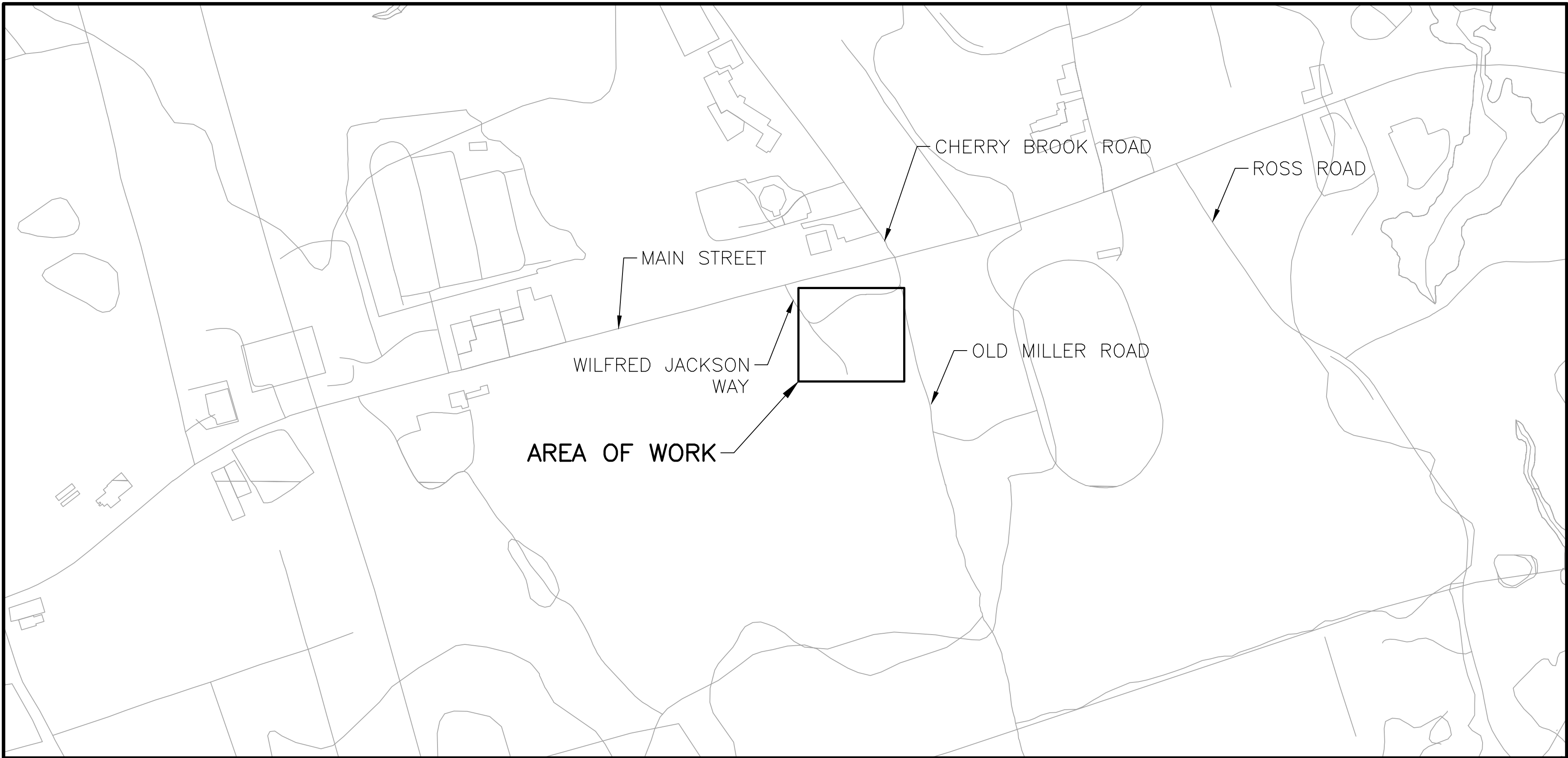


Contract No.

AKOMA OLD HOME RESTORATION

WATER SUPPLY AND WASTEWATER DISPOSAL

Sheet List Table	
Sheet Number	Sheet Title
C00	COVER SHEET
C01	EXISTING CONDITIONS AND REMOVALS
C02	SITE SERVICES & ACCESS PLAN
C03	WATER SERVICES PROFILE
C04	GRADING PLAN
C05	GENERAL DETAILS
C06	GENERAL DETAILS
C07	SLOPING SAND FILTER DETAILS



Project No. 170249.00



RE-ISSUED FOR
HALIFAX WATER
APPROVAL

MARCH 21, 2018



MAIN STREET

35 WILFRED JACKSON WAY

49 WILFRED JACKSON WAY

WILFRED JACKSON WAY

EXIST. HYDRANT (TYP.)

EXIST. ASPHALT PARKING LOT

EXIST. ASPHALT PARKING LOT

EXIST. WATERMAIN 200Ø PVC

EXIST. 50Ø MUNICIPEX

EXIST. GRAVEL ROADWAY

EXISTING SEPTIC RISERS

EXIST. ASPHALT PARKING LOT

EXIST. ASPHALT ROADWAY

APPROX. LOCATION OF UNDERGROUND SANITARY PIPE

EXIST. ABANDONED DRILLED WELL (SEE NOTE 2)

EXISTING SEPTIC RISERS

EXISTING SEPTIC FIELD

6.0m

EXIST. TREE (APPROX. LOCATION)

EXIST. ASPHALT TURN AROUND TO BE REMOVED

EXIST. ASPHALT DRIVEWAY TO BE REMOVED

EXIST. CARETAKERS HOUSE

EXISTING BUILDING

EXIST. TREES (TYP.)—TO BE REMOVED

TP

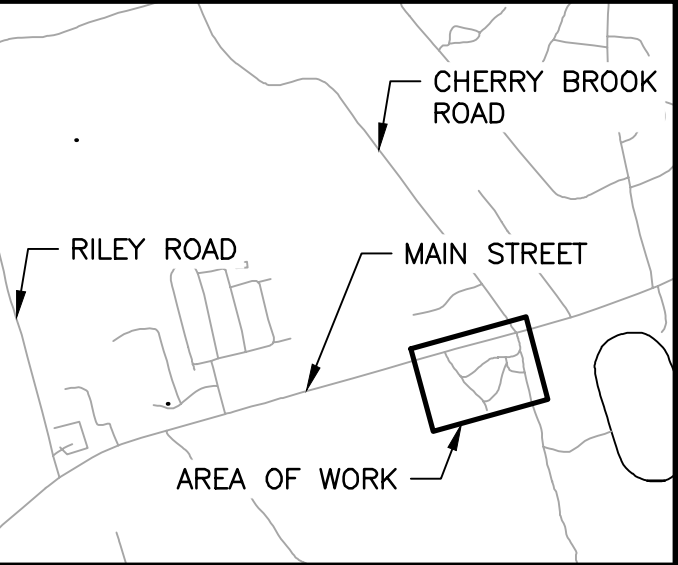
TP

TP

EXIST. TREE LINE TO BE TAKEN BACK TO APPROX. LIMIT OF GRUBBED AREA

APPROX. LIMIT OF AREA TO BE GRUBBED AND REGRADED

APPROX. LOCATION OF EXIST. WATER SERVICE TO COTTAGE



KEY PLAN

1:5000

NOTES

- FOR GENERAL NOTES REFER TO C05.
- DECOMMISSION ABANDONED WELL ACCORDING TO NSE GUIDELINES.

