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April 11, 2016

Julie Prescott
Compliance and Competitive Markets
ND Public Service Commission
Bismarck, ND 58505-0480

Re: Topsoil Inspection Report for Sacagawea Pipeline Project
Palermo to Enbridge Crude Oil Pipeline
PU-15-670

Dear Ms. Prescott:

Enclosed is one (1) signed copy for the construction topsoil removal inspection report as complied by KLJ. This report covers work done at the wetlands location on right of way easement, for the Sacagawea Pipeline Project, PSC case number PU-15-670.

You can reach me at the office at (701) 250-3501 or my cell phone 351-5551. My email is paul.lee@kljeng.com if you have any additional questions or comments.

Sincerely,

KLJ

Paul Lee, PLS

Enclosure(s): Sacagawea Pipeline Project, 1 signed copy
Project #: KLJ number 1216107

SACAGAWEA PIPELINE PROJECT
PALERMO TO ENBRIDGE CRUDE OIL PIPELINE, MOUNTRAIL COUNTY
TOPSOIL INSPECTION REPORT
PU-15-670

KLJ File #1216107
April 2016

PREPARED FOR:

NORTH DAKOTA
PUBLIC SERVICE COMMISSION

600 EAST BOULEVARD AVENUE
BISMARCK, ND 58505-0480

KLJ

4585 COLEMAN STREET
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PU-15-670 FILED APRIL 2016

Table of Contents

APPENDICES

KLJ

1.0 Executive Summary

The North Dakota Public Service Commission, (PSC) **File Case Number PU-15-670,** retained KLJ to complete topsoil inspections during construction of the 12" crude oil line from Palermo to Enbridge Pipeline (Project) in Mountrail County, North Dakota (ND), constructed by Sacagawea Pipeline, LLC. The purpose of the inspections was to ensure the project was constructed in compliance with the siting laws and rules and the applicable PSC Orders for the Project, which includes a requirement that topsoil must be segregated from subsoil during installations of the pipeline.

Construction of the 8 mile pipeline project began 16 March 2016. KLJ reviewed project documents to become familiar with the Project and PSC Orders for the Project. KLJ visually inspected a portion of the construction right of way on 16 March 2016 when contractor started stripping topsoil. On 24 March 2016 another inspection was conducted to observe the completion of the topsoil and subsoil removal and segregation done by the contractor. Overall soil removal and storage processes appeared to be done properly and the work was satisfactory. There were minor noteworthy issues which include 1) a bell hole bore pit location where topsoil and subsoil piles were too close together, and 2) topsoil and subsoil stored piles along edge of right of way were to close together and may have been touching.

2.0 Background and Scope

2.1 INTRODUCTION

The Sacagawea Pipeline Company, LLC (Project), also known as the "Palermo to Enbridge Pipeline Project" connects the proposed pipeline that will originate at the Palermo Rail Facility owned by Phillips 66 Partners Terminal LLC in Mountrail County, and terminate at the Enbridge Crude Oil Terminal located in Stanley, North Dakota (**Appendix A, Figure 1.A.1**). The Project will be constructed and operated by Sacagawea Pipeline Company, LLC. The Project includes a 12-inch diameter underground crude oil pipeline with a total length of approximately 8 miles. The Project is under the jurisdiction of the North Dakota Public Service Commission (PSC), which issued its Findings of Fact, Conclusions of Law, and Order in Case No. PU-15-670 on 9 September 2015, granting a Certificate of Corridor Compatibility No. 180 and Route Permit No. 192 for the Project.

2.2 REGULATORY PURPOSE AND SCOPE OF WORK

The North Dakota Energy Conversion and Transmission Facility Act (North Dakota Century Code Chapter 49-22) authorized the Public Service Commission to determine that the location, construction, and operation of jurisdictional energy conversion and transmission facilities will produce minimal adverse effects on the environment and the welfare of citizens of North Dakota. Construction inspections ensure that such projects are constructed in compliance with the siting laws (North Dakota Century Code Chapter 49-22) and rules (North Dakota Administrative Code Article 69-06) and the applicable Commission Orders.

The North Dakota PSC retained KLJ to complete a construction inspection, and specifically a topsoil inspection, of the Project. The inspection process included a review of the Application for Corridor Compatibility and Route Permit, Order, and other applicable documents. PSC Order #12 for the Project states: "Company understands and agrees that all topsoil, up to 12 inches, or topsoil to the depth of cultivation, whichever is greater, over and along trench areas where cuts will be made, must be stripped and segregated from the subsoil. Any area on which excavated subsoil will be placed must also be stripped of topsoil. After backfilling is completed, any excess subsoil must be placed over the excavation area, blending the grade in existing topography. Topsoil must be replaced over areas from which it was stripped only after the subsoil is replaced."

