

**KEYSTONE PIPELINE PROJECT
PIPELINE ROUTE VARIATION FORM**

0186-SD-P2-594.7-594.7-S

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) PIPELINE ROUTE VARIATION FORM			
1 VARIATION TYPE: Pump Station <input checked="" type="checkbox"/> Does this change require Centerline variation? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
2 LOCATION (Final PS Location): Sketch: <input type="checkbox"/> Attached <input type="checkbox"/> Pictures: <input type="checkbox"/> - <input type="checkbox"/> State: <input type="checkbox"/> SD <input type="checkbox"/> Township: <input type="checkbox"/> 95N <input type="checkbox"/> Quad Map: <input type="checkbox"/> - <input type="checkbox"/> County: <input type="checkbox"/> Tripp <input type="checkbox"/> Range: <input type="checkbox"/> 74W <input type="checkbox"/> Aerial Map: <input type="checkbox"/> Attached <input type="checkbox"/> Section: <input type="checkbox"/> 26 <input type="checkbox"/> Legal (Initial PS loc.): <input type="checkbox"/> 16-95N-74W <input type="checkbox"/> Initial PS MP <input type="checkbox"/> 591.9 <input type="checkbox"/> Final PS MP <input type="checkbox"/> 594.7 <input type="checkbox"/> (March 26th, 2010 CL)			
3 REASON FOR PUMP STATION RELOCATION (Please include reason for move): The Colome Pump Station was previously located on Graesser Family TR (ML-SD-TR-11970.000) which was a denial for the Pump Station. Colome Pump Station is proposed to be relocated onto a willing landowner (Bernard & Betty Seegers, Trustees).			
DETAILS OF NEW PUMP STATION LOCATION AND ROUTE VARIATION, IF APPLICABLE (Please describe in detail): It is proposed to relocate Colome Pump Station ~2.8 miles downstream onto the northeast corner of section 26, T95N-R74W. A 1,910 ft. permanent access road (CAR-139) will be constructed from 331st Ave into the pump station area.			
ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; routing to pump station, hydraulic impacts, etc.): The size of the proposed Pump Station (PS-21) is increased to 8.4 acres from the previous site of 5.0 acres. The cost of construction of access road is not estimated in these costs.			
COST ANALYSIS (costs incurred or saved from the route variation)			
Additional Acreage of the proposed Pump Station site	3.4	acres	\$ 13,600.00
Additional length of route realignment:	-	ft.	\$ 360/ft
Additional length of side-hill construction:	-	ft.	\$ 19/ft
Additional length of wetland construction:	-	ft.	\$ 195/ft
Additional bore length (Road, RR):	-	ft.	\$ 540/ft
Additional foreign line/pipeline crossings:	-	EA	\$ 30,000/EA
Additional waterbody crossing (streams, ponds, etc.):	-	EA	\$ 185,000/EA
	35' - 65' +	EA	\$ -
	10' - 35'	EA	\$ 77,250/EA
	Less than 10'	EA	\$ 32,500/EA
Additional survey required:			
	Civil:	-	\$ 5,000/mile
	Cultural:	-	\$ 2,500/mile
	Biological:	-	\$ 2,800/mile
Additional length of power line construction:	-	ft.	\$ 25/ft
Miscellaneous costs saved or added due to new pump station location from ADDITIONAL IMPACTS listed above: <input type="checkbox"/>			
Overall estimated costs of the new pump station location: <input type="checkbox"/> \$ 13,600			
4 LAND / UNIVERSAL FIELD <i>Doug Reichley</i>			
a) Is a new landowner affected by proposed Pump Station relocation? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
b) Is the new landowner agreeable to the proposed Pump Station location? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
c) Is relocation proposed to satisfy landowner concerns? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
