

UNDERPINNING SEQUENCE OF WORK

- Excavate bays 1 down to required level. The underside of existing foundation is to be well cleaned. Sides of excavation are to be vertical and smooth faced. Provide 4 no. dowel bars into adjacent soil.
- Shutter, as necessary to provide required foundation width. Concrete is to be placed up to 75mm below underside of existing foundation.
- One day after completion of concreting (24 hours), dry pack to bay 1 to be placed between underside of footings and new surface.
- Repeat operations 1 to 3 for bays 2 allowing at least 48 hours between dry packing and excavation of adjacent bay.

- When pouring against a section already underpinned, the face of the concrete shall be cleaned and roughened, if necessary, to provide a good key. Exposed dowel bars to be cleaned off.
- Repeat operations 1 to 3 for additional bay 3 allowing at least 48 hours between dry packing and excavation of adjacent bay.
- When all underpinning bays have been poured and dry packed placed between underside of footings and new surface. Projected brickwork corbels and concrete footings can be carefully removed by the contractor.

NOTES ON RETAINING WALLS

- Condition surveys of the subject building and adjoining properties will also be undertaken prior to commencement of the site works.
- The sequence of retaining wall construction is to be agreed with engineer.
- Not more than 25% of one wall shall be undercut at any one time. Underpinning shall be in short lengths not exceeding 900mm.
- Reinforced concrete for underpinning shall be Design Sulphate class DS-1 and ACEC class AC-1 grade C35, maximum aggregate size of 20mm, and a w/c of 0.45

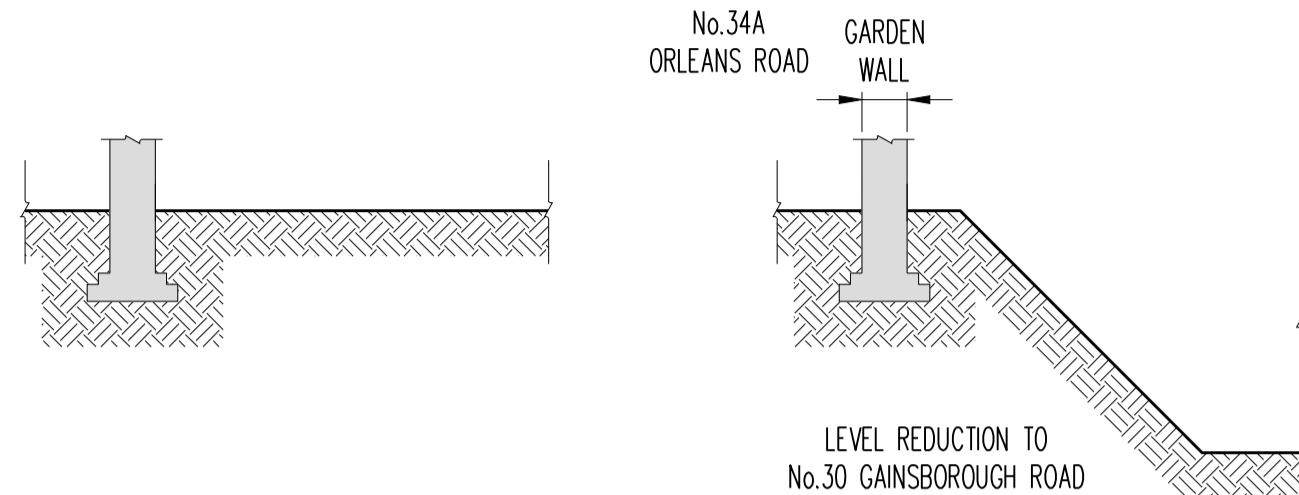
- Dowel bars shall be 20mm plain round bars 600mm long with 300mm embedment in each section.
- Prior to concreting, the underside of existing foundations shall be carefully cleaned of all soil from the sides of the trench, and the formation shall not be left exposed over night. The formation shall be protected from heavy rain and frost.
- Concrete shall be placed with care to avoid loose soil or rubbish falling into the excavation. The concrete shall be carefully compacted by means of a pocket vibrator.

