

SUMMARY OF WORKS:

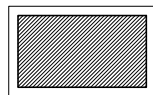
FIRE PUMP HOUSE =	13.60 sq.m.
CISTERN TANK =	55.44 cu.m.
FEEDER PIPE LINE FROM MANHOLE TO CISTERN TANK =	41.50 l.m.
FEEDER PIPE LINE FROM PUMP TO BUILDING INLET PIPES =	(3) 46.00 l.m.

LEGEND & SYMBOLS:

FIRE PUMP HOUSE



CISTERN TANK



3"Ø HDPE PIPE FEEDER LINE W/ FITTINGS



INCOMING SUPPLY FROM MAIN WATER SOURCE



3"Ø GATE VALVE



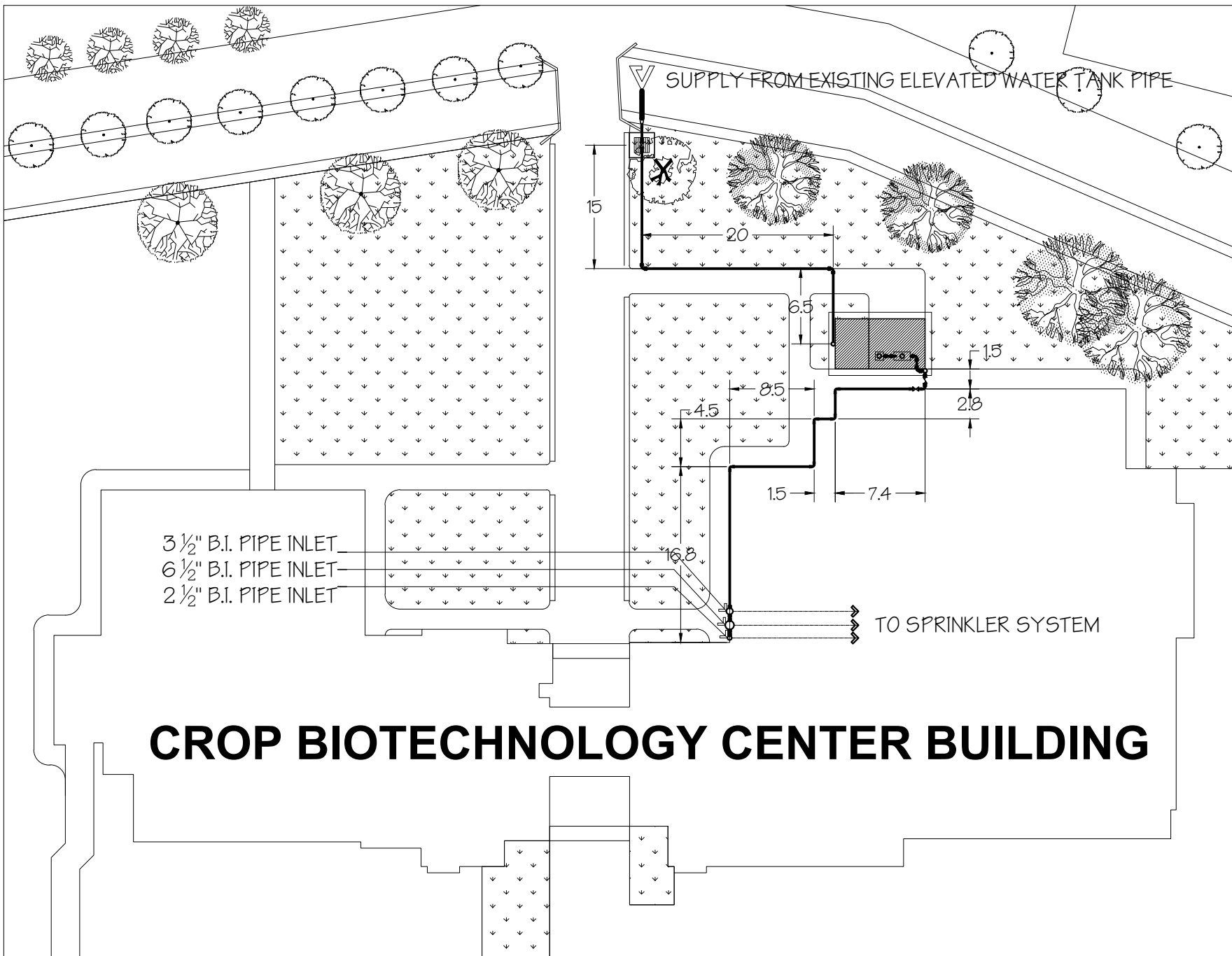
3"Ø CHECK VALVE



REDUCER FITTING, VERIFY EXISTING SUPPLY PIPE SIZE