LEGEND

EXISTING	PROPOSED

6	RE-ISSUED FOR HALIFAX WATER APP	MAR 21/18	SE
5	ISSUED FOR HALIFAX WATER APP	JAN 11/18	SE
4	ISSUED FOR HALIFAX WATER APP	JAN 11/18	SE
3	ISSUED FOR ADDENDUM #1	OCT 12/17	SE
2	ISSUED FOR TENDER	OCT 03/17	SE
1	ISSUED FOR CLIENT APPROVAL	OCT 01/17	SE
B	ISSUED FOR 90% REVIEW	SEPT 22/17	SE
A	ISSUED FOR CONCEPT	SEPT 15/17	JAB

No.	Description	Date	By
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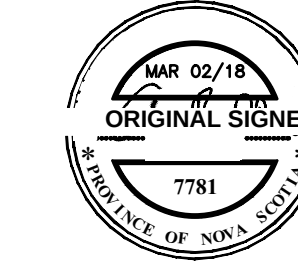
Revision or Issue

AKOMA HOLDINGS INC.
AKOMA OLD HOME RESTORATION

CIVIL
EXISTING CONDITIONS
AND REMOVALS



CBCL No 170249.00	Contract No	Date SEPT 2017	Scale AS NOTED
Designed AD	Drawn BWM/DB	Checked JJ	Approved SE
Sheet No 1 of 7		Drawing No C01	



DRAWING NAME: \\PROJECTS\170249.00 - OLD HOME RESTORATION - WATER SUPPLY AND WASTEWATER DIS\\20 CAD\\01 CIVIL\\04 DRAWING SHEETS\\170249.00 - C01.DWG LAYOUT NAME: C01 PLOT DATE: March-20-18 3:29:39 PM CAD OPERATOR: JUESOME

PLAN
1:250



MAIN STREET

35 WILFRED JACKSON WAY

49 WILFRED JACKSON WAY

WILFRED JACKSON WAY

EXIST. HYDRANT (TYP.)

EXIST. ASPHALT PARKING LOT

EXIST. ASPHALT PARKING LOT

EXIST. FIRE PROTECTION LINE 200Ø PVC

EXIST. 50Ø MUNICIPEX

EXIST. ASPHALT ROADWAY

EXISTING SEPTIC RISERS

CONNECT TO EXIST. 200Ø PVC FIRE PROTECTION LINE WITH GATE VALVE

22.5" BEND C/W THRUST BLOCK (ON FIRE PROTECTION)

SEE DWG C03 FOR PROFILE

EXIST. ASPHALT ROADWAY

EXISTING SEPTIC RISERS

EXIST. SEPTIC FIELD

22.5" BEND C/W THRUST BLOCK

200Ø PVC FIRE PROTECTION LINE

200x200x150 HYDRANT TEE c/w THRUST BLOCK (SEE NOTE 6)

45" BEND C/W THRUST BLOCK (PROVISIONAL)

FUTURE EOA

0.300

EXIST. ASPHALT DRIVEWAY TO BE REMOVED

200Ø PVC FIRE PROTECTION LINE (PROVISIONAL)

EDGE OF GRAVEL SHOULDER

EXIST. CARETAKERS HOUSE

NEW WATER PIPE

REMOVE EXIST. CAP AND INSTALL 50x63.5 REDUCER

APPROX. LOCATION OF EXIST. SANITARY AND WATERMAIN CROSSING (REFER TO NOTE 2/C03)

0.600

EXIST. ABANDONED DRILLED WELL

63.5Ø COPPER DOMESTIC WATER SUPPLY

EDGE OF GRAVEL SHOULDER

0.600

FUTURE EOA

0.300

HYDRANT (TYP.) PER HWSD 1110 (SEE NOTE 6)

200x200x200 TEE c/w THRUST BLOCK (PROVISIONAL)

150x200 REDUCER

SEE NOTE 5

EXTEND CONDUIT THROUGH FOUNDATION (SEE NOTE 3&4)

13

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13

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13

PARKING AREA

U/G ELECTRICAL CONDUIT (SEE DETAIL 20/C07)

PUMP CONTROL PANEL (SEE SECTION B/C07)

DRAINAGE SWALE (SEE DETAIL 4/C05)

100Ø PVC GRAVITY PIPE

100Ø PVC GRAVITY PIPE

SEPTIC TANK 2 (SEE SECTION A/C07)

EXIST. DRILLED WELL SEE NOTE 2

INTERCEPTOR SWALE @ MIN 2.0% (SEE DETAIL 3/C05)

6.000

FUTURE ACCESS

CAP c/w THRUST BLOCK FOR FUTURE USE (PROVISIONAL)

APPROX. LOCATION OF EXIST. WATER SERVICE TO COTTAGE

PROP. ACCESS ROAD

DRAINAGE SWALE (SEE DETAIL 4/C05)

1.000

3.1 SLOPE

2.500

3.1 SLOPE

0.600

5.000

90° BEND c/w THRUST BLOCK

50m LONG SEPTIC FIELD (18/C07)

50Ø FORCE MAIN TO SEPTIC FIELD

90° BEND c/w THRUST BLOCK

TP

PUMP CHAMBER (SEE SECTION A/C07)

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

TP

KEY PLAN

1:5000

NOTES

- FOR GENERAL NOTES REFER TO C05
- LOCATION OF UNDERGROUND ELECTRICAL FOR WELL PUMP IS UNKNOWN. CONTRACTOR TO CONFIRM LOCATION.
- CORE DRILL FOUNDATION WALL AND INSTALL LINKSEAL IN VOID SPACE. GROUT AND MAKE WATERTIGHT.
- COIL A MINIMUM 3.0m OF WIRE FOR CONNECTION TO BUILDING POWER BY OTHERS. LOCATION OF ELECTRICAL CONDUIT INTO BUILDING FOUNDATION MAY BE ALTERED BUT MUST BE SEPARATED FROM ANY OTHER PENETRATION BY A MINIMUM OF 1.0m.
- MECHANICALLY RESTRAIN ALL JOINTS FROM HYDRANT TEE TO BUILDING AND MECHANICALLY RESTRAIN CAP INSIDE BUILDING.
- TRANSITION FROM PVC TO DUCTILE IRON AT HYDRANT TEE.
- FOUNDATION WALL IS APPROX. 600mm THICK.

LEGEND

EXISTING	PROPOSED

6	RE-ISSUED FOR HALIFAX WATER APP	MAR 21/18	SE
5	ISSUED FOR HALIFAX WATER APP	JAN 11/18	SE
4	ISSUED HALIFAX WATER APPROVAL	NOV 10/17	SE
3	ISSUED FOR ADDENDUM #1	OCT 12/17	SE
2	ISSUED FOR TENDER	OCT 03/17	SE
1	ISSUED FOR CLIENT APPROVAL	OCT 01/17	SE
B	ISSUED FOR 90% REVIEW	SEPT 22/17	SE
A	ISSUED FOR CONCEPT	SEPT 15/17	JAB

No.	Description	Date	By
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Revision or Issue