KLJ's scope of work was to perform and document on-site inspections during the topsoil removal phase and the Project to verify that topsoil was properly removed and kept segregated from subsoil until replacement occurred.

The number of on-site inspections was to be based on KLJ's determination that equipment operators demonstrated proficiency concerning topsoil and subsoil removal and segregation in compliance with the Commission's Order. This report includes, but is not limited to, documentation of site visit observations and a summary of findings and issues that should be addressed for the Project to be considered complete and in full compliance. The number of on-site inspections was to be based on KLJ's determination that equipment operators demonstrated proficiency concerning topsoil and subsoil removal and segregation in compliance with the Commission's Order. This report includes, but is not limited to, documentation of site visit observation and a summary of findings and issues that should be addressed for the Project to be considered complete and in full compliance.

2.3 BACKGROUND

During pipeline installation and excavation work in general, it is very important to separate topsoil and subsoil. Topsoil has biological, physical and chemical properties that are critical to recovery of a site. Topsoil, also known as the A horizon, should be stripped to the correct depth according to natural variations in the depth of the top layer of soil. Distinguishing the horizon boundaries can be difficult as they vary in distinctiveness and topography. Most boundaries are zones of transitions rather than sharp lines of division. Boundary distinctiveness is the vertical distance over which one horizon transitions into another which shape of the contact between the horizons which can be smooth, wavy, irregular or broken.

Mixing subsoil in with the topsoil is usually detrimental to the reclamation and re-vegetation of a site. Subsoil material has lower organic matter content than topsoil, making it typically lighter in color. It may also have a different texture than the topsoil. The most visible impact of pipeline constructions on agricultural land is the mixing of organic and nutrient rich topsoil with less fertile, mineral subsoil, which can bring up toxic elements such as sodium that restricts plant growth.

3.0 Findings of Site Inspection

3.1 METHODS

Paul Lee, KLJ Project Manager, visited the Project site on 16 March 2016. The purpose of the visit contributed to the contractor's request for removing topsoil within right of way. A representative from STI, inspector manager, Marc Westbrook accompanied Paul Lee, KLJ, during the topsoil inspection site visit. The contractor, superintendent, and project foreman were present during the start of stripping topsoil off right of way.

The site was inspected visually by everyone in attendance, diving to access points and walking or driving within the project right of way. The survey began at the bore exit station 111+42.20 located on the south side of highway 2 in Mountrail County and headed south. Contractor/equipment operators were observed starting to mow down CRP grass vegetation located on easement right of way, so stripping of top soil could start. After vegetation was cleared away, contractor used two dozer cats to rip and clear topsoil within right of way. During the topsoil removal phase, it was noted that this working procedure had the topsoil removed, piled, and kept segregated from subsoil within the right of way. Digital photographs were taken from Paul Lee's cell phone showing typical project infrastructure and documenting problem areas **(Appendix C, first set photos #1 thru 10)**. Start of project, begun at PI station 111+42.20, which is the bore exit located on south side of highway 2. **(Appendix D)**.

Arnie Siverson, KLJ lead inspector, visited the Project site on 24 March 2016. The purpose of the second inspection was to visualize the completed topsoil removal within right of way, in accordance with the Commission's Selection Criteria. The second inspection also begun at bore exit station 111+42.20 located on the south side of highway 2 in Mountrail County. No pipeline contractors or inspectors accompanied KLJ during topsoil inspection. Most areas of topsoil deposited along right of way edge, appeared properly removed, piled and kept segregated from subsoil within right of way. However, some locations looked as if both top and sub-soils were mixed and piled to close together, as noted by photos taken during inspection. Digital photographs (Nikon Power Shot COOLPIX 3.6X, 14 megapixels) were taken showing typical project infrastructure and documenting problem areas. **(Appendix C, second set photos #1 thru 33)**. Geographic coordinated were recorded at observation points or potential problem areas using a handheld Global Positioning System (GPS) (Garmin GPSMAP Oregon 450; <10m accuracy; NAD83 datum) **(Appendix D)**.

3.2 ON-SITE INSPECTION OBSERVATIONS AND FINDINGS

Construction for the Project began 16 March 2016. At the time of the first inspection by KLJ, topsoil removal procedures were discussed, which consisted of three main steps (**Appendix A, Photo 1, 2, 3, & 4 from inspection #1**). Equipment operators started by using a PTO tractor driven rotary mower to cut down CRP grass vegetation on right of way. After this procedure was completed, equipment operators, using two dozer cats started ripping the top soil within right of way. After the ripping operation was complete, the topsoil was stripped to the appropriate depth, averaging around 8 to 12 inch deep. **(Appendix A, Photos 5, 6, 7, & 8 from inspection #1**). The pipeline contractor employed a combination of dozers and graders depending on the equipment available, depth of topsoil, land use and procedure being used to remove topsoil.

