

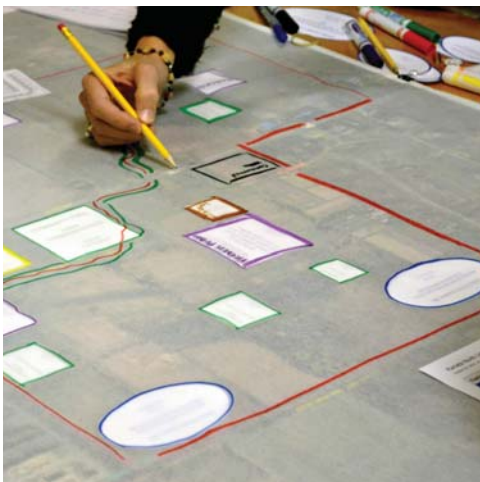


KANATA NORTH

COMMUNITY DESIGN PLAN

MASTER SERVICING STUDY

DRAWINGS



FINAL DRAFT
JUNE 28, 2016





KANATA NORTH COMMUNITY DESIGN PLAN

MASTER SERVICING STUDY

PREPARED BY:

NOVATECH
SUITE 200, 240 MICHAEL COWPLAND DRIVE
OTTAWA, ON K2M 1P6

WITH THE ASSISTANCE OF:

GEOTECHNICAL
PATERSON GROUP INC

HYDROGEOLOGY
PATERSON GROUP INC

NATURAL HERITAGE AND SPECIES AT RISK (ENVIRONMENT)
MUNCASTER ENVIRONMENTAL PLANNING INC.
DST
BOWFIN ENVIRONMENTAL
MCKINLEY ENVIRONMENTAL SOLUTIONS

FLUVIAL GEOMORPHOLOGY
MATRIX SOLUTIONS AND PARISH GEOMORPHIC

ARCHAEOLOGY
PATERSON GROUP INC.

POTABLE WATER ASSESSMENT
STANTEC CONSULTING LTD.

INTEGRATED ENVIRONMENTAL ASSESSMENT
MORRISON HERSHFIELD GROUP INC.

JUNE/28/2016

NOVATECH FILE NO. 112117
REPORT NO. R-2016-041



APPENDIX E

Drawings

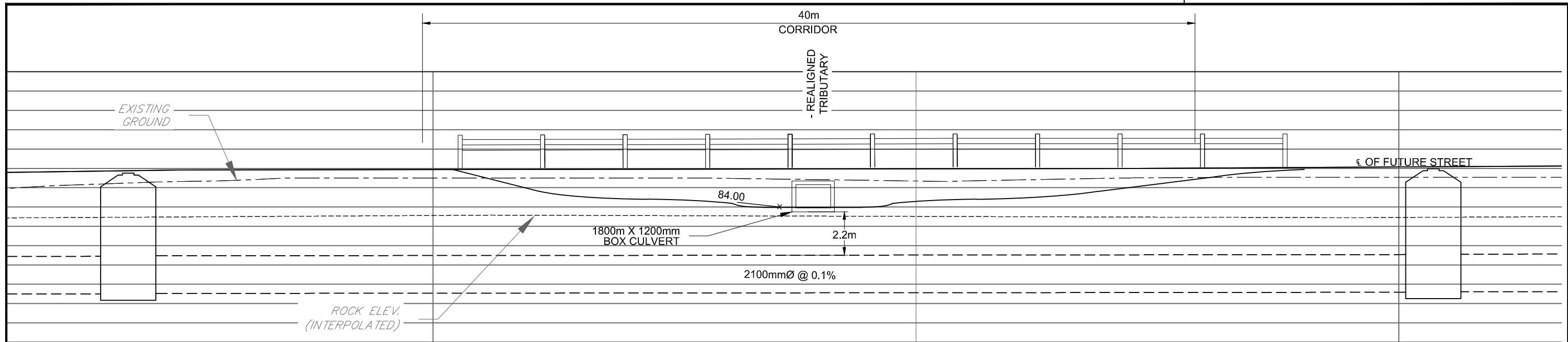
Figures List

- Figure No. E1 - Tributary 2 crossing details
- Figure No. E2 - Tributary 3 crossing details
- Figure 23 – March Road – Interim Cross Section (from TMP)
- Figure 24 – March Road – Ultimate Cross Section (from TMP)
- Figure 25 – Collector Road – Typical Cross Section 1 (from TMP)
- Figure 30 – Local Road – Typical 18m ROW Cross Section (from TMP)
- Figure 31 – Local Road – Typical 18m ROW Cross Section with Sidewalk (from TMP)
- Figure 32 – Local Road – Typical 16.5m ROW Cross Section (from TMP)

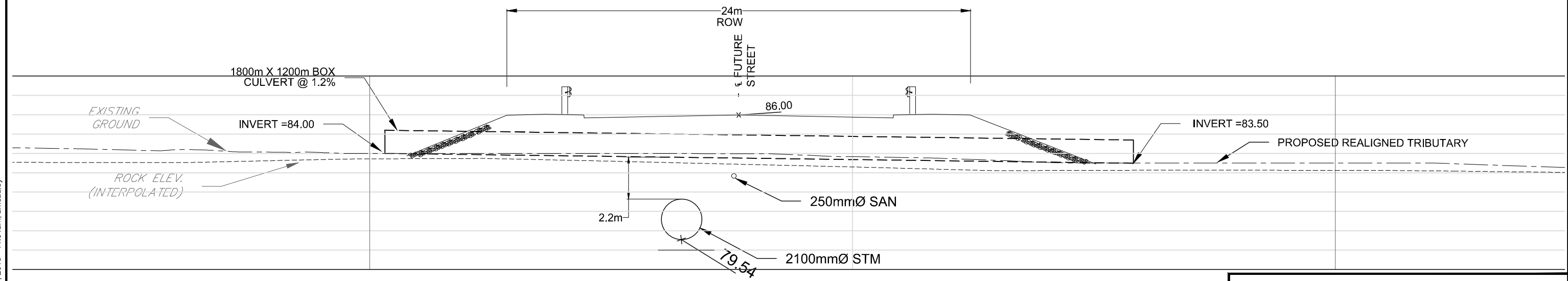
Drawing List

- 112117-PGR Preliminary Grading Plan
- 112117-KP Profile Drawing, Key Plan
- 112117-PP1A March Road – Shirley's Brook Plan and Profile
- 112117-PP1B March Road – Shirley's Brook Plan and Profile
- 112117-PP2 KNUFA to Briar Ridge Pump Station Plan and Profile
- 112117-PP3 Street A Plan and Profile
- 112117-PP4 Street B Plan and Profile
- 112117-PP5 Street C Plan and Profile
- 112117-PP6 Street D Plan and Profile
- 112117-PP7 Street E Plan and Profile
- 112117-PP8 Street F Plan and Profile
- 112117-PP9 Street G Plan and Profile
- 112117-PP10 Street 10 Plan and Profile
- 112117-PP11 Streets 20 and 30 Plan and Profile
- 112117-PP12 Streets 40 and 50 Plan and Profile
- 112117-PP13 Street 60 and 70 Plan and Profile
- 112117-PP14 Streets 80 and 85 Plan and Profile
- 112117-PP15 Street 90 Plan and Profile

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TRIBUTARY 2 CROSSING DETAIL
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TRIBUTARY 2 CULVERT DETAIL
SCALE: 1:200



KANATA NORTH
COMMUNITY DESIGN PLAN

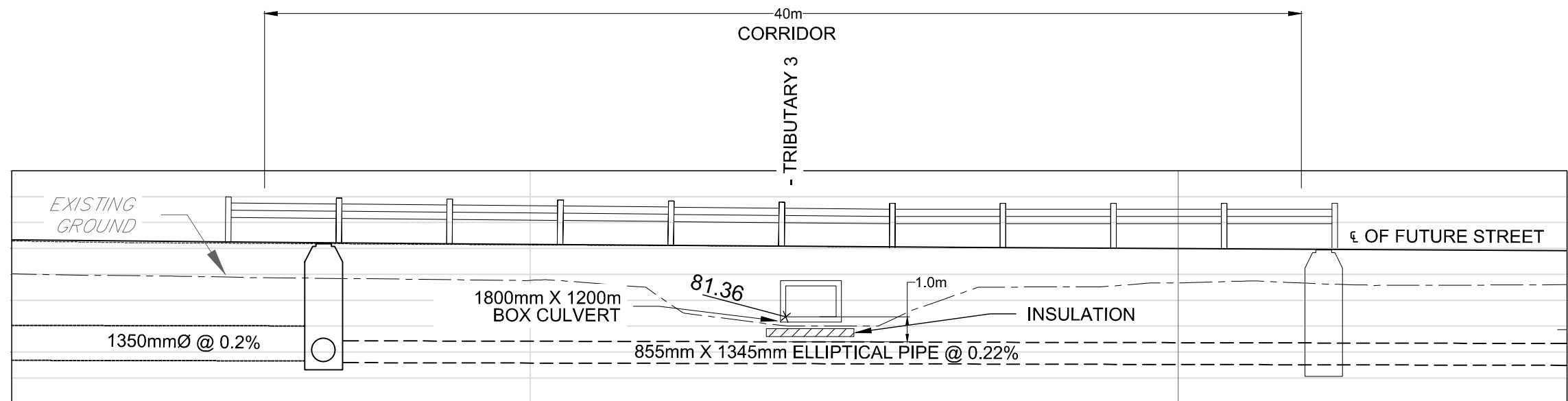
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MAY 2016

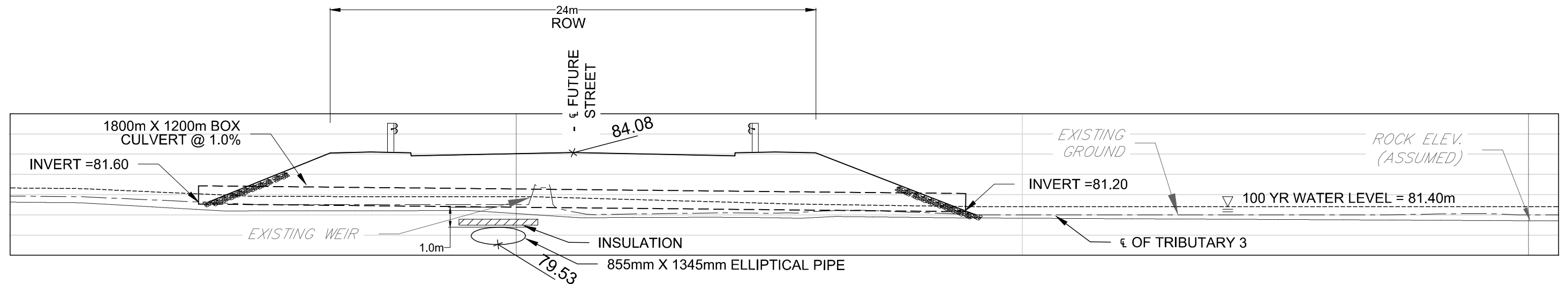
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TRIBUTARY 3 CROSSING DETAIL
SCALE: 1:200



TRIBUTARY 3 CULVERT DETAIL
SCALE: 1:200



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COMMUNITY DESIGN PLAN

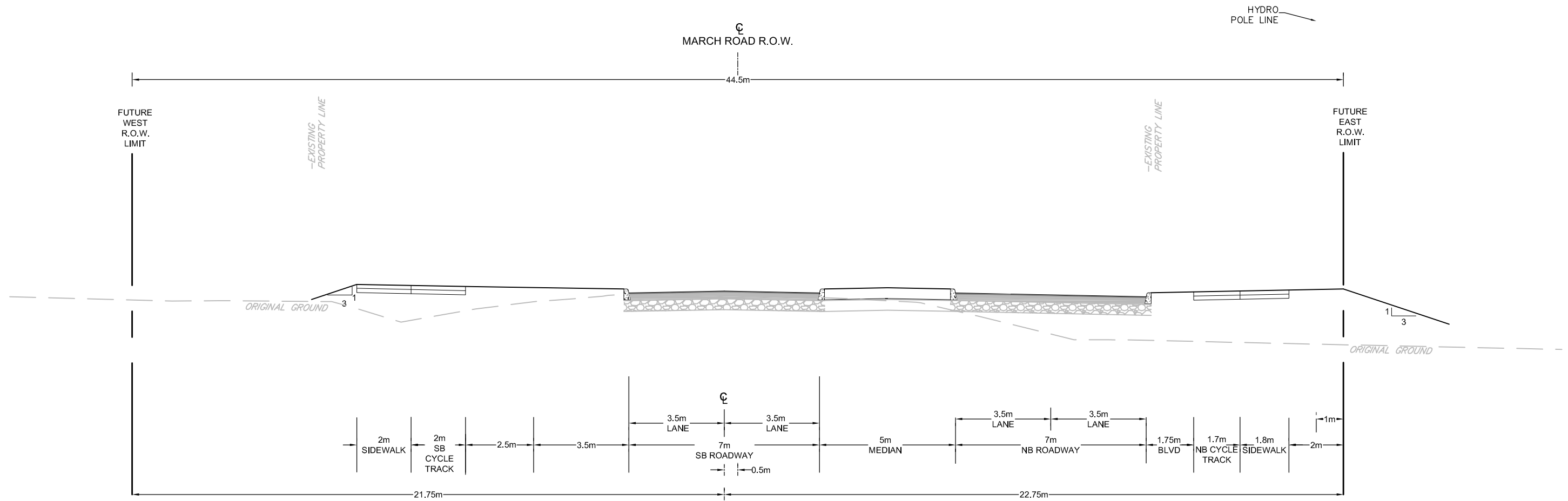
FIGURE NO. E2
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CROSSING DETAILS

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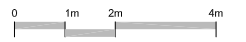
COMMUNITY DESIGN PLAN

FIGURE NO. 23
MARCH ROAD - INTERIM
CROSS SECTION

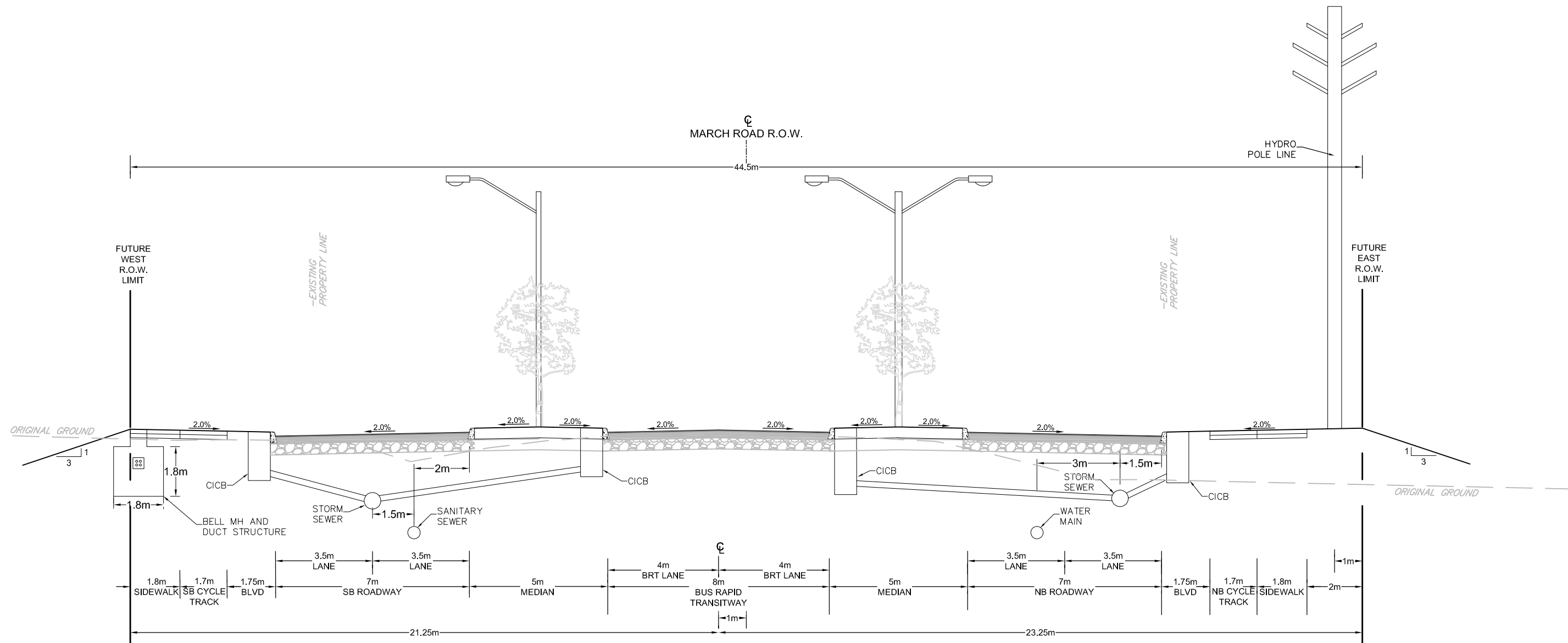
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KANATA NORTH

COMMUNITY DESIGN PLAN

FIGURE NO. 24
MARCH ROAD - ULTIMATE
CROSS SECTION

DATE
MAR 2016

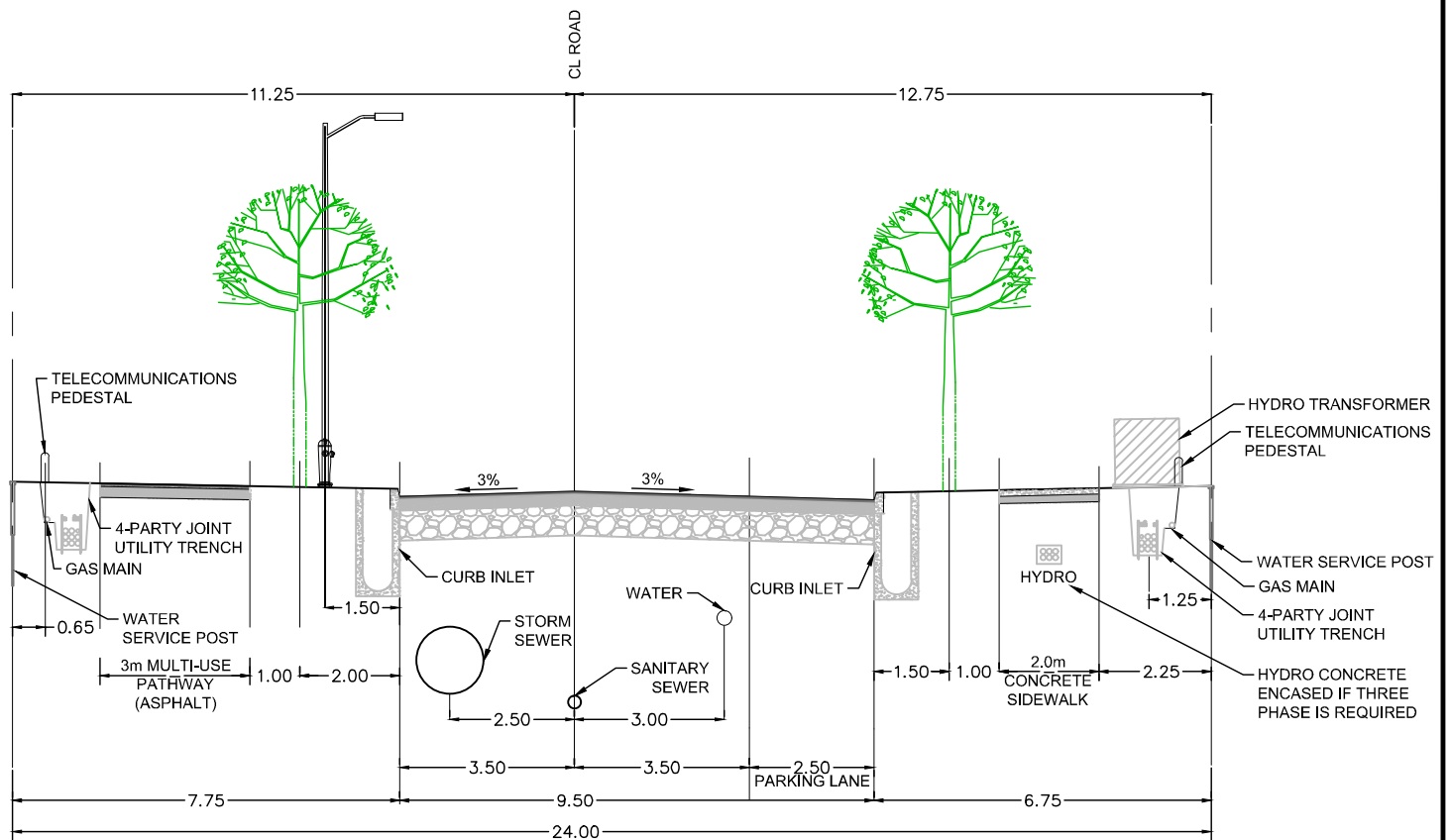
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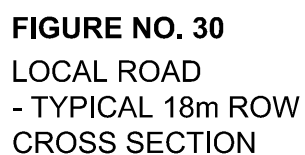
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FIGURE NO. 25
COLLECTOR ROAD -
TYPICAL CROSS SECTION 1

