NOVATECH
Engineers, Planners & Landscape Architects

M E M O R A N D U M

DATE: **FEBRUARY 15, 2024**

TO: **BENTLEY CRAIN**

FROM: **MIROSLAV SAVIC**

RE: **1 ROGERS ROAD, PERTH, ONTARIO**
SERVICEABILITY BRIEF
NOVATECH FILE 124016

CC: **LEE SHEETS**

Novatech has been retained to review serviceability of the property located at 1 Rogers Road in the Town of Perth, Ontario. The property is currently occupied by a 3-unit dwelling located at the southwest corner of the Rogers Road and Peter Street intersection. It is proposed to sever off the existing dwelling and to retain remaining parcel for a new residential development. The purpose of this memo is to review serviceability of the remaining parcel in support of the severance application.

An aerial of the site and the immediate surrounding area is included in **Figure 1**.

Figure 1: Aerial Photo

For the purpose of this review, the proposed development is assumed to be a single residential dwelling.

Water Servicing

As per the information provided by the City, there is a 150 mm diameter watermain within the Peter Street ROW in front of the property. The proposed dwelling will be serviced by connecting the water service to the existing watermain. Refer to the information provided by the City and Conceptual Servicing Plan enclosed in **Appendix A** for details.

There is a municipal fire hydrant at the southeast corner of the Rogers Road and Peter Street intersection. The hydrant is located less than 90m from the proposed dwelling, meeting the Ontario Building Code (OBC) requirements for maximum path of travel between the building principal entrance and a fire hydrant. The hydrant testing may need to be conducted to confirm available flow and pressure in the exiting watermain.

Sanitary Servicing

There is a 300 mm diameter gravity sanitary sewer and a 100mm diameter sanitary forcemain within the Peter Street ROW. As per the City record drawings, the exiting gravity sanitary sewer is terminated at the sanitary manhole located at the intersection of Peter Street and Rogers Road east of the site. The existing sanitary forcemain runs from Perth Golf Course located at 141 Peter Street and outlets into the manhole at the intersection of Peter Street and Rogers Road.

The existing gravity sewer will need to be extended approximately 37m to the west to service the proposed dwelling. A portion of the 100mm forcemain will have to be removed and re-connected to the proposed sanitary sewer extension at the new manhole. It is proposed to extend the existing sanitary sewer with a 250mm diameter pipe at 0.5% slope. The proposed sanitary sewer extension will have a minimum cover of approximately 1.5m and will need to be insulated. The site grading will need to be designed to allow for gravity connection to the new shallow sewer. The sanitary sewage from the proposed dwelling basement would have to be pumped.

Refer to the City record drawings and Conceptual Servicing Plan enclosed in **Appendix A** for details.

Storm Servicing

The site drains naturally from east to west towards Tay River. There is approximately 2m grade drop from west to east property line. There is an 450mm diameter storm sewer within the Peter Street ROW. The storm sewer outlets via a headwall into a ditch in the Peter Street boulevard in front of the site.

As per the City record drawings, the existing storm 450mm diameter storm sewer in front of the site is very shallow. The proposed dwelling foundation drains will have to be pumped from a sump to the surface. The roof drainage can be directed to the surface via downspouts.

Refer to the City record drawings and Conceptual Servicing Plan enclosed in **Appendix A** for details.

Conclusion

Based on our above noted findings, the subject site is serviceable from the existing municipal watermain and storm sewer. The existing municipal sanitary sewer will need to be extended to service the proposed development.

