

DELEGATED REPORT**TO:** SENIOR PLANNER**FROM:** Planning Officer**FILE:** OPW/19/0007**DATE:** 16 October 2019

APPLICATION DETAILS

APPLICATION		PREMISES	
FILE NO:	OPW/19/0007	ADDRESS:	72-76 Masons Road, Kuranda
APPLICANT:	A & A Salinovic	RPD:	Lot 100 on SP202702
LODGED BY:	Trinity Engineering and Consultancy	AREA:	4.426 ha
DATE LODGED:	18 September 2019	OWNER:	Veliki Prolog Pty Ltd
TYPE OF APPROVAL:	Development Permit		
PROPOSED DEVELOPMENT:	Operational Works (Roadworks, Stormwater, Water Infrastructure, Drainage and Earthworks) for Development Permit RAL/18/0029		
PLANNING SCHEME:	Mareeba Shire Council Planning Scheme 2016		
ZONE:	Rural Residential Zone		
LEVEL OF ASSESSMENT:	Code Assessment		
SUBMISSIONS:	N/A - Code assessment only		

PREVIOUS APPLICATIONS & APPROVALS

RAL/18/0029 - Development Permit for Reconfiguring a Lot - Subdivision (1 into 9 Lots)

DESCRIPTION OF PROPOSED DEVELOPMENT

Operational Works (Roadworks, Stormwater, Water Infrastructure, Drainage and Earthworks) for Development Permit RAL/18/0029.

ASSESSMENT**State Planning Policy**

Separate assessment against the State Planning Policy (SPP) is not required because the Mareeba Shire Council Planning Scheme appropriately integrates all relevant aspects of the SPP.

Relevant Development Codes

The following Development Codes are considered to be applicable to the assessment of the application:

- 6.2.10 Rural residential zone code
- 9.4.4 Reconfiguring a lot code
- 9.4.5 Works, services and infrastructure code

The application did not include a planning report and assessment against the planning scheme. An officer assessment has found that the application satisfies the relevant acceptable solutions (or probable solutions/performance criteria where no acceptable solution applies) of the relevant codes set out below.

Relevant Codes	Comments
Rural residential zone code	The application can be conditioned to comply with the relevant acceptable outcomes contained within the code.
Reconfiguring a lot code	The application can be conditioned to comply with the relevant acceptable outcomes contained within the code.
Works, services and infrastructure code	The application can be conditioned to comply with the relevant acceptable outcomes contained within the code.

Compliance with conditions of earlier related approval

RAL/18/0029 - Development Permit for Reconfiguring a Lot - Subdivision (1 into 9 Lots)

1. Development must be carried out substantially in accordance with the approved plans and the facts and circumstances of the use as submitted with the application, and subject to any alterations:
 - found necessary by the Council's delegated officer at the time of examination of the engineering plans or during construction of the development because of particular engineering requirements; and
 - to ensure compliance with the following conditions of approval.
2. Timing of Effect
 - 2.1 The conditions of the development permit for each stage of the development must be complied with to the satisfaction of Council's delegated officer prior to the endorsement of the plan of survey for each stage of the development, except where specified otherwise in these conditions of approval.
3. General
 - 3.1 The development approval would not have been issued if not for the conditions requiring the construction of infrastructure or the payment of infrastructure charges within the conditions of approval.
 - 3.2 The applicant/developer is responsible for the cost of necessary alterations to existing public utility mains, services or installations required by works in relation to the proposed development or any works required by condition(s) of this approval.
 - 3.3 All payments or bonds required to be made to the Council pursuant to any condition of this approval must be made prior to the endorsement of the plan of survey and at the rate applicable at the time of payment.

- 3.4 The developer must relocate (in accordance with FNQROC standards) any services such as water, sewer, drainage, telecommunications and electricity that are not wholly located within the lots that are being created/serviced where required by the relevant authority, unless approved by Council's delegated officer.
- 3.5 Where utilities (such as sewers on non-standard alignments) traverse lots to service another lot, easements must be created in favour of Council for access and maintenance purposes. The developer is to pay all costs (including Council's legal expenses) to prepare and register the easement documents.
- 3.6 Where approved existing buildings and structures are to be retained, setbacks to any new property boundaries are to be in accordance with Planning Scheme requirements for the relevant structure and/or Queensland Development Code.
- 3.7 All works must be designed, constructed and carried out in accordance with FNQROC Development Manual requirements (as amended) and to the satisfaction of Council's delegated officer.

3.8 Charges

All outstanding rates, charges, and expenses pertaining to the land are to be paid in full.

3.9 Bushfire Management (for Lots 2, 3 and 6 - 9 only)

A bushfire hazard management plan for the subject land and proposed allotments must be prepared by suitably qualified person, and submitted to Council prior to the endorsement of the plan of survey.

All future development on the subject land must comply with the bushfire hazard management plan.

3.10 Slope Stability

For any new building work proposed on a slope of 15% or greater, the applicant/developer must provide Council with a site specific geotechnical report prepared by a suitably qualified Registered Professional Engineer of Queensland (RPEQ) that certifies:

- the long-term stability of the development site; and
- that the development site will not be adversely affected by land slide/slip activity originating on sloping land above the development site. 4. Infrastructure Services and Standards

3.11 Building Envelopes

- (a) The approved building envelopes for proposed lots 1 - 4 and 6 - 9 are the building envelopes shown on Brazier Motti plan no. 34579/001A dated 26 July 2018.
- (b) Prior to the endorsement of the survey plan the approved building envelope areas must be defined by markers set at each corner, to the satisfaction of Council's delegated officer.
- (c) All future buildings including associated on-site effluent disposal systems must be located within the approved building envelopes.

- (d) No vegetation shall be cleared outside the approved building envelopes.

4. Infrastructure Services and Standards

4.1 Access

- (a) Industrial/commercial grade access crossovers must be constructed (from the edge of the Mason Road kerbing to the commencement of each shared driveway required by 4.1 (b) below) in accordance with FNQROC Development Manual standards, to the satisfaction of Council's delegated officer.

