

Understanding Legal Descriptions ~ and ~ Land Survey Systems ~ ~ ~

International Right of Way Association
International Education Conference

Portland, Oregon

June 11, 2019

Presented by Gary R. Kent, PS



Schneider

Outline

- I. Legal Descriptions – Background
- II. The Rectangular Public Land Survey System
- III. Colonial Systems
- IV. Irregularities in the USPLSS
- V. Reading and Understanding Legal Descriptions
- VI. Units of Measure
- VII. Metes and Bounds descriptions
- VIII. Lot/Block – Subdivision descriptions
- IX. Other types of descriptions
- X. Types of surveys

The Sufficient Legal Description

Purpose

- **Describes** the unique shape, size and location of real property

OR

- Provides the **means** by which the unique size, shape and location can be ascertained.



Schneider

The Sufficient Legal Description

Sufficiency

- A competent person (professional surveyor) can locate the described real estate on the ground
- With or without reference to extrinsic evidence



The Sufficient Legal Description

Sufficient? Ambiguous?

EXCEPTING also a piece of ground about 7 feet wide and 14 feet long near the Northeast corner of the West Half of the Northeast quarter of said Section, Township and Range aforesaid.



Schneider

Understanding the Effect of Words and Phrases

*When **words**, or the **lack of them**, or the **arrangement** of them, used in descriptions results in ambiguity, both the interpretation of them and the physical location of the boundary lines from them become questionable.*

Writing Legal Descriptions: In Conjunction with Survey Boundary Control, Gurdon Wattles (1976)



The Sufficient Legal Description

Extrinsic Evidence

It is true that "[i]f the text of the easement is **ambiguous**, extrinsic evidence may be considered by the trial court in order to determine the scope of the easement."

However, considering extrinsic evidence in the **absence of ambiguous language** is "clearly inconsistent with the well-established principles of legal interpretation... and is thus incorrect."

Blackhawk Dev. Corp. v. Village of Dexter, 700 NW 2d 364 - Mich: Supreme Court 2005 [internal citations omitted]



The Sufficient Legal Description

Extrinsic Evidence

- May be considered to:
- Explain the **meaning of words** in the conveyance
- Explain **conditions** existing as of the date of the conveyance



Intent – The Holy Grail

"A deed is a contract[,] and, "[a]s with any instrument, a **deed must be read as a whole** in order to ascertain the grantor's intent."

Contracts, such as deeds, are subject to the parol evidence rule, which **precludes the use of extrinsic evidence when interpreting unambiguous contractual language,**

but **ambiguous contracts open the door to the admission of extrinsic evidence** to establish the actual intent of the parties.

...



Determining or Establishing Intent

An ambiguity can be either patent or latent[.]

...[A] patent ambiguity **appears from the face of the document.**

A latent ambiguity exists when the language in a contract **appears to be clear and intelligible** and suggests a single meaning, but other facts create the "**necessity for interpretation or a choice among two or more possible meanings.**"



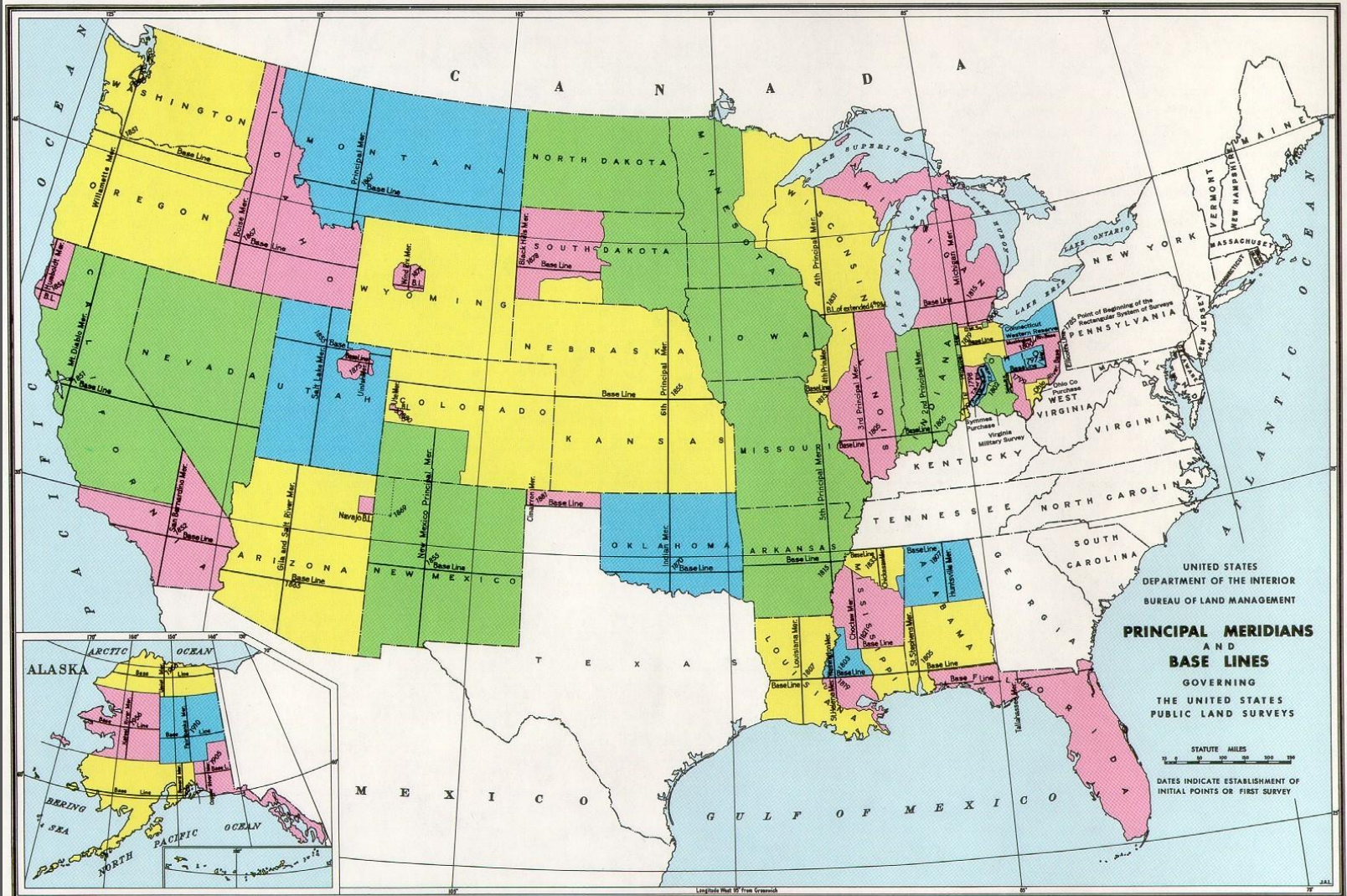
Determining or Establishing Intent

[I]f a latent ambiguity is found to exist, a court must examine the extrinsic evidence again to ascertain the meaning of the contract language at issue.

Halberg v. PFEIFFELMANN, Mich: Court of Appeals
2012 (unpublished)



The Public Land Survey System

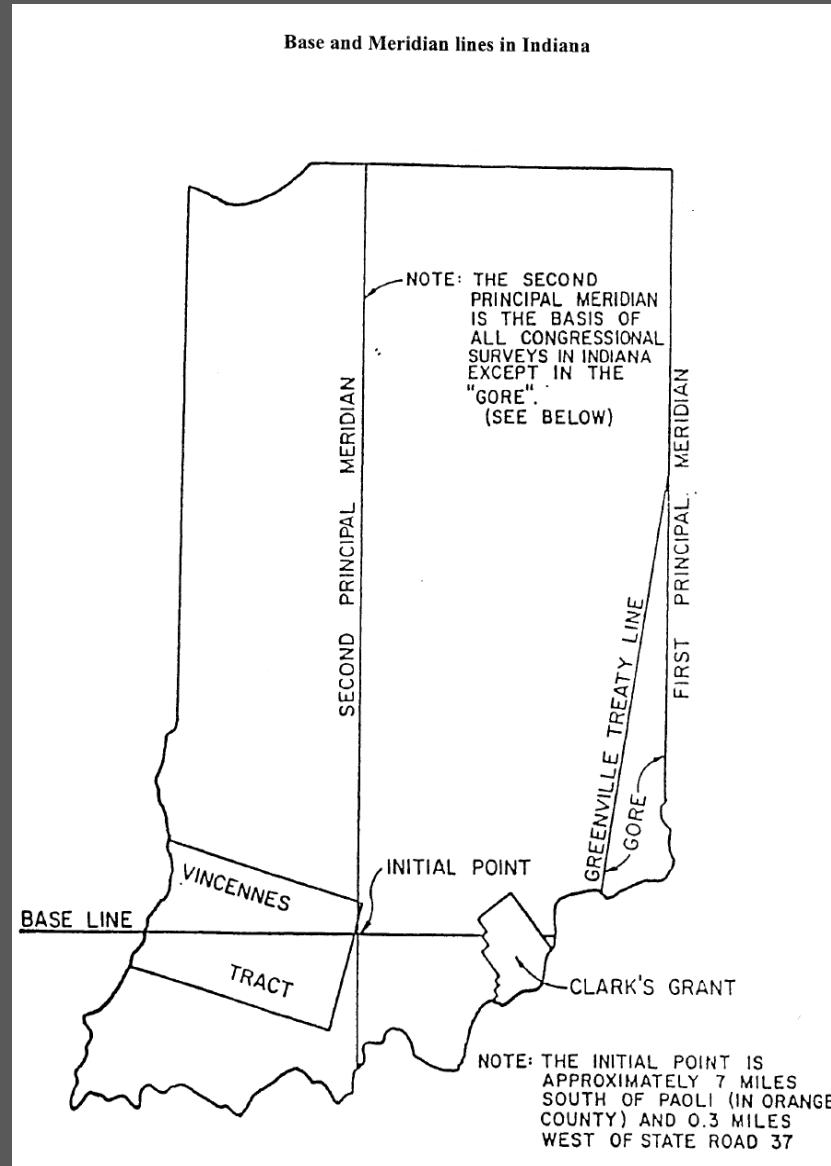


INTERIOR—GEOLOGICAL SURVEY, RESTON, VIRGINIA—1988



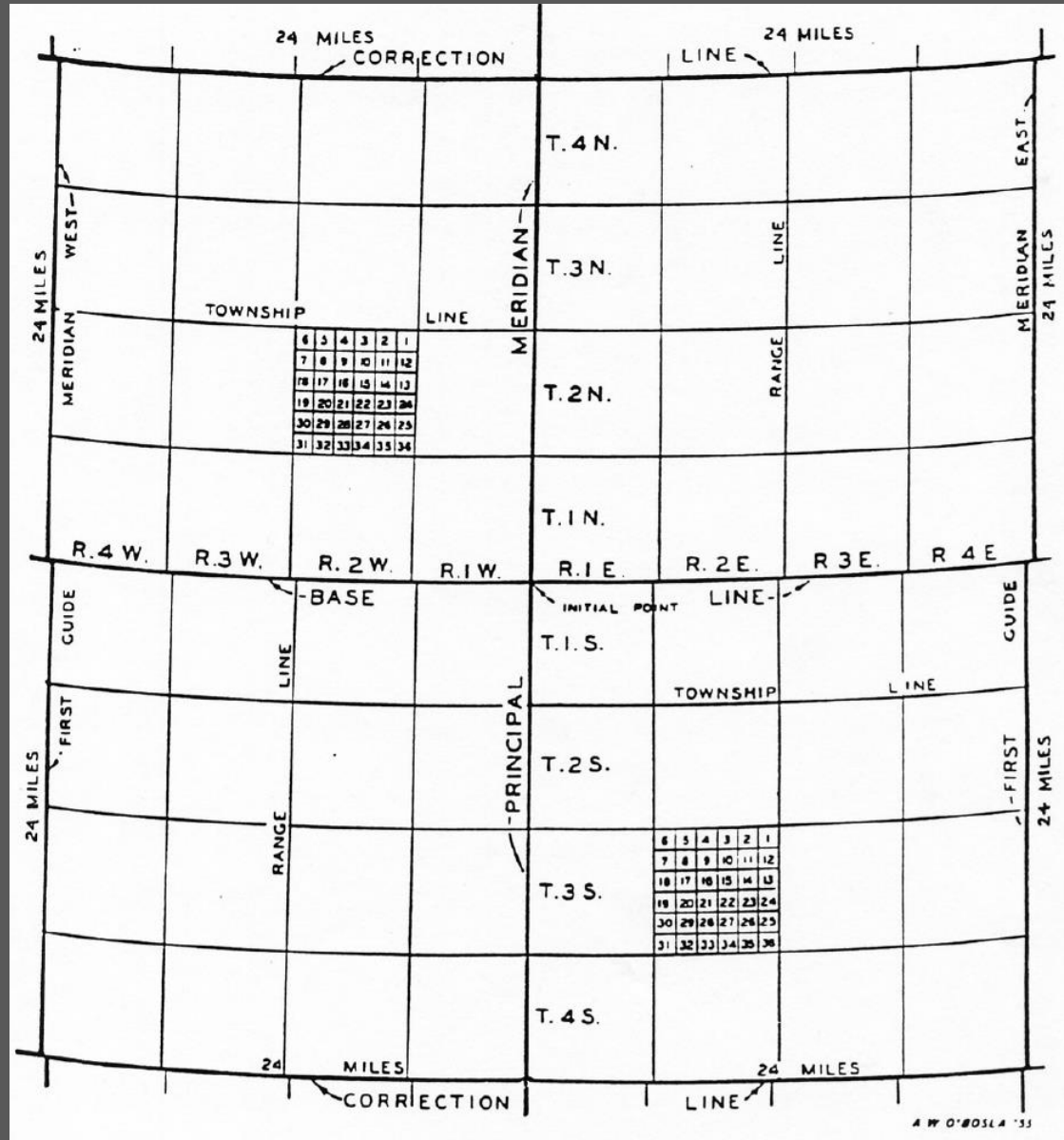
Schneider

The Public Land Survey System



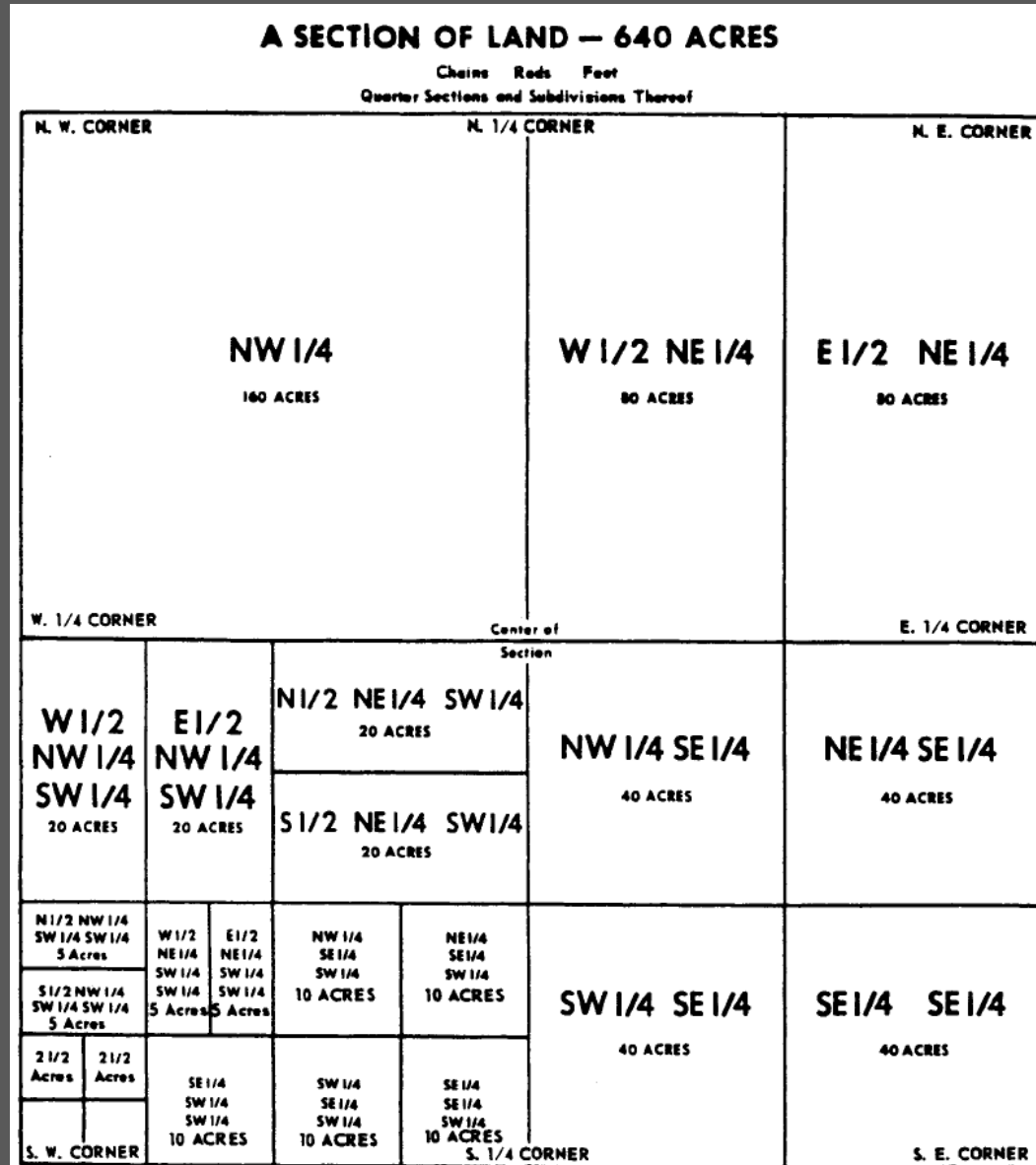
Schneider

The Public Land Survey System



Schneider

The Public Land Survey System



Schneider

Colonial Systems

- Grants from various European crowns sometimes with overlapping claims
 - ✓ Often huge and/or overlapping grants
 - ✓ No regular system like later rectangular system
 - ✓ Grants often relied on obscure, impermanent boundaries and markers
- Some regular systems (e.g., areas of New England and upstate New York)



