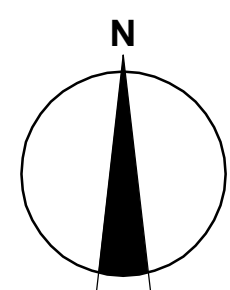


# Estuary

## Stage 6

### City of Greater Geelong



#### LOCALITY PLAN

MELWAYS REF: 468 D6



#### Principal

Leopold Property Developments Pty Ltd

Level 1, 6 Riverside Quay

Southbank, Victoria 3006

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**Standard Construction Notes**

- 1. GENERAL**
- 1.1 **Drawings** - The drawings are to be read in conjunction with the contract specification and the responsible Authorities standard drawings and current specifications for Roadworks and Drainage. Any observed discrepancy to be referred to the Superintendent prior to start of work.
- 1.2 **Responsible Authority Documentation Availability** - A set of the respective responsible Authority standard construction documentation including drawings and specification/s are to be provided by the Contractor and made available on-site for the duration of the construction period.
- 1.3 **Conformity with Drawings** - All works are to be finished in conformity with the lines, grades, thicknesses and cross sections shown in the drawings.
- 1.4 **Materials and Workmanship** - Materials and workmanship to comply with responsible Authority specifications and relevant SAA Codes.
- 1.5 **Tolerances** - Works are to be constructed in compliance with tolerances specified by the relevant responsible Authorities.
- 1.6 **Minimum Standards** - The standards of work and materials stated in the drawings and specification are the minimum acceptable irrespective of relevant responsible Authority minimum standards.
- 1.7 **Sewer/Water Supply** - Construction notes specific to sewer and water supply asset construction are incorporated in the drawings approved by the Water Company as attached hereto.
- 2. EXISTING CONDITIONS**
- 2.1 **Discrepancy with Drawings** - Any discrepancy observed/identified between the drawings and existing conditions and site features are to be referred to the Superintendent prior to start of any related work.
- 2.2 **Municipal Assets & Infrastructure** - The condition of existing Council assets potentially affected by the works is to be assessed by a joint site inspection with Council Officers prior to the start of works. Asset conditions are to be recorded and witnessed by Council and the Contractor. The Contractor is to arrange and record site inspections and is liable for all rectification/reinstatement costs for damage to existing assets.
- 2.3 **Utility Services** - The locations of existing utility services, as shown in the drawings, are not guaranteed. Exact service locations are to be proven prior to start of works. Service location works are to comply with the requirements of the relevant responsible Authority. The Contractor is liable for rectification/reinstatement costs for damage to existing utility services.
- 3. NOTIFICATIONS**
- 3.1 **Council** - Minimum notification periods are:
- (a) **two (2) days** written notice of intention to start works  
 (b) **two (2) days** notice to inspect condition of existing Council assets  
 (c) **twenty four (24) hours** notice for weekend work  
 (d) **twenty four (24) hours** notice for:
- inspection of drainage works
  - inspection of sub-soil drains
  - proof roll of prepared sub-grade or constructed pavement
  - inspection of prepared base for concrete works
  - other works as stated in the drawings or specified
- Or as otherwise agreed with Council Officers.
- 3.2 **Property Owners/Tenants** - Seven (7) days written notice to property owners/tenants affected by the works.
- 4. OCCUPATION OF PUBLIC ROADS**
- All roadworks signage to comply with VicRoads Worksite Traffic Management Code incorporating AS 1742.3.
- 4.1 **Roads under VicRoads jurisdiction** - The Contractor is to arrange VicRoads consent via "Application for Consent - Works within Road Reserves" (refer VicRoads web site).
- 4.2 **Roads under Council control** - The Contractor is to arrange and acquire requisite Road Closure Permits via Council's Traffic Officer.

- 5. SET OUT**
- 5.1 **Survey Stations and Reference Marks** - The locations of survey stations and reference marks are to be verified prior to start of works.
- 5.2 **Road Chainages** - Road chainages as shown in the drawings are to road centreline, unless otherwise stated.
- 5.3 **Kerb & Channel** - Kerb and channel radii and levels relate to edge of channel, unless otherwise stated.
- 5.4 **Drainage Pits** - The locations and orientation of drainage pits are to be accurately set out from co ordinates and/or offsets as stated.
- 5.5 **Pipe Drains** - Drainage lines are to be accurately set out from coordinates and/or offsets as stated. Further to Standard Note 5.4 drainage lines at pits are to be accurately set out to ensure that the outlet pipe is aligned directly opposite the inlet pipe (where deflection angles are 45° or less) or as otherwise stated in the drawings or directed.
- 6. TOPSOIL**
- 6.1 **Stripping Limits** - Clearing and stripping of topsoil to be restricted to areas to be excavated/filled as stated in the drawings or limits as otherwise directed by the Superintendent.
- 6.2 **Surplus Material** - Surplus topsoil must be re-used on-site unless otherwise stated in the drawings or directed by the Superintendent.
- 7. EXISTING VEGETATION**
- All existing trees and significant vegetation within and external to the worksite are to be retained, preserved and protected unless otherwise stated in the drawings or directed by the Superintendent.
- 8. EXCAVATION/TRENCHING**
- 8.1 **Trenching** - Trenching operations exceeding 1.5 metres depth are to comply with the provisions of the Mines (Trenches) Regulations 1982.
- 8.2 **Work close to Trees and Vegetation** - Excavation work within the drip line of trees is not to be performed unless otherwise stated in the drawings or approved by the Superintendent.
- 8.3 **Unstable Sub-Grade** - Unstable sub-grade/"soft spots" to be excavated to a sound proof-rolled base and backfilled with material approved by Council.
- 9. SOIL EROSION**
- The Contractor must install necessary protection works to effectively manage and limit soil erosion within the worksite. Works to include, but are not limited to:
- 9.1 **Silt Fences** - downstream of all exposed areas.
- 9.2 **Silt Barriers** - upstream of all pits
- 10. DRAINAGE WORK**
- 10.1 **Existing Drains** - The location of existing drainage assets to be verified prior to start of works.
- 10.2 **Pipe Class** - Pipes to be, unless otherwise stated in the drawings:
- (a) Roads & Reserves - Class 2 Rubber Ring Jointed RCP  
 (b) Easements - Rubber Ring Jointed RCP/FRP or Sewer Class Solvent Cement UPVC
- 10.3 **Pit Covers** - Pit covers are to be placed to match actual finished surface profiles - level and cross fall - of adjacent structures/surfaces. Finished surface levels stated in the drawings are indicative, for depth range purposes, and are not to be used as the basis for setting final pit cover levels
- 10.4 **Pit Construction** - Precast standard pits are to be installed. Cast in-situ standard pits are only to be constructed where approved by the Superintendent. All sumps in precast concrete pits are to be infilled with concrete flush to the inlet level of the outlet pipe unless otherwise approved by the superintendent.
- 10.5 **Sub-Soil Drains**
- (a) Entry to pits to be trimmed flush with inner wall and effectively mortared in place through the full pit wall thickness.  
 (b) Details of granular filter material including source to be submitted to the Superintendent prior to start of sub-soil drainage works.

- 11. BACKFILL MATERIAL**
- 11.1 **Trenches under all edgings/kerb sections & Nature Strips** - 20mm Class 3 Fine Crushed Rock or other material as approved by Council.
- 11.2 **Trenches under road pavement - Stormwater pipes** are to be backfilled with two percent (2%) cement stabilised sand to extend from the bottom of the pipe to the springline (mid point) of the pipe. Class 3 Fine Crushed Rock is then to be used as the backfill material from the springline up to the road pavement base.
- 11.3 **Allotments/Reserves/** - Selected best quality excavated in-situ material or other material as approved by Council.
- 12. COMPACTION STANDARDS**
- Compaction standards are to be checked and proven in accordance with the requirements of AS 1289. Where unspecified by the responsible Authority, the following minimum standards will apply:
- 12.1 **Structural Fill**
- (a) Fill base - top 150mm 95% standard compaction  
 (b) Fill zone - 95% standard compaction  
 (c) Under road pavement - zone less than 450mm under road pavement surface 98% standard compaction
- 12.2 **Road Pavement**
- (a) Road sub-grade - top 150mm 98% standard compaction  
 (b) Pavement materials - 98% modified compaction
- 12.3 **Trench Backfill**
- (a) Granular under all pavement & edgings/kerb sections - 98% modified compaction  
 (b) Granular behind kerbing - 95% modified compaction  
 (c) Earth around structures - 95% standard compaction
- 13. CONCRETE WORK**
- 13.1 **Minimum Strength**
- Concrete for drainage pits to have a minimum compressive strength of 32 MPa at 28 days.
  - Concrete for all other applications to have a minimum compressive strength of 25 MPa at 28 days
- 13.2 **Bar Chairs** - All reinforcement in footpaths, vehicle crossings and roads to be supported by appropriately sized bar chairs.
- 13.3 **Slump** - Concrete to have 75mm maximum slump.
- 13.4 **Kerb Cement Content** - Concrete for kerb extrusion machines to have a minimum cement content of 280 kg/m3.
- 13.5 **Services Distribution Mains & Conduits** - Mains and conduits are to be installed prior to kerb section construction works.
- 13.6 **Footpaths** - All footpaths are to be a minimum of 125mm thick with F62 reinforcement, bedded on min of 75mm compacted Class 3 FCR. Bedding to extend 100mm beyond the edges of the footpath. Contraction joints to be constructed at 12.5m intervals. Class 4 FCR is to be used where filling is required under footpath Class 3 FCR bedding material.
- 13.7 **Continuous Kerb** - To allow for a continuous concrete kerb and channel pour the "Gatic" HD concrete surround is to be in place prior to the pour commencing. If the pit surrounds are not in place then the initial kerb and channel pour is to stop one metre either side of pit.
- 14. ROAD PAVEMENT WORK**
- 14.1 **Pavement Composition** - The minimum standard of pavement composition is stated in the drawings for the respective road sections.
- 14.2 **Road surfacing** - Road surfacing must not be performed until all other works have been completed.
- 15. IDENTIFICATION MARKING**
- All identification marking figures are to be a minimum of 50mm high.
- 15.1 **Conduits** - Letter "W", "G" "E" or "T" for water, gas, electricity or telecommunications conduit to be stamped into face of kerb sections at frontage of lot served.

- 15.2 **House Drain Connections** - Letter "H" to be stamped into face of kerb sections opposite street drain connection point.
- 15.3 **Lot Nos.** - Lot Nos. to be stenciled in white paint on face of kerb sections at lot frontages.
- 16. TESTING**
- 16.1 **Specified Testing** - Testing will be conducted in compliance with specified requirements. The Contractor is liable for all costs.
- 16.2 **Proof-Rolling** - Pneumatic tyred plant minimum weight 20 tonne with minimum ground contact pressure 450 kPa per tyre.
- 17. EXPOSED SURFACES RESTORATION**
- 17.1 **Topsoiling** - All exposed residual surface areas at completion of civil works to be topsoiled with 100mm depth of best available material.
- 17.2 **Allotments/Reserves** - Allotments and reserves are to be evenly graded at a minimum gradient of 1 in 100 to their nominated drainage connection points.
- 17.3 **Nature Strips** - Nature strip surfaces are to be trimmed to grade between adjacent surfaces. Top-soiling and compaction operations are to ensure there is no later settlement/subsidence.
- 17.4 **Top-Dressing** - Undisturbed grassed areas are to be top-dressed and evenly graded as directed by the Superintendent.
- 17.5 **Hydroseeding** - At completion of the above works all prepared exposed surfaces are to be well watered and hydroseeded.
- 17.6 **Batter Slopes** - Batter slopes shall be a maximum of 1 in 5 for fill and 1 in 3 for cut unless otherwise shown.

- 18. FINAL WORKS PRESENTATION**
- At Practical Completion the following minimum standards of presentation will apply:
- 18.1 **Roads/Paved Areas** - All roads and paved areas are to be swept/washed down to produce clean surfaces free of all deleterious materials.
- 18.2 **Pipe Systems** - All pipe systems are to be flushed and cleared of all accumulated debris and deleterious materials.

- 18.3 **Site** - The site is to be prepared to a state acceptable for presentation to the public for sale purposes and is to be in a condition satisfactory to the Superintendent with completion of, at least, the following activities:
- (a) all incidental and minor works  
 (b) site clean up operations  
 (c) site cleared of all facilities, temporary structures, plant, litter, surplus materials, etc. that are to be removed off-site.

- 18.4 **Reserve Frontages** - Round topped treated pipe bollards (0.6m high) are to be placed across reserve frontages at 1.5m centres. A demountable section for vehicle access consisting of an appropriate length of 50mm diameter (2.3mm wall thickness) galvanised water pipe, short section of chain (3 links) welded to each end. Two galvanised steel bollards - one each side of the entry, with one end to have a D20 padlock, which locks in to a link, which has been welded onto the bollard. Unless otherwise stated on plans.

- 18.5 **Street Signs** - Street signs are to be located as indicated on the plans and installed in accordance with Vicroads Traffic Engineering Manual Volume 2. Mounting height is to be to the underside of the sign and is to be a minimum of 2.1m and maximum of 3.0m

- 18.6 **No Through Road** - No through road signs are to be installed below the street sign where applicable.

- 19. MAINTENANCE WORKS**
- The Contractor must responsively repair/remediate defective works as directed during the maintenance period.

- 19.1 **Council Assets** - for Maintenance Period of 3 months
- 19.2 **Water Company Assets** - for Defects Liability Period of 12 months and Maintenance Period of 2 years

- 19.3 **Inspection & General Maintenance Activities** - the Contractor must undertake regular site inspections of all completed works. Special attention must be given to the adequacy of the following soil protection works:

- (a) Silt fences  
 (b) Silt barriers  
 (c) Areas hydroseeded

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REVISION	DATE	DES/DFT	APPD
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
A	01.03.11	CB/CB	JG

**DRAWING NOTES**

- Do not scale drawings - use only dimensions stated.
- Dimensions - Dimensions are in metres [m] unless otherwise stated.
- Australian Height Datum - Reduced levels are to Australian Height (AHD) unless otherwise stated.

Principal  
 Leopold Property Developments Pty Ltd  
 Level 1, 6 Riverside Quay  
 Southbank, Victoria 3006

Designed  
 C. Barker

Drawn  
 C. Barker

Checked  
 C. Birkett

Authorised  
 J. Golden

Date  
 December 2010

Scale @ A1  
 As Shown

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**Estuary**  
 Stage 6  
 City of Greater Geelong  
 Roadworks and Drainage  
 General Notes

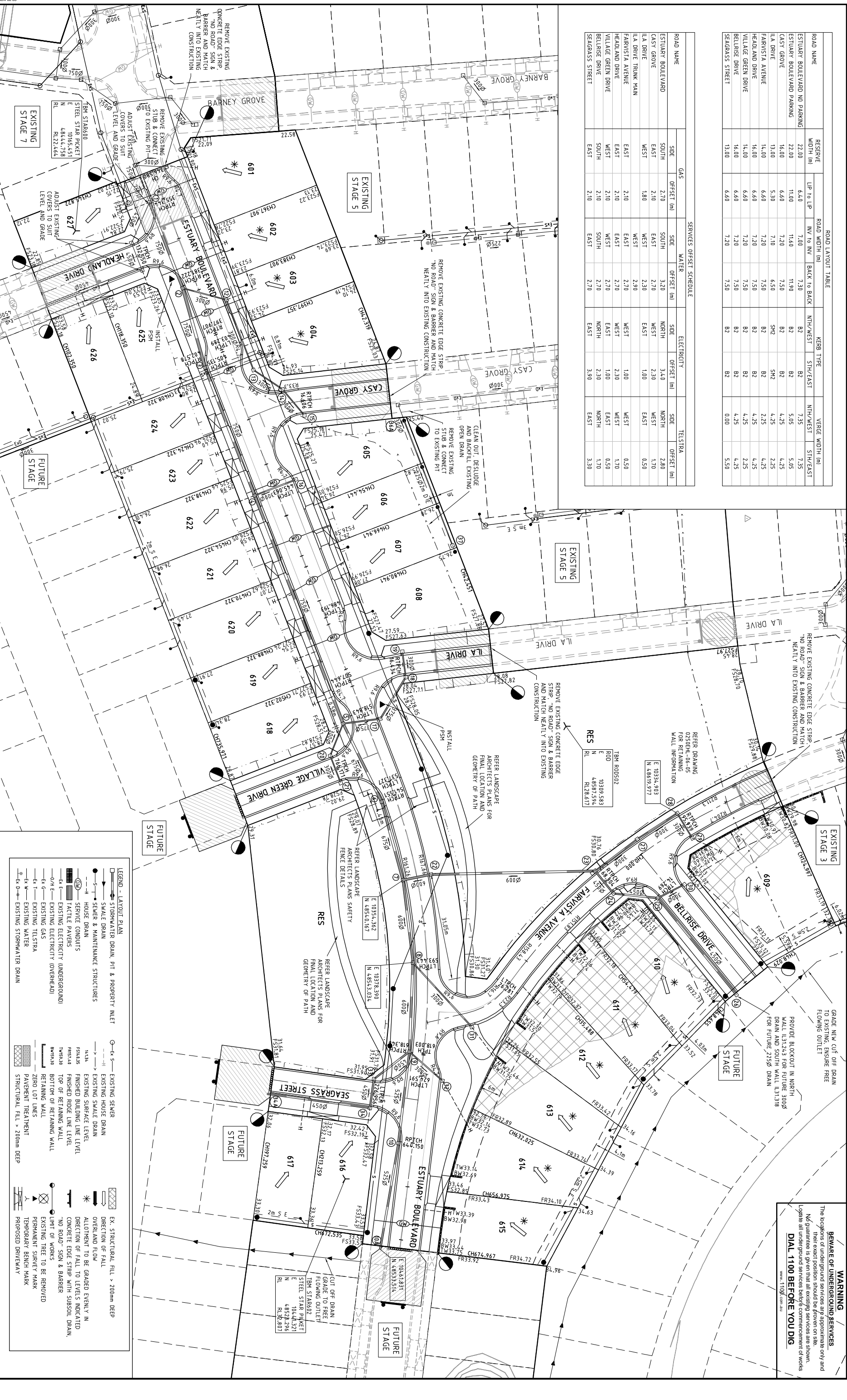
**Drawing No. 0250EHL-06-02** **Rev C**

Sheet No. 2 of 28

**Approved for Construction**

ROAD NAME	ROAD LAYOUT TABLE				KERB TYPE				VERGE WIDTH (m)			
	RESERVE WIDTH (m)	UP to UP	DOWN to DOWN	BACK to BACK	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST	NTH/WEST	STH/EAST
ESTUARY BOULEVARD NO PARKING	22.00	6.40	11.00	7.00	82	82	7.35	7.35	5.05	5.05	4.25	4.25
ESTUARY BOULEVARD PARKING	16.00	6.80	7.20	7.50	82	82	4.25	4.25	4.25	4.25	4.25	4.25
CASY GROVE	16.00	6.80	7.20	7.50	82	82	4.25	4.25	4.25	4.25	4.25	4.25
FARUVISTA AVENUE	13.00	5.30	7.10	6.50	5M2	5M2	2.25	2.25	2.25	2.25	2.25	2.25
FARUVISTA AVENUE	14.00	6.40	7.20	7.50	82	82	4.25	4.25	4.25	4.25	4.25	4.25
HEADLAND DRIVE	16.00	6.80	7.20	7.50	82	82	4.25	4.25	4.25	4.25	4.25	4.25
VILLAGE GREEN DRIVE	16.00	6.80	7.20	7.50	82	82	4.25	4.25	4.25	4.25	4.25	4.25
BELLRISE DRIVE	16.00	6.80	7.20	7.50	82	82	4.25	4.25	4.25	4.25	4.25	4.25
SEAGRASS STREET	13.00	6.40	7.20	7.50	82	82	0.00	0.00	4.25	4.25	4.25	4.25

ROAD NAME	SERVICES OFFSET SCHEDULE				ELECTRICITY				TELSTRA			
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
ESTUARY BOULEVARD	SOUTH	2.70	SOUTH	3.20	NORTH	3.40	NORTH	2.80	SOUTH	2.70	SOUTH	2.80
CASY GROVE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70	EAST	2.10	EAST	1.70
I/LA DRIVE	WEST	1.80	WEST	2.30	EAST	1.00	EAST	0.50	WEST	1.80	WEST	0.50
I/LA DRIVE TRUNK MAIN	WEST	2.90	WEST	2.90	EAST	1.00	EAST	0.50	WEST	2.90	WEST	0.50
FARUVISTA AVENUE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70	EAST	2.10	EAST	1.70
HEADLAND DRIVE	WEST	2.10	WEST	2.70	EAST	1.00	EAST	0.50	WEST	2.10	WEST	0.50
VILLAGE GREEN DRIVE	SOUTH	2.10	SOUTH	2.70	NORTH	2.30	NORTH	1.70	EAST	2.10	EAST	1.70
BELLRISE DRIVE	SOUTH	2.10	SOUTH	2.70	EAST	3.00	EAST	3.00	WEST	2.10	WEST	3.00
SEAGRASS STREET	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70	EAST	2.10	EAST	1.70



G	ROAD NAMES AMENDED & RET WALLS LOTS 610,611,614,615	16.11.11	CB/AH	JC
F	DRIVEWAY AMENDMENT AT LOT 620	28.06.11	CB/CB	JC
E	DRIVEWAY AMENDMENT AT LOT 609	09.08.11	CB/CB	JC
D	MINOR AMENDMENTS	24.05.11	CB/CB	JC
C	ISSUED FOR APPROVAL	19.05.11	CB/CB	JC
B	COUNCIL AMENDMENTS	12.04.11	CB/CB	JC
A	ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JC

**estuary leopold**

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

Designed	C. Barker
Drawn	C. Barker
Checked	C. Barker
Authorised	J. Golden
Date	December 2010

Scale @ A1  
1:500

0 5 10 20

North arrow pointing up.

**smec urban**  
consulting group

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**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Layout Plan

Drawing No. **0250EHL-06-03** Rev G  
Sheet No. 3 of 28

Approved for Construction

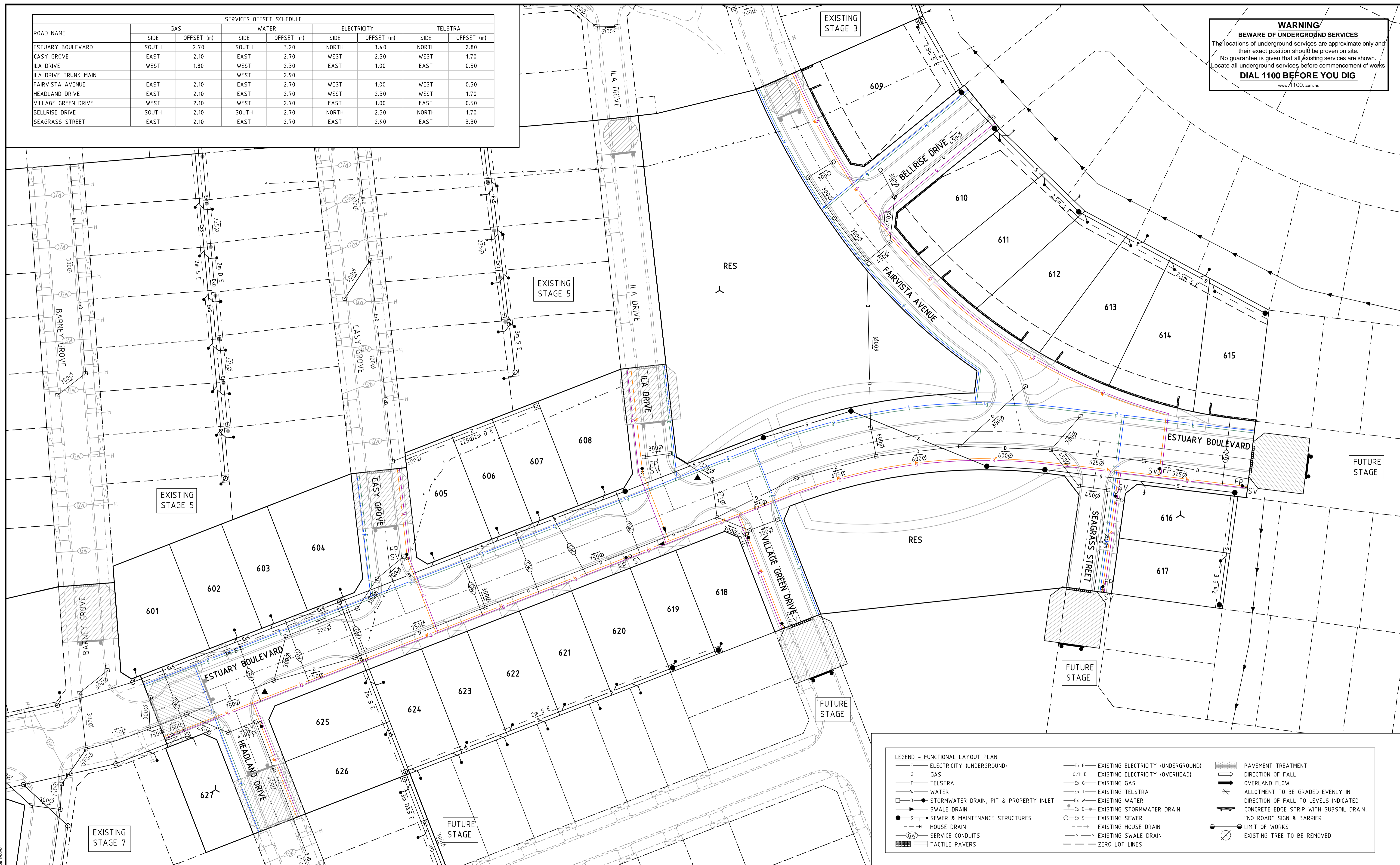
**WARNING**  
BEWARE OF UNDERGROUND SERVICES  
The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works.  
**DIAL 1100 BEFORE YOU DIG**  
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**LEGEND - LAYOUT PLAN**

- STORMWATER DRAIN, PIT & PROPERTY INLET
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- SERVICE CONDUITS
- TACTILE PAVERS
- EXISTING ELECTRICITY (UNDERGROUND)
- EXISTING ELECTRICITY (OVERHEAD)
- EXISTING GAS
- EXISTING TELSTRA
- EXISTING WATER
- EXISTING STORMWATER DRAIN
- EXISTING SEWER
- EXISTING SHALE DRAIN
- EXISTING SURFACE LEVEL
- FINISHED BUILDING FLOOR LEVEL
- FINISHED ROAD LEVEL
- TOP OF RETAINING WALL
- BOTTOM OF RETAINING WALL
- RETAINING WALL
- EXISTING TREE TO BE REMOVED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY
- EX. STRUCTURAL FILL > 200mm DEEP
- DIRECTION OF FLOW
- OVERLAND FLOW
- ALIGNMENT TO BE GRADED EVENLY IN CONCRETE
- DIRECTION OF FILL TO LEVELS INDICATED
- "NO ROAD" SIGN & BARRIER
- LIGHT OF WORKS

ROAD NAME	SERVICES OFFSET SCHEDULE							
	GAS		WATER		ELECTRICITY		TELSTRA	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
ESTUARY BOULEVARD	SOUTH	2.70	SOUTH	3.20	NORTH	3.40	NORTH	2.80
CASY GROVE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70
ILA DRIVE	WEST	1.80	WEST	2.30	EAST	1.00	EAST	0.50
ILA DRIVE TRUNK MAIN			WEST	2.90				
FAIRVISTA AVENUE	EAST	2.10	EAST	2.70	WEST	1.00	WEST	0.50
HEADLAND DRIVE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70
VILLAGE GREEN DRIVE	WEST	2.10	WEST	2.70	EAST	1.00	EAST	0.50
BELLRISE DRIVE	SOUTH	2.10	SOUTH	2.70	NORTH	2.30	NORTH	1.70
SEAGRASS STREET	EAST	2.10	EAST	2.70	EAST	2.90	EAST	3.30

**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
 The locations of underground services are approximate only and their exact position should be proven on site.  
 No guarantee is given that all existing services are shown.  
 Locate all underground services before commencement of works.  
**DIAL 1100 BEFORE YOU DIG**  
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LEGEND - FUNCTIONAL LAYOUT PLAN			
—E—	ELECTRICITY (UNDERGROUND)	—Ex E—	EXISTING ELECTRICITY (UNDERGROUND)
—G—	GAS	—O/H E—	EXISTING ELECTRICITY (OVERHEAD)
—T—	TELSTRA	—Ex G—	EXISTING GAS
—W—	WATER	—Ex T—	EXISTING TELSTRA
□	STORMWATER DRAIN, PIT & PROPERTY INLET	—Ex W—	EXISTING WATER
—S—	SEWER & MAINTENANCE STRUCTURES	—Ex D—	EXISTING STORMWATER DRAIN
—H—	HOUSE DRAIN	—Ex S—	EXISTING SEWER
—GW—	SERVICE CONDUITS	—H—	EXISTING HOUSE DRAIN
■	TACTILE PAVERS	—>—	EXISTING SWALE DRAIN
		—	ZERO LOT LINES
		■	PAVEMENT TREATMENT
		→	DIRECTION OF FALL
		→	OVERLAND FLOW
		*	ALLOTMENT TO BE GRADED EVENLY IN DIRECTION OF FALL TO LEVELS INDICATED
		—	CONCRETE EDGE STRIP WITH SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
		○	LIMIT OF WORKS
		○	EXISTING TREE TO BE REMOVED

REVISION	DATE	DES/DT	APP'D
D ROAD NAMES AMENDED	16.11.11	AH/CB	JG
C ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG

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 Southbank, Victoria 3006

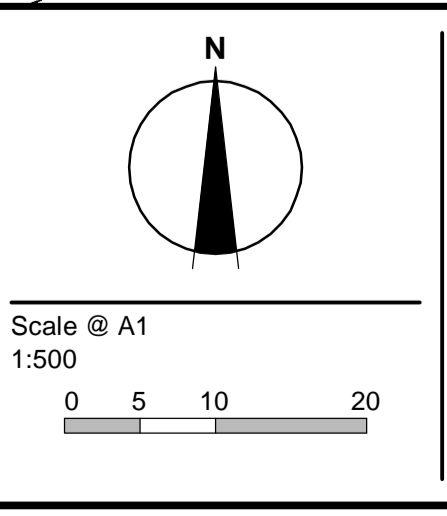
Designed  
 C. Barker

Drawn  
 C. Barker

Checked  
 C. Birckett

Authorised  
 J. Golden

Date  
 December 2010



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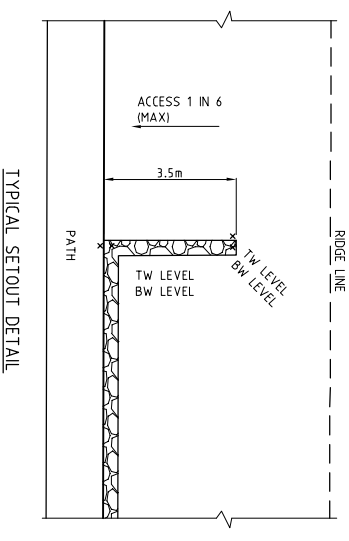
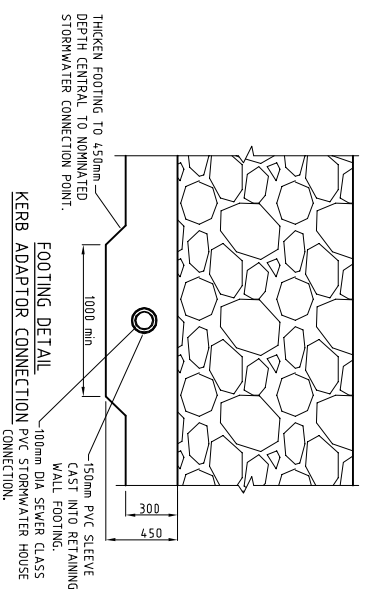
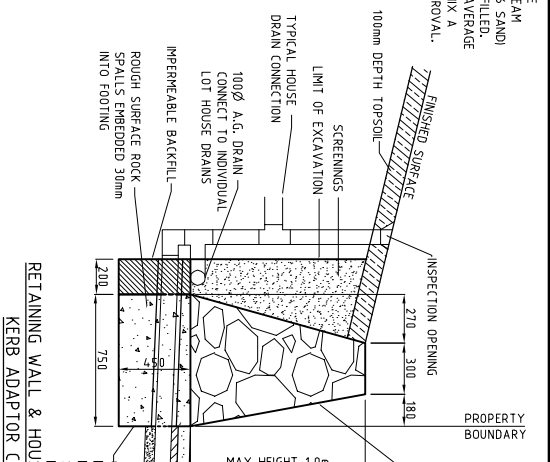
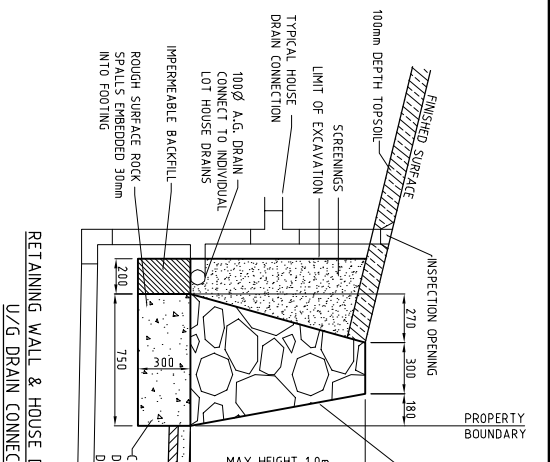
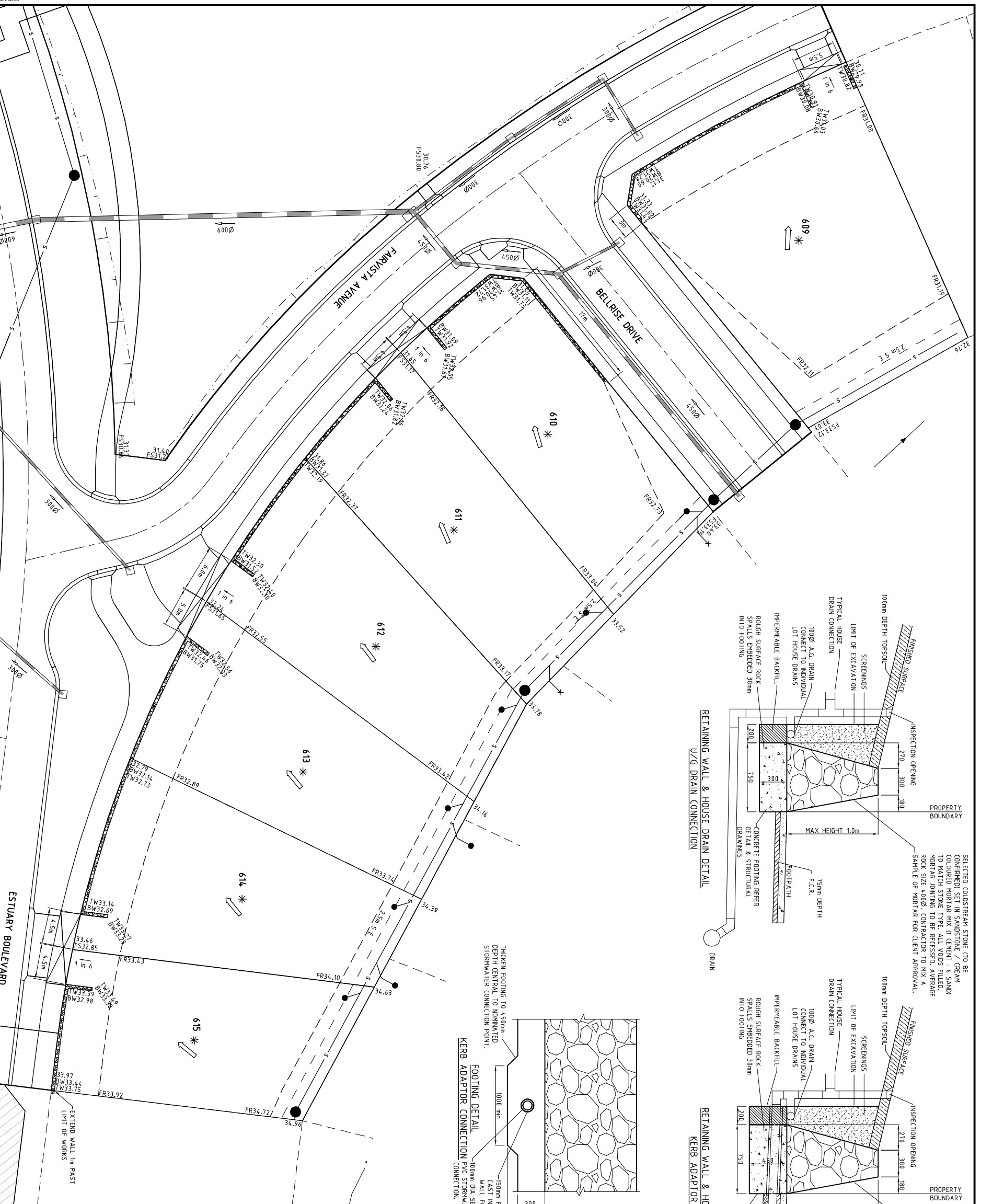
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**Estuary**  
 Stage 6  
 City of Greater Geelong  
 Roadworks and Drainage  
 Services Layout Plan - 1

Drawing No. **0250EHL-06-04** Rev **D**  
 Sheet No. 4 of 28

Approved for Construction



SELECTED COLDSTREAM STONE (TO BE CONFORMED SET IN SANDSTONE / CREAM COLOURED MORTAR MIX (1 CEMENT : 6 SAND) TO MATCH STONE TYPE. ALL Voids FILLED. MORTAR JOINTING TO BE RECESSED. AVERAGE ROCK SIZE 4000. CONTRACTOR TO MIX A SAMPLE OF MORTAR FOR CLIENT APPROVAL.

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**WARNING**  
 BEWARE OF UNDERGROUND SERVICES  
 The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
 www.1100.com.au

**LEGEND - LAYOUT PLAN**

---	STORMWATER DRAIN, PIT & PROPERTY INLET
---	SWALE DRAIN
---	SEWER & MAINTENANCE STRUCTURES
---	HOUSE DRAIN
---	SERVICE CONDUITS
---	TACTILE PAVERS
---	EXISTING ELECTRICITY (UNDERGROUND)
---	EXISTING ELECTRICITY (OVERHEAD)
---	EXISTING GAS
---	EXISTING TELSTRA
---	EXISTING WATER
---	EXISTING STORMWATER DRAIN
---	EXISTING SEWER
---	EXISTING HOUSE DRAIN
---	EXISTING SWALE DRAIN
---	EXISTING SURFACE LEVEL
---	FINISHED BUILDING LINE LEVEL
---	FINISHED RIDGE LINE LEVEL
---	TOP OF RETAINING WALL
---	BOTTOM OF RETAINING WALL
---	RETAINING WALL
---	ZERO LOT LINES
---	PAVEMENT TREATMENT
---	STRUCTURAL FILL > 200mm DEEP
---	EX. STRUCTURAL FILL > 200mm DEEP
---	DIRECTION OF FLOW
---	OVERLAND FLOW
---	ALLOTMENT TO BE GRADED EVENLY IN DIRECTION OF FLOW TO LEVELS INDICATED
---	CONCRETE EDGE STRIP WITH SUBSOIL DRAIN
---	NO ROAD - SIGN & BARRIER
---	LIMIT OF WORKS
---	EXISTING TREE TO BE REMOVED
---	PERMANENT SURVEY MARK
---	TEMPORARY BENCH MARK
---	PROPOSED DRIVEWAY

A	ISSUED TO COUNCIL FOR APPROVAL	JC	01/03/11	CB/CB	JC
B	COUNCIL AMENDMENTS	JC	12/04/11	CB/CB	JC
C	ISSUED FOR APPROVAL	JC	19/05/11	CB/CB	JC
D	DRIVEWAY AMENDMENT AT LOT 609	JC	09/06/11	CB/CB	JC
E	ROAD NAMES AMENDED & RET WALL LOT 610, 611, 614, 615	JC	16/11/11	AM/CB	JC

**estuary leopold**  
 Principal  
 Leopold Property Developments Pty Ltd  
 Level 1, 6 Riverside Quay  
 Southbank, Victoria 3006

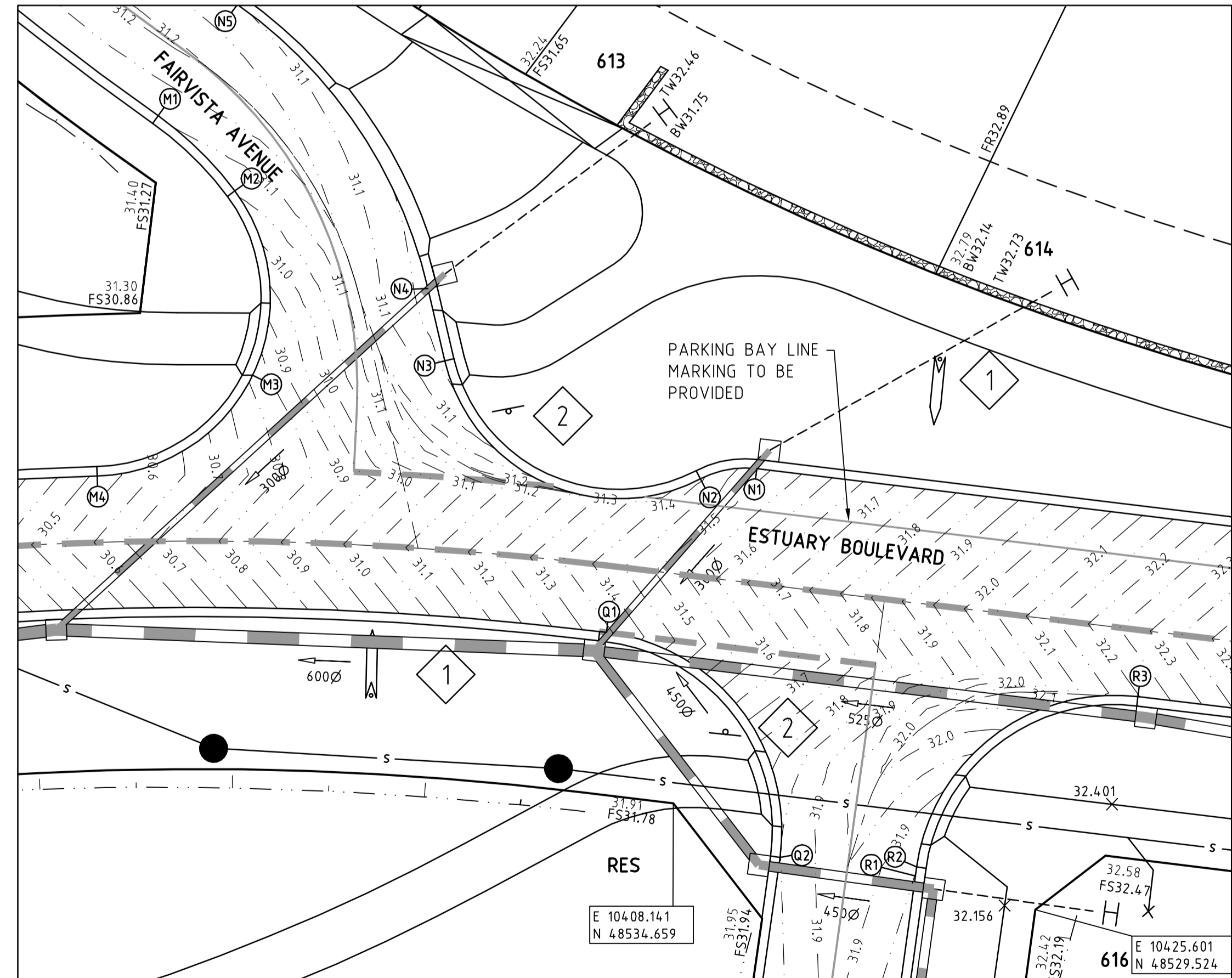
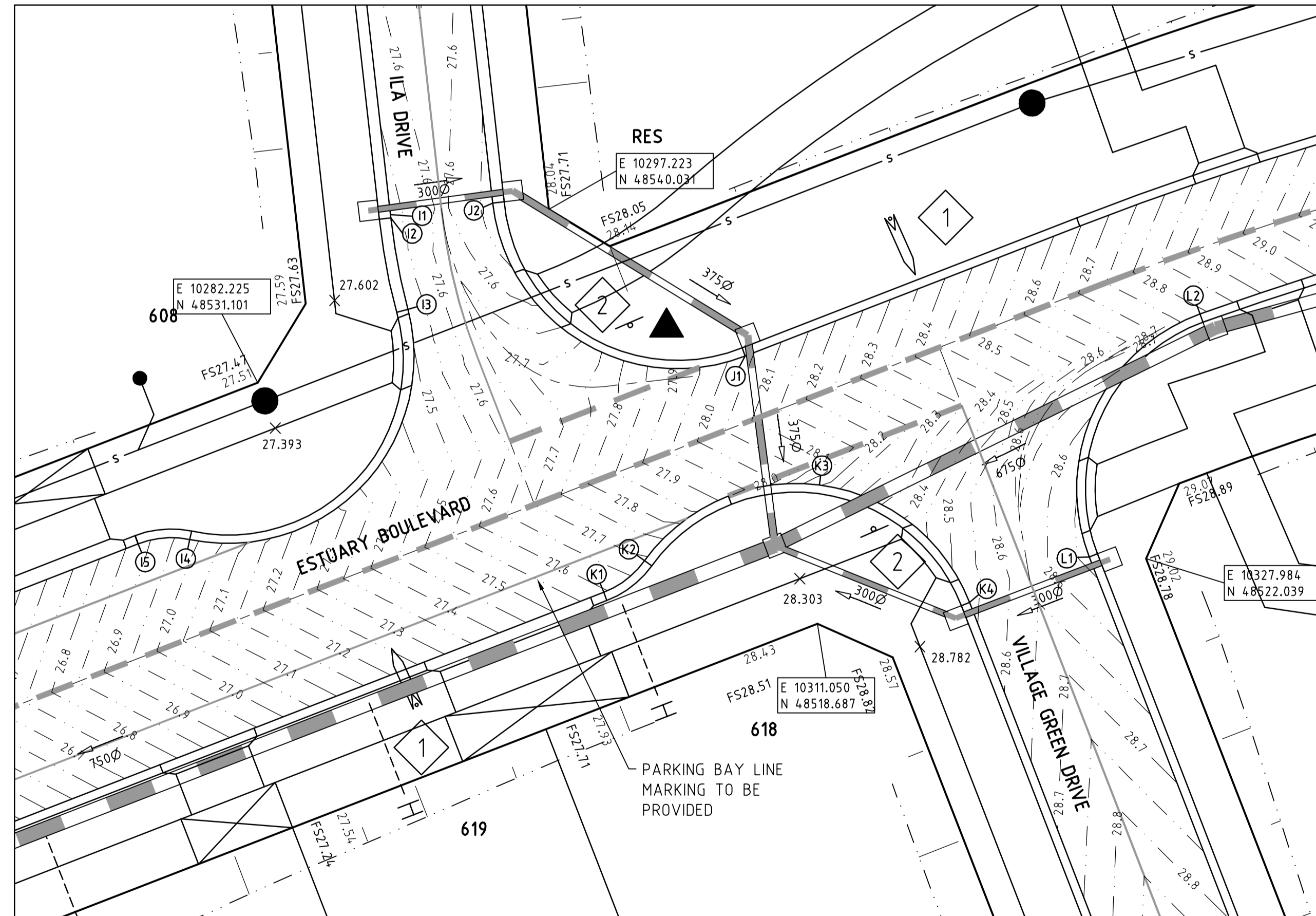
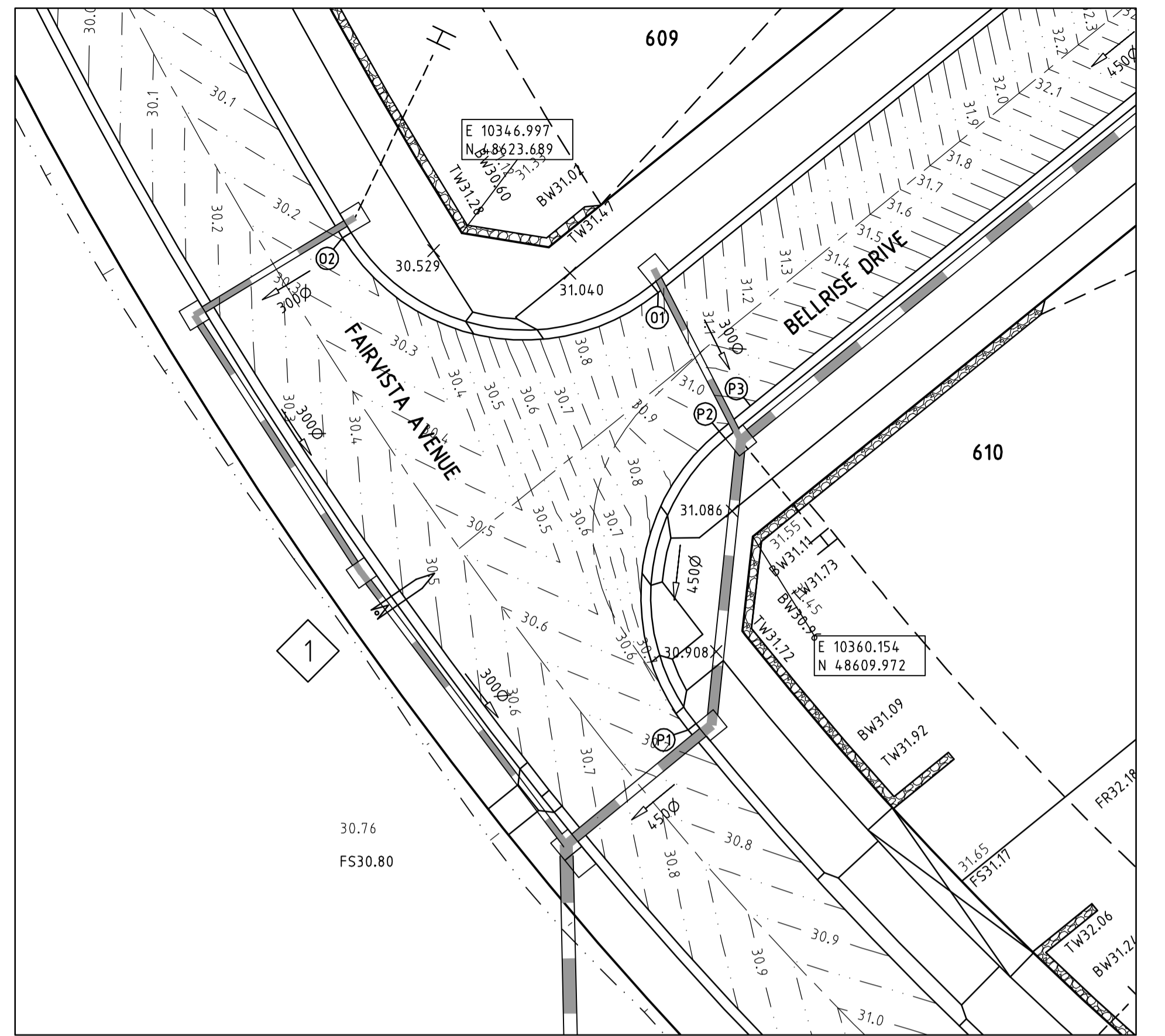
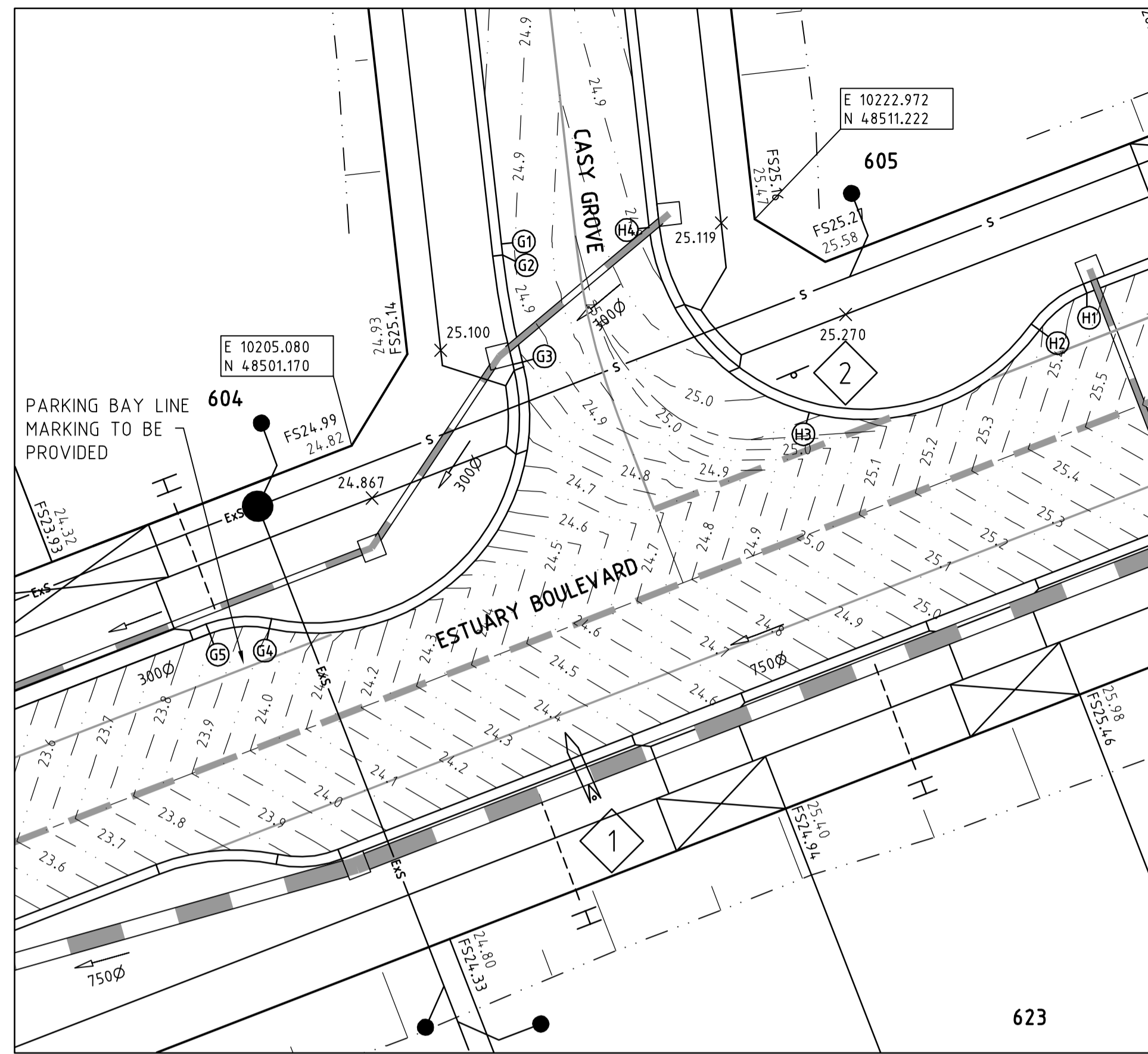
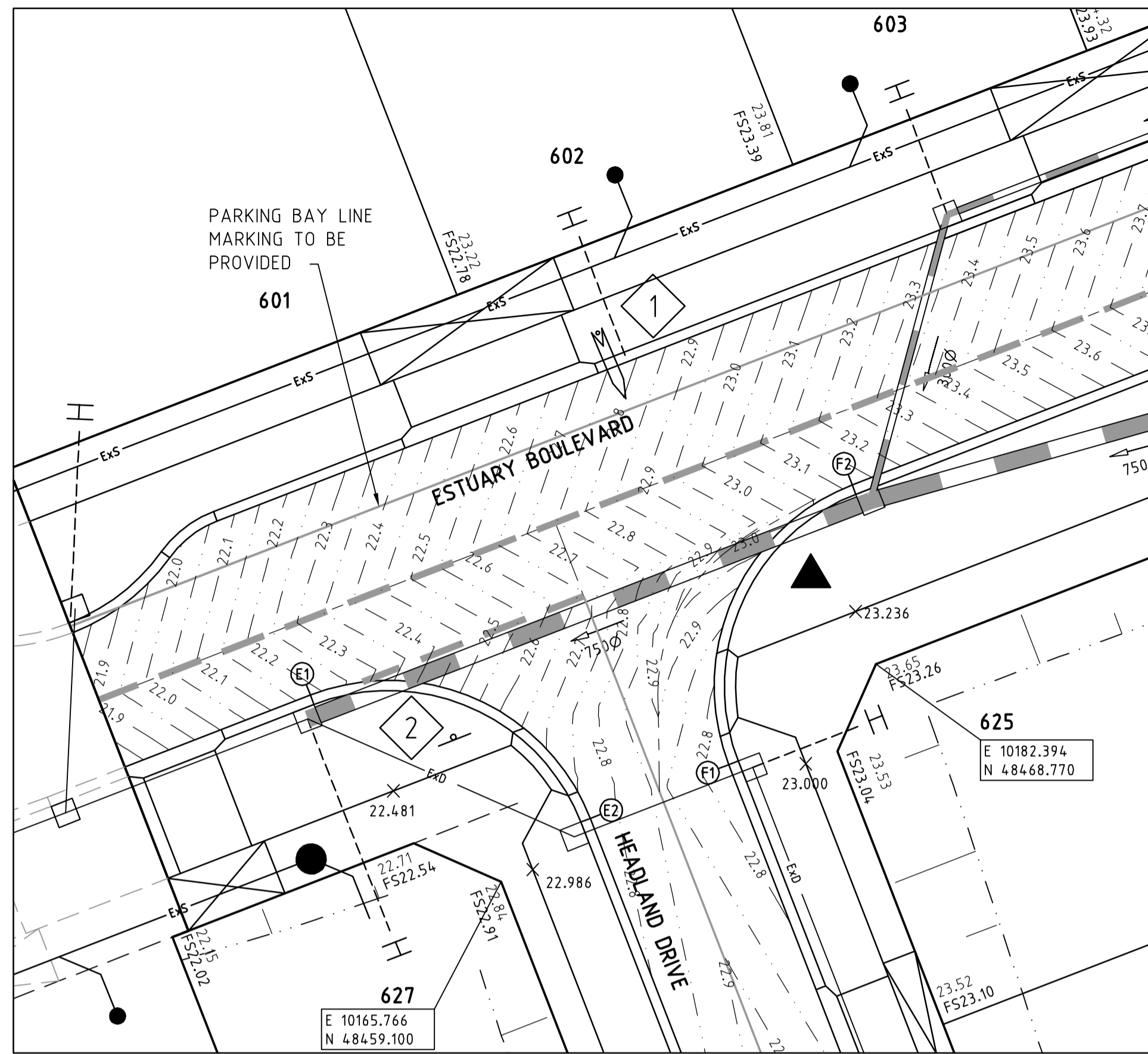
Designed	C. Barker
Drawn	C. Barker
Checked	C. Barker
Authorised	J. Golden
Date	December 2010

