

DRIVEWAY APPLICATION & PERMIT

North Dakota Department of Transportation, Maintenance
SFN 5918 (3-2016)

Permit Number			
1	9	1	9
District Number			
6	7		

Applicant Aurora Wind Project, LLC.			
Address 16105 W 113th Street Ste 105	City Lenexa	State KS	ZIP Code 66219

Driveway Information on State Highway Right of Way

Number of Driveways 1	<input type="checkbox"/> Private <input checked="" type="checkbox"/> Commercial	Direction <input type="checkbox"/> N <input checked="" type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	side of Route 50
Location NE 1/4 of Section 27-159N-97W			
Town N/A	Highway 50	Junction N/A	Mile Marker Number <u>40.92</u> 562 W of MM-41 40.8936 RT
Description of proposed work on state right of way and type of business served. Temporary modification of an existing driveway to accommodate the crane crossing of HWY 50. Traffic counts TBD. Post construction the temporary crane path material will be removed and the land will be restored to the pre-construction condition. See State Highway Access A drawing for details.			
TWE Lease Agreement: 3184000 001 Sevre, Lyle.			

Applicant agrees that any permit issued and any entrance built or work done shall be in accordance with plans attached hereto and made a part hereof, and Permit Specifications, printed on the reverse side of this sheet. If the applicant fails to construct the drive to the specified dimensions, including the proper culvert length and inslopes, the Department of Transportation, hereinafter referred to as NDDOT, will either cancel this permit and remove the drive or make the necessary corrections and the Applicant will reimburse NDDOT for such work.

APPLICANT

Name (Type or Print) Lyle Sevre

X [Signature]
Signature

Title Land owner

Date Aug 7, 2019

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

JOEL M. WILT
District Engineer (Type or Print)

X [Signature]
Signature

Date 8/27/19

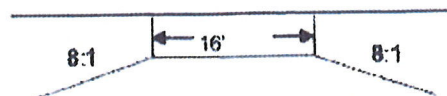
Permit granted

Date 8/27/19

Construction shall be completed by

Date 12/1/20

Sketch



Original to District File, copy to Applicant
Please send completed form to Pavement Management Engineer

DRIVEWAY PERMIT SPECIFICATIONS

1. The total cost of all construction and maintenance of the work specified shall be borne by the Applicant, his grantees, successors, and assigns: except that the state will maintain the shoulder of the roadway.
2. The applicant shall be required to wear an ANSI/ISEA 107-2004 Class II high visibility garment while within the highway right-of-way as per the requirements of 23 CFR 634.
3. It is understood by the Applicant that the state does not assume any responsibility for the removal or clearance of snow, ice, or sleet, or the opening of windrows of such materials, upon any portion of the driveway even though snow, ice, or sleet is deposited or windrowed on said drive by its authorized representative engaged in normal winter maintenance operation.
4. No driveway shall be considered as completed until checked and approved by NDDOT. Surfacing may be omitted on field entrances if so specified in the application.
5. A driveway, as referred to in this permit, shall be the traveled area between the highway roadway surface and the adjacent right-of-way line. Said driveway shall be used only for the purpose of providing entrance to and exit from the Applicant's property.
6. No driveway, or improvement constructed on the highway right-of-way shall be altered or relocated without permission of the district engineer of NDDOT.
7. The Applicant agrees to perform all work in accordance with this permit, and to indemnify and hold harmless NDDOT, its officers, and employees from any and all liability, judgments, costs, expenses, and claims growing out of damages, or alleged damages, of any nature whatsoever, to any person or property arising out of performance or nonperformance of said work, or the existence of said driveways.
8. It is understood by the Applicant that the location, construction, and maintenance of driveways are under the supervision of NDDOT at all times, and that in granting this permit NDDOT waives none of its powers or rights to direct the removal, relocation, or proper maintenance in the future of any driveways within the right of way of the state highway.
9. The granting of this permit does not vest the Applicant with the exclusive use of the driveway. NDDOT retains the right to diminish and expand the use of the driveway as required in the interest of the safety of highway traffic.
10. Wetland: The applicant shall certify that no wetlands will be impacted by the installation of the driveway. If wetlands are impacted, the applicant shall coordinate with the US Army Corps of Engineers (USACE), North Dakota Regulatory Office to determine if a permit is required or mitigation is needed. Certification of avoidance, a wetland delineation, or a permit (if required) from the USACE shall be attached to the application.
11. The Applicant, for him or herself, his or her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that 1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, 2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, 3) that the Applicant will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities set forth in this Assurance.
12. That in the event of breach of any of the above non-discrimination covenants, NDDOT will have the right to terminate this Permit and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said Permit had never been made or issued.
13. Risk Management Appendix, attached, is hereby incorporated and made a part of this agreement.
14. District Engineer to provide copy of approved permit to NDDOT, Planning and Asset Management, Pavement Management Division.

BY

Risk Management Appendix

Permits and Licenses with Private Individuals, Companies, Corporations, Etc. (referred to as Recipient):

Recipient agrees to defend, indemnify, and hold harmless the state of North Dakota, its agencies, officers and employees (State), from and against claims based on the vicarious liability of the State or its agents, but not against claims based on the State's contributory negligence, comparative and/or contributory negligence or fault, sole negligence, or intentional misconduct. The legal defense provided by the Recipient to the State under this provision must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary. Recipient also agrees to defend, indemnify, and hold the State harmless for all costs, expenses and attorneys' fees incurred if the State prevails in an action against the Recipient in establishing and litigating the indemnification coverage provided herein. This obligation shall continue after the termination of this agreement.

Recipient shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

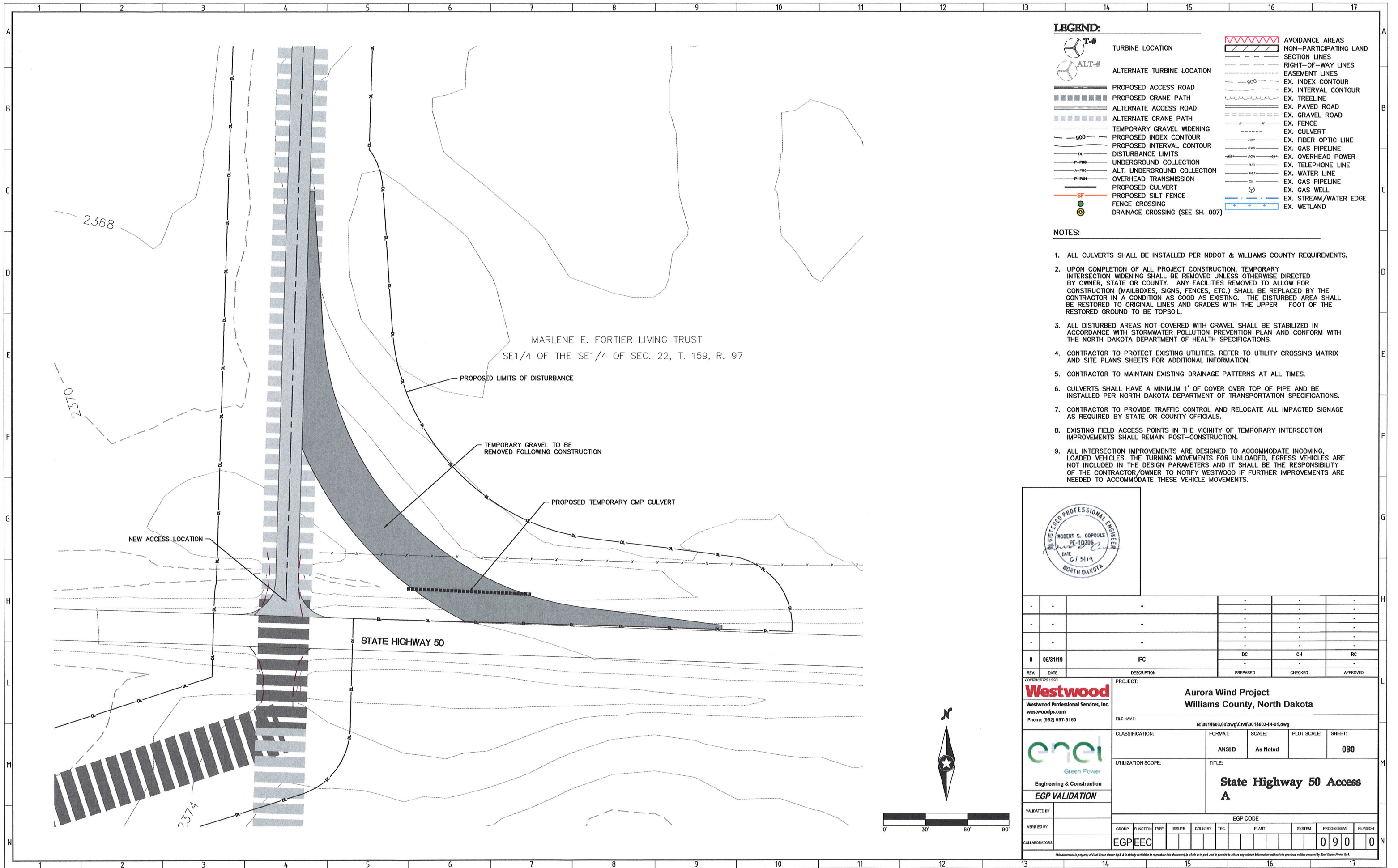
- 1) **Commercial general liability and automobile liability** insurance – minimum limits of liability required are **\$250,000 per person** and **\$1,000,000 per occurrence**.
- 2) **Workers compensation** insurance meeting all statutory limits.
- 3) The State of North Dakota and its agencies, officers, and employees (State) shall be endorsed as an **additional** insured on the commercial general liability and automobile liability policies.
- 4) Said endorsements shall contain a **"Waiver of Subrogation"** in favor of the state of North Dakota.
- 5) The policies and endorsements may not be canceled or modified without **thirty (30) days prior written notice** to the undersigned State representative.

Recipient shall furnish a certificate of insurance evidencing the requirements in 1, 3, and 4 above to the undersigned State representative prior to commencement of this agreement.

The State reserves the right to obtain complete, certified copies of all required insurance documents, policies, or endorsements at any time. If Recipient's insurance will expire prior to the term of this agreement, Recipient shall renew the above requirements and furnish a certificate of insurance evidencing the renewal to the undersigned State representative prior to the expiration of the insurance. Any attorney who represents the State under this policy must first qualify as and be appointed by the North Dakota Attorney General as a Special Assistant Attorney General as required under N.D.C.C. Section 54-12-08.

When a portion of a Contract is sublet, the Recipient shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Recipient and the State as a result of work undertaken by the Subcontractor. In addition, the Recipient shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Recipient. The Recipient shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

Recipient's insurance coverage shall be primary (i.e., pay first) as respects any insurance, self-insurance or self-retention maintained by the State. Any insurance, self-insurance or self-retention maintained by the State shall be excess of the Recipient's insurance and shall not contribute with it. The insolvency or bankruptcy of the insured Recipient shall not release the insurer from payment under the policy, even when such insolvency or bankruptcy prevents the insured Recipient from meeting the retention limit under the policy. Any deductible amount or other obligations under the policy(ies) shall be the sole responsibility of the Recipient. This insurance may be in policy or policies of insurance, primary and excess, including the so-called umbrella or catastrophe form and be placed with insurers rated "A-" or better by A.M. Best Company, Inc. The State will be indemnified, saved, and held harmless to the full extent of any coverage actually secured by the Recipient in excess of the minimum requirements set forth above.

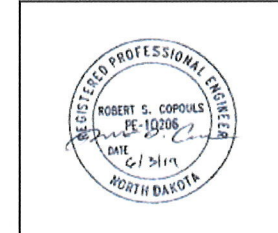


LEGEND:

- TURBINE LOCATION
- ALTERNATE TURBINE LOCATION
- PROPOSED ACCESS ROAD
- PROPOSED CRANE PATH
- ALTERNATE ACCESS ROAD
- ALTERNATE CRANE PATH
- TEMPORARY GRAVEL WIDENING
- PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- DISTURBANCE LIMITS
- UNDERGROUND COLLECTION
- ALT. UNDERGROUND COLLECTION
- OVERHEAD TRANSMISSION
- PROPOSED CULVERT
- PROPOSED SILT FENCE
- FENCE CROSSING
- DRAINAGE CROSSING (SEE SH. 007)
- AVOIDANCE AREAS
- NON-PARTICIPATING LAND
- SECTION LINES
- RIGHT-OF-WAY LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. TREELINE
- EX. PAVED ROAD
- EX. GRAVEL ROAD
- EX. FENCE
- EX. CULVERT
- EX. FIBER OPTIC LINE
- EX. GAS PIPELINE
- EX. OVERHEAD POWER
- EX. TELEPHONE LINE
- EX. WATER LINE
- EX. GAS PIPELINE
- EX. GAS WELL
- EX. STREAM/WATER EDGE
- EX. WETLAND

NOTES:

1. ALL CULVERTS SHALL BE INSTALLED PER NDDOT & WILLIAMS COUNTY REQUIREMENTS.
2. UPON COMPLETION OF ALL PROJECT CONSTRUCTION, TEMPORARY INTERSECTION WIDENING SHALL BE REMOVED UNLESS OTHERWISE DIRECTED BY OWNER, STATE OR COUNTY. ANY FACILITIES REMOVED TO ALLOW FOR CONSTRUCTION (MAILBOXES, SIGNS, FENCES, ETC.) SHALL BE REPLACED BY THE CONTRACTOR IN A CONDITION AS GOOD AS EXISTING. THE DISTURBED AREA SHALL BE RESTORED TO ORIGINAL LINES AND GRADES WITH THE UPPER FOOT OF THE RESTORED GROUND TO BE TOPSOIL.
3. ALL DISTURBED AREAS NOT COVERED WITH GRAVEL SHALL BE STABILIZED IN ACCORDANCE WITH STORMWATER POLLUTION PREVENTION PLAN AND CONFORM WITH THE NORTH DAKOTA DEPARTMENT OF HEALTH SPECIFICATIONS.
4. CONTRACTOR TO PROTECT EXISTING UTILITIES. REFER TO UTILITY CROSSING MATRIX AND SITE PLANS SHEETS FOR ADDITIONAL INFORMATION.
5. CONTRACTOR TO MAINTAIN EXISTING DRAINAGE PATTERNS AT ALL TIMES.
6. CULVERTS SHALL HAVE A MINIMUM 1' OF COVER OVER TOP OF PIPE AND BE INSTALLED PER NORTH DAKOTA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
7. CONTRACTOR TO PROVIDE TRAFFIC CONTROL AND RELOCATE ALL IMPACTED SIGNAGE AS REQUIRED BY STATE OR COUNTY OFFICIALS.
8. EXISTING FIELD ACCESS POINTS IN THE VICINITY OF TEMPORARY INTERSECTION IMPROVEMENTS SHALL REMAIN POST-CONSTRUCTION.
9. ALL INTERSECTION IMPROVEMENTS ARE DESIGNED TO ACCOMMODATE INCOMING, LOADED VEHICLES. THE TURNING MOVEMENTS FOR UNLOADED, EGRESS VEHICLES ARE NOT INCLUDED IN THE DESIGN PARAMETERS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/OWNER TO NOTIFY WESTWOOD IF FURTHER IMPROVEMENTS ARE NEEDED TO ACCOMMODATE THESE VEHICLE MOVEMENTS.



REV.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
0	05/31/19	IFC	DC	CH	RC

Westwood
Westwood Professional Services, Inc.
westwoodps.com
Phone: (852) 937-5150

enel
Green Power
Engineering & Construction
EGP VALIDATION

VALIDATED BY: _____
VERIFIED BY: _____
COLLABORATORS: _____

PROJECT: Aurora Wind Project
Williams County, North Dakota

FILE NAME: N:\0014603.00\dwg\Civil\0014603-IN-01.dwg

CLASSIFICATION: ANSI D SCALE: As Noted PLOT SCALE: SHEET: 090

UTILIZATION SCOPE: TITLE: **State Highway 50 Access A**

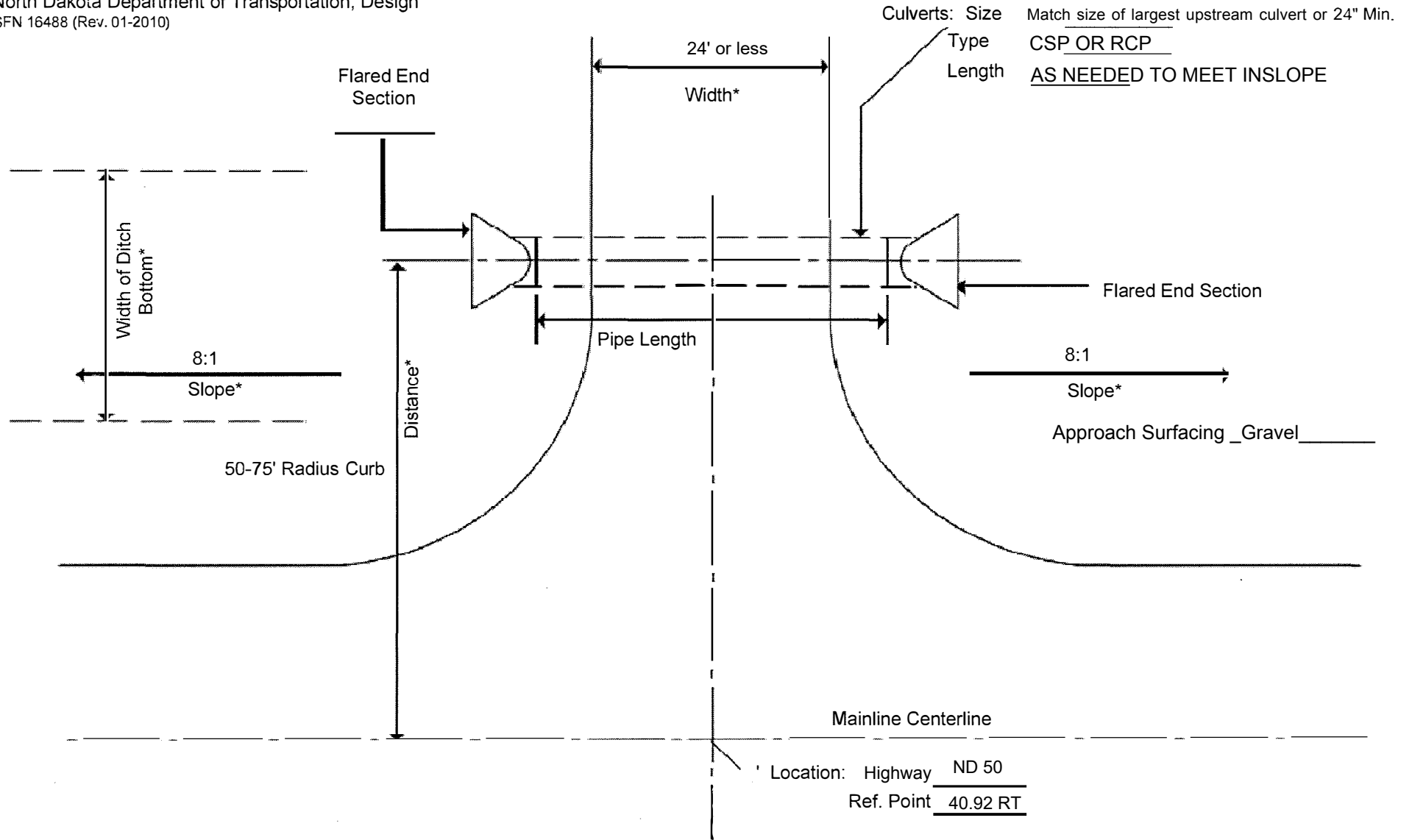
EGP CODE

GROUP	FUNCTION	TYPE	ISSUER	COUNTRY	TEC.	PLANT	SYSTEM	PROGRESSIVE	REVISION
EGP	EEC							090	0

This document is property of Enel Green Power SpA. It is strictly forbidden to reproduce this document, in whole or in part, and to provide to others any related information without the previous written consent by Enel Green Power SpA.

APPROACHES

North Dakota Department of Transportation, Design
SFN 16488 (Rev. 01-2010)



Location: Highway ND 50
Ref. Point 40.92 RT

*Enter dimension above line.