- No two adjoining sections shall be worked concurrently. A minimum period of 48 hours should be given between placing dry pack mortar and commencing excavation of any adjacent section.
- Dry pack is to be a mixture of portland cement and sharp sand mixed as dry as possible passing through a No 16 sieve with just enough water to hydrate the cement and is to be placed into position using a back shutter against which it should be rammed with a blunt timber rammer and mallet.
- A continuous trench for working space shall not be permitted.

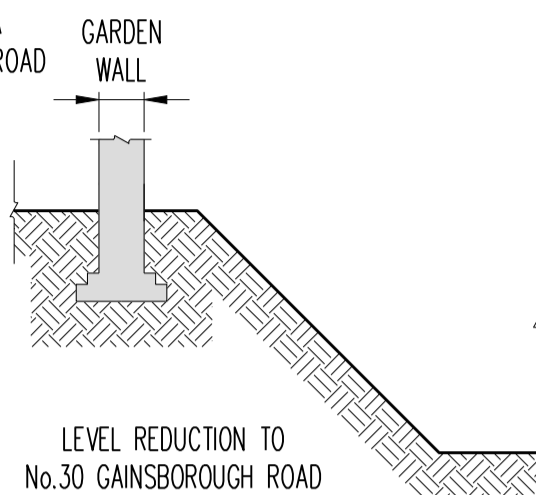
NOTES

METHOD STATEMENT FOR UNDERPINNING AND FORMATION OF RETAINING WALLS TO CREATE A NEW BASEMENT

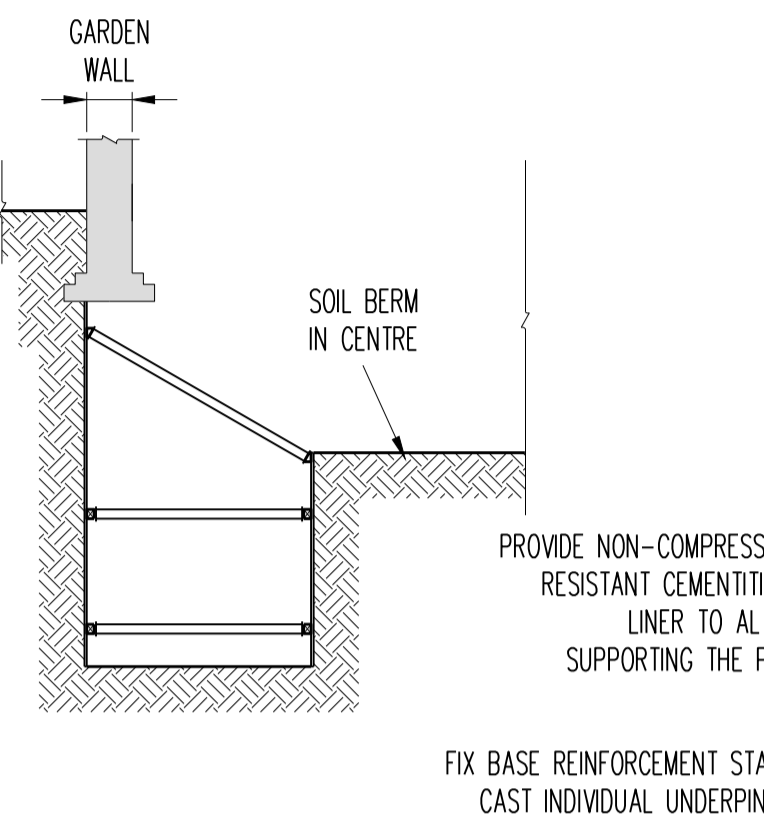
- GENERAL NOTES**
 - THESE CALCULATIONS AND DETAILS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND SPECIFICATIONS.
 - FULL BUILDING REGULATION APPROVAL SHOULD BE OBTAINED PRIOR TO THE COMMENCEMENT OF WORKS ON SITE, AND ANY WORKS CARRIED OUT PRIOR TO THIS ARE UNDERTAKEN AT THE CLIENTS/CONTRACTORS OWN RISK.
 - THE WORKS ARE TO BE CARRIED OUT TO THE APPROVAL AND SATISFACTION OF THE BUILDING CONTROL OFFICER, TO ACCEPTED GOOD BUILDING PRACTICE AND WITH FULL COMPLIANCE AND IN ACCORDANCE WITH ALL RELEVANT BRITISH STANDARDS AND CODES OF PRACTICE.
- CONSTRUCTION NOTES**
 - ALL ASSUMED LOAD BEARING WALLS, FOUNDATIONS AND STRUCTURAL ELEMENTS ARE TO BE EXPOSED AND CHECKED ON SITE WITH THE BUILDING CONTROL OFFICER, PRIOR TO THE COMMENCEMENT OF WORKS FOR SUITABILITY.
 - TRIAL HOLES ARE TO BE EXCAVATED PRIOR TO COMMENCEMENT OF WORKS AND ARE TO BE INSPECTED BY THE BUILDING CONTROL OFFICER/SOILS SPECIALIST. ALL NEW FOUNDATIONS ARE TO BE FOUNDED OFF NATURAL VIRGIN GROUND.
 - ANY DEVIATION FROM THE DESIGN ASSUMPTIONS IS TO BE REPORTED TO THE ARCHITECT/ENGINEER PRIOR TO COMMENCEMENT OF WORKS.
 - THE EXISTING BUILDING IS ASSUMED TO BE IN GOOD STRUCTURAL ORDER AND ANY DEFECTS ARE TO BE REPORTED TO THE ARCHITECT/ENGINEER.
 - THE TEMPORARY STABILITY OF THE STRUCTURE DURING ALL STAGES OF THE CONSTRUCTION WORK IS THE RESPONSIBILITY OF THE CONTRACTOR.
- UNDERPINNING NOTES**
