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THIS DRAWING TO BE READ IN CONJUNCTION WITH ALL RELEVANT NOTES ON DRAWING C01

MAUI FRENCHS FOREST
CIVIL WORKS

GENERAL NOTES

1. Contractor must verify all dimensions and existing levels on site prior to commencement of works. Any discrepancies to be reported to the Engineer .
2. Strip all topsoil from the construction area. All stripped topsoil shall be disposed of off-site unless directed otherwise.
3. Make smooth connection with all existing works.
4. Compact subgrade under buildings and pavements to minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1. Compaction under buildings to extend 2m minimum beyond building footprint.
5. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority; the Contractor is to ensure that the drawings used for construction have been approved by all relevant authorities prior to commencement site.
6. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority is to be carried out in accordance with the requirements of the relevant Authority. The Contractor shall obtain these requirements from the Authority. Where the requirements of the Authority are different to the drawings and specifications, the requirements of the Authority shall be applicable.
7. For all temporary batters refer to geotechnical recommendations.

REFERENCE DRAWINGS

1. These drawings have been based from, and to be read in conjunction with the following Consultants drawings. Any conflict to the drawings must be notified immediately to the Engineer.

Consultant	Dwg Title	Dwg No	Rev	Date
TEAM2	ARCHITECTURAL	DA103	2	28.08.19
MEADOWS CONS	SURVEY	2984	A	06.12.05
ARCADIA	LANDSCAPE	19-635	A	30.08.19

CONCRETE FINISHING NOTES

1. All exposed concrete pavements are to be broomed finished.
2. All edges of the concrete pavement including keyed and dowelled joints are to be finished with an edging tool.
3. Concrete pavements with grades greater than 10 % shall be heavily broomed finished.
4. Carborundum to be added to all stair treads and ramped crossings U.N.O.

BOUNDARY AND EASEMENT NOTE

The property boundary and easement locations shown on Taylor Thomson Whitting drawing's have been based from information received from : **CRUX**

Taylor Thomson Whitting makes no guarantees that the boundary or easement information shown is correct.
Taylor Thomson Whitting will accept no liabilities for boundary inaccuracies. The contractor/builder is advised to check/confirm all boundaries in relation to all proposed work prior to the commencement of construction. Boundary inaccuracies found are to be reported to the superintendent prior to construction starting.

STORMWATER DRAINAGE NOTES

1 Stormwater Design Criteria :
- (A) Average exceedance probability –
  - 1% AEP for roof drainage to first external pit
  - 5% AEP for paved and landscaped areas
- (B) Rainfall intensities –
  - Time of concentration: 5 minutes
  - 1% AEP = mm/hr
  - 5% AEP = mm/hr
- (C) Rainfall losses –
  - Impervious areas: IL = mm , CL = 0 mm/hr
  - Pervious areas: IL = mm , CL = mm/hr

2. Pipes 300 dia and larger to be reinforced concrete Class "2" approved spigot and socket with rubber ring joints U.N.O.
3. Pipes up to 300 dia shall be sewer grade uPVC with solvent welded joints.
4. Equivalent strength VCP or FRP pipes may be used subject to approval.
5. Precast pits may be used external to the building subject to approval by Engineer.
6. Enlargers, connections and junctions to be manufactured fittings where pipes are less than 300 dia.
7. Where subsoil drains pass under floor slabs and vehicular pavements, unslotted uPVC sewer grade pipe is to be used.
8. Grates and covers shall conform with AS 3996-2006, and AS 1428.1 for access requirements.
9. Pipes are to be installed in accordance with AS 3725. All bedding to be type H2 U.N.O.
10. Care is to be taken with levels of stormwater lines. Grades shown are not to be reduced without approval.
11. All stormwater pipes to be 150 dia at 1.0% min fall U.N.O.
12. Subsoil drains to be slotted flexible at 0.7% min fall uPVC U.N.O.
13. Adopt invert levels for pipe installation (grades shown are only nominal).

KERBING NOTES

Includes all kerbs, gutters, dish drains, crossings and edges.

1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
5. In the replacement of kerbs –
   Existing road pavement is to be sawcut 300mm from lip of gutter. Upon completion of new kerbs, new basecourse and surface is to be laid 300mm wide to match existing materials and thicknesses.Refer to drawing QUE-CE-C21.
   Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
   Existing kerbs are to be completely removed where new kerbs are shown.