An access crossover must be provided/constructed to each allotment from the shared access driveways required by 4.1 (b) below) to the boundary of each proposed lot) in accordance with the FNQROC Development Manual, to the satisfaction of Council's delegated officer. The provision of layback kerb along the road/access easement frontages of each allotment will satisfy this condition.

- (b) An asphalt or concrete sealed driveway, including kerb and channel shall be provided for the full length of the access handles of Lots 1 and 6 (covered by easements A and B), to the satisfaction of Council's delegated officer. Each driveway will:
- have a minimum formation width of 4 metres;
 - be constructed generally in the centre of each access handle;
 - be formed to cater for stormwater drainage such that any stormwater runoff is discharged to Masons Road or another approved legal point of discharge;
 - service and utility conduits, including water supply pipes are to be provided for the full length of each driveway to service the benefited allotments.
- (c) A formed concrete wheelie bin set-down area capable of accommodating 4 wheelie bins must be constructed adjacent the Masons Road kerbing next to each access crossover required by 4.1 (a) above.
- (d) Reciprocal "access and services" easement must be established over the access handles of Lots 1 and 6 which benefit Lots 2 - 5 and Lots 7 - 9. Easement documents must be made available to Council for review prior to endorsement of a plan of survey creating any lots.

Prior to works commencing, plans for the abovementioned works must be approved as part of a subsequent application for Operational Works.

4.2 Stormwater Drainage

- (a) The applicant/developer must take all necessary steps to ensure a non-worsening effect on surrounding land as a consequence of the development.
- (b) Prior to operational works commencing, the applicant must submit a Stormwater Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) that meets or exceeds the standards of design and construction set out in the Queensland Urban Drainage Manual (QUDM) and the FNQROC Development Manual to the satisfaction of Council's delegated officer.

- (c) Prior to works commencing the applicant must submit a Stormwater Quality Management Plan and Report prepared and certified by a suitably qualified design engineer (RPEQ) that meets or exceeds the standards of design and construction set out in the Urban Stormwater Quality Planning Guideline and the Queensland Water Quality Guideline to the satisfaction of Council's delegated officer.
- (d) The Stormwater Quality Management Plan must include an Erosion and Sediment Control Plan that meets or exceeds the Soil Erosion and Sedimentation Control Guidelines (Institute of Engineers Australia) to the satisfaction of Council's delegated officer.
- (e) The applicant/developer must construct the stormwater drainage infrastructure in accordance with the approved Stormwater Management Plan and/or Stormwater Quality Management Plan and Report.
- (f) Temporary drainage is to be provided and maintained during the construction phase of the development, discharged to a lawful point and not onto the construction site.
- (g) All stormwater channels through private property must be registered, with the easement for drainage purposes in favour of Council. All documentation leading to the registration of the easement must be completed at no cost to Council.
- (h) All stormwater drainage collected from the site must be discharged to an approved legal point of discharge.
- (i) The applicant (at their cost) must video all stormwater lines and submit the video for inspection by Council's delegated officer prior to the development being taken "off maintenance" to ensure that no defects have occurred during the 12 month maintenance period.

4.3 Water Supply

- (a) Where the existing reticulated water supply does not currently service the site or is not at an adequate capacity, the developer is required to extend or upgrade the reticulated water supply infrastructure to connect the site to Council's existing infrastructure at a point that has sufficient capacity to service the development in accordance with FNQROC Development Manual standards (as amended).
- (b) A water service connection must be provided to each proposed lot in accordance with FNQROC Development Manual standards (as amended) to the satisfaction of Council's delegated officer.

4.4 Wastewater Disposal

At the time of construction of a future dwelling or outbuilding on each lot, any associated on-site effluent disposal system must be constructed in compliance with the latest version On-Site Domestic Wastewater Management Standard (ASNZ1547) to the satisfaction of the Council's delegated officer.

4.5 Electricity provision/supply

The applicant/developer must ensure that an appropriate level of electricity supply is provided to each allotment in accordance with FNQROC Development Manual standards (as amended) to the satisfaction of Council's delegated officer.

Written advice from an Electricity Service Provider is to be provided to Council indicating that an agreement has been made for the provision of **underground** power reticulation.

4.6 Telecommunications

The applicant/developer must demonstrate that a connection to the national broadband network is available for each allotment, or alternatively, enter into an agreement with a telecommunication carrier to provide telecommunication services to each lot and arrange provision of necessary conduits and enveloping pipes (to be included for the full length of the shared driveways required by 4.1 (b) above).

5. Additional Payment Condition/s (section 130 of the Planning Act 2016)

5.1 The additional payment condition has been imposed as the development will create additional demand on trunk infrastructure which will create additional trunk infrastructure costs for council.

5.2 The developer must pay \$16,960.00 per additional lot as a contribution toward trunk infrastructure with the amount of the contribution increased on 1 July each year in accordance with the increase for the PPI index for the period starting on the day the development approval takes effect, adjusted by reference to the 3-yearly PPI index average to the date of payment.

5.3 The trunk infrastructure for which the payment is required is:

- The trunk transport network servicing the land (\$4,585.00 per additional allotment)
- The trunk open space infrastructure servicing the land (\$4,585.00)
- The trunk water supply infrastructure servicing the land (\$7,790.00 - Mason High Level Zone)

5.4 The developer may elect to provide part of the trunk infrastructure instead of making the payment.

5.5 If the developer elects to provide part of the trunk infrastructure the developer must:

- Discuss with Council's delegated officer the part of the works to be undertaken;
- Obtain the necessary approvals for the part of the works;
- Indemnify the Council in relation to any actions, suits or demands relating to or arising from the works;

- Take out joint insurance in the name of the Council and the developer in the sum of \$20,000,000 in relation to the undertaking of the works;
- Comply with the reasonable direction of Council officers in relation to the completion of the works;
- Complete the works to the standards required by the Council; and
- Complete the works prior to endorsement of the plan of subdivision.