 - GIVEN THE ANTICIPATED GROUND CONDITIONS AND DEPTH OF PROPOSED BASEMENT AREAS, THE METHOD OF CONSTRUCTION WILL BE CARRIED OUT FROM EXISTING GROUND LEVELS USING HAND DUG UNDERPINNING TECHNIQUES, DEPENDING ON THE SEQUENCE OF EXCAVATION AND CONSTRUCTION, THE WALLS WILL BE PROPPED AT APPROPRIATE LEVELS USING TEMPORARY AND PERMANENT PROPPING ELEMENTS.
 - THE UNDERPINS WILL TAKE THE FORM OF REINFORCED CONCRETE RETAINING WALL SECTIONS WHICH WILL RESIST THE LATERAL FORCES BOTH IN THE TEMPORARY AND PERMANENT CONDITIONS, ONCE A COMPLETE BOX HAS BEEN FORMED THE CENTRAL SLAB WILL BE CAST.
 - A PROPOSED SEQUENCE OF CONSTRUCTION IN 900mm BAYS HAS BEEN ILLUSTRATED ON THE PLAN.
- RETAINING WALL NOTES**
 - CONDITION SURVEYS OF THE SUBJECT BUILDING AND ADJOINING PROPERTIES WILL ALSO BE UNDERTAKEN PRIOR TO COMMENCEMENT OF THE SITE WORKS.
 - THE SEQUENCE OF RETAINING WALL CONSTRUCTION IS TO BE AGREED WITH ENGINEER.
 - NOT MORE THAN 25% OF ONE WALL SHALL BE UNDERCUT AT ANY ONE TIME. UNDERPINNING SHALL BE IN SHORT LENGTHS NOT EXCEEDING 900MM.
 - REINFORCED CONCRETE FOR UNDERPINNING SHALL BE DESIGN SULPHATE CLASS DS-1 AND ACEC CLASS AC-1 GRADE C35, MAXIMUM AGGREGATE SIZE OF 20mm, AND A W/C OF 0.45
 - DOWEL BARS SHALL BE 20mm PLAIN ROUND BARS 600mm LONG WITH 300mm EMBEDMENT IN EACH SECTION.
 - PRIOR TO CONCRETING PIN, THE UNDERSIDE OF EXISTING FOUNDATIONS SHALL BE CAREFULLY CLEANED OF ALL SOIL FROM THE SIDES OF THE TRENCH, AND THE FORMATION SHALL NOT BE LEFT EXPOSED OVER NIGHT. THE FORMATION SHALL BE PROTECTED FROM HEAVY RAIN AND FROST.
 - SLAB BASES TO BE CAST WITH STARTER L-BARS PROTRUDING FOR MAIN PINS TO BE LAPPED TO AND CAST IN SECOND POUR.
 - CONCRETE SHALL BE PLACED WITH CARE TO AVOID LOOSE SOIL OR RUBBISH FALLING INTO THE EXCAVATION. THE CONCRETE SHALL BE CAREFULLY COMPACTED BY MEANS OF A POCKET VIBRATOR.
 - NO TWO ADJOINING SECTIONS SHALL BE WORKED CONCURRENTLY. A MINIMUM PERIOD OF 48 HOURS SHOULD BE GIVEN BETWEEN PLACING DRY PACK MORTAR AND COMMENCING EXCAVATION OF ANY ADJACENT SECTION.
 - DRY PACK IS TO BE A MIXTURE OF PORTLAND CEMENT AND SHARP SAND MIXED AS DRY AS POSSIBLE PASSING THROUGH A NO 16 SIEVE WITH JUST ENOUGH WATER TO HYDRATE THE CEMENT AND IS TO BE PLACED INTO POSITION USING A BACK SHUTTER AGAINST WHICH IT SHOULD BE RAMMED WITH A BLUNT TIMBER RAMMER AND MALLET.
 - A CONTINUOUS TRENCH FOR WORKING SPACE SHALL NOT BE PERMITTED.



