

BROKEN HILL POLICE STATION STORMWATER DRAINAGE CONCEPT PLAN

AUTHORITY STORMWATER NOTES:

1.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO CHECK ALL SET OUT AND LEVEL PRIOR TO COMMENCEMENT OF WORKS AND TO REPORT ANY DISCREPANCIES FOUND TO THE SUPERINTENDENT.

2.

ALL SET OUT DIMENSIONS ARE TO FACE OF KERB, CENTRELINE OF FENCE/BOLARD/PIPE.

3.

SMOOTH ALL TRANSITION BETWEEN NEW AND EXISTING WORK IN BOTH LEVEL AND ALIGNMENT.

4.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE ALL SAFETY FENCES, WARNING SIGNS, TRAFFIC DIVERSIONS AND THE LIKE DURING CONSTRUCTION. ALL WORKS TO COMPLY WITH OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS AND OTHER RELEVANT AUTHORITY SAFETY REQUIREMENTS.

5.

NO TREES SHALL BE REMOVED, CUTBACK OR RELOCATED WITHOUT THE WRITTEN INSTRUCTION FROM THE SUPERINTENDENT.

6.

THE CONTRACTOR SHALL PROVIDE CERTIFICATION AND COMPACTIONS AND PAVEMENT THICKNESS FROM A NATA REGISTERED TESTING AUTHORITY MINIMUM THREE TESTS PER LAYER AS FOLLOWS

7.

THE AUSPEC SPECIFICATION SHALL BE THE SPECIFICATION FOR THESE WORKS.

PIPE BACKFILL

DENSITY INDEX 75

SELECT FILL

95% STANDARD

SELECT FILL (LESS THAN 300mm FOLLOW BASE COURSE)

98% MODIFIED

BASE COURSE

100% MODIFIED

DRAINAGE NOTES:

ALL PIPES TO BE LAID ON 75mm SAND BED WITH THE BARRELS FULLY SUPPORTED.

100mm AND 150mm DIAMETER PIPES TO BE LAID ON MINIMUM 1% GRADE.

MINIMUM DEPTH OF COVER FOR PIPES NOT SUBJECT TO VEHICULAR LOADING TO BE 300mm

ALL DRAINAGE PIPES LAID UNDER PAVEMENT SHALL BE REINFORCED CONCRETE WITH RUBBER RING JOINTS.

BACKFILL TRENCHES WITH COMPACTED SAND OR APPROVED AGGREGATE MATERIAL.

ALL PITS TO HAVE 600 x 600mm INTERNAL DIMENSIONS (U.N.O).

SILT ARRESTORS TO HAVE 900 x 900mm INTERNAL DIMENSIONS.

HEAVY DUTY GRATES AND COVERS ARE TO BE PROVIDED IN TRAFFICABLE AREAS.

PIT GRATE TO BE TYPE WELDLOK OR APPROVED EQUIVALENT.

ALL PITS SHALL BE PROVIDED WITH A LOCKING LIP.

ALL PITS SHALL BE MAINTAINED REGULARLY.

TOP OF BENCHING SHALL BE TO THE HALF OF THE OUTLET PIPE DIAMETER.

MAXIMUM FRONT ENTRY PIPE:-
STRAIGHT ENTRY - Ø750
SKEW ENTRY - Ø525

Ø100 SUBSOIL DRAINAGE PIPE 3000mm LONG WRAPPED IN FABRIC SOCK TO BE PROVIDED ADJACENT TO INLET PIPES.

COMPRESSIVE STRENGTH f'c FOR CAST IN SITU CONCRETE TO BE A MINIMUM OF 32 MPa AT 28 DAYS.

PROVIDE CLEANING EYES TO ALL DOWNPIPES NOT DIRECTLY CONNECTED TO PITS.

ISOLATED JOINTS TO BE PROVIDED TO ISOLATE CONCRETE PAVEMENTS FROM PITS.

ALL TRENCH GRATES PROVIDED SHALL HAVE MINIMUM CLEAR WIDTH OF 200mm.

STORMWATER DRAINAGE CONNECTIONS TO THE MAIN SYSTEM SHALL BE TO THE REQUIREMENTS AND THE SATISFACTION OF LOCAL COUNCIL.

THESE STORMWATER DRAWINGS SHALL BE IN ACCORDANCE WITH AS 3500.3 AND LOCAL COUNCIL REQUIREMENTS.

PROVIDE HEEL GUARD TO ALL PIT LIDS AND GRATED TRENCH LIDS AT PEDESTRIAN AREAS.

ALL REINFORCED CONCRETE PIPES ARE TO BE CLASS 2 STRENGTH U.N.O



DRAWING REGISTER		
NO.	TITLE	REV.
SW.01	COVER SHEET	A
SW.02	GROUND FLOOR DRAINAGE CONCEPT PLAN	A
SW.03	STORMWATER DRAINAGE DETAILS	A
SE.01	SOIL EROSION AND SEDIMENT CONTROL PLAN	A
SE.02	SOIL EROSION AND SEDIMENT CONTROL DETAILS	A

