	SHEET LIST TABLE
HEET NUMBER	SHEET TITLE
C001	COVER SHEET LOCALITY PLAN & DRAWING SCHEDULE
C002	SURVEY SETOUT PLAN
C003	OVERALL SERVICES LAYOUT
C004	SAFETY IN DESIGN PLAN
C100	ROADWORKS & DRAINAGE LAYOUT PLAN - SHEET 1 OF 2
C101	ROADWORKS & DRAINAGE LAYOUT PLAN - SHEET 2 OF 2
C200	EARTHWORKS LAYOUT PLAN - SHEET 1 OF 3
C201	EARTHWORKS LAYOUT PLAN - SHEET 2 OF 3
C202	EARTHWORKS LAYOUT PLAN - SHEET 3 OF 3
C203	EARTHWORKS NOTES AND DETAILS
C204	EARTHWORKS SUBGRADE ROCK PREPARATION DETAILS
C300	ROADWORKS TYPICAL SECTIONS & NOTES
C301	KESSELS BOULEVARD LONGITUDINAL SECTIONS
C302	KESSELS BOULEVARD CROSS SECTIONS - SHEET 1 OF 3
C303	KESSELS BOULEVARD CROSS SECTIONS - SHEET 2 OF 3
C304	KESSELS BOULEVARD CROSS SECTIONS - SHEET 3 OF 3
C305	TEAL CIRCUIT LONGITUDINAL SECTIONS
C306	TEAL CIRCUIT CROSS SECTIONS
C307	GRASS LANE LONGITUDINAL AND CROSS SECTIONS
C308	LEAF STREET LONGITUDINAL AND CROSS SECTIONS
C309	LEAF STREET CROSS SECTIONS
C310	DRIVEWAY 3 LONGITUDINAL AND CROSS SECTIONS
C311	GROVE STREET LONGITUDINAL AND CROSS SECTIONS
C312	AMAZON WAY LONGITUDINAL SECTIONS
C313	AMAZON WAY CROSS SECTIONS
C314	EMERALD PARADE LONGITUDINAL AND CROSS SECTIONS
C315	HEDGE LANE LONGITUDINAL & CROSS SECTIONS
C316	INTERSECTION DETAILS PLAN - SHEET 1 OF 2
C317	INTERSECTION DETAILS PLAN - SHEET 2 OF 2
C318	PAVEMENT MARKINGS AND SIGNAGE LAYOUT - SHEET 1 OF 2
C319	PAVEMENT MARKINGS AND SIGNAGE LAYOUT - SHEET 2 OF 2
C400	STORMWATER DRAINAGE DETAILS AND NOTES
C401	STORMWATER DRAINAGE CATCHMENT PLAN - SHEET 1 OF 2
C402	STORMWATER DRAINAGE CATCHMENT PLAN - SHEET 2 OF 2
C403	STORMWATER DRAINAGE LONG SECTIONS - SHEET 1 OF 5
C404	STORMWATER DRAINAGE LONG SECTIONS - SHEET 2 OF 5
C405	STORMWATER DRAINAGE LONG SECTIONS - SHEET 3 OF 5
C406	STORMWATER DRAINAGE LONG SECTIONS - SHEET 4 OF 5
C407	STORMWATER DRAINAGE LONG SECTIONS - SHEET 5 OF 5
C408	Q2 MINOR STORM CALCULATIONS - 1 OF 3
C409	Q2 MINOR STORM CALCULATIONS - 2 OF 3
C410	Q2 MINOR STORM CALCULATIONS - 2 OF 3
C410	0100 MAJOR STORM CALCULATIONS - 1 OF 3
C411	O100 MAJOR STORM CALCULATIONS - 1 OF 3
C412	Q100 MAJOR STORM CALCULATIONS - 2 OF 3 Q100 MAJOR STORM CALCULATIONS - 3 OF 3
C414	STORMWATER STRUCTURE DETAILS - SHEET 1 OF 3
C415	STORMWATER STRUCTURE DETAILS - SHEET 2 OF 3
C416	STORMWATER STRUCTURE DETAILS - SHEET 3 OF 3
C500	SEWERAGE RETICULATION LOCALITY PLAN & NOTES
C501	SEWERAGE RETICULATION LAYOUT PLAN - SHEET 1 OF 2
C502	SEWERAGE RETICULATION LAYOUT PLAN - SHEET 2 OF 2
C503	SEWERAGE RETICULATION LONG SECTIONS - SHEET 1 OF 4
C504	SEWERAGE RETICULATION LONG SECTIONS - SHEET 2 OF 4
C505	SEWERAGE RETICULATION LONG SECTIONS - SHEET 3 OF 4
C506	SEWERAGE RETICULATION LONG SECTIONS - SHEET 4 OF 4
C507	SEWERAGE RETICULATION NOTES AND DETAILS
C600	WATER RETICULATION LOCALITY PLAN & NOTES
	WATER RETICULATION LAYOUT PLAN SHEET 1 OF 2
C601	
C601 C602	WATER RETICULATION LAYOUT PLAN SHEET 2 OF 2
	EROSION AND SEDIMENT CONTROL LAYOUT - CLEAR AND GRUB PHAS
C602	WATER RETICULATION LAYOUT PLAN SHEET 2 OF 2 EROSION AND SEDIMENT CONTROL LAYOUT - CLEAR AND GRUB PHAS EROSION AND SEDIMENT CONTROL LAYOUT - BULK EARTHWORKS PHA

C704	EROSION & SEDIMENT CONTROL SECTIONS & DETAILS - SHEET 2
C800	TEMPORARY WORKS - ROADWORKS AND DRAINAGE - SHEET 1 OF 2
C801	TEMPORARY WORKS - ROADWORKS AND DRAINAGE - SHEET 2 OF 2
S001	STORMWATER STRUCTURAL NOTES
S100	STORMWATER REINFORCED CONCRETE PIT ARRANGEMENT
S101	STORMWATER REINFORCED CONCRETE PIT DETAILS

GENERAL NOTES

- 1. ALL DIMENSIONS GIVEN ON THESE DRAWINGS ARE IN METRES UNLESS NOTED
- OTHERWISE.

 2. ALL NEW WORK AND MATERIALS SHALL COMPLY CURRENT RELEVANT COUNCIL STANDARDS AND SPECIFICATIONS.

 3. ALL WORK SHALL BE JOINED
- NEATLY TO EXISTING
 CONSTRUCTION.
- 4. THE CONTRACTOR IS TO LOCATE, IDENTIFY AND ESTABLISH THE CONNECTIVITY OF ALL EXISTING SERVICES WITHIN THE LIMITS OF PROPOSED WORKS AND CONFIRM THIS INFORMATION WITH THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MEASURING DEVICES, SAFETY EQUIPMENT AND MACHINERY REQUIRED TO CARRY OUT INSPECTIONS/MEETINGS AS SPECIFIED OR REQUESTED BY THE ENGINEER.
- 6. PROOF ROLLING NOMINATED SHALL BE CARRIED OUT USING A SINGLE AXLE HIGHWAY TRUCK WITH A REAR AXLE LOAD NOT LESS THAN 10 TONNES AND TYRES INFLATED TO 550KPa OR APPROVED EQUIVALENT. EQUIPMENT LABOUR AND LOADING REQUIRED FOR PROOF ROLLING IS TO BE PROVIDED BY THE CONTRACTOR.

 7. THESE NOTES SHALL APPLY TO
- ALL PORTIONS OF WORK.

 THE DRAWINGS ARE TO BE READ IN CONJUNCTION WITH THE SPECIFICATIONS. ANY POINT OF CONFLICT WILL BE RESOLVED BY THE SUPERINTENDENT.

NOISE

1. ALL PLANT AND EQUIPMENT SHALL BE CONTROLLED TO MINIMISE NOISE EMISSION IN ACCORDANCE WITH AS2436 (GUIDE TO NOISE CONTROL ON CONSTRUCTION, MAINTENANCE AND DEMOLITION). THE SITE WORKING HOURS SHOULD BE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS. WHERE NOT SPECIFIED THE HOURS SHALL BE:

MONDAY - SATURDAY 7:00am to 6:00pm SUNDAY OR PUBLIC HOLIDAY NO WORK PERMITTED

PRE-CONSTRUCTION & APPROVALS

- NO LOCATING/ POTHOLING OF EXISTING SERVICES HAS BEEN CARRIED OUT. THE CONTRACTOR IS TO DETERMINE THE LOCATION AND DEPTH OF ALL EXISTING SERVICES WHICH AFFECT THE WORKS AND REPORT ANY POTENTIAL CLASHES TO THE SUPERINTENDENT PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION WORKS.
- 2. THE CONTRACTOR IS
 RESPONSIBLE FOR ARRANGING
 WITH THE APPROPRIATE
 AUTHORITY FOR LOCATING
 EXISTING SERVICES AND FOR
 ANY MODIFICATIONS TO
 EXISTING SERVICES REQUIRED
 AS A RESULT OF THE WORKS.
- THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL EXISTING SERVICES FROM DAMAGE.
- 4. ANY WORKS DAMAGED AS A
 RESULT OF CONSTRUCTION ARE
 TO BE REINSTATED TO
 RELEVANT AUTHORITY'S
 REQUIREMENTS AT THE
 CONTRACTORS COST.
- FINISHED SURFACE LEVELS ARE TO BE GRADED UNIFORMLY BETWEEN LEVELS INDICATED ON THE DRAWINGS.

WORKPLACE HEALTH &

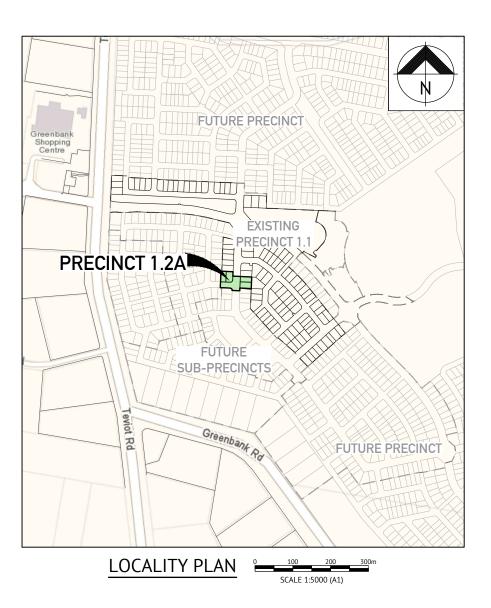
SAFETY

- 1. THE CONTRACTOR SHALL BE THE PRINCIPAL CONTRACTOR AS DESIGNATED BY THE WORK HEALTH AND SAFETY ACT (2011).
- THE CONTRACTOR SHALL
 PREPARE AND IMPLEMENT A
 WORKPLACE HEALTH AND
 SAFETY PLAN AS REQUIRED BY
 THE WORK HEALTH AND SAFETY
 ACT (2011).

SETOUT NOTES

- CO-ORDINATE SETOUT
 PROVIDED ON THESE DRAWINGS
 IS BASED ON A CO-ORDINATE
 BASE PROVIDED BY SAUNDERS
 HAVILL GROUP, REFERENCE
 MARKS AND CORRESPONDING
 CO-ORDINATES ARE PROVIDED
 ON DRAWING COO2.
- THE LEVEL DATUM FOR WORKS IS A.H.D (AUSTRALIAN HEIGHT DATUM).

EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT TEVIOT ROAD, GREENBANK FOR MIRVAC

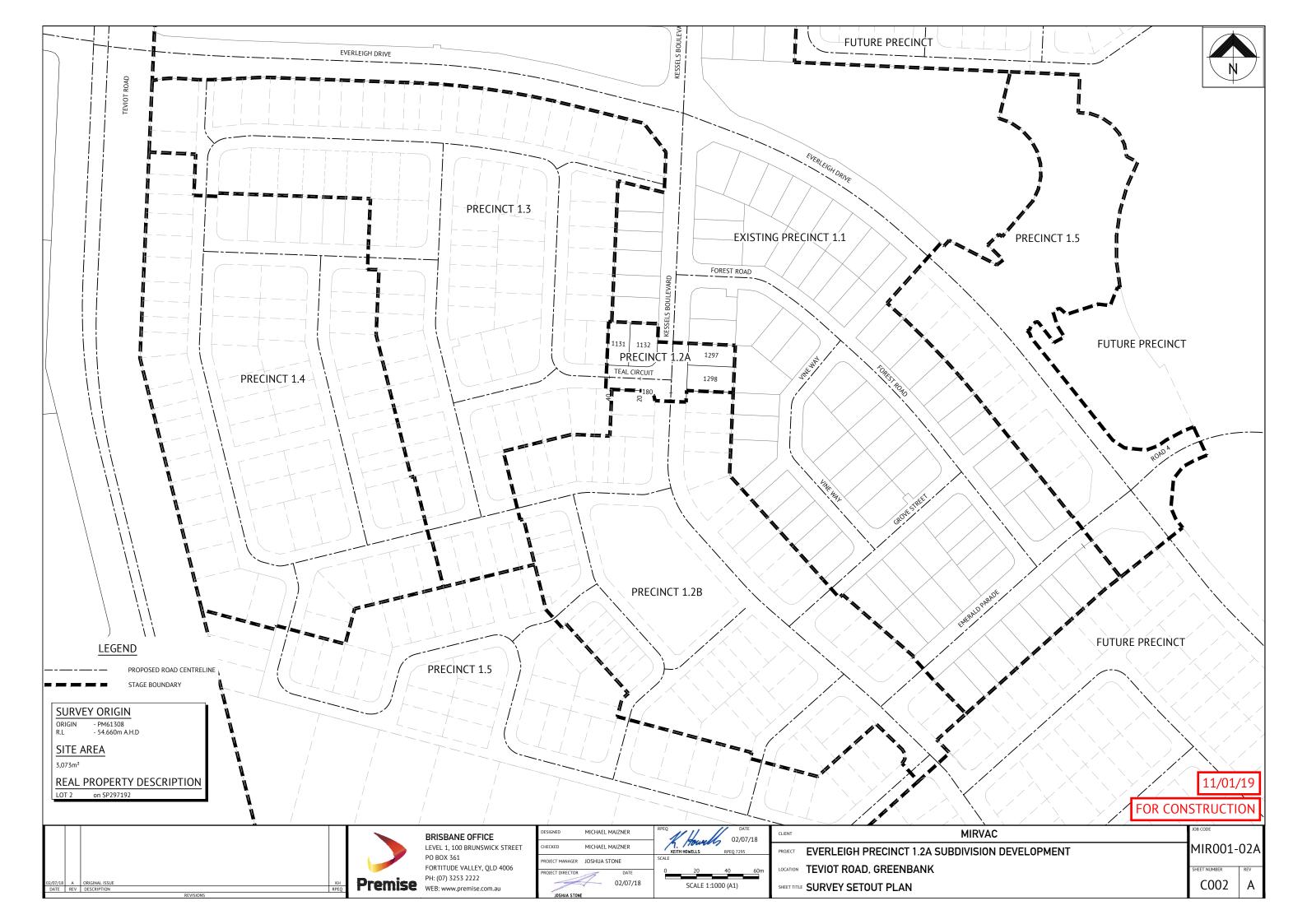


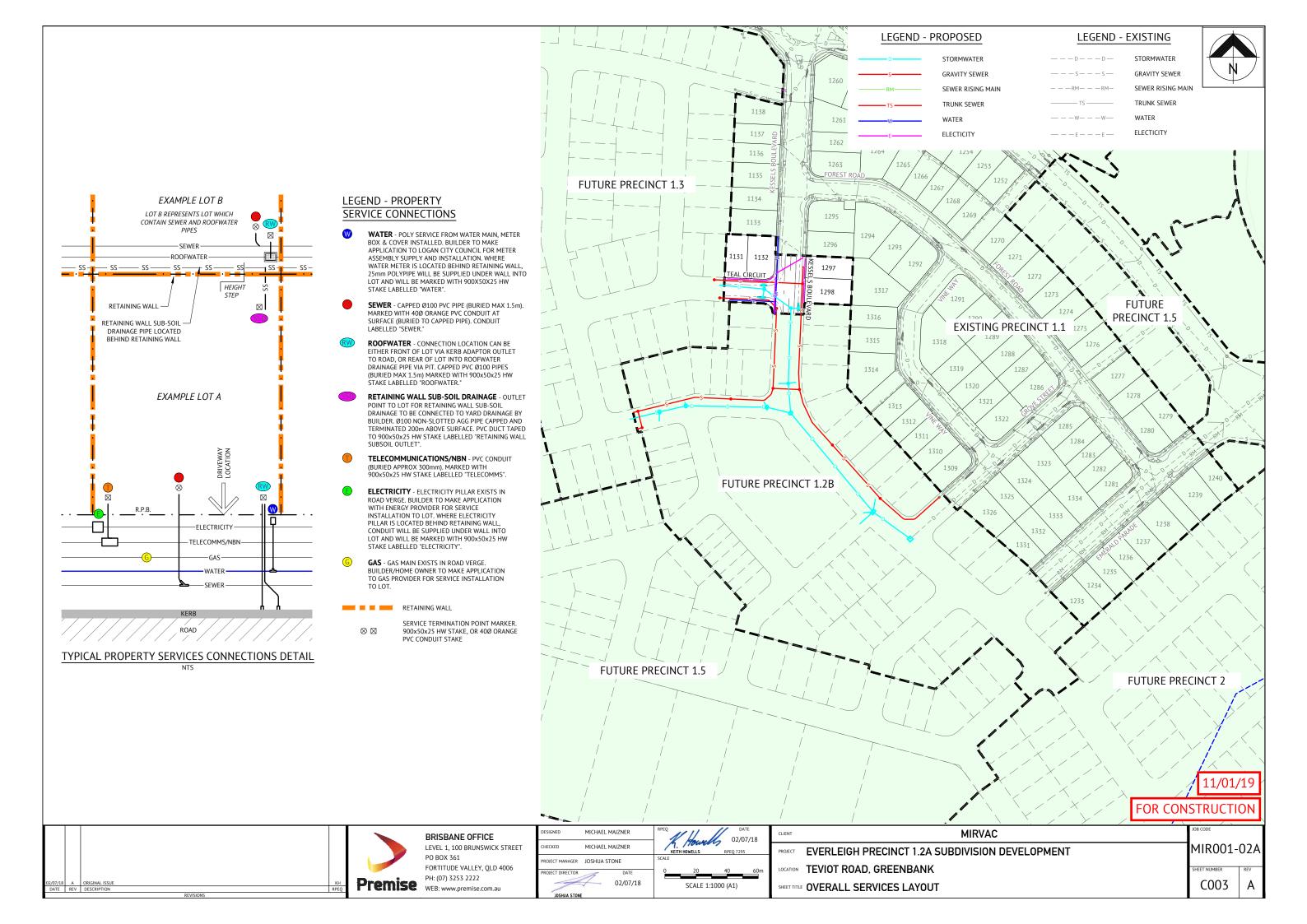


11/01/19

FOR CONSTRUCTION







DESIGN HAZARD NOTES:

- 1. PREMISE, HAVING BEEN COMMISSIONED TO CARRY OUT DETAILED DESIGN AND DOCUMENTATION OF THESE WORKS, CONFIRM THAT THE PREMISE DRAWING SET HAS BEEN INTERNALLY REVIEWED FOR DESIGN SAFETY IN ACCORDANCE WITH SECTION 22 OF THE WORK HEALTH AND SAFETY ACT 2011 OLD.
- 2. THIS REPORT SUMMARISES AN INTERNAL REVIEW OF PREMISE'S DETAILED DESIGN DRAWINGS FOR DESIGN SAFETY.

 3. THIS REPORT IN NO WAY RELIEVES THE PRINCIPAL, CONTRACTOR OR ANY OTHER PARTY OF THEIR OWN OBLIGATIONS AND RESPONSIBILITIES UNDER THE WORK HEALTH AND SAFETY ACT 2011 QLD, INCLUDING (BUT NOT LIMITED TO) CONSULTATION WITH THE DESIGNER UNDER SECTION 294 OF THE ACT, THE PREPARATION OF SATISFACTORY SAFE WORK METHOD STATEMENTS AND DUTIES
- OF CARE.

 4. IT IS A REQUIREMENT UNDER SECTION 296 OF THE WORK HEALTH AND SAFETY ACT 2011 QLD, THAT A COPY OF THIS REPORT BE PROVIDED TO THE CONTRACTOR BY THE ENTITY COMMISSIONING THE WORK SHOWN OF THE PREMISE DRAWINGS.
- 5. AS PER THE DEPARTMENT OF JUSTICE AND THE ATTORNEY-GENERAL-WORKPLACE HEALTH AND SAFETY QUEENSLAND, A WRITTEN REPORT IS NOT REQUIRED FOR DESIGNS THAT HAVE TYPICAL FEATURES.

CONSEQUENCE TABLE				
	CONSEQUENCE IMBLE			
LEVEL	CONSEQUENCE	COST/TIME		
5 - CATASTROPHIC	FATALITY OR MULTIPLE PERSONS ONSITE WITH LIFE THREATENING HEALTH EFFECT OR INABILITY TO CONTINUE	HUGE FINANCIAL OR TIME LOSS		
4 - MAJOR	EXTENSIVE INJURIES, OR ONSET OF SEVERE OR LIFE THREATENING HEALTH EFFECT TO SINGLE PERSON ONSITE. MULTIPLE PERSONS WITH ONSET OF IRREVERSIBLE HEALTH EFFECTS. PREMANENT INJURT TO PERSON INSITE.	MAJOR FINANCIAL OR TIME LOSS		
3 - MODERATE	MEDICAL TREATMENT REQUIRED. IRREVERSIBLE HEALTH EFFECT TO A SINGLE PERSON. MULTIPLE PERSONS ONSITE WITH REVERSIBLE HEALTH EFFECTS.	HIGH FINANCIAL OR TIME LOSS		
2 - MINOR	FIRST AID, SINGLE OR MULTIPLE INJURIES AMONGST PERSONS ONSITE. SINGLE PERSON ONSITE WITH MODERATE SHORT TERM REVERSIBLE HEALTH EFFECTS.	MEDIUM FINANCIAL OR TIME LOSS		
1 - INSIGNIFICANT	NO INJURIES. OVER EXPOSURE TO A SINGLE PERSON ONSITE, BUT NO REPORTED HEALTH EFFECTS.	LOW FINANCIAL OR TIME LOSS		

CONSTRUCTION HAZARD NOTES:

1. UNDER THE QUEENSLAND WORK HEALTH AND SAFETY ACT 2011, THE WORK HEALTH AND SAFETY REGULATION 2011 AND OTHER LEGISLATION AND GUIDELINES, THE PRINCIPAL CONTRACTOR HAS SPECIFIC OBLIGATIONS IN RELATION TO THE SAFE OPERATION OF THE SITE AND OF THE WORKS.

TO ASSIST THE PRINCIPAL CONTRACTOR IN COMPLYING WITH THESE OBLIGATIONS THE PROJECT DESIGNERS HAVE IDENTIFIED BY DRAWING NOTES, AREAS WHERE POTENTIAL HAZARDS MAY ARISE. THESE NOTES OR ADVICE, SHALL NOT NECESSARILY BE CONSIDERED COMPLETE AND ARE BASED UPON THE DESIGNERS' UNDERSTANDING OF THE SAFETY RISKS ASSOCIATED WITH THE

THESE NOTES OR ADVICE SHALL NOT RELIEVE THE PRINCIPAL CONTRACTOR OF ANY OBLIGATION UNDER THE RELEVANT LEGISLATION OR GUIDELINE. THE PRINCIPAL CONTRACTOR SHALL REMAIN RESPONSIBLE FOR THE PREPARATION OF AN APPROPRIATE WORK HEALTH SAFETY MANAGEMENT PLAN AND SAFE WORK METHOD STATEMENTS FOR THE SITE.

2. PURSUANT TO THE WORK HEALTH AND SAFETY ACT 2011 WE HEREBY ADVISE THAT OUR DESIGN SAFETY REVIEW HAS IDENTIFIED UNUSUAL OR ATYPICAL DESIGN FEATURES THAT MAY PRESENT ADDITIONAL HAZARDS OR RISKS DURING THE CONSTRUCTION PHASE AND THESE ARE LISTED IN THE CONSTRUCTION HAZARD SCHEDULE.

	RISK ANALYSIS MATRIX							
	1 - INSIGNIFICANT 2 - MINOR 3 - MODERATE 4 - MAJOR 5 - CATASTROPHIC							
	A - ALMOST CERTAIN	MODERATE	HIGH	EXTREME	EXTREME	EXTREME		
Q0	B - LIKELY	MODERATE	HIGH	HIGH	EXTREME	EXTREME		
LIKELIHOOD	C - POSSIBLE	LOW	MODERATE	HIGH	EXTREME	EXTREME		
\(\(\)	D - UNLIKELY	LOW	LOW	MODERATE	HIGH	EXTREME		
	E - RARE	LOW	LOW	MODERATE	HIGH	HIGH		

RISK EVALUATION TABLE			
RISK LEVEL ACTION REQUIRED			
EXTREME	UNACCEPTABLE RISK. RE-DESIGN REQUIRED. DO NOT PROCEED WITHOUT ADDITIONAL CONTROLS.		
HIGH	UNACCEPTABLE RISK. ADDITIONAL CONTROLS NEEDED. CONSIDER FURTHER REVIEW AND CONSIDER RE-DESIGN		
MODERATE	RISK MAY BE ACCEPTABLE. MANAGEMENT TO DETERMINE ACTIONS REQUIRED		
LOW	ACCEPTABLE. MANAGE RISK THROUGH ROUTINE PROCEDURES AND OTHER ADMINISTRATIVE CONTROLS		

LIKELIHOOD TABLE				
LEVEL DESCRIPTION		QUANTIFICATION GUIDE		
A - ALMOST CERTAIN	THE EVENT IS EXPECTED TO OCCUR IN MOST CERTAIN CIRCUMSTANCES	MORE THAN ONCE PER YEAR		
B - LIKELY	THE EVENT WILL PROBABLY OCCUR IN MOST CIRCUMSTANCES	AT LEAST ONCE IN 5 YEARS		
C - POSSIBLE	THE EVEN T SHOULD OCCUR AT SOME TIME	AT LEAST ONCE IN 10 YEARS		
D - UNLIKELY	THE EVENT COULD OCCUR AT SOME TIME	AT LEAST ONCE IN 30 YEARS		
E - RARE	THE EVENT MAY OCCUR IN EXCEPTIONAL CIRCUMSTANCES	LESS THAN ONCE IN 30 YEARS		

	DESIGN HAZARD SCHEDULE						
ITEM	DESIGN HAZARD	POTENTIAL HAZARD	RISK	ELIMINATION / MINIMISATION OF HAZARD / RISK	RESIDUAL RISK		
D1	URBAN LAYOUT HAZARD	THE URBAN LAYOUT IS DESIGNED AROUND A PARTICULAR HAZARD: - INTERSECTION IS UNCLEAR WHICH ROAD HAS PRIORITY	HIGH	THE HAZARD HAS BEEN REDUCED/ELIMINATED BY: LINE MARKED INTERSECTION TO ENSURE IT IS CLEAR WHICH ROAD HAS PRIORITY - DESIGN VEHICLE SWEPT PATH CHECKED FOR COMPLIANCE	LOW		
D2		EXISTING UNDERGROUND AND/OR OVERHEAD SERVICES HAZARD EXIST ON SITE AND NEEDS TO BE REMOVED AND RELOCATED.	HIGH	THE DESIGN OF THE PROJECT HAS INCORPORATED THE RELOCATION OF THESE EXISTING SERVICES AND THE CONTRACTOR IS TO BE MADE AWARE OF THESE EXISTING SERVICES AND TAKE ALL ACTIONS NECESSARY TO MITIGATE THIS HAZARD DURING CONSTRUCTION.	MEDIUM		
D3		DEEP EXCAVATION IS REQUIRED TO INSTALL SEWER TO SERVICE STRUCTURE.	HIGH	THE DEEP EXCAVATION HAZARD CANNOT BE AVOIDED AND THE CONTRACTOR WILL NEED TO TAKE ALL ACTIONS NECESSARY TO ADDRESS THIS HAZARD DURING CONSTRUCTION.	MEDIUM		
D4	HIGH RETAINING WALLS	SOME AREAS OF WORKS CONTAIN HIGH RETAINING WALLS WHERE LAND MORPHOLOGY DICTATES.	HIGH	HIGH RETAINING WALLS CANNOT BE AVOIDED DUE TO EXISTING LAND MORPHOLOGY. SINGLE TIER WALLS HAVE LIMITED TO A MAX HEIGHT OF 2m. CONTRACTOR WILL NEED TO TAKE ALL ACTIONS NECESSARY TO ADDRESS THIS HAZARD DURING CONSTRUCTION.	MEIDUM		
D5	WATER BODIES	PROPOSED CONSTRUCTION WATER DAMS WILL BE PRESENT ON SITE.	MEDIUM	PROPOSED WATER BODIES HAVE BEEN LOCATED AWAY FROM PUBLIC ACCESS AREAS. ACCESS TO THESE LOCATION WILL BE RESTRICTED FROM THE PUBLIC. CONTRACTOR WILL NEED TO TAKE ALL ACTIONS NECESSARY TO ADDRESS THIS HAZARD DURING CONSTRUCTION.	LOW		

	CONSTRUCTION HAZARD SCHEDULE			
ITEM	ITEM POTENTIAL HAZARD POSSIBLE PREVENTATIVE ACTION			
C1	DEEP EXCAVATION HAZARD	ALL STEPS MUST BE TAKEN TO OBTAIN CURRENT UNDERGROUND SERVICES INFORMATION BEFORE EXCAVATION WORKS COMMENCE. EXCAVATION WORK MUST BE UNDERTAKEN BY APPROPRIATELY EXPERIENCED AND QUALIFIED PERSONNEL. EXCAVATIONS SHALL BE ADEQUATELY SHORED AND APPROPRIATE BARRICADES AND SIGNAGE ERECTED, IF REQUIRED.		
C2	OVERHEAD POWER HAZARD	WARNING SIGNS AND MARKERS SHALL BE ERECTED ADVISING OF THE PRESENCE OF LIVE OVERHEAD CABLES. A REPRESENTATIVE OF THE SUPPLY AUTHORITY SHALL REMAIN ON SITE DURING EARTHWORKS AND ANY OTHER HIGH RISK WORKS, IF REQUIRED.		
C3	UNDERGROUND ELECTRICAL, TELECOMMUNICATION, GAS AND WATER MAIN HAZARD	WARNING SIGNS AND MARKERS SHALL BE ERECTED ADVISING OF THE PRESENCE OF THE EXISTING SERVICE. THE SERVICE SHALL BE IDENTIFIED AND MARKED BY THE SUPPLY AUTHORITY PRIOR TO THE COMMENCEMENT OF EXCAVATION. A REPRESENTATIVE OF THE SUPPLY AUTHORITY SHALL REMAIN ON SITE DURING THE EXCAVATION WORK, IF REQUIRED.		
C4	WORKS NEAR RAIL, AIRPORTS AND ROADS HAZARD	ALL REQUIRED PERMITS, APPROVALS AND SAFETY REQUIREMENTS FROM THE RELEVANT AUTHORITY SHOULD BE OBTAINED PRIOR TO COMMENCING WORK. A REPRESENTATIVE OF THE RELEVANT AUTHORITY SHALL REMAIN ON SITE DURING CONSTRUCTION WHILE THE HAZARD REMAINS.		
C5	PEDESTRIAN ACCESS HAZARD	WORK WITHIN OR ADJACENT TO AREAS WHICH THE PUBLIC REQUIRES PEDESTRIAN ACCESS MUST HAVE APPROPRIATE BARRICADES AND SIGNAGE ERECTED AT ALL TIMES.		
C6	POTENTIAL VEHICLE HAZARD	SITE PERSONNEL SHALL BE ADVISED OF THE POTENTIAL HAZARDS AND THE APPROPRIATE PROCEDURES FOR WORKING ADJACENT TO OPERATING PUBLIC ROADS. APPROPRIATE SAFETY CLOTHING SHALL BE WORN AND THE REQUIRED SIGNAGE SHALL BE ERECTED. THE WORKS SHALL BE UNDERTAKEN IN A MANNER WHICH DOES NOT COMPROMISE THE SAFETY OF THE VEHICLE OCCUPANTS OR THE SITE PERSONNEL.		
C7	DEMOLITION AND CLEARING HAZARD	SUITABLE QUALIFIED AND EXPERIENCED PERSONNEL SHALL BE RESPONSIBLE FOR THE DEMOLITION AND CLEARING WORKS FOR THE PROJECT AT ALL TIMES. THE CONTRACTORS WORK METHOD STATEMENT SHALL ALSO GIVE CONSIDERATION TO FALLING DEBRIS, COLLAPSE AND DANGEROUS AIRBORNE AGENTS.		
C8	TRAFFIC MANAGEMENT HAZARD	SUITABLE QUALIFIED AND EXPERIENCED PERSONNEL SHALL BE RESPONSIBLE FOR THE SAFE AND ORDERLY PASSAGE OF VEHICULAR AND PEDESTRIAN TRAFFIC THROUGH THE PROJECT AT ALL TIMES. THE CONTRACTOR SHALL DEVELOP A TRAFFIC MANAGEMENT PLAN (TMP) FOR THE PROJECT TO ESTABLISH APPROPRIATE CONTROLS IN ACCORDANCE WITH THE MANUAL FOR UNIFORM TRAFFIC CONTROL.		
С9	ASBESTOS HAZARD	ALL PERSONNEL SHOULD BE ADVISED OF THE POTENTIAL PRESENCE OF ASBESTOS AND AN IDENTIFICATION AND ACTION PLAN SHALL BE PUT IN PLACE. SAMPLING AND IDENTIFICATION IS TO BE UNDERTAKEN IN ACCORDANCE WITH WORKPLACE HEALTH AND SAFETY REGULATIONS. IF SAMPLING CONFIRMS THE PRESENCE OF ASBESTOS THEN THE ACTION PLAN IS TO BE IMPLEMENTED TO REMEDIATE THE SITE.		
C10	POTENTIAL ROCK FALL	LAND ABOVE THE SITE HAS BEEN CLEARED AND SOME EARTHWORKS HAS BEEN UNDERTAKEN CREATING A POTENTIAL ROCK FALL HAZARD. SUITABLE PERSONNEL SHALL BE RESPONSIBLE FOR IDENTIFYING ANY POTENTIAL HAZARD AND THE CONTRACTOR SHALL TAKE APPROPRIATE ACTION TO ELIMINATE THE HAZARD.		

11/01/19

FOR CONSTRUCTION



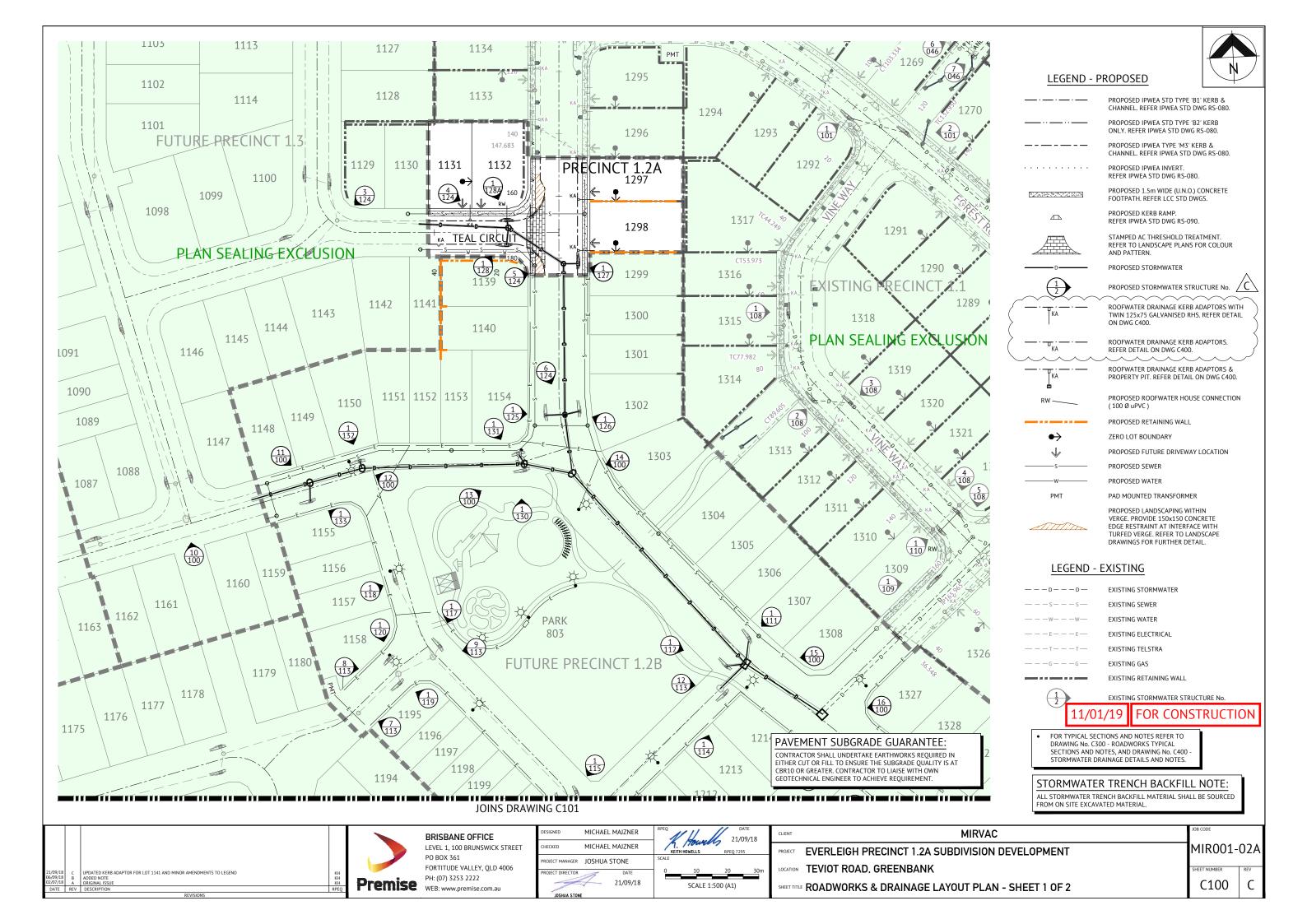
BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222

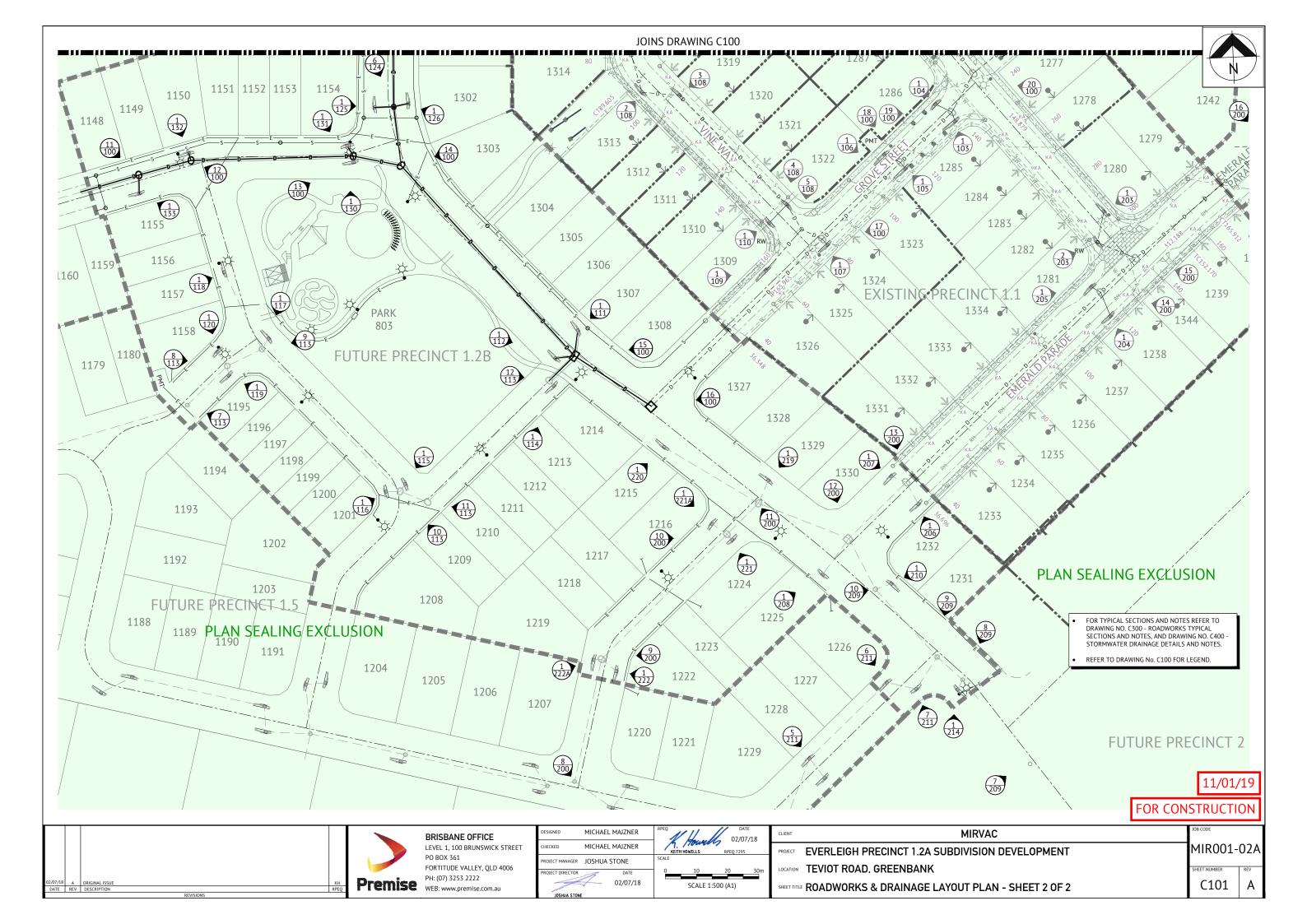
DESIGNED	MICHAEL MAJZNER	RPEQ ////	02/07/18
CHECKED	MICHAEL MAJZNER	KEITH HOWELLS	PEQ 7295
PROJECT MANAGER	JOSHUA STONE	SCALE	
PROJECT DIRECTOR	DATE		
INC. WILL CTOM	02/07/18		

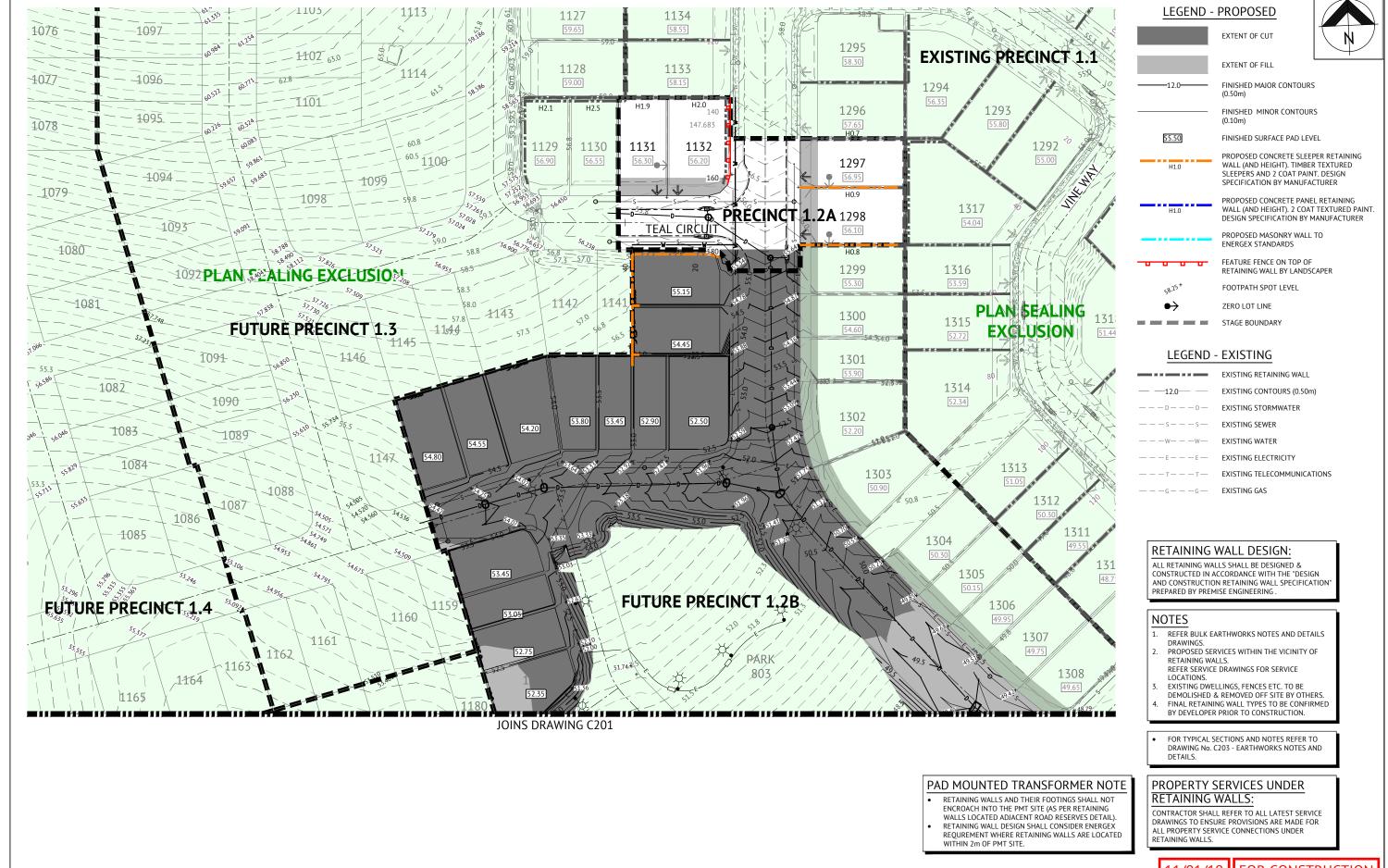
MIRVAC PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK SHEET TITLE SAFETY IN DESIGN PLAN

