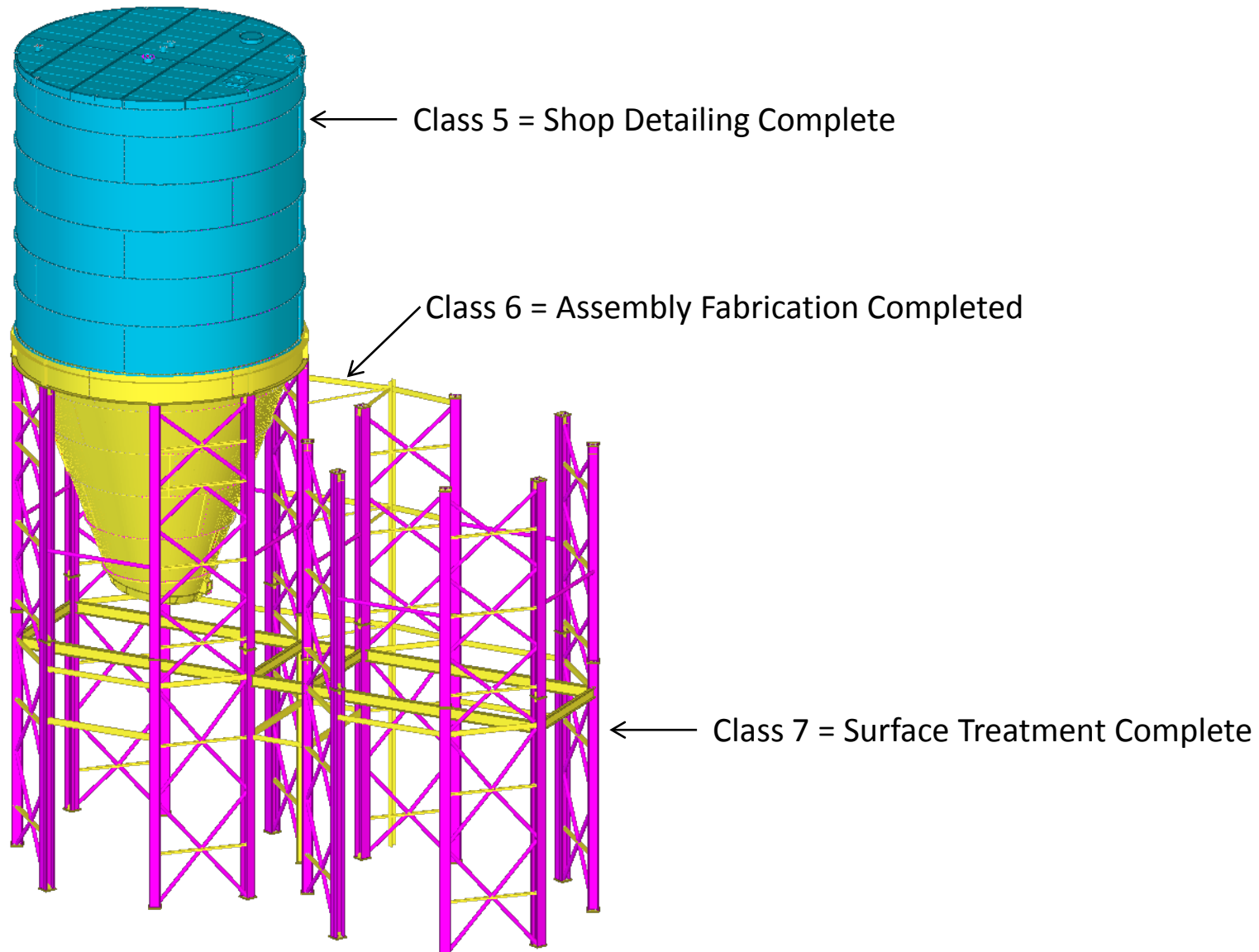


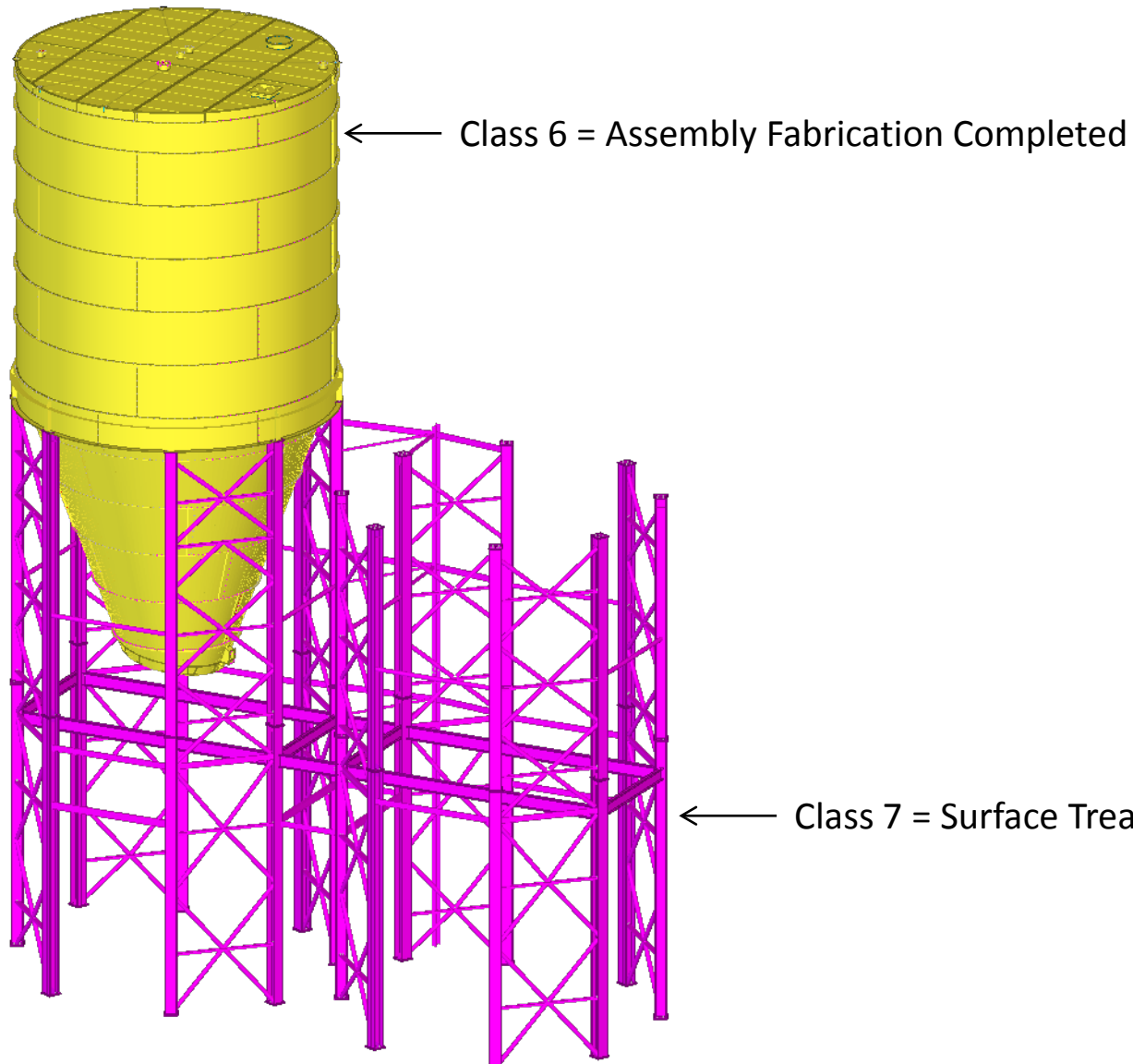
With the help of the tablet no more paper work is required, once data is entered into the mobile Tablet or desktop all models are updated by synchronising through the SDE cloud technology.