Irregularities in the USPLSS

- Era of original surveys (circa 1800-1840)
 - ✓ Weather
 - ✓ Native Americans
 - ✓ Cost/value
- Technology
 - ✓ Compass
 - ✓ Chain
 - ✓ Dealing with curvature of the earth
- Original monuments
 - ✓ Wood posts
 - ✓ Perpetuation programs



Units of Measure - Distances

- Past (and yet today)
 - Chain (66 feet)
 - Link $1/100$ chain (0.66 feet)
 - Pole, Perch, Rod ($1/4$ chain = 16.5 feet)
 - Odd units (e.g., an “out”)
 - Acceptable precisions low compared to today



Units of Measure - Distances

- Present
 - Feet
 - 0.1 feet
 - 0.01 feet
 - Sometimes metric
 - Not inches!
 - Inexplicable combinations (e.g., 13 chains, 6 feet, 3 ½ inches)
 - High precision (can create problems)



Units of Measure - Distances

- Horizontal
 - Not “along the ground” (“slope distance”) except in rare circumstances



Units of Measure - Directions

- Past
 - Measured directly
 - Compass
 - Transit
 - Theodolite
 - Described as:
 - Bearings
 - Deflection angles
 - Interior angles



Units of Measure - Directions

- Present
 - Usually not measured directly
 - Electronic total station
 - GPS
 - Described as:
 - Bearings
 - Azimuths (in rare cases)



Units of Measure - Areas

- Areas
 - ✓ Square feet
 - ✓ Acre (43,560 square feet) =
10 square chains (66' X 660')
 - ✓ Rood
1/4 acre
 - ✓ Perch (1 square perch =
272.25 square feet)



Elements of a Legal Description

- Caption
 - ✓ General location
 - ✓ Limits title
- Body
 - ✓ Describe the property, or
 - ✓ Provide the means by which it can be identified
- Qualifications/Augmenting phrases
 - ✓ Subject to...
 - ✓ Except, however...
 - ✓ Consider items of title vs. location



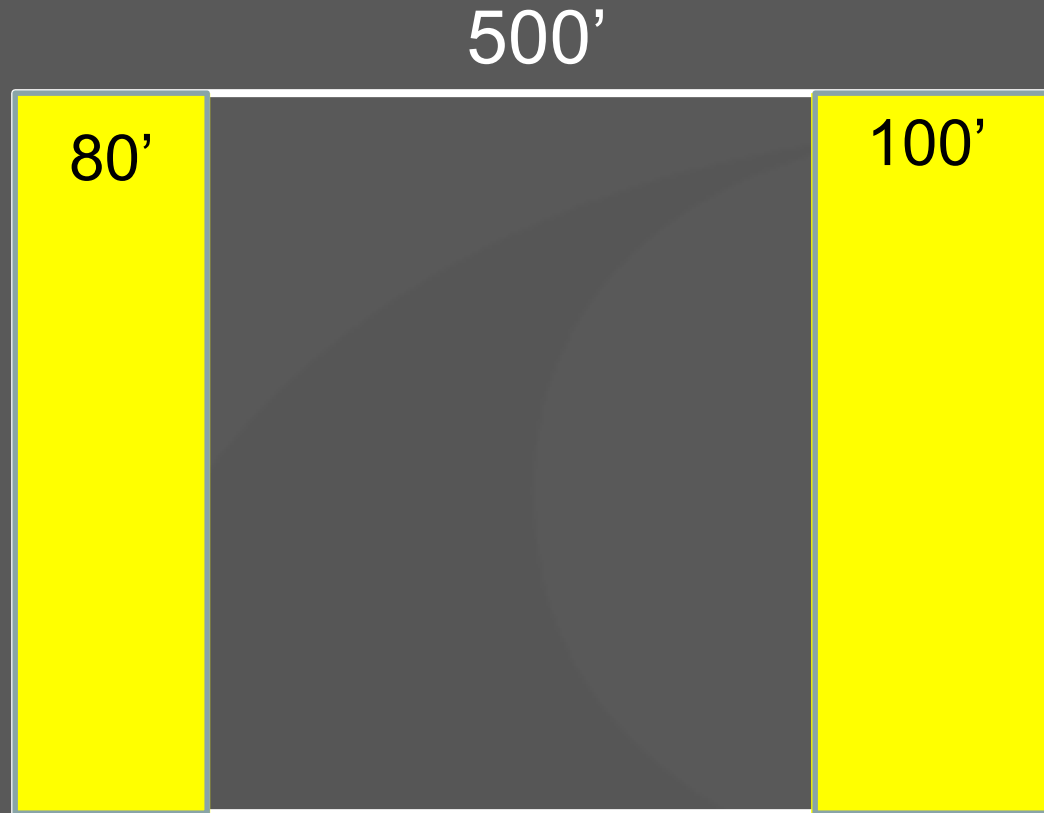
Qualifications/Exceptions

“Subject to...” - TITLE

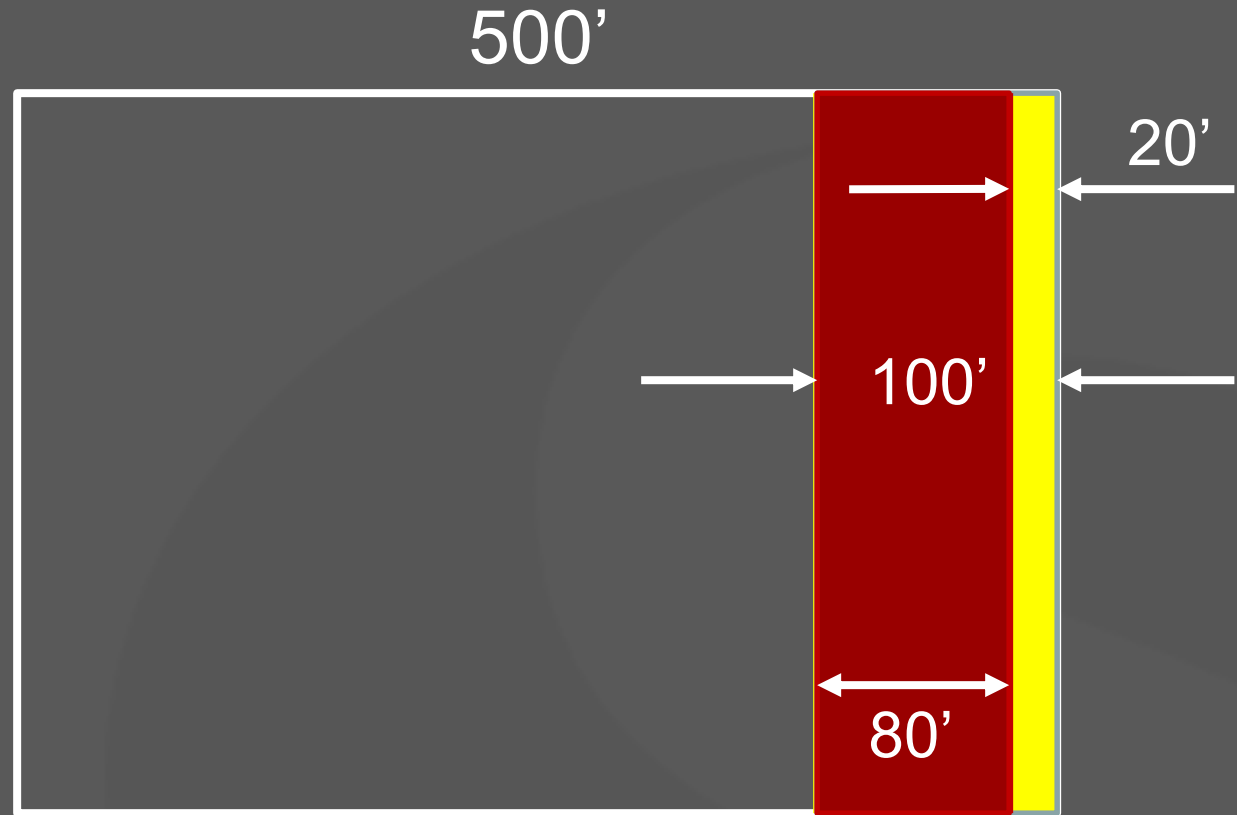
“Except, however,...” - SURVEY

Exceptions in Descriptions

Be careful when there are two exceptions



Except 100 feet off the entire east side thereof.
Except 80 feet off the entire west side thereof.



Except 100 feet off the entire east side thereof.
Except 80 feet off the entire west side thereof.

Types of Land Descriptions

- Metes and Bounds
- Lot/Block
- Aliquot Part
- Area
- Strip
- Bounds
- Combination
 - Linear
 - Proportional Parts
 - Division line
 - Station/Offset
 - Coordinates

Metes and Bounds

Part of the Northeast Quarter of Section 15, Township 17 North, Range 4 East of the Second Principal Meridian in Hamilton County, Indiana being described as follows:

Beginning at the Northeast corner of said Northeast Quarter; thence North 89 degrees 35 minutes 46 seconds West along the north line thereof a distance of 1201.35 feet

...

thence North 01 degrees 15 minutes 06 seconds East along said east line a distance of 1167.88 feet to the **Point of Beginning**.

Lot/Block (Subdivision)

Description by reference to a map/plat.

Lot 100A in Chapel Woods, Section 3, an Addition in the City of Noblesville, Hamilton County, Indiana per plat thereof recorded as Instrument No. 2009-043139 (field in Plat Cabinet 4, as Slide 45) in the Office of the Hamilton County Recorder.

SURVEYOR
THE SCHNEIDER CORPORATION
8901 OTIS AVENUE
MINNEAPOLIS, MN 55426-1007
(612) 826-7100

SECTION 3

PART OF THE S.W.1/4 OF SEC.9-T18N-R5E
HAMILTON COUNTY, INDIANA
NOBLESVILLE, INDIANA

LOD TL 34-406 104-91	
RIGHT HAND	25
REAR WARD	20
SEX FWD	7
WINGGATE SIDE FWD	5

EXTRACTION WORKMENTS ARE REQUIRED PER TITLE 80A (STATE BOARD OF REGISTRATION FOR LAND SURVEYORS) SEC. 1-12-18.

STREET CORNER MONUMENTS SHALL BE 5/8" DIA. SHIRT ALUMINUM ROD W/ 1 1/2" DIA. CAP (N/A/CST) STAMPED "SCHNEIDER FIRM 100".

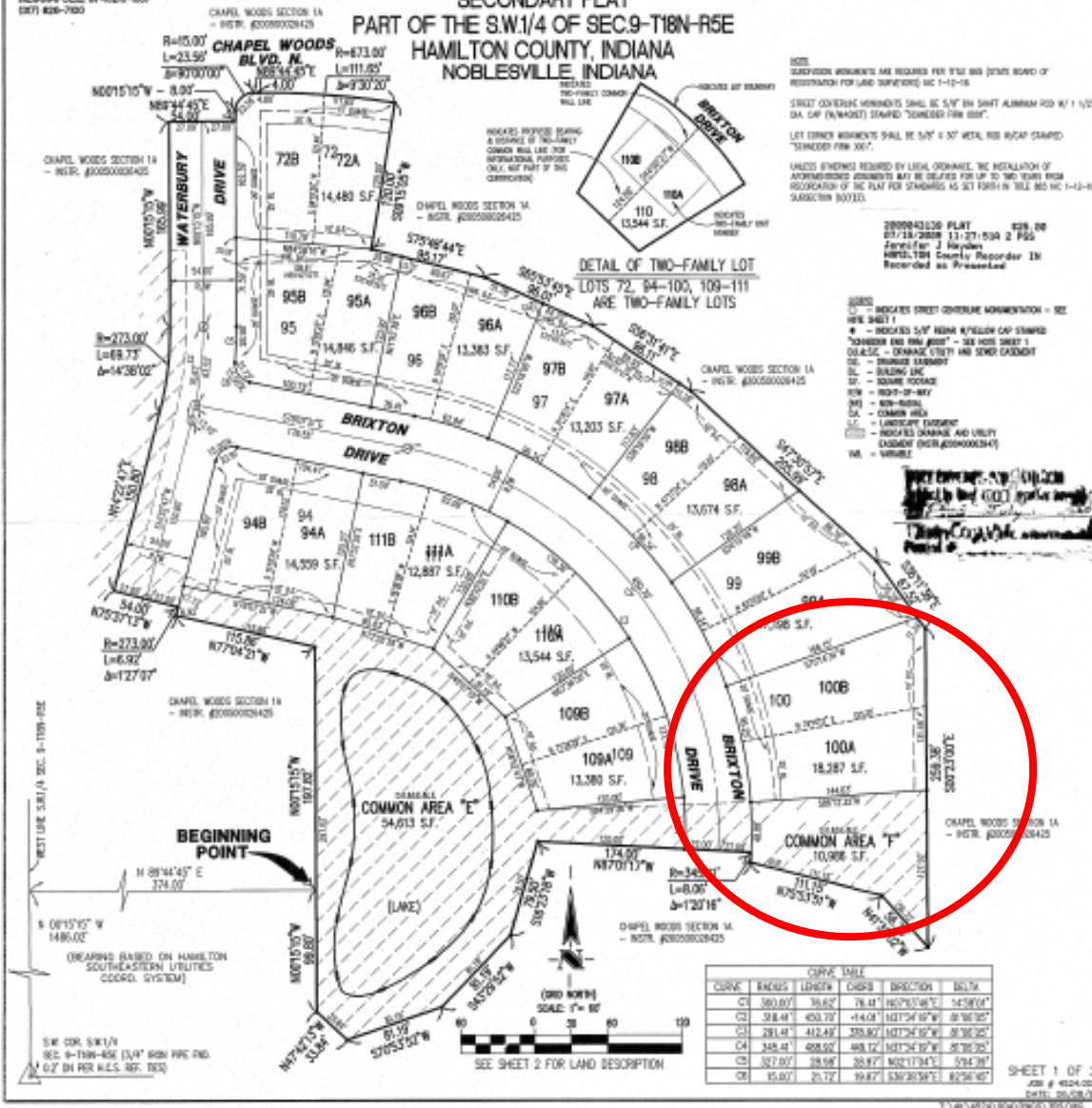
LET CORNER MOMENTS SHALL BE 5/8" x 30" METAL RIB W/ CAP STAMPED
"SCHNEIDER FIRM 2007".

UNLESS OTHERWISE REQUIRED BY LOCAL ORDINANCE, THE INSTALLATION OF APPROVED JOINTS MAY BE DELAYED FOR UP TO TWO YEARS FROM REDEMPTION OF THE FLOT FOR STANDARDS AS SET FORTH IN TITLE 805 MC 1-13-45 SUBJECTS NOTED.