- If yes, name of landowner(s)/track number(s): <input type="checkbox"/> ML-SD-TR-11970.000 (Graesser Family TR)			
d) Has all the evaluation criteria been examined/provided for this specific discipline? Yes <input type="checkbox"/> No <input type="checkbox"/>			
If no, please explain why: <input type="checkbox"/>			
5 ENGINEERING/CONSTRUCTION <i>David Guien</i>			
a) Maximum deviation perpendicular to proposed alignment: <input type="checkbox"/> 0 <input type="checkbox"/> ft.			
b) Is relocation proposed for engineering/construction reasons? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
c) Will site require noise mitigation measures? Yes <input type="checkbox"/> No <input type="checkbox"/>			
6 ENVIRONMENTAL / TROW <i>Jonathan Minton</i>			
a) Has the previous pump station been environmentally surveyed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
b) Has the proposed pump station been environmentally surveyed? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
c) Was new pump station location proposed to satisfy environmental issues? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
d) Was pump station relocation proposed to satisfy agency request? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
- If yes, name of agency(s): <input type="checkbox"/>			
d) Environmental features:			
Added (+): <input type="checkbox"/> NA <input type="checkbox"/>			
Subtracted (-): <input type="checkbox"/> NA <input type="checkbox"/>			
7 POWER INFRASTRUCTURE TECHNICAL <i>Larry Sibbald</i>			
a) Will the new pump station location involve a new utility provider? Yes <input type="checkbox"/> No <input type="checkbox"/>			
b) Will the new pump station location result in a significant change to the power line routing to the station? If yes, by how many miles? Yes <input type="checkbox"/> No <input type="checkbox"/>			
c) Are there any apparent obstacles to routing a power line to the new station? Yes <input type="checkbox"/> No <input type="checkbox"/>			
If yes, please list: <input type="checkbox"/>			
8 ENGINEERING / FACILITIES AND HYDRAULICS <i>Sandra Gigovic</i>			
a) Is the proposed Pump Station area acceptable for PS design? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
b) Will pump station relocation impact hydraulics? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>			
c) Will new pump station location affect valve placement around HCA an N/A to PS Engineer Yes <input type="checkbox"/> No <input type="checkbox"/>			
9 STAKEHOLDER RELATIONS / TCPL <i>Bud Anderson</i>			
a) Does the proposed pump station location result in any new stakeholders? Yes <input type="checkbox"/> No <input type="checkbox"/>			
b) Does it require follow-up with specific stakeholder groups? Yes <input type="checkbox"/> No <input type="checkbox"/>			
c) Was the new pump station location proposed to satisfy stakeholder request? Yes <input type="checkbox"/> No <input type="checkbox"/>			
- If yes, please specify issue type (as it aligns to stakeholder database): <input type="checkbox"/>			
10 Originator: <input type="checkbox"/> Land <input type="checkbox"/> Date: <input type="checkbox"/> 10/5/2010 <input type="checkbox"/>		11 Received by: <input type="checkbox"/> Centerline Coordinator <input type="checkbox"/> Date: <input type="checkbox"/> 10/5/2010 <input type="checkbox"/> Fax to: ? <input type="checkbox"/>	
12 Assigned Tracking Number: <input type="checkbox"/> 0186-SD-P2-594.7-594.7-S <input type="checkbox"/>		13 Filed by: <input type="checkbox"/> Centerline Coordinator <input type="checkbox"/> Date: <input type="checkbox"/> Fax to: ? <input type="checkbox"/>	

