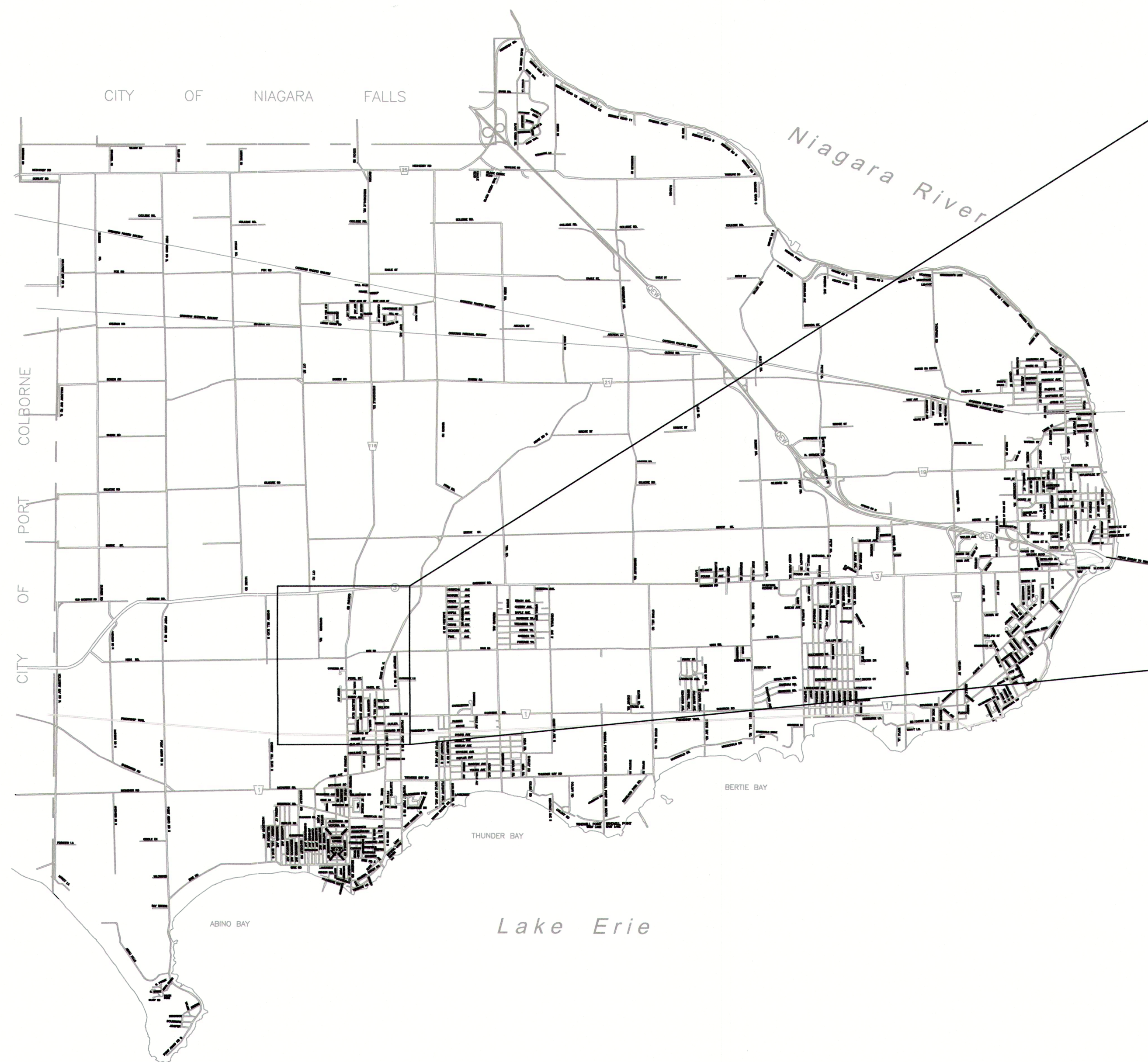
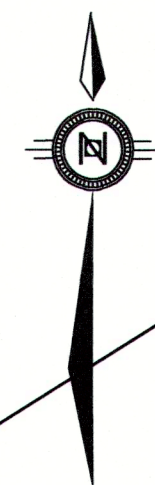
