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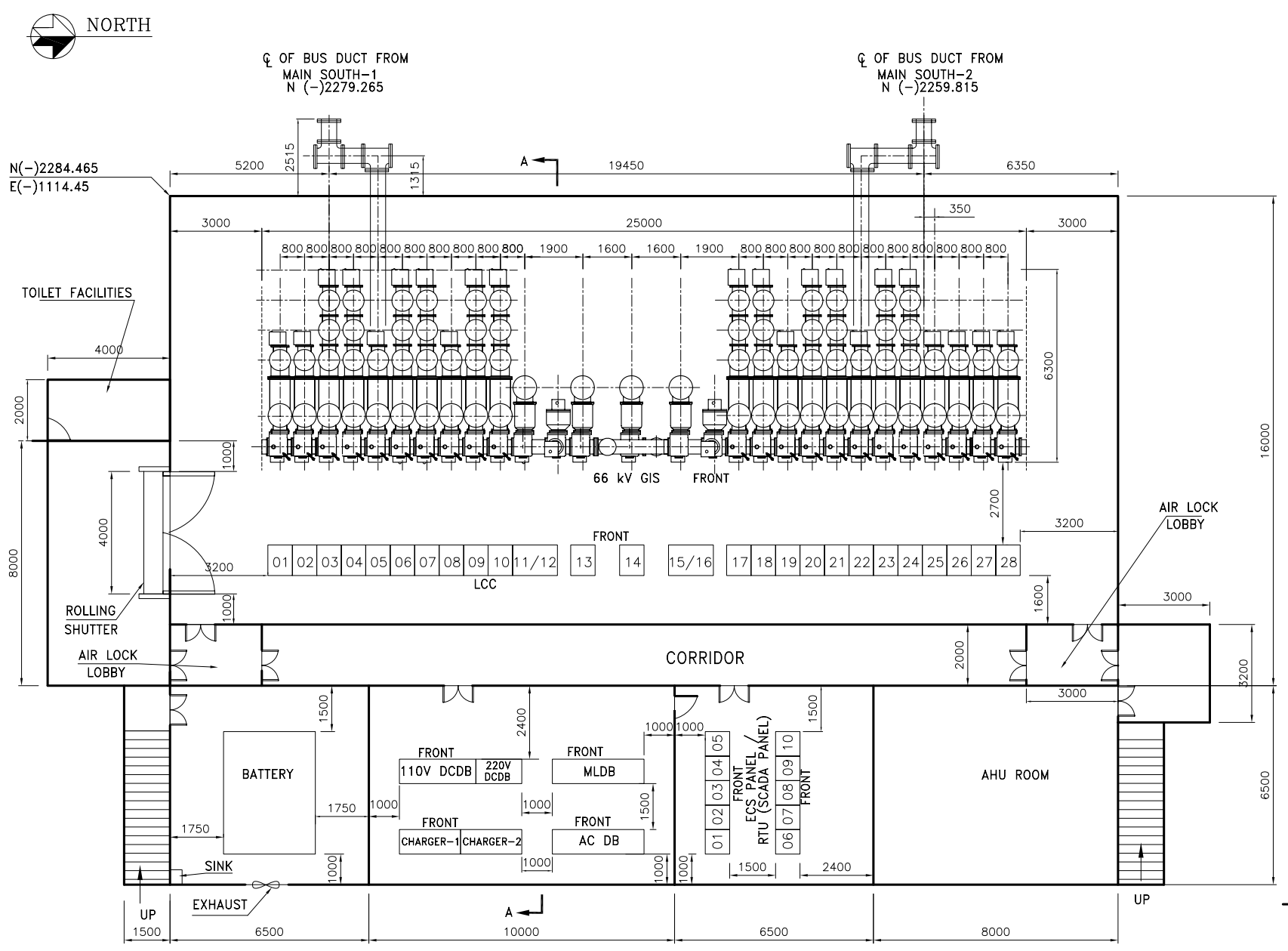
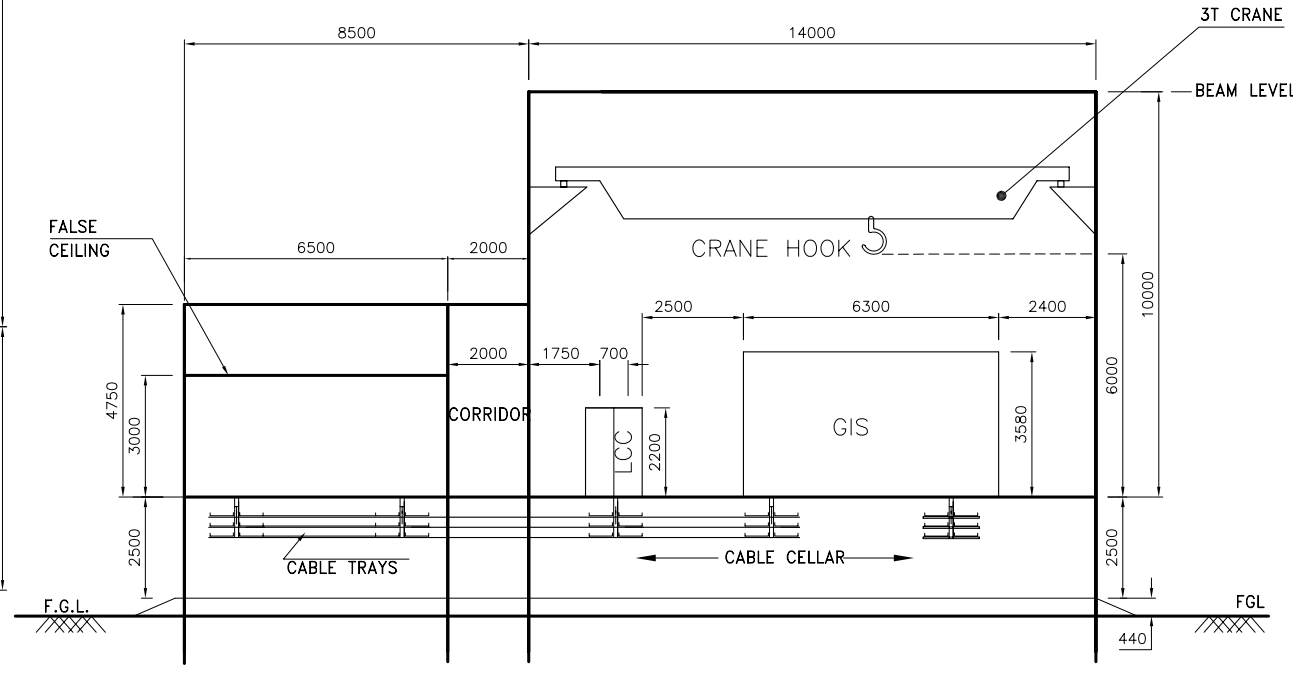
DRAWING No. TB 2 328 316 002





