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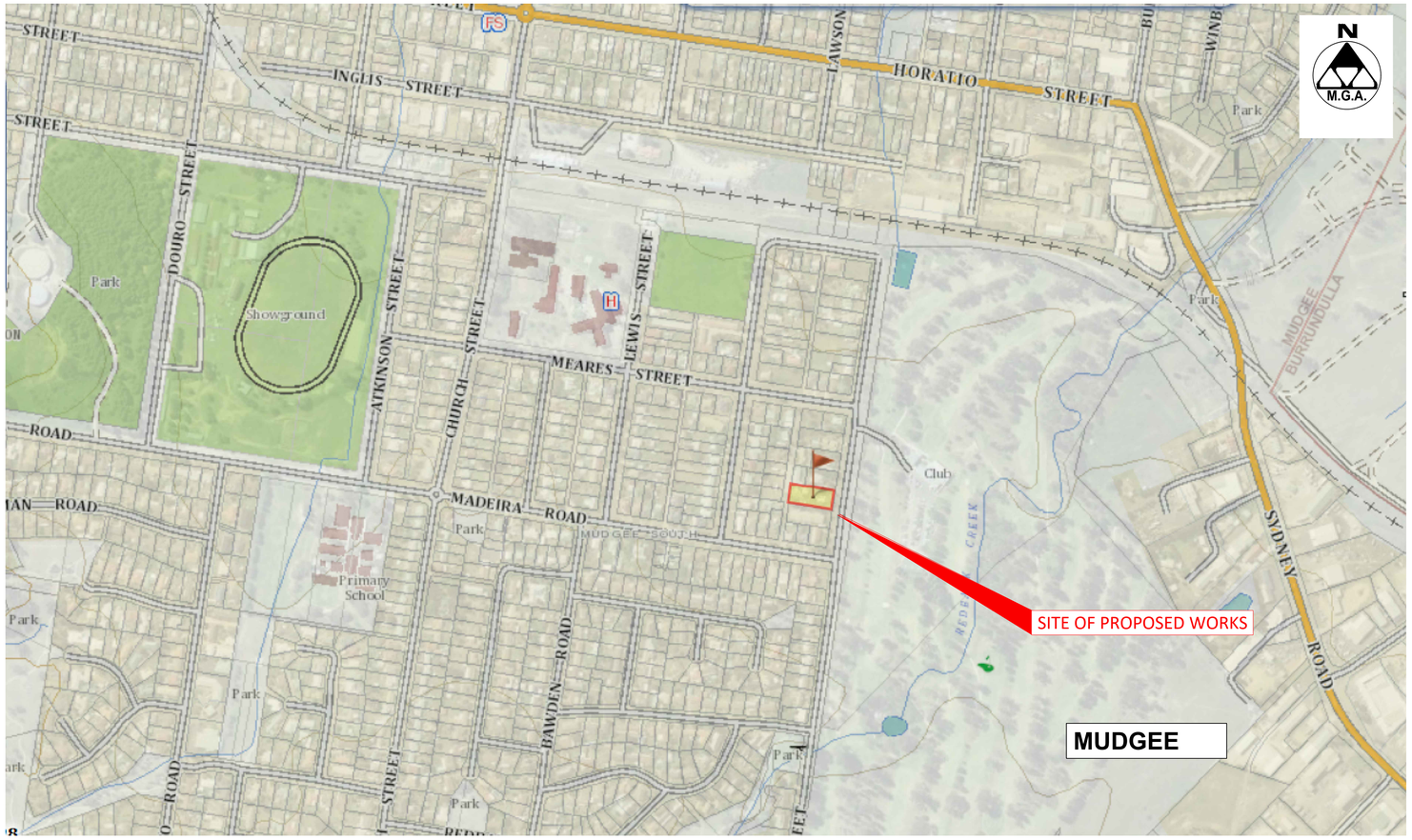
Proposed Unit Complex

30 Robertson St, Mudgee, NSW, 2850

SCHEDULE OF DRAWINGS

SHEET No.	DESCRIPTION
45513-C00	COVER SHEET AND DRAWING SCHEDULE
45513-C01	EXISTING SITE PLAN
45513-C10	PROPOSED STORMWATER MANAGEMENT PLAN
45513-C11	PROPOSED ROOF DRAINAGE PLAN
45513-C12	STORMWATER NOTES & DETAILS



LOCALITY PLAN
NOT TO REDUCTION RATIO

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Project
PROPOSED UNIT COMPLEX

