

KEYSTONE XL PIPELINE PROJECT

0470-SD-P4-XXX.X-XXX.X-1

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM	
1	VARIATION TYPE: Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> Footprint: <input type="text"/> Design: <input type="text"/> Centerline: <input checked="" type="checkbox"/> Pump Station: <input type="text"/> Valve Site: <input type="text"/> CAR: <input type="text"/>
2	LOCATION: Sketch: <input type="text"/> Attached Pictures: <input type="text"/> N/A State: <input type="text"/> SD County: <input type="text"/> Various Quad Map: <input type="text"/> N/A Township: <input type="text"/> Various Range: <input type="text"/> Various Aerial Map: <input type="text"/> See attached map sheets Section: <input type="text"/> Various Centerline: <input type="text"/> 6/11/2013 MP: <input type="text"/> XXX.X to <input type="text"/> XXX.X
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): This report consists of 10 proposed CL route variations based on the 90% alignment sheet review to avoid impact to waterbodies, avoid workspaces paralleling creeks/drainage, among others. These proposed route variations have been field verified by civil survey. The reason for each route variation is listed in the "Supplemental Info" tab. The route variations are proposed by Engineering based on field verification by civil survey.
	DETAIL ROUTE VARIATION (Please describe route variation in detail): Listed in "Supplemental Info" Tab. No new landowners have been affected by the proposed route variations. The tracts impacted are as follows: RV-0470-01 = 1 tract impacted: ML-SD-HA-00080.000 (State of South Dakota). RV-0470-02 = 1 tract impacted: ML-SD-HK-11930.000 (Morris W. Jones). RV-0470-03 = 2 tracts impacted: ML-SD-JO-10545.000 (Christopher J. Iversen and Roy A. Iversen) and ML-SD-JO-10565.000 (State of South Dakota). RV-0470-04 = 2 tracts impacted: ML-SD-PE-00190.000 (Clyde M. Hafner & Loretta M. Hafner) and ML-SD-PE-00210.000 (Harold Miller & Lori Miller; Lynn Miller & Nancy Miller (Miller Family Trust)). RV-0470-05 = 1 tract impacted: ML-SD-PE-00240.000 (State of South Dakota). RV-0470-06 = 1 tract impacted: ML-SD-ME-00270.000 (Lyle D. Weiss, et ux). RV-0470-07 = 1 tract impacted: ML-SD-ME-00740.000 (Schultes Family Limited Partnership). RV-0470-08 = 1 tract impacted: ML-SD-ME-00780.000 (Wendy Blair). RV-0470-09 = 1 tract impacted: ML-SD-PE-00430.000 (Ronald and Faith Miller, As Trustees for the Miller Family Trust). RV-0470-10 = 2 tracts impacted: ML-SD-PE-00430.000 (Ronald and Faith Miller, As Trustees for the Miller Family Trust) and ML-SD-PE-00480.000 (Sam J. Mickelson & Della Rae Mickelson).
	ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): Listed in "Cost Analysis" Tab.
9	Originator: <input type="text"/> Engineering Date: <input type="text"/> 8/8/2013
10	Received by: <input type="text"/> Date: <input type="text"/> 8/8/2013 Fax to: ?
11	Assigned Tracking Number: <input type="text"/> 0470-SD-P4-XXX.X-XXX.X-1
12	Filed by: <input type="text"/> Date: <input type="text"/> Fax to: ?

Keystone XL Pipeline - Supplemental Information for Route Variation Report 0470

Prepared: 2013-08-08

RV ID	MP Start	MP End	State	County	Section	Township	Range	Original Length (ft)	Reroute Length (ft)	Change in Length (ft)	Max. Perp. Deviation (ft)	Reason for Variation	Brief Variation Description	Additional Impacts/Comments	Originator
0470-01	287.78	288.44	SD	HARDING	016	022N	001E	3,478	3,483	5.49	67.61	CL reroute to avoid impact to unnamed Tributary to Boxelder Creek.	Route variation starts near MP 287.7 and deviates -12° northeast of CL. It continues in this direction for ~ 2,161 ft. Then the reroute turns slightly southwest and extends for ~1,322 ft. before rejoining the current CL near MP 288.4.	- Proposed route variation eliminates ~157 ft. of wet crossing.	Engineering
0470-02	487.19	487.54	SD	HAAKON	011	001N	025E	1,821	1,816	-4.97	55.40	CL reroute to avoid workspaces impacting creek/drainage.	Route variation starts near MP 487.2 and deviates -8° southeast of current CL. It extends in this direction for ~170 ft. Then it turns slightly east and continues in a straight line, paralleling the current CL, for ~ 1,606 ft. Then it makes a last turn south and extends for ~40 ft. to rejoin the current CL near MP 487.5.	- Proposed route variation eliminates 2 nd drainage crossing.	Engineering
0470-03	509.81	510.11	SD	JONES	016, 017	001S	029E	1,591	1,616	24.29	111.99	CL reroute to avoid multiple crossings of White Clay Creek Tributary.	Route variation starts near MP 509.8 and deviates -11.5° northeast of the current CL. It continues in this direction for ~ 536 ft., then it turns southeast towards the current CL. It continues in this direction for ~ 1,079 ft. prior to rejoining the current CL near MP 510.1.	- Proposed route variation eliminates 2 waterbody crossings as well as construction through wet area.	Engineering
0470-04	368.01	368.37	SD	PERKINS	002	013N	010E	1,932	1,950	18.13	83.47	CL reroute to avoid CL/workspaces paralleling waterbody.	Route variation starts near MP 368.0 and deviates -5° northeast of current CL. It continues in this direction for ~ 954 ft., then it turns slightly south, thus shifting the CL to avoid paralleling a long stretch of waterbody. It will extend in this direction for ~417 ft. prior to making a turn east for ~575 to rejoin the current CL near MP 368.4.	- Proposed route variation eliminates ~198 ft. of wet crossing.	Engineering
0470-05	369.20	369.57	SD	PERKINS	012	013N	010E	1,947	1,962	15.07	120.42	CL reroute to avoid CL/workspaces paralleling waterbody.	Route variation starts near MP 369.2 and deviates -8° southeast of current CL. It continues in this direction for ~ 864 ft. The reroute then turns further southeast, for ~ 1,098 ft to rejoin the current CL near MP 369.6.	- Proposed route variation eliminates ~200 ft. of wet crossing.	Engineering
0470-06	388.01	388.21	SD	MEADE	018	011N	013E	1,056	1,061	4.83	50.04	CL reroute to straighten waterbody crossing.	Route variation starts near MP 388.0 and deviates -5° southeast of current CL. It continues in this direction for ~ 605 ft. The reroute then turns further southeast, towards the current CL and extends for ~ 456 ft to rejoin it near MP 388.2.		Engineering
0470-07	408.65	408.89	SD	MEADE	028	009N	015E	1,262	1,267	4.89	40.44	CL reroute to avoid workspaces impact to pond.	Route variation starts near MP 388.0 and deviates -11.5° northeast of current CL. It continues in this direction for ~ 198 ft. The reroute then turns in the southeast direction, towards the current CL and extends for ~1,067 ft to rejoin it near MP 388.2.	- Proposed route variation eliminates ~70 ft. of wet crossing.	Engineering
0470-08	409.96	410.17	SD	MEADE	033	009N	015E	1,107	1,121	14.15	85.99	CL reroute to avoid multiple waterbody crossings as well as avoid workspaces paralleling waterbody.	Route variation starts near MP 409.9 and deviates -8° northeast of current CL. It continues in this direction for ~613 ft. The reroute then turns in the southeast direction, towards the current CL and extends for ~509 ft. to rejoin it near MP 410.2.	- Proposed route variation eliminates ~342 ft. of wet crossing and eliminates 1 crossing of waterbody.	Engineering
0470-09	375.94	376.21	SD	PERKINS	035	013N	011E	1,443	1,480	37.88	99.98	CL reroute to avoid CL/Workspaces in ravine.	Route variation starts near MP 375.9 and deviates -4.5° northeast of current CL. It extends in this direction for ~1,233 ft. Then it turns southeast for ~ 247 ft. to rejoin the current CL near MP 376.2.	- Proposed Route Variation will impact CAR-328 (to be shortened).	Engineering
0470-10	376.87	377.20	SD	PERKINS	035, 036	013N	011E	1,747	1,742	-4.60	58.42	CL reroute to avoid CL/workspaces paralleling waterbody.	Route variation starts near MP 376.8 and deviates -13° southeast of current CL. It continues in this direction for ~15 ft. before turning further southeast. It will extend straight in this direction for ~1,727 ft. to rejoin the current CL near MP 377.2.	- Proposed route variation eliminates ~170 ft. of wet crossing.	Engineering

