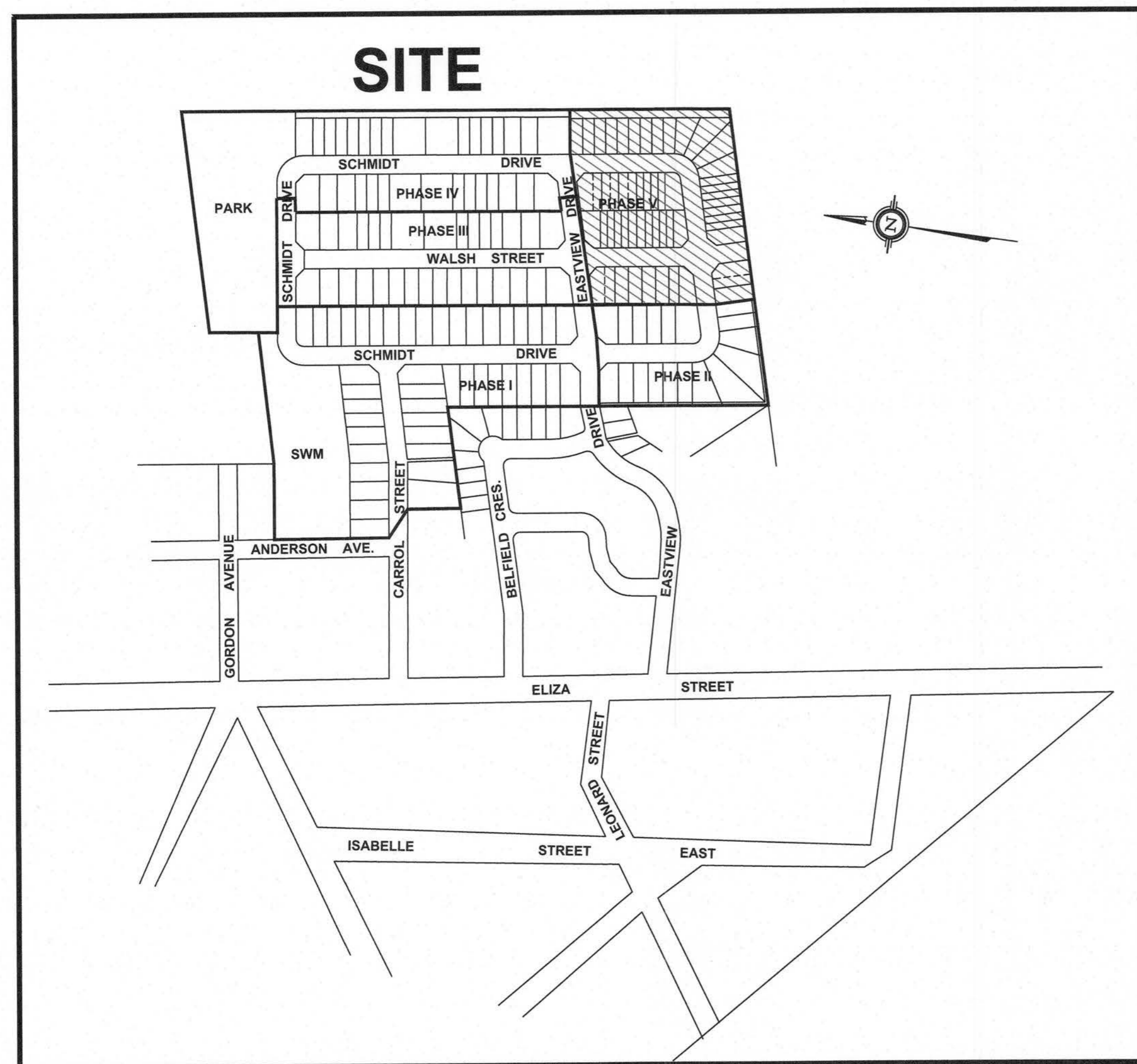


EASTRIDGE LANDING SUBDIVISION, PHASE V

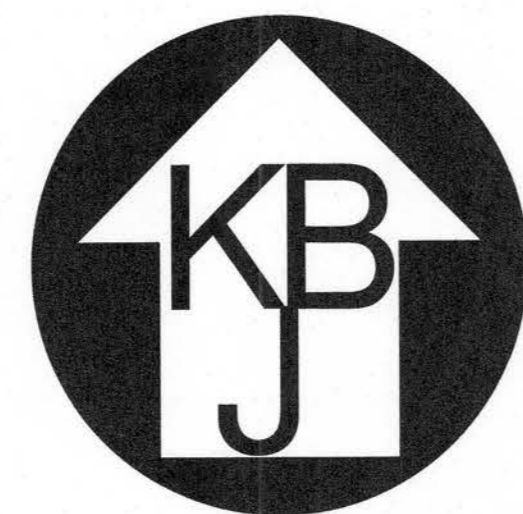
ARTHUR, ONTARIO

TOWNSHIP OF WELLINGTON NORTH



LIST OF DRAWINGS

PLAN	DESCRIPTION	LOCATION
GSP-1	GENERAL SERVICING PLAN	
PRE-1	EXISTING CONDITIONS PLAN	
PD-1	POST-DEVELOPMENT STORM DRAINAGE AREAS	
SA-1	SANITARY SEWER DRAINAGE PLAN	
GCP	GENERAL OVERALL LOT GRADING CONTROL PLAN	
GCP-1	LOT GRADING CONTROL PLAN	
GCP-2	LOT GRADING CONTROL PLAN	
GCP-3A	LOT GRADING CONTROL PLAN	
ECP	OVERALL EROSION CONTROL PLAN	
PP-1	PLAN and PROFILE	SCHMIDT DRIVE 1+000 TO 1+220
PP-2	PLAN and PROFILE	WALSH STREET 1+000 TO 1+300
PP-3	PLAN and PROFILE	WALSH STREET 1+200 TO 1+500
PP-4	PLAN and PROFILE	EASTVIEW DRIVE 1+000 TO 1+120
PP-5	PLAN and PROFILE	SCHMIDT DRIVE 1+180 TO 1+480
PP-6	PLAN and PROFILE	SCHMIDT DRIVE 1+480 TO 1+720
DET-1	DETAILS PLAN	
SWM-1	STORMWATER MANAGEMENT POND	

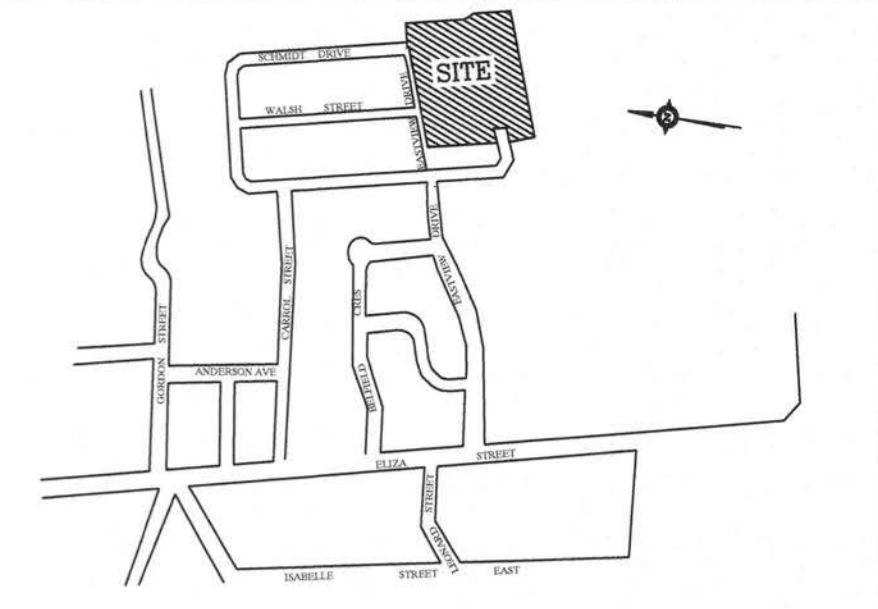


K. J. BEHM AND ASSOCIATES INC.

CONSULTING ENGINEERS

55 ERB STREET EAST, SUITE 101, WATERLOO, ONTARIO, N2J 4K8

PHONE (519) 742 3510 FAX (519) 742 3462



SITE LOCATION N.T.S.

BENCH MARKS:
 1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELBA STREET AND GORDON STREET ELEV 462.0
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARRER STREET. ELEV 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- LEGEND:**
- 464.50 EXISTING CONTOURS
 - PROPOSED ELEVATIONS
 - EXISTING ELEVATIONS
 - DRAINAGE DIRECTION
 - DC DROP CURB
 - ILD IN-LINE DRAIN
 - DRIVEWAY LOCATION
 - TP TACTILE PLATES
 - LUIF LOWEST UNDERSIDE FOOTING (DUE TO SHALLOW SANITARY SERVICE)
 - PROPOSED GROUND ELEVATION @ FRONT AND REAR OF BUILDINGS
 - TRANSFORMER
 - CABLE TV VAULT
 - CABLE TV PEDESTAL
 - S/L STREETLIGHT
 - JB JUNCTION BOX
 - LC-A LIGHTING PEDESTAL
 - FIBRE OPTICS VAULT
 - BB BELL BOXES
 - 8+ W WIGHTMAN VAULTS & GPS

- NOTES:**
- 1) ALL DRAINAGE TO BE DIRECTED TO SIDE AND REAR LOT SWALES
 - 2) DESIRABLE SWALE DEPTH = 230mm
MINIMUM SWALE DEPTH = 150mm
MAXIMUM SWALE DEPTH = 1000mm
 - 3) MAXIMUM DRIVEWAY GRADIENT = 6%
 - 4) MAXIMUM SIDE SLOPE 3:1
 - 5) ALL REAR YARD CATCHBASINS TO BE INSTALLED WITH FRAME & GRATE (OPSD 400.110)
 - 6) DRIVEWAYS TO BE LOCATED NO CLOSER THAN 1.5M FROM HYDRANTS, STREET LIGHTS AND TRANSFORMERS.
 - 7) ALL ROOF WATER TO DISCHARGE TO GROUND SURFACE.
 - 8) CHAIN LINK FENCE TO BE PER OPSD 972.130 AND OPSD 772. NO GATES IN FENCE ARE PERMITTED. FENCE TO BE LOCATED 0.10m ON TOWNSHIP PROPERTY.
 - 9) POST AND RAIL FENCE TO BE PER OPSD 971.101 AND OPSD 772. NO GATES IN FENCE ARE PERMITTED. FENCE TO BE LOCATED 0.10m ON TOWNSHIP PROPERTY.
 - 10) LOTS 42-64 INCLUSIVE: REAR YARD AREAS TO BE GRADED TO PROMOTE SHEET FLOW ONTO ADJACENT PROPERTY TO THE EAST OF THE SITE. MAXIMIZE FRONT YARD AND ROOFTOP DRAINAGE TO THE INTERNAL STREET
 - 11) FRONT & REAR BUILDING ELEVATIONS TO BE ADJUSTED AT BUILDING PERMIT ACCORDING TO THE BUILDING LOCATION ON THE SITE.
 - 12) DRIVEWAY CHANGED BLOCK 31 10/08/22 KJB
 - 13) LOT NUMBERING CHANGED FOR PHASE IV 20/12/21 KJB
 - 14) REAR LOTS 16-21 CHANGED 06/06/21 KJB
 - 15) STORM SEWER BLOCKS 30 & 31 CHANGED 06/06/21 KJB
 - 16) GENERAL REVISIONS 15/02/21 KJB
 - 17) GENERAL REVISIONS 28/12/20 KJB
 - 18) GENERAL REVISIONS 16/12/20 KJB
 - 19) GENERAL REVISIONS 22/06/20 KJB
 - 20) GENERAL REVISIONS 15/03/20 KJB
 - 21) GENERAL REVISIONS 22/06/20 KJB
 - 22) GENERAL REVISIONS 15/03/20 KJB
 - 23) GENERAL REVISIONS 09/05/19 KJB
 - 24) GENERAL REVISIONS 13/03/19 KJB
 - 25) EX. LOT CORNER ELEVATIONS ADDED 21/11/18 KJB
 - 26) GENERAL REVISIONS 25/06/18 KJB
 - 27) GENERAL REVISIONS 22/02/18 KJB
 - 28) GENERAL REVISIONS 01/30/18 KJB
 - 29) GENERAL REVISIONS 02/11/17 KJB
 - 30) GENERAL REVISIONS 14/02/17 KJB
 - 31) GENERAL REVISIONS 30/09/16 KJB
 - 32) REARYARD SWALE & STORM SEWER ADDED ON LOTS 73-78 23/08/16 KJB
 - 33) GENERAL REVISIONS DATE INTL.

REVISIONS

No.	DESCRIPTION	DATE	INTL.

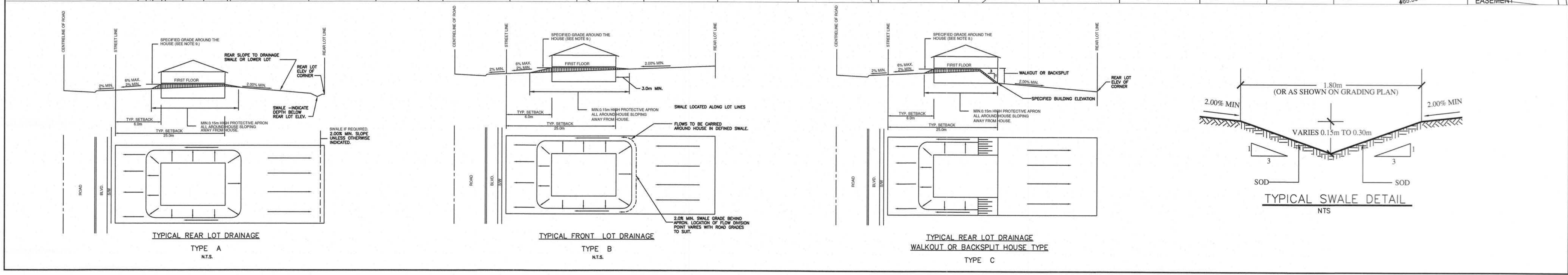
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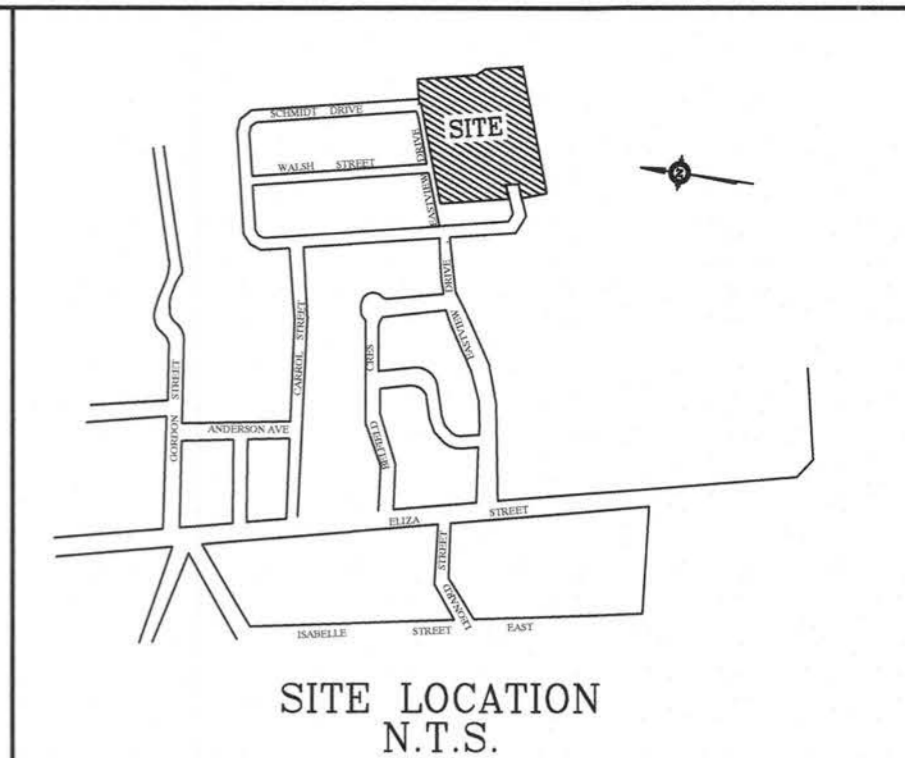
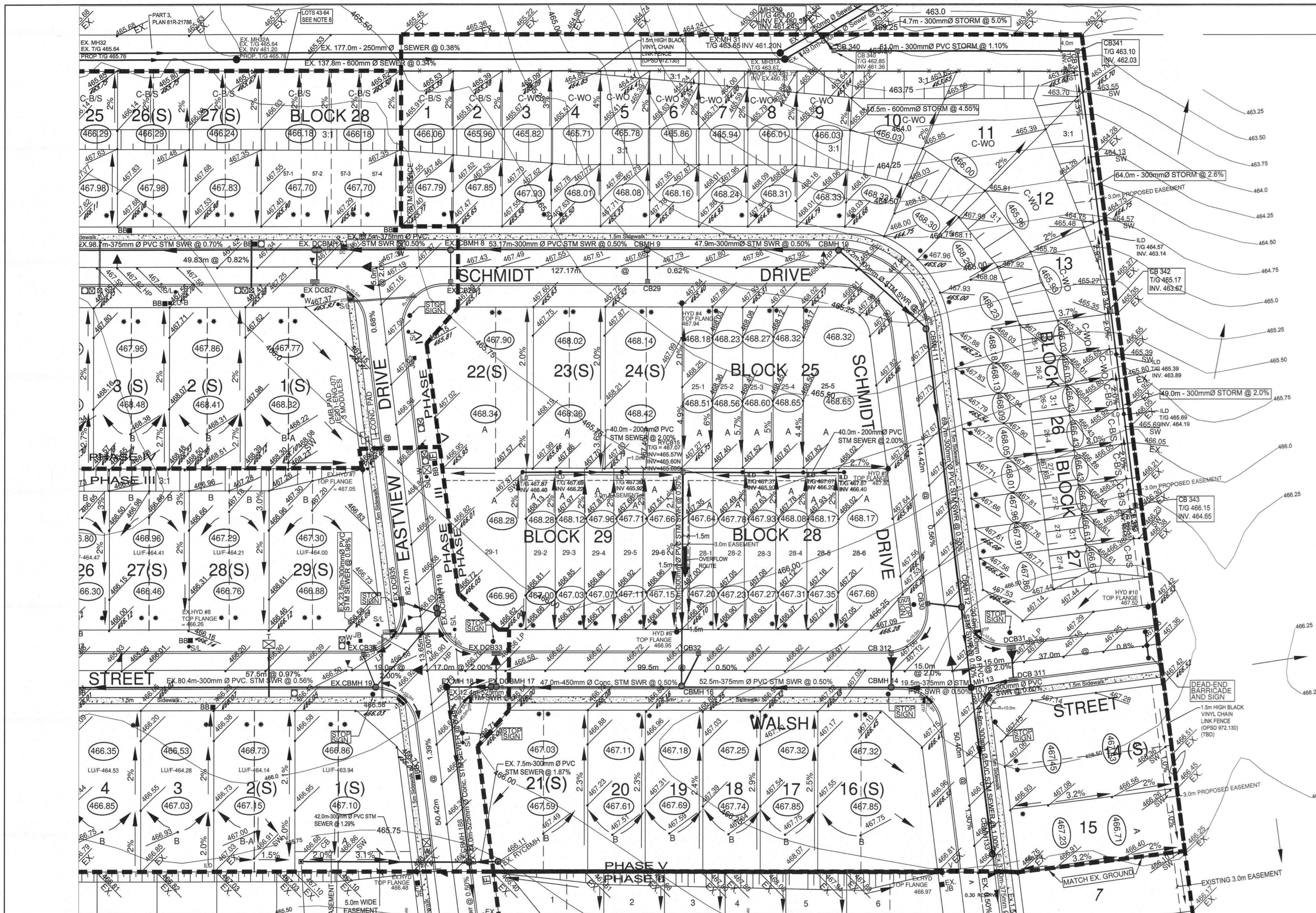
K. J. BEHM AND ASSOCIATES INC.
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EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V
 ARTHUR, ONTARIO

LOT GRADING CONTROL PLAN

DRAWN: WDH SCALE: 1 : 500 DWG. No.: GCP-1
 DESIGN: KJB DATE: APRIL, 2016
 CHECKED: KJB PROJECT No.: 070119



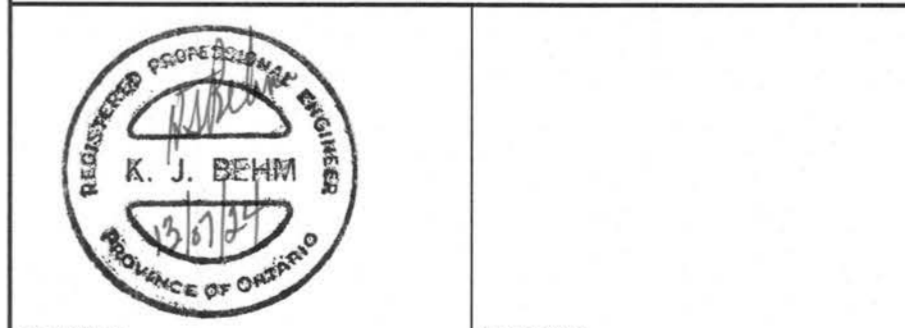


BENCH MARKS:
 1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV. 462.00
 2. TOP OF SANITARY MANHOLE IN OUL-DE-SAC ON FAREL STREET, ELEV. 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE, ELEV. 464.27

- LEGEND:**
- 464.50 — EXISTING CONTOURS
 - 466.30 — PROPOSED ELEVATIONS
 - 467.98 — EXISTING ELEVATIONS
 - DRAINAGE DIRECTION
 - DROP CURB
 - LD — IN-LINE DRAIN
 - DRIVEWAY LOCATION
 - TACTILE PLATES
 - LOWEST UNDERSIDE FOOTING (DUE TO SHALLOW SANITARY SERVICE)
 - PROPOSED GROUND ELEVATION @ FRONT AND REAR OF BUILDING
 - TRANSFORMER
 - CABLE TV VAULT
 - CABLE TV PEDESTAL
 - STREET LIGHT
 - JIB
 - LIGHTING PEDESTAL
 - FIBRE OPTICS VAULT
 - BELL BOXES
 - WIGHTMAN VAULTS & GP'S

- NOTES**
- 1) ALL DRAINAGE TO BE DIRECTED TO SIDE AND REAR LOT SWALES
 - 2) DESIRABLE SWALE DEPTH = 230mm
MINIMUM SWALE DEPTH = 150mm
MAXIMUM SWALE DEPTH = 1000mm
 - 3) MAXIMUM DRIVEWAY GRADIENT = 8%
MAXIMUM SIDE SLOPE 3:1
 - 4) ALL REAR YARD CATCHBASINS TO BE INSTALLED WITH FRAME & GRATE (OPSD 400.110)
 - 5) DRIVEWAYS TO BE LOCATED NO CLOSER THAN 1.5M FROM HYDRANTS, STREET LIGHTS AND TRANSFORMERS
 - 6) ALL ROOF WATER TO DISCHARGE TO GROUND SURFACE.
 - 7) CHAIN LINK FENCE TO BE PER OPSD 972.130 AND OPSD 772. NO GATES IN FENCE ARE PERMITTED. FENCE TO BE LOCATED 0.10m ON TOWNSHIP PROPERTY. POST AND WIRE FENCE TO BE PER OPSD 971.101. NO GATES IN FENCE ARE PERMITTED. FENCE TO BE LOCATED 0.10m ON TOWNSHIP PROPERTY.
 - 8) LOTS 43-64 INCLUSIVE: REAR YARD AREAS TO BE GRADED TO PROMOTE SHEET FLOW ONTO ADJACENT PROPERTY TO THE EAST OF THE SITE. MAXIMIZE FRONT YARD AND ROOFTOP DRAINAGE TO THE INTERNAL STREET.
 - 9) FRONT & REAR BUILDING ELEVATIONS TO BE ADJUSTED AT BUILDING PERMIT ACCORDING TO THE BUILDING LOCATION ON THE SITE

No.	DESCRIPTION	DATE	INTL.
20	LOT NUMBERING CHANGED FOR PHASE IV	20/12/21	KJB
19	REAR LOTS 16-21 CHANGED	06/06/21	KJB
18	STORM SEWER BLOCKS 30 & 31 CHANGED	06/06/21	KJB
17	GENERAL REVISIONS	15/02/21	KJB
16	GENERAL REVISIONS	28/12/20	KJB
15	GENERAL REVISIONS	16/12/20	KJB
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3	GENERAL REVISIONS	14/02/17	KJB
2	GENERAL REVISIONS	30/09/16	KJB
1	REAR YARD SWALE & STORM SEWER ADDED ON LOTS 73-78	23/08/16	KJB

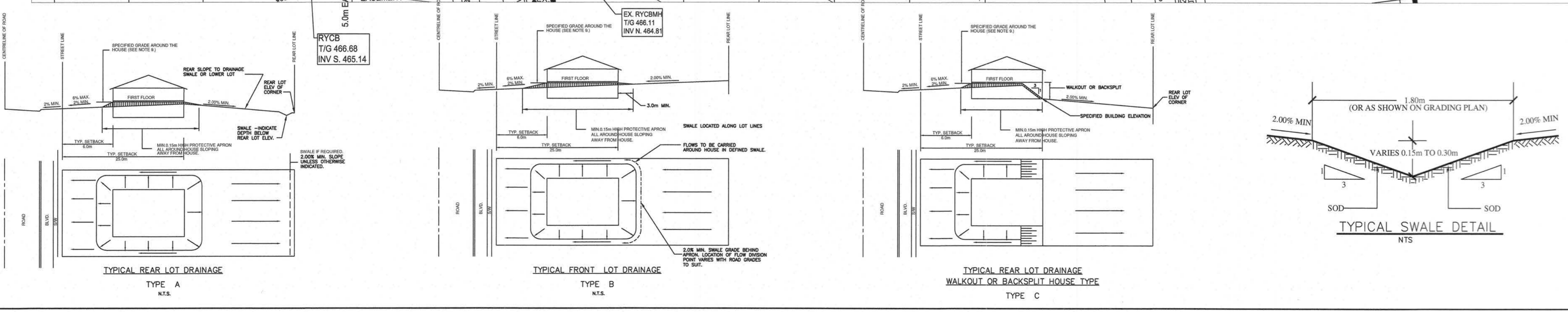


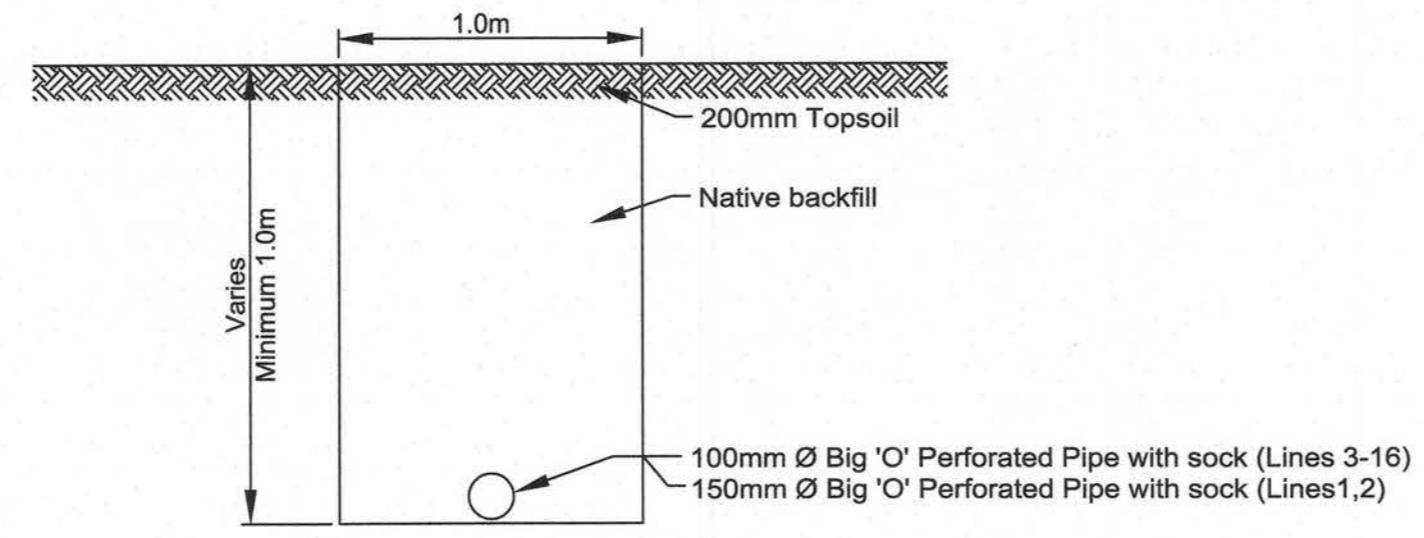
CHECKED: _____ APPROVED: _____
K. J. BEHM AND ASSOCIATES INC.
 CONSULTING ENGINEERS
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**EASTRIDGE LANDING
 SUBDIVISION PHASE III, IV, V
 ARTHUR, ONTARIO**

**LOT GRADING
 CONTROL PLAN**

DRAWN	WDH	SCALE	1 : 500	DWG. No.
DESIGN	KJB	DATE	APRIL, 2016	GCP-2
CHECKED	KJB	PROJECT No.	070119	





DRAINAGE TILE DETAIL
LINES 1-16
NTS

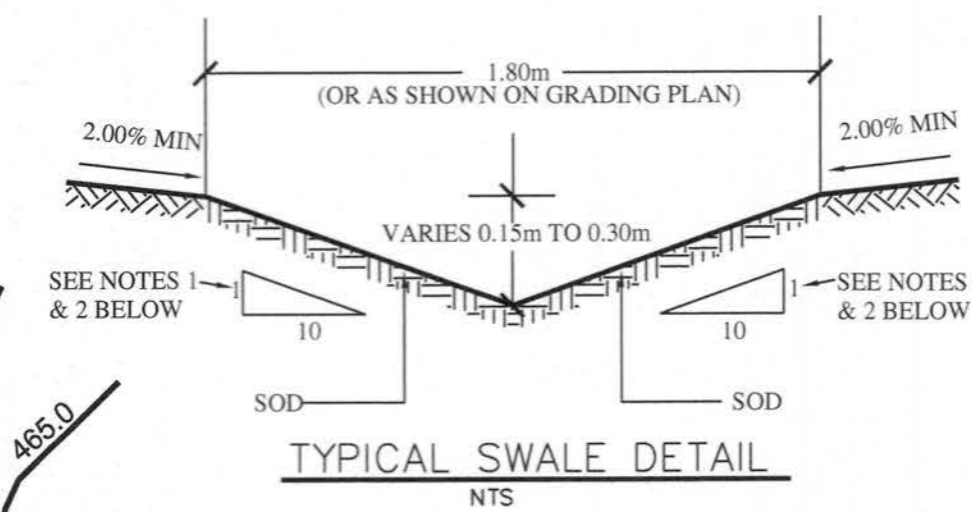
EXISTING SEWAGE LAGOON (CELL No. 1)

PARK NOTES

- THIS GRADING PLAN SHALL BE UPDATED FOLLOWING THE DESIGN OF THE FINAL PARK DEVELOPMENT PLAN, BY THE TOWNSHIP.
- BOULEVARD TREES ALONG THE FRONTAGE OF THE PARK TO BE DETERMINED FOLLOWING THE DESIGN OF THE FINAL PARK DEVELOPMENT PLAN.
- UNDERGROUND SERVICES (SEWER, WATER) FOR THE PARK TO BE DETERMINED FOLLOWING THE DESIGN OF THE FINAL PARK DEVELOPMENT PLAN.
- CHAIN LINK FENCE SHALL BE PER OPSD 972.130 WITH:
 - TERMINAL POSTS - 3 1/2", .120 WALL HDG WITH POST CAP.
 - LINE POSTS - 1 7/8", .100 WALL HDG
 - TOP RAIL - 1 1/16", .100 WALL HDG
 - MESH - 2" DIAMOND, 9 GAUGE HDG
 - END SECTIONS TO BE BRACED ON A DIAGONAL - 1 5/8" OD HDG
 - MAXIMUM POST SPACING - 3.0m
 - BOTTOM WIRE TO BE SINGLE STRAND TENSION WIRE FASTENED TO MESH OF 500mm O.C. AND 40mm-75mm FROM GROUND SURFACE.
 - NO GATES ARE PERMITTED IN CHAIN LINK FENCE.

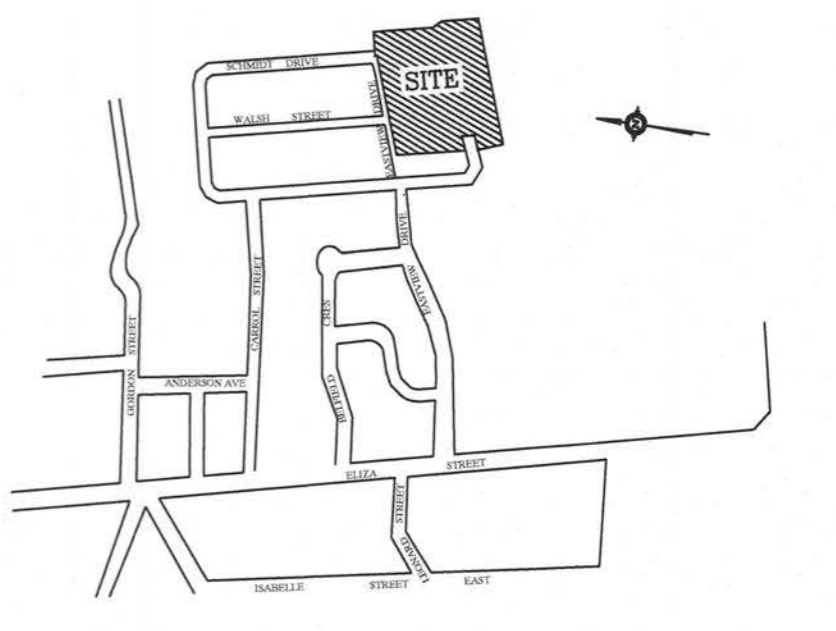
5) POST & WIRE FENCE

- 8" x 8" CEDAR ANCHOR POSTS TO BE SPACED @ 20.0m MAXIMUM INTERVALS ANCHORED 1.2m INTO GROUND.
- STEEL LINE POSTS TO BE SPACED @ 5.0m MAXIMUM INTERVALS BETWEEN CEDAR POSTS ANCHORED 1.2m INTO GROUND (3 STEEL LINE POSTS MAXIMUM)
- TOP OF POSTS TO BE 100mm ABOVE TOP FENCE WIRE.
- FENCE WIRES SHALL BE SPACED 150mm VERTICALLY APART EXCEPT TOP 3 WIRES @ 190mm VERTICALLY AND BOTTOM 3 WIRES @ 125mm VERTICALLY
- BOTTOM WIRE TO BE 120mm ABOVE GROUND SURFACE.



TYPICAL SWALE DETAIL
NTS

NOTES
1) SIDE SLOPES ON SWALE ALONG SOUTH SIDE OF PARK TO BE 10:1.
2) SIDE SLOPES ON SWALE ALONG WEST AND NORTH SIDE OF PARK TO BE 3:1.