Site Address
30 ROBERTSON STREET
MUDGEE NSW 2850

Client
HAYES CONSTRUCTION PTY LTD

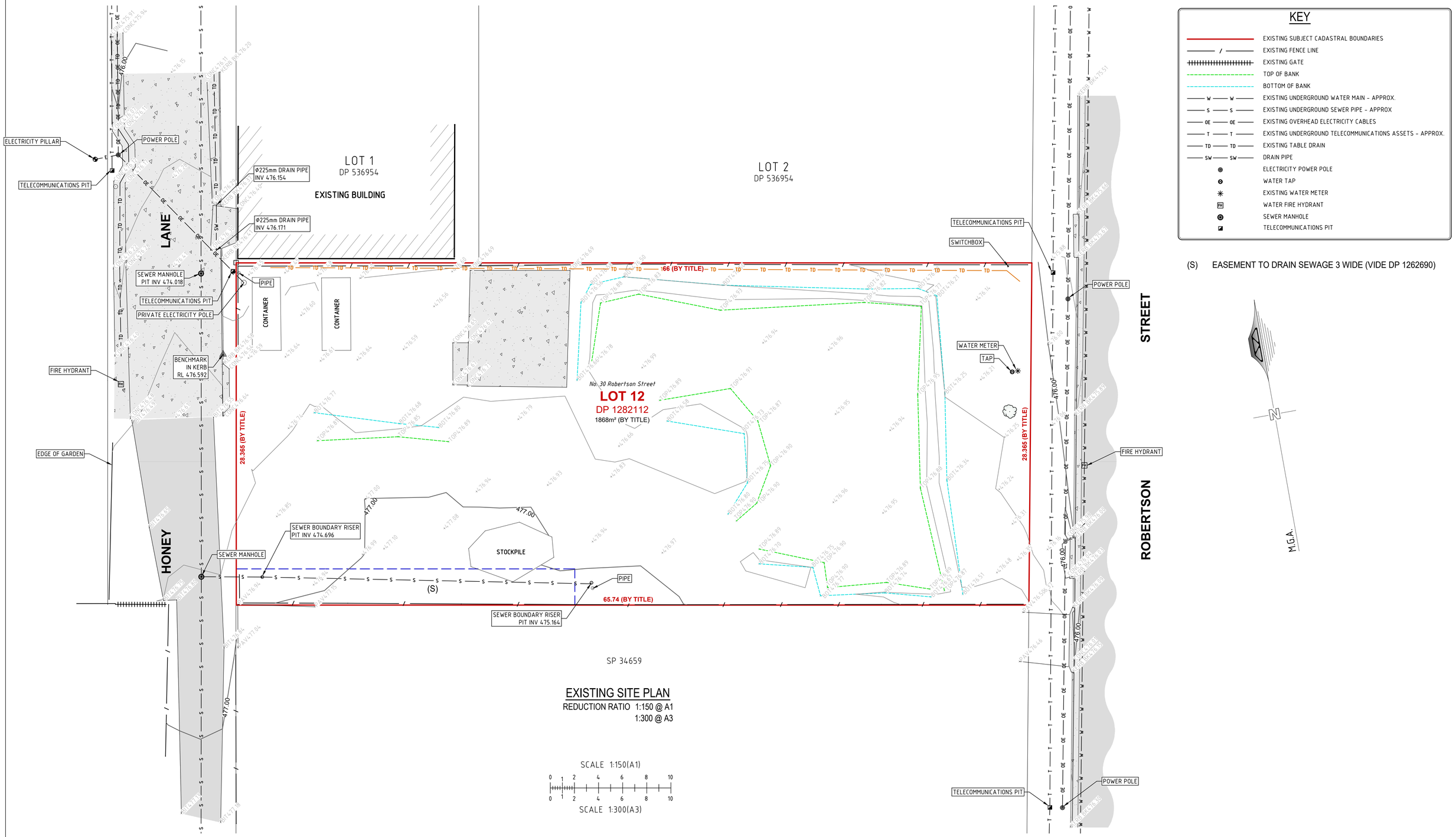
Drawing Title
COVER SHEET & DRAWING SCHEDULE

Design	ST	Original Sheet Size	A1
Drawn	ST		
Check	LM	Revision	A

Certification

Project No 45513

Drawing No C00



KEY

- EXISTING SUBJECT CADASTRAL BOUNDARIES
- EXISTING FENCE LINE
- EXISTING GATE
- TOP OF BANK
- BOTTOM OF BANK
- EXISTING UNDERGROUND WATER MAIN - APPROX.
- EXISTING UNDERGROUND SEWER PIPE - APPROX
- EXISTING OVERHEAD ELECTRICITY CABLES
- EXISTING UNDERGROUND TELECOMMUNICATIONS ASSETS - APPROX.
- EXISTING TABLE DRAIN
- DRAIN PIPE
- ELECTRICITY POWER POLE
- WATER TAP
- EXISTING WATER METER
- WATER FIRE HYDRANT
- SEWER MANHOLE
- TELECOMMUNICATIONS PIT

