

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

123
7,7,9

0216-XX-P2-XXX.X-XXX.X-S

KEYSTONE PHASE IV, US PIPELINE PROJECT - STEELE CITY SEGMENT PIPELINE ROUTE VARIATION FORM	
1	VARIATION TYPE: Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> X Centerline: <input checked="" type="checkbox"/> X Valve Site: <input type="text"/> Pump Station: <input type="text"/>
2	LOCATION: Sketch: <input type="text"/> Attached Pictures: <input type="text"/> See attached. State: <input type="text"/> SD, NE County: <input type="text"/> Multiple Quad Map: <input type="text"/> N/A Township: <input type="text"/> Multiple Range: <input type="text"/> Multiple Aerial Map: <input type="text"/> See attached map sheet Section: <input type="text"/> Multiple Centerline: <input type="text"/> 11/18/2010 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 3 proposed route variations. These route variations are proposed to avoid side slopes and side hills. The reason for the route variation is listed in the "Supplemental Info" tab. The route variations have been proposed based on a combination of Flyover video of Centerline, LIDAR data, Pictometry and other aerals as an effort to determine reroutes through SD and NE.
	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.
	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"/> 7/6/2011
10	Received by: _____ Date: <input type="text"/> 7/6/2011 Fax to: ?
11	Assigned Tracking Number: <input type="text"/> 0216-XX-P2-XXX.X-XXX.X-S
12	Filed by: _____ Date: <input type="text"/> Fax to: ?

Keystone Phase IV, US - Supplemental Information for Route Variation Report 0215

Prepared: 2011-07-05

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	Number of New Landowners impacted by reroute	Number of Landowners on current route impacted by reroute	Number of tracts purchased on original route.	Civil Survey Complete?	Civil Survey Needed (ft)	Moves Pump Station?	Moves Valve Site?	In Co-located Area?	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)	Originator
0215-01	353.04	353.69	SD	Harding	19	15N	09E	3,384	3,441	56	313	To avoid terrain features	Route variation starts at MP 353.0 and deviates -9.5° northeast from C/L for -1,909 ft where it crosses the creek at a better location. Then turns southeast for -1,531 ft to rejoin the current C/L near MP 353.7.	-Estimated -350 ft less reroute crosses bad terrain features.	0	2		NO	3,441	NO	NO	NO	Yes	Yes	No	No	3,441	Engineering
0215-02	411.29	411.63	SD	Meade	7	8N	16E	1,786	1,803	17	97	To shift shift C/L ATWS out of a creek	Route variation starts at MP 411.3 and deviates -13° southwest for -437 ft. Then it turns slightly east almost paralleling the current C/L for -664 ft. And then turns east for -702 ft to rejoin the C/L near MP 411.6.		0	2		NO	1,803	NO	NO	NO	Yes	Yes	Yes	Yes	0	Engineering
0215-03	482.87	483.55	SD	Haakon	4	01N	25E	3,555	3,588	33	445	To avoid dropoff.	Route variation starts at MP 482.9 and deviates -37.5° southeast for -730 ft. Then, turns further east and continues in this direction for -1,176. Then slightly turns southeast for -1681 to rejoin the C/L near MP 483.6.		0	2		NO	3,588	NO	NO	NO	Yes	Yes	No	No	3,588	Engineering
0215-04	578.80	578.97	SD	Tripp	17	31N	38E	885	907	22	100	To avoid road crossing in wetland.	Route variation starts at MP 578.8 and deviates -19.5° east for -302 ft. Then, turns west for -605 to rejoin the C/L near MP 579.	-Eliminates about -80 ft of wetland crossing.	0	1		NO	907	NO	NO	NO	Yes	Yes	No	No	800	Engineering
0215-05	699.54	699.92	NE	Wheeler	31,32	21N	11W	2,003	2,050	46	140	To avoid future meandering/migration of river (Cedar River). Shifts C/L further east.	Route variation starts at MP 699.5 and deviates -6° west for -1,419 ft. Then, turns east for -631 to rejoin the C/L near MP 699.9. Increases current distance away from river meander from -60 ft to -194 ft.		0	1		NO	2,050	NO	NO	NO	Yes	Yes	No	No	1,500	Engineering
0215-06	770.21	770.96	NE	York	21	12N	04W	3,980	4,442	461	602	To avoid wetland/pond	Route variation starts at MP 770.2 and deviates -26° east for -1,392 ft. Then, turns southeast and creates more distance between C/L and pond/wetland. Continues in this direction for -3,049 where it rejoins the C/L near MP 771.	-Eliminates about -1008 ft of wetland/pond crossing.	0	2		NO	4,442	NO	NO	NO	Yes	Yes	No	No	4,442	Engineering
0215-07	802.32	802.49	NE	Fillmore	25, 36,31	8N	2W, 1W	898	906	8	15	To avoid powerpole in 45 degree road crossing	Route variation starts at MP 802.3 and deviates -0.5° west of current C/L for -366 ft. Then turns southeast for -508 ft and continues further east for -32 ft. to rejoin the C/L near MP 802.5.		0	3		NO	906	NO	NO	NO	Yes	Yes	No	No	0	Engineering

