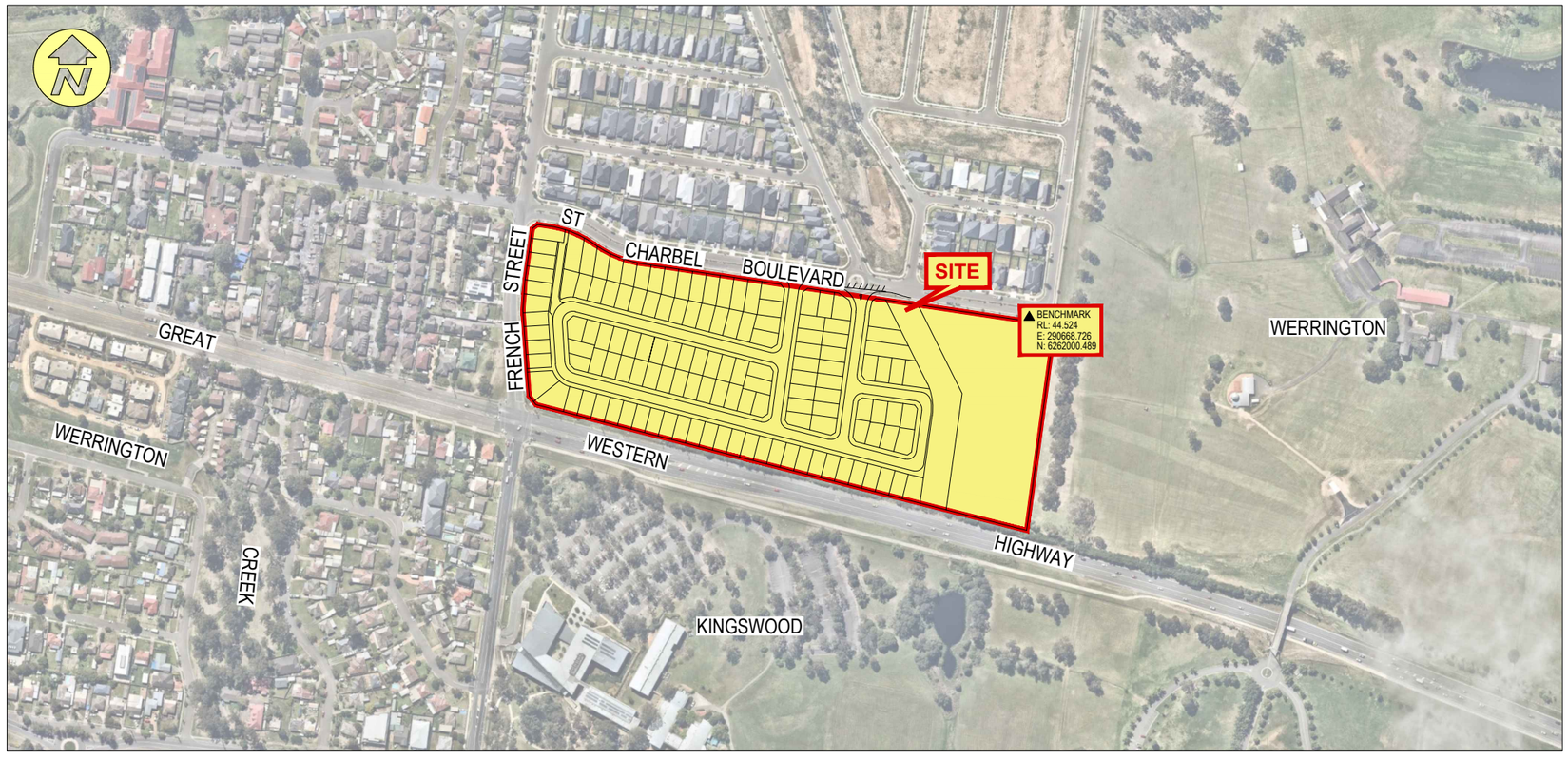
741 & 755 GREAT WESTERN HIGHWAY

ROAD & DRAINAGE DESIGN

FOR DEVELOPMENT APPLICATION



LOCALITY PLAN
N.T.S.

DRAWING LIST

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901	RETAINING WALL DETAILS

PENRITH CITY COUNCIL
LOT 125-127 DP 1215199

CLIENT:

STATEWIDE PLANNING PTY. LTD.

741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

PROJECT No.:	MILESTONE:	REVISION DATE:	DRAWING No.:	REVISION:
20-000606	DA	19/03/2021	000	1

N

ST CHARBEL BOULEVARD

FRENCH STREET

SERVICE LANE

ROAD No.1

ROAD No.2

ROAD No.3

ROAD No.4

BENCHMARK
RL: 41.58
E: 290366.063
N: 6262045.584

BENCHMARK
RL: 44.524
E: 290668.726
N: 6262000.489

WERRINGTON

FUTURE STAGE

LOT 101
DP1140594

GREAT WESTERN HIGHWAY

KINGSWOOD

ENGINEERING PLAN SHEET 01 OF 02

ENGINEERING PLAN SHEET 02 OF 02

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
AMENDMENTS 1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 10 20 30 40 50 60 70 80
SCALE 1:1000 (A1) SCALE 1:2000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: GENERAL ARRANGEMENT PLAN

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	001	DA	1

F:\E.H\2020\-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\2I-000606_LD_DA-001.DWG LAST SAVED BY AUSTEN PERCH PLOTTED: 19-Mar-21

GENERAL NOTES

GENERAL

G1. ALL WORK TO BE CARRIED OUT IN ACCORDANCE WITH PENRITH CITY COUNCIL ENGINEERING DESIGN AND ENGINEERING CONSTRUCTION SPECIFICATIONS AND TO THE REQUIREMENTS OF THE CERTIFYING AUTHORITY.

G2. INSPECTIONS BY CERTIFYING AUTHORITY ARE REQUIRED AT THE FOLLOWING STAGES AND THE WORKS APPROVED PRIOR TO CONTINUANCE OF ANY FUTURE WORK:

(A) FOLLOWING INSTALLATION OF EROSION AND SEDIMENT CONTROL STRUCTURES/MEASURES.

(B) PRIOR TO BACKFILLING PIPELINES, SUBSOIL DRAINS AND DAMS.

(C) PRIOR TO CASTING OF PITS AND OTHER CONCRETE STRUCTURES, INCLUDING KERB AND GUTTER BUT FOLLOWING PLACEMENT OF FOOTINGS, FORMWORK, AND REINFORCEMENT.

(D) PRIOR TO PLACEMENT OF SUB BASE AND ALL SUBSEQUENT PAVEMENT LAYERS, A PROOF ROLLER TEST OF EACH PAVEMENT LAYER IS REQUIRED.

(E) FORMWORKS PRIOR TO POURING CONCRETE IN PARKING AREA FOR FOOTPATH CROSSING AND OTHER ASSOCIATED WORK.

(F) PRIOR TO BACKFILLING PUBLIC UTILITY CROSSINGS IN ROAD RESERVES.

(G) FINAL INSPECTIONS AFTER ALL WORKS ARE COMPLETED AND 'WORKS AS EXECUTED' PLANS HAVE BEEN SUBMITTED TO COUNCIL.

G3. NO TREES ARE TO BE REMOVED UNLESS APPROVAL IS GRANTED BY COUNCIL'S LANDSCAPE COMPLIANCE OFFICER OR AS AUTHORISED BY DEVELOPMENT CONSENT.

G4. MAKE SMOOTH JUNCTIONS WITH EXISTING WORKS.

G5. NO WORK IS TO BE CARRIED OUT ON COUNCIL PROPERTY OR ADJOINING PROPERTIES WITHOUT THE WRITTEN PERMISSION FROM THE OWNER/S.

G6. VEHICULAR ACCESS AND ALL UTILITIES/SERVICES ARE TO BE MAINTAINED AT ALL TIMES TO ADJOINING PROPERTIES AFFECTED BY CONSTRUCTION.

G7. ALL RUBBISH, BUILDINGS, SHEDS AND FENCES TO BE REMOVED TO SATISFACTION OF COUNCIL'S ENGINEER.

G8. COUNCIL ENGINEERS HAVE DISCRETION TO VARY, AS CONSIDERED NECESSARY, THE ENGINEERING REQUIREMENTS IN RESPECT OF A PARTICULAR SUBDIVISION OR DEVELOPMENT HAVING REGARD TO THE SITE CONTEXT.

EARTHWORKS

E1. EARTHWORKS ARE TO BE CARRIED OUT TO THE SATISFACTION OF THE COUNCIL. UNSUITABLE MATERIALS ARE TO BE REMOVED FROM ROADS AND LOTS PRIOR TO FILLING. THE CONTRACTOR IS TO ARRANGE AND MAKE AVAILABLE COMPACTION TESTING RESULTS FOR ALL AREAS THAT CONTAIN FILL IN EXCESS OF 200mm.

E2. COMPACTION OF EARTHWORKS SHALL CONTINUE UNTIL A DRY DENSITY RATIO OF 95% FOR SITE FILLING AND 100% FOR ROAD PAVEMENT SUBGRADES HAS BEEN ACHIEVED IN ACCORDANCE WITH TEST METHOD AS1289.5.3.1 OR AS.1289.5.1.1. THE CONTROL TESTING OF EARTHWORKS SHALL BE IN ACCORDANCE WITH THE GUIDELINES IN AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'. WHERE IT IS PROPOSED TO USE TEST METHOD AS1289.5.8.1 TO DETERMINE THE FIELD DENSITY, A SAND REPLACEMENT METHOD SHALL BE USED TO CONFIRM THE RESULTS.

E3. THE SUITABLE QUALIFIED GEOTECHNICAL ENGINEER, SHALL HAVE A LEVEL 1 RESPONSIBILITY FOR ALL FILLING AS DEFINED IN APPENDIX B AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS', AND AT THE END OF THE WORKS SHALL CONFIRM THE EARTHWORKS COMPLY WITH THE REQUIREMENTS OF THE SPECIFICATION AND DRAWINGS BY WRITTEN NOTIFICATION.

E4. IN AREAS TO BE FILLED WHERE THE SLOPE OF THE NATURAL SURFACE EXCEEDS 1(V):4(H), BENCHES ARE TO BE CUT TO PREVENT SLIPPING OF THE PLACED FILL MATERIAL AS REQUIRED BY THE COUNCIL.

E5. ALL BATTERS ARE TO BE SCARIFIED TO A DEPTH OF 50mm TO ASSIST WITH ADHESION OF TOP SOIL TO BATTER FACE.

E6. PROVIDE MINIMUM 150mm AND MAXIMUM 300mm TOPSOIL ON FOOTPATHS, FILLED AREAS AND ALL OTHER AREAS DISTURBED DURING CONSTRUCTION. TOPSOILED AREAS TO BE STABILISED WITH APPROVED VEGETATION A MAXIMUM OF 14 DAYS AFTER TOPSOILING AND ARE TO BE WATERED TO ENSURE GERMINATION.

E7. THE CONTRACTOR SHALL CONTROL SEDIMENTATION, EROSION AND POLLUTION DURING CONSTRUCTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT EDITION OF 'MANAGING URBAN STORMWATER: SOILS AND CONSTRUCTION' PRODUCED BY LANDCOM.

E8. A MINIMUM 1m WIDE, CONTINUOUS STRIP OF COUCH GRASS SHALL BE PLACED BEHIND THE BACK OF ALL KERBS & OTHER CONCRETE STRUCTURES IMMEDIATELY AFTER THE COMPLETION OF THE FOOTPATH GRADING OR OTHER ELEMENTS AS APPLICABLE, AND SHALL BE MAINTAINED AND REPLACED AS REQUIRED DURING THE CONSTRUCTION MAINTENANCE PERIOD.

CALIBRE GENERAL

CG1. SURVEY SOURCED FROM:
-SURVEYOR: EASTCOAST POSITIONING
-D.T.M.: ECP2074.D.01b.dwg SURVEY DATED 17/12/2020
-BOUNDARY: ECP2074.D.01b.dwg DATED 17/12/2020

CG2. CONTRACTOR IS TO ENSURE THAT ALL WORKS ASSOCIATED WITH PROPERTY BOUNDARIES ARE TO BE SET OUT OR VERIFIED BY A REGISTERED SURVEYOR

CG3. PIPES UP TO 750Ø SHALL BE CONSTRUCTED WITH SPIGOT AND SOCKET RUBBER RING JOINTS AND BE OF FIBRE REINFORCED CONCRETE WHICH SHALL CONFORM RESPECTIVELY TO THE REQUIREMENTS OF AS 4139 AND AS 4058. WHERE FIBRE REINFORCED CONCRETE PIPES ARE TO BE USED, A PROPRIETARY COLLAR IS TO BE APPLIED OVER THE PIPE JOINTS.

CG4. PIPES GREATER THAN 750Ø ARE TO BE CONSTRUCTED FROM SULPHATE RESISTANT CEMENT.

ROADWORKS

R1. SUBGRADES AND SUB BASES ARE TO BE COMPACTED IN ACCORDANCE WITH COUNCIL'S CONSTRUCTION SPECIFICATION.

R2. SUBSOIL DRAINS TO BE PROVIDED ON BOTH SIDES OF ROADS (EXCEPT WHERE THERE IS STORMWATER DRAINAGE).

R3. 150 x 50 H.D. GALVANISED STEEL KERB OUTLETS TO BE PLACED IN ALL KERB TYPES ON LOW SIDE OF LOTS. PROVIDE SUITABLE ADAPTOR TO ALLOW CONNECTION OF 90mm DIAMETER STORMWATER PIPE.

R4. LIPLESS PERAMBULATOR CROSSINGS ARE TO BE PROVIDED IN ALL KERB RETURNS AND WHERE REQUIRED BY COUNCIL.

R5. SERVICE CONDUITS TO BE PLACED AS DIRECTED BY ALL PUBLIC UTILITY AUTHORITIES INCLUDING INTEGRAL ENERGY, TELSTRA AND SYDNEY WATER

R6. PROPOSED UTILITIES AND SERVICES CROSSING EXISTING ROADS SHALL BE PROVIDED FOR USING A TRENCHLESS TECHNIQUE SO AS NOT TO DAMAGE THE EXISTING SURFACE. ALL SERVICE CONDUITS UNDER ROADS MUST BE LAID TO A MINIMUM DEPTH OF 750mm.

R7. CONCRETE FOOTPATH CONSTRUCTION IS TO BE BONDED WITH COUNCIL PENDING COMPLETION OF UTILITY/SERVICES AND SURROUNDING DWELLINGS.

R8. ALL TEMPORARY ROADS MUST BE TEMPORARILY SEALED WITH A SINGLE COAT FLUSH SEAL.

R9. ALL PERMANENT ROADS MUST BE SEALED WITH A SINGLE COAT FLUSH SEAL AND 50mm OF AC TO BE APPLIED IN TWO 25mm THICK LAYERS. THE FINAL AC LAYER IS TO BE AC 10 AND IS TO BE BONDED WITH COUNCIL AND PLACED FOLLOWING APPROVAL FROM COUNCIL.

R10. SIGNPOSTING AND LINE MARKING SHALL CONFORM TO AS1742.2 'TRAFFIC CONTROL DEVICES FOR GENERAL USE'. RAISED RETRO-REFLECTIVE PAVEMENT MARKERS TO CONFORM TO AS1906 'RETRO-REFLECTIVE MATERIALS AND DEVICES FOR ROAD TRAFFIC CONTROL PURPOSES'. ALL APRONS AND KERB FACE ON CENTRAL ISLANDS OF ROUNDABOUTS AND ALL OTHER ISLANDS TO BE DELINEATED BY REFLECTIVE WHITE MARKING. INSTALLATION SHALL OCCUR IN ACCORDANCE WITH THE PLAN APPROVED BY THE LOCAL TRAFFIC COMMITTEE.

R11. ALL LOT AND HOUSE NUMBERS MUST BE STENCILLED ON KERB FACE.

R12. STREET SIGNS TO COUNCIL STANDARD MUST BE INSTALLED BY THE CONTRACTOR.

STORMWATER

S1. ALL PIPES TO BE SPIGOT AND SOCKET, RUBBER RING JOINTED.

S2. ALL LONGITUDINAL PIPELINES IN ROADS MUST BE LOCATED UNDER KERB AND GUTTER AND BE BACKFILLED WITH APPROVED GRANULAR MATERIAL UNLESS OTHERWISE APPROVED BY THE COUNCIL ENGINEER.

S3. DRAINAGE LINES MUST BE BACKFILLED WITH APPROVED GRANULAR MATERIAL IN TRAFFICABLE AREAS. THREE (3) METRES OF SUBSOIL DRAINAGE WRAPPED IN GEOTEXTILE STOCKING MUST BE PROVIDED TO ALL DOWNSTREAM PITS.

S4. ALL GULLY PITS TO COUNCIL'S STANDARD AND LINTELS CENTRALLY PLACED AT SAG PITS.

S5. ALL PITS MUST BE BENCHED AND STREAMLINED. PROVIDE SL72 REINFORCEMENT AND GALVANISED STEP IRONS IN ALL PITS OVER 1.2-METRES DEEP AS MEASURED FROM THE TOP OF GRATE TO THE INVERT OF THE PIT.

S6. CONCRETE IS TO HAVE MINIMUM COMPRESSIVE STRENGTH OF 32MPA AT 28-DAYS UNLESS OTHERWISE APPROVED BY THE COUNCIL ENGINEER.

S7. ALL INTER-ALLOTMENT DRAINAGE MUST HAVE A MINIMUM PIPE DIAMETER OF 150mm AND A MINIMUM GRADE OF 1% UNLESS OTHERWISE APPROVED BY THE COUNCIL ENGINEER.

S8. ALL INTER-ALLOTMENT DRAINAGE LINES MUST BE LAID CENTRALLY WITHIN DRAINAGE EASEMENTS. INSPECTION PITS MUST BE PROVIDED AT ALL CHANGES OF GRADE AND DIRECTION.

S9. INTER-ALLOTMENT DRAINAGE LINES MUST BE INSTALLED AFTER SYDNEY WATER SEWERAGE LINES HAVE BEEN INSTALLED WHERE SEWER IS PROPOSED ADJACENT TO INTER-ALLOTMENT DRAINAGE LINES.

S10. 1% AEP OVERLAND FLOW PATHS MUST BE FORMED AND SHOWN ON 'WORKS AS EXECUTED' DRAWINGS.

S11. ALL PLANS (BOTH DESIGN AND WAE) ARE TO CLEARLY DELINEATE THE EXTENT/LOCATION OF FLOOD LINES INCLUDING THE 5% AEP, 1% AEP AND PMF.

