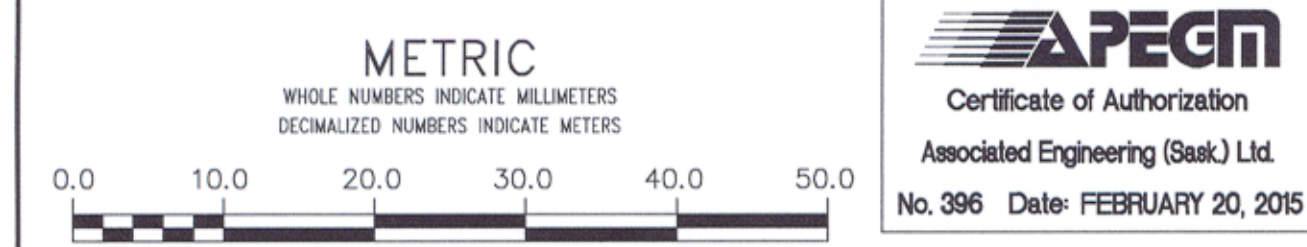


- NOTES:**
- CHAINAGES SHOWN ARE ALONG CENTERLINE OF PIPELINE.
  - DESIGN HDD PARAMETERS ARE SHOWN FOR INFORMATION ONLY. CONTRACTOR TO CONFIRM OR DETERMINE ENTRY AND EXIT LOCATIONS, BEND RADII, AND ENTRY AND EXIT ANGLES THAT WILL WORK WITH THE PROPOSED EQUIPMENT AND METHODOLOGY.
  - HDD CONTRACTOR SHALL DETERMINE IF CASING ON THE ENTRY AND/OR EXIT IS REQUIRED, AND INSTALL IF NECESSARY, CASING TO BE SIZED BY THE CONTRACTOR TO ACCOMMODATE THE FINAL REAM PASS.
  - DRILL RIG WITH A MINIMUM OF 300,000 LB PUSH/PULL WITH APPROPRIATE PUMPS AND RECYCLING SYSTEM IS REQUIRED FOR THIS PROJECT.
  - THE PILOT HOLE SHALL BE INSTALLED ALONG THE DESIGN BORE PATH WITH THE DESIGNATED RADIUS OF CURVATURE SHOWN ON THE DRAWING, AND THE ENTIRE BORE PATH SHALL BE WITHIN ±2m RADIAL DISTANCE OF THE DESIGN BORE PATH.
  - VARIATIONS TO PROPOSED FEEDERMAIN BORE PATH MAY BE CONSIDERED BY THE CONTRACT ADMINISTRATOR. BORE PATH REVISIONS SHALL BE DESIGNED BY AN ENGINEER OF THE PROVINCE OF MANITOBA AND INCLUDE HYDROFRACTURE ANALYSIS.
  - LOCATION OF BOREHOLES SHOWN ON PLAN AND PROFILE ARE APPROXIMATE. REFER TO SOIL INVESTIGATION REPORT FOR ADDITIONAL INFORMATION.



**WARNING**  
IF POWER EQUIPMENT OR EXPLOSIVES ARE TO BE USED FOR EXCAVATION ON THIS PROJECT THE CONTRACTOR MUST:  
1) NOTIFY THE GAS COMPANY OF THE PROPOSED LOCATION OF EXCAVATION.  
2) TAKE PRECAUTION TO AVOID DAMAGE TO GAS COMPANY INSTALLATIONS.  
SEE PROVINCIAL REGULATION 210/72 FOR DETAILS

**LOCATION APPROVED**  
UNDERGROUND STRUCTURES  
SUPPLY U/G STRUCTURES COMMITTEE DATE  
NOTE:  
LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.

B.M. ELEV.	
CONSTRUCTION COMPLETION DATE: YYYY MM DD	
ISSUED FOR TENDER	15-FEB-20 KG
NO.	REVISIONS
DATE	BY

**Associated Engineering**

DESIGNED BY	CL	CHECKED BY	JL
DRAWN BY	KG	APPROVED BY	JL
SCALE:		RELEASED FOR CONSTRUCTION	
HORIZONTAL	1:500	DATE	2015 02 20
VERTICAL	1:500	DATE	

PLOT DATE: 2015 02 20

ENGINEER'S SEAL  
PROVINCE OF MANITOBA  
**J.S. LUEKE**  
Member  
36827  
REGISTERED PROFESSIONAL ENGINEER  
CONSULTANT DRAWING NUMBER  
20134376

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT  
ENGINEERING DIVISION  
NORTH KILDONAN FEEDERMAIN REPLACEMENT  
ALT. 1: HDD PLAN AND PROFILE  
RED RIVER CROSSING  
STATION 1+39 TO 4+65  
SHEET 2 OF 4  
CITY DRAWING NUMBER  
D-13760