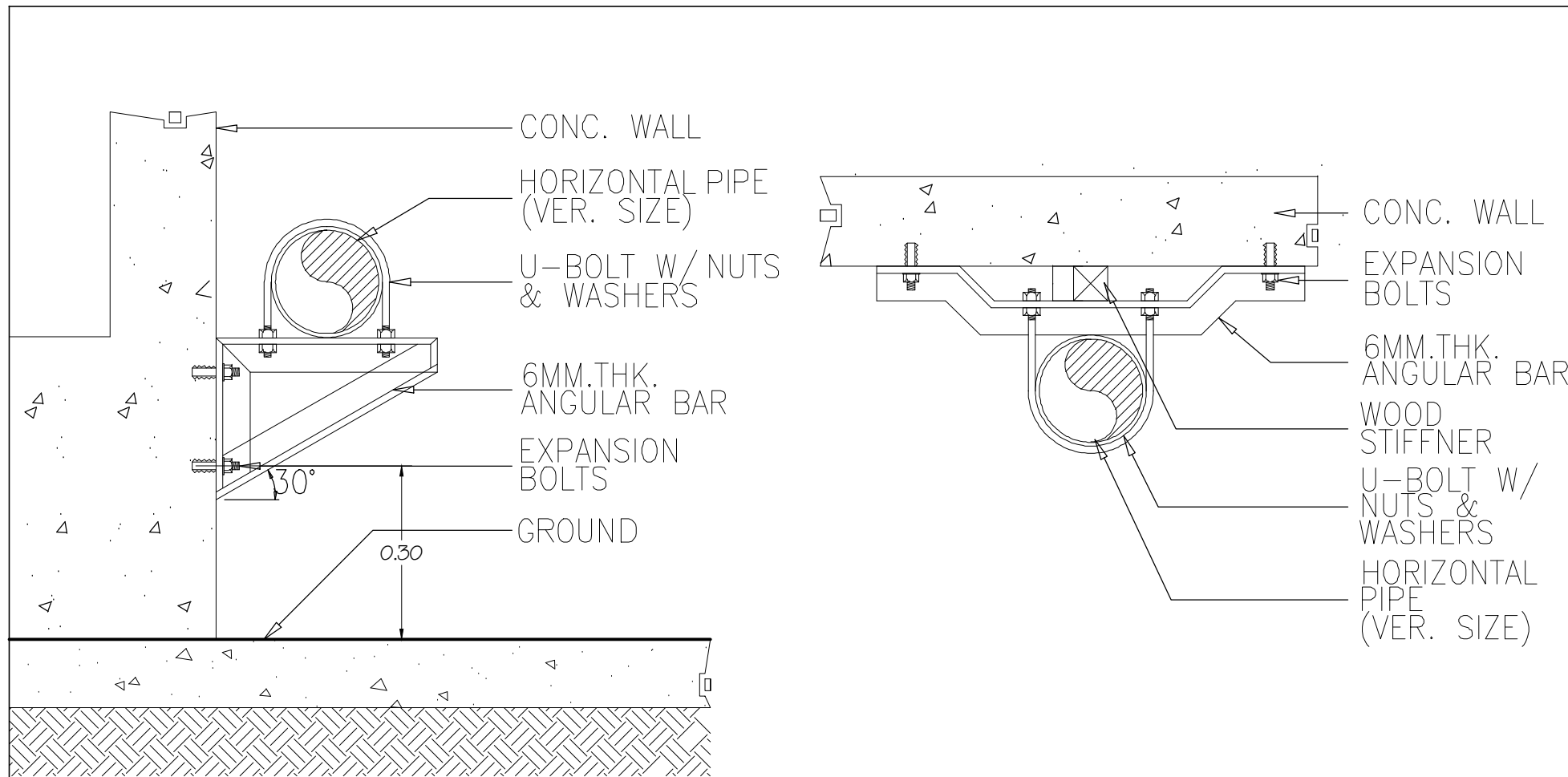
MANHOLE



FIRE SUPPRESSION SYSTEM LAYOUT

SCALE

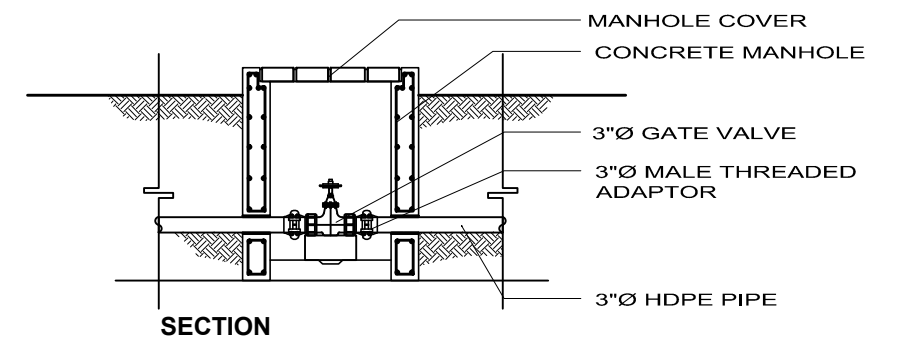
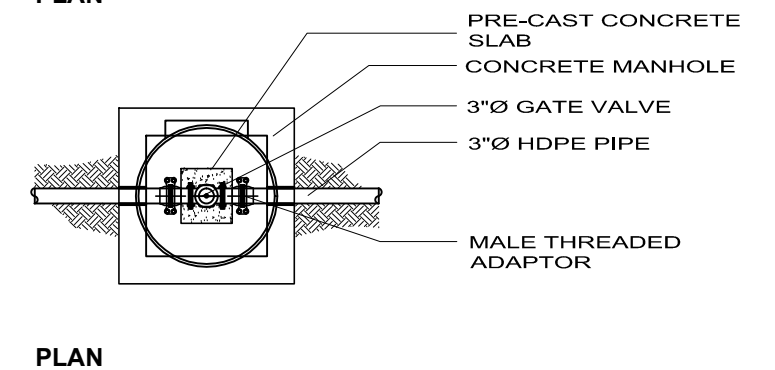
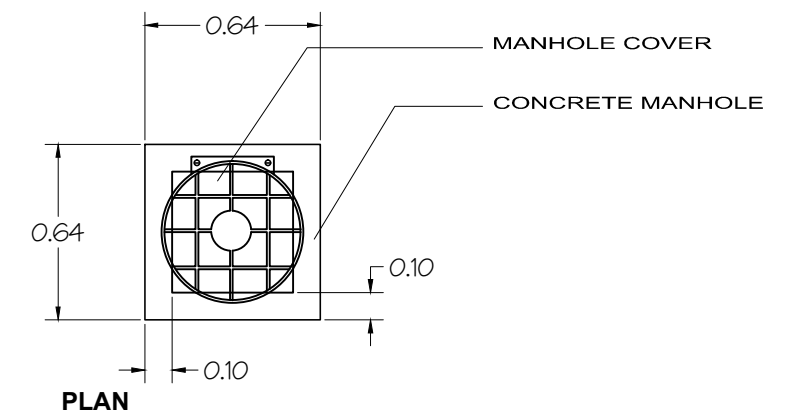
NTS



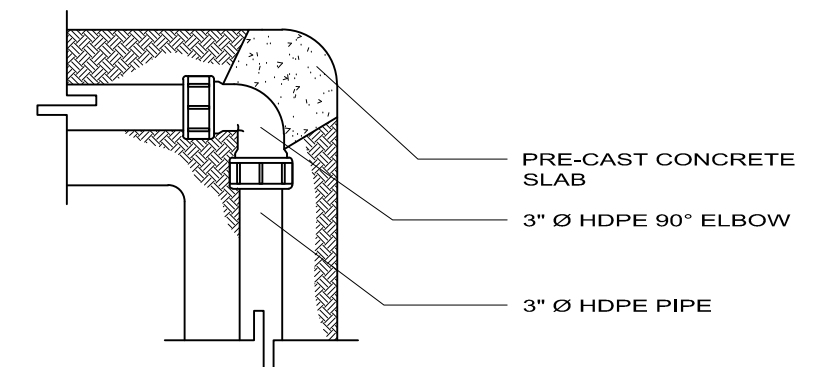
PIPE BRACKET

4-WAY SWAY BRACE

SCHEDULE OF PIPE BRACKET/BRACING			
PIPE SIZE	U-BOLT DIA.	ANGLE BAR	EXPANSION BOLT
50	10	50 X 50	10
65	10	50 X 50	10
75	10	50 X 50	10
100	12	65 X 65	12
150	12	65 X 65	12

