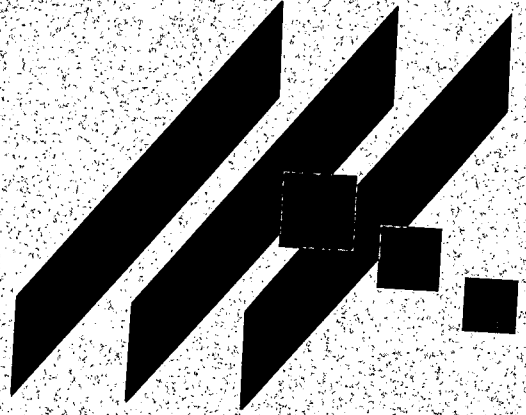


M K E C ENGINEERING CONSULTANTS, I N C



PRELIMINARY DRAINAGE REPORT

FOR

THE SHADY RIDGE ADDITION

March 2004

Preliminary Drainage Report for the Shady Ridge Addition Wichita, Sedgwick County, Kansas

Location

The subject property is in Wichita, Sedgwick County, Kansas. The site has been platted as Woodland Heights 2nd Addition. The proposed development is located approximately 600 feet east of Ridge Road between Central Avenue and Maple Street. The site is between Shade Lane and Wayside Lane. Residential developments and vacant lots surround the site. Shady Ridge is in the South Half of the Southeast Quarter, of Section 29, Township 29 South, Range 1 East. The dimensions of the property are approximately 300 feet by 1300 feet. The area of the plat is 11.0 acres. The site is shown on the Wichita West, Kansas Quadrangle, located in Appendix A.

Soils

According to the NRCS (SCS) Sedgwick County Soil Survey in Appendix B, the soil on the site is silty loam. The site is made up of Milan loam, 1-3% slopes, (Ma - HSG "B") and Pits (Pa). The HSG used to select runoff coefficients is "B".

Pre-developed Conditions

Current Development

The site is currently vacant land zoned as Multi-Family.

Current Landform and Slope

Slopes in the site vary from 1.5% to 3.5%. Elevations vary from 149' at the southwest corner to 125' at street northeast corner of the site.

Current Drainage Conditions

The site drains from Southwest to Northeast. The Wichita-Valley Center Floodway is approximately 500 feet northeast of the site. The northeast corner of the site is designated as Zone B - areas protected by levees from the base flood (FIRM Panel 125, Sedgwick, County, Kansas, January 16, 1987) (shown in Appendix C). The remaining site is in Zone C - areas of minimal flooding. The nearest Zone A is approximately 500 feet northeast of the site.

Current Runoff Characteristics

The site currently drains into Shade Lane and into a drainage ditch north of the site. The drainage ditch crosses under Winterset Lane through a 2-9'x4' RCB. Approximately 45.8 acres from offsite drain into the ditch as it runs parallel with the site. Peak flow during the 100-year design event is 165 cfs. Before crossing under Winterset Lane, a storm water pipe from the north outlets into the drainage ditch just before the RCB. Approximately

17.3 acres drain into the ditch, in addition to the 45.8 acres, before crossing under Winterset Lane. The RCB has a peak flow of 228 cfs during the 100-year design event. Existing runoff calculations were done using the rational method and are shown in the spreadsheet in Appendix D. Drainage boundaries are shown in the Drainage and Utility Plan in Appendix E. Time of Concentration was calculated using the FAA method. Under existing conditions, 17.2 cfs leaves the site in the 100-year design event. A summary of the runoff values is shown in Table 1.

Table 1. Pre-developed Runoff.

Sub-Watershed	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
A	1.5	1.7	2.7	6.7
B	2.3	2.6	4.3	10.5
From Shady Ridge	3.8	4.3	7.0	17.2
To RCB	70.4	95.9	125.7	228.0

Developed Conditions

Proposed Development

The site will develop as Multi-family lots. There will be approximately 36 lots roughly ¼ acre in size. Duplex housing units are planned for this lot.

Proposed Landform and Slope

Final slopes in the development have not been determined, but the minimum will be 0.5% within street right-of-way. The preliminary lot-grading plan is shown in Appendix F.

Proposed Runoff Characteristics

The site will continue to drain into Shade Lane and into the drainage ditch north of the site. Proposed runoff calculations were done using the rational method and are shown in the spreadsheet in Appendix D. Time of Concentration was calculated using the FAA method. Under proposed conditions, 50.6 cfs leaves the site in the 100-year design event. A summary of the runoff values is shown in Table 2.

Table 3. Developed Runoff.

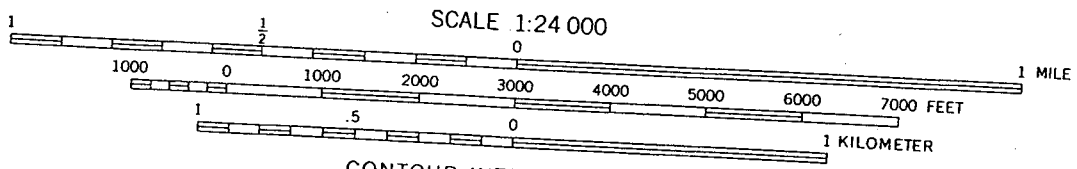
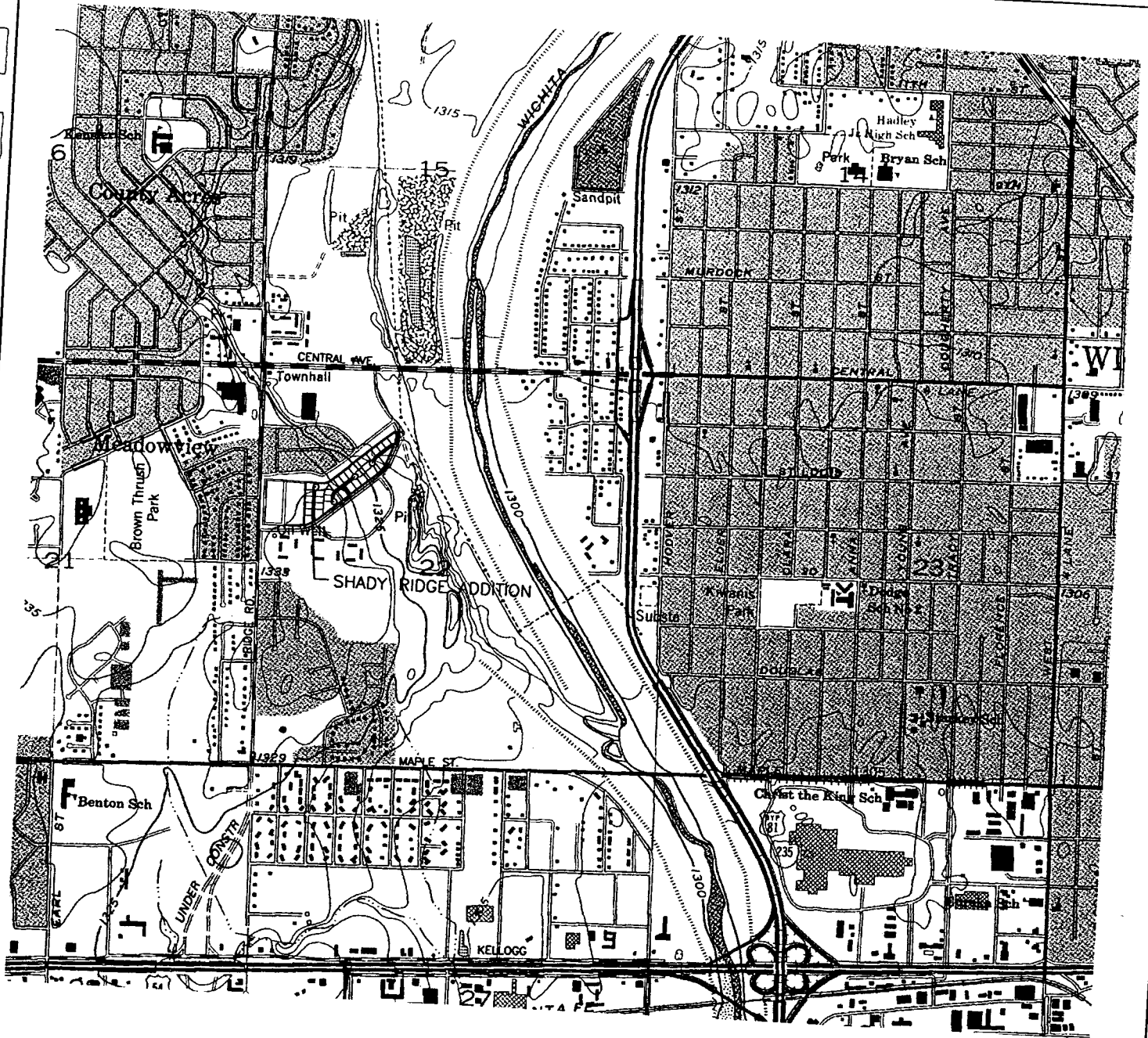
Sub-Watershed	2-Year (cfs)	5-Year (cfs)	10-Year (cfs)	100-Year (cfs)
A	6.7	8.9	11.6	19.8
B	10.5	13.9	18.1	30.8
From Shady Ridge	17.2	22.8	29.8	50.6
To RCB	76.5	104.0	138.0	242.1

An HY-8 run has been completed on the RCB under Winterset Lane and is shown in Appendix G. The 100-year water surface elevation from the Wichita-Valley Center Floodway was used as a constant water surface elevation. The box can handle 650 cfs before overtopping the street.


Summary

The Shady Ridge Addition is currently vacant lots platted as Woodland Heights 2nd Addition. The site will develop as approximately 36 residential lots roughly 1/4-acre in size. A drainage ditch flows from west to northeast, north of the site. Peak runoff from the site will increase by 33.4 cfs during the 100-year design event. The site enters the Wichita-Valley Center Floodway through a 2-9x4' RCB under Winterset. Flow to the RCB will increase from 228.0 cfs to 242.1 cfs. This increase of 14.1 cfs is 6.2% of the total flow to the RCB. According to the HY-8 model, the 100-year water surface elevation is 124.26 feet under current conditions and 124.30 feet after development. The RCB will handle the increased flow from the development of this site. The site is at the base of the drainage area, before it outlets into the Wichita-Valley Center Floodway. The site will have a negligible effect on runoff through the ditch and to the RCB. Minimum pad elevations will be provided with the final plat.

**APPENDIX A
QUADRANGLE MAP**



CONTOUR INTERVAL 5 FEET
 NATIONAL GEODETIC VERTICAL DATUM OF 1929



SHADY RIDGE
PROJECT NAME

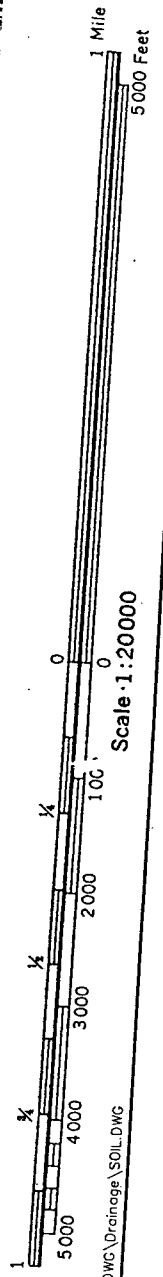
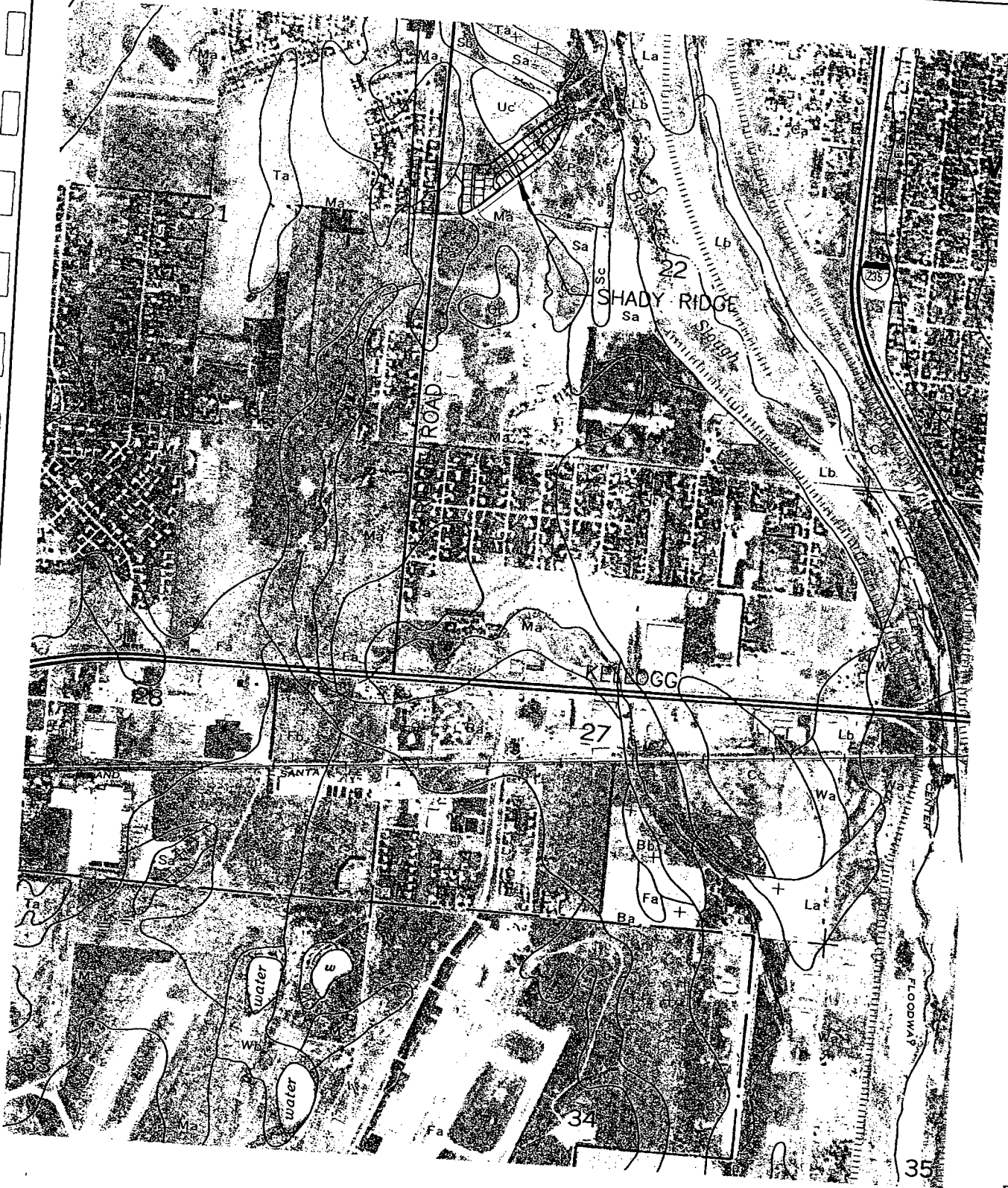
USGS GEOLOGICAL SURVEY
SEDGWICK COUNTY, KANSAS
SHEET TITLE

MKEC ENGINEERING CONSULTANTS 411 N. WEBB ROAD WICHITA, KS. 67206 316 - 684 - 9600	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;"><i>KLA</i></td> <td style="width: 33%;"><i>JFL</i></td> <td style="width: 33%;"><i>GJA</i></td> </tr> <tr> <td>DESIGN BY:</td> <td>DRAWN BY:</td> <td>CHECKED BY:</td> </tr> </table>	<i>KLA</i>	<i>JFL</i>	<i>GJA</i>	DESIGN BY:	DRAWN BY:	CHECKED BY:	<table border="0" style="width: 100%;"> <tr> <td style="width: 33%;"><i>MARCH 2004</i></td> <td style="width: 33%;"><i>104071</i></td> <td style="width: 33%;"></td> </tr> <tr> <td>DATE</td> <td>JOB NO.</td> <td></td> </tr> </table>	<i>MARCH 2004</i>	<i>104071</i>		DATE	JOB NO.	
<i>KLA</i>	<i>JFL</i>	<i>GJA</i>												
DESIGN BY:	DRAWN BY:	CHECKED BY:												
<i>MARCH 2004</i>	<i>104071</i>													
DATE	JOB NO.													

1 / 1

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**APPENDIX B
SOIL SURVEY**



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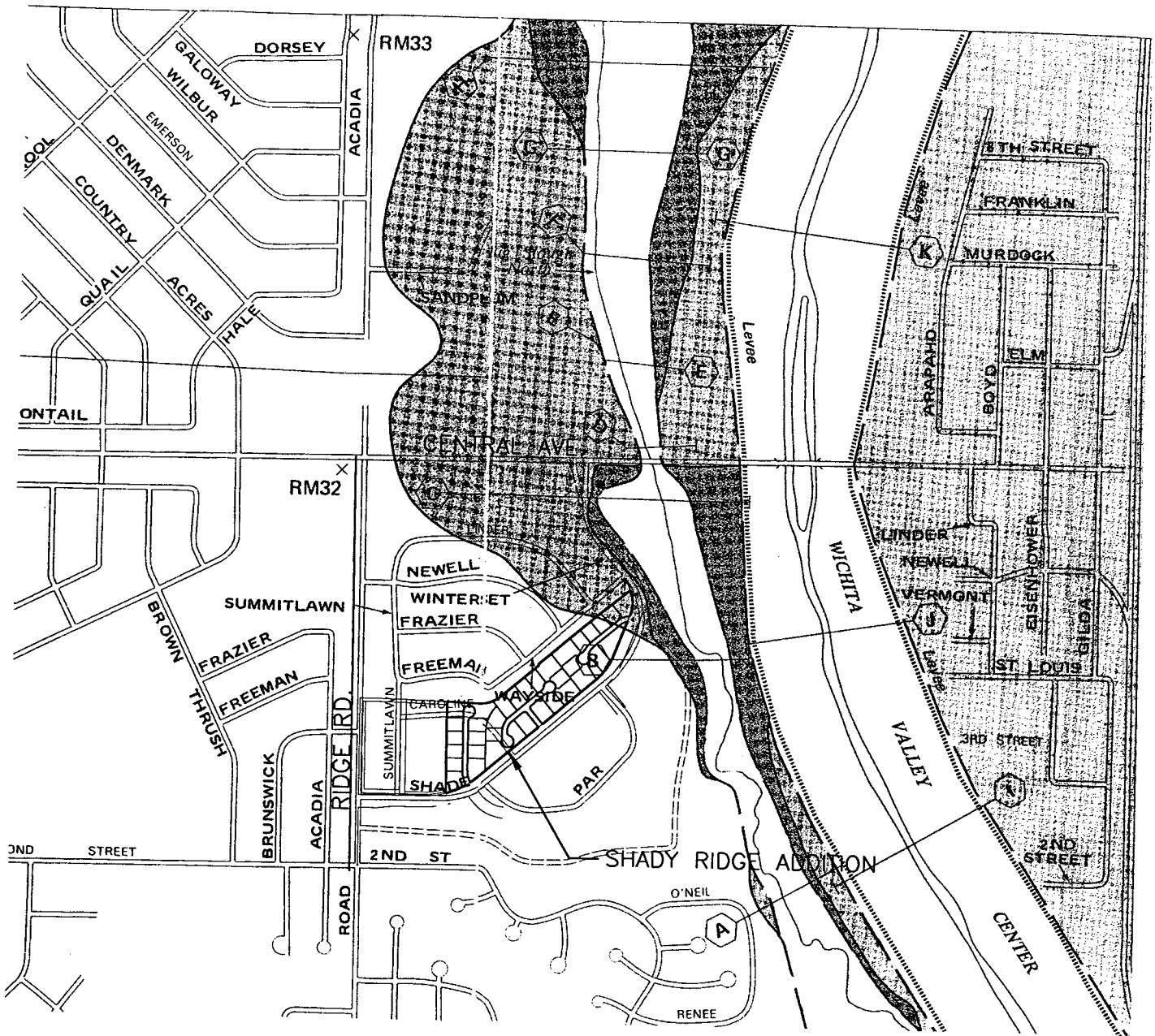


MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

SHADY RIDGE
PROJECT NAME
SOIL SURVEY
SEDGWICK COUNTY, KANSAS
SHEET TITLE

DESIGN BY: KLA DRAWN BY: JFL CHECKED BY: GJA
DATE: MARCH 2004 104071

APPENDIX C
FIRM



NATIONAL FLOOD INSURANCE PROGRAM


**FLOODWAY
FLOOD BOUNDARY AND
FLOODWAY MAP**

CITY OF
WICHITA,
KANSAS
SEDGWICK COUNTY

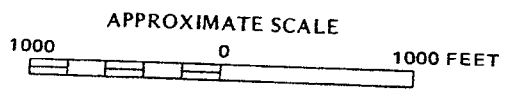

PANEL 20 OF 40
(SEE MAP INDEX FOR PANELS NOT PRINTED)

