

enstruct

CIVIL ENGINEERING WORKS

NARRABEEN EDUCATION PRECINCT

NARRABEEN SPORTS HIGH SCHOOL

10 NAMONA STREET, NORTH NARRABEEN



CIVIL ENGINEERING WORKS DRAWING LIST:

6683-CV-0001	COVER SHEET
6683-CV-0002	NOTES SHEET
6683-CV-1001	EROSION AND SEDIMENT CONTROL PLAN
6683-CV-1101	EROSION AND SEDIMENT CONTROL DETAIL SHEET
6683-CV-3001	BULK EARTHWORKS PLAN
6683-CV-4001	STORMWATER DRAINAGE PLAN
6683-CV-4301	STORMWATER DRAINAGE DETAIL SHEET

TO BE PRINTED IN FULL COLOUR

NOT FOR CONSTRUCTION

01	19/08/22	ISSUE FOR DA	MZV	PAL	
rev	date	description	dm	ch/k	

rev	date	description	dm	ch/k	



enstruct group pty ltd

Level 4, 2 Glen Street
Milsons Point NSW 2061
Australia

Telephone (02) 8904 1444
Facsimile (02) 8904 1555
www.enstruct.com.au



project	NARRABEEN EDUCATION PRECINCT
	NAMONA STREET STREET, NORTH NARRABEEN, NSW, 2101

drawing title	NARRABEEN SPORTS HIGH SCHOOL COVER SHEET
---------------	--

status			
DEVELOPMENT APPLICATION			
scale at A1	drawn MZV	checked PAL	approved PAL
project no. 6683	sheet 6683-CV-0001		rev. 01

BOUNDARY AND EASEMENT NOTE

The property boundary and easement locations shown on enstruct drawing's have been based from information received from: C.M.S. SURVEYORS 18830.A.

enstruct makes no guarantees that the boundary or easement information shown is correct. enstruct will accept no liabilities for boundary inaccuracies. The contractor/builder is advised to check/confirm all boundaries in relation to all proposed work prior to the commencement of construction. Boundary inaccuracies found are to be reported to the superintendent prior to construction starting.

CIVIL SAFETY IN DESIGN

enstruct (NSW) Pty Ltd operates under Safe Work Australia's code of Conduct for the Safe Design of Structures. These drawings shall be read in conjunction with the enstruct Transfer of Information Letter and Civil risk and Solutions Register. Under the Code of Conduct it is the Client's responsibility to provide a copy of the Civil Risk and Solutions Register to the Principal Contractor. It is the Principal Contractor's responsibility to review the hazards and risks identified during the design process to ensure a safe workplace is maintained for the construction, maintenance and eventual demolition of the civil infrastructure.

CONCRETE FINISHING NOTES

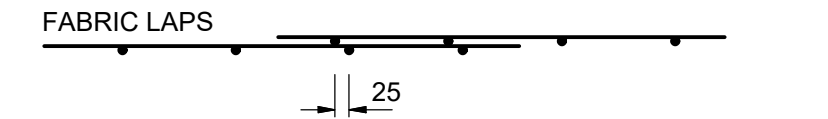
- 1. All exposed concrete pavements are to be broomed finished.
- 2. All edges of the concrete pavement including keyed and dowelled joints are to be finished with an edging tool.
- 3. Concrete pavements with grades greater than 10 % shall be heavily broomed finished.
- 4. Carborundum to be added to all stair treads and ramped crossings U.N.O.

GENERAL NOTES

- 1. Contractor must verify all dimensions and existing levels on site prior to commencement of works. Any discrepancies to be reported to the Engineer
- 2. Strip all topsoil from the construction area. All stripped topsoil shall be disposed of off-site unless directed otherwise.
- 3. Make smooth connection with all existing works.
- 4. Compact subgrade under buildings and pavements to minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1. Compaction under buildings to extend 2m minimum beyond building footprint.
- 5. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority; the Contractor is to ensure that the drawings used for construction have been approved by all relevant authorities prior to commencement site.
- 6. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority is to be carried out in accordance with the requirements of the relevant Authority. The Contractor shall obtain these requirements from the Authority. Where the requirements of the Authority are different to the drawings and specifications, the requirements of the Authority shall be applicable.
- 7. For all temporary batters refer to geotechnical recommendations.
- 8. The approval of a substation shall be sought from the superintendent but is not an authorisation of a cost variation. The superintendent must approve any cost variation before any work starts