20000403000 PLAT 028.00
07/18/2008 11:27:59A 2 PGS
Jennifer J Hayden
HARRIS County Recorder IN
Recorded as Presented

00 - INDICATES STREET CENTERLINE MONUMENTATION - SEE FIELD SHEET 1
- INDICATES 1/8" NEAR YELLOW CAP STAMPED "SCHUBERT AND SON MFG" - SEE PAGE SHEET 1
CLASSE - DRAINAGE STUDY AND SENDER CADDSET
CL - CURBWAY EASEMENT
BL - BUILDING LINC
SF - SQUARE FOOTAGE
R/W - RIGHT-OF-WAY
NM - NON-RURAL
CN - COMMON HILL
L - LANDSCAPE EASEMENT
CD - INDICATES DRAINAGE AND UTILITY EASEMENT (DNR#A0000000000000)
VAR = VARIABLE

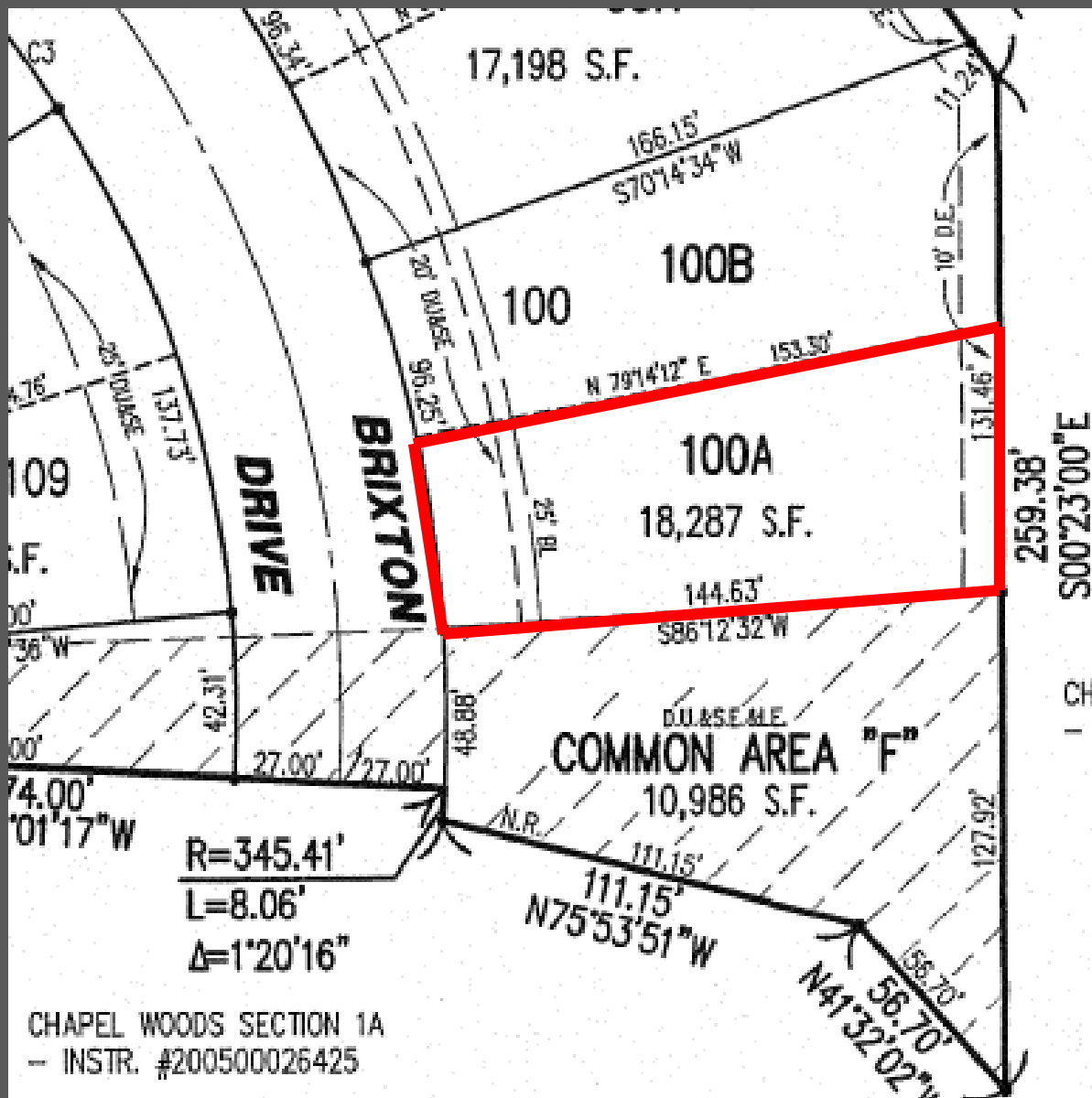
THESE COPIES ARE NOT VALID



SHEET 1 OF 2

[illegible]

Schneider

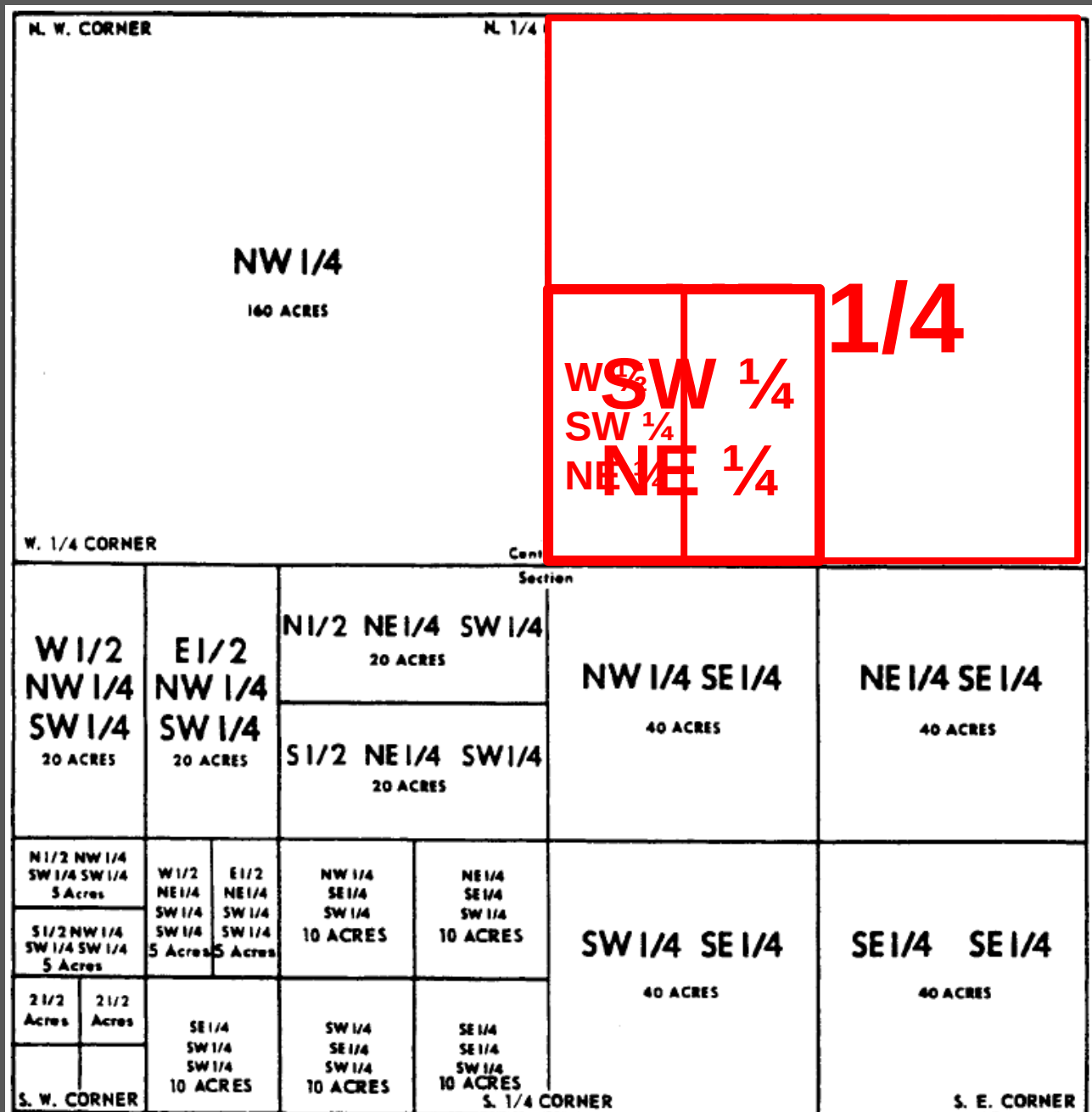


Schneider

Aliquot Part

A standard subdivision of a USPLSS section of land

The West Half of the Southwest Quarter of the Northeast Quarter of Section 15, Township 17 North, Range 4 East of the Second Principal Meridian in Hamilton County, Indiana. Containing 20 acres, more or less.



Interpreting and Plotting Aliquot Parts Descriptions

Read and plot the description backwards



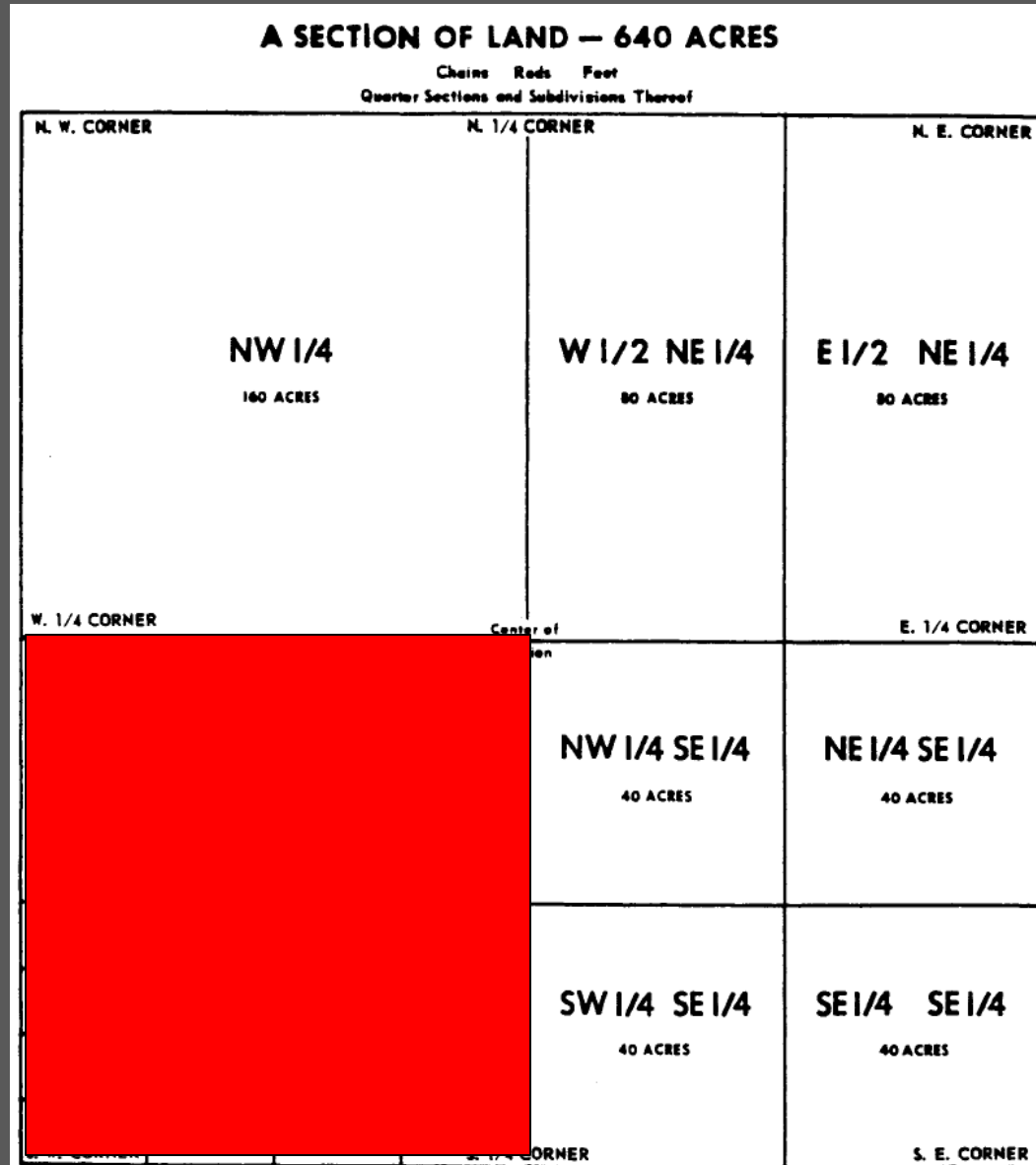
Schneider

Exercise #1: Plot...

- Southwest Quarter (SW $\frac{1}{4}$)



The U.S. Public Land Survey System



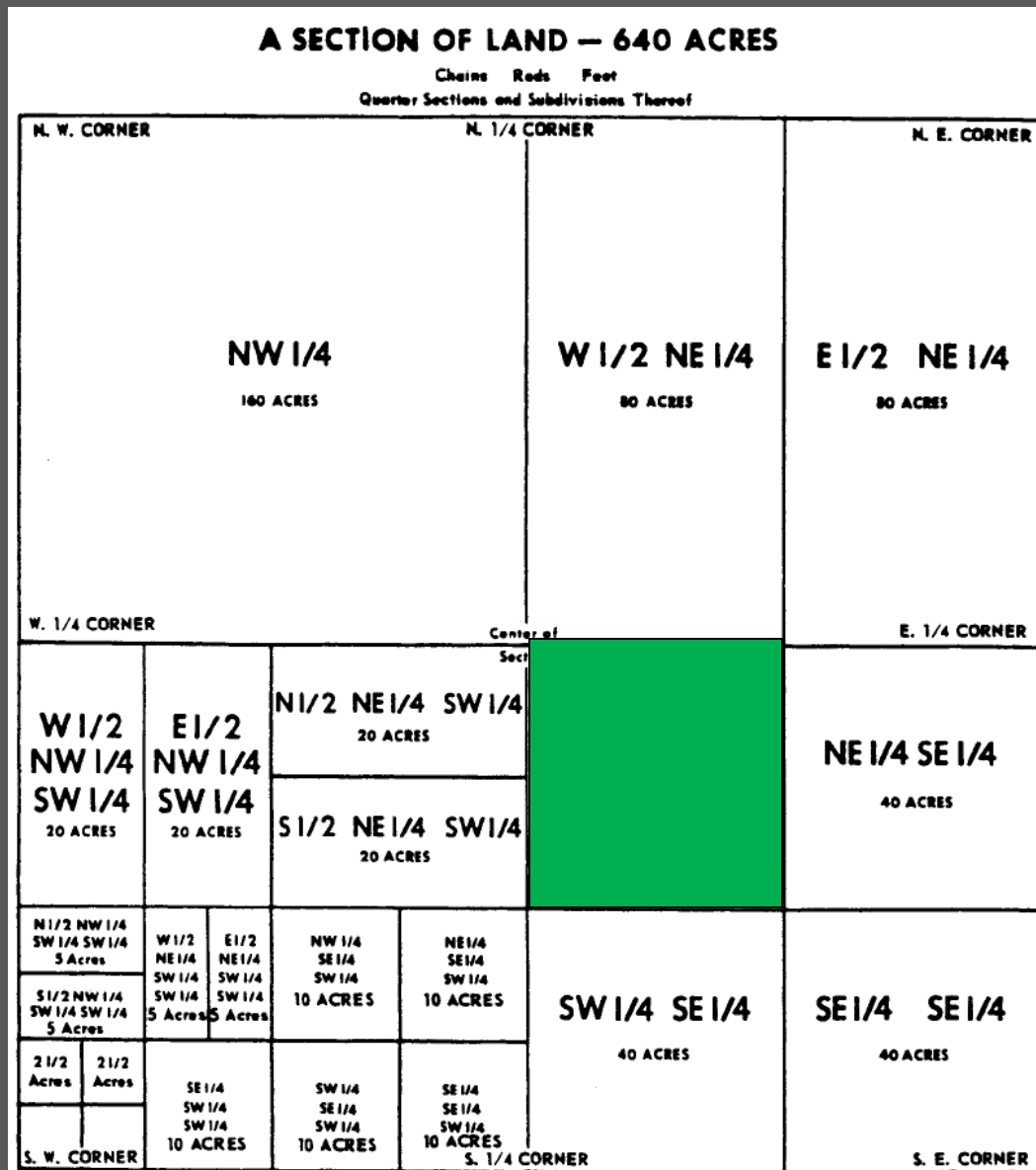
Schneider

Plot...