SECTION A–A

NOTES:–

1. FOR EXACT DETAILS OF PANELS / EHV PANEL, REFER THEIR RESPECTIVE OGA DRAWINGS.
2. AC DC DB ROOM SHALL BE PRESSURIZED AND GIS AND ECS PANEL ROOM SHALL BE AIR CONDITIONED.
3. FALSE CEILING SHALL BE PROVIDED IN ECS PANEL ROOM.
4. COLUMN BEAM DETAIL SHALL BE AS PER CIVIL DESIGN/DRAWING.
5. BATTERY ROOM SHALL BE PROVIDED WITH WATER CONNECTION WITH SINK.
6. FLOOR OF THE BATTERY ROOM AND WALLS UPTO 1.5 M HEIGHT SHALL HAVE ACID/ALKALINE RESISTANT PROTECTIVE EPOXY COATING.
7. ROOFS OF ALL AIR CONDITIONED ROOMS SHALL BE PROVIDED WITH UNDER DECK INSULATION.
8. AT LEAST ONE STAIRCASE SHALL BE APPROACH TO ROOF FOR MAINTENANCE PURPOSE.
9. ALL DIMENSIONS ARE FROM THE INSIDE FACE OF THE WALLS.
10. ARCHITECTUREAL DETAILS SHALL BE SHOWN IN SEPARATE DRAWING.