Keystone Phase IV, US - Cost Analysis for Route Variation Report 0215

Prepared: 2011-07-05

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
0215-01	56	\$ 20,339.72		\$ -	0	\$ -	0	\$ -	0	\$ -	\$ 3,453.69	\$ 3,258.20	\$ -	\$ (70,000.00)	\$ (42,948.39)
0215-02	17	\$ 6,251.05		\$ -	0	\$ -	0	\$ -	0	\$ -	\$ -	\$ 1,707.53	\$ -	\$ (30,000.00)	\$ (22,041.41)
0215-03	33	\$ 11,850.52		\$ -		\$ -	0	\$ -	-1	\$ (32,500.00)	\$ 3,601.65	\$ 3,397.78	\$ -	\$ (6,000.00)	\$ (19,650.05)
0215-04	22	\$ 7,769.29	-80	\$ (15,600.00)	0	\$ -	0	\$ -	0	\$ -	\$ 803.03	\$ 858.57	\$ -		\$ (6,169.12)
0215-05	46	\$ 16,733.76		\$ -	0	\$ -	0	\$ -	-1	\$ (32,500.00)	\$ 1,505.68	\$ 1,941.22	\$ -		\$ (12,319.34)
0215-06	461	\$ 166,012.48	-1008	\$ (196,560.00)	0	\$ -	0	\$ -	0	\$ -	\$ 4,458.43	\$ 4,206.07	\$ -		\$ (21,883.03)
0215-07	8	\$ 2,927.46	0	\$ -	0	\$ -	0	\$ -	0	\$ -	\$ -	\$ 857.77	\$ -	\$ (15,000.00)	\$ (11,214.76)

Overall Estimated Costs of Routes Variations= \$ (136,226.10)

Keystone Phase IV, US - Approval form for Route Variation Report 0216

Prepared: 2011-07-06

RV ID		0216-01	0216-02	0216-03
LAND (UFS) Doug Riechley	Approval (Y/N)	Y	Y	Y
	Comments	- No Issues	- Landowner is difficult to dealt with but will approve if compensated accordingly.	-Permit. No requirements on road crossing in Greeley County. - No Land Issues.
ENGINEERING (TransCanada) Meera Kothari / David Guien	Approval (Y/N)	Y	Y	Y
	Comments			
ENGINEERING (exp) Butch Wallace	Approval (Y/N)	Y	Y	Y
	Comments	Route Variation tweaked and reviewed by Engineering.		
CONSTRUCTION (TransCanada) Bobby Curbow	Approval (Y/N)	Y	Y	Y
	Comments			
ENVIRONMENTAL (exp) Jonathan Minton	Approval (Y/N)	Y	Y	Y
	Comments	- Requires additional Env. Survey	- Requires additional Env. Survey.	- Requires additional Env. Survey.
SAFETY (exp.) Jason Milenbruch	Approval (Y/N)	N/A	N/A	N/A
	Comments			
FACILITIES (TransCanada) Sandra Gigovic	Approval (Y/N)	N/A	N/A	N/A
	Comments			
PROJECT MANAGEMENT (TransCanada) Alan Lietz	Approval (Y/N)	Y	Y	Y
	Comments			
PROJECT MANAGEMENT (TransCanada) Steve Marr	Approval (Y/N)	Y - SM	Y - SM	Y - SM
	Comments	8/31/11	8/31/11	8/31/11