(S) EASEMENT TO DRAIN SEWAGE 3 WIDE (VIDE DP 1262690)

SP 34659

EXISTING SITE PLAN

REDUCTION RATIO 1:150 @ A1
1:300 @ A3

SCALE 1:150(A1)

0 1 2 4 6 8 10

0 1 2 4 6 8 10

SCALE 1:300(A3)

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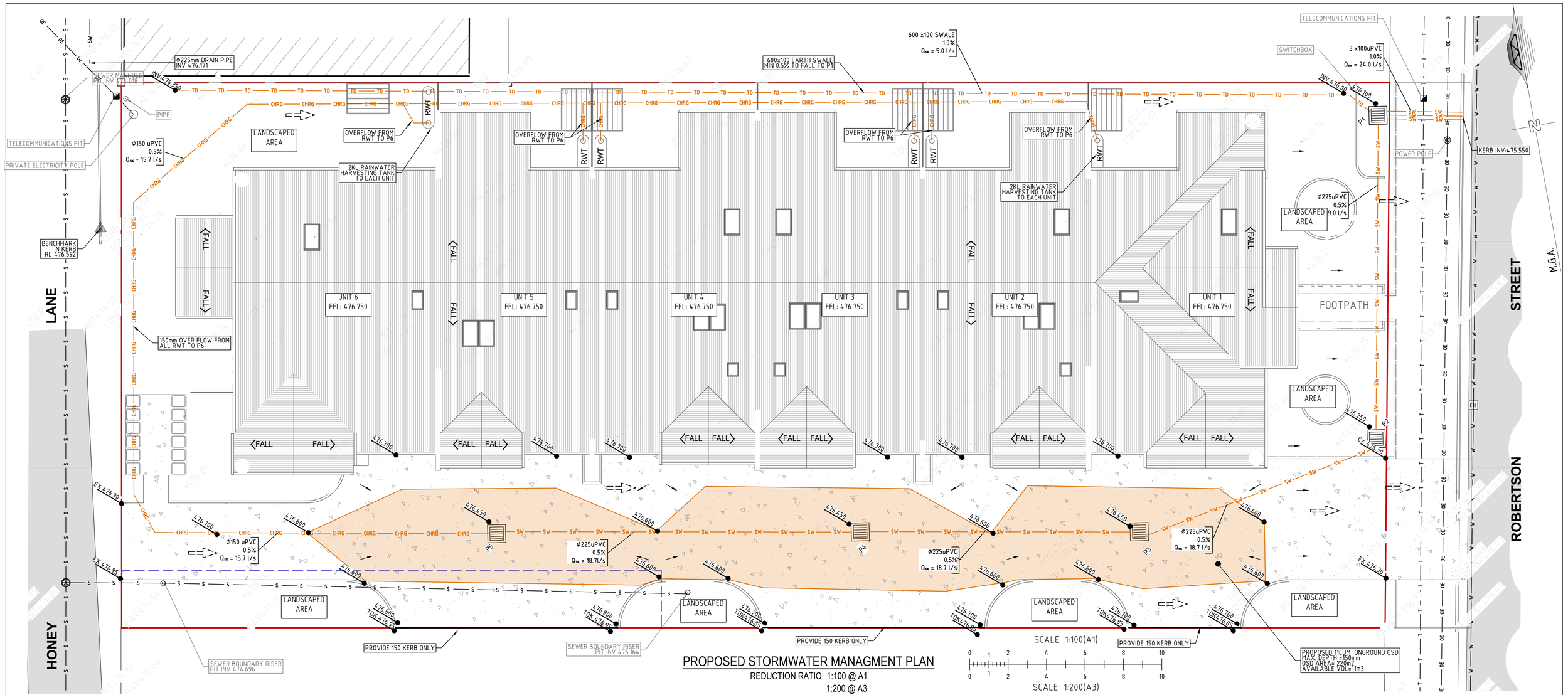
Drawing Title
EXISTING SITE PLAN

Design	ST
Drawn	ST
Check	LM
Original Sheet Size	A1
Revision	A

Certification

Project No 45513

Drawing No C01



PROPOSED STORMWATER MANAGMENT PLAN

REDUCTION RATIO 1:100 @ A1
1:200 @ A3

SCALE 1:100(A1)

SCALE 1:200(A3)