Scale @ A1  
 0 5 10 20  
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 1250  
 0 5 10 20

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 Townsville +61 7 4222 0222

**ESTUARY**  
 Stage 6  
 City of Greater Geelong  
 Roadworks and Drainage  
 Retaining Wall Setout Plan  
 Drawing No. 0250EHL-06-05  
 Sheet No. 5 of 28  
 Approved for Construction  
 Rev E



**SIGN SCHEDULE**

SIGN	REF
	1
STREET SIGN	
	2
R1-2	

**LEGEND - INTERSECTION PLAN**

- STORMWATER DRAIN, PIT & PROPERTY INLET
- SWALE DRAIN
- SEWER & MAINTENANCE STRUCTURES
- HOUSE DRAIN
- TACTILE PAVERS
- EXISTING HOUSE DRAIN
- RETAINING WALL
- PAVEMENT TREATMENT
- CONCRETE EDGE STRIP WITH SUBSOIL DRAIN, "NO ROAD" SIGN & BARRIER
- LIMIT OF WORKS
- EXISTING TREE TO BE REMOVED
- PERMANENT SURVEY MARK
- TEMPORARY BENCH MARK
- PROPOSED DRIVEWAY

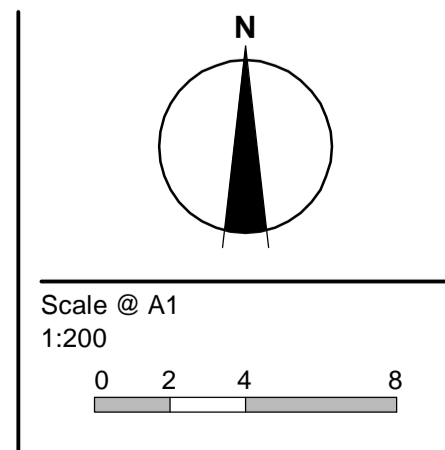
**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
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- NOTES**
- REFER TO SHEET No's 7 - 8 FOR LIP PROFILES.
  - REFER TO SHEET No 9 FOR SETOUT INFORMATION.
  - ESTUARY BOULEVARD CENTRELINER LINE MARKING TO BE LINE MARKED

REVISION	DATE	DES/DT	APP'D
F ROAD NAMES AMENDED	16.11.11	AH/CB	JG
E MINOR AMENDMENTS	21.07.11	CB/CB	JG
D PARKING BAY & CENTRELINER LINE MARKING NOTE ADDED	24.05.11	CB/CB	JG
C ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG

Principal  
 Leopold Property Developments Pty Ltd  
 Level 1, 6 Riverside Quay  
 Southbank, Victoria 3006

Designed  
C. Barker  
 Drawn  
C. Barker  
 Checked  
C. Birckett  
 Authorised  
J. Golden  
 Date  
December 2010



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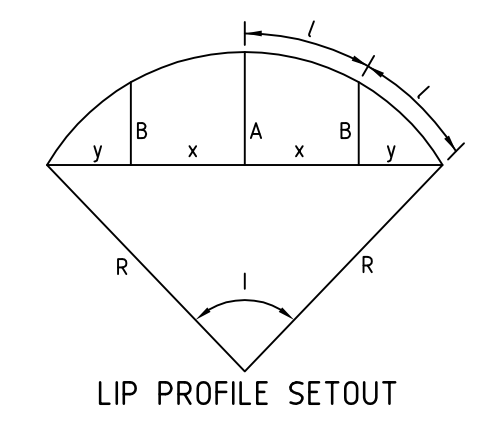
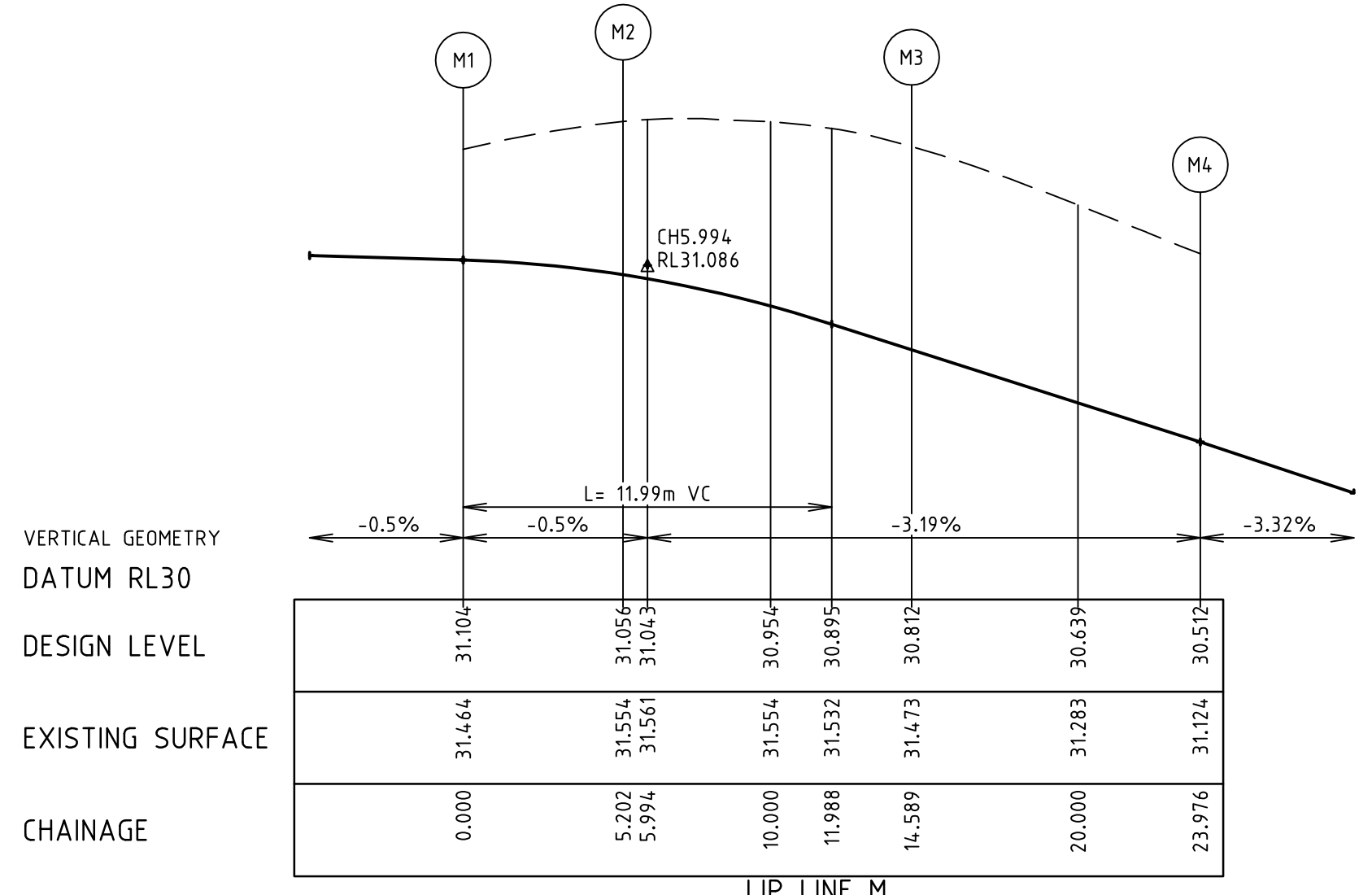
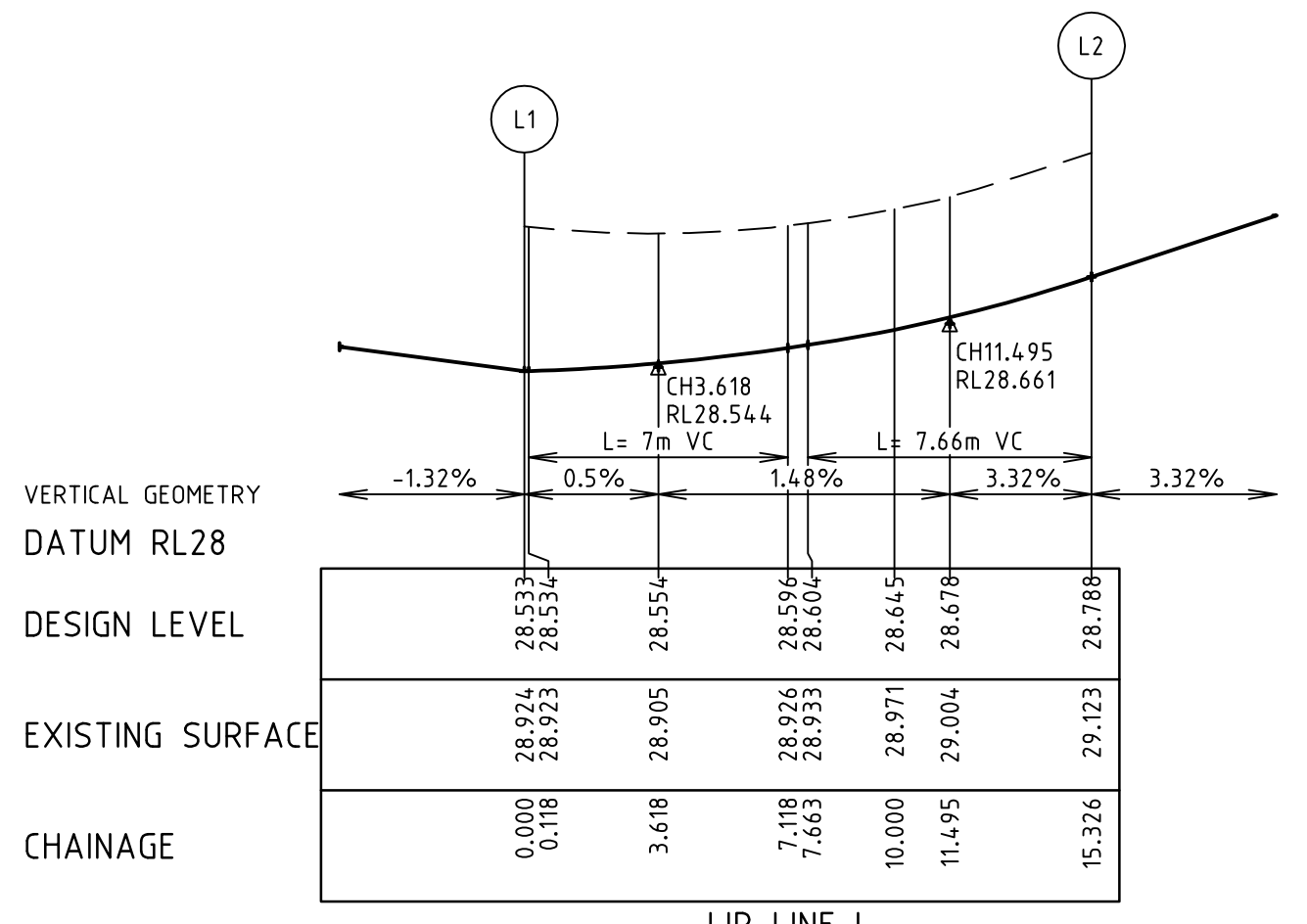
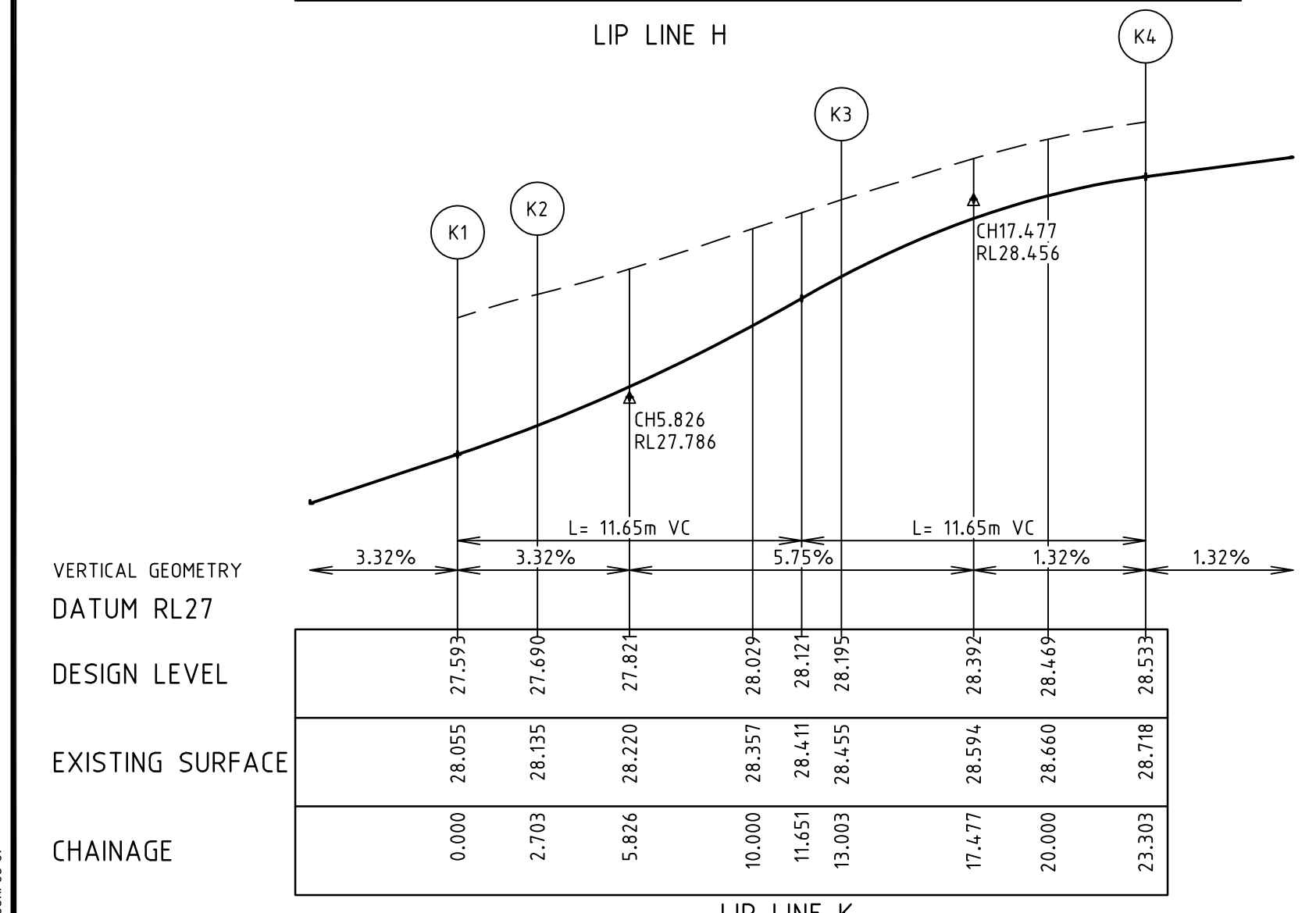
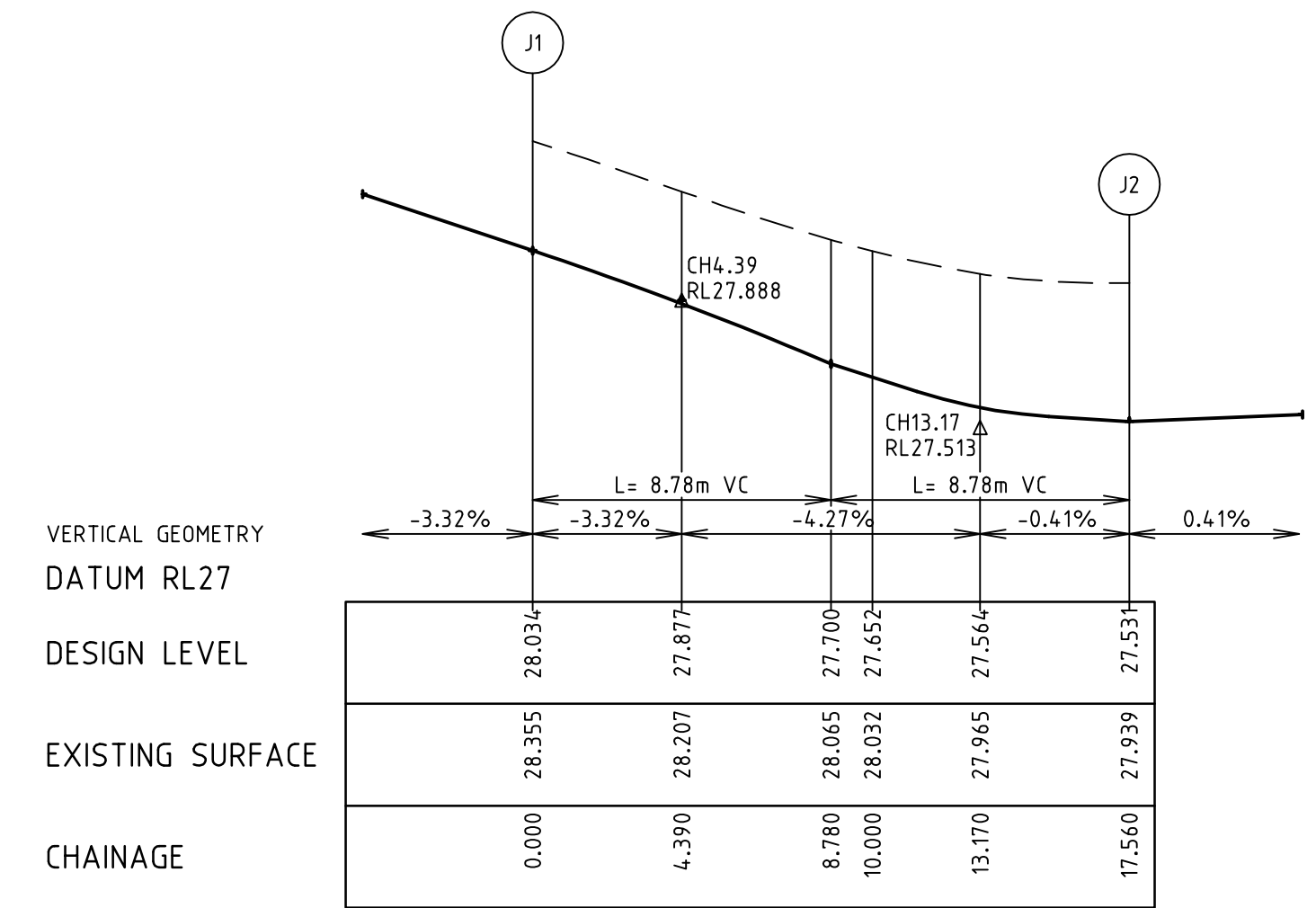
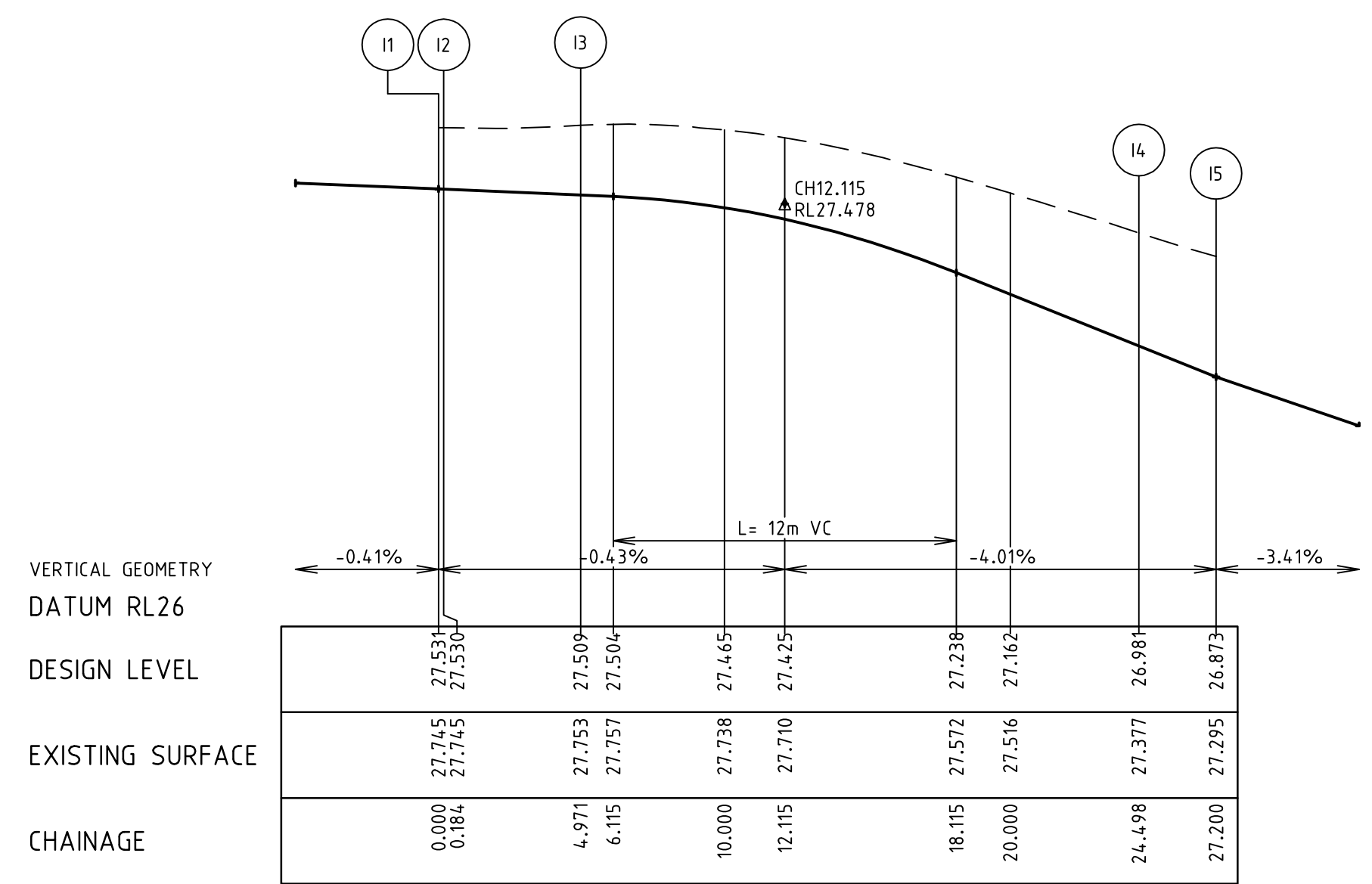
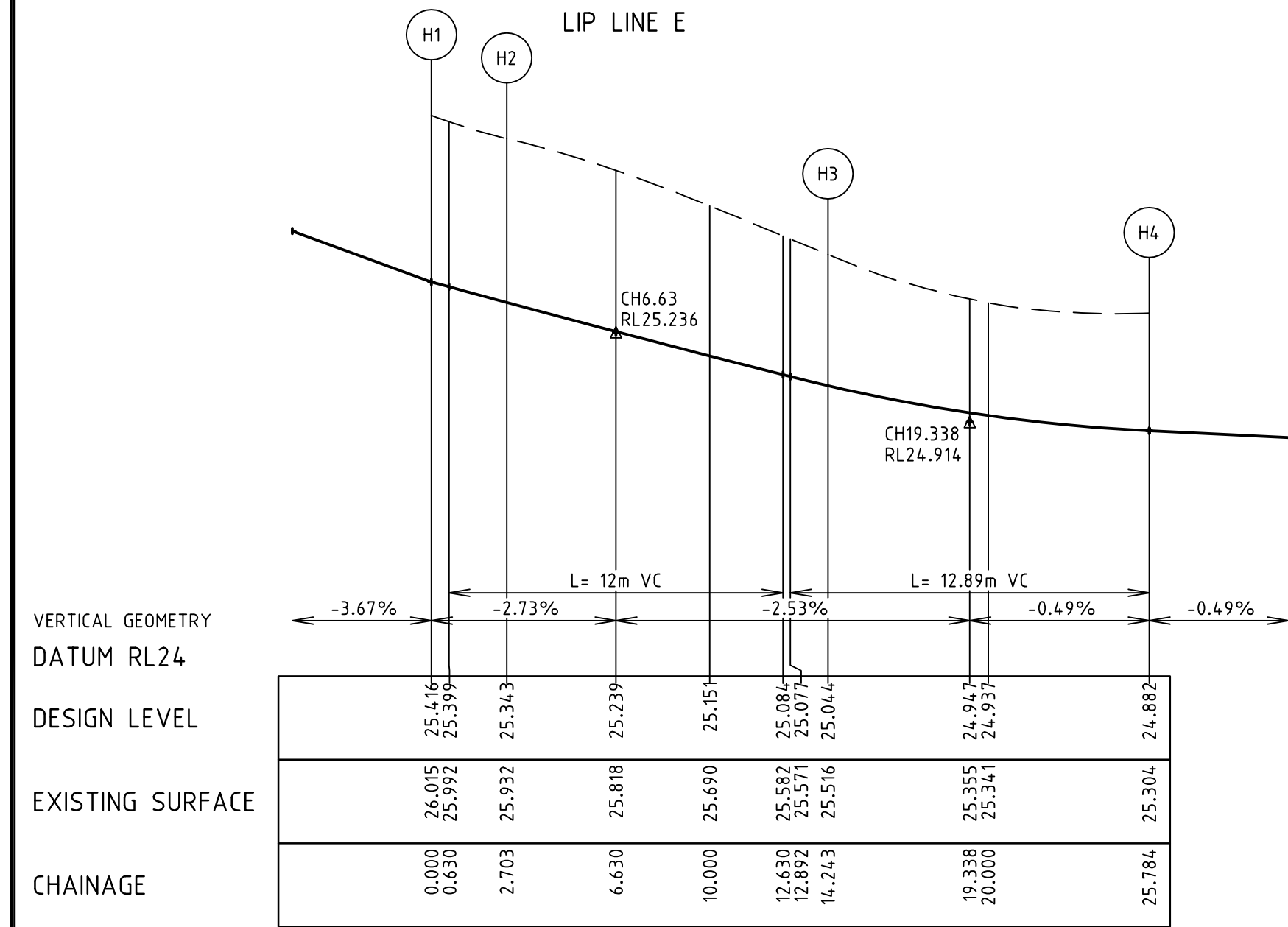
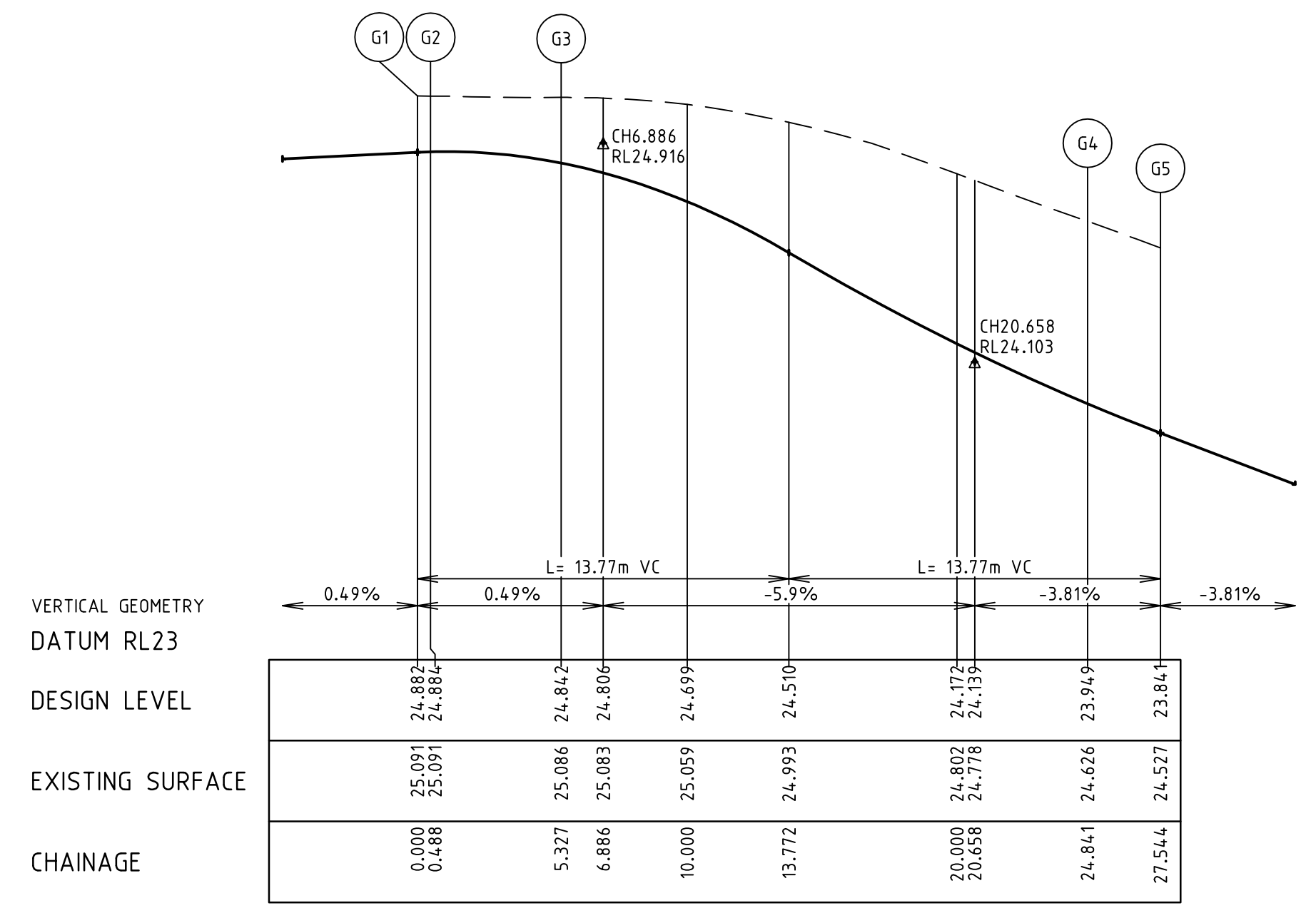
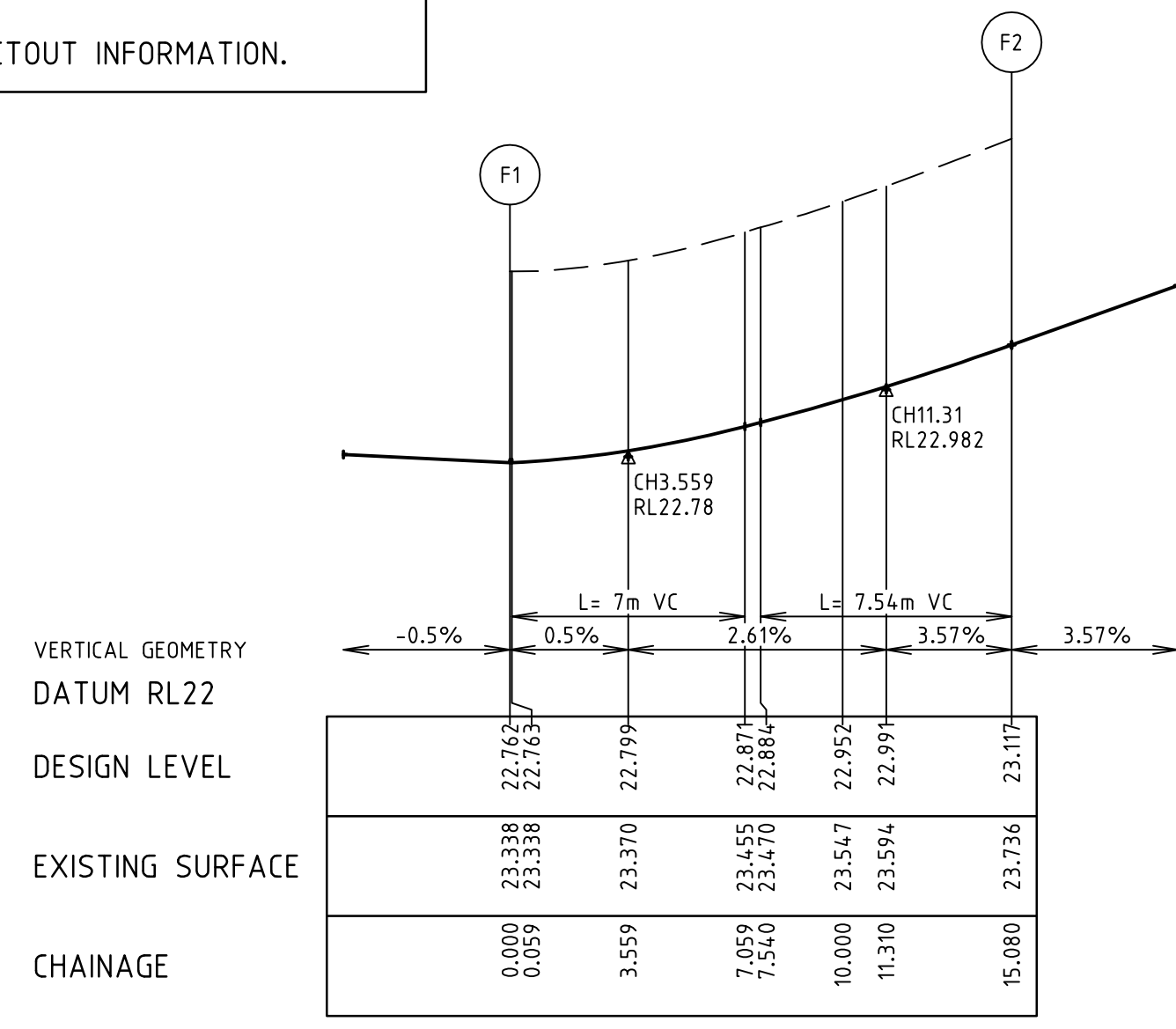
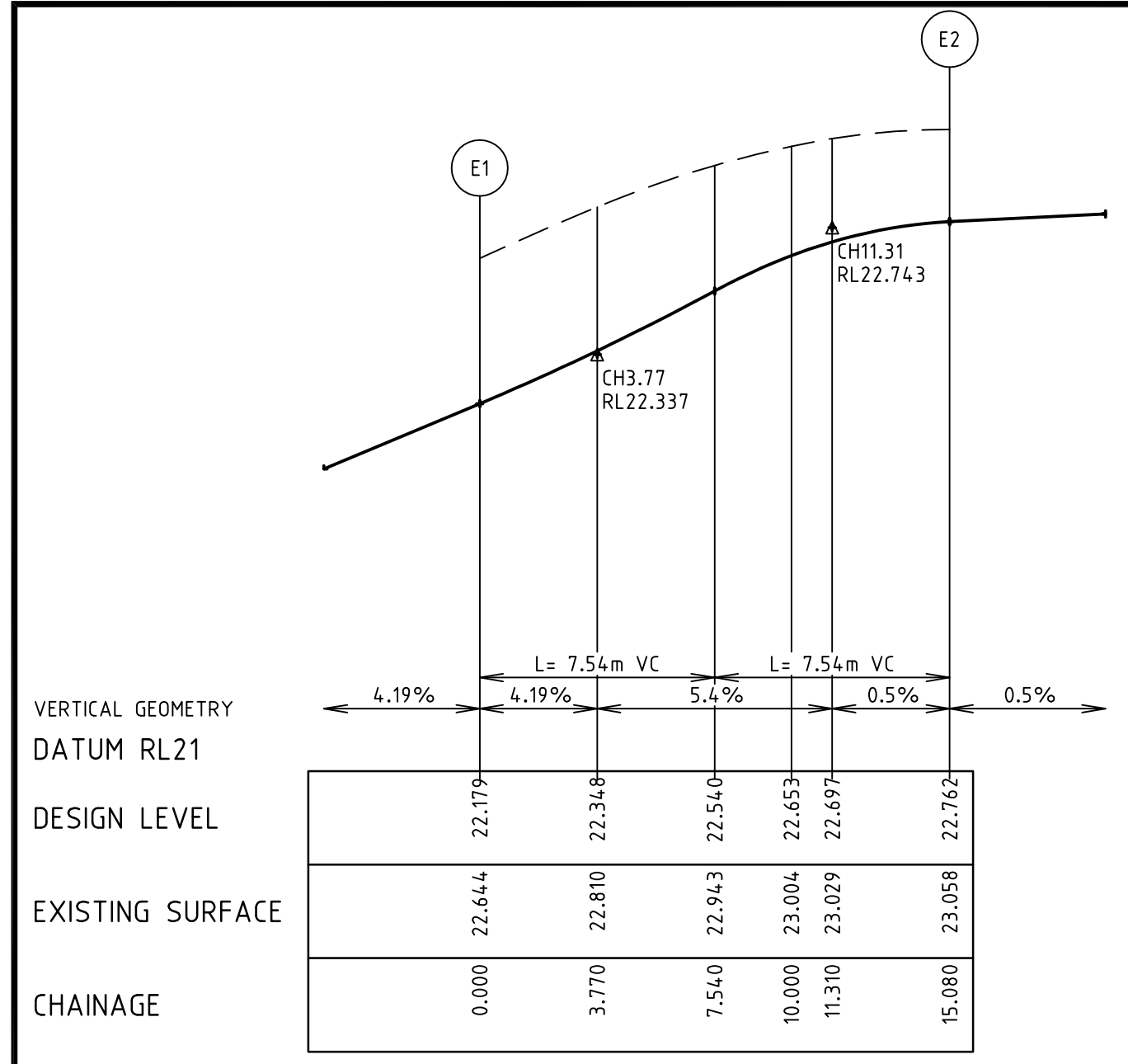
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**Estuary**  
 Stage 6  
 City of Greater Geelong  
 Roadworks and Drainage  
 Intersection Detail Plan

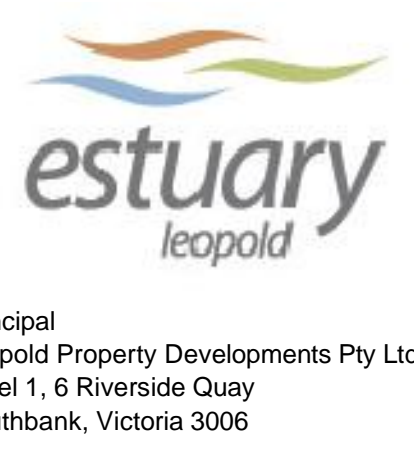
**Drawing No. 0250EHL-06-06** **Rev F**  
 Sheet No. 6 of 28  
**Approved for Construction**

**NOTES**  
1. REFER TO SHEET No 9 FOR SETOUT INFORMATION.

**LEGEND**  
— EXISTING SURFACE  
— DESIGN LINE  
- - - FUTURE DESIGN LINE

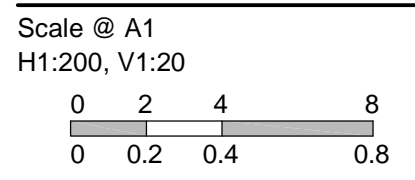


REVISION	DATE	DES/DF	APPD
A	01.03.11	CB/CB	JG
B	12.04.11	CB/CB	JG
C	19.05.11	CB/CB	JG
D	21.07.11	CB/CB	JG



Principal  
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Southbank, Victoria 3006

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Drawn  
C. Barker  
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C. Birkett  
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Cairns +61 2 6126 1900 Darwin +61 3 5173 0190