AKOMA HOLDINGS INC.
AKOMA OLD HOME RESTORATION

CIVIL
SITE SERVICES &
ACCESS PLAN



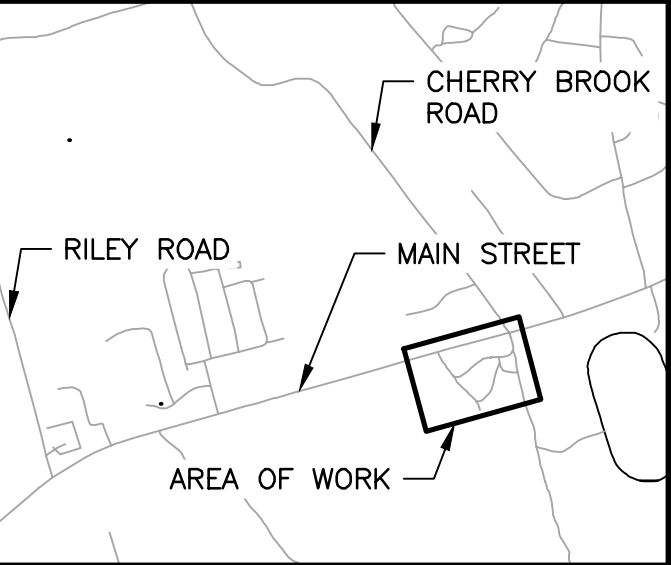
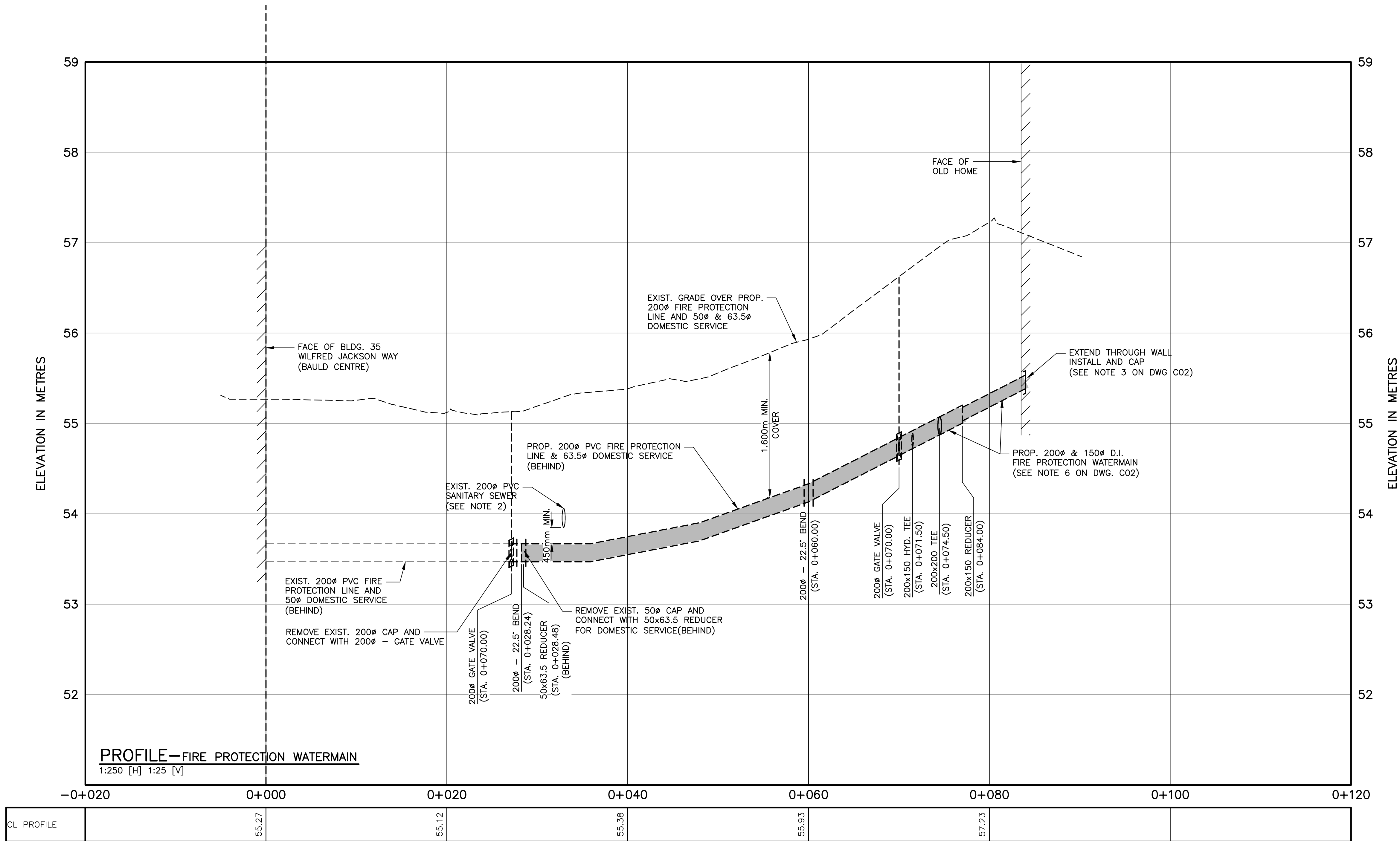
CBCL No 170249.00	Contract No	Date SEPT 2017	Scale AS NOTED
Designed AD	Drawn BWM/DB	Checked JJ	Approved SE
Sheet No 2 of 7	Drawing No C02		

ORIGINAL SIGNED
J.A. BAILLIE
REGISTERED PROFESSIONAL ENGINEER
PROVINCE OF NOVA SCOTIA

PLAN
1:250

DRAWING NAME: \\PROJECTS\170249.00 - OLD HOME RESTORATION - WATER SUPPLY AND WASTEWATER DISPO\20 CAD\01 CIVIL\04 DRAWING SHEETS\170249.00 - C01 DWG LAYOUT NAME: C02 PLOT DATE: March-22-18 3:26:10 PM CAD OPERATOR: JUESOME

DRAWING NAME: \\PROJECTS\170249.00 - OLD HOME RESTORATION - WATER SUPPLY AND WASTEWATER DIS\\20 CAD\\01 CIVIL\\04 DRAWING SHEETS\\170249.00 - C01.DWG LAYOUT NAME: C01.PLOT DATE: March-20-18 4:38:14 PM CAD OPERATOR: JUSSTONE



KEY PLAN

1:5000

NOTES

1. FOR GENERAL NOTES REFER TO C05.

2. EXACT LOCATION/DEPTH/SIZE OF EXISTING SANITARY SEWER IS UNKNOWN. CONTRACTOR IS TO CONFIRM LOCATION PRIOR TO DOMESTIC AND FIRE PROTECTION LINE INSTALLATION. SANITARY PIPE SHALL BE REPLACED WITH A LENGTH OF WATER CLASS PIPE (PVC DR18) AND SHALL BE PRESSURE TESTED. IF WATER PIPES CAN BE INSTALLED OVER SANITARY PIPE WITH A MINIMUM VERTICAL SEPARATION OF 450mm. THE SANITARY PIPE SHALL REMAIN UNDISTURBED.

A	ISSUED FOR HALIFAX WATER APP	MAR 21/18	SE
No.	Description	Date	By

Revision or Issue

AKOMA HOLDINGS INC.
AKOMA OLD HOME RESTORATION

CIVIL
WATER SERVICES
PROFILE



CBCL No 170249.00	Contract No	Date SEPT 2017	Scale AS NOTED
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Designed AD	Drawn MEC
Checked JJ	Approved
Sheet No 3 of 7	Drawing No

C03



MAIN STREET

35 WILFRED JACKSON WAY

49 WILFRED JACKSON WAY

WILFRED JACKSON WAY

EXIST. HYDRANT (TYP.)

EXIST. ASPHALT PARKING LOT

EXIST. ASPHALT PARKING LOT

EXISTING SEPTIC RISERS

EXIST. GRAVEL PARKING LOT

EXIST. ASPHALT ROADWAY

EX. WELL

EXIST. GRAVEL ROADWAY

A C05

PROP. ACCESS ROAD

APPROX. CENTRE LINE OF OLD MILLER ROAD

50m LONG SEPTIC FIELD

PROPOSED BUILDING ADDITION (N.I.C.)

EXISTING BUILDING

EXIST. ASPHALT TURN AROUND

FUTURE EOA (SEE NOTE 2)

EXIST. CARETAKERS HOUSE

FUTURE ACCESS

FUTURE CONNECTION TO OLD MILLER ROAD

KEY PLAN

1:5000

NOTES

- FOR GENERAL NOTES REFER TO C05.
- GRADE ACCESS ROAD AND PARKING AREA ON OR WITHIN FUTURE EOA 75mm LOWER THAN GRADES SHOWN.
- SLOPE GRADE AWAY FROM EXISTING WELL TOWARDS DRAINAGE SWALES.
- MATCH GRADE OF GRAVEL SHOULDER TO EXISTING GRADE.

LEGEND

EXISTING	PROPOSED

No.	Description	Date	By
4	RE-ISSUED FOR HALIFAX WATER APP	MAR 21/18	SE
3	ISSUED FOR HALIFAX WATER APP	JAN 11/18	SE
2	ISSUED FOR TENDER	OCT 03/17	SE
1	ISSUED FOR CLIENT APPROVAL	OCT 01/17	SE

Revision or Issue

AKOMA HOLDINGS INC.
AKOMA OLD HOME RESTORATION

CIVIL

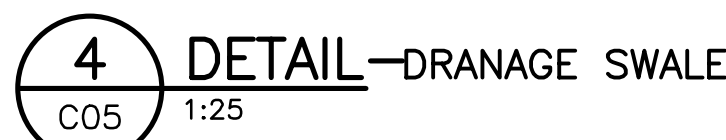
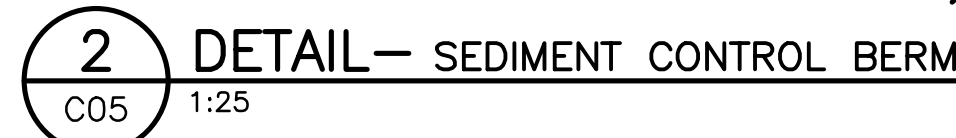
GRADING PLAN