The second right of way topsoil inspection conducted by KLJ, was done on 24 March 2016. The stripping of topsoil was complete. Field measurements were taken for appropriate depth, with the average measurement showing an 8 to 12 inch depth along right of way. **(Appendix A, Photos 7, 8, 10 & 11 from inspection #2).**

The contractors/equipment operators seemed competent during the topsoil stripping operation. Contractors removed topsoil according to the color change in the soil rather than to fixed 12 inch depth throughout the pipeline right of way. This was appropriate for the site conditions, since topsoil thickness were mostly at 12 inch depths along most of right of way. Some areas had a little topsoil left on the stripped right of way, while other areas had a little subsoil scraped up with the topsoil. Overall the contractor has done a good job of separating the soil types.

The new right of way easement wasn't near any existing saline areas which could cause a potential problem with soil stripping. No alkaline/saline areas were observed along pipeline right of way topsoil inspection. If any of these areas had been found or noted, re-vegetation established growth may cause problems due to the natural high alkalinity of the soil types.

For the majority of the project, the topsoil pile was placed on the opposite side from the subsoil pile, except where two-toning/side sloping and bore pit bell holes were located. Two-toning or side sloping refers to a construction technique where the uphill side of the construction side of the construction right of way provides a safe and level surface from which heavy equipment can operate. It usually requires extra workspace to accommodate the additional volumes of material generated by using this construction technique. A bell hole for bore pits is a widening of the trench over a given distance, to provide space for installing pipe tie-ins, valves, fittings, etc.; in this area more subsoil is removed creating a bell-shaped trench.

At one location the subsoil pile was observed touching the topsoil pile at a bell hole bore pit at station 156+72.8 on west side of county road 77th Ave. NW. **(Appendix A, Photo # 33 from inspection #2).** Most of the topsoil was piled on the opposite side of the right of way. When the right of way was extended, a portion of the topsoil was pushed near or touching the trench spoil (subsoil) pile locations. Two-toning areas appeared to be in good condition for topsoil segregation; however, trench spoil (subsoil) piles in the two-toning areas need to be observed and watched during the site inspection visits.

4.0 Issues to Resolve and Recommendations

4.1 TOPSOIL SEGREGATION AT BORE PIT BELL HOLE

When the topsoil inspection for the project was conducted, a minor issue was noted, on a location where the subsoil pile was observed touching the topsoil pile at the bell hole pit by Station 156+72.8 located on west side of county road 77th Ave NW, (**Observation Point 10, Appendix A, Figure 1.A.1 and Photo # 33 Appendix C).** Contractors/ equipment operators need to take special care in this area not to mix the topsoil and subsoil. KLJ recommends monitoring and documentation of this area to ensure vegetation becomes established after reclamation.

4.2 TOPSOIL/SUBSOIL SEGREGATION AREAS

When the topsoil inspections was conducted at east end wetland location, a minor Issue was noted at Station 142+57.7 heading east to Station 133+00, lighter subsoil was deposited up against top soil, mixing both together. (**Observation Point 9 and 8, Appendix A, Figure 1.A.1 and Photos #27, 28, 29, and 30**). KLJ advises contractor/ equipment operators need to take special care along right of way soil deposit areas, not to mix both topsoil and sub soils together. KLJ recommends monitoring these areas after reclamation has been completed and re-vegetation established.

5.0 Conclusions

Overall, the Project appeared to have been constructed as designed, with minimal impacts to the surrounding natural or human environment. The project site was well-maintained and in satisfactory condition. There were a few minor issues that included: a bore pit exit bell hole located on west side of county road 77th Ave NW, where the subsoil pile was touching the topsoil pile. It appears from station 142+57.7 heading east along north side edge right of way to approximate station 133+00, lighter subsoil is deposited up against top soil, mixing both together. KLJ recommends monitoring of these areas after reclamation has been completed and re-vegetation established.

6.0 References

North Dakota Public Service Commission (ND PSC). 2015. Online Case Search. Available from: http://www.psc.nd.gov/database/ company case list. php. Accessed November 2015-December 2015

Westbrook, Marc. 2016. STI Group, Sacagawea Pipeline Company, Chief Inspector. Personal Communication: Discussions during site visits on March 16, and 24, 2016.

Sullivan, Gary. 2016. Boyd Construction, Project Manager. Personal Communication; Discussions during site visit on March 16, 2016.