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**KEYSTONE PIPELINE PROJECT
PIPELINE ROUTE VARIATION AUTHORIZATION FORM**

0186-SD-P2-594.7-594.7-S

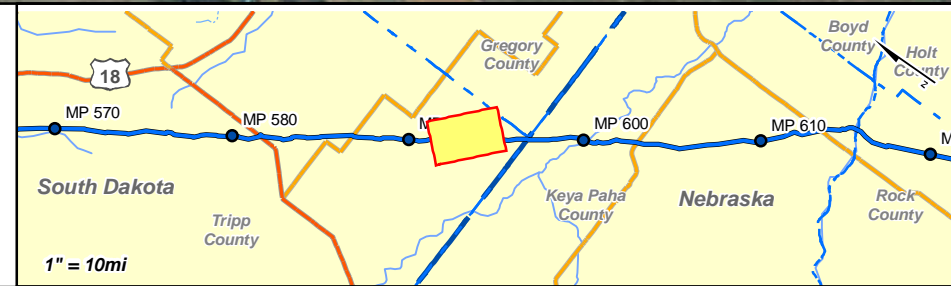
KEYSTONE XL PIPELINE PROJECT PHASE - STEELE CITY SEGMENT ROUTE VARIATION AUTHORIZATION FORM					
Date: <input style="width:100%;" type="text" value="10/5/2010"/>	Tracking Number: <input style="width:100%;" type="text" value="0186-SD-P2-594.7-594.7-S"/>				
Description: <input style="width:100%;" type="text" value="Relocation of PS-21."/>	Initial PS MP: <input style="width:100%;" type="text" value="591.9"/>	Final PS MP: <input style="width:100%;" type="text" value="594.7"/>			
Originated By: <input style="width:100%;" type="text" value="Land"/>					
Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>					
Universal Field Services - Land Doug Reichley	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>Doug Reichley</i> Date: <input style="width:100%;" type="text" value="10/5/2010"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
Construction / Engineering David Guen	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>David Guen</i> Date: <input style="width:100%;" type="text" value="10/25/2010"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
Trow - Environmental Jonathan Minton	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>Jonathan Minton</i> Date: <input style="width:100%;" type="text" value="10/8/2010"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
AECOM - Risk Assessment Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>Name?</i> <input style="width:100%;" type="text"/> Date: <input style="width:100%;" type="text"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
Power Infrastructure Technical Larry Sibbald	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>Name?</i> <input style="width:100%;" type="text"/> Date: <input style="width:100%;" type="text"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
Project Management Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>R.E. Wallace</i> Date: <input style="width:100%;" type="text" value="10/6/2010"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
Stakeholder Relations Bud Anderson	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>Name?</i> <input style="width:100%;" type="text"/> Date: <input style="width:100%;" type="text"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
Facilities: Sandra Gigovic	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text" value="Final hydraulic check to be completed once the pipe routing & other PS MPs are finalized."/>	<i>Sandra Gigovic</i> Date: <input style="width:100%;" type="text" value="10/19/2010"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
TransCanada: Alan Lietz	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>				
Comments: <input style="width:100%; height: 30px;" type="text"/>	<i>Alan Lietz</i> Date: <input style="width:100%;" type="text" value="10/26/2010"/>				
If Rejected Why? <input style="width:100%; height: 30px;" type="text"/>					
Forward to: Butch Wallace <input checked="" type="checkbox"/> Jonathan Minton <input checked="" type="checkbox"/> Heidi Tillquist <input checked="" type="checkbox"/> David Guen <input checked="" type="checkbox"/> Bud Andersen <input checked="" type="checkbox"/> Larry Sibbald <input checked="" type="checkbox"/> Doug Reichley <input checked="" type="checkbox"/> Sandra Gigovic <input checked="" type="checkbox"/> Alan Lietz <input checked="" type="checkbox"/>					
Dispute Resolution, if Required: Yes <input type="checkbox"/> No <input type="checkbox"/>					
Comments: <input style="width:100%; height: 30px;" type="text"/>	Teleconference Required: Yes <input type="checkbox"/> No <input type="checkbox"/>				
Decision: <input style="width:100%; height: 30px;" type="text"/>					
Database - ? <input style="width:100%;" type="text"/>	Database - ? <input style="width:100%;" type="text"/>				
Filed By: <input style="width:100%;" type="text"/>	Filed By: <input style="width:100%;" type="text"/>				
Date: <input style="width:100%;" type="text"/>	Date: <input style="width:100%;" type="text"/>				
Fax to: ? <input style="width:100%;" type="text"/>	Fax to: ? <input style="width:100%;" type="text"/>				



