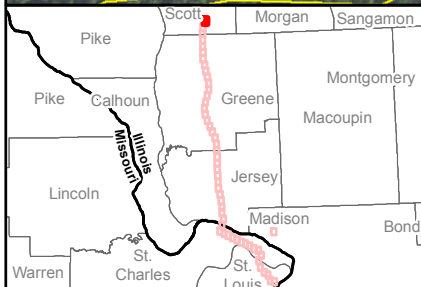
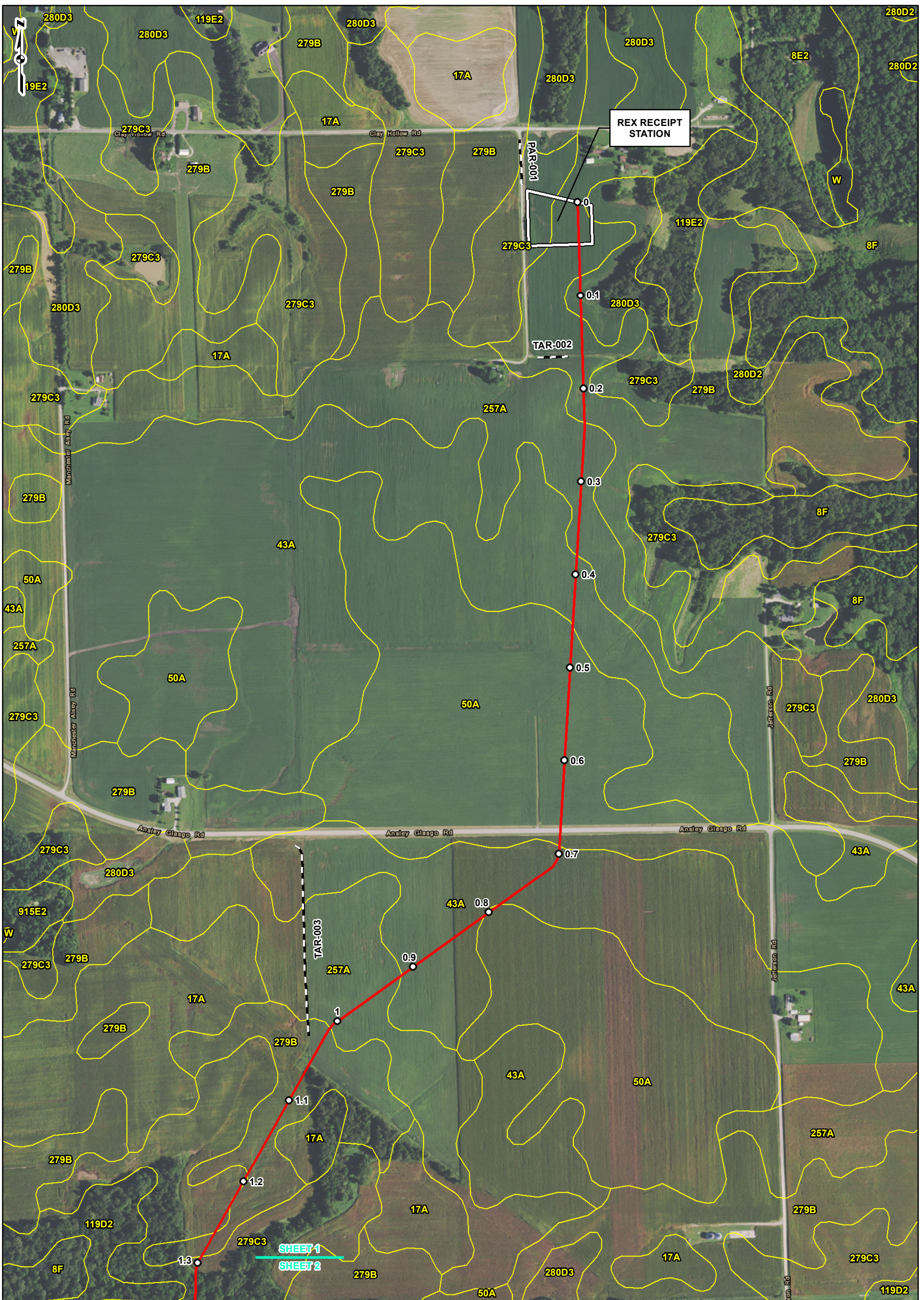




APPENDIX 7-A
Soils Mapping



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

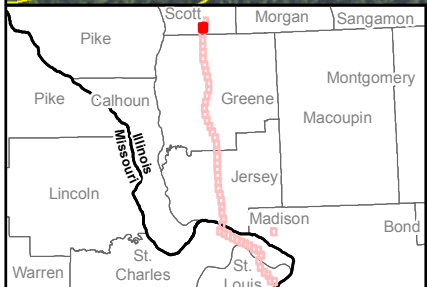
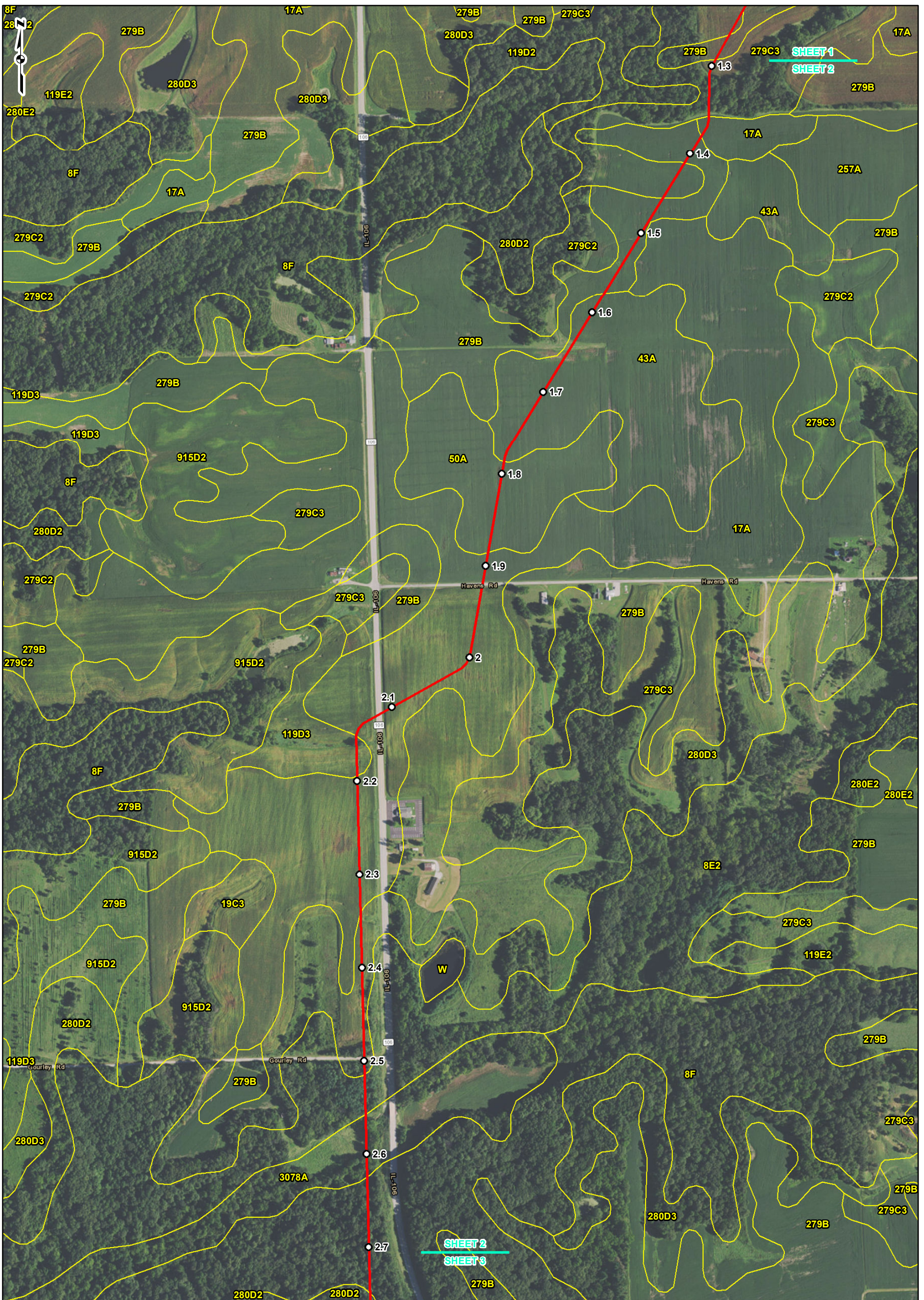
0 250 500 1,000 Feet

SOILS MAP SHEET 1 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAI, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

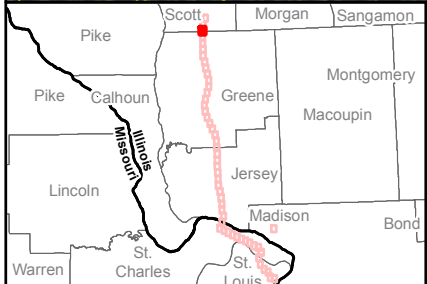
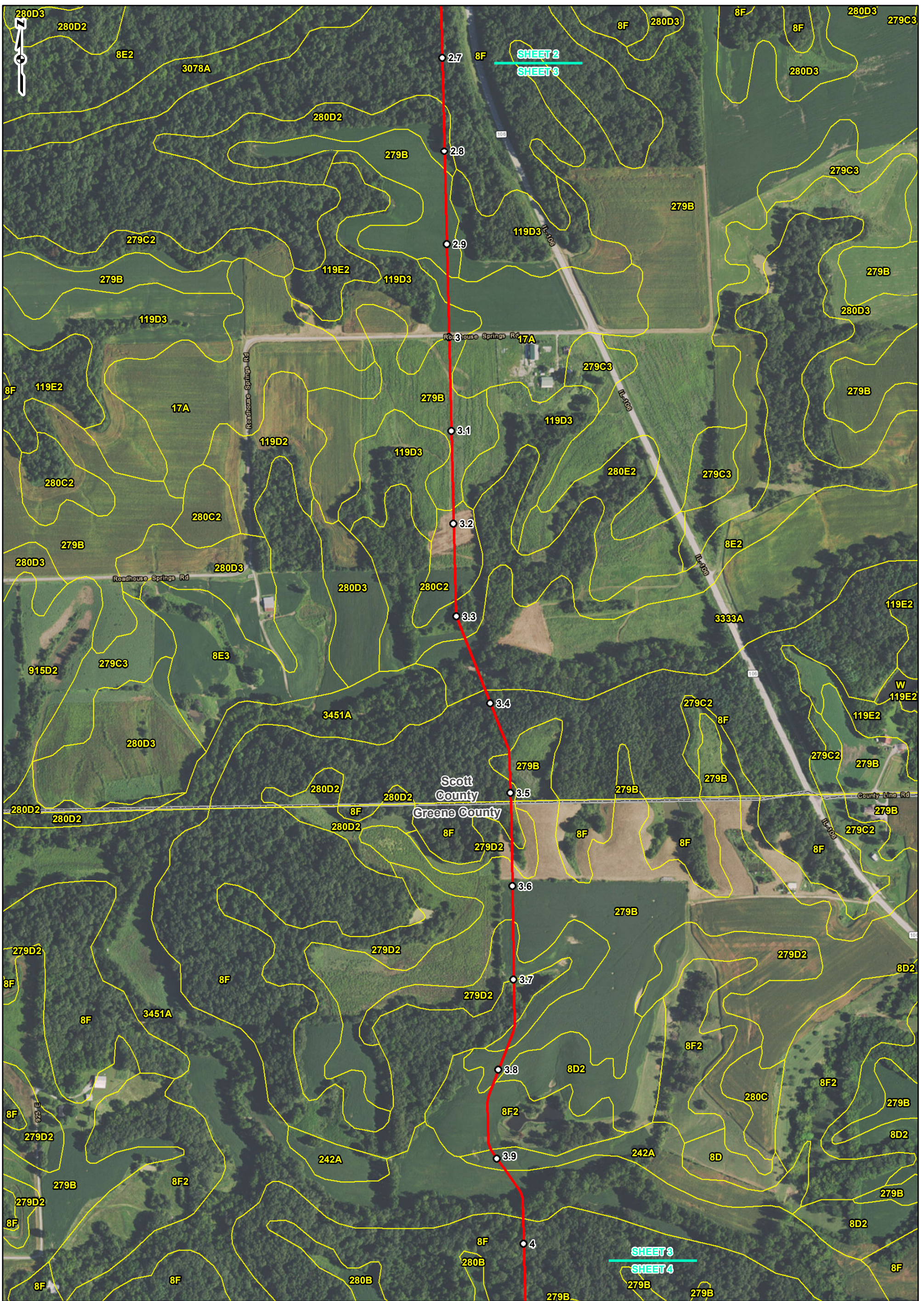
0 250 500 1,000 Feet

