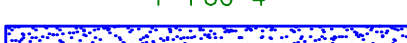
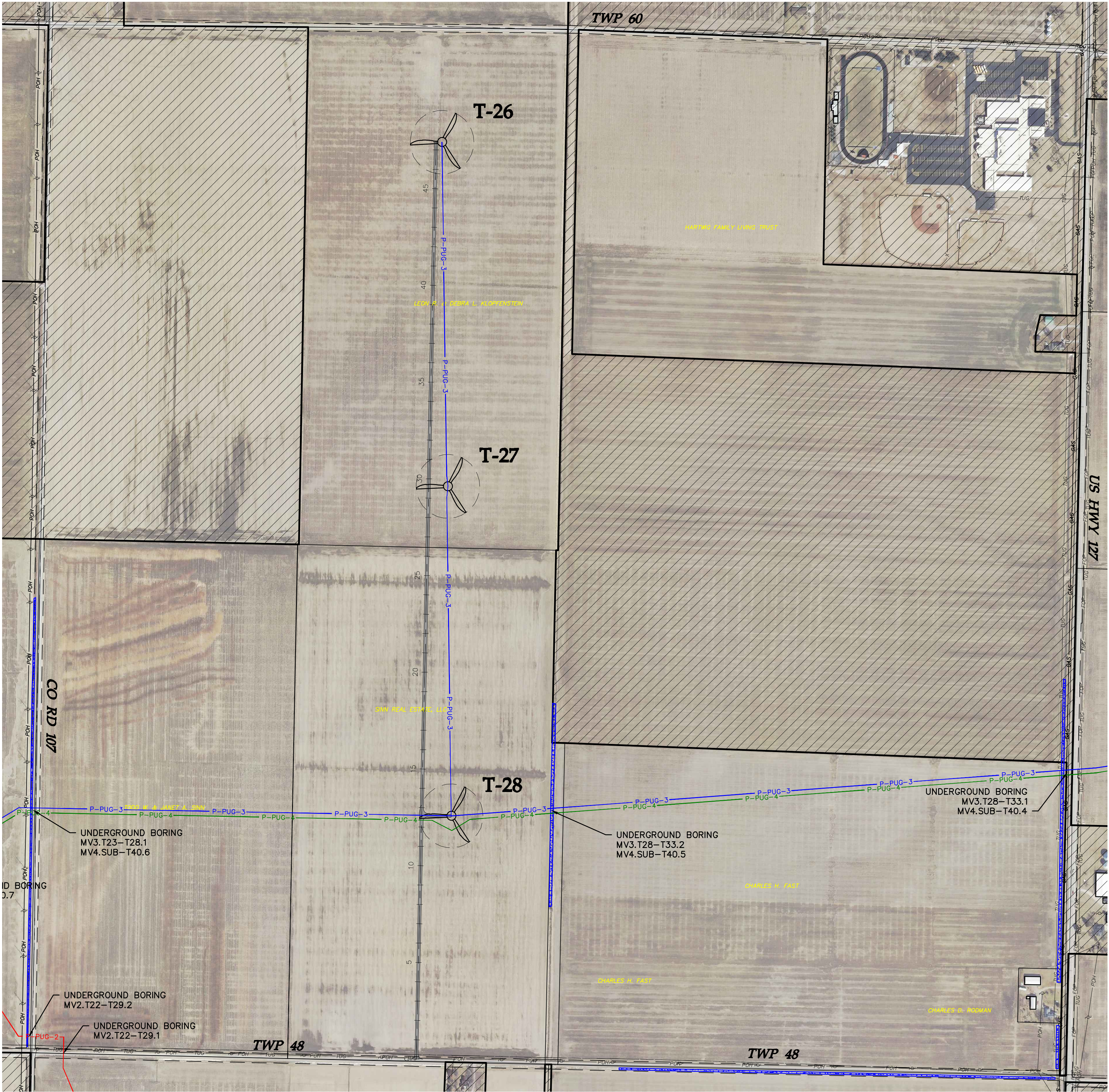


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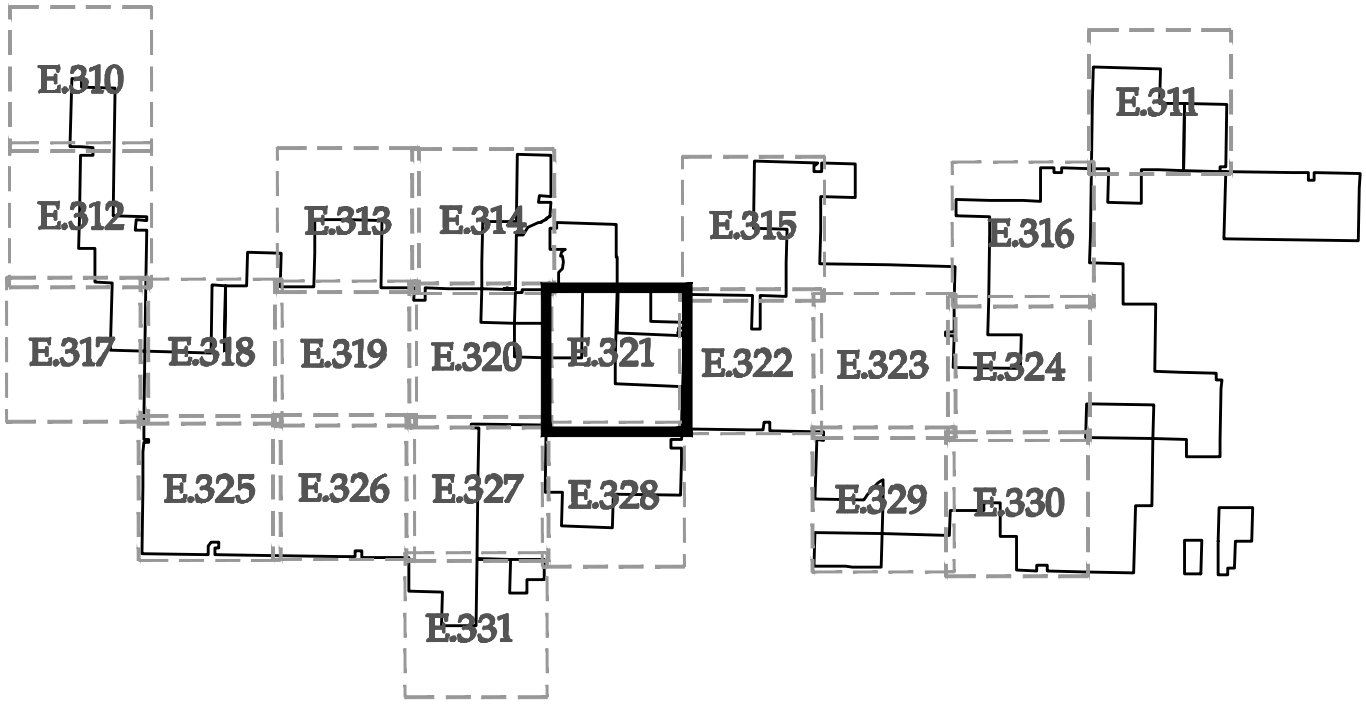
-  TURBINE LOCATION
- T-XX** TURBINE NUMBER
-  P-PUG-1 PROPOSED CIRCUIT 1
-  P-PUG-2 PROPOSED CIRCUIT 2
-  P-PUG-3 PROPOSED CIRCUIT 3
-  P-PUG-4 PROPOSED CIRCUIT 4
-  DELINEATED WETLAND
-  NON-PARTICIPATING PROPERTY



SEE SHEET E.320

SEE SHEET E.322

SEE SHEET E.328



KEY MAP

Designed: JRV
Checked: ANS
Drawn: JMC, JRG
As-Built Drawing:

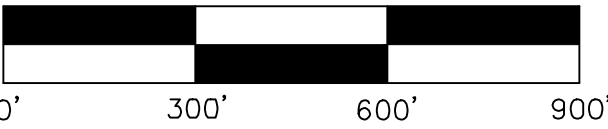
Revisions	DATE	DESCRIPTION
A	09/27/17	30% plans
B	10/03/17	Issued for Procurement - Revised
C	10/19/17	60% plans

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Trishe Wind Ohio, LLC
c/o Starwood Energy Group, LLC
5 Greenwich Office Park, 2nd Floor
Greenwich, CT 06831



Northwest
Ohio Wind
Project
Paulding County, Ohio

Electrical Site Plan

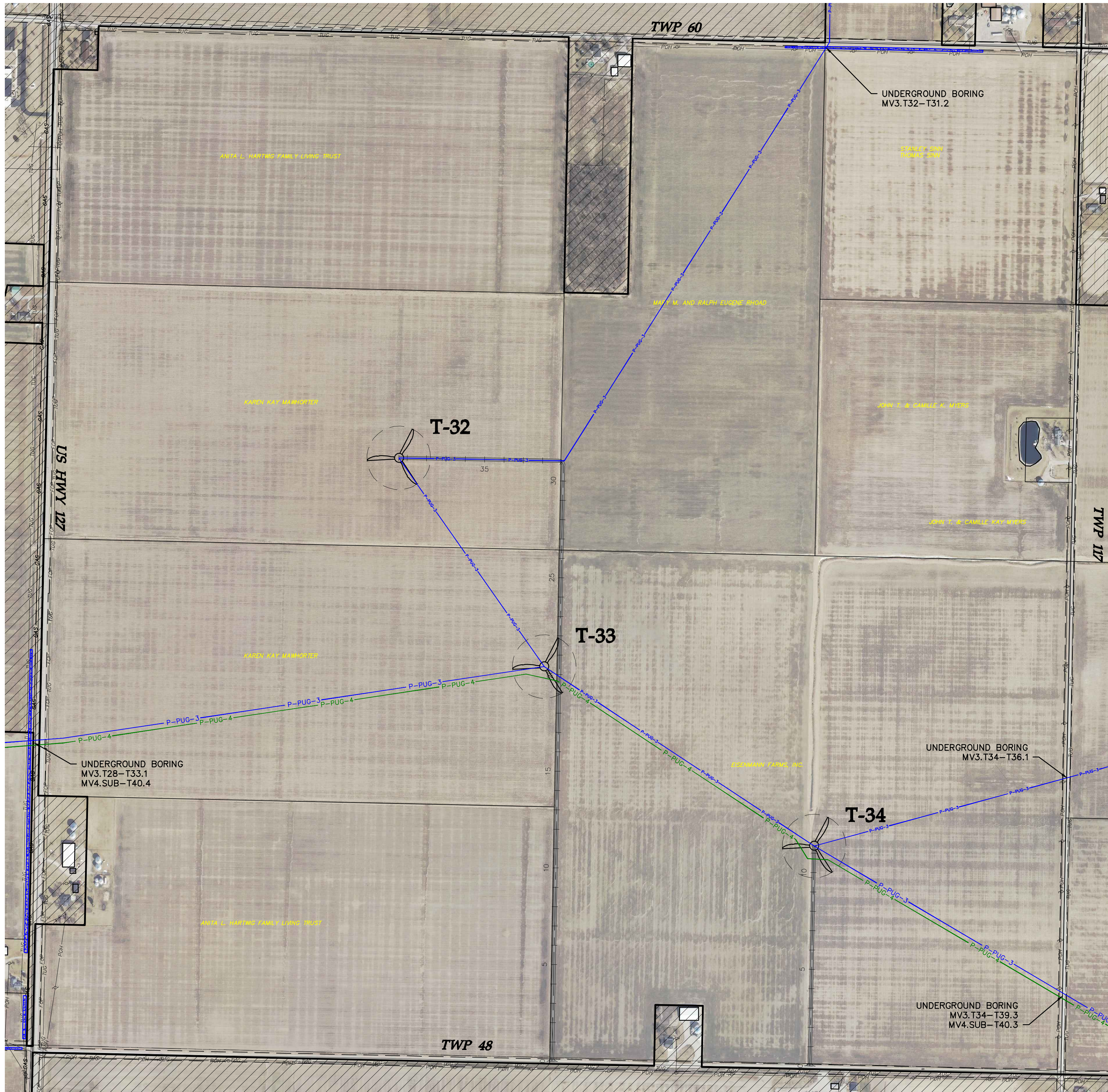
Not For Construction

Array Date: 09/14/2017

Date: 10/19/17

Sheet: E.321

SEE SHEET E.315



LEGEND

- TURBINE LOCATION
- T-XX TURBINE NUMBER
- P-PUG-1 PROPOSED CIRCUIT 1
- P-PUG-2 PROPOSED CIRCUIT 2
- P-PUG-3 PROPOSED CIRCUIT 3
- P-PUG-4 PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

Westwood

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Designed: JRV
Checked: ANS
Drawn: JMC, JRG
As-Built Drawing:

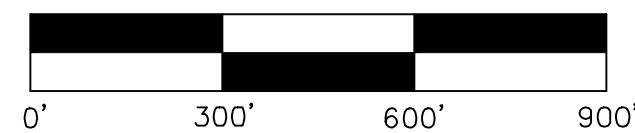
Revisions	DATE	DESCRIPTION
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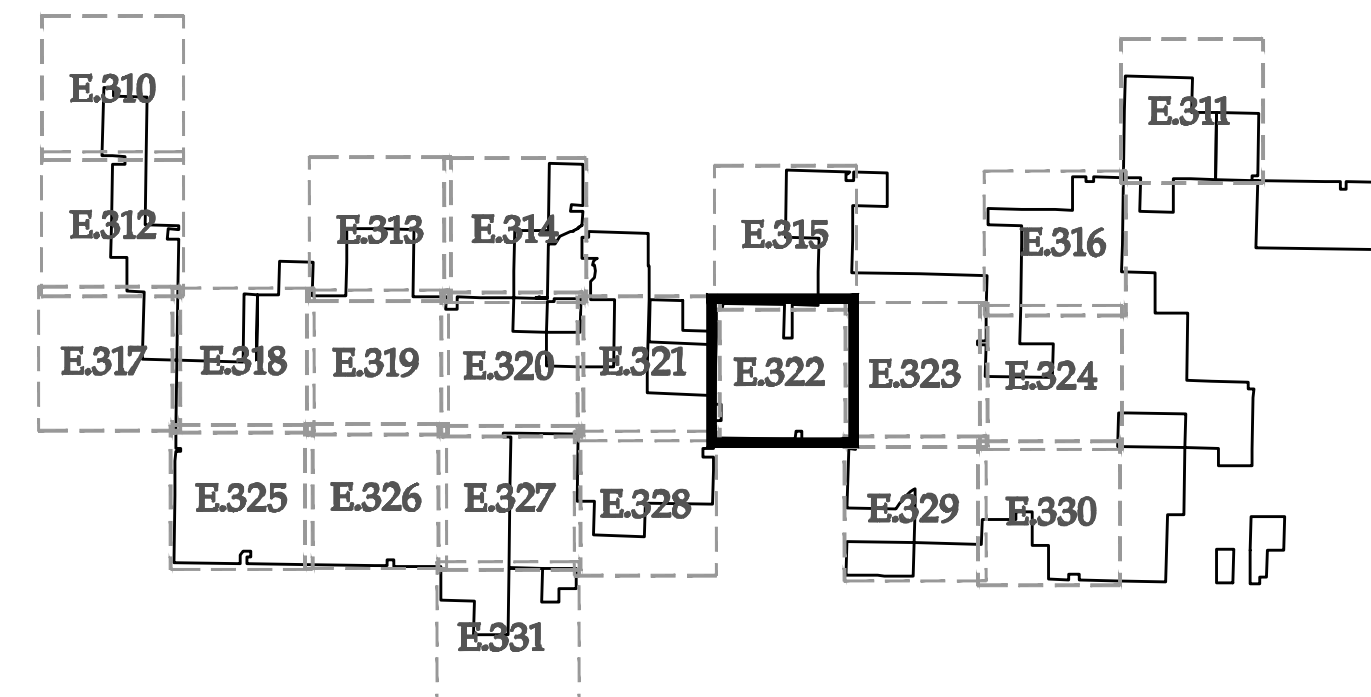
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Array Date: 09/14/2017

Date: 10/19/17

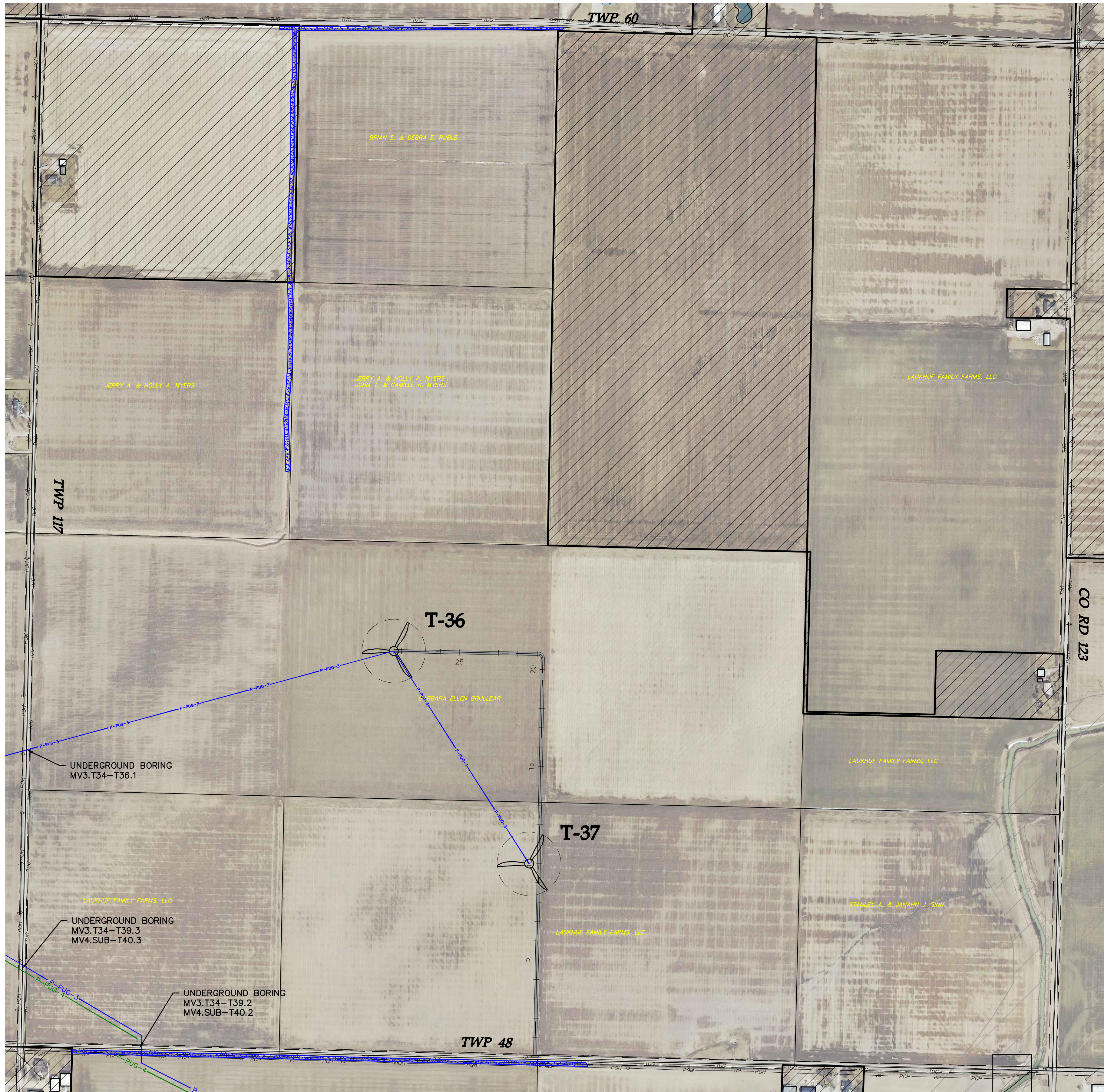
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0007186_Electrical Site Plans.dwg



KEY MAP

SEE SHEET E.328



SEE SHEET E.329

LEGEND

- T-XX TURBINE LOCATION
- P-PUG-1 TURBINE NUMBER
- P-PUG-2 PROPOSED CIRCUIT 1
- P-PUG-3 PROPOSED CIRCUIT 2
- P-PUG-4 PROPOSED CIRCUIT 3
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

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Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

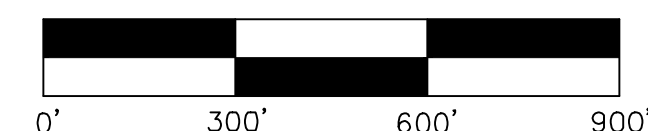
Revisions	DATE	DESCRIPTION
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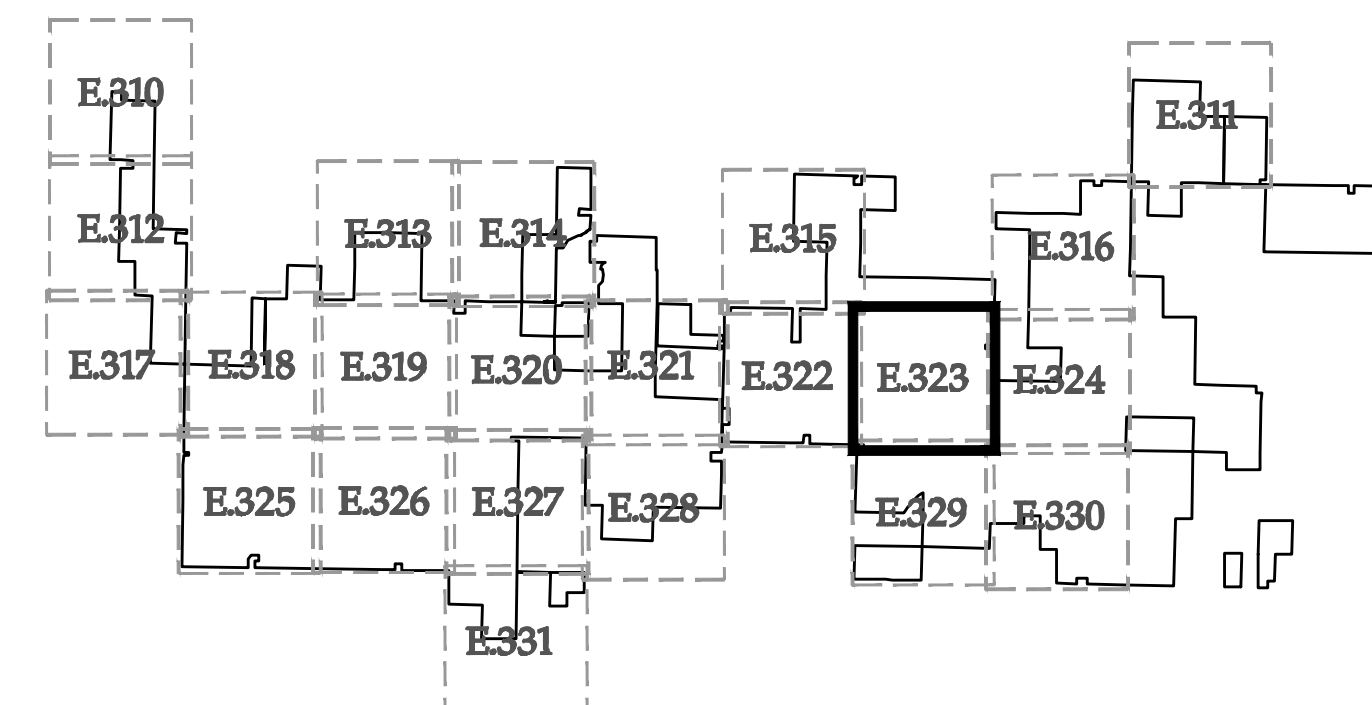
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Array Date: 09/14/2017