- Northwest Quarter of the Southeast Quarter (NW $\frac{1}{4}$, SE $\frac{1}{4}$)



The U.S. Public Land Survey System



Schneider

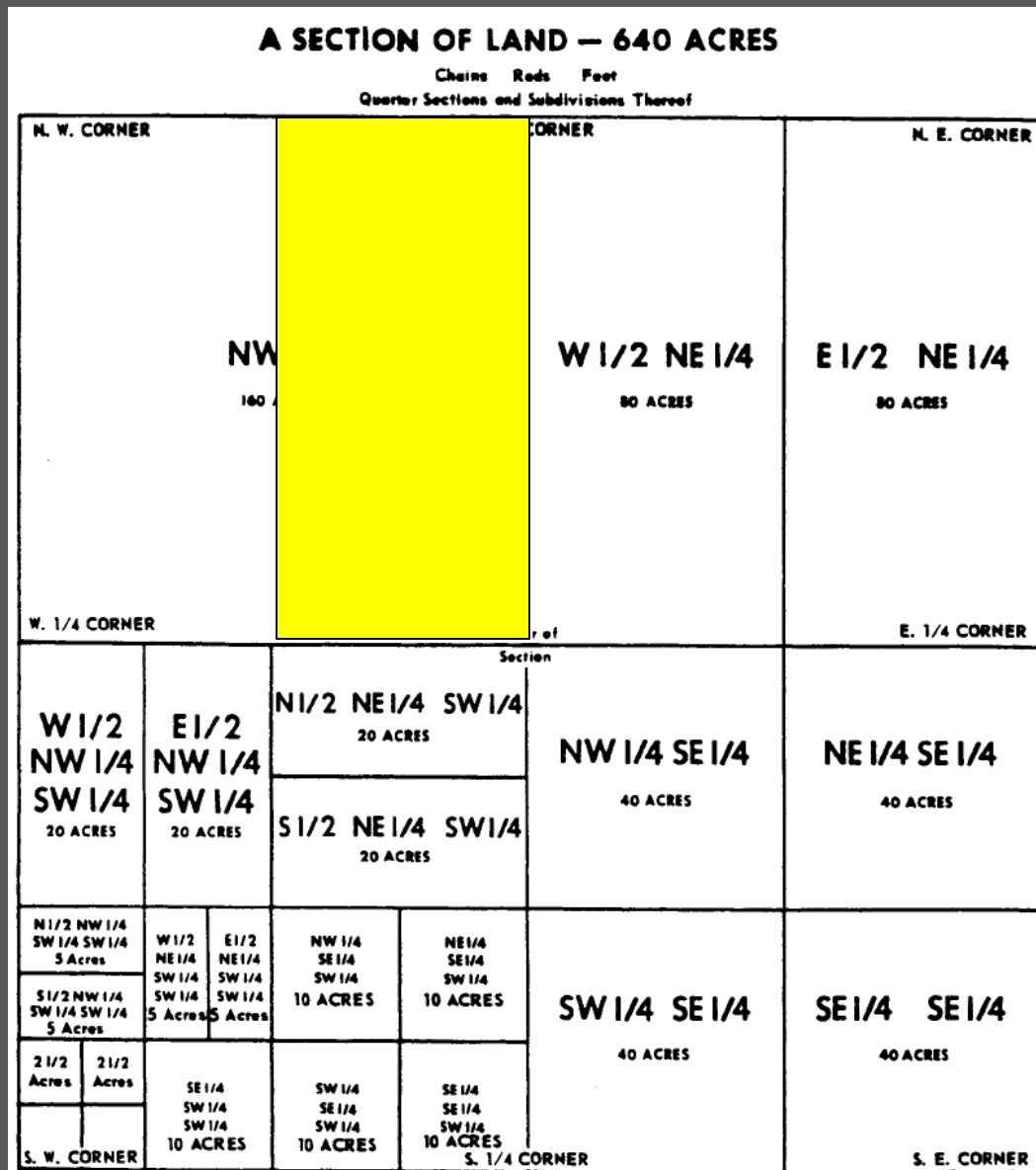
Plot...

- East Half of the Northwest Quarter ($E\frac{1}{2}$, $NW\frac{1}{4}$)



Schneider

The U.S. Public Land Survey System

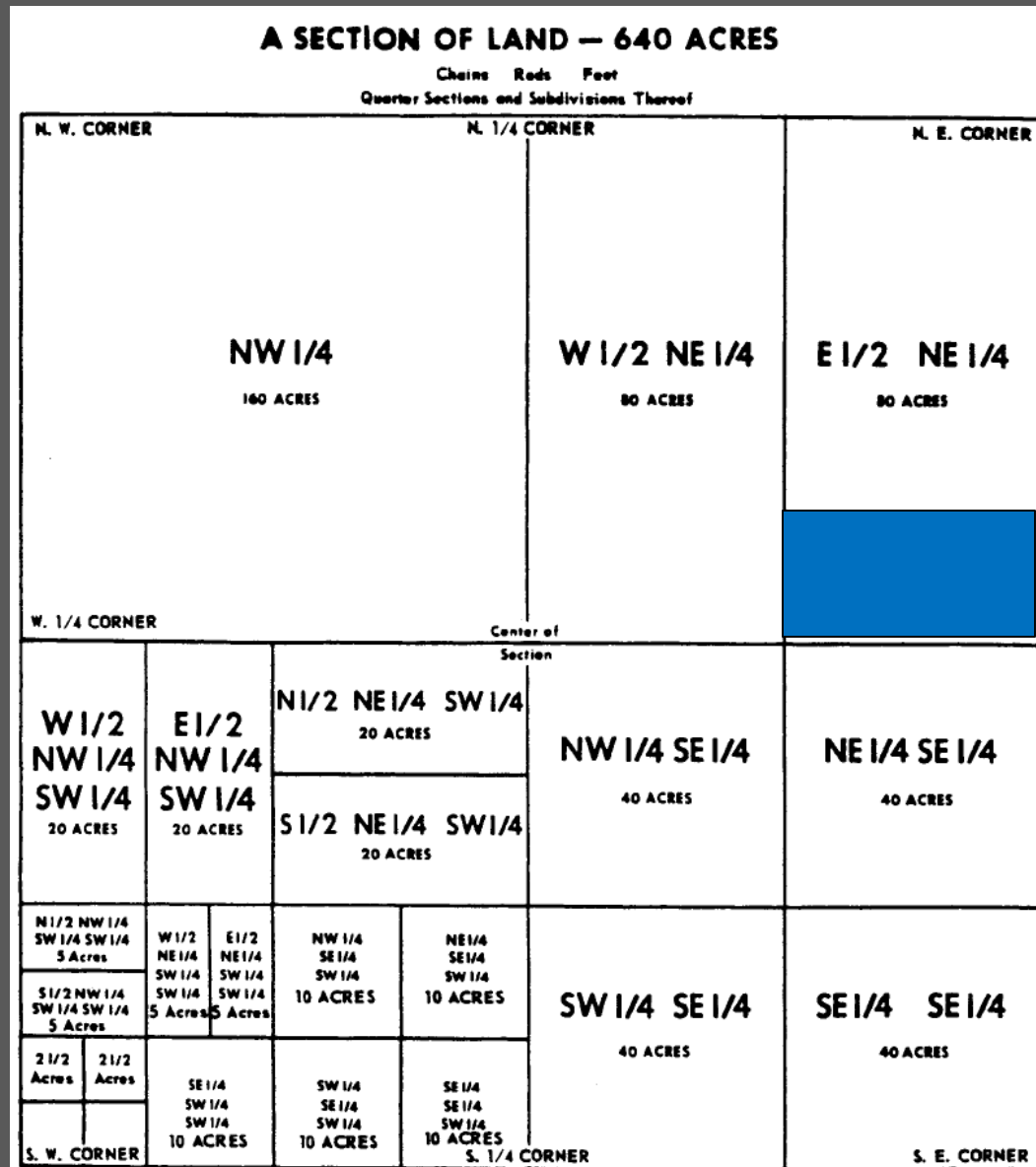


Schneider

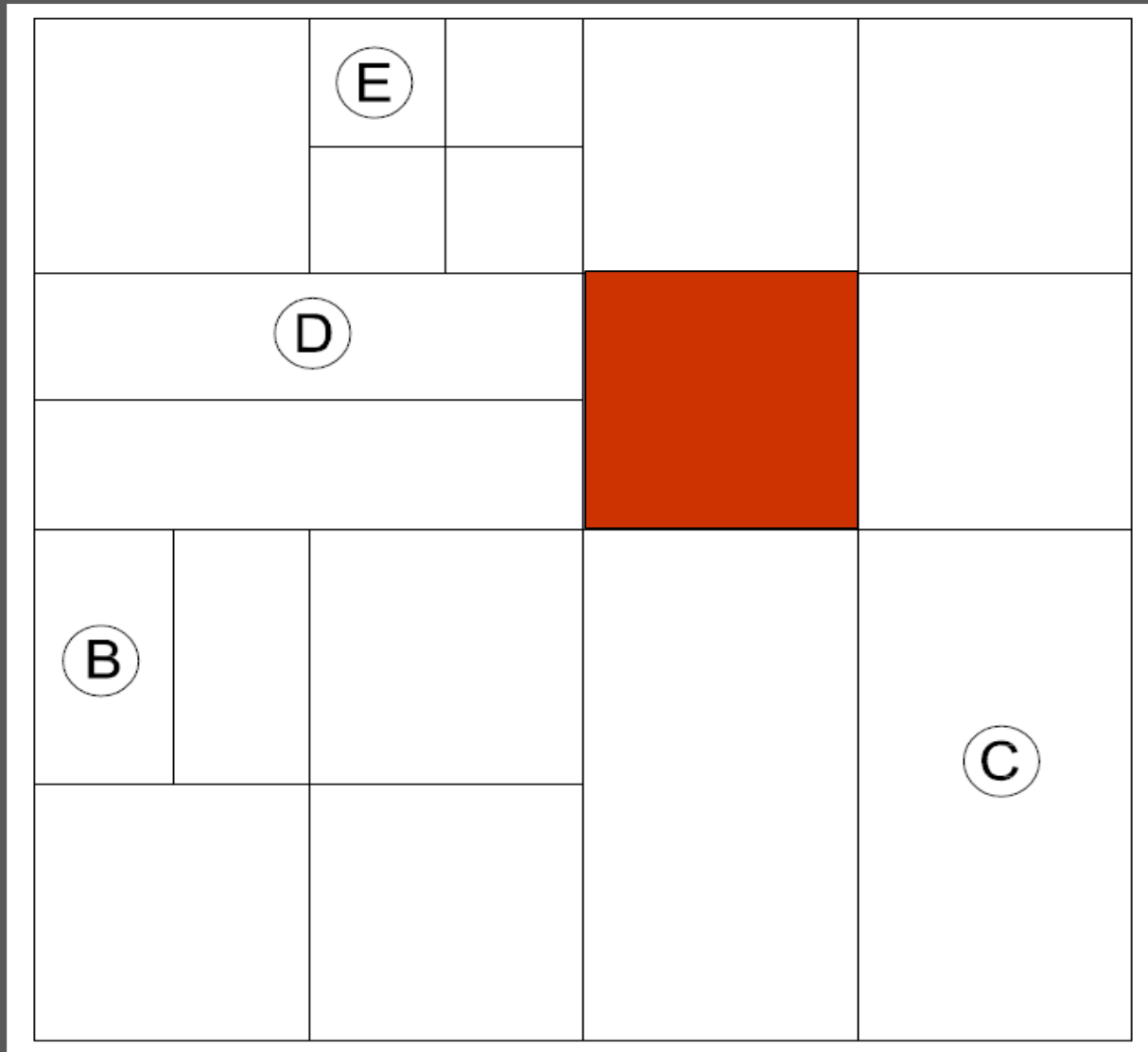
Plot...

- South Half of the Southeast Quarter of the Northeast Quarter ($S^{1/2}$, $SE^{1/4}$, $NE^{1/4}$)





Exercise (in handout p. 28)



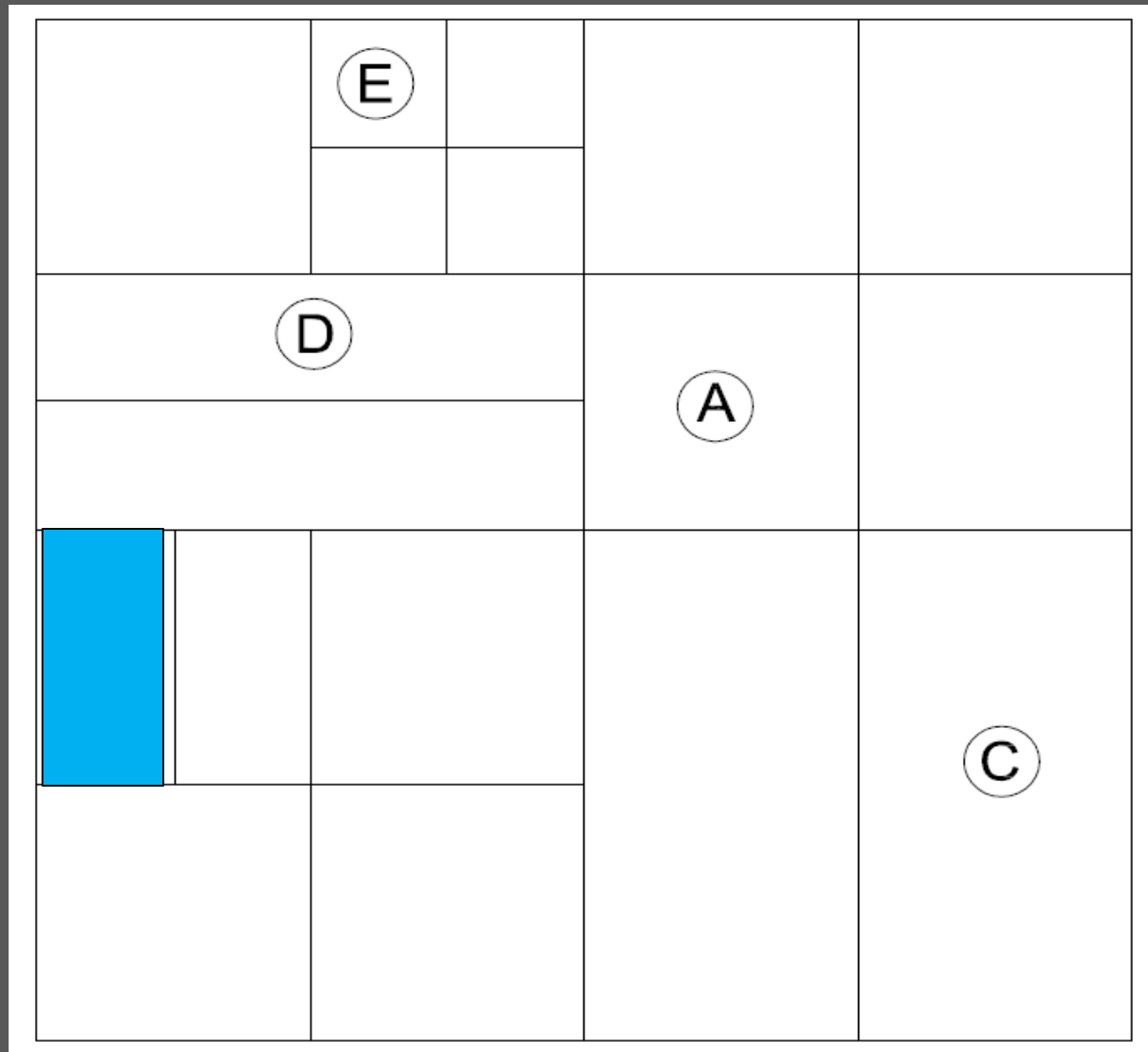
Plot...