Reference Plans

Remarks

Erosion Control should be installed according to Best Management Practices (BMPs) and Seeding of the disturbed area according to Section 251 of 'Standard Specifications for Road and Bridge Construction' that specifies Class II Seed Mixture.

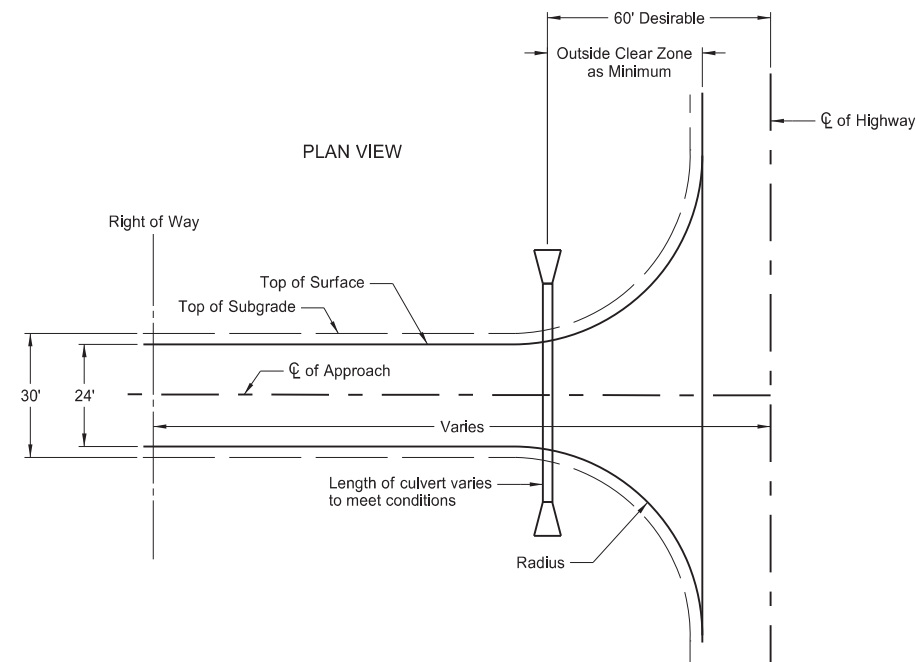
Section Line
Private Drive

STANDARD RURAL APPROACHES

D-203-8

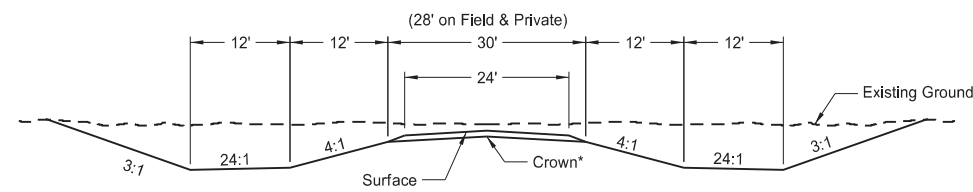
NOTES:

1. Max breakover between approach storage platform and highway shall not exceed 5%.
2. The approach slope shall be measured outside the area of mainline inslope influence.



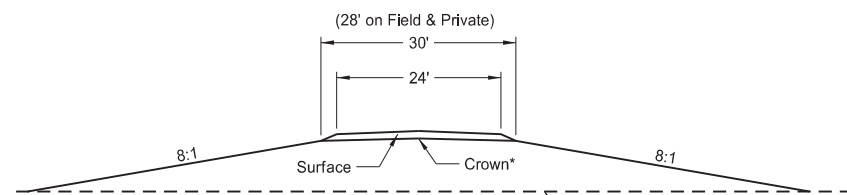
CRITERIA FOR RURAL APPROACH TYPES

	Field Drives	Private Drives	Low Volume Public Roads
Radius	R=24 ft	R=30 ft	R=40 ft
Maximum Grade	10%	7%	7%
Storage Platform	20 ft	24 ft	30 ft
Vertical Curve Length	10 ft	10 ft	Varies (Min. 20 mph)

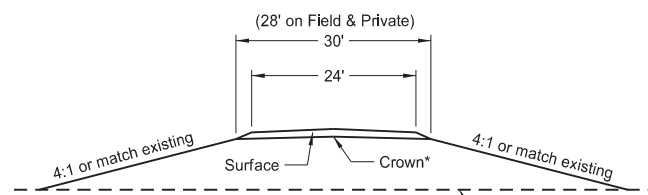


SECTION A-A

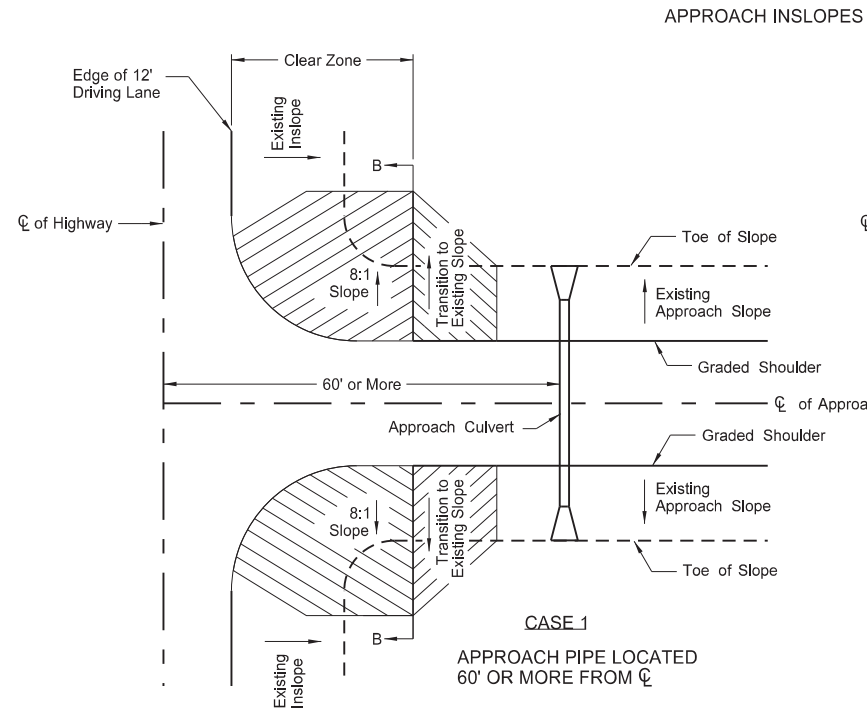
*2.1% crown for paved surface
*3.0% crown for gravel surface



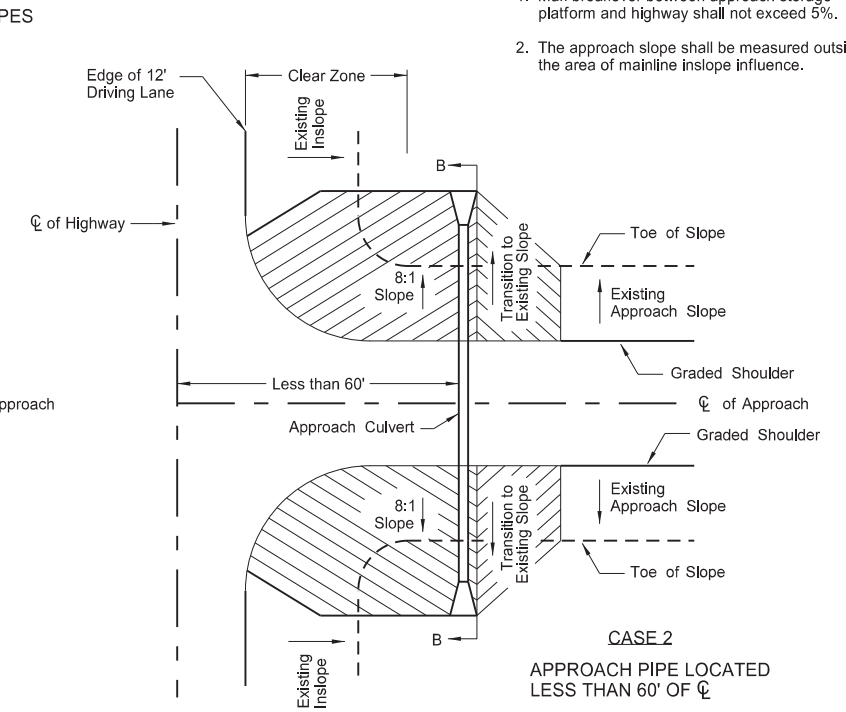
SECTION B-B



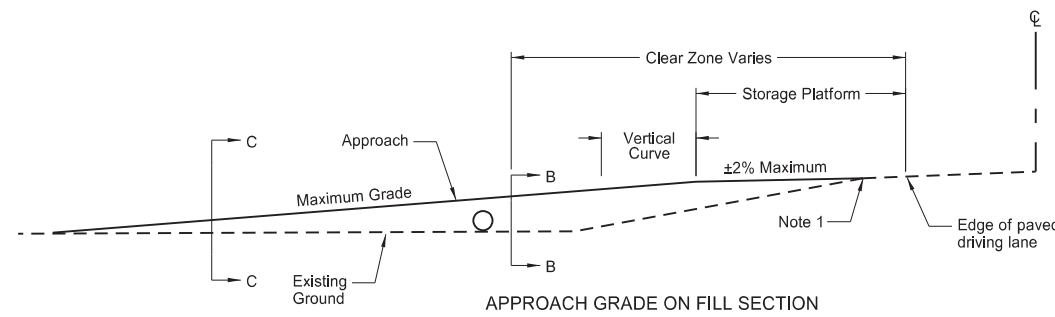
SECTION C-C



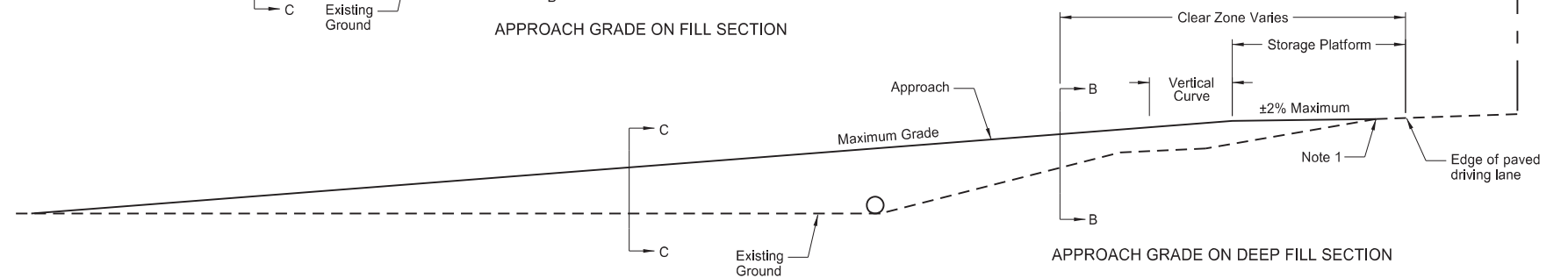
CASE 1
APPROACH PIPE LOCATED
60' OR MORE FROM C



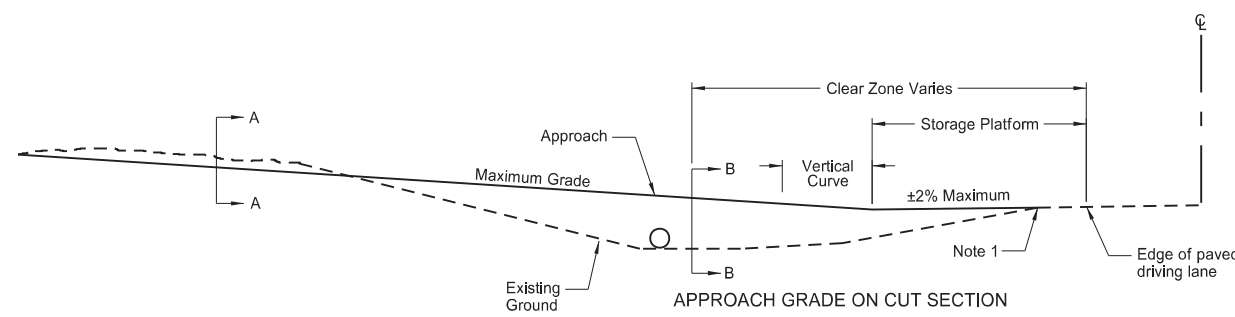
CASE 2
APPROACH PIPE LOCATED
LESS THAN 60' OF C



APPROACH GRADE ON FILL SECTION



APPROACH GRADE ON DEEP FILL SECTION



APPROACH GRADE ON CUT SECTION

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-25-14	
REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by Roger Weigel Registration Number PE-2930, on 02/25/14 and the original document is stored at the North Dakota Department of Transportation

ROAD CLOSURE LAYOUTS

Notes

- Variables
 - S = Numerical value of speed limit or 85th percentile.
 - W = The width of taper.
 - L = Minimum length of taper, or $S \times W$ for freeways, expressways, and all other roads with speeds of 45 mph or greater, or $W \times S^2/60$ for urban, residential, and other streets with speeds of 40 mph or less.
- Barricades placed on roadway shall be on a moveable assembly. Signs placed on roadway shall be placed on skid mounted assemblies.
- Delineator drums, barricades or cones used for tapering traffic shall be spaced at the dimension "S". Delineator drums or cones used for tangents shall be spaced at 2 times dimension "S".
- Sequencing Arrow Panels
 - Panels should normally be placed at the beginning of the taper. Where shoulder width does not provide sufficient room, the panel should be moved closer to the work area so that it can be placed on the roadway surface. See Shoulder Closure Standard Drawing.
 - Type A shall be used on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
 - Type B shall be used on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
 - Type C shall be used on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
- The speed limit shall be re-established. The exact speed limit shall be determined in the field, dependent on location and conditions.
- The reduced speed limit shall be determined dependent on the in place speed limit before construction. The speed limit reduction should not exceed 10 mph below the existing speed limit, unless the design speed of the work zone feature has been reduced below the 10 mph. In this case, the speed limit reduction shall not exceed 30 MPH. Where speed limits are to be reduced more than 30 MPH, a second speed limit sign shall be installed with the desired speed reduction but shall not exceed 30 MPH. The second speed limit sign shall be placed at $\frac{1}{2}$ B.
- Use when work area is 1 mile or longer.
- When warning signs are used in urban areas and the signs are not portable, flags shall be installed. The flags shall be 24 inches square, mounted perpendicular to the edges of the diamond sign, and at such a distance above the edge so that when the flag is limp it will not touch the sign. Rural areas will not require flags.
- Existing speed limit signs within a reduced speed zone shall be covered.
- Where necessary, safe speed to be determined by the Engineer.
- The contractor has the option of using portable sign supports in lieu of post mounted signs in accordance with the NDDOT Standard Specifications.
- G20-55-96 sign is not required if this standard is part of other traffic control layouts, or the work is less than 15 days.

Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

KEY

	Type III barricade		Work area
	Sign		Flagger
	Delineator drum		Sequencing arrow panel
	Tubular markers		Vertical panels back to back

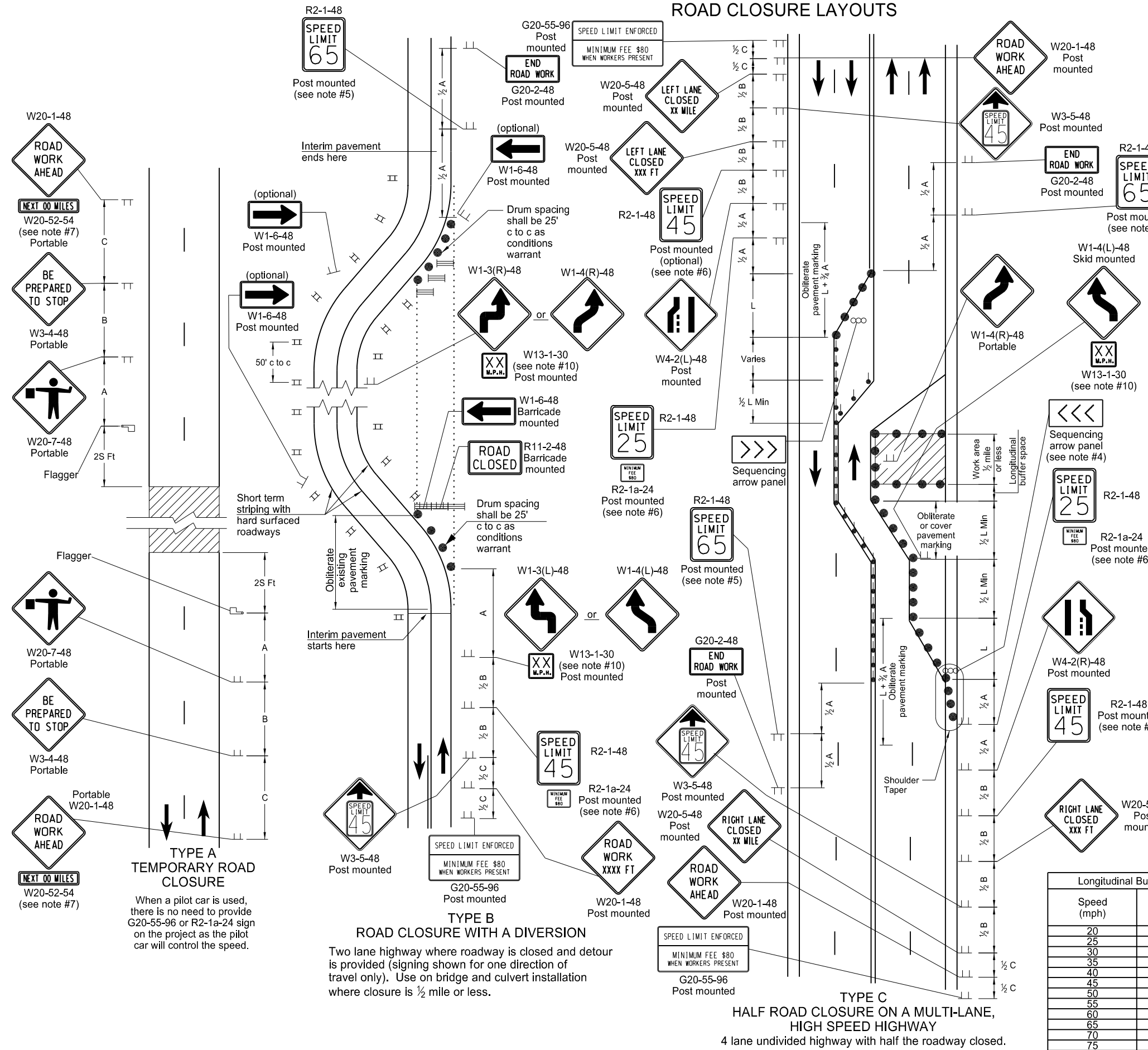
Longitudinal Buffer Space

Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

NORTH DAKOTA
DEPARTMENT OF TRANSPORTATION
9-27-13

REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by
 Roger Weigel
 Registration Number
 PE-2930,
 on 09/27/13 and the original document is stored at the
 North Dakota Department
 of Transportation



**TYPE A
TEMPORARY ROAD CLOSURE**
 When a pilot car is used, there is no need to provide G20-55-96 or R2-1a-24 sign on the project as the pilot car will control the speed.

**TYPE B
ROAD CLOSURE WITH A DIVERSION**
 Two lane highway where roadway is closed and detour is provided (signing shown for one direction of travel only). Use on bridge and culvert installation where closure is $\frac{1}{2}$ mile or less.

**TYPE C
HALF ROAD CLOSURE ON A MULTI-LANE,
HIGH SPEED HIGHWAY**
 4 lane undivided highway with half the roadway closed.

DRIVEWAY APPLICATION & PERMIT

North Dakota Department of Transportation, Maintenance
SFN 5918 (3-2016)

Permit Number			
1	9	2	0
District Number			
6	7		

Applicant Aurora Wind Project, LLC.			
Address 16105 W 113th Street Ste 105	City Lenexa	State KS	ZIP Code 66219

Driveway Information on State Highway Right of Way

Number of Driveways 1	<input type="checkbox"/> Private <input checked="" type="checkbox"/> Commercial	Direction <input checked="" type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	side of Route 50
--------------------------	---	--	------------------

Location
SE 1/4 of Section 22-159N-97W

Town N/A	Highway 50	Junction N/A	Mile Marker Number ~562' W of MM-41 40.92 ^{LT}
-------------	---------------	-----------------	---

Description of proposed work on state right of way and type of business served.
Modification of an existing driveway that will serve as the permanent turbine access road entrance and installation of a temporary radius to accommodate the delivery of wind turbine components. This is also the location of a proposed crane crossing of HWY 50. Traffic counts TBD. Post construction the temporary radius and crane path material will be removed and the land will be restored to the pre-construction condition. See State Highway Access A drawing for details.