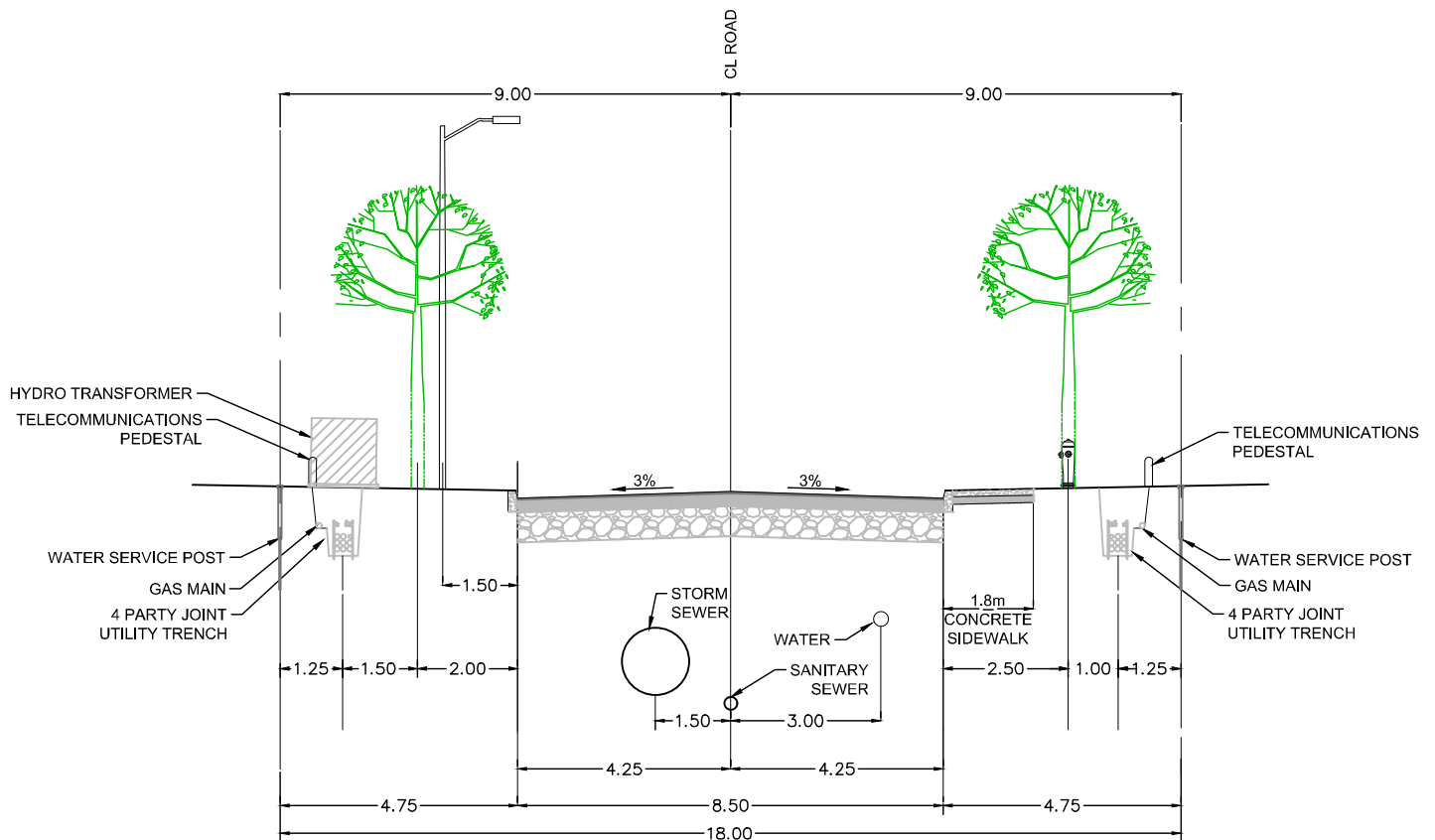
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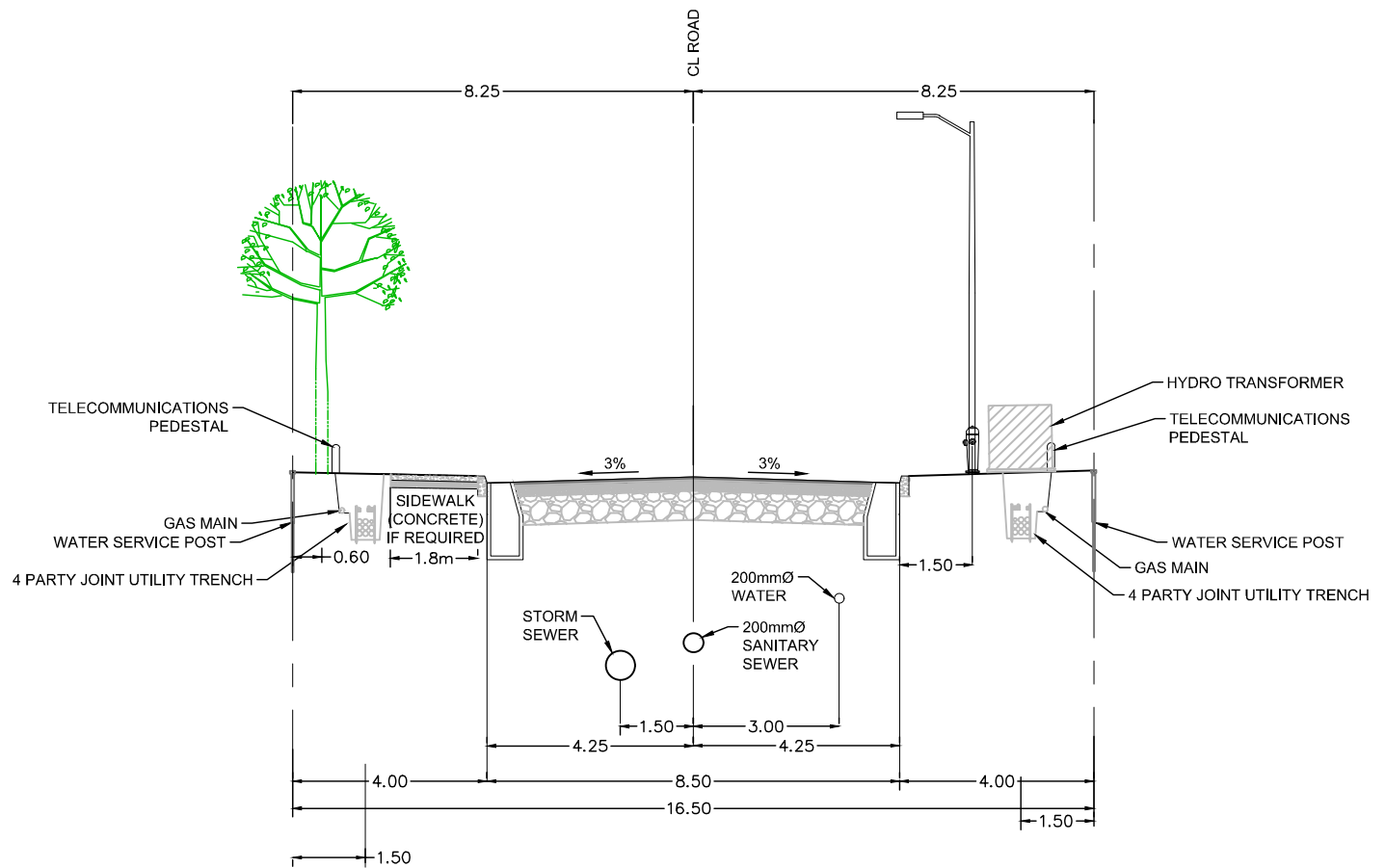
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FIGURE NO. 31
LOCAL ROAD
- TYPICAL 18m ROW CROSS
SECTION WITH SIDEWALK

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NOTES:

FOR SINGLE LOADED ROAD, BOULEVARD WITH NO HOUSING MAY BE REDUCED TO A MINIMUM OF 1.5m. HOUSING AND TREES TO BE LOCATED ON OPPOSITE SIDES OF THE STREET.



KANATA NORTH COMMUNITY DESIGN PLAN

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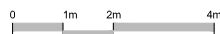
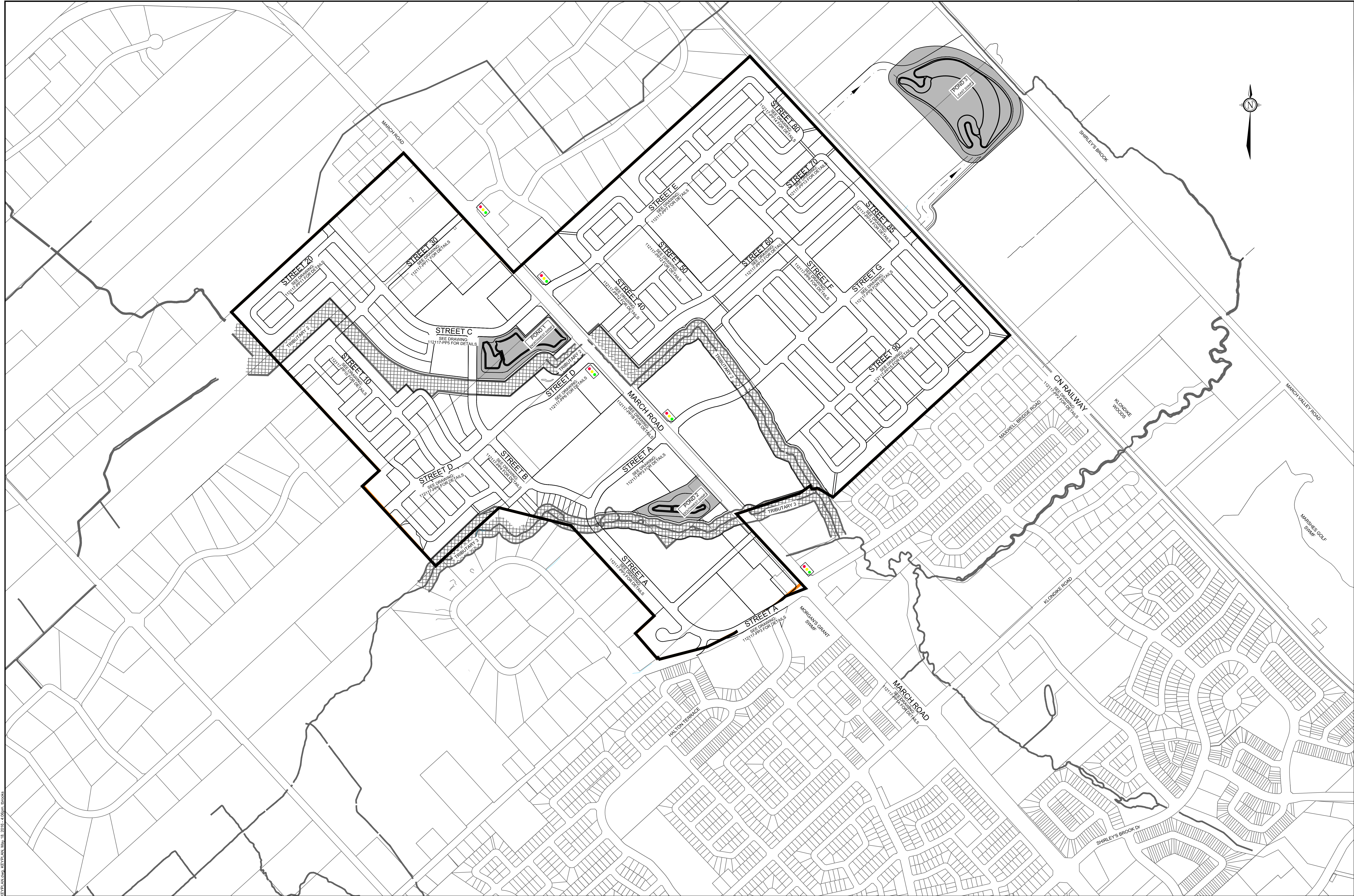


FIGURE NO. 32 LOCAL ROAD - TYPICAL 16.5m ROW CROSS SECTION





NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS,
WATERMANS, SEWERS AND OTHER
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3.	ISSUED WITH DRAFT MASTER SERVICING STUDY	MAY 20/16	JLS
2.	ISSUED WITH DRAFT MASTER SERVICING STUDY	APR 4/16	JLS
1.	ISSUED WITH DRAFT MASTER SERVICING STUDY	FEB 26/16	JLS

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CJR

APPROVED

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Suite 200, 240 Michael Cowland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
KANATA NORTH URBAN EXPANSION AREA
COMMUNITY DESIGN PLAN

DRAWING NAME

PROFILE DRAWING
KEY PLAN

PROJECT NO.
112117-00

REV
REV # 3

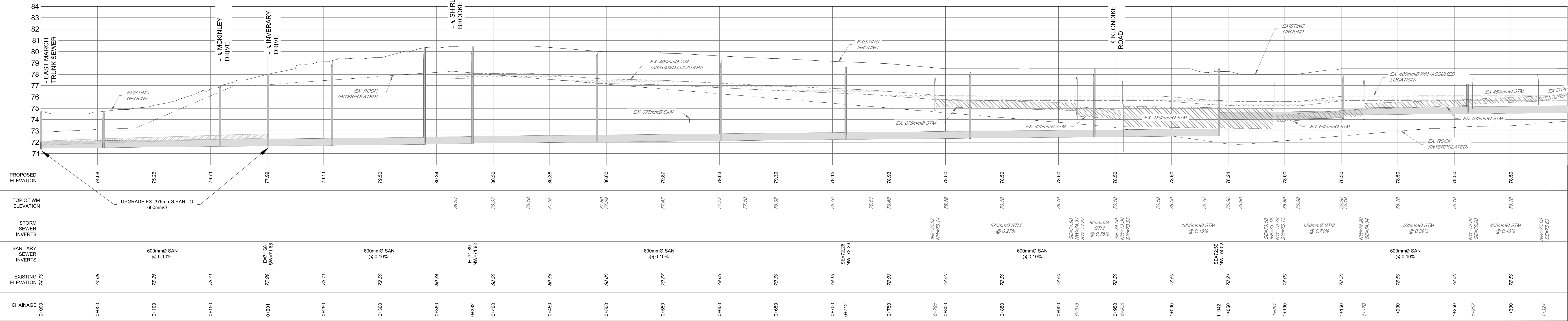
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1.	ISSUED WITH DRAFT MASTER SERVICING STUDY	FEB 26/16	JLS

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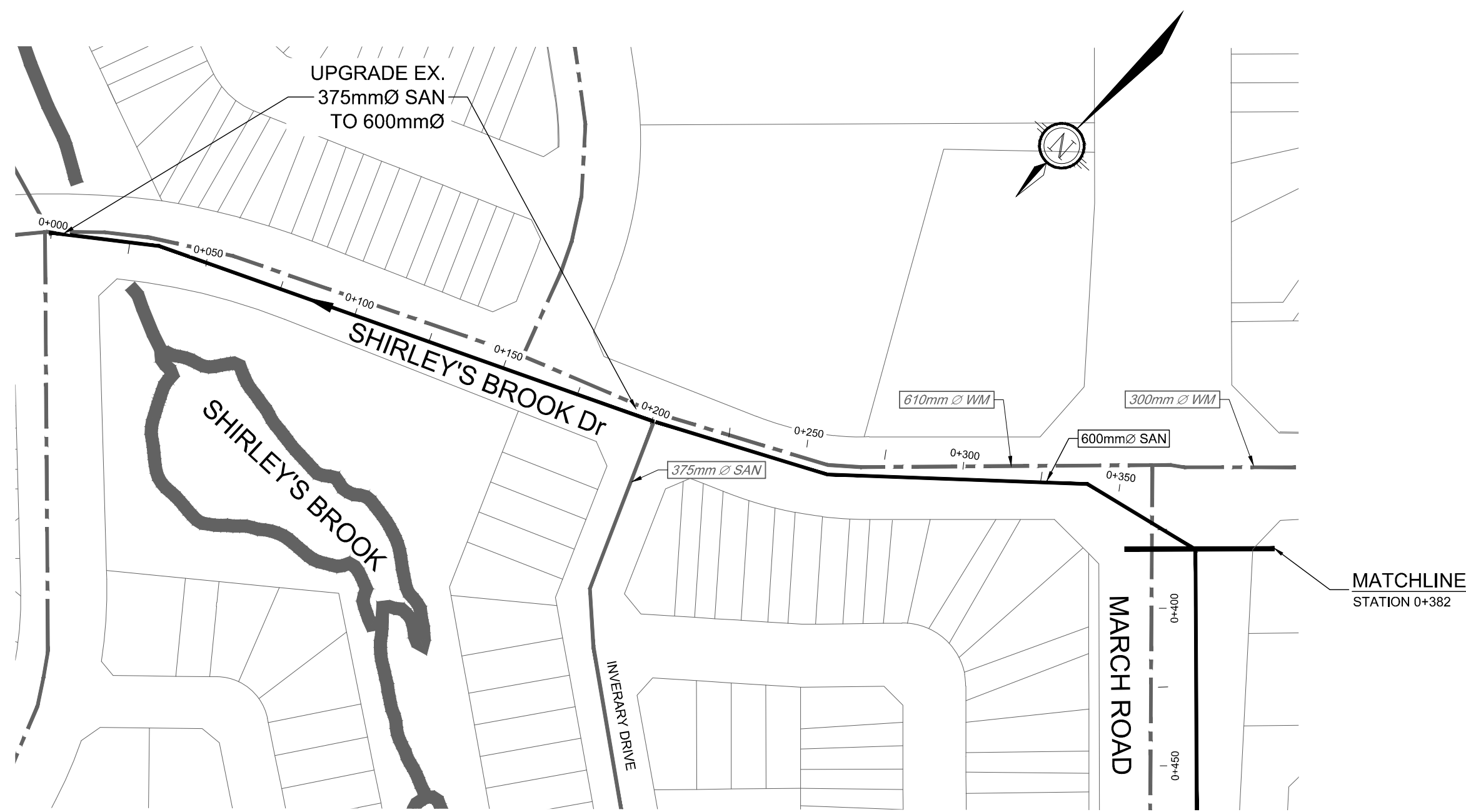
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APPROVED	JLS

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Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