CONCRETE REINFORCEMENT NOTES

- 1. Fix reinforcement as shown on drawings. The type and grade is indicated by a symbol as shown below. On the drawings this is followed by a numeral which indicates the size in millimetres of the reinforcement.
 - N. Hot rolled ribbed bar grade D500N
 - R. Plain round bar grade R250N
 - SL. Square mesh grade 500L
 - RL. Rectangular mesh grade 500L
- 2. Provide bar supports or spacers to give the following concrete cover to all reinforcement unless otherwise noted on drawings.
 - Footings - 50 top, 50 bottom, 50 sides.
 - Walls
 - 30 generally.
 - 30 when cast in forms but later exposed to weather or ground.
 - .. when cast directly in contact with ground.
- 3. Cover to reinforcement ends to be 50 mm u.n.o.
- 4. Provide N12-450 support bars to top reinforcement as required, Lap 500 U.N.O.
- 5. Maintain cover to all pipes, conduits, reglets, drip grooves etc.
- 6. All cogs to be standard cogs unless noted otherwise.
- 7. Fabric end and side laps are to be placed strictly in accordance with the manufacturers requirements to achieve a full tensile lap. Fabric shall be laid so that there is a maximum of 3 layers at any location.



- 8. Laps in reinforcement shall be made only where shown on the drawings unless otherwise approved. Lap lengths as per table below.

SURVEY AND SERVICES INFORMATION

SURVEY
Origin of levels : SSM 40541
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA (GDA 2020)
Survey prepared by : C.M.S. SURVEYORS PTY LTD.
Setout Points : CONTACT THE SURVEYOR

enstruct does not guarantee that the survey information shown on these drawings is accurate and will accept no liability for any inaccuracies in the survey information provided to us from any cause whatsoever.

UNDERGROUND SERVICES - WARNING

The locations of underground services shown on enstruct drawings have been plotted from diagrams provided by service authorities. This information has been prepared solely for the authorities own use and may not necessarily be updated or accurate.

The position of services as recorded by the authority at the time of installation may not reflect changes in the physical environment subsequent to installation.

enstruct does not guarantee that the services information shown on these drawings shows more than the presence or absence of services, and will accept no liability for inaccuracies in the services information shown from any cause whatsoever.

The Contractor must confirm the exact location and extent of services prior to construction and notify any conflict with the drawings immediately to the Engineer/Superintendent.

The contractor is to get approval from the relevant state survey department, to remove/adjust any survey mark. This includes but is not limited to: State Survey Marks (SSM), Permanent Marks (PM), cadastral reference marks or any other survey mark which is to be removed or adjusted in any way.

enstruct plans do not indicate the presence of any survey mark. The contractor is to undertake their own search.

STORMWATER DRAINAGE NOTES

- 1. Stormwater Design Criteria :
 - (A) Average exceedance probability -
 - 1% AEP for roof drainage to first external pit
 - 5% AEP for paved and landscaped areas
 - (B) Rainfall intensities -
 - Time of concentration: 5 minutes
 - 1% AEP = 271 mm/hr
 - 5% AEP = 203 mm/hr
 - (C) Rainfall losses
 - Impervious areas: IL= 1.0 mm , CL = 0 mm/hr
 - Pervious areas: IL= 41mm , CL = 1.8 mm/hr
- 2. Pipes 300 dia and larger to be reinforced concrete Class "2" approved spigot and socket with rubber ring joints U.N.O. Pipes in public roadways (including public domain) to be class 4 reinforced concrete.
- 3. Pipes up to 300 dia may be sewer grade uPVC with solvent welded joints, subject to approval by the engineer
- 4. Equivalent strength VCP or FRP pipes may be used subject to approval.
- 5. Pits in roadways (including public domain) are to be insitu to council details.
- 6. Enlargers, connections and junctions to be manufactured fittings where pipes are less than 300 dia.
- 7. Where subsoil drains pass under floor slabs and vehicular pavements, unsloated uPVC sewer grade pipe is to be used.
- 8. Grates and covers shall conform with AS 3996-2006, and AS 1428.1 for access requirements.
- 9. Pipes are to be installed in accordance with AS 3725. All bedding to be type H2 U.N.O.
- 10. Care is to be taken with invert levels of stormwater lines. Grades shown are not to be reduced without approval.
- 11. All downpipe connections are to be 150mm DIA or the same size as the downpipe (whichever is larger) laid at 1% minimum fall connection to the nearest pit. Minimum cover 450mm in landscaped areas.
- 12. Subsoil drains to be slotted flexible uPVC U.N.O.
- 13. Adopt invert levels for pipe installation (grades shown are only nominal).

DBYD SERVICES NOTE

"Public Service Utility information shown on plan has been compiled from information received from Dial Before You Dig inquiry, reference Number **31037191**, which was obtained on 07/12/21. Unless specifically shown otherwise, this location and depth of services shown on this plan have not been verified.