BENCH MARKS:

- TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.29
- TOP OF SANITARY MANHOLE IN COL-DE-SAC ON FARREL STREET. ELEV 462.31
- TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

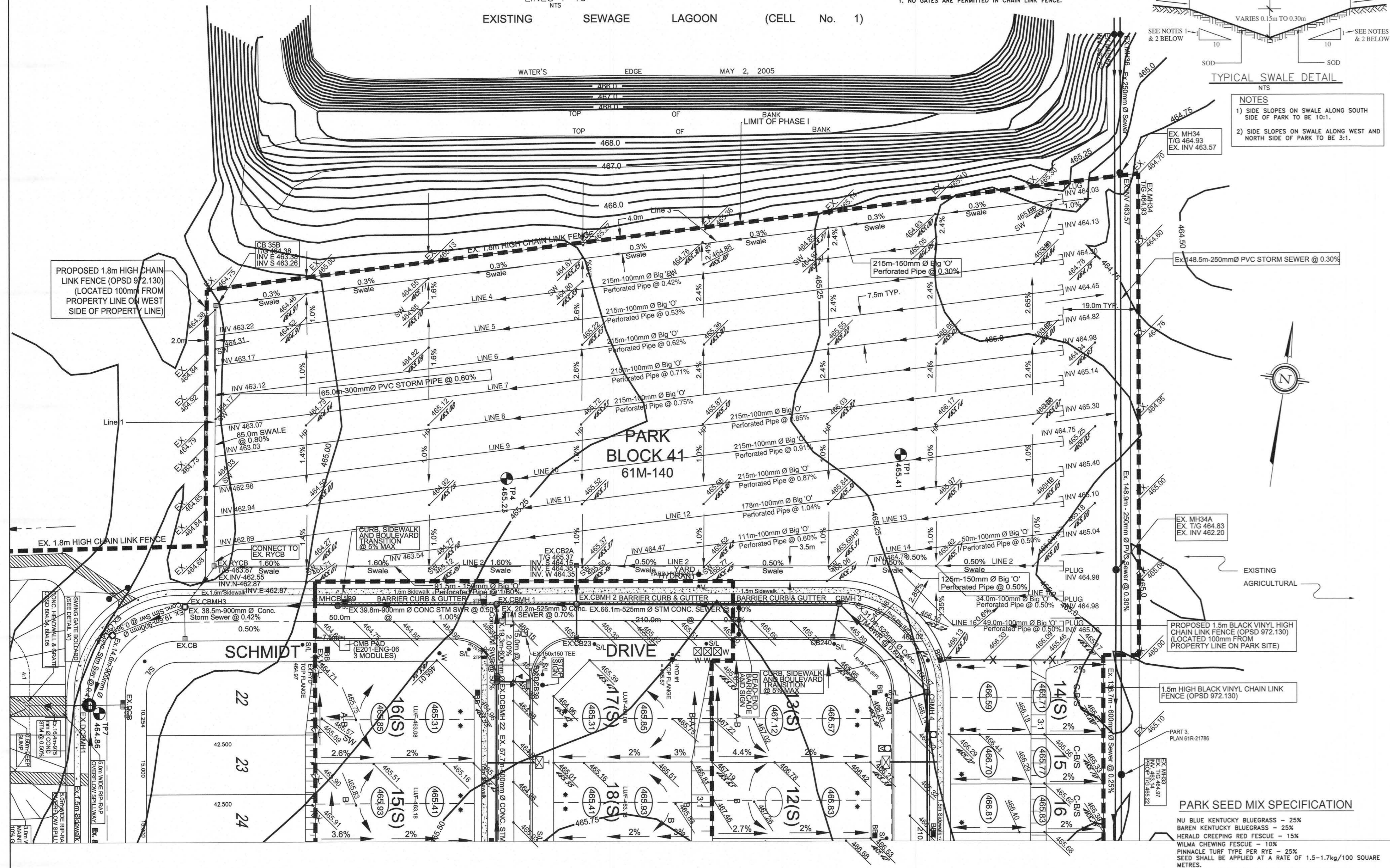
LEGEND:

- 464.50 EXISTING CONTOURS
- PROPOSED ELEVATIONS
- 463.00 EXISTING ELEVATIONS
- DRAINAGE DIRECTION
- DC DROP CURB
- ILD IN-LINE DRAIN
- DRIVEWAY LOCATION
- TP TACTILE PLATES
- LOWEST UNDERSIDE FOOTING (DUE TO SHALLOW SANITARY SERVICE)
- PROPOSED GROUND ELEVATION @ FRONT AND REAR OF BUILDINGS
- TRANSFORMER
- CABLE TV VAULT
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- STREETLIGHT
- JUNCTION BOX
- LC-A LIGHTING PEDESTAL
- FIBRE OPTICS VAULT
- BELL BOXES
- WIGHTMAN VAULTS & GP'S

NOTES

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MAXIMUM SWALE DEPTH = 1000mm
- MAXIMUM DRIVEWAY GRADIENT = 6%
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- FRONT & REAR BUILDING ELEVATIONS TO BE ADJUSTED AT BUILDING PERMIT ACCORDING TO THE BUILDING LOCATION ON THE SITE

No.	DESCRIPTION	DATE	INTL.
20	LOT NUMBERING CHANGED FOR PHASE IV	20/12/21	KJB
19	REAR LOTS 16-21 CHANGED	06/06/21	KJB
18	STORM SEWER BLOCKS 30 & 31 CHANGED	06/06/21	KJB
17	GENERAL REVISIONS	15/02/21	KJB
16	GENERAL REVISIONS	28/12/20	KJB
15	GENERAL REVISIONS	16/12/20	KJB
14	GENERAL REVISIONS	22/06/20	KJB
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4	GENERAL REVISIONS	02/11/17	KJB
3	GENERAL REVISIONS	14/02/17	KJB
2	GENERAL REVISIONS	30/05/16	KJB
1	REAR YARD SWALE & STORM SEWER ADDED ON LOTS 73-78	23/08/16	KJB



PARK SEED MIX SPECIFICATION

NU BLUE KENTUCKY BLUEGRASS - 25%
 BAREN KENTUCKY BLUEGRASS - 25%
 HERALD CREEPING RED FESCUE - 15%
 WILMA CHEWING FESCUE - 10%
 PINNACLE TURF TYPE PER RYE - 25%
 SEED SHALL BE APPLIED AT A RATE OF 1.5-1.7kg/100 SQUARE METRES.
 ALL TOPSOIL SHALL BE IN CONFORMANCE WITH OPSS802.

REGULATED PROFESSIONAL ENGINEER
 K. J. BEHM
 PROFESSIONAL ENGINEER

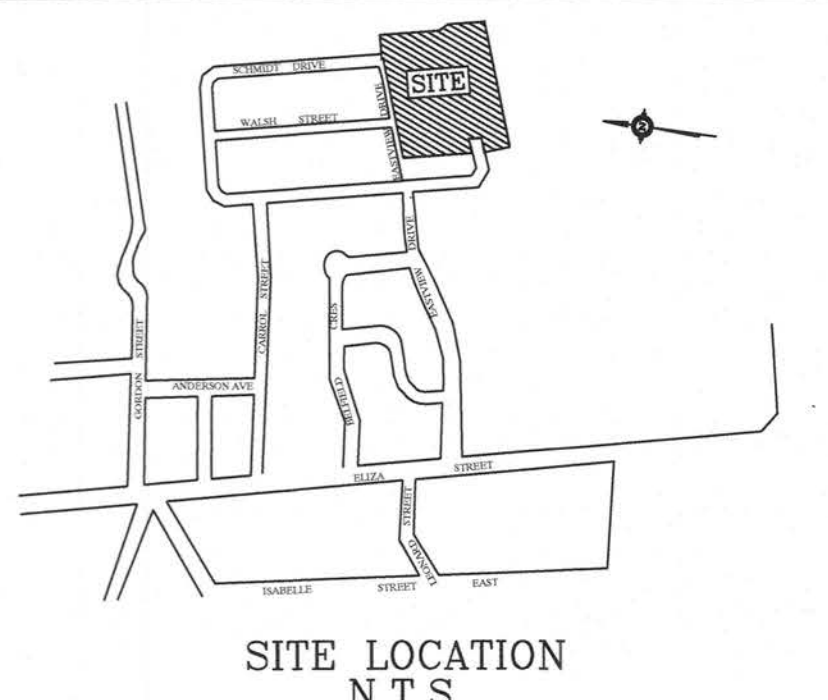
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EASTRIDGE LANDING
 SUBDIVISION PHASE III, IV, V
 ARTHUR, ONTARIO

LOT GRADING CONTROL PLAN
 PARK

DRAWN	WDH	SCALE	1 : 500	DWG. No.
DESIGN	KJB			GCP-3A
CHECKED	KJB	DATE	FEB 2013	
PROJECT No.	070119			



- BENCH MARKS:**
- TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 482.03
 - TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 482.27
 - TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 484.27

- NOTES:**
- 150mm Watermain shall be C900 PVC Class 150 (DR18) @ 1.373 with Ring-Tite joints and 12 gauge 7 strand copper with plastic coating and shall be connected to the storm pump connection. Watermain and services shall be installed minimum 2.0 m below finished grade above the main or service.
 - Watermain fittings - Ductile Iron, mechanical joint, LAWMA C110 approved, pressure rating 1000 kPa. -PVC bends and tees to be used with mechanical joint restraints per Township standards.
 - Watermain valves shall be Mueller Wedge Gate Valve per AWWA C-550, Mechanical joint. Valve extensions to be provided where required.
 - Watermain Valve Boxes shall be HD300, 3 plate No.8 round base screw type as manufactured by GIBBY'S CRUX FOUNDRIES INC., Cambridge, Ontario.
 - Hydrants shall be Conoco Valve Century Type Compression with "Storz" pump connection. All hydrants to be painted red with black "Storz" cap.
 - Water services to be 25mm single pex pipe.
 - Anodes: DZP-24, 10.9 kg shall be installed on all connections to existing iron watermain. DZP-12, 5.4 kg shall be installed on all iron fittings, valves, main stops, curb stops, etc.
 - Main stops, curb stops, unions, service boxes and restraints shall be in accordance with the Township of Wellington North Specifications.
 - Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-B182.2.
 - Sanitary Services shall be 125mm PVC-SDR28 meeting the current CSA-B182.2 Specifications. Service connections to be at a minimum grade of 2% All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and sockets or Kor-N-Tee.
 - Sanitary sewer mainline fittings shall be PVC-SDR35 meeting the current ASTM D3034-13 Specifications and CSA B182.4.
 - Storm sewers 375mm and less shall be either Concrete (reinforced) or PVC Ultra-Rib, as per CSA-B182.4. Storm sewers greater than 375mm shall be concrete (reinforced).
 - All storm services shall be 100mm PVC-SDR28 and connected to mainline with prefabricated tee or "Kor-N-Tee", minimum 1% gradient.
 - All catchbasin heads (200mm Single, 300mm Double) shall be PVC-SDR35. Sidelway leads to rear yard catchbasins to be PVC SDR 35.
 - All sewer pipes and watermain to be installed in Class "B" bedding per OPSD 802.01 and 802.03.
 - Pavement design for all roads shall be: 450mm Granular "B" road base 150mm Granular "A" road base 50mm H-4 Binder Course Asphalt 50mm H-3 Surface Course Asphalt 600mm TOTAL DEPTH
 - Concrete Curbs and sidewalks shall be poured using 30Mpa strength @ 28 days. All watermain and sewers to be tested in accordance with Township of Wellington North Specifications or as noted in the Contract Documents.
 - Concrete Curbs to be mountable as per OPSD 600.10
 - Water Service Boxes to be located at streetline and not in driveways, if possible.
 - Sump Pumps to discharge to storm services.
 - Driveways shall be: 450mm Granular "B" 150mm Granular "A" 50mm H-3C Modified Fine Asphalt
 - All structures shall allow for an adjustment of between 100mm-200mm with modulus. All external joints shall be wrapped with 150mm Densotop or equivalent Control Fabric.
 - Road Section to be in accordance with Township Standard Drawing R1 (see section Control Fabric).
 - Tactile Warning Plates shall be installed in sidewalk at curb intersections as per OPSD 300.03 and OPSD 300.03.3.
 - Sidewalk ramps at curb intersections shall be 8% maximum gradient.
 - Where storm services and water services conflict with mainline pipes, storm services to go over watermain and water services to go under storm sewer with 0.5m clearance.
 - All catchbasin manholes to have 300mm deep sump. All catchbasins to have 600mm deep sump.
 - Where storm sewer runs along curb line and has been backfilled with approved granular leads to rear yard catchbasins (to be 0.0m of 150mm granular wrapped perforated autodon required upstream of all catchbasins and catchbasin manholes and in both directions in the area of the road. Subdrains to be 80mm @ 1000 or approved equivalent to storm sewer. Subdrains to be backfilled with native soils, a continuous 150mm sump to be provided along curbside.

No.	DESCRIPTION	DATE	INTL.
16	PIPE MATERIALS ADDED	26/01/23	KJB
15	AS-CONSTRUCTED U/G SERVICES PHASE IV	06/11/22	KJB
14	DRIVEWAY CHANGED BLOCK 31	10/08/22	KJB
13	LOT NUMBERING CHANGED FOR PHASE IV	20/12/21	KJB
12	STORM SEWER REMOVED LOTS 16-21 PHASE V	06/08/21	KJB
11	STORM SEWER BLOCKS 30 & 31 CHANGED	05/08/21	KJB
10	GENERAL REVISIONS	15/02/21	KJB
9	AS-CONSTRUCTED U/G SERVICES PHASE III	28/12/20	KJB
8	GENERAL REVISIONS	22/06/20	KJB
7	GENERAL REVISIONS	15/03/20	KJB
6	GENERAL REVISIONS	19/05/19	KJB
5	GENERAL REVISIONS	07/01/19	KJB
4	GENERAL REVISIONS	30/11/18	KJB
3	GENERAL REVISIONS	22/02/18	KJB
2	GENERAL REVISIONS	14/02/17	KJB
1	GENERAL REVISIONS	23/08/16	KJB

- LEGEND:**
- S— STORM SEWER & SERVICES
 - S— SANITARY SEWER & SERVICES
 - W— WATERMAIN, SERVICES, VALVES, HYDRANTS
 - ⊠— TRANSFORMER
 - ⊞— CABLE TV VAULT
 - ⊞— CABLE TV PEDESTAL
 - S/L— STREETLIGHT
 - JB— JUNCTION BOX
 - LC-A— LIGHTING PEDESTAL
 - F— FIBRE OPTICS VAULT
 - BB— BELL BOXES
 - W— WIGHTMAN VAULTS & GP'S

Geotechnical Information (per CMT Engineering Inc., June, 2005)

TP1-Topsoil 0.25m, Sandy Silt Till 2.85m, Clayey Silt Till 1.4m
 TP2-Topsoil 0.25m, Sandy Silt Till 3.95m
 TP3-Topsoil 0.30m, Clayey Silt Till 4.30m
 TP4-Topsoil 0.25m, Sandy Silt Till 3.75m
 TP5-Topsoil 0.30m, Sandy Silt Till 4.20m
 TP6-Topsoil 0.25m, Sandy Silt Till 1.75m, Clayey Silt Till 2.80m
 TP7-Topsoil 0.25m, Sandy Silt Till 4.25m
 TP8-Topsoil 0.20m, Sandy Silt Till 4.30m
 TP9-Topsoil 0.40m, Sandy Silt Till 4.60m
 TP10-Topsoil 0.25m, Clayey Silt Till 1.35m, Sandy Silt Till 2.40m



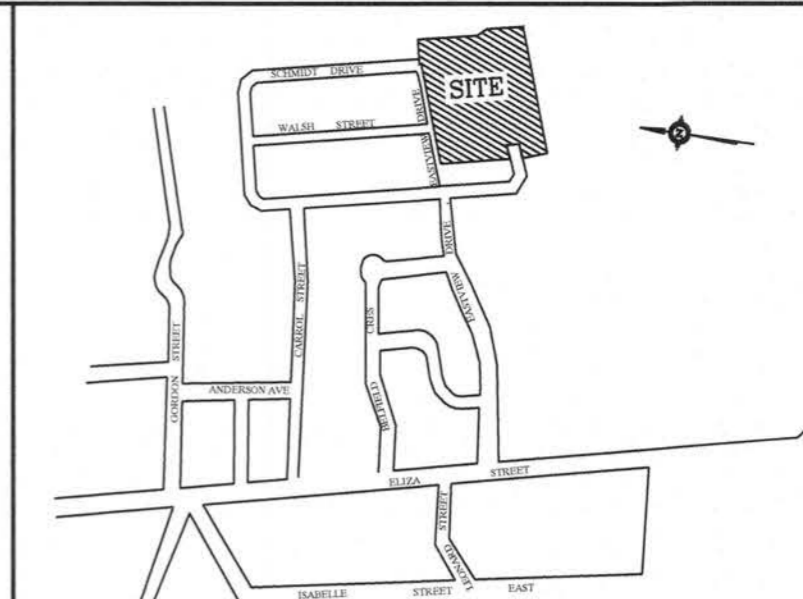
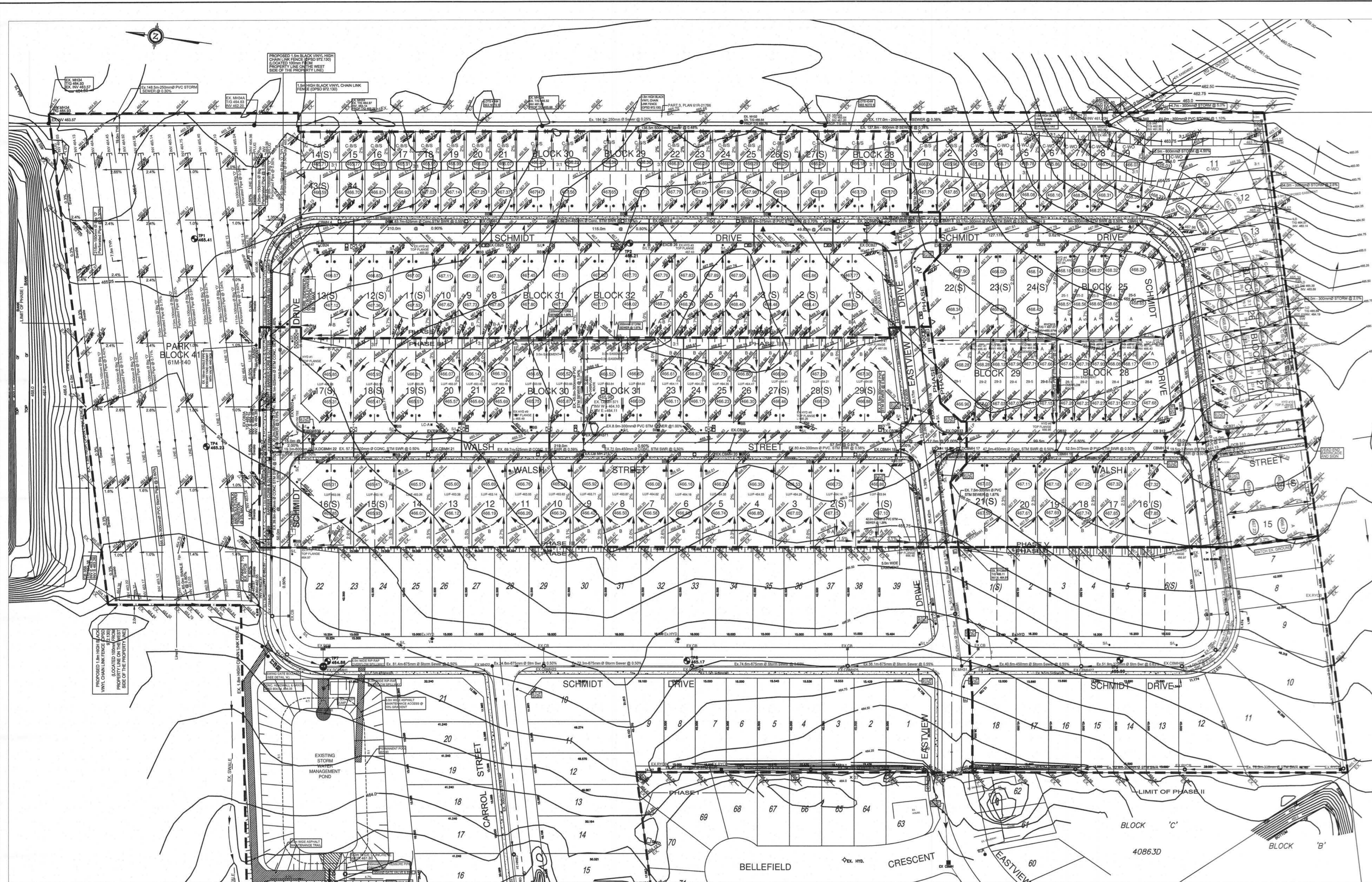
CHECKED: APPROVED:

K. J. BEHM AND ASSOCIATES INC.
 CONSULTING ENGINEERS
 55 EPP STREET EAST, SUITE 101
 WATERLOO, ONTARIO N2J 4K8
 PHONE (519) 742 3510 FAX (519) 742 3462

EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V
 ARTHUR, ONTARIO

GENERAL
SERVICING PLAN

DRAWN	WDH	SCALE	1 : 1000	DWG. No.
DESIGN	KJB			GSP-1
CHECKED	KJB	DATE	FEB 2013	
PROJECT No.	070119			



SITE LOCATION
N.T.S.

- BENCH MARKS:**
1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARRIEL STREET. ELEV 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- LEGEND:**
- 464.50 EXISTING CONTOURS
 - PROPOSED ELEVATIONS
 - EXISTING ELEVATIONS
 - DRAINAGE DIRECTION
 - DC DROP CURB
 - ILD IN-LINE DRAIN
 - DRIVEWAY LOCATION
 - TP TACTILE PLATES
 - LUF LOWEST UNDERSIDE FOOTING (DUE TO SHALLOW SANITARY SERVICE)
 - PROPOSED GROUND ELEVATION @ FRONT AND REAR OF BUILDINGS
 - 467.24
 - T TRANSFORMER
 - CABLE TV VAULT
 - CABLE TV PEDESTAL
 - STREETLIGHT
 - JB JUNCTION BOX
 - LC-A LIGHTING PEDESTAL
 - FIBRE OPTICS VAULT
 - BELL BOXES
 - WIGHTMAN VAULTS & GPS

- NOTES**
- 1) ALL DRAINAGE TO BE DIRECTED TO SIDE AND REAR LOT SWALES
 - DESIRABLE SWALE DEPTH = 230mm
 - MINIMUM SWALE DEPTH = 150mm
 - MAXIMUM SWALE DEPTH = 1000mm
 - MAXIMUM DRIVEWAY GRADIENT = 6%
 - MAXIMUM SIDE SLOPE 3:1
 - 3) ALL REAR YARD CATCHBASINS TO BE INSTALLED WITH FRAME & GRATE (OPSD 400.110)
 - DRIVEWAYS TO BE LOCATED NO CLOSER THAN 1.5M FROM HYDRANTS, STREET LIGHTS AND TRANSFORMERS.
 - 5) ALL ROOF WATER TO DISCHARGE TO GROUND SURFACE.
 - CHAIN LINK FENCE TO BE PER OPSD 972.130 AND OPSD 972. NO GATES IN FENCE ARE PERMITTED. FENCE TO BE LOCATED 0.10M ON TOWNSHIP PROPERTY. POST AND WIRE FENCE TO BE PER OPSD 971.101. NO GATES IN FENCE ARE PERMITTED. FENCE TO BE LOCATED 0.10M ON TOWNSHIP PROPERTY.
 - 8) LOTS 43-64 INCLUSIVE: REARYARD AREAS TO BE GRADED TO PROMOTE SHEET FLOW ONTO ADJACENT PROPERTY TO THE EAST OF THE SITE. MAXIMIZE FRONT YARD AND ROOFTOP DRAINAGE TO THE INTERNAL STREET.
 - 9) FRONT & REAR BUILDING ELEVATIONS TO BE ADJUSTED AT BUILDING PERMIT ACCORDING TO THE BUILDING LOCATION ON THE SITE.
- | | | | |
|----|--|----------|-----|
| 22 | AS-CONSTRUCTED PHASES 3,4 | 28/01/23 | KJB |
| 21 | DRIVEWAY CHANGED BLOCK 31 | 10/06/22 | KJB |
| 20 | LOT NUMBERING CHANGED FOR PHASE IV | 20/12/21 | KJB |
| 19 | REAR LOTS 16-21 CHANGED | 06/06/21 | KJB |
| 18 | STORM SEWER BLOCKS 30 & 31 CHANGED | 06/06/21 | KJB |
| 17 | GENERAL REVISIONS | 15/02/21 | KJB |
| 16 | GENERAL REVISIONS | 28/12/20 | KJB |
| 15 | GENERAL REVISIONS | 16/12/20 | KJB |
| 14 | GENERAL REVISIONS | 22/06/20 | KJB |
| 13 | GENERAL REVISIONS | 15/03/20 | KJB |
| 12 | GENERAL REVISIONS | 22/06/20 | KJB |
| 11 | GENERAL REVISIONS | 15/03/20 | KJB |
| 10 | GENERAL REVISIONS | 09/05/19 | KJB |
| 9 | GENERAL REVISIONS | 13/03/19 | KJB |
| 8 | EX. LOT CORNER ELEVATIONS ADDED | 21/11/18 | KJB |
| 7 | GENERAL REVISIONS | 25/06/18 | KJB |
| 6 | GENERAL REVISIONS | 22/02/18 | KJB |
| 5 | GENERAL REVISIONS | 01/30/18 | KJB |
| 4 | GENERAL REVISIONS | 02/11/17 | KJB |
| 3 | GENERAL REVISIONS | 14/02/17 | KJB |
| 2 | GENERAL REVISIONS | 30/09/16 | KJB |
| 1 | REARYARD SWALE & STORM SEWER ADDED ON LOTS 73-78 | 23/08/16 | KJB |

No.	DESCRIPTION	DATE	INTL.
REVISIONS			



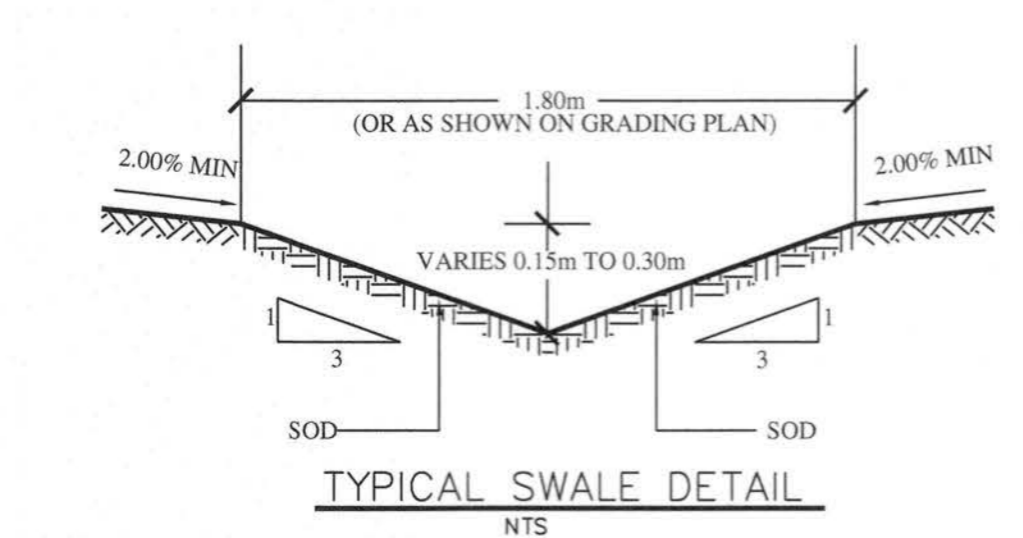
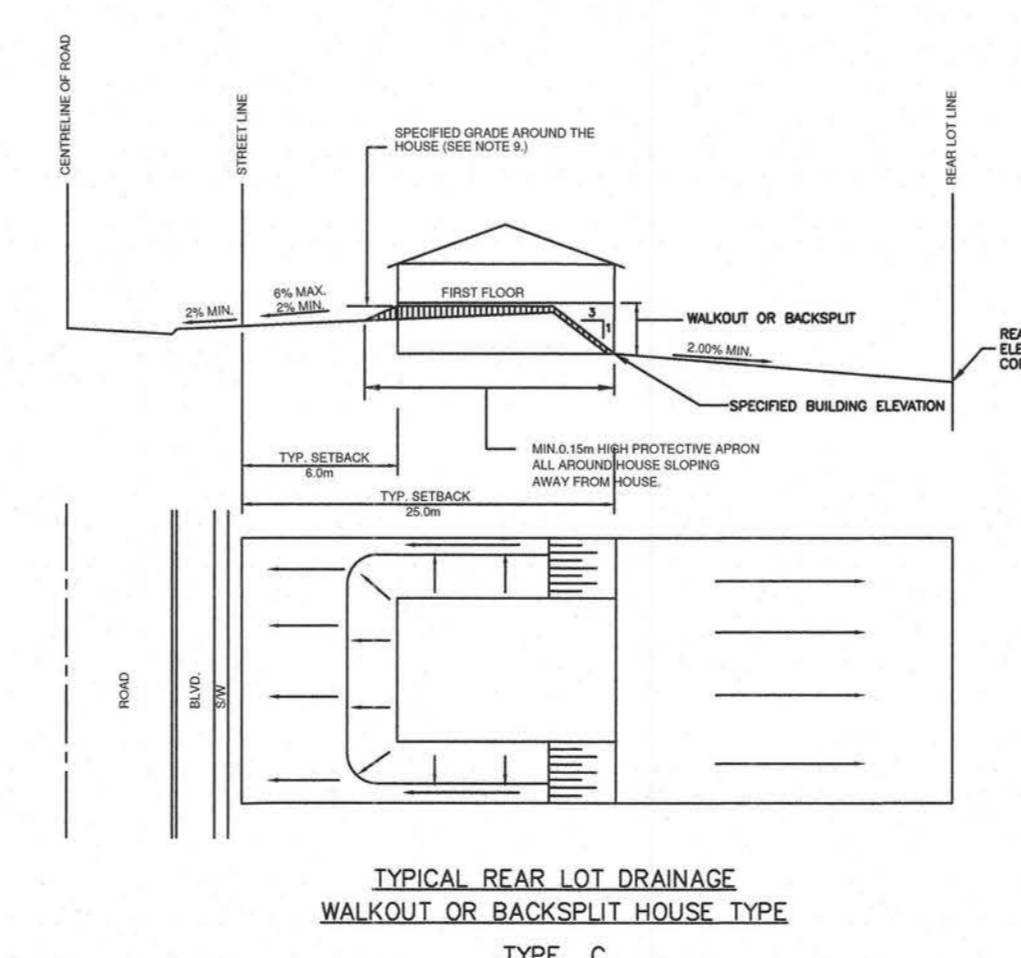
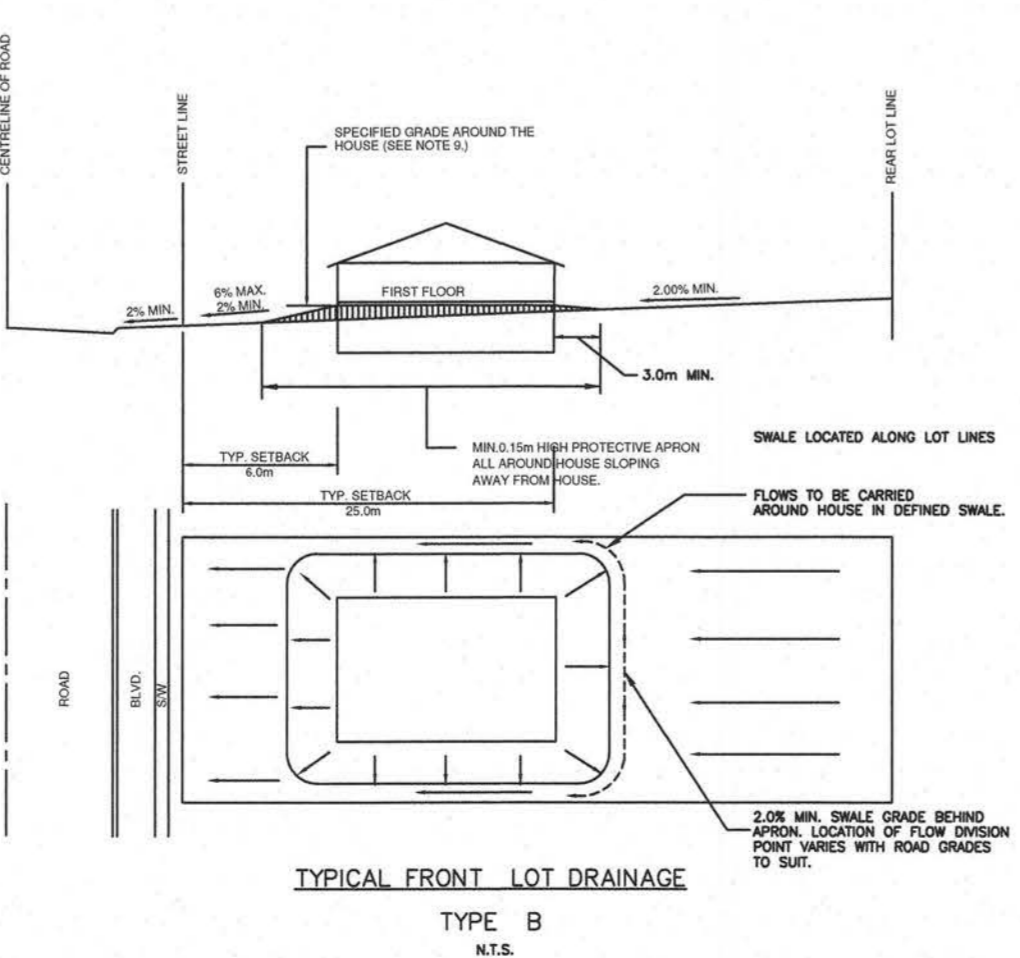
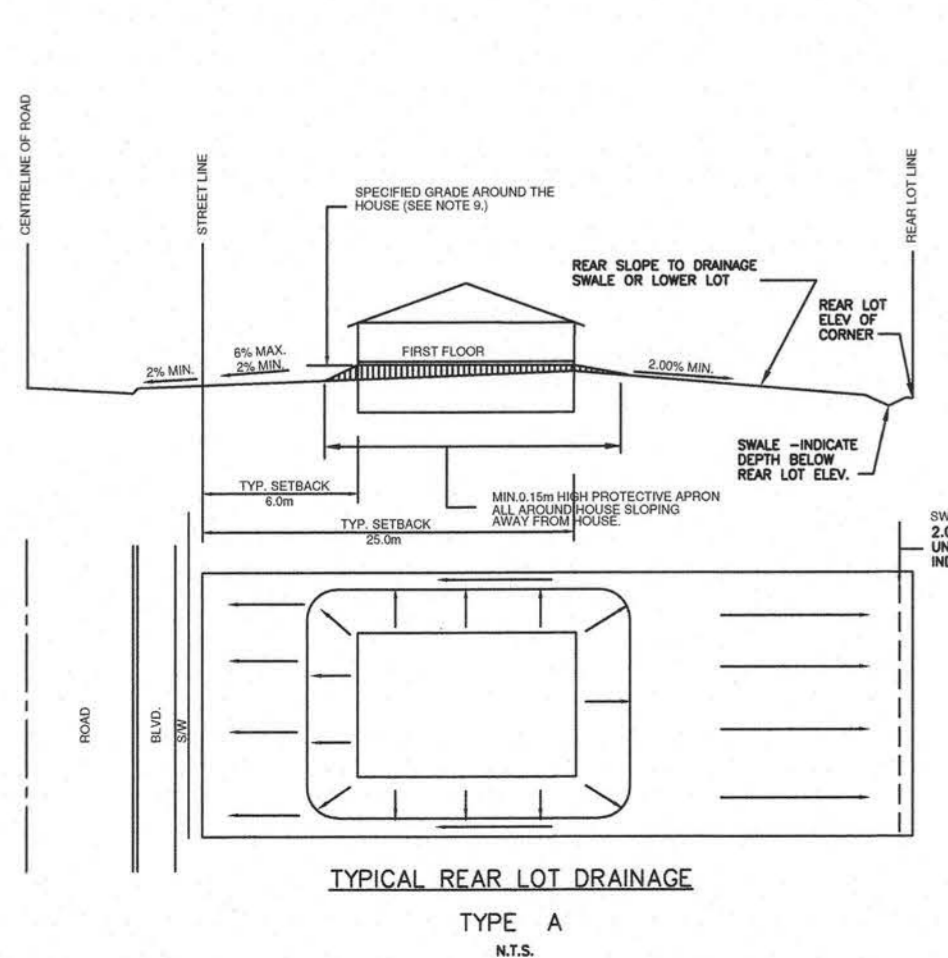
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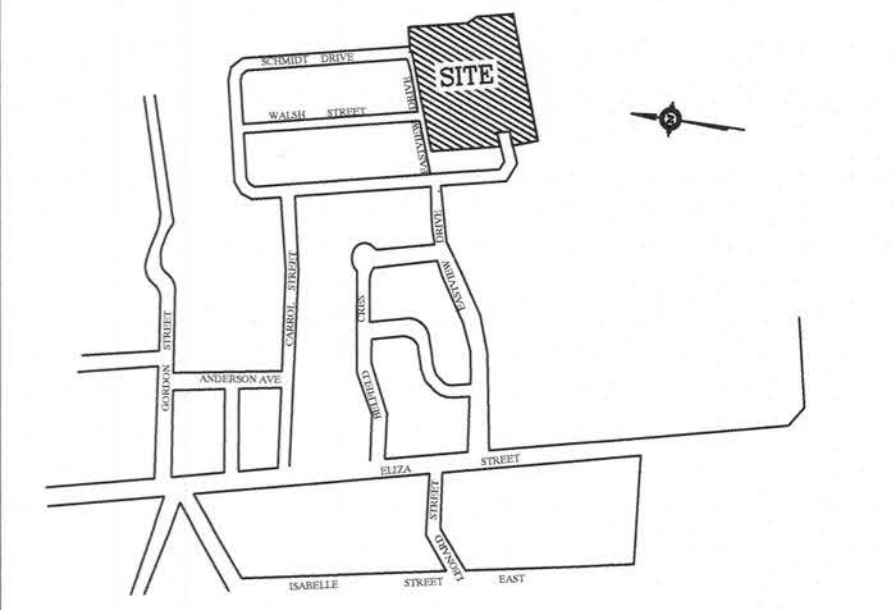
K. J. BEHM AND ASSOCIATES INC.
CONSULTING ENGINEERS
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EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V
ARTHUR, ONTARIO

GENERAL OVERALL LOT
GRADING CONTROL PLAN

DRAWN	WDH	SCALE	1 : 1,000	DWG. No.
DESIGN	KJB	DATE	APRIL, 2016	GCP
CHECKED	KJB	PROJECT No.		

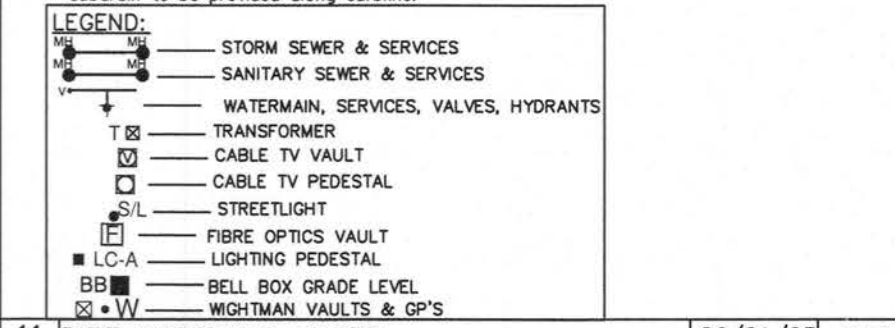




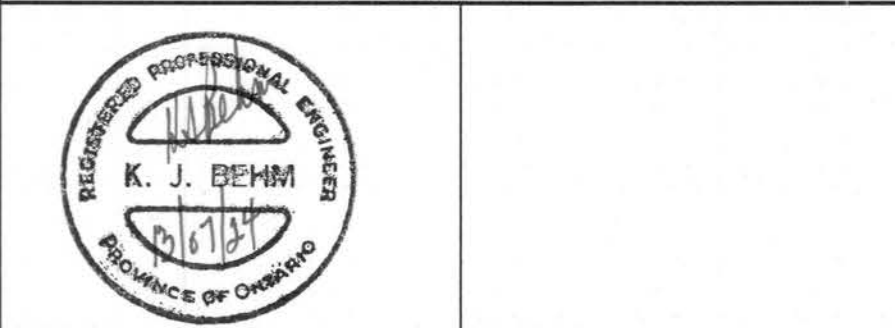
SITE LOCATION
N.T.S.

