

FIGURES

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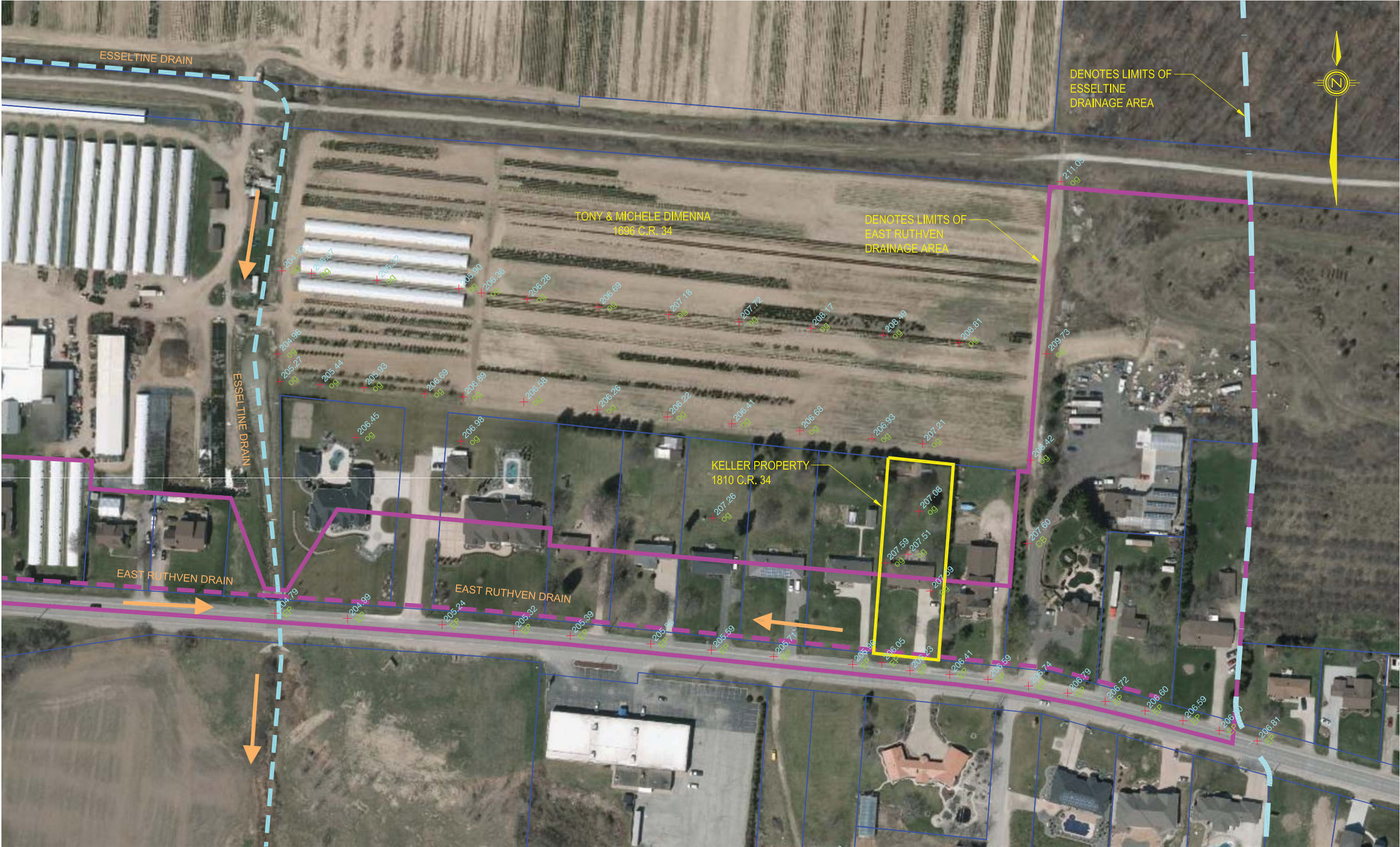
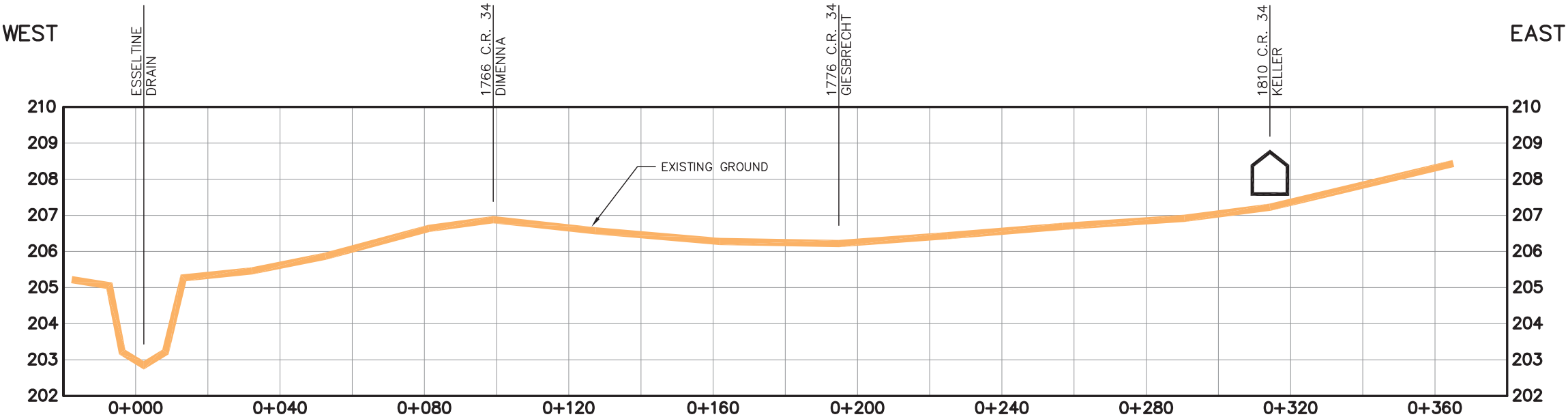
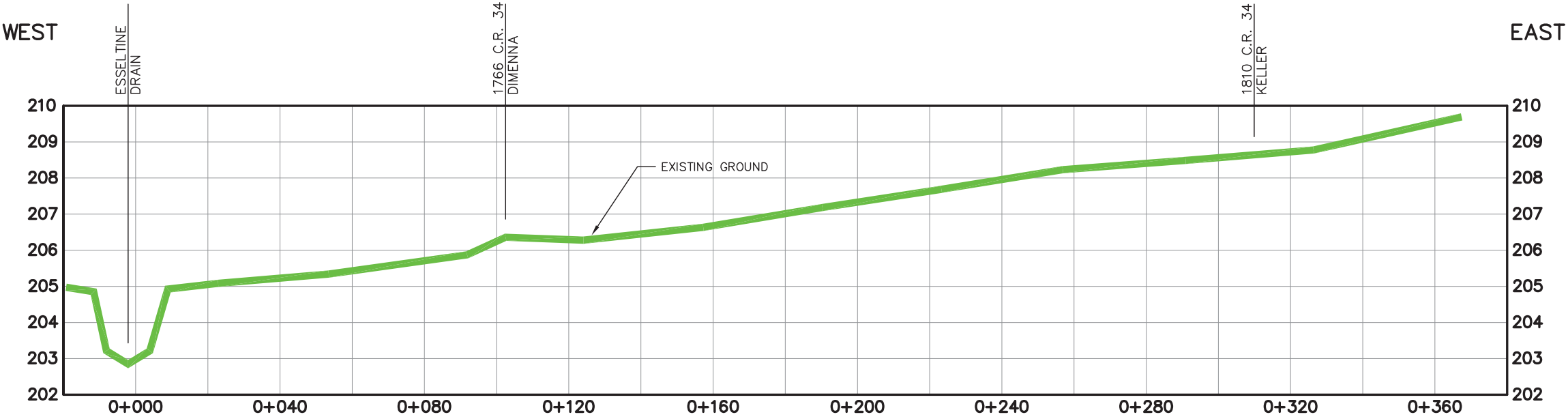


