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New 82,500 pph Low NOx, 350 psig Skid-Mounted Package Boiler

Nationwide Boiler's low NOx 82,500 pph, 350 psig design (150 - 300 psig operating), saturated steam, skid-mounted D type package Babcock & Wilcox watertube boiler is set to burn natural gas or #2 oil. It is piped and wired and includes the following components:

- Low NOx Burner
- EconoStak Economizer
- Burner Management System
- Parallel Positioning Combustion Controls
- Forced Draft Fan & Motor
- Complete Fuel Train & Pilot Ignition System
- Water Column & Site Glass
- Steam Pressure Gauge
- Low-water Cutoffs
- Safety Valves
- Feedwater Control, Stop & Check Valves
- Blowdown Valves
- Continuous Blowdown Metering Valve
- Chemical Feed Valve
- Flues & Ducts
- Steam Non-return Valve (loose)
- Stack (loose)
- NEMA 4 Electrical Enclosure
- Low NOx CataStak™ SCR System (**optional**)
- Weatherproofed (except for freezing)
- Meets FM, NFPA 85 & IRI Insurance Standards
- Operating Manuals with Drawings



Fuel Consumption:

Natural Gas: 99,900 SCFH (99.9 MMBTUH)

Connection Sizes:

Main Steam: 8"-300# FLG
 Natural Gas: 4"-150# FLG
 Feedwater: 3"-300# FLG
 Bottom Blowdown: 1½"-300# FLG
 Continuous Blowdown: 1" NPT
 Chemical Feed: 1" NPT
 Instrument Air: ¾" NPT
 Water Column Drain: 2" NPT

Electrical Power Service Requirements:

480 VAC, 3 ph, 60 hz, 250 AMPS

Boiler Base Dimensions & Weights:

Length / Width / Height: 24' 3" / 11' 9" / 13' 10"
 Shipping Weight: 92,000 lbs
 Operating Weight*: 121,500 lbs

Emissions Data (natural gas):

NOx (corr. to 3% O₂): 30 ppm
 CO (corr. to 3% O₂): 50 ppm

Ask About Our **Green Solutions**



42400 Christy Street / Fremont, CA 94538 / (510) 490-7100 / www.nationwideboiler.com / info@nationwideboiler.com

True Nationwide Coverage & Beyond. Representatives Located Worldwide.

* Actual Equipment may differ from listed specification. Please consult Nationwide Boiler Inc. for additional details.

PREDICTED BOILER EMISSION DATA

NATURAL GAS FIRING

NBI MODEL NO	82-B&W-D-350 SAT	
BOILER MFG AND MODEL	BABCOCK & WILCOX FM103-79	
BURNER MFG AND MODEL	TBD	
BOILER CAPACITY	82,500	
DESIGN PRESSURE, PSIG	350	
OPERATING PRESURE, PSIG	325	
FUEL HEAT INPUT, MMBTU	99.9	
FUEL FLOW, SCFH	100,000	
FLUE GAS OUTLET TEMP, DEG F	300	
FLUE GAS FLOW, LB/HR	88,732	
FLUE GAS SPECIFIC VOLUME, CF/LB	20.0	
STACK OUTLET DIA., IN	56	
STACK OUTLET FLOW AREA, SQ FT	17.1	
STACK GAS EXIT VELOCITY, FPM	1,726	
STACK GAS EXIT FLOW, ACFM	29,739	
	PPMVD	#/MMBTU
NO _x @ 3% O ₂	30	0.036
CO @ 3% O ₂	50	0.037
VOC @ 3% O ₂	10	0.004
PM10 @ 3% O ₂	-	0.010
EXCESS AIR, %	15	15

