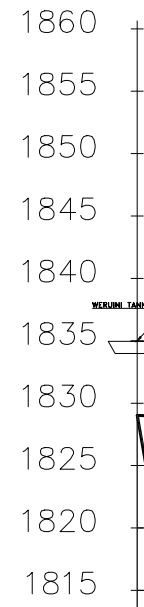


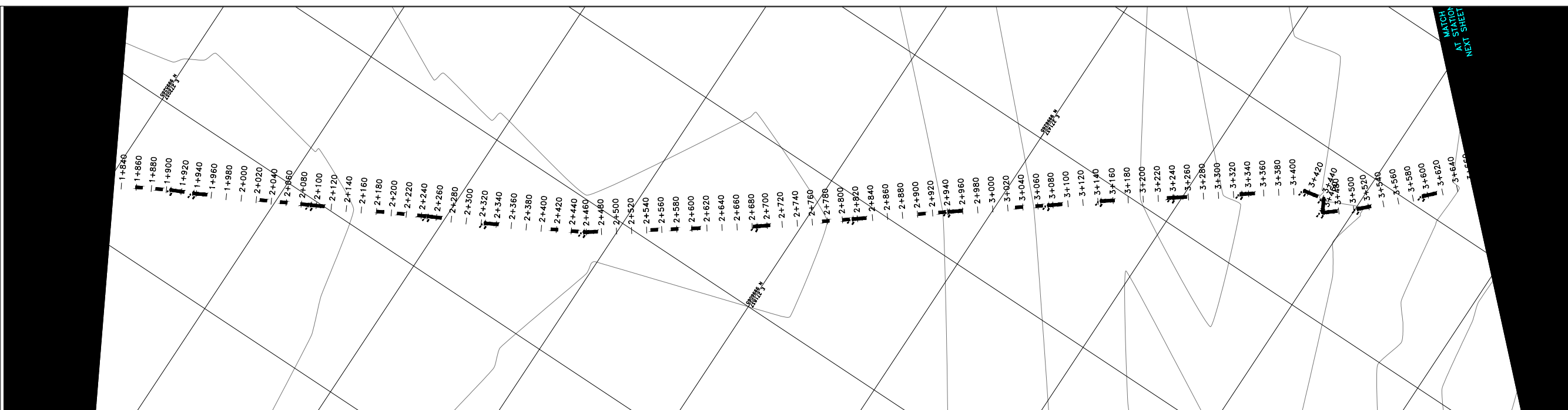
**NOTES**

- ALL LEVELS ARE IN METERS ABOVE SEA LEVEL.
- COORDINATES ARE BASED ON UTM.
- LOCATION OF AIR VALVES, WASHOUTS, BENDS AND OTHER FITTINGS AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER ON SITE.
- GROUND AND INVERT LEVEL SHOWN ARE AS SHOWN ON DRAWING UNLESS OTHERWISE INDICATED ON SITE BY THE ENGINEER.
- PIPES ARE TO BE LAID TO EVEN GRADIENTS WITH A MINIMUM COVER OF 1.0M. WHERE COVER IS LESS THAN THIS, PIPE TO BE SURROUNDED WITH CONCRETE.
- ALL BENDS ARE HORIZONTAL UNLESS OTHERWISE STATED.
- IN WATER LOGGED AREAS, PIPES TO BE BEDDED WITH SINGLE SIZED OR GRADED AGGREGATES AS PER CLAUSE 430.1 AND 216 OF TECHNICAL SPECIFICATIONS AND/OR ANCHOR BLOCKS AS MAY BE DIRECTED ON SITE BY THE ENGINEER.

- LEGEND:**
- PROPOSED PIPELINE
  - EXISTING GROUND PROFILE
  - PIPE INVERT PROFILE
  - EXISTING ROAD
  - AIR VALVE
  - DOUBLE AIR VALVE
  - WASHOUT
  - WASHOUT TYPE 1
  - WASHOUT TYPE 2
  - NOMINAL DIAMETER
  - NOMINAL PRESSURE
  - VERTICAL BEND
  - HORIZONTAL BEND
  - EXISTING STRUCTURE
  - EARTH ROAD
  - GRAVEL ROAD
  - CUT



