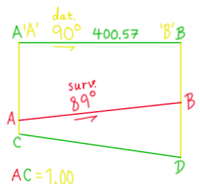
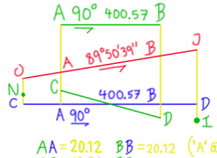
A~AG survey/traverse
A~T occupation
A~AC title
A~C calculation
*deprecated calculations

$\overrightarrow{A'B'}=90°$ $AB \approx HC-(PA+IB)=400.57$



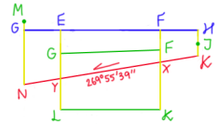
AC = 1.00
AC = 19.96
AA = 18.96
BD = 3.18
BD = 21.05
BB = 17.87
$\angle\overrightarrow{AB}\overrightarrow{AB} = \text{atan}\langle(BB-AA)/AB\rangle$
= -9'21"
$\overrightarrow{AB}_D = 90°-9'21"$
= 89°50'39"
$R = \overrightarrow{AB}_D - \overrightarrow{AB}_S = +50'39"$



AA = 20.12 BB = 20.12 ('A' & 'B')
AC = 19.96 BD = 21.05
CA = 0.16 BD = 0.93
AA = 18.96 BB = 17.87
AA = 1.16 BB = 2.25
check: $BB-AA+AB\tan\langle\angle\overrightarrow{ABAB}\rangle$
$=1.16+400.57\tan\langle 9'21"\rangle$
$\approx 2.249 \approx 2.25$ ✓

Alignment:
ON = 1.10
CA ≈ NC = 20.23
OC = AA-CA tan⟨9'21"⟩
= 1.1044
OC-ON = 5mm good

JI = 2.34
BD ≈ DI = 20.57
JD = BB+BD tan⟨9'21"⟩
= 2.3059
JD-JI = -3.4cm ok

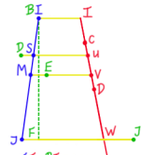


EL = 20.12 FK = 20.12 ('C' & 'D')
GL = 19.89 FK = 20.02
EG = 0.23 FF = 0.10
GY = 0.92 FX = 0.19
EY = 1.15 FX = 0.29
※offsets to title, not bearing datum

$EF = LK \approx FE-(ML+LK)$
= 401.2
$\angle\overrightarrow{EF}\overrightarrow{YX} = \text{atan}\langle(FX-EY)/EF\rangle$
= -7'32"
$\overrightarrow{EF} = 89°55'39"+7'32"$
= 90°03'11"
check: $EY = FX-EF\tan\langle\angle\overrightarrow{EF}\overrightarrow{YX}\rangle$
$\approx 1.149 = 1.15$ ✓

Alignment:
MN = 1.20
GE ≈ MG = 19.91
GN = EY+GE tan⟨9'21"⟩
= 1.144
GN-MN = -6mm good

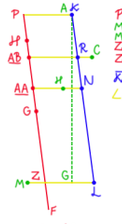
JK = 0.20
FH ≈ FJ = 20.04
HK = FX-FH tan⟨9'32"⟩
= 0.226
HK-JK = 2.6cm ok



II ≈ BI = 1.53
JJ = 20.12
FJ = 20.04
FW = 1.97
WJ = 18.07
JW = 2.05
CE = 403.73
WE ≈ FX = 0.19
IC ≈ BB = 19.87
IW = 421.43
$\overrightarrow{IJ} \approx \overrightarrow{BF}$
$\angle\overrightarrow{IW}\overrightarrow{IJ} = \text{asin}\langle(JW-II)/IW\rangle$
= +9'15"
$\overrightarrow{IJ} = 179°54'54"$

CD = 203.71
VD ≈ EAG = 1.00
IV = 230.58
$MV = II+IV\sin\langle\angle\overrightarrow{IV}\overrightarrow{IM}\rangle$
= 1.305
MV-EV = 0.013

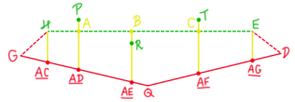
IU ≈ BD = 21.05
SU = II+IU sin⟨∠IUIS⟩
= 1.536
SU-DU = -0.064



PK = PA = 2.05
ML = 20.12
MG = 19.91
ZG = 0.72
ZL = 0.93
$\overrightarrow{KI} \approx \overrightarrow{AG}$
$\angle\overrightarrow{KI}\overrightarrow{PZ} = \text{asin}\langle(ZL-PK)/PZ\rangle$
= -9'08"
$\overrightarrow{KL} = 179°59'43"$
HG = 202.49
AAG = HAC = 1.00
PAA = 220.45
$AAN = PK+PAA\sin\langle\angle\overrightarrow{KN}\overrightarrow{PAA}\rangle$
= 1.464
AAN-AAH = 0.154