S12. ADEQUATE PROVISION IS TO BE MADE TO PREVENT SCOURING AND SEDIMENTATION FOR ALL DRAINAGE WORKS IN ACCORDANCE WITH COUNCIL'S REQUIREMENTS.

S13. PIT LINTELS ARE TO BE STENCILLED WITH APPLICABLE DISTINCTION STENCIL AVAILABLE FROM COUNCIL.

S14. CATCH DRAINS MUST BE CONSTRUCTED AS REQUIRED BY THE APPROVED PLANS OR THE PRINCIPAL CERTIFYING AUTHORITY.

S15. SOIL AND WATER MANAGEMENT PLANS ARE TO BE PREPARED FOR ALL DISTURBED SITES AND ADHERED TO AT ALL TIMES DURING THE CONSTRUCTION AND MAINTENANCE PERIODS.

DIGITAL MODELS CREATED BY CALIBRE UNDER THIS COMMISSION ARE CREATED FOR THE PURPOSE OF THE PREPARATION OF DRAWINGS AND ESTIMATES OF QUANTITIES. INFORMATION CONTAINED IN THE DRAWINGS TAKES PRECEDENCE OVER THE DIGITAL MODEL UPON WHICH IT WAS BASED. USE OF DIGITAL MODELS, CREATED BY CALIBRE, BY OTHER PARTIES TO SET OUT WORKS OR FOR OTHER REASONS IS DONE ENTIRELY AT THE RISK OF THE PARTY SO USING THE DIGITAL MODEL

LEGEND

DESCRIPTION	PROPOSED	EXISTING	FUTURE
STORMWATER PIPELINE	375Ø		
STORMWATER DRAINAGE PITS			
DRAINAGE LINE No. 3 DRAINAGE PIT No. 10	3/10	3/10	3/10
CONCRETE HEADWALL			
SUBSOIL DRAIN	SS		
150mm KERB AND GUTTER	K&G	EXIST. K&G	FUT. K&G
ROLL KERB AND GUTTER	RK	EXIST. RK	FUT. RK
KERB ONLY	KO	EXIST. KO	FUT. KO
EDGE STRIP	ES	EXIST. ES	FUT. ES
MOUNTABLE KERB	MK	EXIST. MK	FUT. MK
DISH CROSSING	DC	EXIST. DC	FUT. DC
VEHICULAR CROSSING	VC	EXIST. VC	FUT. VC
PEDESTRIAN RAMP	PR		
EDGE OF BITUMEN	EOB	EXIST. EOB	FUT. EOB
ROAD PAVEMENT			
BENCHMARK		BM: 115 RL:165.32	
BATTERS			
CONCRETE PATHWAY			
CONTOURS	99.5 99.0	99.5 99.0	99.5 99.0
SITE REGRADING AREA	CUT FILL		
SERVICE LINES SEWER, GAS, WATER, ELECTRICITY, RECYCLED WATER	S G W E RW	ex.S ex.G ex.W ex.E ex.RW	fut.S fut.G fut.W fut.E fut.RW
COMMUNICATION LINES TELSTRA, FIBRE OPTIC, NBN	T OF NBN	ex.T ex.OF ex.NBN	fut.T fut.OF fut.NBN
OVER HEAD LINES AND POLES	OH	ex.OH	fut.OH
SERVICE PITS TELECOM PIT, ACCESS CHAMBER, HYDRANT, STOP VALVE, AIR VALVE			
LIMIT OF ROAD CONSTRUCTION			
STAGE BOUNDARY			
FENCE POST AND RAIL FENCE SECURITY FENCE			
LOT NUMBERS	D-LOTNO	E-LOTNO	F-LOTNO
TREES TO RETAIN WITHIN SITE TREES TO REMOVED WITHIN SITE		RETAIN REMOVE	
RETAINING WALL			
ROCK WALL			
ROOF WATER OUTLET TO KERB			
ROOF WATER OUTLET TO BACK OF PIT			

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
AMENDMENTS 1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE:

CLIENT: STATEWIDE PLANNING PTY. LTD.

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

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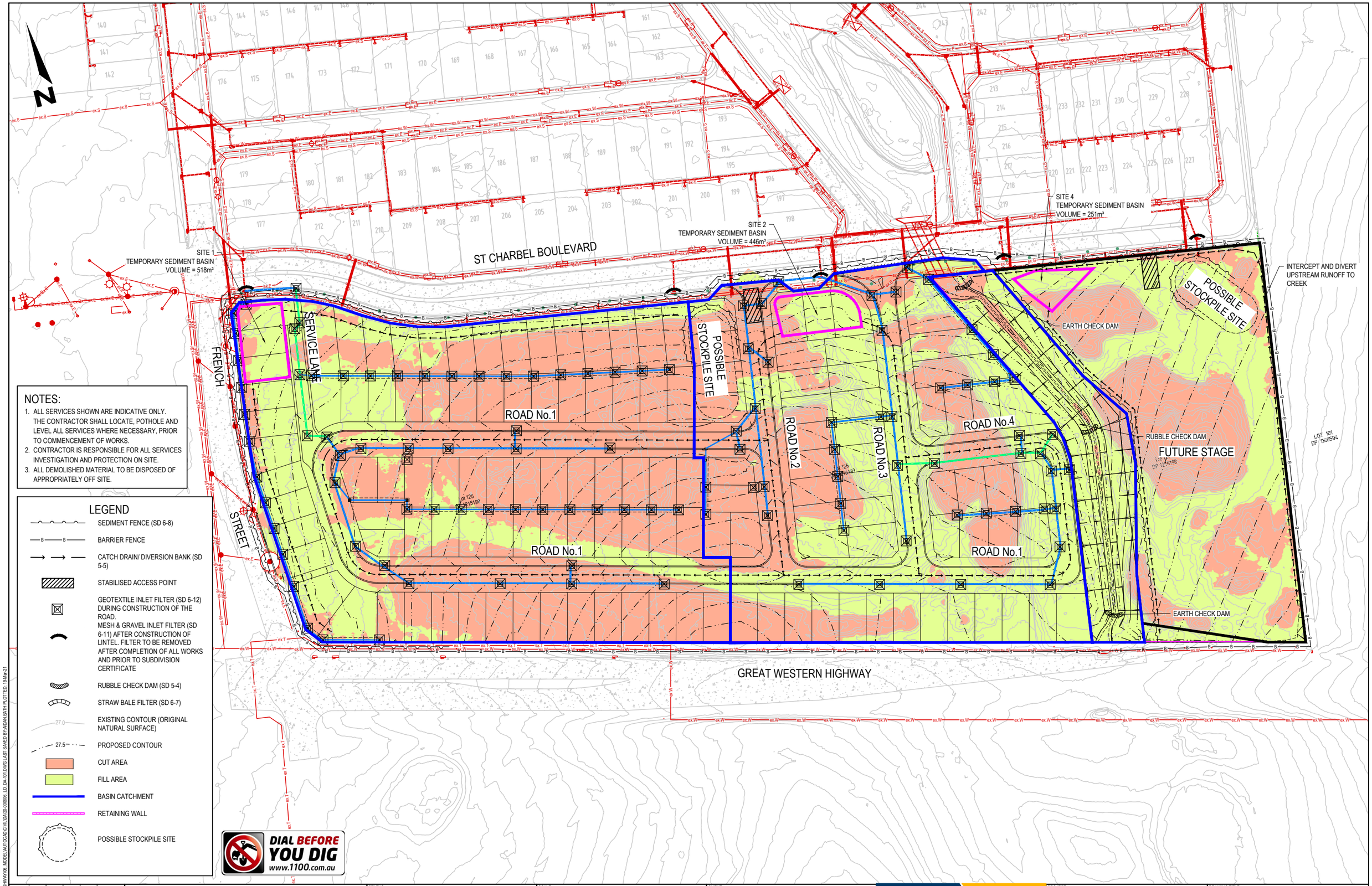
DRAWING TITLE: GENERAL NOTES & LEGEND

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	002	DA	1

FILE: H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\DWG\DA\20-000606_LO_DA-002.DWG LAST SAVED BY AIDAN BATH PLOTTED: 19-Mar-21



NOTES:

1. ALL SERVICES SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR SHALL LOCATE, POTHOLE AND LEVEL ALL SERVICES WHERE NECESSARY, PRIOR TO COMMENCEMENT OF WORKS.
2. CONTRACTOR IS RESPONSIBLE FOR ALL SERVICES INVESTIGATION AND PROTECTION ON SITE.
3. ALL DEMOLISHED MATERIAL TO BE DISPOSED OF APPROPRIATELY OFF SITE.

LEGEND

- SEDIMENT FENCE (SD 6-8)
- BARRIER FENCE
- CATCH DRAIN/ DIVERSION BANK (SD 5-5)
- STABILISED ACCESS POINT
- GEOTEXTILE INLET FILTER (SD 6-12) DURING CONSTRUCTION OF THE ROAD.
  MESH & GRAVEL INLET FILTER (SD 6-11) AFTER CONSTRUCTION OF LINTEL. FILTER TO BE REMOVED AFTER COMPLETION OF ALL WORKS AND PRIOR TO SUBDIVISION CERTIFICATE
- RUBBLE CHECK DAM (SD 5-4)
- STRAW BALE FILTER (SD 6-7)
- EXISTING CONTOUR (ORIGINAL NATURAL SURFACE)
- PROPOSED CONTOUR
- CUT AREA
- FILL AREA
- BASIN CATCHMENT
- RETAINING WALL
- POSSIBLE STOCKPILE SITE

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FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
AMENDMENTS 1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

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DATE: 19/3/21

SCALE
0 7.5 15 22.5 30 37.5 45 52.5 60
SCALE 1:750 (A1) SCALE 1:1500 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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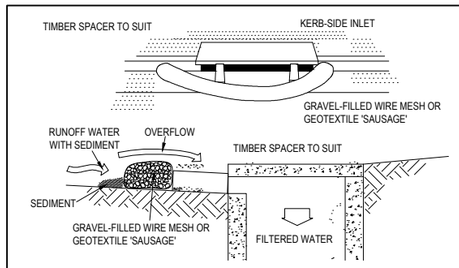
DRAWING TITLE: SOIL & WATER MANAGEMENT PLAN

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	101	DA	1

E:\E-H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-101.DWG LAST SAVED BY:ADAN.BATH PLOTTED: 19-Mar-21

SEDIMENT & EROSION CONTROL NOTES

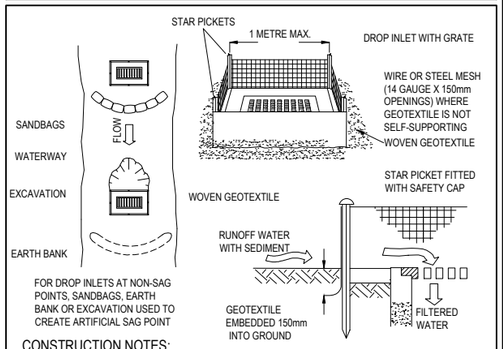
1. THE CONTRACTOR SHALL IMPLEMENT ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO THE COMMENCEMENT OF ANY WORKS BEING CARRIED OUT. ALL SOIL AND EROSION MEASURES SHALL BE MAINTAINED AND KEPT IN PLACE FOR THE FULL DURATION OF THE WORKS AND SHALL ONLY BE REMOVED AT FINAL STABILISATION OF THE WORKS. WHERE IT IS NECESSARY TO UNDERTAKE STRIPPING IN ORDER TO CONSTRUCT A SEDIMENT CONTROL DEVICE ONLY SUFFICIENT GROUND SHALL BE STRIPPED TO ALLOW CONSTRUCTION.
2. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CONSTRUCTED & MAINTAINED AS INDICATED ON THESE DRAWINGS. LOCATION AND EXTENT OF SOIL & WATER MANAGEMENT DEVICES IS DIAGRAMMATIC ONLY AND THE ACTUAL REQUIREMENTS SHALL BE CONFIRMED ON SITE PRIOR TO COMMENCEMENT.
3. CONFORMITY WITH THIS PLAN SHALL IN NO WAY REDUCE THE RESPONSIBILITY OF THE CONTRACTOR TO PROTECT AGAINST WATER DAMAGE DURING THE COURSE OF THE CONTRACT. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO ENSURE THAT ANY NECESSARY CONTROL IS IN PLACE EVEN THOUGH SUCH CONTROL MAY NOT BE SHOWN ON THE PLAN.
4. THE CONTRACTOR SHALL INFORM ALL SUBCONTRACTORS & ALL EMPLOYEES OF THEIR RESPONSIBILITIES IN MINIMISING THE POTENTIAL FOR SOIL EROSION & POLLUTION TO DOWNSTREAM AREAS
5. APART FROM SEDIMENT BASINS, THE CONTRACTOR SHALL REGULARLY MAINTAIN SEDIMENT AND EROSION CONTROL STRUCTURES & DESILT SUCH STRUCTURES PRIOR TO THE REDUCTION IN CAPACITY OF 30% DUE TO ACCUMULATED SEDIMENT. THE SEDIMENT SHALL BE DISPOSED OF ON SITE IN A MANNER APPROVED BY THE ENGINEER.
6. THE CONTRACTOR SHALLTEMPORARILY REHABILITATE WITHIN TEN (10) DAYS ANY DISTURBED AREAS PROVIDING A MINIMUM 60% COVER. FINAL REHABILITATION IS TO BE PROVIDED WITHIN A FURTHER 60 DAYS WITH A MINIMUM 70% COVER.
7. THE CONTRACTOR SHALL PROVIDE WATERING OF THE VEGETATED BATTERS FOR MAINTENANCE PERIOD. PLANT, MACHINERY AND VEHICLES SHALL NOT BE DRIVEN OVER GRASSED AREAS UNLESS ON AN APPROVED HAULAGE ROUTE.
8. ALL DRAINAGE WORKS SHALL BE CONSTRUCTED AND STABILISED AS QUICKLY AS POSSIBLE TO MINIMISE RISK OF EROSION.
9. SITE ACCESS SHALL BE RESTRICTED TO THE NOMINATED POINTS. THE CONTRACTOR SHALL PROVIDE STABILISED SITE ACCESS.
10. DUST AND SITE DISTURBANCE MUST BE KEPT TO A MINIMUM. DURING WINDY WEATHER, LARGE, UNPROTECTED AREAS MUST BE KEPT MOIST (NOT WET) BY SPRINKLING WITH WATER TO REDUCE WIND EROSION. ERECT BARRIER FENCING TO MINIMISE LAND DISTURBANCE BY PREVENTING VEHICULAR AND PEDESTRIAN ACCESS TO AREAS BEING REHABILATATED AND LANDS THAT DO NOT NEED TO BE DISTURBED BY THIS PROJECT.
11. STOCKPILE TOPSOILS, SUBSOILS AND OTHER MATERIALS SEPARATELY.
12. TOPSOIL SHALL BE STORED IN LOW MOUNDS NO MORE THAN 2 METRES HIGH AND RE-USED WITHIN TWO MONTHS TO MAINTAIN ACTIVE POPULATIONS OF BENEFICIAL SOIL MICROBES & SEED.
13. PLACE ALL STOCKPILES AT LEAST FIVE METRES FROM AREAS OF LIKELY CONCENTRATED OR HIGH VELOCITY FLOWS, ESPECIALLY EARTH BANKS AND ROADS. IF NECESSARY, EARTH BANKS OR DRAINS WILL BE CONSTRUCTED TO DIVERT LOCALISED RUN-ON.
14. TURN TOPSOIL STOCKPILES OVER TO AERATE THEM AT MONTHLY INTERVALS. ENSURE VEGETATION IS NOT INCORPORATED INTO THE SOIL.
15. AVOID REVERSING THE SOIL PROFILE MATERIALS DURING FILL OPERATIONS - REPLACE DISTURBED SOILS IN THEIR ORIGINAL ORDER.
16. ON COMPLETION OF MAJOR EARTHWORKS AND BEFORE ADDING TOPSOIL, LEAVE DISTURBED LANDS WITH A LOOSE SURFACE. ALTERNATELY, DISTURBED AREAS PREVIOUSLY COMPACTED BY CONSTRUCTION WORKS WILL BE RIPPED TO MORE THAN 200mm ALONG THE CONTOUR BEFORE APPLYING TOPSOIL
17. PROVIDING MATERIALS ARE AVAILABLE, SPREAD TOPSOIL TO A MINIMUM DEPTH OF 75mm IN REVEGETATION AREAS ON SLOPES OF 4(H):1(V) OR LESS AND TO A DEPTH OF 40 TO 60mm IN REVEGETATION AREAS STEEPER THAN 4:1.
18. LEAVE TOPSOIL IN A SCARIFIED OR ROUGH CONDITION ONCE REPLACED TO HELP MOISTURE INFILTRATION AND REDUCE SOIL EROSION.
19. ENSURE SOIL IS THOROUGHLY SOAKED TO A DEPTH OF 75mm (RAIN OR IRRIGATION) IMMEDIATELY BEFORE PLANTING.
20. HANDLE TOPSOIL ONLY WHEN IT IS MOIST (NOT WET OR DRY) TO AVOID DECLINE OF SOIL STRUCTURE
21. THE CONTRACTOR SHALL MAINTAIN A LOG BOOK DETAILING:
    - RECORDS OF ALL RAINFALL
    - CONDITION OF SOIL AND WATER MANAGEMENT STRUCTURES
    - ANY APPLICATION OF FLOCCULATING AGENTS TO SEDIMENT BASIN
    - VOLUMES OF ALL WATER DISCHARGED FROM SEDIMENT BASINS
    - ANY ADDITIONAL REMEDIAL WORKS REQUIRED.
22. THE LOG BOOK SHALL BE MAINTAINED ON A WEEKLY BASIS AND BE MADE AVAILABLE TO ANY AUTHORISED PERSON UPON REQUEST. THE ORIGINAL LOG BOOK SHALL BE ISSUED TO THE PROJECT MANAGER AT THE COMPLETION OF WORKS
23. ALL ROAD EMBANKMENTS TO BE STABILISED AS PER LANDSCAPE ARCHITECTS DETAILS.
24. A SELF AUDITING PROGRAM SHOULD BE ESTABLISHED BASED ON A CHECK SHEET DEVELOPED FOR THE SITE. A SITE INSPECTION USING THE CHECK SHEET SHOULD BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE AND IMMEDIATELY FOLLOWING RAINFALL EVENTS THAT CAUSE RUNOFF.
25. UNDERTAKE THE SELF AUDIT BY:
    - WALKING AROUND THE SITE SYSTEMATICALLY (E.G. CLOCKWISE)
    - RECORDING THE CONDITION OF EVERY BMP EMPLOYED
    - RECORDING MAINTENANCE REQUIREMENTS (IF ANY) FOR EACH BMP
    - RECORDING THE SITE WHERE SEDIMENT IS DISPOSED
    - FORWARDING A SIGNED DUPLICATE OF THE COMPLETED CHECK SHEET TO THE PROJECT MANAGER/DEVELOPER/SITE OPERATOR FOR THEIR INFORMATION
26. IN PARTICULAR, INSPECT:
    - LOCATIONS WHERE VEHICLES ENTER AND LEAVE THE SITE
    - ALL INSTALLED EROSION AND SEDIMENT CONTROL MEASURES, ENSURING THEY ARE OPERATING CORRECTLY
    - AREAS THAT MIGHT SHOW WHETHER SEDIMENT OR OTHER POLLUTANTS ARE LEAVING THE SITE OR HAVE POTENTIAL TO DO SO
    - ALL DISCHARGE POINTS, TO ASSESS WHETHER THE EROSION AND SEDIMENT CONTROL MEASURES ARE EFFECTIVE IN PREVENTING IMPACTS TO THE RECEIVING WATERS
27. A SITE INSPECTION USING THE CHECK SHEET WILL BE MADE BY THE SITE MANAGER AT LEAST WEEKLY, IMMEDIATELY BEFORE SITE CLOSURE, AND IMMEDIATELY FOLLOWING RAINFALL EVENTS GREATER THAN 5mm IN 24 HOURS.