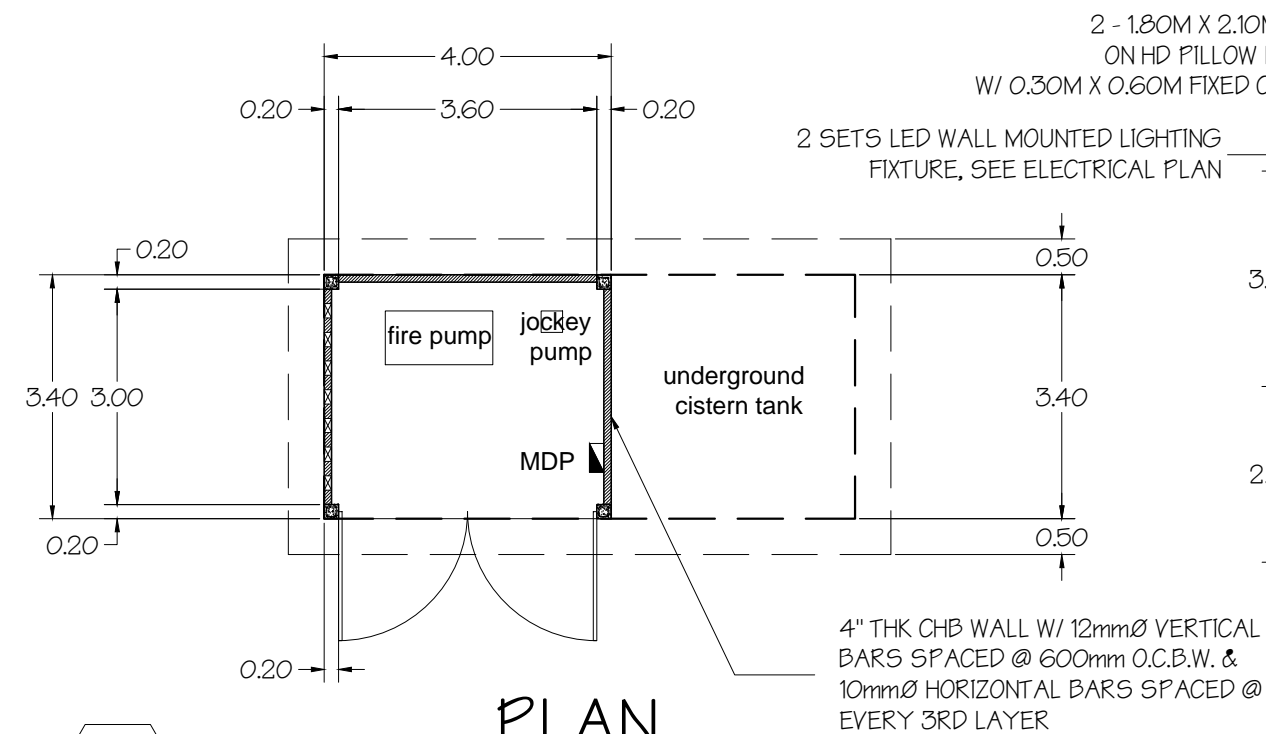


GATE VALVE & MANHOLE DETAIL



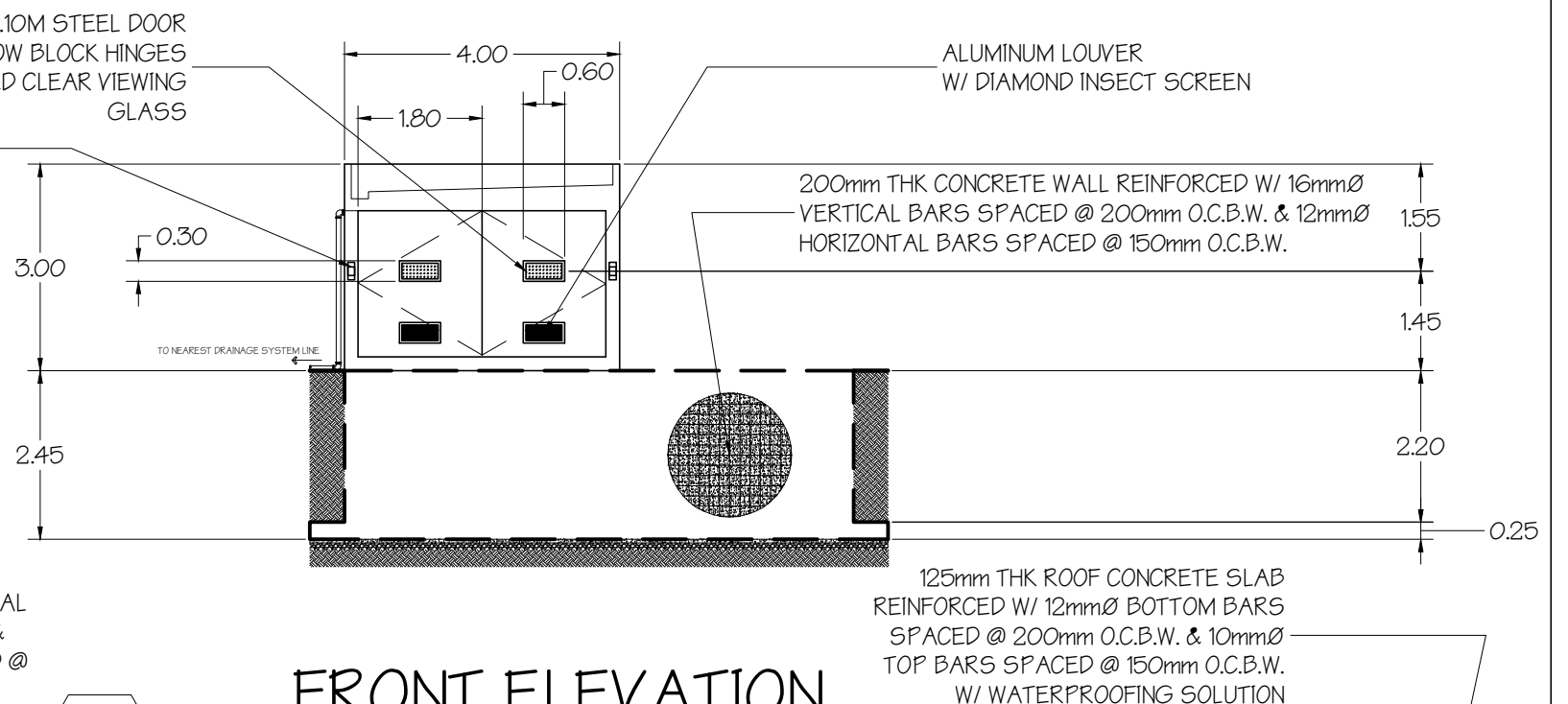
ELBOW CONNECTION DETAIL





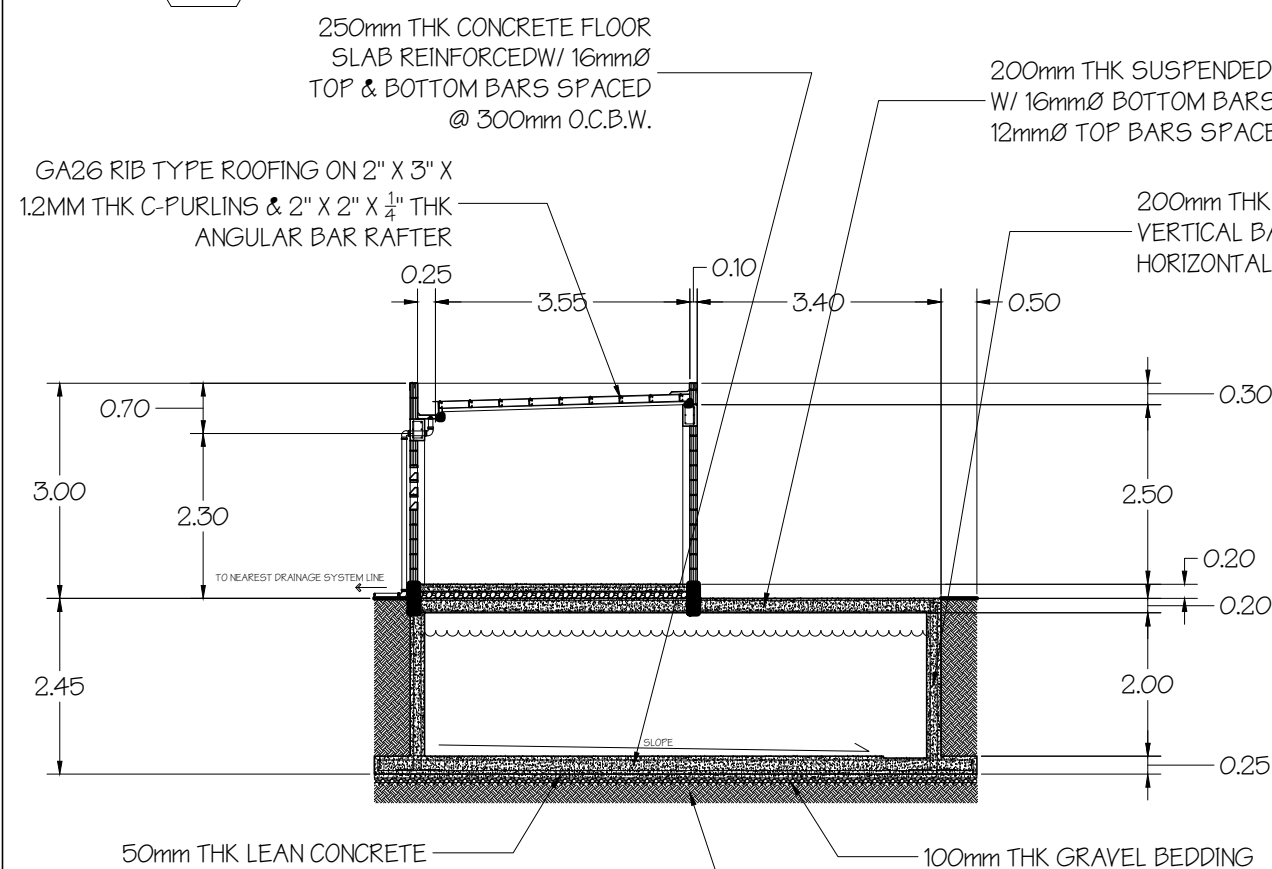
SCALE

NTS



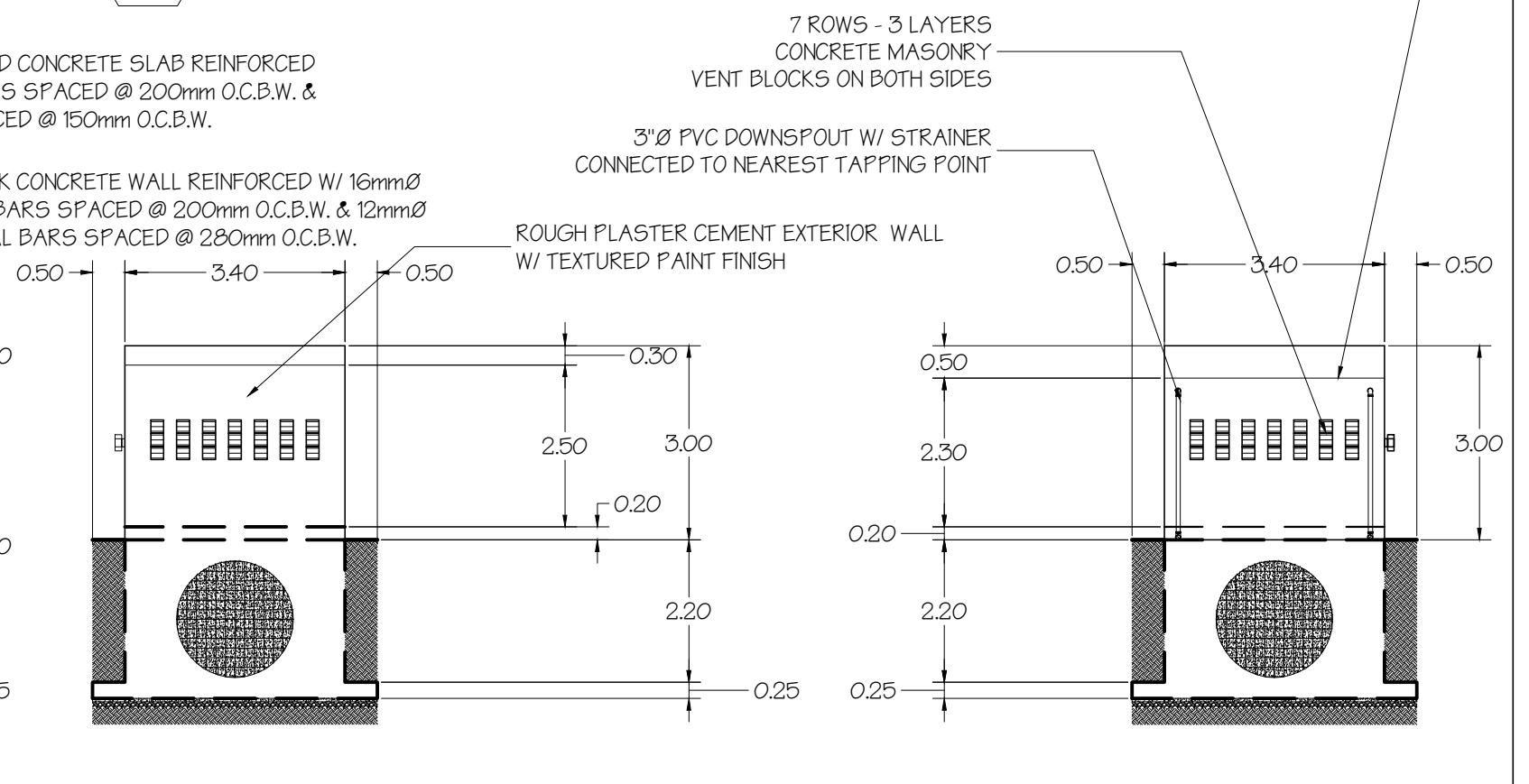
SCALE

NTS



SCALE

NTS

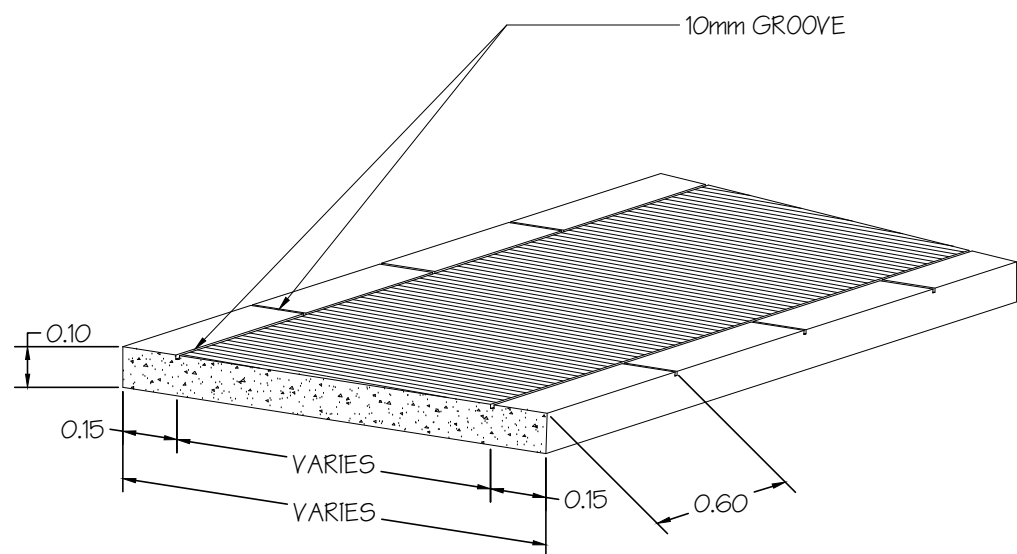


SCALE