COMMUNITY-PANEL NUMBER
200328 0020

EFFECTIVE DATE:
MAY 15, 1986



Federal Emergency Management Agency

MKEC
ENGINEERING
CONSULTANTS
411 N. WEBB ROAD
WICHITA, KS. 67206
316 - 684 - 9600

SHADY RIDGE
PROJECT NAME

**FLOOD BOUNDARY AND FLOODWAY MAP
SEDGWICK COUNTY, KANSAS**
SHEET TITLE

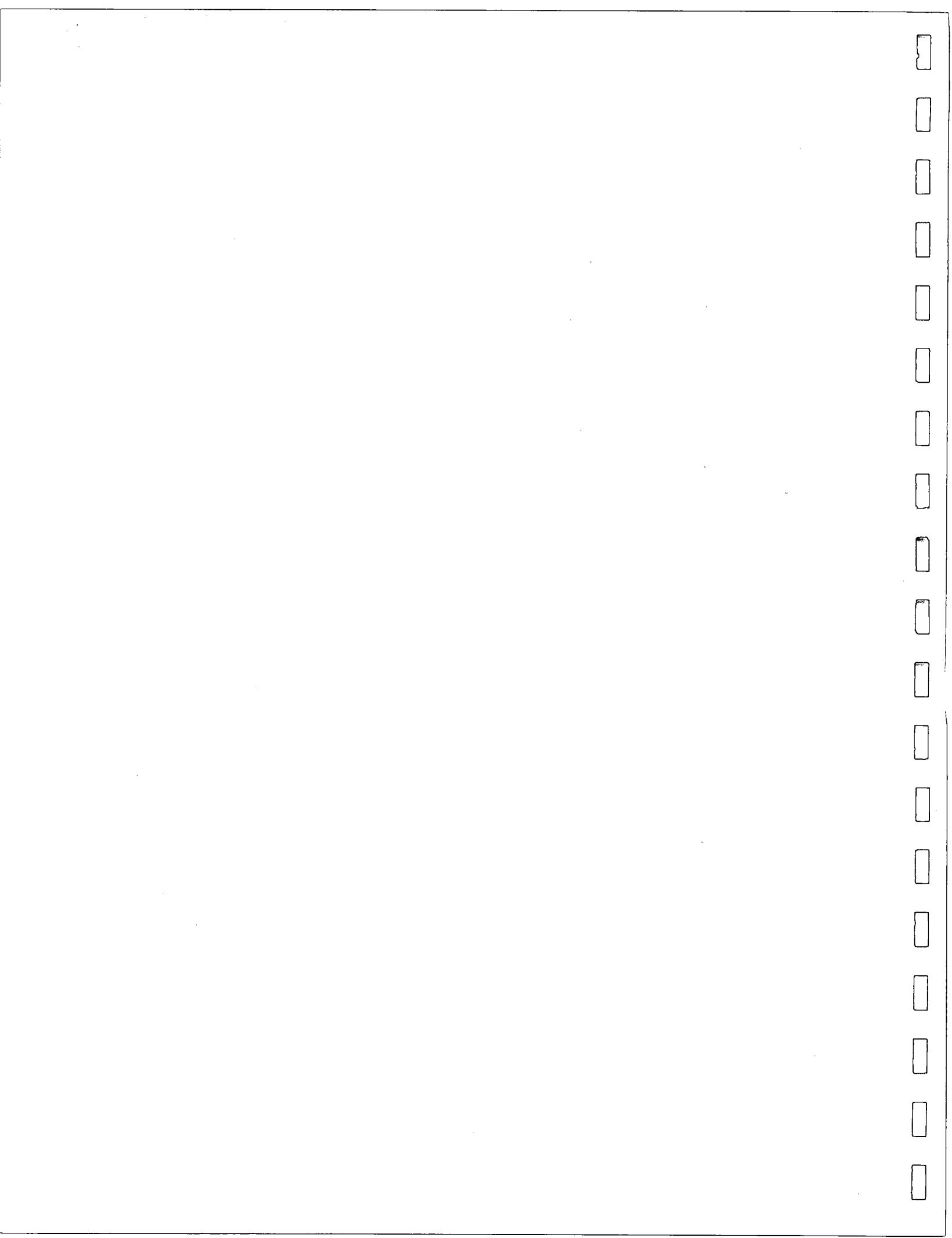
KLA DESIGN BY.	JFL DRAWN BY.	GJA CHECKED BY.
MARCH 2004 DATE	04071 JOB NO.	1 / 1 SHEET/OF

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**APPENDIX D
DRAINAGE CALCULATIONS**

Area ID	Conveyance		Area ac	Accum. Area ac	Runoff Coefficients				Slope Data				Time of Concentration										Rainfall Intensity				Storm Flows					
	From	To			C10	C5	C2	C1	C100	Explanation of Runoff Coefficients	Elev Max	Elev Min	Flow Length	Tc2	Avg V2	Tc5	Avg V5	Tc10	Avg V10	Tc100	Avg V100	Tc2	Tc5	Tc10	Tc100	I2	I5	I10	I100	Q2	Q5	Q10
Existing																																
A			4.30	4.30	0.20	0.18	0.24	0.37	Urban Lawn Areas 1-4% Slope - 0% Impervious	149.0	125.0	1700	59.54	0.48	60.87	0.47	56.90	0.50	48.30	0.59	60	61	57	48	1.72	2.15	2.64	4.23	1.48	1.66	2.72	6.73
B			6.70	6.70	0.20	0.18	0.24	0.37	Urban Lawn Areas 1-4% Slope - 0% Impervious	149.0	125.0	1700	59.54	0.48	60.87	0.47	56.90	0.50	48.30	0.59	60	61	57	48	1.72	2.15	2.64	4.23	2.30	2.59	4.25	10.49
A+B				11.00	0.20	0.18	0.24	0.37	Urban Lawn Areas 1-4% Slope - 0% Impervious	149.0	125.0	1700	59.54	0.48	60.87	0.47	56.90	0.50	48.30	0.59	60	61	57	48	1.72	2.15	2.64	4.23	3.78	4.26	6.97	17.22
C	West	RCB	45.80	45.80	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	170.0	125.0	4000	53.64	1.24	50.35	1.32	45.97	1.45	38.31	1.74	54	50	46	38	1.86	2.41	3.01	4.79	51.96	70.64	93.74	164.54
D	East	RCB	17.30	17.30	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	150.0	125.0	1500	28.81	0.87	27.05	0.92	24.70	1.01	20.58	1.21	29	27	25	21	2.78	3.43	4.22	6.53	29.34	37.98	49.64	84.73
A+C+D		RCB		67.40	0.58	0.61	0.65	0.73	Multi-Unit Attached 65% Impervious	170.0	125.0	4000	56.50	1.18	53.56	1.24	49.05	1.36	40.96	1.63	56	54	49	41	1.79	2.33	2.86	4.66	70.44	95.90	125.67	227.95
Proposed																																
A			4.30	4.30	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	149.0	125.0	1700	32.42	0.87	30.43	0.93	27.79	1.02	23.16	1.22	32	30	28	23	2.57	3.24	3.98	6.13	6.74	8.92	11.64	19.77
B			6.70	6.70	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	149.0	125.0	1700	32.42	0.87	30.43	0.93	27.79	1.02	23.16	1.22	32	30	28	23	2.57	3.24	3.98	6.13	10.50	13.89	18.13	30.80
A+B				11.00	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	149.0	125.0	1700	32.42	0.87	30.43	0.93	27.79	1.02	23.16	1.22	32	30	28	23	2.57	3.24	3.98	6.13	17.24	22.81	29.77	50.57
C	West	RCB	45.80	45.80	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	170.0	125.0	4000	53.64	1.24	50.35	1.32	45.97	1.45	38.31	1.74	54	50	46	38	1.86	2.41	3.01	4.79	51.96	70.64	93.74	164.54
D	East	RCB	17.30	17.30	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	150.0	125.0	1500	28.81	0.87	27.05	0.92	24.70	1.01	20.58	1.21	29	27	25	21	2.78	3.43	4.22	6.53	29.34	37.98	49.64	84.73
A+C+D		RCB		67.40	0.61	0.64	0.68	0.75	Multi-Unit Attached 65% Impervious	170.0	125.0	4000	53.64	1.24	50.35	1.32	45.97	1.45	38.31	1.74	54	50	46	38	1.86	2.41	3.01	4.79	76.47	103.96	137.95	242.13

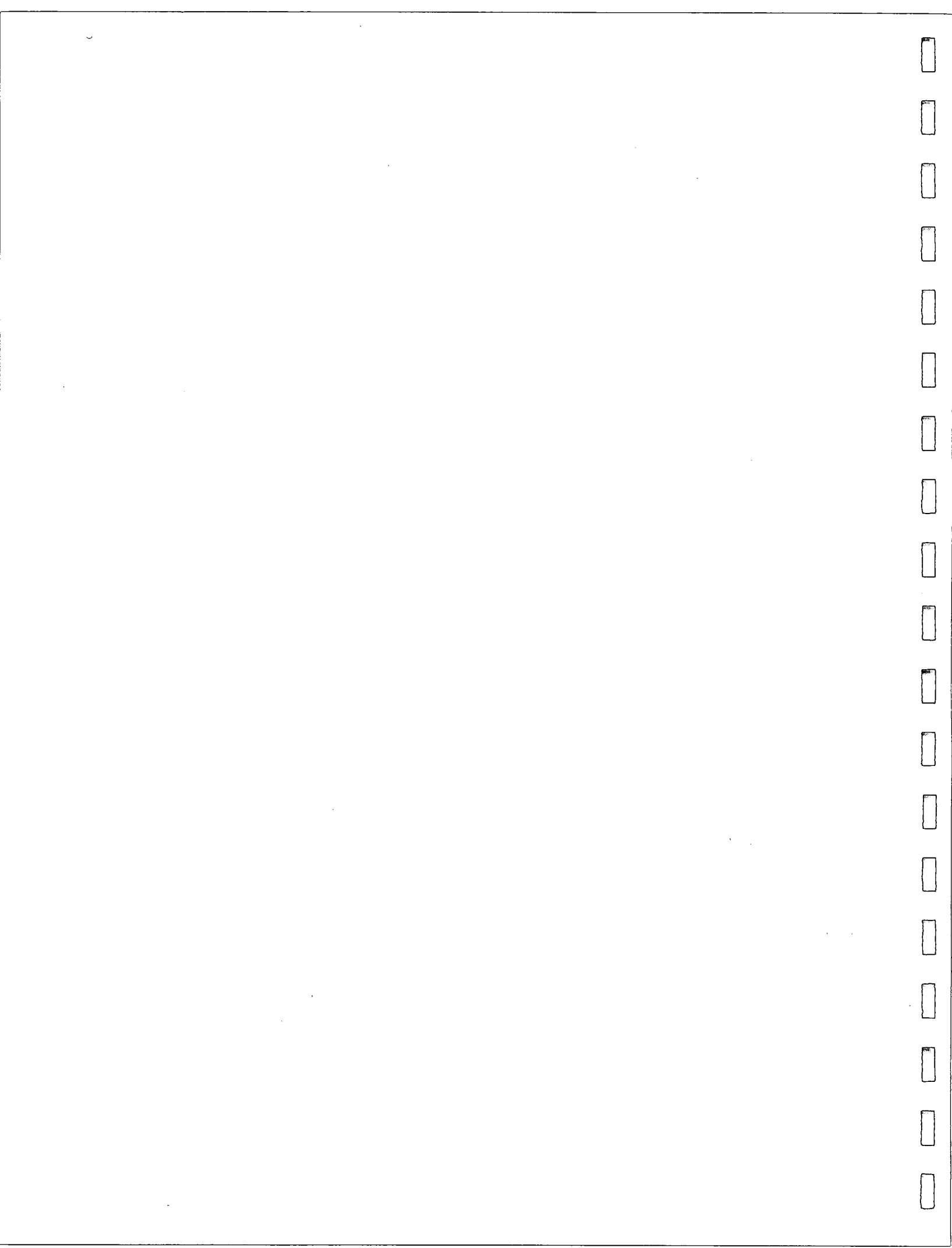
APPENDIX E
DRAINAGE & UTILITY PLAN



APPENDIX F
LOT GRADING PLAN



APPENDIX G
HY - OUTPUT



CURRENT DATE: 03-29-2004
CURRENT TIME: 13:37:17

FILE DATE: 03-29-2004
FILE NAME: SHDYRDG

PHWA CULVERT ANALYSIS
HY-8, VERSION 4.1
SITE DATA
CULVERT SHAPE, MATERIAL, INLET
INLET OUTLET CULVERT BARRELS
ELEV. ELEV. LENGTH SHAPE SPAN RISE MANNING INLET
(FT) (FT) (FT) MATERIAL (FT) (FT) n TYPE
1 120.18 120.12 67.99 2 RCB 9.00 4.00 .012 CONVENTIONAL

SUMMARY OF CULVERT FLOWS (CFS) FILE: SHDYRDG DATE: 03-29-2004

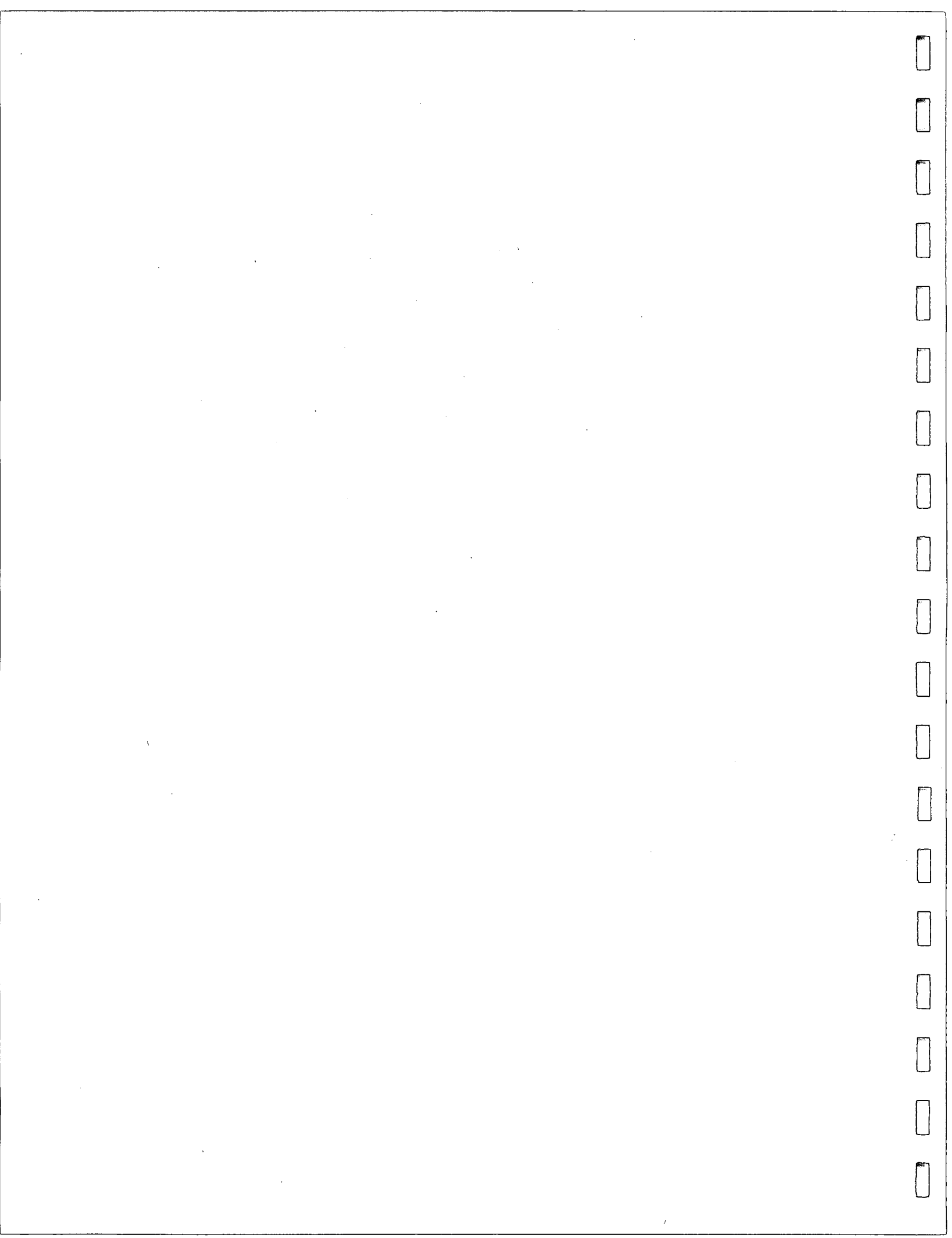
Table with 9 columns: ELEV (FT), TOTAL, 1, 2, 3, 4, 5, 6, ROADWAY ITR. Contains data for elevations from 124.00 to 126.60.

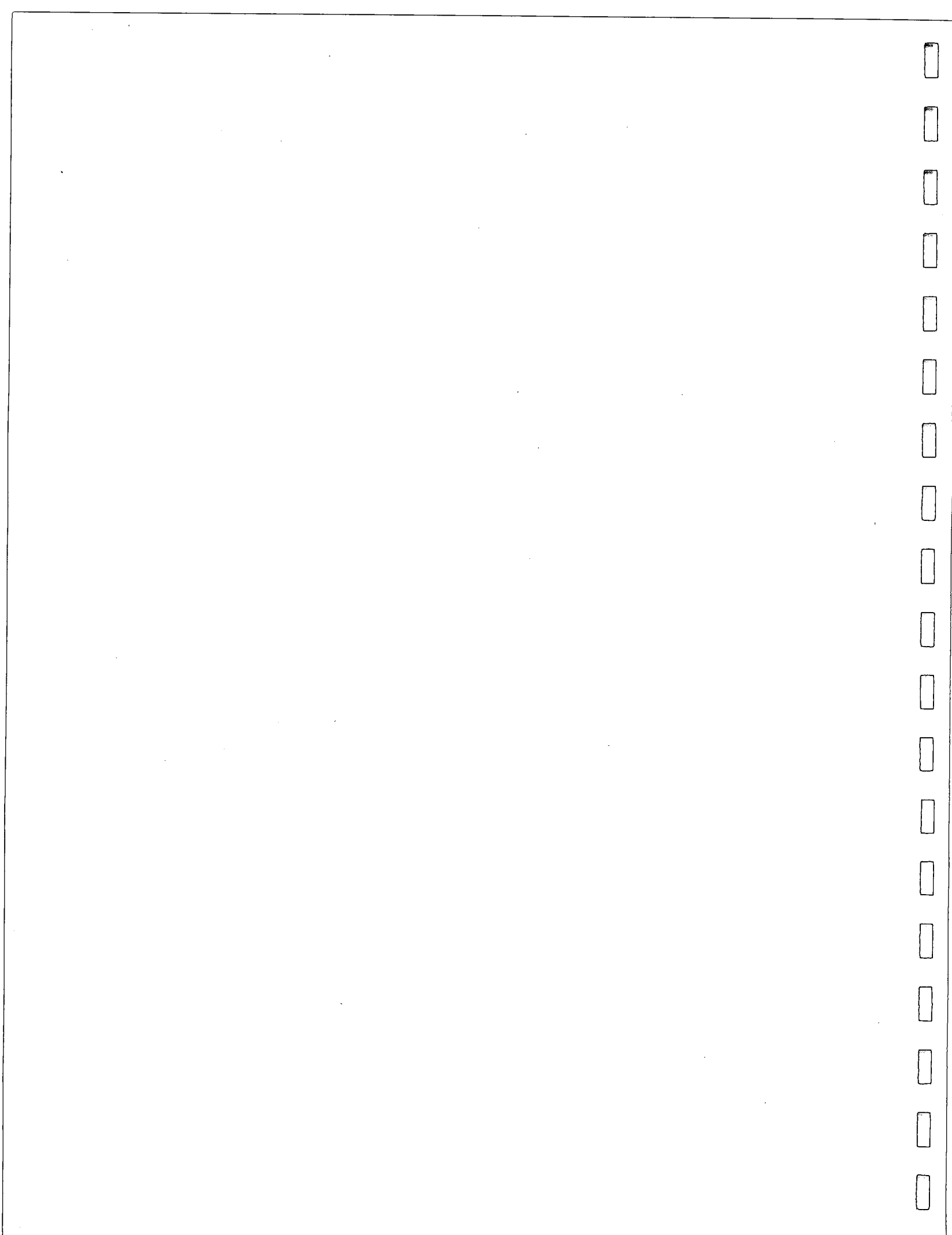
SUMMARY OF ITERATIVE SOLUTION ERRORS FILE: SHDYRDG DATE: 03-29-2004

Table with 5 columns: HEAD ELEV (FT), HEAD ERROR (FT), TOTAL FLOW (CFS), FLOW ERROR (CFS), % FLOW ERROR. Contains data for elevations from 124.00 to 124.30.