HF = 403.19
FH ≈ AA = 18.96
ZF ≈ GY = 0.92
PZ = 421.18

HAB ≈ AC = 1.00
PAB = 19.96
$ABR = PK+PAB\sin\langle\angle\overrightarrow{KR}\overrightarrow{PAB}\rangle$
= 1.997
ABR-ABC = -0.023



HAC = 1.00
HA ≈ HP = 100.57
$AAD = 1+HA\tan\langle\angle\overrightarrow{HE}\overrightarrow{GQ}\rangle$
= 1.195
AAD-PAD = -0.015

EAG = 1.00
CE ≈ TE = 100.16
$CAE = 1+CE\tan\langle\angle\overrightarrow{EX}\overrightarrow{DQ}\rangle$
= 1.219
CAE-TAE = -0.001

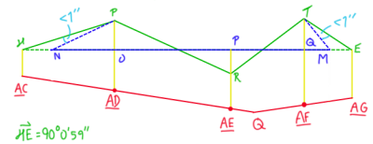
HB ≈ HR = 200.80
$BAE = 1+HB\tan\langle\angle\overrightarrow{HE}\overrightarrow{GQ}\rangle$
= 1.389
BAE-RAE = 0.029

AT ≈ CO = 100.10
AU ≈ CQ = 200.26
AV ≈ CS = 300.45
$RT = AA+AT\tan\langle\overrightarrow{AR}\overrightarrow{AT}\rangle$
= 1.432
$SU = AA+AU\tan\langle\overrightarrow{AS}\overrightarrow{AU}\rangle$
= 1.705
$TV = AA+AV\tan\langle\overrightarrow{AT}\overrightarrow{AV}\rangle$
= 1.977

TB ≈ OD = 300.41
UB ≈ QD = 200.25
VB ≈ SD = 100.06
$RT = BB-TB\tan\langle\overrightarrow{RB}\overrightarrow{TB}\rangle$
= 1.433
$SU = BB-UB\tan\langle\overrightarrow{SB}\overrightarrow{UB}\rangle$
= 1.705
$TV = BB-VB\tan\langle\overrightarrow{TB}\overrightarrow{VB}\rangle$
= 1.978

RT-RO = 0.083
SU-SQ = -0.025
TV-TS = 0.018

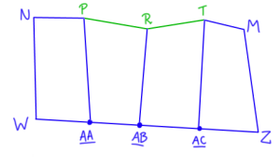
AB ≈ CD, approximations are all short, use larger values