- BENCH MARKS:**
- TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 - TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.31
 - TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- NOTES:**
1. Storm Watermain shall be 900 PVC Class 150 (DR18), B137.3 with Ring-Tite joints and Trocar Wire. Trocar Wire shall be 12 gauge, 7 strand copper with plastic coating and shall be connected to the storm pump connection. Watermain and services shall be installed minimum 2.0 m below finished grade above the main or service in sand bedding per OPS 1001.
 2. Watermain fittings - Ductile Iron, mechanical joint, AWWA C110 approved, pressure rating 1030 kPa.
 3. Watermain valves shall be Mueller Wedge Gate Valve per AWWA C-509, Mechanical joint. Valve extensions to be provided where required.
 4. Watermain Valve Boxes shall be VB3100, 3 place No.6 round base screw type as manufactured by BSBY-ST CROCK FOUNDRIES INC. (Cambridge, Ontario). Hydrants shall be Concrete Valve Centric Type Compression with Storm pump connection. All hydrants to be painted red with black "Storm" cap.
 5. Water services to be 25mm single type pipe.
 6. Anodes: D2P-24, 10.9 kg shall be installed on all connections to existing watermain.
 7. Anodes: D2P-12, 5.4 kg shall be installed on all iron fittings, valves, main stops, curb stops, etc.
 8. Main stops, curb stops, valves, service boxes and restraints shall be in accordance with the Township of Wellington North Specifications.
 9. Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-192.2.
 10. Storm services shall be 100mm PVC-SDR28 meeting the current CSA-192.2 Specifications. Service connections to be at a minimum grade of 0.2%.
 11. All connections to existing mains shall have manufacturer's label. All new connections to existing mains shall use stainless steel straps and saddles or Kor-N-Tee.
 12. Sanitary sewer manhole fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA B182.4.
 13. Storm sewers 375mm and less shall be either Concrete (reinforced) or PVC U/Rig-Rib, as per CSA-B182.4. Storm sewers greater than 375mm shall be concrete (reinforced).
 14. All storm services shall be 100mm PVC-SDR28 and connected to manhole with precastable tee or "Kor-N-Tee", minimum 1% gradient.
 15. All catchbasin leads (250mm Single, 300mm Double) shall be PVC-SDR35. Sloyd lead to report catchbasin to a PVC SDR 35 with minimum 1% gradient and 1.2m of cover.
 16. All sewer pipes and watermain to be installed in Class "B" Bedding per OPS 802.01 and 802.03.
 17. Pavement design for all roads shall be:
450mm Granular "B" road base
150mm Granular "A" road base
50mm H-4 Binder Course Asphalt
40mm H-3 Surface Course Asphalt
900mm TOTAL DEPTH
 18. Concrete curbs and sidewalks shall be poured using 32Mpa strength @ 28 days.
 19. All watermain and sewers to be tested in accordance with Township Standards.
 20. Concrete curbs to be mountable as per OPS 505.10 and Barrier curbs as per OPS 600.04.
 21. Water Service Boxes to be located at streetline and not in driveways, if possible.
 22. Sump Pumps to discharge to storm services.
 23. Driveways shall be:
450mm Granular "B"
150mm Granular "A"
50mm H-3C Modified Fine Asphalt
 24. All structures shall allow for an adjustment of between 100mm-200mm with modulus. All external joints shall be wrapped with 150mm Glasscrete or equivalent.
 25. This plan shall be read in conjunction with Drawing EPC Erosion Control Plan.
 26. Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing DET-1).
 27. 0.6m BB Plates shall be installed in sidewalk at curb intersections as per OPS 310.039 and OPS 310.033.
 28. Slope ranges of curb intersections shall be 8% maximum gradient.
 29. Where storm services and water services conflict with manhole pipes, storm services to go over watermain and water services to go under storm sewer with 0.5m clearance.
 30. All catchbasin manholes to have 300mm deep sump. All roadside catchbasins to have 600mm deep sump. No sumps to be installed in residential areas.
 31. Where storm sewer runs along curb line and has been backfilled with approved granular material, then Road Drains (RD) to be 0.5m of 150mm granular wrapped perforated subdrain required upstream of all catchbasins and catchbasin manholes and in both directions in the slope in the road. Subdrains to be 600mm deep.
 32. If storm sewer is backfilled with native soils, a continuous 150mm x subdrain to be provided along curbside.



No.	DESCRIPTION	DATE	INTL.
11	PIPE MATERIALS ADDED	26/01/23	KJB
10	AS-CONSTRUCTED U/G SERVICES PHASES IV	06/11/12	KJB
9	LOT NUMBERING CHANGED FOR PHASE IV	20/12/21	KJB
8	AS-CONSTRUCTED U/G SERVICES PHASES III	28/12/20	KJB
7	GENERAL REVISIONS	22/06/20	KJB
6	GENERAL REVISIONS	15/03/20	KJB
5	GENERAL REVISIONS	19/05/19	KJB
4	GENERAL REVISIONS	07/01/19	KJB
3	GENERAL REVISIONS	30/11/18	KJB
2	GENERAL REVISIONS	22/02/18	KJB
1	GENERAL REVISIONS	02/11/17	KJB

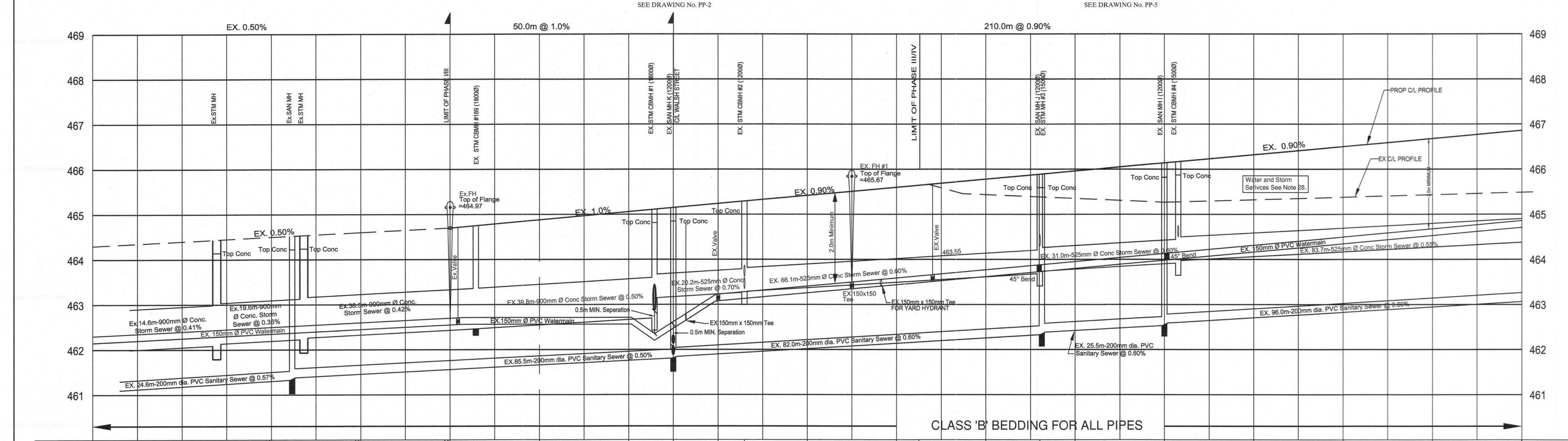
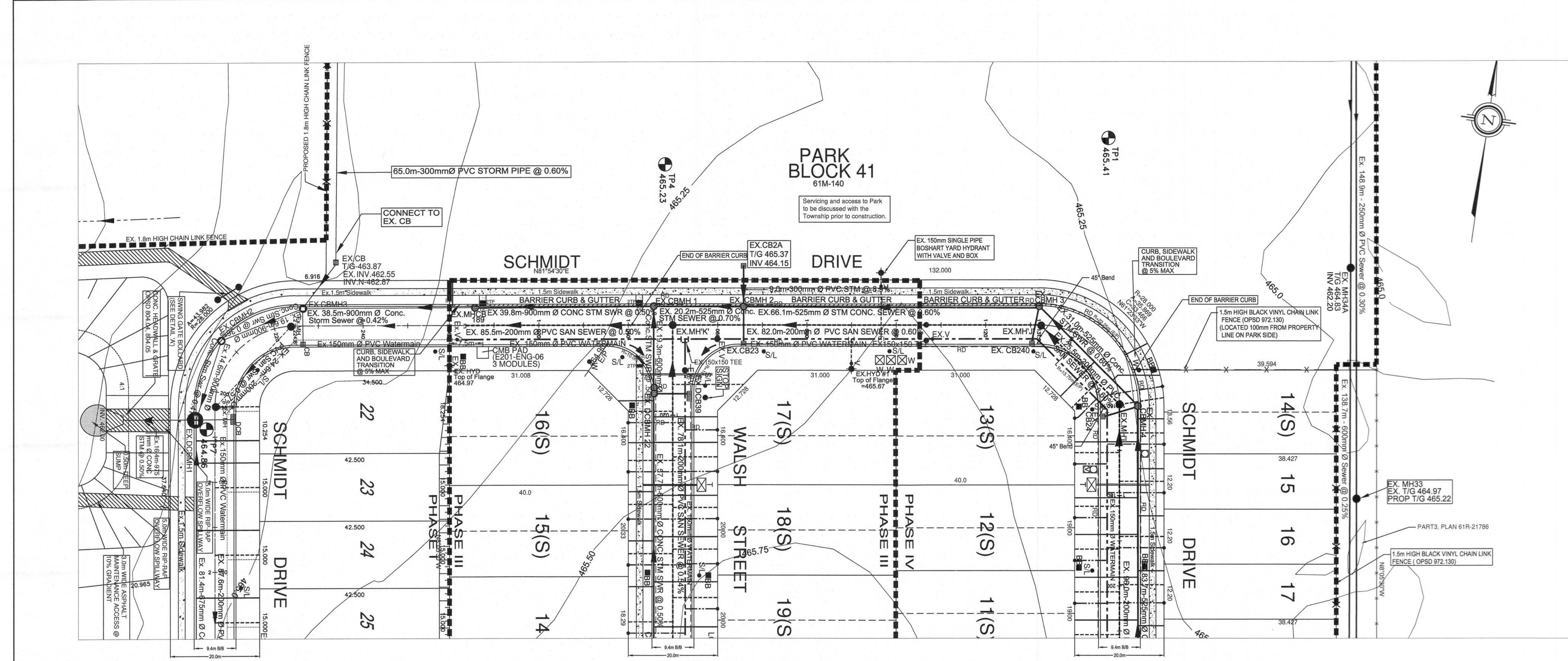


CHECKED: APPROVED:
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WATERLOO, ONTARIO N2J 4K8
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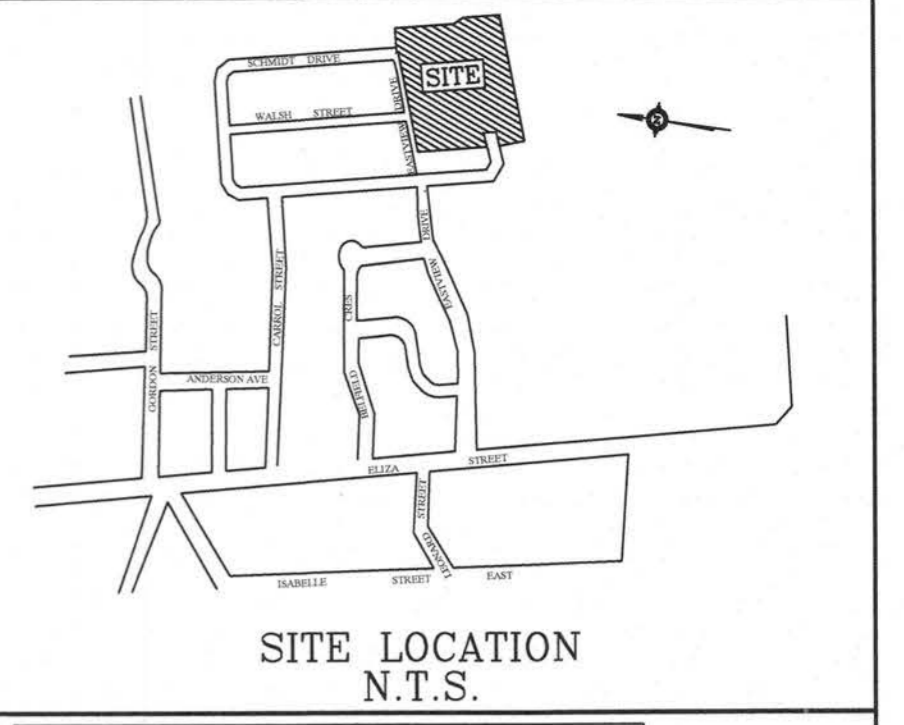
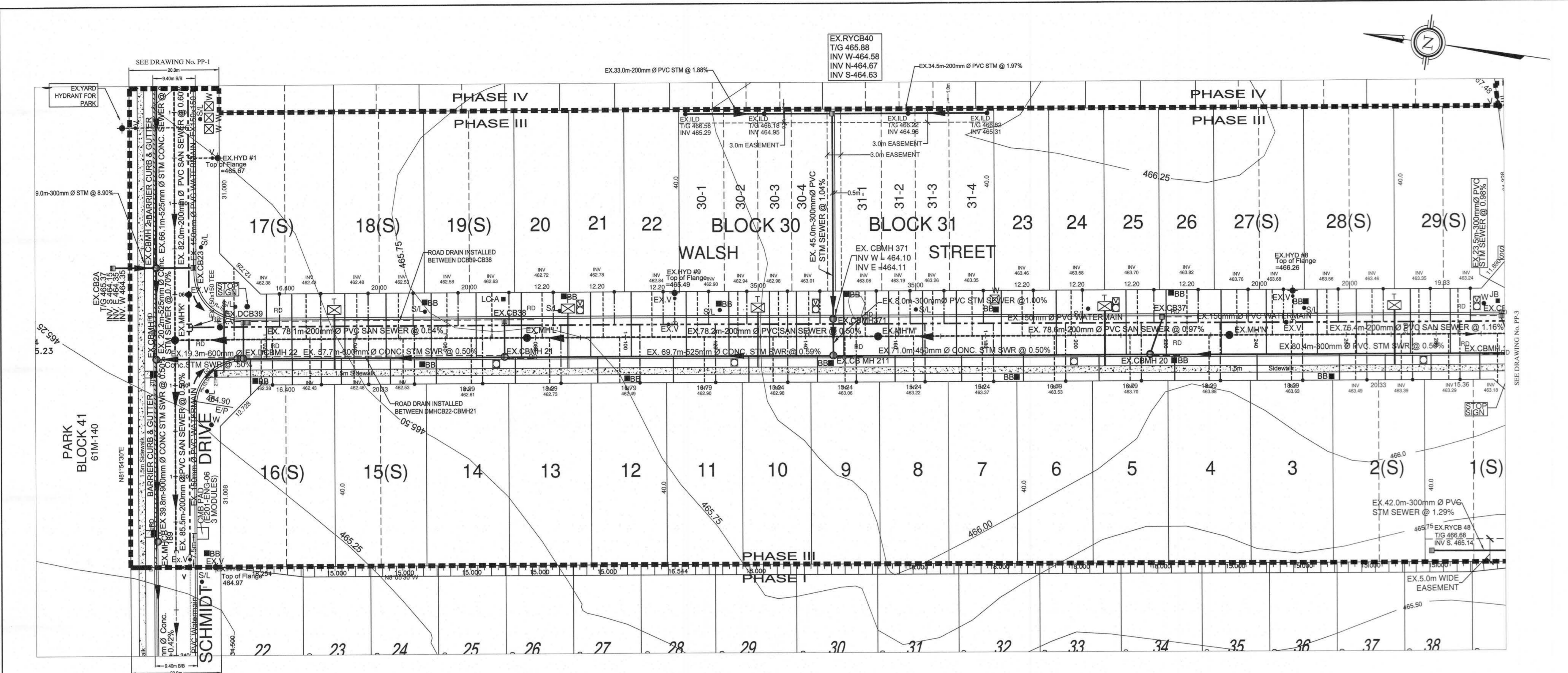
**EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V**
ARTHUR, ONTARIO

**PLAN AND PROFILE
SCHMIDT DRIVE
STA. 1+000 TO STA. 1+220**

DRAWN	WDH	SCALE	HOR: 1 : 500 VERT: 1 : 50	DWG. No.
DESIGN	KJB	DATE	FEB 2013	PP-1
CHECKED	KJB	PROJECT No.	070119	

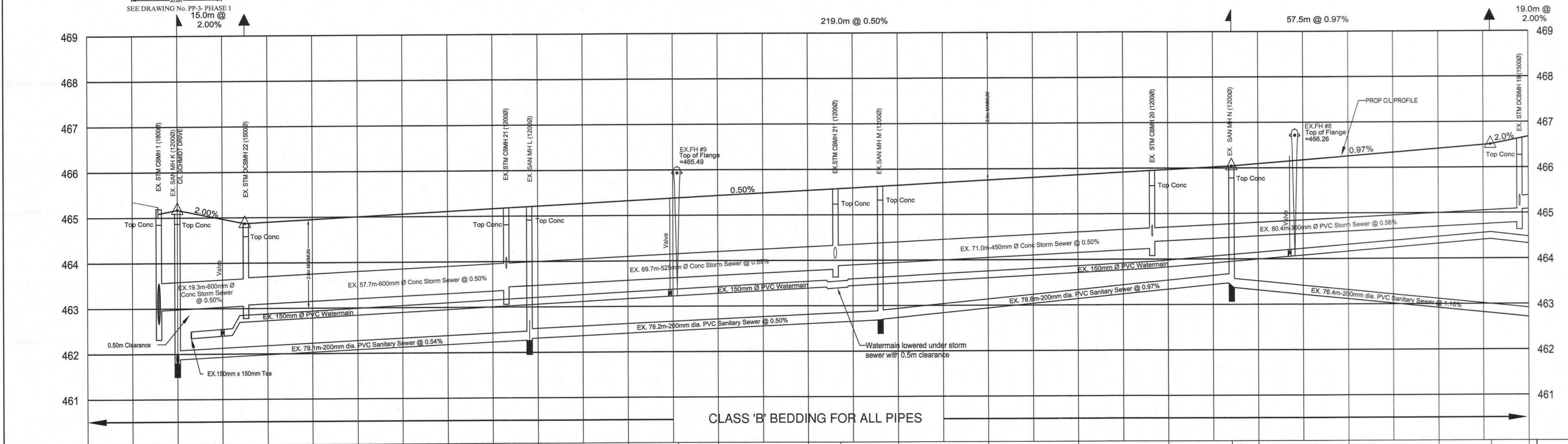


CHANGING	STORM SEWER	SANITARY SEWER	CHANGING
0+194.0	EX. 14.6m-900mm Ø CONC STM SWR @ 0.41%	EX. 24.6m-200mm Ø PVC SAN SWR @ 0.57%	0+194.0
0+196.0	EX. 19.6m-900mm Ø CONC STM SWR @ 0.36%	EX. 19.6m-900mm Ø CONC STM SWR @ 0.36%	0+196.0
0+197.5	EX. 18.6m-900mm Ø CONC STM SWR @ 0.42%	EX. 18.6m-900mm Ø CONC STM SWR @ 0.42%	0+197.5
0+198.0	EX. 38.5m-900mm Ø CONC STM SWR @ 0.42%	EX. 38.5m-900mm Ø CONC STM SWR @ 0.42%	0+198.0
1+000.0	EX. 39.8m-900mm Ø CONC STM SWR @ 0.50%	EX. 85.5m-200mm Ø PVC SAN SWR @ 0.50%	1+000.0
1+003.0	EX. 20.2m-525mm Ø CONC STM SWR @ 0.70%	EX. 20.2m-525mm Ø CONC STM SWR @ 0.70%	1+003.0
1+005.2	EX. 66.1m-525mm Ø CONC SWR STM @ 0.60%	EX. 82.0m-200mm Ø PVC SAN SWR @ 0.60%	1+005.2
1+080.0	EX. 31.0m-525mm Ø CONC STM SWR @ 0.60%	EX. 25.5m-200mm Ø PVC SAN SWR @ 0.60%	1+080.0
1+100.0	EX. 83.7m-525mm Ø CONC STM SWR @ 0.55%	EX. 96.0m-200mm Ø PVC SAN @ 0.60%	1+100.0
1+105.0			1+105.0
1+120.0			1+120.0
1+140.0			1+140.0
1+160.18			1+160.18
1+162.90			1+162.90
1+180.0			1+180.0
1+200.0			1+200.0
1+220.03			1+220.03
1+240.0			1+240.0



- BENCH MARKS:**
- TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 482.03
 - TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET, ELEV 482.31
 - TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE, ELEV 484.27

- NOTES:**
- 150mm Watermain shall be 9000 PVC Class 150 (SDR18), 813.73 with Ring-Tile joints and Tracer Wire. Tracer Wire shall be 12 gauge, 7 strand copper with plastic coating and shall be connected to the storm pump connection. Watermain and services shall be installed minimum 2.0 m below finished grade above the main or service in sand bedding per OPSD 1001.
 - Watermain fittings shall be Ductile Iron/mechanical joint/LAWA C110 approved, pressure rating 1035 PSI.
 - Watermain valves shall be Mueller Wedge Gate Valve per AWWA C-509, Mechanical Joint. Valve extensions to be provided where required.
 - Watermain Valve Boxes shall be 813.73 x 813.73 x 100 mm concrete base with 40 mm steel cover plates as manufactured by BIRBY-ST. CHOX FOUNDRIES INC., Cambridge, Ontario.
 - Hydrants shall be Canada Valve Century Type Compression with "Storz" pump connection. All hydrants to be painted red with black "Storz" cap.
 - Water services to be 25mm single pipe.
 - Another 200-24, 10.5 kg shall be installed on all iron fittings, valves, main stops, curb stops, etc.
 - Main stops, curb stops, unions, service boxes and restraints shall be in accordance with the Township of Wellington North Specifications.
 - Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA B182.2.
 - Sanitary Services shall be 125mm PVC-SDR28 meeting the current ASTM D3034 Specifications and Service connections to be of a minimum grade of 2%.
 - All connections to existing mains shall have manufactured tees. All new connections to existing mains shall use stainless steel stops or saddles or Kor-N-Te.
 - Sanitary sewer manhole fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA B182.4.
 - Storm sewers 375mm and less shall be either Concrete (reinforced) or PVC Ultra-Rib, as per CSA-B182.4. Storm sewers greater than 375mm shall be concrete (reinforced).
 - All storm services shall be 150mm PVC-SDR28 and connected to manhole with prefabricated tee or "Kor-N-Te", minimum 1% gradient.
 - All catchbasin leads (250mm Single, 300mm Double) shall be PVC-SDR35. Sideload leads to rear yard catchbasins to be PVC SDR 35 with minimum 1% gradient and 1.2m of cover.
 - All sewer pipes and watermain to be installed in Class 'B' bedding per OPSD 802.01 and 802.03.
 - Pavement design for all roads shall be:
40mm Granular "B" road base
150mm Granular "A" road base
50mm HL4 Binder Course Asphalt
50mm HL3 Surface Course Asphalt
60mm TOTAL DEPTH
 - Concrete Curbs and sidewalks shall be poured using 32mpa strength @ 28 days.
 - All watermain and sewers to be tested in accordance with Township of Wellington North Specifications or as noted in the Contract Documents.
 - Concrete Curbs to be mountable per OPSD 600.10 and Barrier curbs as per OPSD 600.04.
 - Water Service Boxes to be located at streetline and not in driveways, if possible.
 - Sump Pumps to discharge to storm services.
 - Driveways shall be:
40mm Granular "B"
150mm Granular "A"
50mm HL3 Modified Fine Asphalt
 - All structures shall allow for an adjustment of between 150mm-300mm with modulus. All external joints shall be wrapped with 150mm Denastop or equivalent.
 - The plan shall be read in conjunction with Drawing EPC Erosion Control Plan.
 - Road Section to be in accordance with Township Standard Drawing R1 (see section).
 - Traffic Warning Plates shall be installed in sidewalk at curb intersections (as per OPSD 310.03 and OPSD 310.03).
 - Sidewalk ramps at curb intersections shall be 8% maximum gradient.
 - Where storm services and water services conflict with manhole pipes, storm services to go over watermain and water services to go under storm sewer with 0.5m clearance.
 - All catchbasin manholes to have 300mm deep sump. All roadside catchbasins to have 600mm deep sump. No sumps in rear yard catchbasins.
 - Where storm sewer runs along curb line and has been backfilled with approved granular material, then Road Drains (RD) to be 6.0m of 150mm geotextile wrapped perforated approved equipment. If storm sewer is backfilled with native soils, a continuous 150mm x subdrain to be provided along curbline.



LEGEND:

- STORM SEWER & SERVICES
- SANITARY SEWER & SERVICES
- WATERMAIN, SERVICES, VALVES, HYDRANTS
- TRANSFORMER
- CABLE TV VAULT
- CABLE TV PEDESTAL
- FIBRE OPTICS MAULT
- STREETLIGHT
- LIGHTING PEDESTAL
- BELL BOX GRADE LEVEL
- RIGHT-OF-WAY

No.	DESCRIPTION	REVISIONS	DATE	INTL.
12	PIPE MATERIALS ADDED		26/01/23	KJB
11	AS-CONSTRUCTED U/G SERVICES PHASES IV		06/11/22	KJB
10	LOT NUMBERING CHANGED FOR PHASE IV		20/12/21	KJB
9	STORM SEWER BLOCKS 30 & 31 CHANGED		06/06/21	KJB
8	AS-CONSTRUCTED U/G SERVICES PHASES III		28/12/20	KJB
7	GENERAL REVISIONS		22/06/20	KJB
6	GENERAL REVISIONS		15/03/20	KJB
5	GENERAL REVISIONS		19/05/19	KJB
4	GENERAL REVISIONS		07/01/19	KJB
3	GENERAL REVISIONS		30/11/18	KJB
2	GENERAL REVISIONS		22/02/18	KJB
1	GENERAL REVISIONS		02/11/17	KJB

Checked: Approved: _____

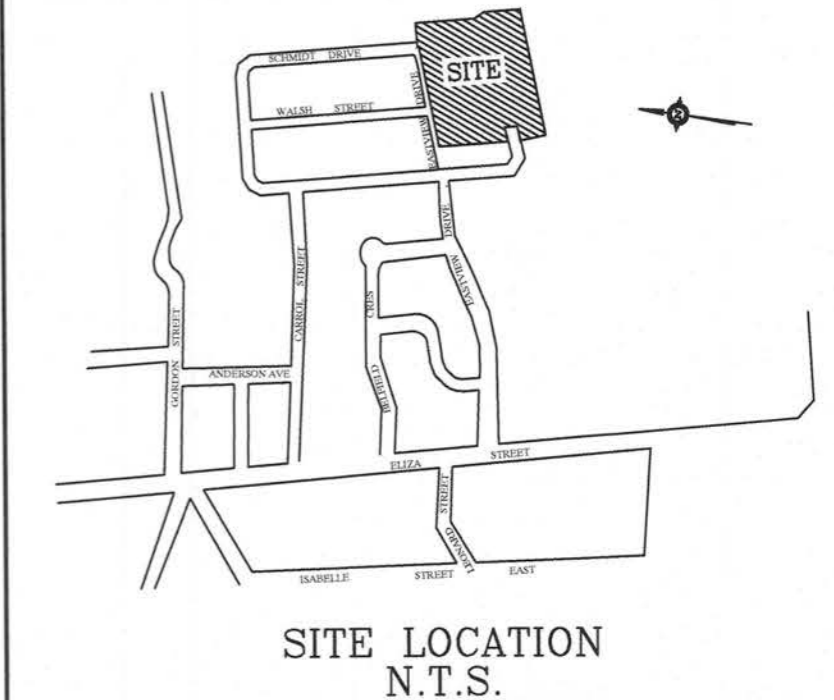
K. J. BEHM AND ASSOCIATES INC.
CONSULTING ENGINEERS
55 ERB STREET EAST, SUITE 101
WATERLOO, ONTARIO N2J 4K8
PHONE (519) 742 3510 FAX (519) 742 3462

CHAINAGE	PROPOSED CL ROAD GRADE	STORM SEWER	SANITARY SEWER
0+995.5	465.15	EX. 19.3m-600mm Ø Conc STM SWR @ 0.50%	EX. 78.1m-200mm Ø PVC SAN SWR @ 0.54%
1+000	465.85	EX. 57.7m-600mm Ø Conc STM SWR @ 0.54%	EX. 78.2m-200mm Ø PVC SAN SWR @ 0.50%
1+015.0	464.88		EX. 71.0m-450mm Ø Conc STM SWR @ 0.50%
1+020	465.08		EX. 78.6m-200mm Ø PVC SAN SWR @ 0.97%
1+040	465.28		EX. 78.4m-200mm Ø PVC SAN SWR @ 1.16%
1+060	465.34		
1+073	465.38		
1+080	465.48		
1+100	465.51		
1+111	465.58		
1+120	465.68		
1+140	465.78		
1+145.5	465.88		
1+156	465.95		
1+160	466.01		
1+180	466.20		
1+200	466.39		
1+216.5	466.51		
1+220	466.68		
1+234	466.88		
1+240	467.00		
1+260	467.10		
1+280	467.20		
1+291.5	467.30		
1+300	467.40		

EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V
ARTHUR, ONTARIO

PLAN AND PROFILE
WALSH STREET
STA. 1+ 000 TO STA. 1+300

DRAWN	WH	SCALE	HOR. 1 : 500	DWG. No.
DESIGN	KJB	VERT.	1 : 50	PP-2
CHECKED	KJB	DATE	FEB 2013	
PROJECT No.	070119			

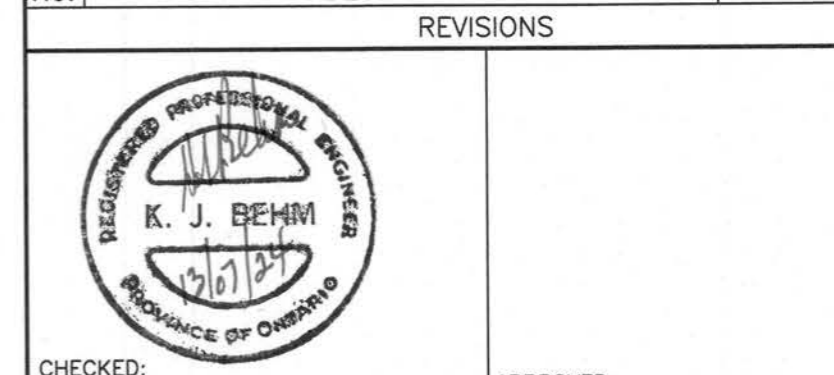


- BENCH MARKS:**
1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTH WEST CORNER OF ELIZABETH STREET AND GORDON STREET ELEV 462.3
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- NOTES:**
1. 150mm Watermain shall be 3000 PVC Class 150 (D18) B137.3 with Ring-Tite joints and Traffic. Tracer wire shall be 12 gauge 7 strand copper with plastic coating and shall be connected to the storm pumper connection. Watermain and services shall be installed minimum 2.0 m below.
 2. Watermain fittings - double iron mechanical joint (AWWA C110 approved, pressure rating 1033 kPa).
 3. Watermain valves shall be Mueller Wedge Gate Valve per AWWA C-508, Mechanical joint. Valve extensions to be provided where required.
 4. Watermain Valve Boxes shall be V8100, 3 piece No.6 round base screw type as manufactured by BERRY-ST. CROSS FOUNDRIES INC. Cambridge, Ontario.
 5. Hydrants shall be Canaco Valve Century Tige Compression with "Storm" pumper connection. All hydrants to be painted red with black "50" top.
 6. Water services to be 25mm single PEX PIPE.
 7. Anodes: DZP-24, 10.9 kg shall be installed on all connections to existing watermains.
 8. DZP-12, 5.4 kg shall be installed on all iron fittings, valves, main stops, curb stops, unions, service boxes and restraints shall be in accordance with the Township of Wellington North Specifications.
 9. Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA B182.2.
 10. Sanitary Services shall be 125mm PVC-SDR28 meeting the current ASTM D3034 Specifications. Service connections to be at a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and saddles or Kor-N-Tee.
 11. Sanitary sewer mainline fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA B182.4.
 12. Storm sewers 375mm and less shall be either Concrete (reinforced) or PVC Ultra-Rib, as per CSA-B182.4. Storm sewers greater than 375mm shall be concrete (reinforced).
 13. All storm services shall be 100mm PVC-SDR28 and connected to manholes with prefabricated tee or "Kor-N-Tee", minimum 1% gradient.
 14. All sewer leads (250mm Single, 300mm Double) shall be PVC-SDR35. Sidelap leads to rear yard catchbasins to be PVC SDR 35 with minimum 1% gradient and 1.2m of cover.
 15. All sewer pipes and watermains to be installed in Class 'B' Bedding per OPS 802.01 and 802.03.
 16. Powerman design for all roads shall be:
450mm Granular "B" road base
150mm Granular "A" road base
50mm H4 Binder Course Asphalt
40mm H3 Surface Course Asphalt
600mm TOTAL DEPTH
 17. Concrete Curb and sidewalks shall be poured using 32Mpa strength @ 28 days.
 18. All watermain and sewers to be tested in accordance with Township of Wellington North Specifications or as noted in the Contract Documents.
 19. Concrete Curb to be mountable as per OPS 600.10 and Barrier curb as per OPS 600.04.
 20. Water Service Boxes to be located at streetline and not in driveways, if possible.
 21. Sump Pumps to discharge to storm services.
 22. Driveways shall be:
450mm Granular "B"
150mm Granular "A"
50mm H3C Modified Fine Asphalt
 23. All structures shall allow for an adjustment of between 150mm-300mm with manholes. All exterior joints shall be wrapped with 150mm Densotex or equivalent. This joint shall be red in conjunction with Drawing CPC Erosion Control Plan.
 24. Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing B1-1).
 25. 3000 PSI Concrete Slabs shall be installed in sidewalk at curb intersections as per Drawing B1-1.
 26. Sidewalk ramps at curb intersections shall be 8% maximum gradient.
 27. Where storm services and water services conflict with manholes, storm services to go over watermain and water services to go under storm sewer with 0.5m clearance.
 28. All catchbasin manholes to have 300mm deep sump. All roadside catchbasins to have 600mm deep sump. No sumps in rear yard catchbasins.
 29. Where storm sewer runs along curb line and has been backfilled with approved granular material, then Road Drains (RD) to be 0.5m of 150mm granular bedding wrapped perforated subdrain required upstream of all catchbasins and catchbasin manholes and in both directions in the same 0.5m of the road. Subdrains to be 90, V, 1000 or approved equivalent. Storm sewer to be backfilled with native soils, a continuous 150mm subdrain to be provided along curbline.