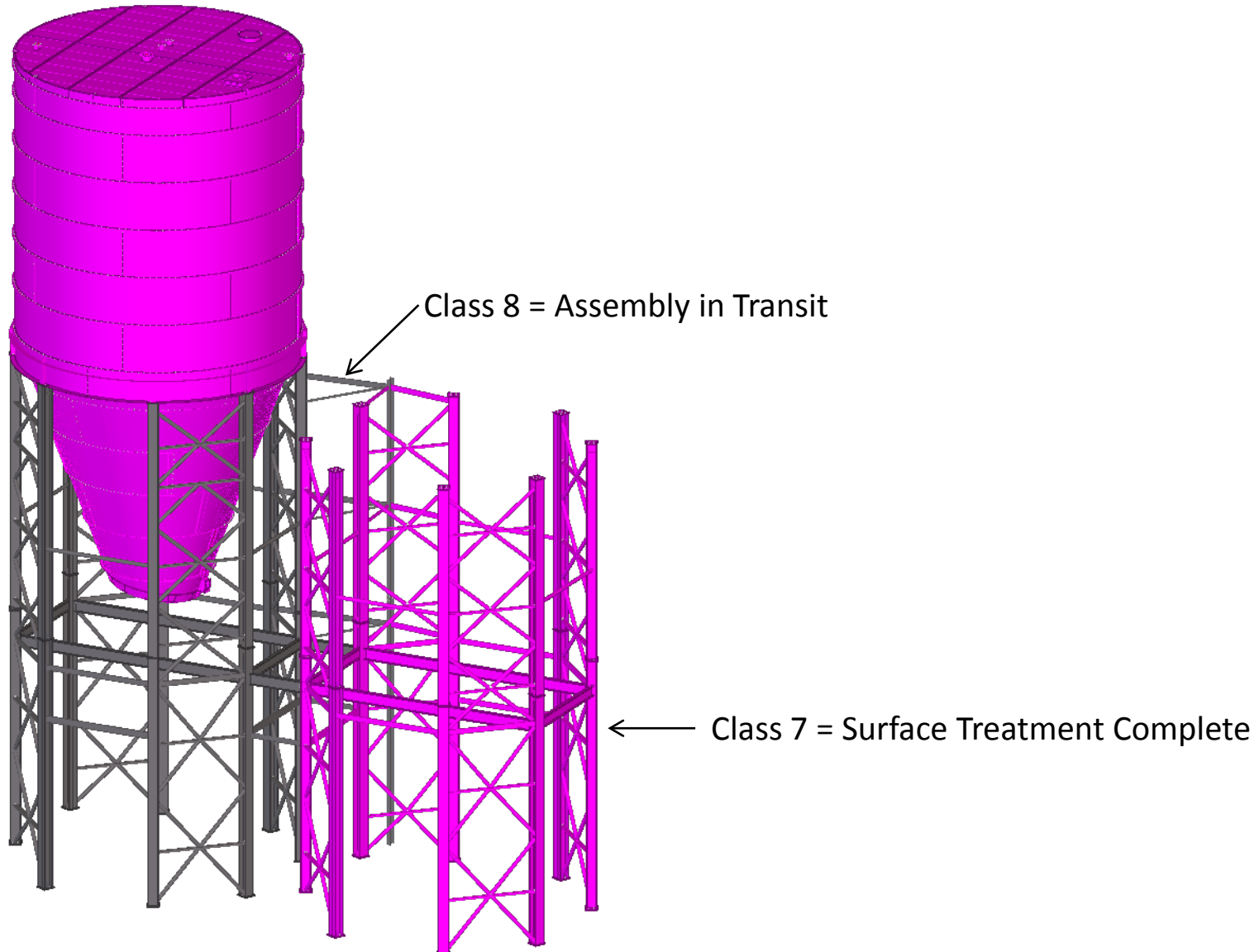
← Class 5 = Shop Detailing Complete