FNQROC Regional Development Manual

The submitted plans have been checked for compliance against the FNQROC Development Manual and are considered to comply.

When checking the submitted plans, Council's Technical Services Department has recommended the following conditions be attached to any approval:

- The water service infrastructure shown on Drawing No. 1331-006 (Rev. D) (excluding the water meters) must be installed by and at the expense of the applicant/developer in accordance with FNQROC Development Manual Standards, to the satisfaction of Council's delegated officer.

Individual water meters will be installed by Council at the request and expense of the developer/landowner as per Council's standard water meter installation procedures. Water meters are not required to be installed as part of the operational works.

Note: *The applicant/developer should ensure that the water hydrants are suitably located to service all lots during an emergency.*

- At time of installation of erosion and sediment control measures, the type, location and scale of erosion and sediment control should, where possible, comply with Council's Standard Erosion and Sediment Control Plans (*Drawing No. QT 150 dated 30/04/99* and *Drawing No. QT 154 dated 30/04/99*), to the satisfaction of Council's delegated officer. Drawing No. QT 150 and QT 154 are available from Council upon request.

REFERRALS

Internal Consultation

Technical Services

OFFICER'S RECOMMENDATION

1. That in relation to this operational works development application:

APPLICATION		PREMISES	
APPLICANT:	A & A Salinovic	ADDRESS:	72-76 Masons Road, Kuranda
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PROPOSED DEVELOPMENT	Operational Works (Roadworks, Stormwater, Water Infrastructure, Drainage and Earthworks) for Development Permit RAL/18/0029		

and in accordance with the Planning Act 2016, as amended, the applicant be notified that the application for operational works is:

Approved subject to the following assessment manager conditions:

(A) APPROVED DEVELOPMENT: Operational Works (Roadworks, Stormwater, Water Infrastructure, Drainage and Earthworks) for Development Permit RAL/18/0029

(B) APPROVED PLANS:

Plan/Document Number	Plan/Document Title	Prepared by	Dated
1331-001 Rev. D	Staging Plan	Trinity Engineering and Consulting	-
1331-002 Rev. E	Siteworks and Drainage Plan	Trinity Engineering and Consulting	-
1331-003 Rev. D	Typical Driveway Sections and Setout Details	Trinity Engineering and Consulting	-
1331-004 Rev. D	Shared Driveway Cross Sections	Trinity Engineering and Consulting	-
1331-006 Rev. D	Services Plan	Trinity Engineering and Consulting	-
1331-007 Rev. C	Miscellaneous Details	Trinity Engineering and Consulting	-
1331-008 Rev. D	Erosion and Sediment Control Strategy	Trinity Engineering and Consulting	-
1331-009 Rev. A	Stormwater Details	Trinity Engineering and Consulting	-

(C) ASSESSMENT MANAGER'S CONDITIONS (COUNCIL)

1. General

- (i) All operational works must be designed and constructed in accordance with the procedures as set out in the FNQROC Development Manual.
- (ii) Development must be carried out substantially in accordance with the approved plans and the facts and circumstances of the use as submitted with the application, and subject to any alterations:

- found necessary by the Council's Delegated Officer at the time of examination of the engineering plans or during construction of the development because of particular engineering requirements;
 - to ensure the works comply in all respects with the requirements and procedures of the FNQROC Development Manual and good engineering practice; and
 - to ensure compliance with the following conditions of approval.
- (iii) Council's examination of the documents should not be taken to mean that the documents have been checked in detail and Council takes no responsibility for their accuracy. If during construction, inadequacies of the design are discovered, it is the responsibility of the Principal Consulting Engineer to resubmit amended plans to Council for approval and rectify works accordingly.

2. Water Service Infrastructure

The water service infrastructure shown on Drawing No. 1331-006 (Rev. D) (excluding the water meters) must be installed by and at the expense of the applicant/developer in accordance with FNQROC Development Manual Standards, to the satisfaction of Council's delegated officer.

Individual water meters will be installed by Council at the request and expense of the developer/landowner as per Council's standard water meter installation procedures. Water meters are not required to be installed as part of the operational works.

Note: The applicant/developer should ensure that the water hydrants are suitably located to service all lots during an emergency.

3. Sediment Control

At time of installation of erosion and sediment control measures, the type, location and scale of erosion and sediment control should, where possible, comply with Council's Standard Erosion and Sediment Control Plans (*Drawing No. QT 150 dated 30/04/99* and *Drawing No. QT 154 dated 30/04/99*), to the satisfaction of Council's delegated officer. Drawing No. QT 150 and QT 154 are available from Council upon request.

4. Pre-start Meeting

- (i) In addition to the requirements of Clause CP1.07 and CP1.08 of the FNQROC Development Manual; after documentation has been approved by Council, a pre-start meeting is to be held on site prior to the commencement of work. Part 1 of the **attached** pre-start meeting pro-forma is to be completed and returned prior to the meeting including clause 1.u 'Request for Meeting' together with the prescribed Construction Monitoring Fee as set out in Council's Schedule of Fees.

5. Inspections

- (i) Inspections are to be carried out as detailed in the FNQROC Manual unless advised otherwise at the pre-start meeting.

6. Construction Security Bond and Defects Liability Bond

- (i) In addition to Clauses CP1.06 and CP1.20 of the FNQROC Development Manual; the Construction Security Bond and Defects Liability Bond shall each be a minimum of \$1000 and Bank Guarantees shall have no termination date.
- (ii) During the Defects Liability period, it is the responsibility of the developer to rectify any works found to be defective due to design faults and or found to exhibit faults attributed to the performance of the construction activities in terms of quality and conformance with design and specifications. The bond will be returned on satisfactory correction of any defective work and after expiration of the maintenance period. Failure to comply with a Council issued instruction to correct defective work may result in the call up of the bond to have the work completed.

7. Hours of Work

- (i) Work involving the operation of construction plant and equipment of any description, shall only be carried out on site during the following times:
 - 7.00am to 6.00pm, Monday to Friday;
 - 7.00am to 1.00pm Saturdays;
 - No work is permitted on Sundays or Public Holidays.
- (ii) No variation to the above working hours is allowed unless otherwise agreed in writing by Council.