Soil Survey Division Staff. 1993. Soil survey manual. Soil Conservation Service, U.S. Department of Agriculture Handbook.

7.0 Signatures

The services performed by KLJ staff for this project have been conducted in a manner consistent with the degree of care and technical skill appropriately exercised by professionals currently practicing in this area under similar time and budget constraints. Recommendations and findings contained in this report represent our professional judgement and are based upon available information and technically accepted practices at the present time and location. Other than this, no warranty is implied or expressed.

Lead Project Manager, Paul Lee, and Environmental Field Inspector, Arnie E. Siverson,

Paul Lee, PLS, Project Manager — Date: 4-11-16

Arnie E. Siverson, Field Inspector — Date: 4-11-16

Map of Project and Observation Points

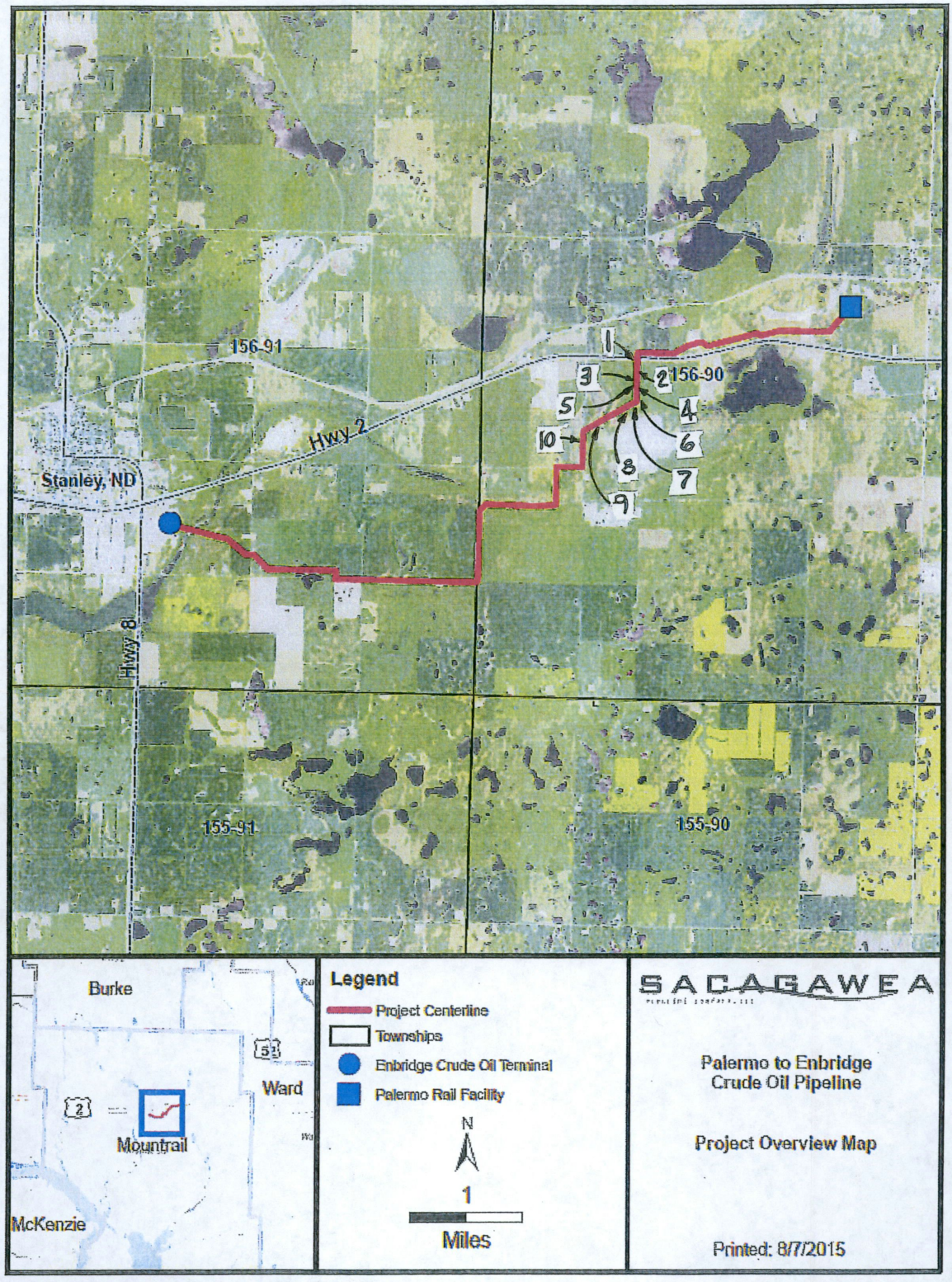


FIGURE 1.A.1 – General Project Location Map

Inspection Reports 1 and 2

Daily Construction Progress Report

Client:	N. Dak. Public Service Commission	**Report Number:**	1
Project:	Sacagawea Pipeline Company LLC	**Date:**	3/16/2016
KL&J Project Number:	1216107 & PSC Case No PU-15-670	**Pages:**	1 and 2