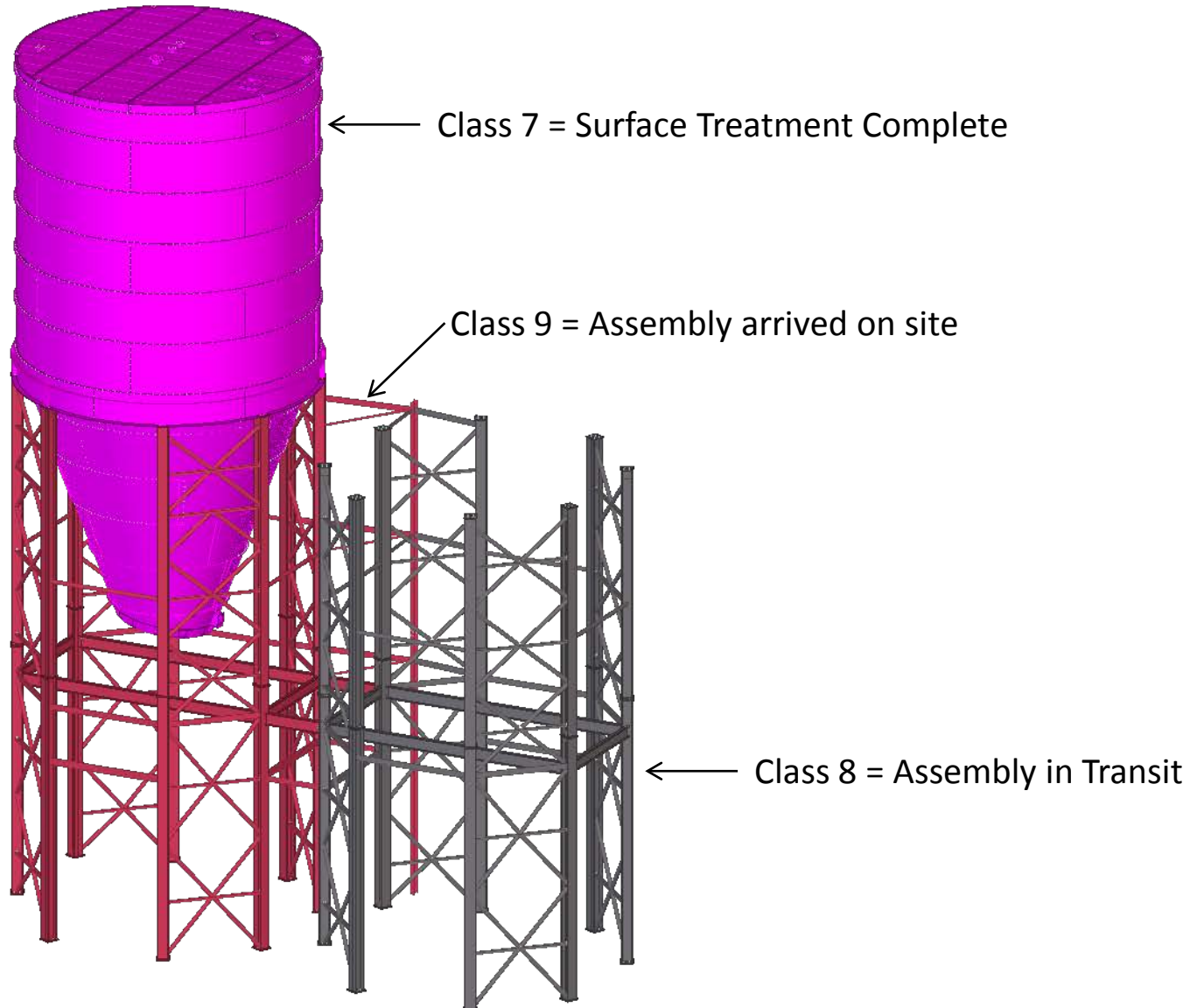
← Class 6 = Assembly Fabrication