8. Transportation of Soil

- (i) All soil transported to or from the site must be covered to prevent dust or spillage during transport. If soil is tracked or spilt onto the road pavement from works on the subject land, it must be removed no later than at the end of each working day. Sediment must not enter Council's stormwater drainage network.

(D) RELEVANT PERIOD

When approval lapses if development not started (s.85)

- Two (2) years (starting the day the approval takes effect).

(E) OTHER NECESSARY DEVELOPMENT PERMITS AND/OR COMPLIANCE PERMITS

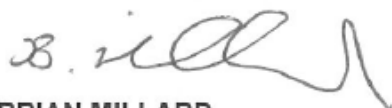
- Nil

DECISION BY DELEGATE

DECISION

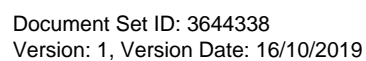
Having considered the Planning Officer's report detailed above, I approve, as delegate of Council, the application subject to the conditions listed in the report.

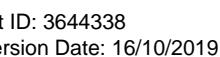
Dated the *16TH* day of *OCTOBER* 2019

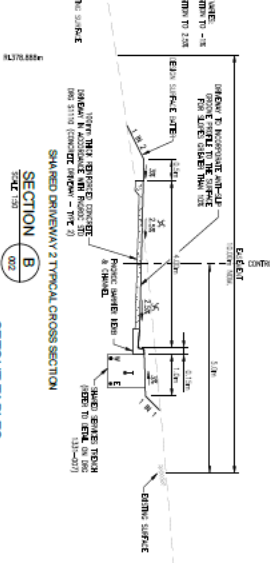
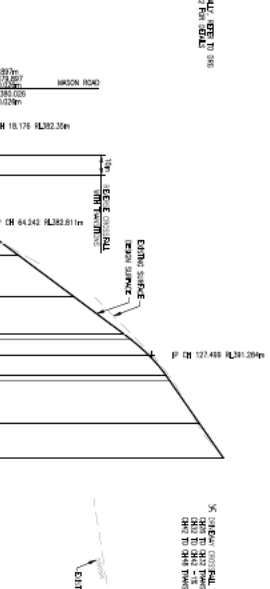
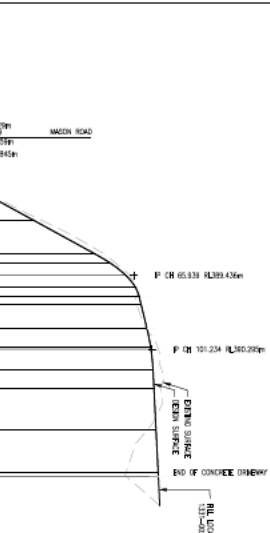
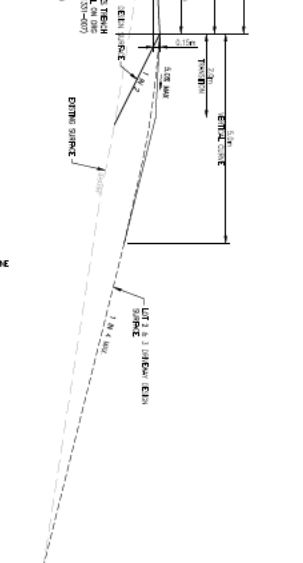
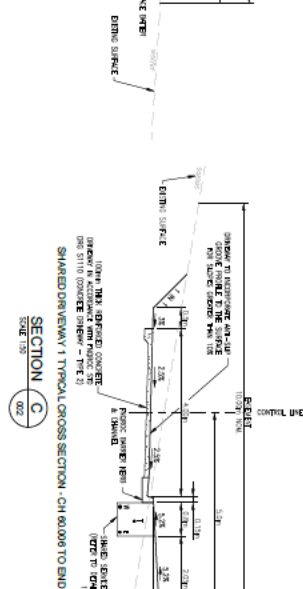
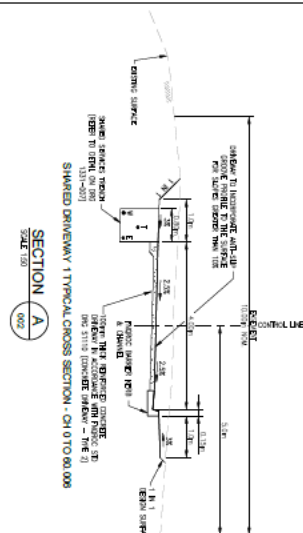


BRIAN MILLARD
SENIOR PLANNER

MAREEBA SHIRE
AS DELEGATE OF THE COUNCIL







Technical drawing of a road cross-section. The drawing shows a road with a width of 12.00m, sidewalks of 1.50m, and shoulders of 0.50m. The road is shown in plan view with a north arrow pointing towards the top right. A scale bar indicates 1:100. The drawing is titled 'CROSS SECTION' and includes a table with project details.

