

Monthly Construction Status Report

Docket PU-17-397

August 1, 2019 through August 15, 2019

Contact	Title	Office Phone	Cell Phone
Chris McFarland	Sr. Project Manager	720-456-4003	832-527-8520
Matt Comeaux	Sr. Manager, Environmental Permitting	713-380-3247	832-622-2761

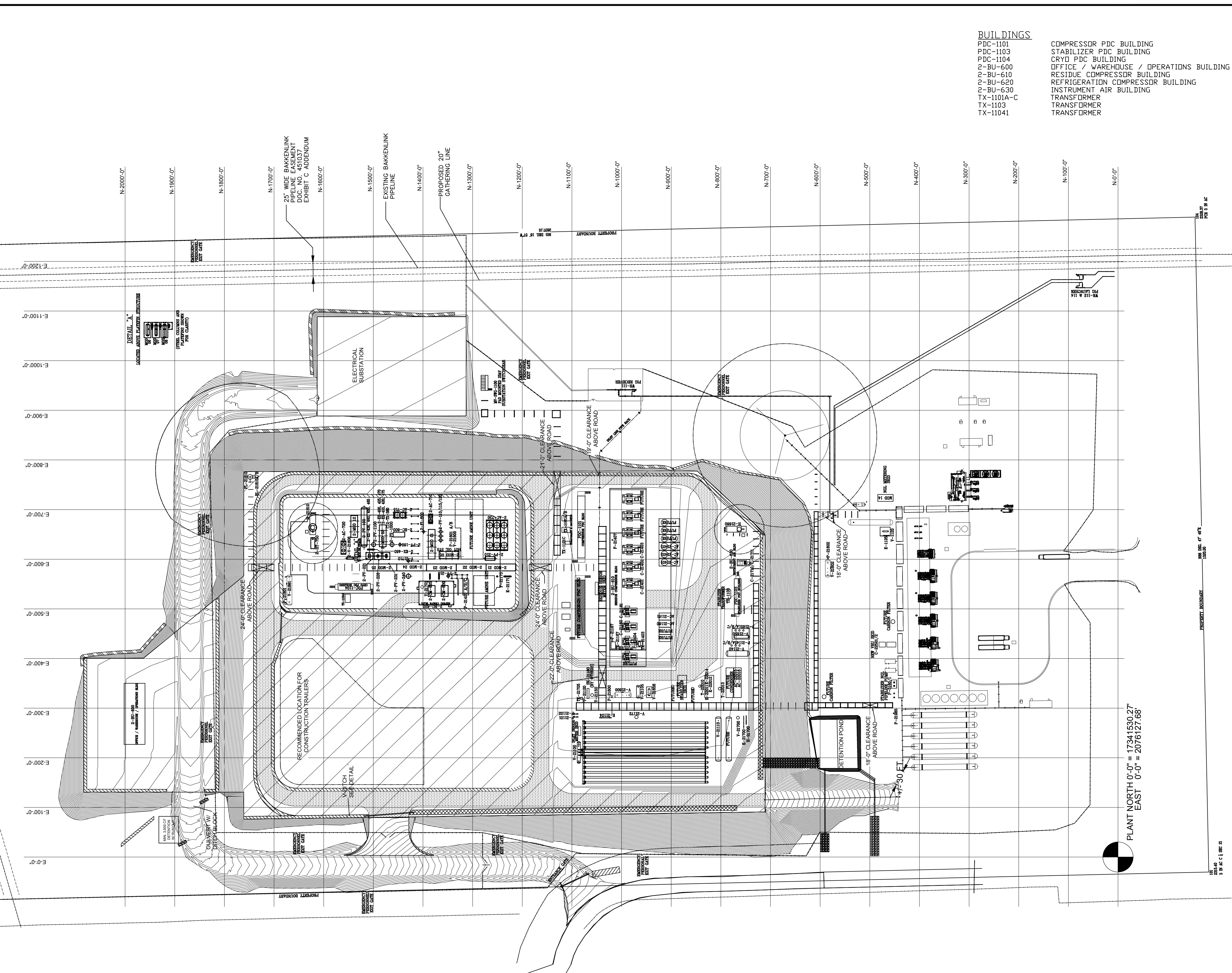
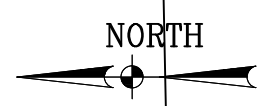
Arrow Bear Den Gas Processing Plant II - Facility Construction

This mid-August 2019 Construction Status Report is being provided to inform the Commission that the Arrow Bear Den Gas Processing Plant II was successfully placed into commercial operations on August 14, 2019.