MIR001-02A

C004







MICHAEL MAJZNER BRISBANE OFFICE 08/08/18 LEVEL 1, 100 BRUNSWICK STREET MICHAEL MAJZNER PO BOX 361 ROJECT MANAGER JOSHUA STONE FORTITUDE VALLEY, QLD 4006 LOCATION TEVIOT ROAD, GREENBANK PH: (07) 3253 2222 Premise WEB: www.premise.com.au 08/08/18 SCALE 1:500 (A1)

MIRVAC EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT

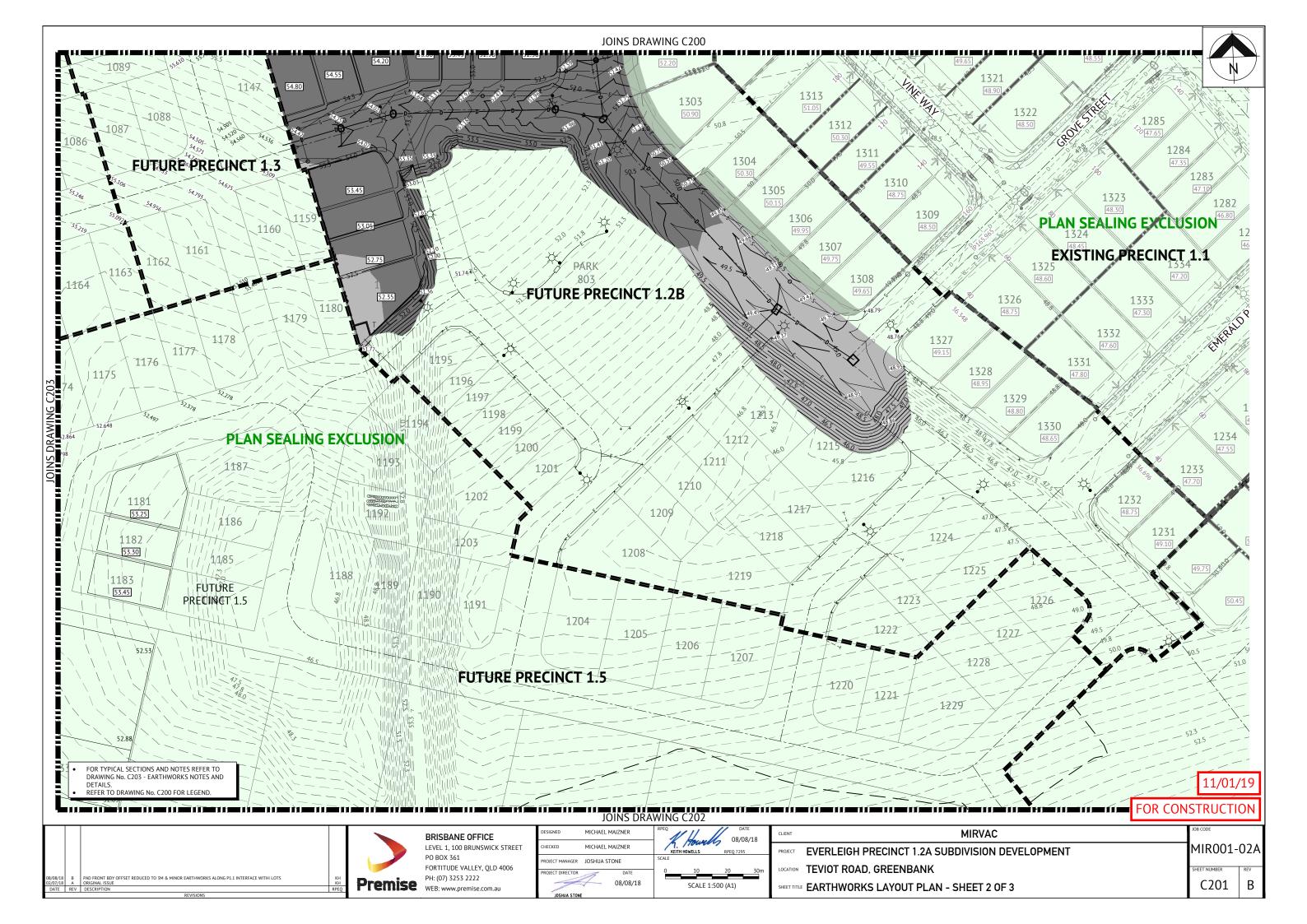
SHEET TITLE EARTHWORKS LAYOUT PLAN - SHEET 1 OF 3

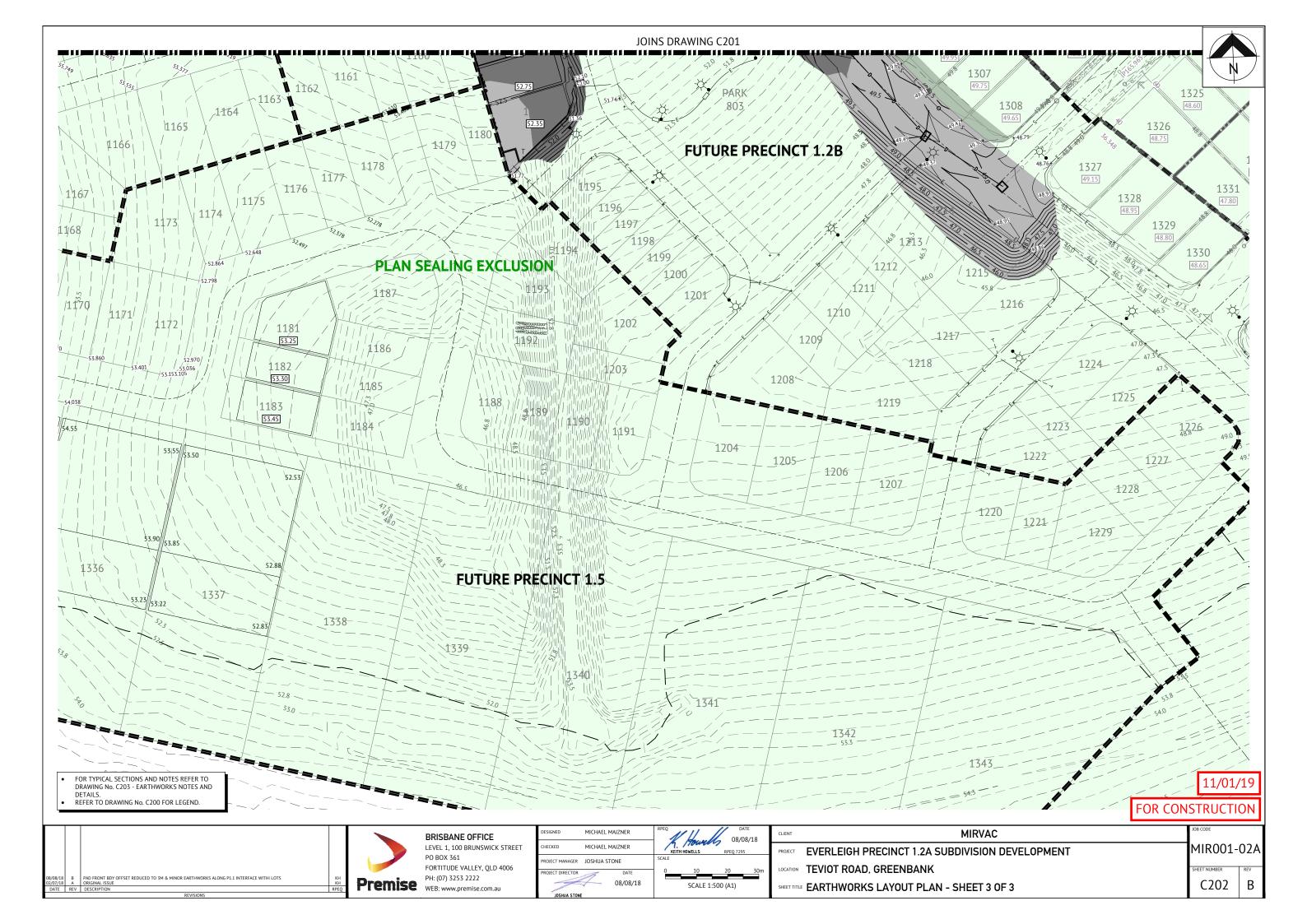
FOR CONSTRUCTION

MIR001-02A

C200

В





NOTES

- LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- FARTHWORKS DRAWINGS ARE TO BE READ IN CONJUNCTION WITH DRAWING C001, EROSION AND SEDIMENT CONTROL LAYOUT PLANS AND EROSION AND SEDIMENT CONTROL NOTES AND DETAILS.
- ALL EARTHWORKS TO BE CARRIED OUT UNDER 'LEVEL ONE' GEOTECHNICAL CONTROL IN ACCORDANCE WITH LOCAL AUTHORITIES AND AS3798
- EXCESS CUT TO BE STOCKPILED IN THE LOCATION SHOWN OR AS DIRECTED ON
- ALL BATTERS ARE 1 IN 4 UNLESS SHOWN OTHERWISE.

TESTING

THE SUPERINTENDENT MAY ORDER ADDITIONAL TESTS. REFER TO THE LOCAL AUTHORITIES SPECIFICATION FOR STANDARDS OF COMPACTION AND MATERIAL

EARTHWORKS TESTING

1 COMPACTION TESTS

COMPACTION 1E313	
LOCATION	AREA PER TEST
FINISHED LEVEL OR ROAD SUBGRADE (IN CUT OR FILL)	
LOWEST TWO LEVELS OF EMBANKMENT (PER LAYER)	REFER TO THE LOCAL AUTHORITY
OTHER LAYERS OF EMBANKMENT	SPECIFICATION
PREPARED NATURAL GROUND UNDER EMBANKMENT	
OULLITY TESTS	

- QUALITY TESTS OF IMPORTED MATERIAL ARE REQUIRED AS SET OUT BY LOCAL AUTHORITY
- SUBGRADE TESTS
 THE NUMBER AND LOCATION OF PAVEMENT SUBGRADE TESTS SHALL BE AS DETERMINED BY THE SUPERINTENDENT WHO SHALL RECOMMEND CBR VALUES TO BE USED IN ROAD PAVEMENT DESIGN. THE NUMBER AND TYPES OF CBR TESTS SHALL BE DETERMINED BY THE SOILSTESTING CONSULTANT TO BEST REPRESENT THE CONDITION OF THE SUBGRADE EXPECTED IN SERVICE.

- NO VISIBLE DUST EMISSIONS MUST OCCUR AT THE BOUNDARIES OF THE SITE DURING EARTHWORKS AND CONSTRUCTION ACTIVITIES ON THE SITE. DUST CONTROL TESTING SHALL BE CONDUCTED IN ACCORDANCE WITH AS/NZS3580.10.1:2003. DUST CONTROL SHALL COMPLY WITH THE NSW DEPARTMENT OF ENVIRONMENT AND CONSERVATION REPORT "APPROVED METHODS & GUIDANCE FOR THE MODELLNG AND ASSESSMENT OF AIR POLLUTANTS IN NSW.
- THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN CONTROLS TO ACHIEVE THE REQUIREMENTS OF ITEM 1 ABOVE.

CONDUITS

THE CONTRACTOR IS TO CONFIRM THE LOCATION OF SERVICE CONDUITS WITH THE SUPERINTENDENT PRIOR TO LAYING.

FILL MANAGEMENT

PUBLIC ROAD

- ALL FILL MATERIAL WILL BE PLACED IN ACCORDANCE WITH THE APPROVED
- THE FILL MATERIAL WILL COMPRISE ONLY OF NATURAL FARTH AND ROCK AND SHALL BE FREE OF ALL CONTAMINATES, NOXIOUS, HAZARDOUS, DELETERIOUS AND ORGANIC MATERIAL.
- ALL SITE PREPARATION WORK SHOULD GENERALLY BE CARRIED OUT IN ACCORDANCE WITH AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'.
- THE SITE SHOULD BE STRIPPED OF ANY TOPSOIL FROM CUT AND FILL AREAS. ROAD ALIGNMENTS AND CARPARKING AREAS, AND STOCKPILED FOR LATER USE.
- PRIOR TO THE PLACEMENT OF ANY STRUCTURAL FILL THE SITE SHOULD BE PROOF ROLLED USING A MINIMUM 10 TONNE (STATIC WEIGHT) PADFOOT ROLLER. ANY LOOSE OR SOFT AREAS SHOULD BE REMOVED AND RECOMPACTED OR REPLACED USING A COMPACTED SELECT FILL.
- DEPRESSIONS FORMED BY THE REMOVAL OR VEGETATION, EXISTING STRUCTURES, UNDERGROUND SERVICES ETC, SHOULD HAVE ALL DISTURBED SOIL CLEANED OUT AND BE BACKFILLED WITH COMPACTED SELECT FILL

ANY STRUCTURAL CLAY FILL SHOULD BE PLACED IN LOOSE LAYERS NOT GREATER THAN 200mm THICK AT A MOISTURE CONTENT IN THE RANGE -2% TO +3% OF THE STANDARD OPTIMUM MOISTURE CONTENT, AND BE COMPACTED TO A MINIMUM DRY DENSITY RATIO OF 98% UNDER STANDARD COMPACTION AS PER (AS1289 5.1.1/5.2.1). CLAY FILL SHOULD BE COMPACTED USING A MINIMUM 10 TONNE VIBRATING PADEOOT ROLLER, MEASURES SHOULD BE ADOPTED TO ENSURE THAT CLAY FILL MATERIAL IS NOT ALLOWED TO DRY OUT PRIOR TO THE PLACEMENT OF SUCCEEDING LAYERS OF FILL AND FINAL COVERING WITH BUILDING SLABS AND ROAD PAVEMENTS. ANY STRUCTURAL, FREE DRAINING SAND FILL SHOULD BE PLACED IN LOOSE

ALLOTMENT

TYPICAL RETAINING WALL DETAIL

INTER ALLOTMENT

0.4m-2m MAX HIGH

TYPICAL RETAINING WALL DETAIL

INTER ALLOTMENT

TYPICAL RETAINING WALL TOP AND BOTTOM

FINISHING LEVEL DETAIL

LOWER ALLOTMENT FINISHED SURFACE LEVEL

TOP OF RETAINING WALL LEVEL

ALLOTMENT PAD LEVEL PLUS 100mm

LAYERS NOT GREATER THAN 200mm THICK, FLOODED, IF NECESSARY, AND COMPACTED TO A MINIMUM DENSITY INDEX OF 70% AS PER AS1289 5.5.1 LISING A STATIC SMOOTH ROLLER DRUM NOT LESS THAN 10 TONNE IN STATIC WEIGHT

- THE PLACEMENT OF ALL STRUCTURAL FILL TO BE INSPECTED, TESTED AND CERTIFIED BY A GEOTECHNICAL ENGINEER TO A LEVEL 1 REQUIREMENT DURING THE EARTHWORKS OPERATIONS TO ENSURE THAT ALL FILL IS PLACED IN A 'CONTROLLED MANNER', IN ACCORDANCE WITH AS3798 'GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS'.
- THE PLACEMENT OF FILL TO BE EXECUTED SUCH THAT TO BE FREE DRAINING AT ALL TIMES AND NOT TO BE A NUISANCE OR PONDING TO ADJOINING PROPERTY OR ROADS.

 NO DEMOLITION MATERIAL TO BE USED AS FILL MATERIAL.
- WHERE UNSUITABLE MATERIAL IN AREAS OF FILL IS ENCOUNTERED, THIS WILL BE TREATED AS SET OUT IN THE EARTHWORK SPECIFICATION.
- ALL VEHICLES EXITING FROM THE SITE TO BE CLEAN TO PREVENT MATERIAL BEING TRACKED OR DEPOSITED ON THE ADJOINING PUBLIC ROADS. REFER ENVIRONMENTAL MANAGEMENT NOTES ON DRG. No. C701
- ACCESS TRACKS THROUGH THE SITE WILL BE LIMITED TO THOSE DETERMINED BY THE SUPERINTENDENT AND THE CONTRACTOR PRIOR TO ANY WORK

TOPSOIL RESPREAD REQUIREMENTS

TOPSOIL RESPREAD THICKNESS SHALL BE AS SPECIFIED BELOW IN THE FOLLOWING AREAS:

- ROAD VERGE FRONTING PARK AND OPEN SPACE AREAS
 CIVIL CONTRACTOR TO CONSTRUCT TO LEVEL 100mm BELOW FSL. (LANDSCAPE CONTRACTOR TO SPREAD 100mm OF AMELIORATED TOPSOIL).
- BIORETENTION BASIN BATTERS CIVIL CONTRACTOR TO CONSTRUCT TO LEVEL 300mm BELOW FSL. (LANDSCAPE CONTRACTOR TO SPREAD 300mm OF AMELIORATED TOPSOIL).
- ALLOTMENTS
 CIVIL CONTRACTOR TO RESPREAD 100mm TOPSOIL THICKNESS TO

CONTRACTOR SHALL SUPPLY AND LAY TURE TO ROAD VERGES TO FULL WIDTH OF ROAD RESERVE. WHERE VERGE IS LOCATED ADJACENT PARK AND OPEN SPACES, TURF WILL BE SUPPLIED AND INSTALLED BY LANDSCAPING CONTRACTOR.

EARTHWORKS TOLERANCES

ITEM	TOLERANCE	
EARTHWORKS IN ALLOTMENTS AND	+50mm	
VERGES (1)	-50mm	
CUT BATTERS	+150mm	
	-150mm	
FILL BATTER	+300mm	
	-300mm	
EARTHWORKS IN PARKS (2)	+0mm	
	-100mm	

(1) NOT LESS THAN SPECIFIED LEVELS WHERE ADJACENT DRAINAGE FEATURES. (2) CONFIRM WITH CONTRACT WHETHER TOPSOIL RESPREADED BY LANDSCAPER.

-FINISHED SURFACE LEVEL (FINISHED PAD LEVEL)

-POSSIBLE CIVIL FINISHED COMPACTED
EARTHWORKS LEVEL PRIOR TO RESPREAD

TYPICAL INTER ALLOTMENT RETAINING WALL TOP OF WALL

SETOUT AND END DETAIL

PRIVATE

(ENSURE PAD IS FREE DRAINING)

TYPICAL RETAINING WALL DETAIL ROAD ADJACENT TO LOT WHERE ROAD LEVEL IS HIGHER

PUBLIC ROAD

RETAINING WALL

WHERE WALL IS RETAINING PRIVATE ALLOTMENT PROVIDE TYPICALLY

PRIVATE

ALLOTMENT

0.50m WHEN ADJACENT -

PUBLIC ROAD

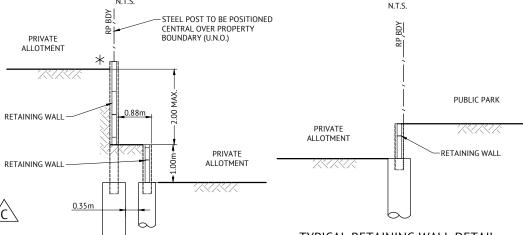
PEDESTRIAN LINK

STEEL P(100mm ADDITIONAL HEIGHT ABOVE FINISHED PAD LEVEL TO CENTRAL ACCOMMODATE FUTURE BUILDING SLAB AND TOP SOIL LEVELS. REFER TO

BOUNDA TYPICAL RETAINING WALL LOT FINISHING DETAIL THIS SHEET.

PRIVATE

ALLOTMENT

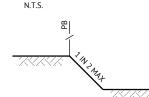


TYPICAL RETAINING WALL DETAIL PARK ADJACENT TO LOT WHERE PARK LEVEL IS HIGHER

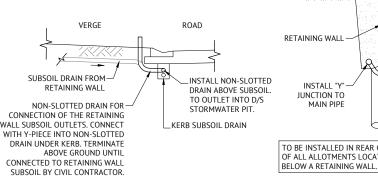
2m-3m MAX HIGH SLEEPER/PANEL FSL - FINISHED SURFACE LEVEL (INCLUDING TOPSOIL) FEW - FINISHED BULK EARTHWORKS LEVEL

PRIVATE

ALLOTMENT



TYPICAL SECTION FOR **BATTERS BETWEEN LOTS** SCALE 1:20



TYPICAL RETAINING WALL SUBSOIL OUTLET TO ROAD

TYPICAL RETAINING WALL DETAIL ROAD ADJACENT TO LOT WHERE LOT LEVEL IS HIGHER

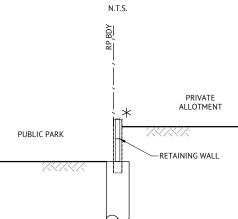
PUBLIC ROAD

PRIVATE

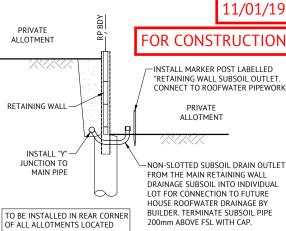
ALLOTMENT

-RETAINING WALL

0.30m



TYPICAL RETAINING WALL DETAIL PARK ADJACENT TO LOT WHERE LOT LEVEL IS HIGHER



TYPICAL RETAINING WALL SUBSOIL OUTLET TO ALLOTMENTS

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(FINISHED PAD LEVEL)

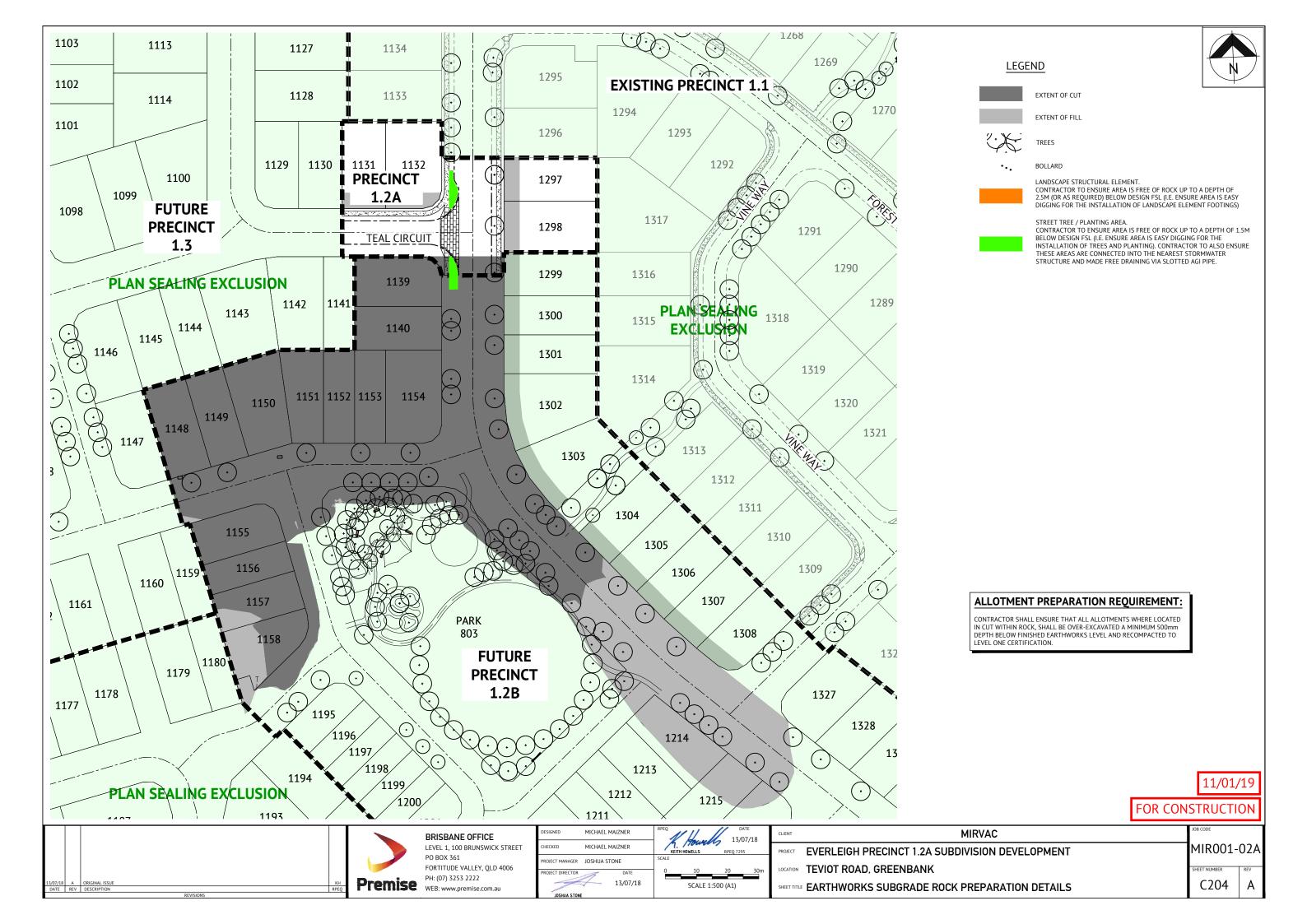
CONCRETE SLEEPER OR PANEL RETAINING WALL

MIRVAC EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK SHEET TITLE EARTHWORKS NOTES AND DETAILS

MIR001-02*A*

C203

200mm ABOVE FSL WITH CAP.



NOTES

- 1. ALL WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH LOGAN CITY COUNCIL STANDARD DRAWINGS AND METHODS (U.N.O.).
- NOTWITHSTANDING THE LIMITS OF CUTTING AND FILLING SHOWN ON THE DRAWINGS, THE ACTUAL LIMITS SHALL BE DETERMINED ON SITE BY THE SUPERINTENDENT DURING CONSTRUCTION AND SIMILARLY THE FINISHED SURFACE CONTOURS MAY BE ADJUSTED BY WRITTEN DIRECTION OF THE SUPERINTENDENT DURING CONSTRUCTION.
- THE CONTRACTOR IS TO ASCERTAIN THE EXACT LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE COST OF RECTIFICATION OF ANY DAMAGES TO EXISTING SERVICES WHICH MAY OCCUR. THE LOCATION OF EXISTING SERVICES SHOWN ON THESE DRAWINGS ARE APPROXIMATE ONLY
- SUBGRADE TEST RESULTS TO BE FORWARDED TO SUPERINTENDENT FOR DETERMINATION OF BOX DEPTHS PRIOR TO EXCAVATION. TESTS SHALL INCLUDE SOAKED CBR AND/OR OTHER TESTS AS REQUESTED BY THE SUPERINTENDENT.
- ALLOTMENT FILLING TO BE COMPACTED TO 95% (min) OF THE R.D.D. (AS 1289 TESTS E1.1, E4.1). LEVELS AND SETOUT INFORMATION FOR KERB AND CHANNEL CONSTRUCTION IS GIVEN TO LIP OF KERB.
- LEVELS AND GRADIENTS AT JUNCTIONS WITH EXISTING WORKS MAY BE VARIED AS APPROVED BY THE SUPERINTENDENT TO ACHIEVE SATISFACTORY CONNECTION TO THE EXISTING WORKS.
- SIDE DRAINS AND MITRE DRAINS TO BE CONSTRUCTED ADJACENT TO ALL KERB AND CHANNEL
- PROVIDE FLUSH POINTS TO SUBSOIL DRAINS, LOCATIONS TO BE CONFIRMED ON SITE.
- ALL STORMWATER PIPES SHALL BE CLASS 22 (UNO) R.C. PIPES UNLESS AN ALTERNATIVE IS APPROVED BY THE SUPERINTENDENT PRIOR TO CONSTRUCTION. ALL PIPES ARE 375mm DIAMETER U.N.O.
- GULLIES AND GULLY GRATES SHALL BE TO STD. DRGs BSD-8051 BSD-8059.
 KACEY GALV. STEEL KERB ADAPTORS ARE TO BE INSTALLED TO THE REQUIREMENTS OF THE LOCAL COUNCILS STANDARD DRAWINGS AND SPECIFICATIONS.
- 13. ALL LOTS SHOWN BOXED TO HAVE ROOFWATER FOOTPATH CROSSINGS TO KERB. CROSSINGS ARE TO BE 88.9 DIA. GALV. CHS.TO KACEY KERB ADAPTOR.
- 14 ALL TEMPORARY ROOFWATER OLITLETS TO BE EXCAVATED AT 1 IN 200 TO NATURAL SURFACE
- 15. ROOFWATER PITS ARE TO BE 600mm DIAMETER FOR DEPTHS LESS THAN 750mm, 900mm DIAMETER FOR DEPTHS BETWEEN 750mm AND 1500mm DEEP AND 1050mm DIAMETER FOR DEPTHS GREATER
- 16. ALL ROOFWATER PIPES CROSSING CONCRETE FOOTPATHS ARE TO BE INSTALLED PRIOR TO CONSTRUCTION OF CONCRETE FOOTPATHS.
- 17. HAZARD MARKERS (D4-4A) TO BE PLACED AT THE END OF NEW WORKS AS DIRECTED BY
- 18. SITE CBR VALUE AND PAVEMENT DESIGN AND DEPTHS TO BE VERIFIED WITH CBR TESTS PRIOR TO CONSTRUCTION.
- LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 20. TO BE READ IN CONJUNCTION WITH ALL STORMWATER DRAINAGE LAYOUT PLANS & ROADWORKS

ROADWORKS NOTES

- GEOTECHNICAL TESTING FOR PAVEMENT CONSTRUCTION IS TO BE CARRIED OUT IN ACCORDANCE WITH THE PROJECT SPECIFICATION. TEST CERTIFICATES ARE TO BE PREPARED BY A REGISTERED N.A.T.A. LABORATORY AT THE CONTRACTORS COST AND SHALL BE PROVIDED TO THE ENGINEER PROGRESSIVELY THROUGH THE WORKS. THE CONTRACTOR IS TO NOTIFY THE ENGINEER OF ANY NON-CONFORMANCES. ALL NON CONFORMING WORK IS TO BE RECTIFIED AS DIRECTED BY THE ENGINEER.
- FULL DEPTH PAVEMENT CONSTRUCTION SHALL EXTEND BEHIND ALL KERB AND KERB AND CHANNEL FOR A DISTANCE WHICH IS THE GREATER OF 150mm FROM THE BACK OF KERB OR ACROSS TO THE OUTER LIMIT OF SIDE DRAIN FILTER MATERIAL.
- TRANSITION KERB AND CHANNEL TO BARRIER KERB SMOOTHLY OVER MIN. 1.0m LENGTH.
 PAVEMENT THICKNESSES NOMINATED ON THESE DRAWINGS ARE PROVISIONAL ONLY AND MAY BE
- VARIED BY THE SUPERINTENDENT SUBJECT TO INSITU PAVEMENT SUBGRADE TESTING, PAVEMENT SUBGRADES ARE TO BE INITIALLY CONSTRUCTED TO THE UNDERSIDE OF THE NOMINATED LOWER SUBBASE COURSE WITHIN FILL AREAS, AND TO THE UNDERSIDE OF THE NOMINATED UPPER SUBBASE COURSE WITHIN CUT AREAS. INSITU SUBGRADE CBR TESTING AS SPECIFIED FOR PAVEMENT DESIGN VERIFICATION IS TO BE CARRIED OUT AT THESE LEVELS.
- REPAIR ANY DAMAGE TO EXISTING KERB AND CHANNEL, FOOTPATH OR ROADWAY (INCLUDING REMOVAL OF CONCRETE SLURRY FROM FOOTPATHS, ROADS, KERB AND CHANNEL AND STORMWATER GULLIES AND SIDEDRAINS) THAT MAY OCCUR DURING ANY WORKS CARRIED OUT.

CONCRETE PAVEMENT

- THE CONCRETE PAVEMENT HAS BEEN DESIGNED BASED ON A CBR 5 AND IS SUBJECT TO CONFIRMATION UPON RECEIPT OF CBR TEST RESULT AT TIME OF CONSTRUCTION.
- CONCRETE PAVEMENT SPECIFICATION:

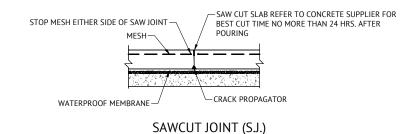
COMPRESSIVE STRENGTH: 25 MPa @ 28 DAYS 3.5 MPa @28 DAYS MAXIMUM AGGREGATE SIZE: 20mm

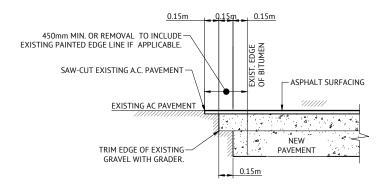
MESH: SL72, 50 TOP COVER 100mm MIN CBR 15 BEDDING BEDDING:

- MATERIALS AND WORKMANSHIP SHALL COMPLY WITH AS1379, AS3600 AND AS3610.
- PROJECT ASSESSMENT OF STRENGTH IN ACCORDANCE WITH AS3600 SHALL BE ADOPTED FOR SAMPLING AND TESTING. THE CONTRACTOR SHALL PAY ALL TESTING COSTS.
- CONSTRUCTION JOINTS SHALL BE MADE ONLY AT APPROVED LOCATIONS.
 ALL JOINTS ARE TO BE SEALED JUST PRIOR TO HANDOVER WITH DOW CORNING '888' SEALANT INSTALLED
- IN ACCORDANCE WITH MANUFACTURING RECOMMENDATIONS.
 JOINTS ARE TO BE INSPECTED AND SEALANT REGULARLY REPLACED IF REOUIRED.
- DIMENSIONAL TOLERANCES OF AS3600, MODIFIED BY AS3610, SHALL APPLY UNLESS OTHERWISE NOTED. SLAB SURFACE FLATNESS TOLERANCE SHALL BE 5mm MAXIMUM DEVIATION FOR A 3m STRAIGHT FDGE.
- CONCRETE PAVEMENTS ARE TO BE BROOM FINISHED. SLAB THICKNESSES NOTED ARE EXCLUSIVE OF APPLIED FINISHES
- 10. CURE ALL CONCRETE BY AN APPROVED METHOD FOR 7 DAYS AFTER HARDENING. PVA AND RESIN BASED CURING COMPOUNDS SHALL NOT BE USED.

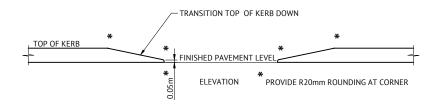
CONCRETE PAVEMENT MAINTENANCE NOTES

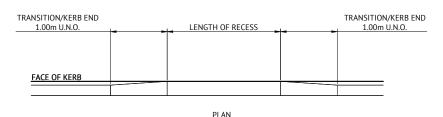
- NOTE THAT UPKEEP AND REPLACEMENT OF SEALANTS IS PART OF THE ONGOING MAINTENANCE
- REQUIREMENTS FOR THIS SITE.
 NOTE THAT SHRINKAGE CRACKS OF WIDTH < 1.5mm MAY OCCUR IN CONCRETE PAVEMENTS WITHIN 12 MONTHS OF INITIAL CASTING
- NOTE THAT THE PAVEMENT WILL NOT BE MAINTENANCE FREE FOR ITS DESIGN LIFE.
- INSPECT FLUSH SIDE DRAINS AND SUBSOIL DRAINS EVERY 12 MONTHS





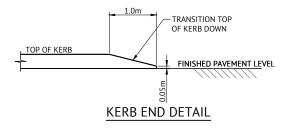
TYPICAL PAVEMENT CUT-BACK DETAIL





NOTE: REFER LAYOUT PLAN FOR TRANSITION RECESS & KERB END LOCATIONS & LENGTHS

TYPICAL KERB RECESS / END DETAIL



CONCRETE REQUIREMENTS

ITEM	28 DAY STRENGTH	CONCRETE CYLINDER TEST	TESTING FREQUENCY
KERB & CHANNEL	N32	REQUIRED	1 TEST PER 300m
VEHICULAR CROSSINGS	N25	REQUIRED	1 TEST PER CROSSING
BIKEWAYS	N25	REQUIRED	1 TEST PER 300m
FOOTPATHS	N25	REQUIRED	1 TEST PER 300m
CONCRETE CHANNELS	N25	REQUIRED	1 TEST PER 150m ²
STRUCTURES	AS DESIGN	REQUIRED	AS DIRECTED
ROOFWATER MH'S	N20	NOT REQUIRED	
STORMWATER MH'S	N25	NOT REQUIRED	
PRECAST MANHOLE ROOF SLABS	N40	NOT REQUIRED	
GULLY PITS			
PRECAST LINTEL	N30	NOT REQUIRED	
OTHER	N25	NOT REQUIRED	

11/01/19

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C300

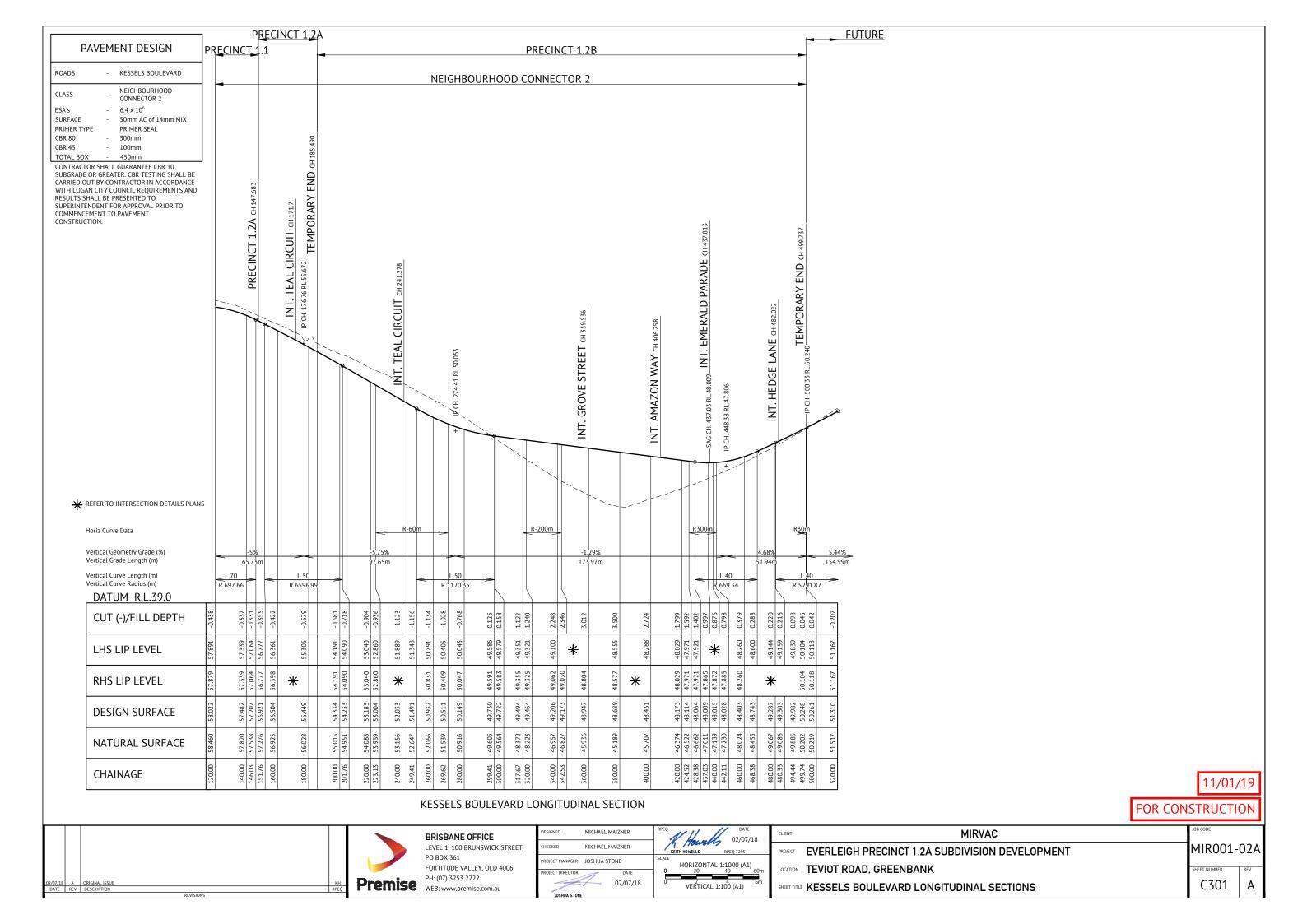
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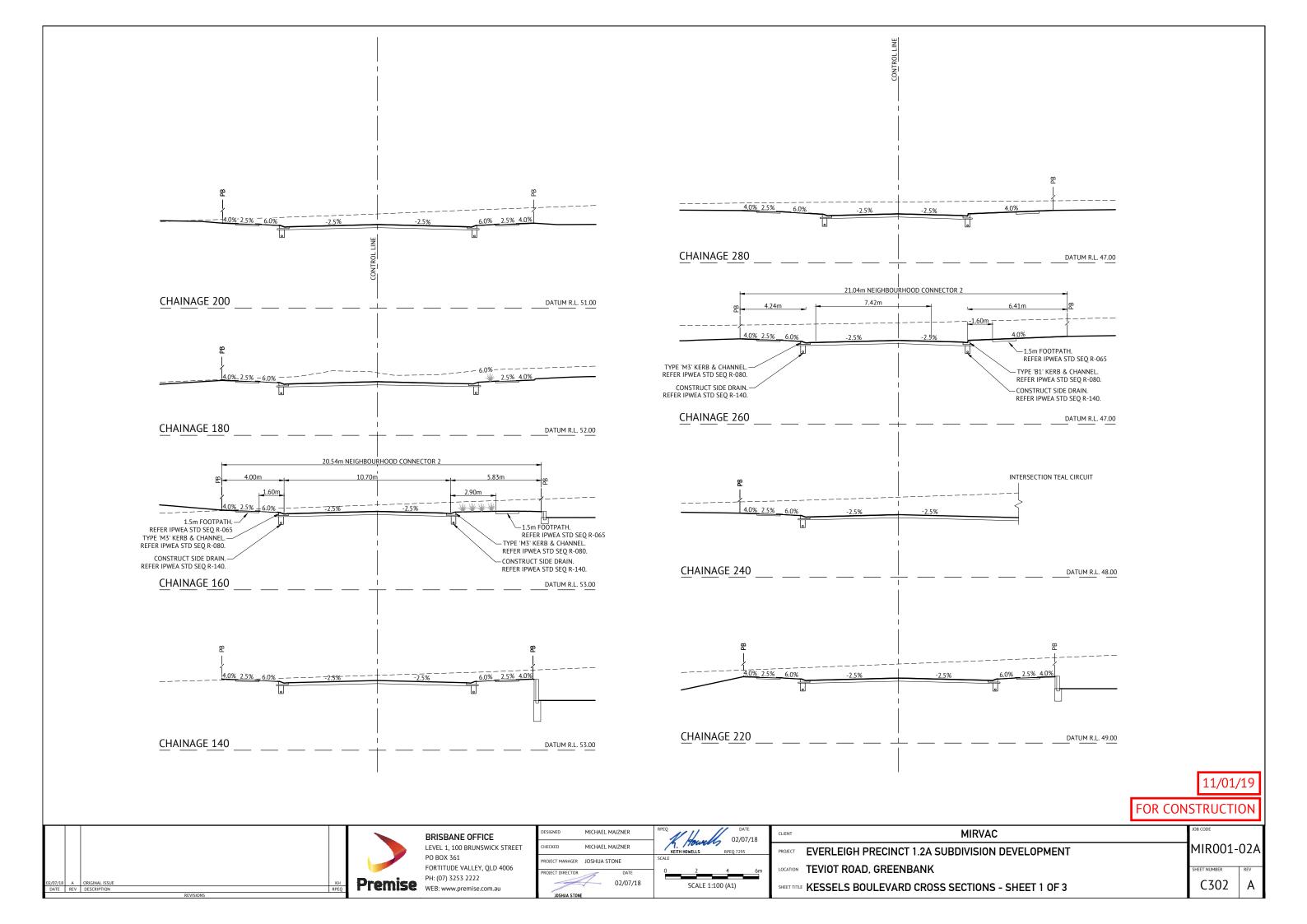