DBYD SERVICES NOTE

"Public Service Utility information shown on plan has been complied from information received from Dial Before You Dig inquiry, reference Number 7991208, which was obtained on 27/11/18.
Unless specifically shown otherwise, this location and depth of services shown on this plan have not been verified.

The location of services shown on this drawing have been plotted as accurately as possible from diagrams provided by service authorities and should be confirmed by site inspection."

EXISTING SEVICES LEGEND

- Existing sewer
- Existing water
- Existing low voltage electrical
- Existing high voltage electrical
- Existing communications
- Existing gas
- Existing stormwater
- Existing service to be removed

SURVEY AND SERVICES INFORMATION

SURVEY

Origin of levels : BM NAIL IN DRIVE RL159.94
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA
Survey prepared by : MEADOWS
Setout Points : CONTACT THE SURVEYOR

Taylor Thomson Whitting does not guarantee that the survey information shown on these drawings is accurate and will accept no liability for any inaccuracies in the survey information provided to us from any cause whatsoever.

UNDERGROUND SERVICES - WARNING

The locations of underground services shown on Taylor Thomson Whittings drawings have been plotted from diagrams provided by service authorities. This information has been prepared solely for the authorities own use and may not necessarily be updated or accurate.

The position of services as recorded by the authority at the time of installation may not reflect changes in the physical environment subsequent to installation.

Taylor Thomson Whitting does not guarantee that the services information shown on these drawings shows more than the presence or absence of services, and will accept no liability for inaccuracies in the services information shown from any cause whatsoever.

The Contractor must confirm the exact location and extent of services prior to construction and notify any conflict with the drawings immediately to the Engineer/Superintendent.

The contractor is to get approval from the relevant state survey department, to remove/adjust any survey mark. This includes but is not limited to; State Survey Marks (SSM), Permanent Marks (PM), cadastral reference marks or any other survey mark which is to be removed or adjusted in any way.
Taylor Thomson Whitting plans do not indicate the presence of any survey mark. The contractor is to undertake their own search.

PIT SCHEDULE

Note: Grate size does not necessarily reflect pit size, refer pit type details, shown on detail sheets – **C15** .
Final internal pit dimensions are to comply with AS3500

Type	Description	Cover (Clear Opening)	Number
A	Surface inlet pit	600 x 600 Class D galvanised mild steel grate hinged to frame	1,2,3,4
E		Existing pit to remain	5

SITEWORKS LEGEND

- F22.20 — Finished surface level
- F22.00 — Finished contour
- MK — Mountable integral kerb
- DD — Dish drain
- IL10.00 / 600 ø 'Z' / 1.25% / 25m / IL9.65 — Stormwater pit, flow direction and line with; Invert level upstream; Pipe size and class; Pipe grade; Length; Invert level downstream
- GD — Grated drain
- Wheelstop
- RW# — Blockwork retaining wall
- Bolard

SAFETY IN DESIGN

Contractor to refer to Appendix B of the Civil Specification for the Civil Risk and Solutions Register.

EXISTING SERVICES

Contractor to be aware existing services are located within the site. Location of all services to be verified by the Contractor prior to commencing works. Contractor to confirm with relevant authority regarding measures to be taken to ensure services are protected or procedures are in place to demolish and/or relocate.

EXISTING STRUCTURES

Contractor to be aware existing structures may exist within the site. To prevent damage to existing structure(s) and/or personnel, site works to be carried out as far as practicably possible from existing structure(s).

EXISTING TREES

Contractor to be aware existing trees exist within the site which need to be protected. To prevent damage to trees and/or personnel, site works to be carried out as far as practicably possible from existing trees. Advice needs to be sought from Arborist and/or Landscape Architect on measures required to protect trees.

GROUNDWATER

Contractor to be aware ground water levels are close to existing surface level. Temporary de-watering may be required during construction works.

EXCAVATIONS

Deep excavations due to stormwater drainage works is required. Contractor to ensure safe working procedures are in place for works. All excavations to be fenced off and batters adequately supported to approval of Geotechnical Engineer.