DISTANCE DATUM (m)	GROUND LEVELS (m)	INVERT LEVELS(m)	DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	HGL(m)	TYPE OF PIPE AND SIZE
1829.02	1829.02	1829.02	0.00	1829.02	
1828.95	1825.07	1825.98	0+020.00	1828.95	
1828.88	1825.18	1826.22	0+040.00	1828.88	
1828.82	1825.29	1826.28	0+060.00	1828.82	
1828.75	1825.41	1826.34	0+080.00	1828.75	
1828.68	1825.52	1826.37	0+100.00	1828.68	
1828.61	1825.64	1826.31	0+120.00	1828.61	
1828.55	1825.76	1826.26	0+140.00	1828.55	
1828.48	1825.88	1826.19	0+160.00	1828.48	
1828.41	1825.99	1826.10	0+180.00	1828.41	
1828.35	1826.11	1826.01	0+200.00	1828.35	
1828.28	1826.22	1825.92	0+220.00	1828.28	
1828.21	1826.34	1825.83	0+240.00	1828.21	
1828.14	1826.45	1825.74	0+260.00	1828.14	
1828.08	1826.56	1825.65	0+280.00	1828.08	
1828.01	1826.67	1825.56	0+300.00	1828.01	
1827.94	1826.78	1825.47	0+320.00	1827.94	
1827.88	1826.89	1825.38	0+340.00	1827.88	
1827.81	1826.99	1825.29	0+360.00	1827.81	
1827.74	1827.10	1825.20	0+380.00	1827.74	
1827.67	1827.21	1825.11	0+400.00	1827.67	
1827.61	1827.31	1825.02	0+420.00	1827.61	
1827.54	1827.42	1824.93	0+440.00	1827.54	
1827.47	1827.52	1824.84	0+460.00	1827.47	
1827.41	1827.62	1824.75	0+480.00	1827.41	
1827.34	1827.72	1824.66	0+500.00	1827.34	
1827.27	1827.82	1824.57	0+520.00	1827.27	
1827.20	1827.92	1824.48	0+540.00	1827.20	
1827.14	1828.02	1824.39	0+560.00	1827.14	
1827.07	1828.12	1824.30	0+580.00	1827.07	
1827.00	1828.22	1824.21	0+600.00	1827.00	
1826.94	1828.32	1824.12	0+620.00	1826.94	
1826.87	1828.42	1824.03	0+640.00	1826.87	
1826.80	1828.52	1823.94	0+660.00	1826.80	
1826.73	1828.62	1823.85	0+680.00	1826.73	
1826.67	1828.72	1823.76	0+700.00	1826.67	
1826.60	1828.82	1823.67	0+720.00	1826.60	
1826.53	1828.92	1823.58	0+740.00	1826.53	
1826.46	1829.02	1823.49	0+760.00	1826.46	
1826.40	1829.12	1823.40	0+780.00	1826.40	
1826.33	1829.22	1823.31	0+800.00	1826.33	
1826.26	1829.32	1823.22	0+820.00	1826.26	
1826.20	1829.42	1823.13	0+840.00	1826.20	
1826.13	1829.52	1823.04	0+860.00	1826.13	
1826.06	1829.62	1822.95	0+880.00	1826.06	
1825.99	1829.72	1822.86	0+900.00	1825.99	
1825.93	1829.82	1822.77	0+920.00	1825.93	
1825.86	1829.92	1822.68	0+940.00	1825.86	
1825.79	1830.02	1822.59	0+960.00	1825.79	
1825.73	1830.12	1822.50	0+980.00	1825.73	
1825.66	1830.22	1822.41	1+000.00	1825.66	
1825.59	1830.32	1822.32	1+020.00	1825.59	
1825.52	1830.42	1822.23	1+040.00	1825.52	
1825.46	1830.52	1822.14	1+060.00	1825.46	
1825.39	1830.62	1822.05	1+080.00	1825.39	
1825.32	1830.72	1821.96	1+100.00	1825.32	
1825.26	1830.82	1821.87	1+120.00	1825.26	
1825.19	1830.92	1821.78	1+140.00	1825.19	
1825.12	1831.02	1821.69	1+160.00	1825.12	
1825.05	1831.12	1821.60	1+180.00	1825.05	
1824.99	1831.22	1821.51	1+200.00	1824.99	
1824.92	1831.32	1821.42	1+220.00	1824.92	
1824.85	1831.42	1821.33	1+240.00	1824.85	
1824.79	1831.52	1821.24	1+260.00	1824.79	
1824.72	1831.62	1821.15	1+280.00	1824.72	
1824.65	1831.72	1821.06	1+300.00	1824.65	
1824.58	1831.82	1820.97	1+320.00	1824.58	
1824.52	1831.92	1820.88	1+340.00	1824.52	
1824.45	1832.02	1820.79	1+360.00	1824.45	
1824.38	1832.12	1820.70	1+380.00	1824.38	
1824.31	1832.22	1820.61	1+400.00	1824.31	
1824.25	1832.32	1820.52	1+420.00	1824.25	
1824.18	1832.42	1820.43	1+440.00	1824.18	
1824.11	1832.52	1820.34	1+460.00	1824.11	
1824.05	1832.62	1820.25	1+480.00	1824.05	
1823.98	1832.72	1820.16	1+500.00	1823.98	
1823.91	1832.82	1820.07	1+520.00	1823.91	
1823.84	1832.92	1819.98	1+540.00	1823.84	
1823.78	1833.02	1819.89	1+560.00	1823.78	
1823.71	1833.12	1819.80	1+580.00	1823.71	
1823.64	1833.22	1819.71	1+600.00	1823.64	
1823.58	1833.32	1819.62	1+620.00	1823.58	
1823.51	1833.42	1819.53	1+640.00	1823.51	
1823.44	1833.52	1819.44	1+660.00	1823.44	
1823.37	1833.62	1819.35	1+680.00	1823.37	
1823.31	1833.72	1819.26	1+700.00	1823.31	
1823.24	1833.82	1819.17	1+720.00	1823.24	
1823.17	1833.92	1819.08	1+740.00	1823.17	
1823.11	1834.02	1818.99	1+760.00	1823.11	
1823.04	1834.12	1818.90	1+780.00	1823.04	
1822.97	1834.22	1818.81	1+800.00	1822.97	
1822.90	1834.32	1818.72	1+820.00	1822.90	
1822.83	1834.42	1818.63	1+840.00	1822.83	
1822.76	1834.52	1818.54	1+860.00	1822.76	
1822.69	1834.62	1818.45	1+880.00	1822.69	
1822.62	1834.72	1818.36	1+900.00	1822.62	
1822.55	1834.82	1818.27	1+920.00	1822.55	
1822.48	1834.92	1818.18	1+940.00	1822.48	
1822.41	1835.02	1818.09	1+960.00	1822.41	
1822.34	1835.12	1818.00	1+980.00	1822.34	
1822.27	1835.22	1817.91	2+000.00	1822.27	
1822.20	1835.32	1817.82	2+020.00	1822.20	
1822.13	1835.42	1817.73	2+040.00	1822.13	
1822.06	1835.52	1817.64	2+060.00	1822.06	
1821.99	1835.62	1817.55	2+080.00	1821.99	
1821.92	1835.72	1817.46	2+100.00	1821.92	
1821.85	1835.82	1817.37	2+120.00	1821.85	
1821.78	1835.92	1817.28	2+140.00	1821.78	
1821.71	1836.02	1817.19	2+160.00	1821.71	
1821.64	1836.12	1817.10	2+180.00	1821.64	
1821.57	1836.22	1817.01	2+200.00	1821.57	
1821.50	1836.32	1816.92	2+220.00	1821.50	
1821.43	1836.42	1816.83	2+240.00	1821.43	
1821.36	1836.52	1816.74	2+260.00	1821.36	
1821.29	1836.62	1816.65	2+280.00	1821.29	
1821.22	1836.72	1816.56	2+300.00	1821.22	
1821.15	1836.82	1816.47	2+320.00	1821.15	
1821.08	1836.92	1816.38	2+340.00	1821.08	
1821.01	1837.02	1816.29	2+360.00	1821.01	
1820.94	1837.12	1816.20	2+380.00	1820.94	
1820.87	1837.22	1816.11	2+400.00	1820.87	
1820.80	1837.32	1816.02	2+420.00	1820.80	
1820.73	1837.42	1815.93	2+440.00	1820.73	
1820.66	1837.52	1815.84	2+460.00	1820.66	
1820.59	1837.62	1815.75	2+480.00	1820.59	
1820.52	1837.72	1815.66	2+500.00	1820.52	
1820.45	1837.82	1815.57	2+520.00	1820.45	
1820.38	1837.92	1815.48	2+540.00	1820.38	
1820.31	1838.02	1815.39	2+560.00	1820.31	
1820.24	1838.12	1815.30	2+580.00	1820.24	
1820.17	1838.22	1815.21	2+600.00	1820.17	
1820.10	1838.32	1815.12	2+620.00	1820.10	
1820.03	1838.42	1815.03	2+640.00	1820.03	
1819.96	1838.52	1814.94	2+660.00	1819.96	
1819.89	1838.62	1814.85	2+680.00	1819.89	
1819.82	1838.72	1814.76	2+700.00	1819.82	
1819.75	1838.82	1814.67	2+720.00	1819.75	
1819.68	1838.92	1814.58	2+740.00	1819.68	
1819.61	1839.02	1814.49	2+760.00	1819.61	
1819.54	1839.12	1814.40	2+780.00	1819.54	
1819.47	1839.22	1814.31	2+800.00	1819.47	
1819.40	1839.32	1814.22	2+820.00	1819.40	
1819.33	1839.42	1814.13	2+840.00	1819.33	
1819.26	1839.52	1814.04	2+860.00	1819.26	
1819.19	1839.62	1813.95	2+880.00	1819.19	
1819.12	1839.72	1813.86	2+900.00	1819.12	
1819.05	1839.82	1813.77	2+920.00	1819.05	
1818.98	1839.92	1813.68	2+940.00	1818.98	
1818.91	1840.02	1813.59	2+960.00	1818.91	
1818.84	1840.12	1813.50	2+980.00	1818.84	
1818.77	1840.22	1813.41	3+000.00	1818.77	
1818.70	1840.32	1813.32	3+020.00	1818.70	
1818.63	1840.42	1813.23	3+040.00	1818.63	
1818.56	1840.52	1813.14	3+060.00	1818.56	
1818.49	1840.62	1813.05	3+080.00	1818.49	
1818.42	1840.72	1812.96	3+100.00	1818.42	
1818.35	1840.82	1812.87	3+120.00	1818.35	
1818.28	1840.92	1812.78	3+140.00	1818.28	
1818.21	1841.02	1812.69	3+160.00	1818.21	
1818.14	1841.12	1812.60	3+180.00	1818.14	
1818.08	1841.22	1812.51	3+200.00	1818.08	
1818.01	1841.32	1812.42	3+220.00	1818.01	