RV ID	Civil Survey Complete?	Civil Survey Needed (ft)	Moves Pump Station?	Moves Valve Site?	In Co-located Area?	Does route variation impact ABB areas?	Biological Survey Complete for Existing Corridor?	Cultural Survey Complete for Existing Corridor?	Biological Survey Complete for Proposed Corridor?	Cultural Survey Complete for Proposed Corridor?	Estimated Length Requiring new Environmental Surveys (ft)	Number of New Landowners impacted by reroute	Number of Landowners on current route impacted by reroute	Is the affected landowner a possible condemnation?	Number of tracts purchased on original route.	Does proposed route variation impact Tribal Lands?	Does proposed route variation impact any Federal/State Lands?
0470-01	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	1			NO	NO
0470-02	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	1			NO	NO
0470-03	YES	0	NO	NO	NO	NO	Yes	Yes	NO	NO	162	0	2			NO	YES
0470-04	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	2			NO	YES
0470-05	YES	0	NO	NO	NO	NO	Yes	Yes	NO	NO	644	0	1	NO		NO	YES
0470-06	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	1			NO	NO
0470-07	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	1			NO	NO
0470-08	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	1			NO	NO
0470-09	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	1			NO	NO
0470-10	YES	0	NO	NO	NO	NO	Yes	Yes	Yes	Yes	0	0	2			NO	NO

Keystone XL Pipeline - Cost Analysis for Route Variation Report 0470

Prepared: 2013-08-08

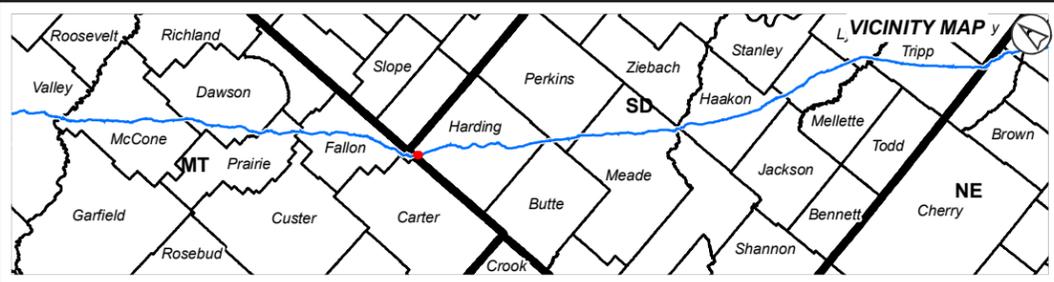
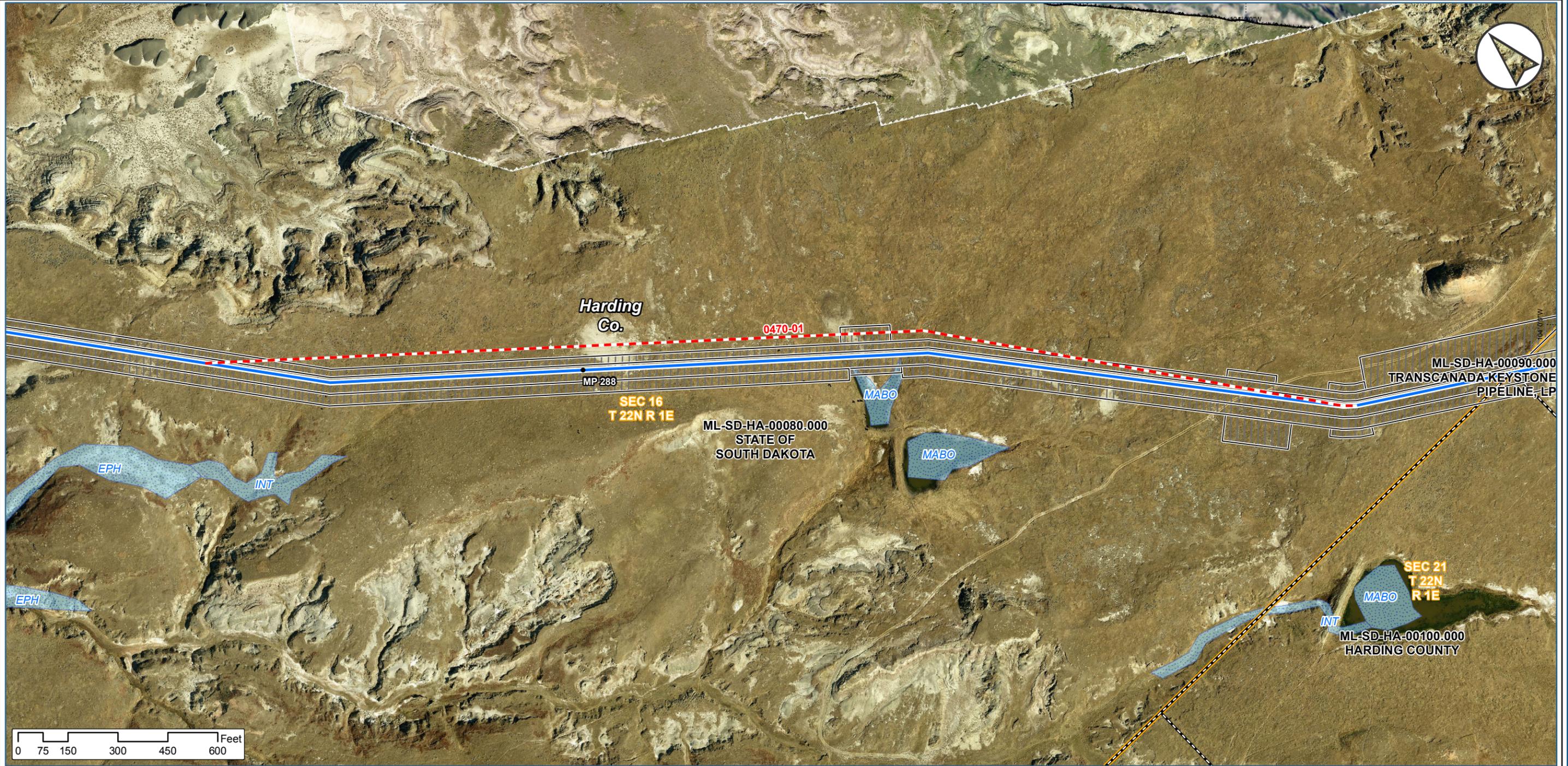
RV ID	Additional length (ft)	Cost \$360/ft	Additional length of wetland construction (ft)	Cost \$195/ft	Additional length of side hill construction (ft)	Cost \$19/ft	Additional bore length (ft)	Cost \$540/ft	Additional Waterbody crossings	Cost (\$77,250/EA btw 10' - 19') (\$32,500/EA < 10')	Cost of Environmental survey (\$5,300/mile)	Cost of Civil survey (\$5,000/mile)	Approximate cost for land purchased on current centerline	Miscellaneous cost for additional impacts	Total Cost
0470-01	5.49	\$ 1,974.60	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ -		\$ -	\$ (30,000.00)	\$ (28,025.40)
0470-02	-4.97	\$ (1,790.15)	0	\$ -	0	\$ -		\$ -	-1	\$ (32,500.00)	\$ -		\$ -		\$ (34,290.15)
0470-03	24.29	\$ 8,742.70	0	\$ -	0	\$ -		\$ -	-2	\$ (65,000.00)	\$ 163.06		\$ -		\$ (56,094.24)
0470-04	18.13	\$ 6,526.32	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ -		\$ -	\$ (38,000.00)	\$ (31,473.68)
0470-05	15.07	\$ 5,423.95	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ 646.27		\$ -	\$ (39,000.00)	\$ (32,929.78)
0470-06	4.83	\$ 1,738.32	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ -		\$ -	\$ (35,000.00)	\$ (33,261.68)
0470-07	4.89	\$ 1,760.76	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ -		\$ -	\$ (13,650.00)	\$ (11,889.24)
0470-08	14.15	\$ 5,092.27	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ -		\$ -	\$ (70,000.00)	\$ (64,907.73)
0470-09	37.88	\$ 13,635.64	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ -		\$ -	\$ (7,000.00)	\$ 6,635.64
0470-10	-4.60	\$ (1,655.17)	0	\$ -	0	\$ -		\$ -	0	\$ -	\$ -		\$ -	\$ (33,000.00)	\$ (34,655.17)