GROUND CONDITIONS

Contractor to be aware of the site geotechnical conditions.
Refer to geotechnical report by ACT GEOTECHNICAL ENGINEERS for details.

HAZARDOUS MATERIALS

Existing asbestos products & contaminated material may be present on site. Contractor to ensure all hazardous materials are identified prior to commencing works. Safe working practices as per relevant authority to be adopted and appropriate PPE to be used when handling all hazardous materials. Refer to environmental report by EIS for details.

CONFINED SPACES

Contractor to be aware of potential hazards due to working in confined spaces such as stormwater pits, trenches and/or tanks. Contractor to provide safe working methods and use appropriate PPE when entering confined spaces.

MANUAL HANDLING

Contractor to be aware manual handling may be required during construction. Contractor to take appropriate measures to ensure manual handling procedures and assessments are in place prior to commencing works.

WATER POLLUTION

Contractor to ensure appropriate measures are taken to prevent pollutants from construction works contaminating the surrounding environment.

SITE ACCESS/EGRESS

Contractor to be aware site works occur in close proximity to footpaths and roadways. Contractor to erect appropriate barriers and signage to protect site personnel and public.

VEHICLE MOVEMENT

Contractor to supply and comply with traffic management plan and provide adequate site traffic control including a certified traffic marshall to supervise vehicle movements where necessary.

EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA – Pollution control manual for urban stormwater,
   (C) LANDCOM NSW – Managing Urban Stormwater: Soils and Construction ("Blue Book").
2. Erosion and sediment control **drawings and notes are** provided for the whole of the works. Should the Contractor stage these works then the design may be required to be modified. Variation to these details may require approval by the relevant authorities.
   The erosion and sediment control **plan** shall be implemented and adapted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
1.6. Provide sandbag sediment traps upstream of existing pits.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.
3. On completion of pavement provide sand bag kerb inlet sediment traps around pits.
4. Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

WATER QUALITY TESTING REQUIREMENTS

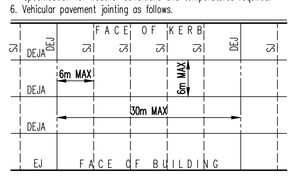
Prior to discharge of site stormwater, groundwater and seepage water into council's stormwater system, contractors must undertake water quality tests in conjunction with a suitably qualified environment consultant outlining the following:

- Compliance with the criteria of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
- If required subject to the environmental consultants advice, provide remedial measures to improve the quality of water that is to be discharged into Councils storm water drainage system.This should include comments from a suitably qualified environmental consultant confirming the suitability of these remedial measures to manage the water discharged from the site into Councils storm water drainage system. Outlining the proposed, ongoing monitoring, contingency plans and validation program that will be in place to continually monitor the quality of water discharged from this site. This should outline the frequency of water quality testing that will be undertaken by a suitably qualified environmental consultant.

JOINTING NOTES

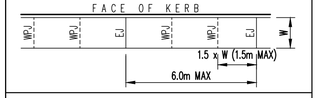
Vehicular Pavement Jointing

1. All vehicular pavements to be jointed as shown on drawings.
2. Keyed construction joints should generally be located at a maximum of 6m centres.
3. Sawn joints should generally be located at a maximum of 6m centres or 1.5 x the spacing of keyed joints, where key joint spacing is less than 4m, with dowelled expansion joints at maximum of 30m centres.
4. Provide 10mm wide full depth expansion joints between buildings and all concrete or unit pavers.
5. The timing of the saw cut is to be confirmed by the contractor on site. Site conditions will determine how many hours after the concrete pour before the saw cuts are commenced. Refer to the specification for weather conditions and temperatures required.
6. Vehicular pavement jointing as follows.



Pedestrian Footpath Jointing

1. Expansion joints are to be located where possible at tangent points of curves and elsewhere at max 6.0m centres.
2. Weakened plane joints are to be located at a max 1.5 x width of the pavement.
3. Where possible joints should be located to match kerbing and / or adjacent pavement joints.
4. All pedestrian footpath jointings as follows (uno).



CONCRETE NOTES

EXPOSURE CLASSIFICATION : External : B2

CONCRETE

Place concrete of the following characteristic compressive strength f'c as defined in AS 1379.