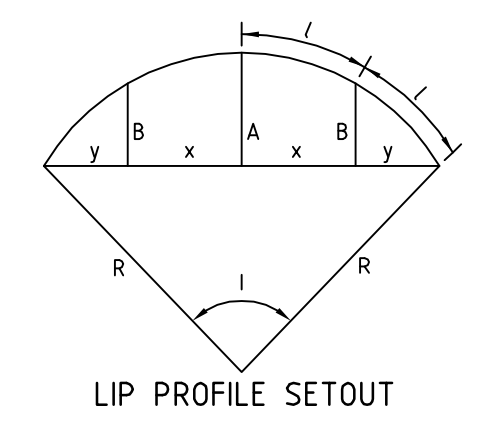
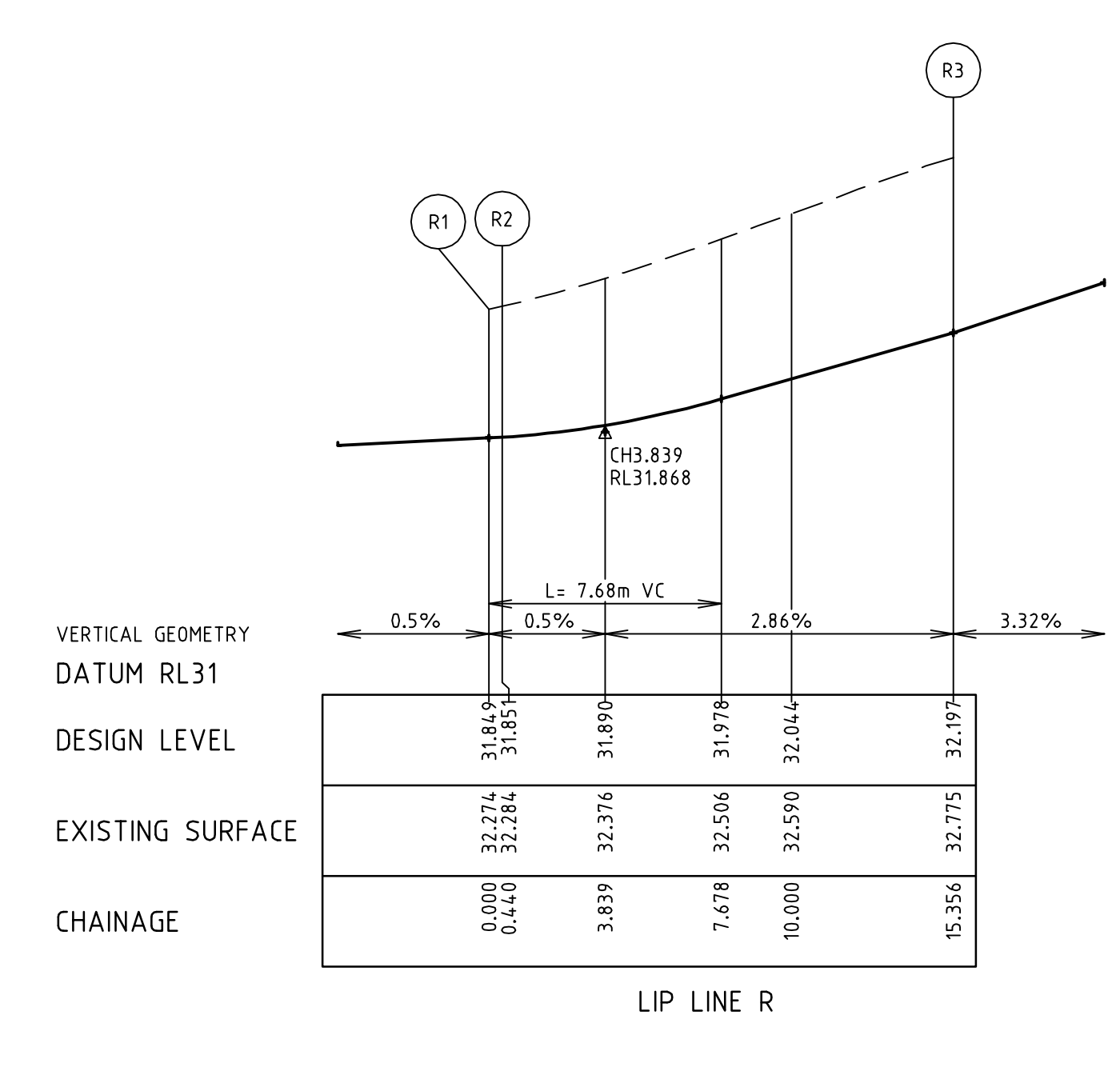
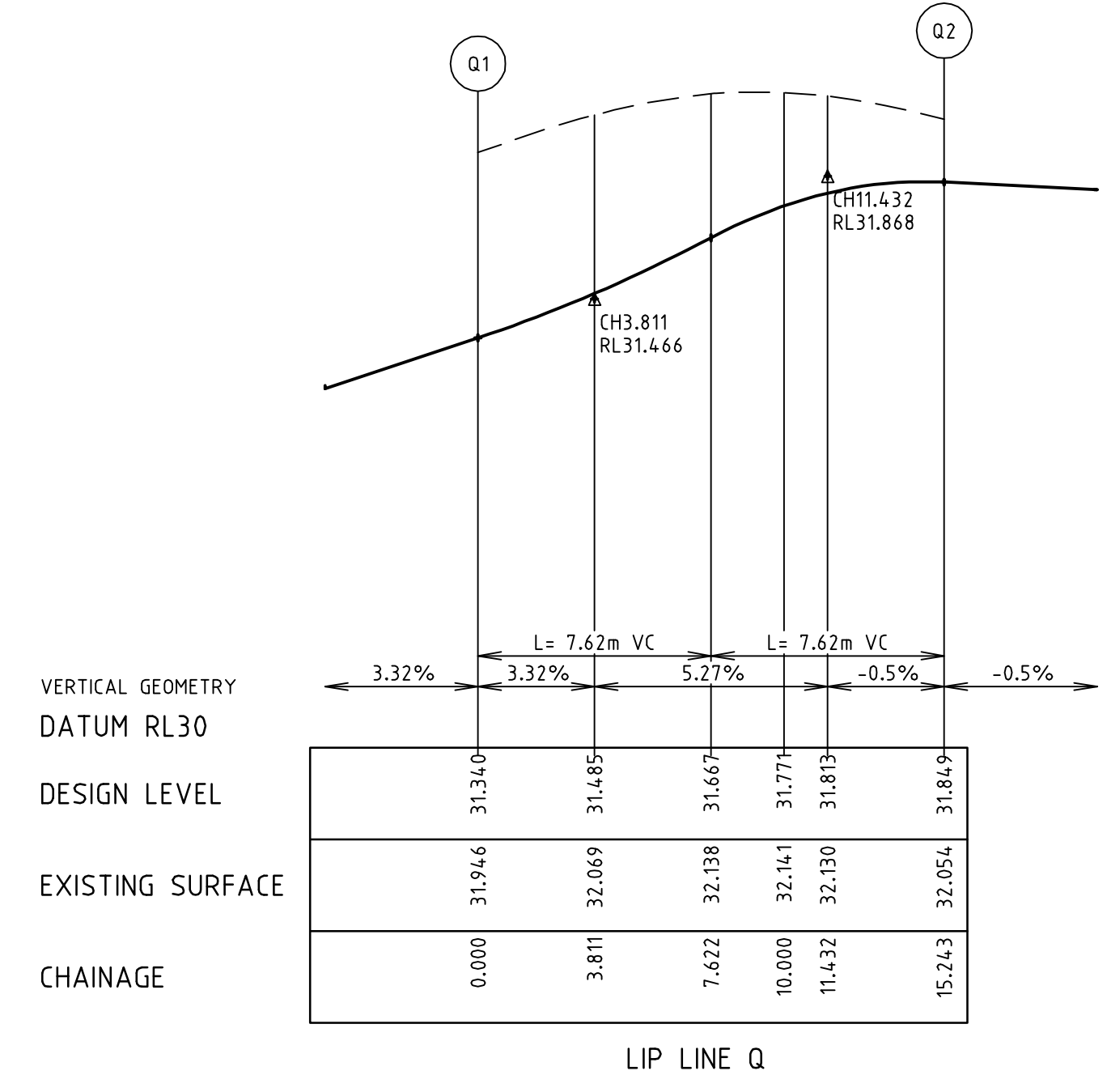
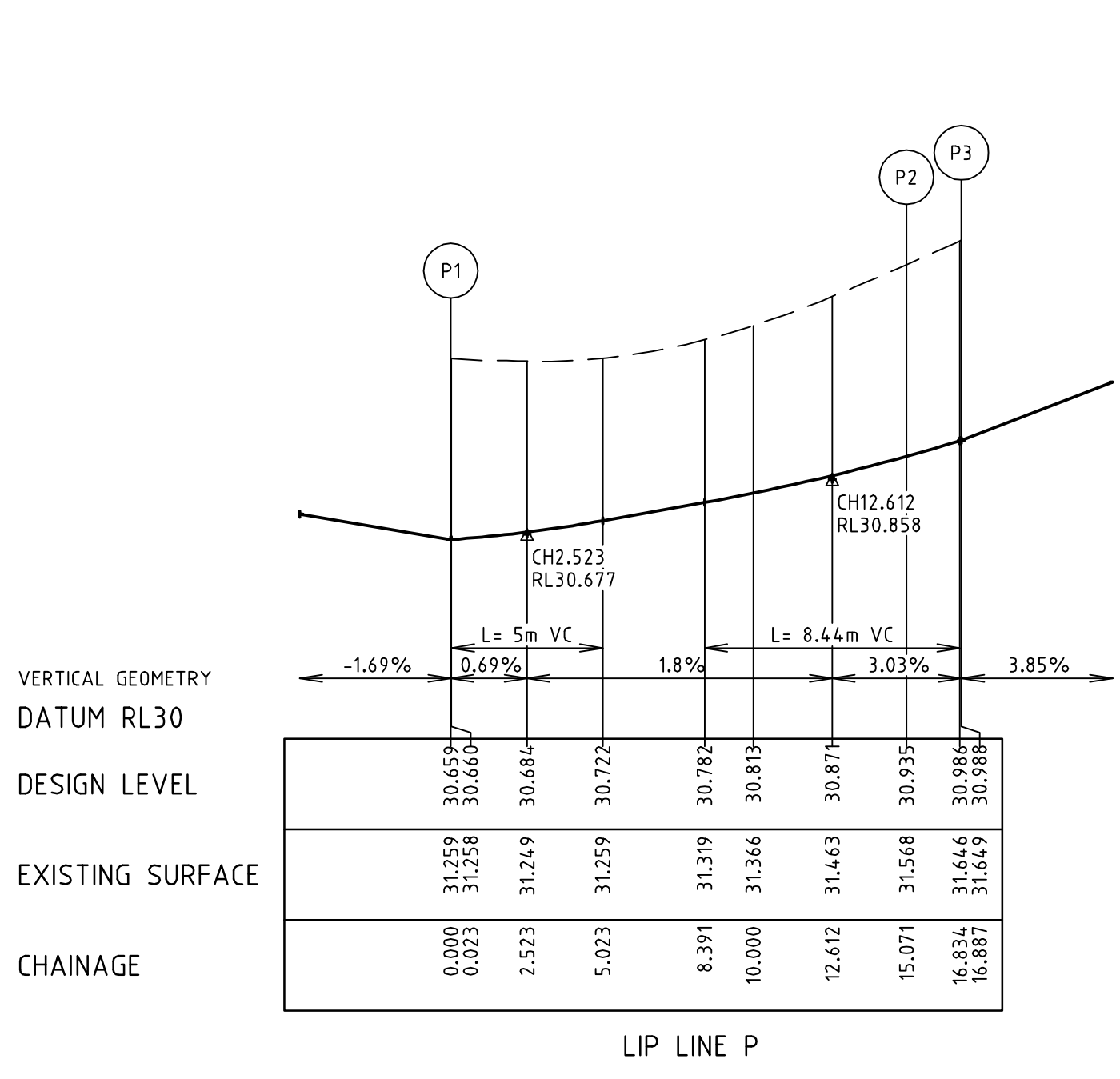
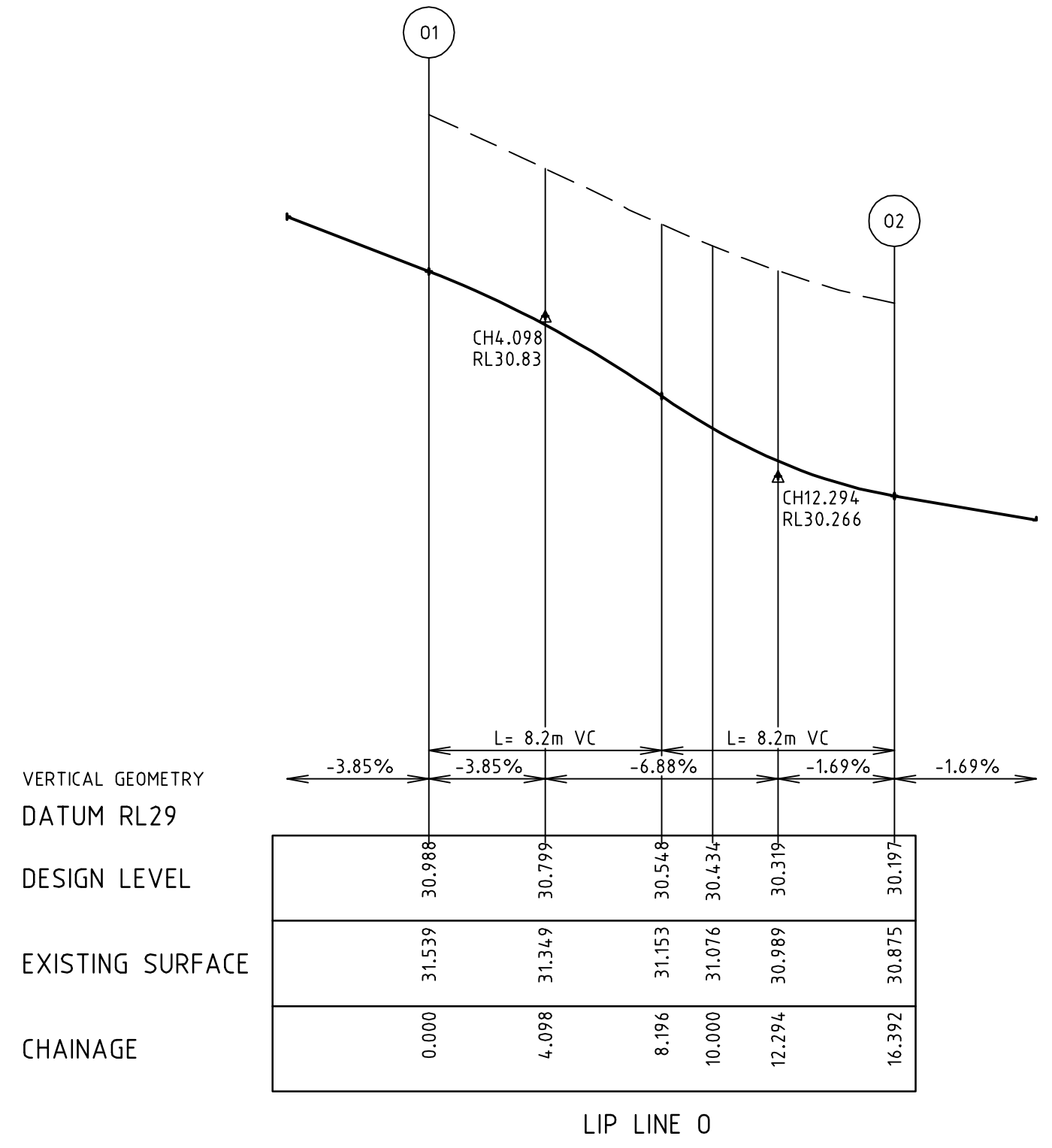
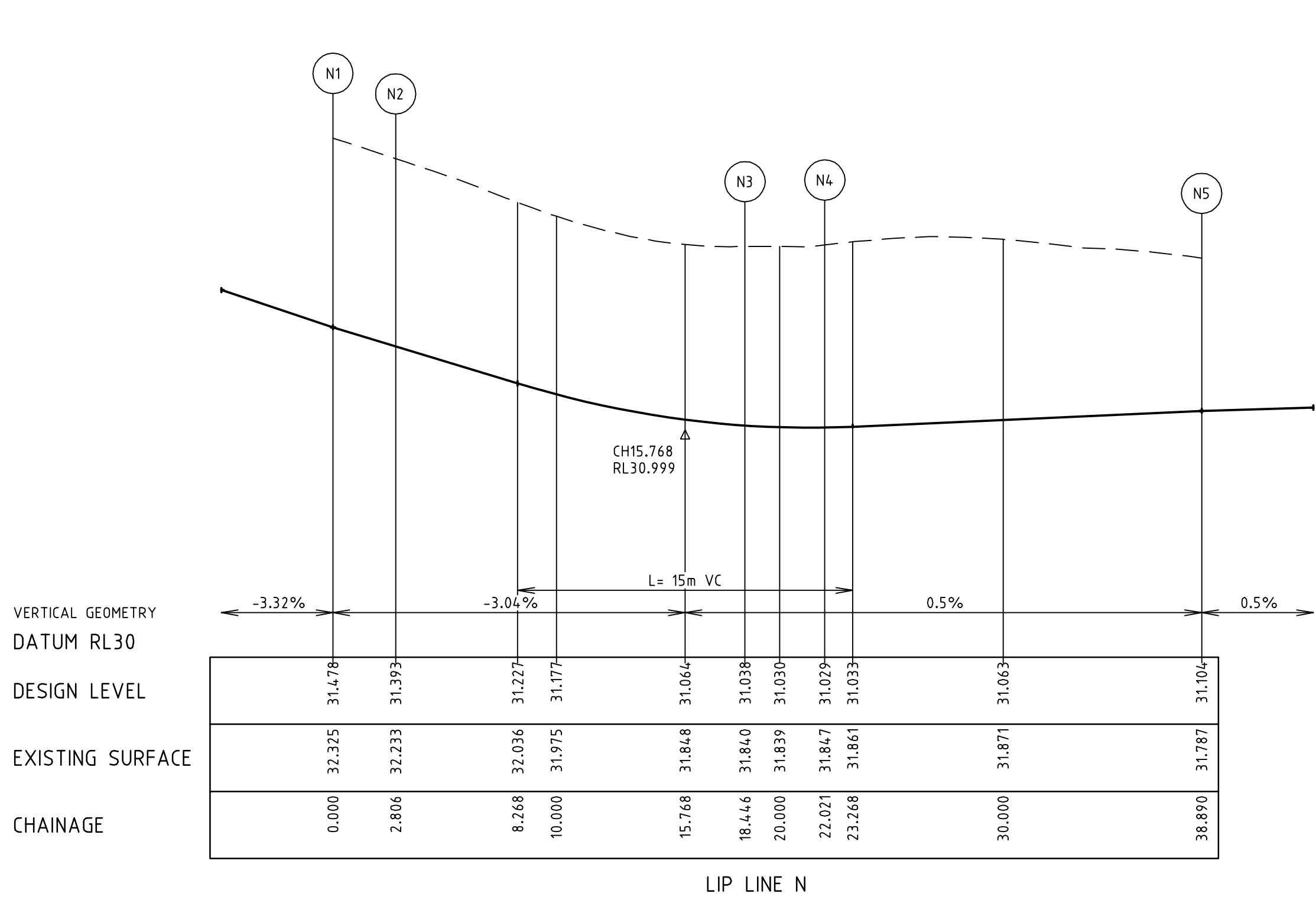
**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Lip Profiles - 1

Drawing No. 0250EHL-06-07 Rev D  
Sheet No. 7 of 28

Approved for Construction

---	EXISTING SURFACE
—	DESIGN LINE
- - -	FUTURE DESIGN LINE

**NOTES**  
1. REFER TO SHEET No 9 FOR SETOUT INFORMATION.

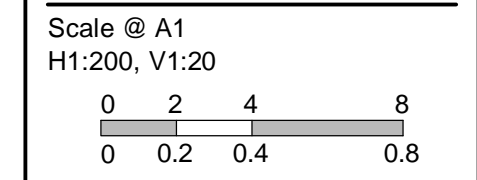


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REVISION	DATE	DES/DF	APPD
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
A	01.03.11	CB/CB	JG

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Tarragona +61 3 5173 0100

**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Lip Profiles - 2

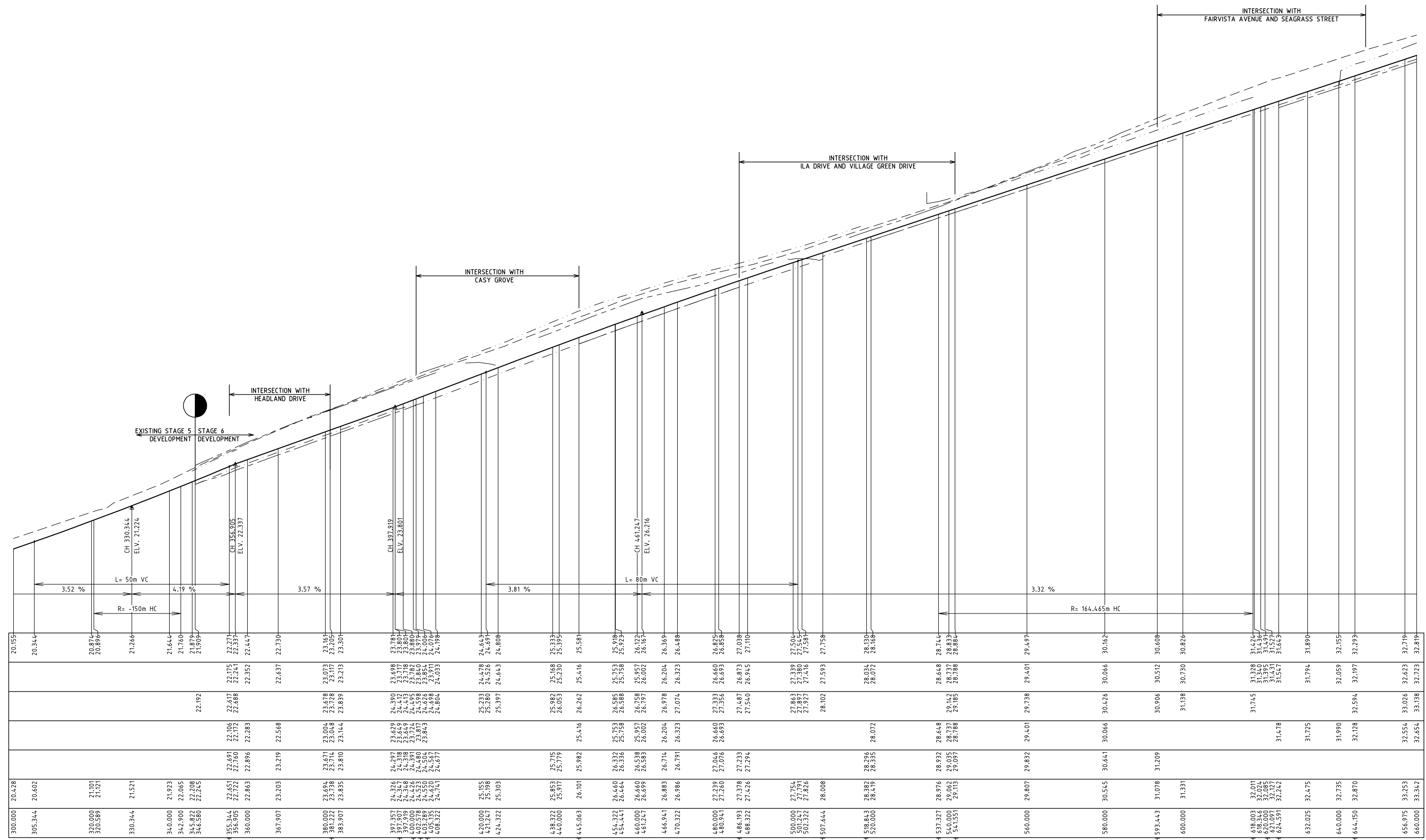
**Drawing No. 0250EHL-06-08** **Rev C**  
Sheet No. 8 of 28

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ALIGNMENT E										ALIGNMENT P										ALIGNMENT F										ALIGNMENT Q										ALIGNMENT G										ALIGNMENT R										ALIGNMENT H										ALIGNMENT I										ALIGNMENT J										ALIGNMENT K										ALIGNMENT L										ALIGNMENT M										ALIGNMENT N										ALIGNMENT O																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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E1	10157.291	48467.397	22.179							P1	10357.227	48601.242	30.659							F1	10175.867	48464.307	22.762							Q1	10404.926	48542.905	31.340							G1	10211.725	48510.119	24.882							R1	10419.820	48531.154	31.849							H1	10237.715	48507.932	25.416							I1	10289.052	48539.764	27.531							J1	10307.331	48532.475	28.034							K1	10300.038	48520.314	27.593							L1	10325.051	48522.134	28.533							M1	10383.304	48567.805	31.104							N1	10412.170	48550.791	31.478							O1	10355.871	48621.006	30.988							E2	10169.713	48461.919	22.762							P2	10358.626	48614.740	30.935							F2	10181.344	48476.729	23.117							Q2	10413.282	48532.059	31.849							G2	10211.779	48509.634	24.884							R2	10419.880	48531.590	31.851							H2	10235.605	48506.303	25.343							I2	10289.072	48539.581	27.530							J2	10294.319	48540.355	27.531							K2	10302.148	48521.943	27.690							L2	10330.759	48534.643	28.788							M2	10387.009	48564.184	31.056							N2	10409.450	48550.302	31.393							O2	10341.610	48623.471	30.197							E1 - E2	90.000	9.600	15.080	2.812	2.081	3.674	3.114	3.770	22.540	P1 - P2	89.950	9.600	15.071	2.809	2.079	3.672	3.113	3.768	30.767	F1 - F2	90.000	9.600	15.080	2.812	2.081	3.674	3.114	3.770	22.884	Q1 - Q2	90.977	9.600	15.243	2.870	2.123	3.712	3.134	3.811	31.667	G1 - G2	8.325	33.300	4.839	0.088	0.066	1.209	1.208	1.210	24.877	R1 - R2	89.023	9.600	14.916	2.754	2.039	3.636	3.094	3.729	31.984	H1 - H2	32.948	4.700	2.703	0.193	0.144	0.673	0.659	0.676	25.380	I1 - I2	116.468	9.600	19.514	4.546	3.333	4.671	3.491	4.879	24.434	J1 - J2	68.877	9.600	11.540	1.683	1.252	2.842	2.587	2.885	25.190	K1 - K2	61.474	9.600	10.300	1.349	1.005	2.544	2.362	2.575	27.918	L1 - L2	62.540	8.600	9.387	1.249	0.931	2.318	2.146	2.347	30.957	M1 - M2	62.540	8.600	9.387	1.249	0.931	2.318	2.146	2.347	30.662	N1 - N2	34.201	4.700	2.806	0.208	0.156	0.699	0.683	0.701	31.435	O1 - O2	97.831	9.600	16.392	3.291	2.430	3.975	3.261	4.098	30.548	CASBY GROVE DESIGN LINE										FAIRVISTA AVENUE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE										SEAGRASS STREET DESIGN LINE										BELLRISE DRIVE DESIGN LINE										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										0.407 10219.781 48495.075 338*47'40" IP										-0.272 10395.841 48546.970 346*54'00" IP										734.046 10332.880 48492.832 338*47'40" IP										346.580 10147.890 48467.182 68*47'40" IP										197.259 10412.481 48502.188 7*52'36" IP										0.000 10346.881 48609.444 50*53'20" IP										8.365 10216.903 48502.494 338*47'40" TC										0.000 10395.780 48547.235 346*54'00" TC										777.046 10317.326 48532.921 338*47'40" IP										400.000 10197.693 48486.505 68*47'40" TC										200.000 10412.857 48504.904 7*52'36" IP										48.655 10384.633 48640.137 50*53'20" IP										16.118 10215.058 48510.001 353*36'00" CT										11.801 10393.105 48558.729 346*54'00" TC										565.000 10342.509 48541.674 74*57'05" IP										537.327 10325.721 48536.178 68*47'40" TC										239.979 10418.335 48544.505 7*52'36" IP										48.555 10384.633 48640.137 50*53'20" IP										42.319 10212.138 48536.039 353*36'00" IP										25.000 10386.235 48569.719 309*05'14" TC										560.000 10347.357 48542.898 76*41'36" IP										540.000 10328.221 48537.124 69*43'33" TC										48.555 10384.633 48640.137 50*53'20" IP										IP 1 COORDINATE = 10219.7814 48495.0746										IP 3 COORDINATE = 10212.1378 48536.0392										IP 1 COORDINATE = 10183.7138 48434.9578										IP 1 COORDINATE = 10332.8800 48492.8322										IP 1 COORDINATE = 10382.4657 48572.4504										IP 1 COORDINATE = 10346.8808 48609.4445										CHAINAGE = 0.4072										CHAINAGE = 42.3187										CHAINAGE = 102.3501										CHAINAGE = 734.0457										CHAINAGE = 346*54'00"										CHAINAGE = 0.0000										IP 2 COORDINATE = 10215.4929 48506.1279										IP 3 COORDINATE = 10212.1378 48536.0392										IP 2 COORDINATE = 10168.1601 48475.0462										IP 2 COORDINATE = 10317.3263 48532.9207										IP 2 COORDINATE = 10391.3883 48566.1053										IP 2 COORDINATE = 10288.7853 48565.9145										CENTRE = 10244.8714 48513.3455										CHAINAGE = 42.3187										CHAINAGE = 145.3501										CHAINAGE = 145.3501										CENTRE = 10373.6254 48554.1956										CENTRE = 10373.6254 48554.1956										RADIUS = 30.0000										CHAINAGE = 42.3187										CHAINAGE = 145.3501										RADIUS = 30.0000										RADIUS = 30.0000										RADIUS = 30.0000										LENGTH = 7.7522										CHAINAGE = 42.3187										CHAINAGE = 145.3501										LENGTH = 7.7522										LENGTH = 7.7522										LENGTH = 7.7522										INTERSECT ANGLE = 14*48'20"										CHAINAGE = 42.3187										CHAINAGE = 145.3501										INTERSECT ANGLE = 14*48'20"										INTERSECT ANGLE = 14*48'20"										INTERSECT ANGLE = 14*48'20"										START TANGENT COORDINATE = 10216.9028 48502.4940										START TANGENT COORDINATE = 10212.1378 48536.0392										START TANGENT COORDINATE = 10216.9028 48502.4940										START TANGENT COORDINATE = 10215.0584 48510.0014										START TANGENT COORDINATE = 10292.1404 48536.0031										START TANGENT COORDINATE = 10291.7059 48539.8766										LENGTH = 3.8978										CHAINAGE = 42.3187										LENGTH = 3.8978										LENGTH = 3.8978										LENGTH = 3.8978										LENGTH = 3.8978										CHAINAGE = 8.3654										CHAINAGE = 42.3187										CHAINAGE = 8.3654										CHAINAGE = 8.3654										CHAINAGE = 8.3654										CHAINAGE = 8.3654										BEARING = 338*47'40"										CHAINAGE = 42.3187										BEARING = 338*47'40"										BEARING = 338*47'40"										BEARING = 338*47'40"										BEARING = 338*47'40"										END TANGENT COORDINATE = 10215.0584 48510.0014										END TANGENT COORDINATE = 10212.1378 48536.0392										END TANGENT COORDINATE = 10215.0584 48510.0014										END TANGENT COORDINATE = 10215.0584 48510.0014										END TANGENT COORDINATE = 10293.5503 48532.3692										END TANGENT COORDINATE = 10291.7059 48539.8766										LENGTH = 3.8978										CHAINAGE = 42.3187										LENGTH = 3.8978										LENGTH = 3.8978										LENGTH = 3.8978										LENGTH = 3.8978										CHAINAGE = 16.1176										CHAINAGE = 42.3187										CHAINAGE = 16.1176										CHAINAGE = 16.1176										CHAINAGE = 16.1176										CHAINAGE = 16.1176										BEARING = 353*36'00"										CHAINAGE = 42.3187										BEARING = 353*36'00"										BEARING = 353*36'00"										BEARING = 353*36'00"										BEARING = 353*36'00"										HEADLAND DRIVE DESIGN LINE										HEADLAND DRIVE DESIGN LINE										HEADLAND DRIVE DESIGN LINE										HEADLAND DRIVE DESIGN LINE										HEADLAND DRIVE DESIGN LINE										HEADLAND DRIVE DESIGN LINE										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										102.350 10183.714 48434.958 338*47'40" IP										102.350 10183.714 48434.958 338*47'40" IP										102.350 10183.714 48434.958 338*47'40" IP										102.350 10183.714 48434.958 338*47'40" IP										102.350 10183.714 48434.958 338*47'40" IP										102.350 10183.714 48434.958 338*47'40" IP										145.350 10168.160 48475.046 338*47'40" IP										145.350 10168.160 48475.046 338*47'40" IP										145.350 10168.160 48475.046 338*47'40" IP										145.350 10168.160 48475.046 338*47'40" IP										145.350 10168.160 48475.046 338*47'40" IP										145.350 10168.160 48475.046 338*47'40" IP										IP 1 COORDINATE = 10183.7138 48434.9578										IP 2 COORDINATE = 10168.1601 48475.0462										IP 1 COORDINATE = 10183.7138 48434.9578										IP 1 COORDINATE = 10183.7138 48434.9578										IP 1 COORDINATE = 10183.7138 48434.9578										IP 1 COORDINATE = 10183.7138 48434.9578										CHAINAGE = 102.3501										CHAINAGE = 145.3501										CHAINAGE = 102.3501										CHAINAGE = 102.3501										CHAINAGE = 102.3501										CHAINAGE = 102.3501										IP 2 COORDINATE = 10168.1601 48475.0462										IP 2 COORDINATE = 10168.1601 48475.0462										IP 2 COORDINATE = 10168.1601 48475.0462										IP 2 COORDINATE = 10168.1601 48475.0462										IP 2 COORDINATE = 10168.1601 48475.0462										IP 2 COORDINATE = 10168.1601 48475.0462										CHAINAGE = 145.3501										CHAINAGE = 145.3501										CHAINAGE = 145.3501										CHAINAGE = 145.3501										CHAINAGE = 145.3501										CHAINAGE = 145.3501										VILLAGE GREEN DRIVE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										CHAINAGE EASTING 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48467.182 68*47'40" IP										346.580 10147.890 48467.182 68*47'40" IP										346.580 10147.890 48467.182 68*47'40" IP										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										500.000 10290.922 48522.676 68*47'40" TC										500.000 10290.922 48522.676 68*47'40" TC										500.000 10290.922 48522.676 68*47'40" TC										500.000 10290.922 48522.676									
E2	10169.713	48461.919	22.762							P2	10358.626	48614.740	30.935							F2	10181.344	48476.729	23.117							Q2	10413.282	48532.059	31.849							G2	10211.779	48509.634	24.884							R2	10419.880	48531.590	31.851							H2	10235.605	48506.303	25.343							I2	10289.072	48539.581	27.530							J2	10294.319	48540.355	27.531							K2	10302.148	48521.943	27.690							L2	10330.759	48534.643	28.788							M2	10387.009	48564.184	31.056							N2	10409.450	48550.302	31.393							O2	10341.610	48623.471	30.197							E1 - E2	90.000	9.600	15.080	2.812	2.081	3.674	3.114	3.770	22.540	P1 - P2	89.950	9.600	15.071	2.809	2.079	3.672	3.113	3.768	30.767	F1 - F2	90.000	9.600	15.080	2.812	2.081	3.674	3.114	3.770	22.884	Q1 - Q2	90.977	9.600	15.243	2.870	2.123	3.712	3.134	3.811	31.667	G1 - G2	8.325	33.300	4.839	0.088	0.066	1.209	1.208	1.210	24.877	R1 - R2	89.023	9.600	14.916	2.754	2.039	3.636	3.094	3.729	31.984	H1 - H2	32.948	4.700	2.703	0.193	0.144	0.673	0.659	0.676	25.380	I1 - I2	116.468	9.600	19.514	4.546	3.333	4.671	3.491	4.879	24.434	J1 - J2	68.877	9.600	11.540	1.683	1.252	2.842	2.587	2.885	25.190	K1 - K2	61.474	9.600	10.300	1.349	1.005	2.544	2.362	2.575	27.918	L1 - L2	62.540	8.600	9.387	1.249	0.931	2.318	2.146	2.347	30.957	M1 - M2	62.540	8.600	9.387	1.249	0.931	2.318	2.146	2.347	30.662	N1 - N2	34.201	4.700	2.806	0.208	0.156	0.699	0.683	0.701	31.435	O1 - O2	97.831	9.600	16.392	3.291	2.430	3.975	3.261	4.098	30.548	CASBY GROVE DESIGN LINE										FAIRVISTA AVENUE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE										SEAGRASS STREET DESIGN LINE										BELLRISE DRIVE DESIGN LINE										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										0.407 10219.781 48495.075 338*47'40" IP										-0.272 10395.841 48546.970 346*54'00" IP										734.046 10332.880 48492.832 338*47'40" IP										346.580 10147.890 48467.182 68*47'40" IP										197.259 10412.481 48502.188 7*52'36" IP										0.000 10346.881 48609.444 50*53'20" IP										8.365 10216.903 48502.494 338*47'40" TC										0.000 10395.780 48547.235 346*54'00" TC										777.046 10317.326 48532.921 338*47'40" IP										400.000 10197.693 48486.505 68*47'40" TC										200.000 10412.857 48504.904 7*52'36" IP										48.655 10384.633 48640.137 50*53'20" IP										16.118 10215.058 48510.001 353*36'00" CT										11.801 10393.105 48558.729 346*54'00" TC										565.000 10342.509 48541.674 74*57'05" IP										537.327 10325.721 48536.178 68*47'40" TC										239.979 10418.335 48544.505 7*52'36" IP										48.555 10384.633 48640.137 50*53'20" IP										42.319 10212.138 48536.039 353*36'00" IP										25.000 10386.235 48569.719 309*05'14" TC										560.000 10347.357 48542.898 76*41'36" IP										540.000 10328.221 48537.124 69*43'33" TC										48.555 10384.633 48640.137 50*53'20" IP										IP 1 COORDINATE = 10219.7814 48495.0746										IP 3 COORDINATE = 10212.1378 48536.0392										IP 1 COORDINATE = 10183.7138 48434.9578										IP 1 COORDINATE = 10332.8800 48492.8322										IP 1 COORDINATE = 10382.4657 48572.4504										IP 1 COORDINATE = 10346.8808 48609.4445										CHAINAGE = 0.4072										CHAINAGE = 42.3187										CHAINAGE = 102.3501										CHAINAGE = 734.0457										CHAINAGE = 346*54'00"										CHAINAGE = 0.0000										IP 2 COORDINATE = 10215.4929 48506.1279										IP 3 COORDINATE = 10212.1378 48536.0392										IP 2 COORDINATE = 10168.1601 48475.0462										IP 2 COORDINATE = 10317.3263 48532.9207										IP 2 COORDINATE = 10391.3883 48566.1053										IP 2 COORDINATE = 10288.7853 48565.9145										CENTRE = 10244.8714 48513.3455										CHAINAGE = 42.3187										CHAINAGE = 145.3501										CHAINAGE = 145.3501										CENTRE = 10373.6254 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E1 - E2	90.000	9.600	15.080	2.812	2.081	3.674	3.114	3.770	22.540	P1 - P2	89.950	9.600	15.071	2.809	2.079	3.672	3.113	3.768	30.767	F1 - F2	90.000	9.600	15.080	2.812	2.081	3.674	3.114	3.770	22.884	Q1 - Q2	90.977	9.600	15.243	2.870	2.123	3.712	3.134	3.811	31.667	G1 - G2	8.325	33.300	4.839	0.088	0.066	1.209	1.208	1.210	24.877	R1 - R2	89.023	9.600	14.916	2.754	2.039	3.636	3.094	3.729	31.984	H1 - H2	32.948	4.700	2.703	0.193	0.144	0.673	0.659	0.676	25.380	I1 - I2	116.468	9.600	19.514	4.546	3.333	4.671	3.491	4.879	24.434	J1 - J2	68.877	9.600	11.540	1.683	1.252	2.842	2.587	2.885	25.190	K1 - K2	61.474	9.600	10.300	1.349	1.005	2.544	2.362	2.575	27.918	L1 - L2	62.540	8.600	9.387	1.249	0.931	2.318	2.146	2.347	30.957	M1 - M2	62.540	8.600	9.387	1.249	0.931	2.318	2.146	2.347	30.662	N1 - N2	34.201	4.700	2.806	0.208	0.156	0.699	0.683	0.701	31.435	O1 - O2	97.831	9.600	16.392	3.291	2.430	3.975	3.261	4.098	30.548	CASBY GROVE DESIGN LINE										FAIRVISTA AVENUE DESIGN LINE										VILLAGE GREEN DRIVE DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE										SEAGRASS STREET DESIGN LINE										BELLRISE DRIVE DESIGN LINE										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										0.407 10219.781 48495.075 338*47'40" IP										-0.272 10395.841 48546.970 346*54'00" IP										734.046 10332.880 48492.832 338*47'40" IP										346.580 10147.890 48467.182 68*47'40" IP										197.259 10412.481 48502.188 7*52'36" IP										0.000 10346.881 48609.444 50*53'20" IP										8.365 10216.903 48502.494 338*47'40" TC										0.000 10395.780 48547.235 346*54'00" TC										777.046 10317.326 48532.921 338*47'40" IP										400.000 10197.693 48486.505 68*47'40" TC										200.000 10412.857 48504.904 7*52'36" IP										48.655 10384.633 48640.137 50*53'20" IP										16.118 10215.058 48510.001 353*36'00" CT										11.801 10393.105 48558.729 346*54'00" TC										565.000 10342.509 48541.674 74*57'05" IP										537.327 10325.721 48536.178 68*47'40" TC										239.979 10418.335 48544.505 7*52'36" IP										48.555 10384.633 48640.137 50*53'20" IP										42.319 10212.138 48536.039 353*36'00" IP										25.000 10386.235 48569.719 309*05'14" TC										560.000 10347.357 48542.898 76*41'36" IP										540.000 10328.221 48537.124 69*43'33" TC										48.555 10384.633 48640.137 50*53'20" IP										IP 1 COORDINATE = 10219.7814 48495.0746										IP 3 COORDINATE = 10212.1378 48536.0392										IP 1 COORDINATE = 10183.7138 48434.9578										IP 1 COORDINATE = 10332.8800 48492.8322										IP 1 COORDINATE = 10382.4657 48572.4504										IP 1 COORDINATE = 10346.8808 48609.4445										CHAINAGE = 0.4072										CHAINAGE = 42.3187										CHAINAGE = 102.3501										CHAINAGE = 734.0457										CHAINAGE = 346*54'00"										CHAINAGE = 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ESTUARY BOULEVARD DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE										ESTUARY BOULEVARD DESIGN LINE																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING										CHAINAGE EASTING NORTHING BEARING																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC										400.000 10197.693 48486.505 68*47'40" TC																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
500.000 10290.922 48522.676 68*47'40" TC										500.000 10290.922 48522.676 68*47'40" TC										500.000 10290.922 48522.676 68*47'40" TC										500.000 10290.922 48522.676																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							

LEGEND	
	EXISTING SURFACE
	DESIGN LINE
	FUTURE DESIGN LINE
	RIGHT BUILDING LINE
	RIGHT LIP OF KERB
	LEFT BUILDING LINE
	LEFT LIP OF KERB



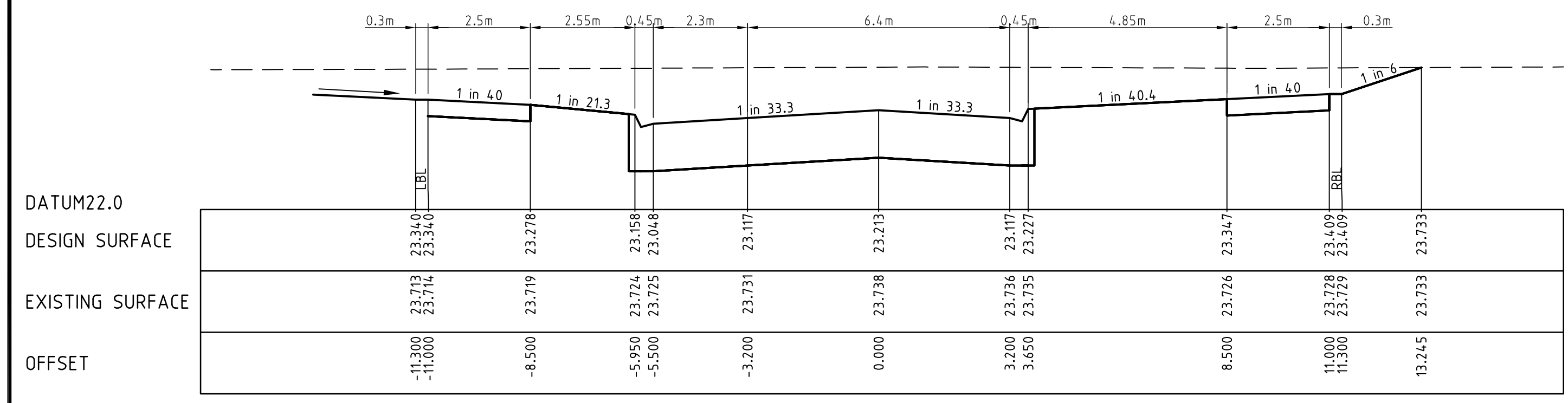
VERTICAL GEOMETRY  
 HORIZONTAL GEOMETRY  
 DATUM RL18  
 DESIGN CENTRELINE  
 RIGHT LIP OF KERB  
 EXISTING SURFACE AT RIGHT BOUNDARY  
 LEFT LIP OF KERB  
 EXISTING SURFACE AT LEFT BOUNDARY  
 EXISTING SURFACE  
 CHAINAGE