REV.	DATE	ALTERED / CHECKED / APPROVED	ZONE
02	21.09.10	ALTERED RAJESH; CHECKED RKP/SKS; APPROVED DS/SN	REVISED AS PER EIL COMMENT RECIEVED ON 20.09.10.
01	01.09.10	ALTERED RAJESH; CHECKED RKP/SKS; APPROVED DS/SN	REVISED AS PER EIL COMMENT

ADDITIONAL INFORMATION
W.O.No. 89005
STATUS OF DRAWING
DISTRIBUTION OF PRINTS

NAME OF CONSULTANT: ENGINEERS INDIA LIMITED
ग्राहक/परियोजना का नाम / NAME OF CUSTOMER/PROJECT: INDIAN OIL CORPORATION LIMITED PARADIP REFINERY PROJECT

BHEL भारत हेवी इलेक्ट्रिकल्स लिमिटेड ट्रांसमिशन परियोजना विभाग
BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION

	नाम /NAME	हस्ता./SIGN.	दि./DATE
बनाया DRAWN	RAJESH	RAJESH	21.08.10
जाँचा CHECKED	RKP/SKS	–SD–	21.08.10
स्वीकृत APPROVED	DS/SN	–SD–	21.08.10

विभाग DEPT. | कोड CODE | अनुपात / SCALE 1:120 | कार्ड कोड CARD CODE

शीर्षक/TITLE: LAYOUT PLAN FOR 66kV GIS BUILDING

ड्राईंग क्र./DRAWING NO. TB 2 328 316 002 | पुनः/REV. 03

पृष्ठ क्र./SHEET No. 01 | अगला पृष्ठ/NEXT SHEET –

COMPUTER DRC. PATH NAME : D:\PROJECTS\Paradip\Drawings\GIS Building\GIS Building Plan REV. 03_19.11.10_Coordinate n GIS Dim. Circle.dwg

REF. DRG. No. | SIGN. & DATE | INVENTORY No.

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DRAWING NO. TB 1 328 316 004

EMERGENCY INCOMER-1 FROM MAIN PLANT CONTROL ROOM (EMERGENCY SECTION)

MAIN INCOMER FROM MAIN PLANT CONTROL ROOM

3.5CX25 sq.mm Al

3X1CX500 sq.mm AL

415V AC DISTRIBUTION BOARD

415V, 3ø 4-WIRE, 400A, 50kA FOR 1SECOND
(FLOOR MOUNTED)

KEY INTERLOCK

400A NC

400A NO

63/1A CL-1

500/1A CL-1

(0-500V) V VSS

(0-100A) A ASS

(0-500A) A ASS

415V/√3 / 110/√3 50VA CL-1/2

415V A.C. DISTRIBUTION BOARD

TPN SPL 125A

TPN SPL 32A

TPN 63A

SPARE

SPARE

TO ELDB

110V BATTERY CHARGER-1

110V BATTERY CHARGER-2

TO MLP

110V BATTERY CHARGER-1

110V BATTERY CHARGER-2

AC & VENTILATION BOARD

EOT CRANE

TO LCC DB

SPARE

SPARE

SPARE

415V EMERGENCY LIGHTING DISTRIBUTION PANEL

415V, 3ø 4-WIRE, 32A, 10kA FOR 1SECOND
(FLOOR MOUNTED)

10KVA Dyn-11 415/415V LIGHTING TRANS. FORMER

415V/√3 / 110/√3 VA >20 CL-0.5

NC 32A 4POLE MCB

415V MAIN LIGHTING PANEL

415V, 3ø 4-WIRE, 200A, 20kA FOR 1 SECOND
(FLOOR MOUNTED)

25KVA Dyn-11 415/415V LIGHTING TRANS. FORMER

125A NC

LCC POWER DISTRIBUTION PANEL

415V, 3ø 4-WIRE, 32A, 10kA FOR 1SECOND
(WALL MOUNTED)

NC 20A 4POLE MCB

LCC 1 TO 9 2CX6 sq.mm Cu

LCC 10 TO 19 2CX6 sq.mm Cu

LCC 20 TO 28 2CX6 sq.mm Cu

SPARE

4CX6 sq.mm Cu

2CX6 sq.mm Cu

OS HALL

CONTROL ROOM LDB

BATTERY ROOM LDB

AHU LDB

LT SWG ROOM

CORRIDOR

MAIN ENTRANCE (STAIRS)

CABLE CELLAR

BATTERY ROOM LDB

15A RECEPTACLE DB

SPARE

LIGHTING DISTRIBUTION PANEL

415V, 3ø 4-WIRE, 32A, 10kA FOR 1SECOND
(WALL MOUNTED)

NC 32A 4POLE MCB

POWER RECEPTACLE DISTRIBUTION PANEL

415V, 3ø 4-WIRE, 32A, 10kA FOR 1SECOND
(WALL MOUNTED)