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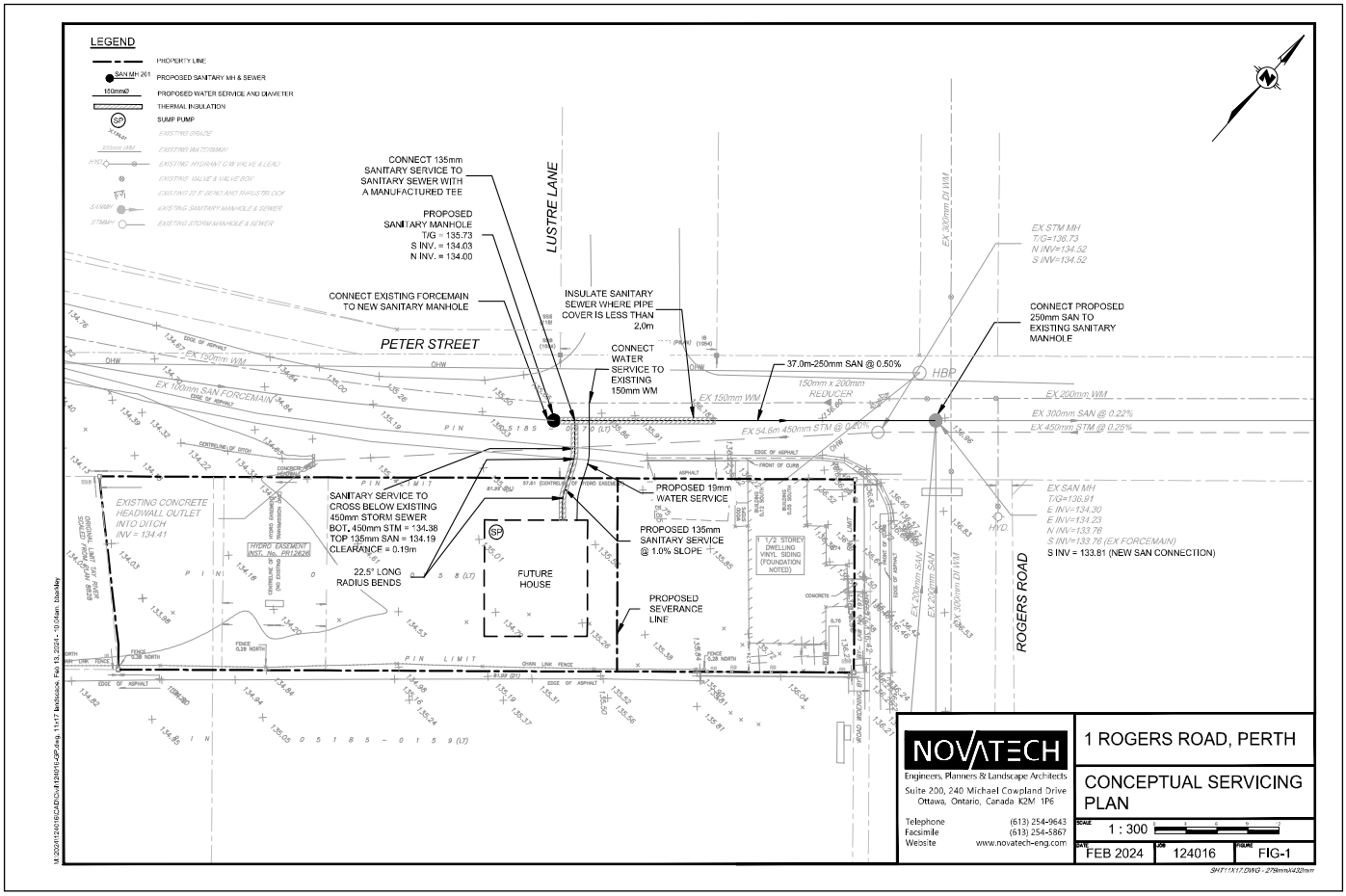
APPENDIX A