- NOTES**
- ALL LEVELS ARE IN METERS ABOVE SEA LEVEL.
  - COORDINATES ARE BASED ON UTM.
  - LOCATION OF AIR VALVES, WASHOUTS, BENDS AND OTHER FITTINGS AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER ON SITE.
  - GROUND AND INVERT LEVEL SHOWN ARE AS SHOWN ON DRAWING UNLESS OTHERWISE INDICATED ON SITE BY THE ENGINEER.
  - PIPES ARE TO BE LAID TO EVEN GRADIENTS WITH A MINIMUM COVER OF 1.0M. WHERE COVER IS LESS THAN THIS, PIPE TO BE SURROUNDED WITH CONCRETE.
  - ALL BENDS ARE HORIZONTAL UNLESS OTHERWISE STATED.
  - IN WATER LOGGED AREAS, PIPES TO BE BEDDED WITH SINGLE SIZED OR GRADED AGGREGATES AS PER CLAUSE 430.1 AND 216 OF TECHNICAL SPECIFICATIONS AND/OR ANCHOR BLOCKS AS MAY BE DIRECTED ON SITE BY THE ENGINEER.


- LEGEND:**
- PROPOSED PIPELINE
  - - - - - EXISTING GROUND PROFILE
  - PIPE INVERT PROFILE
  - EXISTING ROAD
  - ◇ — AIR VALVE
  - DAV — DOUBLE AIR VALVE
  - ▽ — WASHOUT
  - WO1 — WASHOUT TYPE 1
  - WO2 — WASHOUT TYPE 2
  - DN — NOMINAL DIAMETER
  - PN — NOMINAL PRESSURE
  - VB — VERTICAL BEND
  - HB — HORIZONTAL BEND
  - ▨ — EXISTING STRUCTURE
  - ER — EARTH ROAD
  - GR — GRAVEL ROAD
  - ▩ — CUT

**FOR CONSTRUCTION**  
signed CMTS

REV	REVISIONS	SIGN	DATE	APPROVED
	BY			
	CHECKED			
	BY			
	CHECKED			
	BY			
	CHECKED			
CO	ISSUED FOR CONSTRUCTION	BY		
		CHECKED		

CLIENT  

**TANA WATER WORKS DEVELOPMENT AGENCY**  
 P. O. BOX 1292-10100 NYERI

PROJECT  
**AUGMENTATION OF TIGITHI-HUMUKA WATER PROJECT**

Civil/Structural Engineers  

**TANA WATER WORKS DEVELOPMENT AGENCY**  
 P. O. BOX 1292-10100 NYERI

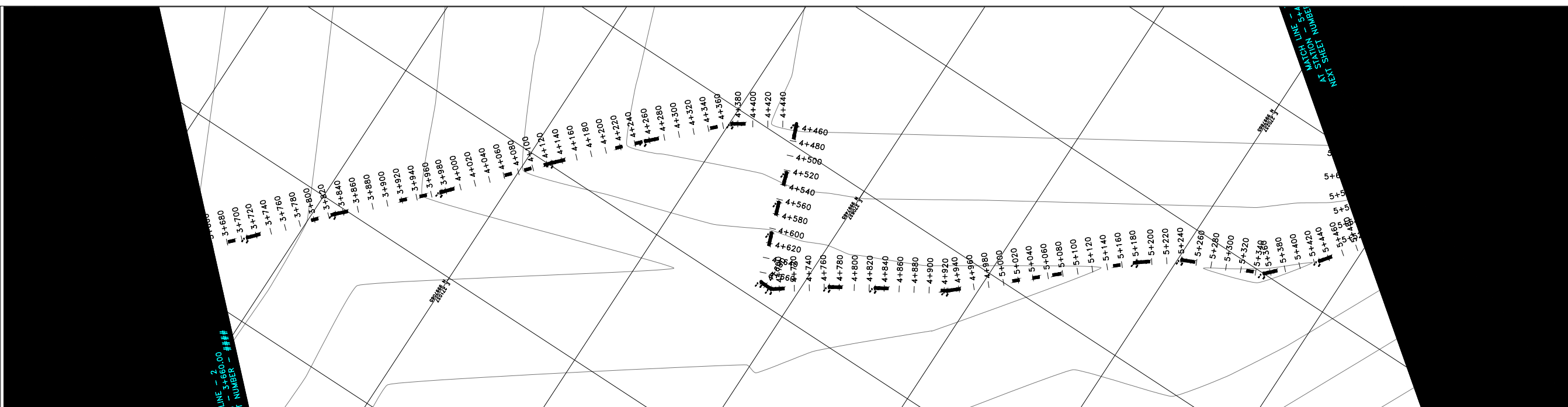
Drawing Title  
**WERUINI TANK SUPPLY LINE 1**  
**PLAN AND PROFILE (SHEET 2 OF 4)**