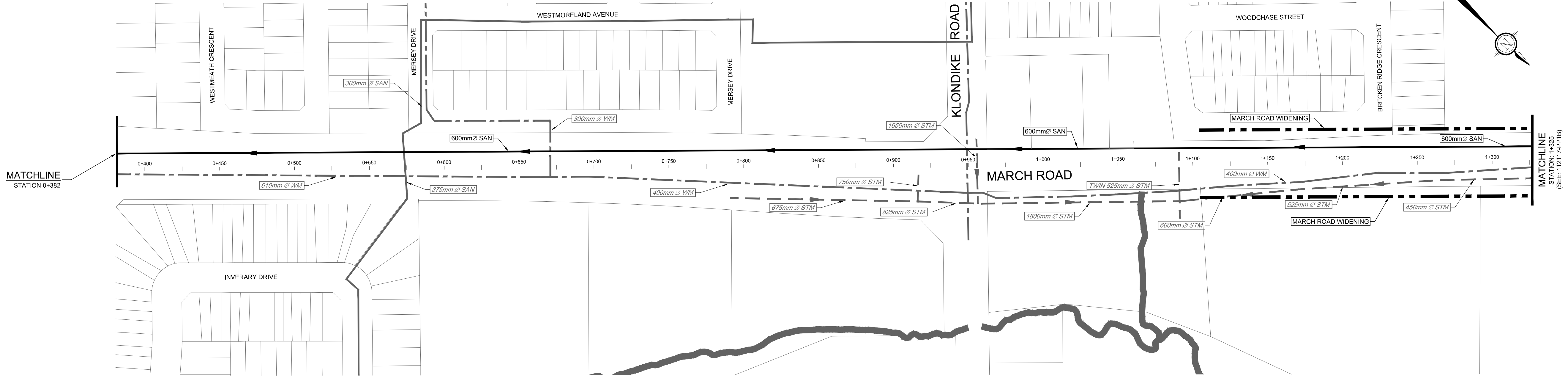
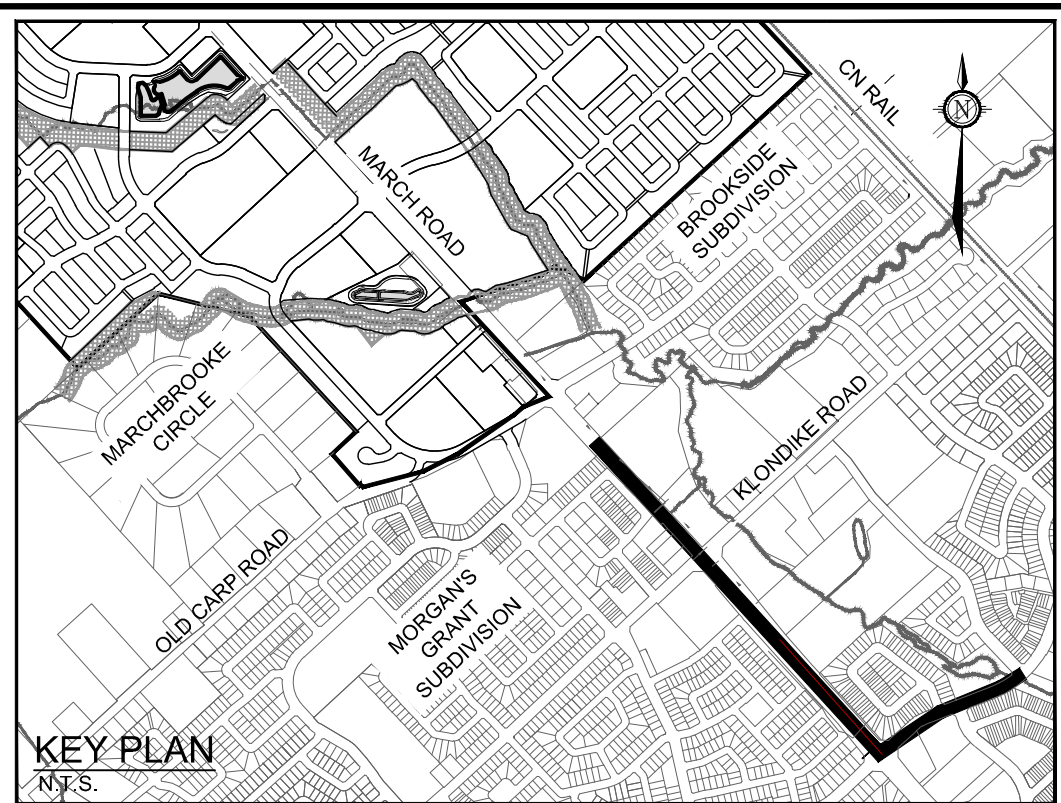
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COMMUNITY DESIGN PLAN**
**MARCH ROAD - SHIRLEY'S BROOK
PLAN AND PROFILE**

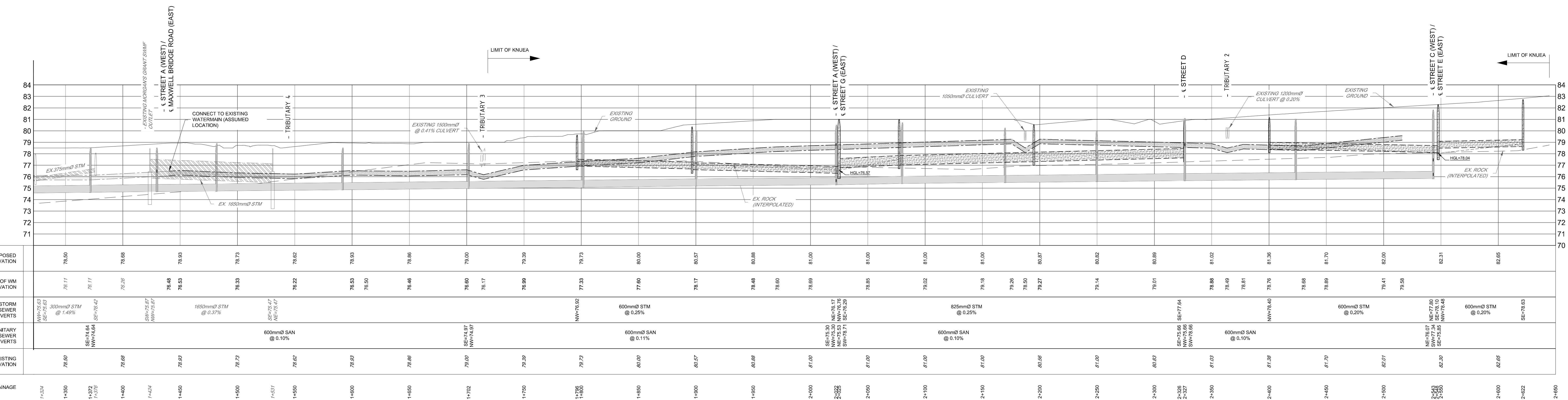
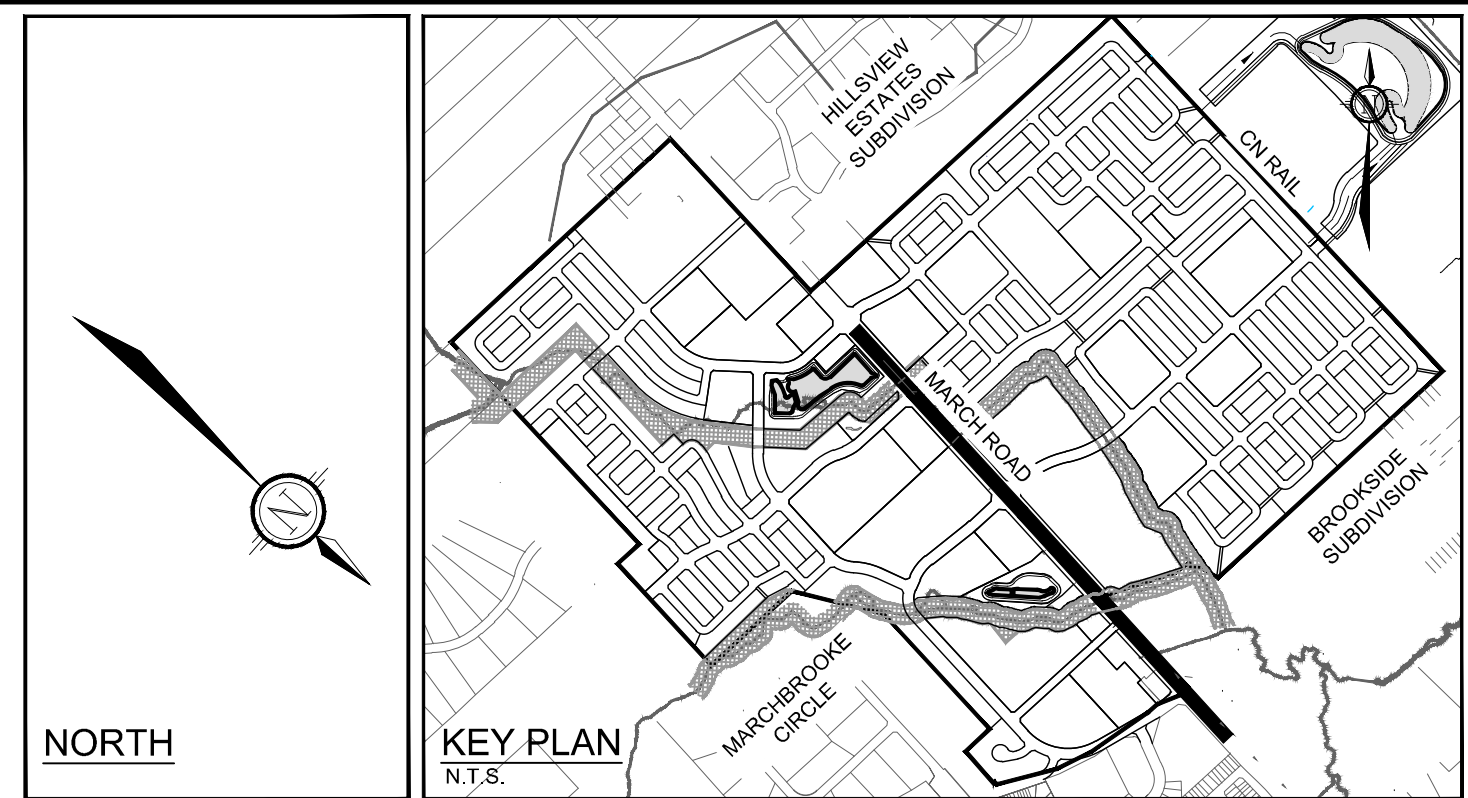
PROJECT NO. 112117-04
REV # 3
DRAWING NO. 112117-PP1A



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- EXISTING STORM SEWER & FLOW DIRECTION (PLAN VIEW)
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- PROPOSED SANITARY SEWER (PROFILE VIEW)
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- EXISTING SANITARY SEWER (PROFILE VIEW)
- PROPOSED WATERMAIN (PLAN VIEW)
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- EXISTING WATERMAIN (PLAN VIEW)
- EXISTING WATERMAIN (PROFILE VIEW)





PROJECT No.	112117-04
REV	REV # 3
DRAWING No.	112117-PP1E

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1.	ISSUED WITH DRAFT MASTER SERVICING STUDY	FEB 26/16	JLS

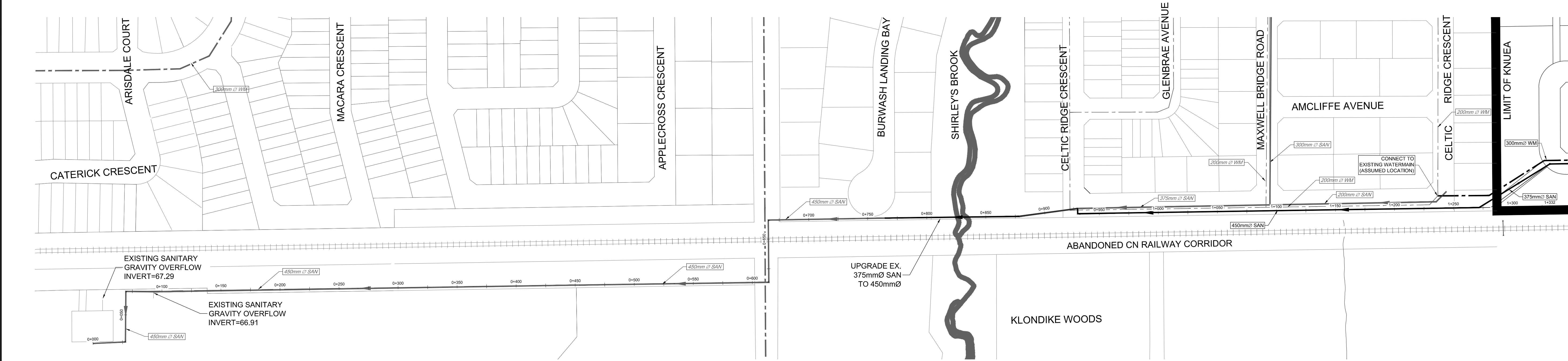
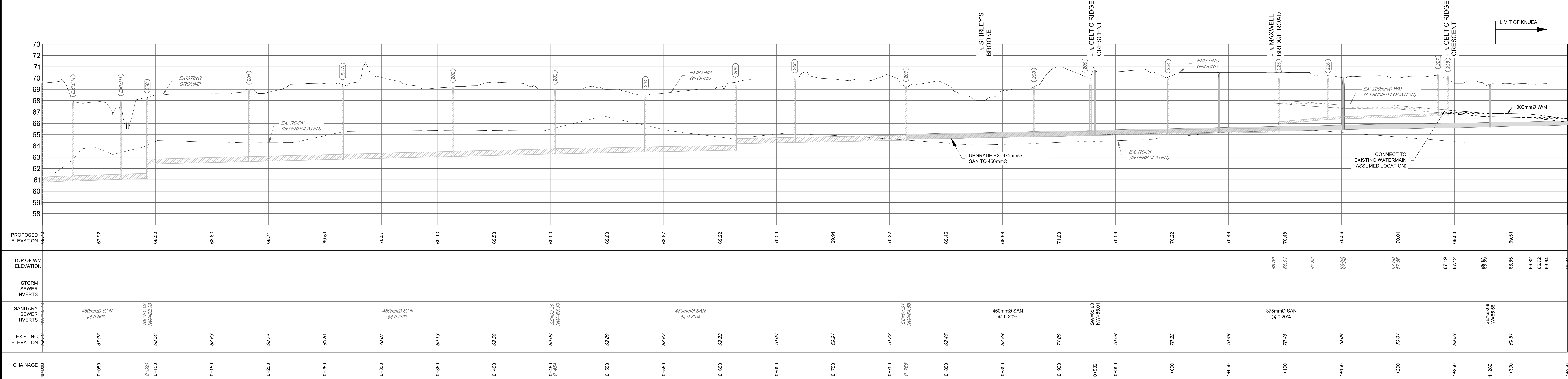
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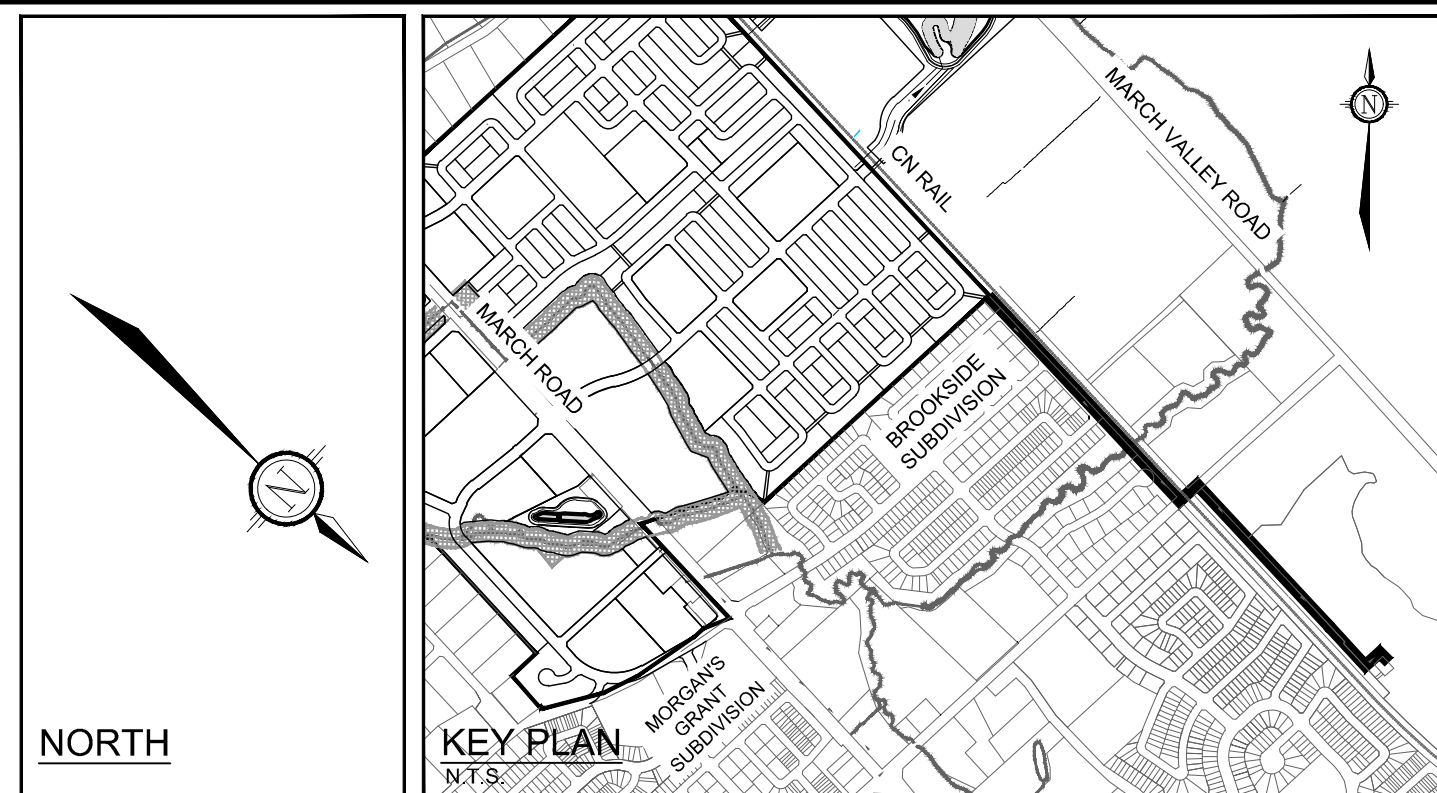
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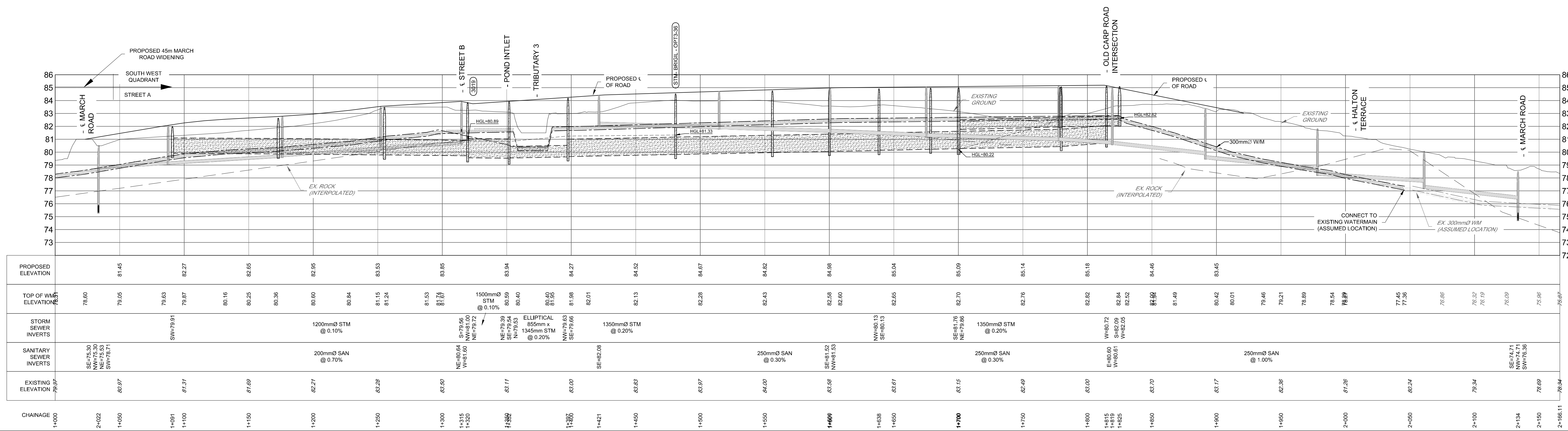
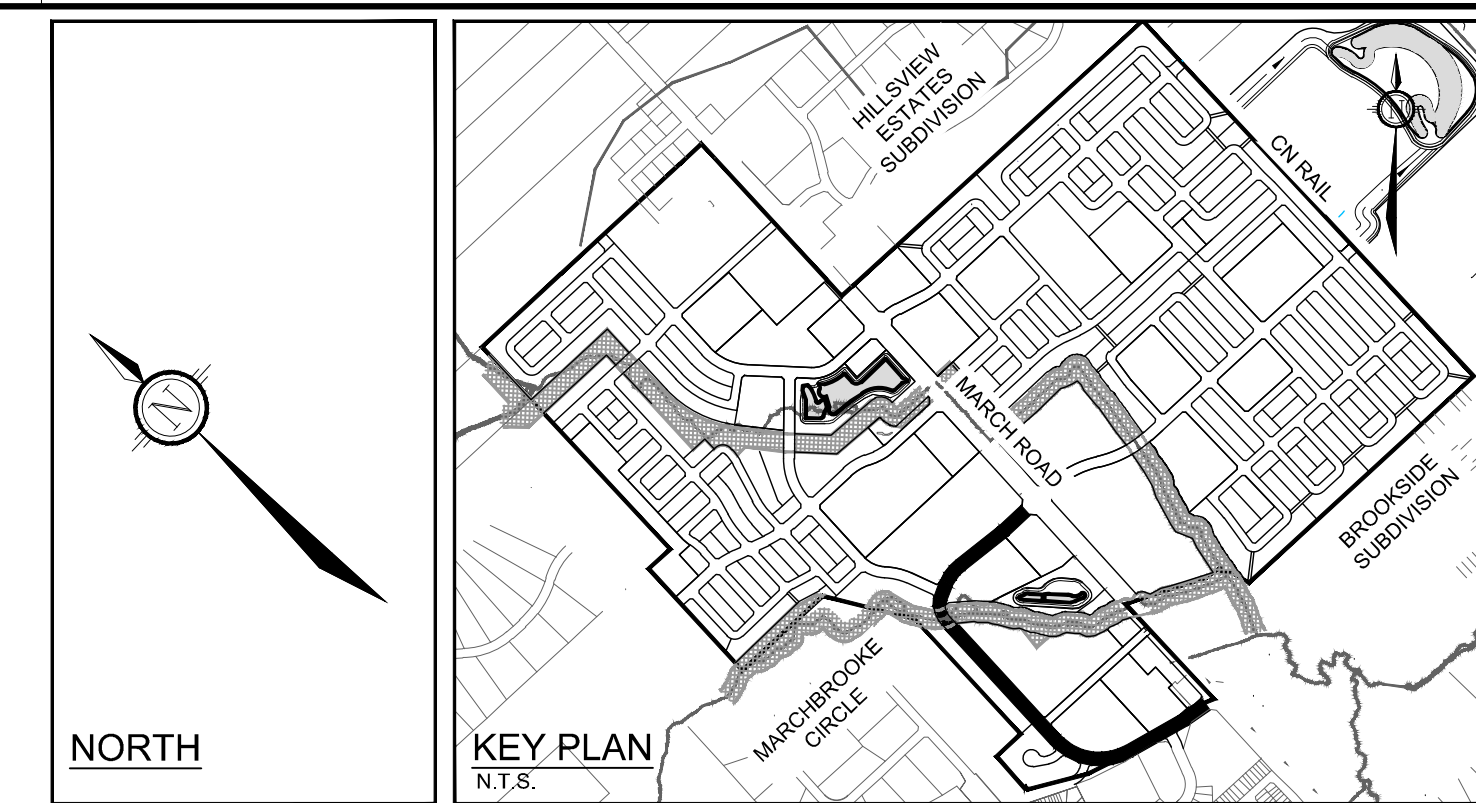
NOVATECH
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Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