FIGURE 1



SECTION A-A (REAR PROPERTY LINE OF RESIDENTIAL HOMES)
(LOOKING NORTH)

FIGURE 2



SECTION B-B (55m NORTH OF REAR PROPERTY LINE)
(LOOKING NORTH)

FIGURE 3

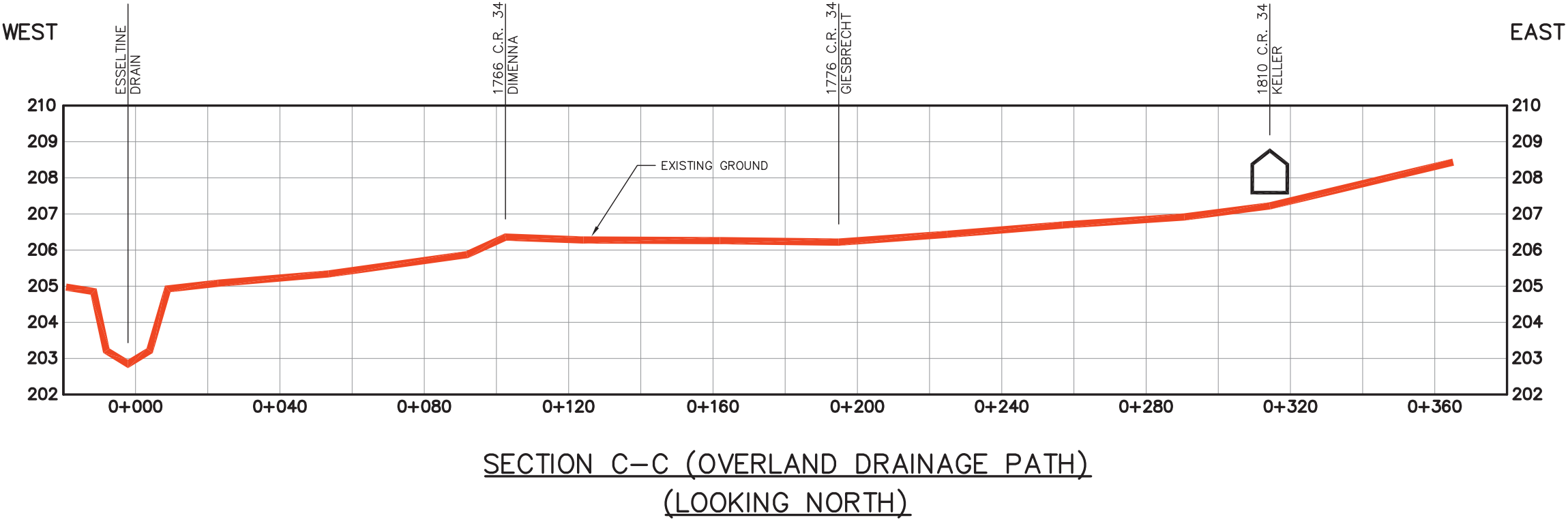