REVISIONS

No.	DESCRIPTION	DATE	INTL.
13	PIPE MATERIALS ADDED	12/06/21	KJB
12	AS-CONSTRUCTED U/G SERVICES PHASES IV, V	06/11/22	KJB
11	LOT NUMBERING CHANGED IN PHASE IV	20/12/21	KJB
10	STORM SEWER REMOVED LOTS 16-21	06/06/21	KJB
9	GENERAL REVISIONS	15/02/21	KJB
8	AS-CONSTRUCTED U/G SERVICES PHASES III, IV, V	28/12/20	KJB
7	GENERAL REVISIONS	22/06/20	KJB
6	GENERAL REVISIONS	15/03/20	KJB
5	GENERAL REVISIONS	19/05/19	KJB
4	GENERAL REVISIONS	07/01/19	KJB
3	GENERAL REVISIONS	30/11/18	KJB
2	GENERAL REVISIONS	22/02/18	KJB
1	GENERAL REVISIONS	02/11/17	KJB



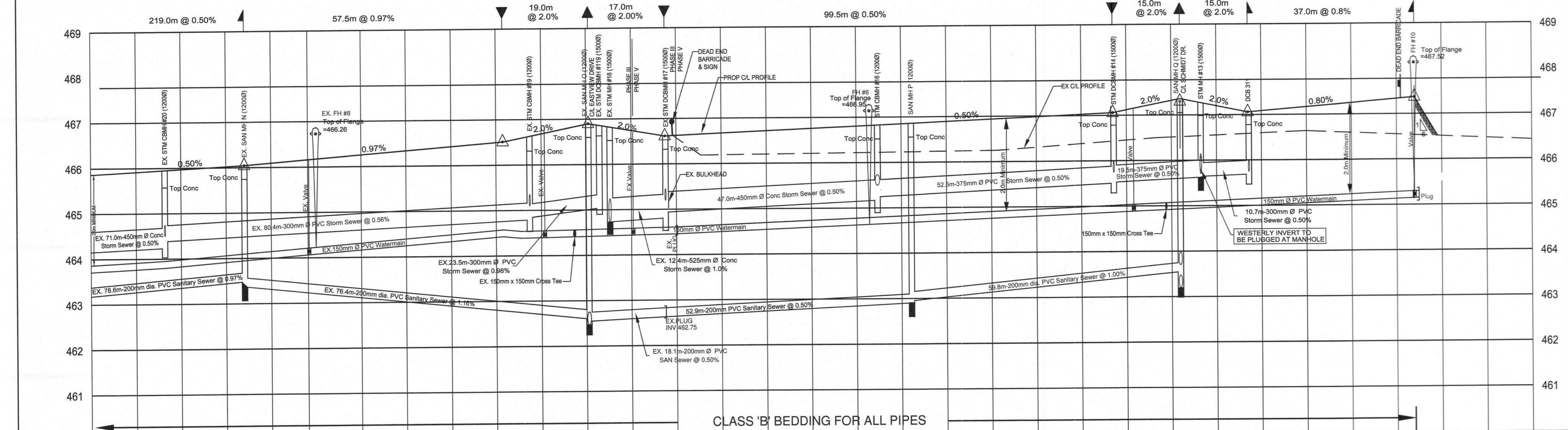
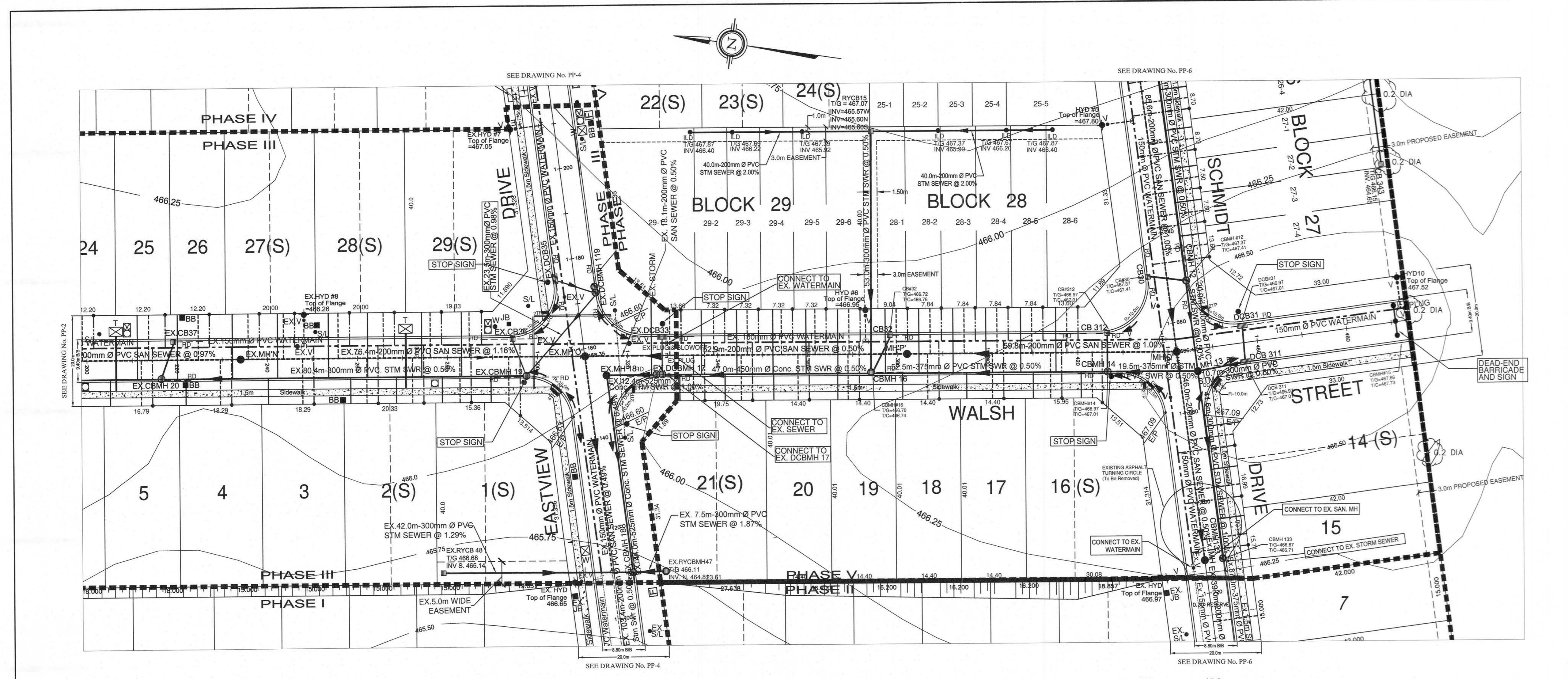
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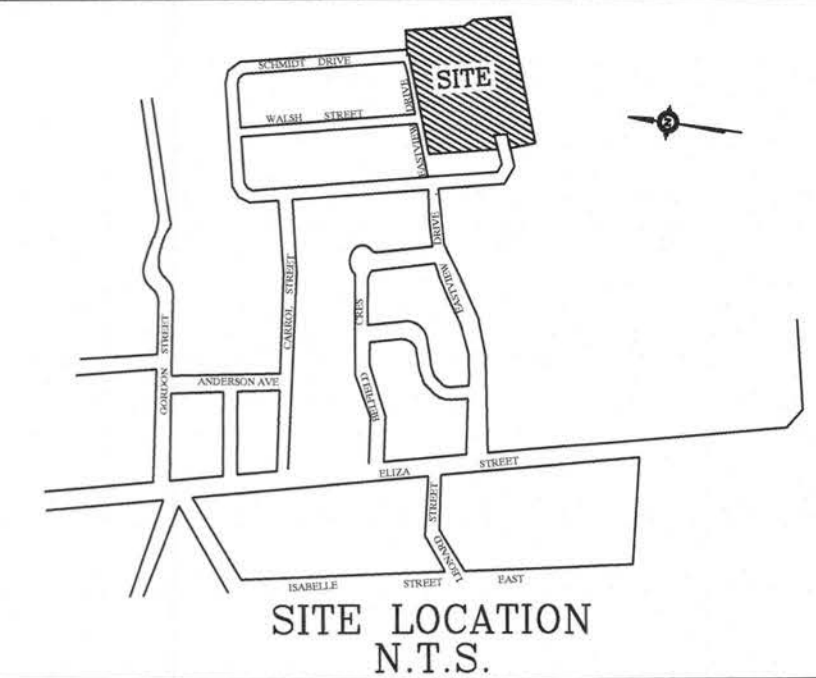
EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V
ARTHUR, ONTARIO

PLAN AND PROFILE
WALSH STREET
STA. 1+200 TO STA. 1+500

DRAWN	WDH	SCALE	HOR: 1 : 500	DWG. No.
DESIGN	KJB	DATE	VERT: 500 : 30	PP-3
CHECKED	KJB	DATE	FEB 2013	
PROJECT No.	070119			

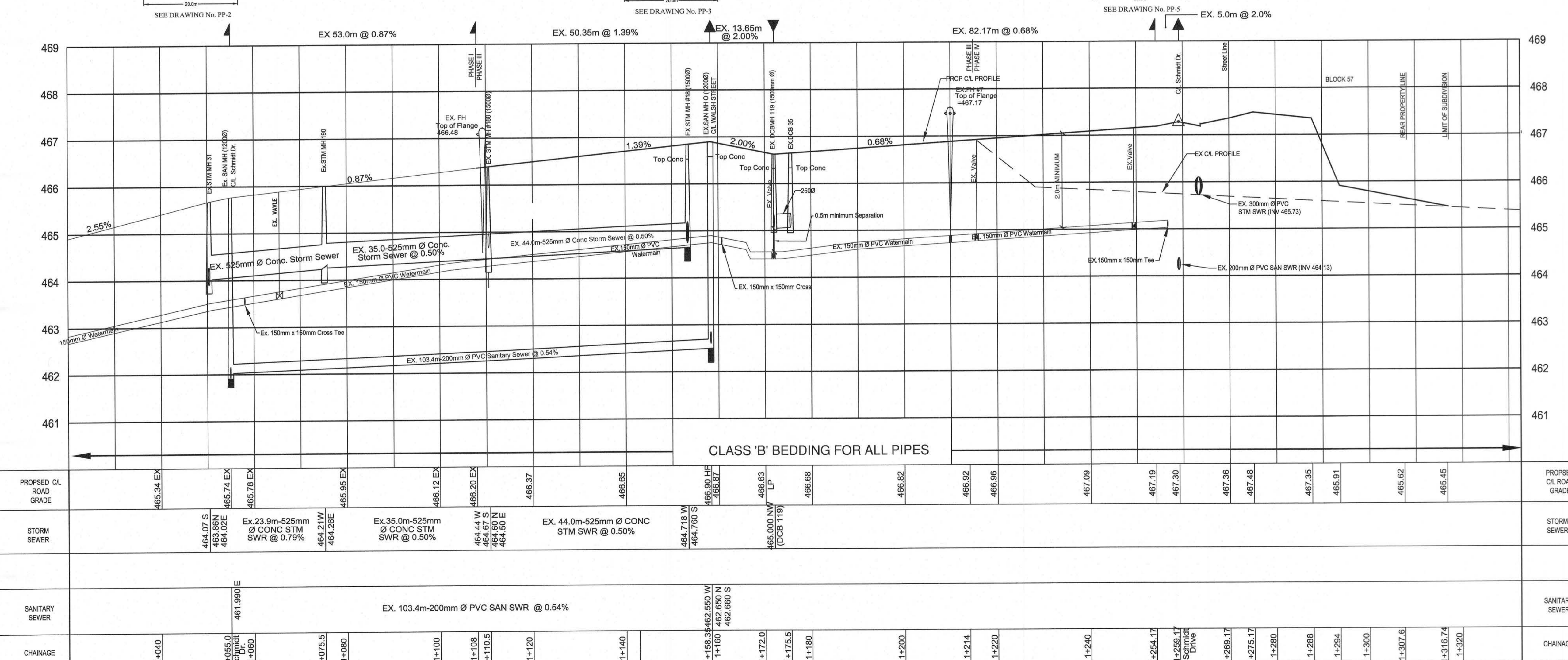
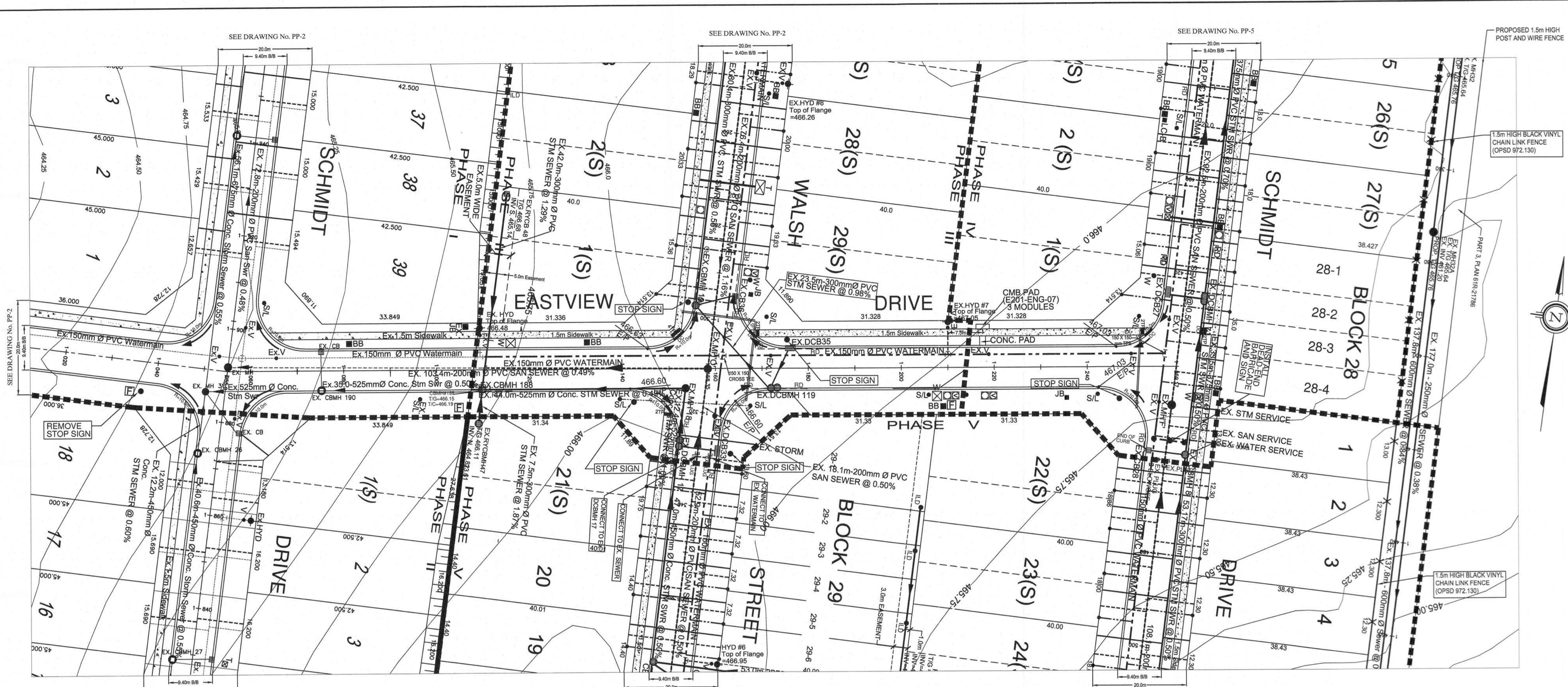


PROPOSED CL ROAD GRADE	STORM SEWER	SANITARY SEWER	CHAINAGE
465.78	EX. 71.0m-450mm Ø Conc Storm Sewer @ 0.50%	EX. 78.6m-200mm Ø PVC SAN SWR @ 0.97%	1+200
465.88			1+215.5
465.95	EX. 80.4m-300mm Ø PVC STM SWR @ 0.56%	EX. 76.4m-200mm Ø PVC SAN SWR @ 1.16%	1+220
465.01			1+234
466.20			1+240
466.39			1+247.5 High Pt
466.51			1+250
466.68			1+260
466.80 HF	EX. 23.5m-300mm Ø PVC STM SWR @ 0.98%	EX. 18.1m-200mm Ø PVC SAN SWR @ 0.50%	1+280
466.95			1+291.5 Low Pt
467.00			1+300
467.10 HF	EX. 47.0m-450mm Ø Conc STM SWR @ 0.50%	EX. 12.4m-525mm Ø Conc STM SWR @ 1.00%	1+310.5
467.20			1+320
467.25			1+327.5
467.36			1+340
467.40			1+360
467.45			1+374.5
467.50			1+380
467.55			1+381.0
467.60			1+400
467.65			1+420
467.70			1+427.0
467.75			1+440
467.80			1+457.0
467.85			1+460
467.90			1+480
467.95			1+494.0 Subd Limit



- BENCH MARKS:**
1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.27
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- NOTES:**
1. 150mm Watermain shall be C900 PVC Class 150(DR18) . 8137.3 with Ring-The joints and Tracer Wire. Tracer Wire shall be 12 gauge 7 strand copper with plastic coating and shall be connected to the storm pump connection. Watermain services shall be installed minimum 2.0 m below finished grade above the main or service in sand bedding per OPS 1001.
 2. Watermain fittings shall be ductile iron, mechanical joint, AWWA C110 approved, pressure rating 1033 kPa.
 3. Watermain valves shall be Mueller Wedge Gate Valve per AWWA C-509. Mechanical joint. Valve extensions to be provided where required.
 4. Watermain Valve Boxes shall be V81000, 3 piece No.6 round base screw type as manufactured by BIRBY-EST CROOK FOUNDRIES INC. Cambridge Ontario.
 5. Hydrants shall be Canada Valve Century Type Compression with "Storz" pump connection. All hydrants to be painted red with black "50" cap.
 6. Water services to be 25mm single pipe.
 7. Anodes: DDP-24, 15.8 kg shall be installed on all connections to existing iron watermains. DDP-12, 5.4 kg shall be installed on all iron fittings, valves, man stops, curb stops, etc.
 8. Man stops, curb stops, unions, service boxes and restrains shall be in accordance with the Township of Wellington North Specifications.
 9. Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM 15000 Specifications and CSA-B182.2.
 10. Sanitary Services shall be 125mm PVC-SDR28 meeting the current CSA-B182.2 Specifications. Service connections to be of a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel stops and saddles or Kor-N-Te.
 11. Sanitary sewer manline fittings shall be PVC-SDR35 meeting the current ASTM 15000-17 Specifications and CSA B182.4.
 12. Storm sewers 375mm and less shall be either Concrete (reinforced) or PVC Ultra-Rib, as per CSA-B182.4. Storm sewers greater than 375mm shall be concrete (reinforced).
 13. All storm services shall be 100mm PVC-SDR35 and connected to manline with prefabricated tees or "Kor-N-Te", minimum 1% gradient.
 14. All catchbasin leads (250mm Single, 300mm Double) shall be PVC-SDR35. Sideload leads to reynard catchbasins to be PVC SDR 35 with minimum 1% gradient and 1.2m of cover.
 15. All sewer pipes and watermain to be installed in Class 'B' Bedding per OPS 600.02 and 600.03.
 16. Pavement design for all roads shall be:
450mm Granular "A" road base
150mm H-4 Binder Course Asphalt
50mm H-3 Surface Course Asphalt
90mm TOTAL DEPTH
 17. Concrete curbs and sidewalks shall be poured using 32Mpa strength @ 28 days.
 18. All watermain and sewers to be tested in accordance with Township of Wellington North Specifications or as noted in the Contract Documents.
 19. Concrete Curb to be mountable as per OPS 600.10 and Barrier curb as per OPS 600.04.
 20. Water Service Boxes to be located at streetline and not in driveways, if possible.
 21. Sump Pumps to discharge to storm services.
 22. Driveways shall be:
450mm Granular "A"
150mm Granular "B"
50mm H-3 Modified Fine Asphalt
 23. All structures shall allow for an adjustment of between 150mm-300mm with masonry. All external joints shall be wrapped with 150mm Densopac or equivalent.
 24. This plan shall be read in conjunction with Drawing EPC Erosion Control Plan.
 25. Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing R1-1).
 26. Tackling Warning Plates shall be installed in sidewalk at curb intersections as per OPS 310.03P and OPS 310.03S.
 27. Sidewalk ramps at curb intersections shall be 8% maximum gradient.
 28. Where storm services and water services conflict with manline pipes, storm services to go over watermain and water services to go under storm sewer with 0.5m clearance.
 29. All catchbasin manholes to have 300mm deep sump. All roadside catchbasins to have 600mm deep sump. No sumps in reynard catchbasins.
 30. Where storm sewer runs along curb line and has been backfilled with approved granular material, then Road Drains (RD) to be 8.0m of 150mm geotextile wrapped perforated subsoil required upstream of all catchbasins and catchbasin manholes and in both directions in the area in the road. Subdrains to be 8" of 1000 or approved equivalent, if storm sewer is backfilled with native soils, a continuous 150mm x 150mm to be provided along curbline.



LEGEND:

- STORM SEWER & SERVICES
- SANITARY SEWER & SERVICES
- WATERMAIN, SERVICES, VALVES, HYDRANTS
- TRANSFORMER
- CABLE TV VAULT
- CABLE TV PEDESTAL
- STREETLIGHT
- FIBRE OPTICS VAULT
- LIGHTING PEDESTAL
- BELL BOX GRADE LEVEL
- WIGHTMAN VAULTS & OPS

No.	DESCRIPTION	DATE	INTL.
13	PIPE MATERIALS ADDED	26/01/23	KJB
12	AS-CONSTRUCTED U/G SERVICES PHASES IV	06/11/22	KJB
11	LOT NUMBERING CHANGED FOR PHASE IV	20/12/21	KJB
10	STORM SEWER REMOVED LOTS 16-21	06/06/21	KJB
9	GENERAL REVISIONS	15/02/21	KJB
8	AS-CONSTRUCTED U/G SERVICES PHASES III	28/12/20	KJB
7	GENERAL REVISIONS	22/06/20	KJB
6	GENERAL REVISIONS	15/03/20	KJB
5	GENERAL REVISIONS	19/05/19	KJB
4	GENERAL REVISIONS	07/01/19	KJB
3	GENERAL REVISIONS	30/11/18	KJB
2	GENERAL REVISIONS	22/02/18	KJB
1	GENERAL REVISIONS	02/11/17	KJB

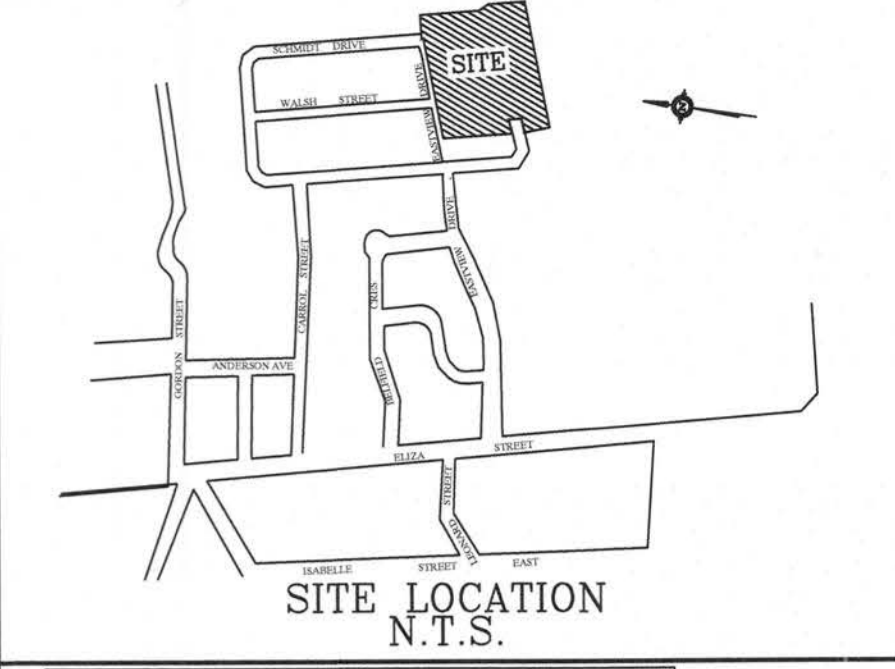
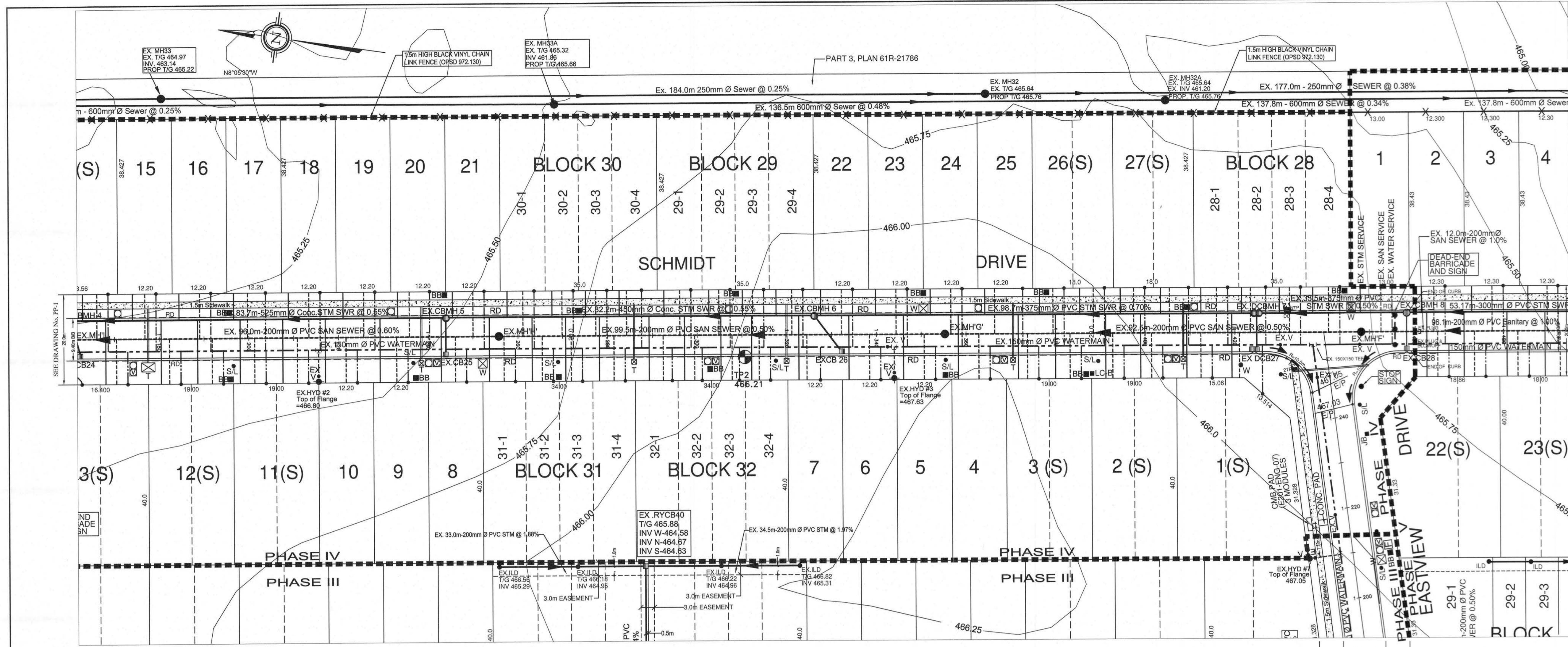
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EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V
ARTHUR, ONTARIO

PLAN AND PROFILE
EASTVIEW DRIVE
STA. 1+000 TO STA. 1+120

DESIGN	WDH	SCALE	HOR. 1 : 500	DWG. No.
CHECKED	KJB	DATE	VERT. 1 : 50	PP-4
PROJECT No.	070119	DATE	FEB 2013	



- BENCHMARKS:**
1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.31
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET, ELEV 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE, ELEV 464.27

- NOTES:**
1. 150mm Watermain shall be CPVC Class 150 (DR18), B137.3 with Ring-Tite joints and Tracer Wire. Tracer Wire shall be 12 gauge, 7 strand copper with plastic coating and shall be connected to the storm pumper connection. Watermains and services shall be installed to the storm pumper connection finished grade above the main or service in sand bedding per OPSD 1001.
 2. Watermain fittings - ductile iron mechanical joint/AWWA C110 approved, pressure rating 1035 kPa.
 3. Watermain shall be Mueller Wedge Gate Valve per AWWA C-509, Mechanical Joint. Valve extensions to be provided where required.
 4. Watermain Novaloc shall be W83200, 3 piece No.6 round base screw type as manufactured by BBSB-ST CROX FOUNDRIES INC., Cambridge, Ontario.
 5. Hydrants shall be Century Type Compression with "Stora" pumper connection. All hydrants to be painted red with black "Stora" cap.
 6. Water services to be 25mm single pass pipe.
 7. Anodes: 12" x 2 1/2" x 1/4" gal shall be installed on all connections to existing iron watermains.
 8. 12" x 2 1/2" x 1/4" gal shall be installed on all iron fittings, valves, main stops, curb stops, etc.
 9. Main stops, curb stops, unions, service boxes and restraints shall be in accordance with the Township of Wellington North Specifications.
 10. Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-182.2.
 11. Sanitary services shall be 150mm PVC-SDR35 meeting the current CSA-182.2 Specifications. Service connections to be of a minimum grade C200. All connections to flow masts shall have manufactured steel all new connections to existing mains shall use stainless steel straps and saddles or Kor-N-Tee.
 12. Sanitary sewer manhole fittings shall be PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA B12.4.
 13. Storm sewers 375mm and less shall be either Concrete (reinforced) or PVC (Ultra-Rib) - 1822-A. Storm sewers greater than 375mm shall be concrete (reinforced).
 14. All storm services shall be 100mm PVC-SDR35 and connected to manhole with predrilled tee or "Kor-N-Tee", minimum 1% gradient.
 15. All catchbasin heads (250mm Single, 300mm Double) shall be PVC-SDR35. Sideroad leads to rear yard catchbasins to be PVC SDR 35 with minimum 1% gradient and 1.2m of cover. Bedding per OPSD 802.01 and 802.03.
 16. All sewer pipes and watermains to be installed in Class 'B'.
 17. Concrete Curbs and sidewalks shall be poured using 32Mpa strength @ 28 days.
 18. All watermains and sewers to be tested in accordance with Township of Wellington North Specifications or as noted in the Contract Documents.
 19. Concrete Curb to be mountable as per OPSD 600.10 and Barrier curb as per OPSD 600.04.
 20. Water Service Boxes to be located at streetline and not in driveways, if possible.
 21. Sump Pumps to discharge to storm services.
 22. Driveways shall be:
 - 450mm Granular 'A'
 - 50mm H.C.C Modified Fine Asphalt
 23. All structures shall allow for an adjustment of between 150mm-200mm with modular joints. All external joints shall be wrapped with 150mm Densotape or equivalent.
 24. This plan shall be read in conjunction with Drawing EPC Erosion Control Plan.
 25. Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing DE-1).
 26. Traffic Warning - Plates shall be installed at sidewalk of curb intersections as per OPSD 310.039 and OPSD 310.033.
 27. Sidewalk ramps at curb intersections shall be 8% maximum gradient.
 28. Where storm services and water services conflict with manhole pipes, storm services to go over watermain and water services to go under storm sewer with 2.5m clearance.
 29. All catchbasin manholes to have 300mm deep sump. All roadside catchbasins to have 600mm deep sump. No sumps in progress catchbasins and all catchbasins to have approved granular material, then Road Drains (RD) to be 8.0m of 150mm geotextile wrapped perforated material and 40mm of 150mm geotextile wrapped manholes and in both directions in the sump in the road. Subdrains to be 1/2" Dia 1000' approved equipment. If storm sewer is backfilled with native soils, a continuous 150mm x subdrain to be provided along curbline.
 30. All catchbasin manholes to have 300mm deep sump. All roadside catchbasins to have 600mm deep sump. No sumps in progress catchbasins and all catchbasins to have approved granular material, then Road Drains (RD) to be 8.0m of 150mm geotextile wrapped perforated material and 40mm of 150mm geotextile wrapped manholes and in both directions in the sump in the road. Subdrains to be 1/2" Dia 1000' approved equipment. If storm sewer is backfilled with native soils, a continuous 150mm x subdrain to be provided along curbline.

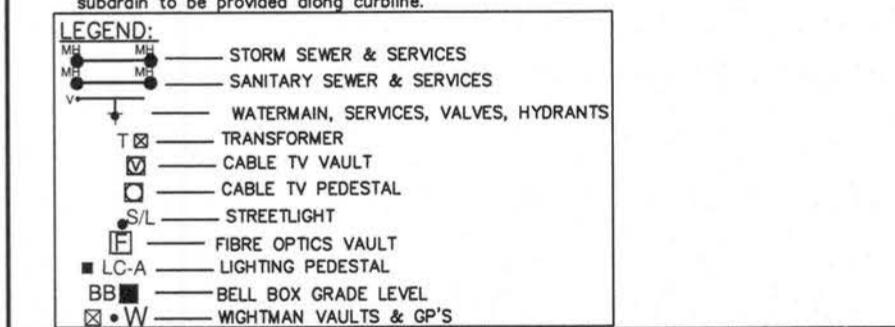
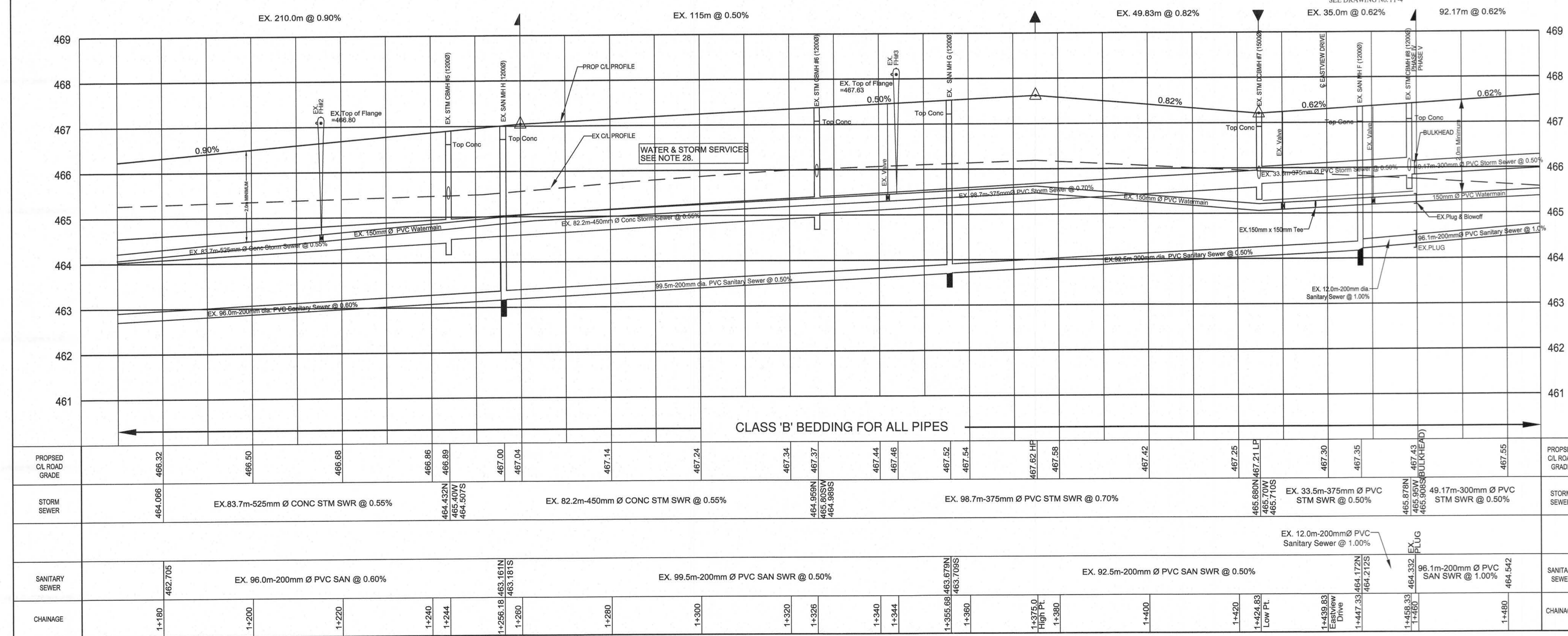
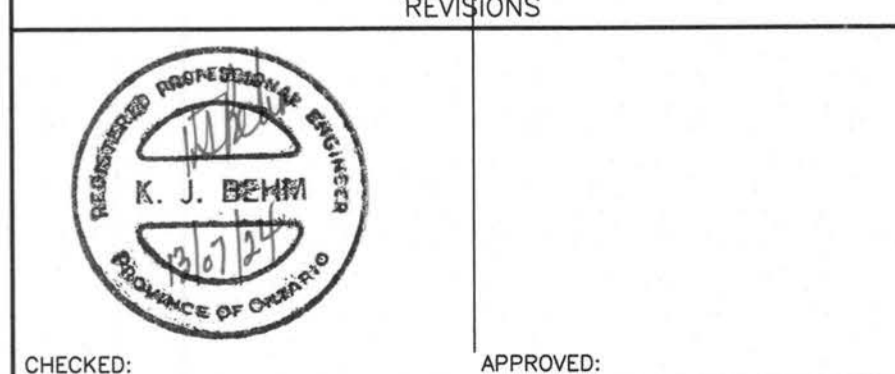


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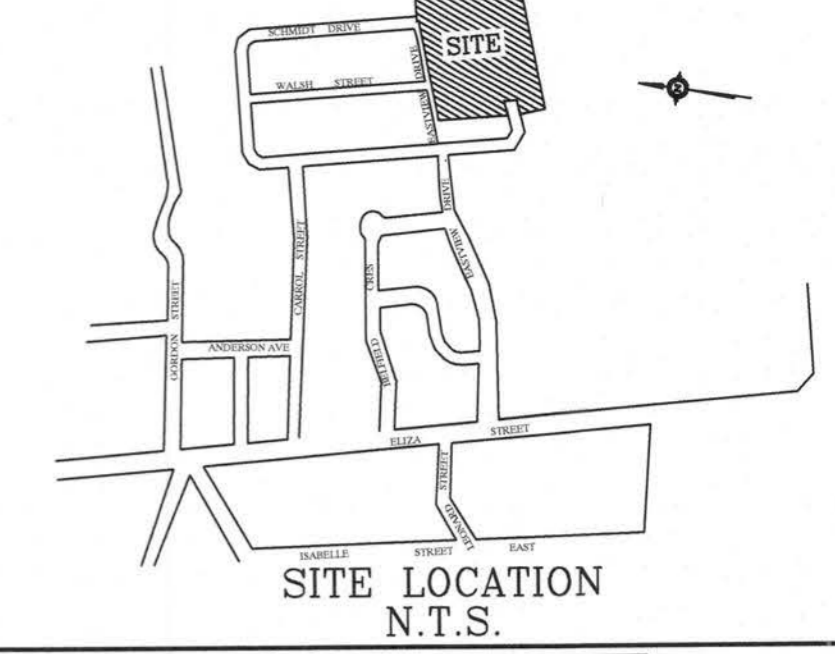
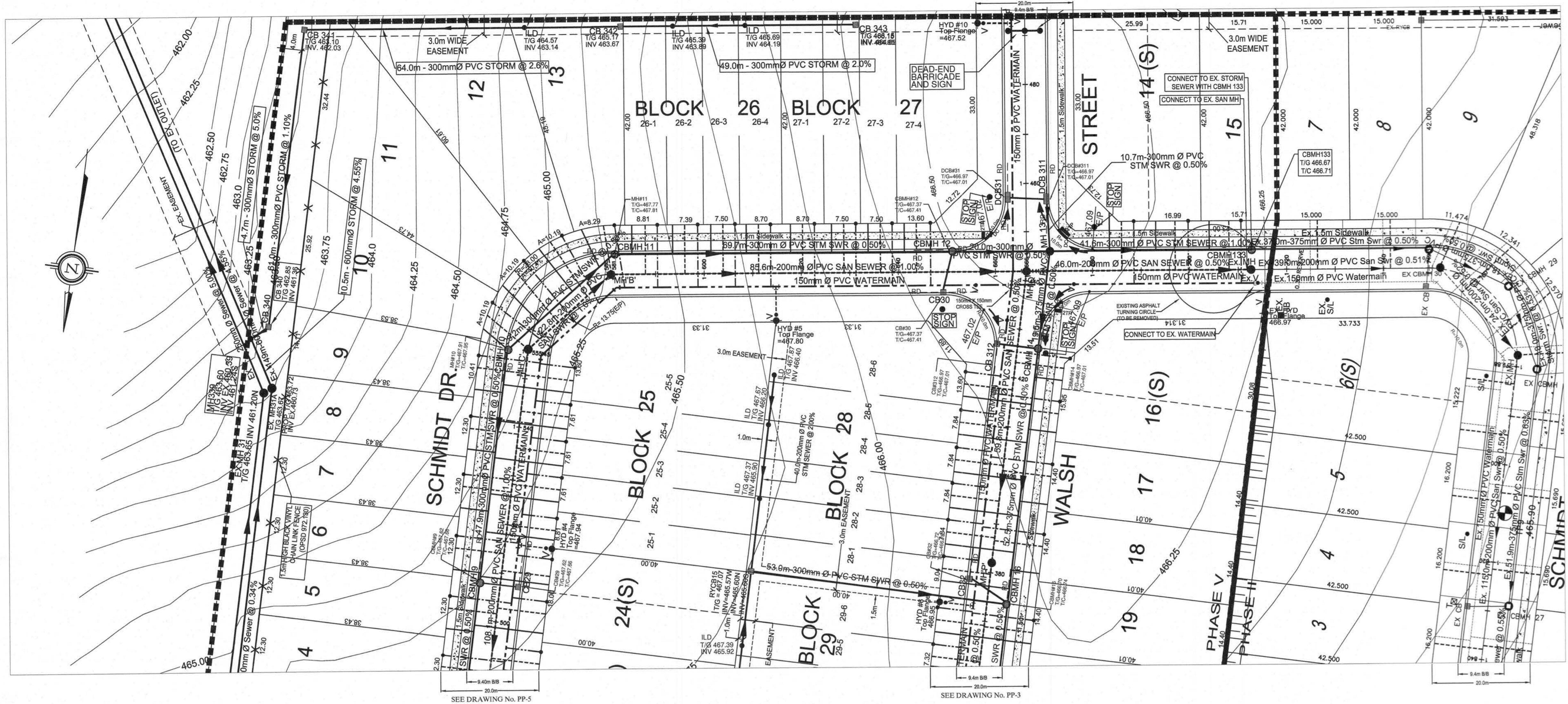
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EASTRIDGE LANDING
SUBDIVISION PHASE III, IV, V
 ARTHUR, ONTARIO

