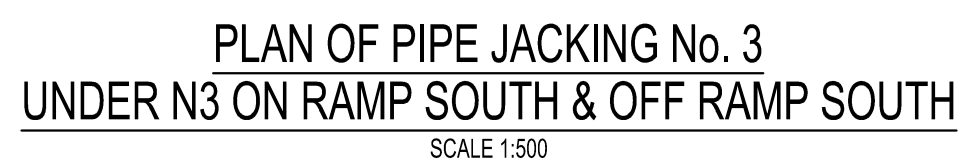
[illegible]

- NOTES:**
1. A MINIMUM CLEAR DISTANCE BETWEEN OTHER SERVICES AND WATER MAINS SHALL BE:
 - * SERVICES AT RIGHT ANGLICES: 300mm
 - * PARALLEL SERVICES: WATER 500mm
SEWER 1000mm
 2. MINIMUM CLEAR DISTANCE BETWEEN ANY BOX, MANHOLE OR SUPPORTING STRUCTURE SHALL BE 500mm
 3. UNDERGROUND SERVICE SHALL HAVE NOT LESS THAN 800mm COVER.
 4. THE LEVELS AND POSITIONS OF EXISTING SERVICES ARE ESTIMATED. CONTRACTOR SHALL EXPOSE ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED JACKING POSITION. SERVICES SHALL BE SURVEYED AND RESULTS REPORTED TO THE EMPLOYER'S AGENT BEFORE COMMENCEMENT OF JACKING ESTIMATION.
 5. CONTRACTOR TO PROVIDE ADEQUATE ROAD SIGNAGE DURING CONSTRUCTION TO THE SATISFACTION OF THE EMPLOYER'S AGENT.
 6. CONTRACTOR TO SURVEY AS BUILT LEVELS OF JACKED LEAVES UNDER ROAD AND FORWARD RESULTS TO THE EMPLOYER'S AGENT.

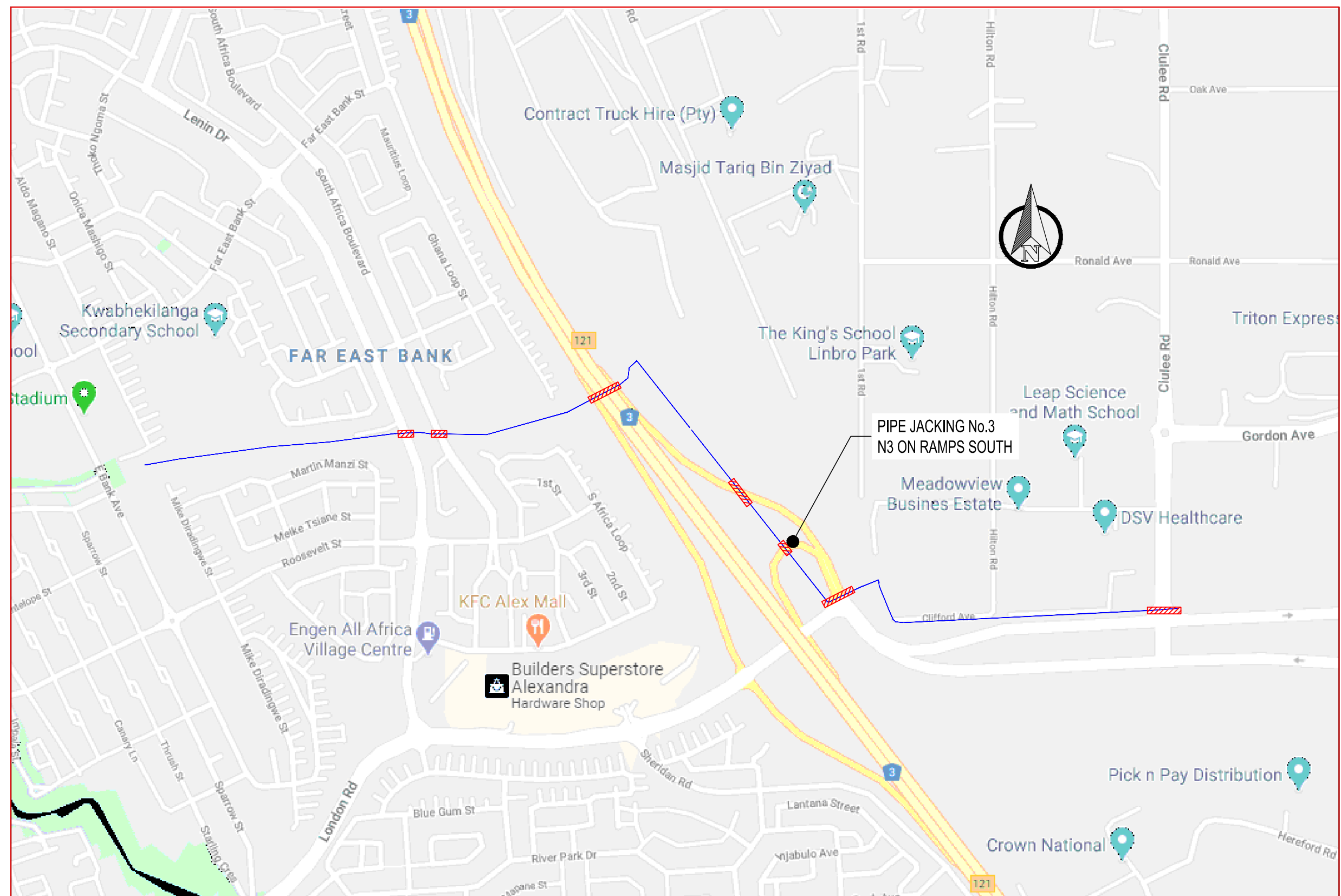


ISSUED FOR TENDER



NOTES:

1. A MINIMUM CLEAR DISTANCE BETWEEN OTHER SERVICES AND WATER MAINS SHALL BE:
 - SERVICES AT RIGHT ANGLES: 300mm
 - PARALLEL SERVICES: WATER 500mm
SEWER 1000mm
2. MINIMUM CLEAR DISTANCE BETWEEN ANY BOX, MANHOLE OR SUPPORTING STRUCTURE SHALL BE 500mm
3. UNDERGROUND SERVICE SHALL HAVE NOT LESS THAN 800mm COVER.
4. POSITION AND LEVELS OF EXISTING SERVICES ARE ESTIMATED. CONTRACTOR SHALL EXPOSE ALL EXISTING SERVICES IN THE VACUITY OF THE PROPOSED JACKING POSITION. SERVICES SHALL BE SURVEYED AND RESULTS REPORTED TO THE EMPLOYER'S AGENT BEFORE JACKING ESTABLISHMENT CAN COMMENCE.
5. CONTRACTOR TO PROVIDE ADEQUATE ROAD SIGNAGE DURING CONSTRUCTION TO THE SATISFACTION OF THE EMPLOYER'S AGENT.
6. CONTRACTOR TO SURVEY AS BUILT LEVELS OF JACKED SLEEVES UNDER ROAD AND FORWARD RESULTS TO THE EMPLOYER'S AGENT.