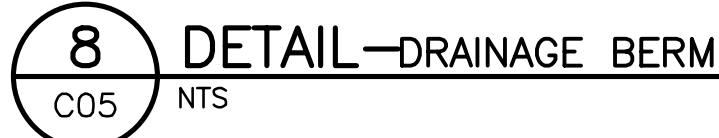
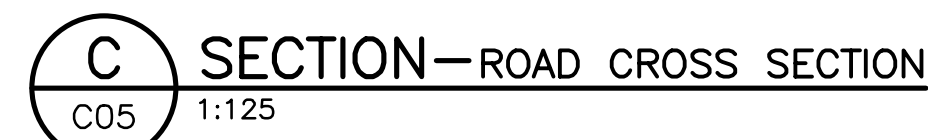
CBCL No 170249.00	Contract No	Date SEPT 2017	Scale AS NOTED
Designed JJ	Drawn BWM	Checked SE	Approved SE
Sheet No 4 of 7	Drawing No C04		

PLAN
1:250

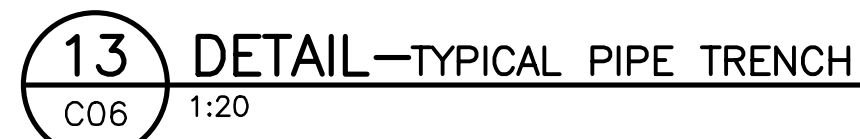
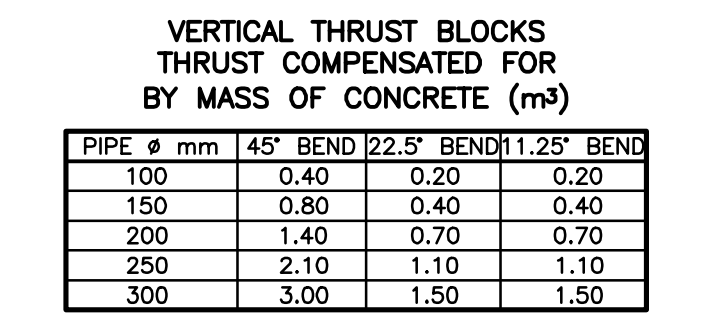
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1. CONTRACTOR SHALL BE RESPONSIBLE TO SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN PREPARED BY A CERTIFIED "GREEN CARD" HOLDER TO APPLICABLE AUTHORITIES FOR APPROVAL AND TO MONITOR THE SITE AND MAKE NECESSARY ADJUSTMENTS AS CONDITIONS CHANGE.
2. CONTRACTOR SHALL FOLLOW EROSION AND SEDIMENT CONTROL PROCEDURES OUTLINED IN THE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION SITES, PREPARED BY NOVA SCOTIA ENVIRONMENT,



 CBCL LIMITED			
Consulting Engineers			
CBCL No 170249.00	Contract No	Date SEPT 2017	Scale AS NOTED
 ORIGINAL SIGNED		Designed AD	Drawn BWM
		Checked JAB	Approved SE
		Sheet No 5 of 7	
		Drawing No C05	