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230

KEYSTONE XL PIPELINE PROJECT - STEELE CITY SEGMENT PIPELINE ROUTE VARIATION FORM	
1	VARIATION TYPE: Refinement: <input type="text"/> Reroute: <input checked="" type="checkbox"/> X Centerline: <input checked="" type="checkbox"/> X Valve Site: <input checked="" type="checkbox"/> X Pump Station: <input type="text"/>
2	LOCATION: Sketch: <input type="text"/> Attached Pictures: <input type="text"/> See attached State: <input type="text"/> Multiple County: <input type="text"/> Multiple Quad Map: <input type="text"/> N/A Township: <input type="text"/> Multiple Range: <input type="text"/> Multiple Aerial Map: <input type="text"/> See attached map sheet Section: <input type="text"/> Multiple Centerline: <input type="text"/> 11/18/2010 MP: <input type="text"/> XXX.X to <input type="text"/> XXX.X
3	REASON FOR ROUTE VARIATION (Please include reason for route variation): The Reason for each Route Variation (RV) is given with the respective RV file. These reroutes are proposed based on aerial/pictometry/Lydar/flyover analysis of current line through Montana, South Dakota, and Nebraska.
	DETAIL ROUTE VARIATION (Please describe route variation in detail): See respective Route Variation Files. No new landowners were affected by the proposed route variations. RVs included: Discussed prior to 6/20/2011: Western Prairie Fringe Orchid Reroute (RV-0194) John Harter Reroute (RV-0195) Buzek Reroute (RV-0197) Discussed during 6/20/2011 Meeting: Reroute away from sidehill (SOM Land) (RV-0209) Discussed during 6/21/2011 Meeting: Reroutes to avoid creek Crossings (RV-0199) MP 475 Reroute (RV-0200) Reroutes to lessen/reduce PIs (RV-0213) Reroutes to avoid waterwell; fence (RV-0214) Reroutes to avoid creeks, dropoffs, wetlands, etc. (RV-0215) Reroutes to avoid sideslopes/hills (RV-0216) Reroutes to avoid pivot centers (RV-0217) Discussed during 8/10/2011 Meeting: HWY 73 Reroute (RV-0196) HWY 56 Reroute (RV-0219) Bad River HDD realignment reroute (RV-0220) MP 396 Reroute (RV-0224) Yellowstone River HDD Entry Pt (RV-0227) PI Breakdowns of all previous RV's for new CL (RV-0228 and RV-0229) CK-MLV-06 and CK-11 Valves relocation (RV-0230)
	ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.): <div style="border: 1px solid black; height: 40px; width: 100%;"></div>
	Is there an increase/decrease in the number of crossings? Yes <input type="text"/> No <input type="text"/> If yes, please list: <input type="text"/>
9	Originator: <input type="text"/> Multiple Date: <input type="text"/> 8/12/2011
10	Received by: <input type="text"/> Date: <input type="text"/> 8/12/2011 Fax to: ?
11	Assigned Tracking Number: <input type="text"/> RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230
12	Filed by: <input type="text"/> Date: <input type="text"/> Fax to: ?

RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) ROUTE VARIATION AUTHORIZATION FORM			
Date:	8/12/2011	Tracking Number:	RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230
Description:	Western Prairie Fringe Orchid Reroute (RV-0194) John Harter Reroute (RV-0195) Buzek Reroute (RV-0197) Reroute away from sidehill (SOM Land) (RV-0209)	MP: XXXX to XXXX	Originated By: Multiple
Universal Field - Land	Doug Reichley	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Comments:	<i>Pending civil survey</i>	Date: 6/20, 6/21, & 8/10/11	If Rejected Why? <i>By S. King 10/5/11</i>
TransCanada - Engineering	Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	and by David Gulen on the 6/20 and 6/21 meetings.	If Rejected Why?	
Exp - Engineering	Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:		If Rejected Why?	
TransCanada - Construction	Bobby Curbow	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:		If Rejected Why?	
Exp - Environmental	Jonathan Minton	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:		If Rejected Why?	
AECOM - Risk Assessment	Heidi Tillquist	Variation: Approved <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments:	N/A.	If Rejected Why?	
Facilities:	Sandra Gigovic	Variation: Approved <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: _____
Comments:	N/A. Does not affect Facilities.	If Rejected Why?	
TransCanada - PM (NE)	Robert Bradley	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8/10/2011
Comments:		If Rejected Why?	
TransCanada - Senior PM	Alan Lietz	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	<i>conditional approvals pending appropriate regulatory approvals</i>	If Rejected Why?	
TransCanada - Manager	Steve Marr	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 8/9/11
Comments:		If Rejected Why?	
Forward to:	Doug Reichley <input checked="" type="checkbox"/> Meera Kothari <input checked="" type="checkbox"/> Butch Wallace <input checked="" type="checkbox"/> Bobby Curbow <input checked="" type="checkbox"/>	Jonathan Minton <input checked="" type="checkbox"/> Heidi Tillquist <input checked="" type="checkbox"/> Robert Bradley <input checked="" type="checkbox"/> Sandra Gigovic <input type="checkbox"/>	Alan Lietz <input checked="" type="checkbox"/> Steve Marr <input checked="" type="checkbox"/>

RV-0194-0197, RV-0199-0200, RV-0209, RV-0213-0217, RV-0219-0220, RV-0224, RV-0227-0230

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

KEYSTONE XL PIPELINE PROJECT - STEELE CITY SEGMENT
PIPELINE ROUTE VARIATION FORM

RV-0194, 0195, 0197, RV-0199-0200, RV-0209, RV-0213-0217

RV-0194, 0195, 0197, RV-0199-0200, RV-0209, RV-0213-0217

1 **VARIATION TYPE:** Refinement: Reroute: X
Centerline: X Valve Site: X Pump Station:

2 **LOCATION:** Sketch: Attached Pictures: See attached
State: Multiple County: Multiple Quad Map: N/A
Township: Multiple Range: Multiple Aerial Map: See attached map sheet
Section: Multiple Centerline: 11/18/2010 MP: XXX.X to XXX.X

3 **REASON FOR ROUTE VARIATION** (Please include reason for route variation):
The Reason for each Route Variation (RV) is given with the respective RV file.
These reroutes are proposed based on aerial/pictometry/Lydar/flyover analysis of current line through Montana, South Dakota, and Nebraska.