SOILS MAP SHEET 2 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

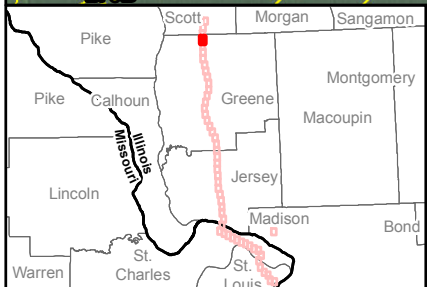
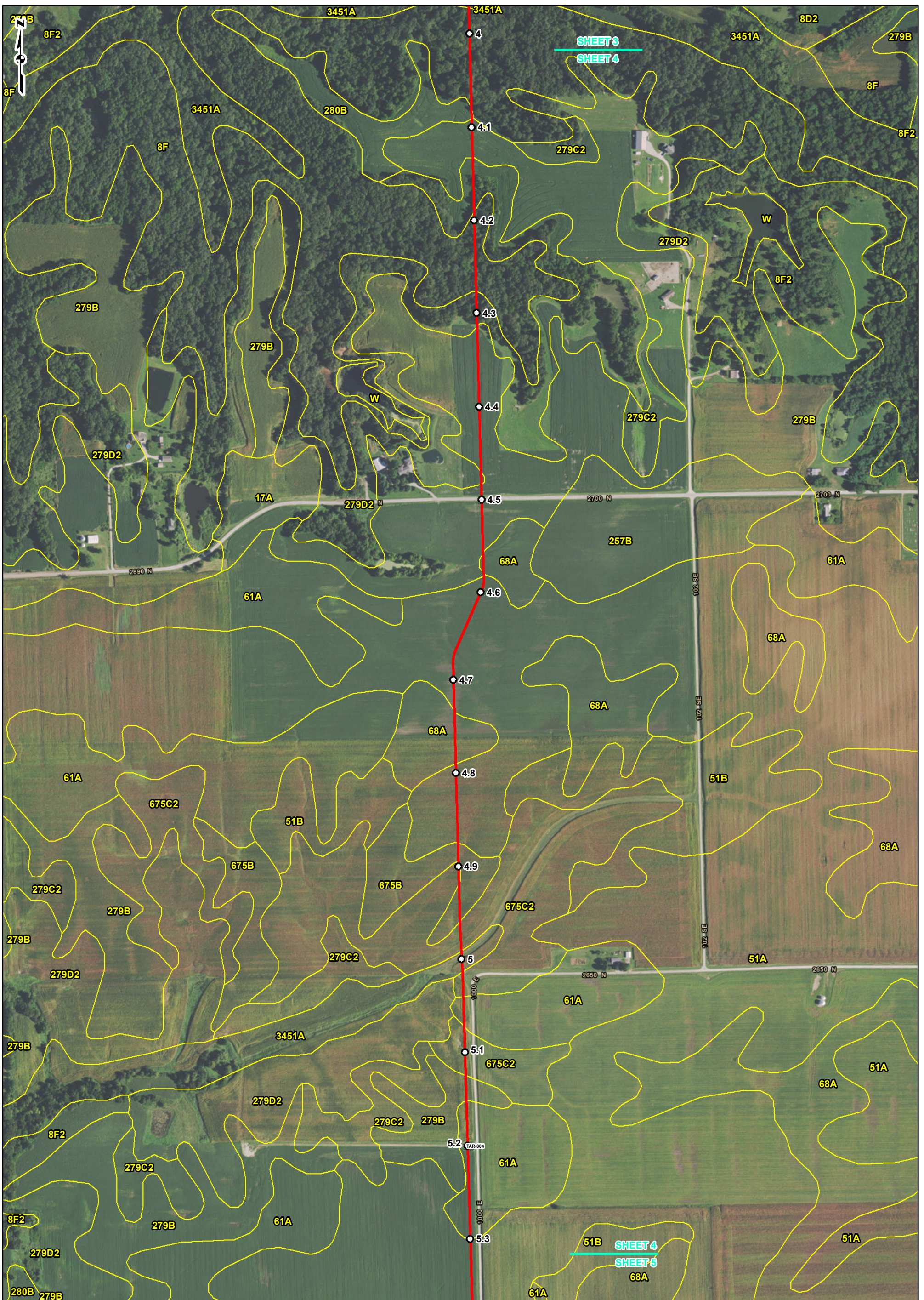
0 250 500 1,000 Feet

SOILS MAP SHEET 3 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

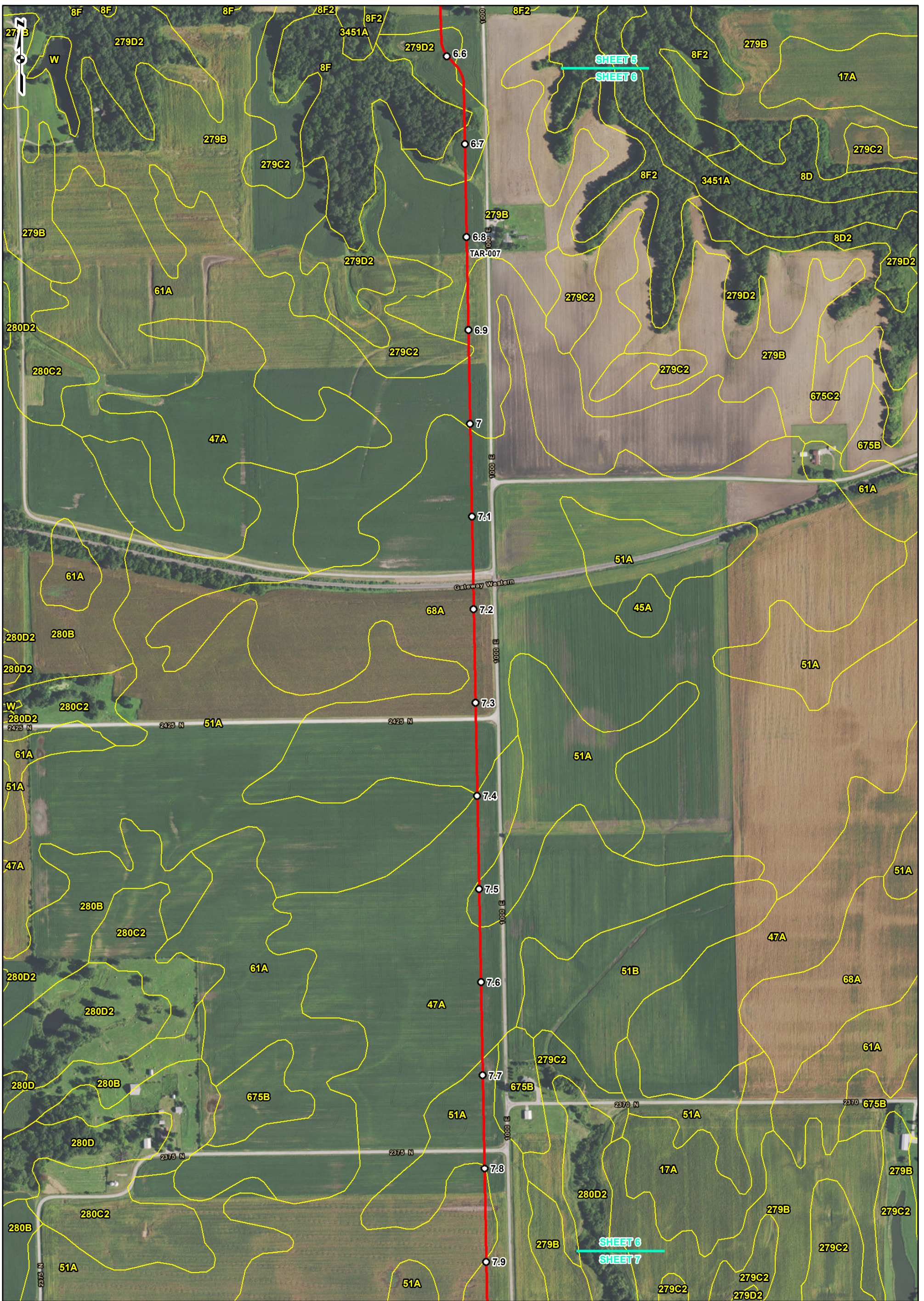
0 250 500 1,000 Feet

SOILS MAP SHEET 4 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016, SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

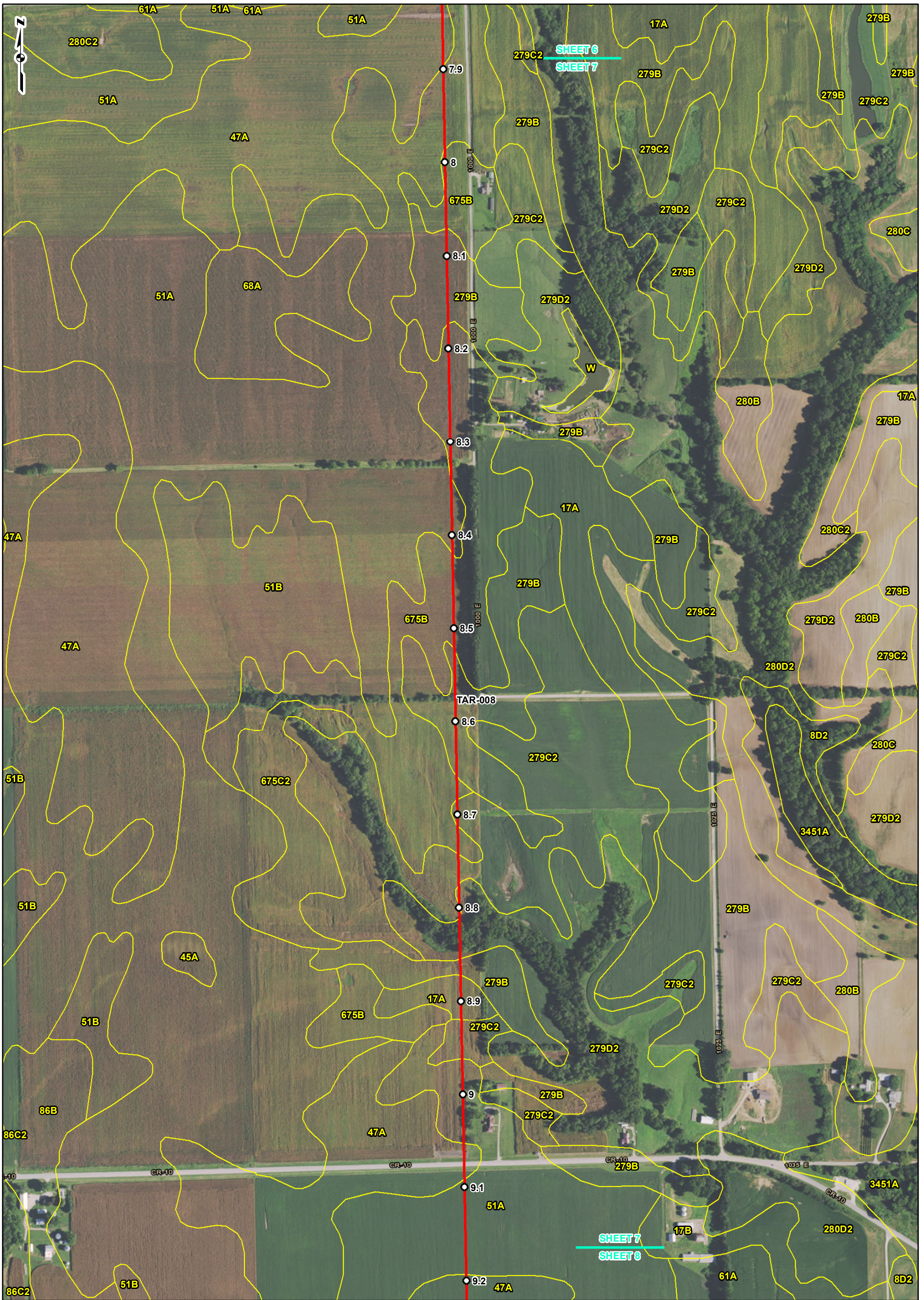
0 250 500 1,000 Feet

SOILS MAP SHEET 6 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016; SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