Date: 10/19/17

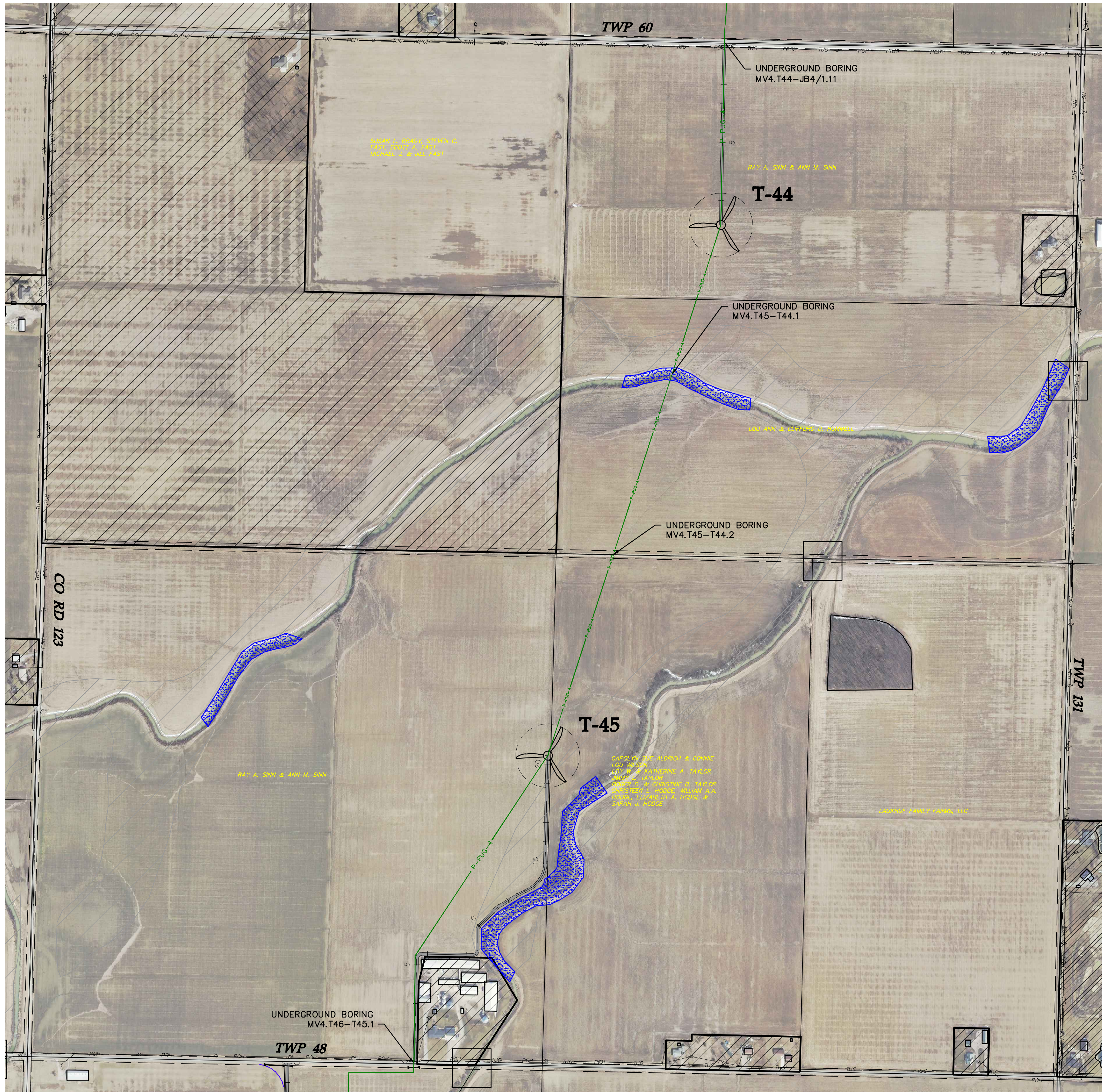
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0007186_Electrical Site Plans.dwg



KEY MAP

SEE SHEET E.316



SEE SHEET E.330

LEGEND

- TURBINE LOCATION
- T-XX** TURBINE NUMBER
- P-PUG-1 PROPOSED CIRCUIT 1
- P-PUG-2 PROPOSED CIRCUIT 2
- P-PUG-3 PROPOSED CIRCUIT 3
- P-PUG-4 PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

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Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

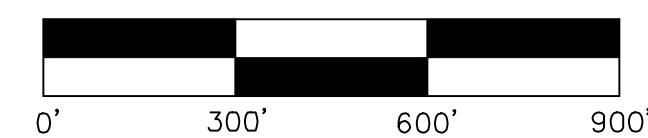
Revisions	DATE	DESCRIPTION
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Paulding County, Ohio

Electrical Site Plan

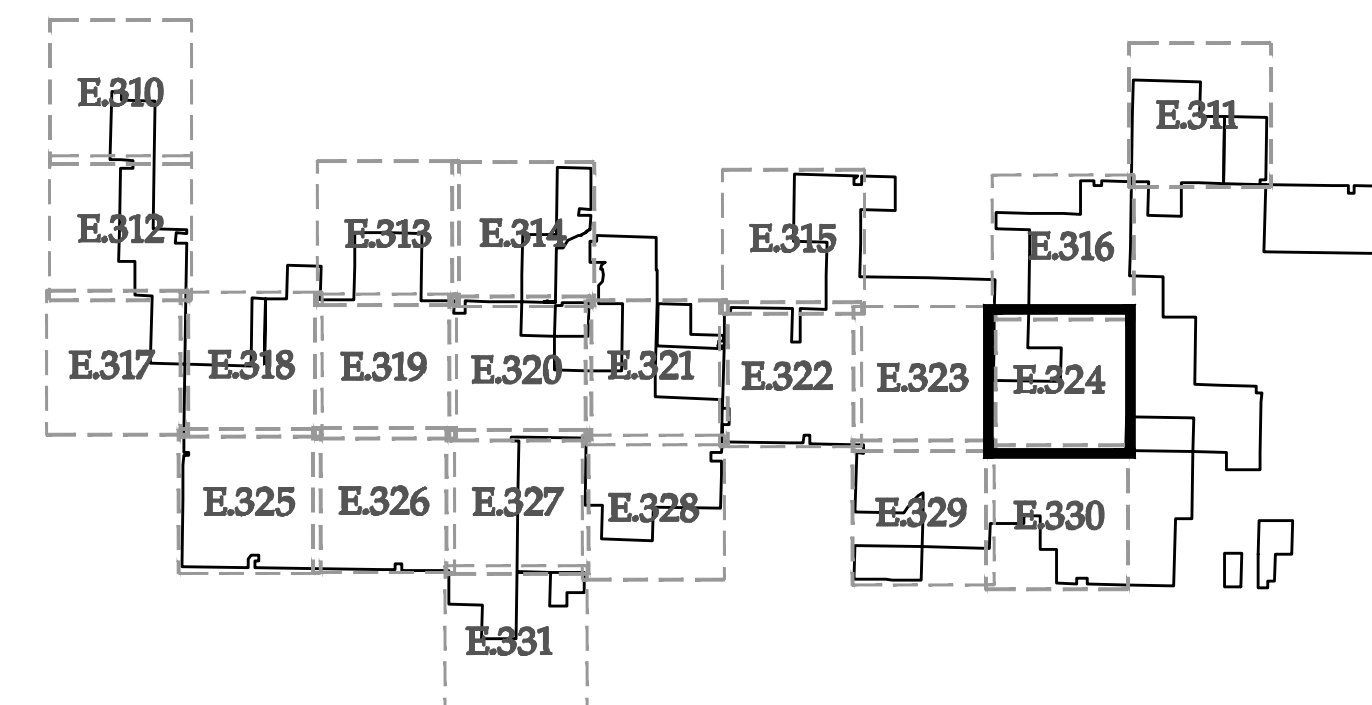
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Array Date: 09/14/2017

Date: 10/19/17

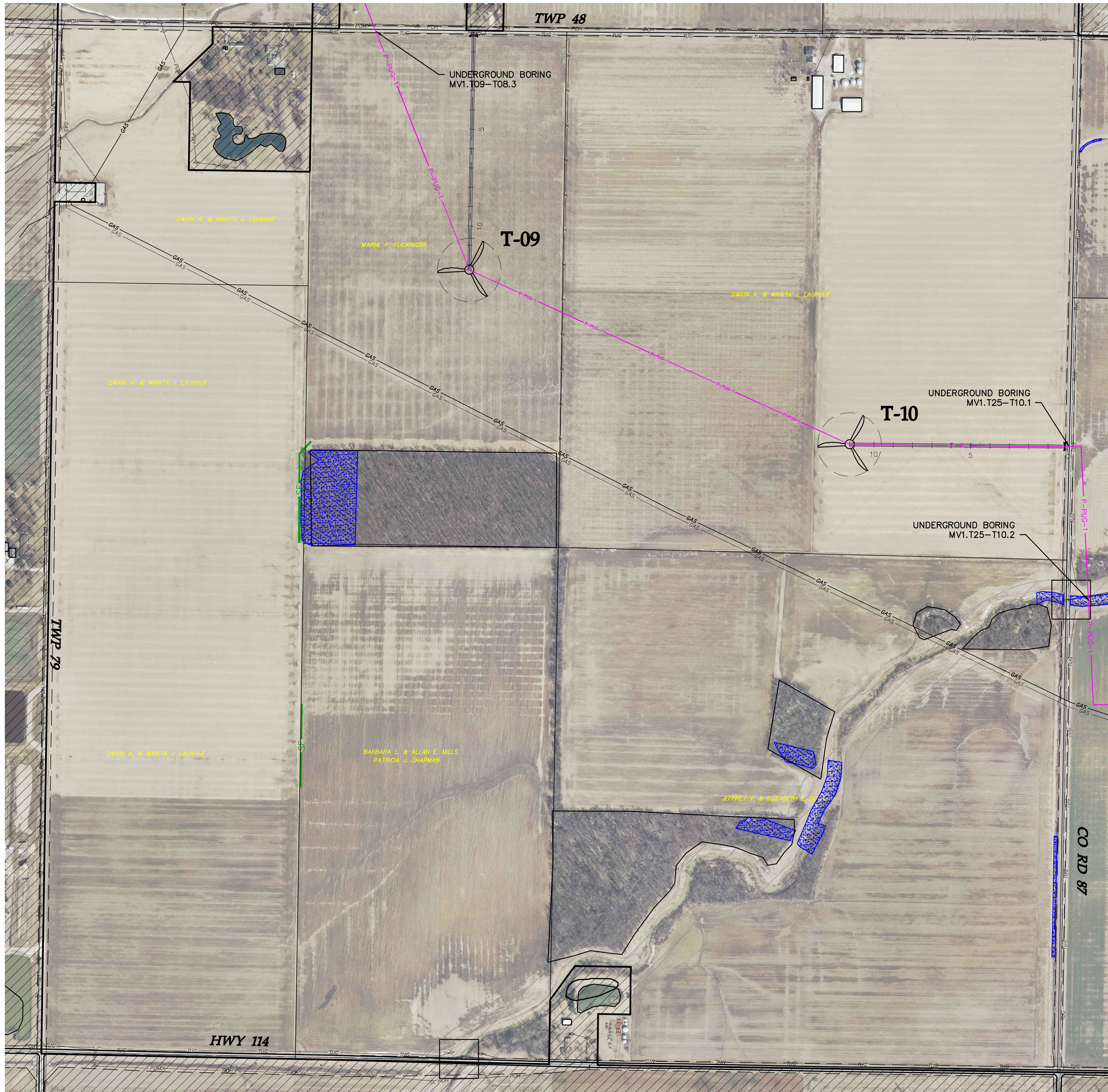
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0007186_Electrical Site Plans.dwg



KEY MAP

SEE SHEET E.318



LEGEND

- TURBINE LOCATION
- T-XX** TURBINE NUMBER
- P-PUG-1 PROPOSED CIRCUIT 1
- P-PUG-2 PROPOSED CIRCUIT 2
- P-PUG-3 PROPOSED CIRCUIT 3
- P-PUG-4 PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

SEE SHEET E.326

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Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

Revisions	DATE	DESCRIPTION
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C	10/19/17	60% plans

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Northwest Ohio Wind Project

Paulding County, Ohio

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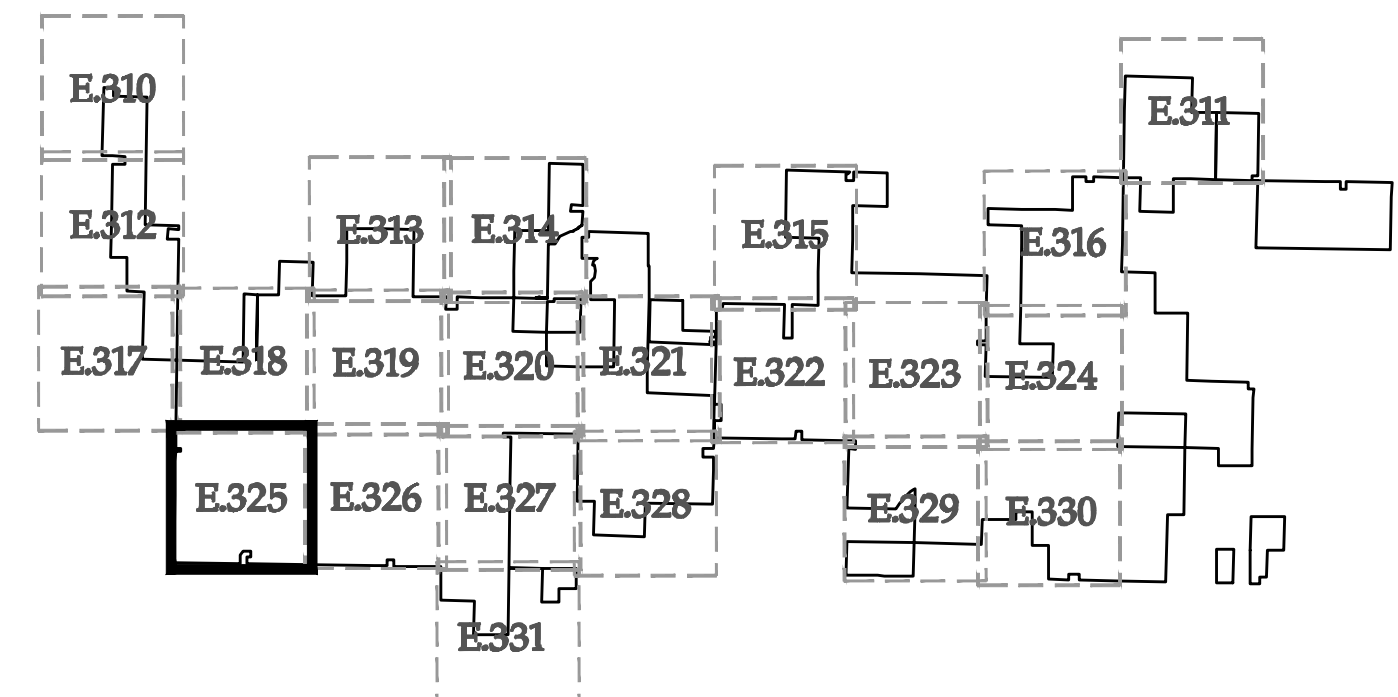
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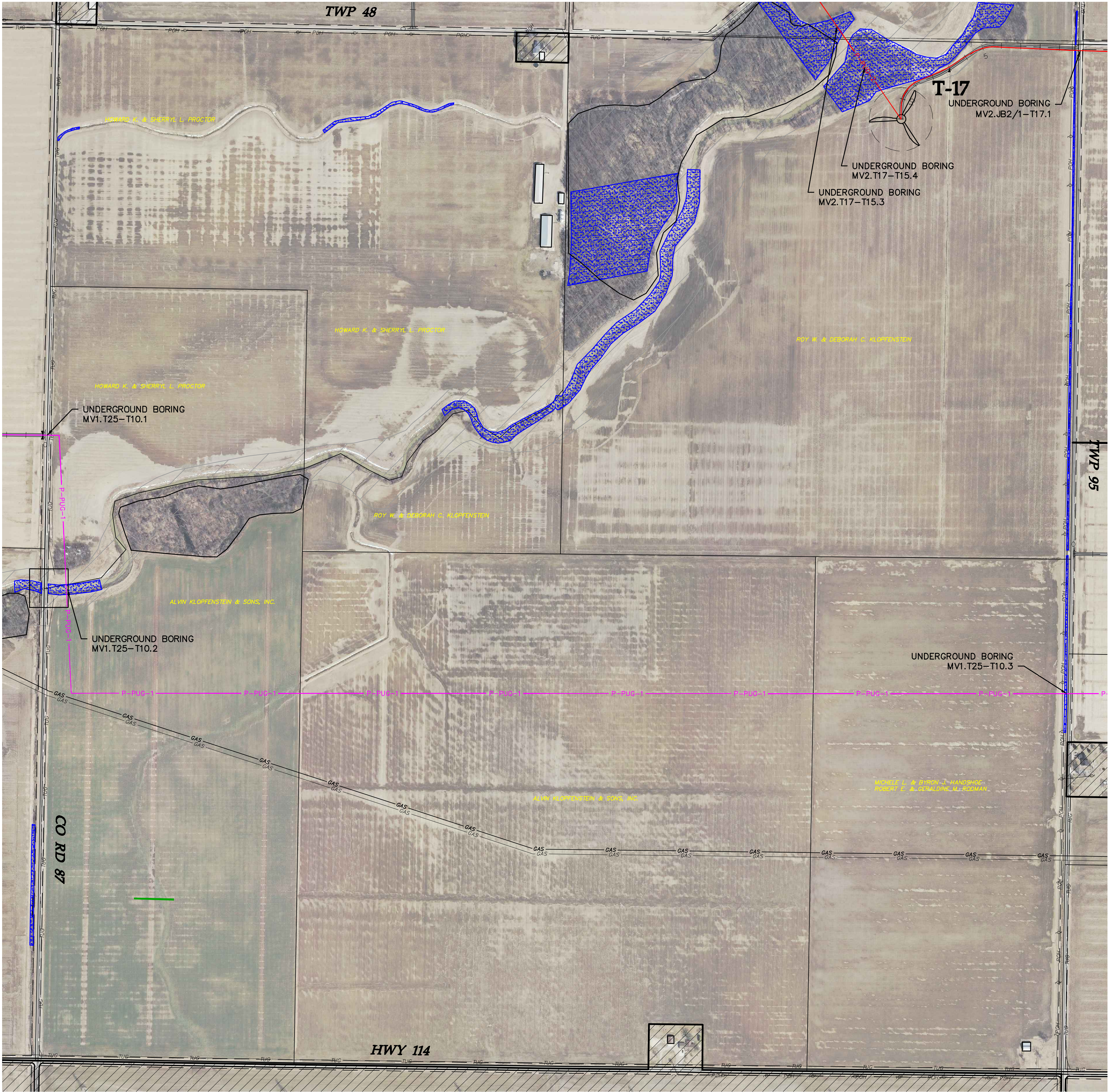
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0007186_Electrical Site Plans.dwg



KEY MAP

SEE SHEET E.319



LEGEND

- TURBINE LOCATION
- T-XX** TURBINE NUMBER
- P-PUG-1 PROPOSED CIRCUIT 1
- P-PUG-2 PROPOSED CIRCUIT 2
- P-PUG-3 PROPOSED CIRCUIT 3
- P-PUG-4 PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

SEE SHEET E.325

SEE SHEET E.327

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Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

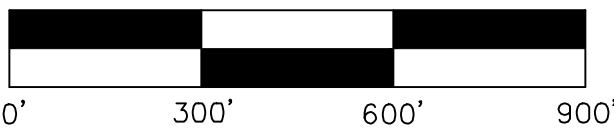
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**Northwest
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Paulding County, Ohio

Electrical Site Plan

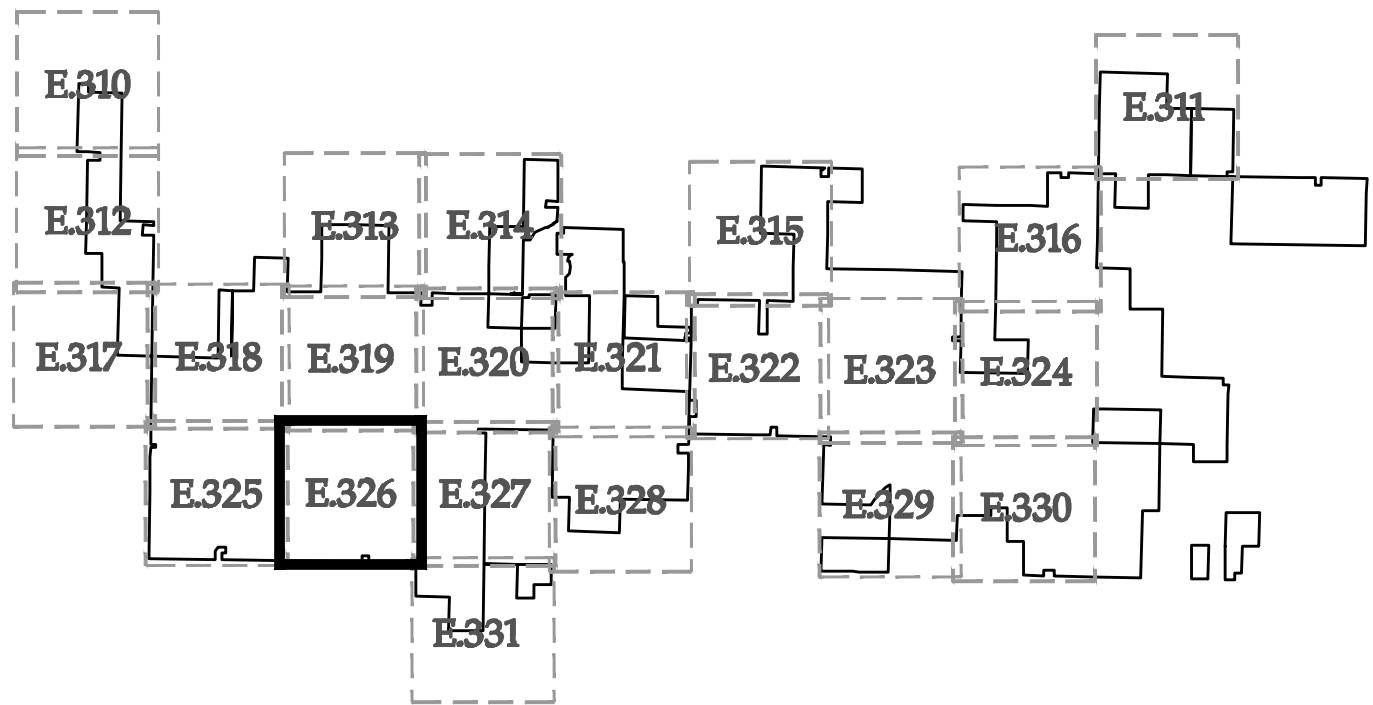
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Array Date: 09/14/2017

Date: 10/19/17

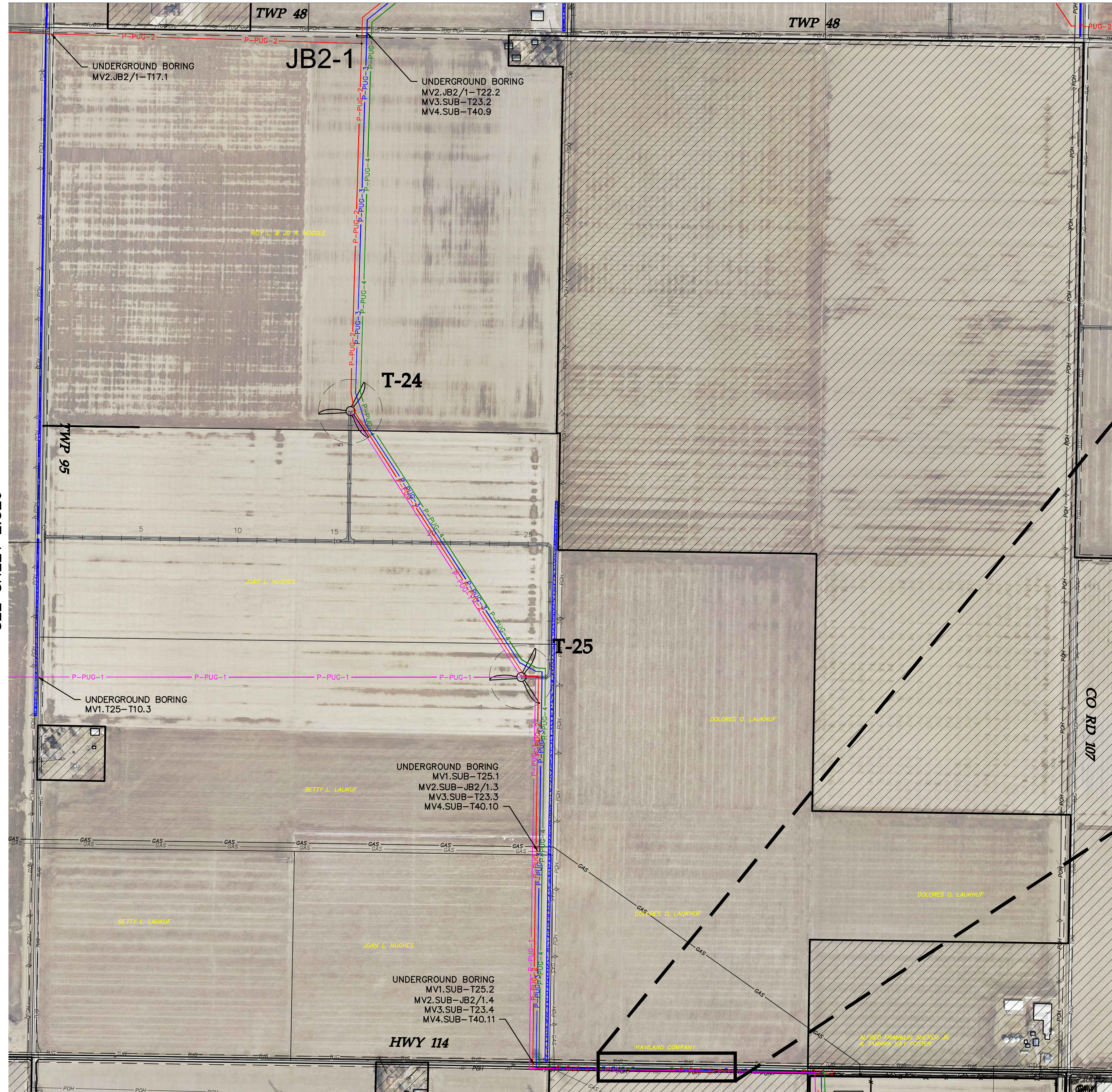
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0007186_Electrical Site Plans.dwg



