AMERICAN MUSCLE DOCKS & FABRICATION / WELLSBURG, WV / CANOPY FEST AI CONFERENCE

FROM GRAPH PAPER TO GAME PLAN

Two internal apps, drawn from one very tired pencil.

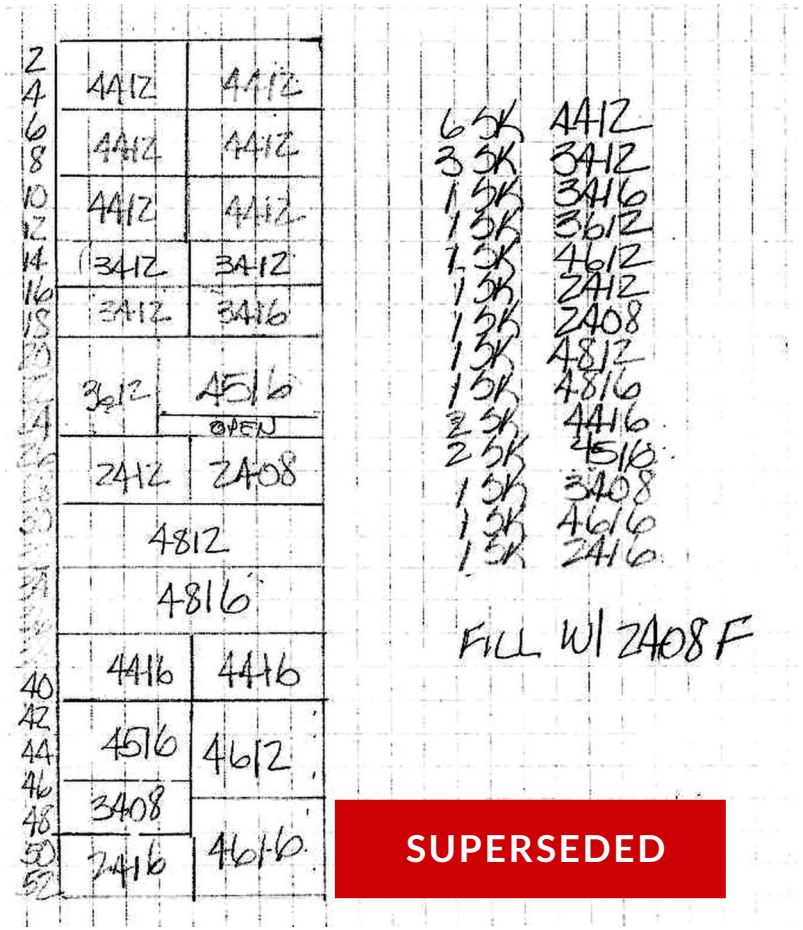
TITLE	GRAPH PAPER TO GAME PLAN
DRAWN BY	RICHIE SHERRIN ACCOUNTING MANAGER
DATE	CANOPY FEST 2026
SCALE	1 SQUARE = 1 FOOT



DWG 02 / AS BUILT / SUPERSEDED

The Pencil Method

52'-0"



Shipping desk, 2025. Pencil on graph paper.

NOTES

1. Order released by sales. Float list pulled by hand.
2. Part footprints looked up.
3. Trailer bed laid out on graph paper, 1 sq = 1 ft.
4. Fit verified by trial and error. Eraser required.
5. Skid pick list handwritten in right margin.
6. Balance of bed filled per note: fill w/ 2408F.
7. Drawing filed away after truck departs.

REDLINE: **Delete notes 2 through 7. Replace with app.**

DWG 03 / DESIGN INPUT

How Both Apps Got Specified

DESIGN INPUT, AS SPOKEN / FLOAT TRUCK OPTIMIZER

> "I ship floating docks. My team plans truck loads on graph paper. The bed is 8 ft by 52 ft. I have 77 float sizes, each with a length, a width, and a height. Build me a web app where I pick parts and quantities, and it lays them out on the bed with no overlaps, tells me what fits and what is left over, and prints a diagram the yard can actually read.

The detail is the spec.