KEY

- EXISTING SUBJECT CADASTRAL BOUNDARIES
- EXISTING FENCE LINE
- EXISTING GATE
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- BOTTOM OF BANK
- EXISTING UNDERGROUND WATER MAIN - APPROX.
- EXISTING UNDERGROUND SEWER PIPE - APPROX
- EXISTING OVERHEAD ELECTRICITY CABLES
- EXISTING UNDERGROUND TELECOMMUNICATIONS ASSETS - APPROX.
- EXISTING TABLE DRAIN
- DRAIN PIPE
- ELECTRICITY POWER POLE
- WATER TAP
- EXISTING WATER METER
- WATER FIRE HYDRANT
- SEWER MANHOLE
- TELECOMMUNICATIONS PIT

LEGEND (proposed)

- EXTENT OF PROPOSED CONCRETE AREA
- EXTENT OF PROPOSED LANDSCAPED AREA
- PROPOSED EARTH SWALE (600x100)
- PROPOSED UNDERGROUND STORMWATER PIPE
- PROPOSED CHARGED ROOF DRAINAGE PIPE
- PROPOSED GRATED STORMWATER PIT (WITH SPELL STORMSACK IN HARDSTAND AREA)
- PROPOSED SURFACE FALL DIRECTION
- 150 uPVC 1.0% Qcap = 26.7 l/s — PROPOSED PIPE SIZE & MATERIAL GRADIENT 5% AEP FLOW
- PROPOSED SURFACE FALL DIRECTION
- EX.475.00 / 475.00 — PROPOSED/EXISTING GROUND LEVEL
- FALL — ROOF - DIRECTION OF FALL

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(S) EASEMENT TO DRAIN SEWAGE 3 WIDE (VIDE DP 1262690)

DESIGN NOTE:
ARI = 5% AEP STORM
DURATION = 5 MIN.
RAINFALL INTENSITY =147mm/hr

STORMWATER ANALYSIS

DESIGN CALCULATIONS AS PER AS3500.3-2021

A) PRE-DEVELOPED:
- -TOTAL APPLICABLE CATCHMENT AREA (A) = 1,868m^2
- -RAINFALL INTENSITY (It) = 147 mm/hr (5min- 5% AEP)
- -Cr = RUNOFF COEFFICIENT FOR ROOFED AREA = 1.0
- -Ar = TOTAL ROOFED AREA= 0 m^2
- -Ci = RUNOFF COEFFICIENT FOR UNROOFED IMPERVIOUS AREA = 0.9
- -Ai = TOTAL UNROOFED IMPERVIOUS AREA= 80 m^2
- -Cp = RUNOFF COEFFICIENT FOR PERVIOUS AREA = 0.3
- -Ap = TOTAL PERVIOUS GRASS AREA = 1,788m^2
- -TOTAL FLOW Q_{PRE} = (Cr Ar +Ci Ai + Cp Ap). It / 3600 = 24.8 l/s

B) POST-DEVELOPED:
- -TOTAL APPLICABLE CATCHMENT AREA (A) = 1,868m^2
- -RAINFALL INTENSITY (It) = 147 mm/hr (5min -5% AEP)
- -Cr = RUNOFF COEFFICIENT FOR ROOFED AREA = 1.0
- -Ar = TOTAL ROOFED AREA=910 m^2
- -Ci = RUNOFF COEFFICIENT FOR UNROOFED IMPERVIOUS AREA = 0.9
- -Ai = TOTAL UNROOFED IMPERVIOUS AREA= 500 m^2
- -Cp = RUNOFF COEFFICIENT FOR PERVIOUS AREA = 0.3
- -Ap = TOTAL PERVIOUS AREA = 458 m^2
- -TOTAL FLOW Q_{POST} = (Cr Ar +Ci Ai + Cp Ap). It / 3600 =61.1 l/s

C) OSD CALCULATION
- REQUIRED OSD VOLUME = (61.1-24.8)x5x60/1000= 10.9 CUM
- PROPOSED ON GROUND OSD = 11 CUM
- OSD-BY-PASS =6.1 l/s(390m2 OF PERVIOUS AREA+35 IMPERVIOUS)
- REQUIRED CONTROL FLOW FROM OSD = (24.8-6.1)=18.7l/s

F) ORIFICE CALCULATION (ONGROUND)
- HEAD ABOVE THE CENTRELINE,D = Xm
- ORIFICE COEFFICIENT,C = 0.8
- ORIFICE DIAMETER,D = Xmm
- CONTROL FLOW=Xl/s