300.000	20.428	20.155	20.874	21.644	22.414	23.184	23.954	24.724	25.494	26.264	27.034	27.804	28.574	29.344	30.114	30.884	31.654	32.424	33.194	33.964	34.734	35.504	36.274	37.044	37.814	38.584	39.354	40.124	40.894	41.664	42.434	43.204	43.974	44.744	45.514	46.284	47.054	47.824	48.594	49.364	50.134	50.904	51.674	52.444	53.214	53.984	54.754	55.524	56.294	57.064	57.834	58.604	59.374	60.144	60.914	61.684	62.454	63.224	63.994	64.764	65.534	66.304	67.074	67.844	68.614	69.384	70.154	70.924	71.694	72.464	73.234	74.004	74.774	75.544	76.314	77.084	77.854	78.624	79.394	80.164	80.934	81.704	82.474	83.244	84.014	84.784	85.554	86.324	87.094	87.864	88.634	89.404	90.174	90.944	91.714	92.484	93.254	94.024	94.794	95.564	96.334	97.104	97.874	98.644	99.414	100.184	100.954	101.724	102.494	103.264	104.034	104.804	105.574	106.344	107.114	107.884	108.654	109.424	110.194	110.964	111.734	112.504	113.274	114.044	114.814	115.584	116.354	117.124	117.894	118.664	119.434	120.204	120.974	121.744	122.514	123.284	124.054	124.824	125.594	126.364	127.134	127.904	128.674	129.444	130.214	130.984	131.754	132.524	133.294	134.064	134.834	135.604	136.374	137.144	137.914	138.684	139.454	140.224	140.994	141.764	142.534	143.304	144.074	144.844	145.614	146.384	147.154	147.924	148.694	149.464	150.234	151.004	151.774	152.544	153.314	154.084	154.854	155.624	156.394	157.164	157.934	158.704	159.474	160.244	161.014	161.784	162.554	163.324	164.094	164.864	165.634	166.404	167.174	167.944	168.714	169.484	170.254	171.024	171.794	172.564	173.334	174.104	174.874	175.644	176.414	177.184	177.954	178.724	179.494	180.264	181.034	181.804	182.574	183.344	184.114	184.884	185.654	186.424	187.194	187.964	188.734	189.504	190.274	191.044	191.814	192.584	193.354	194.124	194.894	195.664	196.434	197.204	197.974	198.744	199.514	200.284	201.054	201.824	202.594	203.364	204.134	204.904	205.674	206.444	207.214	207.984	208.754	209.524	210.294	211.064	211.834	212.604	213.374	214.144	214.914	215.684	216.454	217.224	217.994	218.764	219.534	220.304	221.074	221.844	222.614	223.384	224.154	224.924	225.694	226.464	227.234	228.004	228.774	229.544	230.314	231.084	231.854	232.624	233.394	234.164	234.934	235.704	236.474	237.244	238.014	238.784	239.554	240.324	241.094	241.864	242.634	243.404	244.174	244.944	245.714	246.484	247.254	248.024	248.794	249.564	250.334	251.104	251.874	252.644	253.414	254.184	254.954	255.724	256.494	257.264	258.034	258.804	259.574	260.344	261.114	261.884	262.654	263.424	264.194	264.964	265.734	266.504	267.274	268.044	268.814	269.584	270.354	271.124	271.894	272.664	273.434	274.204	274.974	275.744	276.514	277.284	278.054	278.824	279.594	280.364	281.134	281.904	282.674	283.444	284.214	284.984	285.754	286.524	287.294	288.064	288.834	289.604	290.374	291.144	291.914	292.684	293.454	294.224	294.994	295.764	296.534	297.304	298.074	298.844	299.614	300.384	301.154	301.924	302.694	303.464	304.234	305.004	305.774	306.544	307.314	308.084	308.854	309.624	310.394	311.164	311.934	312.704	313.474	314.244	315.014	315.784	316.554	317.324	318.094	318.864	319.634	320.404	321.174	321.944	322.714	323.484	324.254	325.024	325.794	326.564	327.334	328.104	328.874	329.644	330.414	331.184	331.954	332.724	333.494	334.264	335.034	335.804	336.574	337.344	338.114	338.884	339.654	340.424	341.194	341.964	342.734	343.504	344.274	345.044	345.814	346.584	347.354	348.124	348.894	349.664	350.434	351.204	351.974	352.744	353.514	354.284	355.054	355.824	356.594	357.364	358.134	358.904	359.674	360.444	361.214	361.984	362.754	363.524	364.294	365.064	365.834	366.604	367.374	368.144	368.914	369.684	370.454	371.224	371.994	372.764	373.534	374.304	375.074	375.844	376.614	377.384	378.154	378.924	379.694	380.464	381.234	382.004	382.774	383.544	384.314	385.084	385.854	386.624	387.394	388.164	388.934	389.704	390.474	391.244	392.014	392.784	393.554	394.324	395.094	395.864	396.634	397.404	398.174	398.944	399.714	400.484	401.254	402.024	402.794	403.564	404.334	405.104	405.874	406.644	407.414	408.184	408.954	409.724	410.494	411.264	412.034	412.804	413.574	414.344	415.114	415.884	416.654	417.424	418.194	418.964	419.734	420.504	421.274	422.044	422.814	423.584	424.354	425.124	425.894	426.664	427.434	428.204	428.974	429.744	430.514	431.284	432.054	432.824	433.594	434.364	435.134	435.904	436.674	437.444	438.214	438.984	439.754	440.524	441.294	442.064	442.834	443.604	444.374	445.144	445.914	446.684	447.454	448.224	448.994	449.764	450.534	451.304	452.074	452.844	453.614	454.384	455.154	455.924	456.694	457.464	458.234	459.004	459.774	460.544	461.314	462.084	462.854	463.624	464.394	465.164	465.934	466.704	467.474	468.244	469.014	469.784	470.554	471.324	472.094	472.864	473.634	474.404	475.174	475.944	476.714	477.484	478.254	479.024	479.794	480.564	481.334	482.104	482.874	483.644	484.414	485.184	485.954	486.724	487.494	488.264	489.034	489.804	490.574	491.344	492.114	492.884	493.654	494.424	495.194	495.964	496.734	497.504	498.274	499.044	499.814	500.584	501.354	502.124	502.894	503.664	504.434	505.204	505.974	506.744	507.514	508.284	509.054	509.824	510.594	511.364	512.134	512.904	513.674	514.444	515.214	515.984	516.754	517.524	518.294	519.064	519.834	520.604	521.374	522.144	522.914	523.684	524.454	525.224	525.994	526.764	527.534	528.304	529.074	529.844	530.614	531.384	532.154	532.924	533.694	534.464	535.234	536.004	536.774	537.544	538.314	539.084	539.854	540.624	541.394	542.164	542.934	543.704	544.474	545.244	546.014	546.784	547.554	548.324	549.094	549.864	550.634	551.404	552.174	552.944	553.714	554.484	555.254	556.024	556.794	557.564	558.334	559.104	559.874	560.644	561.414	562.184	562.954	563.724	564.494	565.264	566.034	566.804	567.574	568.344	569.114	569.884	570.654	571.424	572.194	572.964	573.734	574.504	575.274	576.044	576.814	577.584	578.354	579.124	579.894	580.664	581.434	582.204	582.974	583.744	584.514	585.284	586.054	586.824	587.594	588.364	589.134	589.904	590.674	591.444	592.214	592.984	593.754	594.524	595.294	596.064	596.834	597.604	598.374	599.144	599.914	600.684	601.454	602.224	602.994	603.764	604.534	605.304	606.074	606.844	607.614	608.384	609.154	609.924	610.694	611.464	612.234	613.004	613.774	614.544	615.314	616.084	616.854	617.624	618.394	619.164	619.934	620.704	621.474	622.244	623.014	623.784	624.554	625.324	626.094	626.864	627.634	628.404	629.174	629.944	630.714	631.484	632.254	633.024	633.794	634.564	635.334	636.104	636.874	637.644	638.414	639.184	640.954	641.724	642.494	643.264	644.034	644.804	645.574	646.344	647.114	647.884	648.654	649.424	650.194	650.964	651.734	652.504	653.274	654.044	654.814	655.584	656.354	657.124	657.894	658.664	659.434	660.204	660.974	661.744	662.514	663.284	664.054	664.824	665.594	666.364	667.134	667.904	668.674	669.444	670.214	670.984	671.754	672.524	673.294	674.064	674.834	675.604	676.374	677.144	677.914	678.684	679.454	680.224	680.994	681.764	682.534	683.304	684.074	684.844	685.614	686.384	687.154	687.924	688.694	689.464	690.234	691.004	691.774	692.544	693.314	694.084	694.854	695.624	696.394	697.164	697.934	698.704	699.474	700.244	701.014	701.784	702.554	703.324	704.094	704.864	705.634	706.404	707.174	707.944	708.714	709.484	710.254	711.024	711.794	712.564	713.334	714.104	714.874	715.644	716.414	717.184	717.954	718.724	719.494	720.264	721.034	721.804	722.574	723.344	724.114	724.884	725.654	726.424	727.194	727.964	728.734	729.504	730.274	731.044	731.814	732.584	733.354	734.124	734.894	735.664	736.434	737.204	737.974	738.744	739.514	740.284	741.054	741.824	742.594	743.364	744.134	744.904	745.674	746.444	747.214	747.984	748.754	749.524	750.294	751.064	751.834	752.604	753.374	754.144	754.914	755.684	756.454	757.224	757.994	758.764	759.534	760.304	761.074	761.844	762.614	763.384	764.154	764.924	765.694	766.464	767.234	768.004	768.774	769.544	770.314	771.084	771.854	772.624	773.394	774.164	774.934	775.704	776.474	777.244	778.014	778.784	779.554	780
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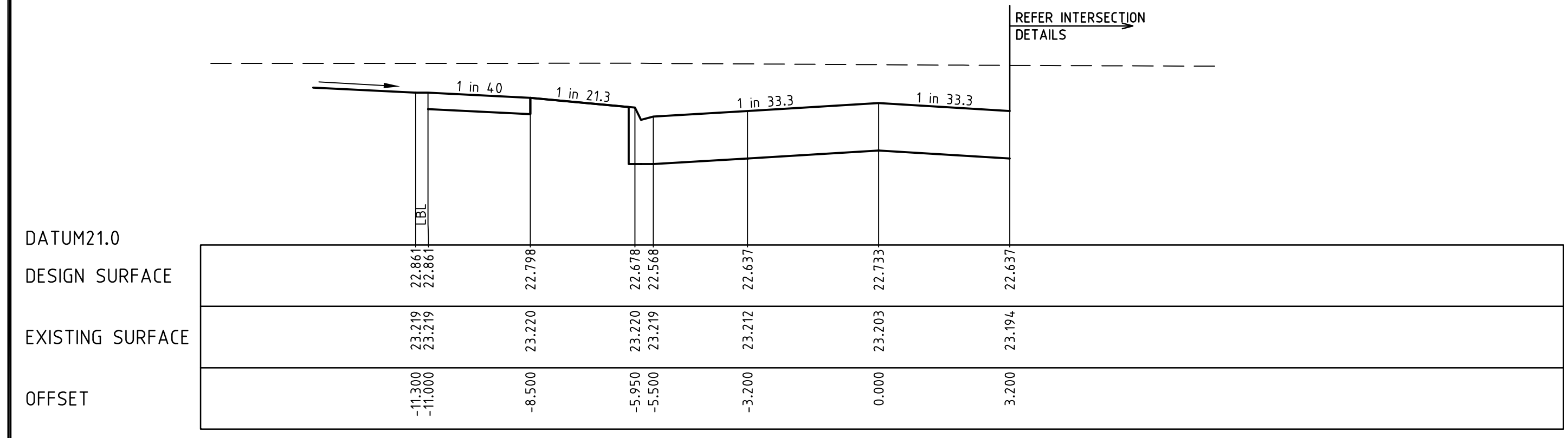




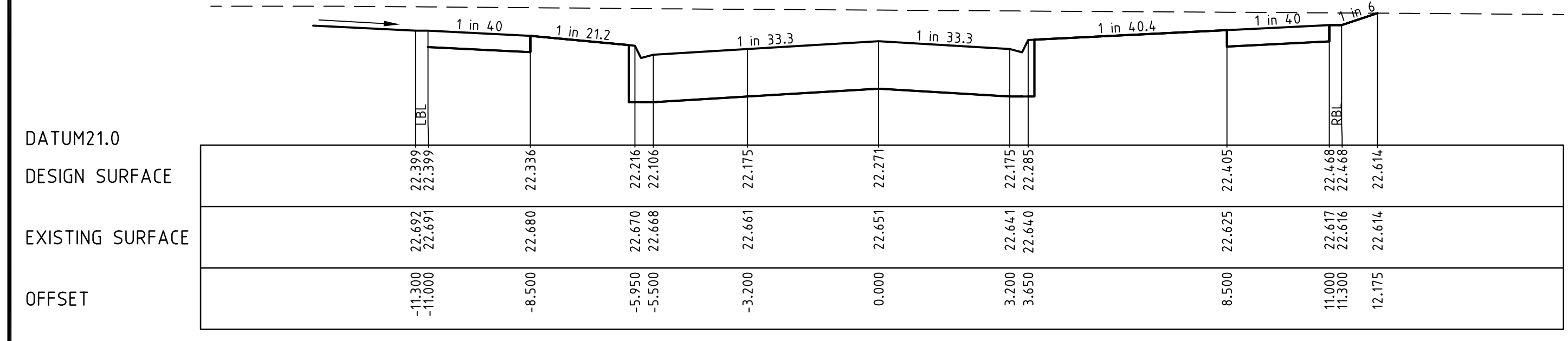
---	EXISTING SURFACE
---	DESIGN LINE
---	FUTURE DESIGN LINE



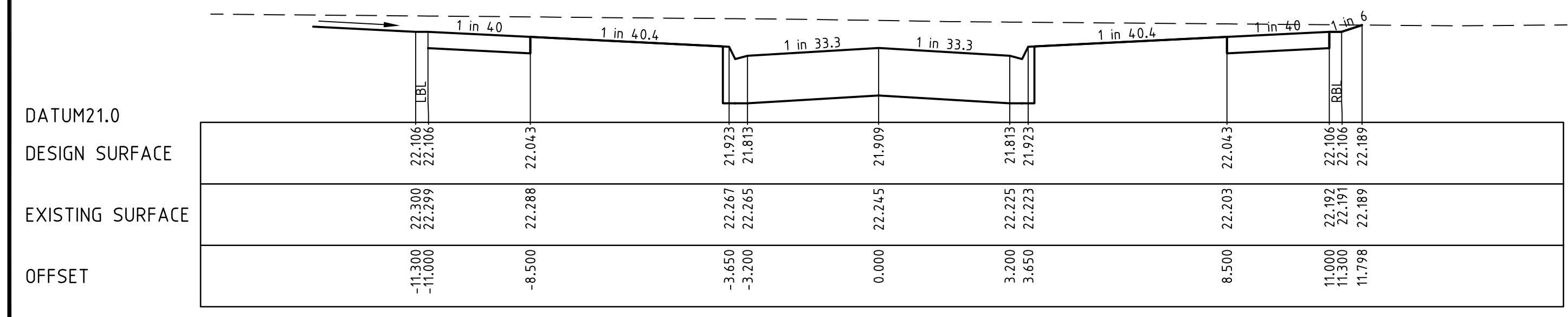
RTPCH 381.222



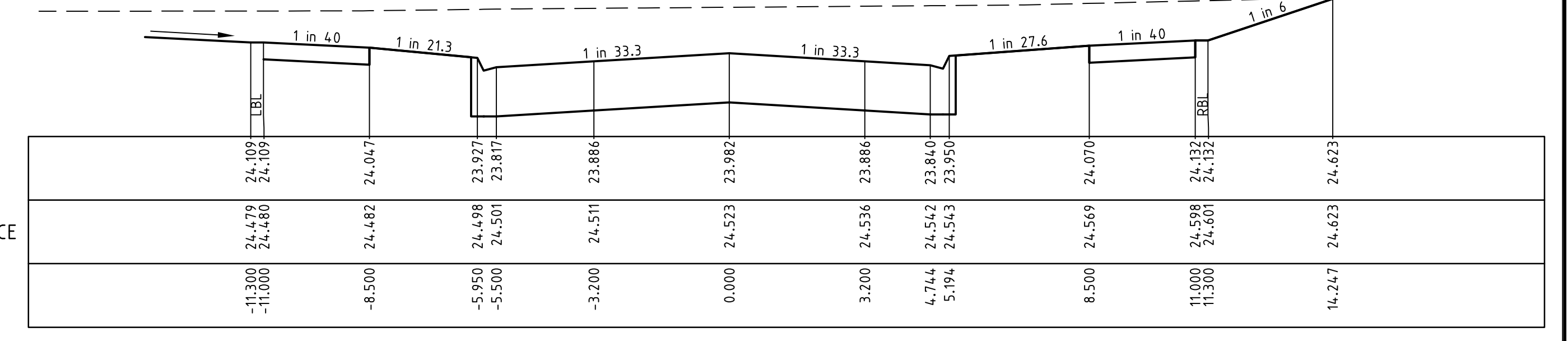
CH 367.907



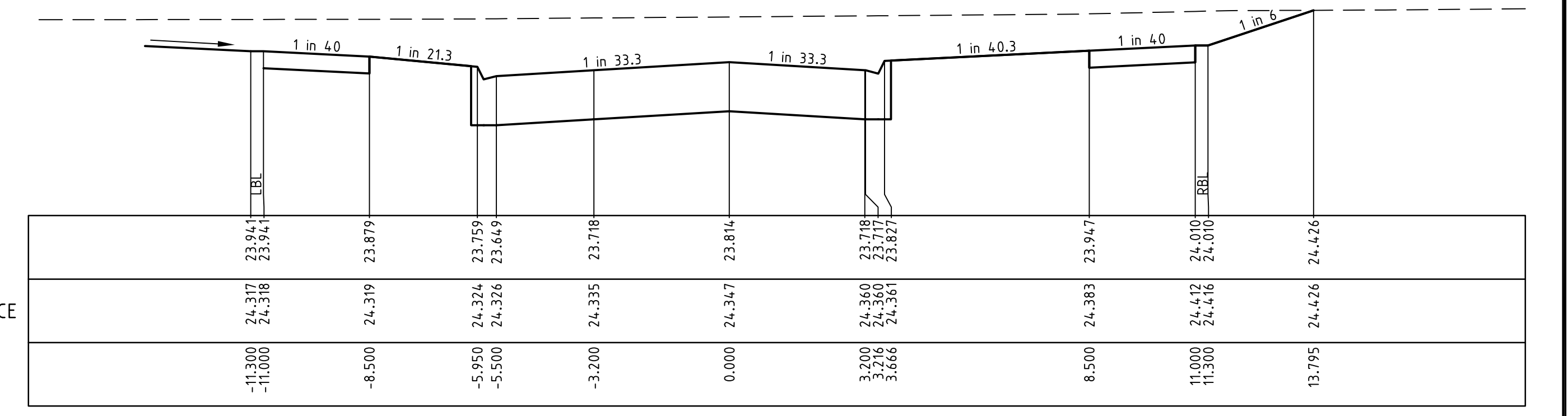
RTPCH 355.344



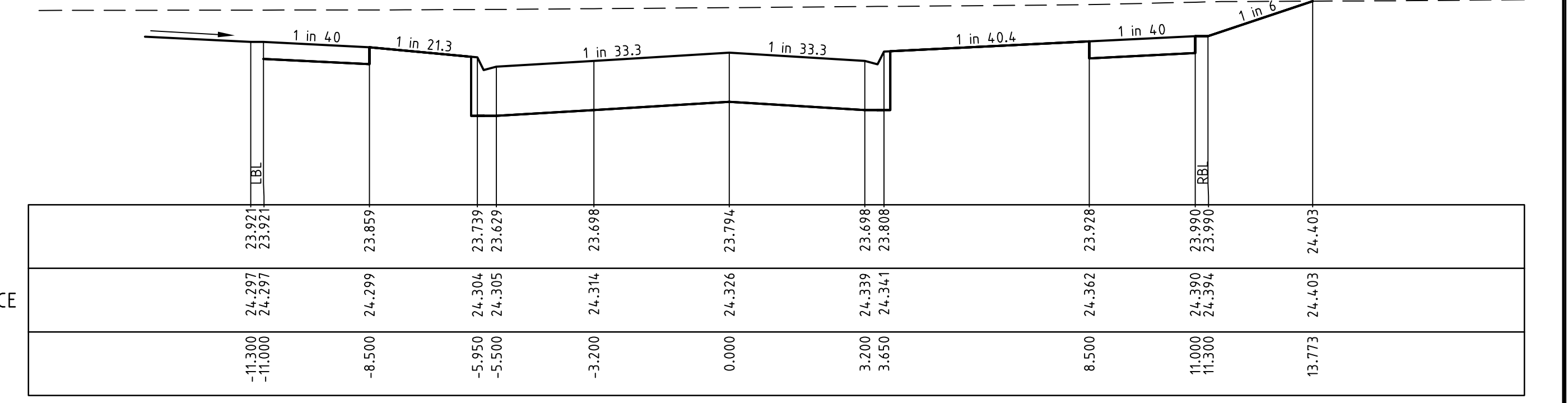
CH 346.580



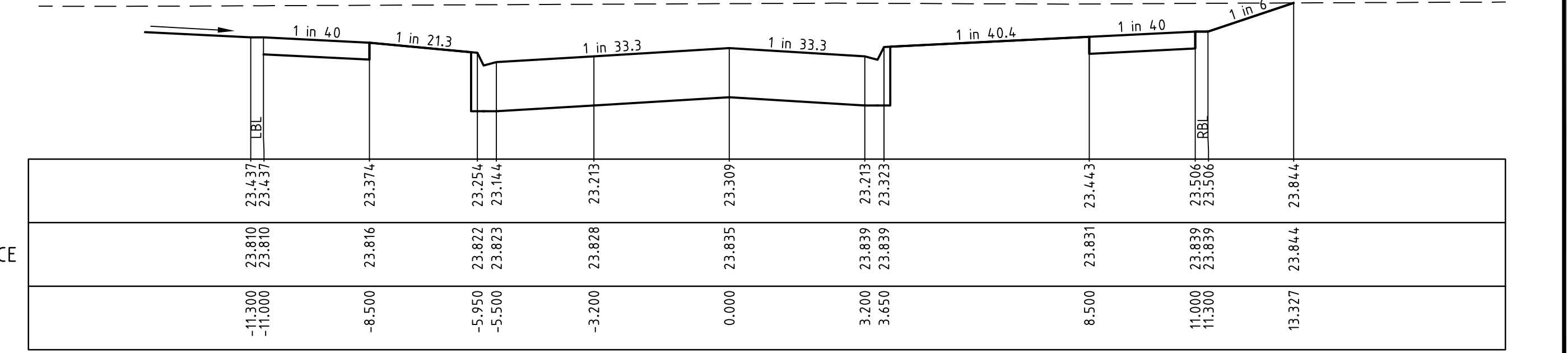
RTPCH 402.578



RTPCH 397.907

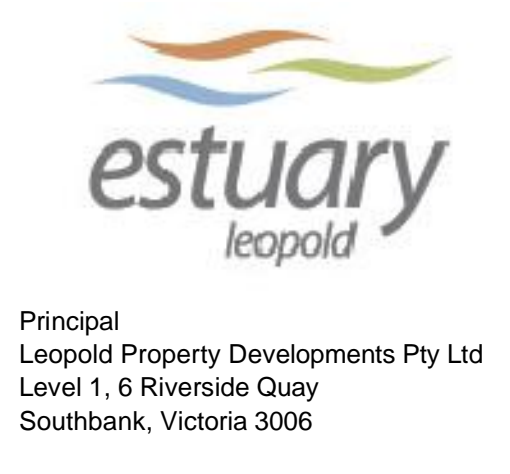


CH 397.357

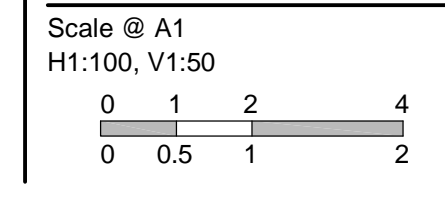


CH 383.907

D	MINOR AMENDMENTS	21.07.11	CB/CB	JG
C	ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B	COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A	ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG
REVISION	DATE	DES/DFT	APPD	



Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
  
Authorised  
J. Golden  
Date  
December 2010



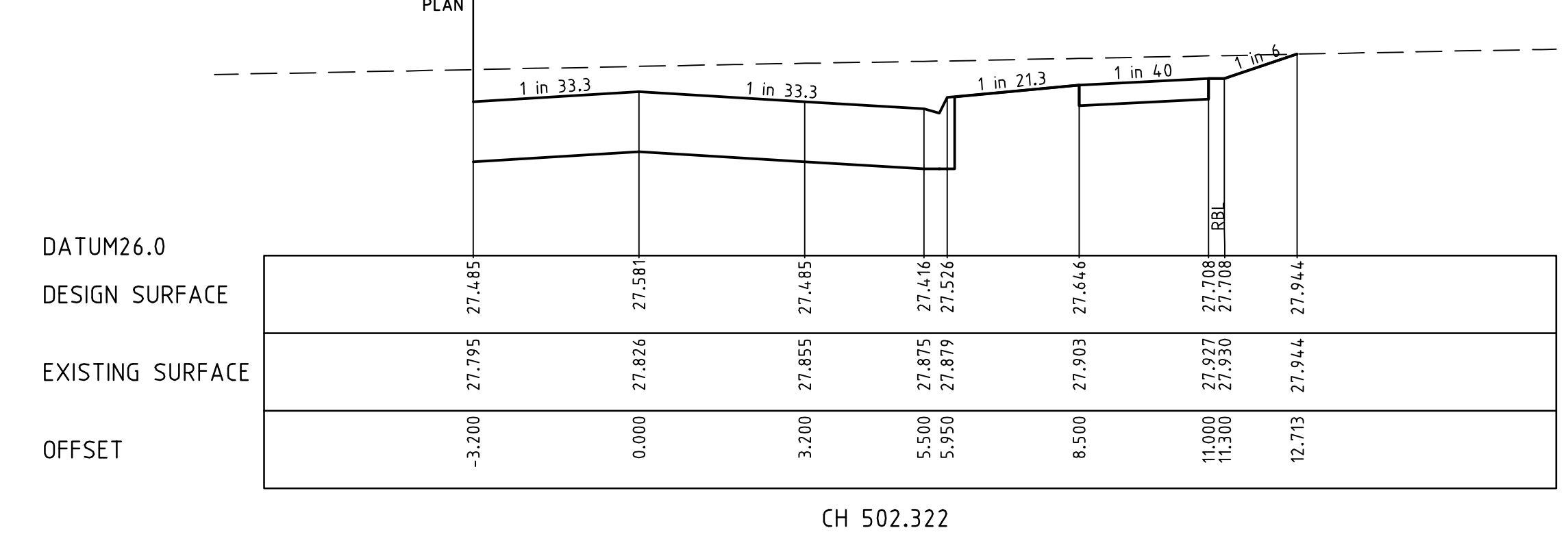
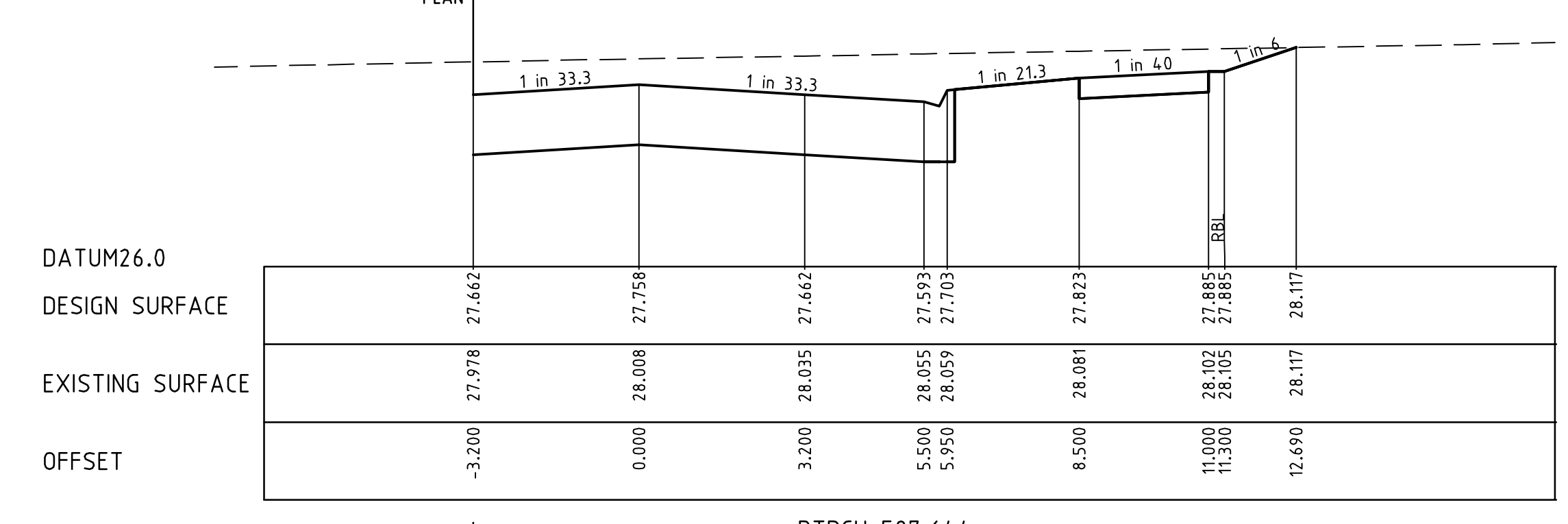
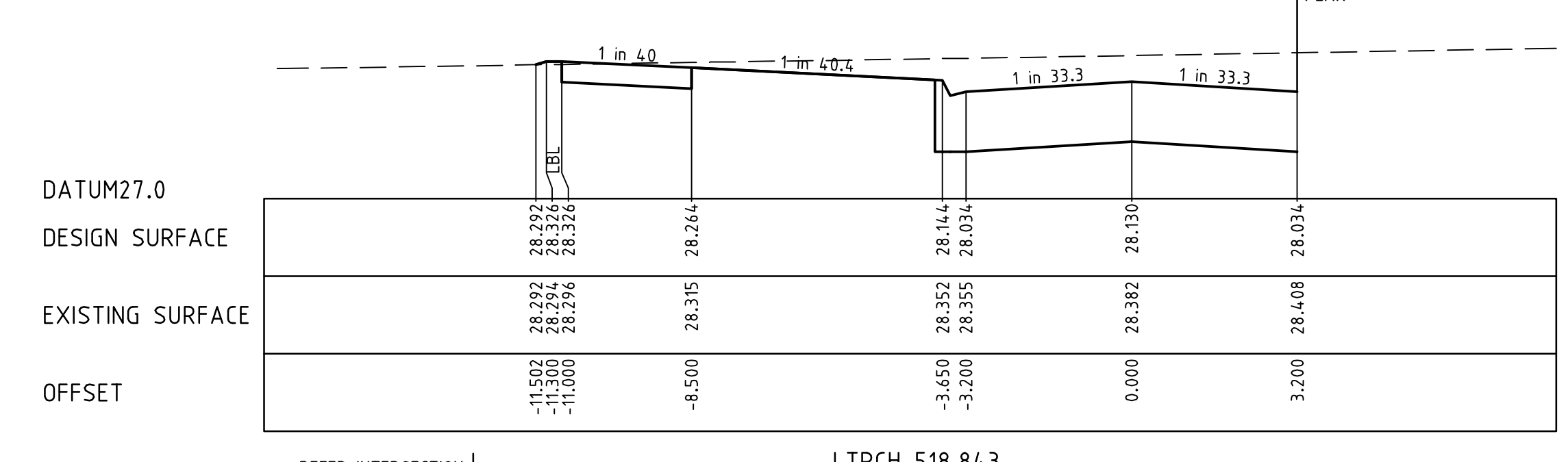
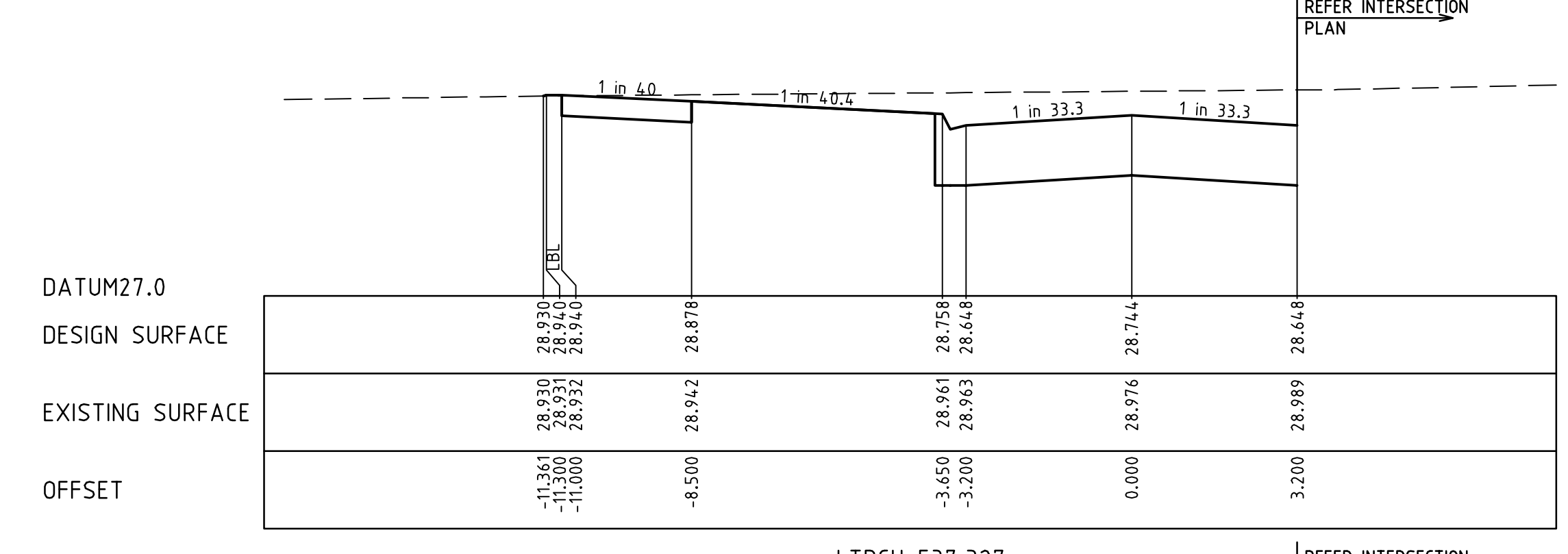
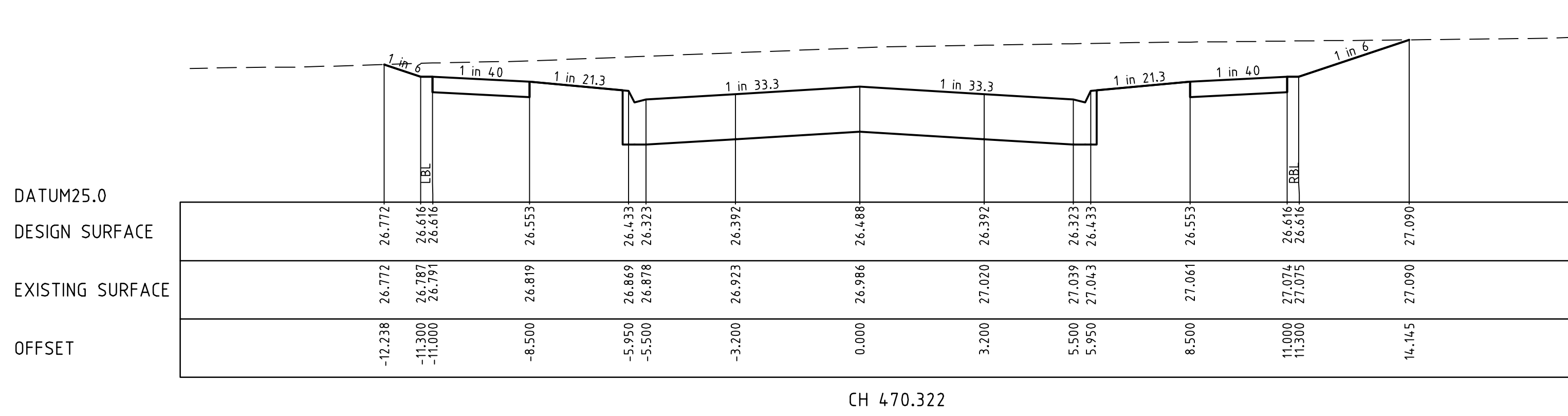
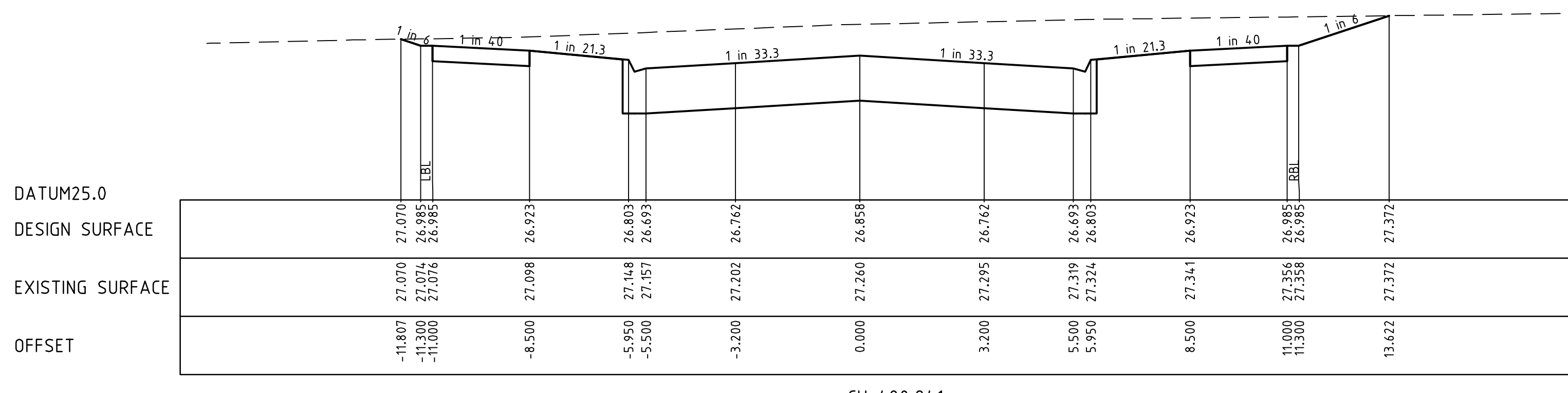
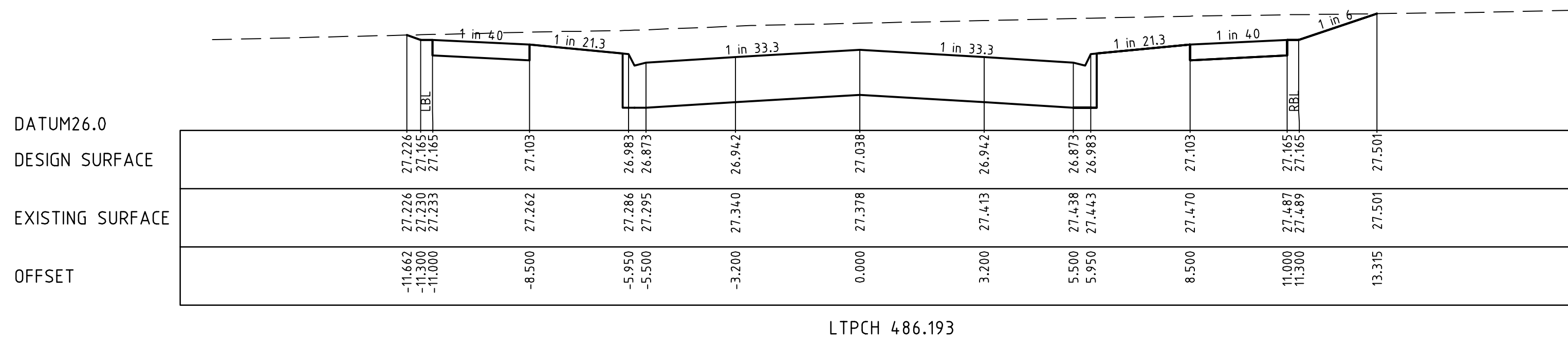
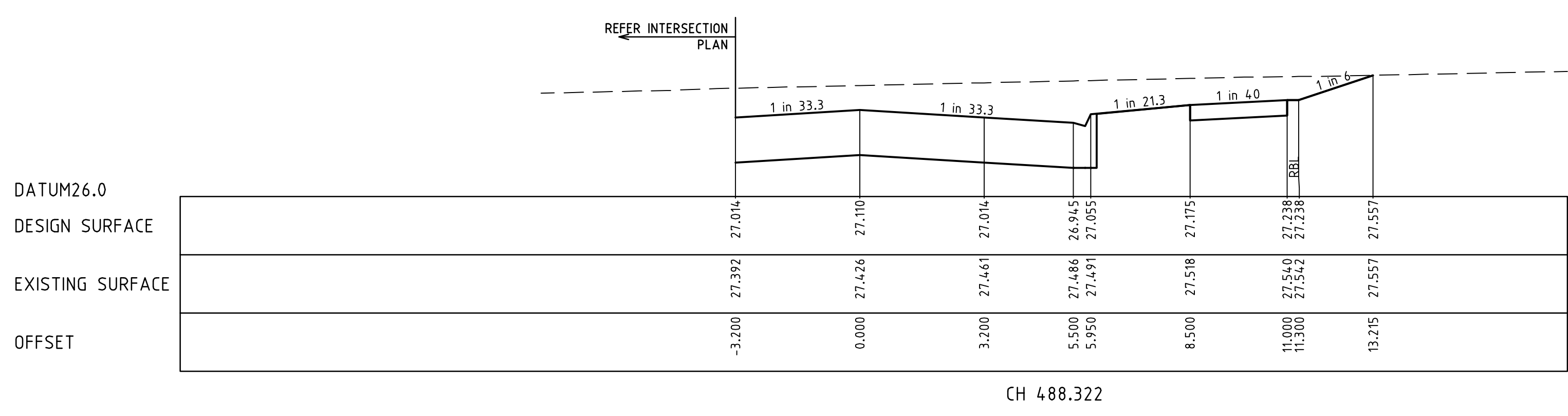
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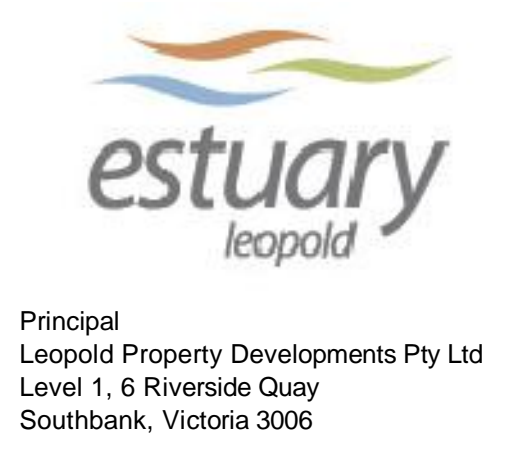
**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Estuary Boulevard  
Ch346.580-Ch402.578  
**Drawing No. 0250EHL-06-13**      **Rev D**  
Sheet No. 13 of 28  
**Approved for Construction**



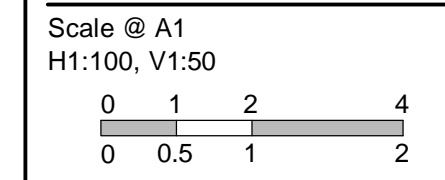
---	EXISTING SURFACE
—	DESIGN LINE
- - -	FUTURE DESIGN LINE



REVISION	DATE	DES/DT	APPD
C ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG



Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010

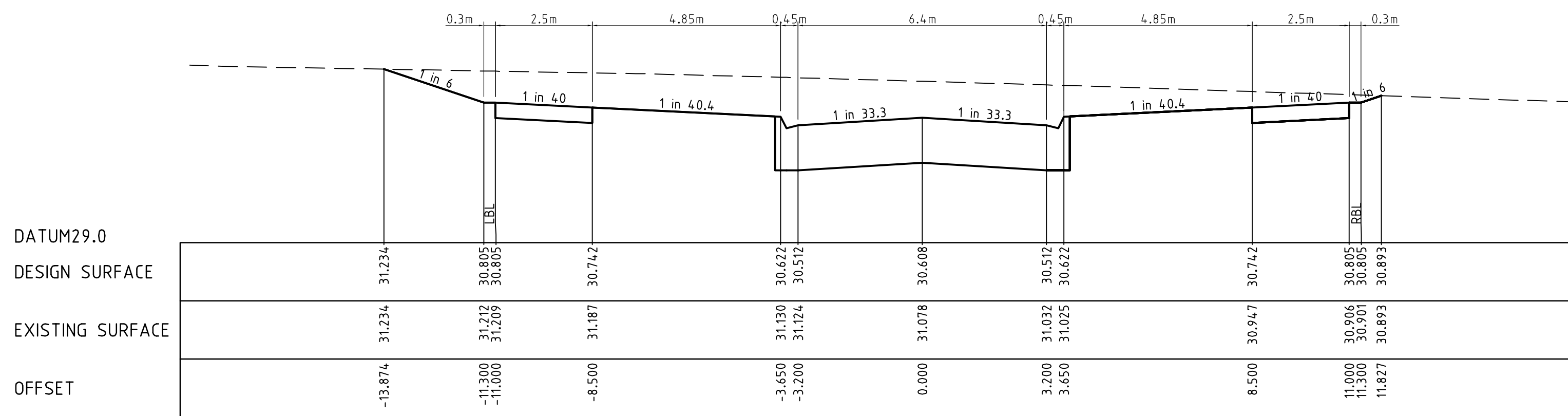


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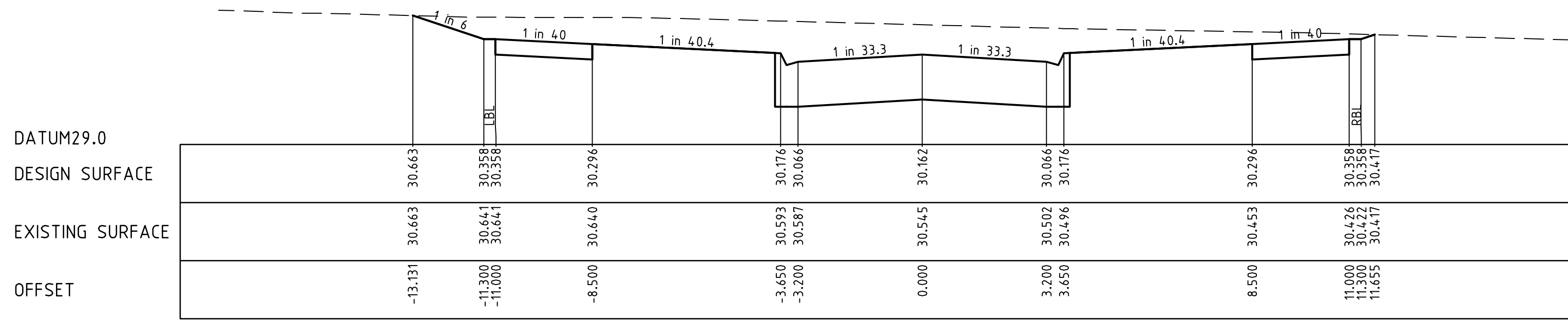


Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Estuary Boulevard  
Ch470.322-Ch537.327  
Drawing No. 0250EHL-06-15 Rev C  
Sheet No. 15 of 28  
Approved for Construction

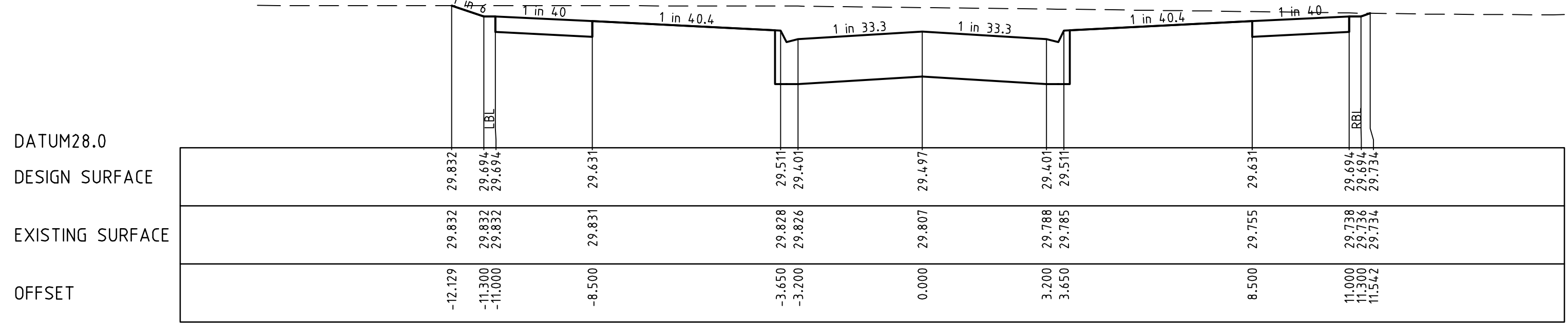
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—	DESIGN LINE
---	FUTURE DESIGN LINE



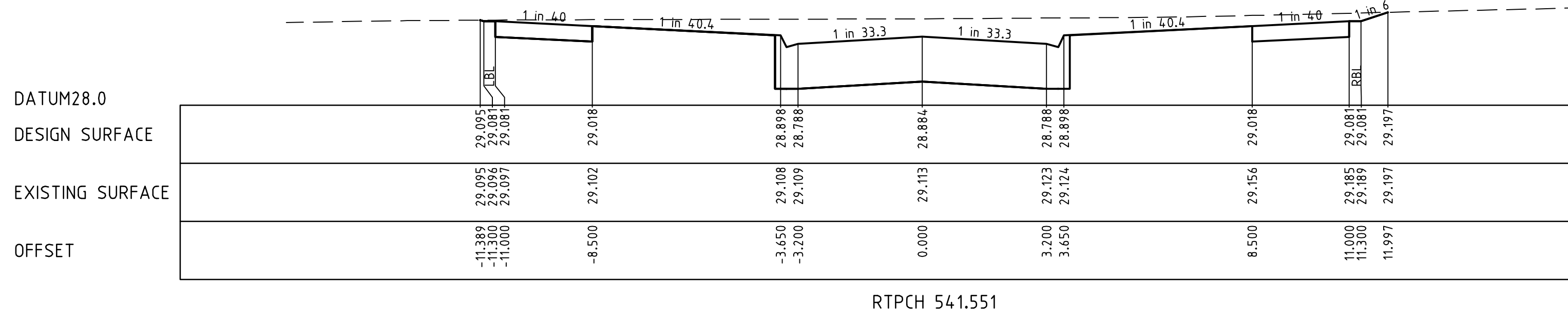
LTPCH 593.443



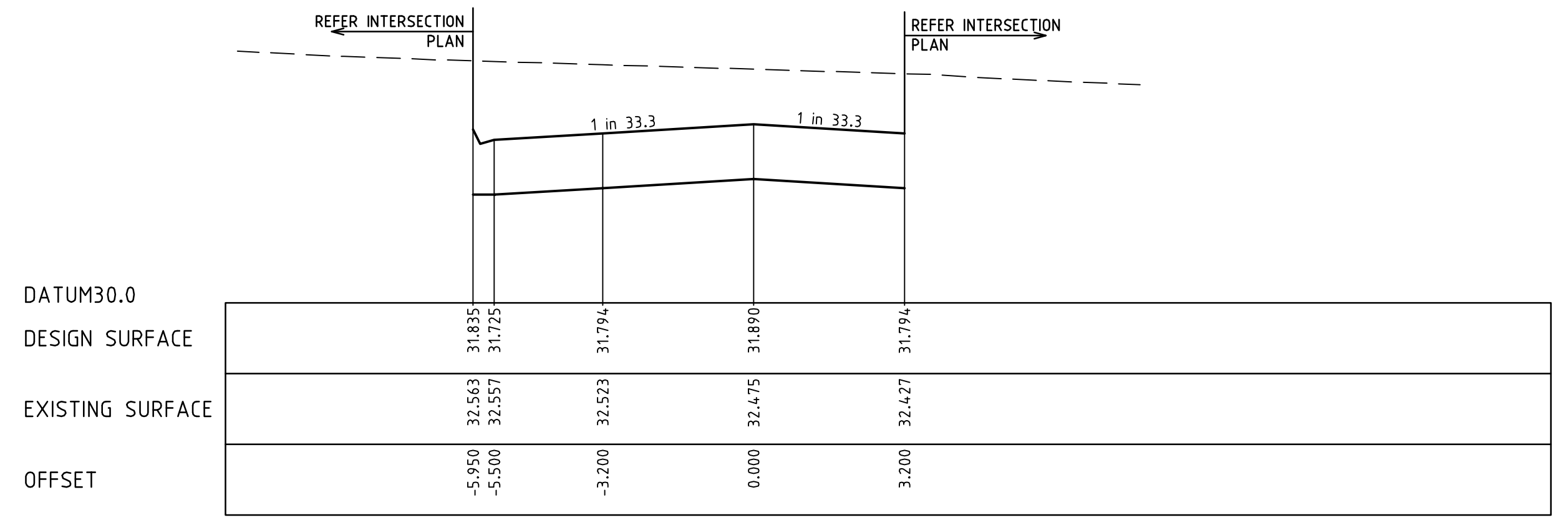
CH 580.000



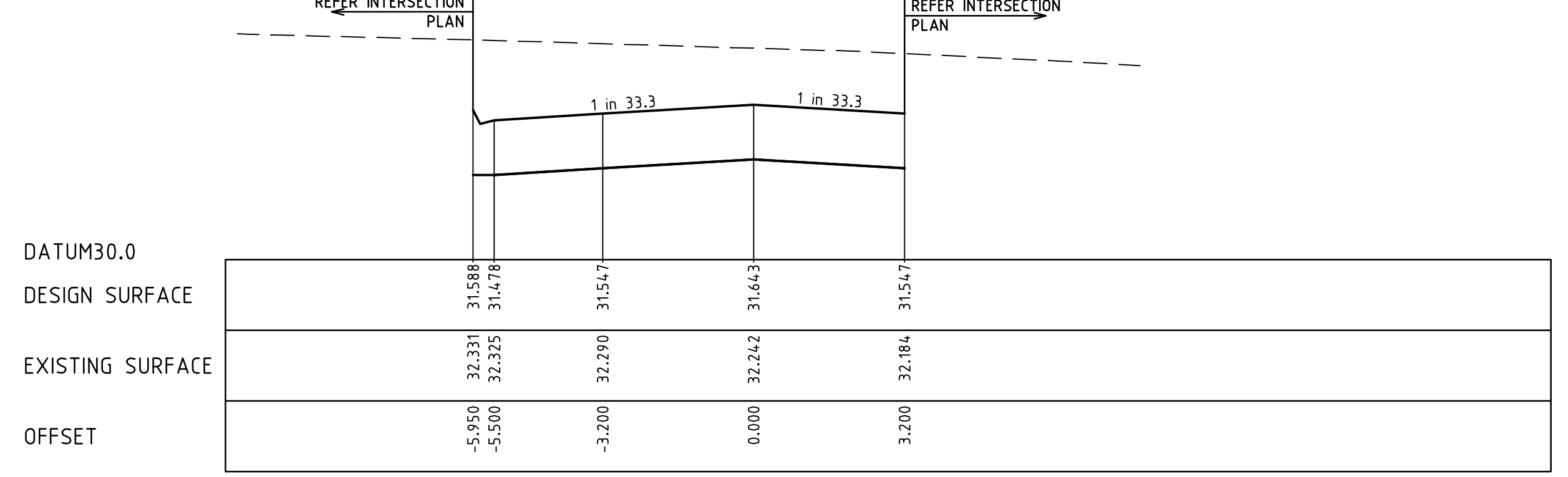
CH 560.000



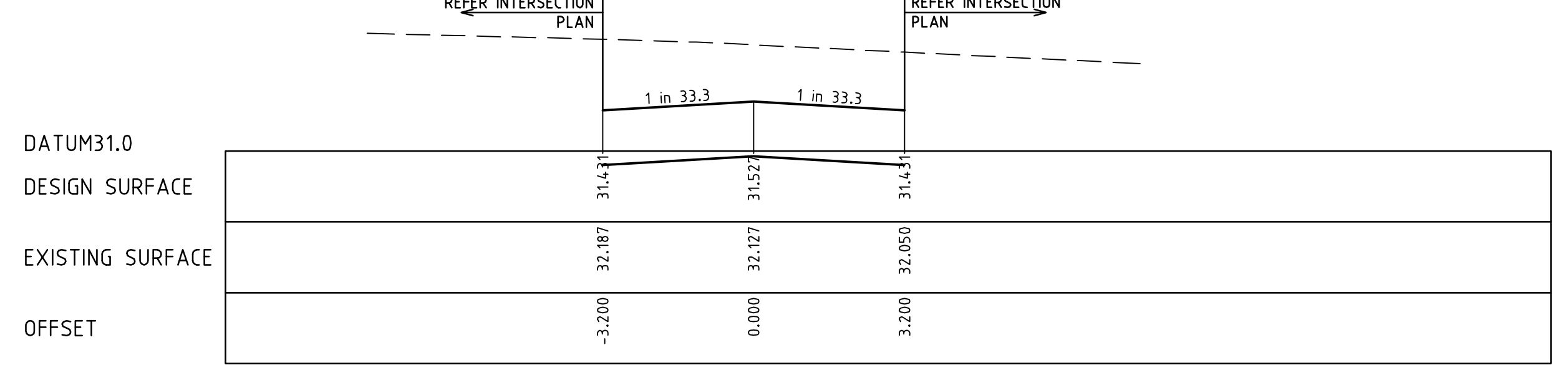
RTPCH 541.551



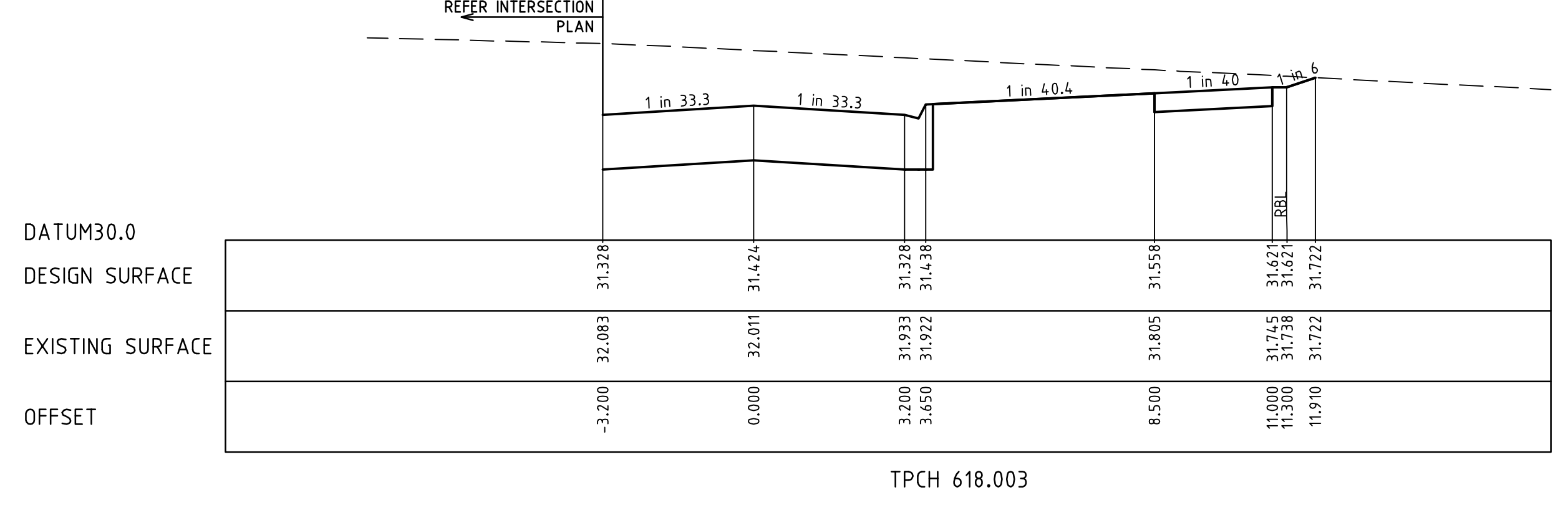
CH 632.025



LTPCH 624.591



LTPCH 621.097

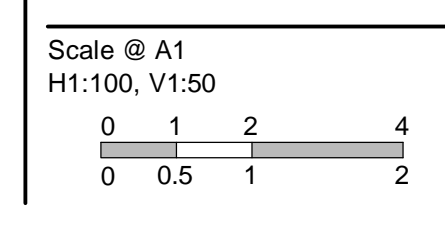


TPCH 618.003

REVISION	DATE	DES/DT	APPD
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
A	01.03.11	CB/CB	JG