FIGURE 4

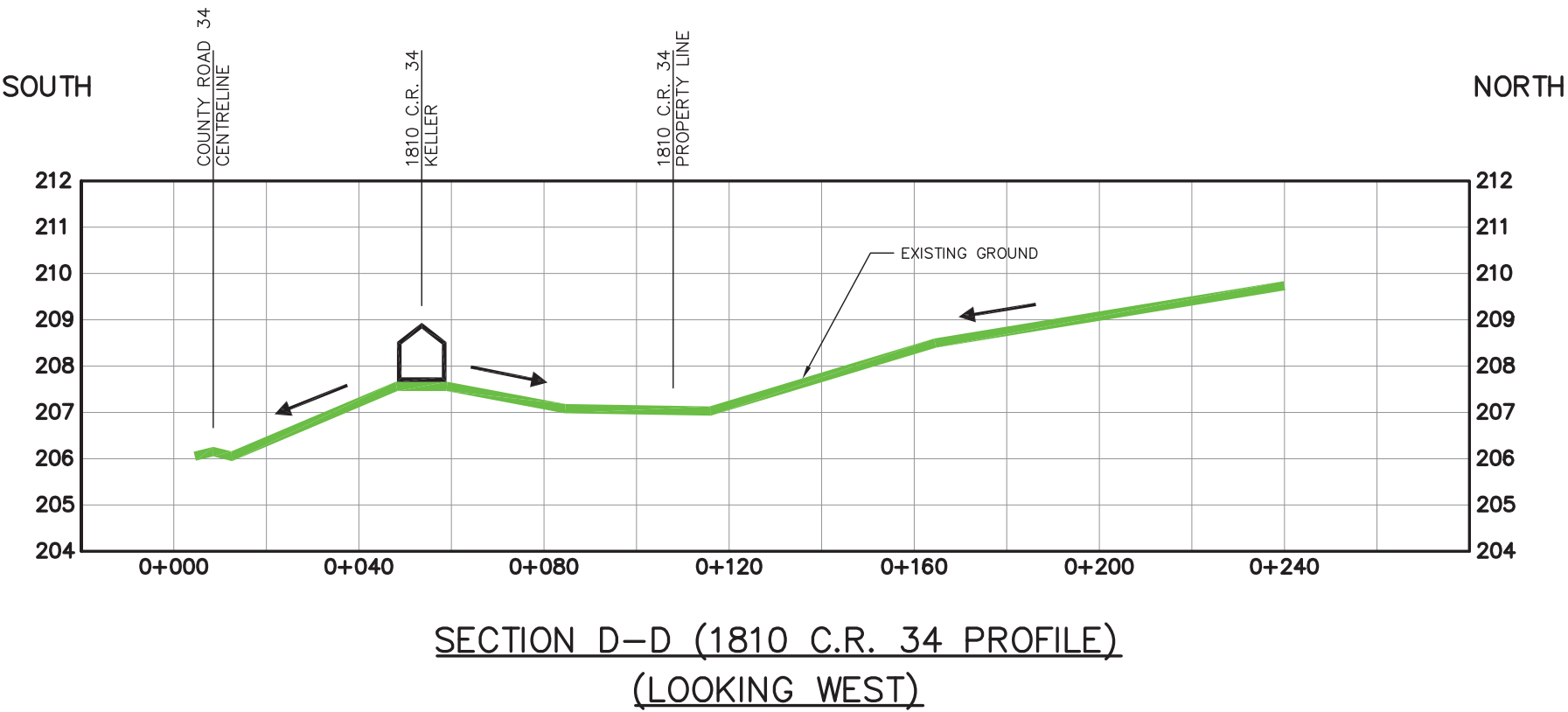
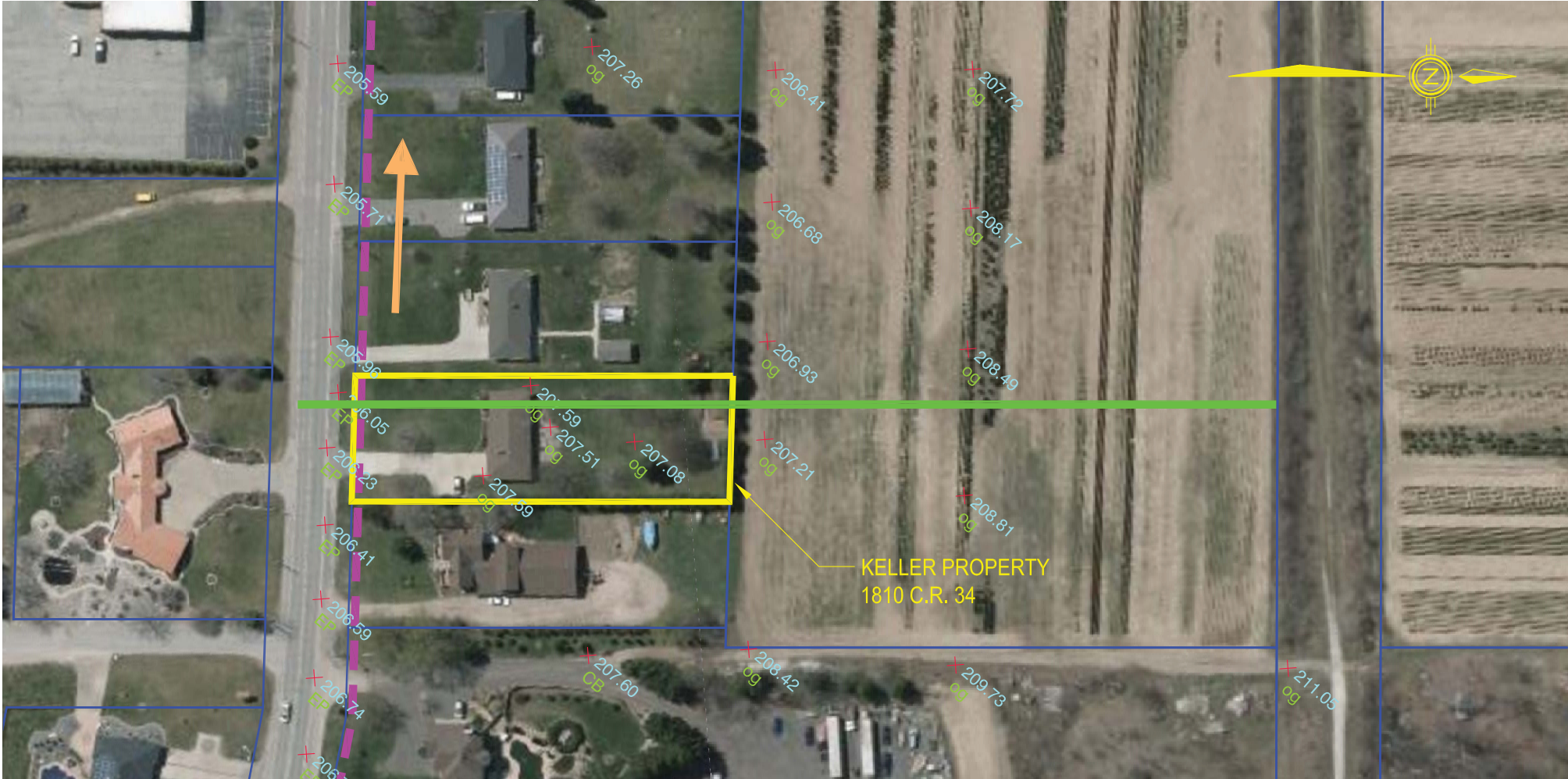
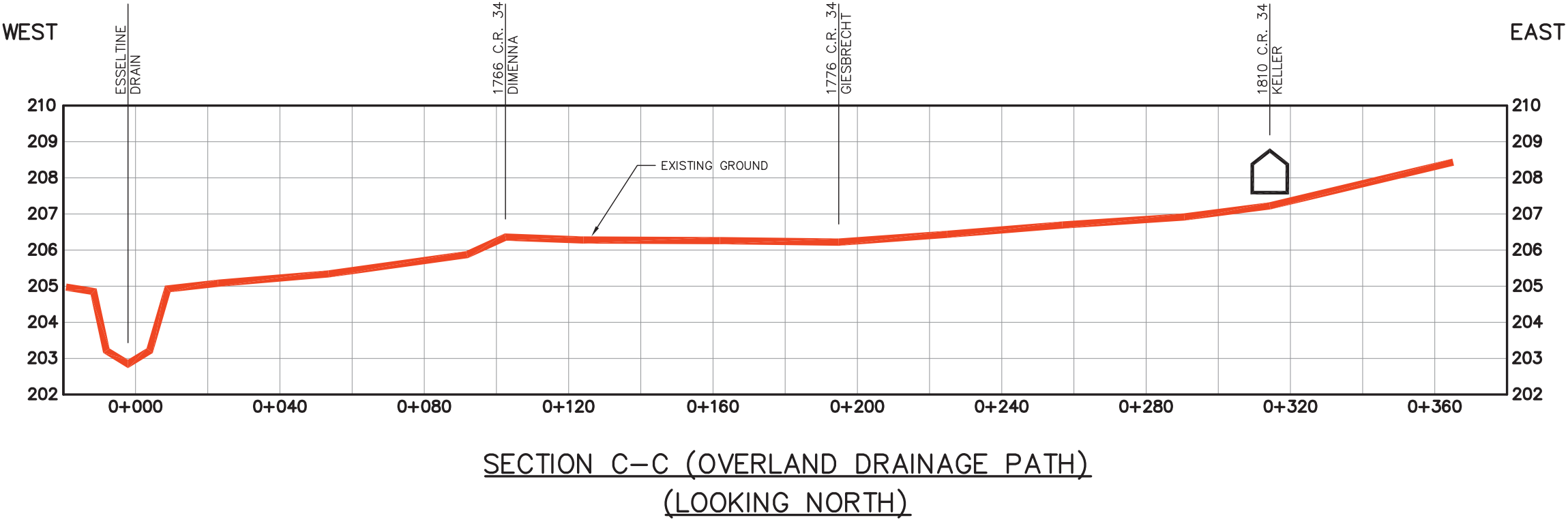
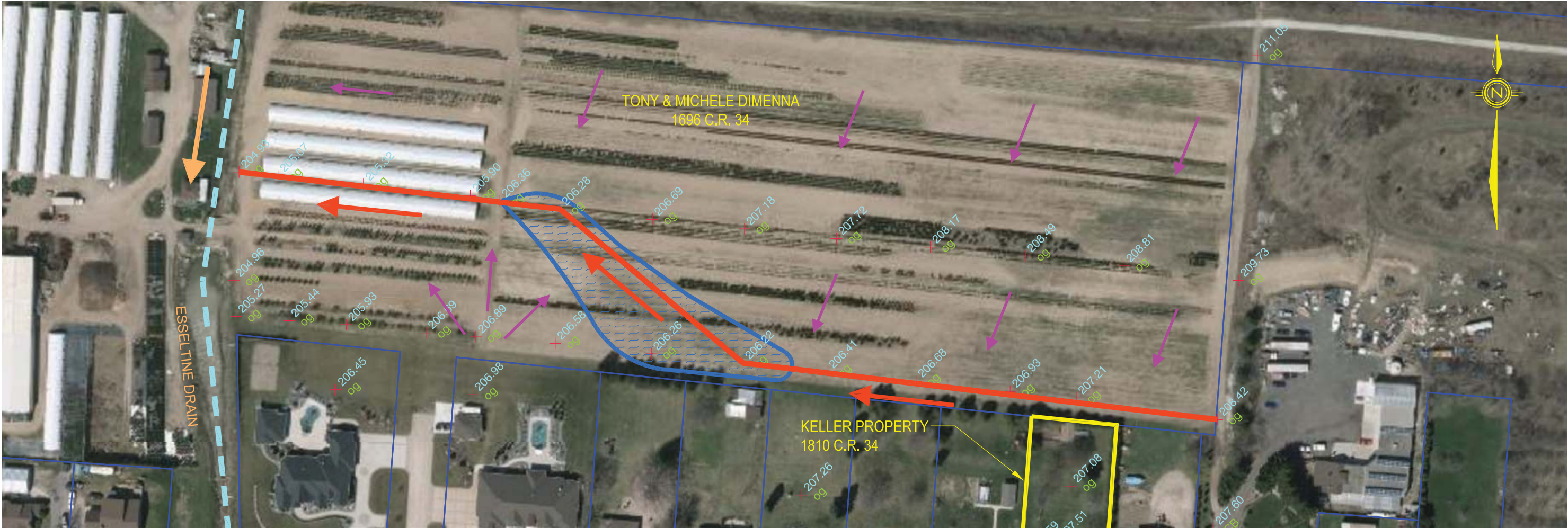