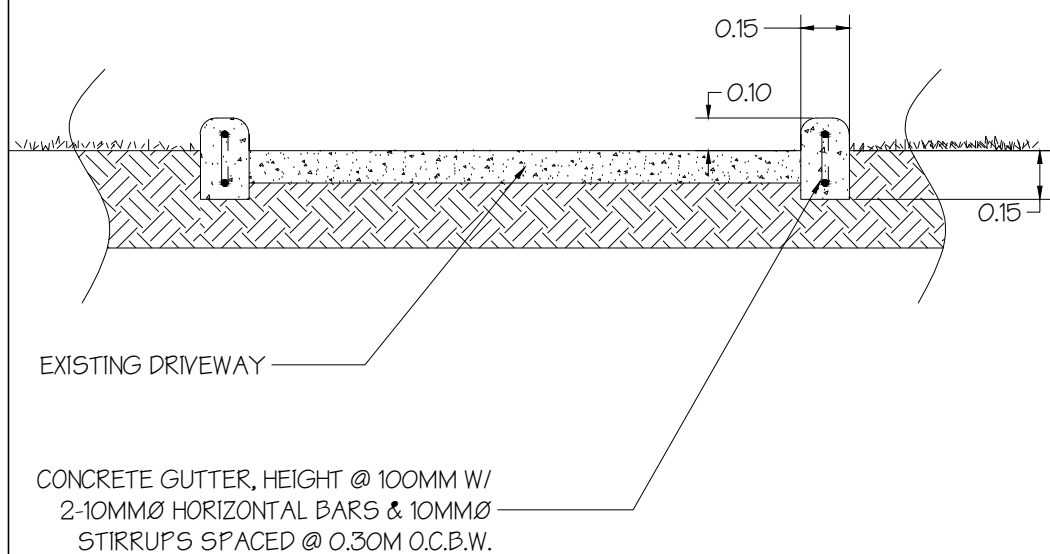
NTS

SCALE

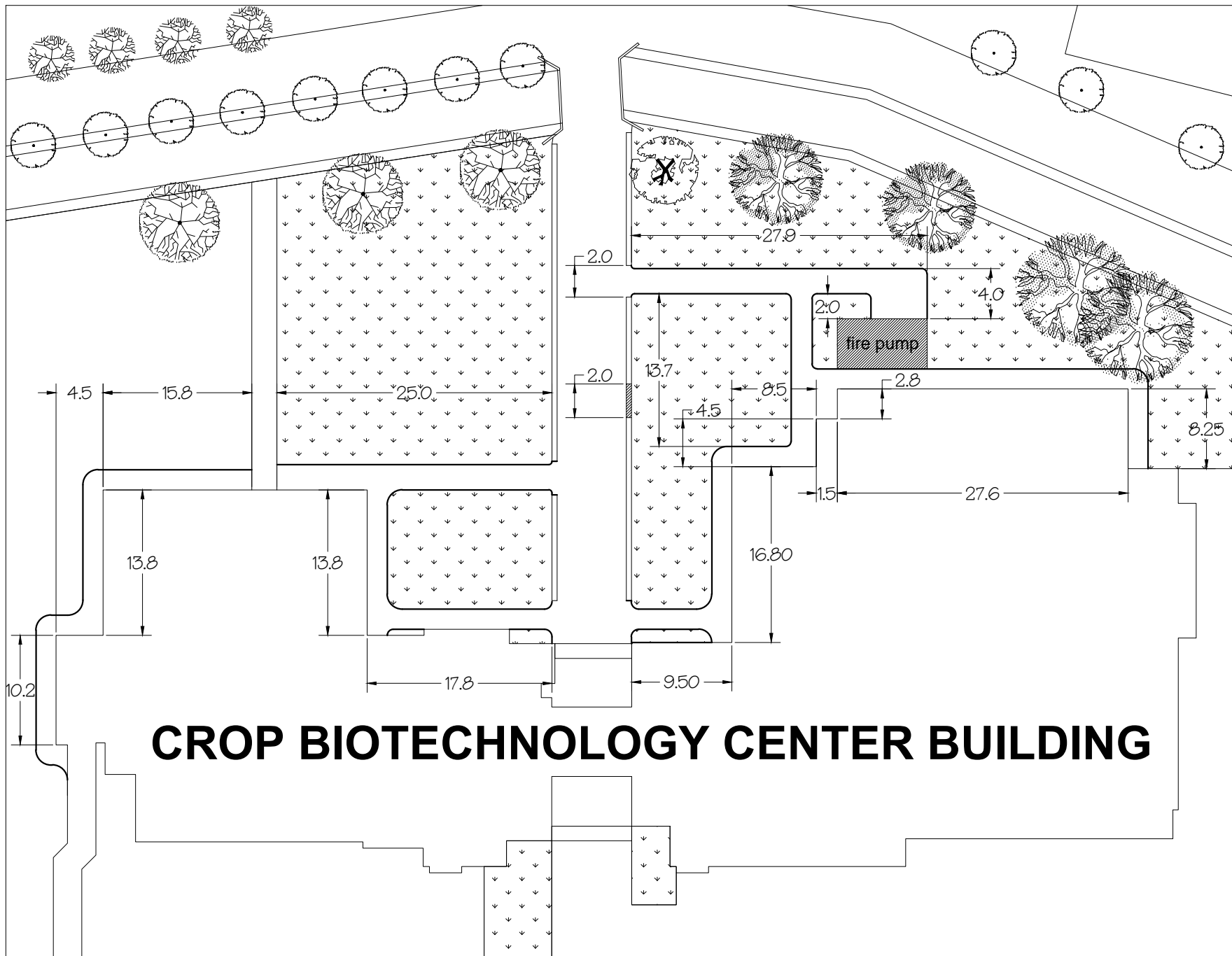
NTS



CONCRETE SIDEWALK DETAIL



CONCRETE GUTTER DETAIL

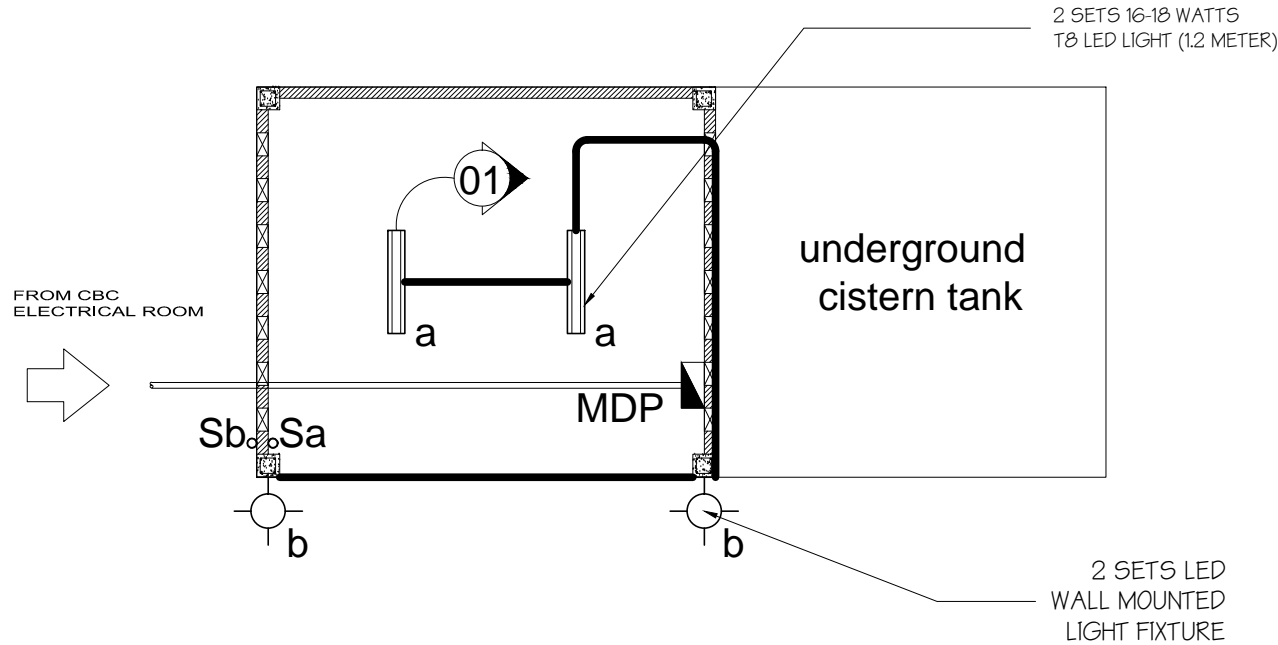


CROP BIOTECHNOLOGY CENTER BUILDING

SUMMARY OF WORKS:

2.0 M WIDE CONCRETE SIDEWALK =	60.81 l.m.
1.5 M WIDE CONCRETE SIDEWALK =	155.35 l.m.