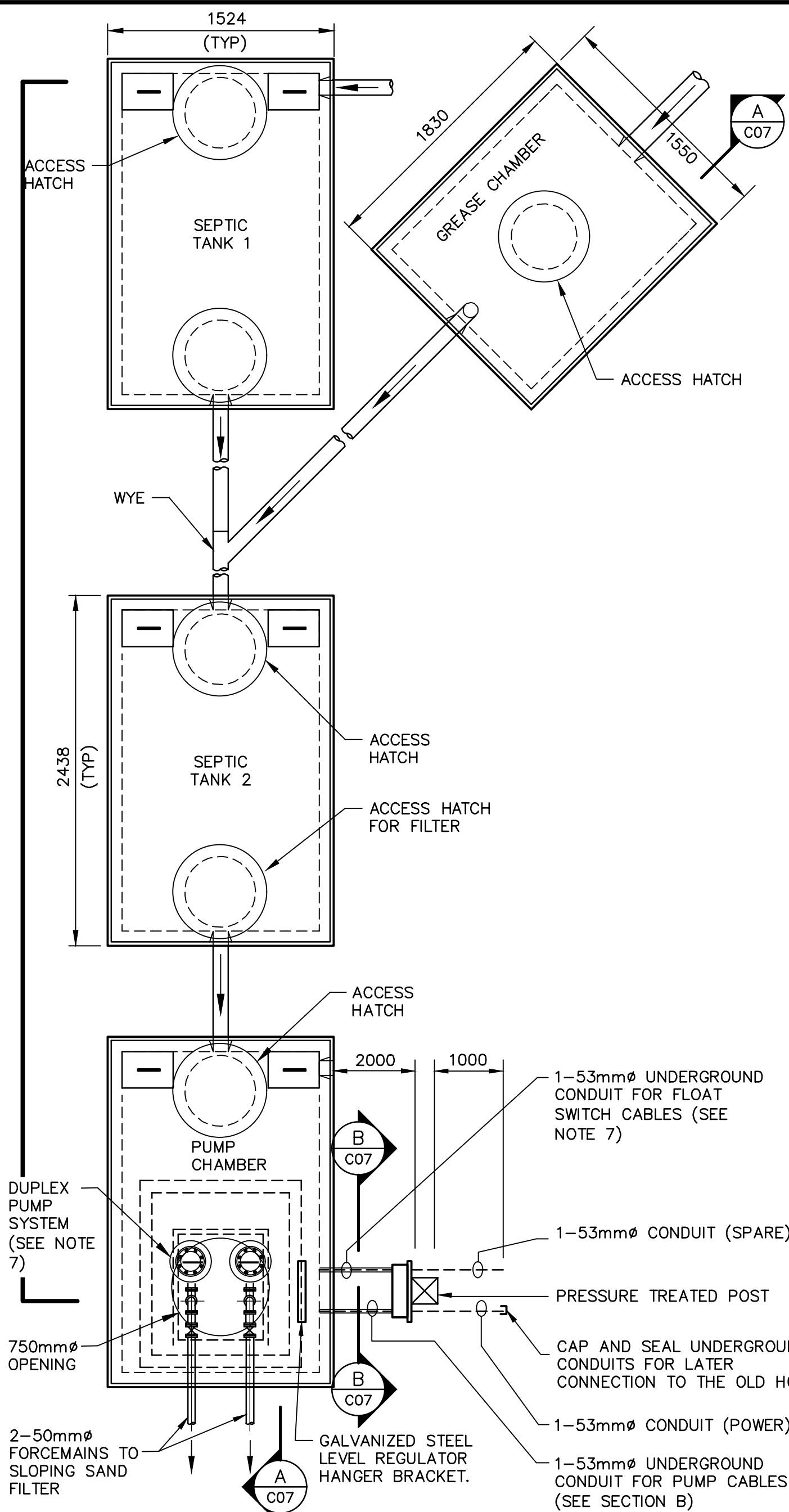


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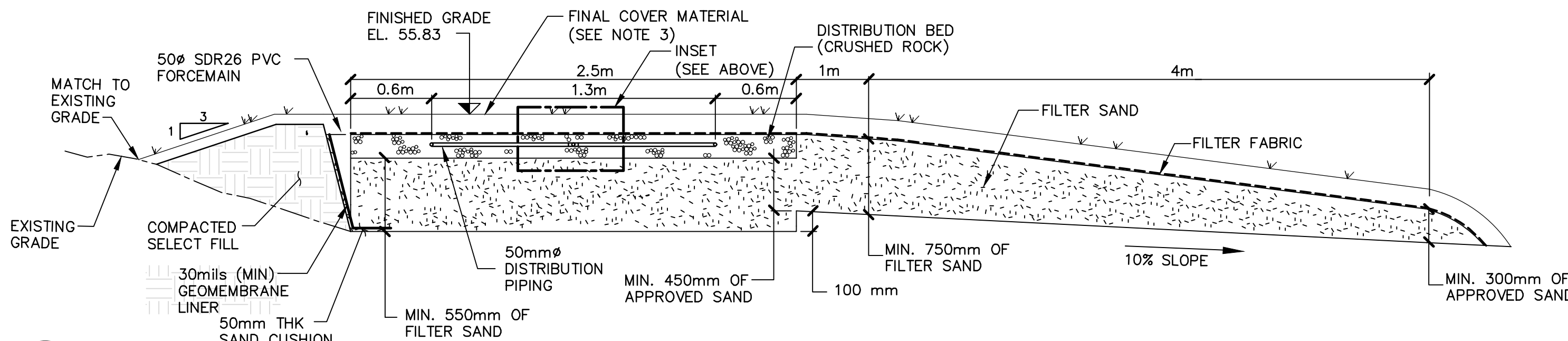
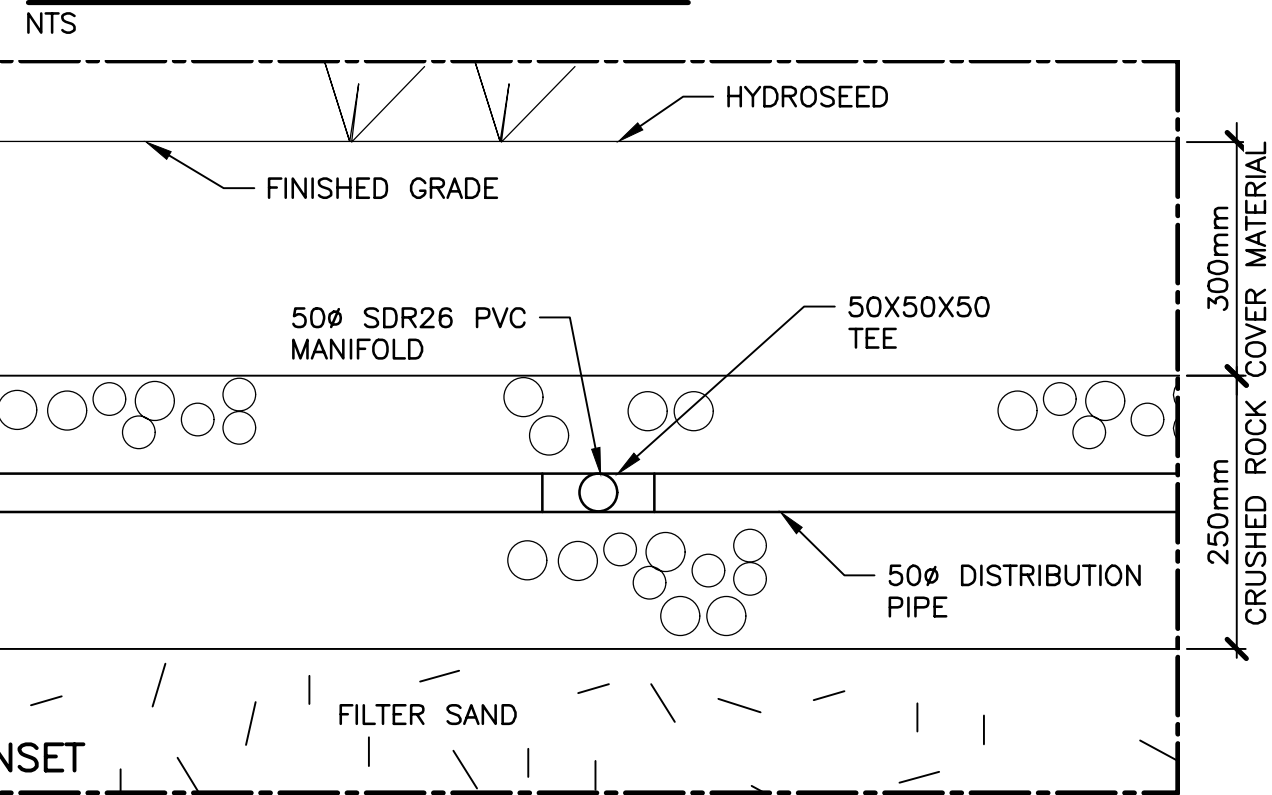
1. WATER LINE REFERS TO FIRE PROTECTION LINE AND/OR DOMESTIC WATER SUPPLY.

C06

DRAWING NAME: N:\PROJECTS\170249.00 - OLD HOME RESTORATION - WATER SUPPLY AND WASTEWATER DISPO\20 CAD\01 DRAWING SHEETS\170249.01 DETAILS.DWG LAYOUT NAME: C07 PLOT DATE: MARCH-20-18 4:47:08 PM CAD OPERATOR: LESLIE DNE