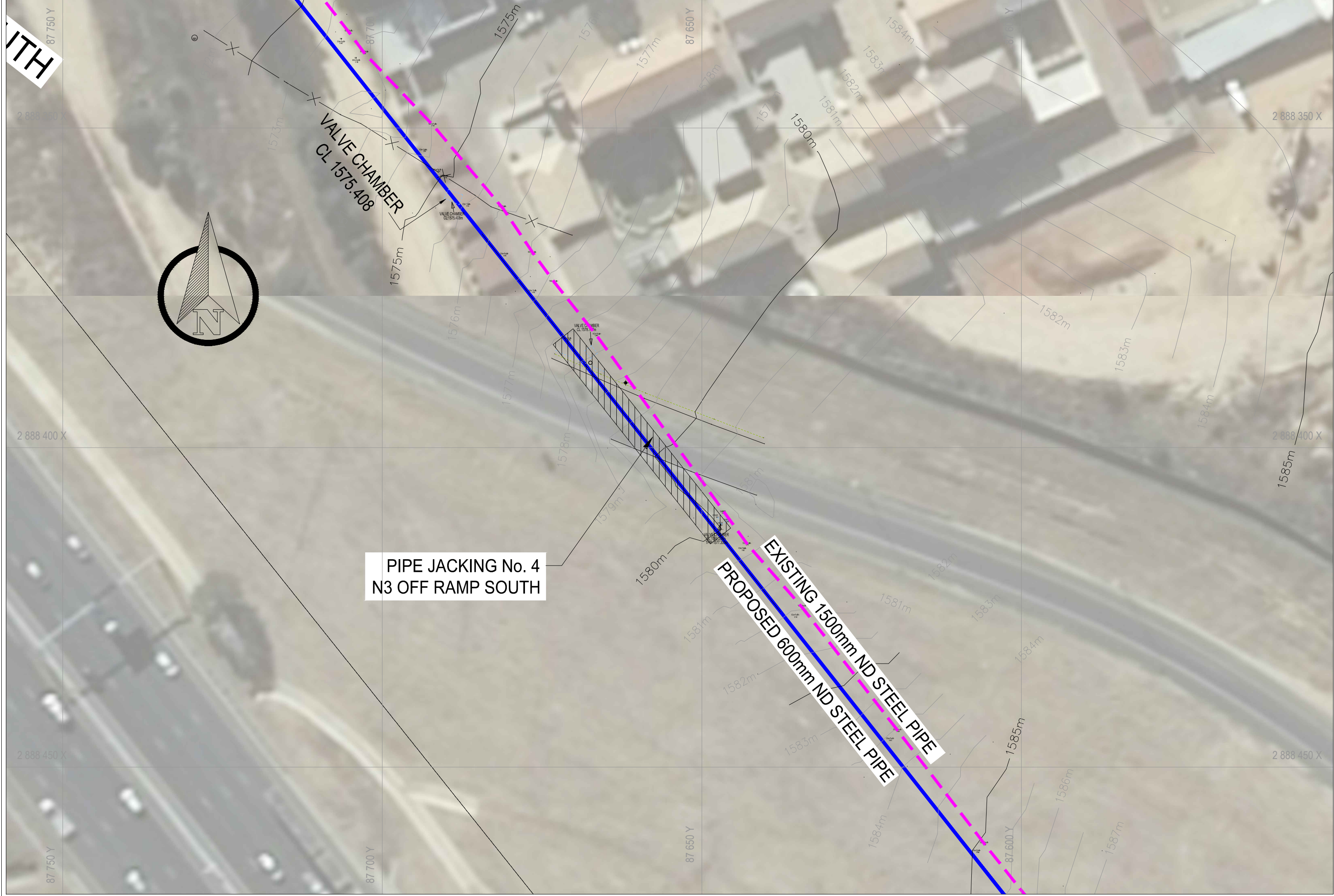


DRAWING No. JW14090R-AL-LAY12-W

JW14090R-AL	LAY 12	A