TWE Lease Agreement: 3267100 000 Marlene E. Fortier Living Trust UDT dated 11/3/04.

Applicant agrees that any permit issued and any entrance built or work done shall be in accordance with plans attached hereto and made a part hereof, and Permit Specifications, printed on the reverse side of this sheet. If the applicant fails to construct the drive to the specified dimensions, including the proper culvert length and inslopes, the Department of Transportation, hereinafter referred to as NDDOT, will either cancel this permit and remove the drive or make the necessary corrections and the Applicant will reimburse NDDOT for such work.

APPLICANT
Aurora Wind Project Inc. & Marlene E. Fortier Living Trust

Name (Type or Print) _____

By: Marlene E. Fortier, Trustee
Signature _____

Marlene E. Fortier Trustee
Title _____

8-3-19
Date _____

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

JOEL M. WILT
District Engineer (Type or Print) _____

Joel M. Wilt
Signature _____

8/27/19
Date _____

Permit granted _____

Date _____

Construction shall be completed by _____

Date **December 1st, 2020**



Original to District File, copy to Applicant
Please send completed form to Pavement Management Engineer

DRIVEWAY PERMIT SPECIFICATIONS

1. The total cost of all construction and maintenance of the work specified shall be borne by the Applicant, his grantees, successors, and assigns: except that the state will maintain the shoulder of the roadway.
2. The applicant shall be required to wear an ANSI/ISEA 107-2004 Class II high visibility garment while within the highway right-of-way as per the requirements of 23 CFR 634.
3. It is understood by the Applicant that the state does not assume any responsibility for the removal or clearance of snow, ice, or sleet, or the opening of windrows of such materials, upon any portion of the driveway even though snow, ice, or sleet is deposited or windrowed on said drive by its authorized representative engaged in normal winter maintenance operation.
4. No driveway shall be considered as completed until checked and approved by NDDOT. Surfacing may be omitted on field entrances if so specified in the application.
5. A driveway, as referred to in this permit, shall be the traveled area between the highway roadway surface and the adjacent right-of-way line. Said driveway shall be used only for the purpose of providing entrance to and exit from the Applicant's property.
6. No driveway, or improvement constructed on the highway right-of-way shall be altered or relocated without permission of the district engineer of NDDOT.
7. The Applicant agrees to perform all work in accordance with this permit, and to indemnify and hold harmless NDDOT, its officers, and employees from any and all liability, judgments, costs, expenses, and claims growing out of damages, or alleged damages, of any nature whatsoever, to any person or property arising out of performance or nonperformance of said work, or the existence of said driveways.
8. It is understood by the Applicant that the location, construction, and maintenance of driveways are under the supervision of NDDOT at all times, and that in granting this permit NDDOT waives none of its powers or rights to direct the removal, relocation, or proper maintenance in the future of any driveways within the right of way of the state highway.
9. The granting of this permit does not vest the Applicant with the exclusive use of the driveway. NDDOT retains the right to diminish and expand the use of the driveway as required in the interest of the safety of highway traffic.
10. Wetland: The applicant shall certify that no wetlands will be impacted by the installation of the driveway. If wetlands are impacted, the applicant shall coordinate with the US Army Corps of Engineers (USACE), North Dakota Regulatory Office to determine if a permit is required or mitigation is needed. Certification of avoidance, a wetland delineation, or a permit (if required) from the USACE shall be attached to the application.
11. The Applicant, for him or herself, his or her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that 1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, 2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, 3) that the Applicant will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities set forth in this Assurance.
12. That in the event of breach of any of the above non-discrimination covenants, NDDOT will have the right to terminate this Permit and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said Permit had never been made or issued.
13. Risk Management Appendix, attached, is hereby incorporated and made a part of this agreement.
14. District Engineer to provide copy of approved permit to NDDOT, Planning and Asset Management, Pavement Management Division.

By

Risk Management Appendix

Permits and Licenses with Private Individuals, Companies, Corporations, Etc. (referred to as Recipient):

Recipient agrees to defend, indemnify, and hold harmless the state of North Dakota, its agencies, officers and employees (State), from and against claims based on the vicarious liability of the State or its agents, but not against claims based on the State's contributory negligence, comparative and/or contributory negligence or fault, sole negligence, or intentional misconduct. The legal defense provided by the Recipient to the State under this provision must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary. Recipient also agrees to defend, indemnify, and hold the State harmless for all costs, expenses and attorneys' fees incurred if the State prevails in an action against the Recipient in establishing and litigating the indemnification coverage provided herein. This obligation shall continue after the termination of this agreement.

Recipient shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

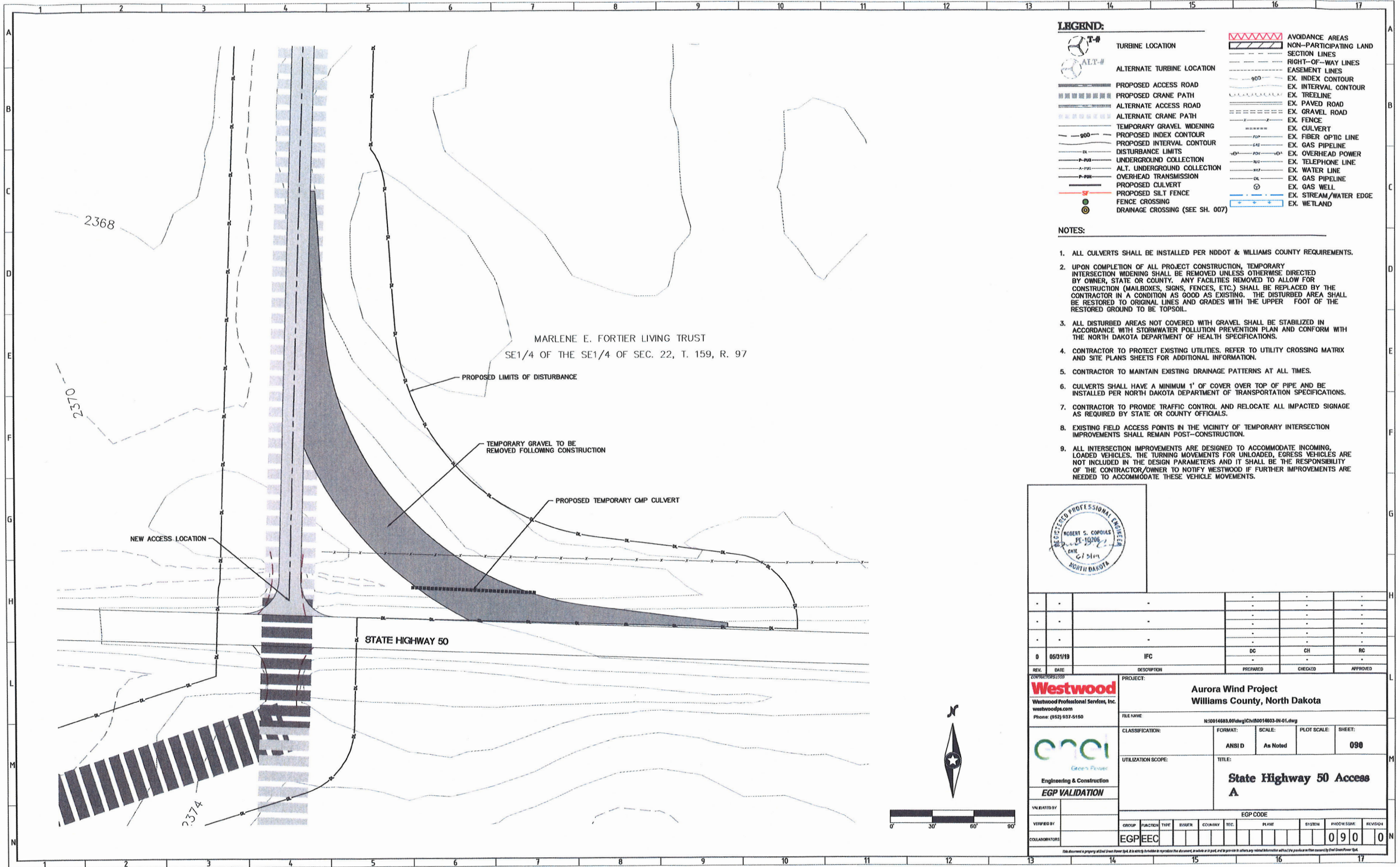
- 1) **Commercial general liability and automobile liability** insurance – minimum limits of liability required are **\$250,000 per person** and **\$1,000,000 per occurrence**.
- 2) **Workers compensation** insurance meeting all statutory limits.
- 3) The State of North Dakota and its agencies, officers, and employees (State) shall be endorsed as an **additional** insured on the commercial general liability and automobile liability policies.
- 4) Said endorsements shall contain a **"Waiver of Subrogation"** in favor of the state of North Dakota.
- 5) The policies and endorsements may not be canceled or modified without **thirty (30) days prior written notice** to the undersigned State representative.

Recipient shall furnish a certificate of insurance evidencing the requirements in 1, 3, and 4 above to the undersigned State representative prior to commencement of this agreement.

The State reserves the right to obtain complete, certified copies of all required insurance documents, policies, or endorsements at any time. If Recipient's insurance will expire prior to the term of this agreement, Recipient shall renew the above requirements and furnish a certificate of insurance evidencing the renewal to the undersigned State representative prior to the expiration of the insurance. Any attorney who represents the State under this policy must first qualify as and be appointed by the North Dakota Attorney General as a Special Assistant Attorney General as required under N.D.C.C. Section 54-12-08.

When a portion of a Contract is sublet, the Recipient shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Recipient and the State as a result of work undertaken by the Subcontractor. In addition, the Recipient shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Recipient. The Recipient shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

Recipient's insurance coverage shall be primary (i.e., pay first) as respects any insurance, self-insurance or self-retention maintained by the State. Any insurance, self-insurance or self-retention maintained by the State shall be excess of the Recipient's insurance and shall not contribute with it. The insolvency or bankruptcy of the insured Recipient shall not release the insurer from payment under the policy, even when such insolvency or bankruptcy prevents the insured Recipient from meeting the retention limit under the policy. Any deductible amount or other obligations under the policy(ies) shall be the sole responsibility of the Recipient. This insurance may be in policy or policies of insurance, primary and excess, including the so-called umbrella or catastrophe form and be placed with insurers rated "A-" or better by A.M. Best Company, Inc. The State will be indemnified, saved, and held harmless to the full extent of any coverage actually secured by the Recipient in excess of the minimum requirements set forth above.

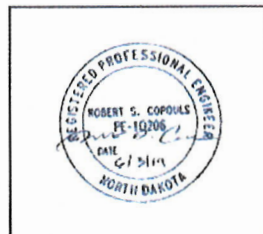


LEGEND:

- T-# TURBINE LOCATION
- ALT-# ALTERNATE TURBINE LOCATION
- PROPOSED ACCESS ROAD
- PROPOSED CRANE PATH
- ALTERNATE ACCESS ROAD
- ALTERNATE CRANE PATH
- TEMPORARY GRAVEL WIDENING
- PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- DISTURBANCE LIMITS
- UNDERGROUND COLLECTION
- ALT. UNDERGROUND COLLECTION
- OVERHEAD TRANSMISSION
- PROPOSED CULVERT
- PROPOSED SILT FENCE
- FENCE CROSSING
- DRAINAGE CROSSING (SEE SH. 007)
- AVOIDANCE AREAS
- NON-PARTICIPATING LAND
- SECTION LINES
- RIGHT-OF-WAY LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. TREELINE
- EX. PAVED ROAD
- EX. GRAVEL ROAD
- EX. FENCE
- EX. CULVERT
- EX. FIBER OPTIC LINE
- EX. GAS PIPELINE
- EX. OVERHEAD POWER
- EX. TELEPHONE LINE
- EX. WATER LINE
- EX. GAS PIPELINE
- EX. GAS WELL
- EX. STREAM/WATER EDGE
- EX. WETLAND

NOTES:

1. ALL CULVERTS SHALL BE INSTALLED PER NDDOT & WILLIAMS COUNTY REQUIREMENTS.
2. UPON COMPLETION OF ALL PROJECT CONSTRUCTION, TEMPORARY INTERSECTION WIDENING SHALL BE REMOVED UNLESS OTHERWISE DIRECTED BY OWNER, STATE OR COUNTY. ANY FACILITIES REMOVED TO ALLOW FOR CONSTRUCTION (MAILBOXES, SIGNS, FENCES, ETC.) SHALL BE REPLACED BY THE CONTRACTOR IN A CONDITION AS GOOD AS EXISTING. THE DISTURBED AREA SHALL BE RESTORED TO ORIGINAL LINES AND GRADES WITH THE UPPER FOOT OF THE RESTORED GROUND TO BE TOPSOIL.
3. ALL DISTURBED AREAS NOT COVERED WITH GRAVEL SHALL BE STABILIZED IN ACCORDANCE WITH STORMWATER POLLUTION PREVENTION PLAN AND CONFORM WITH THE NORTH DAKOTA DEPARTMENT OF HEALTH SPECIFICATIONS.
4. CONTRACTOR TO PROTECT EXISTING UTILITIES. REFER TO UTILITY CROSSING MATRIX AND SITE PLANS SHEETS FOR ADDITIONAL INFORMATION.
5. CONTRACTOR TO MAINTAIN EXISTING DRAINAGE PATTERNS AT ALL TIMES.
6. CULVERTS SHALL HAVE A MINIMUM 1' OF COVER OVER TOP OF PIPE AND BE INSTALLED PER NORTH DAKOTA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
7. CONTRACTOR TO PROVIDE TRAFFIC CONTROL AND RELOCATE ALL IMPACTED SIGNAGE AS REQUIRED BY STATE OR COUNTY OFFICIALS.
8. EXISTING FIELD ACCESS POINTS IN THE VICINITY OF TEMPORARY INTERSECTION IMPROVEMENTS SHALL REMAIN POST-CONSTRUCTION.
9. ALL INTERSECTION IMPROVEMENTS ARE DESIGNED TO ACCOMMODATE INCOMING, LOADED VEHICLES. THE TURNING MOVEMENTS FOR UNLOADED, EGRESS VEHICLES ARE NOT INCLUDED IN THE DESIGN PARAMETERS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/OWNER TO NOTIFY WESTWOOD IF FURTHER IMPROVEMENTS ARE NEEDED TO ACCOMMODATE THESE VEHICLE MOVEMENTS.



0	05/31/19	IFC	DC	CH	RC
REV.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Westwood
Westwood Professional Services, Inc.
westwoodps.com
Phone: (522) 937-5150

Green Power
Engineering & Construction
EGP VALIDATION

PROJECT: Aurora Wind Project
Williams County, North Dakota

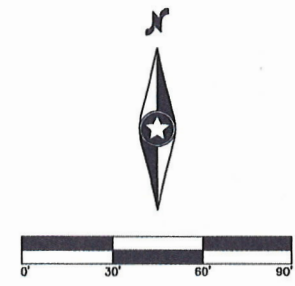
FILE NAME: N:\0014603.00\dwg\Civil\0014603-IN-01.dwg

CLASSIFICATION: ANSI D SCALE: As Noted PLOT SCALE: SHEET: 090

UTILIZATION SCOPE: TITLE: **State Highway 50 Access A**

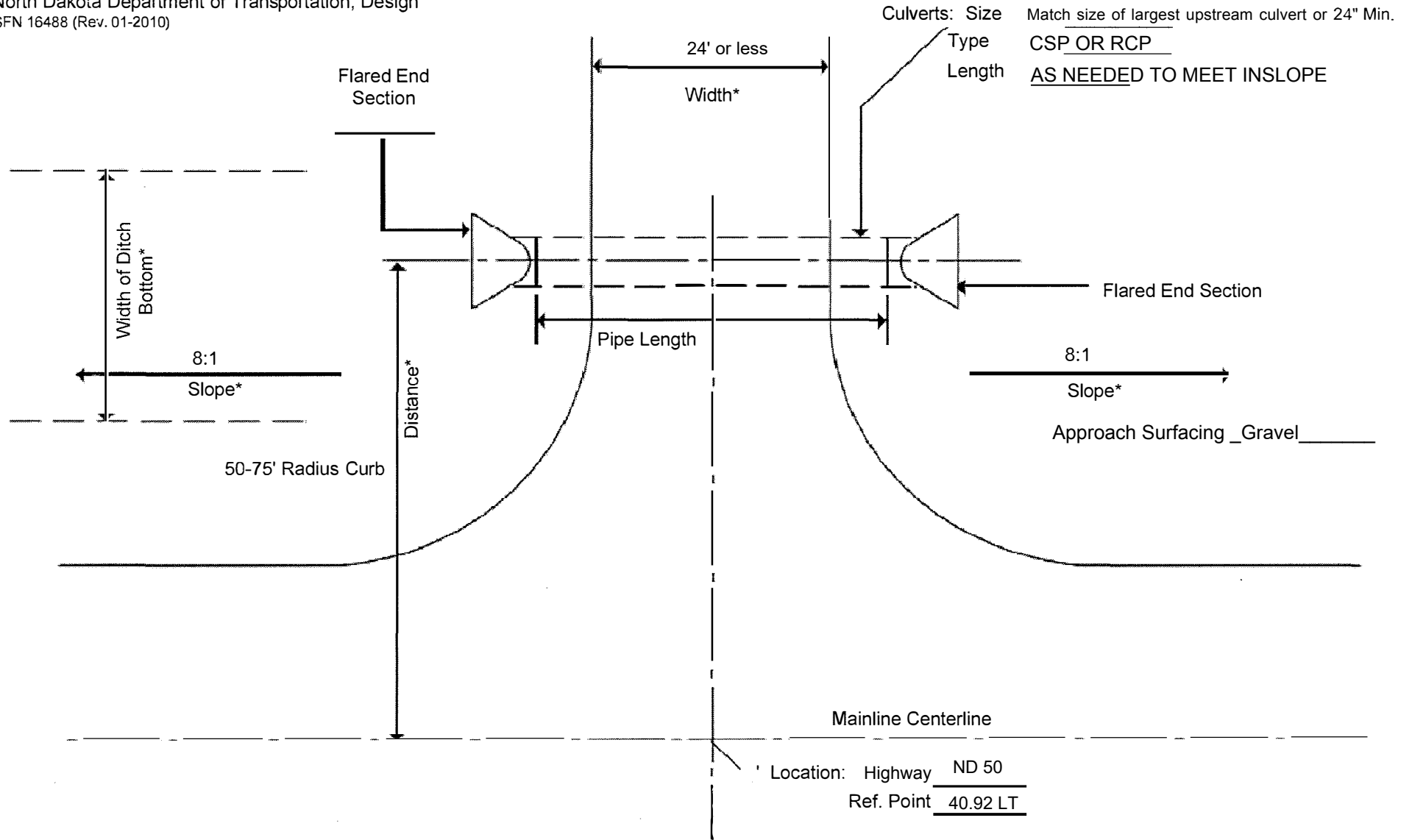
EGP CODE: EGPEEC

GROUP	FUNCTION	TYPE	ISSUER	COUNTRY	SEC.	PLANT	SYSTEM	PROJECT	REVISION
EGPEEC								090	0



APPROACHES

North Dakota Department of Transportation, Design
SFN 16488 (Rev. 01-2010)



*Enter dimension above line.

Reference Plans

Remarks

Erosion Control should be installed according to Best Management Practices (BMPs) and Seeding of the disturbed area according to Section 251 of 'Standard Specifications for Road and Bridge Construction' that specifies Class II Seed Mixture.