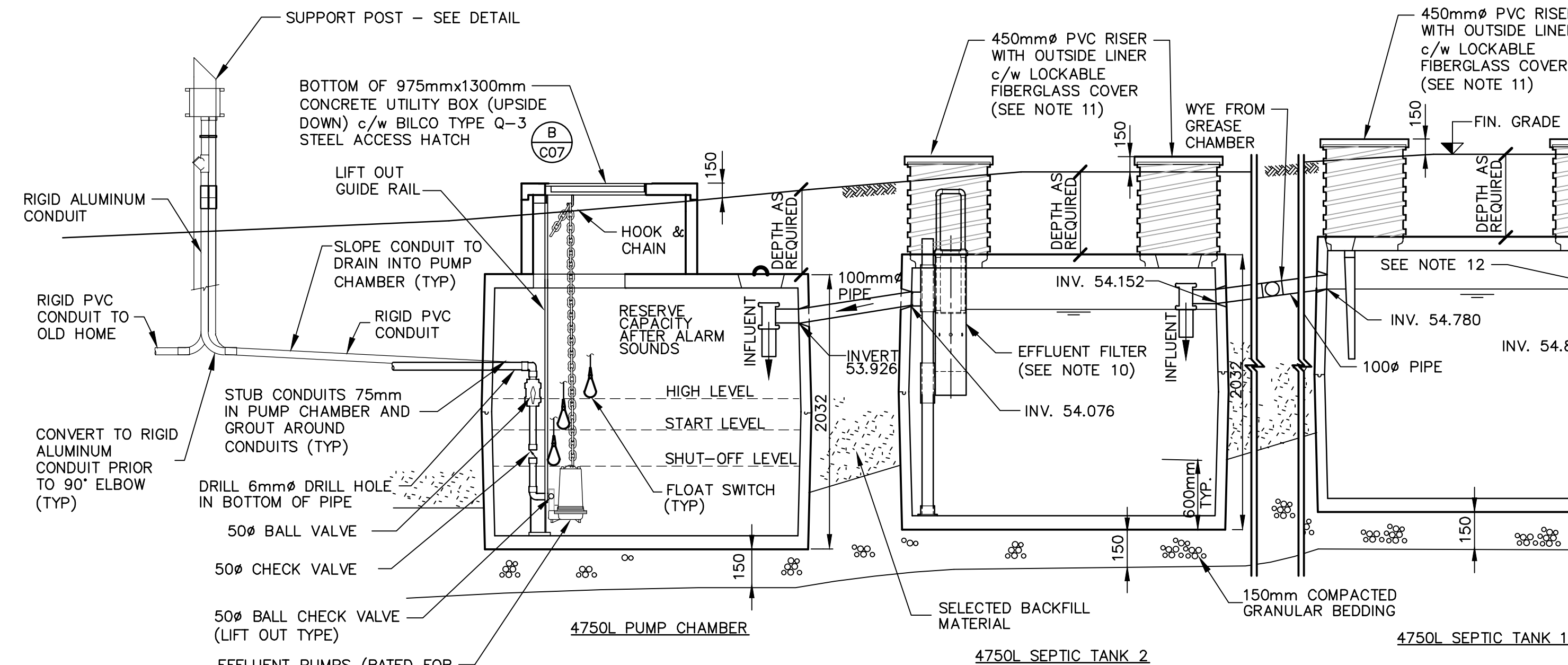


PLAN—TANKS AND CHAMBERS



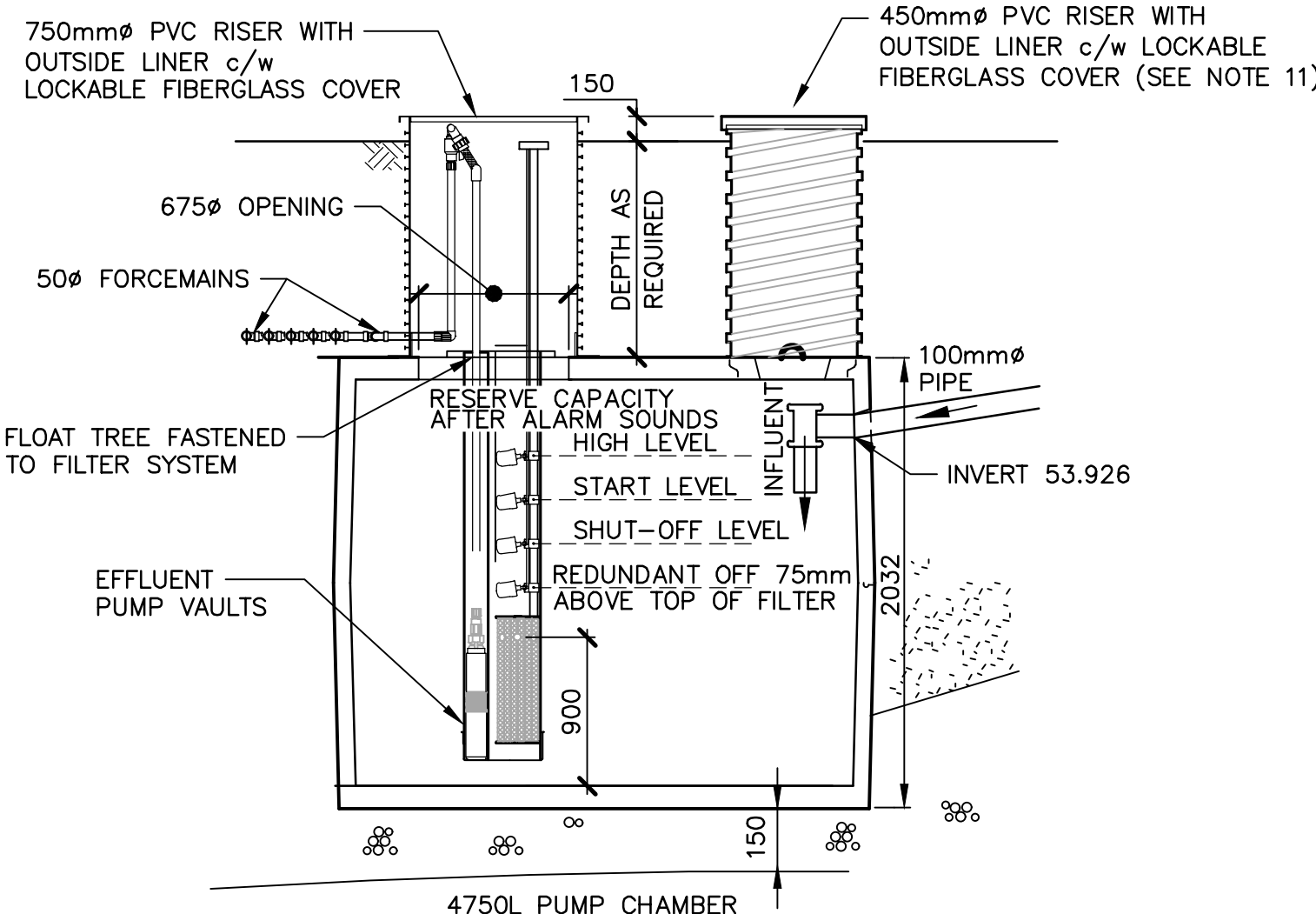
18 DETAIL—SLOPING SAND FILTER

- NOTES:
- INVERT OF DISTRIBUTION PIPE AT ELEVATION 55.355

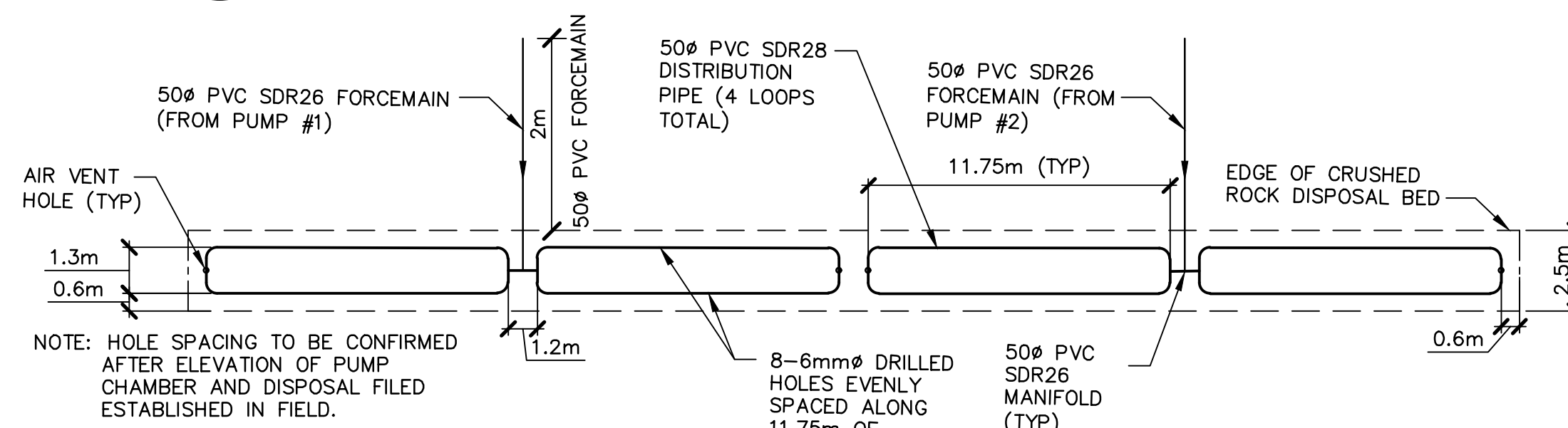


A SECTION—TANKS AND CHAMBERS

- NOTES:
- ALL TANKS AND CHAMBERS JOINTS TO BE WRAPPED IN AN APPROVED WATERPROOF MEMBRANE. WATERPROOF MEMBRANE TO EXTEND MIN 150mm ON BOTH SIDES OF JOINT.