ABBREVIATIONS

Ø OR DIA

DIAMETER

CNR

CALIFORNIA BEARING RATIO

CH

CHAINAGE

CL

CENTRE LINE

CO

CLEAR OUT

DD

DISH CROSSING

DDO

DISH DRAIN OUTLET

DEJ

DOWELLED EXPANSION JOINT

DGB

DENSE GRADED BASECOURSE

DGS

DENSE GRADED SUB-BASE

DP

DOWNPIPE

e

EXISTING

FFL

FINISHED FLOOR LEVEL

GTD

GRATED TRENCH DRAIN

GSIP

GRATED SURFACE INLET PIT

HYD

HYDRANT

IJ

ISOLATING JOINT

IK

INTEGRAL KERB

IL

INVERT LEVEL

IP

INTERSECTION POINT

KIP

KERB INLET PIT

KO

KERB ONLY

K&G

KERB & GUTTER

KR

KERB RETURN

LS

LONGITUDINAL SECTION

NGL

NATURAL GROUND LEVEL

OPF

OVERLAND FLOW PATH

OSD

ON-SITE DETENTION

R

RADIUS

RCP

REINFORCED CONCRETE PIPE

RK

ROLL KERB & GUTTER

RL

REDUCED LEVEL

RW

RETAINING WALL

RWT

RAINWATER TANK

SJ

SAWN CONTROL JOINT

SMH

SEWER MAN HOLE

SW

STORMWATER

SWP

STORMWATER PIT

SWRM

STORMWATER RISING MAIN

SWS

STORMWATER SUMP

SV

STOP VALVE

TOK

TOP OF KERB

TOW

TOP OF WALL

TP

TANGENT POINT

UPVC

UNPLASTICISED POLYVINYL CHLORIDE

UNO

UNLESS NOTED OTHERWISE

WPJ

WEAKENED PLANE JOINT

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PROJECT

BROKEN HILL
POLICE STATION

TITLE

COVER SHEET

SCALES

as noted @ A1

DATE

APR. 2020

DRAWN

C.KE

DESIGN

C.A

VERIFIED

-

APPROVED

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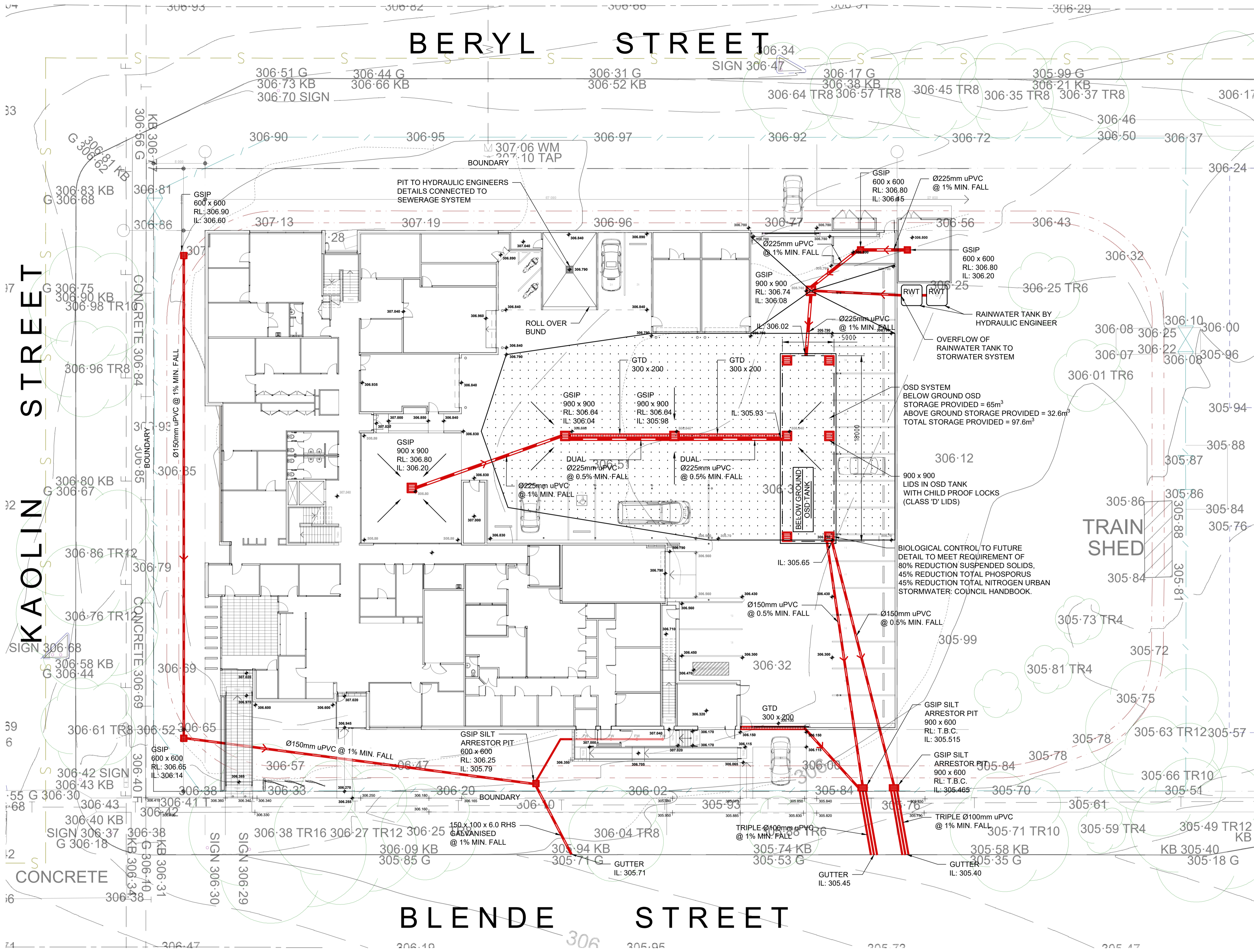
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SW.01



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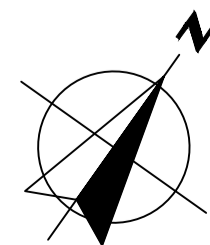
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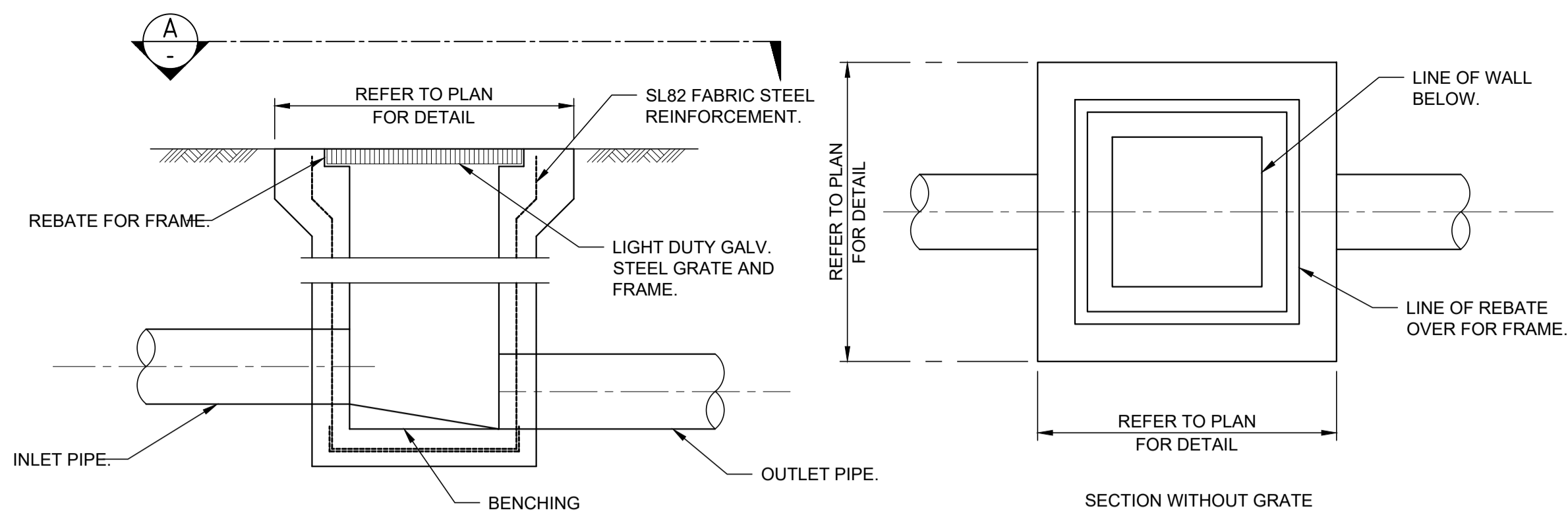
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PROJECT			
BROKEN HILL POLICE STATION			
TITLE			
GROUND FLOOR DRAINAGE CONCEPT PLAN			
SCALES		DATE	
as noted @ A1		APR. 2020	
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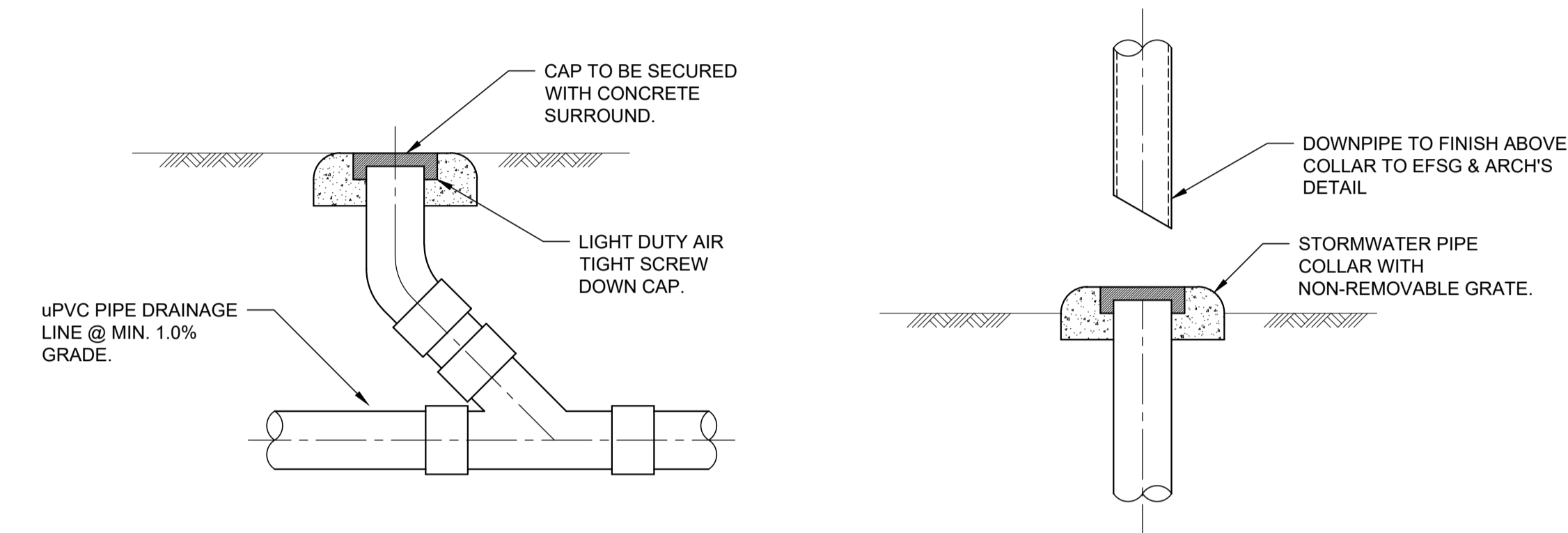


GROUND DRAINAGE CONCEPT PLAN
SCALE 1:200
NOTE:
PIT AND PIPE SIZES TO BE CONFIRMED.



