

KEYSTONE XL PIPELINE PROJECT

0491-SD-P4-387.0-387.7-S

KEYSTONE XL PIPELINE PROJECT PIPELINE ROUTE VARIATION FORM			
1	<b>VARIATION TYPE:</b> 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	<b>LOCATION:</b> Sketch: <input type="text" value="Attached"/> Pictures: <input type="text" value="N/A"/> State: <input type="text" value="SD"/> County: <input type="text" value="Meade"/> Quad Map: <input type="text" value="N/A"/> Township: <input type="text" value="011N"/> Range: <input type="text" value="012E, (013E)"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="012, (07)"/> Centerline: <input type="text" value="6/11/2013"/> MP: <input type="text" value="387.02"/> to <input type="text" value="387.67"/>		
3	<b>REASON FOR ROUTE VARIATION</b> (Please include reason for route variation): The primary reason for this CL reroute is to shift CL away from drainage channel per 90% alignment sheet review. This CL reroute has been field verified by civil survey.  This reroute is requested by Engineering.		
	<b>DETAIL ROUTE VARIATION</b> (Please describe route variation in detail): The proposed reroute begins at ~MP 387.0 and deviates ~8° northeast of the current CL. It extends for ~1,855 ft in this direction before turning southeasterly for ~1,589 ft. to reconnect with the current CL near MP 387.7  Tracts Impacted: ML-SD-ME-00240.000 (Lyle D. Weiss, et ux) ML-SD-ME-00260.000 (Lyle D. Weiss, et ux)		
	<b>ADDITIONAL IMPACTS</b> (Please include any additional impacts which may affect cost; crossings, induction bends, etc.):  The proposed route variation falls within the current environmental surveyed corridor, so no additional costs associated with surveys will be incurred.		
	Is there an increase/decrease in the number of crossings? Yes <input type="text"/> No <input checked="" type="checkbox"/>		
	If yes, please list: <input type="text"/>		
	<b>COST ANALYSIS</b> (costs incurred or saved from the route variation)		
	Additional length of route realignment:	14 ft.	\$ 4,907.62 \$ 360/ft
	Additional length of side-hill construction:	<input type="text"/> ft.	\$ - \$ 19/ft
	Additional length of wetland construction:	-356 ft.	\$ (69,420.00) \$ 195/ft
	Additional bore length (Road, RR):	<input type="text"/> ft.	\$ - \$ 540/ft
	Additional foreign line/pipeline crossings:	<input type="text"/> EA	\$ - \$ 30,000/EA
	Additional water body crossing (streams, ponds, etc.):		
	35 - 65' +	0 EA	\$ - \$ 185,000/EA
	10' - 19'	0 EA	\$ - \$ 77,250/EA
	Less than 10'	0 EA	\$ - \$ 32,500/EA
	Additional survey required:		
	Civil:	0.00 mile	\$ - \$ 5,000/mile
	Cultural:	0.00 mile	\$ - \$ 2,500/mile
	Biological:	0.00 mile	\$ - \$ 2,800/mile
	Miscellaneous costs saved or added due to route variation from <b>ADDITIONAL IMPACTS</b> listed above: <input type="text"/>		
	Overall estimated costs of the route variation:	\$ (64,512.38)	(See "Additional Impacts" above)