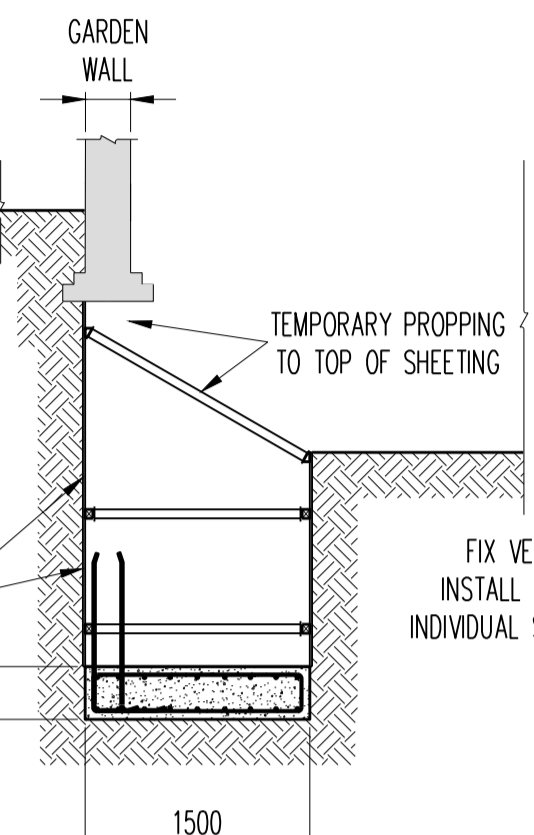
STAGE 0
EXISTING CONDITION



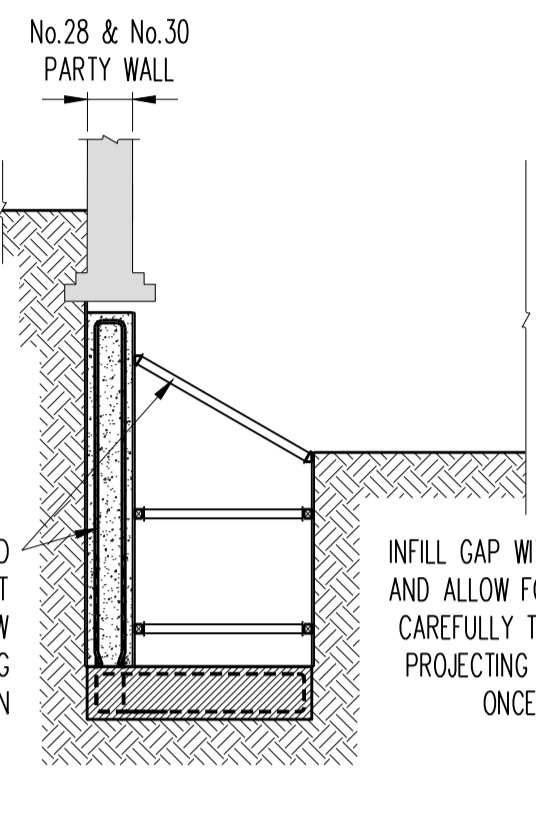
STAGE 1
GENERAL LEVEL REDUCTION



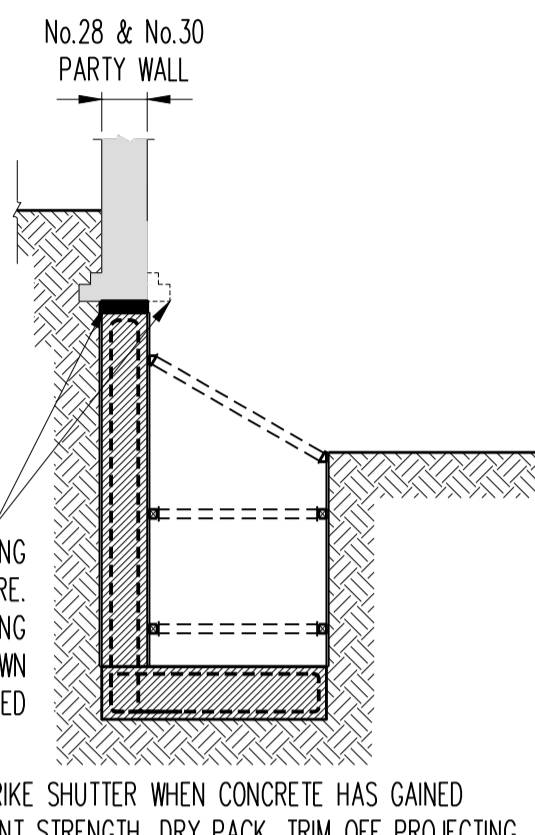
STAGE 2
EXCAVATE TO FORM UNDERPIN



STAGE 3
CONCRETE BASE OF UNDERPIN