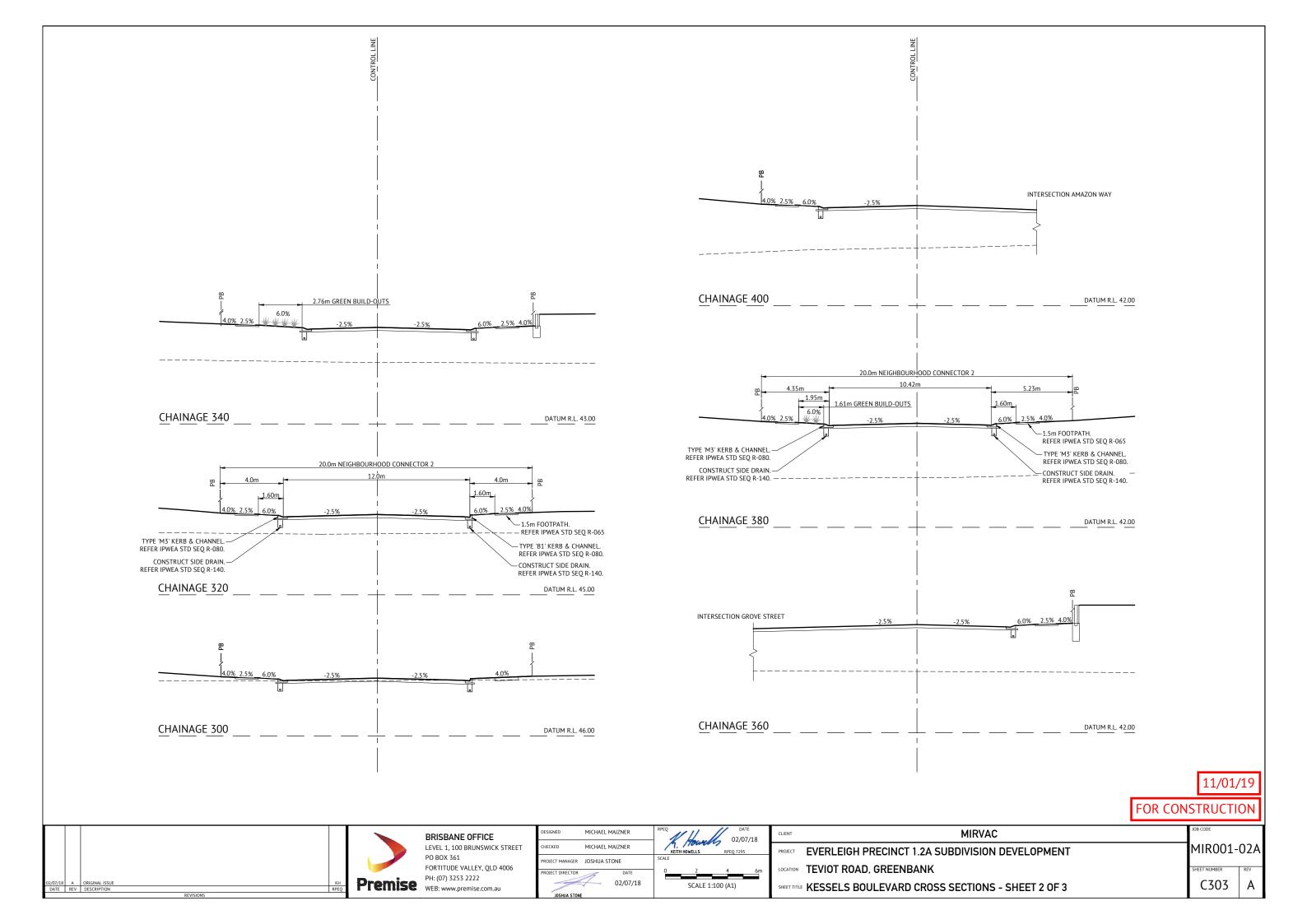
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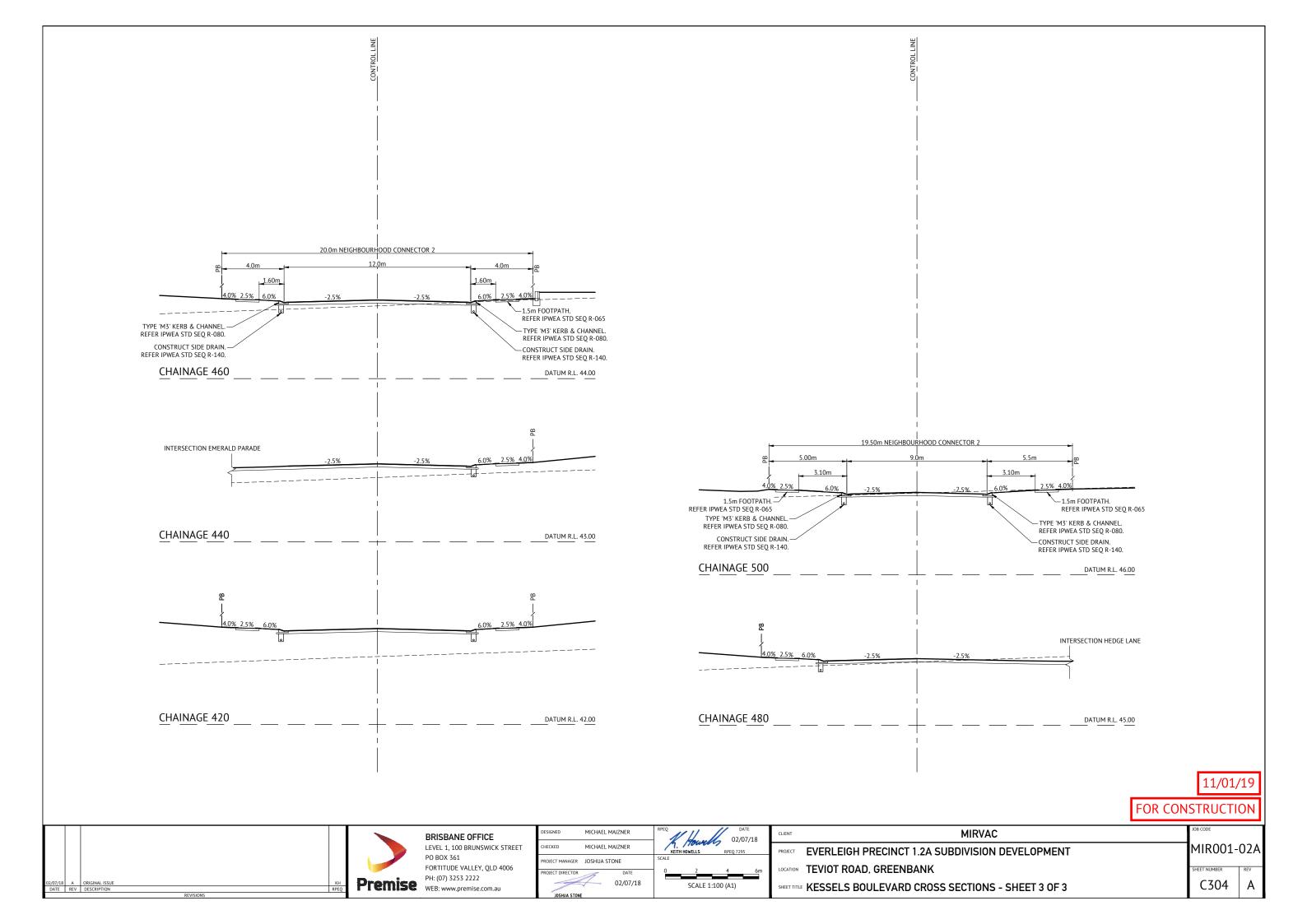


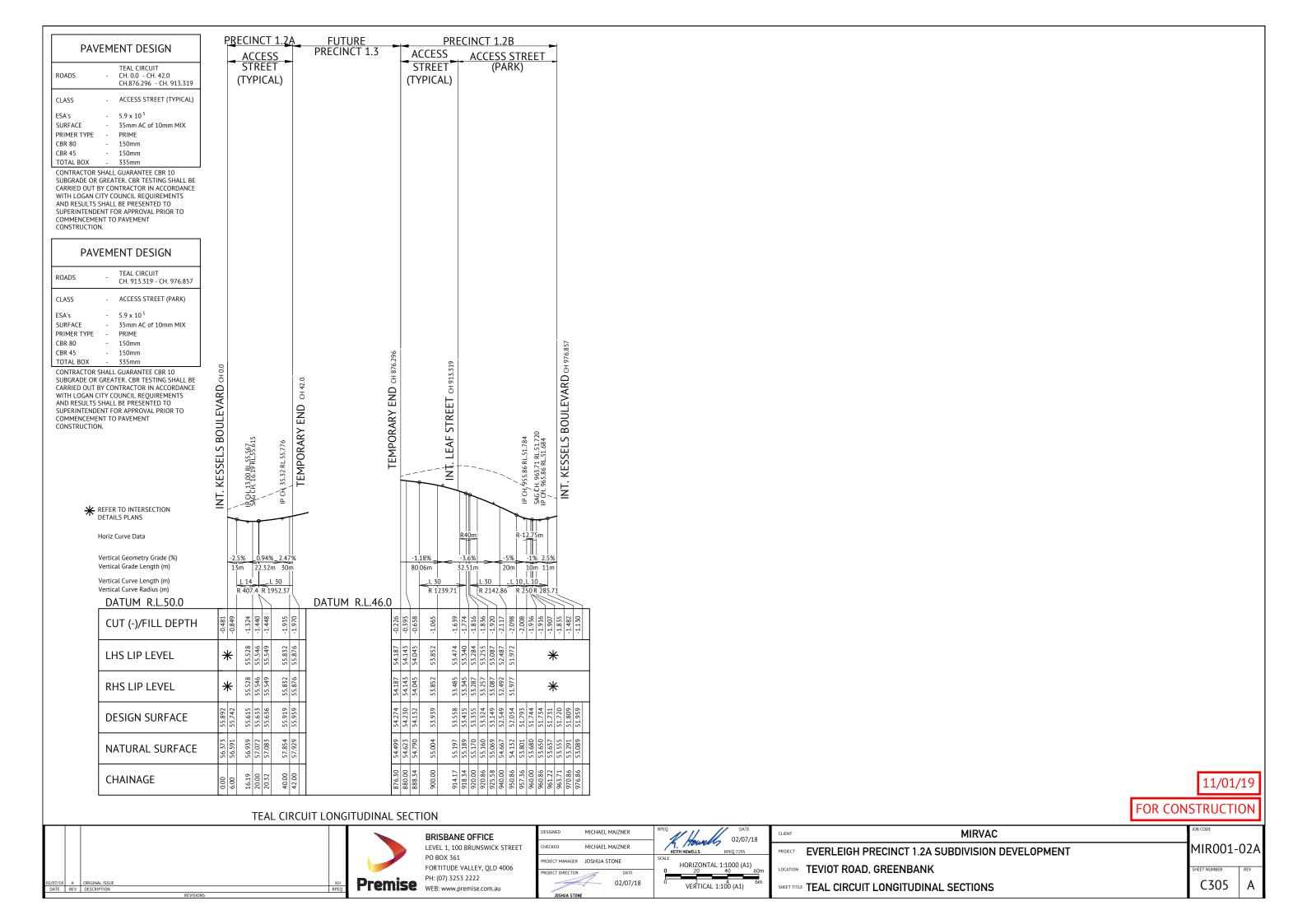
MIRVAC EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK ROADWORKS TYPICAL SECTIONS & NOTES