DATE: 3/31/15

NATIONWIDE BOILER INCORPORATED

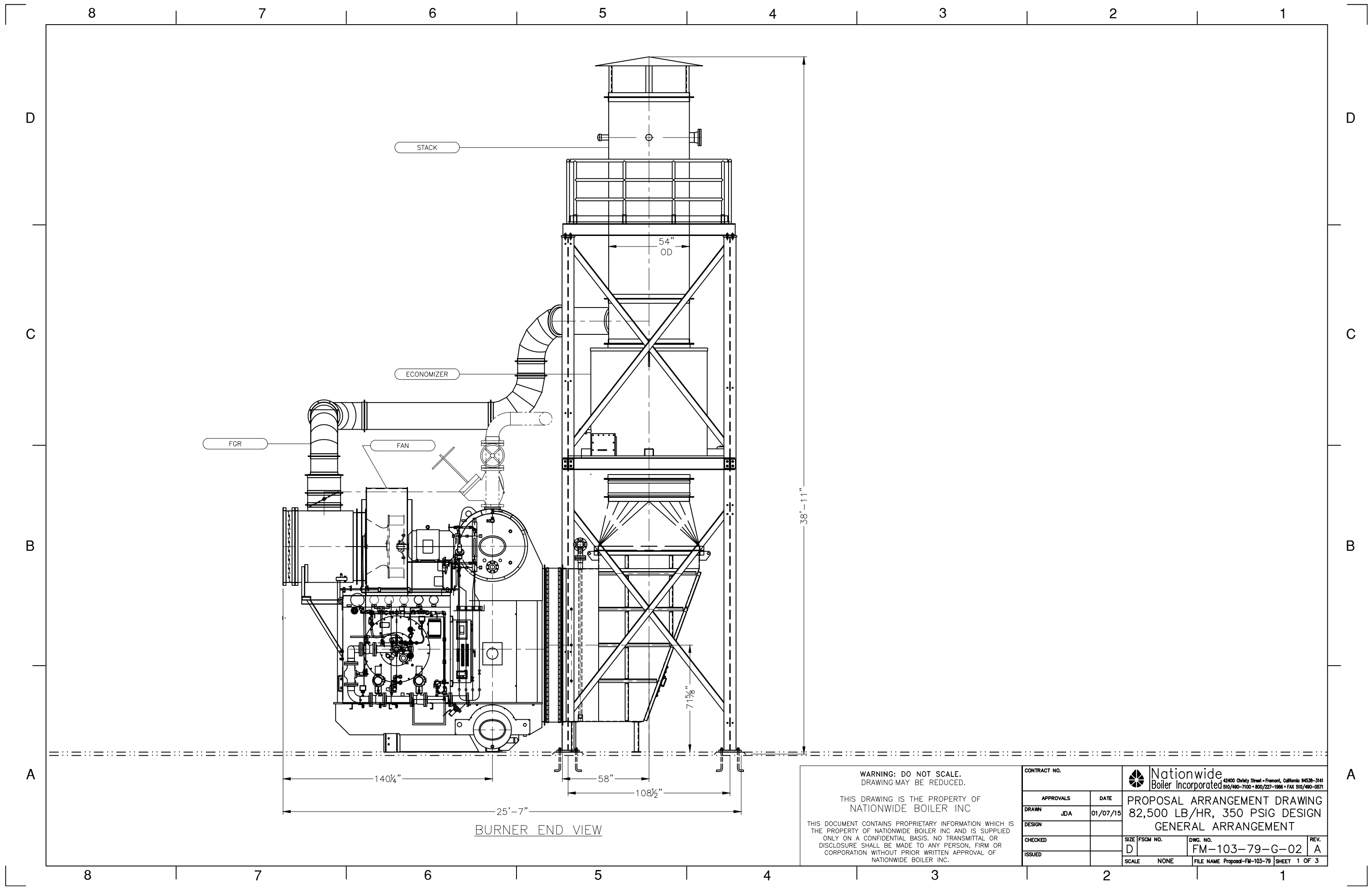
42400 CHRISTY STREET, FREMONT, CA 94538-3141



PROPOSAL ARRANGEMENT 82,500 LB/HR, 350 PSIG DESIGN SATURATED

INDEX OF DRAWINGS		
FM-103-79-T-01	TITLE SHEET, INDEX OF DRAWINGS	REV. A
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<p>APPROVALS</p> <p>DATE</p>	<p>PROPOSAL ARRANGEMENT DRAWING 82,500 LB/HR, 350 PSIG DESIGN TITLE SHEET/INDEX OF DRAWINGS</p>	<p>42400 Christy Street • Fremont, California 94538-3141 510/490-7100 • 800/227-1966 • FAX 510/490-0571</p>	
<p>DRAWN JDA</p> <p>DESIGN</p> <p>CHECKED</p> <p>ISSUED</p>	<p>01/07/15</p>	<p>SIZE FSCM NO.</p> <p>DWG. NO.</p> <p>SCALE NONE</p> <p>FILE NAME Proposal-FM-103-79</p>	<p>REV. A</p> <p>FM-103-79-T-01</p> <p>SHEET 1 OF 1</p>