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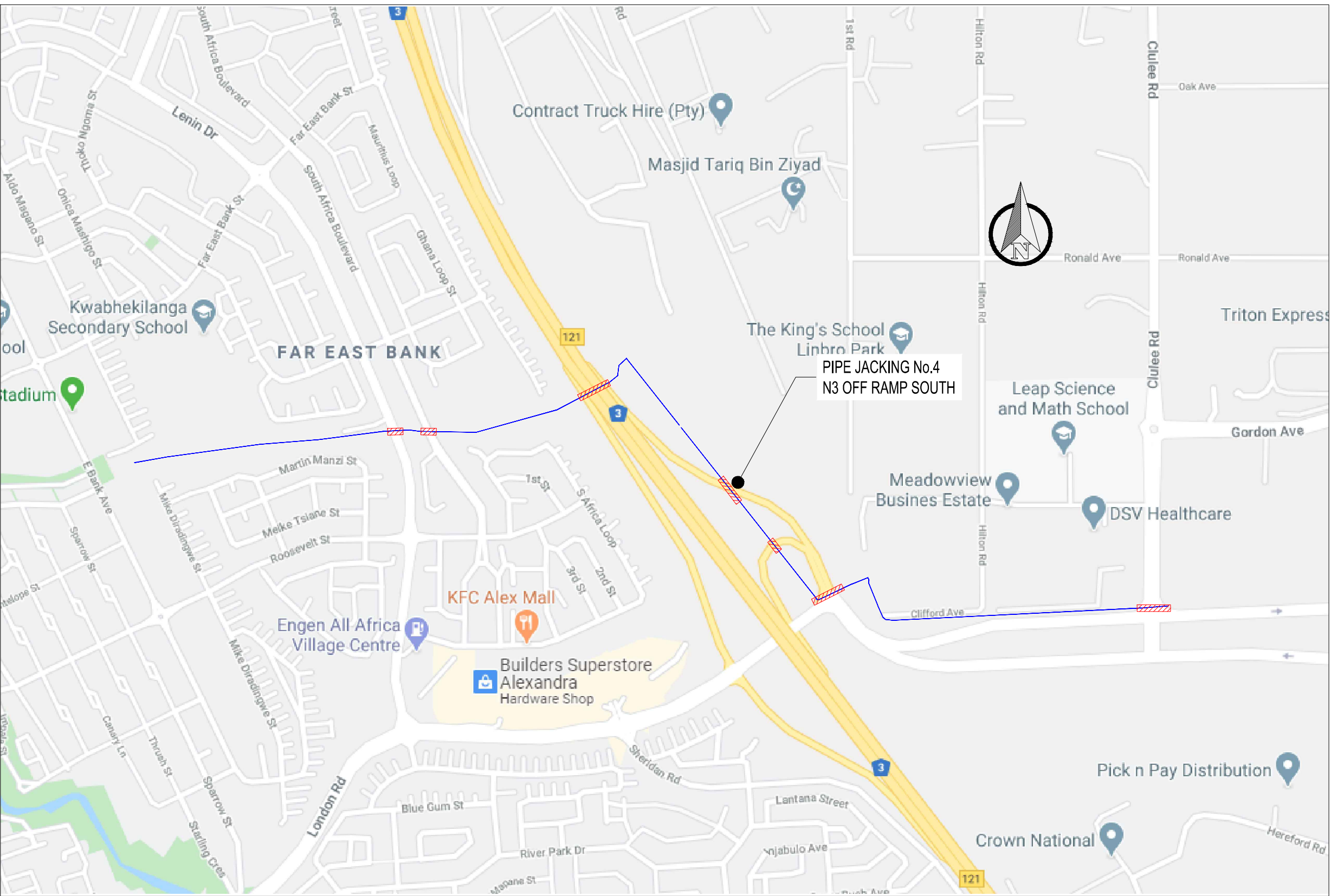
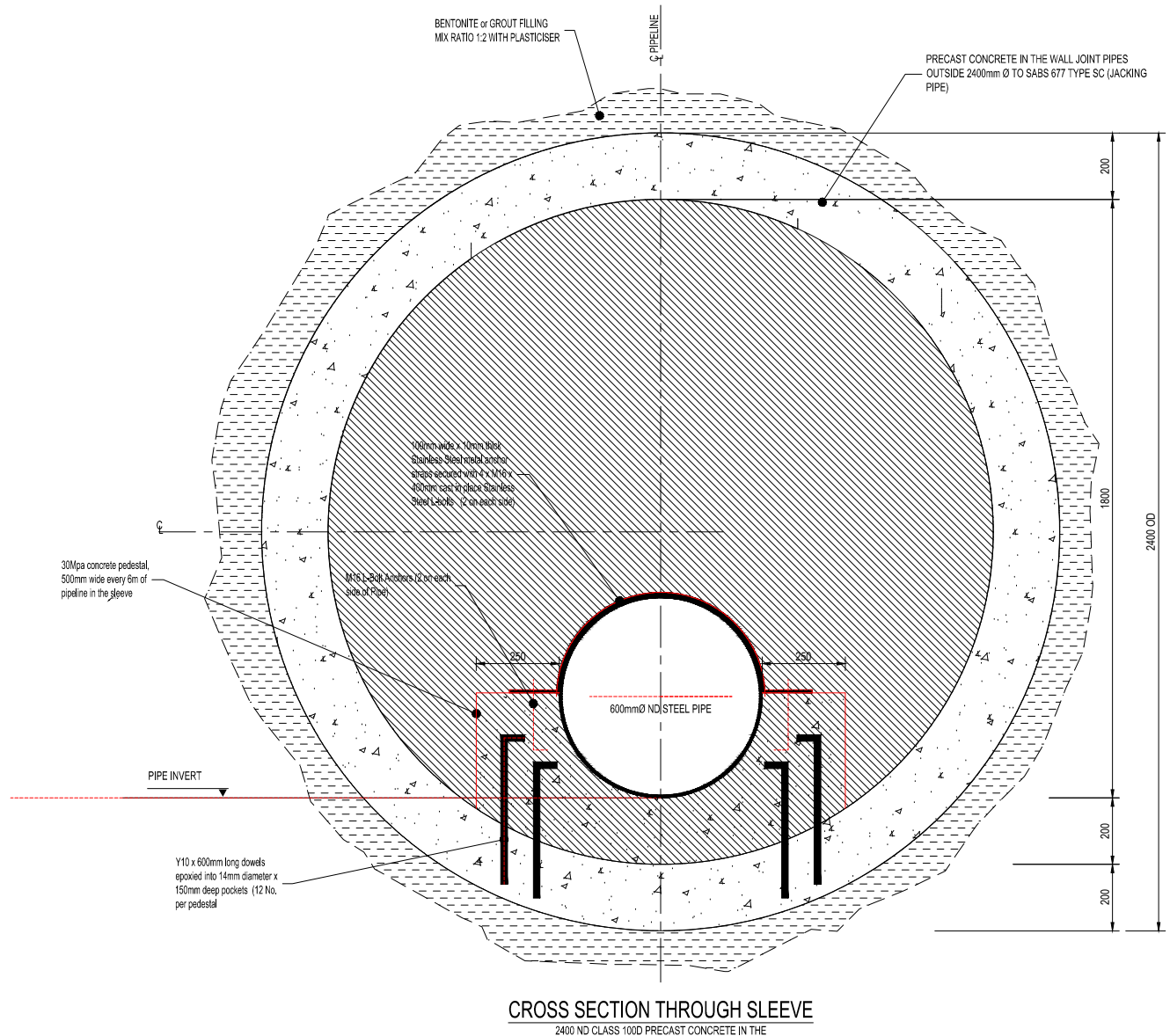
FILE No.