Overall Estimated Costs of Routes Variations= \$ (320,891.42)

Keystone XL Pipeline - Approval form for Route Variation Report 0470
 Prepared: 2013-08-08

RV ID		0470-01	0470-02	0470-03	0470-04	0470-05	0470-06	0470-07	0470-08	0470-09	0470-10
LAND (TransCanada) Tina Hall	Approval (Y/N)	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
	Comments										
	Signature	<i>Tina Hall</i>									
ENGINEERING (TransCanada) Meera Kotbani	Approval (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Comments										
	Signature	<i>Meera Kotbani</i>									
ENGINEERING (exp) Kevin McGlynn	Approval (Y/N)	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
	Comments								Not a feature		
	Signature	<i>Kevin McGlynn</i>									
ENVIRONMENTAL (TransCanada) Sandra Barnett	Approval (Y/N)	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
	Comments			Pending Survey		Pending Survey			no feature		
	Signature	<i>Sandra Barnett</i>									
FACILITIES (TransCanada) Sandra Gigovic	Approval (Y/N)										
	Comments										
	Signature										
PROJECT MANAGEMENT - MONTANA (TransCanada) Alan Lietz	Approval (Y/N)										
	Comments										
	Signature										
PROJECT MANAGEMENT - SOUTH DAKOTA (TransCanada) James Odom	Approval (Y/N)	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
	Comments										
	Signature	<i>James Odom</i>									
PROJECT MANAGEMENT - NEBRASKA (TransCanada) Robert Bradley	Approval (Y/N)										
	Comments										
	Signature										
KEYSTONE XL MANAGER (TransCanada) Steve Marr	Approval (Y/N)										
	Comments										
	Signature										

RV-0470-08_Denied: RV not necessary anymore. Environmental deleted the waterbody delineated feature after field verification.



LEGEND

- Milepost
- Valve
- Power Pole
- Centerline (2012-11-18)
- Route Variation
- Access Road
- Overhead Power Line
- Cultural Site
- Workspace
- Wash Station
- Property Parcel
- Section Line
- County Line
- Waterbody
- Wetland
- MDEQ Corridor

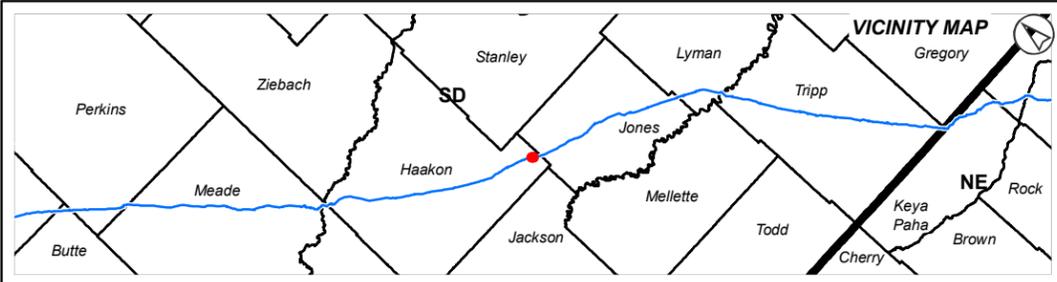
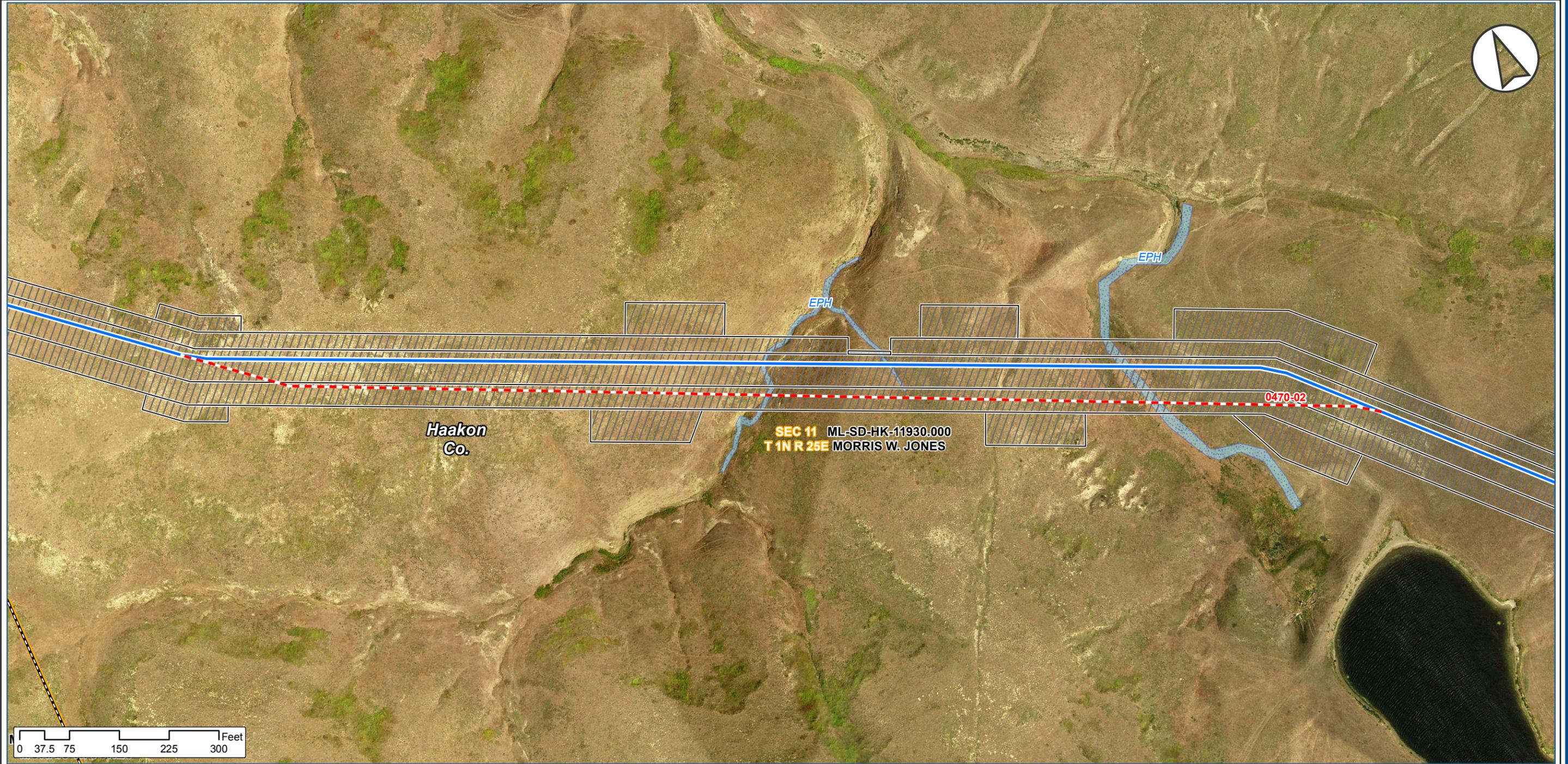
KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	HARDING	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