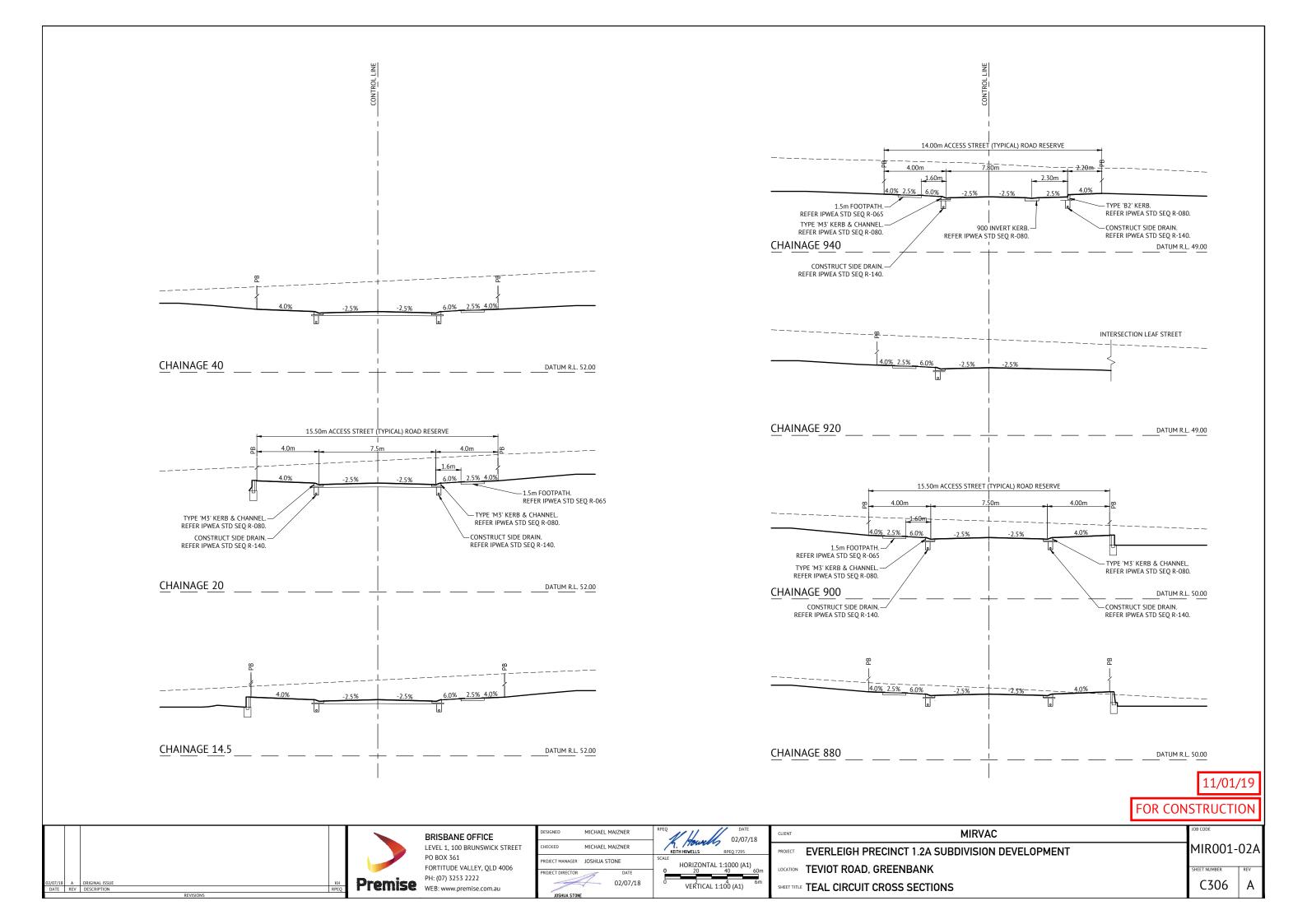


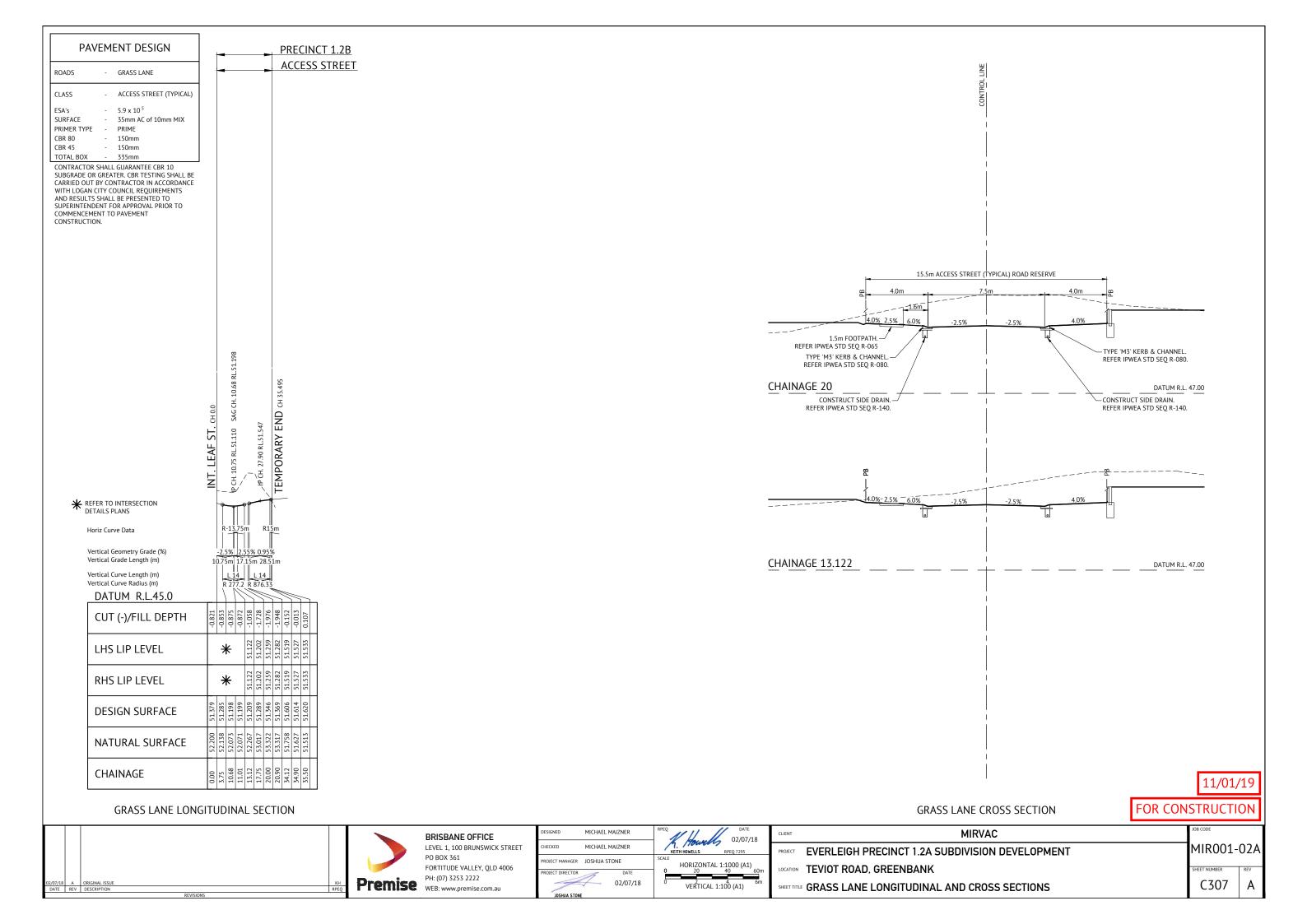


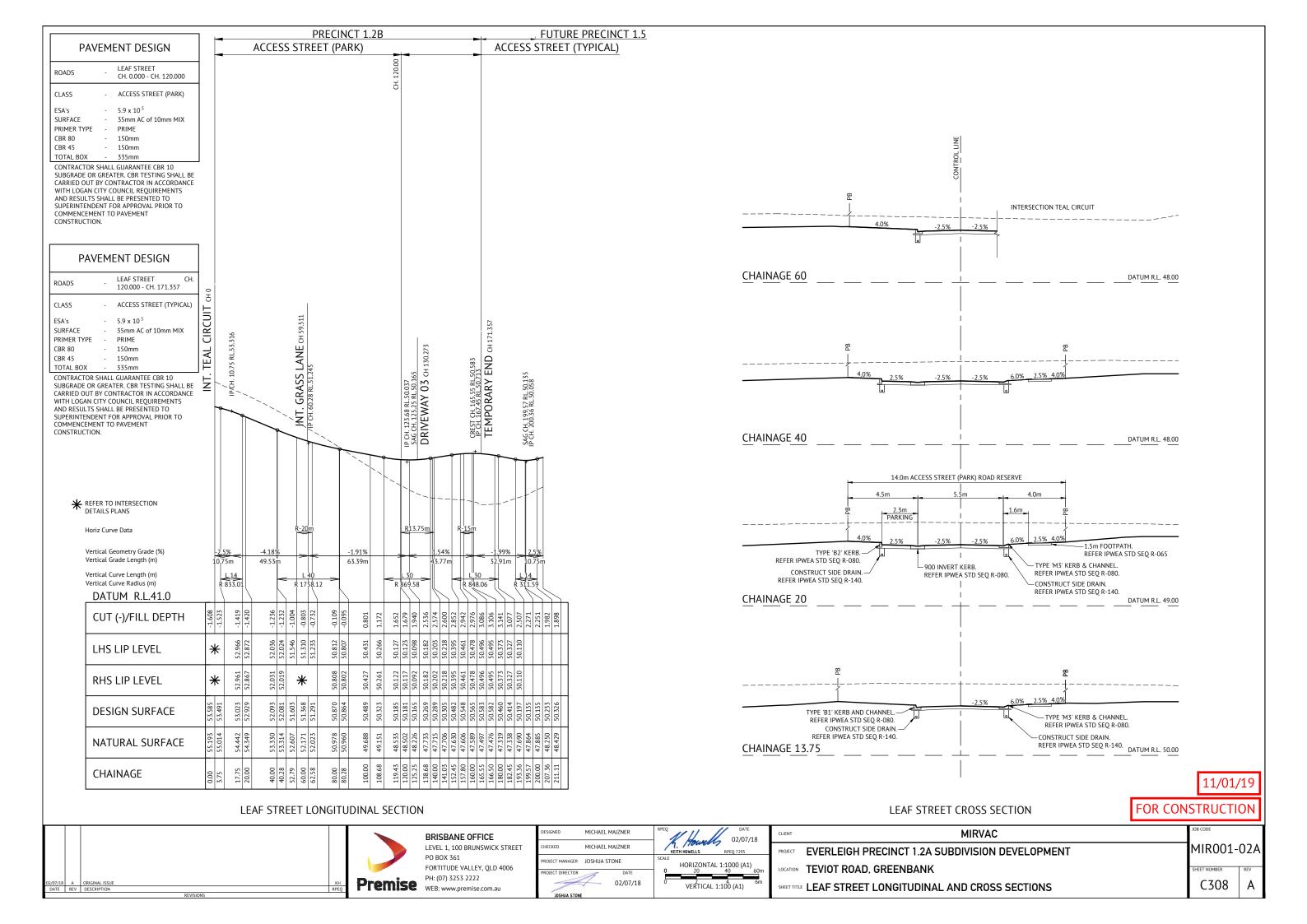


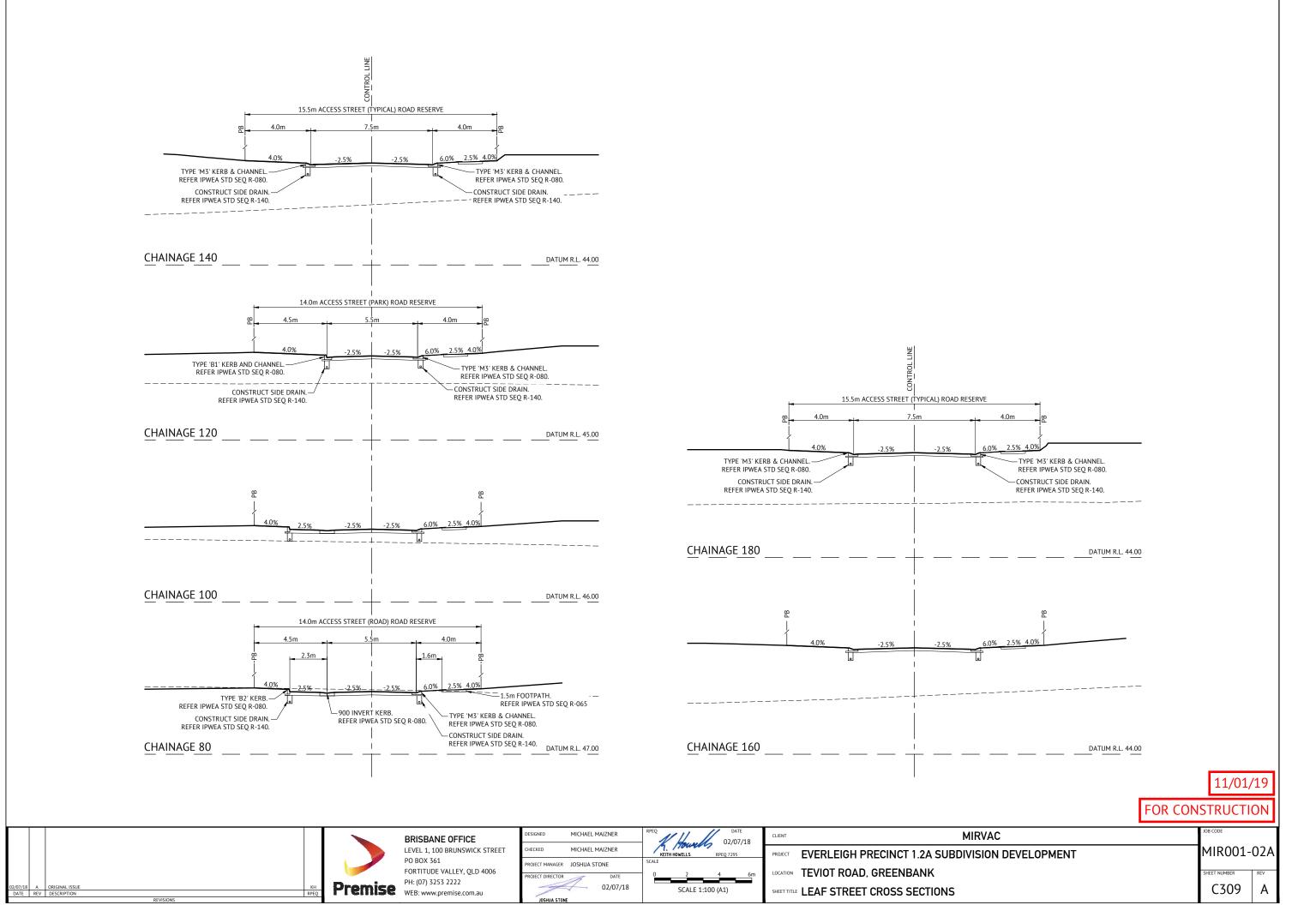


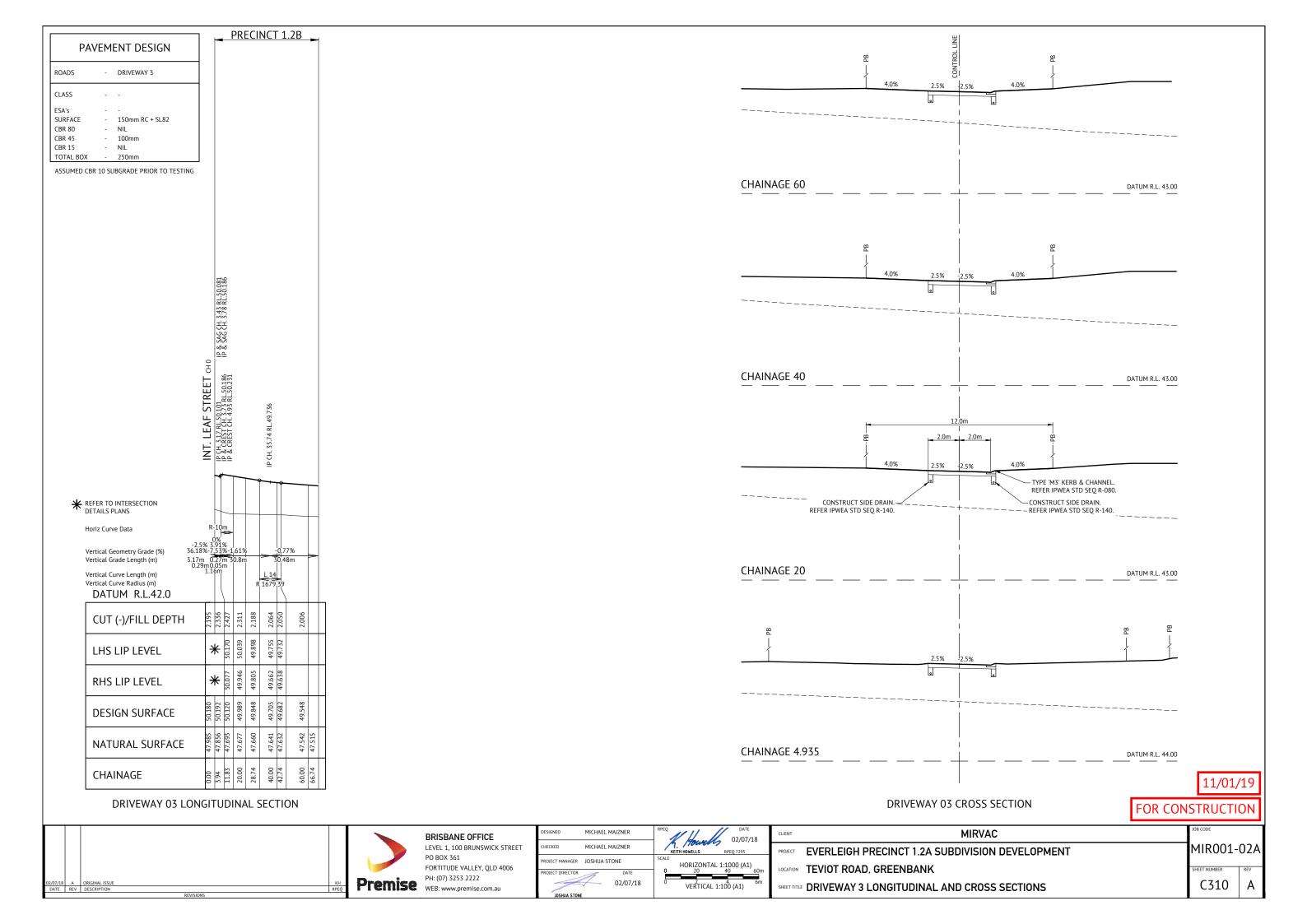


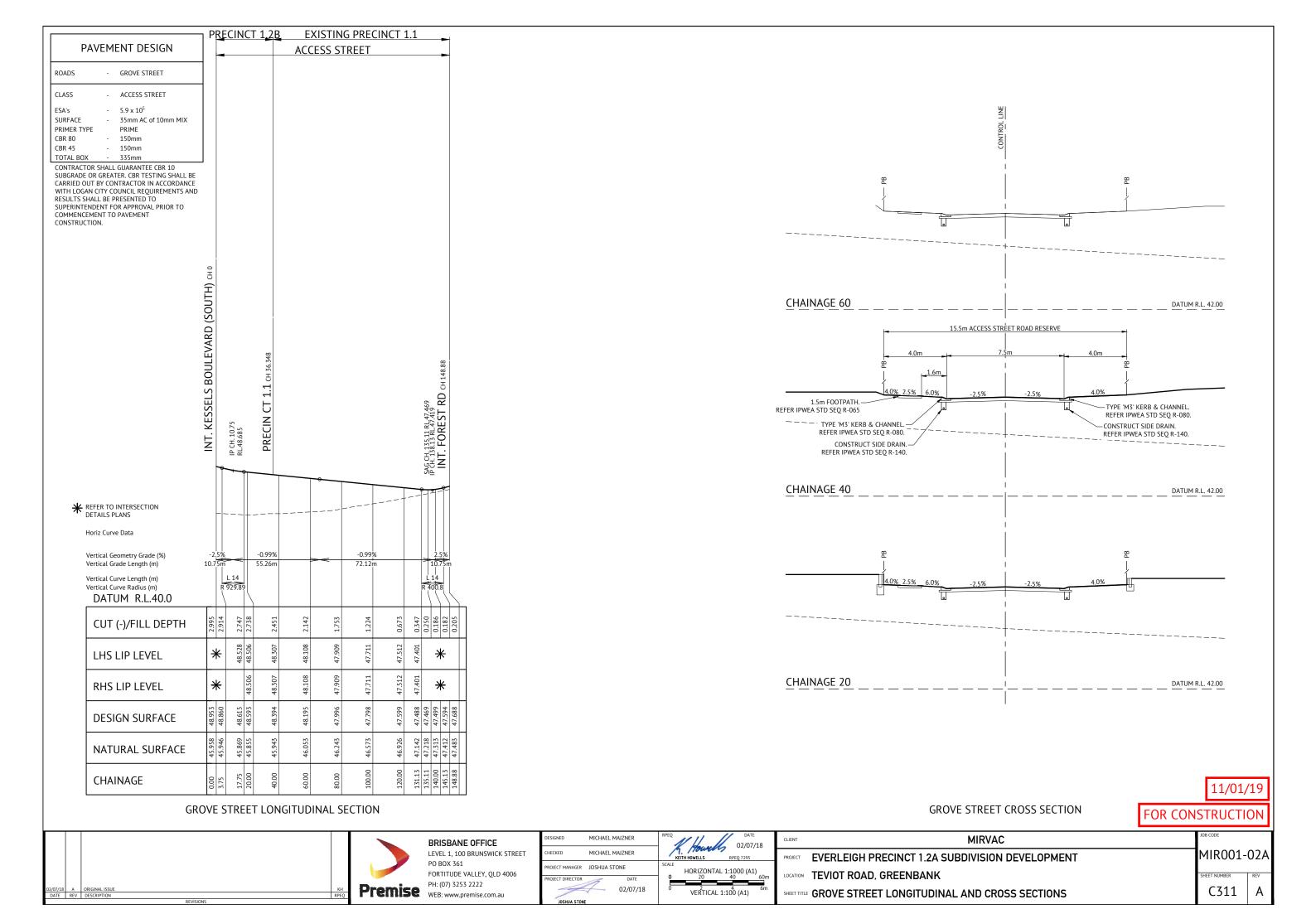


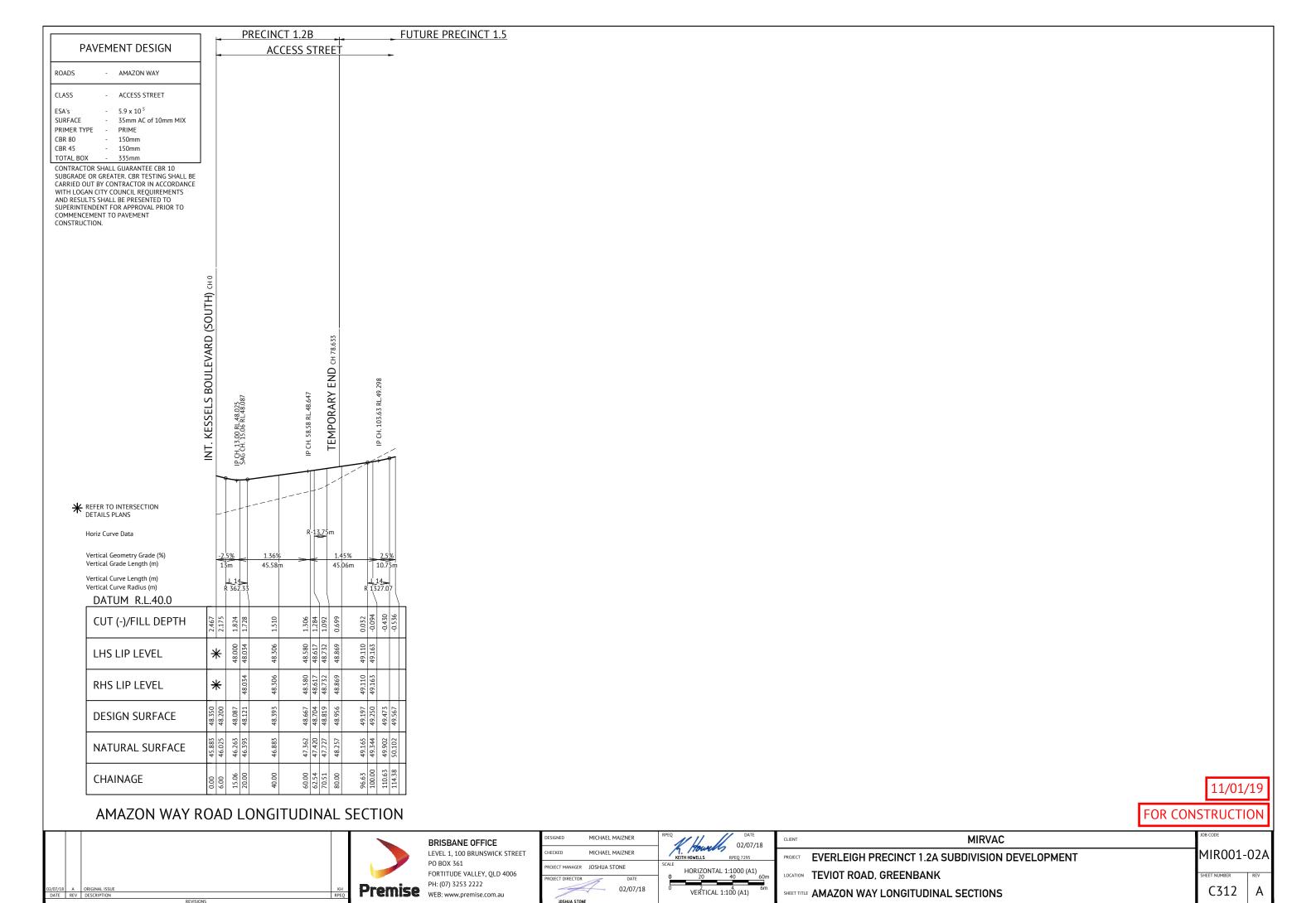


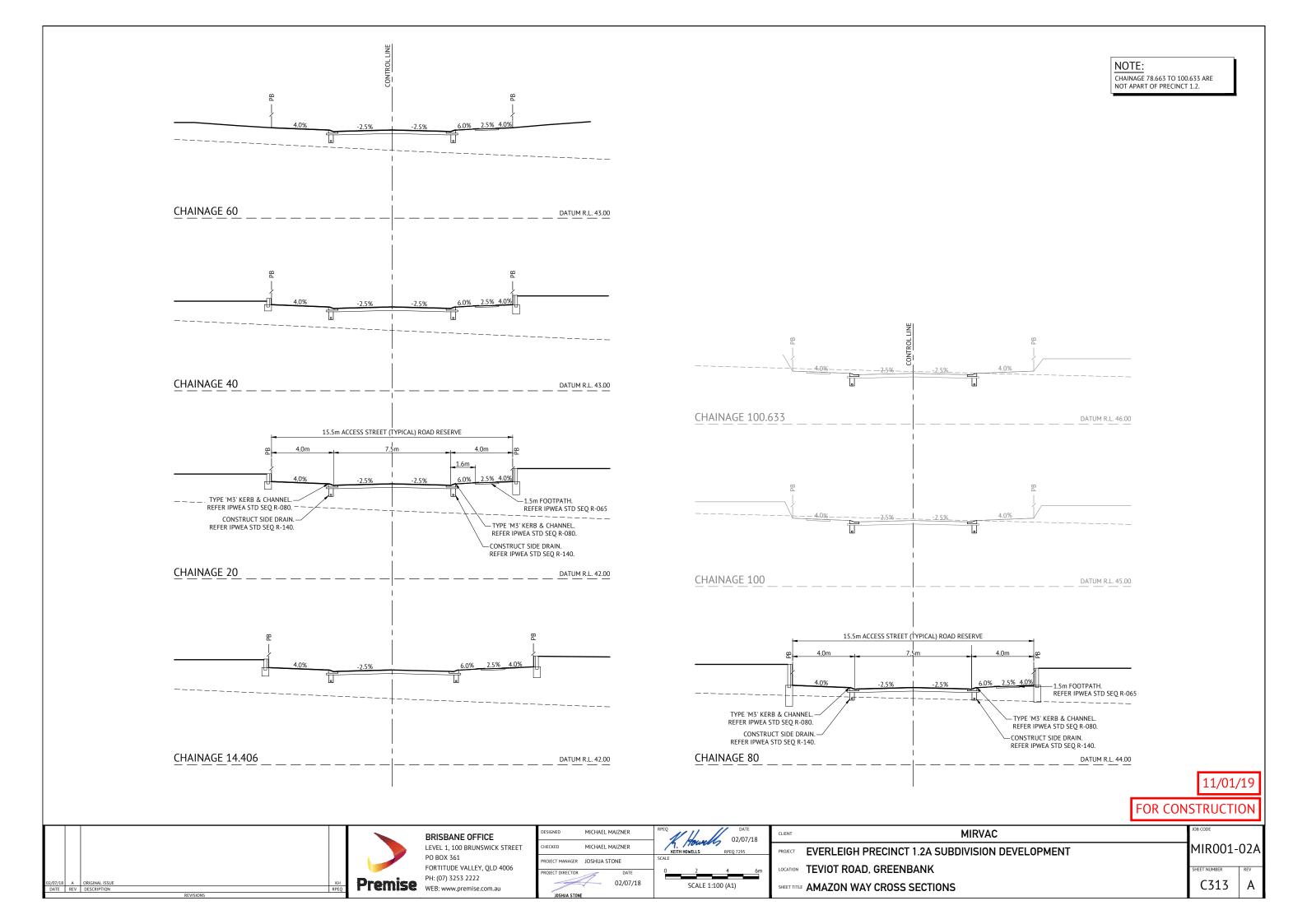


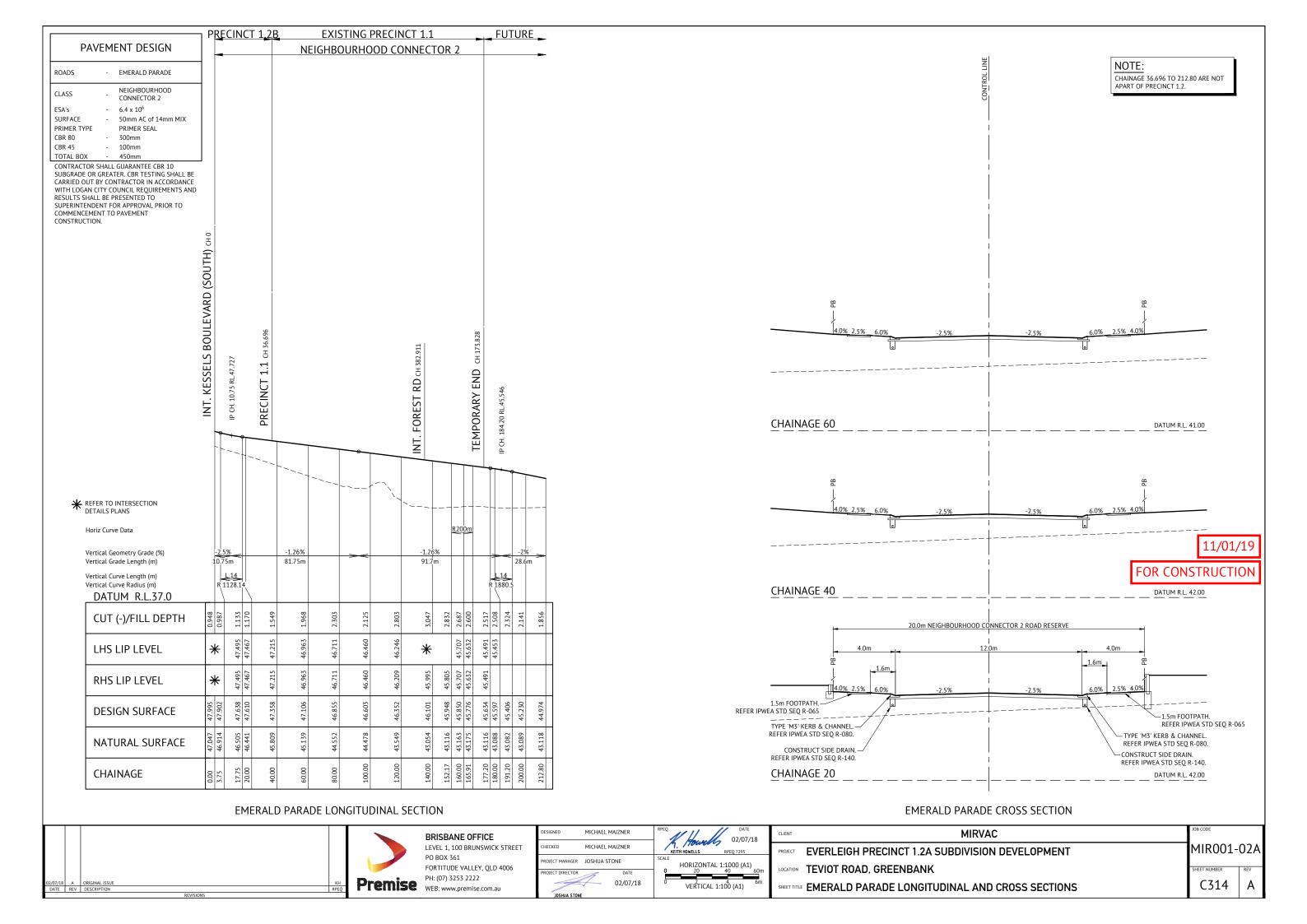


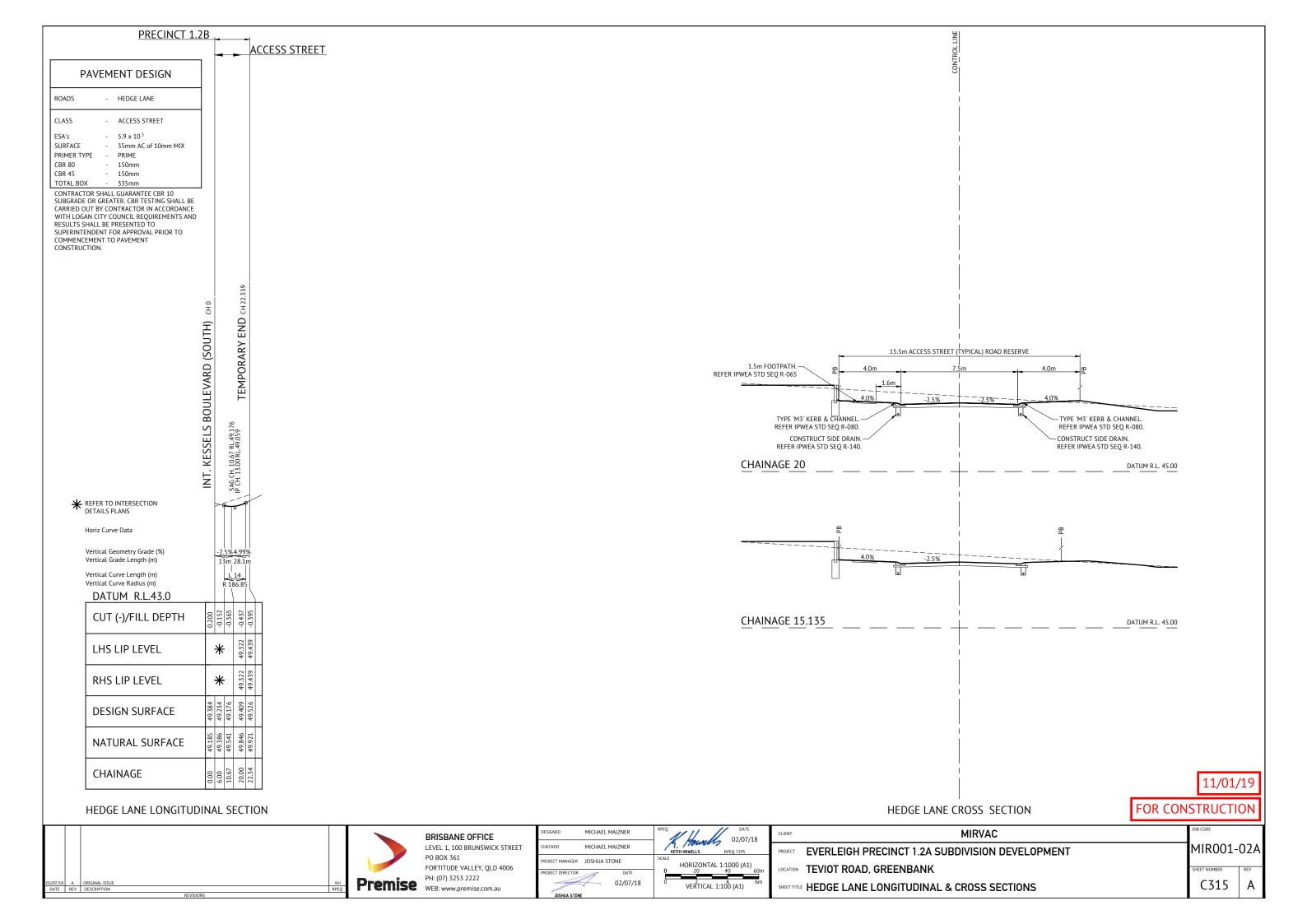


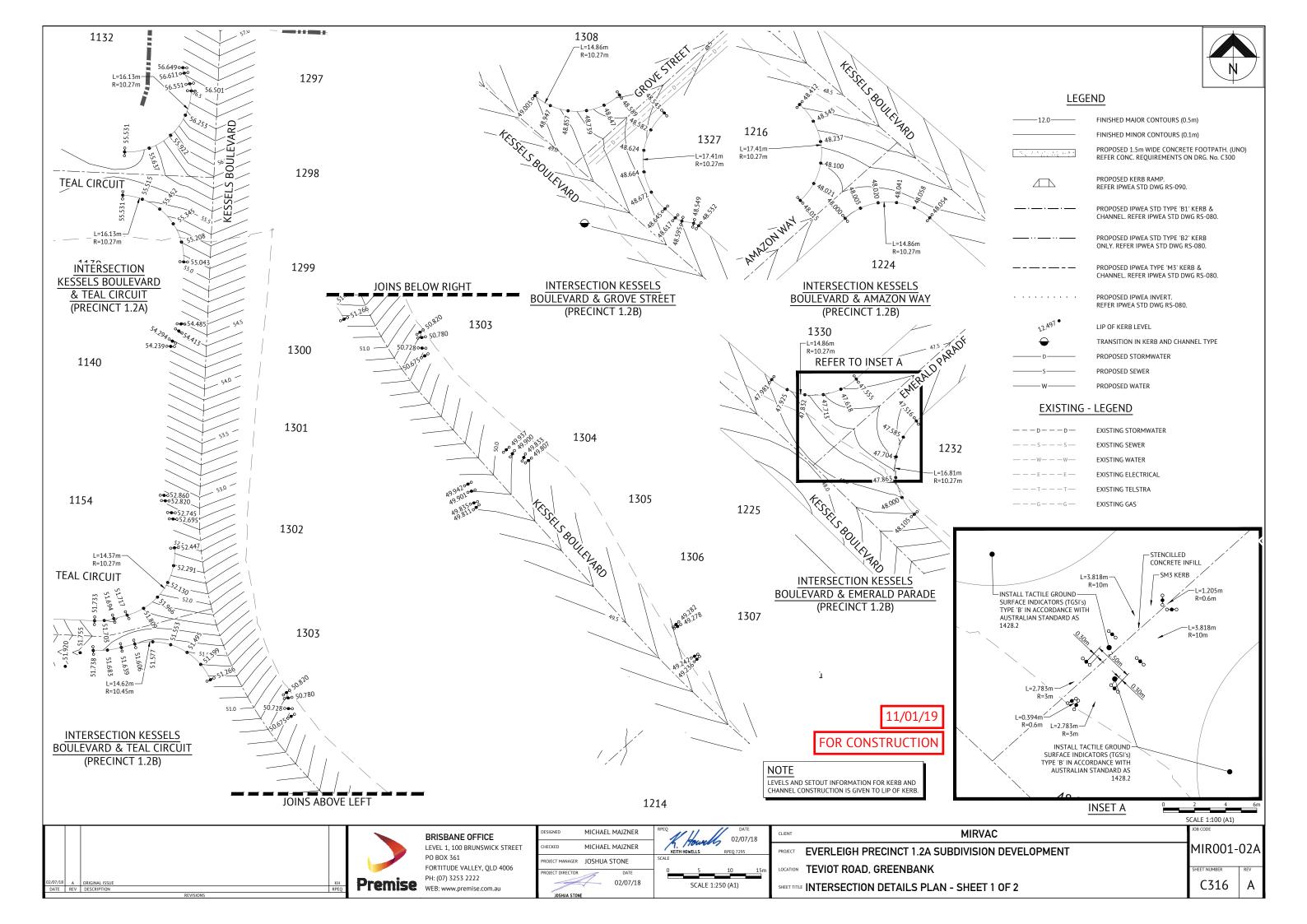


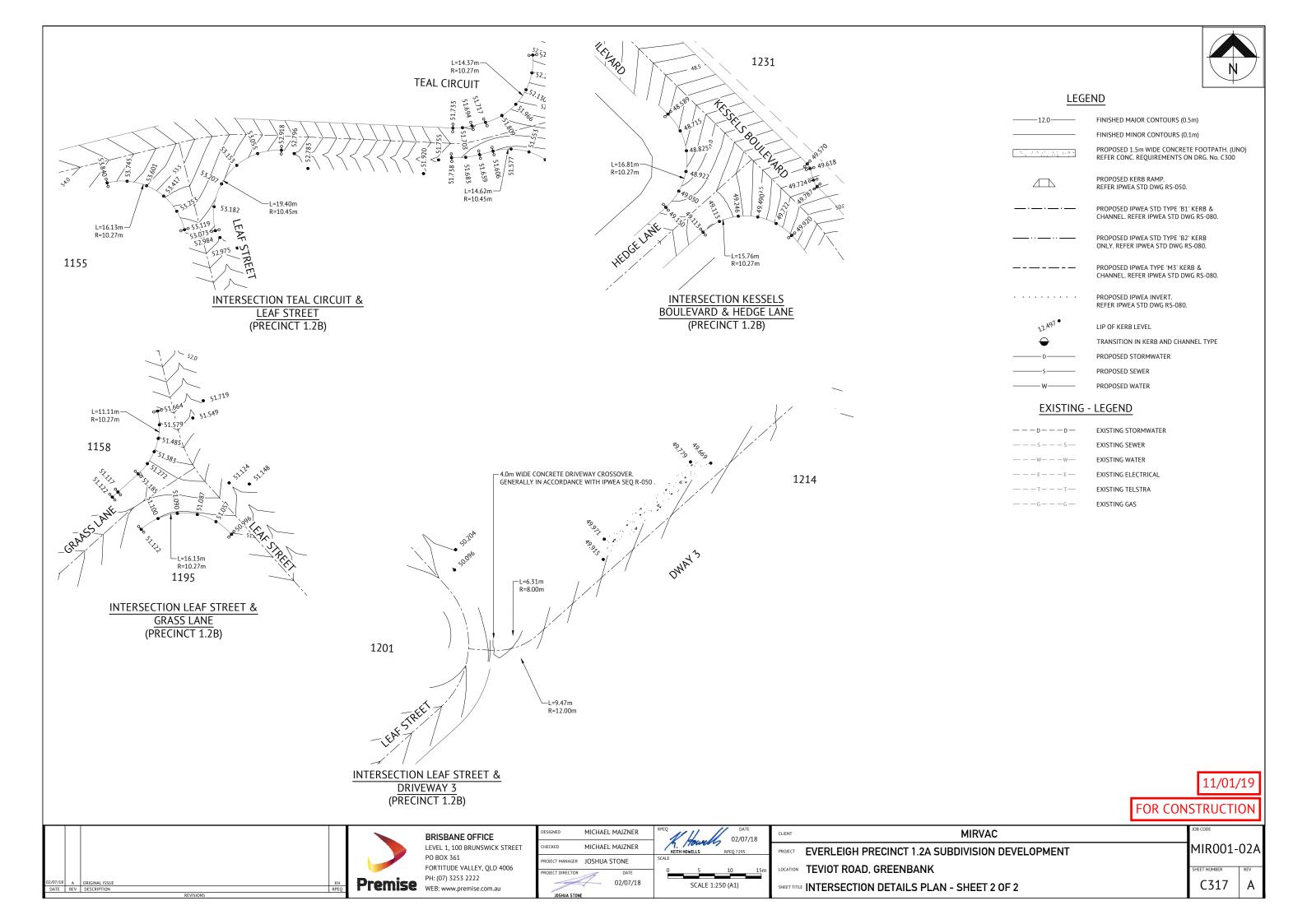


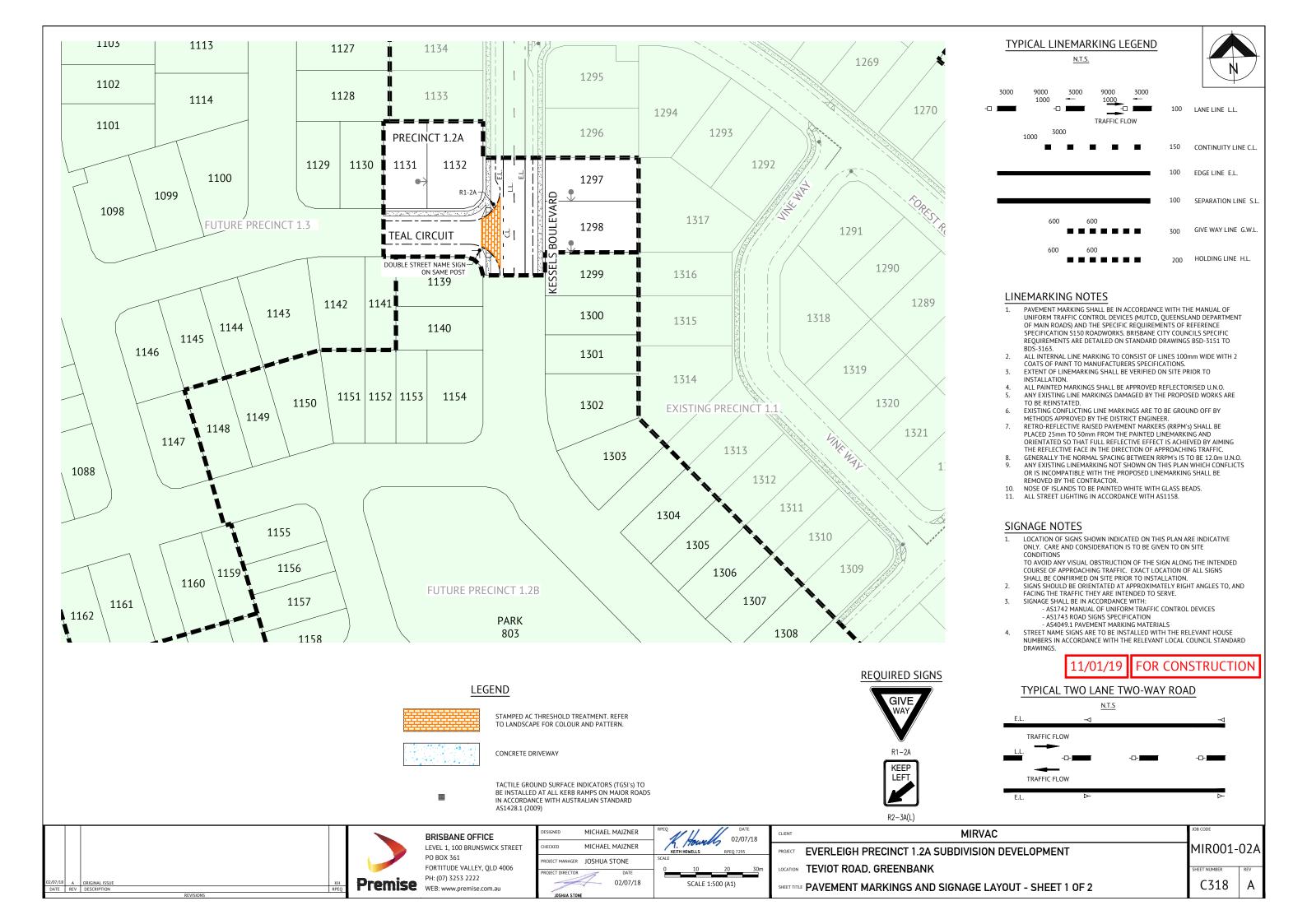


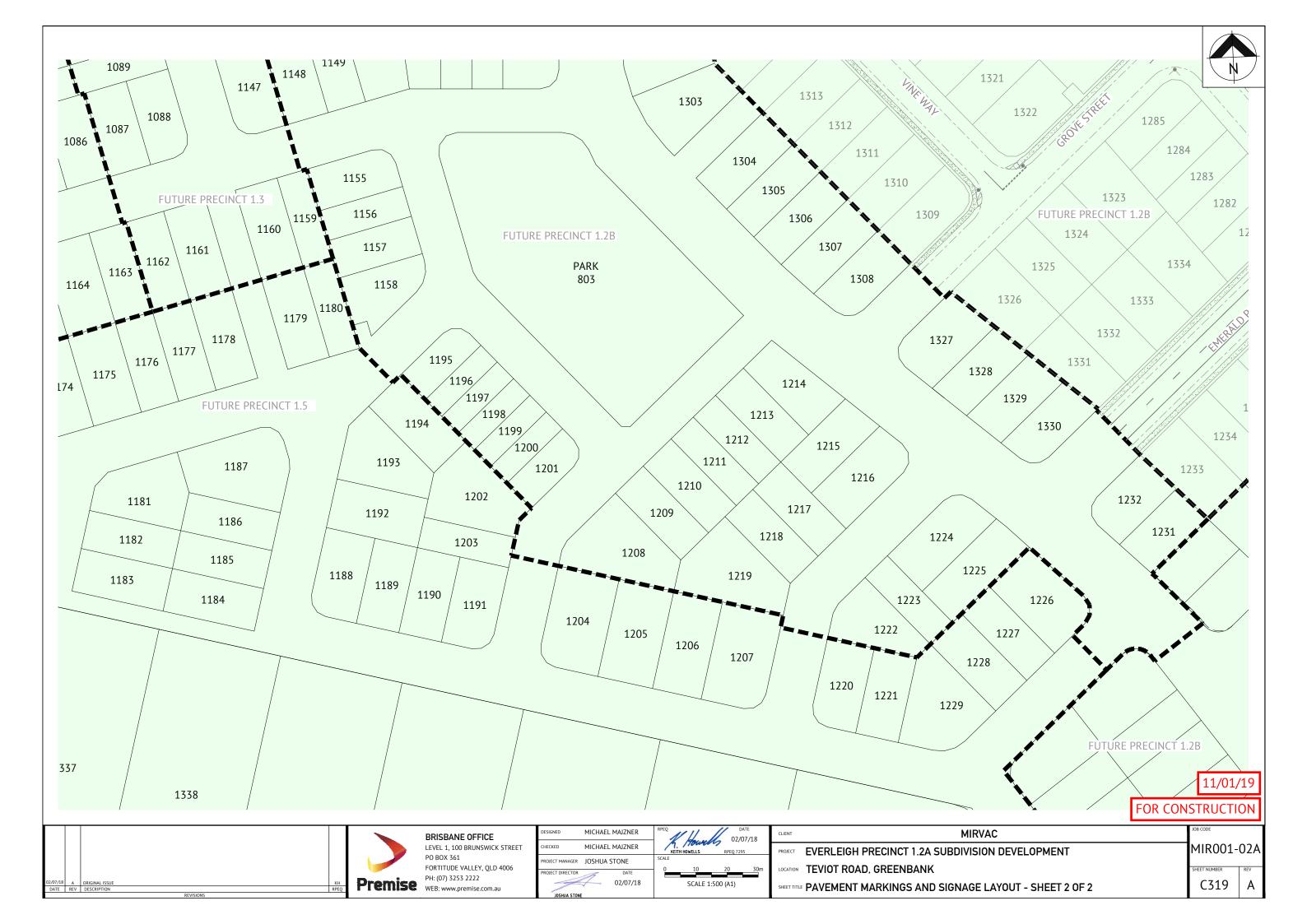










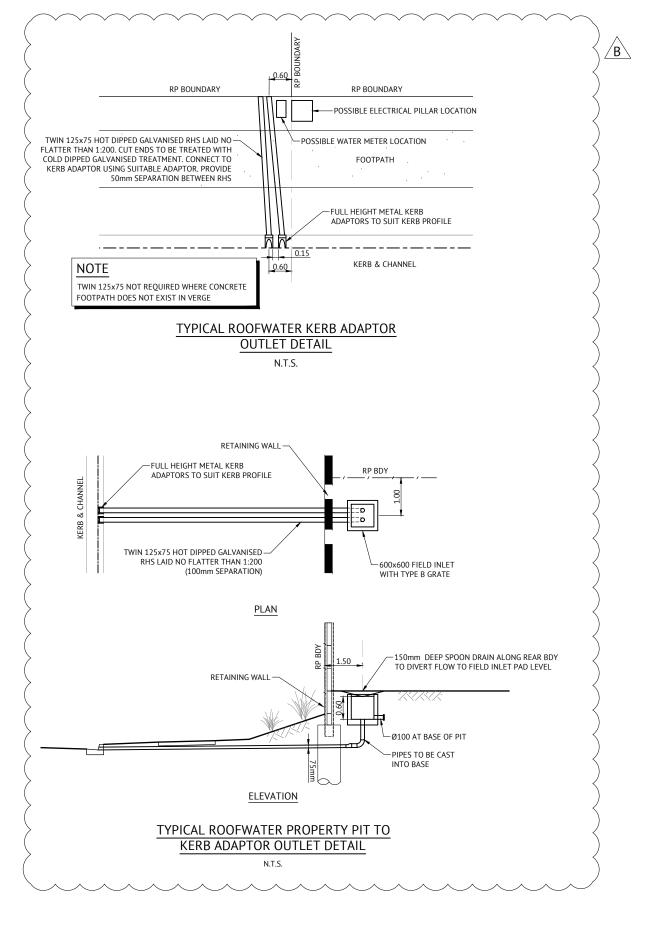


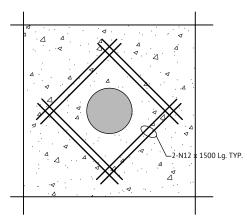
STORMWATER DRAINAGE NOTES

- THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE STORMWATER DRAINAGE DRAWINGS
- STORMWATER PITS ARE TO BE CONSTRUCTED INSITU IN ACCORDANCE WITH DRAWINGS OR AS VARIED AS NOTED ON THE DRAWING PREFABRICATED STORMWATER PITS CAN BE USED SUBJECT TO WRITTEN APPROVAL FROM THE SUPERINTENDENT. CLASS D HEAVY DUTY GALVANIZED STEEL GRATES ARE TO BE FITTED IN TRAFFIC AREAS, CLASS B LIGHT DUTY GALVANIZED STEEL GRATES ARE TO BE FITTED IN LANDSCAPE AREAS UNLESS NOTED OTHERWISE.
- ALL DRAINAGE EXCAVATION AND CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH AS3500 AND THE APPLICABLE LOCAL AUTHORITY SPECIFICATIONS AND STANDARD DETAILS.
 ALL MATERIALS SHALL MEET THE REQUIREMENTS OF AS1254 &
- ALL uPVC PIPES SHALL BE CLASS 'SN8' FOR Ø150 & Ø225, AND CLASS 'SN6' FOR Ø100 UNLESS NOTED OTHERWISE.
 PIPES SHALL BE LAID AT MIN. 1% GRADE UNLESS NOTED OTHERWISE.
- CONTRACTOR MUST VERIFY THAT ALL PIPE LEVELS AND GRADES CAN BE ACHIEVED PRIOR TO CONSTRUCTING DRAIN LINES, ANY CONFLICT SHALL BE REPORTED TO THE SUPERINTENDENT FOR ANY NECESSARY ALTERATIONS PRIOR TO ANY CONSTRUCTION OF CONNECTING
- WHERE PIPES ARE TO BE LAID WITHIN THE ZONE OF INFLUENCE OF WHERE PIPES ARE TO BE LAID WITHIN THE ZOING OF INFLUENCE OF STRUCTURAL LOADINGS (e.g. BUILDING FOOTINGS, RETAINING WALLS...etc) THE BUILDER SHALL PROVIDE ADEQUATE BRIDGING / PROTECTION. WHERE ANY DOUBT MAY EXIST REFERENCE SHALL BE
- MADE TO THE DESIGNER OF THE STRUCTURE. BENCHING OF PIT STRUCTURES SHALL HAVE A SMOOTH FINISHED SURFACE, AND PIPES SHALL NOT PROJECT INSIDE THE SHAFT OF THE
- WHERE RECTANGULAR PIT STRUCTURES ARE USED, PIPES MUST NOT CONNECT TO THE PIT AT CORNERS.
- ALL CONSTRUCTION AND EXCAVATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE CURRENT REQUIREMENTS OF THE WORK HEALTH AND SAFETY ACT 2011 AND SUBSEQUENT AMENDMENTS
- REFER TO LCC STD DWG'S FOR TYPICAL ROOF SLAB REINFORCEMENT

REFERENCE POINT LOCATION FOR DRAINAGE STRUCTURES

STRUCTURE TYPE	HORIZONTAL CONTROL POINT [REFERENCE POINT LOCATION]	VERTICALCONTROL REFERENCE LEVEL	
MANHOLE	CENTRELINE OF MAIN SHAFT	FINISHED SURFACE LEVEL AT CENTRE OF MAIN SHAFT.	
GULLY PIT OVER MANHOLE	CENTRE OF GULLY PIT	LIP LEVEL	
GULLY PIT (LIP IN LINE)	CENTRE OF GULLY PIT	LIP LEVEL	
HEADWALL	INTERSECTION OF HEADWALL FACE AND PIPE CENTRE LINE	INVERT LEVEL	
FIELD INLET	CENTRE OF PIT	TOP OF CONCRETE PIT	
ROOFWATER PIT	CENTRE OF PIT	TOP OF GRATE	





TYPICAL DETAIL GRATED PIT IN CONCRETE PAVEMENT

11/01/19

FOR CONSTRUCTION

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BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222

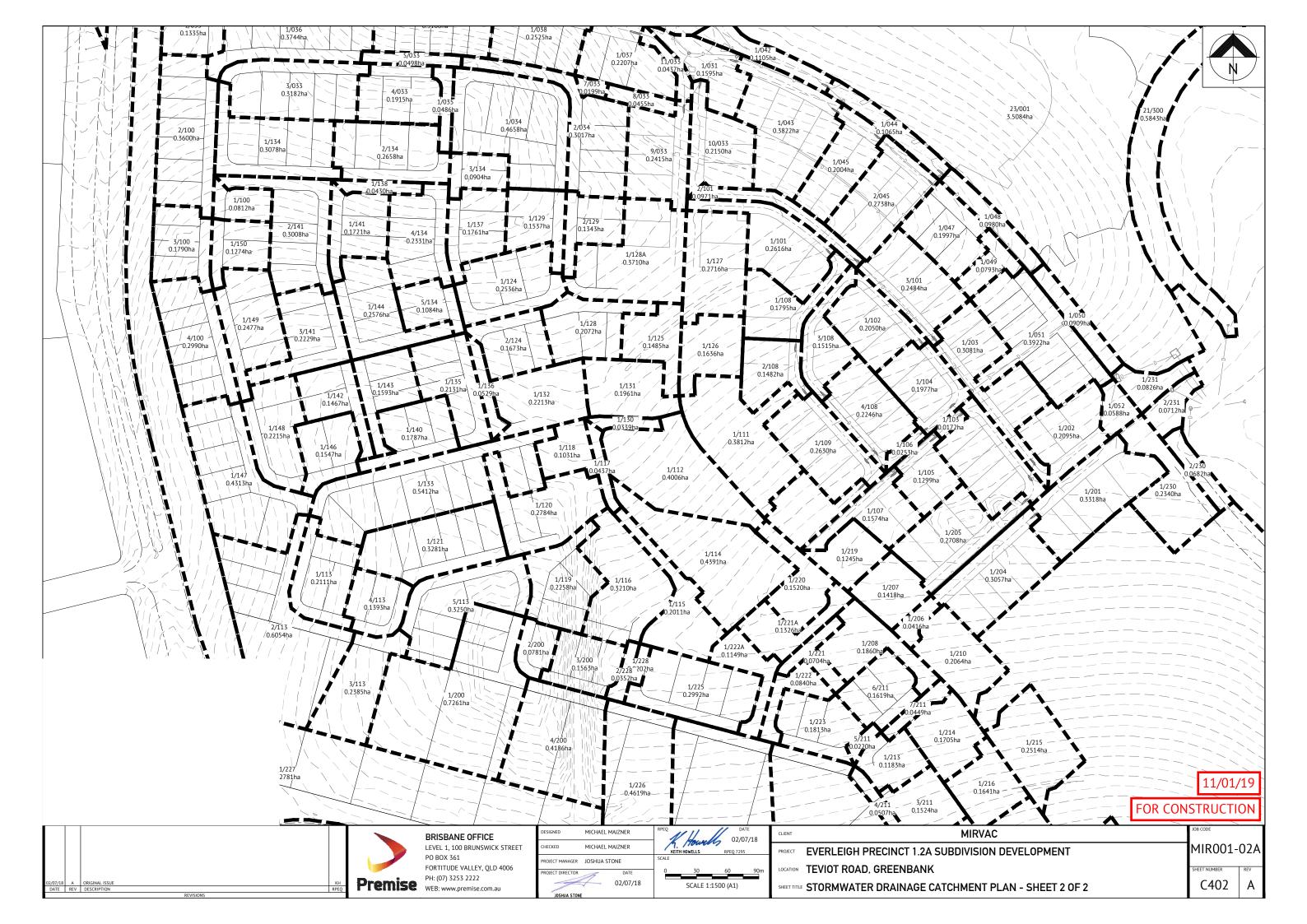
ESIGNED	MICHAEL	MAJZNER	RPEQ	111	DA 24.40	
HECKED	MICHAEL	MAJZNER		HOWELLS	21/0 RPEQ 7295	•
ROJECT MANAGER	JOSHUA S	STONE	SCALE			
ROJECT DIRECTOR	16	DATE	0	10	20	30n
JOSHUA STONE		21/09/18		SCALE 1	:500 (A1)	

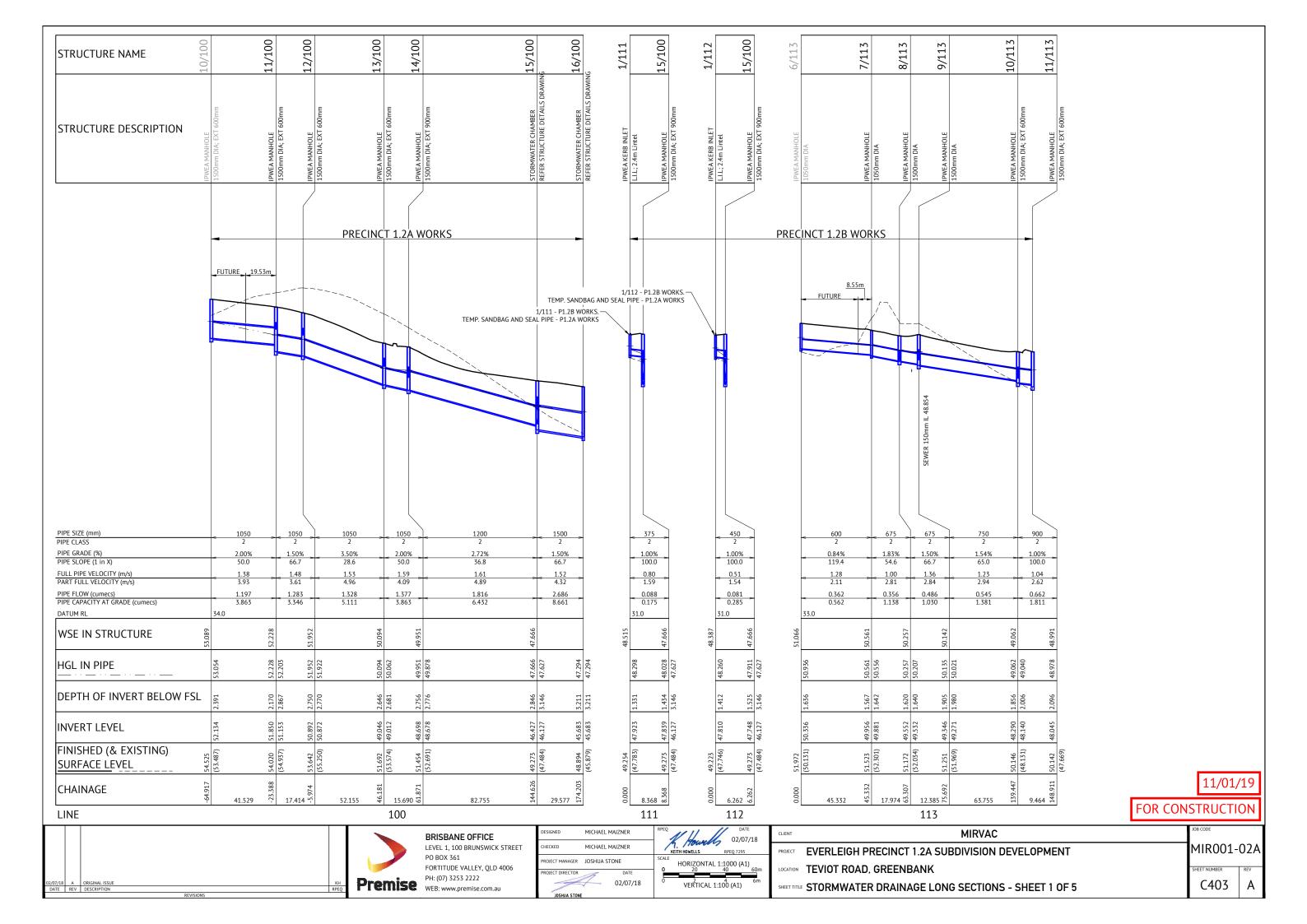
MIRVAC PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK SHEET TITLE STORMWATER DRAINAGE DETAILS AND NOTES