DETAIL ROUTE VARIATION (Please describe route variation in detail):
See respective Route Variation Files. No new landowners were affected by the proposed route variations.
RVs included:
Discussed prior to 6/20/2011:
Western Prairie Fringe Orchld Reroute (RV-0194)
John Harter Reroute (RV-0195)
Buzek Reroute (RV-0197)
Discussed during 6/20/2011 Meeting:
Reroute away from sidehill (SOM Land) (RV-0209)
Discussed during 6/21/2011 Meeting:
Reroutes to avoid creek Crossings (RV-0199)
MP 475 Reroute (RV-0200)
Reroutes to lessen/reduce PIs (RV-0213)
Reroutes to avoid waterwell; fence (RV-0214)
Reroutes to avoid creeks, dropoffs, wetlands, etc. (RV-0215)
Reroutes to avoid sideslopes/hills (RV-0216)
Reroutes to avoid pivot centers (RV-0217)

ADDITIONAL IMPACTS (Please include any additional impacts which may affect cost; crossings, induction bends, etc.):

Is there an Increase/decrease in the number of crossings? Yes No
If yes, please list:

9 Originator: Multiple
Date: 8/12/2011

10 Received by:
Date: 8/12/2011
Fax to: ?

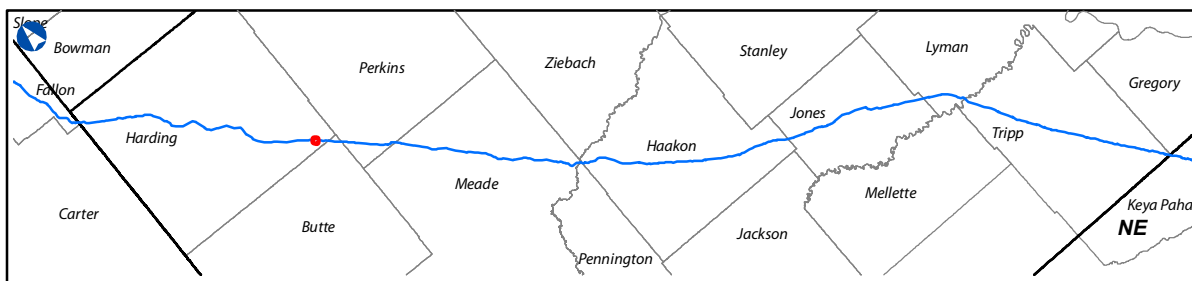
11 Assigned Tracking Number: RV-0194, 0195, 0197, RV-0199-0200, RV-0209, RV-0213-0217

12 Filed by:
Date:
Fax to: ?

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT)

KEYSTONE PIPELINE PROJECT - U.S. PHASE IV (STEELE CITY SEGMENT) ROUTE VARIATION AUTHORIZATION FORM		
Date: 8/12/2011	Tracking Number: RV-0194, 0195, 0197, RV-0199-0200, RV-0209, RV-0213-0217	MP: XXX.X to XXX.X
Description: Western Prairie Fringe Orchid Reroute (RV-0194); John Harter Reroute (RV-0195); Buzek Reroute (RV-0197); Reroute away from sidehill (SOM Land) (RV-0209); Reroutes to avoid creek crossings (RV-0199); MP 475 Reroute (RV-0200); Reroutes to lessen/produce PIs (RV-0213); Reroutes to avoid waterwell, fence (RV-0214);	Originated By: Multiple	Variation Form Attached: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Universal Field - Land Doug Reichley	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: <i>Pending Survey</i>	If Rejected Why? <i>By G. Fij 10/5/11</i>	
TransCanada - Engineering Meera Kothari	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: and by David Gulen on the 6/20 and 6/21 meetings. <i>for meera Kothari.</i>	If Rejected Why?	
Exp - Engineering Butch Wallace	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	If Rejected Why?	
TransCanada - Construction Bobby Curbow	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	If Rejected Why?	
Exp - Environmental Jonathan Minton	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: <i>Pending Survey Completion</i>	If Rejected Why?	
TransCanada - Environmental Stephen Craycroft	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments:	If Rejected Why?	
Facilities: Sandra Gigovic	Variation: Approved <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments: N/A. Does not affect Facilities.	If Rejected Why?	
AECOM - Risk Assessment Heidi Tillquist	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments: N/A	If Rejected Why?	
TransCanada - Senior PM Alan Lietz	Variation: Approved <input checked="" type="checkbox"/> Rejected <input type="checkbox"/>	Date: 6/20, 6/21, & 8/10/11
Comments: <i>Conditional approval pending approval of regulatory approval</i>	If Rejected Why?	
TransCanada - Manager Steve Marr	Variation: Approved <input type="checkbox"/> Rejected <input type="checkbox"/>	Date:
Comments:	If Rejected Why?	
Forward to:	Doug Reichley <input checked="" type="checkbox"/> Jonathan Minton <input checked="" type="checkbox"/> Alan Lietz <input checked="" type="checkbox"/>	Meera Kothari <input checked="" type="checkbox"/> Stephen Craycroft <input checked="" type="checkbox"/> Steve Marr <input checked="" type="checkbox"/>
	Butch Wallace <input checked="" type="checkbox"/> Heidi Tillquist <input checked="" type="checkbox"/>	
	Bobby Curbow <input checked="" type="checkbox"/> Sandra Gigovic <input type="checkbox"/>	