No spec document. No requirements meeting. No budget request. Dock Builder got the same treatment in its own conversation, about its own problem.

REVISION LOG / OPTIMIZER

01	First working layout
08	Added part catalog
19	Print view for the yard
27	Flatbed, 3D stacking
35	Galvanizer runs
47	Cloud catalog, shared

Every line above started as a sentence, not a ticket.

Dock Builder is a separate app with its own log. Same method, different problem.

DWG 04 / DESIGN INPUT

The Other One, Specified the Same Way

DESIGN INPUT, AS SPOKEN / AMD DOCK BUILDER

> We quote floating docks. Every quote means opening a price list and a bill of materials sheet, counting frames, floats, decking, hardware and fasteners by hand, and entering all of it into QuickBooks. We build 38 standard sizes, in composite or pressure treated. Build me a web app where I pick a size and a decking material and it gives me the whole bill of materials and a total and lets me copy the table straight into QuickBooks.

Same method. Different problem.

Nobody wrote a requirements document for this one either. I described the quoting job out loud and corrected it until the bill of materials matched what the shop actually builds.

REVISION LOG / DOCK BUILDER

01	First size, first BOM
05	All 38 sizes loaded
09	Composite vs treated
14	QuickBooks export tab
18	One click table copy
22	BOM verified, all 38

A different app, on its own clock.

No shared code with the Optimizer. Built separately, from its own conversation.