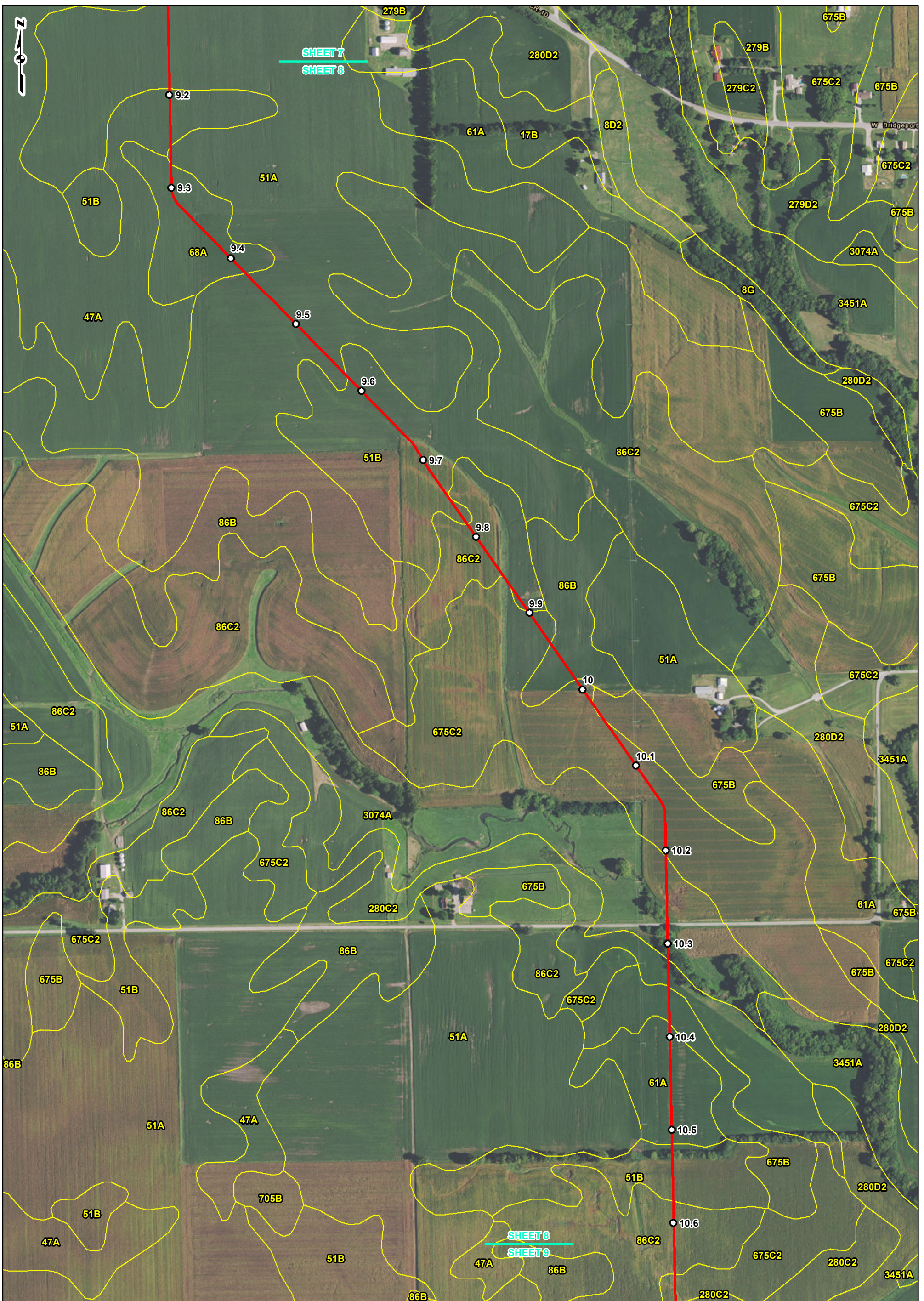
0 250 500 1,000 Feet

SOILS MAP SHEET 7 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

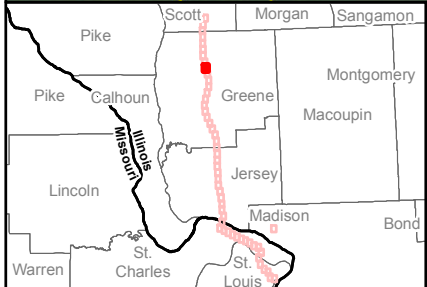
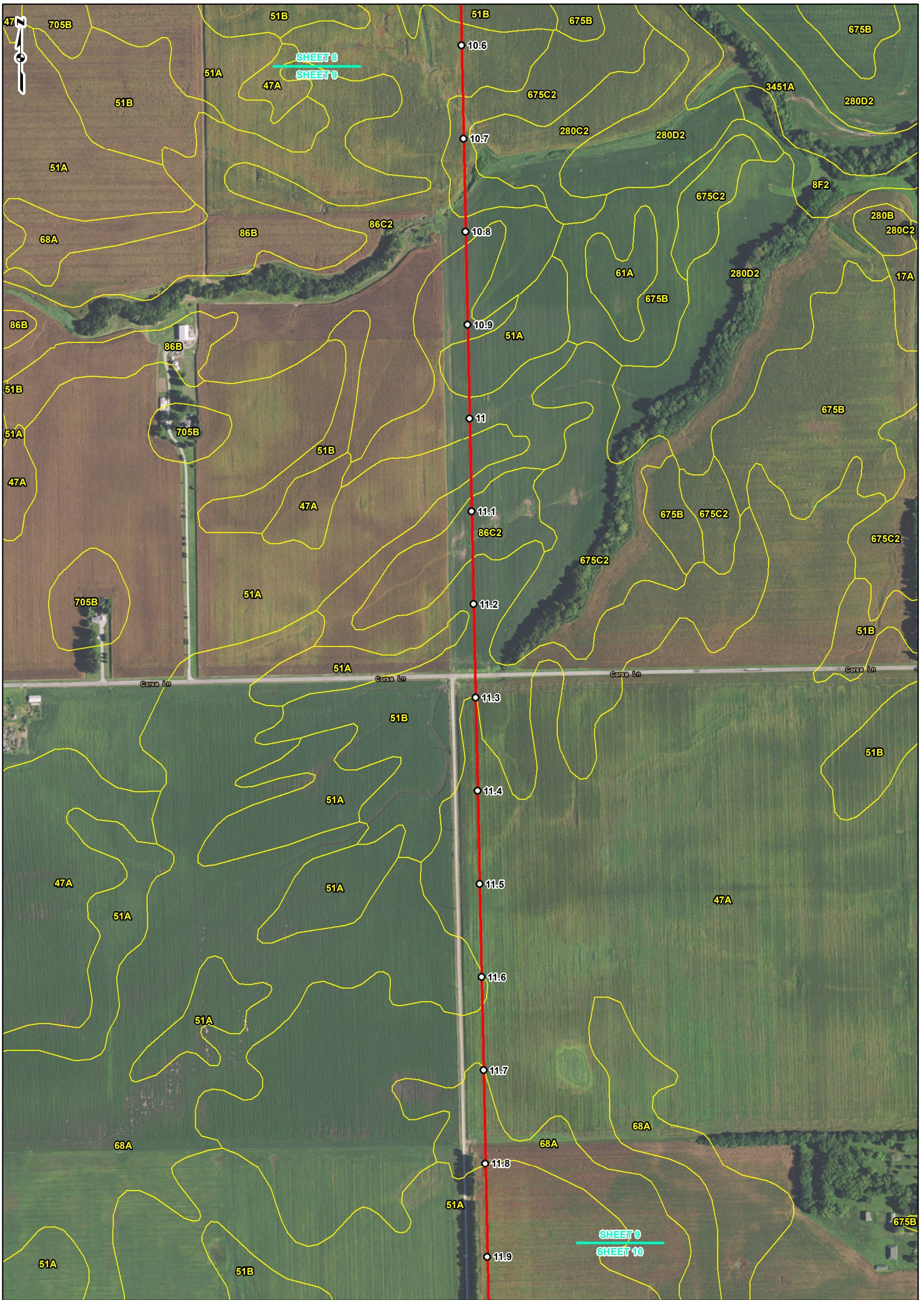
0 250 500 1,000 Feet