PLAN OF PIPE JACKING No. 4
UNDER N3 OFF RAMP SOUTH
SCALE 1:500

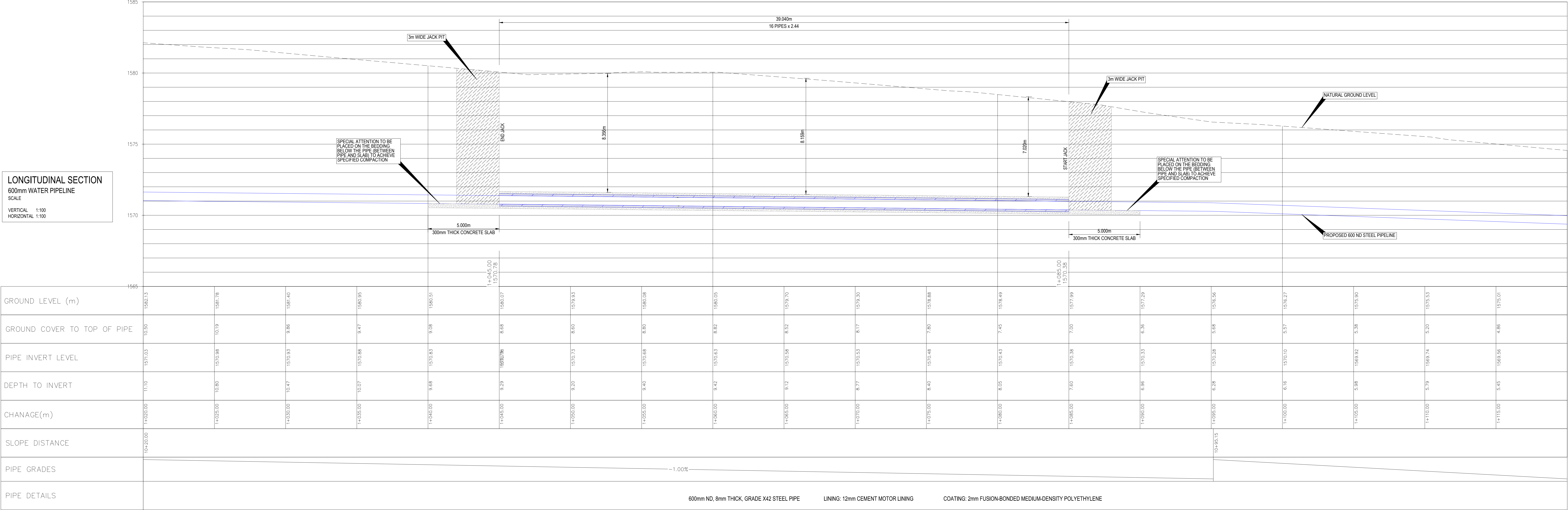
600mm ND STEEL PIPELINE IN ALEXANDRA - PIPE JACKING No.4				
COORDINATES - Lo 29, South African Survey Grid, WGS84 datum: 28 to 30d E				
Name	Y10	X10	Z (m)	Chainage (m)
END JACK	87 647 090	2 888 413.833	1570.780	1+045.00
START JACK	87 671 705	2 888 382.640	1570.380	1+085.00

- NOTES:
- A MINIMUM CLEAR DISTANCE BETWEEN OTHER SERVICES AND WATER MAINS SHALL BE:
 - SERVICES AT RIGHT ANGLES: 300mm
 - PARALLEL SERVICES: WATER 500mm, SEWER 1000mm
 - MINIMUM CLEAR DISTANCE BETWEEN ANY BOX, MANHOLE OR SUPPORTING STRUCTURE SHALL BE 500mm
 - UNDERGROUND SERVICE SHALL HAVE NOT LESS THAN 800mm COVER.
 - POSITION AND LEVELS OF EXISTING SERVICES ARE ESTIMATED. CONTRACTOR SHALL EXPOSE ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED JACKING POSITION. SERVICES SHALL BE SURVEYED AND RESULTS REPORTED TO THE EMPLOYERS AGENT BEFORE JACKING ESTABLISHMENT CAN COMMENCE
 - CONTRACTOR TO PROVIDE ADEQUATE ROAD SIGNAGE DURING CONSTRUCTION TO THE SATISFACTION OF THE EMPLOYERS AGENT.
 - CONTRACTOR TO SURVEY AS BUILT LEVELS OF JACKED SLEEVES UNDER ROAD AND FORWARD RESULTS TO THE EMPLOYERS AGENT.



LOCALITY MAP
N.T.S.

LONGITUDINAL SECTION
600mm WATER PIPELINE
SCALE
VERTICAL 1:100
HORIZONTAL 1:100



PIPE JACKING No. 4: N3 OFF RAMP SOUTH
LONGSECTION ALIGNMENT 600mm ND STEEL PIPELINE
SCALE 1:100

ISSUED FOR TENDER

CONSULTING ENGINEERS

LIDWALA CONSULTING ENGINEERS (SA) (PTY) LTD if

Tel: 081 4004441 081 543 9552

Int: +27 11 793 5486

Postal Suite # 128

Private Bag 921

BRYANSTON, 2021

Corner Main Office Park

Block B, 1st Floor, Unit 2

2 Pylon Road Bryanston, 2191

Email: info@lidwala.com

Web: www.lidwala.com

Offices Botswana, Mozambique, Namibia, South Africa, Tanzania, Zambia, Zimbabwe

CLIENT

JOHANNESBURG WATER

1 MAIN STREET

SWISS HOUSE

DESIGNED: M.MURIGO

AUGUST 2022

DRAWN: G.MALINOWSKI

AUGUST 2022

CHECKED: M.MURIGO

AUGUST 2022

APPROVED BY: SIGNATURE T.KLEYNHANS

DATE AUGUST 2022

ECSA REG. No. 20110139

CHECKED BY:

SIGNATURE

DATE

17 HARRISON STREET

MARSHALLTOWN

2107

TEL: (011) 688-1400

FAX: (011) 688-1529

REPLACEMENT OF JOHANNESBURG WATER

600mm Ø STEEL PIPELINE FROM LINBRO PARK RESERVOIR

TO BHEKILANGA PRV STATION IN ALEXANDRA

PIPE JACKING No. 4

N3 OFF RAMP SOUTH

SURVEY INFORMATION

PROJECT SURVEYOR:

DATE:

CCTV COMPANY:

DATE:

INFORMATION BY JW DEPOT

CHECKED

APPROVED BY:

SIGNATURE

DATE

APPROVAL BY JW PLANNING

CHECKED

APPROVED BY:

SIGNATURE

DATE

SCALE

1 : 5000

AMENDMENTS

REV: A

DESCRIPTION

ISSUED FOR TENDER PURPOSES ONLY

DATE:

AUGUST 2022

DRAWING No. JW14090R-AL-LAY13-W

JW14090R-AL

LAY 13

A

A0

SHEET

1

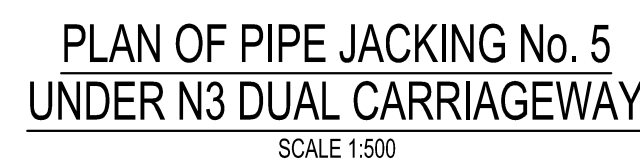
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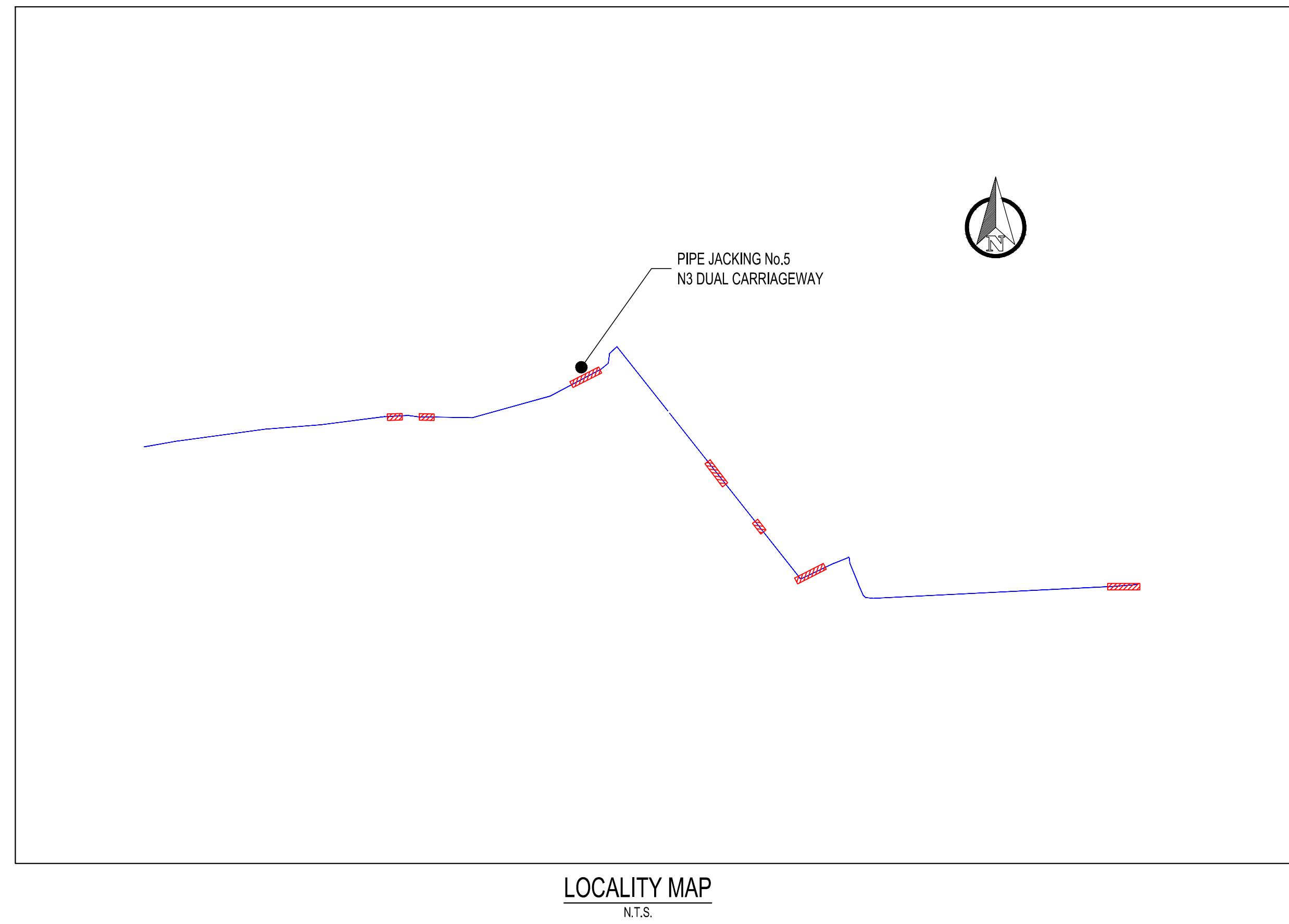
FILE No.

PRINT DATE: 18.08.2022



NOTES:

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 - SERVICES AT RIGHT ANGLES: 300mm
 - PARALLEL SERVICES: WATER 500mm
SEWER 1000mm
2. MINIMUM CLEAR DISTANCE BETWEEN ANY BOX, MAN-HOLE OR SUPPORTING STRUCTURE SHALL BE 500mm
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5. CONTRACTOR TO PROVIDE ADEQUATE ROAD SIGNAGE DURING CONSTRUCTION TO THE SATISFACTION OF THE EMPLOYER'S AGENT.
6. CONTRACTOR TO SURVEY AS BUILT LEVELS OF JACKED SLEEVES UNDER ROAD AND FORWARD RESULTS TO THE EMPLOYER'S AGENT



DRAWING No. JW14090R-LAY14-W

JW14090R-LA	LAY 14	A
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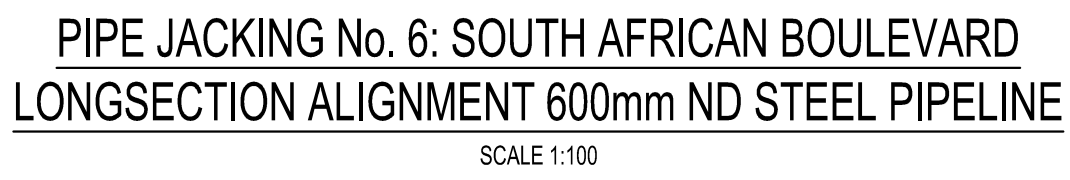
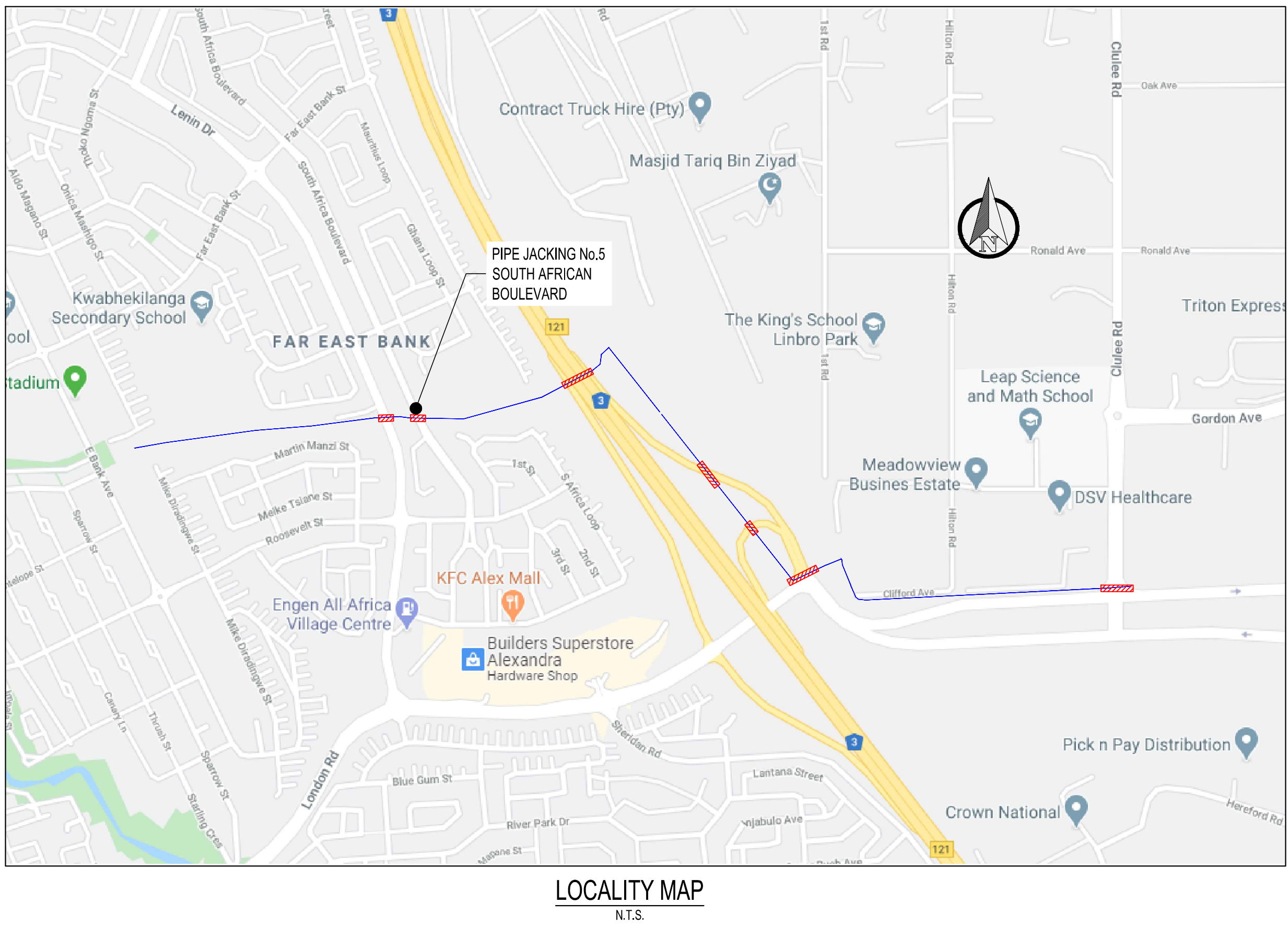
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FILE No. _____