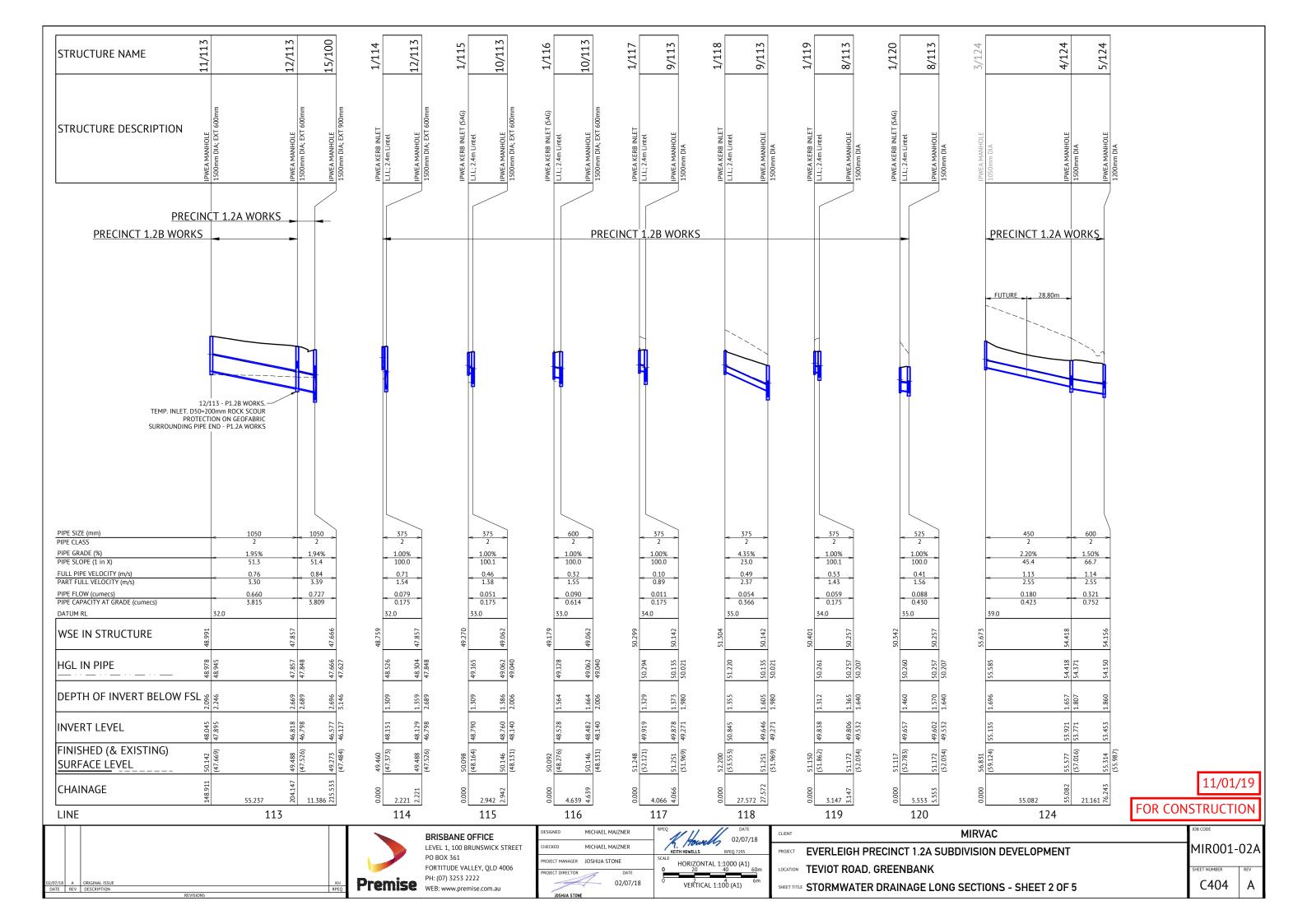
MIR001-02A

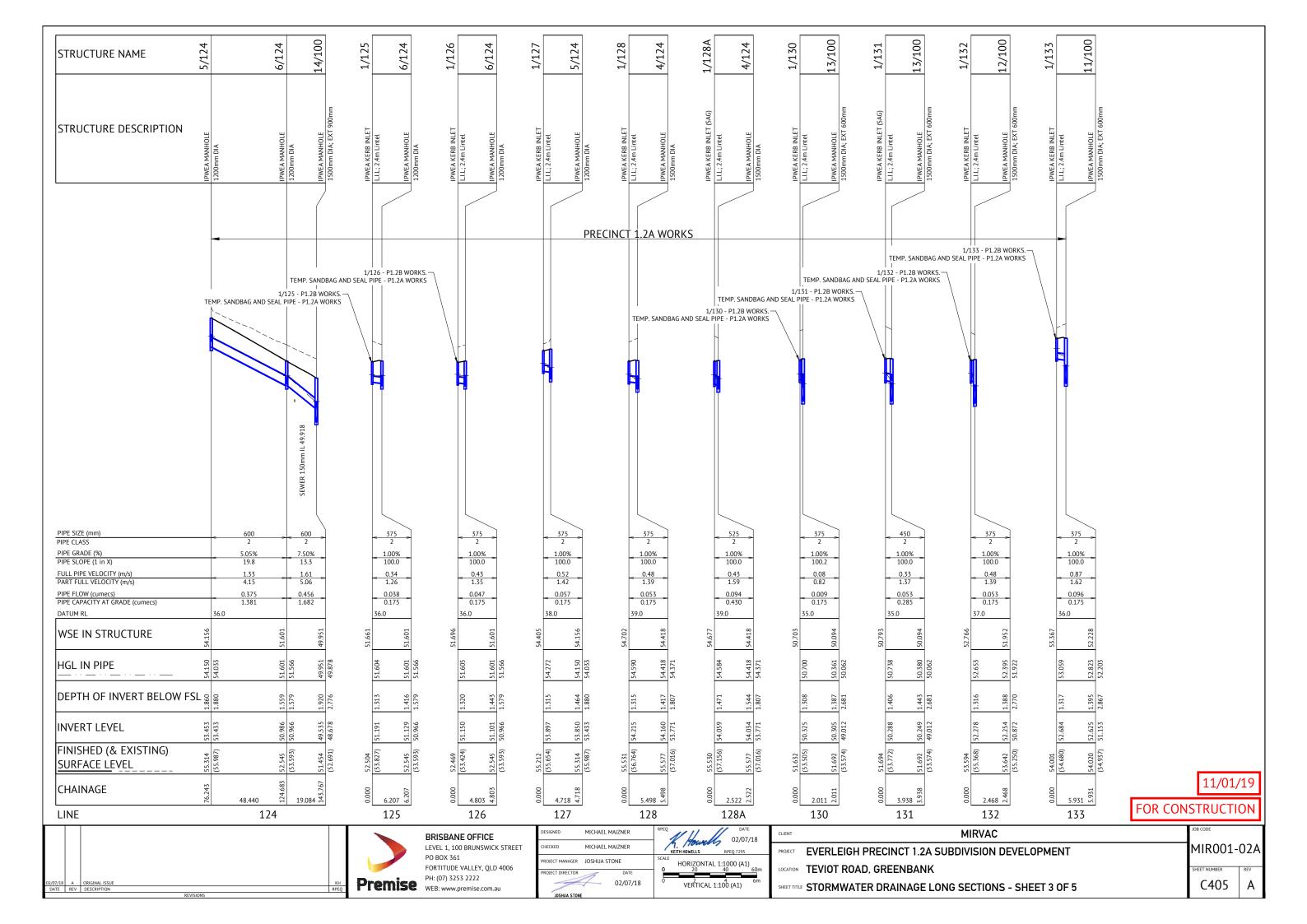
C400

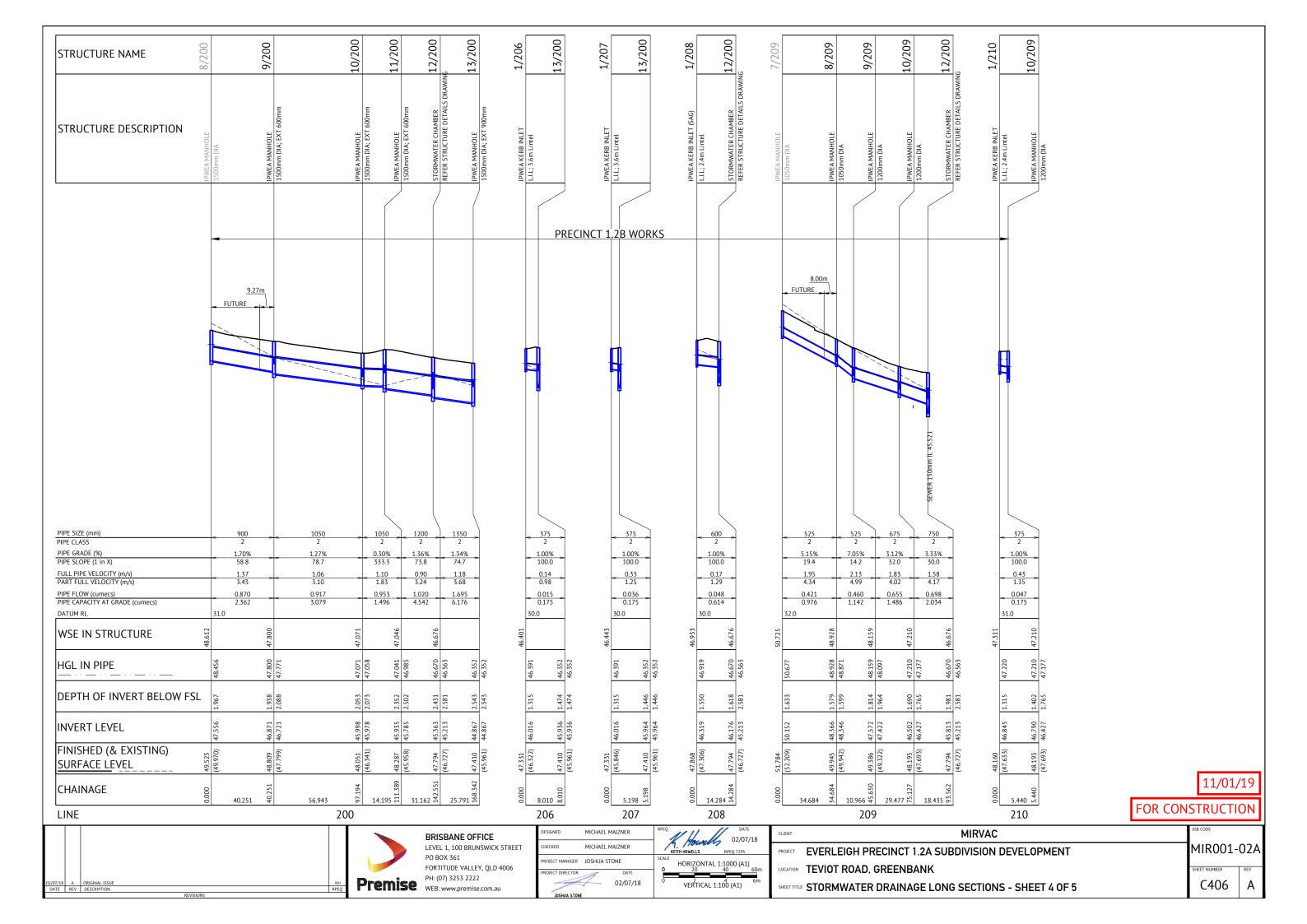


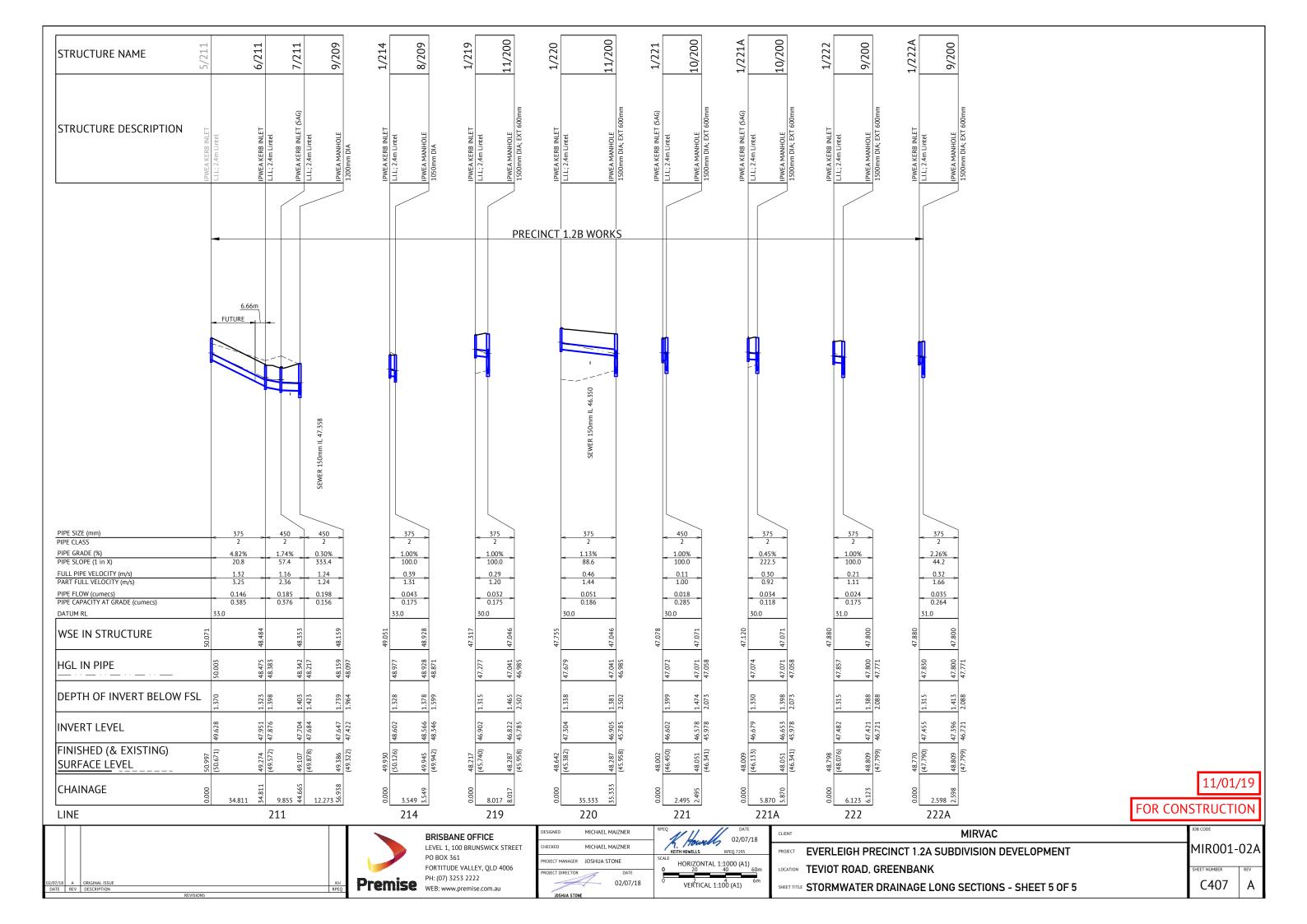












	LOCATION		TIME	SI	UB-CAT	CHMEI	NT RUNOFF	F		ı	NLET DES	IGN						DRAIN I	DESIGN	I								HEADI	OSSES					PART	FULL			DES	SIGN LEV	ELS.		
		tc	_	-	A	CA	Q				Qg	Qb		tc	I CA		Qp	L	S			Vf=Q/A			STRU	JCTURE R	RATIOS V	/2/2g	Ku hu	Kw	hw	Sf	1	dn	Vn		\vdash					
STRUCTURE NUMBER	DOWNSTREAM STRUCTURE STRUCTURE SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONCENTRATION	RAINFALL INTENSITY	CO-EFFICIENT OF	SUB-CATCHIM		SUB-CATCHMENT DISCHARGE FLOW IN K.&C (INC. BYPASS)		FLOW	ROAD GRADE AT INLET	HALF ROAD CAPACITY FLOW INTO INLET	BYPASS FLO	BYPASS STRUCTURE NUMBER	CRITICAL TIME OF CONCENTRATION	TOT	SUM ADDITIONAL PIPE FLOW	PIPE FLOW	REA(PIPE GRADE	PIPE/BOX DIMENSIONS	CLASS		TIME OF FLOW IN REACH	CHARTS USED	09/00	Du/Do	S/Do	VELOCITY HEAD	UPSTREAM HEADLUSS CO-EFFICIENT UPSTREAM HEADLOSS			PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L x Sf)	NORMAL DEPTH	NORMAL DEPTH VELOCITY	UPSTREAM OBVERT LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.		STRUCTURE NUMBER
	1 /1 40 1 /1 42 1 /1 47 1 /1 44	min	mm/h		ha	ha	l/s l/s	m	m	%	l/s l/s	l/s		min mi	n/h ha	l/s	l/s	m	%	mm		m/s	min					m	m		m	%	m	m	m/s	m	m	m	m	m	m	
10/100	1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 1/149 1/150 11/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134													7.38 11	6 3.718	0 :	1197 4	1.529 2	! 1	050	2	1.38	0.16	34 37	0	1	1.03 0.0	.098 (0.36 0.03	i	0.035	1.99	0.826	0.401	3.93	53.054	52.223	53.054	52.228	53.089	54.525 1	ւ0/100
11/100	1/133 1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 1/149 12/100 1/150 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134													7.45 11	6 4.109	0	1283 1	7.414 1	5 1	050	2	1.48	0.08	33 34	0	1	1.02 0.	112	0.02	;	0.025	1.44	0.251	0.451	3.61	52.203	51.942	52.203	51.952	52.228	54.02 1	11/100
12/100	1/132 1/133 1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 13/100 1/149 1/150 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134													7.53 11	5 4.275	0	1328 5	2.155 3	5.5 1	050	2	1.53	0.15	33 34	0	1	1.03 0.	12 (0.25 0.03		0.03	3.5	1.828	0.365	4.96	51.922	50.096	51.922	50.094	51.952	53.642 1	12/100
13/100	1/130 1/131 1/132 1/133 1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 1/149 1/150 1/147 1/148 1/149 1/150 1/100 2/100 3/100 4/100 1/155 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134													7.68 11	5 4.447	0	1377 1	5.69 2	! 1	050	2	1.59	0.06	33 34	0	1	1.03 0.	129 (0.25 0.03.	!	0.032	0.7	0.11	0.433	4.09	50.062	49.748	50.062	49.951	50.094	51.692 1	13/100
14/100	1/125 1/126 1/127 1/128 1/128A 1/124 2/124 1/129 2/129 1/130 1/131 1/132 1/133 1/140 1/142 1/143 1/144 1/141 1/141 3/141 1/146 1/147 1/148 1/149 1/150 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134													7.62 11	5 5.823	0 :	1816 8	2.755 2	2.72 1	200	2	1.61	0.24	34 37	0	1	1.06 0.	132 (0.074		0.074	2.67	2.212	0.436	4.89	49.878	47.627	49.878	47.666	49.951	51.454 1	14/100
15/100	1/111 1/112 1/114 1/115 1/116 1/117 1/118 1/119 1/120 1/113 2/113 3/113 4/113 5/113 1/121 1/125 1/126 1/127 1/128 1/128A 1/124 2/124 1/129 2/129 16/100 1/130 1/131 1/132 1/133 1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 1/149 1/150 1/100 2/100 3/100 4/100 1/155 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134													7.77 11	4 8.547	0 :	2686 2	9.577 1	5 1	500	2	1.52	0.1				0.	118 (0.039		0.039	1.13	0.333	0.574	4.32	47.627	47.183	47.627	47.294	47.666	49.273 1	15/100
16/100																																								47.294	48.894 1	6/100
1/111	15/100 1/111	6.5	120 0	.75 0.:	381 0.	285	95 101	3.568	8 0.103	0.67	330 88	12	1/109	6.5 12	0.285	0	88 8	.255 1	.01 3	75	2	0.8	0.09	32	1		1.58 0.0	.033	0.21	3	0.218	3.23	0.174	0.188	1.59	48.298	48.214	48.298	48.028	48.515		1/111
15/100 1/112 15/100	15/100 1/112	7.5	116 0	.64 0.4	401 0.3	255	82 93	3.451	1 0.044	1.25	874 81	12	1/220	7.5 11	6 0.255	0	81 6	.159 1	.02 4	50	2	0.51	0.06	32	1		1.28 0.0	013	0.7 0.12	,	0.127	5.57	0.241	0.164	1.54	48.26	48.198	48.26	47.911	48.387	49.273 1 49.223 1 49.273 1	1/112
6/113	7/113			+		\dashv		+						9.14 10	8 1.265	0	362 4	5.332).84	00	2	1.28	0.38	37 42 43	0	1	1.22	.083	.47 0.12	1.55	0.13	0.83	0.375	0.35	2.11	50.936	50.556	50.936	50.561			6/113
7/113	8/113 5/113 1/121 8/113 1/113 2/113 3/113 4/113 5/113 1/121			+				+						9.52 10				7.974 1			2		0.09		0	0.89	1.01 0.						0.299				50.227					7/113
8/113	9/113 1/121 9/113 1/120 1/113 2/113 3/113 4/113 5/113 1/121			+										9.62 10	7 1.642	0	486 1	2.385 1	5 6	75	2	1.36	0.07	34 37	0	1	1.08 0.0	.094	0.54 0.05	-	0.051	0.57	0.071	0.326	2.84	50.207	50.021	50.207	50.135	50.257	51.172	8/113
9/113	10/113 1/121 10/113 1/113 1/113 1/120 10/113 1/113 2/113 3/113 4/113 5/113 1/121													9.47 10	7 1.737	0	545 6	3.755 1	54 7	50	2	1.23	0.34	42 43	0	1	1.16 0.	.078	48 0.11	1.57	0.121	1.5	0.959	0.327	2.94	50.021	49.04	50.021	49.062	50.142	51.251	9/113
10/113	1/115 1/116 1/117 1/118 11/113 1/119 1/120 1/113 2/113 3/113 4/113 5/113 1/121													9.81 10	6 2.128	0	662 9	.464 1	. 9	00	2	1.04	0.06	34 37	0	1	1.02 0.	.055	0.4 0.02	!	0.022	0.65	0.062	0.376	2.62	49.04	48.945	49.04	48.978	49.062	50.146 1	10/113
11/113	1/115 1/116 1/117 1/118 12/113 1/119 1/120 1/113 2/113 3/113 4/113 5/113 1/121													9.86 10	6 2.128	0	660 5	5.237 1	95 1	050	2	0.76	0.21	37 42 43	0	0.86	1.04 0.	03	11 0.03	1.56	0.046	1.97	1.089	0.296	3.3			7			50.142 1	
																																				11/0)1/19	JF(OR CO	TZMC	RUCT	ION
											BRIS	BANE	OFFICE		DESIGNE)	MICHAEL	MAJZNER		RPEQ	How	M	DATE 02/07/2	18 CL	IENT						N	IIRVA	C								CODE	

PO BOX 361 Premise PH: (07) 3253 2222
WEB: www.premise.com.au

BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET FORTITUDE VALLEY, QLD 4006



PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT

LOCATION TEVIOT ROAD, GREENBANK

SHEET TITLE Q2 MINOR STORM CALCULATIONS - 1 OF 3

C408

MIR001-02A

	LOCATION	TIM	IE SUB-	CATCHME	ENT RUN	NOFF		11	NLET D	DESIGN						DRAIN	N DESIGN							H	ADLOSS	SES				PAR	T FULL			DES	SIGN LEVE	LS		
		tc I	C A	CA	Q					Qg Qb		tc	I	CA	Qp	L	S		Vf=Q/A			STRUCT	URE RATIOS	V2/2	g Ku	hu K	w h	w Sf	hf	dn	Vn							
STRUCTURE NUMBER DOWNSTREAM STRUCTURE		SUB-CATCHMENT TIME OF CONCENTRATION RAINEAL INTENSITY	CO-EFFICIENT OF RUNOFF SUB-CATCHMENT AREA	EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS) FLOW WIDTH	FLOW DEPTH	ROAD GRADE AT INLET	HALF ROAD CAPACITY	FLOW INTO INLET BYPASS FLOW	BYPASS STRUCTURE NUMBER	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C × A) SUM ADDITIONAL	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE/BUX DIMENSIONS	CLASS FULL PIPE VELOCITY	TIME OF FLOW IN REACH	CHARTS USED	09/00	Du/Do S/Do	VELOCITY HEAD		UPSTREAM HEADLOSS	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E. PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS	NORMAL DEPTH	NORMAL DEPTH VELOCITY	UPSTREAM OBVERT LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL	STRUCTURE NUMBER
		min mm	/h ha	ha	l/s	l/s m	m	%	l/s	l/s l/s		min	mm/h	ha l/	s l/s	m	% m	nm	m/s	min				m		m	ı	m %	m	m	m/s	m	m	m	m	m	m	
12/113 15/100	1/114 1/115 1/116 1/117 1/118 1/119 1/120 1/113 2/113 3/113 4/113 5/113 1/121											7.76	114	2.213 0	727	11.386	1.94 1050)	2 0.84	0.04	33 34	0 1	1.01	0.036	0.23	0.008	0.0	08 1.6	0.182	0.311	3.39	47.848	47.627	47.848		7.857 49		12/113
15/100	4 44 4										4.442											_					-									7.666 49		15/100
1/114 12/113	1/114	7.5 116	0.64 0.439	0.28	90 9	90 4.84	2 0.076	1 5	356 79	79 11	1/112	7.5	116	0.28 0	79	2.221	1 375		2 0.71	0.02	32	1	1.62	0.026	9.04	0.233	0.2	33 9.96	0.126	0.176	1.54	48.526	48.504	48.526		8.759 49		1/114
12/113 1/115 10/113	1/11	6 422	0.75 0.304	0.454	F4 (F4	0.000	0.37 7	775 5	1 0	1/114		422	0.454	F4	2.064	4.07 775		2 046	0.07	73	4	4.20	0.01	0.7	0.106	0.1	06 7.40	0.000	0.470	4.70	10.175	40.475	40.465				12/113
10/113	1/113	6 122	0.75 0.201	0.151	51 :	51	0.008	0.27	375 5:	0	1/114	ь	122	0.151 0	51	2.864	1.03 375		2 0.46	0.03	52	1	1.28	0.01	9.7	0.106	0.1	06 3.48	0.099	0.139	1.38	49.105	49.155	49.165		9.27 50 9.062 50		1/115
1/116 10/113	1/116	6 122	0.75 0.721	0.24	81 9	90	0.077	0.47 7	375 90	0 0	1/115	6	122	0.24	90	4.626	1 600		2 0.72	0.04	72	1	1.00	0.00	9.7	0.051	0.0	F1 1.42	0.066	0.156	1 5 5	40 120	40.002	40 1 20		9.179 50		1/116
10/113	1/110	0 122	0.75 0.321	0.24	01	90	0.037	0.47	3/3 91	,0 0	1/113	0	122	0.24	90	4.626	1 600		2 0.32	0.04	32	1	1.06	0.00	9.7	0.031	0.0	51 1.42	0.066	0.156	1.55	47.120	49.002	49.128				10/113
1/117 9/113	1/117	6 122	0.75 0.044	0.027	11	11 071	0.05	3 52 1	170	1 0	1/115	6	122	0.037	11	4.05	1 375		2 0.1	0.04	37	1	1.01	0.00	9.7	0.005	0.0	05 3.9	0150	0.064	0.80	50.204	50.257	50.294		9.062 50 0.299 51		1/117
9/113	1/11/	3 122	0.73 0.044	0.033	11	11 0.71	0.03	ا کد.د	1.0 1.	0	1/113	0	144	0.033 0	111	T.U3	1 3/3		2 0.1	0.04	32	1	1.01	0.00	2./	0.003	0.0	لا.د دی	0.158	0.064	0.07	JU.274	30.233	JU.274		0.142 51		9/113
1/118 9/113	1/110	6 122	0.75 0.107	0.077	26 (67 2.20	2 0.062	110 1	127 5	1 0	1/120	6	122	0.077 0	54	27.566	4 7 F 77 F		2 0.49	014	72	1	1 22	0.01	7	0.094	0.0	04 7.07	1 005	0.097	2 7 7	E1 22	E0.021	E1 22		1.304 52		1/118
9/113	1/110	3 122	0.75 0.103	0.077	20	63 2.282	2 0.002	7.10	773 34	7 7	1/120	U	144	0.077 0	34	27.300	4.35 375		2 0.49	0.14	32	1	1.22	0.01.	- /	0.084	0.0	84 3.93	1.085	0.097	2.31	J1.22	50.021	51.22		0.142 51		9/113
1/119 8/113	1/119	6 122	0.75 0.226	0.169	57	68 2.711	1 0.075	1 72 1	192 59	ig 0	1/116	6	122	0.169 0	59	3.051	1.03 375		2 0.53	0.03	37	1	1.5	0.014	9.69	0.14	0.1	4 0.11	0.004	0.15	1.43	50 21 3	50 181	50.261				1/119
8/113	1/11/	0 122	0.73 0.220	0.107	, ,	2.71.	1 0.075	1.72	1,72	,,	1,110		122	0.107	- 37	3.031	1.03 373		2 0.55	0.03	32	-	1.5	0.01	7.07	0.11	0.1	0.11	0.001	0.13	1.13	30.213	30.101	30.201		0.257 51		8/113
1/120 8/113	1/120	6 122	0.75 0.278	0.208	71 8	88	0.035	0.88 3	375 88	88 0	1/119	6	122	0.208 0	88	5.546	1 525		2 0.41	0.05	32	1	1 3	0.009	9.7	0.082	0.0	82 0.04	0.002	0.161	1.56	50 182	50.127	50.26		0.342 51		1/120
8/113	1/120	0 122	0.73 0.270	0.200	71		0.033	0.00	,,,	,0 0	2/11/		122	0.200		3.5 10	323		0.11	0.03	32	-	1.5	0.00	7.7	0.002	0.0	0.01	0.002	0.101	1.50	30.102	30.127	30.20		0.257 51		8/113
	1/124 2/124 1/129 2/129											6.34	121	0.531 0	180	55.082	2.2 450		2 1.13	0.34	37 42 43	0 1	1.2	0.06	1 29	0.084 1.3	5 0.0	88 212	1 167	0.205	2 5 5	55 585	54 371	55.585		5.673 56		3/124
	1/128 1/128A 1/124 2/124																																					
4/124 5/124	1/129 2/129											6.55	120	0.959 0	321	21.161	1.5 600		2 1.14	0.13	34 37	0 1	1.08	0.06	0.72	0.047	0.0	47 1.04	0.22	0.274	2.55	54.371	54.053	54.371	54.15 5	4.418 55	5.577	4/124
5/124 6/124	1/127 1/128 1/128A 1/124 2/124 1/129 2/129											6.68	119	1.162 0	375	48.44	5.05 600		2 1.33	0.17	37 42 43	0 1	1.21	0.09	1.3	0.117 1.3	7 0.1	23 5.02	2.432	0.214	4.15	54.033	51.586	54.033	51.601 5	4.156 55	5.314	5/124
6/124 14/100	1/125 1/126 1/127 1/128 1/128A 1/124 2/124 1/129 2/129											6.85	119	1.396 0	456	19.084	7.5 600		2 1.61	0.05	33 34	0 1	1.06	0.13	3 0.27	0.035	0.0	35 8.46	1.506	0.214	5.06	51.566	50.135	51.566	49.951 5	1.601 52	2.545	6/124
14/100	2/129																																			9.951 51	151	14/100
1/125 6/124	1/125	6 122	0.75 0.149	0.111	7.8	38 1.748	8 0.052	5 3 5	506 39	18 O	1/131	6	122	0.111 0	38	6.206	1 375		2 0.34	0.07	37	1	1 26	0.004	5 9.7	0.058	0.0	58 0.05	0.003	0.118	1 76	51 566	51 504	51.604		1.661 52		1/125
6/124	1/125	0 122	0.75 0.115	0.111	30	30 1.7 10	0.032	3.33	300 30	,0 0	1/131		122	0.111	30	0.200	3,3		0.51	0.07	32	-	1.20	0.000	7.7	0.030	0.0	0.03	0.003	0.110	1.20	31.300	31.301	31.001		1.601 52		6/124
1/126 6/124	1/126	6 122	0.75 0.164	0.122	41 4	53 1.632	2 0.06	6 39 2	2121 4	17 6	1/111	6	122	0.122 0	47	4.801	1 375		2 0.43	0.05	32	1	1.46	0.009	9.7	0.091	0.0	91 0.07	0.004	0.133	1.35	51 525	51 476	51 605		1.696 52		1/126
6/124	1/120	0 122	0.75 0.101	0.122		33 1.032	2 0.00	0.57		17	2/111		122	0.122	- 17	1.001	373		0.13	0.03	32	-	1.10	0.00	, ,,,	0.071	0.0	0.07	0.001	0.155	1.55	31.323	31.170	31.003		1.601 52		6/124
1/127 5/124	1/127	6 122	0.75 0.272	0.203	69	69 2.164	4 0.062	5 43 1	1205 5	7 12	1/126	6	122	0.203 0	57	4.718	1 375		2 0.52	0.05	32	1	1 36	0.014	9.7	0.133	0.1	33 2.58	0.117	0.148	1 42	54 272	54 225	54 272		4.405 55		1/127
5/124	1/12/	0 1111	0.73 0.272	0.203	0,	0, 2.10	0.002	3.13	2205	., 122	1,120			0.203		10	3,3		0.52	0.03	32	-	1.50	0.01		0.133	- 0.1	2.50	0.117	0.1.0	1	3	3	3		4.156 55		5/124
1/128 4/124	1/128	6 122	0.75 0.207	0.155	53	53 3.12	0.085	0.47 1	102 5	i3 0	1/125	6	127	0.155 0	53	5.496	1 375		2 0.48	0.06	32	1	1 3	0.01	9.7	0.117	0.1	12 3.13	0.162	0.141	1.39	54.59	54.535	54.59		4.702 55	_	1/128
4/124	,	- 122	0.7 5 0.207	0.133	-	3.12	0.505			- 10	-, -2-5				+	3	- 3,3		0.10	0.00		-	1.5	10.01		15.222	- 0.1	3.13	3.132	0.111	1.57	,	3333	,		4.418 55		4/124
1/128A 4/124	1/128A	6 122	0.75 0.371	0.278	94	94	0.04	0.47	375 94	94 0	1/128	6	122	0.278 0	94	2.512	1 525		2 0.43	0.02	32	1	1.18	0.01	9.7	0.094	0.0	94 6.58	0.16	0.167	1.59	54.584	54.559	54.584		4.677 55		1/128A
4/124			0.571	1				- 1	-	- -	,	-	-		+	1			1		-			1.01	1				1	1	1 -					4.418 55		4/124
1/130 13/100	1/130	6 122	0.75 0.034	0.025	9 9	9 0.7	0.05	1.87 1	178 9	0	1/112	6	122	0.025 0	9	1.991	1.01 375		2 0.08	0.02	32	1	1.01	0	9.7	0.003	0.0	03 16.83	0.304	0.056	0.82	50.7	50.68	50.7	50.361 5			1/130
13/100															+							-+							+							0.094 51		
1/131 13/100	1/131	6 122	0.75 0.196	0.147	50 5	53	0.009	1.42 3	375 5	3 0	1/130	6	122	0.147 0	53	3.926	1 450		2 0.33	0.04	32	1	1.12	0.00	9.7	0.055	0.0	55 9.09	0.267	0.132	1.37	50.738	50.699	50.738		0.793 51		1/131
13/100								$\overline{}$							\top														+							0.094 51		
1/132 12/100	1/132	6 122	0.75 0.221	0.166	56	56 2.25	5 0.065	2.83 2	253 5	3 3	1/131	6	122	0.166 0	53	2.468	1 375		2 0.48	0.03	32	1	1.3	0.01	9.7	0.113	0.1	13 10.48	0.172	0.141	1.39	52.653	52.629	52.653		2.766 53	_	1/132
12/100																																			5	1.952 53	5.642	12/100
1/133 11/100	1/133	7 118	0.75 0.541	0.405	133 1	133 3.507	7 0.096	1.52 1	191 9	96 37	1/118	7	118	0.405 0	96	5.915	1 375		2 0.87	0.06	32	1	1.82	0.039	7.96	0.308	0.3	08 3.98	0.14	0.198	1.62	53.059	53	53.059	52.823 5	3.367 54	1.001	1/133
11/100																																			5	2.228 54	1.02	11/100
8/200 9/200	1/225 1/226 1/227 1/228 2/228 1/200 2/200 3/200 4/200 1/223 2/223											9.4	107	2.902 0	870	40.251	1.7 900		2 1.37	0.18	42 43	0 1	1.17	0.09	5 1.53	0.146 1.6	4 0.1	56 1.63	0.656	0.378	3.43	48.456	47.771	48.456	47.8 4	8.612 49	9.523	8/200
9/200 10/200	1/222 1/222A 1/225 1/226 1/227 1/228 2/228 1/200 2/200 3/200 4/200 1/223 2/223											9.58	107	3.051 0	917	56.943	1.27 1050)	2 1.06	0.27	34 37	0 0	0.99 1.03	0.05	0.51	0.029	0.0	29 1.23	0.699	0.393	3.1	47.771	47.048	47.771	47.071 4	7.8 48	3.809	9/200
10/200 11/200	1/221 1/221A 1/222 1/222A 1/225 1/226 1/227 1/228 2/228 1/200 2/200 3/200											9.84	106	3.203 0	953	14.195	0.3 1050)	2 1.1	0.14	33 34	0 1	1.04	0.063	2 0.22	0.013	0.0	13 0.12	0.017	0.609	1.83	47.028	46.985	47.058	47.041 4	7.071 48	3.051	10/200
	4/200 1/223 2/223																														┷	4 4	4 11 -	1	D 66	VICT-	116-	
																																11/0	1/19	FC	R CO	NSTR	UCT	ION
																															_							

DZ/07/18 A ORIGINAL ISSUE KH
DATE REV DESCRIPTION REVISIONS

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DESIGNED MICHAEL MAIZNER

CHECKED MICHAEL MAIZNER

PROJECT MANAGER JOSHUA STONE

PROJECT DIRECTOR

DATE

02/07/18

CLIENT

MIRVAC

MIR001-02A

C409

PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT

LOCATION TEVIOT ROAD, GREENBANK

TEVIOT ROAD, OREERS WITH

SHEET TITLE Q2 MINOR STORM CALCULATIONS - 2 OF 3

	LOCATION		TIM	ИE	SUB-C	ATCHME	ENT RU	JNOFF			INLET	DESIGN						DRA	AIN DI	ESIGN								HEADLOS	SES				PAR	T FUL			DES	IGN LEV	'ELS		
			tc I	С	Α	CA	Q					Qg C	<u>D</u> b	tc	ı	CA		Qp L		S		Vf=Q/A			STRUCTU	JRE RATI	os V	2/2g Ku	hu	Kw	hw S	h	ıf dn	V	'n					=	
STRUCTURE NUMBER	STRUCTURE SUB-CATCHMENTS CONTRIBUTING		SUB-CATCHMENT TIME OF CONCENTRATION RAINFALL INTENSITY	CO-EFFICII	SUB-CATCHMENT AREA	EQUIVALENT AREA		FLOW IN K&C (INC. BYPASS)	FLOW WIDTH	FLOW DEPTH ROAD GRADE AT INLET	HALF ROAD CAPACITY		BYPASS	CRITICAL TIME OF	3 ₹	TOTAL (C × A)	SUM ADDITIONAL PIPE FLOW	PIPE REA(_	PIPE GRADE PIPE/BOX DIMENSIONS	CLASS	FULL PIPE VELOCITY	TIME OF FLOW IN REACH	CHARTS USED	09/00	Du/Do		VELOCITY HEAD UPSTREAM HEADLOSS	UPSTREAM HEADLOSS	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	! 뽀	(L × Sf) NORMAL DEPTH	NORMAL DEPTH	VELOCITY UPSTREA LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL	STRUCTURE NUMBER
			min mm	ı/h	ha	ha	l/s	l/s	m	m %	l/s	l/s l,	/s	mir	n mm/h	ha	l/s	l/s m	9	% mm		m/s	min					m	m		m %	r	n m	m	ı/s m	m	m	m	m	m	
11/200 12	1/219 1/220 1/22 1/222 1/222A 1/2 1/227 1/228 2/22 2/200 3/200 4/20 2/223	225 1/226 28 1/200												9.98	105	3.41	0	1020 31.16	2 1.3	36 1200	2	0.9	0.13 37	42 43	0 0.	98 1.0	5 0.0	042 1.35	0.056	1.46	0.061 1.01	0.33	15 0.387	3.24	4 46.985	46.563	46.985	46.67	47.046	48.287	11/200
12/200 13	1/208 1/210 1/21 3/211 4/211 1/21 6/211 7/211 1/21 1/218 2/218 1/20 3/209 4/209 5/20 1/216 1/219 1/27 1/2214 1/22 1/2 1/200 2/200 3/20 1/223 2/223	13 5/211 14 1/217 09 2/209 09 1/215 20 1/221 222A 1/225 28 2/228												9.12	109	5.631	0	1695 25.79	1 1.3	1350	2	1.18	0.1 42	43	0 1	1.0	8 0.0	072 1.5	0.107	1.59	0.114 0.82	0.23	11 0.484	3.68	3 46.563	46.217	46.563	46.352			
13/200																	-										+													47.41	
	5/200 1/206		6 122	0.75	0.042	0.031	11	15	1.586	0.049 1.28	593	15 0	1/204	1 6	122	0.031	0	15 7.995	1	375	2	0.14	0.08 32		1	1.0	3 0.0	001 9.7	0.01		0.01 0.49	0.03	39 0.075	0.98	46.391	46.311	46.391	46.352		47.331	
13/200	5/200 1/207		6 133	0.75	0.142	0.100	7.6	7.6	2 272	0.064 1.28	E02	7.6	1/20!		122	0.106	10	76 5450	1.0	01 375	2	0.33	0.05 32		1	11	4 0.	005 9.7	0.053		0.052 0.75	0.0	70 0115	4 31	F 46 704	46 770	46 701	46 752		47.41 47.331	
13/200	1/207		6 122	0.75	0.142	0.106	36	36	2.232	0.064 1.28	382	0 0	1/20:	, 6	122	0.106	10	36 5.159	1.0	01 3/3	2	0.55	0.05 32		1	1.1	4 0.0	005 9.7	0.052		0.032 0.73	0.03	39 0.115	1.23	40.391	46.559	46.391	40.332		47.41	
	2/200 1/208		6 122	0.75	0.186	0.139	47	48		0.005 0.35	375	48 O	1/20	7 6	122	0.139	0	48 14.28	7 1	600	2	0.17	0.11 32		1	1.0	2 00	001 9.7	0.014		0.014 1.74	0.24	48 0.113	1 20	46 919	46 776	46.919	46 67			
12/200	7,200 1,200		0 122	0.73	0.100	0.137	77	10		0.003 0.33	373	10 0	1/20	0	122	0.137		14.20		000	-	0.17	0.11 32		1	1.0	2 0.0	501 5.7	0.01+		0.014 1.74	0.2	70 0.113	1.2.	+0.717	10.770	40.717	40.07		47.794	
12,200	1/217 1/218 2/21	18 1/209																																	_				10.070		12,200
7/209 8	/209 2/209 3/209 4/20 1/215 1/216 1/214 1/217 1/21													6.93	118	1.315	0	421 34.68	4 5.1	15 525	2	1.95	0.13 33	34	0 1	1.0	9 0.:	193 0.25	0.048		0.048 5.04	1.74	49 0.241	4.34	4 50.677	48.891	50.677	48.928	50.725	51.784	7/209
8/209 9	/209	09 4/209 16												7.05	118	1.442	0	460 10.96	6 7.0	525	2	2.13	0.03 33	34	0 1	1.1	1 0.2	231 0.25	0.057		0.057 6.49	0.71	12 0.232	4.99	48.871	48.097	48.871	48.159	48.928	49.945	8/209
9/209 10	1/211 2/211 3/21 1/213 5/211 6/21 1/209 1/214 1/217 1/21 1/209 2/209 3/20 5/209 1/215 1/21	11 7/211 18 2/218 09 4/209												6.97	118	2.066	0	655 29.47	7 3.1	675	2	1.83	0.12 34	37	0 1	1.0	9 0.:	171 0.36	0.061		0.061 3.01	0.88	87 0.314	4.02	48.097	47.177	48.097	47.21	48.159	49.386	9/209
	1/210 1/211 2/21 4/211 1/213 5/21 7/211 1/214 1/21 2/218 1/209 2/20 4/209 5/209 1/21	11 6/211 17 1/218 09 3/209												7.02	118	2.216	0	698 18.43	5 3.3	750	2	1.58	0.07 33	34	0 1	1.0	4 0.:	127 0.26	0.033		0.033 2.75	0.50	0.303	4.17	7 47.177	46.563	47.177	46.67		48.193	
12/200	1700 4 7240		(122	0.75	0.204	0.454		F2	2477	0.067. 7.06	000	47 5	4 (20)		422	0.454		47 5 704	4.6	775	_	0.47	0.06 73			4.2	4 04	200 0.7	0.004		0.004	0.00	00 0477	4.75	- 47.22	47.465	47.22	47.24		47.794	
1/210 10	0/209 1/210		6 122	0.75	0.206	0.154	52	52	2.1/3	0.063 3.06	908	4/ 5	1/200	6	122	0.154	0	47 5.384	1.0	01 3/5	2	0.43	0.06 32		1	1.2	4 0.0	009 9.7	0.091		0.091 0.17	0.00	0.133	1.55	47.22	47.165	47.22	47.21		48.16 48.193	
	/211 1/211 2/211 3/21	1 4/211						_					6.724				-								 	<u> </u>								+-							
5/211 6	1/213 5/211		6 122	0.75	0.022	0.016	6	6	0./36	0.03 5	333	5 0	6/21:	6.46	120	0.477	0	146 34.81	1 4.8	375	2	1.32	0.17 34	3/	0.04 1	1.1	8 0.0	0.76	0.068		0.068 4.39	1.52	28 0.16	3.25	50.003	48.326	50.003	48.4/5	50.0/1	50.997	5/211
6/211 7	/211 1/211 2/211 3/21 1/213 5/211 6/21	11 4/211 11	6 122	0.75	0.162	0.121	41	41	1.896	0.056 4.67	288	41 0	1/208	6.63	119	0.598	0	185 9.698	1.7	77 450	2	1.16	0.07 37	42 43	0.22 0.	83 1.3	5 0.0	069 1.33	0.092	1.45	0.1 0.42	0.04	42 0.223	2.36	6 48.326	48.154	48.383	48.342	48.484	49.274	6/211
7/211 9	/200 1/211 2/211 3/21	1 4/211	6 122	0.75	0.045	0.034	11	13		0 0.29	383	13 0	6/21	67	119	0.631	0	198 12.25	8 0 2	3 450	2	1.24	0.21 37	47 47	0.07 1	1 4	9 0	150	0.124	1 72	0.135 0.48	0.01	59 0.45	1.24	4 49174	48 007	48.217	48 150	48 352	49 107	7/211
	1/213 5/211 6/21	11 7/211	· 122	0.75	0.073	0.034				0.29	303	.5 0	5/21.	- 0.7	117	0.031	1	170 12.23	0.3	750		1.27	0.21 3/	.2 73	0.07	1.4	- 0.0	1.30	0.124	1.,, 2	0.40	0.03	0.43	1.2	70.134	10.077	10.21/	10.137			
9/209	/209 1/214		6 433	0.75	0.174	0.130	47	14	2 244	0.040 5.00	7.00	47 3	7/24	1 /	122	0.120	0	47 7 533	4.5	1 775	7	0.70	0.04 73		1	4.5		000 07	0.074		0.074 4.70	-	10 0431	4 74	1 40.077	40.044	40.077	40.020		49.386	
1/214 8, 8/209	/209 1/214		0 122	0./5	0.171	0.128	45	44	2.216	0.049 5.89	709	+5 2	7/21:	6	122	0.128	10	43 3.528	1.0	01 375	2	0.39	0.04 32		1	1.2	0.0	008 9.7	0.074		0.074 1.39	0.02	49 0.126	1.5	48.9//	48.941	48.977	40.728		49.93 49.945	
	./200 1/219		6 177	0.75	0.125	0.093	32	32	2.093	0.062 1.29	607	32 n	1/20	7 6	177	0.093	0	32 8.001	1	375	2	0.29	0.08 32		1	1 1	1 0	004 9.7	0.04		0.04 2.94	0.2	29 0.108	1 7	47 777	47 197	47.277	47 041			
11/200	, -,		- 122	3.73	0.123	0.073		102	,	1.002 1.27		- 0	2,20		1	0.073	†	0.001	+	3.3	+	0.27	3.00		+	1.1	_ 0.0	-3.	0.01		2.51	0.22	0.100	12						48.287	
	/200 1/220		6 122	0.75	0.152	0.114	39	51	2.521	0.072 1.29	608	51 0	1/22	L 6	122	0.114	0	51 35.32	9 1.1	13 375	2	0.46	0.35 32		1	1.2	0.0	011 7	0.076		0.076 1.81	0.54	47 0.134	1.44	4 47.679	47.28	47.679	47.041			
11/200									-										+						+		-					1		Ť	+					48.287	
)/200 1/221		6 122	0.75	0.07	0.053	18	18		0 0.38	383	18 0	1/208	3 6	122	0.053	0	18 2.495	1	450	2	0.11	0.02 32		1	1.0	6 0.0	001 9.7	0.006		0.006 0	0	0.076	1	47.052	47.028	47.072	47.071		48.002	
10/200																																							47.071	48.051	10/200
1/221A 10)/200 1/221A		6 122	0.75	0.133	0.099	34	34		0 0.83	375	34 0	LOST	6	122	0.099	0	34 5.869	0.4	45 375	2	0.3	0.09 32		1	1.1	7 0.0	005 9.7	0.046		0.046 0.04	0.00	0.137	0.92	47.054	47.028	47.074	47.071	47.12	48.009	1/221A
10/200																																							47.071	48.051	10/200
1/222 9	/200 1/222		6 122	0.75	0.084	0.063	21	24	1.839	0.055 1.45	179	24 0	1/22:	L 6	122	0.063	0	24 6.078	1.0	375	2	0.21	0.06 32		1	1.0	6 0.0	002 9.7	0.023		0.023 0.94	0.0!	57 0.093	1.11	47.857	47.796	47.857	47.8	47.88	48.798	1/222
9/200																																								48.809	
	/200 1/222A		6 122	0.75	0.115	0.086	29	35	2.142	0.062 1.45	181	35 0	1/22	LA 6	122	0.086	0	35 2.575	2.2	28 375	2	0.32	0.02 32		1	1.1	3 0.0	005 9.7	0.05		0.05 1.14	0.03	3 0.092	1.66	6 47.83	47.771	47.83	47.8		48.77	
9/200					1												1		\perp		1				$\perp \perp$		\perp					4	4 11 5						47.8	48.809	9/200
																															1	1/01	1/19	FC	OR CON	STR	UCTIO	DN L			/
																				RPFO			DATE	_															JOB CO	ODE	─ ─┤
											ВІ	RISBAN	E OFFIC	E		DESIGNED		MICHAEL MAJZN	IER		14	well -	02/07/18	CLIEN	AT .						MIRV	AC							300 ((- 1