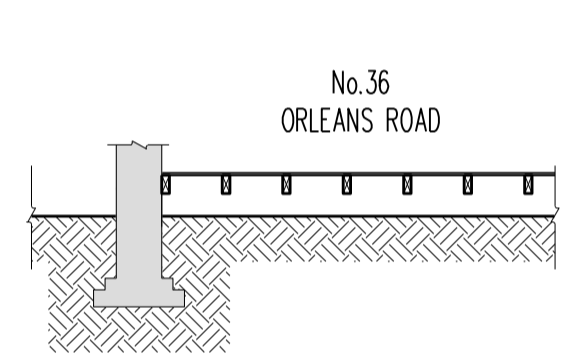


STAGE 4
ERECT SHUTTER CONCRETE STEM OR UNDERPIN

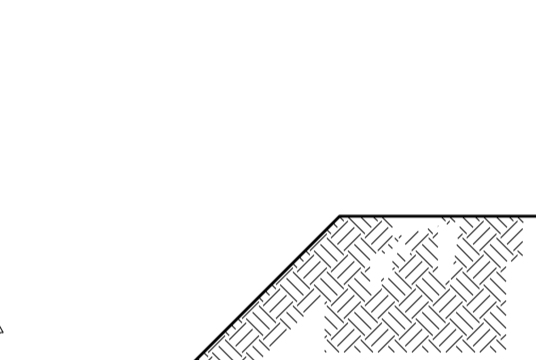


STAGE 5
STRIKE SHUTTER

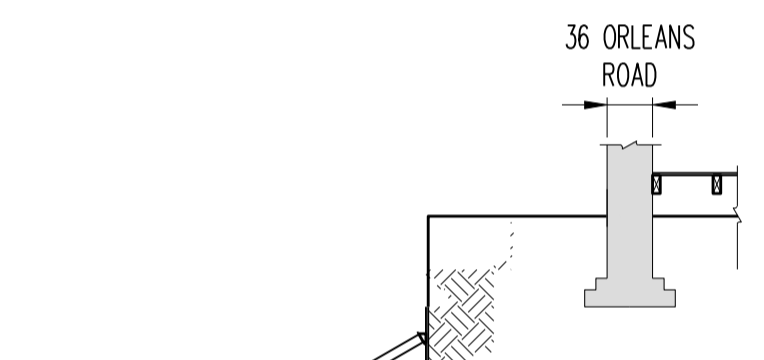
TEMPORARY WORKS SEQUENCE FOR PARTY WALL AT UNDER GARDEN WALL