KEY MAP

SEE SHEET E.320



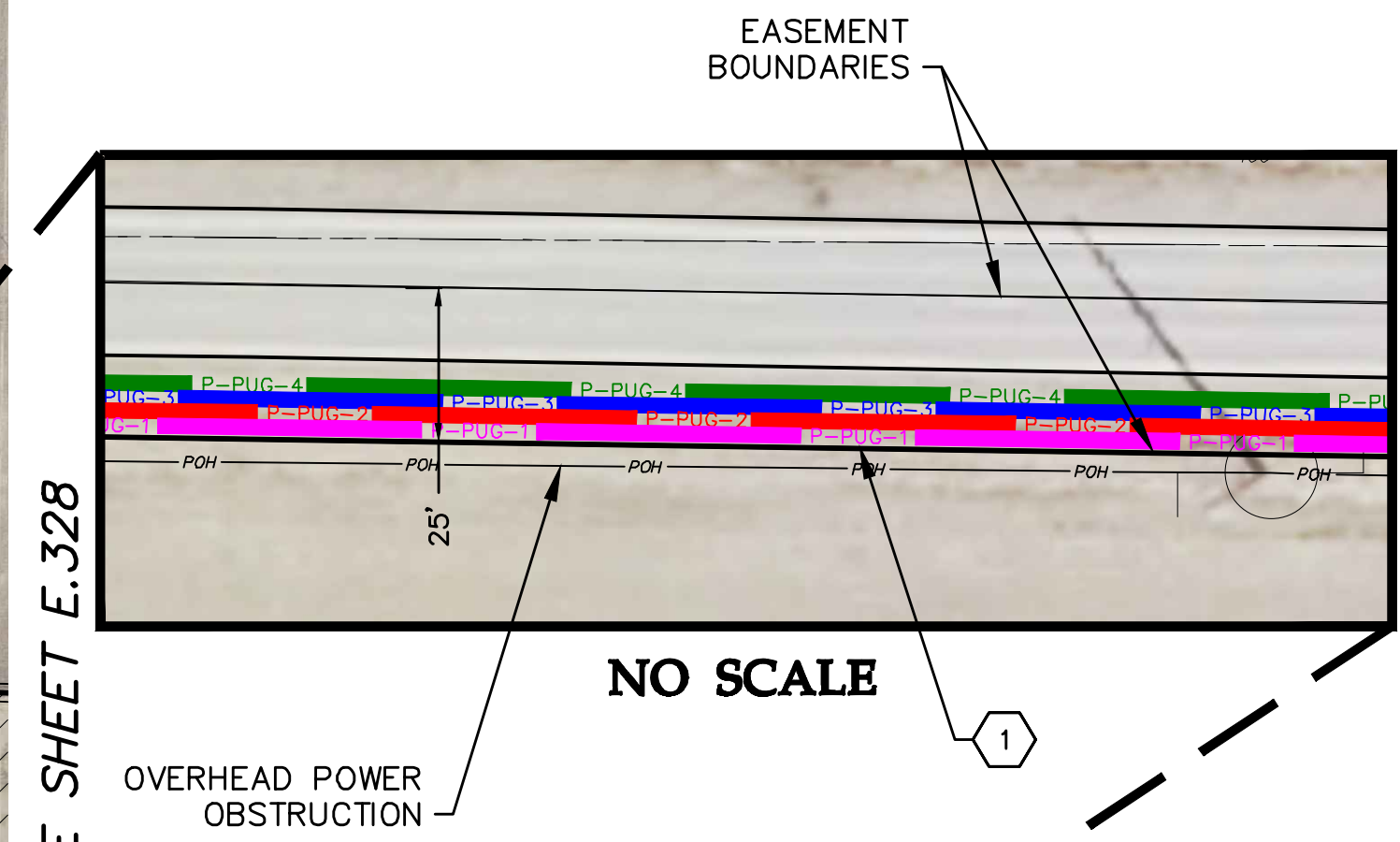
SEE SHEET E.331

LEGEND

- TURBINE LOCATION
- T-XX** TURBINE NUMBER
- P-PUG-1 PROPOSED CIRCUIT 1
- P-PUG-2 PROPOSED CIRCUIT 2
- P-PUG-3 PROPOSED CIRCUIT 3
- P-PUG-4 PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

KEY NOTES

- 1 34.5KV COLLECTOR CIRCUITS 1,2,3 AND 4 CONTAINED WITHIN 25' EASEMENT ON SOUTH SIDE OF HWY 114 FOR EAST TO WEST RUN.



SEE SHEET E.328

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Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

Revisions	DATE	DESCRIPTION
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**Northwest
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Paulding County, Ohio

Electrical Site Plan

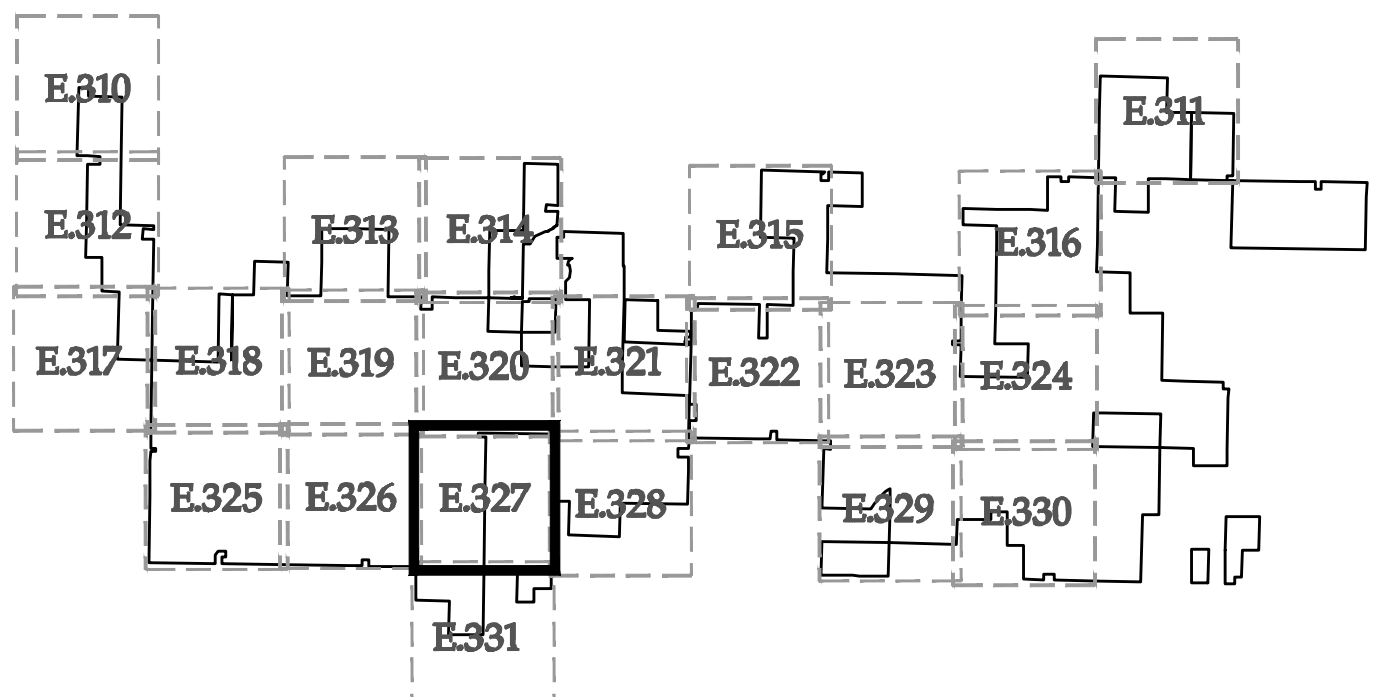
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Array Date: 09/14/2017

Date: 10/19/17

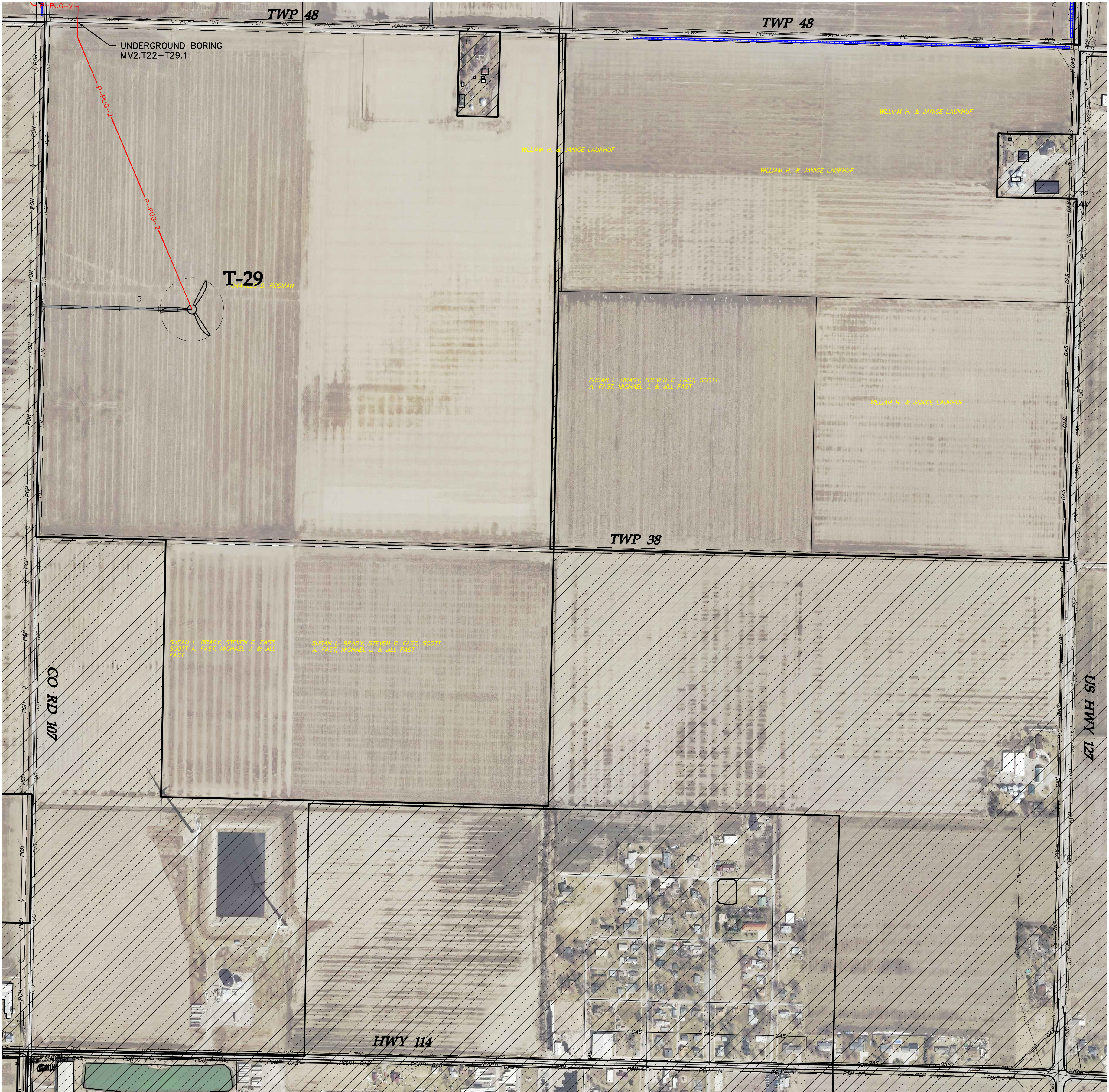
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0007186_Electrical Site Plans.dwg



KEY MAP

SEE SHEET E.321



LEGEND

- TURBINE LOCATION
- T-XX TURBINE NUMBER
- P-PUG-1 PROPOSED CIRCUIT 1
- P-PUG-2 PROPOSED CIRCUIT 2
- P-PUG-3 PROPOSED CIRCUIT 3
- P-PUG-4 PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

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Westwood Professional Services, Inc.

Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

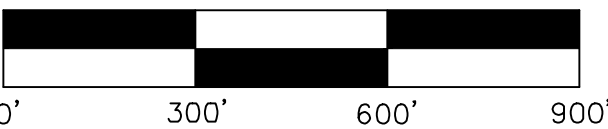
Revisions	DATE	DESCRIPTION
A	09/27/17	30% plans
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C	10/19/17	60% plans

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Greenwich, CT 06831



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Project

Paulding County, Ohio

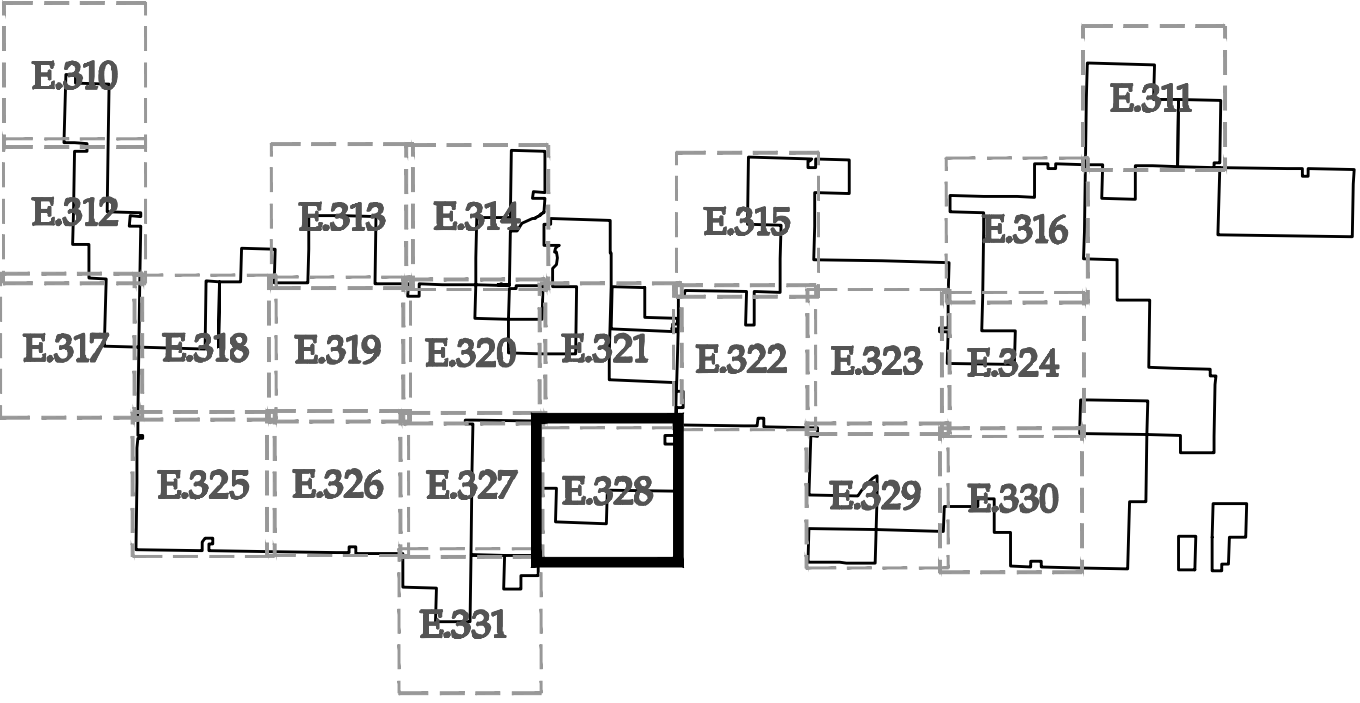
Electrical Site Plan

Not For Construction

Array Date: 09/14/2017

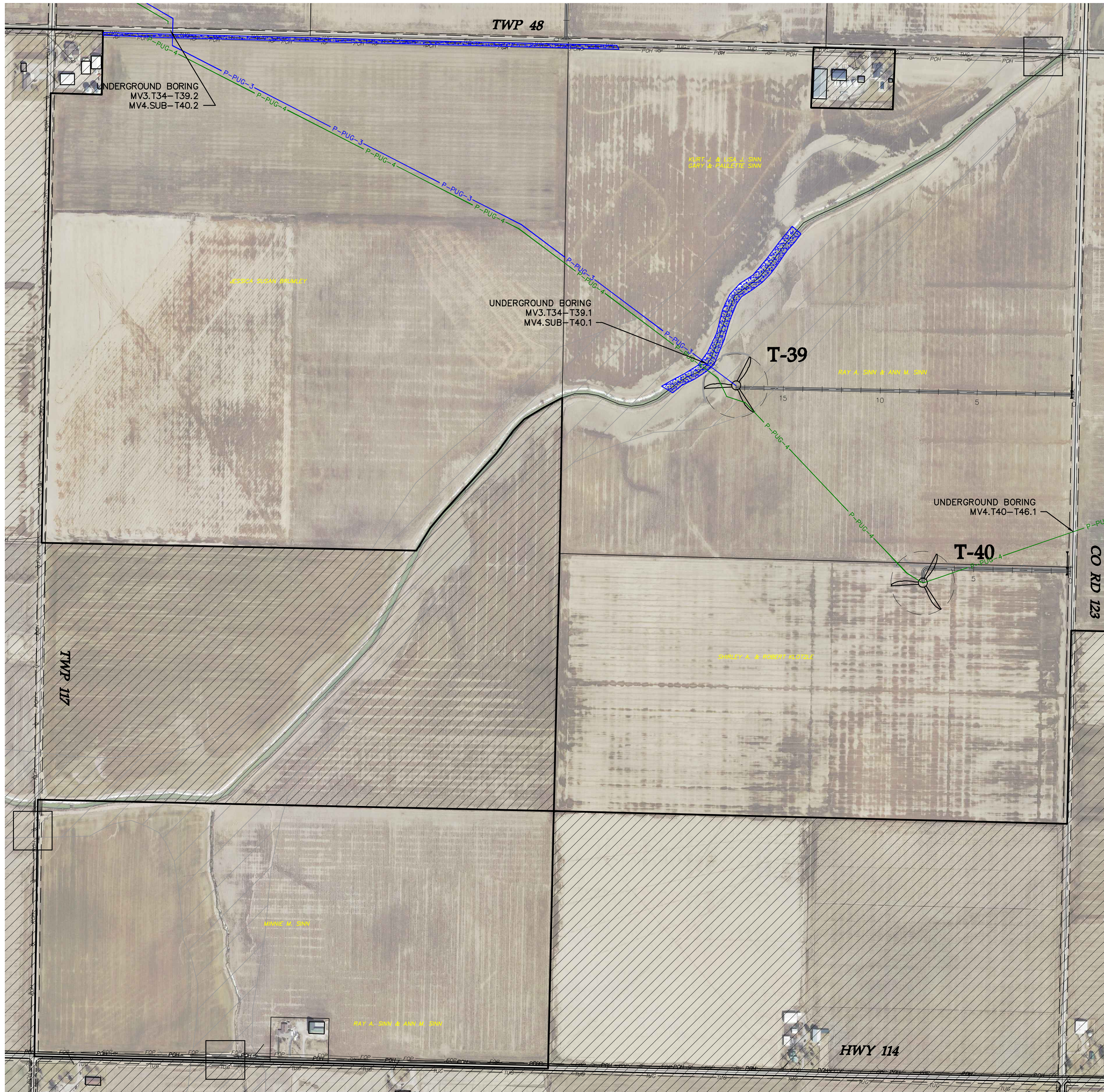
Date: 10/19/17

Sheet: E.328



KEY MAP

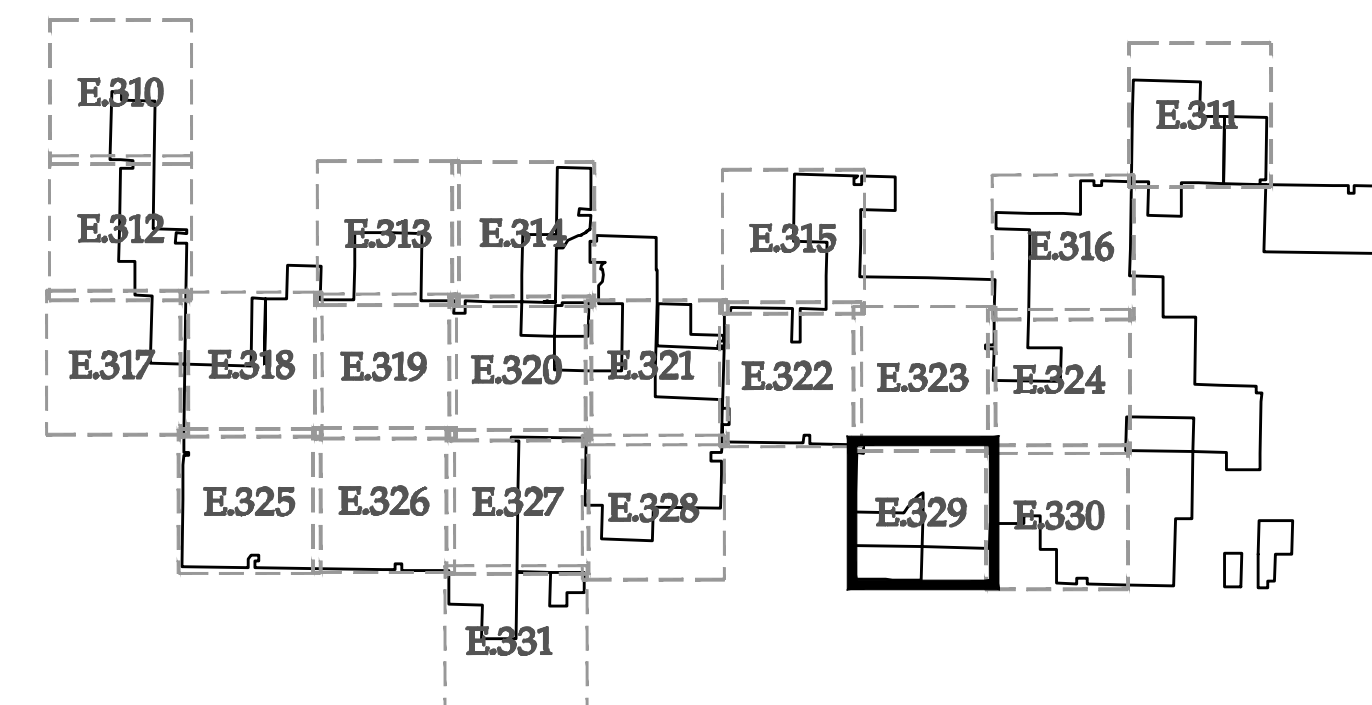
SEE SHEET E.323



LEGEND

-  TURBINE LOCATION
- T-XX** TURBINE NUMBER
-  PROPOSED CIRCUIT 1
-  PROPOSED CIRCUIT 2
-  PROPOSED CIRCUIT 3
-  PROPOSED CIRCUIT 4
-  DELINEATED WETLAND
-  NON-PARTICIPATING PROPERTY

SEE SHEET E.330



KEY MAP

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Westwood Professional Services, Inc.

Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

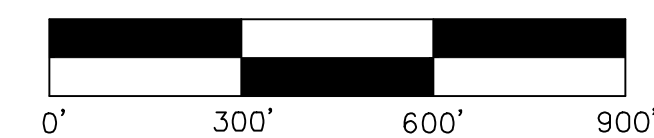
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Project**

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Electrical Site Plan

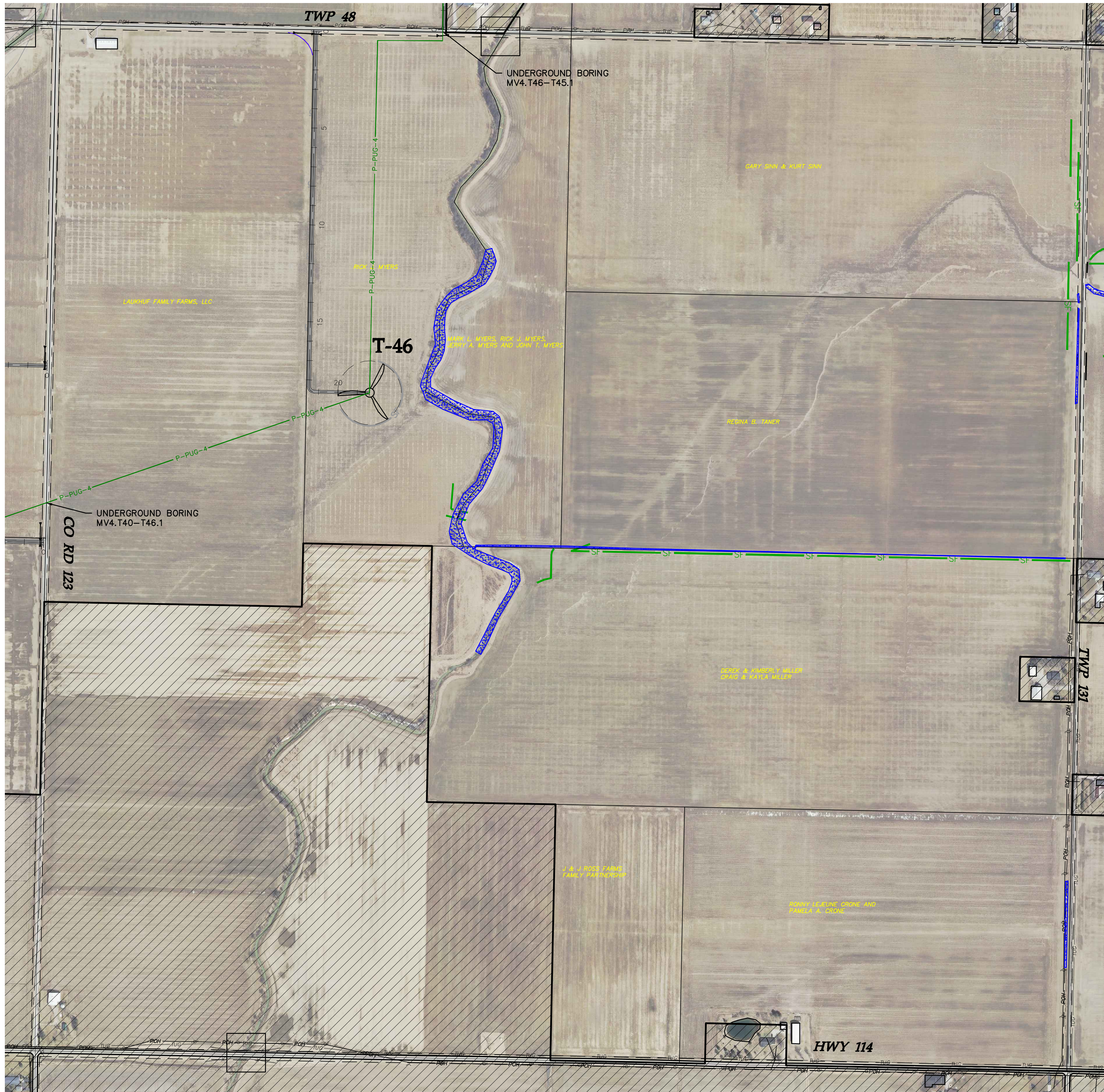
Not For Construction

Array Date: 09/14/2017

Date: 10/19/17

Sheet: E.329

SEE SHEET E.324



LEGEND

- TURBINE LOCATION
- T-XX** TURBINE NUMBER
- P-PUG-1 PROPOSED CIRCUIT 1
- P-PUG-2 PROPOSED CIRCUIT 2
- P-PUG-3 PROPOSED CIRCUIT 3
- P-PUG-4 PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

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As-Built Drawing:

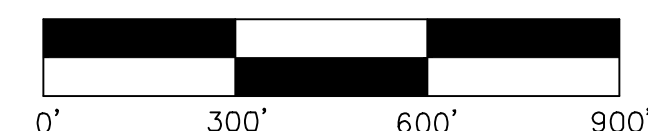
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Northwest Ohio Wind Project

Paulding County, Ohio

Electrical Site Plan

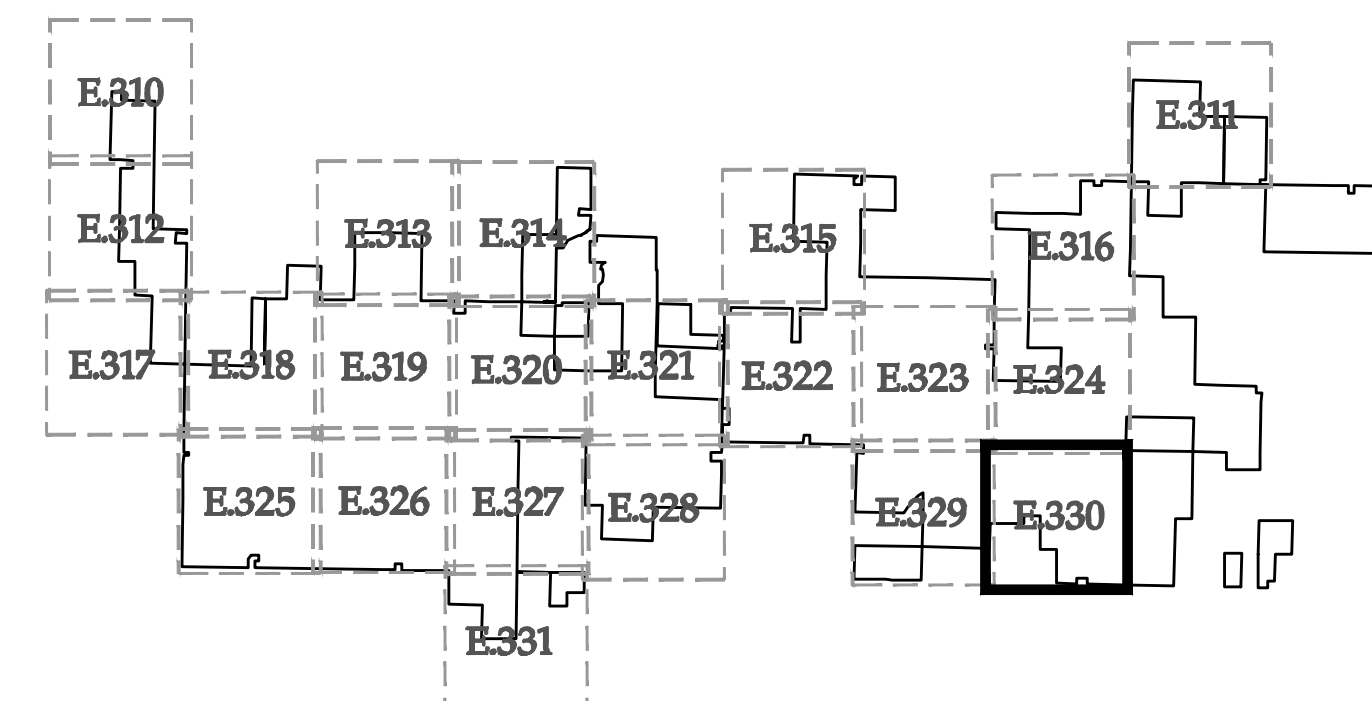
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Date: 10/19/17

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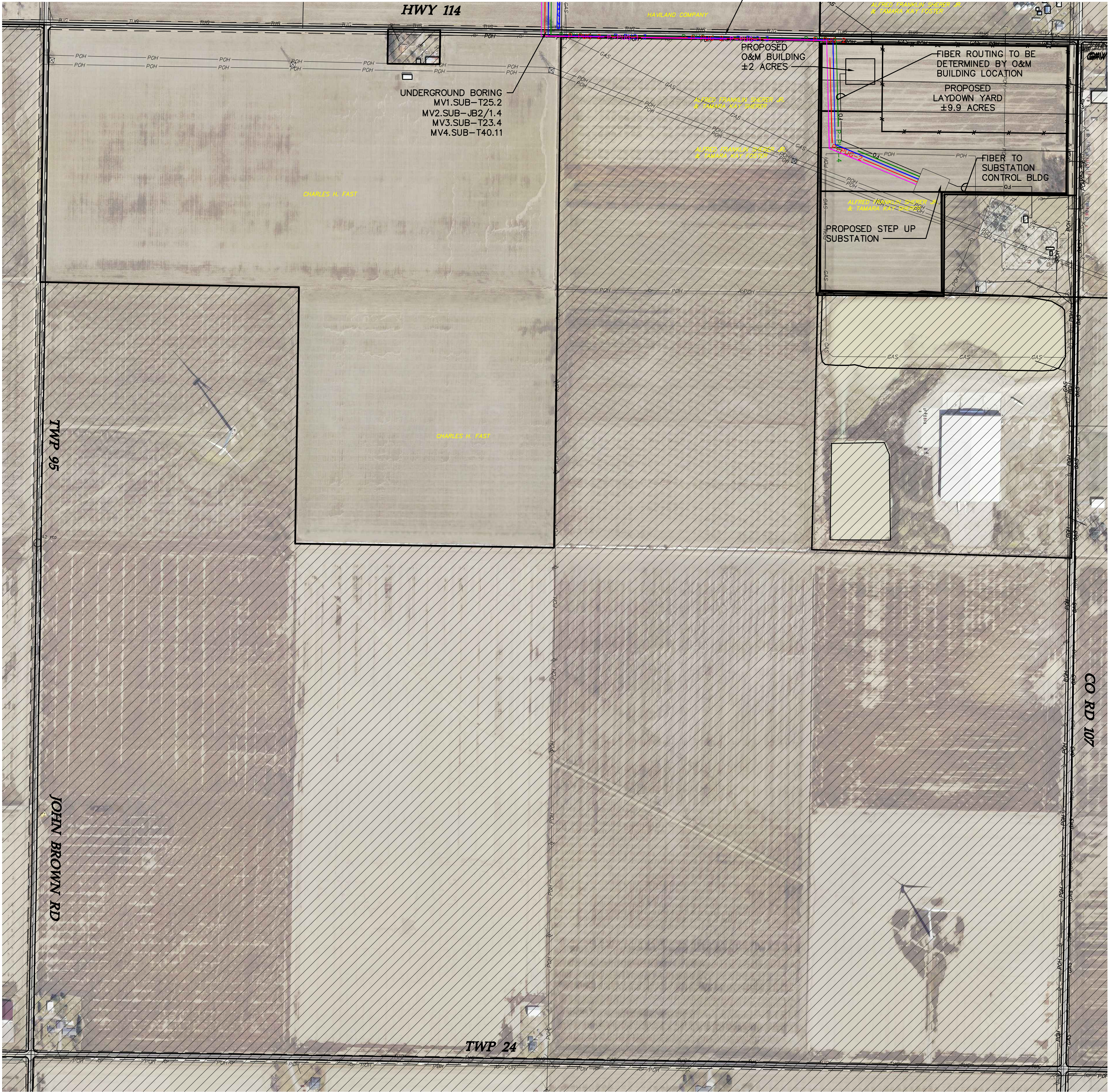
0007186_Electrical Site Plans.dwg



KEY MAP

SEE SHEET E.327

SEE E.328 FOR EASEMENT DETAILS FOR EAST TO WEST RUN



LEGEND

- TURBINE LOCATION
- TURBINE NUMBER
- PROPOSED CIRCUIT 1
- PROPOSED CIRCUIT 2
- PROPOSED CIRCUIT 3
- PROPOSED CIRCUIT 4
- DELINEATED WETLAND
- NON-PARTICIPATING PROPERTY

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Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

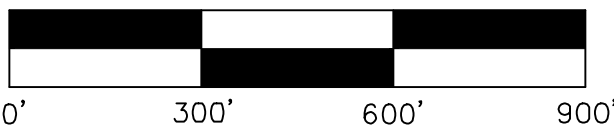
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Paulding County, Ohio

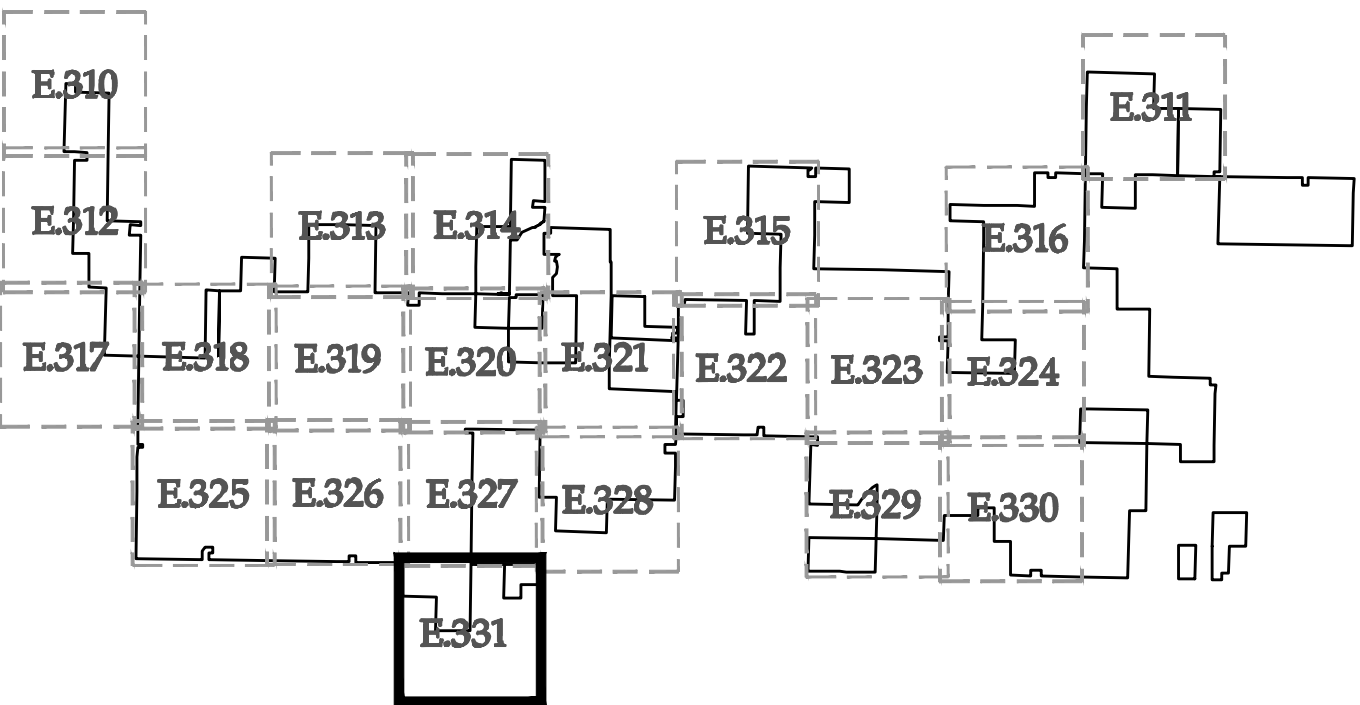
Electrical Site Plan

Not For Construction

Array Date: 09/14/2017

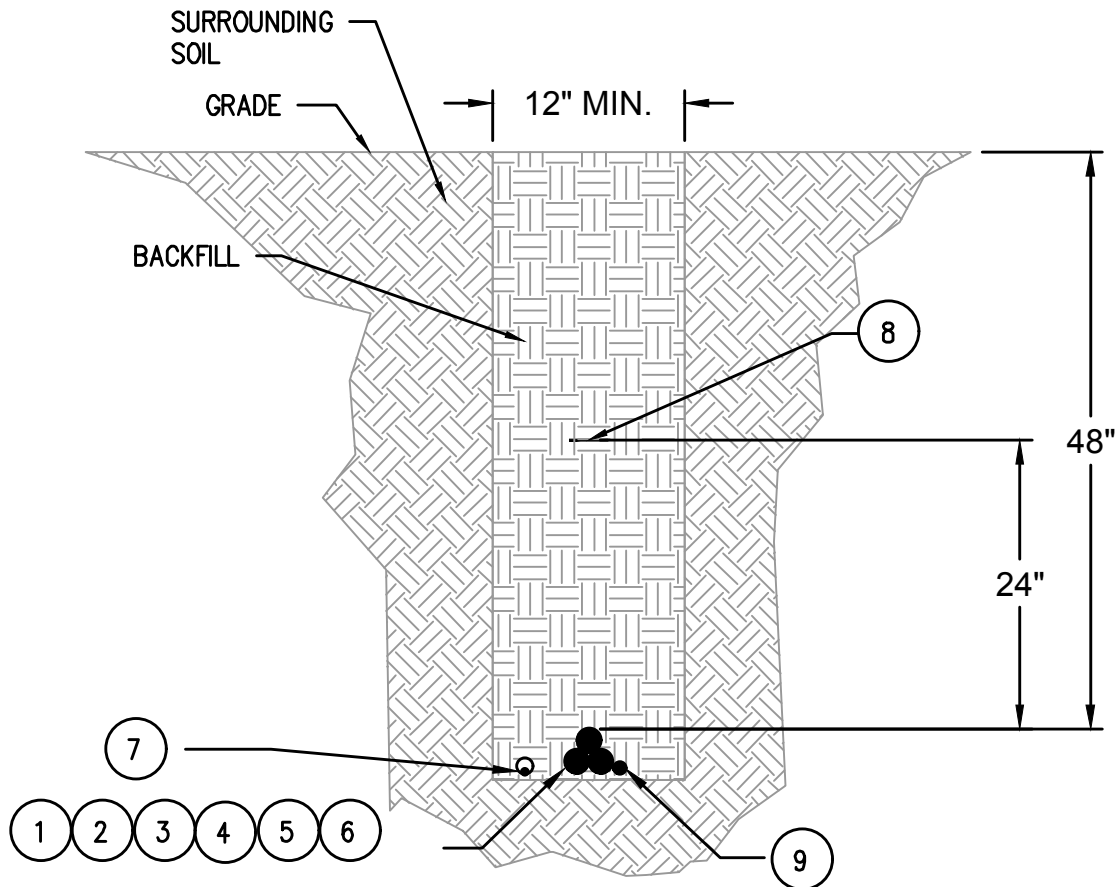
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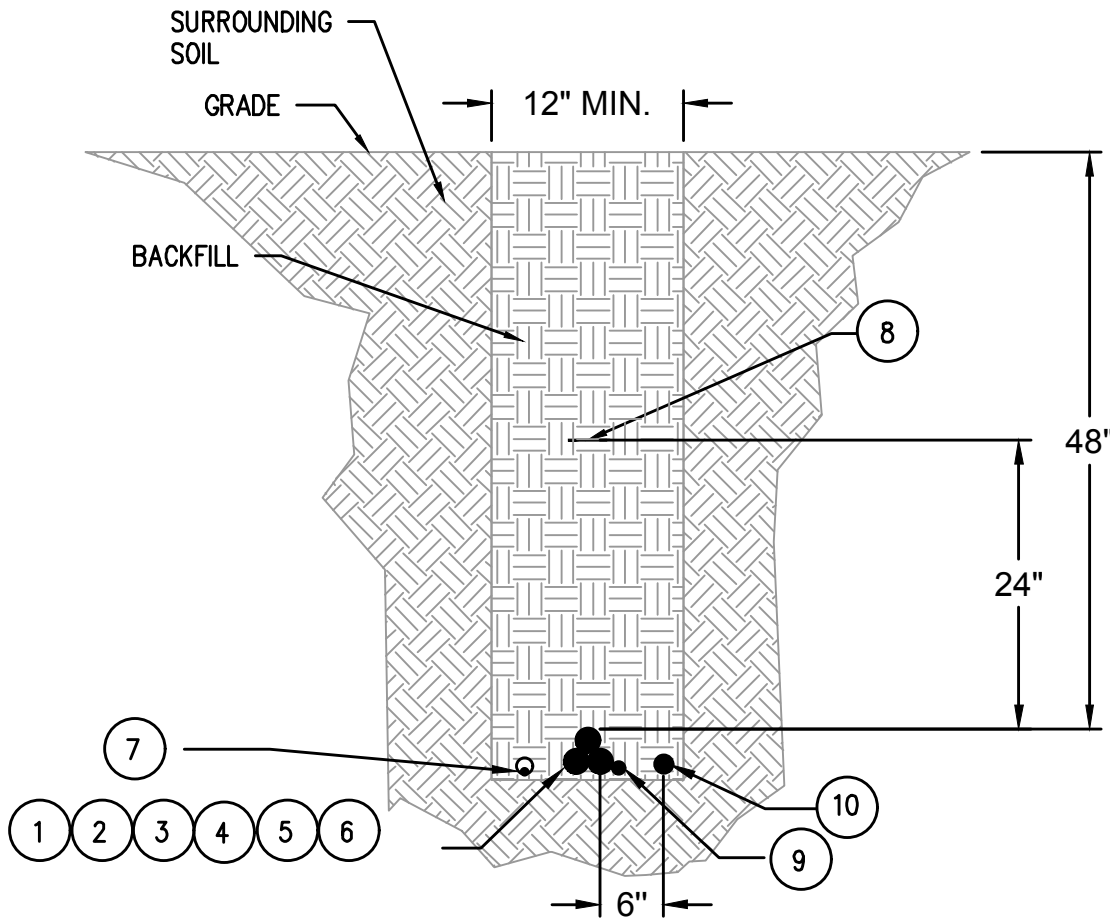


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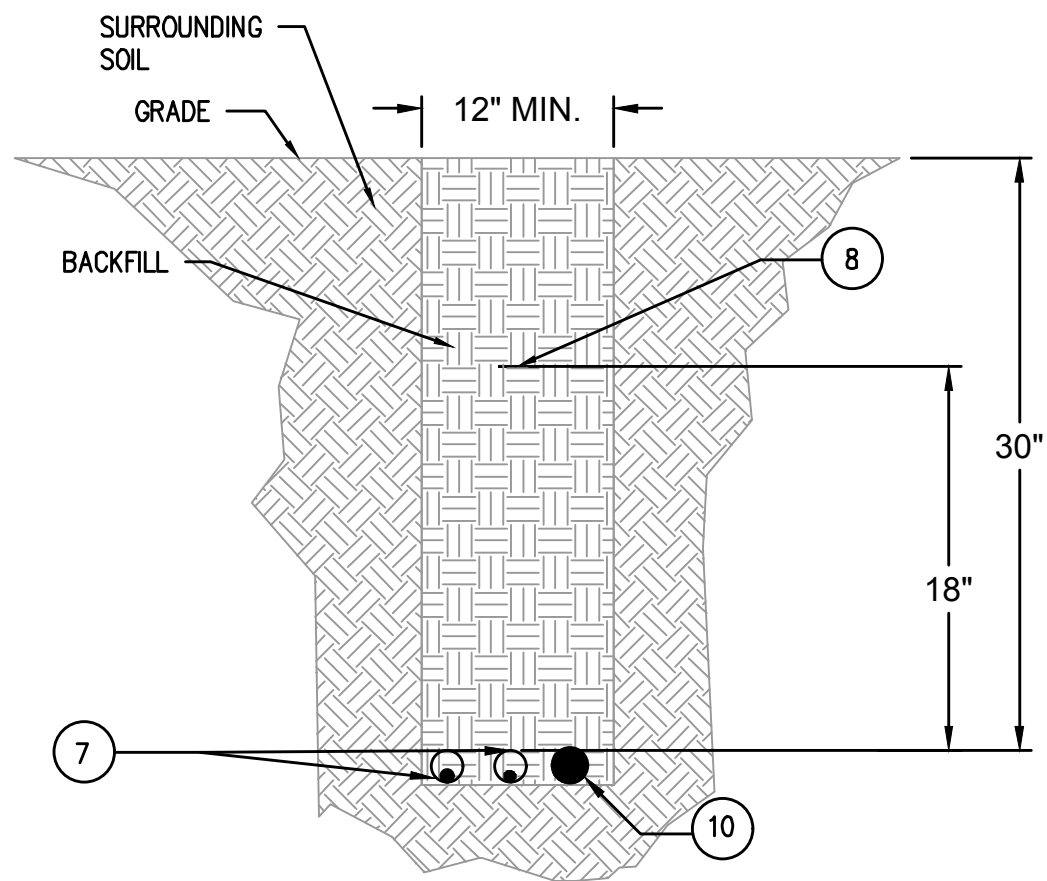
A
B
C
D
E
F
G
H



1 Typical MVAC & FO Trench
NTS



2 MVAC, FO AND LVAC TRENCH
NTS



3 FO AND LVAC TRENCH
NTS

MATERIAL LIST					
ITEM	QTY	UNIT	DESCRIPTION		
1	A/R	FT	CABLE, 35 KV MV-90 1/0 AWG AL, 2/3 CN - 11 #14 CU		
2	A/R	FT	CABLE, 35 KV MV-90 4/0 AWG AL, 1/2 CN - 16 #14 CU		
3	A/R	FT	CABLE, 35 KV MV-90 500 KCMIL AL, 1/3 CN - 16 #12 CU		
4	A/R	FT	CABLE, 35 KV MV-90 750 KCMIL AL, 1/6 CN - 19 #14 CU		
5	A/R	FT	CABLE, 35 KV MV-90 1000 KCMIL AL, 1/6 CN - 16 #12 CU		
6	A/R	FT	CABLE, 35 KV MV-90 1250 KCMIL AL, 1/6 CN - 20 #12 CU		
7	A/R	FT	CABLE, 12 COUNT SM (9/125) FIBER OPTIC, IN 1.5" INNERDUCT, NON-ARMORED		
8	A/R	FT	UG UTILITY RED WARNING TAPE		
9	A/R	FT	7#7 COPPER CLAD STEEL, 40% CONDUCTIVITY		
10	A/R	FT	CABLE, 600V, TYPE TC		

GENERAL NOTES

- EACH CIRCUIT CONSISTS OF 3-1/0 AWG AL, 4/0 AWG AL, 500 KCMIL AL, 750 KCMIL AL, 1000 KCMIL AL, OR 1250 KCMIL AL MEDIUM VOLTAGE CABLES (1 PER PHASE).
- EXCLUDE HEAVY STIFF CLAY, ROCKS, OR OTHER UNDERSTANDABLE BACKFILL WITHIN 12 INCHES OF CABLES
- POWER CABLES INSTALLED IN TRIPLEX CONFIGURATION.
- COMPACT NATIVE SOIL TO BE (TBD) STANDARD PROCTOR DENSITY FOR ALL TRENCH WORK UNLESS OTHERWISE SPECIFIED.
- NO ENGINEERED BACKFILL REQUIRED.
- WARNING TAPE TO HAVE WHITE TEXT STATING "CAUTION BURIED HIGH VOLTAGE LINE BELOW".