Completed

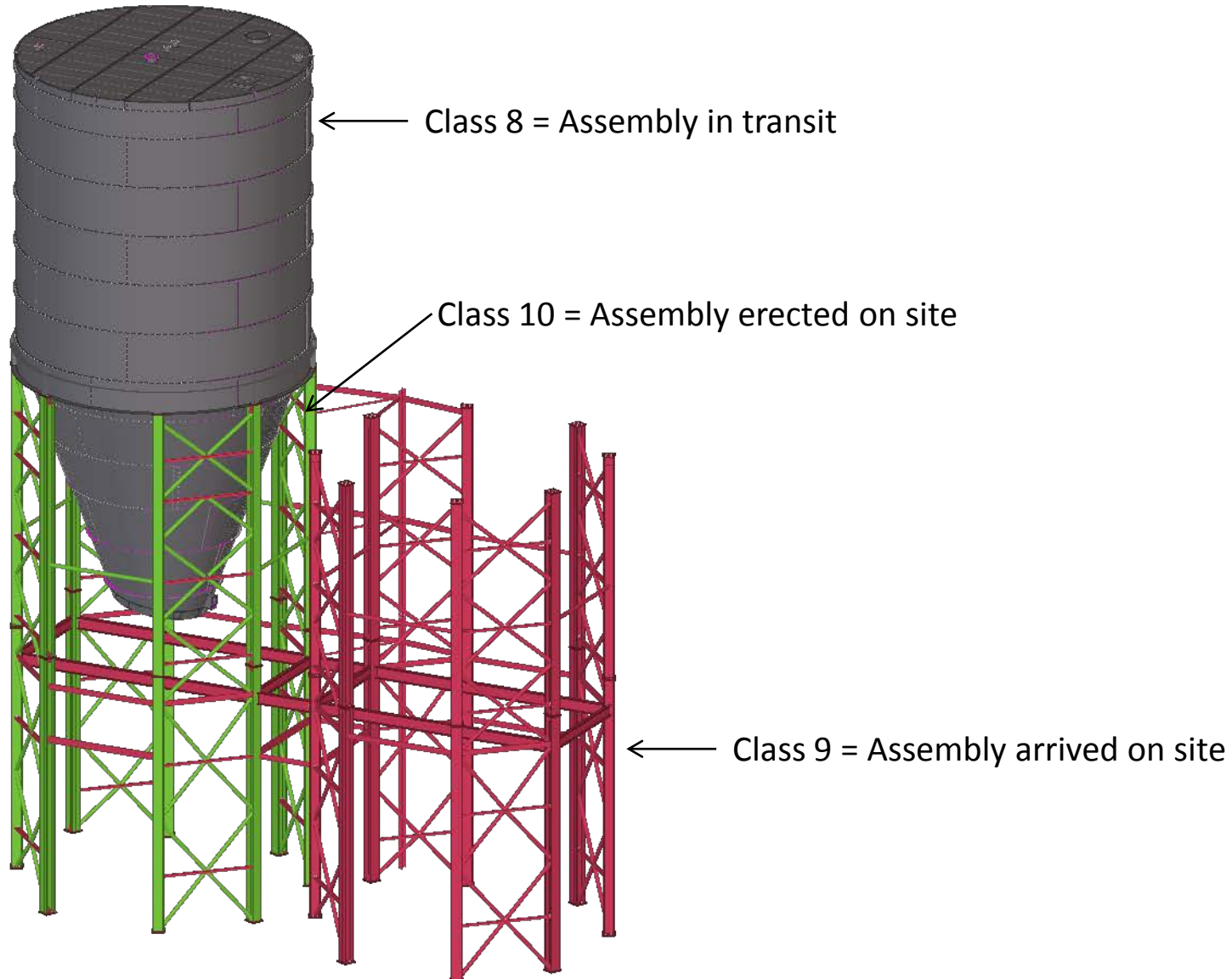