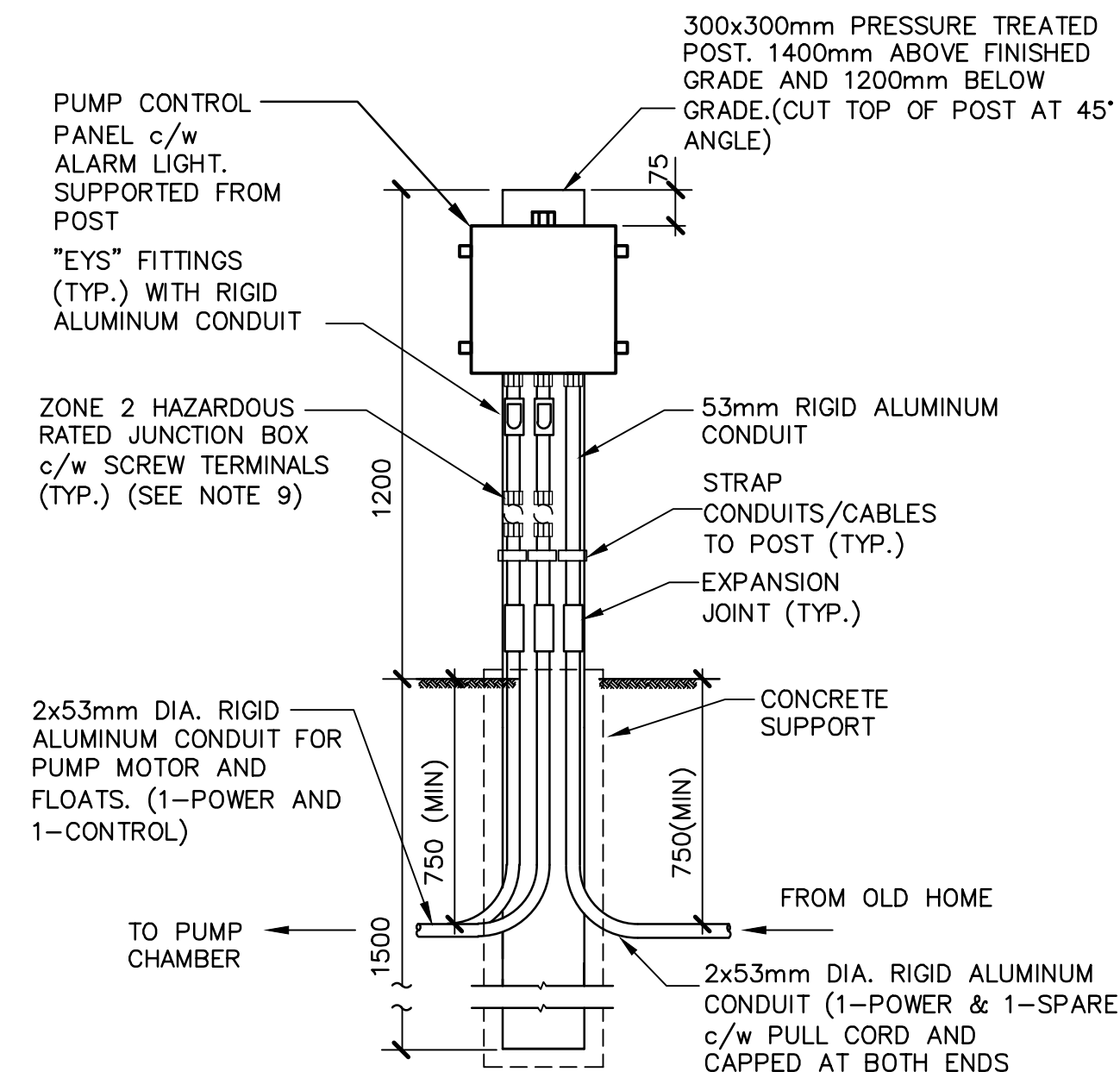
21 DETAIL—PUMP CHAMBER ALTERNATE



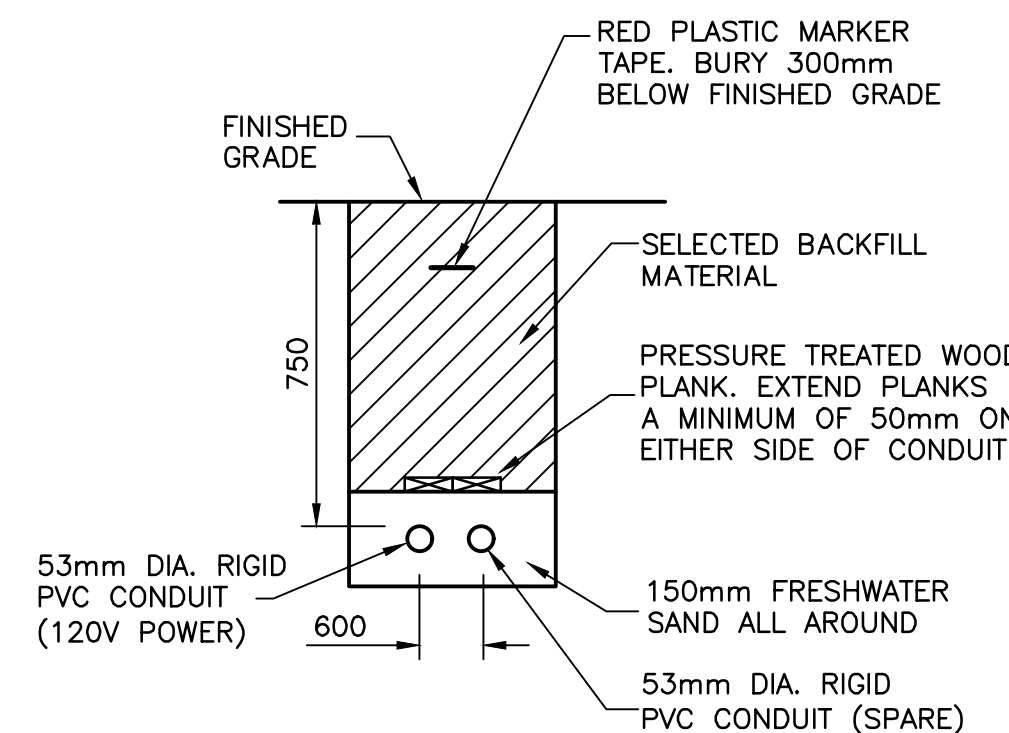
19 DETAIL—DISTRIBUTION PIPE LAYOUT

SLOPING SAND FILTER SPECIFICATIONS

- 30 MILS HDPE OR PVC GEOMEMBRANE LINER ON 50mm SAND CUSHION
- 50 METRES LONG
- 7.5 METRES WIDE
- MIN. 450 mm FILTER SAND UNDER CRUSHED ROCK
- 125 mm CRUSHED ROCK UNDER PIPE
- 75 mm CRUSHED ROCK OVER PIPE
- 50 LINEAL METRES OF BARRIER MATERIAL, 7.5 METRES WIDE
- PIPE TO BE LOOPED AS INDICATED
- PERMEABILITY OF FILTER SAND BETWEEN 1×10^{-4} and 5×10^{-4} m/sec
- PERMEABILITY OF FILTER SAND TO BE CERTIFIED BY SAND SUPPLIER
- AIR VENT TO BE DRILLED AT END OF DISTRIBUTION PIPE
- ALL MATERIALS AND PROCEDURES TO MEET NOVA SCOTIA ENVIRONMENT SPECIFICATIONS
- DESIGN CAPACITY IS 4300 L/DAY



B SECTION—ELECTRICAL SUPPORT STRUCTURE



20 DETAIL—ELECTRICAL TRENCH

- NOTES
- ELEVATIONS SHOWN ARE APPROXIMATE AND ARE PROVIDED TO SHOW RELATIVE GRADE CHANGES.
 - COVER MATERIAL SHALL BE 300mm THICK AND SHALL INCLUDE A MINIMUM 150mm THICK TOP SOIL AND FINISHED WITH HYDROSEED. CLEAN LOCAL FILL MAY TAKE UP 150mm OF THE 300mm THICK LAYER.
 - TRANSITION FROM RIGID PVC CONDUIT TO RIGID ALUMINUM CONDUIT BELOW GRADE.
 - DOSING VOLUME SHALL BE PROVIDED TO CONTRACTOR AFTER PUMP CHAMBER SELECTION.
 - THE ON-SITE SEWAGE DISPOSAL SYSTEM IS TO BE INSTALLED BY AN "INSTALLER" WHO HOLDS A VALID CERTIFICATE OF QUALIFICATION ISSUED PURSUANT TO THE NOVA SCOTIA DEPARTMENT OF ENVIRONMENT REGULATIONS RESPECTING ON-SITE SEWAGE DISPOSAL SYSTEMS.
 - USE STAINLESS STEEL LEVEL REGULATOR HANGER BRACKET. SECURE FLOAT SWITCH CABLES TO HANGER ASSEMBLY WITH STRAIN RELIEF CONNECTORS. SECURE PUMP CABLES WITH STAINLESS STEEL KELLUM'S GRIPS.
 - THE AIR SPACE ABOVE THE LIQUID LEVEL IN THE GREASE CHAMBER, SEPTIC TANKS AND PUMP CHAMBER TO BE TREATED AS A ZONE 2 HAZARDOUS AREA PER NEPA 820.
 - CONTRACTOR SHALL TEST PUMPS USING GENERATOR POWER AS POWER FROM BUILDING WILL BE UNAVAILABLE.
 - JUNCTION BOXES TO BE STAINLESS STEEL NEMA 4X JUNCTION BOXES. BOXES TO BE SIZED CONTRACTOR TO HAVE SUFFICIENT ROOM FOR SPLICING ALL CONDUCTORS PLUS 25% SPARE SPACE.
 - SEPTIC TANK EFFLUENT FILTERS, DESIGNED TO REMOVE ALL SOLIDS GREATER THAN 3 mm AT A FLOW RATE OF 10 LPM, ARE TO BE INSTALLED ON THE OUTLET OF THE SEPTIC TANKS AS SHOWN ON THE DRAWINGS. FILTERS ARE TO BE EASILY REMOVABLE FROM SURFACE. ACCEPTABLE MANUFACTURERS ORENCO, OR APPROVED EQUIVALENT.
 - "SCREW-DOWN" FIBERGLASS COVERS ARE CONSIDERED ADEQUATE LOCKING MECHANISM.
 - SANITARY TEES MAY BE USED AS AN ALTERNATIVE TO CONCRETE BAFFLES.

No.	Description	Date	By
5	RE-ISSUED FOR HALIFAX WATER APP	MAR 21/18	SE
4	ISSUED FOR HALIFAX WATER APP	JAN 11/18	SE
3	ISSUED FOR ADDENDUM #1	OCT 12/17	SE
2	ISSUED FOR TENDER	OCT 03/17	SE
1	ISSUED FOR CLIENT APPROVAL	OCT 01/17	SE
A	ISSUED FOR 90% REVIEW	SEPT 22/17	SE

Revision or Issue

AKOMA HOLDINGS INC.