SOILS MAP SHEET 8 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

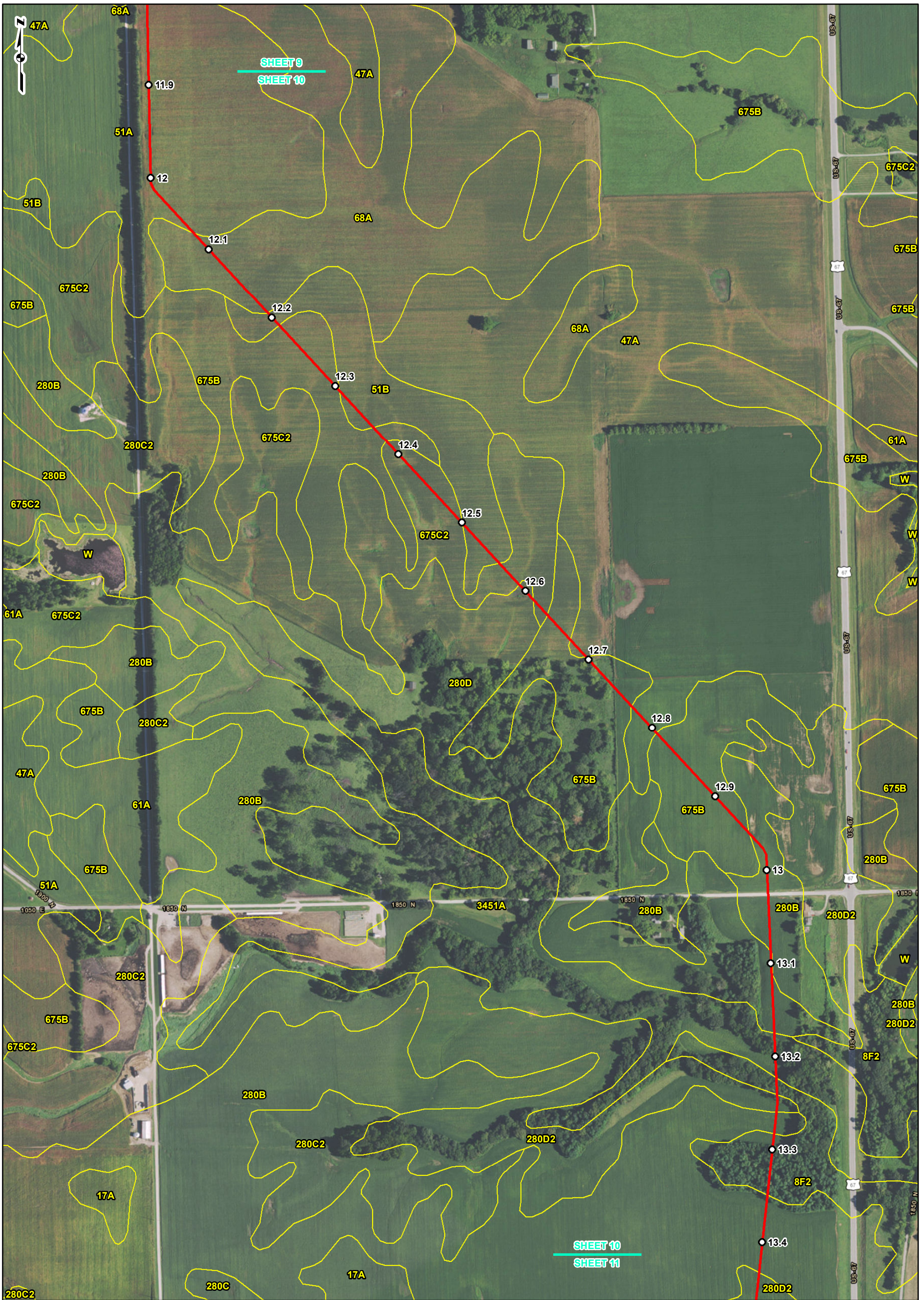
0 250 500 1,000 Feet

**SOILS MAP
SHEET 9 OF 52**

**SPIRE STL
PIPELINE
PROJECT**

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

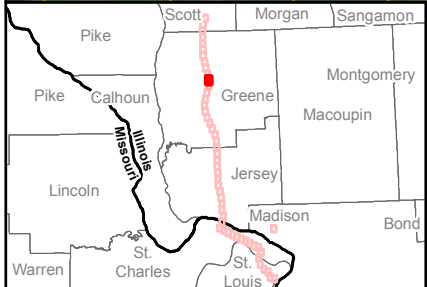
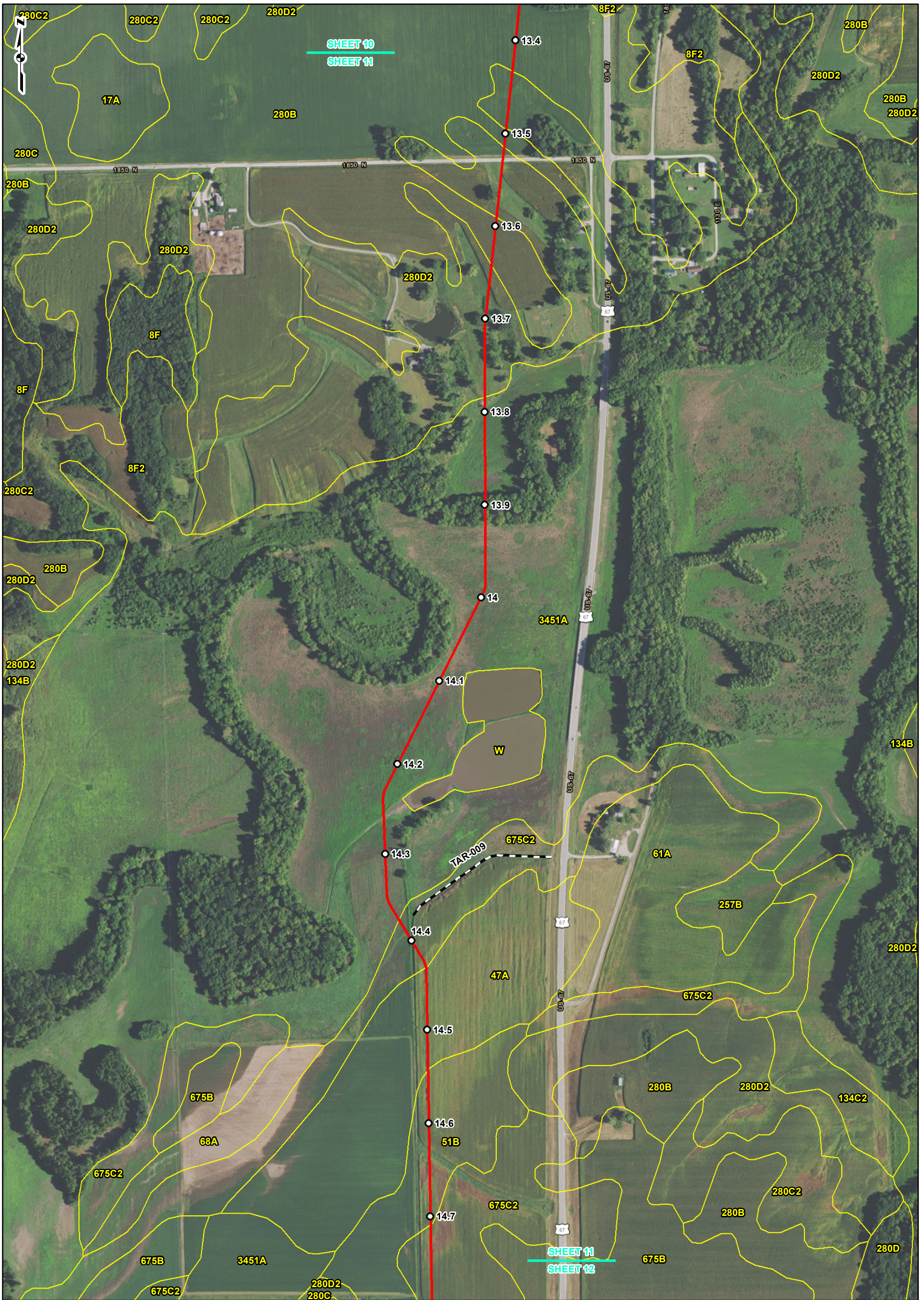
0 250 500 1,000 Feet

**SOILS MAP
SHEET 10 OF 52**

**SPIRE STL
PIPELINE
PROJECT**

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016, SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

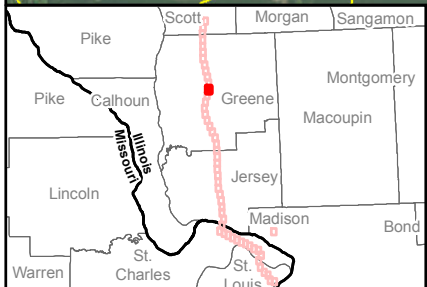
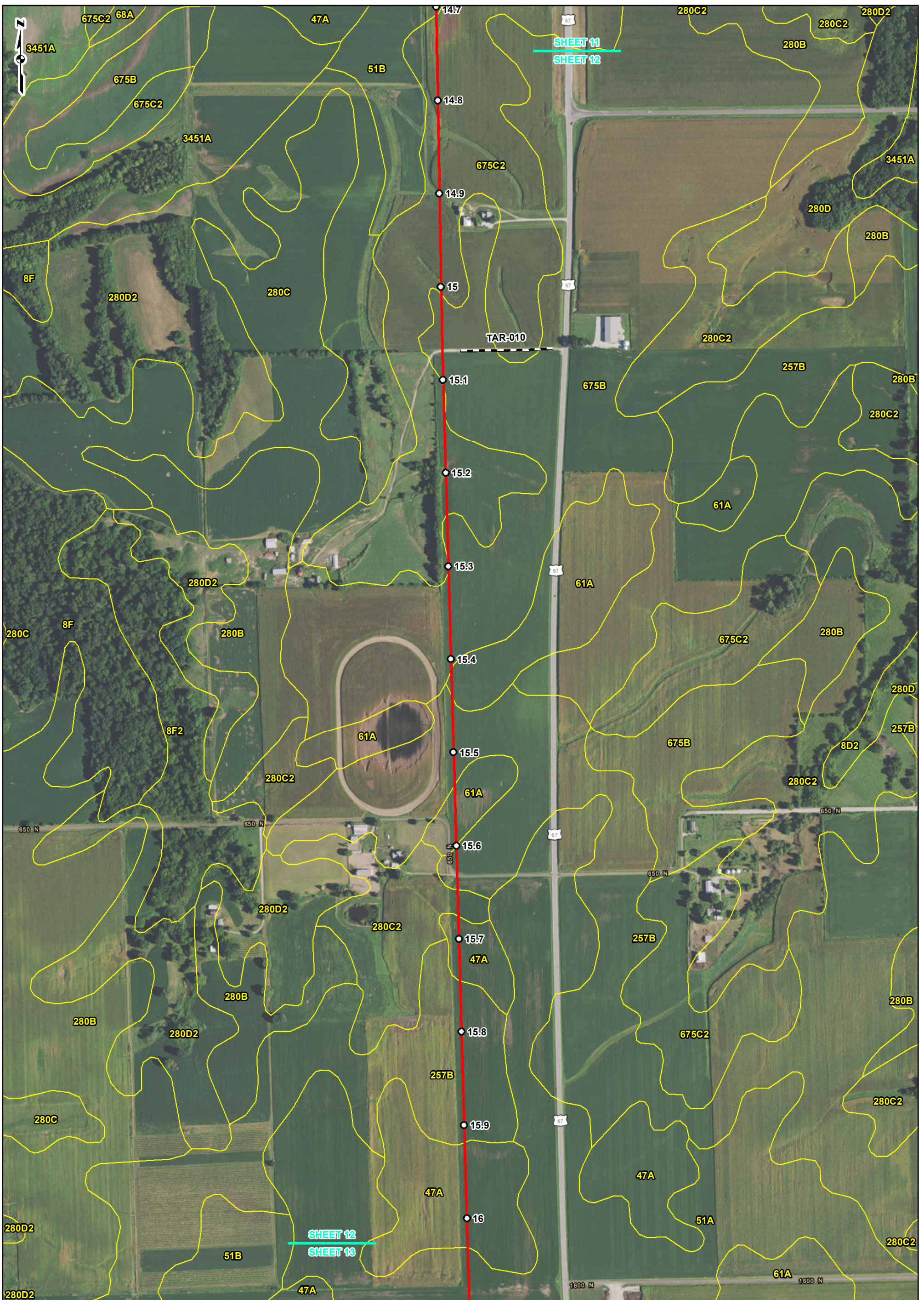
0 250 500 1,000 Feet

**SOILS MAP
SHEET 11 OF 52**

**SPiRE STL
PIPELINE
PROJECT**

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016; SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