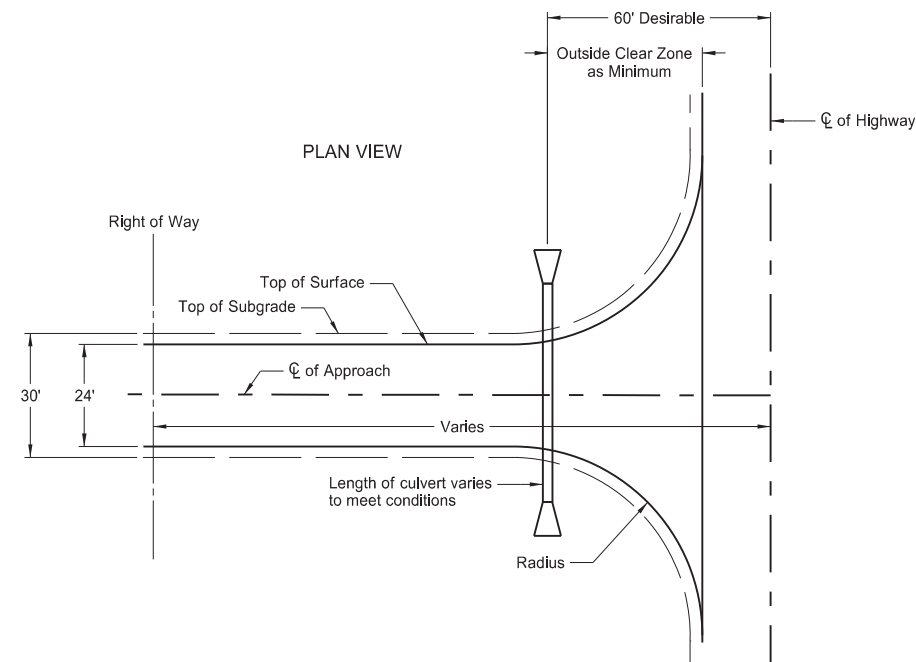
Section Line
Private Drive

STANDARD RURAL APPROACHES

D-203-8

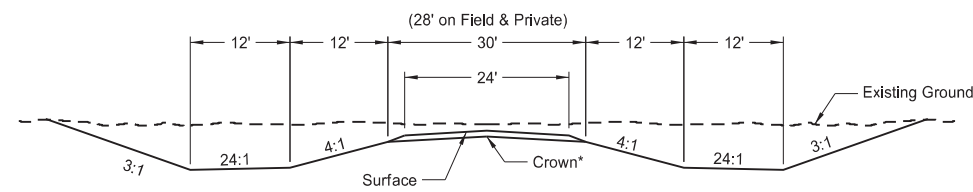
NOTES:

1. Max breakover between approach storage platform and highway shall not exceed 5%.
2. The approach slope shall be measured outside the area of mainline inslope influence.



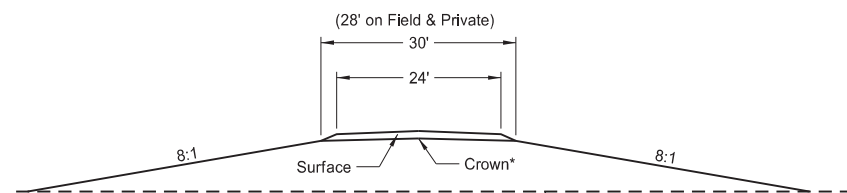
CRITERIA FOR RURAL APPROACH TYPES

	Field Drives	Private Drives	Low Volume Public Roads
Radius	R=24 ft	R=30 ft	R=40 ft
Maximum Grade	10%	7%	7%
Storage Platform	20 ft	24 ft	30 ft
Vertical Curve Length	10 ft	10 ft	Varies (Min. 20 mph)

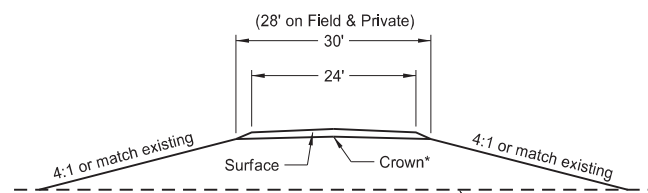


SECTION A-A

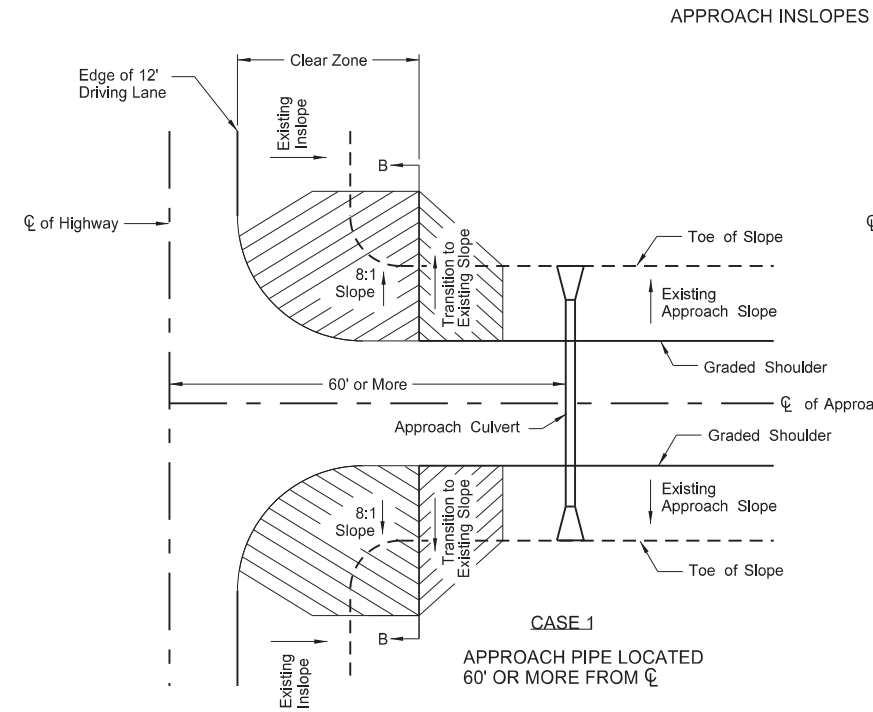
*2.1% crown for paved surface
*3.0% crown for gravel surface



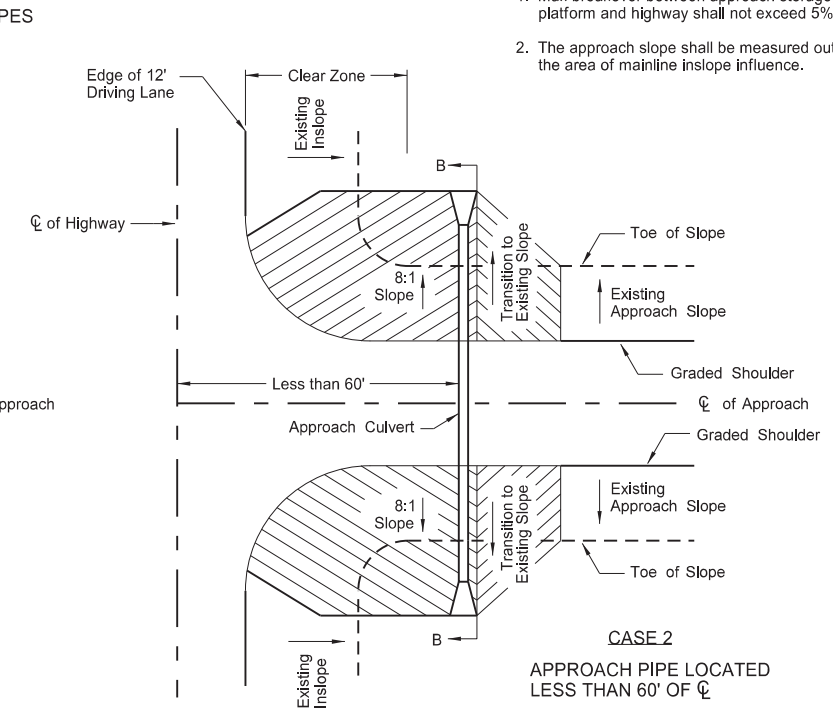
SECTION B-B



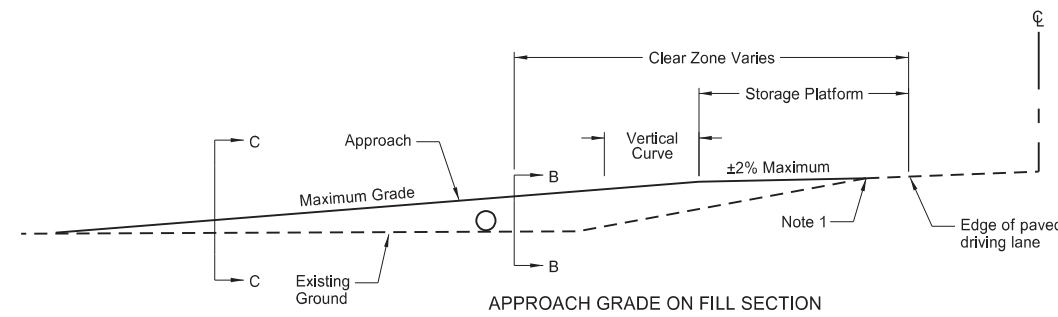
SECTION C-C



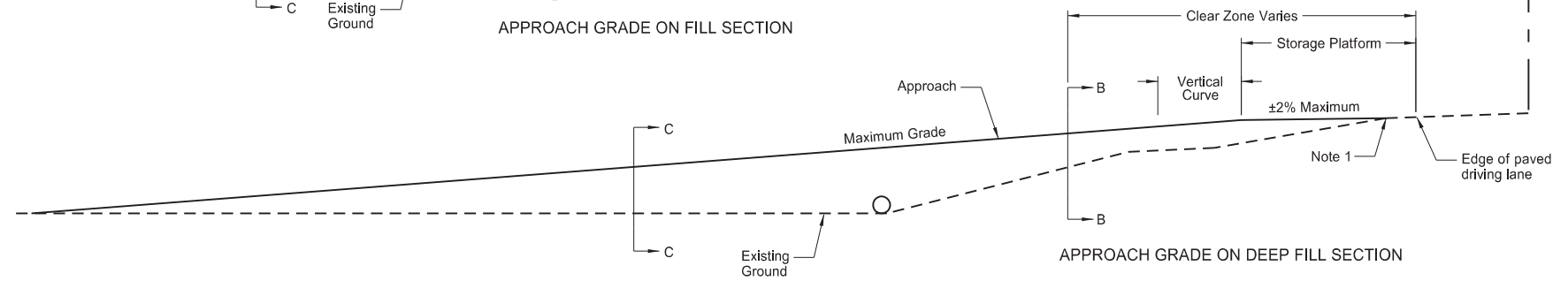
CASE 1
APPROACH PIPE LOCATED
60' OR MORE FROM C



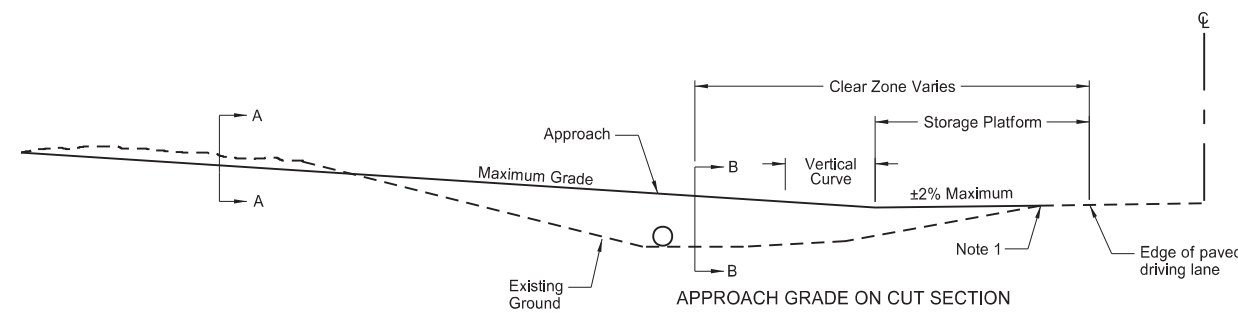
CASE 2
APPROACH PIPE LOCATED
LESS THAN 60' OF C



APPROACH GRADE ON FILL SECTION



APPROACH GRADE ON DEEP FILL SECTION



APPROACH GRADE ON CUT SECTION

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-25-14	
REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by Roger Weigel Registration Number PE-2930, on 02/25/14 and the original document is stored at the North Dakota Department of Transportation

ROAD CLOSURE LAYOUTS

Notes

- Variables
 - S = Numerical value of speed limit or 85th percentile.
 - W = The width of taper.
 - L = Minimum length of taper, or S x W for freeways, expressways, and all other roads with speeds of 45 mph or greater, or $W \times S^2/60$ for urban, residential, and other streets with speeds of 40 mph or less.
- Barricades placed on roadway shall be on a moveable assembly. Signs placed on roadway shall be placed on skid mounted assemblies.
- Delineator drums, barricades or cones used for tapering traffic shall be spaced at the dimension "S". Delineator drums or cones used for tangents shall be spaced at 2 times dimension "S".
- Sequencing Arrow Panels
 - Panels should normally be placed at the beginning of the taper. Where shoulder width does not provide sufficient room, the panel should be moved closer to the work area so that it can be placed on the roadway surface. See Shoulder Closure Standard Drawing.
 - Type A shall be used on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
 - Type B shall be used on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
 - Type C shall be used on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
- The speed limit shall be re-established. The exact speed limit shall be determined in the field, dependent on location and conditions.
- The reduced speed limit shall be determined dependent on the in place speed limit before construction. The speed limit reduction should not exceed 10 mph below the existing speed limit, unless the design speed of the work zone feature has been reduced below the 10 mph. In this case, the speed limit reduction shall not exceed 30 MPH. Where speed limits are to be reduced more than 30 MPH, a second speed limit sign shall be installed with the desired speed reduction but shall not exceed 30 MPH. The second speed limit sign shall be placed at 1/2 B.
- Use when work area is 1 mile or longer.
- When warning signs are used in urban areas and the signs are not portable, flags shall be installed. The flags shall be 24 inches square, mounted perpendicular to the edges of the diamond sign, and at such a distance above the edge so that when the flag is limp it will not touch the sign. Rural areas will not require flags.
- Existing speed limit signs within a reduced speed zone shall be covered.
- Where necessary, safe speed to be determined by the Engineer.
- The contractor has the option of using portable sign supports in lieu of post mounted signs in accordance with the NDDOT Standard Specifications. G20-55-96 sign is not required if this standard is part of other traffic control layouts, or the work is less than 15 days.

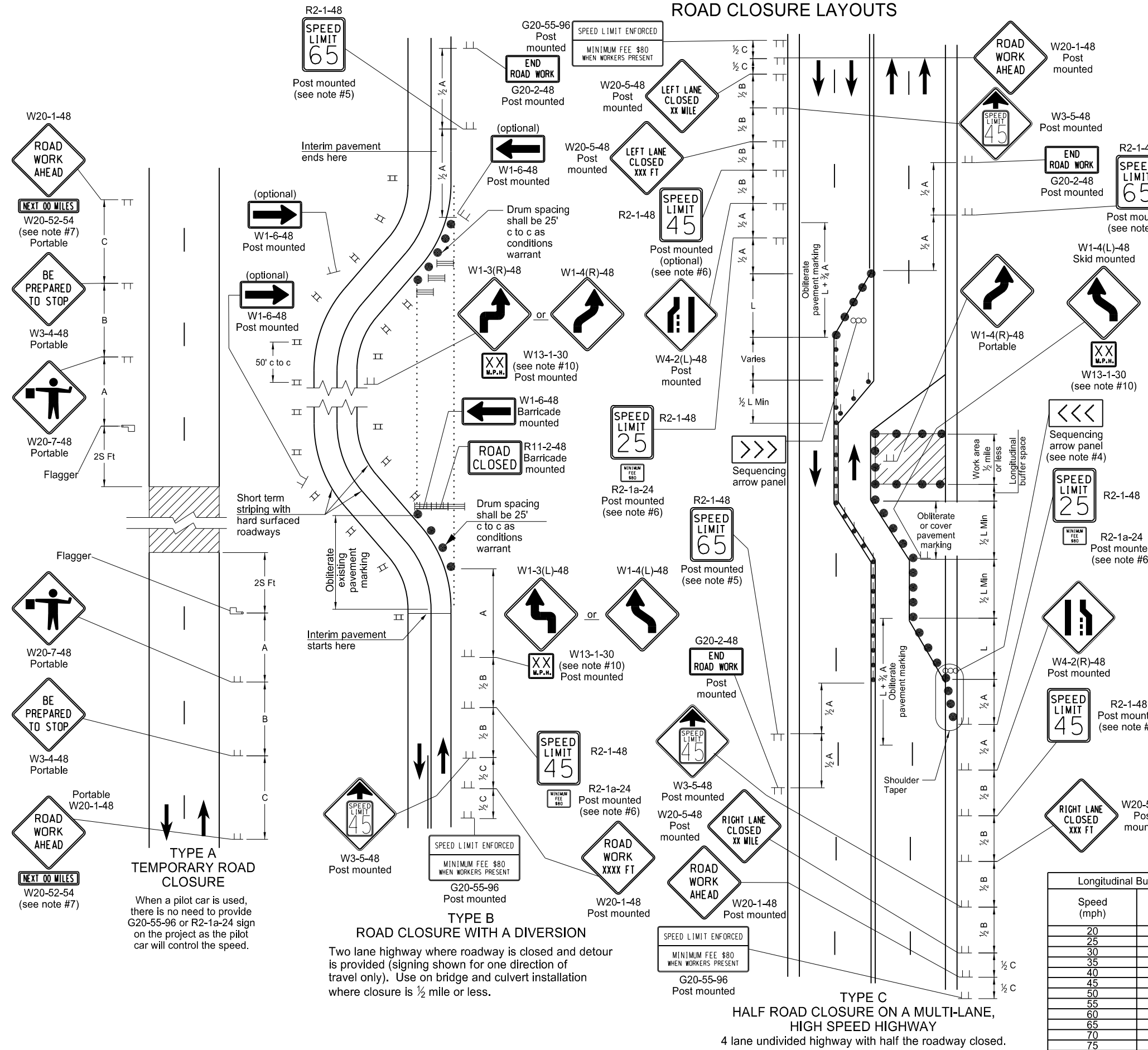
Road Type	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

KEY	
	Type III barricade
	Sign
	Delineator drum
	Tubular markers
	Work area
	Flagger
	Sequencing arrow panel
	Vertical panels back to back

Longitudinal Buffer Space	
Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-27-13	
REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by Roger Weigel Registration Number PE-2930, on 09/27/13 and the original document is stored at the North Dakota Department of Transportation



DRIVEWAY APPLICATION & PERMIT

North Dakota Department of Transportation, Maintenance
SFN 5918 (3-2016)

Permit Number			
1	9	2	1
District Number			
6	7		

Applicant Aurora Wind Project, LLC.			
Address 16105 W 113th Street Ste 105	City Lenexa	State KS	ZIP Code 66219

Driveway Information on State Highway Right of Way

Number of Driveways 1	<input type="checkbox"/> Private <input checked="" type="checkbox"/> Commercial	Direction <input checked="" type="checkbox"/> N <input type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	side of Route 50
Location SW 1/4 of Section 24-159N-97W			
Town N/A	Highway 50	Junction N/A	Mile Marker Number 1724 E of MM-42, 35 LT 1867
Description of proposed work on state right of way and type of business served. Modification of an existing driveway that will serve as the permanent turbine access road entrance and installation of a temporary radius to accommodate the delivery of wind turbine components. Traffic counts TBD. Post construction the temporary radius will be removed and the land will be restored to the pre-construction condition. See State Highway Access B drawing for details.			
TWE Lease Agreement: 3230600 001 Peterson, Gerald C., et al.			

Applicant agrees that any permit issued and any entrance built or work done shall be in accordance with plans attached hereto and made a part hereof, and Permit Specifications, printed on the reverse side of this sheet. If the applicant fails to construct the drive to the specified dimensions, including the proper culvert length and inslopes, the Department of Transportation, hereinafter referred to as NDDOT, will either cancel this permit and remove the drive or make the necessary corrections and the Applicant will reimburse NDDOT for such work.