Project Contact Information

Title	Name	Company	Office Phone	Cell Phone
Client Contact	Julie Prescott	ND Public Service Commission	701-328-4188	N/A
KLJ Project Manager	Paul Lee	KLJ	701-250-3501	701-351-5551
Field Inspector	Arnie Siverson	KLJ	701-355-8786	701-425-5414
Chief Field Inspector	Marc Westbrook	STI Group	409-384-4278	409-382-8333
Contractor Field Foreman	Gary Sullivan	Boyd Construction	918-413-1735	N/A

Daily Construction Conditions

Weather Conditions: Partly Cloudy, breezy 15MPH

Temp (High/Low): High 45, Low 36

Tailgate Meeting (Yes/No): No

Daily Construction Activity

Construction Activity	Footage Installed Today	Total Footage To-Date	Comments/Description
ROW Clearing	Work just starting	N/A	
Topsoil Removal	Work just starting	N/A	
Level/Grade ROW	0	0	
HDD Boring	0	0	
Ditch	0	0	
Extra Depth Ditch	0	0	
Non-Native Bedding/Padding	0	0	
Pipe Lower/Pull-in	0	0	
Backfill/Compaction	0	0	
Topsoil Replacement	0	0	
Final Grade ROW	0	0	
Final Reclamation & Reseeding	0	0	

Installed Quantities

Material	Quantity Installed Today	Total Quantity To-Date	Comments/Description
Mainline Block Valve Setting	0	0	
Pig Launcher	0	0	
Pig Receiver	0	0	
Fence Crossings	0	0	
Gates in Fence	0	0	
Silt Fence	0	0	
Waddles	0	0	
Erosion Blankets	0	0	
Straw Bales	0	0	
Sand Bag Trench Breakers	0	0	
Swamp Mats	0	0	
Trench Breakers	0	0	
	0	0	
	0	0	

Photos	
Photo No. 1	Work at station 122+00 looking north. Contractor starting to mow vegetation on right of way.
Photo No. 2	Work at station 128+00 looking south/SW. Contractor mowing vegetation on right of way.
Photo No. 3	Direction looking south. Contractor mowing grass vegetation within right of way.
Photo No. 4	Work at station 124+00 looking south. Contractor mowing CRP vegetation on right of way.
Photo No. 5	Work at station 118+00 looking south, up hill. Start of top soil stripping on right of way.
Photo No. 6	Work bore exit 111+42.2 looking south. Start of ripping and stripping top soil on right of way.
Photo No. 7	Work bore exit 111+42.2 looking west. Top soil stripped & pushed to opposite side easement
Photo No. 8	Work bore exit 111+42.2 looking west. Top soil stripped & pushed to opposite side easement
Photo No. 9	Work at station 122+00 looking south. Top soil being ripped and stripped on right of way.
Photo No.10	Work at station 116+00 look'g south/SW. Top soil being stripped & moved west on easement

Sub Contractors On-Site

No Sub-contractors on site during meeting to discuss procedures for stripping and removal of top soil on construction right of way easement.

Disposition/Comments:

Paul Lee, KLJ project manager, arrived at contractor's field office, south of Stanley, ND, located on highway 8. Mr Lee arrived on 3/16/16 at 7:30AM and waited 3 hours for Boyd, pipeline contractor, and lead inspector, Marc Westbrook to arrive. After everyone met at job trailer, they travelled to right of way location on south side of highway 2. Construction work was started at station 112+00. GPS latitude or longitude readings were taken and are included within Appendix D, along with this report. After meeting with contractor and inspector's present, right of way work begun so no disturbance of endangered piping plover nesting habitat would occur. Contractor started mowing CRP grass vegetation located within right of way easement, so stripping of top soil can start. After vegetation was cleared away, contractor used two dozer cats to rip and clear top soil within right of way. Top soil was pushed within right of way and placed along west edge of easement. Work can be noted from the eleven photos enclosed within Appendix C along with this report. After taking photos and observing work on right of way was being completed within PSC guidelines, KLJ left job site.