NO.	DESCRIPTION	DATE
1	DESIGN	10/10/2010
2	CHECK	10/10/2010
3	APPROVED	10/10/2010

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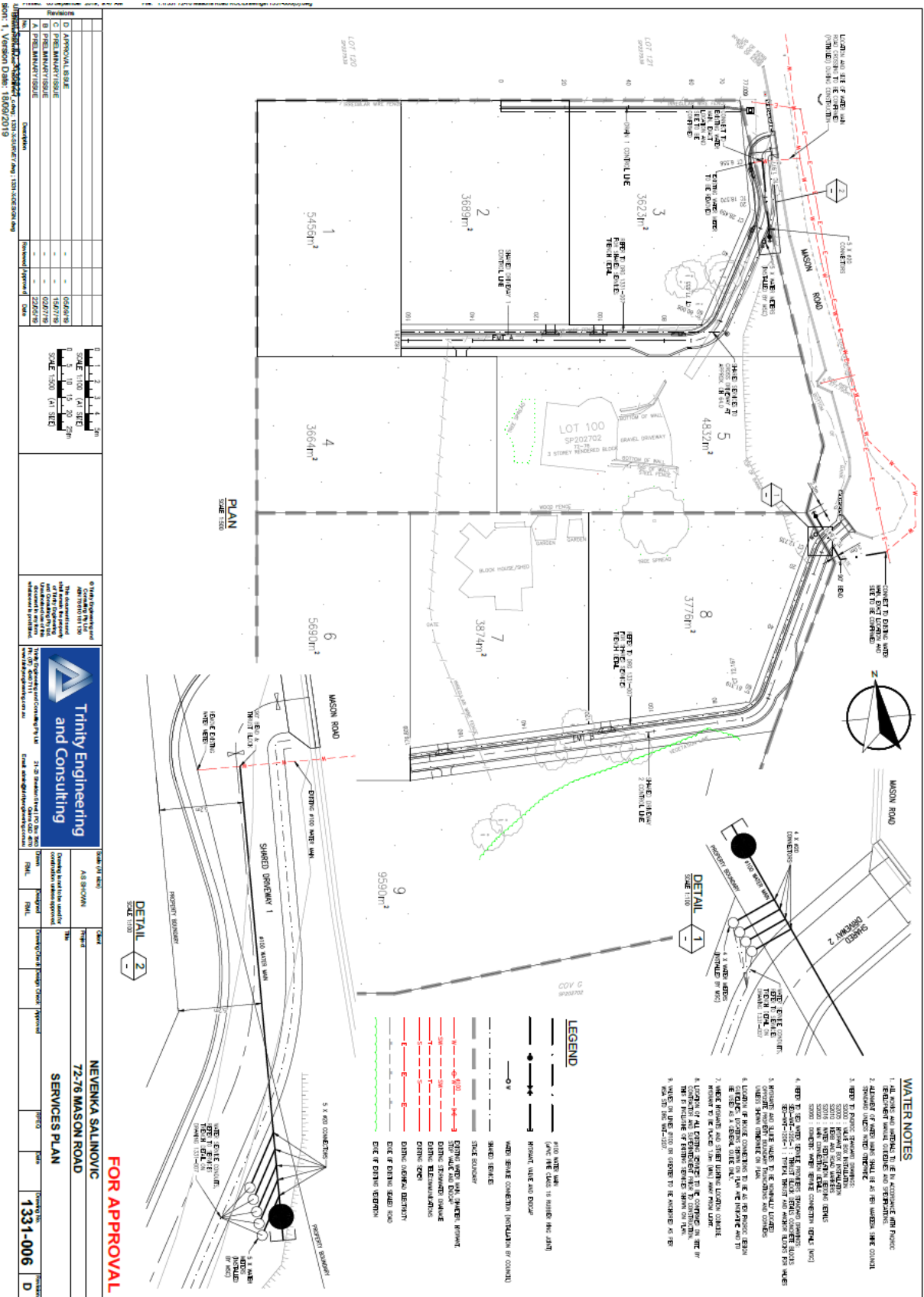
SHARED DRIVEWAY LONGITUDINAL SECTION
HORIZONTAL SCALE 1:1000
VERTICAL SCALE 1:150

STANDARD DRIVEWAY & CONSTRUCTION SECTION

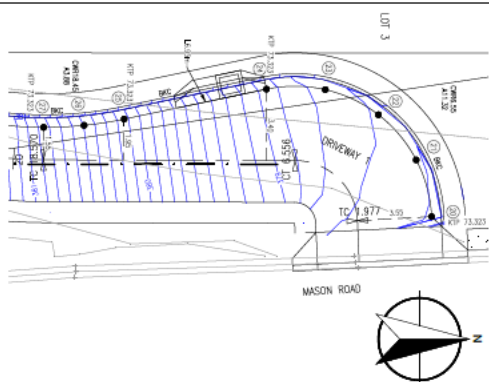
HORIZONTAL SCALE 1:1,000
VERTICAL SCALE 1:100

FOR APPROVAL

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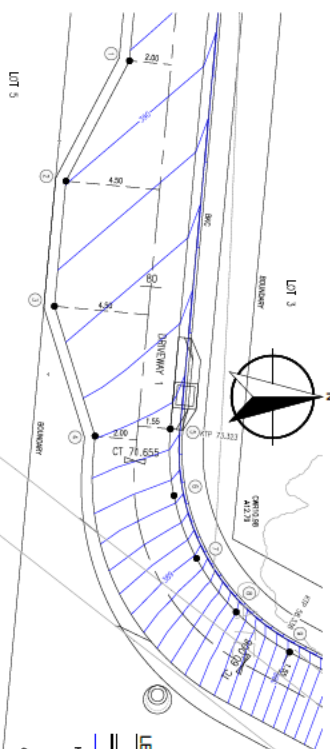