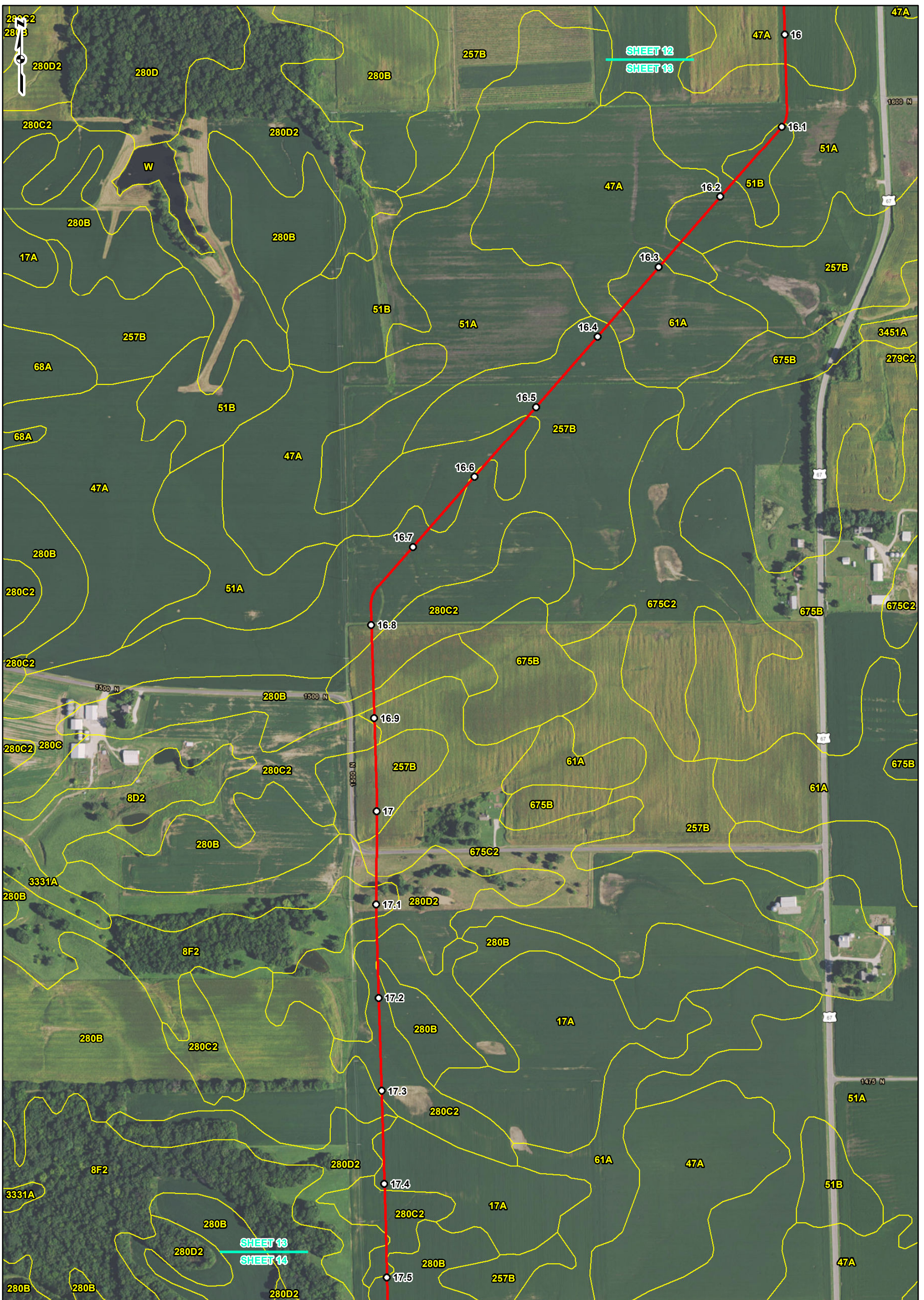
0 250 500 1,000 Feet

**SOILS MAP
SHEET 12 OF 52**

**SPIRE STL
PIPELINE
PROJECT**

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

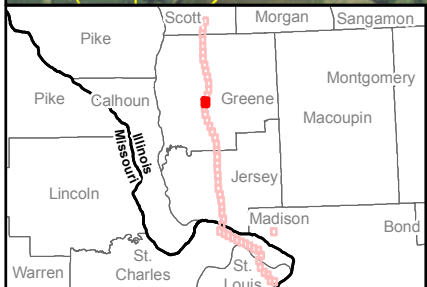
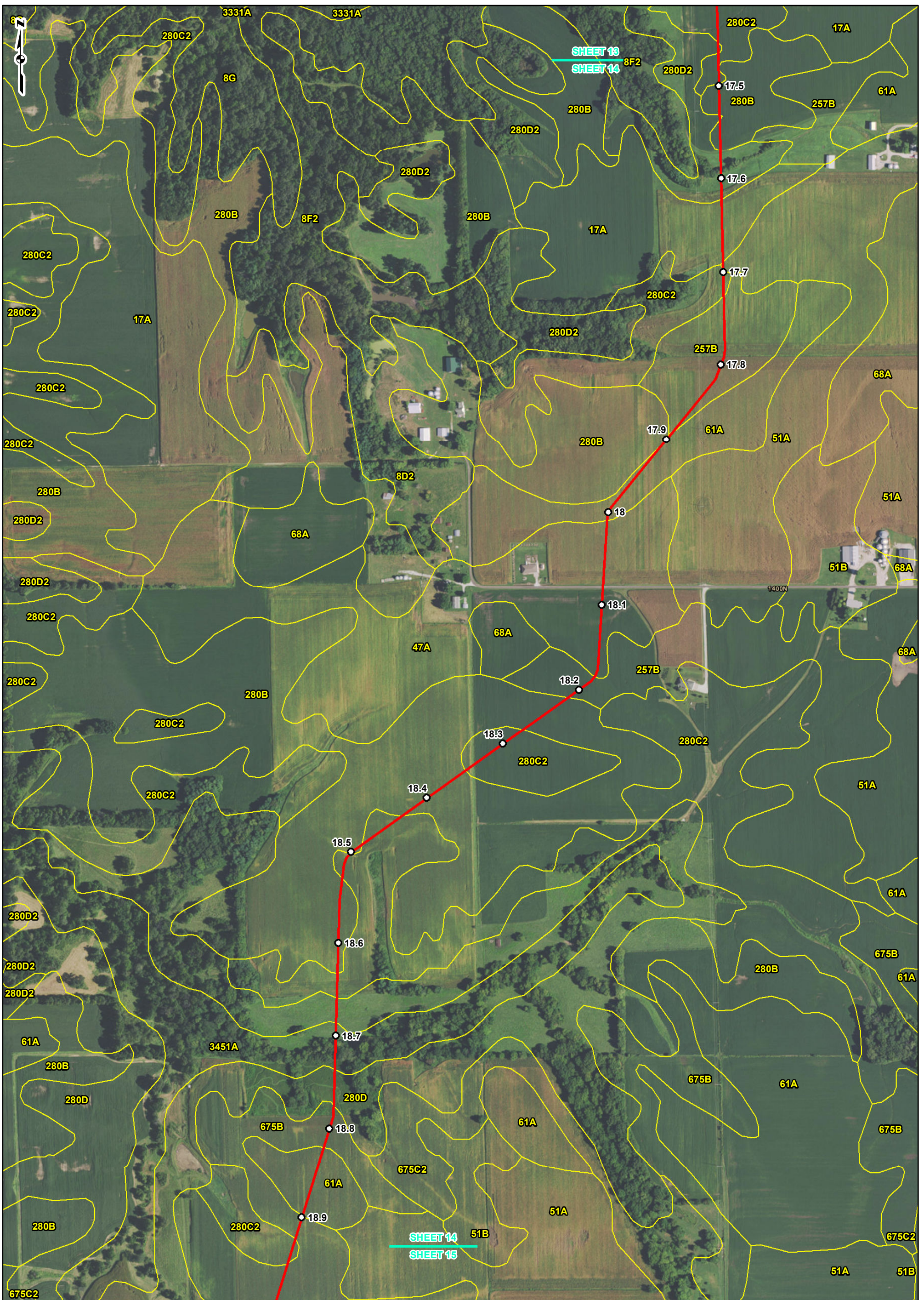
0 250 500 1,000 Feet

SOILS MAP SHEET 13 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016, SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

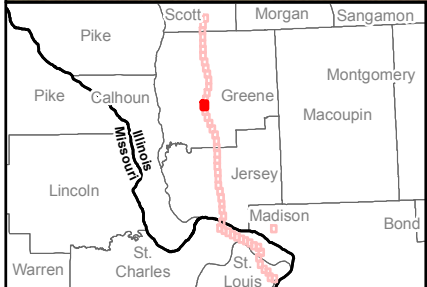
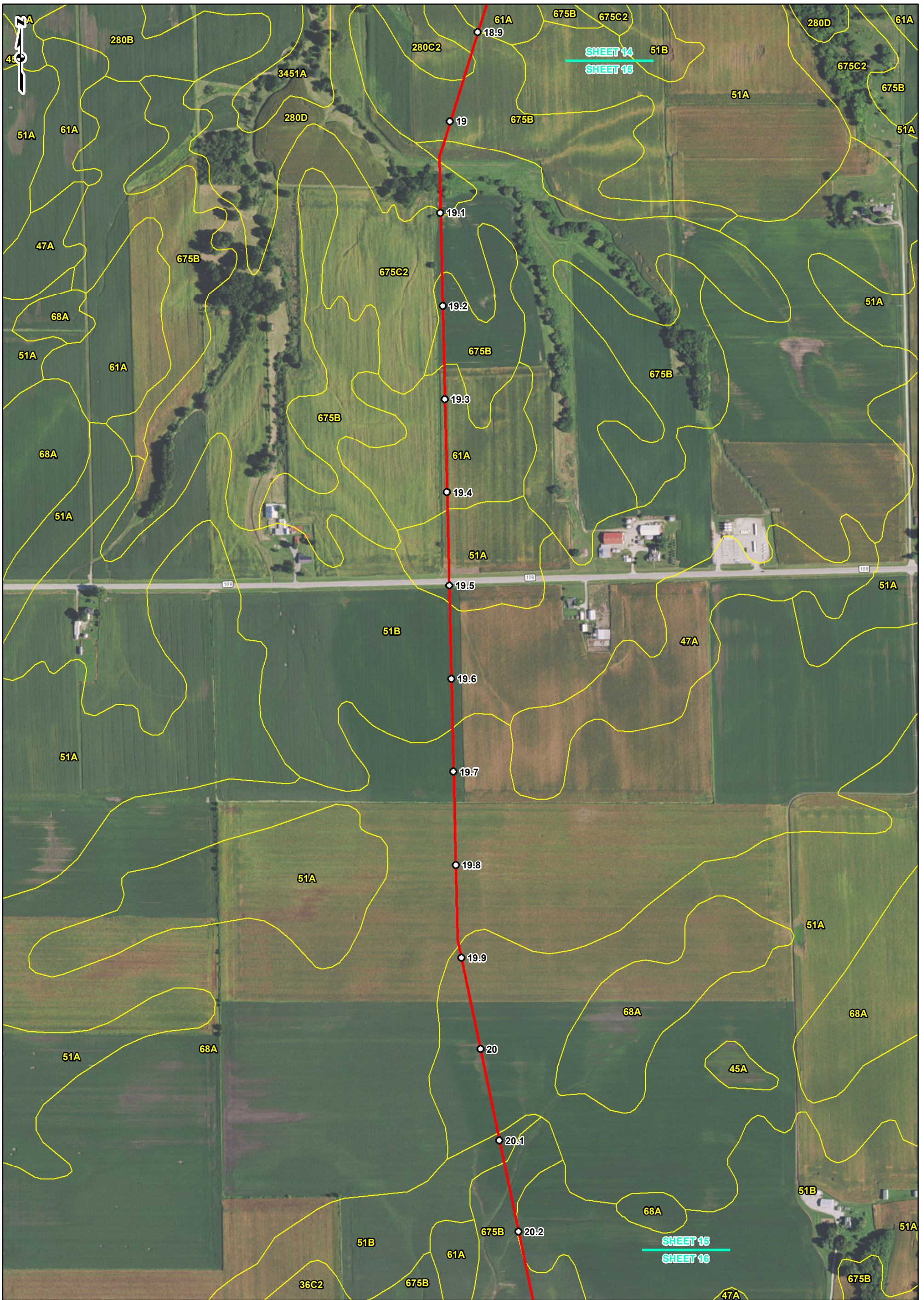
0 250 500 1,000 Feet

SOILS MAP
SHEET 14 OF 52

spire
gal consultants

SPIRE STL PIPELINE PROJECT

DRAWN BY: PMH DATE: 10/14/2016
CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- ▭ CONTRACTOR YARD
- ▭ FACILITY
- ▭ SOIL TYPE BOUNDARY
- ▭ COUNTY BOUNDARY
- ▭ STATE BOUNDARY