NOTE: THIS PRACTICE ONLY TO BE USED WHERE SPECIFIED IN AN APPROVED SWMP/ESCP.

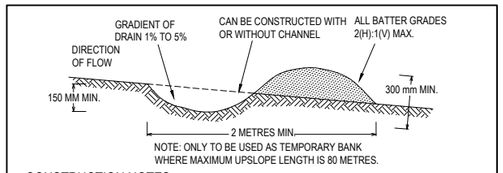
CONSTRUCTION NOTES:
1. INSTALL FILTERS TO KERB INLETS ONLY AT SAG POINTS.
2. FABRICATE A SLEEVE MADE FROM GEOTEXTILE OR WIRE MESH LONGER THAN THE LENGTH OF THE INLET PIT AND FILL IT WITH 25mm TO 50mm GRAVEL.
3. FORM AN ELLIPTICAL CROSS-SECTION ABOUT 150mm HIGH X 400mm WIDE.
4. PLACE THE FILTER AT THE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

MESH AND GRAVEL INLET FILTER SD 6-11



CONSTRUCTION NOTES:
1. FABRICATE A SEDIMENT BARRIER MADE FROM GEOTEXTILE OR STRAW BALES.
2. FOLLOW STANDARD DRAWING 6-7 AND STANDARD DRAWING 6-8 FOR INSTALLATION PROCEDURES FOR THE STRAW BALES OR GEOFABRIC,REDUCE THE PICKET SPACING TO 1m CENTRES.
3. IN WATERWAYS, ARTIFICIAL SAG POINTS CAN BE CREATED WITH SANDBAGS OR EARTH BANKS AS SHOWN IN THE DRAWING.
4. DO NOT COVER THE INLET WITH GEOTEXTILE UNLESS THE DESIGN IS ADEQUATE TO ALLOW FOR ALL WATERS TO BYPASS IT.

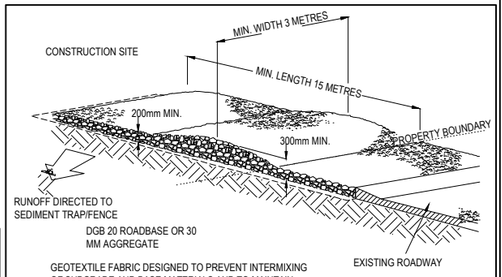
GEOTEXTILE INLET FILTER SD 6-12



NOTE: ONLY TO BE USED AS TEMPORARY BANK WHERE MAXIMUM UPSLOPE LENGTH IS 80 METRES.

CONSTRUCTION NOTES:
1. BUILD WITH GRADIENTS BETWEEN 1 PERCENT AND 5 PERCENT.
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V SHAPED.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION.

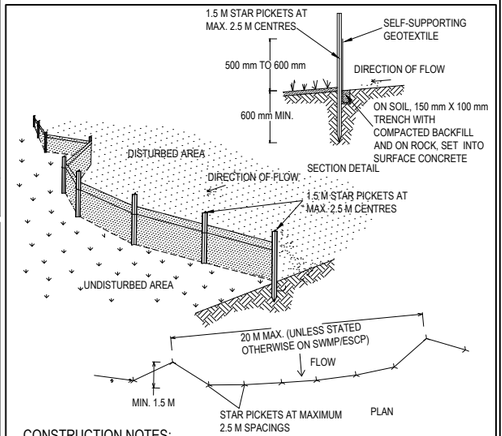
EARTH BANK (LOW FLOW) SD 5-5



GEOTEXTILE FABRIC DESIGNED TO PREVENT INTERMIXING OF SUBGRADE AND BASE MATERIALS AND TO MAINTAIN GOOD PROPERTIES OF THE SUB-BASE LAYERS. GEOFABRIC MAY BE A WOVEN OR NEEDLE-PUNCHED PRODUCT WITH A MINIMUM CBR BURST STRENGTH (AS3706.4-90) OF 2500 N

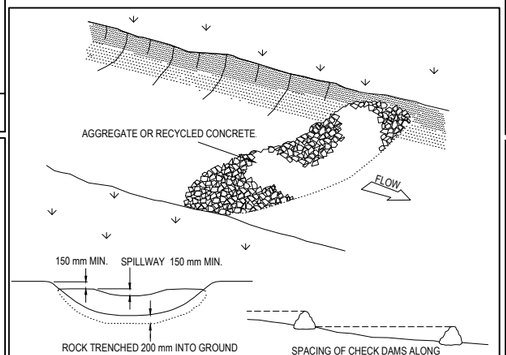
CONSTRUCTION NOTES:
1. STRIP THE TOPSOIL, LEVEL THE SITE AND COMPACT THE SUBGRADE.
2. COVER THE AREA WITH NEEDLE-PUNCHED GEOTEXTILE.
3. CONSTRUCT A 200mm THICK PAD OVER THE GEOTEXTILE USING ROAD BASE OR 30mm AGGREGATE.
4. ENSURE THE STRUCTURE IS AT LEAST 15 METRES LONG OR TO BUILDING ALIGNMENT AND AT LEAST 3m WIDE
5. WHERE A SEDIMENT FENCE JOINS ONTO THE STABILISED ACCESS, CONSTRUCT A HUMP IN THE STABILISED ACCESS TO DIVERT WATER TO THE SEDIMENT FENCE

STABILISED SITE ACCESS SD 6-14



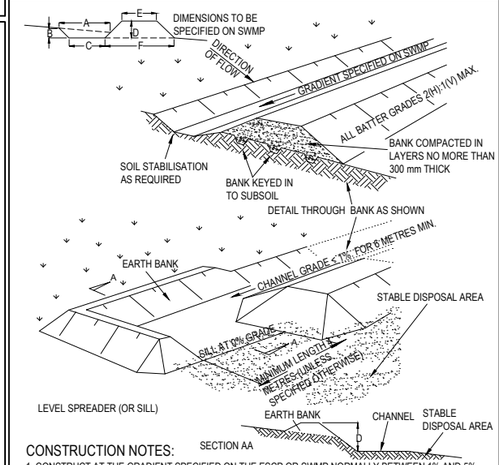
CONSTRUCTION NOTES:
1. CONSTRUCT SEDIMENT FENCES AS CLOSE AS POSSIBLE TO BEING PARALLEL TO THE CONTOURS OF THE SITE, BUT WITH SMALL RETURNS AS SHOWN IN THE DRAWING TO LIMIT THE CATCHMENT AREA OF ANY ONE SECTION. THE CATCHMENT AREA SHOULD BE SMALL ENOUGH TO LIMIT WATER FLOW IF CONCENTRATED AT ONE POINT TO 50 LITRES PER SECOND IN THE DESIGN STORM EVENT, USUALLY THE 10-YEAR EVENT.
2. CUT A 150mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
3. DRIVE 1.5 METRE LONG STAR PICKETS INTO GROUND AT 2.5m INTERVALS (MAX) AT THE DOWNSLOPE EDGE OF THE TRENCH. ENSURE ANY STAR PICKETS ARE FITTED WITH SAFETY CAPS.
4. FIX SELF-SUPPORTING GEOTEXTILE TO THE UPSLOPE SIDE OF THE POSTS ENSURING IT GOES TO THE BASE OF THE TRENCH. FIX THE GEOTEXTILE WITH WIRE TIES OR AS RECOMMENDED BY THE MANUFACTURER. ONLY USE GEOTEXTILE SPECIFICALLY PRODUCED FOR SEDIMENT FENCING. THE USE OF SHADE CLOTH FOR THIS PURPOSE IS NOT SATISFACTORY.
5. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.
6. BACKFILL THE TRENCH OVER THE BASE OF THE FABRIC AND COMPACT IT THOROUGHLY OVER THE GEOTEXTILE.

SEDIMENT FENCE SD 6-8



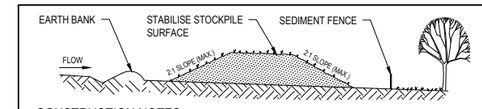
CONSTRUCTION NOTES:
1. CHECK DAMS CAN BE BUILT WITH VARIOUS MATERIALS, INCLUDING ROCKS, LOGS, SANDBAGS AND STRAW BALES. THE MAINTENANCE PROGRAM SHOULD ENSURE THEIR INTEGRITY IS RETAINED, ESPECIALLY WHERE CONSTRUCTED WITH STRAW BALES. IN THE CASE OF BALES, THIS MIGHT REQUIRE THEIR REPLACEMENT EACH TWO TO FOUR MONTHS.
2. TRENCH THE CHECK DAM 200 mm INTO THE GROUND ACROSS ITS WHOLE WIDTH. WHERE ROCK IS USED, FILL THE TRENCHES TO AT LEAST 100 MM ABOVE THE GROUND SURFACE TO REDUCE THE RISK OF UNDERCUTTING.
3. NORMALLY, THEIR MAXIMUM HEIGHT SHOULD NOT EXCEED 600 mm ABOVE THE GULLY FLOOR. THE CENTRE SHOULD ACT AS A SPILLWAY, BEING AT LEAST 150 mm LOWER THAN THE OUTER EDGES.
4. SPACE THE DAMS SO THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE SPILLWAY OF THE NEXT DOWNSTREAM DAM.

ROCK CHECK DAM SD 5-4



CONSTRUCTION NOTES:
1. CONSTRUCT AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP,NORMALLY BETWEEN 1% AND 5%
2. AVOID REMOVING TREES AND SHRUBS IF POSSIBLE - WORK AROUND THEM.
3. ENSURE THE STRUCTURES ARE FREE OF PROJECTIONS OR OTHER IRREGULARITIES THAT COULD IMPEDE WATER FLOW.
4. BUILD THE DRAINS WITH CIRCULAR, PARABOLIC OR TRAPEZOIDAL CROSS SECTIONS, NOT V-SHAPED, AT THE DIMENSIONS SHOWN ON THE SWMP.
5. ENSURE THE BANKS ARE PROPERLY COMPACTED TO PREVENT FAILURE.
6. COMPLETE PERMANENT OR TEMPORARY STABILISATION WITHIN 10 DAYS OF CONSTRUCTION FOLLOWING TABLE 5.2 IN LANDCOM (2004).
7. WHERE DISCHARGING TO ERODIBLE LANDS, ENSURE THEY OUTLET THROUGH A PROPERLY CONSTRUCTED LEVEL SPREADER.
8. CONSTRUCT THE LEVEL SPREADER AT THE GRADIENT SPECIFIED ON THE ESCP OR SWMP,NORMALLY LESS THAN 1% OR LEVEL.
9. WHERE POSSIBLE, ENSURE THEY DISCHARGE WATERS ONTO EITHER STABILISED OR UNDISTURBED DISPOSAL SITES WITHIN THE SAME SUBCATCHMENT AREA FROM WHICH THE WATER ORIGINATED. APPROVAL MIGHT BE REQUIRED TO DISCHARGE INTO OTHER SUBCATCHMENTS.

EARTH BANK (HIGH FLOWS) SD 5-6

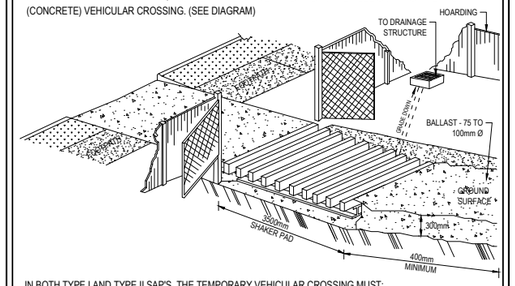


CONSTRUCTION NOTES:
1. PLACE STOCKPILES MORE THAN 2 (PREFERABLY 5) METRES FROM EXISTING VEGETATION, CONCENTRATED WATER FLOW, ROADS AND HAZARD AREAS.
2. CONSTRUCT ON THE CONTOUR AS LOW, FLAT, ELONGATED MOUNDS.
3. WHERE THERE IS SUFFICIENT AREA, TOPSOIL STOCKPILES SHALL BE LESS THAN 2 METRES IN HEIGHT.
4. ALL STOCKPILES ARE TO BE LOCATED AND PLACED IN ACCORDANCE WITH THE CONTRACTOR'S EROSION AND SEDIMENT CONTROL PLAN.
5. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) NO STABILISATION IS REQUIRED. REVIEW THE ADEQUACY OF SEDIMENT CONTROLS IF RAINFALL IS PREDICTED.
6. WHERE STOCKPILES ARE TEMPORARY (<14 DAYS) THE FOLLOWING ADDITIONAL CONTROLS ARE REQUIRED:
   -MAXIMUM BATTER SLOPE REDUCED TO 1:4
   -CONSTRUCT A CONTOUR DRAIN ON THE LOW SIDE OF THE STOCKPILE, AND DISCHARGING THROUGH A STRAW BALE OR 200mm HIGH GRAVEL DAM
   -ESTABLISH GRASS COVER TO SURFACE OF STOCKPILE WITHIN 14 DAYS, USING HYDROMULCH WITH A 75:25 MIX OF SEASONAL AND PERMANENT GRASS SEEDS, AND A STRAW MULCH THICKNESS OF NO LESS THAN 5mm.
7. CONSTRUCT EARTH BANKS (STANDARD DRAWING 5-5) ON THE UPSLOPE SIDE TO DIVERT WATER AROUND STOCKPILES AND SEDIMENT FENCES (STANDARD DRAWING 6-8) 1 TO 2 METRES DOWNSLOPE.

STOCKPILES SD 4-1

STABILISED ACCESS POINT-TYPE 2

THE TYPE II SAP DESIGN IS MORE DEFINED IN THAT IT REQUIRES AN AREA OF BALLAST WITHIN THE SITE COMBINED WITH A SHAKER PAD; ADJACENT THE SHAKER PAD AND IN THE PUBLIC WAY IS A TEMPORARY (CONCRETE) VEHICULAR CROSSING. (SEE DIAGRAM)



IN BOTH TYPE I AND TYPE II SAP'S, THE TEMPORARY VEHICULAR CROSSING MUST:
- CONNECT TO AN EXISTING GUTTER LAYBACK (WHERE THE KERB AND GUTTER EXIST) . IF A GUTTER LAYBACK DOES NOT EXIST THEN THE CONNECTION MUST BE MADE TO THE GUTTER BY REMOVING THE ADJCENT KERB SECTION ONLY.
- CONNECT TO A DISH CROSSING (WHERE KERB AND GUTTER DOES NOT EXIST). IF A DISH CROSSING DOES NOT EXIST, THEN IT MUST BE CONSTRUCTED IN ACCORDANCE WITH DETAILS CONTAINED IN COUNCIL'S ISSUED FOOTPATH CROSSING LEVELS.

IT SHOULD BE NOTED THAT THESE TYPES OF SAPS ARE CONSIDERED TO BE APPLICABLE FOR THE MAJORITY OF ACTIVITIES HOWEVER SOME SITES MAY REQUIRE SPECIAL CONSIDERATION.

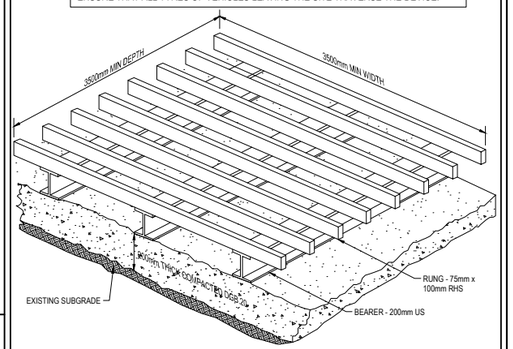
SHAKER PAD (CATTLE GRID)

A CORRECTLY DESIGNED AND INSTALLED SHAKER PAD WILL ASSIST IN PREVENTING SEDIMENT TRANSFERE FROM A SITE. ANY STABILISED ACCESS POINT (SAP) CAN BE DESIGNED WITH A SHAKER PAD (COMPULSOPRY IN TYPE II SAP'S)

SHAKER PADS CAN BE DESIGNED AND CONSTRUCTED TO ENABLE RE-USE ON FUTURE PROJECTS.

THE SHAKER PAD:
- MUST BE DESIGNED AND CERTIFIED BY A PRACTICING STRUCTURAL ENGINEER. THE CERTIFIED DESIGN SHOULD BE SUBMITTED WITH THE RELEVENT APPLICATION.
- CAN BE CONSTRUCTED FROM ANY SUITABLE MATERIAL.
- MUST BE LOCATED ON A SUITABLY PREPARED AND COMPACTED SUB-GRADE/BASE MATERIAL.
- MUST BE SITUATED SUCH THAT THE RUNGS OF THE SHAKER PAD ARE LEVEL WITH THE ADJOINING NATURAL SURFACE.
- MUST BE A MINIMUM OF 3.5m IN LENGTH.
- MUST BE A MINIMUN OF 3.5m IN WIDTH.
- MUST HAVE CLEAR SPACING BETWEEN RUNGS OF 200 - 250mm.
- RUNGS MUST HAVE A MAXIMUM WIDTH (BEARING AREA) OF 75mm.
- MUST HAVE A MINIMUM CLEAR DEPTH OF 300mm IE FORM THE ROP OF THE RUNG TO THE FINISHED SUB-GRADE/BASE LEVEL.

THE SHAKER PAD MUST BE PROVIDED WITH SUITABLE BARRIERS AT THE SIDES TO ENSURE THAT ALL TYRES OF VEHICLES LEAVING THE SITE TRAVERSE THE DEVICE.



FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE: BY: BASEM HAMDAN MIEAust. BE (Civil) SIGN: DATE: 19/3/21

SCALE:

CLIENT: STATEWIDE PLANNING PTY. LTD.

calibre

PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: SOIL & WATER MANAGEMENT NOTES & DETAILS

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	102	DA	1

FILE: H:\2020\-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DWG\D-000606_LD_DA-102.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21

1. Erosion Hazard and Sediment Basins

Site Name: 741 & 755 Great Western Highway

Site Location: Werrington

Precinct/Stage: stage 4

Other Details: 20-000606

Site area	Sub-catchment or Name of Structure						Notes
	1	2	3	4	5		
Total catchment area (ha)	2.85	2.42	0.46	1.35			
Disturbed catchment area (ha)	2.85	2.42	0.46	1.35			
Soil analysis (enter sediment type if known, or laboratory particle size data)							
Sediment Type (C, F or D) if known:	D	D	D	D	D		From Appendix C (if known)
% sand (fraction 0.02 to 2.00 mm)							Enter the percentage of each soil fraction. E.g. enter 10 for 10%
% silt (fraction 0.002 to 0.02 mm)							
% clay (fraction finer than 0.002 mm)							
Dispersion percentage							E.g. enter 10 for dispersion of 10%
% of whole soil dispersible							See Section 6.3.3(e). Auto-calculated
Soil Texture Group	D	D	D	D	D		Automatic calculation from above
Rainfall data							
Design rainfall depth (no of days)	5	5	5	5			See Section 6.3.4 and, particularly, Table 6.3 on pages 6-24 and 6-25.
Design rainfall depth (percentile)	85	85	85	85			
x-day, y-percentile rainfall event (mm)	35	35	35	35			
Rainfall R-factor (if known)							Only need to enter one or the other here
IFD: 2-year, 6-hour storm (if known)	10.1	10.1	10.1	10.1			
RUSLE Factors							
Rainfall erosivity (*R*-factor)	2250	2250	2250	2250			Auto-filled from above
Soil erodibility (*K*-factor)	0.038	0.038	0.038	0.038			
Slope length (m)	40	40	80	80			
Slope gradient (%)	3	4	2	3.5			RUSLE LS factor calculated for a high rill/interrill ratio.
Length/gradient (*LS*-factor)	0.47	0.63	0.41	0.78			
Erosion control practice (*P*-factor)	1.3	1.3	1.3	1.3	1.3	1.3	
Ground cover (*C*-factor)	1	1	1	1	1	1	
Sediment Basin Design Criteria (for Type D/F basins only. Leave blank for Type C basins)							
Storage (soil) zone design (no of months)	2	2	2	2			Minimum is generally 2 months
Cv (Volumetric runoff coefficient)	0.5	0.5	0.5	0.5			See Table F2, page F-4 in Appendix F
Calculations and Type D/F Sediment Basin Volumes							
Soil loss (t/ha/yr)	52	70	45	87			
Soil Loss Class	1	1	1	1			See Table 4.2, page 4-13
Soil loss (m^3/ha/yr)	40	54	35	67			Conversion to cubic metres
Sediment basin storage (soil) volume (m^3)	19	22	3	15			See Sections 6.3.4(i) for calculations
Sediment basin settling (water) volume (m^3)	499	424	81	236			See Sections 6.3.4(i) for calculations
Sediment basin total volume (m^3)	518	446	84	251			

NB for sizing of Type C (coarse) sediment basins, see Worksheet 3 (if required).

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
AMENDMENTS 1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE: BY: BASEM HAMDAN, MIEAust. BE (Civil) SIGN: DATE: 19/3/21

SCALE

CLIENT: STATEWIDE PLANNING PTY. LTD.

PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: SEDIMENT BASIN CALCULATIONS

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	103	DA	1

FILE: H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-103.DWG LAST SAVED BY: AIDAN BATH PLOTTED: 19-Mar-21

N

ST CHARLES BOULEVARD

EXISTING TREES TO BE RELOCATED

FRENCH STREET

SERVICE LANE

ROAD No.1

ROAD No.1

ROAD No.1

GREAT WESTERN HIGHWAY

EXISTING SERVICES CONDUITS TO BE LOCATED, POTHOLED & PROTECTED. CONTRACT TO PROVIDE MINIMUM CONDUIT/PIPE COVER IN ACCORDANCE WITH RELEVANT AUTHORITIES REQUIREMENTS

Lot 125 DP 1215199

FOR CONTINUATION REFER DWG No. 202

DIAL BEFORE YOU DIG www.1100.com.au

LEGEND

- EXISTING CONTOUR (27.0)
- PROPOSED CONTOUR (27.5)
- CUT AREA
- FILL AREA
- TREE TO BE RELOCATED
- PROPOSED RETAINING WALL

EARTHWORKS VOLUMES

TOTAL CUT: 54,185 m³
TOTAL FILL: 26,545 m³
EXPORT EXCESS CUT FROM SITE: 27,640 m³

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
A	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT
M						
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S						

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE: BY: BASEM HAMDAN, MIEAust. BE (Civil) SIGN: DATE: 19/3/21

SCALE: 0 5 10 15 20 25 30 35 40 — SCALE 1:500 (A1) SCALE 1:1000 (A3)

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

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DRAWING TITLE: SITE REGRADING PLAN SHEET 01 OF 02

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	201	DA	1

FILE: H:\2020\20-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-201.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21

ST CHARBEL BOULEVARD

GREAT WESTERN HIGHWAY

ROAD No.1

ROAD No.2

ROAD No.3

ROAD No.4

EXISTING SERVICES CONDUITS TO BE LOCATED, POTHOLED & PROTECTED. CONTRACT TO PROVIDE MINIMUM CONDUIT/PIPE COVER IN ACCORDANCE WITH RELEVANT AUTHORITIES REQUIREMENTS

LOT 101
DP1140594

FUTURE STAGE

N

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LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- CUT AREA
- FILL AREA
- TREE TO BE REMOVED
- PROPOSED RETAINING WALL

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 7.5 15 22.5 30 37.5 45 52.5 60
SCALE 1:750 (A1) SCALE 1:1500 (A3)

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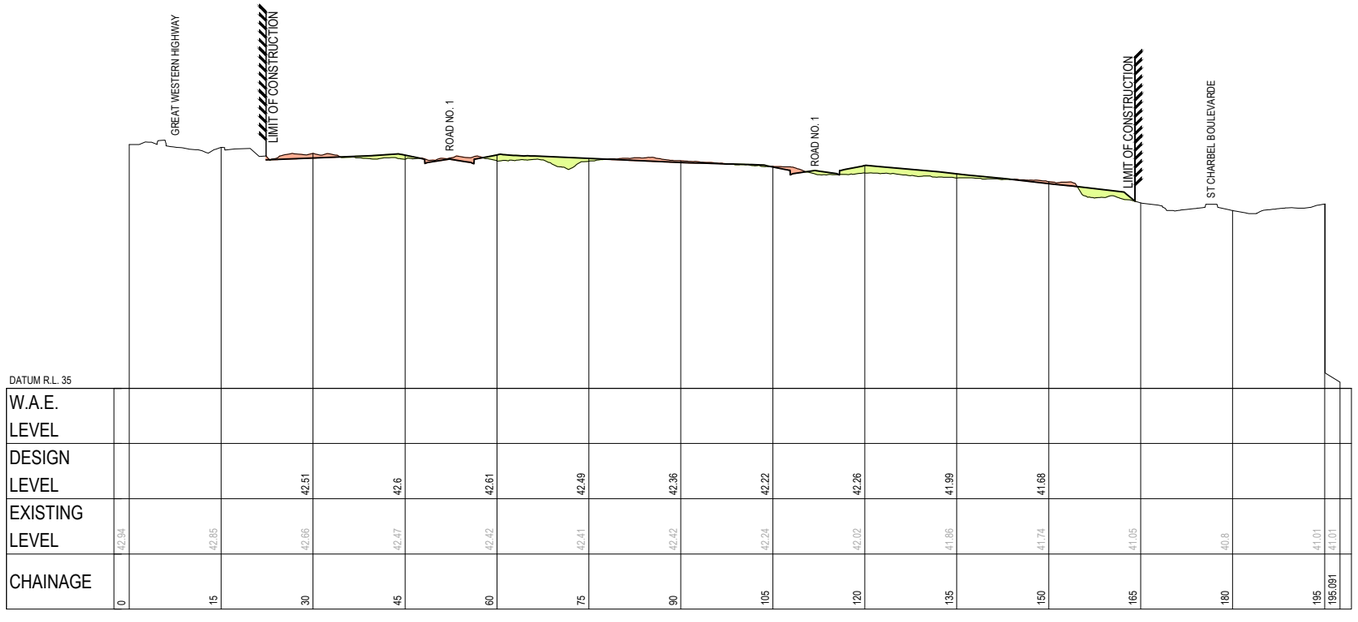
PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: SITE REGRADING PLAN SHEET 02 OF 02

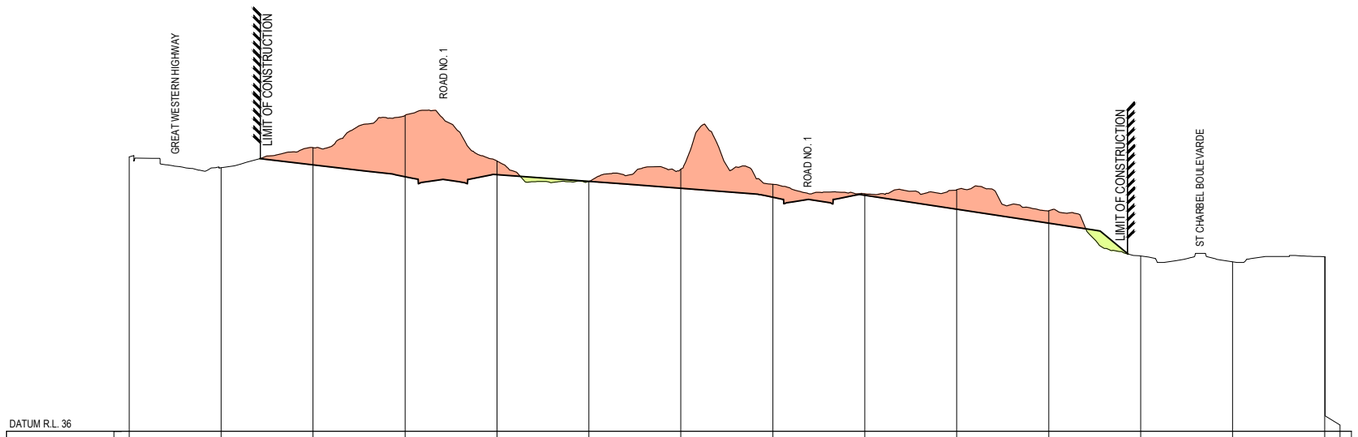
PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	202	DA	1

FILE: H:\2020\-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-202.DWG, LAST SAVED BY AIDAN BATH, PLOTTED: 19-Mar-21



DATUM R.L. 35														
W.A.E. LEVEL														
DESIGN LEVEL			42.51	42.6	42.61	42.49	42.36	42.22	42.26	41.99	41.68			
EXISTING LEVEL	42.94	42.85	42.66	42.47	42.42	42.41	42.42	42.24	42.02	41.86	41.74	41.05	40.8	41.01	41.01
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	195.091

SECTION A/201
SCALE: 1:500 (H)
SCALE: 1:100 (V)



DATUM R.L. 36														
W.A.E. LEVEL														
DESIGN LEVEL			44.68	44.3	44.37	44.14	43.92	43.63	43.69	43.24	42.78			
EXISTING LEVEL	44.94	44.59	45.24	46.3	44.81	44.15	44.54	44.05	43.74	43.87	43.19	41.71	41.52	41.69	41.69
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	195.091

SECTION B/201
SCALE: 1:500 (H)
SCALE: 1:100 (V)

1

LEGEND
- CUT AREA
- FILL AREA
- RETAINING WALL

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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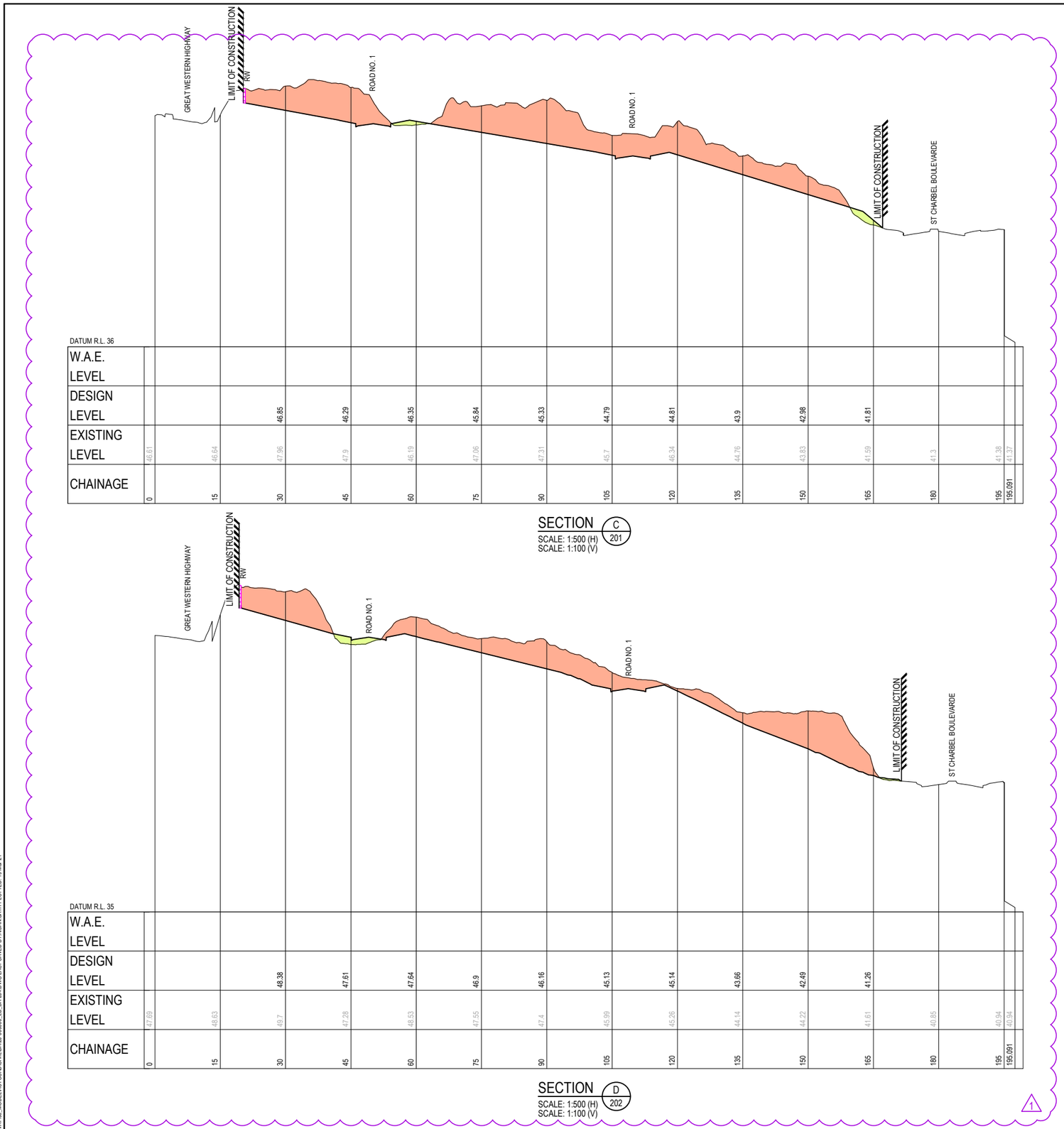
PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY. DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: SITE REGRADING SECTIONS SHEET 01 OF 06

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	203	DA	1

FILE: H:\2020\-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-203.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21



SECTION C/201
SCALE: 1:500 (H)
SCALE: 1:100 (V)

SECTION D/202
SCALE: 1:500 (H)
SCALE: 1:100 (V)

1

LEGEND
- CUT AREA
- FILL AREA
- RETAINING WALL

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
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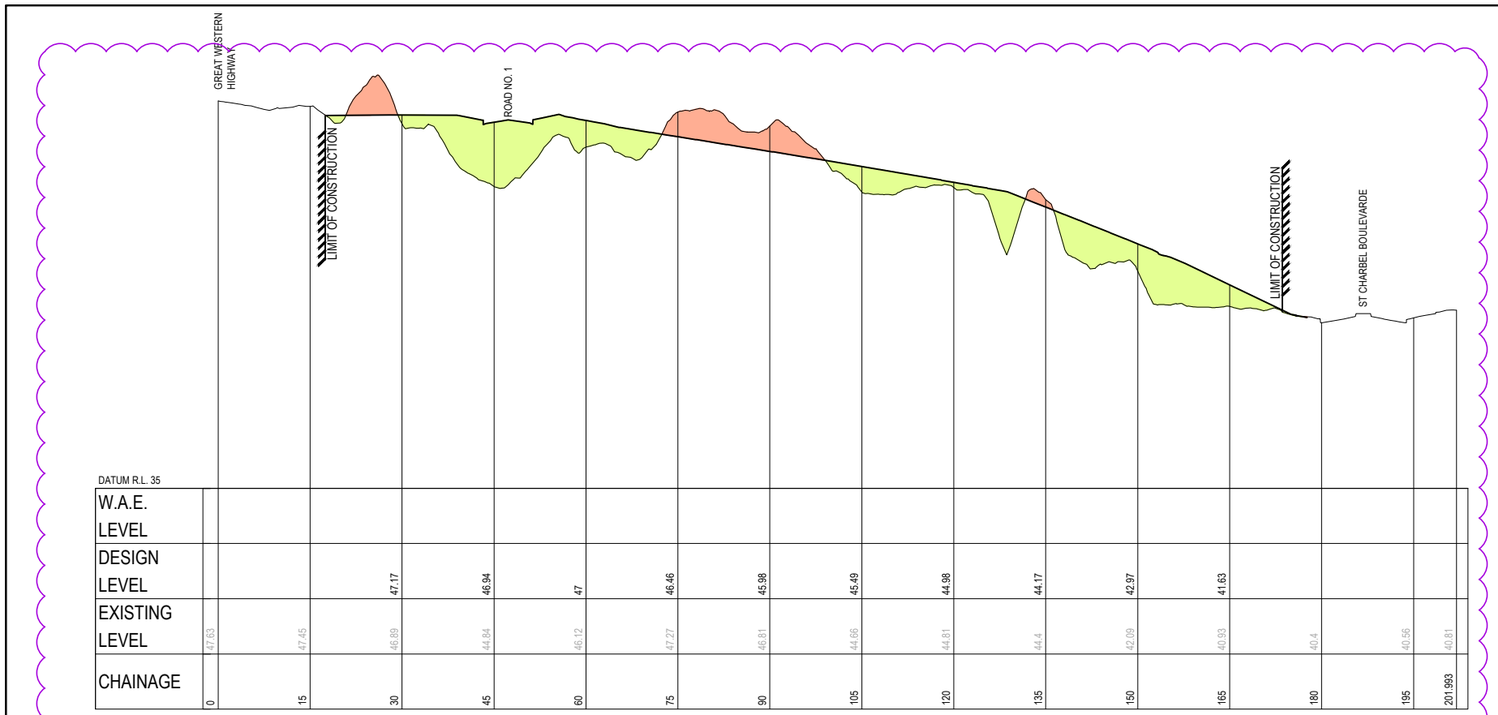
DRAWING TITLE: SITE REGRADING SECTIONS SHEET 02 OF 06