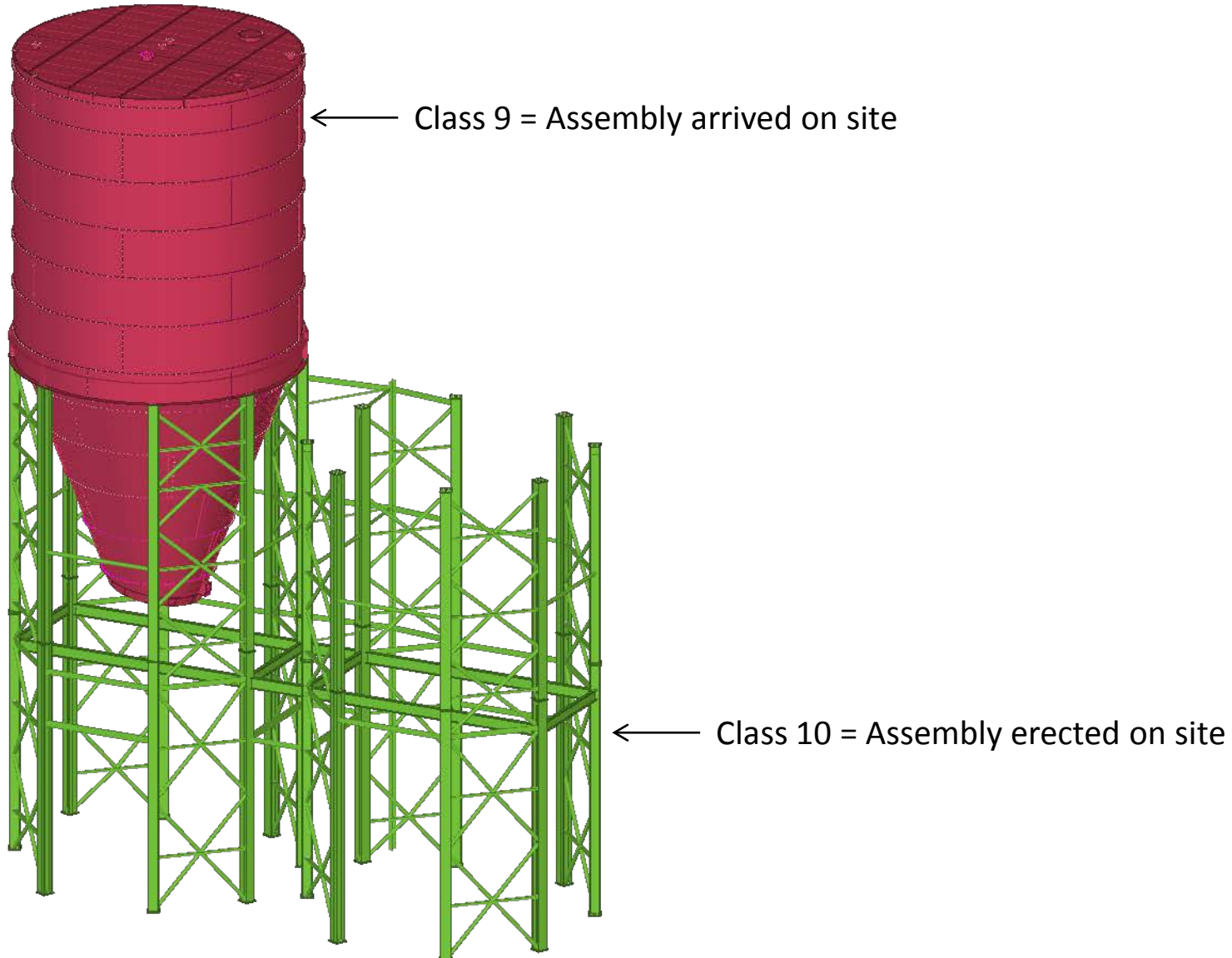














← Class 10 = Assembly erected on site