Location	AS 1379 f'c MPa at 28 days	Specified Slump	Nominal Agg. Size
Kerbs	S20	80	20
Retaining wall footing	S40	80	20

1. Use Type 'GP' cement, unless otherwise specified.
2. All concrete shall be subject to project assessment and testing to AS 1379.
3. Consolidate by mechanical vibration. Cure all concrete surfaces as directed in the Specification.
4. For all falls in slab, drip grooves, reglets, chamfers etc. refer to Architects drawings and specifications.
5. Unless shown on the drawings, the location of all construction joints shall be submitted to Engineer for review.
6. No holes or chases shall be made in the slab without the approval of the Engineer.
7. Conduits and pipes are to be fixed to the underside of the top reinforcement layer.
8. Slurry used to lubricate concrete pump lines is not to be used in any structural members.
9. All slabs cast on ground require sand blinding with a Concrete Underlay

FORMWORK

1. The design, certification, construction and performance of the formwork, falsework and backpropping shall be the responsibility of the contractor. Proposed method of installation and removal of formwork is to be submitted to the superintendent for comment prior to work being carried out.

DRAWING SCHEDULE

DRAWING NO.	DRAWING NAME
C00	NOTES AND LEGENDS SHEET
C01	EROSION AND SEDIMENT CONTROL PLAN
C02	STORMWATER PLAN, GROUND FLOOR
C15	DETAILS, SHEET 1

FileName: C00.dwg - USER: samp - Plot File Created: Sep 02, 2019 - 5:13pm

A1 0 1 2 3 4 5 6 7 8 9 10

PRELIMINARY

Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	AL	SP	02.09.19

Architect
WOLSKI COPPIN
SUITE 3, LEVEL 1, 507 MILITARY ROAD,
MOSMAN NSW 2088

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Project
MAUI FRENCHS FOREST
49 FRENCHS FOREST RD,
FRENCHS FOREST

Sheet Subject
NOTES AND LEGENDS SHEET

Scale : A1	Drawn	Authorised
NTS@A1	WW	

Job No	Drawing No	Revision
191134	C00	P1

Plot File Created: Sep 02, 2019 - 5:13pm

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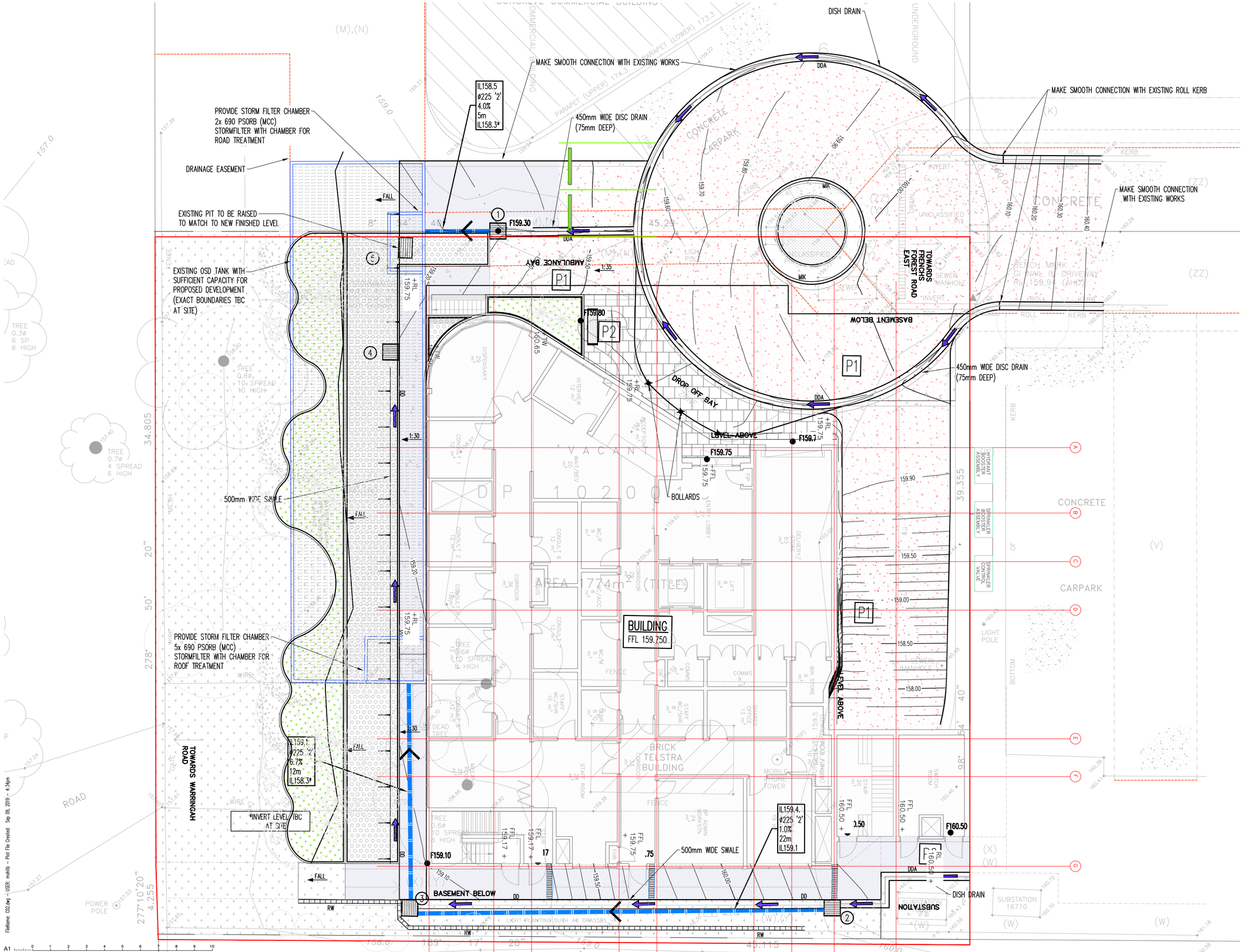