CURB & GUTTER FOR REMOVAL =	2.0 l.m.
CURB & GUTTER FOR RECTIFICATION =	2.0 l.m.

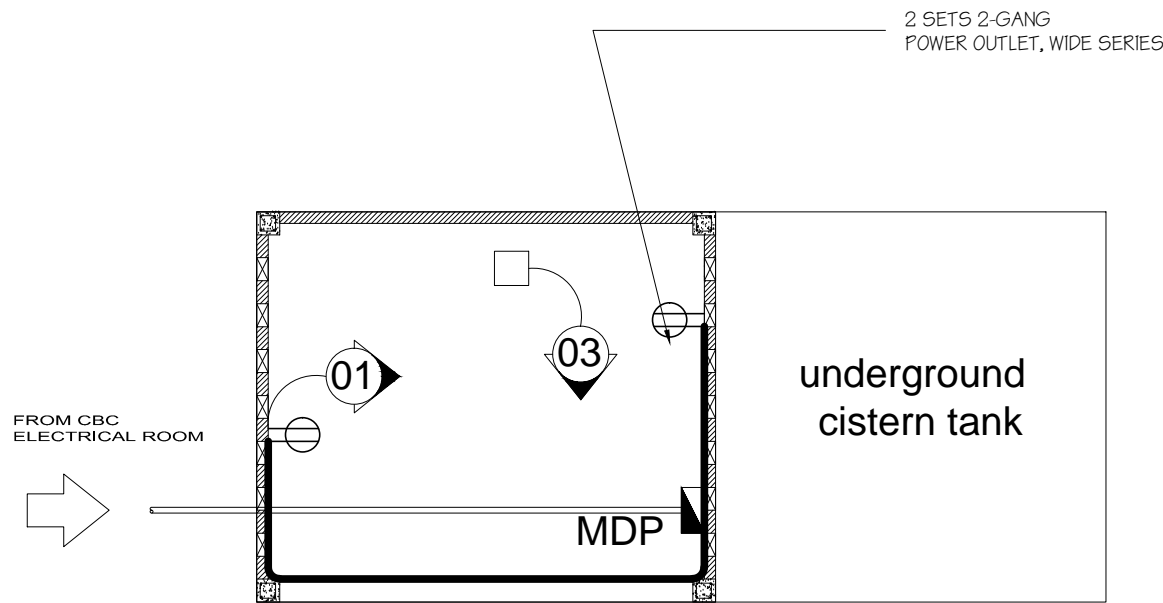




LIGHTING LAYOUT

SCALE

NTS



POWER LAYOUT

SCALE

NTS

Panelboard - Schedule of Loads														
CKT NO.	QTY	LOAD DESCRIPTION	VOLTS	TOTAL VA	AMP/CKT	CURRENT/PHASE			CKT PROTECTION		SIZE OF WIRE		CONDUIT SIZE	
						AB	BC	CA	AT	AF	TYPE	mm	TYPE	mm
1	4	Lighting outlet	230	200	0.87	4.00	4.00	4.00	20	50	THHN	3-3.5	PVC	20
	2	Convenience Outlet	230	720	3.13						THHN		PVC	20
2		Spare	230	0	8.00	8.00	8.00	8.00	30	50	THHN			
3	6	Fire Pump Controller	230		50.00	50.00	50.00	50.00	100	100	THHN	3-30.0	PVC	50
						62.00	62.00	62.00						