LEGEND

• Milepost	— Access Road	▭ Section Line
⊗ Valve	P—P Overhead Power Line	▭ County Line
⊗ Power Pole	▭ Cultural Site	▭ Waterbody
— Centerline (2012-11-18)	▭ Workspace	▭ Wetland
- - - Route Variation	▭ Wash Station	▭ MDEQ Corridor
	▭ Property Parcel	

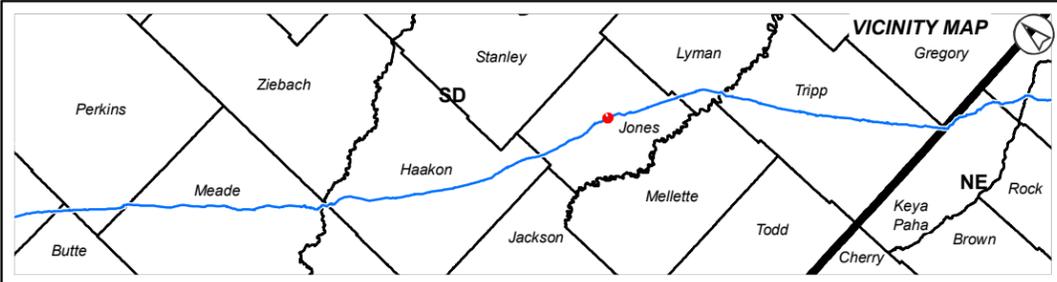
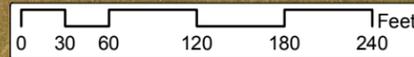
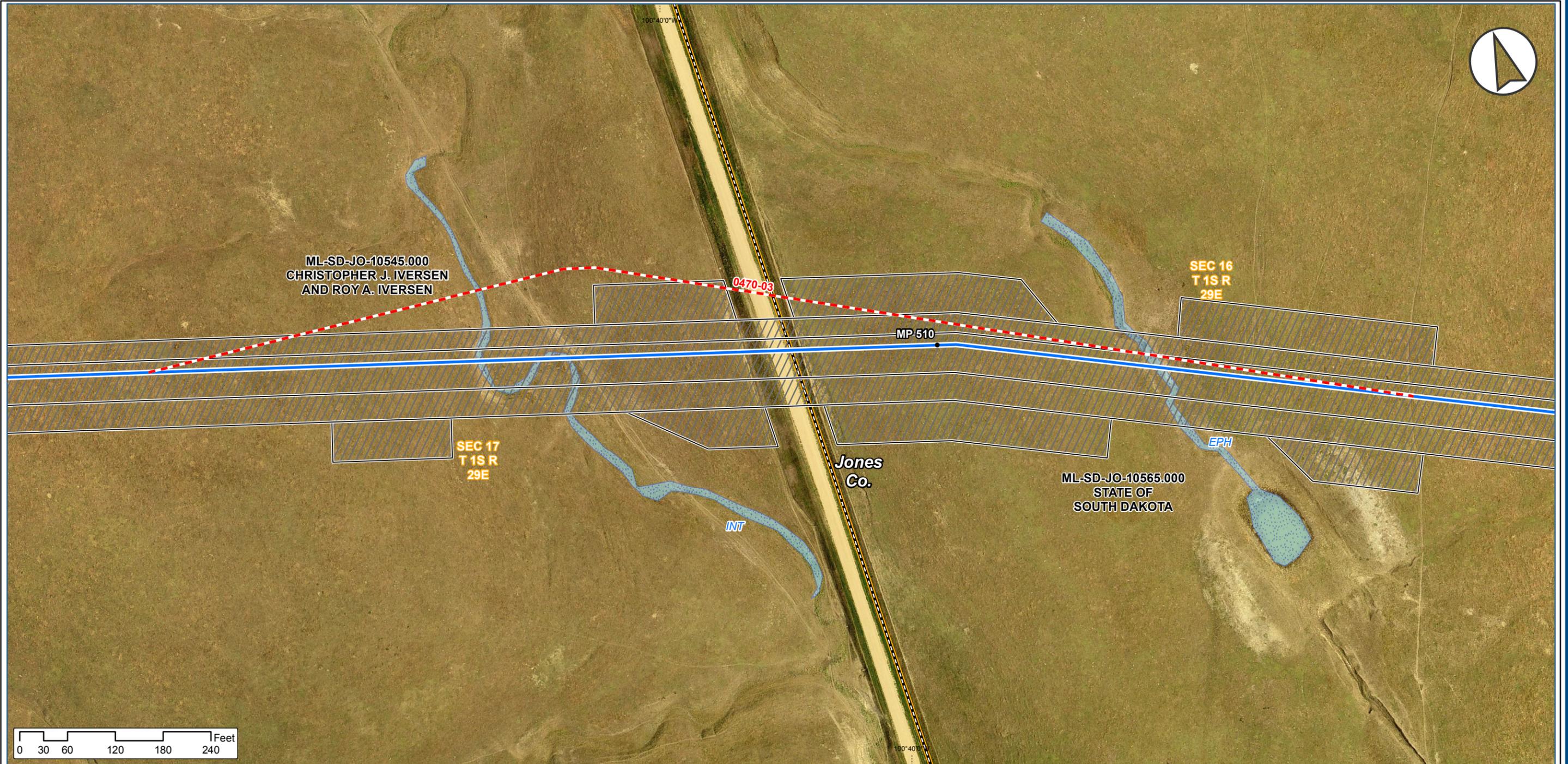
KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	HAAKON	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM14 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



