

Record Drawings

for

Wind Turbine Generators, Access Roads, Drainage and Erosion Control

for

COURTENAY WIND PROJECT STUTSMAN COUNTY, NORTH DAKOTA

RECORD DRAWING

INFORMATION IS FURNISHED WITHOUT WARRANTY AS TO ACCURACY. USERS SHOULD FIELD VERIFY LOCATIONS AND ELEVATIONS.

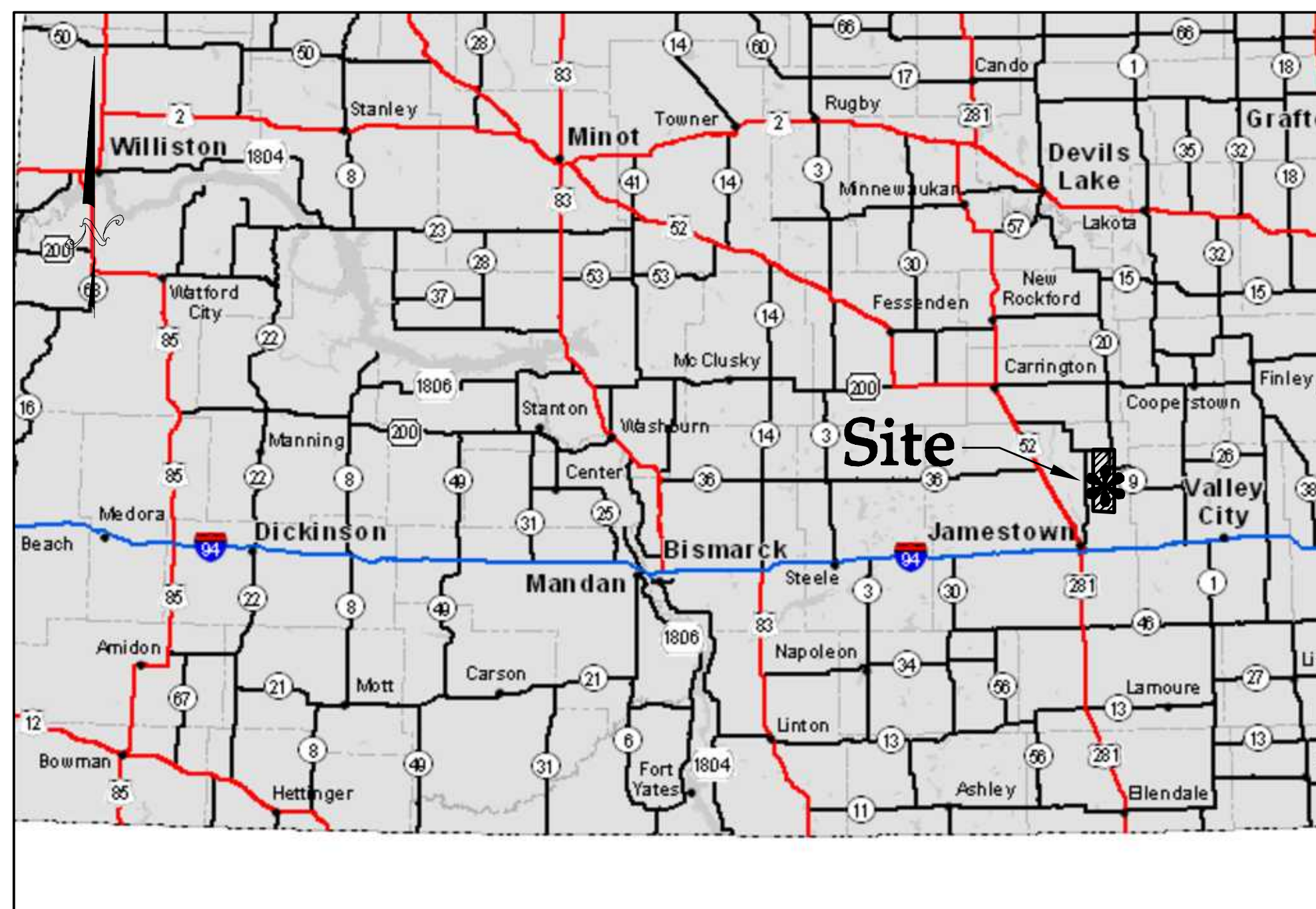
SURVEY DATA WAS COLLECTED BETWEEN APRIL AND OCTOBER 2016 AND INCLUDES TURBINES, ROADS, TRANSMISSION LINE, UNDERGROUND COLLECTION AND O&M FACILITY.

ELECTRICAL INFRASTRUCTURE FIELD LOCATIONS PROVIDED BY WANZEK CONSTRUCTION AND ARE SHOWN FOR REFERENCE ONLY. SEE ULTEIG ELECTRICAL PLANS FOR FURTHER INFORMATION.

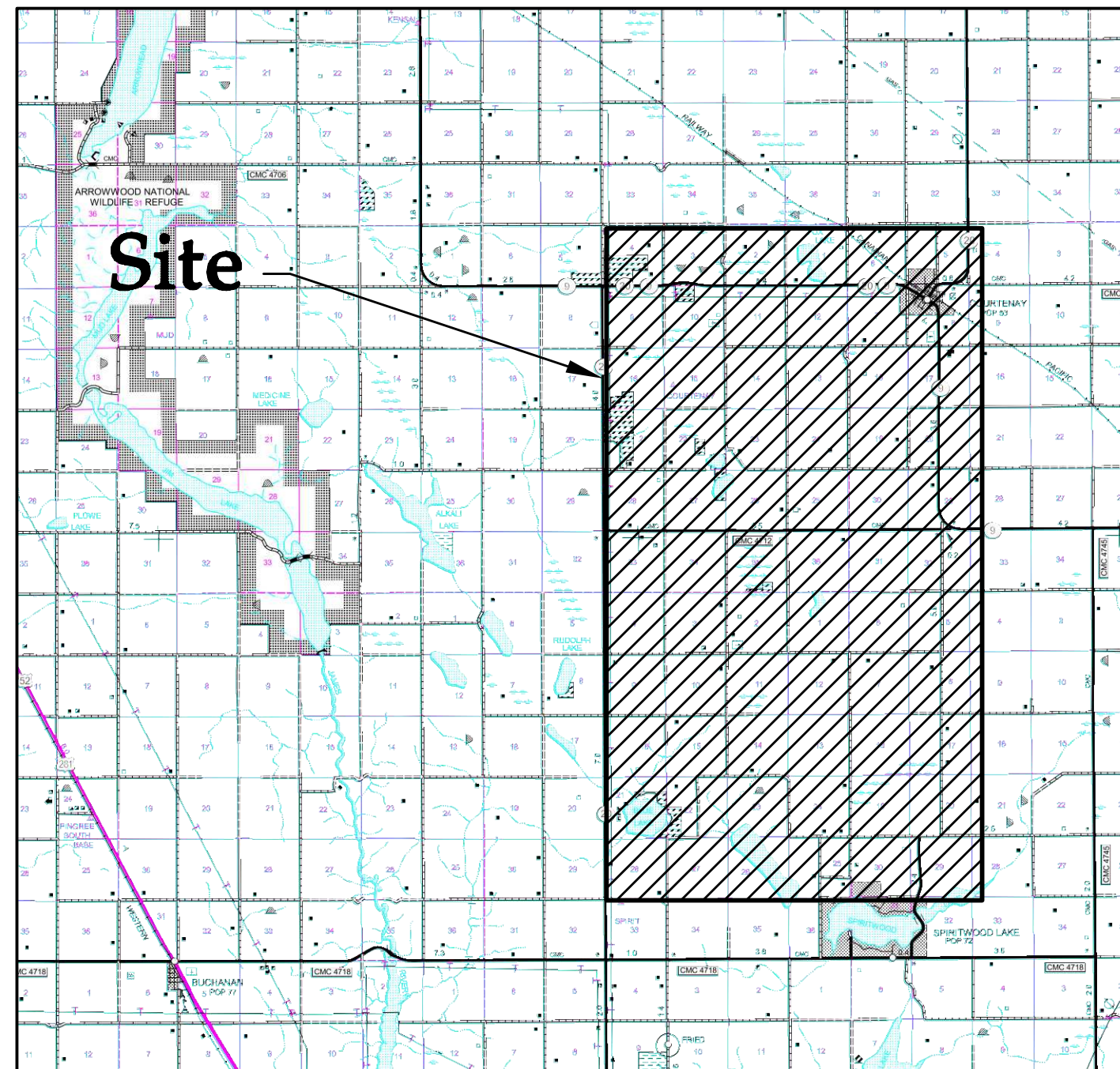
NO.	DATE	REVISION	SHEETS
A	08/30/13	30% SUBMITTAL	ALL
B	09/30/13	REVISED ACCESS ROADS PER COMMENTS	ALL
C	10/10/13	REVISED ACCESS ROADS PER COMMENTS	ALL
D	12/09/13	ADDED EROSION CONTROL	ALL
E	02/28/14	70% SUBMITTAL	ALL
F	05/01/14	90% SUBMITTAL	ALL
G	09/26/14	90% SUBMITTAL-UPDATED	ALL
H	06/01/15	95% SUBMITTAL-UPDATED	ALL
I	07/22/15	95% SUBMITTAL-UPDATED	ALL
0	08/31/15	ISSUED FOR CONSTRUCTION	ALL
1	09/23/15	ISSUED FOR CONSTRUCTION	1-3,6,7,9,11-34,37,40-41
2	10/26/15	ISSUED FOR CONSTRUCTION	1,58,59,60
3	02/29/16	ISSUED FOR CONSTRUCTION	1,12-57
4	04/18/16	ISSUED FOR CONSTRUCTION	1,2,3,29
5	10/07/16	RECORD DRAWINGS	ALL
6	11/07/16	UPDATED RECORD DRAWINGS	ALL
7	12/02/16	UPDATED RECORD DRAWINGS	ALL
8	12/15/16	UPDATED RECORD DRAWINGS	ALL
9	12/22/16	UPDATED RECORD DRAWINGS	ALL

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6	Construction Details
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9	Construction Details
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13	Civil Plan - S35 T144N R63W
14	Civil Plan - S3 T143N R63W
15	Civil Plan - S2 T143N R63W
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17	Civil Plan - S9 T143N R63W
18	Civil Plan - S10 T143N R63W
19	Civil Plan - S11 T143N R63W
20	Civil Plan - S12 T143N R63W
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23	Civil Plan - S13 T143N R63W
24	Civil Plan - S18 T143N R62W
25	Civil Plan - S17 T143N R62W
26	Civil Plan - S22 T143N R63W
27	Civil Plan - S23 T143N R63W
28	Civil Plan - S24 T143N R63W
29	Civil Plan - S19 T143N R62W
30	Civil Plan - S20 T143N R62W

31	Civil Plan - S26 T143N R63W
32	Civil Plan - S25 T143N R63W
33	Civil Plan - S30 T143N R62W
34	Civil Plan - S29 T143N R62W
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38	Civil Plan - S33 T143N R62W
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40	Civil Plan - S5 T142N R62W
41	Civil Plan - S4 T142N R62W
42	Civil Plan - S7 T142N R62W
43	Civil Plan - S8 T142N R62W
44	Civil Plan - S13 T142N R63W
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46	Civil Plan - S24 T142N R63W
47	Civil Plan - S25 T142N R63W
48	Civil Plan - S36 T142N R63W
49	Civil Plan - S2 T141N R63W
50	Civil Plan - S1 T141N R63W
51	Civil Plan - S8 T141N R63W
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58	Civil Plan - O&M
59	Grading Plan - O&M
60	O&M Notes



North Dakota State Road Map



Stutsman County Vicinity Map

Data Source Information			
BASE FILE	FILE NAME / VERSION	PROVIDER	DATE
TURBINE ARRAY	2012151TURB.dwg	WESTWOOD	07/20/2015
TOPOGRAPHY MAPPING	LDAR - North Dakota LDAR Dissemination Service (http://ldar.nc.nd.gov)	STATE OF ND	07/13/2013
ELECTRICAL/COLLECTION	CFW-OL-SPP-RB.dwg	ULTEIG	08/14/2015
TRANSMISSION LINE	CTL_PreferedAlignment_L5_Station.dwg	GERONIMO	03/07/2014
WETLAND	Wetland_Poly_110913.dwg	GERONIMO	11/14/2013
CULTURAL RESOURCE	CRM_Artifacts_Survey_110813.dwg	GERONIMO	11/14/2013
CULTURAL RESOURCE	CRM_Site_062413.dwg	GERONIMO	07/12/2013
GEOTECHNICAL REPORT	2013-11-08 - Courtenay Geotechnical and Pavement Evaluation Report - Pre- and Post-Construction Recommendations	BRAUN INTERTEC	11/08/2013
GEOTECHNICAL REPORT	2014-02-24 - Addendum Letter.pdf	BRAUN INTERTEC	02/24/2014
GEOTECHNICAL REPORT	Westwood_Courtenay_Windfarm_General_Stabilization_Report_JET26-00750(rev)	AET	11/01/2013
DATUM: NAD83/(HARN) / North Dakota South (ft)			

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Xcel Energy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

WANZEK
Member company

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE:

Westwood
Professional Services, Inc.
Phone (952) 937-5150 7899 Anagram Drive
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Toll Free (888) 937-5150 westwoodps.com

20121151-01CFV01.dwg

THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

Cover
CIVIL PLANS SHEET 1
NH-217540-1 REV 9

Turbine Record Coordinates							
TURBINE NUMBER	NORTHING	EASTING	AS-BUILT PEDESTAL ELEVATION	TURBINE NUMBER	NORTHING	EASTING	AS-BUILT PEDESTAL ELEVATION
T-1	580995.024	2430622.868	1526.66	T-51	563005.261	2431146.377	1546.40
T-2	581210.628	2432286.125	1531.93	T-52	562035.680	2432977.676	1551.54
T-3	581302.208	2433302.335	1538.21	T-53	562113.192	2434095.280	1555.83
T-4	581264.825	2434445.147	1552.78	T-54	562116.973	2435231.845	1549.18
T-5	581324.969	2435551.449	1520.16	T-55	562214.843	2436429.903	1540.61
T-6	577966.163	2435871.091	1526.27	T-56	561891.555	2438261.971	1537.96
T-7	577886.967	2437283.449	1530.35	T-57	562068.785	2439352.543	1541.27
T-8	578041.306	2438387.008	1530.43	T-58	562337.199	2440434.661	1539.89
T-9	577989.545	2439525.372	1532.52	T-59	562612.668	2441451.754	1535.18
T-10	578025.771	2440616.455	1543.19	T-60	562541.213	2448444.093	1532.31
T-11	573363.739	2434738.876	1529.96	T-61	562767.371	2449318.757	1538.59
T-12	573327.003	2435829.397	1539.74	T-62	562573.031	2451270.294	1539.34
T-13	572028.292	2437417.778	1541.54	T-63	558908.727	2434919.161	1545.24
T-14	572149.837	2438487.356	1528.90	T-64	558952.652	2436122.264	1541.24
T-15	572359.912	2439582.820	1523.96	T-65	559956.051	2443915.716	1536.53
T-16	569832.812	2424773.823	1540.50	T-66	560030.820	2445019.968	1537.83
T-17	569945.952	2425924.418	1527.27	T-67	559226.078	2448108.539	1550.76
T-18	571142.473	2426732.913	1526.40	T-68	559404.038	2451702.276	1539.79
T-19	570107.864	2435027.715	1539.36	T-69	557427.061	2437657.095	1544.24
T-20	569819.833	2436168.858	1538.10	T-70	557231.980	2439235.672	1544.56
T-21	568013.522	2427453.587	1527.30	T-71	557167.805	2440370.791	1546.07
T-22	568035.217	2428574.657	1525.25	T-72	557199.111	2441405.197	1542.69
T-23	568116.069	2429714.771	1530.88	T-73	553792.012	2433023.169	1547.26
T-24	568149.229	2430844.968	1538.21	T-74	553856.018	2433983.475	1557.97
T-25	568049.238	2432090.196	1544.56	T-75	553858.885	2434990.098	1547.45
T-26	567968.079	2433076.347	1545.59	T-76	553727.581	2439313.865	1557.82
T-27	568393.508	2438905.351	1556.25	T-77	553851.267	2440315.459	1548.53
T-28	568480.512	2439954.692	1531.76	T-78	553336.553	2451250.374	1551.30
T-29	568168.462	2440978.874	1526.00	T-79	555378.358	2452444.442	1554.34
T-30	565182.898	2427327.639	1566.84	T-80	555428.008	2453581.010	1547.37
T-31	565473.199	2428376.747	1533.18	T-81	555404.585	2454682.637	1543.13
T-32	565445.619	2429941.113	1536.41	T-82	551089.429	2439219.550	1542.12
T-33	565522.491	2430939.858	1541.98	T-83	550950.252	2440219.478	1548.55
T-34	565459.998	2432239.295	1541.42	T-84	551856.104	2452141.611	1543.36
T-35	565795.045	2435073.951	1540.38	T-85	546468.326	2449814.040	1558.08
T-36	565910.125	2435934.707	1535.77	T-86	546878.663	2451344.866	1569.53
T-37	565273.163	2437623.642	1539.43	T-87	547007.284	2452479.522	1560.64
T-38	565495.795	2438616.256	1532.81	T-88	547302.669	2453552.713	1542.32
T-39	565602.943	2439840.158	1540.15	T-89	547242.205	2454700.619	1545.12
T-40	565380.826	2440957.943	1538.16	T-90	542008.070	2446998.303	1552.50
T-41	564515.480	2443524.870	1541.25	T-91	541435.828	2451378.923	1552.32
T-42	565370.261	2444473.862	1535.62	T-92	541377.134	2452536.679	1545.26
T-43	565517.482	2445659.700	1539.52	T-93	539630.843	2443594.538	1533.97
T-44	565831.042	2446656.175	1538.04	T-94	539797.574	2444708.220	1539.25
T-45	565915.139	2447803.001	1531.99	T-95	538217.868	2446490.939	1535.48
T-46	565977.184	2448903.672	1553.12	T-96	538407.259	2447668.598	1564.98
T-47	562644.797	2427106.205	1530.84	T-97	538326.927	2448839.589	1567.66
T-48	562793.595	2428082.719	1533.98	T-98	538216.797	2449884.557	1583.27
T-49	563082.764	2429155.069	1533.77	T-99	538277.793	2451410.082	1552.34
T-50	562911.835	2430162.182	1531.92	T-100	538344.151	2452482.256	1553.47

Coordinate System - ND HARN IF, Northing-Easting

Culvert Schedule								
Type	Size	Sec	Twp	Range	Location		Sheet #	Notes
					Access Road	Public Road		
CMP	36"	1	143	63	Road D	N/A	16	
CMP	18"	13	143	63	Road S	14th St SE	23	
CMP	18"	18	143	62	Road U	90th Ave SE	24	
CMP	15"	17	143	62	O&M Entrance	State Hwy. 9	25	O&M Entrance
CMP	15"	19	143	62	N/A	90th Ave SE	29	Substation, one culvert at each entrance
CMP	18"	20	143	62	Road AI	16th St SE	30	
CMP	18"	20	143	62	Road AJ	16th St SE	30	
CMP	24"	20	143	62	Road AH	State Hwy. 9	30	
CMP	18"	26	143	63	Road AM	17th St SE	31	
CMP	18"	25	143	63	Road AN	89th Ave SE	32	
CMP	24"	22	143	63	Road AS	State Hwy. 9	34	
CMP	18"	5	142	62	Road AV	91 1/2 Ave SE	40	
CMP	18"	8	142	62	Road BC	91 1/2 Ave SE	43	
CMP	18"	8	142	62	Road BD	20th St. SE	43	
CMP	18"	8	142	62	Road BE	20th St. SE	43	
CMP	18"	8	142	62	Road BB	91 1/2 Ave SE	43	

NOTES:
 - SEE PUBLIC IMPROVEMENT PLANS FOR CULVERTS ASSOCIATED WITH PUBLIC INTERSECTION IMPROVEMENTS
 - PER EMAIL FROM JAKE CURTISS FROM WANZEK ON 10/25/2016, ALL FIELD CULVERTS ON ACCESS ROADS WERE REPLACED BY LOW WATER CROSSINGS, WITH THE EXCEPTION OF THE CULVERT ON ROAD D, STA 40+85 (SHEET 16) WHERE A 36" CULVERT WAS INSTALLED.
 - NO TEMPORARY CULVERTS CALLED OUT ON THE RECORD PLANS, ONLY LOW WATER CROSSINGS AND PERMANENT CULVERTS. SEE TABLE ON SHEET 8 FOR LOW WATER CROSSINGS LIST

NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	DWG NO. MANUFACTURER DESCRIPTION
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
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8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



XcelEnergy
 NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
 STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
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 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE:

Westwood

Phone (952) 937-5150 7699 Anagram Drive
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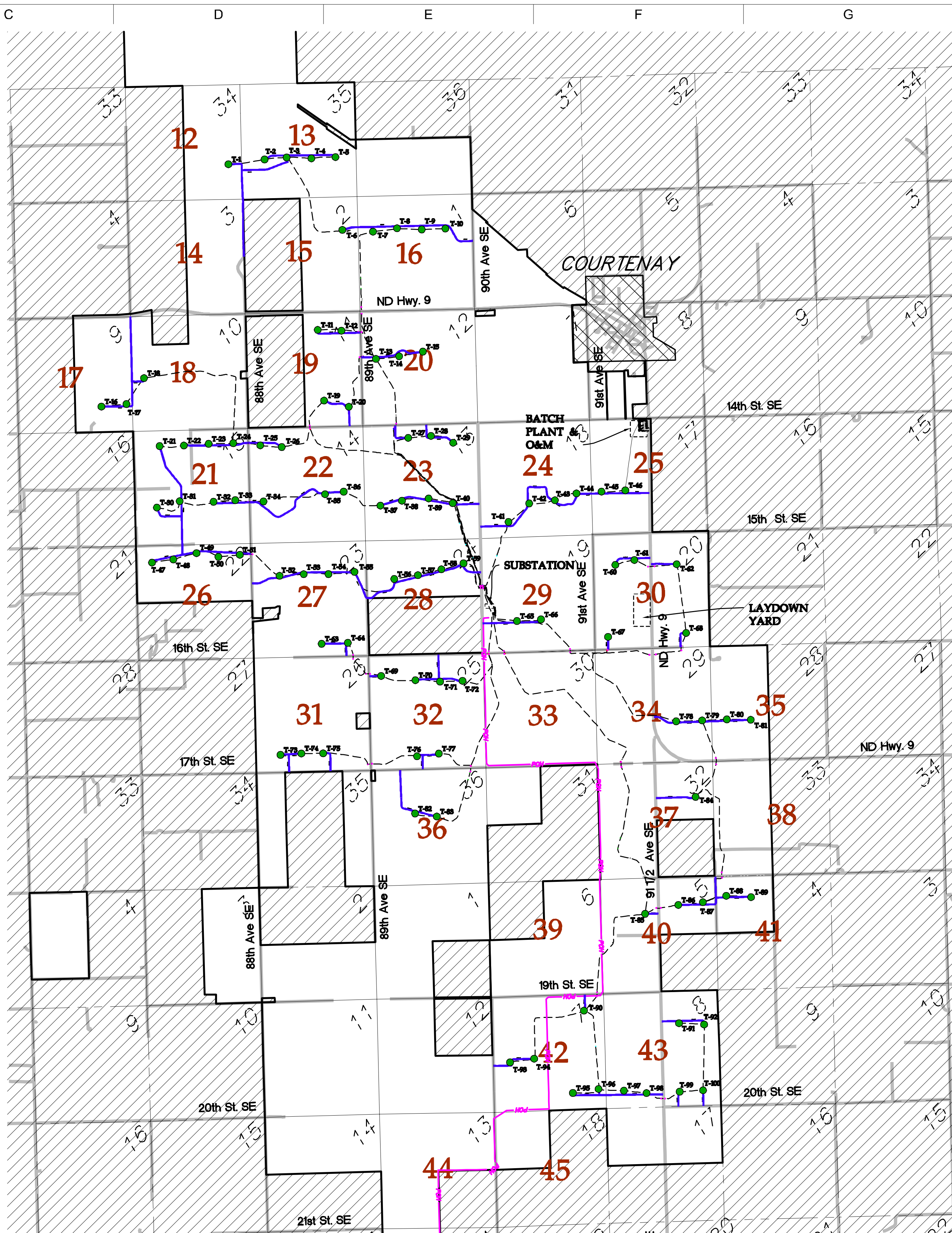
Turbine Coordinates & Culvert Schedule

CIVIL PLANS SHEET **2**

NH-217540-2

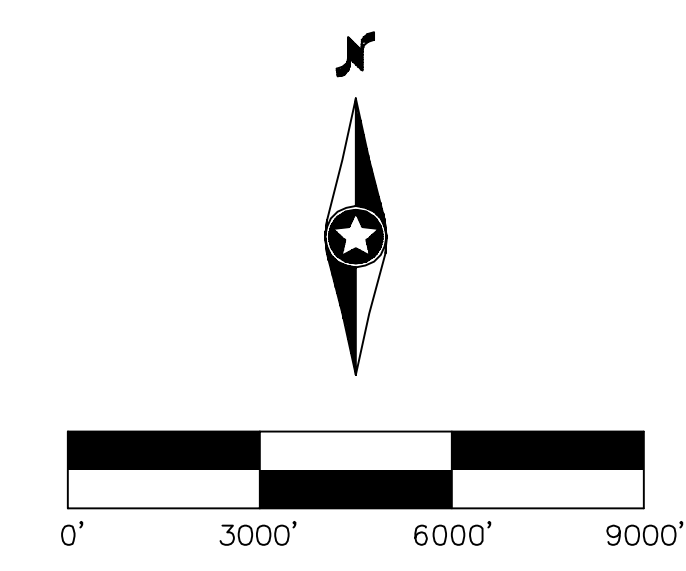
ENERGY SUPPLY ENGINEERING & CONSTRUCTION

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LEGEND:

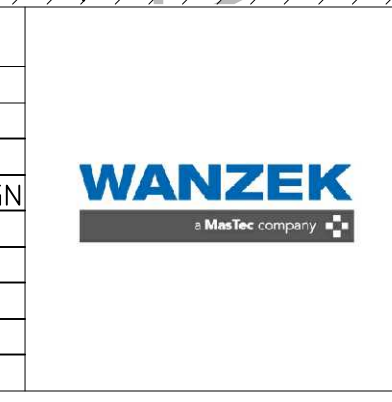
- RECORD TURBINE LOCATION
- T-XX** RECORD TURBINE NUMBER
- OUTSIDE OF PROJECT BOUNDARY
- MUNICIPALITY
- 8** DENOTES SHEET NUMBER
- DENOTES SECTION NUMBER
- RECORD ACCESS ROAD
- RECORD UNDERGROUND COLLECTION
- EXISTING ROADS
- SECTION LINE
- RECORD TRANSMISSION LINE



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
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DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy®
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

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Westwood

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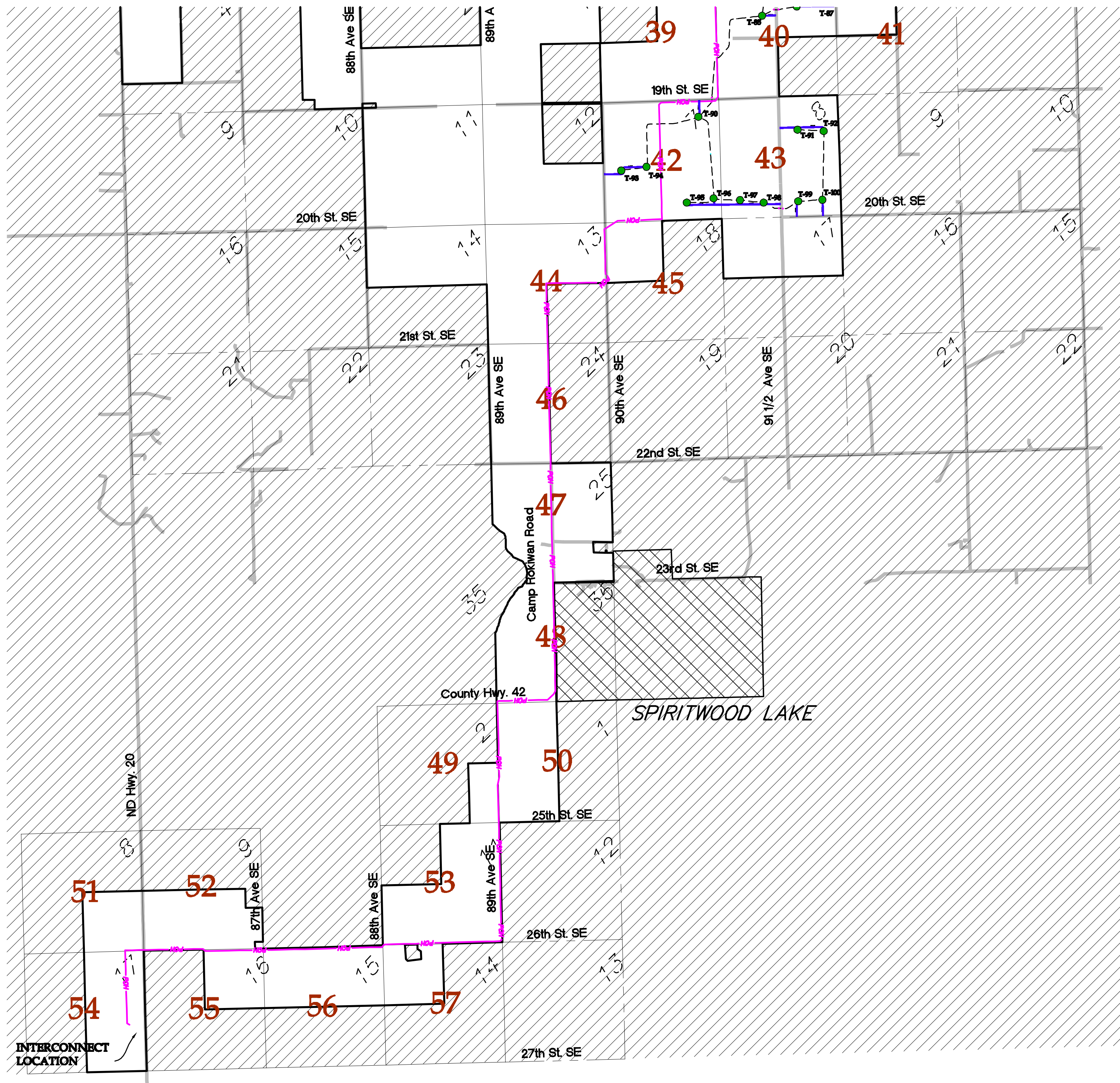
Overall Plan - North

CIVIL PLANS SHEET **3**

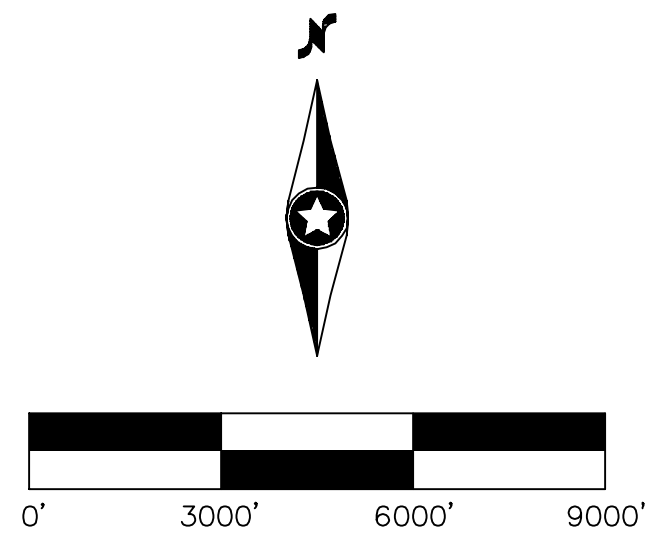
NH-217540-3 REV 9

SHEET 03 - INDEX.dwg

1
2
3
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7



- LEGEND:**
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XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: LJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE:	

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Phone (952) 937-5150 7699 Anagram Drive
Fax (952) 937-5822 Eden Prairie, MN 55344
Toll Free (888) 937-5150 westwoodps.com
Westwood Professional Services, Inc.

REGISTERED PROFESSIONAL ENGINEER
ROBERT S. COPPILLS
PE-00000000
DATE 12/22/16
NORTH DAKOTA

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Overall Plan - South

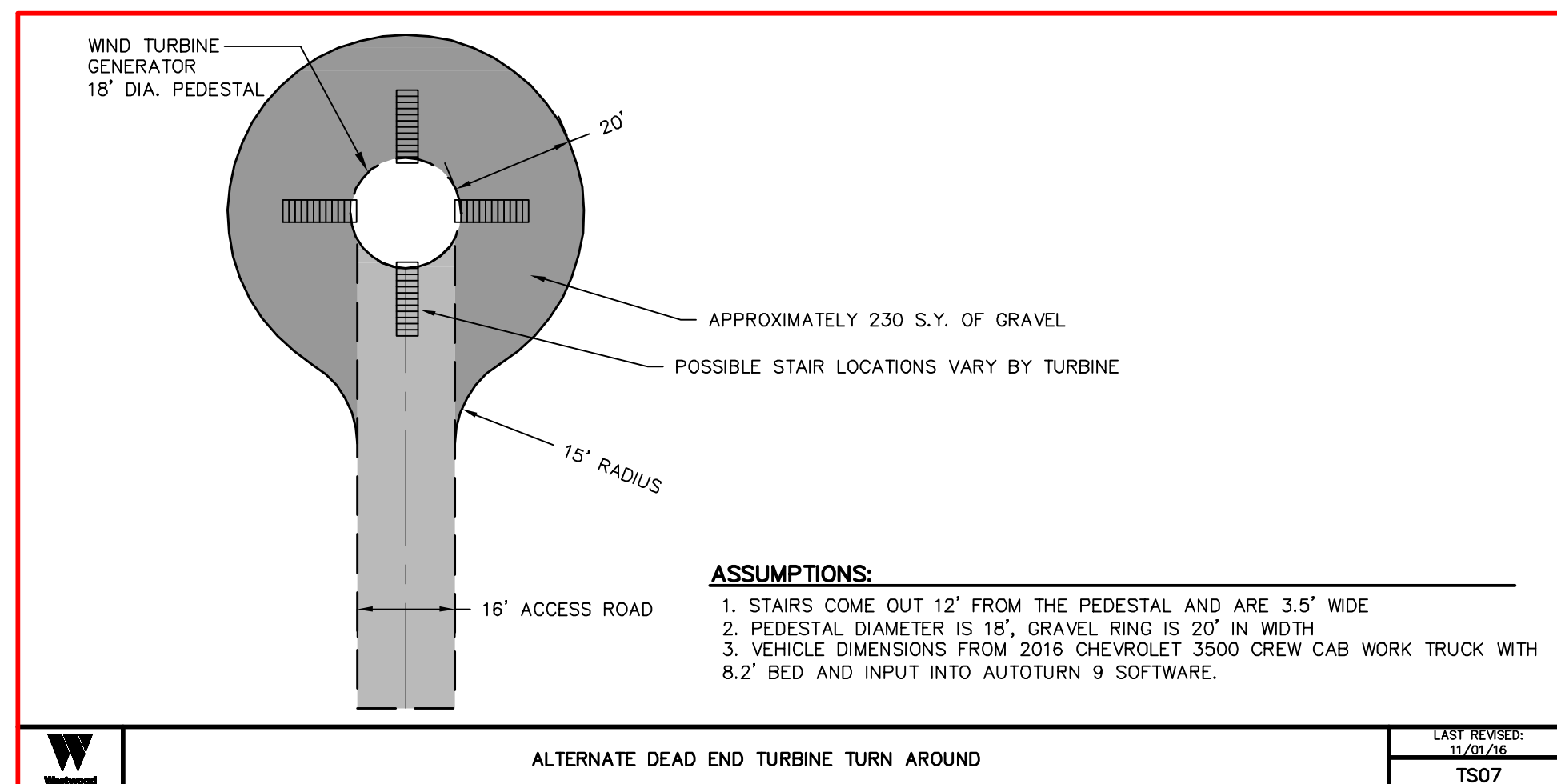
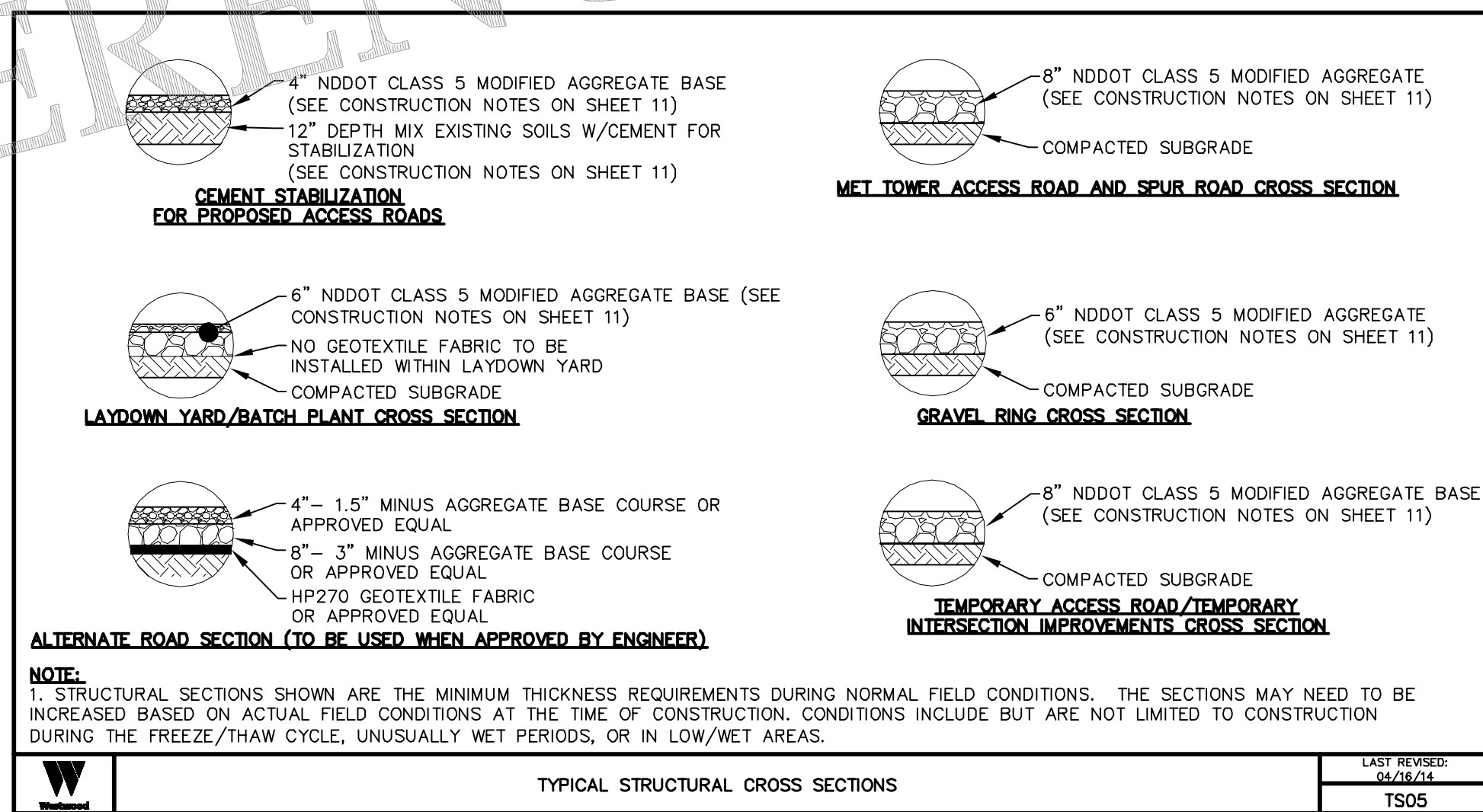
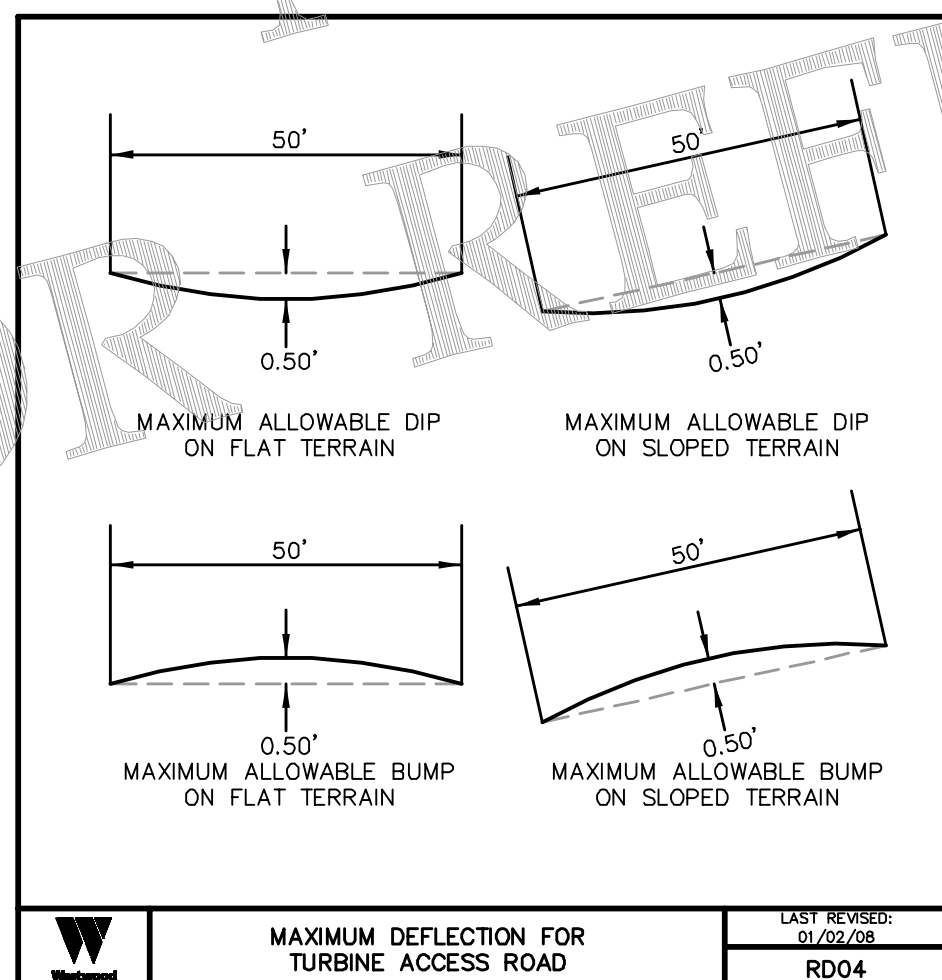
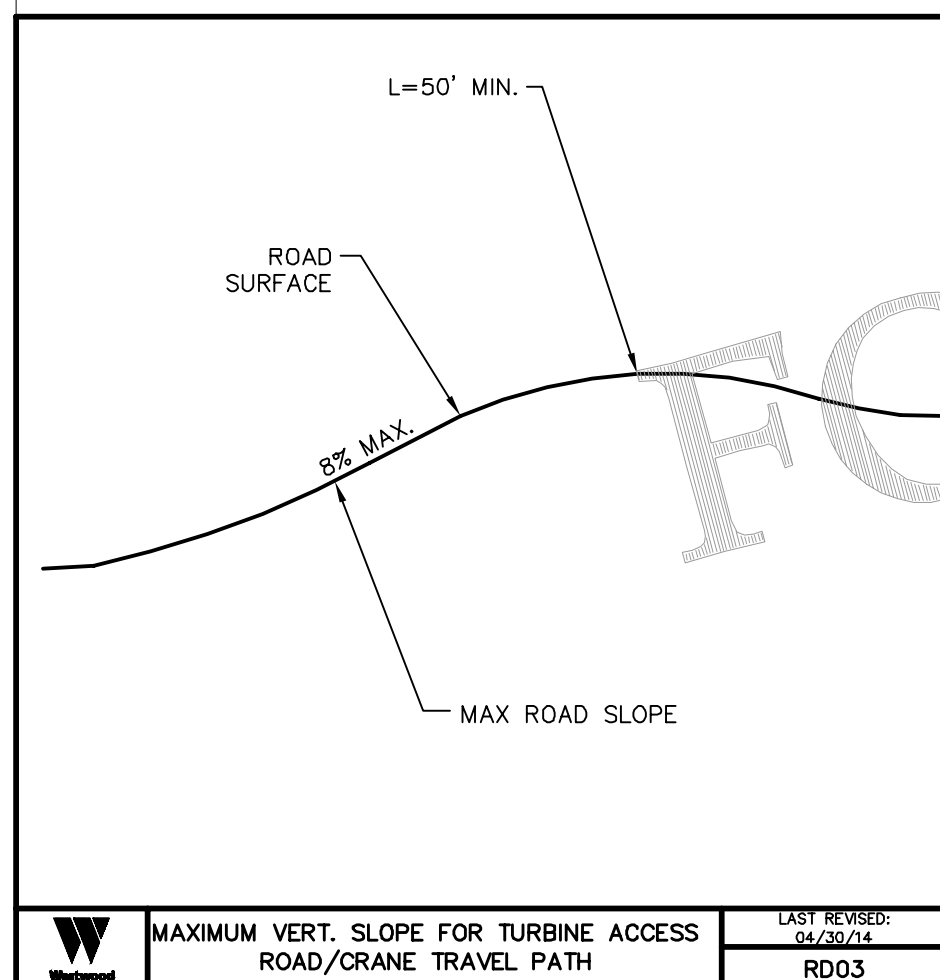
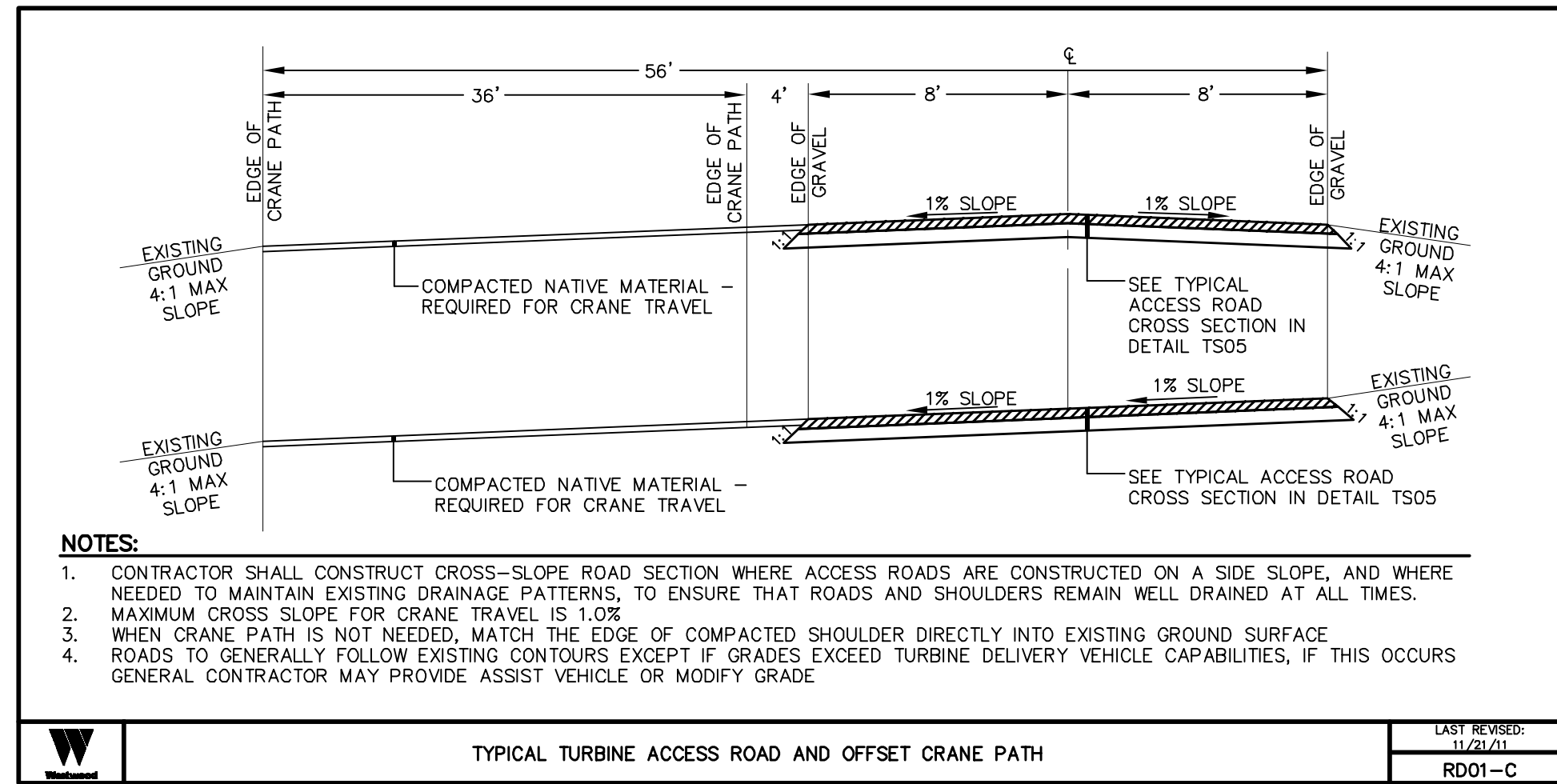
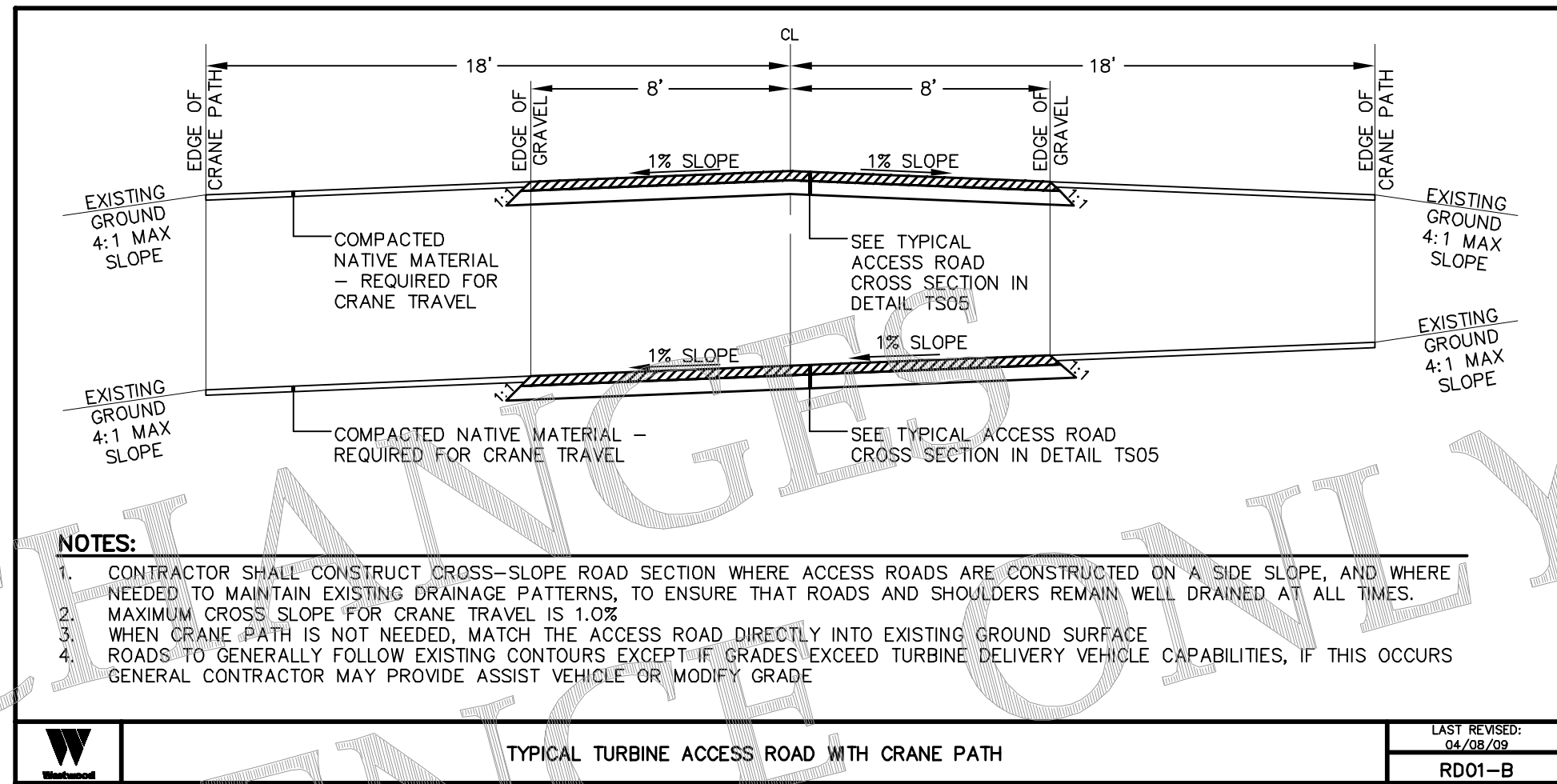
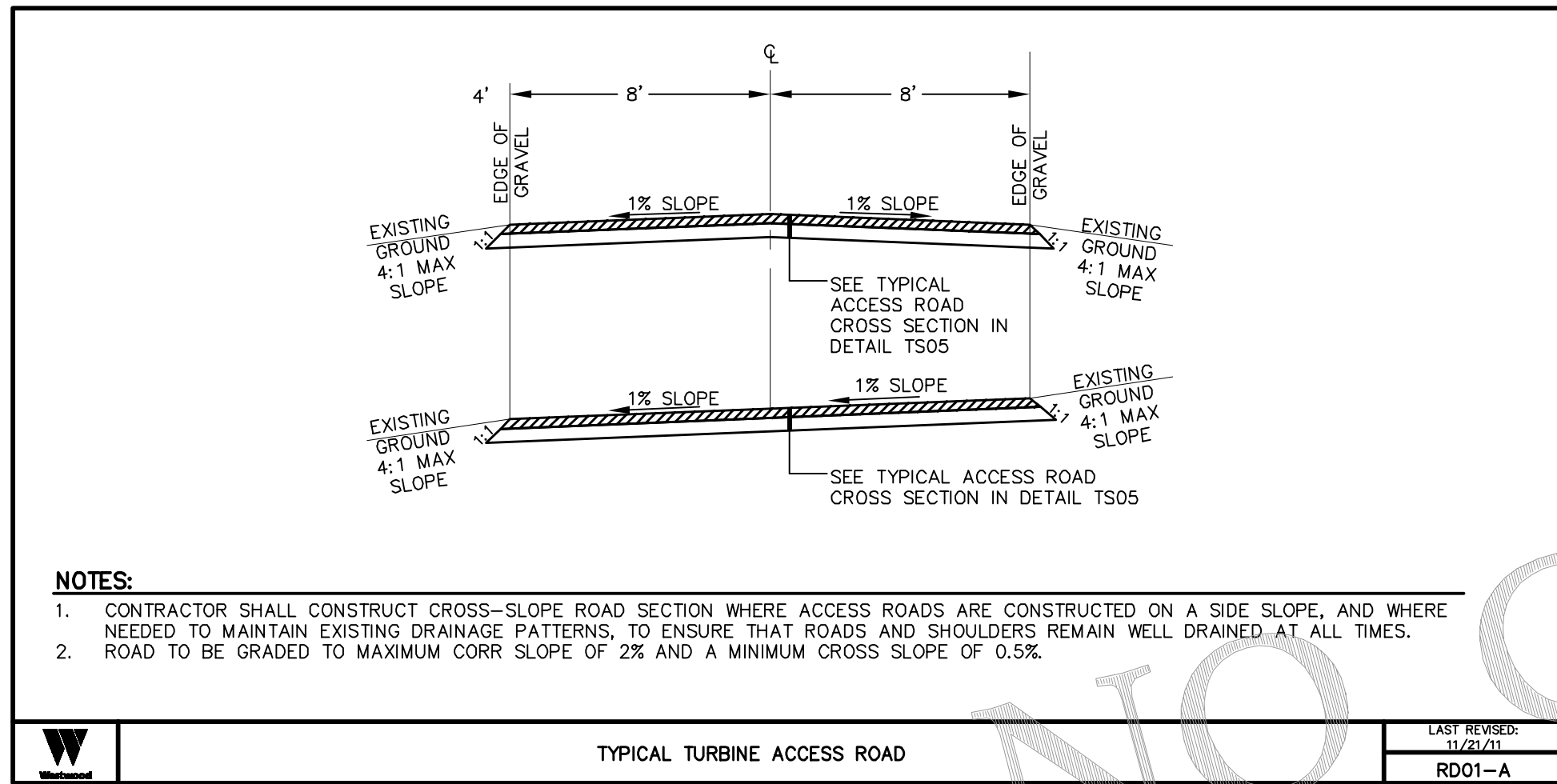
CIVIL PLANS SHEET **4**

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-4

REV 9

SHEET 03 - INDEX.dwg



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0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
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3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
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REFERENCE DRAWINGS	
DWG NO.	MANUFACTURER DESCRIPTION

XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

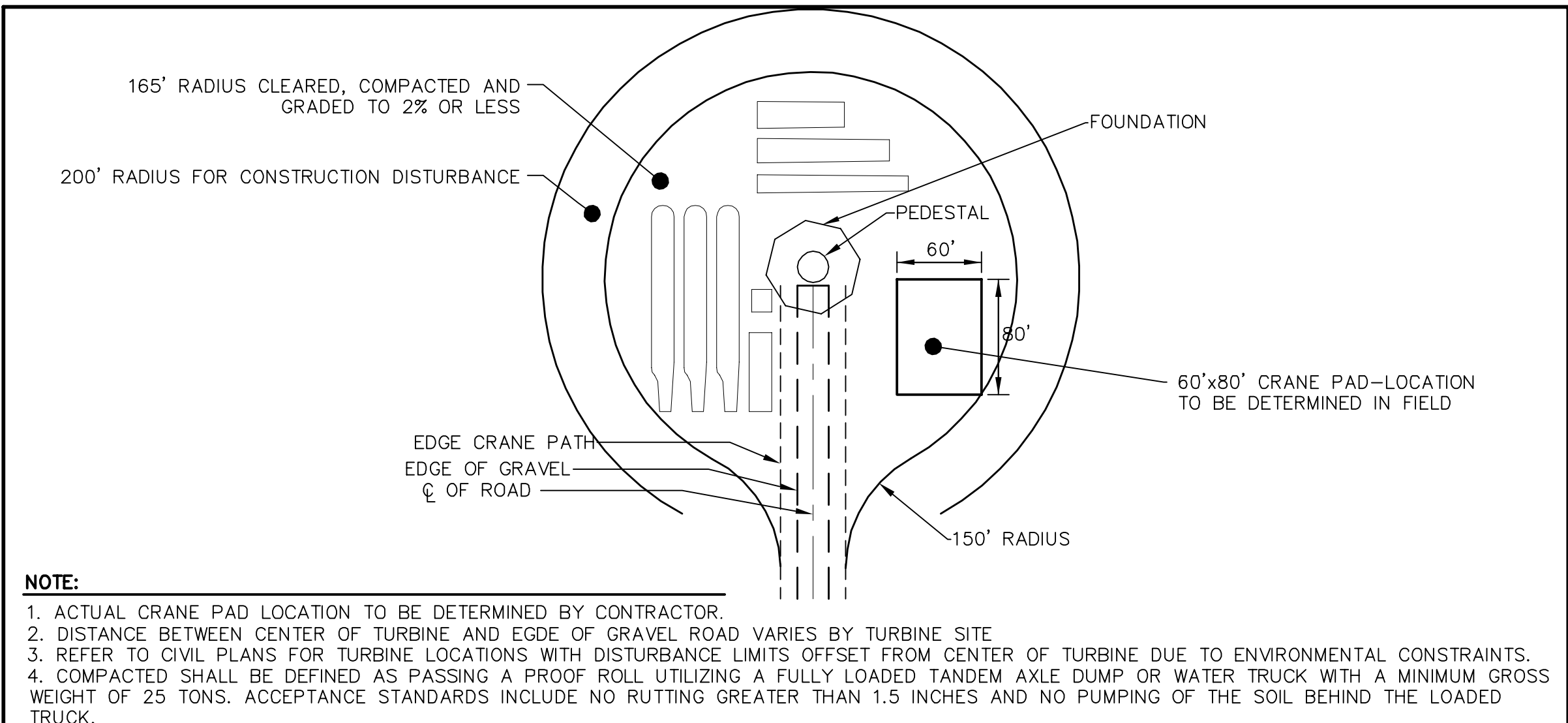
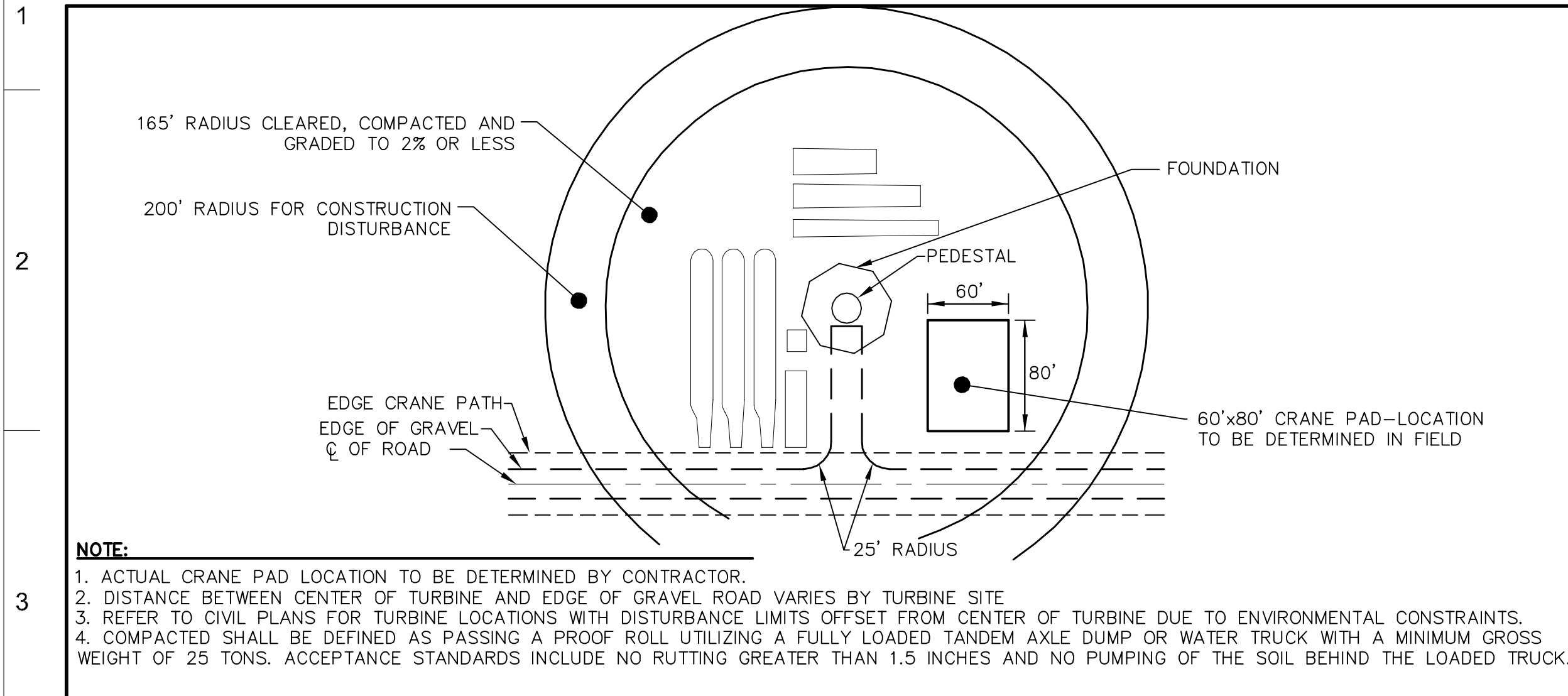
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Construction Details
CIVIL PLANS SHEET 5
NH-217540-5

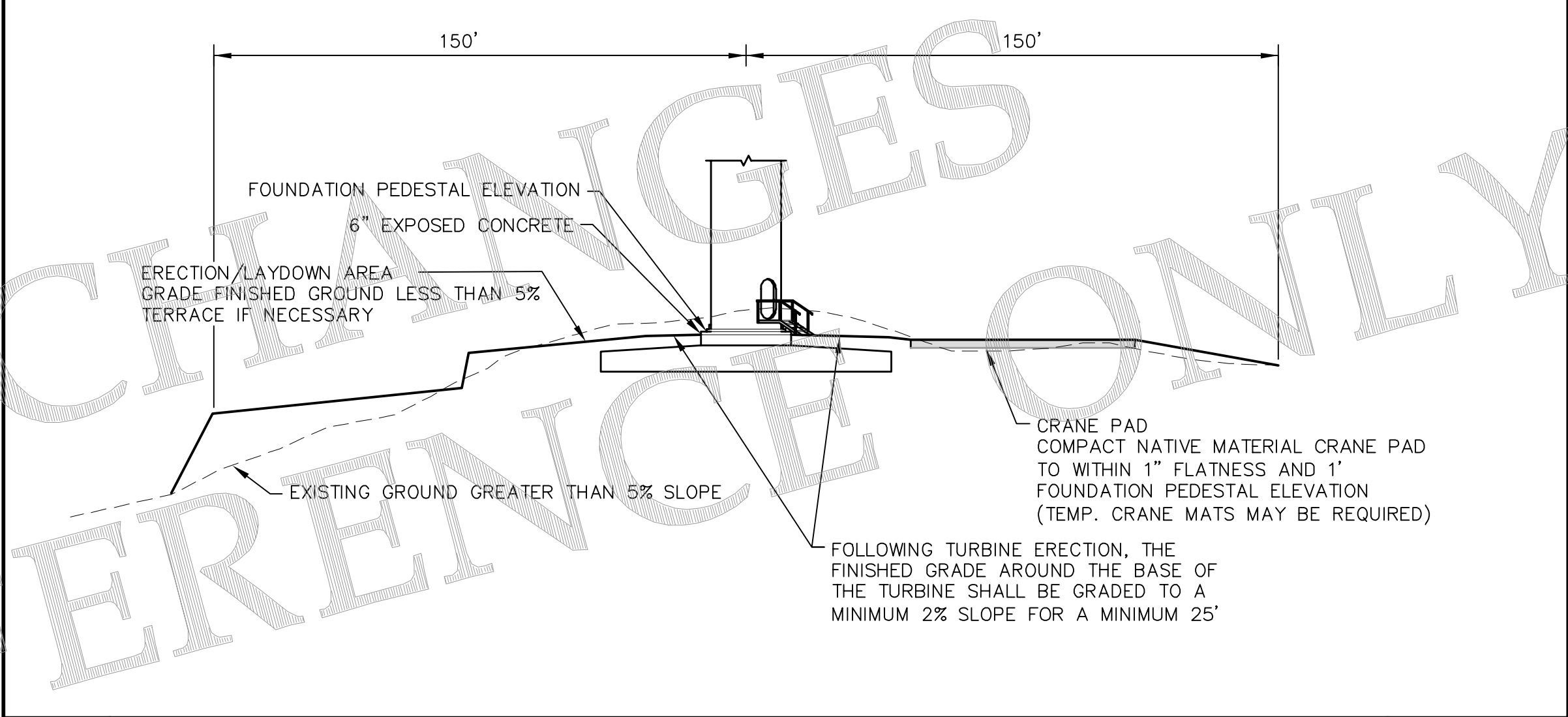
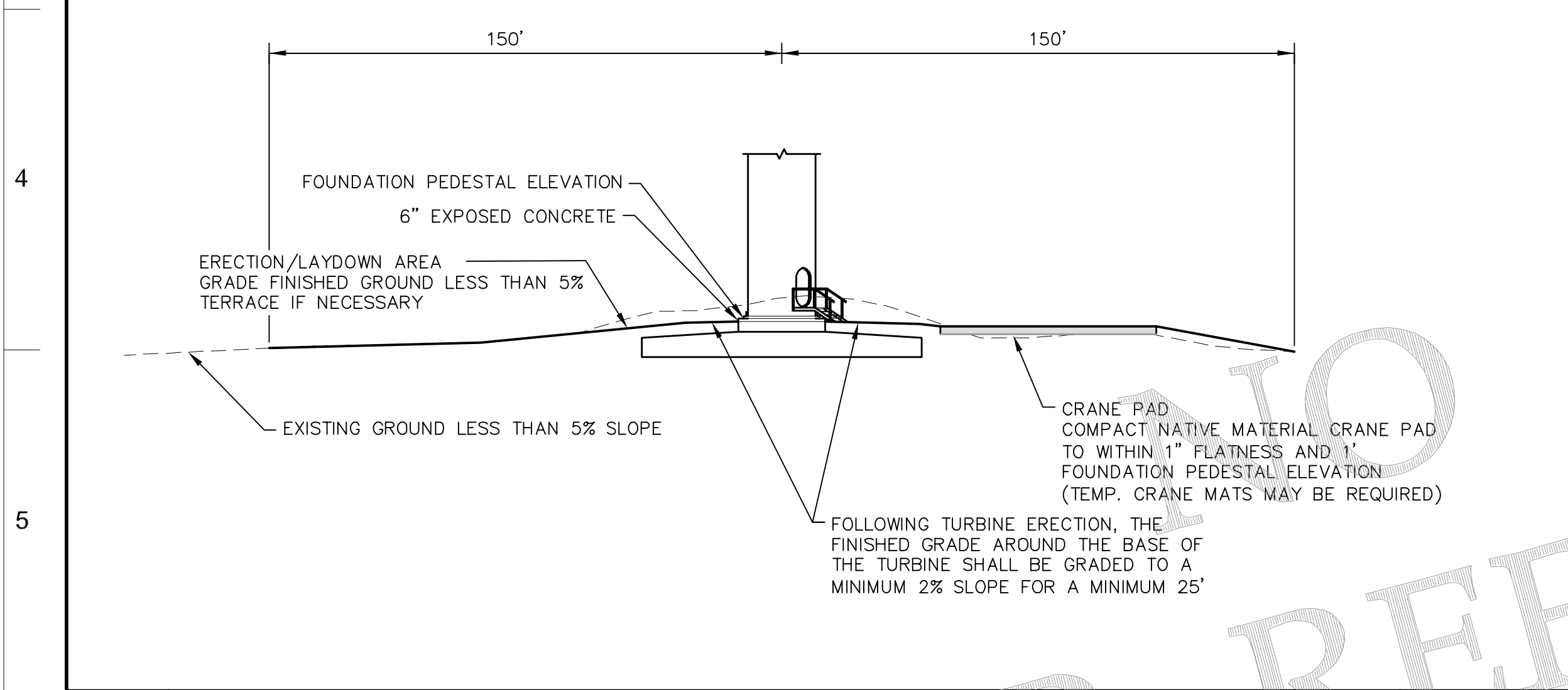


NOTE:
 1. ACTUAL CRANE PAD LOCATION TO BE DETERMINED BY CONTRACTOR.
 2. DISTANCE BETWEEN CENTER OF TURBINE AND EDGE OF GRAVEL VARIES BY TURBINE SITE.
 3. REFER TO CIVIL PLANS FOR TURBINE LOCATIONS WITH DISTURBANCE LIMITS OFFSET FROM CENTER OF TURBINE DUE TO ENVIRONMENTAL CONSTRAINTS.
 4. COMPACTED SHALL BE DEFINED AS PASSING A PROOF ROLL UTILIZING A FULLY LOADED TANDEM AXLE DUMP OR WATER TRUCK WITH A MINIMUM GROSS WEIGHT OF 25 TONS. ACCEPTANCE STANDARDS INCLUDE NO RUTTING GREATER THAN 1.5 INCHES AND NO PUMPING OF THE SOIL BEHIND THE LOADED TRUCK.