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Designed: JRV

Checked: AMS

Drawn: JMC, JRG

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Paulding County, Ohio

Medium Voltage Trench
Details

Not For Construction

Array Date: 09/14/2017

Date: 10/19/17

Sheet: E.400

0007186_E400_Trench_Details.dwg



ITEM	QTY	UNIT	DESCRIPTION		
1A		EA	SPLICE KIT, CABLE, 1/0 AWG AL, 345 MIL, 35 KV		
1B		EA	SPLICE KIT, CABLE, 4/0 AWG AL, 345 MIL, 35 KV		
1C		EA	SPLICE KIT, CABLE, 500 KCMIL AL, 345 MIL, 35 KV		
1D		EA	SPLICE KIT, CABLE, 750 KCMIL AL, 345 MIL, 35 KV		
1E		EA	SPLICE KIT, CABLE, 1000 KCMIL AL, 345 MIL, 35 KV		
1F		EA	SPLICE KIT, CABLE, 1250 KCMIL AL, 345 MIL, 35 KV		
2		FT	WIRE, 2 AWG, SOLID CU, BARE		
3		EA	GROUND ROD, 5/8" X 8', 13 MIL COPPER CLAD		
4		EA	COMPRESSION CONNECTOR, CN TO CN		
5		EA	COMPRESSION CONNECTOR 2 AWG CU TO 5/8" X 8' GROUND ROD		
6		EA	COMPRESSION CONNECTOR, 2 AWG TO 2 AWG CU		
7		EA	UNDERGROUND UTILITY MARKER BALL LOCATOR		
8		EA	COMPRESSION CONNECTOR, #2 AWG CU TO 7/8" CCS		
9		EA	MARKER BALL		

1. SPLICE KIT INCLUDES SPLICE BODY, SPLICE COVER AND COMPRESSION CONNECTOR.
2. PERFORM ALL SPLICES USING MANUFACTURER'S INSTRUCTIONS.
3. PLACE MARKER BALL ABOVE SPLICE AT 30" DEPTH.
4. SPLICE LOCATION TO BE COMPLETED PER GENERAL TRENCH COMPACTION SPEC.

Westwood Professional Services, Inc.

As-Built Drawing:

Prepared for:



Trishe Wind Ohio, LLC
c/o Starwood Energy Group, LLC
5 Greenwich Office Park, 2nd Floor
Greenwich, CT 06831

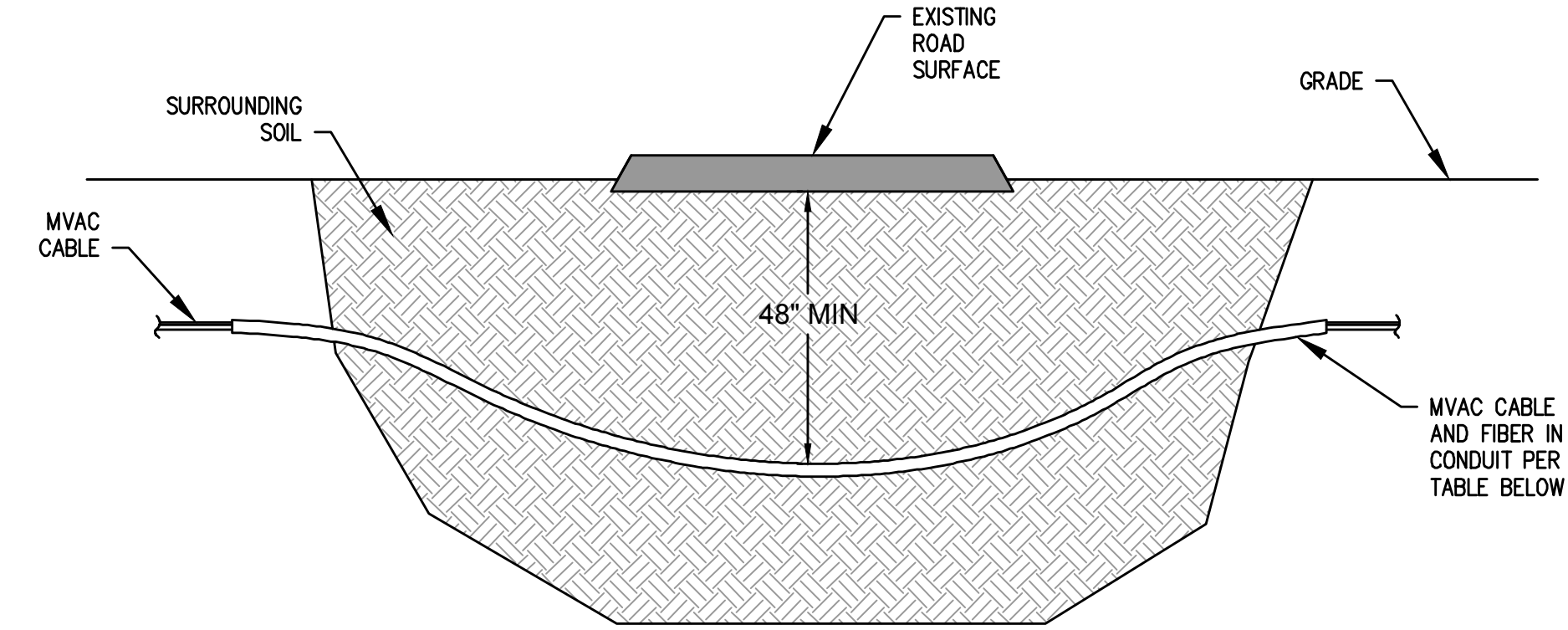
Northwest Ohio Wind Project

Paulding County, Ohio

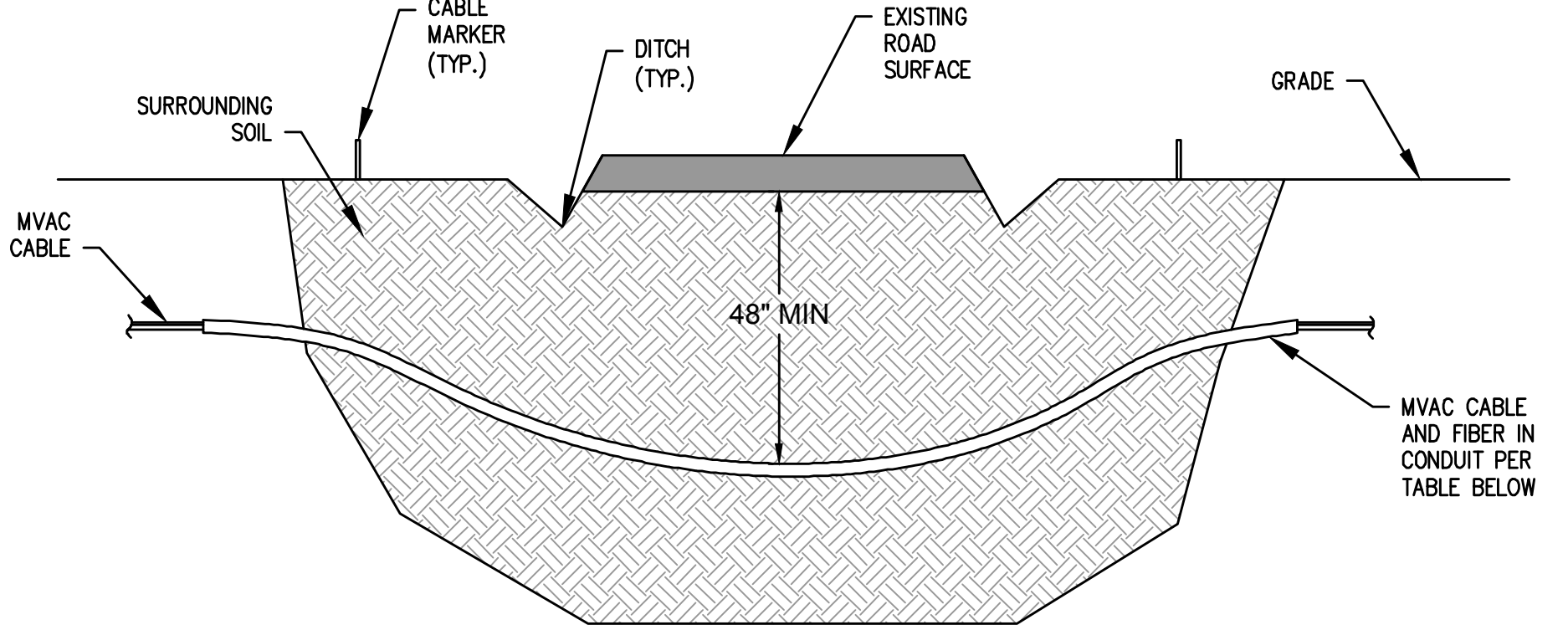
Medium Voltage Underground Cable Splice

0007186_E400_MV Details and Crossing.dwg

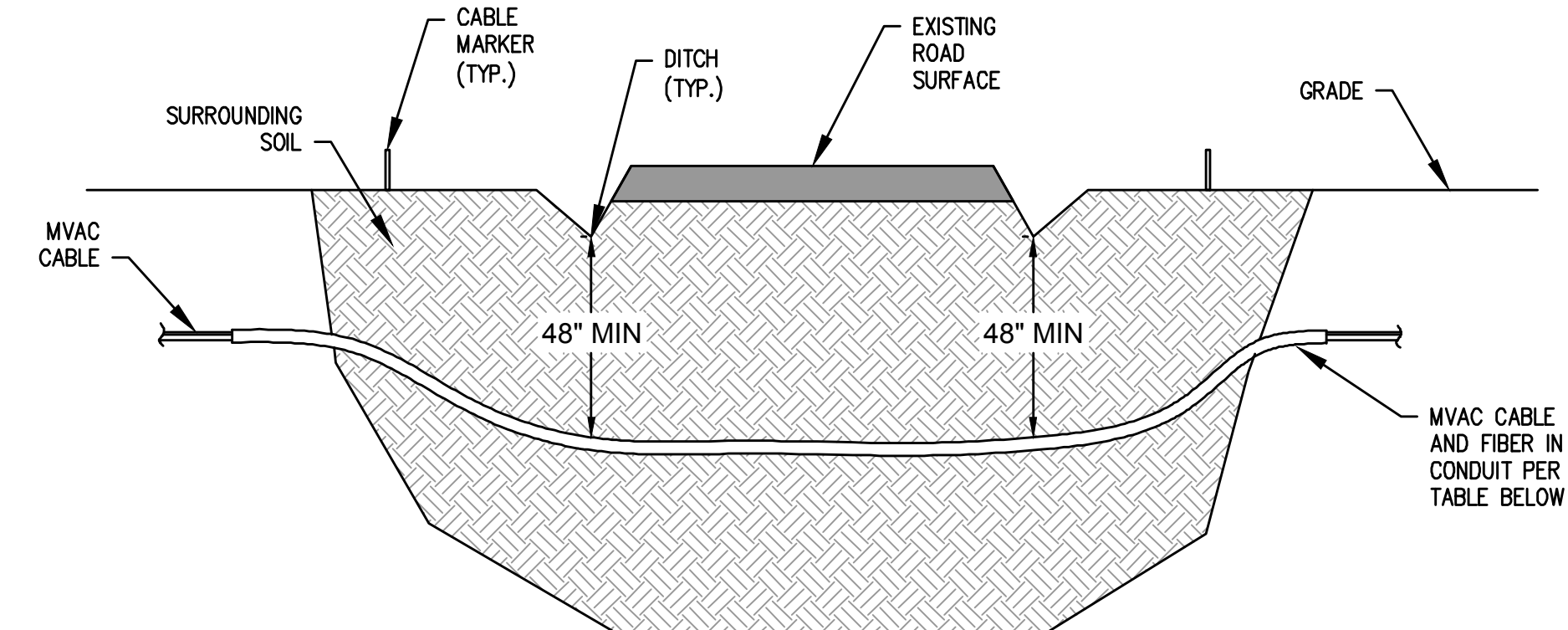
A
B
C
D
E
F
G
H



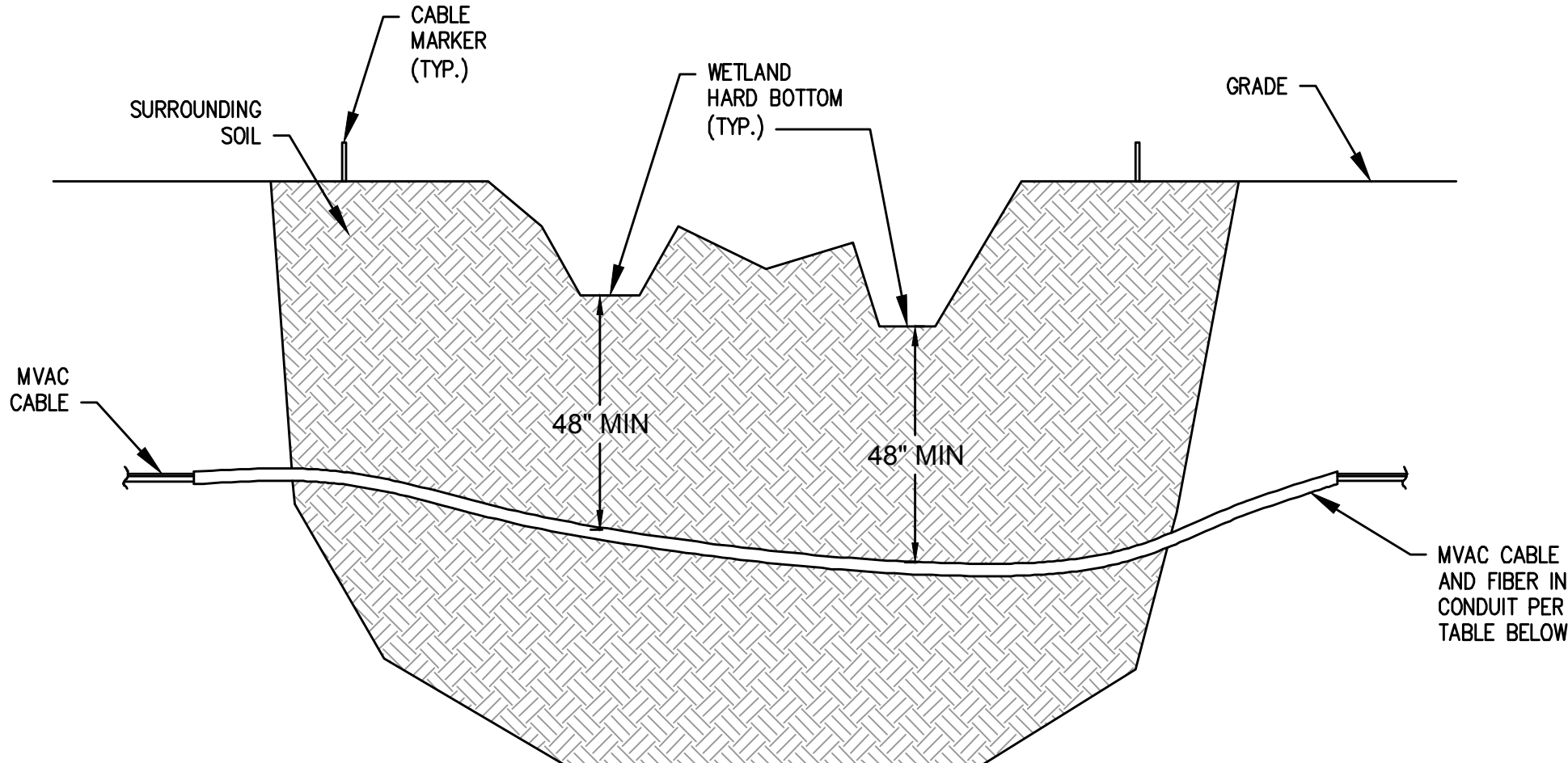
1 Typical MVAC Crossing Access Road Boring Detail NTS



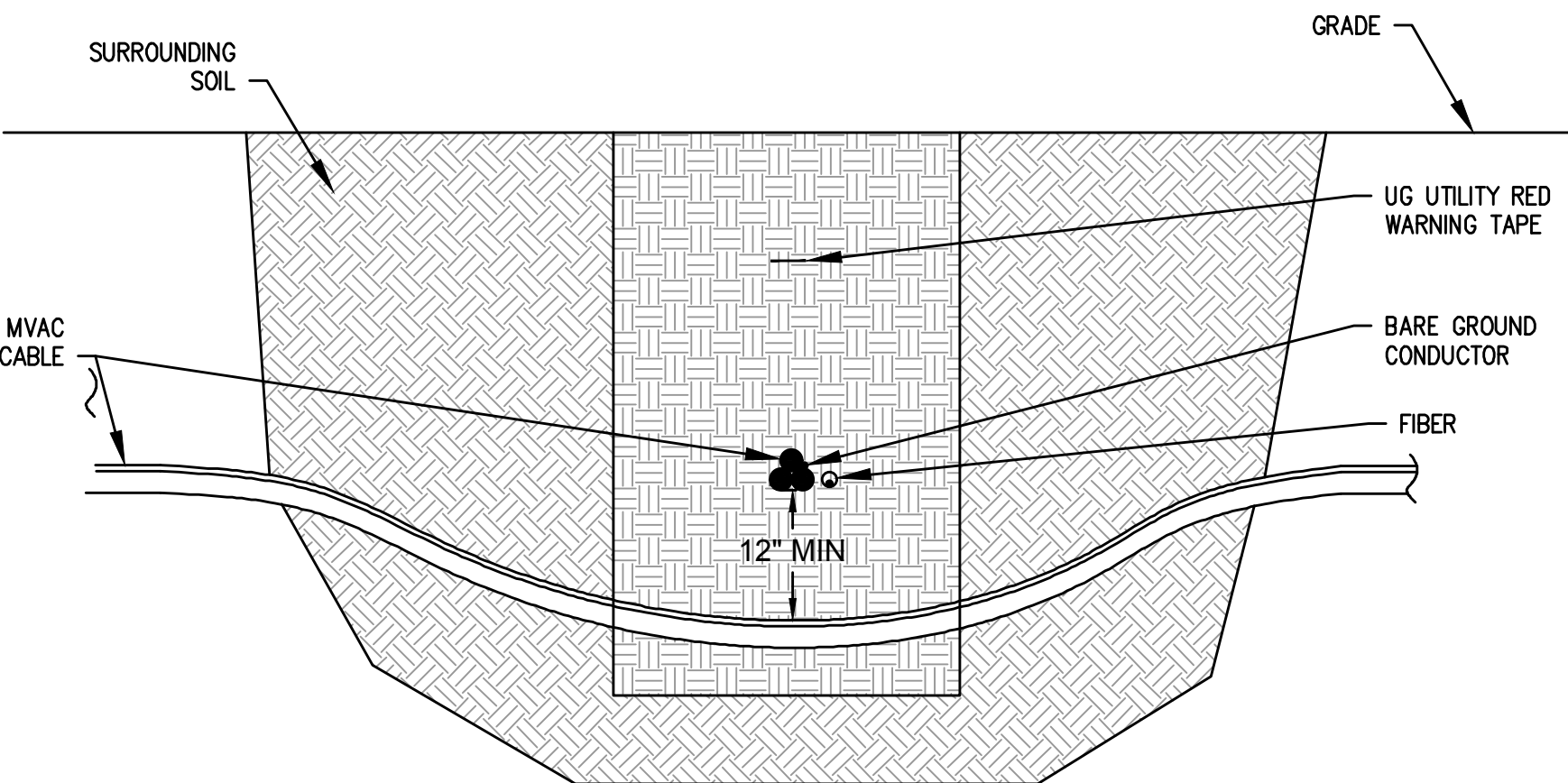
2 Typical MVAC Crossing County Road Boring Detail NTS



3 Typical MVAC Crossing State Highway Boring Detail NTS



4 Typical MVAC Crossing Wetland Boring Detail NTS



5 Typical MVAC Crossing MVAC Trench Detail NTS

CONDUIT TABLE					
MV CABLE SIZE	1/0 AWG	4/0 AWG	500 kCMIL	1000 kCMIL	1250 kCMIL
MIN. CONDUIT SIZE	6" HDPE DR17	6" HDPE DR17	8" HDPE DR17	8" HDPE DR17	8" HDPE DR17

GENERAL NOTES

1. SEAL ALL CONDUITS WITH FOAM AFTER CABLE INSTALLATION.
2. EXISTING PIPELINE LOCATIONS & DEPTHS TO BE DETERMINED BY OTHERS WITH ELECTRONIC MEANS IN ADVANCE OF CONSTRUCTION.
3. INSTALL EROSION CONTROL MEASURES BEFORE LAND DISTURBANCE BEGINS AROUND WETLANDS.
4. CROSS WETLANDS IN AREAS THAT MINIMIZE THE EXTENT AND DEGREE OF DISTURBANCE AND IS AS PERPENDICULAR TO BANKS AS POSSIBLE. FOLLOW STREAM AND WATERWAY CROSSING PERMIT REQUIREMENTS.
5. LOCATE ALL SOIL STOCKPILES OUTSIDE OF EMBANKMENTS OF WATER BODIES, DITCHES OR OTHER CONVEYANCE SYSTEMS, OR AS REQUIRED BY PERMITS.
6. DO NOT STORE EQUIPMENT SOLID WASTE, OR PETROCHEMICAL PRODUCTS BELOW THE ORDINARY HIGH WATER MARK OF ANY DITCH OR STREAM.
7. UPON COMPLETION OF THE WORK, ALL AREAS ON OR ALONG THE BANKS OF STREAMS MUST BE SEEDED TO NATIVE GRASS.

Westwood

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Tel/Fax (888) 937-5150 westwoodps.com
Westwood Professional Services, Inc.

Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

Revisions	DATE	DESCRIPTION
A	09/27/17	30% plans
B	10/03/17	Issued for Procurement - Revised
C	10/19/17	60% plans

Prepared for:



3900 E. White Ave
Clinton, IN 47842

Trishe Wind Ohio, LLC
c/o Starwood Energy Group, LLC
5 Greenwich Office Park, 2nd Floor
Greenwich, CT 06831

Northwest
Ohio Wind
Project
Paulding County, Ohio

Medium Voltage & FO
Crossing Details

Not For Construction

Array Date: 09/14/2017

Date: 10/19/17

Sheet: E.402

0007186_E400_MV Details and Crossing.dwg

GENERAL NOTES - TRANSCANADA PIPELINE CROSSINGS

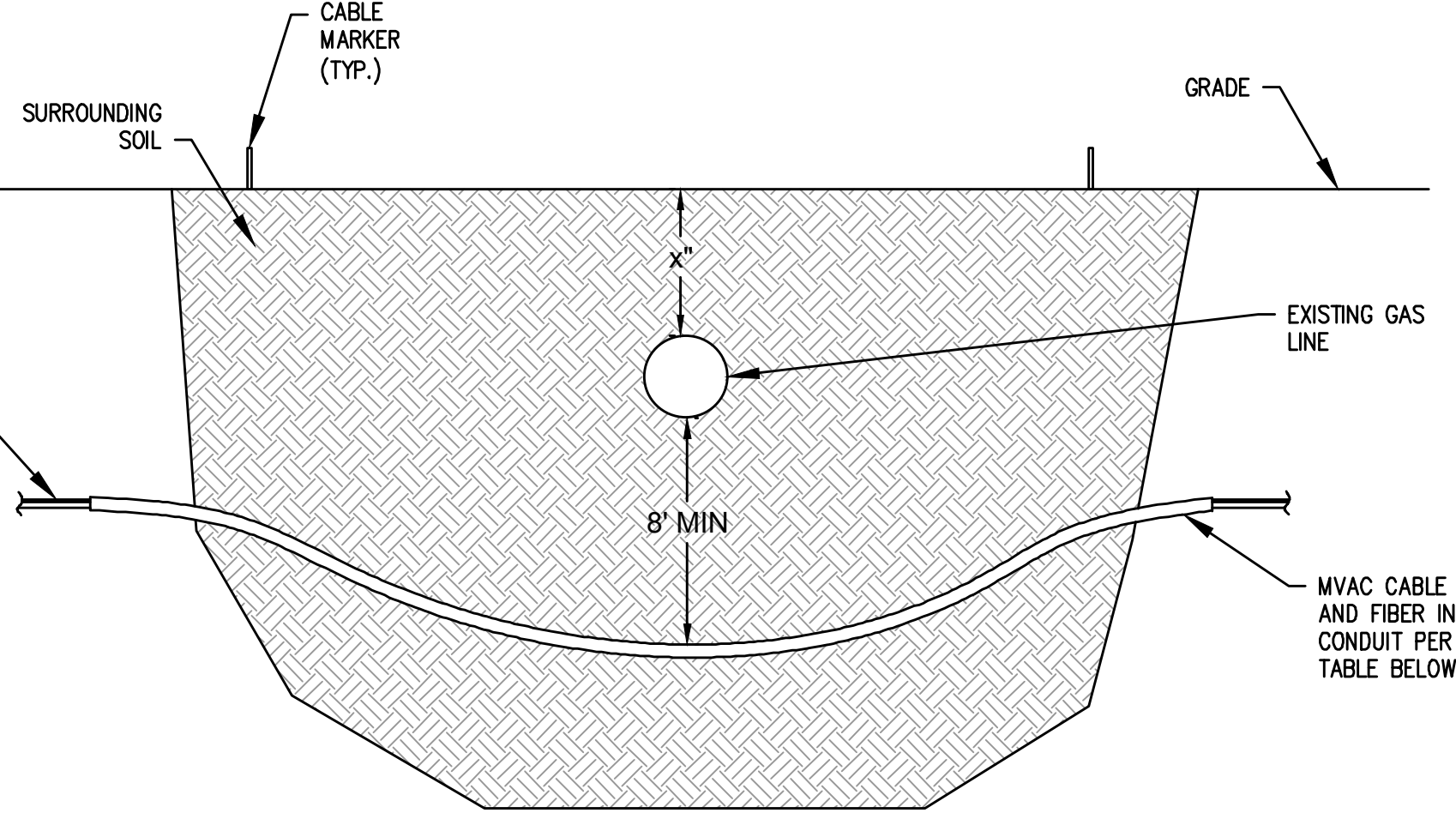
- THE TOP SIDE OF ALL TRANSCANADA PIPELINES OR BURIED FACILITIES MUST BE EXPOSED BY HAND DIGGING OR HYDROVAC.
- SIGHT HOLES MUST BE EXCAVATED AT A MIN. OF 5 FEET FROM THE SIDE (NEAREST TO THE DRILL) OF EACH BURIED FACILITY, AND PARALLEL TO THE EXISTING TRANSCANADA BURIED FACILITY.
- BORE PITS REQUIRING SETUP AND STAGING OF EQUIPMENT SHALL BE OUTSIDE OF TRANSCANADA BURIED FACILITY RIGHT OF WAY.
- THE NEW CROSSING FACILITY SHOULD MAINTAIN A CONTINUOUS DEPTH OR CONSISTENT PROFILE AND STRAIGHT HORIZONTAL ALIGNMENT ACROSS THE FULL LENGTH OF THE RIGHT OF WAY.
- CROSSING MUST PASS TRANSCANADA FACILITY WITH A MIN. CLEARANCE OF 8 FEET.
- CABLE CROSSING SHOULD BE CLEARLY AND PERMANENTLY MARKED ON EACH SIDE OF THE RIGHT OF WAY.
- NO GROUND DISTURBANCE SHALL BE MADE WITHIN TRANSCANADA REPRESENTATIVE. TRANSCANADA WILL ARRANGE FOR A REPRESENTATIVE TO BE ONSITE WHEN WORK IS OCCURRING ON OR NEAR RIGHT OF WAY OR WITHIN 25 FEET OF PIPELINES. AFTER HOURS CALL 800-447-8066.
- NOTICE OF AT LEAST 72 HOURS IN ADVANCE OF CONSTRUCTION MUST BE PROVIDED. NORTHWEST OHIO WIND PROJECT MUST CONTACT TRANSCANADA REPRESENTATIVE TODD FLORY 419-438-0208.