LEGEND
PROPERTY LINE
PROPOSED SANITARY MH & SEWER
PROPOSED WATER SERVICE AND DIAMETER
THERMAL INSULATION
SUMP PUMP
EXISTING GRADE
EXISTING WATERMAIN
EXISTING HYDRANT C/W VALVE & LEAD
EXISTING VALVE & VALVE BOX
EXISTING 22.5° BEND AND THRUSTBLOCK
EXISTING SANITARY MANHOLE & SEWER
EXISTING STORM MANHOLE & SEWER
CONNECT 135mm SANITARY SERVICE TO SANITARY SEWER WITH A MANUFACTURED TEE
PROPOSED SANITARY MANHOLE T/G = 135.73 S INV. = 134.03 N INV. = 134.00
CONNECT EXISTING FORCEMAIN TO NEW SANITARY MANHOLE
INSULATE SANITARY SEWER WHERE PIPE COVER IS LESS THAN 2.0m
CONNECT WATER SERVICE TO EXISTING 150mm WM
LUSTRE LANE
PETER STREET
ROGERS ROAD
EX 150mm WM
EX 100mm SAN FORCEMAIN
EX 54.6m 450mm STM @ 0.40%
37.0m-250mm SAN @ 0.50%
150mm x 200mm REDUCER
EX 200mm WM
EX 300mm SAN @ 0.22%
EX 450mm STM @ 0.26%
CONNECT PROPOSED 250mm SAN TO EXISTING SANITARY MANHOLE
EX STM MH T/G=136.73 N INV=134.52 S INV=134.52
EX SAN MH T/G=136.91 E INV=134.30 E INV=134.25 N INV=133.76 S INV=133.76 (EX FORCEMAIN) S INV = 133.81 (NEW SAN CONNECTION)
EXISTING CONCRETE HEADWALL OUTLET INTO DITCH INV = 134.41
SANITARY SERVICE TO CROSS BELOW EXISTING 450mm STORM SEWER BOT. 450mm STM = 134.38 TOP 135mm SAN = 134.19 CLEARANCE = 0.19m
22.5° LONG RADIUS BENDS
PROPOSED 19mm WATER SERVICE