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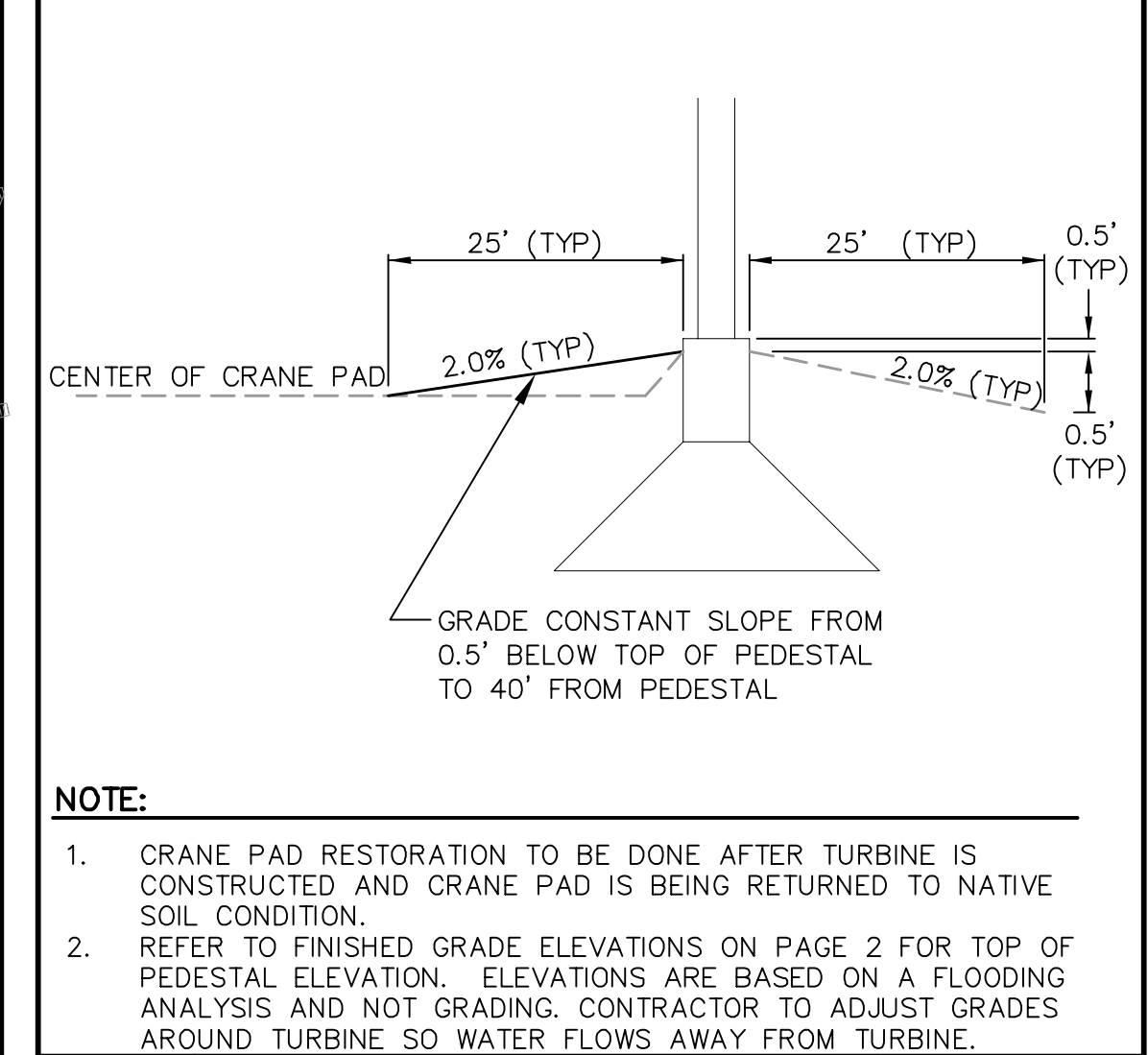
TYPICAL WTG SITE - PLAN VIEW - DRIVE BY
 LAST REVISED: 08/30/15
 TS01

TYPICAL WTG SITE - PLAN VIEW - DEAD END
 LAST REVISED: 08/30/15
 TS02

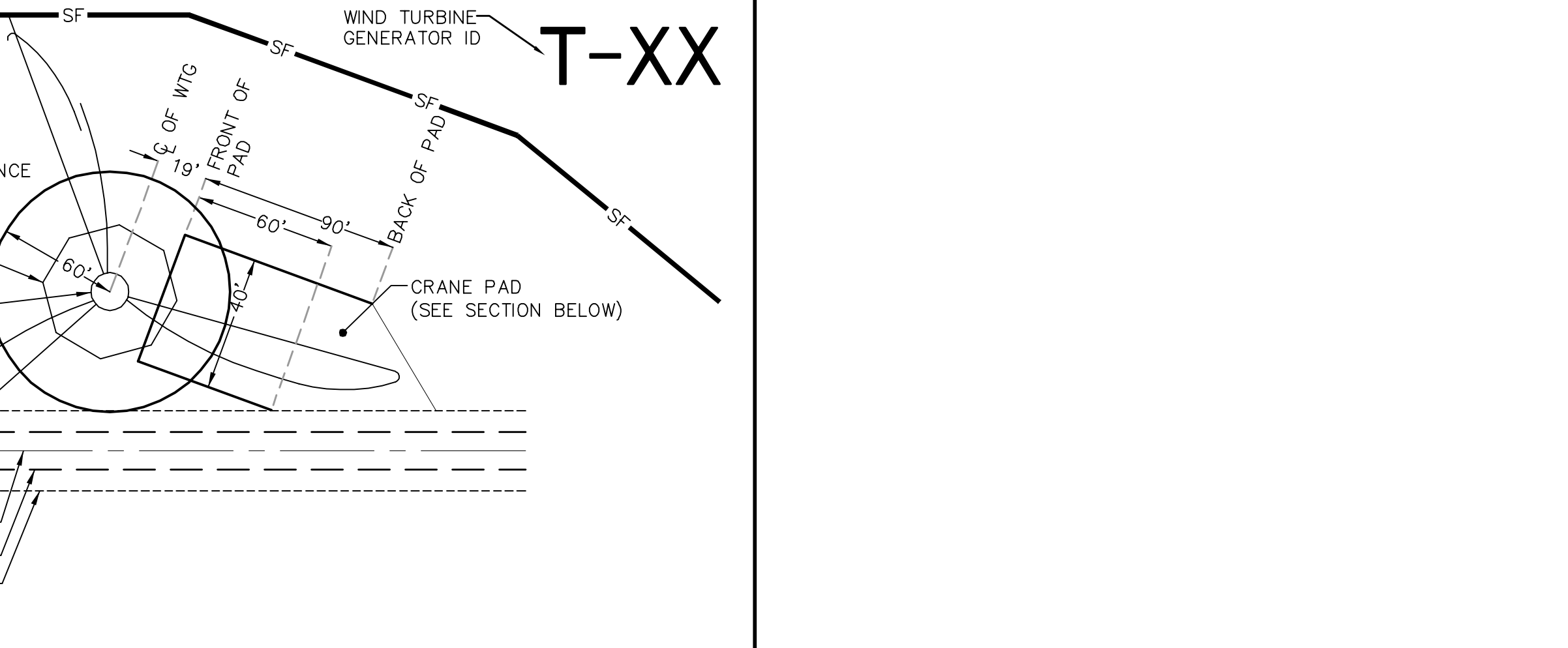
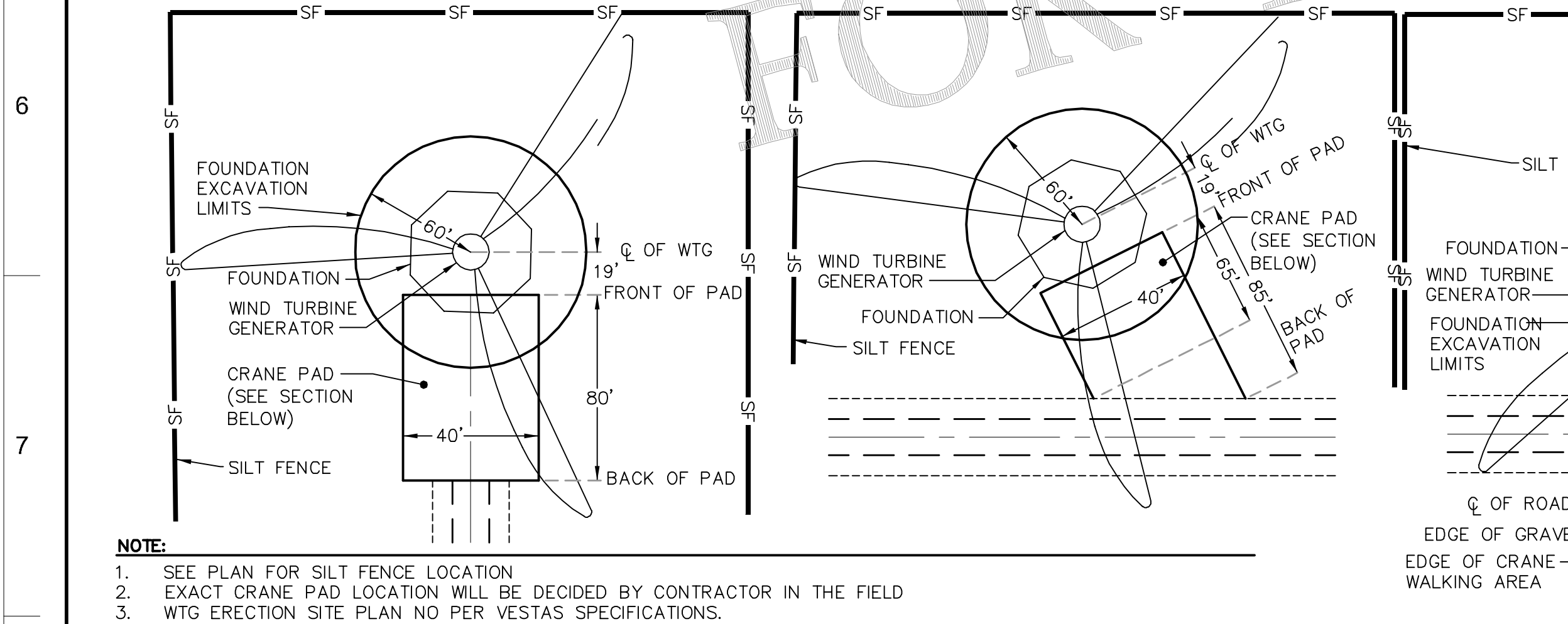


TYPICAL WTG SITE - PROFILE VIEW
 LAST REVISED: 04/11/14
 TS03

TYPICAL WTG SITE, EXISTING GROUND GREATER THAN 5% - PROFILE VIEW
 LAST REVISED: 04/08/09
 TS04



CRANE PAD RESTORATION
 LAST REVISED: 12/01/11
 UPO1



TYPICAL WTG ERECTION SITE PLAN
 LAST REVISED: 02/27/14
 TBO1

TYPICAL WTG ERECTION SITE PLAN T-XX
 LAST REVISED: 02/27/14
 TBO1

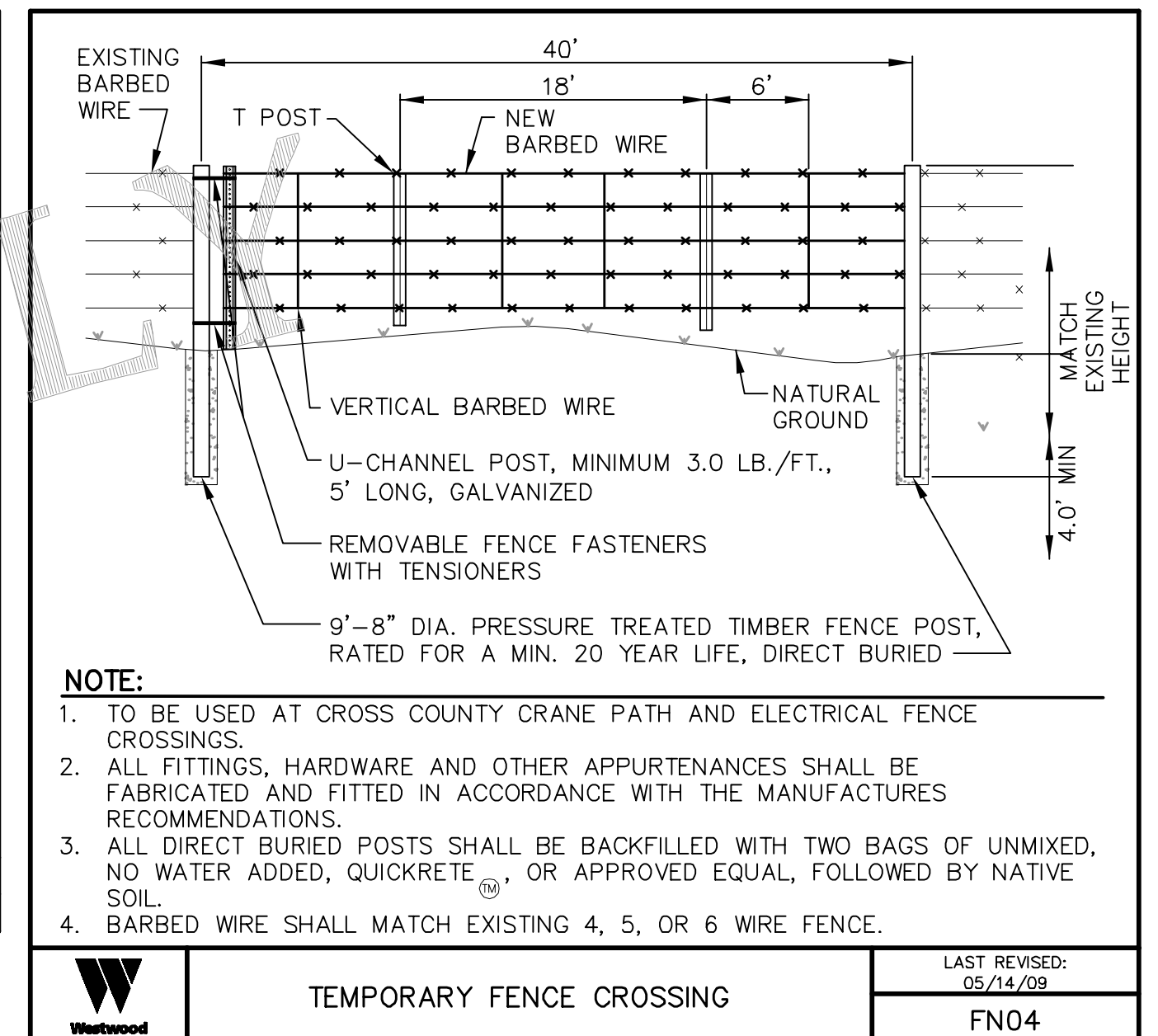
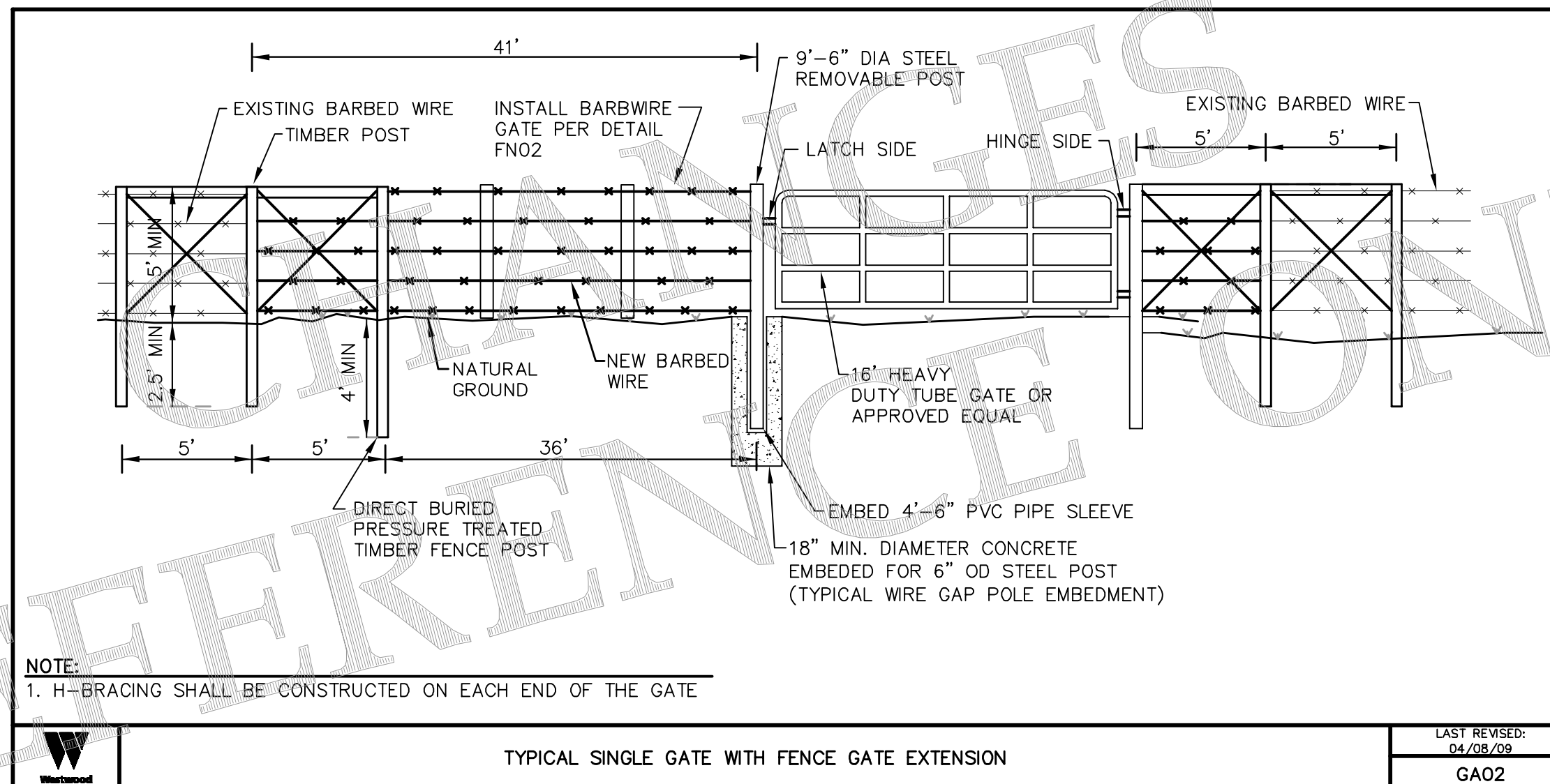
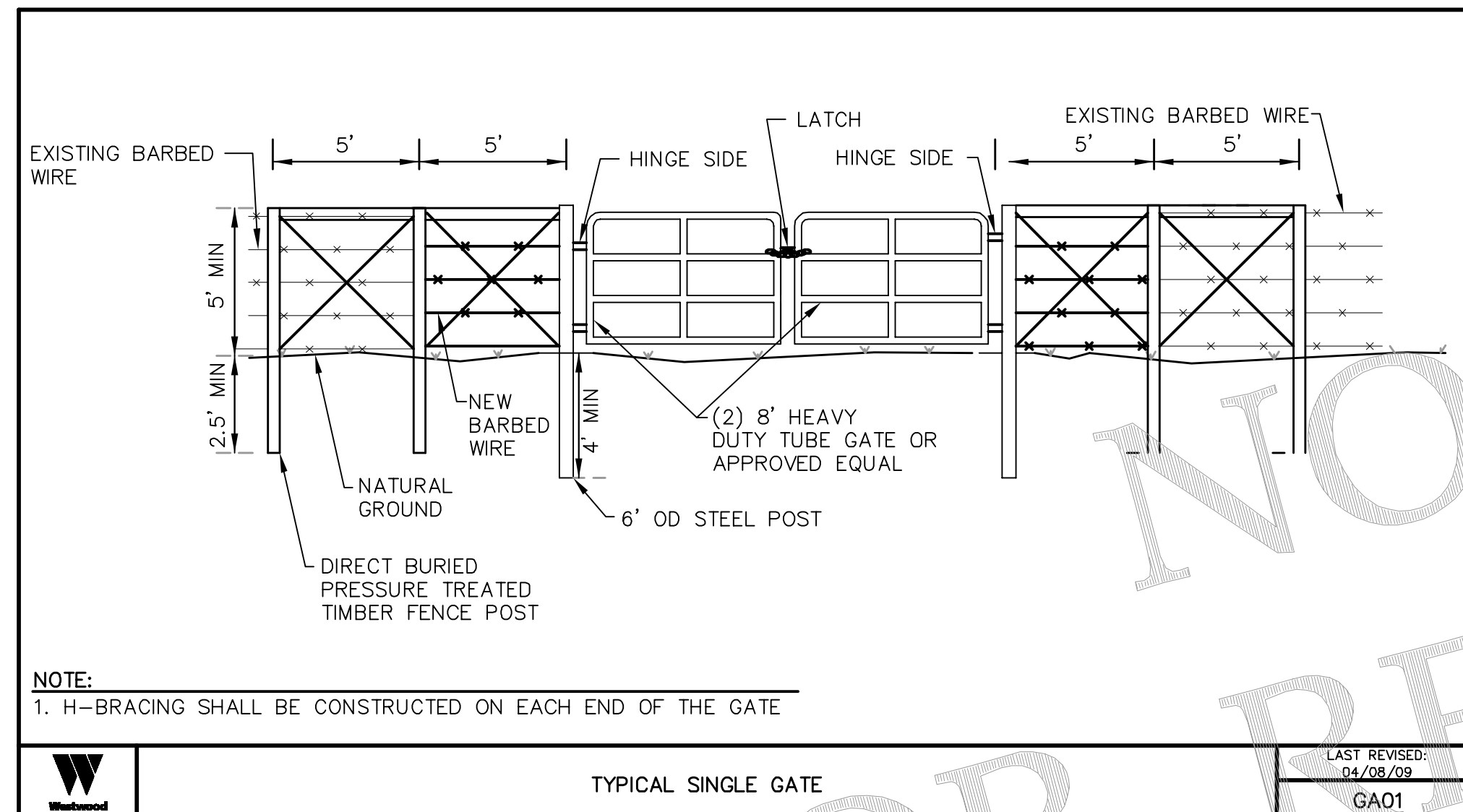
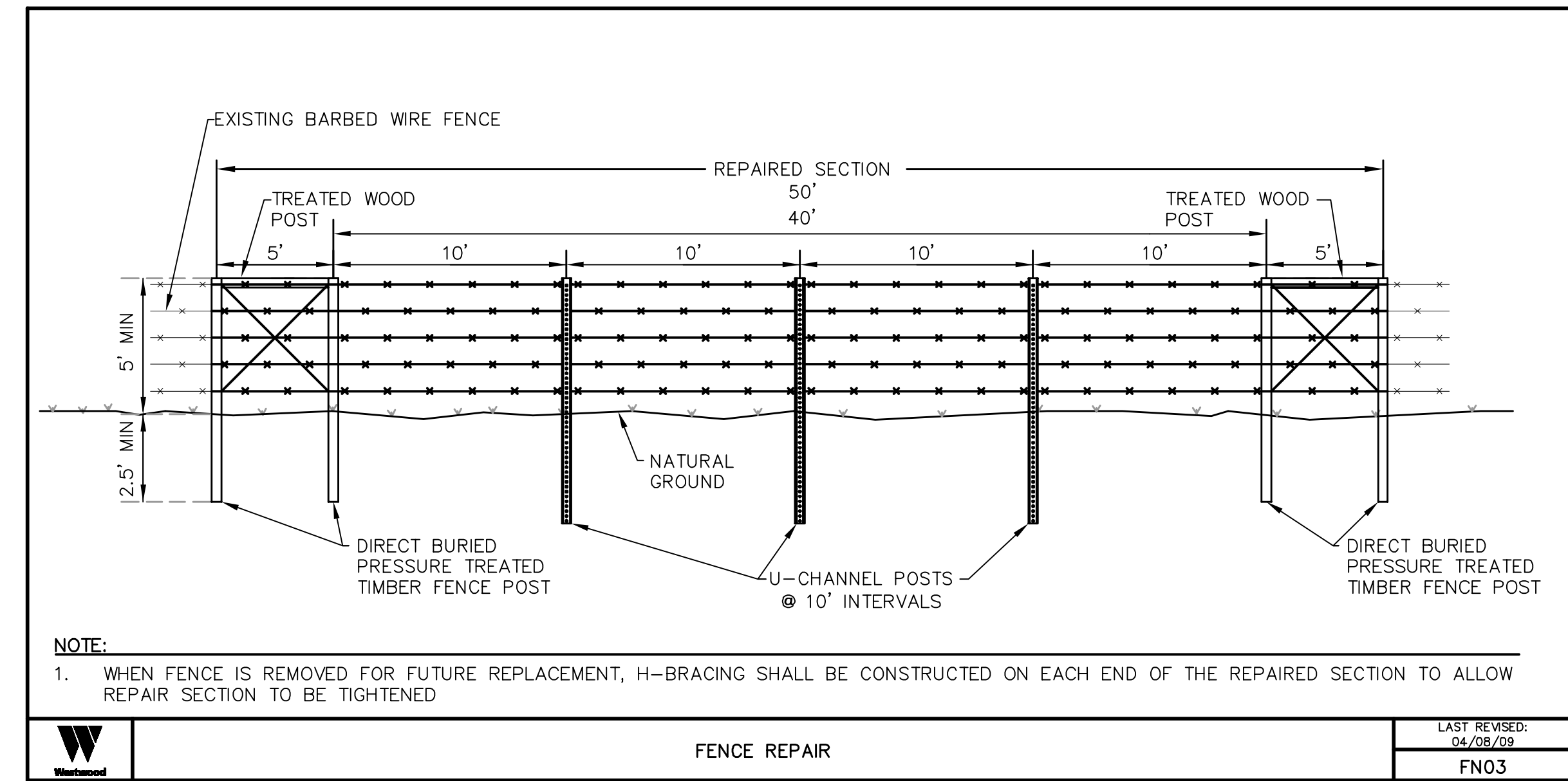
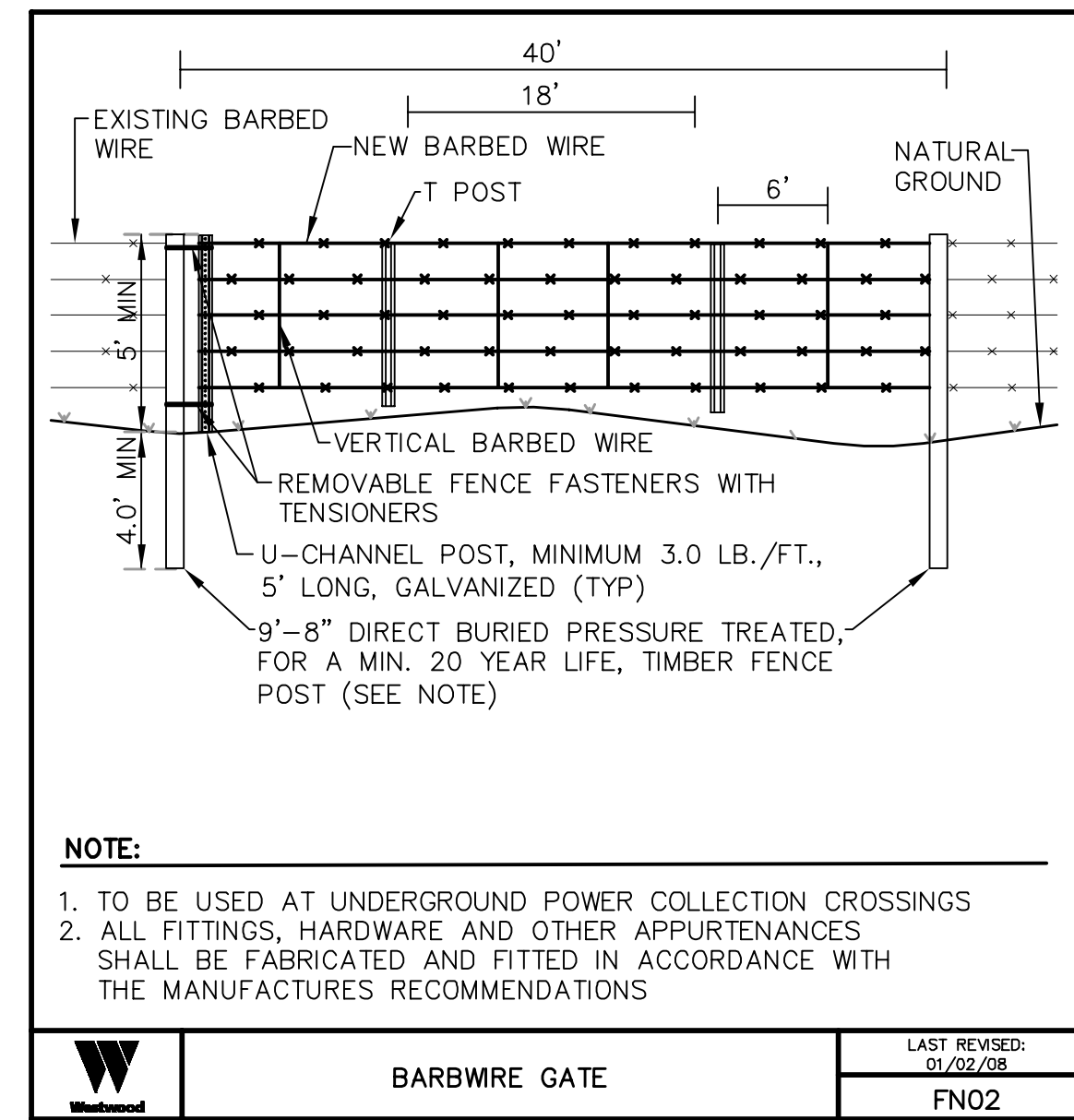
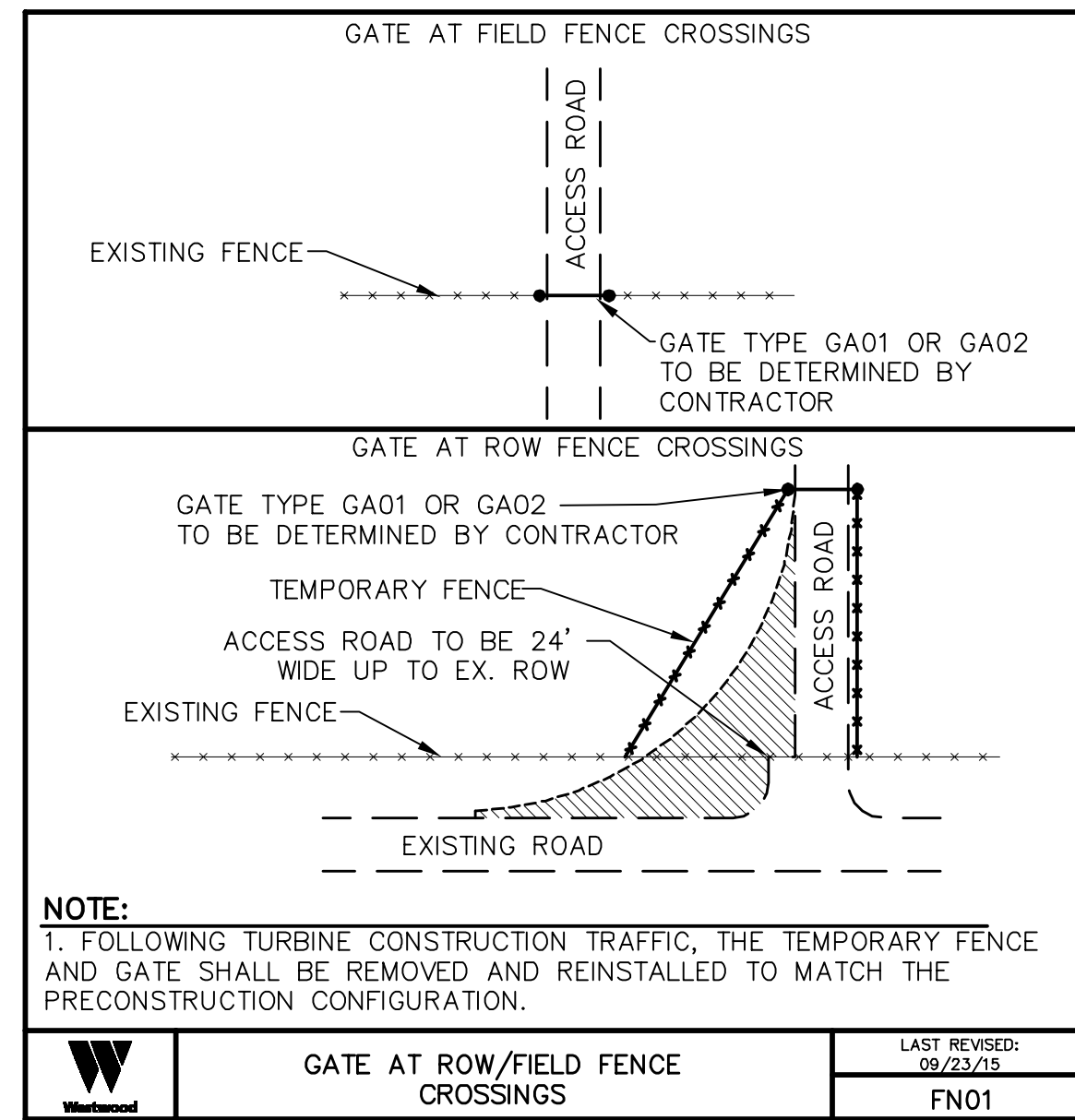
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8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
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REFERENCE DRAWINGS			
DWG NO.	MANUFACTURER	DESCRIPTION	

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Construction Details
 CIVIL PLANS SHEET 6
 ENERGY SUPPLY ENGINEERING & CONSTRUCTION
 NH-217540-6



FOR NO REFERENCE ONLY

Table 1						
Existing Fence Crossing						
Crossing #	Detail #	Gate Size	Removable Size	Landowner 1	Landowner 2	Sheet #
AV-01	GA02	16'	N/A	RALPH K. DICK & SANDRA L. DICK	-	21
BR-01	GA02	16'	N/A	GARY G. STEIDL	JEFFREY BURKE MITCHELL	16
BR-02	GA02	16'	N/A	JEFFERY BURKE MITCHELL	JEFFREY BURKE MITCHELL	16
CP-01	FN04	N/A	40'	KATHERINE JENKINS	DAVID A. BISCHOFF	40
CP-02	FN04	N/A	40'	MERLE E. MICHAELSON AND JOYCE A. MICHAELSON	-	38
CP-03	FN04	N/A	50'	MERLE E. MICHAELSON AND JOYCE A. MICHAELSON	-	38
PC-02	FN03	N/A	40'	GARY G. STEIDL	JEFFREY BURKE MITCHELL	16
PC-03	FN03	N/A	40'	CLYDE LYLE HUBER & LINDA DOREEN HUBER	JEFFREY BURKE MITCHELL	15
PC-04	FN03	N/A	40'	CLYDE LYLE HUBER & LINDA DOREEN HUBER	JEFFREY BURKE MITCHELL	15
PC-05	FN03	N/A	40'	JEFFERY BURKE MITCHELL	-	15
PC-06	FN03	N/A	40'	JEFFERY BURKE MITCHELL	CHARLES CROMMETT	15

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REVISION							REFERENCE DRAWINGS		
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XcelEnergy
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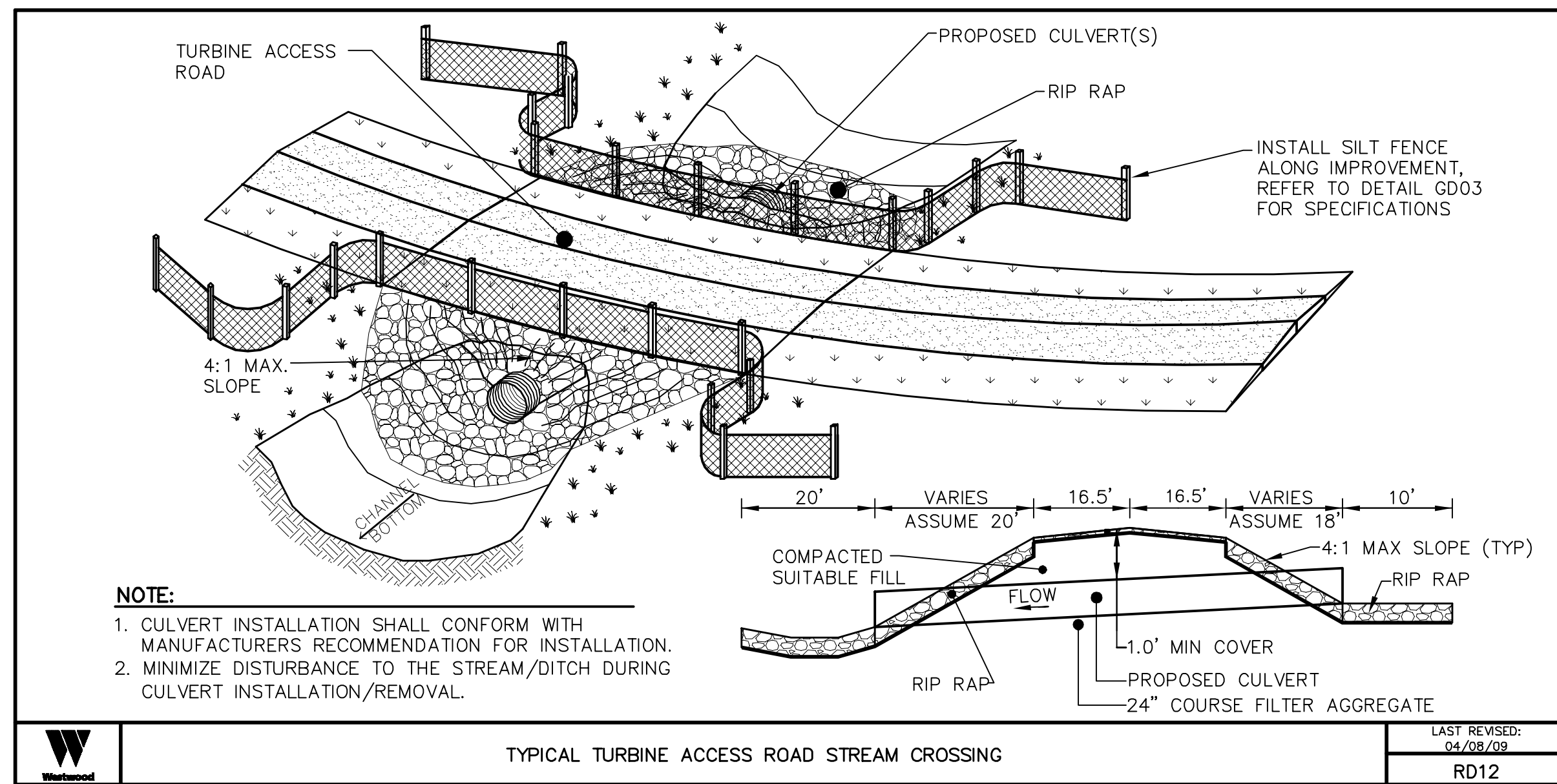
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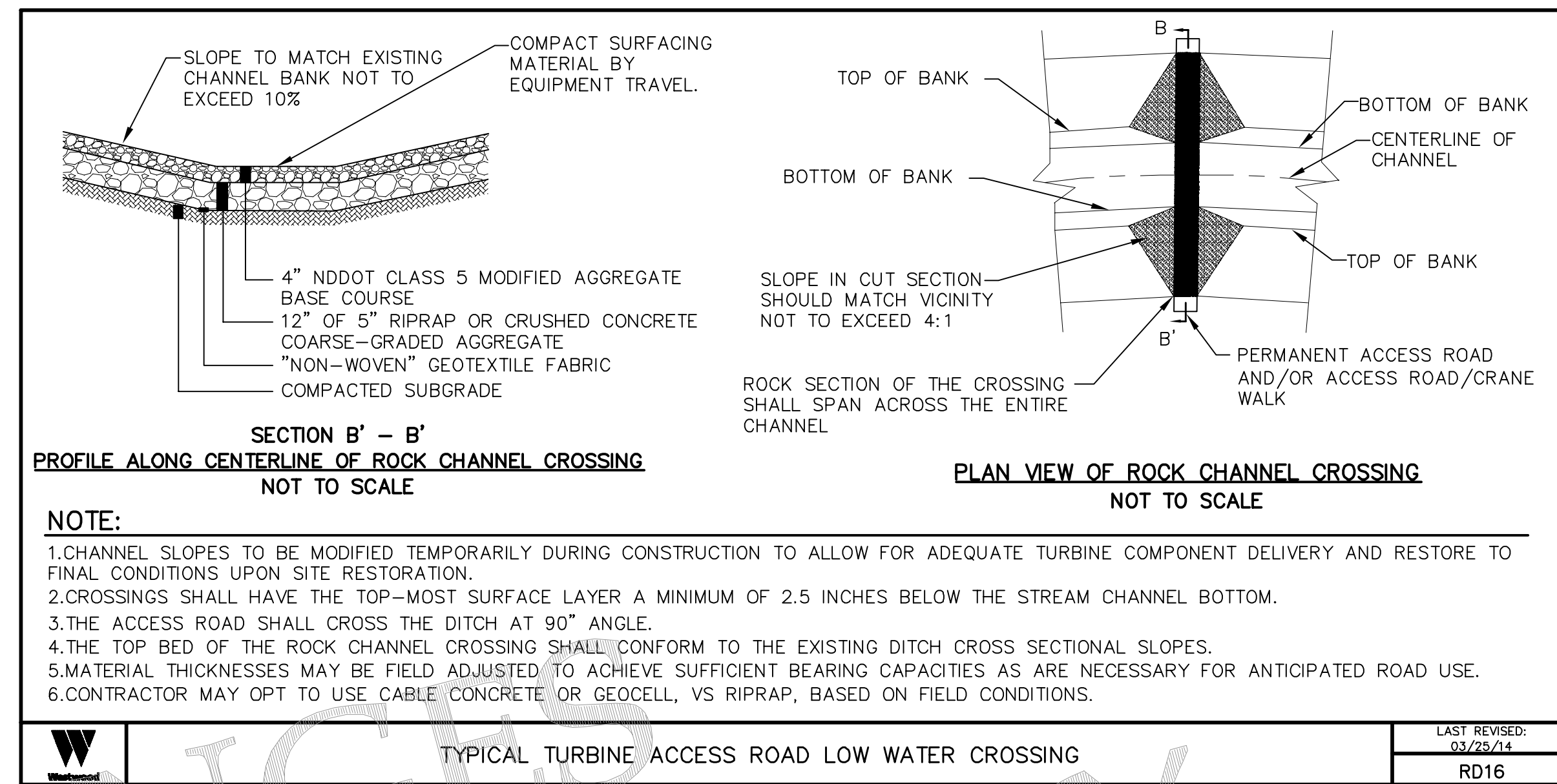
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Construction Details
CIVIL PLANS SHEET 7
NH-217540-7



NOTE:
 1. CULVERT INSTALLATION SHALL CONFORM WITH MANUFACTURERS RECOMMENDATION FOR INSTALLATION.
 2. MINIMIZE DISTURBANCE TO THE STREAM/DITCH DURING CULVERT INSTALLATION/REMOVAL.

TYPICAL TURBINE ACCESS ROAD STREAM CROSSING
 LAST REVISED: 04/08/09
 RD12

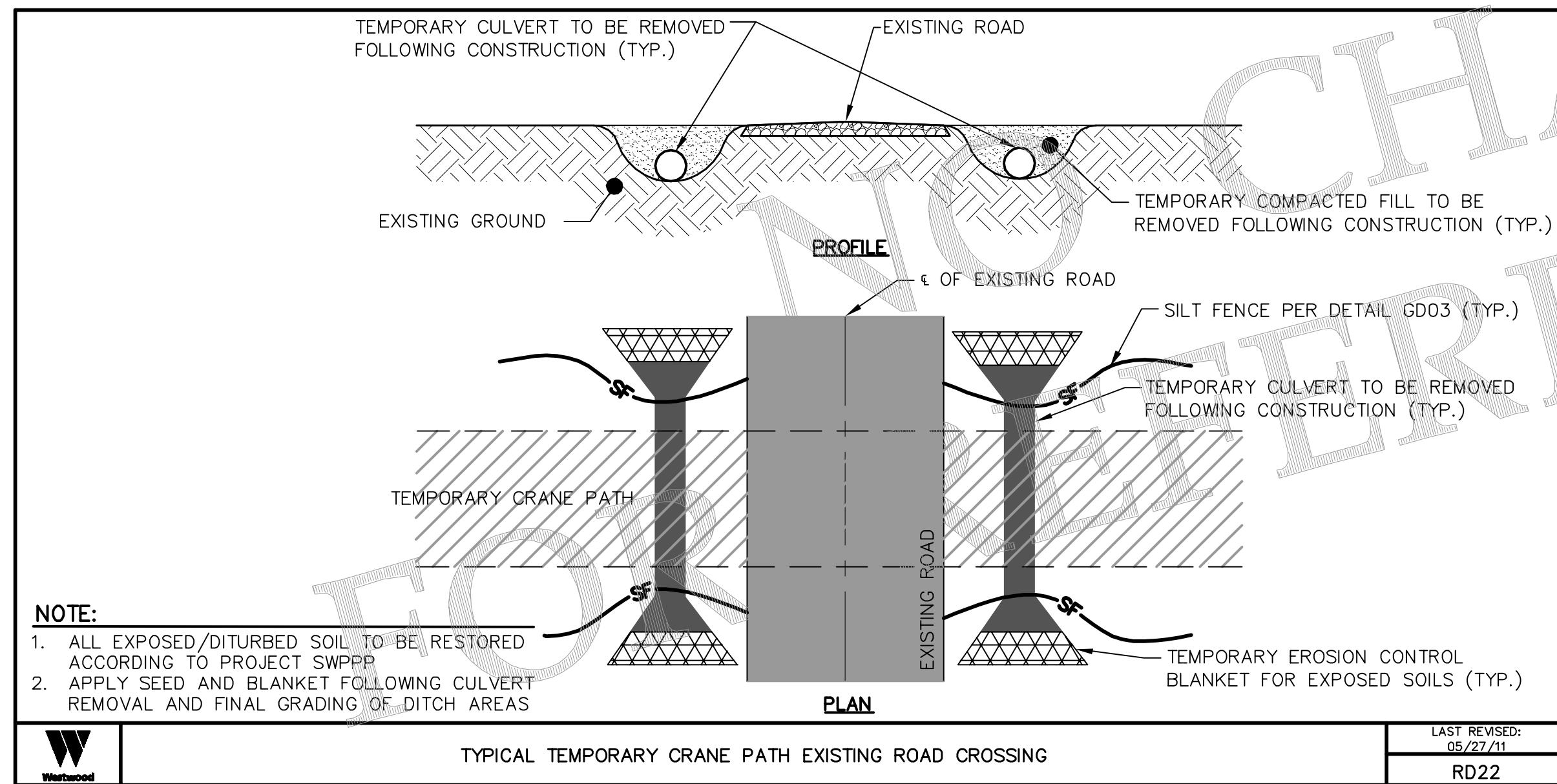


SECTION B' - B'
 PROFILE ALONG CENTERLINE OF ROCK CHANNEL CROSSING
 NOT TO SCALE

PLAN VIEW OF ROCK CHANNEL CROSSING
 NOT TO SCALE

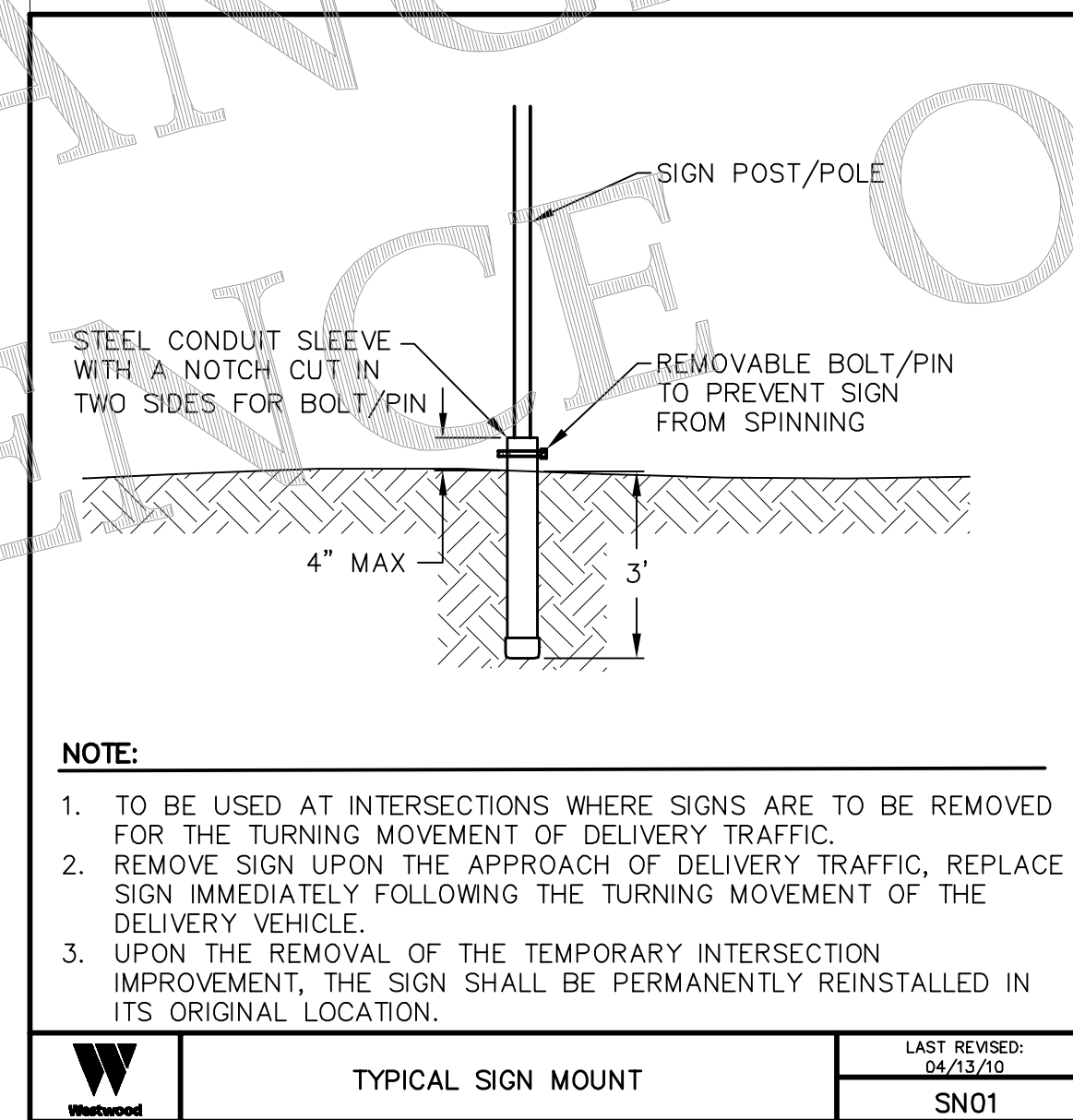
NOTE:
 1. CHANNEL SLOPES TO BE MODIFIED TEMPORARILY DURING CONSTRUCTION TO ALLOW FOR ADEQUATE TURBINE COMPONENT DELIVERY AND RESTORE TO FINAL CONDITIONS UPON SITE RESTORATION.
 2. CROSSINGS SHALL HAVE THE TOP-MOST SURFACE LAYER A MINIMUM OF 2.5 INCHES BELOW THE STREAM CHANNEL BOTTOM.
 3. THE ACCESS ROAD SHALL CROSS THE DITCH AT 90° ANGLE.
 4. THE TOP BED OF THE ROCK CHANNEL CROSSING SHALL CONFORM TO THE EXISTING DITCH CROSS SECTIONAL SLOPES.
 5. MATERIAL THICKNESSES MAY BE FIELD ADJUSTED TO ACHIEVE SUFFICIENT BEARING CAPACITIES AS ARE NECESSARY FOR ANTICIPATED ROAD USE.
 6. CONTRACTOR MAY OPT TO USE CABLE CONCRETE OR GEOCELL, VS RIPRAP, BASED ON FIELD CONDITIONS.

TYPICAL TURBINE ACCESS ROAD LOW WATER CROSSING
 LAST REVISED: 03/25/14
 RD16



NOTE:
 1. ALL EXPOSED/DISTURBED SOIL TO BE RESTORED ACCORDING TO PROJECT SWPPP.
 2. APPLY SEED AND BLANKET FOLLOWING CULVERT REMOVAL AND FINAL GRADING OF DITCH AREAS.

TYPICAL TEMPORARY CRANE PATH EXISTING ROAD CROSSING
 LAST REVISED: 05/27/11
 RD22



NOTE:
 1. TO BE USED AT INTERSECTIONS WHERE SIGNS ARE TO BE REMOVED FOR THE TURNING MOVEMENT OF DELIVERY TRAFFIC.
 2. REMOVE SIGN UPON THE APPROACH OF DELIVERY TRAFFIC, REPLACE SIGN IMMEDIATELY FOLLOWING THE TURNING MOVEMENT OF THE DELIVERY VEHICLE.
 3. UPON THE REMOVAL OF THE TEMPORARY INTERSECTION IMPROVEMENT, THE SIGN SHALL BE PERMANENTLY REINSTALLED IN ITS ORIGINAL LOCATION.

TYPICAL SIGN MOUNT
 LAST REVISED: 04/13/10
 SN01

Table 2			
Low Water Crossings			
Crossing #	Detail #	Road Name	Sheet #
LWC-03	RD16	ROAD AX	41
LWC-04	RD16	ROAD AT	36
LWC-05	RD16	ROAD AP	32
LWC-06	RD16	ROAD AD	27
LWC-07	RD16	ROAD Z	26
LWC-08	RD16	ROAD AA	21
LWC-09	RD16	ROAD M	21
LWC-11	RD16	ROAD H	19
LWC-12	RD16	ROAD V	25
LWC-13	RD16	ROAD A	12
LWC-14	RD16	ROAD E	17
LWC-15	RD16	ROAD U	24
LWC-16	RD16	ROAD Z	26
LWC-17	RD16	ROAD AW	40/41