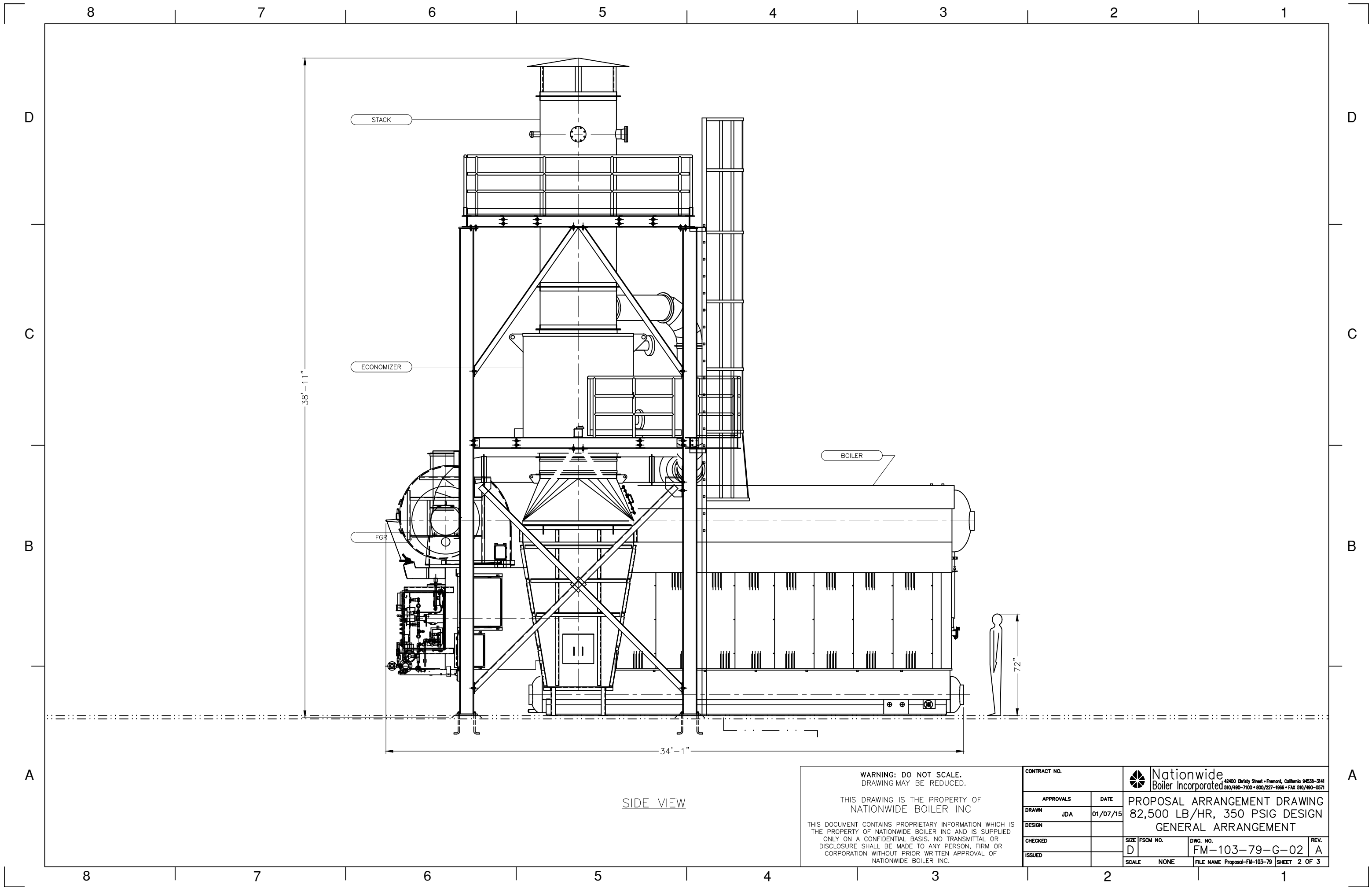
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BURNER END VIEW