<1> TOLERANCE (FT) = 0.010 <2> TOLERANCE (\$) = 1.000







Shady Ridge Addition

Parcel Closures

Project: 04071
COGO Revisions: none
Date: Wednesday, April 07, 2004
COGO Project: G:\CIVIL\04071\cogo\

Parcel name: - Final Plat Boundary

Curve Length: 169.662 Radius: 234.670 North: 21208.458 East : 20949.310
Delta: 41-25-26.0 Tangent: 88.730
Chord: 165.991 Course: S 00-20-25.7 W
Course In: S 69-37-42.7 W Course Out: S 68-56-51.3 E
RP North: 21126.768 East : 20729.318
End North: 21042.470 East : 20948.324
Line Course: S 21-06-33.3 W Length: 281.771

Curve Length: 179.154 Radius: 360.130 North: 20779.607 East : 20846.845
Delta: 28-30-10.4 Tangent: 91.471
Chord: 177.312 Course: S 35-19-54.5 W
Course In: N 68-55-10.7 W Course Out: S 40-25-00.3 E
RP North: 20909.138 East : 20510.816
End North: 20634.953 East : 20744.304
Line Course: S 49-34-43.0 W Length: 978.300

Curve Length: 231.111 Radius: 538.200 North: 20000.619 East : 19999.527
Delta: 24-36-13.3 Tangent: 117.365
Chord: 229.340 Course: S 61-50-39.7 W
Course In: N 40-27-26.9 W Course Out: S 15-51-13.6 E
RP North: 20410.129 East : 19650.298
End North: 19892.401 East : 19797.325
Line Course: N 00-26-13.0 W Length: 580.453

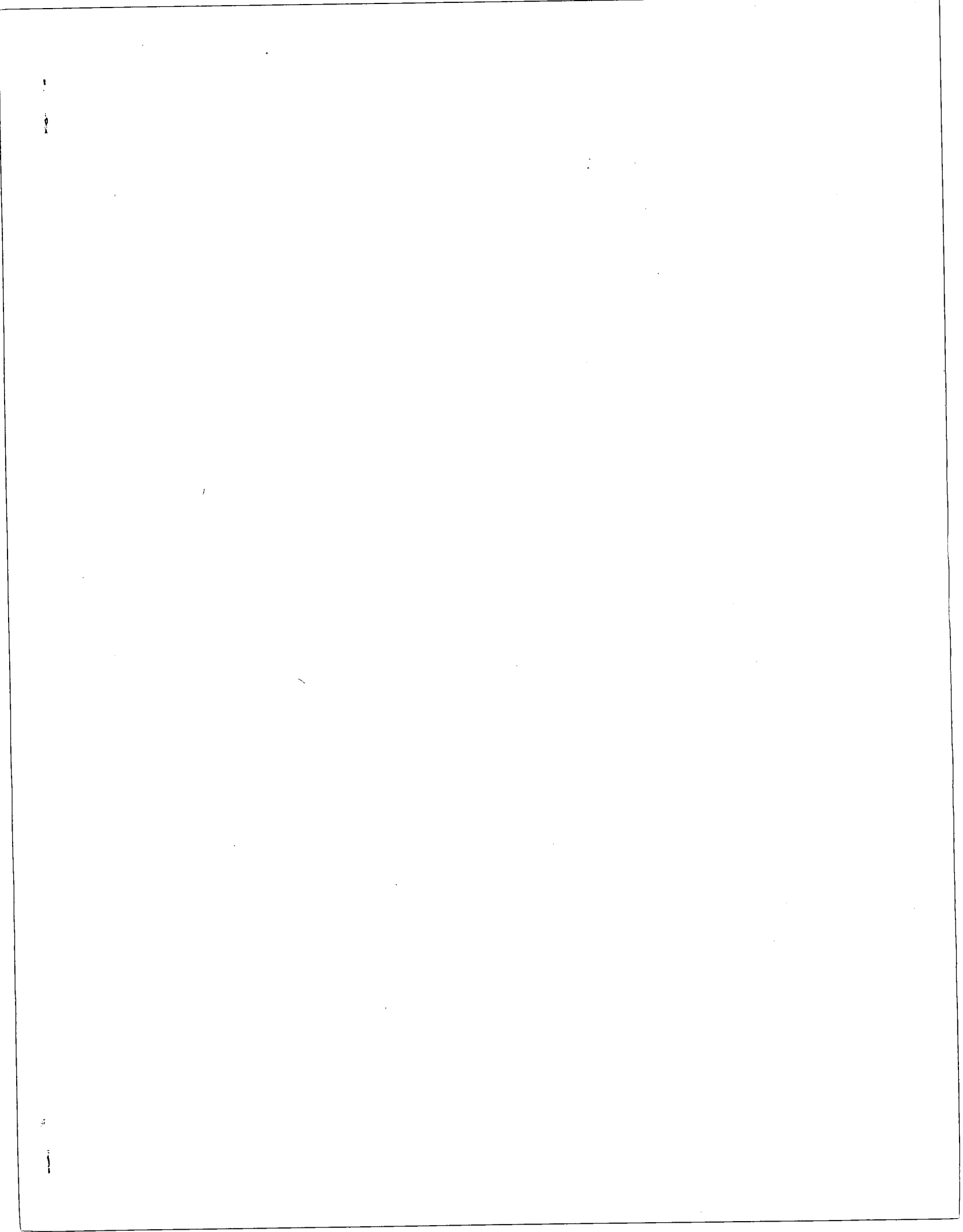
Line Course: S 87-58-32.6 E Length: 209.945 North: 20472.837 East : 19792.899

Curve Length: 143.922 Radius: 193.000 North: 20465.421 East : 20002.713
Delta: 42-43-33.4 Tangent: 75.492
Chord: 140.610 Course: N 70-19-55.9 E
Course In: N 01-41-42.6 E Course Out: S 41-01-50.8 E
RP North: 20658.337 East : 20008.422
End North: 20512.746 East : 20135.120
Line Course: N 49-37-19.9 E Length: 313.209

Line Course: N 40-00-02.6 W Length: 7.920 North: 20715.650 East : 20373.719

Line Course: N 49-37-16.4 E Length: 514.981 North: 20721.717 East : 20368.628

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Created by Brian Lindebak on 4/7/2004 11:21 AM



Shady Ridge Addition

Parcel Closures

Project: 04071
COGO Revisions: none
Date: Wednesday, April 07, 2004
COGO Project: G:\Civil\04071\cogo\

Parcel name: - Final Plat Boundary

North: 21208.458 East : 20949.310

Curve Length: 169.662 Radius: 234.670
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 End North: 20634.953 East : 20744.304
 Line Course: S 49-34-43.0 W Length: 978.300

North: 20000.619 East : 19999.527

Curve Length: 231.111 Radius: 538.200
 Delta: 24-36-13.3 Tangent: 117.365
 Chord: 229.340 Course: S 61-50-39.7 W
 Course In: N 40-27-26.9 W Course Out: S 15-51-13.6 E
 RP North: 20410.129 East : 19650.298
 End North: 19892.401 East : 19797.325
 Line Course: N 00-26-13.0 W Length: 580.453

North: 20472.837 East : 19792.899

Line Course: S 87-58-32.6 E Length: 209.945

North: 20465.421 East : 20002.713

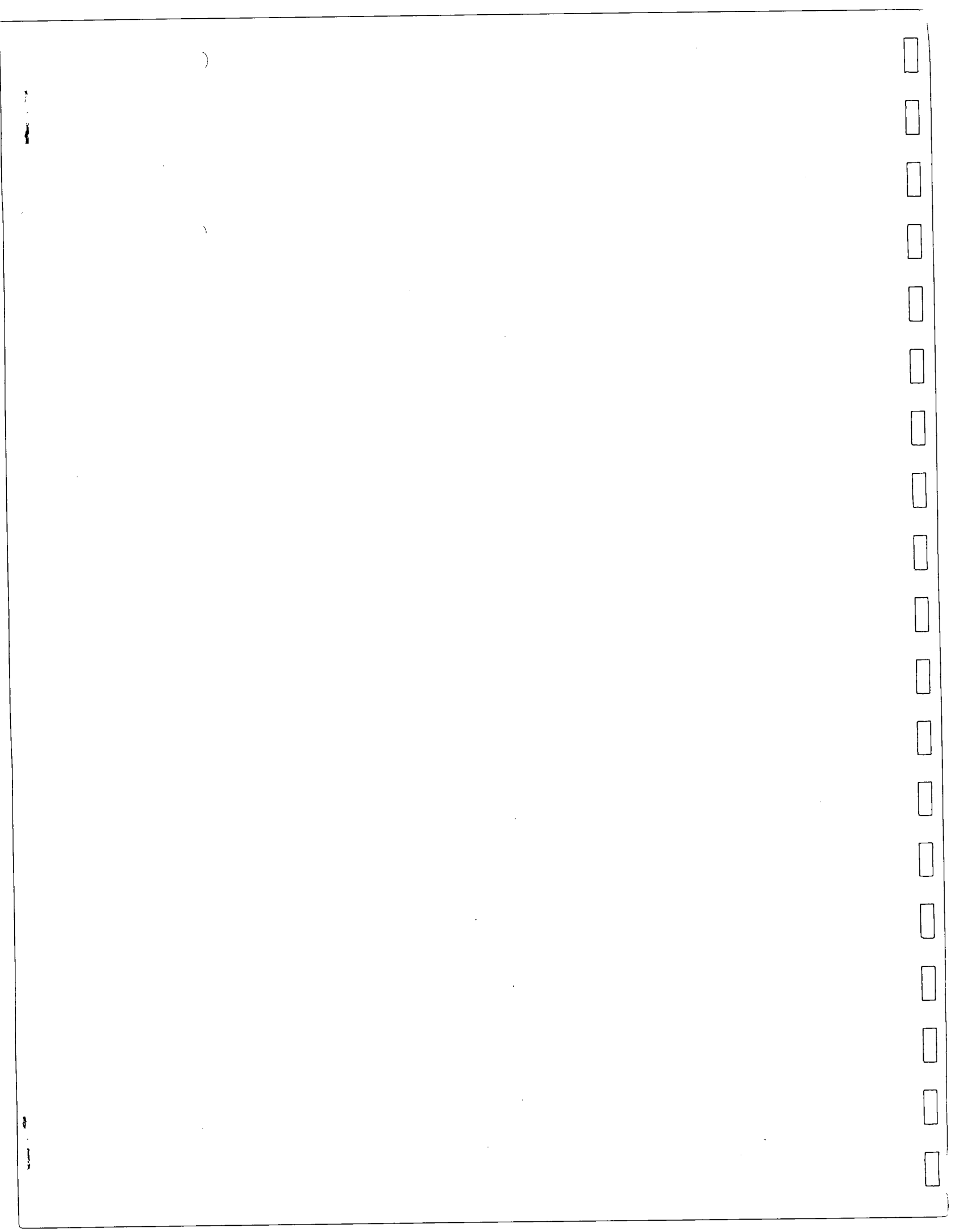
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 Delta: 43-23-02.9 Tangent: 75.663
 Chord: 140.610 Course: N 70-19-55.9 E
 Course In: N 02-01-27.4 E Course Out: S 41-21-35.5 E
 RP North: 20655.513 East : 20009.432
 End North: 20512.746 East : 20135.120
 Line Course: N 49-37-19.9 E Length: 313.209~~

North: 20715.650 East : 20373.719

Line Course: N 40-00-02.6 W Length: 7.920

North: 20721.717 East : 20368.628

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Created by Brian Lindebak on 4/7/2004 11:21 AM



Line Course: N 49-37-16.4 E Length: 514.981

North: 21055.342 East : 20760.929

Line Course: N 50-53-44.0 E Length: 242.760

North: 21208.459 East : 20949.310

Perimeter: 3853.293 Area: 478,742. sq.ft. 10.99 acres

Mapcheck Closure - (Uses listed courses and chords) Error Closure: 0.001 Course: N 00-22-43.5 W

Error North: 0.0009 East : -0.0000

Precision 1: 3,842,592.000

Parcel name: - Balance of Lot 2, Woodland Heights Second Addition

Line Course: S 00-26-13.0 E Length: 139.305

North: 20031.701 East : 19796.263

North: 19892.400 East : 19797.325

Curve Length: 148.179 Radius: 538.200
Delta: 15-46-29.5 Tangent: 74.561
Chord: 147.711 Course: S 82-02-01.1 W
Course In: N 15-51-13.6 W Course Out: S 00-04-44.1 E
RP North: 20410.128 East : 19650.298
End North: 19871.929 East : 19651.040

Line Course: N 89-58-25.5 W Length: 113.326

North: 19871.981 East : 19537.714

Line Course: N 00-26-13.0 W Length: 610.057

North: 20482.020 East : 19533.062

Line Course: S 87-58-32.6 E Length: 260.000

North: 20472.836 East : 19792.899

Line Course: S 00-26-13.0 E Length: 101.148

North: 20371.691 East : 19793.671

Line Course: S 00-26-13.0 E Length: 85.000

North: 20286.693 East : 19794.319

Line Course: S 00-26-13.0 E Length: 85.000

North: 20201.696 East : 19794.967

Line Course: S 00-26-13.0 E Length: 85.000

North: 20116.698 East : 19795.615

Line Course: S 00-26-13.0 E Length: 85.000

North: 20031.701 East : 19796.264

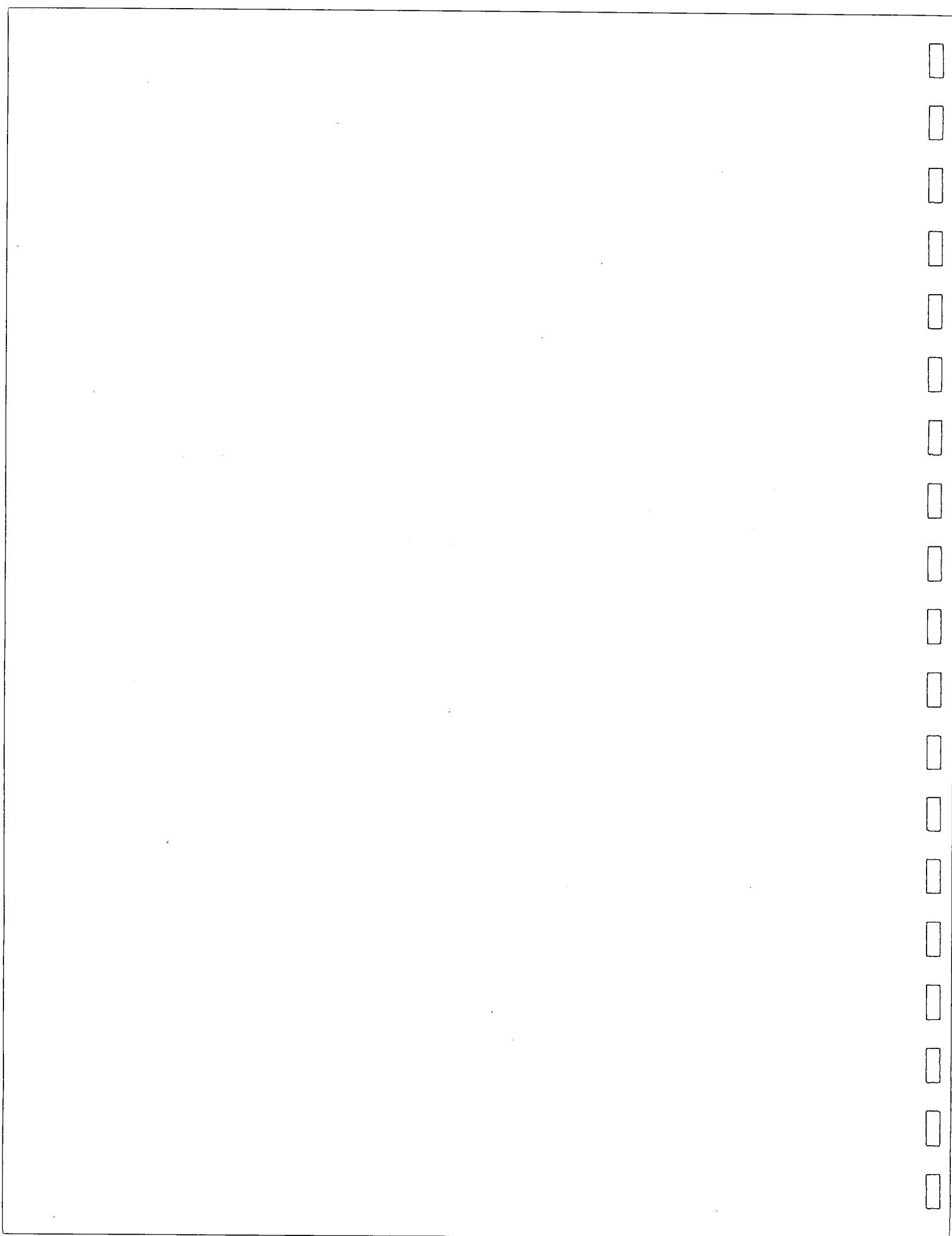
Perimeter: 1712.015 Area: 156,289. sq.ft. 3.58 acres

Mapcheck Closure - (Uses listed courses and chords) Error Closure: 0.001 Course: S 47-32-17.2 E

Error North: -0.0004 East : 0.0005

Precision 1: 1,711,547.000

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Created by Brian Lindebak on 4/7/2004 11:21 AM



Parcel name: - Shady Ct. - South most cul-de-sac

Line Course: N 32-02-24.5 W Length: 14.581 North: 19924.240 East: 19954.388
 North: 19936.600 East: 19946.653

Curve Length: 110.316 Radius: 200.000
 Delta: 31-36-11.5 Tangent: 56.600
 Chord: 108.923 Course: N 16-14-18.8 W
 Course In: N 57-57-35.5 E Course Out: S 89-33-47.0 W
 RP North: 20042.703 East: 20116.188
 End North: 20041.178 East: 19916.194

Line Course: N 00-26-13.0 W Length: 373.956 North: 20415.123 East: 19913.342
 North: 20415.287 East: 19934.842

Line Course: N 89-33-47.0 E Length: 21.500

Parcel name: Shady Ct. - Middle cul-de-sac

Line Course: N 40-22-40.1 W Length: 186.899 North: 20308.724 East: 20415.255
 North: 20451.101 East: 20294.177

Parcel name: Shady Ct. - Middle cul-de-sac

Line Course: S 89-33-47.0 W Length: 21.500 North: 20229.650 East: 20187.265
 North: 20229.486 East: 20165.766

Line Course: N 00-26-13.0 W Length: 65.000 North: 20294.484 East: 20165.270

Curve Length: 87.370 Radius: 100.000
 Delta: 50-03-32.9 Tangent: 46.694
 Chord: 84.617 Course: N 24-35-33.4 E
 Course In: N 89-33-47.0 E Course Out: N 40-22-40.1 W
 RP North: 20295.247 East: 20265.267
 End North: 20371.426 East: 20200.484

Line Course: N 49-37-19.9 E Length: 122.990 North: 20451.102 East: 20294.177
 North: 20580.667 East: 20446.535

