

KEYSTONE XL PIPELINE PROJECT

0413-SD-P4-295.2-295.7-1

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" value="Attached"/> Pictures: <input type="text" value="N/A"/> State: <input type="text" value="SD"/> County: <input type="text" value="Valley"/> Quad Map: <input type="text" value="N/A"/> Township: <input type="text" value="21N"/> Range: <input type="text" value="02E"/> Aerial Map: <input type="text" value="See attached map sheet"/> Section: <input type="text" value="4"/> Centerline: <input type="text" value="3/14/2012"/> MP: <input type="text" value="295.21"/> to <input type="text" value="295.73"/>		
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): The primary reason for this route variation is to avoid washouts and dropoff (~200 ft.). Centerline moved 197' east to avoid dropoff. This route variation will also eliminate reclamation issues. This reroute is requested by Engineering based on field reconnaissance effort.		
DETAIL ROUTE VARIATION (Please describe route variation in detail): The proposed route variation starts near MP 295.2 and deviates ~5.5° northeast of the current CL. It continues in this direction for ~1,795 ft. Then the reroute turns slightly southwest and extends for ~991 ft. to rejoin the current CL near MP 295.7.			
ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): 2 tracts are impacted by the reroute: ML-SD-HA-00410.000 (Ronald Brown and Sheryl L. Brown) - Offline ML-SD-HA-00420.000 (Rebecca Holsti) CAR-041 is impacted by reroute (will be extended) Construction savings approximately ~ \$20,000 (to avoid a difficult construction, to avoid a ~15-20 ft. dropoff, additional bends, etc.). Approximately ~15,000 in reclamation savings.			
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"/> <input type="text"/>			
COST ANALYSIS (costs incurred or saved from the route variation)			
Additional length of route realignment:	46	ft.	\$ 16,615.41
Additional length of side-hill construction:	<input type="text"/>	ft.	\$ -
Additional length of wetland construction:	<input type="text"/>	ft.	\$ -
Additional bore length (Road, RR):	<input type="text"/>	ft.	\$ -
Additional foreign line/pipeline crossings:	<input type="text"/>	EA	\$ -
Additional water body crossing (streams, ponds, etc.):			
35 - 65' +	0	EA	\$ -
10' - 19'	0	EA	\$ -
Less than 10'	0	EA	\$ -
Additional survey required:			
Civil:	0.00	mile	\$ -
Cultural:	0.00	mile	\$ -
Biological:	0.00	mile	\$ -
Miscellaneous costs saved or added due to route variation from ADDITIONAL IMPACTS listed above:			\$ (35,000)
Overall estimated costs of the route variation:	\$ (18,384.59)		(See "Additional Impacts" above)

4 **LAND / TransCanada** Tina Hall

a) Is a new landowner affected by the proposed variation? Yes No

b) Is the affected landowner/tract a possible condemnation? Yes No

c) Does proposed route variation impact Tribal Lands? Yes No

d) Does proposed route variation impact any Federal/State Lands? Yes No
 -If yes, name type (i.e. USFWS, BLM, etc.):

e) Is proposed realignment outside the easement/workspace? Yes No

f) Is realignment proposed to satisfy landowner request? Yes No
 -If yes, name of landowner(s)/track number(s):

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

5 **ENGINEERING/CONSTRUCTION - TransCanada** Meera Kothari

a) Maximum deviation perpendicular to proposed alignment: ft.

b) Does variation (CL) (including workspaces) falls within 500 ft. MDEQ Corridor? Yes No

c) Has the centerline been staked for construction? Yes No

d) Does route variation affect HDD crossing alignment? Yes No

e) Is realignment proposed for engineering/construction reasons? Yes No

f) Will the route variation require the relocation of a pump station? Yes No

g) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

6 **ENVIRONMENTAL - TransCanada** Sandra Barnett

a) Has the corridor been environmentally surveyed? Yes No

b) Has the proposed variation been environmentally surveyed? Yes No

c) Does proposed route variation impact Sage Grouse areas? Yes No

d) Does route variation impact ABB areas? Yes No

e) Was variation proposed to satisfy environmental issues? Yes No

f) Was realignment proposed to satisfy agency request? Yes No
 -If yes, name of agency(s):

g) Environmental features:
 Added (+): Subtracted (-):
 Wetland ID # for newly impacted wetlands:

h) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

7 **ENGINEERING / FACILITIES AND HYDRAULICS (if applicable)** Sandra Gigovic

a) Will the route variation require the relocation of a pump station? Yes No

b) Will route variation impact hydraulics? Yes No

c) Are additional valves required at HCA's or water crossing? Yes No

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

8 **STAKEHOLDER RELATIONS / TCPL (if applicable)** Bud Andersen

a) Does the variation result in any new stakeholders? Yes No

b) Does the variation require follow-up with specific stakeholder groups? Yes No

c) Was the variation proposed to satisfy stakeholder request? Yes No
 -If yes, please specify issue type (as it aligns to stakeholder database):

d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes No
 If no, please explain why:

9 Originator:
 Date:

10 Received by:
 Date:
 Fax to: ?

11 Assigned Tracking Number:

12 Filed by:
 Date:
 Fax to: ?

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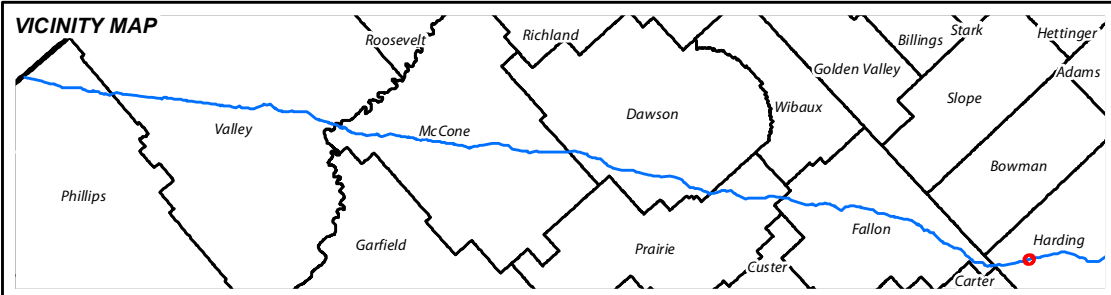
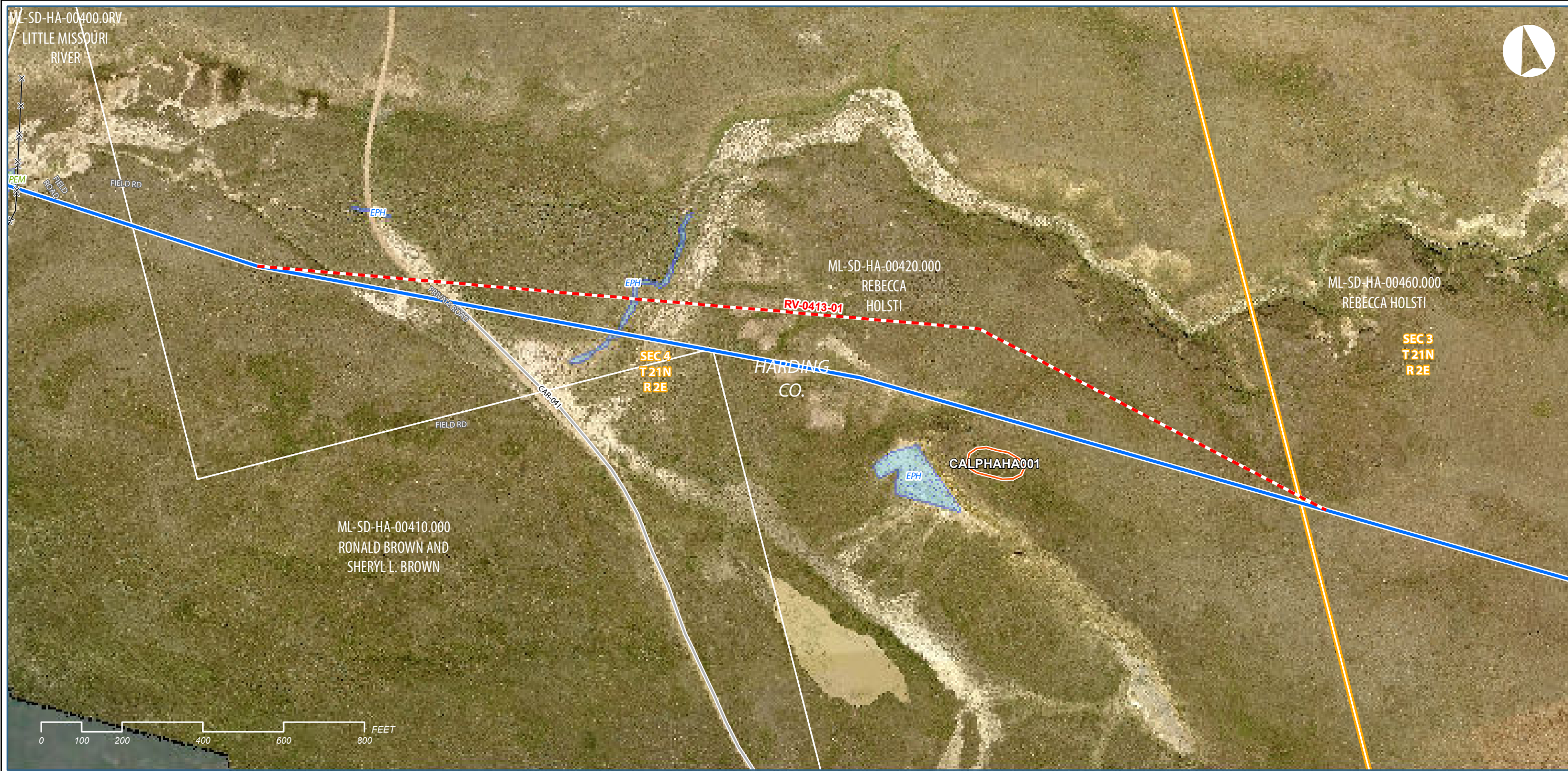
KEYSTONE XL PIPELINE PROJECT ROUTE VARIATION AUTHORIZATION FORM		
Date: 7/13/2012	Tracking Number: 0413-SD-P4-295 2-295 7-1	
Description: The primary reason for this route variation is to avoid washouts and dropoff (~200 ft.). Centerline moved 197' east to avoid dropoff.	MP: 295.2 to 295.7	Originated By: Engineering
	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
TransCanada - Land Tina Hott	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 7-16-12
Comments:	If Rejected Why?	
TransCanada - Engineering Meera Kohari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 7/13/12
Comments:	If Rejected Why?	
Eng - Engineering Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 7-9-2012
Comments:	If Rejected Why?	
TransCanada - Environmental Sandra Barnett	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
States - Risk Assessment Heidi Tilquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - Facilities Sandra Gigovic	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (Montana) Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (South Dakota) James Odom	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - PM (Nebraska) Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
TransCanada - Area Manager Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
Forward to: Tina Hott <input type="checkbox"/> Meera Kohari <input type="checkbox"/> Butch Wallace <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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Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
TransCanada- Engineering Meera Kothari	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