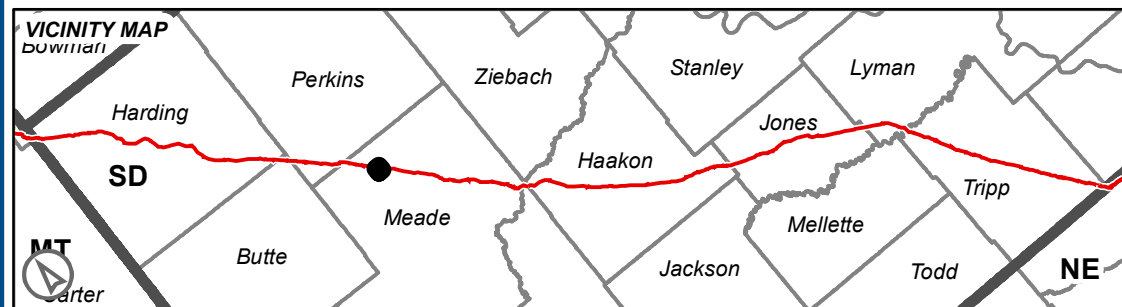
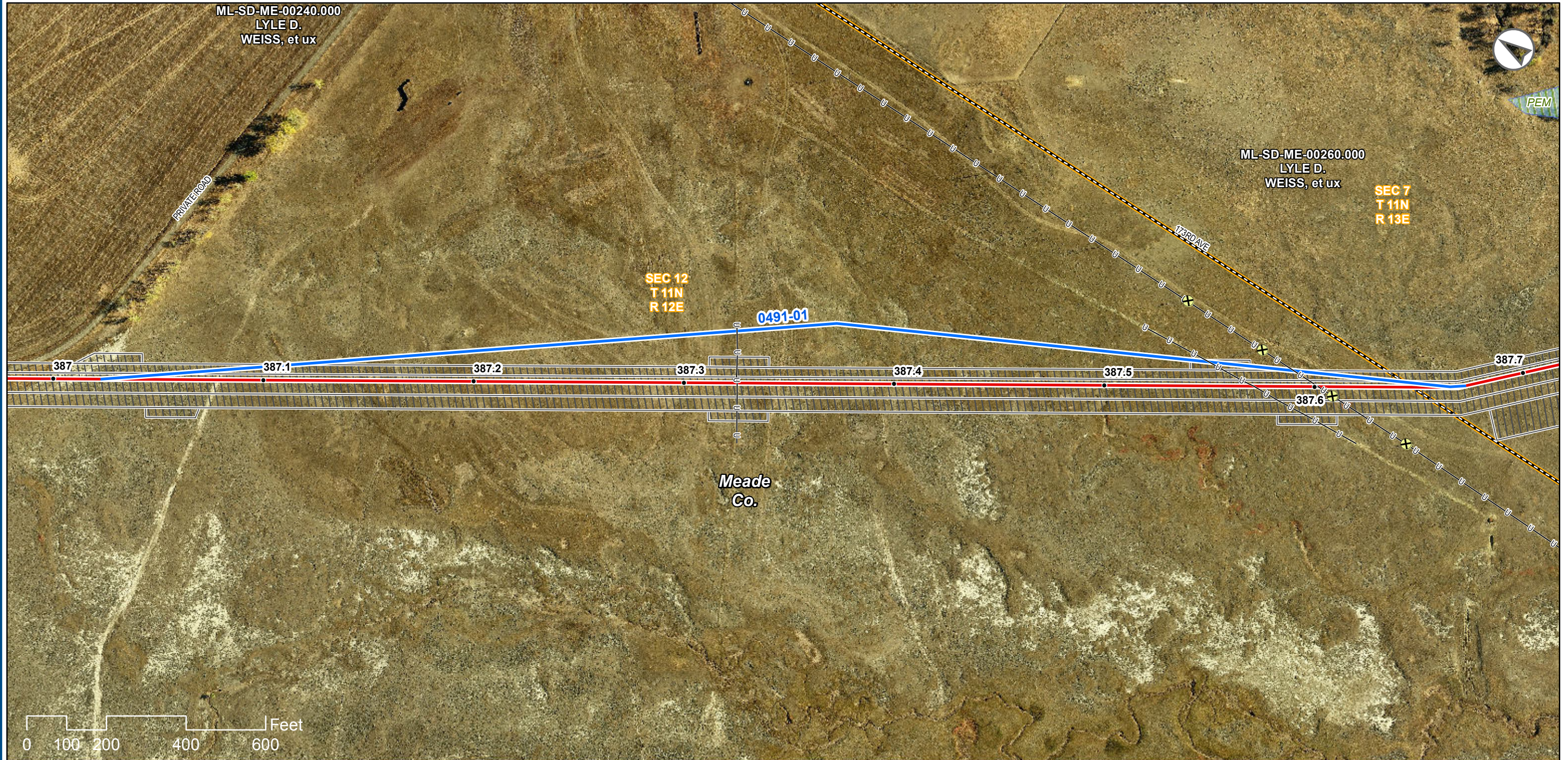
<b>4 LAND / TransCanada</b> <span style="float: right;"><i>Tina Hall</i></span>	
a) Is a new landowner affected by the proposed variation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Is the affected landowner/tract a possible condemnation?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Does proposed route variation impact Tribal Lands?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does proposed route variation impact any Federal/State Lands?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name type (i.e. USFWS, BLM, etc.): <input type="text"/>	
e) Is proposed realignment outside the easement/workspace?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f) Is realignment proposed to satisfy landowner request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name of landowner(s)/track number(s): <input type="text"/>	
g) Has all the evaluation criteria been examined/provided for this specific discipline?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If no, please explain why: <input type="text"/>	
<input type="text"/>	
<b>5 ENGINEERING/CONSTRUCTION - TransCanada</b> <span style="float: right;"><i>Meera Kothari</i></span>	
a) Maximum deviation perpendicular to proposed alignment:	<input type="text" value="152"/> ft.
b) Does variation (CL) (including workspaces) falls within 500 ft. MDEQ Corridor?	Yes <input type="text" value="N/A"/> No <input type="checkbox"/>
c) Has the centerline been staked for construction?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does route variation affect HDD crossing alignment?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
e) Is realignment proposed for engineering/construction reasons?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f) Will the route variation require the relocation of a pump station?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
g) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
<input type="text"/>	
<b>6 ENVIRONMENTAL - TransCanada</b> <span style="float: right;"><i>Sandra Barnett</i></span>	
a) Has the corridor been environmentally surveyed?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
b) Has the proposed variation been environmentally surveyed?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
c) Does proposed route variation impact Sage Grouse areas?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Does route variation impact ABB areas?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
e) Was variation proposed to satisfy environmental issues?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
f) Was realignment proposed to satisfy agency request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, name of agency(s): <input type="text"/>	
g) Environmental features:	
Added (+): <input type="text"/>	Subtracted (-): <input type="text"/>
Wetland ID # for newly impacted wetlands: <input type="text"/>	
h) Has all the evaluation criteria been examined/provided for this specific discipline?	
Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If no, please explain why: <input type="text"/>	
<input type="text"/>	
<b>7 ENGINEERING / FACILITIES AND HYDRAULICS (if applicable)</b> <span style="float: right;"><i>Sandra Gigovic</i></span>	
a) Will the route variation require the relocation of a pump station?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Will route variation impact hydraulics?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Are additional valves required at HCA's or water crossing?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
d) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
<b>8 STAKEHOLDER RELATIONS / TCPL (if applicable)</b> <span style="float: right;"><i>Bud Andersen</i></span>	
a) Does the variation result in any new stakeholders?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
b) Does the variation require follow-up with specific stakeholder groups?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
c) Was the variation proposed to satisfy stakeholder request?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
-If yes, please specify issue type (as it aligns to stakeholder database): <input type="text"/>	
d) Has all the evaluation criteria been examined/provided for this specific discipline?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If no, please explain why: <input type="text"/>	
<input type="text"/>	
9 Originator: <input type="text" value="Engineering"/>	10 Received by: <input type="text"/>
Date: <input type="text" value="8/8/2013"/>	Date: <input type="text" value="8/8/2013"/>
	Fax to: ?
11 Assigned Tracking Number: <input type="text" value="0491-SD-P4-387.0-387.7-S"/>	12 Filed by: <input type="text"/>
	Date: <input type="text"/>
	Fax to: ?