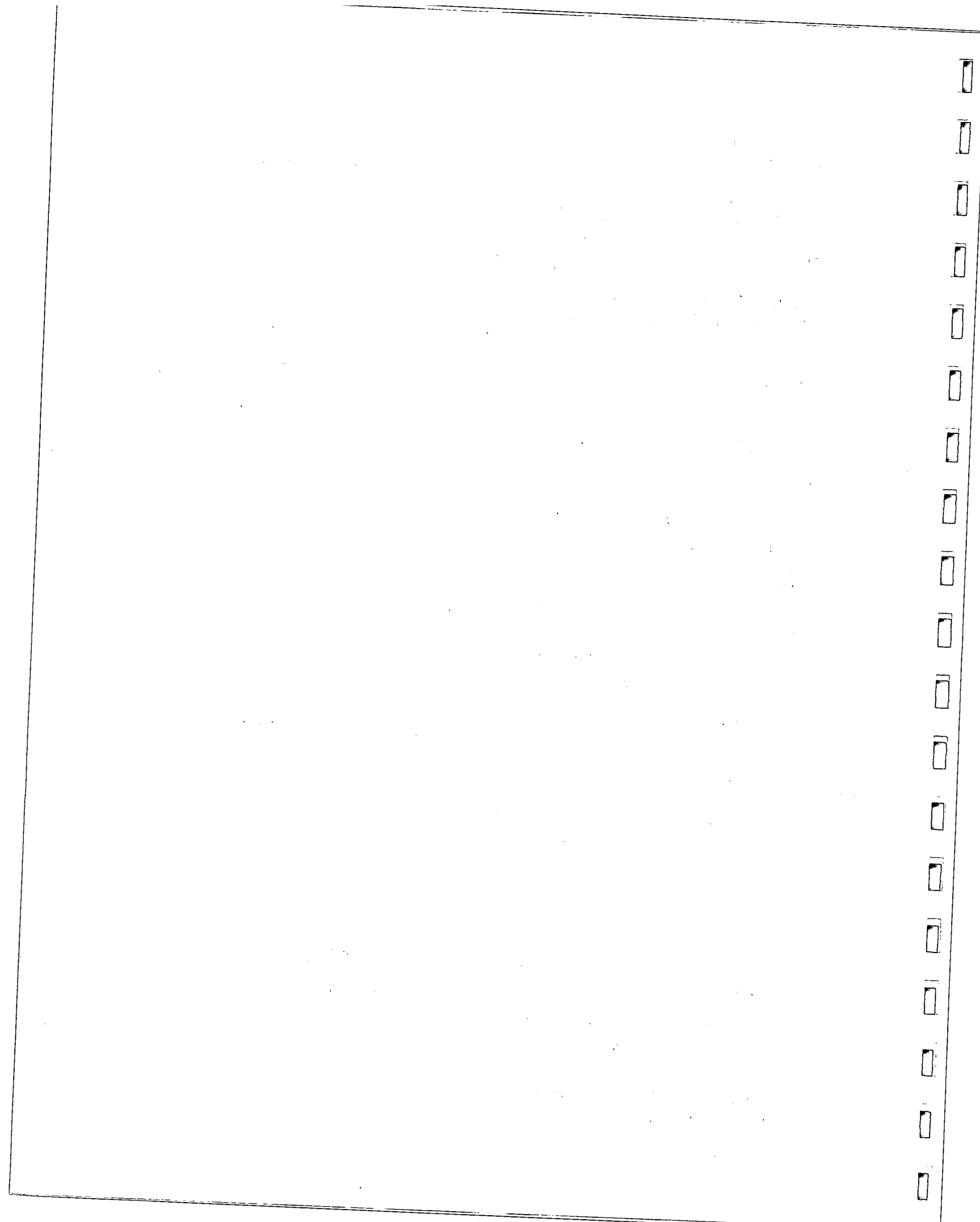
Line Course: N 49-37-19.9 E Length: 200.000

Parcel name: - Shady Ct. - North most cul-de-sac

Curve Length: 94.777 Radius: 90.000
 Delta: 60-20-13.1 Tangent: 52.315
 Chord: 90.458 Course: S 79-47-23.0 W
 Course In: S 19-57-29.5 W Course Out: N 40-22-43.6 W
 RP North: 20936.479 East: 20946.862

North: 21021.074 East: 20977.582

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Course In: N 89-33-47.0 E Course Out: S 87-17-29.8 W
RP North: 20042.702 East : 20116.189
End North: 20032.495 East : 19900.430
Line Course: S 89-33-47.0 W Length: 104.170

North: 20031.701 East : 19796.263

Line Course: N 00-26-13.0 W Length: 85.000

North: 20116.698 East : 19795.615

Line Course: N 89-33-47.0 E Length: 104.000

North: 20117.492 East : 19899.612

Perimeter: 378.172 Area: 8,840. sq.ft. 0.20 acres

Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.000 Course: S 40-23-13.5 W
Error North: -0.0003 East : -0.0003
Precision 1: 378,172,000.000

Parcel name: LOT 3

Line Course: S 00-26-13.0 E Length: 85.000

North: 20202.489 East : 19898.964

Line Course: S 89-33-47.0 W Length: 104.000

North: 20117.492 East : 19899.612

Line Course: N 00-26-13.0 W Length: 85.000

North: 20116.699 East : 19795.615

Line Course: N 89-33-47.0 E Length: 104.000

North: 20201.696 East : 19794.967

North: 20202.489 East : 19898.964

Perimeter: 378.000 Area: 8,840. sq.ft. 0.20 acres

Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.000 Course: S 90-00-00.0 E
Error North: 0.0000 East : 0.0000
Precision 1: 378,000,000.000

Parcel name: LOT 4

Line Course: S 00-26-13.0 E Length: 85.000

North: 20287.487 East : 19898.315

Line Course: S 89-33-47.0 W Length: 104.000

North: 20202.489 East : 19898.964

Line Course: N 00-26-13.0 W Length: 85.000

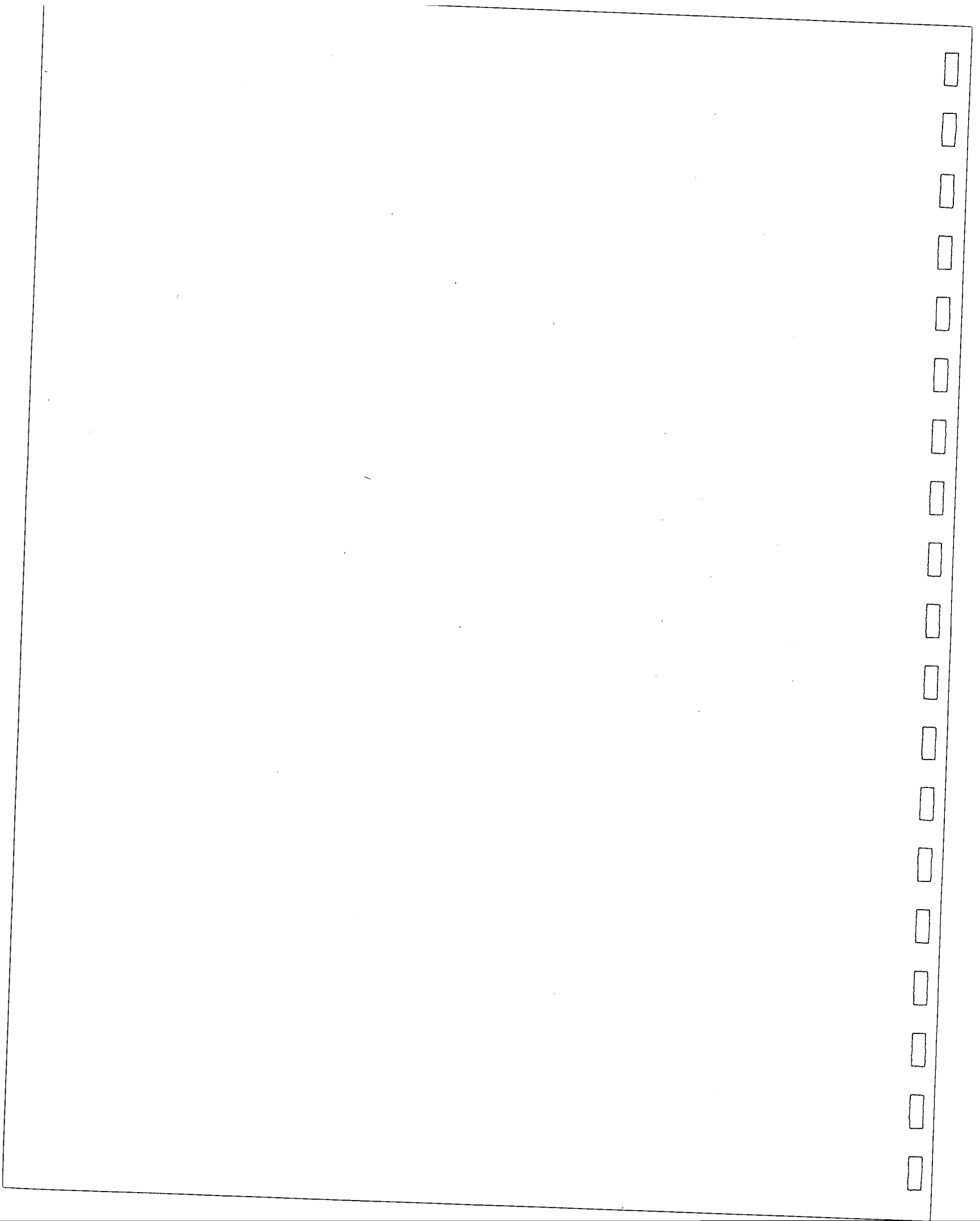
North: 20201.696 East : 19794.967

Line Course: N 89-33-47.0 E Length: 104.000

North: 20286.694 East : 19794.318

North: 20287.487 East : 19898.315

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Perimeter: 378.000 Area: 8,840. sq.ft. 0.20 acres

Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.000 Course: S 90-00-00.0 E
Error North: 0.0000 East : 0.0000
Precision 1: 378,000,000.000

Parcel name: LOT 5

Line Course: S 00-26-13.0 E Length: 85.000	North: 20372.484 East : 19897.667
Line Course: S 89-33-47.0 W Length: 104.000	North: 20287.487 East : 19898.315
Line Course: N 00-26-13.0 W Length: 85.000	North: 20286.694 East : 19794.318
Line Course: N 89-33-47.0 E Length: 104.000	North: 20371.691 East : 19793.670
	North: 20372.484 East : 19897.667

Perimeter: 378.000 Area: 8,840. sq.ft. 0.20 acres

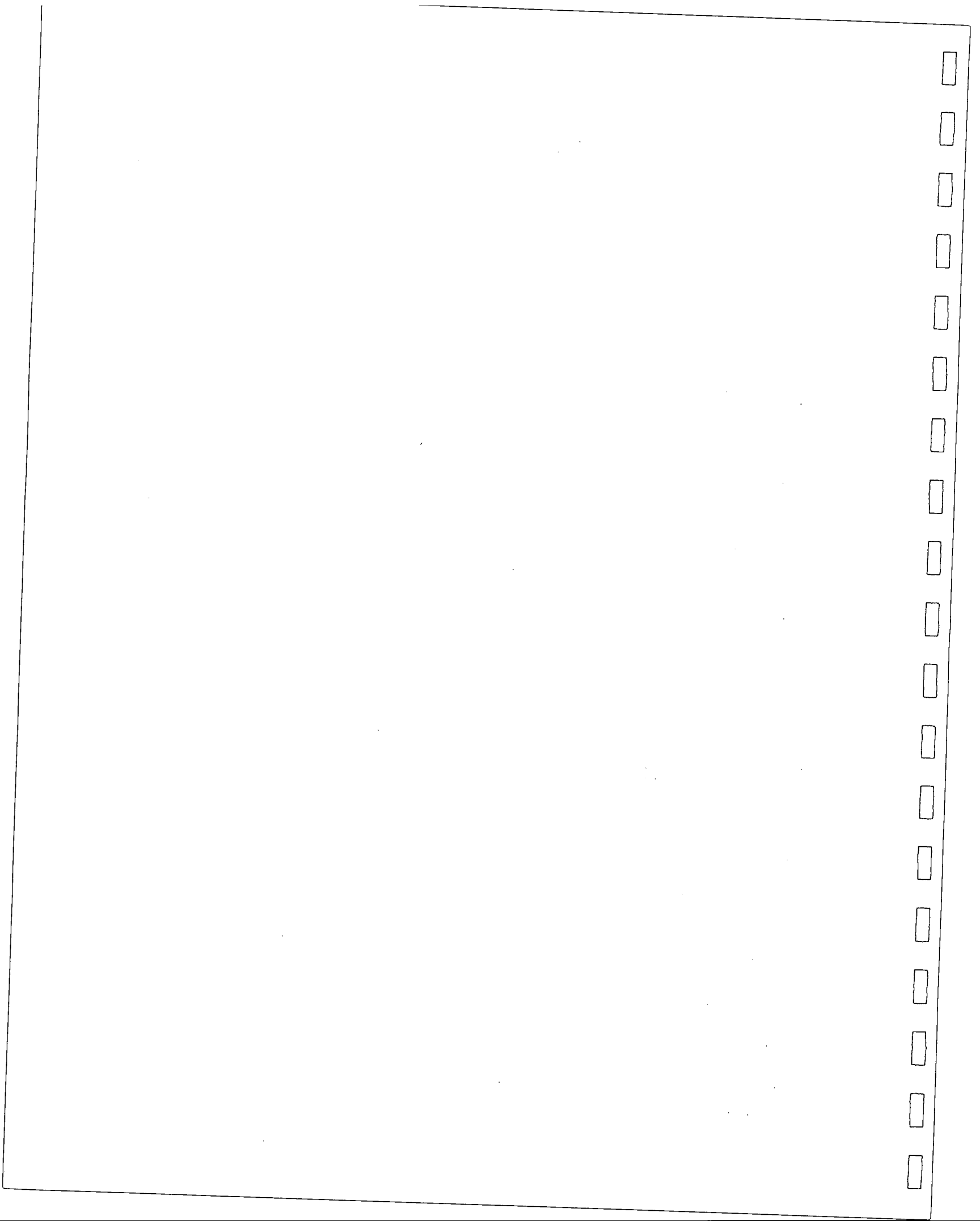
Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.000 Course: S 90-00-00.0 E
Error North: 0.0000 East : 0.0000
Precision 1: 378,000,000.000

Parcel name: LOT 6

Line Course: N 02-01-27.4 E Length: 15.000	North: 20452.763 East : 19936.166
Line Course: N 87-58-32.6 W Length: 143.887	North: 20467.754 East : 19936.696
Line Course: S 00-26-13.0 E Length: 101.148	North: 20472.836 East : 19792.899
Line Course: N 89-33-47.0 E Length: 104.000	North: 20371.691 East : 19793.670
Line Course: N 00-26-13.0 W Length: 42.517	North: 20372.484 East : 19897.667
	North: 20415.000 East : 19897.343

Curve Length: 60.516 Radius: 37.500
Delta: 92-27-40.4 Tangent: 39.146
Chord: 54.160 Course: N 45-47-37.2 E
Course In: N 89-33-47.0 E Course Out: N 02-01-27.4 E
RP North: 20415.286 East : 19934.842
End North: 20452.763 East : 19936.167

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Perimeter: 467.068 Area: 11,212. sq.ft. 0.25 acres

Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.001 Course: S 57-41-46.1 E
Error North: -0.0003 East : 0.0004
Precision 1: 460,712.000

Parcel name: LOT 7

Line Course: S 40-22-40.1 E Length: 38.119 North: 20481.122 East : 20084.870
North: 20452.083 East : 20109.564

Curve Length: 95.231 Radius: 221.000
Delta: 24-41-21.4 Tangent: 48.366
Chord: 94.496 Course: S 32-51-47.2 W
Course In: S 44-47-32.1 E Course Out: N 69-28-53.5 W
RP North: 20295.247 East : 20265.267
End North: 20372.709 East : 20058.287
Line Course: S 89-33-47.0 W Length: 120.370 North: 20371.791 East : 19937.921

Curve Length: 15.532 Radius: 34.500
Delta: 25-47-43.1 Tangent: 7.900
Chord: 15.401 Course: N 52-54-48.4 E
Course In: S 49-59-03.1 E Course Out: N 24-11-20.0 W
RP North: 20349.608 East : 19964.343
End North: 20381.078 East : 19950.207

Curve Length: 100.653 Radius: 37.500
Delta: 153-47-12.6 Tangent: 161.063
Chord: 73.046 Course: N 11-04-56.3 W
Course In: N 24-11-20.0 W Course Out: N 02-01-27.4 E
RP North: 20415.286 East : 19934.841
End North: 20452.762 East : 19936.166
Line Course: N 02-01-27.4 E Length: 15.000 North: 20467.753 East : 19936.696

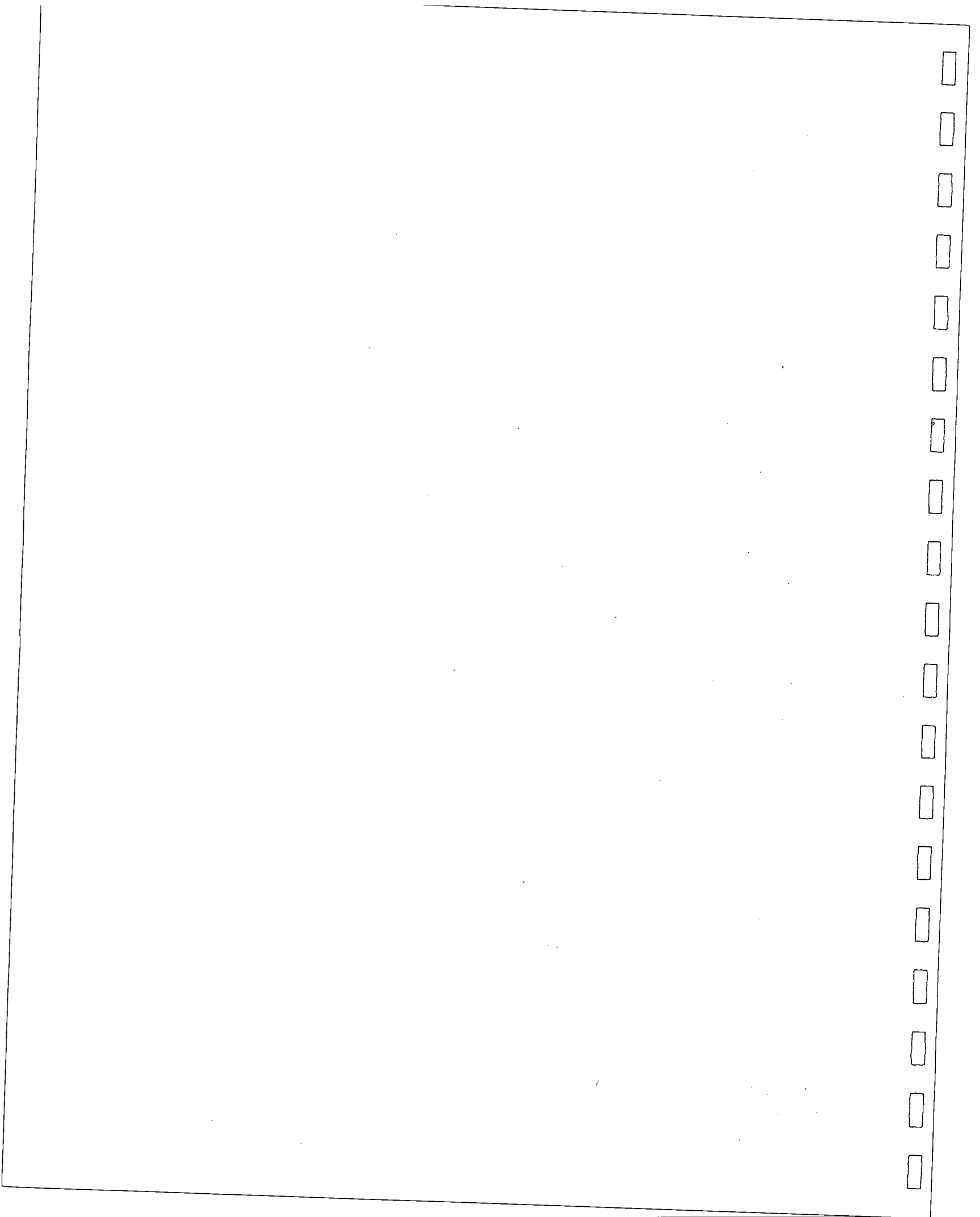
Line Course: S 87-58-32.6 E Length: 66.058 North: 20465.420 East : 20002.712

Curve Length: 84.312 Radius: 193.000
Delta: 25-01-46.9 Tangent: 42.840
Chord: 83.643 Course: N 79-10-49.2 E
Course In: N 01-41-42.6 E Course Out: S 23-20-04.3 E
RP North: 20658.335 East : 20008.422
End North: 20481.121 East : 20084.868

Perimeter: 535.275 Area: 12,122. sq.ft. 0.27 acres

Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.001 Course: S 56-20-42.7 W

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Error North: -0.0008 East: -0.0011
Precision 1: 506,133.000

Parcel name: LOT 8

Line Course: S 89-33-47.0 W Length: 120.370 North: 20372.709 East: 20058.287
North: 20371.791 East: 19937.921

Curve Length: 24.358 Radius: 34.500
Delta: 40-27-09.9 Tangent: 12.712
Chord: 23.855 Course: S 19-47-21.9 W
Course In: S 49-59-03.1 E Course Out: S 89-33-47.0 W
RP North: 20349.608 East: 19964.343
End North: 20349.345 East: 19929.844

Line Course: S 00-26-13.0 E Length: 61.616 North: 20287.731 East: 19930.314
Line Course: N 89-33-47.0 E Length: 114.000 North: 20288.600 East: 20044.311