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MICHAEL MAJZNER PROJECT MANAGER JOSHUA STONE — 02/07/18

PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT

LOCATION TEVIOT ROAD, GREENBANK SHEET TITLE Q2 MINOR STORM CALCULATIONS - 3 OF 3 MIR001-02A

	LOCATION	TIME	9	SUB-CA	АТСНМ	IENT RI	UNOFF		INLE	ET DES	IGN					1	DRAIN	DESIG	iN									HEAD	DLOSSE	S					PAR	FULL			DESIGN	N LEVELS	5		RUN	OFF	
		tc I		Α	CA	Q			Qg	Qb		tc	I	CA		Qp	L	S			Vf=Q/	A	-	2	TRUCTU	JRE RA	TIOS	V2/2g	Ku	hu	Kw	hw	Sf		dn	Vn				\vdash			\vdash	$\overline{}$	
STRUCTURE NUMBER DOWNSTREAM	SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONCENTRATION RAINFALL INTENSITY	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	FLOW INTO INLET	BYPASS FLOW	rruci	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C × A)	SUM ADDITIONAL PIPE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS	CLASS	FULL PIPE VELOCITY	TIME OF FLOW IN RFACH	HARTS LISED			Du/Do	S/Do	VELOCITY HEAD	UPSTREAM HEADLOSS CO-EFFICIENT	UPSTREAM HEADLOSS	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L × Sf)	NORMAL DEPTH	NORMAL DEPTH VELOCITY	UPSTREAM OBVERT LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL	MAJOR SURFACE FLOW CAPACITY	MAJOR SURFACE FLOW	STRUCTURE NUMBER
		min mm/h		ha	ha	l/s	l/s	%	l/s	l/s		min I	_	ha	l/s		m	%	mm		m/s							m		m		m	%	m	m	m/s	m	m	m	m	m	m	l/s	l/s	
10/100 11/1	1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 1/149 1/150 01 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134											7.38	259 4	.968	0	2661 4	1.529	2	1050	2	3.07	0.16	34 37	0) 1	1	1.29	0.482	0.64	0.307		0.307	1.6	0.666	0.641	4.81	53.054	52.223	53.054	52.388	53.361	54.525	0		10/100
11/100 12/1	1/133 1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 1/149 00 1/150 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134											7.45	258 5	.491	0	2821 1	7.414	1.5	1050	2	3.26	0.08	33 34	0) 1	1	1.18	0.541	0.22	0.12		0.12	1.07	0.186	0.739	4.33	52.203	51.942	52.268	52.083	52.388	54.02	0		11/100
12/100 13/1	1/132 1/133 1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 00 1/149 1/150 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134											7.53	257 5	.712	0	3013 52	2.155	3.5	1050	2	3.48	0.15	33 34	0) 1	1	1.15	0.618	0.26	0.161		0.161	1.47	0.768	0.58	6.14	51.922	50.096	51.922	51.154	52.083	53.642	0		12/100
13/100 14/1	1/130 1/131 1/132 1/133 1/140 1/142 1/143 1/144 1/141 1/141 3/141 1/146 00 1/147 1/148 1/149 1/150 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134											7.68	256 5	.942	0	3384 1	5.69	2	1050	2	3.91	0.06	34	0) 1	2	2.04	0.779	0.27	0.209		0.209	1.53	0.241	0.762	5.03	50.062	49.748	50.945	50.704	51.154	51.692	0		13/100
14/100 15/1	1/125 1/126 1/127 1/128 1/128A 1/124 2/124 1/129 2/129 1/130 1/131 1/132 1/133 1/140 1/142 1/143 1/133 1/144 1/141 3/141 1/146 1/147 1/148 1/149 1/150 1/100 2/100 3/100 4/100 1/15 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134											7.62	256 7	7.781	0	4365 82	2.755	2.72	1200	2	3.86	0.24	34 37	0) 1	1	1.69	0.76	0.56	0.426		0.426	1.25	1.037	0.725	6.11	49.878	47.627	50.278	49.241	50.704	51.454	0		14/100
15/100 16/1	1/111 1/112 1/114 1/115 1/116 1/117 1/118 1/119 1/120 1/113 2/113 3/113 4/113 5/113 1/121 1/125 1/126 1/127 1/128 1/128A 1/124 2/124 1/129 2/129 1/130 1/131 1/132 1/133 1/140 1/142 1/143 1/144 1/141 2/141 3/141 1/146 1/147 1/148 1/149 1/150 1/100 2/100 3/100 4/100 1/135 1/136 1/137 1/138 1/134 2/134 3/134 4/134 5/134											7.77	255 1	1.478	0	6140 29	9.577	1.5	1500	2	3.47	0.1						0.502	0.33	0.166		0.166	0.61	0.182	0.933	5.32	47.627	47.183	49.076	48.894	49.241	49.273	0		15/100
16/100	, -															$\overline{}$						+	+			\dashv															48.894	48.894	\Box	+	16/100
1/111 15/1	00 1/111	6.5 269	1 0	0.381	0.381	285	377	0.67	0 3	377 1	1/109	6.5	269 0	.381	0	0 8.	255	1.01	375	2	0	0.09	32					0	0	0		0	0	0	0	0	48.298	48.214	49.241	49.241	+	49.254	2163		1/111
15/100 1/112 15/1	00 1/112	7.5 258	0.80	0.401	0.354	25.4	1600	1 25	0 1	1600 4	1/220	75	250	756	0	0 6	159	1.02	450	2	0	0.06	77	\dashv	+			0	0	0		0	0	0	0	0	10.26	49 100	40 241	40 241		49.273 49.223	2571		15/100
15/100	1/112	238	0.07	J.TU1	סכנ.ט	234	1000	1.23	v 1	1000	1/220	۱.)	0 مدء	סנכ.	J	0 6.	1.77	1.02	UCF		0	0.06	32	\dashv	+	+		U	U	J		U	U		U		70.20	70.178	77.241	77.241		49.223	2331	-	15/100
6/113 7/11	3 1/113 2/113 3/113 4/113 5/113 1/121											9.14	241 1	.728	0	732 4	5.332	0.84	600	2	2.59	0.38	42 43	0) 1	2	2.69	0.205	1.23	0.252	1.32	0.27	0.85	0.386	0.6	2.59	50.936	50.556	51.679	51.293		51.972	0		6/113
7/113 8/11	3 1/113 2/113 3/113 4/113											9.52	237 1	.728	0	715 13	7.974	1.83	675	2	2	0.09	34 37	0	0.	.89 2	2.09	0.204	0.1	0.021		0.021	0.72	0.13	0.388	3.36	50.556	50.227	51.272	51.142	51.293	51.523	0	-	7/113
8/113 9/11	7 1/119 1/120 1/113 2/113								+	+			236 2			1056 12				7	2.95		34 37	\dashv	+	+			0	0			0	0	0.57	3.27	50.207					51.172		\rightarrow	8/113
0/113 9/11	3/113 4/113 5/113 1/121 1/117 1/118 1/119 1/120											2.02	200 2	۷۷ ـــــــــــــــــــــــــــــــــــ	0	ין סנחד	00	د.د	013		2.73	0.07	J# 3/	+	+	+		U	0	J		J	U	0	0.37	3.21	50.207	50.021	31.142	71.142	31.142	31.1/2	0		0/113
9/113 10/1	13 1/113 2/113 3/113 4/113 5/113 1/121											9.69	236 2	.379	0	1219 6	3.755	1.54	750	2	2.76	0.34	37 42	43 0) 1	2	2.49	0.308	1.23	0.379	1.28	0.396	0.95	0.607	0.548	3.53	50.021	49.04	50.746	50.14	51.142	51.251	0		9/113
10/113 11/1	1/115 1/116 1/117 1/118 1/119 1/120 1/113 2/113 3/113 4/113 5/113 1/121							0.34				9.81	235 2	.88	0	1891 9.	464	1	900	2	2.97	0.06	34 37	0	1	2	2.22	0.343	0.56	0.193		0.193	0.83	0.078	0.78	3.23	49.04	48.945	49.947	49.869	50.14	50.146	0		10/113
11/113 12/1	1/115 1/116 1/117 1/118 13 1/119 1/120 1/113 2/113							1.34				9.86	234 2	.88	0	1887 5	5.237	1.95	1050	2	2.18	0.21	37 42	43 0	0.	.86 1	1.95	0.242	1.09	0.264	1.41	0.34	0.48	0.264	0.522	4.39	48.945	47.868	49.605	49.341	49.945	50.142	0		11/113
	3/113 4/113 5/113 1/121						1														1													<u> </u>		<u> </u>	1		11/)1/1	<i>γ</i> Fι	OR CO	SNC	TRU	CTION
$\overline{}$																_			AEL MAIZE		RPEO			// 1	DATE	_									41DV								JC	OB CODE	

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BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET



MIRVAC

PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT

LOCATION TEVIOT ROAD, GREENBANK

SHEET TITLE Q100 MAJOR STORM CALCULATIONS - 1 OF 3

MIR001-02A

	LOCATION	TIME	S	SUB-CA	ГСНМЕ	NT RUI	NOFF			DESIGN					DRA	N DES	GN									DLOSSES					PAR	T FULL		DESI	GN LEVELS	5	RU	INOFF	
		tc I	C !L	A	CA	Q			Qg QI	<u> </u>	tc	+	CA		Qp L	S			Vf=Q/A	\ <u> </u>		STRUC	TURE R	RATIOS	V2/2g	Ku	hu I	Kw	hw Sf		dn	Vn		+					
STRUCTURE NUMBER DOWNSTREAM STRUCTURE	ATC	SUB-CATCHMENT TIME OF CONCENTRATION RAINFALL INTENSITY	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA		SUB	FLOW IN K&C (INC. BYPASS)	ROAD GRADE A	FLOW INTO INLET			RAINFALL INTE	TOTAL (C	SUM ADDITIONAL PIPE FLOW	F PIPE FLOW REACH LENGTH	PIPE GRADE	PIPE/BOX DIMENSIONS	CLASS	FULL PIPE VELOCITY	TIME OF FLOW	CHARTS USED	09/00	Du/Do	S/Do		UPSTREAM CO-EFFICIE	UPSTR	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.		Š Š	NORMAL DEPTH VELOCITY	UPSTREAM OBVERT LEVEL DOWNSTREAM OBVERT		_	W.S.E.	SURFACE OR GRATE LEVEL MAJOR SURFACE	+-	STRUCTURE NUMBER
12/113 15/100	1/114 1/115 1/116 1/117 1/118 1/119 1/120 1/113	min mm/n		ha	ha	l/s	l/s	%	L/s L/:		min			l/s	l/s m 1856 11.386	%		2	m/s 2.14	min	7.7	0	4	2.42	m		047		m %			m/s 4.37	m m	7 40 34		m	m l/s	l/s	12/113
	2/113 3/113 4/113 5/113 1/121										7.76	255	3	0	1636 11.366	1.94	1030		2.14	0.04	33		1	2.42	0.234	0.2 0.	047		0.46	0.033	0.517	4.37	47.848 47.62	49.2	94 49.241				
15/100 1/114 12/113	1/114	7.5 258	0.89 0	.439 (70	279	471	1 0	471	1/11	2 7.5	259	0.39	0	0 2.221	1	375	2	0	0.02	77				0	0 0) 0	0	0	0	48.526 48.50	1 10 7	41 49.341	49.241	49.273 49.46 1929	471	15/100
12/113	1/114	7.3 236	0.89	1.439	1.39	2/9	4/1	1 0	473	1/11/	7.3	230	0.39	-	0 2.221	1	3/3	2	0	0.02	32				0	0 0			, 0	0	0	10	40.320 40.30	+ 49.3	41 49.341	49.341		4/1	12/113
1/115 10/113	1/115	6 275	1 0	.201 (0.201	154	567	0.27 37	75 192	1/114	4 6	275	0.201	0	375 2.864	1.03	375	2	3.4	0.03	32				0	0 0		0	0	0	0.375	3.4	49.165 49.13	5 50.14	4 50.14	50.14	50.098	567	1/115
10/113																																				50.14	50.146		10/113
1/116 10/113	1/116	6 275	1 0	.321 (.321	245	788	0.47 37	75 413	1/11!	5 6	275	0.321	0	375 4.626	1	600	2	1.33	0.04	32				0	0 0		0	0	0	0.339	2.28	49.128 49.08	2 50.14	4 50.14	50.14	50.092	788	1/116
10/113														-		1														1						50.14	50.146		10/113
9/113 9/113	1/11/	6 275	1 0	.044 (0.044	33	33	3.52 33	3 0	1/11!	6	275	0.044	0	33 4.05	1	375	2	0.3	0.04	32	1		3.26	0.005	3.51 0.	016	0	0.016 0.04	0.001	0.111	1.22	50.294 50.25	51.12	27 51.125	51.143	51.248 1680	33	1/117 9/113
1/118 9/113	1/118	6 275	1 0	.103 (103	79	283	4.18 1	50 133	1/120) 6	275	0.103	0	150 27.566	4 35	375	2	1.36	0.14	32	1		2 32	0.094	4.12 0.	389		0.389 0.73	0.202	0.167	3.15	51.22 50.02	51 3	28 51.125	51.142	51.251 52.2 1656	283	1/118
9/113	-,	2.3		.105		.,	203		70 153	1 -,		12.75	0.103		27.500	1.55	3.3	-	1.50	10.21	32	1		2.52	0.071		507			0.202	0.107	3.13	31.22 30.02.	132.33	32,123		51.251	1203	9/113
1/119 8/113	1/119	6 275	1 0	.226	0.226	172	567	1.72 24	4 543	1/116	5 6	275	0.226	0	24 3.051	1.03	375	2	0.21	0.03	32	1		3.5	0.002	3.26 0.	008	0	0.008 0.02	0.001	0.093	1.11	50.213 50.183	L 51.14	43 51.142	51.15	51.15 1867	567	1/119
8/113																																				51.142	51.172		8/113
1/120 8/113	1/120	6 275	1 0	.278).278	213	458	0.88 37	75 83	1/119	9 6	275	0.278	0	375 5.546	1	525	2	1.73	0.05	32				0	0 0		0	0	0	0.379	2.24	50.182 50.123	7 51.14	42 51.142	51.142	51.117	458	1/120
8/113	4 424 2 424 4 420 2 420										674	274	0.700		402 55 005	2.2	450		4.24	0.74	12 14 17 17			4 20	0.074	4.50	110 1	74	120 122	0.473	0.247	2.6	55 505 54 77		25 54 04 2		51.172		8/113
	1/124 2/124 1/129 2/129 1/128 1/128A 1/124 2/124												0.709	1	192 55.082			2	1.21		42 46 43 47	0	1						0.129 1.22		0.213		55.585 54.373					-	3/124
4/124 5/124	1/129 2/129										6.55	268	1.281	0	622 21.161	1.5	600	2	2.2	0.13	37 42 43	0	1	1.91	0.247	0.93 0.	23 0.	.95 0	0.235 1.03	0.217	0.416	2.97	54.371 54.05	54.68	82 54.465	54.917	55.577 0		4/124
5/124 6/124	1/127 1/128 1/128A 1/124 2/124 1/129 2/129										6.68	267	1.553	0	734 48.44	5.05	600	2	2.6	0.17	37 42 43	0	1	1.75	0.344	1.26 0.	432 1.	.31 0).451 4.48	2.171	0.311	4.96	54.033 51.586	5 54.0	33 51.863	54.484	55.314 0		5/124
6/124 14/100	1/125 1/126 1/127 1/128 1/128A 1/124 2/124 1/129 2/129										6.77	266	1.86	0	1036 19.084	7.5	600	2	3.66	0.05	34 37	0	1	1.49	0.684	0.43 0.	297	0).297 4.52	0.862	0.34	6.25	51.566 50.13	5 51.56	50.704	51.863	52.545 0		6/124
14/100																																				50.704	51.454		14/100
1/125 6/124	1/125	6 275	1 0	.149 ().149	113	580	5.35 20	01 378	1/131	1 6	275	0.149	0	201 6.206	1	375	2	1.82	0.07	32	1		3.49	0.17	3.27 0.	555	0	0.555 1.32	0.082	0.375	1.82	51.566 51.504	51.94	45 51.863	52.5	52.504 1607	580	1/125
6/124	4 #26									4.444				-		1.																				51.863	52.545		6/124
6/124	1/126	6 275	1 0	.164 (0.164	125	209	6.39 1:	17 92	1/111	L 6	2/5	0.164	0	117 4.801	1	375	2	1.06	0.05	32	1		2.65	0.057	4.57 0.	26	0	0.26 0.44	0.021	0.224	1./	51.525 51.476	51.88		52.144	52.469 1567	209	6/124
1/127 5/124	1/127	6 275	1 0	.272 ().272	207	207	5.43 12	24 84	1/126	5 6	275	0.272	0	124 4.718	1	375	2	1.12	0.05	32	1		2.45	0.064	5.11 0.	327	0	0.327 0.5	0.023	0.232	1.72	54.272 54.22	5 54.48			55.212 1607	207	1/127
5/124																																					55.314		5/124
1/128 4/124	1/128	6 275	1 0	.207	0.207	158	636	0.47 17	70 466	1/12!	5 6	275	0.207	0	170 5.496	1	375	2	1.54	0.06	32	1		3.16	0.121	3.62 0.	438	0	0.438 0.94	0.052	0.298	1.81	54.59 54.53	54.96	64 54.912	55.402	55.531 1787	636	1/128
4/124																																				54.917	55.577		4/124
1/128A 4/124	1/128A	6 275	1 0	.371 (0.371	283	310	0.47 28	80 30	1/128	3 6	275	0.371	0	280 2.512	1	525	2	1.29	0.02	32	1		2.47	0.085	5.04 0.	43	0	0.43	0.011	0.309	2.12	54.584 54.559	54.92	23 54.912			310	1/128A
4/124 1/130 13/100	1/170	. 275	1 0	074	074	26	1070	4.07. 41		1/11) (275	0.074		455 4 004	4.04	775	1	1.4	0.03	72	1		7.24	0.4	7.50	7.5.7		757 070	0.016	0.374	4.70	50.7	F4.4	7 54.454		55.577	4070	4/124
13/100	1/130	6 275	1 0	.034	0.034	26	1030	1.87 1	55 8/5	1/11.	2 6	2/5	0.034	0	155 1.991	1.01	5/5	12	1.4	0.02	52	1		5.21	0.1	3.58 0.	557	- 10	0.78	0.016	0.274	1.79	50.7 50.68	51.17	7 51.154		51.632 1815 51.692	1030	13/100
1/131 13/100	1/131	6 275	1 0	.196 (0.196	150	1258	1.42 2	55 100	4 1/130) 6	275	0.196	0	255 3.926	1	450	2	1.6	0.04	32	1		3.07	0.131	3.72 0.	486	0	0.486 0.8	0.031	. 0.332	2.03	50.738 50.699	51.18	86 51.154			1258	1/131
13/100																												\neg									51.692		13/100
1/132 12/100	1/132	6 275	1 0	.221	0.221	169	946	2.83 2:	16 730	1/13	1 6	275	0.221	0	216 2.468	1	375	2	1.96	0.03	32	1		2.99	0.195	3.82 0.	746	0	0.746 2.68	0.04	0.375	1.96	52.653 52.629	52.6	53 52.587	53.399	53.594 1743	946	1/132
12/100																																				52.083	53.642		12/100
1/133 11/100 11/100	1/133	7 263	1 0	.541 ().541	395	395	1.52 19	91 204	1/118	7	263	0.541	0	191 5.915	1	375	2	1.73	0.06	32	1		2.76	0.153	4.33 0.	66	0	0.66 1.95	0.082	0.375	1.73	53.059 53	53.0	59 52.943	53.719 52.388	54.001 1867	395	1/133 11/100
	1/225 1/226 1/227 1/228 2/228 1/200 2/200 3/200										9.4	238	4.014	0	1484 40.251	1.7	900	2	2.33	0.18	42 43	0	1	1.5	0.278	1.53 0.	424 1.	.63 0	0.454 1.43	0.576	0.517	3.92	48.456 47.77	1 48.4	56 47.88				8/200
9/200 10/200	4/200 1/223 2/223 1/222 1/222A 1/225 1/226 1/227 1/228 2/228 1/200							+			9 5 8	237	4.213		1707 56.943			2	1.97		34 37	0				0.55 0.		+	0.109 0.73				47.771 47.04	+					9/200
1,200	2/200 3/200 4/200 1/223 2/223 1/221 1/221A 1/222 1/222A										7.50	231			2.07	1.21	1333		1	3.21	,				0.170	0.			0.73	0.710	0.557	3.03	/1		. 1 17.555	00			-,100
10/200 11/200	1/225 1/226 1/227 1/228 2/228 1/200 2/200 3/200 4/200 1/223 2/223										9.84	234	4.416	0	2004 14.195	0.3	1050	2	2.31	0.14	33 34	0	1	1.31	0.273	0.25 0.	067	0	0.54	0.076	1.05	2.31	47.028 46.98						10/200
																																		11	./01/19) [F	OR CON	STRU	ICTION

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MICHAEL MAJZNER MICHAEL MAJZNER ROJECT MANAGER JOSHUA STONE 02/07/18

PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT

MIRVAC

LOCATION TEVIOT ROAD, GREENBANK

SHEET TITLE Q100 MAJOR STORM CALCULATIONS - 2 OF 3

MIR001-02A

	LOCATION	TIME		SUB-CA	ATCHM	1ENT R	UNOFF	=	IN	NLET DE	SIGN					DI	RAIN D	ESIGN										ADLOS						ART F	ULL			DESIGN I	LEVELS		P	UNOFF	
		tc I		A	CA	Q		+	Qg	Qb		tc	I	CA		Qp	L	S	\longrightarrow	$\overline{}$	Vf=Q/A		+	STRU	CTURE	RATIOS	V2/2g) Ku	hu	Kw	hw	Sf		dn	Vn			$\overline{}$				+	+
STRUCTURE NUMBER DOWNSTREAM STRUCTURE	SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONCENTRATION RAINFALL INTENSITY	CO-EFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	FLOW INTO INLET	BYPASS FLOW	BYPASS STRUCTURE NUMBER	CRITICAL TIME OF CONCENTRATION	RAINFALL INTENSITY	TOTAL (C x A)	SUM ADDITIONAL PIPE FLOW	PIPE FLOW	KEACH LENGIH	PIPE GRADE	PIPE/BOX DIMENSIONS	CLASS	FULL PIPE VELOCITY	TIME OF FLOW IN REACH	CHARTS USED	09/00	Du/Do	S/Do	VELOCITY HEAD	UPSTREAM HEADLOSS	UPSTREAM HEADLOSS	W.S.E. CO-EFFICIENT	CHANGE IN W.S.E.	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L x Sf)	NORMAL DEPTH	NORMAL DEPTH VELOCITY	UPSTREAM OBVERT LEVEL	DOWNSTREAM OBVERT LEVEL	UPSTREAM H.G.L.	DOWNSTREAM H.G.L.	W.S.E.	SURFACE OR GRATE LEVEL MAJOR SURFACE	FLOW CAPACITY MAJOR SURFACE FLOW	TURE NUN
		min mm/h		ha	ha	l/s		%	l/s	l/s		min	mm/h	ha	l/s		n		mm		m/s	min					m		m		m	%	m		m/s	m	m	m	m	m		's L/s	
11/200 12/20	1/219 1/220 1/221 1/221A 1/222 1/222A 1/225 1/226 0 1/227 1/228 2/228 1/200 2/200 3/200 4/200 1/223 2/223											9.98	233	4.693	0	1976 31.1	162 1.	36 120	00	2	1.75	0.13	37 42 43	0	0.98	1.2	0.156	1.11	0.172	1.18	0.183	0.26	0.08 0.5	54 3	5.87	46.985	46.563	47.038	46.958	47.221	48.287 0		11/200
12/200 13/20	1/208 1/210 1/211 2/211 3/211 4/211 1/213 5/211 6/211 7/211 1/214 1/217 1/218 2/218 1/209 2/209 3/209 4/209 5/209 1/215 1/216 1/219 1/220 1/221 1/221A 1/222 1/228 1/225 1/226 1/227 1/228 2/228 1/200 2/200 3/200 4/200 1/223 2/223											9.12	241	7.651	0	3433 25.7	791 1.	34 13.	50	2 :	2.4	0.1	37 42 43	0	1	1.31	0.293	1.35	0.395	1.42	0.416	0.74	0.191 0.7	19 4	1.43	46.563	46.217	46.563	46.372	46.978	47.794 0		12/200
13/200																																								46.372	47.41		13/200
	0 1/206	6 275	1	0.042	0.042	32	86	1.28	80	6	1/204	6	275	0.042	0	80 7.99	95 1	375	5	2	0.73	0.08	32	1		1.64	0.027	8.93	0.241		0.241	0.24	0.019 0.1	78 1	L.55	46.391	46.311	46.391			47.331 253	1 86	1/206
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	0 1/208	6 275	1	0.186	0.186	142	1644	0.35	375	1269	1/207	6	275	0.186	0	375 14.2	282 1	600	0	2	1.33	0.11	32	1		2.12	0.09	6.48	0.582		0.582	0.37	0.053 0.3	39 2	2.28	46.919	46.776	47.011			47.868 1	1644	
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8/209 9/20	1/214 1/217 1/218 2/218 9 1/209 2/209 3/209 4/209 5/209 1/215 1/216											7.05	262	1.927	0	860 10.9	966 7.	05 52!	5	2	3.97	0.03	33 34	0	1	1.39	0.805	0.25	0.204		0.204	5.12	0.562 0.3	4 5	5.79	48.871	48.097	48.871	48.309	49.074	49.945 0		8/209
9/209 10/20	1/211 2/211 3/211 4/211 1/213 5/211 6/211 7/211 9 1/214 1/217 1/218 2/218 1/209 2/209 3/209 4/209 5/209 1/215 1/216											6.91	264	2.754	0	1219 29.4	477 3.	12 67:	5	2	3.41	0.12	34 37	0	1	1.31	0.592	0.36	0.211		0.211	2.61	0.771 0.4	-65 4	1.63	48.097	47.177	48.097	47.327	48.309	49.386 0		9/209
10/209 12/20	1/210 1/211 2/211 3/211 4/211 1/213 5/211 6/211 0 7/211 1/214 1/217 1/218 2/218 1/209 2/209 3/209 4/209 5/209 1/215 1/216											7.02	263	2.961	0	1305 18.4	435 3.	33 75	0	2	2.95	0.07	33 34	0	1	1.2	0.445	0.26	0.116		0.116	1.37	0.253 0.4	-37 4	1.88	47.177	46.563	47.211	46.958	47.327	48.193 0		10/209
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									-		BRIS	SBANE	E OFF	ICE		DESIGNED		MICHAEL	L MAJZNER	٠	RPEQ	116	burll	02/07/1	8	CLIENT							MII	RVAC	C							JOB CODE	

02,07,18 A ORIGINAL ISSUE KH
DATE REV DESCRIPTION REVISIONS

Premise

BRISBANE OFFICE

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PO BOX 361

FORTITUDE VALLEY, QLD 4006

PH: (07) 3253 2222

WEB: www.premise.com.au

DESIGNED MICHAEL MAIZNER

CHECKED MICHAEL MAIZNER

PROJECT MANAGER JOSHUA STONE

PROJECT DIRECTOR

DATE

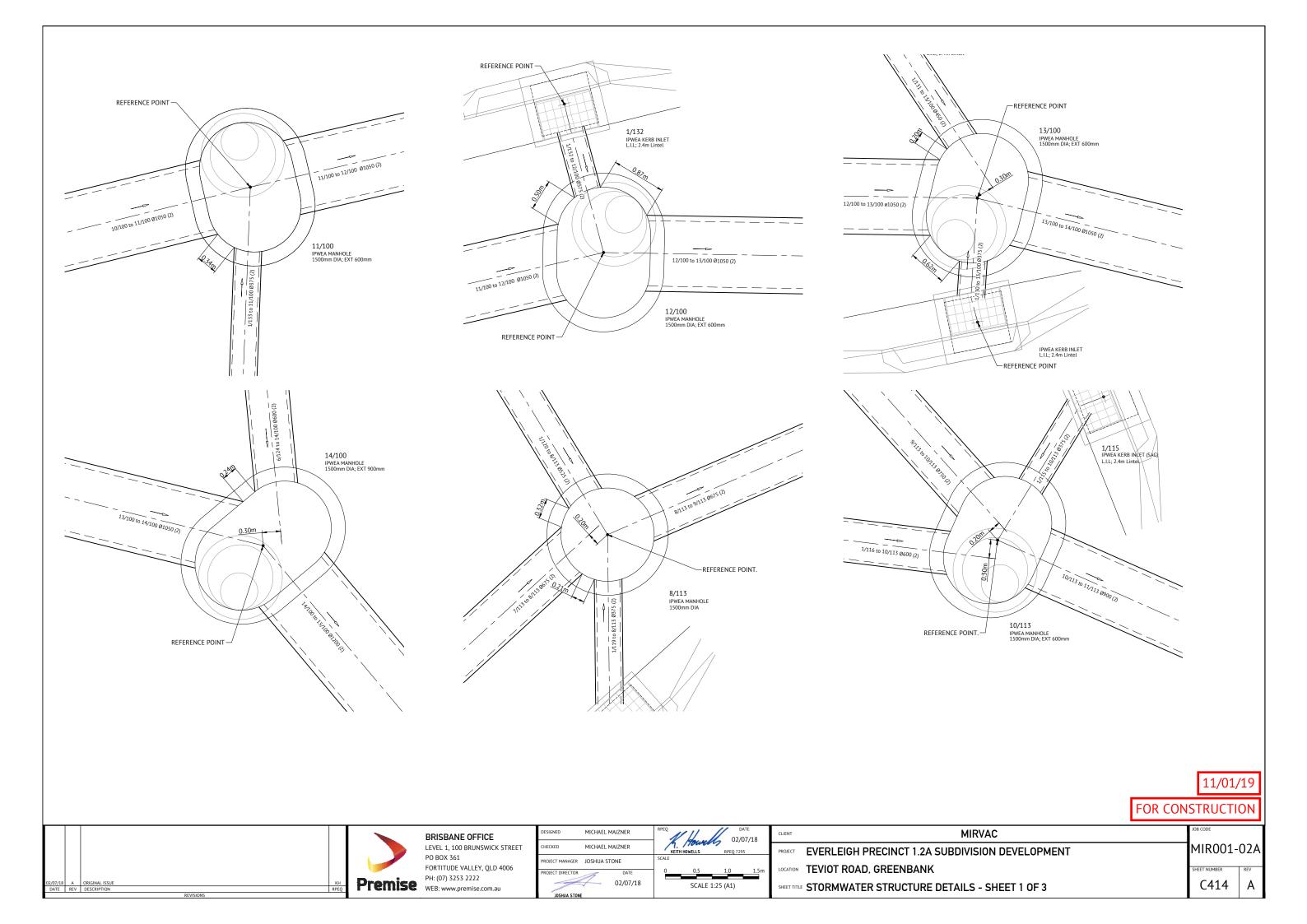
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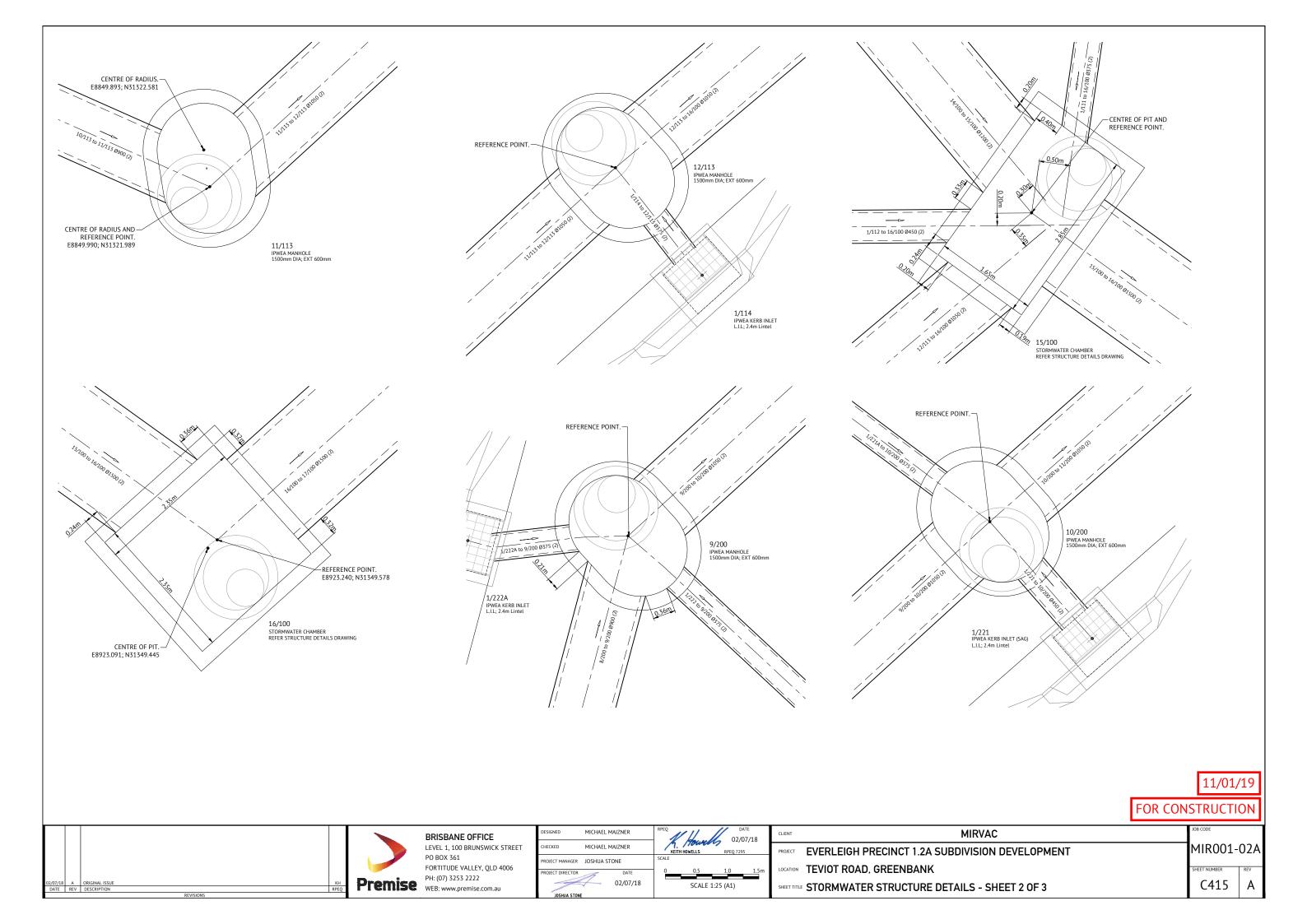
PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT

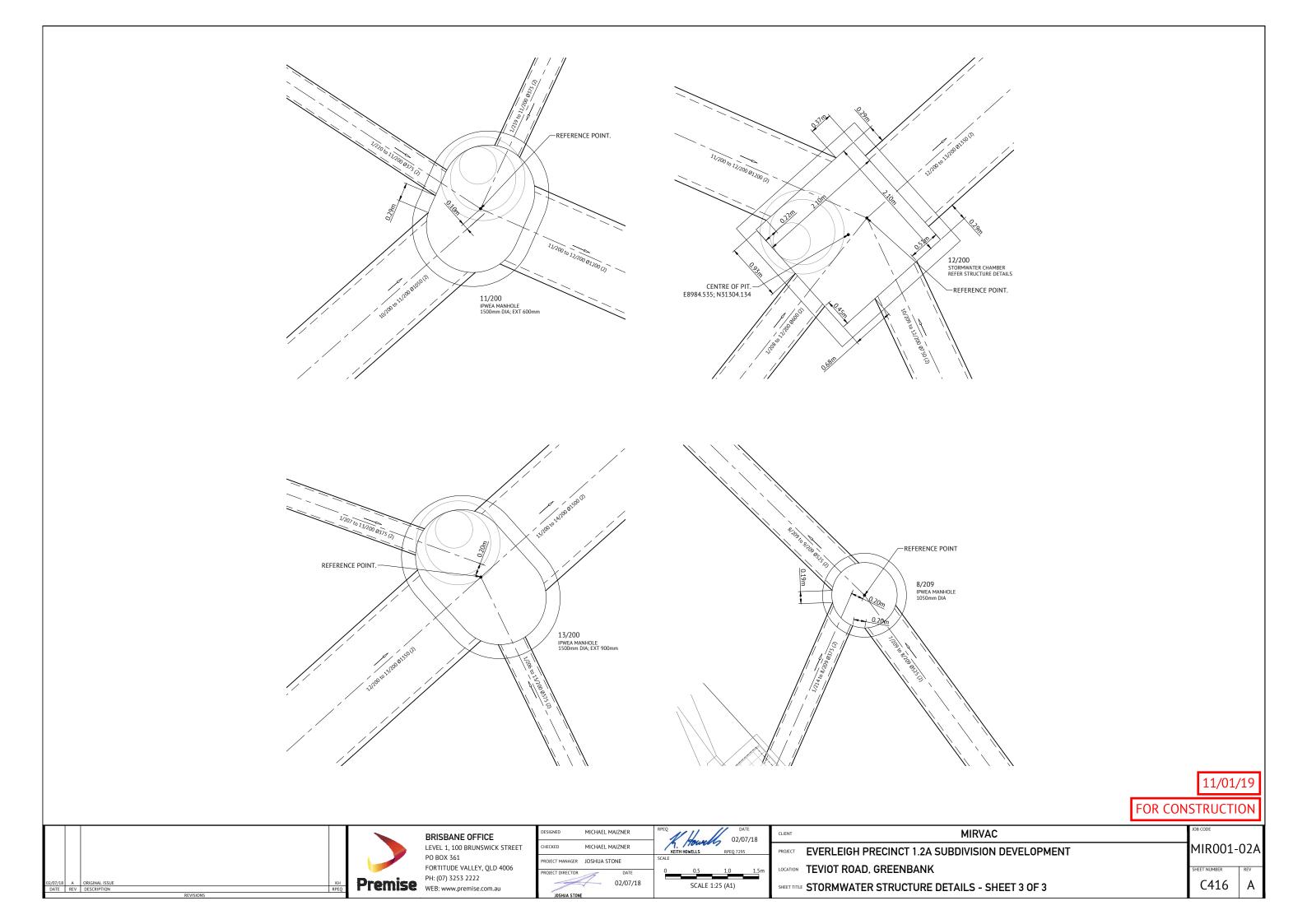
LOCATION TEVIOT ROAD, GREENBANK

SHEET TITLE Q100 MAJOR STORM CALCULATIONS - 3 OF 3

MIR001-02A

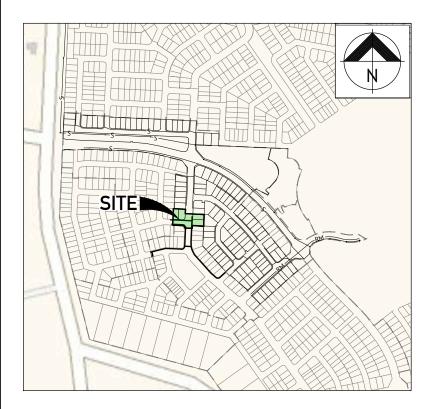






EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT TEVIOT ROAD, GREENBANK **FOR MIRVAC**

SEWERAGE RETICULATION



LOCALITY PLAN



SH	IEET LIST TABLE
SHEET NUMBER	SHEET TITLE
C500	SEWERAGE RETICULATION LOCALITY PLAN & NOTES
C501	SEWERAGE RETICULATION LAYOUT PLAN - SHEET 1 OF 2
C502	SEWERAGE RETICULATION LAYOUT PLAN - SHEET 2 OF 2
C503	SEWERAGE RETICULATION LONG SECTIONS - SHEET 1 OF 4 $$
C504	SEWERAGE RETICULATION LONG SECTIONS - SHEET 2 OF 4 $$
C505	SEWERAGE RETICULATION LONG SECTIONS - SHEET 3 OF 4 $$
C506	SEWERAGE RETICULATION LONG SECTIONS - SHEET 4 OF 4 $$
C507	SEWERAGE RETICULATION NOTES AND DETAILS

GENERAL NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND SEWERAGE CODE SPECIFICATIONS AND STANDARDS.
- UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- THE CONSTRUCTION OF THE SEWERAGE WORK SHOWN ON THIS DRAWING SHALL BE SUPERVISED BY AN ENGINEER WHO HAS RPEO REGISTRATION. SEWERAGE WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO THE SEQ SERVICE PROVIDER SEWERAGE
- 4. ALL WORK ASSOCIATED WITH LIVE SEWERS OR MAINTENANCE HOLES SHALL BE CARRIED OUT BY THE CONTRACTOR UNDER LOGAN WATER
- SUPERVISION AT THE DEVELOPER'S COST.
 ALL PIPES AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF
- THE "ACCEPTED PRODUCTS AND MATERIALS" LIST.
 EACH ALLOTMENT SHALL BE SERVED BY A DN100 PROPERTY CONNECTION. FOR ALLOTMENTS OTHER THAN SINGLE RESIDENTIAL, A DN150 PROPERTY CONNECTION SHALL BE PROVIDED.
- PROPERTY CONNECTIONS SHALL BE LOCATED WITHIN THE PROPERTY AS SHOWN IN THE DRAWINGS.
- PROPERTY CONNECTION BRANCHES SHALL EXTEND INTO THE PROPERTY A MINIMUM OF 300mm AND A MAXIMUM OF 750mm
- WHERE PIPES ARE LAID IN FILL, THE FILLING SHALL BE CARRIED OUT IN LAYERS NOT EXCEEDING 300mm (LOOSE) IN DEPTH AND SHALL BE COMPACTED UNTIL THE COMPACTION IS NOT LESS THAN 95% OF THE MATERIALS MAXIMUM COMPACTION WHEN TESTED IN ACCORDANCE WITH A.S. 1289 (MODIFIED COMPACTION). TESTING SHALL BE CARRIED OUT AFTER EACH ALTERNATE LAYER, IN ALL SUCH CASES APPROVAL OF CONSTRUCTED SEWERS WILL NOT BE ISSUED BY THE SEQ SERVICE PROVIDER UNLESS CERTIFICATES ARE PRODUCED CERTIFYING THAT THE REQUIRED COMPACTION HAS BEEN ACHIEVED.
- 10. WHERE SEWERS HAVE A GRADE OF 1 IN 20 OR STEEPER, BULKHEADS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE SEO SEWER CODE.
- THE CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF EXISTING SERVICES WITH RELEVANT AUTHORITIES BEFORE COMMENCING WORKS.
- 12. SEWERS SHALL BE DISUSED /ABANDONED IN ACCORDANCE WITH PROCEDURES SET OUT IN THE SEO SEWER CODE.
- BENCH MARK AND LEVELS TO AHD.
- 14. REFER TO BULK EARTHWORKS DRAWINGS FOR FINISHED SURFACE LEVELS.
- 15. ALL SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORK HEALTH AND SAFETY ACT. FOR INFORMATION PHONE: 1300 369 915.
- 16 THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS TO ALLOW CONSTRUCTION OF THE SEWER SYSTEM.
- 17. THE CONTRACTOR IS RESPONSIBLE FOR EXCAVATION AND SAFE SHORING TO ALLOW SEWER MAINTENANCE SECTION TO CARRY OUT LIVE SEWER
- 18. CONSTRUCT TRENCHES TO SEQ-SEW-1200-2, WITH EMBEDMENT TYPE 3 SUPPORT MINIMUM TO SEQ-SEW-1201-1, AND ROAD CROSSINGS TO SEQ-SEW-1205-1 AND LCC STANDARDS.
- CONSTRUCT PROPERTY CONNECTIONS TO SEQ-SEW-1100 SERIES.
 CONSTRUCT MAINTENANCE STRUCTURES TO SEQ-SEW-1300 SERIES.

- 21. CONSTRUCT BULKHEADS TO SEQ-SEW-1206-1.
 22. INSTALL DETECTABLE MARKER TAPE ON ALL MAINS AND PROPERTY
- CONNECTIONS

 23. CONTRACTOR SHALL ENSURE THAT ALL SEWER PROPERTY CONNECTIONS

 13. CONTRACTOR SHALL ENSURE THAT ALL SEWER PROPERTY CONNECTIONS

 14. CONTRACTOR SHALL ENSURE THAT ALL SEWER PROPERTY CONNECTIONS

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 15. CONTRACTOR SHA CLEARANCE WHERE CROSSING LINDERNEATH WATER MAINS

VEGETATION PROTECTION

A. TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.

B. WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES S HALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL, GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.

C. TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED, JE ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE, CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE D. ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED

A. TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY. B. CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT

C. IF ACID SUI PHATE SOILS EXIST IN THE WORKS AREA. ACID SUI PHATE SOILS ARE TO MANAGED IN ACCORDANCE WITH AN APPROVED ACID SULPHATE SOIL

CREEK CROSSINGS

A. SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY

B APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT SEDIMENT

C NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK

REHABILITATION

A. PREDISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE B. PREDISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED.

A. THE DESIGN AND CONSTRUCTION OF THE WORKS SHALL COMPLY WITH ALL OUFFNSI AND LEGISLATION

INDEMNITY - EXISTING SERVICES

NOT WITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE ENGINEER OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. TH DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGES CAUSED AS A RESULT OF THE WORKS.

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO COMMENCING ANY CONSTRUCTION WORK, INCLUDING CLEARING.