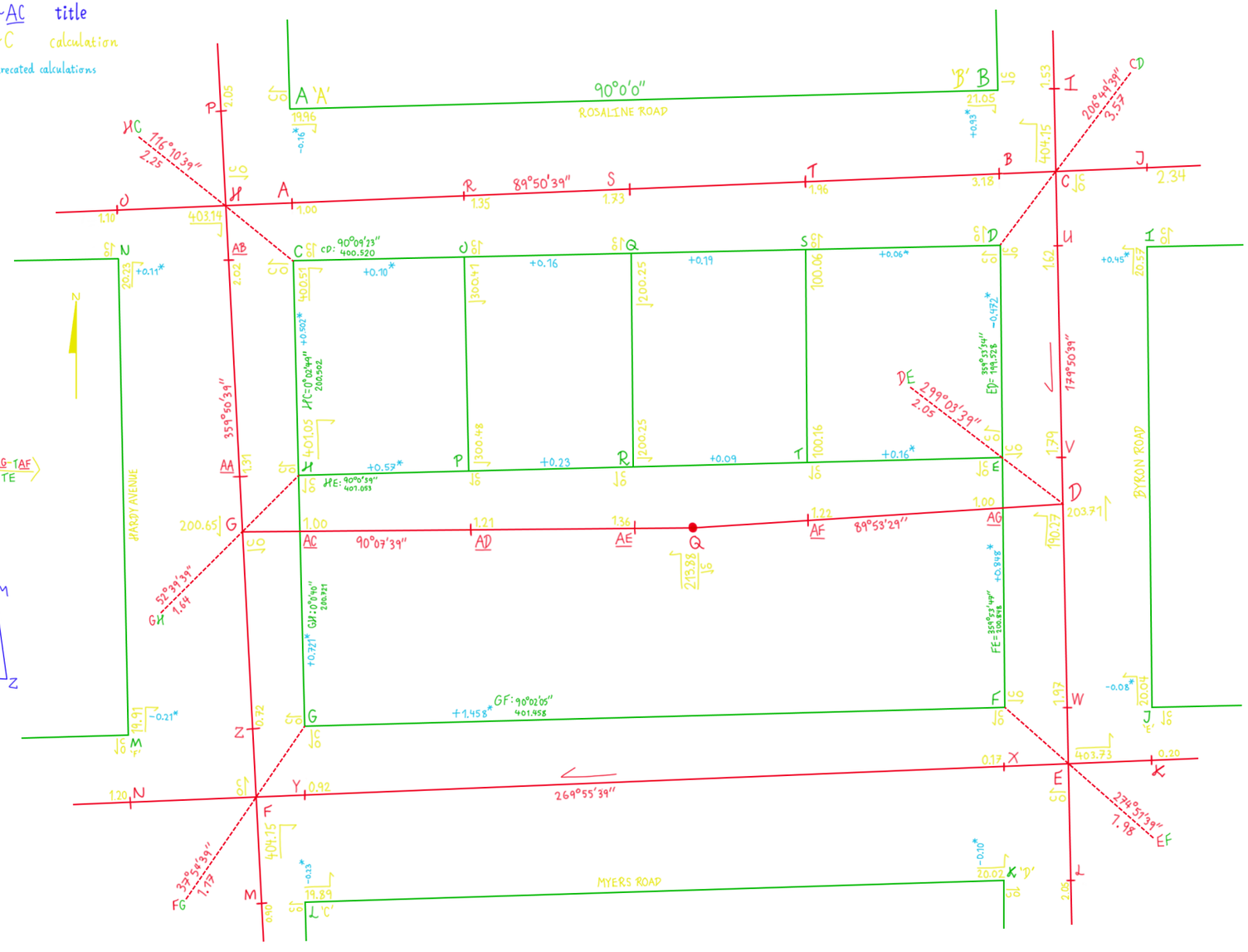
$\overrightarrow{HE} = 90°0'59"$
$\overrightarrow{ACQ} = 90°09'39"$
HAC = 1.00
PAD = 1.21
HP = 100.57
$\angle\overrightarrow{HP}\overrightarrow{AC}\overrightarrow{AD} = \text{atan}\langle(PAD-HAC)/HP\rangle$
= 7'11"
$\overrightarrow{HP} = 90°0'28"$
PR = 0.029
TQ = 0.001
RT = 100.09
$\angle\overrightarrow{RT}\overrightarrow{FQ} = \text{asin}\langle(PR+TQ)/RT\rangle$
= 1'02"
$\overrightarrow{RT} = 89°59'57"$
NP: 90°0'28" 100.416