PAVEMENT DETAIL

NOTES

PAVEMENT TYPE 1
RETE PAVING (HEAVY DUTY)

PAVEMENT TYPE 2
ICRETE PAVING (LIGHT DUTY)

PAVEMENT TYPE 3
BLOCK PAVING

SITEWORKS LEGEND

- ● F22.20 — Finished surface level
- F22.00 — Finished contour
- MIK — Mountable integral kerb
- DD — Dish drain
- IL10.00 / 600 ø 'Z' / 1.25% / 25m / IL9.65 — Stormwater pit, flow direction and line with; Invert level upstream, Pipe size and class, Pipe grade, Length, Invert level downstream
- GD — Grated drain
- RW# — Blockwork retaining wall
- Bolard — Wheelstop

PRELIMINARY

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	AL	MB	09.09.19
P1	PRELIMINARY	AL	SP	02.09.19

Architect
WOLSKI COPPIN
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Project
MAUI FRENCHS FOREST
49 FRENCHS FOREST RD,
FRENCHS FOREST

Sheet Subject
SITEWORKS & STORMWATER PLAN

Scale : A1 — 100@A1
Drawn — SP
Authorised
Job No — 191134
Drawing No — C02
Revision — P2
Plot File Created: Sep 09, 2019 - 4:34pm

FileName: C02.dwg - USER: mattb - Plot File Created: Sep 09, 2019 - 4:34pm

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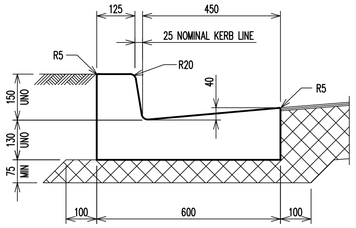

KERB AND GUTTER (K&G)

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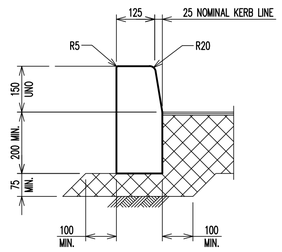

KERB ONLY (KO)