DWG 05 / DEMO 01 / LIVE

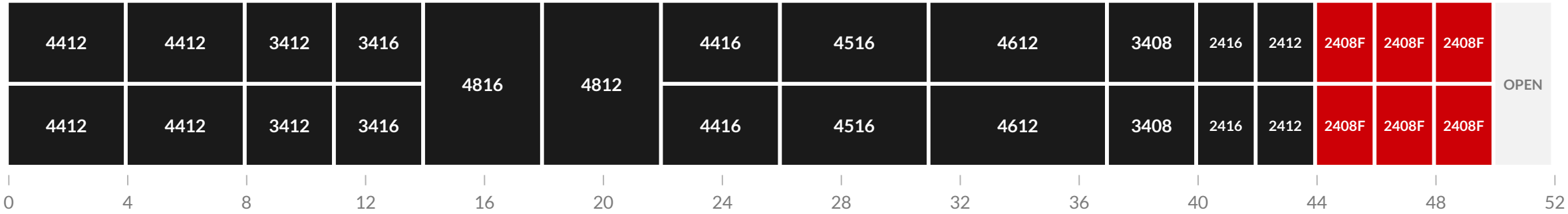
AMD Float Truck Optimizer

LIVE DEMO

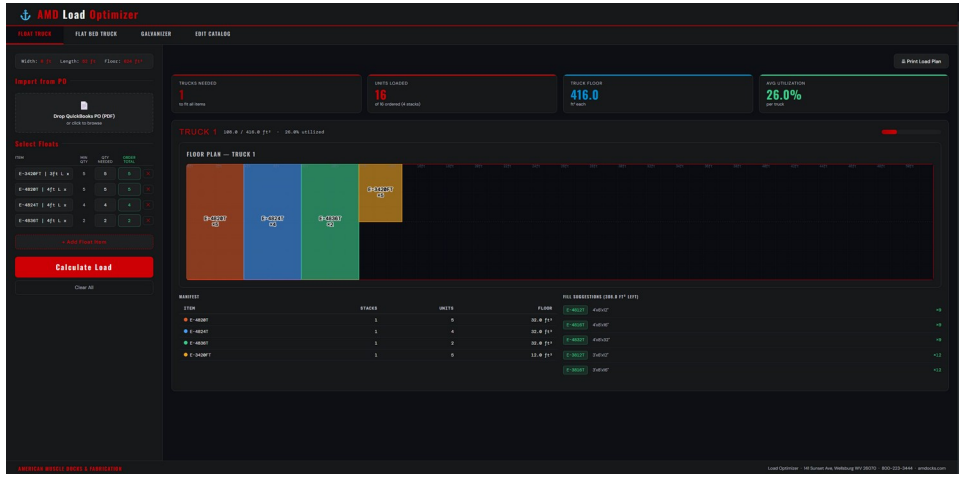
https://amd-load-optimizer.netlify.app/

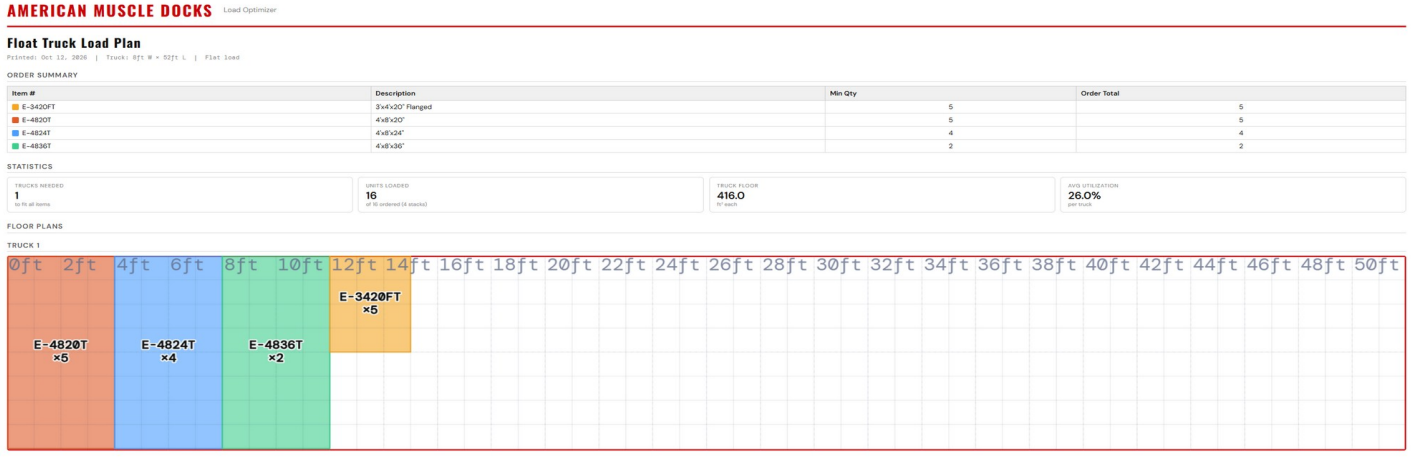
DETAIL A OPTIMIZER OUTPUT, 8'-0" x 52'-0" TRAILER BED

