

1. GENERAL NOTES:

- THIS DRAWING PROVIDES GUIDANCE FOR IDENTIFICATION AND CLASSIFICATION OF SOILS TO ENABLE CONFIRMATION OF THE THRUST BLOCK / ANCHOR BLOCK SIZING.
- THE ALLOWABLE HORIZONTAL BEARING PRESSURE VALUE SHOWN ON THIS DRAWING SHALL BE APPLIED TO TABLES DEPICTED ON OTHER DRAWINGS FROM THE 4005-30003 SERIES.

2. TESTING:

- TESTING AREA PREPARATION:
CONDUCT ALL NATIVE SOIL IDENTIFICATION TESTS ON A FRESHLY EXPOSED, DAMP, HAND - TRIMMED AREA OF THE TRENCH WALL IN THE PIPE ZONE. TAKE CARE THAT THE SOIL IN THE EXPOSED TEST AREA IS NOT COMPACTED OR LOOSENED DURING TRENCH EXCAVATION.
IF THE SOIL IN THE TRENCH FLOOR AND WALL IS VERY DRY AT THE TIME THE TRENCH IS OPENED THEN FLOOD THE TEST AREA AND ALLOW TIME FOR THE WATER TO BE ABSORBED BY THE SOIL BEFORE IT IS TRIMMED AND TESTED.
- CLAY SOILS:**
CLAY SOILS ARE BEST TESTED IN THE WALL OF THE TRENCH. THE FIST, THE THUMB OR THE THUMBNAIL ARE USED TO DETERMINE THE CONSISTENCY (STRENGTH) OF THE CLAY (REFER TABLE.)
 - CLEAN SAND SOILS:**
CLEAN SAND SOILS ARE BEST TESTED IN THE FLOOR OF THE TRENCH BY PUSHING WITH THE WHOLE BODY WEIGHT ON ONE FOOT. THE DEPTH OF THE DEPRESSION LEFT BY THE BOOT IS RELATED TO THE DENSITY OF THE SAND (REFER TABLE). TAKE CARE TO ENSURE THAT THE SAND IN THE TRENCH FLOOR WAS NOT COMPACTED OR LOOSENED DURING THE EXCAVATION OF THE TRENCH OR THE TRIMMING OF THE TEST AREA.
 - ROCK:**
THE RECOMMENDED FIELD IDENTIFICATION TESTS FOR ROCK RELY ON OBSERVING THE EASE WITH WHICH THE ROCK CAN BE DUG WITH A PICK, AND ESTIMATING THE SPACING OF THE JOINTS IN THE ROCK. (JOINTS ARE COMMONLY CALLED CRACKS OR BREAKS).
THE SPACING BETWEEN JOINTS IS IMPORTANT BECAUSE THE ALLOWABLE BEARING PRESSURE ON ROCK IS USUALLY CONTROLLED BY THE JOINTS IN IT, RATHER THAN THE INHERENT STRENGTH OF A FRAGMENT OF ROCK. JOINTS MAY BE TIGHTLY CLOSED (LIKE HAIRLINE CRACKS), BUT CAN ALSO BE OPEN (FILLED WITH AIR) OR FILLED WITH SOFT CLAY OR OTHER SOIL.



3. IDENTIFICATION:

- CLAY SOIL:**
A LUMP OF CLAY SOIL WILL BE DIFFICULT TO BREAK WHEN DRY. IT WILL BE STICKY AND NEED SOME EFFORT TO MOULD WITH THE FINGERS WHEN WET. CLAY WILL NOT WASH OFF EASILY. INDIVIDUAL CLAY PARTICLES CANNOT BE SEEN BY THE NAKED EYE.
- CLEAN SAND SOILS:**
THE INDIVIDUAL GRAINS OF SAND WILL BE VISIBLE TO THE EYE. A LUMP OF CLEAN SAND, IF IT CAN BE PICKED UP AT ALL, WILL CRUMBLE WITH VERY LITTLE EFFORT. CLEAN SAND WASHES OFF EASILY.

SOIL CLASSIFICATION		FIELD IDENTIFICATION	AHBP kPa Δ
CLAY SOILS	VERY SOFT	EASILY PENETRATED 40 mm WITH FIST.	< 50 ¹
	SOFT	EASILY PENETRATED 40 mm WITH THUMB.	< 50 ¹
	FIRM	MODERATE EFFORT NEEDED TO PENETRATE 30 mm WITH THUMB.	< 50 ¹
	STIFF	READILY INDENTED WITH THUMB BUT PENETRATED ONLY WITH GREAT EFFORT.	50
	VERY STIFF	READILY INDENTED WITH THUMBNAIL.	100
	HARD	INDENTED WITH DIFFICULTY BY THUMBNAIL.	200
SANDS	LOOSE CLEAN SAND	TAKES FOOTPRINT MORE THAN 10 mm DEEP.	< 50 ¹
	MEDIUM-DENSE CLEAN SAND	TAKES FOOTPRINT 3 mm TO 10 mm DEEP.	50
	DENSE CLEAN SAND OR GRAVEL	TAKES FOOTPRINT LESS THAN 3 mm DEEP.	100
ROCK	BROKEN OR DECOMPOSED ROCK	DIGGABLE. HAMMER BLOW "THUDS". JOINTS (BREAKS IN ROCK) SPACED AT LESS THAN 300 mm APART.	100
	SOUND ROCK	NOT DIGGABLE WITH PICK. HAMMER BLOW "RINGS" JOINTS (BREAK IN ROCK) SPACED MORE THAN 300 mm APART.	200
UNCOMPACTED FILL DOMESTIC REFUSE		OBSERVATION AND KNOWLEDGE OF THE SITE HISTORY.	< 50 ¹

LEGEND:

- Δ AHBP kPa = ALLOWABLE HORIZONTAL BEARING PRESSURE.
- 10 mm MOVEMENT
- CENTRE OF THRUST 800mm BELOW THE NATURAL SURFACE LEVEL
- HIGH WATER TABLE
- ¹ SPECIAL GEOTECHNICAL ASSESSMENT REQUIRED

REVISION PANEL					DESIGN PANEL			<div></div> <div>This drawing is the property of the SOUTH AUSTRALIAN WATER CORPORATION and shall not be copied or modified in part or in whole without authorization.</div>	SA WATER STANDARD DRAWINGS WATER SUPPLY CONSTRUCTION MANUAL		A3 SHT SIZE		1 REVISION
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