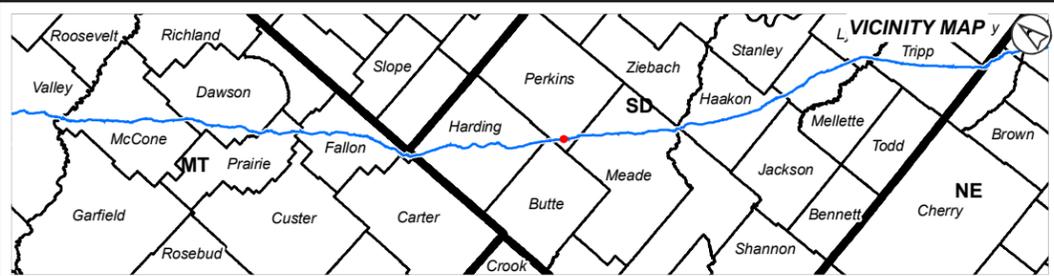
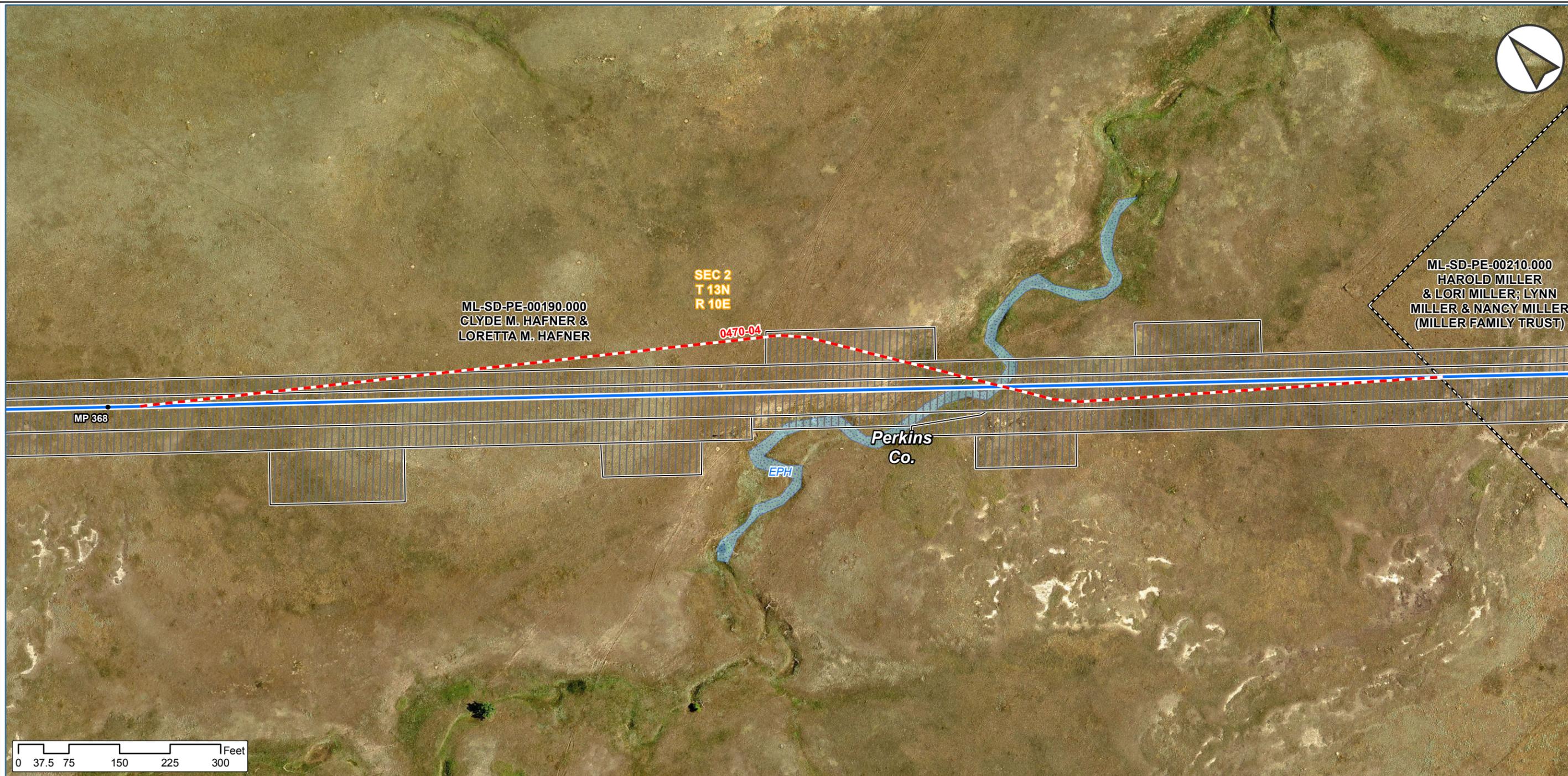
LEGEND		
• Milepost	— Access Road	▭ Section Line
⊗ Valve	P—P Overhead Power Line	▭ County Line
⊗ Power Pole	▭ Cultural Site	▭ Waterbody
— Centerline (2012-11-18)	▭ Workspace	▭ Wetland
- - - Route Variation	▭ Wash Station	▭ MDEQ Corridor
	▭ Property Parcel	

KEYSTONE XL PROJECT		
PROPOSED ROUTE VARIATION		
COUNTY: JONES	DRAWN BY: RJM	
STATE: SOUTH DAKOTA	CHECKED BY: JP	
REV. NO.	REVISION	DATE
0	ISSUED FOR REVIEW.	2013-07-09
PRELIMINARY		
DATE: 2013-07-08	PROJECTION: NAD83 UTM14 N	

PREPARED BY:
exp Energy Services Inc.
 t: +1.850.385.5441 | f: +1.850.385.5523
 1300 Metropolitan Blvd.
 Tallahassee, FL 32308
 U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
 • INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLR V SHEET: 1 of 1



LEGEND

• Milepost	— Access Road	▭ Section Line
⊗ Valve	P—P Overhead Power Line	▭ County Line
⊗ Power Pole	▭ Cultural Site	▭ Waterbody
— Centerline (2012-11-18)	▭ Workspace	▭ Wetland
- - - Route Variation	▭ Wash Station	▭ MDEQ Corridor
	▭ Property Parcel	

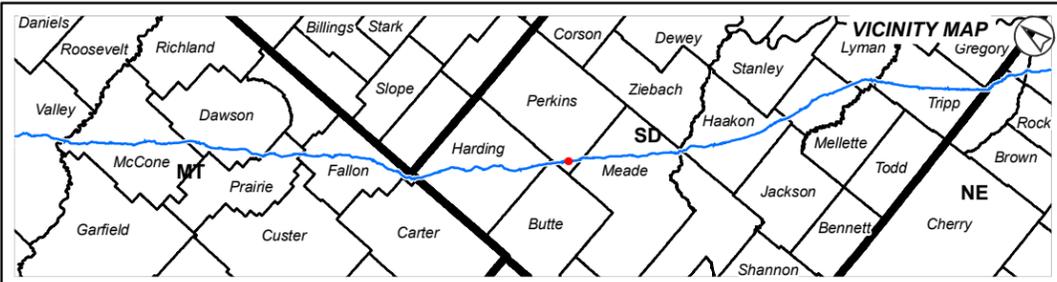
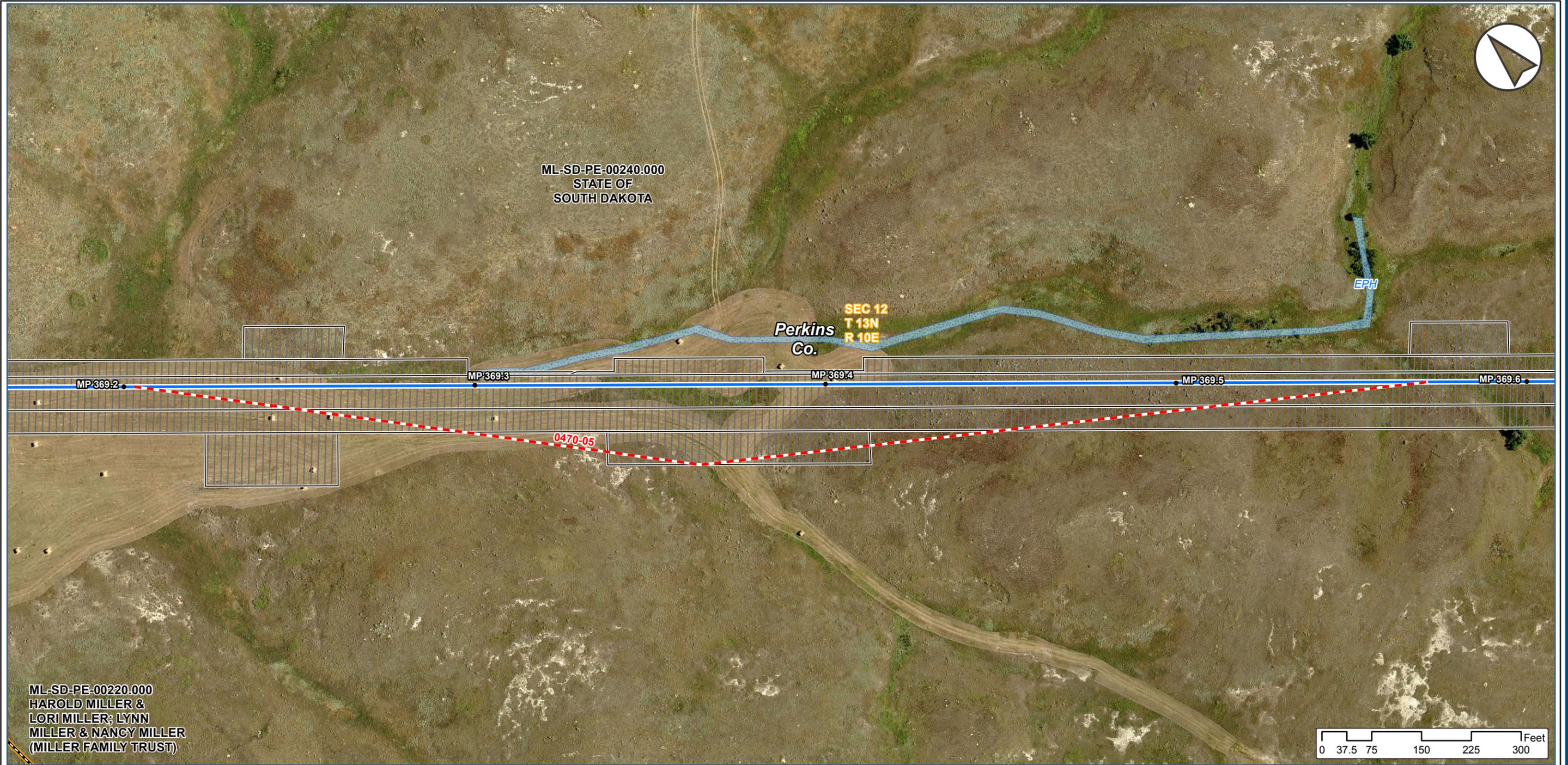
KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	PERKINS	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



LEGEND

- Milepost
- ⊗ Valve
- ⊗ Power Pole
- Centerline (2012-11-18)
- - - Route Variation
- Access Road
- P - P Overhead Power Line
- ⊗ Cultural Site
- ▨ Workspace
- ▨ Wash Station
- ▭ Property Parcel
- ▭ Section Line
- ▭ County Line
- ▭ Waterbody
- ▭ Wetland
- ▭ MDEQ Corridor

KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	PERKINS	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.