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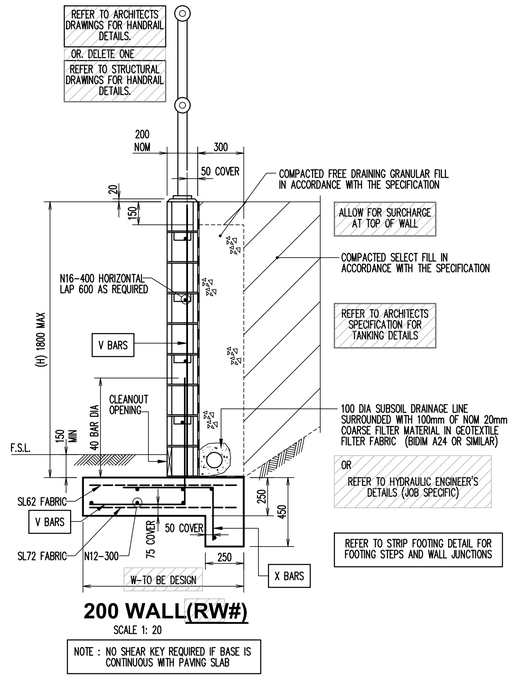
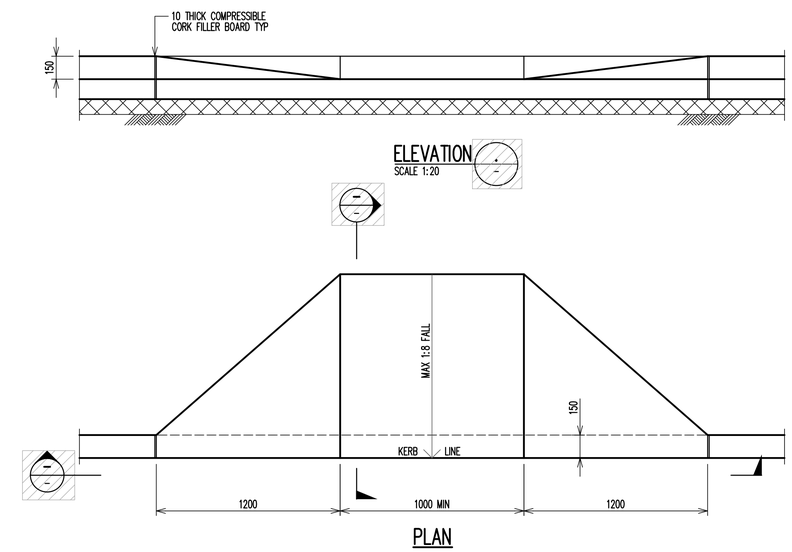


200 WALL(RW#)

SCALE 1: 20

NOTE : NO SHEAR KEY REQUIRED IF BASE IS CONTINUOUS WITH PAVING SLAB



RAMPED CROSSING

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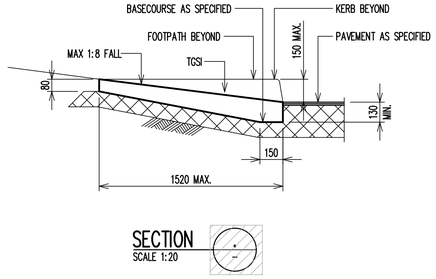

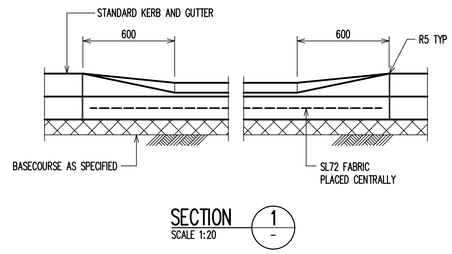

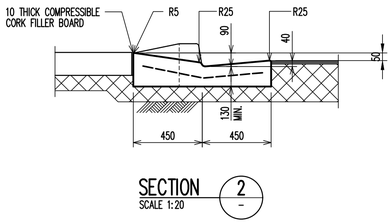

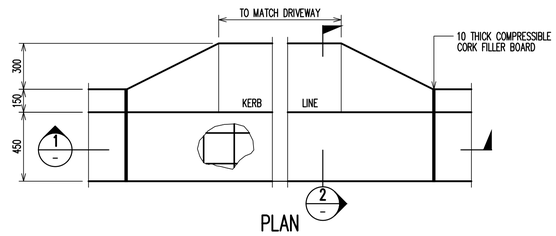

VEHICULAR CROSSING

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PRELIMINARY

FileName: C14.dwg - USER: mohlib - Plot File Created: Sep 09, 2019 - 4:35pm

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Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	AL	SP	09.09.19