FIGURE 5



APPROXIMATE
VOLUME OF
STORM RUNOFF
RETAINED IN
LOW AREA OF
DIMENNA FARM
LAND

115 CUBIC
METRES

FIGURE 6

STORMWATER MODELLING

14-425

RUN-OFF VOLUME CALCULATIONS

HARRY & GUGLIELMINA KELLER

1810 COUNTY ROAD 34

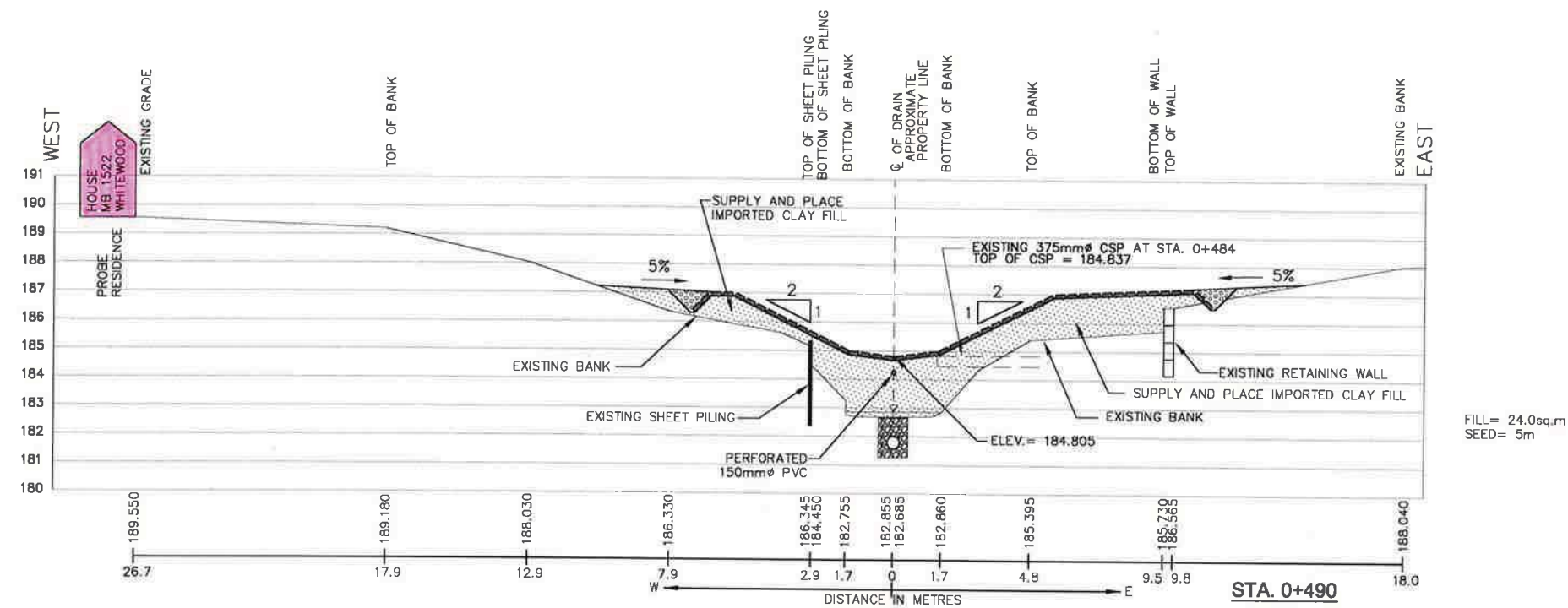
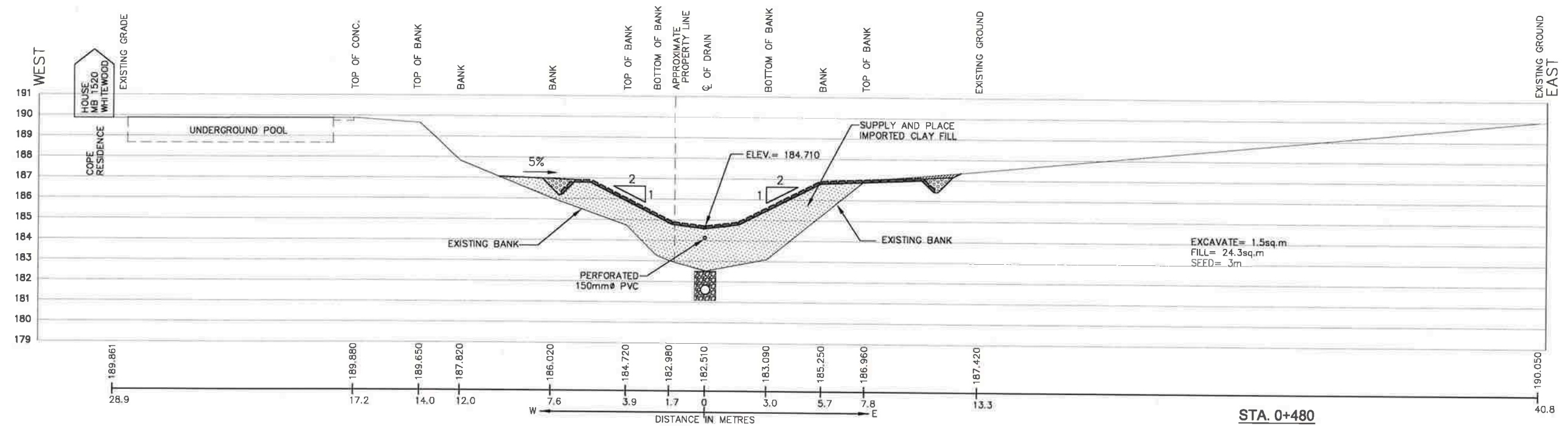
**APPROXIMATE RUNOFF VOLUME
RETAINED ON DIMENNA LAND**

115m³

STORM EVENTS			
FREQUENCY	RAINFALL DEPTH		RUN-OFF VOLUME
1:2 YEAR	53mm	2.1 inch	246m ³
1:5 YEAR	68mm	2.7 inch	515m ³
1:25 YEAR	90mm	3.5 inch	1037m ³
1:100 YEAR	108mm	4.3 inch	1549m ³

*Rainfall events creating greater than 115 cubic metres of runoff will be directed overland to the Esseltine Drain as shown on Page 6 of 6 (Overland Drainage Path)