STORMWATER PIT DETAIL
SCALE 1:10

SECTION A
SCALE 1:10



CLEANING EYE DETAIL
SCALE 1:10

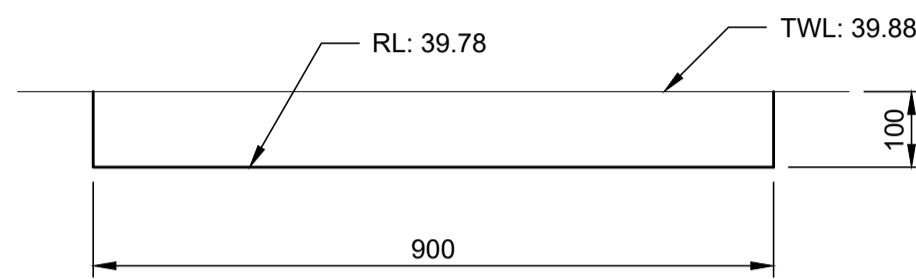
DOWNPIPE CONNECTION DETAIL
SCALE 1:10

STEP IRONS DETAIL
SCALE 1:10

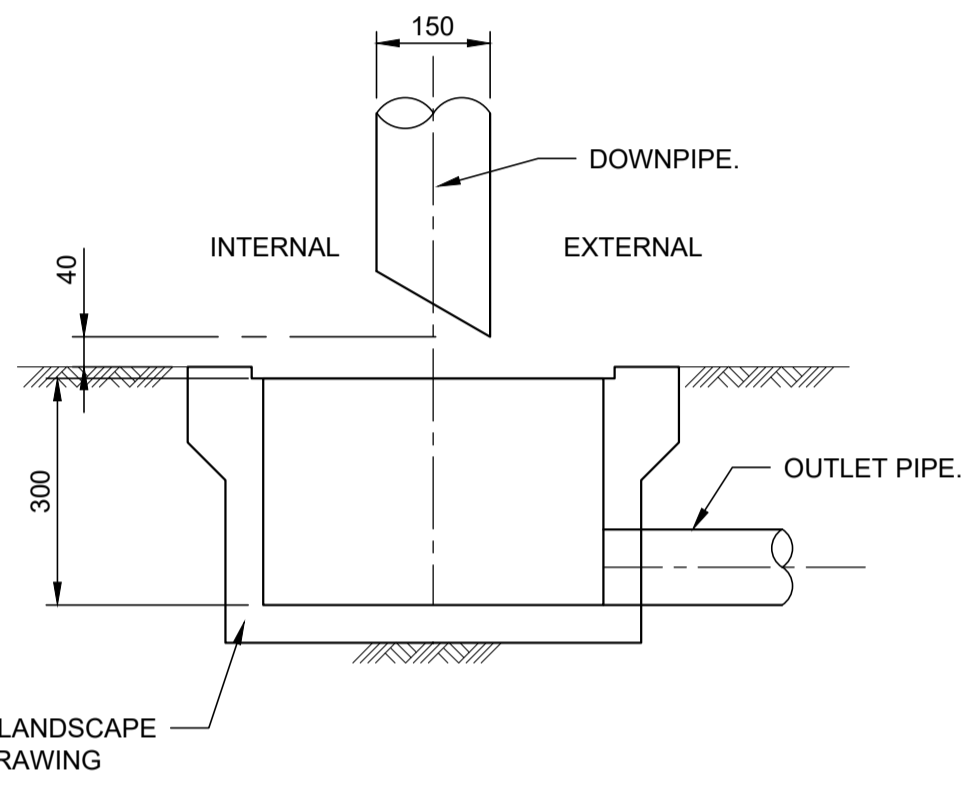
SECTION B
SCALE 1:10

DEBRIS SCREEN DETAIL
NOT TO SCALE

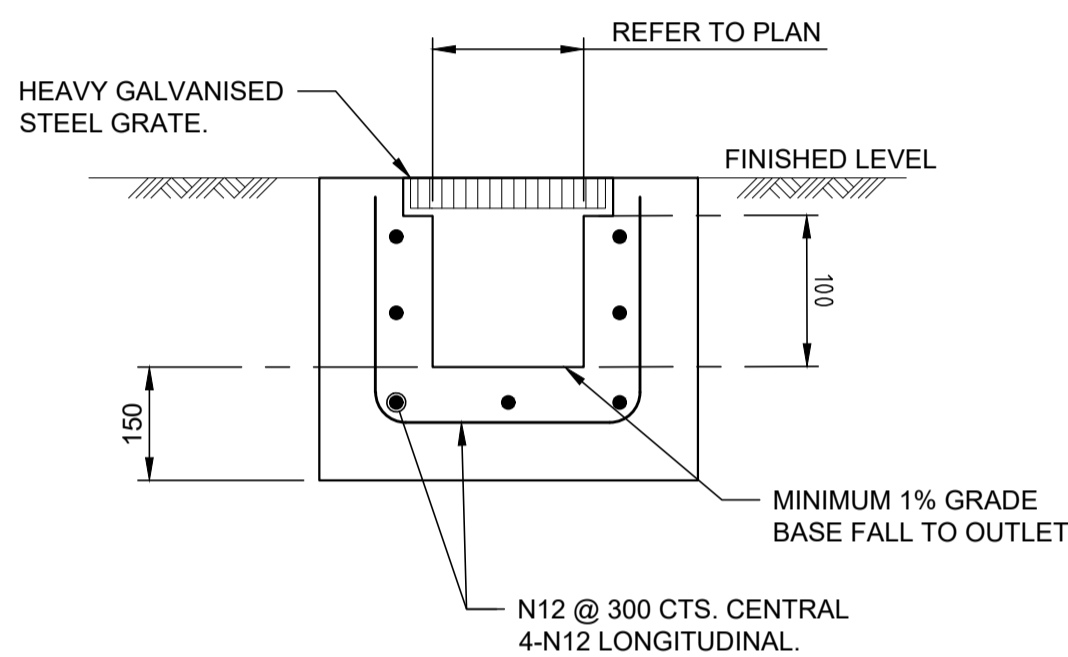
ORIFICE PLATE DETAIL
SCALE 1:10



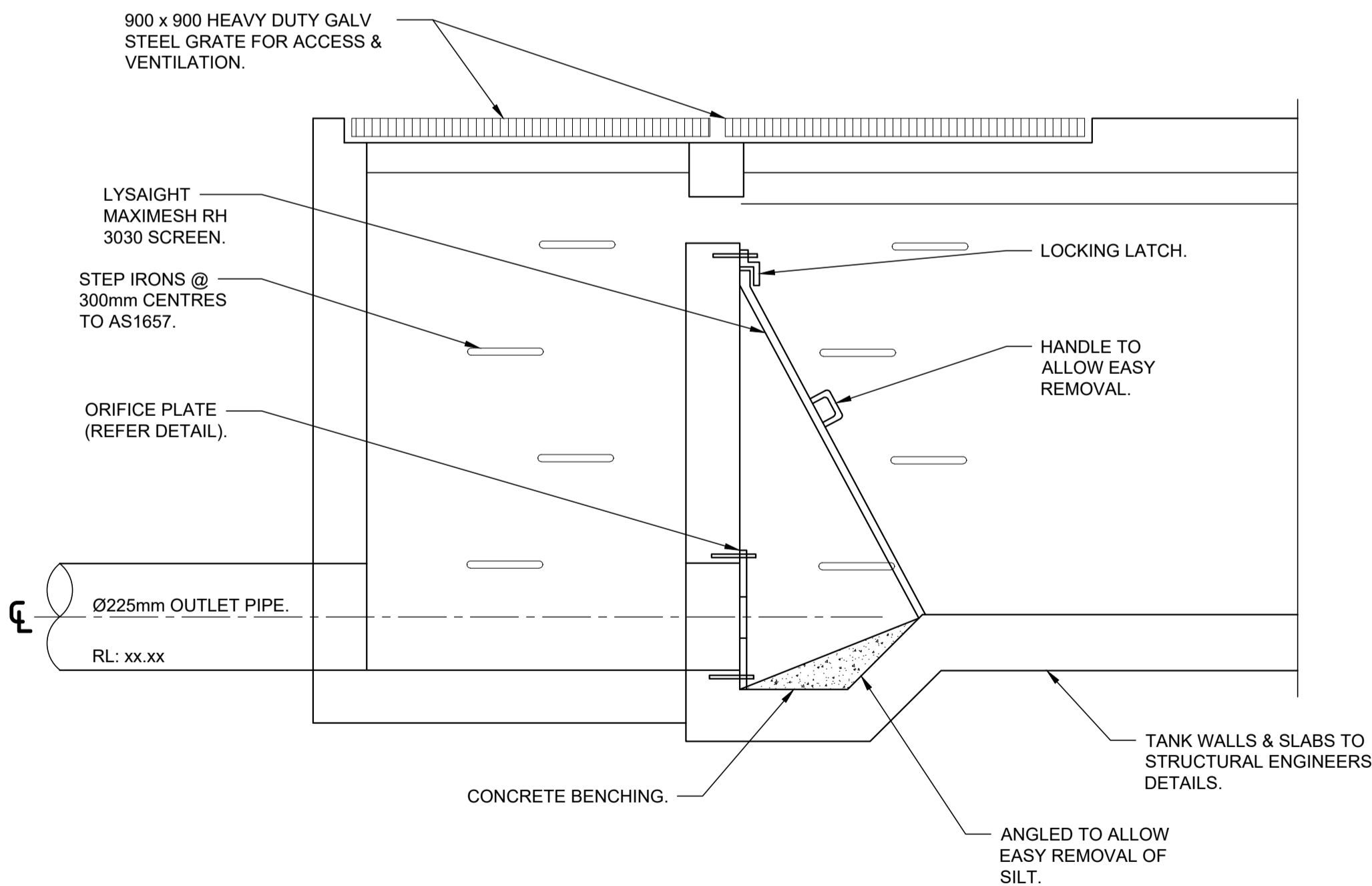