Inspectors Name:	Arnie Siverson	**Date:** 3/16/2016	
Inspectors Time (hrs.):	5		

Daily Construction Progress Report

Client:	N. Dak. Public Service Commision	**Report Number:**	2
Project:	Sacagawea Pipeline Company LLC	**Date:**	3/24/2016
KL&J Project Number:	1216107 & PSC Case No PU-15-670	**Pages:**	1 and 2

Project Contact Information

Title	Name	Company	Office Phone	Cell Phone
Client Contact	Julie Prescott	ND Public Service Commission	701-328-4188	N/A
KLJ Project Manager	Paul Lee	KLJ	701-250-3501	701-351-5551
Field Inspector	Arnie Siverson	KLJ	701-355-8786	701-425-5414
Chief Field Inspector	Marc Westbrook	STI Group	409-384-4278	409-3828333
Contractor Field Foreman	Gary Sullivan	Boyd Construction	918-413-1735	N/A

Daily Construction Conditions

Weather Conditions: Breezy wind, 25 MPH and partly sunny overcast

Temp (High/Low): High 53, Low 29

Tailgate Meeting (Yes/No): No

Daily Construction Activity

Construction Activity	Footage Installed Today	Total Footage To-Date	Comments/Description
ROW Clearing	No clearing done today	Approx footage 3658.80 ft. done	This is approx. clearing footage distance due to nesting disturbance
Topsoil Removal	No topsoil removal wrk today	Approx footage 3658.80 ft. done	This is approx. topsoil removal distance due to nesting disturbance
Level/Grade ROW	0	0	
HDD Boring	0	0	
Ditch	0	0	
Extra Depth Ditch	0	0	
Non-Native Bedding/Padding	0	0	
Pipe Lower/Pull-in	0	0	
Backfill/Compaction	0	0	
Topsoil Replacement	0	0	
Final Grade ROW	0	0	
Final Reclamation & Reseeding	0	0	

Installed Quantities

Material	Quantity Installed Today	Total Quantity To-Date	Comments/Description
HDPE Fittings	0	0	
Pig Launcher	0	0	
Pig Reciever	0	0	
Mainline Block Valve Setting	0	0	
Fence Crossings	0	0	
Gates in Fence	0	0	
Silt Fence	0	0	
Waddles	0	0	
Erosion Blankets	0	0	
Straw Bales	0	0	
Sand Bags	0	0	
Swamp Mats	0	0	
Trench Breakers	0	0	
Rock Shield	0	0	

Photos (See previous page 1)	
33 photos were taken showing depth and amount of top soil stripped and moved to opposite side on right of way easement. Discription of work will be noted on each photos within Appendix C along with this report.	Page 2

Sub Contractors On-Site
Bore subcontractor was on site during inspection working on bore exit at Station 156+72.8 located on west side county road 77th Ave NW

Disposition/Comments:
Arnie Siverson, KLJ inspector, arrived at project site located at bore exit station 111+42.20 on south side of highway 2. Inspection was conducted on 3-24-16 at 2:20 PM.
Marc Westbrook, lead inspector for Boyd Construction, was at another job site during inspection, so was not in attendance. Contractor was on site working on hydrotest
bore pipe and related work. At present right of way topsoil removal has only begun at station 112+00 located on south side of highway 2 and ending at bore exit station
156+72.8 located on west side of county road 77th Ave NW. The main reason Boyd Construction was working on this portion of right of way, is to finish pipeline
construction before the endangered piping plover nesting habitat occurs. GPS latitude and longitude readings were taken at given station points and are included within
Appendix D along with this report. Right of way was noted from inspection, within these station points, that grading was complete and top soil had been pushed to west
opposite side on right of way easement. Depth of soil removed within right of way was measured approximately 12" deep. Work on right of way continued south and
turned west at PI station 128+43.8. Photos were taken along right of way during inspection and are included in Appendix C along with this report. It was noticed during
inspection that in some locations top soil appeared to be touching subsoil deposits along right of way. No BMP's were installed along right of way as noted by inspection.
Bore pipe was setting on skids and being tested. After testing complete, pipe will be bored under water way. After completing inspection, KLJ left job site at 3:30PM.

Inspectors Name:	Arnie Siverson	**Date:**	3/24/2016
Inspectors Time (hrs.):	3		

Photographs

First Set Photos - Taken 16 March 2016

Above: Photo 1- Located at station 122+00. Direction looking north showing Highway 2 beyond. Start of contractor mowing CRP grass vegetation.

Below: Photo 2- Located at station 128+00. Direction looking south/southwest. Contractor mowing grass vegetation within right of way.

Above: Photo 3- Direction looking south. Contractor moving grass vegetation within right of way.

Below: Photo 4- Located at station 124+00. Direction looking south. Contractor mowing grass vegetation within right of way.

Above: Photo 5- Located at station 118+00. Direction looking south. Right of way extending up hill. Start of top soil stripping on right of way.