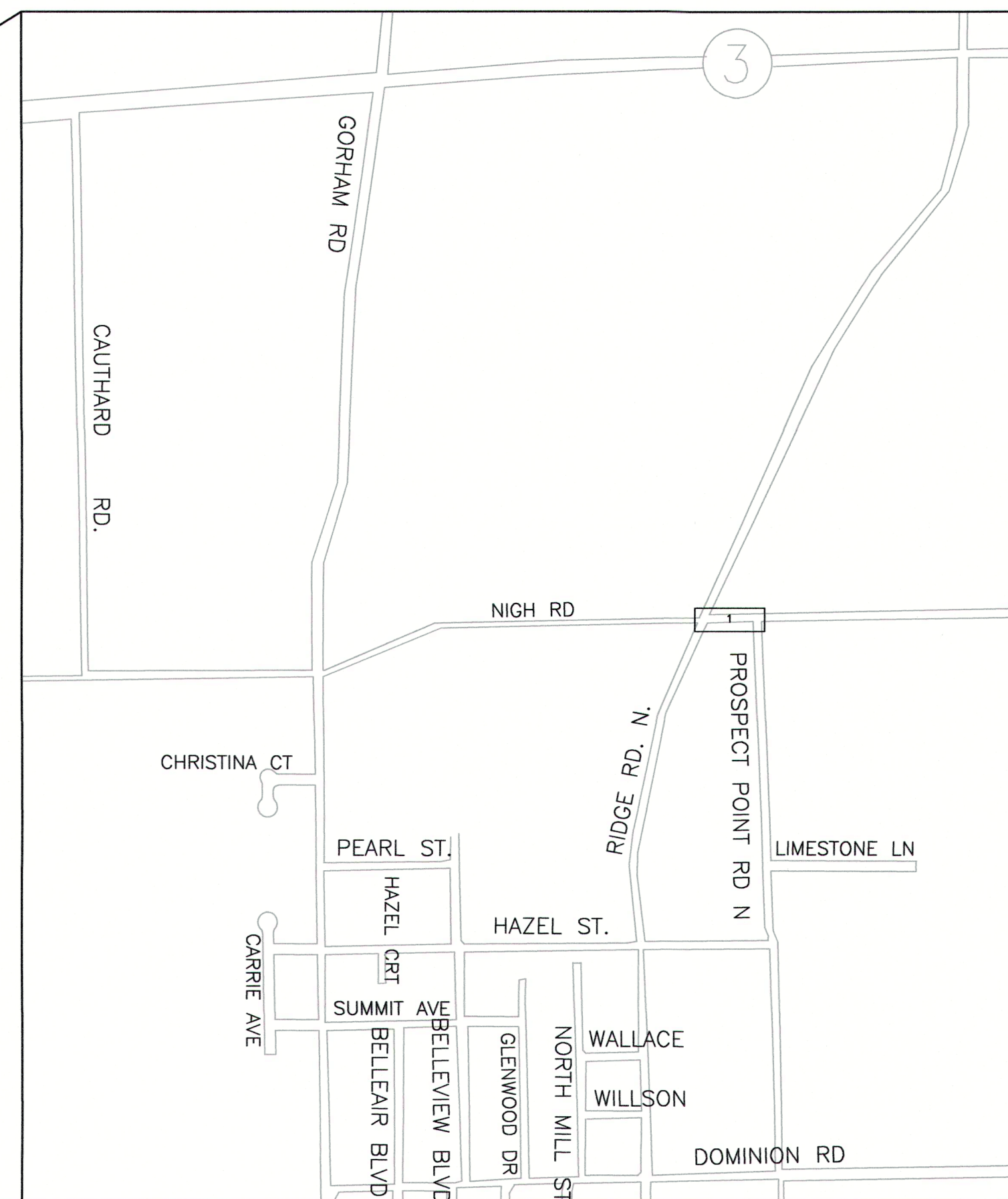