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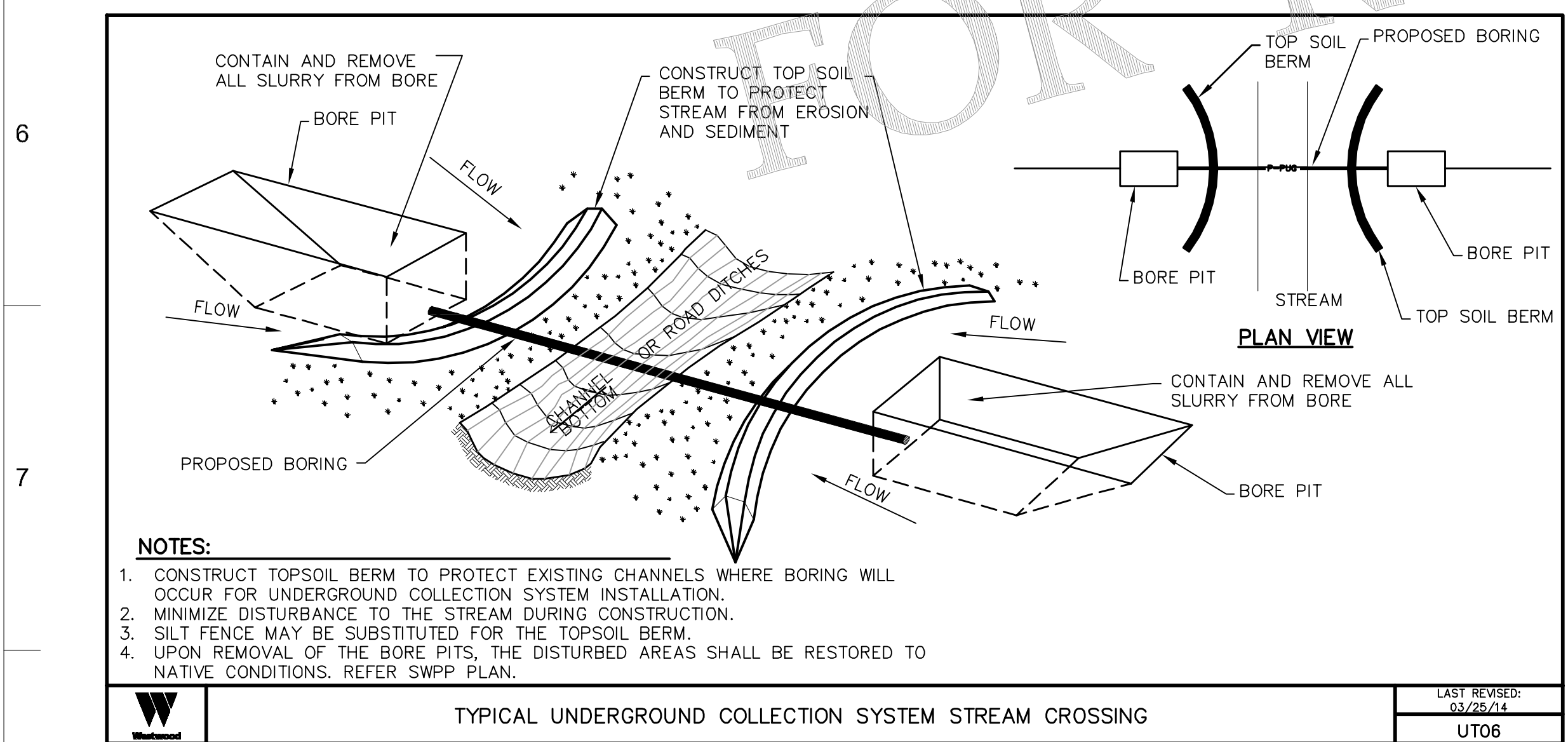
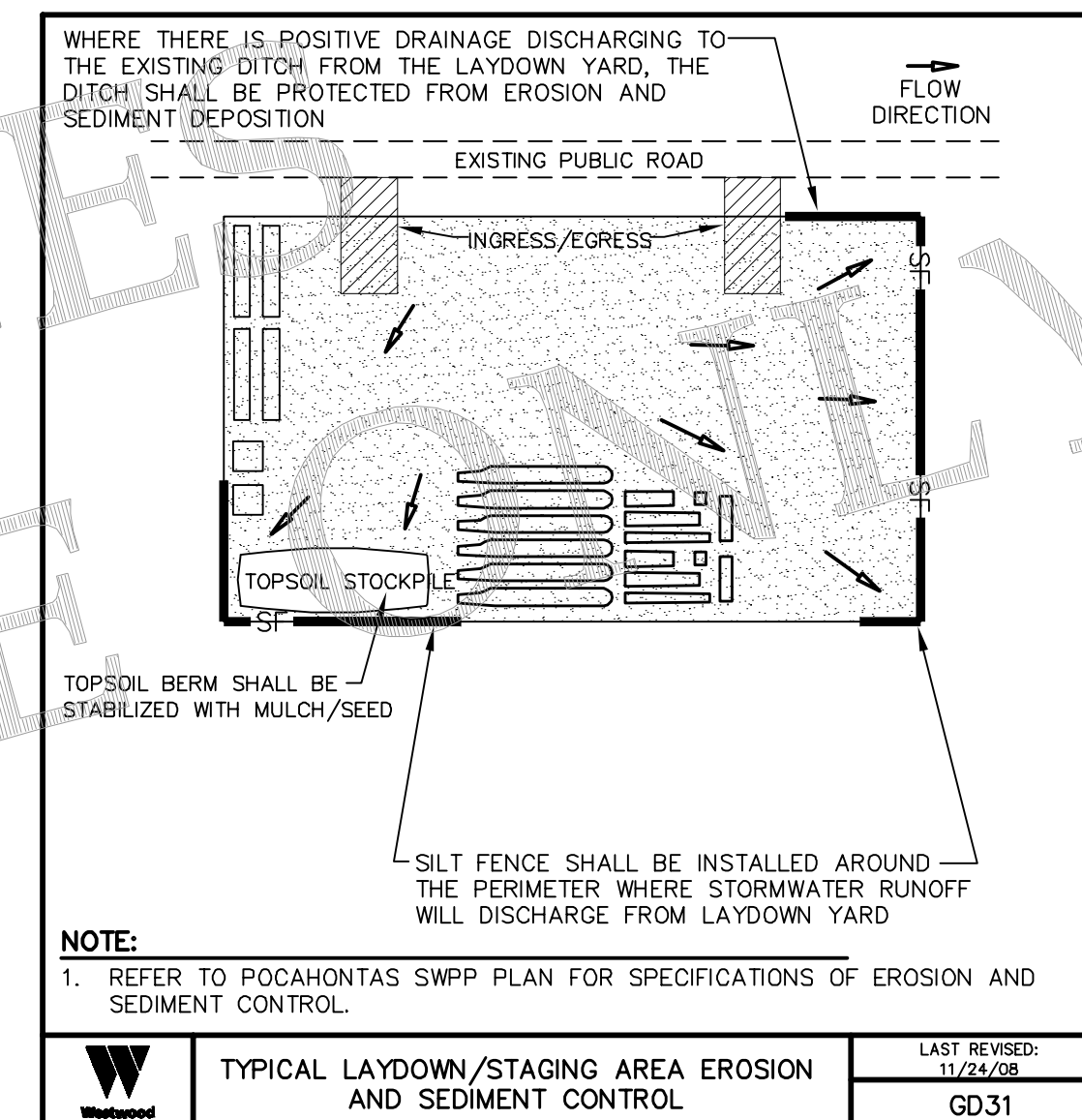
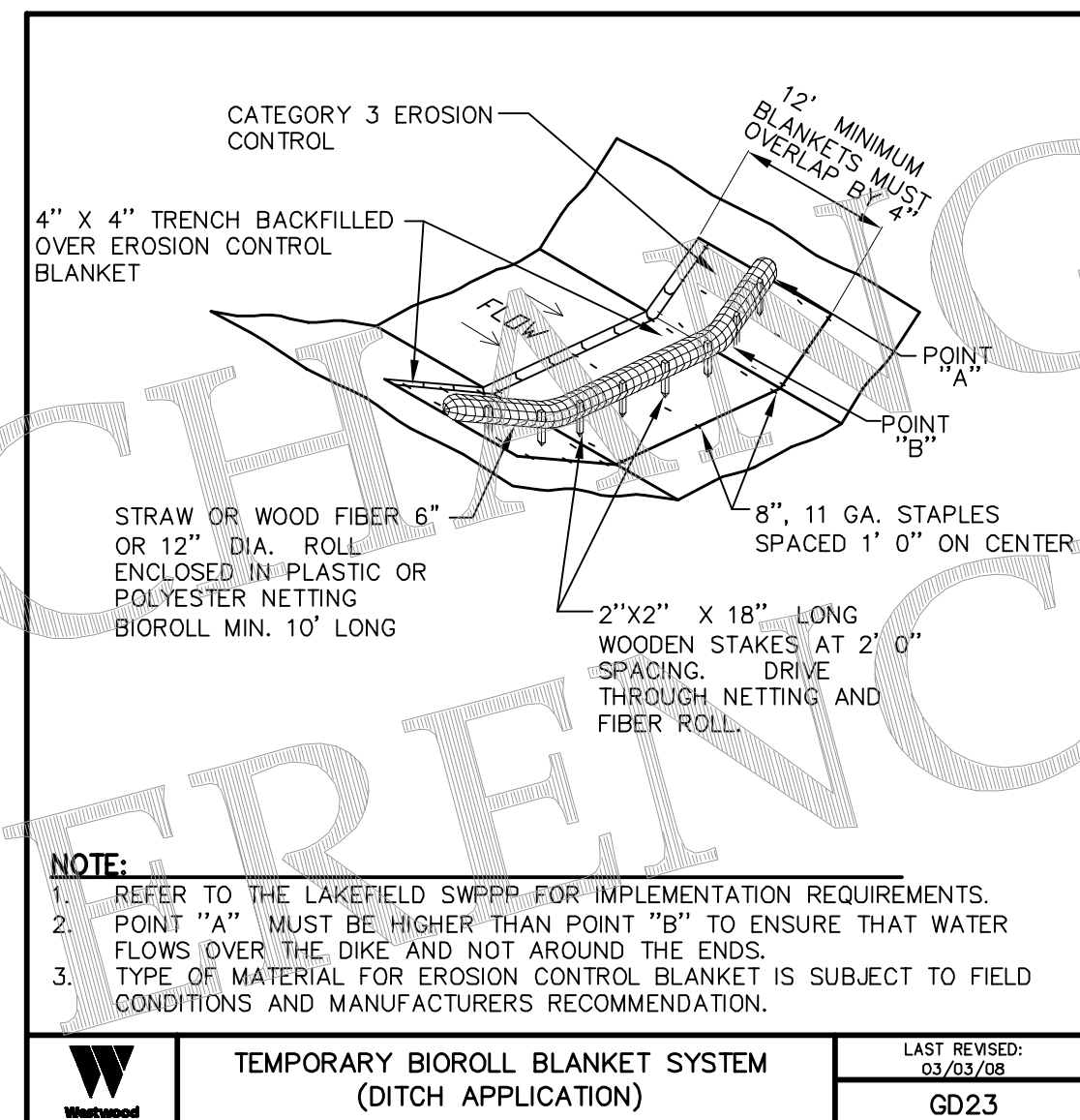
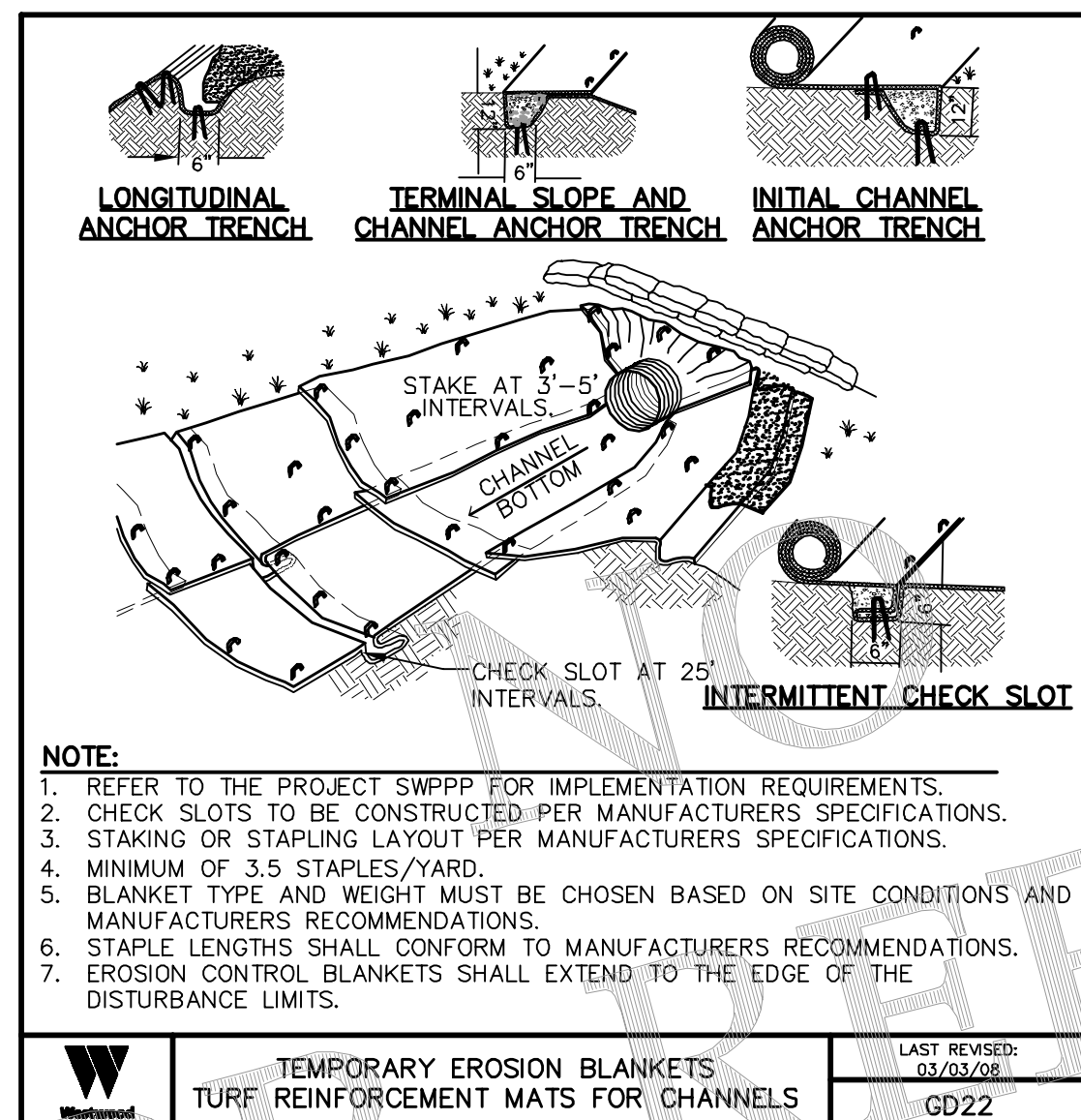
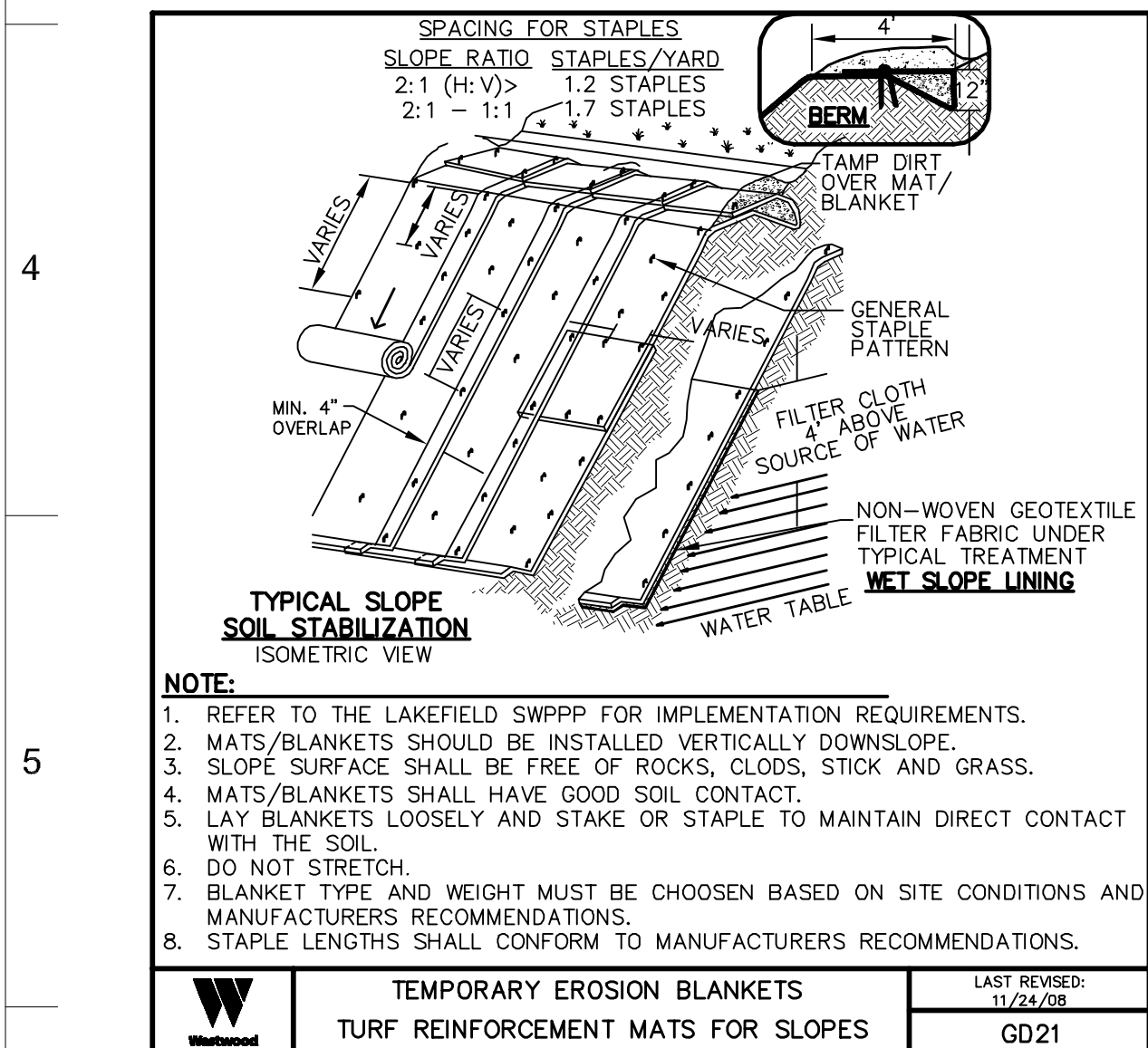
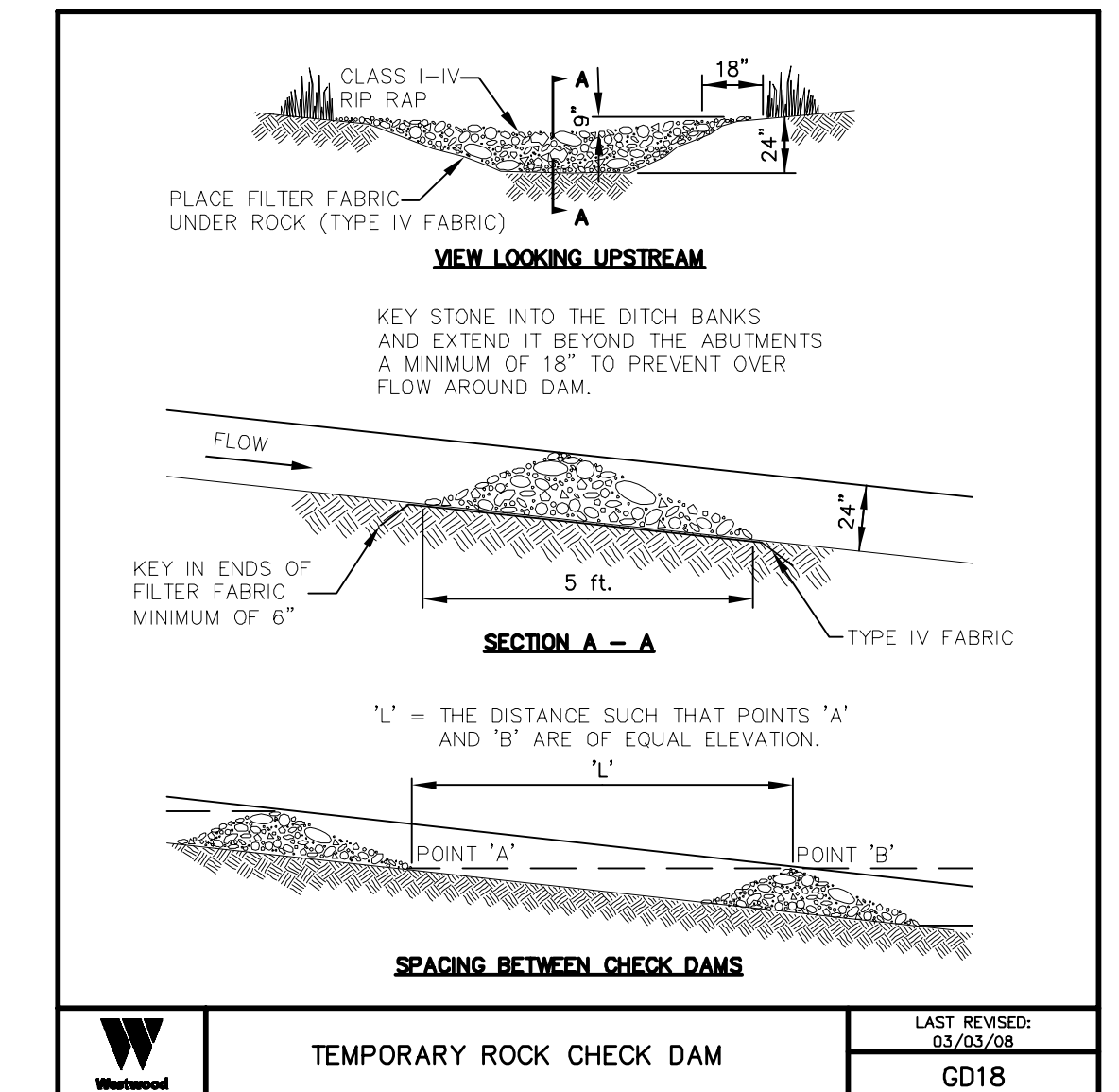
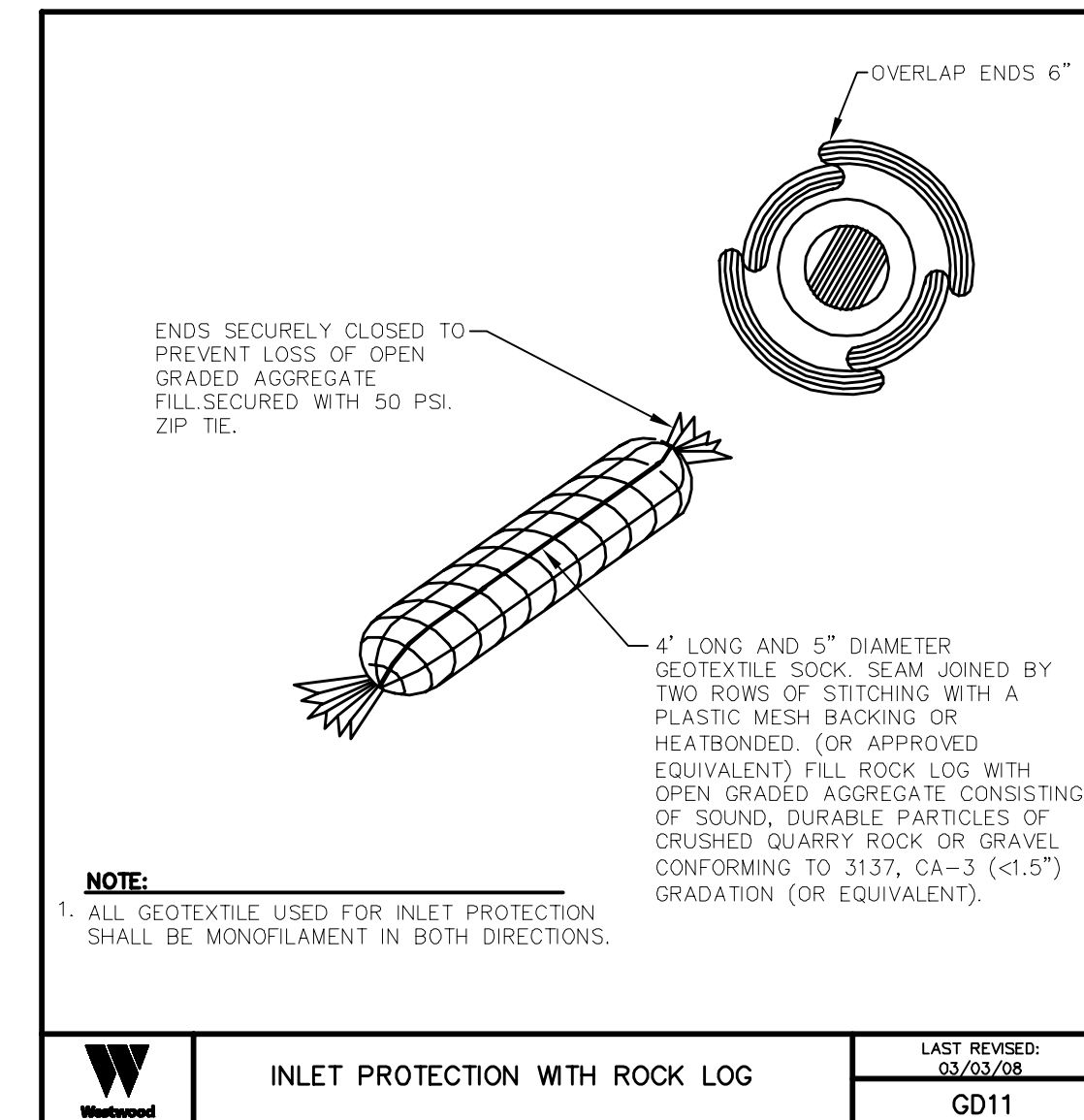
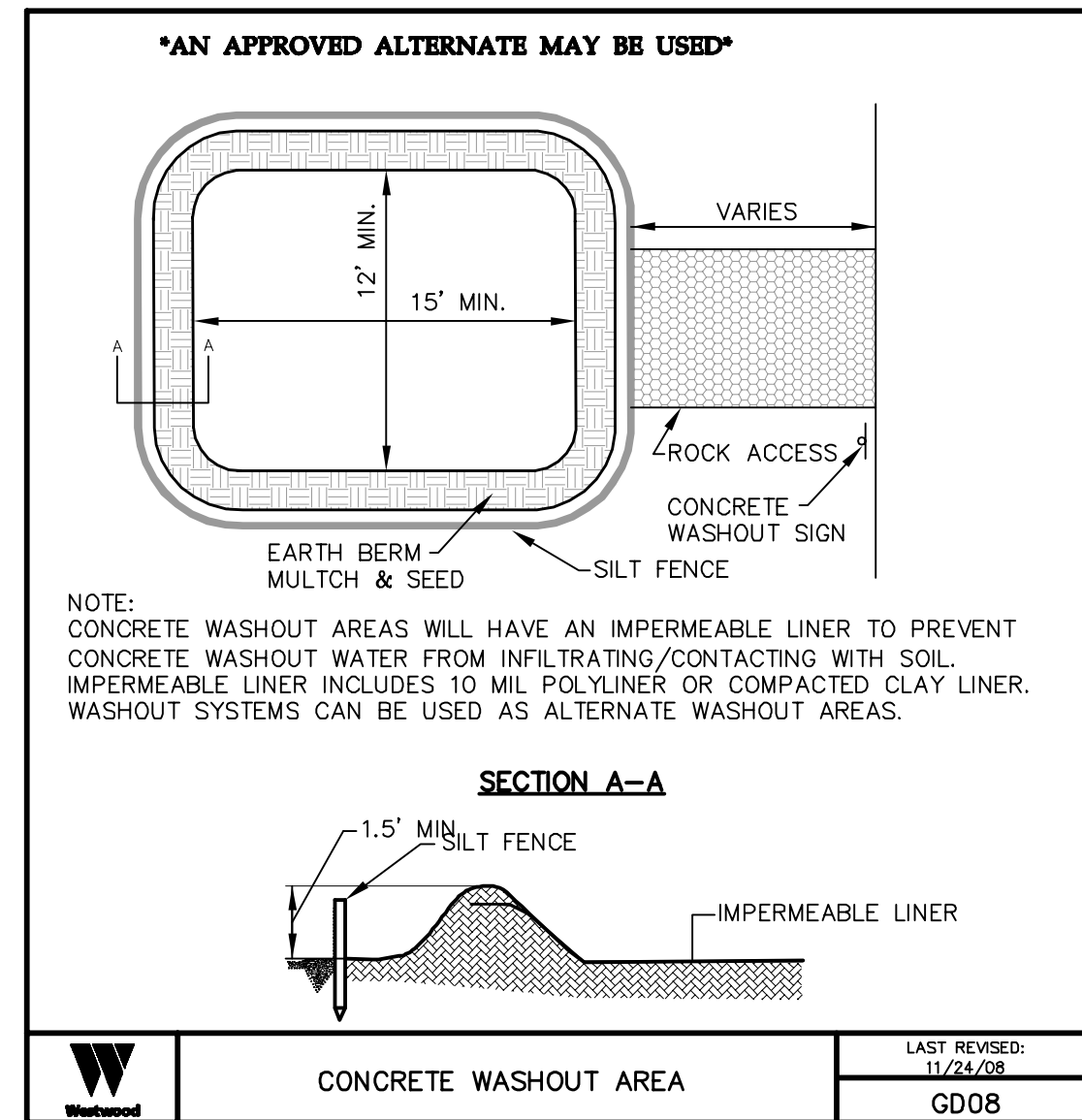
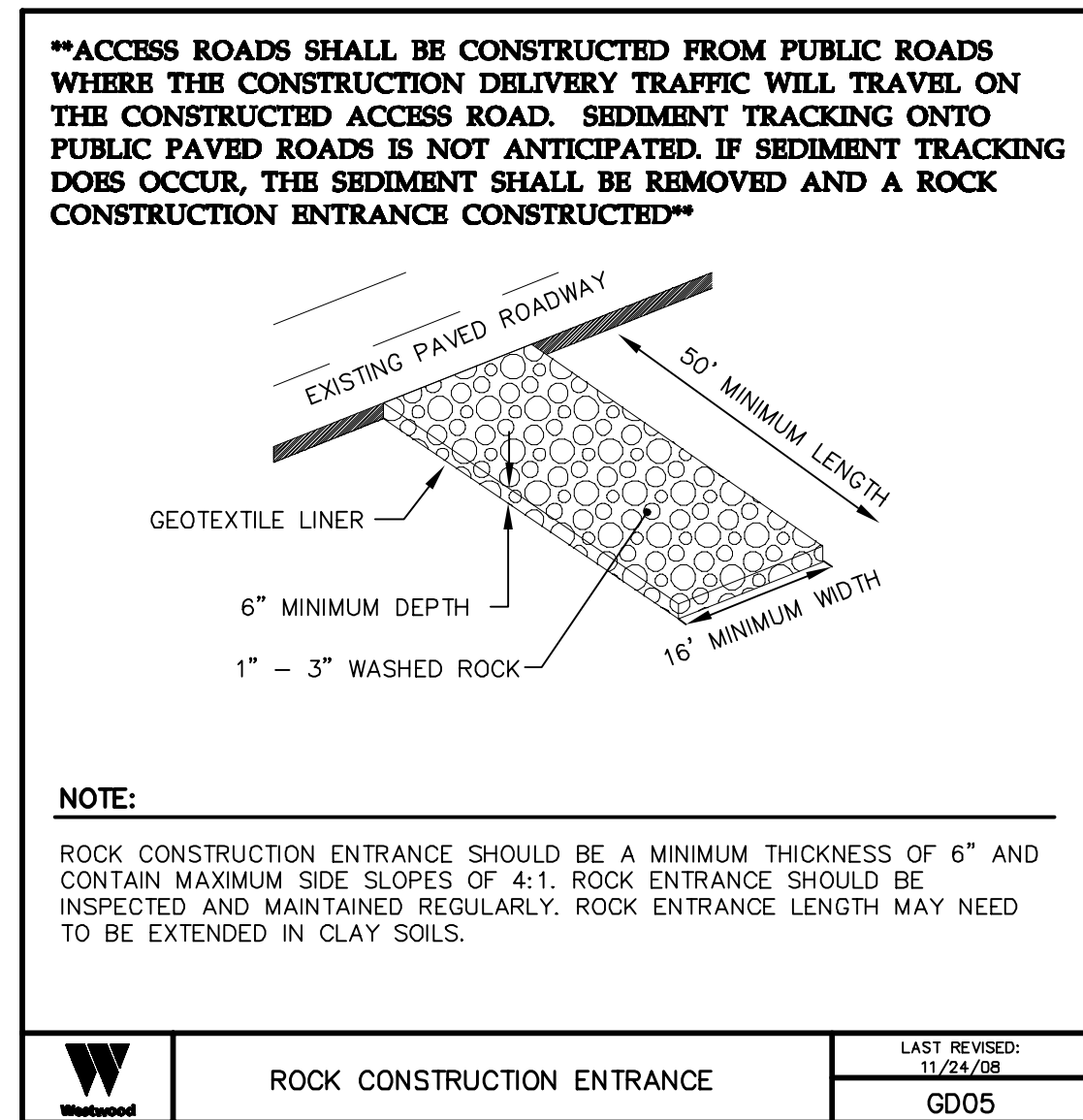
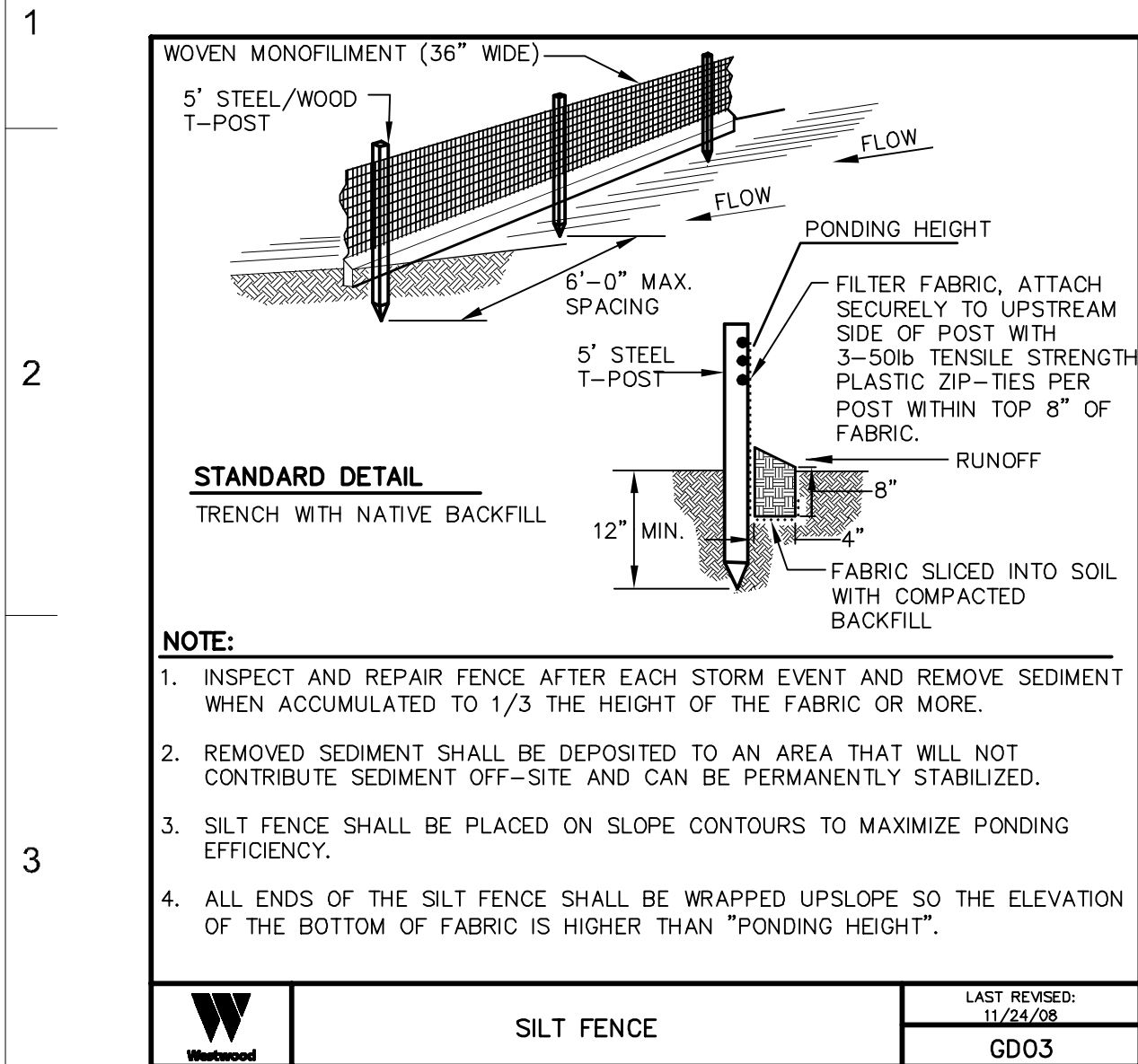
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 NH-217540-8 REV 9



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE:	

THIS MAP/DOCUMENT IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

SWPPP Details

CIVIL PLANS SHEET **10**

NH-217540-10

REV 9

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ACCESS ROAD DESIGN PARAMETERS

- 1. ACCESS ROADS HAVE BEEN DESIGNED TO ACCOMMODATE LIGHT DUTY TRUCKS FOR LOW VOLUME USE IN NORMAL OPERATING CONDITIONS. THE ROAD DESIGN SPECIFIED IS NOT INTENDED FOR ALL WEATHER USE FOR HEAVY DUTY, HIGH VOLUME, CONSTRUCTION LOADS. MAINTENANCE CAN BE EXPECTED THROUGHOUT CONSTRUCTION.
2. MAINTENANCE CAN BE EXPECTED OVER THE LIFE OF THE PERMANENT FACILITY.
3. ROAD SECTION AND SPECIFICATIONS SHOWN ON THE PLANS WERE PROVIDED BY AMERICAN ENGINEERING TESTING.
4. ROAD DESIGN IS BASED ON INDUSTRY STANDARDS FOR WIND FARM CONSTRUCTION TRAFFIC AND O&M TRAFFIC AFTER CONSTRUCTION.

SPECIAL PROVISIONS FOR GRADING AND EROSION CONTROL

THE CONTRACTOR SHALL PROVIDE EROSION CONTROL MEASURES AS PLANNED AND SPECIFIED FOLLOWING BEST MANAGEMENT PRACTICES AS OUTLINED BY THE NORTH DAKOTA DEPARTMENT OF HEALTH (NDDOH) AND BEING IN CONFORMANCE WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL STORMWATER PERMIT. SEE THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR EROSION CONTROL AND RESTORATION SPECIFICATIONS. UNLESS OTHERWISE NOTED OR MODIFIED HEREIN, ALL SECTIONS OF THE GENERAL CONDITIONS SHALL APPLY.

PRODUCTS

- 1. ROAD SUBGRADE SHALL CONSIST OF TYPE 1 OR TYPE 2 CEMENT MIXED WITH NATIVE MATERIAL.
2. ROAD AGGREGATE SHALL BE CRUSHED AGGREGATE AND CONSIST OF CLASS 5 MODIFIED AGGREGATE BASE MEETING NDDOT SPEC 302 AND 816.03. THE GRADATION IS PROVIDED IN TABLE 1.
3. CRANE PADS SHALL CONSIST OF COMPACTED NATIVE SOILS WITH CRANE MATS AS DETERMINED NECESSARY BY THE CONTRACTOR TO MEET BEARING REQUIREMENTS.
4. CRANE PATHS SHALL CONSIST OF COMPACTED NATIVE SOILS.
5. CULVERTS: SEE PLAN FOR DRAINAGE CULVERT LOCATIONS. ACCESS ROAD CULVERTS SHALL MEET THE MINIMUM SPECIFICATIONS SET FORTH BY THE NORTH DAKOTA DEPARTMENT OF TRANSPORTATION AND/OR STUTSMAN COUNTY. ALL CULVERTS SHALL BE MANUFACTURED OF CORRUGATED METAL PIPE.
6. LAYDOWN YARD AGGREGATE SHALL CONSIST OF 3" MINUS AGGREGATE MATERIAL MEETING THE NDDOT SPEC 302 AND 816.03. THE GRADATION IS PROVIDED IN TABLE 2.
7. GEOTEXTILE FABRIC FOR LAYDOWN YARD MATERIAL SEPARATION SHALL BE MIRAFI HP270 OR APPROVED EQUAL.

EXECUTION

- 1. CLEARING AND GRUBBING
A. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE ALL TREES, STUMPS, BRUSH, AND DEBRIS WITHIN THE GRADING AREAS SHOWN ON THE PLANS. THE CONTRACTOR IS TO REMOVE ONLY THOSE TREES WHICH ARE DESIGNATED BY THE OWNER'S REPRESENTATIVE FOR REMOVAL, AND SHALL EXERCISE EXTREME CARE AROUND EXISTING TREES TO BE SAVED.
2. TOPSOIL STRIPPING
A. TOPSOIL SHALL BE STRIPPED FROM ALL ROADWAY AREAS THROUGH THE ROOT ZONE. TOPSOIL SHALL NOT BE STRIPPED OUTSIDE OF THE DESIGNATED DISTURBANCE AREAS.
B. ANY TOPSOIL, THAT HAS BEEN STRIPPED, SHALL BE RE-SPREAD OR STOCKPILED WITHIN GRADING AREAS AND/OR USED AS FILL OUTSIDE OF THE DISTURBANCE AREAS, AS DIRECTED BY THE ENGINEER. ALL TOPSOIL SHALL BE REDISTRIBUTED TO THE LAND OWNER'S PROPERTY OF WHERE IT ORIGINATED FROM.
C. CONTRACT SHALL ATTEMPT TO MATCH FINAL ROAD GRADE TO EXISTING FIELD ELEVATION VIA TOP SOIL STRIPPING OR REGRADING DURING RESTORATION.
3. EMBANKMENT CONSTRUCTION
A. EMBANKMENT CONSTRUCTION SHALL CONSIST OF THE PLACING OF SUITABLE FILL MATERIAL, AFTER TOPSOIL STRIPPING, ABOVE THE EXISTING GRADE. GENERALLY, EMBANKMENTS SHALL HAVE COMPACTED SUPPORT SLOPES OF ONE FOOT HORIZONTAL TO ONE FOOT VERTICAL. THE MATERIAL FOR EMBANKMENT CONSTRUCTION SHALL BE OBTAINED FROM THE ACCESS ROAD EXCAVATION (SEE GEOTECHNICAL REPORT FOR RESTRICTIONS), OR ANY SUITABLE, APPROVED SOIL OBTAINED OFFSITE BY CONTRACTOR, AS DIRECTED OR APPROVED BY THE ENGINEER. THIS MATERIAL SHALL BE PLACED IN LIFTS NOT TO EXCEED 8" FOR COHESIVE SOILS OR 12" FOR GRANULAR SOILS.
B. SIDE SLOPES GREATER THAN 4:1 WILL NOT BE PERMITTED, UNLESS OTHERWISE NOTED ON THE PLAN.

STORM WATER DESIGN PARAMETERS

- 1. CULVERTS WITHIN THE COUNTY AND STATE RIGHT OF WAYS WERE NOT SIZED BASED ON SPECIFIC STORM INTERVALS. IT IS EXPECTED THAT CULVERTS WILL BE OVERTOPPED DURING SOME STORMS AND MAINTENANCE WILL BE REQUIRED THROUGH THE LIFE OF THE PROJECT. INSTALLED CULVERTS SHALL BE SIZED TO MATCH THE DOWNSTREAM CULVERT SIZE (E.G. IF THE DOWNSTREAM CULVERT IS A 18" THE INSTALLED CULVERT SHALL BE A 18", UNLESS IN CIRCUMSTANCES WHERE THERE MAY BE CONSTRUCTIBILITY CONCERNS). ALL CULVERTS SHALL BE INSTALLED PER NORTH DAKOTA DEPARTMENT OF TRANSPORTATION AND/OR STUTSMAN COUNTY STANDARD SPECIFICATIONS AND SHALL BE MANUFACTURED OF CORRUGATED METAL PIPE. ALL CULVERTS SHALL BE PLACED AT A MINIMUM 0.5% GRADE. ALL TEMPORARY PORTIONS OF THE INSTALLED CULVERTS SHALL BE REMOVED UPON COMPLETION OF THE PROJECT.
2. CULVERTS ON PRIVATE PROPERTY HAVE BEEN SIZED BASED ON THE 5 YEAR STORM EVENT. IT IS EXPECTED THAT CULVERTS WILL BE OVERTOPPED DURING SOME STORMS AND MAINTENANCE WILL BE REQUIRED THROUGH THE LIFE OF THE PROJECT. ALL CULVERTS SHALL BE INSTALLED PER NORTH DAKOTA DEPARTMENT OF TRANSPORTATION AND/OR STUTSMAN COUNTY STANDARD SPECIFICATIONS AND SHALL BE MANUFACTURED OF CORRUGATED METAL PIPE. ALL CULVERTS SHALL BE PLACED AT A MINIMUM 0.5% GRADE.
3. LOW WATER CROSSINGS HAVE BEEN DESIGNED TO ALLOW NATURAL DRAINAGE TO OCCUR POST CONSTRUCTION OF THE ACCESS ROADS. IT IS ANTICIPATED THAT DURING "HEAVY" RAIN STORM EVENTS AND DURING THE FREEZE/THAW CYCLE, SOME ACCESS ROADS WILL BE IMPASSABLE DUE TO THE SEASONAL ENVIRONMENTAL CONDITIONS. MAINTENANCE OF THE ACCESS ROADS MAY BE REQUIRED DUE TO THE NATURAL DRAINAGE.
4. WHEN INSTALLING DRAINAGE CULVERTS THE CONTRACTOR SHALL USE JUDGMENT IN SETTING THE FLOW LINE ELEVATIONS AND CULVERT LONGITUDINAL SLOPE. TYPICALLY THE FLOW LINE ELEVATIONS AND LONGITUDINAL SLOPE OF THE CULVERT SHOULD MATCH THE NATURAL GROUND ELEVATIONS AND SLOPE TO ENSURE POSITIVE DRAINAGE. WHEN POSSIBLE, ALL CULVERTS SHOULD BE PLACED AT A MINIMUM 0.5% GRADE.
5. ANTICIPATED CULVERTS AND LOW WATER CROSSINGS ARE SHOWN ON THE CONSTRUCTION PLAN. ADDITIONAL CULVERTS MAY NEED TO BE INSTALLED IN AREAS WHERE CONCENTRATED FLOW IS EXPECTED DUE TO CONSTRUCTION ACTIVITIES.
6. CULVERTS FOR TEMPORARY CRANE CROSSINGS HAVE BEEN DESIGNED TO ACCOMMODATE THE 1 YEAR STORM EVENT. IT IS ANTICIPATED THAT DURING LARGER RAINFALL EVENTS THE STORM WATER WILL OVERTOP THE CONSTRUCTED CRANE CROSSING.

TABLE 1: CRUSHED BASE COURSE CLASS 5 MODIFIED - GRADATION. Table with 2 columns: Sieve Size, Percent Passing. Rows include 1", 3/4", #4, #30, #200.

MEET THE FOLLOWING REQUIREMENTS FOR CRUSHED BASE COURSE CLASS 5 MODIFIED:
1. AT LEAST 50 PERCENT BY WEIGHT OF THE AGGREGATE RETAINED ON THE NO. 4 SIEVE HAS AT LEAST ONE MECHANICALLY FRACTURED FACE FOR CLASS 5.

NOTE: GRADATION ABOVE HAS BEEN OBTAINED FROM THE 2008 NORTH DAKOTA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION BOOKLET, SECTION 816.03.

TABLE 4: TESTING SCHEDULE SUMMARY. Table with 3 columns: Location, Test, Frequency. Rows include Structural Fill, Compacted Subgrade, Aggregate Base, Crane Shoulders, Crane Pads.

TESTING REQUIREMENTS:

- 1. TESTING SHALL BE PERFORMED BY A DESIGNATED INDEPENDENT TESTING AGENCY.
2. SUBMIT TESTING AND INSPECTION RECORDS SPECIFIED TO THE CIVIL ENGINEER OF RECORD FOR REVIEW.
3. PROOF ROLLING:
A. PROOF-ROLLING SHALL BE PERFORMED IN THE PRESENCE OF THE GEOTECHNICAL ENGINEER OR QUALIFIED GEOTECHNICAL REPRESENTATIVE USING A FULLY LOADED TANDEM AXLE DUMP TRUCK WITH A MINIMUM GROSS WEIGHT OF 33 TONS. NO RUTTING GREATER THAN 0.5 INCHES, AND NO "PUMPING" OF THE SOIL BEHIND THE LOADED TRUCK IS ALLOWED. PUMPING IS DEFINED AS THE MIXING OF THE UN-STABILIZED SUBGRADE SOILS WITH STABILIZED SUBGRADE.
4. SIEVE ANALYSIS:
5. PROCTOR:
A. PROCTORS SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T99
6. ATTERBERG LIMITS:
A. ATTERBERG LIMITS SHALL BE DETERMINED IN ACCORDANCE WITH AASHTO T89 AND T90
7. MOISTURE DENSITY (NUCLEAR DENSITY):
A. MOISTURE DENSITY TESTING SHALL BE DONE IN ACCORDANCE WITH AASHTO T310
8. DYNAMIC CONE PENETROMETER (DCP) TESTING:
A. DCP TESTING SHALL BE DONE IN ACCORDANCE WITH ASTM D6951-03

SUBGRADE COMPACTION, TEST ROLLING AND AGGREGATE BASE COMPACTION:

- 1. FILL MATERIAL:
A. SOILS USED AS FILL MATERIAL SHALL BE TESTED FOR GRAIN SIZE ANALYSIS, MOISTURE CONTENT, ATTERBERG LIMITS ON FINES CONTENT, AND PROCTOR TESTS (STANDARD DRY MAXIMUM DENSITY).
B. FOR PLACED & COMPACTED FILLS, PROVIDE ONE COMPACTION TEST PER LIFT FOR EVERY 1000 FT OF ROAD LENGTH. INCLUDE THE LOCATION, DRY DENSITY, MOISTURE CONTENT, AND COMPACTION PERCENT BASED ON STANDARD PROCTOR MAXIMUM DRY DENSITY.
C. IF STRUCTURAL FILL IS REQUIRED, GEOTECHNICAL ENGINEER SHALL BE CONSULTED BY GENERAL CONTRACTOR FOR DETERMINATION OF SUITABILITY.
2. COMPACTED SUBGRADE:
A. REFER TO THE SPECIFICATION FOR CEMENT STABILIZATION OF ROADWAY SUBGRADES
B. THE ENTIRE SUBGRADE SHALL BE PROOF-ROLLED PRIOR TO THE PLACEMENT OF THE AGGREGATE BASE
3. AGGREGATE BASE:
A. AGGREGATE BASE SHALL BE PROOF-ROLLED OVER THE ENTIRE LENGTH. PROVIDE 1 DCP TEST FOR EVERY 500 L.F. OF ROAD LENGTH. ROAD BASE SHALL BE COMPACTED TO ACHIEVE A PENETRATION INDEX VALUE LESS THAN OR EQUAL TO 10 MM/BLOW. PROVIDE 1 SIEVE ANALYSIS PER 2500 CY OF ROAD BASE PLACED.
B. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CONDITION OF THE ROADS DURING CONSTRUCTION AND THE FINAL ACCEPTANCE OF THE ROADWAY WILL BE BASED ON A PROOF ROLL OF THE AGGREGATE SURFACE AT THE END OF THE PROJECT.
4. CRANE TRAVEL SHOULDERS:
A. CRANE TRAVEL SHOULDERS SHALL BE PROOF-ROLLED OVER THE ENTIRE LENGTH.
B. WHERE REQUIRED TO SUPPORT CRANE TRAVEL, SCARIFY AND COMPACT EXISTING SOILS TO A DEPTH OF 6-INCHES AND TO A MINIMUM OF 97% STANDARD PROCTOR MAXIMUM DRY DENSITY AT ±2% OF OPTIMUM MOISTURE CONTENT.
5. CRANE PADS:
A. CRANE PADS SHALL CONSIST OF COMPACTED NATIVE, SCARIFIED AND COMPACT TO A MINIMUM DEPTH OF 12-INCHES. PAD SHALL BE GRADED LEVEL.
B. CRANE PADS SUBGRADE SHALL BE PROOF ROLLED PRIOR TO THE PLACEMENT OF TIMBER MATS
C. AT THE CONTRACTORS DISCRETION, CRANE MATS MAY BE UTILIZED TO PROVIDE ADDITIONAL STABILITY.

SPECIFICATIONS FOR CEMENT STABILIZED ACCESS ROADS

- SPECIFICATIONS BELOW ARE PRELIMINARY GENERAL RECOMMENDATIONS/GUIDELINES FOR CEMENT STABILIZATION OF PROPOSED SITE ACCESS ROADS. ACTUAL FIELD CONDITIONS MAY ALTER APPLICATION RATE, CONSULT PROJECT ENGINEER FOR FURTHER RECOMMENDATIONS.
1. STRIP THE TOP 4-5 INCHES OF TOPSOIL (THROUGH THE ROOT ZONE) FROM THE PROPOSED ROAD SURFACE.
2. DETERMINE THE INSITU MOISTURE CONTENT USING A SPEEDY MOISTURE METER OR OTHER SUITABLE DEVICE.
3. TYPE I OR TYPE II PORTLAND CEMENT SHALL BE MIXED UNIFORMLY WITH EXISTING SOILS TO A DEPTH OF 12 INCHES. CONTRACTOR SHALL ASSUME RECLAMATION AND CEMENT STABILIZATION FOR 17" WIDTH ON ALL TURBINE ACCESS ROADS. AGGREGATE SURFACE SHALL BE 16" WIDE.
4. APPLY CEMENT AT A RATE OF 6% THE AMOUNT OF CEMENT MAY NEED TO BE ADJUSTED BASED ON FIELD CONDITIONS, SOIL TYPE, MOISTURE CONTENT, TEST STRIP INFORMATION, AND TESTING DATA FROM ROADS PREVIOUSLY CONSTRUCTED FOR THE PROJECT. IF THE IN-SITU MOISTURE CONTENT IS GREATER THAN OPTIMUM, THE EXISTING SOIL MAY NEED TO BE SCARIFIED AND DRIED PRIOR TO STABILIZATION OR THE ENGINEER SHOULD BE CONTACTED FOR RECOMMENDATIONS FOR PROCEEDING. THE ACTUAL CEMENT CONTENT SHOULD BE BASED ON TESTING DATA AND ROAD PERFORMANCE AND ADJUSTED FOR SOIL TYPE AND MOISTURE CONTENT.
5. A ROLLING PATTERN SHALL BE ESTABLISHED USING A NUCLEAR DENSITY GAUGE. COMPACTION SHALL BE PERFORMED UNTIL THE STABILIZED MATERIAL "BREAKS." COMPACTION IS TYPICALLY ACHIEVED BY MULTIPLE PASSES OF A PADFOOT ROLLER UNTIL THE ROLLER "WALKS" OUT OF THE RECLAIMED MATERIAL (SPACE IS VISIBLE BETWEEN THE DRUM AND THE RECLAIMED MATERIAL). THIS SHALL BE FOLLOWED BY BLADING THE HIGH AND LOW POINTS OF THE MATERIAL OFF AND SHAPING THE RECLAIMED MATERIAL TO FINAL PROFILE AND CROSS SECTION. SMOOTH DRUM OR RUBBER TIRE ROLLERS ARE THEN USED TO FINISH ROLLING, (THIS IS WHEN DENSITY TESTS SHALL BE PERFORMED) UNTIL THE DENSITY OF THE MATERIAL "BREAKS."
6. DENSITY TESTS SHALL BE TAKEN AT THE RATE OF ONE TEST EVERY 1000 SQUARE YARDS (APPROXIMATELY 7 PER 8' PASS PER MILE) TO CONFIRM THE DENSITY IS MATCHING THE TARGET ESTABLISHED BY THE ROLLING PATTERN.
7. IF A DENSITY FAILURE OCCURS, AND ADDITIONAL APPLICATION OF COMPACTION DOES NOT IMPROVE THE DENSITY, A ONE POINT PROCTOR SHALL BE RUN TO DETERMINE WHETHER THE MATERIAL HAD CHANGED AND A NEW PROCTOR IS NEEDED.
8. THE STABILIZED MATERIAL SHALL BE CONTINUOUSLY WET CURED FOR A MINIMUM OF 24 HOURS (WET CURED IS IDENTIFIED VISUALLY AS SURFACE DAMP). THIS MAY REQUIRE THE APPLICATION OF WATER EVERY 2-3 HOURS, INCLUDING AT NIGHT WHEN NO OTHER WORK IS BEING PERFORMED.
9. SUBGRADE STRENGTH TESTING BY DCP SHALL BE DONE RANDOMLY FOR EVERY 300 LF IN EACH PASS OF THE RECLAIMER. AFTER AT LEAST 2 DAYS OF PRODUCTION (ONCE THE PROCEDURE IS DEEMED SATISFACTORY BY THE ENGINEER), THE TESTING MAYBE INCREASED TO EVERY 500 LF. SUBGRADE STRENGTH TESTING SHALL BE DONE AT 24 HOURS (+/- 4 HOURS) FROM THE TIME OF FINAL COMPACTION OF THE STABILIZED MATERIAL. A MINIMUM OF 15 CBR IS REQUIRED PRIOR TO PROOF ROLLING BY THE CONTRACTOR. CBR AND DCP ARE RELATED BY, CBR = 292/DCP^2, AS RECOMMENDED BY THE US ARMY CORPS OF ENGINEERS (DCP MEASURED IN MM/BLOW).
10. ADDITIONAL SUBGRADE STRENGTH TESTING BY DCP SHALL BE DONE AT 2 TO 7 DAYS FROM THE TIME OF FINAL COMPACTION ON A 500 LF SPACING. THE TEST MUST CONFIRM A CBR OF 20 IS ACHIEVED. IF A CBR OF 20 IS NOT ACHIEVED, ADDITIONAL GRAVEL SURFACING WILL BE REQUIRED AND THE CEMENT CONTENT FOR FUTURE STABILIZATION WILL BE ADJUSTED.
11. PRIOR TO THE PLACEMENT OF GRAVEL SURFACE, THE SUBGRADE SHALL BE PROOF ROLLED BASED ON THE SPECIFICATIONS IN THE TESTING REQUIREMENTS SECTION.
12. IF THE STABILIZED SUBGRADE PASSES THE DCP TESTING AND PROOF-ROLL DESCRIBED ABOVE, PLACE NDDOT CLASS 5 MODIFIED AGGREGATE, OR AN APPROVED EQUAL, IN ACCORDANCE WITH NDDOT 302 AND 816.03. ADDITIONAL AGGREGATE MAY BE REQUIRED IF DCP TESTING AND/OR PROOF-ROLLING CRITERIA DESCRIBED ABOVE CANNOT BE MET.
13. AGGREGATE BASE SHALL BE PROOF-ROLLED OVER THE ENTIRE LENGTH. IF PROOF ROLLING DETERMINES THAT THE ROAD IS UNSTABLE, ADDITIONAL AGGREGATE SHALL BE ADDED UNTIL THE UNSTABLE SECTION IS ABLE TO PASS A PROOF ROLL. PROVIDE 1 DCP TEST FOR EVERY 500 L.F. OF ROAD LENGTH. ROAD BASE SHALL BE COMPACTED TO ACHIEVE A PENETRATION INDEX VALUE LESS THAN OR EQUAL TO 10 MM/BLOW.

GENERAL NOTES:

- 1. THE GROUND SURFACE CONTOURS (AT TWO-FOOT VERTICAL INTERVALS) AND ELEVATIONS ARE BASED ON LIDAR DATA OBTAINED FROM THE STATE OF NORTH DAKOTA.
2. THE ELEVATIONS AND CONTOURS SHOWN ON THESE CONSTRUCTION DRAWINGS WERE PREPARED FROM AERIAL PHOTOGRAPHY DATA, AND NOT ACTUAL FIELD SURVEYING. AS SUCH, THE ACCURACY OF THE ELEVATIONS AND CONTOURS IS NOT AS HIGH AS INFORMATION GATHERED USING CONVENTIONAL FIELD SURVEYING PROCEDURES. THE CONTRACTOR MAY FIND THAT GROUND ELEVATIONS DETERMINED DURING FIELD STAKING WILL VARY FROM THE GROUND ELEVATIONS SHOWN ON THE DRAWINGS.
3. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE OWNER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS AND MONUMENTS UNTIL THE OWNER, AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION.
4. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING DRAINAGE THROUGHOUT THE CONSTRUCTION OF THIS PROJECT. CONSTRUCTION ACTIVITIES SHALL NOT BLOCK THE NATURAL OR MANMADE CREEKS OR DRAINAGE SWALES CAUSING RAINWATER TO POND. ADDITIONAL CULVERTS IN EXCESS OF THOSE ON THE PLANS MAY BE REQUIRED.
5. ANY FACILITIES DETERMINED TO ALLOW FOR CONSTRUCTION (MAILBOXES, SIGNS, FENCES, ETC.) SHALL BE REPLACED BY THE CONTRACTOR IN A CONDITION AS GOOD AS EXISTING.
6. THE CONTRACTOR SHALL NOTIFY COMMON GROUND ALLIANCE (811) AT LEAST 48 HOURS BEFORE EXCAVATION ACTIVITIES COMMENCE.
7. UTILITY LOCATIONS SHOWN ON THE PLANS ARE BASED ON THE ALTA SURVEY, PREPARED BY WESTWOOD PROFESSIONAL SERVICES, AND DATA PROVIDED BY GERONIMO WIND ENERGY. ADDITIONAL UTILITIES COULD EXIST, BOTH ABOVE GROUND AND BELOW GROUND, THAT ARE NOT SHOWN ON THE PLANS OR ARE IN A DIFFERENT LOCATION THAN SHOWN ON THE PLANS. THE CONTRACTOR SHOULD TAKE EXTREME CAUTION WHILE CONSTRUCTING THE PROJECT.
8. THE CONTRACTOR TO VERIFY EXISTING CONDITIONS SHOWN ON PLANS PRIOR TO CONSTRUCTION AND NOTIFY ENGINEER IF THERE ARE ANY DISCREPANCIES.
9. WHILE BUILDING THE ROADS AND EXCAVATING THE TURBINE FOUNDATIONS, EXCESS SOIL WILL RESULT. THE CONTRACTOR SHALL DISPOSE OF THIS EXCESS SOIL IN AN APPROVED MANNER. NO TOPSOIL SHALL BE MIXED WITH CLAY OR USED AS BACKFILL MATERIAL. NO TOPSOIL WILL BE ALLOWED TO LEAVE THE PROPERTY FROM WHICH IT WAS DUG. EXCESS TOPSOIL SHALL BE DISTRIBUTED INTO A THIN LAYER ON LAND IMMEDIATELY ADJACENT TO WHERE THE TOPSOIL ORIGINATED. WHILE DOING SO THE CONTRACTOR SHALL AVOID CAUSING RIDGES OR MOUNDS THAT WOULD MAKE IT DIFFICULT FOR STORM WATER RUNOFF TO DRAIN. THE SURFACE OF THE DISTURBED TOPSOIL SHALL BE SMOOTH AND FOLLOW THE NATURAL CONTOUR OF THE LAND.
10. UPON COMPLETION OF ALL PROJECT CONSTRUCTION ACTIVITIES, TEMPORARY INTERSECTION WIDENINGS SHALL BE REMOVED UNLESS OTHERWISE NOTIFIED BY THE ENGINEER, CONSTRUCTION MANAGER, OR STATE/COUNTY OFFICIALS. THE DISTURBED AREA FROM THE INTERSECTION WIDENINGS SHALL BE RESTORED TO ITS ORIGINAL LINES AND GRADES WITH THE UPPER FOOT OF THE RESTORED GROUND BEING TOPSOIL.
11. GRADE ALL PROPOSED ROADS AND CRANE PATHS ACCORDING TO THE DETAILS PROVIDED IN THE PLANS. ROAD SLOPES GREATER THAN 8% ARE NOT ALLOWED.
12. FINALIZE GRADING AROUND THE BASE OF TURBINES IN ACCORDANCE WITH DETAIL U01. ELEVATIONS SHOWN ON PAGE 2 ARE BASED ON THE TOP OF PEDESTAL BEING A MINIMUM OF 1' ABOVE THE EXISTING GROUND PER THE FOUNDATION PLAN. ELEVATION RECOMMENDATIONS GREATER THAN 1' ABOVE THE EXISTING GRADE ARE BASED ON WESTWOOD'S REVIEWED OF THE TURBINES FROM A FLOODING STANDPOINT BY COMPARING THE FINISHED GRADE ELEVATION TO THE INFORMATION OBTAINED IN A HYDROLOGY REPORT PREPARED BY WESTWOOD. WESTWOOD HAS NOT REVIEWED THESE ELEVATIONS FROM A GRADING STANDPOINT.
13. GRADING LIMITS/DISTURBANCE LIMITS/CONSTRUCTION CORRIDORS ARE REPRESENTED ON THE PLANS WITH A "-DL-". ALL CONSTRUCTION ACTIVITY SHALL TAKE PLACE WITHIN THE GRADING LIMITS THAT HAVE BEEN PROVIDED. IF THE ENTIRE WIDTH OF THE CORRIDOR IS NOT AVAILABLE DURING CONSTRUCTION, THE CONTRACTOR SHALL ONLY CLEAR THE WIDTH THAT IS NECESSARY. GRADING LIMITS FOR ACCESS ROADS AND CRANE PATHS ARE TYPICALLY CENTERED ON THE ROAD OR CRANE PATH AND ARE 100' WIDE, FOR TURBINES ARE CENTERED ON THE TURBINE AND HAVE A RADIUS OF 150', AND FOR CROSS COUNTY ELECTRICAL LINES EXTEND 25' ON EITHER SIDE OF THE LINE. REFER TO THE CONSTRUCTION DOCUMENTS FOR EXACT DIMENSIONS. THE CONTRACTOR SHALL NOT GO OUTSIDE OF CONSTRUCTION CORRIDORS WITHOUT WRITTEN PERMISSION FROM THE OWNER.
14. TURBINE SETBACKS ARE NOT IDENTIFIED ON THE CONSTRUCTION PLANS. IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO ENSURE THAT ALL TURBINE SETBACKS MEET PROJECT REQUIREMENTS.
15. GEOTECHNICAL REPORTS WITH RECOMMENDATIONS HAVE BEEN PREPARED BY BRAUN INTERTEC. THE CONTRACTOR SHALL BE FAMILIAR WITH THE REPORTS AND SHALL REVIEW ALL RECOMMENDATIONS.
16. WETLAND, STREAMS AND ENVIRONMENTAL INFORMATION SHOWN ON THE PLAN WAS PROVIDED BY GERONIMO WIND ENERGY. ALL PERMITTING SHALL BE COMPLETED PRIOR TO CONSTRUCTION COMMENCING. THE GENERAL CONTRACTOR SHALL VERIFY THAT ALL PERMITS HAVE BEEN SUBMITTED AND APPROVED PRIOR TO CONSTRUCTION COMMENCING.
17. TEMPORARY WETLAND IMPACTS SHALL BE DE-COMPACTED USING A CHISEL PLOW AND/OR DISC PLOW METHODS PER USFWS REQUEST. CONTRACTOR IS NOT TO USE A DEEP RIP PLOWING METHOD.
18. ELECTRICAL INFORMATION SHOWN ON THE PLANS IS FOR REFERENCE ONLY. REFER TO ELECTRICAL PLANS FOR SPECIFIC LOCATIONS AND CONSTRUCTION DETAILS FOR THE UNDERGROUND POWER COLLECTION SYSTEM, TRANSMISSION LINE, SUBSTATION, AND PERMANENT AND TEMPORARY FIBER OPTIC LINES.
19. ANY STORM WATER DRAIN TILES DAMAGED, DISTURBED, BROKEN OR CUT FROM CONSTRUCTION ACTIVITIES SHALL BE REPAIRED IMMEDIATELY (IN ANY EVENT WITHIN 24 HOURS). CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENT DOES NOT ENTER ANY DRAIN TILE SYSTEM. IN THE EVENT SHOULD SEDIMENT ENTER THE DRAIN TILE SYSTEM, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

- 1. REFER TO THE SWPPP BOOKLET FOR SEDIMENT AND EROSION CONTROL PROCEDURES, LOCATIONS OF BMPs, DETAILS, AND INSPECTION INFORMATION.
2. ALL PASTURES AND DRAINAGE SWALES DISTURBED DURING CONSTRUCTION ACTIVITIES AND NOT COVERED BY ROAD SURFACING MATERIALS, SHALL BE SEEDED IN ACCORDANCE WITH THE SWPP PLAN.
3. TEMPORARY EROSION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE TEMPORARY EROSION CONTROL PLAN SHALL BE IN ACCORDANCE WITH THE NORTH DAKOTA DEPARTMENT OF HEALTH AND THE COURTENAY WIND PROJECT STORMWATER POLLUTION PREVENTION PLAN ON FILE.
4. INTERSECTION OF ANY UNDERGROUND COLLECTION LINES OR TRENCHES WITH STUTSMAN COUNTY ROAD DITCHES SHALL HAVE ADEQUATE EROSION AND SEDIMENT CONTROL MEASURES IN PLACE.

PROJECT CONTACT INFORMATION:

Table with 4 columns: Title, Company, Name, Contact Number. Rows include Owner (Xcel Energy), Engineer (Westwood), Contractor (Wanzek Construction), and NDDOH.

TABLE 2: 3" MINUS AGGREGATE GRADATION. Table with 2 columns: Sieve Size, Percent Passing. Rows include 3", 1", 3/4", 3/8", #10, #200.

Table with 2 main sections: REVISION and REFERENCE DRAWINGS. REVISION includes columns for NO, REVISION, ZONE, DATE, BY, CHK, ENG, NO. REFERENCE DRAWINGS includes columns for DWG NO., MANUFACTURER, DESCRIPTION.



XcelEnergy logo and project details: COURTENAY WIND - COLLECTOR SUBSTATION, STUTSMAN COUNTY, NORTH DAKOTA. Includes contact info for DWN, ENG, PM, APVD.

Westwood logo and contact information. Includes phone, fax, toll free numbers and address. Project title: ENERGY SUPPLY ENGINEERING & CONSTRUCTION. Sheet number: SHEET 11.

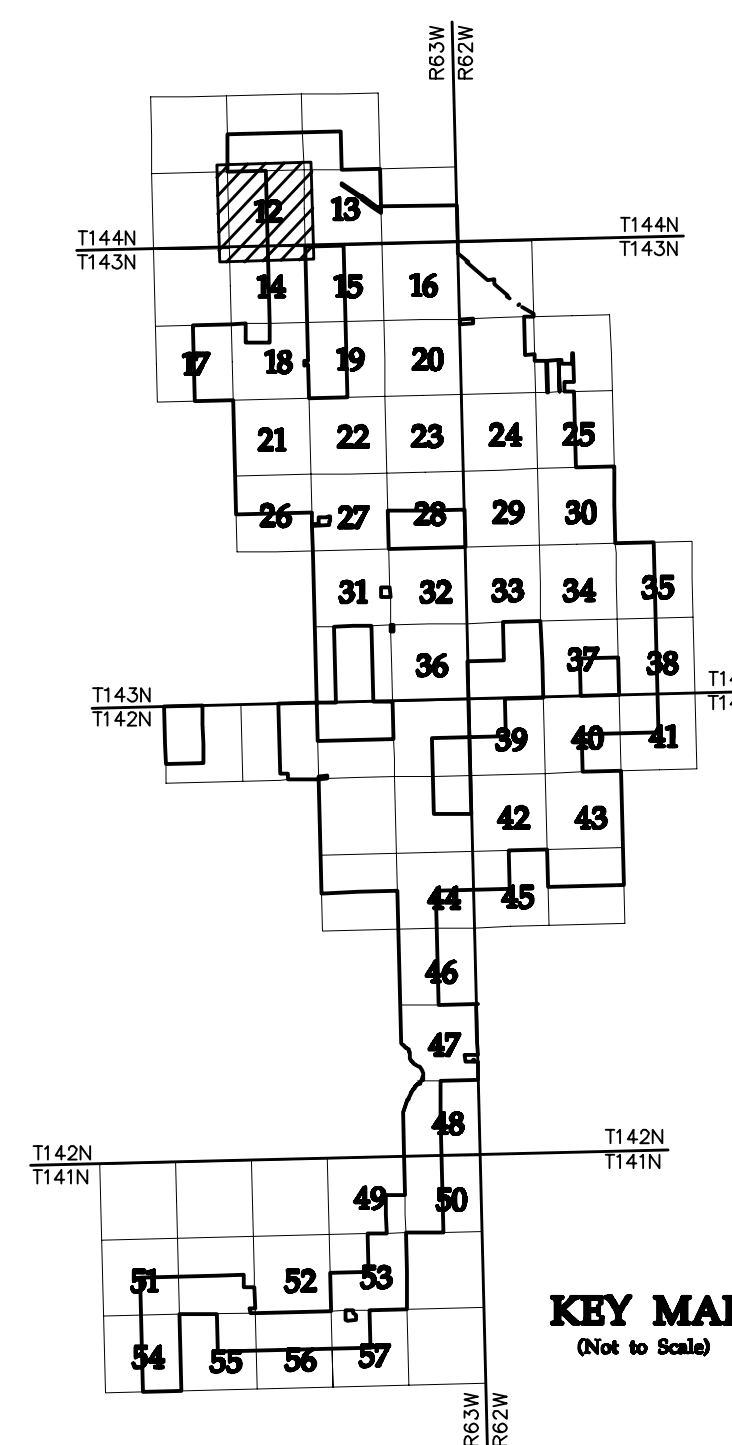


SEE SHEET 13

88TH AVENUE SE

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								DWG NO. MANUFACTURER DESCRIPTION
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

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 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

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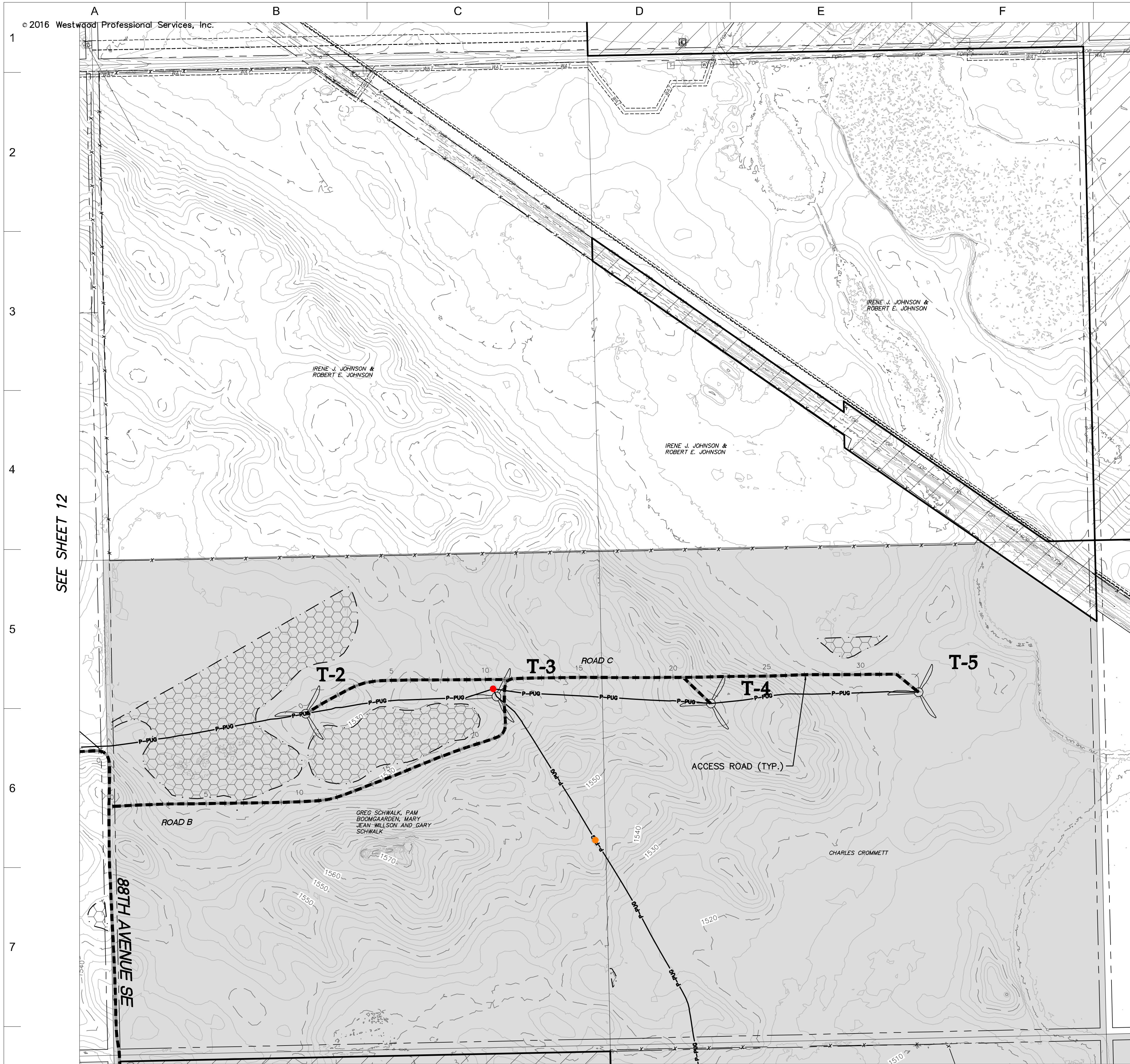
Civil Plan - S34 T144N R63W

CIVIL PLANS SHEET 12

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-12

REV 9

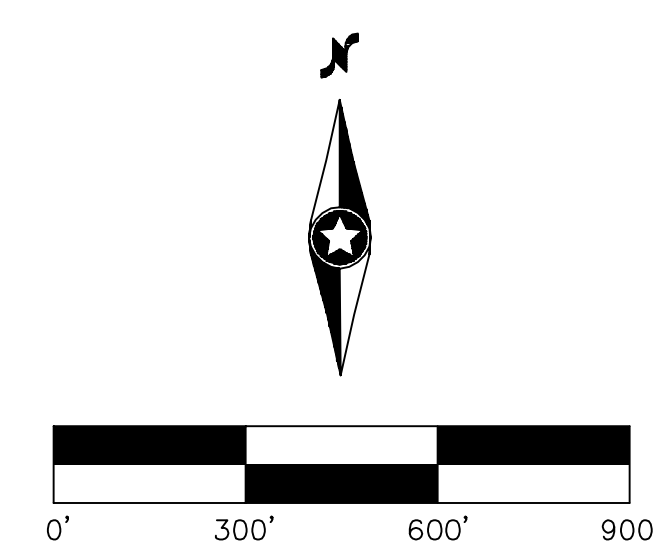
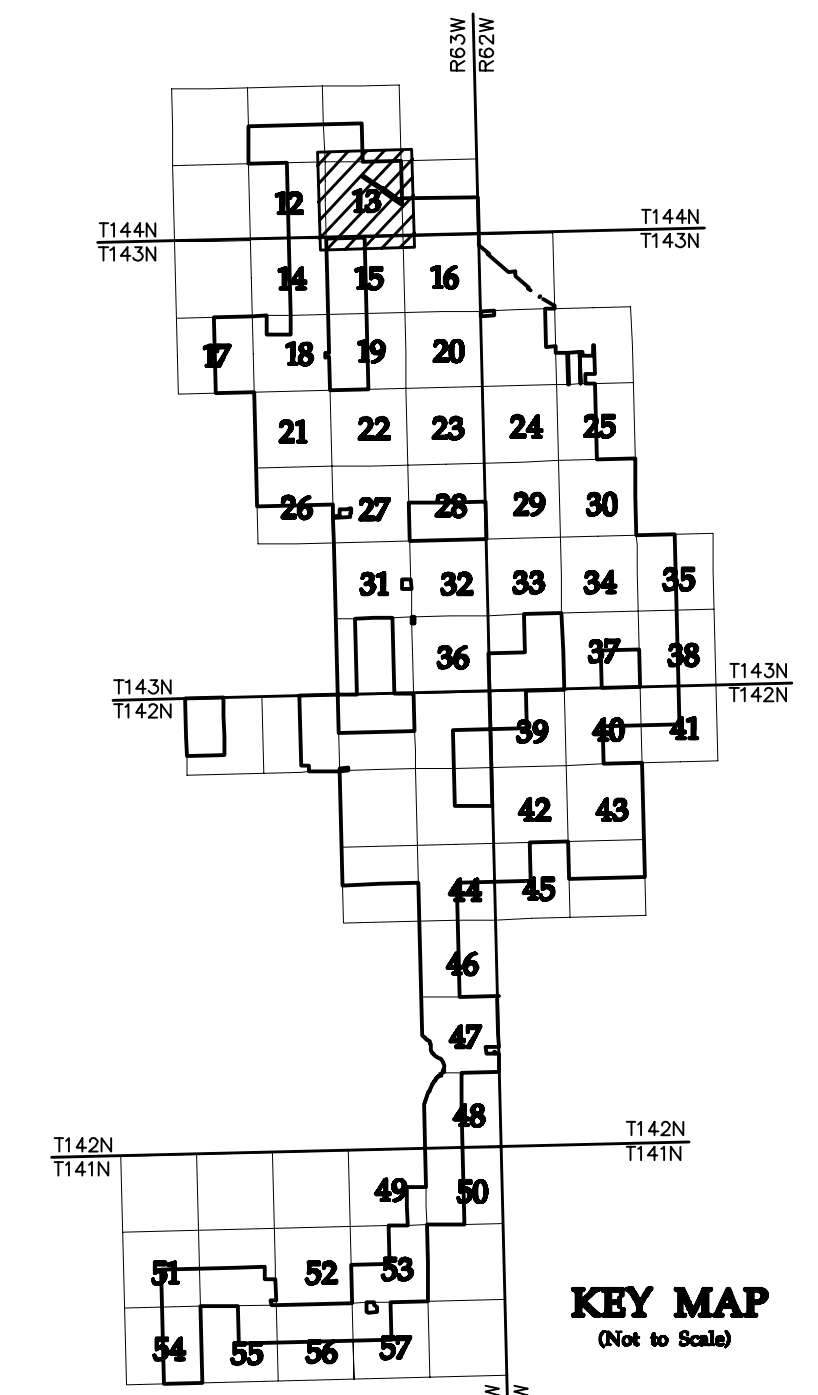


SEE SHEET 12

LEGEND:

- RECORD TURBINE LOCATION
- T-XX** TURBINE NUMBER
- RECORD ACCESS ROAD
- RECORD FENCE
- RECORD UNDERGROUND COLLECTION SYSTEM
- RECORD UNDERGROUND COLLECTION SYSTEM
- FIBER SLICE LOCATION*
- ELECTRICAL GROUND LOCATION*
- JUNCTION BOX LOCATION*
- ROAD BORE LOCATION*
- WETLAND BORE LOCATION*
- SPLICE LOCATION*
- RECORD TRANSMISSION LINE
- EXISTING CULVERT
- EXISTING FENCE
- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD POWER
- EXISTING WATER LINE
- EXISTING GAS PIPELINE
- EXISTING FIBER OPTIC LINE
- EXISTING EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING GRAVEL EDGE
- EXISTING BITUMINOUS EDGE
- EXISTING MICROWAVE BEAM PATH
- EXISTING VEGETATION
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
- EXISTING WATERWAY/WATER BODY
- EXISTING DELINEATED WETLAND
- AVOIDANCE AREA
- OUTSIDE PROJECT BOUNDARY
- USFWS WETLAND EASEMENT PARCEL

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3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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**Civil Plan - S35
T144N R63W**