- A: Southwest Quarter, Northeast Quarter
(SW $\frac{1}{4}$ NE $\frac{1}{4}$)



Schneider

Exercise



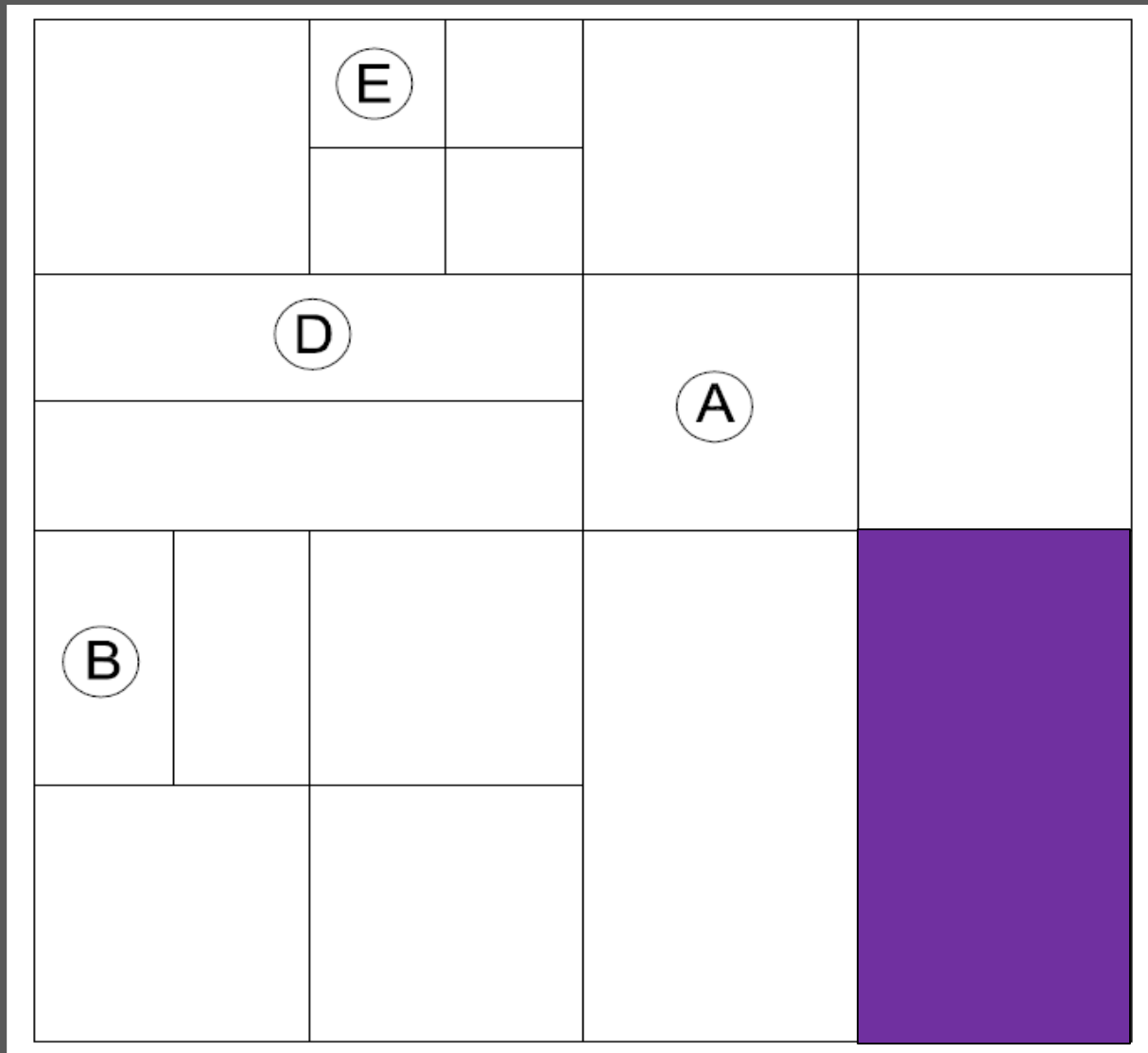
Plot...

- B: West Half, Northwest Quarter,
Southwest Quarter
(W^{1/2} NW^{1/4} SW^{1/4})



Schneider

Exercise



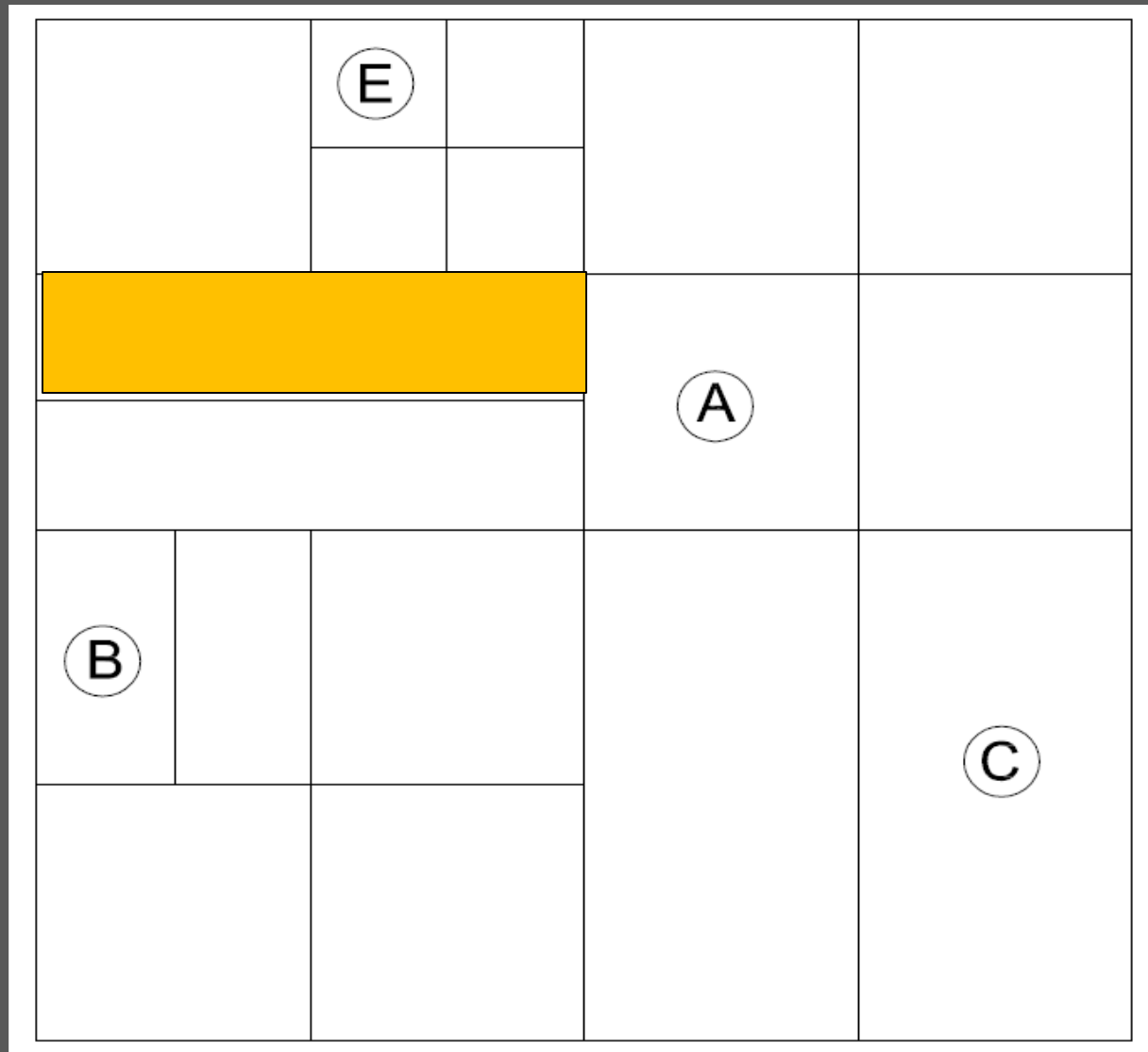
Plot...

- C: East Half, Southeast Quarter
(E $\frac{1}{2}$ SE $\frac{1}{4}$)



Schneider

Exercise

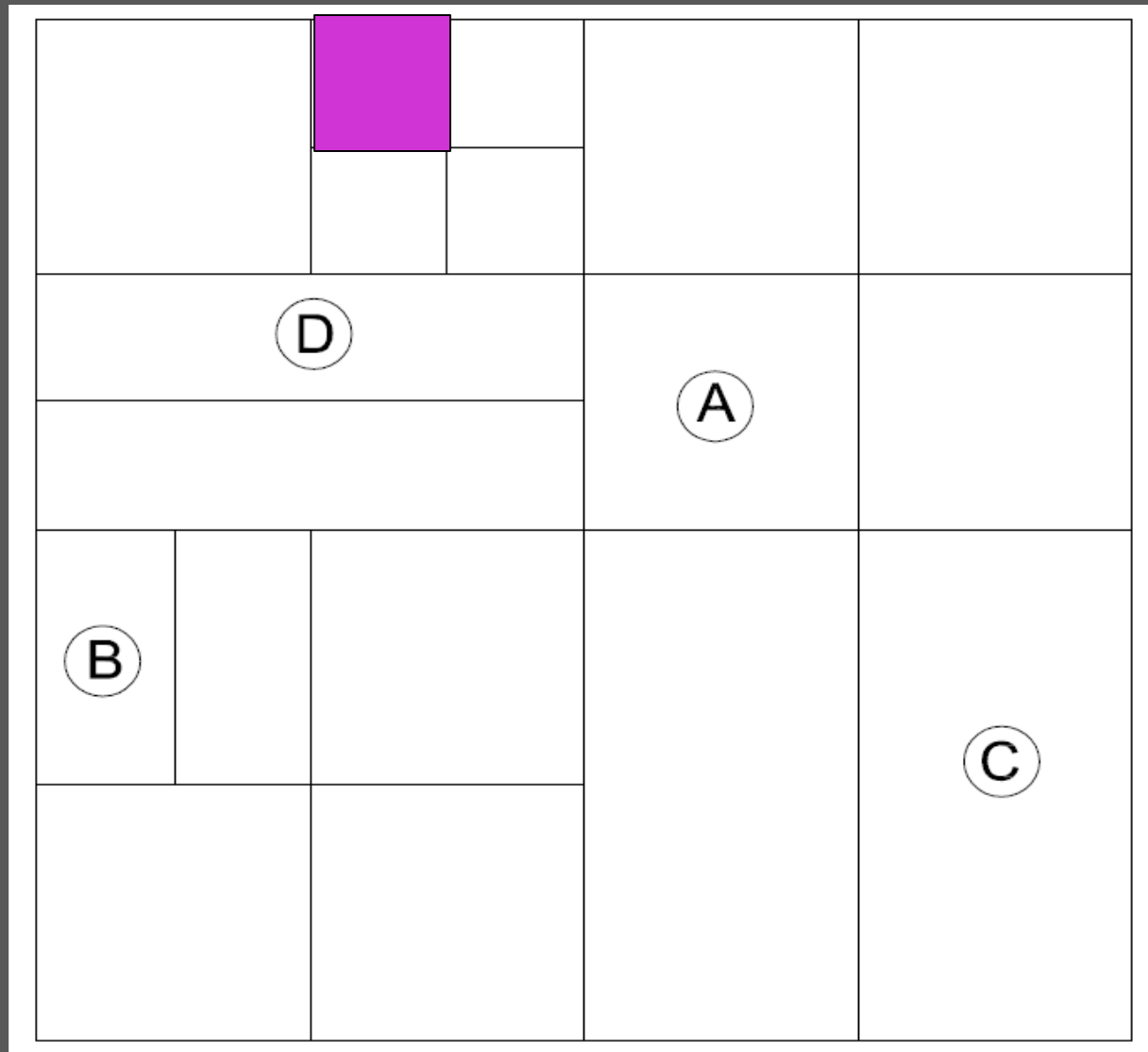


Plot...

- D: North Half, South Half, Northwest Quarter
(N¹/₂ S¹/₂ NW¹/₄)



Exercise



Plot...

- E: Northwest Quarter, Northeast Quarter,
Northwest Quarter
(NW¹/₄ NE¹/₄ NW¹/₄)



Schneider

Area Description

Ten acres by parallel lines off the entire north end of the tract of the following described tract of land: Part of the Northeast Quarter of Section 15, Township 17 North, Range 4 East of the Second Principal Meridian in Hamilton County, Indiana being described as follows:

Beginning at the Northeast corner of said Northeast Quarter; thence North 89 degrees 35 minutes 46 seconds West along the north line thereof a distance of ...



10 Acres

Is the dividing line here?

Or here?

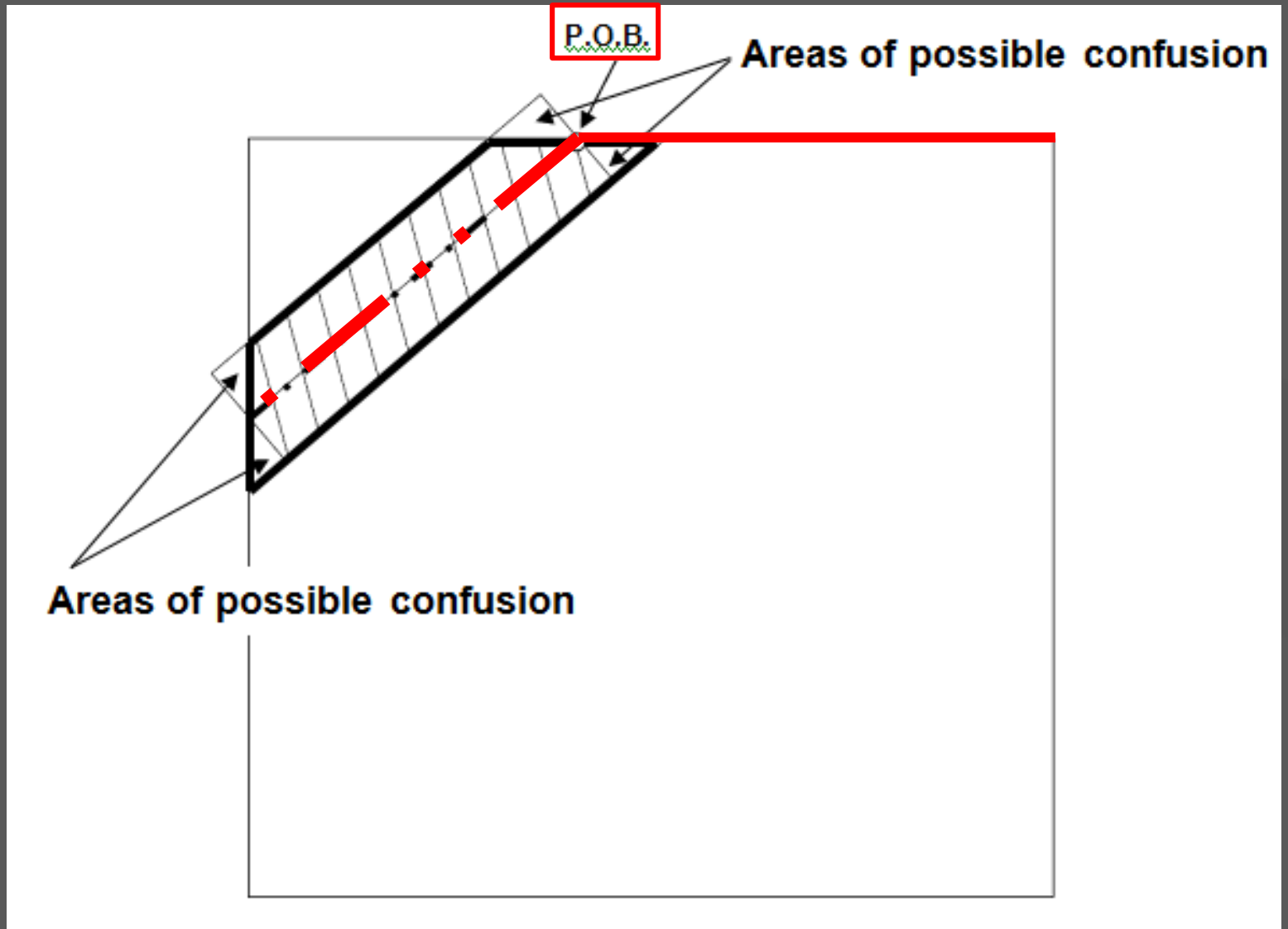


Strip Description

Part of the Northeast Quarter of Section 15, Township 17 North, Range 4 East of the Second Principal Meridian in Hamilton County, Indiana being a strip of land 20 feet in width, the **centerline of which is described as follows:**

Commencing at the Northeast corner of said Northeast Quarter; thence North 89 degrees 35 minutes 46 seconds West along the north line thereof a distance of 1201.35 feet to the **Point of Beginning**; thence South 01 degrees 15 minutes 06 seconds West parallel with the east line of said Northeast Quarter a distance of a distance of 1167.88 feet to the **Terminus**.





Bounds

All that land in Lincoln County, Kentucky bounded on the north by Township Road 142, on the south by Fishback Creek, on the west by the lands of Jeremiah Johnson and on the east by the lands of Cyrus Pickett.