LOCATION PLAN
N.T.S.

LIST OF DRAWINGS		
DRAWING #	LOCATION	STATION
SHEET 1	NIGH RD.	0+000 TO 0+125
SHEET 2	DETAILS	

WAYNE REDEKOP
Mayor

KELLY M. WALSH P.Eng.
Director of Infrastructure Services

THE CORPORATION OF THE TOWN OF FORT ERIE
INFRASTRUCTURE SERVICES – ENGINEERING DIVISION



NIGH RD WATERMAIN INSTALLATION
RIDGE RD. N. TO PROSPECT POINT RD. N.

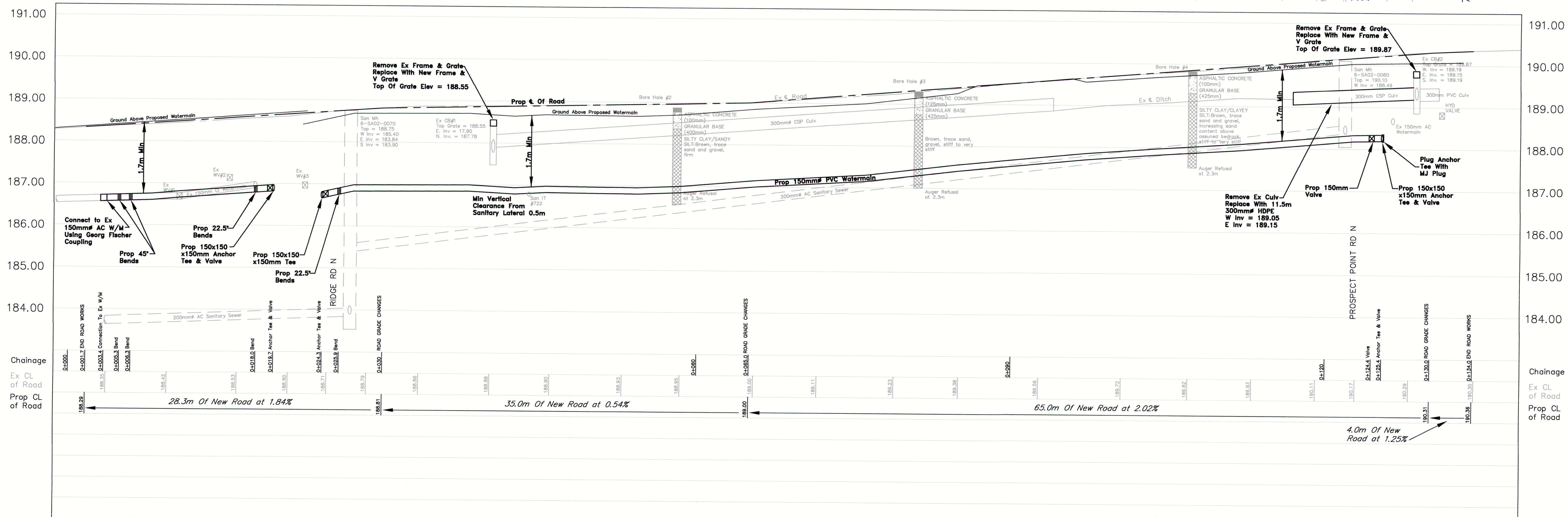
REV.	ISSUE	DATE	BY	BENCH MARK SUNSET RD/GILMORE RD TOP SANITARY MANHOLE 6-SA02-0070 LOCATED IN INTERSECTION OF RIDGE RD AND NIGH RD ELEVATION = 188.747m			
3	ISSUE FOR CONSTRUCTION	SEPT 15-2021	LIS				
2	ISSUE FOR TENDER	AUG 18-2021	LIS				
1	ISSUE FOR REVIEW	AUG 17-2021	LIS				
				NIGH RD WATERMAIN INSTALLATION RIDGE RD N TO PROSPECT POINT RD N			
				DSN.	LS	DSN. CKD. RL	DWG. CKD. RL
				SCALE		HORIZONTAL 1:200 VERTICAL 1:50	PROJECT NO. ISE-21T-NIM19
				DATE	APRIL 2021	SHEET	1 OF 2
						REV.	3

START CONSTRUCTION
STA 0+000

END CONSTRUCTION
STA 0+125

AREA OF
CONSTRUCTION

NIGH RD



LEGEND

EXISTING	PROPOSED
Edge of Road	Edge of Road
Sanitary Sewer	Gravel Shoulder
Watermain	Watermain
	Top Pavement Elevation