RV-0194, 0195, 0197, RV-0199-0200, RV-0209, RV-0213-0217



LEGEND

●	MILEPOST		300 FT CORRIDOR
	PHASE IV CL (2010-11-18)		PROPERTY PARCEL
	PROPOSED ROUTE VARIATION		CULTURAL SITE
	SECTION LINE		WETLAND
	ACCESS ROAD		WATERBODY
	PUMP STATION		
	VALVE SITE		

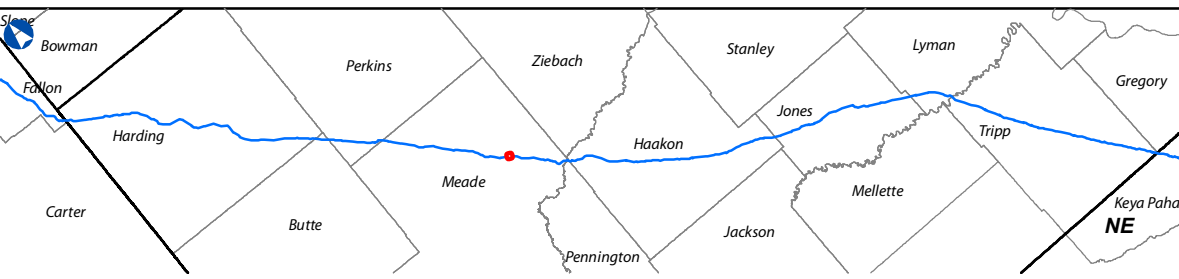
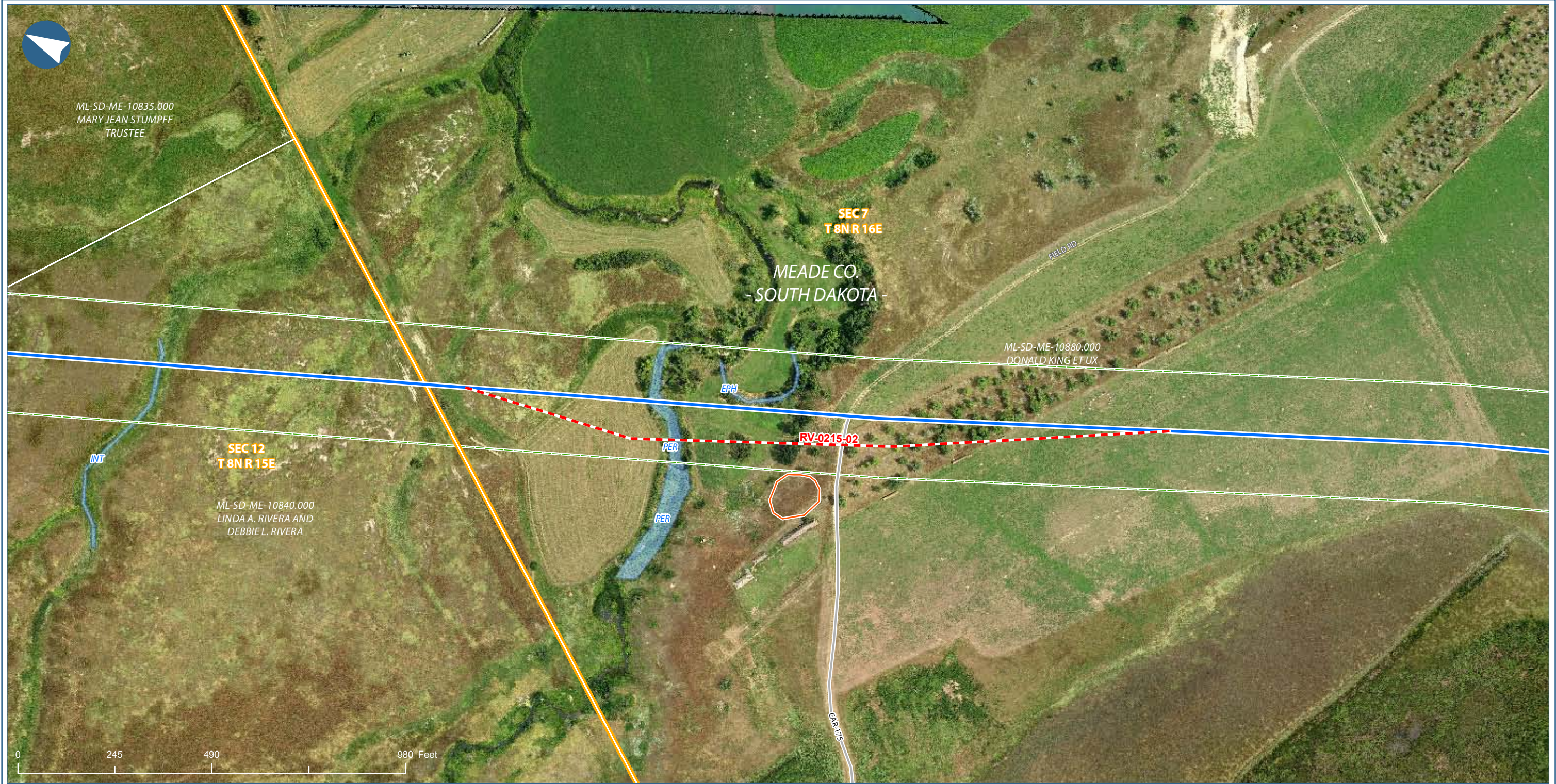
Keystone Phase IV, US
Proposed Route Variation 0215-01