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
  
Authorised  
J. Golden  
Date  
December 2010



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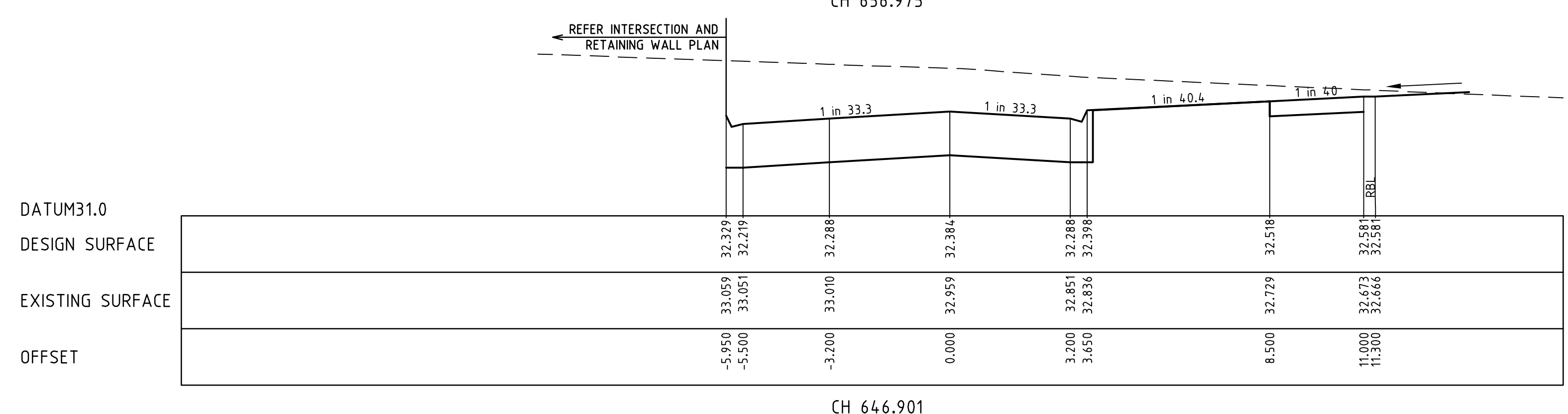
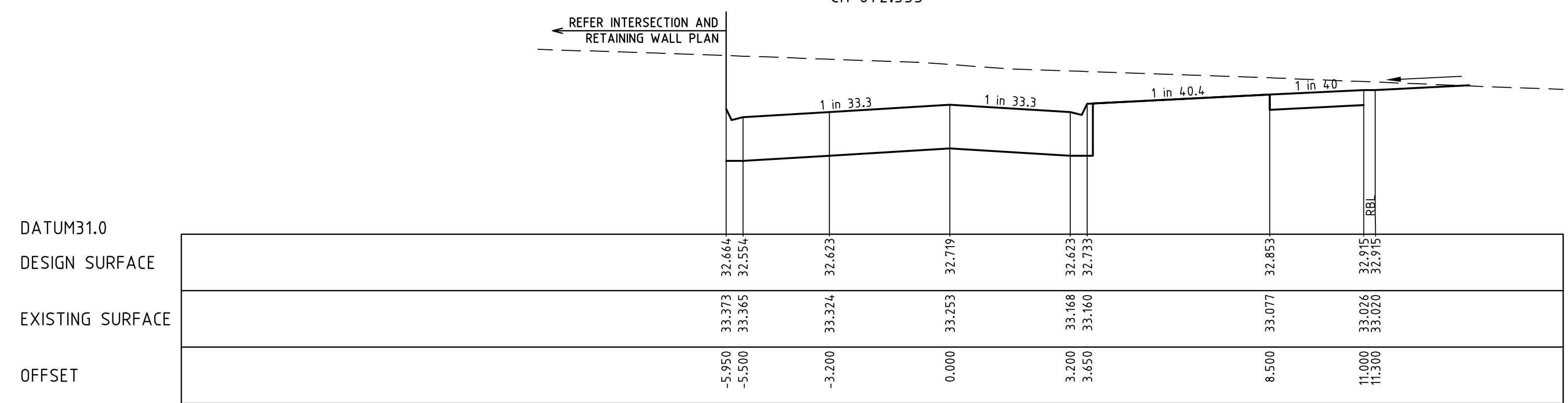
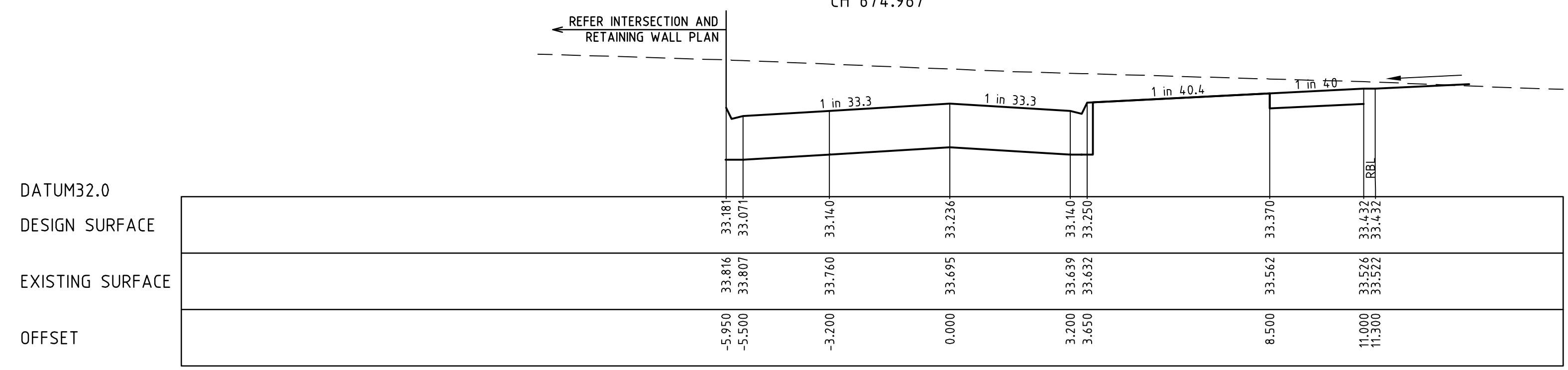
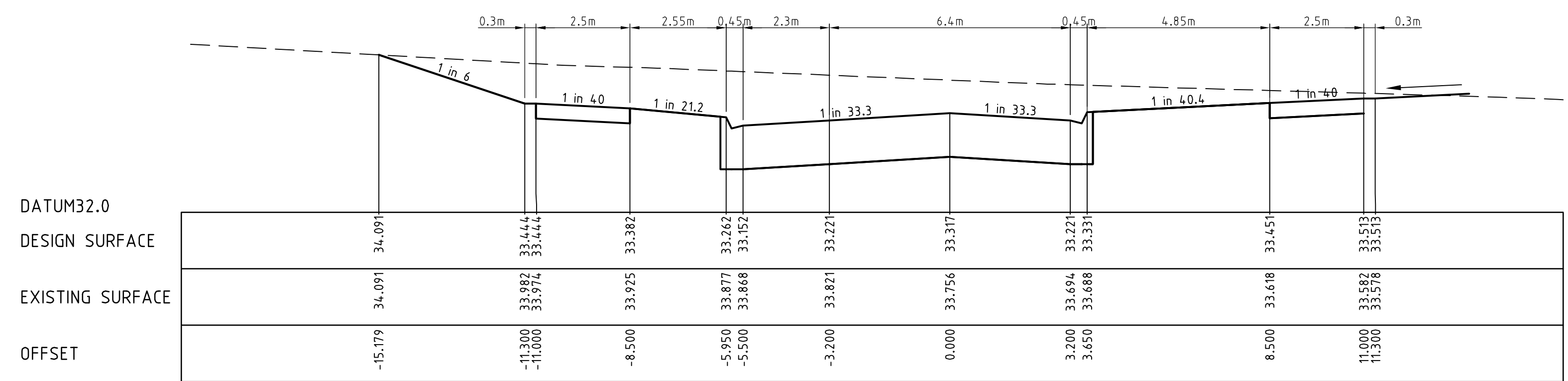
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Gold Coast +61 7 5578 0222  
Melbourne +61 3 9869 0800  
Traralgon +61 3 5173 0100

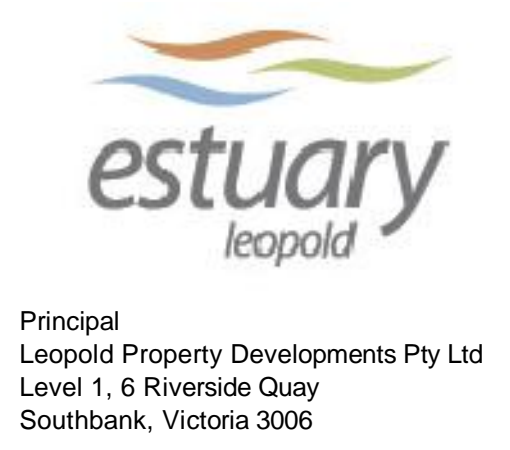
**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Estuary Boulevard  
Ch541.551-Ch632.025  
**Drawing No. 0250EHL-06-16**      **Rev C**  
Sheet No. 16 of 28  
**Approved for Construction**



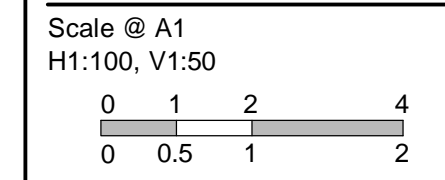
---	EXISTING SURFACE
—	DESIGN LINE
---	FUTURE DESIGN LINE



REVISION	DATE	DES/DFE	APPD
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
A	01.03.11	CB/CB	JG



Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birckett  
Authorised  
J. Golden  
Date  
December 2010



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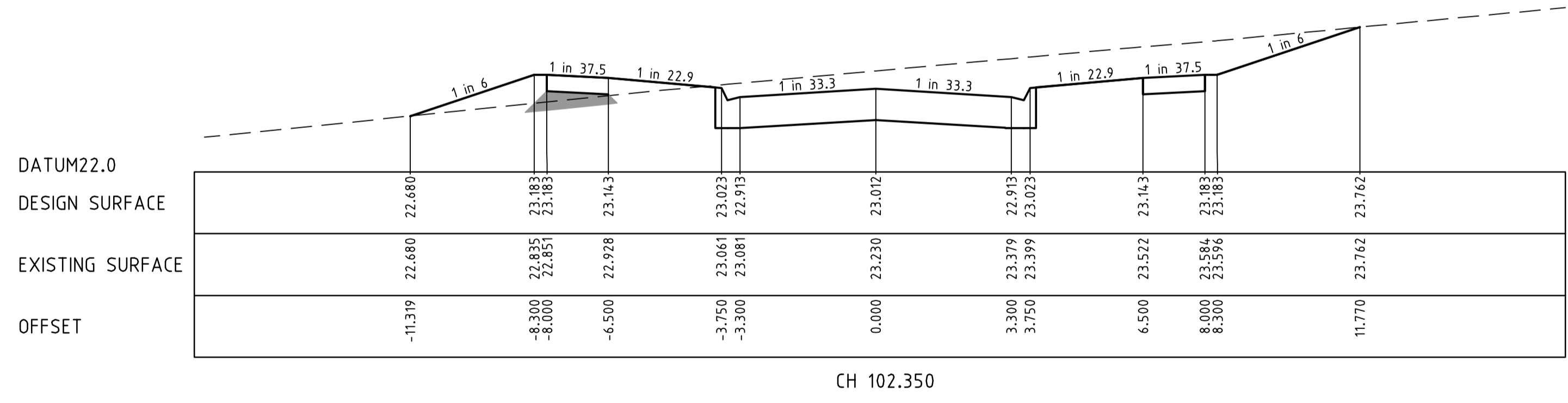
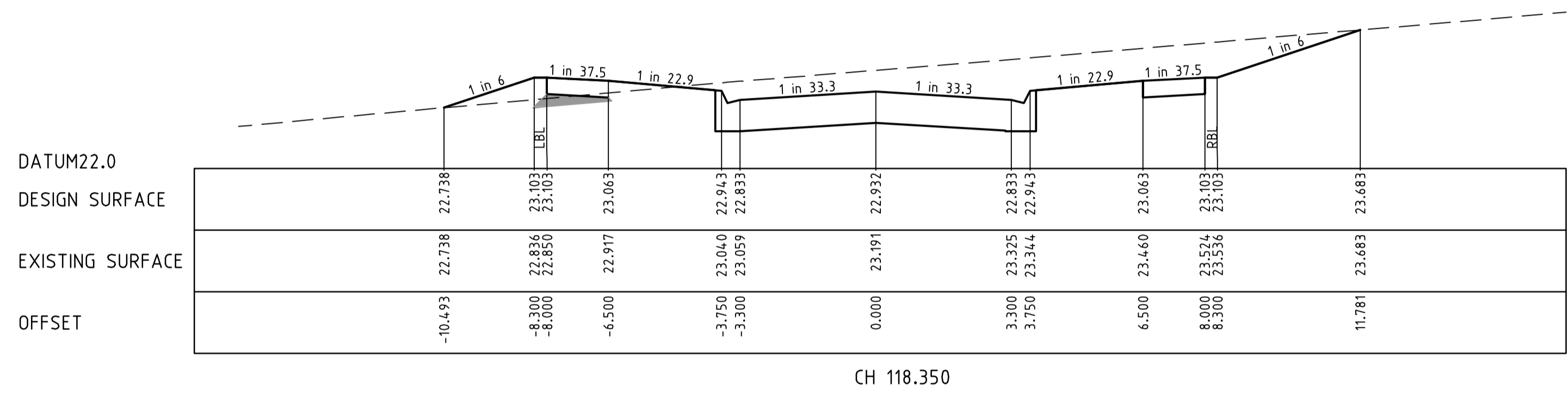
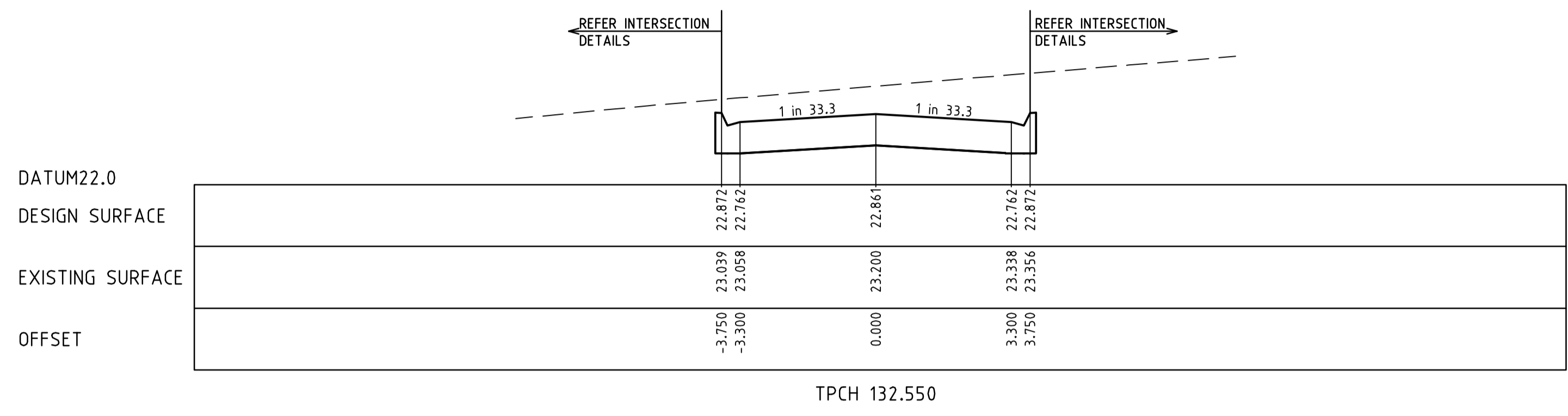
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Brisbane +61 7 3831 8988  
Carlisle +61 2 8126 1900  
Gold Coast +61 7 5578 0222  
Melbourne +61 3 9869 0800  
Tarragon +61 3 5173 0100

**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Estuary Boulevard  
Ch646.901-Ch674.967  
**Drawing No. 0250EHL-06-17** **Rev C**  
Sheet No. 17 of 28

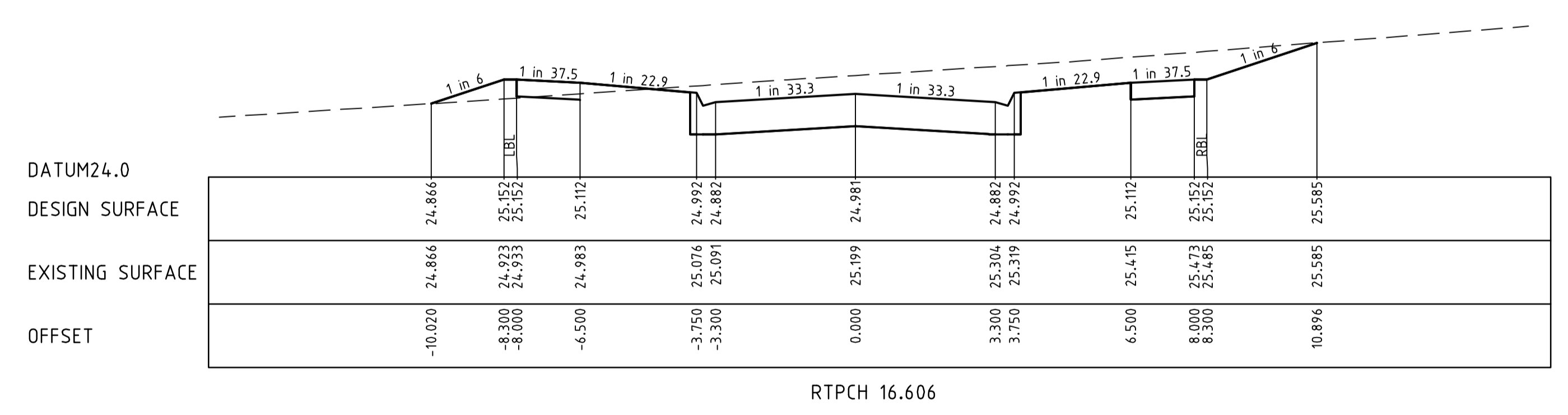
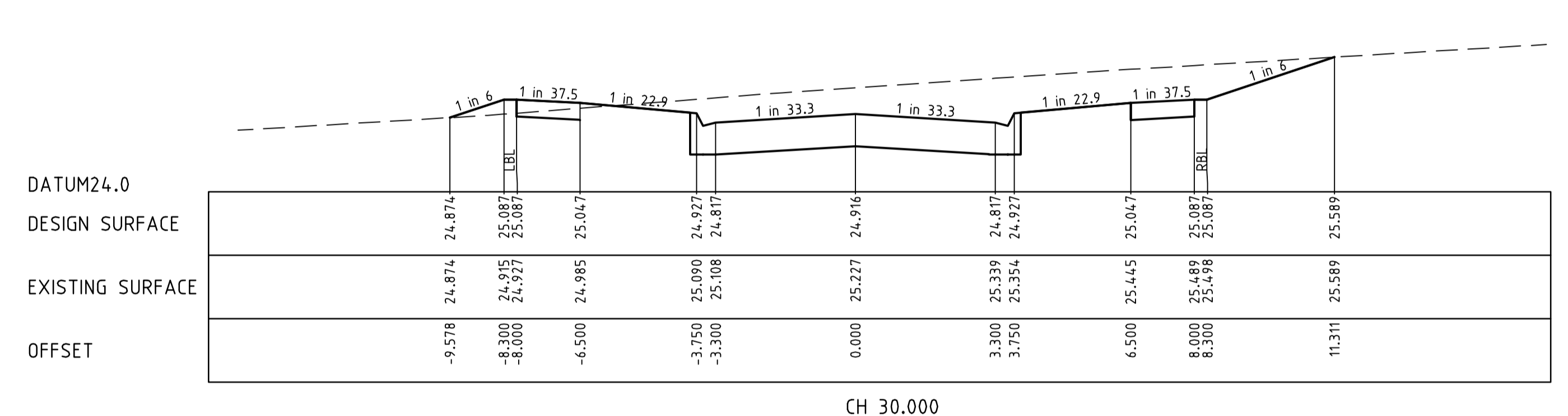
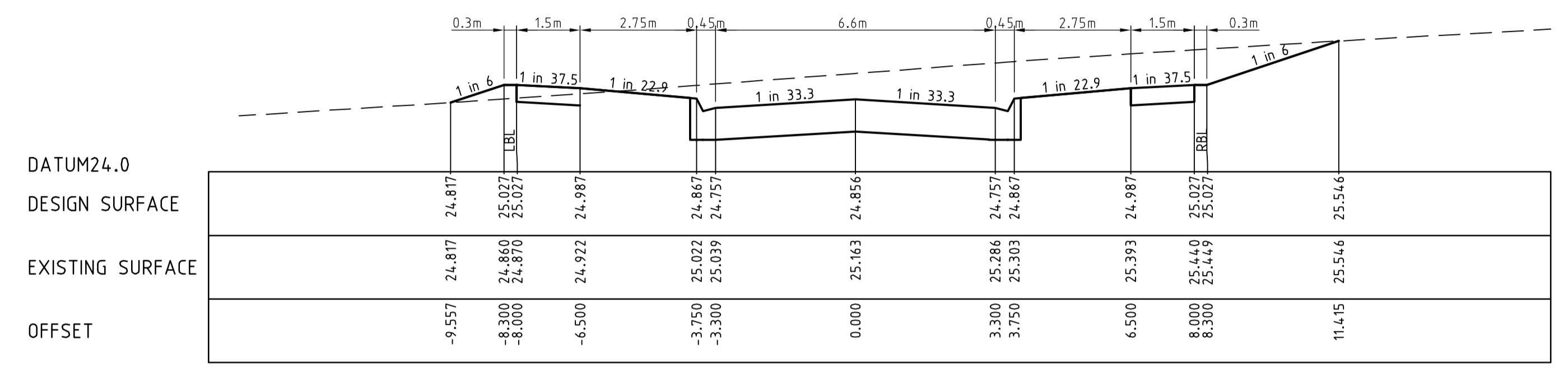
Approved for Construction

---	EXISTING SURFACE
---	DESIGN LINE
---	FUTURE DESIGN LINE

STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE

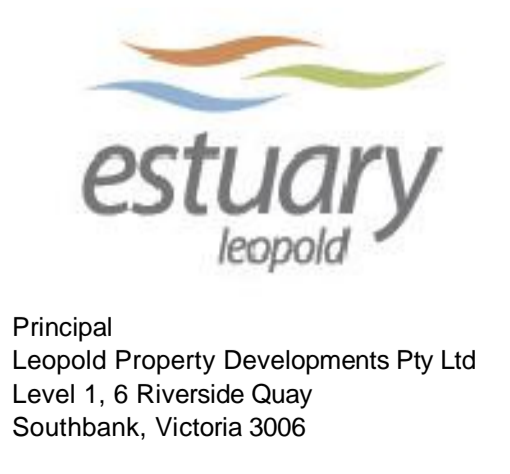


CROSS SECTIONS - HEADLAND DRIVE

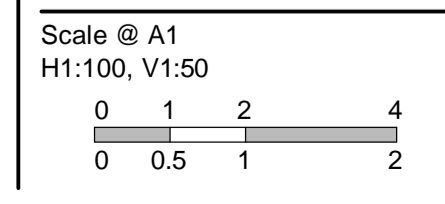


CROSS SECTIONS - CASY GROVE

REVISION	DATE	DESIGNER	APP'D
D ROAD NAMES AMENDED	16.11.11	CB/AH	JG
C ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG



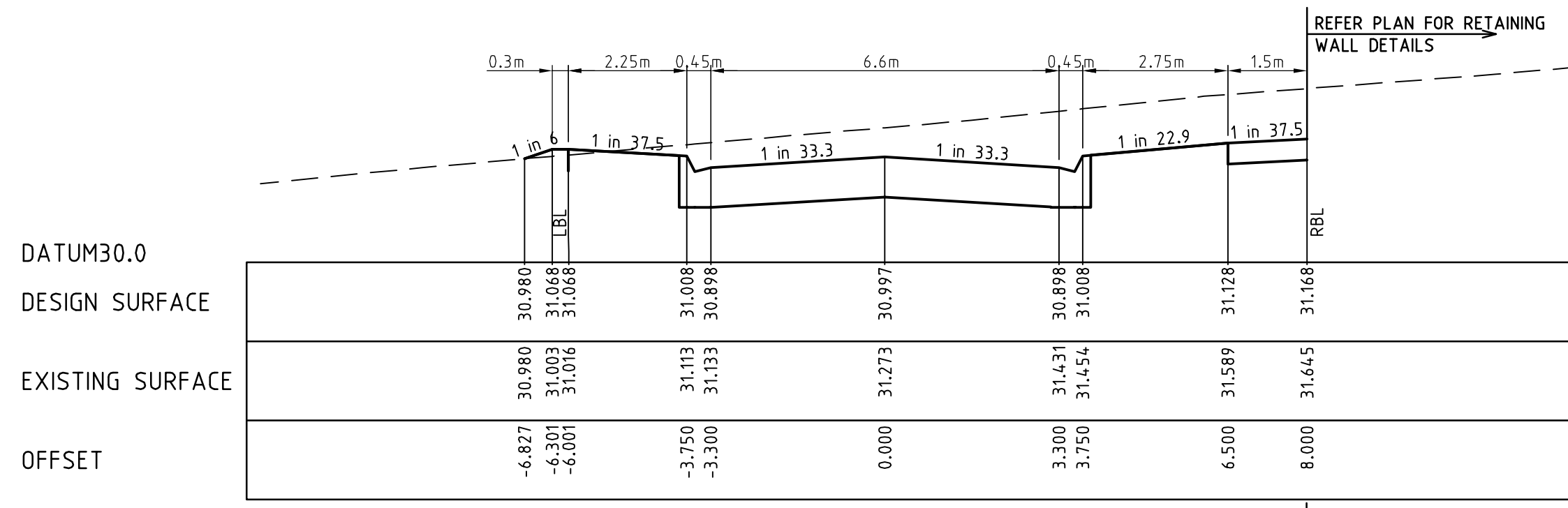
Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010



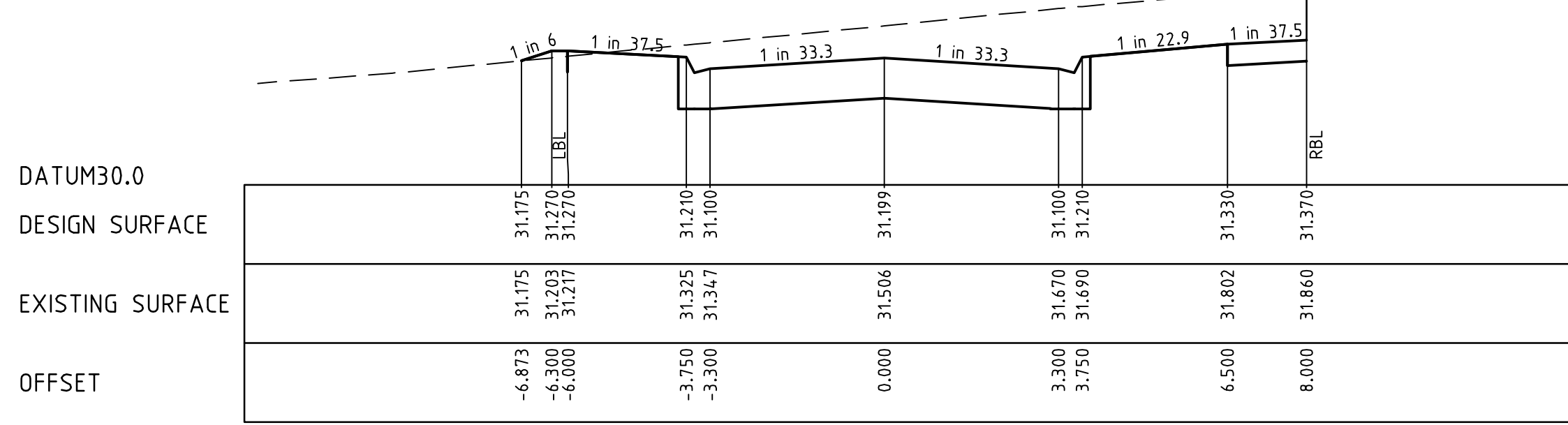
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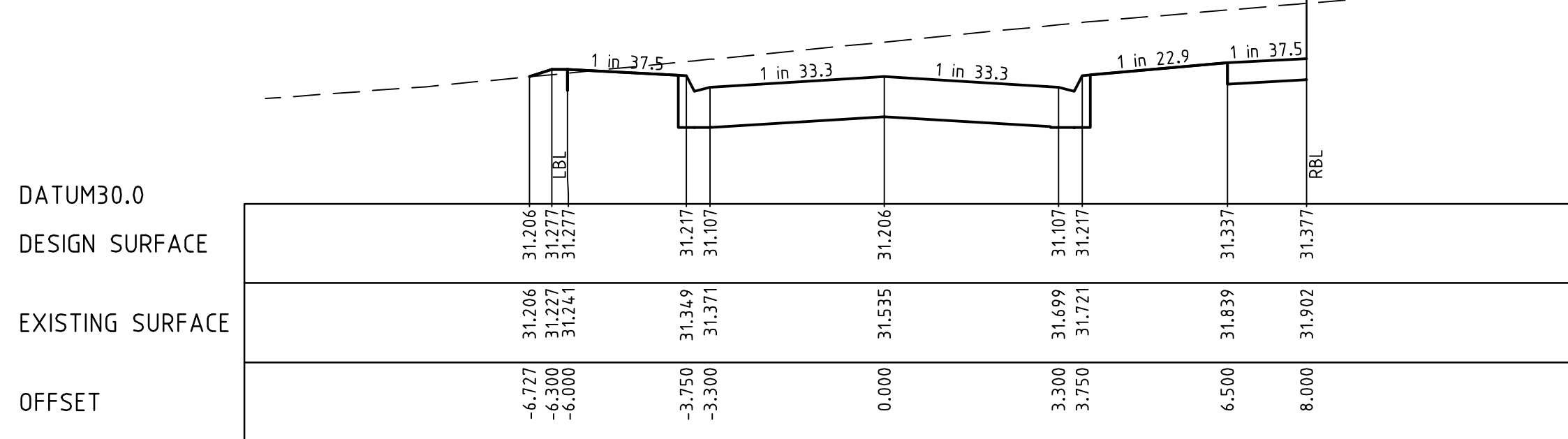
Estuary  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Headland Drive and Casy Grove  
Drawing No. 0250EHL-06-18 Rev D  
Sheet No. 18 of 28  
Approved for Construction



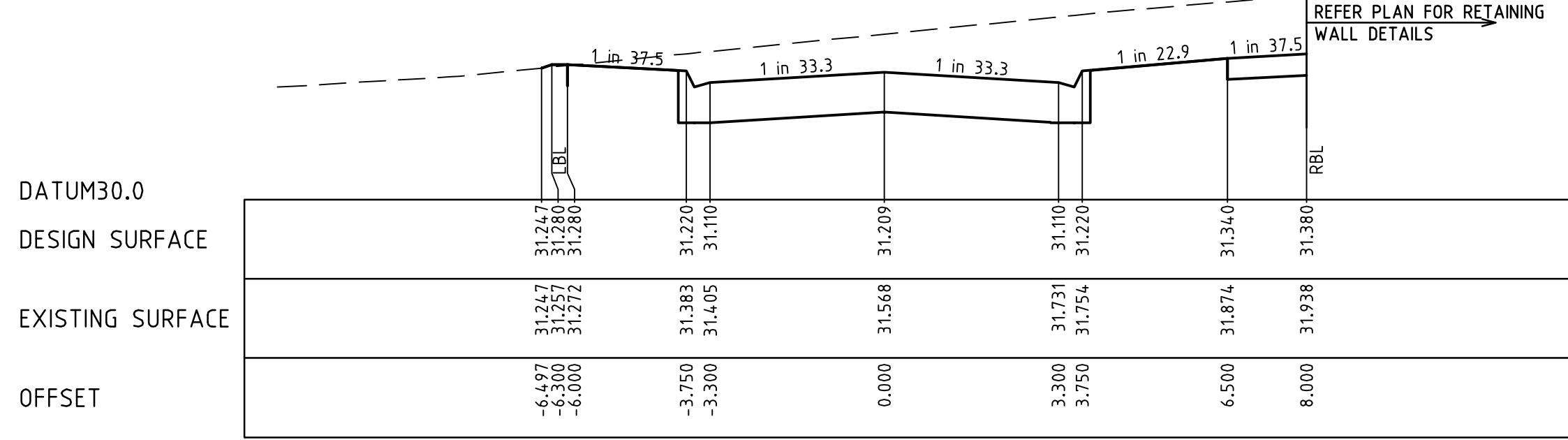
CH 54.479



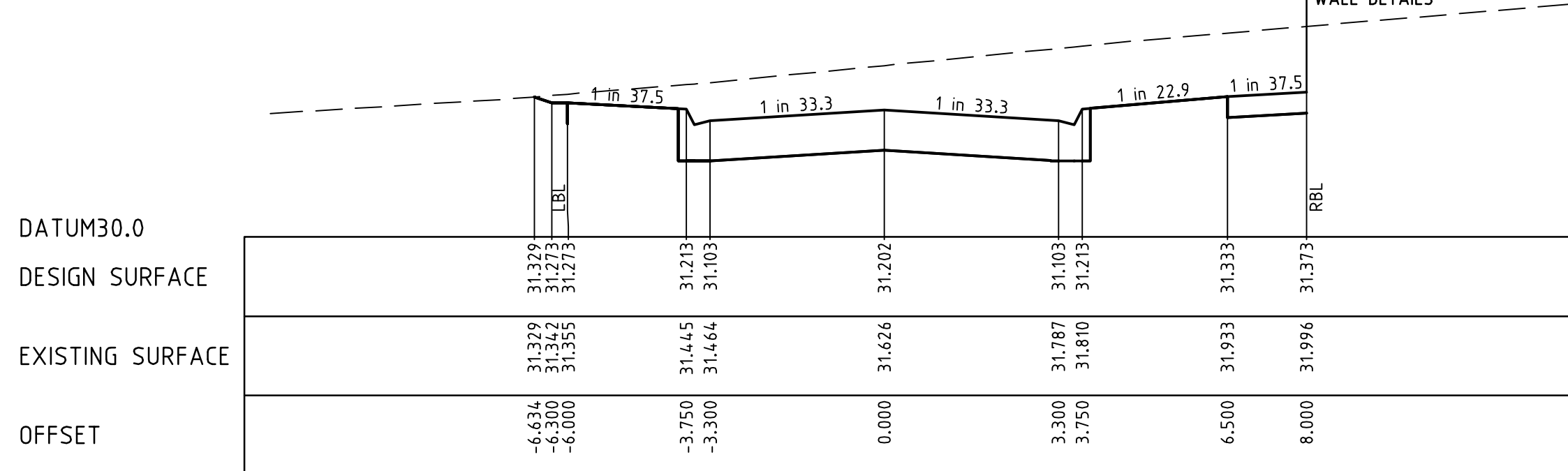
CH 35.488



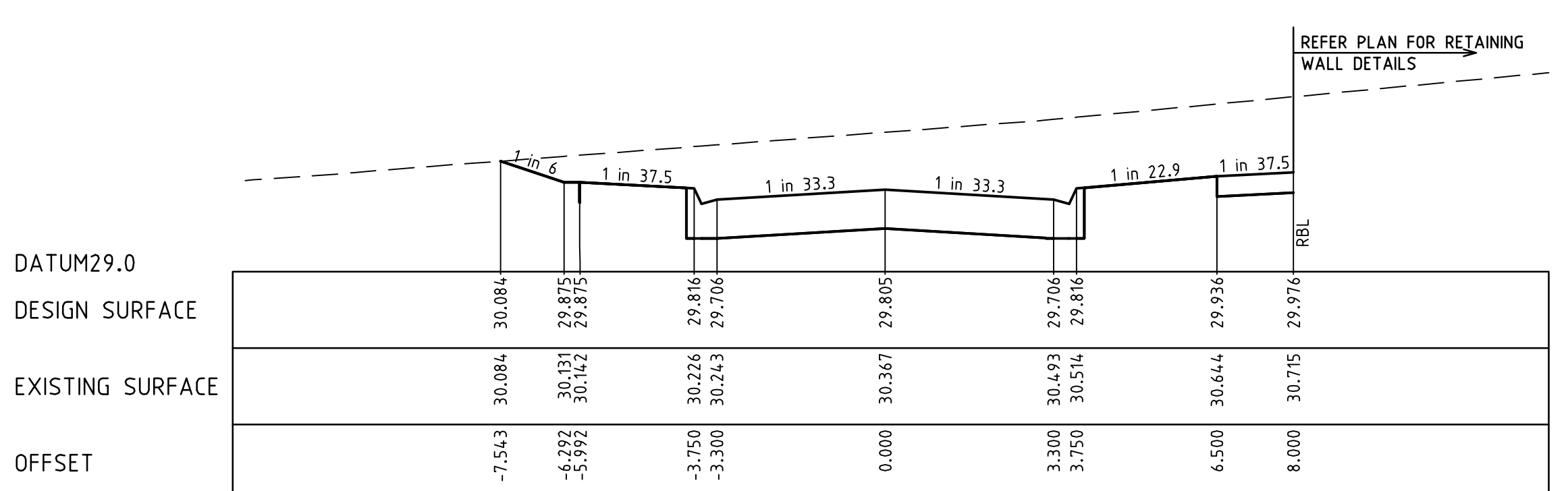
CH 33.030



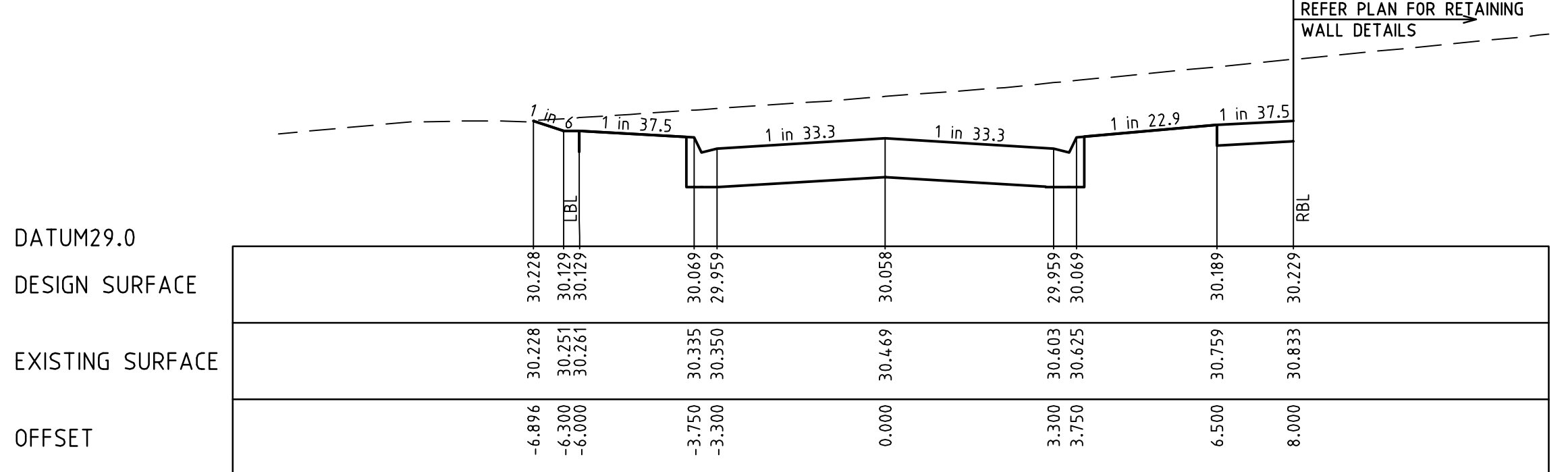
CH 30.429



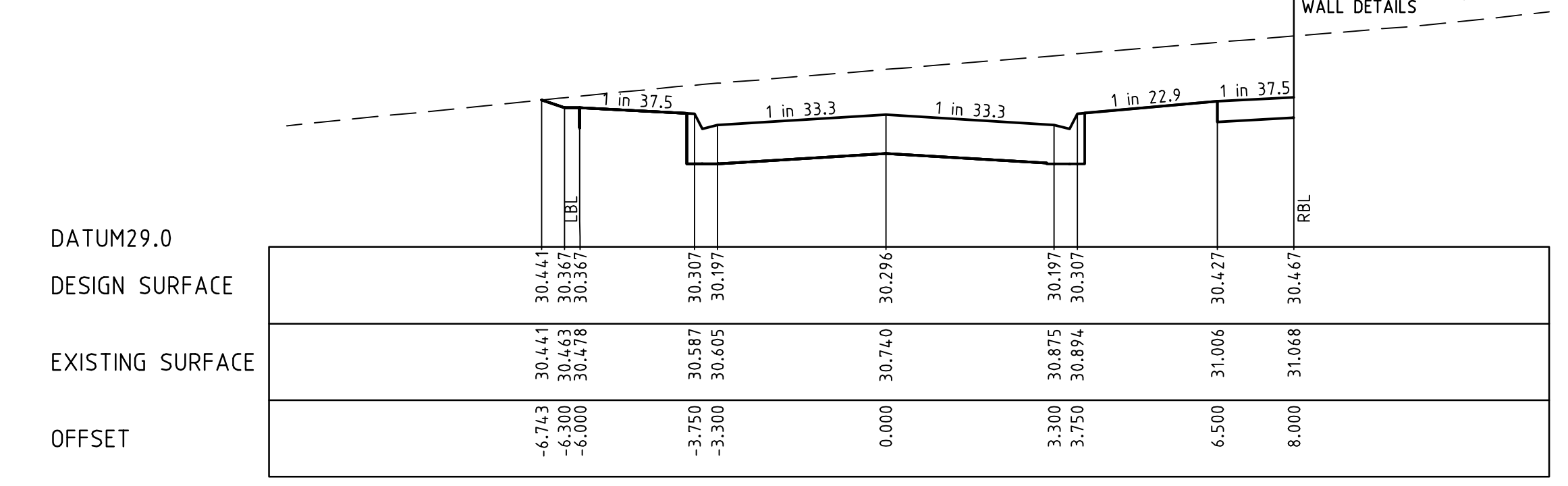
LTPCH 26.281



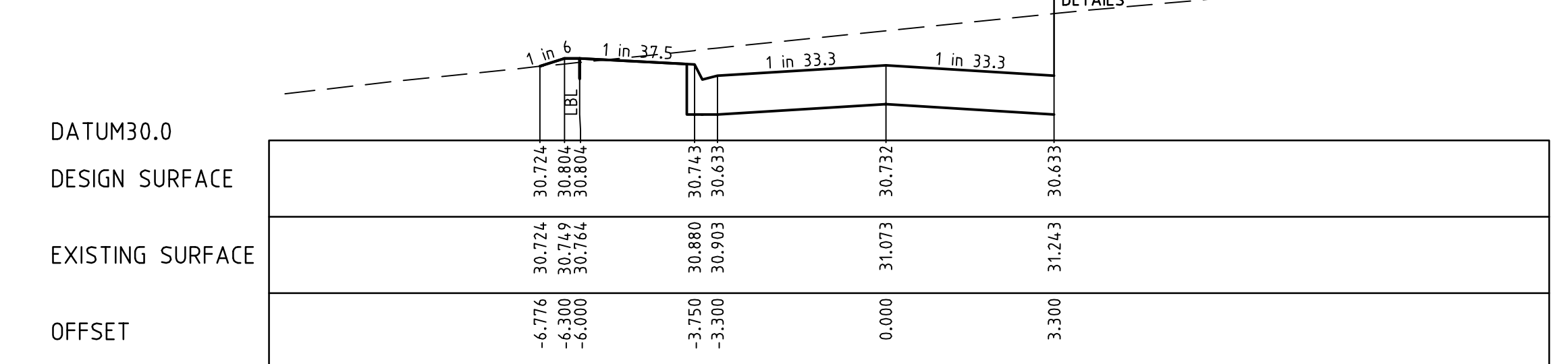
CH 124.997



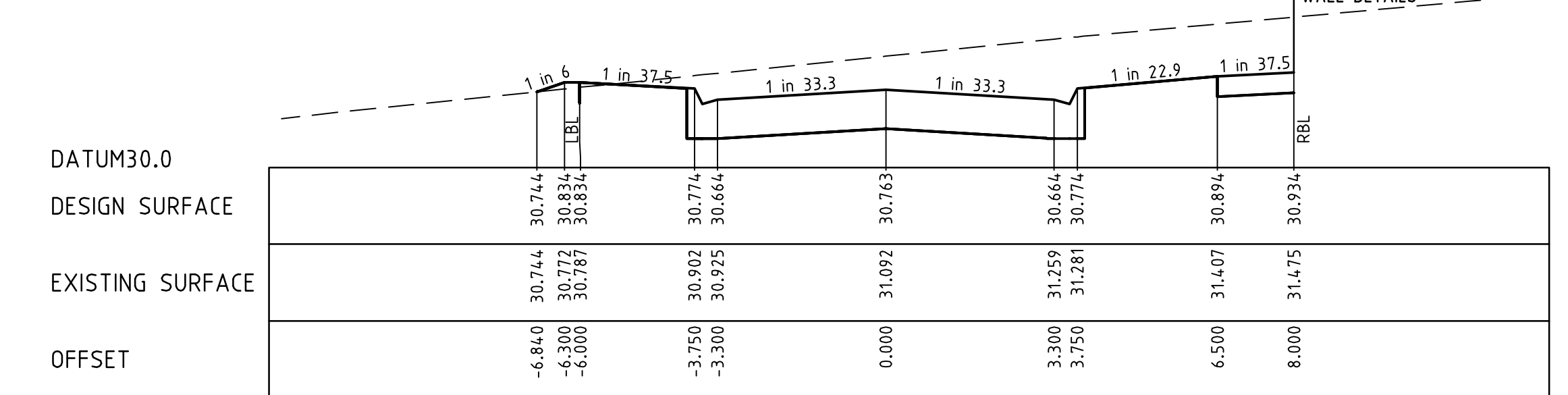
CH 110.000



RTPCH 95.939



CH 70.106

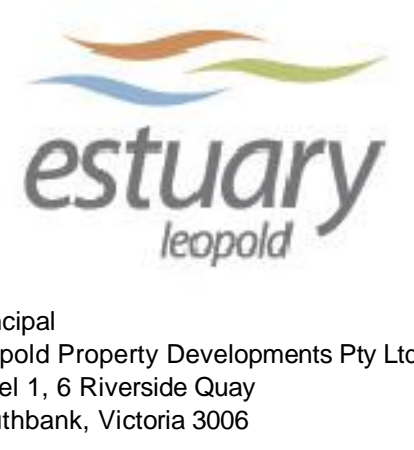


RTPCH 68.304

LEGEND

- EXISTING SURFACE
- DESIGN LINE
- FUTURE DESIGN LINE

REVISION	DATE	DES/DT	APPD
C ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A ISSUED TO COUNCIL FOR APPROVAL	01.03.10	CB/CB	JG