CIVIL PLANS SHEET 13

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

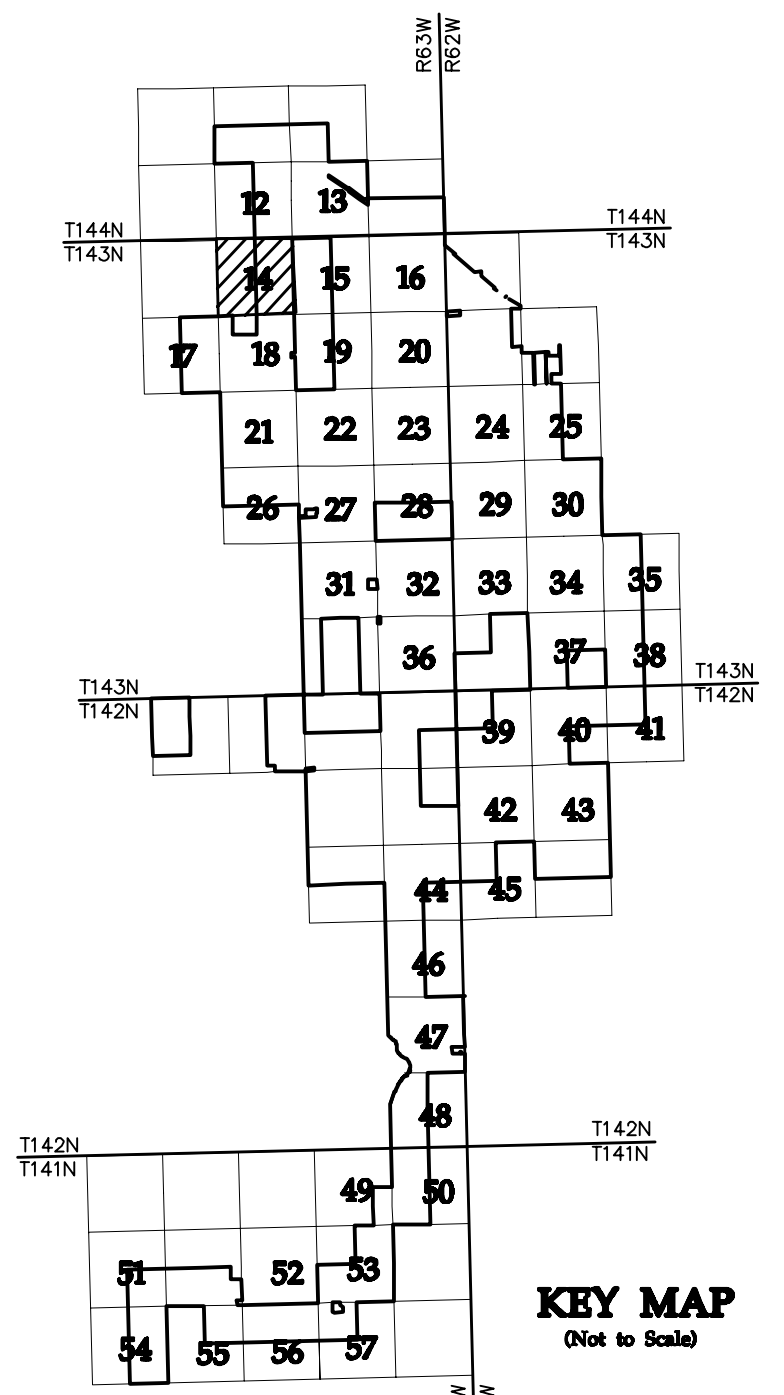
NH-217540-13



SEE SHEET 15

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
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 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
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4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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20121151-01SPF01.dwg

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Civil Plan - S3
T143N R63W

CIVIL PLANS SHEET 14

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-14

REV 9

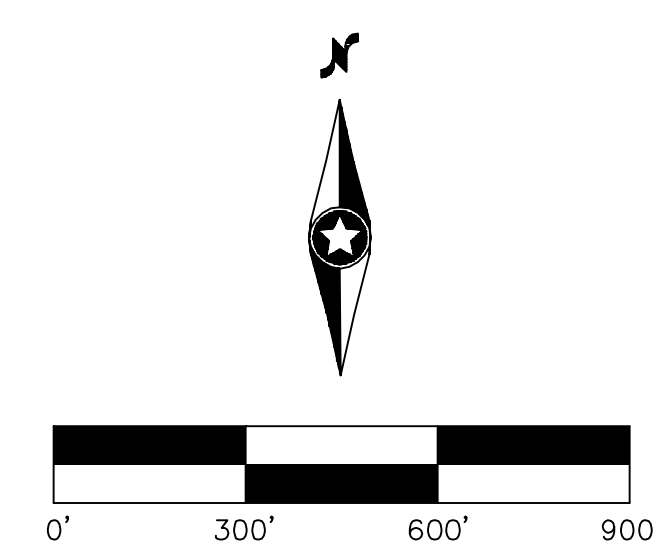
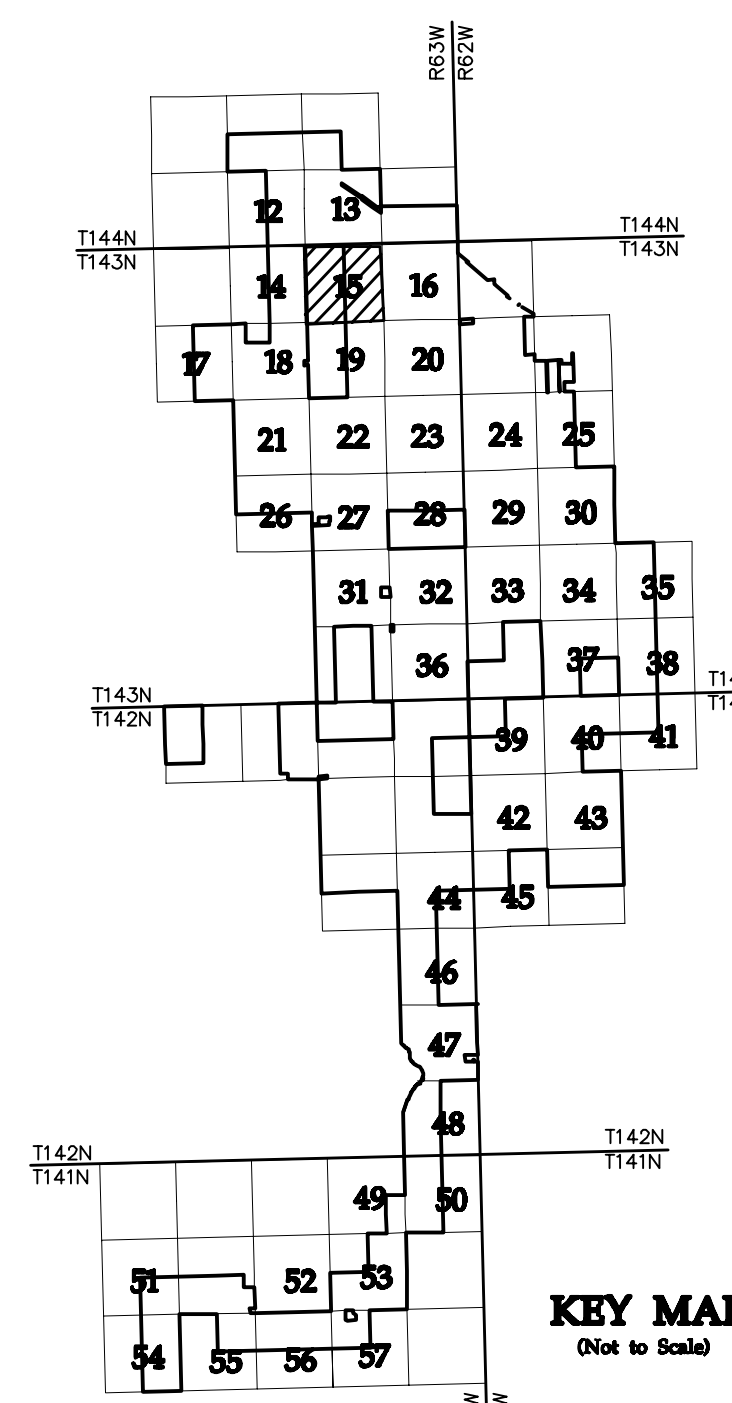


SEE SHEET 14

SEE SHEET 16

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
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4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
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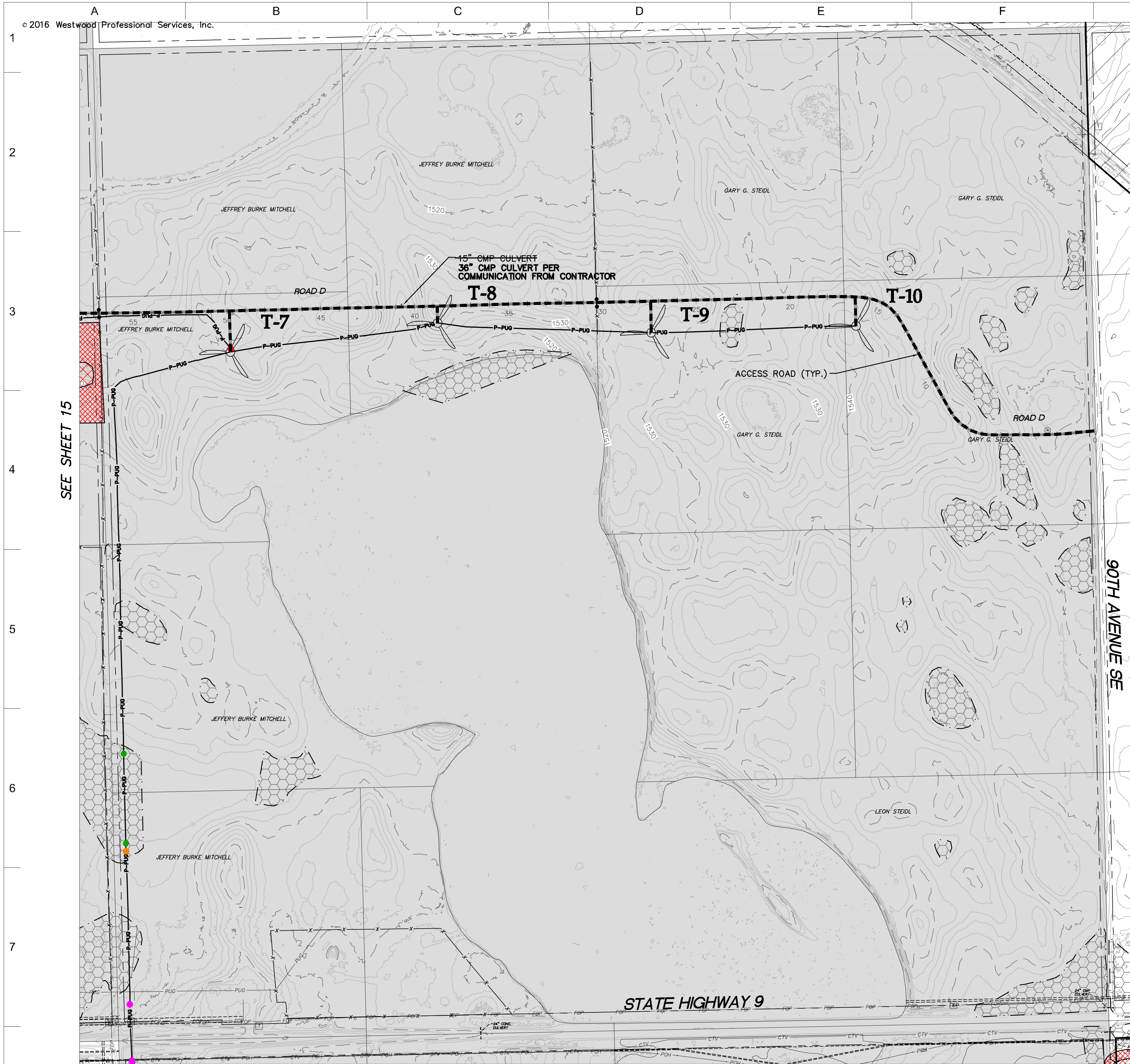
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Civil Plan - S2 T143N R63W

CIVIL PLANS SHEET 15

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-15

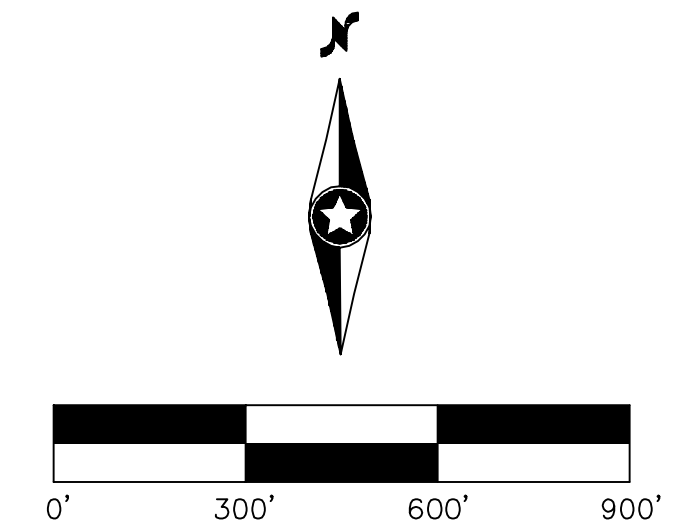
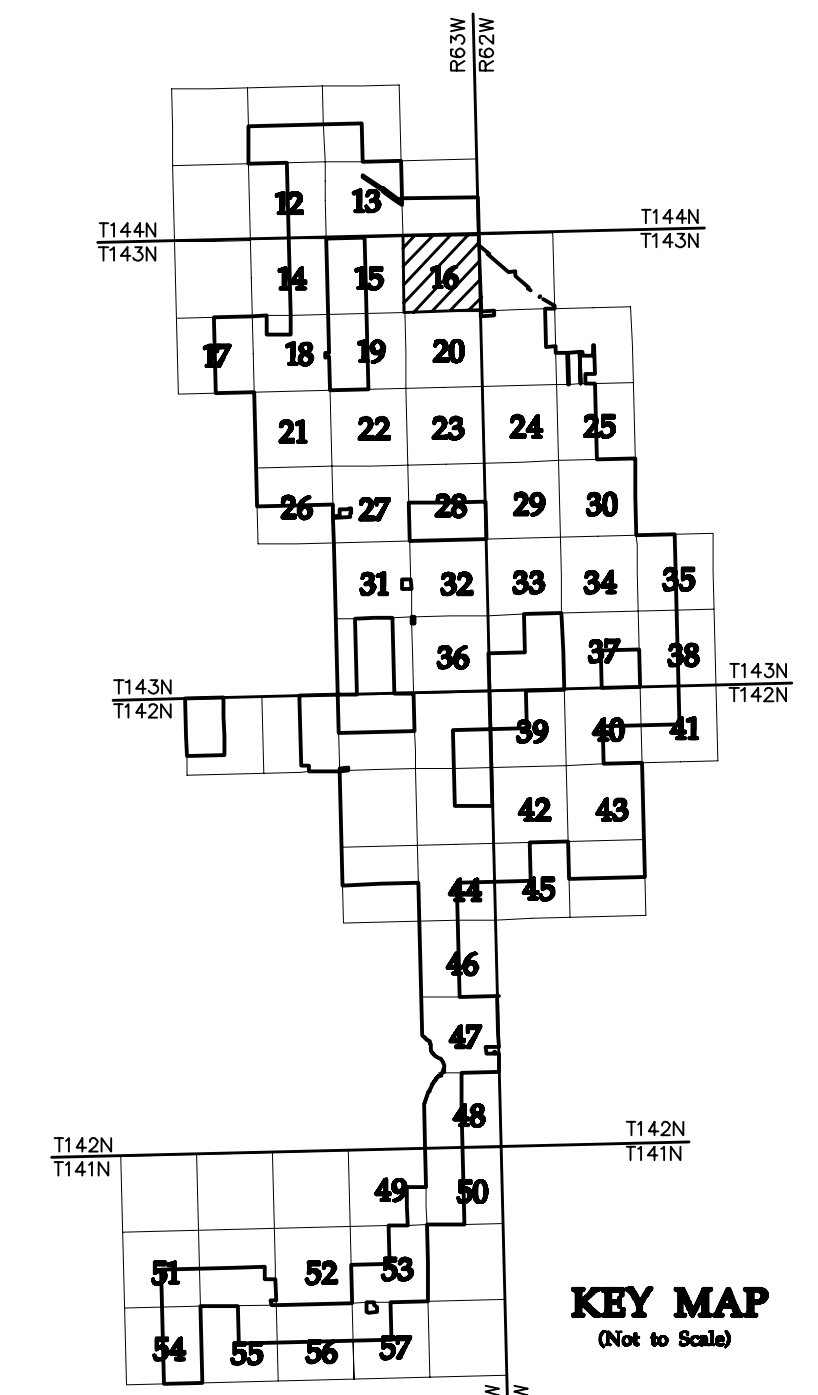


SEE SHEET 15

LEGEND:

- RECORD TURBINE LOCATION
- T-XX** TURBINE NUMBER
- RECORD ACCESS ROAD
- RECORD FENCE
- RECORD UNDERGROUND COLLECTION SYSTEM
- RECORD UNDERGROUND COLLECTION SYSTEM
- FIBER SLICE LOCATION*
- ELECTRICAL GROUND LOCATION*
- JUNCTION BOX LOCATION*
- ROAD BORE LOCATION*
- WETLAND BORE LOCATION*
- SPLICE LOCATION*
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- EXISTING CULVERT
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- EXISTING RIGHT OF WAY
- EXISTING GRAVEL EDGE
- EXISTING BITUMINOUS EDGE
- EXISTING MICROWAVE BEAM PATH
- EXISTING VEGETATION
- EXISTING 10' CONTOURS
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5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
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8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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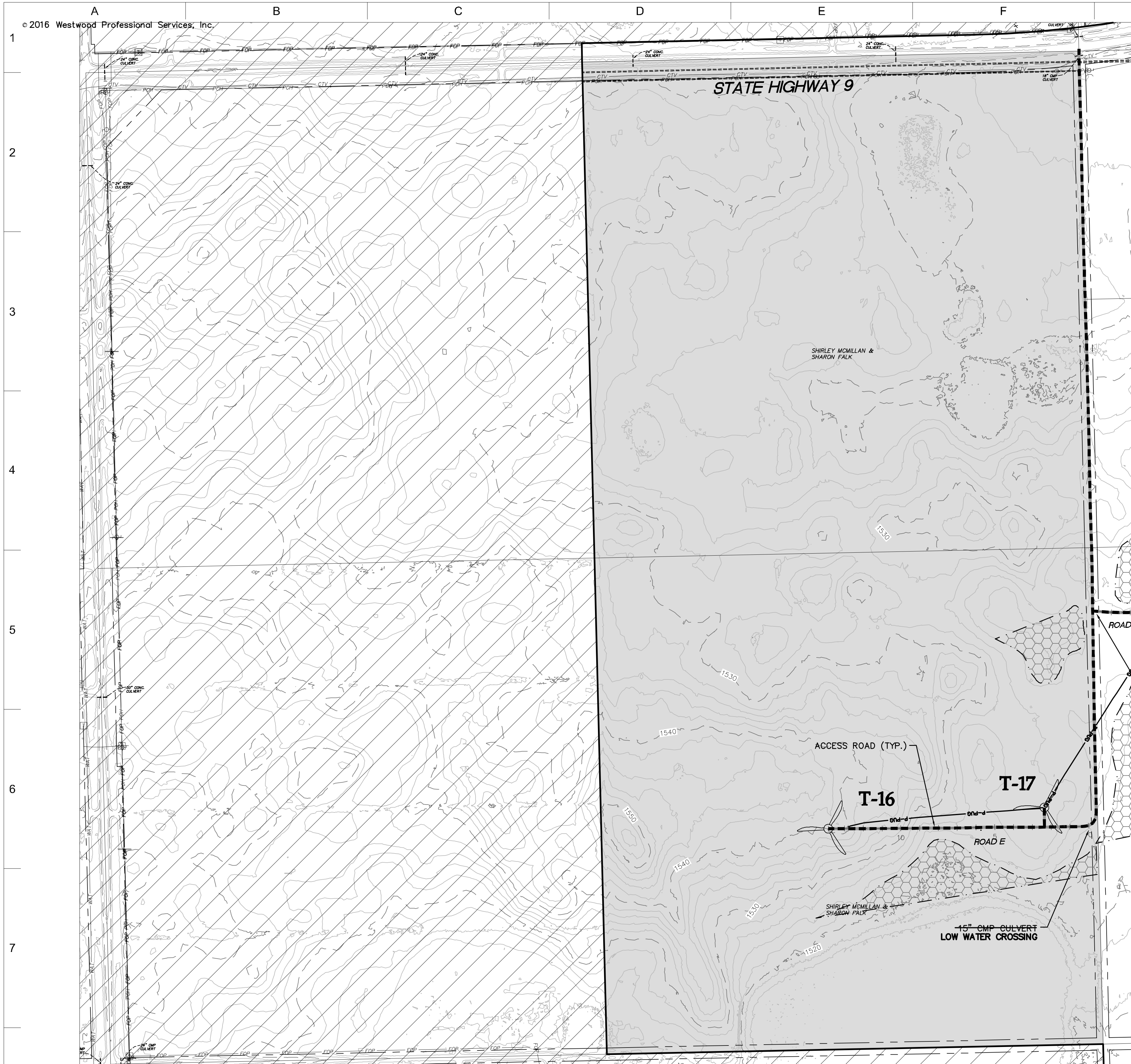
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Civil Plan - S1 T143N R63W

CIVIL PLANS SHEET 16

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

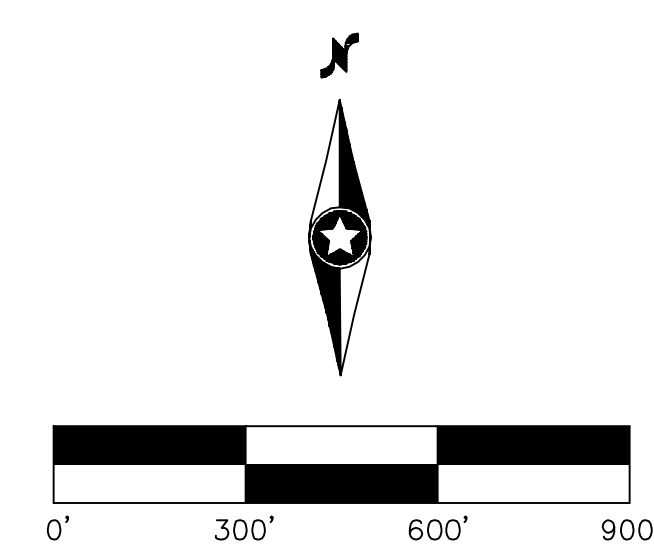
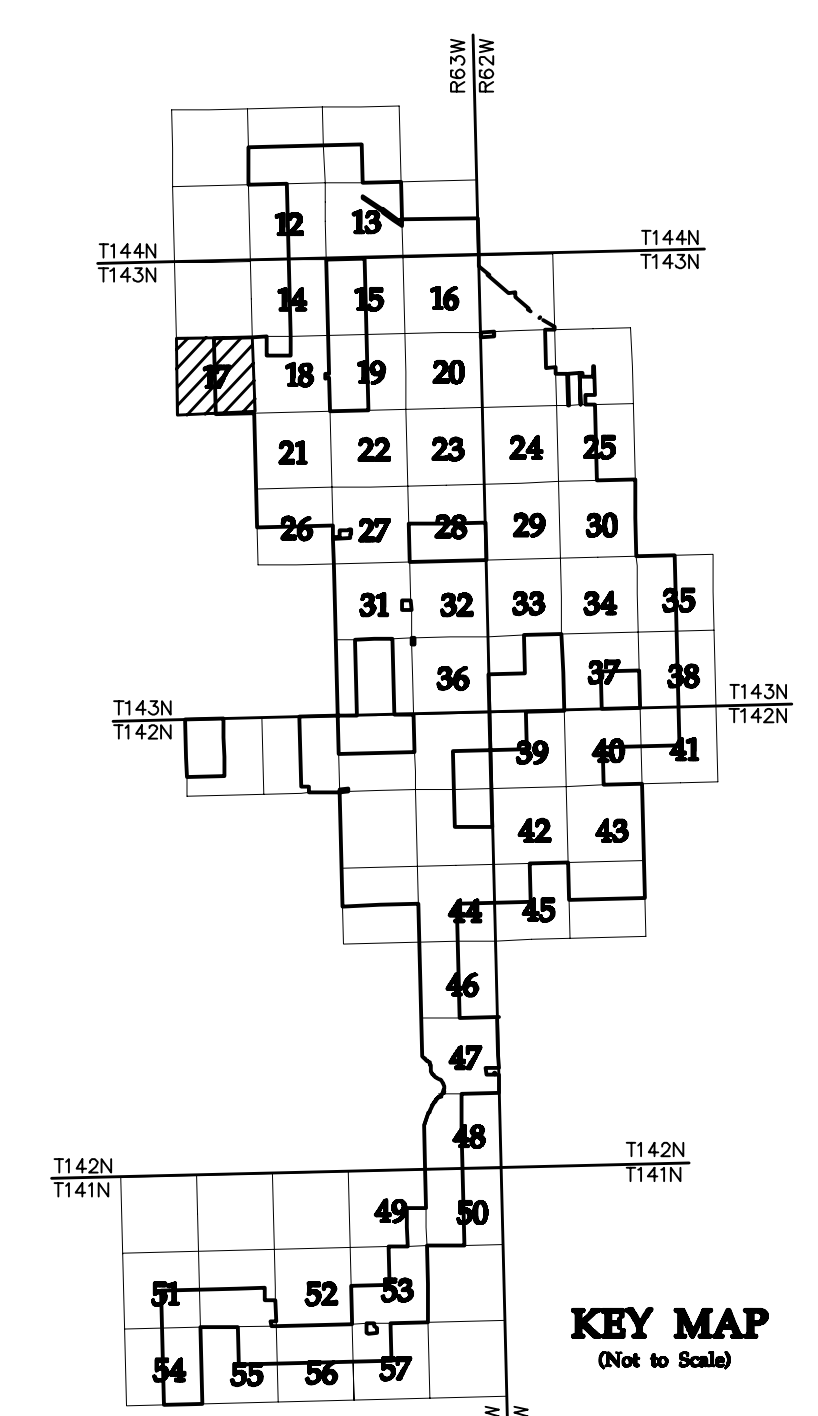
NH-217540-16



SEE SHEET 18

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
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 - EXISTING EASEMENT
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 - EXISTING GRAVEL EDGE
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8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								

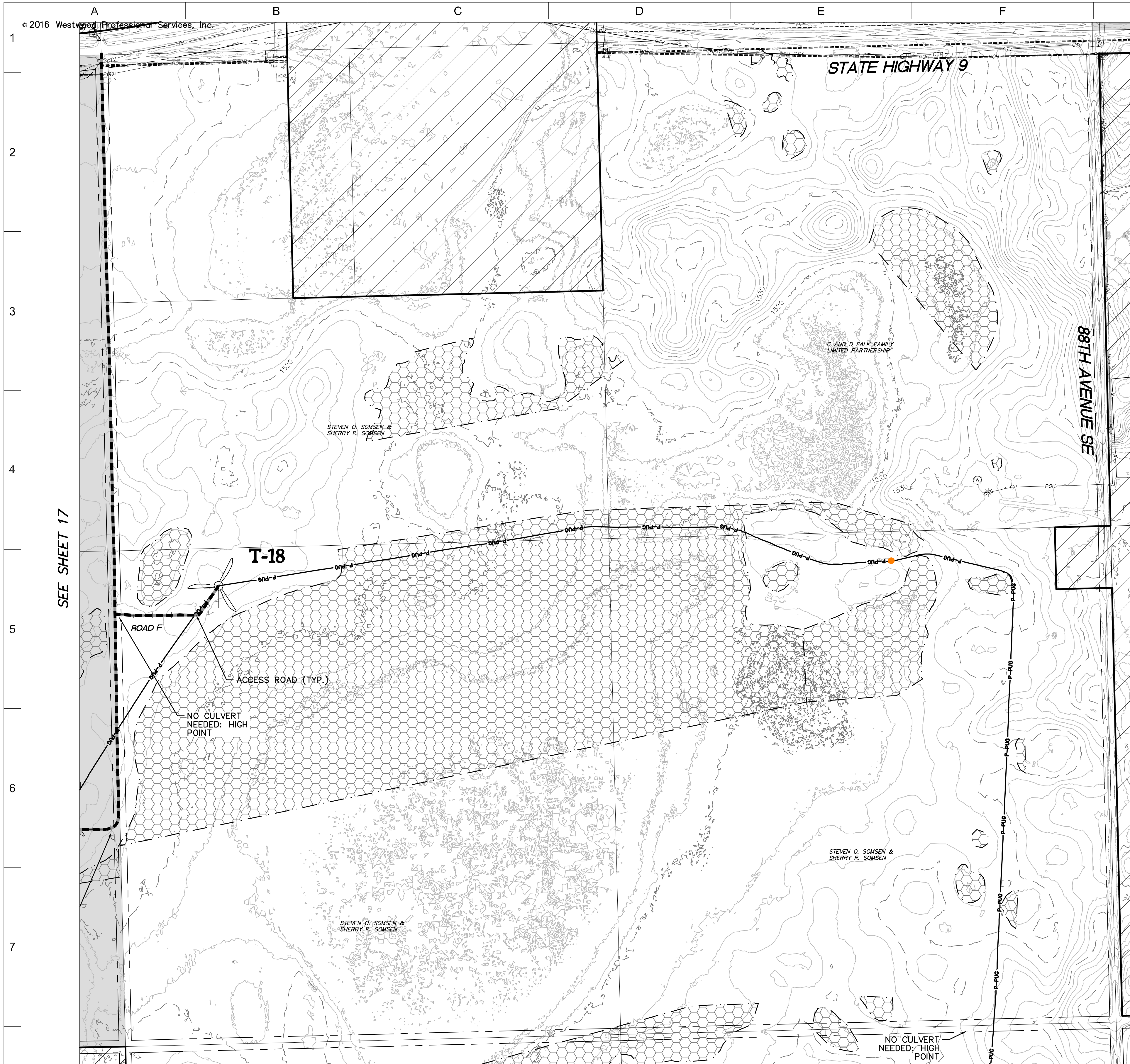


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CIVIL PLANS SHEET 17
 NH-217540-17
 ENERGY SUPPLY ENGINEERING & CONSTRUCTION

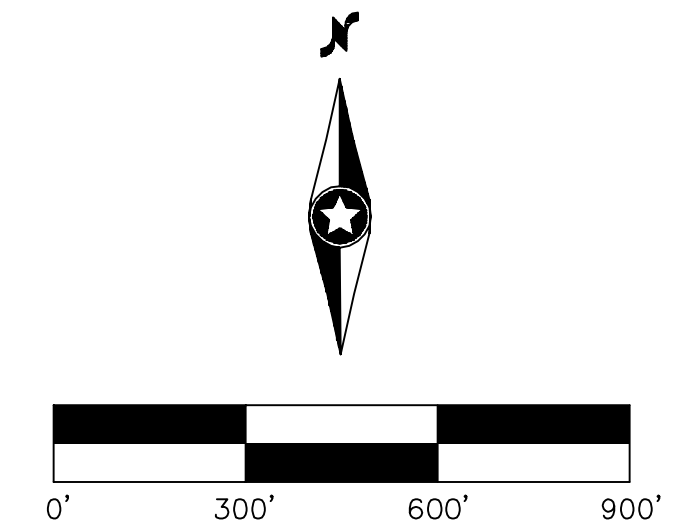
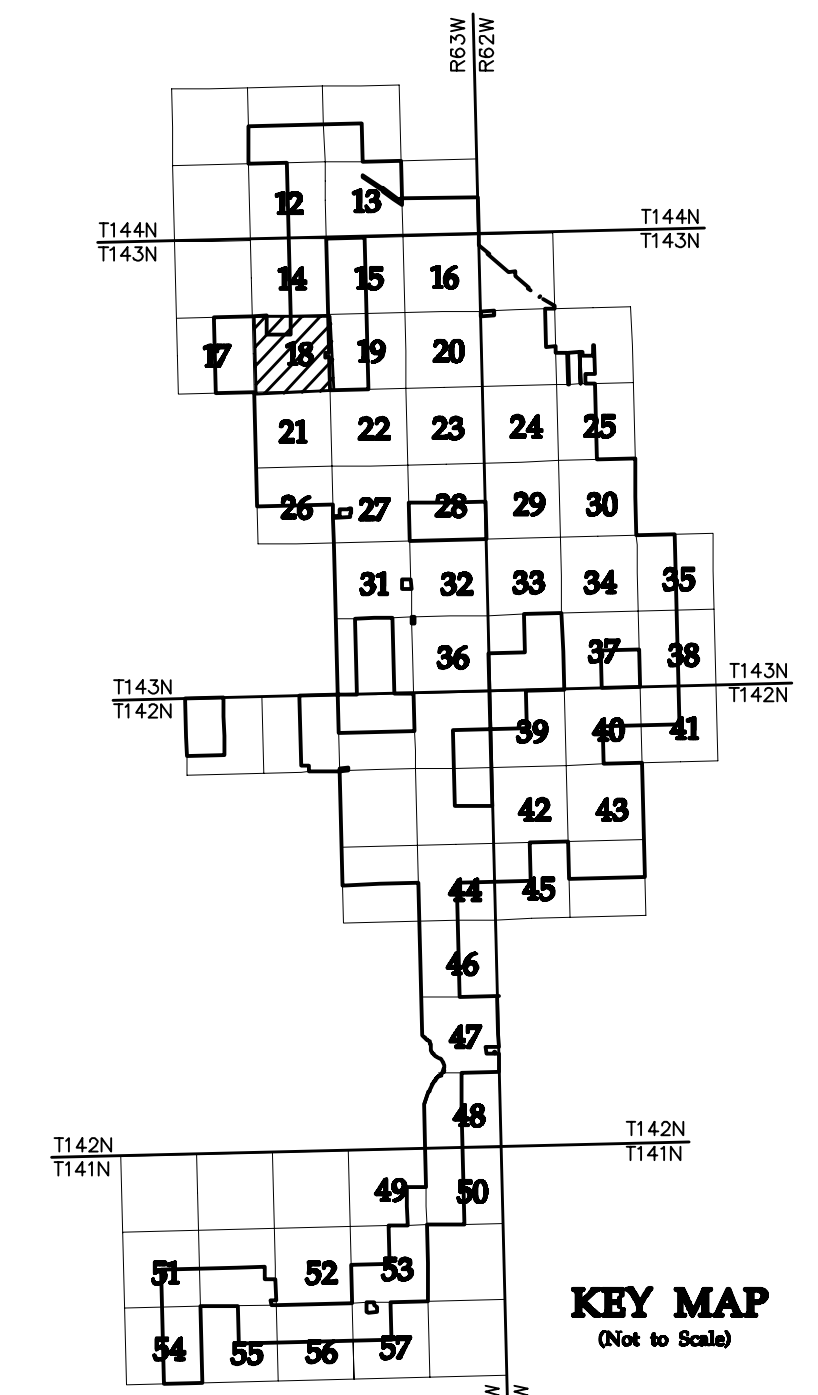


SEE SHEET 17

SEE SHEET 19

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

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Civil Plan - S10 T143N R63W

CIVIL PLANS SHEET 18

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-18

REV 9



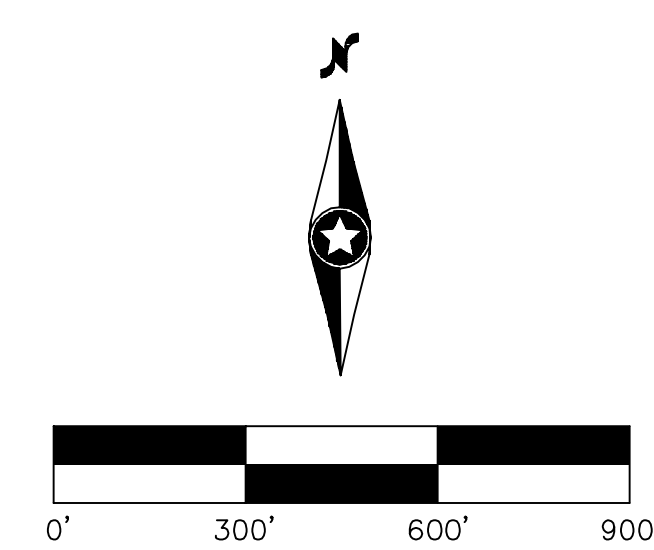
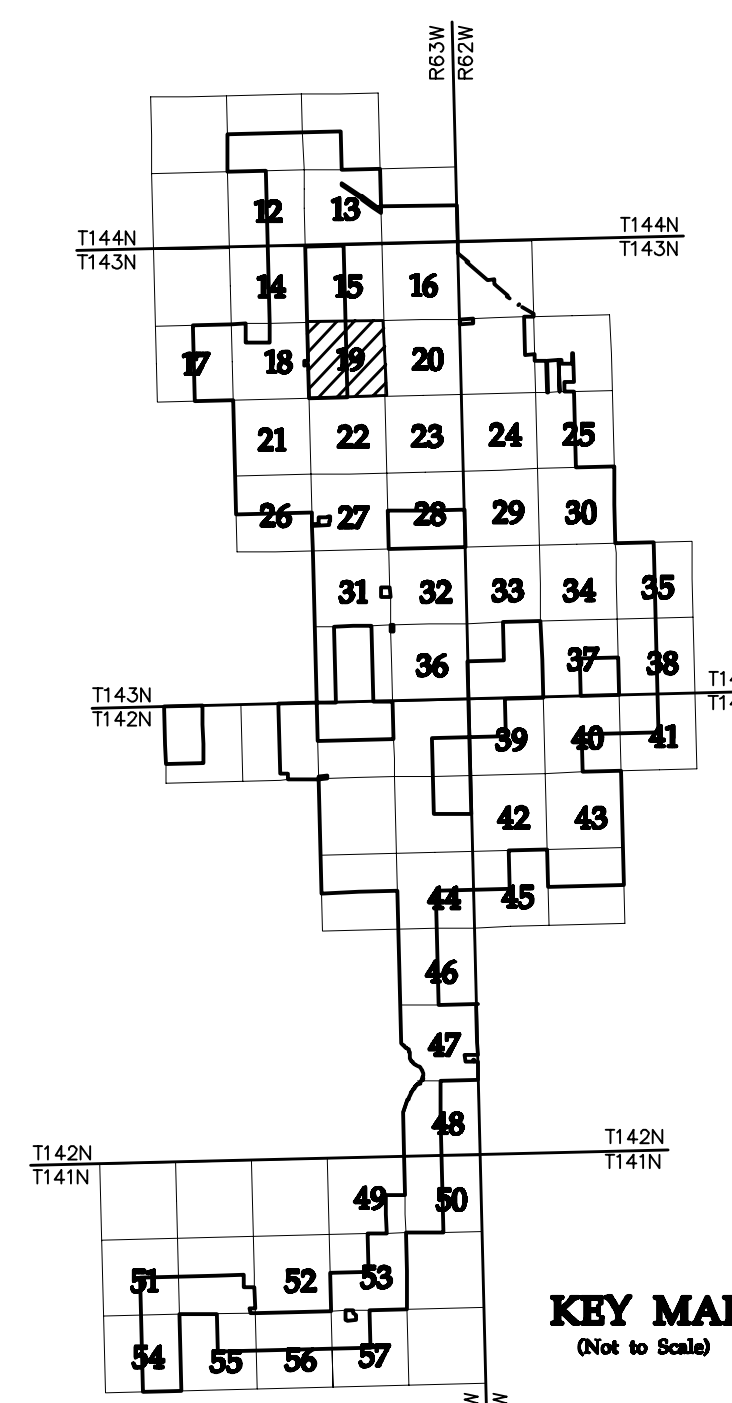
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- RECORD TURBINE LOCATION
- T-XX** TURBINE NUMBER
- RECORD ACCESS ROAD
- RECORD FENCE
- RECORD UNDERGROUND COLLECTION SYSTEM
- RECORD UNDERGROUND COLLECTION SYSTEM
- FIBER SLICE LOCATION*
- ELECTRICAL GROUND LOCATION*
- JUNCTION BOX LOCATION*
- ROAD BORE LOCATION*
- WETLAND BORE LOCATION*
- SPLICE LOCATION*
- RECORD TRANSMISSION LINE
- EXISTING CULVERT
- EXISTING FENCE
- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD POWER
- EXISTING WATER LINE
- EXISTING GAS PIPELINE
- EXISTING FIBER OPTIC LINE
- EXISTING EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING GRAVEL EDGE
- EXISTING BITUMINOUS EDGE
- EXISTING MICROWAVE BEAM PATH
- EXISTING VEGETATION
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
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* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.

SEE SHEET 18

SEE SHEET 20



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
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3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

REVISION	ZONE	DATE	BY	CHK	ENG
9		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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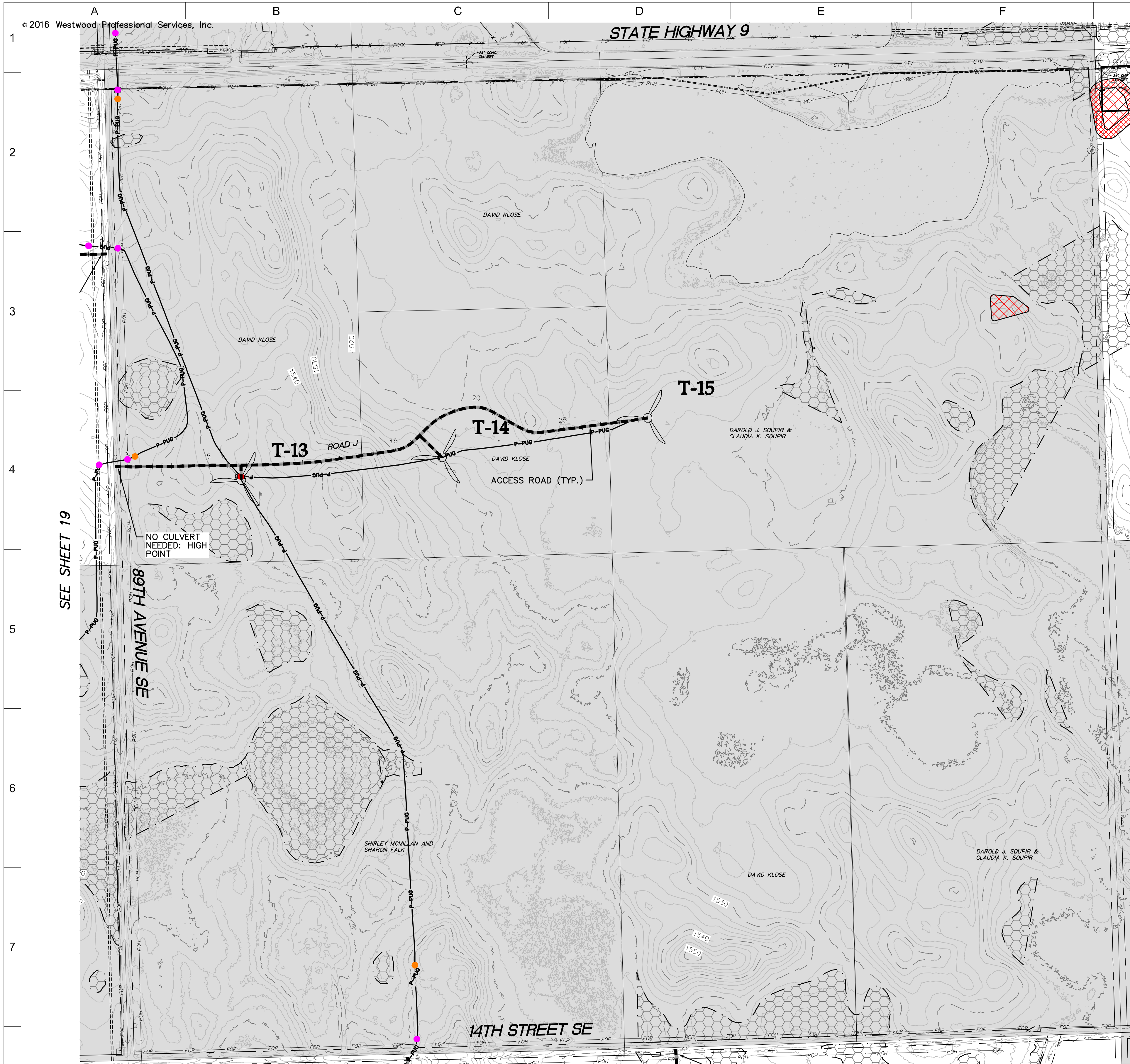
Civil Plan - S11
T143N R63W

CIVIL PLANS SHEET **19**

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

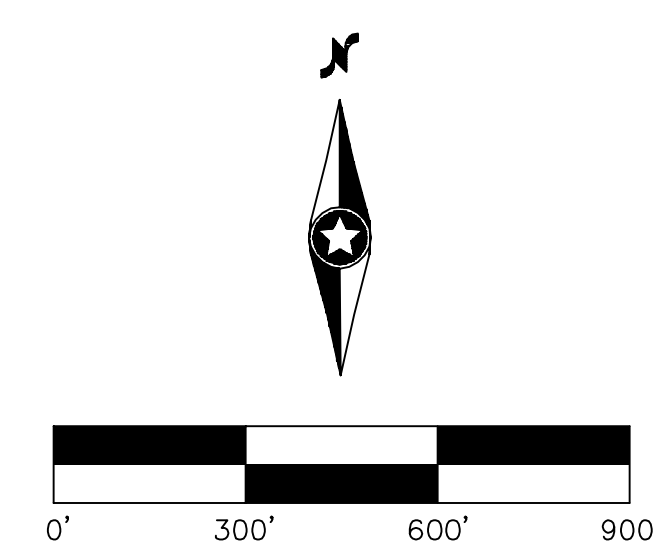
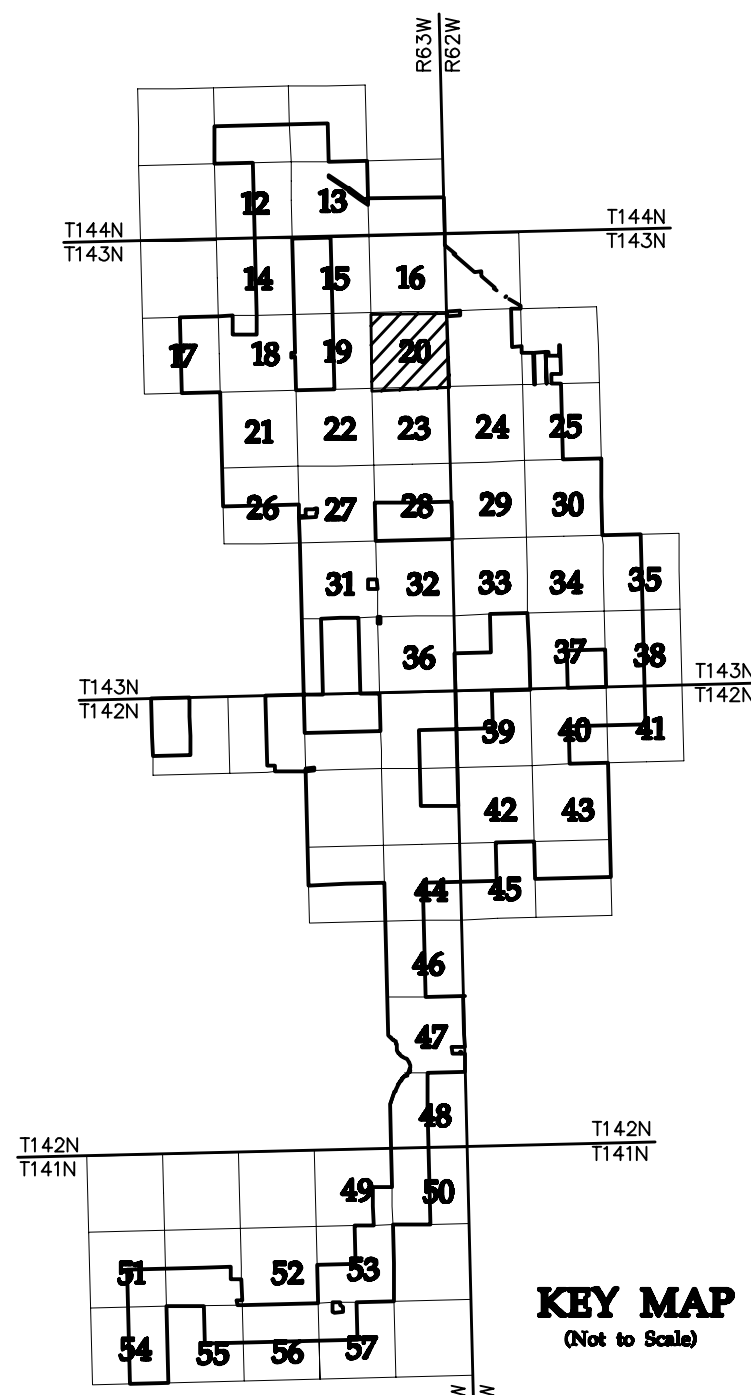
NH-217540-19 REV 9

STATE HIGHWAY 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL
- * FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.

SEE SHEET 19



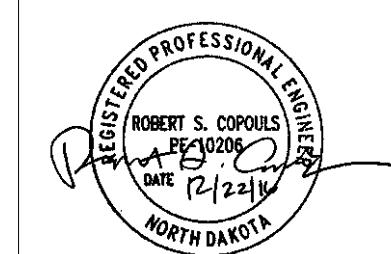
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1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
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7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
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 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'



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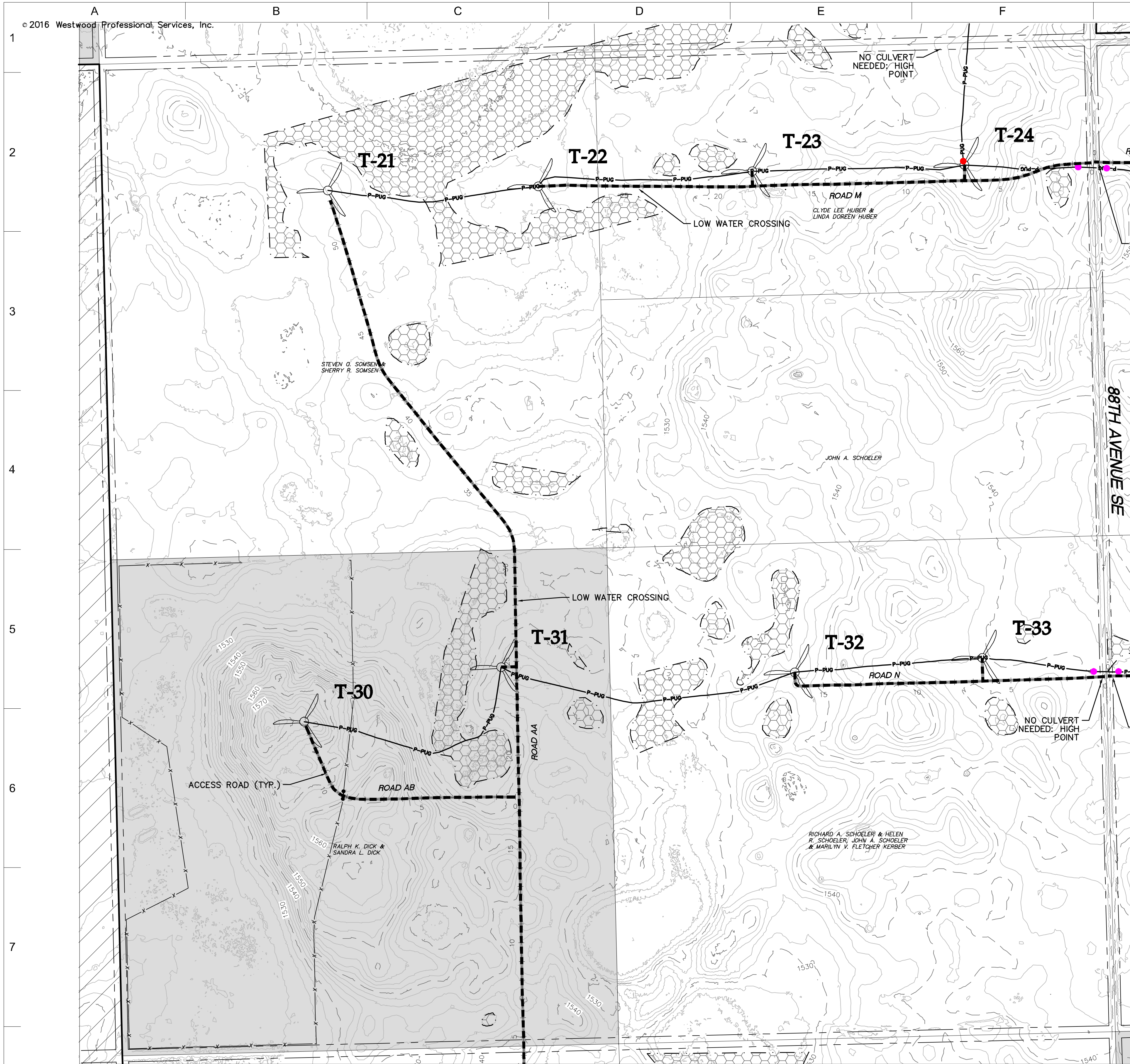
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Civil Plan - S12 T143N R63W

CIVIL PLANS SHEET 20

NH-217540-20

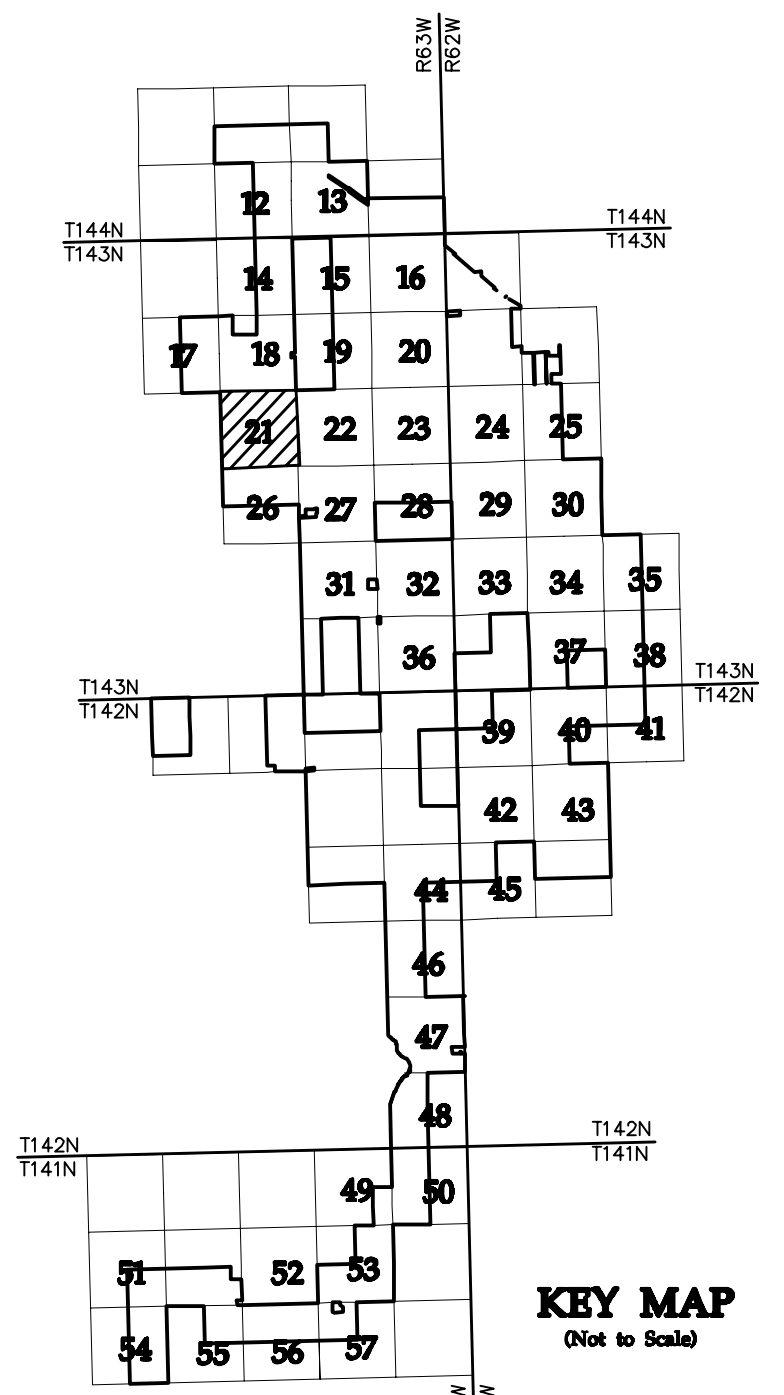
REV 9



SEE SHEET 22

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - RECORD TRANSMISSION LINE
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								DWG NO. MANUFACTURER DESCRIPTION
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
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 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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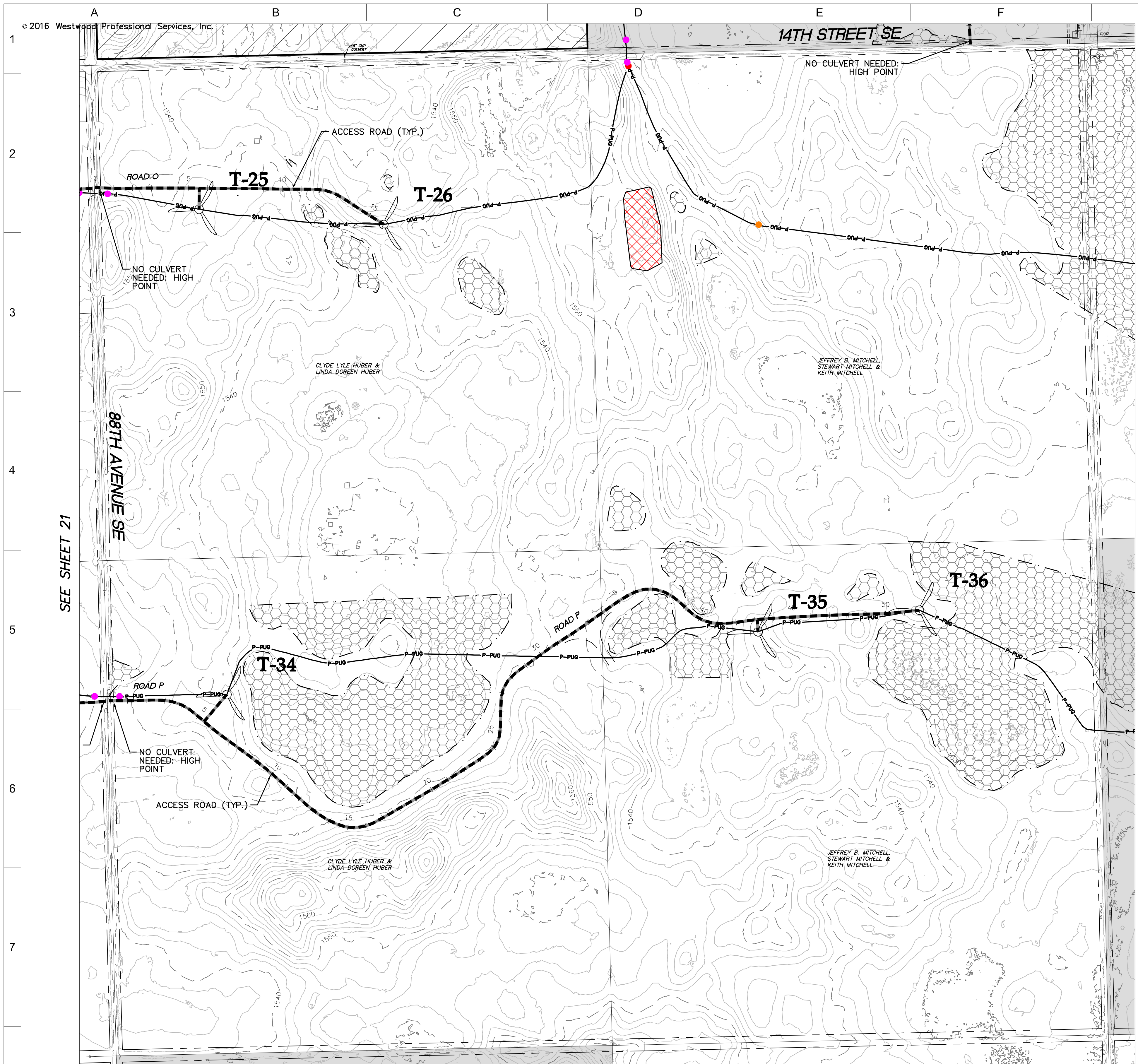
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Civil Plan - S15 T143N R63W

CIVIL PLANS SHEET 21

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

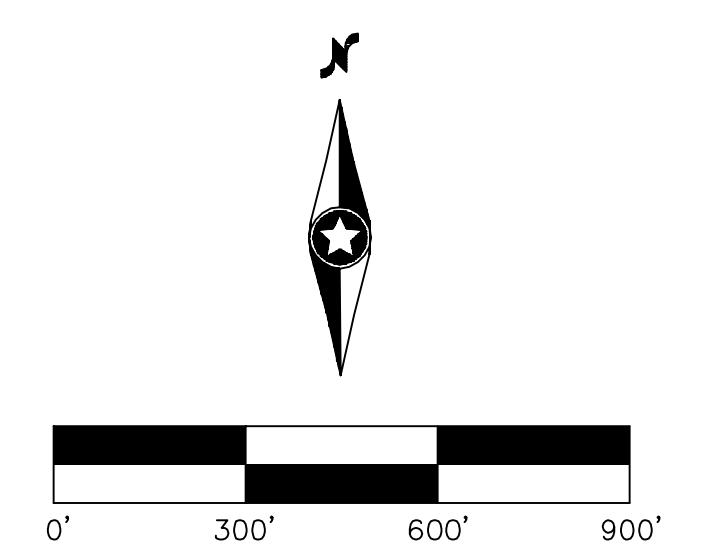
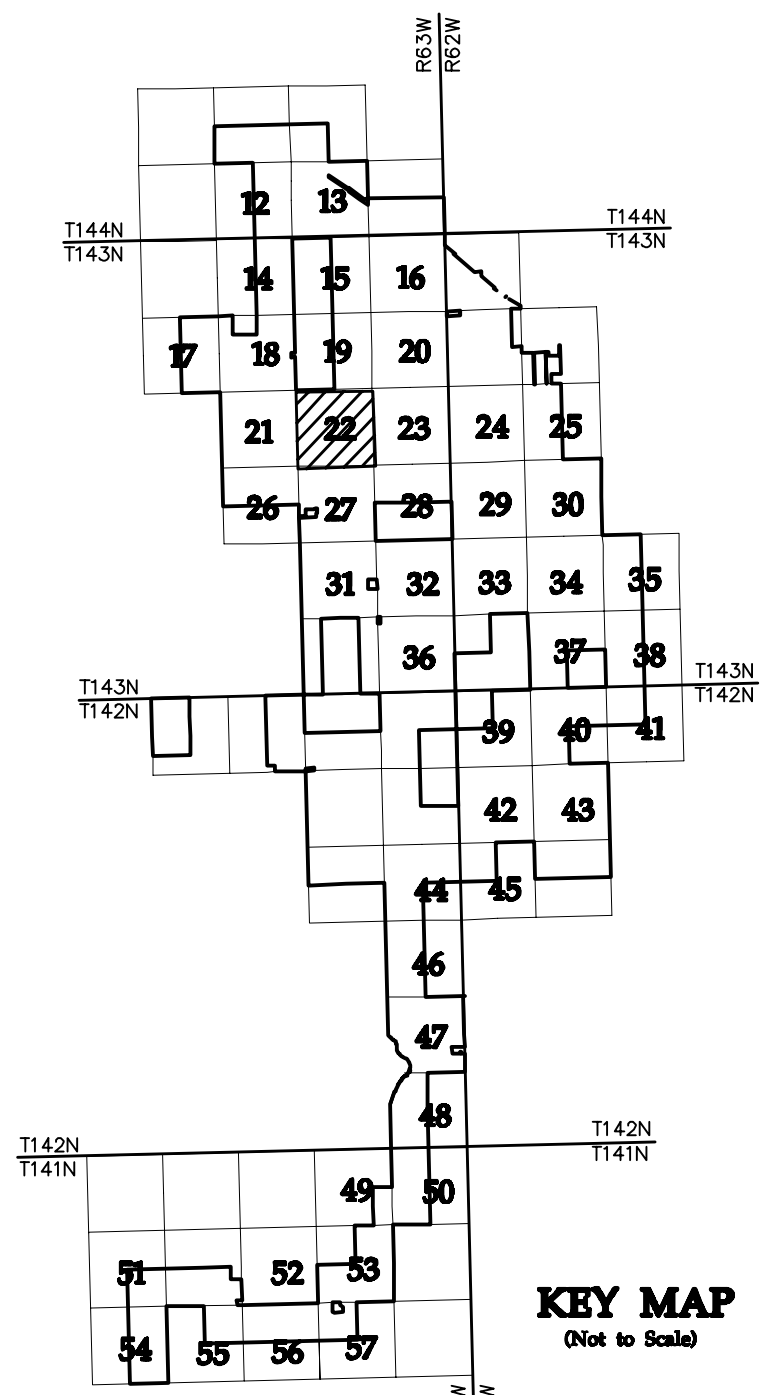
NH-217540-21



SEE SHEET 23

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
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0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
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5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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STUTSMAN COUNTY, NORTH DAKOTA

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PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
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Civil Plan - S14 T143N R63W

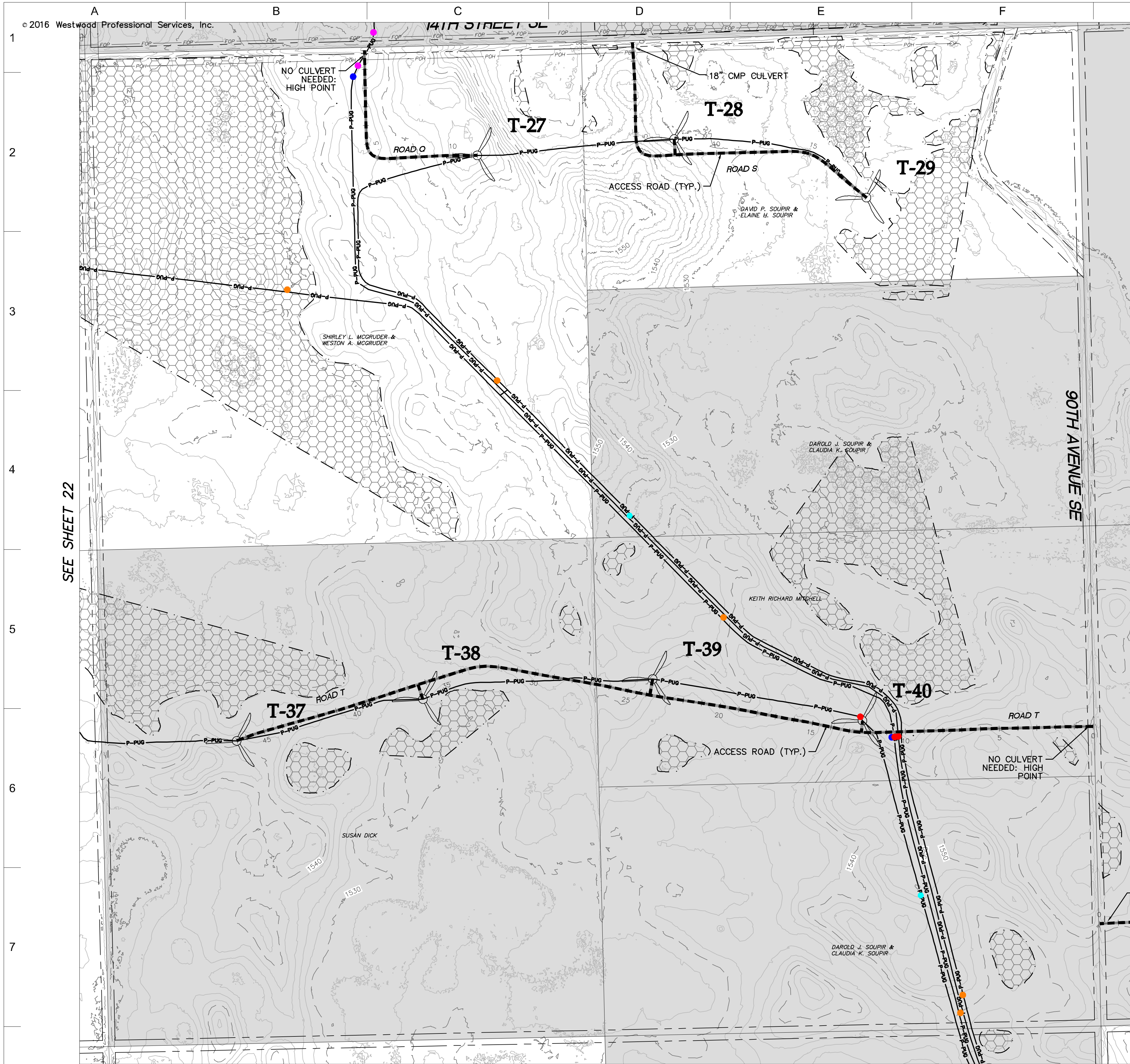
CIVIL PLANS SHEET 22

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-22

REV 9

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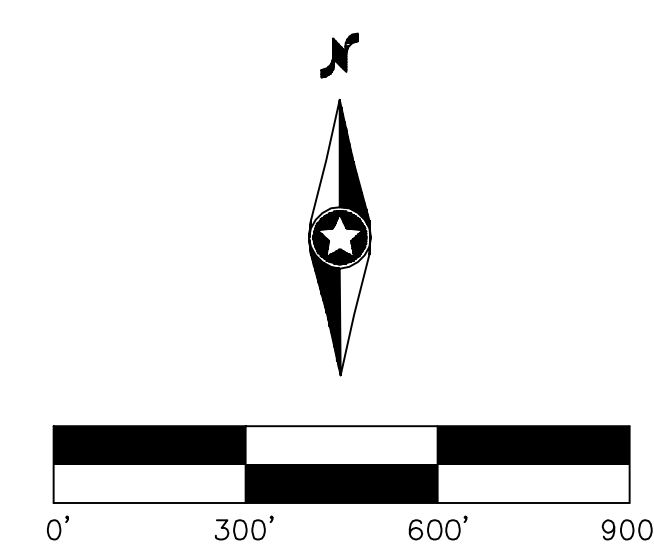
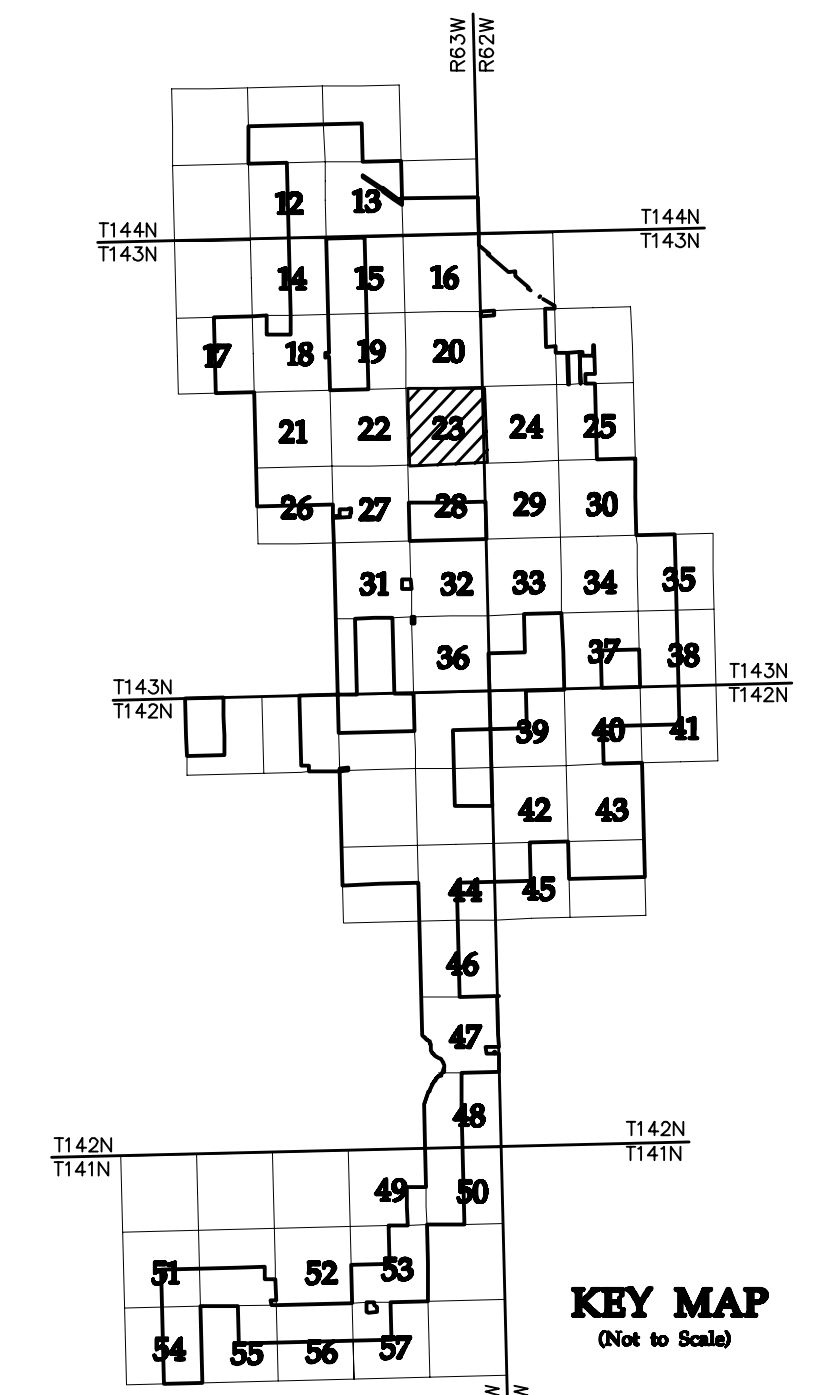