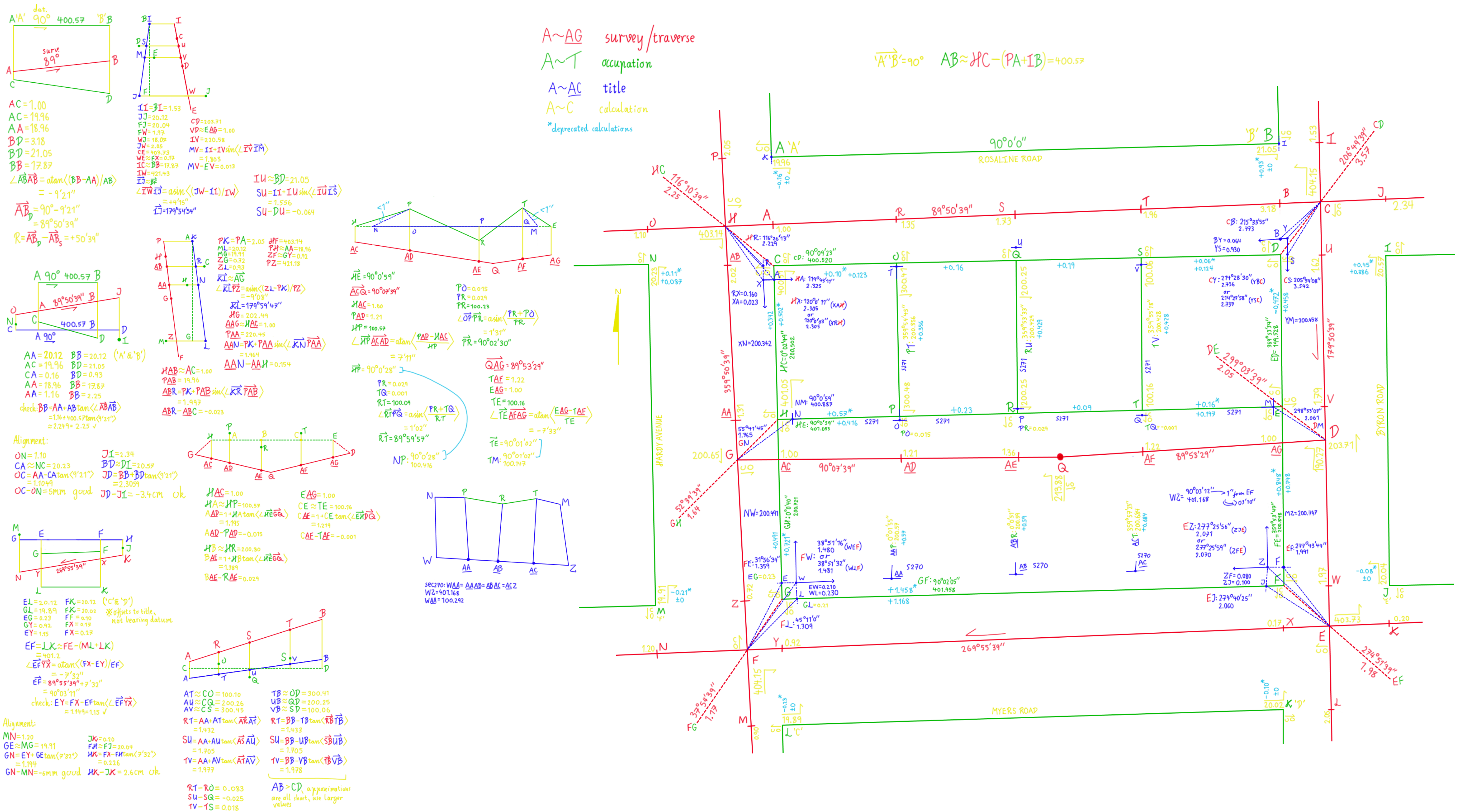
PO = 0.015
PR = 0.029
PR = 100.23
$\angle\overrightarrow{OP}\overrightarrow{PR} = \text{asin}\langle(PR+PO)/PR\rangle$
= 1'31"
$\overrightarrow{PR} = 90°02'30"$