Exp - Engineering Butch Wallace	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
TransCanada- Environmental Sandra Barnett	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
Stantec - Risk Assessment Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
TransCanada - Facilities Sandra Gigovic	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: <u>Sept 7, 2012</u>
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
TransCanada - PM (Montana) Alan Lietz	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
TransCanada - PM (South Dakota) James Odom	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
TransCanada - PM (Nebraska) Robert Bradley	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments: <input type="text"/>	If Rejected Why? <input type="text"/>	
TransCanada - Area Manager Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
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Forward to: Tina Hall _____ Meera Kothari _____ Butch Wallace _____	Sandra Barnett _____ Heidi Tillquist _____ Sandra Gigovic _____ Alan Lietz _____	James Odom _____ Robert Bradley _____ Steve Marr _____

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LEGEND

- MILEPOST
- KEYSTONE XL CL (2012-03-14)
- PROPOSED ROUTE VARIATION
- SECTION LINE
- ACCESS ROAD
- PUMP STATION
- VALVE
- WATERLINE
- PROPERTY PARCEL
- CULTURAL SITE
- WETLAND
- WATERBODY
- 500FT MDEQ CORRIDOR
- HDD ENTRY / EXIT

KEYSTONE XL PROJECT

Proposed Route Variation 0413-01

COUNTY:	HARDING	DRAWN BY:	PD
STATE:	SOUTH DAKOTA	CHECKED BY:	JP
REV. NO.:	REVISION	DATE	
0	ISSUED FOR REVIEW.	2012-07-10	

PRELIMINARY

DATE:	2012-07-10	PROJECTION:	NAD83 UTM13 N
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PREPARED BY:

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DWG:	XL-30-P-9200	SHEET:	1
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