While commercial operations are now underway, remaining final construction activities are ongoing. These activities include items such as painting, heat trace & insulation installation and completion of stormwater management infrastructure. A courtesy copy of final facility plot plans are also attached.

Progress on remaining activities will be provided to the Commission in the August Construction Status Report.

Site Plot Plans



BUILDINGS

- PDC-1101 COMPRESSOR PDC BUILDING
- AC-21161 STABILIZER PDC BUILDING
- PDC-1104 CRYO PDC BUILDING
- 2-BU-600 OFFICE / WAREHOUSE / OPERATIONS BUILDING
- 2-BU-610 RESIDUE COMPRESSOR BUILDING
- AC-22015/16 REFRIGERATION COMPRESSOR BUILDING
- 2-BU-620 INSTRUMENT AIR BUILDING
- 2-BU-630 TRANSFORMER
- TX-1101A-C TRANSFORMER
- TX-1103 TRANSFORMER
- TX-11041 TRANSFORMER

- AREA 00 UNDERGROUND**
- AREA 51 INLET & S2 STABILIZER**
- AC-21160 OVERHEAD COOLER No.1
- AC-21161 OVERHEAD COOLER No.2
- AC-21401 RESIDUE GAS COOLER No.1
- AC-21402 RESIDUE GAS COOLER No.2
- AC-21403 RESIDUE GAS COOLER No.3
- AC-22015/16 PRODUCT COOLER/STABILIZER OVHD CONDENSER
- C-21160 OVERHEAD COMPRESSOR No.1
- C-21161 OVERHEAD COMPRESSOR No.2
- C-21401 RESIDUE COMPRESSOR No.1
- C-21402 RESIDUE COMPRESSOR No.2
- C-21403 RESIDUE COMPRESSOR No.3
- E-1125 SLOP HEATER
- E-21104 HP CONDENSATE EXCHANGER
- E-21700 FUEL GAS HEATER
- E-22011 DEETHANIZER REBOILER
- E-22012 FED/BOTTOMS EXCHANGER
- E-22014 STABILIZER REBOILER
- F-21101 CONDENSATE FILTER
- F-21102 CONDENSATE FILTER
- F-21407 RESIDUE GAS COALESCER
- H-21660 STABILIZER THERMAL FLUID HEATER
- H-21700 STARTUP FUEL GAS HEATER
- P-21120 TIER 1 METHANOL INJECTION PUMP
- P-2145A/B/C STABILIZER NGL BOOSTER PUMPS
- P-21167 COMPRESSOR SUMP TANK PUMP
- P-21404 COMP. LUBE OIL PUMP
- P-21651A/B/C STABILIZER HDT OIL PUMPS
- P-21800 STABILIZER FLARE PUMP
- P-21802 TIER 0 FLARE PUMP
- P-21985 NGL RETURN PUMP
- P-5160/1 NGL PIPELINE PUMP (EXISTING RE-USE)
- SK-21180 TARGA METERING SKID (BY OTHERS)
- T-22013 STABILIZER TOWER
- T-22010 DEETHANIZER TOWER
- TK-21403 COMPRESSOR LUBE OIL TANK
- TK-21167 COMPRESSOR SUMP TANK
- TK-21705 METHANOL TOTE
- V-1120 SLOP SEPARATOR
- V-21100 INLET SLUG CATCHER
- V-21105 HP SEPARATOR
- V-21110 CONDENSATE SURGE TANK
- V-21140 STABILIZER NGL SURGE DRUM
- V-21150 DH COMPRESSOR SUCTION SCRUBBER
- V-21172 RAW GAS SEPARATOR
- V-21650 STABILIZER HOT OIL EXPANSION DRUM
- V-21658 STABILIZER HOT OIL RELIEF DRUM
- V-21700 FUEL GAS SCRUBBER
- V-21800 STABILIZER FLARE KNOCKOUT DRUM
- V-21802 TIER 0 FLARE KNOCKOUT DRUM
- WR-112/114 PIG LAUNCHERS (EXISTING)
- WR-111 PIG RECEIVER (EXISTING)
- 2-MODULE 14 - SK-21190 NGL METERING SKID**