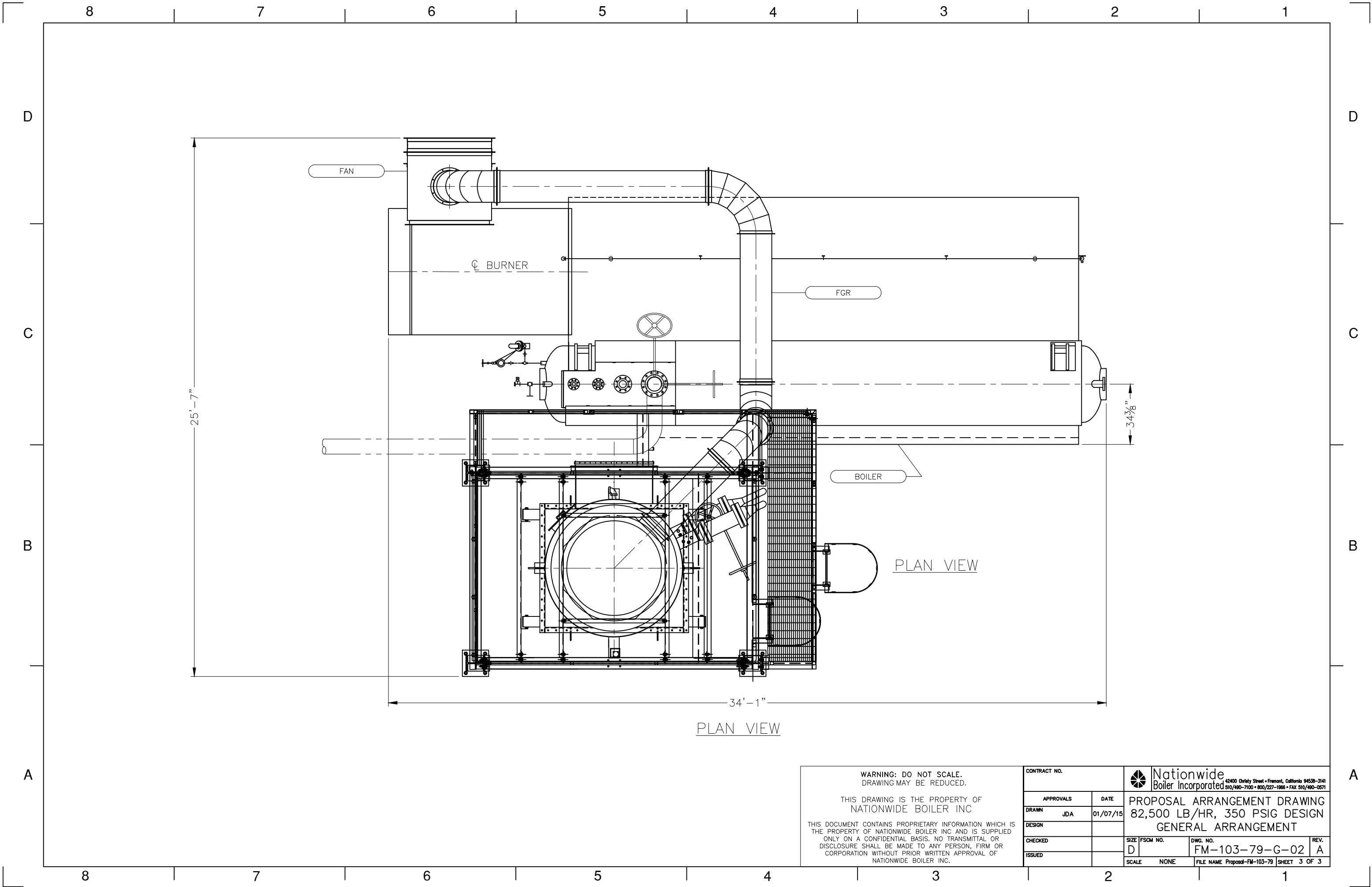
SIDE VIEW

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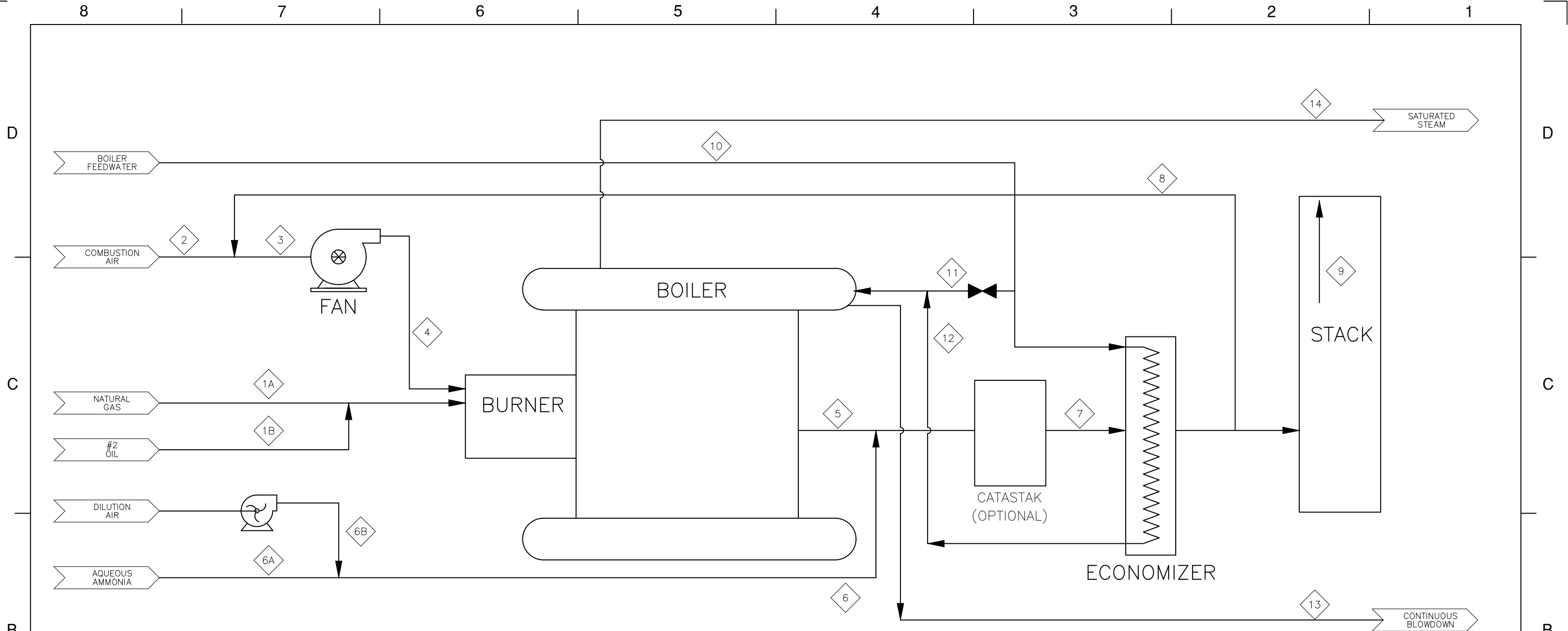
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PROPOSAL ARRANGEMENT DRAWING
82,500 LB/HR, 350 PSIG DESIGN
GENERAL ARRANGEMENT

SIZE	FSCM NO.	DWG. NO.	REV.
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SCALE	NONE	FILE NAME	Proposed-FM-103-79 SHEET 3 OF 3



NOTE: ASSUMED 15% EA, 3% BLOWDOWN, 10% FGR AND NEAR SEA LEVEL ELEVATION

ITEM		1A	1B	2	3	4	5	6A	6B	6 (OPTIONAL)	7	8	9	10	11	12	13	14
DESCRIPTION		NATURAL GAS	#2 OIL	COMBUSTION AIR	COMBUSTION MIX	COMBUSTION MIX	FLUE GAS	AMMONIA	DILUTION AIR	AMMONIA MIX	FLUE GAS	FLUE GAS RECIRCULATION	FLUE GAS	FEEDWATER	ECONOMIZER BYPASS	FEEDWATER	CONTINUOUS BLOWDOWN	SATURATED STEAM
UNITS	FLOW PRESSURE	SCFH PSIG	SCFH PSIG	ACFM IN WC	ACFM IN WC	ACFM IN WC	ACFM IN WC	ACFM PSIG	ACFM IN WC	ACFM IN WC	ACFM IN WC	ACFM IN WC	ACFM IN WC	GPM PSIG	GPM PSIG	GPM PSIG	GPM PSIG	PSIG
FLOW	SEE UNITS	99,990	-	19,214	22,352	20,791	42,423	---	-	-	42,822	2,963	29,734	177.5	0	184.9	6.0	---
MASS FLOW	LB/HR	4,577	4,975	83,949	92,802	92,802	97,379	5.0	195	200	97,579	8,853	88,726	85,052	0	85,052	2,552	82,500
TEMPERATURE	*F	70	70	80	103	103	540	80	80	80	540	300	300	227	227	301	422	422
PRESSURE	SEE UNITS	30	30	0	-0.5	30.0	5.0	80	45	20	2.0	0.5	0	360	-	340	300	300