LOCATION
KANATA NORTH URBAN EXPANSION AREA
COMMUNITY DESIGN PLAN
DRAWING NAME
KNUEA TO BRIAR RIDGE
PUMP STATION
PLAN AND PROFILE
PROJECT NO.
112117-04
REV
REV # 3
DRAWING NO.
112117-PP2



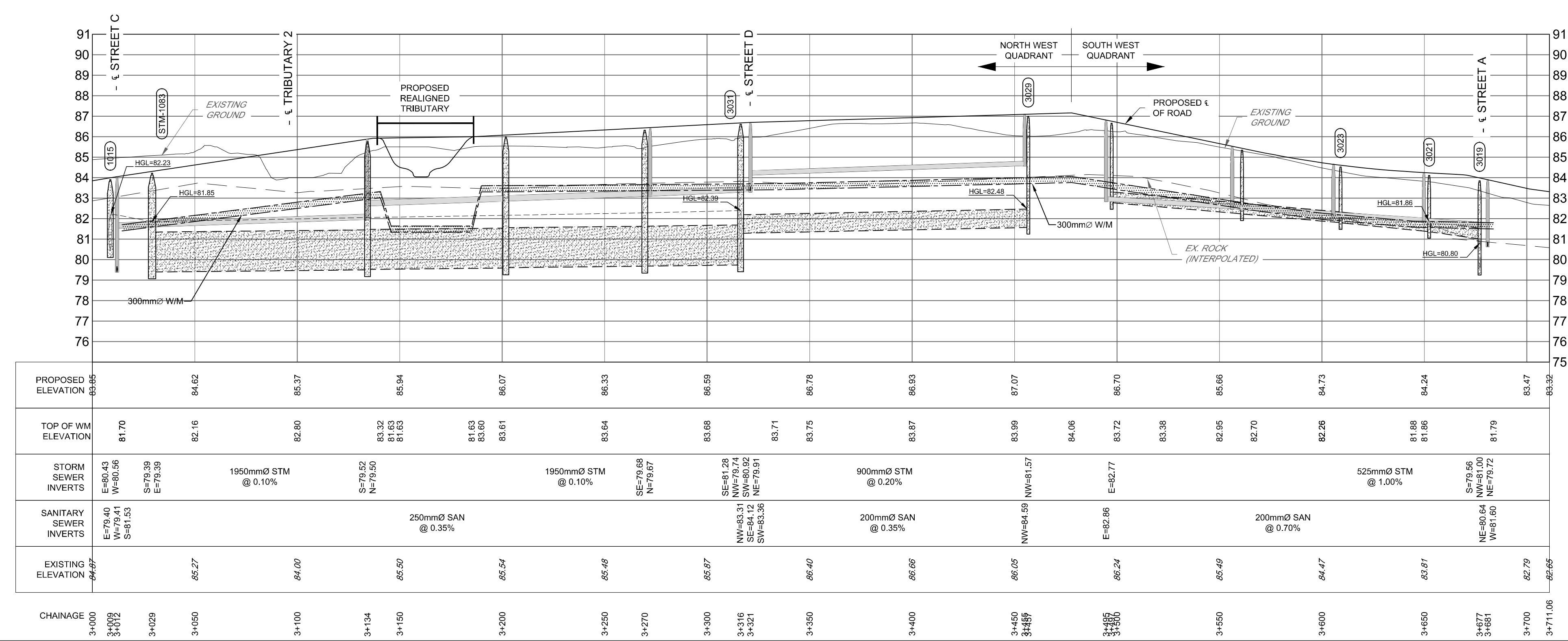
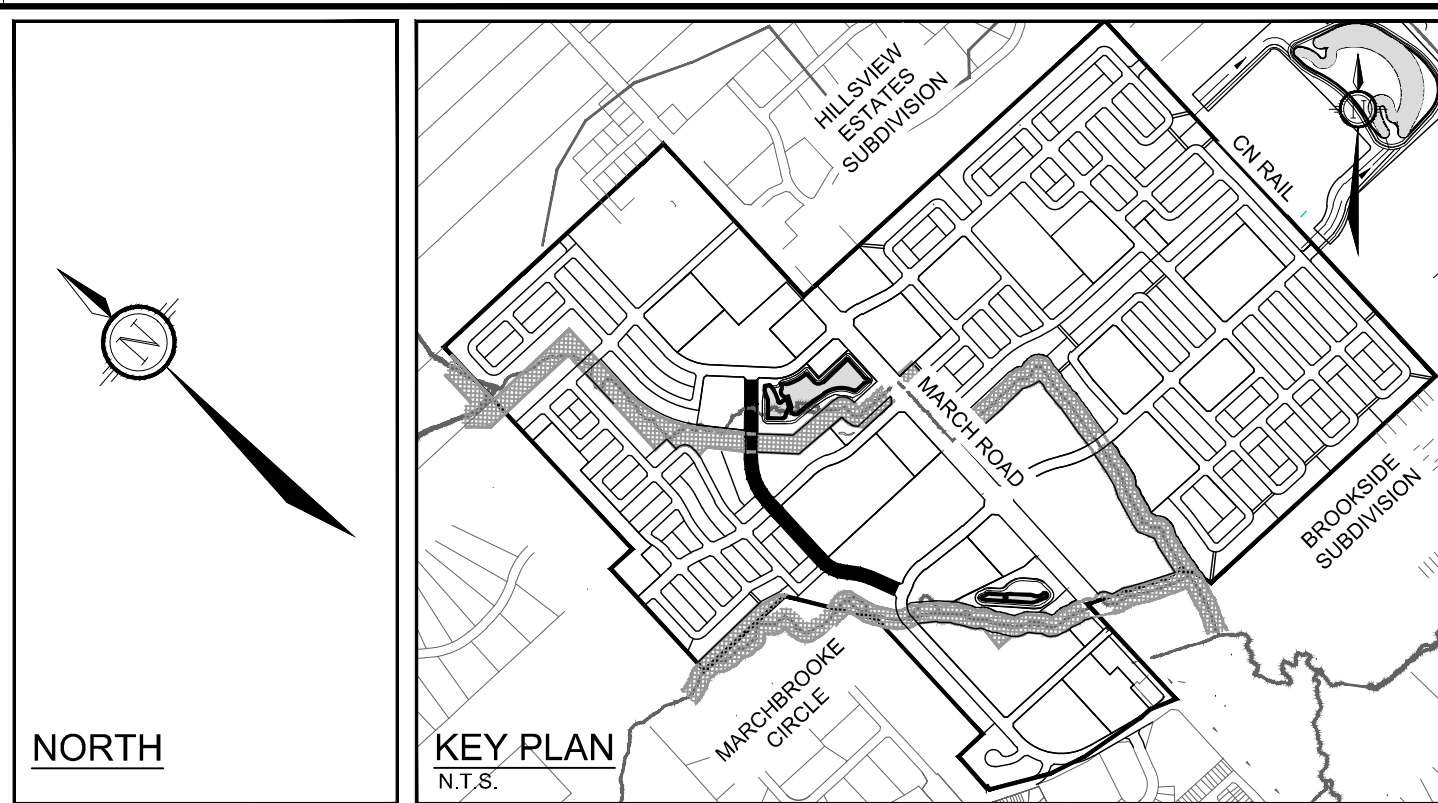
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 - EXISTING SANITARY SEWER (PROFILE VIEW)
 - PROPOSED WATERMAIN (PLAN VIEW)
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 Engineers, Planners & Landscape Architects 2000, 240 Michael Cowpland Drive Ottawa, Ontario, Canada K2M 1P6 Telephone (613) 254-9643 Facsimile (613) 254-5867 Website www.novatech-inc.com	LOCATION KANATA NORTH URBAN EXPANSION AREA COMMUNITY DESIGN PLAN	
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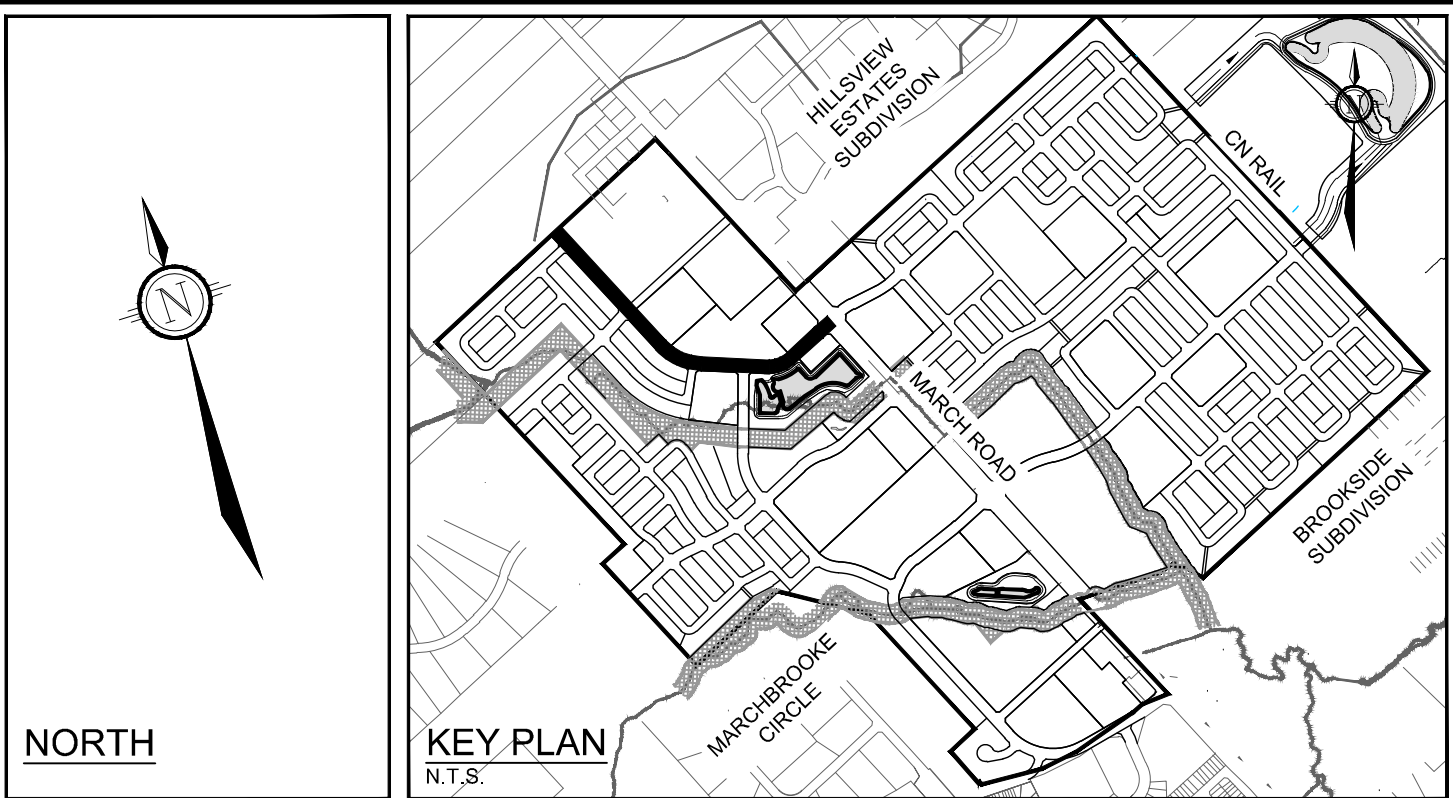


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1.	ISSUED WITH DRAFT MASTER SERVICING STUDY	FEB 26'16	JLS				
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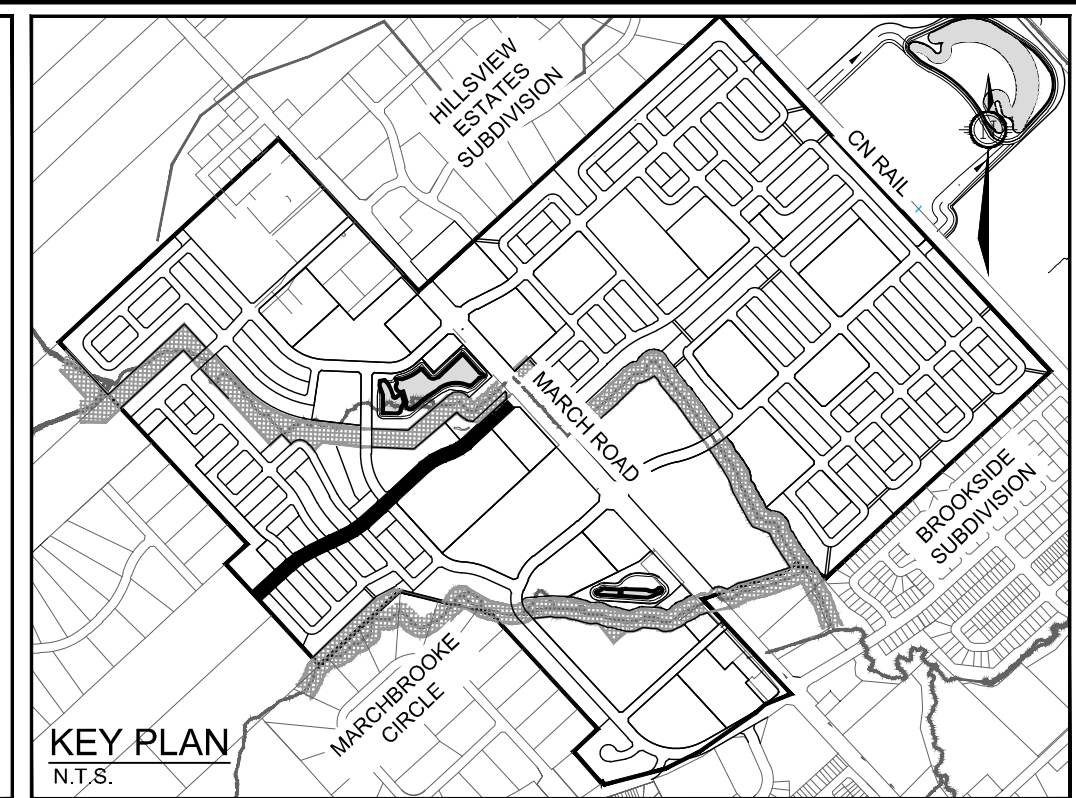
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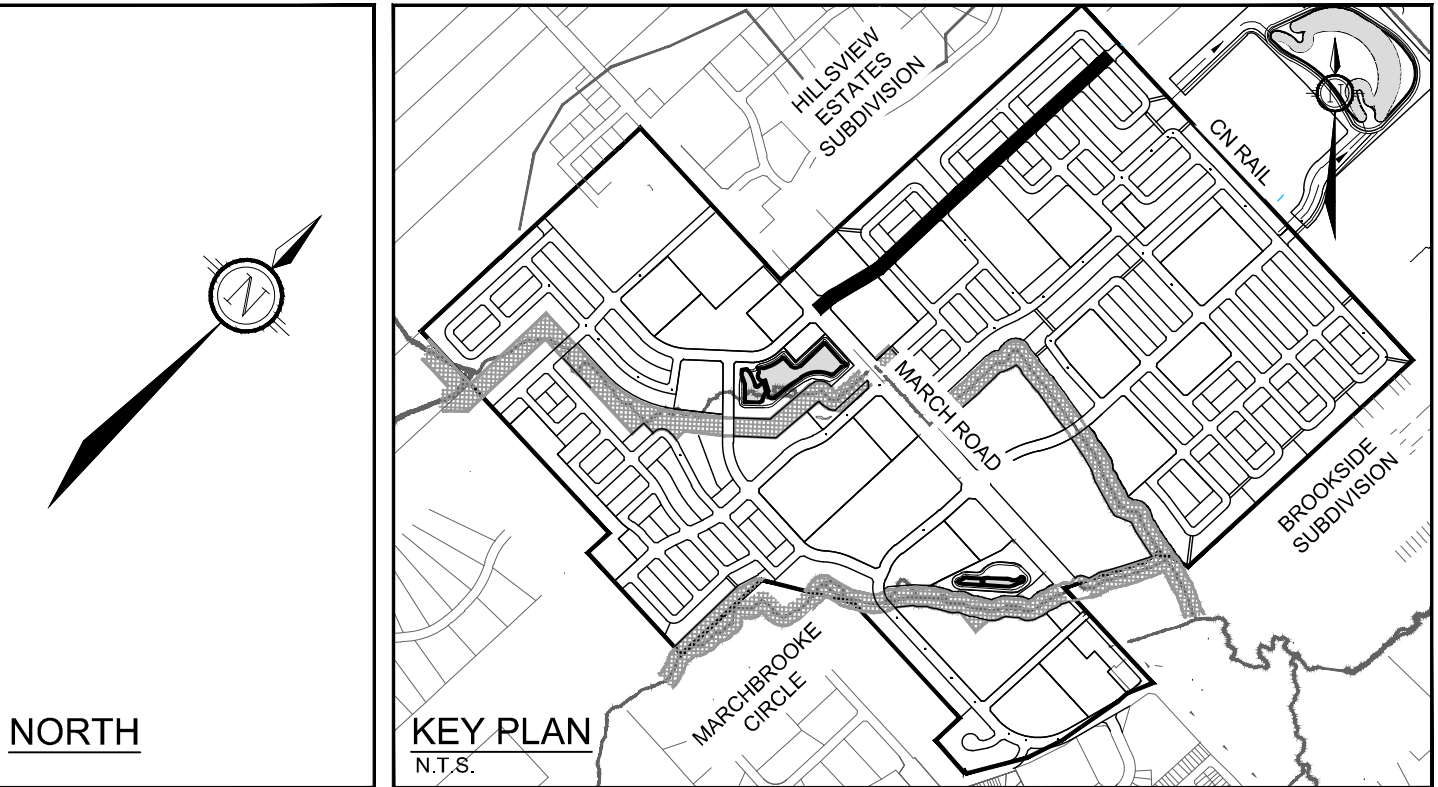
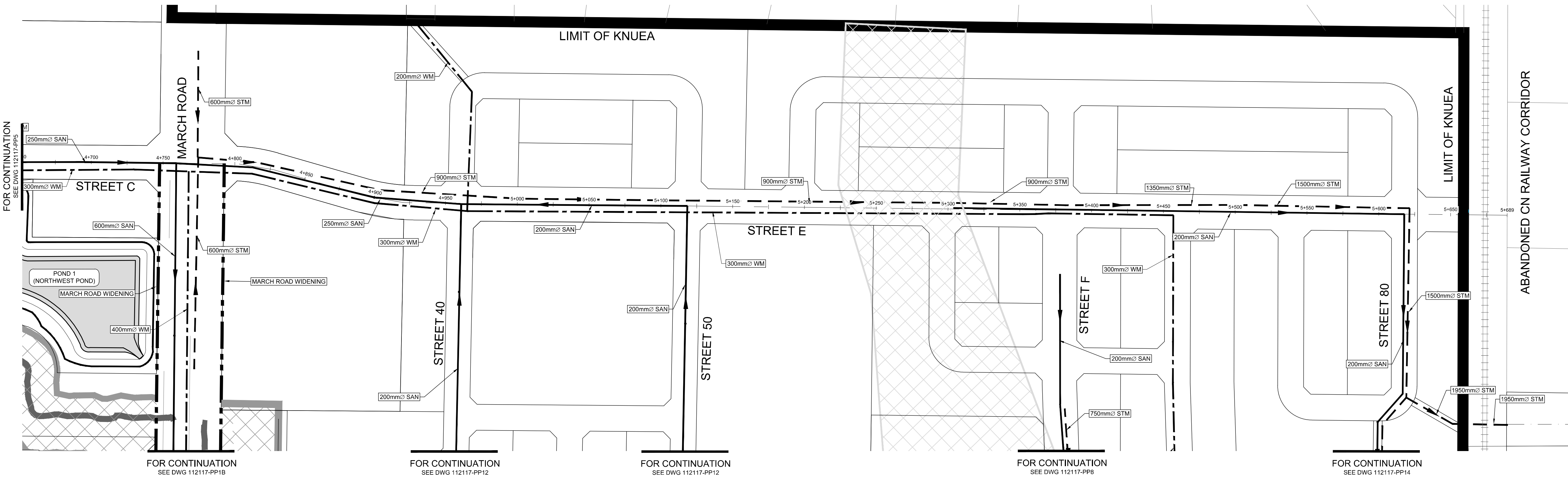
 Engineers, Planners & Landscape Architects Suite 200, 240 Michael Cowpland Drive Ottawa, Ontario, Canada K2M 1P6 Telephone (613) 254-9643 Facsimile (613) 254-5867 Website www.novatech-eng.com	LOCATION KANATA NORTH URBAN EXPANSION AREA COMMUNITY DESIGN PLAN	
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		REV REV # 3
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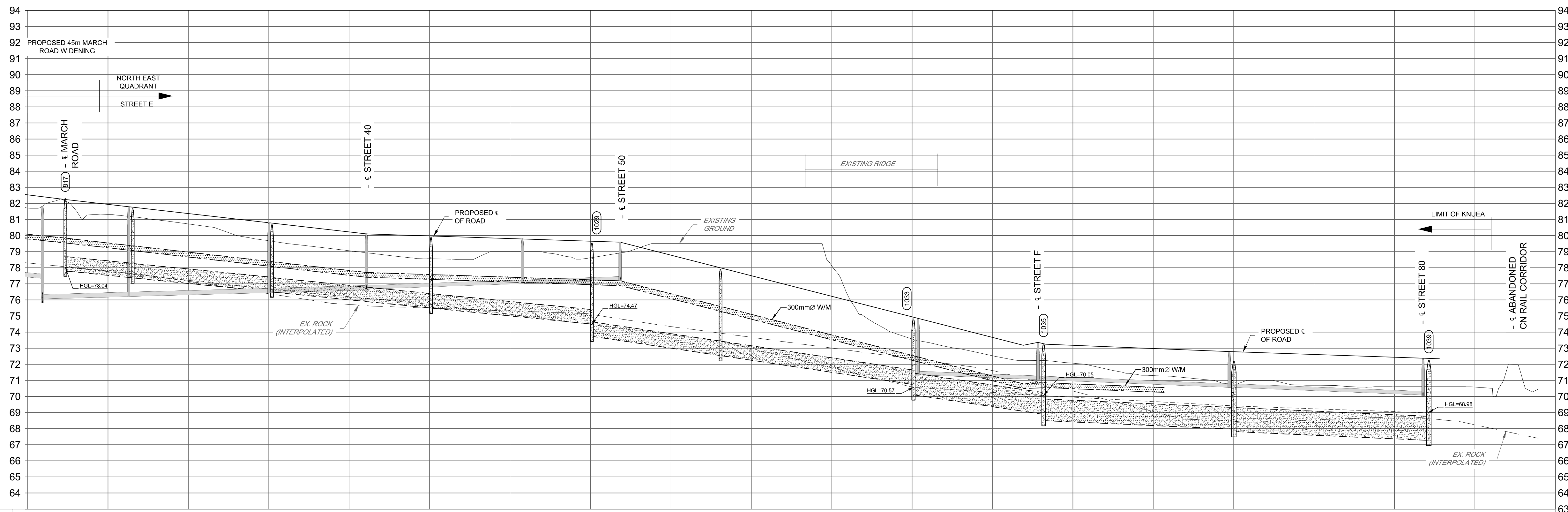