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	204	DA	1

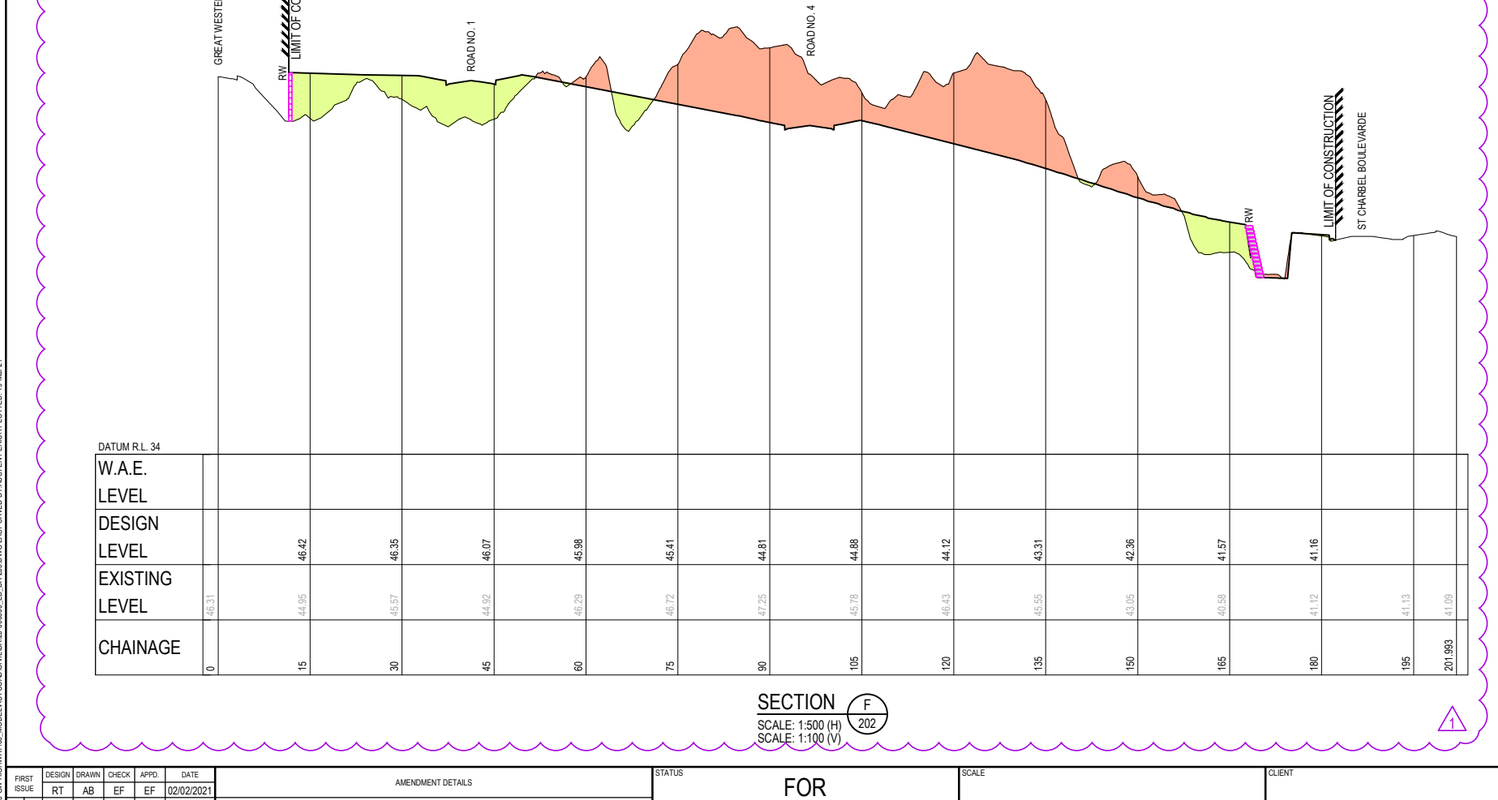
FILE: H:\2020\-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-204.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21



DATUM R.L. 35

W.A.E. LEVEL														
DESIGN LEVEL			47.17	46.94	47	46.46	45.98	45.49	44.98	44.17	42.97	41.63		
EXISTING LEVEL	47.63	47.45	46.89	44.84	46.12	47.27	46.81	44.66	44.81	44.4	42.09	40.93	40.4	40.56	40.81
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	201.993

SECTION E
SCALE: 1:500 (H)
SCALE: 1:100 (V)
202



DATUM R.L. 34

W.A.E. LEVEL														
DESIGN LEVEL		46.42	46.35	46.07	45.98	45.41	44.81	44.88	44.12	43.31	42.36	41.57	41.16		
EXISTING LEVEL	46.31	44.95	45.57	44.92	46.29	46.72	47.25	45.78	46.43	45.55	43.05	40.58	41.12	41.13	41.09
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	201.993

SECTION F
SCALE: 1:500 (H)
SCALE: 1:100 (V)
202

1

LEGEND
- CUT AREA
- FILL AREA
- RETAINING WALL

E:\E.H.\2020-000606 - 741 & 755 GW HIGHWAY\IA_MODEL\AUTOCAD\CIVIL\DWJD-000606_LD_DA-205.DWG LAST SAVED BY AUSTEN PERCH PLOTTED: 19-May-21

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
A	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

AMENDMENTS

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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 calibregroup.com

PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

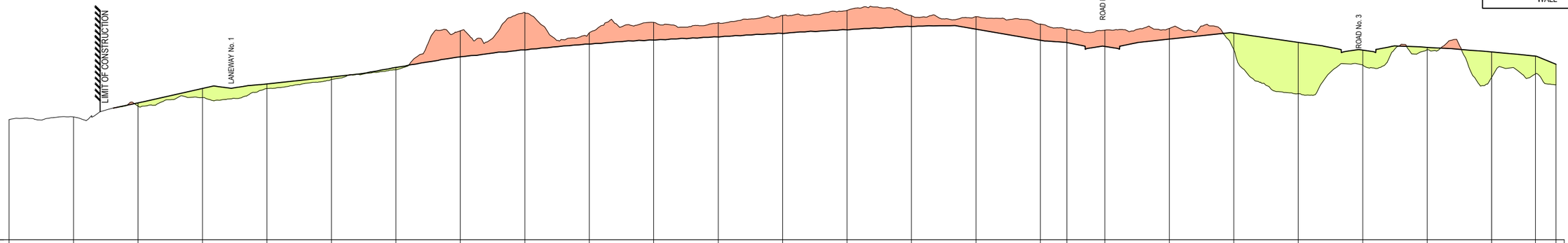
DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: SITE REGRADING SECTIONS SHEET 03 OF 06

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	205	DA	1

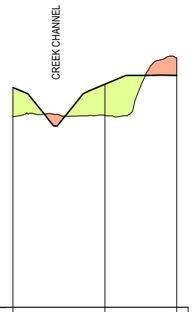
LEGEND

- CUT AREA
- FILL AREA
- RETAINING WALL



DATUM R.L. 34																														
W.A.E. LEVEL																														
DESIGN LEVEL			40.37	41.04	41.26	41.58	42.02	42.52	42.84	43.11	43.29	43.44	43.6	43.77	43.93	43.8	43.29	43.18	43	43.34	43.62	43.19	42.83	42.95	42.74	42.55	42.16			
EXISTING LEVEL	39.6	39.71	40.21	40.62	41.04	41.46	41.91	43.73	44.57	43.63	44.12	44.1	44.44	44.68	44.43	44.38	44.04	43.8	43.76	43.84	42.86	40.79	42.13	42.84	41.56	41.72	41.22			
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	240	246.152	255	270	285	300	315	330	345	355.205	360			

SECTION G 201 / G 202
SCALE: 1:500 (H)
SCALE: 1:100 (V)



DATUM R.L. 35			
W.A.E. LEVEL			
DESIGN LEVEL	42.16	42.27	
EXISTING LEVEL	41.22	41.25	43.12
CHAINAGE	360	375	386.698

SECTION G 201 / G 202
SCALE: 1:500 (H)
SCALE: 1:100 (V)

1

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
A 1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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 calibregroup.com

PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
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DRAWING TITLE: SITE REGRADING SECTIONS SHEET 04 OF 06

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	206	DA	1

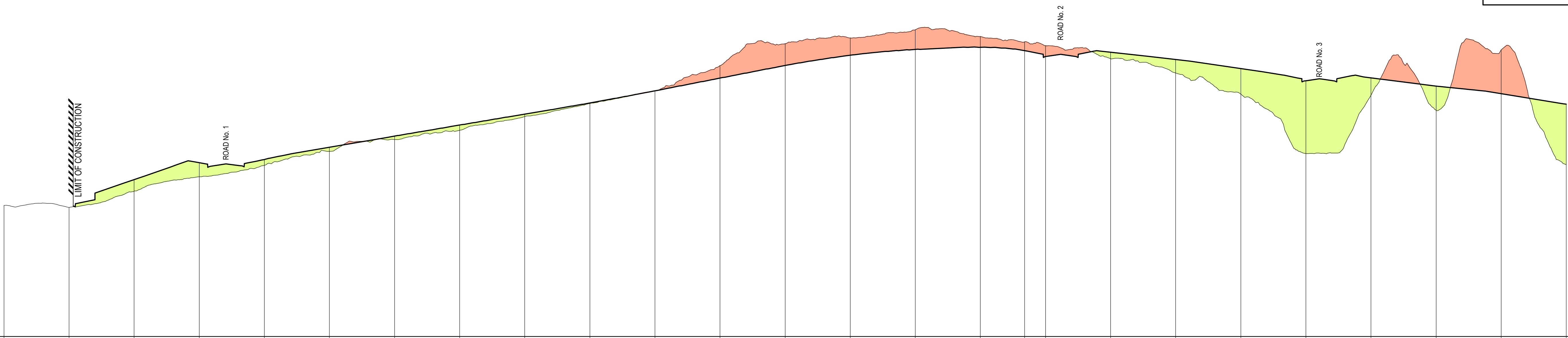
F:\E H\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-306.DWG LAST SAVED BY AIDAN.BATH PLOTTED: 19-Mar-21

LEGEND

CUT AREA

FILL AREA

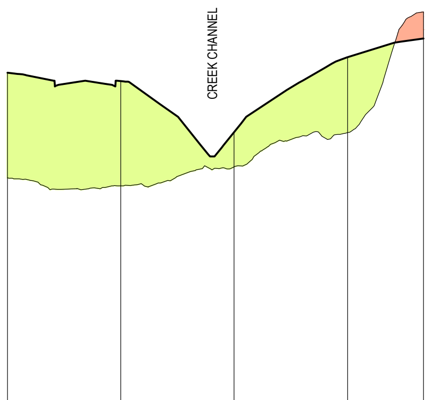
RETAINING WALL



DATUM R.L. 34

W.A.E. LEVEL																									
DESIGN LEVEL			41.23	42.01	42.16	42.72	43.23	43.74	44.25	44.76	45.32	45.91	46.48	46.96	47.22	47.32	47.17	46.9	47.1	46.76	46.34	45.78	45.92	45.53	45.19	44.71
EXISTING LEVEL	40.04	39.94	40.69	41.36	41.89	42.53	43.08	43.5	44.13	44.73	45.32	46.47	47.49	47.75	48.13	47.82	47.57	47.4	46.79	46.14	45.17	42.43	45.12	44.42	47.2	41.92
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	225	235.197	240	255	270	285	300	315	330	345	360

SECTION H/201 H/202
SCALE: 1:500 (H)
SCALE: 1:100 (V)



DATUM R.L. 36

W.A.E. LEVEL					
DESIGN LEVEL	44.71	44.48	43.13		
EXISTING LEVEL	41.92	41.7	42.21	43.11	46.31
CHAINAGE	360	375	390	405	415.062

SECTION H/201 H/202
SCALE: 1:500 (H)
SCALE: 1:100 (V)

1

FILE: H:\20\20-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-207.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21

		DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
FIRST ISSUE		RT	AB	EF	EF	02/02/2021	
AMENDMENTS	1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS
FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT
STATEWIDE PLANNING PTY. LTD.

PROJECT
741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
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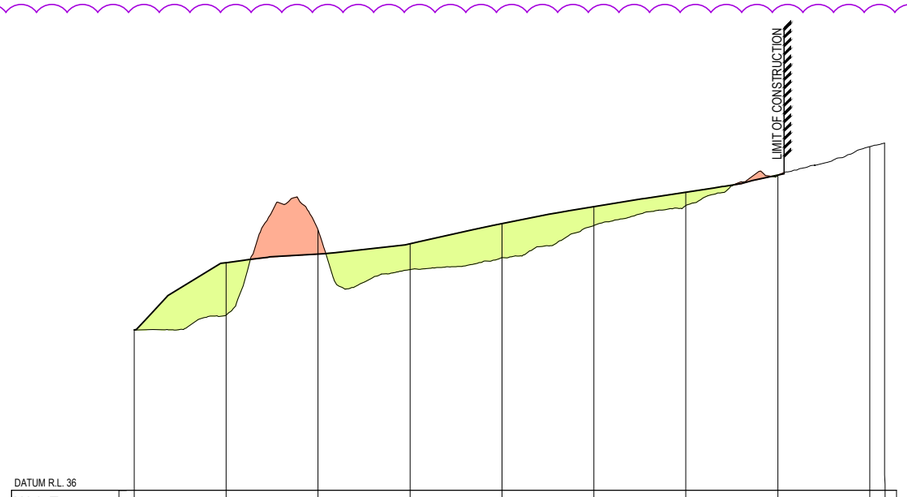
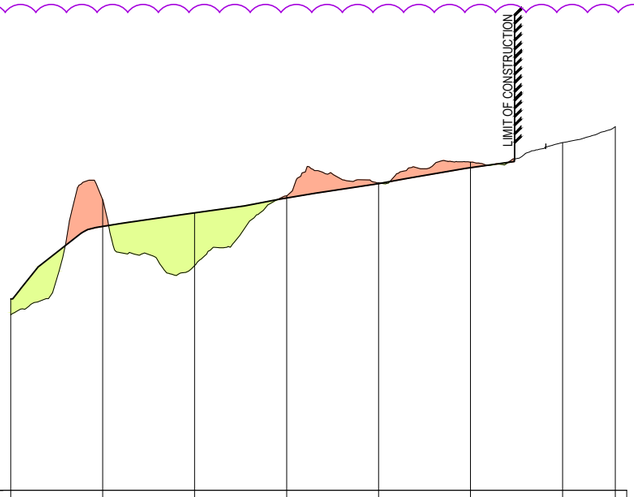
DRAWING TITLE
SITE REGRADING SECTIONS
SHEET 05 OF 06

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	207	DA	1



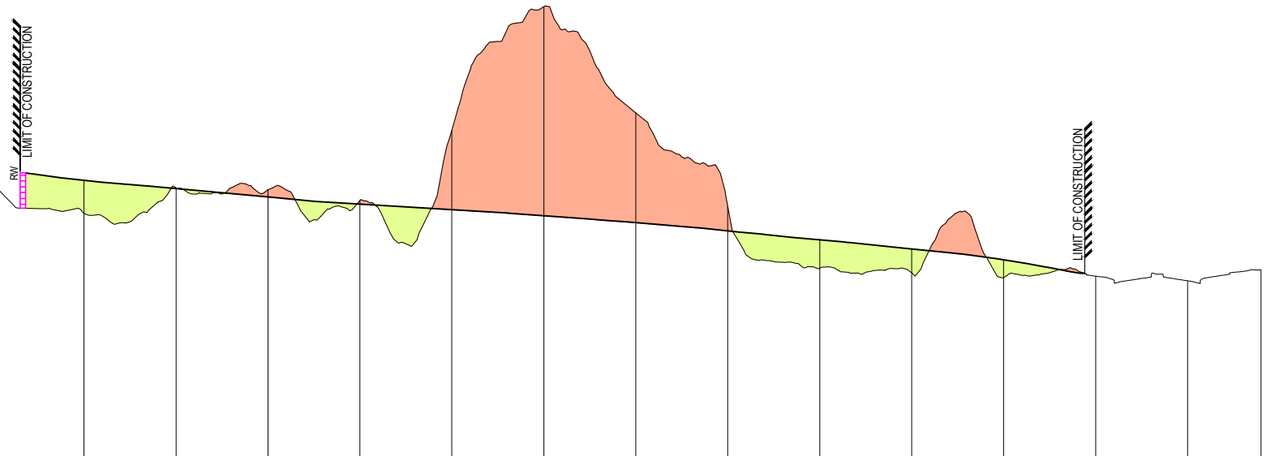
DATUM R.L. 36										
W.A.E. LEVEL										
DESIGN LEVEL		43.42	43.71	44.04	44.7	45.25	45.72	46.28		
EXISTING LEVEL	41.22	41.71	44.49	43.2	43.59	44.64	45.29	46.27	47.21	47.32
CHAINAGE	0	15	30	45	60	75	90	105	120	122.415

SECTION J 202
SCALE: 1:500 (H)
SCALE: 1:100 (V)



DATUM R.L. 37								
W.A.E. LEVEL								
DESIGN LEVEL		45.6	46.05	46.53	47	47.52		
EXISTING LEVEL	42.72	46.48	44.33	46.6	47.03	47.7	48.34	48.85
CHAINAGE	0	15	30	45	60	75	90	98.601

SECTION K 202
SCALE: 1:500 (H)
SCALE: 1:100 (V)



DATUM R.L. 38															
W.A.E. LEVEL															
DESIGN LEVEL		47.06	46.79	46.52	46.28	46.1	45.91	45.68	45.41	45.12	44.82	44.47			
EXISTING LEVEL	47.85	47.02	45.99	46.81	46.75	46.4	48.69	52.72	49.25	46.21	44.19	44.05	43.89	43.93	43.78	44.14
CHAINAGE	0	15	30	45	60	75	90	105	120	135	150	165	180	195	210	221.993

SECTION I 202
SCALE: 1:500 (H)
SCALE: 1:100 (V)

1

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
A 1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT
M						
E						
N						
D						
E						
M						
E						
N						
T						
S						

FILE: H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-208.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21

STATUS
FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT
STATEWIDE PLANNING PTY. LTD.