FIGURE 7



*EXISTING 375mm DIA. CSP TO BE RECONNECTED INTO NEW FLOW CHANNEL

FIGURE 8a



THIS PLAN HAS BEEN REDUCED IN SIZE FOR PRESENTATION PURPOSES AND THEREFORE IT IS NOT TO THE SCALES INDICATED. A FULL SIZE SET OF DRAWINGS IS AVAILABLE FOR REVIEW AT THE TOWN OFFICE

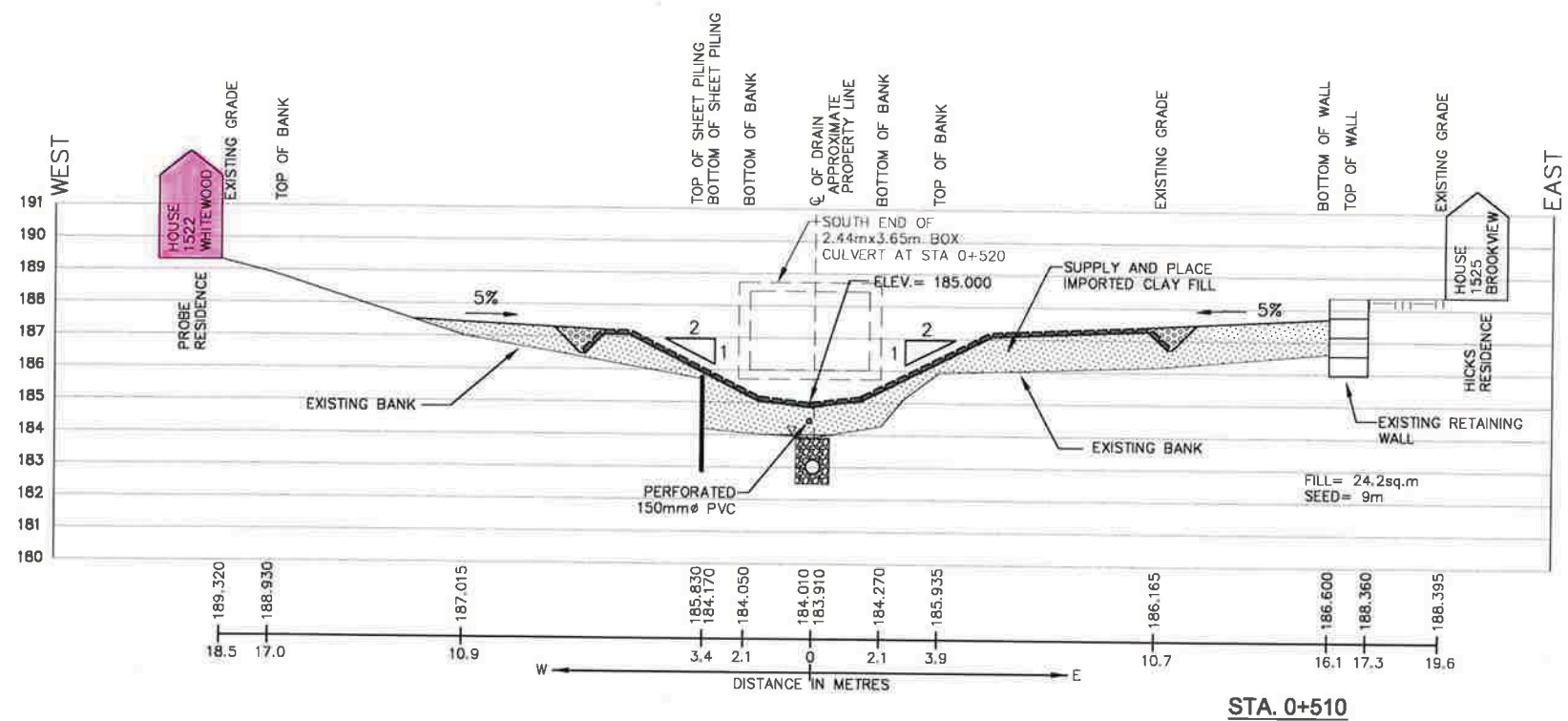
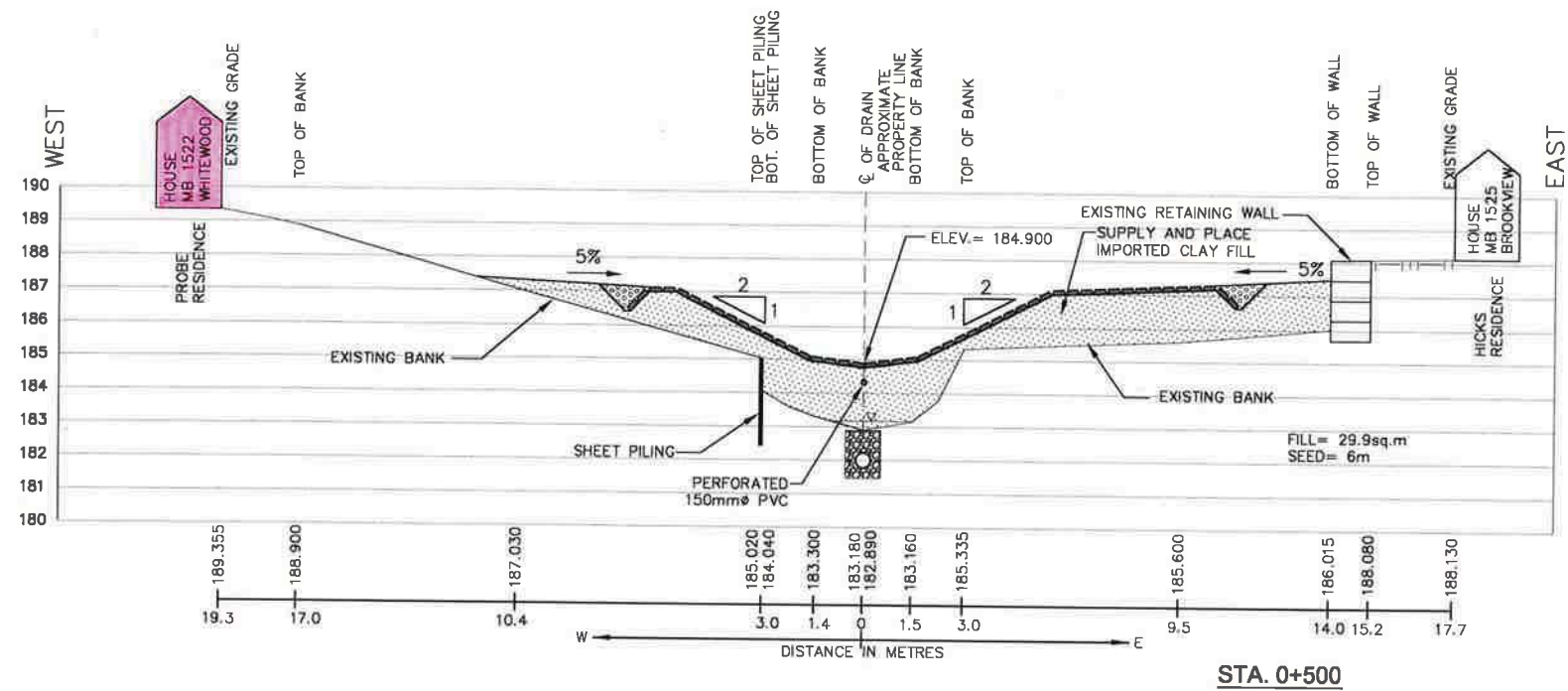


NO.	REVISION	DATE	BY	APP.
5.				
4.				
3.				
2.				
1.				