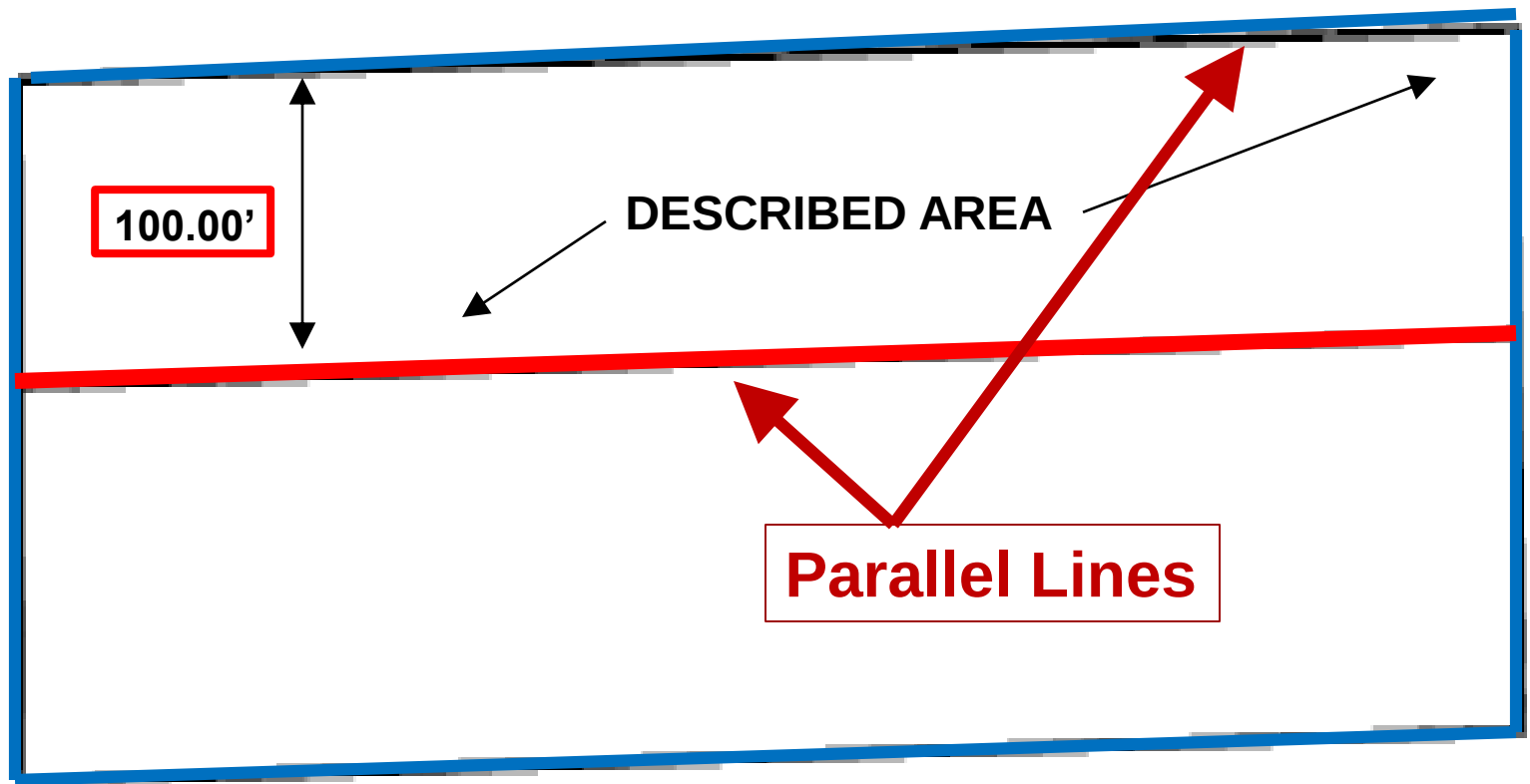


Combination - Linear

100 feet by parallel lines off the entire north end of the following described tract: Part of the Northwest Quarter of Section 12, Township 36 North, Range 8 East in Allen County, Indiana being described as follows:

Beginning at the northwest corner of said northwest quarter; thence North 89 degrees 12 minutes 07 seconds East along the north line thereof a distance of 1200.00 feet...



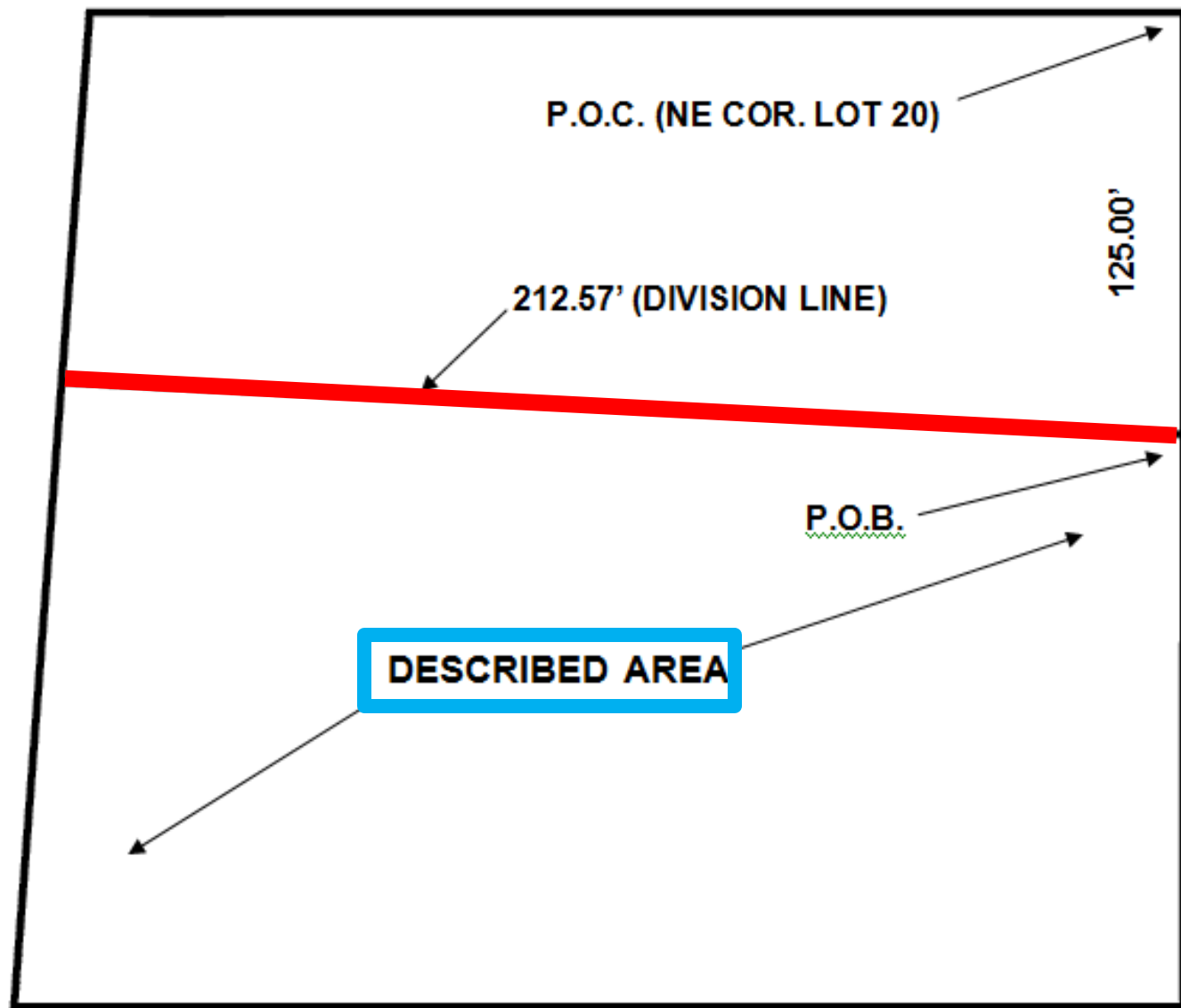


Combination - Division Line

All that part of Lot 20 in Bridlewood Addition ...
lying south of the following described line:

Commencing at the northeast corner of said Lot 20;
thence on a plat bearing of South 00 degrees 01
minutes 35 seconds West along the east line thereof
a distance of 125.00 feet to the **Point of Beginning**;
thence North 88 degrees 37 minutes 25 seconds
West a distance of 212.57 feet to the west line of Lot
20 and the **Terminus**.



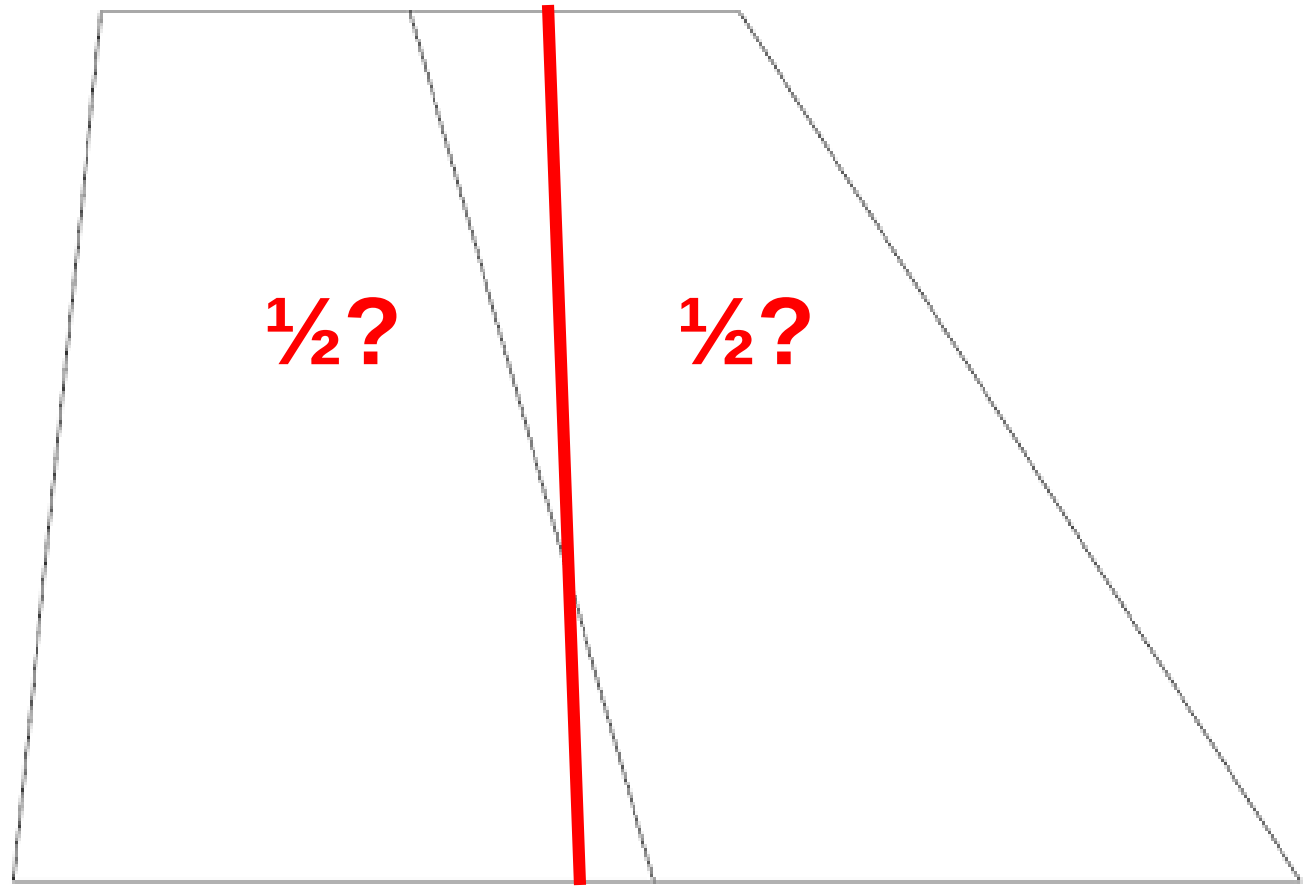


Combination - Proportional Parts

The East half of Lot 5 in Summerwood Addition, per plat thereof recorded in Plat Book 18, Page 20 in the Office of the Recorder of Boone County, Indiana.



Schneider



Schneider

Station/Offset

State Highway Project FA-125-100

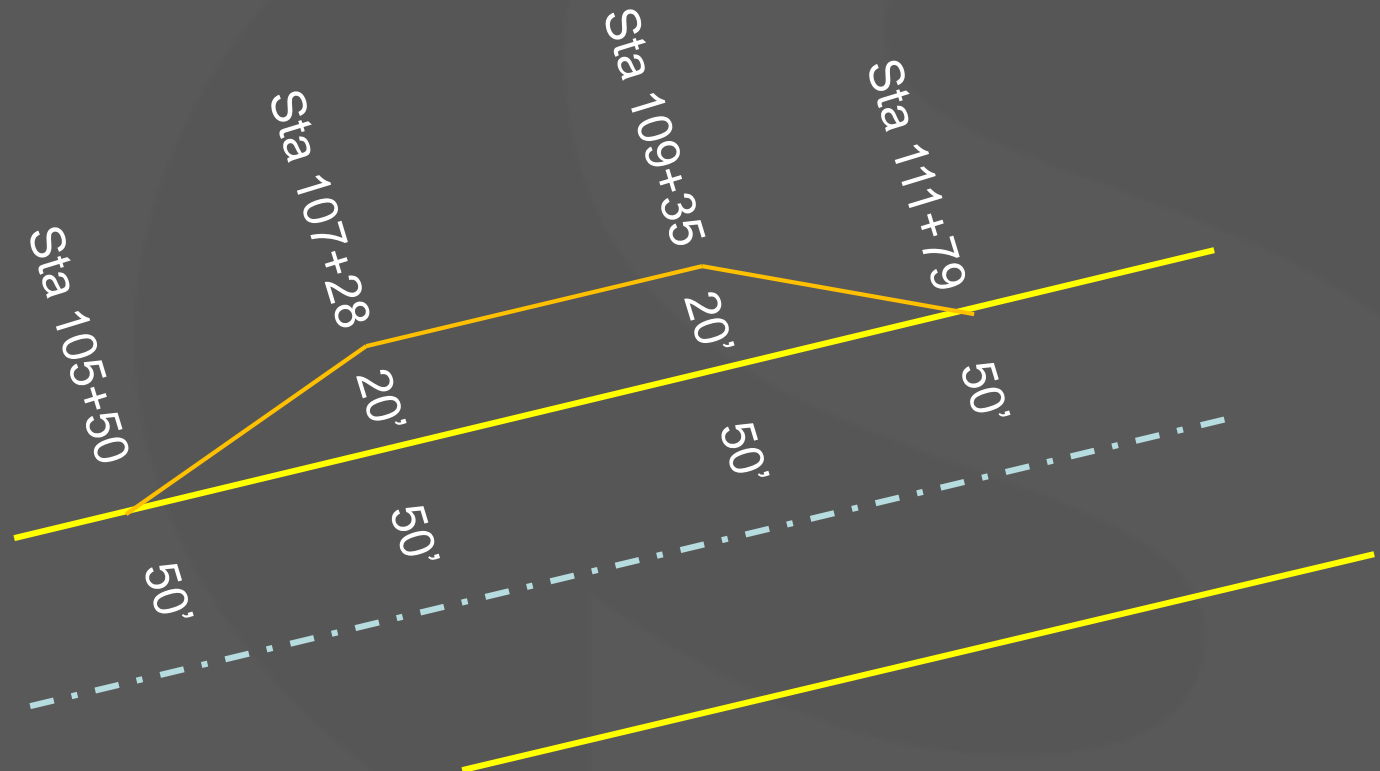
Station	Offset L	Offset R
105+50-107+28	50.00 - 70.00	N.A.
107+28-109+35	70.00	N.A.
109+35-111+79	70.00 - 50.00	N.A.



Schneider

Station/Offset

Station	Offset L	Offset R
105+50-107+28	50.00 - 70.00	N.A.
107+28-109+35	70.00	N.A.
109+35-111+79	70.00 - 50.00	N.A.



Schneider

Coordinates

Part of the Northwest Quarter of Section 1, Township 19 North Range 8 East of the Second Principal Meridian in Henry County, Indiana being described as follows:

Beginning at a railroad spike with punch mark at Indiana State Plane, East Zone coordinate 1,035,948.89 North and 2,876,043.77 East approximately 2,490 feet east of the intersection of the centerlines of White River Road and Lincoln Road; thence South 89 degrees 10 minutes 00 seconds East 200.00 feet to a railroad spike with punch mark at coordinate 1,035,945.99 North and 2,876,243.74 East; thence ...