2408F FILLERS CLOSE THE BED



DETAIL B OPTIMIZER APP SCREENS





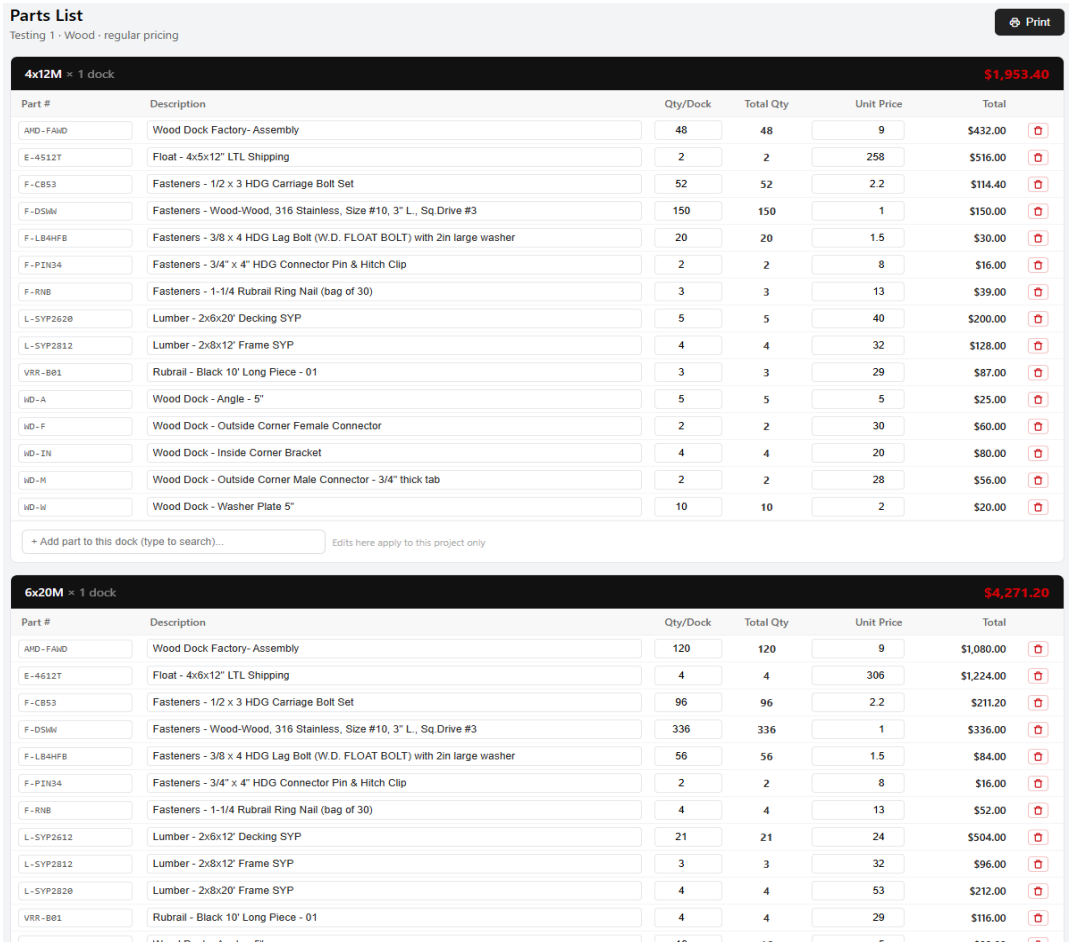
DWG 06 / DEMO 02 / LIVE

AMD Dock Builder

LIVE DEMO

https://amd-dock-builder.netlify.app/

DETAIL C DOCK BUILDER, BILL OF MATERIALS BUILT



Parts List

Testing 1 · Wood · regular pricing

Print

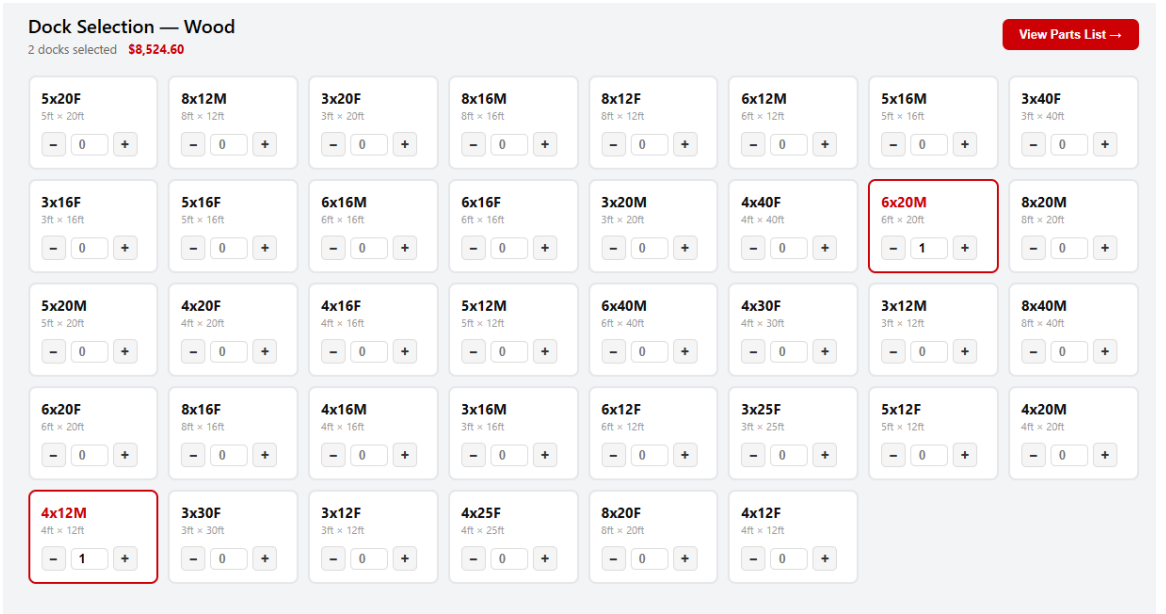
4x12M × 1 dock — $1,953.40

Part #	Description	Qty/Dock	Total Qty	Unit Price	Total
AMD-FAWD	Wood Dock Factory- Assembly	48	48	9	$432.00
E-4512T	Float - 4x5x12" LTL Shipping	2	2	258	$516.00
F-CB53	Fasteners - 1/2 x 3 HDG Carriage Bolt Set	52	52	2.2	$114.40
F-DSWW	Fasteners - Wood-Wood, 316 Stainless, Size #10, 3" L., Sq.Drive #3	150	150	1	$150.00
F-LB4HFB	Fasteners - 3/8 x 4 HDG Lag Bolt (W.D. FLOAT BOLT) with 2in large washer	20	20	1.5	$30.00
F-PIN34	Fasteners - 3/4" x 4" HDG Connector Pin & Hitch Clip	2	2	8	$16.00
F-RNB	Fasteners - 1-1/4 Rubrail Ring Nail (bag of 30)	3	3	13	$39.00
L-SYP2620	Lumber - 2x6x20' Decking SYP	5	5	40	$200.00
L-SYP2812	Lumber - 2x8x12' Frame SYP	4	4	32	$128.00
VRR-B01	Rubrail - Black 10' Long Piece - 01	3	3	29	$87.00
WD-A	Wood Dock - Angle - 5"	5	5	5	$25.00