Designed by	KNG	Drawn by	MK
Checked by	JMM	Approved by	
Scale	AS SHOWN (A1)	Date	SEPTEMBER 2023
Job No.	1	ACAD File:	
PD STATUS	DRAWING	NotJWDA/THWP/WTS1/02	CO REV

1845  
1840  
1835  
1830  
1825  
1820  
1815  
1810  
1805  
1800

DISTANCE DATUM (m)	GROUND LEVELS (m)	INVERT LEVELS(m)	DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	HGL(m)	TYPE OF PIPE AND SIZE
1+840	1822.87	1820.75	2.12	1822.87	1+840
1+860	1822.84	1820.73	2.11	1822.84	1+860
1+880	1822.77	1820.67	2.10	1822.77	1+880
1+900	1822.70	1820.62	2.08	1822.70	1+900
1+920	1822.64	1820.57	2.07	1822.64	1+920
1+940	1822.57	1820.51	2.06	1822.57	1+940
1+960	1822.50	1820.43	2.07	1822.50	1+960
1+980	1822.43	1820.34	2.09	1822.43	1+980
2+000	1822.37	1820.26	2.11	1822.37	2+000
2+020	1822.30	1820.17	2.13	1822.30	2+020
2+040	1822.23	1820.04	2.19	1822.23	2+040
2+060	1822.16	1819.91	2.25	1822.16	2+060
2+080	1822.10	1819.78	2.32	1822.10	2+080
2+100	1822.03	1819.65	2.38	1822.03	2+100
2+120	1821.96	1819.53	2.43	1821.96	2+120
2+140	1821.90	1819.35	2.55	1821.90	2+140
2+160	1821.83	1819.17	2.66	1821.83	2+160
2+180	1821.76	1818.99	2.77	1821.76	2+180
2+200	1821.69	1818.81	2.88	1821.69	2+200
2+220	1821.63	1818.63	2.99	1821.63	2+220
2+240	1821.49	1818.27	3.22	1821.49	2+240
2+260	1821.43	1818.18	3.25	1821.43	2+260
2+280	1821.36	1818.10	3.26	1821.36	2+280
2+300	1821.29	1818.01	3.28	1821.29	2+300
2+320	1821.22	1817.92	3.30	1821.22	2+320
2+340	1821.16	1817.84	3.32	1821.16	2+340
2+360	1821.09	1817.75	3.34	1821.09	2+360
2+380	1821.02	1817.67	3.35	1821.02	2+380
2+400	1820.96	1817.58	3.38	1820.96	2+400
2+420	1820.89	1817.53	3.36	1820.89	2+420
2+440	1820.82	1817.47	3.35	1820.82	2+440
2+460	1820.75	1817.42	3.33	1820.75	2+460
2+480	1820.69	1817.36	3.33	1820.69	2+480
2+500	1820.62	1817.41	3.21	1820.62	2+500
2+520	1820.55	1817.45	3.10	1820.55	2+520
2+540	1820.49	1817.50	2.99	1820.49	2+540
2+560	1820.42	1817.54	2.88	1820.42	2+560
2+580	1820.35	1817.59	2.77	1820.35	2+580
2+600	1820.28	1817.63	2.66	1820.28	2+600
2+620	1820.22	1817.67	2.45	1820.22	2+620
2+640	1820.15	1817.71	2.56	1820.15	2+640
2+660	1820.08	1817.75	2.67	1820.08	2+660
2+680	1820.01	1817.79	2.78	1820.01	2+680
2+700	1819.95	1817.74	2.21	1819.95	2+700
2+720	1819.88	1817.58	2.30	1819.88	2+720
2+740	1819.81	1817.42	2.39	1819.81	2+740
2+760	1819.75	1817.26	2.49	1819.75	2+760
2+780	1819.68	1817.10	2.58	1819.68	2+780
2+800	1819.61	1816.94	2.67	1819.61	2+800
2+820	1819.54	1816.68	2.86	1819.54	2+820
2+840	1819.48	1816.42	3.06	1819.48	2+840
2+860	1819.41	1816.16	3.25	1819.41	2+860
2+880	1819.34	1815.84	3.50	1819.34	2+880
2+900	1819.28	1815.52	3.76	1819.28	2+900
2+920	1819.21	1815.20	4.01	1819.21	2+920
2+940	1819.14	1814.88	4.26	1819.14	2+940
2+960	1819.07	1814.56	4.51	1819.07	2+960
2+980	1819.01	1814.24	4.77	1819.01	2+980
3+000	1818.94	1813.92	5.02	1818.94	3+000
3+020	1818.87	1813.60	5.27	1818.87	3+020
3+040	1818.74	1813.28	5.46	1818.74	3+040
3+060	1818.67	1812.96	5.71	1818.67	3+060
3+080	1818.60	1812.64	5.96	1818.60	3+080
3+100	1818.54	1812.32	6.22	1818.54	3+100
3+120	1818.47	1812.00	6.47	1818.47	3+120
3+140	1818.40	1811.68	6.72	1818.40	3+140
3+160	1818.34	1811.36	6.98	1818.34	3+160
3+180	1818.27	1811.04	7.23	1818.27	3+180
3+200	1818.20	1810.72	7.48	1818.20	3+200
3+220	1818.13	1810.40	7.73	1818.13	3+220
3+240	1818.07	1810.08	7.99	1818.07	3+240
3+260	1818.00	1809.76	8.24	1818.00	3+260
3+280	1817.93	1809.44	8.49	1817.93	3+280
3+300	1817.86	1809.12	8.74	1817.86	3+300
3+320	1817.80	1808.80	9.00	1817.80	3+320
3+340	1817.73	1808.48	9.25	1817.73	3+340
3+360	1817.66	1808.16	9.50	1817.66	3+360
3+380	1817.60	1807.84	9.76	1817.60	3+380
3+400	1817.53	1807.52	10.01	1817.53	3+400
3+420	1817.46	1807.20	10.26	1817.46	3+420
3+440	1817.39	1806.88	10.51	1817.39	3+440
3+460	1817.33	1806.56	10.77	1817.33	3+460
3+480	1817.26	1806.24	11.02	1817.26	3+480
3+500	1817.20	1805.92	11.28	1817.20	3+500
3+520	1817.13	1805.60	11.53	1817.13	3+520
3+540	1817.06	1805.28	11.78	1817.06	3+540
3+560	1816.99	1804.96	12.03	1816.99	3+560
3+580	1816.92	1804.64	12.28	1816.92	3+580
3+600	1816.86	1804.32	12.54	1816.86	3+600
3+620	1816.79	1804.00	12.79	1816.79	3+620
3+640	1816.72	1803.68	13.04	1816.72	3+640
3+660	1816.67	1803.36	13.30	1816.67	3+660