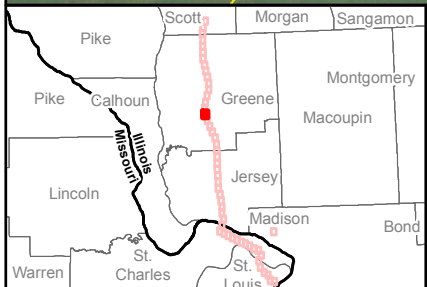
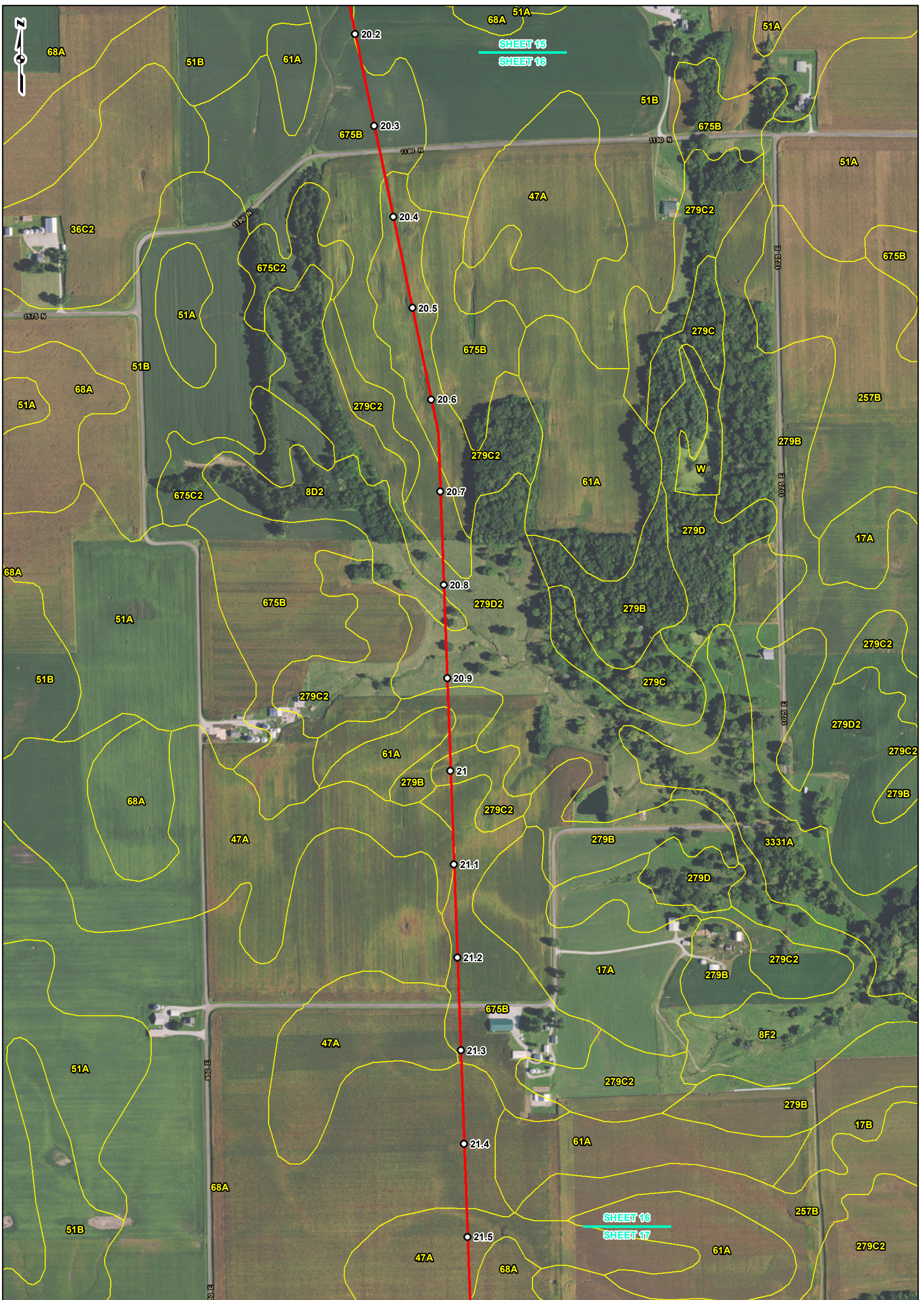
0 250 500 1,000 Feet

SOILS MAP SHEET 15 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

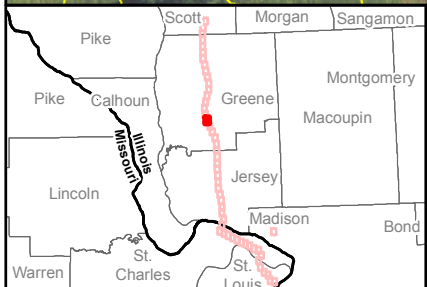
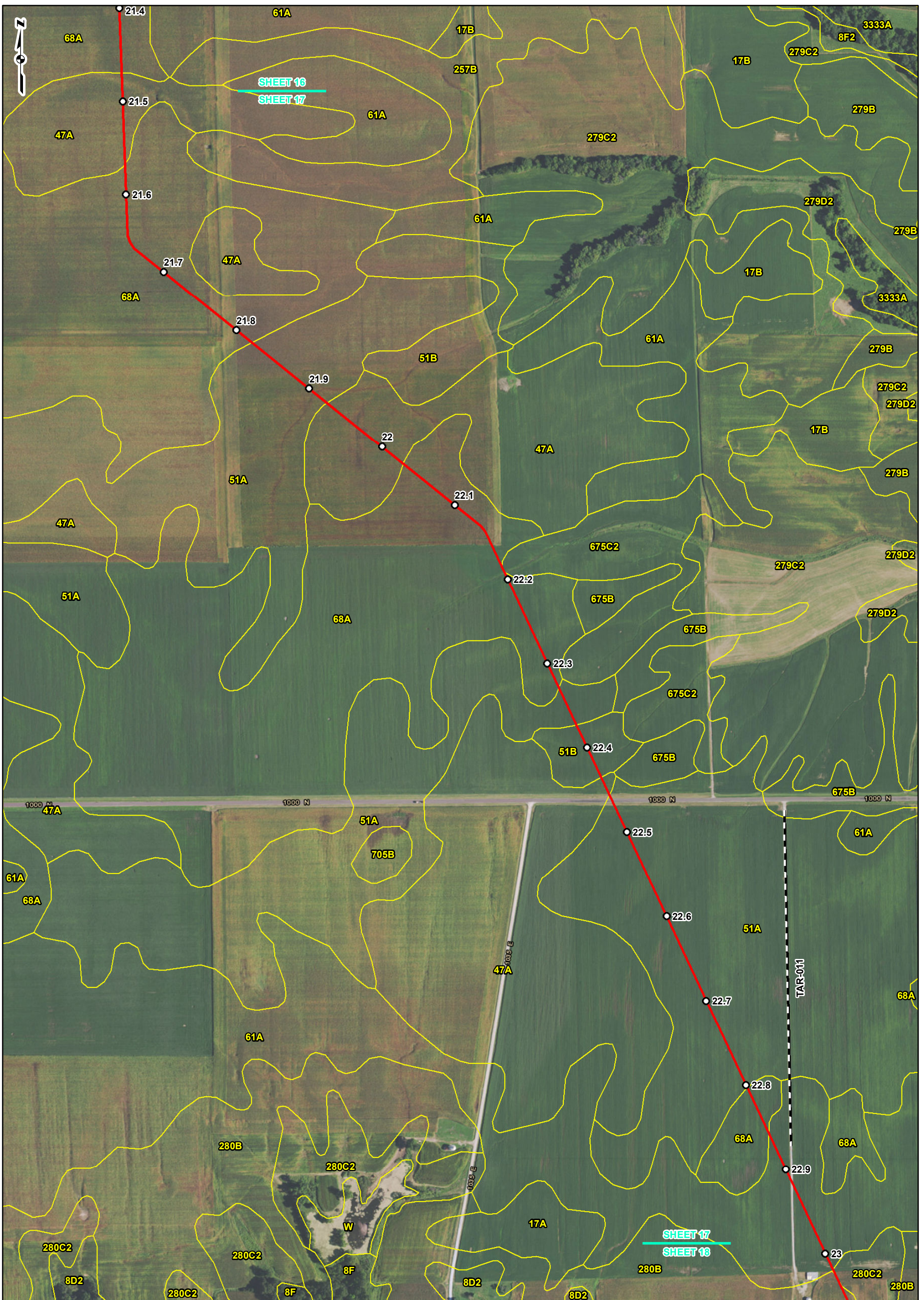
0 250 500 1,000 Feet

**SOILS MAP
SHEET 16 OF 52**

**SPIRE STL
PIPELINE
PROJECT**

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT



LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

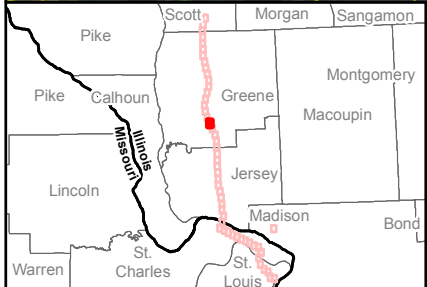
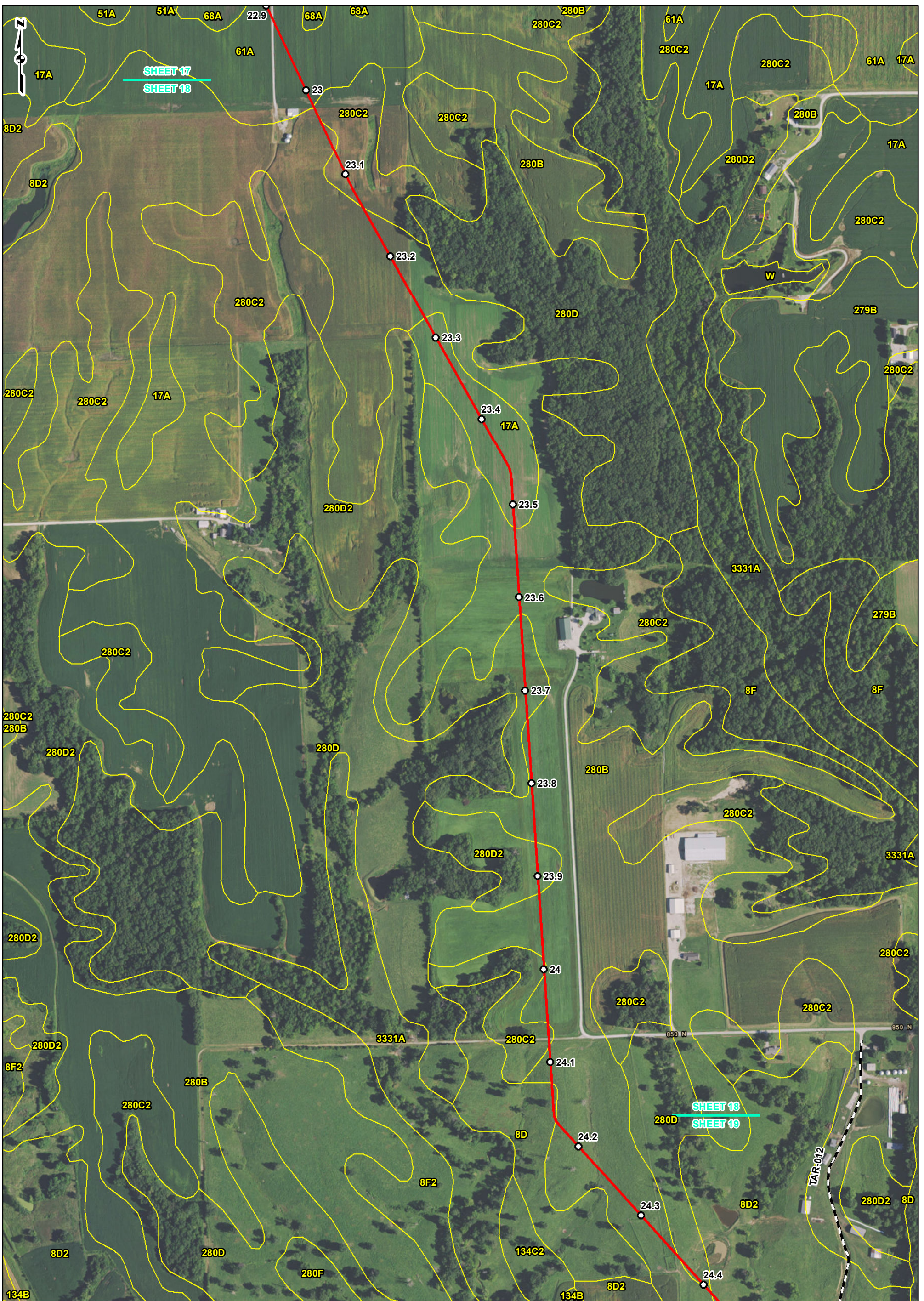
0 250 500 1,000 Feet

SOILS MAP SHEET 17 OF 52

SPiRE STL PIPELINE PROJECT

gal consultants  spire 

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAI, USDA FSA, 2014, ACCESSED 10/2016, SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT



LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

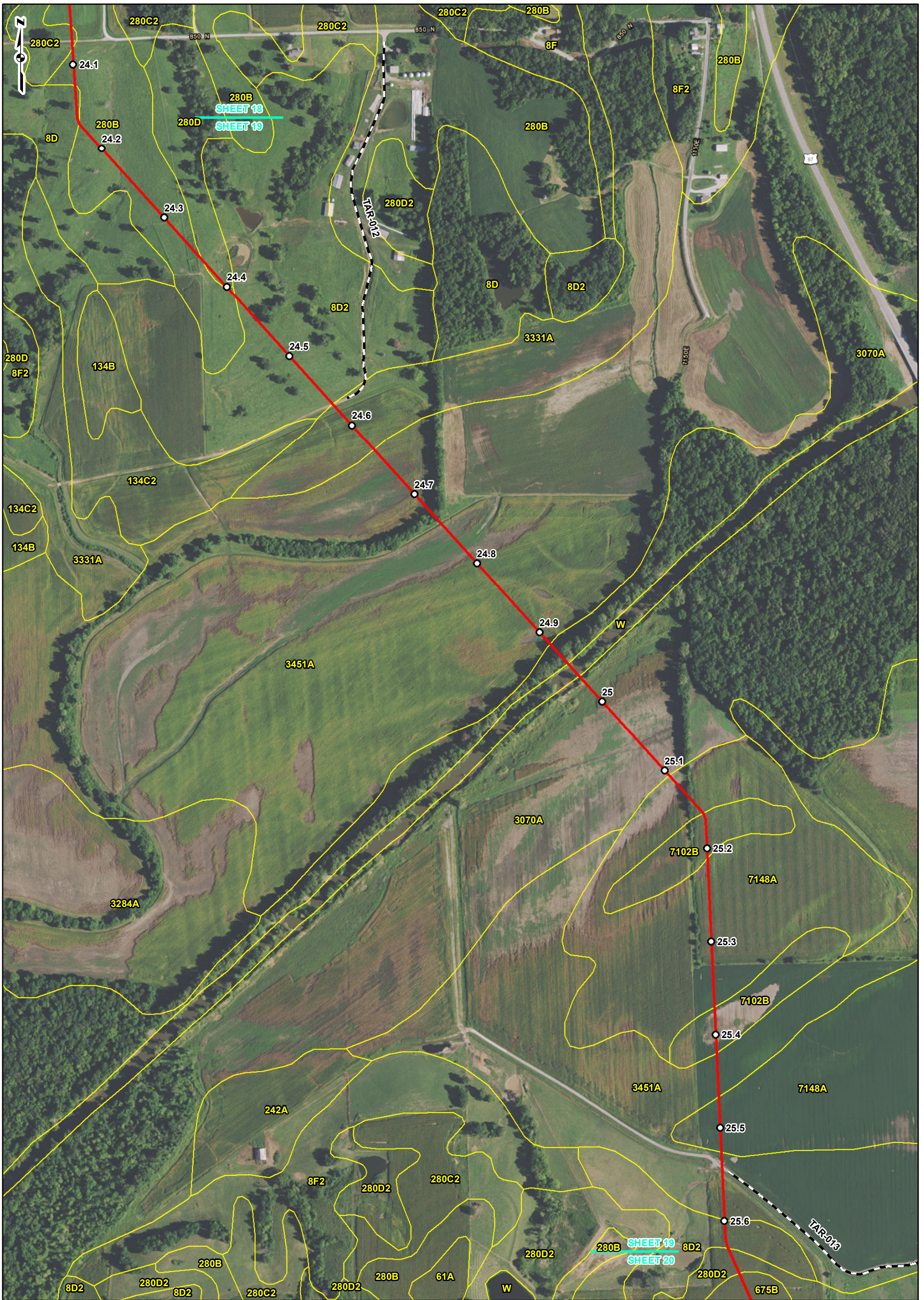
0 250 500 1,000 Feet

SOILS MAP SHEET 18 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants  spire 