ALL SEWER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORKPLACE HEALTH AND SAFETY ACT 2011. CONTACT THE DIVISION OF HEALTH & SAFETY FOR INFORMATION. PHONE: 1300 369 915

CONTACT "DIAL BEFORE YOU DIG" ON 1100 FOR LOCATION OF EXISTING PUBLIC SERVICES PRIOR TO EXCAVATION

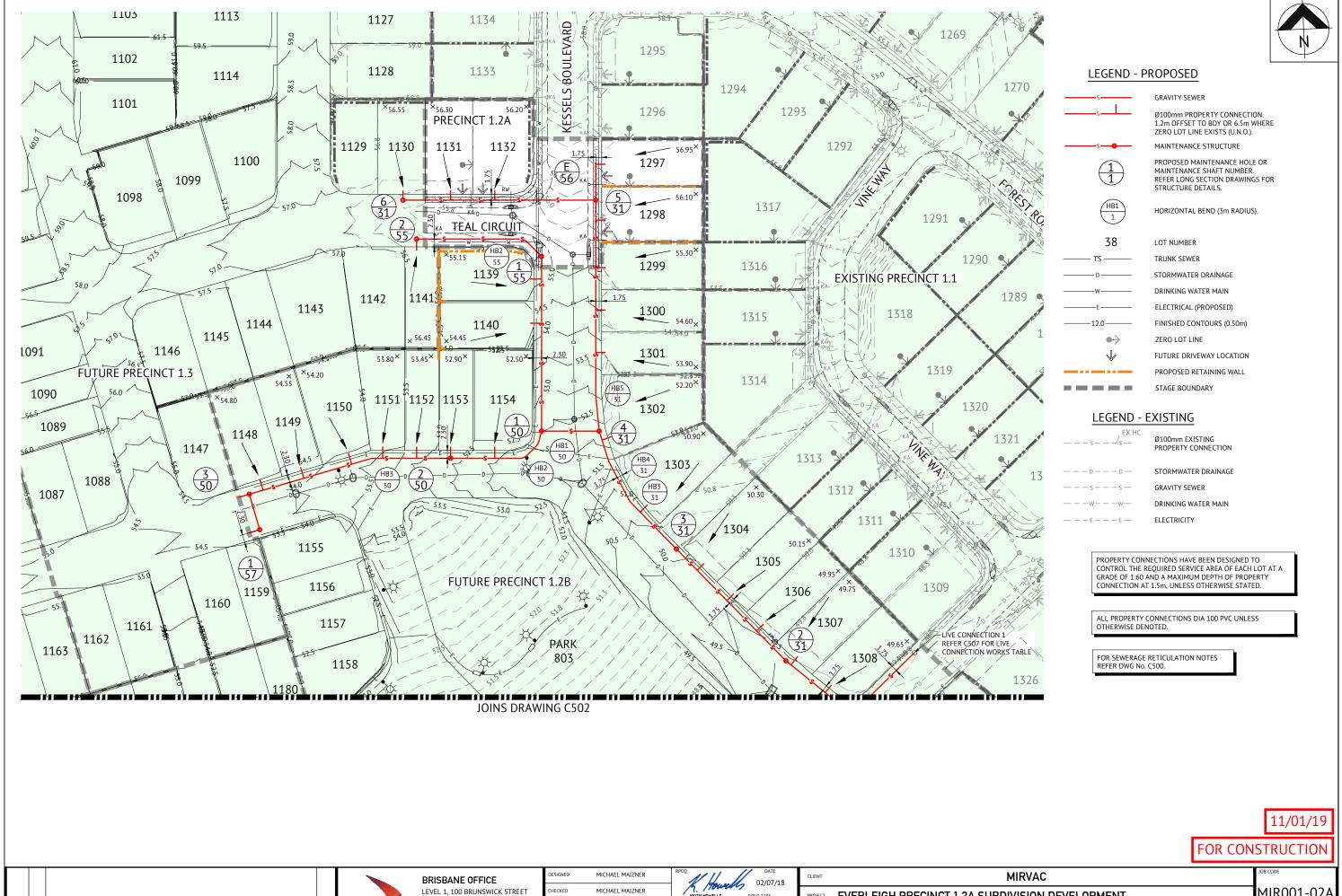
NAME OF ES	STATE	EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT
SUBDIVIDER		MIRVAC
APPLICATION No.		-
SP DELEGATE APPR	OVAL DATE	5 JUNE 2017
COUNCIL DA APPRO	VAL No.	DEV 2016 / 768
DRAWING/PLAN No.		C501-C502
No. OF ALLOTMENT	S	25
AREA IN Ha.		0.31 Ha
LENGTH OF SEWERS	DN150 uPVC SN8	486m

11/01/19

FOR CONSTRUCTION







PO BOX 361

Premise PH: (U/) 5255 2222 WEB: www.premise.com.au

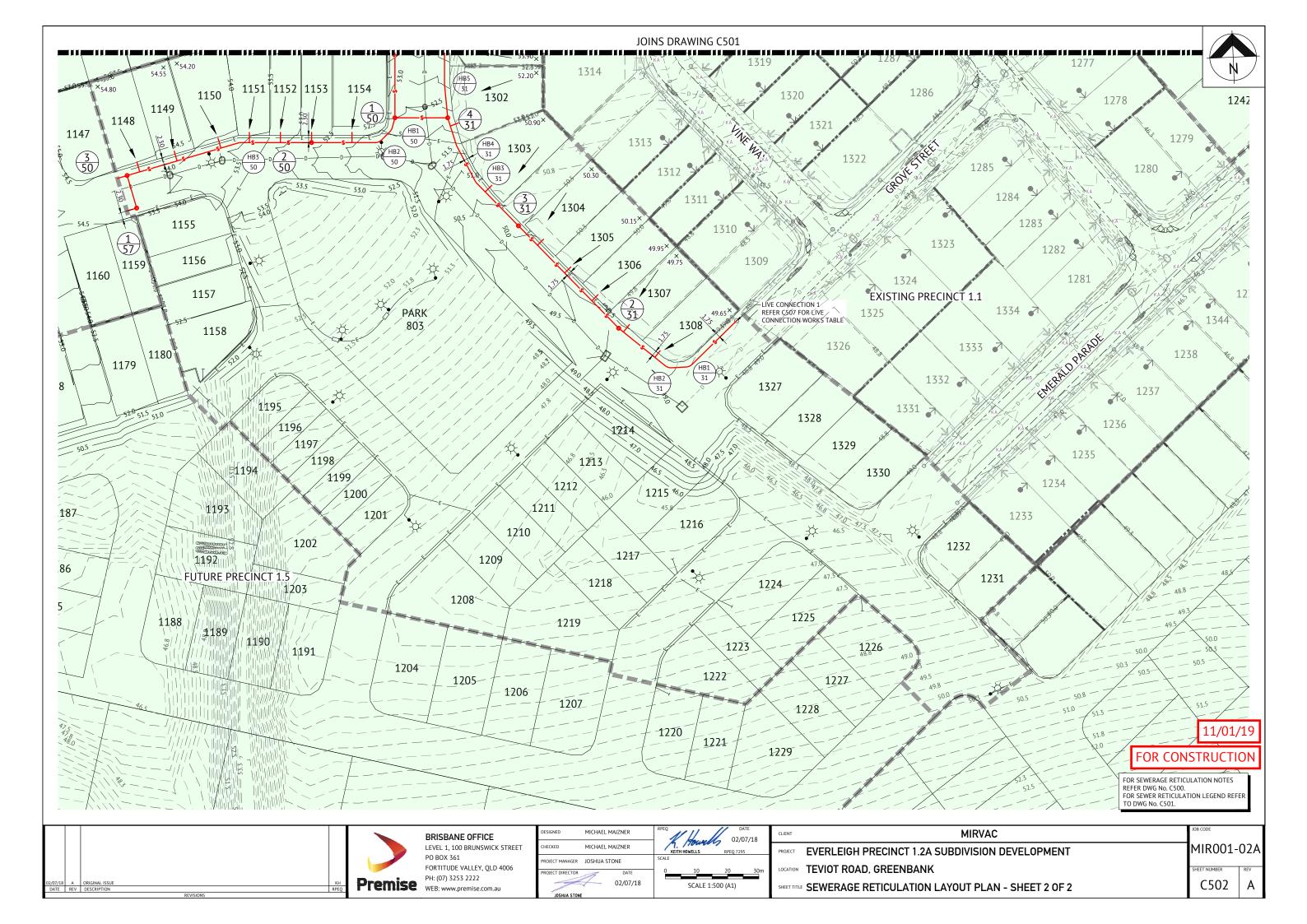
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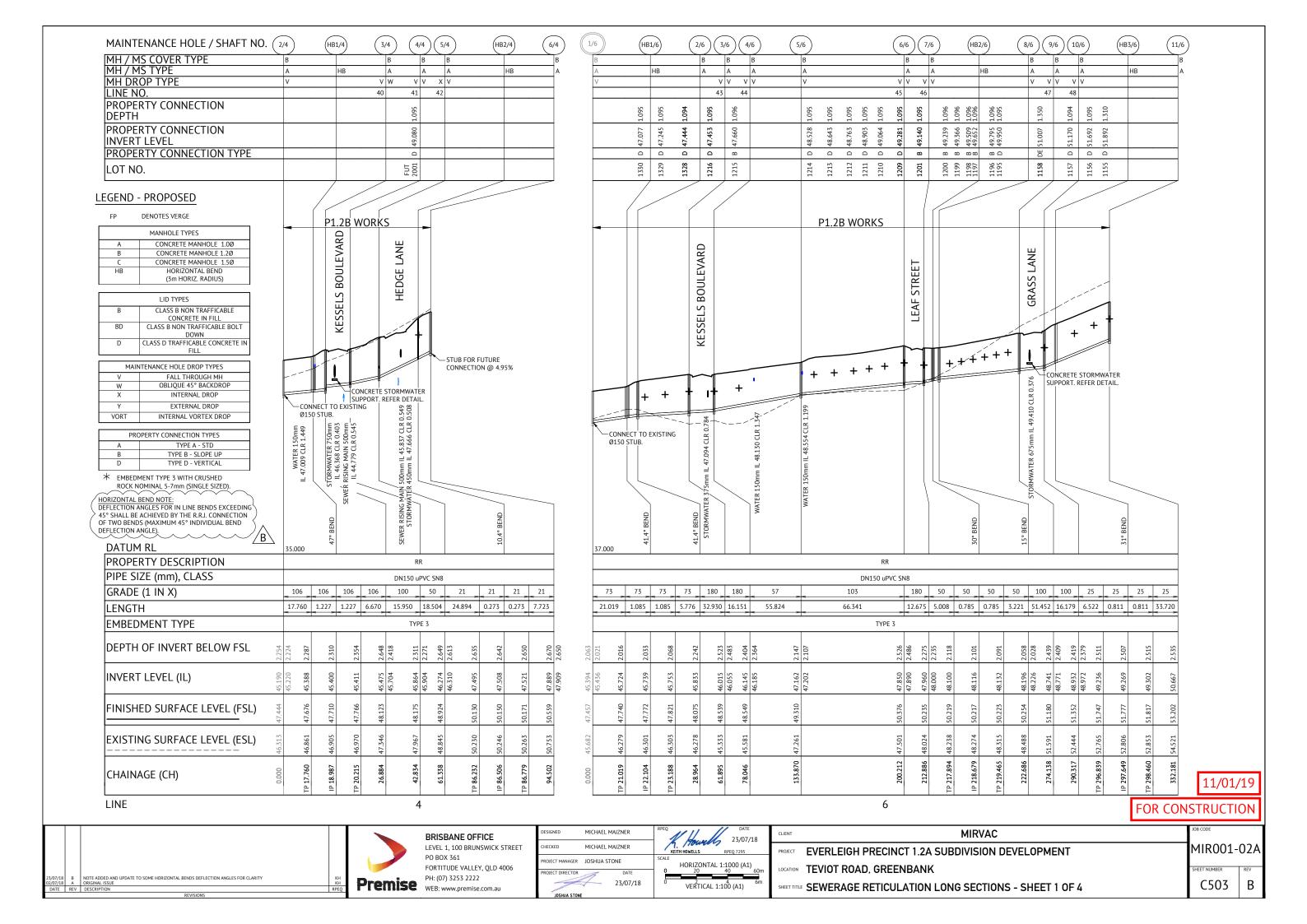
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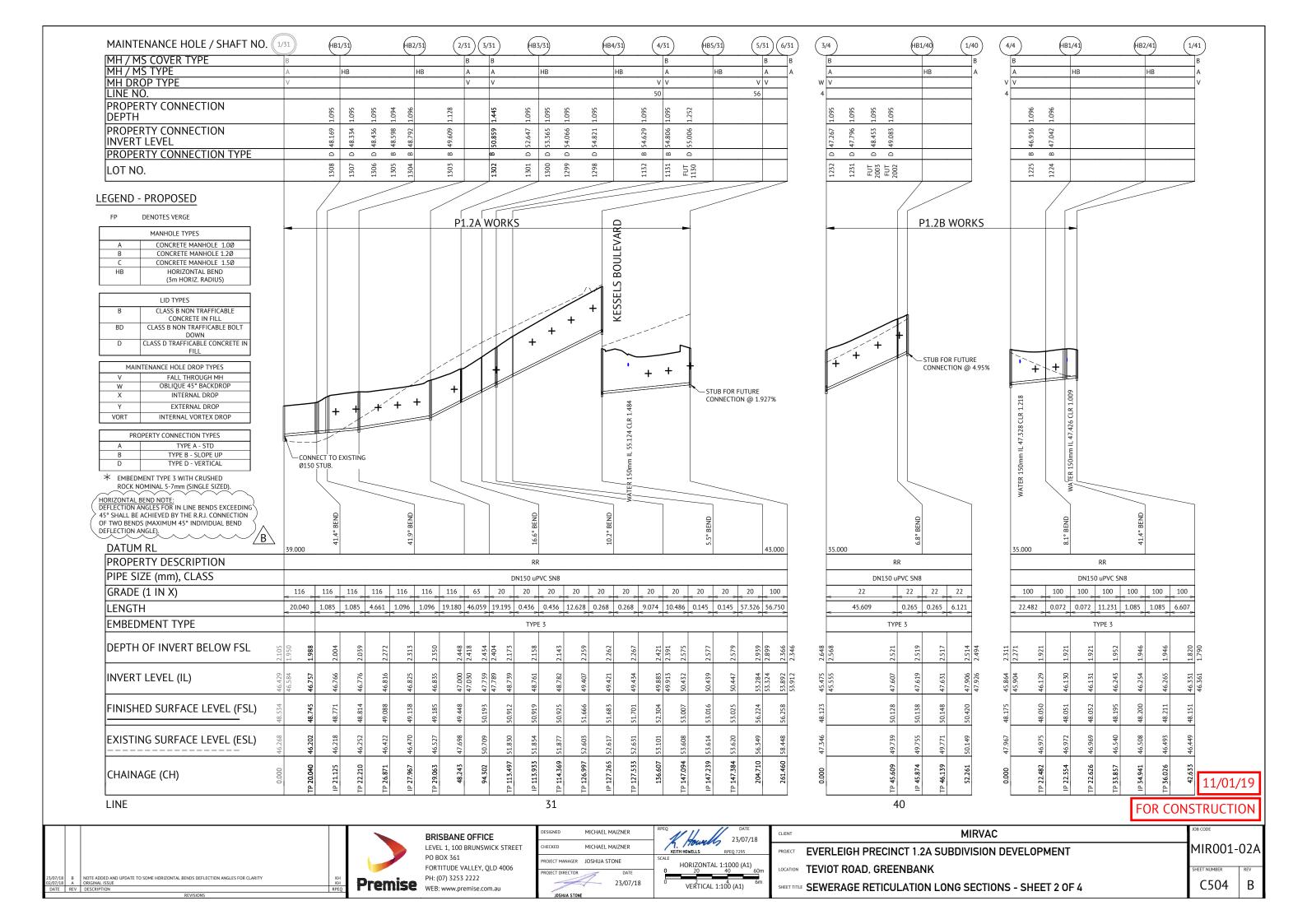
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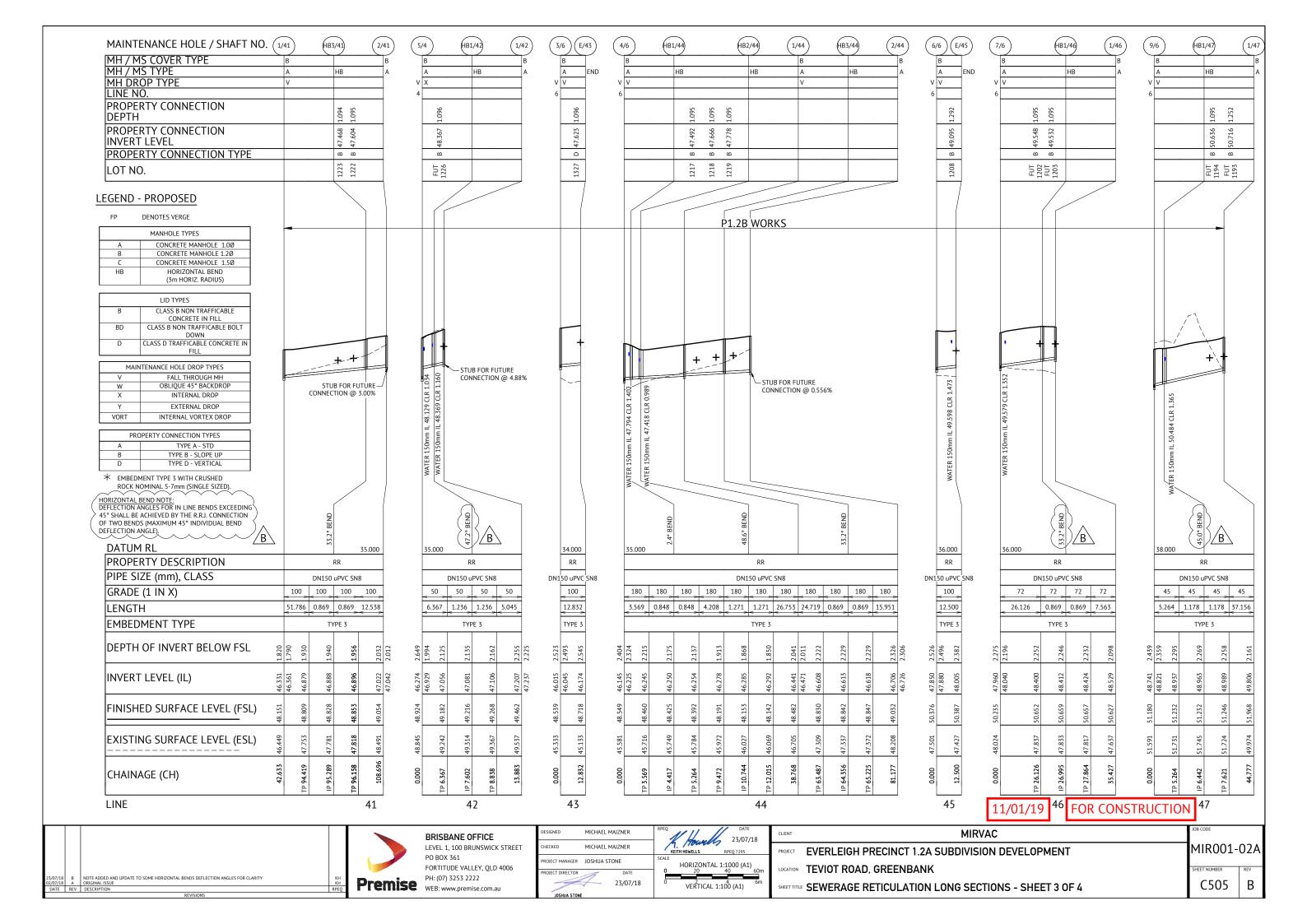
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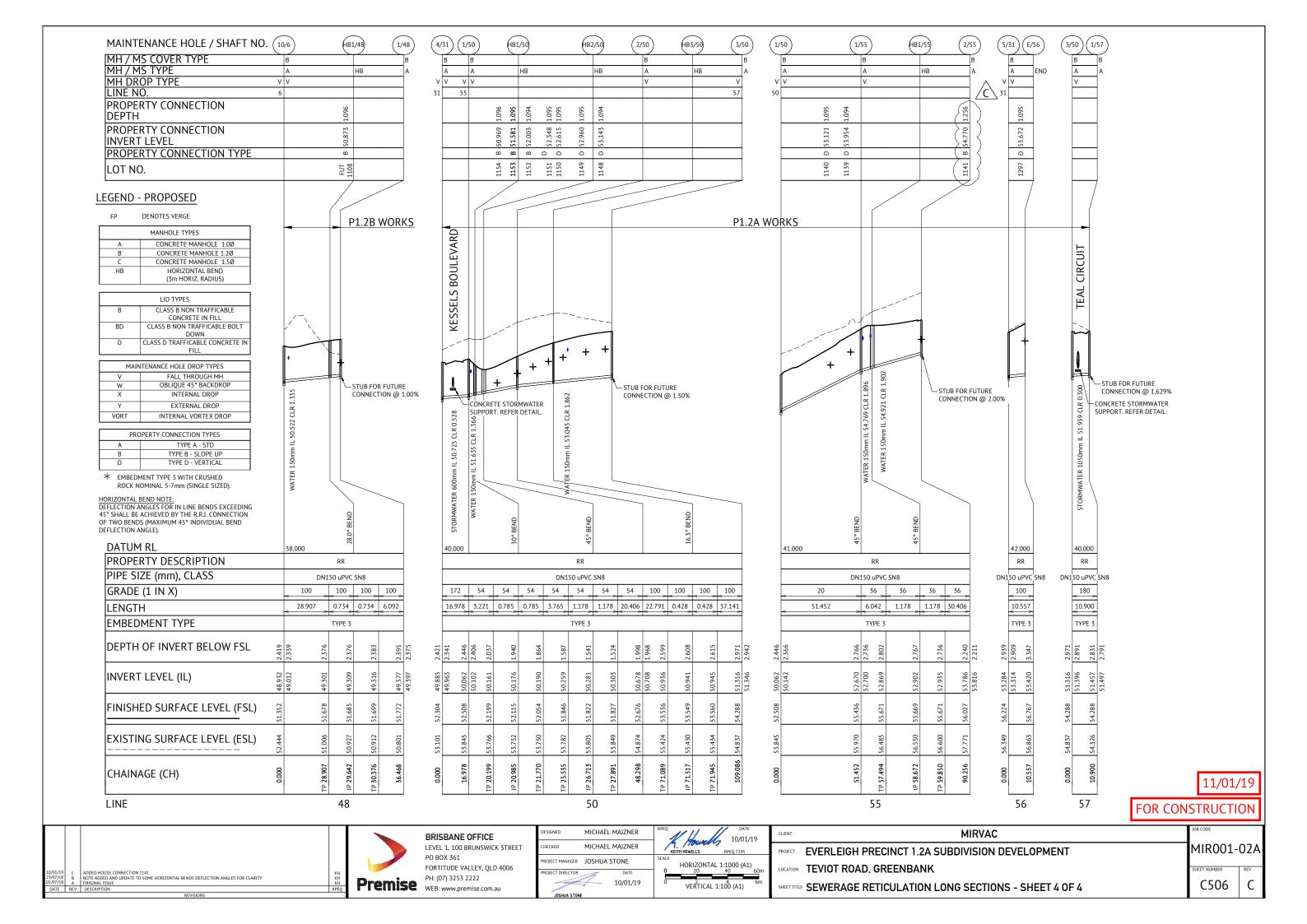
MIR001-02A PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK C501 SCALE 1:500 (A1) SHEET TITLE SEWERAGE RETICULATION LAYOUT PLAN - SHEET 1 OF 2

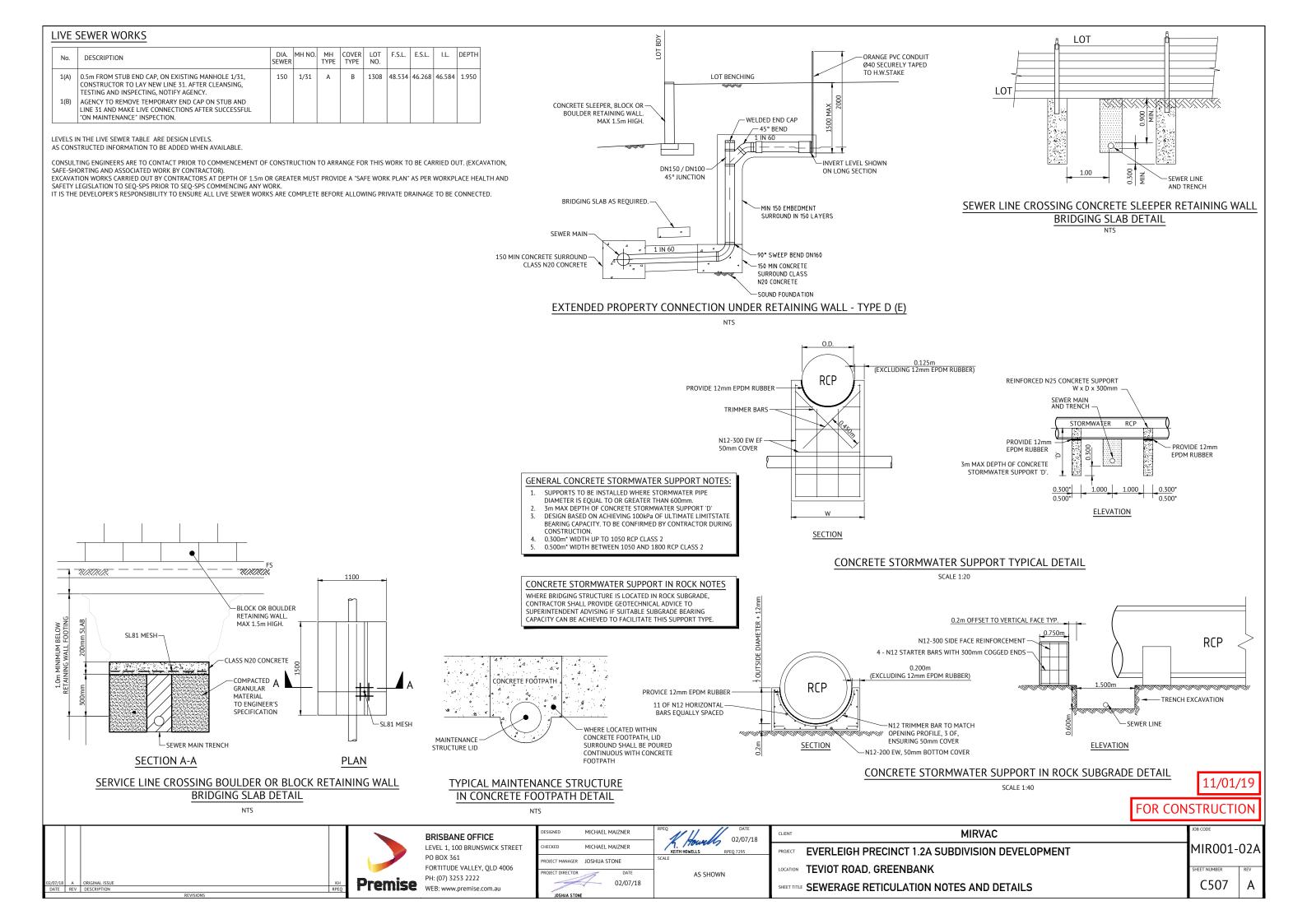












EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT TEVIOT ROAD, GREENBANK FOR MIRVAC

WATER RETICULATION



SCALE 1:5000 (A1)

LOCALITY PLAN

REAL PROPERTY DESCRIPTION

LOT 205 & 434 on RP845844 LOT 9 on S312355



GENERAL NOTES

- ALL WORK AND MATERIALS SHALL BE IN ACCORDANCE WITH CURRENT SOUTH EAST QUEENSLAND WATER SUPPLY CODE SPECIFICATIONS AND STANDARDS
- 2. UNLESS SPECIFIED OTHERWISE ALL MATERIALS AND WORK SHALL COMPLY WITH THE RELEVANT AUSTRALIAN STANDARDS.
- ADOPT LIP OF KERB OR SHOULDER OF ROAD AS PERMANENT LEVEL.
- COVER OF MAIN FROM PERMANENT LEVEL TO BE AS SHOWN IN SEO-WAT-1200-2.
- 5. CONDUITS TO BE INSTALLED IN ACCORDANCE WITH THE STANDARD DRAWINGS.
- ALL MATERIALS USED IN THE WORKS SHALL COMPLY WITH SEQ-SP'S
 ACCEPTED PRODUCTS AND MATERIALS LIST OR BE APPROPRIATELY
 SHOWN, LISTED AND DEFINED IN THE ENGINEERING SUBMISSION SO
 THAT THE ALTERNATIVE PRODUCT OR MATERIAL CAN BE ASSESSED
 AND IF APPROPRIATE, APPROVED BY SEQ-SP'S
- 7. ALL CONCRETE FOOTPATHS TO BE CLEAR OF WATER MAINS. WHERE POSSIBLE
- 8. TEST/CHLORINATION POINTS TO BE INSTALLED IN ACCORDANCE WITH STANDARD DRAWING NO. SEO-WAT-1410-1
- CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT TO THE RETICULATION SYSTEM.
- 10. ALL WATER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORK HEALTH AND SAFETY ACT 2011. CONTACT THE DIVISION OF WORKPLACE HEALTH & SAFETY FOR INFORMATION. PHONE: 1300 362 128.
- CONSTRUCT THRUST BLOCKS ON ALL BENDS, TEES, TAPERS AND DEAD ENDS IN ACCORDANCE WITH SEQ-WAT-1205-1, AND SEQ-WAT-1206-1.
 CONSTRUCT TRENCHES IN ACCORDANCE WITH SEQ-WAT-1200-2, PIPE
- CONSTRUCT TRENCHES IN ACCORDANCE WITH SEQ-WAT-1200-2, PII EMBEDMENT TO SEQ-WAT-1201-1 (TYPE C SUPPORT) AND ROAD CROSSINGS TO SEQ-WAT-1204-1 AND BCC STANDARDS.
- 13. INSTALL SCOURS IN ACCORDANCE WITH SEQ-WAT-1307-2.

 14. INSTALL DETECTABLE MARKER TAPE ON ALL WATER MAINS AND
- PROPERTY SERVICES.

 15. INSTALL HYDRANTS IN ACCORDANCE WITH SEQ-WAT-1302-1,
- SEQ-WAT-1303-2 AND SEQ-WAT-1409-1

 16. INSTALL PAVEMENT MARKERS IN ACCORDANCE WITH SEQ-SEW-1300-1
- & 2.

VEGETATION PROTECTION

- TREES LOCATED ALONG THE FOOTPATH SHALL BE, TRANSPLANTED PRIOR TO CONSTRUCTION, OR REPLACED IF DESTROYED.
- WHEN WORKING WITHIN 4m OF TREES, RUBBER OR HARDWOOD GIRDLES SHALL BE CONSTRUCTED WITH 1.8m BATTENS CLOSELY SPACED AND ARRANGED VERTICALLY FROM GROUND LEVEL. GIRDLES SHALL BE STRAPPED TO TREES PRIOR TO CONSTRUCTION AND REMAIN UNTIL COMPLETION.
- TREE ROOTS SHALL BE TUNNELLED UNDER, RATHER THAN SEVERED, IF ROOTS ARE SEVERED THE DAMAGED AREA SHALL BE TREATED WITH A SUITABLE FUNGICIDE. CONTACT RELEVANT COUNCIL ARBORIST FOR FURTHER ADVICE.
- ANY TREE LOPPING REQUIRED SHOULD BE UNDERTAKEN BY AN APPROVED ARBORIST.

SOIL

 TOPSOIL AND SUBSOIL SHALL BE STOCKPILED SEPARATELY.
 CARE SHALL BE TAKEN TO PREVENT SEDIMENT FROM ENTERING THE STORMWATER SYSTEM. THIS MAY INVOLVE PLACING APPROPRIATE SEDIMENT CONTROLS AROUND STOCKPILES.

CREEK CROSSINGS

- SILTATION CONTROL MEASURES SHALL BE PLACED DOWNSTREAM OF ANY EXCAVATION WORK.
- APPROPRIATE SEDIMENT CONTROLS SHALL BE USED TO PREVENT
- SEDIMENT FROM ENTERING THE CREEK.

 NO SOIL SHALL BE STOCKPILED WITHIN 5m OF THE CREEK.

REHABILITATION

- I. PRE-DISTURBANCE SOIL PROFILES AND COMPACTION LEVELS SHALL BE REINSTATED.
- PRE-DISTURBANCE VEGETATION PATTERNS SHALL BE RESTORED, ALL DISTURBED AREAS ASSOCIATED WITH CONSTRUCTION SHALL BE REHABILITATED, HEAVILY COMPACTED AREAS SHOULD BE RIPPED PRIOR TO TREATMENT.
- 3. ALL DISTURBED AREAS ARE TO BE LEFT IN STABLE CONDITION.
- ALL PLANTING/RE-VEGETATION WILL NEED TO BE MAINTAINED THROUGHOUT THE MAINTENANCE PERIOD.

CONSTRUCTION REQUIREMENTS

- LIVE WATER CONNECTIONS TO BE CARRIED OUT BY CONTRACTOR IN ACCORDANCE WITH A VALID NETWORK ACCESS PERMIT UNDER LOGAN WATER SUPERVISION AT DEVELOPERS EXPENSE AT LOCATION MARKED
- 2. PRIOR TO ANY EXCAVATION, CONTRACTOR IS TO LOCATE ACTUAL
- POSITIONS OF PUBLIC SERVICE UTILITIES BY POT HOLES.

 3. UPON COMPLETION OF ALL WORKS, CONTRACTORS SHALL SUPPLY THE SUPERVISING RPEQ DETAILED "AS CONSTRUCTED" INFORMATION OF THE WORK. "AS CONSTRUCTED "INFORMATION SHALL COMPLY WITH CURRENT SEQ CODE OR LOCAL AUTHORITY STANDARDS FOR PLAN AND DIGITAL INFORMATION.
- 4. CONTRACTOR IS TO BE RESPONSIBLE FOR ARRANGING ALL LOGAN WATER CONNECTIONS AND PAYMENTS OF CONNECTION FEES.

INDEMNITY - EXISTING SERVICES

NOT WITHSTANDING THAT EXISTING SERVICES MAY OR MAY NOT BE SHOWN ON THESE DRAWINGS, NO RESPONSIBILITY IS TAKEN BY THE ENGINEER OR THE PRINCIPAL FOR THIS INFORMATION WHICH HAS BEEN SUPPLIED BY OTHERS. THE DETAILS ARE PROVIDED FOR INFORMATION ONLY. THE CONTRACTOR SHALL ASCERTAIN THE POSITION OF ALL UNDERGROUND SERVICES PRIOR TO EXCAVATION AND SHALL BE RESPONSIBLE FOR THE COST OF REPAIRS TO DAMAGES CAUSED AS A RESULT OF THE WORKS.

RPEQ CERTIFICATION

THE CONSTRUCTION OF THE WATER RETICULATION WORK SHOWN ON THIS DRAWING MUST BE SUPERVISED BY AN ENGINEER WHO HAS RPEQ REGISTRATION. WORKS NOT COMPLYING WITH THIS REQUIREMENT WILL NOT BE PERMITTED TO CONNECT INTO LOGAN WATER RETICULATION SYSTEM. ALL RPEQ CERTIFIED DRAWINGS COMPLY WITH SEQ CODE AND LOGAN WATER REQUIREMENTS.

INSPECTION REQUIREMENTS

PRIOR TO COMMENCEMENT OF WORKS, CONTACT PREMISE (07) 3253 2222 AND LOGAN WATER TO CONFIRM INSPECTIC REQUIREMENTS INCLUDING LIVE CONNECTIONS.

A MINIMUM 48 HOURS NOTICE IS REQUIRED

INSPECTIONS ARE REQUIRED TO BE ORGANIZED WITH PREMISE AND LOGAN WATER. ANY COSTS ASSOCIATED WITH ENGAING LOGAN WATER TO UNDERTAKE INSPECTIONS OUTSIDE OF THE FEE PAID SHALL BE BORNE BY THE CONTRACTOR

ALL ENVIRONMENT PROTECTION MEASURES SHALL BE IMPLEMENTED PRIOR TO COMMENCING ANY CONSTRUCTION WORK, INCLUDING CLEARING.

ALL WATER CONSTRUCTION WORK UNDERTAKEN BY THE CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS OF THE QUEENSLAND WORK HEALTH AND SAFETY ACT 2011. CONTACT THE DIVISION OF WORKPLACE HEALTH & SAFETY FOR INFORMATION, PHONE: 1300 362 128

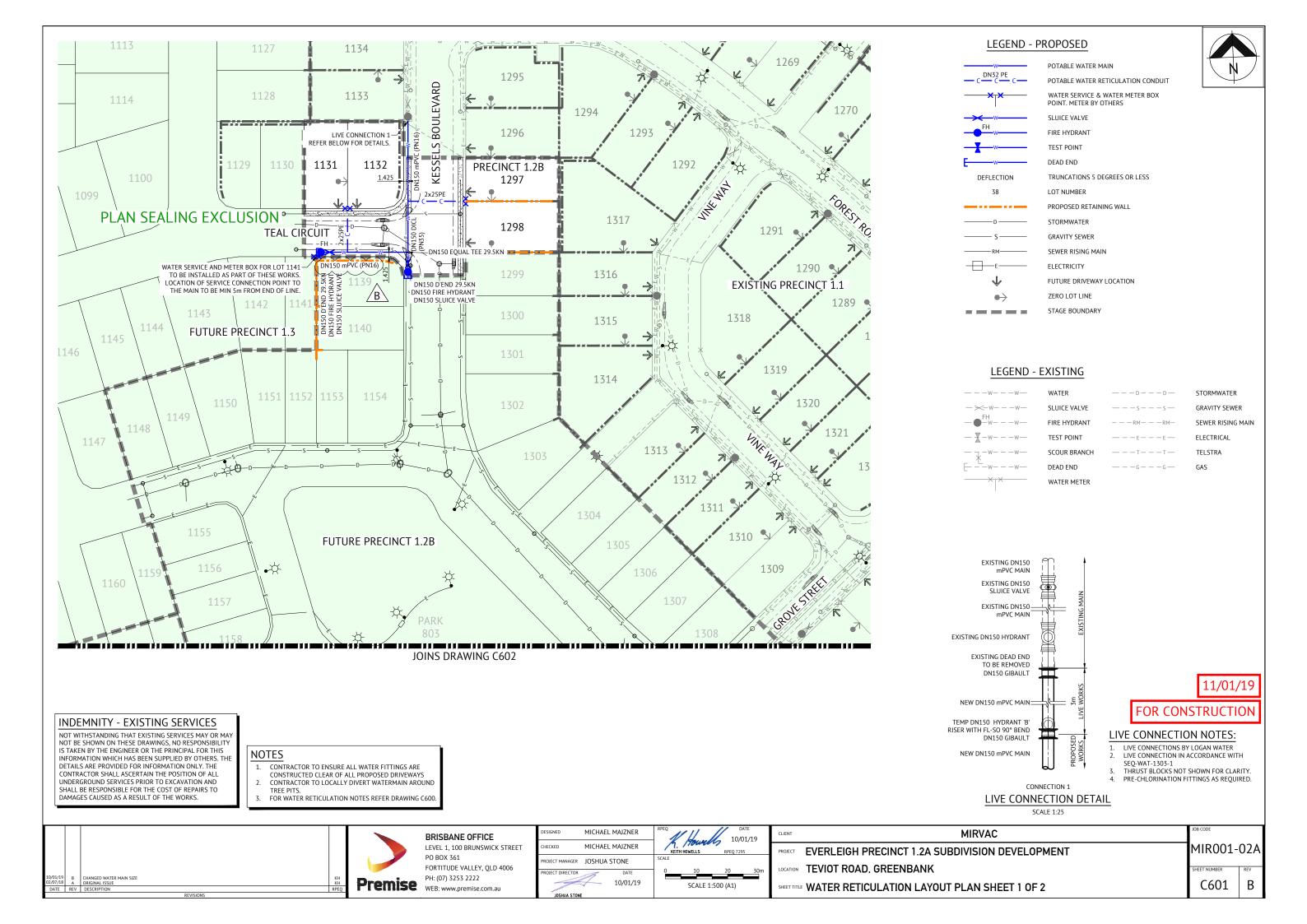
SEQ CODE STD DRAWING SCHEDULE

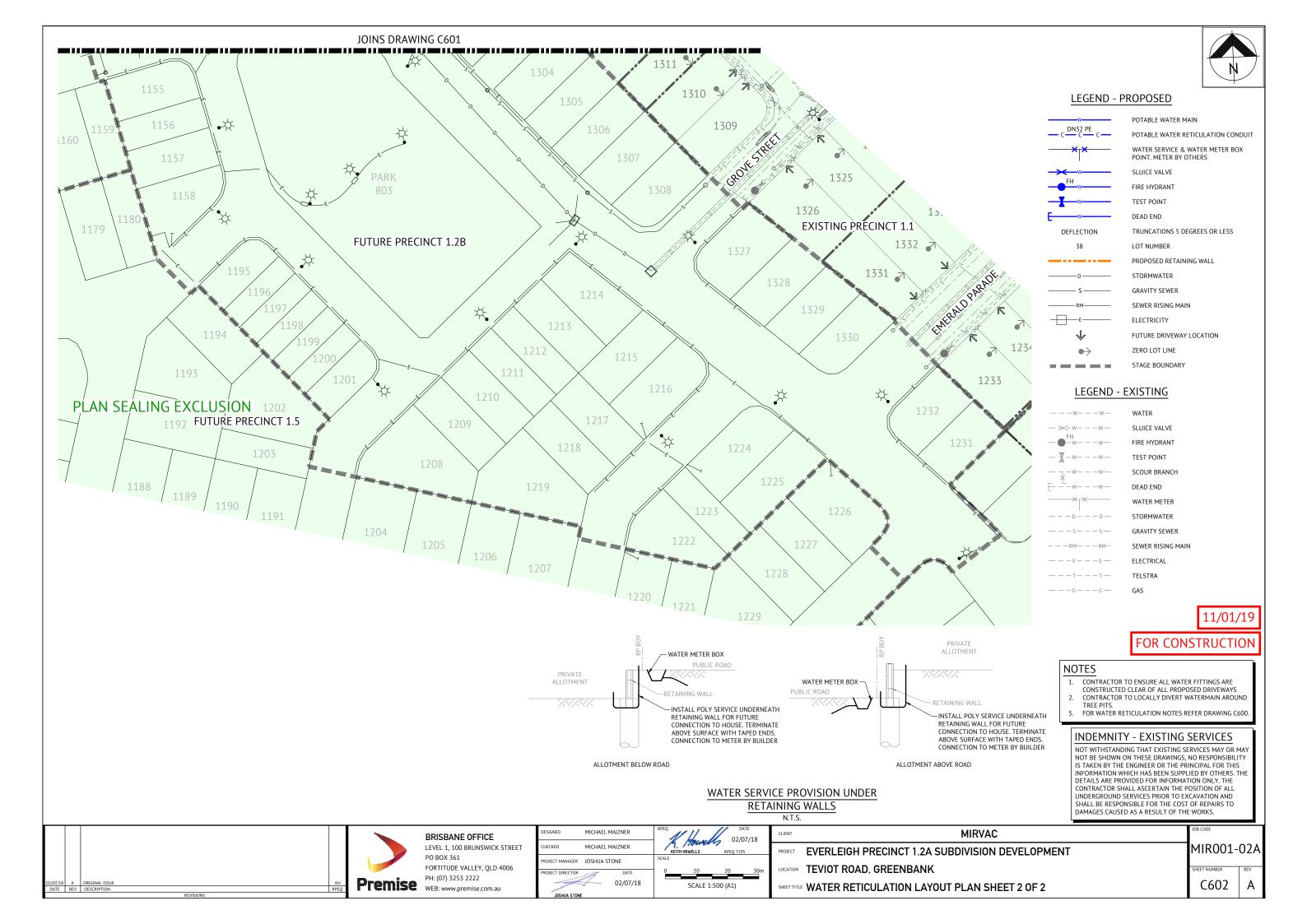


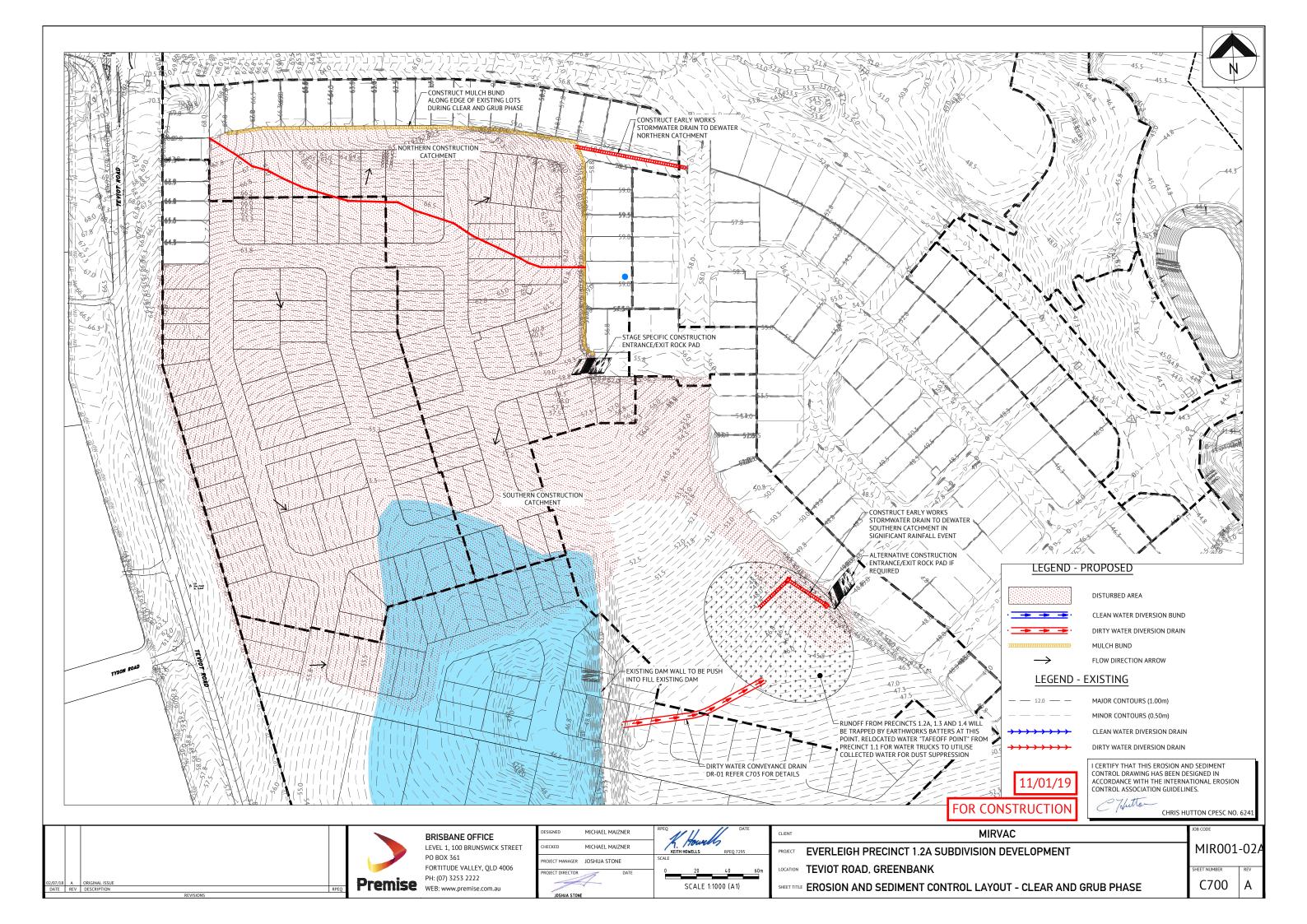
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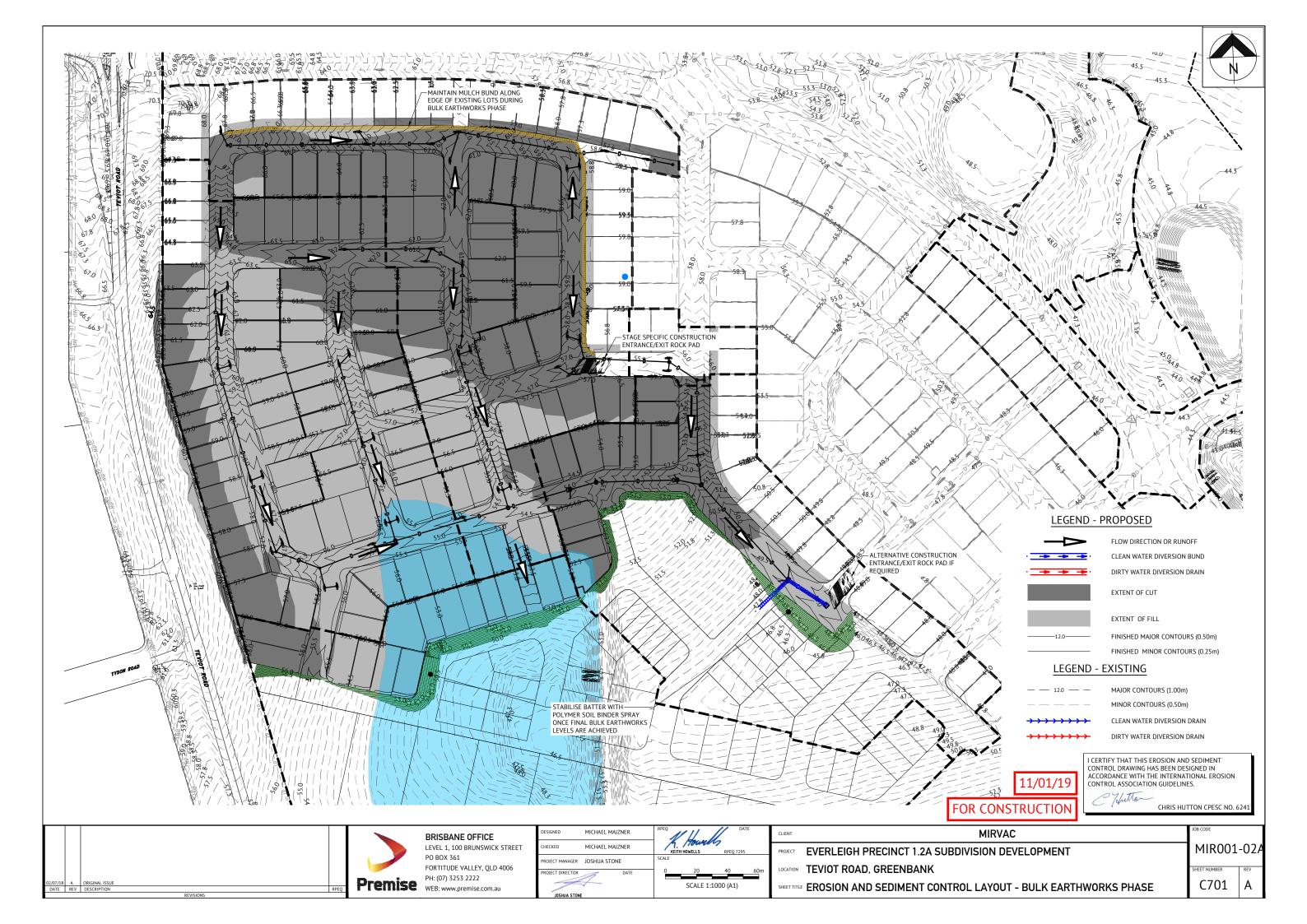
FOR CONSTRUCTION