SEE SHEET 22

SEE SHEET 24

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
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 - ROAD BORE LOCATION*
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4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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20121151-01SPF01.dwg

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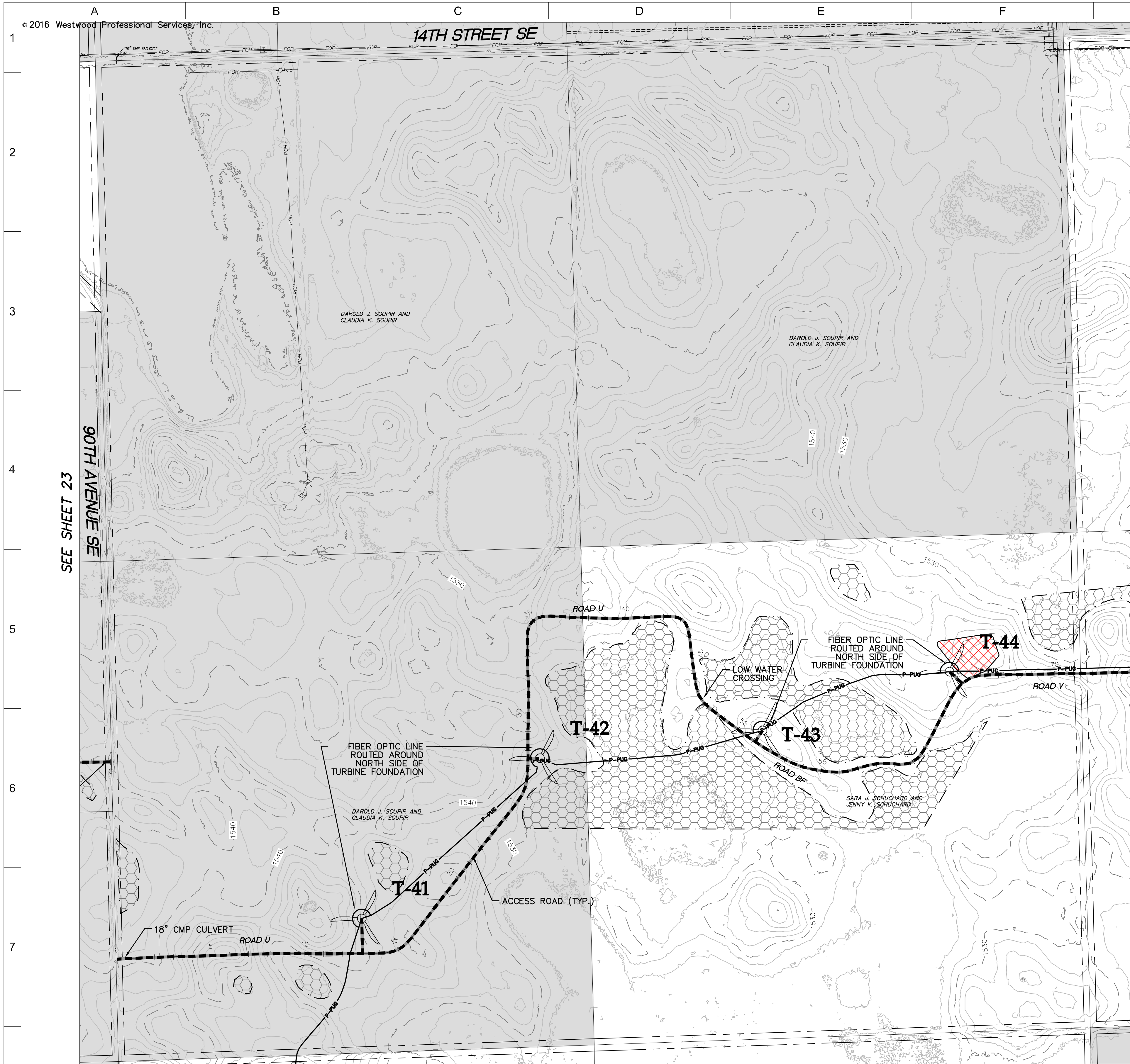
Civil Plan - S13 T143N R63W

CIVIL PLANS SHEET 23

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-23

REV 9

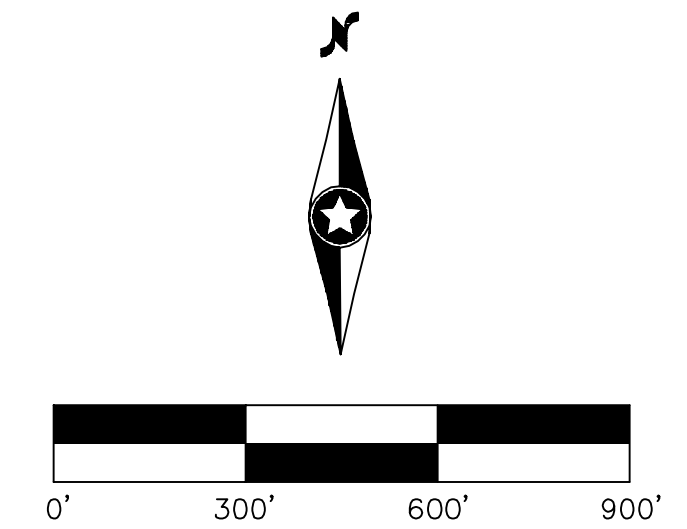
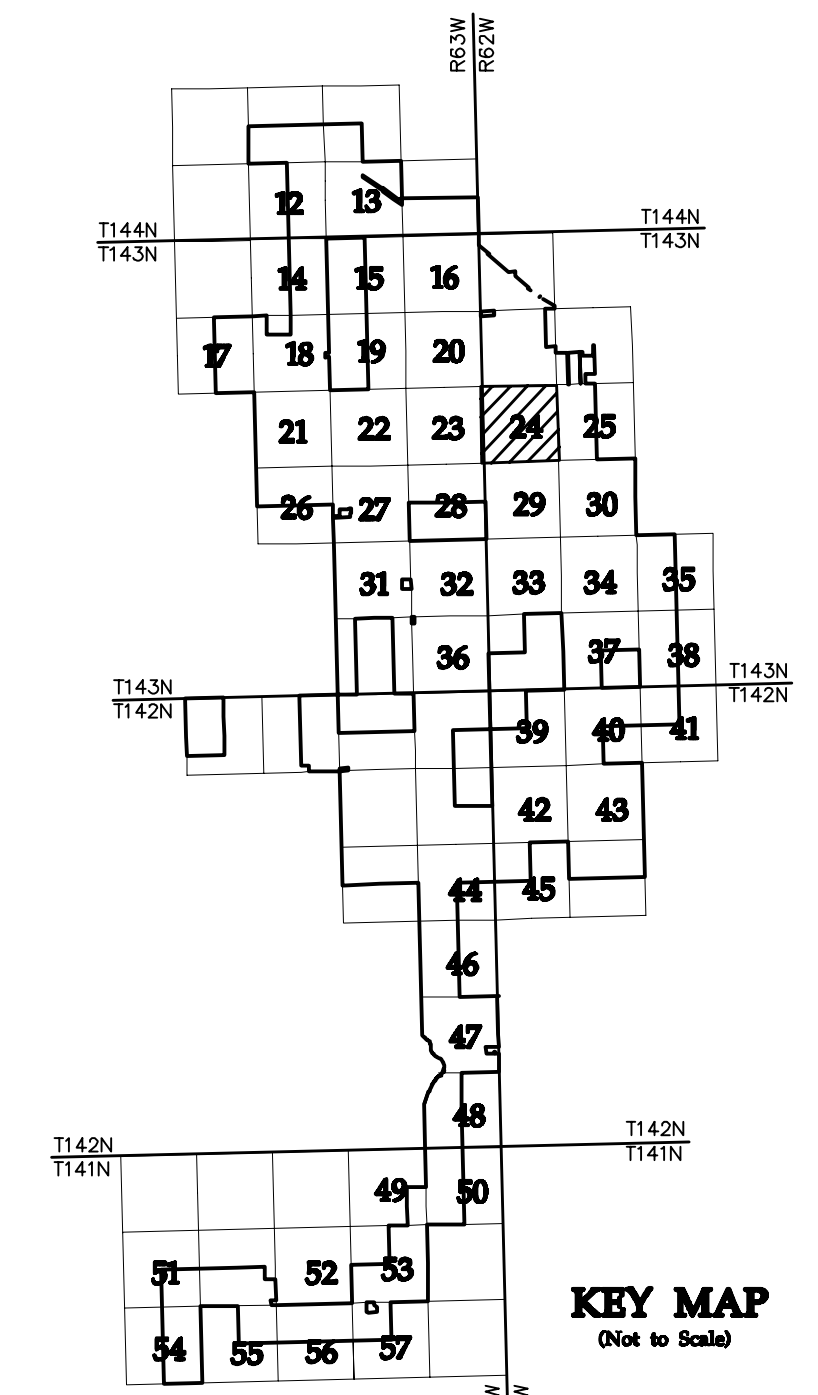


SEE SHEET 23
90TH AVENUE SE

SEE SHEET 25

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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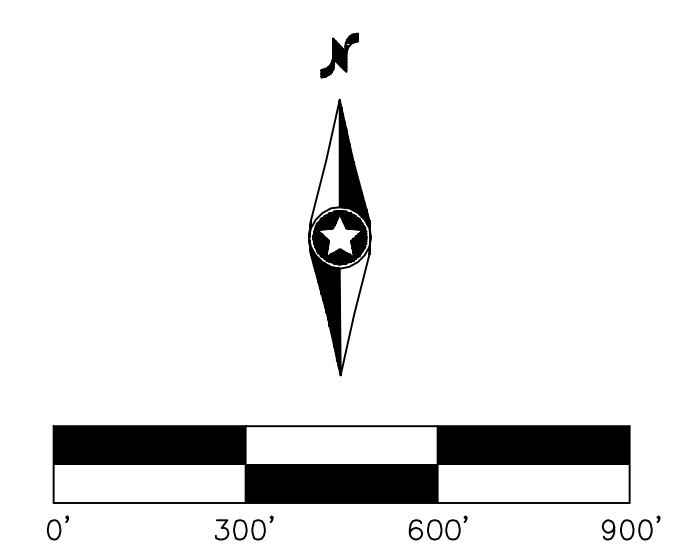
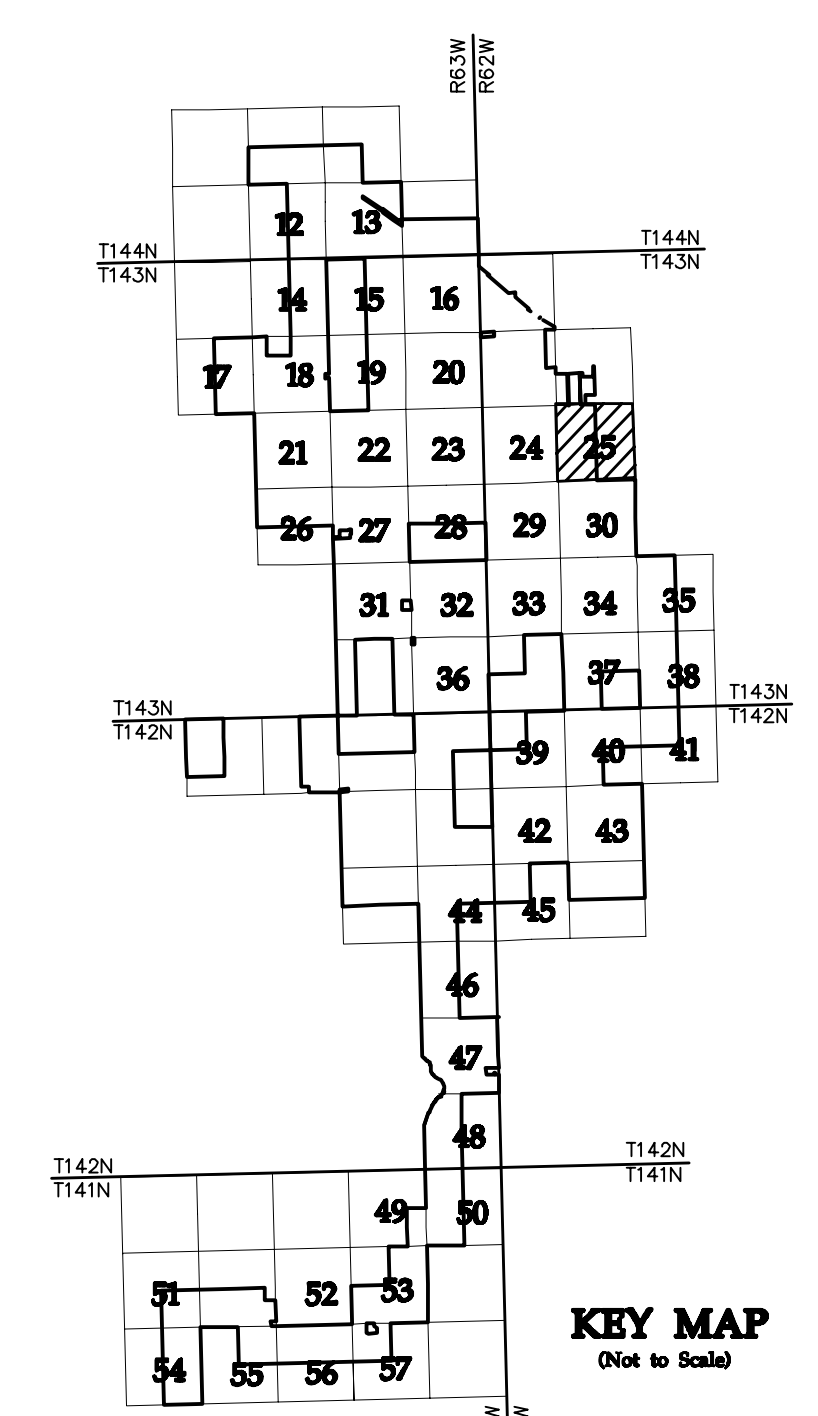
**Civil Plan - S18
T143N R62W**

CIVIL PLANS SHEET 24
NH-217540-24



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
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 - AVOIDANCE AREA
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 - USFWS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
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2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

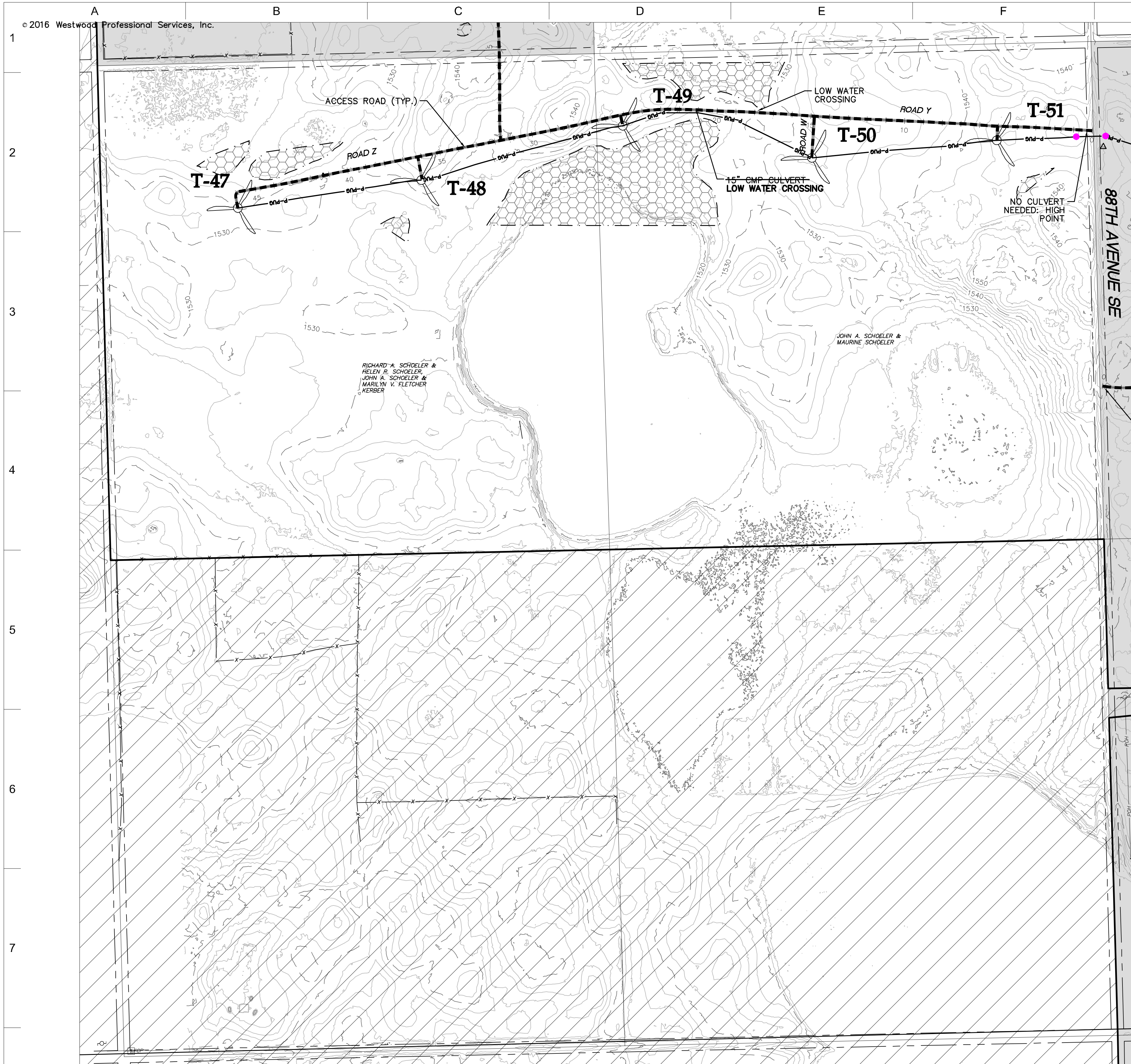
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**Civil Plan - S17
T143N R62W**

CIVIL PLANS SHEET **25**

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

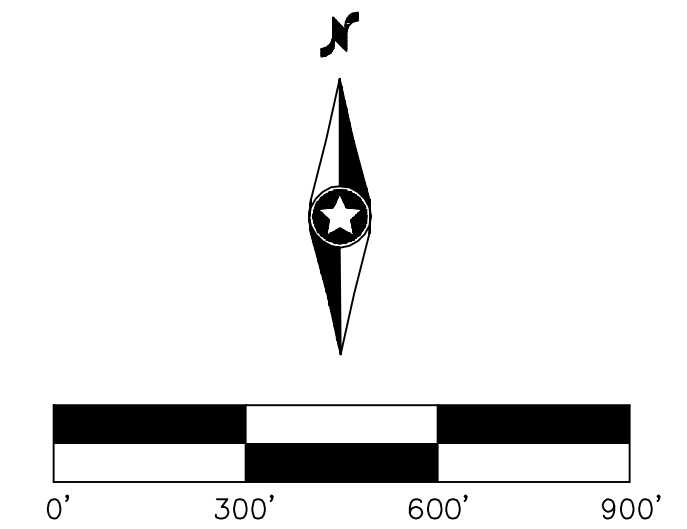
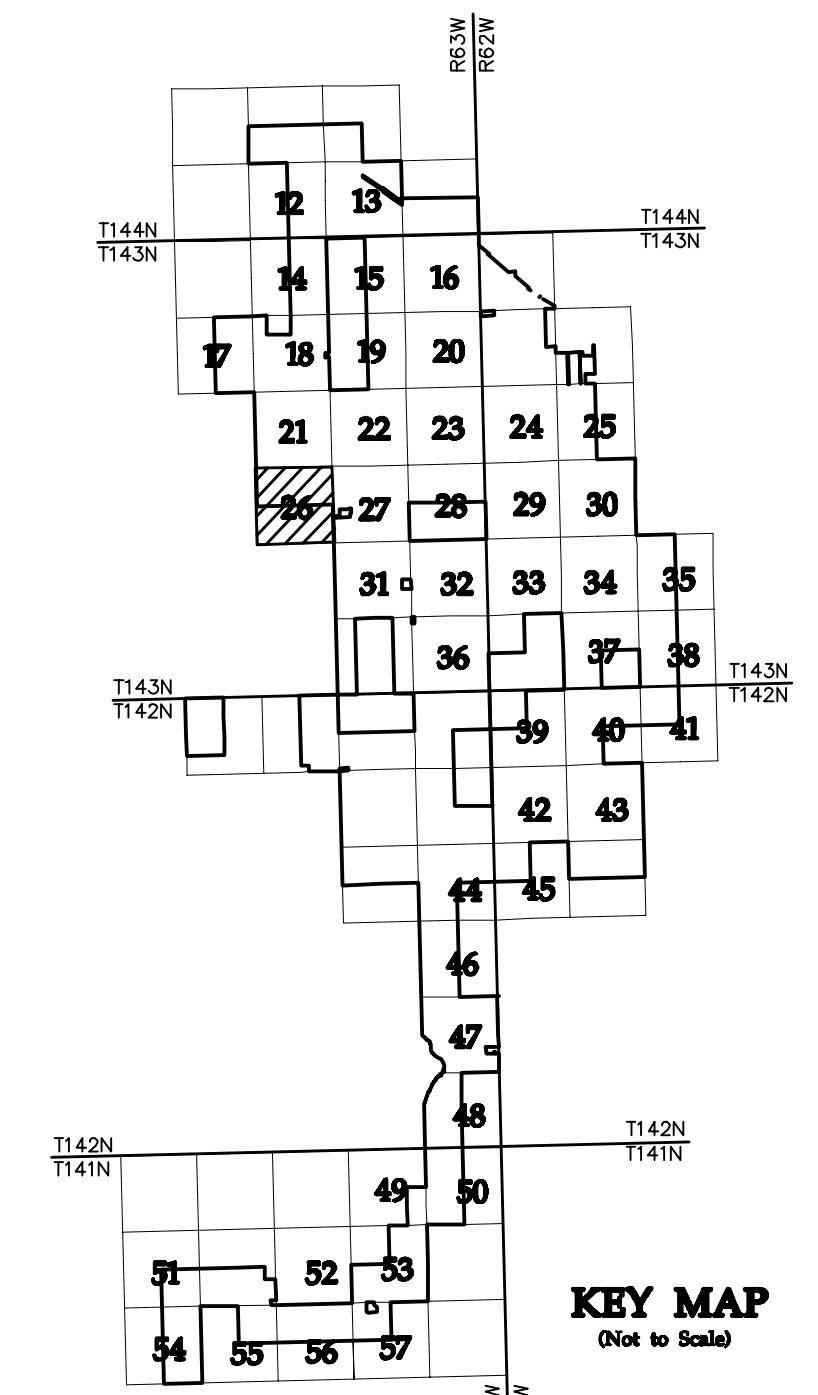
NH-217540-25 REV 9



SEE SHEET 27

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
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 - USFWS WETLAND EASEMENT PARCEL

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3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
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5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

REFERENCE DRAWINGS	
DWG NO.	DESCRIPTION
20121151ECON.DWG	EXISTING CONTOURS
20121151MAPD.DWG	MAPD BASE
20121151SITE.DWG	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

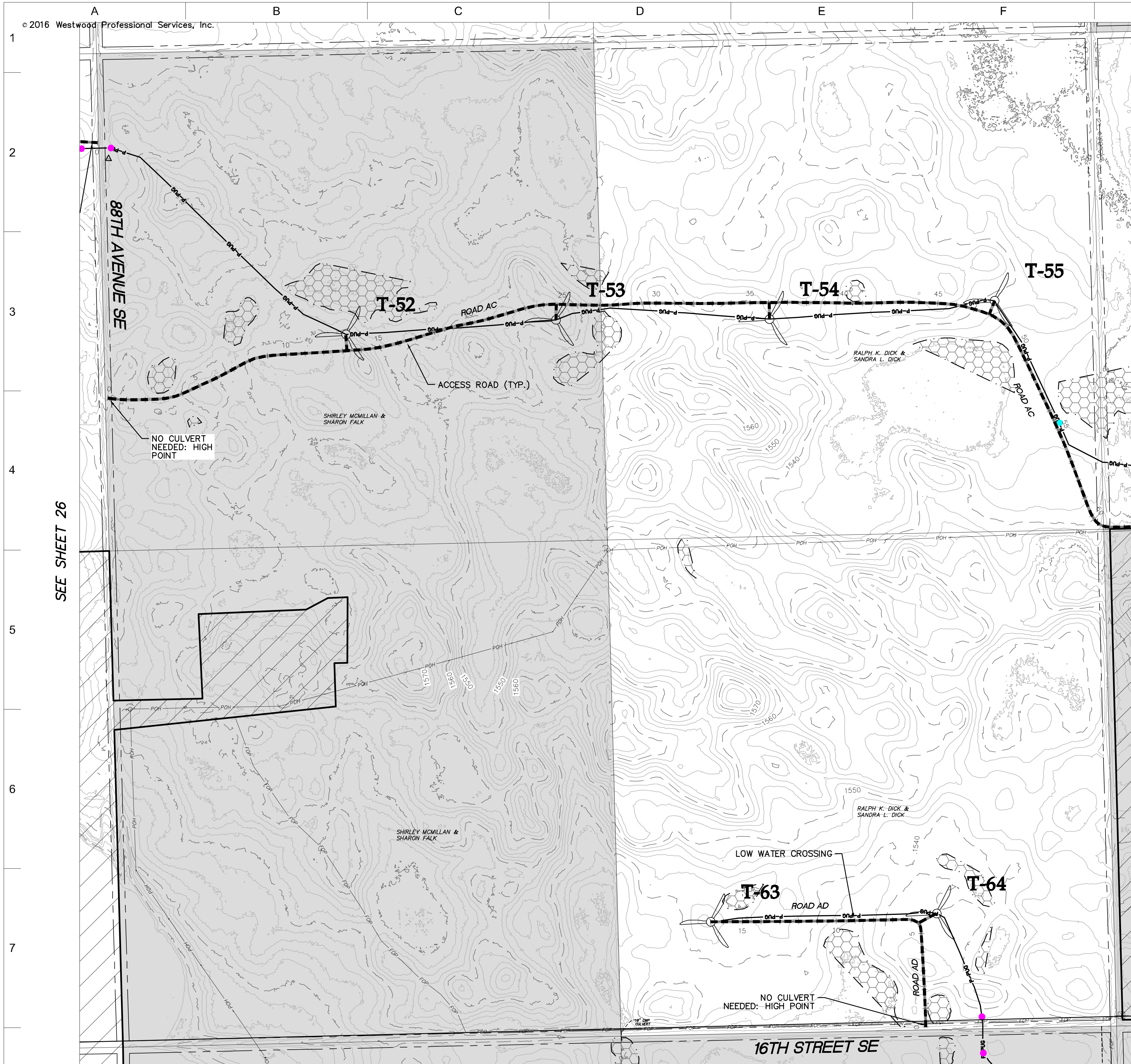
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 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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**Civil Plan - S22
T143N R63W**

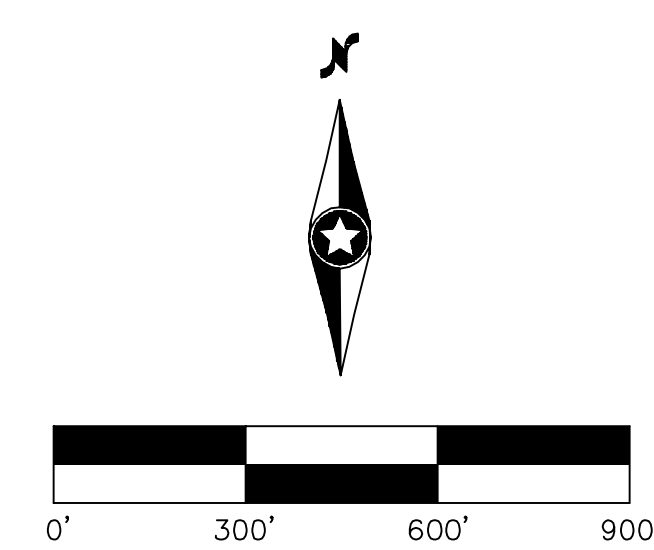
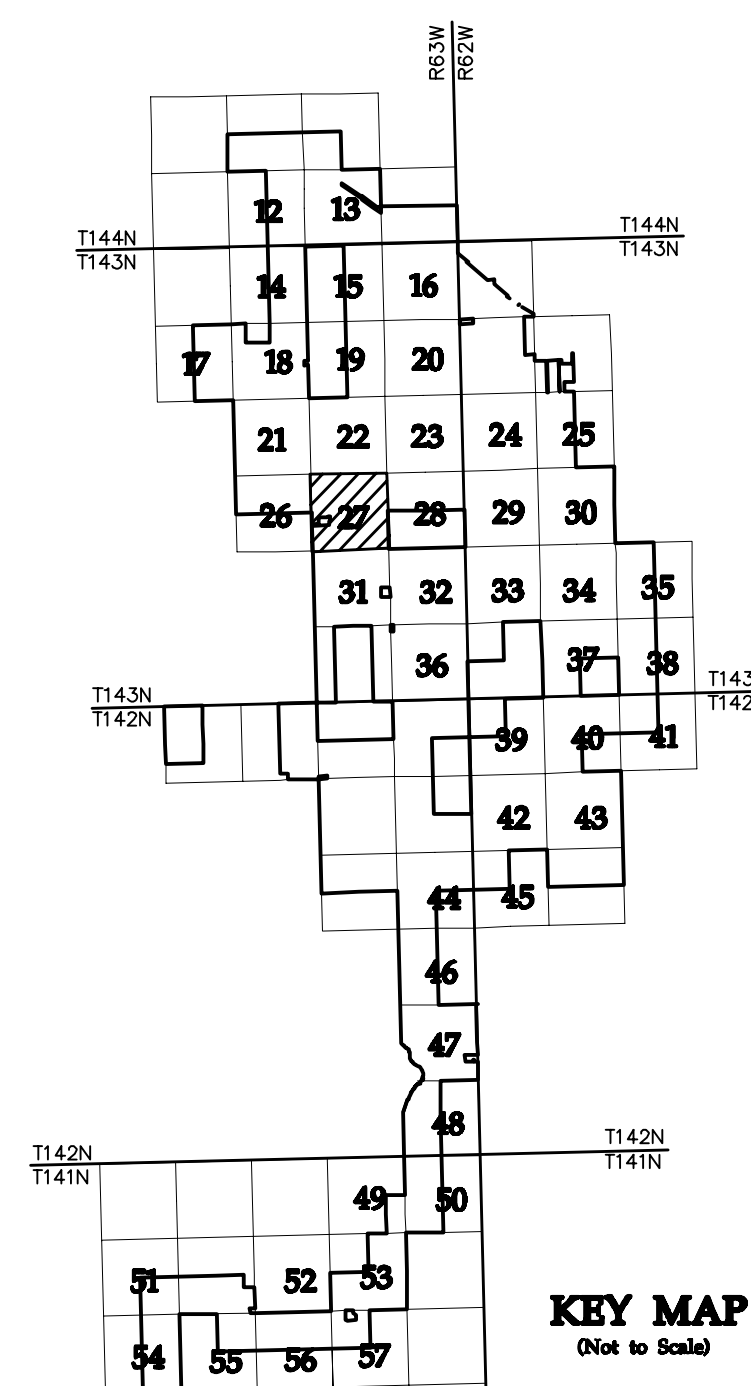
CIVIL PLANS SHEET 26
NH-217540-26



SEE SHEET 28

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
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 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
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 - AVOIDANCE AREA
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 - USFS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
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3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

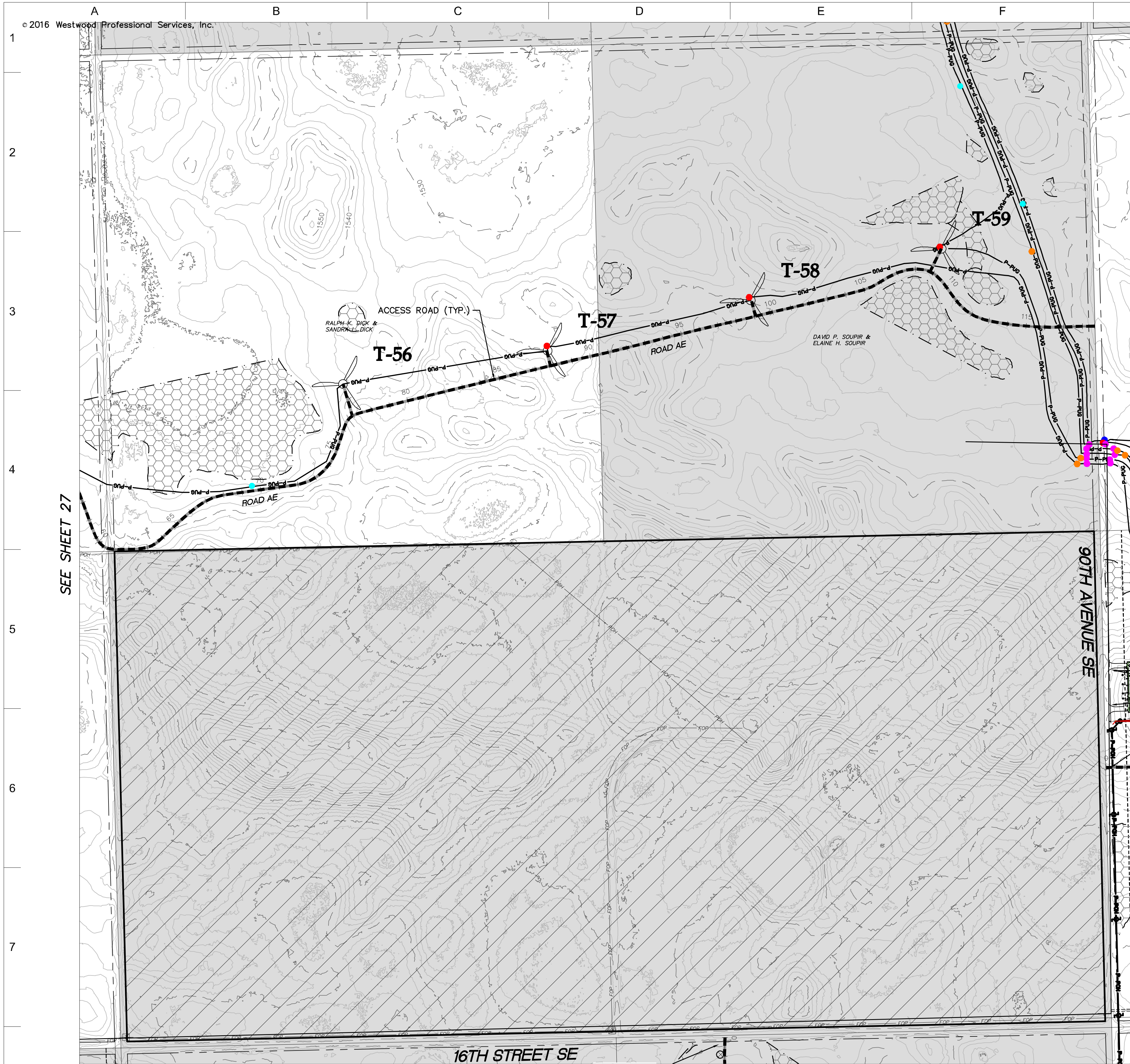
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 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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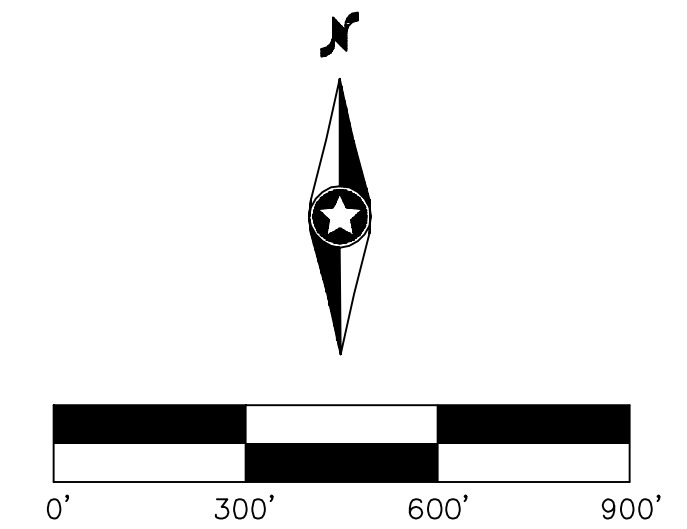
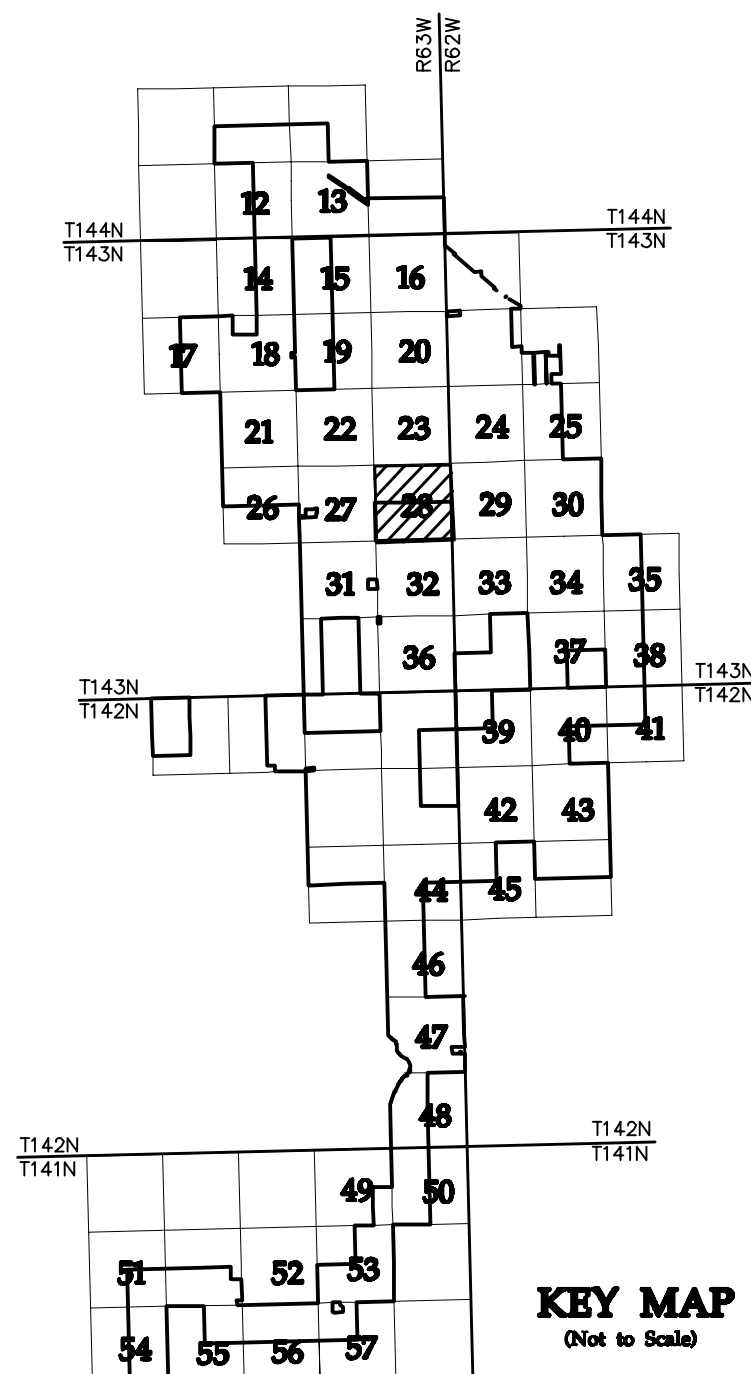
Civil Plan - S23 T143N R63W

CIVIL PLANS SHEET 27
 NH-217540-27 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
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7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
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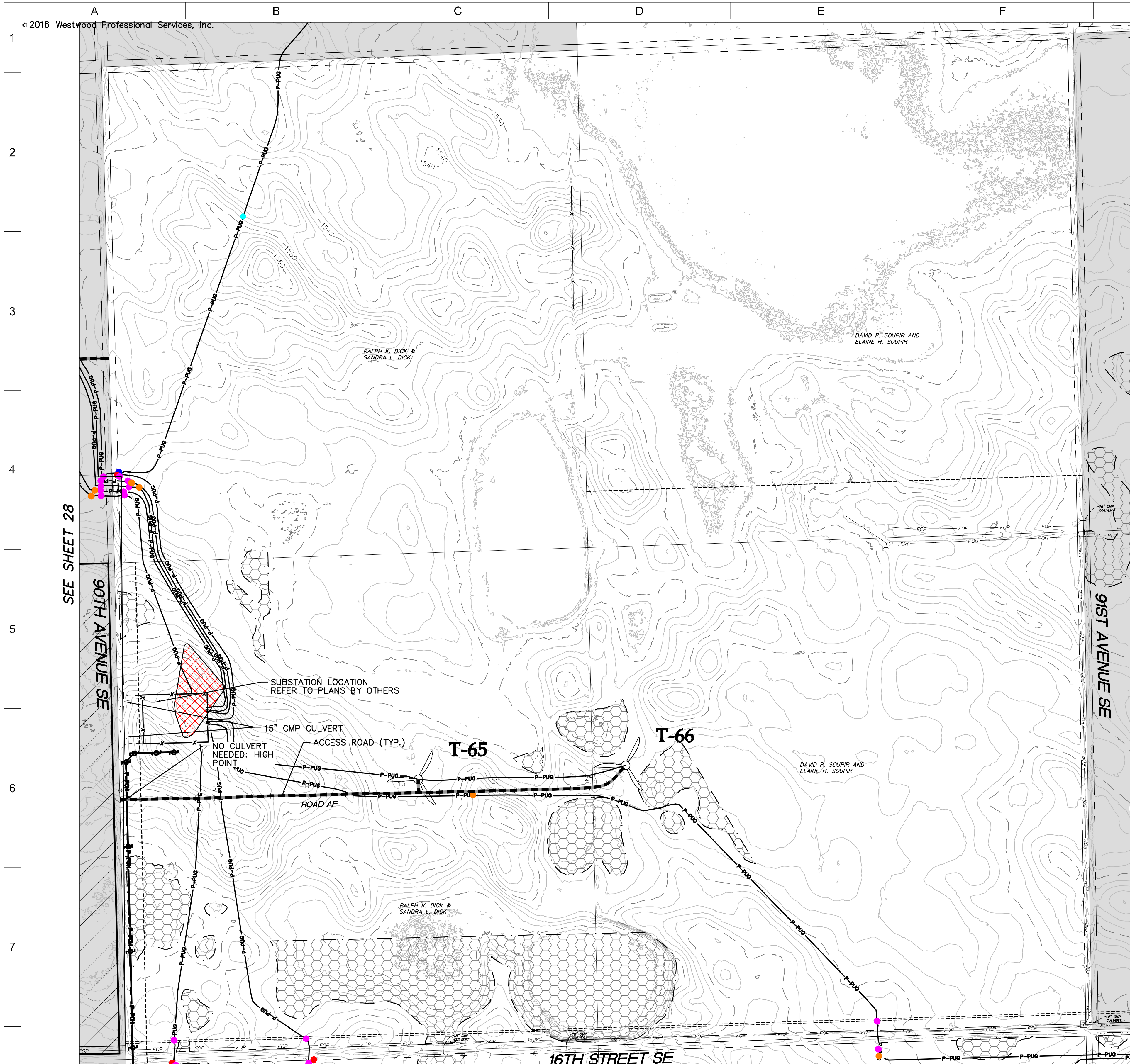
Civil Plan - S24 T143N R63W

CIVIL PLANS SHEET 28

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-28

REV 9

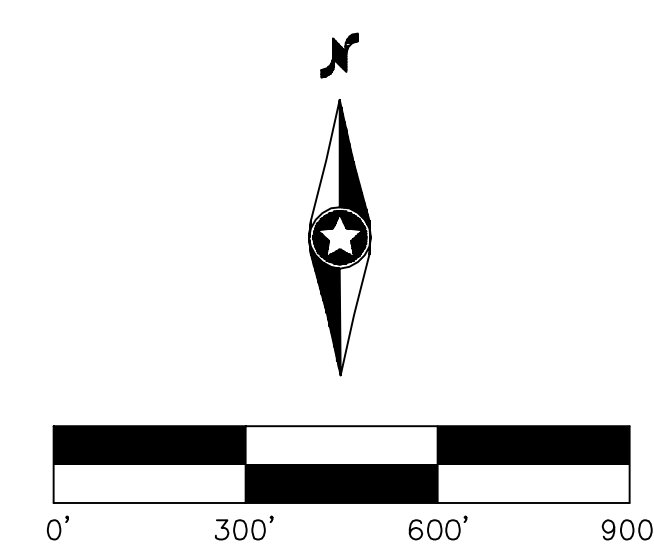
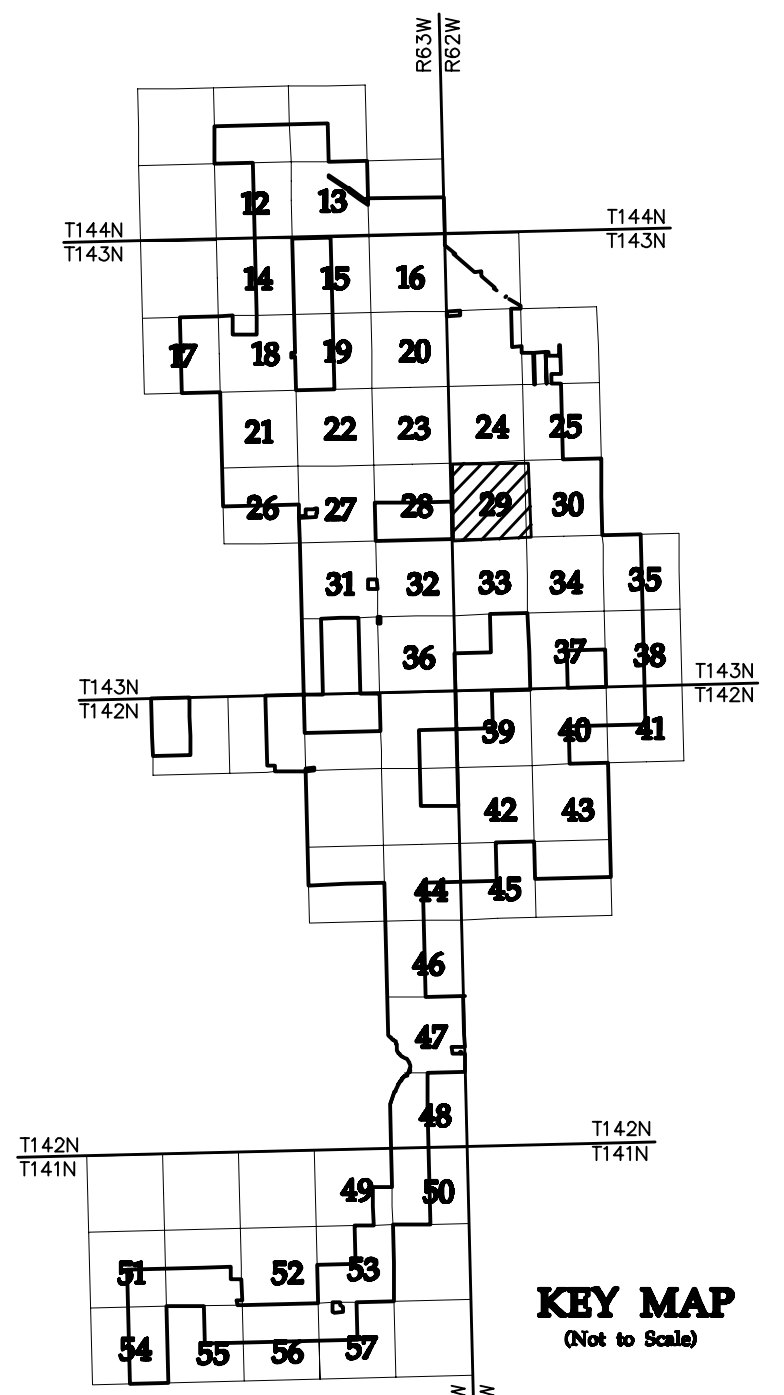


SEE SHEET 28

SEE SHEET 30

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

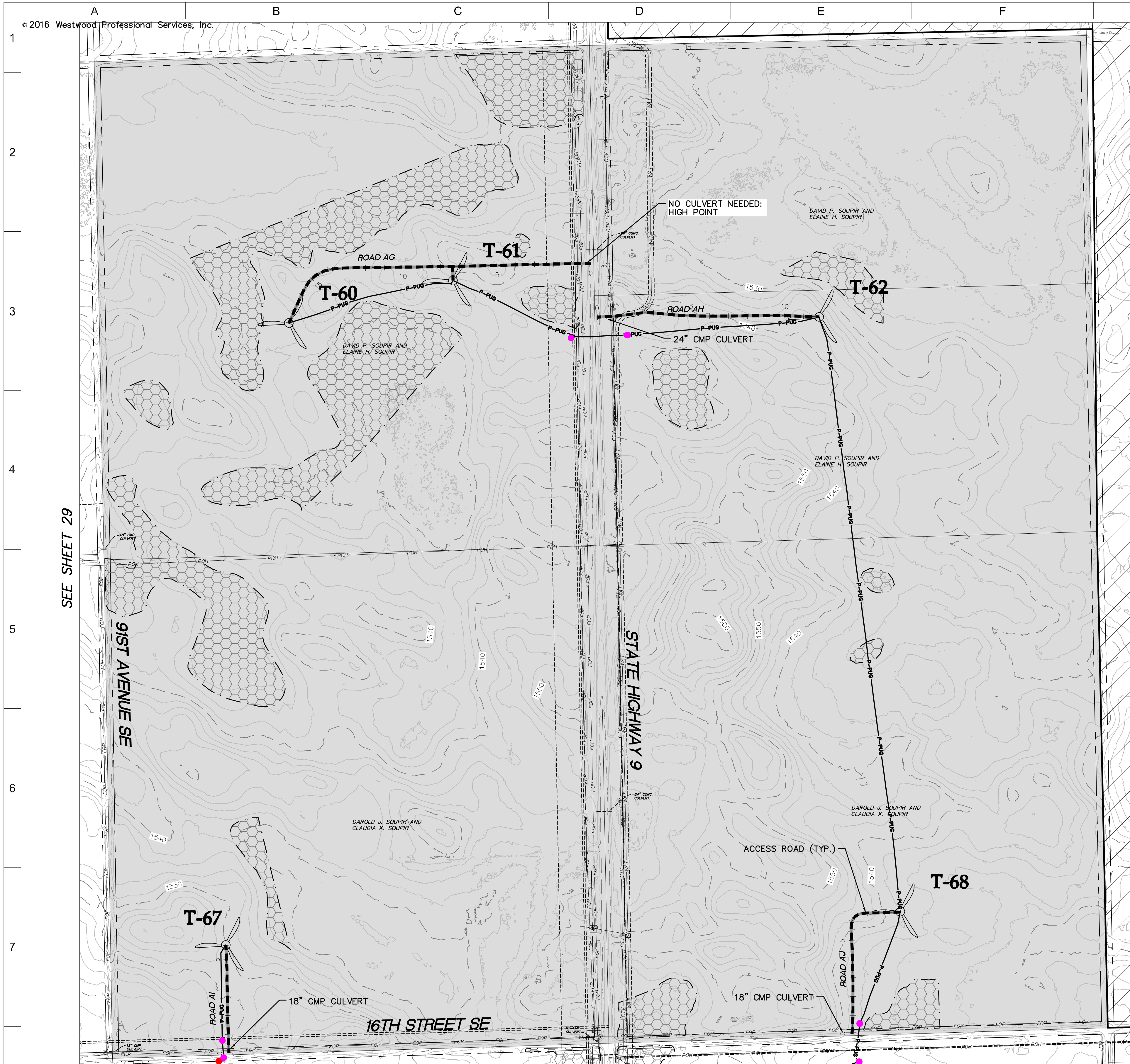
THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.

Civil Plan - S19
T143N R62W

CIVIL PLANS SHEET 29

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

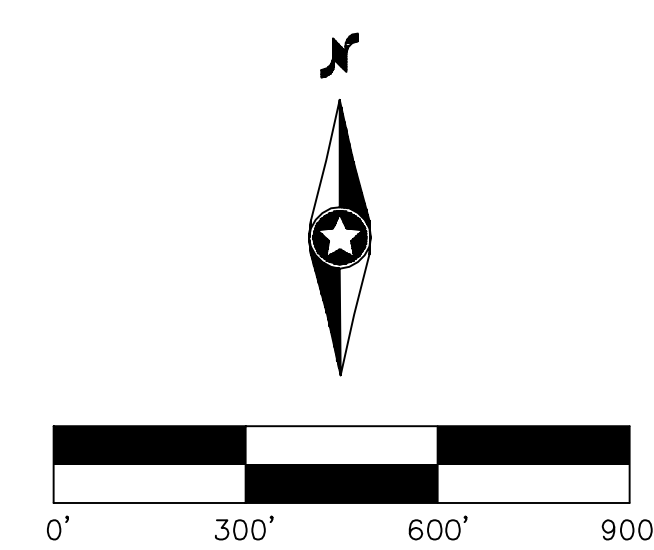
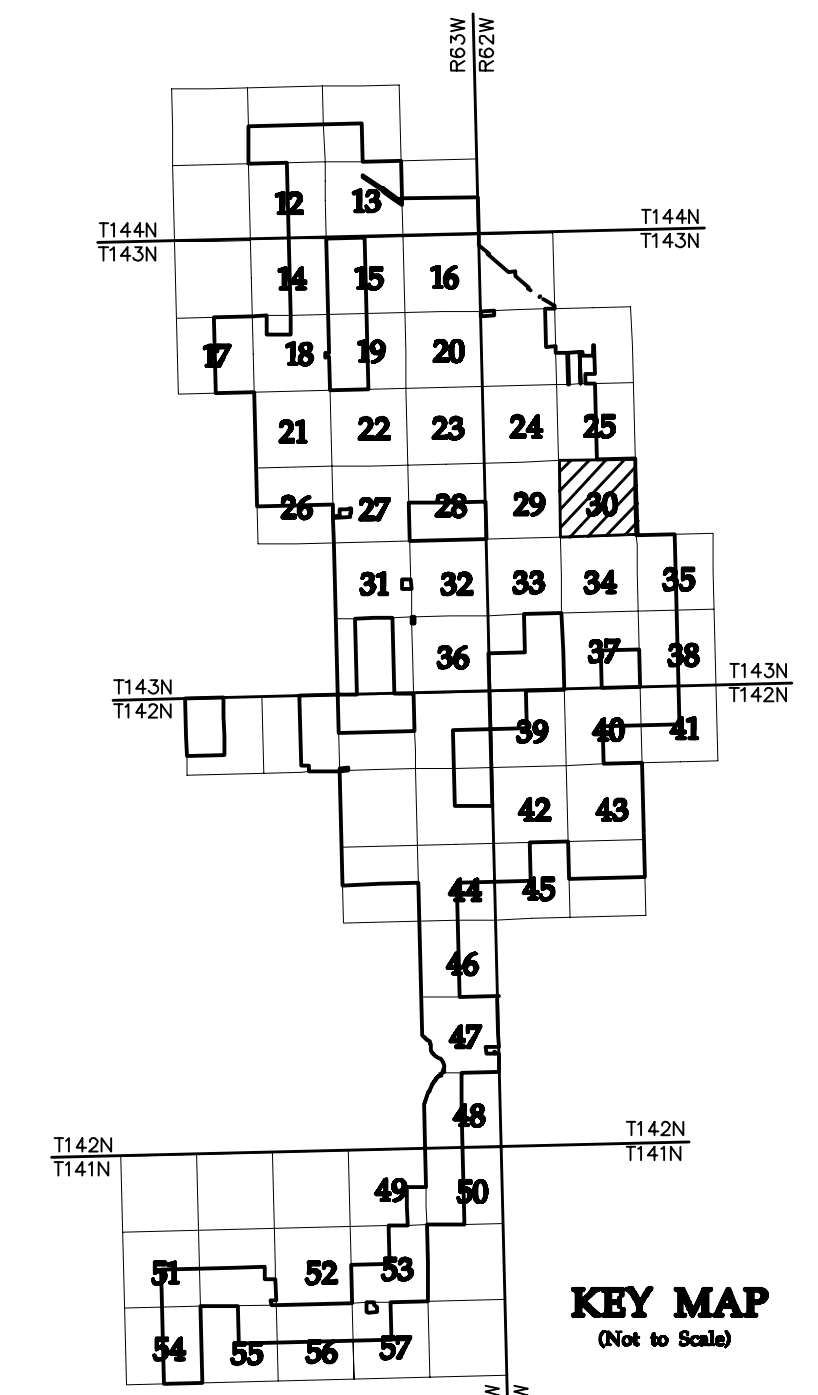
NH-217540-29



SEE SHEET 29

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

REVISION	ZONE	DATE	BY	CHK	ENG
9		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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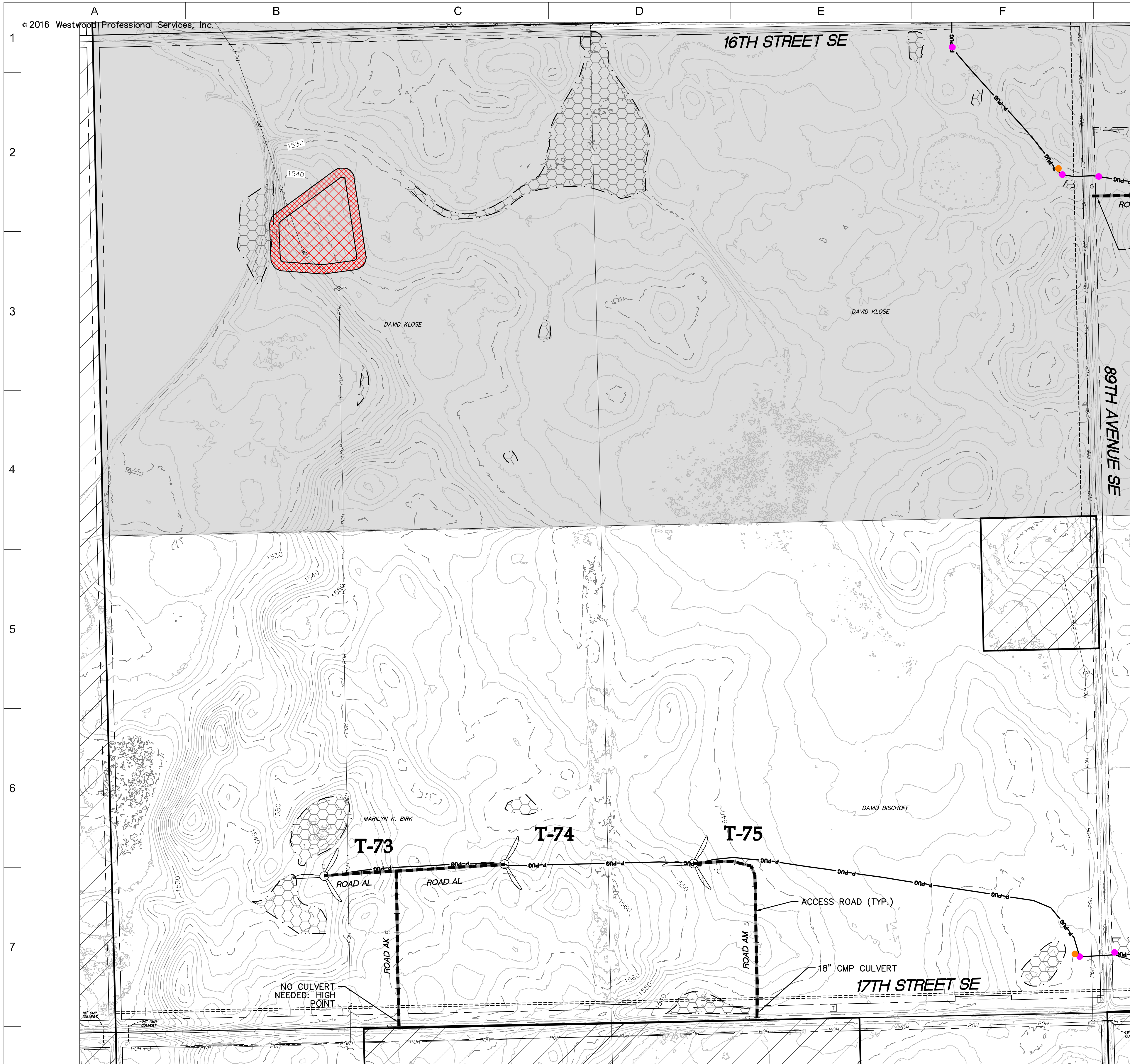
Civil Plan - S20 T143N R62W

CIVIL PLANS SHEET 30

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-30

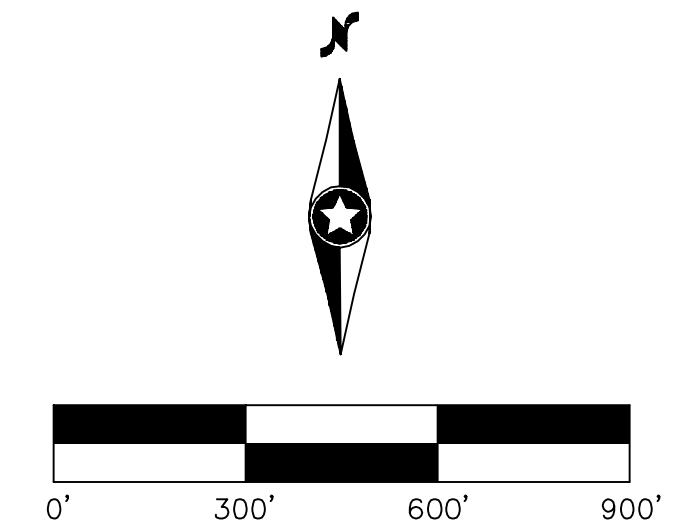
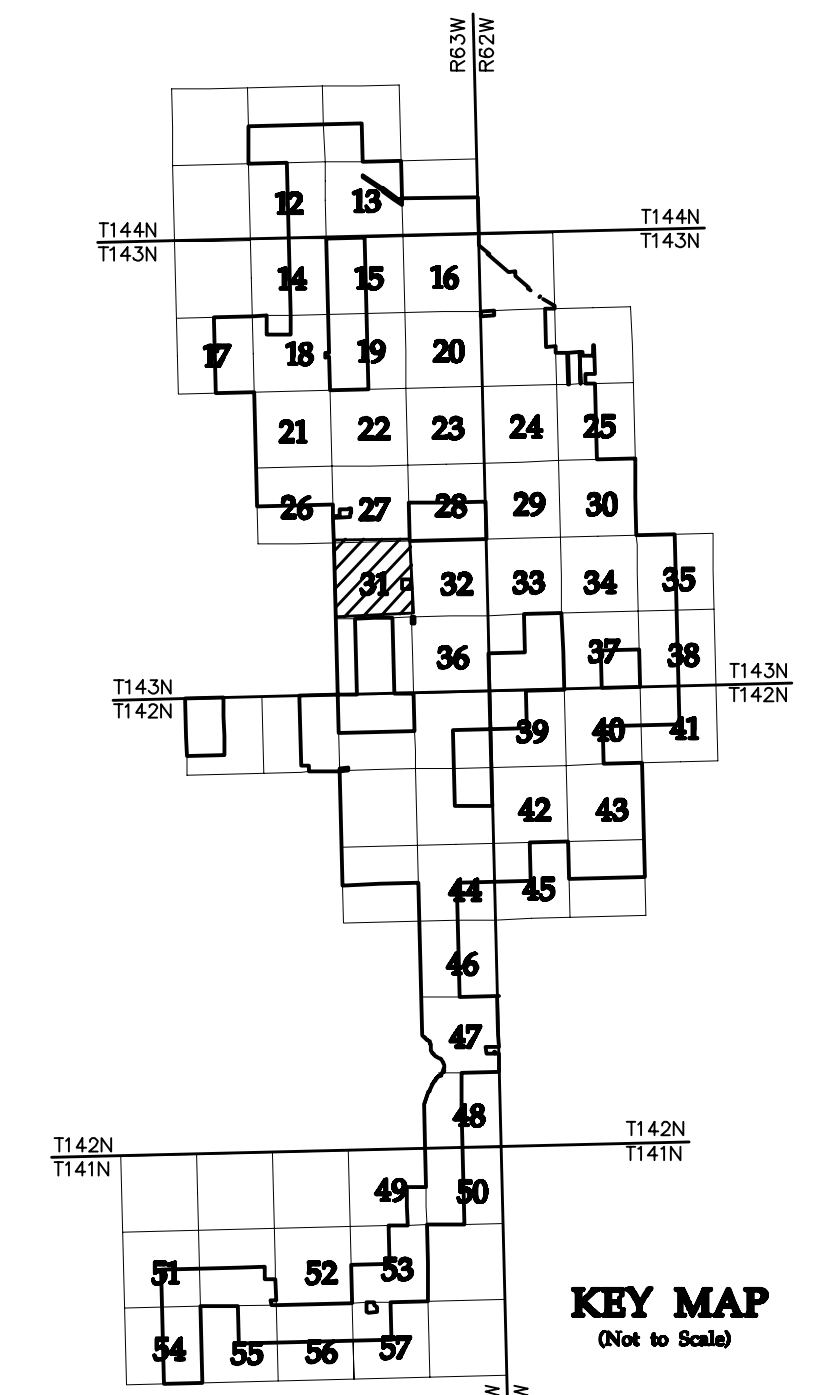
REV 9