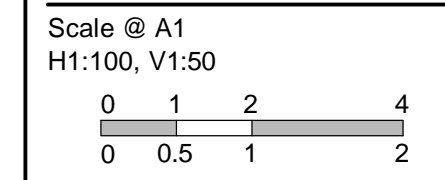
Designed  
C. Barker

Drawn  
C. Barker

Checked  
C. Birckett

Authorised  
J. Golden

Date  
December 2010



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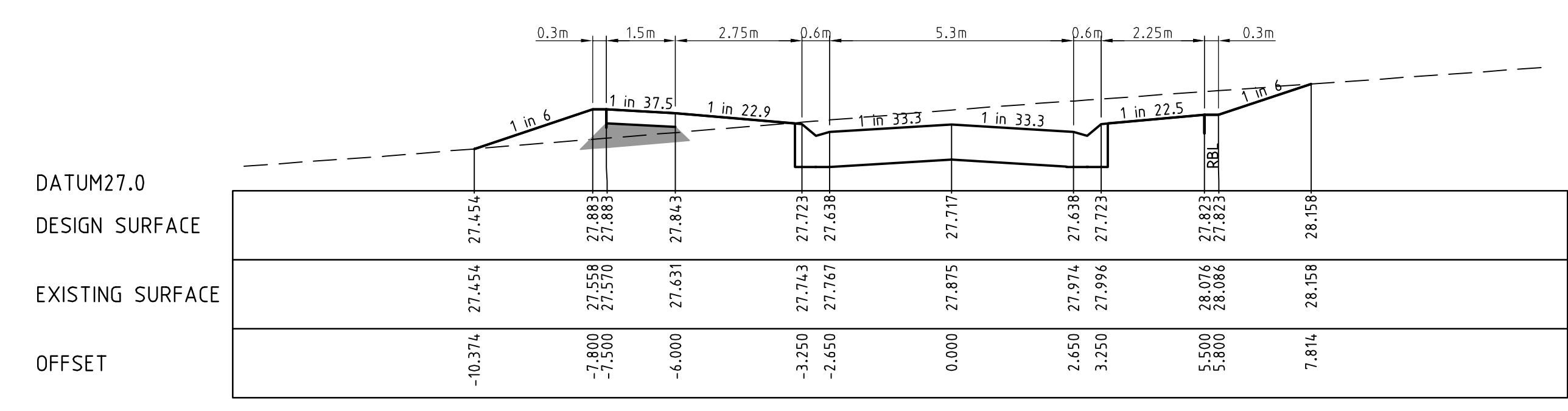
Estuary  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Fairvista Avenue

Drawing No. 0250EHL-06-19 Rev C  
Sheet No. 19 of 28

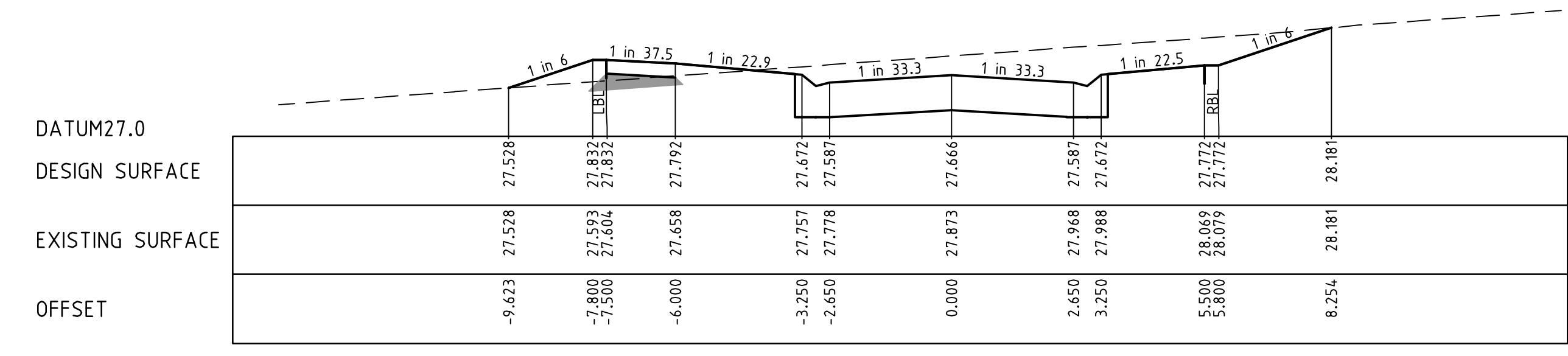
Approved for Construction

---	EXISTING SURFACE
---	DESIGN LINE
---	FUTURE DESIGN LINE

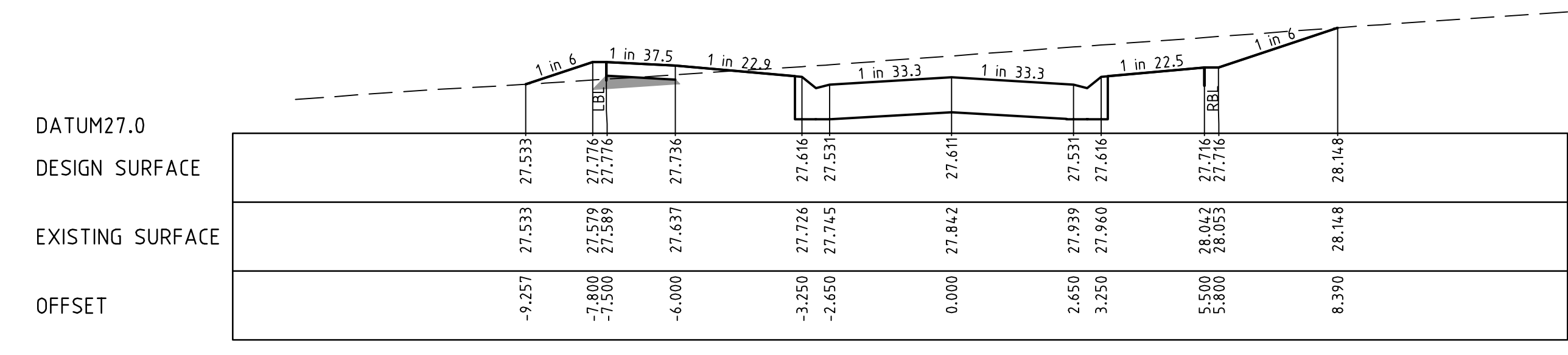
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE



CH 42.451



CH 30.000

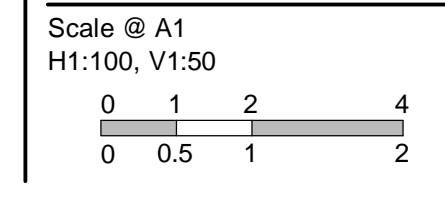


RTPCH 16.434

REVISION	DATE	DES/DT	APPD
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
A	01.03.11	CB/CB	JG

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010



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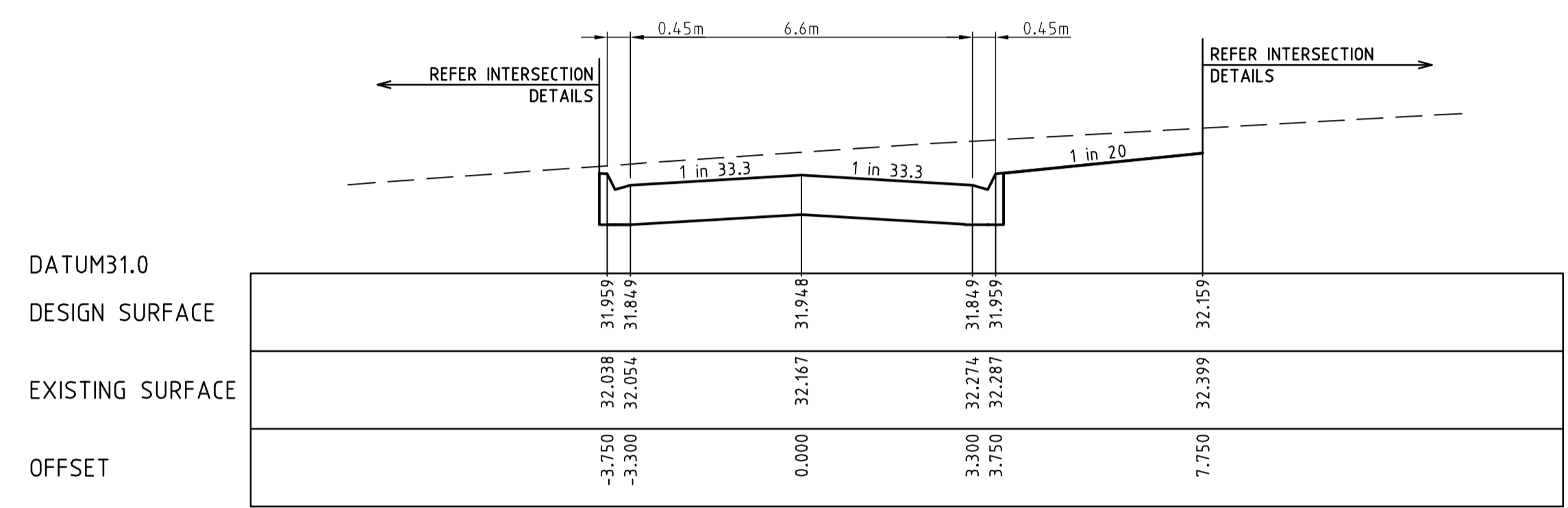
smec urban consulting group  
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Tarragon +61 3 5173 0100

**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Ila Drive

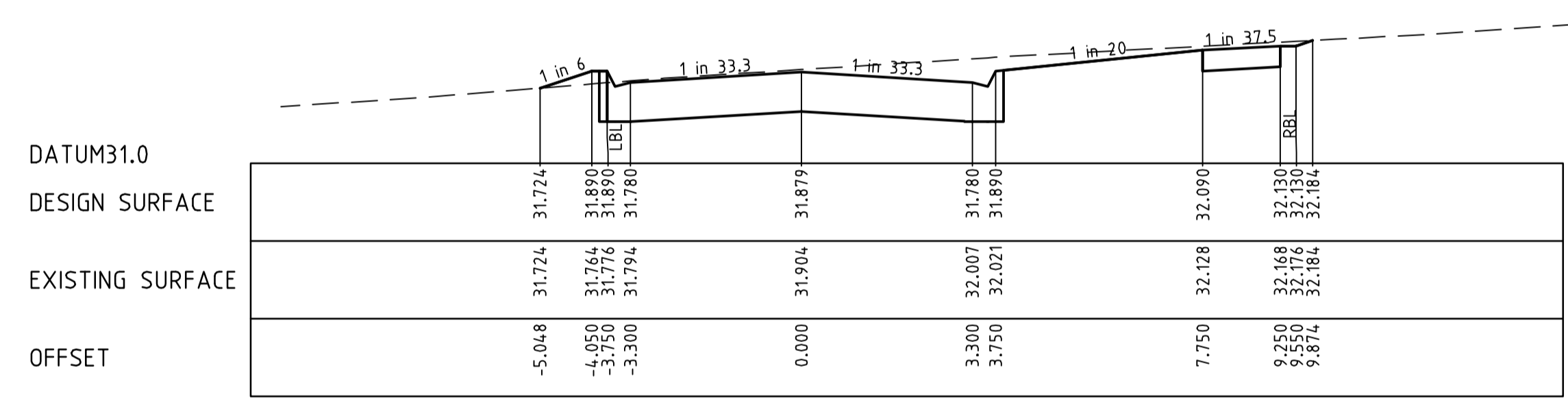
Drawing No. **0250EHL-06-20** Rev **C**  
Sheet No. 20 of 28

Approved for Construction

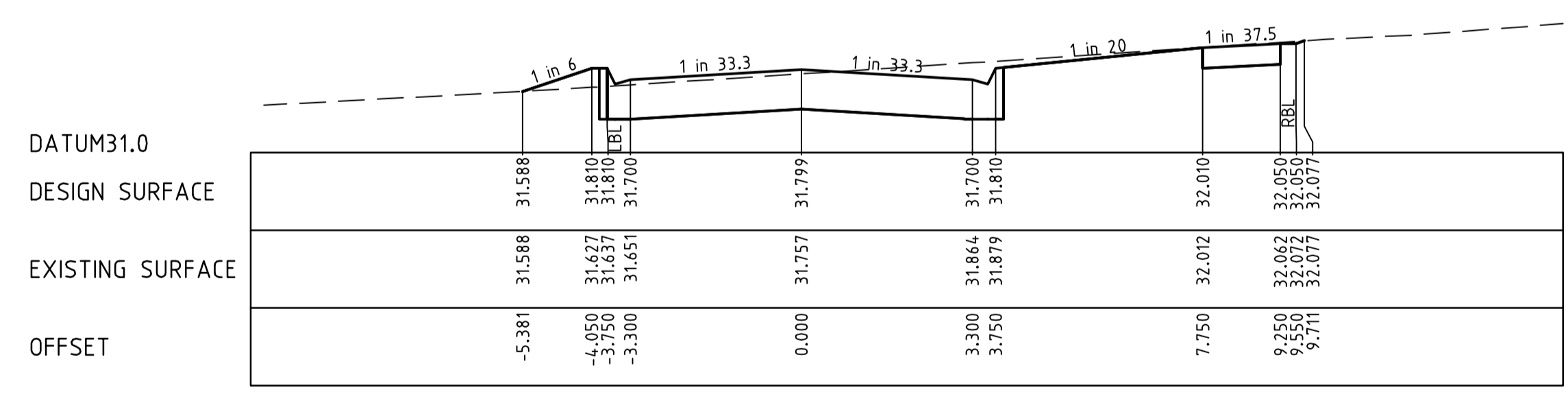
---	EXISTING SURFACE
---	DESIGN LINE
---	FUTURE DESIGN LINE



LTPCH 226.957

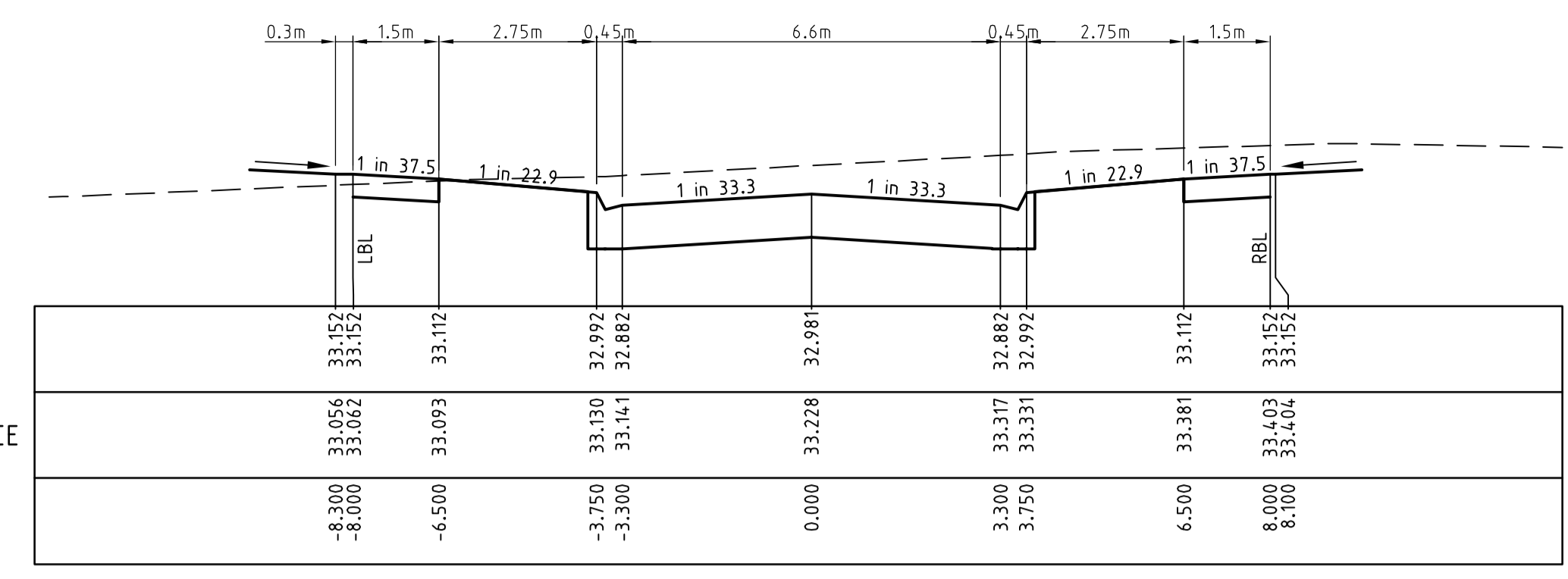


CH 213.259

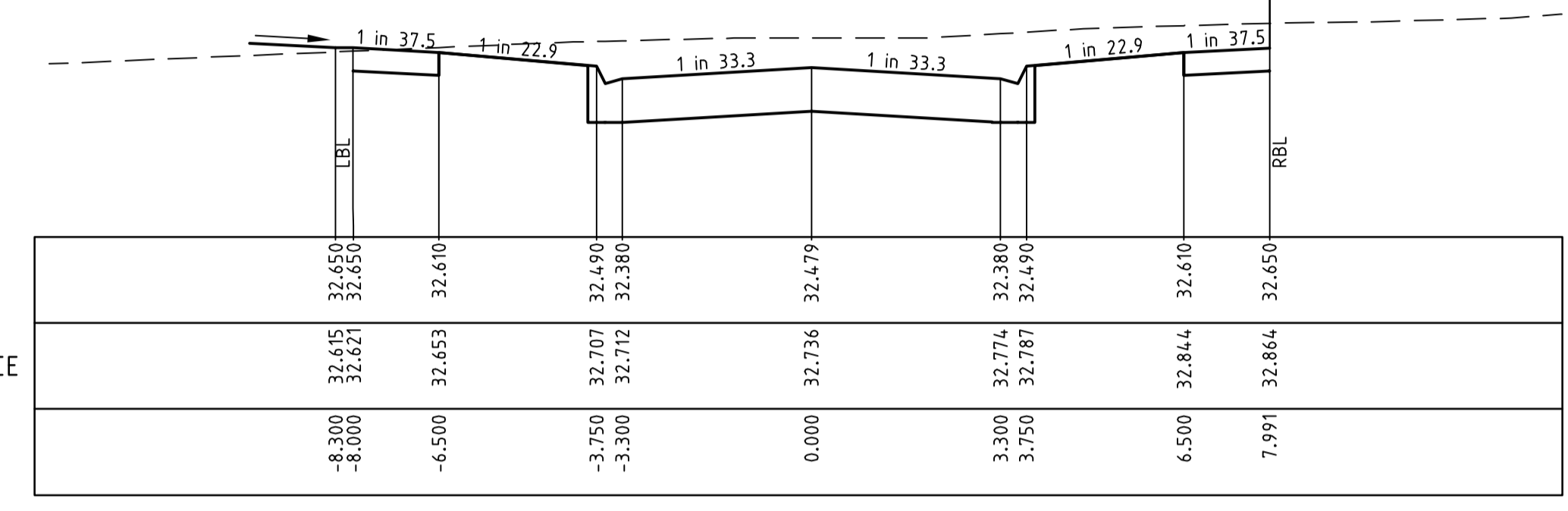


CH 197.259

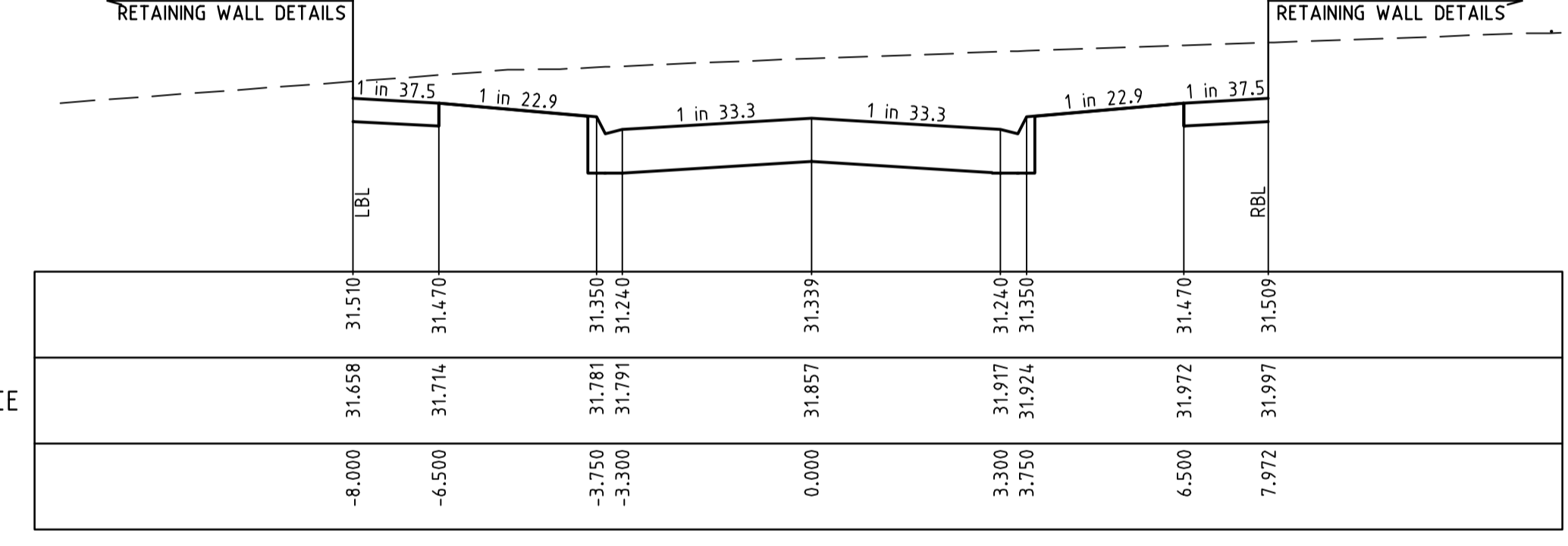
CROSS SECTIONS - SEAGRASS STREET



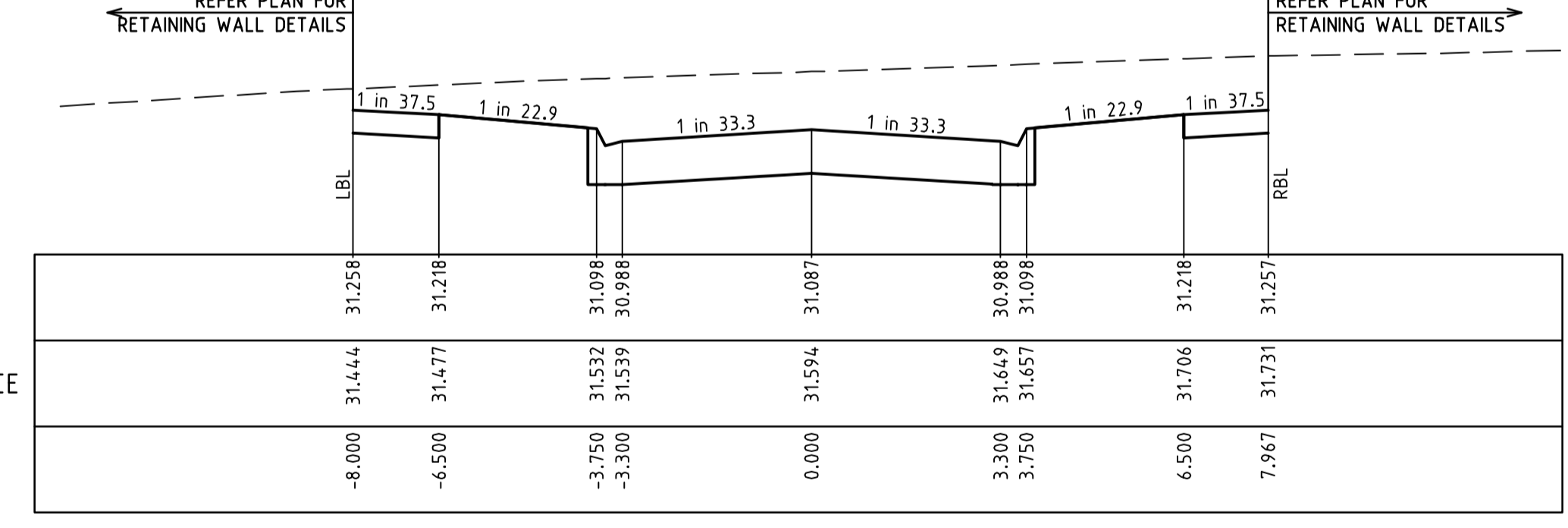
CH 48.655



CH 40.000



CH 20.000



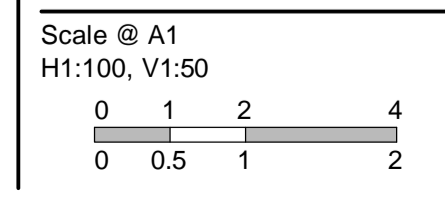
LTPCH 14.269

CROSS SECTIONS - BELLRISE DRIVE

REVISION				
D	ROAD NAMES AMENDED	16.11.11	CB/AH	JG
C	ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B	COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A	ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG
		DATE	DES/DT	APP/D

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010



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Gold Coast +61 7 5578 0222  
Melbourne +61 3 9869 0800  
Trawalgon +61 3 5173 0100

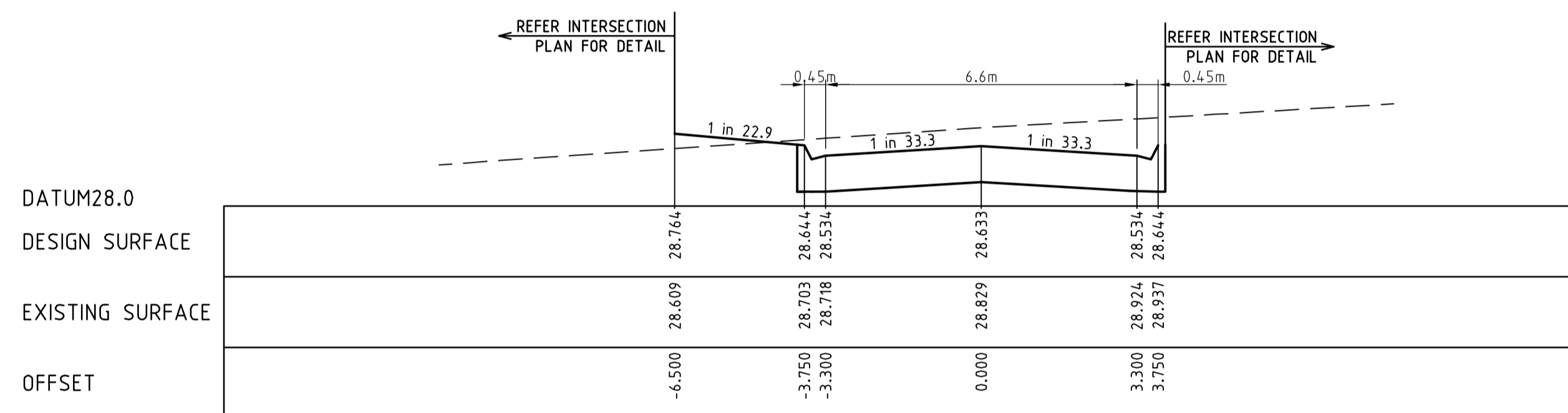
**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Seagrass Street and Bellrise Drive

Drawing No. **0250EHL-06-21** Rev **D**  
Sheet No. 21 of 28

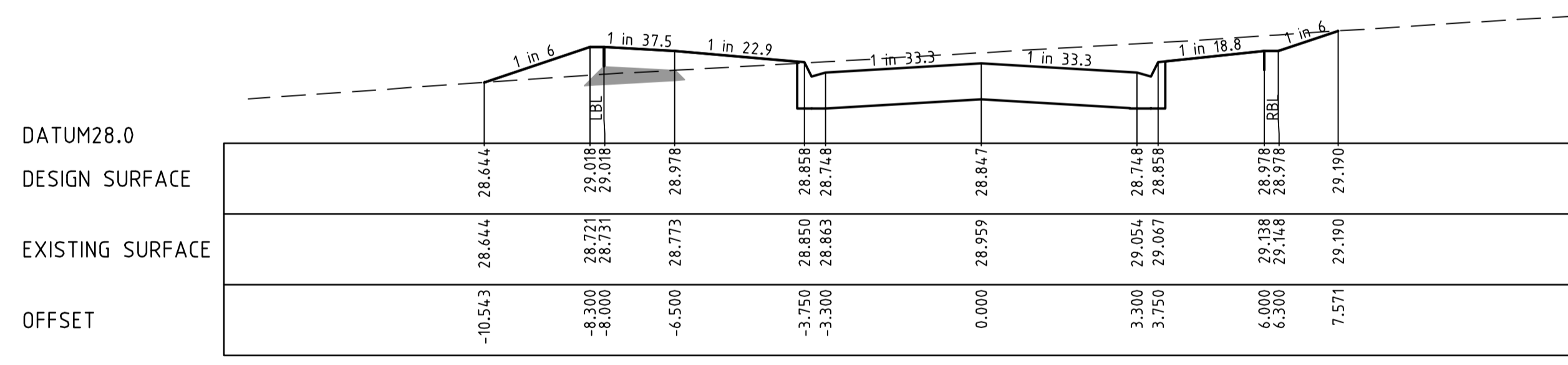
Approved for Construction

LEGEND	
---	EXISTING SURFACE
—	DESIGN LINE
- - -	FUTURE DESIGN LINE

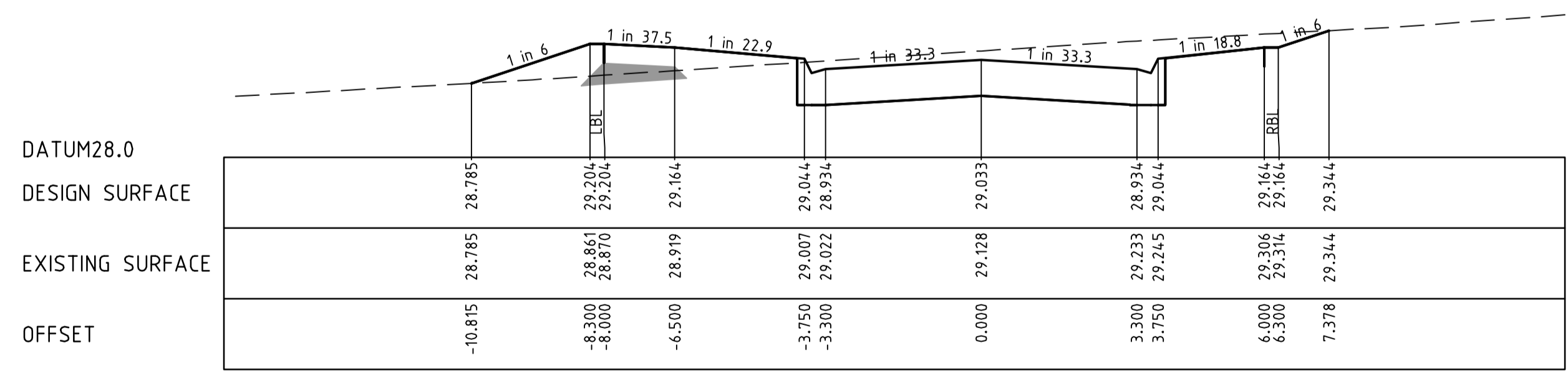
STRUCTURAL FILL REQUIRED UNDER PAVEMENT AND FOOTPATHS WHERE CONSTRUCTED ABOVE NATURAL SURFACE



TPCH 766.171



CH 750.000

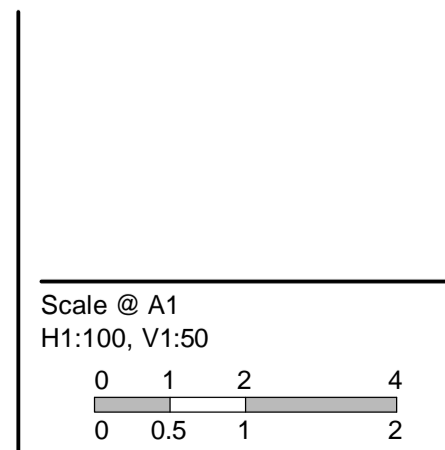


CH 735.971

REVISION	DATE	DES/DF	APP'D
D	16.11.11	CB/AH	JG
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
A	01.03.11	CB/CB	JG

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010



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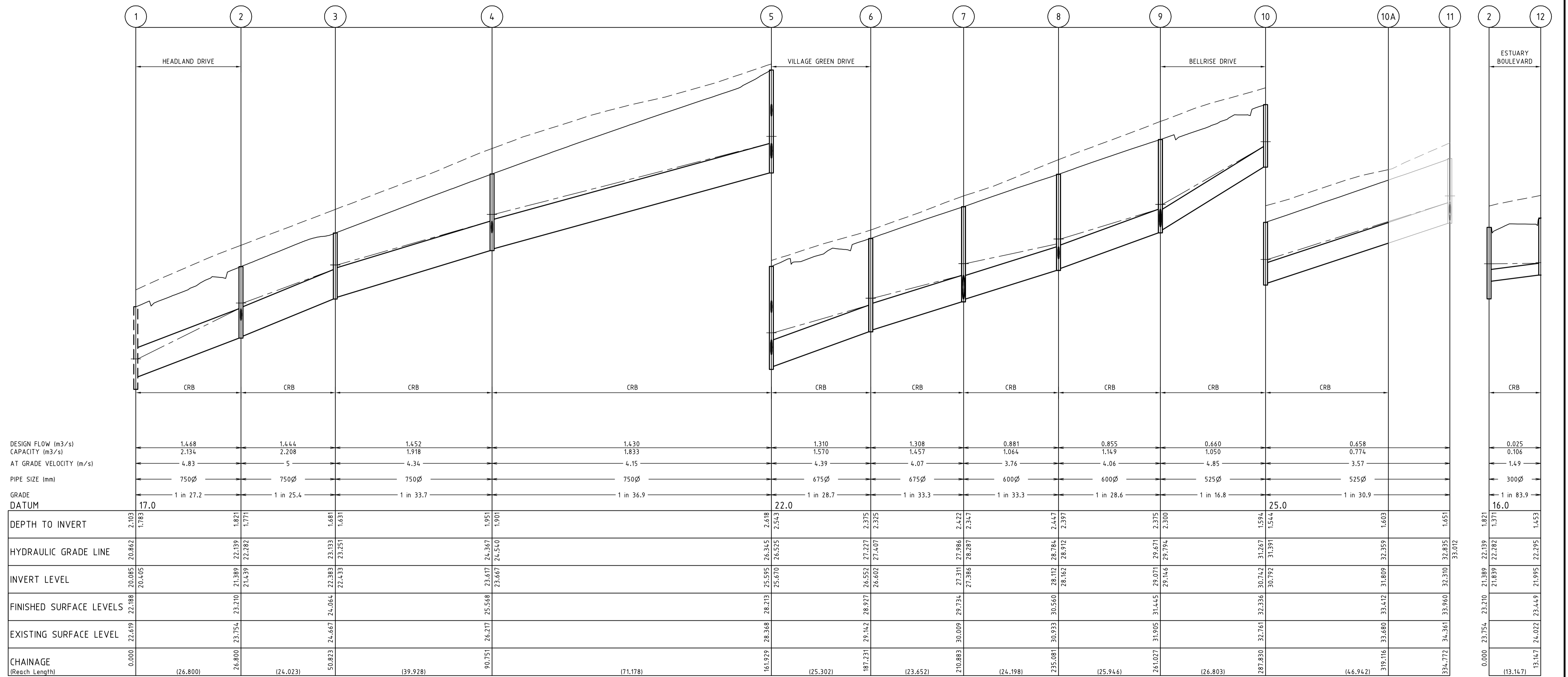
Adelaide +61 8 8223 6455  
Brisbane +61 7 3831 8988  
Canberra +61 2 6126 1900  
Gold Coast +61 7 5578 0222  
Melbourne +61 3 9869 0800  
Traralgon +61 3 5173 0100

**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Cross Sections - Village Green Drive

Drawing No. **0250EHL-06-22** Rev **D**  
Sheet No. 22 of 28

Approved for Construction

LEGEND	
	EXISTING SURFACE
	DESIGN SURFACE
	DRAINAGE PIPE/PIT
	EXISTING DRAINAGE PIPE/PIT
	HYDRAULIC GRADE LINE

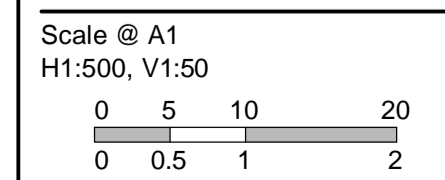


DESIGN FLOW (m <sup>3</sup> /s)	1.468	1.444	1.452	1.430	1.310	1.308	0.881	0.855	0.660	0.658	0.025
CAPACITY (m <sup>3</sup> /s)	2.134	2.208	1.918	1.833	1.570	1.457	1.064	1.149	1.050	0.774	0.106
AT GRADE VELOCITY (m/s)	4.83	5	4.34	4.15	4.39	4.07	3.76	4.06	4.85	3.57	1.49
PIPE SIZE (mm)	750Ø	750Ø	750Ø	750Ø	675Ø	675Ø	600Ø	600Ø	525Ø	525Ø	300Ø
GRADE	1 in 27.2	1 in 25.4	1 in 33.7	1 in 36.9	1 in 28.7	1 in 33.3	1 in 33.3	1 in 28.6	1 in 16.8	1 in 30.9	1 in 83.9
DATUM	17.0				22.0					25.0	16.0
DEPTH TO INVERT	2.003 1.783	1.821 1.771	1.681 1.631	1.951 1.901	2.418 2.343	2.375 2.325	2.422 2.347	2.447 2.397	2.375 2.300	1.594 1.544	1.651 1.601
HYDRAULIC GRADE LINE	20.085 20.405	22.139 22.282	23.133 23.251	24.367 24.540	26.315 26.525	27.227 27.407	27.986 28.287	28.112 28.512	29.671 29.794	31.267 31.391	32.835 33.012
INVERT LEVEL	20.085 20.405	21.389 21.439	22.383 22.433	23.617 23.667	25.595 25.670	26.552 26.602	27.311 27.386	28.112 28.162	29.071 29.146	30.742 30.792	32.336 32.336
FINISHED SURFACE LEVELS	22.188 22.619	23.210 23.754	24.064 24.667	25.568 26.217	28.213 28.368	28.927 29.142	29.734 30.009	30.560 30.933	31.445 31.905	32.336 32.761	33.412 34.361
EXISTING SURFACE LEVEL	22.619 22.619	23.754 23.754	24.667 24.667	26.217 26.217	28.368 28.368	29.142 29.142	30.009 30.009	30.933 30.933	31.905 31.905	32.761 32.761	34.361 34.361
CHAINAGE (Reach Length)	0.000	(26.800)	(24.023)	(39.928)	(71.178)	(25.302)	(23.652)	(24.198)	(25.946)	(26.803)	(46.942)

REVISION	DATE	DESIGNER	APP'D
D ROAD NAMES AMENDED	16.11.11	CB/AH	JG
C ISSUED FOR APPROVAL	19.05.11	CB/CB	JG
B COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010



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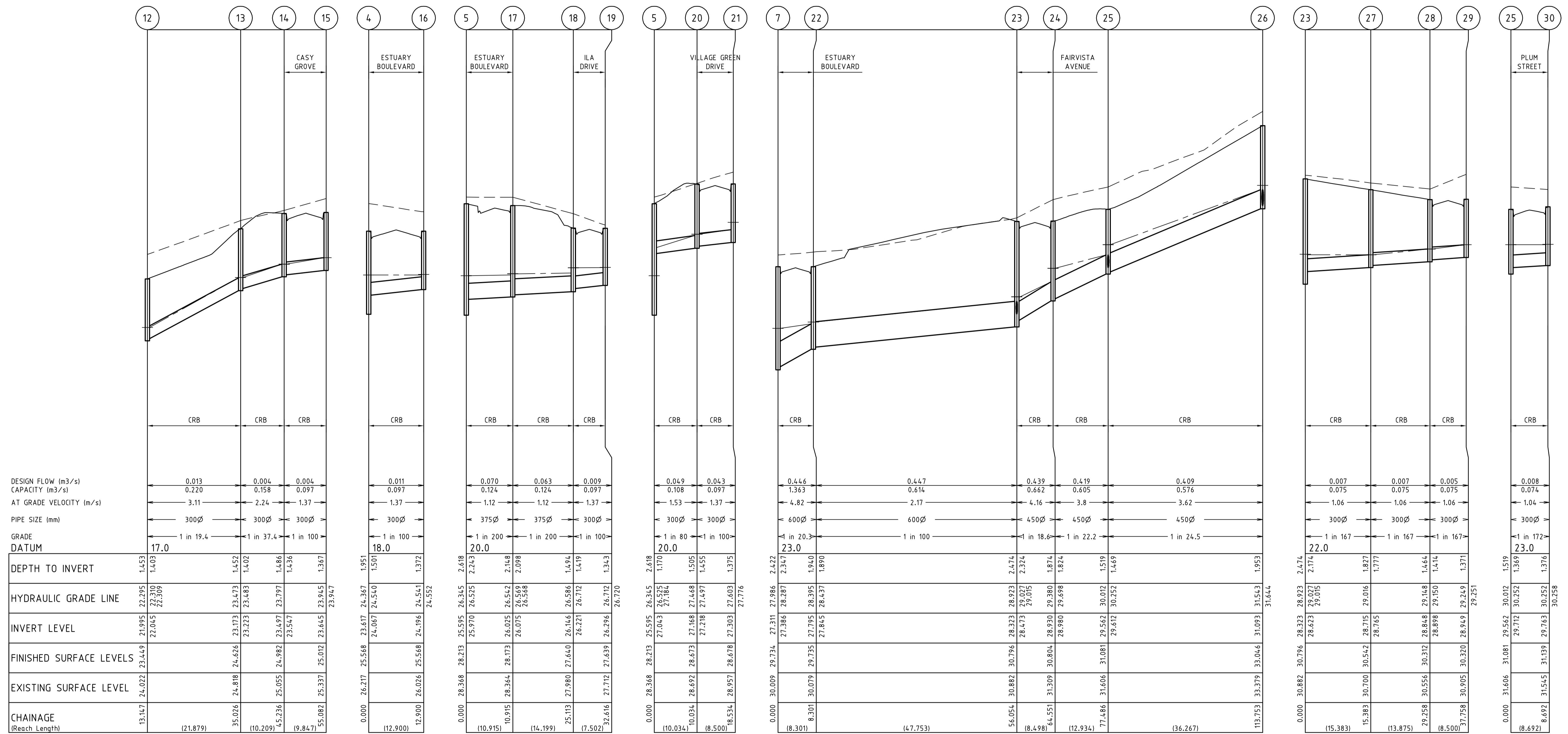
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Traralgon +61 3 5173 0100

**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Drainage Longitudinal Sections - 1

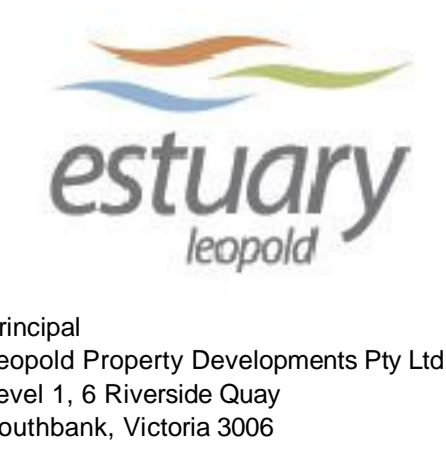
Drawing No. **0250EHL-06-23** Rev D  
Sheet No. 23 of 28

Approved for Construction

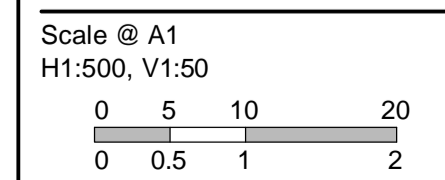
LEGEND	
	EXISTING SURFACE
	DESIGN SURFACE
	DRAINAGE PIPE/PIT
	EXISTING DRAINAGE PIPE/PIT
	HYDRAULIC GRADE LINE



REVISION	DATE	DES/DT	APP'D
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A ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG



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**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Drainage Longitudinal Sections - 2

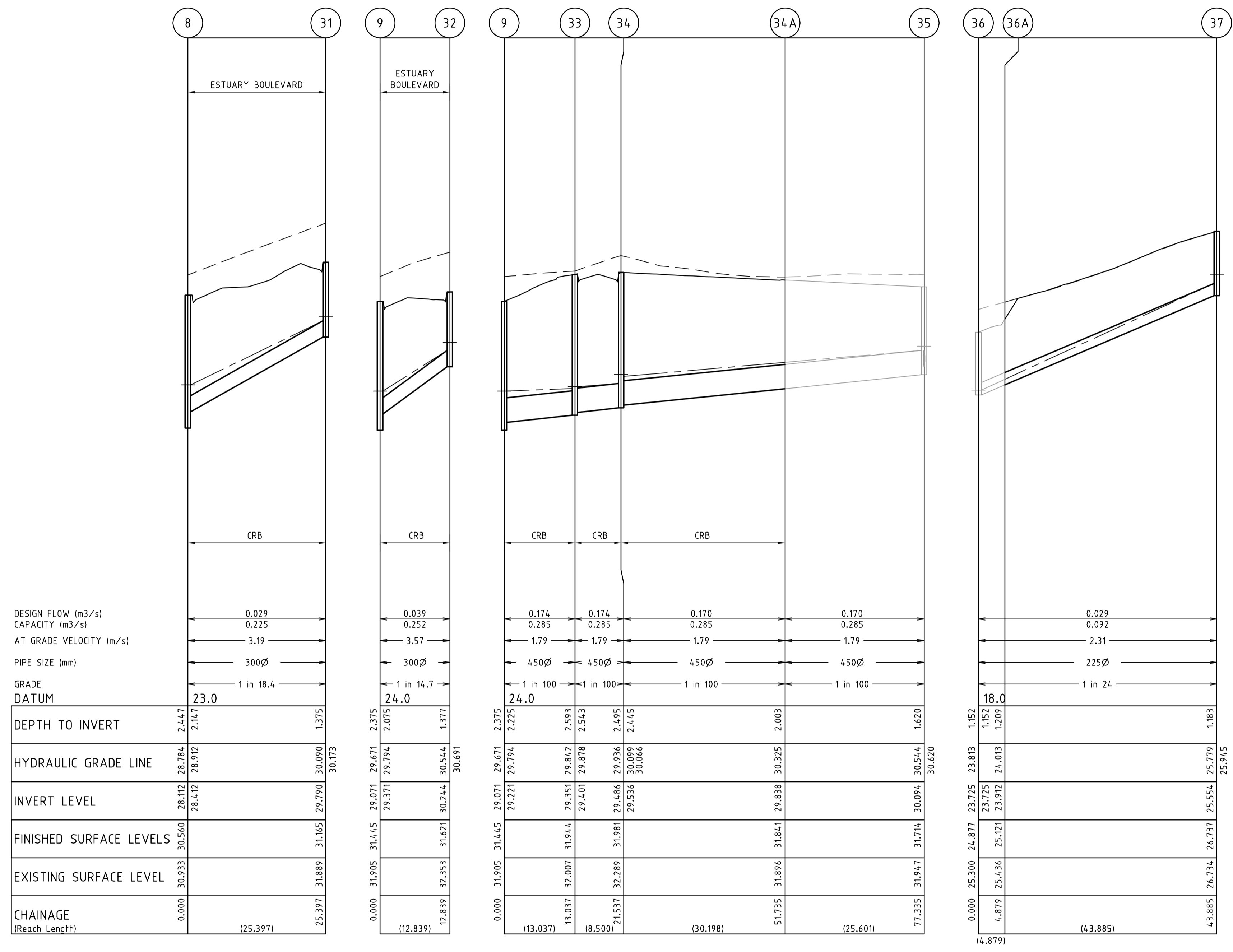
Drawing No. **0250EHL-06-24** Rev D  
Sheet No. 24 of 28