GENERAL NOTES - PANHANDLE PIPELINE CROSSINGS

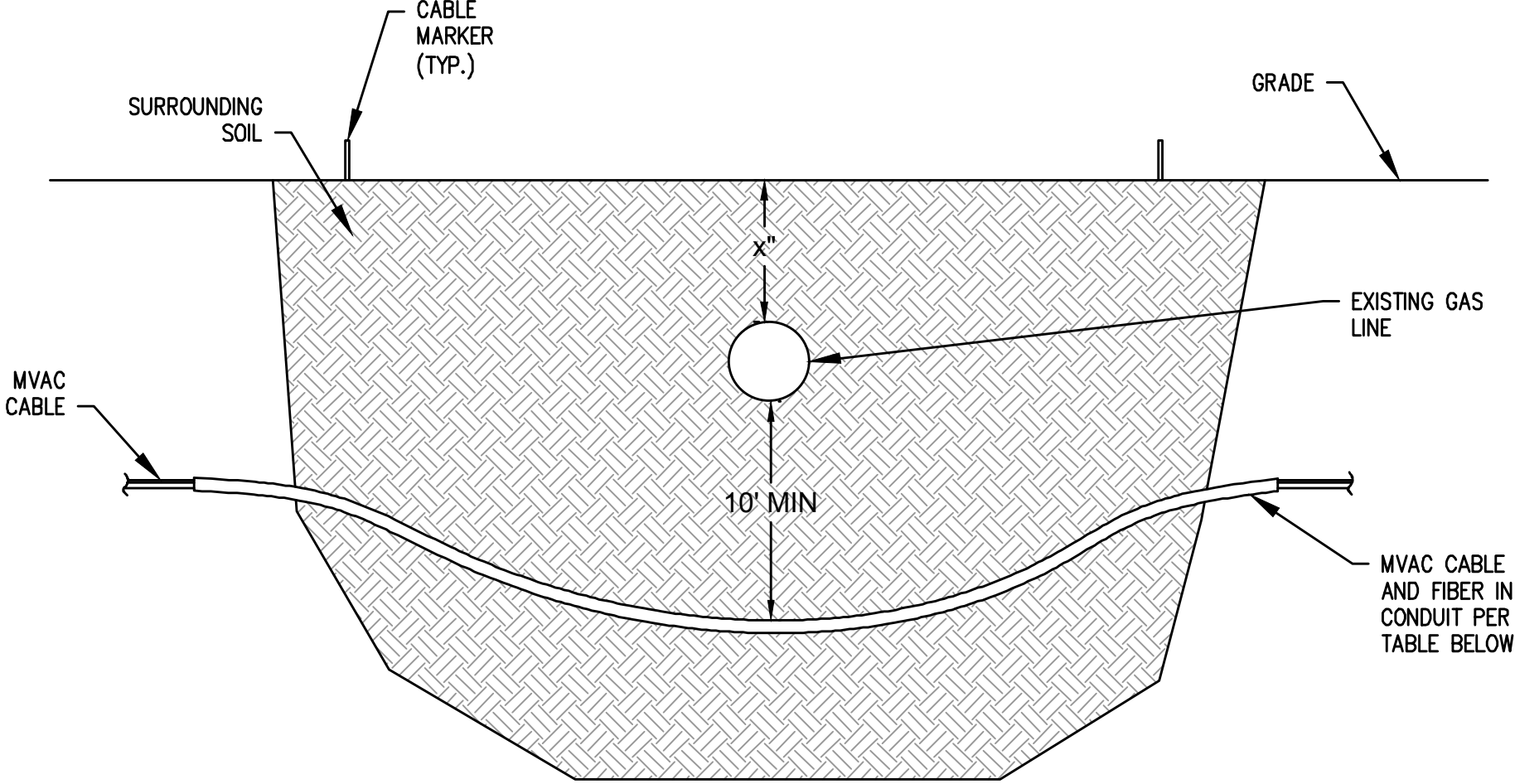
- 81(5)5281(1)(85266)1(60867&5266)7251(15)727(3)3(1)(
- A MINIMUM OF 10' CLEARANCE SHALL BE MAINTAINED FOR THE WIDTH OF THE PIPELINE RIGHT OF WAY.
- POTHOLES SHALL BE EXCAVATED ON THE APPROACH SIDE OF THE BORE. THE DEPTH OF THE POTHOLE SHALL BE TO A MINIMUM OF 2' BELOW THE BOTTOM OF THE PIPELINE AND IN THE DIRECT PATH OF THE APPROACHING BORE TOOL TO ALLOW VISUAL CONFIRMATION THAT THE BORE TOOL DOES NOT IMPACT THE PIPELINE.
- POWER LINE CROSSINGS MUST BE CLEARLY MARKED AND IDENTIFIED ON EACH SIDE OF THE PIPELINE EASEMENT.

GENERAL NOTES - DOMINION PIPELINE CROSSINGS

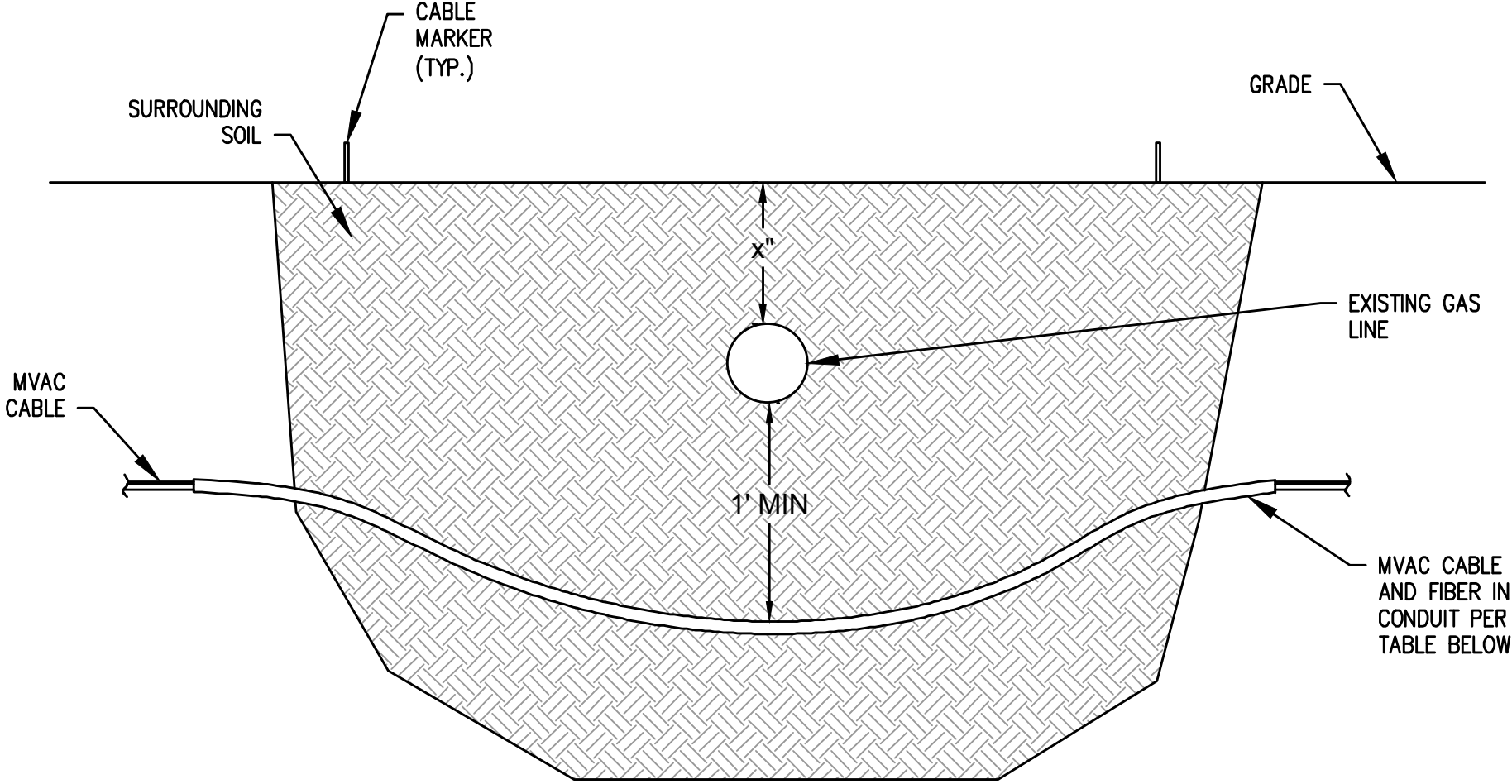
- ALL BORING MUST MAINTAIN A MIN. OF 1 FOOT CLEARANCE AND POTHOLED.



1 TransCanada MVAC Crossing Gas Pipeline Boring Detail NTS



2 Panhandle MVAC Crossing Gas Pipeline Boring Detail NTS



3 Dominion MVAC Crossing Gas Pipeline Boring Detail NTS

GENERAL NOTES

- SEAL ALL CONDUITS WITH FOAM AFTER CABLE INSTALLATION. SEE SHEET E500 FOR MORE INFORMATION.
- PIPE LINE UTILITY MUST BE CONTACTED AT LEAST 72 HOURS PRIOR TO CONSTRUCTION UNDER MEANS IN ADVANCE OF CONSTRUCTION.
- EXISTING PIPELINE LOCATIONS & DEPTHS TO BE DETERMINED BY OTHERS WITH ELECTRONIC MEANS IN ADVANCE OF CONSTRUCTION.
- INSTALL EROSION CONTROL MEASURES BEFORE LAND DISTURBANCE BEGINS AROUND WETLANDS.
- LOCATE ALL SOIL STOCKPILES OUTSIDE OF EMBANKMENTS OF WATER BODIES, DITCHES OR OTHER CONVEYANCE SYSTEMS, OR AS REQUIRED BY PERMITS.
- DO NOT STORE EQUIPMENT SOLID WASTE, OR PETROCHEMICAL PRODUCTS BELOW THE ORDINARY HIGH WATER MARK OF ANY DITCH OR STREAM.
- UPON COMPLETION OF THE WORK, ALL AREAS ON OR ALONG THE BANKS OF STREAMS MUST BE SEEDED TO NATIVE GRASS.

Westwood

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Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

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Prepared for:



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5 Greenwich Office Park, 2nd Floor
Greenwich, CT 06831

Northwest Ohio Wind Project

Paulding County, Ohio

Medium Voltage & FO Crossing Details (2)

Not For Construction

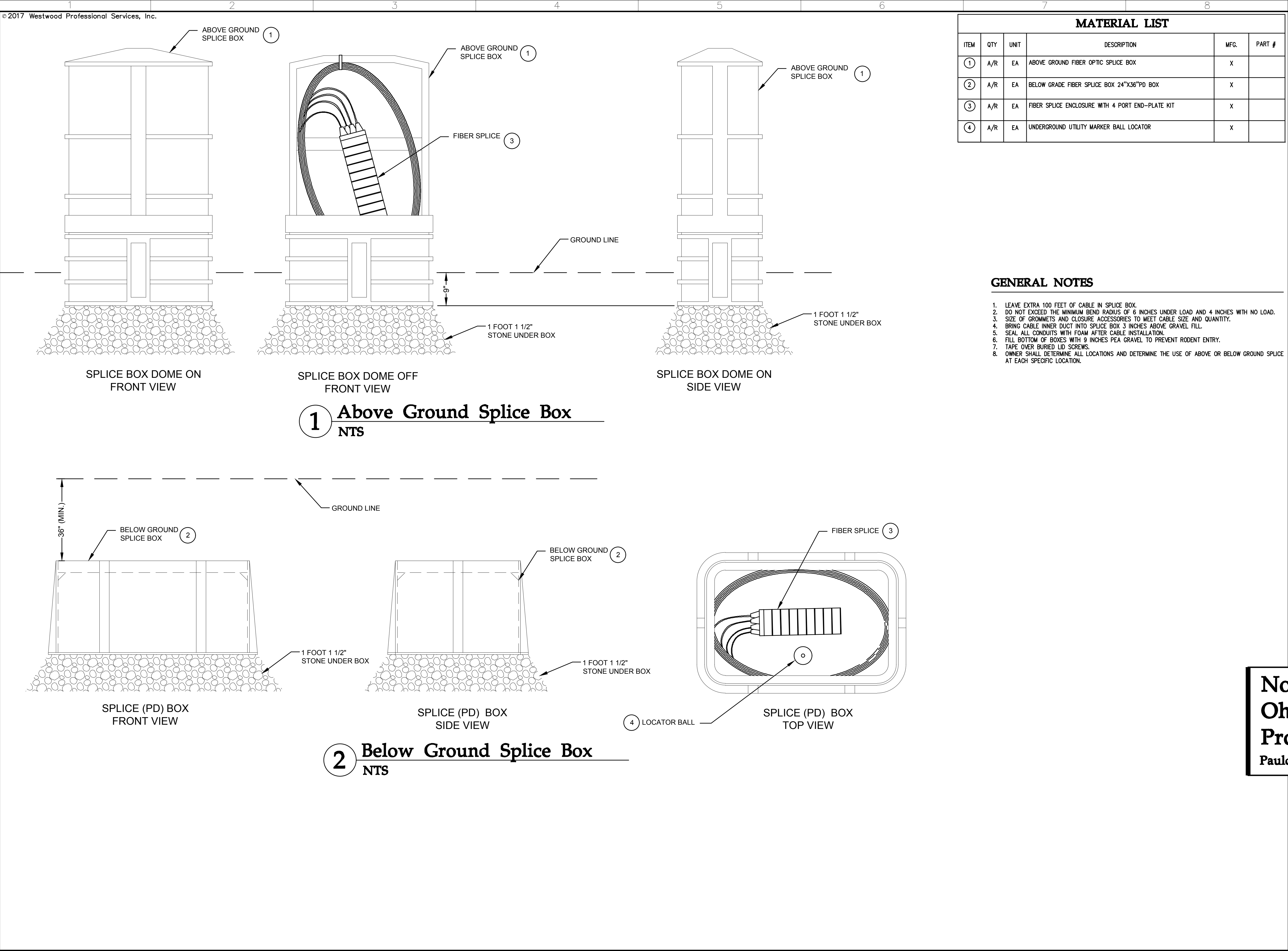
Array Date: 09/14/2017

Date: 10/19/17

Sheet: E403

0007186_E400_MV Details and Crossing.dwg

CONDUIT TABLE					
MV CABLE SIZE	1/0 AWG	4/0 AWG	500 kCMIL	1000 kCMIL	1250 kCMIL
MIN. CONDUIT SIZE	6" HDPE DR17	6" HDPE DR17	8" HDPE DR17	8" HDPE DR17	8" HDPE DR17



MATERIAL LIST					
ITEM	QTY	UNIT	DESCRIPTION	MFG.	PART #
1	A/R	EA	ABOVE GROUND FIBER OPTIC SPLICE BOX	X	
2	A/R	EA	BELOW GRADE FIBER SPLICE BOX 24"x36"PD BOX	X	
3	A/R	EA	FIBER SPLICE ENCLOSURE WITH 4 PORT END-PLATE KIT	X	
4	A/R	EA	UNDERGROUND UTILITY MARKER BALL LOCATOR	X	

GENERAL NOTES

1. LEAVE EXTRA 100 FEET OF CABLE IN SPLICE BOX.
2. DO NOT EXCEED THE MINIMUM BEND RADIUS OF 6 INCHES UNDER LOAD AND 4 INCHES WITH NO LOAD.
3. SIZE OF GROMMETS AND CLOSURE ACCESSORIES TO MEET CABLE SIZE AND QUANTITY.
4. BRING CABLE INNER DUCT INTO SPLICE BOX 3 INCHES ABOVE GRAVEL FILL.
5. SEAL ALL CONDUITS WITH FOAM AFTER CABLE INSTALLATION.
6. FILL BOTTOM OF BOXES WITH 9 INCHES PEA GRAVEL TO PREVENT RODENT ENTRY.
7. TAPE OVER BURIED LID SCREWS.
8. OWNER SHALL DETERMINE ALL LOCATIONS AND DETERMINE THE USE OF ABOVE OR BELOW GROUND SPLICE AT EACH SPECIFIC LOCATION.

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Northwest
Ohio Wind
Project

Paulding County, Ohio

Fiber Splice Box

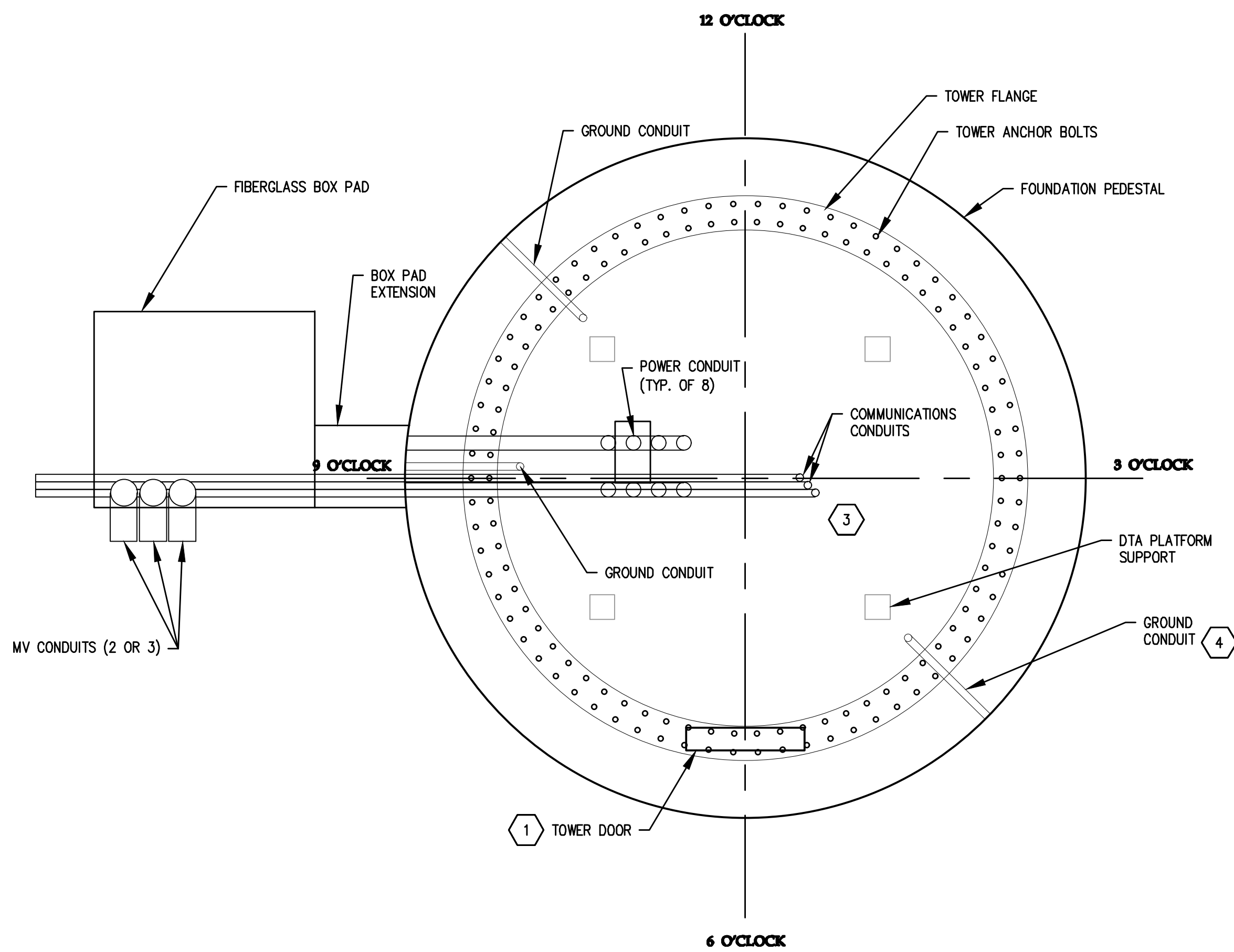
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Array Date: 09/14/2017

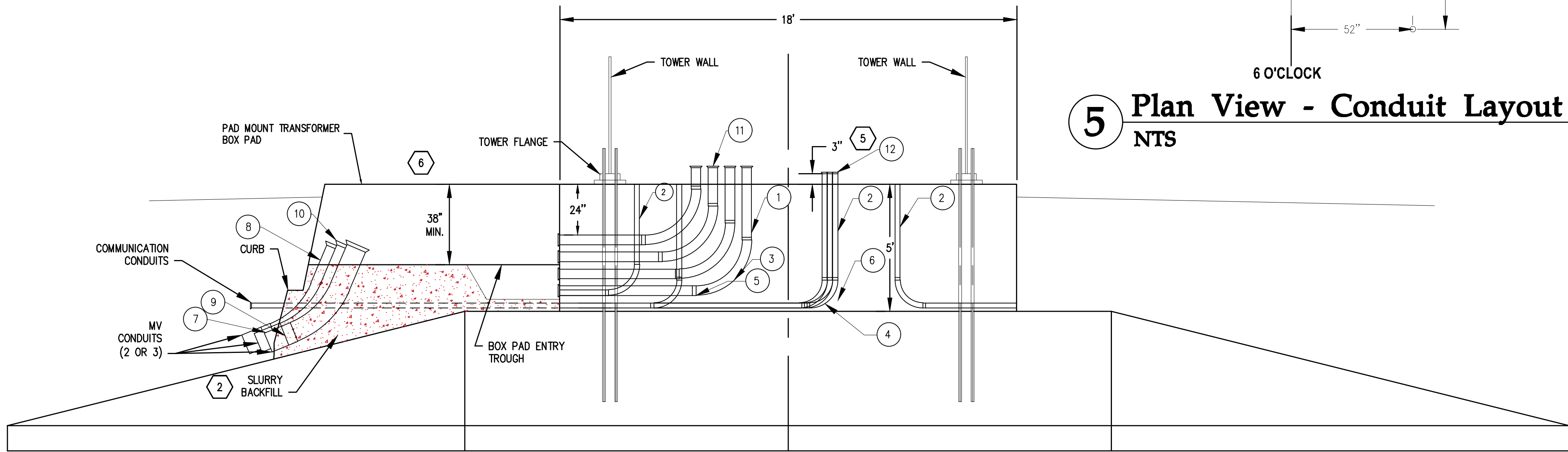
Date: 10/19/17

Sheet: E.404

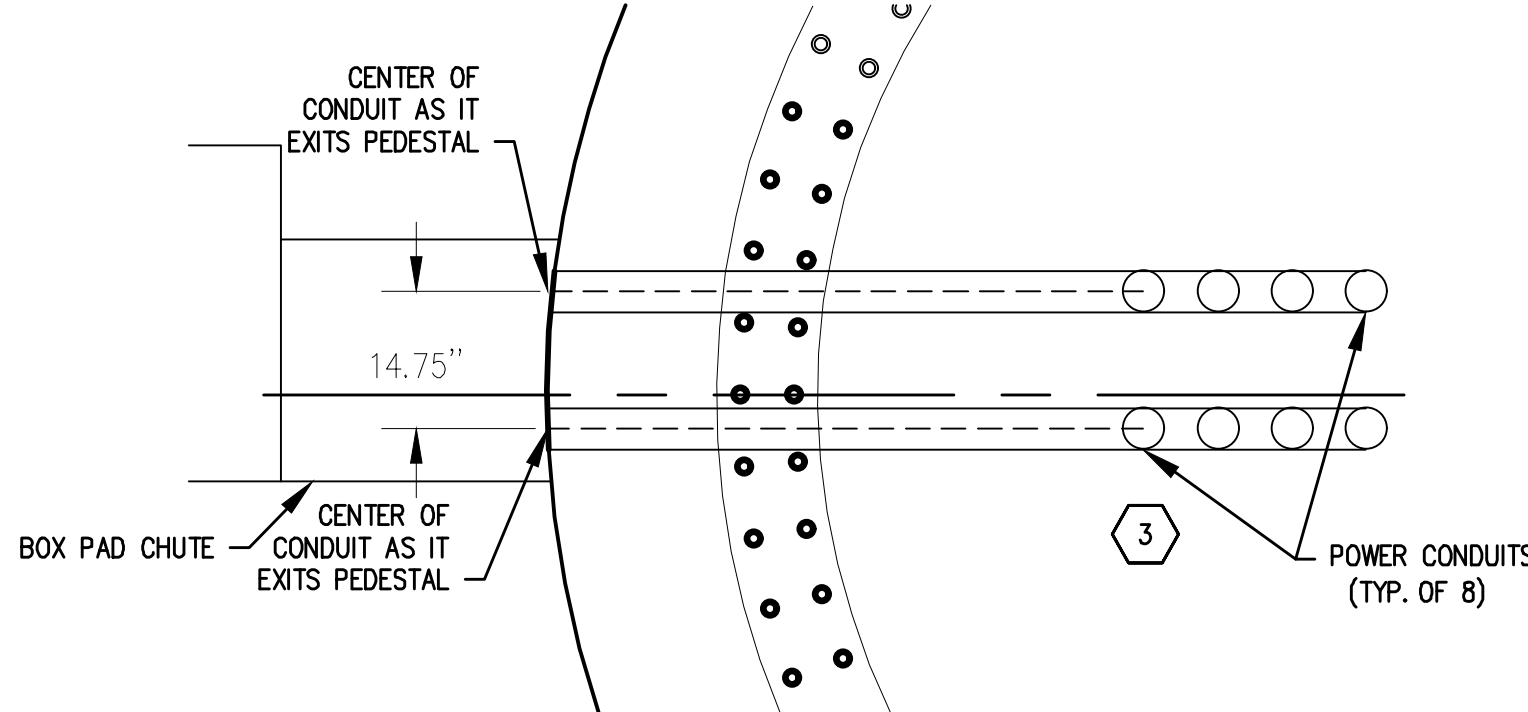
0007186_E400_MV Details and Crossing.dwg