Line Course: N 00-26-13.0 W Length: 4.961 North: 20293.561 East: 20044.273

Curve Length: 19.023 Radius: 221.000
Delta: 4-55-55.1 Tangent: 9.518
Chord: 19.018 Course: N 02-01-44.5 E
Course In: N 89-33-47.0 E Course Out: N 85-30-17.9 W
RP North: 20295.247 East: 20265.267
End North: 20312.567 East: 20044.946

Curve Length: 61.805 Radius: 221.000
Delta: 16-01-24.4 Tangent: 31.106
Chord: 61.604 Course: N 12-30-24.3 E
Course In: S 85-30-17.9 E Course Out: N 69-28-53.5 W
RP North: 20295.247 East: 20265.267
End North: 20372.709 East: 20058.287

Perimeter: 406.134 Area: 9,897. sq.ft. 0.22 acres

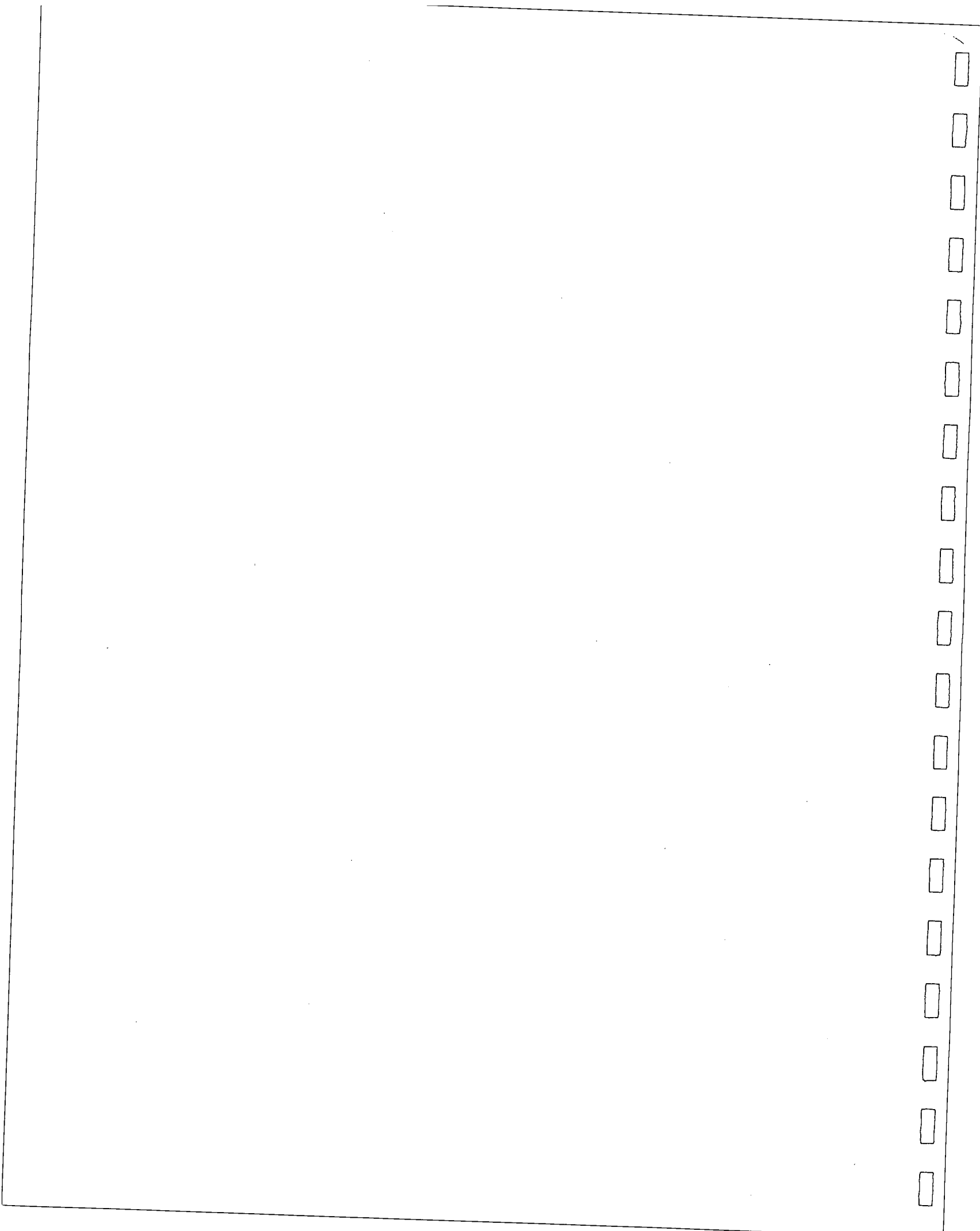
Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.000 Course: N 64-13-36.3 W
Error North: 0.0001 East: -0.0002

Precision 1: 405,424,000.000

Parcel name: LOT 9

Line Course: N 00-26-13.0 W Length: 24.961 North: 20203.603 East: 20044.959
North: 20228.563 East: 20044.769
Line Course: N 00-26-13.0 W Length: 60.039

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Line Course: S 89-33-47.0 W Length: 114.000 North: 20288.600 East : 20044.311
 Line Course: S 00-26-13.0 E Length: 85.000 North: 20287.731 East : 19930.314
 Line Course: N 89-33-47.0 E Length: 114.000 North: 20202.733 East : 19930.963
 Line Course: N 89-33-47.0 E Length: 114.000 North: 20203.603 East : 20044.959

Perimeter: 398.000 Area: 9,690. sq.ft. 0.22 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: N 00-00-00.0 E
 Error North: 0.0000 East : 0.0000
 Precision 1: 398,000,000.000

Parcel name: LOT 10

Line Course: S 00-26-13.0 E Length: 85.000 North: 20203.603 East : 20044.959
 Line Course: S 89-33-47.0 W Length: 114.000 North: 20118.605 East : 20045.608
 Line Course: N 00-26-13.0 W Length: 85.000 North: 20117.736 East : 19931.611
 Line Course: N 89-33-47.0 E Length: 114.000 North: 20202.733 East : 19930.963
 Line Course: N 89-33-47.0 E Length: 114.000 North: 20203.603 East : 20044.959

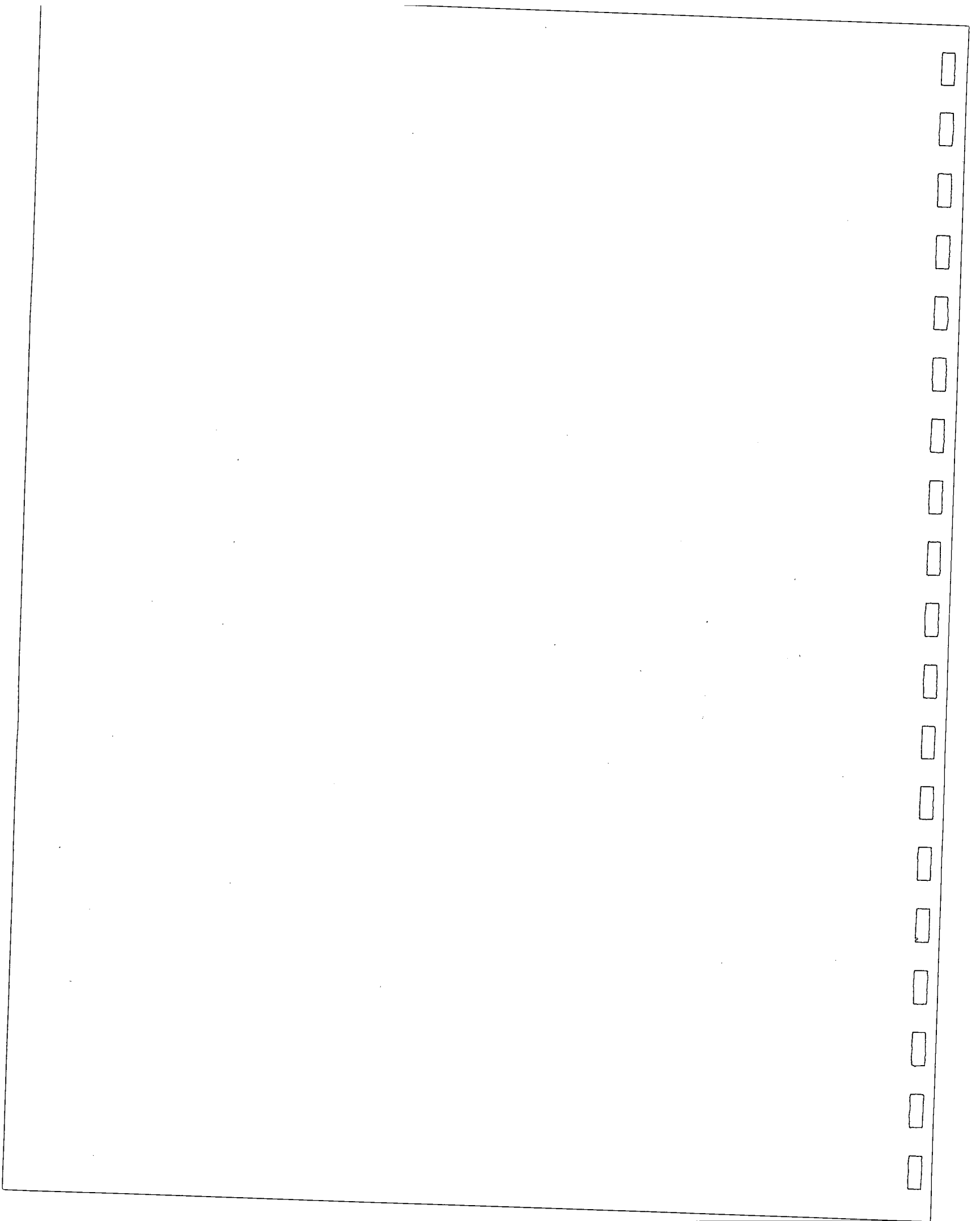
Perimeter: 398.000 Area: 9,690. sq.ft. 0.22 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: S 90-00-00.0 E
 Error North: 0.0000 East : 0.0000
 Precision 1: 398,000,000.000

Parcel name: LOT 11

Line Course: S 00-26-13.0 E Length: 78.234 North: 20118.605 East : 20045.608
 Line Course: S 49-34-43.0 W Length: 61.312 North: 20040.374 East : 20046.204
 North: 20000.619 East : 19999.528
 Curve Length: 61.897 Radius: 538.200
 Delta: 6-35-21.9 Tangent: 30.983
 Chord: 61.863 Course: S 52-50-14.1 W
 Course In: N 40-27-26.9 W Course Out: S 33-52-05.0 E
 RP North: 20410.128 East : 19650.299
 End North: 19963.248 East : 19950.228

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Curve Length: 80.754 Radius: 184.000
 Delta: 25-08-45.1 Tangent: 41.038
 Chord: 80.107 Course: N 13-00-35.6 W
 Course In: N 64-25-01.9 E Course Out: S 89-33-47.0 W
 RP North: 20042.702 East: 20116.189
 End North: 20041.299 East: 19932.194

Line Course: N 00-26-13.0 W Length: 76.439 North: 20117.736 East: 19931.611

Line Course: N 89-33-47.0 E Length: 114.000 North: 20118.605 East: 20045.608

Perimeter: 472.636 Area: 13,638. sq.ft. 0.31 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: S 64-42-01.4 E
 Error North: -0.0001 East: 0.0001
 Precision 1: 471,955,000.000

Parcel name: LOT 12

Line Course: N 49-34-43.0 E Length: 93.000 North: 20264.710 East: 20309.599

Line Course: N 40-22-40.1 W Length: 117.911 North: 20325.012 East: 20380.400

Line Course: N 40-22-40.1 W Length: 117.911 North: 20414.835 East: 20304.014

Curve Length: 28.274 Radius: 18.000
 Delta: 90-00-00.0 Tangent: 18.000
 Chord: 25.456 Course: N 85-22-40.1 W
 Course In: S 49-37-19.9 W Course Out: N 40-22-40.1 W
 RP North: 20403.174 East: 20290.302
 End North: 20416.886 East: 20278.641

Line Course: S 49-37-19.9 W Length: 75.000 North: 20368.300 East: 20221.507

Line Course: S 40-22-40.1 E Length: 135.982 North: 20264.710 East: 20309.599

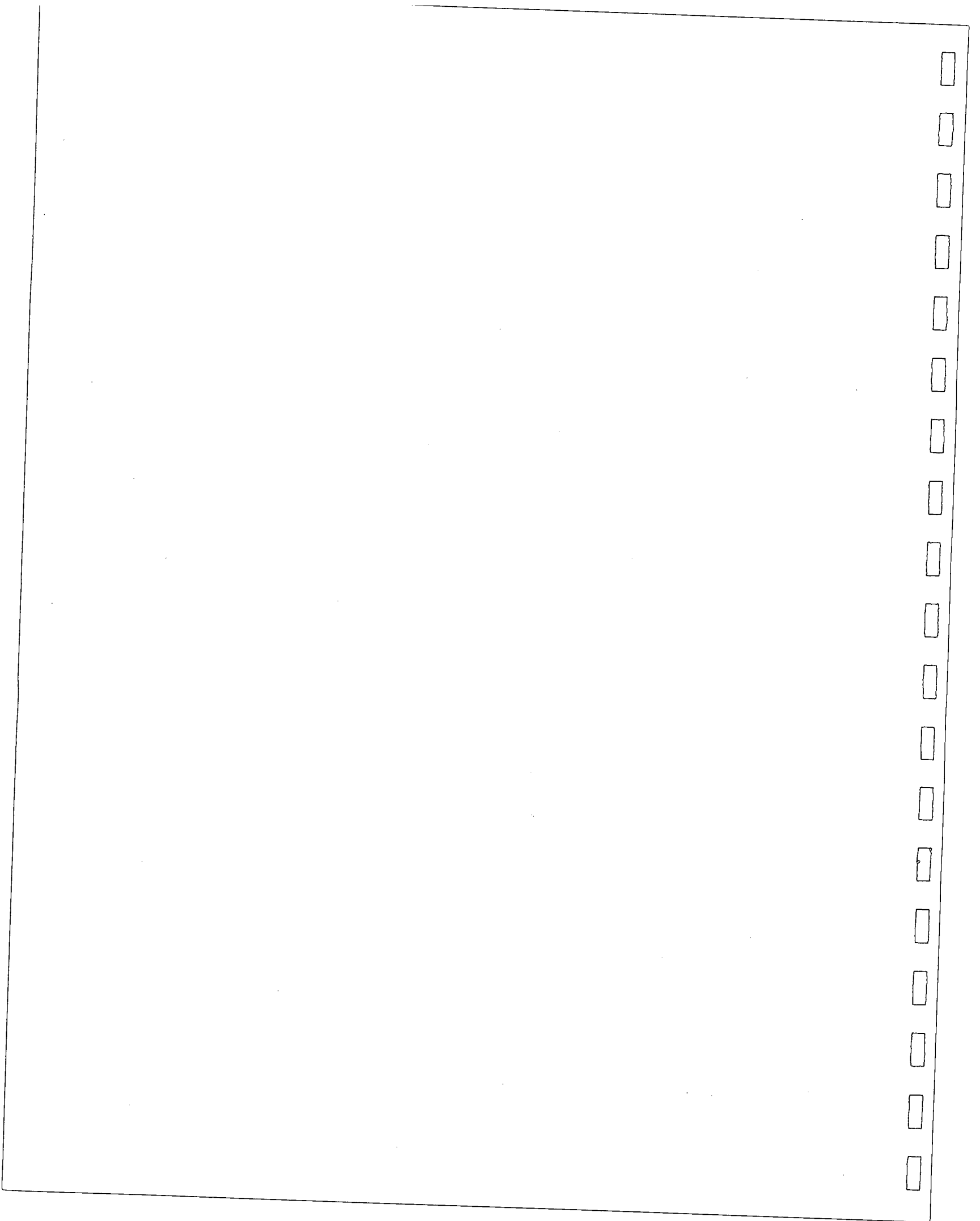
Perimeter: 450.168 Area: 12,573. sq.ft. 0.28 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: S 02-35-17.3 W
 Error North: -0.0002 East: -0.0000
 Precision 1: 447,349,000.000

Parcel name: LOT 13

North: 20189.582 East: 20221.391

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Line Course: N 49-34-43.0 E Length: 115.866 North: 20264.710 East : 20309.599
 Line Course: N 40-22-40.1 W Length: 135.982 North: 20368.300 East : 20221.507
 Line Course: S 49-37-19.9 W Length: 13.990 North: 20359.237 East : 20210.850
 Curve Length: 73.391 Radius: 84.000
 Delta: 50-03-32.9 Tangent: 39.223
 Chord: 71.078 Course: S 24-35-33.4 W
 Course In: S 40-22-40.1 E Course Out: S 89-33-47.0 W
 RP North: 20295.246 East : 20265.267
 End North: 20294.606 East : 20181.269
 Line Course: S 00-26-13.0 E Length: 10.926 North: 20283.681 East : 20181.353

Curve Length: 24.185 Radius: 18.000
 Delta: 76-59-02.0 Tangent: 14.314
 Chord: 22.407 Course: S 38-55-44.0 E
 Course In: N 89-33-47.0 E Course Out: S 12-34-45.0 W
 RP North: 20283.818 East : 20199.352
 End North: 20266.250 East : 20195.432
 Curve Length: 83.121 Radius: 37.500
 Delta: 126-59-58.0 Tangent: 75.212
 Chord: 67.120 Course: S 13-55-16.0 E
 Course In: S 12-34-45.0 W Course Out: S 40-25-17.0 E
 RP North: 20229.650 East : 20187.265
 End North: 20201.101 East : 20211.580
 Line Course: S 40-25-17.0 E Length: 15.131 North: 20189.582 East : 20221.391

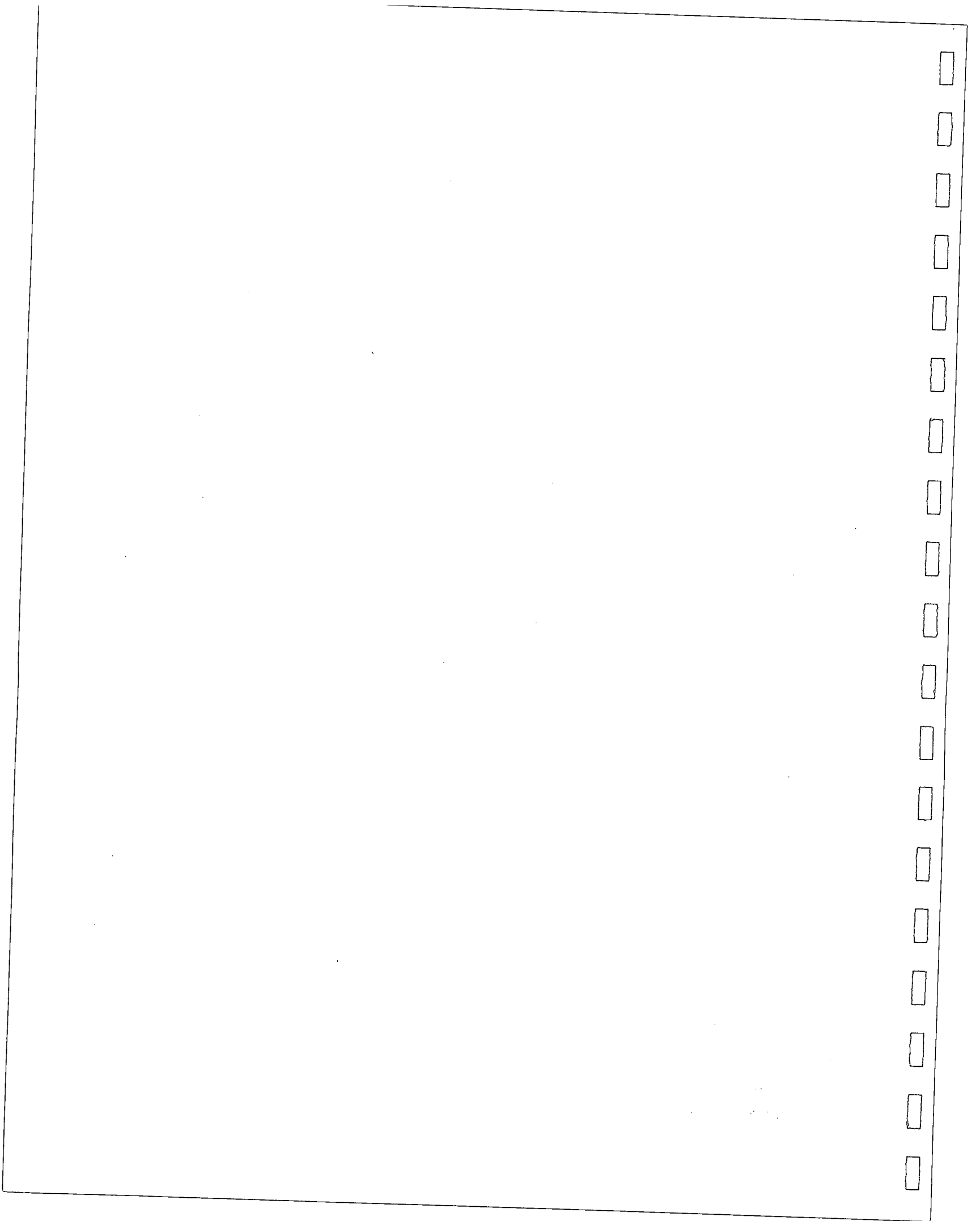
Perimeter: 472.591 Area: 11,247. sq.ft. 0.25 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: S 44-10-05.8 E
 Error North: -0.0003 East : 0.0003
 Precision 1: 452,500,000.000