APPLICANT

Name (Type or Print) _____
X Gerald C. Peterson
Signature _____
Title _____
Date 7-29-19

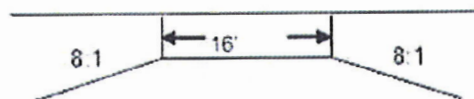
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Joel M. Wilt
District Engineer (Type or Print) _____
X Joel M. Wilt
Signature _____
Date 8/27/19

Permit granted _____
Date 8/27/19

Construction shall be completed by _____
Date December 1st, 2020

Sketch



Original to District File, copy to Applicant
Please send completed form to Pavement Management Engineer

DRIVEWAY PERMIT SPECIFICATIONS

1. The total cost of all construction and maintenance of the work specified shall be borne by the Applicant, his grantees, successors, and assigns: except that the state will maintain the shoulder of the roadway.
2. The applicant shall be required to wear an ANSI/ISEA 107-2004 Class II high visibility garment while within the highway right-of-way as per the requirements of 23 CFR 634.
3. It is understood by the Applicant that the state does not assume any responsibility for the removal or clearance of snow, ice, or sleet, or the opening of windrows of such materials, upon any portion of the driveway even though snow, ice, or sleet is deposited or windrowed on said drive by its authorized representative engaged in normal winter maintenance operation.
4. No driveway shall be considered as completed until checked and approved by NDDOT. Surfacing may be omitted on field entrances if so specified in the application.
5. A driveway, as referred to in this permit, shall be the traveled area between the highway roadway surface and the adjacent right-of-way line. Said driveway shall be used only for the purpose of providing entrance to and exit from the Applicant's property.
6. No driveway, or improvement constructed on the highway right-of-way shall be altered or relocated without permission of the district engineer of NDDOT.
7. The Applicant agrees to perform all work in accordance with this permit, and to indemnify and hold harmless NDDOT, its officers, and employees from any and all liability, judgments, costs, expenses, and claims growing out of damages, or alleged damages, of any nature whatsoever, to any person or property arising out of performance or nonperformance of said work, or the existence of said driveways.
8. It is understood by the Applicant that the location, construction, and maintenance of driveways are under the supervision of NDDOT at all times, and that in granting this permit NDDOT waives none of its powers or rights to direct the removal, relocation, or proper maintenance in the future of any driveways within the right of way of the state highway.
9. The granting of this permit does not vest the Applicant with the exclusive use of the driveway. NDDOT retains the right to diminish and expand the use of the driveway as required in the interest of the safety of highway traffic.
10. Wetland: The applicant shall certify that no wetlands will be impacted by the installation of the driveway. If wetlands are impacted, the applicant shall coordinate with the US Army Corps of Engineers (USACE), North Dakota Regulatory Office to determine if a permit is required or mitigation is needed. Certification of avoidance, a wetland delineation, or a permit (if required) from the USACE shall be attached to the application.
11. The Applicant, for him or herself, his or her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that 1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, 2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, 3) that the Applicant will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities set forth in this Assurance.
12. That in the event of breach of any of the above non-discrimination covenants, NDDOT will have the right to terminate this Permit and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said Permit had never been made or issued.
13. Risk Management Appendix, attached, is hereby incorporated and made a part of this agreement.
14. District Engineer to provide copy of approved permit to NDDOT, Planning and Asset Management, Pavement Management Division.

BY

Risk Management Appendix

Permits and Licenses with Private Individuals, Companies, Corporations, Etc. (referred to as Recipient):

Recipient agrees to defend, indemnify, and hold harmless the state of North Dakota, its agencies, officers and employees (State), from and against claims based on the vicarious liability of the State or its agents, but not against claims based on the State's contributory negligence, comparative and/or contributory negligence or fault, sole negligence, or intentional misconduct. The legal defense provided by the Recipient to the State under this provision must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary. Recipient also agrees to defend, indemnify, and hold the State harmless for all costs, expenses and attorneys' fees incurred if the State prevails in an action against the Recipient in establishing and litigating the indemnification coverage provided herein. This obligation shall continue after the termination of this agreement.

Recipient shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

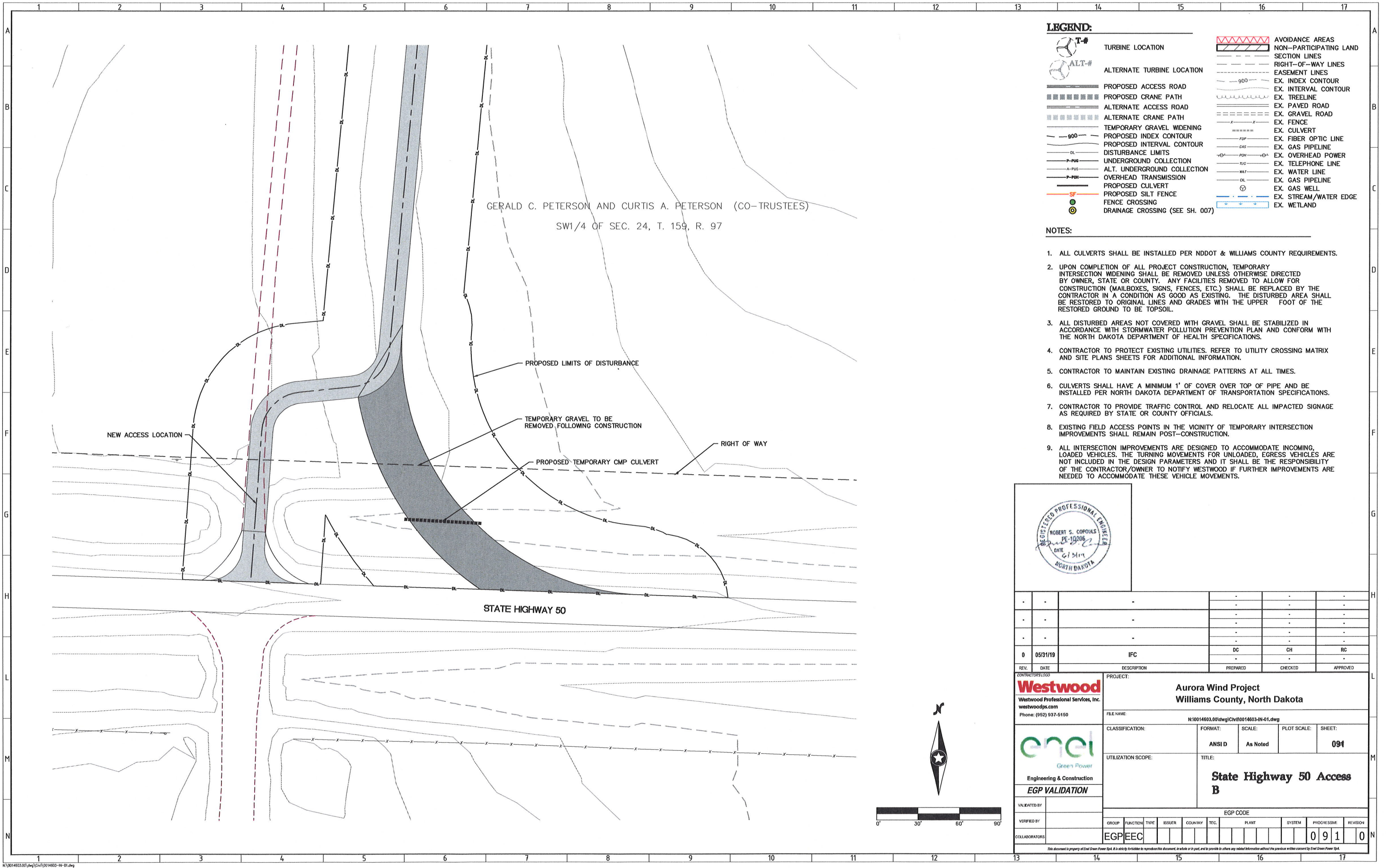
- 1) **Commercial general liability and automobile liability** insurance – minimum limits of liability required are **\$250,000 per person** and **\$1,000,000 per occurrence**.
- 2) **Workers compensation** insurance meeting all statutory limits.
- 3) The State of North Dakota and its agencies, officers, and employees (State) shall be endorsed as an **additional** insured on the commercial general liability and automobile liability policies.
- 4) Said endorsements shall contain a **"Waiver of Subrogation"** in favor of the state of North Dakota.
- 5) The policies and endorsements may not be canceled or modified without **thirty (30) days prior written notice** to the undersigned State representative.

Recipient shall furnish a certificate of insurance evidencing the requirements in 1, 3, and 4 above to the undersigned State representative prior to commencement of this agreement.

The State reserves the right to obtain complete, certified copies of all required insurance documents, policies, or endorsements at any time. If Recipient's insurance will expire prior to the term of this agreement, Recipient shall renew the above requirements and furnish a certificate of insurance evidencing the renewal to the undersigned State representative prior to the expiration of the insurance. Any attorney who represents the State under this policy must first qualify as and be appointed by the North Dakota Attorney General as a Special Assistant Attorney General as required under N.D.C.C. Section 54-12-08.

When a portion of a Contract is sublet, the Recipient shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Recipient and the State as a result of work undertaken by the Subcontractor. In addition, the Recipient shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Recipient. The Recipient shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

Recipient's insurance coverage shall be primary (i.e., pay first) as respects any insurance, self-insurance or self-retention maintained by the State. Any insurance, self-insurance or self-retention maintained by the State shall be excess of the Recipient's insurance and shall not contribute with it. The insolvency or bankruptcy of the insured Recipient shall not release the insurer from payment under the policy, even when such insolvency or bankruptcy prevents the insured Recipient from meeting the retention limit under the policy. Any deductible amount or other obligations under the policy(ies) shall be the sole responsibility of the Recipient. This insurance may be in policy or policies of insurance, primary and excess, including the so-called umbrella or catastrophe form and be placed with insurers rated "A-" or better by A.M. Best Company, Inc. The State will be indemnified, saved, and held harmless to the full extent of any coverage actually secured by the Recipient in excess of the minimum requirements set forth above.



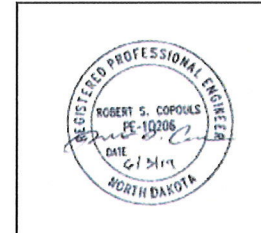
GERALD C. PETERSON AND CURTIS A. PETERSON (CO-TRUSTEES)
 SW1/4 OF SEC. 24, T. 159, R. 97

LEGEND:

- T-# TURBINE LOCATION
- ALT-# ALTERNATE TURBINE LOCATION
- PROPOSED ACCESS ROAD
- PROPOSED CRANE PATH
- ALTERNATE ACCESS ROAD
- ALTERNATE CRANE PATH
- TEMPORARY GRAVEL WIDENING
- PROPOSED INDEX CONTOUR
- PROPOSED INTERVAL CONTOUR
- DISTURBANCE LIMITS
- UNDERGROUND COLLECTION
- ALT. UNDERGROUND COLLECTION
- OVERHEAD TRANSMISSION
- PROPOSED CULVERT
- PROPOSED SILT FENCE
- FENCE CROSSING
- DRAINAGE CROSSING (SEE SH. 007)
- AVOIDANCE AREAS
- NON-PARTICIPATING LAND
- SECTION LINES
- RIGHT-OF-WAY LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. TREELINE
- EX. PAVED ROAD
- EX. GRAVEL ROAD
- EX. FENCE
- EX. CULVERT
- EX. FIBER OPTIC LINE
- EX. GAS PIPELINE
- EX. OVERHEAD POWER
- EX. TELEPHONE LINE
- EX. WATER LINE
- EX. GAS PIPELINE
- EX. GAS WELL
- EX. STREAM/WATER EDGE
- EX. WETLAND

NOTES:

1. ALL CULVERTS SHALL BE INSTALLED PER NDDOT & WILLIAMS COUNTY REQUIREMENTS.
2. UPON COMPLETION OF ALL PROJECT CONSTRUCTION, TEMPORARY INTERSECTION WIDENING SHALL BE REMOVED UNLESS OTHERWISE DIRECTED BY OWNER, STATE OR COUNTY. ANY FACILITIES REMOVED TO ALLOW FOR CONSTRUCTION (MAILBOXES, SIGNS, FENCES, ETC.) SHALL BE REPLACED BY THE CONTRACTOR IN A CONDITION AS GOOD AS EXISTING. THE DISTURBED AREA SHALL BE RESTORED TO ORIGINAL LINES AND GRADES WITH THE UPPER FOOT OF THE RESTORED GROUND TO BE TOPSOIL.
3. ALL DISTURBED AREAS NOT COVERED WITH GRAVEL SHALL BE STABILIZED IN ACCORDANCE WITH STORMWATER POLLUTION PREVENTION PLAN AND CONFORM WITH THE NORTH DAKOTA DEPARTMENT OF HEALTH SPECIFICATIONS.
4. CONTRACTOR TO PROTECT EXISTING UTILITIES. REFER TO UTILITY CROSSING MATRIX AND SITE PLANS SHEETS FOR ADDITIONAL INFORMATION.
5. CONTRACTOR TO MAINTAIN EXISTING DRAINAGE PATTERNS AT ALL TIMES.
6. CULVERTS SHALL HAVE A MINIMUM 1' OF COVER OVER TOP OF PIPE AND BE INSTALLED PER NORTH DAKOTA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
7. CONTRACTOR TO PROVIDE TRAFFIC CONTROL AND RELOCATE ALL IMPACTED SIGNAGE AS REQUIRED BY STATE OR COUNTY OFFICIALS.
8. EXISTING FIELD ACCESS POINTS IN THE VICINITY OF TEMPORARY INTERSECTION IMPROVEMENTS SHALL REMAIN POST-CONSTRUCTION.
9. ALL INTERSECTION IMPROVEMENTS ARE DESIGNED TO ACCOMMODATE INCOMING, LOADED VEHICLES. THE TURNING MOVEMENTS FOR UNLOADED, EGRESS VEHICLES ARE NOT INCLUDED IN THE DESIGN PARAMETERS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/OWNER TO NOTIFY WESTWOOD IF FURTHER IMPROVEMENTS ARE NEEDED TO ACCOMMODATE THESE VEHICLE MOVEMENTS.



0	05/31/19	IFC	DC	CH	RC
REV.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED

Westwood
 Westwood Professional Services, Inc.
 westwoodps.com
 Phone: (952) 937-5150

enei
 Green Power
 Engineering & Construction
EGP VALIDATION

VALIDATED BY: _____
 VERIFIED BY: _____
 COLLABORATORS: _____

PROJECT:
 Aurora Wind Project
 Williams County, North Dakota

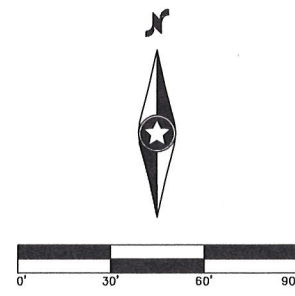
FILE NAME: N:\0014603.00\dwg\Civil\0014603-IN-01.dwg

CLASSIFICATION: ANSI D SCALE: As Noted PLOT SCALE: SHEET: 091

UTILIZATION SCOPE: TITLE: **State Highway 50 Access B**

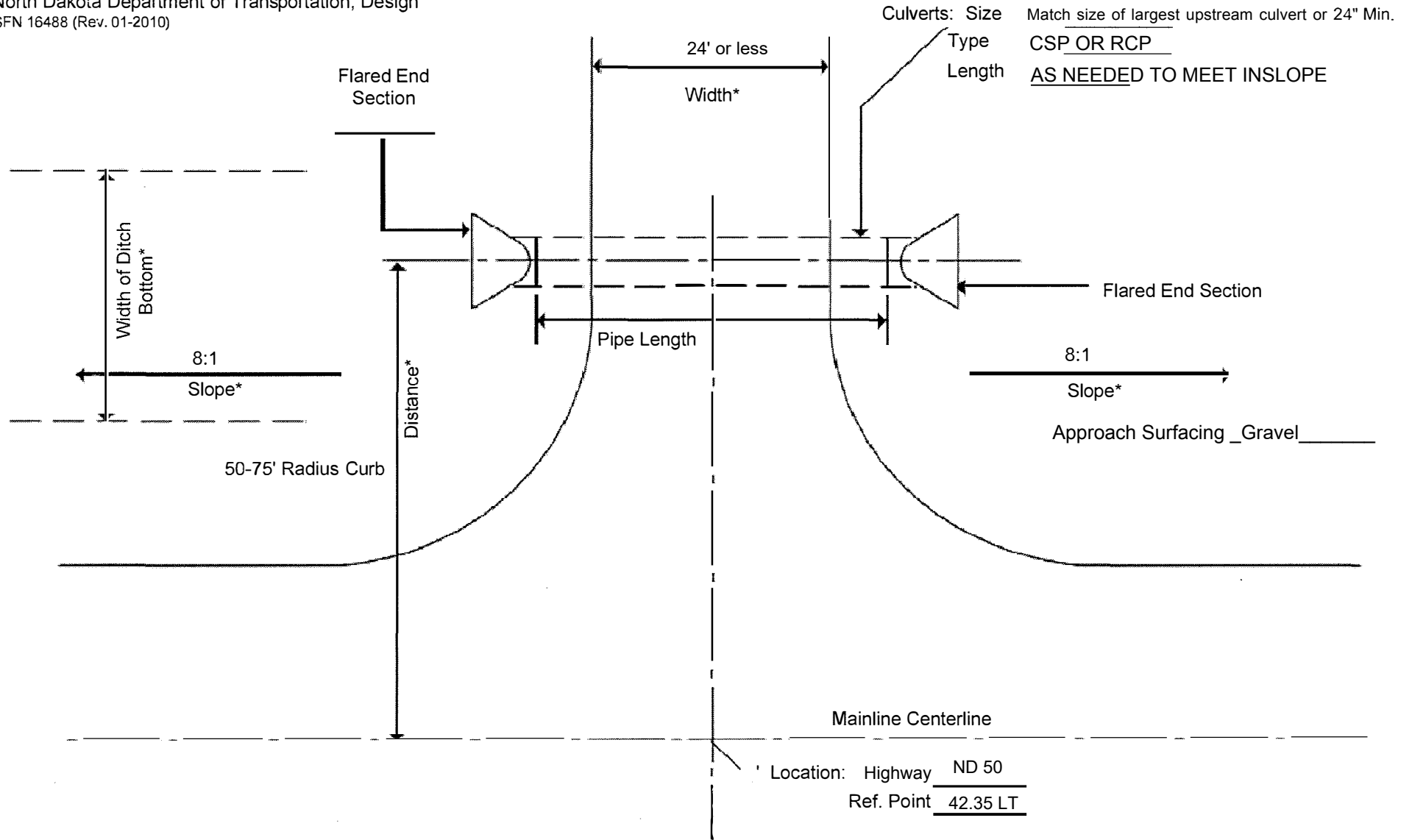
EGP CODE

GROUP	FUNCTION	TYPE	ISSUER	COUNTRY	TEC.	PLANT	SYSTEM	PROGRESSIVE	REVISION
EGPEEC								091	0



APPROACHES

North Dakota Department of Transportation, Design
SFN 16488 (Rev. 01-2010)



*Enter dimension above line.

Reference Plans

Remarks

Erosion Control should be installed according to Best Management Practices (BMPs) and Seeding of the disturbed area according to Section 251 of 'Standard Specifications for Road and Bridge Construction' that specifies Class II Seed Mixture.

