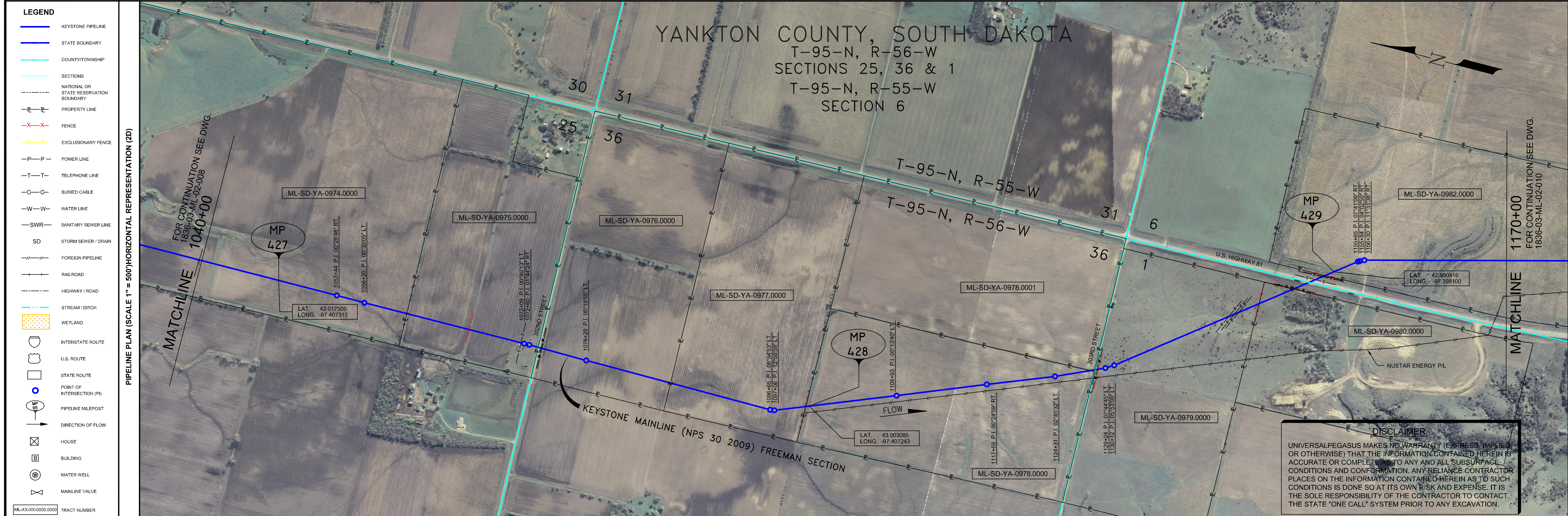


- GENERAL NOTES**
- 1) ALL CHAINAGES ARE IN FEET UNLESS OTHERWISE SPECIFIED.
  - 2) DATUM ELEVATION AND PROJECTION ARE BASED ON MEAN SEA LEVEL AND NAD 83.
  - 3) FIELD PIPE LOCATING REQUIRED TO DETERMINE PLACEMENT OF PIPELINE WITHIN PERMANENT EASEMENT.
  - 4) UNLESS OTHERWISE NOTED, 48 INCHES MINIMUM COVER EXCEPT 36 INCHES IN AREAS OF CONSOLIDATED ROCK.
  - 5) NO ACTUAL AS-BUILT GROUND SHOTS WERE TAKEN AT THIS LOCATION. THE PROFILE REPRESENTS A PROJECTION FROM SHOTS TAKEN AT 150' TO 250' INTERVALS.
  - 6) TWO TYPES OF COATING WERE APPLIED TO THE FIELD WELDS DURING THE ORIGINAL CONSTRUCTION: ONE TYPE WAS TWO COMPONENT LIQUID EPOXY. THE PRODUCTS USED WERE DENSO 7200 OR SPC SP-2888. THE OTHER TYPE THAT WAS APPLIED TO THE FIELD WELDS WAS FBE. THE PRODUCT NAME WAS 3M 6223 11G.
  - 7) THE SUBSTANTIAL CONSTRUCTION COMPLETION DATE, BASED ON CALIPER PIG RUN, WAS AUGUST 17, 2009 FOR M.P. 403.90 TO 422.96 AND OCTOBER 28, 2009 FOR M.P. 422.96 TO 463.18.
  - 8) ORIGINAL IN-SERVICE DATE OF THE KEYSTONE PIPELINE (PHASE 1): JUNE 30, 2010.
  - 9) CPS CALCULATION DATE: MAY 2010.
  - 10) ORION STATION SERIES NUMBER: 1182700.
  - 11) TO DETERMINE THE MILE POST AT A GIVEN LOCATION, ADD THE 3D STATION NUMBER FROM THIS SEGMENT TO STATION NUMBER 21496-76 AND DIVIDE BY 5280.