Parcel name: LOT 14

Line Course: S 49-34-43.0 W Length: 230.117 North: 20189.582 East : 20221.391
 Line Course: N 00-26-13.0 W Length: 78.234 North: 20040.373 East : 20046.204
 Line Course: N 00-26-13.0 W Length: 85.000 North: 20118.605 East : 20045.607
 Line Course: N 00-26-13.0 W Length: 24.961 North: 20203.603 East : 20044.959
 Line Course: N 00-26-13.0 W Length: 24.961 North: 20228.563 East : 20044.769

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Line Course: N 89-33-47.0 E Length: 105.000 North: 20229.364 East : 20149.766

Curve Length: 85.075 Radius: 37.500
 Delta: 129-59-04.0 Tangent: 80.391
 Chord: 67.969 Course: S 65-25-45.0 E
 Course In: N 89-33-47.0 E Course Out: S 40-25-17.0 E
 RP North: 20229.650 East : 20187.265
 End North: 20201.101 East : 20211.580

Line Course: S 40-25-17.0 E Length: 15.131 North: 20189.582 East : 20221.391

Perimeter: 623.517 Area: 17,869. sq.ft. 0.41 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: S 22-52-31.9 W
 Error North: -0.0005 East : -0.0002
 Precision 1: 606,412,000.000

Parcel name: LOT 15

Line Course: N 00-26-13.0 W Length: 65.000 North: 20229.364 East : 20149.766
 North: 20294.362 East : 20149.270

Curve Length: 19.086 Radius: 116.000
 Delta: 9-25-37.6 Tangent: 9.565
 Chord: 19.064 Course: N 04-16-35.8 E
 Course In: N 89-33-47.0 E Course Out: N 81-00-35.4 W
 RP North: 20295.247 East : 20265.267
 End North: 20313.373 East : 20150.692

Line Course: S 89-33-47.0 W Length: 105.748 North: 20312.567 East : 20044.947

Curve Length: 19.023 Radius: 221.000
 Delta: 4-55-55.1 Tangent: 9.518
 Chord: 19.018 Course: S 02-01-44.5 W
 Course In: S 85-30-17.9 E Course Out: S 89-33-47.0 W
 RP North: 20295.246 East : 20265.267
 End North: 20293.561 East : 20044.274

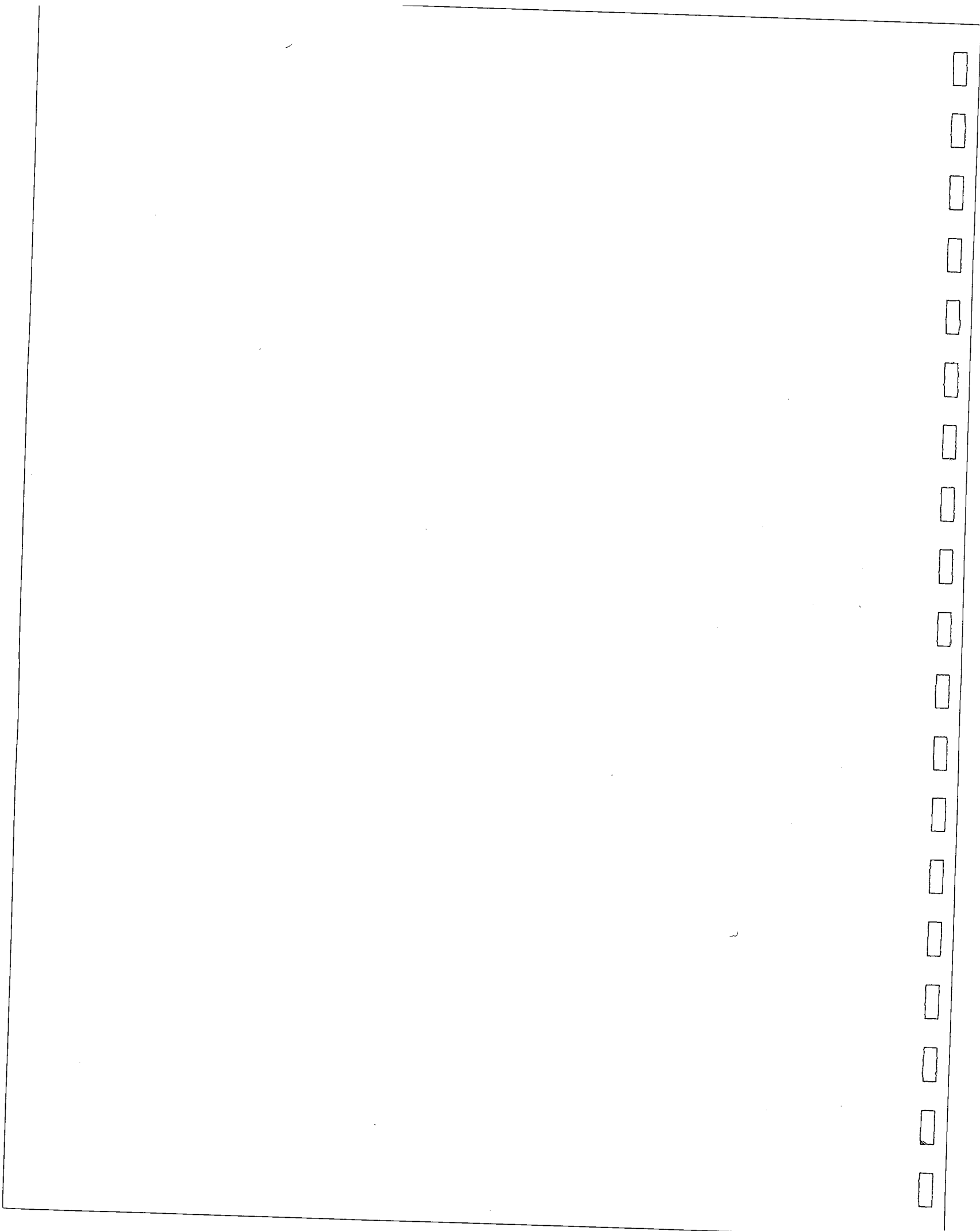
Line Course: S 00-26-13.0 E Length: 4.961 North: 20288.600 East : 20044.311

Line Course: S 00-26-13.0 E Length: 60.039 North: 20228.562 East : 20044.769

Line Course: N 89-33-47.0 E Length: 105.000 North: 20229.363 East : 20149.766

Perimeter: 378.858 Area: 8,824. sq.ft. 0.20 acres

Mapcheck Closure - (Uses listed courses and chords)
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Error Closure: 0.001 Course: S 19-41-06.7 E
 Error North: -0.0009 East: 0.0003
 Precision 1: 378,830.000

Parcel name: LOT 16

Curve Length: 95.231 Radius: 221.000 North: 20372.709 East: 20058.287
 Delta: 24-41-21.4 Tangent: 48.366
 Chord: 94.496 Course: N 32-51-47.2 E
 Course In: S 69-28-53.5 E Course Out: N 44-47-32.1 W
 RP North: 20295.247 East: 20265.267
 End North: 20452.083 East: 20109.564
 Line Course: S 40-22-40.1 E Length: 105.598 North: 20371.640 East: 20177.973

Curve Length: 65.191 Radius: 116.000
 Delta: 32-11-58.8 Tangent: 33.481
 Chord: 64.336 Course: S 25-05-24.0 W
 Course In: S 48-48-36.6 E Course Out: N 81-00-35.4 W
 RP North: 20295.247 East: 20265.267
 End North: 20313.374 East: 20150.692
 Line Course: S 89-33-47.0 W Length: 105.748 North: 20312.568 East: 20044.947

Curve Length: 61.805 Radius: 221.000
 Delta: 16-01-24.4 Tangent: 31.106
 Chord: 61.604 Course: N 12-30-24.3 E
 Course In: S 85-30-17.9 E Course Out: N 69-28-53.5 W
 RP North: 20295.247 East: 20265.267
 End North: 20372.710 East: 20058.288

Perimeter: 433.574 Area: 11,668. sq.ft. 0.26 acres

Mapcheck Closure - (Uses listed courses and chords)

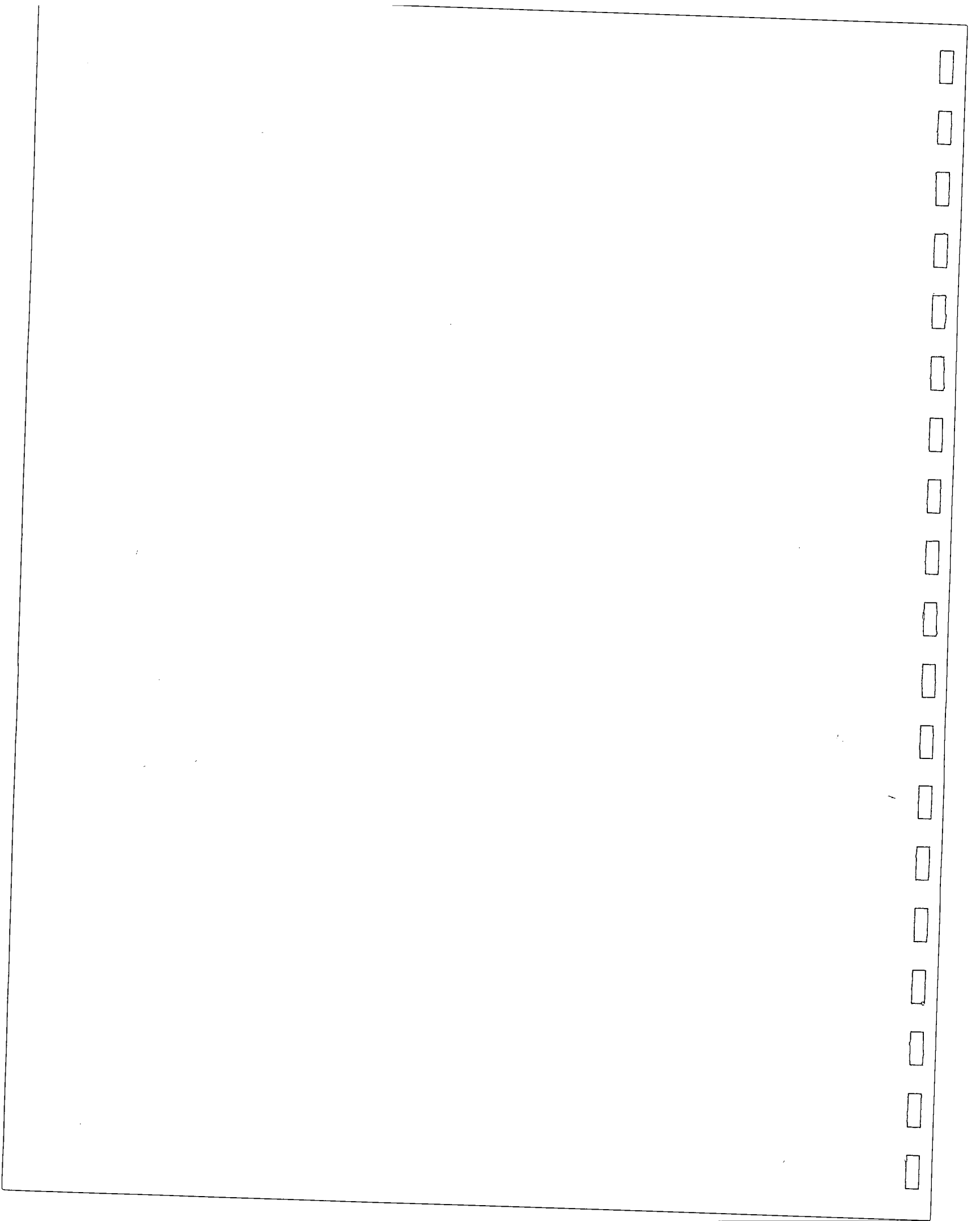
Error Closure: 0.001 Course: N 26-51-00.2 E
 Error North: 0.0006 East: 0.0003
 Precision 1: 431,782.000

Parcel name: LOT 17

Line Course: S 40-22-40.1 E Length: 134.000 North: 20529.739 East: 20155.104
 North: 20427.660 East: 20241.913
 Line Course: S 49-37-19.9 W Length: 67.990 North: 20383.614 East: 20190.119

Curve Length: 17.072 Radius: 116.000
 Delta: 8-25-56.5 Tangent: 8.551
 Chord: 17.057 Course: S 45-24-21.7 W

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Course In: S 40-22-40.1 E Course Out: N 48-48-36.6 W
 RP North: 20295.247 East : 20265.267
 End North: 20371.639 East : 20177.973
 Line Course: N 40-22-40.1 W Length: 143.717 North: 20481.121 East : 20084.869

Curve Length: 59.610 Radius: 193.000
 Delta: 17-41-46.5 Tangent: 30.044
 Chord: 59.373 Course: N 57-49-02.5 E
 Course In: N 23-20-04.3 W Course Out: S 41-01-50.8 E
 RP North: 20658.335 East : 20008.422
 End North: 20512.744 East : 20135.120
 Line Course: N 49-37-19.9 E Length: 26.233 North: 20529.738 East : 20155.104

Perimeter: 448.622 Area: 11,554. sq.ft. 0.26 acres
Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.001 Course: S 31-28-43.6 W
 Error North: -0.0010 East : -0.0006
 Precision 1: 448,370.000

Parcel name: LOT 18

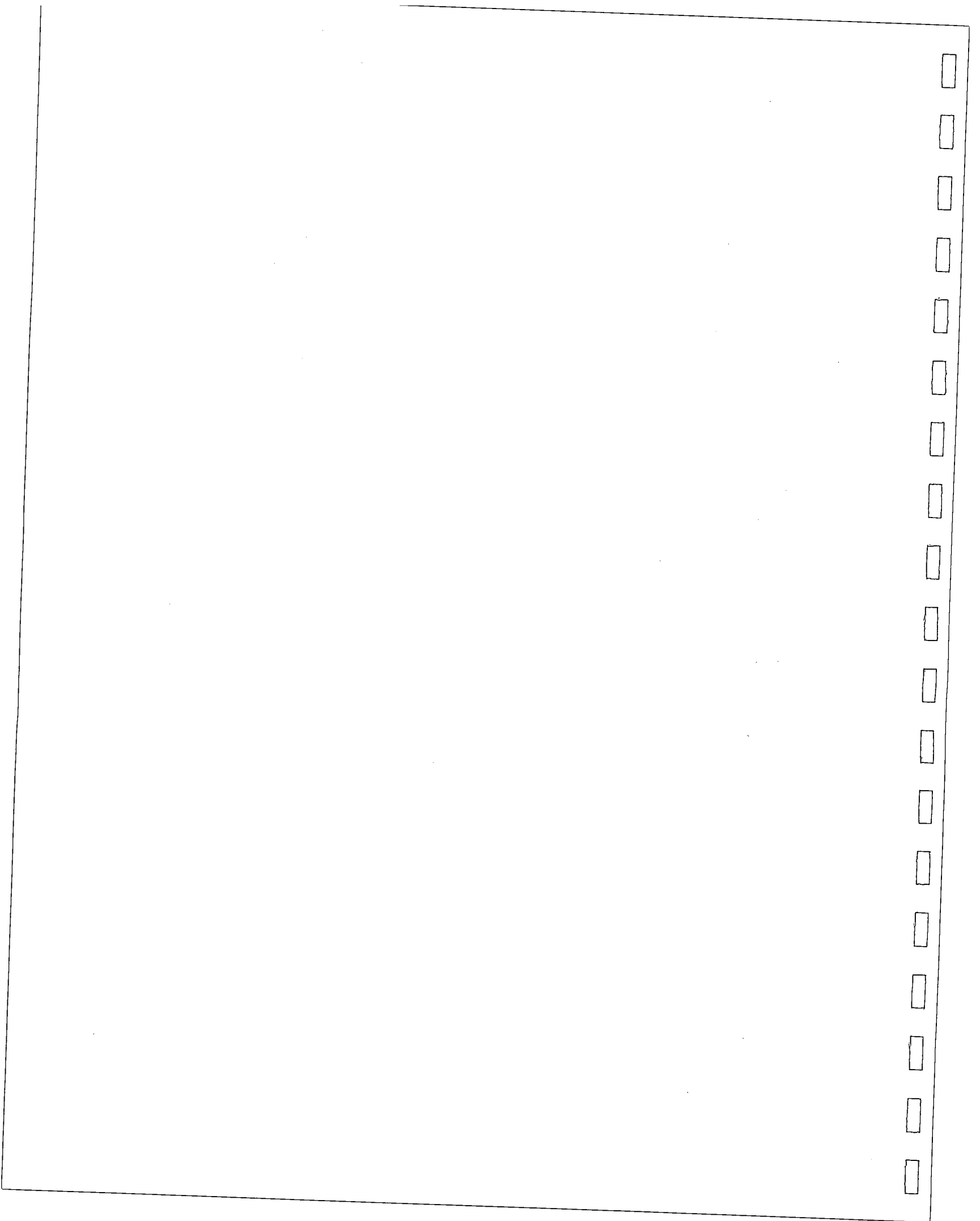
Line Course: N 49-37-19.9 E Length: 85.000 North: 20427.660 East : 20241.913
 Line Course: N 40-22-40.1 W Length: 134.000 North: 20482.725 East : 20306.665
 Line Course: S 49-37-19.9 W Length: 85.000 North: 20584.805 East : 20219.857
 Line Course: S 40-22-40.1 E Length: 134.000 North: 20529.739 East : 20155.104
 North: 20427.660 East : 20241.913

Perimeter: 438.000 Area: 11,390. sq.ft. 0.26 acres
Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: S 90-00-00.0 E
 Error North: 0.0000 East : 0.0000
 Precision 1: 438,000,000.000

Parcel name: LOT 19

Line Course: N 49-37-19.9 E Length: 85.000 North: 20482.725 East : 20306.665
 Line Course: N 40-22-40.1 W Length: 134.000 North: 20537.790 East : 20371.417
 North: 20639.870 East : 20284.609

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Line Course: S 49-37-19.9 W Length: 85.000

North: 20584.805 East : 20219.857

Line Course: S 40-22-40.1 E Length: 134.000

North: 20482.725 East : 20306.665

Perimeter: 438.000 Area: 11,390. sq.ft. 0.26 acres

Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.000 Course: S 90-00-00.0 E
Error North: 0.0000 East : 0.0000
Precision 1: 438,000,000.000

Parcel name: LOT 20

Line Course: N 49-37-19.9 E Length: 33.680

North: 20537.790 East : 20371.417

North: 20559.609 East : 20397.074

Curve Length: 27.374 Radius: 34.500
Delta: 45-27-41.2 Tangent: 14.453
Chord: 26.662 Course: N 26-53-29.3 E
Course In: N 40-22-40.1 W Course Out: S 85-50-21.3 E
RP North: 20585.890 East : 20374.724
End North: 20583.388 East : 20409.133

Curve Length: 29.754 Radius: 37.500
Delta: 45-27-41.2 Tangent: 15.710
Chord: 28.980 Course: N 26-53-29.3 E
Course In: S 85-50-21.3 E Course Out: N 40-22-40.1 W
RP North: 20580.667 East : 20446.535
End North: 20609.234 East : 20422.241