- F-21175 NGL PARTICULATE FILTER
- AIR PACKAGE - INSTRUMENT AIR COMPRESSOR SKID**
- C-21710/21711 INSTRUMENT AIR COMPRESSOR
- DY-21714A/B DRYER
- F-21713A/B PRE-FILTERS
- F-21715A/B AFTER-FILTERS
- V-21712 DRY AIR RECEIVER
- V-21713 WET AIR RECEIVER
- AREA 53 REFRIGERANT**
- 2-AC-730 REFRIGERANT CONDENSER
- 2-PV-210 REFRIGERANT SURGE DRUM
- AREA 54 PROCESS**
- V-21710 SYSTEM FUEL GAS SCRUBBER
- 2-AC-710 REGENERATION GAS COOLER
- 2-AC-715 EXPANDER/COMPRESSOR DISCHARGE COOLER
- 2-EC-600 EXPANDER/COMPRESSOR PLATEFIN
- 2-EX-430 PLATEFIN HEFC SIDE HEATER
- 2-EX-440 PLATEFIN HEFC REBOILER
- 2-EX-450 PLATEFIN PROD. EXCHANGER
- 2-EX-465 PLATEFIN FEED GAS CHILLER PLATEFIN
- 2-EX-400 PLATEFIN GAS/GAS EXCHANGER
- 2-EX-425 PLATEFIN REGENERATION GAS EXCHANGER
- 2-EX-470 PLATEFIN FEED GAS CHILLER PLATEFIN
- 2-EX-410 PLATEFIN COLD GAS/GAS EXCHANGER
- 2-EX-420 PLATEFIN SUB-COOLER
- 2-EX-475 PLATEFIN REFRIGERANT COOLER
- 2-EX-460 TRIM REBOILER
- 2-FI-800 INLET GAS FILTER SEPARATOR (S.L.)
- 2-PV-110 DEHYDRATOR
- 2-PV-115 DEHYDRATOR
- 2-PV-120 DEHYDRATOR
- 2-PV-160 COLD SEPARATOR
- 2-PV-190 PRODUCT SURGE TANK
- 2-PV-221 OIL RECLAIMER POT
- 2-PV-226 OIL RECLAIMER POT
- 2-PV-231 OIL RECLAIMER POT
- 2-PV-1000 LIGHT ENDS FRACTIONATION COLUMN (LEFC)
- 2-PV-1100 HEAVY ENDS FRACTIONATION COLUMN (HEFC)
- 2-TK-380 METHANOL TOTE
- V-21710 SYSTEMS FUEL GAS SCRUBBER
- AREA 55 HEATERS**
- BL-21810A/B FLARE STACK BLOWERS
- FL-21810 PLANT FLARE
- H-21610 CRYO HOT OIL HEATER
- 2-AC-720 PRODDUCT COOLER
- 2-HT-750 REGENERATION GAS HEATER
- V-21608 CRYO HOT OIL RELIEF DRUM
- AREA 56 FLARE**
- P-21801 PLANT FLARE PUMP
- V-21801 PLANT FLARE KNOCKOUT DRUM
- AREA 57 REFRIGERATION COMPRESSION**
- E-21171 CRYO PREHEAT EXCHANGER
- F-21173 CRYO INLET COALESCER
- P-21420A/B/C CRYO NGL PIPELINE PUMPS
- 2-CM-625 REFRIGERATION COMPRESSOR
- CM-630 REFRIGERATION COMPRESSOR
- 2-PV-240 REFRIGERANT SUCTION SCRUBBER
- 2-PV-215 REFRIGERANT ECONDMIZER
- V-21701 INSTRUMENT AIR VOLUME BOTTLE
- 2-MODULE 01 - PROCESS MODULE**
- 2-CM-620 REGENERATION GAS COMPRESSOR
- 2-FI-910 A/B INLET DUST FILTERS
- 2-PV-130 REGENERATION GAS SCRUBBER
- 2-MODULE 02 - PUMP MODULE**
- 2-PM-10 A/B LEFC BOTTOMS PUMPS
- 2-PM-900 METHANOL INJECTION PUMP
- 2-MODULE 05 - HOT OIL SYSTEM**
- P-21601A/B/C CRYO HOT OIL PUMPS
- 2-STR-21600A/B/C STRAINERS
- V-21600 CRYO HOT OIL EXPANSION DRUM
- 2-MODULE 06 - REFRIGERATION MODULE**
- 2-PV-220 REFRIGERANT DISENGAGING VESSEL
- 2-MODULE 07 - REFRIGERATION MODULE**
- 2-PV-225 REFRIGERANT DISENGAGING VESSEL
- 2-MODULE 08 - REFRIGERATION MODULE**
- 2-PV-230 REFRIGERANT DISENGAGING VESSEL
- 2-MODULE 12 - HEFC PUMP MODULE**
- 2-PM-25 A/D HEFC BOTTOMS PUMPS