Weruini supply line 1  
 SCALE: HOR 1:2000 VERT 1:1000



**NOTES**

1. ALL LEVELS ARE IN METERS ABOVE SEA LEVEL.
2. COORDINATES ARE BASED ON UTM.
3. LOCATION OF AIR VALVES, WASHOUTS, BENDS AND OTHER FITTINGS AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER ON SITE.
4. GROUND AND INVERT LEVEL SHOWN ARE AS SHOWN ON DRAWING UNLESS OTHERWISE INDICATED ON SITE BY THE ENGINEER.
5. PIPES ARE TO BE LAID TO EVEN GRADIENTS WITH A MINIMUM COVER OF 1.0M. WHERE COVER IS LESS THAN THIS, PIPE TO BE SURROUNDED WITH CONCRETE.
6. ALL BENDS ARE HORIZONTAL UNLESS OTHERWISE STATED.
7. IN WATER LOGGED AREAS, PIPES TO BE BEDDED WITH SINGLE SIZED OR GRADED AGGREGATES AS PER CLAUSE 430.1 AND 216 OF TECHNICAL SPECIFICATIONS AND/OR ANCHOR BLOCKS AS MAY BE DIRECTED ON SITE BY THE ENGINEER.

**LEGEND:**

- PROPOSED PIPELINE
- EXISTING GROUND PROFILE
- PIPE INVERT PROFILE
- EXISTING ROAD
- AIR VALVE
- DOUBLE AIR VALVE
- WASHOUT
- WASHOUT TYPE 1
- WASHOUT TYPE 2
- NOMINAL DIAMETER
- NOMINAL PRESSURE
- VERTICAL BEND
- HORIZONTAL BEND
- EXISTING STRUCTURE
- EARTH ROAD
- GRAVEL ROAD
- CUT

FOR CONSTRUCTION  
signed CMTS

REV	REVISIONS	SIGN	DATE	APPROVED
	BY			
	CHECKED			
	BY			
	CHECKED			
	BY			
	CHECKED			
CO	ISSUED FOR CONSTRUCTION	BY		
		CHECKED		

CLIENT

TANA WATER WORKS  
DEVELOPMENT AGENCY  
P. O. BOX 1292-10100  
NYERI

PROJECT

AUGMENTATION OF TIGITHI-HUMUKA  
WATER PROJECT

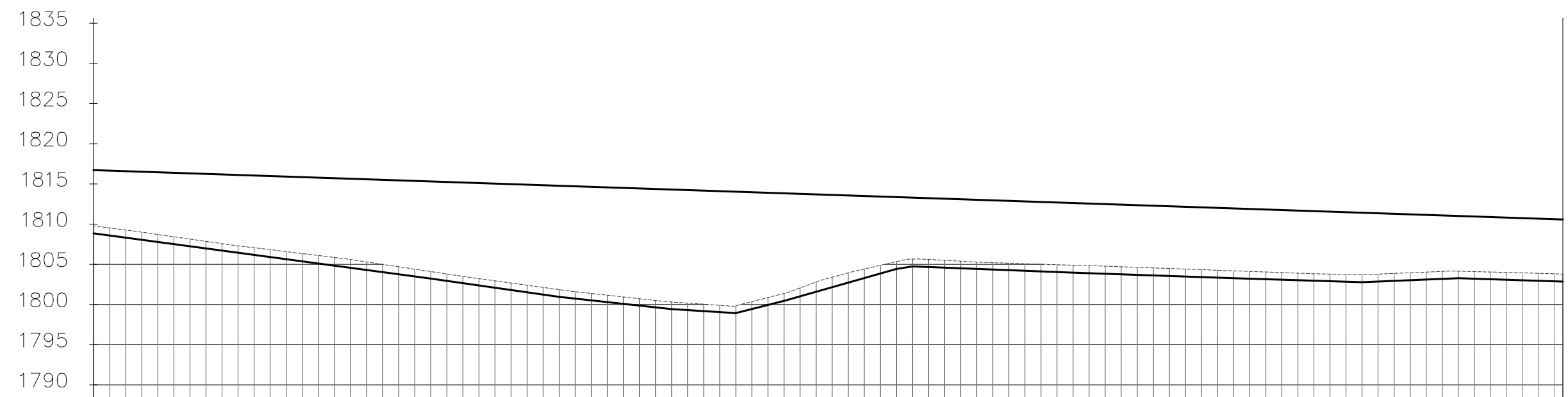
Civil/Structural Engineers

TANA WATER WORKS  
DEVELOPMENT AGENCY  
P. O. BOX 1292-10100  
NYERI

Drawing Title

WERUINI TANK SUPPLY  
LINE 1  
PLAN AND PROFILE (SHEET 3 OF 4)