Tripp County, SD

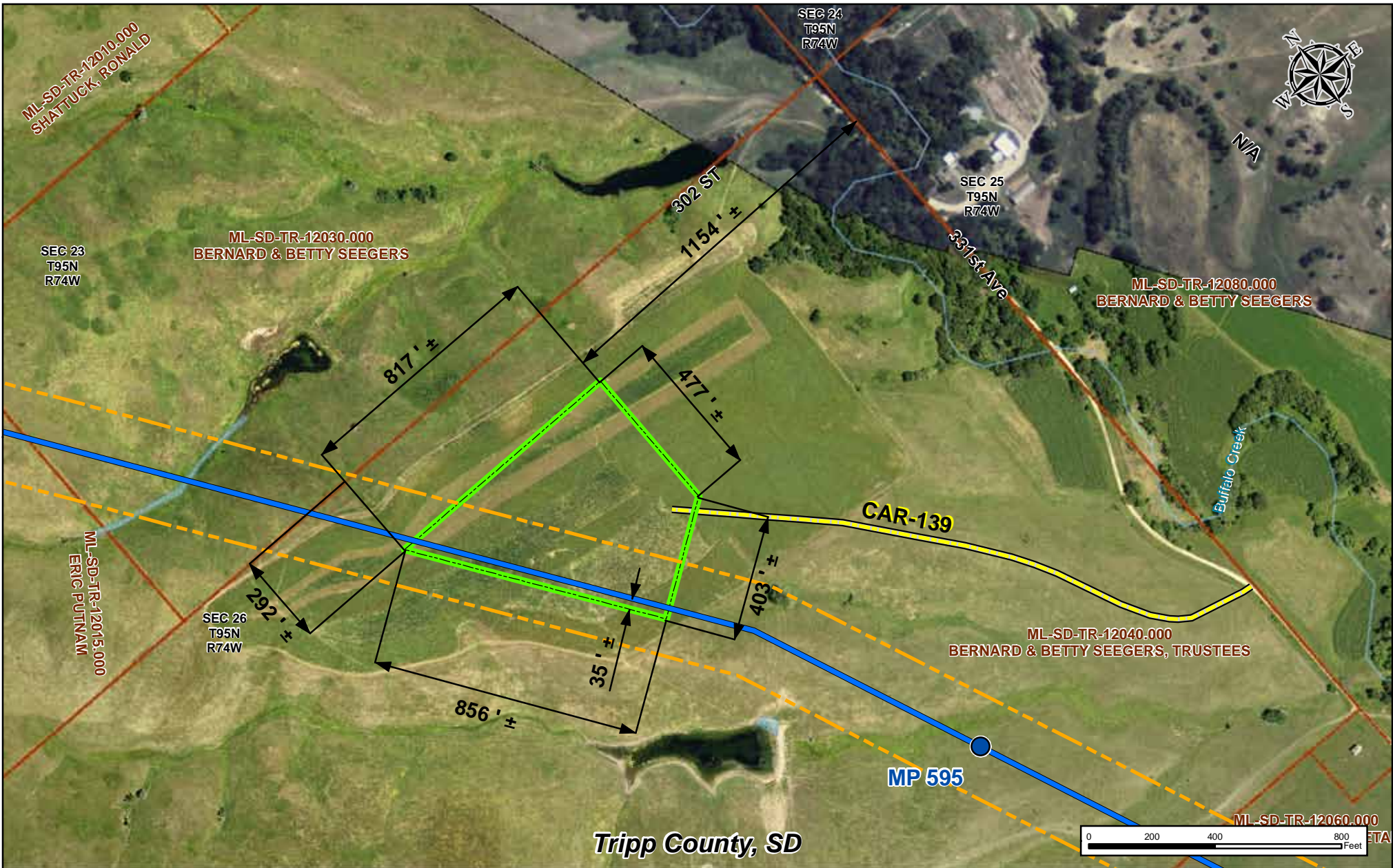
Legend

- Milepost
- Centerline (2010-03-26)
- 300ft Corridor
- Current Pump Station
- Proposed Pump Station
- Access Roads
- Parcel Boundary
- Waterbody
- Wetland
- County Boundary
- State Boundary



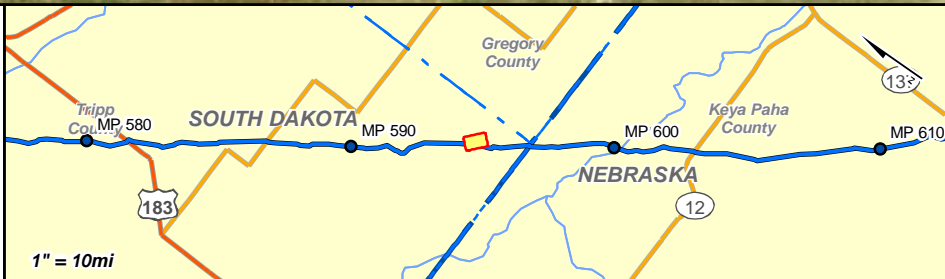
**KEYSTONE US PROJECT - PHASE IV
PROPOSED PS-21 (COLOME)
TRIPP COUNTY, SOUTH DAKOTA**

	DATE	PROJECT	MAP PARAMETERS		
	Sept. 28, 2010	50388X	PROJECTION: UTM 13, NAD83, US FT SCALE: 1" = 1000'		
DRAWN BY	CHECKED BY	APPROVED BY	ROUTE VARIATION NO.	SHEET	REV.
HKC	CPA	ALS	0186-SD-P2-594.7-594.7-S	001	0