Approved for Construction

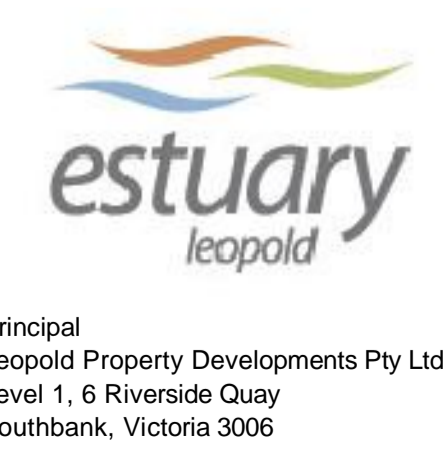
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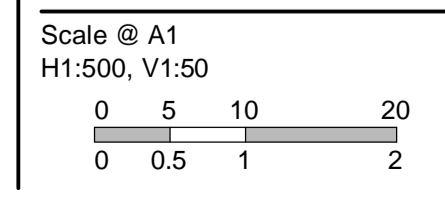
LEGEND	
	EXISTING SURFACE
	DESIGN SURFACE
	DRAINAGE PIPE/PIT
	EXISTING DRAINAGE PIPE/PIT
	HYDRAULIC GRADE LINE



REVISION	DATE	DES/DFT	APP'D
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B COUNCIL AMENDMENTS	12.04.11	CB/CB	JG
A ISSUED TO COUNCIL FOR APPROVAL	01.03.11	CB/CB	JG



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C. Barker  
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Authorised  
J. Golden  
Date  
December 2010



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**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Drainage Longitudinal Sections - 3  
**Drawing No. 0250EHL-06-25** **Rev D**  
Sheet No. 25 of 28  
**Approved for Construction**

LEGEND	
---	EXISTING SURFACE
---	DESIGN SURFACE
---	DRAINAGE PIPE/PIT
---	EXISTING DRAINAGE PIPE/PIT
---	HYDRAULIC GRADE LINE

PIT SCHEDULE											
PIT NUMBER	TYPE	INTERNAL		INLET		OUTLET		F.S.L. (m)	DEPTH (m)	STANDARD DRAWING	REMARKS
		WIDTH (mm)	LENGTH (mm)	DIAMETER (mm)	INVERT R.L.(m)	DIAMETER (mm)	INVERT R.L. (m)				
1	Ex PIT			750	20.405			22.188	2.103		CONNECT TO EXISTING PIT
2	SIDE ENTRY PIT	1200	900	750	21.439	750	21.389	23.210	1.821	SD 430	
				300	21.839						
3	JUNCTION PIT	1200	900	750	22.433	750	22.383	24.064	1.681	SD 420	
4	SIDE ENTRY PIT	1200	900	750	23.667	750	23.617	25.568	1.951	SD 430	
				300	24.067						
5	JUNCTION PIT	900	900	675	25.670	750	25.595	28.213	2.618	SD 420	
				375	25.970						
				300	27.043						
6	SIDE ENTRY PIT	900	900	675	26.602	675	26.552	28.927	2.375	SD 430	
7	JUNCTION PIT	900	900	600	27.386	675	27.311	29.734	2.422	SD 420	
				600	27.386						
8	SIDE ENTRY PIT	900	900	600	28.162	600	28.112	30.560	2.447	SD 430	
				300	28.412						
9	SIDE ENTRY PIT	900	900	525	29.146	600	29.071	31.445	2.375	SD 430	
				300	29.371						
				450	29.221						
10	SIDE ENTRY PIT	900	900	525	30.792	525	30.742	32.336	1.594	SD 430	
10A	ENDPIPE			525	31.809			33.412	1.603		BLANK END OF PIPE
12	SIDE ENTRY PIT	900	900	300	22.045	300	21.995	23.449	1.453	SD 430	
13	JUNCTION PIT	900	900	300	23.223	300	23.173	24.626	1.452	SD 420	
14	SIDE ENTRY PIT	900	900	300	23.547	300	23.497	24.982	1.486	SD 430	
15	SIDE ENTRY PIT	900	900			300	23.645	25.012	1.367	SD 430	
16	SIDE ENTRY PIT	900	900			300	24.196	25.568	1.372	SD 430	
17	SIDE ENTRY PIT	900	900	375	26.075	375	26.025	28.173	2.148	SD 430	
18	SIDE ENTRY PIT	900	900	300	26.221	375	26.146	27.640	1.494	SD 430	
19	SIDE ENTRY PIT	900	900			300	26.296	27.639	1.343	SD 430	
20	SIDE ENTRY PIT	900	900	300	27.218	300	27.168	28.673	1.505	SD 430	
21	SIDE ENTRY PIT	900	900			300	27.303	28.678	1.375	SD 430	
22	SIDE ENTRY PIT	900	900	600	27.845	600	27.795	29.735	1.940	SD 430	
23	DOUBLE SIDE ENTRY PIT	900	1800	450	28.473	600	28.323	30.796	2.474	SD 430	
				300	28.623						
24	SIDE ENTRY PIT	900	900	450	28.980	450	28.930	30.804	1.874	SD 430	
25	SIDE ENTRY PIT	900	900	450	29.612	450	29.562	31.081	1.519	SD 430	
				300	29.712						
26	JUNCTION PIT	900	900	375	31.168	450	31.093	33.046	1.953	SD 420	
				300	31.243						
				225	31.318						
27	JUNCTION PIT	900	900	300	28.765	300	28.715	30.542	1.827	SD 420	
28	SIDE ENTRY PIT	900	900	300	28.898	300	28.848	30.312	1.464	SD 430	
29	SIDE ENTRY PIT	900	900			300	28.949	30.320	1.371	SD 430	
30	SIDE ENTRY PIT	900	900			300	29.763	31.139	1.376	SD 430	
31	SIDE ENTRY PIT	900	900			300	29.790	31.165	1.375	SD 430	
32	SIDE ENTRY PIT	900	900			300	30.244	31.621	1.377	SD 430	
33	SIDE ENTRY PIT	900	900	450	29.401	450	29.351	31.944	2.593	SD 430	
34	SIDE ENTRY PIT	900	900	450	29.536	450	29.486	31.981	2.495	SD 430	
34A	ENDPIPE			450	29.838			31.841	2.003		BLANK END OF PIPE
36A	Ex ENDPIPE			225	23.912			25.121	1.209		CONNECT TO EXISTING ENDPIPE
37	JUNCTION PIT	600	900			225	25.554	26.737	1.183	SD 425	

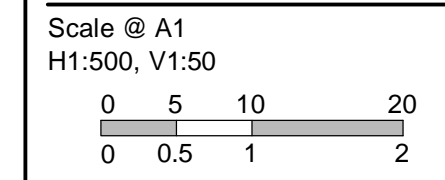
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REVISION	DATE	DES/DFE	APPD
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
A	01.03.11	CB/CB	JG

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006



Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010



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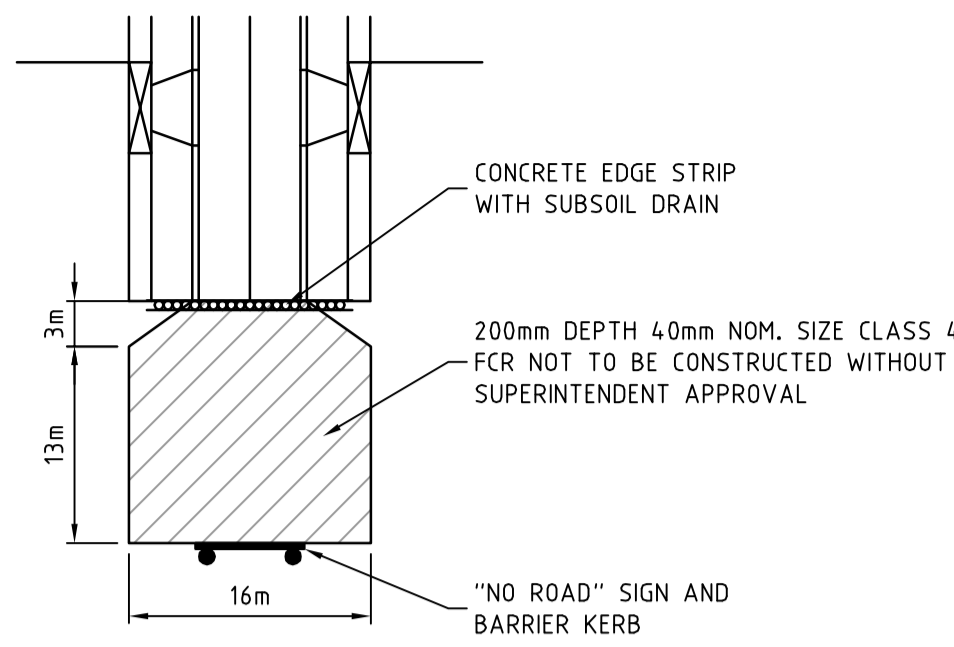
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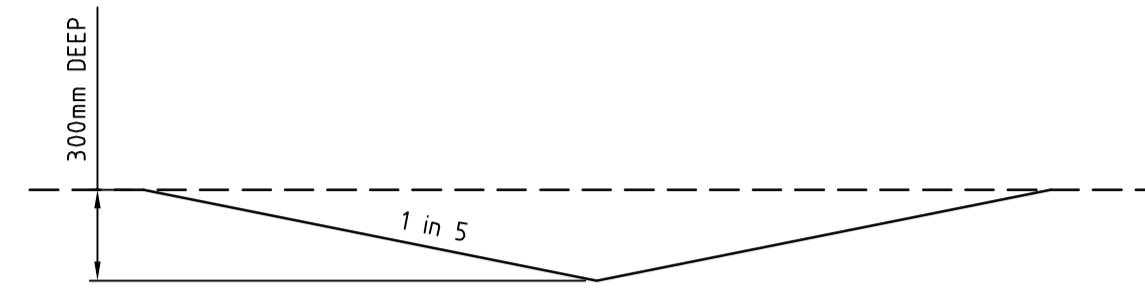
**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Pit Schedule

**Drawing No. 0250EHL-06-26** **Rev C**  
Sheet No. 26 of 28

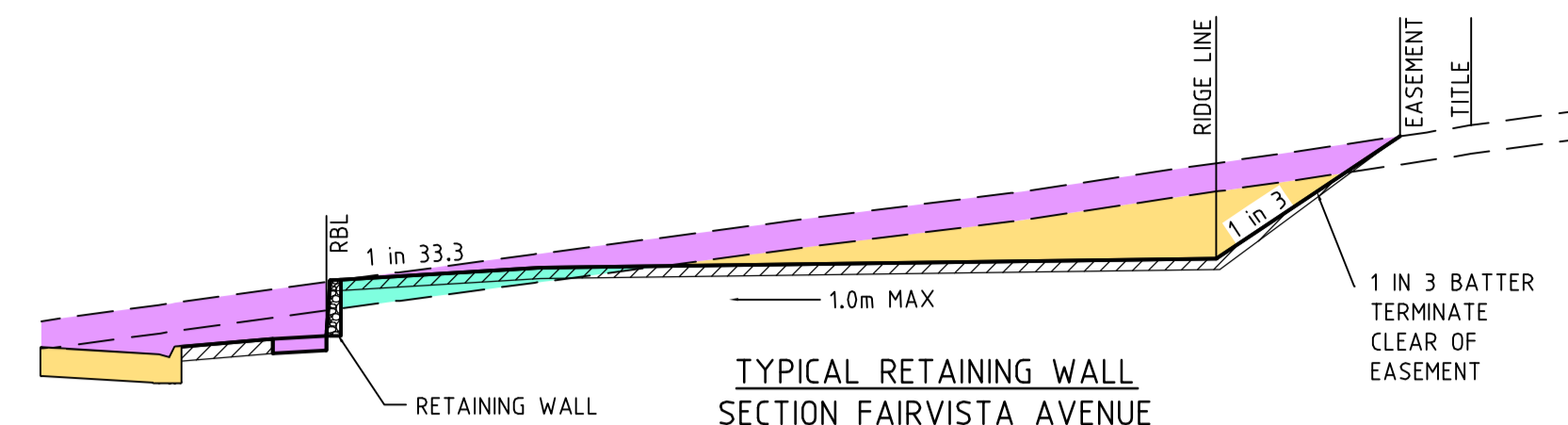
Approved for Construction



**TEMPORARY TURN AREA DETAIL**  
NOT TO SCALE

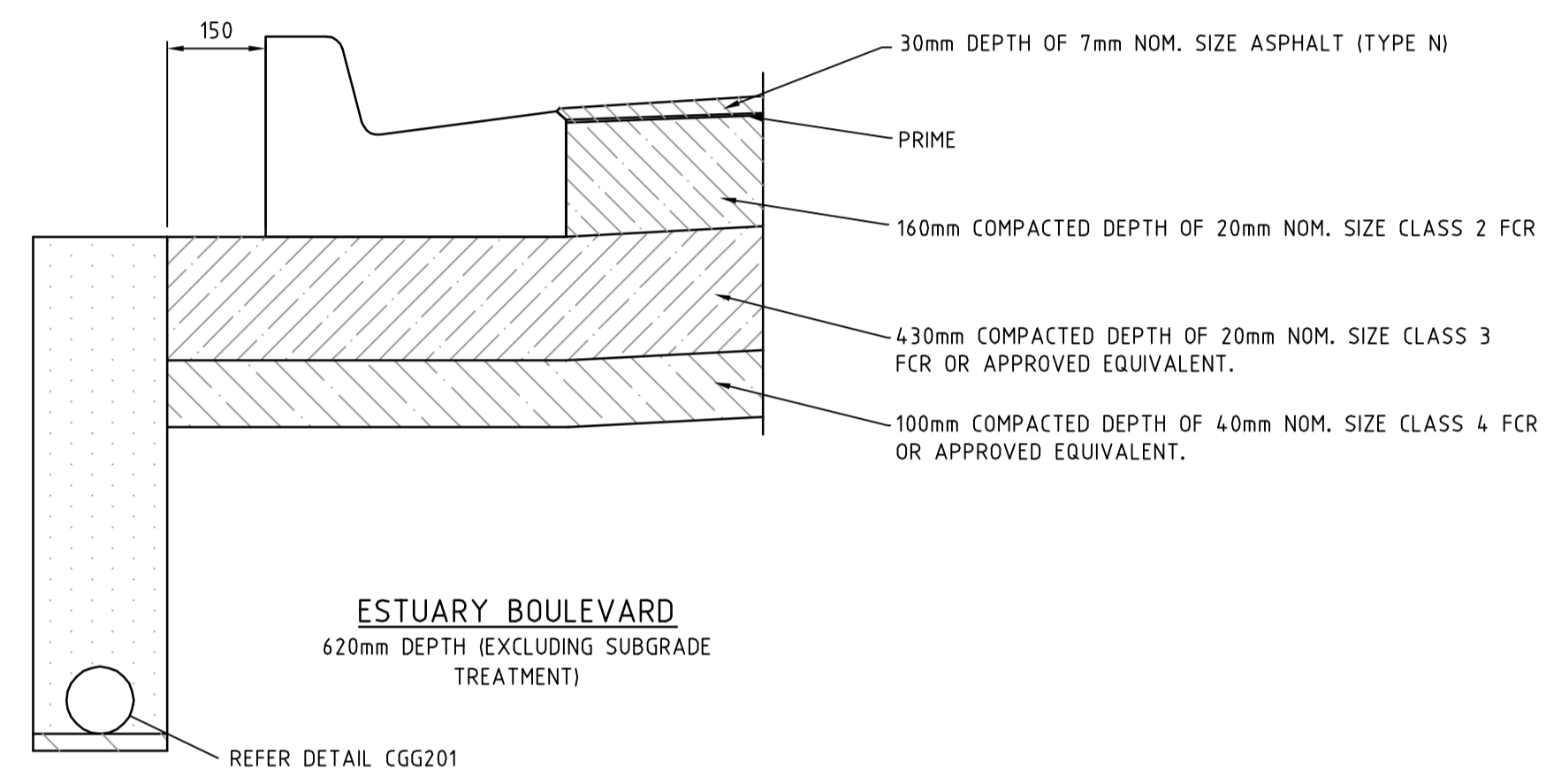


**CUT OFF DRAIN TYPICAL SECTION**  
NOT TO SCALE



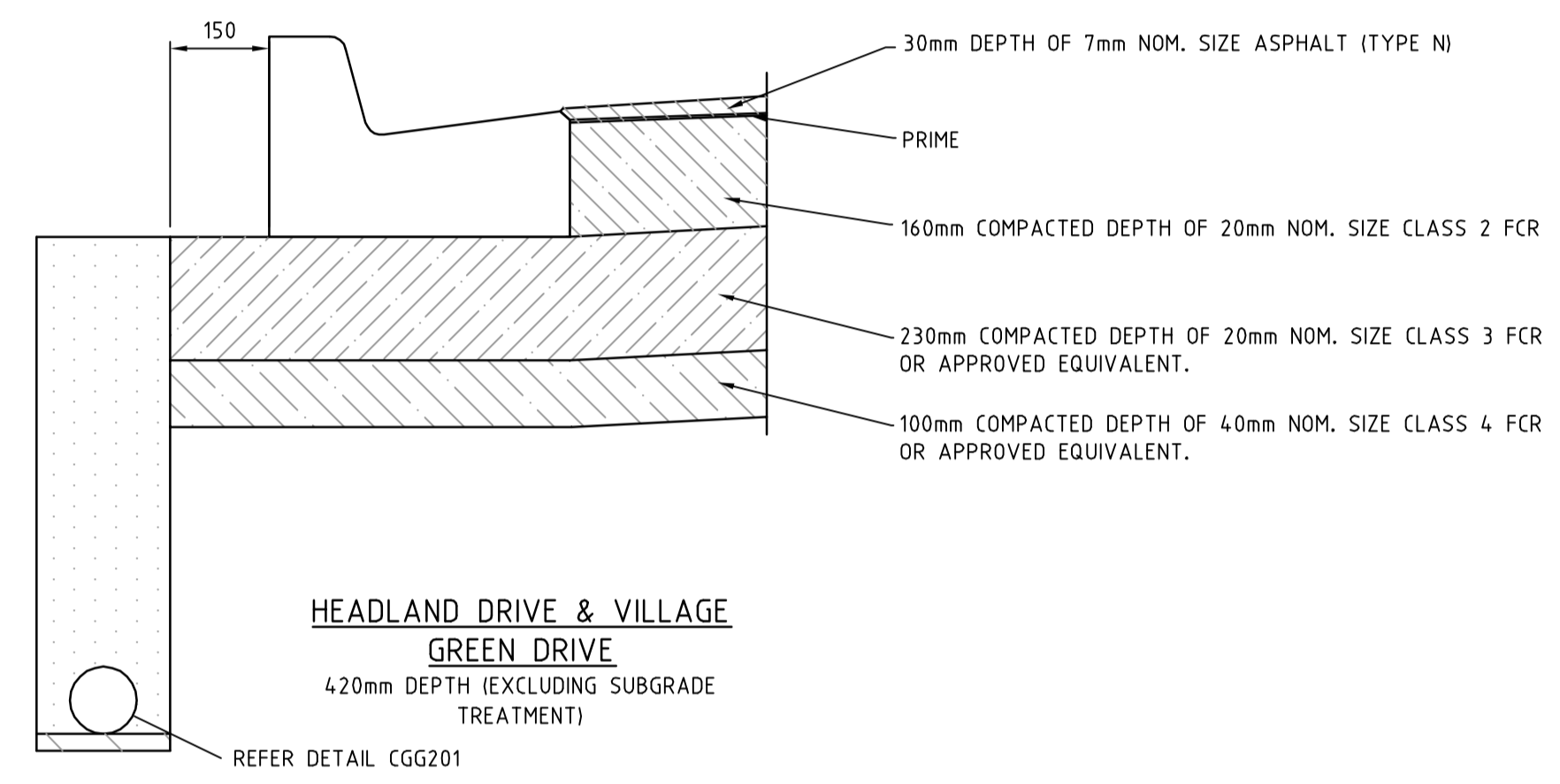
**TYPICAL RETAINING WALL SECTION FAIRVISTA AVENUE**  
NOT TO SCALE

- CUT AREAS
- FILLS AREAS
- TOPSOIL STRIP
- CUT AREA AND RESPREAD TOPSOIL TO A 150mm DEPTH



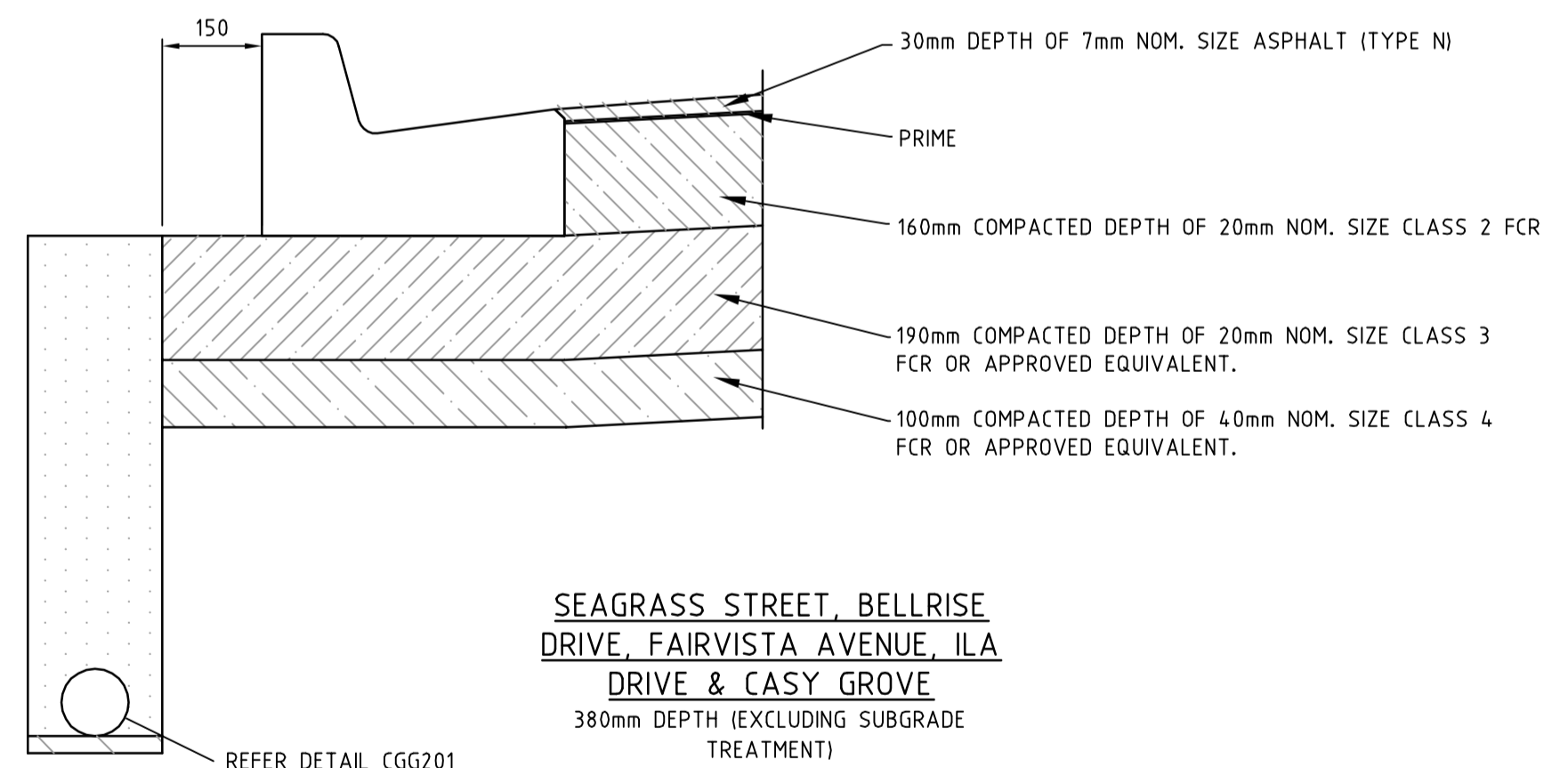
**ESTUARY BOULEVARD**  
620mm DEPTH (EXCLUDING SUBGRADE TREATMENT)

REFER DETAIL CGG201



**HEADLAND DRIVE & VILLAGE GREEN DRIVE**  
420mm DEPTH (EXCLUDING SUBGRADE TREATMENT)

REFER DETAIL CGG201



**SEAGRASS STREET, BELLRISE DRIVE, FAIRVISTA AVENUE, ILA DRIVE & CASY GROVE**  
380mm DEPTH (EXCLUDING SUBGRADE TREATMENT)

REFER DETAIL CGG201

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REVISION	DATE	DES/DFT	APP'D
A	01.03.11	CB/CB	JG
B	12.04.11	CB/CB	JG
C	19.05.11	CB/CB	JG
D	21.07.11	CB/CB	JG
E	16.11.11	CB/AH	JG

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
December 2010

Scale @ A1  
As Shown

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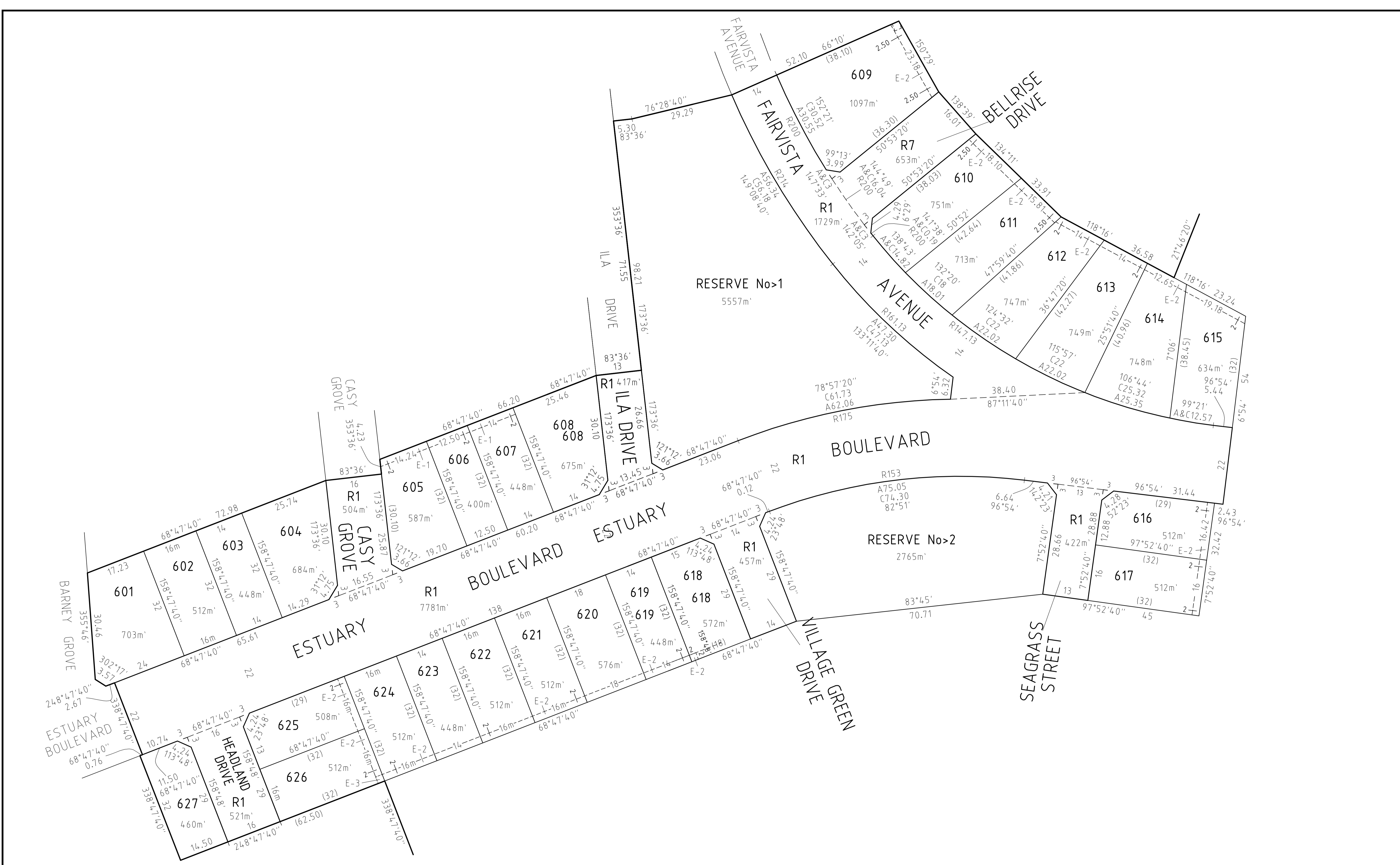
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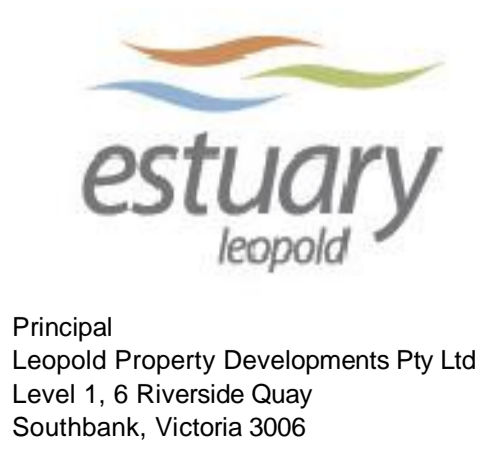
**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Details

**Drawing No. 0250EHL-06-27** **Rev E**  
Sheet No. 27 of 28

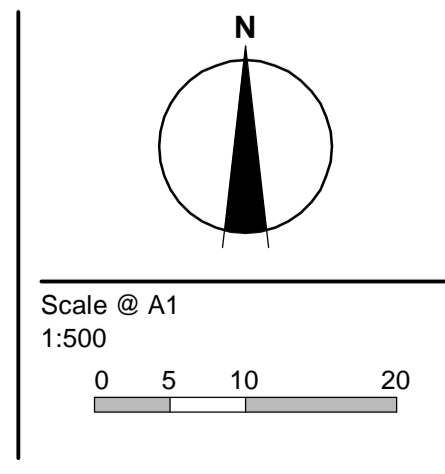
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REVISION	DATE	DES/DT	APP'D
D	16.11.11	CB/AH	JG
C	19.05.11	CB/CB	JG
B	12.04.11	CB/CB	JG
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**Estuary**  
Stage 6  
City of Greater Geelong  
Roadworks and Drainage  
Subdivision Setout Plan

Drawing No. 0250EHL-06-28 Rev D  
Sheet No. 28 of 28

Approved for Construction

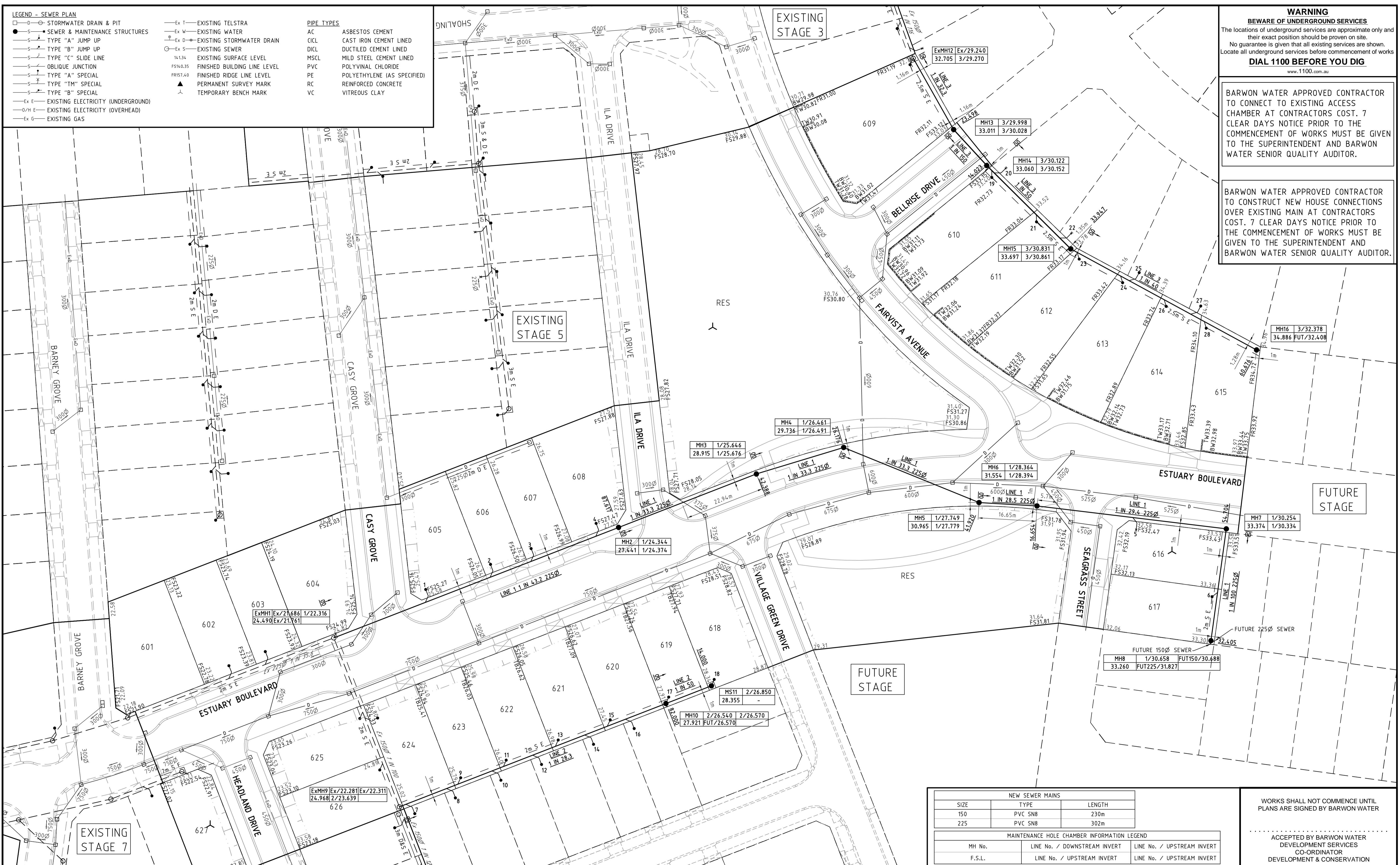
LEGEND - SEWER PLAN	
○	STORMWATER DRAIN & PIT
●	SEWER & MAINTENANCE STRUCTURES
—	TYPE "A" JUMP UP
—	TYPE "B" JUMP UP
—	TYPE "C" SLIDE LINE
—	OBLIQUE JUNCTION
—	TYPE "A" SPECIAL
—	TYPE "TM" SPECIAL
—	TYPE "B" SPECIAL
—	EXISTING ELECTRICITY (UNDERGROUND)
—	EXISTING ELECTRICITY (OVERHEAD)
—	EXISTING GAS
—	EXISTING TELSTRA
—	EXISTING WATER
—	EXISTING STORMWATER DRAIN
—	EXISTING SEWER
—	EXISTING SURFACE LEVEL
—	FINISHED BUILDING LINE LEVEL
—	FINISHED RIDGE LINE LEVEL
—	PERMANENT SURVEY MARK
—	TEMPORARY BENCH MARK

PIPE TYPES	
AC	ASBESTOS CEMENT
CICL	CAST IRON CEMENT LINED
DICL	DUCTILE CEMENT LINED
MSCL	MILD STEEL CEMENT LINED
PVC	POLYVINYL CHLORIDE
PE	POLYETHYLENE (AS SPECIFIED)
RC	REINFORCED CONCRETE
VC	VITREOUS CLAY

**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
 The locations of underground services are approximate only and their exact position should be proven on site.  
 No guarantee is given that all existing services are shown. Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
 www.1100.com.au

BARWON WATER APPROVED CONTRACTOR TO CONNECT TO EXISTING ACCESS CHAMBER AT CONTRACTORS COST. 7 CLEAR DAYS NOTICE PRIOR TO THE COMMENCEMENT OF WORKS MUST BE GIVEN TO THE SUPERINTENDENT AND BARWON WATER SENIOR QUALITY AUDITOR.

BARWON WATER APPROVED CONTRACTOR TO CONSTRUCT NEW HOUSE CONNECTIONS OVER EXISTING MAIN AT CONTRACTORS COST. 7 CLEAR DAYS NOTICE PRIOR TO THE COMMENCEMENT OF WORKS MUST BE GIVEN TO THE SUPERINTENDENT AND BARWON WATER SENIOR QUALITY AUDITOR.



NEW SEWER MAINS		
SIZE	TYPE	LENGTH
150	PVC SN8	230m
225	PVC SN8	302m

MAINTENANCE HOLE CHAMBER INFORMATION LEGEND			
MH No.	LINE No. / DOWNSTREAM INVERT	LINE No. / UPSTREAM INVERT	
F.S.L.	LINE No. / UPSTREAM INVERT	LINE No. / UPSTREAM INVERT	

WORKS SHALL NOT COMMENCE UNTIL PLANS ARE SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES CO-ORDINATOR DEVELOPMENT & CONSERVATION

REVISION	DATE	DES/DT	APPD
E ROAD NAMES AMENDED	16.11.11	CB/AH	JG
D MINOR AMENDMENT MH15 IL'S	30.08.11	CB/CB	JG
C SEWER DEPTH AMENDMENTS	15.08.11	CB/CB	JG
B BARWON WATER AMENDMENTS	39.04.11	CB/CB	JG
A ISSUED TO BARWON WATER FOR APPROVAL	7.03.11	CB/CB	JG

**estuary leopard**

Principal  
 Leopold Property Developments Pty Ltd  
 Level 1, 6 Riverside Quay  
 Southbank, Victoria 3006

- Construction Notes
- Construction of the sewer and water mains is to be in accordance with the Barwon Water standard specifications "Construction of gravity sewers and rising mains" and "Construction of water mains".
  - Every endeavour to ensure the location of all existing services on the plan are correct. However actual locations are to be checked on site prior to commencement of excavations.
  - Nominal size of water mains indicated in millimetres & offsets are indicated in metres.
  - All sewer pipes are 1500mm unless otherwise shown.

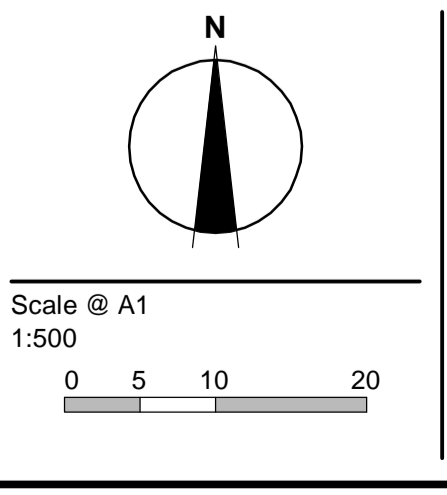
Designed  
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Drawn  
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Checked  
 C. Birckett

Authorised  
 C. Birckett

Date  
 March 2011



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**smec urban**  
 consulting group

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 Canberra +61 2 6126 1900 Traralgon +61 3 5173 0100

**Barwon Region Water Corporation**  
 Barwon Water No. L006844  
 Estuary  
 Stage No. 6  
 Sewer Detail Plan 1

**Drawing No. 0250EHL-06-51**      **Rev E**

Sheet No. 1 of 4

**Approved for Construction**

**NOTES**

- GENERAL**
- SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE WATER SERVICES ASSOCIATION OF AUSTRALIA STANDARD CODES (WSA 02-2002 - WSA 03-2002) IN CONJUNCTION WITH BARWON WATERS SUPPLEMENTS TO THE CODES.
  - BARWON WATER AND THE PROJECT MANAGER TO BE NOTIFIED 7 CLEAR WORKING DAYS NOTICE PRIOR TO COMMENCEMENT OF WORKS.
  - THE CONTRACTOR SHALL
    - COMPLY WITH SAFETY REQUIREMENTS OF THE MINES ACT, GENERAL REGULATIONS AND STATUTORY RULES, AND THE MINES (TRENCHES) REGULATIONS 1982.
    - NOTIFY THE DEPARTMENT OF LABOUR OF HIS INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
    - INSURE THAT THE MINE MANAGER OR HIS DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
  - THE CONTRACTOR SHALL MAKE ALL WORKS AVAILABLE FOR THE INSPECTOR/SURVEYOR TO CARRY OUT THE NECESSARY INSPECTIONS AND SURVEYING BEFORE BACKFILLING IS COMMENCED.
  - SERVICES ARE APPROXIMATE ONLY. ALL RELEVANT SERVICE AUTHORITY'S ARE TO BE CONTACTED PRIOR TO THE COMMENCEMENT OF EXCAVATION TO ESTABLISH THEIR EXACT LOCATION.
  - CONTACT PRIOR TO COMMENCEMENT OF WORKS:  
CITY OF GREATER GEELONG  
POWERCOR  
TELSTRA  
TRU  
VICTORIAN WORKCOVER AUTHORITY
  - ALL SERVICES ARE TO BE LOCATED ON SITE PRIOR TO ANY EXCAVATION.
  - INVERT LEVELS OF EXISTING SEWERS AND WATERMANS TO BE CHECKED PRIOR TO THE COMMENCEMENT OF WORKS.
  - CLASS 2 BACKFILL TO BE USED UNDER DRIVEWAYS FOR WATER AND SEWER RETICULATION.
  - PROPERTY OWNERS ARE TO BE NOTIFIED IN WRITING BY THE CONSULTANT 14 CLEAR DAYS PRIOR TO COMMENCEMENT OF WORKS
  - COPY OF CADASTRAL MAP GRID (MGA) CONNECTION & COPY OF AUSTRALIAN HEIGHT DATUM (AHD) CONNECTION IS TO BE PROVIDED BY CONTRACTOR
  - WORKS SHALL BE EFFECTED BETWEEN THE HOURS OF 8:00am AND 5:00pm MONDAY - FRIDAY. IN THE EVENT THAT WORKS ARE TO BE EFFECTED OUTSIDE THESE WORKING HOURS, A LETTER REQUESTING APPROVAL FOR SUCH OUT OF HOURS WORK SHALL BE LODGED TO THE SENIOR QUALITY AUDITOR.
  - THE CONTRACTOR SHALL COMPLY WITH SAFETY REQUIREMENTS RELATING TO WORKING NEAR POWER LINES AS SET BY THE CHIEF ELECTRICAL INSPECTOR WHERE NECESSARY AN ACCREDITED TRAINED SPOTTER IS TO BE PROVIDED.
  - WATER RESTRICTIONS ARE TO APPLY FROM MIDNIGHT JUNE 30th 2006, IN ACCORDANCE WITH BY-LAW NO. 187. ONLY TRIGGER HOSES (MAXIMUM SIZE 25mm) MAY BE USED FOR CONSTRUCTION WORK NOT INCLUDING TRENCHING, UNLESS OTHERWISE EXEMPTED BY THE AUTHORITY IN WRITING. MECHANICAL COMPACTION IS TO BE USED IN ACCORDANCE WITH MRWA SPECIFICATION 04-03 FOR TRENCH WORKS UNTIL FURTHER NOTICE. ANY WATER USED TO FLUSH WATER MAINS IS TO BE RECLAIMED AND USED FOR CONSTRUCTION PURPOSES.

**SEWER**

- THE CONTRACTOR SHALL CORE CUT ALL HOLES INTO EXISTING PRECAST SEWER MAINTENANCE HOLES.
- ALL FSL'S SHOWN IN MAINTENANCE HOLES INFORMATION BOX ARE TOP OF MANHOLE LEVELS.
- ALL END OF LINES NOMINATED AS TMS ARE TO HAVE A TERMINAL MAINTENANCE SHAFT AS PER BARWON WATER STANDARD DRAWING 70095.
- WHERE FUTURE SEWER MAINS ARE INDICATED A 150mm ACCESS COUPLING AND CAP ARE TO BE PLACED OUT OF THE MANHOLE.
- WARNING: ENTRY INTO ANY MAINTENANCE HOLE IS CONTROLLED BY CONFINED SPACE REGULATIONS BEING "OCCUPATIONAL HEALTH & SAFETY (CONFINED SPACES) REGULATIONS 1996; STATUTORY RULE No. 148/1996 AND A.S. 2865 - 1995 "SAFE WORKING IN CONFINED SPACES". PERSONS) REQUIRING ACCESS TO ANY BARWON WATER MANHOLE AS PART OF THE DEVELOPER WORKS PROCESS MUST CONTACT THE SENIOR QUALITY AUDITOR PH (03) 5226 9204 FOR ANY REQUIREMENTS DURING THE CONSTRUCTION OF WORKS TO GAIN ACCESS TO A BARWON WATER MANHOLE THE PROCEDURE AS OUTLINED IN THE ATTACHED FLOWCHART IS TO BE FOLLOWED, AND "THE CONFINED SPACE ENTRY PERMIT APPLICATION FORM" (ALSO ATTACHED) IS TO BE COMPLETED AND LODGED WITH THE SENIOR QUALITY AUDITOR 3 (THREE) CLEAR WORKING DAYS PRIOR TO ENTRY.
- ALL SEWERS ARE TO BE PVC-SN8
- DETECTOR TAPE TO BE PLACED OVER SEWERS AT ALL ROAD CROSSINGS AND ALL CURVED SEWER MAINS.
- BORED SECTIONS OF SEWER TO BE CCTV INSPECTED IN ACCORDANCE WITH BARWON WATER'S LAND DEVELOPMENT MANUAL AND SUBMITTED TO BARWON WATER FOR ACCEPTANCE
- ALL MANHOLE JOINTS, INCLUDING DROPS TO BE SEALED WITH FERROPRE OR APPROVED EQUIVALENT.
- ALL EXCAVATIONS AROUND A NEWLY CONSTRUCTED MANHOLE TO BE BACKFILLED WITH 3% CEMENT STABILISED SAND.

**SPECIAL**

- TRENCH COMPACTION RESULTS TO BE SUBMITTED BY CONSULTANT WITH 'AS CONSTRUCTED' NOTES.

SURVEY STATIONS (HORIZONTAL - ARBITRARY, VERTICAL - AHD)				
TBM	EASTING	NORTHING	RL	DESCRIPTION
R0D501	10106.39	48560.27	21.19	ROD
R0D502	10309.58	48587.59	28.62	ROD
MOOLAP PM69	1000.00	50000.00	-	BRASS PLAQUE
MOOLAP PM321	9897.74	48994.921	9.436	BRASS PLAQUE
MOOLAP PM302	10212.03	48959.504	22.180	BRASS PLAQUE

SURVEY CONTROL				
TBM	EASTING	NORTHING	RL	DESCRIPTION
R0D501	277245.07	5768919.27	21.19	ROD
R0D502	277448.31	5768946.60	28.62	ROD
MOOLAP PM69	277138.66	5770359.31	-	BRASS PLAQUE
MOOLAP PM321	277040	5769480	9.436	BRASS PLAQUE
MOOLAP PM302	277310	5769280	22.180	BRASS PLAQUE

ROAD NAME	SERVICES OFFSET SCHEDULE							
	GAS		WATER		ELECTRICITY		TELSTRA	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
ESTUARY BOULEVARD	SOUTH	2.70	SOUTH	3.20	NORTH	3.40	NORTH	2.80
CASY GROVE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70
ILA DRIVE	WEST	1.80	WEST	2.30	EAST	1.00	EAST	0.50
ILA DRIVE TRUNK MAIN			WEST	2.90				
FAIRVISTA AVENUE	EAST	2.10	EAST	2.70	WEST	1.00	WEST	0.50
HEADLAND DRIVE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70
VILLAGE GREEN DRIVE	WEST	2.10	WEST	2.70	EAST	1.00	EAST	0.50
BELLRISE DRIVE	SOUTH	2.10	SOUTH	2.70	NORTH	2.30	NORTH	1.70
SEAGRASS STREET	EAST	2.10	EAST	2.70	EAST	3.90	EAST	3.30
MELALUKA ROAD	-	-	EAST	Ex 2.10	EAST	Ex 0/H E	EAST	Varies Ex1.2-1.5

WORKS SHALL NOT COMMENCE UNTIL PLANS ARE SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES CO-ORDINATOR DEVELOPMENT & CONSERVATION

REVISION	DATE	DES/DT	APP'D
C ROAD NAMES AMENDED	16.11.11	CB/AH	JG
B BARWON WATER AMENDMENTS	29.04.11	CB/CB	JG
A ISSUED TO BARWON WATER FOR APPROVAL	7.03.11	CB/CB	JG

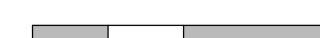


Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

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  - All sewer pipes are 1500mm unless otherwise shown.