GENERAL NOTES:
 1. TRUE NORTH CONTROL POINT 0'-0" NOTED ON THIS DRAWING
 2. TRUE NORTH 0'-0" = 17341530.27, EAST 0'-0" = 2076127.69
 3. ALL PLANT COORDINATES ARE BASED ON CONTROL POINT 0,0
 4. ALL ELEVATIONS ARE BASED ON TRUE SITE ELEVATIONS

THE REPRODUCTION, DISTRIBUTION AND UTILIZATION OF THIS DOCUMENT AS WELL AS THE COMMUNICATION OF ITS CONTENTS TO OTHERS WITHOUT EXPRESS AUTHORIZATION IS PROHIBITED. OFFENDERS WILL BE HELD LIABLE FOR THE PAYMENT OF DAMAGES. ALL RIGHTS RESERVED IN THE EVENT OF THE GRANT OF A PATENT, UTILITY MODEL OR DESIGN. REFER TO PROTECTION NOTICE IS016016

STATUS	ISSUE	DESCRIPTION	BY	CHK	REVIEW	APPR	DATE
IFCR	5.0	GENERAL REVISIONS	JAS	CP	JAS	ETM	08-13-18
IFC	4.0	GENERAL REVISIONS	JAS	JT	JAS	KG	07-06-18
IFC	3.0	ISSUE FOR CONSTRUCTION	JAS	JT	JAS	ETM	06-04-18
IFD	2.0	ISSUE FOR DESIGN	JAS	JT	JAS	ETM	05-01-18
IFCR	6.0	GENERAL REVISIONS	AT	JAS	JAS	ETM	02-12-19

Linde Engineering North America, Inc.

Crestwood

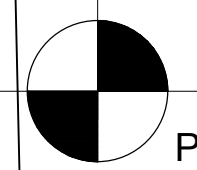
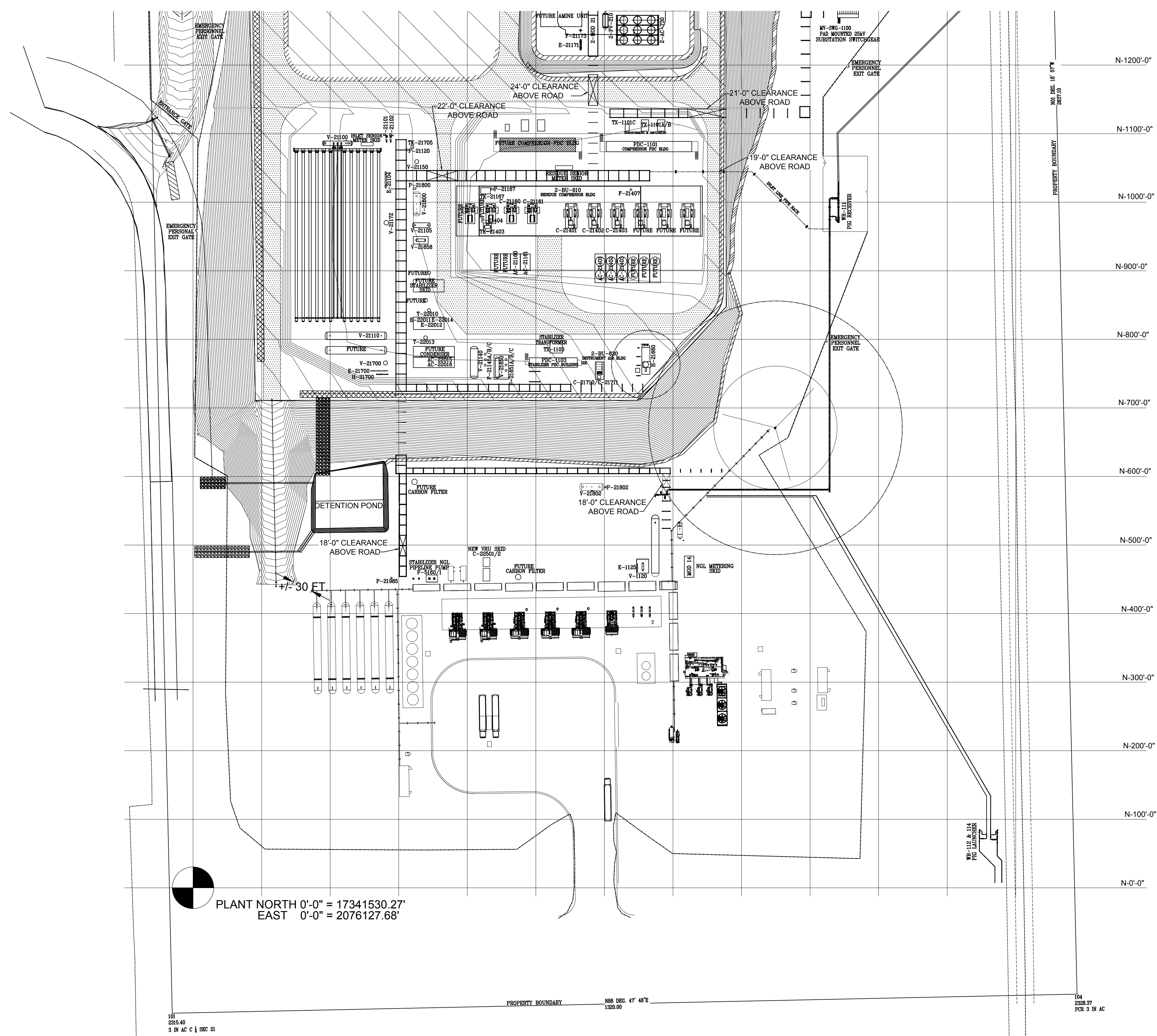
OVERALL PLOT PLAN