PROPOSED 135mm SANITARY SERVICE @ 1.0% SLOPE
PROPOSED SEVERANCE LINE
FUTURE HOUSE
1 1/2 STOREY DWELLING VINYL SIDING (FOUNDATION NOTED)
HYDRO EASEMENT INST. No. PR12626
P I N 0 5 1 8 5 - 0 1 5 9 (LT)
P I N 0 5 1 8 5 - 0 1 7 0 (LT)
PIN LIMIT
NOVATECH
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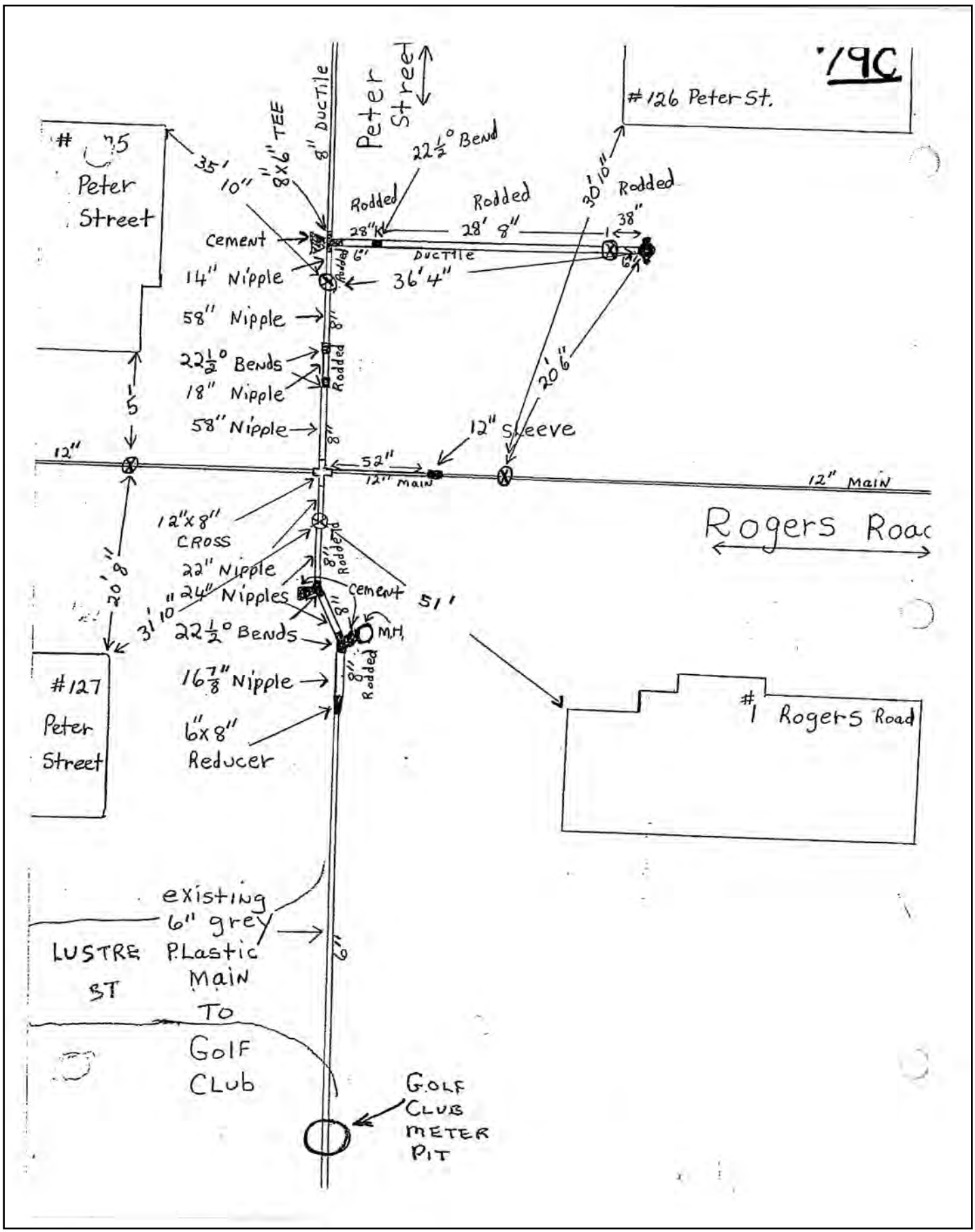
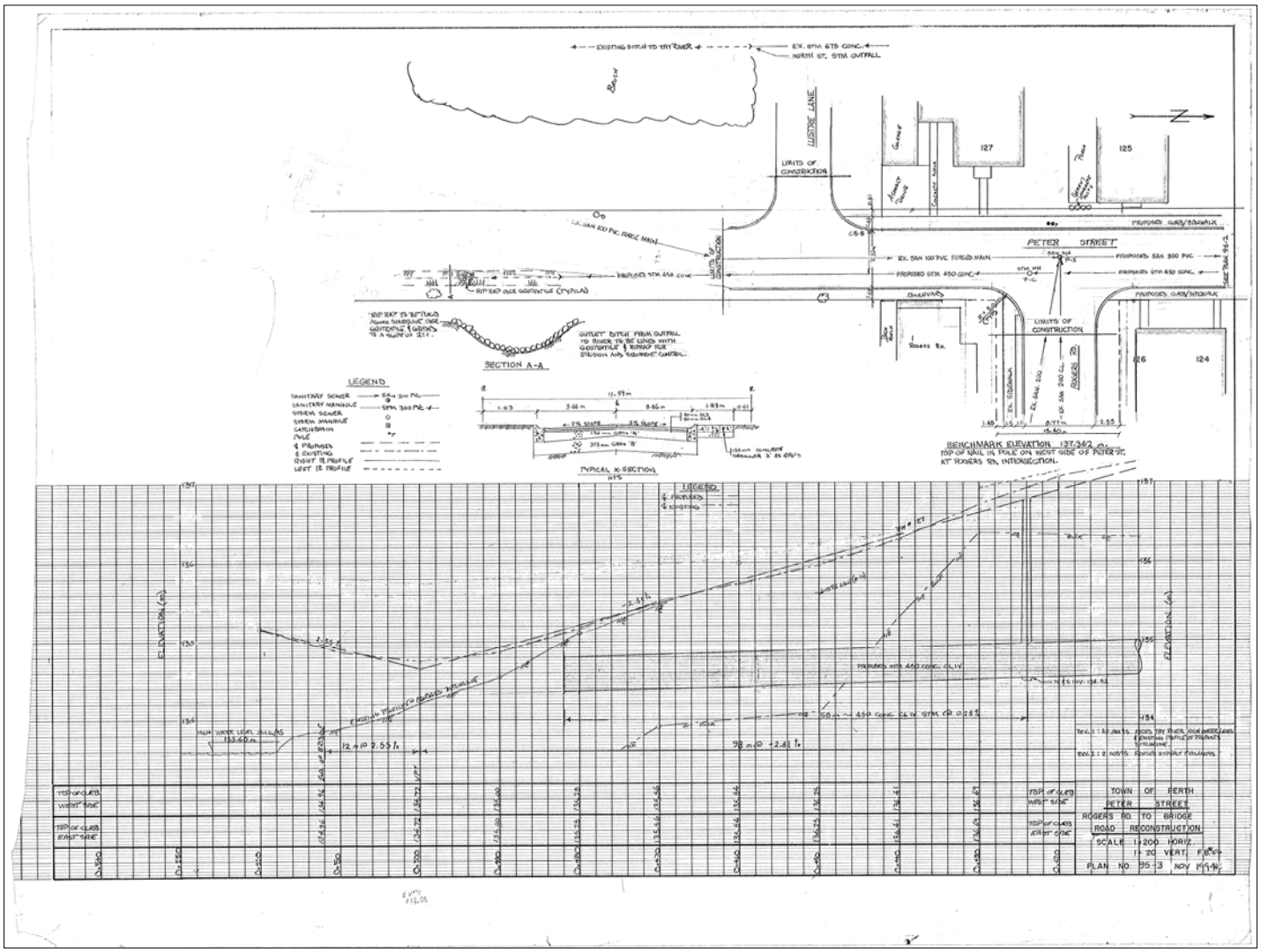
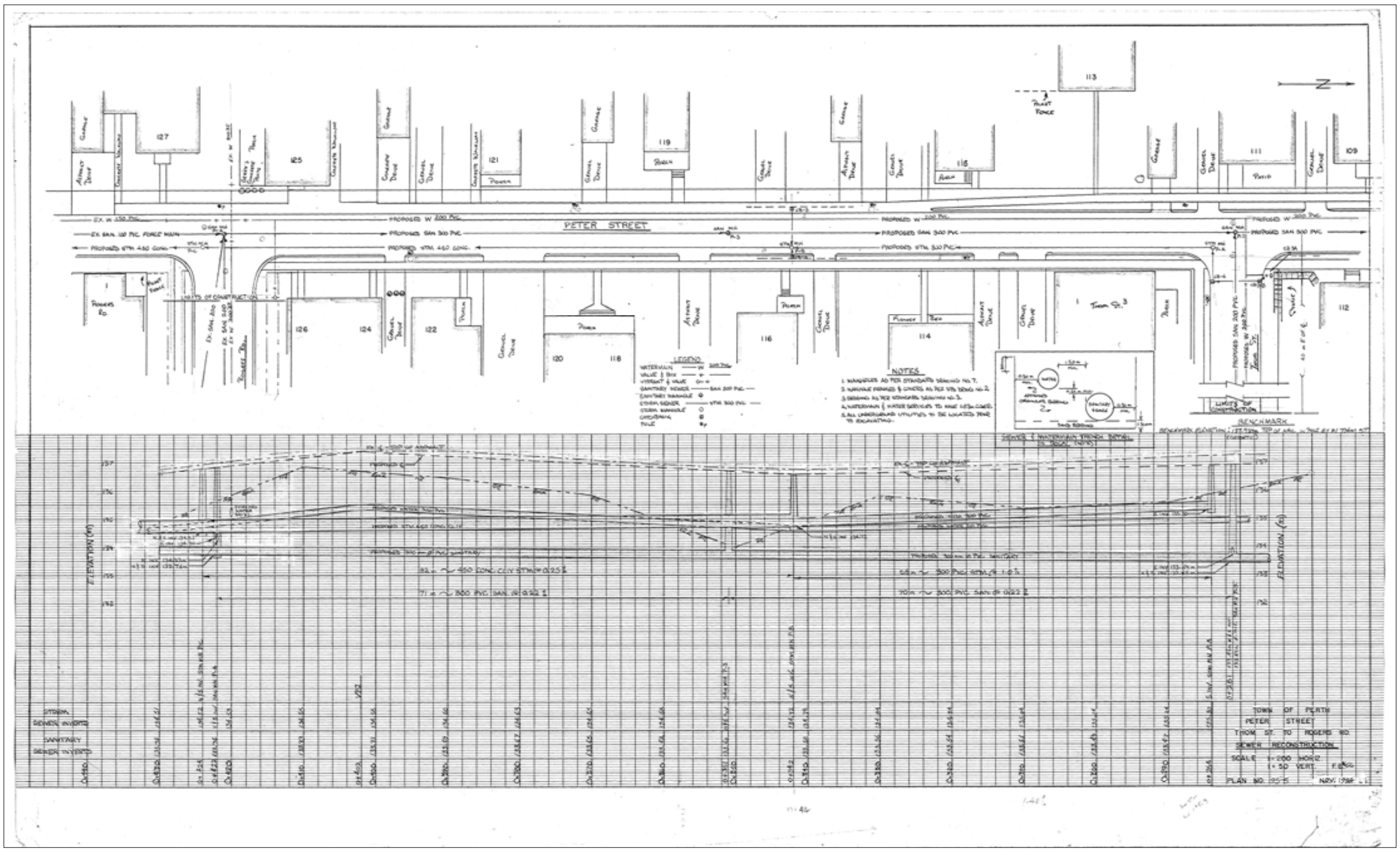
1 ROGERS ROAD, PERTH
CONCEPTUAL SERVICING PLAN
SCALE 1 : 300
DATE FEB 2024
JOB 124016
FIGURE FIG-1


'19C
#126 Peter St.
#75 Peter Street
35'
10"
8x6" TEE
8" DuctTile
Peter Street
22½° Bend
Rodded
Rodded
Rodded
30'10"
28"K
28' 8"
38"
Cement
DUCTILE
6"
14" Nipple
36'4"
58" Nipple
8"
22½° Bends
18" Nipple
58" Nipple
15
20'6"
12" Sleeve
12"
52"
12" Main
12" Main
Rogers Road
12"x8" CROSS
22" Nipple
24" Nipples
Cement
51'
31'10"
22½° Bends
M.H.
20'8"
#127 Peter Street
16⅞" Nipple
6"x8" Reducer
#1 Rogers Road
existing 6" grey Plastic Main To Golf Club
LUSTRE ST
GOLF CLUB METER PIT




PETER STREET
NOTES
LEGEND
BENCHMARK
LIMITS OF CONSTRUCTION
ELEVATION (m)
STORM SEWER INVERTS
SANITARY SEWER INVERTS
TOWN OF PERTH
PETER STREET
THOM ST. TO ROGERS RD.
SEWER RECONSTRUCTION
SCALE 1:200 HORIZ.
1:50 VERT.
PLAN NO. 95-5