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
C. Birkett  
Date  
March 2011

Scale @ A1



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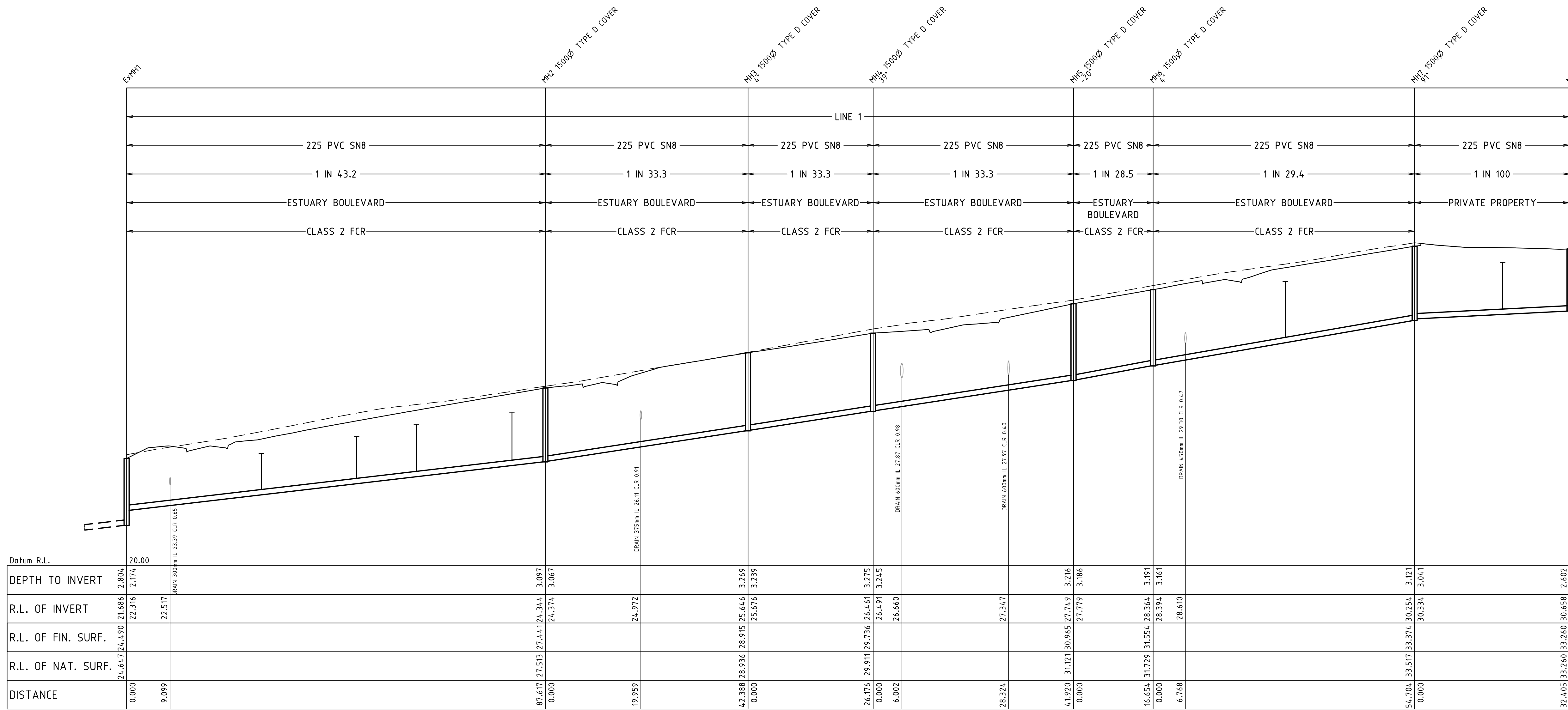
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**Barwon Region Water Corporation**

Barwon Water No. L006844  
Estuary  
Stage No. 6  
Sewer Detail Plan 2

Drawing No. **0250EHL-06-52** Rev **C**  
Sheet No. 2 of 4

Approved for Construction



WORKS SHALL NOT COMMENCE UNTIL  
PLANS ARE SIGNED BY BARWON WATER

ACCEPTED BY BARWON WATER  
DEVELOPMENT SERVICES  
CO-ORDINATOR  
DEVELOPMENT & CONSERVATION

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REVISION	DATE	DES/DFT	APPD
C	15.08.11	CB/CB	JG
B	29.04.11	CB/CB	JG
A	7.03.11	CB/CB	JG

**estuary leopold**

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

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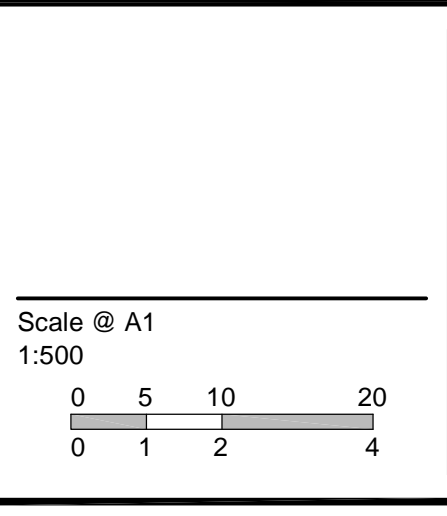
Designed  
C. Barker

Drawn  
C. Barker

Checked  
C. Birkett

Authorised  
J. Golden

Date  
March 2011



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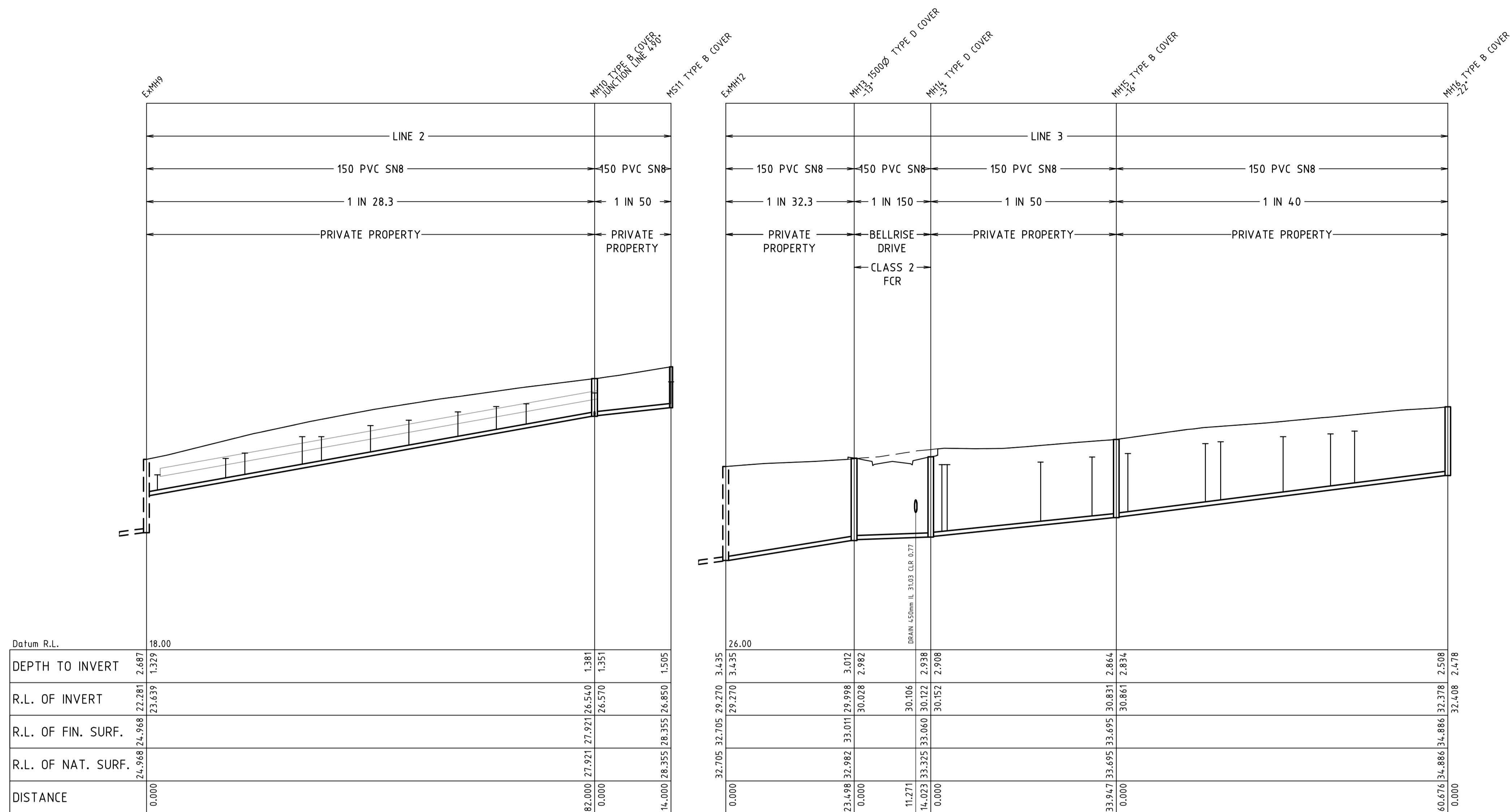
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**Barwon Retion Water Corporation**  
Barwon Water No. L006844  
Estuary  
Stage No. 6  
Sewer Longitudinal Sections - 1

Drawing No. **0250EHL-06-53** Rev C  
Sheet No. 3 of 4

Approved for Construction



Datum R.L.	18.00
DEPTH TO INVERT	24.968 24.968 22.281 2.687 23.639 1.329
R.L. OF INVERT	27.921 26.540 26.570 1.351
R.L. OF FIN. SURF.	
R.L. OF NAT. SURF.	24.968 27.921 27.921 26.540
DISTANCE	0.000 82.000 27.921 27.921 26.540 1.381 0.000 16.000 28.355 28.355 26.850 1.505

DEPTH TO INVERT	23.498 32.982 33.011 28.998 3.012 30.028 2.982 11.271 16.023 33.325 33.060 30.122 2.938 0.000 33.947 33.695 33.695 30.831 2.864 30.861 2.834 60.676 34.886 34.886 32.378 2.508 0.000 32.408 2.478
R.L. OF INVERT	29.270 34.435 29.270 34.435 30.106 30.152 2.908 30.152 2.908 33.695 30.831 2.864 30.861 2.834
R.L. OF FIN. SURF.	
R.L. OF NAT. SURF.	32.705 32.705 29.270 34.435 32.705 32.705 33.011 28.998 3.012 30.028 2.982 30.106 30.122 2.938 33.947 33.695 33.695 30.831 2.864 30.861 2.834 34.886 34.886 32.378 2.508 32.408 2.478
DISTANCE	0.000 23.498 32.982 33.011 28.998 3.012 30.028 2.982 11.271 16.023 33.325 33.060 30.122 2.938 0.000 33.947 33.695 33.695 30.831 2.864 30.861 2.834 60.676 34.886 34.886 32.378 2.508 0.000 32.408 2.478

LINE NO.	MANHOLE NO.	HC NO.	LOT NAME	CONNECTION TYPE	CHAINAGE	IL SEWER	IL BRANCH	BRANCH HEIGHT
1	MH1	1	LOT 605	A SPECIAL	28.19	22.96	24.70	1.74
1	MH1	2	LOT 606	A SPECIAL	48.12	23.43	25.40	1.97
1	MH1	3	LOT 607	A SPECIAL	60.62	23.72	25.90	2.18
1	MH1	4	LOT 608	A SPECIAL	80.62	24.19	26.40	2.21
1	MH6	5	Lot 616	TM SPECIAL	27.65	29.33	31.90	2.57
1	MH7	6	Lot 617	B SPECIAL	18.40	30.52	32.70	2.18
2	MH9	7	FUT LOT	A SPECIAL	2.00	23.69	24.40	0.71
2	MH9	8	FUT LOT	A SPECIAL	14.50	24.14	25.00	0.86
2	MH9	9	LOT 623	B	18.00	24.27	25.20	0.93
2	MH9	10	FUT LOT	A SPECIAL	28.50	24.64	25.80	1.16
2	MH9	11	LOT 622	B	32.00	24.77	25.80	1.03
2	MH9	12	FUT LOT	A SPECIAL	41.00	25.09	26.20	1.11
2	MH9	13	LOT 621	B	48.00	25.34	26.40	1.06
2	MH9	14	FUT LOT	A SPECIAL	57.00	25.66	26.70	1.04
2	MH9	15	LOT 620	B	64.00	25.91	26.90	0.99
2	MH9	16	FUT LOT	A SPECIAL	69.50	26.11	27.00	0.89
2	MH10	17	LOT 619	B	0.00	26.54	27.40	0.86
2	MS11	18	LOT 618	B	0.00	26.85	27.80	0.95
3	MH14	19	LOT 610	B SPECIAL	2.01	30.18	32.77	2.59
3	MH14	20	FUT LOT	TM SPECIAL	3.01	30.20	32.77	2.57
3	MH14	21	LOT 611	B SPECIAL	20.09	30.56	32.87	2.31
3	MH14	22	FUT LOT	TM SPECIAL	29.52	30.75	33.05	2.30
3	MH15	23	LOT 612	B SPECIAL	2.13	30.90	33.18	2.28
3	MH15	24	LOT 613	B SPECIAL	16.31	31.26	33.54	2.28
3	MH15	25	FUT LOT	TM SPECIAL	19.10	31.33	33.61	2.28
3	MH15	26	LOT 614	B SPECIAL	30.52	31.62	33.80	2.18
3	MH15	27	FUT LOT	TM SPECIAL	39.20	31.84	33.90	2.06
3	MH15	28	LOT 615	B SPECIAL	43.61	31.96	34.00	2.04

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ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES CO-ORDINATOR DEVELOPMENT & CONSERVATION

REVISION	DATE	DESIGNER	APP'D
D	16.11.11	CB/AH	JG
C	15.08.11	CB/CB	JG
B	29.04.11	CB/CB	JG
A	7.03.11	CB/CB	JG

**estuary leopard**

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

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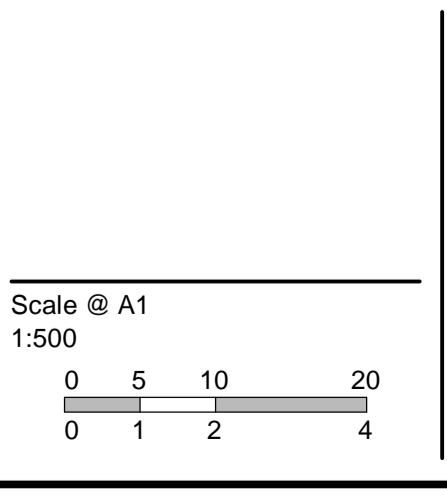
Designed  
C. Barker

Drawn  
C. Barker

Checked  
C. Birckett

Authorised  
J. Golden

Date  
March 2011



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**Barwon Retion Water Corporation**  
Barwon Water No. L006844  
Estuary  
Stage No. 6  
Sewer Longitudinal Sections - 2

Drawing No. **0250EHL-06-54** Rev D  
Sheet No. 3 of 4

**Approved for Construction**

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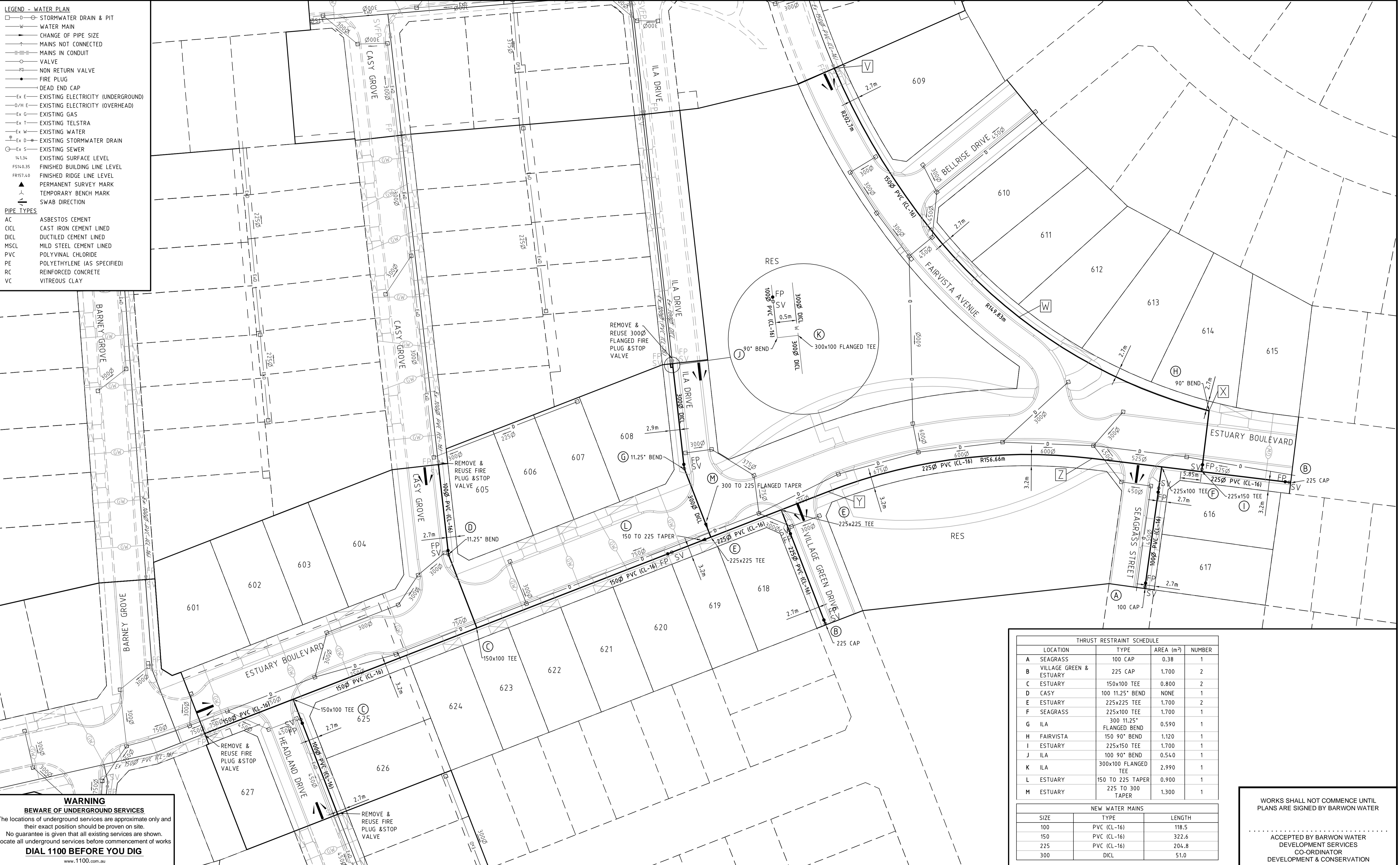


**LEGEND - WATER PLAN**

—○—	STORMWATER DRAIN & PIT
—	WATER MAIN
—	CHANGE OF PIPE SIZE
—	MAINS NOT CONNECTED
—	MAINS IN CONDUIT
○	VALVE
—○—	NON RETURN VALVE
●	FIRE PLUG
—	DEAD END CAP
—Ex E	EXISTING ELECTRICITY (UNDERGROUND)
—D/H E	EXISTING ELECTRICITY (OVERHEAD)
—Ex G	EXISTING GAS
—Ex T	EXISTING TELSTRA
—Ex W	EXISTING WATER
—Ex D	EXISTING STORMWATER DRAIN
—Ex S	EXISTING SEWER
14.134	EXISTING SURFACE LEVEL
FS14.0.35	FINISHED BUILDING LINE LEVEL
FR157.40	FINISHED RIDGE LINE LEVEL
▲	PERMANENT SURVEY MARK
△	TEMPORARY BENCH MARK
↔	SWAB DIRECTION

**PIPE TYPES**

AC	ASBESTOS CEMENT
CICL	CAST IRON CEMENT LINED
DICL	DUCTILED CEMENT LINED
MSCL	MILD STEEL CEMENT LINED
PVC	POLYVINYL CHLORIDE
PE	POLYETHYLENE (AS SPECIFIED)
RC	REINFORCED CONCRETE
VC	VITREOUS CLAY



**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
 The locations of underground services are approximate only and their exact position should be proven on site. No guarantee is given that all existing services are shown. Locate all underground services before commencement of works  
**DIAL 1100 BEFORE YOU DIG**  
 www.1100.com.au

THRUST RESTRAINT SCHEDULE			
LOCATION	TYPE	AREA (m <sup>2</sup> )	NUMBER
A	SEAGRASS	100 CAP	0.38
B	VILLAGE GREEN & ESTUARY	225 CAP	1.700
C	ESTUARY	150x100 TEE	0.800
D	CASY	100 11.25° BEND	NONE
E	ESTUARY	225x225 TEE	1.700
F	SEAGRASS	225x100 TEE	1.700
G	I/A	300 11.25° FLANGED BEND	0.590
H	FAIRVISTA	150 90° BEND	1.120
I	ESTUARY	225x150 TEE	1.700
J	I/A	100 90° BEND	0.540
K	I/A	300x100 FLANGED TEE	2.990
L	ESTUARY	150 TO 225 TAPER	0.900
M	ESTUARY	225 TO 300 TAPER	1.300

NEW WATER MAINS		
SIZE	TYPE	LENGTH
100	PVC (CL-16)	118.5
150	PVC (CL-16)	322.6
225	PVC (CL-16)	204.8
300	DICL	51.0

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ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES  
 CO-ORDINATOR  
 DEVELOPMENT & CONSERVATION

REVISION	DATE	DESIGN	APP'D
C	16.11.11	CB/AH	JG
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**estuary leopard**

Principal  
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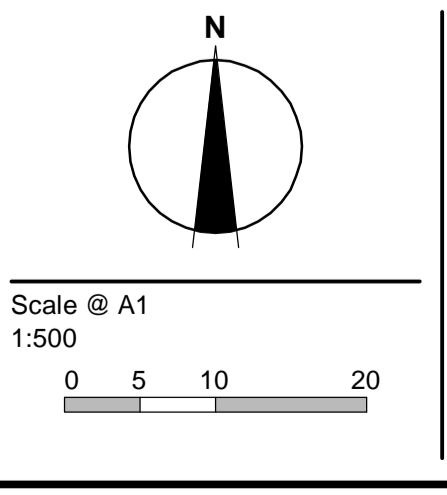
Designed  
 C. Barker

Drawn  
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Checked  
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Authorised  
 J. Golden

Date  
 March 2011



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**smec urban**  
 consulting group

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**Barwon Region Water Corporation**  
 Barwon Water No. L006844  
 Estuary  
 Stage No. 6  
 Water Detail Plan 1

**Drawing No. 0250EHL-06-61** Rev C  
 Sheet No. 1 of 2

**Approved for Construction**

**DESIGN HEAD=114.7m AHD  
TEST PRESSURE=1600kPa**

**NOTES**

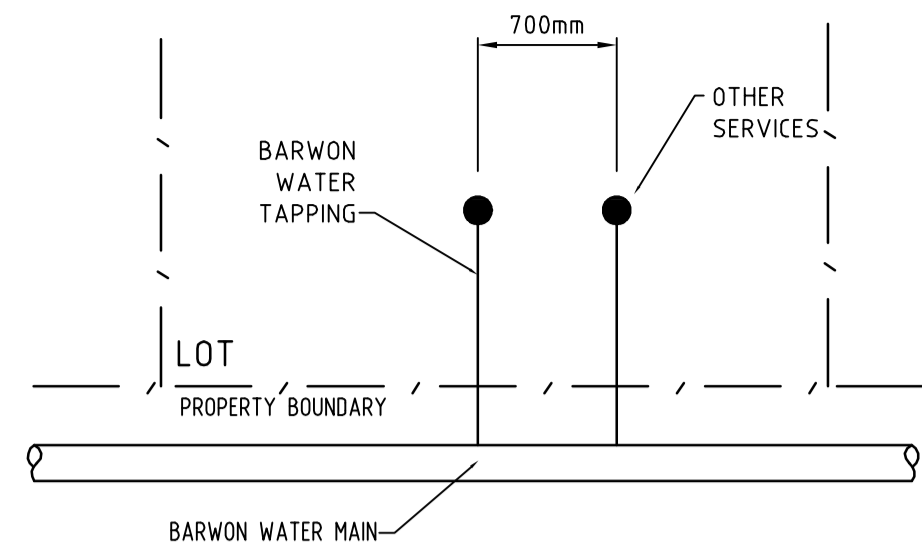
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    - COMPLY WITH SAFETY REQUIREMENTS OF THE MINES ACT, GENERAL REGULATIONS AND STATUTORY RULES, AND THE MINES (TRENCHES) REGULATIONS 1982.
    - NOTIFY THE DEPARTMENT OF LABOUR OF HIS INTENTION TO COMMENCE TRENCHING OPERATIONS WHERE TRENCHES ARE 1.5 METRES OR DEEPER.
    - INSURE THAT THE MINE MANAGER OR HIS DEPUTY AS REQUIRED BY THE REGULATIONS IS IN ATTENDANCE WHEN TRENCHING OPERATIONS ARE IN PROGRESS.
  - THE CONTRACTOR SHALL MAKE ALL WORKS AVAILABLE FOR THE INSPECTOR/SURVEYOR TO CARRY OUT THE NECESSARY INSPECTIONS AND SURVEYING BEFORE BACKFILLING IS COMMENCED.
  - SERVICES ARE APPROXIMATE ONLY. ALL RELEVANT SERVICE AUTHORITY'S ARE TO BE CONTACTED PRIOR TO THE COMMENCEMENT OF EXCAVATION TO ESTABLISH THEIR EXACT LOCATION.
  - CONTACT PRIOR TO COMMENCEMENT OF WORKS:
    - CITY OF GREATER GEELONG
    - POWERCOR
    - TELSTRA
    - TRU
    - VICTORIAN WORKCOVER AUTHORITY
  - ALL SERVICES ARE TO BE LOCATED ON SITE PRIOR TO ANY EXCAVATION.
  - INVERT LEVELS OF EXISTING SEWERS AND WATERMANS TO BE CHECKED PRIOR TO THE COMMENCEMENT OF WORKS.
  - CLASS 2 BACKFILL TO BE USED UNDER DRIVEWAYS FOR WATER AND SEWER RETICULATION.
  - PROPERTY OWNERS ARE TO BE NOTIFIED IN WRITING BY THE CONSULTANT 14 CLEAR DAYS PRIOR TO COMMENCEMENT OF WORKS
  - COPY OF CADASTRAL MAP GRID (MGA) CONNECTION & COPY OF AUSTRALIAN HEIGHT DATUM (AHD) CONNECTION IS TO BE PROVIDED BY CONTRACTOR
  - WORKS SHALL BE EFFECTED BETWEEN THE HOURS OF 8.00am AND 5.00pm MONDAY - FRIDAY. IN THE EVENT THAT WORKS ARE TO BE EFFECTED OUTSIDE THESE WORKING HOURS, A LETTER REQUESTING APPROVAL FOR SUCH OUT OF HOURS WORK SHALL BE LODGED TO THE SENIOR QUALITY AUDITOR.
  - THE CONTRACTOR SHALL COMPLY WITH SAFETY REQUIREMENTS RELATING TO WORKING NEAR POWER LINES AS SET BY THE CHIEF ELECTRICAL INSPECTOR WHERE NECESSARY AN ACCREDITED TRAINED SPOTTER IS TO BE PROVIDED.
  - WATER RESTRICTIONS ARE TO APPLY FROM MIDNIGHT JUNE 30th 2006, IN ACCORDANCE WITH BY-LAW NO. 187. ONLY TRIGGER HOSES (MAXIMUM SIZE 25mm) MAY BE USED FOR CONSTRUCTION WORK NOT INCLUDING TRENCHING, UNLESS OTHERWISE EXEMPTED BY THE AUTHORITY IN WRITING. MECHANICAL COMPACTION IS TO BE USED IN ACCORDANCE WITH MRWA SPECIFICATION 04-03 FOR TRENCH WORKS UNTIL FURTHER NOTICE. ANY WATER USED TO FLUSH WATER MAINS IS TO BE RECLAIMED AND USED FOR CONSTRUCTION PURPOSES.

**WATER**

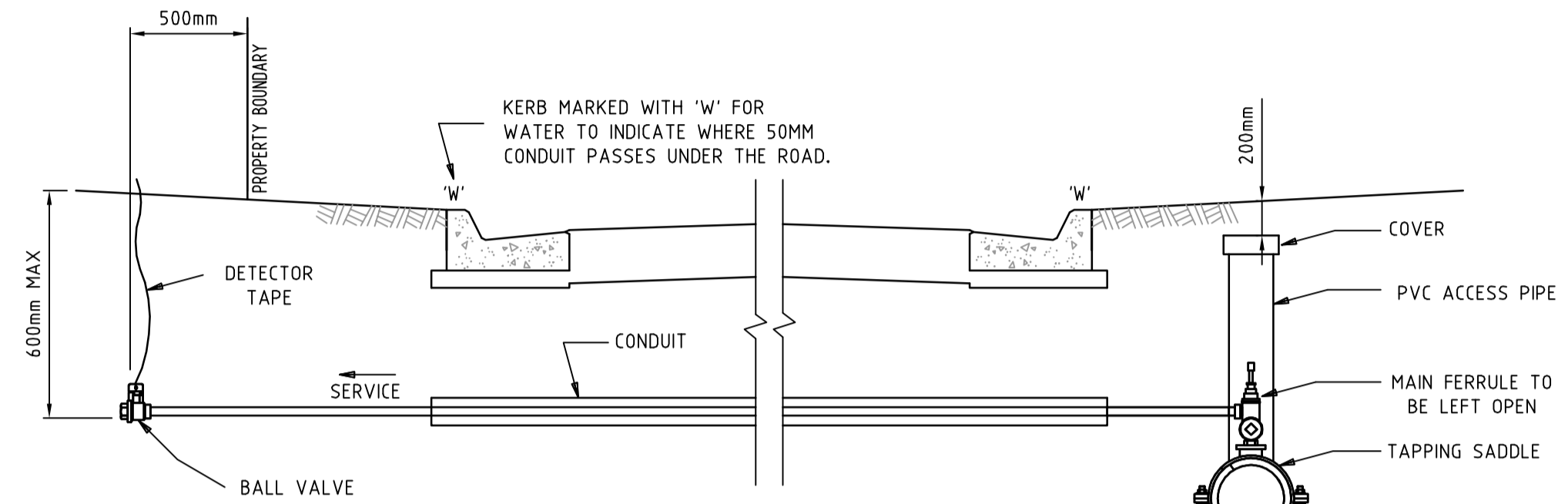
- ENSURE WATERMANS ARE GRADED TO SUFFICIENT DEPTH UNDER ROADWAYS TO OBTAIN REQUIRED CLEARANCE UNDER STORM WATER DRAINS AND PAVEMENT LEVELS.
- MARKER POSTS TO BE PLACED AT FIRE PLUGS. FIRE PLUG INDICATORS ARE TO BE IN ACCORDANCE WITH CFA & WSAA REQUIREMENTS.
- ALL ALLOTMENTS ARE TO BE PROVIDED WITH A WATER SERVICE AS PART OF WATER RETICULATION WORKS. THE WATER MAIN IS TO BE TAPPED USING A TAPPING SADDLE AND PRESSURE FERRULE (FERRULE TO BE LEFT OPEN). A MINIMUM SIZE SERVICE (i.e. 20mm COPPER, 25mm PE) IS THEN TO BE EXTENDED TO A POINT 500mm WITHIN THE PROPERTY. THE SERVICE IS TO BE A CONTINUOUS LENGTH WITH NO JOINTS. IN THE CASE OF PE OR ANY OTHER NON-METALLIC SERVICE BEING INSTALLED, A COPPER TRACE WIRE IS TO BE INCORPORATED. A BURIED BALL VALVE IS TO BE PLACED AT THE END OF THE SERVICE AND BACKFILLED WITH SAND TO DESIGN SURFACE LEVEL. DETECTOR TAPE FROM BALL VALVE TO BE RUN TO SURFACE LEVEL.
- PE PIPE TO BE LAID IN ACCORDANCE WITH WSA-01 WITH LONG RADIUS BENDS OR DEFLECTION ONLY. NO COMPRESSION BENDS TO BE USED.
- AC PIPE NOTE**  
ANY WORK INVOLVING THE REMOVAL (CUTTING AND HANDLING), STORAGE, TRANSPORTATION AND DISPOSAL OF WASTE ASBESTOS CEMENT (AC) PIPES MUST BE CARRIED OUT IN ACCORDANCE WITH THE OCCUPATIONAL, HEALTH AND SAFETY (ASBESTOS) REGULATIONS 1992 AND RELEVANT CODES OF PRACTICE (REMOVAL), THE ENVIRONMENT PROTECTION (PRESCRIBED WASTE) REGULATIONS 1998 (STORAGE, TRANSPORTATION AND DISPOSAL), AND BARWON WATER'S SAFETY MANAGEMENT SYSTEM "SAFES".
- FITZROY BOXES ARE TO BE PLACED OVER MONT TAP (MT) OR ANY TAPPING LOCATED WITHIN THE ROAD PAVEMENT.
- THRUST BLOCKS ARE TO BE CONSTRUCTED AS PER BARWON WATER STANDARD DRAWING No's 70104, 70105 AND 70106
- SWABBING OF WATER MAINS IS TO BE DONE IN ACCORDANCE WITH SECTION 6.7 AND SECTION 18 OF WSAA WATER SUPPLY CODE OF AUSTRALIA WSA 03-2002 MRWA EDITION 1
- ALL WATER MAINS MUST BE HYDROSTATIC PRESSURE TESTED IN ACCORDANCE WITH SECTION 19.4 OF WSAA WATER SUPPLY CODE OF AUSTRALIA WSA 03-2002 MRWA EDITION 1.0. THE CONTRACTOR MUST GIVE BARWON WATER THREE WORKING DAYS NOTICE IN WRITING OF THE DATE AND TIME OF THE PROPOSED HYDROSTATIC PRESSURE TESTING TO ENSURE THAT BARWON WATER HAS THE OPPORTUNITY TO WITNESS THESE TESTS.

**SPECIAL**

- TRENCH COMPACTION RESULTS TO BE SUBMITTED BY CONSULTANT WITH 'AS CONSTRUCTED' NOTES.



**TAPPING OFFSET DETAIL**  
NOT TO SCALE



**TAPPING INSTALLATION DETAIL**  
NOT TO SCALE

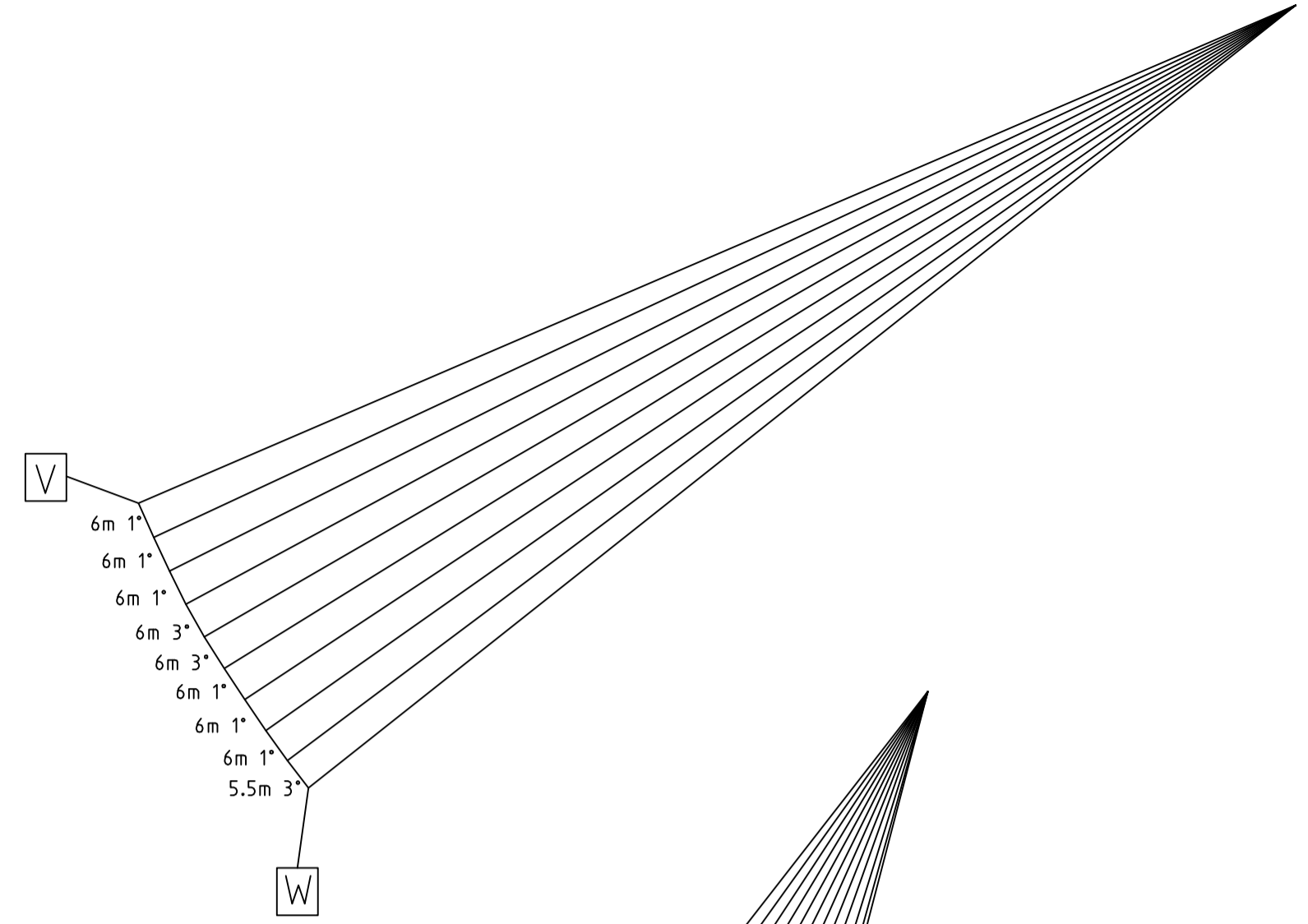
SURVEY STATIONS (HORIZONTAL - ARBITRARY, VERTICAL - AHD)				
TBM	EASTING	NORTHING	RL	DESCRIPTION
ROD501	10106.39	48560.27	21.19	ROD
ROD502	10309.58	48587.59	28.62	ROD
MOOLAP PM69	1000.00	50000.00	-	BRASS PLAQUE
MOOLAP PM321	9897.74	48994.921	9.436	BRASS PLAQUE
MOOLAP PM302	10212.03	48959.504	22.180	BRASS PLAQUE

SURVEY CONTROL				
TBM	EASTING	NORTHING	RL	DESCRIPTION
ROD501	277245.07	5768919.27	21.19	ROD
ROD502	277448.31	5768946.60	28.62	ROD
MOOLAP PM69	277138.66	5770359.31	-	BRASS PLAQUE
MOOLAP PM321	27704.0	57694.80	9.436	BRASS PLAQUE
MOOLAP PM302	277310	5769280	22.180	BRASS PLAQUE

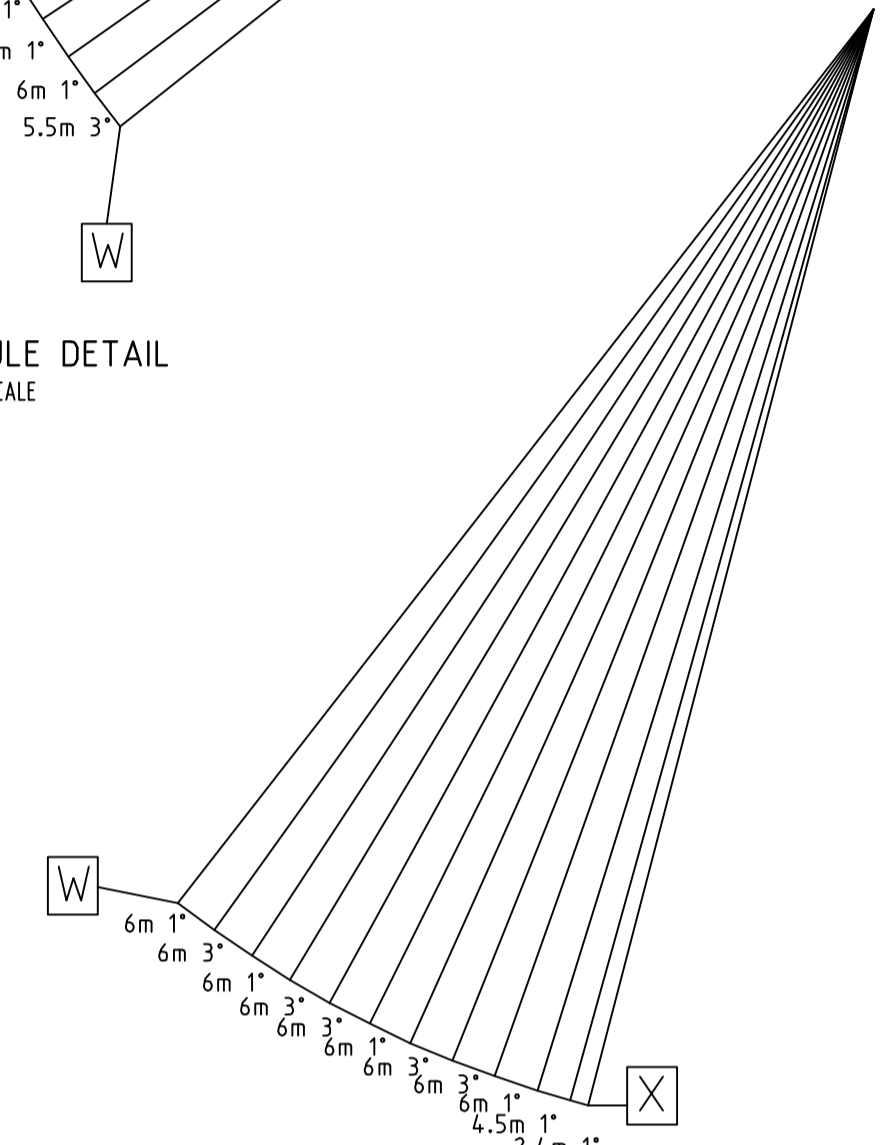
ROAD NAME	SERVICES OFFSET SCHEDULE							
	GAS		WATER		ELECTRICITY		TELSTRA	
	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)	SIDE	OFFSET (m)
ESTUARY BOULEVARD	SOUTH	2.70	SOUTH	3.20	NORTH	3.40	NORTH	2.80
CASY GROVE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70
ILA DRIVE	WEST	1.80	WEST	2.30	EAST	1.00	EAST	0.50
ILA DRIVE TRUNK MAIN			WEST	2.90				
FAIRVISTA AVENUE	EAST	2.10	EAST	2.70	WEST	1.00	WEST	0.50
HEADLAND DRIVE	EAST	2.10	EAST	2.70	WEST	2.30	WEST	1.70
VILLAGE GREEN DRIVE	WEST	2.10	WEST	2.70	EAST	1.00	EAST	0.50
BELLRISE DRIVE	SOUTH	2.10	SOUTH	2.70	NORTH	2.30	NORTH	1.70
SEAGRASS STREET	EAST	2.10	EAST	2.70	EAST	3.90	EAST	3.30
MELALUKA ROAD	-	-	EAST	Ex 2.10	EAST	Ex O/H E	EAST	Varies Ex1.2-1.5

CURVED WATER MAIN SCHEDULE								
CURVE	RADIUS(m)	PIPE LENGTH(m)	NO OF PIPES	NO OF DEFLECTIONS OF 1°	NO OF SOC-SOC CONNECTORS	BEND REQUIRED 11.25°	BEND REQUIRED 22.5°	BEND REQUIRED 45°
V-W	202.7	6 & 5.5	9	6	3	-	-	-
W-X	149.83	6, 4.5 & 2.4	11	6	5	-	-	-
Y-Z	156.66	6 & 4.85	13	6	7	-	-	-

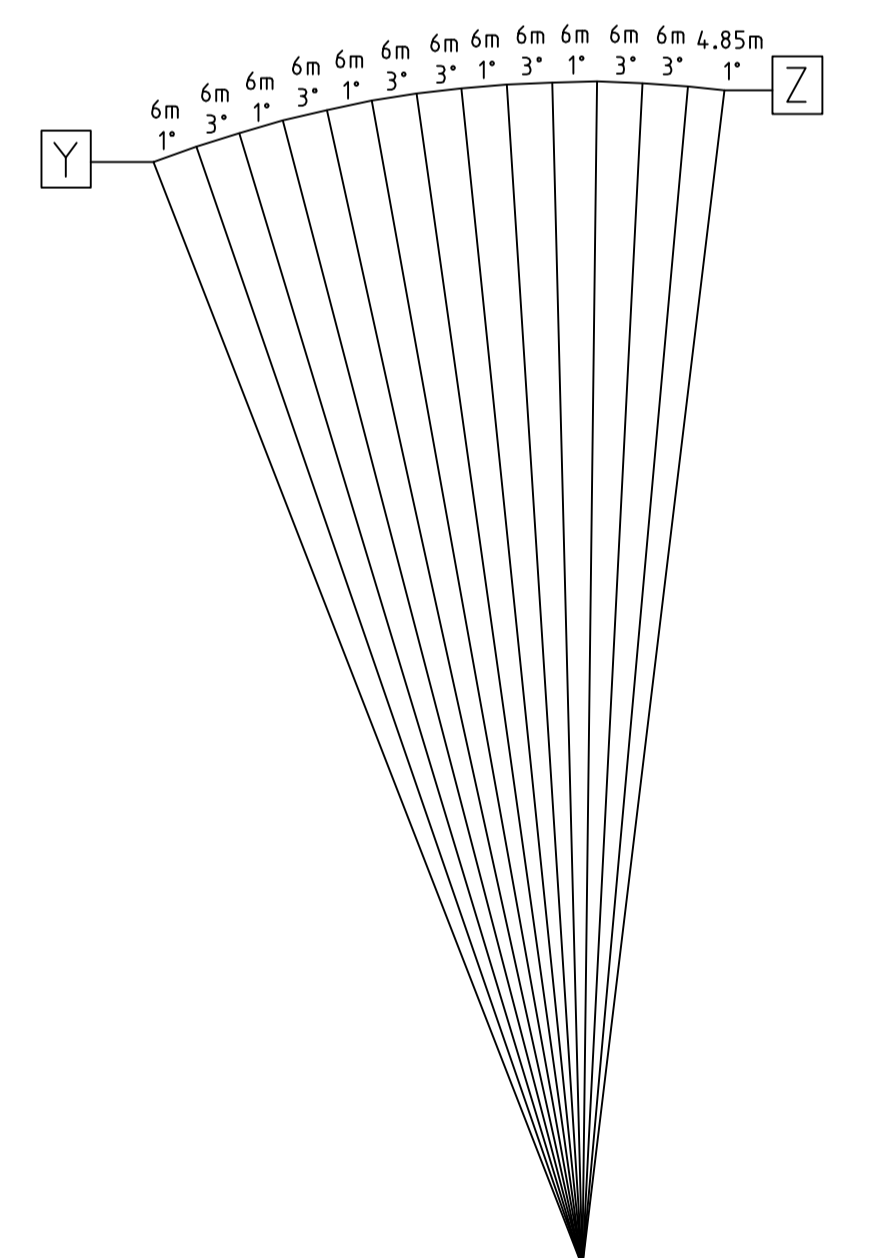
- ALL LOTS ARE TO BE TAPPED USING A TAPPING SADDLE AND PRESSURE FERRULE.
- A MINIMUM SIZE SERVICE (IE 20MM COPPER, 25MM PE) IS THEN TO BE EXTENDED TO A POINT 500MM WITHIN THE PROPERTY.
- SERVICE PIPE BETWEEN MAIN FERRULE AND BALL VALVE TO BE A CONTINUOUS LENGTH (IE NO JOINTS)
- SERVICE TO BE TYPE 'B' COPPER OR CLASS 12 TYPE 50 PE.
- IN THE CASE OF PE OR ANY OTHER NON-METALLIC SERVICE BEING INSTALLED, A COPPER TRACE WIRE IS TO BE INCORPORATED.
- A BURIED BALL VALVE IS TO BE PLACED AT THE END OF THE SERVICE.
- DETECTOR TAPE IS TO BE RUN TO SURFACE LEVEL.
- BALL VALVE TO BE IN ACCORDANCE WITH AUSTRALIAN STANDARDS (IE STAMPED 'W') BRASS FITTING WITH STAINLESS STEEL BALL.



**CURVE SCHEDULE DETAIL**  
NOT TO SCALE



**CURVE SCHEDULE DETAIL**  
NOT TO SCALE



**CURVE SCHEDULE DETAIL**  
NOT TO SCALE

WORKS SHALL NOT COMMENCE UNTIL PLANS ARE SIGNED BY BARWON WATER

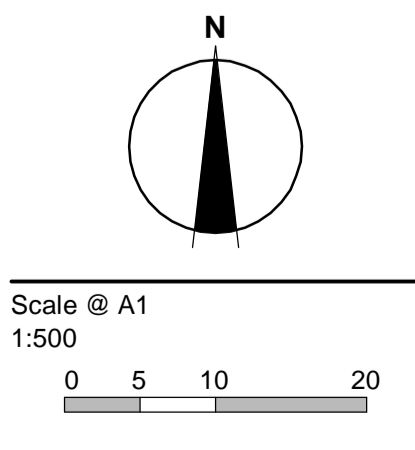
ACCEPTED BY BARWON WATER DEVELOPMENT SERVICES CO-ORDINATOR DEVELOPMENT & CONSERVATION

REVISION	DATE	DES/DT	APP'D
C ROAD NAMES AMENDED	16.11.11	CB/AH	JG
B BARWON WATER AMENDMENTS	29.04.11	CB/CB	JG
A ISSUED TO BARWON WATER FOR APPROVAL	7.03.11	CB/CB	JG

Principal  
Leopold Property Developments Pty Ltd  
Level 1, 6 Riverside Quay  
Southbank, Victoria 3006

- Construction Notes**
- Construction of the sewer and water mains is to be in accordance with the Barwon Water standard specifications "Construction of gravity sewers and rising mains" and "Construction of water mains".
  - Every endeavour to ensure the location of all existing services on the plan are correct. However actual locations are to be checked on site prior to commencement of excavations.
  - Nominal size of water mains indicated in millimetres & offsets are indicated in metres.
  - All sewer pipes are 1500mm unless otherwise shown.

Designed  
C. Barker  
Drawn  
C. Barker  
Checked  
C. Birkett  
Authorised  
J. Golden  
Date  
March 2011



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Traralgon +61 3 5173 0100

**Barwon Region Water Corporation**  
Barwon Water No. L006844  
Estuary  
Stage No. 6  
Water Detail Plan 2

**Drawing No. 0250EHL-06-62**      **Rev C**  
Sheet No. 2 of 2

**Approved for Construction**

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