The location of services shown on this drawing have been plotted as accurately as possible from diagrams provided by service authorities and should be confirmed by site inspection."

STORMWATER PIT SCHEDULE

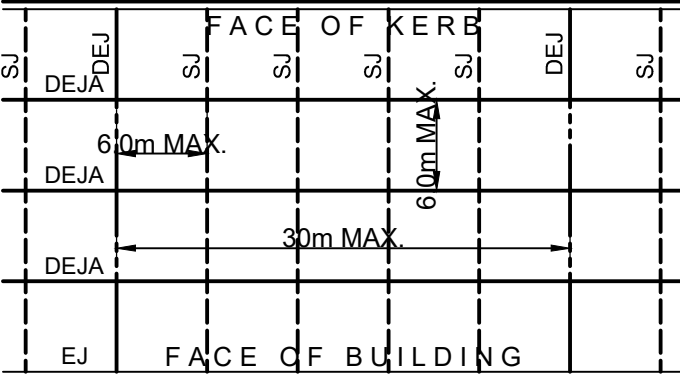
Note: Grate size does not necessarily reflect pit size, refer pit type details, shown on detail sheets - CV4301
Final internal pit dimensions are to comply with AS3500

Type	Description	Size	Class	Water Quality	Material	Number
B	Surface inlet pit	600x 900	D	Litter basket	Galvanised mild steel grate hinged to frame	B1, B2, B3, B4, B5, B6, B7, B8
C	Junction pit	600x 900	D		Cast iron cover with concrete infill	C1
D	Existing pit to be demolished and removed					D1, D2
E	Existing pit to remain					E1, E2, E3

JOINTING NOTES

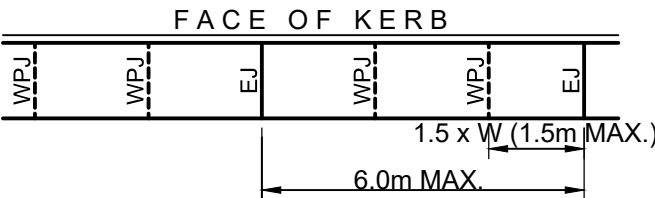
Vehicular Pavement Jointing

- 1. All vehicular pavements to be jointed as shown on drawings.
- 2. Keyed construction joints should generally be located at a maximum of 6m centres.
- 3. Sawn joints should generally be located at a maximum of 6m centres or 1.5 x the spacing of keyed joints, where key joint spacing is less than 4m, with dowelled expansion joints at maximum of 30m centres.
- 4. Provide 10mm wide full depth expansion joints between buildings and all concrete or unit pavers.
- 5. The timing of the saw cut is to be confirmed by the contractor on site. Site conditions will determine how many hours after the concrete pour before the saw cuts are commenced. Refer to the specification for weather conditions and temperatures required.
- 6. Vehicular pavement jointing as follows.



Pedestrian Footpath Jointing

- 1. Expansion joints are to be located where possible at tangent points of curves and elsewhere at max 6.0m centres.
- 2. Weakened plane joints are to be located at a max 1.5 x width of the pavement.
- 3. Where possible joints should be located to match kerbing and / or adjacent pavement joints.
- 4. All pedestrian footpath jointings as follows (uno).



CONCRETE NOTES

EXPOSURE CLASSIFICATION : External :B2

CONCRETE

Place concrete of the following characteristic compressive strength f_c as defined in AS 1379.

Location	AS 1379 f _c MPa at 28 days	Specified Slump	Nominal Agg. Size
Kerbs	S20	80	20
Pavements	S32	80	20
Retaining wall footing	S40	80	20

- 1. Use Type 'GP' cement, unless otherwise specified.
- 2. All concrete shall be subject to project assessment and testing to AS 1379.
- 3. Consolidate by mechanical vibration. Cure all concrete surfaces as directed in the Specification.
- 4. For all falls in slab, drip grooves, reglets, chamfers etc. refer to Architects drawings and specifications.
- 5. Unless shown on the drawings, the location of all construction joints shall be submitted to Engineer for review.
- 6. No holes or chases shall be made in the slab without the approval of the Engineer.
- 7. Conduits and pipes are to be fixed to the underside of the top reinforcement layer.
- 8. Slurry used to lubricate concrete pump lines is not to be used in any structural members.
- 9. All slabs cast on ground require sand blinding with a Concrete Underlay

FORMWORK

- 1. The design, certification, construction and performance of the formwork, falsework and backpropping shall be the responsibility of the contractor. Proposed method of installation and removal of formwork is to be submitted to the superintendent for comment prior to work being carried out.