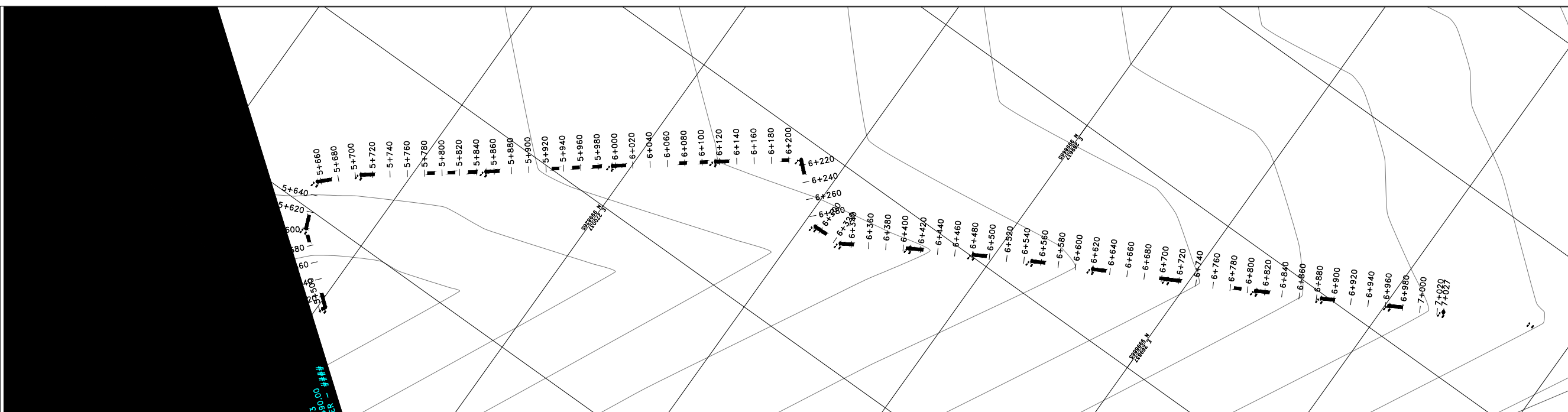
Designed by	KNG	Drawn by	MK
Checked by	JMM	Approved by	
Scale	AS SHOWN (A1)	Date	SEPTEMBER 2023
Job No.	1	ACAD File:	
PD STATUS	DRAWING NoTWDA/THWP/WTS1/03	CO	REV



DISTANCE DATUM (m)	GROUND LEVELS (m)	INVERT LEVELS(m)	DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	HGL(m)	TYPE OF PIPE AND SIZE
1816.72	1808.85	1809.78	0.93	1808.85	
1816.66	0.94	1808.58	1809.53	3+680.00	
1816.59	0.96	1808.31	1809.27	3+700.00	
1816.52	0.95	1808.05	1809.00	3+720.00	
1816.45	0.93	1807.78	1808.71	3+740.00	
1816.39	0.92	1807.51	1808.43	3+760.00	
1816.32	0.90	1807.24	1808.14	3+780.00	
1816.25	0.88	1806.97	1807.86	3+800.00	
1816.18	0.87	1806.71	1807.57	3+820.00	
1816.12	0.87	1806.44	1807.31	3+840.00	
1816.05	0.90	1806.17	1807.07	3+860.00	
1815.98	0.92	1805.90	1806.82	3+880.00	
1815.92	0.95	1805.63	1806.58	3+900.00	
1815.85	0.97	1805.36	1806.34	3+920.00	
1815.78	1.00	1805.10	1806.10	3+940.00	
1815.71	1.02	1804.83	1805.85	3+960.00	
1815.65	1.03	1804.56	1805.59	3+980.00	
1815.58	1.00	1804.29	1805.29	4+000.00	
1815.51	0.97	1804.02	1805.00	4+020.00	
1815.45	0.94	1803.76	1804.70	4+040.00	
1815.38	0.91	1803.49	1804.40	4+060.00	
1815.31	0.88	1803.22	1804.10	4+080.00	
1815.24	0.87	1802.94	1803.80	4+100.00	
1815.18	0.85	1802.65	1803.50	4+120.00	
1815.11	0.85	1802.37	1803.22	4+140.00	
1815.04	0.86	1802.08	1802.95	4+160.00	
1814.98	0.87	1801.80	1802.67	4+180.00	
1814.91	0.88	1801.52	1802.40	4+200.00	
1814.84	0.89	1801.23	1802.12	4+220.00	
1814.77	0.90	1800.95	1801.85	4+240.00	
1814.71	0.86	1800.73	1801.59	4+260.00	
1814.64	0.86	1800.51	1801.37	4+280.00	
1814.57	0.86	1800.29	1801.15	4+300.00	
1814.51	0.86	1800.08	1800.94	4+320.00	
1814.44	0.86	1799.86	1800.72	4+340.00	
1814.37	0.86	1799.64	1800.50	4+360.00	
1814.30	0.88	1799.43	1800.31	4+380.00	
1814.24	0.87	1799.30	1800.17	4+400.00	
1814.17	0.86	1799.18	1800.03	4+420.00	
1814.10	0.85	1799.05	1799.90	4+440.00	
1814.03	0.92	1798.93	1799.85	4+460.00	
1813.97	0.92	1799.43	1800.36	4+480.00	
1813.90	0.93	1799.94	1800.86	4+500.00	
1813.83	0.93	1800.44	1801.37	4+520.00	
1813.77	1.06	1801.01	1802.07	4+540.00	
1813.70	1.22	1801.58	1802.80	4+560.00	
1813.63	1.24	1802.14	1803.39	4+580.00	
1813.56	1.22	1802.71	1803.93	4+600.00	
1813.50	1.14	1803.28	1804.42	4+620.00	
1813.43	1.03	1803.85	1804.87	4+640.00	
1813.36	0.92	1804.42	1805.33	4+660.00	
1813.30	0.91	1804.74	1805.64	4+680.00	
1813.23	0.94	1804.66	1805.60	4+700.00	
1813.16	0.91	1804.58	1805.50	4+720.00	
1813.09	0.88	1804.51	1805.39	4+740.00	
1813.03	0.85	1804.43	1805.28	4+760.00	
1812.96	0.85	1804.35	1805.20	4+780.00	
1812.89	0.86	1804.27	1805.14	4+800.00	
1812.83	0.88	1804.20	1805.07	4+820.00	
1812.76	0.89	1804.12	1805.01	4+840.00	
1812.69	0.91	1804.04	1804.95	4+860.00	
1812.62	0.92	1803.96	1804.89	4+880.00	
1812.56	0.93	1803.90	1804.83	4+900.00	
1812.49	0.94	1803.83	1804.77	4+920.00	
1812.42	0.94	1803.76	1804.70	4+940.00	
1812.36	0.94	1803.69	1804.63	4+960.00	
1812.29	0.94	1803.62	1804.55	4+980.00	
1812.22	0.93	1803.55	1804.48	5+000.00	
1812.15	0.93	1803.48	1804.41	5+020.00	
1812.09	0.93	1803.41	1804.33	5+040.00	
1812.02	0.92	1803.34	1804.26	5+060.00	
1811.95	0.92	1803.27	1804.19	5+080.00	
1811.88	0.91	1803.21	1804.12	5+100.00	
1811.82	0.90	1803.15	1804.04	5+120.00	
1811.75	0.89	1803.08	1803.97	5+140.00	
1811.68	0.87	1803.02	1803.90	5+160.00	
1811.62	0.86	1802.96	1803.82	5+180.00	
1811.55	0.88	1802.90	1803.78	5+200.00	
1811.48	0.90	1802.84	1803.74	5+220.00	
1811.41	0.92	1802.78	1803.70	5+240.00	
1811.35	0.92	1802.86	1803.78	5+260.00	
1811.28	0.92	1802.94	1803.86	5+280.00	
1811.21	0.92	1803.02	1803.95	5+300.00	
1811.15	0.92	1803.11	1804.03	5+320.00	
1811.08	0.92	1803.19	1804.11	5+340.00	
1811.01	0.87	1803.27	1804.14	5+360.00	
1810.94	0.89	1803.21	1804.09	5+380.00	
1810.88	0.90	1803.14	1804.04	5+400.00	
1810.81	0.92	1803.07	1803.99	5+420.00	
1810.74	0.93	1803.01	1803.94	5+440.00	
1810.68	0.93	1802.94	1803.87	5+460.00	
1810.61	0.93	1802.88	1803.81	5+480.00	
1810.57	0.94	1802.84	1803.78	5+490.00	