RJT & BOP / NORTH PLANT CRYO AREA

120 MMSCFD LIQUID RECOVERY UNIT

BEAR DEN GAS PLANT MCKENZIE COUNTY, ND

SCALE NONE DWG. 000-L-ZP-1001 ISSUE 6.0



PLANT NORTH 0'-0" = 17341530.27'
 EAST 0'-0" = 2076127.68'

- AREA 00 UNDERGROUND**
- AREA 51 INLET & 52 STABILIZER**
- AC-21160 OVERHEAD COOLER No.1
 - AC-21161 OVERHEAD COOLER No.2
 - AC-21401 RESIDUE GAS COOLER No.2
 - AC-21402 RESIDUE GAS COOLER No.3
 - AC-21403 RESIDUE GAS COOLER No.3
 - AC-22015/16 PRODUCT COOLER/STABILIZER DVHD CONDENSER
 - C-21160 OVERHEAD COMPRESSOR No.1
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 - E-1125 SLOP HEATER
 - E-21104 HP CONDENSATE EXCHANGER
 - E-21700 FUEL GAS HEATER
 - E-22011 DEETHANIZER REBOILER
 - E-22012 FEED/BOTTOMS EXCHANGER
 - E-22014 STABILIZER REBOILER
 - F-21101 CONDENSATE FILTER
 - F-21102 CONDENSATE FILTER
 - F-21407 STABILIZER GAS COALESCEER
 - H-21660 STABILIZER HOT OIL HEATER
 - H-21700 STARTUP FUEL GAS HEATER
 - P-21120 TIER 1 METHANOL INJECTION PUMP
 - P-21145A/B/C STABILIZER NGL BOOSTER PUMPS
 - P-21167 COMPRESSOR SUMP TANK PUMP
 - P-21404 COMP. LUBE OIL PUMP
 - P-21651A/B/C STABILIZER HOT OIL PUMPS
 - P-21800 STABILIZER FLARE PUMP
 - P-21802 TIER 0 FLARE PUMP
 - P-21985 NGL REFLUX PUMP
 - P-5160/1 NGL PIPELINE PUMP (EXISTING RE-USE)
 - T-22013 STABILIZER TOWER
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 - TK-21167 COMPRESSOR SUMP TANK
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 - V-21172 RAW GAS SEPARATOR
 - V-21650 STABILIZER HOT OIL EXPANSION DRUM
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 - V-21800 STABILIZER FLARE KNOCKOUT DRUM
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 - WR-111 PIG RECEIVER (EXISTING)
- 2-MODULE 14 - SK-21190 (NGL METERING SKID)**
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 - DY-21714A/B DRYER
 - F-21713A/B PRE-FILTERS
 - F-21715A/B AFTER-FILTERS
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 - V-21713 WET AIR RECEIVER
- BUILDINGS**
- PDC-1101 COMPRESSOR PDC BUILDING
 - PDC-1103 STABILIZER PDC BUILDING
 - 2-BU-610 RESIDUE COMPRESSOR BUILDING
 - 2-BU-630 INSTRUMENT AIR BUILDING
 - TX-1101A/B/C TRANSFORMERS
 - TX-1103 TRANSFORMER