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KEYSTONE XL PIPELINE PROJECT

KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: <u>8/8/2013</u>	Tracking Number: <u>0491-SD-P4-387 0-387 7-S</u>	
Description: The primary reason for this CL reroute is to shift CL away from drainage channel per 90% alignment sheet review. This CL reroute has been field verified by civil survey.	MP: <u>387 0</u> to <u>387 7</u>	Originated By: <u>Engineering</u>
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
<u>TransCanada - Land</u> Tina Hall	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>8/19/13</u>
Comments:	If Rejected Why?	
<u>TransCanada - Engineering</u> Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>8/15/13</u>
Comments:	If Rejected Why?	
<u>Exp - Engineering</u> Kevin McGlynn	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>8-20-13</u>
Comments:	If Rejected Why?	
<u>TransCanada - Environmental</u> Sandra Barnett	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>8/15/13</u>
Comments:	If Rejected Why?	
<u>Stantec - Risk Assessment</u> Heidi Tilquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments:	If Rejected Why?	
<u>TransCanada - Facilities</u> Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments:	If Rejected Why?	
<u>TransCanada - PM (Montana)</u> Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments:	If Rejected Why?	
<u>TransCanada - PM (South Dakota)</u> James Odom	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>10-Aug-13</u>
Comments:	If Rejected Why?	
<u>TransCanada - PM (Nebraska)</u> Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments:	If Rejected Why?	
<u>TransCanada - Area Manager</u> Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: <input type="text"/>
Comments:	If Rejected Why?	
Forward to: Tina Hall <input type="checkbox"/> Meera Kothari <input type="checkbox"/> Kevin McGlynn <input type="checkbox"/>	Sandra Barnett <input type="checkbox"/> Heidi Tilquist <input type="checkbox"/> Sandra Gigovic <input type="checkbox"/> Alan Lietz <input type="checkbox"/>	James Odom <input type="checkbox"/> Robert Bradley <input type="checkbox"/> Steve Marr <input type="checkbox"/>

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**LEGEND**

• Milepost	☒ Pump Station
⊗ Valve	▭ Cultural Site
— Foreign Utilities	▭ Property Parcel
— Keystone XL Project Centerline	▭ Section Line
— Centerline RV	▭ County Line
▨ Workspace	▭ Waterbody
▭ MDEQ 500' Corridor	▭ Wetland
⊗ Power Pole	

**KEYSTONE XL PROJECT**  
**RV-0491-01 CL CHANGES**

COUNTY:	MEADE	DRAWN BY:	CR
STATE:	SD	CHECKED BY:	PD
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2013-08-06	
<b>PRELIMINARY</b>			
DATE:	2013-08-06	PROJECTION:	NAD83   UTM13 N

PREPARED BY:  
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DWG: XL-P-9299-RV-20130806 SHEET: 1