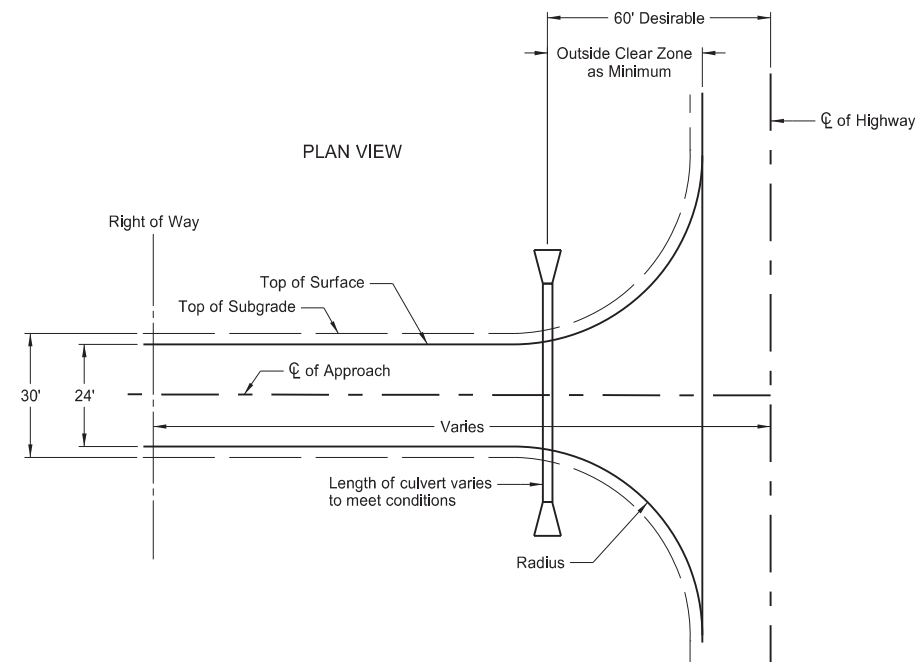
Section Line
Private Drive

STANDARD RURAL APPROACHES

D-203-8

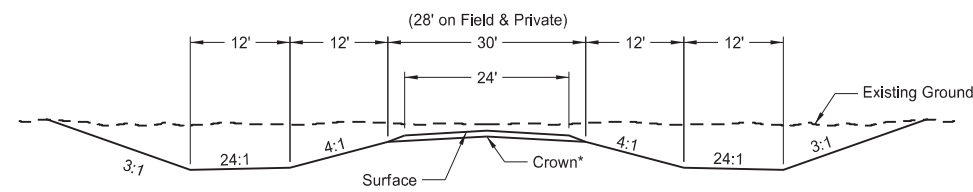
NOTES:

1. Max breakover between approach storage platform and highway shall not exceed 5%.
2. The approach slope shall be measured outside the area of mainline inslope influence.



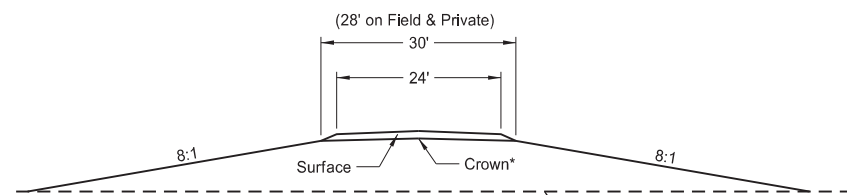
CRITERIA FOR RURAL APPROACH TYPES

	Field Drives	Private Drives	Low Volume Public Roads
Radius	R=24 ft	R=30 ft	R=40 ft
Maximum Grade	10%	7%	7%
Storage Platform	20 ft	24 ft	30 ft
Vertical Curve Length	10 ft	10 ft	Varies (Min. 20 mph)

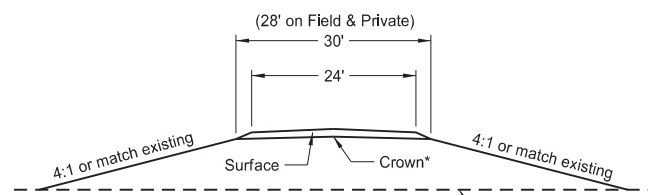


SECTION A-A

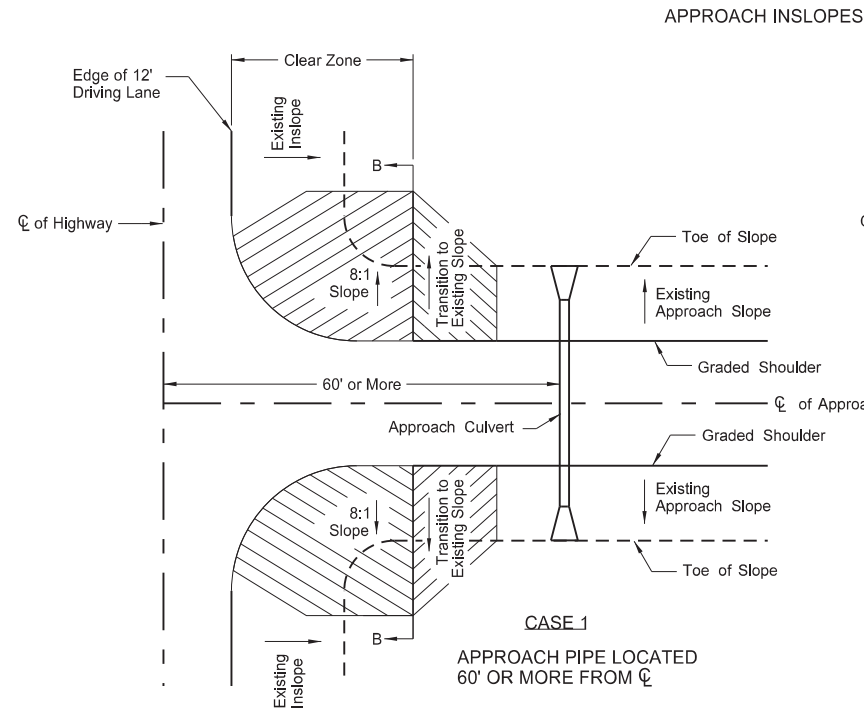
*2.1% crown for paved surface
*3.0% crown for gravel surface



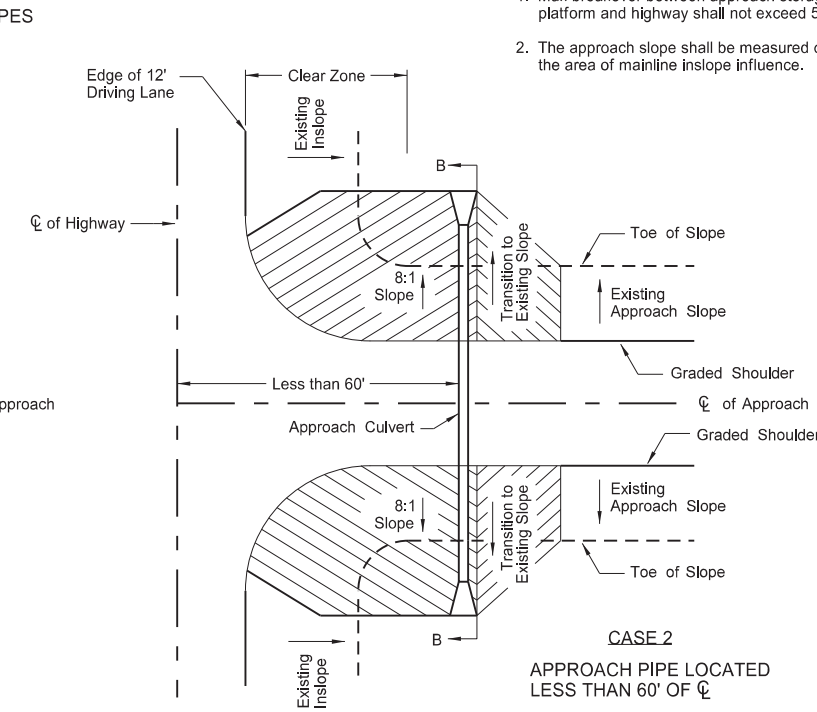
SECTION B-B



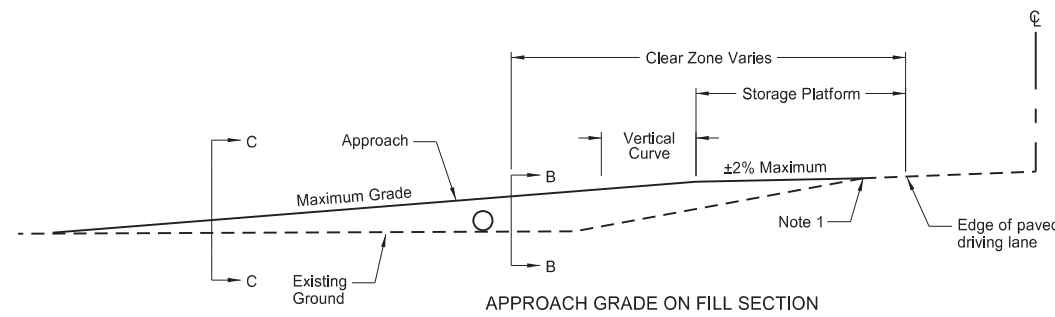
SECTION C-C



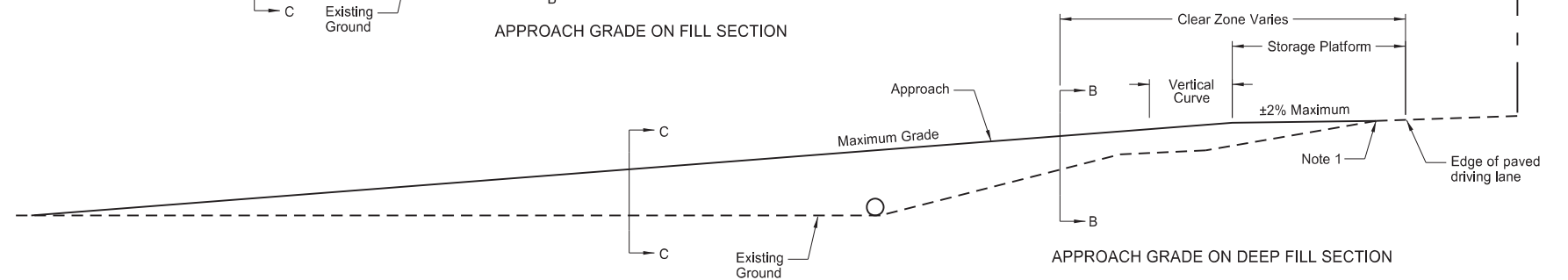
CASE 1
APPROACH PIPE LOCATED
60' OR MORE FROM C



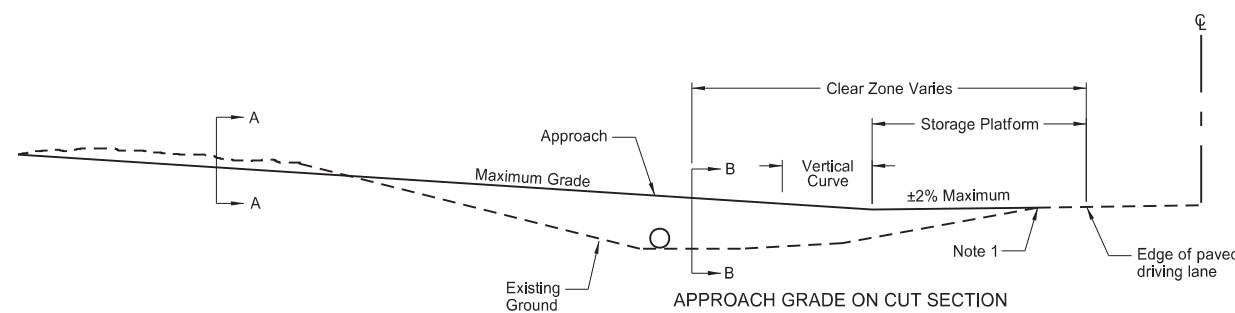
CASE 2
APPROACH PIPE LOCATED
LESS THAN 60' OF C



APPROACH GRADE ON FILL SECTION



APPROACH GRADE ON DEEP FILL SECTION



APPROACH GRADE ON CUT SECTION

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-25-14	
REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by Roger Weigel Registration Number PE-2930, on 02/25/14 and the original document is stored at the North Dakota Department of Transportation

ROAD CLOSURE LAYOUTS

Notes

- Variables
 S = Numerical value of speed limit or 85th percentile.
 W = The width of taper.
 L = Minimum length of taper, or $S \times W$ for freeways, expressways, and all other roads with speeds of 45 mph or greater, or $W \times S^2/60$ for urban, residential, and other streets with speeds of 40 mph or less.
- Barricades placed on roadway shall be on a moveable assembly. Signs placed on roadway shall be placed on skid mounted assemblies.
- Delineator drums, barricades or cones used for tapering traffic shall be spaced at the dimension "S". Delineator drums or cones used for tangents shall be spaced at 2 times dimension "S".
- Sequencing Arrow Panels
 Panels should normally be placed at the beginning of the taper. Where shoulder width does not provide sufficient room, the panel should be moved closer to the work area so that it can be placed on the roadway surface. See Shoulder Closure Standard Drawing.
 Type A shall be used on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
 Type B shall be used on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
 Type C shall be used on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
- The speed limit shall be re-established. The exact speed limit shall be determined in the field, dependent on location and conditions.
- The reduced speed limit shall be determined dependent on the in place speed limit before construction. The speed limit reduction should not exceed 10 mph below the existing speed limit, unless the design speed of the work zone feature has been reduced below the 10 mph. In this case, the speed limit reduction shall not exceed 30 MPH. Where speed limits are to be reduced more than 30 MPH, a second speed limit sign shall be installed with the desired speed reduction but shall not exceed 30 MPH. The second speed limit sign shall be placed at $\frac{1}{2}$ B.
- Use when work area is 1 mile or longer.
- When warning signs are used in urban areas and the signs are not portable, flags shall be installed. The flags shall be 24 inches square, mounted perpendicular to the edges of the diamond sign, and at such a distance above the edge so that when the flag is limp it will not touch the sign. Rural areas will not require flags.
- Existing speed limit signs within a reduced speed zone shall be covered.
- Where necessary, safe speed to be determined by the Engineer.
- The contractor has the option of using portable sign supports in lieu of post mounted signs in accordance with the NDDOT Standard Specifications.
- G20-55-96 sign is not required if this standard is part of other traffic control layouts, or the work is less than 15 days.

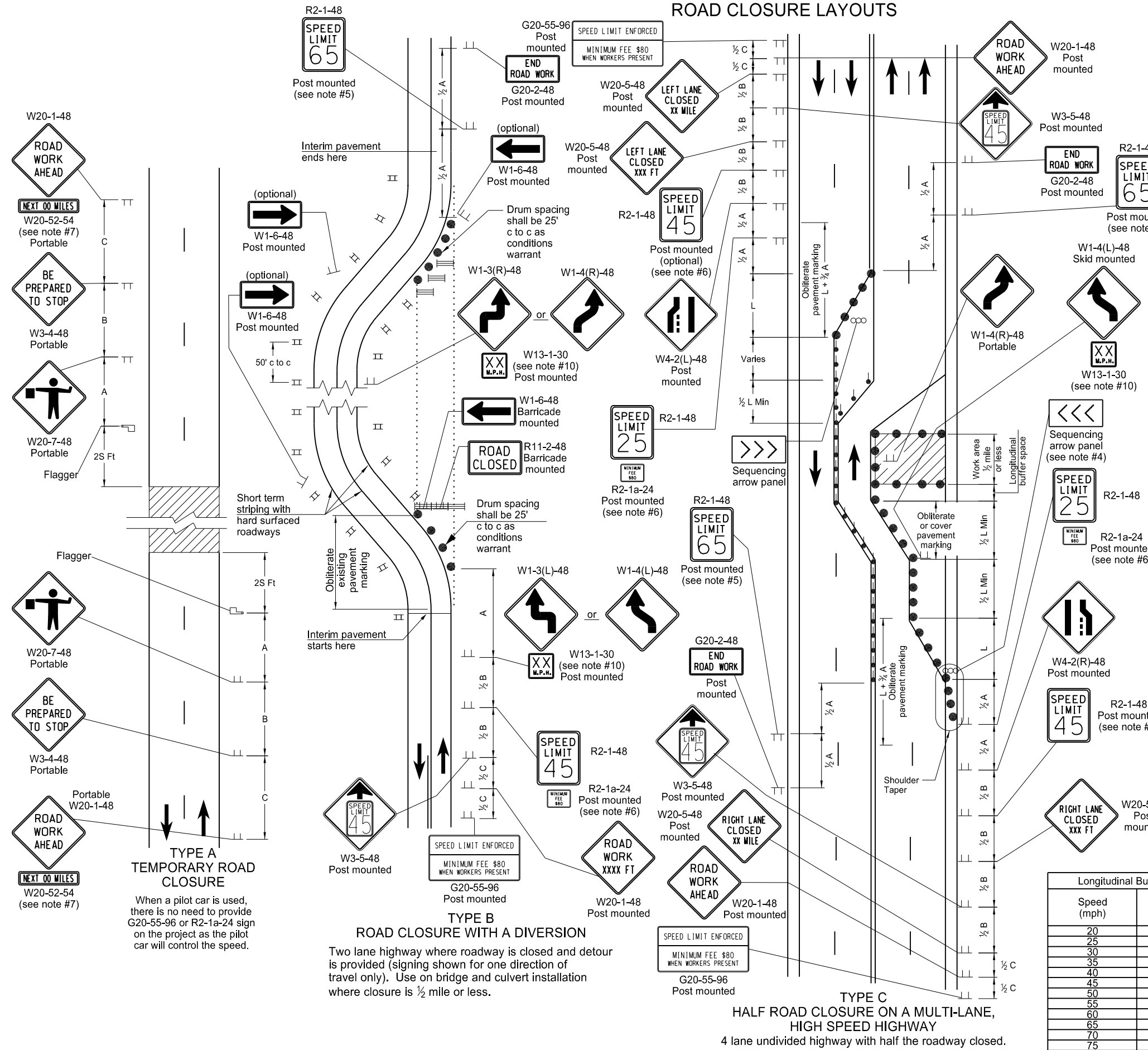
Road Type	ADVANCE WARNING SIGN SPACING		
	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

KEY	
	Type III barricade
	Sign
	Delineator drum
	Tubular markers
	Work area
	Flagger
	Sequencing arrow panel
	Vertical panels back to back

Longitudinal Buffer Space	
Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-27-13	
REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by Roger Weigel Registration Number PE-2930, on 09/27/13 and the original document is stored at the North Dakota Department of Transportation



TYPE A TEMPORARY ROAD CLOSURE

When a pilot car is used, there is no need to provide G20-55-96 or R2-1a-24 sign on the project as the pilot car will control the speed.

TYPE B ROAD CLOSURE WITH A DIVERSION

Two lane highway where roadway is closed and detour is provided (signing shown for one direction of travel only). Use on bridge and culvert installation where closure is $\frac{1}{2}$ mile or less.

TYPE C HALF ROAD CLOSURE ON A MULTI-LANE, HIGH SPEED HIGHWAY
4 lane undivided highway with half the roadway closed.

DRIVEWAY APPLICATION & PERMIT

North Dakota Department of Transportation, Maintenance
SFN 5918 (3-2016)

Permit Number			
1	9	2	2
District Number			
6	7		

Applicant Aurora Wind Project, LLC.			
Address 16105 W 113th Street Ste 105	City Lenexa	State KS	ZIP Code 66219

Driveway Information on State Highway Right of Way

Number of Driveways 1	<input type="checkbox"/> Private <input checked="" type="checkbox"/> Commercial	Direction <input type="checkbox"/> N <input checked="" type="checkbox"/> S <input type="checkbox"/> E <input type="checkbox"/> W	side of Route 50
Location SE corner of intersection between ND HWY 50 and 114th Ave NW			
Town N/A	Highway 50	Junction 114th Ave NW	Mile Marker Number 590 E of MM-43.12 LT 638'
Description of proposed work on state right of way and type of business served. Temporary intersection radius widening to accommodate delivery of wind turbine components. During construction traffic counts are expected to be approximately 5-10 counts per day. Post construction the radius will be removed and the land will be restored to the pre-construction condition. See Intersection 2 drawing for details.			
TWE Lease Agreement: 3230600 004 Peterson, Gerald C., et al.			

Applicant agrees that any permit issued and any entrance built or work done shall be in accordance with plans attached hereto and made a part hereof, and Permit Specifications, printed on the reverse side of this sheet. If the applicant fails to construct the drive to the specified dimensions, including the proper culvert length and inslopes, the Department of Transportation, hereinafter referred to as NDDOT, will either cancel this permit and remove the drive or make the necessary corrections and the Applicant will reimburse NDDOT for such work.