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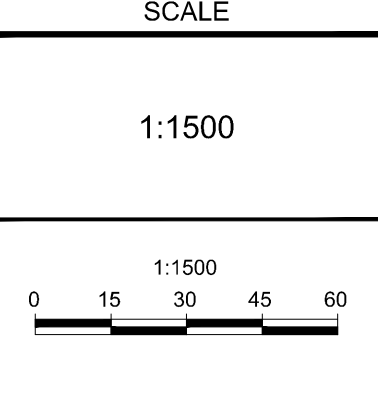
- LEGEND**
- PROPOSED STORM SEWER & FLOW DIRECTION (PLAN VIEW)
 - PROPOSED STORM SEWER (PROFILE VIEW)
 - EXISTING STORM SEWER & FLOW DIRECTION (PLAN VIEW)
 - EXISTING STORM SEWER (PROFILE VIEW)
 - PROPOSED SANITARY SEWER & FLOW DIRECTION (PLAN VIEW)
 - PROPOSED SANITARY SEWER (PROFILE VIEW)
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 - EXISTING SANITARY SEWER (PROFILE VIEW)
 - PROPOSED WATERMAIN (PLAN VIEW)
 - PROPOSED WATERMAIN (PROFILE VIEW)
 - EXISTING WATERMAIN (PLAN VIEW)
 - EXISTING WATERMAIN (PROFILE VIEW)



PROPOSED ELEVATION	82.53		81.94		81.37		80.50		80.23		79.98		79.81		79.65		79.78		77.50		76.23		74.95		73.67		73.18		72.98		72.78		72.61		72.44	
TOP OF WM ELEVATION	80.08		79.88		79.97		78.40		77.83		77.58		77.41		77.25		76.38		76.10		73.83		72.55		71.27		70.78		70.85		70.69		70.55			
STORM SEWER INVERTS			NE=77.60 SE=76.10 NW=76.48						900mmØ STM @ 1.00%						NE=74.39 SW=74.50 NW=75.14				900mmØ STM @ 1.50%				NE=70.10 SW=70.74						1350mmØ STM @ 0.45%		NE=67.81 SW=67.96					
SANITARY SEWER INVERTS	NE=76.07 SE=76.65							250mmØ SAN @ 0.29%	NE=76.60 SW=76.64 SE=76.69		200mmØ SAN @ 0.35%				SE=77.24 SW=77.24							NE=71.36							200mmØ SAN @ 0.40%							
EXISTING ELEVATION	81.71		81.31		80.72		79.69		79.06		79.56		79.00		78.62		79.50		79.50		78.13		73.57		72.53		72.07			71.29		70.75		70.69		70.60
CHAINAGE	4+750	4+759	4+773	4+800	4+850	4+900	4+950	4+981	5+000	5+050	5+100	5+118	5+150	5+200	5+250	5+300	5+350	5+400	5+450	5+500	5+550	5+600	5+650	5+700												

NOTE:
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3.	ISSUED WITH DRAFT MASTER SERVICING STUDY	MAY 20/16	JLS
2.	ISSUED WITH DRAFT MASTER SERVICING STUDY	APR 4/16	JLS
1.	ISSUED WITH DRAFT MASTER SERVICING STUDY	FEB 26/16	JLS

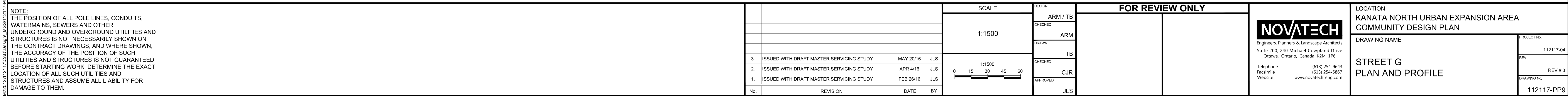
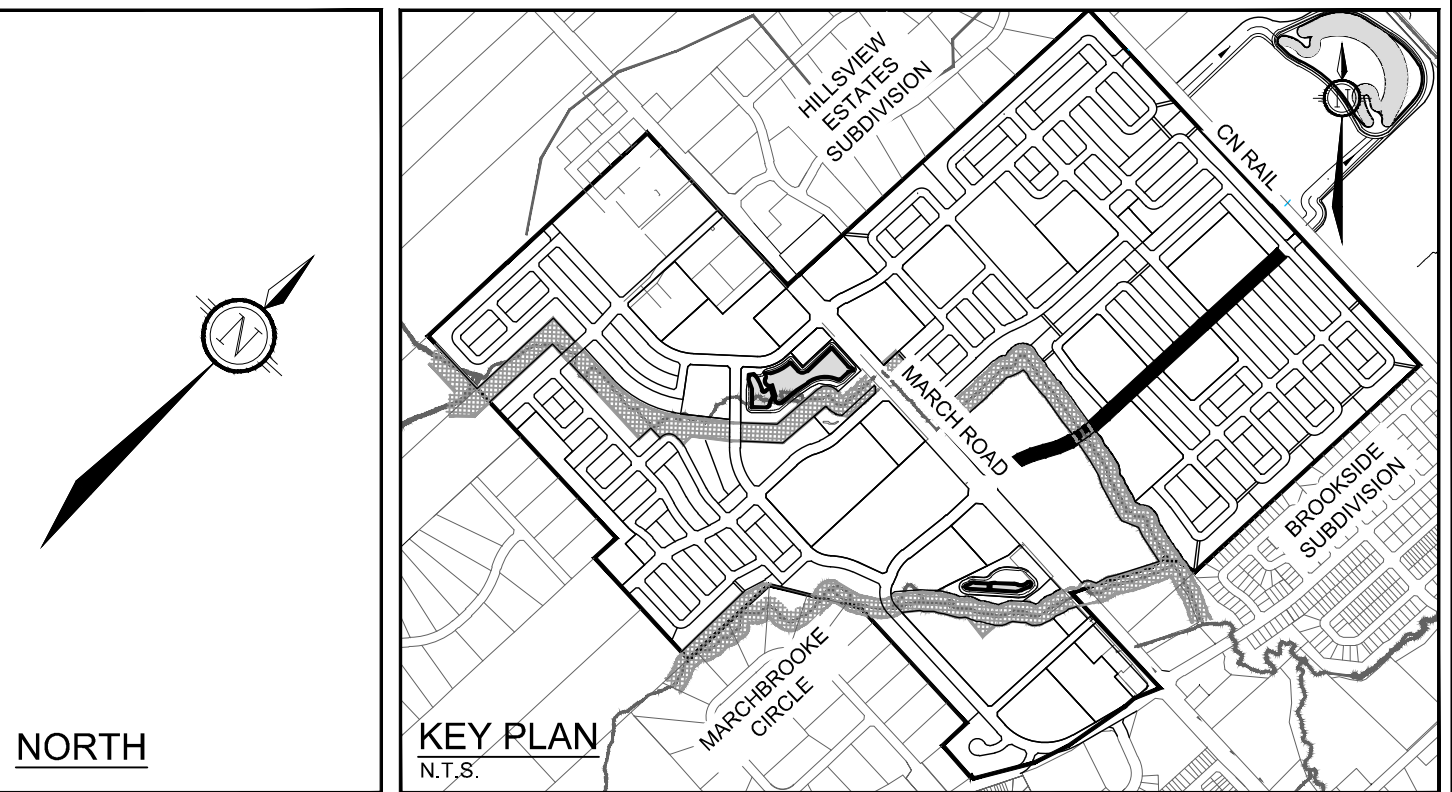


DESIGN	ARM / TB
CHECKED	ARM
DRAWN	TB
CHECKED	CJR
APPROVED	JLS

FOR REVIEW ONLY

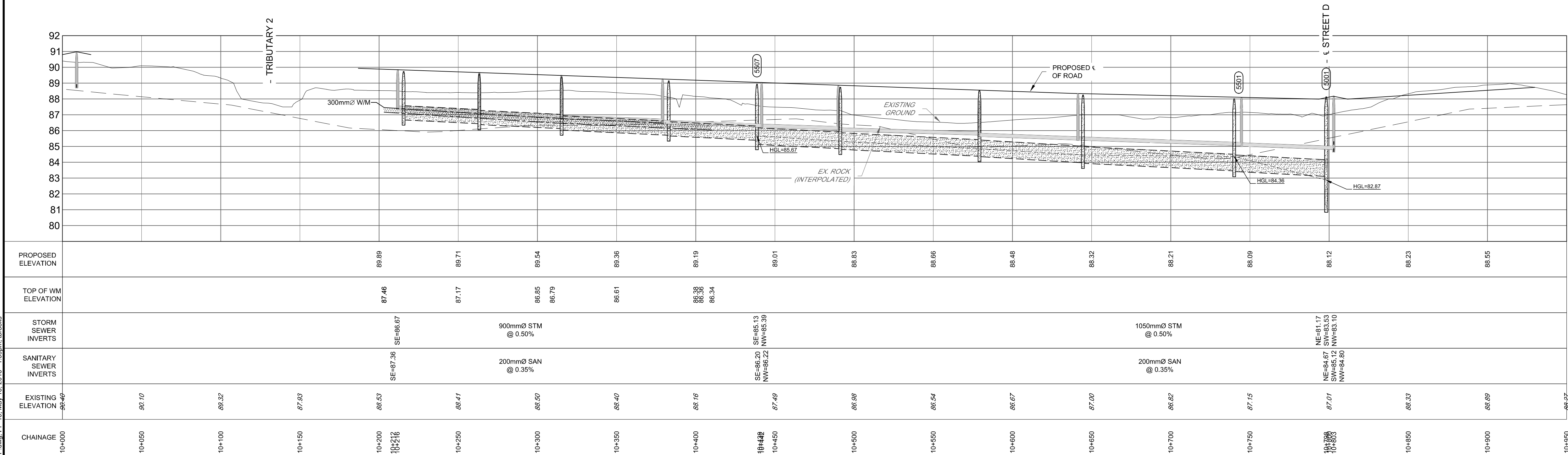


LOCATION KANATA NORTH URBAN EXPANSION AREA COMMUNITY DESIGN PLAN	PROJECT No. 112117-04
DRAWING NAME STREET E PLAN AND PROFILE	REV # 3 112117-PP7



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LIMIT OF KNUEA STREET 20

STREET 10

STREET D

FOR CONTINUATION
SEE DWG 112117-PP6

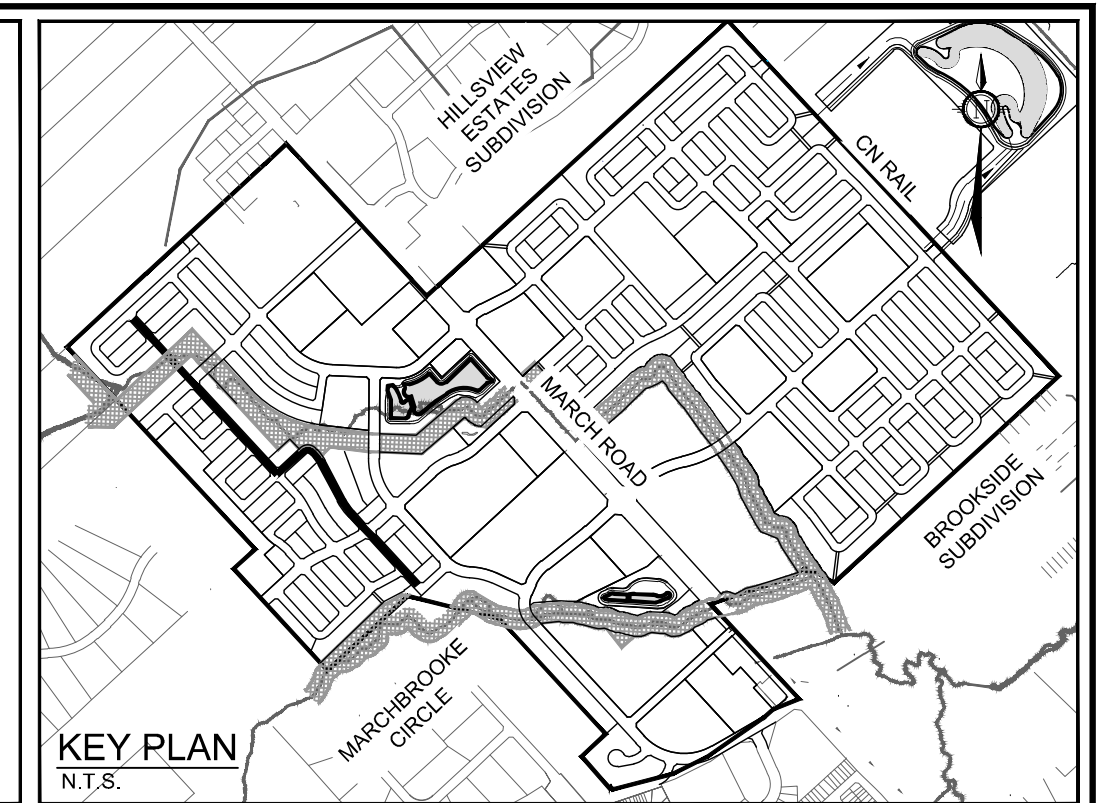
FOR CONTINUATION
SEE DWG 112117-PP6

LEGEND

- PROPOSED STORM SEWER & FLOW DIRECTION (PLAN VIEW)
- PROPOSED STORM SEWER (PROFILE VIEW)
- EXISTING STORM SEWER & FLOW DIRECTION (PLAN VIEW)
- EXISTING STORM SEWER (PROFILE VIEW)
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- PROPOSED SANITARY SEWER (PROFILE VIEW)
- EXISTING SANITARY SEWER & FLOW DIRECTION (PLAN VIEW)
- EXISTING SANITARY SEWER (PROFILE VIEW)
- PROPOSED WATERMAIN (PLAN VIEW)
- PROPOSED WATERMAIN (PROFILE VIEW)
- EXISTING WATERMAIN (PLAN VIEW)
- EXISTING WATERMAIN (PROFILE VIEW)

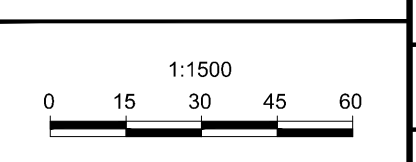
NORTH

KEY PLAN
N.T.S.