Line Course: N 40-22-40.1 W Length: 112.500

North: 20694.935 East : 20349.361

Line Course: S 49-37-19.9 W Length: 85.000

North: 20639.870 East : 20284.609

Line Course: S 40-22-40.1 E Length: 134.000

North: 20537.790 East : 20371.417

Perimeter: 422.308 Area: 10,829. sq.ft. 0.24 acres

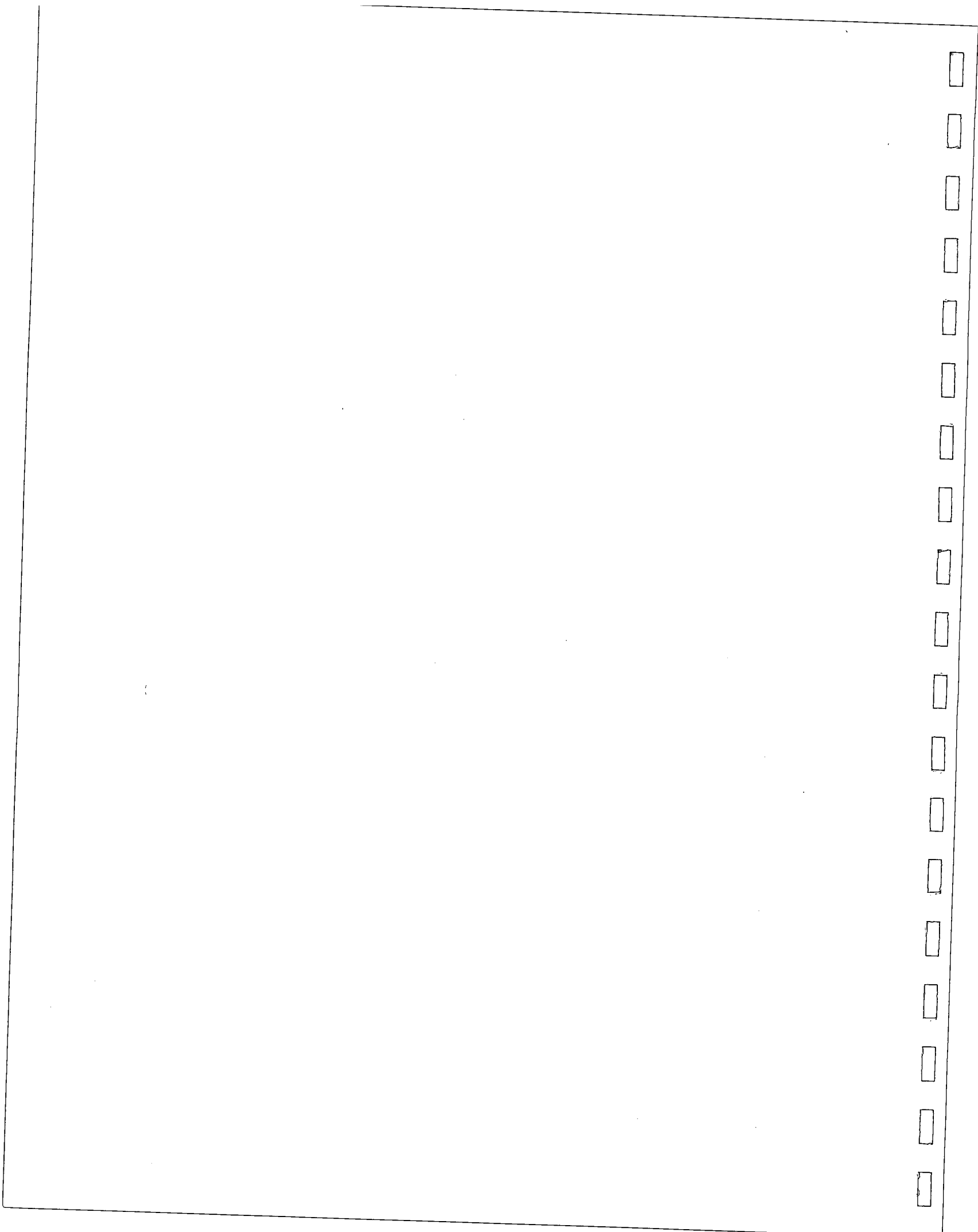
Mapcheck Closure - (Uses listed courses and chords)
Error Closure: 0.000 Course: N 32-34-32.0 E
Error North: 0.0003 East : 0.0002
Precision 1: 420,822,000.000

Parcel name: LOT 21

Curve Length: 27.304 Radius: 37.500

North: 20618.156 East : 20447.411

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Delta: 41-43-01.4 Tangent: 14.289
 Chord: 26.705 Course: S 70-28-50.6 W
 Course In: S 01-20-21.3 W Course Out: N 40-22-40.1 W
 RP North: 20580.666 East : 20446.534
 End North: 20609.233 East : 20422.241
 Line Course: N 40-22-40.1 W Length: 112.500
 North: 20694.935 East : 20349.360
 Line Course: N 49-37-19.9 E Length: 31.975
 North: 20715.649 East : 20373.719
 Line Course: N 40-00-02.6 W Length: 7.920
 North: 20721.716 East : 20368.628
 Line Course: N 49-37-16.4 E Length: 107.748
 North: 20791.519 East : 20450.708
 Line Course: S 40-22-43.6 E Length: 105.000
 North: 20711.532 East : 20518.731
 Line Course: S 40-22-43.6 E Length: 10.000
 North: 20703.915 East : 20525.209
 Line Course: S 49-37-16.4 W Length: 101.514
 North: 20638.150 East : 20447.878
 Line Course: S 01-20-21.3 W Length: 20.000
 North: 20618.155 East : 20447.410

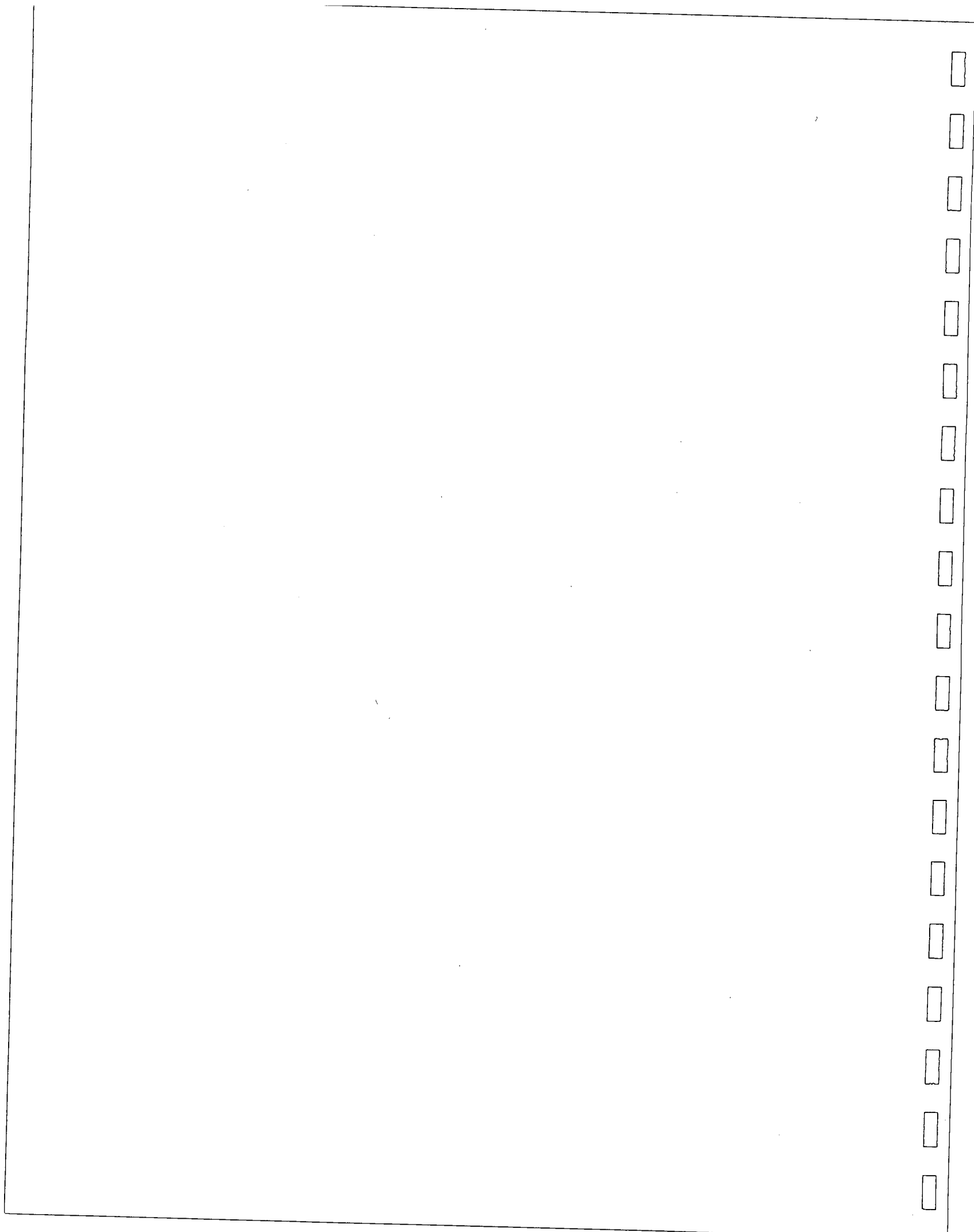
Perimeter: 523.962 Area: 16,130. sq.ft. 0.37 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.001 Course: S 32-48-48.5 W
 Error North: -0.0007 East : -0.0005
 Precision 1: 523,362.000

Parcel name: LOT 22

Curve Length: 62.388 Radius: 37.500
 Delta: 95-19-19.8 Tangent: 41.156
 Chord: 55.438 Course: S 40-59-58.8 E
 Course In: S 01-20-21.3 W Course Out: S 83-20-18.9 E
 RP North: 20580.666 East : 20446.534
 End North: 20576.316 East : 20483.781
 Line Course: S 83-20-18.9 E Length: 20.000
 North: 20573.996 East : 20503.646
 Line Course: N 49-37-16.4 E Length: 100.593
 North: 20639.164 East : 20580.276
 Line Course: N 40-22-43.6 W Length: 10.000
 North: 20646.782 East : 20573.797
 Line Course: N 40-22-43.6 W Length: 75.000
 North: 20703.915 East : 20525.210
 Line Course: S 49-37-16.4 W Length: 101.514

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Line Course: S 01-20-21.3 W Length: 20.000 North: 20638.151 East : 20447.878

North: 20618.156 East : 20447.411

Perimeter: 389.495 Area: 9,065. sq.ft. 0.20 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: N 34-18-05.9 E
 Error North: 0.0001 East : 0.0001
 Precision 1: 382,545,000.000

Parcel name: LOT 23

Line Course: S 83-20-18.9 E Length: 20.000 North: 20576.316 East : 20483.781

North: 20573.996 East : 20503.646

Line Course: N 49-37-16.4 E Length: 100.593

North: 20639.164 East : 20580.276

Line Course: S 40-22-43.6 E Length: 109.563

North: 20555.701 East : 20651.255

Line Course: S 49-34-43.0 W Length: 139.781

North: 20465.067 East : 20544.840

Line Course: N 40-22-40.1 W Length: 114.247

North: 20552.099 East : 20470.828

Curve Length: 28.118 Radius: 37.500
 Delta: 42-57-38.8 Tangent: 14.757
 Chord: 27.464 Course: N 28-08-30.5 E
 Course In: N 40-22-40.1 W Course Out: S 83-20-18.9 E
 RP North: 20580.666 East : 20446.535
 End North: 20576.316 East : 20483.782

Perimeter: 512.302 Area: 15,619. sq.ft. 0.35 acres

Mapcheck Closure - (Uses listed courses and chords)
 Error Closure: 0.000 Course: N 82-57-43.5 E
 Error North: 0.0000 East : 0.0003
 Precision 1: 511,648,000.000

Parcel name: LOT 24

Line Course: S 40-22-40.1 E Length: 135.812

North: 20513.413 East : 20392.148

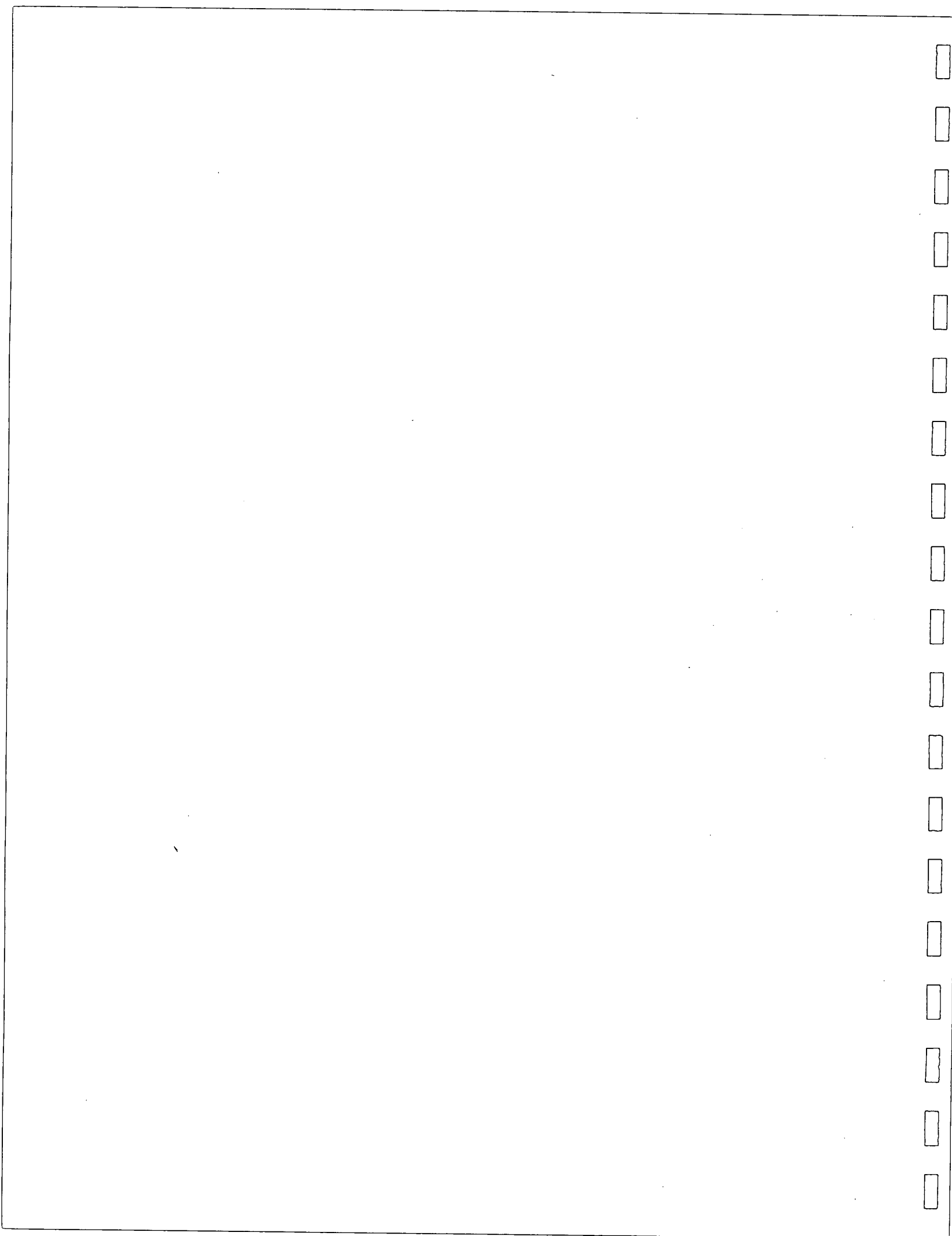
Line Course: N 49-34-43.0 E Length: 85.000

North: 20409.952 East : 20480.130

Line Course: N 40-22-40.1 W Length: 114.247

North: 20465.067 East : 20544.840

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North: 20552.099 East : 20470.828

Curve Length: 29.754 Radius: 37.500
 Delta: 45-27-41.3 Tangent: 15.710
 Chord: 28.980 Course: S 72-21-10.5 W
 Course In: N 40-22-40.1 W Course Out: S 05-05-01.2 W
 RP North: 20580.666 East : 20446.535
 End North: 20543.314 East : 20443.212

Curve Length: 27.374 Radius: 34.500
 Delta: 45-27-41.3 Tangent: 14.453
 Chord: 26.662 Course: S 72-21-10.5 W
 Course In: S 05-05-01.2 W Course Out: N 40-22-40.1 W
 RP North: 20508.949 East : 20440.155
 End North: 20535.231 East : 20417.804

Line Course: S 49-37-19.9 W Length: 33.680

North: 20513.412 East : 20392.147

Perimeter: 425.867 Area: 10,980. sq.ft. 0.25 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: S 16-46-15.2 W
 Error North: -0.0004 East : -0.0001
 Precision 1: 424,381,000.000

Parcel name: LOT 25

Line Course: S 40-22-40.1 E Length: 135.812

North: 20513.413 East : 20392.148

Line Course: S 49-34-43.0 W Length: 99.000

North: 20409.952 East : 20480.130

Line Course: N 40-22-40.1 W Length: 117.887

North: 20345.760 East : 20404.762

Curve Length: 28.274 Radius: 18.000
 Delta: 90-00-00.0 Tangent: 18.000
 Chord: 25.456 Course: N 04-37-19.9 E
 Course In: N 49-37-19.9 E Course Out: N 40-22-40.1 W
 RP North: 20447.226 East : 20342.104
 End North: 20460.939 East : 20330.443

Line Course: N 49-37-19.9 E Length: 81.000

North: 20435.566 East : 20328.391

North: 20513.413 East : 20392.148

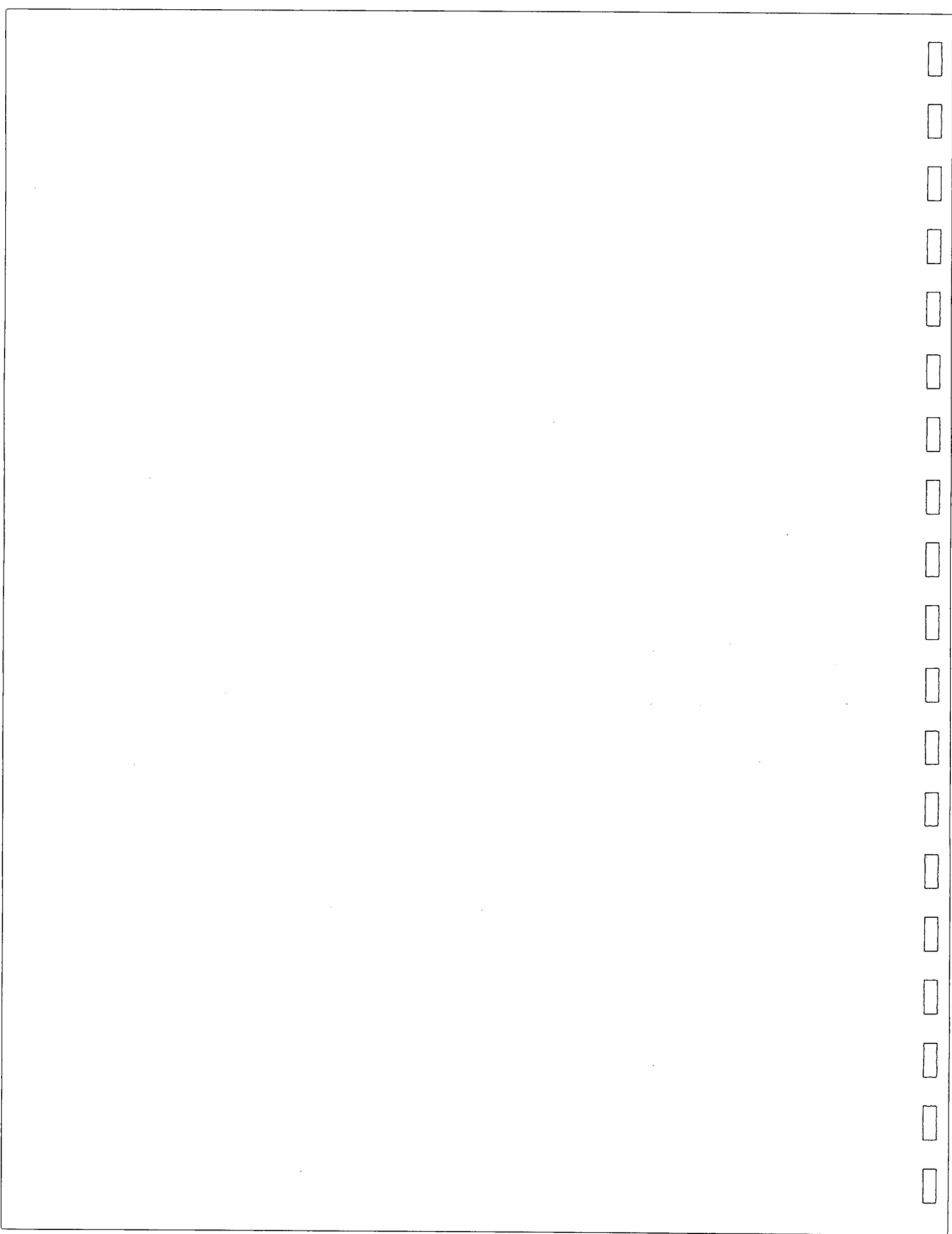
Perimeter: 461.973 Area: 13,379. sq.ft. 0.30 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: S 75-38-40.9 E
 Error North: -0.0001 East : 0.0002
 Precision 1: 459,155,000.000