REFERENCE NOTES

- 1 ALTERNATE FUEL
- 2 FLOW DEPENDS ON WATER QUALITY

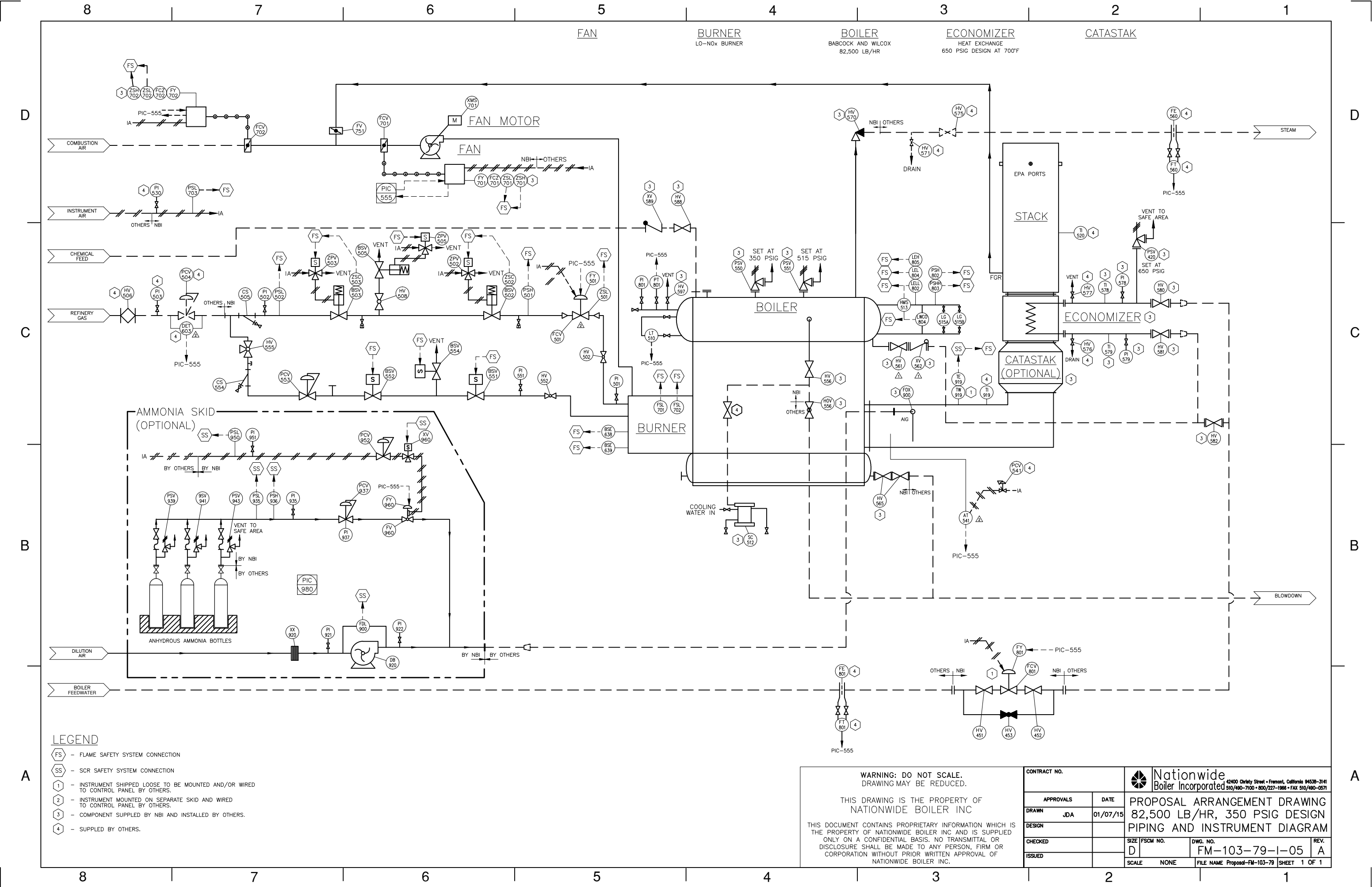
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PROPOSAL ARRANGEMENT DRAWING
82,500 LB/HR, 350 PSIG DESIGN
PROCESS FLOW DIAGRAM



- LEGEND**
- FS - FLAME SAFETY SYSTEM CONNECTION
 - SS - SCR SAFETY SYSTEM CONNECTION
 - 1 - INSTRUMENT SHIPPED LOOSE TO BE MOUNTED AND/OR WIRED TO CONTROL PANEL BY OTHERS.
 - 2 - INSTRUMENT MOUNTED ON SEPARATE SKID AND WIRED TO CONTROL PANEL BY OTHERS.
 - 3 - COMPONENT SUPPLIED BY NBI AND INSTALLED BY OTHERS.
 - 4 - SUPPLIED BY OTHERS.

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