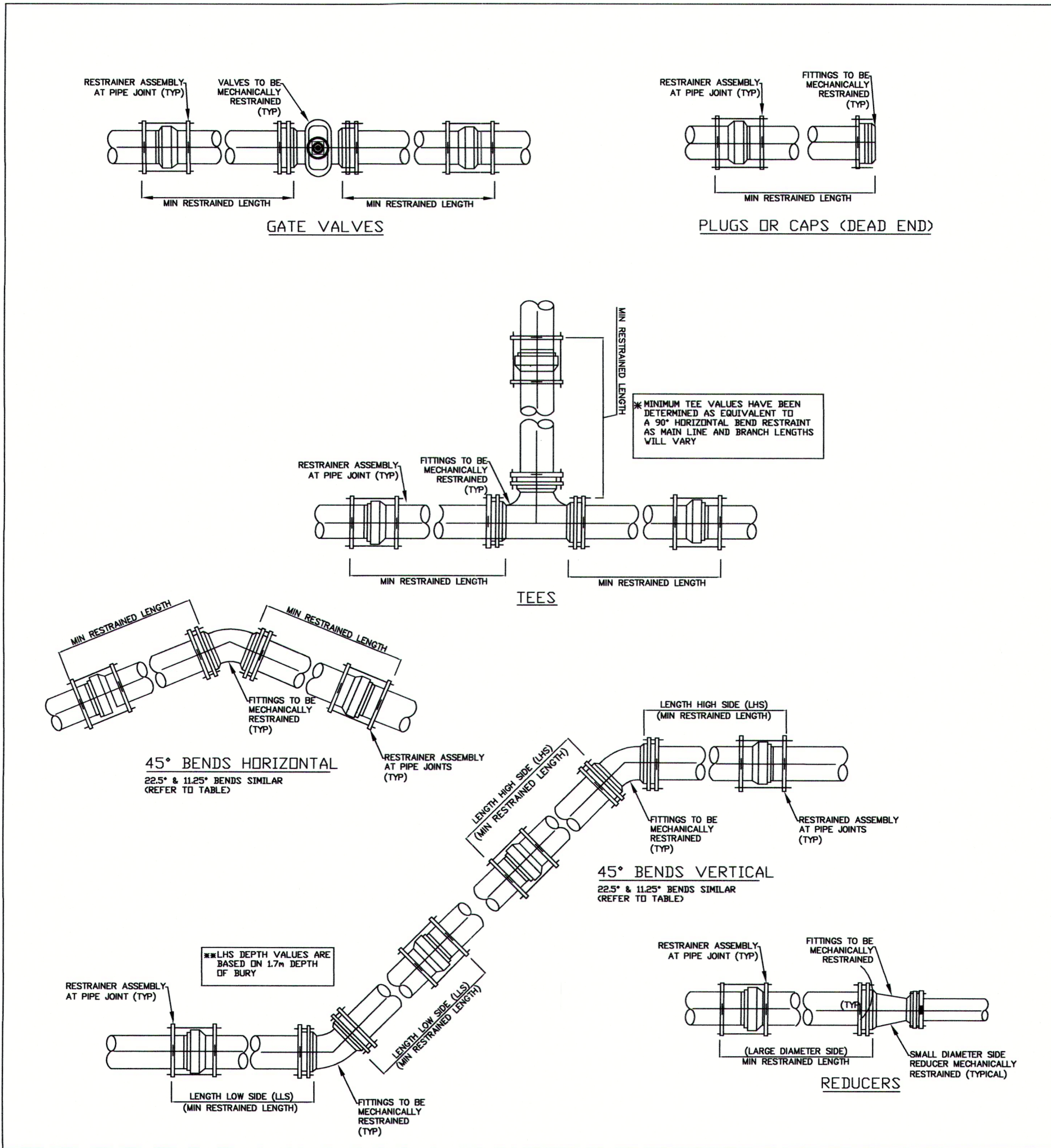
REV.	ISSUE	DATE	BY
3	ISSUE FOR CONSTRUCTION	SEPT 15-2021	LJS
2	ISSUE FOR TENDER	AUG 18-2021	LJS
1	ISSUE FOR REVIEW	AUG 17-2021	LJS