$$\text{Line Current} = (1.73) \times 62.00 \text{ A}$$
$$= 107.26 \text{ A}$$

$$\text{For Feeder Conductor} = 1.25 \times 107.26 \text{ A} = 134.08 \text{ A}$$

Use 3 - 38mm² THHN-2 cu.wire in 50mm PVC/RSC Pipe with 8.0mm² grounding wire

For Feeder Protection

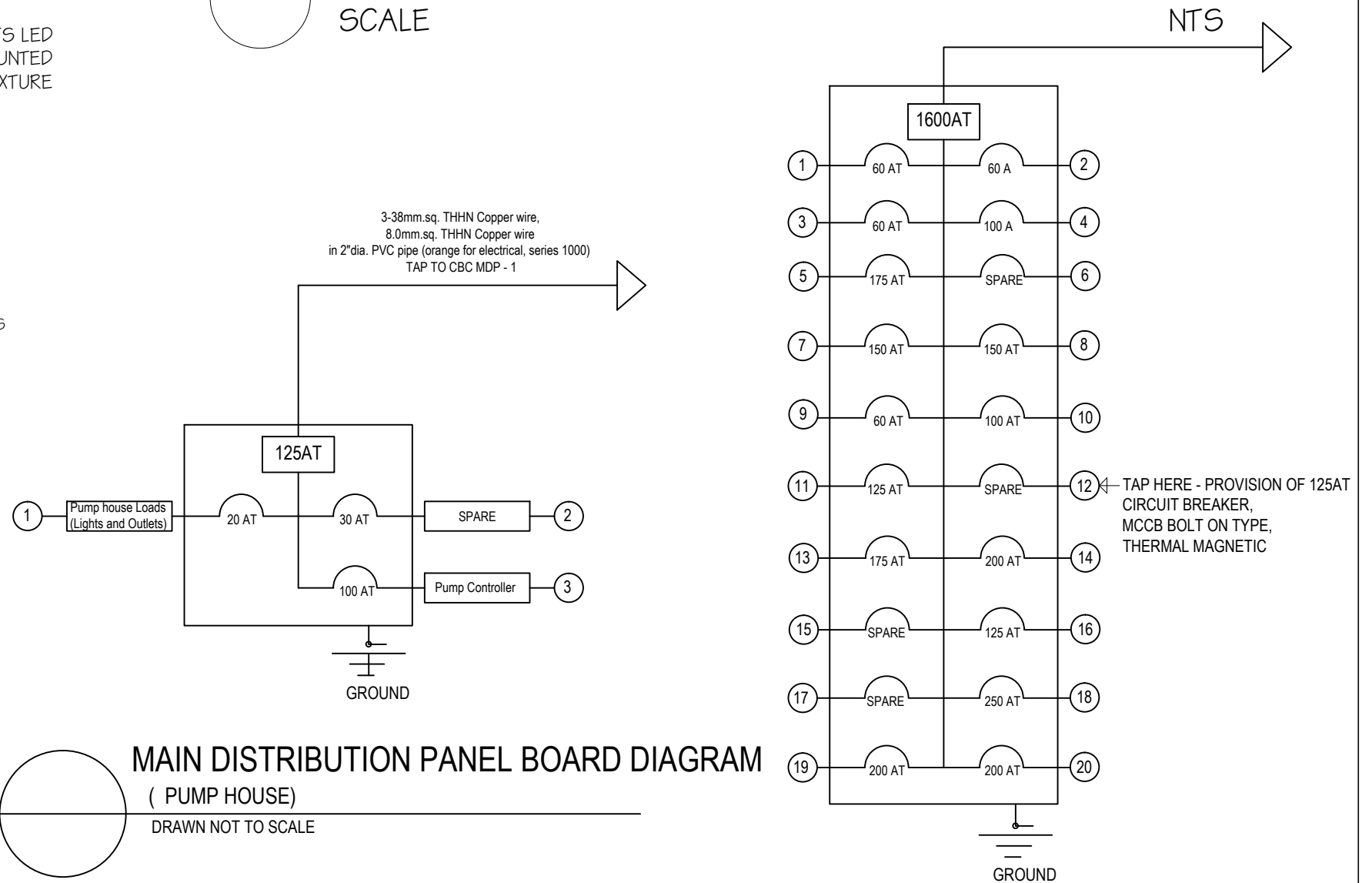
Use 125AT, 200AF, 3Phase 230V, MCCB Bolt on Type

Panelboard should be NEMA 1 Enclosure with front dead platecover with grounding busbar

All Breakers should be MCCB Bolt on Type, Thermal Magnetic, Industrial Type breaker (for all breakers)