Architect
WOLSKI COPPIN
SUITE 3, LEVEL 1, 507 MILITARY ROAD,
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Engineer
TTW Structural Civil Traffic Façade
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Project
MAUI FRENCHS FOREST
49 FRENCHS FOREST RD,
FRENCHS FOREST

Sheet Subject
DETAIL SHEET 1

Scale : A1	Drawn	Authorised
NTS@A1	JW	

Job No	Drawing No	Revision
191134	C14	P1

Plot File Created: Sep 09, 2019 - 4:35pm

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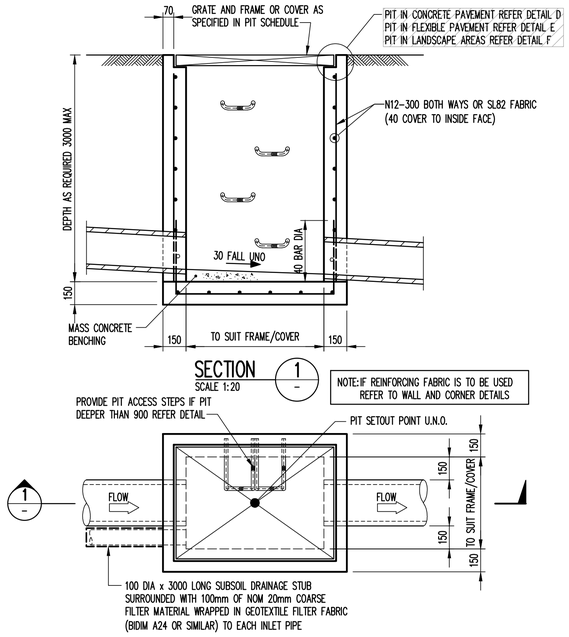
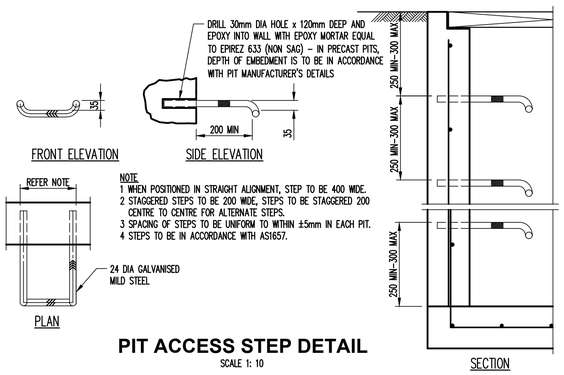
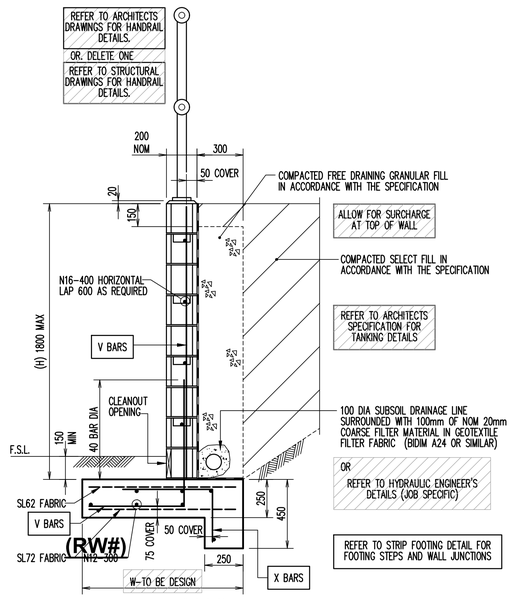


PIT TYPE xx



PIT ACCESS STEP DETAIL

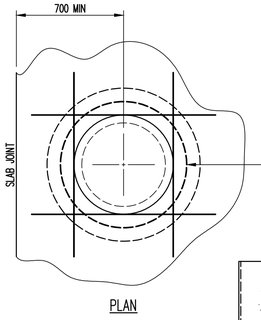
SCALE 1: 10

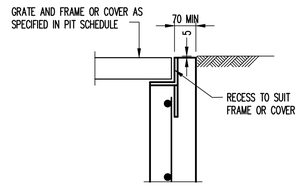


200 WALL

SCALE 1: 20

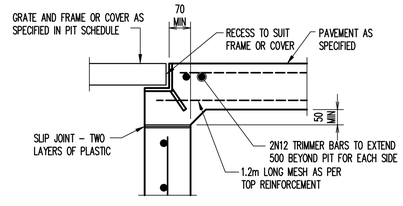
NOTE : NO SHEAR KEY REQUIRED IF BASE IS CONTINUOUS WITH PAVING SLAB