NOTES:

1. A MINIMUM CLEAR DISTANCE BETWEEN OTHER SERVICES AND WATER MAINS SHALL BE:
 - a. SERVICES AT RIGHT ANGLES 300mm
 - b. WATER SERVICES 500mm
 - c. PARALLEL SERVICES SEWER 1000mm
2. MINIMUM CLEAR DISTANCE BETWEEN ANY MANHOLE OR SUPPORTING STRUCTURE SHALL BE 500mm
3. UNDERGROUND SERVICE SHALL HAVE NOT LESS THAN 300mm COVER.
4. POSITION AND LEVELS OF EXISTING SERVICES ARE ESTIMATED. CONTRACTOR SHALL EXPOSE ALL EXISTING SERVICES IN THE VICINITY OF THE PROPOSED JACKING POSITION. SERVICES SHALL BE SURVEYED AND RESULTS REPORTED TO THE EMPLOYER'S AGENT BEFORE JACKING ESTABLISHMENT CAN COMMENCE.
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DRAWING No.JW14090R-AL-LAY15-W

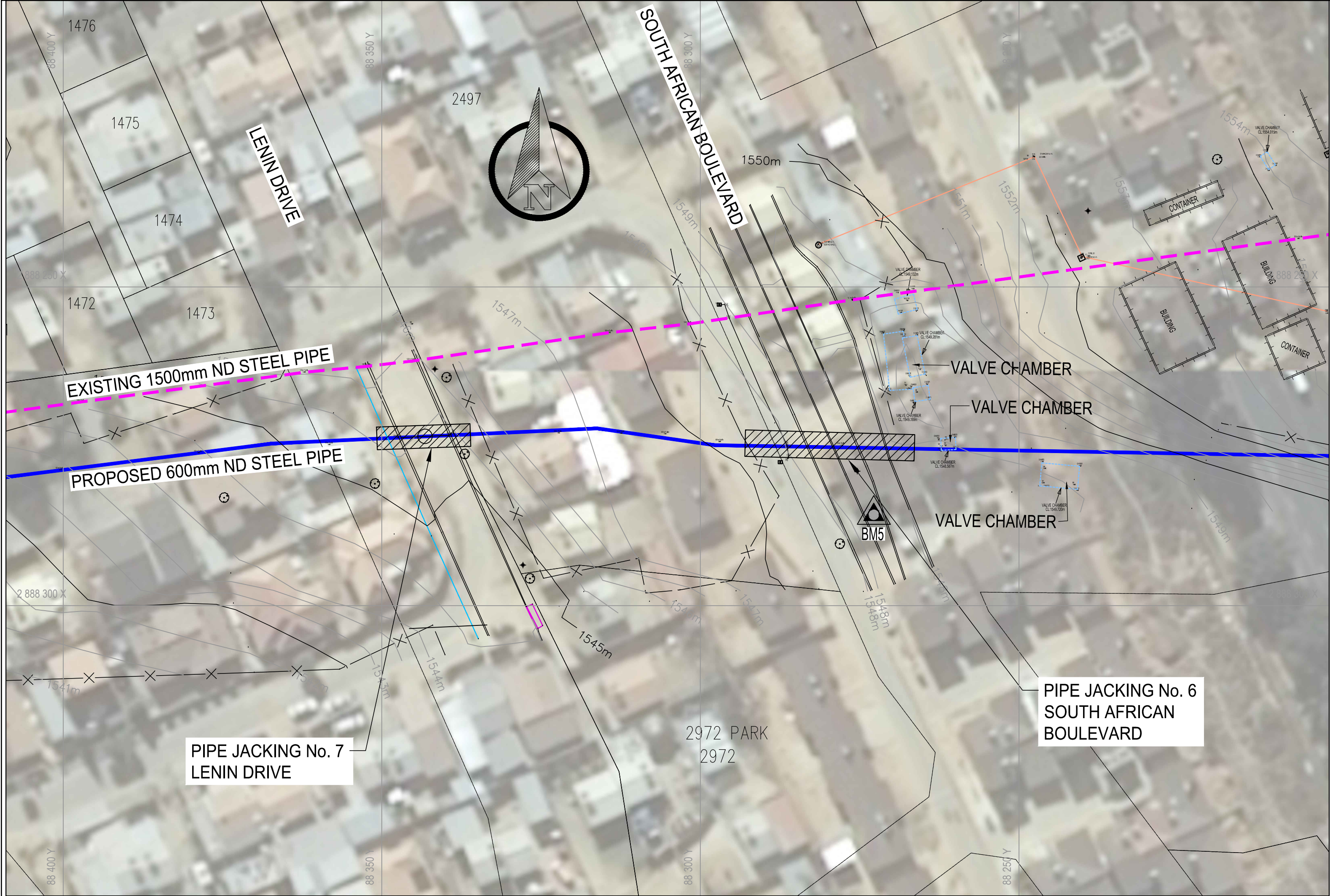
JW14090R-AL	LAY 15	A
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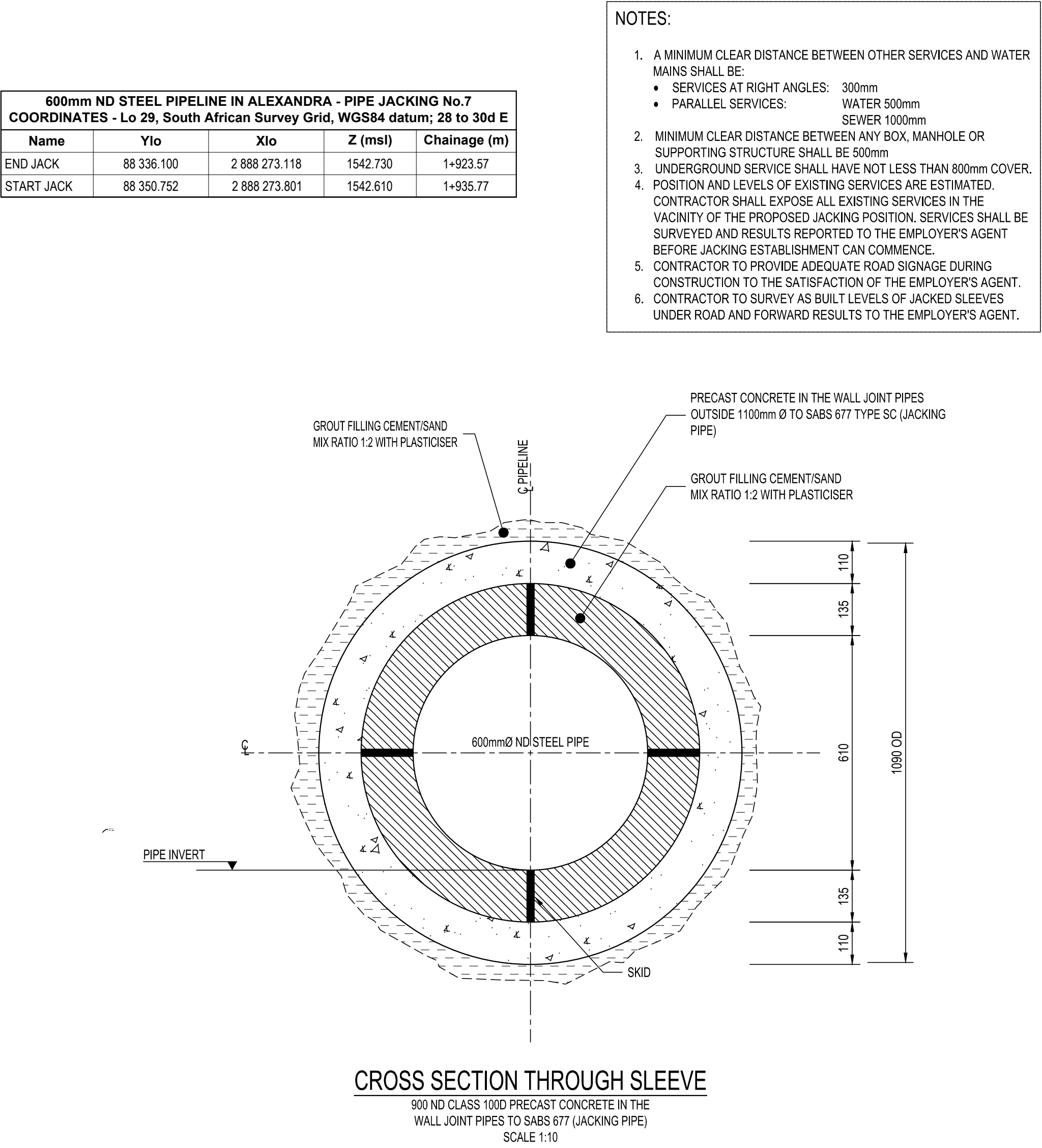
SHEET 1 OF 1

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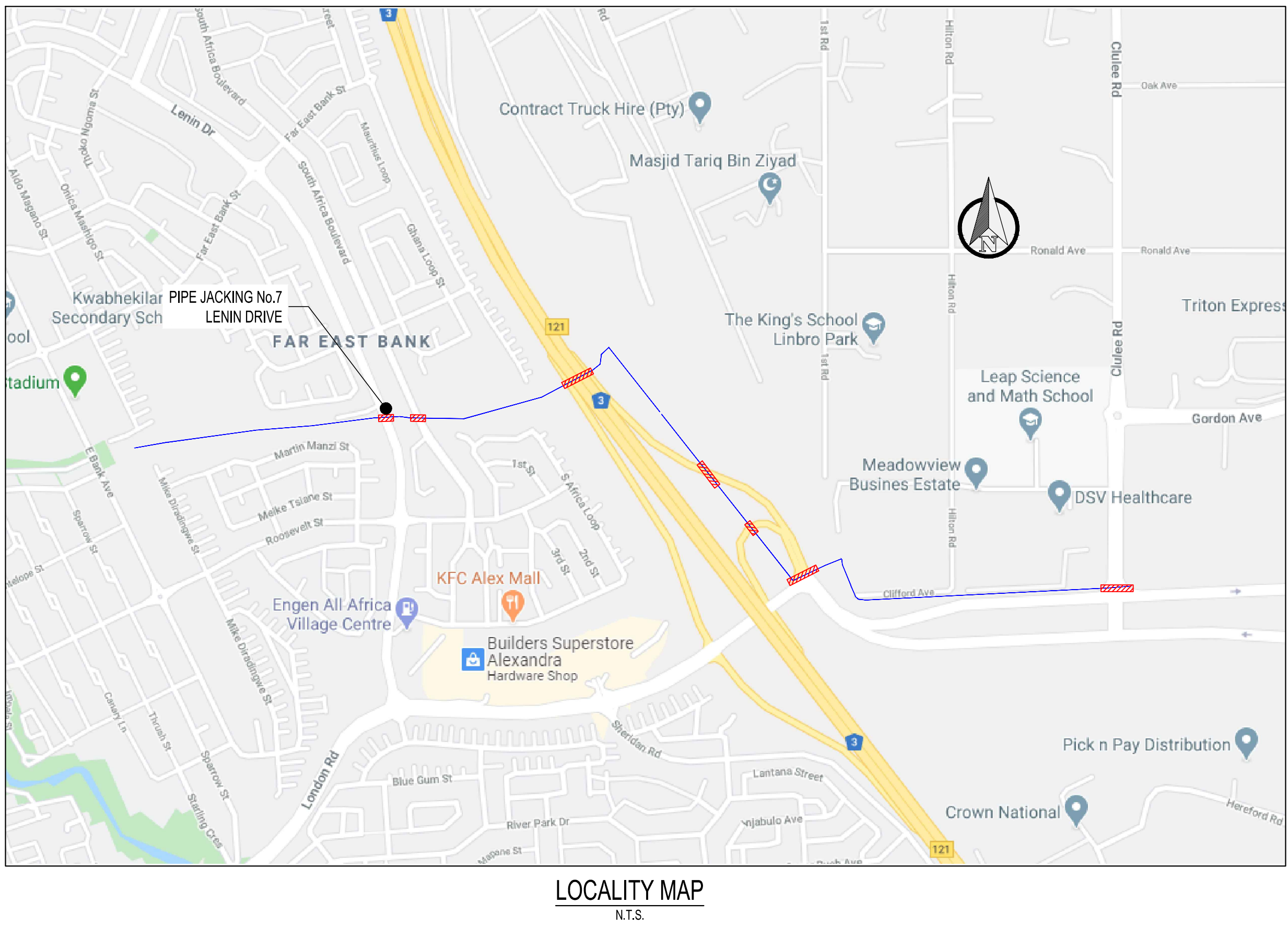
FILE No.