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IFCR	STATUS	ISSUE	DESCRIPTION	BY	CHK	REVIEW	APPR	DATE
5.0	GENERAL REVISIONS	JAS	CP	JAS	ETM	08-13-18		
4.0	GENERAL REVISION	JAS	JT	JAS	KTG	07-06-18		
3.0	ISSUE FOR CONSTRUCTION	JAS	JT	JAS	ETM	06-04-18		
2.0	ISSUE FOR DESIGN	JAS	JT	JAS	ETM	05-01-18		
6.0	GENERAL REVISIONS	AT	JAS	JAS	ETM	02-12-19		

Linde Engineering North America, Inc.

Crestwood

PLOT PLAN

SOUTH PLANT STABILIZER AREA

120 MMSCFD LIQUID RECOVERY UNIT

BEAR DEN GAS PLANT MCKENZIE COUNTY, ND

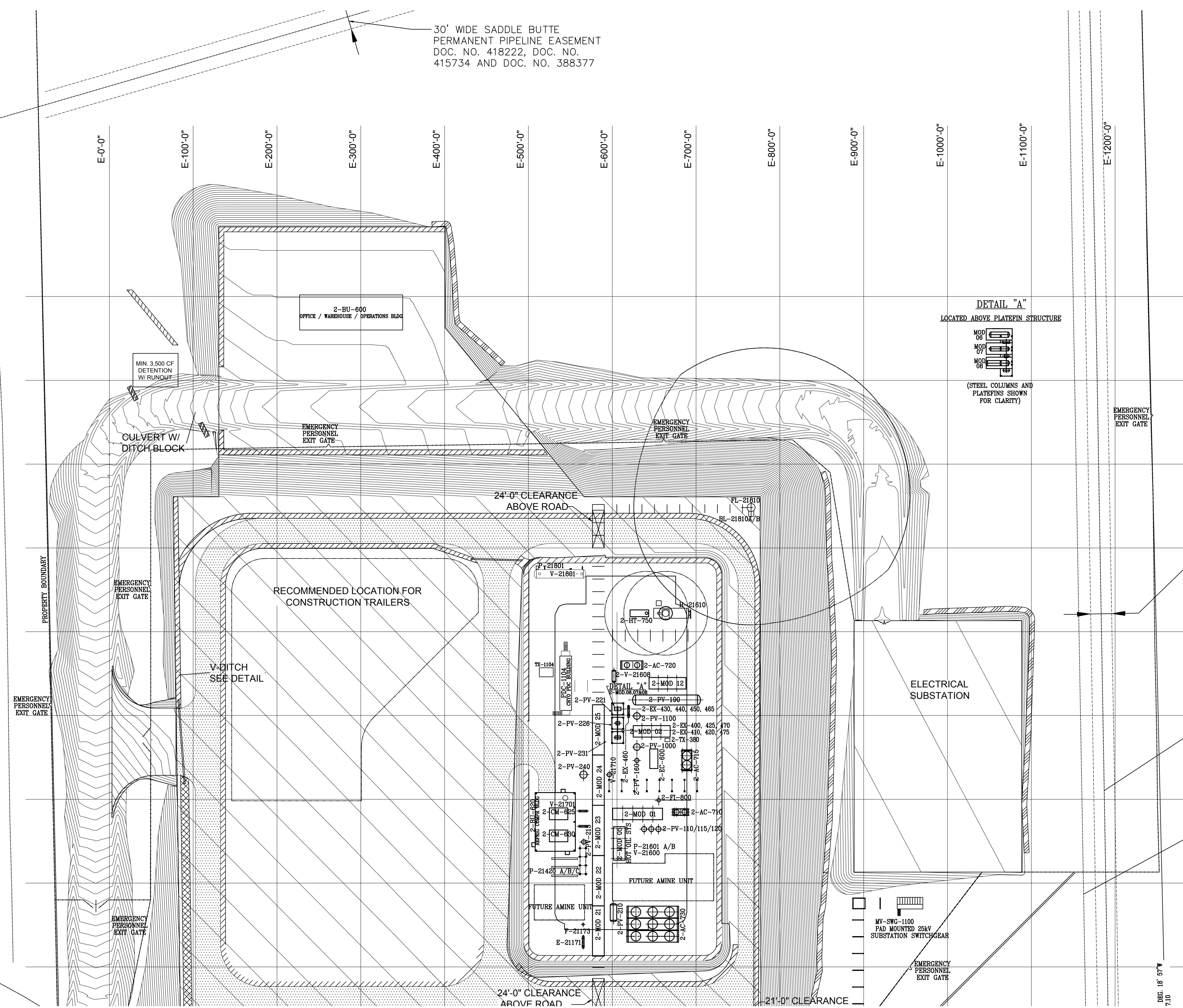
SCALE: NONE/DWG. 000-L-ZP-1002 ISSUE 6.0