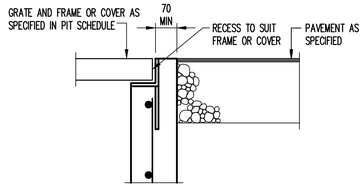
DETAIL F

SCALE 1: 10



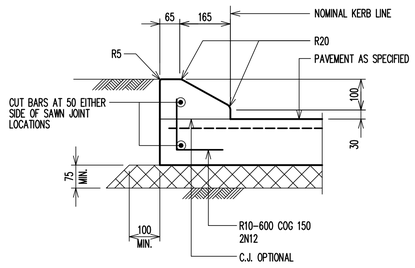
DETAIL D

SCALE 1: 10



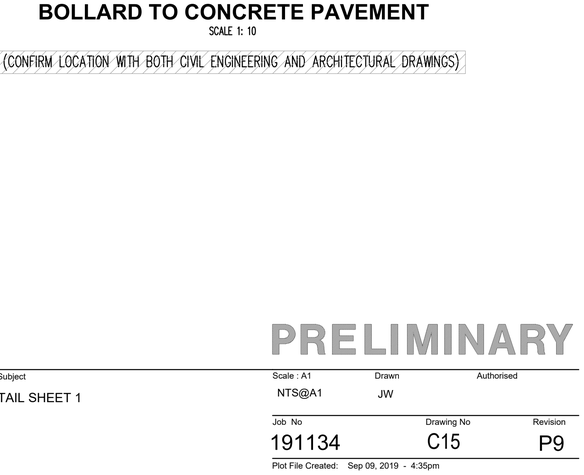
DETAIL E

SCALE 1: 10



MOUNTABLE INTEGRAL KERB (MIK)

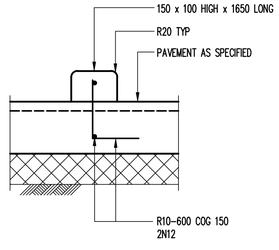
SCALE 1:10



BOLLARD TO CONCRETE PAVEMENT

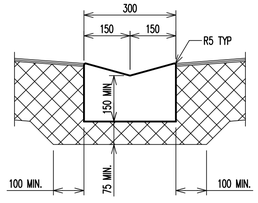
SCALE 1: 10

(CONFIRM LOCATION WITH BOTH CIVIL ENGINEERING AND ARCHITECTURAL DRAWINGS)



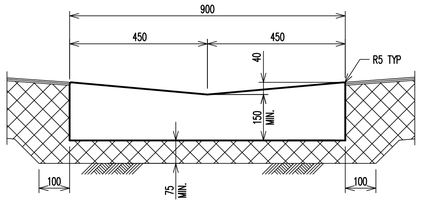
WHEEL STOP IN CONCRETE PAVEMENT

SCALE 1:10



DISH DRAIN TYPE A (DDA)

SCALE 1:10



DISH DRAIN (DD)

SCALE 1:10

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A1 0 1 2 3 4 5 6 7 8 9 10

PRELIMINARY

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	AL	SP	09.09.19
P1	PRELIMINARY	AL	SP	02.09.19

Architect
WOLSKI COPPIN
SUITE 3, LEVEL 1, 507 MILITARY ROAD,
MOSMAN NSW 2088

Engineer
TTW Structural Civil Traffic Façade
612 9439 7288 | 48 Chandos Street St Leonards NSW 2065

Project
MAUI FRENCHS FOREST
49 FRENCHS FOREST RD,
FRENCHS FOREST

Sheet Subject
DETAIL SHEET 1

Scale : A1	Drawn	Authorised
NTS@A1	JW	

Job No	Drawing No	Revision
191134	C15	P9

Plot File Created: Sep 09, 2019 - 4:35pm