Weruini supply line 1  
SCALE: HOR 1:2000 VERT 1:1000

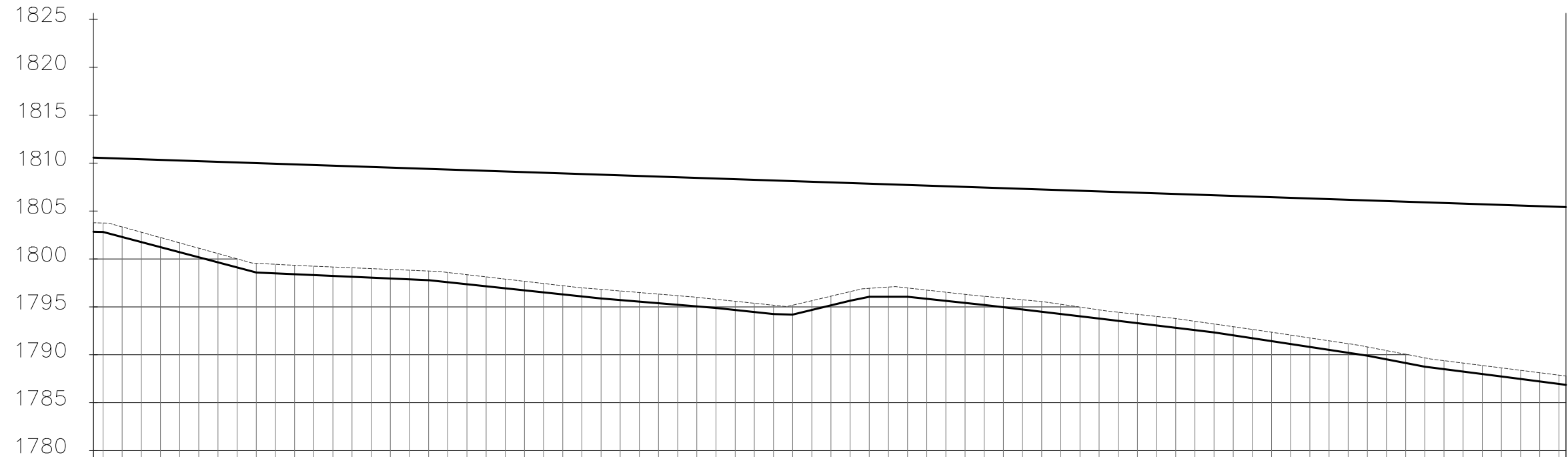




**NOTES**

1. ALL LEVELS ARE IN METERS ABOVE SEA LEVEL.
2. COORDINATES ARE BASED ON UTM.
3. LOCATION OF AIR VALVES, WASHOUTS, BENDS AND OTHER FITTINGS AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER ON SITE.
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6. ALL BENDS ARE HORIZONTAL UNLESS OTHERWISE STATED.
7. IN WATER LOGGED AREAS, PIPES TO BE BEDDED WITH SINGLE SIZED OR GRADED AGGREGATES AS PER CLAUSE 430.1 AND 216 OF TECHNICAL SPECIFICATIONS AND/OR ANCHOR BLOCKS AS MAY BE DIRECTED ON SITE BY THE ENGINEER.

- LEGEND:**
- PROPOSED PIPELINE
  - EXISTING GROUND PROFILE
  - PIPE INVERT PROFILE
  - EXISTING ROAD
  - AIR VALVE
  - DOUBLE AIR VALVE
  - WASHOUT
  - WASHOUT TYPE 1
  - WASHOUT TYPE 2
  - NOMINAL DIAMETER
  - NOMINAL PRESSURE
  - VERTICAL BEND
  - HORIZONTAL BEND
  - EXISTING STRUCTURE
  - EARTH ROAD
  - GRAVEL ROAD
  - CUT