HEAD WIER DETAIL
SCALE 1:10



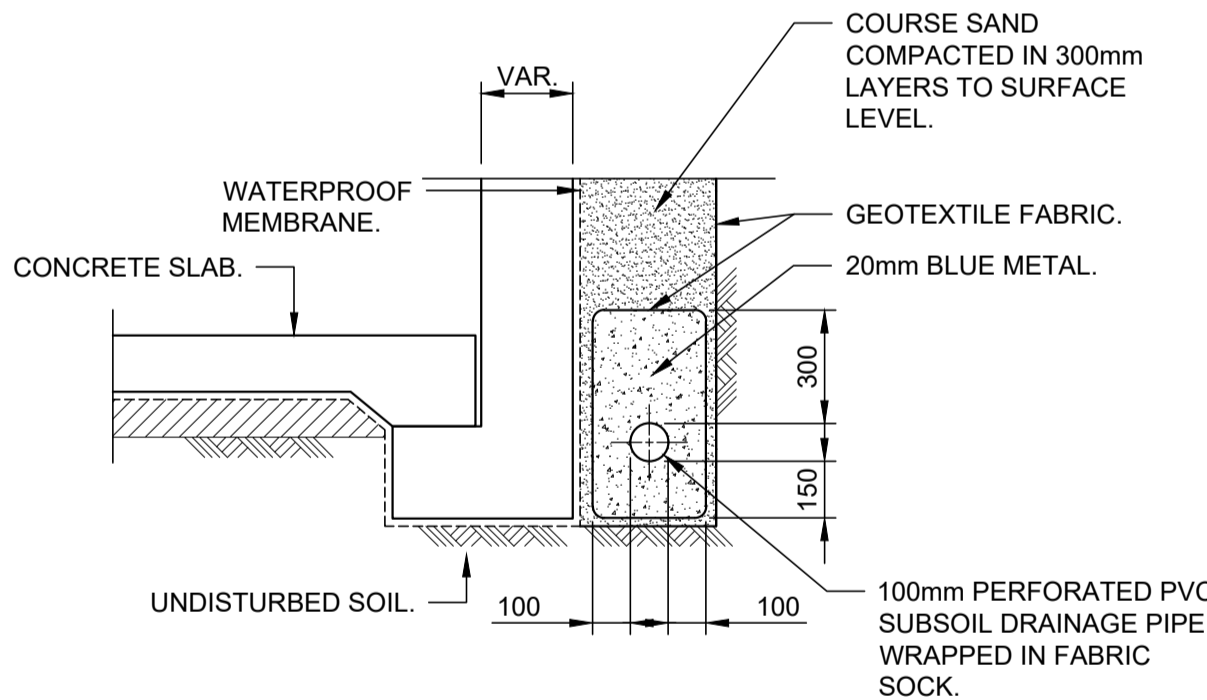
DOWNPIPE CONNECTION VARIATION DETAIL
SCALE 1:10



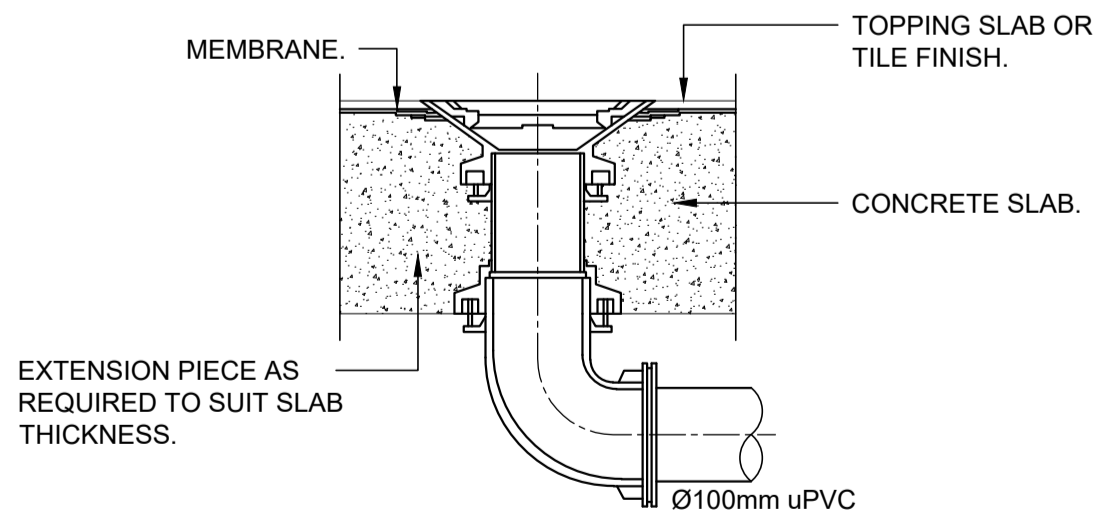
TYPICAL GRATED DRAIN DETAIL
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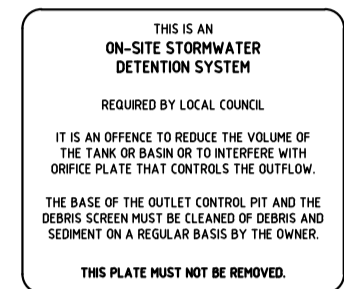
DETENTION TANK DETAIL
NOT TO SCALE



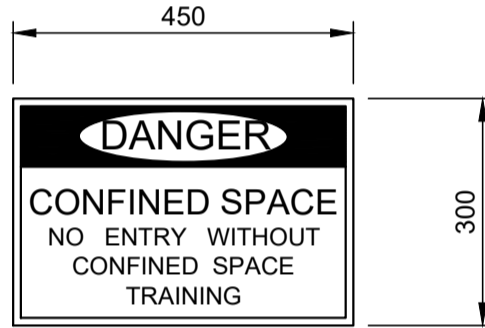
TYPICAL SUBSOIL DRAINAGE DETAIL
SCALE 1:20