DESIGN	LZ.
CHECKED	A.M.G.
DRAWN	A.A.H.
CHECKED	R.C.S.
DATE	JUNE 17, 2018
SCALE	H=1:100 V=1:100

ESSELTINE DRAIN
CROSS-SECTIONS
STA. 0+475 to STA. 0+490

PROJECT NO.	14-425
SHEET NO.	17
OF	47



NOTES:

1. ABANDON STEEL SHEET PILE WALL (CUT TO BELOW CONCRETE MAT - DO NOT REMOVE)
2. REPLACE SEPTIC LATERALS:
- EXCAVATE AND LOCATE LATERAL
- REPLACE LATERALS
- RESTORE YARD
3. TEMPORARY USE OF EXISTING CISTERN FOR PUMPING CONTENTS ON WEEKLY BASIS BY ENVIRONMENTAL CONTRACTOR
4. REMOVAL OF 4 LARGE TREES DUE TO BURYING TREE CROWN ROOTS.

FIGURE 8b



THIS PLAN HAS BEEN REDUCED IN SIZE FOR PRESENTATION PURPOSES AND THEREFORE IT IS NOT TO THE SCALES INDICATED. A FULL SIZE SET OF DRAWINGS IS AVAILABLE FOR REVIEW AT THE TOWN OFFICE



NO.	REVISION	DATE	BY	APP.
5.				
4.				
3.				
2.				
1.				

DESIGN	L.Z.
CHECKED	A.M.G.
DRAWN	A.A.H.
CHECKED	R.C.S.
DATE	JUNE 17, 2016
SCALE	H=1:100 V=1:100
ESSETTINE DRAIN	
CROSS-SECTIONS	
STA. 0+500 to STA. 0+510	
PROJECT NO.	14-425
SHEET NO.	18
OF	47

Esseltine Drain-Residential Tree Evaluation, Replacement Planting/Compensation

		A	B	C	D	E	F	G	H	I	J	J	K	K	L	M	N
	Property	Category 0 (Dead/Faulty)	Category 1 (10- 25cmDBH)	% of Total	Category 2 (>25cmDBH)	% of Total	Total Trees for Removal	Area of Removals (m2)	Plantable Area (m2)	Replacement Trees	Planted Trees by Area (50mm)	Planted Trees by Area (70mm)	Unplanted Trees by Area (50mm)	Unplanted Trees by Area (70mm)	Estimated Cost of Installation	Estimated Payout to Landowner	Total Project Cost
1	1504 Whitewood Road	2	27	60%	18	40%	45	1962	1200	63	13	8	25	17	\$8,230.00	\$8,285.00	\$16,515.00
2	1506 Whitewood Road	1	6	67%	3	33%	9	263	134	12	1	1	7	3	\$810.00	\$1,915.00	\$2,725.00
3	1508 Whitewood Road+	2	12	60%	8	40%	20	1120	1120	28	8	6	8	6	\$5,560.00	\$2,780.00	\$8,340.00
4	1510 Whitewood Road+	3	6	86%	1	14%	7	517	517	8	8	1	0	0	\$3,260.00	\$0.00	\$3,260.00
5	1512 Whitewood Road	2	2	22%	7	78%	9	470	430	16	2	6	2	6	\$3,460.00	\$1,730.00	\$5,190.00
6	1514 Whitewood Road	2	2	50%	2	50%	4	636	592	6	5	6	0	0	\$4,510.00	\$0.00	\$4,510.00
7	1516 Whitewood Road	4	4	44%	5	56%	9	656	546	14	4	6	2	2	\$4,160.00	\$810.00	\$4,970.00
8	1517 Brookview Drive+	5	18	55%	15	45%	33	1754	1358	48	5	4	21	18	\$3,590.00	\$7,815.00	\$11,405.00
9	1518 Whitewood Road	2	2	33%	4	67%	6	400	400	10	2	5	1	2	\$3,000.00	\$635.00	\$3,635.00
10	1519 Brookview Drive+	3	6	60%	4	40%	10	756	672	14	2	2	6	4	\$1,620.00	\$1,970.00	\$3,590.00
11	1520 Whitewood Road	1	2	18%	9	82%	11	316	316	20	1	5	3	11	\$2,650.00	\$3,055.00	\$5,705.00
12	1521 Brookview Drive+	1	8	62%	5	38%	13	708	635	18	4	3	7	4	\$2,780.00	\$2,145.00	\$4,925.00
13	1522 Whitewood Road	0	4	80%	1	20%	5	349	292	6	4	1	1	0	\$1,860.00	\$175.00	\$2,035.00
14	1523 Brookview Drive+	0	1	14%	6	86%	7	720	596	13	1	5	1	6	\$2,650.00	\$1,555.00	\$4,205.00
15	1525 Brookview Drive+	3	2	22%	7	78%	9	1141	914	16	1	4	2	9	\$2,190.00	\$2,420.00	\$4,610.00
16	1875 County Road 20+	10	9	29%	22	71%	31	2353	2193	53	4	9	12	28	\$5,540.00	\$8,540.00	\$14,080.00
															\$55,870.00	\$43,830.00	\$99,700.00

+ properties with Access Road

C percentage of total reviewed trees within this size category

these percentages are used to calculate number of 50mm cal, replacement trees

E percentage of total reviewed trees within this size category

these percentages are used to calculate number of 70mm cal, replacement trees

F trees on property to be removed to accommodate construction

G area of property to be affected by construction

H area available for planting after construction of channel and access road

properties with access road will be paid out for area of access road including installation

I number of replacement trees calculated per property based on the following:

for Category 1 trees: 1 50mm caliper, wire basket tree

for Category 2 trees: 2 70mm caliper, wire basket trees

J number of trees which can be planted in the area remaining after construction

trees will be planted in a 7.5m X 7.5m on-centre grid pattern

K number of replacement trees which cannot be planted in the area remaining after construction

L replacement cost based on M. Putzer Hornby Nursery Ltd, 2015 Price List

installation cost calculated as 200% of replacement cost

50mm cal., wire basket \$350.00

70mm cal., wire basket \$460.00

M value of trees that cannot be planted due to space restrictions without installation costs