Sheet 1, Version Date: 16/09/2019

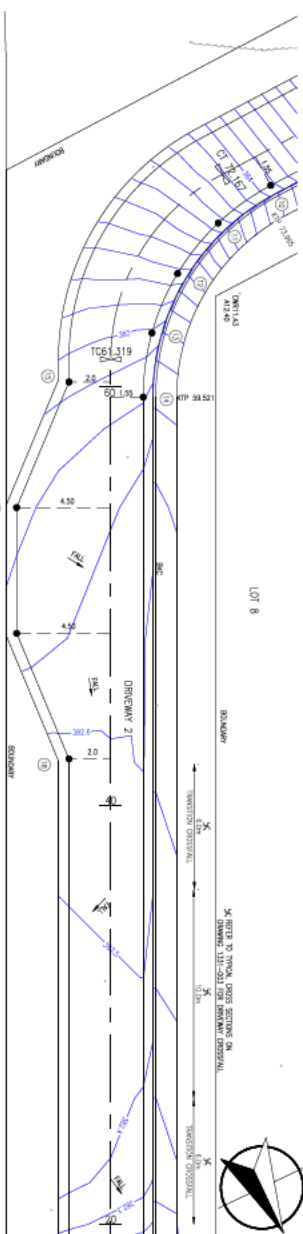


SHARED DRIVEWAY 1 CURVE WIDENING

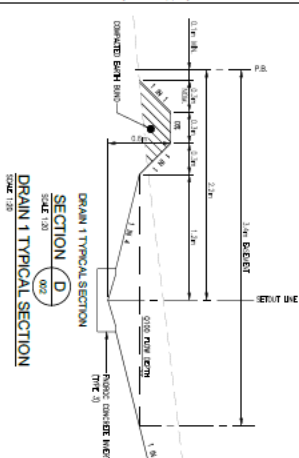
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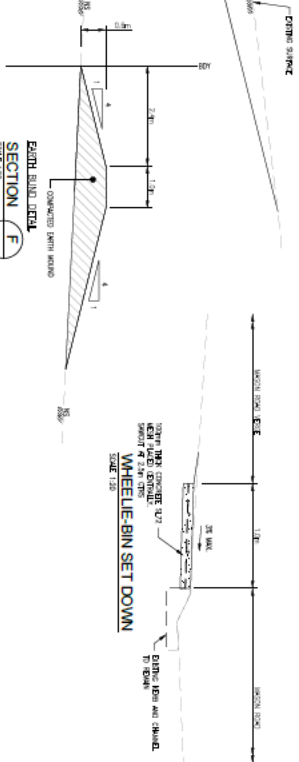
SHARED DRIVEWAY 1 PASSING BAY & CURVE WIDENING



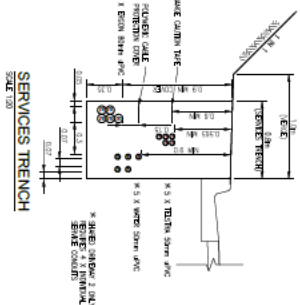
SHARED DRIVEWAY 2 PASSING BAY, CURVE WIDENING AND CROSSFALL TRANSITION



DRAIN 1 TYPICAL SECTION



WHEELIE-BIN SET DOWN



SERVICES TRENCH
SCALE 1/20

NEMO SEQUOI TABLES				
Year	2015	2016	2017	2018
1	25,005,146	19,707,400	341,456	
2	25,005,146	19,707,400	341,456	
3	25,005,146	19,707,400	341,456	
4	25,049,148	19,707,400	341,456	
5	25,049,148	19,707,400	341,456	
6	25,049,148	19,707,400	341,456	
7	25,049,148	19,707,400	341,456	
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41	25,049,148	19,707,400	341,456	
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43	25,049,148	19,707,400	341,456	
44	25,049,148	19,707,400	341,456	
45	25,049,148	19,707,400	341,456	
46	25,049,148	19,707,400	341,456	
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48	25,049,148	19,707,400	341,456	
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54	25,049,148	19,707,400	341,456	
55	25,049,148	19,707,400	341,456	
56	25,049,148	19,707,400	341,456	
57	25,049,148	19,707,400	341,456	
58	25,049,148	19,707,400	341,456	
59	25,049,148	19,707,400	341,456	
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61	25,049,148	19,707,400	341,456	
62	25,049,148	19,707,400	341,456	
63	25,049,148	19,707,400	341,456	
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68	25,049,148	19,707,400	341,456	
69	25,049,148	19,707,400	341,456	
70	25,049,148	19,707,400	341,456	
71	25,049,148	19,707,400	341,456	
72	25,049,148	19,707,400	341,456	
73	25,049,148	19,707,400	341,456	
74	25,049,148	19,707,400	341,456	
75	25,049,148	19,707,400	341,456	
76	25,049,148	19,707,400	341,456	
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83	25,049,148	19,707,400	341,456	
84	25,049,148	19,707,400	341,456	
85	25,049,148	19,707,400	341,456	
86	25,049,148	19,707,400	341,456	
87	25,049,148	19,707,400	341,456	
88	25,049,148	19,707,400	341,456	
89	25,049,148	19,707,400	341,456	
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91	25,049,148	19,707,400	341,456	
92	25,049,148	19,707,400	341,456	
93	25,049,148	19,707,400	341,456	
94	25,049,148	19,707,400	341,456	
95	25,049,148	19,707,400	341,456	
96	25,049,148	19,707,400	341,456	
97	25,049,148	19,707,400	341,456	
98	25,049,148	19,707,400	341,456	
99	25,049,148	19,707,400	341,456	
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KERB SETOUT TABLES