RAINWATER OUTLET DETAIL
NOT TO SCALE



OSD SIGN DETAIL
NOT TO SCALE



CONFINED SPACE SIGN DETAIL
SCALE 1:10

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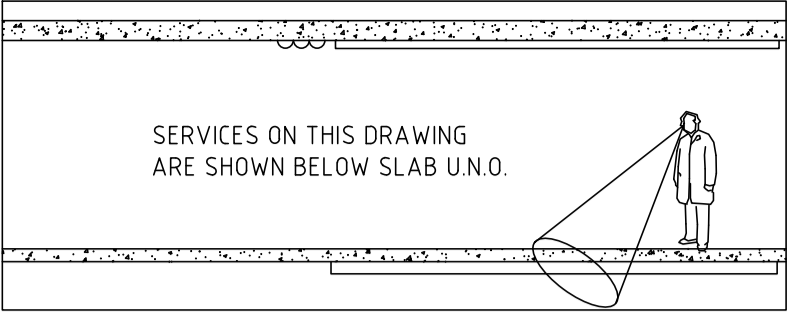
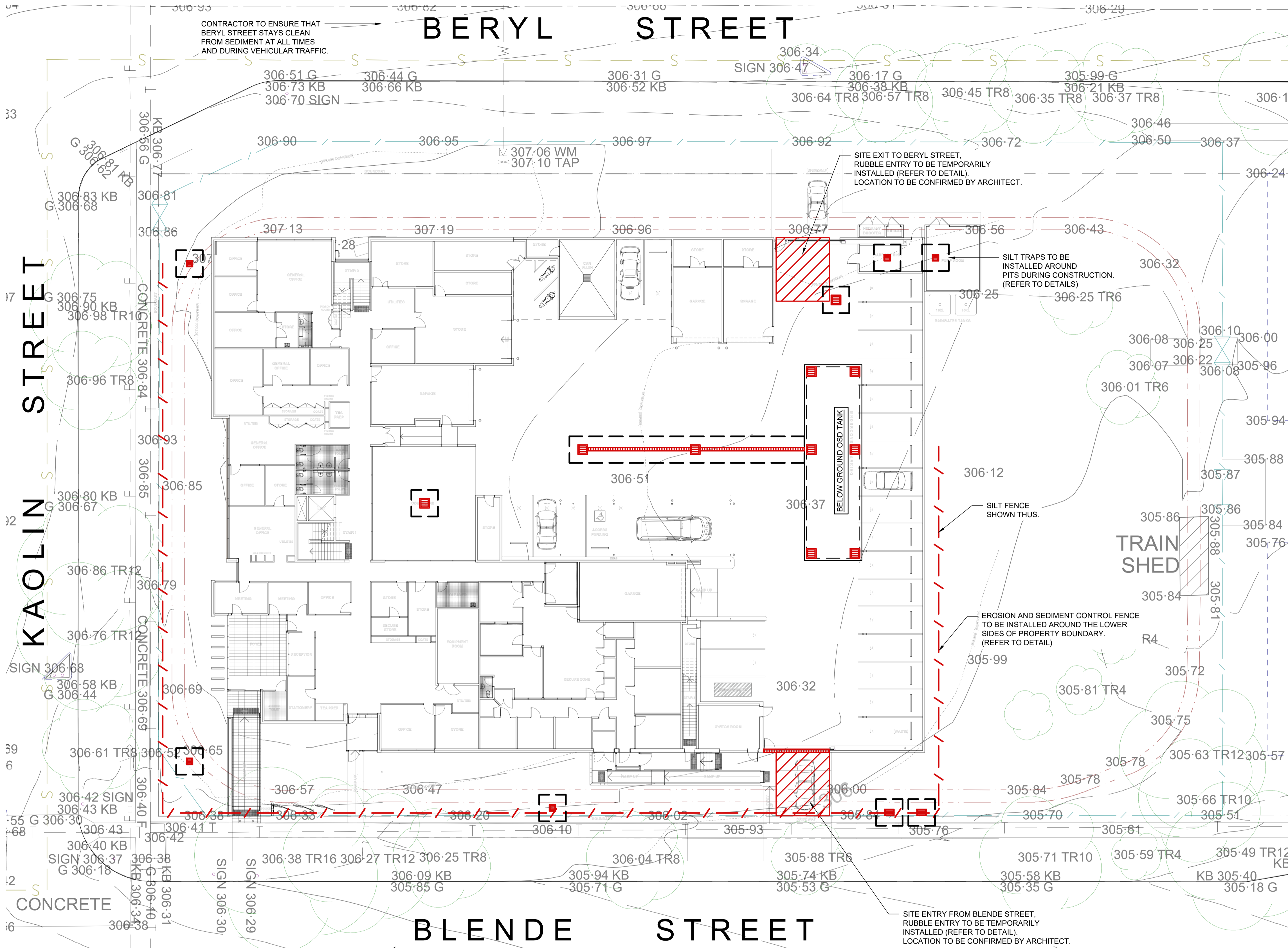
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PROJECT
BROKEN HILL POLICE STATION

TITLE
COVER SHEET

SCALES			as noted @ A1		DATE	APR. 2020	
DRAWN		DESIGN		VERIFIED		APPROVED	
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GENERAL NOTES.

1. THIS PLAN IS A CONCEPT PLAN ONLY FOR STORMWATER DISPOSAL & EROSION CONTROL. IT IS NOT SUITABLE FOR CONSTRUCTION. THIS PLAN SHOULD BE ADAPTED BY THE BUILDER DURING DEMOLITION, EXCAVATION & CONSTRUCTION PHASES TO ENSURE ADEQUATE PERFORMANCE.
2. ALL DRAINAGE LAYOUT & DETAILS ARE DIAGRAMMATIC & INDICATIVE ONLY. ACTUAL LOCATION, SIZES, LEVELS & GRADES MAY LATER WHEN DETAIL DESIGN WORKS ARE DOCUMENTED.

CLAY SOILS

A SYSTEM SHALL BE INSTALLED TO EITHER:

1. TRANSPORT STORMWATER RUNOFF WITH SUSPENDED SOLIDS FROM SITE VIA PUMP TRUCKS.
2. TREAT THE STORMWATER RUNOFF WITH SUSPENDED SOLIDS SO THE DISCHARGE WATER QUALITY TO COUNCIL STORMWATER DRAINAGE SYSTEM HAS A MAXIMUM CONCENTRATION OF SUSPENDED SOLIDS THAT DOES NOT EXCEED 50 MILLIGRAMS PER LITRE IN ACCORDANCE WITH THE PROTECTION OF THE ENVIRONMENT OPERATION ACT (POEO 1997) AND SHALL BE APPROVED BY THE LOCAL COUNCIL.

EROSION & SEDIMENTATION CONTROL NOTES

1. CONTRACTOR SHALL PROVIDE SEDIMENT FENCING MATERIAL DURING CONSTRUCTION TO THE LOW SIDE OF THE WORKS. TIE SEDIMENT FENCING MATERIAL TO CYCLONE WIRE SECURITY FENCE. SEDIMENT CONTROL FABRIC SHALL BE AN APPROVED MATERIAL (EG. HUMES PROPEX SILT STOP) STANDING 300mm ABOVE GROUND & EXTENDING 150mm BELOW GROUND.
2. EXISTING DRAINS LOCATED WITHIN THE SITE SHALL ALSO BE ISOLATED BY SEDIMENT FENCING MATERIAL.
3. NO PARKING OR STOCKPILING OF MATERIAL IS PERMITTED ON THE LOWER SIDE OF THE SEDIMENT FENCE.
4. GRASS VERGES SHALL BE MAINTAINED AS MUCH AS PRACTICAL TO PROVIDE A BUFFER ZONE TO THE CONSTRUCTION SITE.
5. CONSTRUCTION ENTRY/EXIT SHALL BE VIA THE LOCATION NOTED ON THE DRAWING. CONTRACTOR SHALL ENSURE ALL DROPPABLE SOIL & SEDIMENT IS REMOVED PRIOR TO CONSTRUCTION TRAFFIC EXITING SITE. CONTRACTOR SHALL ENSURE ALL CONSTRUCTION TRAFFIC ENTERING & LEAVING THE SITE DO SO IN A FORWARD DIRECTION.