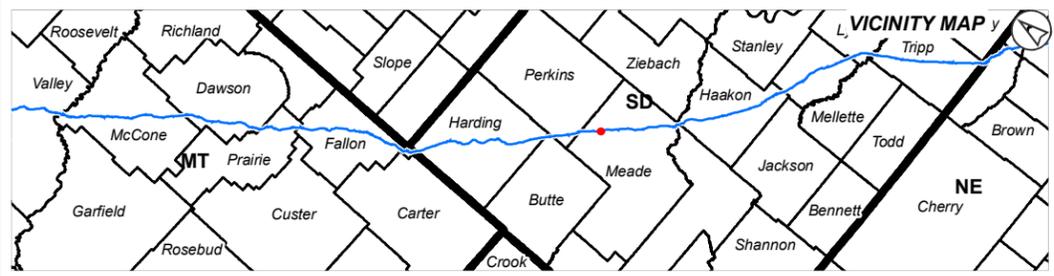
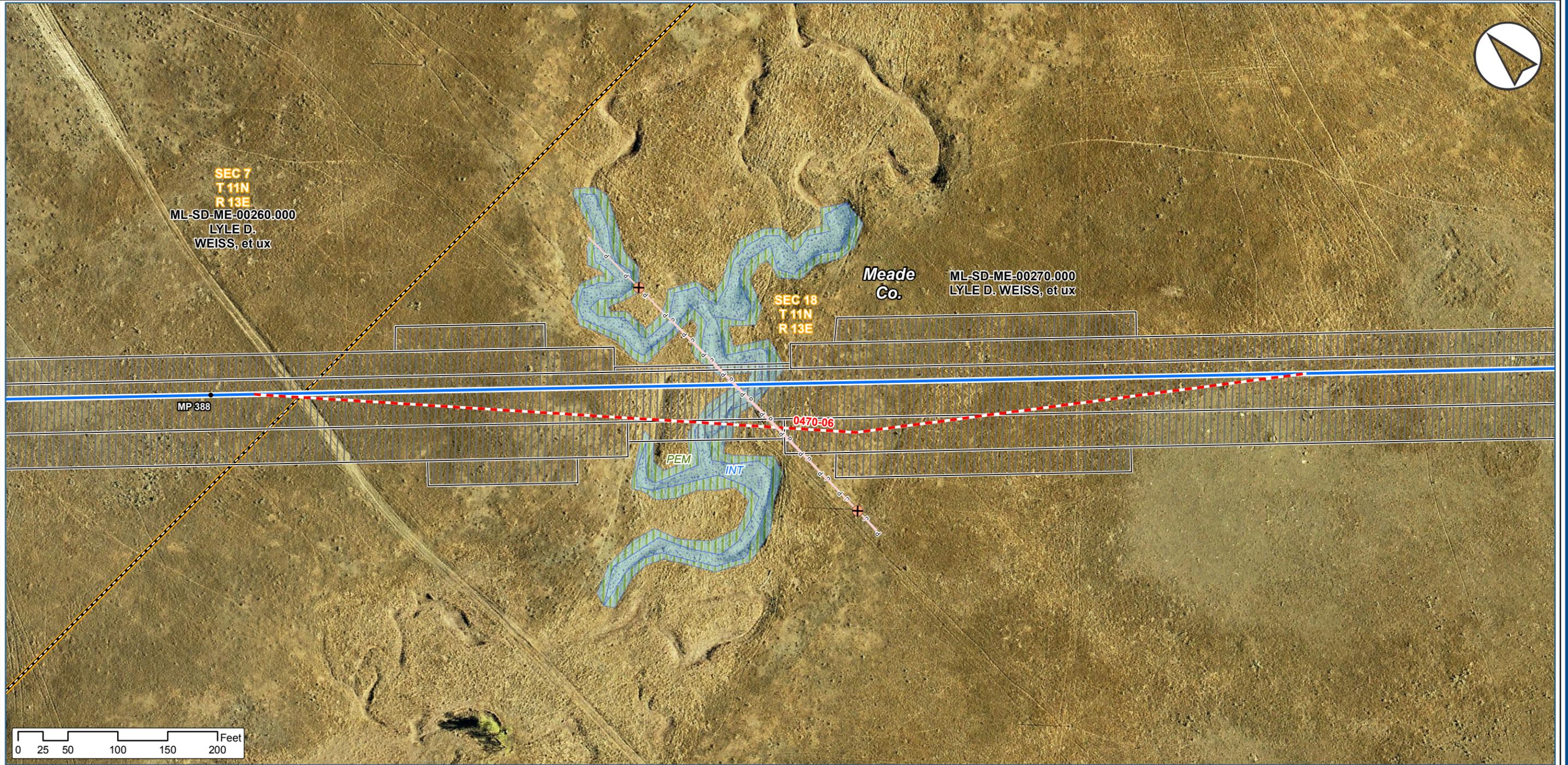
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.

www.exp.com

exp.

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



LEGEND

- Milepost
- Valve
- Power Pole
- Centerline (2012-11-18)
- Route Variation
- Access Road
- Overhead Power Line
- Cultural Site
- Workspace
- Wash Station
- Property Parcel
- Section Line
- County Line
- Waterbody
- Wetland
- MDEQ Corridor