SCALE

1:1500



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CHECKED
ARM
DRAWN
TB
CHECKED
CJR
APPROVED
JLS

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Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com

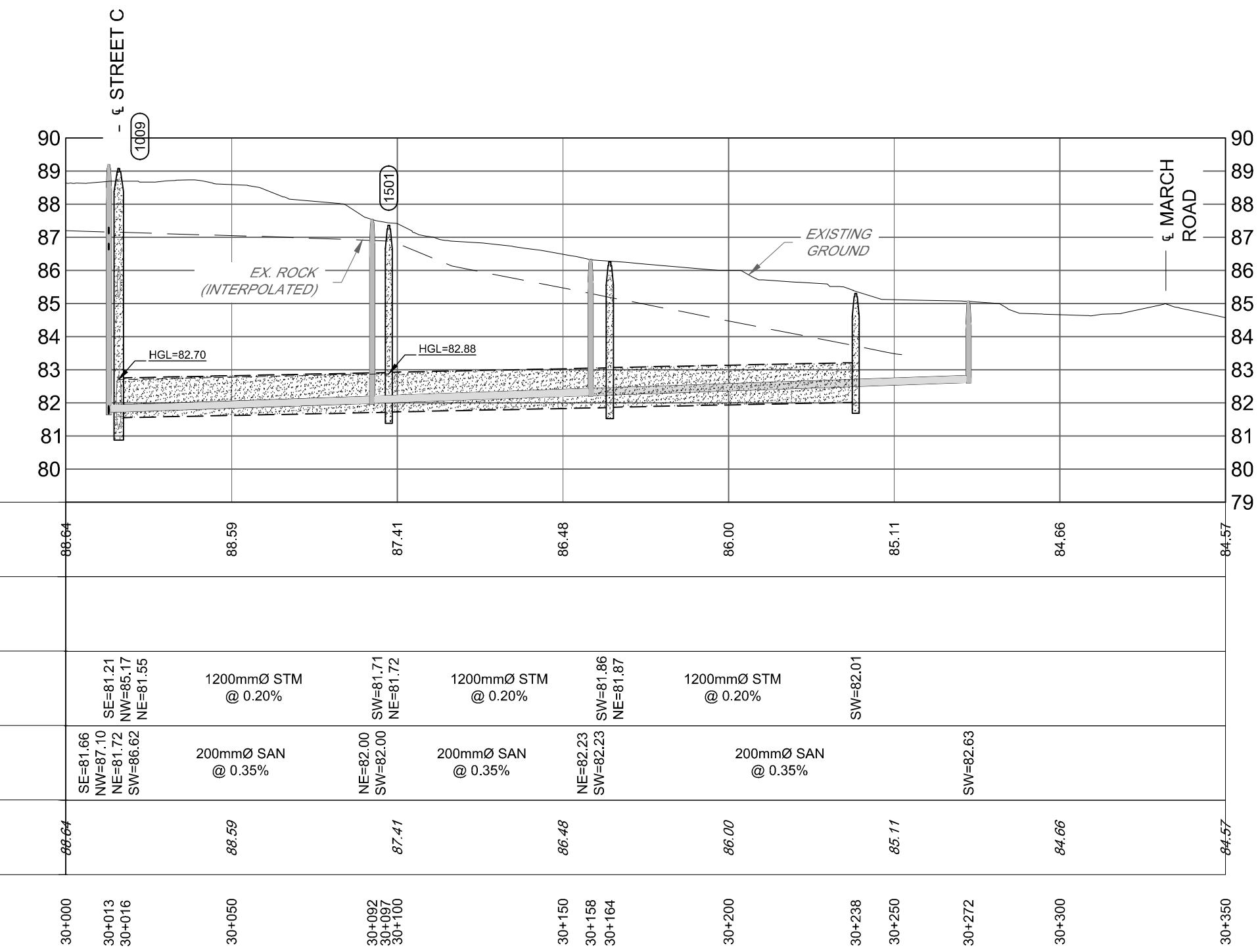
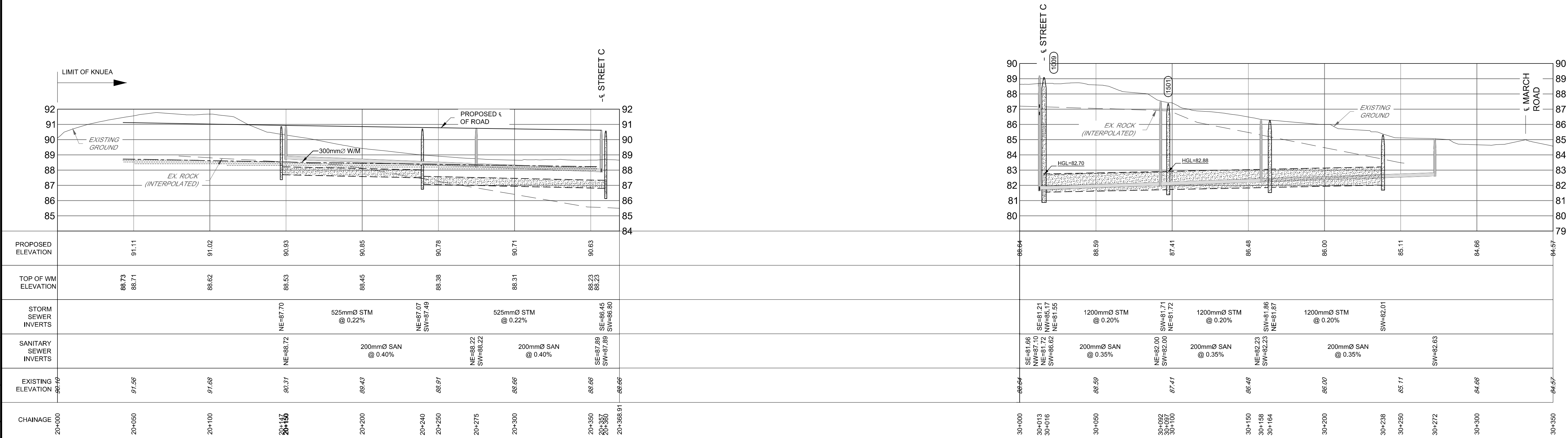
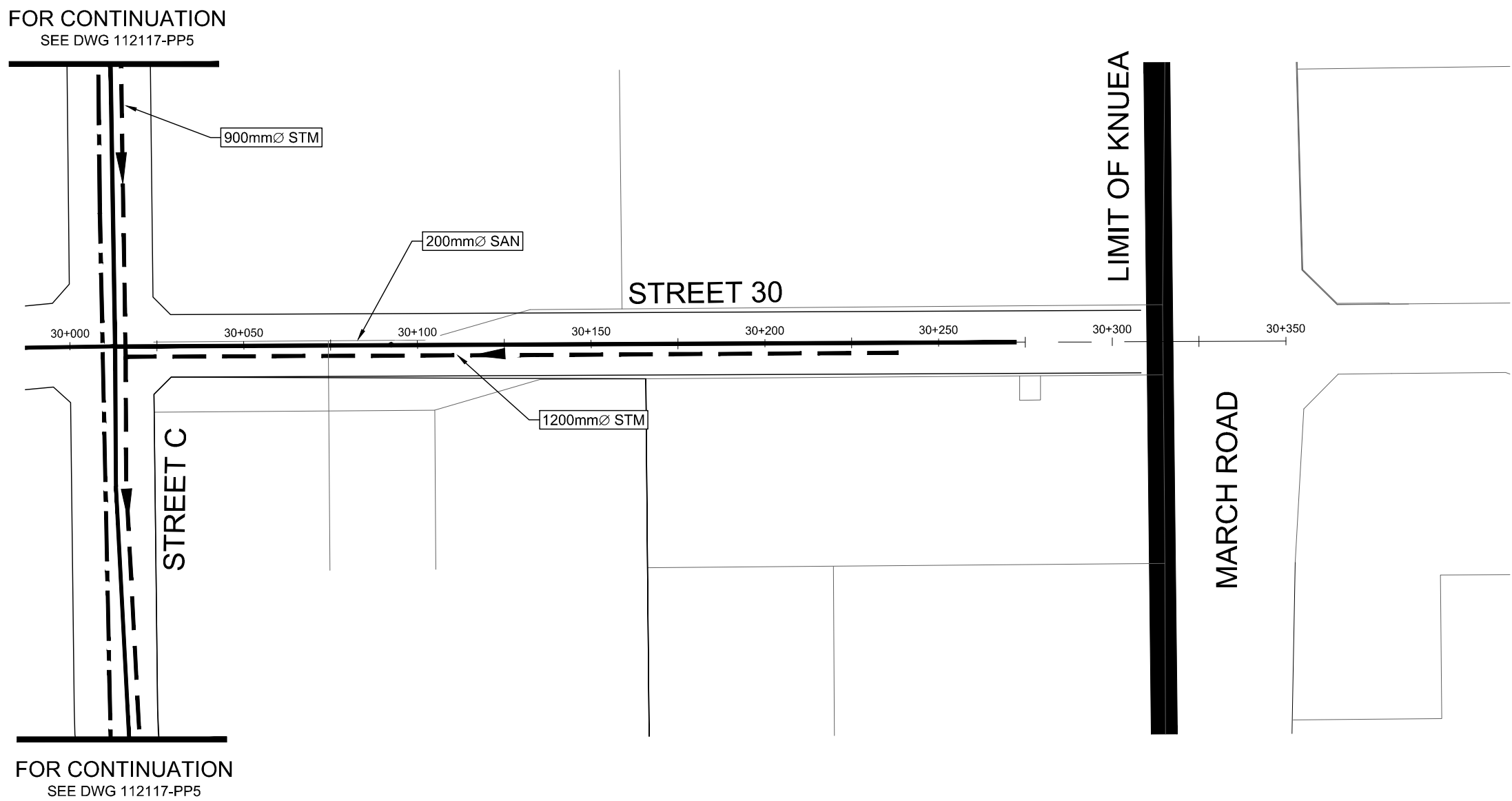
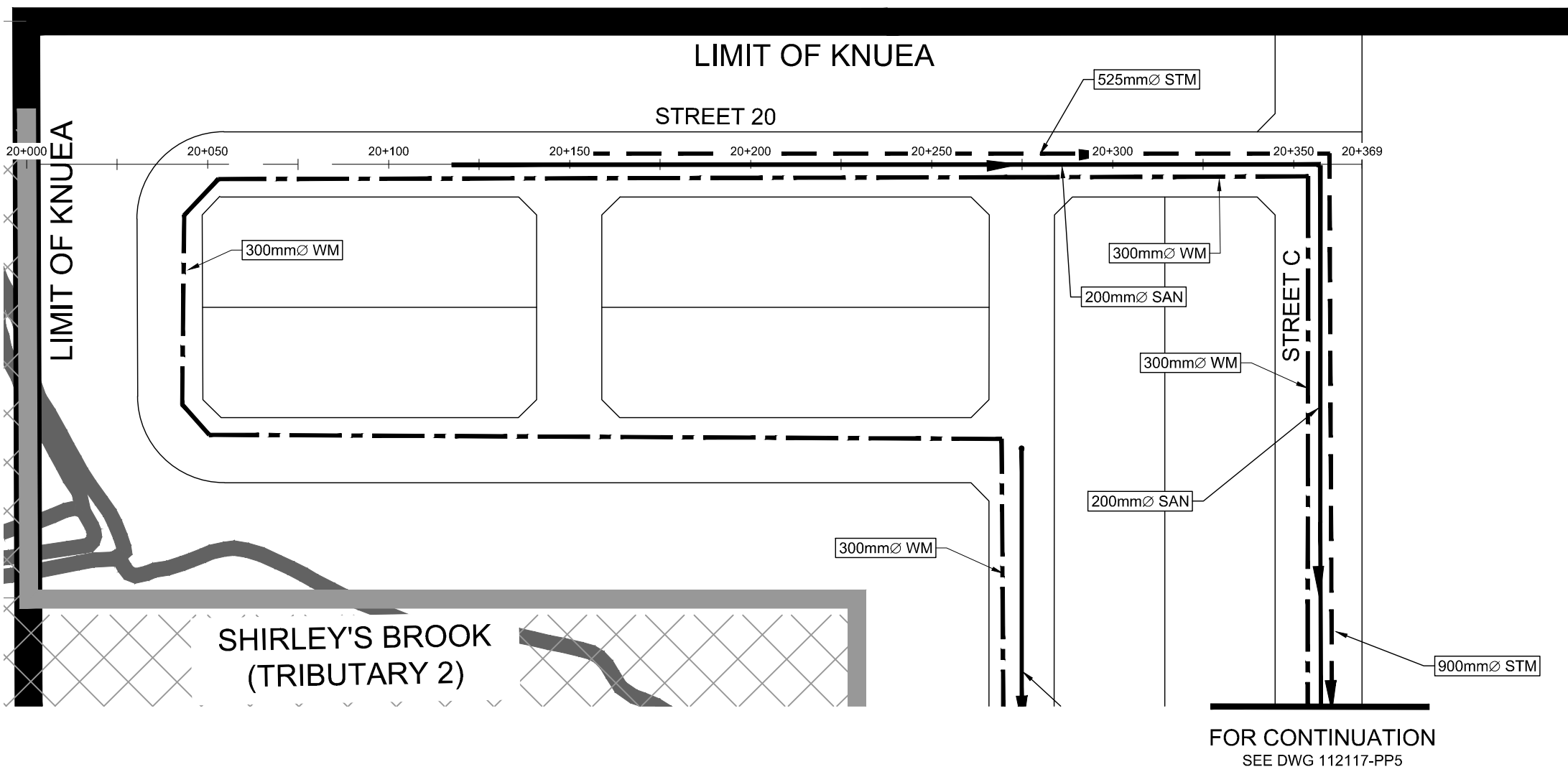
LOCATION KANATA NORTH URBAN EXPANSION AREA COMMUNITY DESIGN PLAN	
DRAWING NAME	PROJECT NO. 112117-04
STREET 10 PLAN AND PROFILE	REV # 3
DRAWING NO. 112117-PP10	

LEGEND

- PROPOSED STORM SEWER & FLOW DIRECTION (PLAN VIEW)
PROPOSED STORM SEWER (PROFILE VIEW)
EXISTING STORM SEWER & FLOW DIRECTION (PLAN VIEW)
EXISTING STORM SEWER (PROFILE VIEW)
PROPOSED SANITARY SEWER & FLOW DIRECTION (PLAN VIEW)
PROPOSED SANITARY SEWER (PROFILE VIEW)
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EXISTING SANITARY SEWER (PROFILE VIEW)
PROPOSED WATERMAIN (PLAN VIEW)
PROPOSED WATERMAIN (PROFILE VIEW)
EXISTING WATERMAIN (PLAN VIEW)
EXISTING WATERMAIN (PROFILE VIEW)

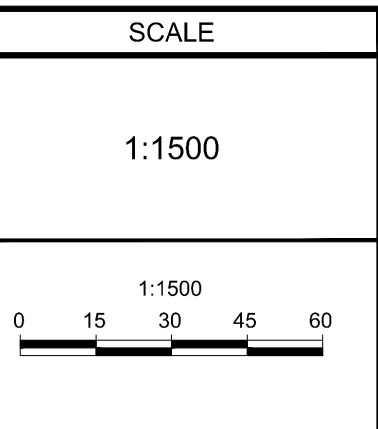
NORTH

KEY PLAN
N.T.S.