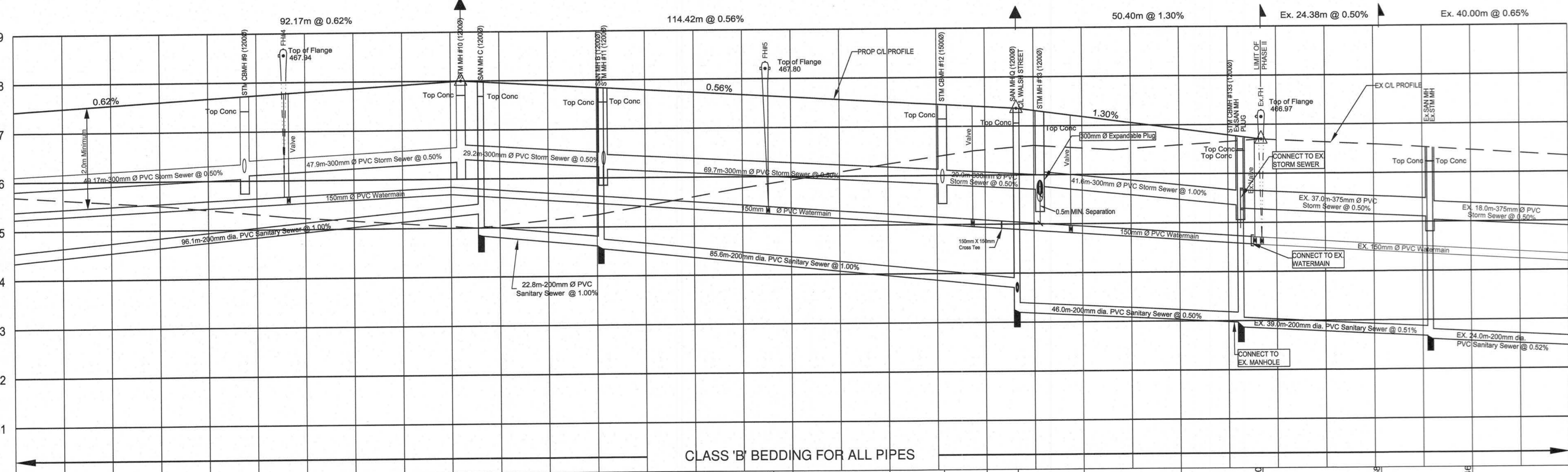
PLAN AND PROFILE
SCHMIDT DRIVE
STA. 1+180 TO STA. 1+480

DRAWN: WDH SCALE: HOR: 1:500 DWG. No.: PP-5
 DESIGN: KJB VERT: 1:500
 CHECKED: KJB DATE: FEB 2013
 PROJECT No.: 070119



- BENCH MARKS:**
1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- NOTES:**
1. 150mm Watermain shall be 2000 PVC Class 150 (R18), B137.3 with Ring-Tite joints and Tracer Wire. Tracer Wire shall be 12 gauge, 7 strand copper with plastic coating and shall be connected to the storm pump connection. Watermain and services shall be installed minimum 2.0 m below finished grade above the main or service in sand bedding per OPSS 1001.
 2. Watermain fittings - ductile iron mechanical joint (AWWA C110 approved, pressure rating 1033 kPa).
 3. Watermain valves shall be Mueller Wedge Gate Valve per AWWA C-509, Mechanical joint. Valve extensions to be provided where required.
 4. Watermain Valve Boxes shall be W8300, 3 piece No.6 round base type as manufactured by BBS-ST CROWN FOUNDRIES INC., Cambridge, Ontario.
 5. Hydrants shall be Corrado Valve Century Vigs Compression with "Storz" pumper connection. All hydrants to be painted red with black "Storz" cap.
 6. Water services to be 25mm single pex pipe.
 7. Anodes: DZP-24, 10.9 kg shall be installed on all iron fittings, valves, main stops, curb stops, etc.
 8. Main stops, curb stops, unions, service boxes and restraints shall be in accordance with the Township of Wellington North Specifications.
 9. Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-B182.2.
 10. Sanitary Services shall be 120mm PVC-SDR35 meeting the current CSA-B182.2 Specifications. Service connections to be of a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and saddles or Kor-N-Tee.
 11. Sanitary sewer manhole fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA B182.4.
 12. Storm sewers 375mm and less shall be either Concrete (reinforced) or PVC Ultra-Rib, as per CSA-B182.4. Storm sewers greater than 375mm shall be concrete (reinforced).
 13. All storm services shall be 100mm PVC-SDR28 and connected to manhole with pretensioned tee or "Kor-N-Tee", minimum 1% gradient.
 14. All catchbasin leads (250mm Single, 300mm Double) shall be PVC-SDR35. Sideload leads to roadway catchbasins to be PVC SDR 35 with minimum 1% gradient and 1.2m of cover.
 15. All sewer pipes and watermain to be installed in Class "B" Bedding per OPSS 800.01 and 802.03.
 16. Pavement design for all roads shall be: 450mm Granular "B" road base, 150mm Granular "A" road base, 50mm H-4 Binder Course Asphalt, 40mm H-3 Surface Course Asphalt, 90mm TOTAL DEPTH.
 17. Concrete Curbs and sidewalks shall be poured using 32Mpa strength @ 28 days.
 18. All watermain and sewers to be laid in accordance with Township of Wellington North Specifications or as noted in the Contract Documents.
 19. Concrete Curb to be mountable as per OPSS 600.10 and Barrier curb as per OPSS 600.04.
 20. Water Service Boxes to be located at streetline and not in driveways, if possible.
 21. Sump Pumps to discharge to storm services.
 22. Driveways shall be: 450mm Granular "B", 150mm Granular "A", 50mm H-3 Modified Fine Asphalt.
 23. All structures shall allow for an adjustment of between 150mm-300mm with music. All exterior joints shall be wrapped with 150mm Densotape or equivalent.
 24. This plan shall be read in conjunction with Drawing EPC Erosion Control Plan.
 25. Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing 301-1).
 26. Traffic Warning Plates shall be installed in sidewalk at curb intersections as per OPSS 310.03P and OPSS 310.03S.
 27. Sidewalk ramps at curb intersections shall be 8% maximum gradient.
 28. Where storm services and water services conflict with manhole pipes, storm services to go over watermain and water services to go under storm sewer with 0.5m clearance.
 29. All catchbasin manholes to have 300mm deep sump. All roadside catchbasins to have 600mm deep sump. No sumps in roadway catchbasins.
 30. Where storm sewer runs along curb line and has been backfilled with approved granular material, then Road Drains (RD) to be 6.0m of 150mm geotextile wrapped perforated sumpdrain required upstream of all catchbasins and roadway manholes and in both directions in the area in the road. Subdrains to be Big "D" Boxes 1000 or approved equivalent. If storm sewer is backfilled with native soils, a continuous 150mm x subdrain to be provided along curbline.



REVISIONS

No.	DESCRIPTION	DATE	INTL.
13	PIPE MATERIALS ADDED	26/01/23	KJB
12	GENERAL REVISIONS	06/11/22	KJB
11	LOT NUMBERING CHANGED FOR PHASE IV	20/12/21	KJB
10	STORM SEWER REMOVED LOTS 16-21	06/06/21	KJB
9	GENERAL REVISIONS	15/02/21	KJB
8	AS-CONSTRUCTED U/G SERVICES PHASES III, IV, V	28/12/20	KJB
7	GENERAL REVISIONS	22/06/20	KJB
6	GENERAL REVISIONS	15/03/20	KJB
5	GENERAL REVISIONS	19/05/19	KJB
4	GENERAL REVISIONS	07/01/19	KJB
3	GENERAL REVISIONS	30/11/18	KJB
2	GENERAL REVISIONS	22/02/18	KJB
1	GENERAL REVISIONS	02/11/17	KJB



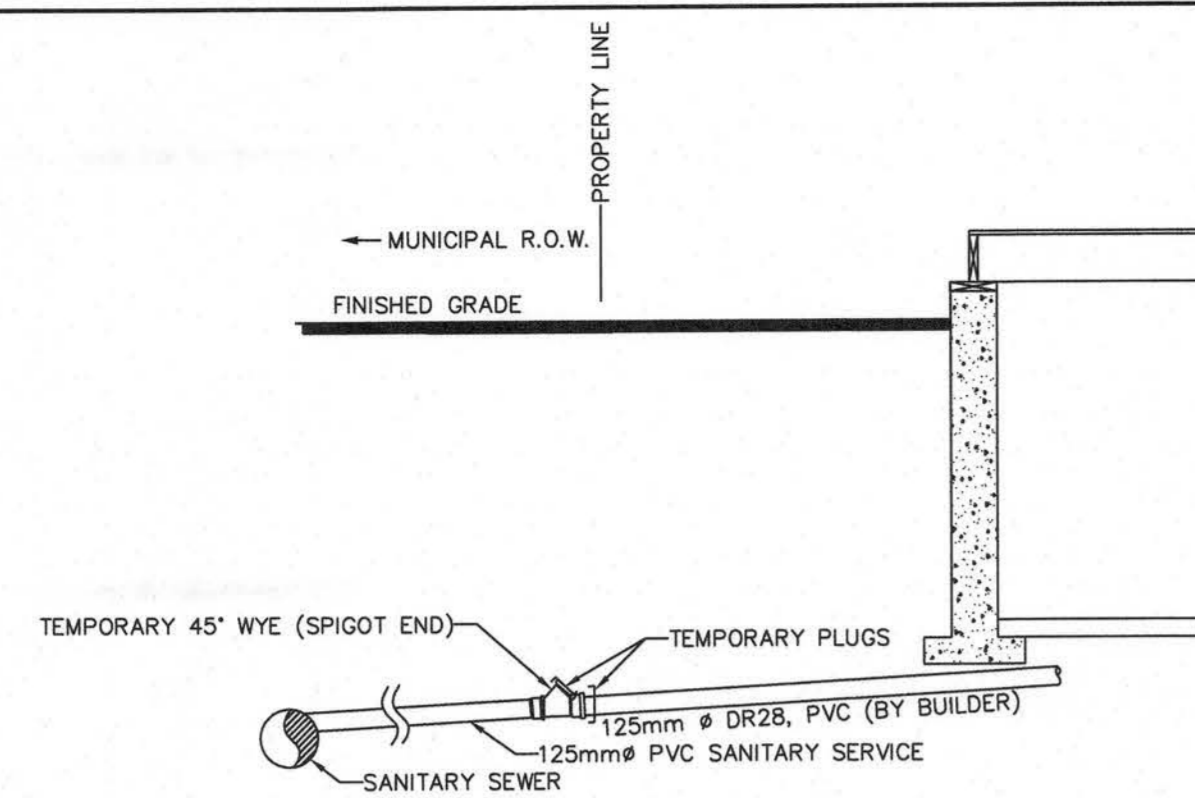
CHECKED: K. J. BEHM AND ASSOCIATES INC. CONSULTING ENGINEERS
 55 ERS STREET EAST, SUITE 101
 WATERLOO, ONTARIO N2L 4K8
 PHONE (519) 742 3510 FAX (519) 742 3462

**EASTRIDGE LANDING
 SUBDIVISION PHASE III, IV, V
 ARTHUR, ONTARIO**

**PLAN AND PROFILE
 SCHMIDT DRIVE
 STA. 1+480 TO STA. 1+720**

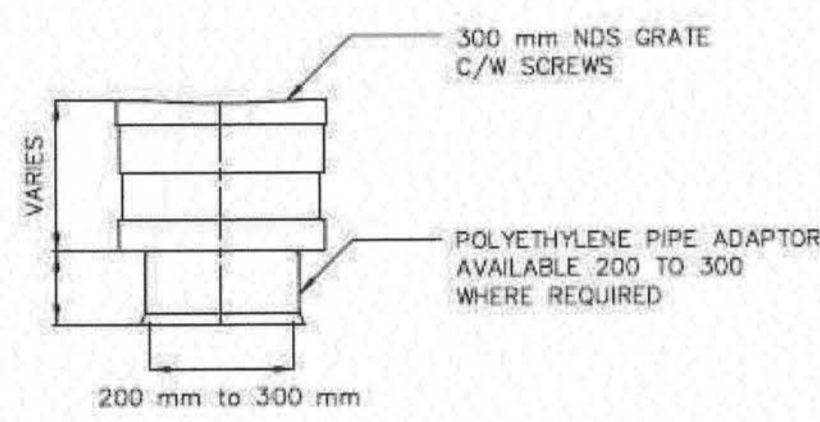
DESIGN	WDH	SCALE	HOR: 1 : 500	DWG. No.
CHECKED	KJB	DATE	VERT: 1 : 30	PP-6
PROJECT No.	070119		FEB 2013	

PROPOSED CL ROAD GRADE	STORM SEWER	SANITARY SEWER	CHAINAGE
467.55	49.17m-300mm Ø PVC STM SWR @ 0.50%	96.1m-200mm Ø PVC SAN SWR @ 1.00%	1+480
467.67	47.9m-300mm Ø PVC STM SWR @ 0.50%		1+500
467.75			1+507.53
467.80			1+511.50
467.92			1+520
468.00 HF			1+540
468.00 HF			1+562.0
468.401SW	29.2m-300mm Ø PVC STM SWR @ 0.50%	22.8m-200mm Ø PVC SAN SWR @ 1.00%	1+565.45
468.97			1+564.834SW
468.97			1+560
468.256NE			1+580
466.175W			1+580.50/464.556W
467.86			1+600
467.75	69.7m-300mm Ø PVC STM SWR @ 0.50%	85.6m-200mm Ø PVC SAN SWR @ 1.00%	1+616.0
467.86			1+620
467.64			1+651.42
467.53			1+660
467.46	20.0m-300mm Ø PVC STM SWR @ 0.50%		1+666.42
467.41			1+671.42
467.38			1+680
(PLUG)			1+682.870 EX W Limit
467.18	41.6m-300mm Ø PVC STM SWR @ 1.00%	46.0m-200mm Ø PVC SAN SWR @ 0.50%	1+712.42
466.92			1+716.82
466.92			1+740
466.56	EX. 37.0m-375mm Ø PVC STM SWR @ 0.50%	EX. 39.0m-200mm Ø PVC SAN SWR @ 0.51%	1+751.42
466.56			1+760
466.15 E	EX. 18.0m-375mm Ø PVC STM SWR @ 0.50%		1+770
465.09 W			

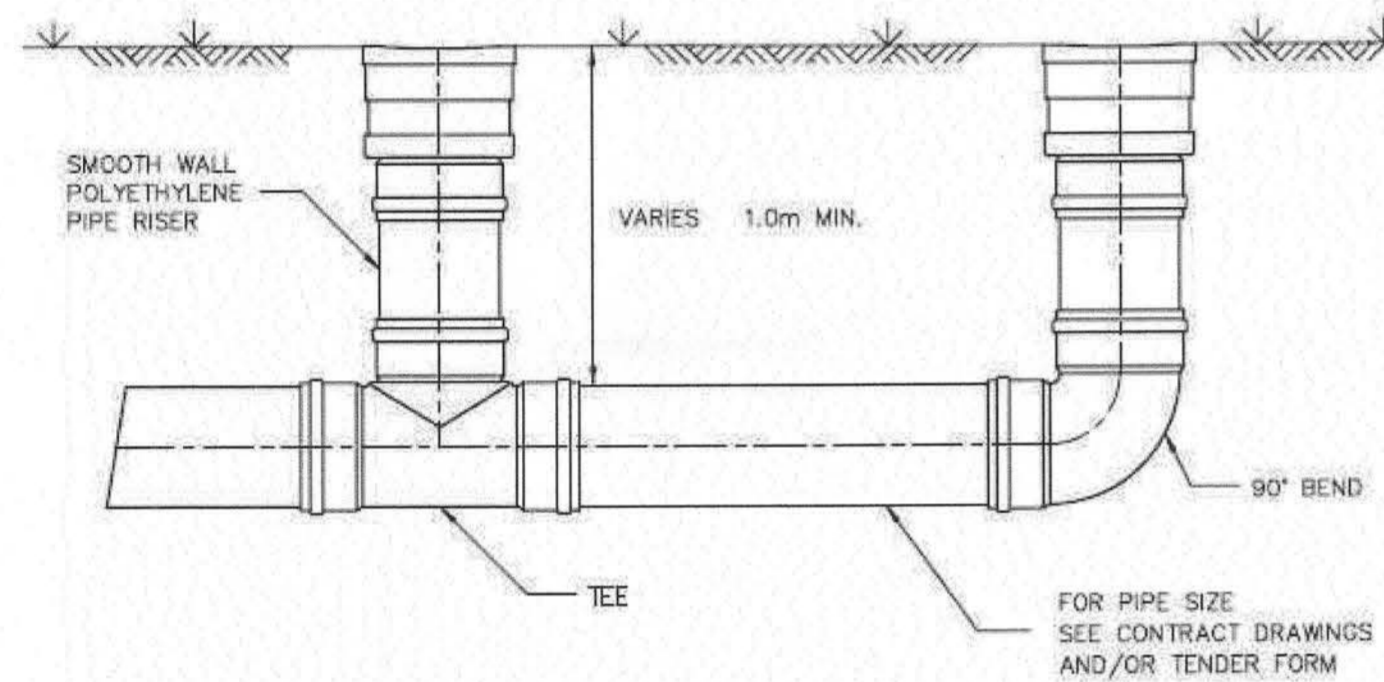


SANITARY SERVICE CONNECTION

STD S3
NTS

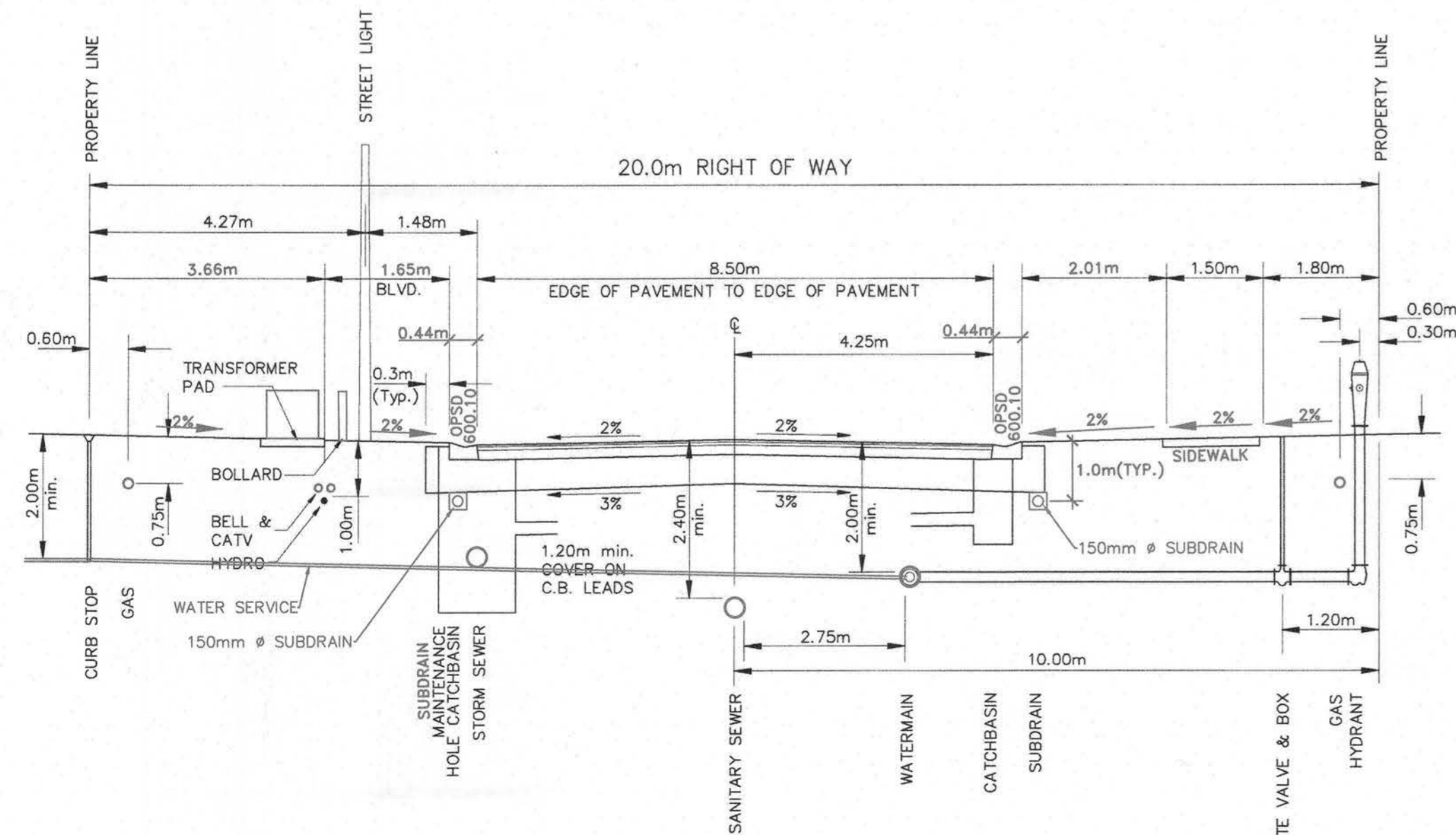


ADAPTOR DETAIL



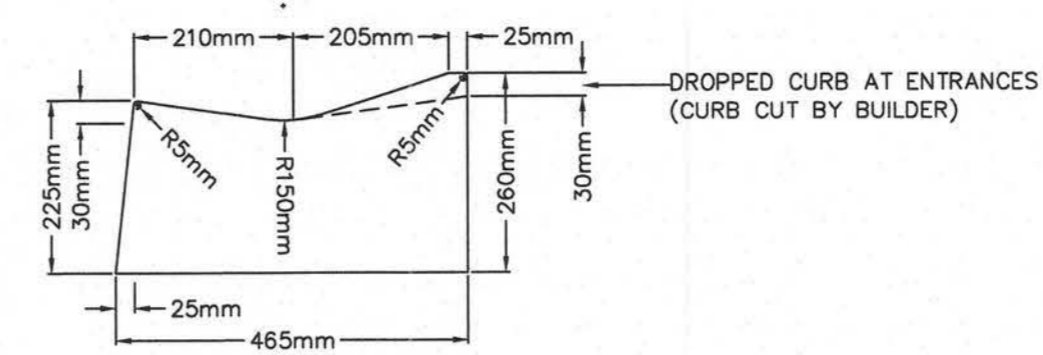
POLYETHYLENE INLINE CATCH BASIN

NTS



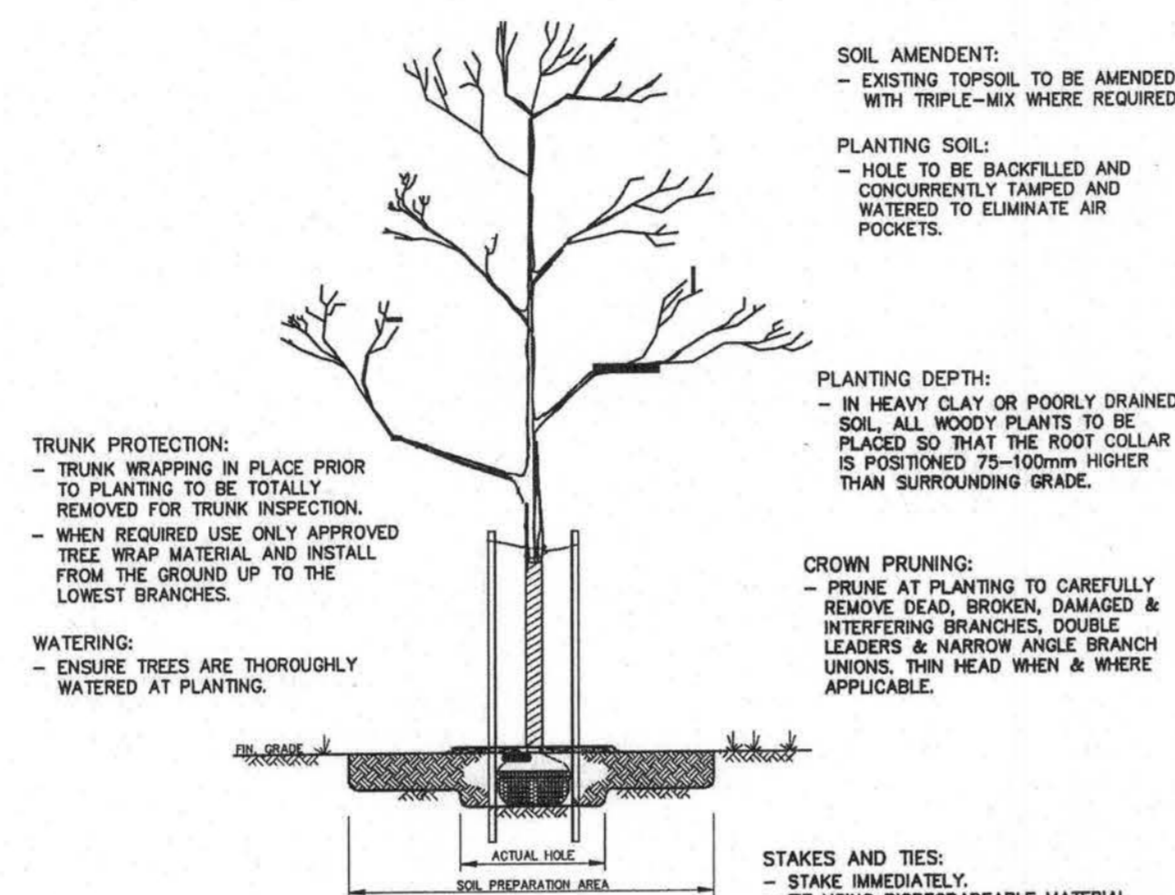
TYPICAL ROAD SECTION

NTS



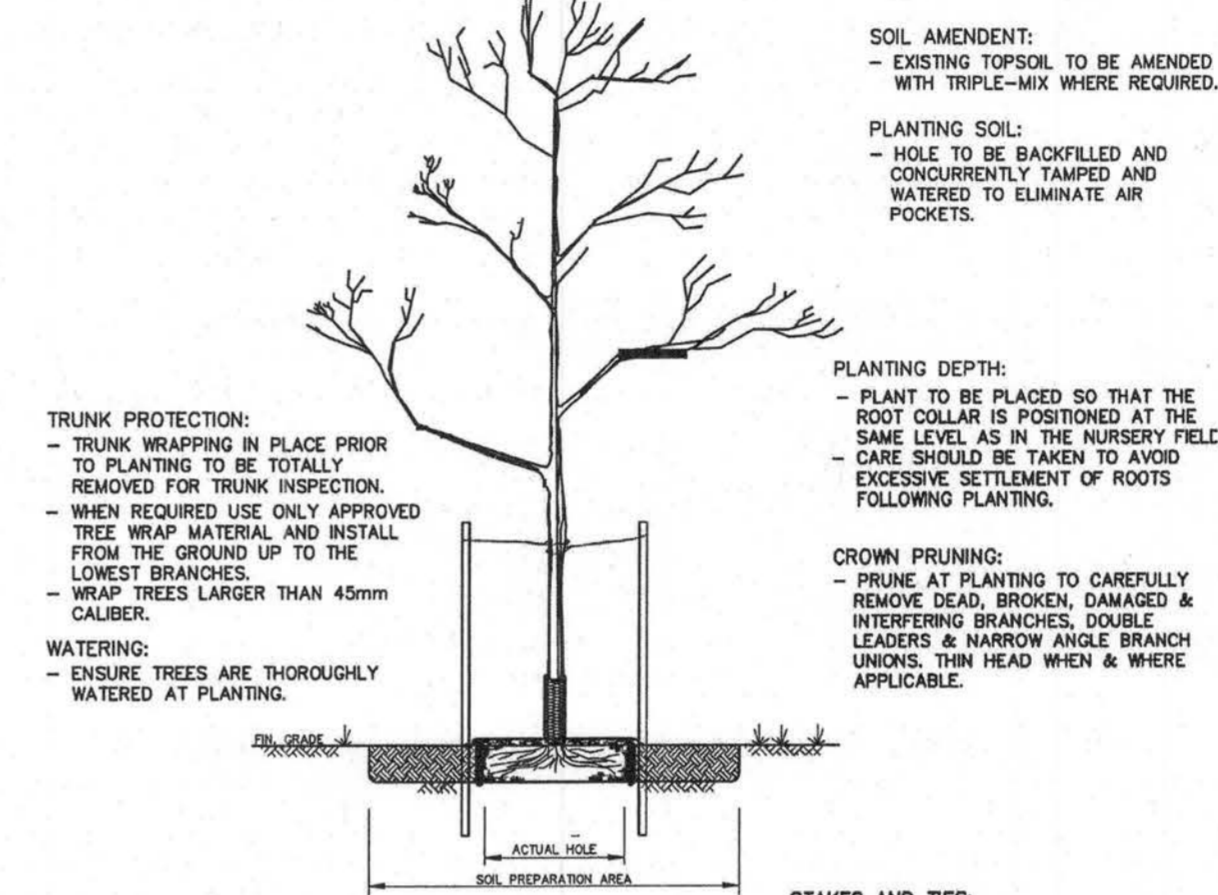
CURB AND GUTTER (OPSD 600.100)

N.T.S.



DECIDUOUS TREE PLANTING DETAIL

NTS



BARE-ROOT PLANTING DETAIL

NTS

- NOTES:
- PAVEMENT DESIGN
 - 450mm GRANULAR 'B' ROAD BASE
 - 150mm GRANULAR 'A' ROAD BASE
 - 50mm HL4 BINDER COURSE ASPHALT
 - 40mm HL3 SURFACE COURSE ASPHALT
 - 690mm TOTAL DEPTH
 - CONCRETE CURB & GUTTER- OPSD 600.10 (MOUNTABLE), OPSD 600.04 (BARRIER)
 - WHERE LOT SERVICES CONFLICT WITH STORM SEWERS AND WATERMANS, STORM SERVICES SHALL BE PLACED UNDER WATERMAIN, AND WATER SERVICES SHALL BE PLACED OVER STORM SEWER WITH MINIMUM 0.5m CLEARANCE.
 - WHERE UTILITY CABLES/MAINS CONFLICT WITH STORM SEWERS, UTILITIES SHALL BE INSTALLED UNDER STORM SEWERS.
 - CONCRETE SIDEWALKS TO BE 150MM THICKNESS, 32 MPa AT 30 DAYS, INCLUDING 150MM THICKNESS OF GRANULAR 'A' BEDDING COMPACTED TO 98% S.P.D.
 - BOULEVARDS TO HAVE MINIMUM 200mm THICKNESS OF TOPSOIL AND No.1 NURSERY SOD.

NOTES:

BOULEVARD TREES:

- Trees shall be planted in front of every lot on Private Property at a location 300 mm from the street Property Line or maximum spacing of 25 m.
- On corner lots a tree shall be planted every 15 m on Private Property the adjacent side yard on the flanking street.
- Trees are to be planted so as not to interfere with other street functions or services when the tree matures. Where it is not possible to conform with the foregoing, the trees shall be planted at locations approved by the Municipality.

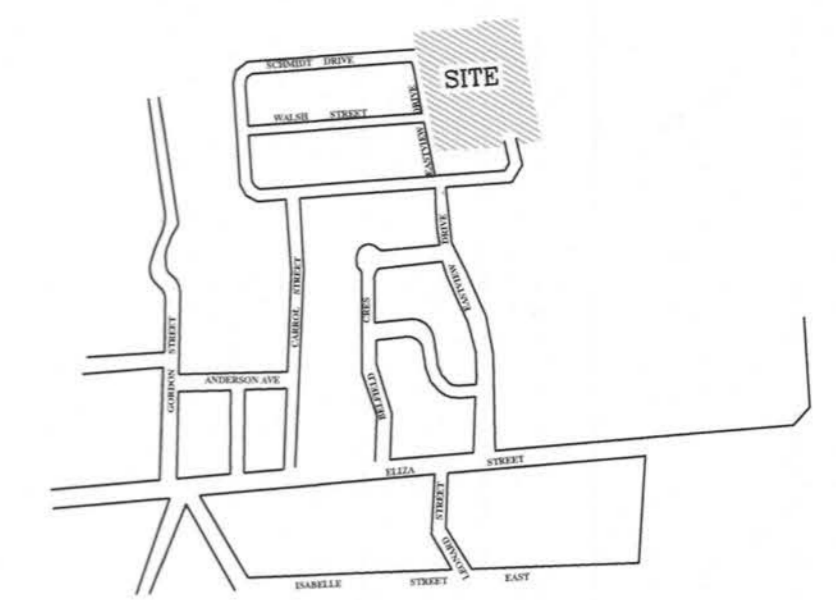
- Planting of trees shall be as detailed on Standard Drawing L1 and L2. They shall be watered at time of planting and every two (2) weeks thereafter up to the expiration of the guarantee period. The guarantee period shall be one (1) year from the date of planting and the period for planting shall be Spring and Fall only.

- All trees shall be No. 1 nursery stock, 2.5 m minimum height with a minimum caliper of 60 mm measured 300 mm above ground level.
- All areas for planting shall be stabilized with sod or seed as required, prior to planting of trees.

1.4 Species

- Alternate species shall be provided on all streets. A species list shall be provided and approved for each street, prior to any planting.
- The species that are approved for planting on Municipal property shall include the following:

- Acer Nigrum Black Maple
- Acer Rubrum Red Maple
- Acer Saccharum Sugar Maple
- Aesculus Hippocastanum Common Horse Chestnut
- Phellodendron Amurensis Amur Cork Tree
- Celtis Occidentalis Common Hackberry



SITE LOCATION
N.T.S.

8	SANITARY SERVICE CONNECTION DETAIL REVISED	26/01/23	KJB
7	GENERAL REVISIONS	22/06/20	KJB
6	NOTE #6 ADDED	15/03/20	KJB
5	GENERAL REVISIONS	19/05/19	KJB
4	GENERAL REVISIONS	01/07/19	KJB
3	GENERAL REVISIONS	30/11/18	KJB
2	GENERAL REVISIONS	02/11/17	KJB
1	GENERAL REVISIONS	14/02/17	KJB
No.	DESCRIPTION	DATE	INTL.