APPLICANT

Name (Type or Print) _____
 X Gerald C. Peterson
 Signature _____
 Title _____
 Date 7-29-19

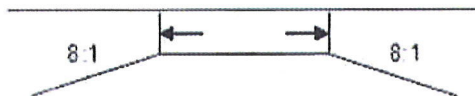
NORTH DAKOTA DEPARTMENT OF TRANSPORTATION

Joel M. Wilt
 District Engineer (Type or Print) _____
 X Joel M. Wilt
 Signature _____
 Date 8/27/19

Permit granted _____
 Date 8/27/19

Construction shall be completed by _____
 Date December 1st, 2020

Sketch



Original to District File, copy to Applicant
Please send completed form to Pavement Management Engineer

DRIVEWAY PERMIT SPECIFICATIONS

1. The total cost of all construction and maintenance of the work specified shall be borne by the Applicant, his grantees, successors, and assigns: except that the state will maintain the shoulder of the roadway.
2. The applicant shall be required to wear an ANSI/ISEA 107-2004 Class II high visibility garment while within the highway right-of-way as per the requirements of 23 CFR 634.
3. It is understood by the Applicant that the state does not assume any responsibility for the removal or clearance of snow, ice, or sleet, or the opening of windrows of such materials, upon any portion of the driveway even though snow, ice, or sleet is deposited or windrowed on said drive by its authorized representative engaged in normal winter maintenance operation.
4. No driveway shall be considered as completed until checked and approved by NDDOT. Surfacing may be omitted on field entrances if so specified in the application.
5. A driveway, as referred to in this permit, shall be the traveled area between the highway roadway surface and the adjacent right-of-way line. Said driveway shall be used only for the purpose of providing entrance to and exit from the Applicant's property.
6. No driveway, or improvement constructed on the highway right-of-way shall be altered or relocated without permission of the district engineer of NDDOT.
7. The Applicant agrees to perform all work in accordance with this permit, and to indemnify and hold harmless NDDOT, its officers, and employees from any and all liability, judgments, costs, expenses, and claims growing out of damages, or alleged damages, of any nature whatsoever, to any person or property arising out of performance or nonperformance of said work, or the existence of said driveways.
8. It is understood by the Applicant that the location, construction, and maintenance of driveways are under the supervision of NDDOT at all times, and that in granting this permit NDDOT waives none of its powers or rights to direct the removal, relocation, or proper maintenance in the future of any driveways within the right of way of the state highway.
9. The granting of this permit does not vest the Applicant with the exclusive use of the driveway. NDDOT retains the right to diminish and expand the use of the driveway as required in the interest of the safety of highway traffic.
10. Wetland: The applicant shall certify that no wetlands will be impacted by the installation of the driveway. If wetlands are impacted, the applicant shall coordinate with the US Army Corps of Engineers (USACE), North Dakota Regulatory Office to determine if a permit is required or mitigation is needed. Certification of avoidance, a wetland delineation, or a permit (if required) from the USACE shall be attached to the application.
11. The Applicant, for him or herself, his or her heirs, personal representatives, successors in interest, and assigns, as a part of the consideration hereof, does hereby covenant and agree that 1) no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities, 2) that in the construction of any improvements on, over, or under such land, and the furnishing of services thereon, no person on the ground of race, color, or national origin, will be excluded from participation in, denied the benefits of, or otherwise be subjected to discrimination, 3) that the Applicant will use the premises in compliance with all other requirements imposed by or pursuant to the Acts and Regulations, as amended, such that no person on the grounds of race, color, or national origin, will be excluded from participation in, denied the benefits of, or be otherwise subjected to discrimination in the use of said facilities set forth in this Assurance.
12. That in the event of breach of any of the above non-discrimination covenants, NDDOT will have the right to terminate this Permit and to enter or re-enter and repossess said land and the facilities thereon, and hold the same as if said Permit had never been made or issued.
13. Risk Management Appendix, attached, is hereby incorporated and made a part of this agreement.
14. District Engineer to provide copy of approved permit to NDDOT, Planning and Asset Management, Pavement Management Division.

BY

Risk Management Appendix

Permits and Licenses with Private Individuals, Companies, Corporations, Etc. (referred to as Recipient):

Recipient agrees to defend, indemnify, and hold harmless the state of North Dakota, its agencies, officers and employees (State), from and against claims based on the vicarious liability of the State or its agents, but not against claims based on the State's contributory negligence, comparative and/or contributory negligence or fault, sole negligence, or intentional misconduct. The legal defense provided by the Recipient to the State under this provision must be free of any conflicts of interest, even if retention of separate legal counsel for the State is necessary. Recipient also agrees to defend, indemnify, and hold the State harmless for all costs, expenses and attorneys' fees incurred if the State prevails in an action against the Recipient in establishing and litigating the indemnification coverage provided herein. This obligation shall continue after the termination of this agreement.

Recipient shall secure and keep in force during the term of this agreement, from insurance companies, government self-insurance pools or government self-retention funds authorized to do business in North Dakota, the following insurance coverages:

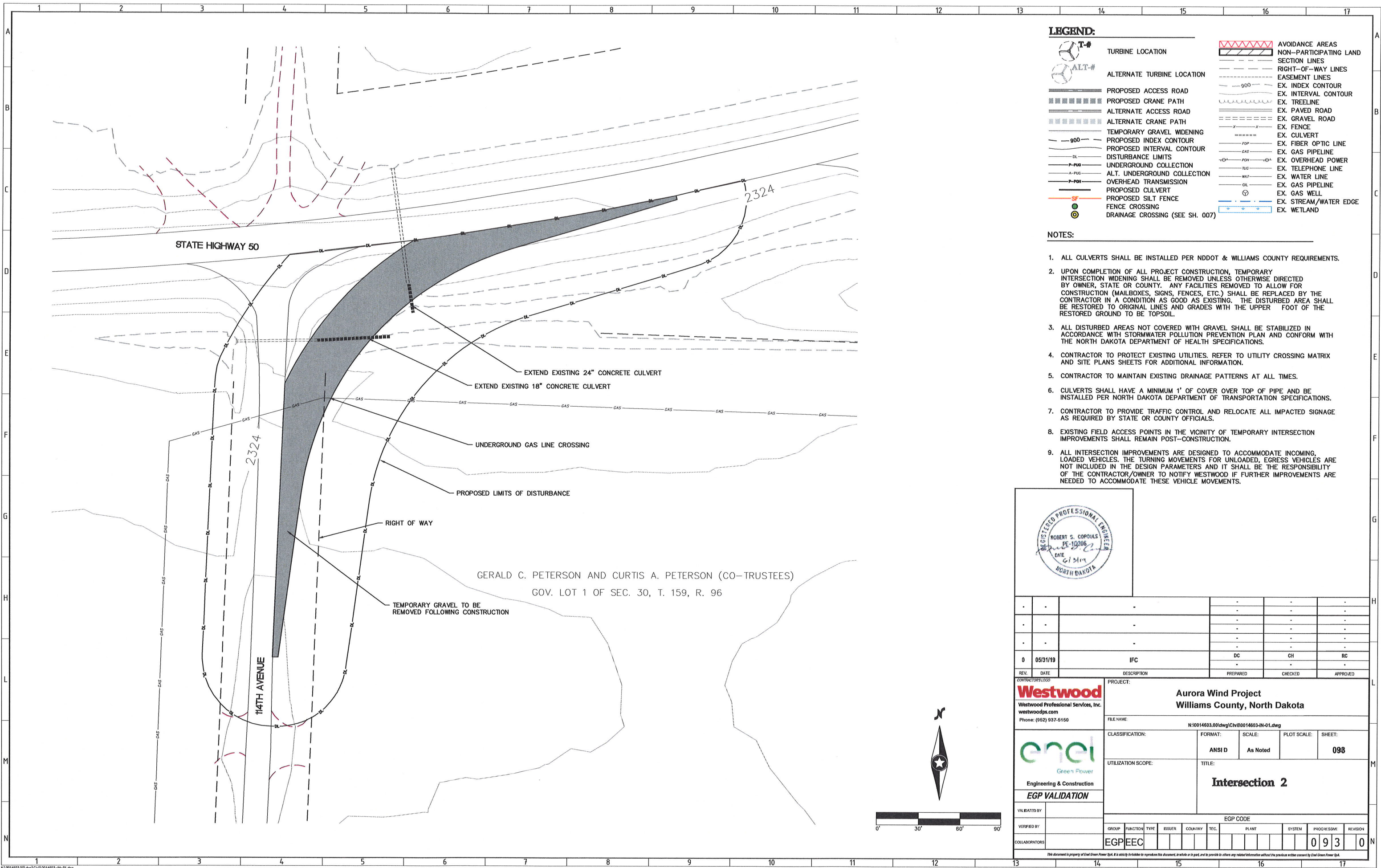
- 1) **Commercial general liability and automobile liability** insurance – minimum limits of liability required are **\$250,000 per person** and **\$1,000,000 per occurrence**.
- 2) **Workers compensation** insurance meeting all statutory limits.
- 3) The State of North Dakota and its agencies, officers, and employees (State) shall be endorsed as an **additional** insured on the commercial general liability and automobile liability policies.
- 4) Said endorsements shall contain a **"Waiver of Subrogation"** in favor of the state of North Dakota.
- 5) The policies and endorsements may not be canceled or modified without **thirty (30) days prior written notice** to the undersigned State representative.

Recipient shall furnish a certificate of insurance evidencing the requirements in 1, 3, and 4 above to the undersigned State representative prior to commencement of this agreement.

The State reserves the right to obtain complete, certified copies of all required insurance documents, policies, or endorsements at any time. If Recipient's insurance will expire prior to the term of this agreement, Recipient shall renew the above requirements and furnish a certificate of insurance evidencing the renewal to the undersigned State representative prior to the expiration of the insurance. Any attorney who represents the State under this policy must first qualify as and be appointed by the North Dakota Attorney General as a Special Assistant Attorney General as required under N.D.C.C. Section 54-12-08.

When a portion of a Contract is sublet, the Recipient shall obtain insurance protection (as outlined above) to provide liability coverage to protect the Recipient and the State as a result of work undertaken by the Subcontractor. In addition, the Recipient shall ensure that any and all parties performing work under the Contract are covered by public liability insurance as outlined above. All Subcontractors performing work under the Contract are required to maintain the same scope of insurance required of the Recipient. The Recipient shall be held responsible for ensuring compliance with those requirements by all Subcontractors.

Recipient's insurance coverage shall be primary (i.e., pay first) as respects any insurance, self-insurance or self-retention maintained by the State. Any insurance, self-insurance or self-retention maintained by the State shall be excess of the Recipient's insurance and shall not contribute with it. The insolvency or bankruptcy of the insured Recipient shall not release the insurer from payment under the policy, even when such insolvency or bankruptcy prevents the insured Recipient from meeting the retention limit under the policy. Any deductible amount or other obligations under the policy(ies) shall be the sole responsibility of the Recipient. This insurance may be in policy or policies of insurance, primary and excess, including the so-called umbrella or catastrophe form and be placed with insurers rated "A-" or better by A.M. Best Company, Inc. The State will be indemnified, saved, and held harmless to the full extent of any coverage actually secured by the Recipient in excess of the minimum requirements set forth above.

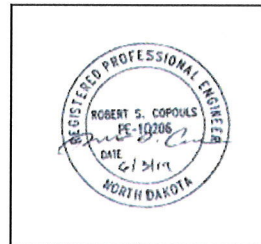


LEGEND:

- T-# TURBINE LOCATION
- ALT-# ALTERNATE TURBINE LOCATION
- PROPOSED ACCESS ROAD
- PROPOSED CRANE PATH
- ALTERNATE ACCESS ROAD
- ALTERNATE CRANE PATH
- TEMPORARY GRAVEL WIDENING
- PROPOSED INDEX CONTOUR
- DISTURBANCE LIMITS
- UNDERGROUND COLLECTION
- ALT. UNDERGROUND COLLECTION
- OVERHEAD TRANSMISSION
- PROPOSED CULVERT
- PROPOSED SILT FENCE
- FENCE CROSSING
- DRAINAGE CROSSING (SEE SH. 007)
- AVOIDANCE AREAS
- NON-PARTICIPATING LAND
- SECTION LINES
- RIGHT-OF-WAY LINES
- EASEMENT LINES
- EX. INDEX CONTOUR
- EX. INTERVAL CONTOUR
- EX. TREELINE
- EX. PAVED ROAD
- EX. GRAVEL ROAD
- EX. FENCE
- EX. CULVERT
- EX. FIBER OPTIC LINE
- EX. GAS PIPELINE
- EX. OVERHEAD POWER
- EX. TELEPHONE LINE
- EX. WATER LINE
- EX. GAS PIPELINE
- EX. GAS WELL
- EX. STREAM/WATER EDGE
- EX. WETLAND

NOTES:

1. ALL CULVERTS SHALL BE INSTALLED PER NDDOT & WILLIAMS COUNTY REQUIREMENTS.
2. UPON COMPLETION OF ALL PROJECT CONSTRUCTION, TEMPORARY INTERSECTION WIDENING SHALL BE REMOVED UNLESS OTHERWISE DIRECTED BY OWNER, STATE OR COUNTY. ANY FACILITIES REMOVED TO ALLOW FOR CONSTRUCTION (MAILBOXES, SIGNS, FENCES, ETC.) SHALL BE REPLACED BY THE CONTRACTOR IN A CONDITION AS GOOD AS EXISTING. THE DISTURBED AREA SHALL BE RESTORED TO ORIGINAL LINES AND GRADES WITH THE UPPER FOOT OF THE RESTORED GROUND TO BE TOPSOIL.
3. ALL DISTURBED AREAS NOT COVERED WITH GRAVEL SHALL BE STABILIZED IN ACCORDANCE WITH STORMWATER POLLUTION PREVENTION PLAN AND CONFORM WITH THE NORTH DAKOTA DEPARTMENT OF HEALTH SPECIFICATIONS.
4. CONTRACTOR TO PROTECT EXISTING UTILITIES. REFER TO UTILITY CROSSING MATRIX AND SITE PLANS SHEETS FOR ADDITIONAL INFORMATION.
5. CONTRACTOR TO MAINTAIN EXISTING DRAINAGE PATTERNS AT ALL TIMES.
6. CULVERTS SHALL HAVE A MINIMUM 1' OF COVER OVER TOP OF PIPE AND BE INSTALLED PER NORTH DAKOTA DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.
7. CONTRACTOR TO PROVIDE TRAFFIC CONTROL AND RELOCATE ALL IMPACTED SIGNAGE AS REQUIRED BY STATE OR COUNTY OFFICIALS.
8. EXISTING FIELD ACCESS POINTS IN THE VICINITY OF TEMPORARY INTERSECTION IMPROVEMENTS SHALL REMAIN POST-CONSTRUCTION.
9. ALL INTERSECTION IMPROVEMENTS ARE DESIGNED TO ACCOMMODATE INCOMING, LOADED VEHICLES. THE TURNING MOVEMENTS FOR UNLOADED, EGRESS VEHICLES ARE NOT INCLUDED IN THE DESIGN PARAMETERS AND IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR/OWNER TO NOTIFY WESTWOOD IF FURTHER IMPROVEMENTS ARE NEEDED TO ACCOMMODATE THESE VEHICLE MOVEMENTS.



GERALD C. PETERSON AND CURTIS A. PETERSON (CO-TRUSTEES)
GOV. LOT 1 OF SEC. 30, T. 159, R. 96

REV.	DATE	DESCRIPTION	PREPARED	CHECKED	APPROVED
0	05/31/19	IFC	DC	CH	RC

Westwood Professional Services, Inc.
westwoodps.com
Phone: (952) 937-5150

Engineering & Construction
EGP VALIDATION

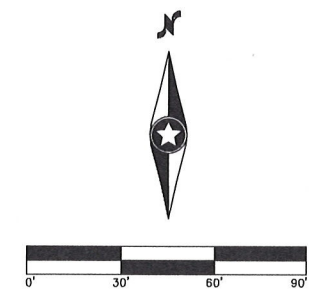
PROJECT: Aurora Wind Project
Williams County, North Dakota

FILE NAME: N:\0014603.00\dwg\Civ\0014603-IN-01.dwg

CLASSIFICATION:	FORMAT:	SCALE:	PLOT SCALE:	SHEET:
	ANSI D	As Noted		098

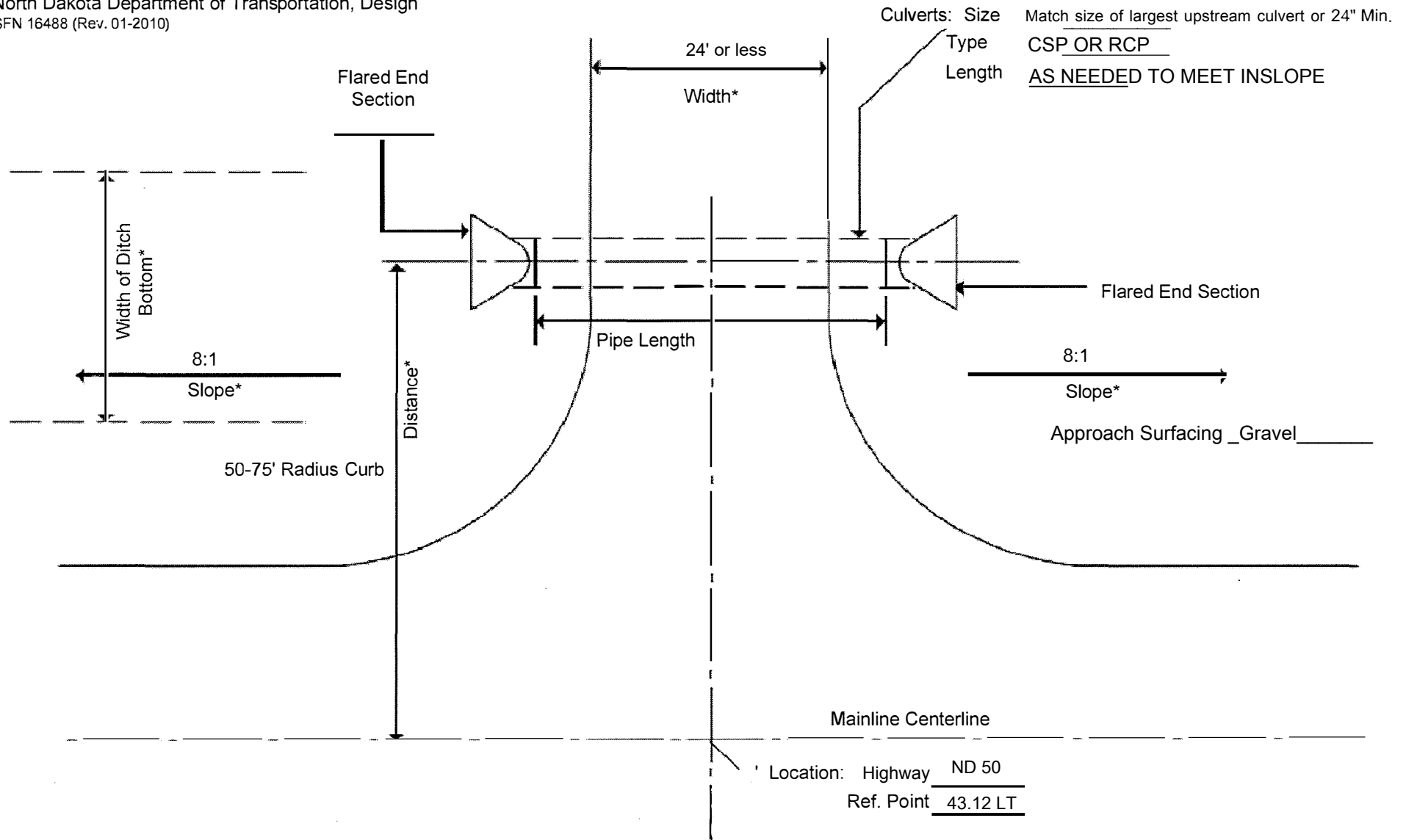
UTILIZATION SCOPE: TITLE: **Intersection 2**

VALUATED BY:	EGP CODE									
VERIFIED BY:	GROUP:	FUNCTION:	TYPE:	ISSUE:	COUNTRY:	TEC.	PLANT:	SYSTEM:	PROGRESSIVE:	REVISION:
COLLABORATORS:	EGPEEC								093	0



APPROACHES

North Dakota Department of Transportation, Design
SFN 16488 (Rev. 01-2010)



*Enter dimension above line.

Reference Plans

Remarks

Erosion Control should be installed according to Best Management Practices (BMPs) and Seeding of the disturbed area according to Section 251 of 'Standard Specifications for Road and Bridge Construction' that specifies Class II Seed Mixture.