50mm cal., wire basket \$175.00

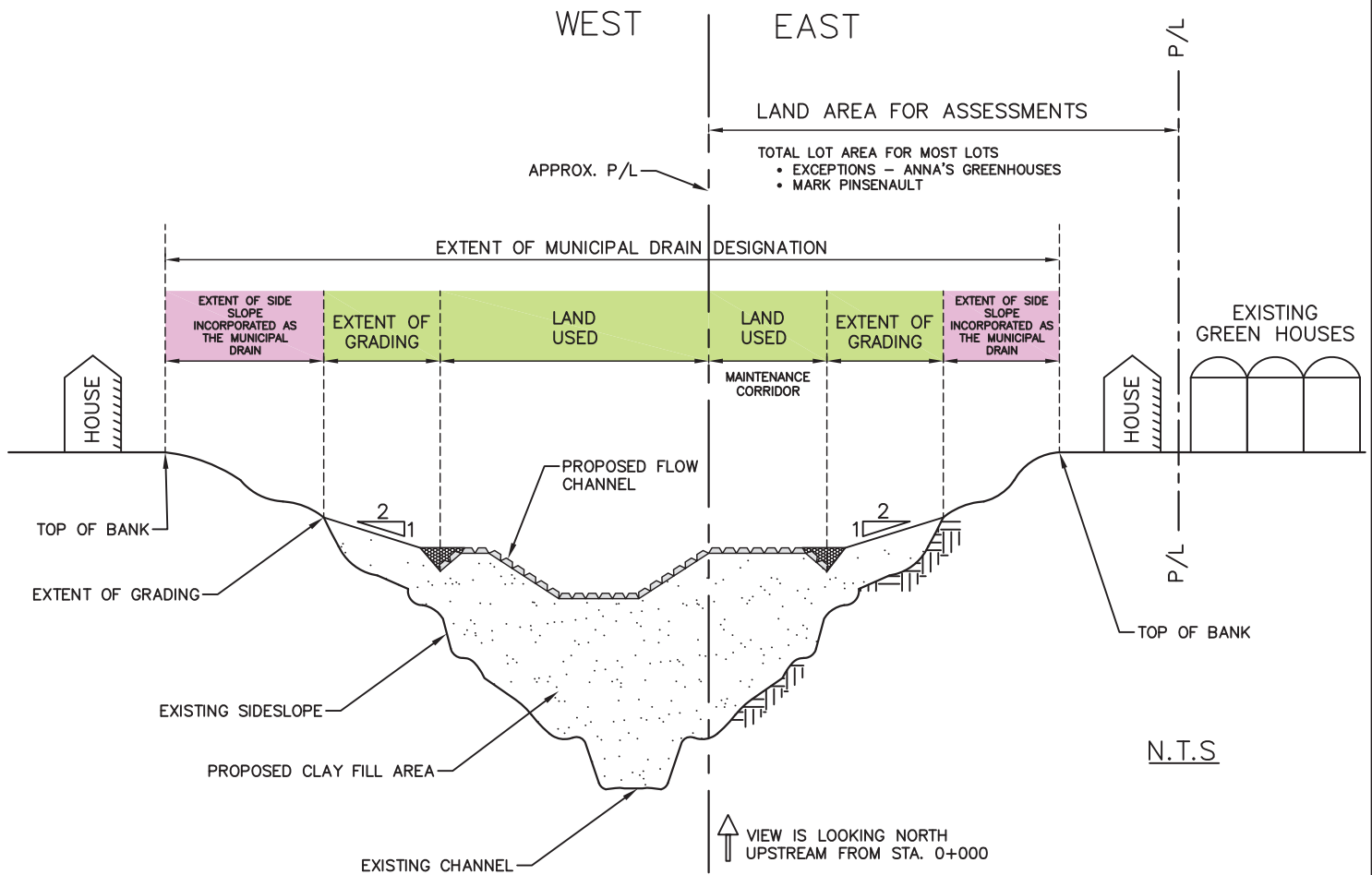
70mm cal., wire basket \$230.00

FIGURE 9

GENERAL SCHEMATIC SHOWING DETERMINATION OF ALLOWANCES FOR LAND USED WITHIN THE RAVINE AREA

DETERMINE LAND USED (TAKEN) FOR:

1. LAND USED TO CONSTRUCT THE DRAIN FLOW CHANNEL
2. LAND USED TO CONSTRUCT MAINTENANCE CORRIDOR
3. LAND USED TO GRADE SIDE SLOPE
4. LAND USED TO INCORPORATE EXISTING SIDE SLOPES AS PART OF MUNICIPAL DRAIN



Ticket Summary for Scott Schilson**Project No.: 14-425**

	Material	Total No. of Loads	Total Weight (Tons)	Conversion to Volume (c.m.)	Non-Erodible Volume (c.m.)
1)	Amherst Quarry - 12-24" Rip Rap		778.67	442	442
2A)	South western sales - Granular 'A'		24.65	10	
2B)	South western sales - 3/4" stone		175.97	89	
3A)	Great Northern - Dirt, Sand, Rocks	30		300	30
3B)	Great Northern - Fill, fill sand, 0-7/8 stone	145		1450	
3C)	Great Northern - Fill, fill sand, topsoil	33		330	
4)	Ingratta Farms - Topsoil	21		210	
	Total Material =			2831	472

***Non-Erodible Volume of 30 C.M. for the "Great Northern - Dirt, Sand, Rocks" was determined as shown on the attached Summary Pages**

***Allowance Rate of \$20.00 per Cubic Metre of Rock Fill is determined as the Same Rate as Imported Clay Fill (\$20.00 per Cubic Metre)**

***Total Allowance Calculation for Previous Repairs to Watercourse (Chart 7):
472 C.M. x \$20.00/C.M. = \$9,440.00**

FIGURE 11a

Breakdown of Ticket Summary for Scott Schilson

1) Amherst Quarry - 12-24" Rip Rap

	<u>Loads</u>	<u>Tons</u>		
Aug. 19, 2013	2	42.06	=	24 c.m. *based on 1.76 Tons per c.m.
Aug. 15, 2013	2	39.86	=	23 c.m. *based on 1.76 Tons per c.m.
Aug. 14, 2013	11	232.38	=	132 c.m. *based on 1.76 Tons per c.m.
Aug. 1, 2013	10	209.14	=	119 c.m. *based on 1.76 Tons per c.m.
Aug. 2, 2013	4	86.75	=	49 c.m. *based on 1.76 Tons per c.m.
Aug. 6, 2013	2	41.52	=	24 c.m. *based on 1.76 Tons per c.m.
Aug. 16, 2013	5	107.05	=	61 c.m. *based on 1.76 Tons per c.m.
Jul. 27, 2013	1	19.91	=	11 c.m. *based on 1.76 Tons per c.m.
	37	778.67	=	442 c.m. *based on 1.76 Tons per c.m.

2A) South western sales - Granular 'A'

	<u>Loads</u>	<u>Tons</u>		
Jul. 29, 2013		24.65	=	10 c.m. *based on 2.48 Tons per c.m.

2B) South western sales - 3/4" stone

	<u>Loads</u>	<u>Tons</u>		
Jul. 24, 2013		24.12	=	12 c.m. *based on 1.98 Tons per c.m.
Jul. 24, 2013		20.45	=	10 c.m. *based on 1.98 Tons per c.m.
Jul. 26, 2013		21.68	=	11 c.m. *based on 1.98 Tons per c.m.
Jul. 25, 2013		21.94	=	11 c.m. *based on 1.98 Tons per c.m.
Jul. 25, 2013		22.14	=	11 c.m. *based on 1.98 Tons per c.m.
Jul. 25, 2013		22.17	=	11 c.m. *based on 1.98 Tons per c.m.
Jul. 23, 2013		21.02	=	11 c.m. *based on 1.98 Tons per c.m.
Jul. 23, 2013		22.45	=	11 c.m. *based on 1.98 Tons per c.m.
		175.97	=	89 c.m. *based on 1.98 Tons per c.m.