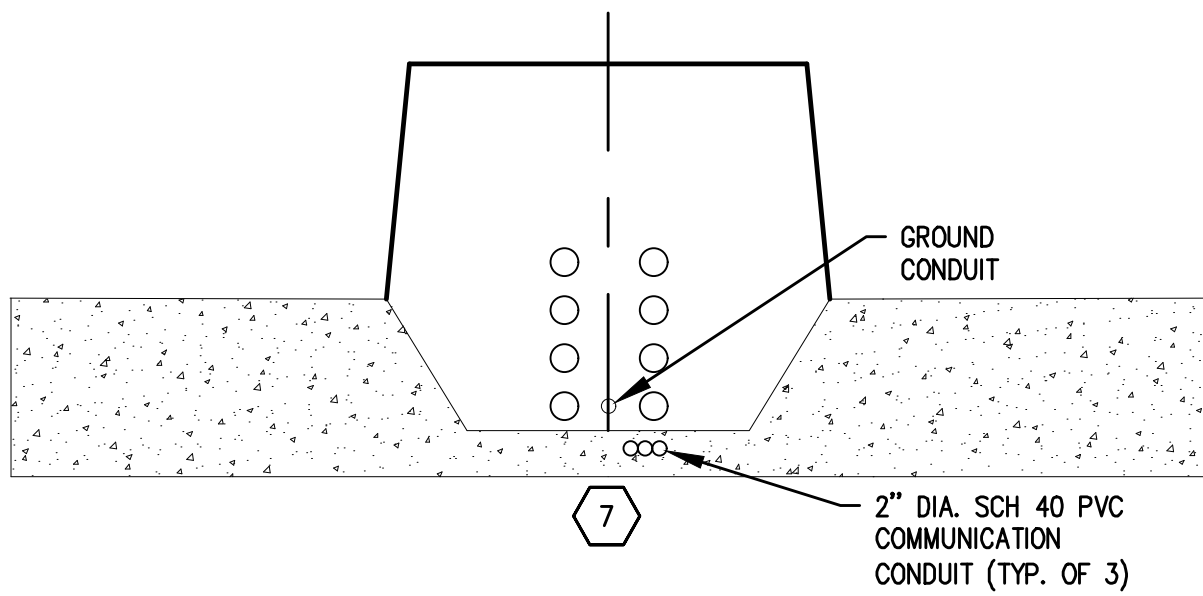
1 Plan View - Turbine Conduits
NTS



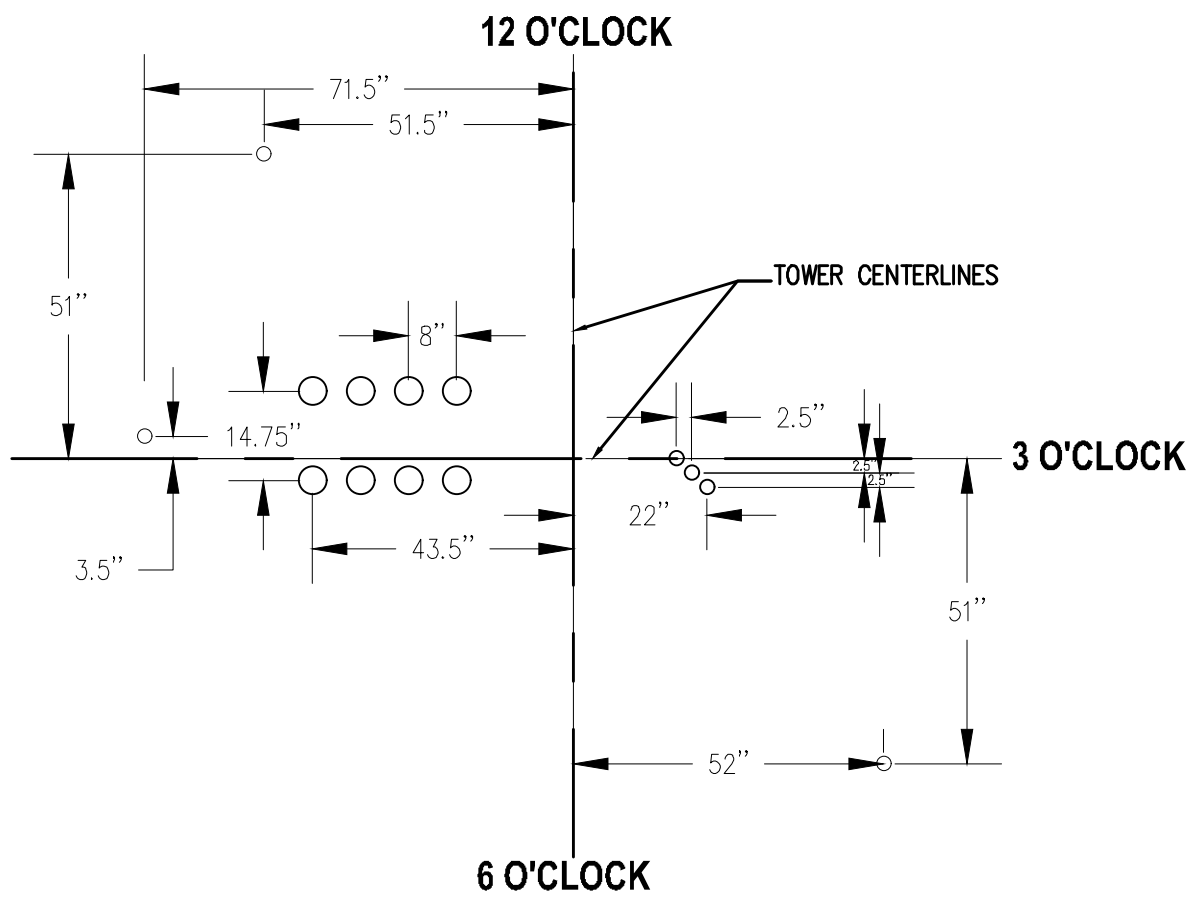
2 Section View - Foundation Elevation
NTS



3 Power Conduit Exit From Pedestal
NTS



4 Power Conduit Exit From Pedestal
NTS



5 Plan View - Conduit Layout
NTS

MATERIAL LIST

ITEM	QTY	UNITS	DESCRIPTION		
1	55	FT	4" PVC CONDUIT SCH. 40		
2	100 OR 75	FT	2" PVC CONDUIT SCH. 40		
3	8	EA	4" PVC CONDUIT SCH. 40, 90 DEGREE SWEEP, 24" RADIUS		
4	5 OR 6	EA	2" PVC CONDUIT SCH. 40, 90 DEGREE SWEEP, 12" RADIUS		
5	16	EA	4" PVC COUPLING		
6	10 OR 12	EA	2" PVC COUPLING		
7	12	FT	8" PVC CONDUIT SCH. 40		
8	3	EA	8" PVC CONDUIT SCH. 40, 45 DEGREE SWEEP, 36" RADIUS		
9	2 OR 3	EA	8" PVC COUPLING		
10	2 OR 3	EA	8" PVC BELL END, SCH. 40		
11	16	EA	4" PVC BELL END, SCH. 40		
12	6	EA	2" PVC BELL END, SCH. 40		

GENERAL NOTES

1. PREVENT CONCRETE FROM ENTERING ALL OPEN CONDUIT ENDS BY INSTALLATION OF CAPS.
2. ALL SPARE CONDUITS SHOULD BE SEALED WITH FLAME RETARDED FOAM AND CAPPED. ALL FLOATING CONDUCTORS IN CONDUIT SHALL BE ENCAPSULATED IN FLAME RETARDANT FOAM TO PREVENT RODENT AND MOISTURE DAMAGE. FOAM SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER.
3. ALL POWER AND CONTROL CONDUIT ENDS TO BE FITTED WITH BELL ENDS.
4. LOW VOLTAGE POWER FROM PAD MOUNT TRANSFORMER TO MET STATION AT WTG-04 ONLY.

KEY NOTES

- 1 CENTER OF TOWER DOOR AT 6 O'CLOCK POSITION (FACING ACCESS ROAD).
- 2 SLURRY BACKFILL - 2000 PSI, 8 INCH SLUMP. FILL TO 2 INCHES ABOVE BOX PAD FLANGE.
- 3 RUN ONE SET PHASE CONDUCTORS A,B,C, AND NEUTRAL IN EACH OF THE EIGHT 4 INCH CONDUITS.
- 4 SEE TURBINE GROUNDING SHEET E.411 FOR GROUNDING INSTRUCTIONS.
- 5 THE CONDUITS SHALL BE TRIMMED TO WITHIN 3 INCH OF THE TOP OF THE CONCRETE SURFACE NO LATER THAN 2 DAYS AFTER THE INSTALLATIONS OF CONCRETE. DEBUR THE ENDS OF THE CONDUIT. SLOPE ALL CONDUIT TOWARDS THE OUTSIDE OF THE FOUNDATION AT APPROXIMATELY A 2% SLOPE.
- 6 THE TRANSFORMER BOX PAD SHALL BE SET SO THAT THE FACE OF THE EXTENSION IS FLUSH WITH THE TOP EDGE OF THE PEDESTAL.
- 7 COMMUNICATION CONDUITS INSTALLED IN SLURRY BACKFILL. TWO COMMUNICATION CONDUITS TYPICALLY REQUIRED. THREE CONDUITS REQUIRED AT TURBINES 07, 15, 22, 25, 28, 33, 34 AND 49.

Westwood

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Clinton, IN 47842

Trishe Wind Ohio, LLC
c/o Starwood Energy Group, LLC
5 Greenwich Office Park, 2nd Floor
Greenwich, CT 06831

**Northwest
Ohio Wind
Project**
Paulding County, Ohio

**Below Grade Work GE
2.5-116 Turbines**

Not For Construction

Array Date: 09/14/2017

Date: 10/19/17

Sheet: E.410

0007186_E400_Turbine Conduit and Gnd.dwg

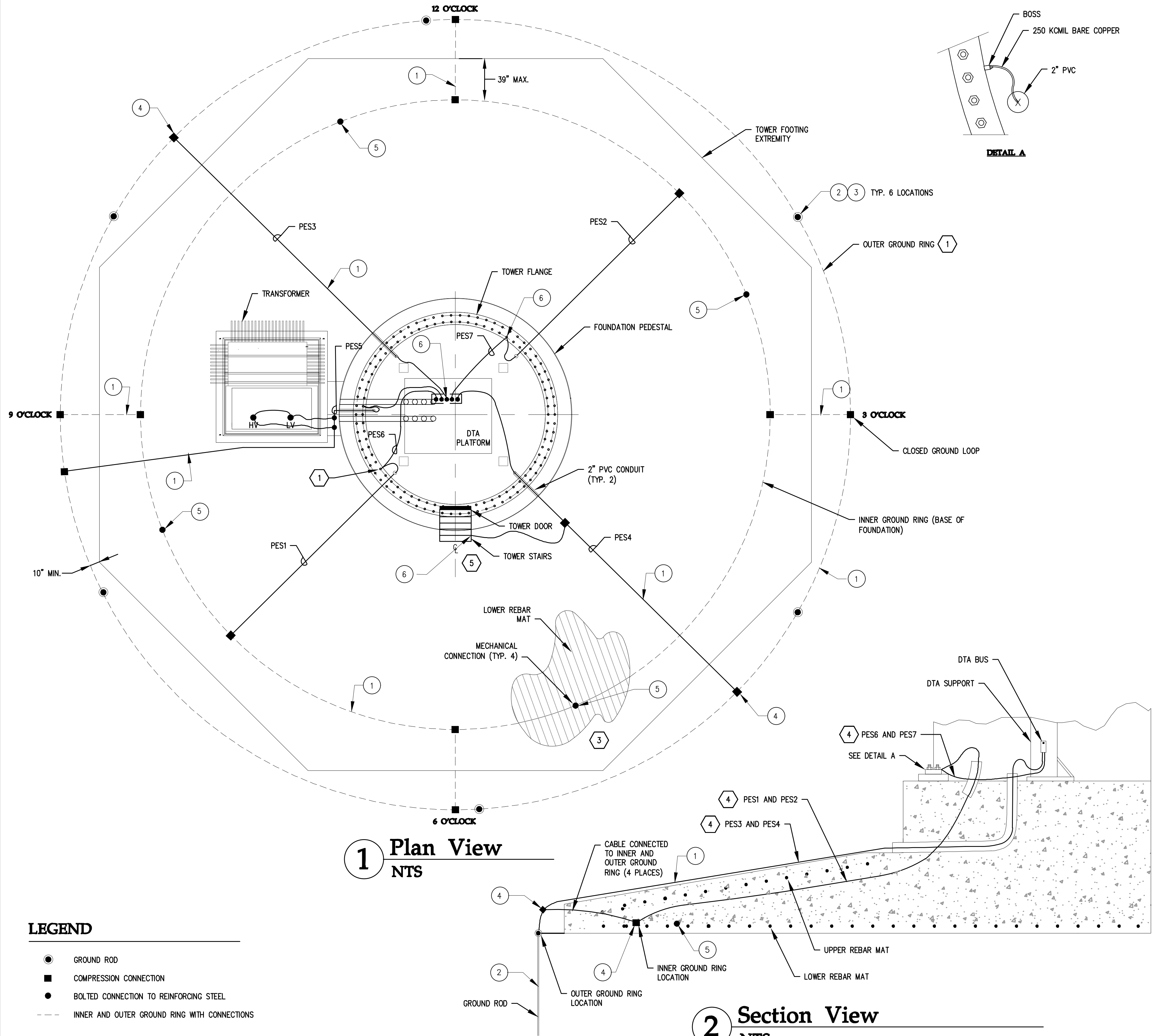
MATERIAL LIST				
ITEM	QTY	UNITS	DESCRIPTION	
1	590	FT	4/0 AWG BARE CU STR. CABLE, S.D.	
2	6	EA	GROUND ROD, 5/8" X 8', 13 MIL CU CLAD	
3	6	EA	COMPRESSION CONNECTOR 5/8" CU ROD TO 4/0 AWG BARE CU	
4	16	EA	COMPRESSION CONNECTOR 4/0 AWG BARE CU TO 4/0 AWG BARE CU	
5	4	EA	BOLTED CONNECTOR, #10 REBAR TO 4/0 AWG BARE CU	
6	8	EA	COMPRESSION LUG, 4/0 AWG CU TO 1 HOLE	

GENERAL NOTES

- PROVIDE SUFFICIENT CONDUCTOR LENGTH SO CONNECTORS CAN BE MADE WITH SLACK.
- INSTALL GROUND GRID AS SHOWN. OUTER GROUND RING TO BE INSTALLED AT BASE OF FOUNDATION. PROVIDE EXOTHERMIC WELD CONNECTIONS FOR ALL GROUND ROD AND GROUNDING CABLE CONNECTIONS EXCEPT WHERE NOTED.
- AFTER INSTALLATION OF GRID AND PRIOR TO CONNECTION OF COLLECTOR CABLES, MEASURE GROUND/EARTH GRID RESISTANCE. IF RESISTANCE IS GREATER THAN 10 OHMS, INSTALL ADDITIONAL GROUND GRID IN 10 FEET SUCCESSIVE STEPS CONCENTRIC FROM PREVIOUS GRID. CONNECT TO PREVIOUS SECTION AT FOUR LOCATIONS AND INSTALL FOUR GROUND RODS WITH EACH SECTION.
- REMOVE PAINT COATINGS, IF PRESENT, AT ALL GROUND CONNECTION LOCATIONS.
- CONDUIT STUB OUTS NEAR TOWER FLANGE TO BE 6 INCH FROM FLANGE (EDGE TO EDGE).
- GROUND CABLE IS PERMITTED TO LAY ON FOUNDATION.

KEY NOTES

- GROUNDING CABLE CONNECTING INNER GROUND LOOP TO INTERIOR TOWER FLANGE - TYPICAL 2 LOCATIONS (SEE DETAIL A).
- ALL GROUNDING CABLES SHALL BE 250 KCMIL BARE COPPER.
- MECHANICALLY BOLT INNER GROUNDING RING TO BOTTOM REINFORCING STEEL MAT OF FOUNDATION (NO EXOTHERMIC WELDS). USE FOUR EQUALLY SPACED CONNECTIONS.
- PES1 AND PES2:** CONNECTS THE GROUNDING RING INSIDE THE FOUNDATION (CONNECTED TO THE BOTTOM REINFORCING BARS) TO THE INTERIOR TOWER BASE FLANGE BOSSSES.
PES3 AND PES4: CONNECTS THE DTA PLATFORM BUS BAR TO THE OUTER GROUND RING LOCATED IN THE SOIL. ISOLATE PES3 AND PES4 FROM THE CONCRETE AND REINFORCING BARS BY INSTALLING THEM INSIDE 2" SCH. 40 PVC DUCTS.
PES5: CONNECTS THE GROUND RING, PADMOUNT TRANSFORMER GROUND BUS, AND THE DTA PLATFORM BUS BAR.
PES6 AND PES7: CONNECTS THE DTA PLATFORM BUS BAR TO TOWER INTERIOR BOTTOM FLANGE.
- BOND TOWER STAIRS TO GROUNDING RING.



Designed: JRV

Checked: ANS

Drawn: JMC, JRG

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Northwest Ohio Wind Project

Paulding County, Ohio

Turbine Grounding -
Spread Foundation GE
2.5-116

Not For Construction

Array Date: 09/14/2017

Date: 10/19/17

Sheet: E411

0007186_E400_Turbine Conduit and Gnd.dwg



GENERAL NOTES

1. PREVENT CONCRETE FROM ENTERING ALL OPEN CONDUIT ENDS.
 2. ALL SPARE CONDUITS SHOULD BE SEALED WITH FLAME RETARDANT FOAM AND CAPPED. ALL FLOA
CONDUCTORS IN CONDUIT SHALL BE ENCAPSULATED IN FLAME RETARDANT FOAM TO PREVENT ROENT
MOISTURE DAMAGE. FOAM SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER.
 3. MARK EACH CIRCUIT WITH DESTINATION.
 4. MARK EACH CABLE
- | <u>PHASE</u> | <u>34.5 KV</u> | <u>SECONDARY</u> |
|--------------|----------------|------------------|
| A | RED | BROWN |
| B | WHITE | ORANGE |
| C | BLUE | YELLOW |

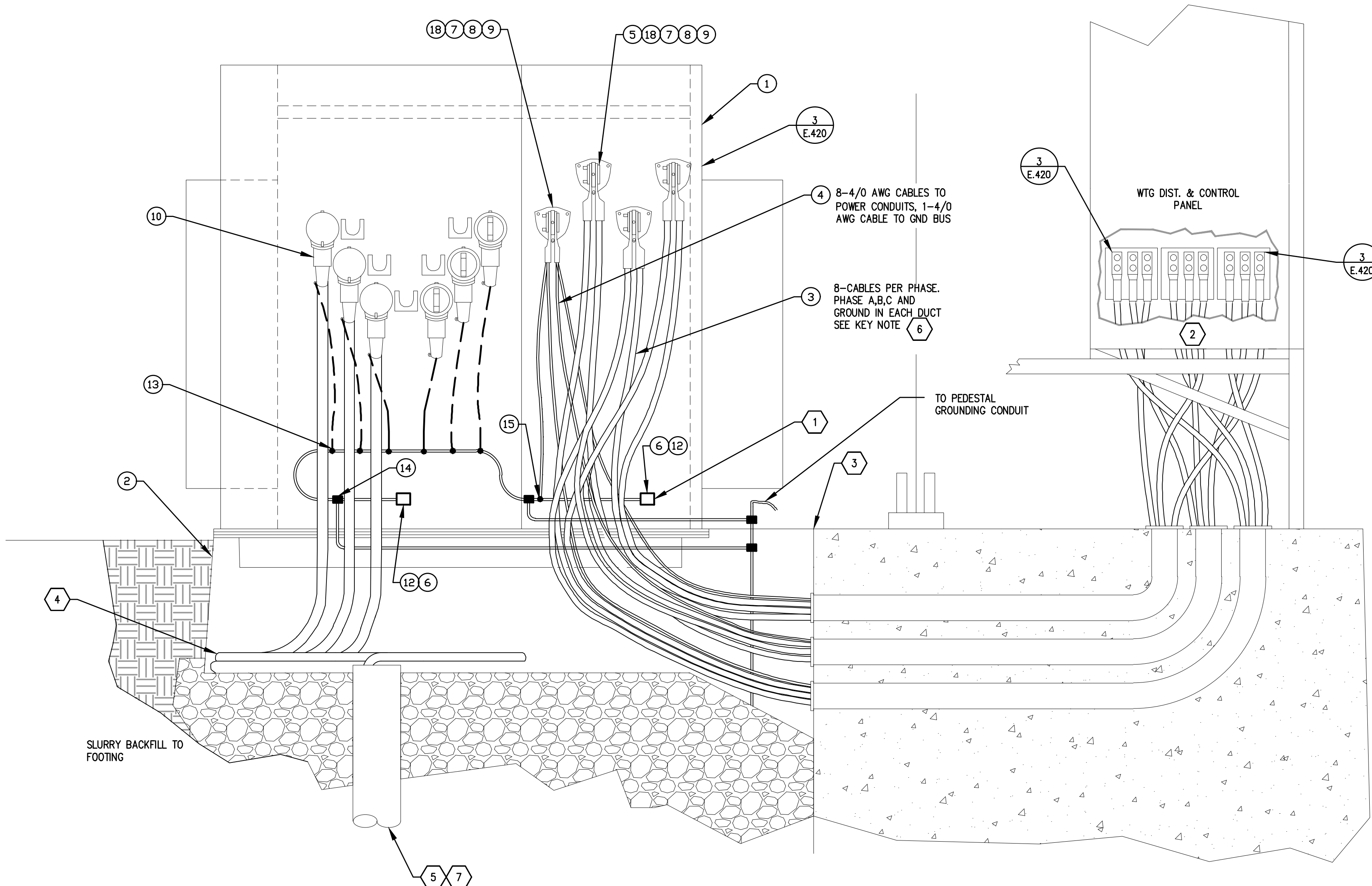
- 1 BOND 4/0 AWG COPPER GROUND BUS TO TRANSFORMER GROUNDING PAD. CONNECT TO GROUND GRID WITH 4/0 AWG COPPER.
- 2 CONNECT GROUNDING CONDUCTORS TO GROUND BUS IN WTG DIST. PANEL.
- 3 TOP OF PEDESTAL AND BOX PADS TO BE AT SAME ELEVATION. CAULK THE JOINT BETWEEN THE BOX/PAD AND PEDESTAL.
- 4 SLACK COIL (FOR ONE EXTRA TERMINATION)
- 5 SEAL ALL CONDUITS WITH FOAM AFTER CABLE INSTALLATION.
- 6 ALL TURBINE POWER CABLES SHALL BE EQUAL IN LENGTH.
- 7 EXTEND ELECTRICAL CONDUITS FOR MV CABLE AND GROUNDS INTO NATIVE SOIL BEDDING WITH 45 AND 90 DEG SWEEPS AS REQUIRED.
- 8 ELBOW TO ELBOW (PIGGYBACK) CONNECTOR KIT REQUIRED.