COUNTY:	HARDING	DRAWN BY:	PD
STATE:	SD	CHECKED BY:	JP
SHEET:	1 OF 1	APPROVED BY:	RG
RV FULL:	0215-XX-P2-XXX.X-XXX.X-S		
REVISION			DATE
PRELIMINARY			
PROJECT:	THES0050388X	DWG:	XL-00-P-9178
DATE:	2011-06-28	REV. NO.:	0

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

The new identity of Trow Engineering Consultants, Inc.

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



LEGEND

●	MILEPOST		300 FT CORRIDOR
	PHASE IV CL (2010-11-18)		PROPERTY PARCEL
	PROPOSED ROUTE VARIATION		CULTURAL SITE
	SECTION LINE		WETLAND
	ACCESS ROAD		WATERBODY
	PUMP STATION		
	VALVE SITE		

Keystone Phase IV, US
Proposed Route Variation 0215-02

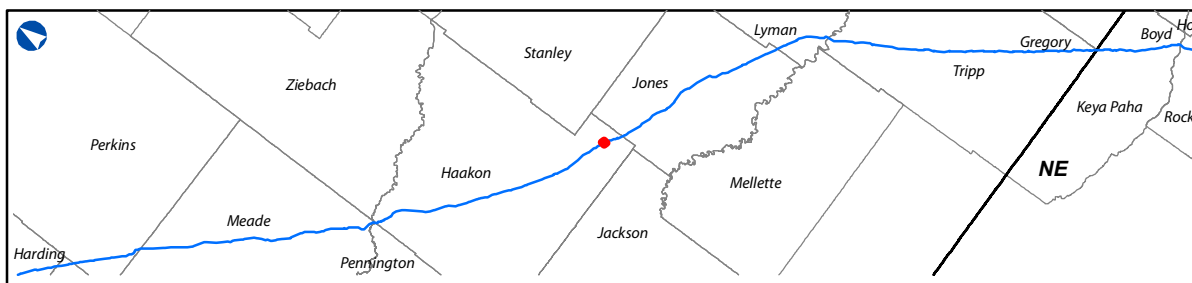
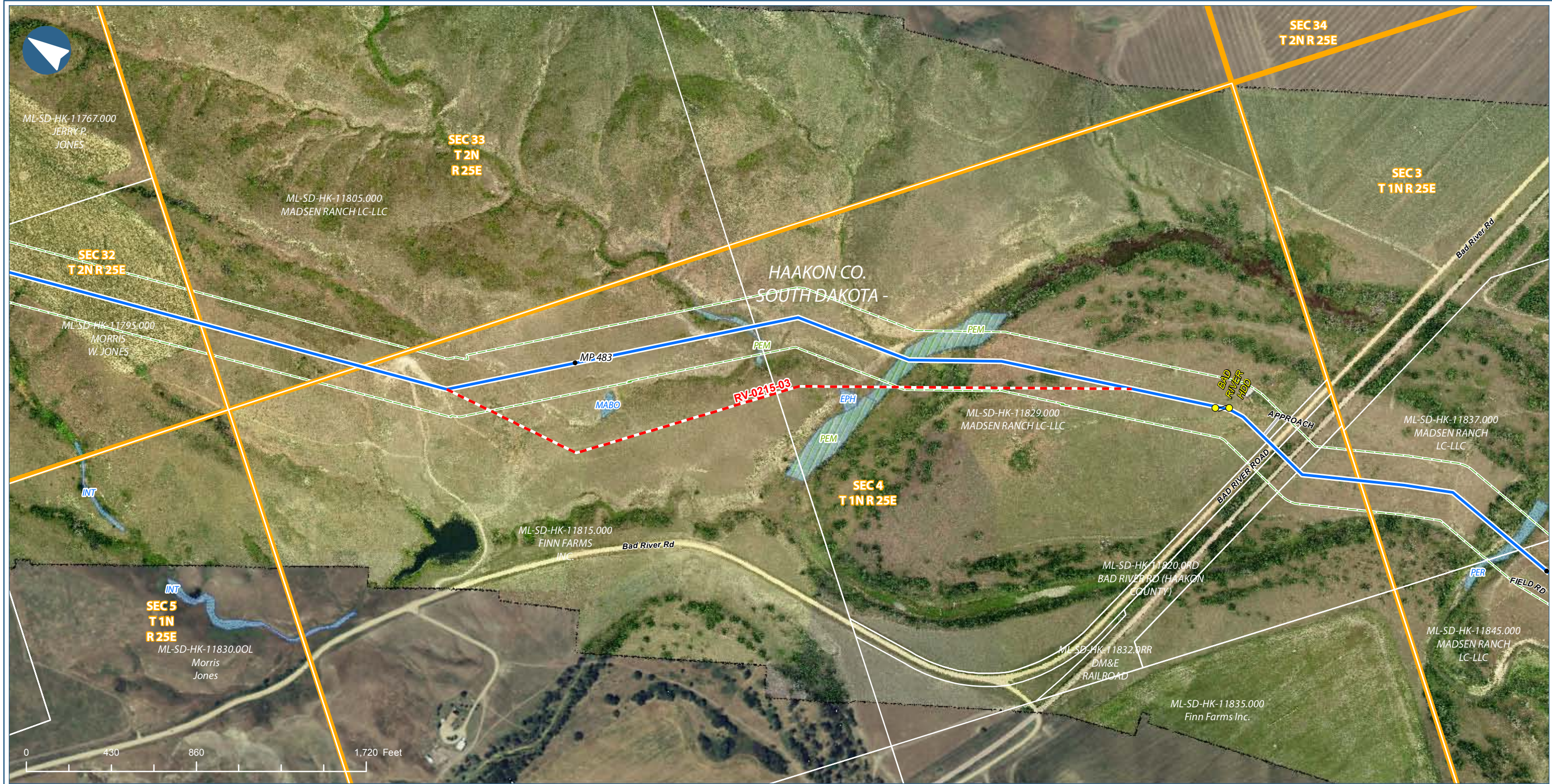
COUNTY:	MEADE	DRAWN BY:	PD
STATE:	SD	CHECKED BY:	JP
SHEET:	1 OF 1	APPROVED BY:	RG
RV FULL:	0215-XX-P2-XXX.X-XXX.X-S		
REVISION	DATE		
PRELIMINARY			
PROJECT:	THES0050388X	DWG:	XL-00-P-9178
DATE:	2011-06-28	REV. NO.:	0