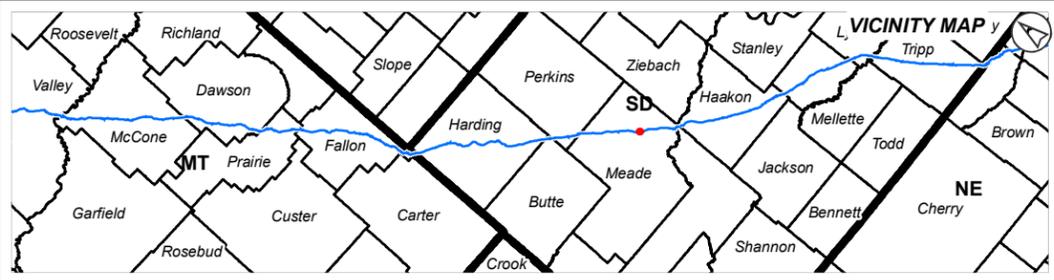
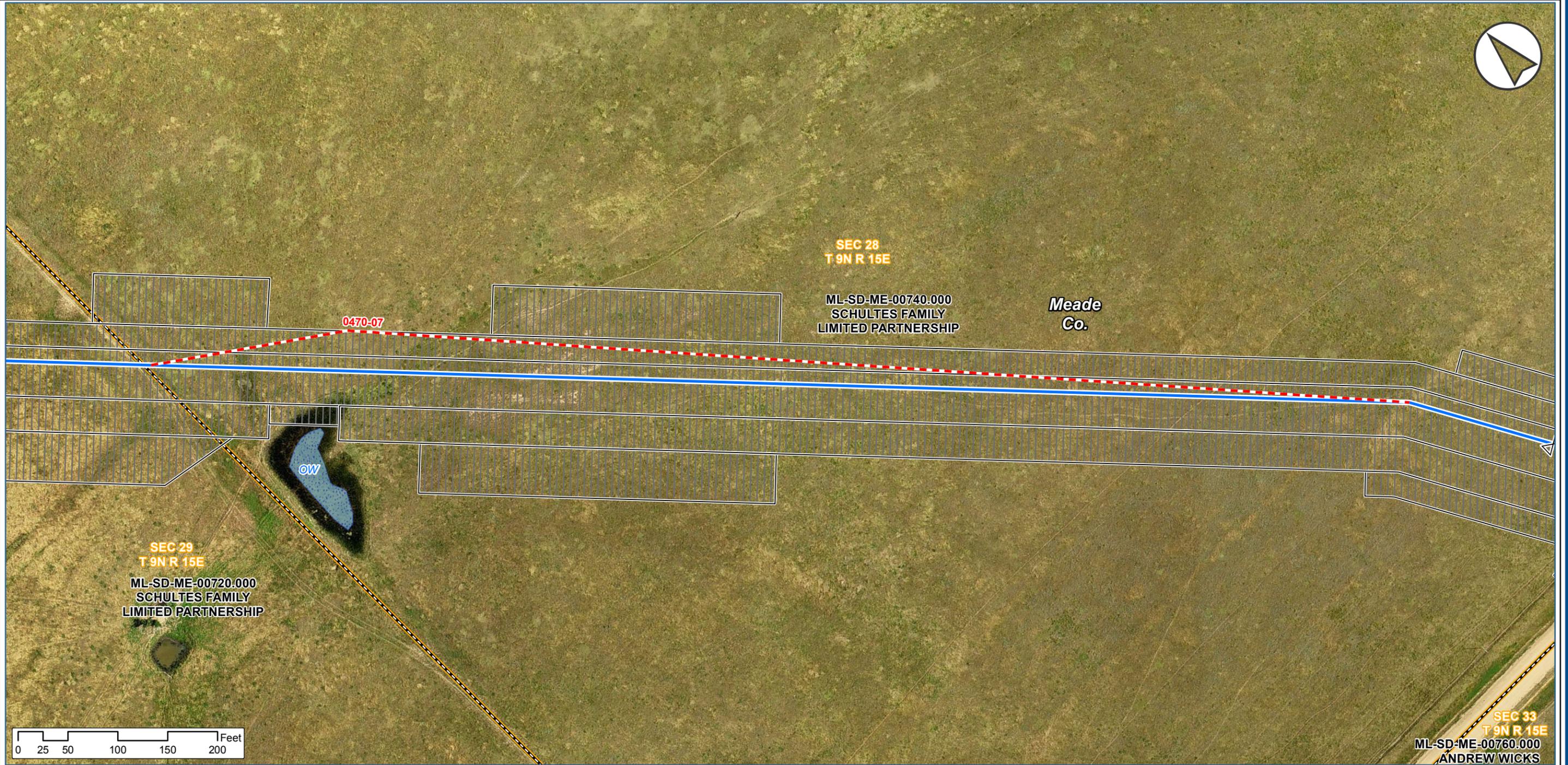
KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	MEADE	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



LEGEND

- Milepost
- Valve
- Power Pole
- Centerline (2012-11-18)
- Route Variation
- Access Road
- Overhead Power Line
- Cultural Site
- Workspace
- Wash Station
- Property Parcel
- Section Line
- County Line
- Waterbody
- Wetland
- MDEQ Corridor

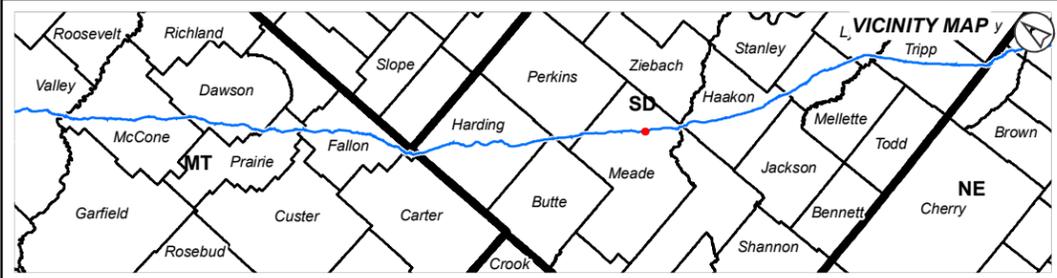
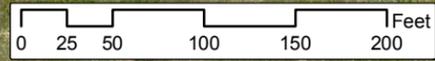
KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	MEADE	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



LEGEND

• Milepost	— Access Road	▭ Section Line
⊗ Valve	P—P Overhead Power Line	▭ County Line
⊗ Power Pole	▭ Cultural Site	▭ Waterbody
— Centerline (2012-11-18)	▭ Workspace	▭ Wetland
- - - Route Variation	▭ Wash Station	▭ MDEQ Corridor
	▭ Property Parcel	

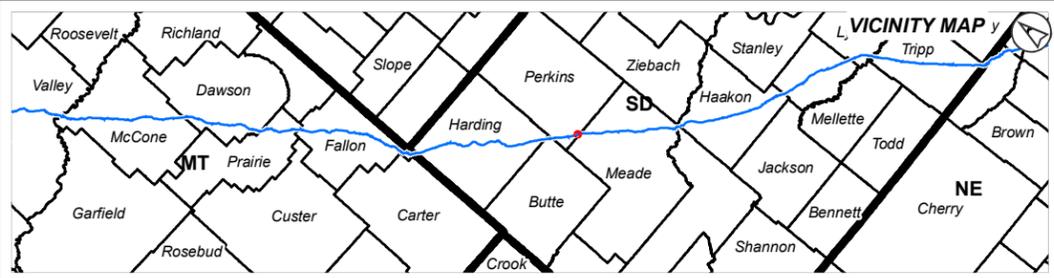
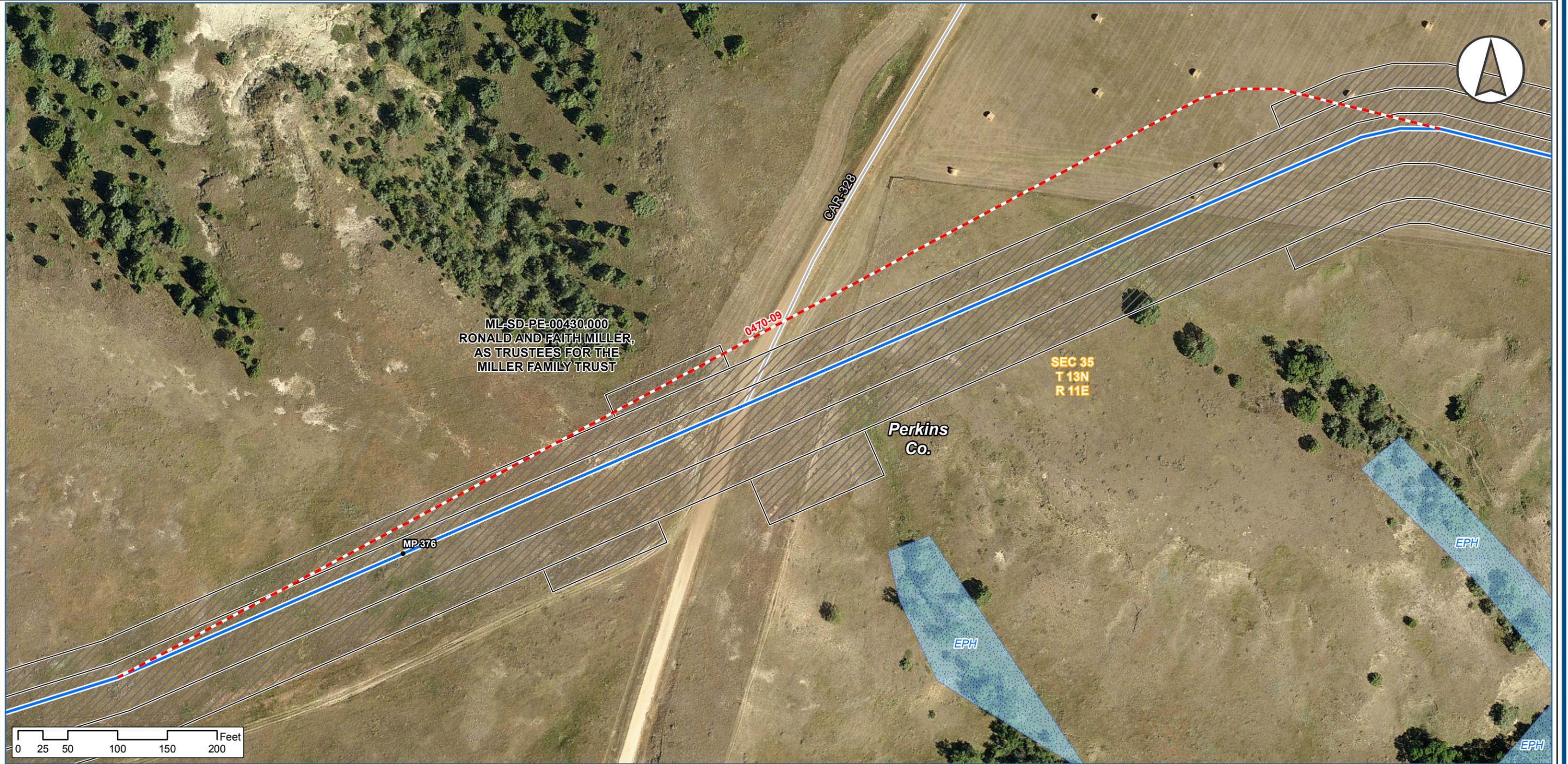
KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	MEADE	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