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calibregroup.com

PROJECT
741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
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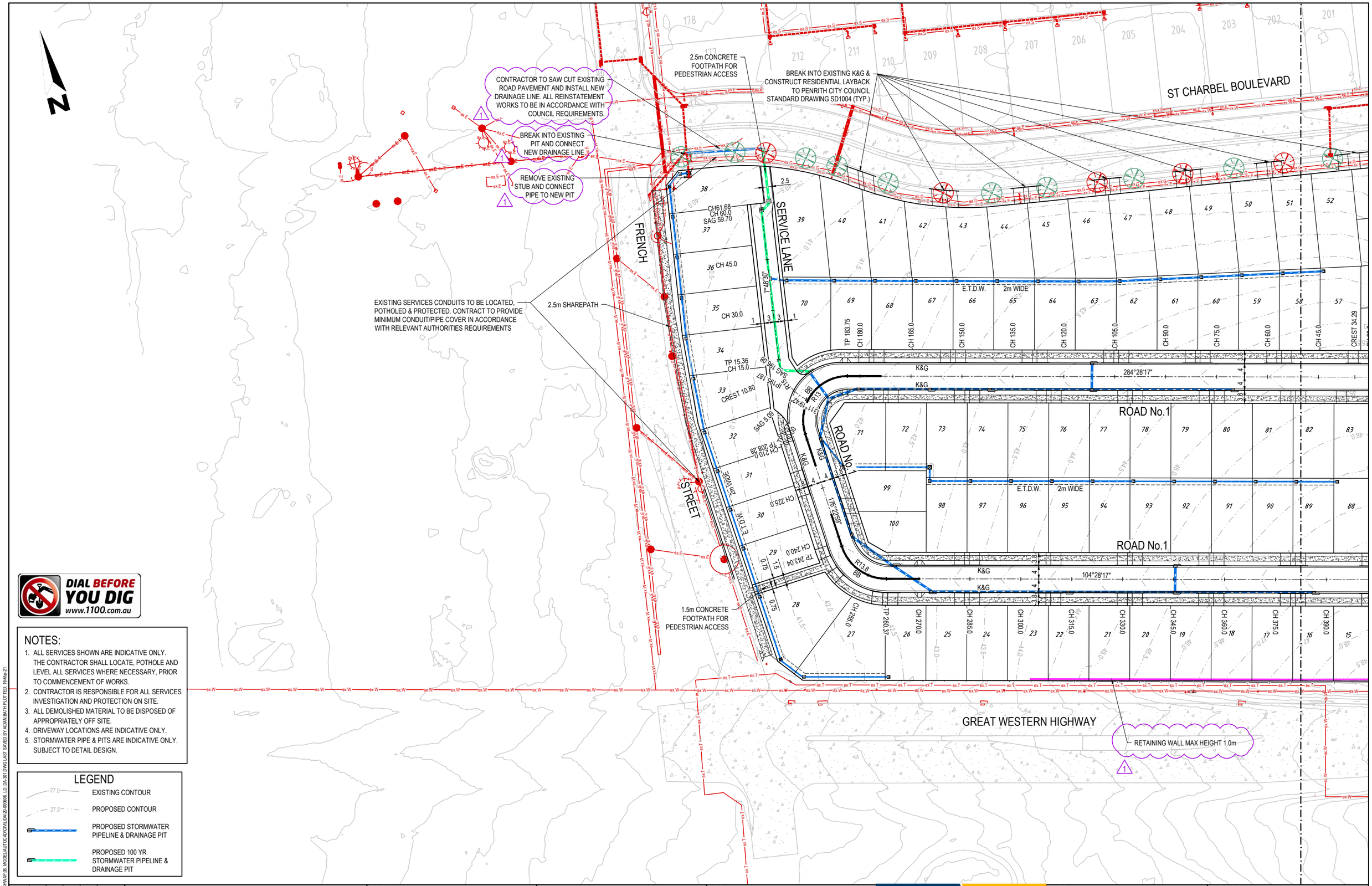
DRAWING TITLE
SITE REGRADING SECTIONS
SHEET 06 OF 06

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	208	DA	1



DIAL BEFORE YOU DIG
www.1100.com.au

NOTES:

1. ALL SERVICES SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR SHALL LOCATE, POTHOLE AND LEVEL ALL SERVICES WHERE NECESSARY, PRIOR TO COMMENCEMENT OF WORKS.
2. CONTRACTOR IS RESPONSIBLE FOR ALL SERVICES INVESTIGATION AND PROTECTION ON SITE.
3. ALL DEMOLISHED MATERIAL TO BE DISPOSED OF APPROPRIATELY OFF SITE.
4. DRIVEWAY LOCATIONS ARE INDICATIVE ONLY.
5. STORMWATER PIPE & PITS ARE INDICATIVE ONLY. SUBJECT TO DETAIL DESIGN.

LEGEND

- EXISTING CONTOUR (27.0)
- PROPOSED CONTOUR (27.5)
- PROPOSED STORMWATER PIPELINE & DRAINAGE PIT
- PROPOSED 100 YR STORMWATER PIPELINE & DRAINAGE PIT

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

AMENDMENTS

FILE: H:\2020\-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\30-000606_LD_DA_301.DWG LAST SAVED BY AIDAN.BATH PLOTTED: 19-Mar-21

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

DISCLAIMER
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DRAWING TITLE: ENGINEERING PLAN SHEET 01 OF 02

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	301	DA	1

ST CHARBEL BOULEVARD

EXISTING K&G TO BE REMOVED TO ALLOW FOURTH LEG CONSTRUCTION OF EXISTING ROUNDABOUT.

BREAK INTO EXISTING PIT AND CONNECT NEW DRAINAGE LINES

CONVERT EXISTING G.G.K.I.P. TO A JUNCTION PIT WITH TRAFFICABLE LID.

EXISTING SERVICES CONDUITS TO BE LOCATED, POTHOLED & PROTECTED. CONTRACT TO PROVIDE MINIMUM CONDUIT/PIPE COVER IN ACCORDANCE WITH RELEVANT AUTHORITIES REQUIREMENTS

MEDIAN KERB (SPLITTER ISLAND)

EXISTING CULVERT HEADWALL

RETAINING WALL/WING WALL MAX HEIGHT 1.8m

EXISTING FENCE TO BE REINSTATED AFTER BULK EARTHWORKS

SAWCUT EXISTING PAVEMENT & MAKE SMOOTH CONNECTION

CONTRACTOR TO SAW CUT EXISTING ROAD PAVEMENT AND INSTALL NEW DRAINAGE LINE. ALL REINSTATEMENT WORKS TO BE IN ACCORDANCE WITH COUNCIL REQUIREMENTS.

ROAD No.2

ROAD No.3

ROAD No.4

ROAD No.1

E.T.D.W. 2m WIDE

LOT 101
DP1140594

FUTURE STAGE

CREEK CHANNEL
FOR DETAILS REFER
TO DWG No. 850-852

GREAT WESTERN HIGHWAY

RETAINING WALL MAX HEIGHT 1m IN CUT

RETAINING WALL MAX HEIGHT 2.7m IN FILL

EXISTING CULVERT HEADWALL UNDER GREAT WESTERN HIGHWAY

RETAINING WALL MAX HEIGHT 1.0m

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NOTES:

1. ALL SERVICES SHOWN ARE INDICATIVE ONLY. THE CONTRACTOR SHALL LOCATE, POTHOLE AND LEVEL ALL SERVICES WHERE NECESSARY, PRIOR TO COMMENCEMENT OF WORKS.
2. CONTRACTOR IS RESPONSIBLE FOR ALL SERVICES INVESTIGATION AND PROTECTION ON SITE.
3. ALL DEMOLISHED MATERIAL TO BE DISPOSED OF APPROPRIATELY OFF SITE.
4. DRIVEWAY LOCATION INDICATIVE ONLY.
5. STORMWATER PIPE & PITS ARE INDICATIVE ONLY. SUBJECT TO DETAIL DESIGN.

LEGEND

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED STORMWATER PIPELINE & DRAINAGE PIT
- PROPOSED 100 YR STORMWATER PIPELINE & DRAINAGE PIT

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
1	RT	AB	EF	EF	02/02/2021	
AMENDMENTS	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE: 0 7.5 15 22.5 30 37.5 45 52.5 60
SCALE 1:750 (A1) SCALE 1:1500 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

calibre
 calibregroup.com

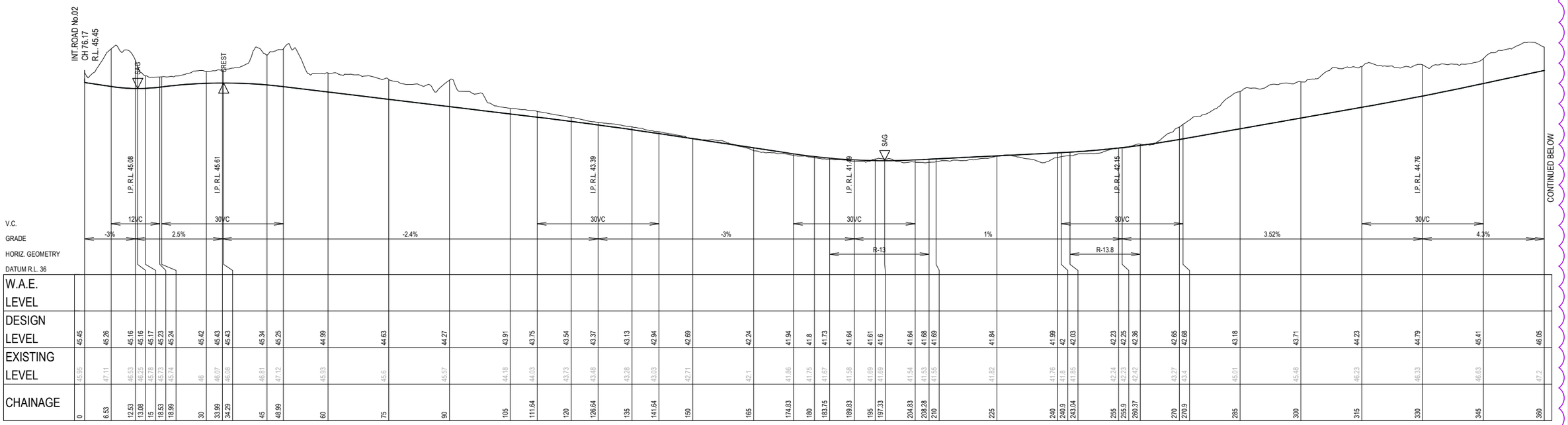
PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: ENGINEERING PLAN SHEET 02 OF 02

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	302	DA	1

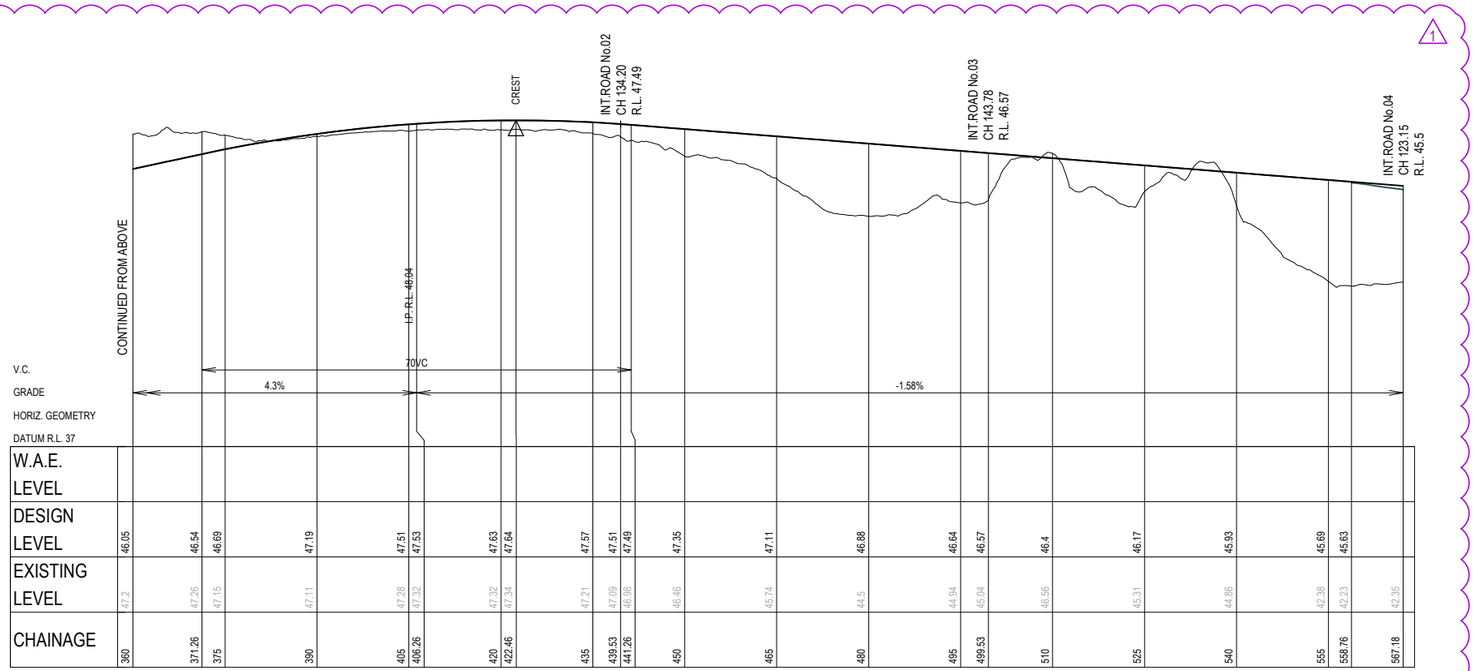
FILE: H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-302.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21



LONGITUDINAL SECTION CENTRELINE - ROAD No.1

SCALE 1:500 (H)
SCALE 1:100 (V)

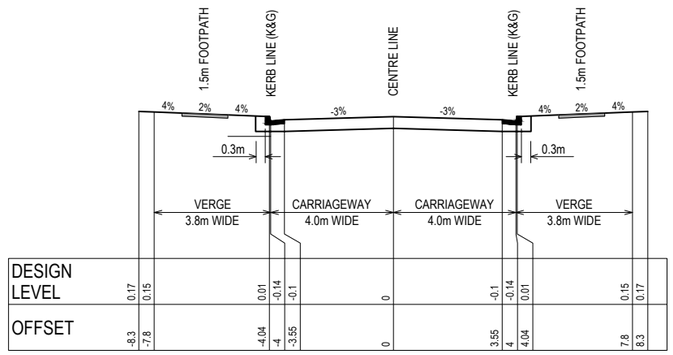
1



LONGITUDINAL SECTION CENTRELINE - ROAD No.1

SCALE 1:500 (H)
SCALE 1:100 (V)

1



TYPICAL CROSS SECTION ROAD No. 1

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
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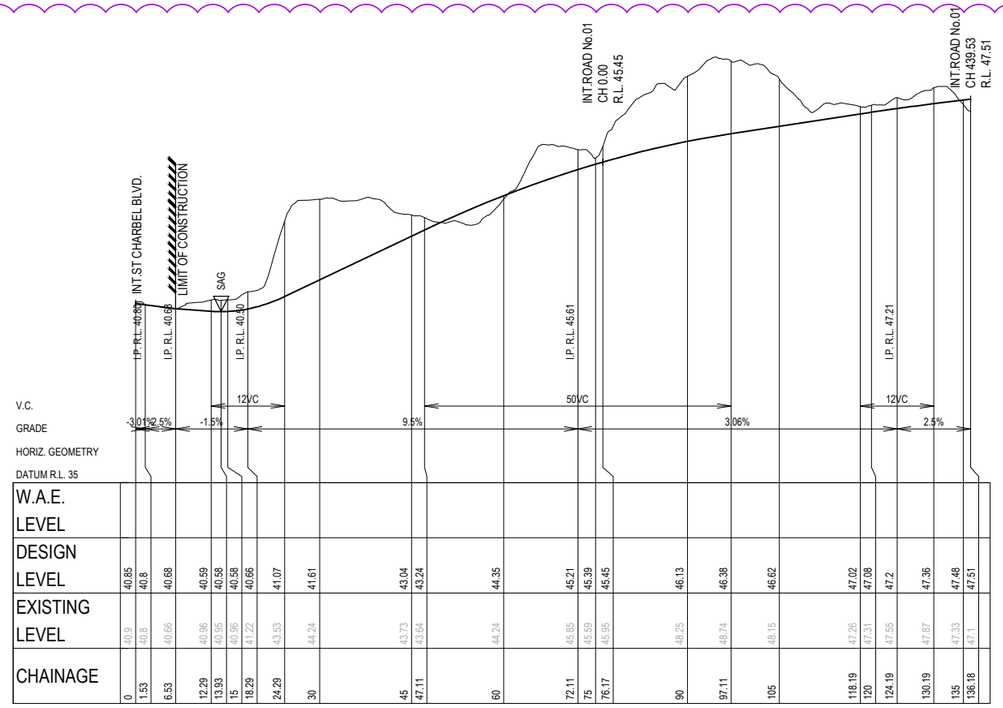
DRAWING TITLE: ROAD No.01 LONGITUDINAL & TYPICAL CROSS SECTION

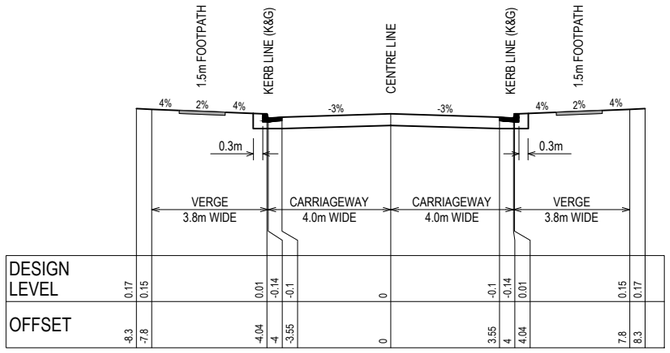
PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	401	DA	1

FILE: H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-401.DWG LAST SAVED BY:AIDAN (BATH PLOTTED: 19-Mar-21