KERBING NOTES

Includes all kerbs, gutters, dish drains, crossings and edges.

- 1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
- 2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
- 3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
- 4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
- 5. In the replacement of kerbs - Existing road pavement is to be sawcut 900mm from: Lip of gutter, invert of kerb, or edge of dish drain. Upon completion of new kerbs, new basecourse and surface is to be laid 900mm wide to match existing materials and thicknesses.
- 6. Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
- 7. Existing kerbs are to be completely removed where new kerbs are shown.

SAFETY IN DESIGN

Contractor to refer to the Civil Risk and Solutions Register.

EXISTING SERVICES

Contractor to be aware existing services are located within the site. Location of all services to be verified by the Contractor prior to commencing works. Contractor to confirm with relevant authority regarding measures to be taken to ensure services are protected or procedures are in place to demolish and/or relocate.

EXISTING STRUCTURES

Contractor to be aware existing structures may exist within the site. To prevent damage to existing structure(s) and/or personnel, site works to be carried out as far as practicably possible from existing structure(s).

EXISTING TREES

Contractor to be aware existing trees exist within the site which need to be protected. To prevent damage to trees and/or personnel, site works to be carried out as far as practicably possible from existing trees. Advice needs to be sought from Arborist and/or Landscape Architect on measures required to protect trees.

GROUNDWATER

Contractor to be aware ground water levels are close to existing surface level. Temporary de-watering may be required during construction works.

EXCAVATIONS

Deep excavations due to stormwater drainage works is required. Contractor to ensure safe working procedures are in place for works. All excavations to be fenced off and batters adequately supported to approval of Geotechnical Engineer.

GROUND CONDITIONS

Contractor to be aware of the site geotechnical conditions. Refer to geotechnical report by Douglas Partners for details.

HAZARDOUS MATERIALS

Existing asbestos products & contaminated material may be present on site. Contractor to ensure all hazardous materials are identified prior to commencing works. Safe working practices as per relevant authority to be adopted and appropriate PPE to be used when handling all hazardous materials. Refer to geotechnical/environmental report by Douglas Partners for details.

CONFINED SPACES

Contractor to be aware of potential hazards due to working in confined spaces such as stormwater pits, trenches and/or tanks. Contractor to provide safe working methods and use appropriate PPE when entering confined spaces.

MANUAL HANDLING

Contractor to be aware manual handling may be required during construction. Contractor to take appropriate measures to ensure manual handling procedures and assessments are in place prior to commencing works.

WATER POLLUTION

Contractor to ensure appropriate measures are taken to prevent pollutants from construction works contaminating the surrounding environment.

SITE ACCESS/EGRESS

Contractor to be aware site works occur in close proximity to footpaths and roadways. Contractor to erect appropriate barriers and signage to protect site personnel and public.

VEHICLE MOVEMENT

Contractor to supply and comply with traffic management plan and provide adequate site traffic control including a certified traffic marshal to supervise vehicle movements where necessary.

SITEWORKS NOTES

- 1. All basecourse material to comply with RMS specification No 3051 and compacted to minimum 98% modified dry density in accordance with AS 1289 5.2.1.
- 2. All trench backfill material shall be compacted to the same density as the adjacent material.
- 3. All service trenches under vehicular pavements shall be backfilled with an approved select material and compacted to a minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1

TO BE PRINTED IN FULL COLOUR

NOT FOR CONSTRUCTION

02	25/08/22	ISSUE FOR DA		MZV	KEH
01	19/08/22	ISSUE FOR DA		MZV	PAL
rev	date	description	dm	ch	k

rev	date	description	dm	ch	k

enstruct group pty ltd

Level 4, 2 Glen Street
Milsoms Point NSW 2081
Australia

Telephone (02) 8904 1444
Facsimile (02) 8904 1555
www.enstruct.com.au

enstruct

project
**NARRABEEN EDUCATION
PRECINCT**

NAMONA STREET STREET, NORTH
NARRABEEN, NSW, 2101

drawing title
**NARRABEEN SPORTS
HIGH SCHOOL
NOTES SHEET**

status DEVELOPMENT APPLICATION			
scale at A1 NTS	drawn MZV	checked PAL	approved PAL
project no. 6683	sheet 6683-CV-0002	rev. 02	