LEGEND

• Milepost	— Access Road	▭ Section Line
⊗ Valve	P—P Overhead Power Line	▭ County Line
⊗ Power Pole	▭ Cultural Site	▭ Waterbody
— Centerline (2012-11-18)	▭ Workspace	▭ Wetland
- - - Route Variation	▭ Wash Station	▭ MDEQ Corridor
	▭ Property Parcel	

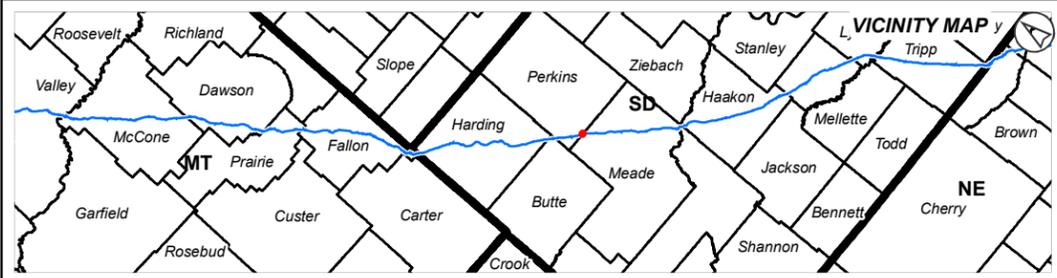
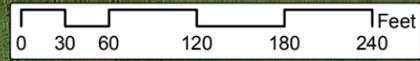
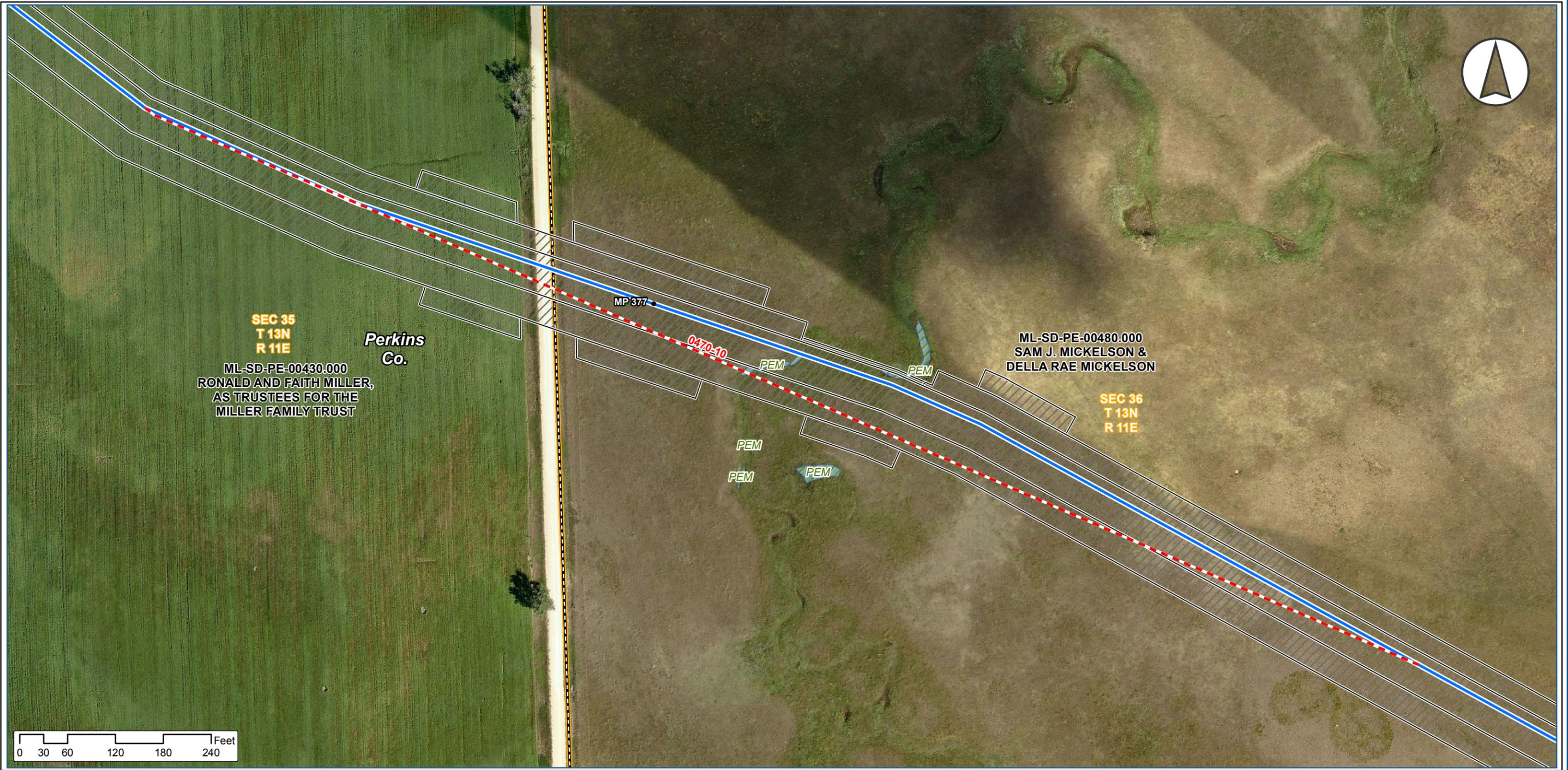
KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	PERKINS	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1



LEGEND

- Milepost
- Valve
- Power Pole
- Centerline (2012-11-18)
- Route Variation
- Access Road
- Overhead Power Line
- Cultural Site
- Workspace
- Wash Station
- Property Parcel
- Section Line
- County Line
- Waterbody
- Wetland
- MDEQ Corridor

KEYSTONE XL PROJECT
PROPOSED ROUTE VARIATION

COUNTY:	PERKINS	DRAWN BY:	RJM
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-07-09	
PRELIMINARY			
DATE:	2013-07-08	PROJECTION:	NAD83 UTM13 N

PREPARED BY:
exp Energy Services Inc.
t: +1.850.385.5441 | f: +1.850.385.5523
1300 Metropolitan Blvd.
Tallahassee, FL 32308
U.S.A.
www.exp.com

• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

DWG: XL-46-P-9299-A-CLRV SHEET: 1 of 1