WD-F	Wood Dock - Outside Corner Female Connector	2	2	30	$60.00
WD-IN	Wood Dock - Inside Corner Bracket	4	4	20	$80.00
WD-M	Wood Dock - Outside Corner Male Connector - 3/4" thick tab	2	2	28	$56.00
WD-W	Wood Dock - Washer Plate 5"	10	10	2	$20.00

+ Add part to this dock (type to search)... Edits here apply to this project only

6x20M × 1 dock — $4,271.20

Part #	Description	Qty/Dock	Total Qty	Unit Price	Total
AMD-FAWD	Wood Dock Factory- Assembly	120	120	9	$1,080.00
E-4612T	Float - 4x6x12" LTL Shipping	4	4	306	$1,224.00
F-CB53	Fasteners - 1/2 x 3 HDG Carriage Bolt Set	96	96	2.2	$211.20
F-DSWW	Fasteners - Wood-Wood, 316 Stainless, Size #10, 3" L., Sq.Drive #3	336	336	1	$336.00
F-LB4HFB	Fasteners - 3/8 x 4 HDG Lag Bolt (W.D. FLOAT BOLT) with 2in large washer	56	56	1.5	$84.00
F-PIN34	Fasteners - 3/4" x 4" HDG Connector Pin & Hitch Clip	2	2	8	$16.00
F-RNB	Fasteners - 1-1/4 Rubrail Ring Nail (bag of 30)	4	4	13	$52.00
L-SYP2612	Lumber - 2x6x12' Decking SYP	21	21	24	$504.00
L-SYP2812	Lumber - 2x8x12' Frame SYP	3	3	32	$96.00
L-SYP2820	Lumber - 2x8x20' Frame SYP	4	4	53	$212.00
VRR-B01	Rubrail - Black 10' Long Piece - 01	4	4	29	$116.00