3A) Great Northern - Dirt, Sand, Rocks

	<u>Loads</u>	<u>Tons</u>		
Aug. 26, 2013	1		Stone	= 10 c.m. *based on 10 c.m. per load
Aug. 28	4		Dirt	= 40 c.m. *based on 10 c.m. per load
Aug. 28	3		Sand	= 30 c.m. *based on 10 c.m. per load
Aug. 29	7		Sand	= 70 c.m. *based on 10 c.m. per load
	1		Rocks	= 10 c.m. *based on 10 c.m. per load
Aug. 29	7		Dirt	= 70 c.m. *based on 10 c.m. per load
Aug. 14	3		Dirt	= 30 c.m. *based on 10 c.m. per load
Aug. 15	3		Sand	= 30 c.m. *based on 10 c.m. per load
	1		Rip Rap	= 10 c.m. *based on 10 c.m. per load
			(from 2nd Conc)	
	30			= 300 c.m. *based on 10 c.m. per load

FIGURE 11b

3B) Great Northern - Fill, fill sand, 0-7/8 stone

	<u>Loads</u>	<u>Tons</u>			
Aug. 2	3		Sand	=	30 c.m. *based on 10 c.m. per load
Aug. 2	7		Fill	=	70 c.m. *based on 10 c.m. per load
Aug. 2	7		Fill Sand	=	70 c.m. *based on 10 c.m. per load
Aug. 2	12		Fill	=	120 c.m. *based on 10 c.m. per load
Jul. 30	21		Fill	=	210 c.m. *based on 10 c.m. per load
Aug. 1	3		Dirt	=	30 c.m. *based on 10 c.m. per load
Aug. 1	5		Fill	=	50 c.m. *based on 10 c.m. per load
Jul. 29	16		Fill	=	160 c.m. *based on 10 c.m. per load
Jul. 30	21		Soil	=	210 c.m. *based on 10 c.m. per load
Jul. 30	21		Fill	=	210 c.m. *based on 10 c.m. per load
Jul. 29	13		Dirt	=	130 c.m. *based on 10 c.m. per load
			<i>0-7/8 (from Southwestern)</i>		
Jul. 29	<u>16</u>		Dirt	=	<u>160 c.m.</u> *based on 10 c.m. per load
	145			=	1450 c.m. *based on 10 c.m. per load

3C) Great Northern - Fill, fill sand, topsoil

	<u>Loads</u>	<u>Tons</u>			
Aug. 14	5		Fill Sand	=	50 c.m. *based on 10 c.m. per load
Aug. 13	13		Fill	=	130 c.m. *based on 10 c.m. per load
Aug. 14	2		Sand	=	20 c.m. *based on 10 c.m. per load
			Topsoil /		
Aug. 13	<u>13</u>		Dirt	=	<u>130 c.m.</u> *based on 10 c.m. per load
	33			=	330 c.m. *based on 10 c.m. per load

4) Ingratta Farms - Topsoil

	<u>Loads</u>	<u>Tons</u>			
Sep. 3	3			=	30 c.m. *based on 10 c.m. per load
Sep. 3	4			=	40 c.m. *based on 10 c.m. per load
Aug. 29	3			=	30 c.m. *based on 10 c.m. per load
Aug. 29	5			=	50 c.m. *based on 10 c.m. per load
Aug. 28	2			=	20 c.m. *based on 10 c.m. per load
Aug. 28	<u>4</u>			=	<u>40 c.m.</u> *based on 10 c.m. per load
	21			=	210 c.m. *based on 10 c.m. per load

ESSELTINE DRAIN
CHART 7 - ALLOWANCES FOR VALUE OF
DRAINAGE WORKS PREVIOUSLY PERFORMED
STATIONS 0+000 TO 0+520

A) STATIONS 0+000 TO 0+520													
ENTRY NO.	ADDRESS	TAX ROLL NO.	LAND USE	CON. OR PLAN NO.	LOT OR PART OF LOT	ACRES OWNED	ACRES AFFT'D	HECTARES AFFT'D	VOLUME OF IMPORTED FILL (C.M.)	ALLOWANCE RATE (\$ / C.M.)	STATIONS	OWNERS NAME	VALUE OF ALLOWANCE
1	1504 Whitewood Rd	290-10100	RESIDENTIAL	1 E.D.	11	2.16	2.16	0.874			0+000 to 0+167	JEAN-MARC JOSEPH & ISABELLA MARGARET PINSONNEAULT	\$ -
2	1506 Whitewood Rd	290-10000	RESIDENTIAL	1 E.D.	11	0.65	0.65	0.261			0+167 to 0+185	STEVEN ROBERT MARCHAND & FELICIA RICO	\$ -
3	1508 Whitewood Rd	290-09900	RESIDENTIAL	1 E.D.	11	0.85	0.85	0.344			0+185 to 0+257	DAVID WALTER & SUSAN LYNN ANNETTE WHITE	\$ -
4	1510 Whitewood Rd	290-09800	RESIDENTIAL	M19	7	0.98	0.98	0.398	472.0	\$20.00	0+257 to 0+300	SCOTT ARNOLD SHILSON	\$ 9,440.00
5	1512 Whitewood Rd	290-09700	RESIDENTIAL	M19	6	0.43	0.43	0.172			0+310 to 0+333	DAVID ANDREW DANN	\$ -
6	1514 Whitewood Rd	290-09600	RESIDENTIAL	M19	5	0.42	0.42	0.168			0+333 to 0+370	JIN ZHU	\$ -
7	1516 Whitewood Rd	290-09500	RESIDENTIAL	M19	4	0.51	0.51	0.207			0+370 to 0+415	GEOFFREY BROOK GARDNER & JENNIFER ISOBEL FRASER	\$ -
8	1518 Whitewood Rd	290-09400	RESIDENTIAL	M19	3	0.40	0.40	0.160			0+415 to 0+455	JONI LYNN BALTZER	\$ -
9	1520 Whitewood Rd	290-09300	RESIDENTIAL	M19	2	0.35	0.35	0.142			0+455 to 0+490	JASON VERN & JENNIFER SUSAN S COPE	\$ -
10	1522 Whitewood Rd	290-09200	RESIDENTIAL	M19	1	0.31	0.31	0.127			0+490 to 0+520	LEO & KATHY PROBE	\$ -
11	1517 Brookview Dr	290-09100	RESIDENTIAL	1 E.D.	11	1.07	1.07	0.434			0+235 to 0+345	CONNIE-JEAN LATAM	\$ -
12	1519 Brookview Dr	290-09000	RESIDENTIAL	1 E.D.	11	0.61	0.61	0.248			0+345 to 0+390	DEBORAH LORI & EDMOND JULIEN ROLLIER	\$ -
13	1521 Brookview Dr	290-08900	RESIDENTIAL	1 E.D.	11	0.47	0.47	0.190			0+390 to 0+428	GREGORY & VICKI CALCOTT	\$ -
14	1523 Brookview Dr	290-08800	RESIDENTIAL	1 E.D.	11	0.44	0.44	0.178			0+428 to 0+453	JAMES ERNEST & SHIRLEY ANNE JENSEN	\$ -
15	Brookview Dr	290-08700	RESIDENTIAL	1 E.D.	11	0.37	0.37	0.150			0+453 to 0+486	PHYLLIS MARIE HICKS	\$ -
16	1525 Brookview Dr	290-08600	RESIDENTIAL	1 E.D.	11	0.34	0.34	0.138			0+486 to 0+520	RICHARD CLARE & PHYLLIS MARIE HICKS	\$ -
17	1875 County Rd 20	290-08401	AGRICULTURAL	1 E.D.	11	9.38	9.38	3.796			0+000 to 0+230	(2462284 ONTARIO INC) ANNA'S GREENHOUSES	\$ -
Total Affected Lands							19.74	7.987	Total Allowance				\$ 9,440.00

The "VOLUME OF IMPORTED FILL" is made up of the following components:
1) Volume of previously installed approved rock fill material from Station 0+257 to 0+300 in the existing natural watercourse

*Allowance Rate of \$20.00 per Cubic Metre of Rock Fill is determined as the Same Rate as Imported Clay Fill (\$20.00 per Cubic Metre)



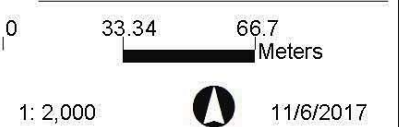
Notes
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FIGURE 13



- Legend**
- Essex Municipalities
 - <all other values>
 - Kingsville
 - Street
 - Severance
 - Kingsville Assessment



Notes

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