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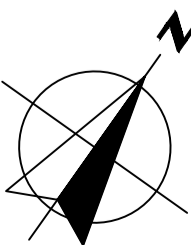
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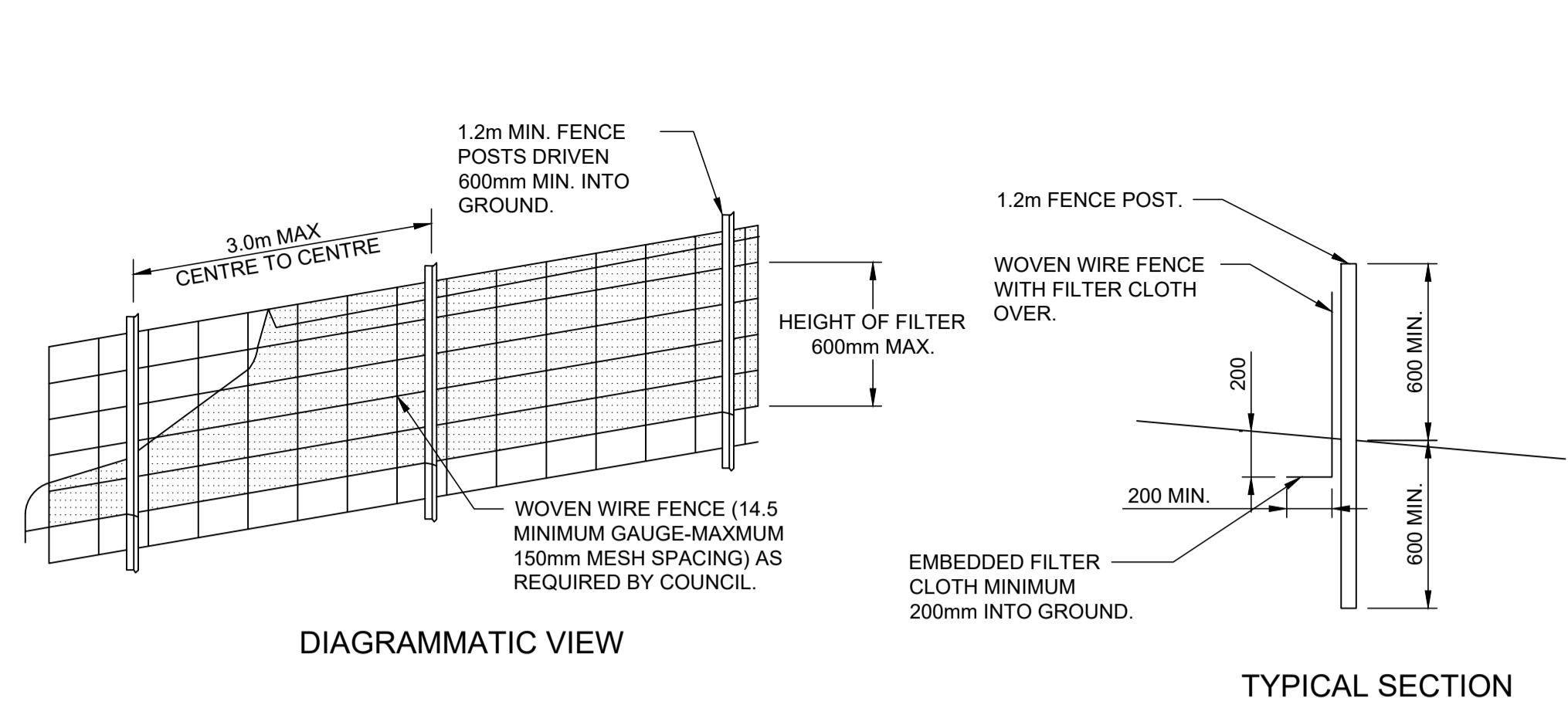
PROJECT
BROKEN HILL POLICE STATION

TITLE
SOIL EROSION AND SEDIMENT CONTROL PLAN

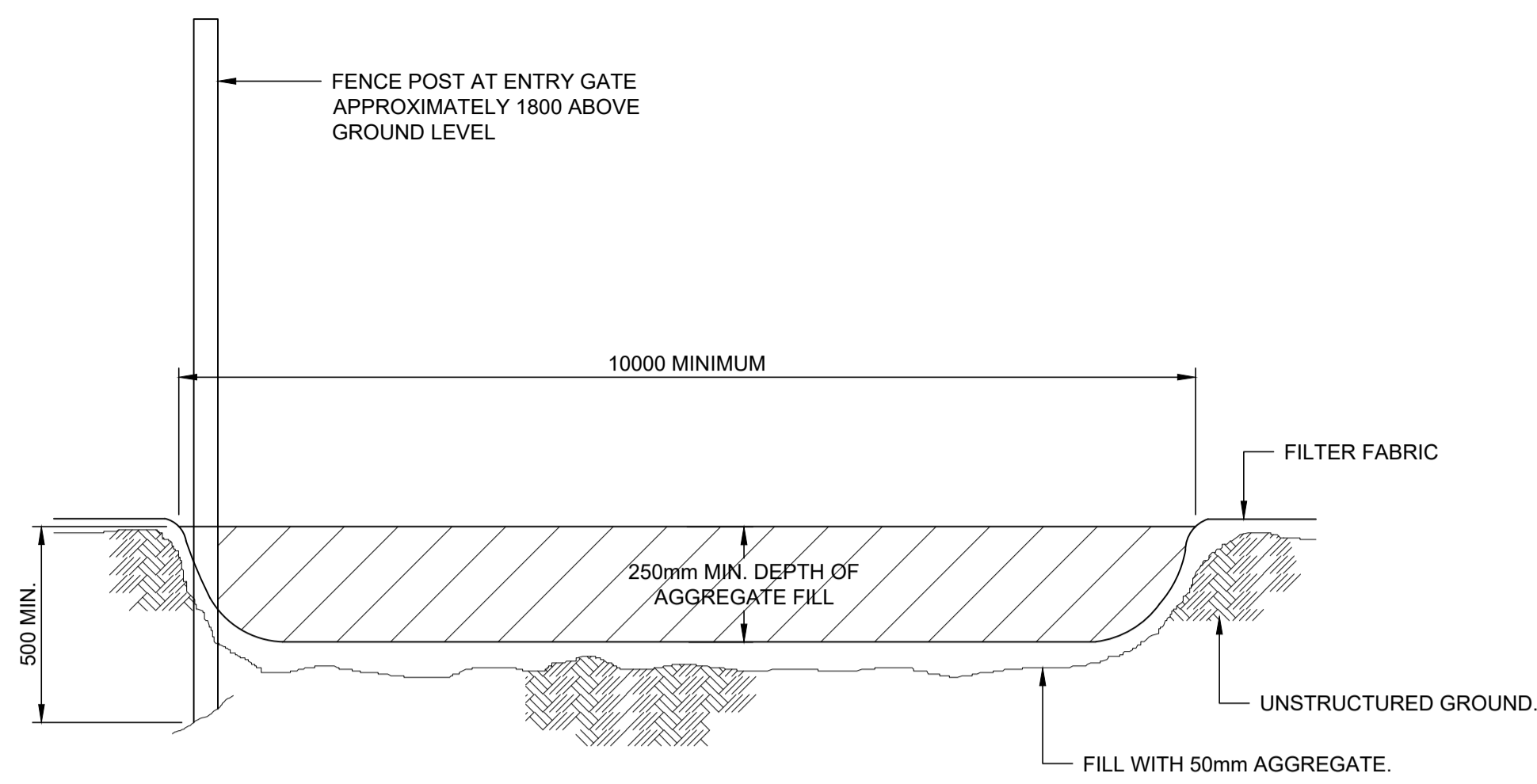
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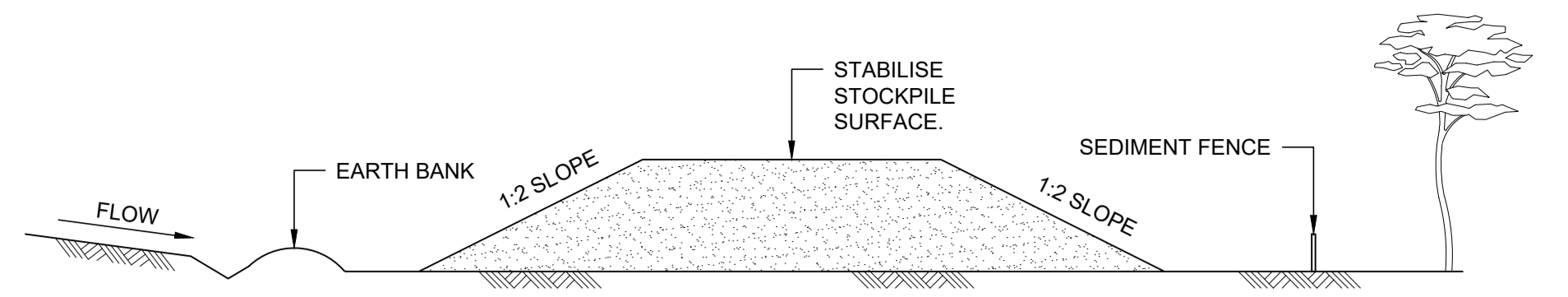
SOIL EROSION AND SEDIMENT CONTROL PLAN
SCALE 1:200