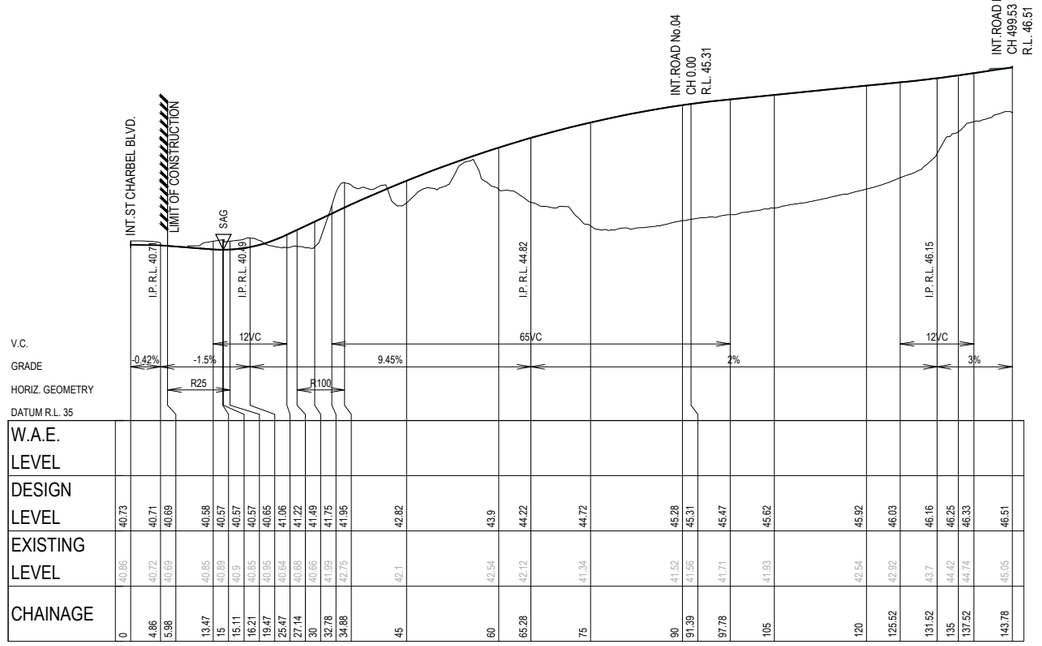


LONGITUDINAL SECTION CENTRELINE - ROAD No.2

SCALE 1:500 (H)
SCALE 1:100 (V)



TYPICAL CROSS SECTION ROAD No. 2 & 3



LONGITUDINAL SECTION CENTRELINE - ROAD No.3

SCALE 1:500 (H)
SCALE 1:100 (V)

1

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
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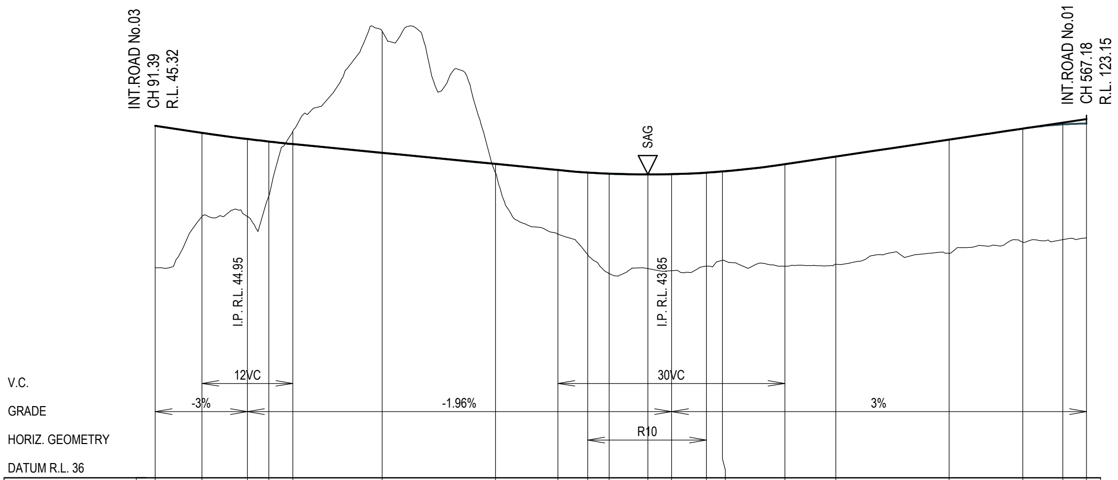
DRAWING TITLE: ROAD No.02 & 03 LONGITUDINAL & TYPICAL CROSS SECTION

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	402	DA	1

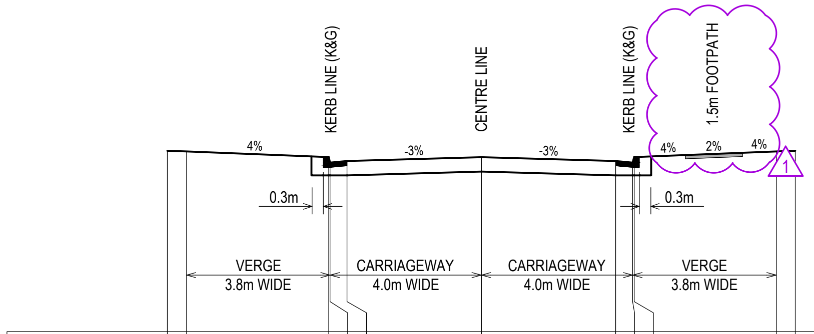
FILE: H:\2020\-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-402.DWG LAST SAVED BY AIDAN.BATH PLOTTED: 19-Mar-21



W.A.E. LEVEL																				
DESIGN LEVEL	45.32	45.13	44.97	44.9	44.84	44.6	44.31	44.15	44.08	44.05	44.03	44.04	44.08	44.11	44.3	44.51	44.96	45.25	45.41	45.5
EXISTING LEVEL	41.56	42.92	42.92	43.46	45.18	47.82	44.07	42.45	41.9	41.41	41.54	41.49	41.61	41.76	41.6	41.65	41.95	42.24	42.3	42.35
CHAINAGE	0	6.18	12.18	15	18.18	30	45	53.26	57.19	60	65.13	68.26	72.9	75	83.26	90	105	114.72	120	123.15

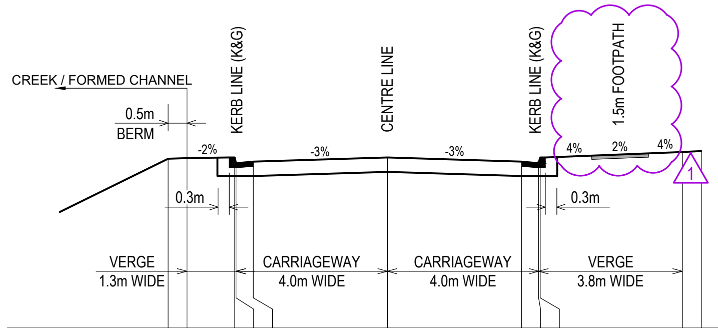
LONGITUDINAL SECTION CENTRELINE - ROAD No.4

SCALE 1:500 (H)
SCALE 1:100 (V)



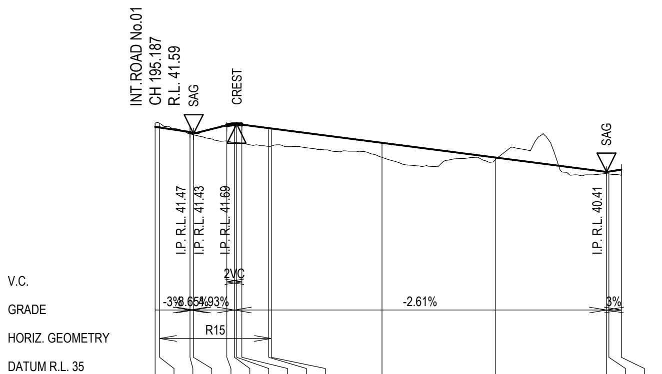
DESIGN LEVEL	0.17	0.15	0.01	-0.14	-0.1	0	-0.1	-0.14	0.01	0.15	0.17
OFFSET	-8.3	-7.8	-4.04	-4	-3.55	0	3.55	4	4.04	7.8	8.3

TYPICAL CROSS SECTION ROAD No. 4
(CH 0.00 to Ch 56.00)



DESIGN LEVEL	-0.03	-0.02	0	-0.15	-0.11	0	-0.11	-0.15	0	0.14	0.16
OFFSET	-5.8	-5.3	-4.04	-4	-3.55	0	3.55	4	4.04	7.8	8.3

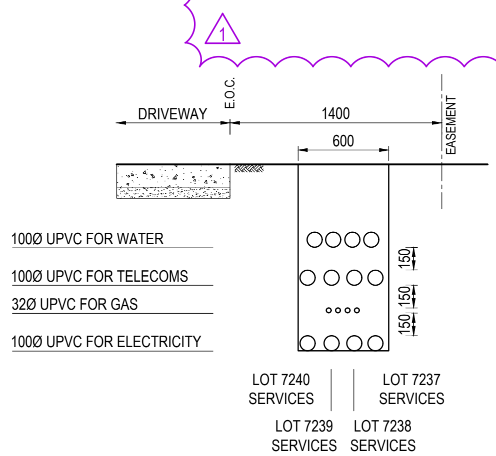
TYPICAL CROSS SECTION ROAD No. 4
(CH 75 to 123.15)



W.A.E. LEVEL															
DESIGN LEVEL	41.61	41.59	41.47	41.43	41.64	41.67	41.67	41.67	41.57	41.56	41.18	40.79	40.41	40.41	40.46
EXISTING LEVEL	41.7	41.69	41.42	41.39	41.23	41.19	41.18	41.17	41.09	41.09	40.79	40.74	40.36	40.36	40.32
CHAINAGE	0	0.57	4.62	5.09	9.47	10.47	10.77	11.47	15	15.36	30	45	59.7	60	61.68

LONGITUDINAL SECTION CENTRELINE - LANEWAY

SCALE 1:500 (H)
SCALE 1:100 (V)

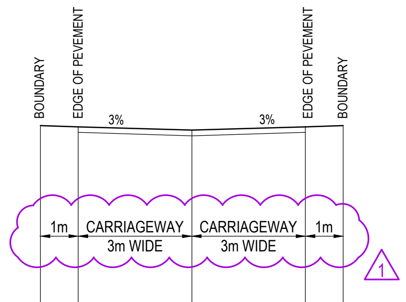


SHARED TRENCH DETAIL

DRIVEWAY No.1

SCALE - 1:25

SHARED TRENCH NOTES:
1. CONDUIT SIZES ARE INDICATIVE ONLY
2. ALL DIMENSIONS ARE IN MILLIMETRES U.N.O.



DESIGN LEVEL	0.12	.09	0	.09	0.12
OFFSET	-4	-3	0	3	4

TYPICAL CROSS SECTION CH 45 (SERVICE LANE)

FILE: H:\20\20-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-403.DWG LAST SAVED BY:AIDAN.BATH PLOTTED: 19-Mar-21

		DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
FIRST ISSUE		RT	AB	EF	EF	02/02/2021	
AMENDMENTS	1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN: [illegible]
DATE: 19/3/21

SCALE
0 1 2 3 4 5 6 7 8
SCALE 1:100 (A1) SCALE 1:200 (A3)
0 5 10 15 20 25 30 35 40
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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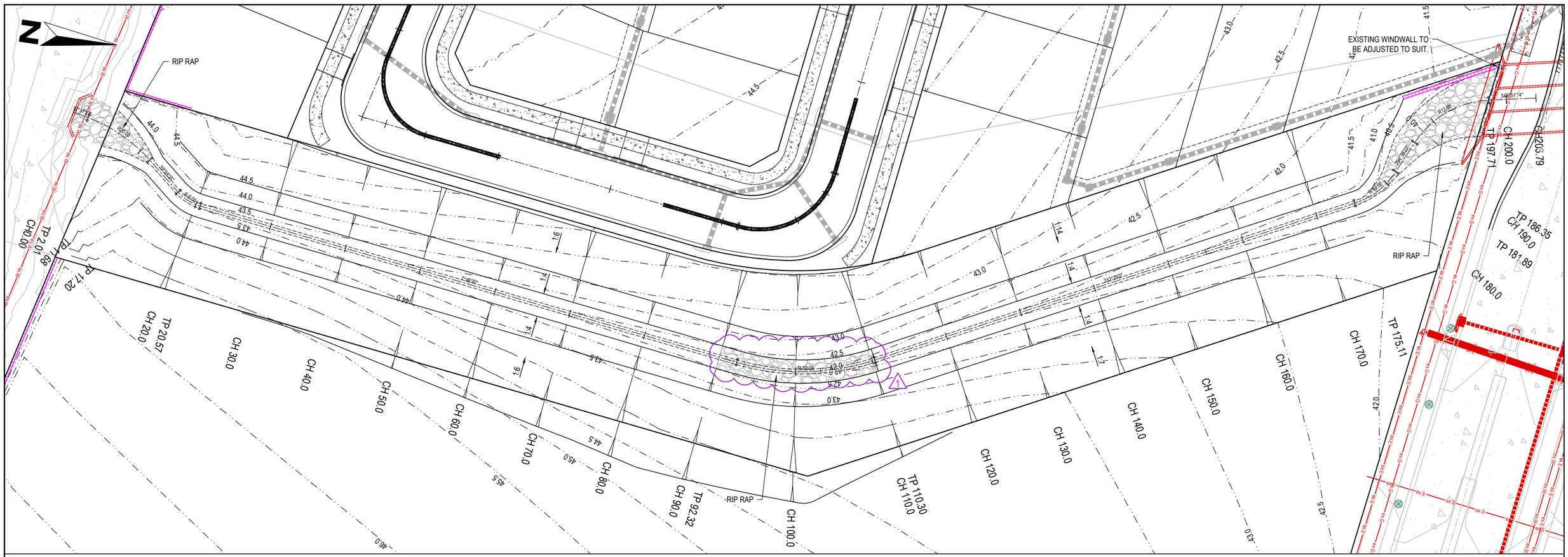
PROJECT: 741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

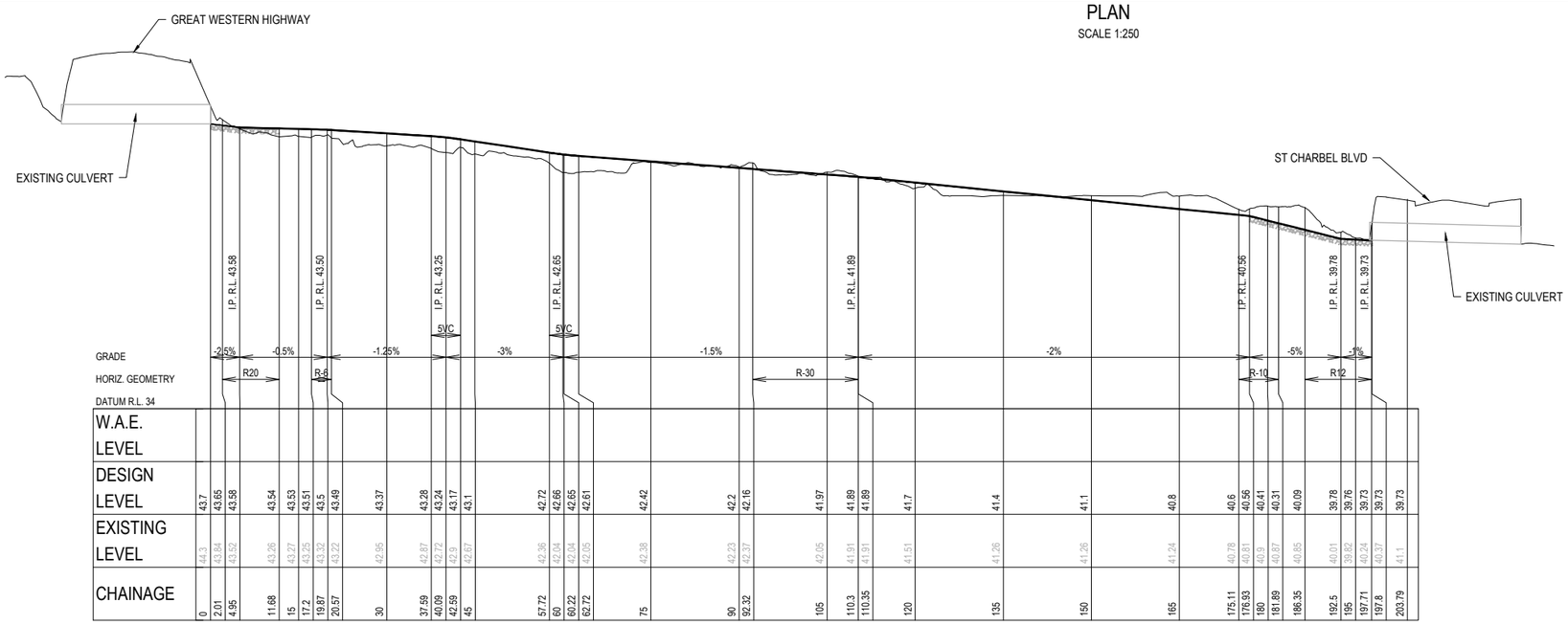
DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: ROAD No.04 & LANEWAY LONGITUDINAL & TYPICAL CROSS SECTION

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	403	DA	1

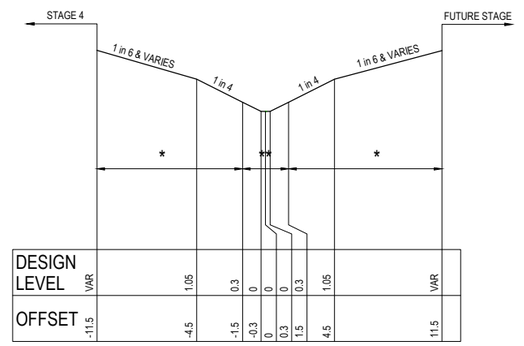


PLAN
SCALE 1:250



LONGITUDINAL SECTION CENTRELINE
SCALE 1:500 (H)
SCALE 1:100 (V)
SCALE 1:100 (A1) SCALE 1:200 (A3)

* PLANTED TO LANDSCAPE ARCHITECT'S REQUIREMENTS
** LOW FLOW CHANNEL TREATMENT SUBJECT TO DETAIL DESIGN



TYPICAL CROSS SECTION
SCALE 1:200 H
1:100 V

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

AMENDMENTS

FILE: H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-850.DWG LAST SAVED BY AIDAN.BATH PLOTTED: 19-Mar-21

STATUS
FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE:
BY: BASEM HAMDAN
MIEAust. BE (Civil)
SIGN:
DATE: 19/3/21

SCALE
SCALE 1:200 (A1) SCALE 1:400 (A3)
SCALE 1:250 (A1) SCALE 1:500 (A3)
SCALE 1:500 (A1) SCALE 1:1000 (A3)

CLIENT
STATEWIDE PLANNING PTY. LTD.