STORMWATER PIT SCHEDULE

MARK	TOP R.L.	DEPTH (mm)	IL INLET	IL OUTLET	LxB	LID TYPE
Ex.K&G	475.700	150	475.550	475.550	-	Ex.KERB & GUTTER
PIT P1	476.100	500	475.600	475.600	450x450	MD GRATED (GALV)
PIT P2	476.250	570	475.680	475.680	450x450	MD GRATED (GALV)
PIT P3	476.450	705	475.745	475.745	600x600	HD GRATED (GALV)- SPELL STORMSACK
PIT P4	476.450	635	475.815	475.815	600x600	HD GRATED (GALV)- SPELL STORMSACK
PIT P4	476.450	545	-	475.905	600x600	HD GRATED (GALV)- SPELL STORMSACK

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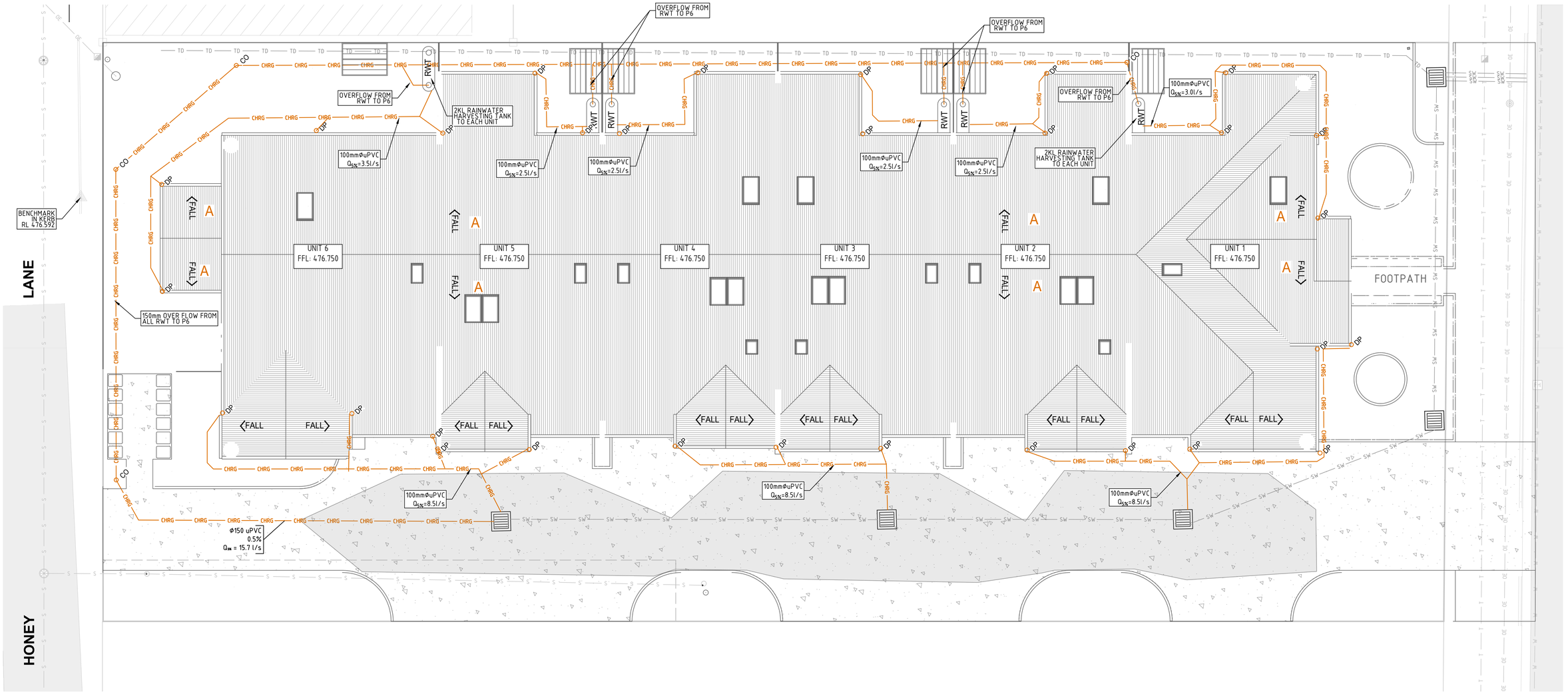
Drawing Title
PROPOSED STORMWATER MANAGEMENT PLAN

Certification

Design	ST	Original Sheet Size	A1	Project No	45513
Drawn	ST				
Check	LM	Revision	A	Drawing No	C10



PROPOSED ROOF DRAINAGE PLAN

REDUCTION RATIO 1:100 @ A1
1:200 @ A3

SCALE 1:100(A1)

0 1 2 4 6 8 10

0 1 2 4 6 8 10

SCALE 1:200(A3)

LEGEND (proposed)