**OPERATING AND TEST PRESSURE**

1. THE MAXIMUM OPERATING PRESSURE (MOP) IS 1440 PSIG.
2. THE MINIMUM TEST PRESSURE WAS 160 PSIG.

**BILL OF MATERIALS (3D)**

ITEM NO.	DESCRIPTION	QUANTITY
2	30" O.D. X 0.386" W.T., API-XL70 W/FBE COATING	12,413'
3	30" O.D. X 0.516" W.T., API-XL70 W/FBE COATING & ABRASION RESISTANT OVERCOAT	958'

ITEM	QUANTITY
PIPELINE MARKERS	0 EA
PIPELINE WARNING SIGNS	6 EA
CATHODIC TEST STATION	3 EA
AERIAL MARKER	0 EA

**REFERENCE DRAWINGS**

REF. NO.	DRAWING NO.	REV. NO.	DRAWING TITLE

**REVISIONS**

NO.	DATE	REV. BY	CHKD. BY	APPRD. BY	DESCRIPTION
1	5/17/08	UEI	RDG	LAG	ISSUED FOR CONSTRUCTION
2	10/17/08	UEI			ISSUED FOR AS-BUILT

**PIPELINE SCHEMATIC**

STATION	DESCRIPTION
1042+97	6.2' C.V.R.
1048+64	M.P. 427
1054+41	P.I. 1.0072848' RT.
1056+20	P.I. 1.0073505' LT.
1060+43	FENCE (BARBED WIRE)
1067+61	FENCE (WIRE)
1072+83	TELEPHONE LINE
1073+26	P.I. 1.0075313' LT.
1074+54	ROAD BAR DITCH
1074+88	CL 302ND STREET
1074+81	EDGE OF ROAD
1074+85	WATER SUPPLY LINE
1074+97	ROAD BAR DITCH
1075+02	OVERHEAD POWERLINE, HT. = 29'
1078+29	P.I. 1.0071855' LT.
1089+27	4.9' C.V.R.
1087+83	P.I. 1.0875433' LT.
1087+25	P.I. 1.2728397' LT.
1101+28	FENCE (BARBED WIRE)
1101+64	M.P. 428
1110+13	P.I. 1.0071340' LT.
1116+02	5.4' C.V.R.
1118+90	P.I. 1.0072439' RT.
1125+53	P.I. 1.0245532' LT.
1128+16	ROAD BAR DITCH
1128+30	EDGE OF ROAD
1128+33	EDGE OF ROAD
1128+54	TELEPHONE LINE
1128+67	ROAD BAR DITCH
1128+68	WATER SUPPLY LINE
1128+78	FENCE (WIRE)
1128+82	P.I. 1.0744482' LT.
1131+35	P.I. 1.0553098' LT.
1143+36	OVERHEAD POWERLINE, HT. = 20'
1143+37	POWERLINE
1144+41	POWERLINE
1145+31	FENCE (STEEL PIPE)
1148+88	OVERHEAD FIBER OPTIC CABLE (BARBED WIRE)
1149+01	OVERHEAD FIBER OPTIC CABLE
1149+08	WATER SUPPLY LINE
1149+76	ROAD BAR DITCH
1150+19	EDGE OF ROAD
1150+89	EDGE OF ROAD
1151+22	FIBER OPTIC CABLE
1151+46	ROAD BAR DITCH
1151+82	5.0' C.V.R.
1153+31	TELEPHONE LINE
1153+48	FENCE (WIRE)
1154+44	M.P. 429
1154+45	P.I. 1.0741097' RT.
1154+56	P.I. 1.1313387' RT.
1156+48	5.1' C.V.R.

**ENGINEERING RECORDS**

DRAWN BY	INITIAL	DATE	ENY. APPRD.	INITIAL	DATE
UEI		10/03/01			

**PROFESSIONAL ENGINEER**

NAME	STATE	LIC#	REV#	DATE
LOYDS ALVIN GRAY, III	SD	CE9004		

**TEST SECTIONS (3D)**

TEST SECTION 4B-2  
ILTO-028-2010

**ENVIRONMENTAL MITIGATION/RECLAMATION STATIONS (2D)**

STATION	REPRESENTATION
1041+15	
1074+30	
1075+10	

**SCALE:** 0 125 250 500 Feet

**TransCanada**  
In business to deliver

KEYSTONE MAINLINE (NPS 30 2009) FREEMAN SECTION  
SPREAD 4B DISCIPLINE 03

**AS-BUILT ALIGNMENT**  
M.P. 426.85 TO M.P. 429.32  
SHEET 9 OF 13 SHEETS  
STA. 1041+15 TO STA. 1171+26 (3D)

DRAWING NO. 1836-03-ML-02-009  
REV. 2