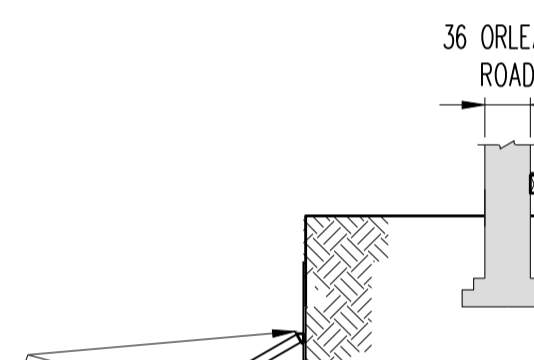
STAGE 0
EXISTING CONDITION



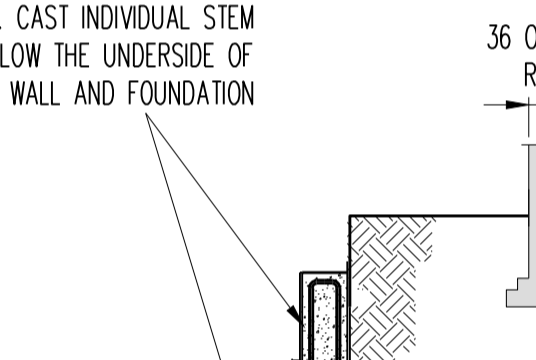
STAGE 1
GENERAL LEVEL REDUCTION



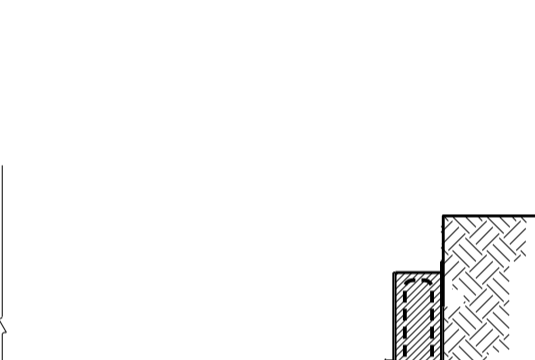
STAGE 2
EXCAVATE TO FORM UNDERPIN



STAGE 3
CONCRETE BASE OF UNDERPIN