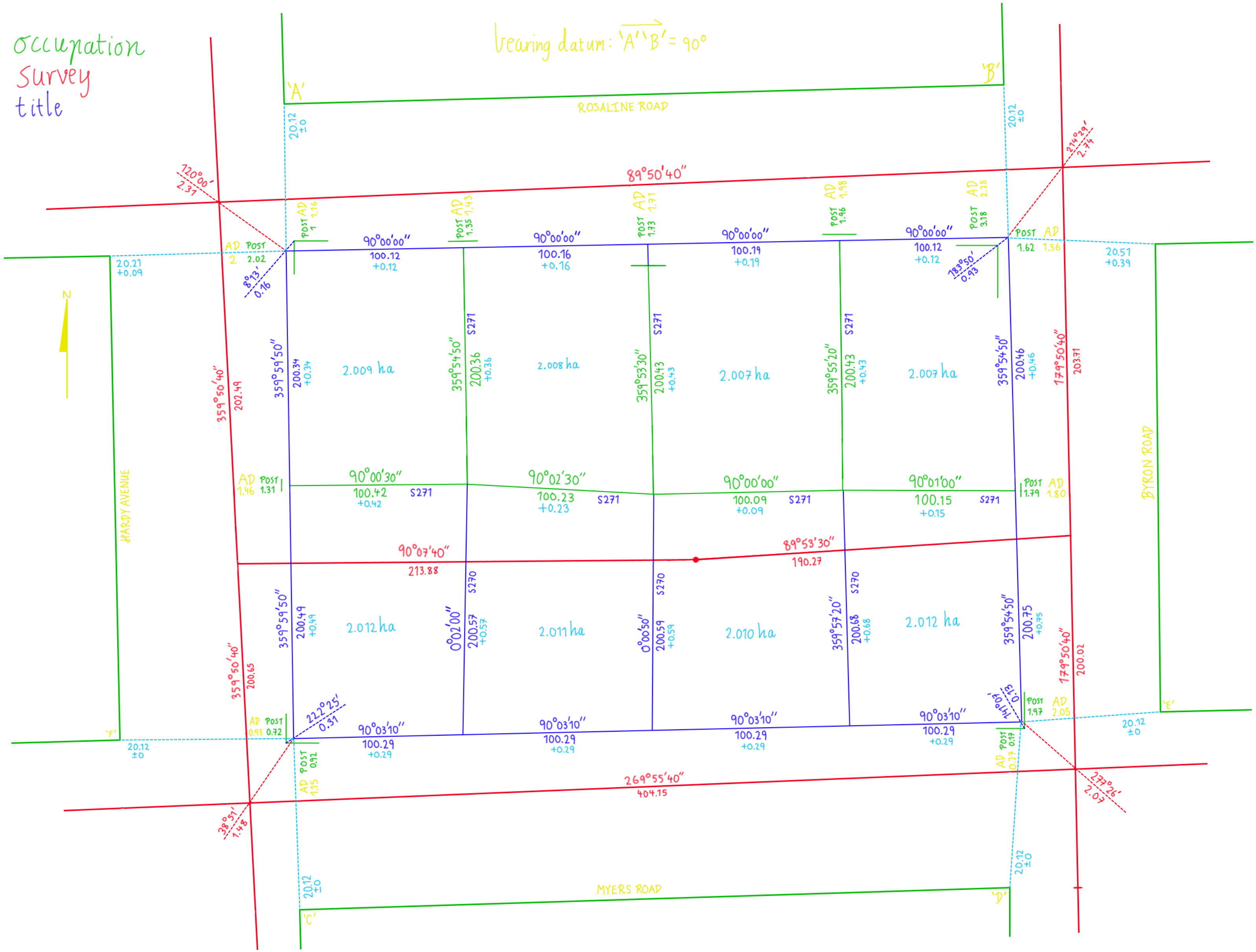
$\overrightarrow{QAG} = 89°53'29"$
TAF = 1.22
EAG = 1.00
TE = 100.16
$\angle\overrightarrow{TE}\overrightarrow{AF}\overrightarrow{AG} = \text{atan}\langle(EAG-TAF)/TE\rangle$
= -7'33"
$\overrightarrow{TE} = 90°01'02"$
TM: 90°01'02" 100.147



SEC270: WAA = AAAB = ABAC = ACZ
WZ = 401.168
WAA = 700.242




A~AG survey/traverse
A~T occupation
A~AC title
A~C calculation
*deprecated calculations
'A''B'=90° AB≈HC−(PA+IB)=400.57
ROSALINE ROAD
MYERS ROAD
HARDY AVENUE
BYRON ROAD
Alignment:



occupation
survey
title
bearing datum: 'A''B' = 90°
'A'
'B'
'C'
'D'
'E'
'F'
N
ROSALINE ROAD
MYERS ROAD
HARDY AVENUE
BYRON ROAD
89°50'40"
90°07'40"
213.88
89°53'30"
190.27
269°55'40"
404.15
359°50'40"
202.49
359°50'40"
200.65
179°50'40"
203.71
179°50'40"
200.02
120°00'
2.31
216°29'
2.74
38°51'
1.48
277°26'
2.07
8°13'
0.16
183°50'
0.93
222°25'
0.31
90°00'00"
100.12
+0.12
90°00'00"
100.16
+0.16
90°00'00"
100.19
+0.19
90°00'00"
100.12
+0.12
90°00'30"
100.42
+0.42
90°02'30"
100.23
+0.23
90°00'00"
100.09
+0.09
90°01'00"
100.15
+0.15
90°03'10"
100.29
+0.29
S271
S270
359°59'50"
200.34
+0.34
359°54'50"
200.36
+0.36
359°53'30"
200.43
+0.43
359°55'20"
200.43
+0.43
359°54'50"
200.46
+0.46
359°59'50"
200.49
+0.49
0°02'00"
200.57
+0.57
0°00'50"
200.59
+0.59
359°57'20"
200.68
+0.68
359°54'50"
200.75
+0.75
2.009 ha
2.008 ha
2.007 ha
2.007 ha
2.012 ha
2.011 ha
2.010 ha
2.012 ha
20.12
±0
20.21
+0.09
20.51
+0.39
POST
AD
2.02
1.16
1.35
1.43
1.73
1.71
1.46
1.98
3.18
2.25
1.62
1.56
1.31
1.46
1.79
1.80
0.72
0.93
0.92
1.15
1.97
2.05
0.17
0.27