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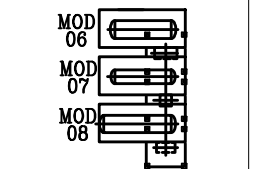
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3 IN AC C 1 SBC 21

Feb 13, 2019 - 2:21pm Q:\211044WC - BEAR DEN GAS PLANT\2130 Piping Design\Plot Plans\PLT PLAN - 02-12-19\04WG



30' WIDE SADDLE BUTTE
PERMANENT PIPELINE EASEMENT
DOC. NO. 418222, DOC. NO.
415734 AND DOC. NO. 388377

DETAIL "A"
LOCATED ABOVE PLATEFIN STRUCTURE



(STEEL COLUMNS AND
PLATEFINS SHOWN
FOR CLARITY)

- AREA 00 UNDERGROUND**
- 2-AC-730 REFRIGERANT CONDENSER
 - 2-PV-210 REFRIGERANT SURGE DRUM
- AREA 53 REFRIGERANT**
- V-21710 SYSTEM FUEL GAS SCRUBBER
 - 2-AC-710 REGENERATION GAS COOLER
 - 2-AC-715 EXPANDER/COMPRESSOR DISCHARGE COOLER
 - 2-CC-600 EXPANDER/COMPRESSOR
 - 2-EX-430 PLATEFIN HEFC SIDE HEATER
 - 2-EX-440 PLATEFIN HEFC REBOILER
 - 2-EX-450 PLATEFIN PRODUCT EXCHANGER
 - 2-EX-465 PLATEFIN FEED GAS CHILLER
 - 2-EX-400 PLATEFIN GAS/GAS EXCHANGER
 - 2-EX-425 REGENERATION GAS EXCHANGER
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 - 2-PV-110 DEHYDRATOR
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 - 2-PV-221 OIL RECLAIMER PDT
 - 2-PV-226 OIL RECLAIMER PDT
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 - 2-PV-1100 HEAVY ENDS FRACTIONATION COLUMN (HEFC)
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 - 2-CM-630 REFRIGERATION COMPRESSOR
 - 2-PV-240 REFRIGERANT SUCTION SCRUBBER
 - 2-PV-215 REFRIGERANT ECONOMIZER
 - V-21701 INSTRUMENT AIR VOLUME BOTTLE

- 2-MODULE 01 - PROCESS MODULE**
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 - 2-PM-900 METHANOL INJECTION PUMP
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 - 2-PM-25 A/B/C/D HEFC BOTTOMS PUMPS

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IFCR	5.0	GENERAL REVISIONS	AT	JAS	JAS	ETM	02-12-19
IFCR	4.0	GENERAL REVISIONS	JAS	CP	JAS	ETM	08-13-18
IFC	3.0	GENERAL REVISION	JAS	JT	JAS	ETM	07-06-18
IFC	2.0	ISSUE FOR CONSTRUCTION	JAS	JT	JAS	ETM	06-04-18
IFD	1.0	ISSUED FOR DESIGN	JAS	JT	JAS	ETM	05-01-18

PLOT PLAN
NORTH PLANT CRYO AREA
120 MMSCFD LIQUID RECOVERY UNIT

BEAR DEN GAS PLANT
McKENZIE COUNTY, ND

SCALE NONE/DWG. 000-L-ZP-1003 ISSUE 5.0

PROJECT NUMBER &AF2110A4WC

Linde Engineering North America, Inc.
Crestwood