SEE SHEET 32

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

REVISION	ZONE	DATE	BY	CHK	ENG
9		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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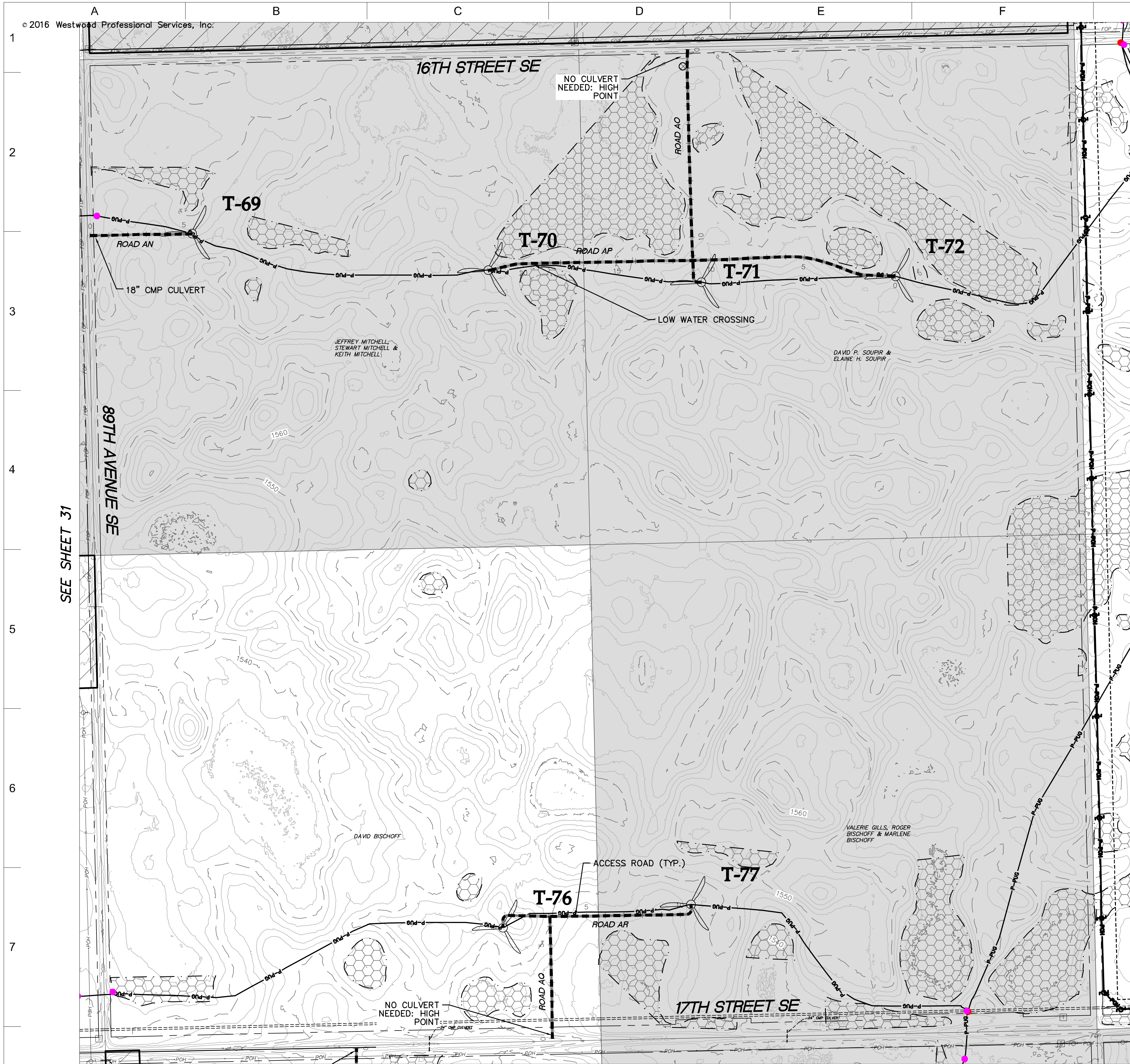
Civil Plan - S26
T143N R63W

CIVIL PLANS SHEET **31**

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-31

REV 9

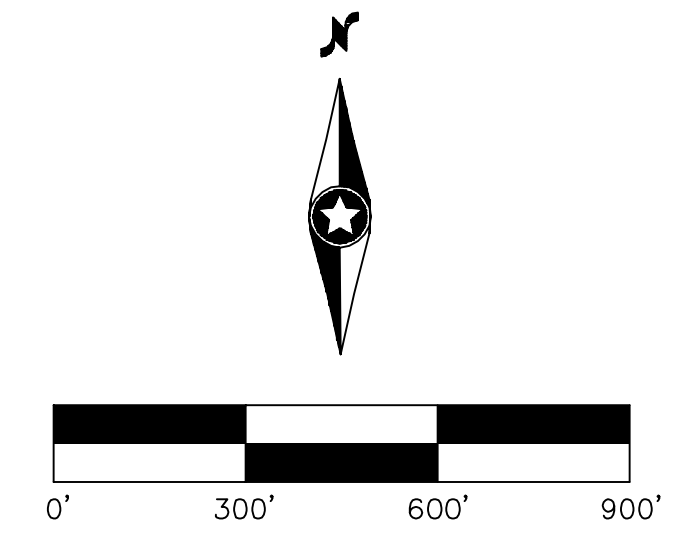
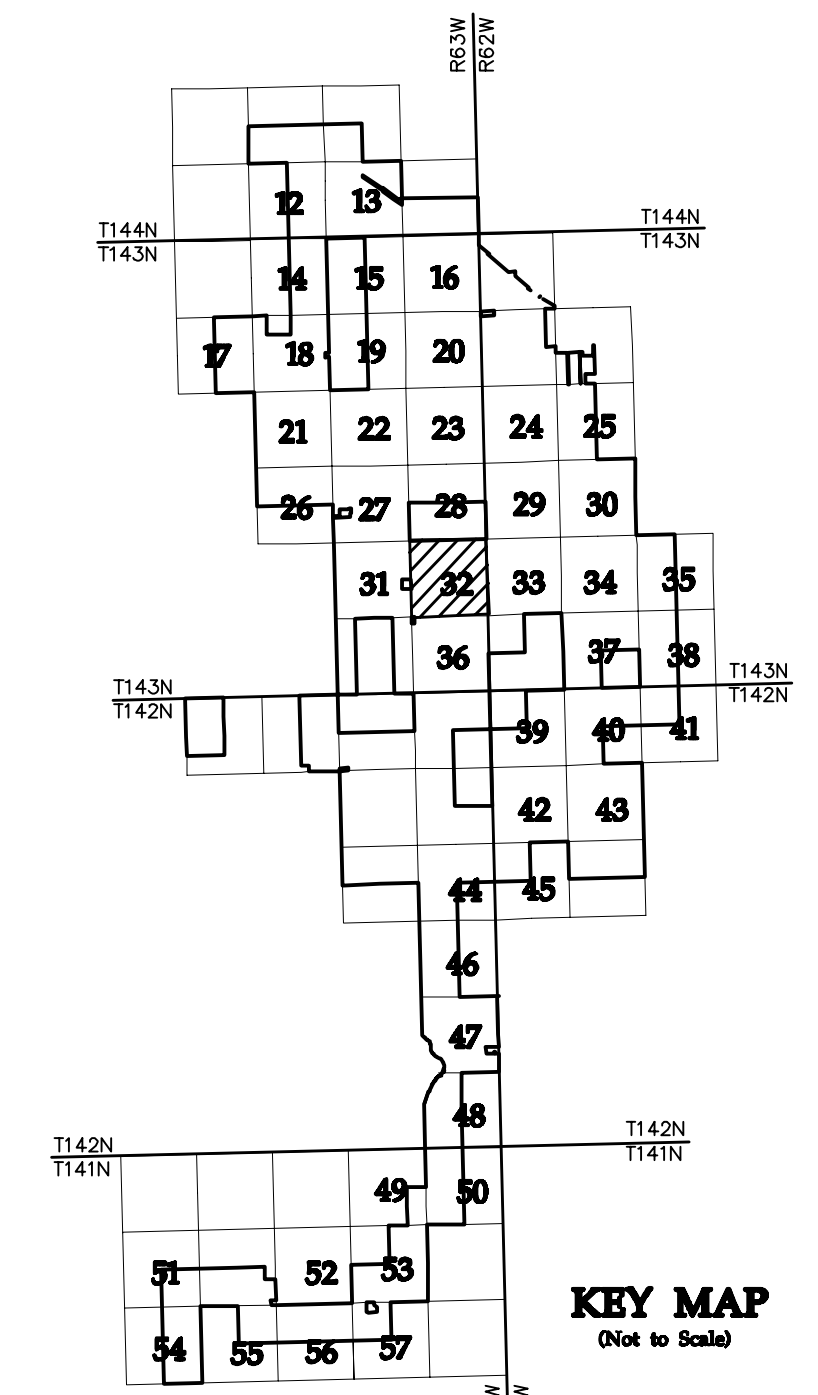


SEE SHEET 31

SEE SHEET 33

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

REVISION	ZONE	DATE	BY	CHK	ENG
9		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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20121151-01SPF01.dwg

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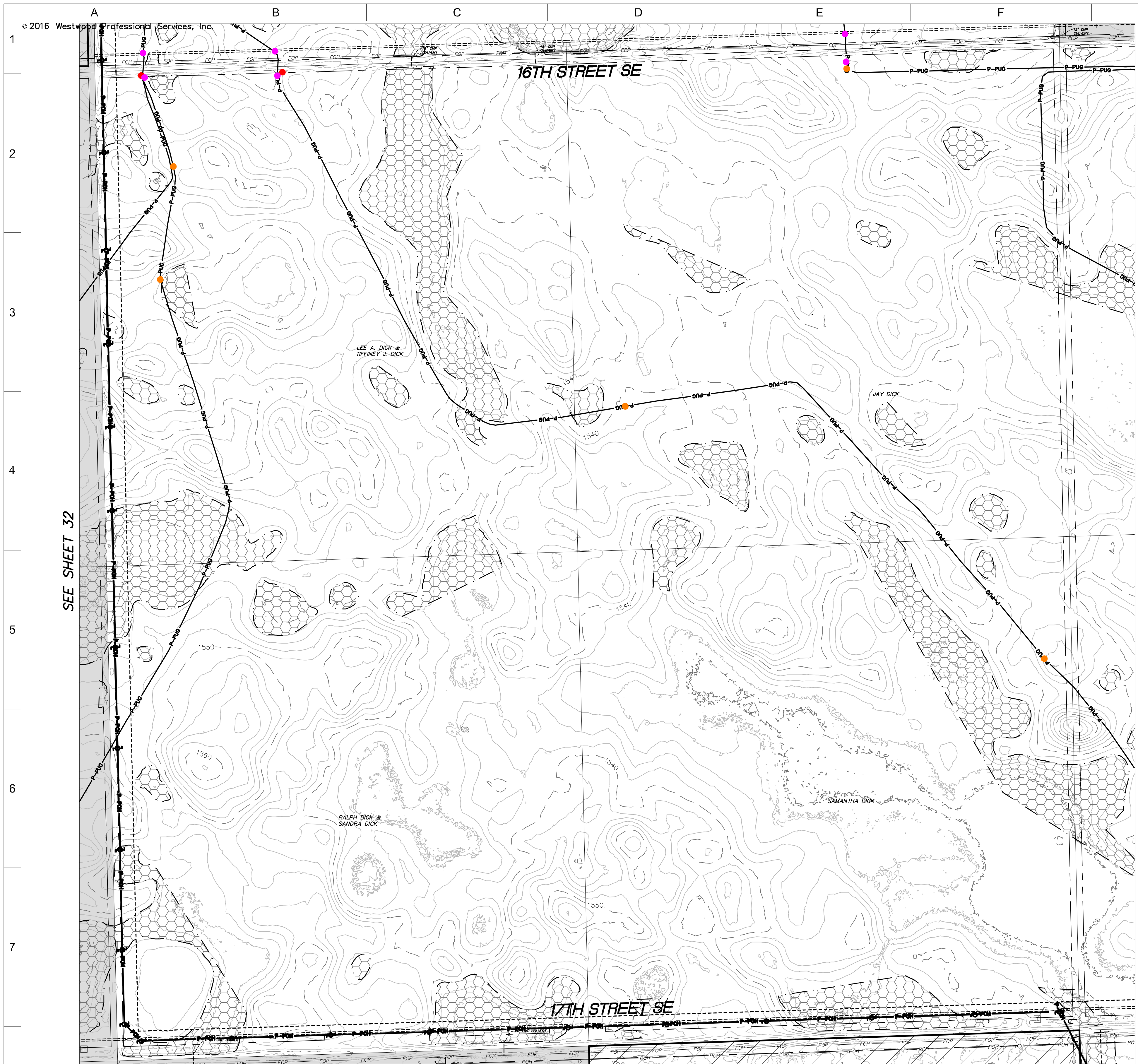
Civil Plan - S25 T143N R63W

CIVIL PLANS SHEET 32

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-32

REV 9

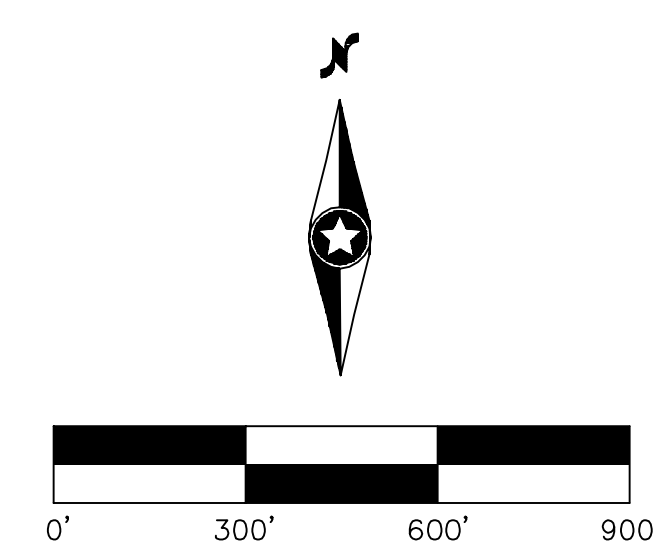
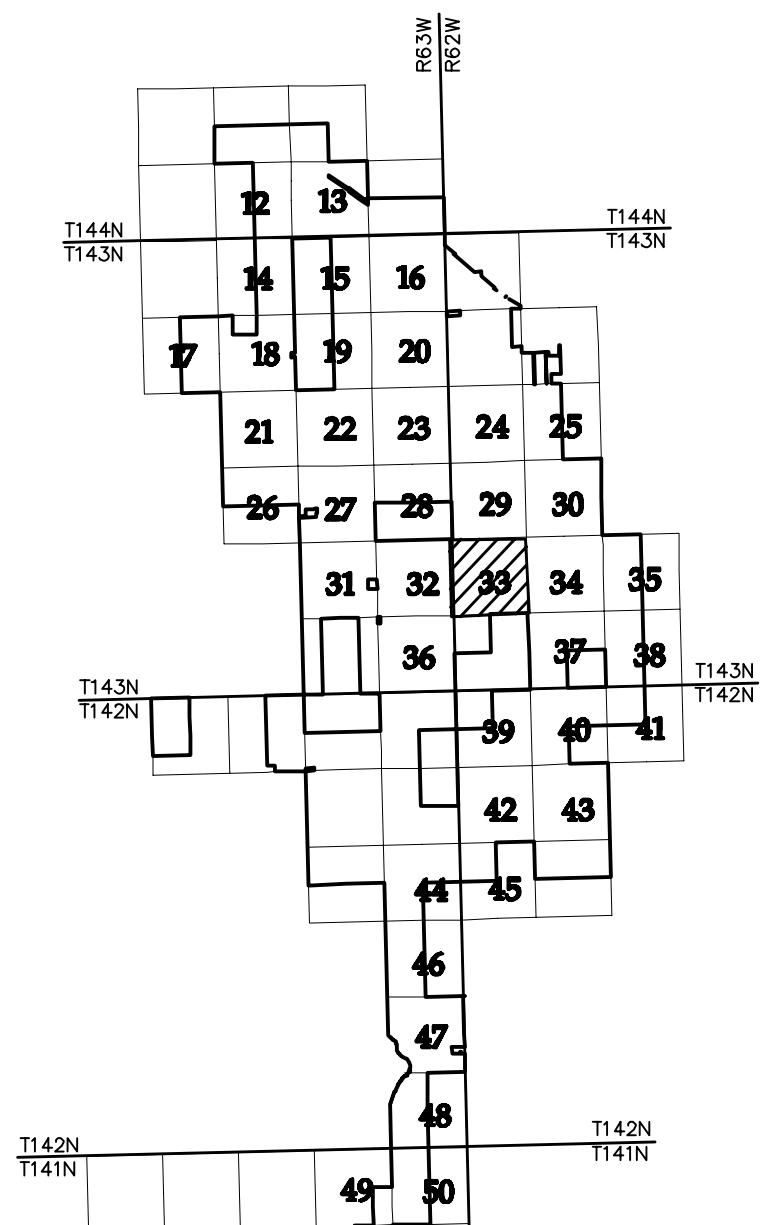


- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.

SEE SHEET 34

SEE SHEET 32



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

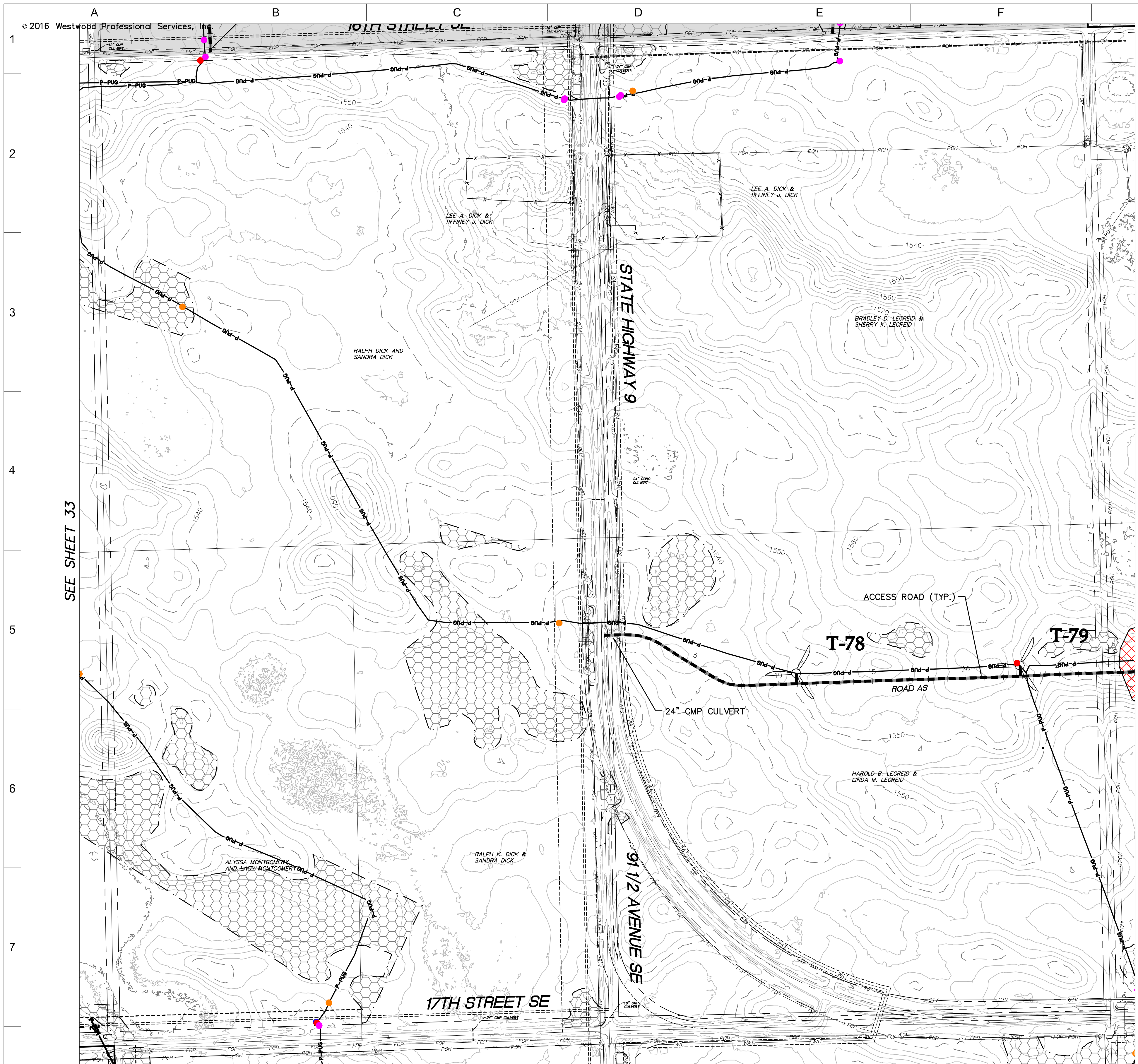
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CIVIL PLANS SHEET **33**

**Civil Plan - S30
T143N R62W**

NH-217540-33

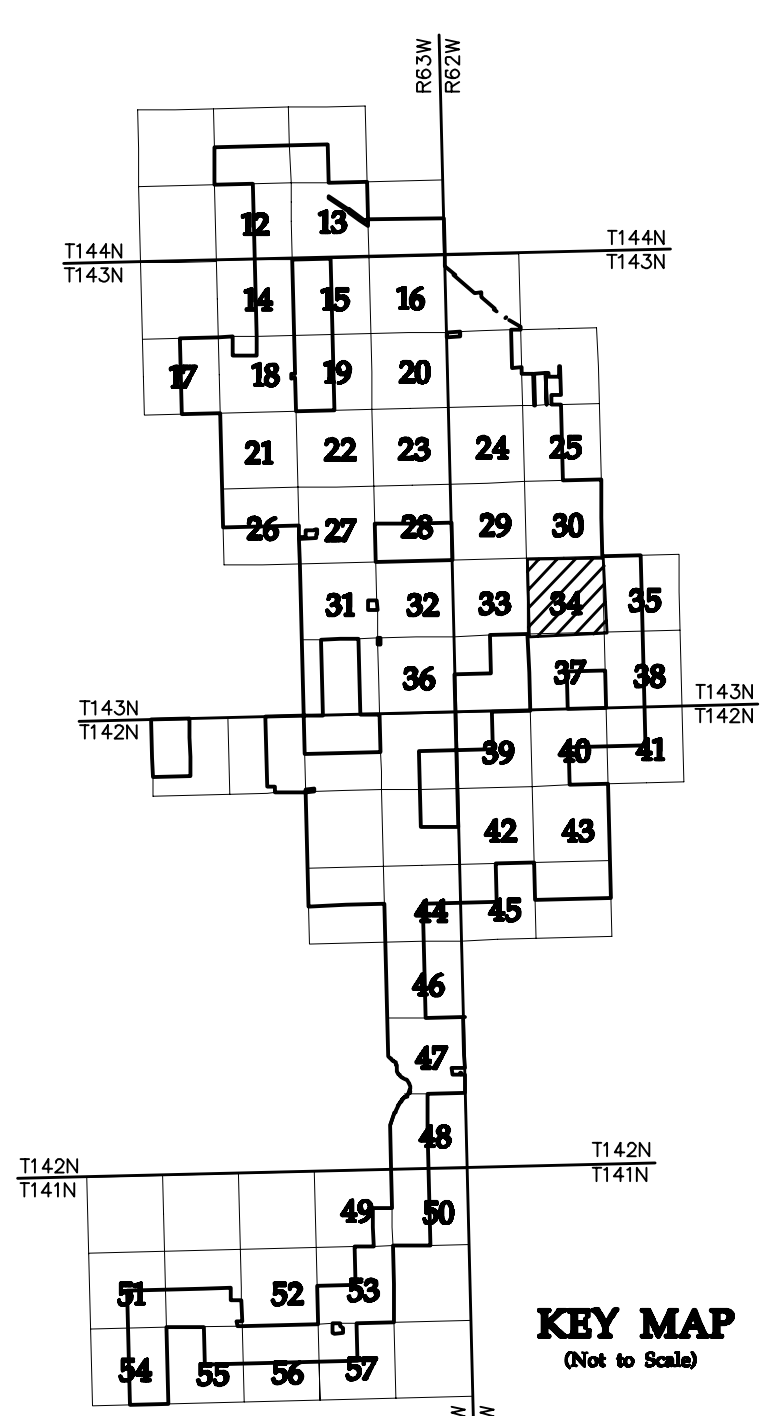
20121151-01SPF01.dwg



SEE SHEET 33

SEE SHEET 35

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
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 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL
- * FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

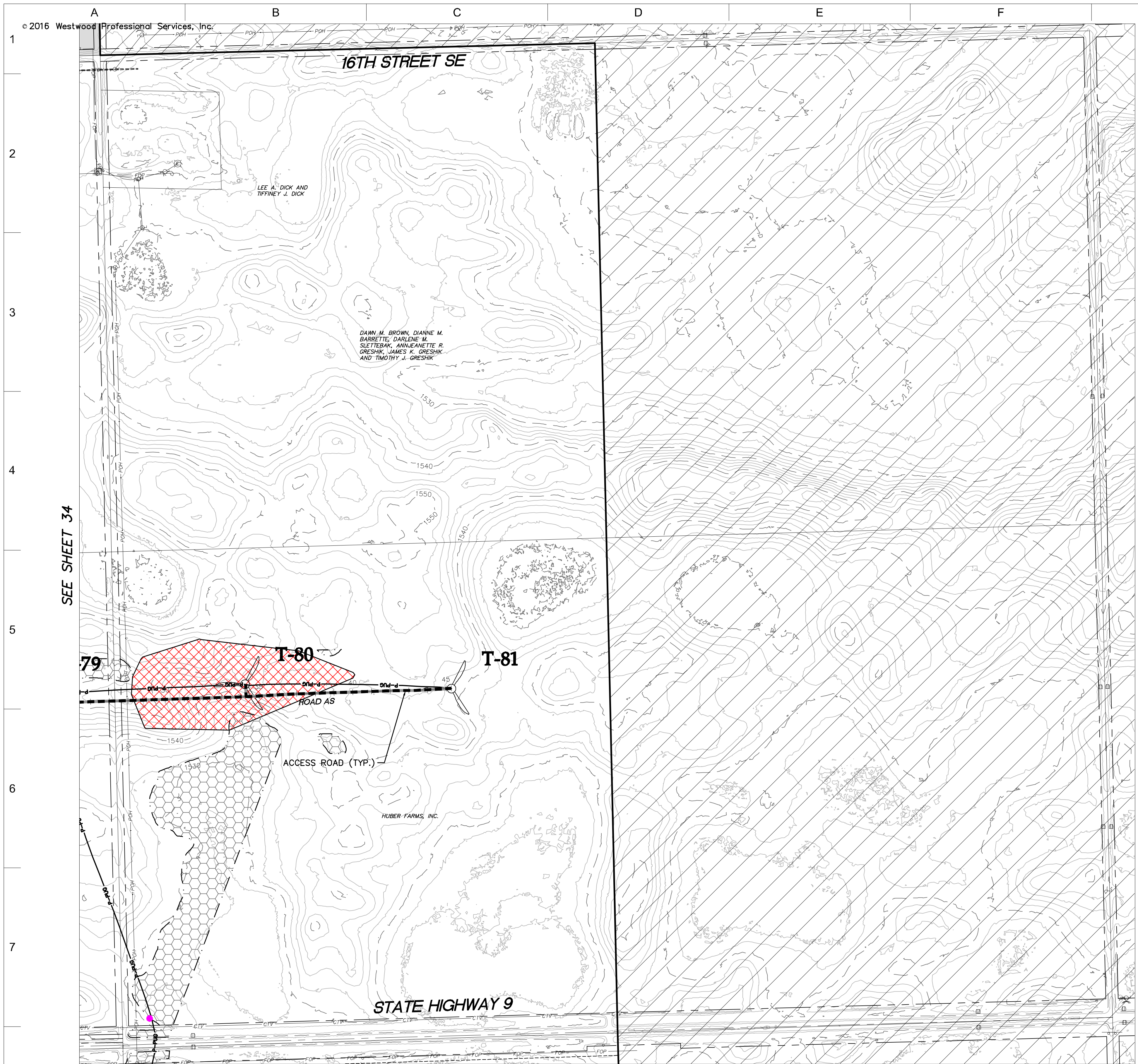
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Civil Plan - S29 T143N R62W

CIVIL PLANS SHEET 34

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

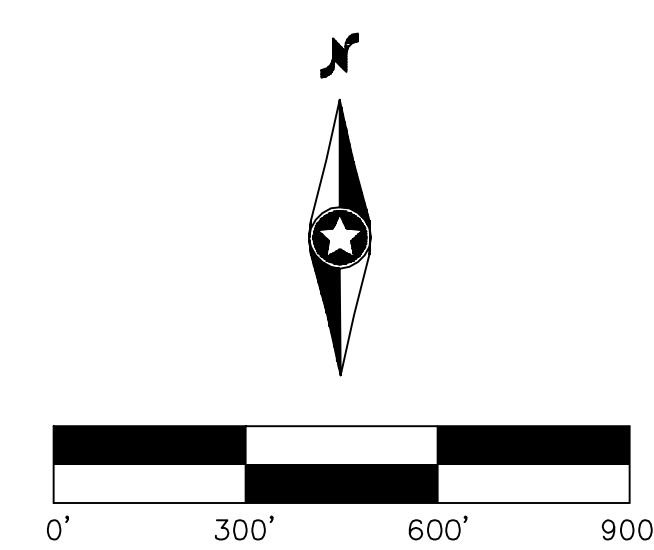
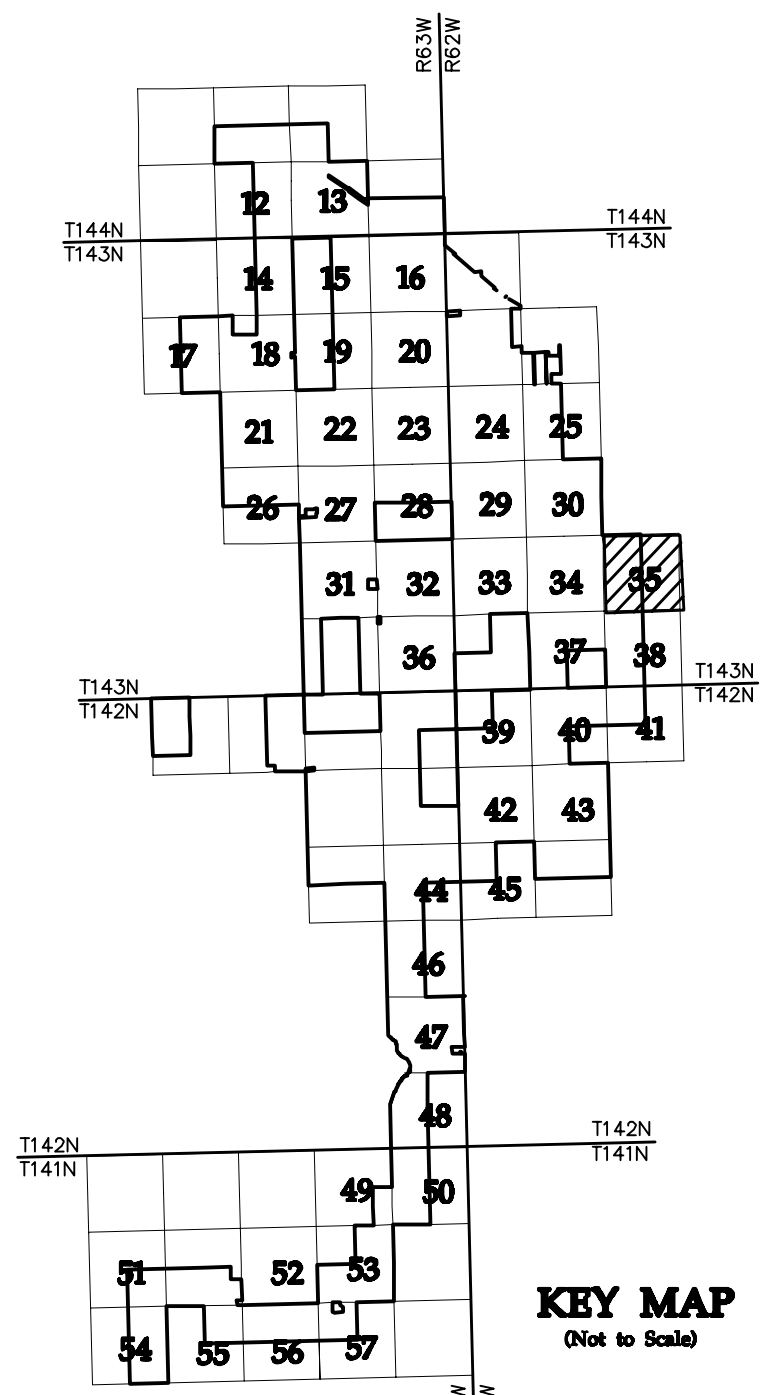
NH-217540-34



SEE SHEET 34

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

NO	REVISION	ZONE	DATE	BY	CHK	ENG
9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM

REFERENCE DRAWINGS		
DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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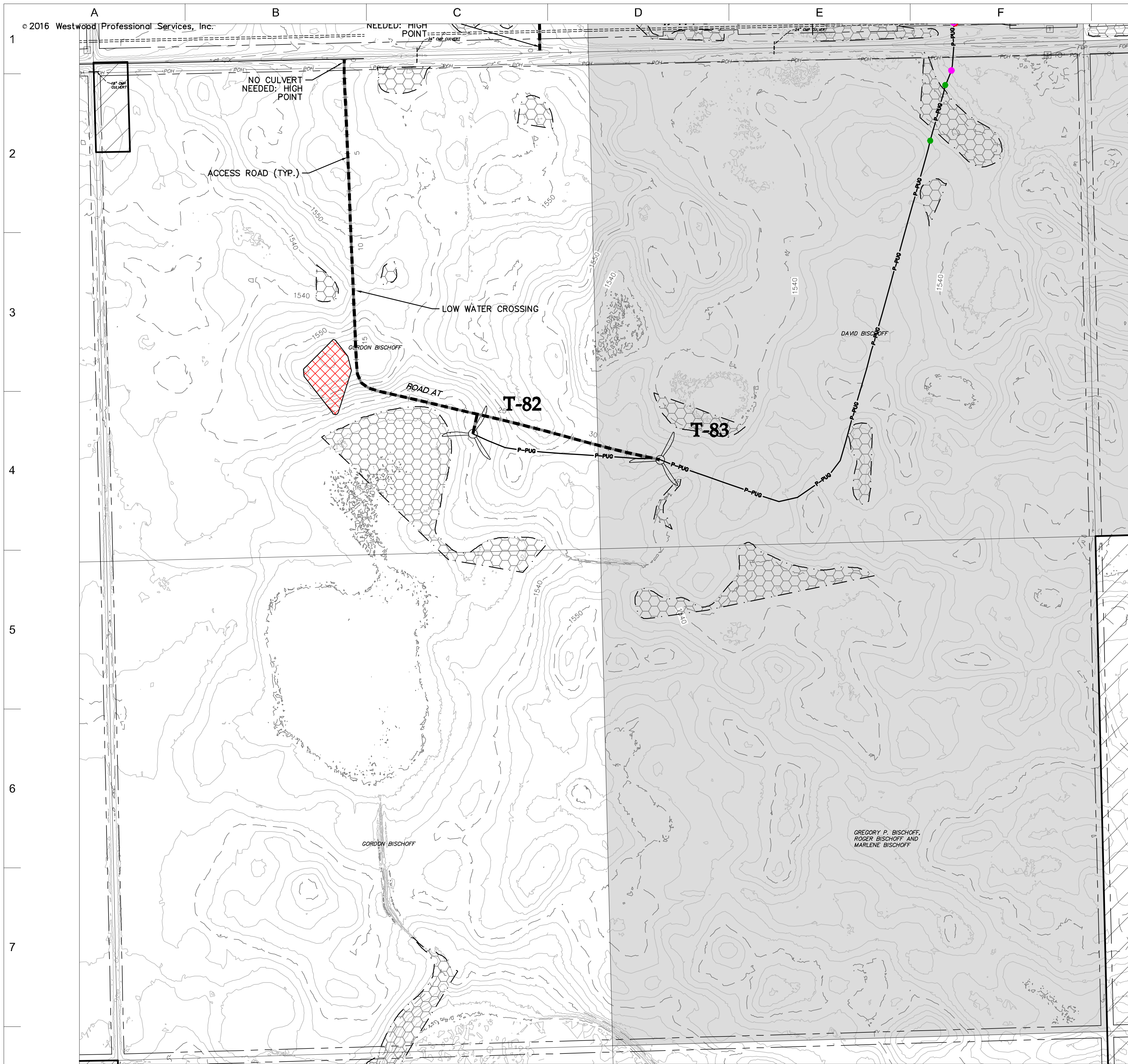
**Civil Plan - S28
T143N R62W**

CIVIL PLANS SHEET **35**

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

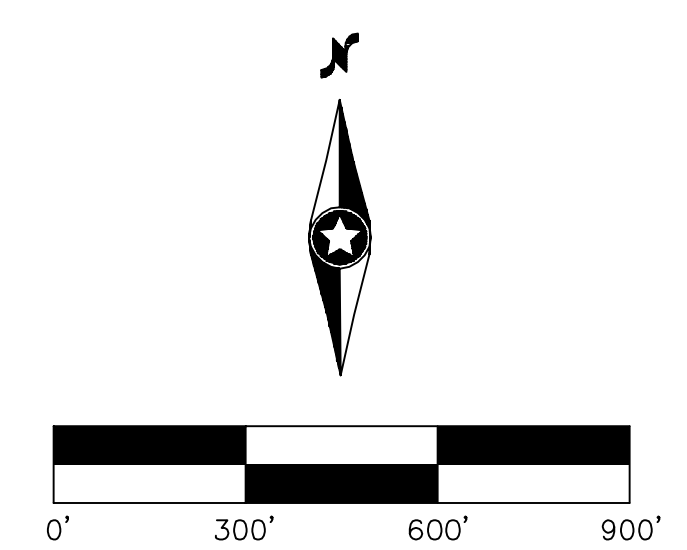
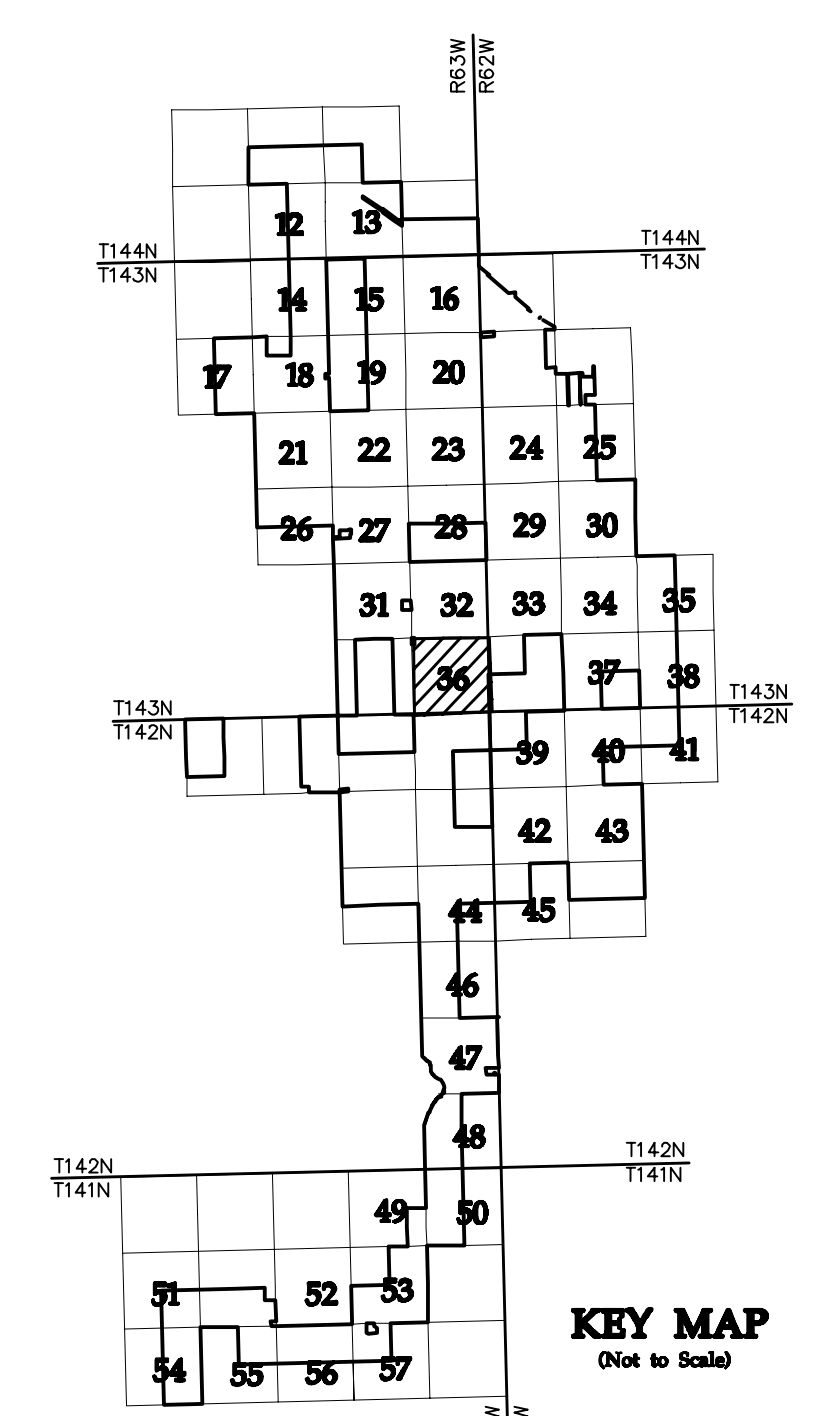
NH-217540-35

20121151-01SPF01.dwg



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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**Civil Plan - S36
T143N R63W**

CIVIL PLANS SHEET **36**

NH-217540-36

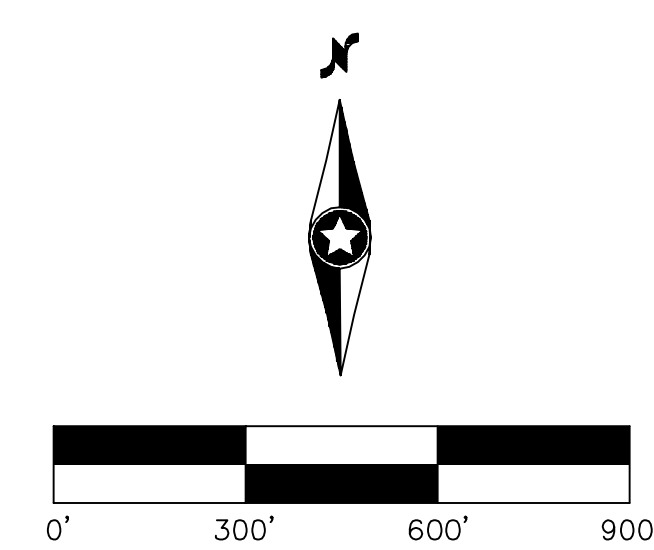
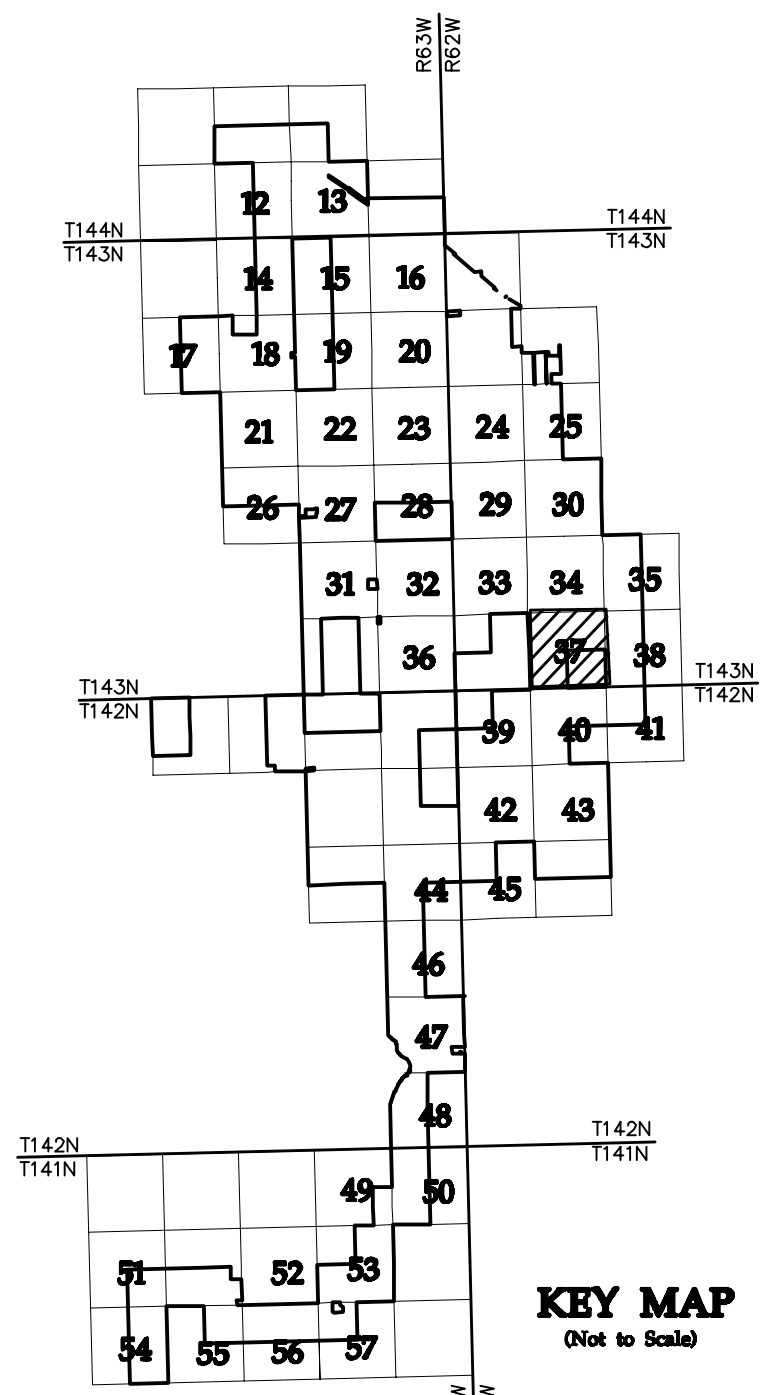
REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
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 - EXISTING TELEPHONE LINE
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 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
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 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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SEE SHEET 38



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

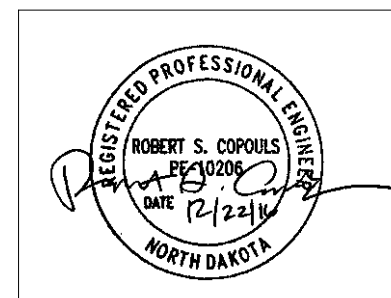
NO	REVISION	ZONE	DATE	BY	CHK	ENG
9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM

REFERENCE DRAWINGS		
DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
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 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'



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**Civil Plan - S32
T143N R62W**

CIVIL PLANS SHEET **37**

NH-217540-37

REV 9

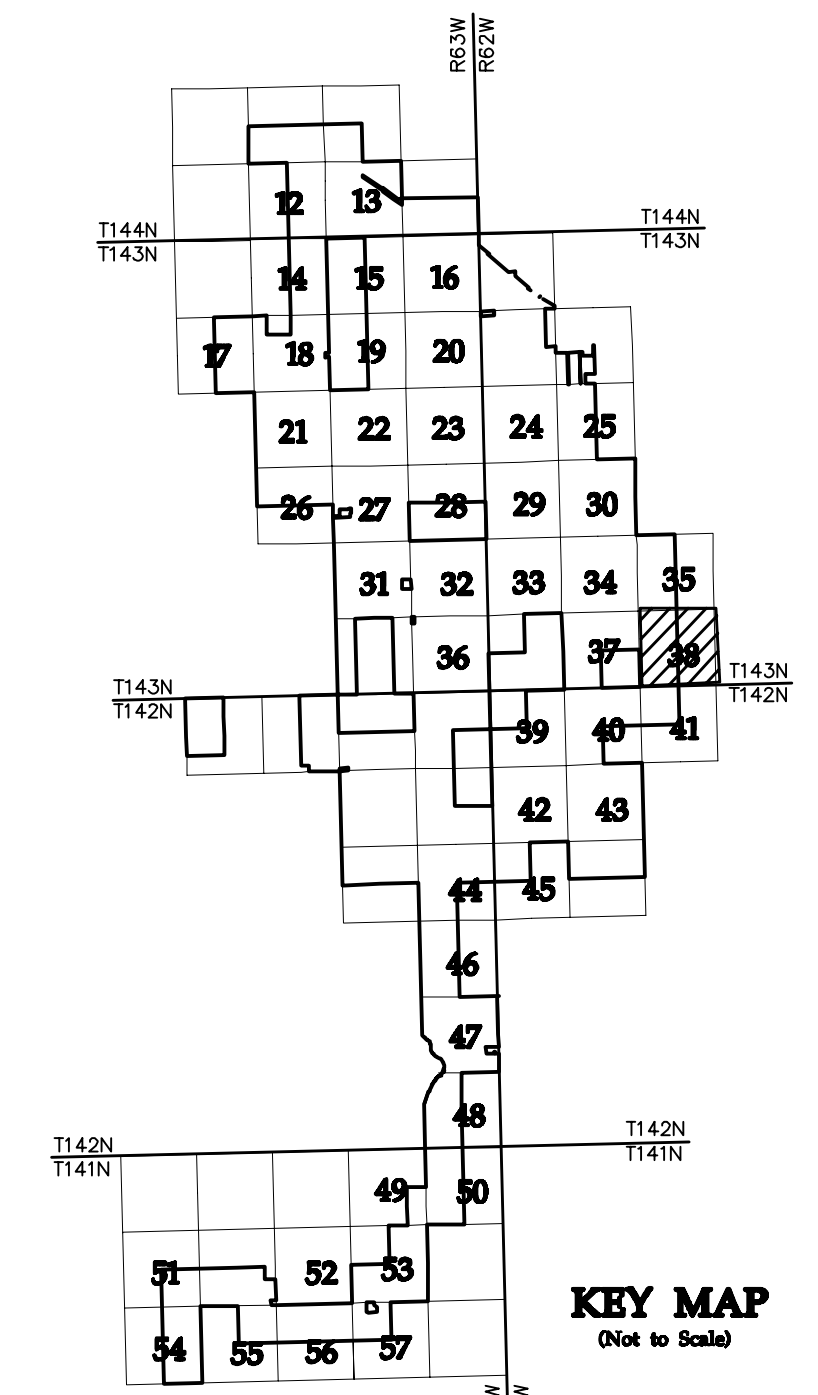
20121151-01SPF01.dwg



SEE SHEET 37

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

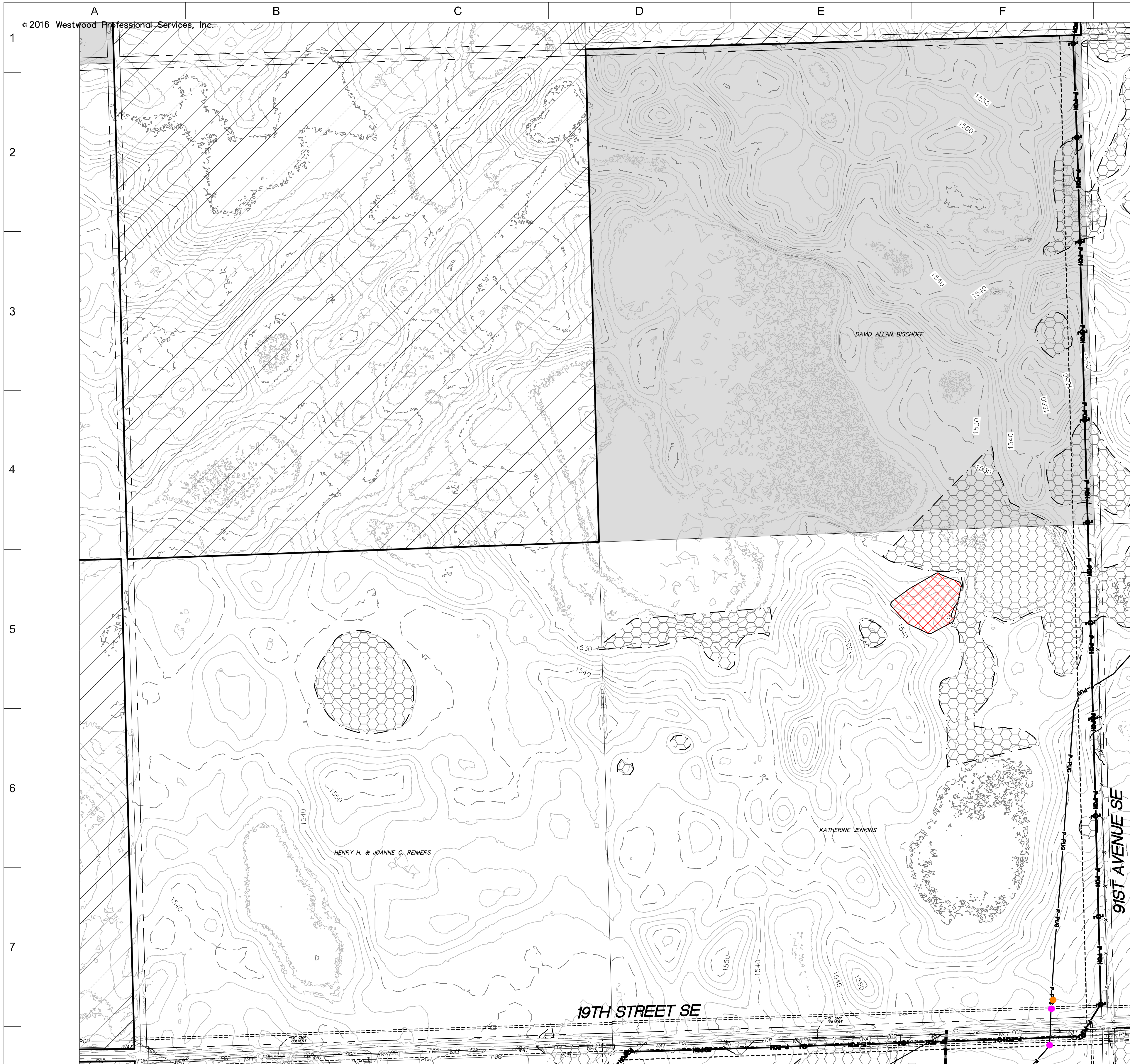
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**Civil Plan - S33
T143N R62W**

CIVIL PLANS SHEET **38**

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

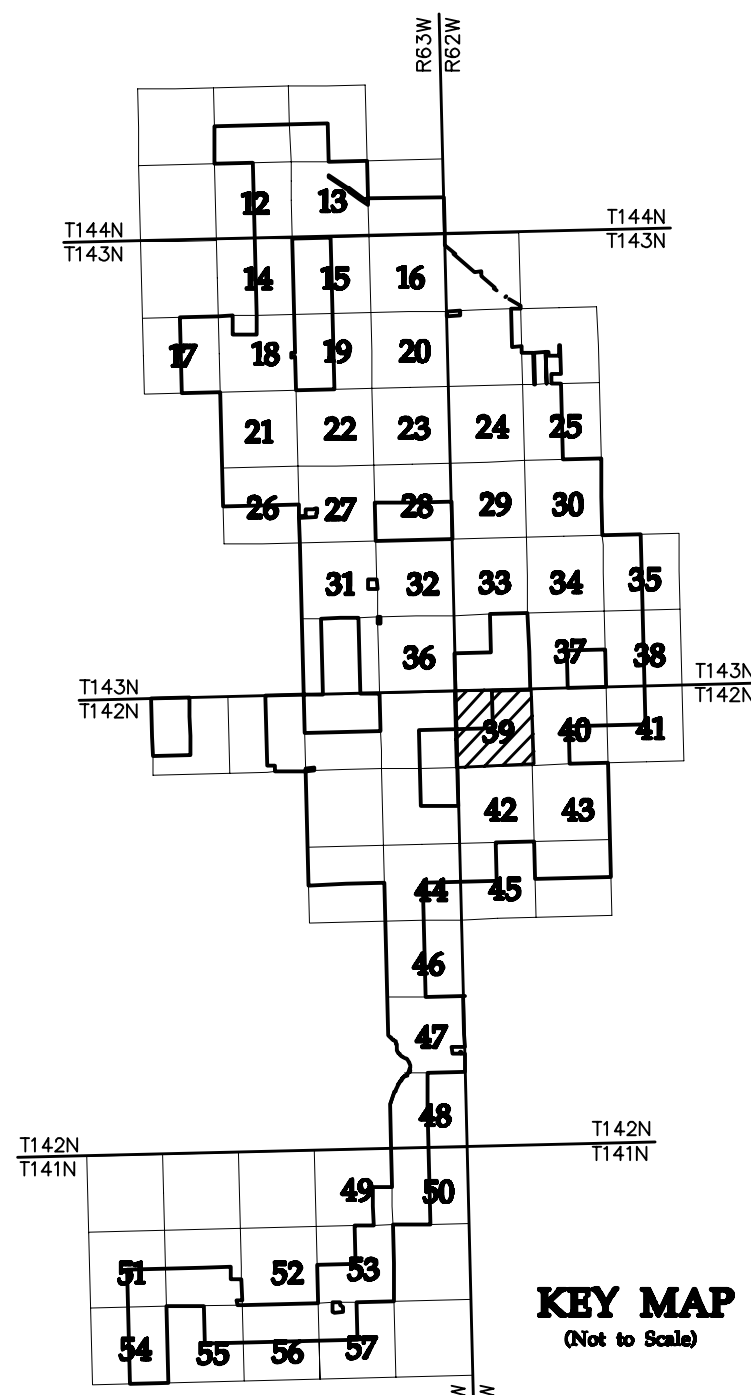
NH-217540-38 REV 9



SEE SHEET 40

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
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 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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KEY MAP
(Not to Scale)

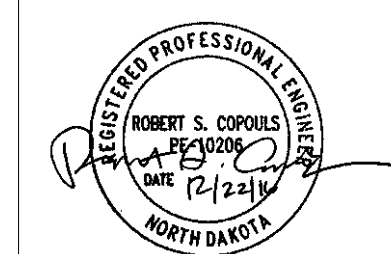
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1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	



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Civil Plan - S6
T142N R62W

CIVIL PLANS SHEET **39**

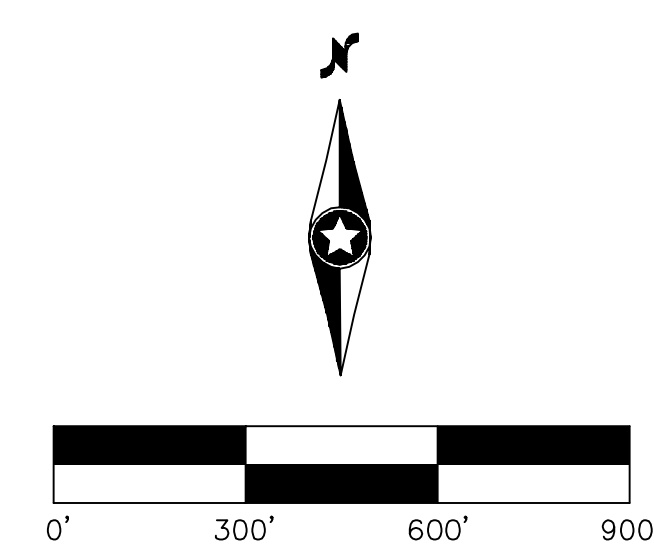
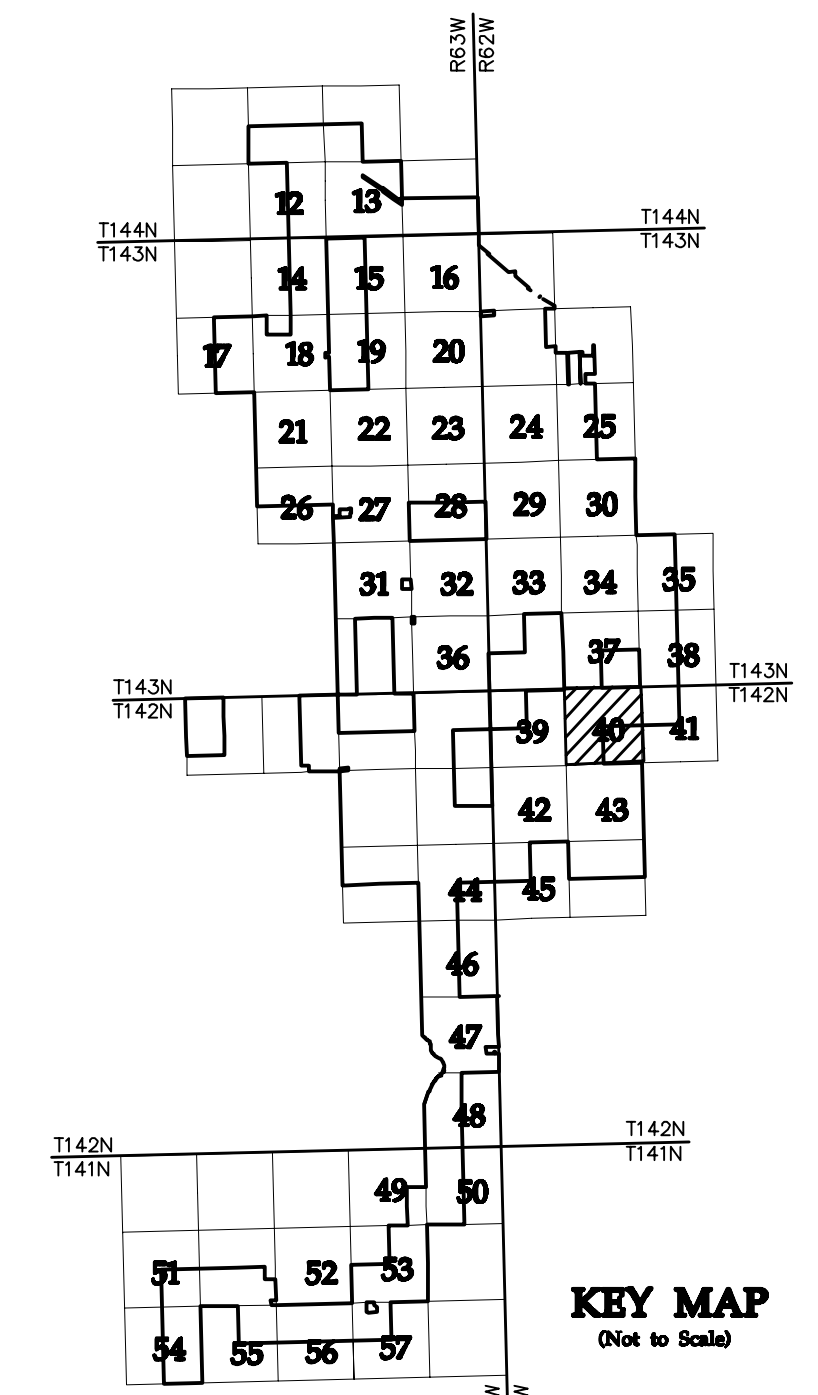
NH-217540-39

REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
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 - EXISTING WATER LINE
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 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
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 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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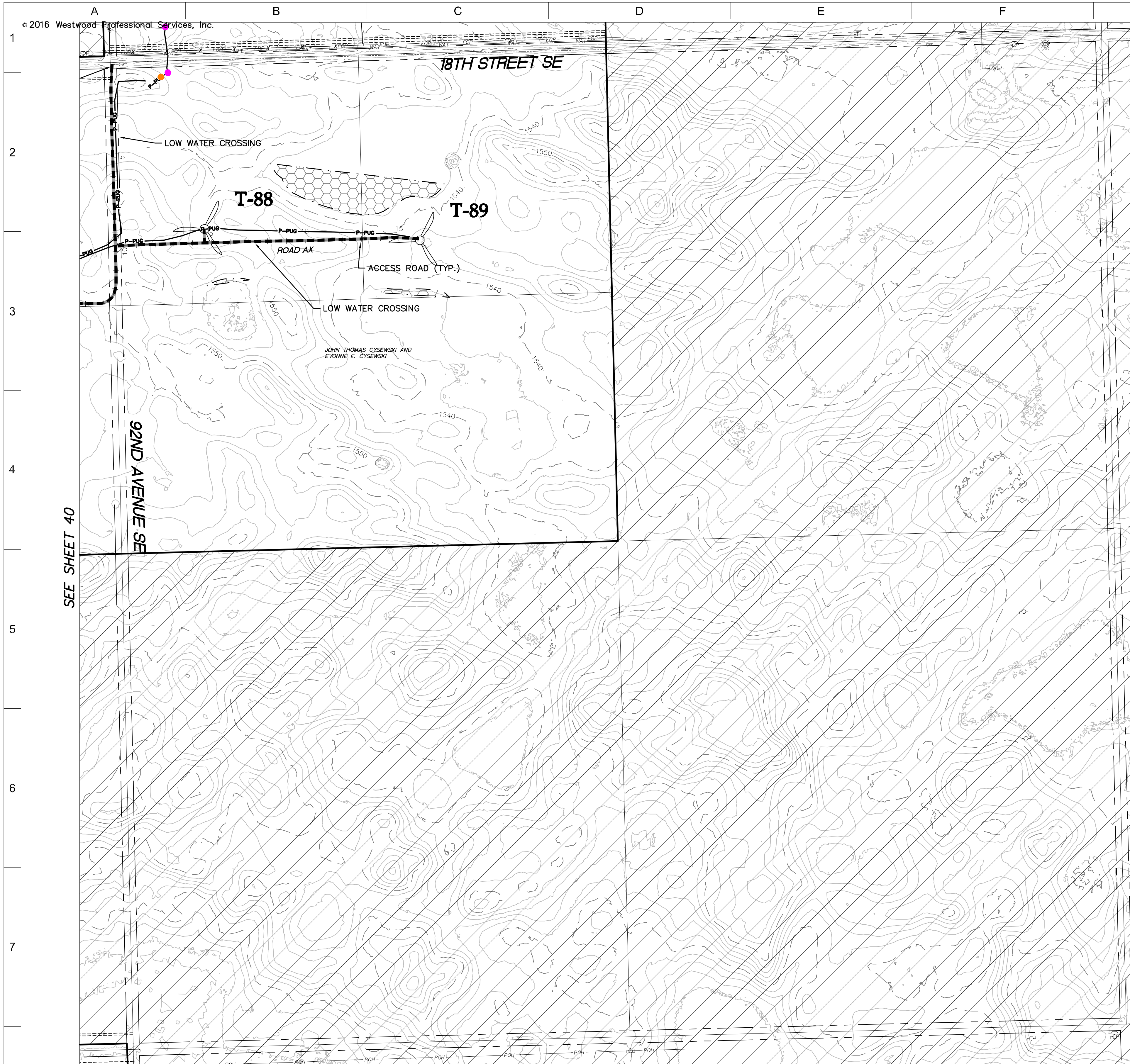
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**Civil Plan - S5
T142N R62W**

CIVIL PLANS SHEET **40**

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-40 REV 9

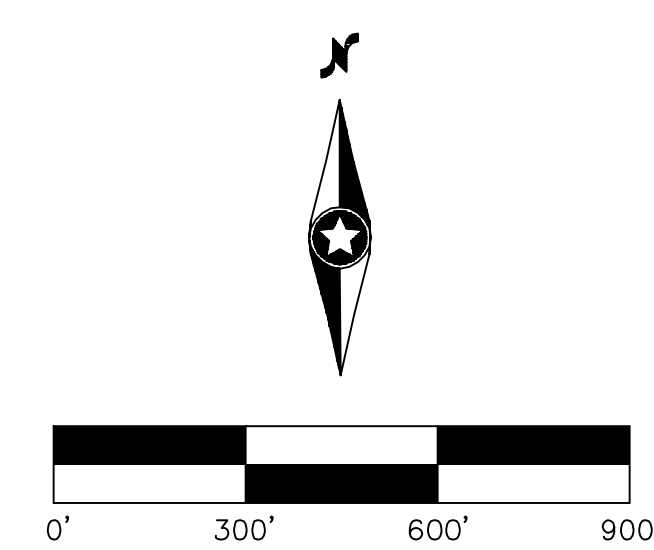
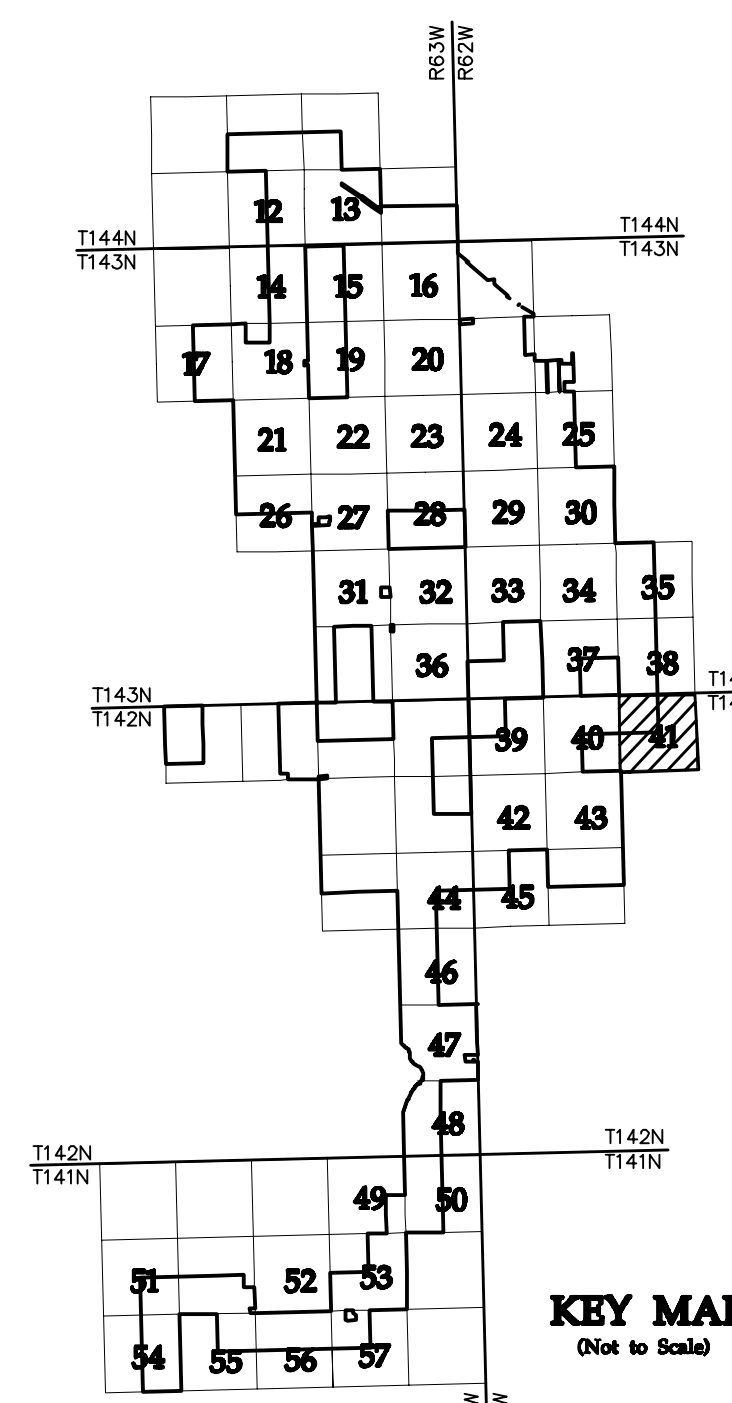


SEE SHEET 40

LEGEND:

- RECORD TURBINE LOCATION
- T-XX** TURBINE NUMBER
- RECORD ACCESS ROAD
- RECORD FENCE
- RECORD UNDERGROUND COLLECTION SYSTEM
- RECORD UNDERGROUND COLLECTION SYSTEM
- FIBER SLICE LOCATION*
- ELECTRICAL GROUND LOCATION*
- JUNCTION BOX LOCATION*
- ROAD BORE LOCATION*
- WETLAND BORE LOCATION*
- SPLICE LOCATION*
- RECORD TRANSMISSION LINE
- EXISTING CULVERT
- EXISTING FENCE
- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD POWER
- EXISTING WATER LINE
- EXISTING GAS PIPELINE
- EXISTING FIBER OPTIC LINE
- EXISTING EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING GRAVEL EDGE
- EXISTING BITUMINOUS EDGE
- EXISTING MICROWAVE BEAM PATH
- EXISTING VEGETATION
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
- EXISTING WATERWAY/WATER BODY
- EXISTING DELINEATED WETLAND
- AVOIDANCE AREA
- OUTSIDE PROJECT BOUNDARY
- USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

REFERENCE DRAWINGS	
DWG NO.	DESCRIPTION
20121151ECON.DWG	EXISTING CONTOURS
20121151MAPD.DWG	MAPD BASE
20121151SITE.DWG	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

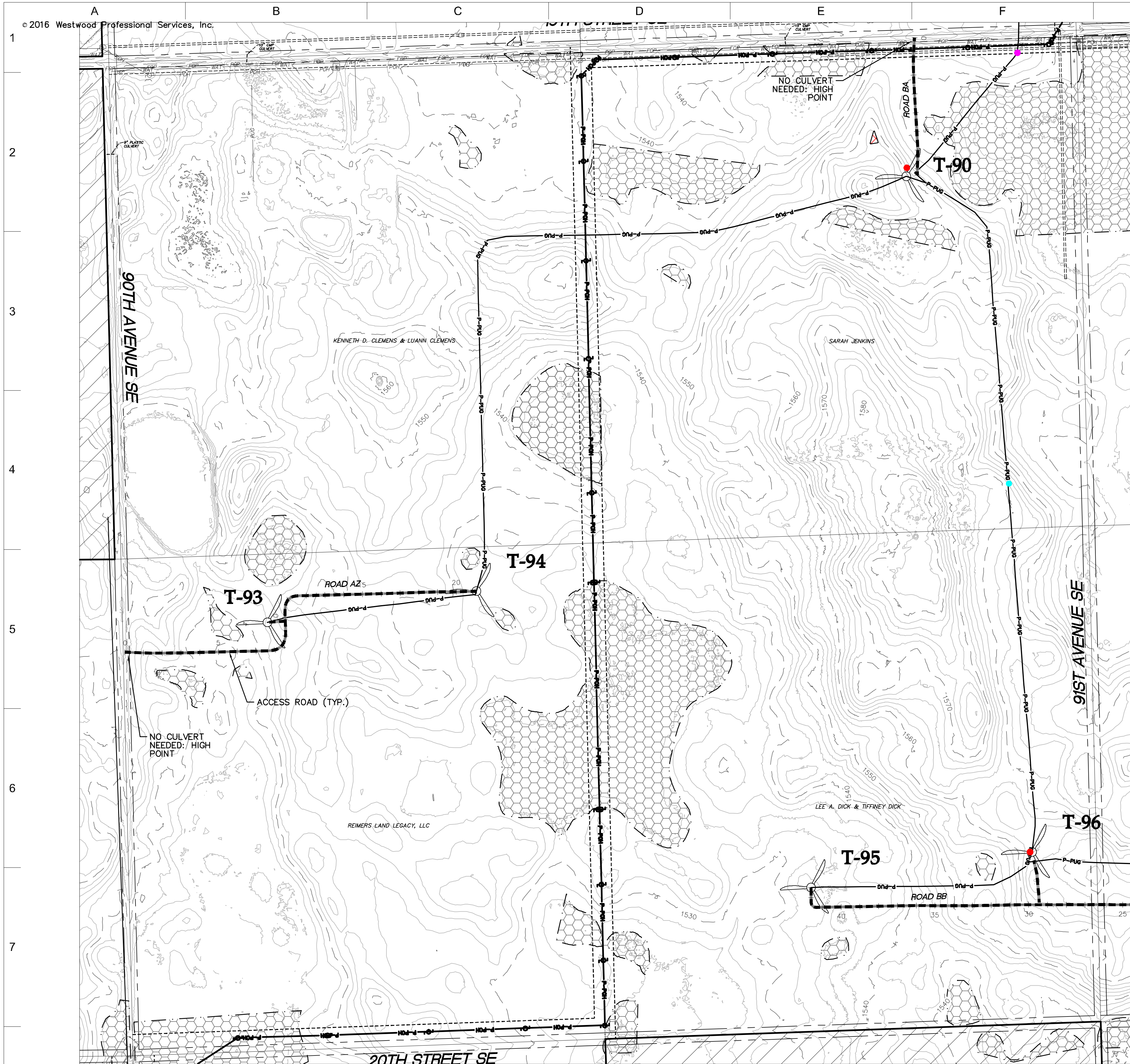
THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.