LEGEND

- Siltation Fence
- Sandbag Sediment Trap
- Overland Flow Path

EROSION AND SEDIMENT CONTROL NOTES

- All work shall be generally carried out in accordance with (A) Local authority requirements, (B) EPA - Pollution control manual for urban stormwater, (C) LANDCOM NSW - Managing Urban Stormwater: Soils and Construction ("Blue Book").
- Erosion and sediment control drawings and notes are provided for the whole of the works. Should the Contractor stage these works then the design may be required to be modified. Variation to these details may require approval by the relevant authorities. The erosion and sediment control plan shall be implemented and adapted to meet the varying situations as work on site progresses.
- Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
- When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
- Minimise the area of site being disturbed at any one time.
- Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
- All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
- Control water from upstream of the site such that it does not enter the disturbed site.
- All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
- All vehicles leaving the site shall be cleaned and inspected before leaving.
- Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
- Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

- Prior to commencement of excavation the following soil management devices must be installed.
- Construct silt fences below the site and across all potential runoff sites.
- Construct temporary construction entry/exit and divert runoff to suitable control systems.
- Construct measures to divert upstream flows into existing stormwater system.
- Construct sedimentation traps/basin including outlet control and overflow.
- Construct turf lined swales.
- Provide sandbag sediment traps upstream of existing pits.
- Construct geotextile filter pit surround around all proposed pits as they are constructed.
- On completion of pavement provide sand bag kerb inlet sediment traps around pits.
- Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

WATER QUALITY TESTING REQUIREMENTS

Prior to discharge of site stormwater, groundwater and seepage water into council's stormwater system, contractors must undertake water quality tests in conjunction with a suitably qualified environment consultant outlining the following:

- Compliance with the criteria of the Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000)
- If required subject to the environmental consultants advice, provide remedial measures to improve the quality of water that is to be discharged into Councils storm water drainage system. This should include comments from a suitably qualified environmental consultant confirming the suitability of these remedial measures to manage the water discharged from the site into Councils storm water drainage system. Outlining the proposed, ongoing monitoring, contingency plans and validation program that will be in place to continually monitor the quality of water discharged from this site. This should outline the frequency of water quality testing that will be undertaken by a suitably qualified environmental consultant.

Date generated: 25/08/2022 11:10:11 AM P:\4-600068300 - ENSTRUCT DOCUMENTS\01 - CAD\CIVIL\DRAWINGS\NSW\683-CV-1001

02	25/08/22	ISSUE FOR DA	MZV	KEH	
01	19/08/22	ISSUE FOR DA	MZV	PAL	
rev	date	description	dm	ch/k	

rev	date	description	dm	ch/k	

enstruct group pty ltd

Level 4, 2 Glen Street
Milsons Point NSW 2061
Australia

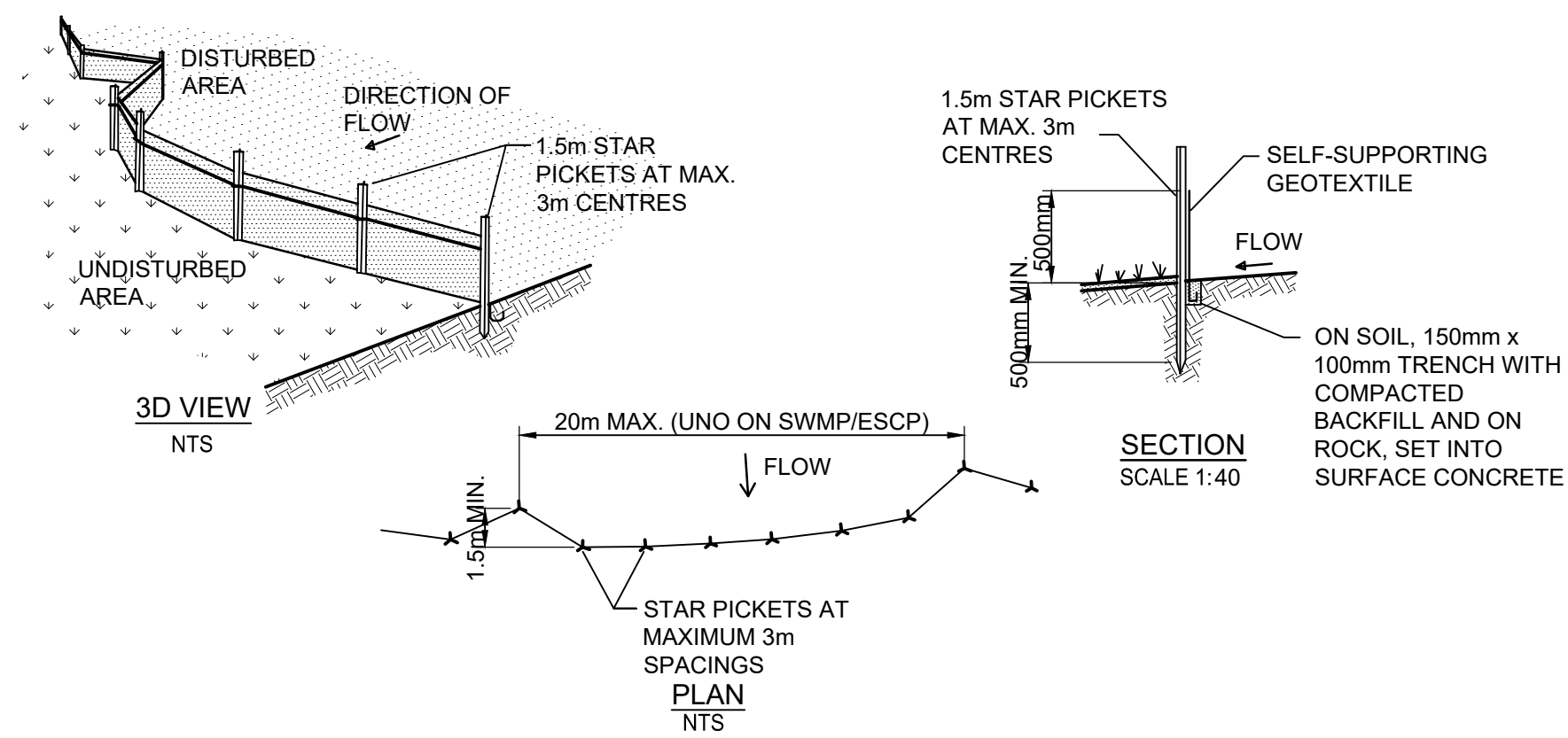
Telephone (02) 8904 1444
Facsimile (02) 8904 1555
www.enstruct.com.au