Schneider

Do's and Don'ts

- Be clear, concise and complete
- No tax legalese
- No abbreviations
- Confirm accuracy of caption
- Write intent into the description – controlling vs. information calls
- The math does not do the work!
- Basis of bearings
- Adequate curve data (including tangent or non-tangent)
- “Except, however,” vs. “Subject to”
- Only surveyors in most states



Vague and Inaccurate

- Inadequate
- Erroneous
- Ambiguous
- Inaccurate/imprecise
 - Imprecision $\neq$ erroneous
 - Imprecise descriptions, old dimensions, survey vs. deed differences do not necessarily require rewriting

Types of Surveys

- Boundary Survey
 - ✓ Retracement
 - ✓ Original
- ALTA/NSPS Land Title Survey
 - ✓ Conveyance with financing
 - ✓ Driven by title insurance
- Topographic Survey
 - ✓ Improvements, elevations, contours, utilities
- Route Survey
 - Describe and location acquisitions for linear transmission/transportation corridors

Questions?

Gary R. Kent, PS
Schneider Geomatics
8901 Otis Avenue
Indianapolis, IN 46216
Phone - 317.826.7134
gkent@schneidercorp.com



Schneider

Interpreting Property Descriptions

~ ~ ~

International Right of Way Association

International Education Conference

Portland, Oregon

June 12, 2019

Presented by Gary R. Kent, PS



Schneider

Outline

- I. Boundary Law Principles
- II. Angular measurements
 - a. Bearings
 - b. Deflection angles
 - c. Using a protractor
- III. Linear measurements
 - a. Feet
 - b. Chains and links
 - c. Rods, poles and perches
 - d. Using a scale
- IV. Interpreting and drawing property descriptions

Boundaries - The Role of the Surveyor

The vocation of a surveyor is limited to the ascertainment of definite lines.

[Surveyors] may ascertain **where** the lines and corners specified in the description of the given tract of real estate actually are.

[They do] not have the power to determine **what** the terms of such description ought to be.

Boundaries - The Role of the Surveyor

Where the line lies, and where its corners are, is a question, and on which ... surveyor[s], on account of their superior facilities for doing so, may be called upon to officially determine.

What the lines and corners are is a matter of law, which courts can alone declare.

Wilson v. Powell, (1905) 37 Ind.App. 44, 70 N.E. 611.

Retracement Surveys

- “Following in the Footsteps” vs. the written intentions of the parties?
- The conveyance is the written manifestation of the survey
- The best evidence of the survey is the points on the ground set by the original surveyor or perpetuated thereafter

Solving Boundary Location Problems

Understand references, ties and controlling calls.

Know what will control - and why - if a conflict between calls arises

Determining or Establishing Intent

- A. Right of Possession (unwritten conveyances)
- B. Senior Rights (in the event of an overlap)
- C. Written Intentions of Parties
 - 1. Call for a Survey or an actual survey on which the conveyances is based
 - 2. Call for monuments
 - a. Natural
 - b. Artificial
 - 3. Adjoiners
 - 4. Distance and Direction
 - 5. Direction or Direction
 - 6. Area (quantity)

Brown's Boundary Control and Legal Principles, Fifth Edition, Brown, Robillard and Wilson, p. 307

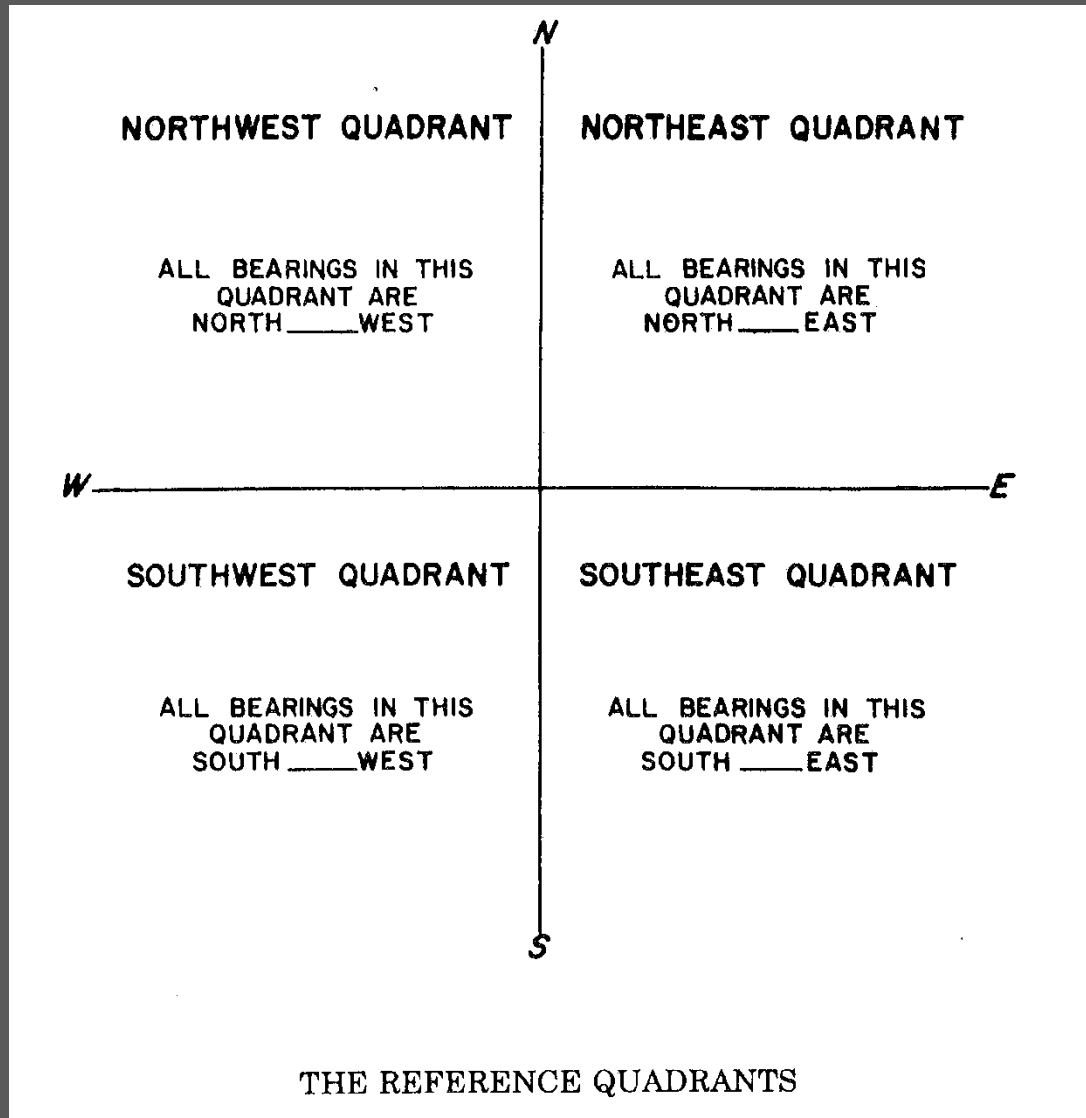


Angular Measurements

- Angular
 - ✓ Deflection angles
 - ✓ Interior angles
 - ✓ Azimuths
 - ✓ Bearings
 - ✓ Using the protractor

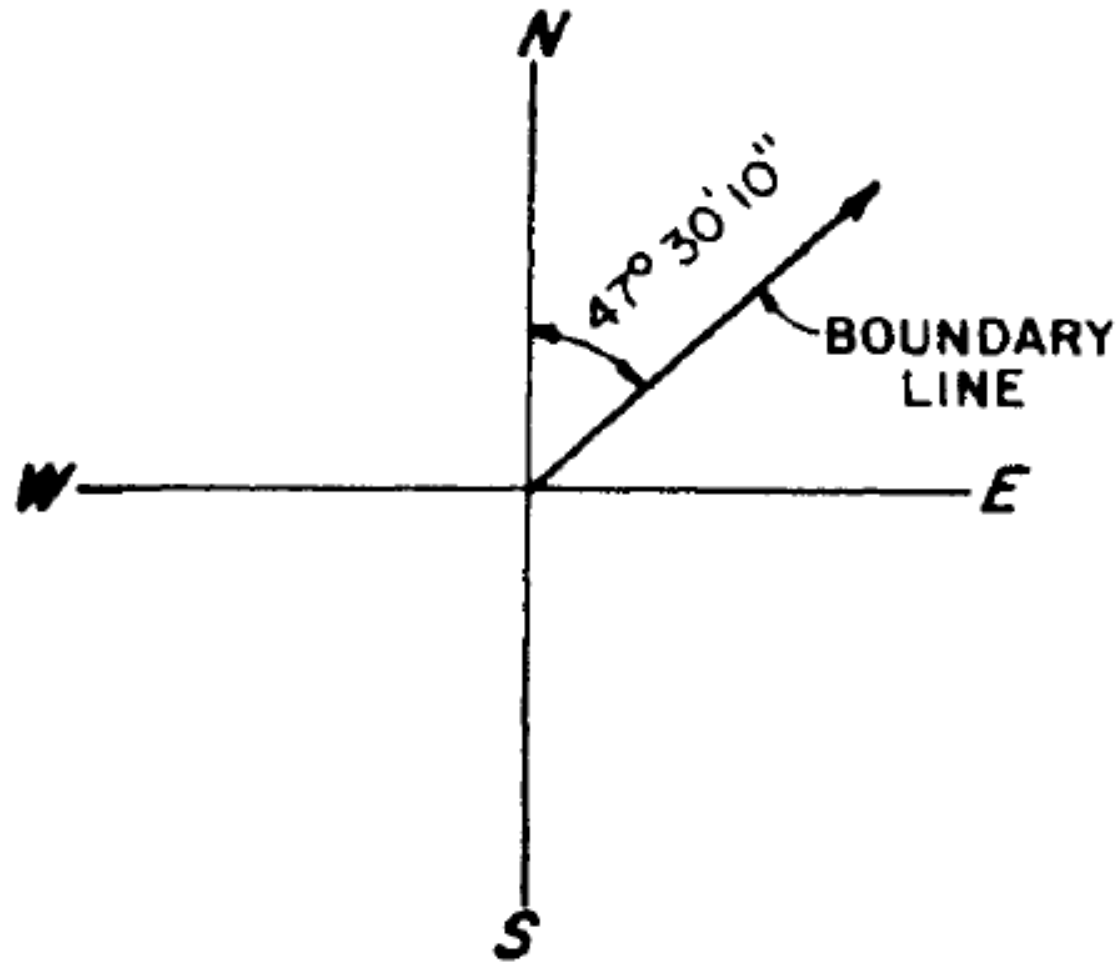


Bearings



Schneider

Bearings

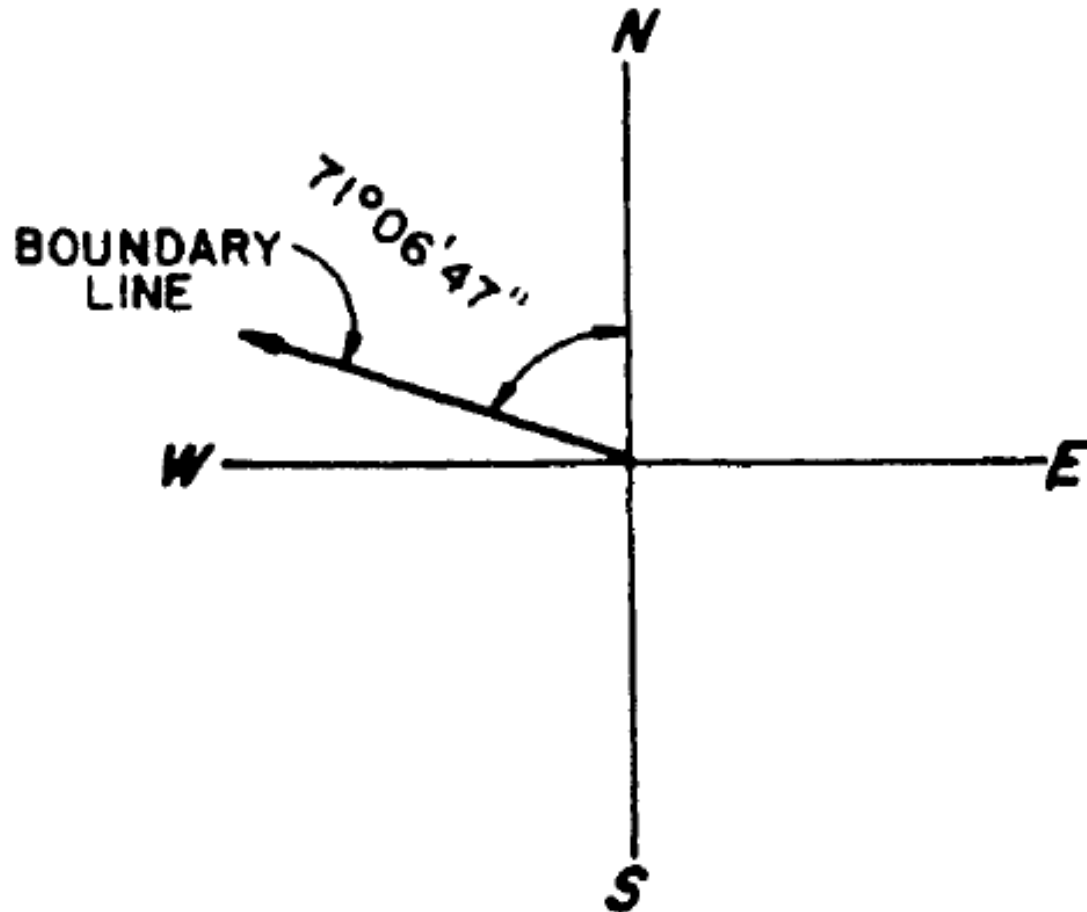


THE DIRECTION IS N. $47^{\circ} 30' 10''$ E.



Schneider

Bearings

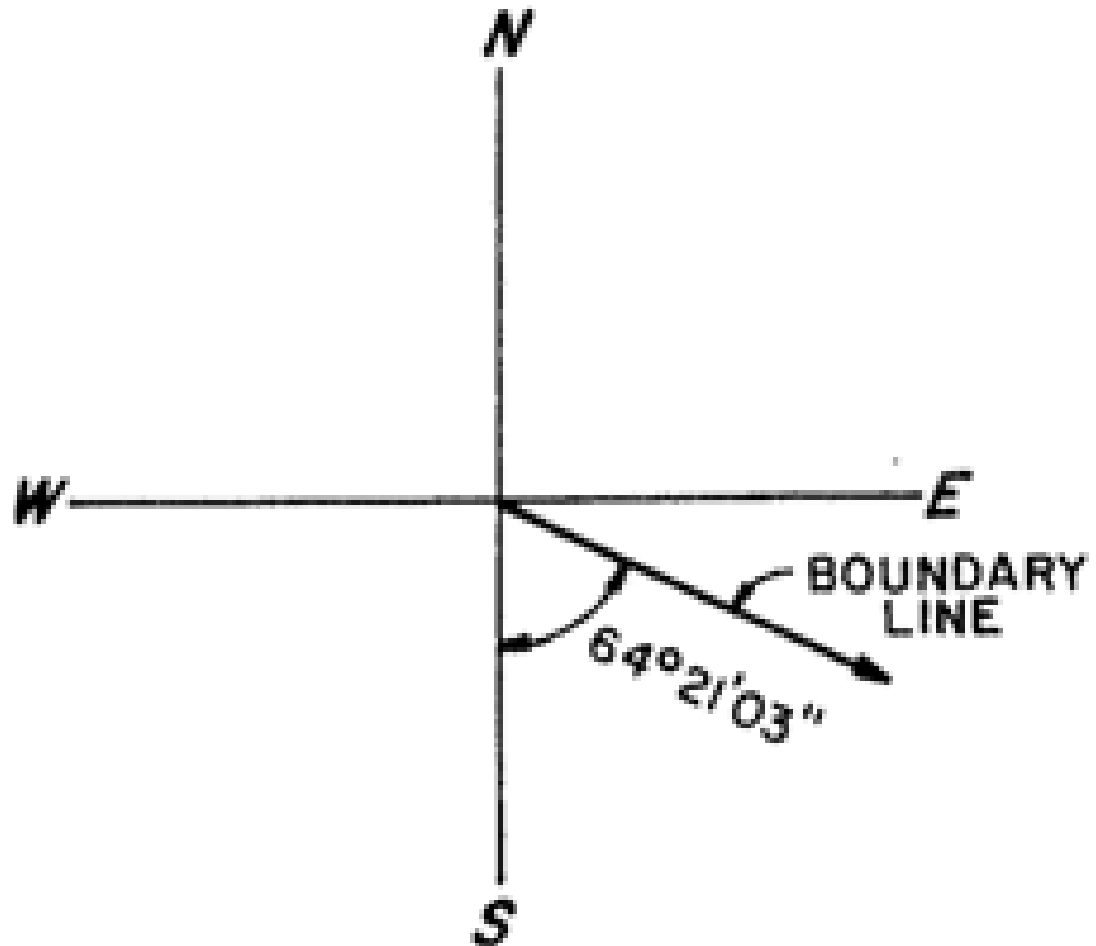


THE DIRECTION IS N. $71^{\circ}06'47''$ W.