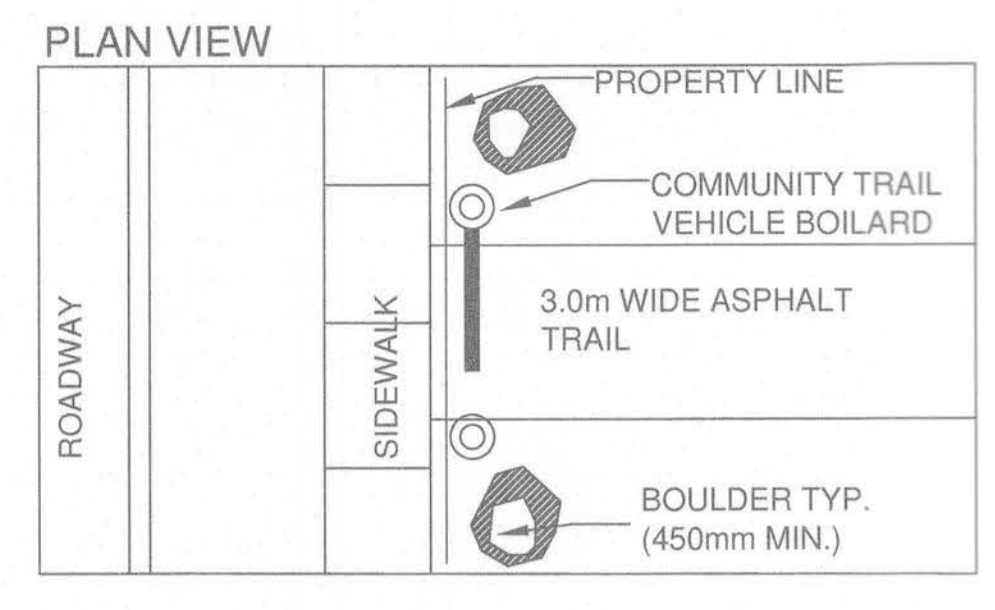
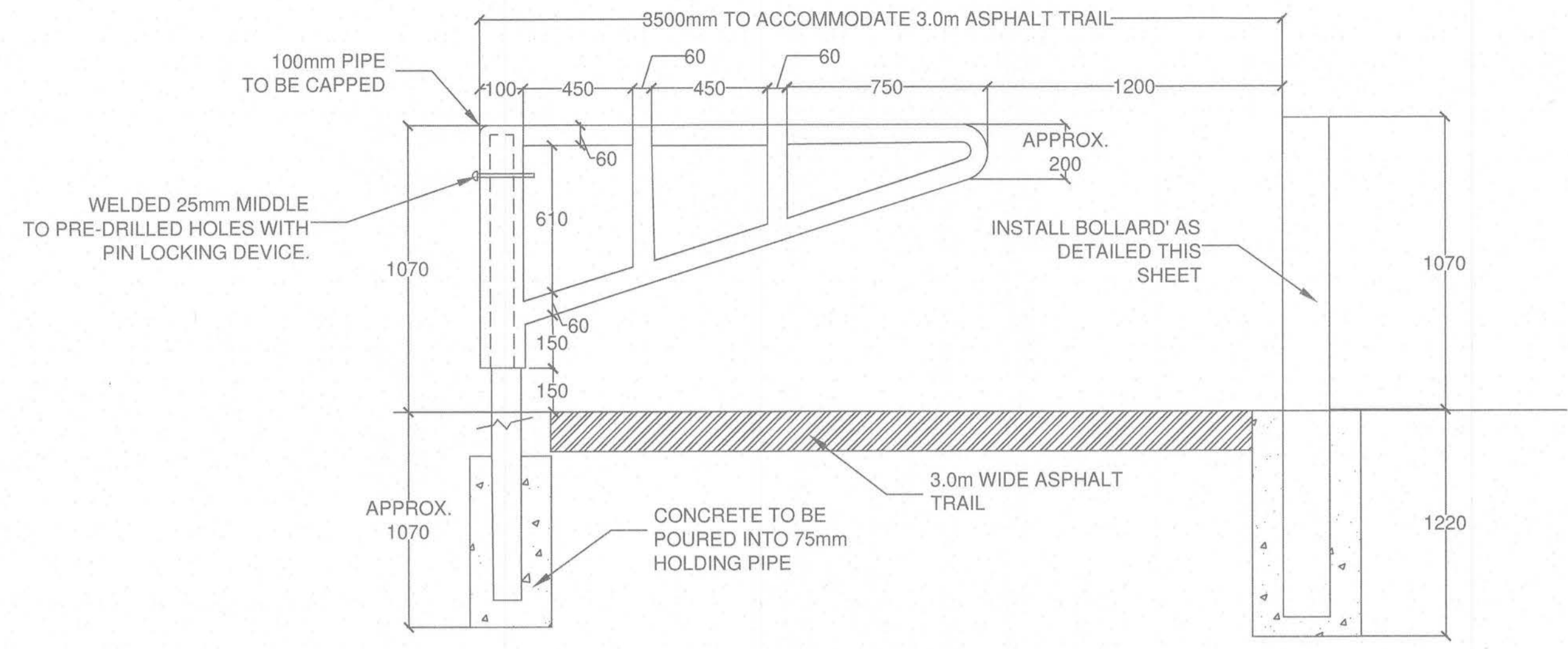
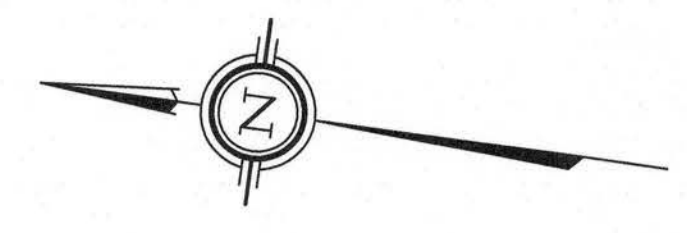
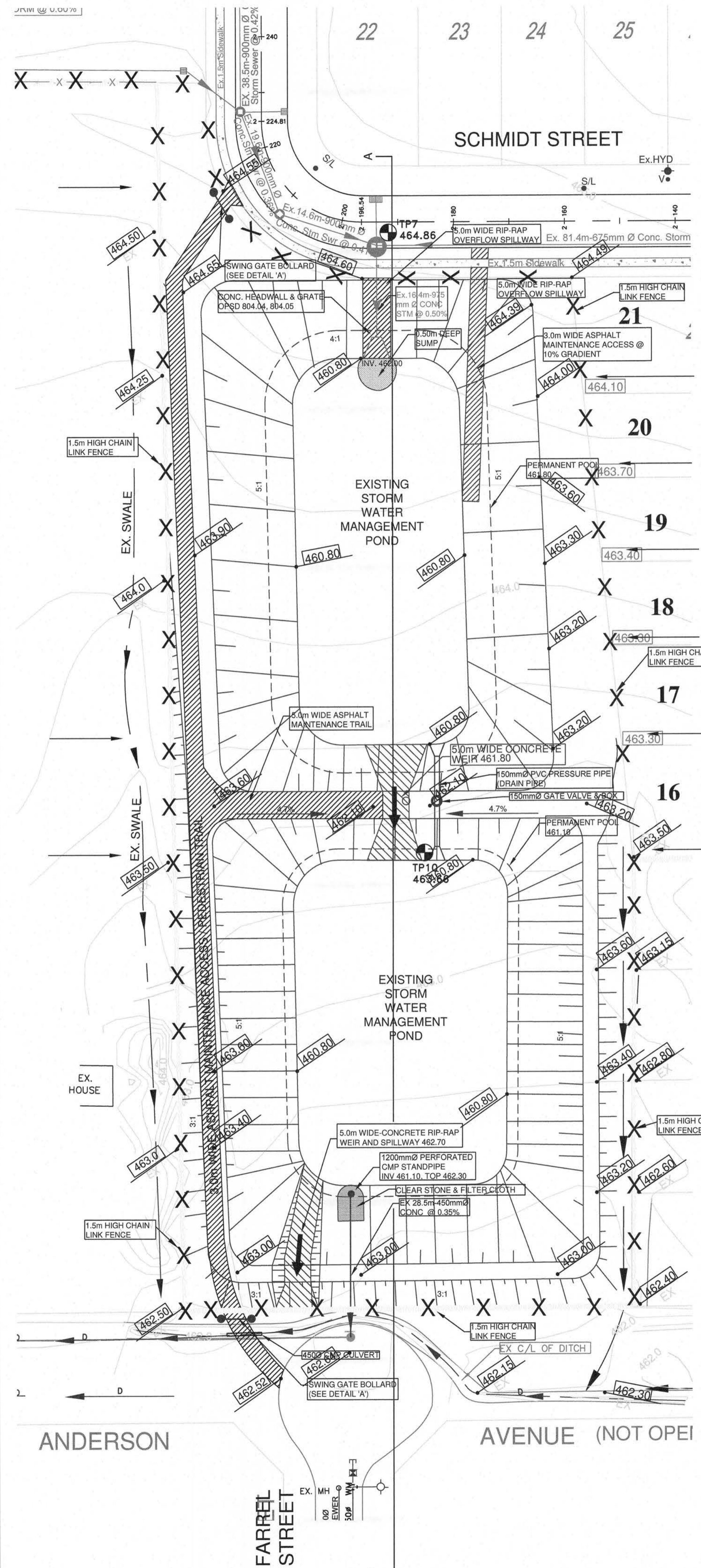


CHECKED: [Signature] APPROVED: [Signature]
K. J. BEHM AND ASSOCIATES INC.
 CONSULTING ENGINEERS
 55 ERB STREET EAST, SUITE 101
 WATERLOO, ONTARIO N2J 4K8
 PHONE: (519) 742-3510 FAX: (519) 742-3462

EASTRIDGE LANDING SUBDIVISION PHASE III, IV, V ARTHUR, ONTARIO

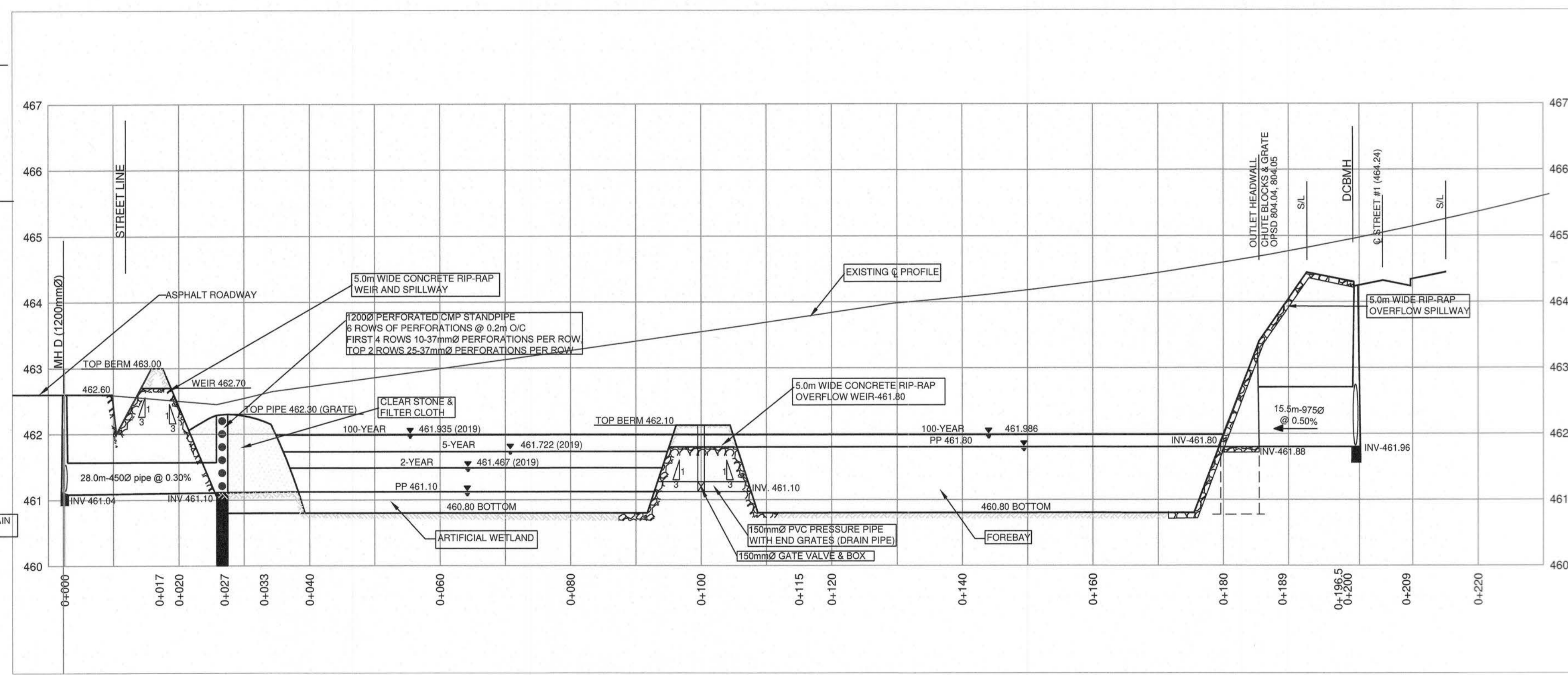
DETAILS PLAN

DRAWN	WDH	SCALE	N.T.S.	DWG. No.
DESIGN	KJB			DET-1
CHECKED	KJB	DATE	APRIL, 2016	
PROJECT No.	070119			

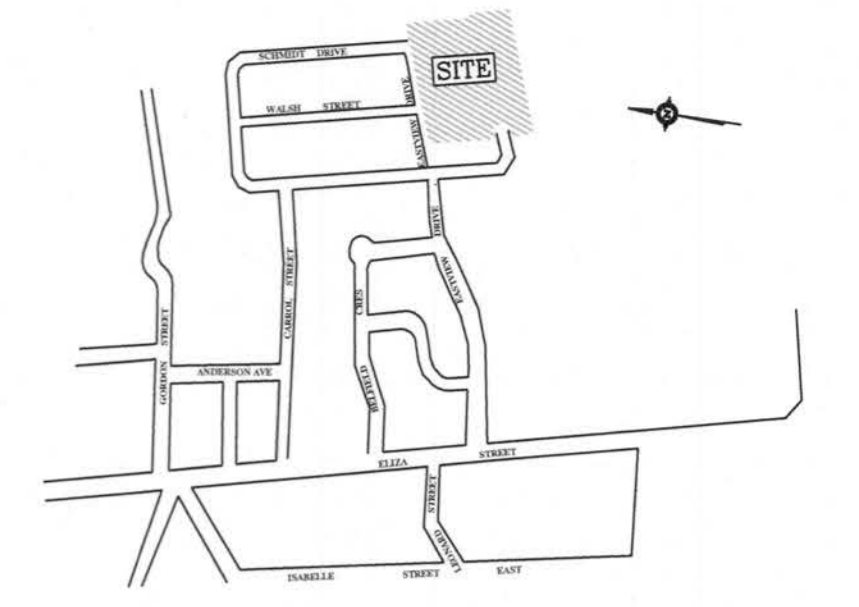


NOTE:
 -GATE RESTS ON 75mm POST SLEEVED INTO 100mm GATE SLEEVE
 -75mm POST FILLED WITH CONCRETE
 -PIPE TO BE GALVANIZED
 -ALL DIMENSIONS HAVE BEEN CONVERTED TO MILLIMETRES.

DETAIL 'A' COMMUNITY TRAIL VEHICLE BOLLARD N.T.S.



SECTION A-A' N.T.S.



LEGEND

- PROPOSED ELEVATIONS
- CHAIN LINK FENCE
- EXISTING CONTOURS

No.	DESCRIPTION	DATE	INTL.
10	GENERAL REVISIONS	22/06/20	KJB
9	WATER ELEVATIONS CHANGED	07/01/19	KJB
8	GENERAL REVISIONS	30/11/18	KJB
7	GENERAL REVISIONS	02/11/17	KJB
6	GENERAL REVISIONS	14/02/17	KJB
5	STORM POND ELEVATIONS CHANGED	21/07/16	KJB
4	GENERAL REVISIONS	27/10/06	KJB
3	GENERAL REVISIONS	29/09/06	KJB
2	STANDPIPE PERFORATIONS	28/02/06	KJB
1	GENERAL REVISIONS	17/02/06	KJB

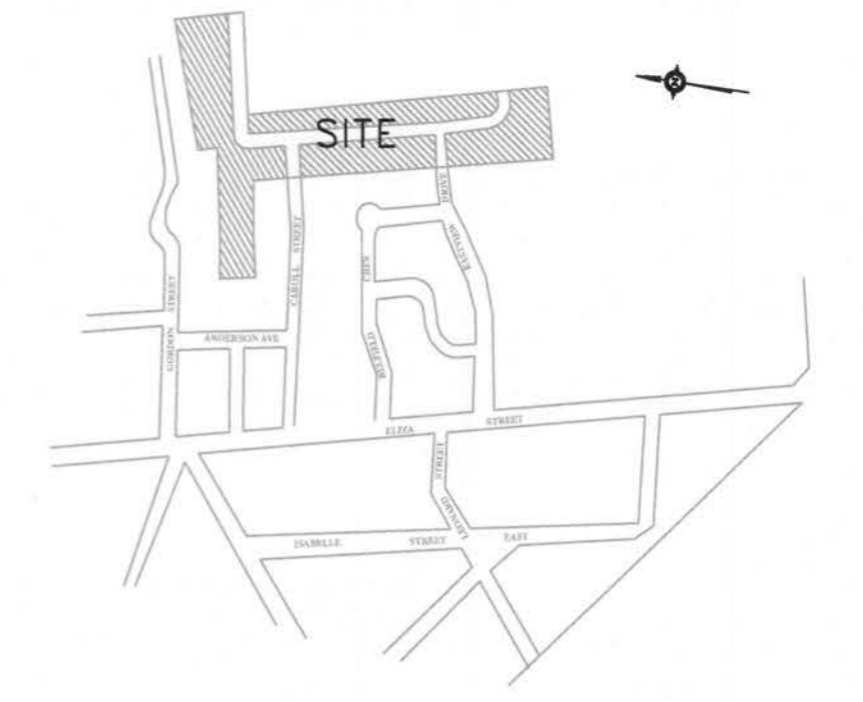


APPROVED:
 K. J. BEHM AND ASSOCIATES INC.
 CONSULTING ENGINEERS
 55 ERB STREET EAST, SUITE 101
 WATERLOO, ONTARIO N2K 4K8
 PHONE (519) 742 3510 FAX (519) 742 3462

EASTRIDGE LANDING
 SUBDIVISION PHASE I-V
 ARTHUR, ONTARIO

STORMWATER
 MANAGEMENT
 PLAN

DRAWN	SM	SCALE	DWG. No.
DESIGN	KJB	1 : 500	SWM1
CHECKED	KJB	DATE	JULY 2006
PROJECT No.	260606		



SITE LOCATION
N.T.S.

- BENCH MARKS:**
1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- NOTES:**
1. 150mm ϕ Watermain shall be C900 PVC Class 150(DR18) B137.3 with Ring-Tie joints and Tracer Wire. Tracer Wire shall be 12 gauge 7 strand copper with plastic coating and shall be connected to both on bottom flange of fire hydrant. 38mm ϕ Watermains shall be Type 'K' copper pipe. Watermains and services shall be installed minimum 2.0 m below finished grade above the main or service.
 2. Watermain fittings -Ductile Iron,mechanical joint,AWWA C110 approved, pressure rating 1035 kPa. -PVC bends and tees to be used with mechanical joint restraints.
 3. Watermain valves shall be Mueller "Super Seal" Resilient Gate Valve, mechanical joint.
 4. Watermain Valve Boxes shall be VB3100, 3 place No.6 round base screw type as manufactured by BIBBY-ST CROIX FOUNDRIES INC., Cambridge, Ontario.
 5. Hydrants shall be Canada Valve New Century Type Compression or McAnby M-59, with "Storm" bumper connection. All hydrants to be painted yellow with black "Storm" cap.
 6. Water services to be 20mm single Type 'K' copper pipe.
 7. Anodes: DZP-24, 10.9 kg shall be installed on all connections to existing iron watermains. DZP-12, 5.4 kg shall be installed on all iron fittings, valves etc.
 8. Main stops, curb stops, unions and service boxes shall be in accordance with the Township of Wellington North Specifications.
 9. Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-182.2.
 10. Sanitary Services shall be 100mm PVC-SDR28 meeting the current CSA-182.2 Specifications. Service connections to be at a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and saddles. Sanitary Services shall be 100mm PVC-SDR28 meeting the current.
 11. Sanitary sewer mainline fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA-182.2.
 12. Storm sewers 375mm and less shall be either Concrete E.S. or PVC Ultra-Rib as per CSA-182.4
 13. All storm services shall be 100mm PVC-SDR28 and connected to mainline with prefabricated tee or "Kou-N-Tee"
 14. All catchbasin leads (250mm Single, 300mm Double) shall be PVC-SDR35.
 15. All sewer pipes and watermains to be installed in Class 'B' Bedding per OFSD 802.01 and 802.03.
 16. Pavement design for all roads shall be:
450mm Granular 'B' road base
150mm Granular 'A' road base
50mm HL4 Binder Course Asphalt
30mm HL3 (fine) Surface Course Asphalt
 17. Concrete Curbs and sidewalks shall be poured using 30MPa strength @ 28 days.
 18. All watermains and sewers to be tested in accordance with Township of Centre Wellington Specifications or as noted in the Contract Documents.
 19. Road subdrains to be installed if required as determined by site conditions at time of construction. Subdrains shall be 100mm ϕ perforated plastic drainage tile c/w geotextile filter sock.
 20. Concrete Curb to be barrier as per OFSD 800.10.
 21. Water Service Boxes to be located at limit of easement.
 22. Sump Pumps to discharge to storm services.
 23. Driveways shall be:
150mm Granular 'B'
150mm Granular 'A'
50mm HL3 Asphalt
 24. All structures shall allow for an adjustment of between 150mm-300mm with modulus.
 25. This plan shall be read in conjunction with drawing #2-Grading and Erosion Control Plan and the approved Site Plan and the approved Landscaping Plan (by others).
 26. Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing #63).

* WATERMAIN TO CROSS UNDER STORM WITH A MINIMUM OF 0.5m CLEARANCE.

No.	DESCRIPTION	DATE	INTL.
3	AS-CONSTRUCTED U/G SERVICES	20/07/07	KJB
2	GENERAL REVISIONS	27/10/06	KJB
1	GENERAL REVISIONS	25/09/06	KJB



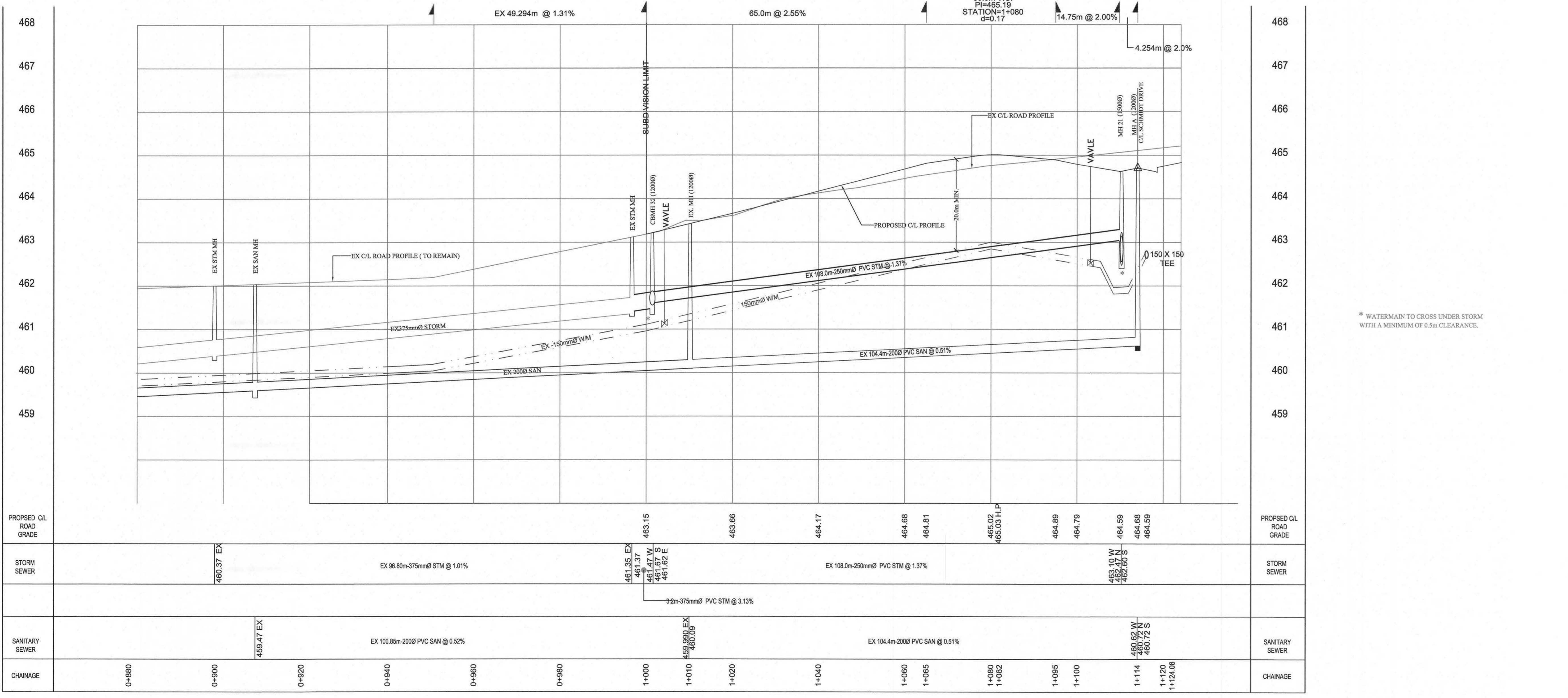
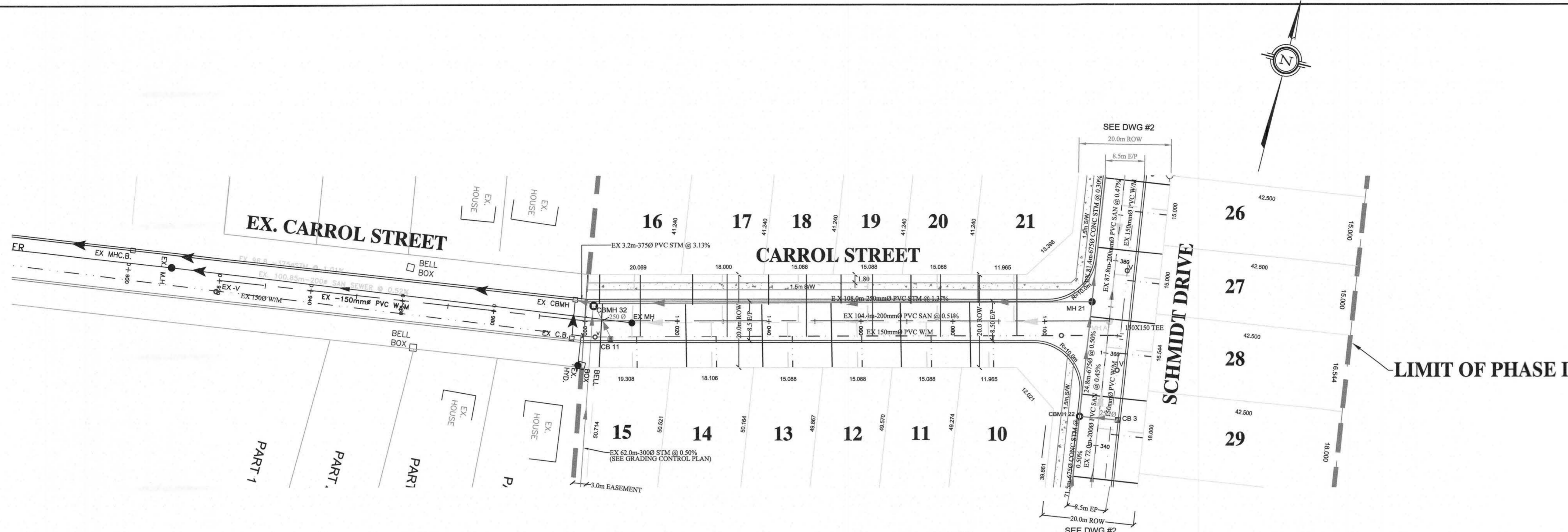
CHECKED: APPROVED:

K. J. BEHM AND ASSOCIATES INC.
CONSULTING ENGINEERS
60 NEW DUNDAS RD., KITCHENER, ONTARIO, N2P 2N6
PHONE: (519) 742 3510 FAX: (519) 742 3462

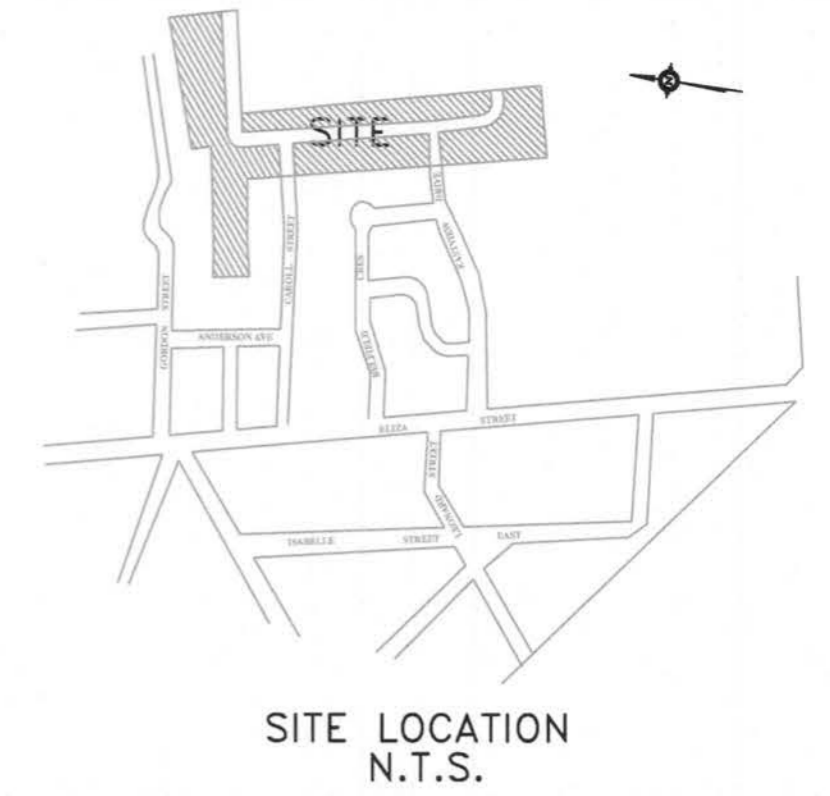
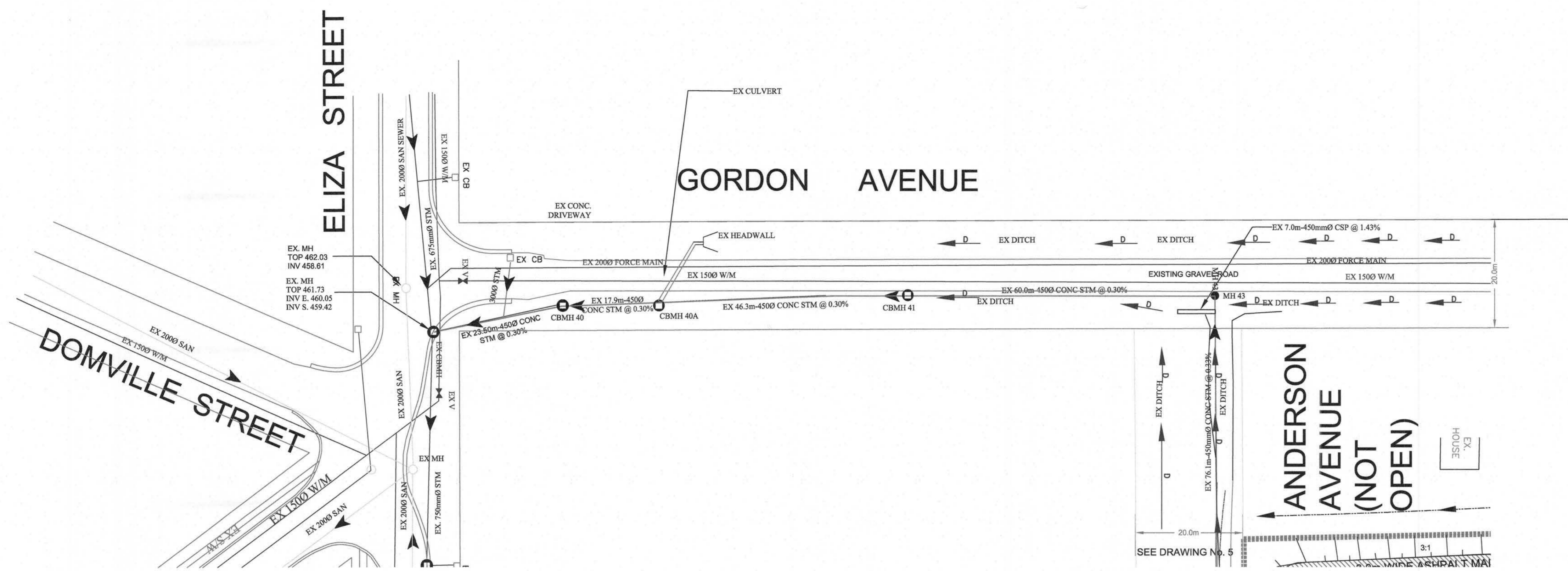
**EASTRIDGE LANDING
SUBDIVISION PHASES I AND II
ARTHUR, ONTARIO**

**PLAN AND PROFILE
CARROL STREET
STA. 0+880 TO STA. 1+124.08**

DRAWN	SM	SCALE	1 : 500	DWG. No.
DESIGN	KJB	DATE	JUNE 2006	4
CHECKED	KJB	PROJECT No.	280606	

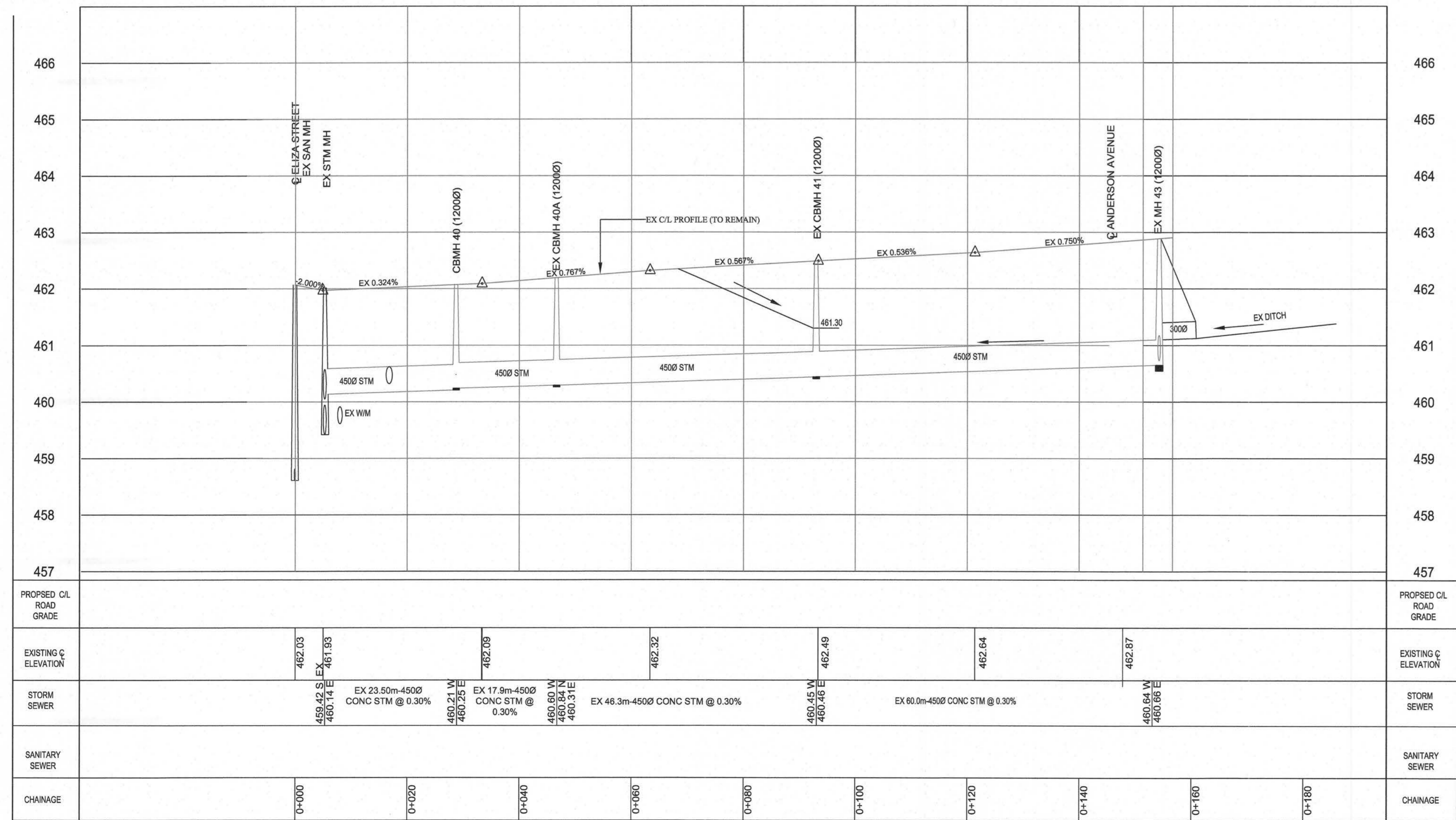


PROPOSED C/L ROAD GRADE	468	467	466	465	464	463	462	461	460	459	PROPOSED C/L ROAD GRADE						
STORM SEWER											STORM SEWER						
SANITARY SEWER											SANITARY SEWER						
CHAINAGE	0+880	0+900	0+920	0+940	0+960	0+980	1+000	1+010	1+020	1+040	1+060	1+080	1+100	1+114	1+120	1+124.08	CHAINAGE



- BENCH MARKS:**
1. TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 2. TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.31
 3. TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW ANNUE. ELEV 464.27

- NOTES:**
1. 150mm² Watermain shall be C900 PVC Class 150(DR18), B137.3 with Ring-Tile joints and Tracer Wire. Tracer Wire shall be 12 gauge, 7 strand copper with plastic coating and shall be connected to bolt on bottom flange of fire hydrant. 38mm² Watermain shall be Type 'K' copper pipe. Watermain and services shall be installed minimum 2.0 m below finished grade above the main or service.
 2. Watermain fittings - Ductile Iron, mechanical joint AWWA C110 approved, pressure rating 1035 kPa.
 3. Watermain valves shall be Mueller "Super Seal" Resilient Gate Valve, mechanical joint.
 4. Watermain Valve Boxes shall be VES100, 3 piece No.6 round base screw type as manufactured by BIBBY-ST CROIX FOUNDRIES INC., Cambridge, Ontario.
 5. Hydrants shall be Canada Valve New Century Type Compression or Molybly 14.56 with "Storz" pump connection. All hydrants to be painted yellow with black "Storz" cap.
 6. Water services to be 20mm single Type 'K' copper pipe.
 7. Anodes - DZP-24, 10.8 kg shall be installed on all connections to existing iron watermain.
 8. Main stops, curb stops, unions and service boxes shall be in accordance with the Township of Wellington North Specifications.
 9. Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-182.2.
 10. Sanitary Services shall be 100mm PVC-SDR28 meeting the current CSA-182.2 Specifications. Service connections to be at a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and saddles. Sanitary Services shall be 100mm PVC-SDR28 meeting the current.
 11. Sanitary sewer mainline fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA-182.2.
 12. Storm sewers 375mm and less shall be either: Concrete E.S. or PVC Ultra-Rib as per CSA-182.4
 13. All storm services shall be 100mm PVC-SDR28 and connected to mainline with pretensioned tee or "No-Ar-Tee"
 14. All catchbasin leads (250mm Single, 300mm Double) shall be PVC-SDR35.
 15. All sewer pipes and watermain to be installed in Class 'B' Bedding per OPSD 802.01 and 802.03.
 16. Pavement design for all roads shall be:
450mm Granular 'B' road base
150mm Granular 'A' road base
50mm H-4 Binder Course Asphalt
35mm H-3 (Fine) Surface Course Asphalt
 17. Concrete Curbs and sidewalks shall be poured using 30MPa strength @ 28 days.
 18. All watermain and sewers to be tested in accordance with Township of Centre Wellington Specifications or as noted in the Contract Documents.
 19. Road subdrains to be installed if required as determined by site conditions at time of construction. Subdrains shall be 100mm² perforated elastic drainage the one geotextile filter sock.
 20. Concrete Curb to be barrier as per OPSD 600.10
 21. Water Service Boxes to be located at limit of easement.
 22. Sump Pumps to discharge to storm services.
 23. Driveways shall be:
150mm Granular 'B'
150mm Granular 'A'
50mm H-3C Asphalt
 24. All structures shall allow for an adjustment of between 150mm-300mm with modulus.
 25. This plan shall be read in conjunction with dwg #2- Grading and Erosion Control Plan and the approved Site Plan and the approved Landscaping Plan (by others).
 26. Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing #G3).