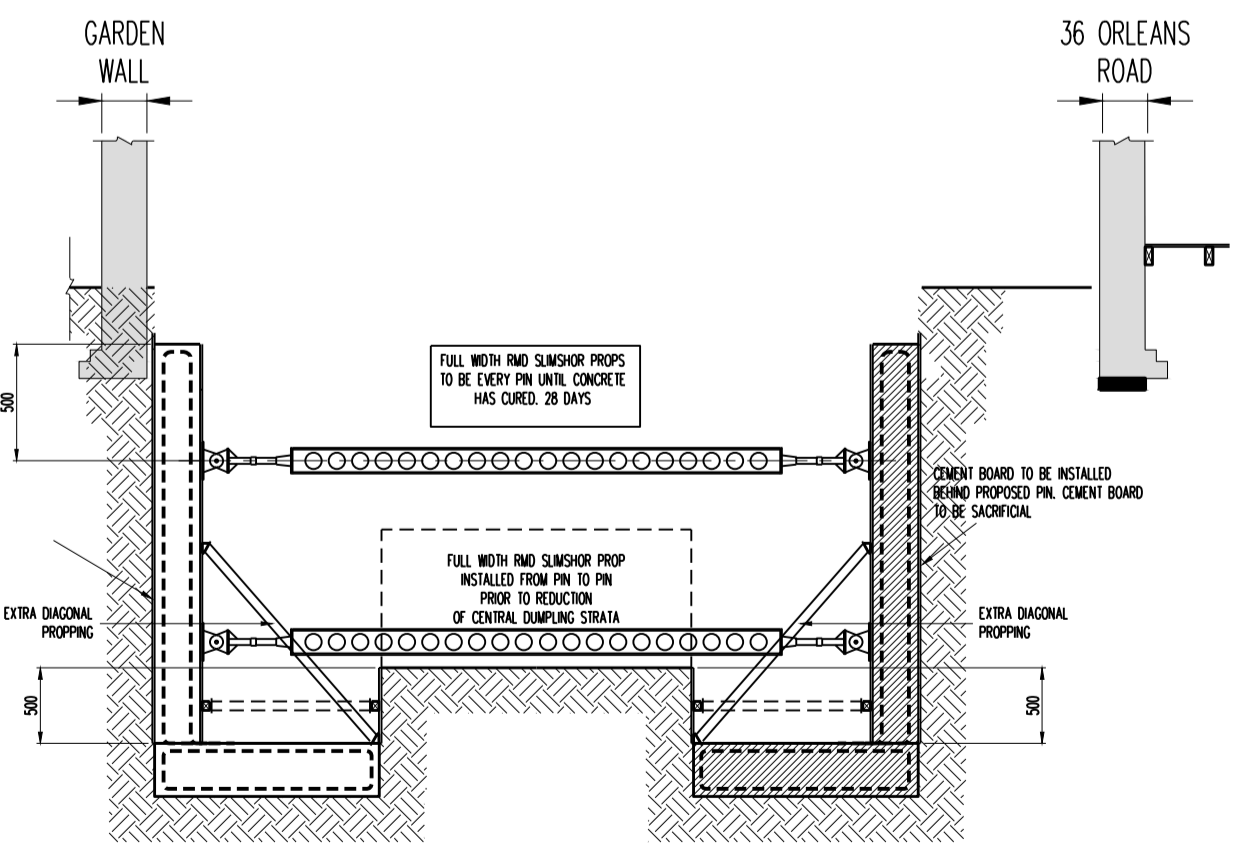


STAGE 4
ERECT SHUTTER CONCRETE STEM OR UNDERPIN

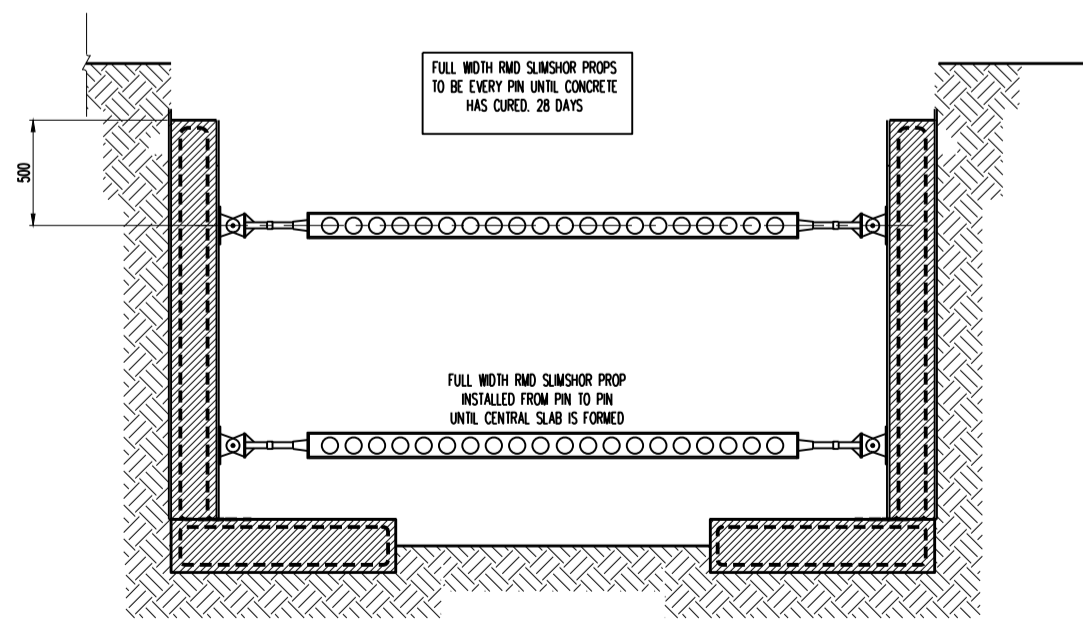


STAGE 5
STRIKE SHUTTER

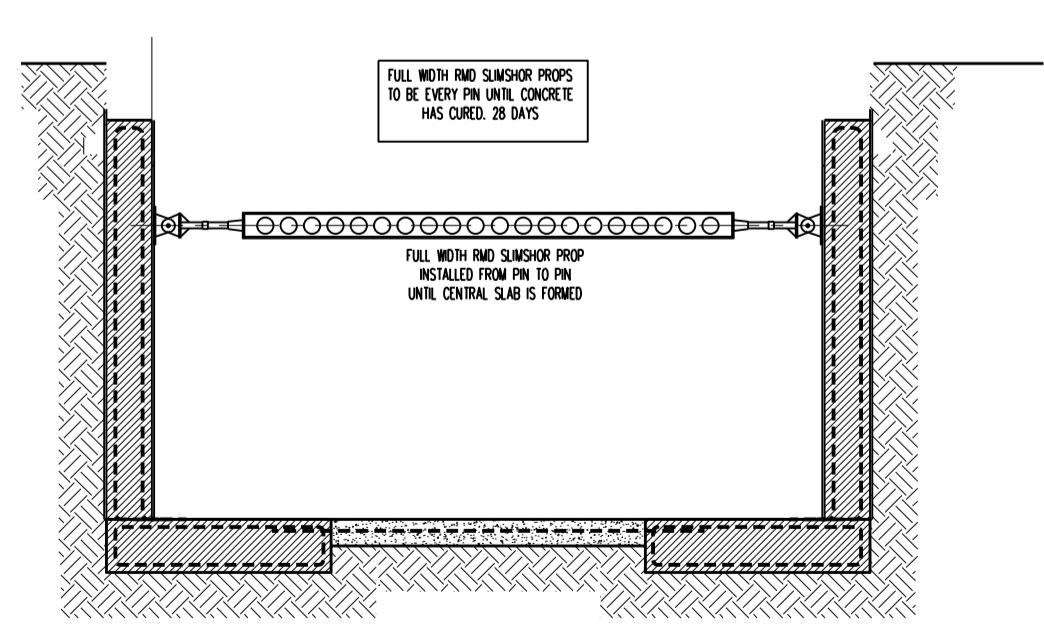
TEMPORARY WORKS SEQUENCE ADJACENT TO NEIGHBOURING HOUSE



STAGE 6
COMMENCE EXCAVATION



STAGE 7
COMPLETE EXCAVATION



STAGE 8
CAST SLAB



0	ORIGINAL ISSUE	31/10/19	MJB
REV	DESCRIPTION	DATE	BY

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DRAWING
TEMPORARY WORKS

DRAWING No.	REV	CHECKED
19388 / 02	0	
SCALE	DATE	DRAWN
As Shown	Oct '19	MJB
		APPROVED