PLAN OF PIPE JACKING No. 7
UNDER LENIN DRIVE
SCALE 1:500

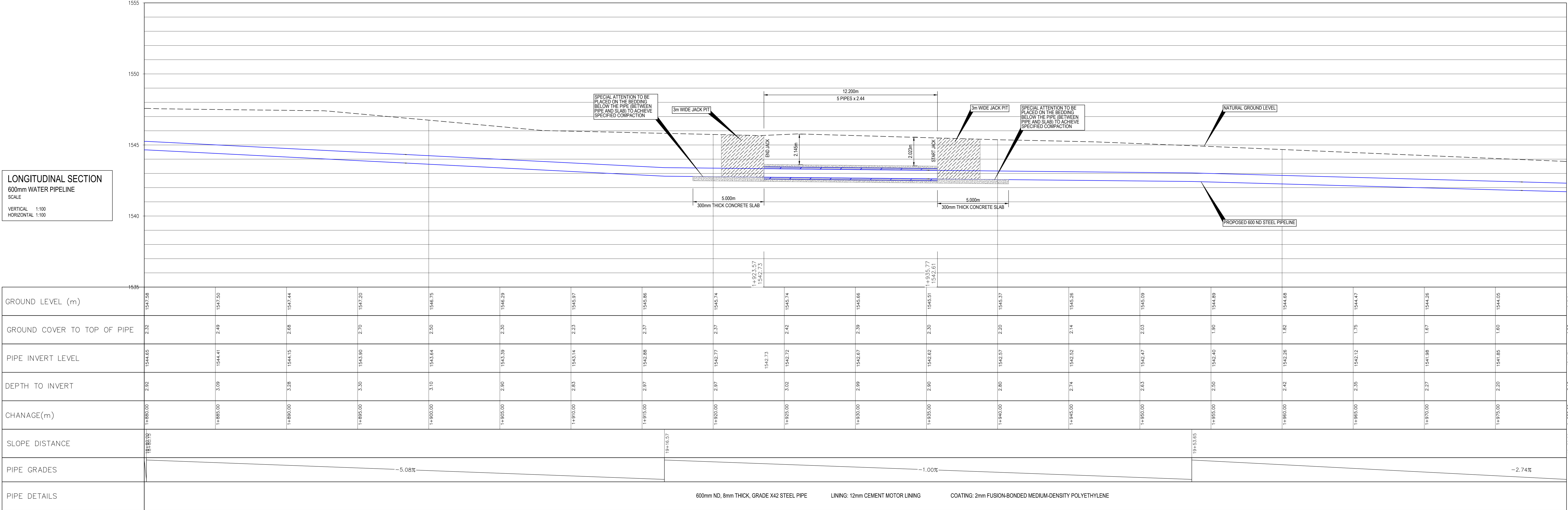


CROSS SECTION THROUGH SLEEVE
800 NO CLASS 1000 PRECAST CONCRETE IN THE
WALL JOINT PIPES TO SABS 677 (JACKING PIPE)
SCALE 1:10



LOCALITY MAP
N.T.S.

LONGITUDINAL SECTION
600mm WATER PIPELINE
SCALE
VERTICAL 1:100
HORIZONTAL 1:100



PIPE JACKING No. 7: LENIN ROAD
LONGSECTION ALIGNMENT 600mm ND STEEL PIPELINE
SCALE 1:100

ISSUED FOR TENDER

CONSULTING ENGINEERS
LIDWALA CONSULTING ENGINEERS (SA) (PTY) LTD If
Tel: 0851 1000000, 0851 543 9922
E: +27 11 793 5488
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Private Bag 925
Brynerton, 2011
Corner Main Office Park,
Block B, 1st Floor, Unit 5
2 Pagine Road, Bryanston, 2091
Email: info@lidwala.com
Web: www.lidwala.com
Offices: Botswana, Mozambique, Namibia, South Africa, Tanzania, Zambia, Zimbabwe

CLIENT
JOHANNESBURG WATER
1 MAIN STREET
SWISS HOUSE

DESIGNED
M. MURIGO
AUGUST 2022

DRAWN
G. MALINOWSKI
AUGUST 2022

CHECKED
M. MURIGO
AUGUST 2022

APPROVED BY:
SIGNATURE: T. KLEYNHANS
DATE: AUGUST 2022

ECSA REG. No.
20110139

CHECKED BY:
SIGNATURE: _____
DATE: _____

17 HARRISON STREET
MARSHALLTOWN
2107

TEL: (011) 688-1400
FAX: (011) 688-1529

REPLACEMENT OF JOHANNESBURG WATER
600mm Ø STEEL PIPELINE FROM LINBRO PARK RESERVOIR
TO BHEKILANGA PRV STATION IN ALEXANDRA

PIPE JACKING No. 7
LENIN DRIVE

SURVEY INFORMATION
PROJECT SURVEYOR:
DATE:

CCTV INFORMATION
CCTV COMPANY:
DATE:

INFORMATION BY JW DEPOT
CHECKED:
APPROVED BY:

SIGNATURE: _____
DATE: _____

APPROVAL BY JW PLANNING
CHECKED:
APPROVED BY:

SIGNATURE: _____
DATE: _____

SCALE
1 : 5000

CONSULTANT
DETAIL
REV:
A
DESCRIPTION
ISSUED FOR TENDER PURPOSES ONLY
DATE:
AUGUST 2022

AMENDMENTS

DRAWING No. JW14090R-AL-LAY16-W

JW14090R-AL
LAY 16
A

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SHEET 1 OF 1
ORIGINAL PAGE SIZE
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PRINT DATE: 18.08.2022