AKOMA OLD HOME RESTORATION

CIVIL

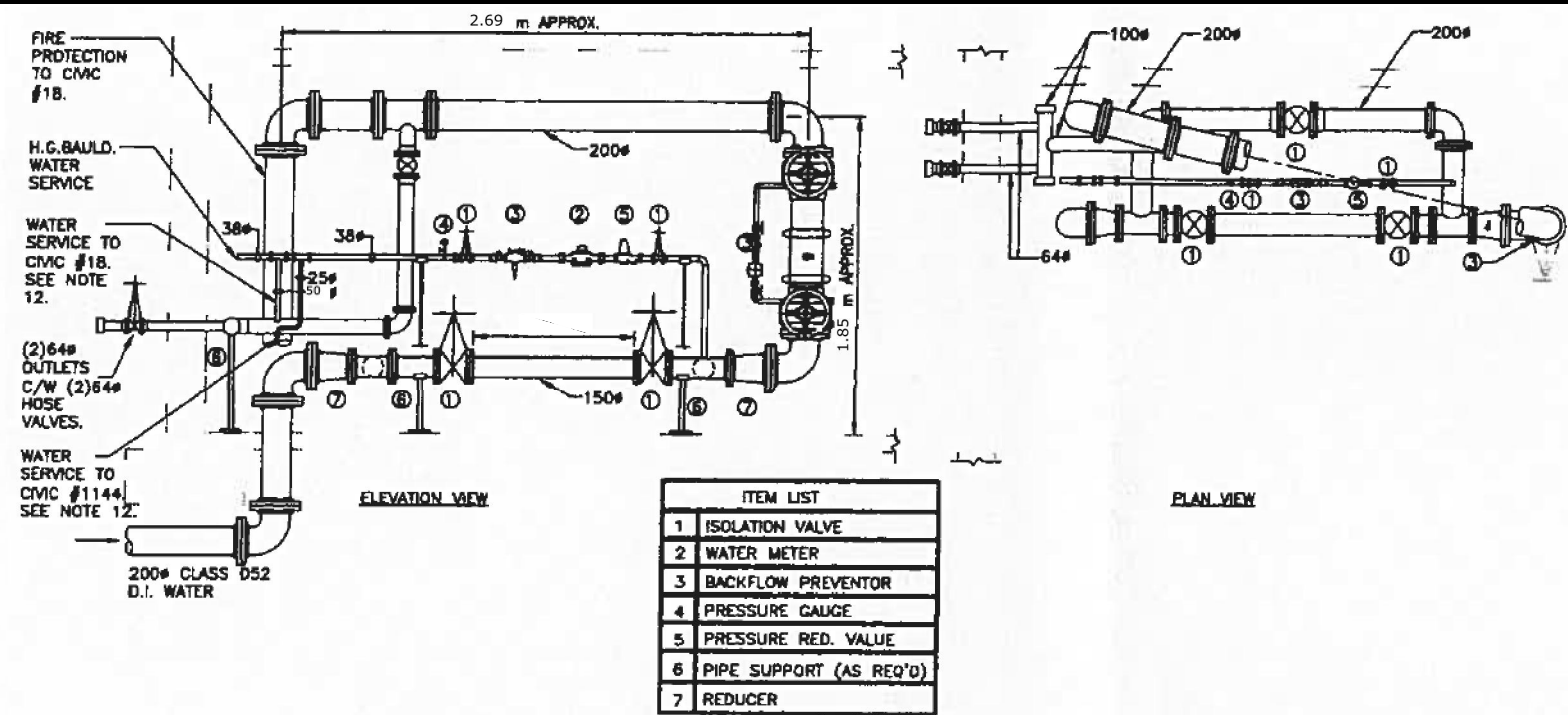
SLOPING SAND FILTER
DETAILS

CBCL **CBCL LIMITED**
Consulting Engineers

CBCL No	Contract No	Date	Scale
170249.00		SEPT 2017	AS NOTED
Designed	Drawn	Checked	Approved
JJ	BWM	JAB	SE
Sheet No	6 of 7	Drawing No	

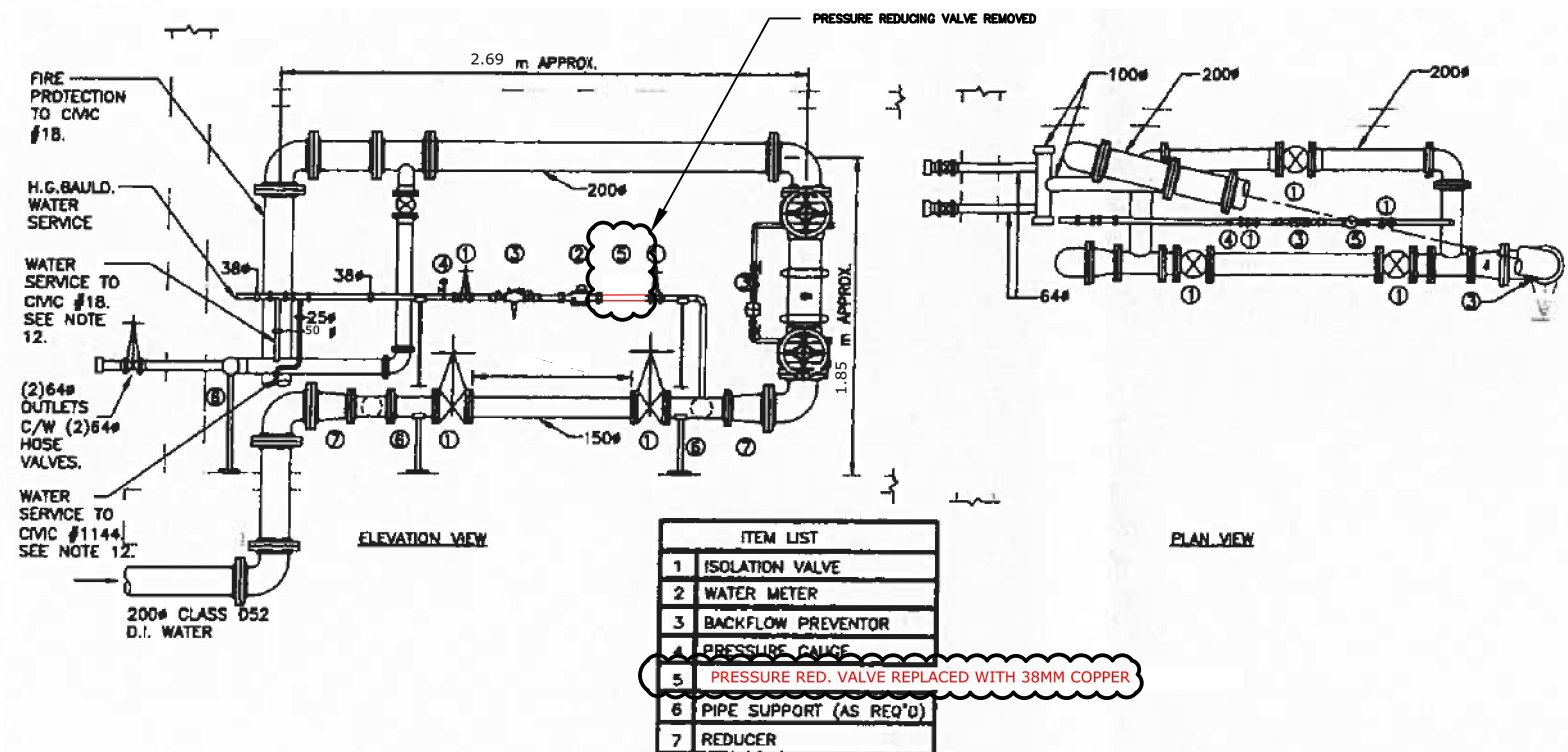
C07

DRAWING NAME: K:\PROJECTS\170249.00 - OLD HOME RESTORATION - WATER SUPPLY AND WASTEWATER DISP\20 CAD\01 CIVIL\04 DRAWING SHEETS\170249.00-SK1.DWG LAYOUT NAME: SK-1 PLOT DATE: March-02-18 10:02:03 AM CAD OPERATOR: JESSOME



INCOMING DOMESTIC WATER & FIRE PROTECTION DETAIL (CURRENT ARRANGEMENT)

nls



INCOMING DOMESTIC WATER & FIRE PROTECTION DETAIL (NEW ARRANGEMENT)

nls

NOTE:
SKETCH IS A MODIFIED VERSION OF
DRAWING C-101 SUBMITTED TO HALIFAX
WATER BY STANTEC DATED 2014-05-06

		Date MAR 2018	Scale N.T.S	Designed JJ	Drawn MEC	Checked	Approved	CBCL No. 170249.00	Contract
		CBCL CBCL LIMITED Consulting Engineers			AKOMA OLD HOME RESTORATION				Drawing SK-1
					NEW METER ARRANGEMENT				
No.	Description								