- NEW ROOF AREA
- SW — SW — PROPOSED STORMWATER DRAINAGE PIPE
- CHRG — CHRG — PROPOSED CHARGED ROOF DRAINAGE PIPE
- DP — PROPOSED DOWNPIPE
- CO — PROPOSED CLEAR OUT OPENING
- P1 — PROPOSED SW PIT
- C — ROOF - CATCHMENT IDENTIFIER
- FALL — ROOF - DIRECTION OF FALL
- 100mmΦuPVC Q5%=1.3l/s — PROPOSED PIPE SIZE & MATERIAL 5% AEP FLOW

NOTE:
ALL STORMWATER & SEWER PIPES AND PLUMBING SHALL BE FITTED WITH SLEEVED UNIVERSAL FLEXIBLE COUPLINGS WHERE THEY PASS UNDER FOOTINGS, THROUGH FOOTINGS, THROUGH SLABS AND INTO GROUND. FITTINGS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH AS3500-2021.

DESIGN NOTE:
5% AEP, 5 MIN. INTERVAL
RAINFALL INTENSITY =147mm/hr

STORMWATER ANALYSIS

1. DESIGN CALCULATIONS AS PER AS3500.3-2021
2. EAVES GUTTERS DESIGNED FOR 5% AEP STORM, 5 MINUTE INTENSITY. GUTTERS TO BE INSTALLED AT FALL 1:500 OR STEEPER.
3. EAVES GUTTERS TO HAVE EQUIVALENT CROSS SECTIONAL AREA AS SPECIFIED.

PROPOSED CATCHMENT, GUTTERS, & DOWNPIPES

LOCATION	AREA (m^2)	AEP	ROOF PITCH	FLOW l/s	GUTTER (m^2)	DP's	MAX m^2/DP
ROOF: U1-U6(A)	910	5%	20%	43.9	6,600	25×Ø90	38

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Drawing Title
PROPOSED ROOF DRAINAGE PLAN

Design	ST	Original Sheet Size	A1
Drawn	ST		
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Certification

Project No 45513

Drawing No C11

SITEWORKS NOTES

1. ORIGIN OF LEVELS :- AHD
2. CONTRACTOR MUST VERIFY ALL DIMENSIONS AND EXISTING LEVELS ON SITE PRIOR TO COMMENCEMENT OF WORK.
3. ALL WORK IS TO BE UNDERTAKEN IN ACCORDANCE WITH THE DETAILS SHOWN ON THE DRAWINGS, THE SPECIFICATIONS AND THE DIRECTIONS OF THE SUPERINTENDENT.
4. EXISTING SERVICES HAVE BEEN OBTAINED FROM SURFACE INSPECTION ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO ESTABLISH THE LOCATION AND THE LEVEL OF ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF ANY WORK. ANY DISCREPANCIES SHALL BE REPORTED TO THE SUPERINTENDENT. CLEARANCES SHALL BE OBTAINED FROM THE RELEVANT SERVICE AUTHORITY.
5. WHERE NEW WORKS ABUT EXISTING THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
6. THE CONTRACTOR SHALL ARRANGE ALL SURVEY SETOUT TO BE CARRIED OUT BY A QUALIFIED SURVEYOR.
7. CARE IS TO BE TAKEN WHEN EXCAVATING NEAR EXISTING SERVICES. NO MECHANICAL EXCAVATIONS ARE TO BE UNDERTAKEN OVER TELECOM OR ELECTRICAL SERVICES. HAND EXCAVATE IN THESE AREAS.
8. ON COMPLETION OF CONSTRUCTION, ALL DISTURBED AREAS MUST BE RESTORED TO ORIGINAL, INCLUDING KERBS, FOOTPATHS, CONCRETE AREAS, GRAVEL AND GRASSED AREAS AND ROAD PAVEMENTS.
9. MAKE SMOOTH TRANSITION TO EXISTING AREAS.
10. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY DIVERSION DRAINS AND MOUNDS TO ENSURE THAT AT ALL TIMES EXPOSED SURFACES ARE FREE DRAINING AND WHERE NECESSARY EXCAVATE SUMPS AND PROVIDE PUMPING EQUIPMENT TO DRAIN EXPOSED AREAS. ALL WORK TO BE UNDERTAKEN WITH ADHERENCE TO THE REQUIREMENTS OF THE SOIL AND WATER MANAGEMENT PLAN.
11. THESE PLANS SHALL BE READ IN CONJUNCTION WITH APPROVED ARCHITECTURAL, STRUCTURAL, HYDRAULIC AND MECHANICAL DRAWINGS AND SPECIFICATIONS.