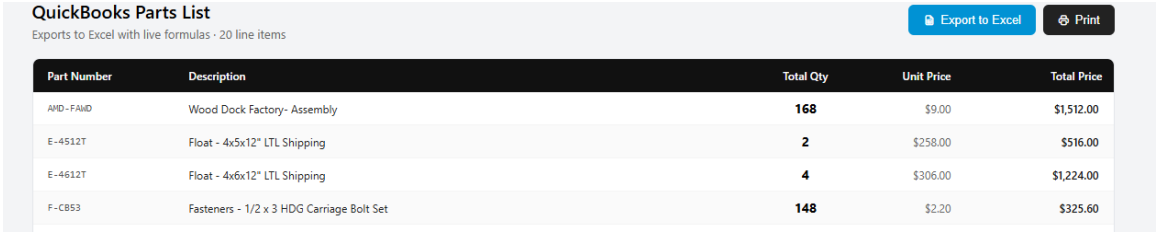
Dock Selection — Wood

2 docks selected $8,524.60

View Parts List →

5x20F 5ft × 20ft	8x12M 8ft × 12ft	3x20F 3ft × 20ft	8x16M 8ft × 16ft	8x12F 8ft × 12ft	6x12M 6ft × 12ft	5x16M 5ft × 16ft	3x40F 3ft × 40ft
3x16F 3ft × 16ft	5x16F 5ft × 16ft	6x16M 6ft × 16ft	6x16F 6ft × 16ft	3x20M 3ft × 20ft	4x40F 4ft × 40ft	6x20M 6ft × 20ft	8x20M 8ft × 20ft
5x20M 5ft × 20ft	4x20F 4ft × 20ft	4x16F 4ft × 16ft	5x12M 5ft × 12ft	6x40M 6ft × 40ft	4x30F 4ft × 30ft	3x12M 3ft × 12ft	8x40M 8ft × 40ft
6x20F 6ft × 20ft	8x16F 8ft × 16ft	4x16M 4ft × 16ft	3x16M 3ft × 16ft	6x12F 6ft × 12ft	3x25F 3ft × 25ft	5x12F 5ft × 12ft	4x20M 4ft × 20ft
4x12M 4ft × 12ft	3x30F 3ft × 30ft	3x12F 3ft × 12ft	4x25F 4ft × 25ft	8x20F 8ft × 20ft	4x12F 4ft × 12ft		

DETAIL D QUICKBOOKS EXPORT



QuickBooks Parts List

Exports to Excel with live formulas · 20 line items

Export to Excel Print

Part Number	Description	Total Qty	Unit Price	Total Price
AMD-FAWD	Wood Dock Factory- Assembly	168	$9.00	$1,512.00
E-4512T	Float - 4x5x12" LTL Shipping	2	$258.00	$516.00
E-4612T	Float - 4x6x12" LTL Shipping	4	$306.00	$1,224.00
F-CB53	Fasteners - 1/2 x 3 HDG Carriage Bolt Set	148	$2.20	$325.60

DWG 08 / TAKEOFF / ISSUED FOR PRODUCTION

Time Takeoff, by Tool

TOOL	TASK	BEFORE	AFTER	SAVED	QTY
OPTIMIZER	Plan a float truck load	[45 to 90 min]	[3 min]	**[~1 hr]**	[3 / wk]
DOCK BUILDER	Quote a dock	[35 min]	[5 min]	**[~30 min]**	[3 / wk]
DOCK BUILDER	Requote after a change	[25 min]	[under 1 min]	**[~25 min]**	[2 / wk]
DOCK BUILDER	QuickBooks entry	[15 min]	[one paste]	**[~15 min]**	[ea]

TOTAL TIME RETURNED TO THE FLOOR

[300] HOURS PER YEAR

NOT IN THE TABLE:

Anybody on the team can do it now, and every plan we have made is still on file.

What Transfers to Your Department

GENERAL NOTES

1. **Start at the pain, not the tech.**
2. **Describe it like you would to a new hire.** The detail you give a rookie is the detail the AI needs.
3. **The first version is meant to be wrong.** This drawing is at Rev 47 for a reason.
4. **Keep a human in charge.** The app proposes the load. The packer still approves it.
5. **Two problems, two separate apps.** What carried over was the method, not the code.

NEXT REVISIONS

1. Optimizer on a phone, out in the yard
2. Pull open orders in automatically
3. Invoices that print themselves
4. Customer entered dock quotes

AMERICAN MUSCLE
DOCKS & FABRICATION

QUESTIONS?