project	NARRABEEN EDUCATION PRECINCT
	NAMONA STREET STREET, NORTH NARRABEEN, NSW, 2101

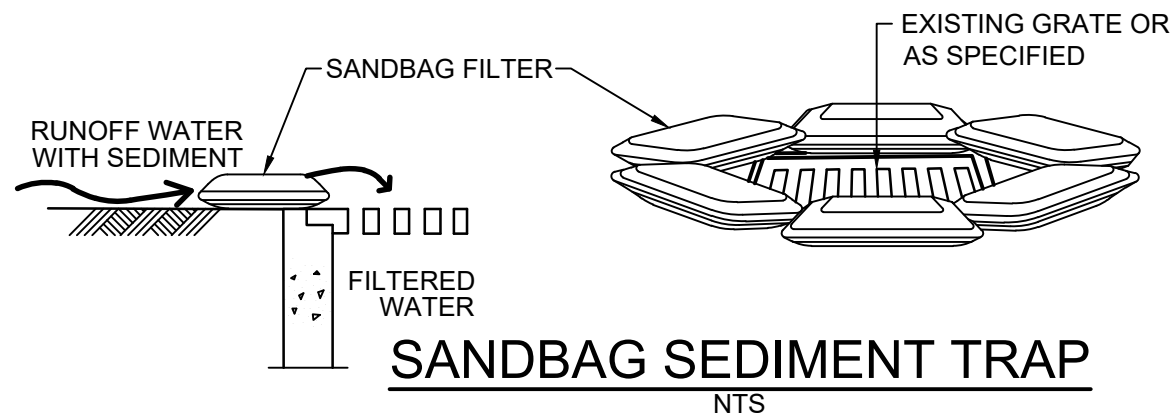
drawing title	NARRABEEN NORTH PUBLIC SCHOOL EROSION AND SEDIMENT CONTROL PLAN
---------------	--

status	DEVELOPMENT APPLICATION
scale at A1	1:250
drawn	MZV
checked	PAL
approved	PAL
project no.	6683
sheet	6683-CV-1001
rev.	02



SILTATION FENCE DETAIL

- NOTES
- 1. CONSTRUCT SEDIMENT FENCE AS CLOSE AS POSSIBLE TO PARALLEL TO THE CONTOURS OF THE SITE.
 - 2. DRIVE 1.5m LONG STAR PICKETS INTO GROUND, 3 METRES APART.
 - 3. DIG A 200mm DEEP TRENCH ALONG THE UPSLOPE LINE OF THE FENCE FOR THE BOTTOM OF THE FABRIC TO BE ENTRENCHED.
 - 4. BACKFILL TRENCH OVER BASE OF FABRIC.
 - 5. FIX SELF-SUPPORTING GEOTEXTILE TO UPSLOPE SIDE OF POSTS WITH WIRE TIES OR AS RECOMMENDED BY GEOTEXTILE MANUFACTURER.
 - 6. JOIN SECTIONS OF FABRIC AT A SUPPORT POST WITH A 150mm OVERLAP.