NC 32A 4POLE MCB

2CX6 sq.mm Cu

OS ROOM LTC-SWB

CONTROL ROOM LTC-SWB

BATTERY ROOM LTC-SWB

AHU LTC-SWB

ECS ROOM LTC-SWB

CORRIDOR

MAIN ENTRANCE (STAIRS)

CABLE CELLAR

SPARE

15A RECEPTACLE

SPARE

- CONTACTOR
- DRAW OUT HEAVY DUTY SWITCH
- CONTROL FUSE
- TRANSDUCER
- NON DRAW OUT AIR BREAK SWITCH
- SWITCH FUSE UNIT
- MCB
- CBCT CORE BALANCE CURRENT TRANSFORMER
- 27 : DC INSTANTANEOUS UNDER VOLTAGE RELAY
- 54 : DC INSTANTANEOUS OVER VOLTAGE RELAY
- 64 : EARTH LEAKAGE RELAY
- V VOLTMETER
- A AMMETER
- VSS VOLTAGE SELECTOR SWITCH
- ASS AMMETER SELECTOR SWITCH
- TPN THREE POLE WITH SEPARATE NEUTRAL LINK
- MK MARSHALLING KIOSK
- LR LINE REACTOR

Notes:

1. NO TWO AC SOURCE SHALL BE PARALLELED AT ANY STAGE.
2. IN THE ABSENCE OF NORMAL / MAIN INCOMER SOURCE EMERGENCY INCOMER SUPPLY SHALL BE STARTED AND BUS COUPLER OF EMERGENCY INCOMER SHALL BE OPENED.
3. EACH BAY LCC SHALL BE FED BY ATLEAST ONE SOURCE FROM ACDB AND SECOND SOURCE SHALL BE LOOPED FROM NEAREST LCC WHICH SHALL BE FED FROM ANOTHER SOURCE FROM 415V ACDB (SEE DETAIL A FOR LCC SUPPLY)
4. STATUS OF ALL INCOMERS INCLUDING EMERGENCY AND BUSCOUPLER BREAKERS OF MAIN AC DC BOARDS SHALL BE AVAILABLE FOR SCADA (ECS) SYSTEM, SUITABLE AUX. CONTACTS TO BE PROVIDED.
5. FOLLOWING ALARMS SHALL BE AVAILABLE FOR SCADA (ECS) SYSTEM.
   RELAY TRIP OF ALL BREAKER OF 415V AC BOARD
   MAIN INCOMER SUPPLY FAILURE / OFF OF 415V AC BOARD.
   RELAY TRIP OF ALL BREAKER OF 110V DC BOARD
6. TRANSDUCERS (OF 4-20MA) FOR FOLLOWING SHALL BE AVAILABLE FOR SIGNALS TO SCADA (ECS) SYSTEM.
   -CURRENT IN MAIN INCOMER 1 AND 2 OF 415V AC BOARD
   -CURRENT IN EMERGENCY INCOMER OF 415V AC BOARD
   -CURRENT IN EMERGENCY AND MAIN BUS COUPLER OF 415V AC BOARD
   -VOLTAGE OF MAIN INCOMER 1 AND 2 OF 415V AC BOARD
   -VOLTAGE OF EMERGENCY INCOMER OF 415V AC BOARD
   -VOLTAGE OF EMERGENCY AND MAIN BUS COUPLER OF 415V AC BOARD
   -CURRENT IN MAIN INCOMER 1 AND 2 OF 110V DC BOARD
   -VOLTAGE OF MAIN INCOMER 1 AND 2
7. NECESSARY CONTACTORS SHALL BE PROVIDED IN AC AND DC DISTRIBUTION BOARDS SUCH THAT 220V DC CRITICAL LIGHTING PANEL SHALL TURNED ON AFTER FAILURE OF MAIN AND EMERGENCY LIGHTING SUPPLY.