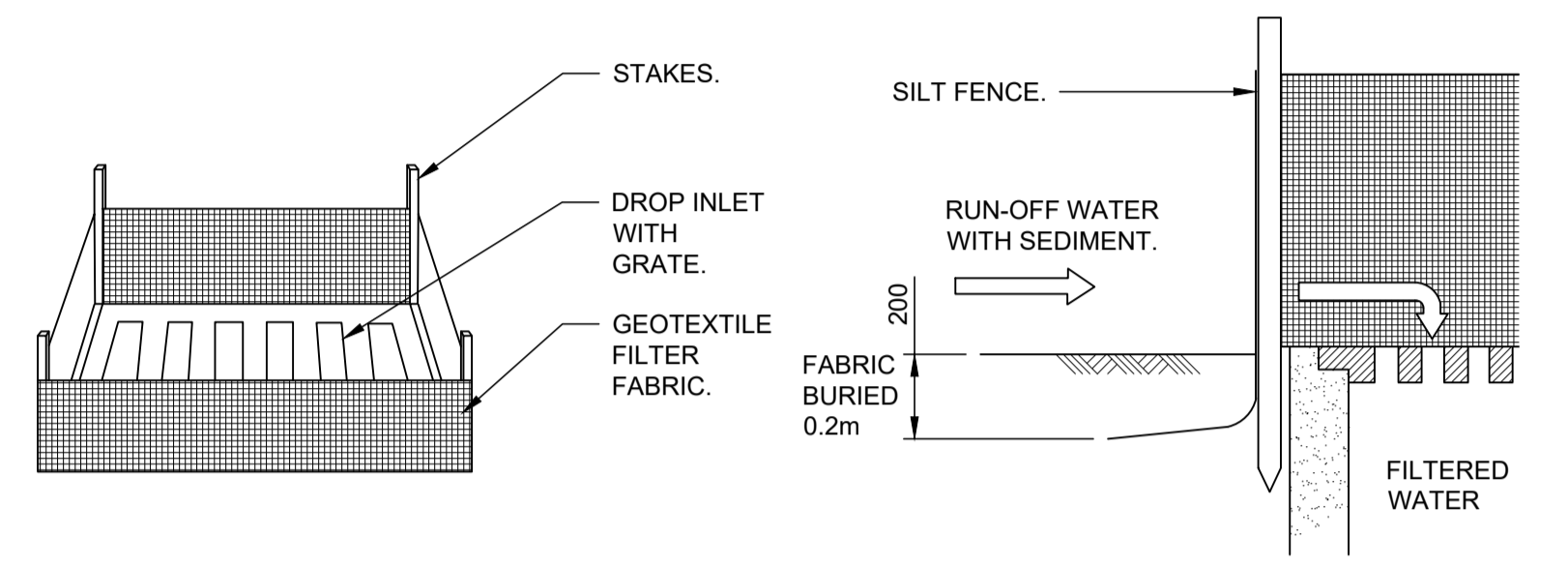
SEDIMENT FENCE DETAIL
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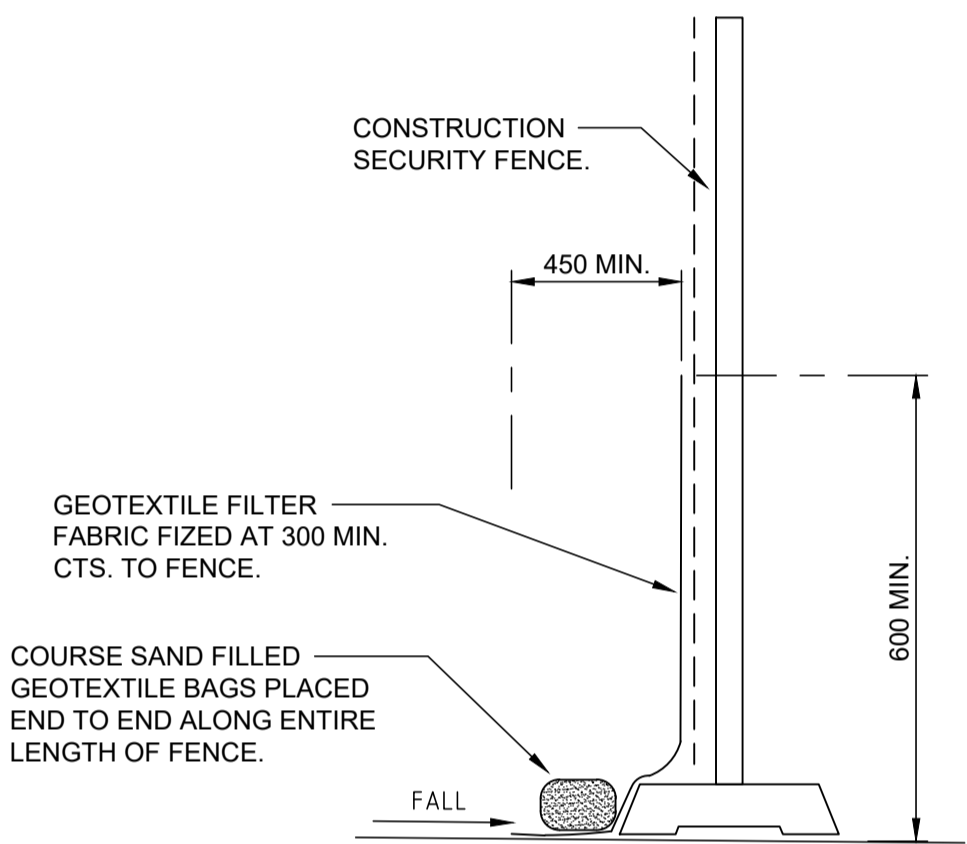
CROSS-SECTION OF CONSTRUCTION ENTRY/EXIT DETAIL
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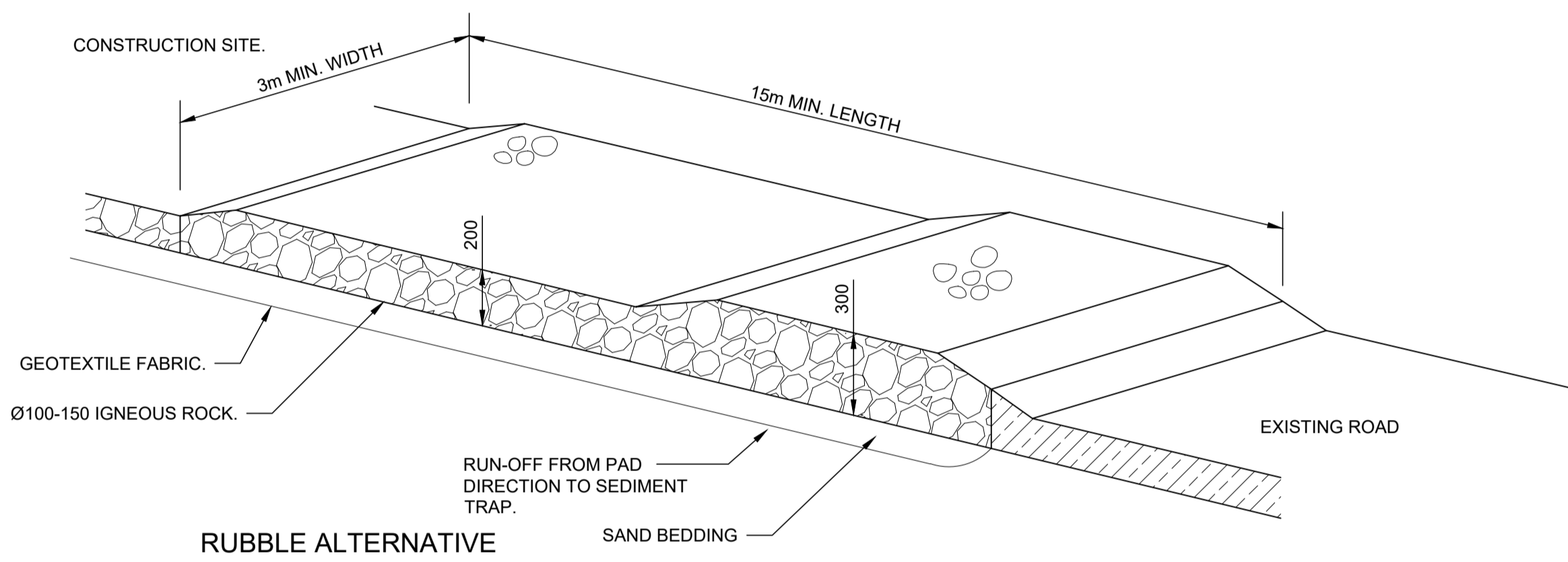
STOCKPILES DETAIL
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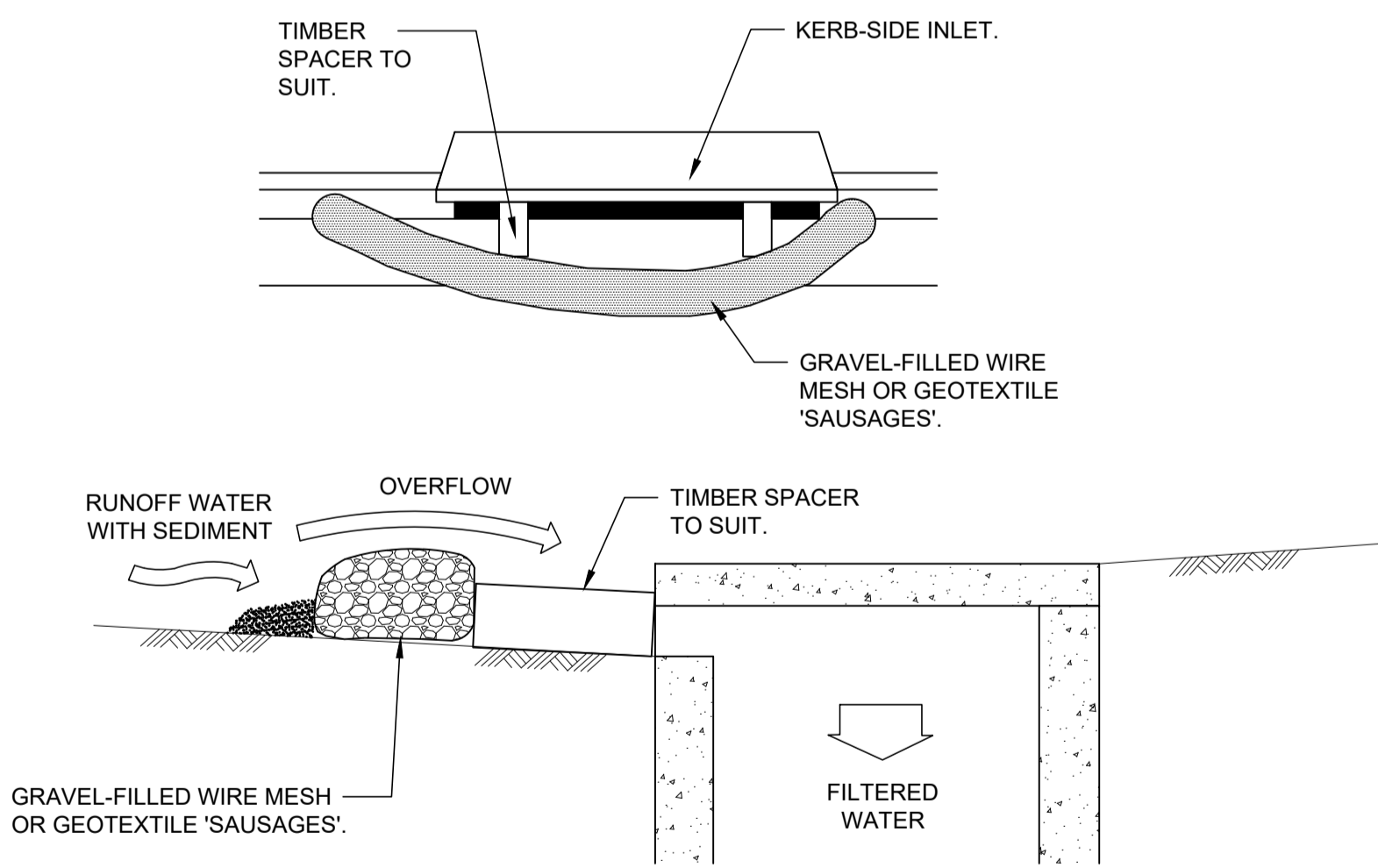
SUMP SEDIMENT TRAP DETAIL
NOT TO SCALE