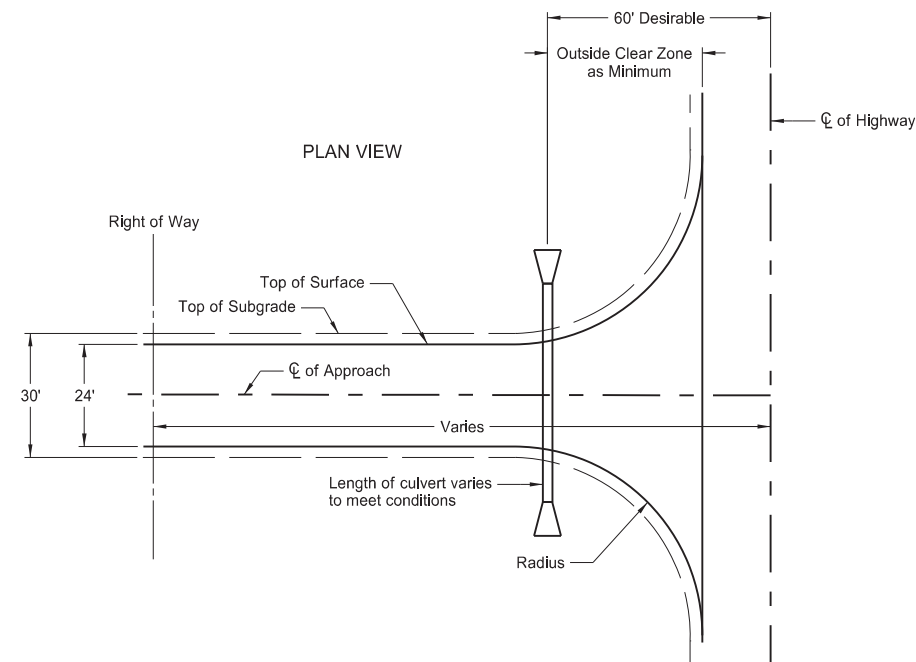
Section Line
Private Drive

STANDARD RURAL APPROACHES

D-203-8

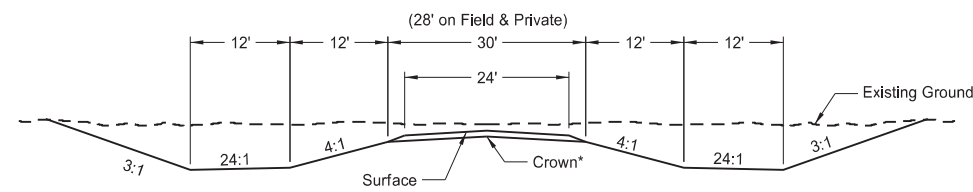
NOTES:

1. Max breakover between approach storage platform and highway shall not exceed 5%.
2. The approach slope shall be measured outside the area of mainline inslope influence.



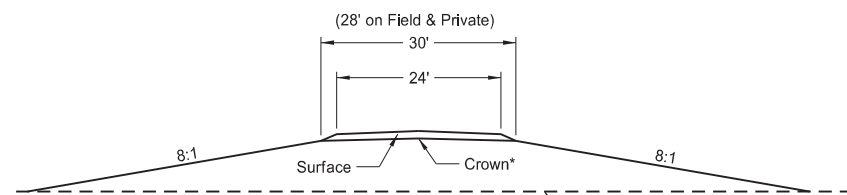
CRITERIA FOR RURAL APPROACH TYPES

	Field Drives	Private Drives	Low Volume Public Roads
Radius	R=24 ft	R=30 ft	R=40 ft
Maximum Grade	10%	7%	7%
Storage Platform	20 ft	24 ft	30 ft
Vertical Curve Length	10 ft	10 ft	Varies (Min. 20 mph)

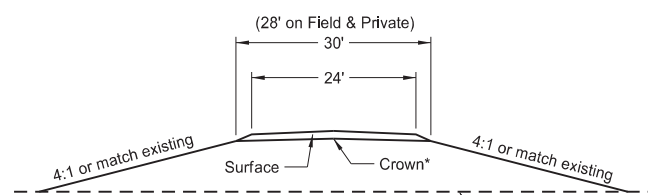


SECTION A-A

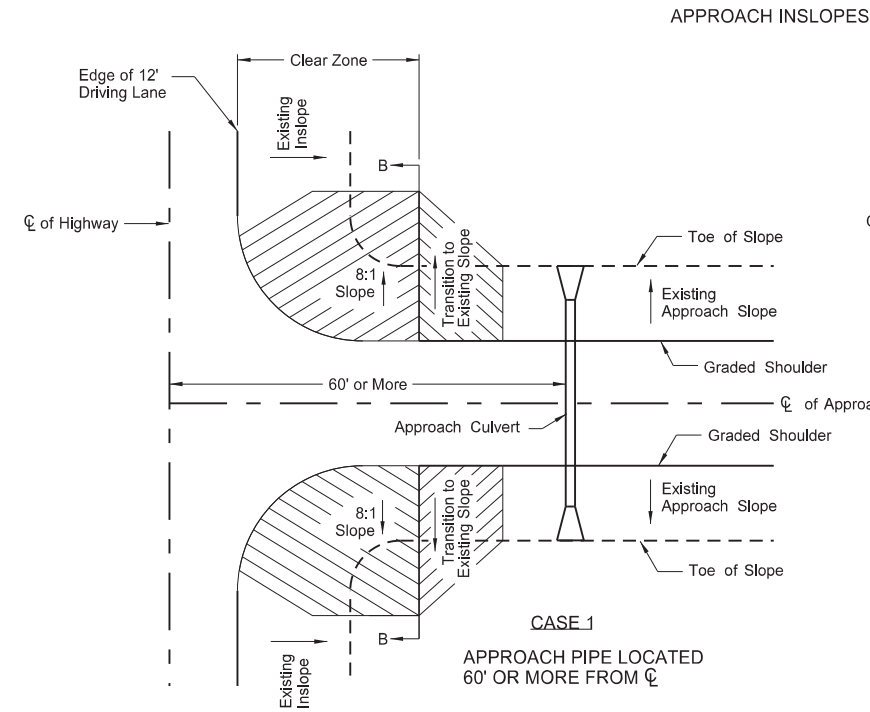
*2.1% crown for paved surface
*3.0% crown for gravel surface



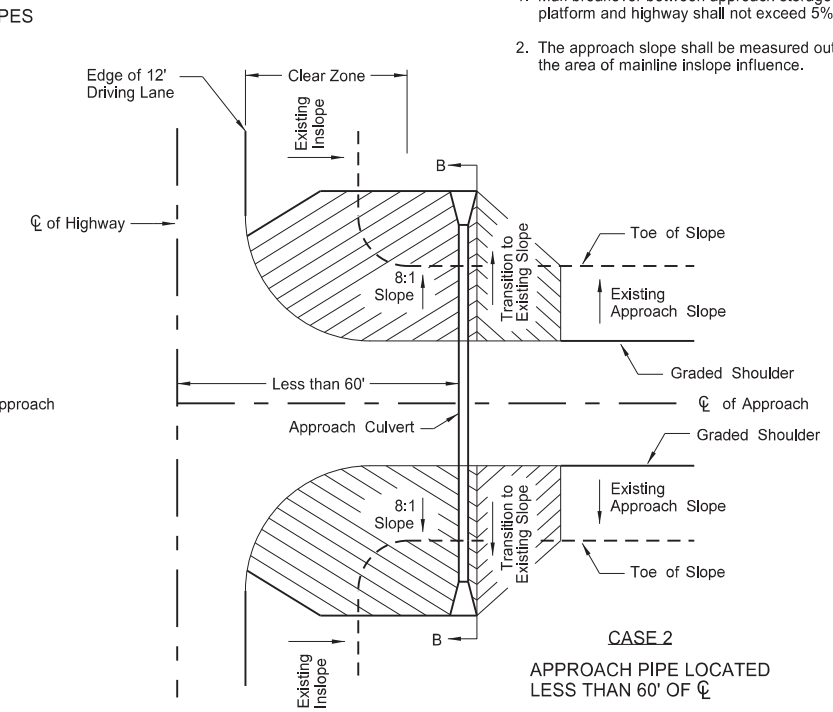
SECTION B-B



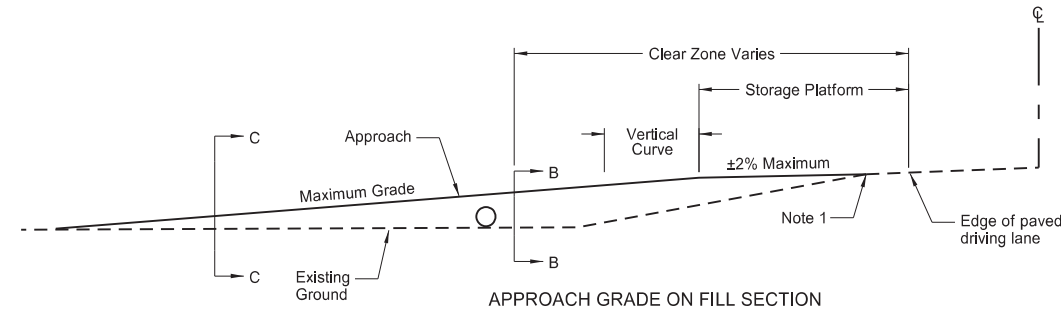
SECTION C-C



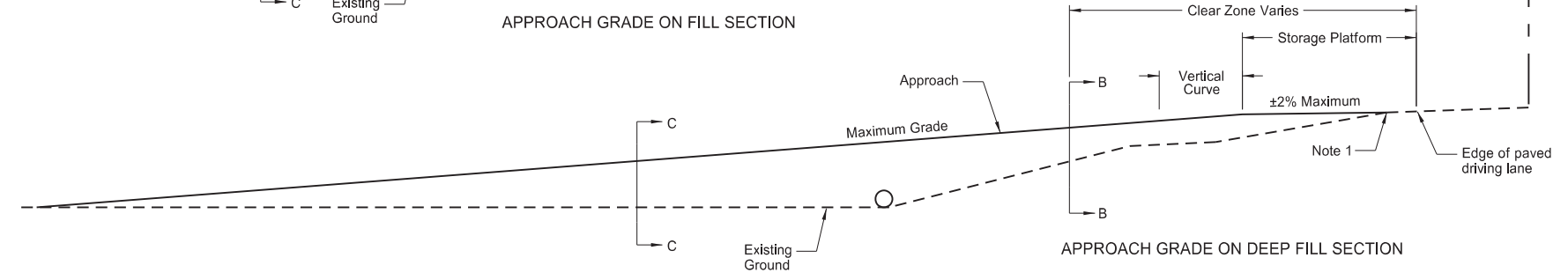
CASE 1
APPROACH PIPE LOCATED
60' OR MORE FROM C



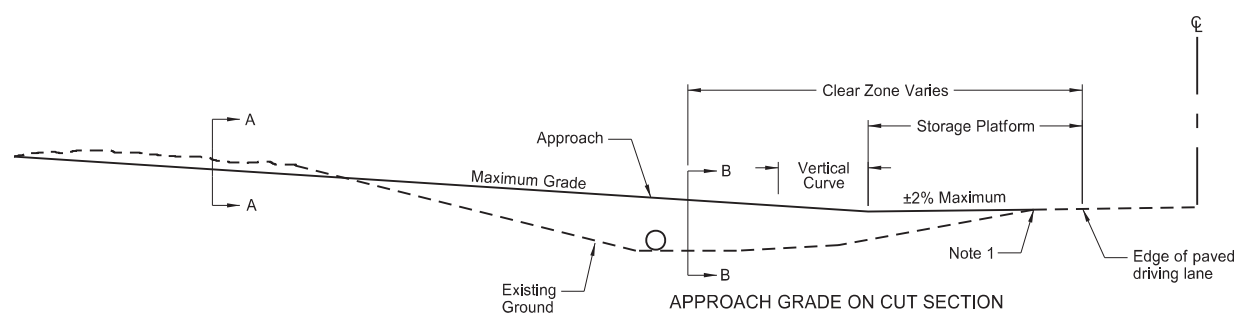
CASE 2
APPROACH PIPE LOCATED
LESS THAN 60' OF C



APPROACH GRADE ON FILL SECTION



APPROACH GRADE ON DEEP FILL SECTION



APPROACH GRADE ON CUT SECTION

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
2-25-14	
REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by Roger Weigel, Registration Number PE-2930, on 02/25/14 and the original document is stored at the North Dakota Department of Transportation.

ROAD CLOSURE LAYOUTS

Notes

- Variables
 - S = Numerical value of speed limit or 85th percentile.
 - W = The width of taper.
 - L = Minimum length of taper, or S x W for freeways, expressways, and all other roads with speeds of 45 mph or greater, or $W \times S^2/60$ for urban, residential, and other streets with speeds of 40 mph or less.
- Barricades placed on roadway shall be on a moveable assembly. Signs placed on roadway shall be placed on skid mounted assemblies.
- Delineator drums, barricades or cones used for tapering traffic shall be spaced at the dimension "S". Delineator drums or cones used for tangents shall be spaced at 2 times dimension "S".
- Sequencing Arrow Panels
 - Panels should normally be placed at the beginning of the taper. Where shoulder width does not provide sufficient room, the panel should be moved closer to the work area so that it can be placed on the roadway surface. See Shoulder Closure Standard Drawing.
 - Type A shall be used on roadways with slow moving traffic speeds and low volume (25 mph or less and 750 ADT or less).
 - Type B shall be used on roadways with moderate traffic speeds and volumes (40 mph or less and 5000 ADT or less).
 - Type C shall be used on roadways with high traffic speeds and volumes (over 40 mph or over 5000 ADT).
- The speed limit shall be re-established. The exact speed limit shall be determined in the field, dependent on location and conditions.
- The reduced speed limit shall be determined dependent on the in place speed limit before construction. The speed limit reduction should not exceed 10 mph below the existing speed limit, unless the design speed of the work zone feature has been reduced below the 10 mph. In this case, the speed limit reduction shall not exceed 30 MPH. Where speed limits are to be reduced more than 30 MPH, a second speed limit sign shall be installed with the desired speed reduction but shall not exceed 30 MPH. The second speed limit sign shall be placed at 1/2 B.
- Use when work area is 1 mile or longer.
- When warning signs are used in urban areas and the signs are not portable, flags shall be installed. The flags shall be 24 inches square, mounted perpendicular to the edges of the diamond sign, and at such a distance above the edge so that when the flag is limp it will not touch the sign. Rural areas will not require flags.
- Existing speed limit signs within a reduced speed zone shall be covered.
- Where necessary, safe speed to be determined by the Engineer.
- The contractor has the option of using portable sign supports in lieu of post mounted signs in accordance with the NDDOT Standard Specifications. G20-55-96 sign is not required if this standard is part of other traffic control layouts, or the work is less than 15 days.

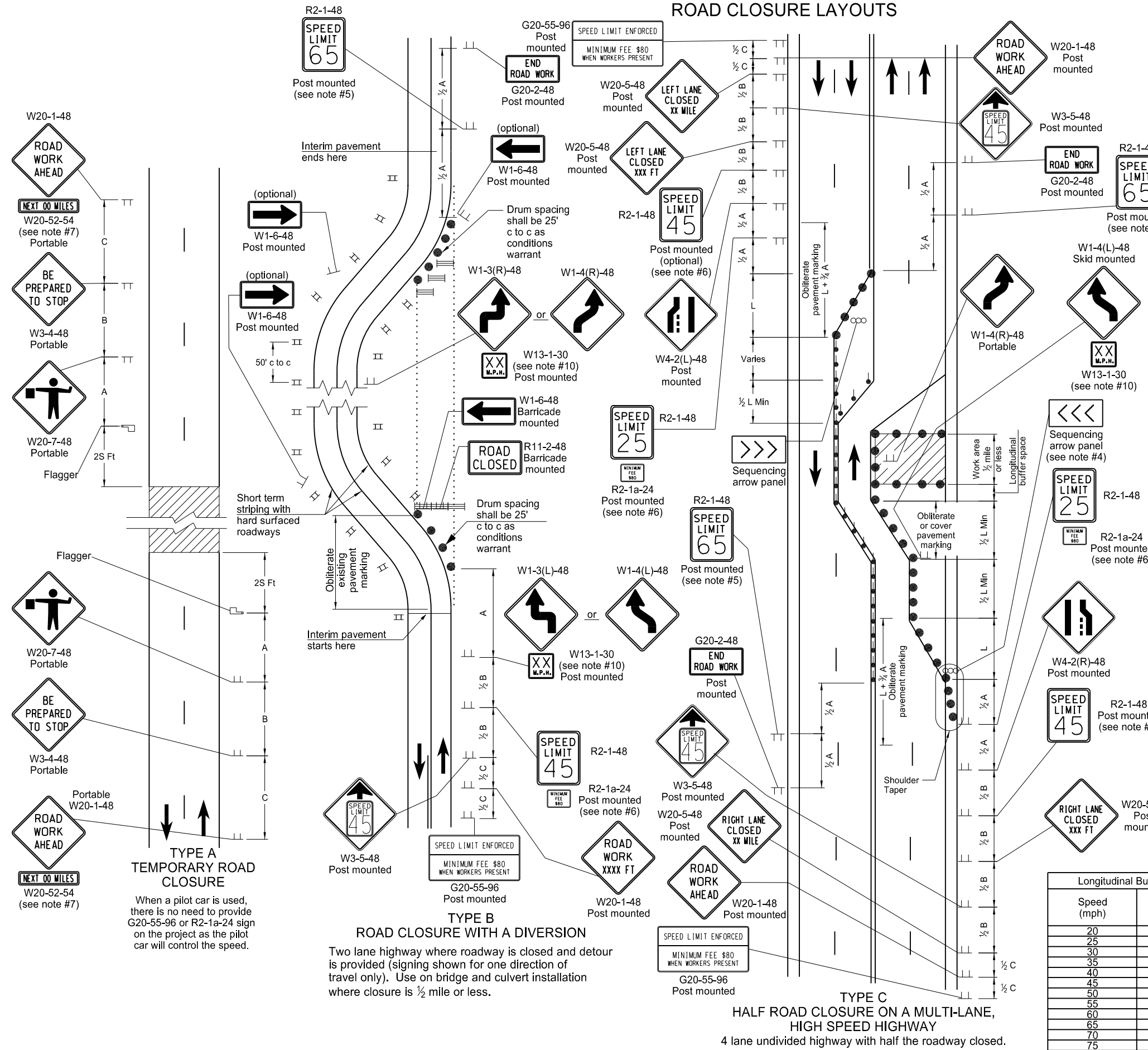
Road Type	ADVANCE WARNING SIGN SPACING		
	Distance Between Signs Min. (ft)		
	A	B	C
Urban - Low Speed (30 mph or less)	150	150	150
Urban - Low Speed (over 30 to 40 mph)	280	280	280
Urban - High Speed (over 40 mph to 50 mph)	360	360	360
Rural - High Speed (over 50 mph to 65 mph)	720	720	720
Urban Expressway and Freeway (55 mph to 60 mph)	850	1350	2200
Rural Expressway and Freeway (70 mph to 75 mph)	1000	1500	2640
Interstate/4-Lane Divided (Maintenance and Surveying)	750	1000	1500

KEY	
	Type III barricade
	Sign
	Delineator drum
	Tubular markers
	Work area
	Flagger
	Sequencing arrow panel
	Vertical panels back to back

Longitudinal Buffer Space	
Speed (mph)	Length Min (feet)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570
65	645
70	730
75	820

NORTH DAKOTA DEPARTMENT OF TRANSPORTATION	
9-27-13	
REVISIONS	
DATE	CHANGE

This document was originally issued and sealed by Roger Weigel Registration Number PE-2930, on 09/27/13 and the original document is stored at the North Dakota Department of Transportation



TYPE A TEMPORARY ROAD CLOSURE
When a pilot car is used, there is no need to provide G20-55-96 or R2-1a-24 sign on the project as the pilot car will control the speed.

TYPE B ROAD CLOSURE WITH A DIVERSION
Two lane highway where roadway is closed and detour is provided (signing shown for one direction of travel only). Use on bridge and culvert installation where closure is 1/2 mile or less.

TYPE C HALF ROAD CLOSURE ON A MULTI-LANE, HIGH SPEED HIGHWAY
4 lane undivided highway with half the roadway closed.