FROM AC DB

110V

FLOAT CUM BOOST CHARGER-1

2X2CX25 sq.mm Al

110V BATTERY SET-1

2X1CX500 sq.mm Al

NC 150A

(0-300V) V VSS

27 54 64 25

(SEE NOTE 4 TO 6)

110V D.C. DISTRIBUTION BOARD-1

110V, 150A, 10KA FOR 1SECOND

150A

6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 1A

2CX5 sq.mm Al

LCC 1 LCC 2 LCC 3 LCC 4 LCC 5 LCC 6 LCC 7 LCC 8 LCC 9 LCC 10 LCC 11 LCC 12 LCC 13 LCC 14 LCC 15 LCC 16 LCC 17 LCC 18 LCC 19 LCC 20 LCC 21 LCC 22 LCC 23 LCC 24 LCC 25 LCC 26 SPARE SPARE

2CX6 sq.mm Cu

FROM AC DB

110V

FLOAT CUM BOOST CHARGER-2

2X2CX25 sq.mm Al

110V BATTERY SET-2

2X2CX25 sq.mm Al

NC 150A

(0-300V) V VSS

25 64 54 27 VSS

110V D.C. DISTRIBUTION BOARD-2

110V, 150A, 10KA FOR 1SECOND

6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 6A 1A

2CX5 sq.mm Al

LCC 1 LCC 2 LCC 3 LCC 4 LCC 5 LCC 6 LCC 7 LCC 8 LCC 9 LCC 10 LCC 11 LCC 12 LCC 13 LCC 14 LCC 15 LCC 16 LCC 17 LCC 18 LCC 19 LCC 20 LCC 21 LCC 22 LCC 23 LCC 24 LCC 25 LCC 26 SPARE SPARE

2CX6 sq.mm Cu

FROM ACDB SECTION -1 (Ph-R)

FROM ACDB SECTION -2 (Ph-R)

LCC 1 LCC 2 LCC 3 LCC 4 LCC 5 LCC 6 LCC 7 LCC 8 LCC 9

LCC AC POWER SUPPLY

FROM ACDB SECTION -1 (Ph-Y)

FROM ACDB SECTION -2 (Ph-Y)

LCC 10 LCC 11 LCC 12 LCC 13 LCC 14 LCC 15 LCC 16 LCC 17 LCC 18 LCC 19

LCC AC POWER SUPPLY

FROM ACDB SECTION -1 (Ph-B)

FROM ACDB SECTION -2 (Ph-B)

LCC 20 LCC 21 LCC 22 LCC 23 LCC 24 LCC 25 LCC 26 LCC 27 LCC 28

LCC AC POWER SUPPLY

DETAIL-A

220 V DC CRITICAL LIGHTING SUPPLY FROM MAIN PLANT 220 V DC DB

4CX6 sq.mm Cu

NO

SPN MCB, 32A

DC CRITICAL LIGHTING DISTRIBUTION BOARD
220V DC, 2-WIRE, 32A, (WALL MOUNTED)

DP MCB,20A

2CX2.5 sq.mm Cu

BATTERY ROOM

LV SW ROOM

ECS ROOM

OS HALL

CORRIDOR

STAIRCASE

SPARE

REV.	DATE	ALTERED / CHECKED / APPROVED	ZONE
01	20.12.10	ALTERED RAJESH; CHECKED RKP/SKS; APPROVED DS/SN	DRG. REVISED AS PER EIL COMMENTS
02	19.01.11	ALTERED JOGINDER; CHECKED RKP/SKS; APPROVED DS	DRG. REVISED AS PER EIL COMMENTS

ADDITIONAL INFORMATION
W.O.No. 89005

STATUS OF DRAWING

DISTRIBUTION OF PRINTS

ग्राहक/परियोजना का नाम INDIAN OIL CORPORATION LIMITED
NAME OF CUSTOMER/PROJECT : PARADIP REFINERY PROJECT

NAME OF CONSULTANT : ENGINEERS INDIA LIMITED

BHEL भारत हेवी इलेक्ट्रिकल्स लिमिटेड
भारत हेवी इलेक्ट्रिकल्स लिमिटेड पारेषण परियोजना विभाग
BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION

	नाम /NAME	हस्ता./SIGN.	दि./DATE
बनाया DRAWN	RAJESH	RAJESH	03.11.10
जाचा CHECKED	RKP/SKS	-Sd-	
स्वीकृत APPROVED	DS/SN	-Sd-	

विभाग DEPT. / कोड CODE / अनुपात / SCALE / कार्ड कोड CARD CODE

शीर्षक/TITLE
SINGLE LINE DIAGRAM OF 415V ACDB AND DCDB FOR 66KV GIS

ड्राईंग क्र./DRAWING NO. TB 1 328 316 004

पृष्ठ/REV. 02

पृष्ठ क्र./SHEET No. 01 अगला पृष्ठ/NEXT SHEET --

COMPUTER DRG. PATH NAME :

REF. DRG. No.

SIGN. & DATE

INVENTORY No.