**Civil Plan - S4
T142N R62W**

CIVIL PLANS SHEET **41**

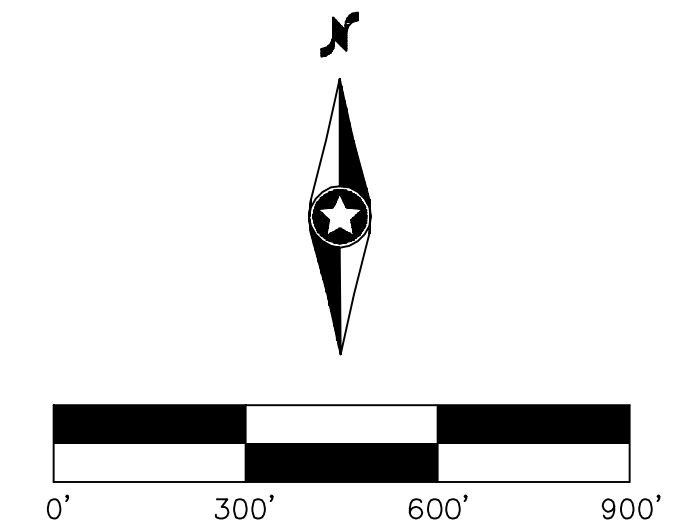
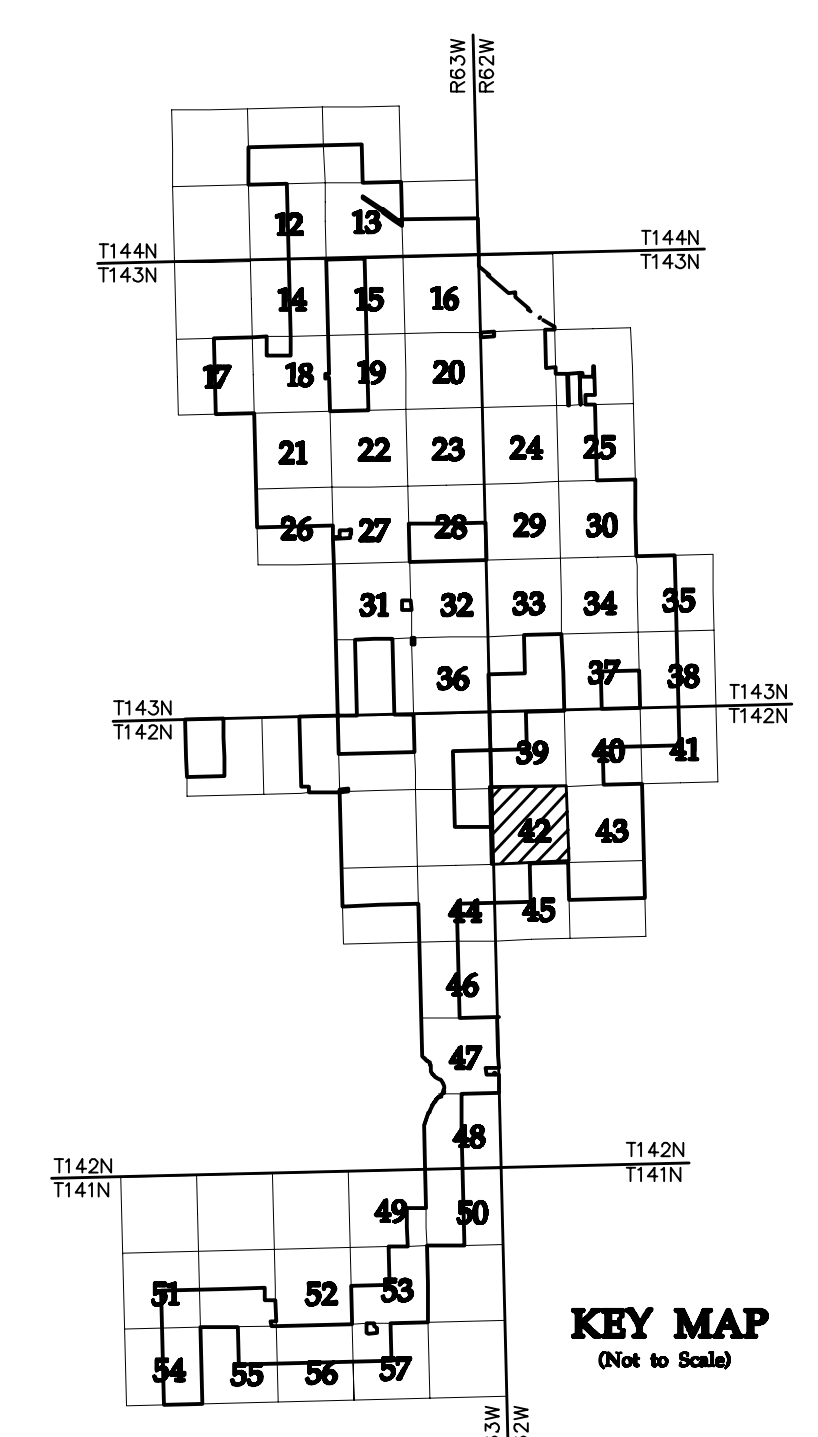
ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-41 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL
- * FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.

SEE SHEET 43



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

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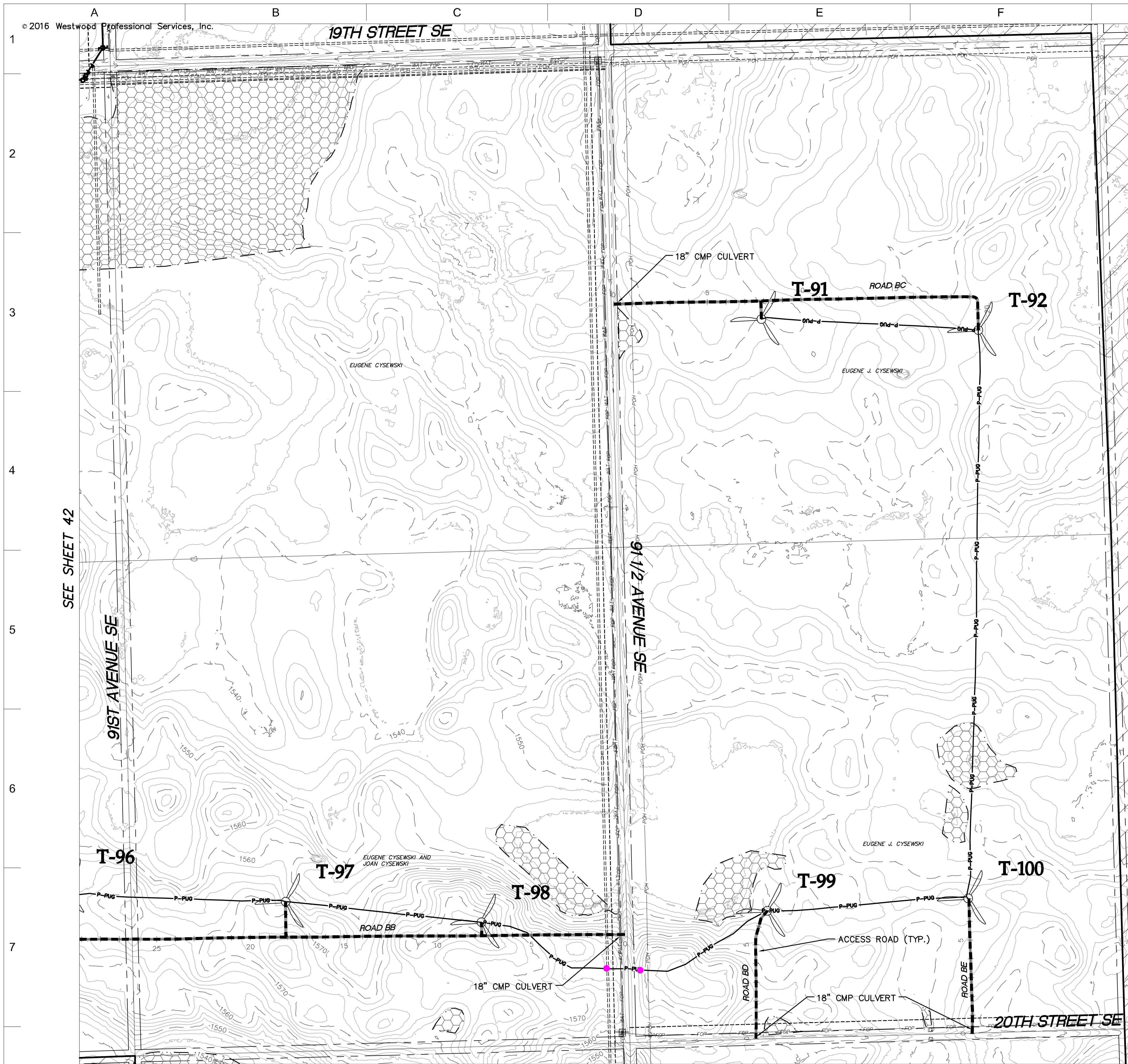
**Civil Plan - S7
T142N R62W**

CIVIL PLANS SHEET 42

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

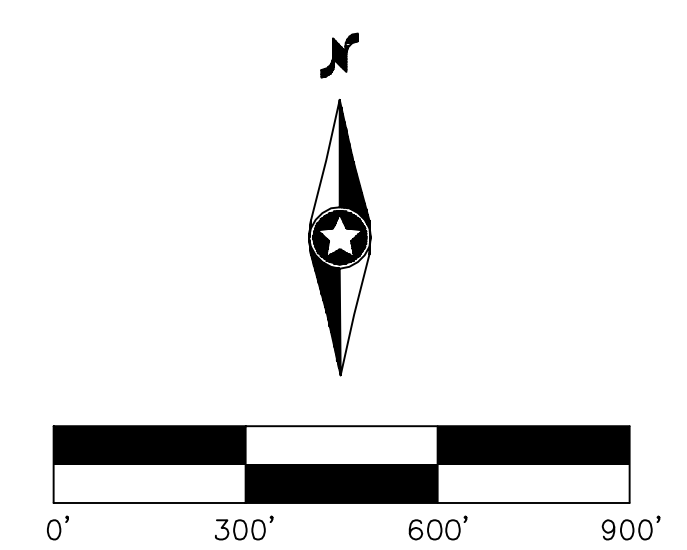
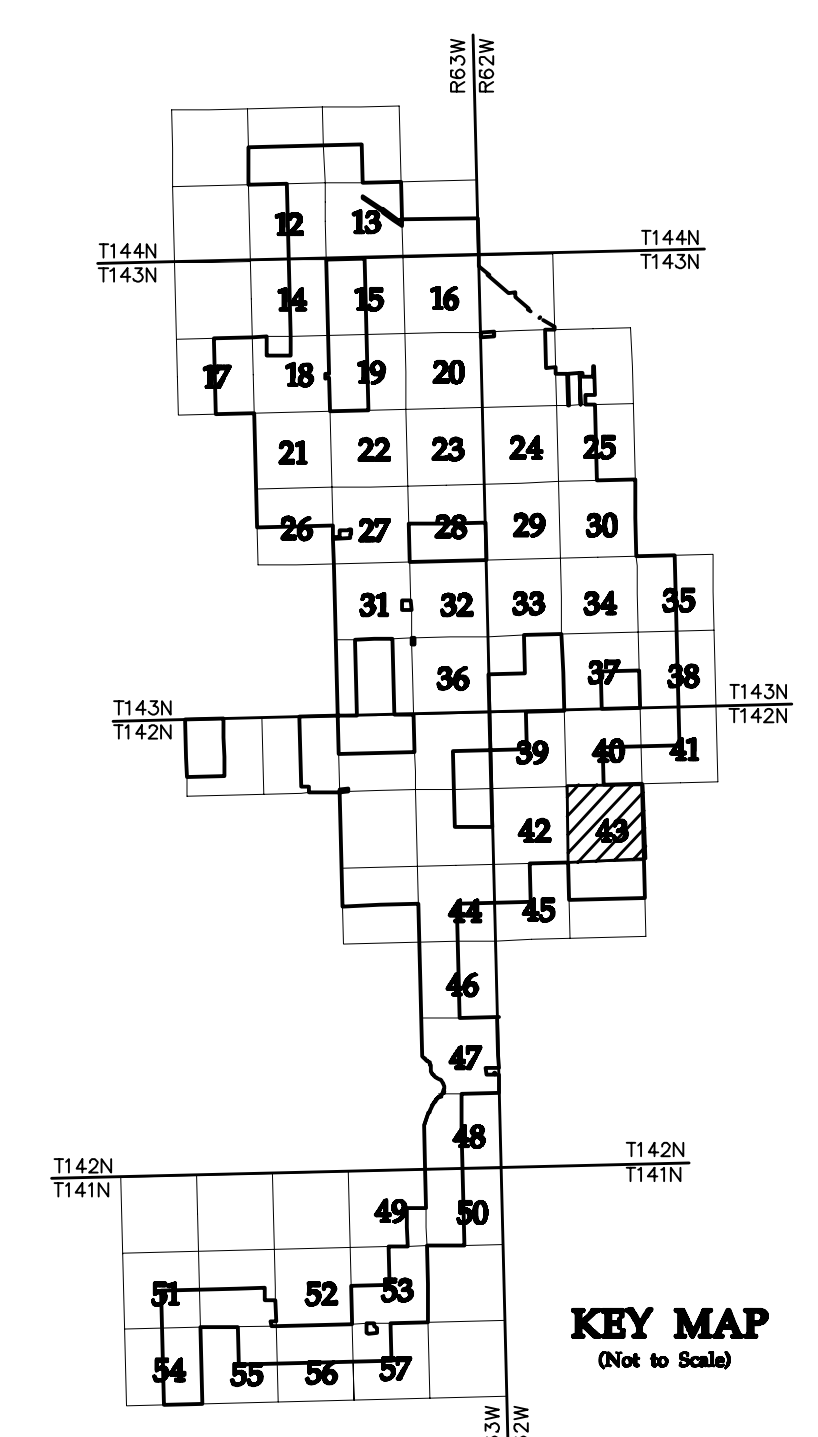
NH-217540-42

REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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Civil Plan - S8
T142N R62W

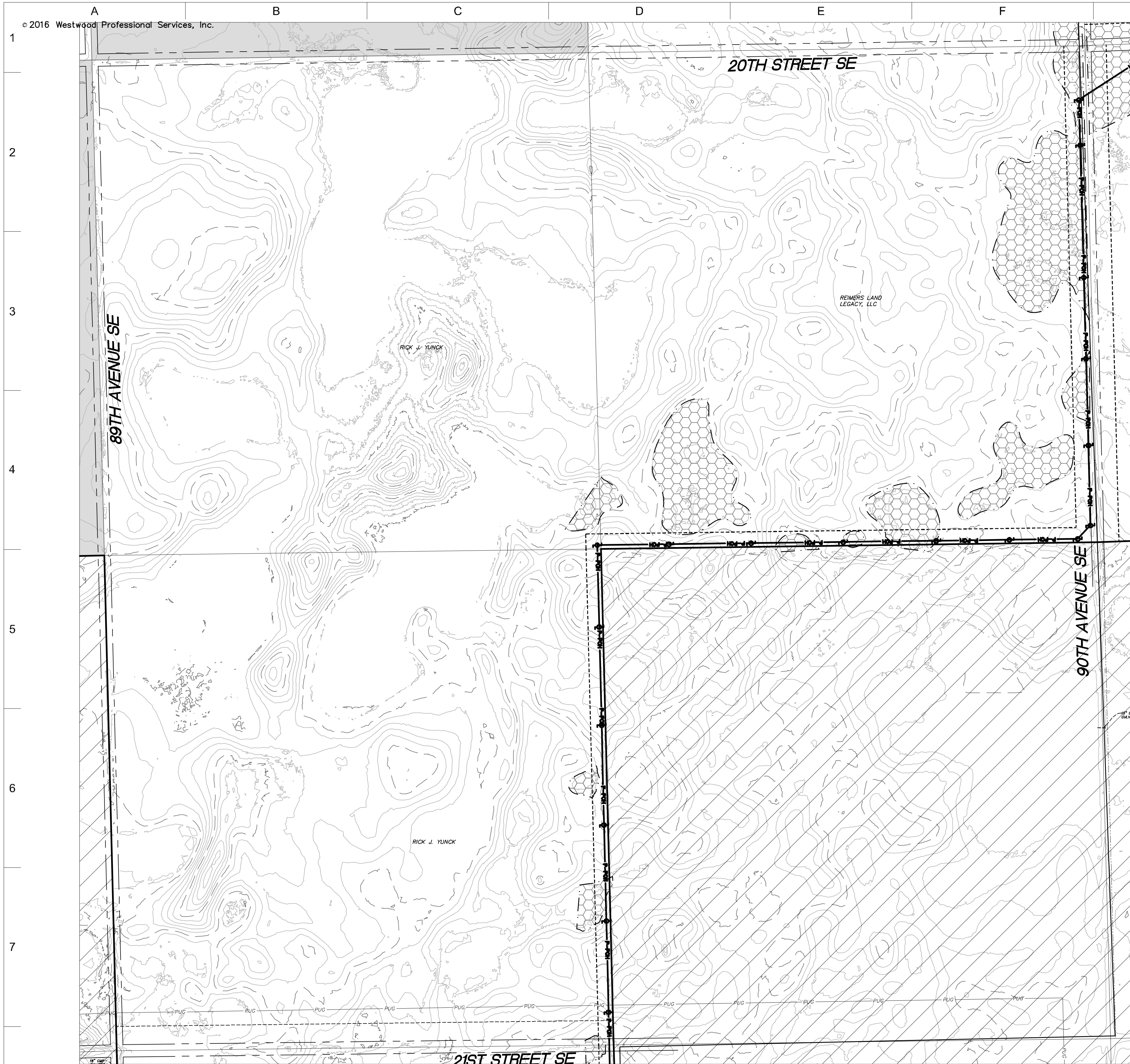
CIVIL PLANS SHEET **43**

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-43

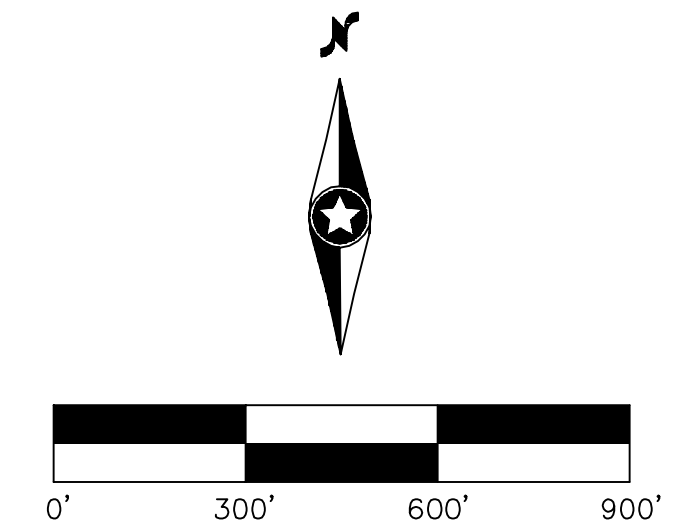
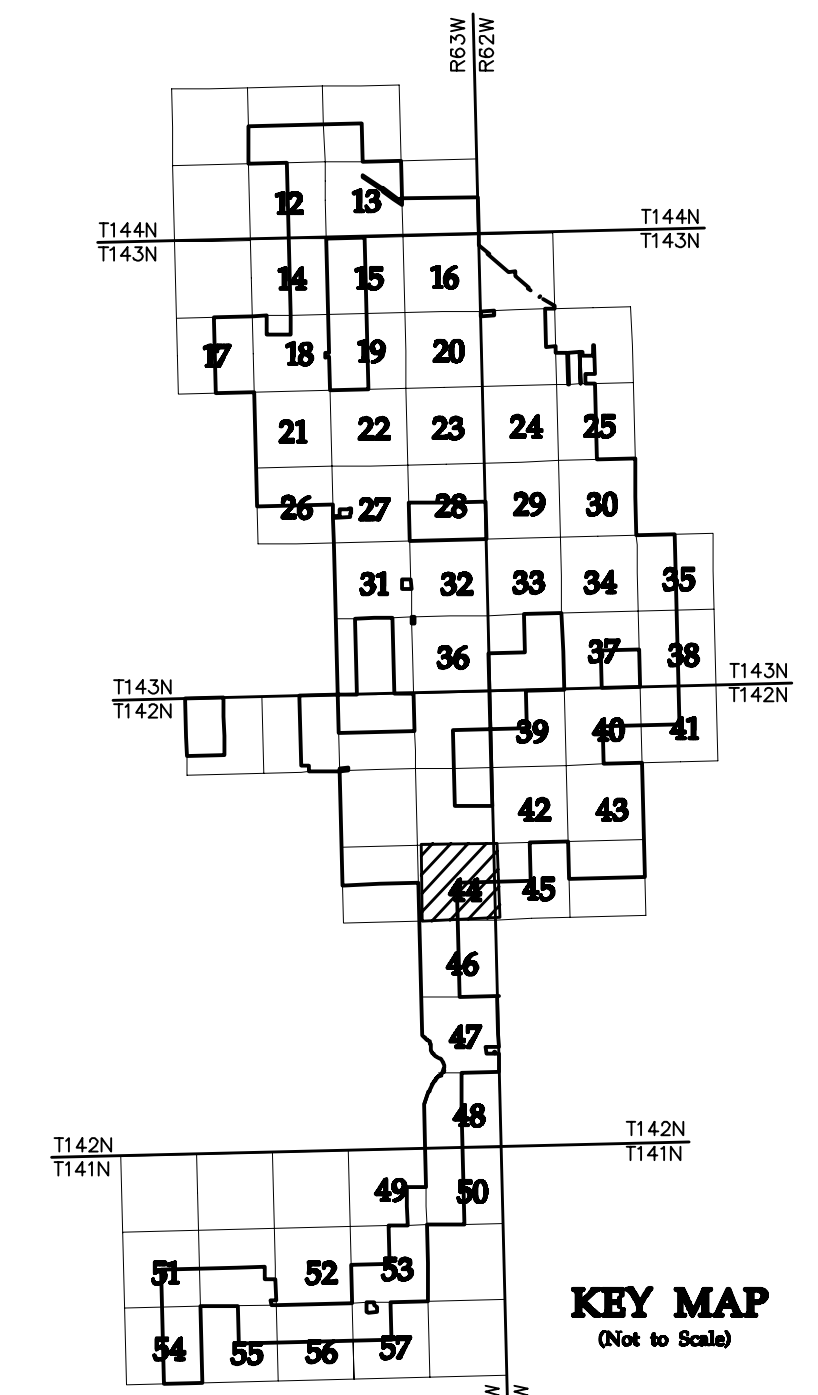
REV 9

20121151-01SPF01.dwg



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - EXISTING OVERHEAD POWER
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

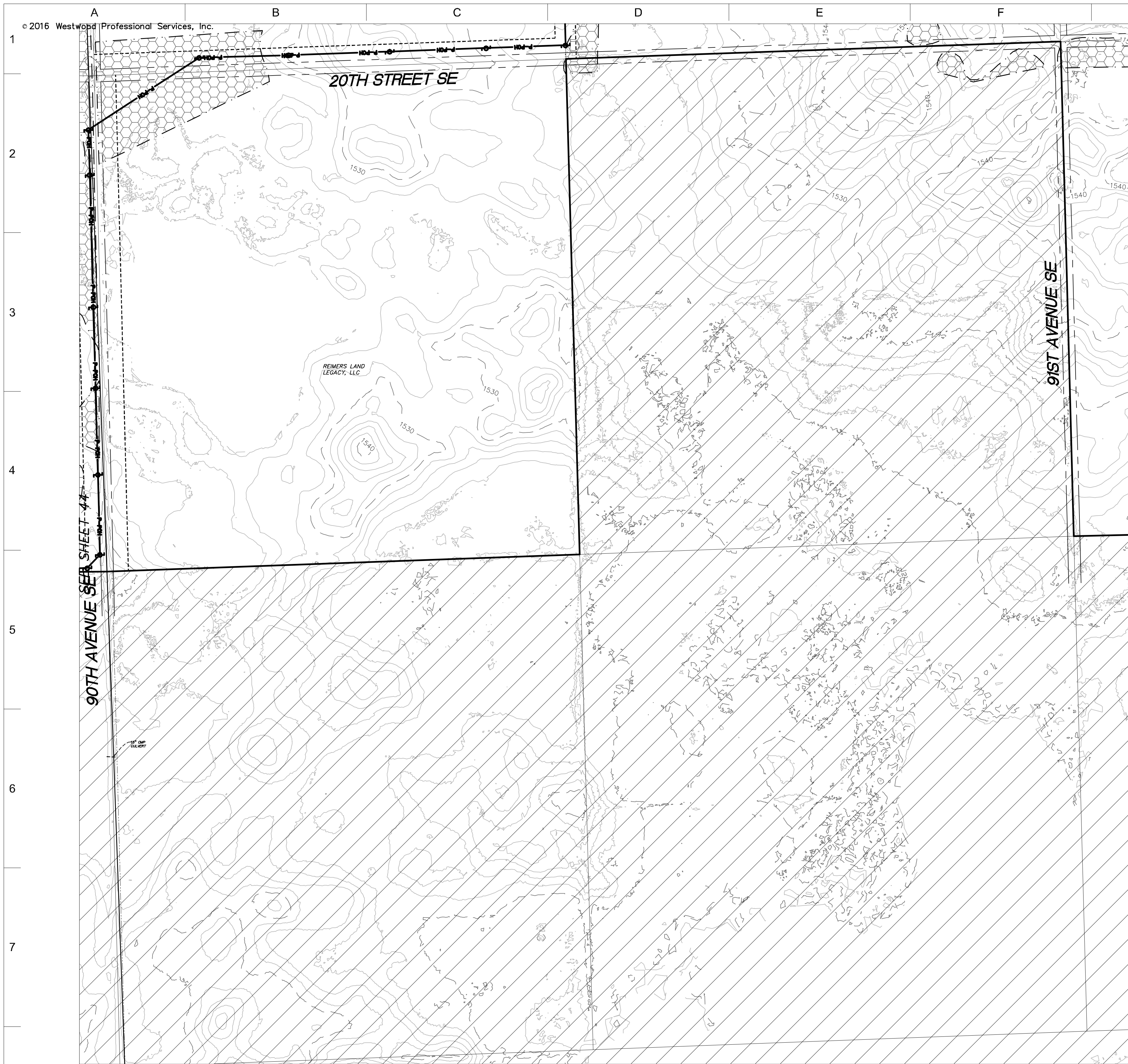
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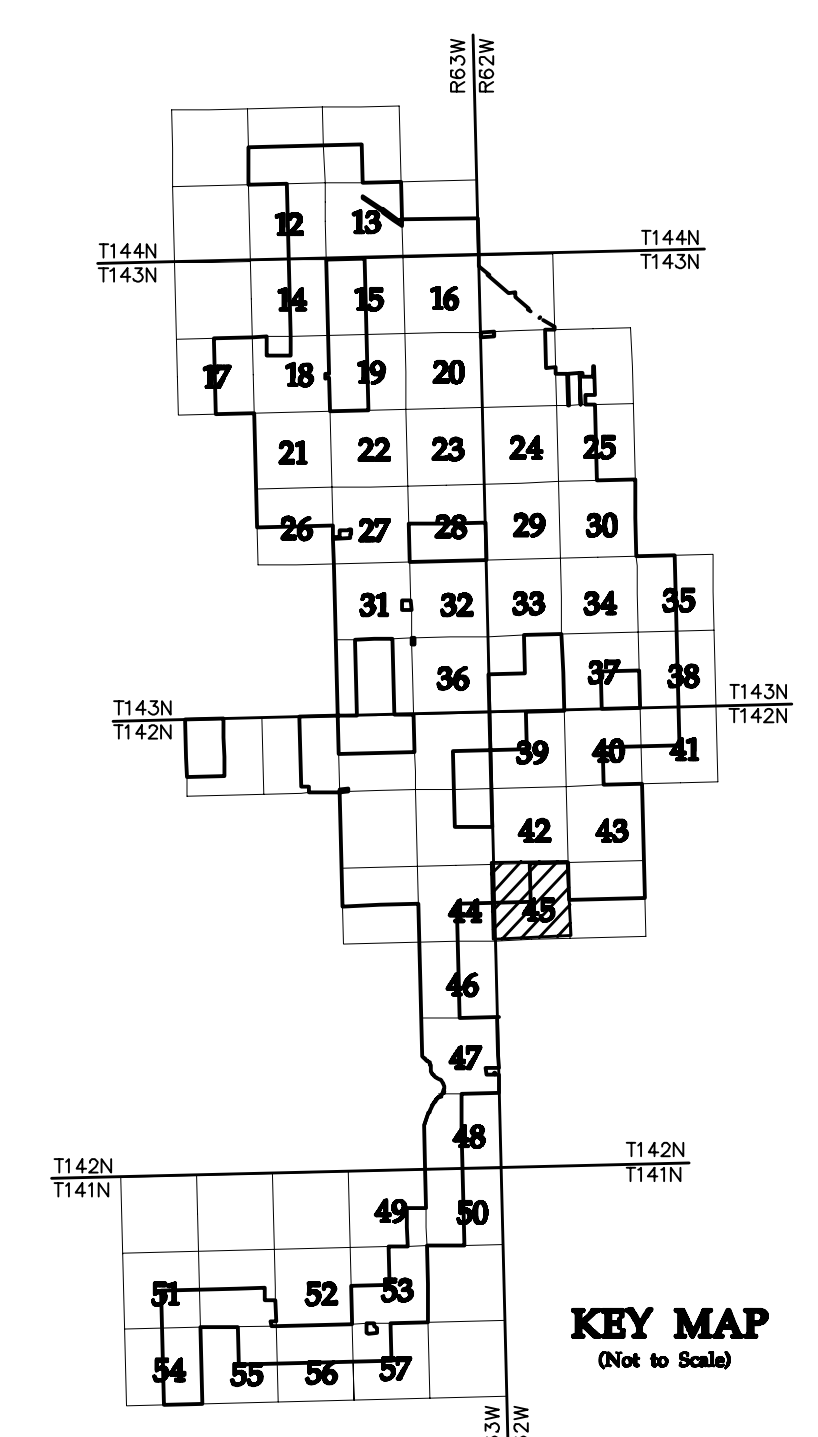
Civil Plan - S13
T142N R63W

CIVIL PLANS SHEET **44**

NH-217540-44



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
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 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
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1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
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 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

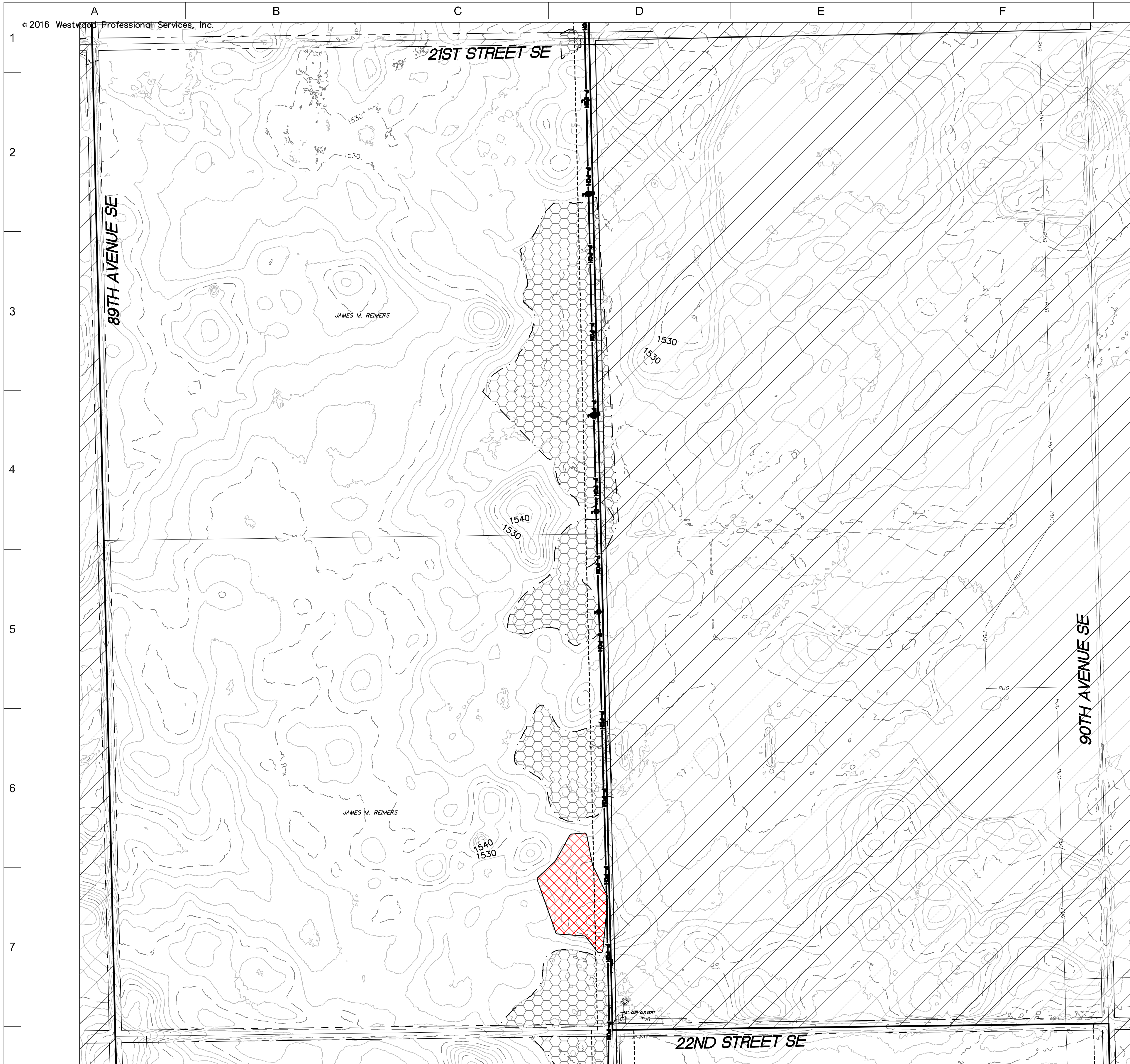
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Civil Plan - S18
T142N R62W

CIVIL PLANS SHEET **45**

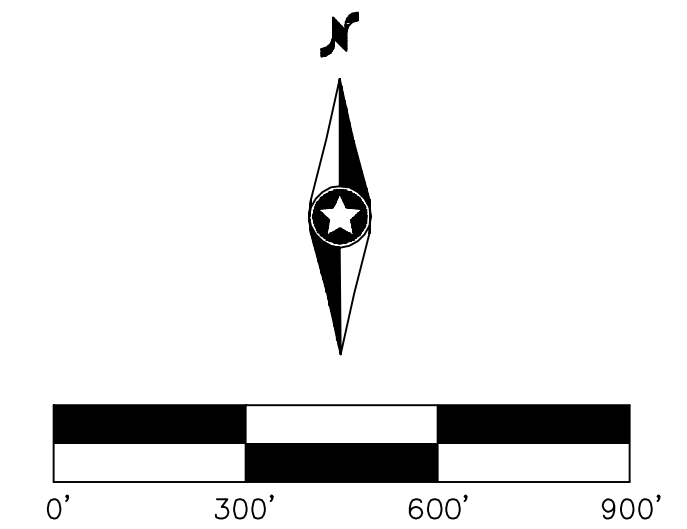
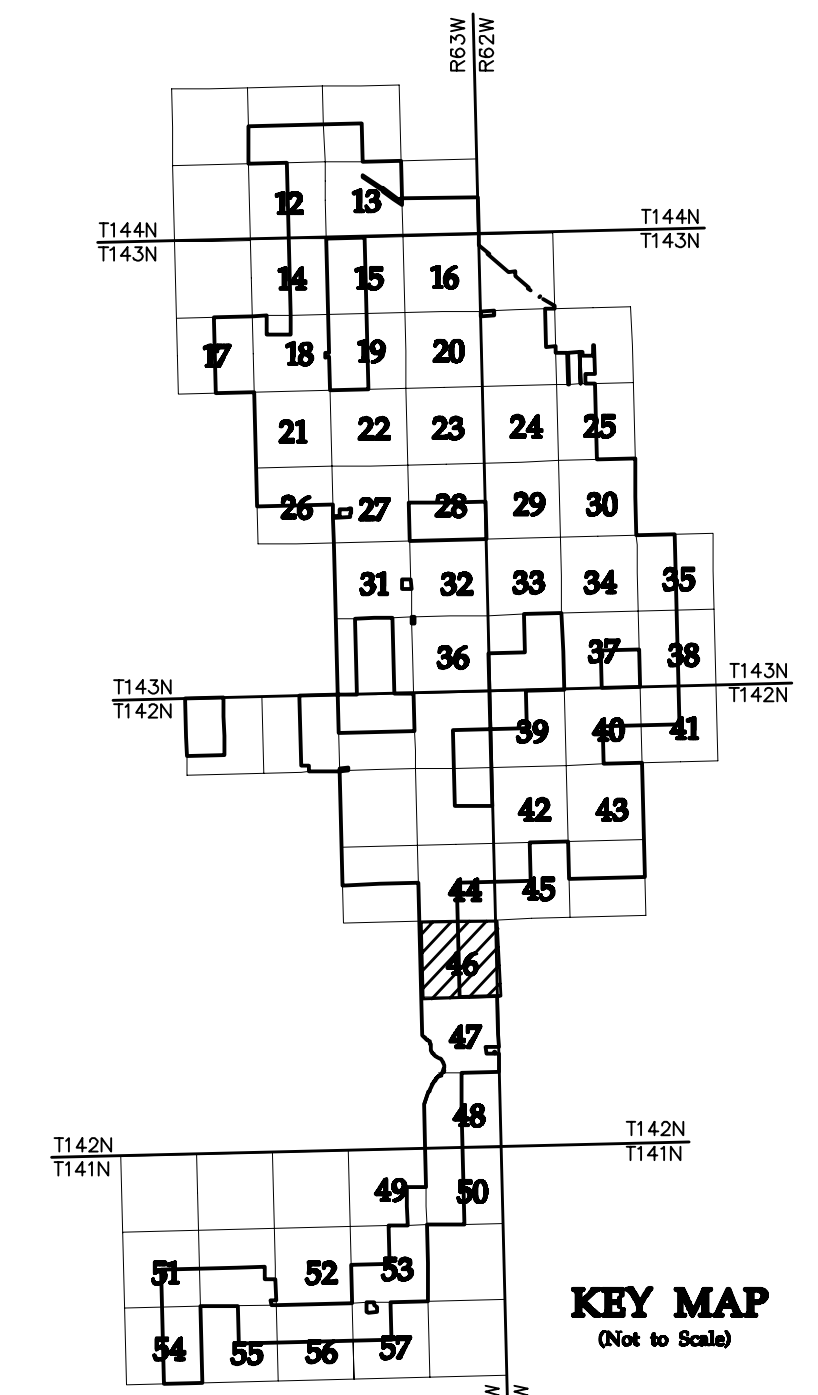
ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-45 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
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 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
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DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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Civil Plan - S24 T142N R63W

CIVIL PLANS SHEET **46**

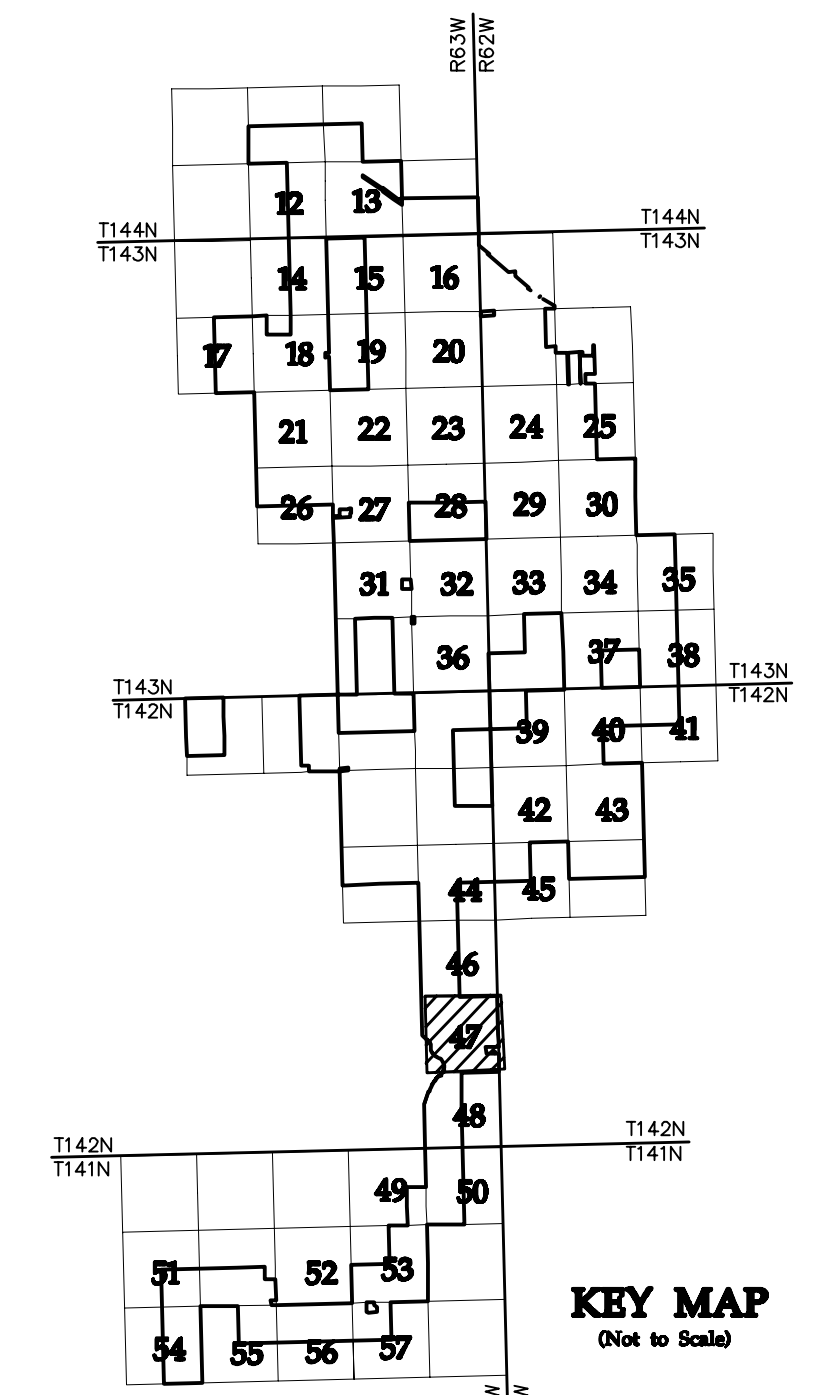
ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-46 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

NO	REVISION	ZONE	DATE	BY	CHK	ENG
9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
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 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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20121151-01SPF01.dwg

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Civil Plan - S25 T142N R63W

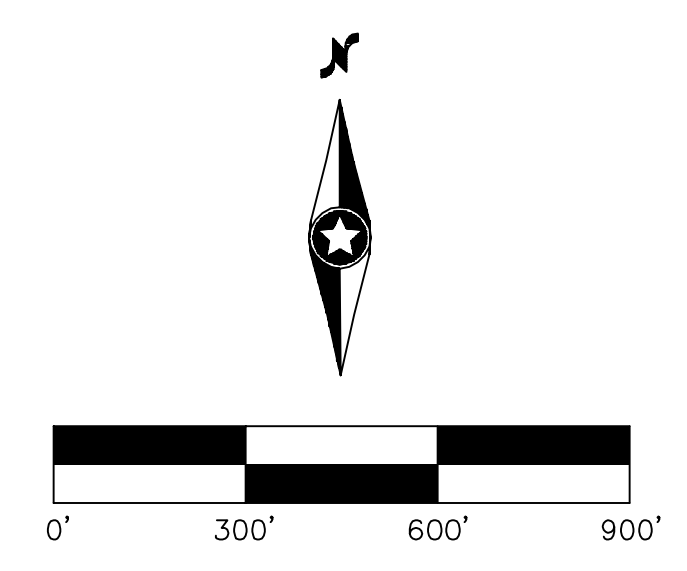
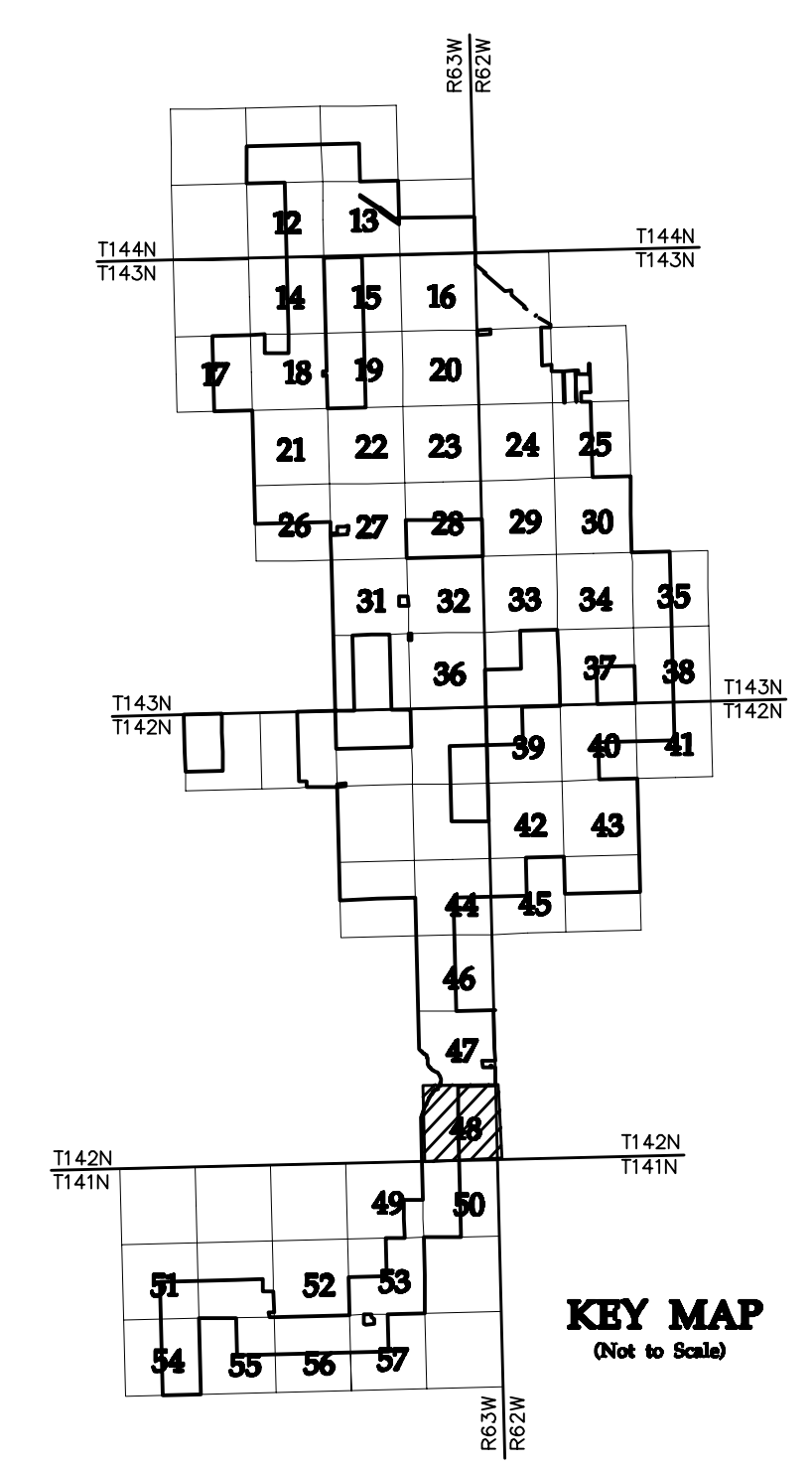
CIVIL PLANS SHEET **47**

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-47 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL
- * FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

NO	REVISION	ZONE	DATE	BY	CHK	ENG
9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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**Civil Plan - S36
T142N R63W**

CIVIL PLANS SHEET **48**

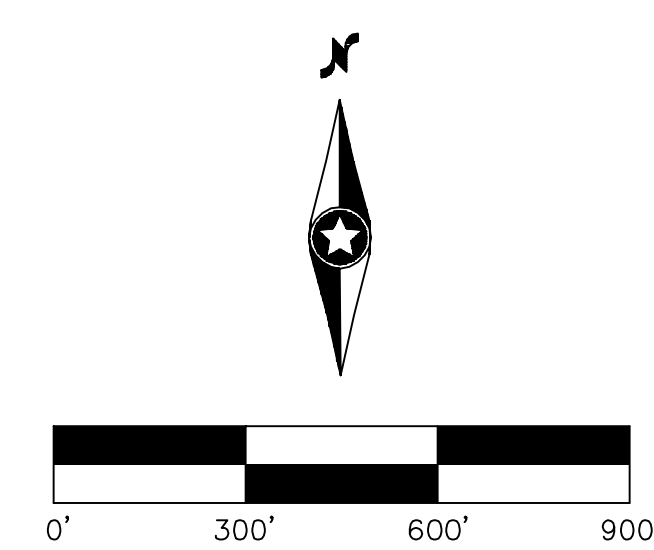
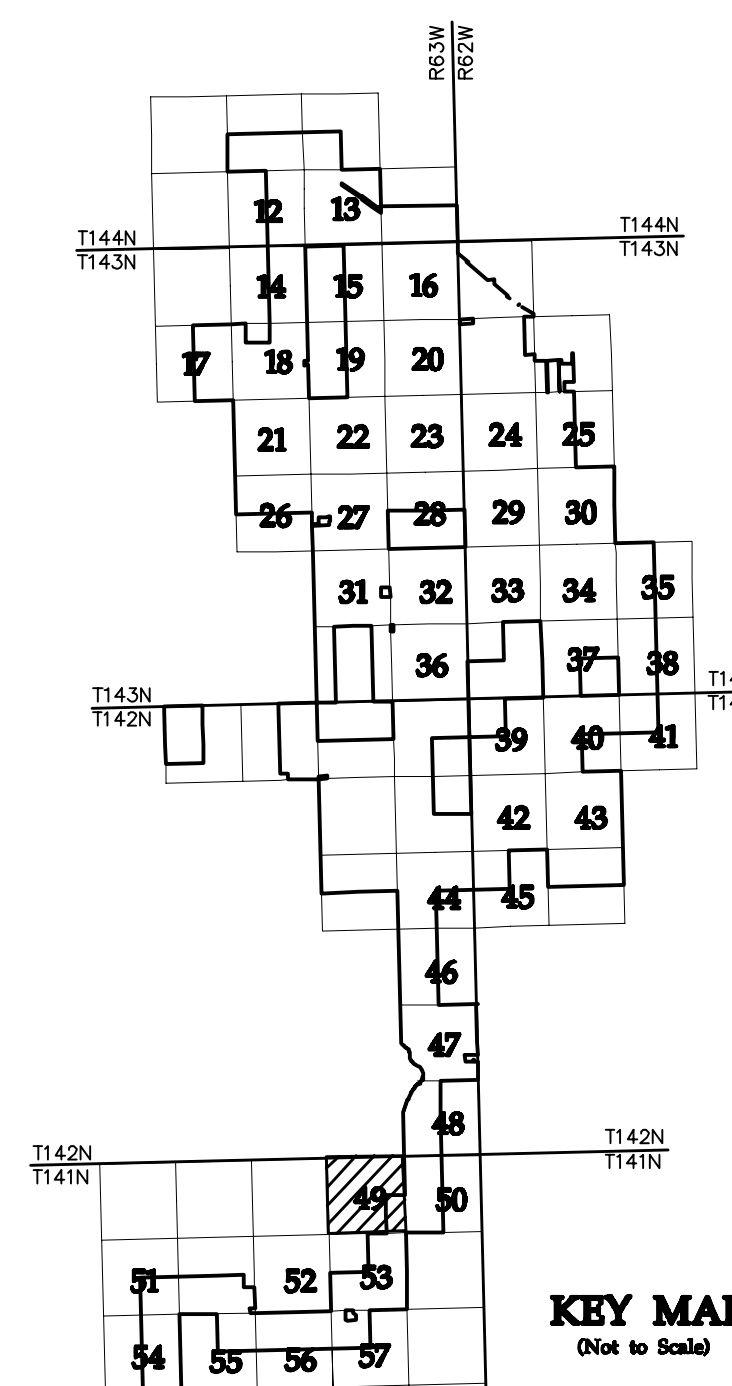
NH-217540-48 REV 9

20121151-01SPF01.dwg



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM							
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM							
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM							
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

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 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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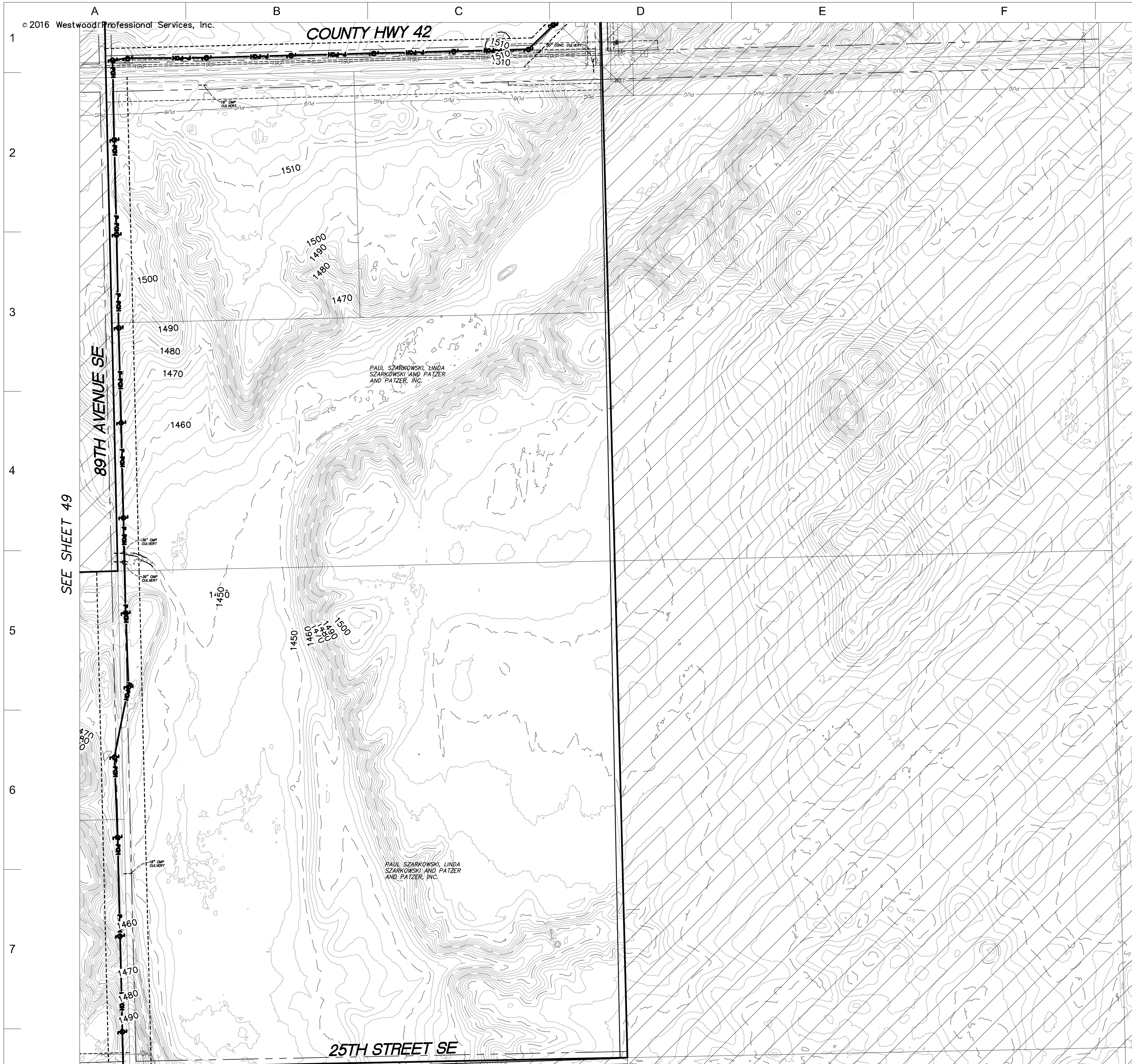
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**Civil Plan - S2
T141N R63W**

CIVIL PLANS SHEET **49**

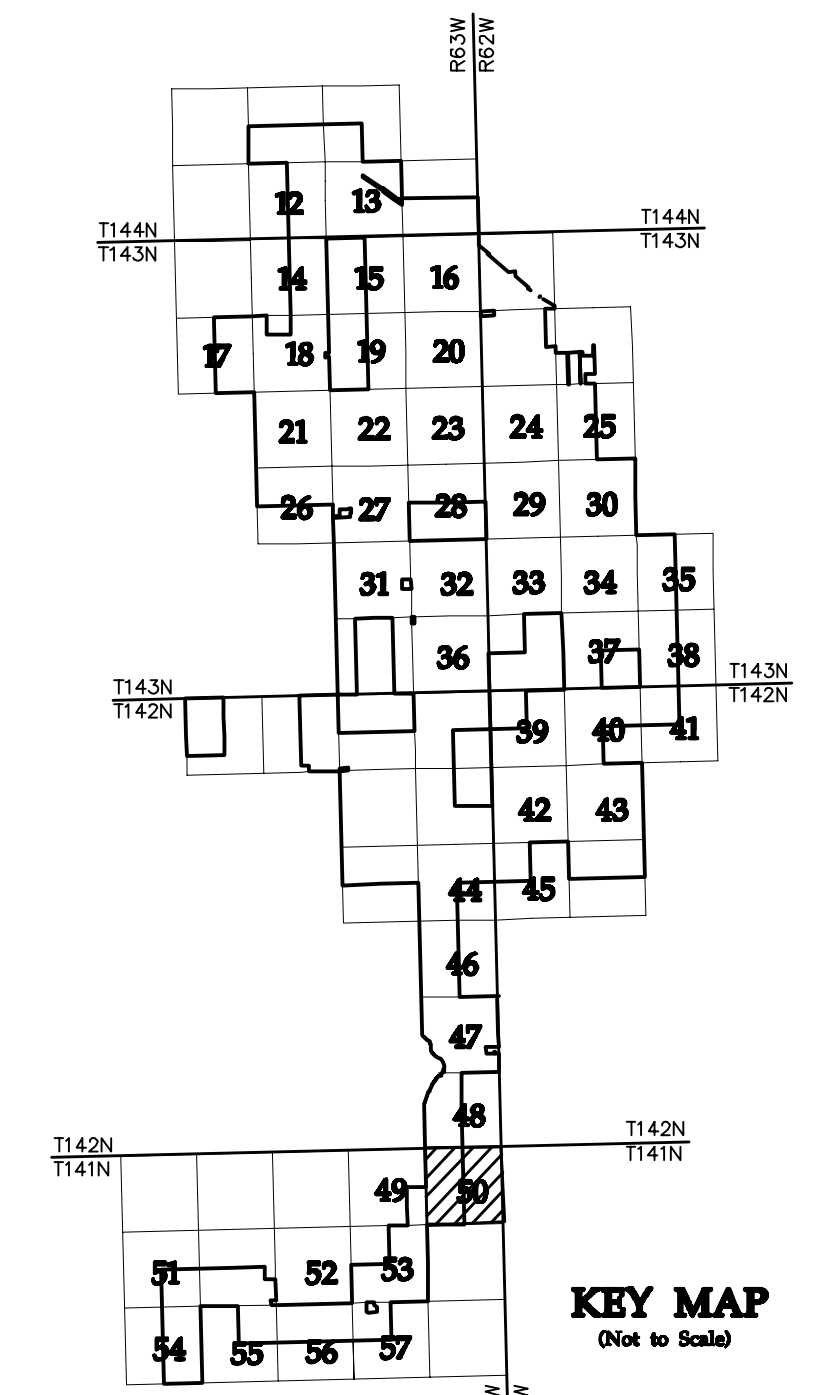
ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-49 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
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 - USFWS WETLAND EASEMENT PARCEL

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KEY MAP
(Not to Scale)

NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/23/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM	
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM	
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM	
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM	
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

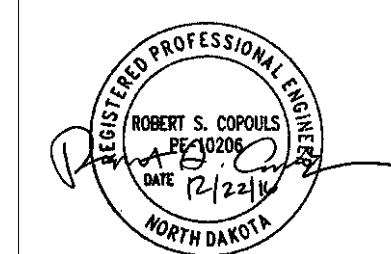
NO	REVISION	ZONE	DATE	BY	CHK	ENG
9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'



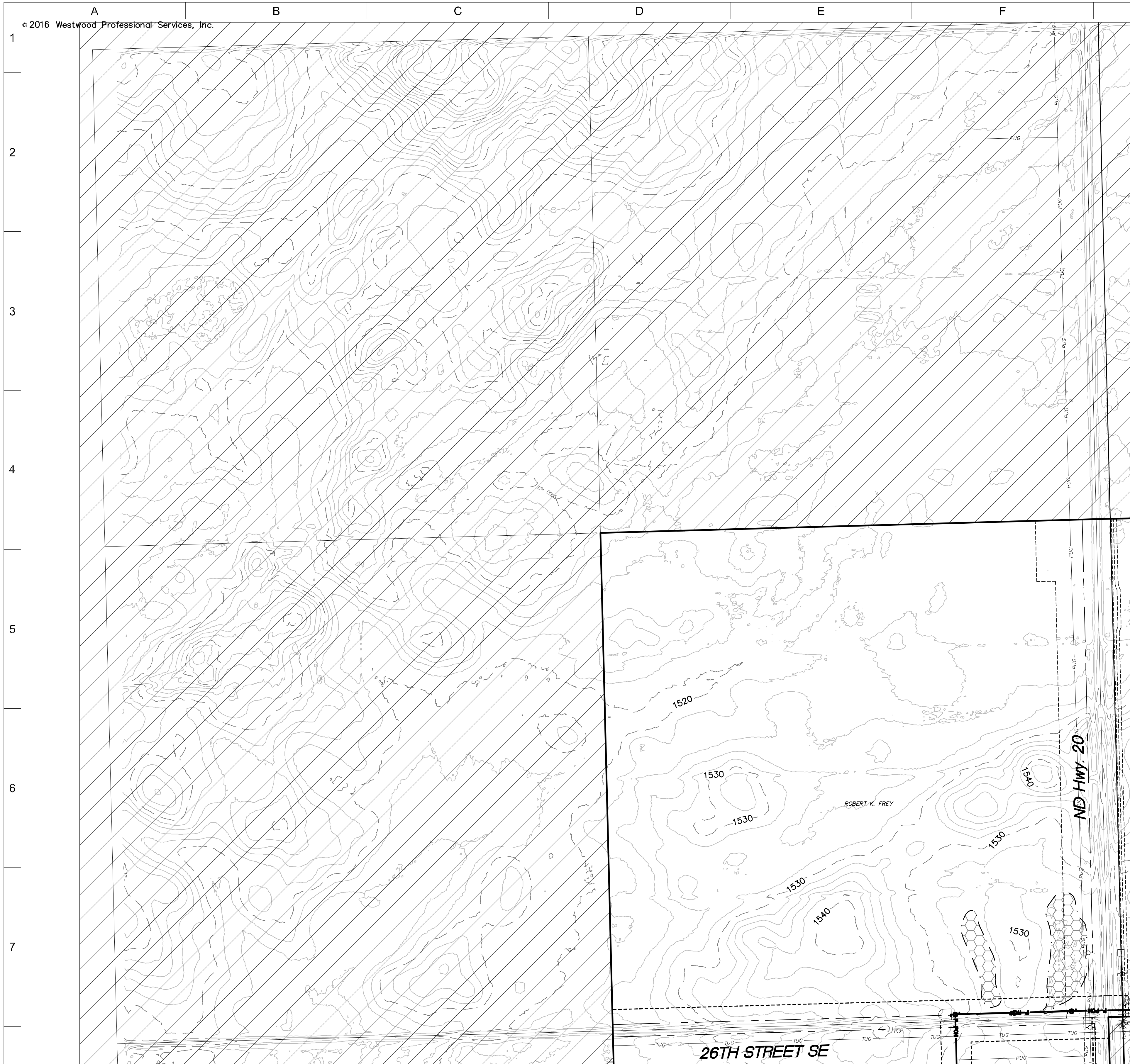
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Civil Plan - S1
T141N R63W