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

The new identity of Trow Engineering Consultants, Inc.

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

PROPOSED ROUTE VARIATION 0215-03



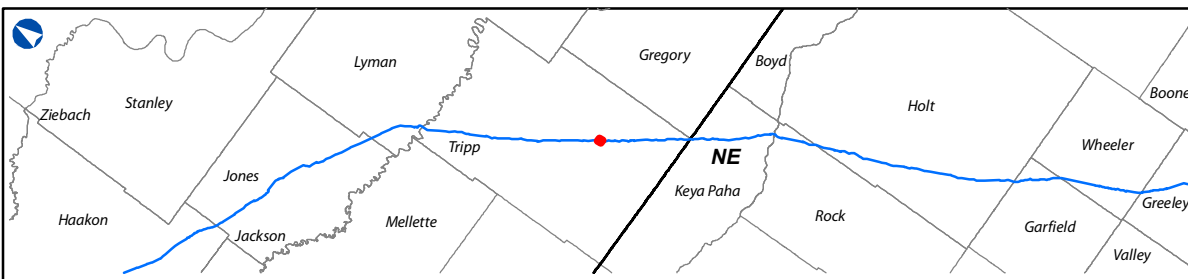
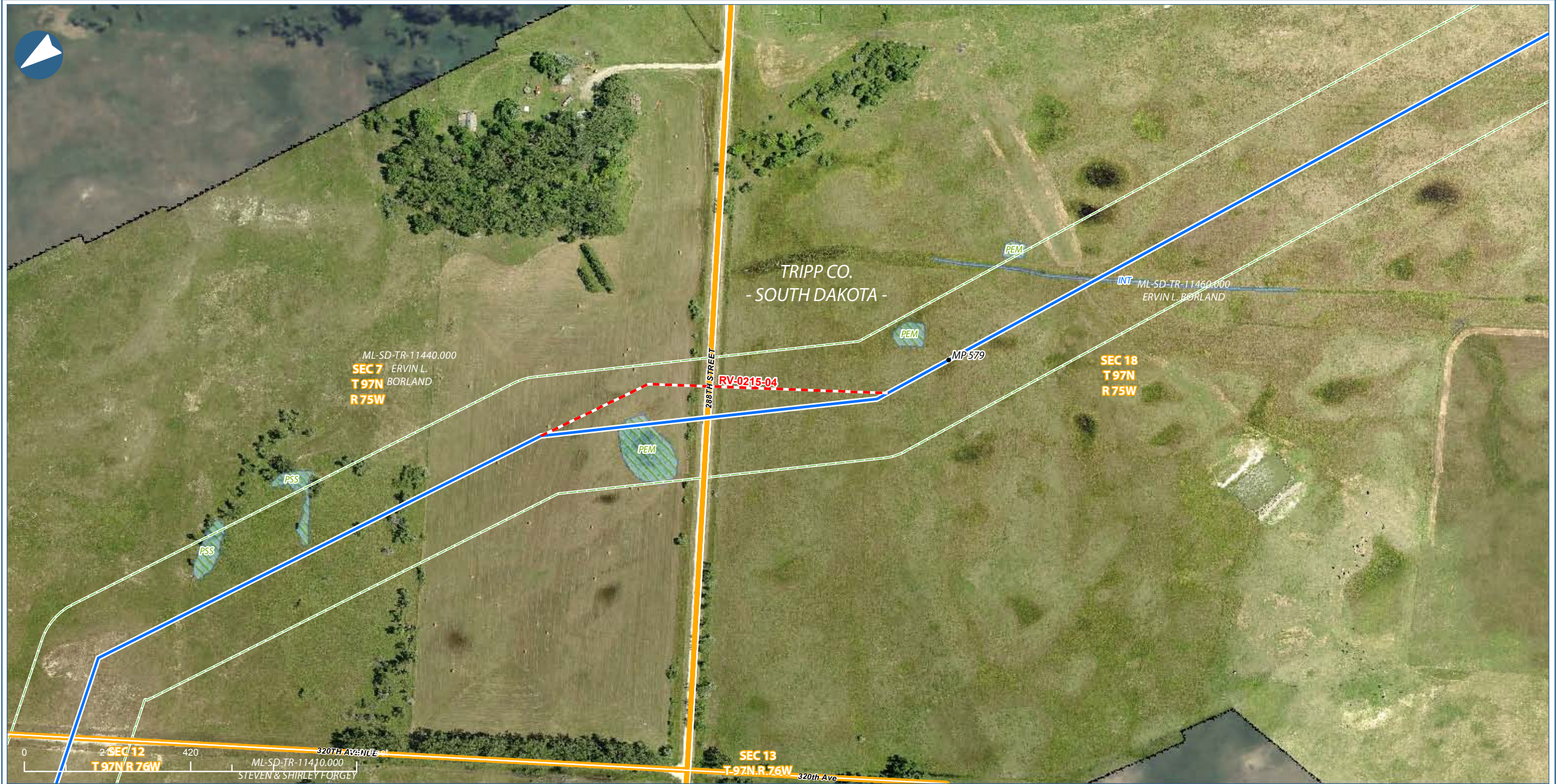
LEGEND	
●	MILEPOST
—	PHASE IV CL (2010-11-18)
- - -	PROPOSED ROUTE VARIATION
▭	SECTION LINE
—	ACCESS ROAD
⊙	PUMP STATION
⊗	VALVE SITE
▭	300 FT CORRIDOR
▭	PROPERTY PARCEL
▭	CULTURAL SITE
▭	WETLAND
▭	WATERBODY
●	HORIZONTAL DIRECTIONAL DRILL

Keystone Phase IV, US	
Proposed Route Variation 0215-03	
COUNTY: HAAKON	DRAWN BY: PD
STATE: SD	CHECKED BY: JP
SHEET: 1 OF 1	APPROVED BY: RG
RV FULL: 0215-XX-P2-XXX.X-XXX.X-S	
REVISION	DATE
PRELIMINARY	
PROJECT: THES0050388X	DWG: XL-00-P-9178
DATE: 2011-06-27	REV. NO.: 0

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

The new identity of Trow Engineering Consultants, Inc.

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



LEGEND

- MILEPOST
- PHASE IV CL (2010-11-18)
- PROPOSED ROUTE VARIATION
- SECTION LINE
- ACCESS ROAD
- PUMP STATION
- VALVE SITE
- 300 FT CORRIDOR
- PROPERTY PARCEL
- CULTURAL SITE
- WETLAND
- WATERBODY
- HORIZONTAL DIRECTIONAL DRILL

Keystone Phase IV, US
Proposed Route Variation 0215-04

COUNTY:	TRIPP	DRAWN BY:	PD
STATE:	SD	CHECKED BY:	JP
SHEET:	1 OF 1	APPROVED BY:	RG
RV FULL:	0215-XX-P2-XXX.X-XXX.X-S		
REVISION	DATE		
PRELIMINARY			
PROJECT:	THES0050388X	DWG:	XL-00-P-9178
DATE:	2011-06-27	REV. NO.:	0

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

The new identity of Trow Engineering Consultants, Inc.

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