Below: Photo 6- located at bore exit 111+42.20. South side of Highway 2 looking south. Start of ripping and top soil removal on right of way.

Above: Photo 7- Located at bore exit 111+42.20.South side of Highway 2 looking west. Start of ripping and top soil removal on right of way.

Below: Photo 8- Located at bore exit 111+42.20.South side of Highway 2 looking west. Top soil being stripped and being pushed to opposite side on right of way.

Above: Photo 9- Located at station 122+00 looking south. Top soil being ripped and stripped. Top soil being placed at west side on right of way.

Below: Photo 10- Located at station 116+00 looking south/southwest. Top soil being stripped and pushed to west side on edge of right of way easement.

Second Set Photos - Taken 24 March 2016

Above: Photo 1- Start of right of way inspection at bore exit stationing 111+42.2 located on south side of Highway 2. Photo shows start of top soil stripping.

Below: Photo 2- Station 111+42.20 bore exit on south side of Highway 2 showing stripped right of way extending south with construction equipment on the side.

Above: Photo 3- Photo showing station 112+00. Vegetation shown is off right of way looking east.

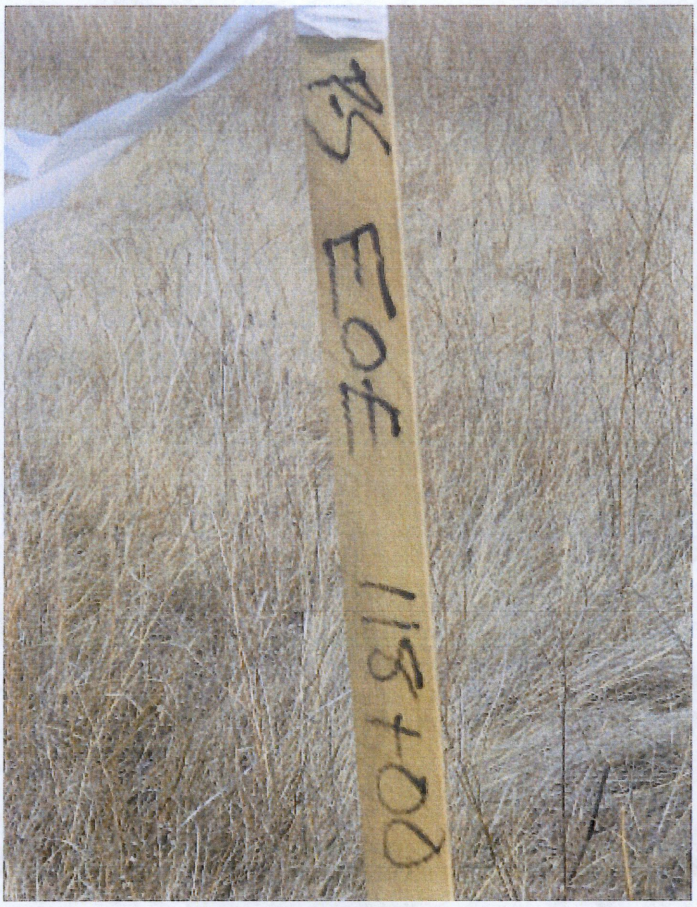
Below: Photo 4- Looking south at hillside located at station 120+00. Right of way has been stripped with top soil located at west side of right of way.

Above: Photo 5- Looking at top soil pushed off right of way located at west side of easement. Photo showing right of way stripped at station 114+00.

Below: Photo 6- Photo showing station 114+94. Right of way has been stripped with top soil located at opposite side of right of way.

Above: Photo 7- Photo showing depth of approximately 12" top soil after right of way has been stripped. Station location is 114+00.

Below: Photo 8- Looking south at station 116+00 showing right of way being stripped with depth of top soil approximately 12". Photo taken at west side of right of way.



Above: Photo 9- Photo showing station 118+00. Vegetation shown is off right of way looking east.

Below: Photo 10- Looking south at station 118+00 showing stripped right of way at approximate top soil depth of 12'. Photo is showing east side of right of way. Upper right hand side of photo is location of water resting habitat to be bored.

Above: Photo 11- Photo showing depth of approximately 12" top soil after right of way has been stripped. Station location is 118+00.

Below: Photo 12- Looking at east side of right of way cut through hillside at station 124+00. Photo showing approximately 12" top soil with subsoil located below.

Above: Photo 13- Looking at west side of deep cut through hill at station 124+00. Right of way is stripped showing subsoil at left. Top soil is placed on east edge of right of way beyond subsoil location.

Below: Photo 14- Looking south at stripped right of way through hillside showing subsoil location with top soil placed at edge of right of way on west side of easement.