SEDIMENT FENCE ON PAVED SURFAC E
NOT TO SCALE

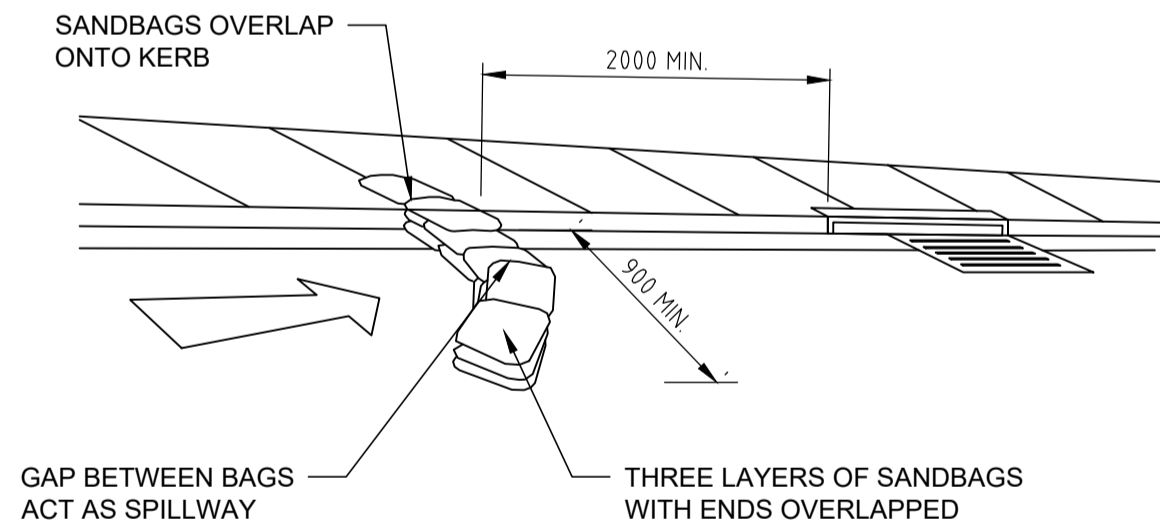


TEMPORARY CONSTRUCTION EXIT
NOT TO SCALE



MESH AND GRAVEL INLET FILTER
SCALE 1:20

- NOTES:**
1. FABRICATE A SSLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
 2. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH Ax 400mm WIDE.
 3. PLACE THE FILTER AT THE OPENING LEAVING AT LEAST A 100mm SPACE BETWEEN IT AND THE KERB INLET. MAINTAIN THE OPENING WITH SPACER BLOCKS.
 4. FORM A SEAL WITH THE KERB TO PREVENT SEDIMENT BYPASSING THE FILTER.
 5. SANDBAGS FILLED WITH GRAVEL CAN SUBSTITUTE FOR THE MESH OR GEOTEXTILE PROVIDING THEY ARE PLACED SO THAT THEY CAN FIRMLY ABUT EACH OTHER AND SEDIMENT/LADEN WATERS CANNOT PASS BETWEEN.



SANDBAG SEDIMENT TRAP FOR KERB INLET ON GRADE
NOT TO SCALE

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PROJECT			
BROKEN HILL POLICE STATION			
TITLE			
SOIL EROSION AND SEDIMENT CONTROL DETAILS			
SCALES			DATE
as noted @ A1			APR. 2020
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