Date generated: 17/08/2022 4:08:28 PM | ENSTRUT.COM.AU/CADD/6683/CV/DRAWINGS/6683-CV-1101

TO BE PRINTED IN FULL COLOUR

NOT FOR CONSTRUCTION

01	19/08/22	ISSUE FOR DA	MZV	PAL	
rev	date	description	dwn	ch/k	

rev	date	description	dwn	ch/k	



enstrut group pty ltd

Level 4, 2 Glen Street
Milsons Point NSW 2061
Australia

Telephone (02) 8904 1444
Facsimile (02) 8904 1555
www.enstrut.com.au

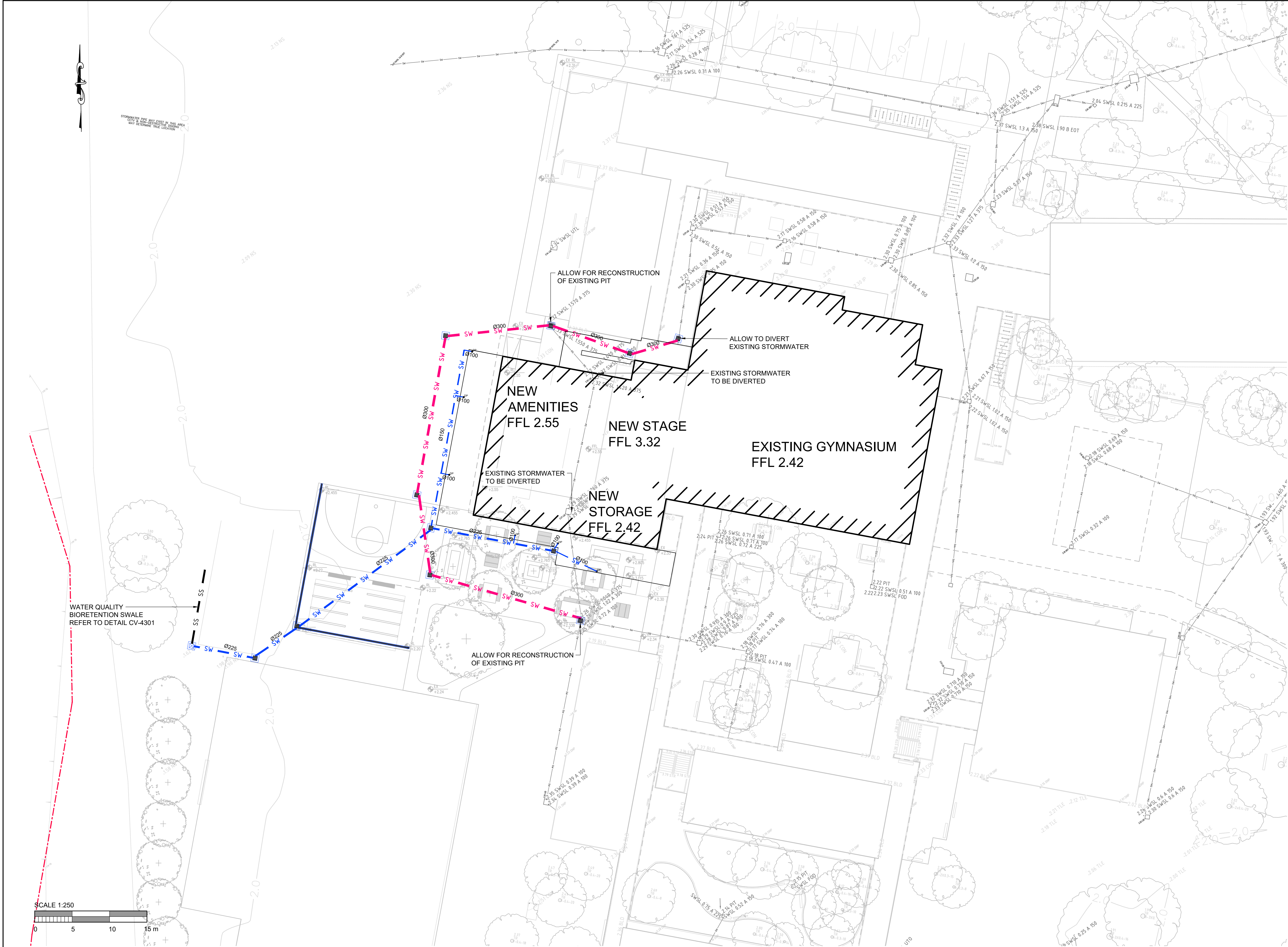


project	NARRABEEN EDUCATION PRECINCT
	NAMONA STREET STREET, NORTH NARRABEEN, NSW, 2101

drawing title	NARRABEEN SPORTS HIGH SCHOOL EROSION AND SEDIMENT CONTROL DETAIL SHEET
---------------	---

status			
DEVELOPMENT APPLICATION			
scale at A1	drawn	checked	approved
AS SHOWN	MZV	PAL	PAL
project no.	sheet		rev.
6683	6683-CV-1101		01