No.	DESCRIPTION	DATE	INTL.
2	AS-CONSTRUCTED U/G SERVICES	20/07/07	KJB
1	GENERAL REVISIONS	29/09/06	KJB

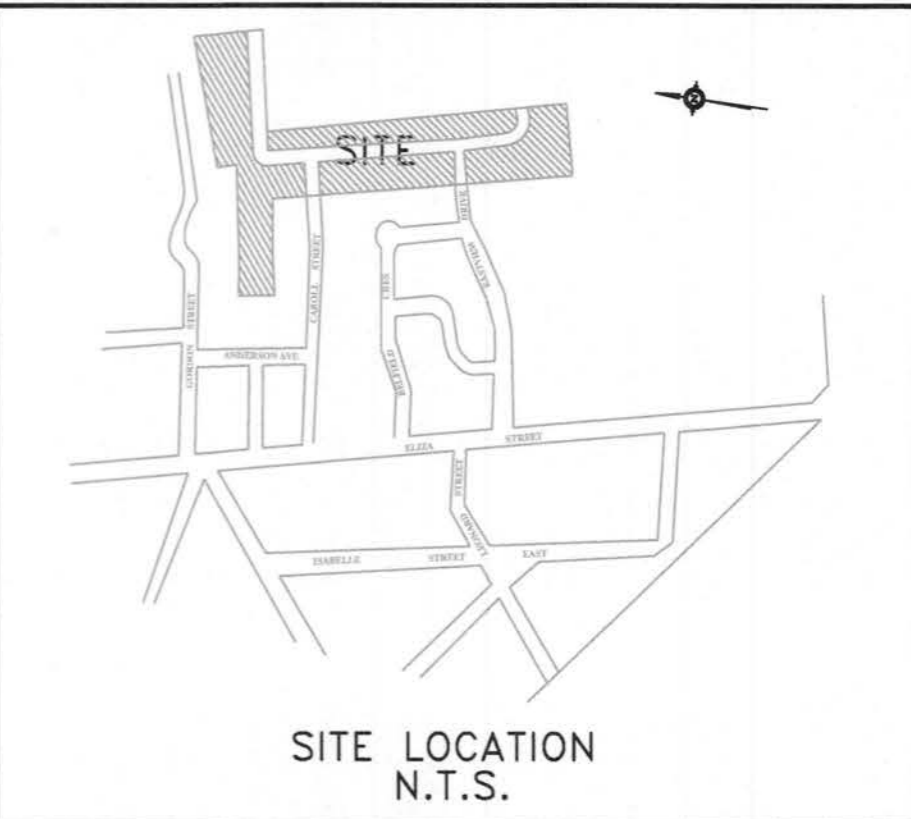
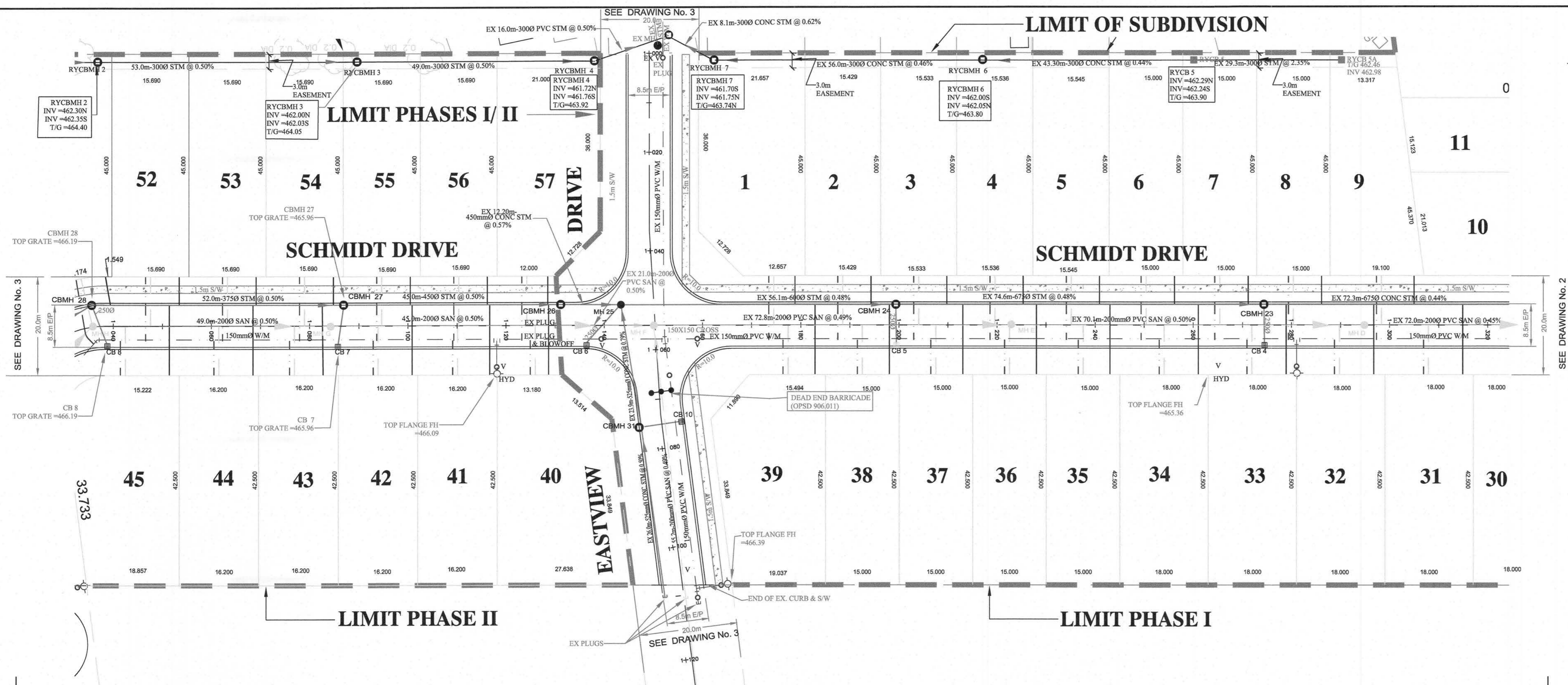
CHECKED: _____ APPROVED: _____

K. J. BEHM AND ASSOCIATES INC.
 CONSULTING ENGINEERS
 60 NEW DUNDEE RD., KITCHENER, ONTARIO, N2P 2N6
 PHONE (519) 742-3510 FAX (519) 742-3462

EASTRIDGE LANDING
SUBDIVISION PHASES I AND II
 ARTHUR, ONTARIO

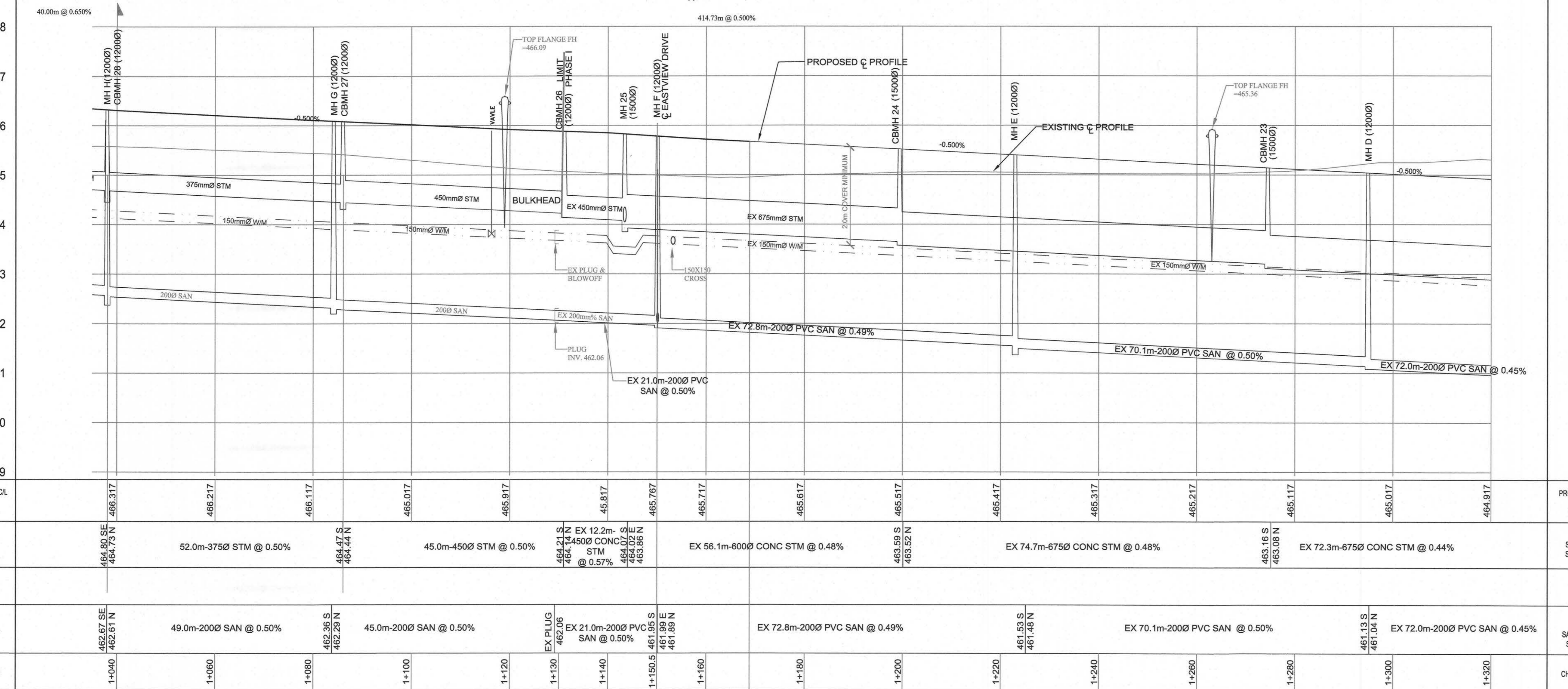
PLAN AND PROFILE
GORDON AVENUE
STA.0-000 TO STA. 0+150

DRAWN SM	SCALE 1 : 500	DWG. No. 6
DESIGN KJB	DATE JUNE 2006	
CHECKED KJB	PROJECT No. 260608	



- BENCH MARKS:**
- TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 - TOP OF SANITARY MANHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.31
 - TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW AVENUE. ELEV 464.27

- NOTES:**
- 150mm \varnothing Watermain shall be C900 PVC Class 150(DR19), B137.3 with Ring-Tite joints and Tracer Wire. Tracer Wire shall be 12 gauge 7 strand copper with plastic coating and shall be connected to bolt on bottom flange of the hydrant. 150mm \varnothing Watermain shall be Type 'K' copper pipe. Watermain and services shall be installed minimum 2.0 m below finished grade above the main or service.
 - Watermain fittings - Ductile Iron, mechanical joint, AWWA C110 approved, pressure rating 1035 kPa. PVC bands and ties to be used with mechanical joint restraints.
 - Watermain valves shall be Mueller "Super Seal" Resilient Gate Valve, mechanical joint.
 - Watermain Valve Boxes shall be V83100, 3 place No.6 round base screw type as manufactured by BIRBY-ST. CROOK FOUNDRIES INC., Cambridge, Ontario.
 - Hydrants shall be Canada Valve New Century Type Compression or Modelly 4-56 with "Storz" pump connection. All hydrants to be painted yellow with black "Storz" cap.
 - Water services to be 20mm single Type 'K' copper pipe.
 - Anodes - DZP-24, 10.9 kg shall be installed on all connections to existing iron watermain.
 - DZP-12, 5.4 kg shall be installed on all iron fittings, valves etc.
 - Main stops, curb stops, unions and service boxes shall be in accordance with the Township of Wellington North Specifications.
 - Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-182.2.
 - Sanitary Services shall be 100mm PVC-SDR28 meeting the current CSA-182.2 Specifications. Service connections to be at a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and saddles. Sanitary Services shall be 100mm PVC-SDR28 meeting the current ASTM D3034-73 Specifications and CSA-182.2.
 - Sanitary sewer manhole fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA-182.2.
 - All storm services shall be 100mm PVC-SDR28 and connected to mainline with prefabricated tees or "Kor-A-Tee".
 - All catchbasin tees (250mm Single, 300mm Double) shall be PVC-SDR35.
 - All sewer pipes and watermain to be installed in Class 'B' Bedding per OPSD 802.01 and 802.03.
 - Pavement design for all roads shall be:
450mm Granular 'B' road base
150mm Granular 'A' road base
50mm H-4 Binder Course Asphalt
35mm H-3 (fine) Surface Course Asphalt
 - All watermain and sewers to be tested in accordance with Township of Centre Wellington Specifications or as noted in the Contract Documents.
 - Road subdrains to be installed if required as determined by site conditions at time of construction. Subdrains shall be 100mm \varnothing perforated plastic drainage tile on geotextile filter sock.
 - Concrete Curb to be better as per OPSD 600.10.
 - Water Service Boxes to be located at limit of easement.
 - Sump Pumps to discharge to storm services.
 - Driveways shall be:
150mm Granular 'B'
100mm Granular 'A'
50mm H-3C Asphalt
 - All structures shall allow for an adjustment of between 150mm-300mm with modulus.
 - The plan shall be read in conjunction with drawing #2- Grading and Erosion Control Plan and the approved Site Plan and the approved Landscaping Plan (by others).
 - Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing #G3).



No.	DESCRIPTION	DATE	INTL.
3	AS-CONSTRUCTED U/G SERVICES	20/07/07	KJB
2	GENERAL REVISIONS	27/10/06	KJB
1	GENERAL REVISIONS	29/09/06	KJB

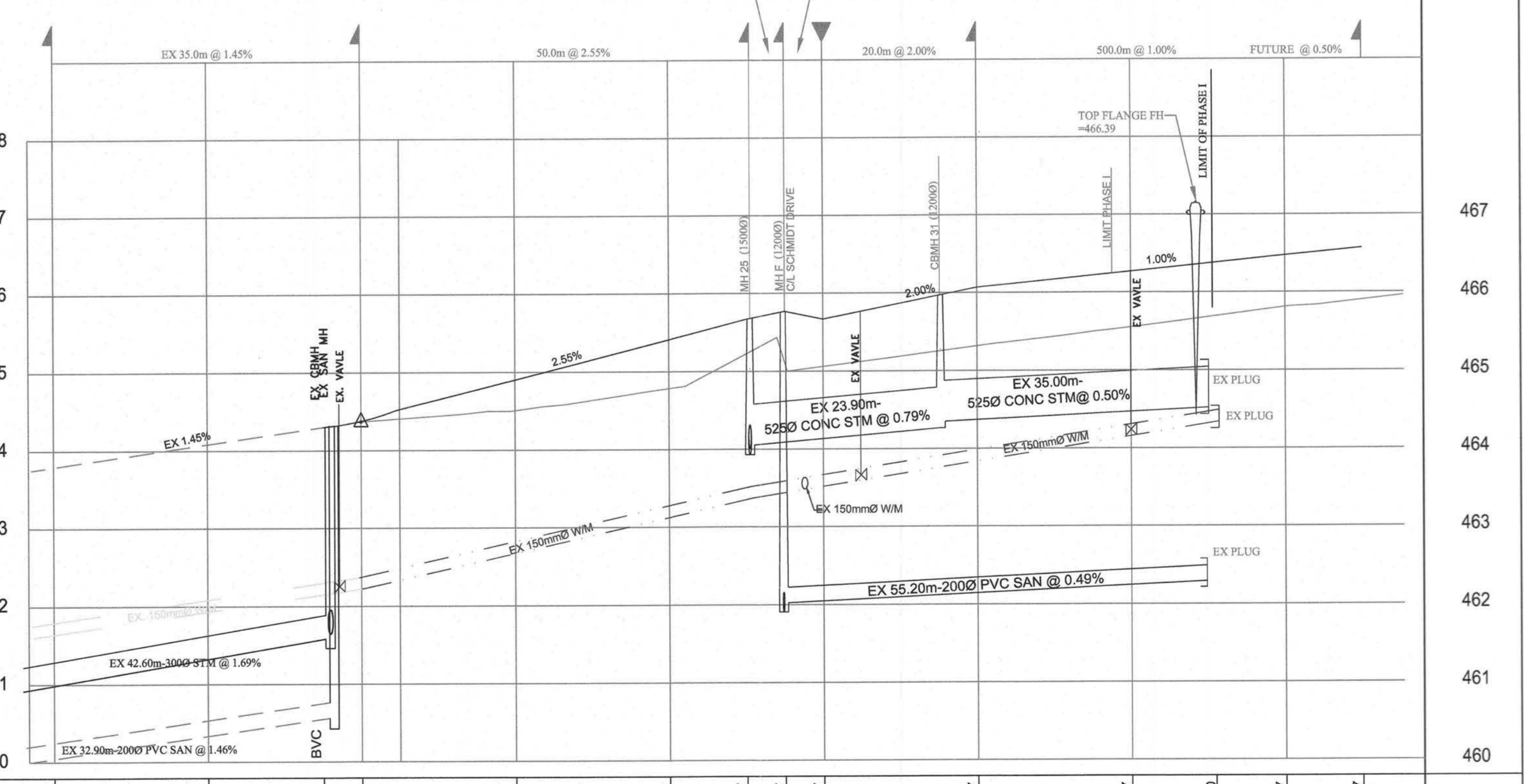
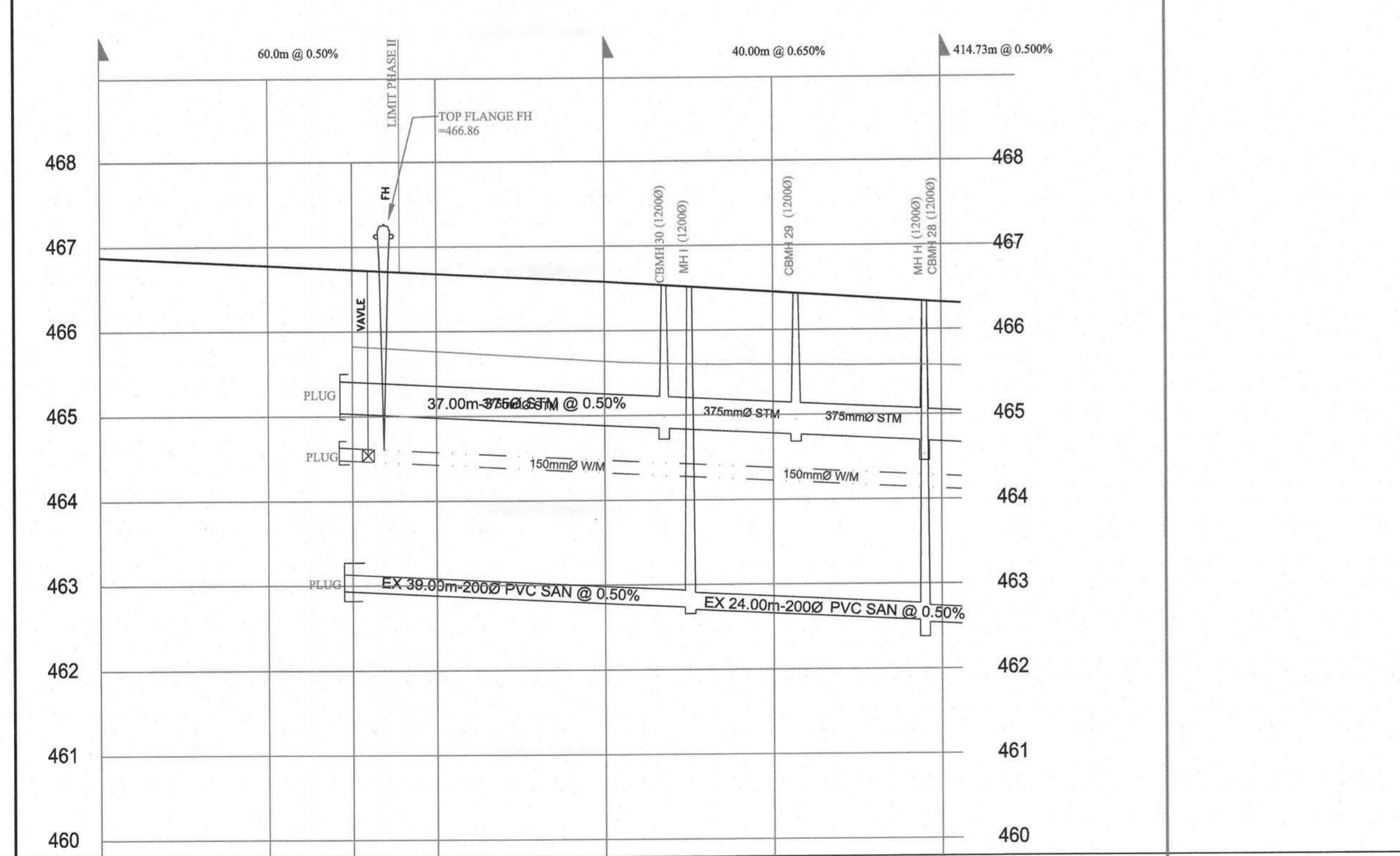
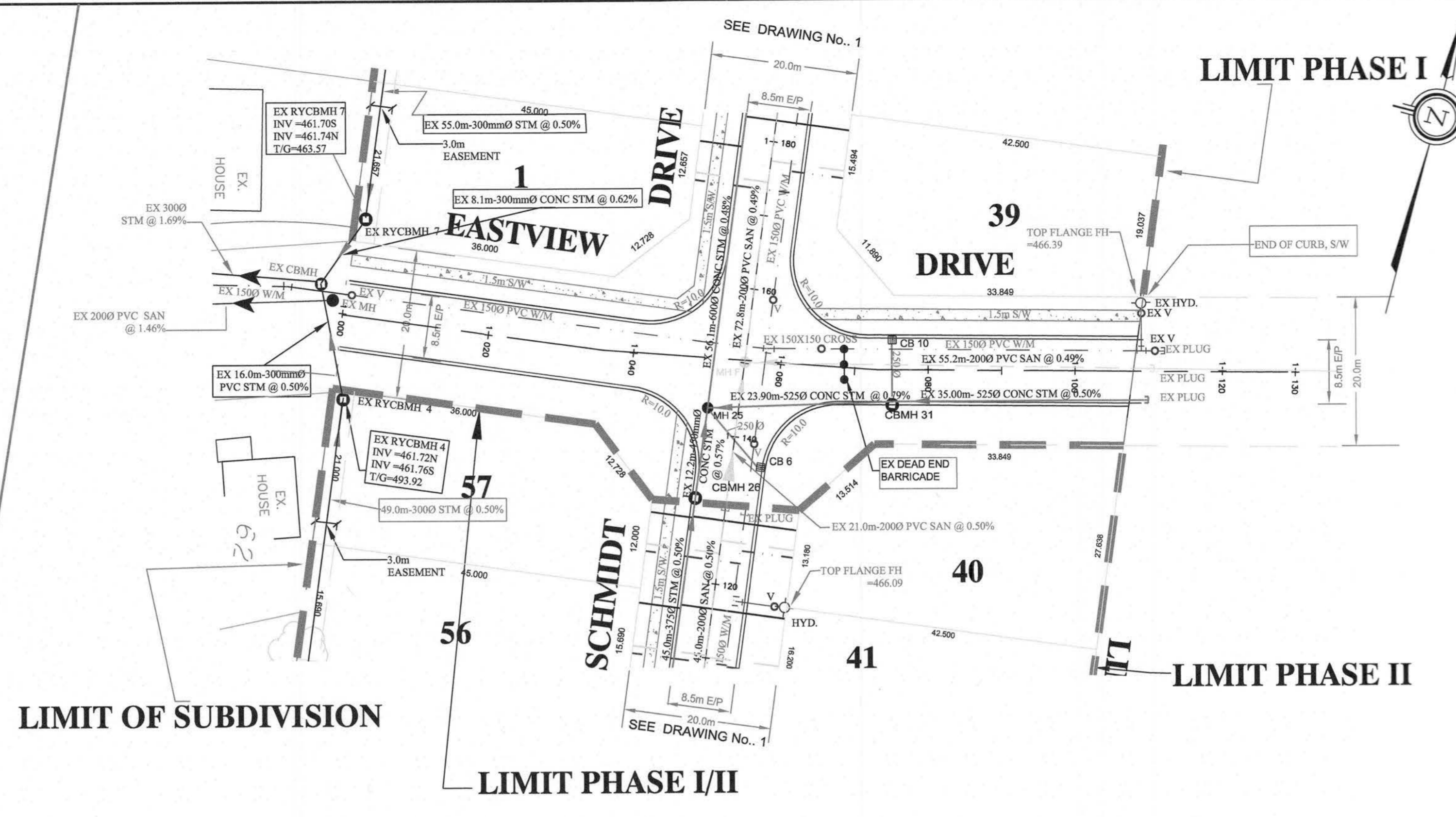
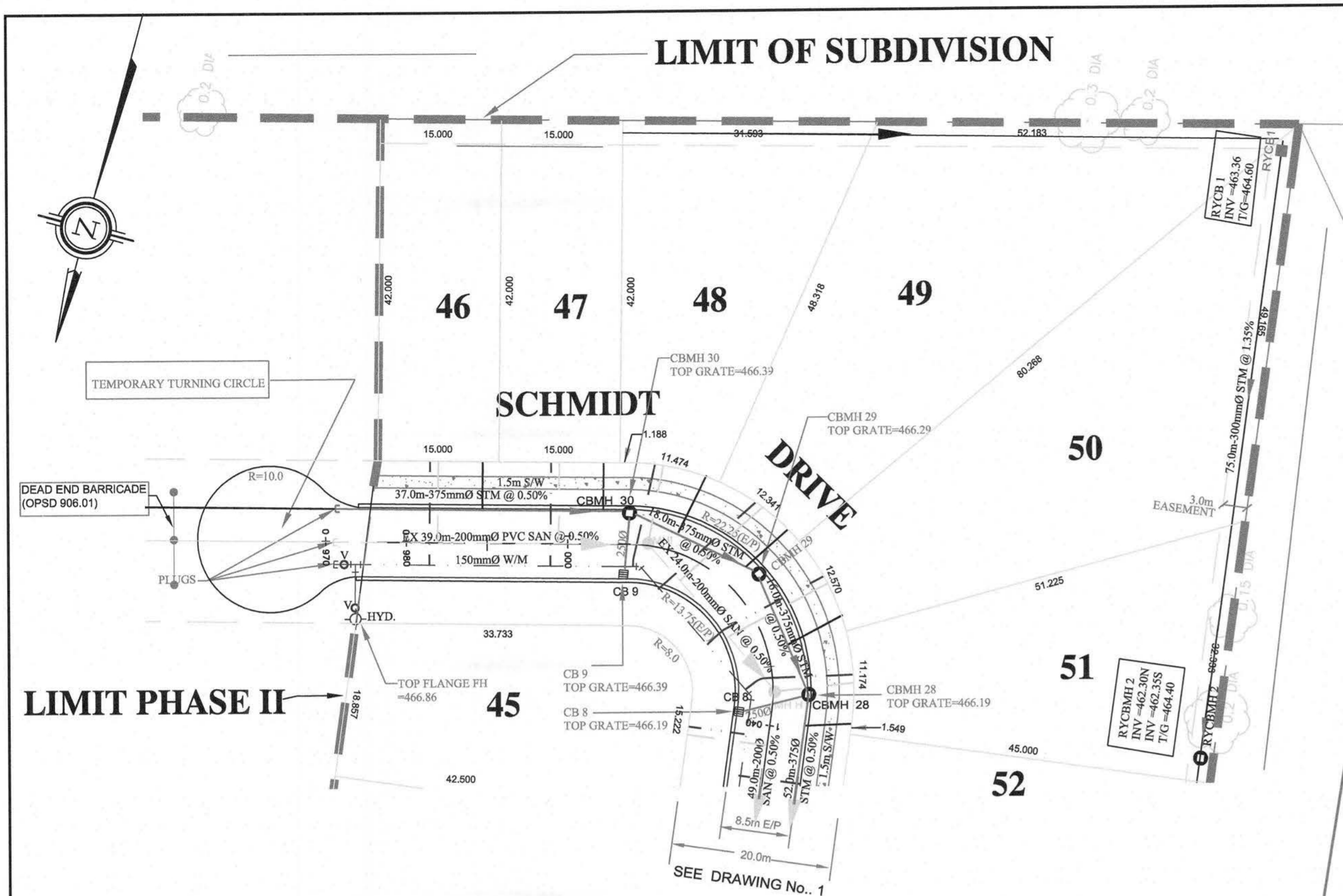


CHECKED: _____ APPROVED: _____
K. J. BEHM AND ASSOCIATES INC.
 CONSULTING ENGINEERS
 60 NEW DUNDEE RD., KITCHENER, ONTARIO, N2P 2N6
 PHONE (519) 742 3510 FAX (519) 742 3462

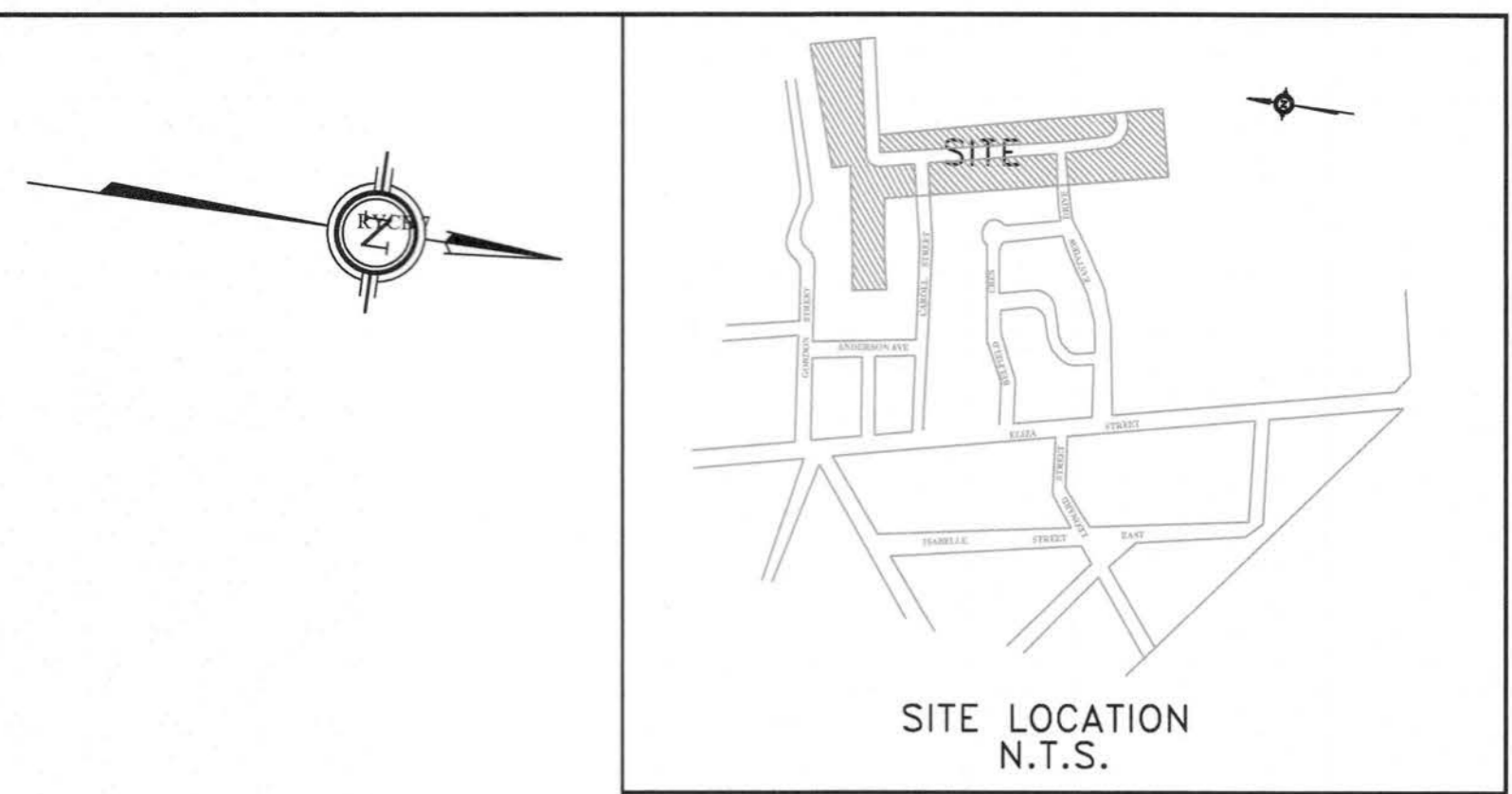
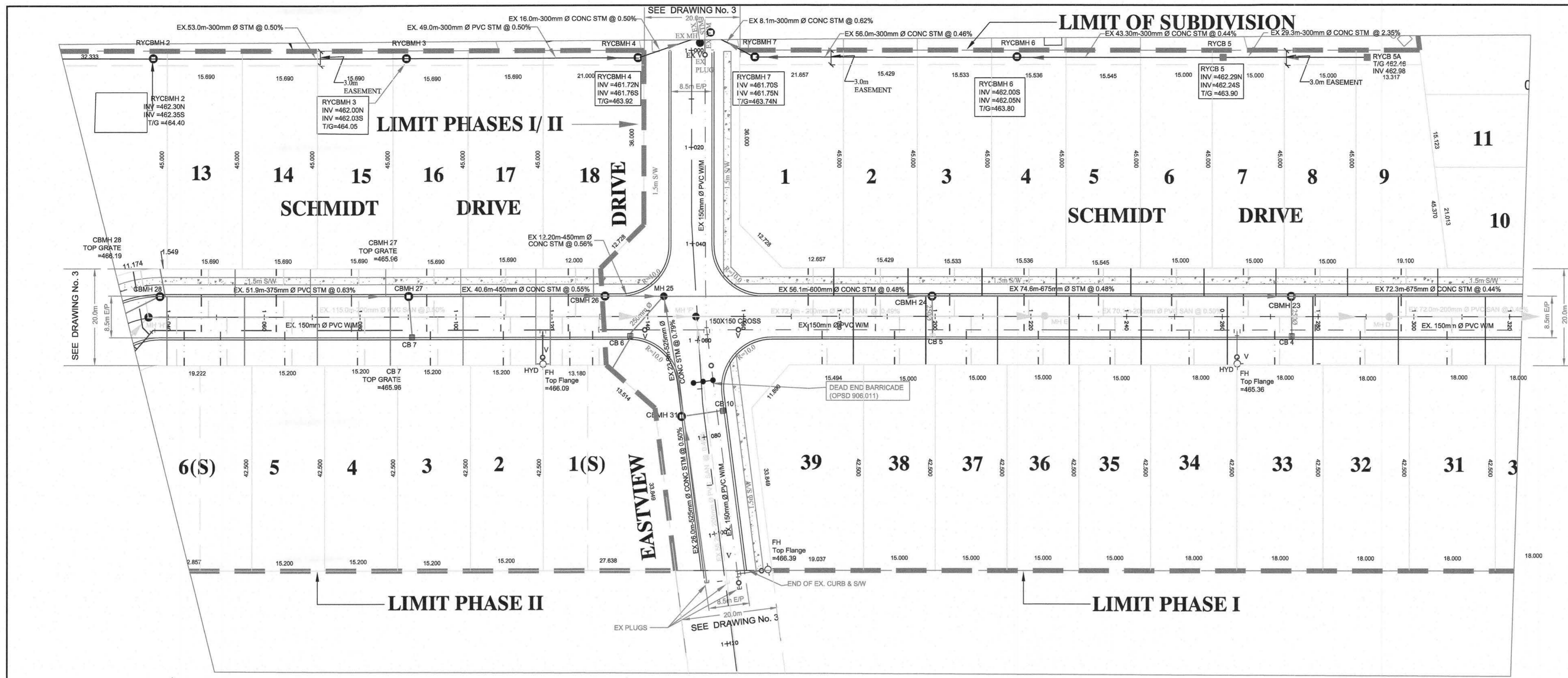
EASTRIDGE LANDING
SUBDIVISION PHASES I AND II
 ARTHUR, ONTARIO