Above: Photo 15- Looking south at stropped right of way through hillside showing subsoil location lower left side of photo. Top soil placed at edge of right of way on west side easement. Station location 126+00.

Below: Photo 16- Looking at west side of right of way with easement heading south. Photo location approximately 126+00. Work done from photo shows right of way graded with op soil placed on west side of right of way. Large rocks pushed off right of way into top soil location. Rocks need to be removed off right of way.

Above: Photo 17- Looking at west side of right of way with easement heading south. Photo station location approximately 124+00. Work done from photo shows right of way graded with top soil pushed on west side of right of way.

Below: Photo 18- Looking at west edge of right of way at station 128+00. Graded right of way showing subsoil is located at right hand side of photo. Approximately 12" top soil depth shown at west edge of right of way.

Above: Photo 19- Looking south from graded right of way at station 128+00. Subsoil shown in middle of photo with top soil pushed off right of way at edge of easement at west location. Photo also shows right of way turning west with water slough nesting area beyond. Contractor is shown beyond hydro testing bore piping.

Below: Photo 20- Looking south at PI station 128+43.8 where right of way turns right and heads west. Photo shows contractor on site hydro testing bore piping. Pipe not showing in this photo.

Above: Photo 21- Photo taken form east end right of way heading west towards left isde of photo at station 132+00. Right of way graded with top soil pushed to north edge of right of way easement.

Below: Photo 22- Looking west from east end at graded right of way. Right of way has top soil depth of 12". Top soild is pushed off right of way located at right hand side of photo. Top soil not shown on photo. 12" bore piping shown on skids being hydro tested. Station location 130+00.

Above: Photo 23- Photo showing station 142+00. Vegetation shown is off right of way. At station 142+57.7, bore entry starts across weland water slough to not disturb Piping Plover habitat nesting ground.

Below: Photo 24- Photo taken from east end of right of way facing west, heading uphill at station 134+00. Right of way graded with top soil pushed to north edge of right of way easement. No BMP's have been installed along entire length of right of way for erosion control.

Above: Photo 25- Photo taken from west side of right of way facing east at bore stationing entry 142+52.8 Photo shows graded right of way with top soil shown at upper portion of photo. It appears that top soil is mixed together with subsoil deposit.

Below: Photo 26- Looking at west side of bore piping placed on skids at bore station 142+52.8. Photo showing right of way graded with top soil shown at top of photo. It appears that top soil is mixed together with subsoil deposits.

Above: Photo 27- Looking at north side of right of way at station 144+00. Photo shows top soil location with lighter subsoil deposits mixed in with top soil.

Below: Photo 28- Looking at north side of right of way at station 145+00. Photo shows graded right of way with top soil shown at top of photo. Lighter subsoil is deposited up against top soil, mixing both together.

Above: Photo 29- Showing topsoil deposited at north side of right of way west end, looking back east. Subsoil ridge is shown placed up against top soil mixing both together.

Below: Photo 30- Looking west for bore entry station 142+57.7 looking across water way slough. Top soil is placed at north side of right of way to left side of photo with subsoil ridge at left side of photo. Both subsoil and top soil appear to be mixed together. Bore contractor is shown beyond at bore exit station 156+72.8 across county road 77th Ave. NW.

Above: Photo 31- Standing on west hillside at bore entry station 142+57.7 looking across waterway slough to be bored due to nesting habitat. Bore contractor on site working.

Below: Photo 32- Photo taken from county road 77th Ave. NW. shown bridge matts in road ditch for contractor at bore exit 158+72.8.

Above: Photo 33- Photo taken at bore exit 158+72.8 located on west side of county road 77th Ave. NEW. Bore contractor on site working. Bore site was stripped of top soil and placed on west edge of site. Subsoil dug out for bell pits was deposited and mixed with top soil. Top soil should have been moved further from subsoil deposit.

Field Observation Point

POINT	NAME	STATION	LATITUDE	LONGITUDE
1	BORE EXIT HIGHWAY 2	111+42.20	47.1433	-103.2172
2	TOPSOIL STRIPPING	116+00	47.8997	-102.5480
3	TOPSOIL STRIPPING	118+00	48.3278	-102.2805
4	TOPSOIL STRIPPING	120+00	48.2138	-102.1664
5	TOPSOIL STRIPPING	122+00	48.2830	-102.2330
6	TOPSOIL STRIPPING	124+00	48.1211	-102.1831
7	TOPSOIL STRIPPING	126+00	48.5831	-102.9886
8	TOPSOIL STRIPPING	128+00	48.1997	-102.1128
9	START BORE STATION	142+57.7	48.3211	-102.2861
10	END BORE STATION	156+72.8	48.4625	-102.6164

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