LEGEND

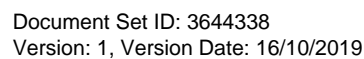
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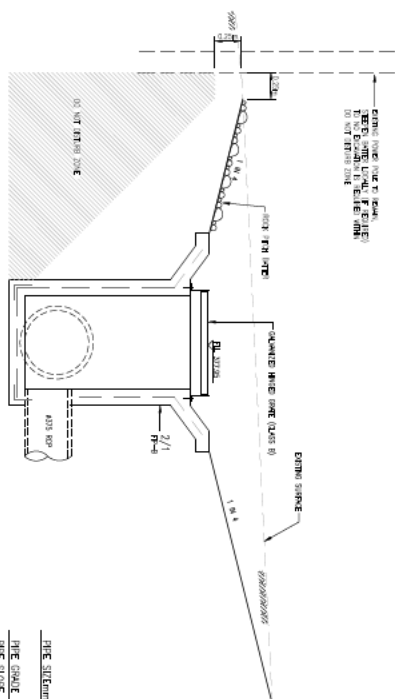
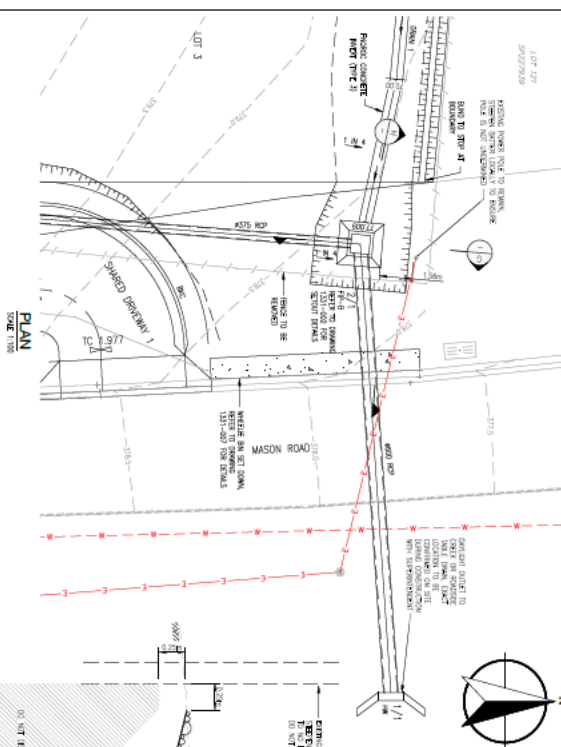
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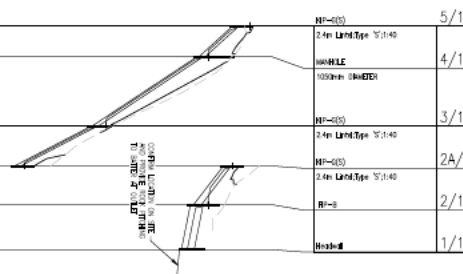
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Dimensions		Scale		Notes	
A	Overall height	1000	1000		
B	Overall width	1000	1000		
C	Overall depth	1000	1000		
D	Overall weight	1000	1000		
E	Overall length	1000	1000		
F	Overall area	1000	1000		
G	Overall volume	1000	1000		
H	Overall mass	1000	1000		
I	Overall density	1000	1000		
J	Overall pressure	1000	1000		
K	Overall force	1000	1000		
L	Overall energy	1000	1000		
M	Overall power	1000	1000		
N	Overall speed	1000	1000		
O	Overall acceleration	1000	1000		
P	Overall deceleration	1000	1000		
Q	Overall frequency	1000	1000		
R	Overall wavelength	1000	1000		
S	Overall period	1000	1000		
T	Overall phase	1000	1000		
U	Overall amplitude	1000	1000		
V	Overall displacement	1000	1000		
W	Overall distance	1000	1000		
X	Overall time	1000	1000		
Y	Overall angle	1000	1000		
Z	Overall area	1000	1000		
AA	Overall volume	1000	1000		
AB	Overall mass	1000	1000		
AC	Overall density	1000	1000		
AD	Overall pressure	1000	1000		
AE	Overall force	1000	1000		
AF	Overall energy	1000	1000		
AG	Overall power	1000	1000		
AH	Overall speed	1000	1000		
AI	Overall acceleration	1000	1000		
AJ	Overall deceleration	1000	1000		
AK	Overall frequency	1000	1000		
AL	Overall wavelength	1000	1000		
AM	Overall period	1000	1000		
AN	Overall phase	1000	1000		
AO	Overall amplitude	1000	1000		
AP	Overall displacement	1000	1000		
AQ	Overall distance	1000	1000		
AR	Overall time	1000	1000		
AS	Overall angle	1000	1000		
AT	Overall area	1000	1000		
AU	Overall volume	1000	1000		
AV	Overall mass	1000	1000		
AW	Overall density	1000	1000		
AX	Overall pressure	1000	1000		
AY	Overall force	1000	1000		
AZ	Overall energy	1000	1000		
BA	Overall power	1000	1000		
BB	Overall speed	1000	1000		
BC	Overall acceleration	1000	1000		
BD	Overall deceleration	1000	1000		
BE	Overall frequency	1000	1000		
BF	Overall wavelength	1000	1000		
BG	Overall period	1000	1000		
BH	Overall phase	1000	1000		
BI	Overall amplitude	1000	1000		
BJ	Overall displacement	1000	1000		
BK	Overall distance	1000	1000		
BL	Overall time	1000	1000		
BM	Overall angle	1000	1000		
BN	Overall area	1000	1000		
BO	Overall volume	1000	1000		
BP	Overall mass	1000	1000		
BQ	Overall density	1000	1000		
BR	Overall pressure	1000	1000		
BS	Overall force	1000	1000		
BT	Overall energy	1000	1000		
BU	Overall power	1000	1000		
BV	Overall speed	1000	1000		
BW	Overall acceleration	1000	1000		
BX	Overall deceleration	1000	1000		
BY	Overall frequency	1000	1000		
BZ	Overall wavelength	1000	1000		





STRUCTURE DESCRIPTION	STRUCTURE NAME
WT=005	5/1
2.4m LandType 'S';1:40	
WASHLE	4/1
1000mm (ShoPDI)	
WT=005	3/1
2.4m LandType 'S';1:40	
WT=005	2A/
2.4m LandType 'S';1:40	
WT=0	2/1
WT=0	1/1