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PROJECT
741 & 755 GREAT WESTERN HIGHWAY
ROAD & DRAINAGE DESIGN

DISCLAIMER
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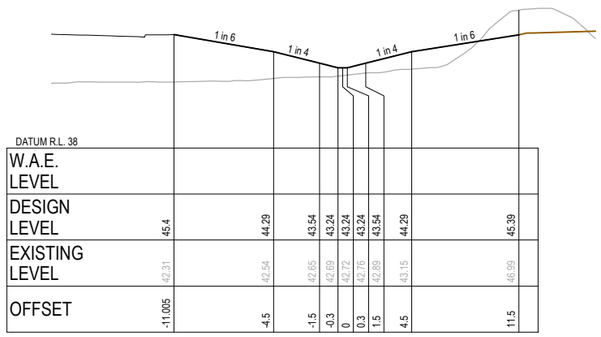
DRAWING TITLE
CREEK CHANNEL PLAN & LONGITUDINAL SECTION

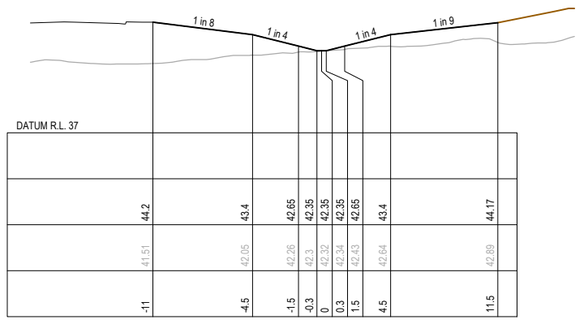
PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	850	DA	1

LEGEND

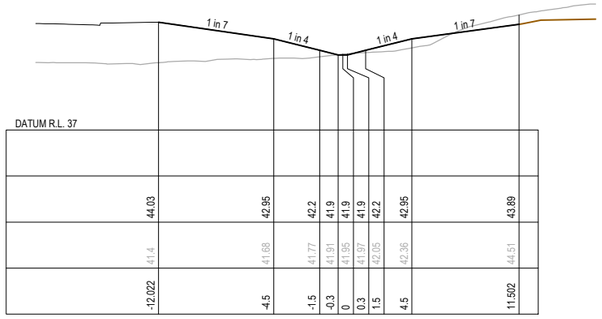
RETAINING WALL



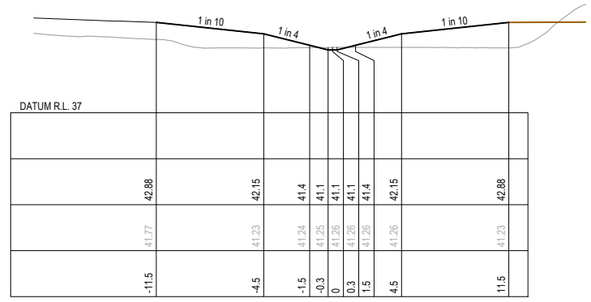
CH 40



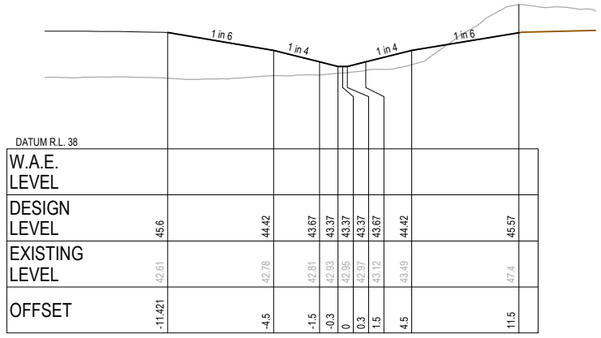
CH 80



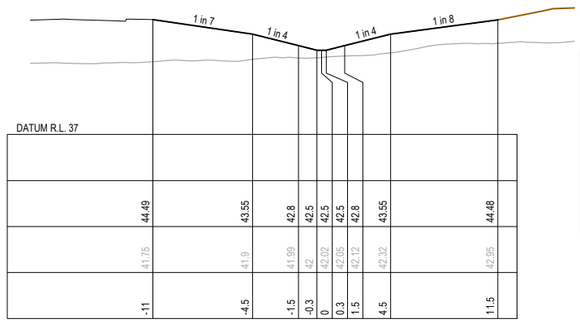
CH 110



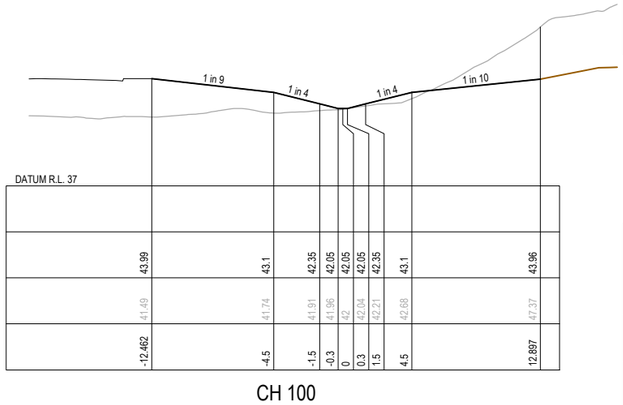
CH 150



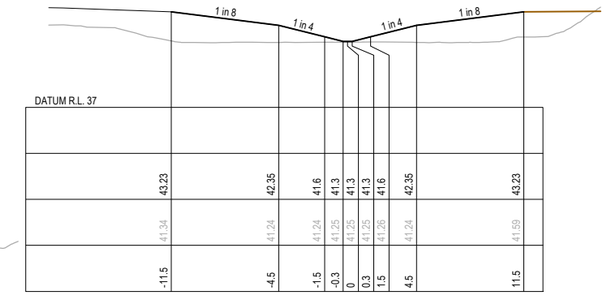
CH 30



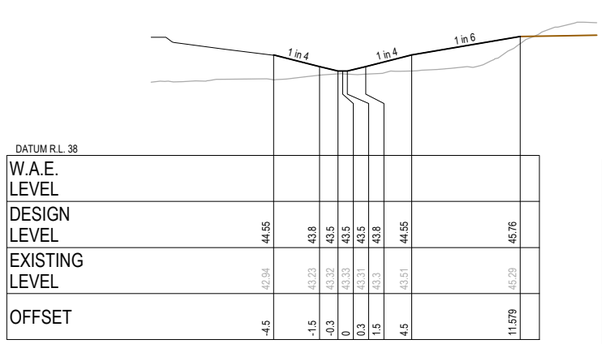
CH 70



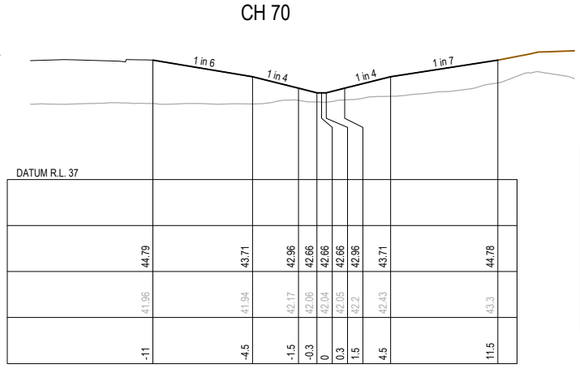
CH 100



CH 140

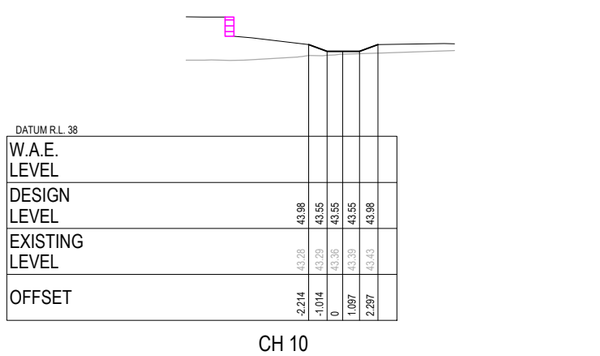


CH 20

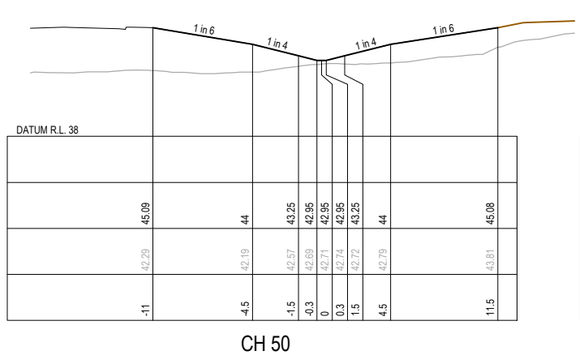


CH 60

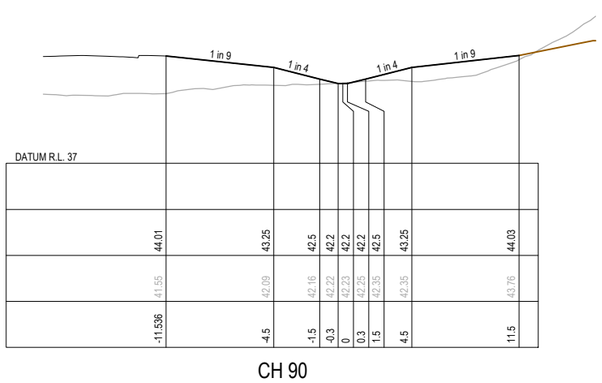
CH 130



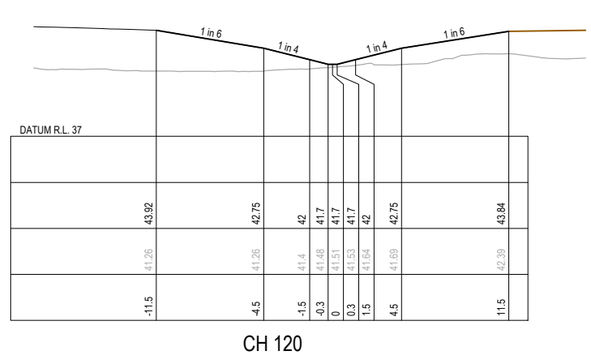
CH 10



CH 50



CH 90



CH 120

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

AMENDMENTS

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE: BY: BASEM HAMDAN, MIEAust. BE (Civil) SIGN: DATE: 19/3/21

SCALE: 0 1 2 3 4 5 6 7 8 — SCALE 1:100 (A1) SCALE 1:200 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

calibre

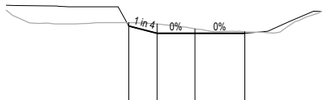
PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

DISCLAIMER
ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: CREEK CHANNEL CROSS SECTIONS SHEET 01 OF 02

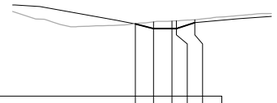
PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	851	DA	1

E:\E.H\20\20-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-851.DWG LAST SAVED BY AUSTEN.PERCH PLOTTED: 19-Mar-21



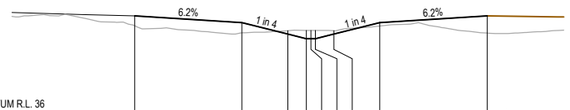
DATUM R.L. 35					
W.A.E. LEVEL					
DESIGN LEVEL	40.38	39.91	39.91	39.91	
EXISTING LEVEL	40.6	40.51	40.19	40.01	
OFFSET	-4.311	-2.465	0	3.26	

CH 190



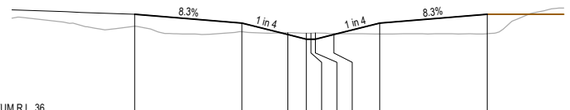
DATUM R.L. 36					
W.A.E. LEVEL					
DESIGN LEVEL	40.71	40.41	40.41	40.79	
EXISTING LEVEL	40.73	40.85	40.9	40.58	
OFFSET	-2.388	-1.188	0	1.5	

CH 180



DATUM R.L. 36									
W.A.E. LEVEL									
DESIGN LEVEL	42.19	41.75	41	40.7	40.7	40.7	41	41.75	42.19
EXISTING LEVEL	41.55	41.08	41.22	41.24	41.24	41.24	41.22	41.52	41.07
OFFSET	-11.5	-4.5	-1.5	-0.3	0	0.3	1.5	4.5	11.5

CH 170



DATUM R.L. 36									
W.A.E. LEVEL									
DESIGN LEVEL	42.53	41.95	41.2	40.9	40.9	40.9	41.2	41.95	42.53
EXISTING LEVEL	41.74	41.39	41.32	41.3	41.3	41.3	41.26	41.23	41.26
OFFSET	-11.5	-4.5	-1.5	-0.3	0	0.3	1.5	4.5	11.5

CH 160

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD.	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
AMENDMENTS 1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION

AUTHORISED FOR ISSUE: BY: BASEM HAMDAN, MIEAust. BE (Civil) SIGN: DATE: 19/3/21

SCALE: 0 2.5 5 7.5 10 12.5 15 17.5 20 — SCALE 1:250 (A1) SCALE 1:500 (A3)

CLIENT: STATEWIDE PLANNING PTY. LTD.

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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN

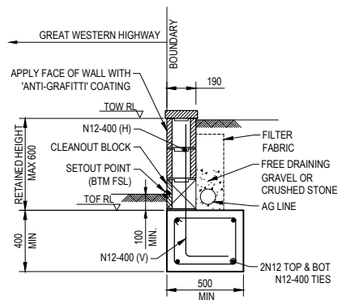
DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY

DRAWING TITLE: CREEK CHANNEL CROSS SECTIONS SHEET 02 OF 02

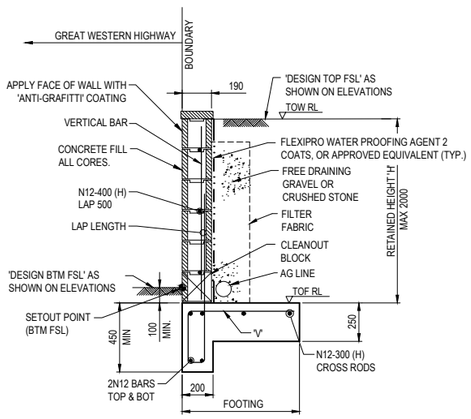
PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	852	DA	1

FILE: H:\2020-000606 - 741 & 755 GW HIGHWAY\06_MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-852.DWG LAST SAVED BY: AIDAN.BATH PLOTTED: 19-Mar-21

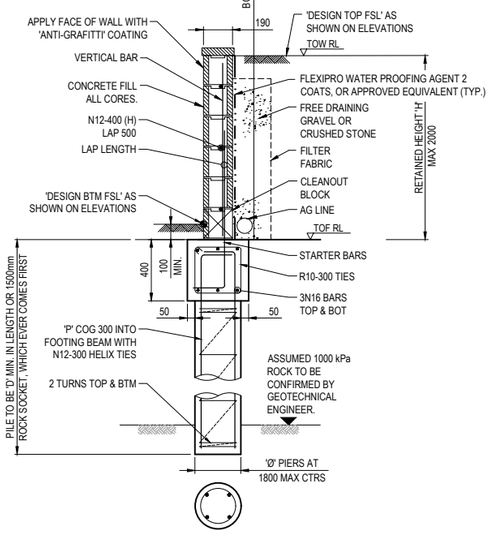
NOTE:
SUBJECT TO DETAILED &
STRUCTURAL DESIGN



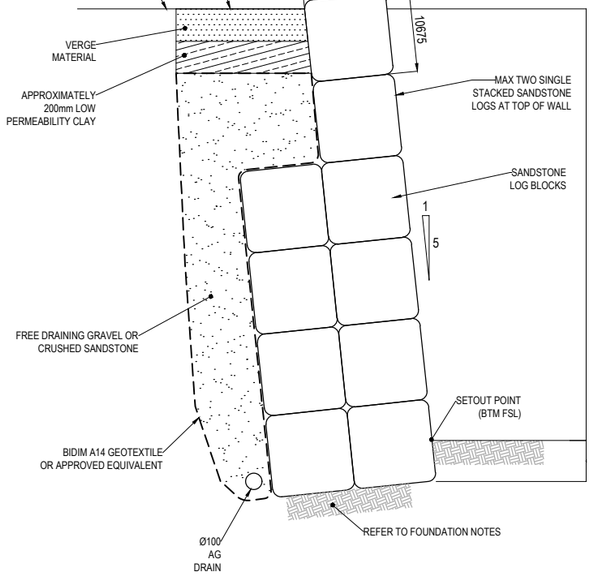
TYPICAL BLOCKWORK RETAINING WALL
MAX 600 HEIGHT
SCALE 1:20



TYPICAL BLOCKWORK RETAINING WALL
MAX 2000 HEIGHT
SCALE 1:20



TYPICAL BLOCKWORK RETAINING WALL
MAX 2000 HEIGHT
SCALE 1:20



SANDSTONE LOG WALL TYPICAL
MAX. 2750 RETAINED HEIGHT
SCALE 1:20
(0.0KPa SURCHARGE)

1

FIRST ISSUE	DESIGN	DRAWN	CHECK	APPD	DATE	AMENDMENT DETAILS
	RT	AB	EF	EF	02/02/2021	
1	LF	PS	EF	BH	19/03/2021	FOR DEVELOPMENT APPLICATION LODGEMENT

STATUS: FOR DEVELOPMENT APPLICATION
AUTHORISED FOR ISSUE: BY: BASEM HAMDAN, MIEAust. BE (Civil) SIGN: DATE: 19/3/21
SCALE: 0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 — SCALE 1:20 (A1) SCALE 1:40 (A3)
CLIENT: STATEWIDE PLANNING PTY. LTD.
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PROJECT: 741 & 755 GREAT WESTERN HIGHWAY ROAD & DRAINAGE DESIGN
DISCLAIMER: ALL DIMENSIONS TO BE CHECKED ON SITE BY CONTRACTOR PRIOR TO CONSTRUCTION. USE WRITTEN DIMENSIONS ONLY, DO NOT SCALE. NOT FOR CONSTRUCTION UNLESS STAMPED BY CERTIFYING AUTHORITY
DRAWING TITLE: RETAINING WALL DETAILS

PROJECT No.	DRAWING No.	MILESTONE	REVISION
20-000606	901	DA	1

FILE: H:\2020\20000606 - 741 & 755 GW HIGHWAY\06. MODEL\AUTOCAD\CIVIL\DA\20-000606_LD_DA-901.DWG LAST SAVED BY AIDAN.BATH PLOTTED: 19-Mar-21