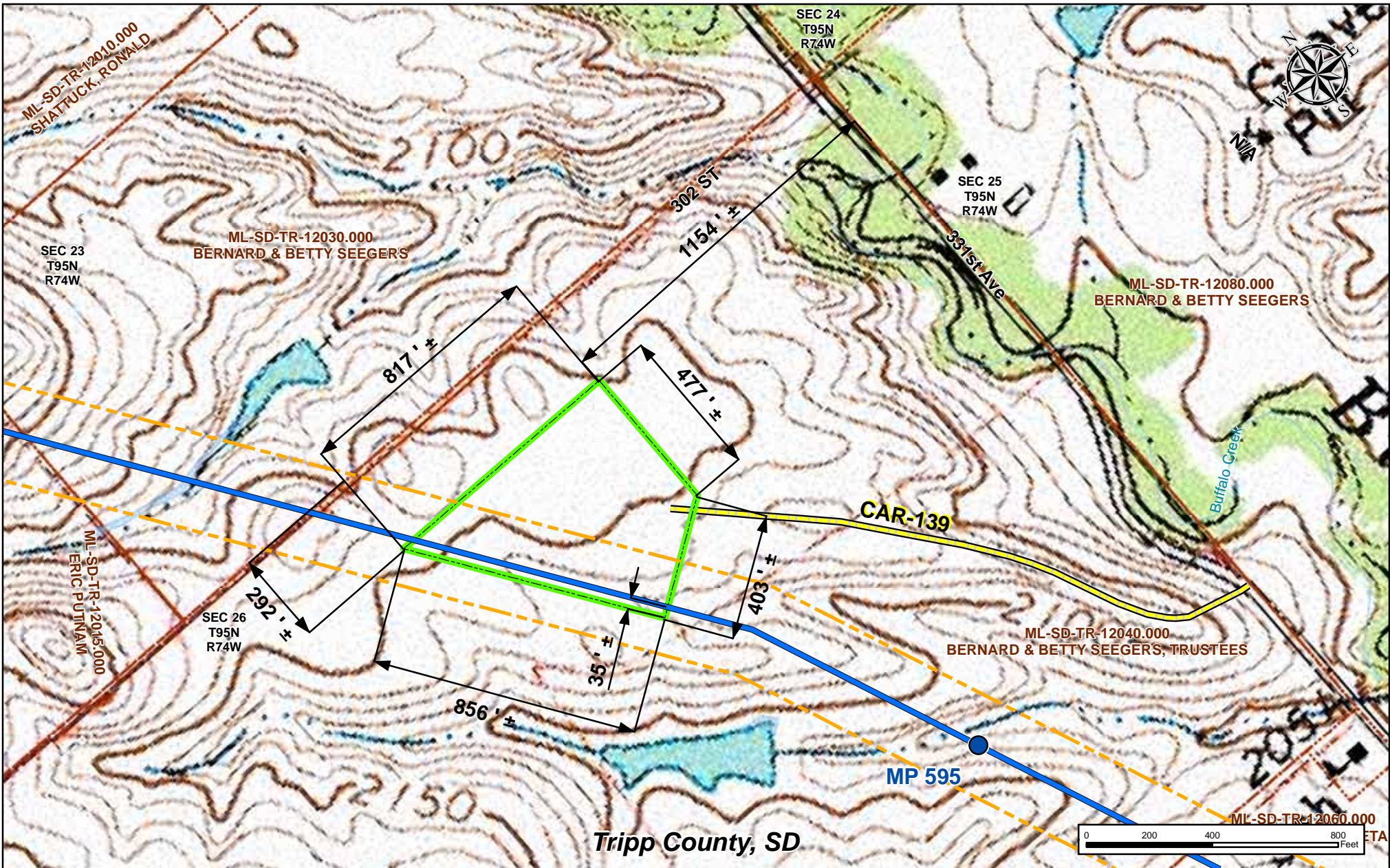
Legend

- Milepost
- Centerline (2010-03-26)
- 300ft Corridor
- Proposed Pump Station
- Permanent Access Road
- Parcel Boundary
- Waterbody
- Wetland
- County Boundary
- State Boundary



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HKC	CPA	WSF	0186-SD-P2-594.7-594.7-S	001	0



Legend

	Milepost		Parcel Boundary
	Centerline (2010-03-26)		Waterbody
	300ft Corridor		Wetland
	Proposed Pump Station		County Boundary
	Permanent Access Road		State Boundary



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PROPOSED PS-21 (COLOME)
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