SURVEY NOTES

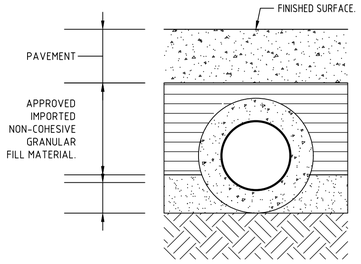
1. CONTOURS SHOWN DEPICT THE TOPOGRAPHY. EXCEPT AT SPOT LEVELS SHOWN THEY DO NOT REPRESENT THE EXACT LEVEL AT ANY PARTICULAR POINT.
2. SERVICES SHOWN HEREON HAVE BEEN DETERMINED FROM VISUAL EVIDENCE AND ARE INDICATIVE ONLY. PRIOR TO ANY DEMOLITION, EXCAVATION OR CONSTRUCTION ON THE SITE THE RELEVANT AUTHORITY SHOULD BE CONTACTED TO ESTABLISH DETAILED LOCATION AND DEPTH.

PIPE TRENCH - FILL NOTES:

1. BEDDING SAND
   BEDDING SAND SHALL BE GRANULAR MATERIAL HAVING A LOW PERMEABILITY AND HIGH STABILITY WHEN SATURATED, CONFORMING TO THE GRADING LIMITS FOR BEDDING SAND AS INDICATED IN THE CONTRACT DOCUMENTS. BEDDING SAND SHALL BE COMPACTED TO A DENSITY INDEX OF 95% AS DETERMINED IN ACCORDANCE WITH AS1289.
2. APPROVED IMPORTED GRANULAR FILL
   ONLY IMPORTED GRANULAR FILL MATERIAL APPROVED BY THE SUPERINTENDENT SHALL BE USED. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK TO A DRY DENSITY OF 100% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL AND WITH A MOISTURE CONTENT NO MORE THAN 1% ABOVE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.
3. ORDINARY EXCAVATED FILL MATERIAL
   ORDINARY EXCAVATED FILL MATERIAL IS EXCAVATED TRENCH MATERIAL THAT IS FREE OF VEGETABLE MATTER, HUMUS, LARGE CLAY LUMPS AND ROCK BOULDERS. THIS FILL MATERIAL SHALL BE COMPACTED IN LAYERS NOT EXCEEDING 300mm THICK, TO A DENSITY OF 95% OF THE STANDARD MAXIMUM DRY DENSITY OF THE MATERIAL WITH A MOISTURE CONTENT OF NOT MORE THAN 1% ABOVE THE OPTIMUM MOISTURE CONTENT AS DETERMINED IN ACCORDANCE WITH AS1289.

STORMWATER NOTES

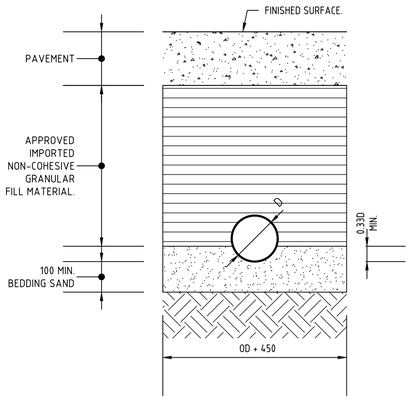
1. ALL DOWNPIPE LINES SHALL BE SEWER GRADE uPVC WITH SOLVENT WELD JOINTS (U.N.O)
2. EQUIVALENT STRENGTH VCP OR FCP PIPES MAY BE USED.
3. MINIMUM GRADE TO STORMWATER LINES TO BE 0.5% MINIMUM (U.N.O)
4. CONTRACTORS TO SUPPLY AND INSTALL ALL FITTINGS AND SPECIALS INCLUDING VARIOUS PIPE ADAPTORS TO ENSURE PROPER CONNECTION BETWEEN DISSIMILAR PIPEWORK.
5. ALL CONNECTIONS TO EXISTING DRAINAGE PITS SHALL BE MADE IN A TRADESMAN-LIKE MANNER AND THE INTERNAL WALL OF THE PIT AT THE POINT OF ENTRY SHALL BE CEMENT RENDERED TO ENSURE A SMOOTH FINISH.
6. APPROVED PRECAST PITS MAY BE USED.
7. WHERE TRENCHES ARE IN ROCK, THE PIPE SHALL BE BEDDED ON A MIN. 50mm CONCRETE BED (75mm THICK BED OF 12mm BLUE METAL) UNDER THE BARREL OF THE PIPE. THE PIPE COLLAR AT NO POINT SHALL BEAR THE ROCK. IN OTHER THAN ROCK, PIPES SHALL BE LAID ON A 75mm THICK SAND BED. IN ALL CASES, BACKFILL THE TRENCH WITH THE SAND TO 200mm ABOVE THE PIPE .WHERE THE PIPE IS UNDER PAVEMENTS, BACKFILL REMAINDER OF TRENCH WITH SAND OR APPROVED GRANULAR BACKFILL COMPACTED IN 150mm LAYERS TO 98% MAX. DRY DENSITY.
8. WHERE STORMWATER LINES PASS UNDER FLOOR SLABS, SEWER GRADE RUBBER RING JOINTS ARE TO BE USED.
9. ALL PIPES IN THE ROADWAY AND FOOTPATH AREAS, WHERE THE DEPTH OF PIPE IS LESS THAN 500mm FROM THE FINISHED SURFACE LEVEL ARE TO BE CONCRETE ENCASED.