NOTE:
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1.	ISSUED WITH DRAFT MASTER SERVICING STUDY	FEB 26/16	JLS



ARM / TB
CHECKED
DRAWN
TB
CJR
APPROVED
JLS

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Ottawa, Ontario, Canada K2M 1P6
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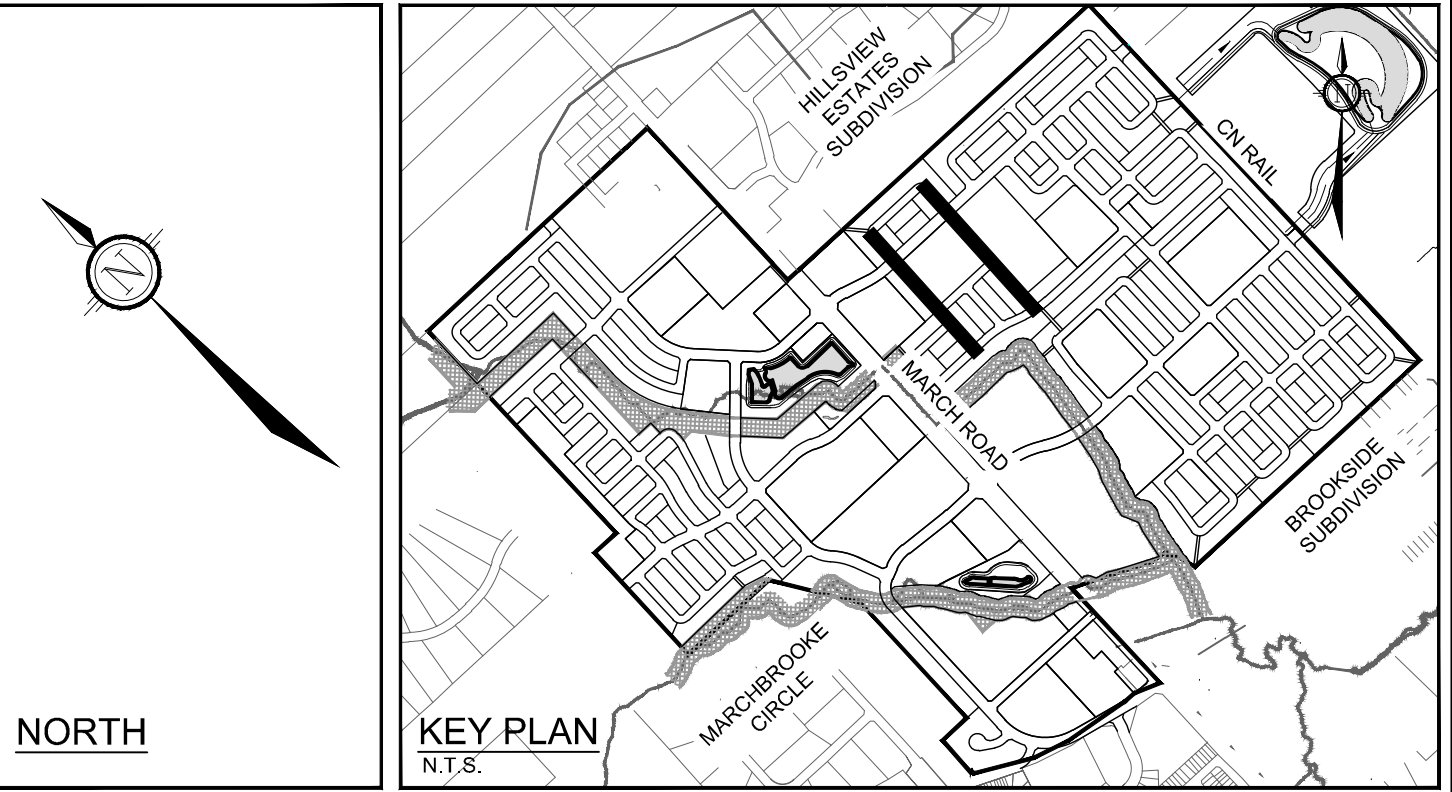
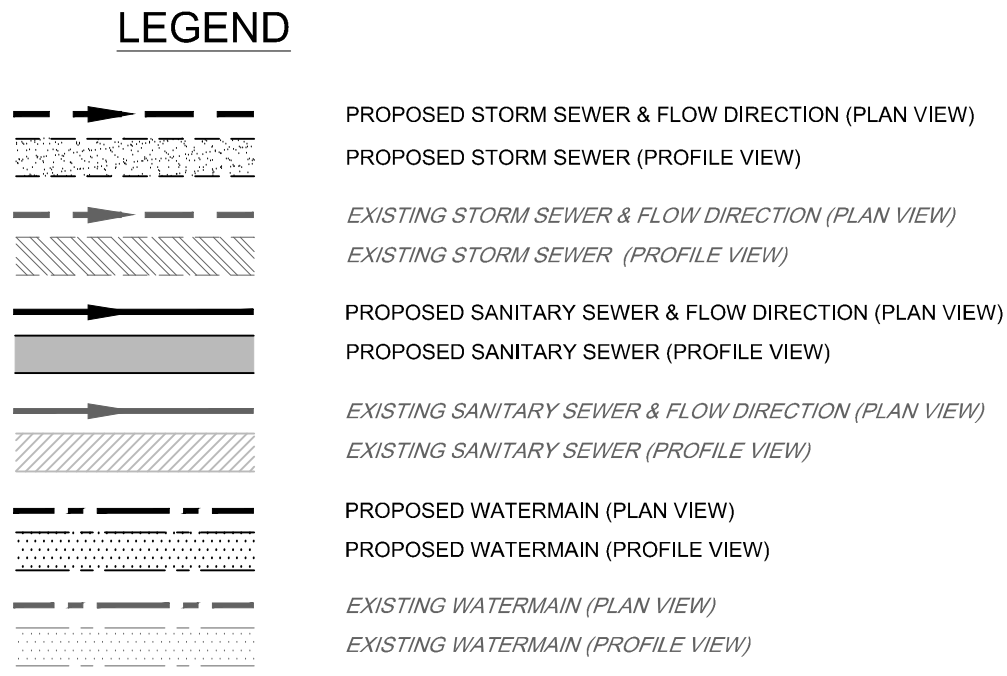
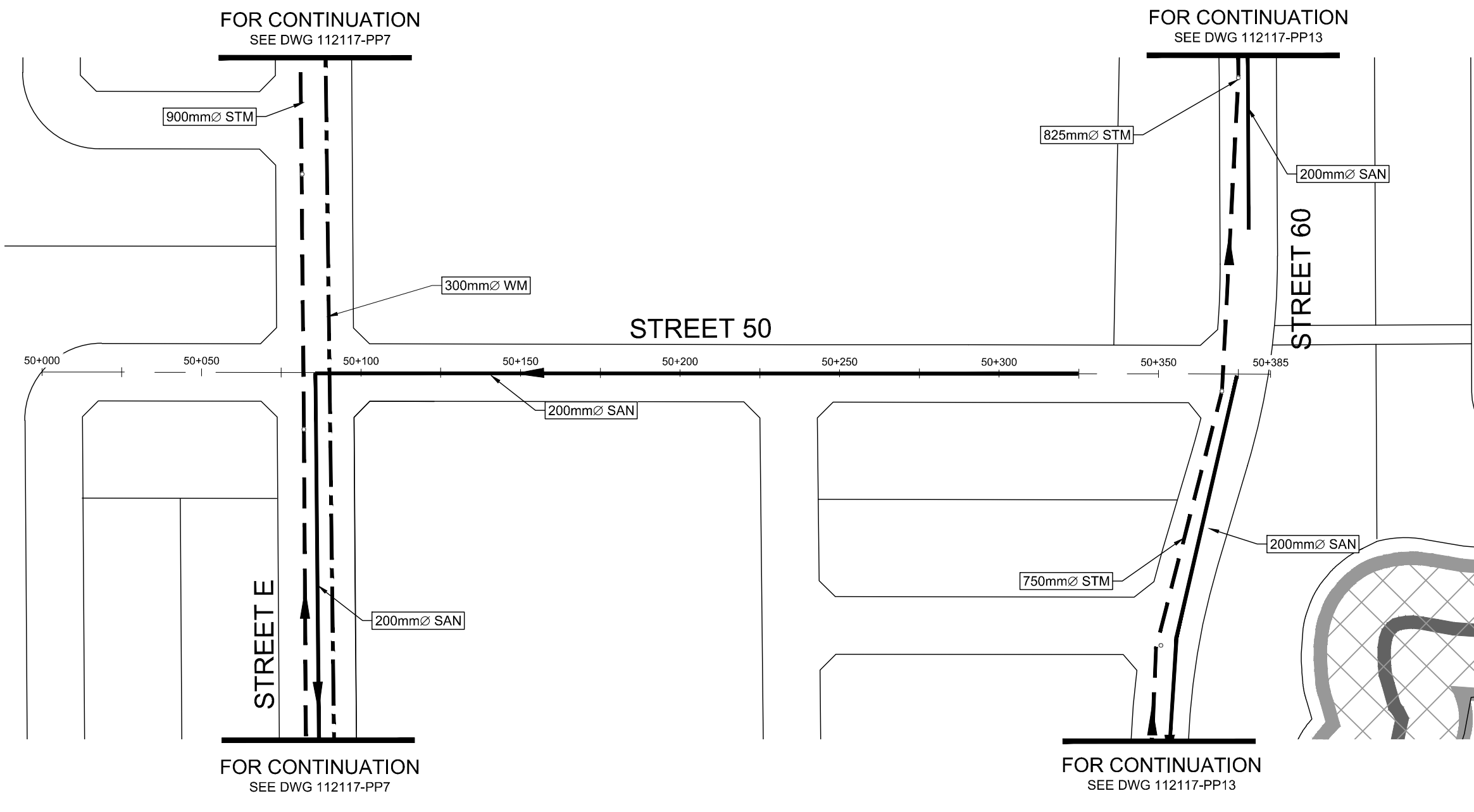
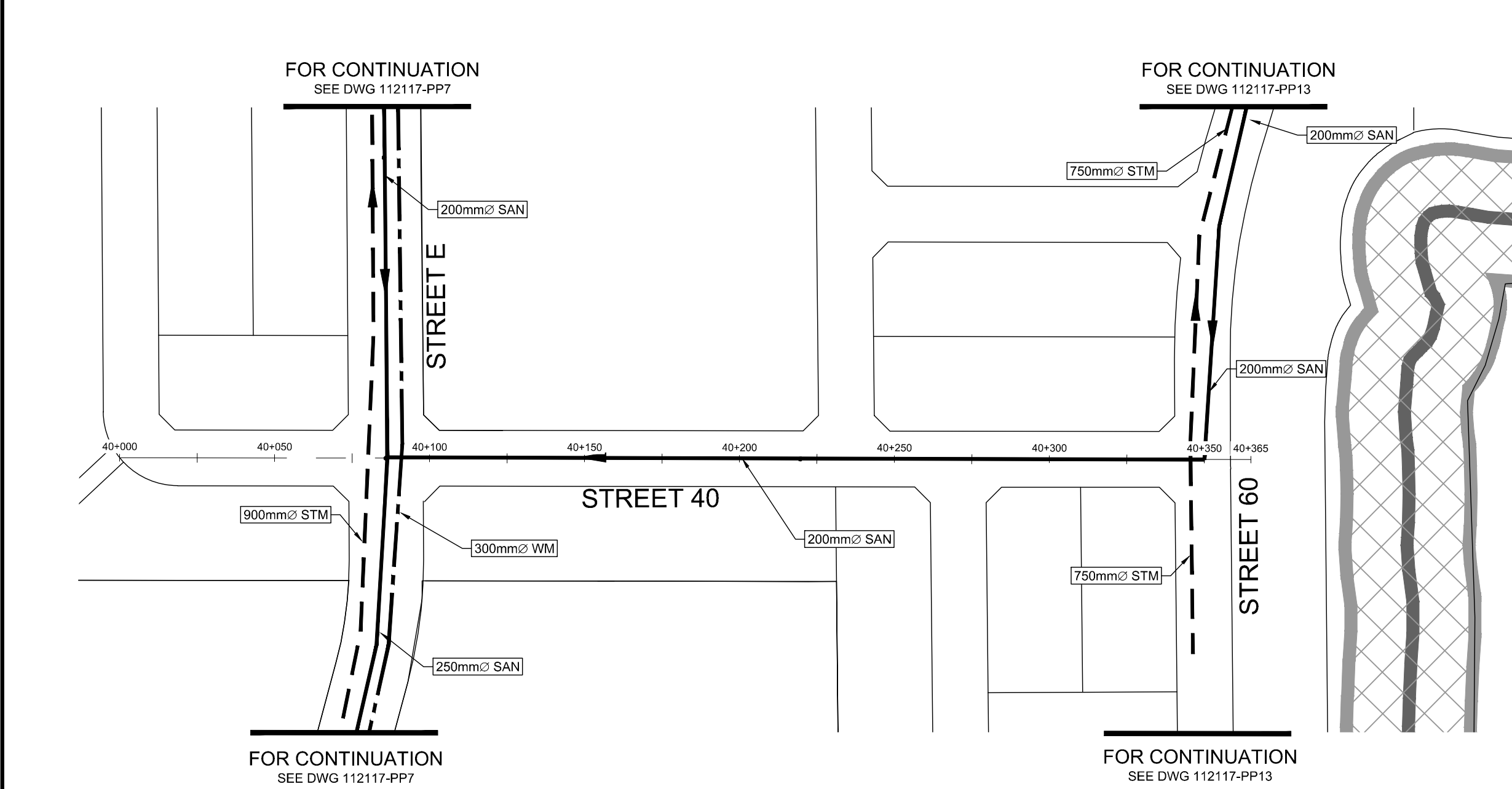
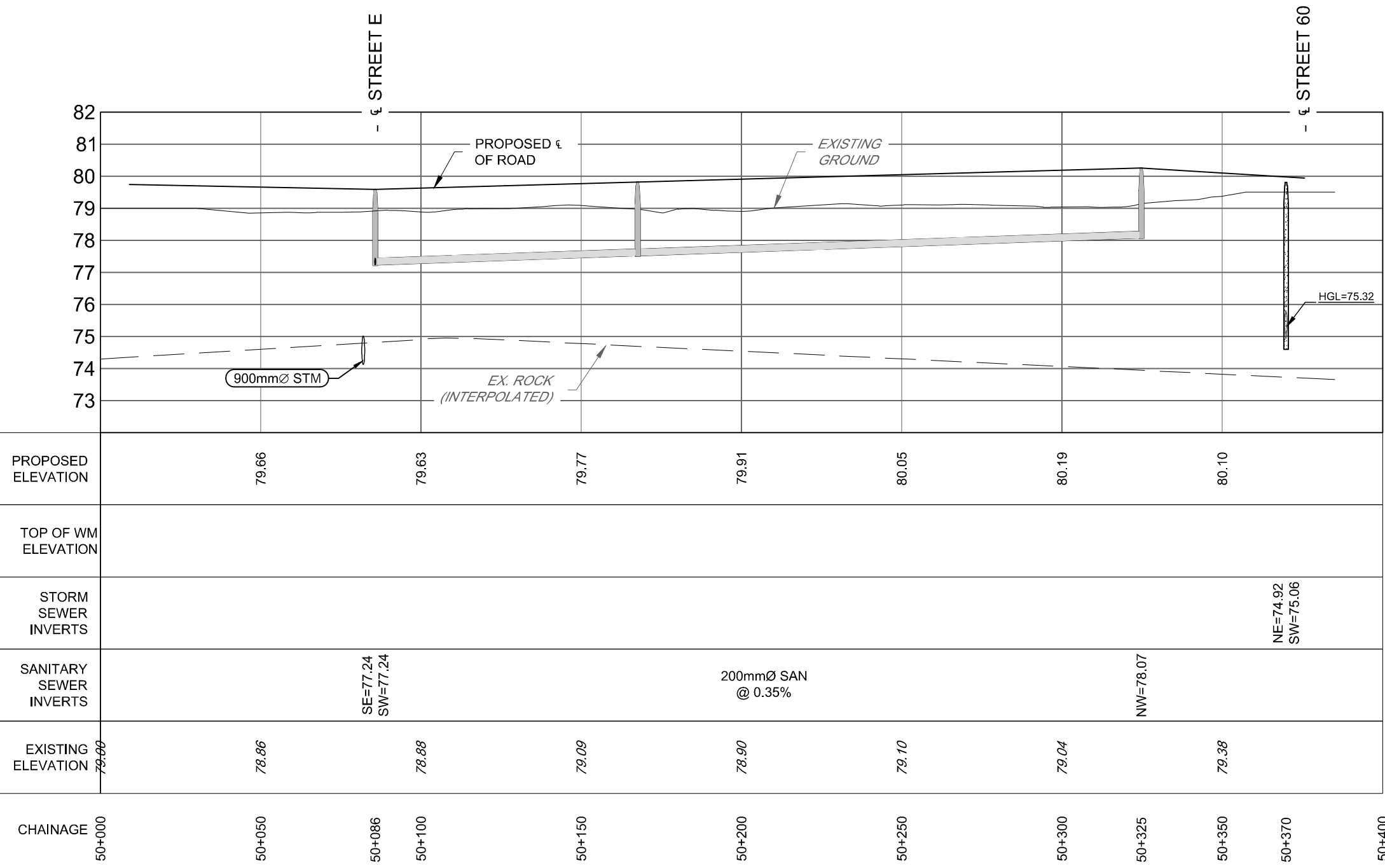
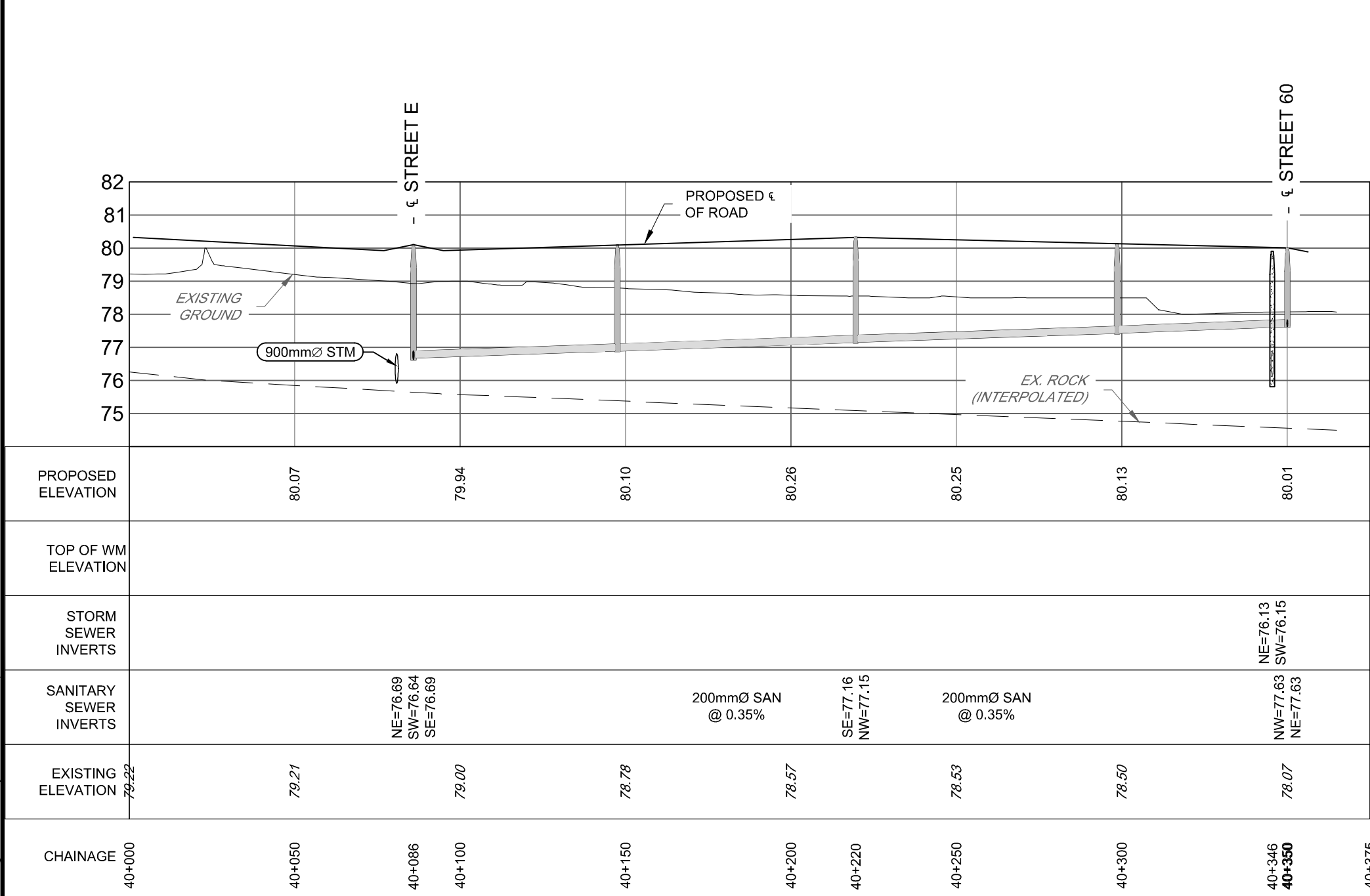
LOCATION
KANATA NORTH URBAN EXPANSION AREA
COMMUNITY DESIGN PLAN

DRAWING NAME
STREETS 20 AND 30
PLAN AND PROFILE

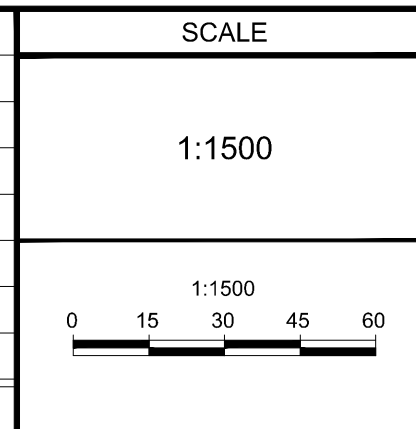
PROJECT NO.	112117-04
REV	REV # 3
DRAWING NO.	112117-PP11

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NOTE:
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DESIGN	ARM / TB
CHECKED	ARM
DRAWN	TB
CHECKED	CJR
APPROVED	JLS

FOR REVIEW ONLY

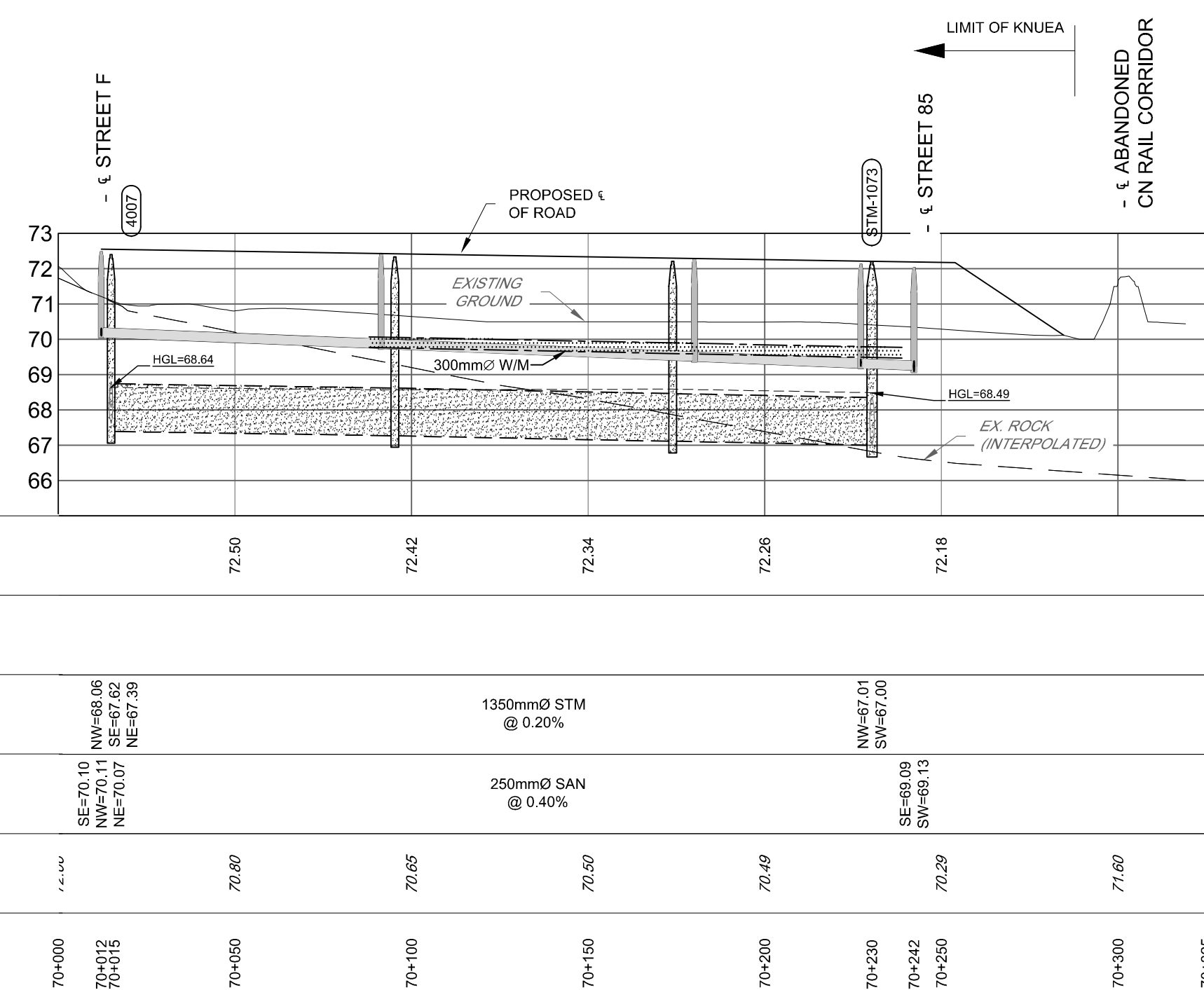
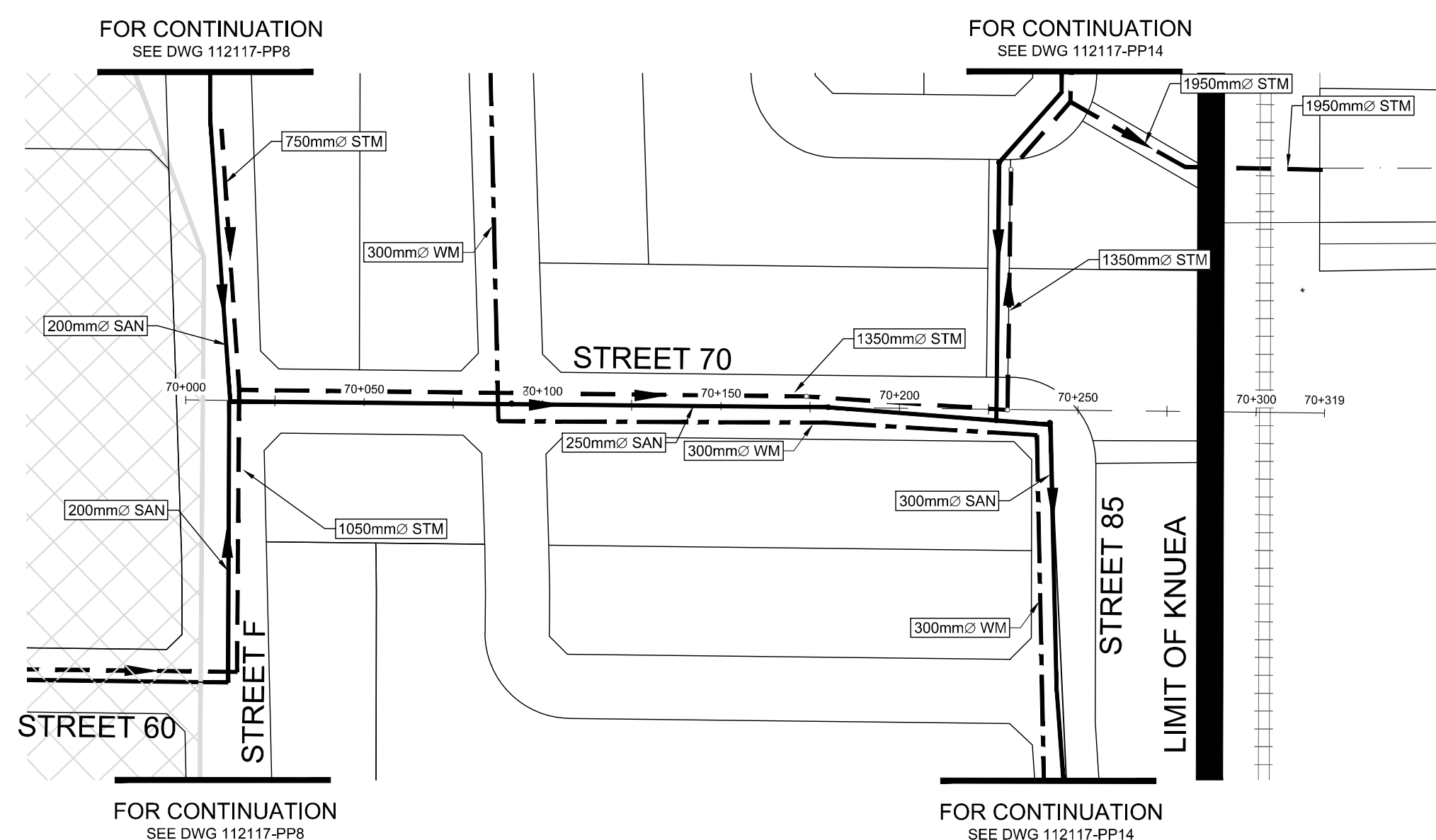