CIVIL PLANS SHEET **50**

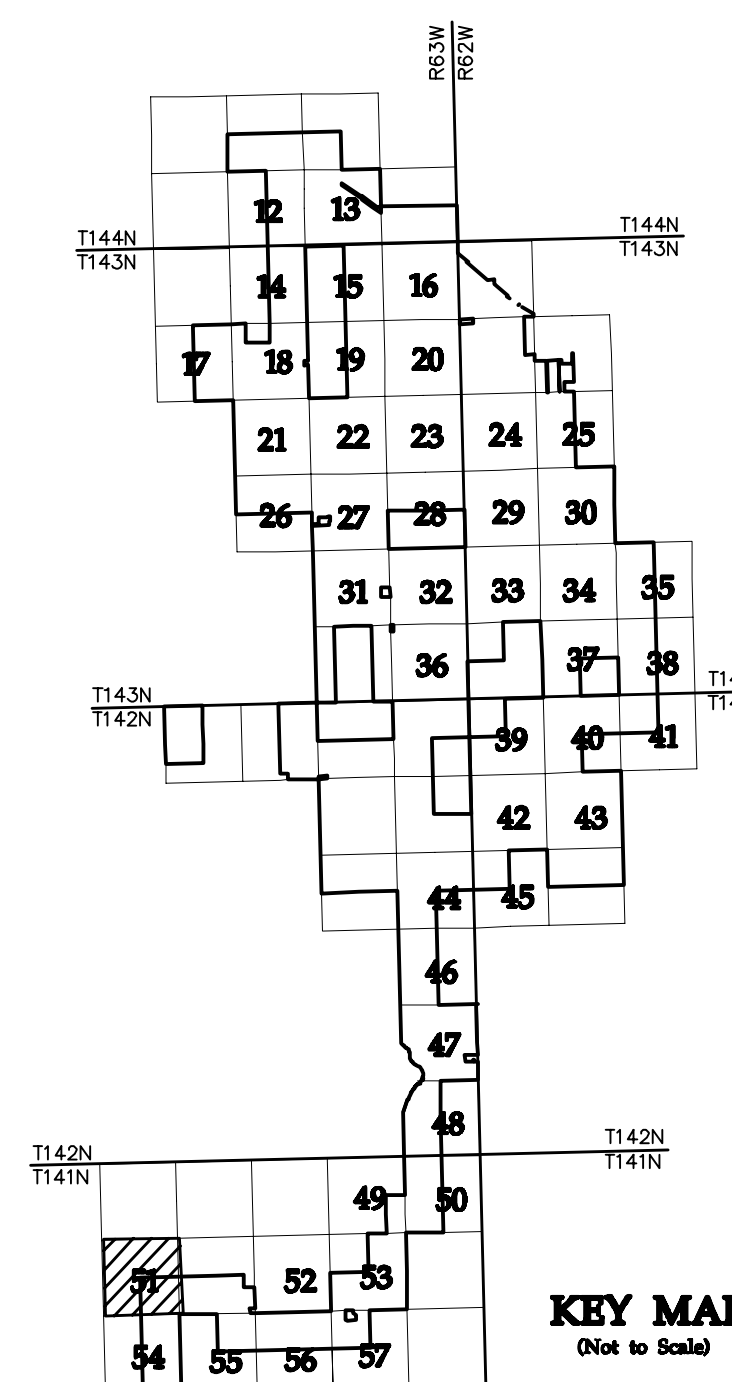
NH-217540-50 REV 9



SEE SHEET 52

- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
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KEY MAP
(Not to Scale)

NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	DWG NO. MANUFACTURER DESCRIPTION
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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Civil Plan - S8
T141N R63W

CIVIL PLANS SHEET **51**

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-51

REV 9

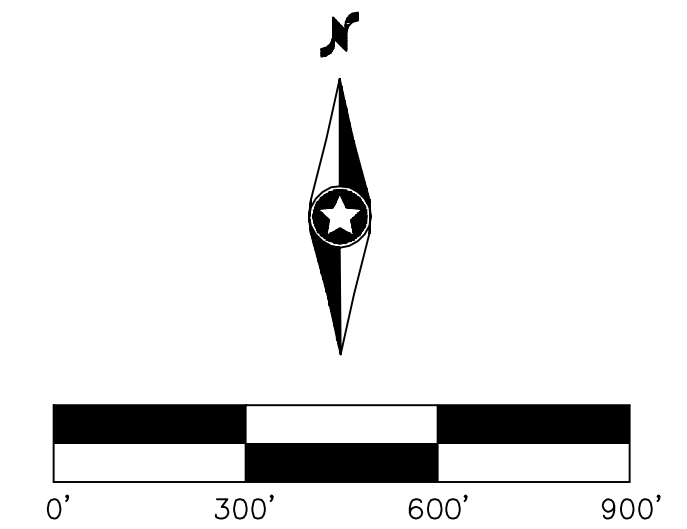
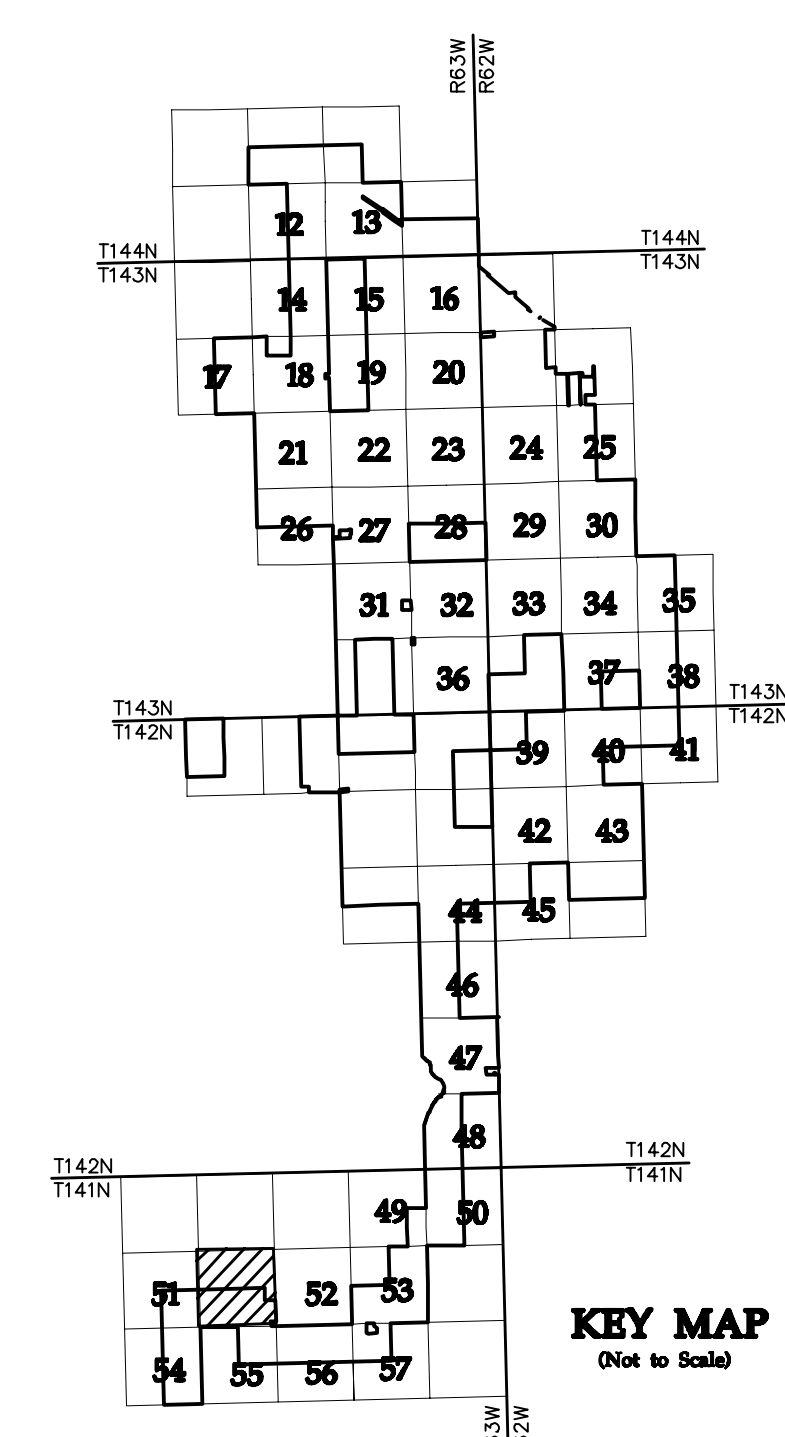


SEE SHEET 51

LEGEND:

- RECORD TURBINE LOCATION
- T-XX** TURBINE NUMBER
- RECORD ACCESS ROAD
- RECORD FENCE
- RECORD UNDERGROUND COLLECTION SYSTEM
- RECORD UNDERGROUND COLLECTION SYSTEM
- FIBER SLICE LOCATION*
- ELECTRICAL GROUND LOCATION*
- JUNCTION BOX LOCATION*
- ROAD BORE LOCATION*
- WETLAND BORE LOCATION*
- SPLICE LOCATION*
- RECORD TRANSMISSION LINE
- EXISTING CULVERT
- EXISTING FENCE
- EXISTING TELEPHONE LINE
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- EXISTING GAS PIPELINE
- EXISTING FIBER OPTIC LINE
- EXISTING EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING GRAVEL EDGE
- EXISTING BITUMINOUS EDGE
- EXISTING MICROWAVE BEAM PATH
- EXISTING VEGETATION
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
- EXISTING WATERWAY/WATER BODY
- EXISTING DELINEATED WETLAND
- AVOIDANCE AREA
- OUTSIDE PROJECT BOUNDARY
- USFS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								DWG NO. 20121151ECON.DWG MANUFACTURER WESTWOOD DESCRIPTION EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								DWG NO. 20121151MAPD.DWG MANUFACTURER WESTWOOD DESCRIPTION MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								DWG NO. 20121151SITE.DWG MANUFACTURER WESTWOOD DESCRIPTION SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								DWG NO. 20121151TURB.DWG MANUFACTURER WESTWOOD DESCRIPTION TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



XcelEnergy
NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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**Civil Plan - S9
T141N R63W**

CIVIL PLANS SHEET 52

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

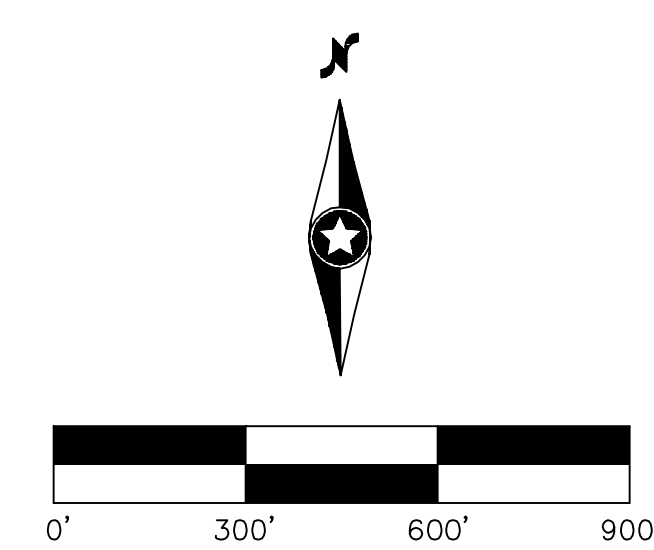
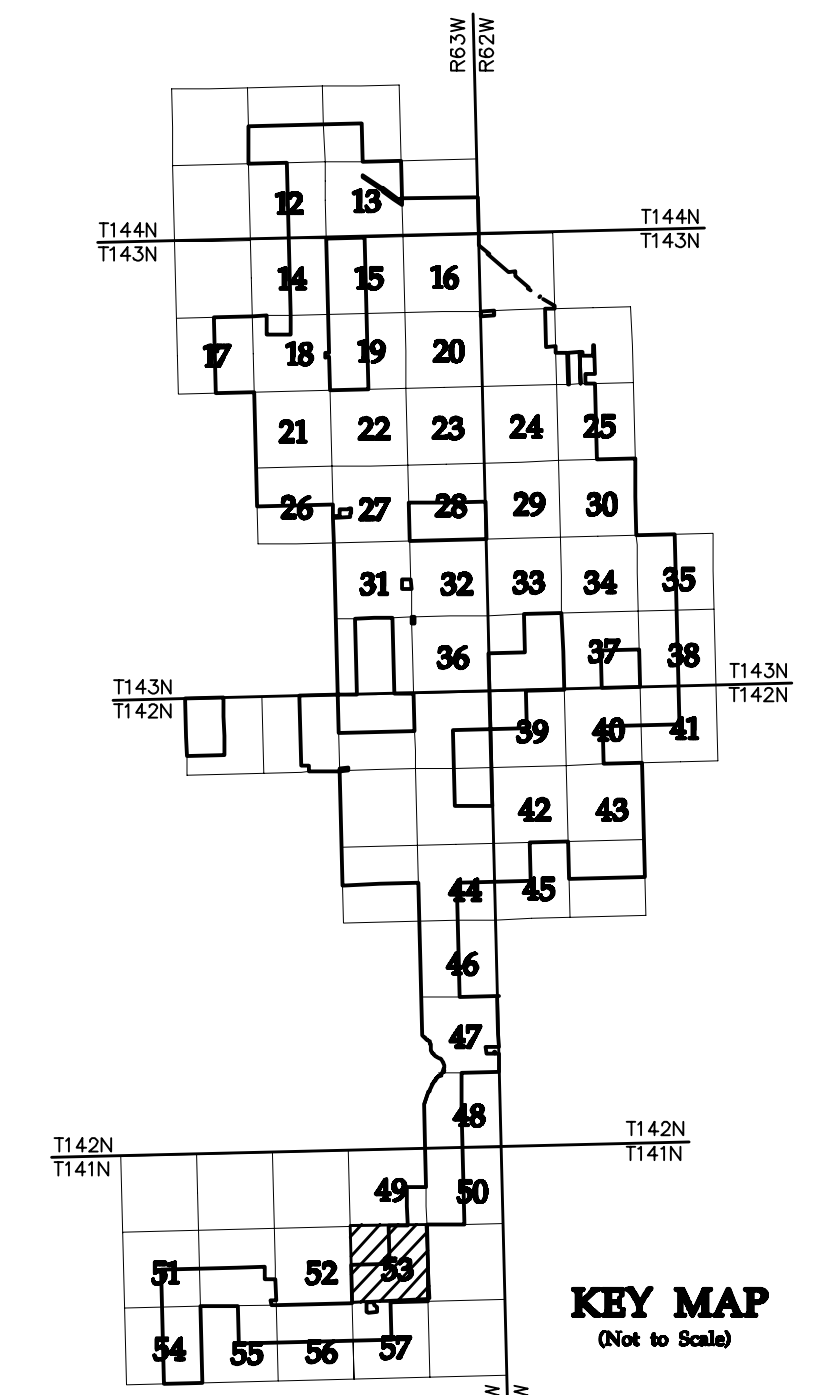
NH-217540-52

REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

* FIELD LOCATION INFORMATION FOR ELECTRICAL INFRASTRUCTURE PROVIDED BY WANZEK CONSTRUCTION AND ADJUSTED AS NEEDED TO MATCH LINWORK FROM WESTWOOD UNDERGROUND COLLECTION SYSTEM SURVEY DATA.



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
ENG: KLM	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
APVD: RSC	DATE: 10-07-16	SCALE: 1"=300'	

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Civil Plan - S11
T141N R63W

CIVIL PLANS SHEET **53**

REV 9

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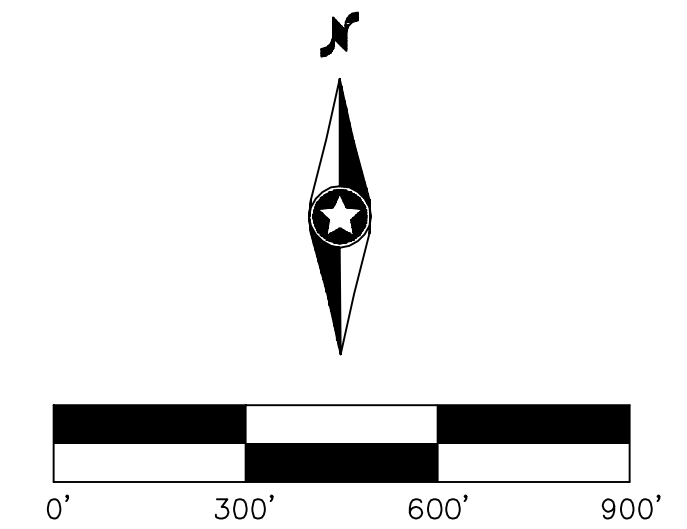
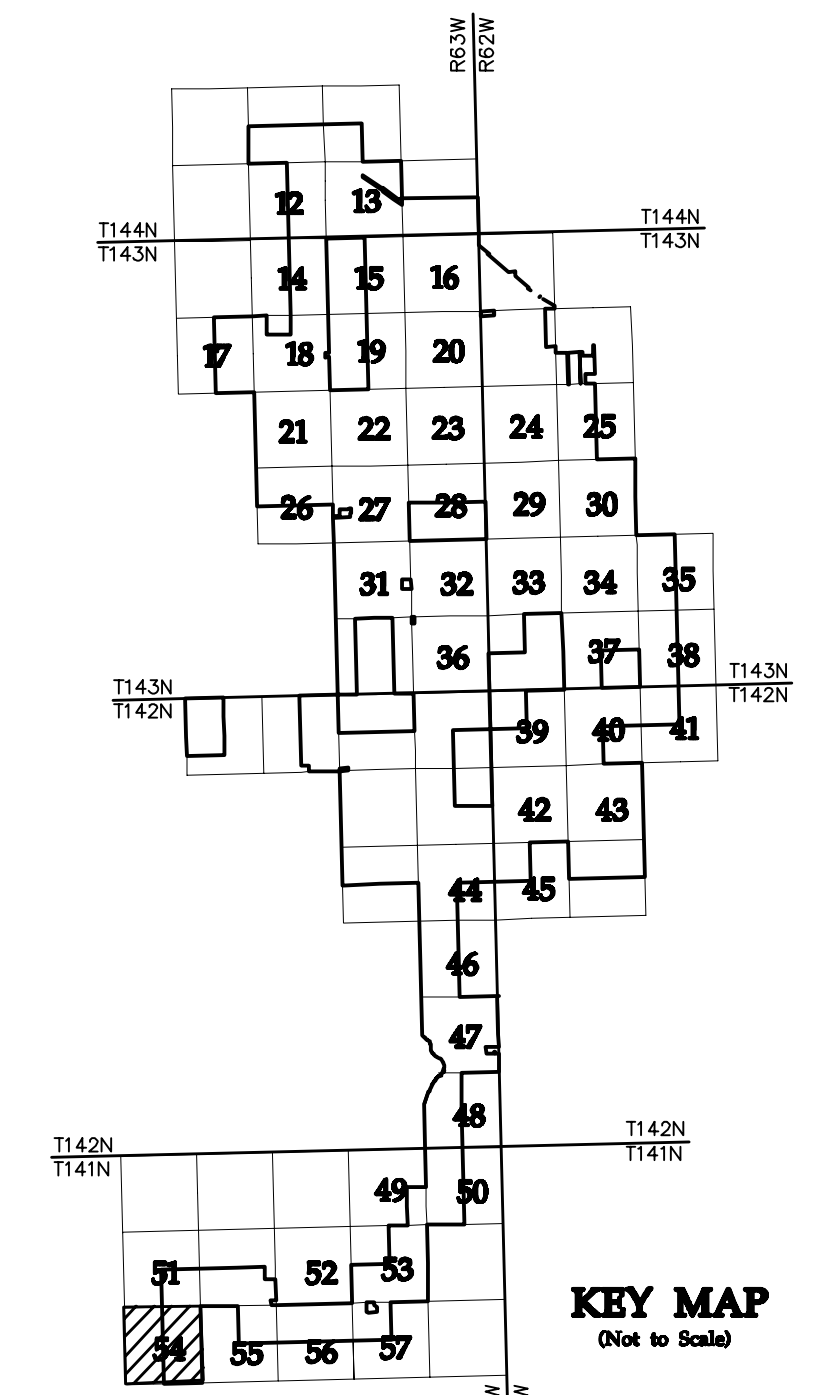
ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-53



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
 - RECORD TRANSMISSION LINE
 - EXISTING CULVERT
 - EXISTING FENCE
 - EXISTING TELEPHONE LINE
 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFWS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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NORTHERN STATES POWER
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STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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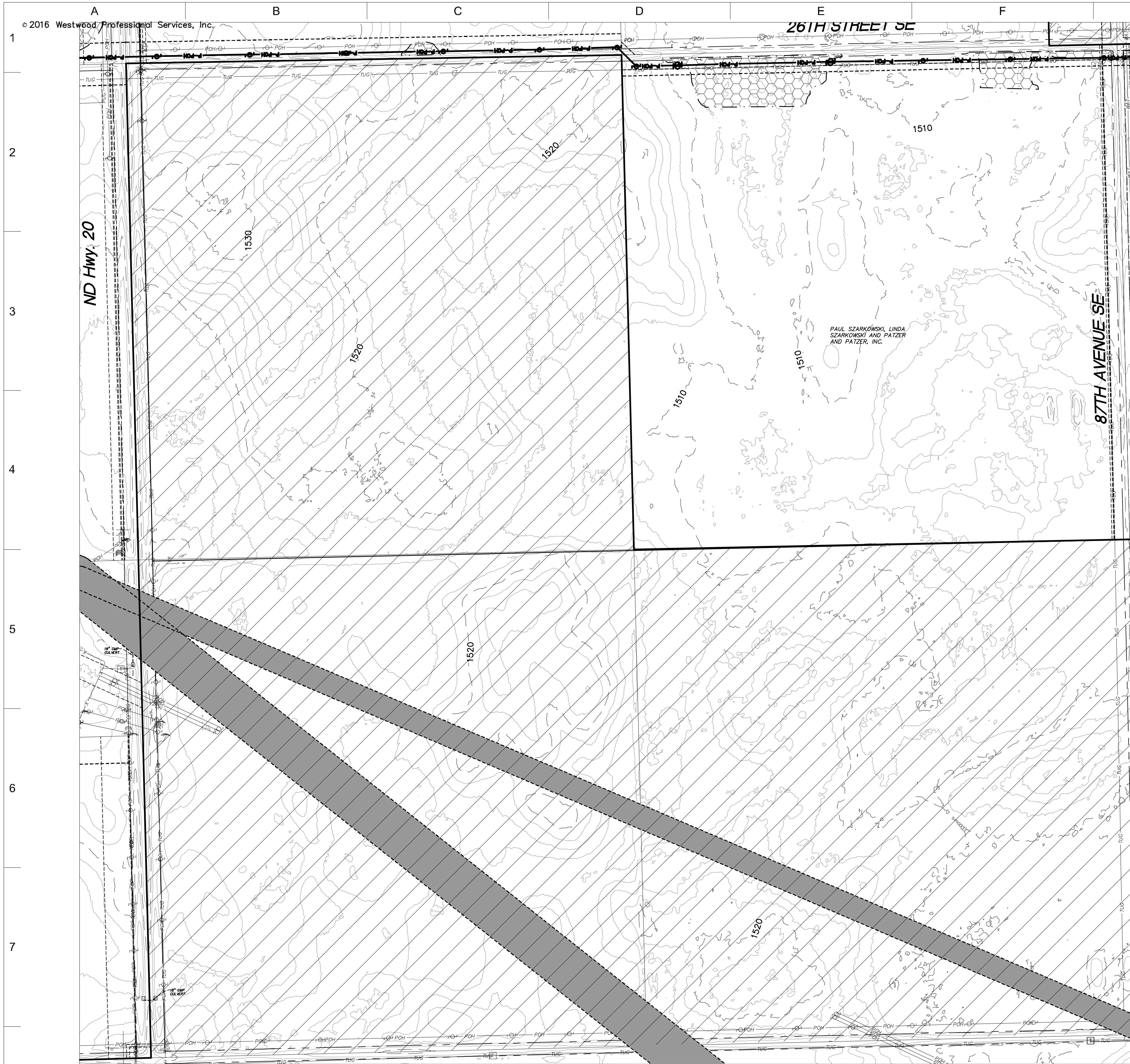
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**Civil Plan - S17
T141N R63W**

CIVIL PLANS SHEET **54**

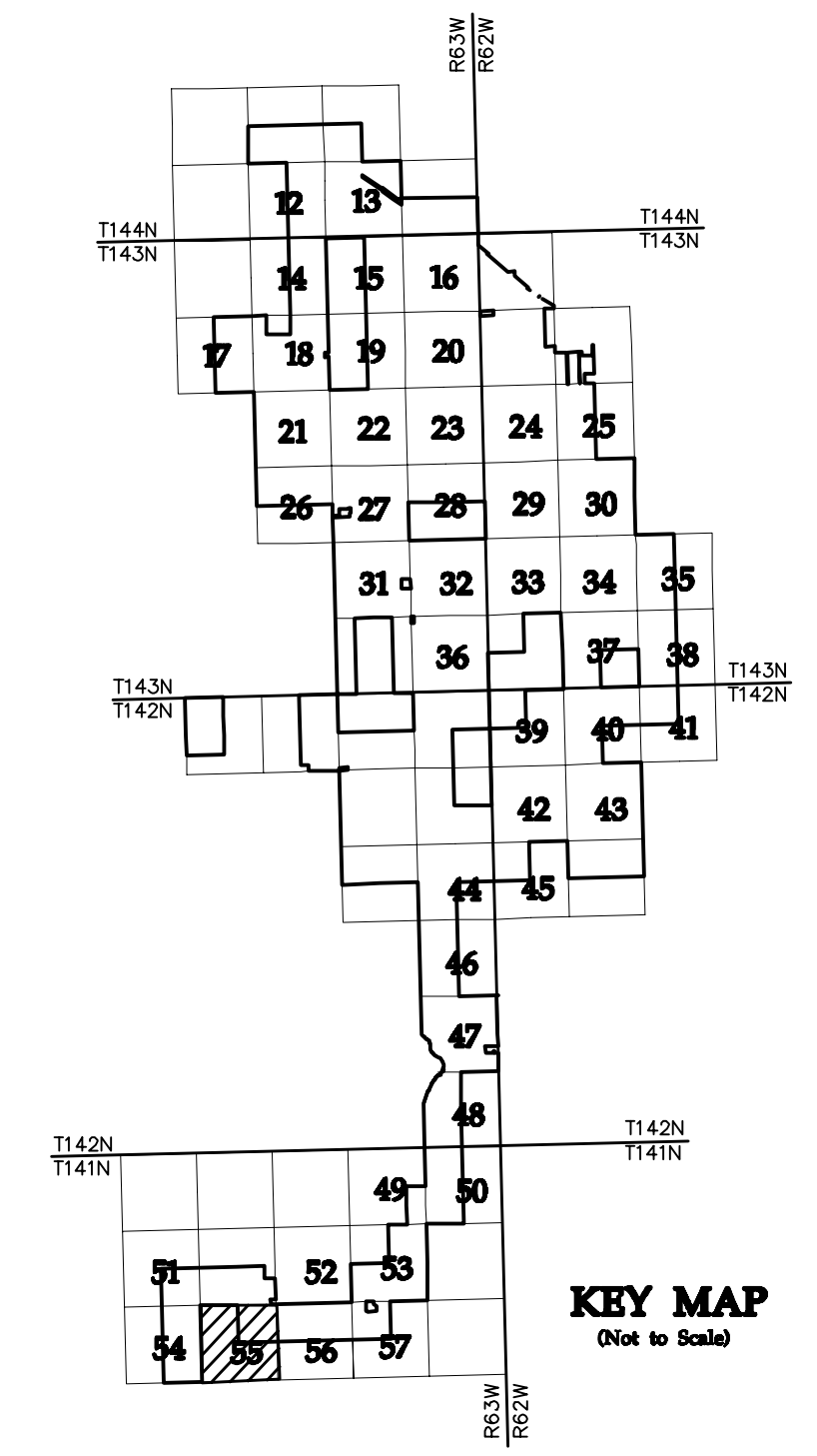
ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-54 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
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 - EXISTING GAS PIPELINE
 - EXISTING FIBER OPTIC LINE
 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - EXISTING WATERWAY/WATER BODY
 - EXISTING DELINEATED WETLAND
 - AVOIDANCE AREA
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 - USFS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	DWG NO. MANUFACTURER DESCRIPTION
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
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 PM: RSC DATE: 10-07-16 PROJ. NO: TB21
 APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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**Civil Plan - S16
T141N R63W**

CIVIL PLANS SHEET **55**

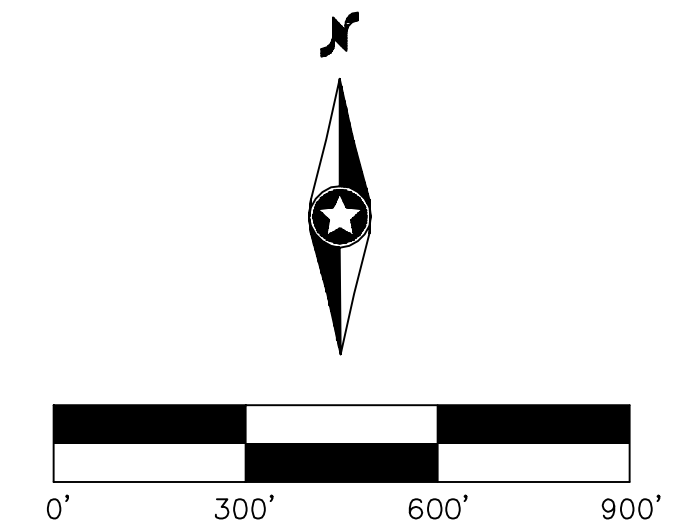
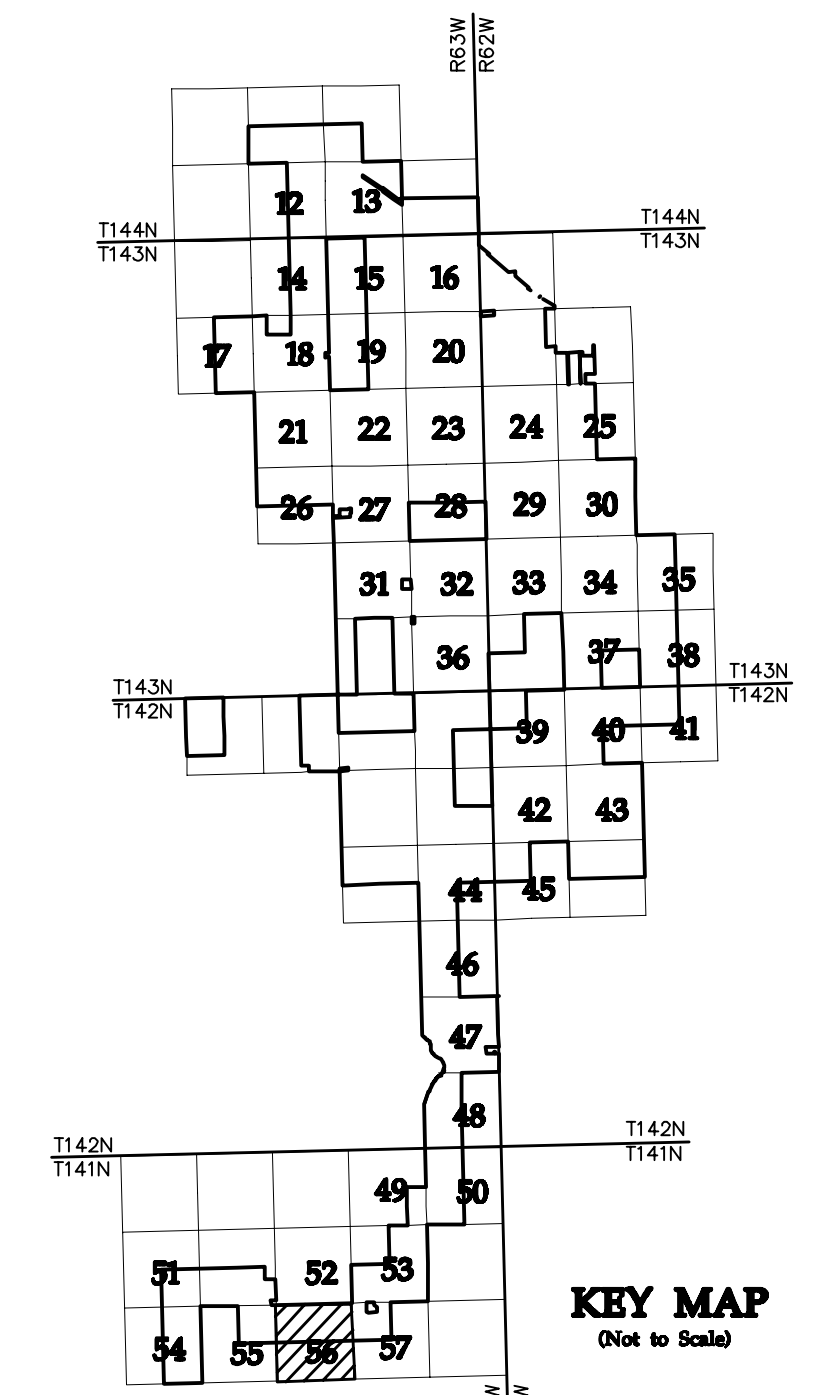
ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-55 REV 9



- LEGEND:**
- RECORD TURBINE LOCATION
 - T-XX** TURBINE NUMBER
 - RECORD ACCESS ROAD
 - RECORD FENCE
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - RECORD UNDERGROUND COLLECTION SYSTEM
 - FIBER SLICE LOCATION*
 - ELECTRICAL GROUND LOCATION*
 - JUNCTION BOX LOCATION*
 - ROAD BORE LOCATION*
 - WETLAND BORE LOCATION*
 - SPLICE LOCATION*
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 - EXISTING OVERHEAD POWER
 - EXISTING WATER LINE
 - EXISTING GAS PIPELINE
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 - EXISTING EASEMENT
 - EXISTING RIGHT OF WAY
 - EXISTING GRAVEL EDGE
 - EXISTING BITUMINOUS EDGE
 - EXISTING MICROWAVE BEAM PATH
 - EXISTING VEGETATION
 - EXISTING 10' CONTOURS
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 - EXISTING WATERWAY/WATER BODY
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 - AVOIDANCE AREA
 - OUTSIDE PROJECT BOUNDARY
 - USFS WETLAND EASEMENT PARCEL

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NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG	REFERENCE DRAWINGS
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM								20121151ECON.DWG WESTWOOD EXISTING CONTOURS
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM								20121151MAPD.DWG WESTWOOD MAPD BASE
3	ISSUED FOR CONSTRUCTION		02/29/16	ZHW	RSC	KLM								20121151SITE.DWG WESTWOOD SITE BASE-CIVIL DESIGN
4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM								20121151TURB.DWG WESTWOOD TURBINE ARRAY
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM								
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM								
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM								
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM								



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
STUTSMAN COUNTY, NORTH DAKOTA

DWN: IJH DATE: 10-07-16 CHK: RSC DATE: 10-07-16
ENG: KLM DATE: 10-07-16 CHK: RSC DATE: 10-07-16
PM: RSC DATE: 10-07-16 PROJ. NO: TB21
APVD: RSC DATE: 10-07-16 SCALE: 1"=300'

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**Civil Plan - S15
T141N R63W**

CIVIL PLANS SHEET **56**

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

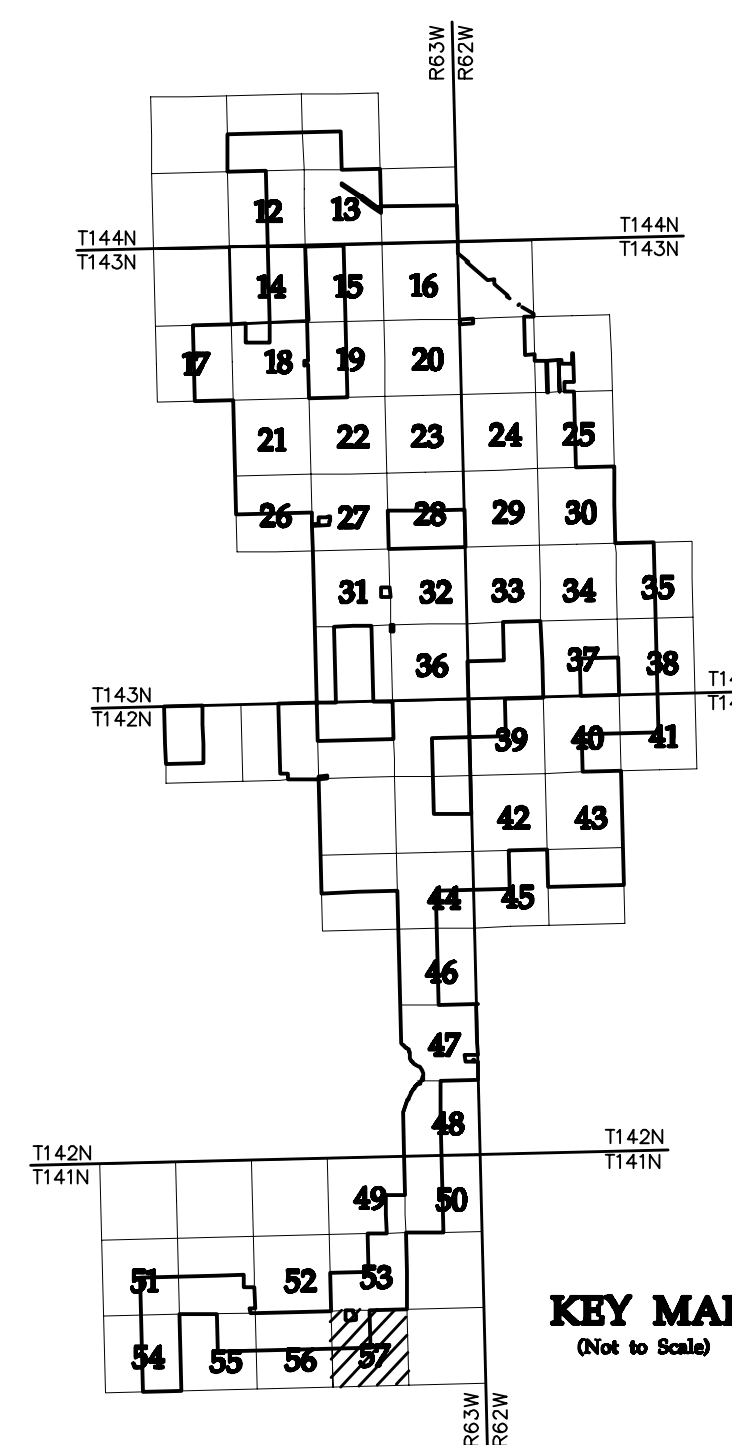
NH-217540-56 REV 9



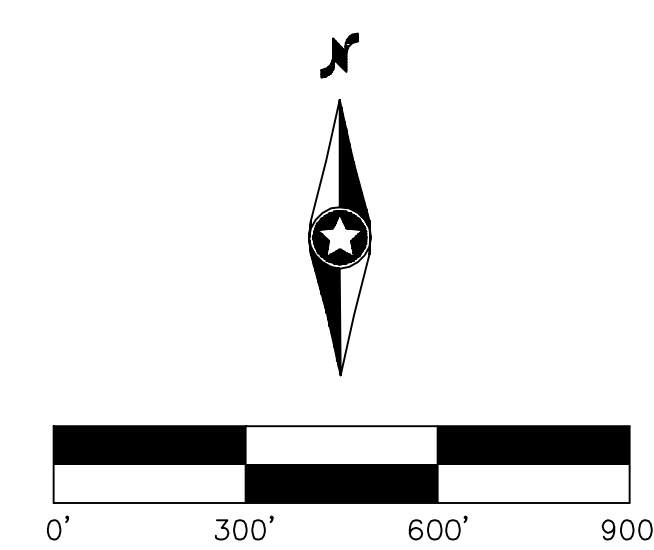
LEGEND:

- RECORD TURBINE LOCATION
- T-XX** TURBINE NUMBER
- RECORD ACCESS ROAD
- RECORD FENCE
- RECORD UNDERGROUND COLLECTION SYSTEM
- RECORD UNDERGROUND COLLECTION SYSTEM
- FIBER SLICE LOCATION*
- ELECTRICAL GROUND LOCATION*
- JUNCTION BOX LOCATION*
- ROAD BORE LOCATION*
- WETLAND BORE LOCATION*
- SPLICE LOCATION*
- RECORD TRANSMISSION LINE
- EXISTING CULVERT
- EXISTING FENCE
- EXISTING TELEPHONE LINE
- EXISTING OVERHEAD POWER
- EXISTING WATER LINE
- EXISTING GAS PIPELINE
- EXISTING FIBER OPTIC LINE
- EXISTING EASEMENT
- EXISTING RIGHT OF WAY
- EXISTING GRAVEL EDGE
- EXISTING BITUMINOUS EDGE
- EXISTING MICROWAVE BEAM PATH
- EXISTING VEGETATION
- EXISTING 10' CONTOURS
- EXISTING 2' CONTOURS
- EXISTING WATERWAY/WATER BODY
- EXISTING DELINEATED WETLAND
- AVOIDANCE AREA
- OUTSIDE PROJECT BOUNDARY
- USFWS WETLAND EASEMENT PARCEL

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KEY MAP
(Not to Scale)



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
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7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM	
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

REVISION	ZONE	DATE	BY	CHK	ENG
9		12/22/16	IJH	RSC	KLM

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY



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NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
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20121151-01SPF01.dwg

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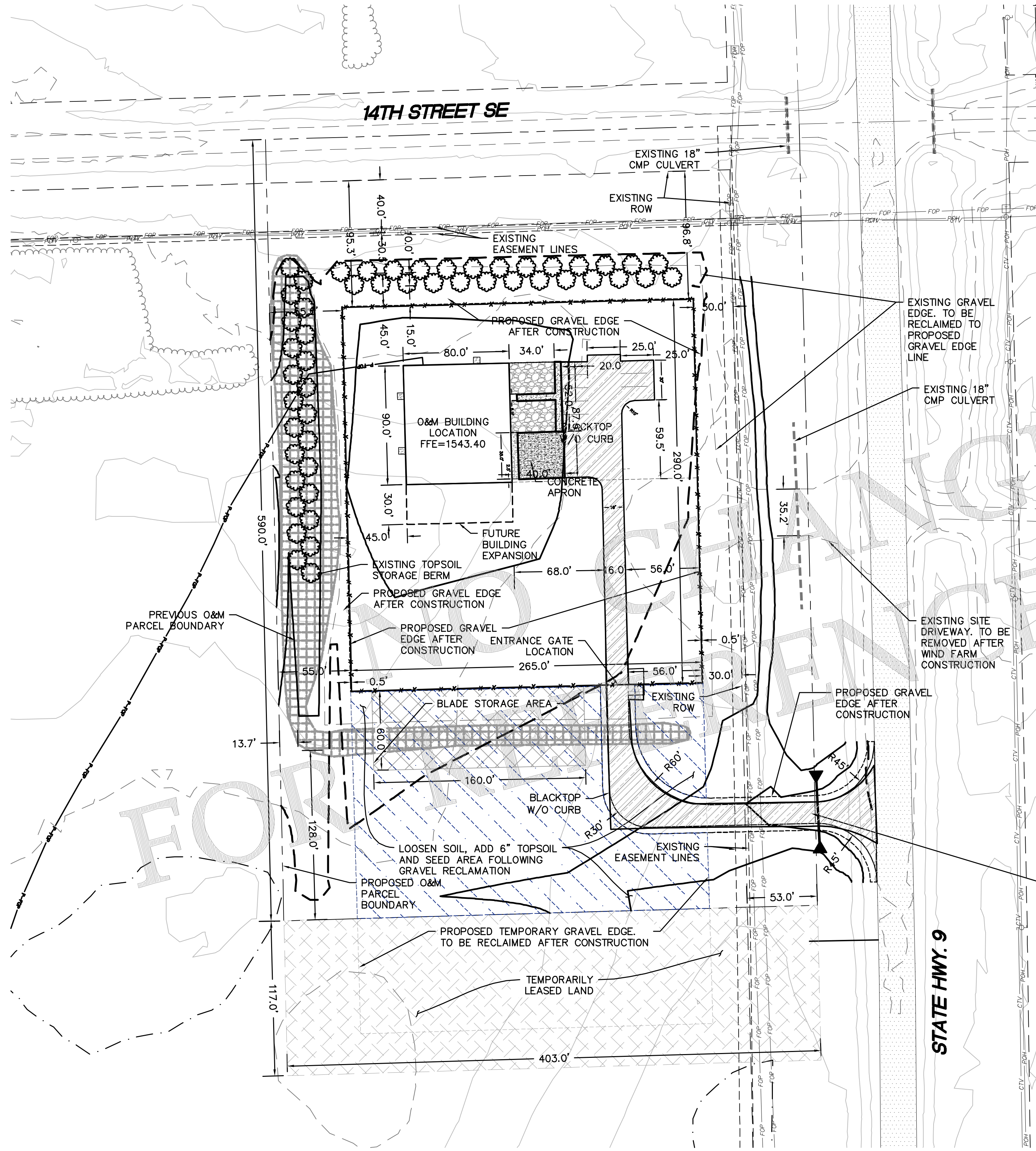
Civil Plan - S14
T141N R63W

CIVIL PLANS SHEET **57**

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-57 REV 9

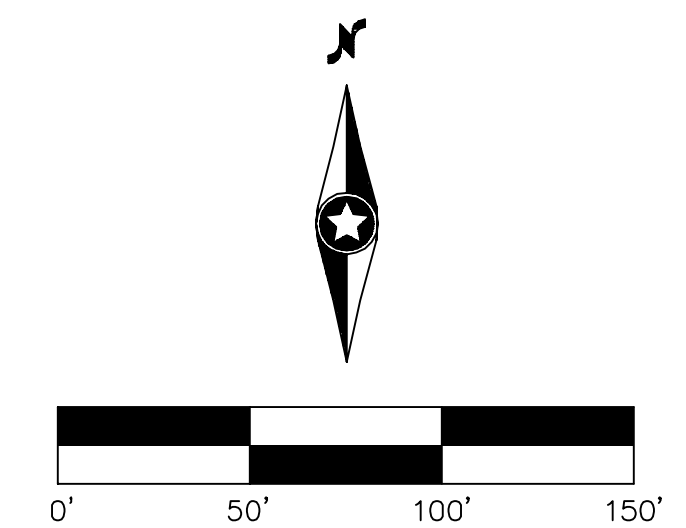
1
2
3
4
5
6
7



LEGEND:

[Symbol]	RECORD BUILDING
[Symbol]	RECORD CONCRETE
[Symbol]	RECORD BITUMINOUS
[Symbol]	RECORD FENCE
[Symbol]	RECORD UNDERGROUND FIBER LINE
[Symbol]	EXISTING CULVERT
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING TELEPHONE LINE
[Symbol]	EXISTING OVERHEAD POWER
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING GAS PIPELINE
[Symbol]	EXISTING FIBER OPTIC LINE
[Symbol]	EXISTING EASEMENT
[Symbol]	EXISTING RIGHT OF WAY
[Symbol]	EXISTING GRAVEL EDGE
[Symbol]	EXISTING BITUMINOUS EDGE
[Symbol]	EXISTING TOP SOIL STORAGE BERM
[Symbol]	EXISTING VEGETATION
[Symbol]	EXISTING 10' CONTOURS
[Symbol]	EXISTING 2' CONTOURS
[Symbol]	OUTSIDE PROJECT BOUNDARY

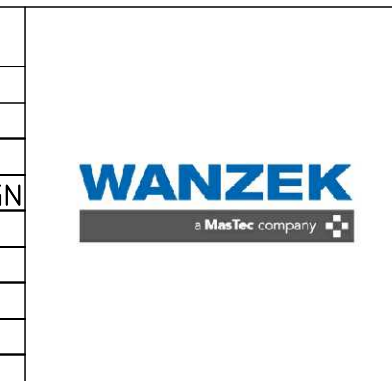
FOR CONTRACTOR USE ONLY



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO	REVISION	ZONE	DATE	BY	CHK	ENG
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4	ISSUED FOR CONSTRUCTION		04/18/16	ZHW	RSC	KLM							
5	RECORD DRAWINGS		10/07/16	IJH	RSC	KLM							
6	UPDATED RECORD DRAWINGS		11/07/16	IJH	RSC	KLM							
7	UPDATED RECORD DRAWINGS		12/02/16	IJH	RSC	KLM							
8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM							

DWG NO.	MANUFACTURER	DESCRIPTION
20121151ECON.DWG	WESTWOOD	EXISTING CONTOURS
20121151MAPD.DWG	WESTWOOD	MAPD BASE
20121151SITE.DWG	WESTWOOD	SITE BASE-CIVIL DESIGN
20121151TURB.DWG	WESTWOOD	TURBINE ARRAY

DWN:	DATE:	CHK:	DATE:
IJH	10-07-16	RSC	10-07-16
KLM	10-07-16	RSC	10-07-16
RSC	10-07-16	RSC	10-07-16
RSC	10-07-16	RSC	10-07-16



Xcel Energy
 NORTHERN STATES POWER
COURTENAY WIND - COLLECTOR SUBSTATION
 STUTSMAN COUNTY, NORTH DAKOTA

Westwood
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20121151-01STF02.dwg

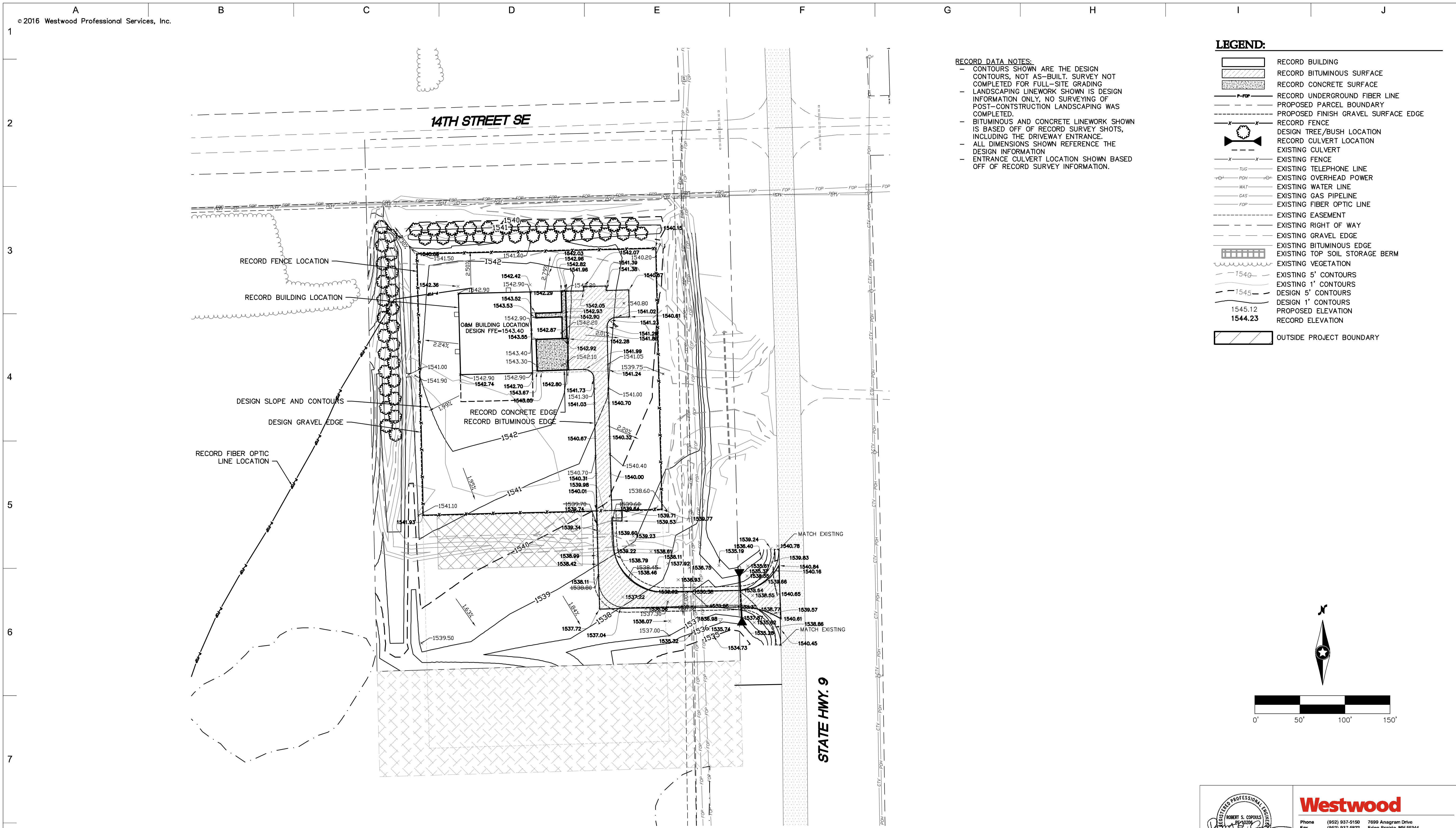
THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.

Civil Plan - O&M

CIVIL PLANS SHEET **58**

ENERGY SUPPLY
ENGINEERING & CONSTRUCTION

NH-217540-58 REV 9

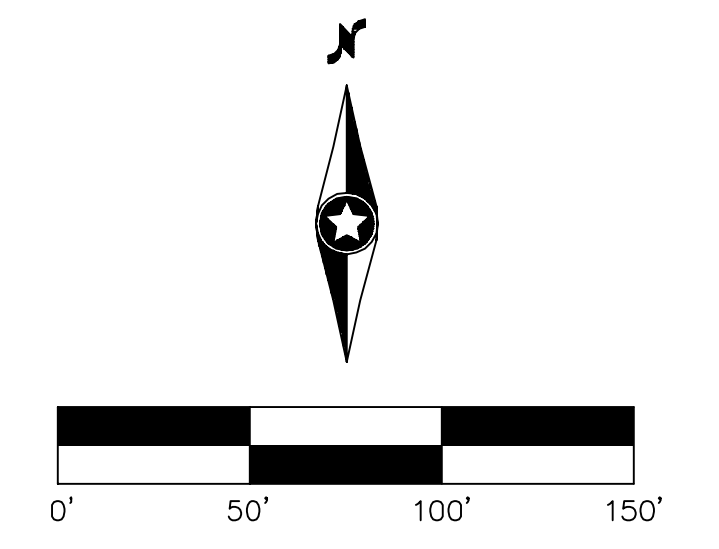


RECORD DATA NOTES:

- CONTOURS SHOWN ARE THE DESIGN CONTOURS, NOT AS-BUILT. SURVEY NOT COMPLETED FOR FULL-SITE GRADING
- LANDSCAPING LINWORK SHOWN IS DESIGN INFORMATION ONLY, NO SURVEYING OF POST-CONSTRUCTION LANDSCAPING WAS COMPLETED.
- BITUMINOUS AND CONCRETE LINWORK SHOWN IS BASED OFF OF RECORD SURVEY SHOTS, INCLUDING THE DRIVEWAY ENTRANCE.
- ALL DIMENSIONS SHOWN REFERENCE THE DESIGN INFORMATION
- ENTRANCE CULVERT LOCATION SHOWN BASED OFF OF RECORD SURVEY INFORMATION.

LEGEND:

[Symbol]	RECORD BUILDING
[Symbol]	RECORD BITUMINOUS SURFACE
[Symbol]	RECORD CONCRETE SURFACE
[Symbol]	RECORD UNDERGROUND FIBER LINE
[Symbol]	PROPOSED PARCEL BOUNDARY
[Symbol]	PROPOSED FINISH GRAVEL SURFACE EDGE
[Symbol]	RECORD FENCE
[Symbol]	DESIGN TREE/BUSH LOCATION
[Symbol]	RECORD CULVERT LOCATION
[Symbol]	EXISTING CULVERT
[Symbol]	EXISTING FENCE
[Symbol]	EXISTING TELEPHONE LINE
[Symbol]	EXISTING OVERHEAD POWER
[Symbol]	EXISTING WATER LINE
[Symbol]	EXISTING GAS PIPELINE
[Symbol]	EXISTING FIBER OPTIC LINE
[Symbol]	EXISTING EASEMENT
[Symbol]	EXISTING RIGHT OF WAY
[Symbol]	EXISTING GRAVEL EDGE
[Symbol]	EXISTING BITUMINOUS EDGE
[Symbol]	EXISTING TOP SOIL STORAGE BERM
[Symbol]	EXISTING VEGETATION
[Symbol]	EXISTING 5' CONTOURS
[Symbol]	EXISTING 1' CONTOURS
[Symbol]	DESIGN 5' CONTOURS
[Symbol]	DESIGN 1' CONTOURS
[Symbol]	PROPOSED ELEVATION
[Symbol]	RECORD ELEVATION
[Symbol]	OUTSIDE PROJECT BOUNDARY



NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
0	ISSUED FOR CONSTRUCTION		08/31/15	TBR	RSC	KLM	9
1	ISSUED FOR CONSTRUCTION		09/29/15	TBR	RSC	KLM	
2	ISSUED FOR CONSTRUCTION		10/26/15	ZHW	RSC	KLM	
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8	UPDATED RECORD DRAWINGS		12/15/16	IJH	RSC	KLM	

NO	REVISION	ZONE	DATE	BY	CHK	ENG	NO
9	UPDATED RECORD DRAWINGS		12/22/16	IJH	RSC	KLM	

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DWN: IJH	DATE: 10-07-16	CHK: RSC	DATE: 10-07-16
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PM: RSC	DATE: 10-07-16	PROJ. NO: TB21	
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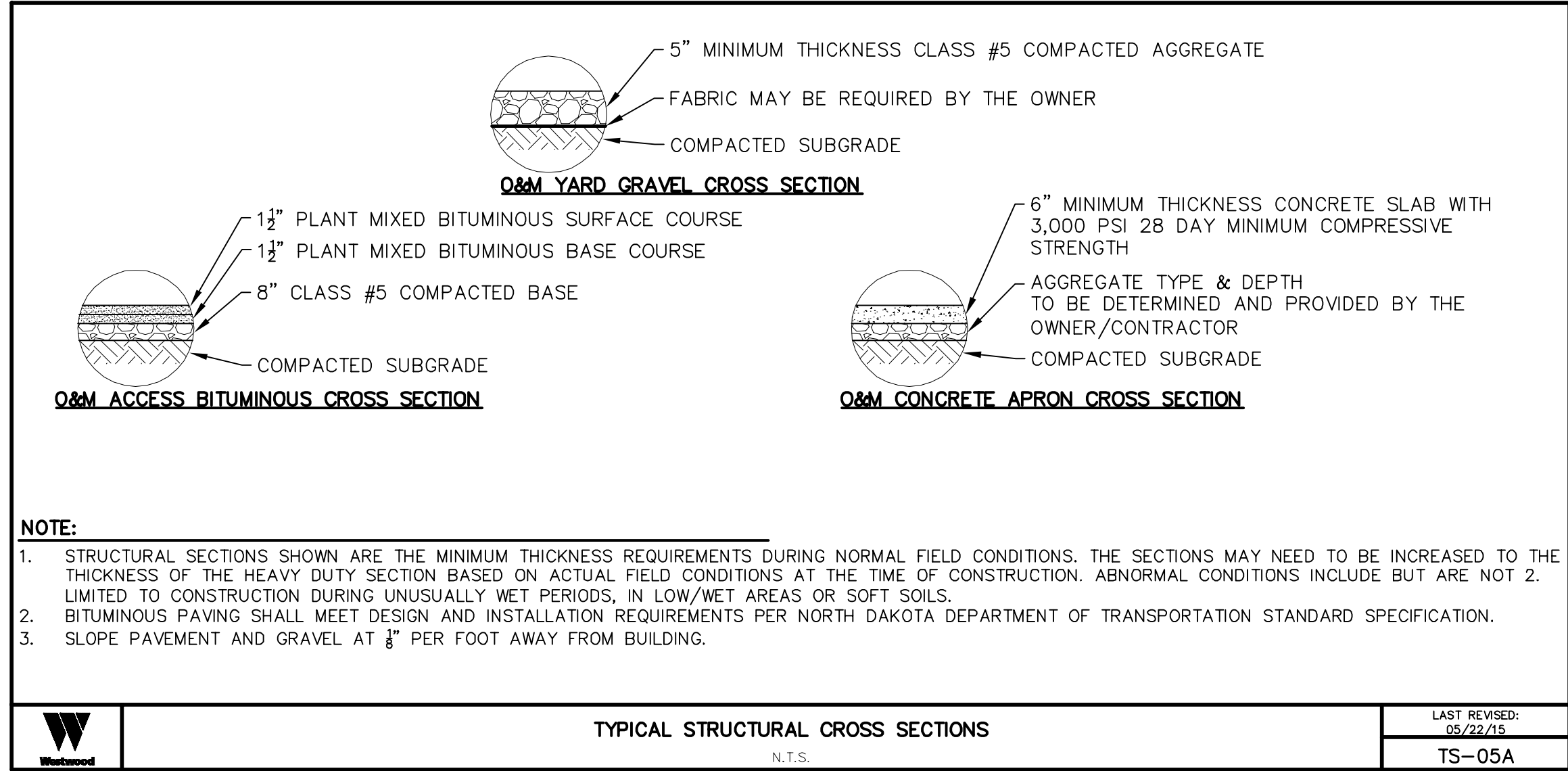
20121151-01STF03.dwg

Grading Plan - O&M

CIVIL PLANS SHEET **59**

NH-217540-59

THIS MAP/DRAWING IS A TOOL TO ASSIST EMPLOYEES IN THE PERFORMANCE OF THEIR JOBS. YOUR PERSONAL SAFETY IS PROVIDED FOR BY USING SAFETY PRACTICES, PROCEDURES, AND EQUIPMENT AS DESCRIBED IN THE SAFETY TRAINING PROGRAMS AND MANUALS.



Grading, Drainage & Erosion Control Notes

- RIGHT-OF-WAY AND EASEMENTS ARE SHOWN PER ALTA SURVEY PREPARED BY WESTWOOD PROFESSIONAL SERVICES.
- EXISTING GROUND CONTOURS SHOWN ON THE GRADING PLAN ARE BASED ON FIELD SURVEY INFORMATION PERFORMED BY WESTWOOD PROFESSIONAL SERVICES.
- REFER TO PLANS BY OTHERS FOR DETAILED INFORMATION FOR THE OPERATIONS AND MAINTENANCE SITE. REFER TO ARCHITECTURAL PLANS FOR DETAILED DIMENSIONS FOR BUILDING FOOTPRINT AND EXACT LOCATIONS/DIMENSIONS OF VESTIBULE, SLOPED PAVING RAMPS, TRUCK DOCKS, UTILITY ENTRANCES AND DOWNSPOUT LOCATIONS.
- REFER TO PLANS BY OTHERS FOR FENCE AND GATE SPECIFICATION.
- ALL CONSTRUCTION SHALL CONFORM TO LOCAL, STATE AND FEDERAL RULES INCLUDING THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT REQUIREMENTS. REFER TO THE STORM WATER POLLUTION PREVENTION PLAN PREPARED FOR THE PROJECT FOR DETAILS.
- THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO AVOID PROPERTY DAMAGE TO ADJACENT PROPERTIES DURING THE CONSTRUCTION PHASES OF THIS PROJECT. THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY DAMAGES TO THE ADJACENT PROPERTIES OCCURRING DURING THE CONSTRUCTION PHASES OF THIS PROJECT.
- SAFETY NOTICE TO CONTRACTORS: IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS ON THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK, THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE DUTY OF THE ENGINEER OR THE DEVELOPER TO CONDUCT CONSTRUCTION REVIEW OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONSTRUCTION SITE.
- THE CONTRACTOR SHALL COMPLETE THE SITE GRADING IN ACCORDANCE WITH THE REQUIREMENTS OF THE GEOTECHNICAL ENGINEER. ALL SOIL TESTING SHALL BE COMPLETED BY A THIRD PARTY TESTING LABORATORY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL REQUIRED TESTS AND INSPECTIONS WITH THE TESTING LABORATORY. THE COSTS OF RETESTING (IN CASE OF TESTS NOT MEETING STANDARDS) SHALL BE BORN BY THE CONTRACTOR.
- PRIOR TO PLACEMENT OF ANY STRUCTURE OR PAVEMENT, A PROOFROLL WILL BE REQUIRED ON THE SUBGRADE. PROOFROLLING SHALL BE ACCOMPLISHED BY MAKING MINIMUM OF 2 COMPLETE PASSES WITH FULLY-LOADED TANDEM-AXEL DUMP TRUCK, OR APPROVED EQUAL, IN EACH OF 2 PERPENDICULAR DIRECTIONS WHILE UNDER SUPERVISION AND DIRECTION OF AN INDEPENDENT TESTING LABORATORY. AREAS OF FAILURE SHALL BE EXCAVATED AND RECOMPACTED AS SPECIFIED HEREIN.
- THE CONTRACTOR SHALL UNIFORMLY GRADE AREAS WITHIN LIMITS OF GRADING, INCLUDING ADJACENT TRANSITION AREAS. PROVIDE A SMOOTH FINISHED SURFACE WITHIN SPECIFIED TOLERANCES, WITH UNIFORM LEVELS OR SLOPES BETWEEN POINTS, WHERE ELEVATIONS ARE SHOWN, OR BETWEEN SUCH POINTS, AND EXISTING GRADES. AREAS THAT HAVE BEEN FINISH GRADED SHALL BE PROTECTED FROM SUBSEQUENT CONSTRUCTION OPERATIONS.
- ALL SLOPES SHALL BE GRADED TO 4:1 OR FLATTER, UNLESS OTHERWISE INDICATED ON THE PLAN. ALL SLOPES 4:1 OR GREATER AND PROPOSED DITCH BOTTOMS (DRAINAGE SWALES) SHALL BE SEEDED AND STABILIZED WITH FIBER BLANKET.
- SPOT ELEVATIONS AND PROPOSED CONTOURS INDICATE FINISHED GRADE SURFACE (TOP OF AGGREGATE).
- AFTER THE SITE GRADING IS COMPLETED, IF EXCESS SOIL MATERIAL EXISTS, THE CONTRACTOR SHALL DISPOSE OF ALL EXCESS SOIL MATERIAL IN A MANNER ACCEPTABLE TO THE OWNER AND THE REGULATING AGENCIES INVOLVED.
- NO SEDIMENT BASIN IS REQUIRED PER STATE/COUNTY REQUIREMENTS.
- SILTATION AND EROSION CONTROL: THE CONTRACTOR SHALL ASSUME COMPLETE RESPONSIBILITY FOR CONTROLLING ALL SILTATION AND EROSION OF THE PROJECT AREA. THE CONTRACTOR SHALL USE WHATEVER MEANS NECESSARY TO CONTROL THE EROSION AND SILTATION INCLUDING BUT NOT LIMITED TO STAKED STRAW BALES AND/OR SILTATION FABRIC FENCES. CONTROL SHALL COMMENCE WITH GRADING AND CONTINUE THROUGHOUT THE PROJECT UNTIL ACCEPTANCE OF THE WORK BY THE OWNER. THE CONTRACTOR'S RESPONSIBILITY INCLUDES ALL IMPLEMENTATION AS REQUIRED TO PREVENT EROSION AND THE DEPOSITING OF SILT. THE OWNER MAY, AT HIS OPTION, DIRECT THE CONTRACTOR IN HIS METHODS AS DEEMED FIT TO PROTECT PROPERTY AND IMPROVEMENTS. ANY DEPOSITING OF SILT OR MUD ON NEW OR EXISTING PAVEMENT OR IN EXISTING STORM SEWERS OR SWALES SHALL BE REMOVED AFTER EACH RAIN AND EFFECTED AREAS CLEANED TO THE SATISFACTION OF THE OWNER, ALL AT THE EXPENSE OF THE CONTRACTOR. THE SILT FENCES SHALL BE REMOVED BY THE CONTRACTOR AFTER THE TURF IS ESTABLISHED.
- EROSION CONTROL BMP'S SHOWN SHALL BE USED AS NEEDED OR AS SPECIFIED IN THE PROJECT SWPPP. IT IS THE CONTRACTORS RESPONSIBILITY TO MAINTAIN COMPLIANCE.
- PROVIDE EROSION AND SEDIMENT CONTROL AT THE PERIMETER OF ALL TEMPORARY STOCKPILES.
- ALL DISTURBED AREAS NOT COVERED IN AGGREGATE OR PAVEMENT SHALL BE STABILIZED AND SEEDED PER THE PROJECT SWPPP AFTER COMPLETION OF GROUND DISTURBING ACTIVITIES.
- TURNING RADII PROVIDED BY XCEL ENERGY. RADII HAVE NOT BEEN VERIFIED BY WESTWOOD PROFESSIONAL SERVICES.
- DRIVEWAY ENTRANCE CULVERT SIZE DETERMINED BY NDDOT PERMIT. CULVERT SHALL BE INSTALLED TO MEET PERMIT REQUIREMENTS.

Grading Construction Sequencing

- NO SEDIMENT BASINS WILL BE NEEDED.
- INSTALL PERIMETER CONTROLS PRIOR TO EARTHMOVING ACTIVITIES COMMENCING.
- SITE GRADING SHALL BE PHASED, AS BEST PRACTICAL, TO MINIMIZE SOILS LOSS.
- AREAS NOT COVERED BY GRAVEL/PAVEMENT SHALL BE SEEDED AND MULCHED AFTER SITE GRADING IS COMPLETE ACCORDING TO TIMELINE IN SWPPP.

NO CHANGES PERMITTED WITHOUT APPROVAL ONLY
FOR REFERENCE ONLY

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COURTENAY WIND - COLLECTOR SUBSTATION
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WANZEK
 a MacTec company

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O&M Notes

CIVIL PLANS SHEET **60**

ENERGY SUPPLY ENGINEERING & CONSTRUCTION

NH-217540-60

REV 9