BENCH MARK SUNSET RD/GILMORE RD
TOP SANITARY MANHOLE 6-SA02-0070
LOCATED IN INTERSECTION OF RIDGE RD
AND NIGH RD
ELEVATION = 188.747m



NIGH RD WATERMAIN INSTALLATION
RIDGE RD N TO PROSPECT POINT RD N

DSN.	LS	DSN. CKD.	RL	DWG.	LS	DWG. CKD.	RL
SCALE	HORIZONTAL 1:200 VERTICAL 1:50	PROJECT NO.	ISE-21T-NIWM19	SHEET	1 OF 2	REV.	3



MINIMUM RESTRAINING LENGTH (m) TABLE		PIPE DIAMETER (mm)					
DESCRIPTION		100mmø	150mmø	200mmø	250mmø	300mmø	400mmø
VALVES, DEAD ENDS, CAPS, PLUGS Either side of valves and before caps or plugs		7.5	10.5	13.5	16.0	19.0	24.5
TEES* Size on Size or reducing tees		3.0	3.5	4.5	5.5	12.5a	12.5(a)
HORIZONTAL BENDS 11.25° bends 22.5° bends 45° bends 90° bends		0.5 1.0 1.5 3.0	0.5 1.0 1.5 3.5	1.0 1.5 2.0 4.5	1.0 1.5 2.5 5.5	1.0 1.5 3.0 12.5a	1.0 1.5 3.5 12.5(a)
45° VERTICAL BENDS** Length High Side – LHS (Based on 1.7m cover) Length Low Side – LLS (Depth greater than or equal to 1.7m)		3.5 1.5	4.5 1.5	6.0 2.0	7.0 2.5	8.0 3.0	10.5 3.5
22.5° & 11.25° VERTICAL BENDS Length High Side – LHS (Based on 1.7m cover) Length Low Side – LLS (Depth greater than or equal to 1.7m)		1.5 1.0	2.5 1.0	3.0 1.5	3.5 1.5	4.0 1.5	5.0 2.0
REDUCERS		LARGE DIAMETER SIDE (mm)					
SMALL DIAMETER SIDE (mm)		100mmø	150mmø	200mmø	250mmø	300mmø	400mmø
100ø		N/A	5.5	10.0	13.0	16.5	23.0
150ø		N/A	N/A	6.0	10.0	14.0	21.0
200ø		N/A	N/A	N/A	5.5	10.5	18.0
250ø		N/A	N/A	N/A	N/A	6.0	15.0
300ø		N/A	N/A	N/A	N/A	N/A	10.5
400ø		N/A	N/A	N/A	N/A	N/A	N/A

TABLE VALUES BASED UPON EBAA "CL Granular" SOIL TYPES
(Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, lean clays--backfilled with granular material)

a) 300ø and 400ø pipe diameter table values for 90° bends and tees have been increased to 12.5m MINIMUM LENGTHS.

NOTE:

1. Restraint assembly at pipe joints to be EBBA Iron 1900 Split Serrated Restraint Harness or approved equivalent.
2. Mechanical joint restraint to be EBBA Iron 2000PV Megalug Mechanical Joint Restraint of approved equivalent.

LEGEND

EXISTING

Edge of Road

Sanitary Sewer

Watermain

PROPOSED

Edge of Road

Gravel Shoulder

Watermain

Top Pavement Elevation

REV.	ISSUE	DATE	BY
3	ISSUE FOR CONSTRUCTION	SEPT 15-2021	LJS
2	ISSUE FOR TENDER	AUG 18-2021	LJS
1	ISSUE FOR REVIEW	AUG 17-2021	LJS

BENCH MARK SUNSET RD/GILMORE RD
TOP SANITARY MANHOLE 6-SA02-0070
LOCATED IN INTERSECTION OF RIDGE RD
AND NIGH RD
ELEVATION = 188.747m



NIGH RD WATERMAIN INSTALLATION
RIDGE RD N TO PROSPECT POINT RD N

DSN.	LS	DSN. CKD.	RL	DWG.	LS	DWG. CKD.	RL
SCALE	HORIZONTAL 1:200 VERTICAL 1:50			PROJECT NO.	ISE-21T-NIWM19		
DATE	APRIL, 2021			SHEET	2 OF 2		
				REV.	3		