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Parcel name: LOT 26

Line Course: N 49-37-16.4 E Length: 204.818 North: 20860.162 East : 20742.896
 North: 20992.851 East : 20898.922
 Curve Length: 40.890 Radius: 74.000
 Delta: 31-39-34.5 Tangent: 20.981
 Chord: 40.372 Course: N 65-27-03.7 E
 Course In: S 40-22-43.6 E Course Out: N 08-43-09.1 W
 RP North: 20936.479 East : 20946.862
 End North: 21009.624 East : 20935.645
 Line Course: S 21-06-33.3 W Length: 246.563 North: 20779.607 East : 20846.846
 Curve Length: 29.773 Radius: 360.130
 Delta: 4-44-12.4 Tangent: 14.895
 Chord: 29.764 Course: S 23-26-55.5 W
 Course In: N 68-55-10.7 W Course Out: S 64-10-58.3 E
 RP North: 20909.137 East : 20510.817
 End North: 20752.301 East : 20835.002
 Line Course: N 40-29-39.7 W Length: 141.836 North: 20860.163 East : 20742.897

Perimeter: 663.880 Area: 18,637. sq.ft. 0.42 acres

Mapcheck Closure - (Uses listed courses and chords)

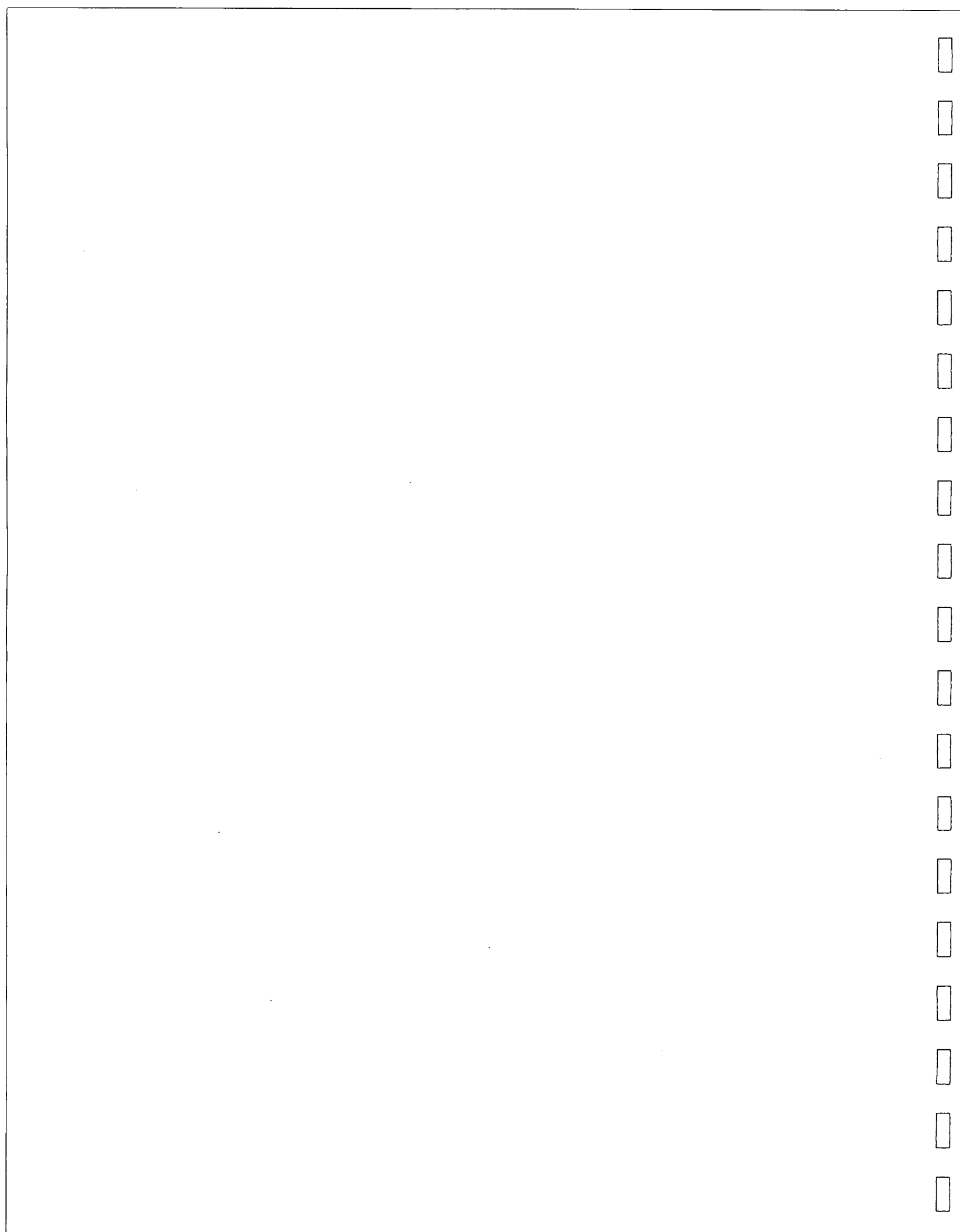
Error Closure: 0.001 Course: N 54-28-21.0 E
 Error North: 0.0008 East : 0.0011
 Precision 1: 663,353.000

Parcel name: LOT 27

Line Course: S 40-29-39.7 E Length: 141.836 North: 20860.162 East : 20742.896
 North: 20752.300 East : 20835.000
 Curve Length: 88.929 Radius: 360.130
 Delta: 14-08-54.2 Tangent: 44.692
 Chord: 88.703 Course: S 32-53-28.8 W
 Course In: N 64-10-58.3 W Course Out: S 50-02-04.1 E
 RP North: 20909.137 East : 20510.816
 End North: 20677.816 East : 20786.831
 Line Course: N 41-30-38.4 W Length: 137.859 North: 20781.049 East : 20695.463
 Curve Length: 33.172 Radius: 34.500
 Delta: 55-05-26.8 Tangent: 17.994
 Chord: 31.909 Course: N 05-05-07.6 E
 Course In: N 67-32-24.2 E Course Out: N 57-22-09.0 W

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RP North: 20794.230 East : 20727.346
 End North: 20812.833 East : 20698.292
 Curve Length: 48.632 Radius: 164.000
 Delta: 16-59-25.4 Tangent: 24.496
 Chord: 48.454 Course: N 41-07-33.7 E
 Course In: S 57-22-09.0 E Course Out: N 40-22-43.6 W
 RP North: 20724.400 East : 20836.406
 End North: 20849.331 East : 20730.161
 Line Course: N 49-37-16.4 E Length: 16.718

North: 20860.162 East : 20742.896

Perimeter: 467.147 Area: 13,096. sq.ft. 0.30 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: S 31-26-38.9 E

Error North: -0.0002 East : 0.0001

Precision 1: 465,479,000.000

Parcel name: LOT 28

Line Course: S 41-30-38.4 E Length: 137.859 North: 20781.049 East : 20695.463

North: 20677.816 East : 20786.830

Curve Length: 60.452 Radius: 360.130
 Delta: 9-37-03.8 Tangent: 30.297
 Chord: 60.381 Course: S 44-46-27.8 W
 Course In: N 50-02-04.1 W Course Out: S 40-25-00.3 E
 RP North: 20909.137 East : 20510.815
 End North: 20634.952 East : 20744.303

Line Course: N 32-21-36.8 W Length: 118.497

North: 20735.047 East : 20680.879

Curve Length: 52.425 Radius: 37.500
 Delta: 80-05-59.0 Tangent: 31.522
 Chord: 48.259 Course: N 17-35-23.7 E
 Course In: N 32-21-36.8 W Course Out: N 67-32-24.2 E
 RP North: 20766.723 East : 20660.807
 End North: 20781.049 East : 20695.463

Perimeter: 369.233 Area: 6,102. sq.ft. 0.14 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: N 77-20-28.4 W

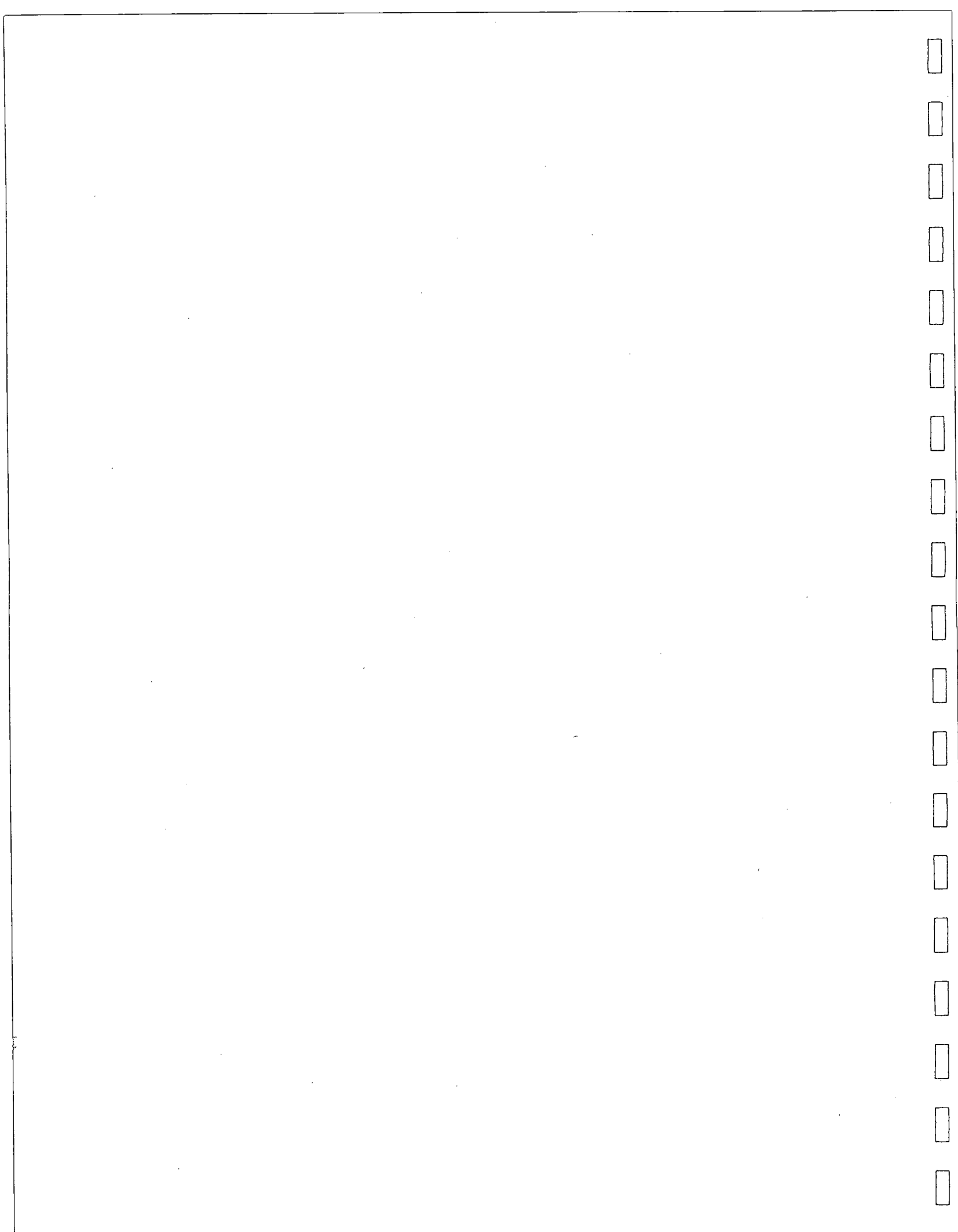
Error North: 0.0001 East : -0.0004

Precision 1: 364,996,000.000

Parcel name: LOT 29

North: 20730.081 East : 20652.831

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Curve Length: 29.217 Radius: 37.500
 Delta: 44-38-27.7 Tangent: 15.396
 Chord: 28.484 Course: N 79-57-37.0 E
 Course In: N 12-16-50.9 E Course Out: S 32-21-36.8 E
 RP North: 20766.723 East : 20660.807
 End North: 20735.047 East : 20680.879

Line Course: S 32-21-36.8 E Length: 118.497

North: 20634.952 East : 20744.303

Line Course: S 49-34-43.0 W Length: 122.224

North: 20555.702 East : 20651.255

Line Course: N 40-22-43.6 W Length: 109.563

North: 20639.164 East : 20580.276

Line Course: N 40-22-43.6 W Length: 10.000

North: 20646.782 East : 20573.797

Line Course: N 49-37-16.4 E Length: 98.108

North: 20710.340 East : 20648.534

Line Course: N 12-16-50.9 E Length: 20.203

North: 20730.081 East : 20652.831

Perimeter: 507.813 Area: 15,781. sq.ft. 0.36 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: S 75-02-26.4 W

Error North: -0.0000 East : -0.0001

Precision 1: 507,079,000.000

Parcel name: LOT 30

Line Course: N 69-58-14.2 W Length: 20.000

North: 20779.567 East : 20625.576

Line Course: S 49-37-16.4 W Length: 115.590

North: 20786.417 East : 20606.785

Line Course: S 40-22-43.6 E Length: 10.000

North: 20711.533 East : 20518.731

Line Course: S 40-22-43.6 E Length: 75.000

North: 20703.915 East : 20525.210

Line Course: N 49-37-16.4 E Length: 98.108

North: 20646.782 East : 20573.797

Line Course: N 12-16-50.9 E Length: 20.203

North: 20710.340 East : 20648.534

North: 20730.081 East : 20652.831

Curve Length: 63.976 Radius: 37.500

Delta: 97-44-54.9 Tangent: 42.948

Chord: 56.495 Course: N 28-50-41.7 W

Course In: N 12-16-50.9 E Course Out: N 69-58-14.2 W

RP North: 20766.723 East : 20660.808

End North: 20779.566 East : 20625.576

Perimeter: 402.877 Area: 9,526. sq.ft. 0.21 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: S 34-29-36.6 E

Error North: -0.0003 East : 0.0002

Precision 1: 395,396,000.000

Parcel name: LOT 31

North: 20779.567 East : 20625.576

Curve Length: 31.046 Radius: 37.500
Delta: 47-26-06.8 Tangent: 16.475
Chord: 30.167 Course: N 43-44-49.2 E
Course In: S 69-58-14.2 E Course Out: N 22-32-07.4 W
RP North: 20766.723 East : 20660.807
End North: 20801.359 East : 20646.435

Line Course: N 40-22-43.6 W Length: 119.304

North: 20892.243 East : 20569.146

Line Course: S 49-37-16.4 W Length: 155.475

North: 20791.520 East : 20450.708

Line Course: S 40-22-43.6 E Length: 105.000

North: 20711.533 East : 20518.731

Line Course: N 49-37-16.4 E Length: 115.590

North: 20786.417 East : 20606.785

Line Course: S 69-58-14.2 E Length: 20.000

North: 20779.567 East : 20625.575

Perimeter: 546.415 Area: 16,822. sq.ft. 0.38 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: N 60-28-22.1 W

Error North: 0.0001 East : -0.0001

Precision 1: 545,536,000.000

Parcel name: LOT 32

North: 20801.359 East : 20646.435

Curve Length: 23.659 Radius: 34.500
Delta: 39-17-31.9 Tangent: 12.316
Chord: 23.198 Course: N 47-49-06.6 E
Course In: N 22-32-07.4 W Course Out: S 61-49-39.3 E
RP North: 20833.225 East : 20633.213
End North: 20816.937 East : 20663.626

Curve Length: 63.511 Radius: 196.000
Delta: 18-33-56.7 Tangent: 32.036
Chord: 63.233 Course: N 37-27-19.0 E

Course In: S 61-49-39.3 E Course Out: N 43-15-42.6 W

RP North: 20724.400 East : 20836.406

End North: 20867.133 East : 20702.080

Line Course: N 40-22-43.6 W Length: 105.248

North: 20947.308 East : 20633.897

Line Course: S 49-37-16.4 W Length: 85.000

North: 20892.242 East : 20569.145

Line Course: S 40-22-43.6 E Length: 119.304

North: 20801.359 East : 20646.435

Perimeter: 396.722 Area: 9,598. sq.ft. 0.22 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.001 Course: S 25-51-38.8 W

Error North: -0.0006 East : -0.0003

Precision 1: 395,983.000

Parcel name: LOT 33

North: 20867.133 East : 20702.081

Curve Length: 9.862 Radius: 196.000

Delta: 2-52-59.0 Tangent: 4.932

Chord: 9.861 Course: N 48-10-46.9 E

Course In: S 43-15-42.6 E Course Out: N 40-22-43.6 W

RP North: 20724.400 East : 20836.406

End North: 20873.708 East : 20709.430

Line Course: N 49-37-16.4 E Length: 75.142

North: 20922.388 East : 20766.671

Line Course: N 40-22-43.6 W Length: 105.000

North: 21002.375 East : 20698.648

Line Course: S 49-37-16.4 W Length: 85.000

North: 20947.309 East : 20633.897

Line Course: S 40-22-43.6 E Length: 105.248

North: 20867.133 East : 20702.081

Perimeter: 380.252 Area: 8,925. sq.ft. 0.20 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: S 79-57-58.3 W

Error North: -0.0000 East : -0.0001

Precision 1: 380,251,000.000

Parcel name: LOT 34

North: 20922.388 East : 20766.671

Line Course: N 49-37-16.4 E Length: 85.000

North: 20977.454 East : 20831.422

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Line Course: N 40-22-43.6 W Length: 104.928

North: 21057.386 East : 20763.446

Line Course: S 50-53-41.4 W Length: 3.243

North: 21055.341 East : 20760.929

Line Course: S 49-37-16.4 W Length: 81.757

North: 21002.376 East : 20698.649

Line Course: S 40-22-43.6 E Length: 105.000

North: 20922.389 East : 20766.672

Perimeter: 379.929 Area: 8,924. sq.ft. 0.20 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.001 Course: N 43-47-39.4 E

Error North: 0.0006 East : 0.0006

Precision 1: 379,928.000

Parcel name: LOT 35

Line Course: N 49-37-16.4 E Length: 61.394

North: 20977.454 East : 20831.422

Curve Length: 30.352 Radius: 106.000

North: 21017.228 East : 20878.191

Delta: 16-24-22.7 Tangent: 15.281

Chord: 30.249 Course: N 57-49-27.8 E

Course In: S 40-22-43.6 E Course Out: N 23-58-20.9 W

RP North: 20936.479 East : 20946.862

End North: 21033.336 East : 20903.794

Line Course: N 40-22-43.6 W Length: 107.213

North: 21115.008 East : 20834.338

Line Course: S 50-53-41.4 W Length: 91.356

North: 21057.386 East : 20763.446

Line Course: S 40-22-43.6 E Length: 104.928

North: 20977.454 East : 20831.423

Perimeter: 395.244 Area: 9,533. sq.ft. 0.21 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.000 Course: S 48-55-45.5 E

Error North: -0.0003 East : 0.0004

Precision 1: 395,140,000.000

Parcel name: LOT 36

Curve Length: 169.662

North: 21208.458 East : 20949.310

Delta: 41-25-26.0

Radius: 234.670

Chord: 165.991

Tangent: 88.730

Course: S 00-20-25.7 W

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Course In: S 69-37-42.7 W Course Out: S 68-56-51.3 E
RP North: 21126.768 East : 20729.318
End North: 21042.470 East : 20948.324
Curve Length: 45.813 Radius: 106.005
Delta: 24-45-42.4 Tangent: 23.270
Chord: 45.457 Course: S 78-24-31.0 W
Course In: S 00-47-22.2 W Course Out: N 23-58-20.2 W
RP North: 20936.475 East : 20946.863
End North: 21033.336 East : 20903.794
Line Course: N 40-22-43.6 W Length: 107.212

North: 21115.008 East : 20834.338

Line Course: N 50-53-44.0 E Length: 148.161

North: 21208.459 East : 20949.311

Perimeter: 470.848 Area: 13,246. sq.ft. 0.30 acres

Mapcheck Closure - (Uses listed courses and chords)

Error Closure: 0.001 Course: N 30-24-10.6 E
Error North: 0.0005 East : 0.0003
Precision 1: 466,821.000