PB LOAD SCHEDULE & RISER DIAGRAM

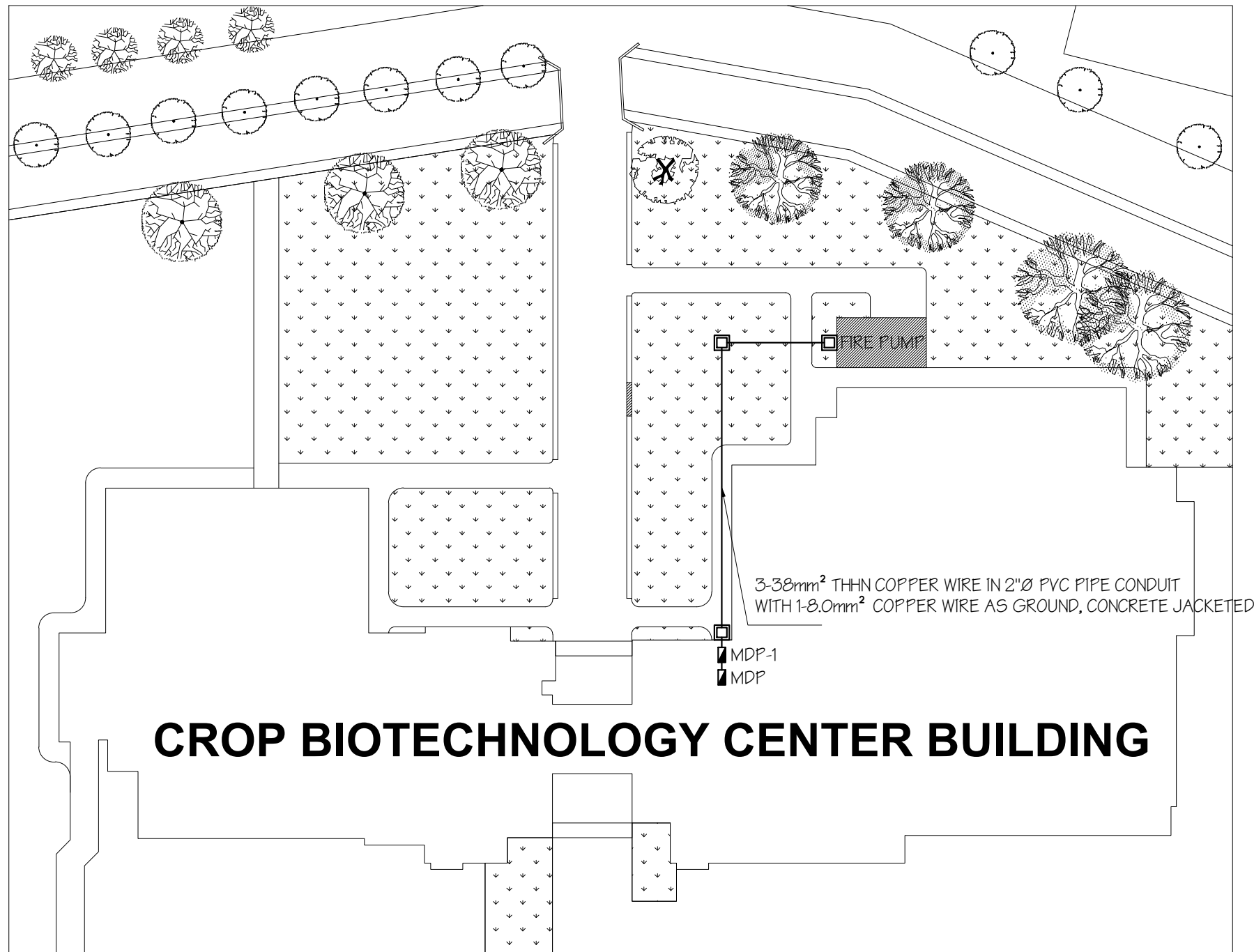
SCALE



MAIN DISTRIBUTION PANEL 1 - DIAGRAM

(CBC ELECTRICAL ROOM)

DRAWN NOT TO SCALE

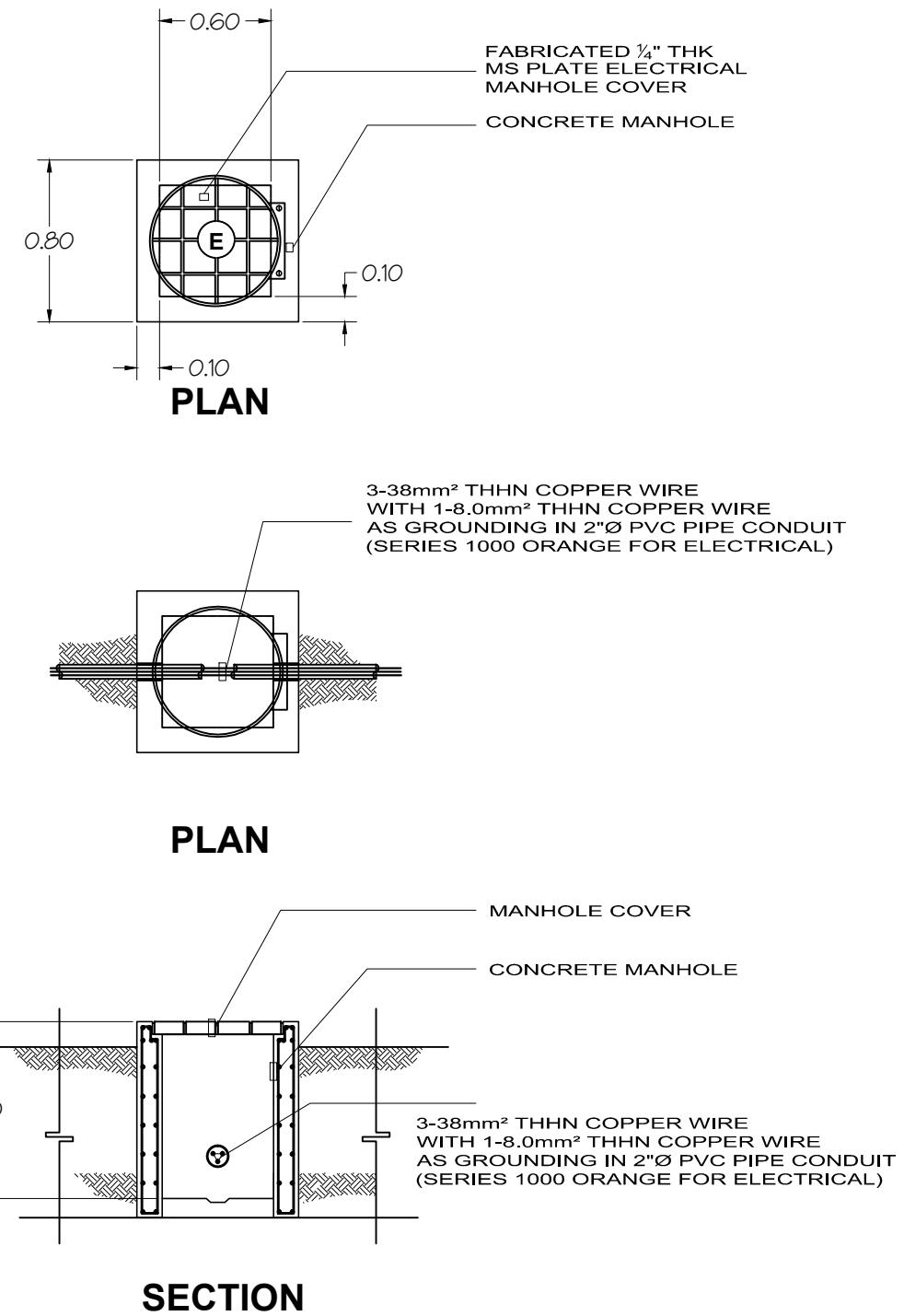


CROP BIOTECHNOLOGY CENTER BUILDING

MAIN FEEDER LINE LAYOUT

SCALE

NTS



MANHOLE DETAIL

SCALE

NTS