TYPICAL PIPE ENCASEMENT

SCALE 1:10

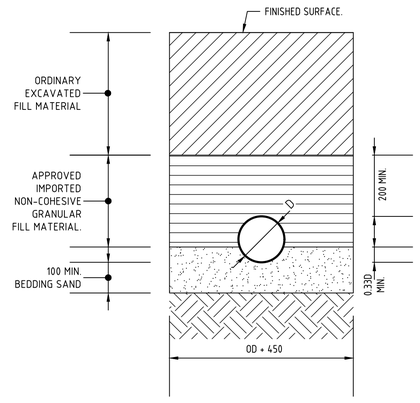
NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL



TYPICAL SECTION TRENCH IN ROADWAY

SCALE 1:10

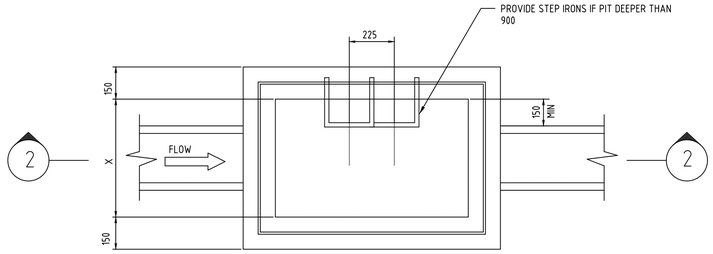
NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL



TYPICAL SECTION EARTH FOUNDATION TRENCH

SCALE 1:10

NOTE: PIPE COLLAR IS NOT TO REST ON ORIGINAL MATERIAL

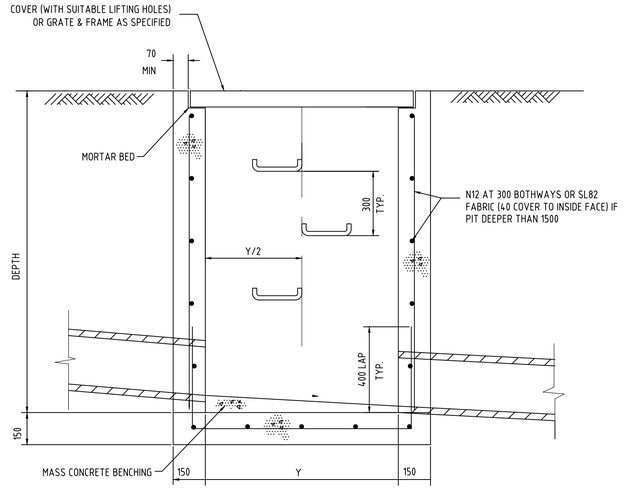


PLAN

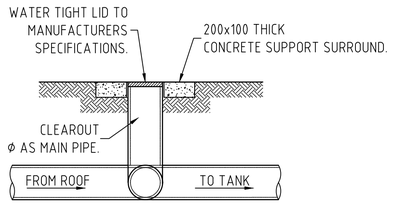
GRATED INLET PIT

N.T.S.

PIT DIMENSIONS		
DEPTH	X	Y
D<600	450	450
D<1000	600	600
D<1500	600	900
1500<D<2400	900	900
D>2400	750	1200



SECTION 2



CLEAROUT (CO) DETAIL

SCALE = 1:20

INSPECTION HOLD POINTS
1. INSTALLATION OF SEDIMENT & EROSION CONTROL MEASURES.
2. WATER & SEWER LINE INSTALLATION PRIOR TO BACKFILL.
3. ESTABLISHMENT OF LINE & LEVEL FOR KERB & GUTTER PLACEMENT.
4. ROAD PAVEMENT CONSTRUCTION.
5. ROAD PAVEMENT SURFACING.
6. PRACTICAL COMPLETION.
SERVICES INSTALLATION
1. INSTALLATION OF ALL UNDERGROUND PIPES BE INSTALLED PRIOR TO INSTALLATION OF ROAD PAVEMENT.

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Check	LM	Revision	A

Certification

Project No 45513

Drawing No C12