Schneider

Bearings

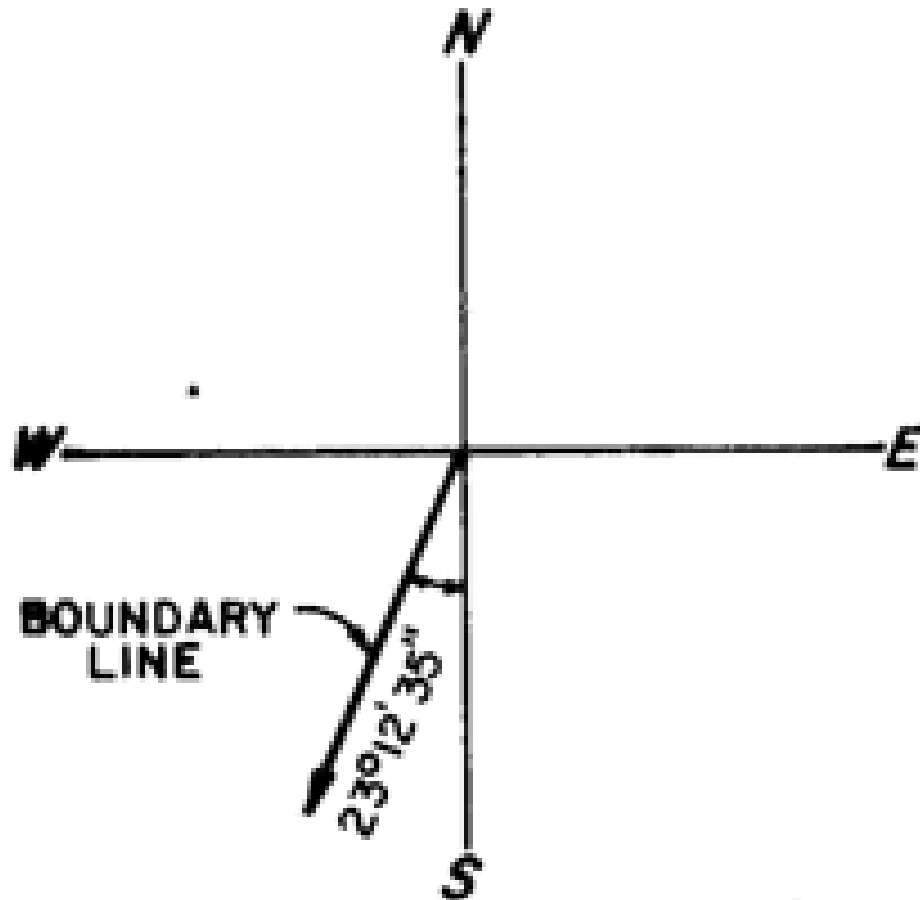


THE DIRECTION IS S. $64^{\circ} 21' 03''$ E.



Schneider

Bearings

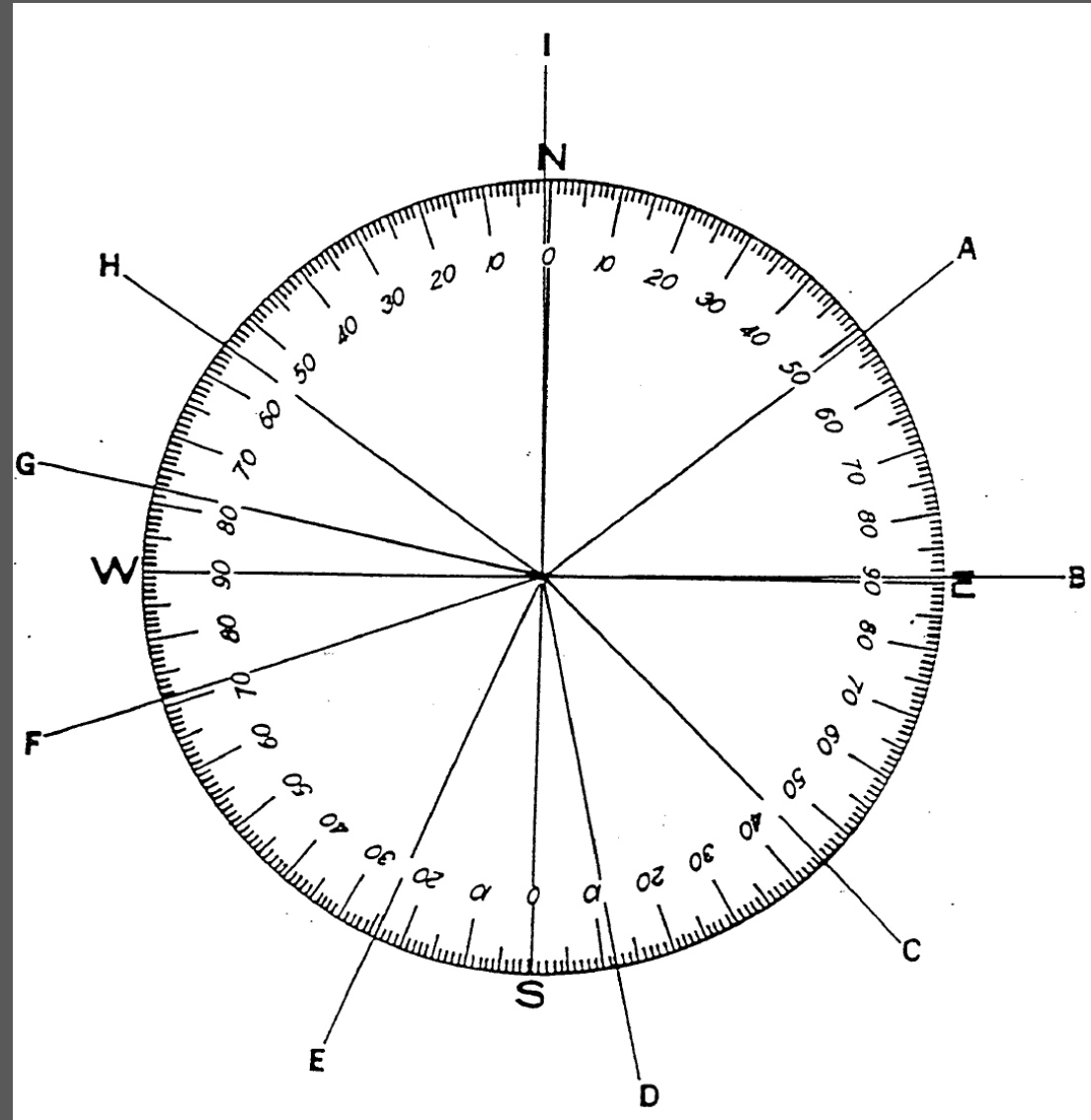


THE DIRECTION IS S. $23^{\circ}12'35''$ W.



Schneider

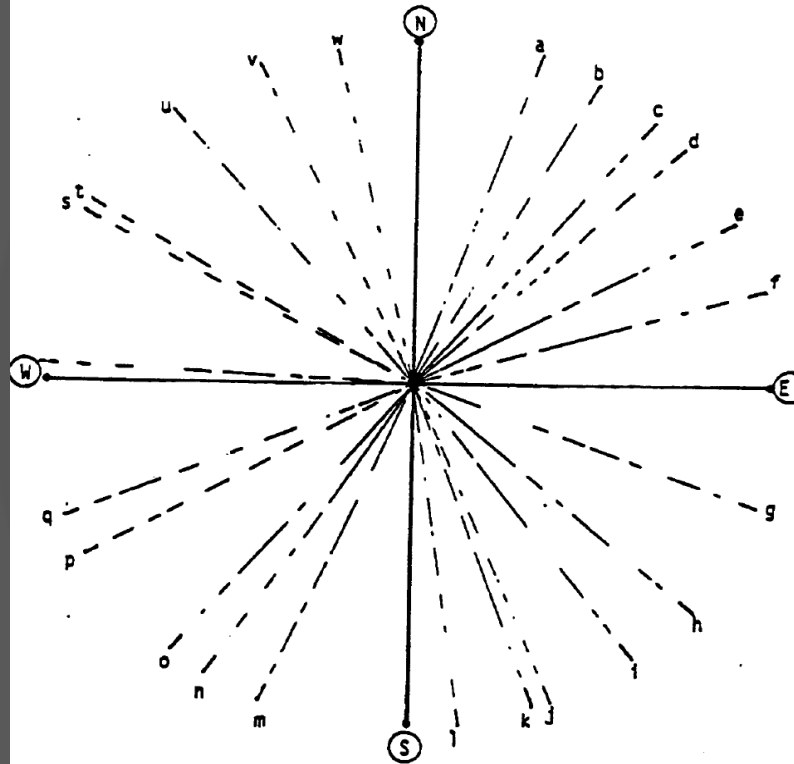
Bearings – Exercise



Bearings – Exercise

N 30° E _____
S 67° W _____
S 38° E _____
S 50° E _____

N 41° E _____
N 62° E _____
N 61° W _____
S 33° W _____



Schneider

Distance Measurements

- Distance
 - ✓ Feet (but not inches)
 - ✓ Chains and Links
 - ✓ Rods/Poles/Perches
 - ✓ Using the scale



Using the Scale

Scale the distance of #1 through 4 at $1'' = 10'$

Scale the distance of #5 through 7 at $1'' = 20'$

Scale the distance of #8 through 9 at $1'' = 50'$

Scale the distance of #10 through 11 at $1'' = 100'$

1.		_____ feet
2.		_____ feet
3.		_____ feet
4.		_____ feet
5.		_____ feet
6.		_____ feet
7.		_____ feet
8.		_____ feet
9.		_____ feet
10.		_____ feet
11.		_____ feet



Using the Scale

A. Along the following line, lay out 159 feet at 1"= 100'

B. Along the following line, lay out 10 feet at 1"= 2'

C. Along the following line, lay out 244 feet at 1"= 40'

D. Along the following line, lay out 481 feet at 1"= 60'

E. Along the following line, lay out 47 feet at 1"=30'



Determining the scale to use

Select a scale that fits the size of paper you are working on...

Typically-

1" = 10' (or 100')

1" = 20'

1" = 30'

1" = 40'

1" = 50'

1" = 60'



Plotting a Metes & Bounds Description

Plot at 1" = 400'

Part of the Northeast Quarter of Section 14, Township 35 North, Range 2 West of the Second Principal Meridian in St. Joseph County, Indiana being described as follows:



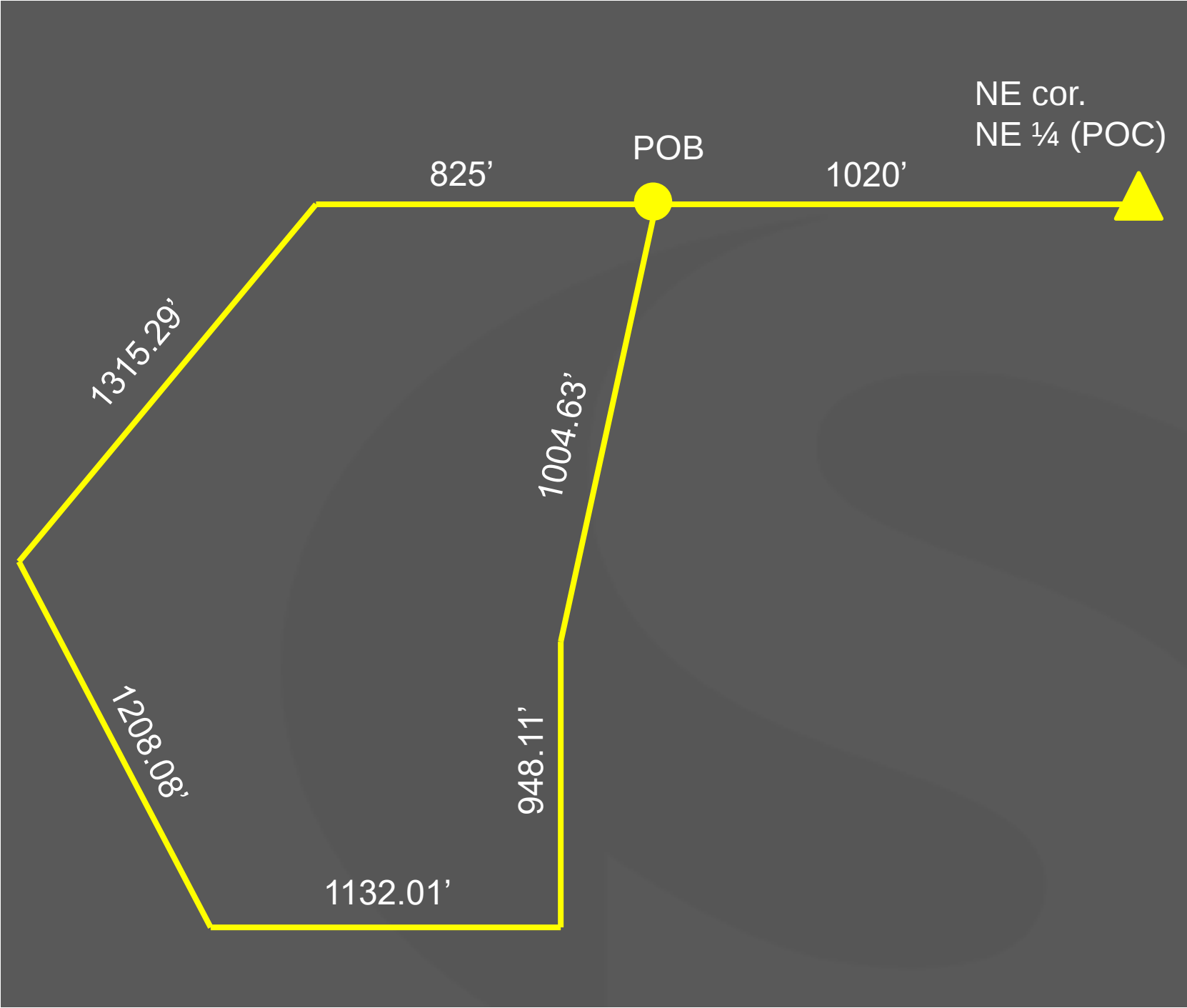
Schneider

Plotting a Metes & Bounds Description

Commencing at the northeast corner of said northeast quarter; thence South 88 degrees 30 minutes West along the north line thereof a distance of 1020 feet to the **Point of Beginning**; thence continuing South 88 degrees 30 minutes West along said north line a distance of 825 feet; thence South 48 degrees 40 minutes 09 seconds West a distance of 1315.29 feet; thence South 27 degrees 05 minutes 08 seconds East a distance of 1208.08 feet; thence South 90 degrees East a distance of 1132.01 feet; thence North 00 degrees 00 minutes 00 seconds East a distance of 948.11 feet; thence North 07 degrees 28 minutes 07 seconds East a distance of 1004.63 feet to the **Point of Beginning**



Schneider



Plotting a Metes & Bounds Description

Plot at 1" = 300'

Part of Block 14 in the Middleburg Heights International Airport Industrial Park Subdivision per plat thereof in Cuyahoga County, Ohio being described as follows:

Commencing at the northeast corner of said Block 14; thence North 90 degrees West along the north line thereof a distance of 1,151.50 feet to the **Point of Beginning**; thence South 00 degrees East a distance of 2130 feet; thence North 80 degrees East a distance of 895 feet; thence North 5 degrees East a distance of 1982 feet to the north line of said Block; thence North 90 degrees West along said north line a distance of 1054 feet to the **Point of Beginning**.



Schneider

N. LINE BLOCK 14

POB

1151.50'

NE cor.
Block 14 (POC)

1054'

2130'

1982'

E. LINE BLOCK 14

895'

S. LINE BLOCK 14

W. LINE BLOCK 14



Schneider

Questions?

Gary R. Kent, PS
The Schneider Corporation
8901 Otis Avenue
Indianapolis, IN 46216
Phone - 317.826.7134
gkent@schneidercorp.com



Schneider