Date generated: 25/08/2022 3:37:48 PM P:\4-690683\300 - ENSTRUCT DOCUMENTS\01 - CAD\CIVIL\DRAWINGS\683-CV-4001



LEGEND

SW

SW

SS

SW

SW

SW

Existing Stormwater

Proposed Stormwater

Building Extent

Bioretention Swale

Proposed Grated Pit

Proposed Junction Pit

Proposed Linear Drain

Proposed Stormwater Diversion

Proposed Downpipes

STORMWATER DRAINAGE EFSG NOTES

All minimum pipe sizes are to be in accordance with ESFG Section 95.08:

- DN 100 for subsoil drainage
- DN 225 downstream of any grated pit
- DN 225 downstream of any side entry pit

Minimize the extent of pipe runs under building slabs.

02	25/08/22	ISSUE FOR DA	MZV	KEH	
01	19/08/22	ISSUE FOR DA	MZV	PAL	
rev	date	description	dm	ch/k	

rev	date	description	dm	ch/k	

enstruct group pty ltd

Level 4, 2 Glen Street
Milsons Point NSW 2061
Australia

Telephone (02) 8904 1444
Facsimile (02) 8904 1555
www.enstruct.com.au



project
**NARRABEEN EDUCATION
PRECINCT**

NAMONA STREET STREET, NORTH
NARRABEEN, NSW, 2101

drawing title
**NARRABEEN SPORTS
HIGH SCHOOL
STORMWATER DRAINAGE
PLAN**

status DEVELOPMENT APPLICATION			
scale at A1 1:250	drawn MZV	checked PAL	approved PAL
project no. 6683	sheet 6683-CV-4001	rev. 02	

SCALE 1:10

NOTE: IF REINFORCING FABRIC IS TO BE USED
REFER TO WALL AND CORNER DETAILS

NOTE:
1. THE CHANNEL MUST NOT BE TRAFFICKED
UNTIL WEARING COURSE IS LAID

SECTION 1
SCALE 1:20

SCALE: NTS

PLAIN
SCALE 1:20

SCALE 1:10

SCALE 1:10

NOTES FOR PITS:

1. HOLES BROKEN/FORMED IN PRE-CAST PITS FOR THE INSERTION OF PIPES SHALL BE MADE WATERTIGHT AND REINSTATED WITH A STIFF MORTAR (3 CEMENT:1 FINE AGGREGATE) OR EPOXY BASED SEALANT.

SCHOOL DOWNPIPE DETAILS

TYPICAL TRENCH 'HS' SUPPORT BACKFILL DETAIL

NOTES:

1. MASS CONCRETE BENCHING WITHIN PITS MUST BE FORMED SO AS TO CONVEY WATER FROM INLET(S) TO OUTLET.
2. BENCHING SHOULD BE ACHIEVE MINIMUM CROSS FALLS WITHIN PITS AS REQUIRED BY ENSTRUCT'S PIT DETAILS AND AUSTRALIAN STANDARDS.
3. NO WATER IS TO STAND IN PITS WHEN BENCHING IS COMPLETE.

TYPICAL PIT BENCHING DETAILS

SCALE 1:20

TO BE PRINTED IN FULL COLOUR

01	19/08/22	ISSUE FOR DA			MZV PAL
rev	date	description			drn ch'k

rev	date		description	dwn	ch/k

--

enstruct group pty ltd

Level 4, 2 Glen Street
Milsons Point NSW 2061
Australia

Telephone (02) 8904 1444
Facsimile (02) 8904 1555
www.enstruct.com.au

enstruct

project

NARRABEEN EDUCATION
PRECINCT

NAMONA STREET STREET, NORTH
NARRABEEN, NSW, 2101

drawing title

NARRABEEN SPORTS HIGH SCHOOL STORMWATER DRAINAGE DETAIL SHEET

status

DEVELOPMENT APPLICATION

scale at A1	drawn	checked	approved
AS SHOWN	MZV	PAI	PAI

project no. 6683	sheet 6683-CV-4301	rev. 01
---------------------	-----------------------	------------

NOT FOR CONSTRUCTION