PIPE SYSTEM (Class)		PIPE GRADE %		PIPE SLOPE IN X		FULL PIPE FLOW VELOCITY (m/s)		PARTIAL PIPE FLOW VELOCITY (m/s)	
2000	3000	2000	3000	2000	3000	2000	3000	2000	3000
0.000	389.575	0.000	389.575	0.000	389.575	0.000	389.575	0.000	389.575
1.500	388.091	1.500	388.091	1.500	388.091	1.500	388.091	1.500	388.091
3.000	386.607	3.000	386.607	3.000	386.607	3.000	386.607	3.000	386.607
4.500	385.123	4.500	385.123	4.500	385.123	4.500	385.123	4.500	385.123
6.000	383.639	6.000	383.639	6.000	383.639	6.000	383.639	6.000	383.639
7.500	382.155	7.500	382.155	7.500	382.155	7.500	382.155	7.500	382.155
9.000	380.671	9.000	380.671	9.000	380.671	9.000	380.671	9.000	380.671
10.500	379.187	10.500	379.187	10.500	379.187	10.500	379.187	10.500	379.187
12.000	377.703	12.000	377.703	12.000	377.703	12.000	377.703	12.000	377.703
13.500	376.219	13.500	376.219	13.500	376.219	13.500	376.219	13.500	376.219
15.000	374.735	15.000	374.735	15.000	374.735	15.000	374.735	15.000	374.735
16.500	373.251	16.500	373.251	16.500	373.251	16.500	373.251	16.500	373.251
18.000	371.767	18.000	371.767	18.000	371.767	18.000	371.767	18.000	371.767
19.500	370.283	19.500	370.283	19.500	370.283	19.500	370.283	19.500	370.283
21.000	368.799	21.000	368.799	21.000	368.799	21.000	368.799	21.000	368.799
22.500	367.315	22.500	367.315	22.500	367.315	22.500	367.315	22.500	367.315
24.000	365.831	24.000	365.831	24.000	365.831	24.000	365.831	24.000	365.831
25.500	364.347	25.500	364.347	25.500	364.347	25.500	364.347	25.500	364.347
27.000	362.863	27.000	362.863	27.000	362.863	27.000	362.863	27.000	362.863
28.500	361.379	28.500	361.379	28.500	361.379	28.500	361.379	28.500	361.379
30.000	359.895	30.000	359.895	30.000	359.895	30.000	359.895	30.000	359.895
31.500	358.411	31.500	358.411	31.500	358.411	31.500	358.411	31.500	358.411
33.000	356.927	33.000	356.927	33.000	356.927	33.000	356.927	33.000	356.927
34.500	355.443	34.500	355.443	34.500	355.443	34.500	355.443	34.500	355.443
36.000	353.959	36.000	353.959	36.000	353.959	36.000	353.959	36.000	353.959
37.500	352.475	37.500	352.475	37.500	352.475	37.500	352.475	37.500	352.475
39.000	350.991	39.000	350.991	39.000	350.991	39.000	350.991	39.000	350.991
40.500	349.507	40.500	349.507	40.500	349.507	40.500	349.507	40.500	349.507
42.000	348.023	42.000	348.023	42.000	348.023	42.000	348.023	42.000	348.023
43.500	346.539	43.500	346.539	43.500	346.539	43.500	346.539	43.500	346.539
45.000	345.055	45.000	345.055	45.000	345.055	45.000	345.055	45.000	345.055
46.500	343.571	46.500	343.571	46.500	343.571	46.500	343.571	46.500	343.571
48.000	342.087	48.000	342.087	48.000	342.087	48.000	342.087	48.000	342.087
49.500	340.603	49.500	340.603	49.500	340.603	49.500	340.603	49.500	340.603
51.000	339.119	51.000	339.119	51.000	339.119	51.000	339.119	51.000	339.119
52.500	337.635	52.500	337.635	52.500	337.635	52.500	337.635	52.500	337.635
54.000	336.151	54.000	336.151	54.000	336.151	54.000	336.151	54.000	336.151
55.500	334.667	55.500	334.667	55.500	334.667	55.500	334.667	55.500	334.667
57.000	333.183	57.000	333.183	57.000	333.183	57.000	333.183	57.000	333.183
58.500	331.699	58.500	331.699	58.500	331.699	58.500	331.699	58.500	331.699
60.000	330.215	60.000	330.215	60.000	330.215	60.000	330.215	60.000	330.215
61.500	328.731	61.500	328.731	61.500	328.731	61.500	328.731	61.500	328.731
63.000	327.247	63.000	327.247	63.000	327.247	63.000	327.247	63.000	327.247
64.500	325.763	64.500	325.763	64.500	325.763	64.500	325.763	64.500	325.763
66.000	324.279	66.000	324.279	66.000	324.279	66.000	324.279	66.000	324.279
67.500	322.795	67.500	322.795	67.500	322.795	67.500	322.795	67.500	322.795
69.000	321.311	69.000	321.311	69.000	321.311	69.000	321.311	69.000	321.311
70.500	319.827	70.500	319.827	70.500	319.827	70.500	319.827	70.500	319.827
72.000	318.343	72.000	318.343	72.000	318.343	72.000	318.343	72.000	318.343
73.500	316.859	73.500	316.859	73.500	316.859	73.500	316.859	73.500	316.859
75.000	315.375	75.000	315.375	75.000	315.375	75.000	315.375	75.000	315.375
76.500	313.891	76.500	313.891	76.500	313.891	76.500	313.891	76.500	313.891
78.000	312.407	78.000	312.407	78.000	312.407	78.000	312.407	78.000	312.407
79.500	310.923	79.500	310.923	79.500	310.923	79.500	310.923	79.500	310.923
81.000	309.439	81.000	309.439	81.000	309.439	81.000	309.439	81.000	309.439
82.500	307.955	82.500	307.955	82.500	307.955	82.500	307.955	82.500	307.955
84.000	306.471	84.000	306.471	84.000	306.471	84.000	306.471	84.000	306.471
85.500	304.987	85.500	304.987	85.500	304.987	85.500	304.987	85.500	304.987
87.000	303.503	87.000	303.503	87.000	303.503	87.000	303.503	87.000	303.503
88.500	302.019	88.500	302.019	88.500	302.019	88.500	302.019	88.500	302.019
90.000	300.535	90.000	300.535	90.000	300.535	90.000	300.535	90.000	300.535
91.500	299.051	91.500	299.051	91.500	299.051	91.500	299.051	91.500	299.051
93.000	297.567	93.000	297.567	93.000	297.567	93.000	297.567	93.000	297.567
94.500	296.083	94.500	296.083	94.500	296.083	94.500	296.083	94.500	296.083
96.000	294.599	96.000	294.599	96.000	294.599	96.000	294.599	96.000	294.599
97.500	293.115	97.500	293.115	97.500	293.115	97.500	293.115	97.500	293.115
99.000	291.631	99.000	291.631	99.000	291.631	99.000	291.631	99.000	291.631
100.000	290.147	100.000	290.147	100.000	290.147	100.000	290.147	100.000	290.147

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[illegible]