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

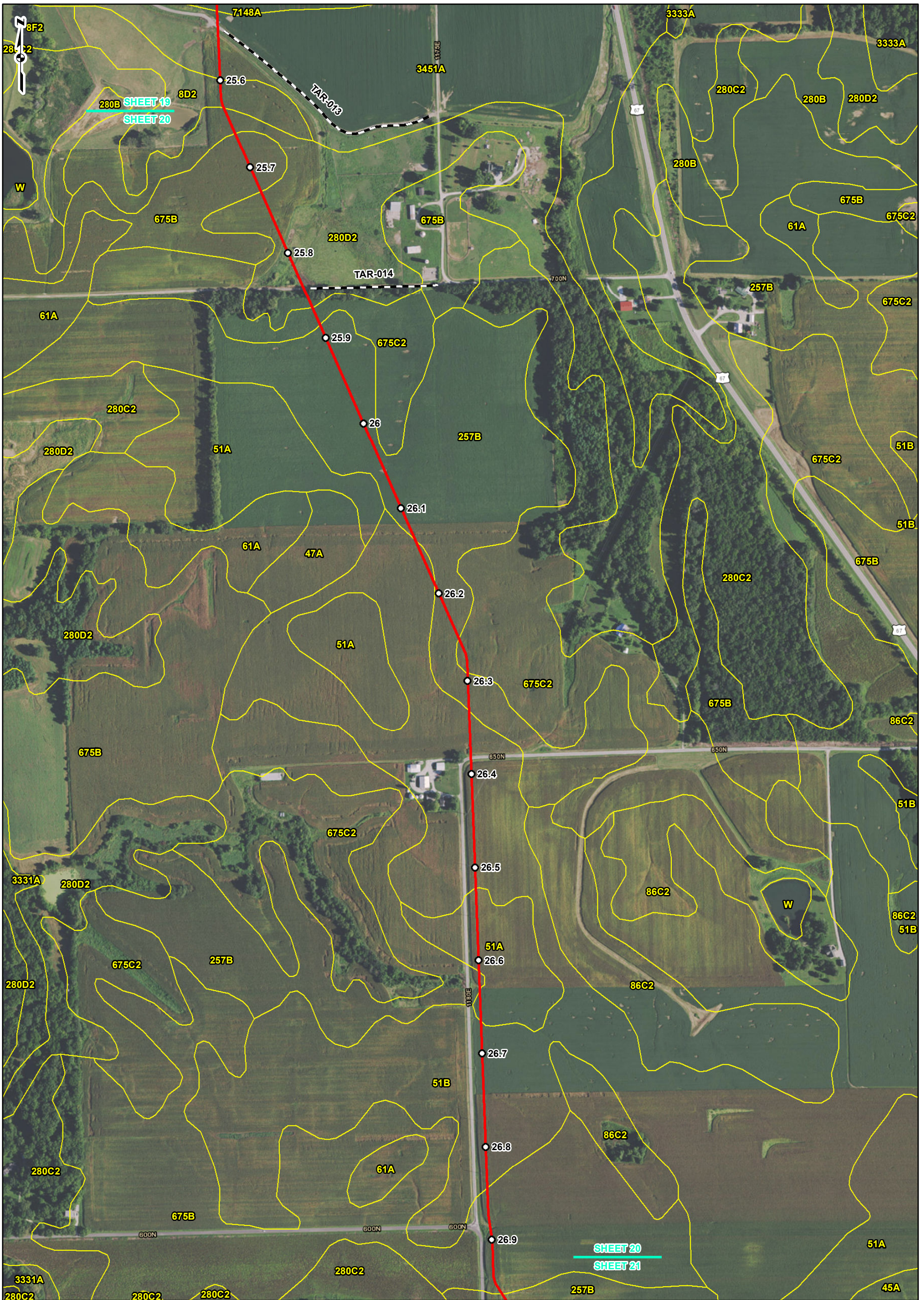
0 250 500 1,000 Feet

**SOILS MAP
SHEET 19 OF 52**

**SPIRE STL
PIPELINE
PROJECT**

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

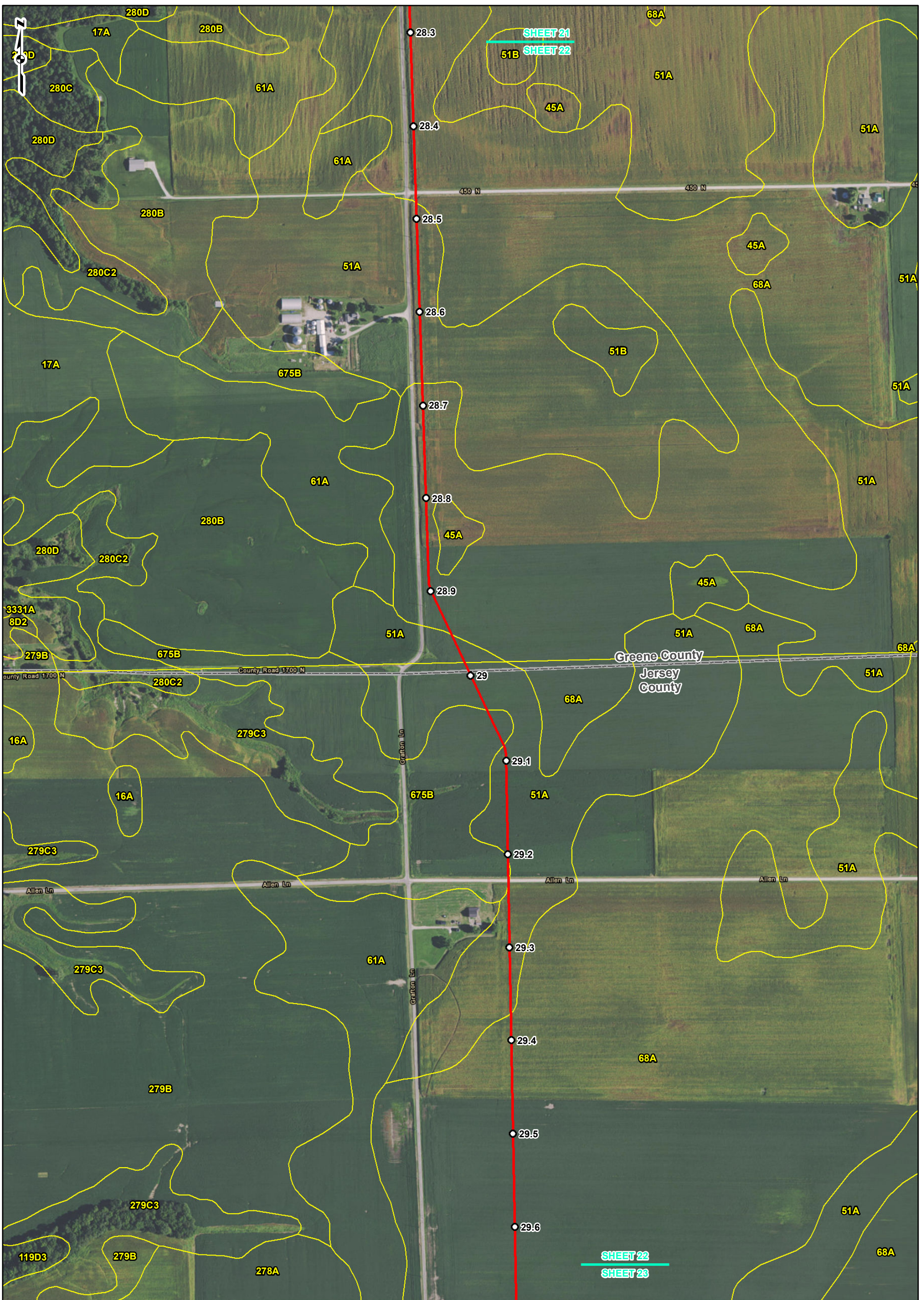
0 250 500 1,000 Feet

**SOILS MAP
SHEET 20 OF 52**

**SPIRE STL
PIPELINE
PROJECT**

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

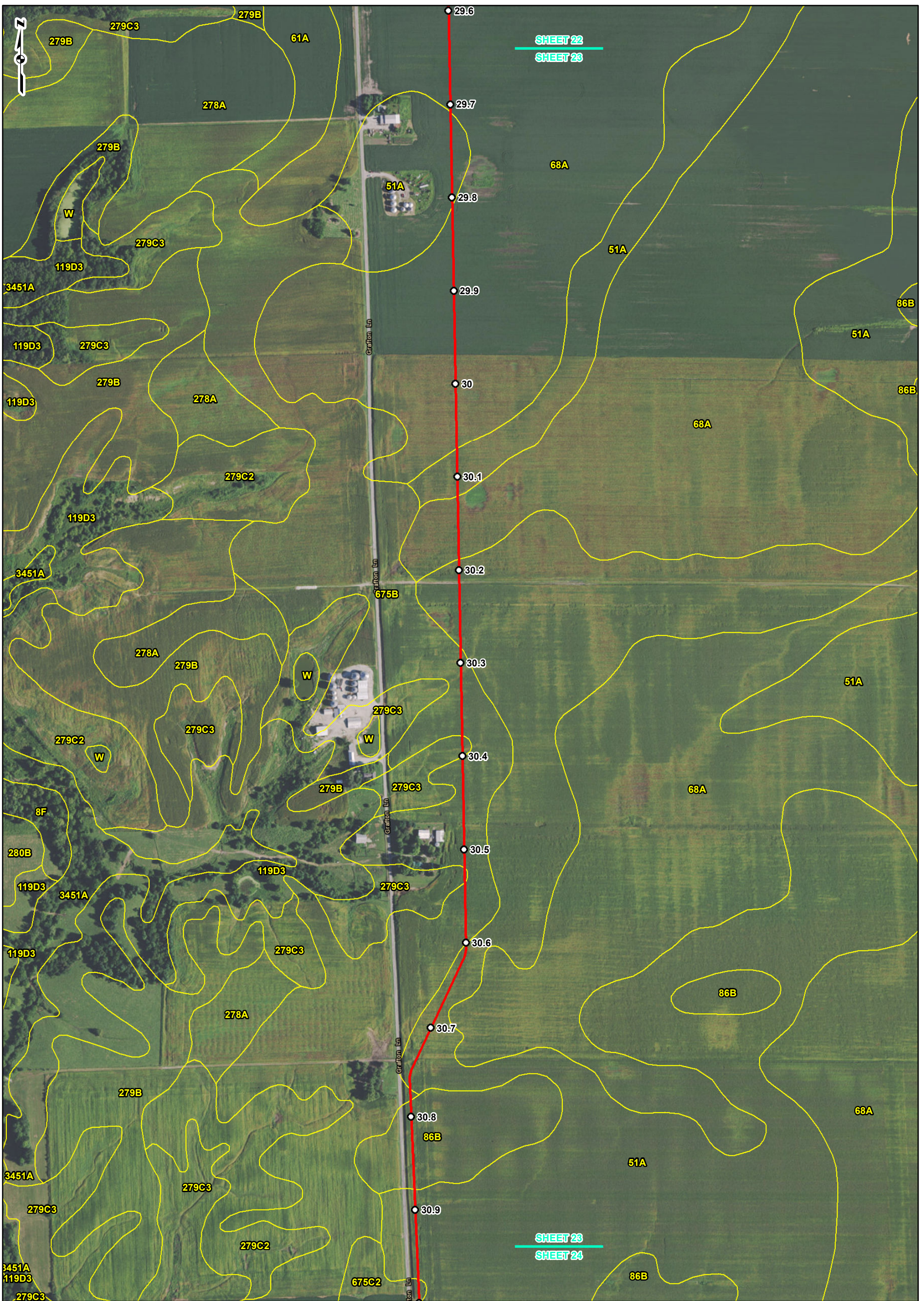
0 250 500 1,000 Feet

SOILS MAP SHEET 22 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016, SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

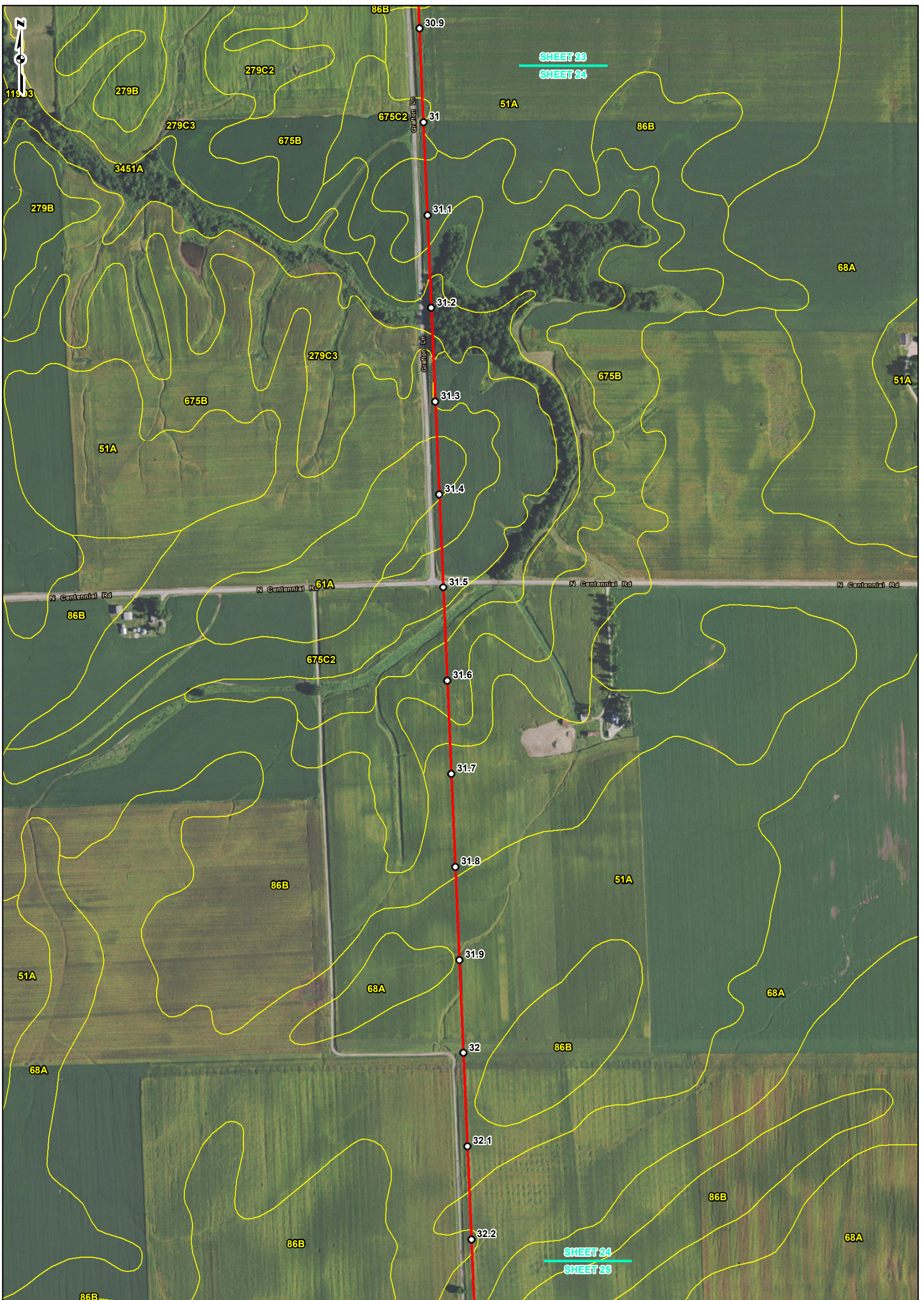
0 250 500 1,000 Feet

**SOILS MAP
SHEET 23 OF 52**

**SPIRE STL
PIPELINE
PROJECT**

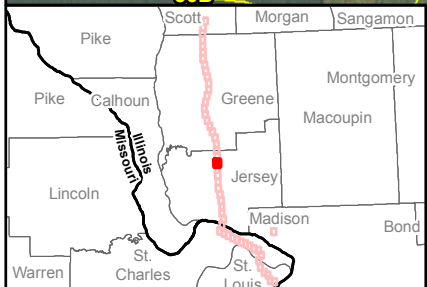
gal consultants

DRAWN BY: PMH DATE: 10/14/2016
 CHECKED: EFJ APPROVED: LMF



SHEET 23
SHEET 24

SHEET 24
SHEET 25



REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014. ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880 MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

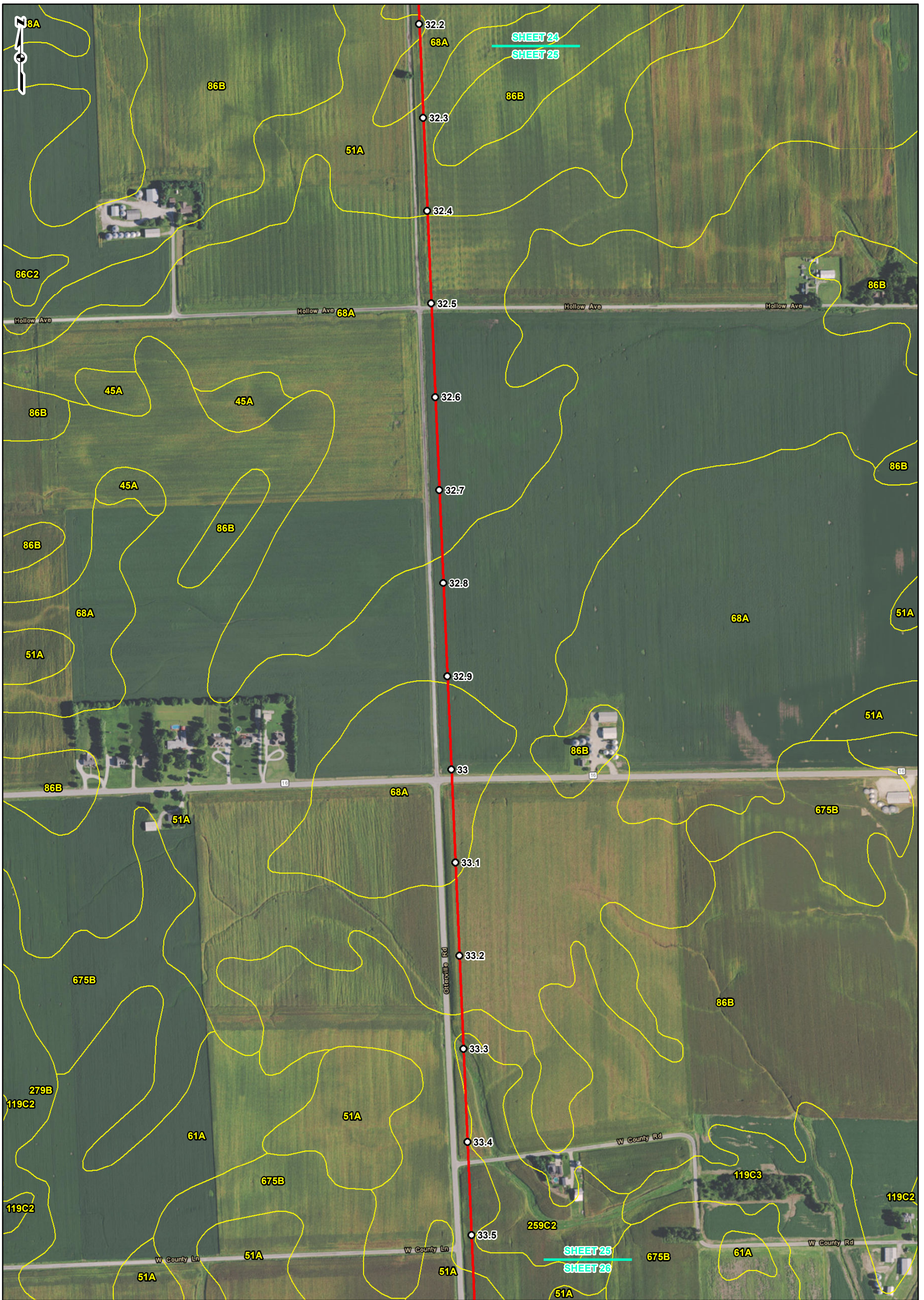
0 250 500 1,000 Feet

SOILS MAP SHEET 24 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

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REFERENCE: ESRI WORLD IMAGERY AND TRANSPORTATION, NAIP, USDA FSA, 2014, ACCESSED 10/2016. SOIL SURVEY GEOGRAPHIC (SSURGO) DATABASE FOR ILLINOIS (2014) AND MISSOURI (2015), USDA/NRCS.

DRAFT

LEGEND

- MILEPOST
- 24-INCH PIPELINE
- LINE 880
- MODIFICATIONS
- ACCESS ROAD
- CONTRACTOR YARD
- FACILITY
- SOIL TYPE BOUNDARY
- COUNTY BOUNDARY
- STATE BOUNDARY

0 250 500 1,000 Feet

SOILS MAP SHEET 25 OF 52

SPIRE STL PIPELINE PROJECT

gal consultants

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