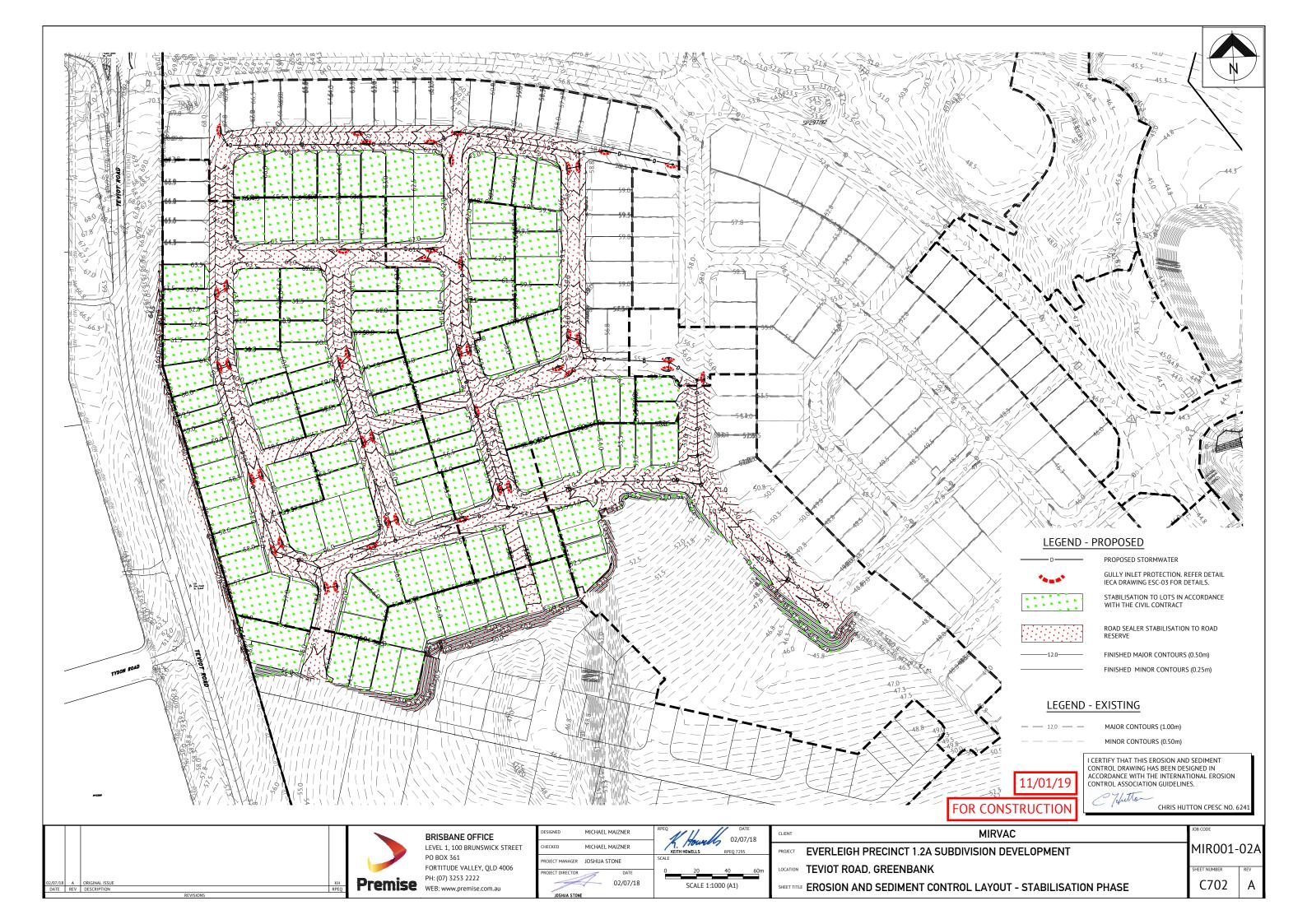












EROSION & SEDIMENT CONTROL NOTES

- LOCATION & LEVELS OF ALL EXISTING SERVICES TO BE CONFIRMED ON SITE BY CONTRACTOR PRIOR TO THE COMMENCEMENT OF CONSTRUCTION
- REFER EARTHWORKS DRAWINGS FOR ADDITIONAL NOTES.
- ALL TRENCHES, FOOTPATH EXCAVATIONS & STOCKPILES TO BE PROTECTED BY TEMPORARY SEDIMENT FENCES UNTIL 80% GRASS COVERAGE IS ACHIEVED TO DISTURBED AREAS.
- 4. EVERY PRECAUTION IS TO BE TAKEN TO PREVENT THE TRANSPORT OF SILT INTO THE NEWLY LAID STORMWATER PIPES THAT ARE CONNECTED TO THE DOWNSTREAM PIPE SYSTEMS, AND ANY EXISTING
- THESE NOTES SHALL BE READ IN CONJUNCTION WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- THE EROSION AND SEDIMENT CONTROL WORKS SHALL COMPLY WITH THE REQUIREMENTS OF THE
- LOCAL AUTHORITIES EROSION AND SEDIMENT CONTROL STANDARDS.
 THE CONTRACTOR SHALL TAKE ALL REASONABLE AND PRACTICABLE MEASURES TO:
- ALLOW STORMWATER TO PASS THROUGH THE SITE IN A CONTROLLED MANNER AND AT NON EROSIVE FLOW VELOCITIES:
- MINIMISE SOIL EROSION FROM WATER AND WIND;
- MINIMISE ADVERSE FEFECTS OF SEDIMENT RUN-OFF
- MINIMISE OR PREVENT ENVIRONMENTAL HARM ASSOCIATED WITH DISCHARGES FROM THE SITE (E.G.
- THE EFFECTS OF SEDIMENTATION ON THE ENVIRONMENTAL VALUES OF RECEIVING WATERS); AND ENSURE THAT THE VALUE AND USE OF RESIDENTIAL PROPERTIES ADJACENT TO THE DEVELOPMENT (SUCH AS DRAINAGE AND ROADS) ARE NOT DIMINISHED AS A RESULT OF THE MIGRATION OF SEDIMENT FROM THE DEVELOPMENT.
- THE CONTRACTOR SHALL APPOINT AN APPROPRIATELY EXPERIENCED PERSON TO BE MADE RESPONSIBLE FOR IMPLEMENTATION OF THE ESC.
- ALL ESC MEASURES SHALL BE INSPECTED
- AT LEAST DAILY (WHEN WORK IS OCCURRING ON SITE)
- AT LEAST WEEKLY (WHEN WORK IS NOT OCCURRING ON SITE). WITHIN 24 HOURS OF EXPECTED RAINFALL.
- WITHIN 18 HOURS OF RAINFALL OCCURRING
- MAINTENANCE OF ESC MEASURES SHALL OCCUR TO ENSURE THEY ARE OPERATING EFFICIENTLY AND IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:

ESC MEASURES	MAINTENANCE TRIGGER	TIME FRAME FOR UNDERTAKING
		MAINTENANCE
SEDIMENT BASINS	WHEN SETTLED SEDIMENT VOLUME EXCEEDS THE VOLUME OF THE SEDIMENT SETTLEMENT ZONE	WITHIN 4 DAYS OF INSPECTION
OTHER ESC MEASURES	WHEN SETTLED SEDIMENT VOLUME EXCEEDS 25% OF THE CAPACITY OF THE ESC MEASURE	BY THE END OF THE DAY

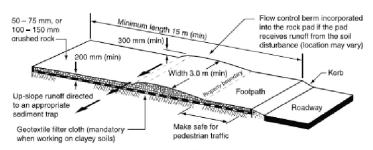
- INSTALL DIVERSION CATCH DRAINS UPSTREAM OF, AND SILT FENCE DOWNSTREAM OF, STOCKPILES.
- 8. STOCKPILES ARE TO BE LOCATED AWAY FROM EROSION HAZARD AREAS SUCH AS DRAINAGE LINES AND STEEP SLOPES.
- STOCKPILES ARE TO BE PROTECTED FROM EROSION BY THE WIND
- 10. ADEQUATE SUPPLIES OF EMERGENCY MAINTENANCE MATERIALS, INCLUDING (BUT NOT LIMITED TO) TIE WIRE, STAKES, FILTER CLOTH, WIRE MESH AND CLEAN GRAVEL SHOULD BE AVAILABLE ON-SITE.
- 11. ESC MAINTENANCE ACTIVITIES ARE TO BE RECORDED IN AN ON-SITE REGISTER. THE REGISTER IS TO BE MAINTAINED FOR THE DURATION OF THE WORKS AND IS TO BE MADE AVAILABLE TO THE SUPERINTENDENT
- 12. DISTURBED AREA ARE TO BE STABILISED AS SOON AS POSSIBLE ON COMPLETION OF BULK FARTHWORKS LOTS TO BE STABILISED FOLLOWING RESPREADING OF TOPSOIL
- 13. SUPPLEMENTARY ESC MEASURES SHALL BE DIRECTED BY THE SUPERINTENDENT

CATCH DRAIN DETAILS

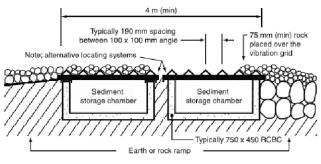
Drain ID	Drain Type	Slope	Lining	Base Width (m)	Top Width (m)	Depth incl. freeboard (m)	Side Slope Length	Wetted Perimeter (m²)	Velocity (m/s)
DR-01	Type B	2.0%	Geofabric	4	5.2	0.3	2	5.34	2.0

NOTE:

COIR LOG CHECK DAMS TO BE INSTALLED AT 20m CRS



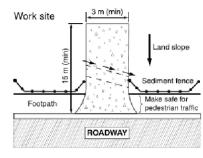
(a) Rock entry/exit pad for construction sites (refer to Standard Drawing Exit-03 for building sites)



(c) Alternative low maintenance arrangement (still under development)

Work site Land slope Make safe for Footpath ROADWAY

(b) Rock pad sloping away from road



(d) Rock pad sloping towards the road

CONSTRUCTION ENTRANCE DETAIL

MATERIALS

COMPOSTS MUST COMPLY WITH THE REQUIREMENTS OF AS4454.

(i) WELL-DECOMPOSED 100% ORGANIC MATTER PRODUCED BY CONTROLLED AEROBIC (BIOLOGICAL) DECOMPOS

(ii) MAXIMUM OF 1% OF INERT MATERIAL

(iii) MAXIMUM SOLUBLE SALT CONCENTRATION OF 5dS/m, AND pH RANGE OF 5.0 TO 8.5.

(iv) MOISTURE CONTENT OF 30 TO 50% PRIOR TO APPLICATION.

INSTALLATION

1 REFER TO APPROVED PLANS FOR 1. REPER TO APPROVED PLANS FOR LOCATION AND EXTENT. IF THERE ARE QUESTIONS OR PROBLEMS WITH THE LOCATION, EXTENT, MATERIAL TYPE, OR METHOD OF INSTALLATION CONTACT THE ENGINEER OR RESPONSIBLE ON-SITE OFFICER FOR ASSISTANCE.

2. WHEN SELECTING THE LOCATION OF A COMPOST FILTER BERM, TO THE MAXIMUM DEGREE PRACTICABLE, ENSURE THE BERM IS LOCATED:

(i) TOTALLY WITHIN THE PROPERTY BOUNDARIES;

(ii) ALONG A LINE OF CONSTANT ELEVATION (PREFERRED, BUT NOT ALWAYS PRACTICAL); (iii) AT LEAST 1m, IDEALLY 3m, FROM THE TOE OF A FILL EMBANKMENT;

(iv) AWAY FROM AREAS OF CONCENTRATED FLOW.

3. ENSURE THE BERM IS INSTALLED IN A MANNER THAT AVOIDS THE

CONCENTRATION OF FLOW ALONG THE BERM, OR THE UNDESIRABLE
DISCHARGE OF WATER AROUND THE ENDS OF THE BERM.

4. ENSURE THE BERM HAS BEEN PLACED ALONG THE CONTOUR SUCH THAT WATER WILL POND EVENLY ALONG THE

5. ENSURE BOTH ENDS OF THE BERM ARE ADEQUATELY TURNED UP THE SLOPE TO PREVENT FLOW BYPASSING PRIOR TO WATER PASSING OVER THE

6. ENSURE 100% CONTACT WITH THE SOIL SURFACE.

7. WHERE SPECIFIED, TAKE APPROPRIATE STEPS TO VEGETATE THE

1. DURING THE CONSTRUCTION PERIOD. INSPECT THE BERM AT LEAST WEEKLY AND AFTER ANY SIGNIFICANT RAIN. MAKE NECESSARY REPAIRS IMMEDIATELY.

2. REPAIR OR REPLACE ANY DAMAGED

3 WHEN MAKING REPAIRS ALWAYS WHEN MAKING REPAIRS, ADVATS
RESTORE THE SYSTEM TO ITS ORIGINAL
CONFIGURATION UNLESS AN AMENDED
LAYOUT IS REQUIRED OR SPECIFIED.

4. REMOVE ACCUMULATED SEDIMENT IF THE SEDIMENT DEPOSIT EXCEEDS A DEPTH OF 100mm OR 1/3 THE HEIGHT OF

5. DISPOSE OF SEDIMENT IN A SUITABLE MANNER THAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

1. WHEN DISTURBED AREAS UP-SLOPE OF THE BERM ARE SUFFICIENTLY STABILISED TO RESTRAIN EROSION, THE BERM MAYBE REMOVED.

2. REMOVE ANY COLLECTED SEDIMENT ND DISPOSE OF IN A SUITABLE MANNE HAT WILL NOT CAUSE AN EROSION OR POLLUTION HAZARD.

3. REHABILITATE/REVEGETATE THE DISTURBED GROUND AS NECESSARY TO MINIMISE THE EROSION HAZARD.

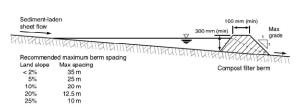
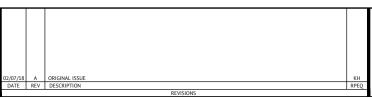


Figure 1 - Typical profile of a compost filter berm

MULCH BUND DETAIL

11/01/19

FOR CONSTRUCTION





BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222 WFB: www.premise.com.au

DESIGNED	MICHAEL MAIZNER	PPEQ DATE 02/07/18
HECKED	MICHAEL MAIZNER	KEITH HOWELLS RPEQ 7295
PROJECT MANAGER	JOSHUA STONE	SCALE
PROJECT DIRECTOR	DATE	
	02/07/18	
JOSHUA STONE	<u> </u>	

MIRVAC **EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT** LOCATION TEVIOT ROAD, GREENBANK EROSION & SEDIMENT CONTROL SECTIONS & DETAILS - SHEET 1

MIR001-02*A*

CORRECTIVE AND PREVENTATIVE ACTION

An environmental incident with respect to the ESCP is defined as any occurrence where sediment is released from the site, whether controlled or uncontrolled, or where storm water is released (controlled) from site which does not meet the water quality requirements.

All incidents and non-conformances are to be reported, investigated and corrected in accordance with the ESCP to ensure effective soil and water quality management practices at all times.

Best practice site management requires all ESC measures to be inspected by the Contractors nominated representative at least daily when rain is occurring, within 24 hours prior to expected rainfall, and within 18 hours of a rainfall event of sufficient intensity and duration to cause onsite runoff (IECA, 2008). Such inspections must check:

- Daily site inspections (during periods of runoff producing rainfall)
 - All drainage, erosion and sediment control measures
 - Occurrences of excessive sediment deposition (whether on-site or off-site)
 - All site discharge points (including dewatering activities as appropriate)
- Weekly site inspections (even if work is not occurring on-site)
 - All drainage, erosion and sediment control measures
 - Occurrences of excessive sediment deposition (whether on-site or off-site)
 - Occurrences of construction materials, litter or sediment placed, deposited, washed or blown from the site, including deposition by vehicular movements
 - Litter and waste receptors
 - Oil, fuel and chemical storage facilities

Prior to anticipated runoff producing rainfall

- · All drainage, erosion and sediment control measures
- All temporary flow diversion and drainage works

Following runoff producing rainfall

- All drainage, erosion and sediment control measures
- Occurrences of excessive sediment deposition (whether on-site or off-site)
- Occurrences of construction materials, litter or sediment placed, deposited, washed or blown from the site, including deposition by vehicular movements

ROLLS AND RESPONSIBILITIES

Role	Responsibility
Project Manager	 Overall responsibility of ESC implementation
	 Notify the Environmental Manager immediately of any non- compliance with ESCP
	 Ensure the prompt implementation of measures to mitigate erosion and sediment generation
Site Supervisor/Foremen	Monitor daily rainfall
	 Notify Environmental Advisor/Consultant when runoff generating rainfall occurs in the previous 24 hours
	 Maintain current records of rainfall, storage volumes, water quality, treatment practices, discharge volumes (as appropriate)
	 Installation and maintenance of ESC
Environmental Manager	 Provide design information as required
	 Conduct in-situ monitoring (as required)
	 Collect and submit samples to laboratory (as required)
	 Collate results and prepare reports (as required)
	 Conduct site inspections and audits (as required)
	 Inspect ESC installation and maintenance
	 Inspect offsite impacts and management
	 Provide advice regarding ESC site improvement (as required)
All Personnel	 Report any damage to ESC devices and any potential or actual environmental harm in line with Duty to Notify under the requirements of the Environmental Protection Act 1994

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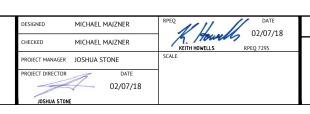
FOR CONSTRUCTION

I CERTIFY THAT THIS EROSION AND SEDIMENT CONTROL DRAWING HAS BEEN DESIGNED IN ACCORDANCE WITH THE INTERNATIONAL EROSION CONTROL ASSOCIATION GUIDELINES.

CHRIS HUTTON CPESC NO. 624:

707/18 A ORIGINAL ISSUE KH DATE REV DESCRIPTION RPEQ

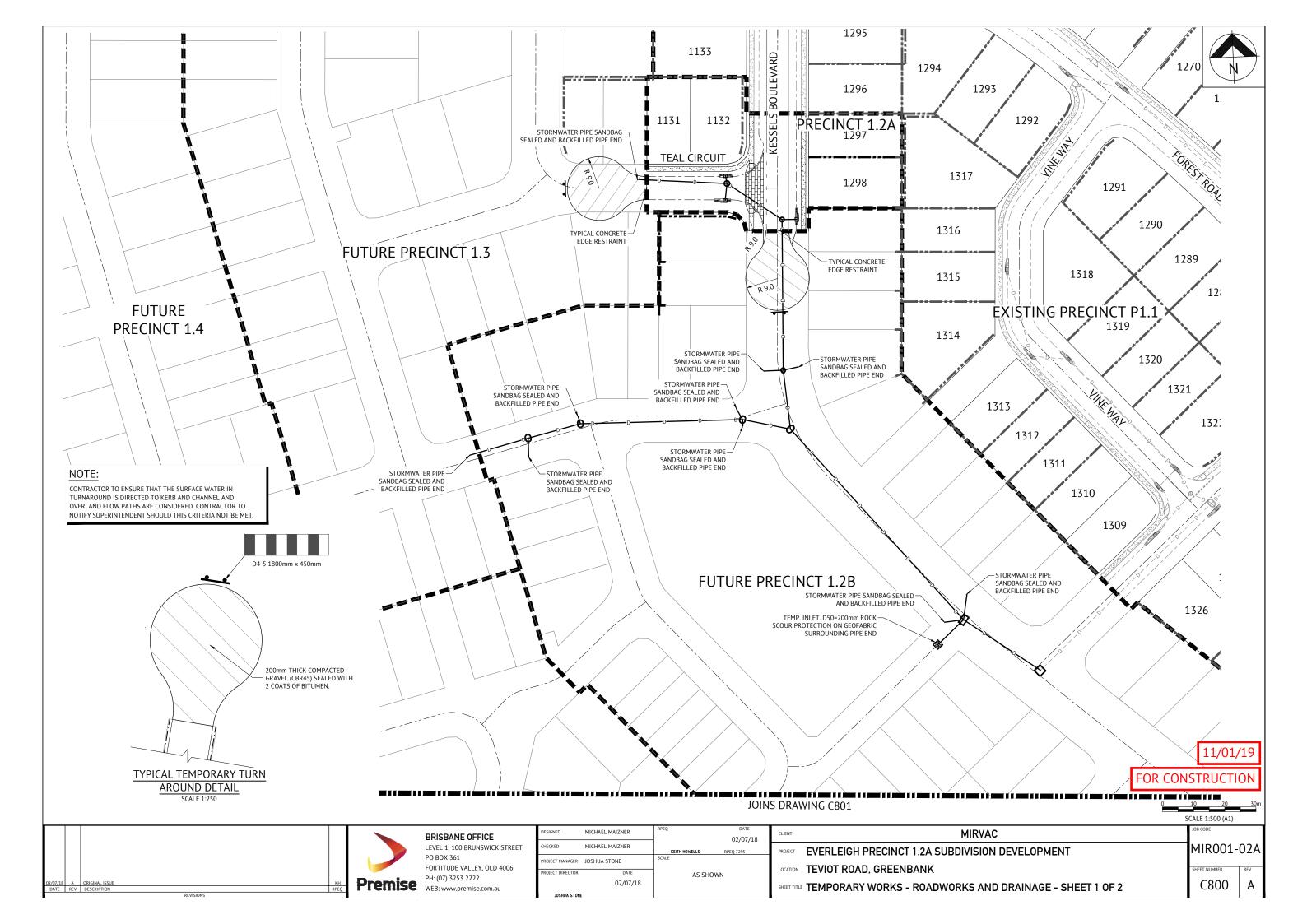


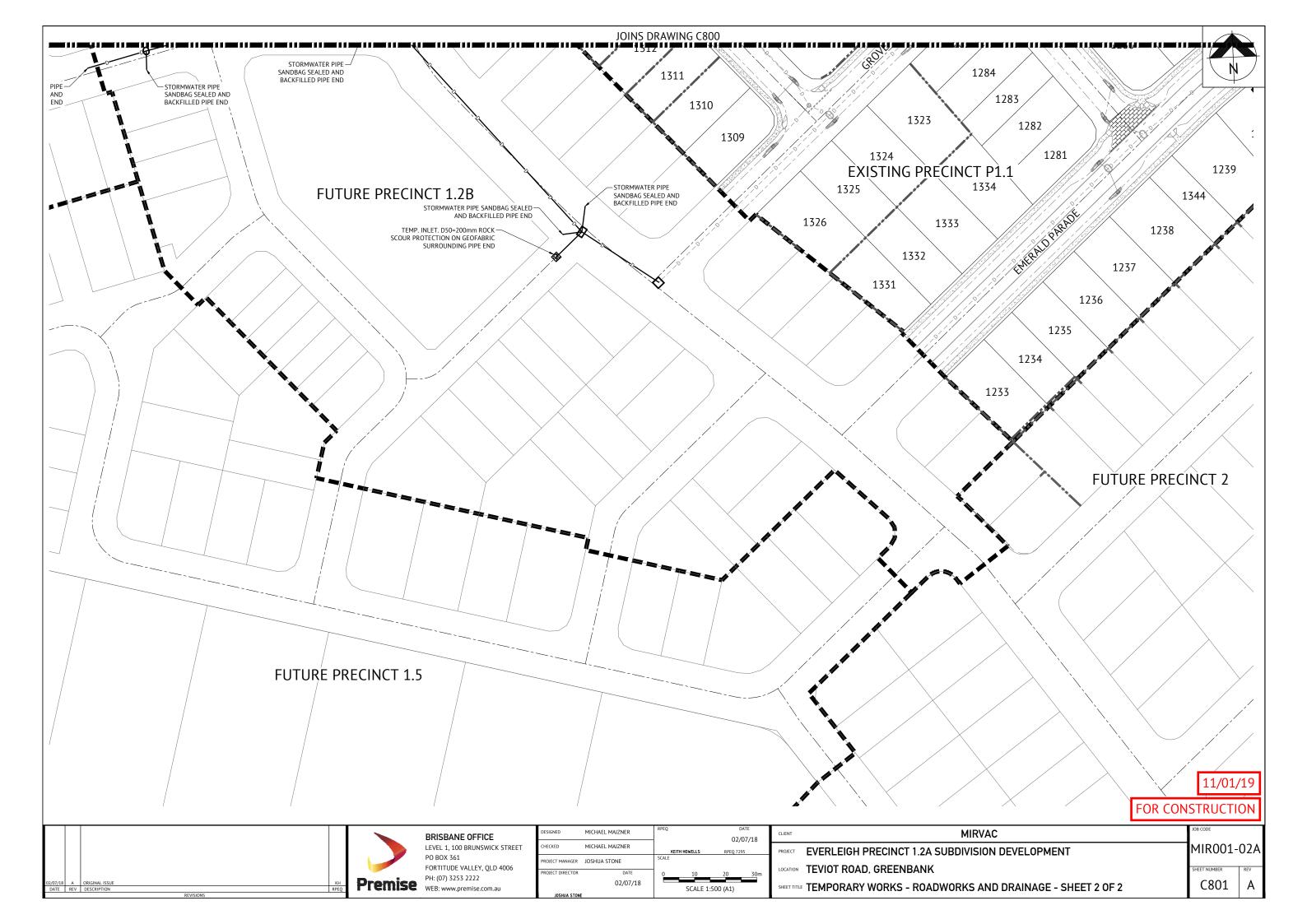


PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT
LOCATION TEVIOT ROAD, GREENBANK

SHEET TITLE EROSION & SEDIMENT CONTROL SECTIONS & DETAILS - SHEET 2

MIR001-02A





GENERAL:

- CONSTRUCTION METHODS ARE THE RESPONSIBILITY OF THE BUILDER. DETAILS SHOWN ARE A GUIDE AND ALTERNATE DETAILS MAY BE SUBMITTED FOR ENGINEERING APPROVAL, PRIOR TO
- MAINTAIN THE STRUCTURE IN A STABLE CONDITION DURING CONSTRUCTION.
- DO NOT OVERSTRESS ANY PART OF THE MEMBERS DURING FABRICATION, TRANSPORTATION OR
- PROPRIETARY ITEMS ARE TO BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS
- SPECIFICATION AND DESIGN DETAILS. IT IS THE RESPONSIBILITY OF THE BUILDER TO MAKE GOOD ANY DAMAGE CAUSED TO ADJOINING STRUCTURES OR ELEMENTS CREATED DURING CONSTRUCTION.

SERVICE LOADS:

- SL.1. STRUCTURAL WORK HAS BEEN DESIGNED FOR THE FOLLOWING LOADS:
 - PERMANENT DEAD LOAD OF STRUCTURE AS SHOWN ON DRAWINGS
 - LIVE LOADS TO AS/NSZ5100.2:
- 80 kN (W80 WHFFL LOAD)
- IMPOSED SURCHARGE LOAD ON GROUND:
 - 20 kN/m³ (HEIGHT OF SOIL OVER ROOF SLAB = 0.5m MAX.)
- AT REST LATERAL EARTH PRESSURE COEFFICIENT ko:
- THE ABOVE DO NOT INCLUDE LOADS WHICH MAY BE APPLIED DURING CONSTRUCTION.

SITE PREPARATION AND FOUNDATIONS:

- REFER TO GEOTECHNICAL INVESTIGATIONS PREPARED BY MORRISON GEOTECHNIC
- NO GEOTECHNICAL INVESTIGATION HAS BEEN COMPLETED. BUILDER TO CONFIRM SITE CLASSIFICATION AND INSITU MATERIAL PROPERTIES PRIOR TO POURING FOUNDATIONS
- GEOTECHNICAL ENGINEER SHALL BE ENGAGED, AT THE BUILDER'S EXPENSE TO CERTIFY THAT THE ALLOWABLE BEARING PRESSURE HAS BEEN ACHIEVED IN THE BASE OF ALL FOOTINGS. GEOTECHNICAL ENGINEER'S CERTIFICATE SHALL BE SUBMITTED TO STRUCTURAL ENGINEER PRIOR TO PLACEMENT OF 50mm BLINDING LAYER AND /OR REINFORCEMENT
- EARTHWORKS SHALL BE IN ACCORDANCE WITH AS 3798 INCLUDING THE FOLLOWING
- THE BUILDING SITE SHALL BE STRIPPED OF ALL VEGETABLE MATTER AND THE ASSOCIATED LAYER
- FOUNDATIONS HAVE BEEN DESIGNED FOR A SAFE BEARING CAPACITY OF 100 kPa. IT IS THE RESPONSIBILITY OF THE BUILDER TO DETERMINE FINAL BEARING PRESSURE ON SITE, UPON FXCAVATION
- THE TOP 150mm OF SUBGRADE (UNDER FOUNDATIONS, FOOTINGS AND SLABS) SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 95% OF THE MAXIMUM DRY DENSITY AS DETERMINED IN ACCORDANCE WITH METHOD 5.1.1 OF AS 1289 (STANDARD COMPACTION).
- FILL MATERIAL SHALL BE SAND FILL OR OTHER APPROVED GRANULAR MATERIAL AND SHALL BE PLACED IN LAYERS NOT EXCEEDING 150mm IN THICKNESS. FILL SHALL BE COMPACTED TO 95% OF THE MAXIMUM DRY DENSITY AS PER ABOVE. FOR COHESIONLESS FILL WITH LESS THAN 5% PASSING THE 75 MICRON SIEVE, THE MATERIAL SHALL BE COMPACTED TO 70% DENSITY INDEX IN ACCORDANCE WITH AS 1289 TEST E6.1.
- TO AVOID SWELLING OF FOUNDATIONS AND SLAB MOVEMENTS. THE AREA AROUND THE SLAB SHALL BE EFFECTIVELY DRAINED, BOTH BEFORE AND AFTER CONSTRUCTION, TO ENSURE NO PONDING OF WATER ON OR ADJACENT TO THE SLAB AREA. SPOON DRAINS SHALL BE PROVIDED AS REQUIRED TO FACILITATE DRAINAGE ADJACENT TO THE SLAB AND AT THE TOPS OF BANKS.
- ALL SLABS SHALL BE CAST ON A MINIMUM THICKNESS OF 50mm OF BEDDING SAND.
- A MOISTURE BARRIER OF 0.2mm POLYETHYLENE FILM LAPPED 200mm AND TAPED AT JOINTS SHALL BE PROVIDED UNDER THE SLAB.

CONCRETE:

- C.1. ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH AS2870 AND AS3600.
- CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES SEE TABLE BELOW:

CONCRETE TABLE							
ELEMENT	CLASS & GRADE (CONCRETE)		CLEAR COVER TO REINF'T (mm)	MAX AGG. SIZE (mm)	MAX SLUMP (mm)		
STORMWATER PIT WALLS	B1	N32	40	20	80		
STORMWATER PIT BASE	B1	N32	40	20	80		
STORMWATER PIT ROOF SLAB	A2	N32	40	20	80		

- SPLICES IN REINFORCEMENT MUST BE MADE ONLY IN POSITIONS SHOWN ON THE STRUCTURAL DRAWINGS OR IN POSITIONS OTHERWISE APPROVED IN WRITING BY THE SUPERINTENDENT, LAPS MUST BE IN ACCORDANCE WITH AS 3600 AND NOT LESS THAN THE DEVELOPMENT LENGTH FOR EACH BAR.
- SPLICES IN MESH: THE OUTERMOST TRANSVERSE WIRES MUST BE OVERLAPPED BY AT LEAST THE SPACING OF THE TRANSVERSE WIRES PLUS 50mm
- WELDING OF REINFORCEMENT IS NOT PERMITTED U.N.O. ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE SUPERINTENDENT.
- CURING OF ALL CONCRETE MUST BE ACHIEVED BY KEEPING SURFACES CONTINUOUSLY WET FOR A PERIOD OF 7 DAYS U.N.O. IN ACCORDANCE WITH AS 3600. APPROVED SPRAY-ON CURING COMPOUNDS THAT COMPLY WITH AS 3799 MAY BE USED WHERE FLOOR FINISHES WILL NOT BE AFFECTED, POLYTHENE SHEETING OR WET HESSAIN MAY BE LISED TO RETAIN CONCRETE MOISTURE WHERE PROTECTED FROM THE WIND AND TRAFFIC. CURING MUST COMMENCE IMMEDIATELY AFTER CONCRETE PLACEMENT

REINFORCEMENT:

- SYMBOLS ON DRAWINGS FOR GRADE AND TYPE OF REINFORCEMENT ARE AS FOLLOWS:
- R: DENOTES STRUCTURAL GRADE 250 PLAIN ROUND BAR TO AS4671 N: DENOTES HOT ROLLED GRADE 500 DEFORMED BAR DUCTILITY CLASS N TO AS4671
- R.1.3. L: DENOTES HARD DRAWN WIRE GRADE 500 SQUARE REINFORCING MESH DUCTILITY CLASS TO AS4671
- RL: DENOTES HARD DRAWN WIRE GRADE 500 RECTANGULAR REINFORCING MESH DUCTILITY CLASS L TO AS4671
- ALL N BARS TO BE GRADE 500.
- FOLLOWING ABBREVIATIONS APPLY TO LOCATION OF REINFORCEMENT:
- BB: BOTTOM BOTTOM (LAID FIRST) TT: TOP TOP (LAID LAST) EW: EACH WAY FF: FAR FACE
- EF: EACH FACE B: BOTTOM
- NF: NEAR FACE T: TOP CP: CENTRALLY PLACED
- CLEAR COVER TO REINFORCEMENT SHALL BE PROVIDED BY APPROVED CHAIRS, SPACERS OR TIES
- AS REQUIRED TO PROVIDE ADEQUATE SUPPORT AS FOLLOWS
- BARS 16mm AND LESS AND FABRIC 1000mm CENTERS
- BARS 20mm AND OVER 1200mm CENTERS USE MESH SUPPLIED IN FLAT SHEETS UNLESS APPROVED OTHERWISE

- LENGTH OF BARS

DRAWINGS OR APPROVED BY ENGINEER.

REINFORCEMENT NOMINATIONS:

RN.7. NOMINATION CALL OUT DESCRIPTION:

NUMBER OF SIZE OF BARS

RN.8. LAP LENGTHS TO COMPLY WITH AS3600, OR FOR SLAB AND WALL REINFORCEMENT WITH BARS AT > 150mm CENTRES WITH THE FOLLOWING UNO: REFER TO TABLE BELOW:

REINFORCEMENT LAP TABLE							
LOCATION	F'C	BAR SIZE AND LAP LENGTH (mm)					
LOCATION		N12	N16	N20	N24	N28	
HORIZONTAL BARS WITH ≤ 300mm CONCRETE BELOW	25	500	675	1000	1300	1600	
	32	450	625	875	1175	1400	
	40+	450	600	775	1050	1250	
HORIZONTAL BARS WITH >	25	650	875	1300	1700	2050	
300mm CONCRETE BELOW BAR, & VERT. BARS	32	575	775	1175	1525	1850	
	40+	575	775	1000	1350	1650	

11/01/19

FOR CONSTRUCTION

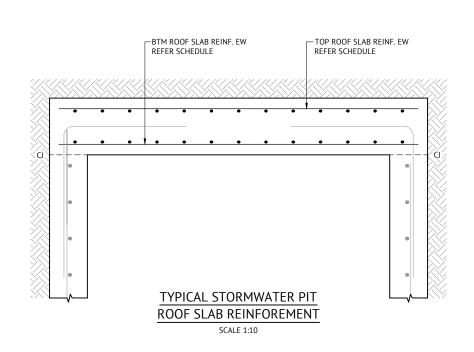
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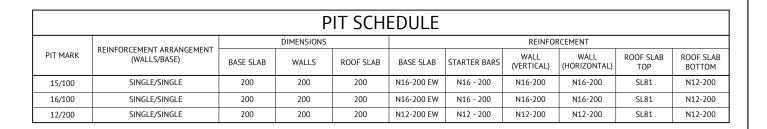
BRISBANE OFFICE LEVEL 1, 100 BRUNSWICK STREET PO BOX 361 FORTITUDE VALLEY, QLD 4006 PH: (07) 3253 2222



MIRVAC PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK SHEETTITLE STORMWATER STRUCTURAL NOTES

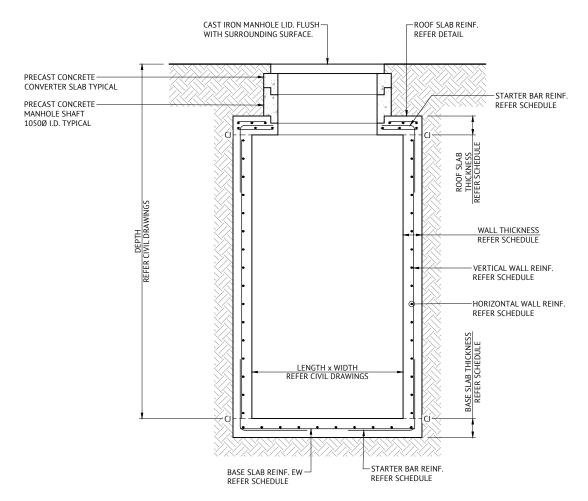
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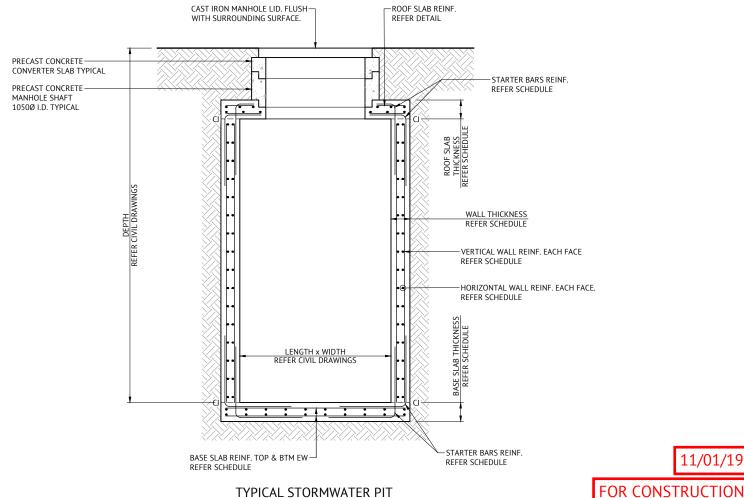




NOTES

1. REFER DRAWING No. S001 FOR STRUCTURAL NOTES





TYPICAL STORMWATER PIT SINGLE LAYER REINFORCEMENT

SCALE 1:20

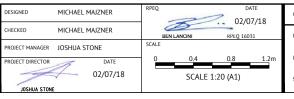
TYPICAL STORMWATER PIT DOUBLE LAYER REINFORCEMENT SCALE 1:20

SCALE 1:10 (A1)

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MIRVAC PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK SHEET TITLE STORMWATER REINFORCED CONCRETE PIT ARRANGEMENT

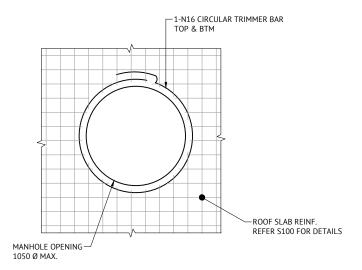
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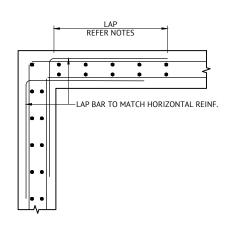
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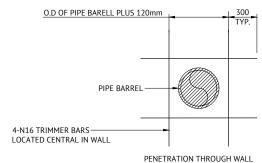
TYPICAL ROOF PENETRATION REINFORCEMENT DETAIL

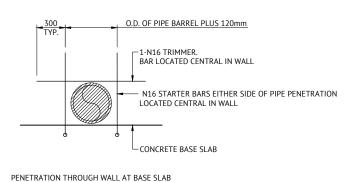
LAP REFER NOTES LAP BAR TO MATCH HORIZONTAL REINF.

TYPICAL 'L' INTERSECTION DETAIL SINGLE LAYER REINFORCEMENT



TYPICAL 'L' INTERSECTION DETAIL DOUBLE LAYER REINFORCEMENT





TYPICAL WALL PIPE PENETRATION REINFORCEMENT DETAIL

NOT TO SCALE

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DESIGNED MICHAEL MAJZNER	RPEQ	DATE 2/07/18
CHECKED MICHAEL MAJZNER	0	16031
PROJECT MANAGER JOSHUA STONE	SCALE	
PROJECT DIRECTOR DATE		
02/07/1	8	

MIRVAC PROJECT EVERLEIGH PRECINCT 1.2A SUBDIVISION DEVELOPMENT LOCATION TEVIOT ROAD, GREENBANK

SHEET TITLE STORMWATER REINFORCED CONCRETE PIT DETAILS

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