LOCATION
KANATA NORTH URBAN EXPANSION AREA
COMMUNITY DESIGN PLAN

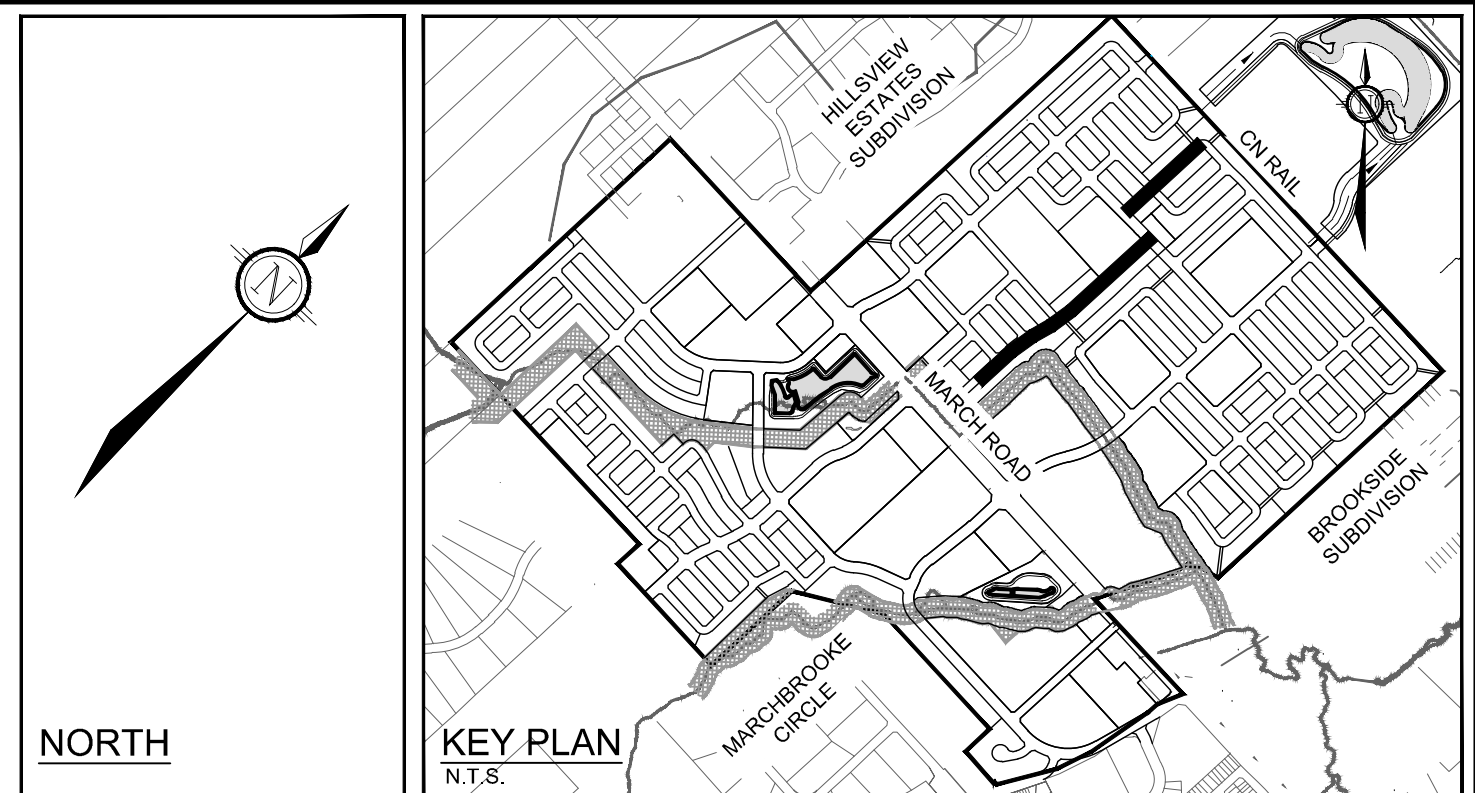
DRAWING NAME
STREETS 40 AND 50
PLAN AND PROFILE

PROJECT NO.	112117-04
REV	REV # 3
DRAWING NO.	112117-PP12

PL-ANP1-DWG-1033mm/60mm



 Engineers, Planners & Landscape Architects Suite 200, 240 Michael Cowpland Drive Ottawa, Ontario, Canada K2M 1P6 Telephone (613) 254-8643 Facsimile (613) 254-5967 Website www.novatech-eng.com	LOCATION KANATA NORTH URBAN EXPANSION AREA COMMUNITY DESIGN PLAN	
	DRAWING NAME STREETS 60 AND 70 PLAN AND PROFILE	PROJECT No. 112117-04 REV REV # 3 DRAWING No. 112117-PP13



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NOTE:
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SCALE	
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0	15 30 45 60

DESIGN	ARM / TB
CHECKED	ARM
DRAWN	TB
CHECKED	CJR
APPROVED	JLS

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LOCATION
KANATA NORTH URBAN EXPANSION AREA
COMMUNITY DESIGN PLAN

DRAWING NAME
STREETS 80 AND 85
PLAN AND PROFILE

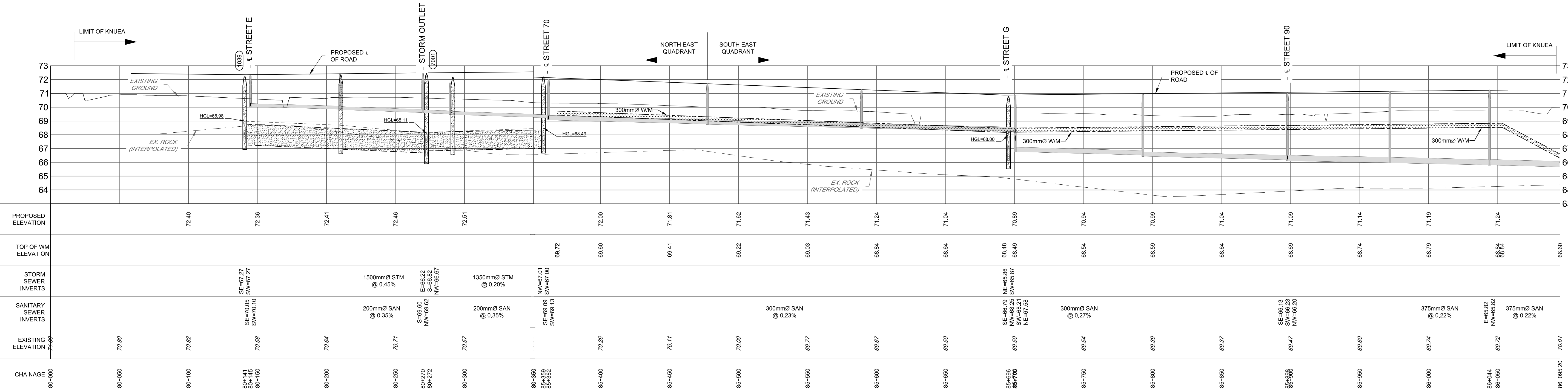
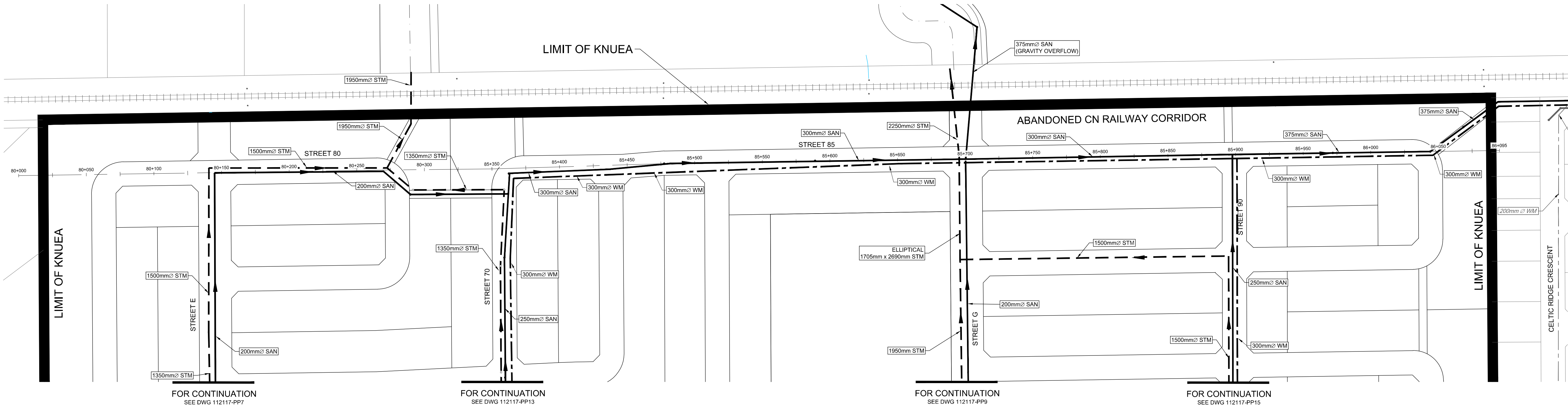
PROJECT NO.	112117-04
REV	REV # 3
DRAWING NO.	112117-PP14

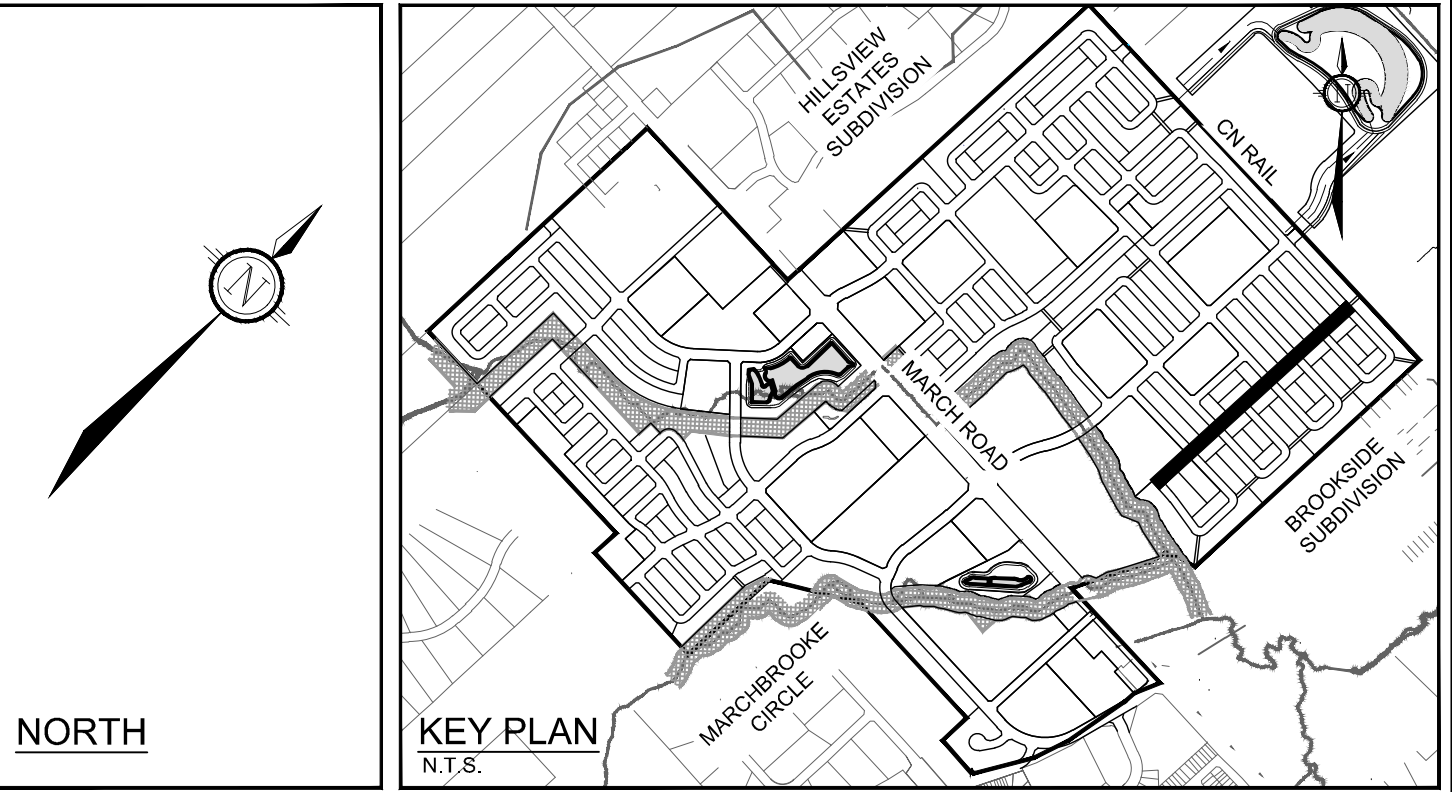
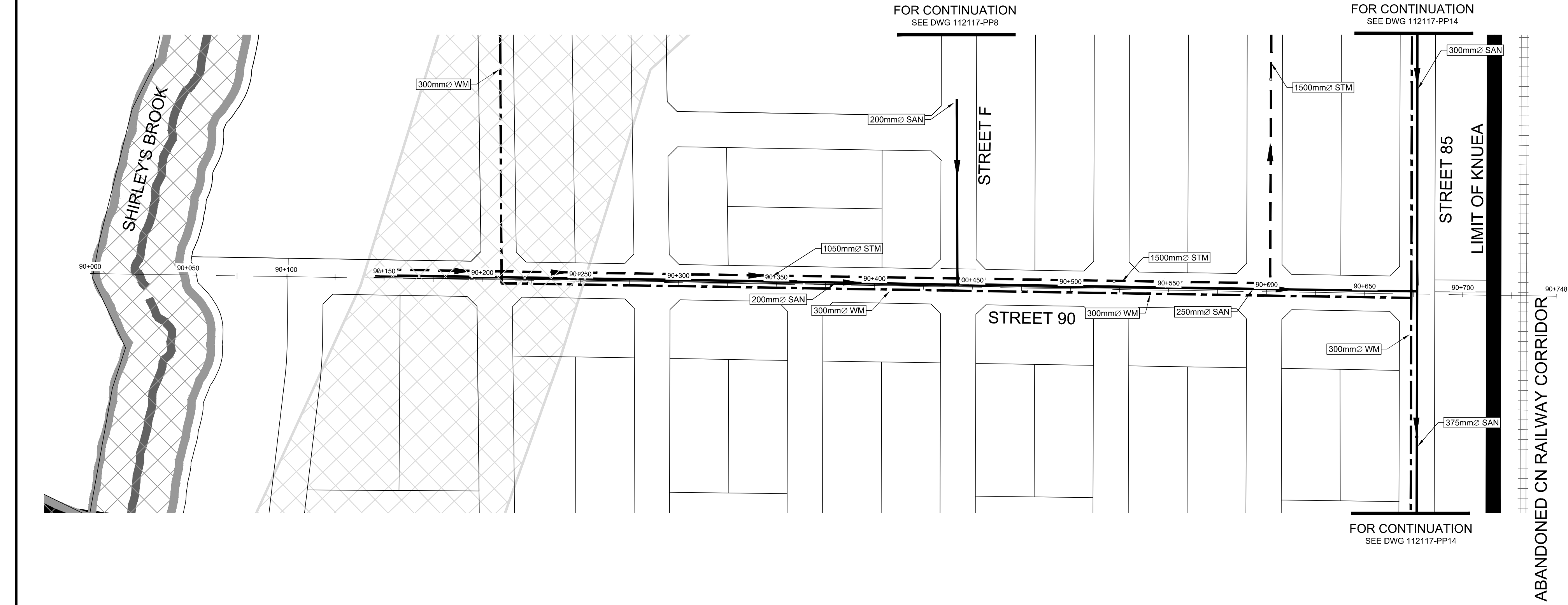
LEGEND

	PROPOSED STORM SEWER & FLOW DIRECTION (PLAN VIEW)
	PROPOSED STORM SEWER (PROFILE VIEW)
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	EXISTING WATERMAIN (PLAN VIEW)
	EXISTING WATERMAIN (PROFILE VIEW)

NORTH

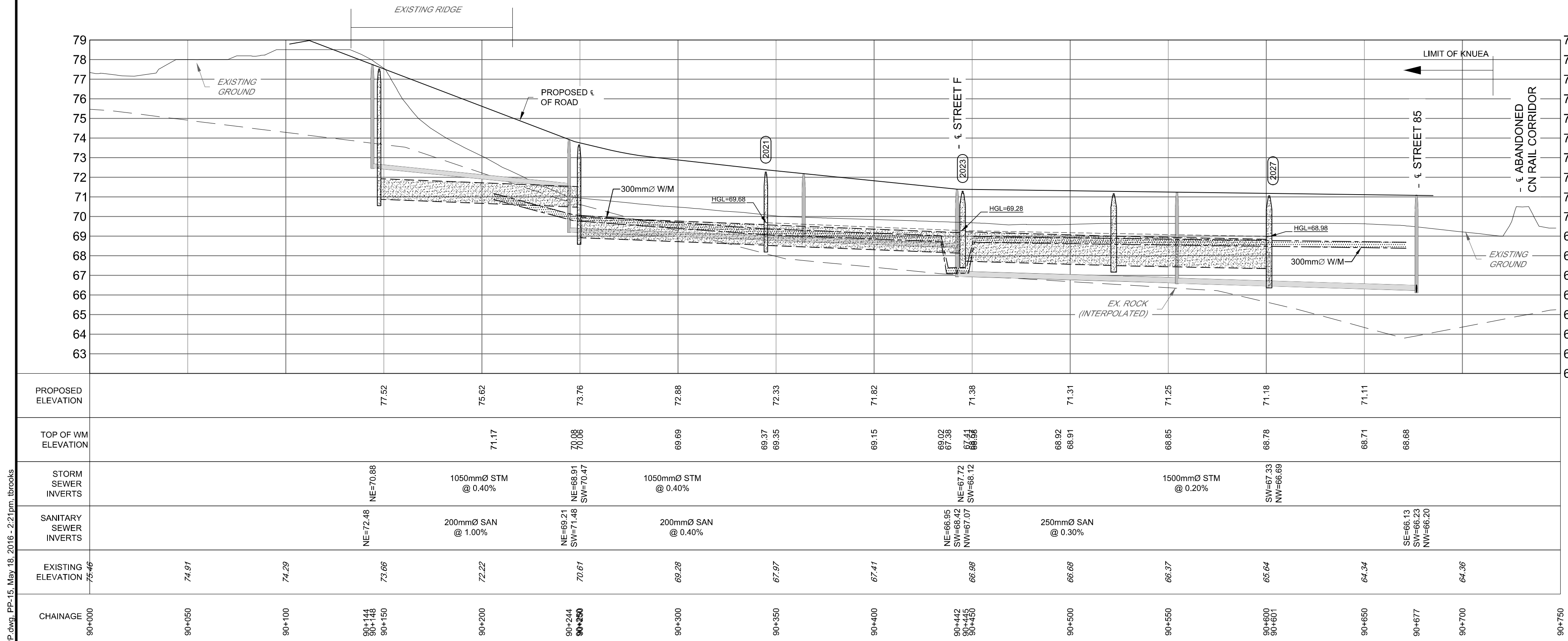
KEY PLAN
N.T.S.





LEGEND

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- PROPOSED STORM SEWER (PROFILE VIEW)
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- EXISTING SANITARY SEWER (PROFILE VIEW)
- PROPOSED WATERMAIN (PLAN VIEW)
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SCALE
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DESIGN
ARM / TB
CHECKED
DRAWN
TB
CJR
JLS

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LOCATION
KANATA NORTH URBAN EXPANSION AREA
COMMUNITY DESIGN PLAN

DRAWING NAME
STREET 90
PLAN AND PROFILE

PROJECT NO.	112117.04
REV	REV # 3
DRAWING No.	112117-PP15

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PLANNING.DWG - 1053mm x 675mm