PLAN AND PROFILE
SCHMIDT DRIVE
 STA. 1+040 TO STA.1+320

DRAWN	SM	SCALE	1 : 500	DWG. No.	1
DESIGN	KJB	DATE			
CHECKED	KJB				
PROJECT No.	260608	GENERAL REVISIONS	27/10/06	KJB	

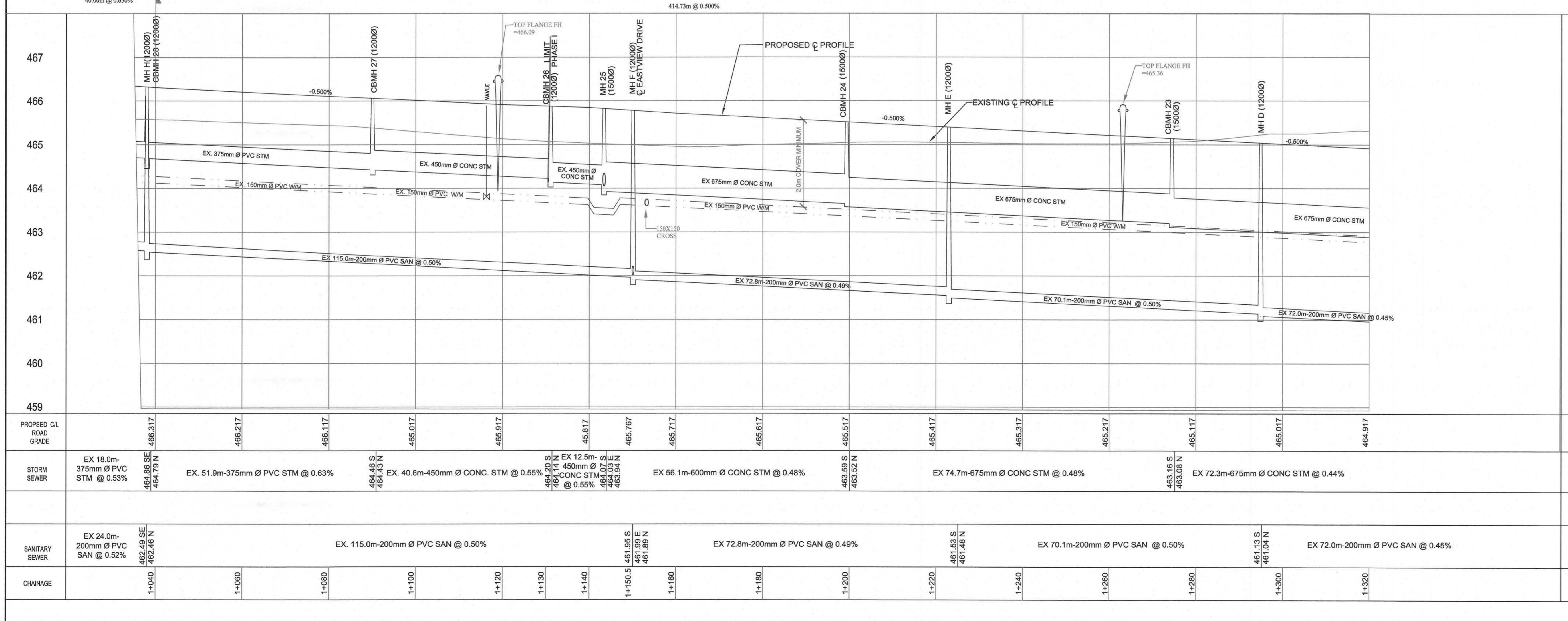


PROPOSED CL ROAD GRADE	466.877	466.777	466.677	466.577	466.447	466.317	466.177	466.037	465.897	465.757	465.617	465.477	465.337	465.197	465.057	464.917	464.777	464.637	464.497	464.357	464.217	464.077	463.937	463.797	463.657	463.517	463.377	463.237	463.097	462.957	462.817	462.677	462.537	462.397	462.257	462.117	461.977	461.837	461.697	461.557	461.417	461.277	461.137	460.997	460.857	460.717	460.577	460.437	460.297	460.157	460.017	459.877	459.737	459.597	459.457	459.317	459.177	459.037	458.897	458.757	458.617	458.477	458.337	458.197	458.057	457.917	457.777	457.637	457.497	457.357	457.217	457.077	456.937	456.797	456.657	456.517	456.377	456.237	456.097	455.957	455.817	455.677	455.537	455.397	455.257	455.117	454.977	454.837	454.697	454.557	454.417	454.277	454.137	453.997	453.857	453.717	453.577	453.437	453.297	453.157	453.017	452.877	452.737	452.597	452.457	452.317	452.177	452.037	451.897	451.757	451.617	451.477	451.337	451.197	451.057	450.917	450.777	450.637	450.497	450.357	450.217	450.077	449.937	449.797	449.657	449.517	449.377	449.237	449.097	448.957	448.817	448.677	448.537	448.397	448.257	448.117	447.977	447.837	447.697	447.557	447.417	447.277	447.137	446.997	446.857	446.717	446.577	446.437	446.297	446.157	446.017	445.877	445.737	445.597	445.457	445.317	445.177	445.037	444.897	444.757	444.617	444.477	444.337	444.197	444.057	443.917	443.777	443.637	443.497	443.357	443.217	443.077	442.937	442.797	442.657	442.517	442.377	442.237	442.097	441.957	441.817	441.677	441.537	441.397	441.257	441.117	440.977	440.837	440.697	440.557	440.417	440.277	440.137	440.017	439.897	439.777	439.657	439.537	439.417	439.297	439.177	439.057	438.937	438.817	438.697	438.577	438.457	438.337	438.217	438.097	437.977	437.857	437.737	437.617	437.497	437.377	437.257	437.137	437.017	436.897	436.777	436.657	436.537	436.417	436.297	436.177	436.057	435.937	435.817	435.697	435.577	435.457	435.337	435.217	435.097	434.977	434.857	434.737	434.617	434.497	434.377	434.257	434.137	434.017	433.897	433.777	433.657	433.537	433.417	433.297	433.177	433.057	432.937	432.817	432.697	432.577	432.457	432.337	432.217	432.097	431.977	431.857	431.737	431.617	431.497	431.377	431.257	431.137	431.017	430.897	430.777	430.657	430.537	430.417	430.297	430.177	430.057	429.937	429.817	429.697	429.577	429.457	429.337	429.217	429.097	428.977	428.857	428.737	428.617	428.497	428.377	428.257	428.137	428.017	427.897	427.777	427.657	427.537	427.417	427.297	427.177	427.057	426.937	426.817	426.697	426.577	426.457	426.337	426.217	426.097	425.977	425.857	425.737	425.617	425.497	425.377	425.257	425.137	425.017	424.897	424.777	424.657	424.537	424.417	424.297	424.177	424.057	423.937	423.817	423.697	423.577	423.457	423.337	423.217	423.097	422.977	422.857	422.737	422.617	422.497	422.377	422.257	422.137	422.017	421.897	421.777	421.657	421.537	421.417	421.297	421.177	421.057	420.937	420.817	420.697	420.577	420.457	420.337	420.217	420.097	419.977	419.857	419.737	419.617	419.497	419.377	419.257	419.137	419.017	418.897	418.777	418.657	418.537	418.417	418.297	418.177	418.057	417.937	417.817	417.697	417.577	417.457	417.337	417.217	417.097	416.977	416.857	416.737	416.617	416.497	416.377	416.257	416.137	416.017	415.897	415.777	415.657	415.537	415.417	415.297	415.177	415.057	414.937	414.817	414.697	414.577	414.457	414.337	414.217	414.097	413.977	413.857	413.737	413.617	413.497	413.377	413.257	413.137	413.017	412.897	412.777	412.657	412.537	412.417	412.297	412.177	412.057	411.937	411.817	411.697	411.577	411.457	411.337	411.217	411.097	410.977	410.857	410.737	410.617	410.497	410.377	410.257	410.137	410.017	409.897	409.777	409.657	409.537	409.417	409.297	409.177	409.057	408.937	408.817	408.697	408.577	408.457	408.337	408.217	408.097	407.977	407.857	407.737	407.617	407.497	407.377	407.257	407.137	407.017	406.897	406.777	406.657	406.537	406.417	406.297	406.177	406.057	405.937	405.817	405.697	405.577	405.457	405.337	405.217	405.097	404.977	404.857	404.737	404.617	404.497	404.377	404.257	404.137	404.017	403.897	403.777	403.657	403.537	403.417	403.297	403.177	403.057	402.937	402.817	402.697	402.577	402.457	402.337	402.217	402.097	401.977	401.857	401.737	401.617	401.497	401.377	401.257	401.137	401.017	400.897	400.777	400.657	400.537	400.417	400.297	400.177	400.057	399.937	399.817	399.697	399.577	399.457	399.337	399.217	399.097	398.977	398.857	398.737	398.617	398.497	398.377	398.257	398.137	398.017	397.897	397.777	397.657	397.537	397.417	397.297	397.177	397.057	396.937	396.817	396.697	396.577	396.457	396.337	396.217	396.097	395.977	395.857	395.737	395.617	395.497	395.377	395.257	395.137	395.017	394.897	394.777	394.657	394.537	394.417	394.297	394.177	394.057	393.937	393.817	393.697	393.577	393.457	393.337	393.217	393.097	392.977	392.857	392.737	392.617	392.497	392.377	392.257	392.137	392.017	391.897	391.777	391.657	391.537	391.417	391.297	391.177	391.057	390.937	390.817	390.697	390.577	390.457	390.337	390.217	390.097	389.977	389.857	389.737	389.617	389.497	389.377	389.257	389.137	389.017	388.897	388.777	388.657	388.537	388.417	388.297	388.177	388.057	387.937	387.817	387.697	387.577	387.457	387.337	387.217	387.097	386.977	386.857	386.737	386.617	386.497	386.377	386.257	386.137	386.017	385.897	385.777	385.657	385.537	385.417	385.297	385.177	385.057	384.937	384.817	384.697	384.577	384.457	384.337	384.217	384.097	383.977	383.857	383.737	383.617	383.497	383.377	383.257	383.137	383.017	382.897	382.777	382.657	382.537	382.417	382.297	382.177	382.057	381.937	381.817	381.697	381.577	381.457	381.337	381.217	381.097	380.977	380.857	380.737	380.617	380.497	380.377	380.257	380.137	380.017	379.897	379.777	379.657	379.537	379.417	379.297	379.177	379.057	378.937	378.817	378.697	378.577	378.457	378.337	378.217	378.097	377.977	377.857	377.737	377.617	377.497	377.377	377.257	377.137	377.017	376.897	376.777	376.657	376.537	376.417	376.297	376.177	376.057	375.937	375.817	375.697	375.577	375.457	375.337	375.217	375.097	374.977	374.857	374.737	374.617	374.497	374.377	374.257	374.137	374.017	373.897	373.777	373.657	373.537	373.417	373.297	373.177	373.057	372.937	372.817	372.697	372.577	372.457	372.337	372.217	372.097	371.977	371.857	371.737	371.617	371.497	371.377	371.257	371.137	371.017	370.897	370.777	370.657	370.537	370.417	370.297	370.177	370.057	369.937	369.817	369.697	369.577	369.457	369.337	369.217	369.097	368.977	368.857	368.737	368.617	368.497	368.377	368.257	368.137	368.017	367.897	367.777	367.657	367.537	367.417	367.297	367.177	367.057	366.937	366.817	366.697	366.577	366.457	366.337	366.217	366.097	365.977	365.857	365.737	365.617	365.497	365.377	365.257	365.137	365.017	364.897	364.777	364.657	364.537	364.417	364.297	364.177	364.057	363.937	363.817	363.697	363.577	363.457	363.337	363.217	363.097	362.977	362.857	362.737	362.617	362.497	362.377	362.257	362.137	362.017	361.897	361.777	361.657	361.537	361.417	361.297	361.177	361.057	360.937	360.817	360.697	360.577	360.457	360.337	360.217	360.097	359.977	359.857	359.737	359.617	359.497	359.377	359.257	359.137	359.017	358.897	358.777	358.657	358.537	358.417	358.297	358.177	358.057	357.937	357.817	357.697	357.577	357.457	357.337	357.217	357.097	356.977	356.857	356.737	356.6
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BENCH MARKS:

- NOTES:**
- 150mmØ Watermain shall be C900 PVC Class 150(DR18), B13.3 with Ring-Tie joints and Tracer Wire. Tracer Wire shall be 12 gauge, 7 strand copper with plastic coating and shall be connected to both on bottom flange of fire hydrant. 30mmØ Watermains shall be Type 'K' copper pipe. Watermains and services shall be installed minimum 2.0 m below finished grade above the main or service.
 - Watermain fittings - Ductile iron, mechanical joint, AWWA C110 approved, pressure rating 1500 kPa. -PVC bends and tees to be used with mechanical joint restraints.
 - Watermain valves shall be Mueller "Super Seal" Resilient Gate Valve, mechanical joint.
 - Watermain Valve Boxes shall be VB3100, 3 piece No. 6 round base screw type as manufactured by BIBBY-ST CROIX FOUNDRIES INC., Cambridge, Ontario.
 - Hydrants shall be Canada Valve New Century Type Compression or McAvity M-59, with "Storm" pumper connection. All hydrants to be painted yellow with black "Storm" cap.
 - Water services to be 20mm single Type 'K' copper pipe.
 - Anodes: DZP-24, 10.9 kg shall be installed on all connections to existing iron watermains. DZP-12, 5.4 kg shall be installed on all iron fittings, valves etc. in accordance with the Township of Wellington North Specifications.
 - Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-182.2.
 - Sanitary Services shall be 100mm PVC-SDR35 meeting the current CSA-182.2 Specifications. Service connections to be at a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and saddles. Sanitary Services shall be 100mm PVC-SDR35 meeting the current.
 - Sanitary sewer mainline fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA-182.2.
 - Storm sewers 375mm and less shall be either Concrete E.S. or PVC Ultra-Rib as per CSA-182.4.
 - All storm services shall be 100mm PVC-SDR28 and connected to mainline with prefabricated tee or "Koo-N-Tee".
 - All catchbasin leads (250mm Single, 300mm Double) shall be PVC-SDR35.
 - All sewer pipes and watermains to be installed in Class 'B' bedding per OPSD 802.01 and 802.03.
 - Pavement design for all roads shall be: 150mm Granular 'B' road base 50mm H.4 Binder Course Asphalt 40mm H.L.3 (fine) Surface Course Asphalt
 - Concrete Curbs and sidewalks shall be poured using 30MPa strength @ 28 days.
 - All watermains and sewers to be tested in accordance with Township of Centre Wellington Specifications or as noted in the Contract Documents.
 - Road subdrains to be installed if required as determined by site conditions at time of construction. Subdrains shall be 100mmØ perforated plastic drainage tile c/w geotextile filter sock.
 - Concrete Curb to be barrier as per OPSD 600.10
 - Water Service Boxes to be located at limit of easement.
 - Sump Pumps to discharge to storm services.
 - Driveways shall be: 150mm Granular 'B' 150mm Granular 'A' 50mm H.L.3C Asphalt
 - All structures shall allow for an adjustment of between 150mm-300mm with modulus.
 - This plan shall be read in conjunction with drawing #2: Grading and Erosion Control Site Plan and the approved Landscaping Plan (by others).
 - Road Section to be in accordance with Township Standard Drawing R1 (see section Drawing #03).



467			
466			
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459			
PROPOSED CL ROAD GRADE	466.517	466.217	466.117
STORM SEWER	EX 18.0m-375mm Ø PVC STM @ 0.53%	EX 51.9m-375mm Ø PVC STM @ 0.63%	EX 40.6m-450mm Ø CONC. STM @ 0.55%
SANITARY SEWER	EX 24.0m-200mm Ø PVC SAN @ 0.52%	EX 115.0m-200mm Ø PVC SAN @ 0.50%	EX 72.8m-200mm Ø PVC SAN @ 0.49%
CHAINAGE	1+040	1+060	1+080
	1+100	1+120	1+130
	1+140	1+150.5	1+160
	1+180	1+200	1+220
	1+240	1+260	1+280
	1+300	1+320	
PROPOSED CL ROAD GRADE	464.86 SE	464.78 N	464.46 S
STORM SEWER	EX 56.1m-600mm Ø CONC STM @ 0.48%	EX 74.7m-675mm Ø CONC STM @ 0.48%	EX 72.3m-675mm Ø CONC STM @ 0.44%
SANITARY SEWER	EX 115.0m-200mm Ø PVC SAN @ 0.50%	EX 70.1m-200mm Ø PVC SAN @ 0.50%	EX 72.0m-200mm Ø PVC SAN @ 0.45%
CHAINAGE	1+040	1+060	1+080
	1+100	1+120	1+130
	1+140	1+150.5	1+160
	1+180	1+200	1+220
	1+240	1+260	1+280
	1+300	1+320	

6	"AS CONSTRUCTED"	26/10/10	KJB
5	GENERAL REVISIONS	30/07/10	KJB
4	GENERAL REVISIONS PHASE II	30/05/10	KJB
3	AS-CONSTRUCTED U/G SERVICES	20/07/07	KJB
2	GENERAL REVISIONS	27/10/06	KJB
1	GENERAL REVISIONS	29/09/06	KJB

REVISIONS

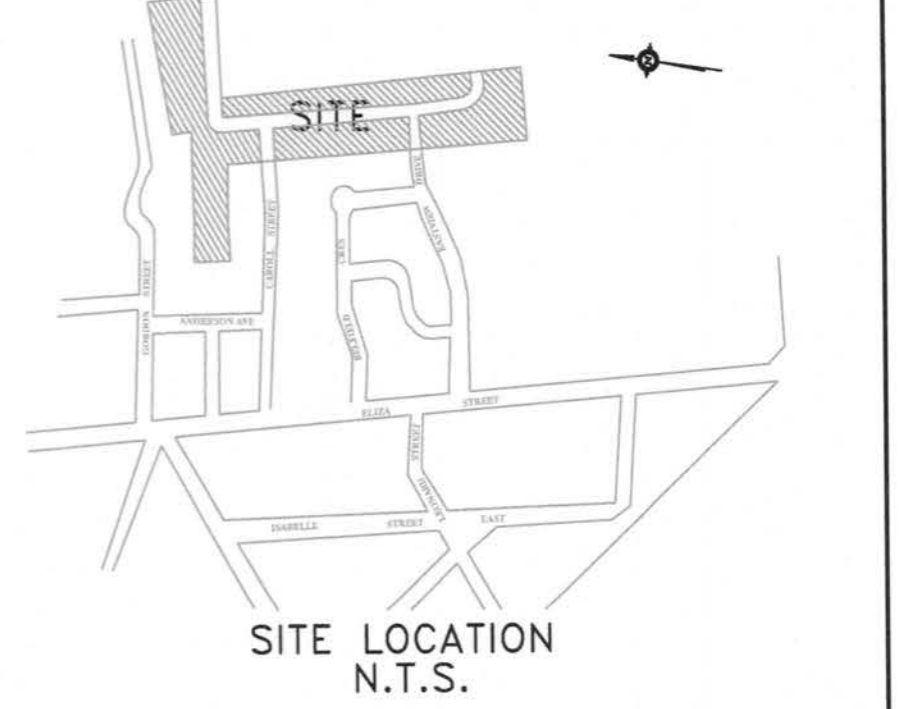
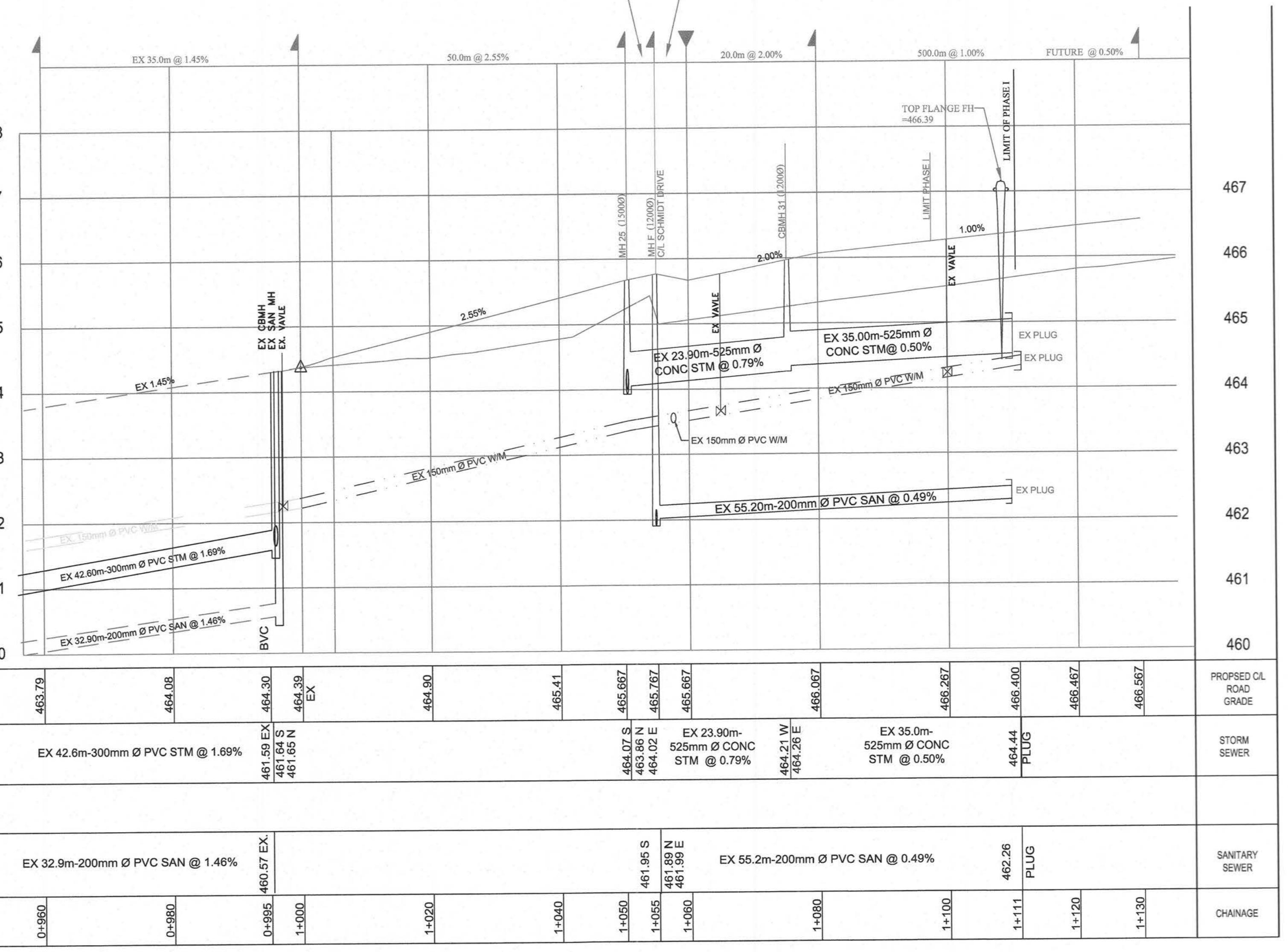
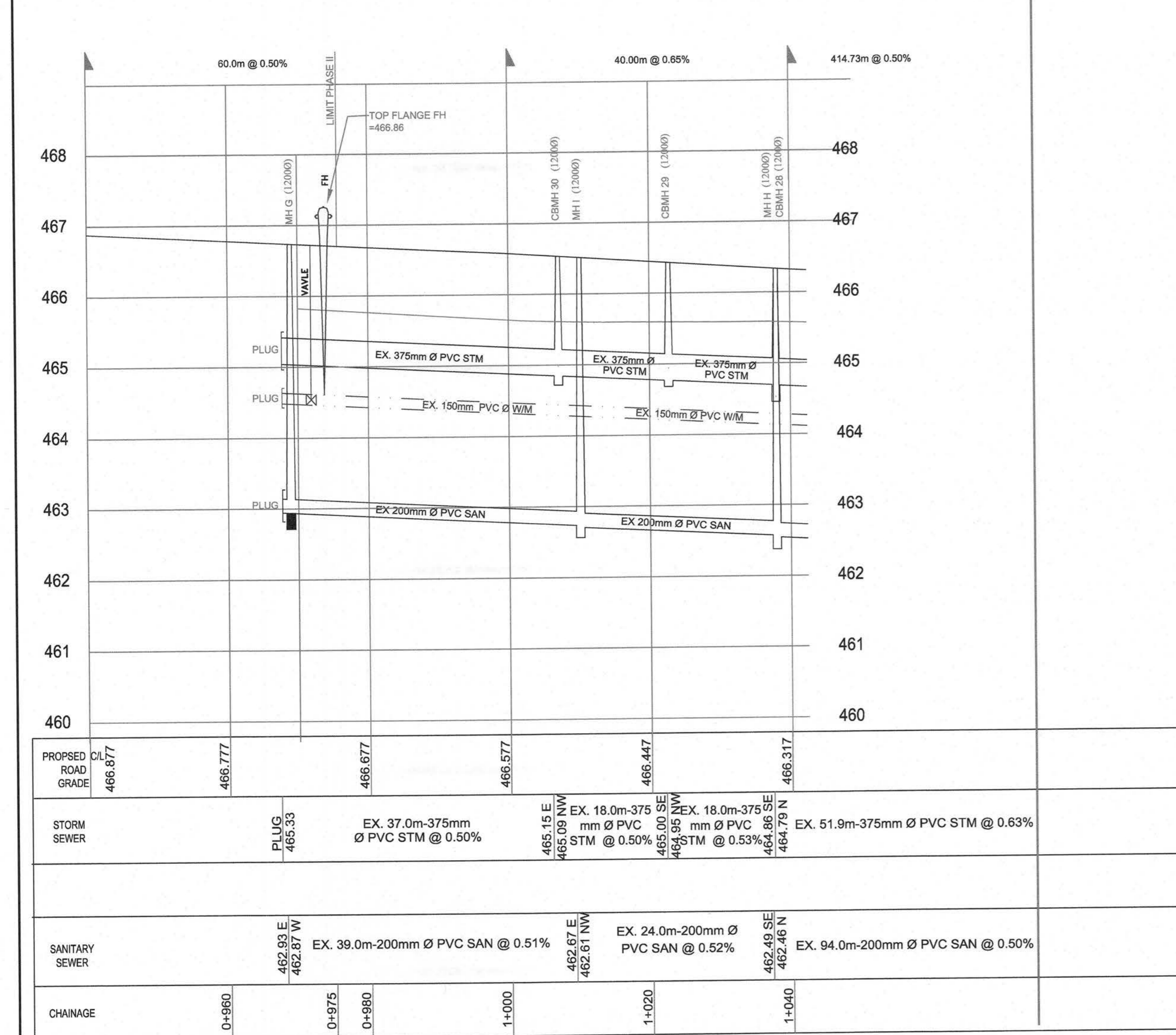
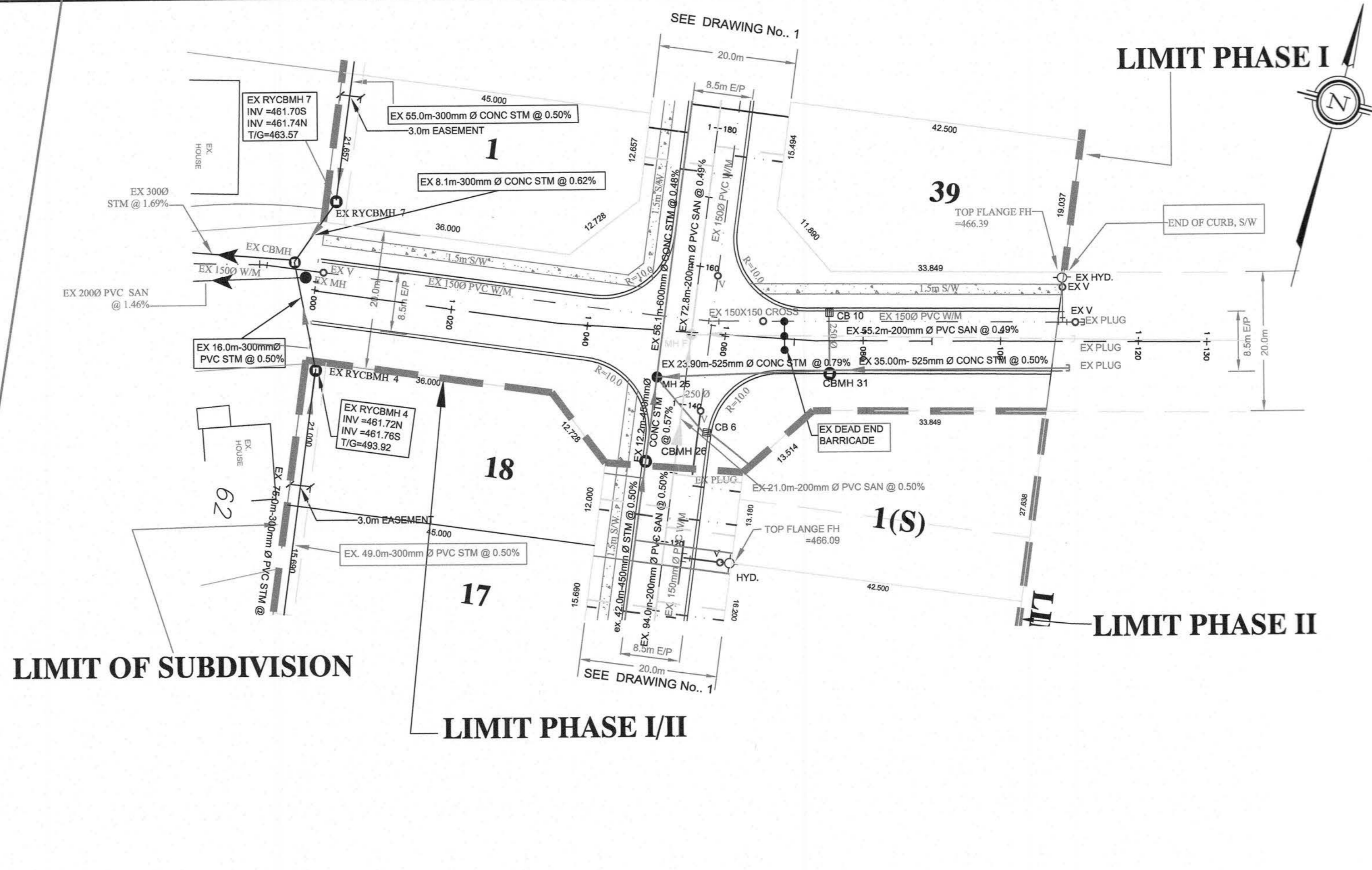
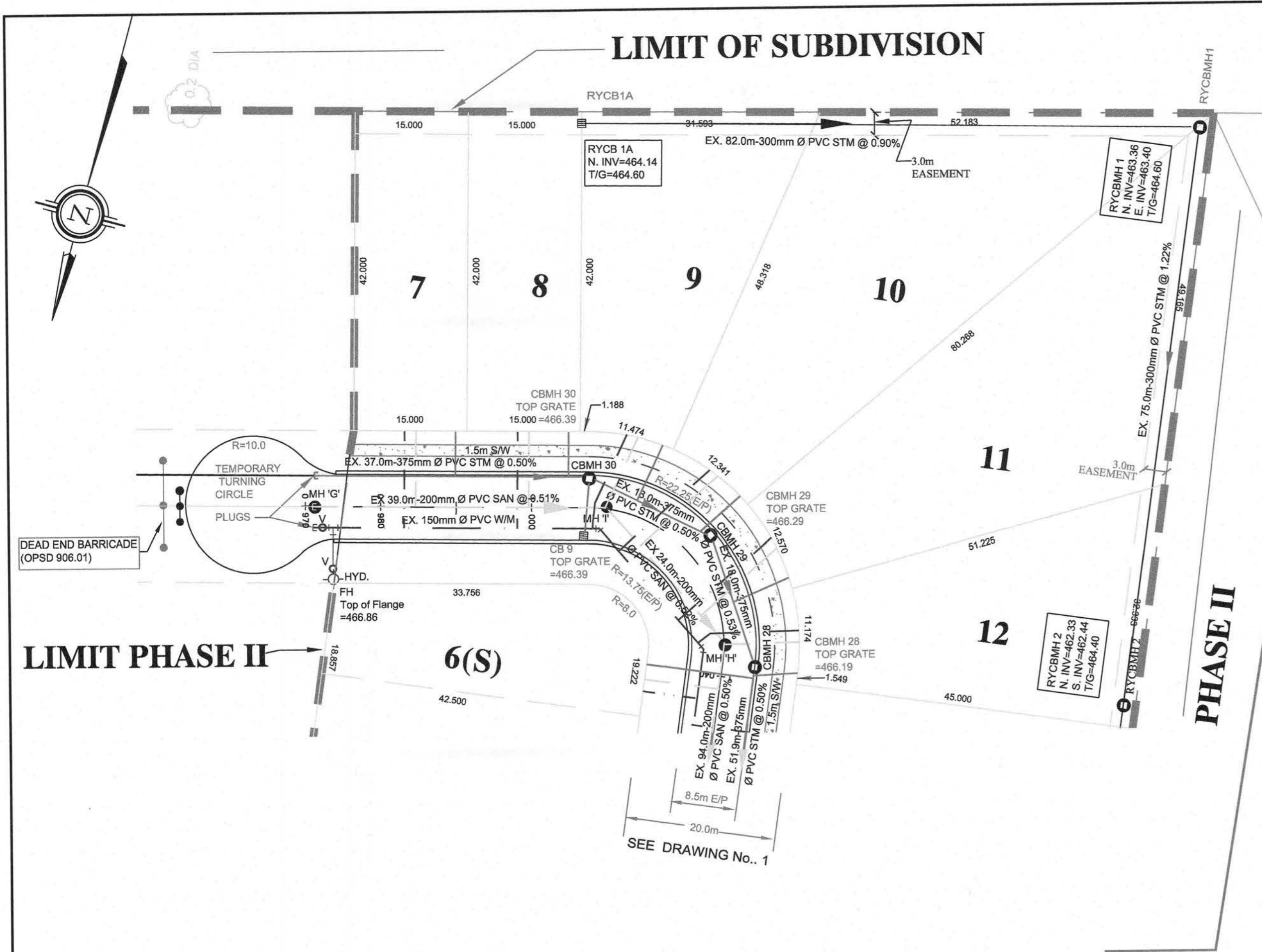
CHECKED: APPROVED:

K. J. BEHM AND ASSOCIATES INC.
CONSULTING ENGINEERS
60 NEW DUNDEE RD., KITCHENER, ONTARIO, N2P 2N6
PHONE (519) 742 3510 FAX (519) 742 3462

EASTRIDGE LANDING
SUBDIVISION PHASES I AND II
ARTHUR, ONTARIO

PLAN AND PROFILE
SCHMIDT DRIVE
STA. 1+040 TO STA. 1+320

DRAWN	SM	SCALE	1 : 500	DWG. No.	1
DESIGN	KJB	DATE	JUNE 2006		
CHECKED	KJB				
PROJECT No.	260606				KJB



- BENCH MARKS:**
- TOP OF STORM MANHOLE IN BOULEVARD AT SOUTHWEST CORNER OF ELIZA STREET AND GORDON STREET ELEV 462.03
 - TOP OF SANITARY MONHOLE IN CUL-DE-SAC ON FARREL STREET. ELEV 462.31
 - TOP OF SANITARY MANHOLE AT EXISTING EAST LIMIT OF EASTVIEW ANNUUE. ELEV 464.27

- NOTES:**
- 150mm Watermain shall be C900 PVC Class 150(DR18), B137.3 with Ring-Tite joints and Tracer Wire. Tracer Wire shall be 12 gauge, 7 strand copper with plastic coating and shall be connected to both on bottom flange of the hydrant. Storm Watermain shall be Type 'K' copper pipe. Watermain and services shall be installed minimum 2.0 m below finished grade above the main or service.
 - Watermain fittings - Ductile Iron, mechanical joint, AWWA C110 approved, pressure rating 1035 kPa. PVC bands and ties to be used with mechanical joint restraints.
 - Watermain valves shall be Mueller "Super Seal" Resilient Gate Valve, mechanical joint.
 - Watermain Valve Boxes shall be VBS100, 3 slot No. 8 round base screw type as manufactured by BBSB-ST CROIX FOUNDRIES INC., Cambridge, Ontario.
 - Hydrants shall be Canada Valve New Century Type Compression or Midway M-59 with "Slorz" summer connection. All hydrants to be painted yellow with black "Slorz" cap.
 - Water services to be 20mm single Type 'K' copper pipe.
 - Arrestors: DZP-24, 10 kg shall be installed on all connections to existing iron watermain.
 - DZP-12, 5.4 kg shall be installed on all iron fittings, valves etc.
 - Main stops, curb stops, unions and service boxes shall be in accordance with the Township of Wellington North Specifications.
 - Sanitary sewer shall be 200mm PVC-SDR35 meeting the current ASTM D3034 Specifications and CSA-182.2.
 - Sanitary Services shall be 100mm PVC-SDR28 meeting the current CSA-182.2 Specifications. Service connections to be at a minimum grade of 2%. All connections to new mains shall have manufactured tees. All new connections to existing mains shall use stainless steel straps and saddles. Sanitary Services shall be 100mm PVC-SDR28 meeting the current ASTM D3034-73 Specifications and CSA-182.2.
 - Sanitary sewer mainline fittings shall be PVC-SDR35 meeting the current ASTM D3034-73 Specifications and CSA-182.2.
 - Storm sewers 375mm and less shall be either Concrete E.S. or PVC Ultra-50 as per CSA-182.4.
 - All storm services shall be 100mm PVC-SDR28 and connected to mainline with prefabricated tee or "Kor-N-Tee".
 - All cast-iron tees (200mm Single, 300mm Double) shall be PVC-SDR35.
 - All sewer pipes and watermain to be installed in Class 'B' Bedding per OPSD 802.01 and 802.03.
 - Pavement design for all roads shall be:
450mm Granular 'B' road base
150mm Granular 'A' road base
50mm H-4 Binder Course Asphalt
40mm H-3 (fin) Surface Course Asphalt
 - Concrete Curbs and sidewalks shall be poured using 30MPa strength @ 28 days.
 - All watermain and sewers to be tested in accordance with Township of Centre Wellington Specifications or as noted in the Contract Documents.
 - Soil subdrains to be installed if required as determined by site conditions at time of construction. Subdrains shall be 100mm perforated plastic drainage tile on geotextile filter sock.
 - Concrete Curb to be barrier as per OPSD 600.10
 - Water Service Boxes to be located at limit of easement.
 - Sump Pumps to discharge to storm services.
 - Driveways shall be:
150mm Granular 'B'
150mm Granular 'A'
50mm H-3 Asphalt
 - All structures shall allow for an adjustment of between 150mm-300mm with modicum.
 - This plan shall be read in conjunction with drwg #2- Grading and Erosion Control Plan and the approved Site Plan and the approved Landscaping Plan (by others).
 - Road Section to be in accordance with Township Standard Drawing 'R1' (see section Drawing #G3).

No.	DESCRIPTION	DATE	INTL.
6	AS-CONSTRUCTED	26/10/10	KJB
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REVISIONS

CHECKED: [Signature] APPROVED: [Signature]

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**EASTRIDGE LANDING
SUBDIVISION PHASES I AND II
ARTHUR, ONTARIO**

**PLAN AND PROFILE
SCHMIDT DRIVE
STA. 0+960 TO STA. 1+040**

**PLAN AND PROFILE
EASTVIEW DRIVE
STA. 0+960 TO STA. 1+120**

DRAWN	SM	SCALE	DWG. No.
DESIGN	KJB	1:500	3
CHECKED	KJB	DATE	JUNE 2006
PROJECT No.	260606		