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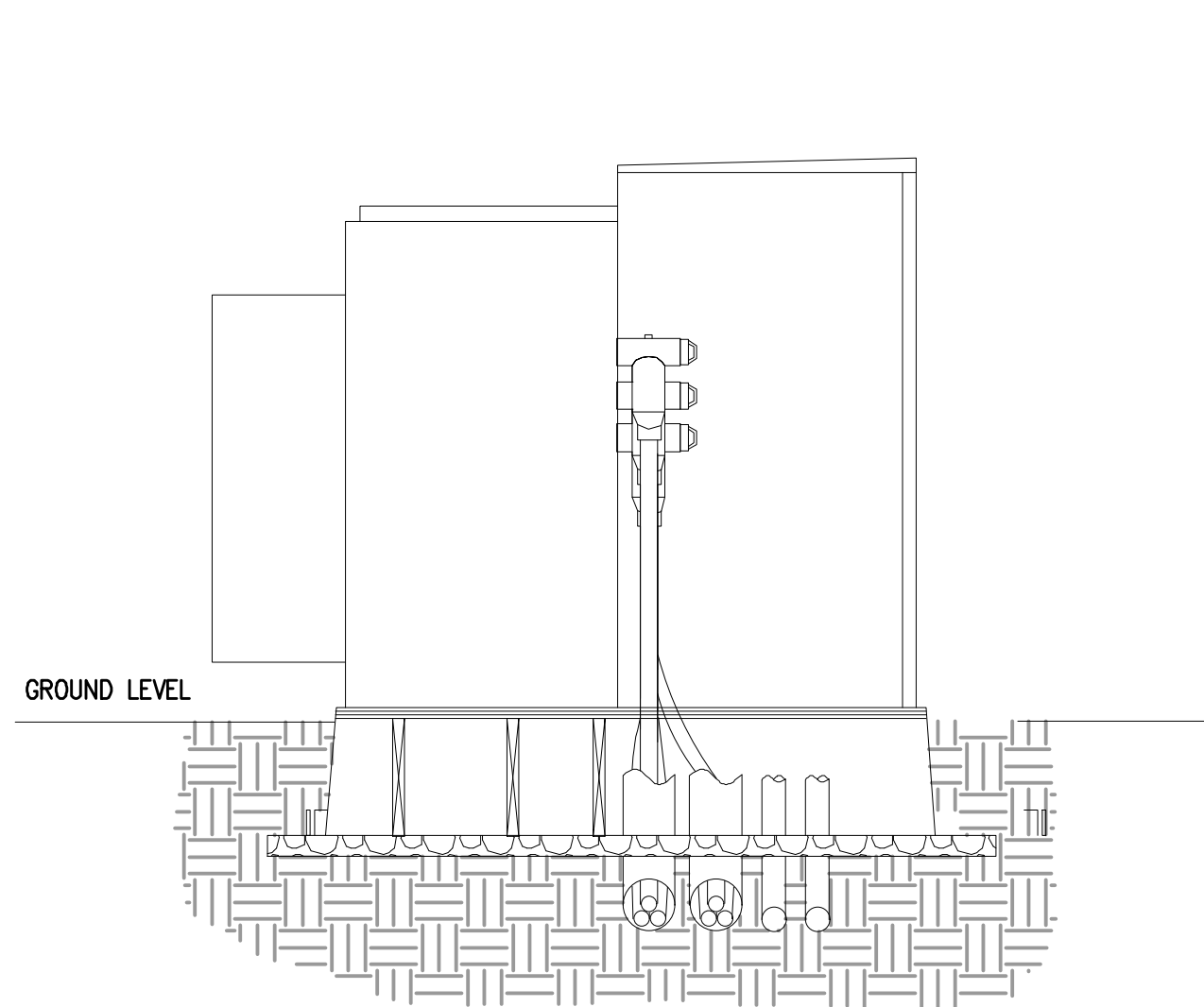
Paulding County, Ohio

Padmount Transformer Feedthrough

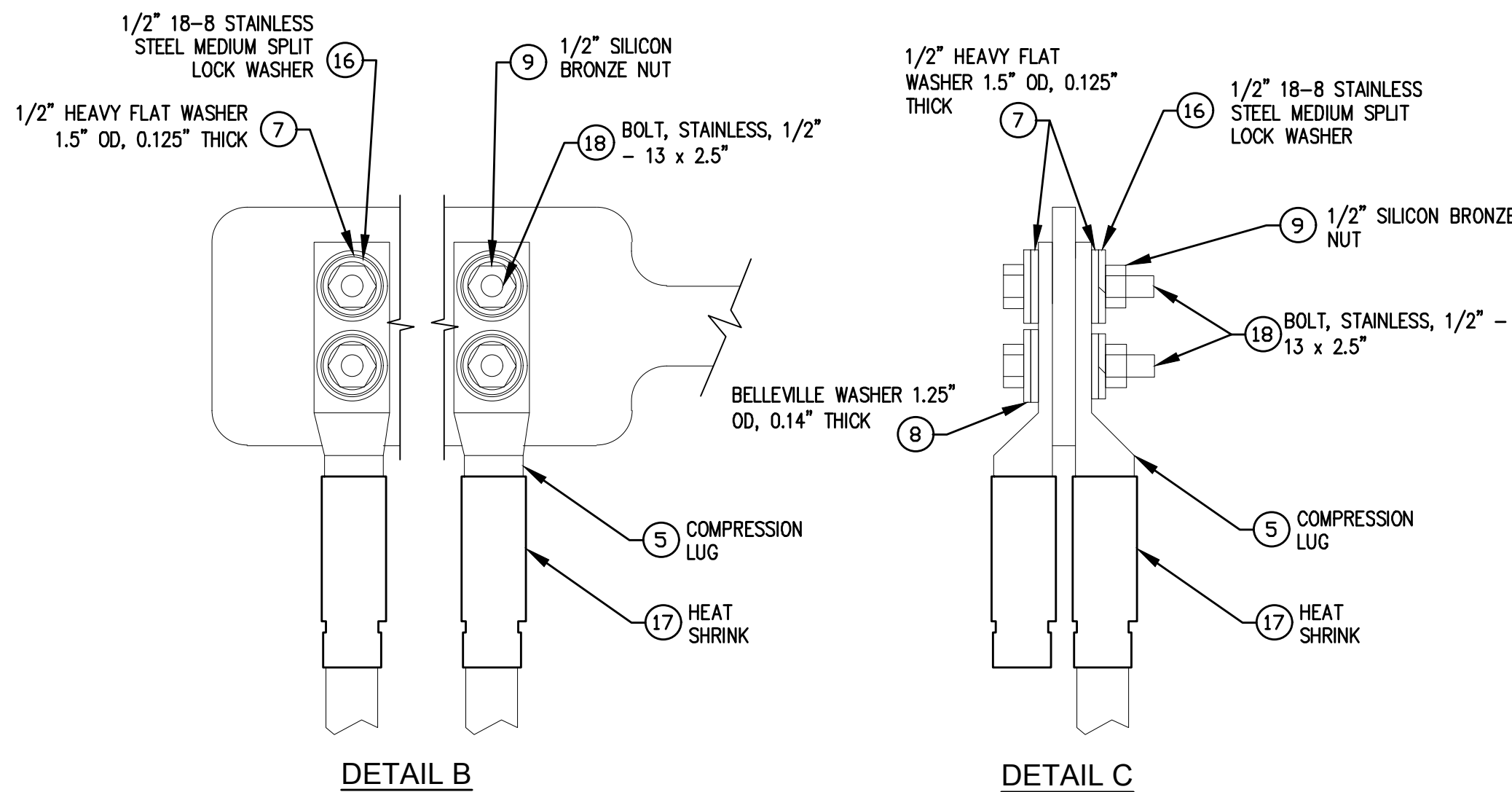
0007186_E400_Podmount Transformer Details.dwg



1 Step-Up Transformer - Front View
NTS



2 Step-Up Transformer - Side View
NTS



3 Termination Detail
NTS

MATERIAL LIST

ITEM	QTY	UNIT	DESCRIPTION	MFG.
1	1	EA	PAD MOUNTED TRANSFORMER, 2750KVA	-
2	1	EA	BOX PAD ## INCH X ## INCH X 36 INCH	-
3	###	FT	1000 KCMIL AL STR. CABLE, 2 KV, RHW-2	-
4	###	FT	4/0 AWG BARE CU STR. CABLE, S.D.	-
5	64	EA	CONNECTOR, CP, AL, 2H LUG 1000 KCMIL (TURBINE AND TRANSFORMER)	-
6	4	EA	1/2"-13 X 2-1/2" 316 STAINLESS STEEL HEX CAP SCREW	-
7	128	EA	1/2" 18-8 STAINLESS STEEL SMALL OD EXTRA THICK FLAT WASHER	-
8	64	EA	1/2" 18-8 S/S BELLEVILLE WASHER 4700 LBS	-
9	64	EA	1/2-13 HEAVY HEX NUTS, SILICON BRONZE	-
10a	3	EA	600A DEAD BREAK CONNECTOR WITH SEALING KIT, 35 KV 1250 MCM	-
10b	3	EA	600A DEAD BREAK CONNECTOR WITH SEALING KIT, 35 KV 1000 MCM	-
10c	3	EA	600A DEAD BREAK CONNECTOR WITH SEALING KIT, 35 KV 750 MCM	-
10d	3	EA	600A DEAD BREAK CONNECTOR WITH SEALING KIT, 35 KV 500 MCM	-
10e	3	EA	600A DEAD BREAK CONNECTOR WITH SEALING KIT, 35 KV 4/0 AWG	-
10f	3	EA	600A DEAD BREAK CONNECTOR WITH SEALING KIT, 35 KV 1/0 AWG	-
11	.25	EA	CABLE CLEANING KIT, SPECIALIZED PADS CLEAN CABLE INSULATION, COMES W/ 3EA SATURATED PADS/KIT & CASE	-
12	##	EA	CONNECTOR, CP, CU, 2H LUG	-
13	##	EA	CONNECTOR, CP, CU GRD. TAP "C", GROUND TAP "C", HYTAP 2/0 TO #1 AWG CU RUN TO TAP #8-#4 STR CU	-
14	##	EA	CONNECTOR, CP, CU GRD. TAP "C", 7#7 CCS RUN TO 7#7 CCS TAP, CU WIRE/BAR	-
15	#	EA	CONNECTOR, CP, TIN PLATED "C", HYTAP, 2 AWG - 250 KCMIL RUN TO 2 AWG- 250 KCMIL TAP	-
16	64	EA	1/2" 18-8 STAINLESS STEEL MEDIUM SPLIT LOCK WASHER	-
17	A/R	FT	HEAT SHRINK, 1000V	-
18	64	EA	BOLT, STAINLESS STEEL, 1/2" - 13 X 2.5"	-

GENERAL NOTES

- PREVENT CONCRETE FROM ENTERING ALL OPEN CONDUIT ENDS.
 - ALL SPARE CONDUITS SHOULD BE SEALED WITH FLAME RETARDANT FOAM AND CAPPED. ALL FLOATING CONDUITORS IN CONDUIT SHALL BE ENCAPSULATED IN FLAME RETARDANT FOAM TO PREVENT ROENT AND MOISTURE DAMAGE. FOAM SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER
 - MARK EACH CIRCUIT WITH DESTINATION.
 - MARK EACH CABLE
- | PHASE | 34.5 KV | SECONDARY |
|-------|---------|-----------|
| A | RED | BROWN |
| B | WHITE | ORANGE |
| C | BLUE | YELLOW |

KEY NOTES

- BOND 4/0 AWG COPPER GROUND BUS TO TRANSFORMER GROUNDING PAD. CONNECT TO GROUND GRID WITH 4/0 AWG COPPER.
- CONNECT GROUNDING CONDUCTORS TO GROUND BUS IN WTG DIST. PANEL
- TOP OF PEDESTAL AND BOX PADS TO BE AT SAME ELEVATION. CAULK THE JOINT BETWEEN THE BOXPAD AND PEDESTAL.
- SLACK COIL (FOR ONE EXTRA TERMINATION)
- SEAL ALL CONDUITS WITH FOAM AFTER CABLE INSTALLATION.
- ALL TURBINE POWER CABLES SHALL BE EQUAL IN LENGTH.
- EXTEND ELECTRICAL CONDUITS FOR MV CABLE AND GROUNDS INTO NATIVE SOIL BEDDING WITH 45 AND 90 DEG SWEEPS AS REQUIRED.
- ELBOW TO ELBOW (PIGGYBACK) CONNECTOR KIT REQUIRED.

Westwood

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Westwood Professional Services, Inc.

Designed: JRV

Checked: ANS

Drawn: JMC, JRG

As-Built Drawing:

Revision	DATE	DESCRIPTION
A	09/27/17	30% plans
B	10/03/17	Issued for Procurement - Revised
C	10/19/17	60% plans

Prepared for:



3900 E. White Ave
Clinton, IN 47842

Trishe Wind Ohio, LLC
c/o Starwood Energy Group, LLC
5 Greenwich Office Park, 2nd Floor
Greenwich, CT 06831

**Northwest
Ohio Wind
Project**

Paulding County, Ohio

**Padmount
TransformerTerminal**

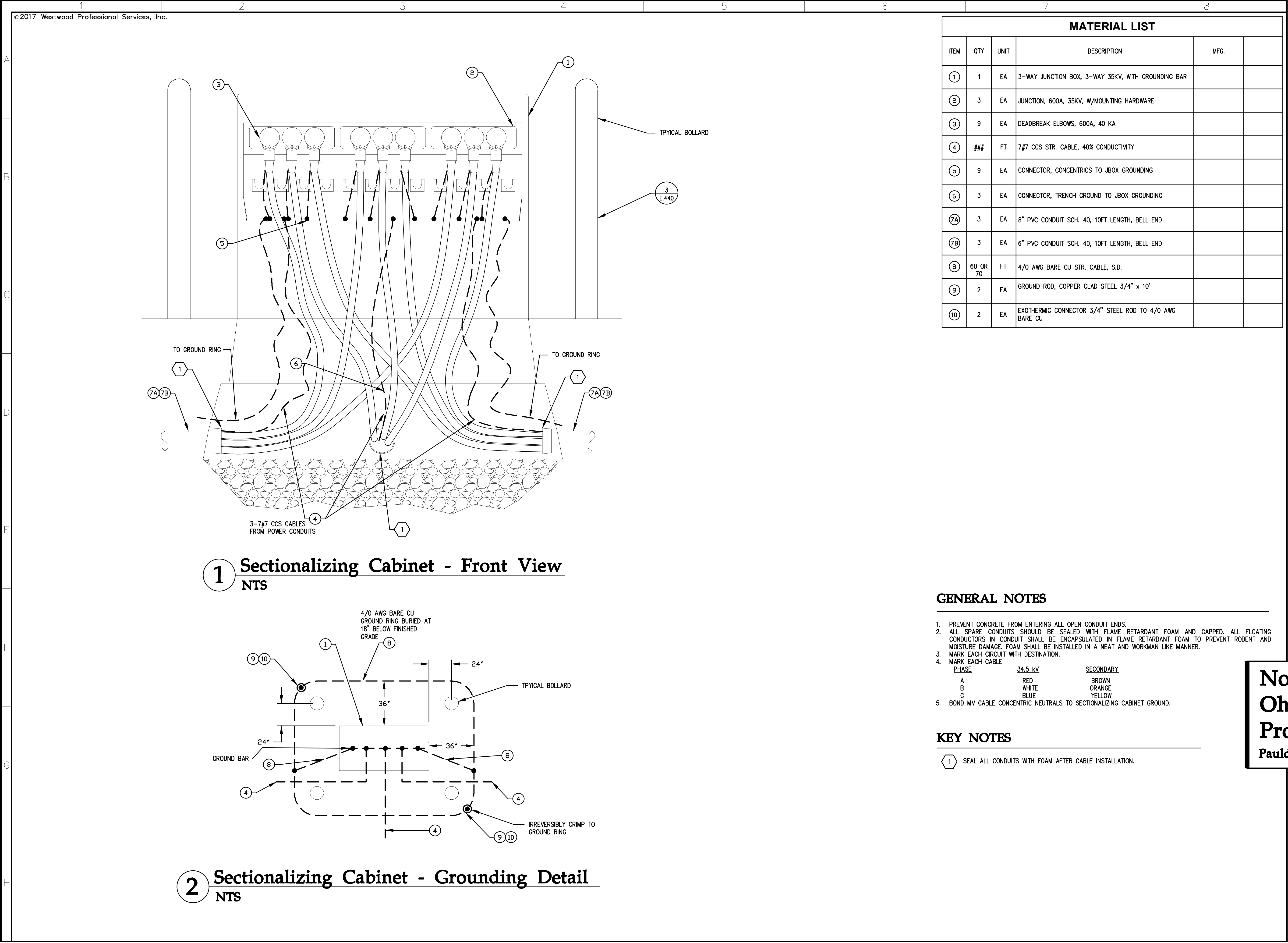
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Array Date: 09/14/2017

Date: 10/19/17

Sheet: E.421

0007186_E400_Padmount Transformer Details.dwg



MATERIAL LIST					
ITEM	QTY	UNIT	DESCRIPTION	MFG.	
①	1	EA	3-WAY JUNCTION BOX, 3-WAY 35KV, WITH GROUNDING BAR		
②	3	EA	JUNCTION, 600A, 35KV, W/MOUNTING HARDWARE		
③	9	EA	DEADBREAK ELBOWS, 600A, 40 KA		
④	###	FT	7#7 CCS STR. CABLE, 40% CONDUCTIVITY		
⑤	9	EA	CONNECTOR, CONCENTRICS TO JBOX GROUNDING		
⑥	3	EA	CONNECTOR, TRENCH GROUND TO JBOX GROUNDING		
⑦A	3	EA	8" PVC CONDUIT SCH. 40, 10FT LENGTH, BELL END		
⑦B	3	EA	6" PVC CONDUIT SCH. 40, 10FT LENGTH, BELL END		
⑧	60 OR 70	FT	4/0 AWG BARE CU STR. CABLE, S.D.		
⑨	2	EA	GROUND ROD, COPPER CLAD STEEL 3/4" x 10'		
⑩	2	EA	EXOTHERMIC CONNECTOR 3/4" STEEL ROD TO 4/0 AWG BARE CU		

GENERAL NOTES

1.

PREVENT CONCRETE FROM ENTERING ALL OPEN CONDUIT ENDS.
2.

ALL SPARE CONDUITS SHOULD BE SEALED WITH FLAME RETARDANT FOAM AND CAPPED. ALL FLOATING CONDUCTORS IN CONDUIT SHALL BE ENCAPSULATED IN FLAME RETARDANT FOAM TO PREVENT RODENT AND MOISTURE DAMAGE. FOAM SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER.
3.

MARK EACH CIRCUIT WITH DESTINATION.
4.

MARK EACH CABLE

PHASE	34.5 KV	SECONDARY
A	RED	BROWN
B	WHITE	ORANGE
C	BLUE	YELLOW
5.

BOND MV CABLE CONCENTRIC NEUTRALS TO SECTIONALIZING CABINET GROUND.

KEY NOTES

- 1

SEAL ALL CONDUITS WITH FOAM AFTER CABLE INSTALLATION.

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Northwest
Ohio Wind
Project

Paulding County, Ohio

Sectionalizing Cabinet, 3
Way

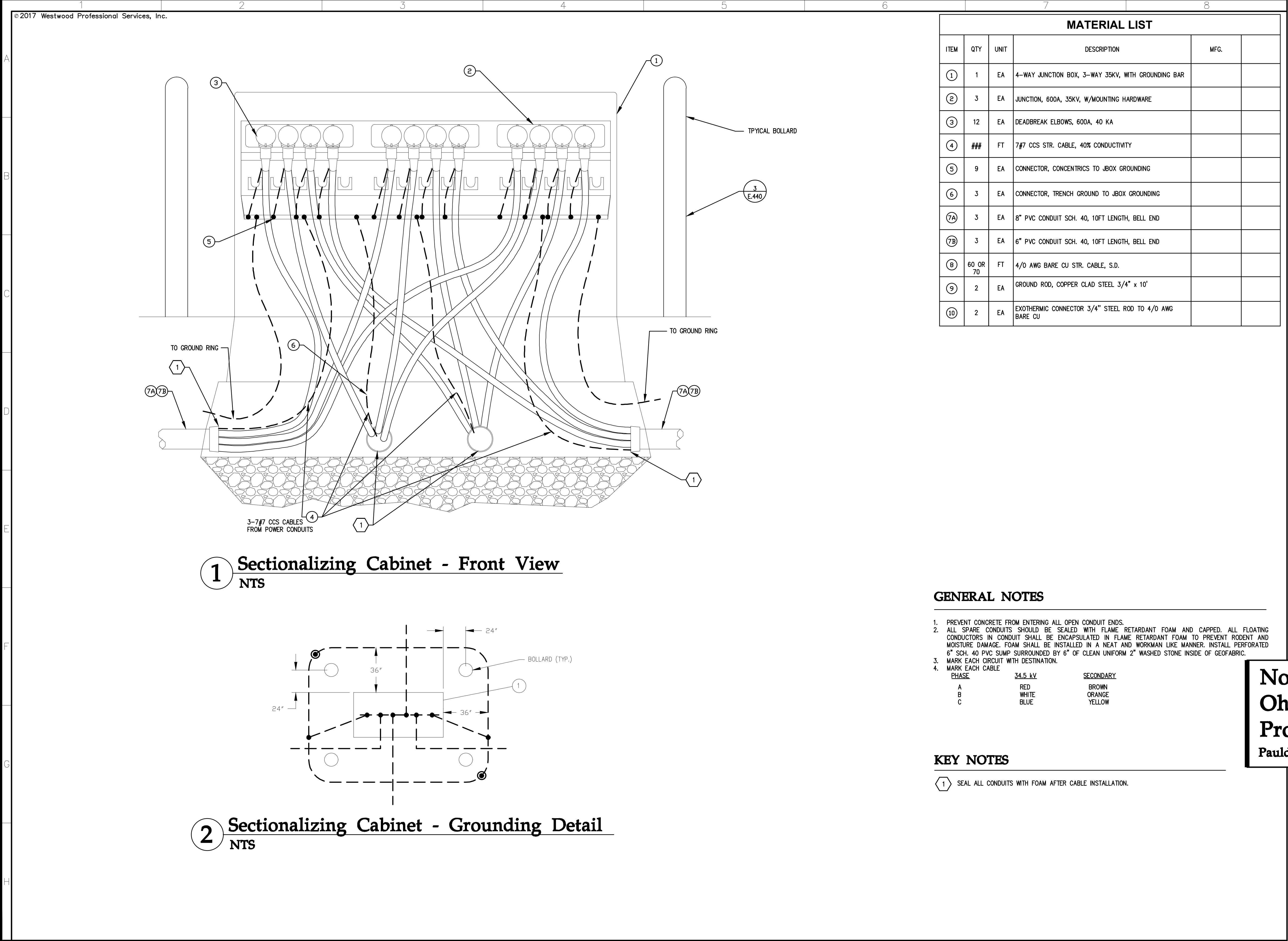
Not For Construction

Array Date: 09/14/2017

Date: 10/19/17

Sheet: E.422

0007186_E400_Podmount Transformer Details.dwg



MATERIAL LIST					
ITEM	QTY	UNIT	DESCRIPTION	MFG.	
①	1	EA	4-WAY JUNCTION BOX, 3-WAY 35KV, WITH GROUNDING BAR		
②	3	EA	JUNCTION, 600A, 35KV, W/MOUNTING HARDWARE		
③	12	EA	DEADBREAK ELBOWS, 600A, 40 KA		
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⑨	2	EA	GROUND ROD, COPPER CLAD STEEL 3/4" x 10'		
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GENERAL NOTES

1. PREVENT CONCRETE FROM ENTERING ALL OPEN CONDUIT ENDS.

2. ALL SPARE CONDUITS SHOULD BE SEALED WITH FLAME RETARDANT FOAM AND CAPPED. ALL FLOATING CONDUCTORS IN CONDUIT SHALL BE ENCAPSULATED IN FLAME RETARDANT FOAM TO PREVENT RODENT AND MOISTURE DAMAGE. FOAM SHALL BE INSTALLED IN A NEAT AND WORKMAN LIKE MANNER. INSTALL PERFORATED 6" SCH. 40 PVC SUMP SURROUNDED BY 6" OF CLEAN UNIFORM 2" WASHED STONE INSIDE OF GEOFABRIC.

3. MARK EACH CIRCUIT WITH DESTINATION.

4. MARK EACH CABLE
- | | | |
|-------|---------|-----------|
| PHASE | 34.5 kV | SECONDARY |
| A | RED | BROWN |
| B | WHITE | ORANGE |
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KEY NOTES

- 1
- SEAL ALL CONDUITS WITH FOAM AFTER CABLE INSTALLATION.

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Northwest
Ohio Wind
Project

Paulding County, Ohio

Sectionalizing Cabinet, 4
Way

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This foregoing document was electronically filed with the Public Utilities

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10/25/2017 1:26:01 PM

in

Case No(s). 13-0197-EL-BGN, 16-1687-EL-BGA, 17-1099-EL-BGA

Summary: Notice of Update to September 1, 2017 Filing Regarding Compliance with Condition 6 – Drawings for Final Design Plan (Part 2 of 5) electronically filed by Mr. William V Vorys on behalf of Trishe Wind Ohio, LLC