DISTANCE DATUM (m)	GROUND LEVELS (m)	INVERT LEVELS(m)	DEPTH FROM GROUND LEVEL TO INVERT LEVEL (m)	HGL(m)	TYPE OF PIPE AND SIZE
1810.57	1802.84	1803.76	0.94	1802.84	PH10 0083MM HDPE PIPE
1810.54	1802.81	1803.75	0.94	1802.81	
1810.47	1802.28	1803.34	1.06	1802.28	PH10 0040MM HDPE PIPE
1810.41	1801.75	1802.79	1.03	1801.75	
1810.34	1801.23	1802.23	1.01	1801.23	PH10 0040MM HDPE PIPE
1810.27	1800.70	1801.68	0.98	1800.70	
1810.21	1800.17	1801.12	0.95	1800.17	PH10 0040MM HDPE PIPE
1810.14	1799.64	1800.56	0.92	1799.64	
1810.07	1799.11	1800.01	0.89	1799.11	PH10 0040MM HDPE PIPE
1810.00	1798.59	1799.55	0.96	1798.59	
1809.94	1798.06	1799.02	0.95	1798.06	PH10 0040MM HDPE PIPE
1809.87	1797.53	1798.49	0.93	1797.53	
1809.80	1797.00	1797.96	0.93	1797.00	PH10 0040MM HDPE PIPE
1809.73	1796.47	1797.43	0.93	1796.47	
1809.67	1795.94	1796.90	0.94	1795.94	PH10 0040MM HDPE PIPE
1809.60	1795.41	1796.37	0.94	1795.41	
1809.53	1794.88	1795.84	0.95	1794.88	PH10 0040MM HDPE PIPE
1809.47	1794.35	1795.31	0.95	1794.35	
1809.40	1793.82	1794.78	0.96	1793.82	PH10 0040MM HDPE PIPE
1809.33	1793.29	1794.25	0.96	1793.29	
1809.26	1792.76	1793.72	1.00	1792.76	PH10 0040MM HDPE PIPE
1809.20	1792.23	1793.19	0.98	1792.23	
1809.13	1791.70	1792.66	0.96	1791.70	PH10 0040MM HDPE PIPE
1809.06	1791.17	1792.13	0.95	1791.17	
1809.00	1790.64	1791.60	0.93	1790.64	PH10 0040MM HDPE PIPE
1808.93	1790.11	1791.07	0.91	1790.11	
1808.86	1789.58	1790.54	0.90	1789.58	PH10 0040MM HDPE PIPE
1808.79	1789.05	1790.01	0.95	1789.05	
1808.73	1788.52	1789.48	0.95	1788.52	PH10 0040MM HDPE PIPE
1808.66	1787.99	1788.95	0.95	1787.99	
1808.59	1787.46	1788.42	0.96	1787.46	PH10 0040MM HDPE PIPE
1808.53	1786.93	1787.89	0.96	1786.93	
1808.46	1786.40	1787.36	0.95	1786.40	PH10 0040MM HDPE PIPE
1808.39	1785.87	1786.83	0.91	1785.87	
1808.32	1785.34	1786.30	0.92	1785.34	PH10 0040MM HDPE PIPE
1808.26	1784.81	1785.77	0.92	1784.81	
1808.19	1784.28	1785.24	0.92	1784.28	PH10 0040MM HDPE PIPE
1808.12	1783.75	1784.71	0.98	1783.75	
1808.06	1783.22	1784.18	0.97	1783.22	PH10 0040MM HDPE PIPE
1807.99	1782.69	1783.65	0.96	1782.69	
1807.92	1782.16	1783.12	0.95	1782.16	PH10 0040MM HDPE PIPE
1807.85	1781.63	1782.59	0.88	1781.63	
1807.79	1781.10	1782.06	1.02	1781.10	PH10 0040MM HDPE PIPE
1807.72	1780.57	1781.53	0.92	1780.57	
1807.65	1780.04	1781.00	0.91	1780.04	PH10 0040MM HDPE PIPE
1807.58	1779.51	1780.47	0.90	1779.51	
1807.52	1778.98	1779.94	0.89	1778.98	PH10 0040MM HDPE PIPE
1807.45	1778.45	1779.41	0.91	1778.45	
1807.38	1777.92	1778.88	0.96	1777.92	PH10 0040MM HDPE PIPE
1807.32	1777.39	1778.35	1.01	1777.39	
1807.25	1776.86	1777.82	1.06	1776.86	PH10 0040MM HDPE PIPE
1807.18	1776.33	1777.29	1.01	1776.33	
1807.11	1775.80	1776.76	0.96	1775.80	PH10 0040MM HDPE PIPE
1807.05	1775.27	1776.23	0.90	1775.27	
1806.98	1774.74	1775.70	0.89	1774.74	PH10 0040MM HDPE PIPE
1806.91	1774.21	1775.17	0.91	1774.21	
1806.85	1773.68	1774.64	0.94	1773.68	PH10 0040MM HDPE PIPE
1806.78	1773.15	1774.11	0.96	1773.15	
1806.71	1772.62	1773.58	0.92	1772.62	PH10 0040MM HDPE PIPE
1806.64	1772.09	1773.05	0.88	1772.09	
1806.58	1771.56	1772.52	0.90	1771.56	PH10 0040MM HDPE PIPE
1806.51	1771.03	1771.99	0.92	1771.03	
1806.44	1770.50	1771.46	0.93	1770.50	PH10 0040MM HDPE PIPE
1806.38	1769.97	1770.93	0.94	1769.97	
1806.31	1769.44	1770.40	0.94	1769.44	PH10 0040MM HDPE PIPE
1806.24	1768.91	1769.87	0.95	1768.91	
1806.17	1768.38	1769.34	0.95	1768.38	PH10 0040MM HDPE PIPE
1806.11	1767.85	1768.81	0.92	1767.85	
1806.04	1767.32	1768.28	0.92	1767.32	PH10 0040MM HDPE PIPE
1805.97	1766.79	1767.75	0.92	1766.79	
1805.91	1766.26	1767.22	0.93	1766.26	PH10 0040MM HDPE PIPE
1805.84	1765.73	1766.69	0.89	1765.73	
1805.77	1765.20	1766.16	0.89	1765.20	PH10 0040MM HDPE PIPE
1805.70	1764.67	1765.63	0.90	1764.67	
1805.64	1764.14	1765.10	0.90	1764.14	PH10 0040MM HDPE PIPE
1805.57	1763.61	1764.57	0.91	1763.61	
1805.50	1763.08	1764.04	0.91	1763.08	PH10 0040MM HDPE PIPE
1805.43	1762.55	1763.51	0.92	1762.55	

Weruini supply line 1  
SCALE: HOR 1:2000 VERT 1:1000

FOR CONSTRUCTION  
signed CMTS

REV	REVISIONS	SIGN	DATE	APPROVED
	BY			
	CHECKED			
	BY			
	CHECKED			
	BY			
	CHECKED			
CO	ISSUED FOR CONSTRUCTION BY			
	CHECKED			

CLIENT

TANA WATER WORKS DEVELOPMENT AGENCY  
P. O. BOX 1292-10100 NYERI

PROJECT

AUGMENTATION OF TIGITHI-HUMUKA WATER PROJECT

Civil/Structural Engineers

TANA WATER WORKS DEVELOPMENT AGENCY  
P. O. BOX 1292-10100 NYERI

Drawing Title

WERUINI TANK SUPPLY  
LINE 1  
PLAN AND PROFILE (SHEET 4 OF 4)

Designed by	KNG	Drawn by	MK
Checked by	JMM	Approved by	
Scale	AS SHOWN (A1)	Date	SEPTEMBER 2023
Job No.	1	ACAD File:	
PD STATUS	DRAWING NoTWJDA/THWP/WTS1/04	CO REV	