

A1 | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P

HOMEBUSH BAY BRIDGE CONCEPT DESIGN COVER SHEET AND DRAWING INDEX

DRAWING INDEX

BRIDGE STRUCTURE

S01-CST-700 PROPOSED BRIDGE - COVER SHEET AND DRAWING INDEX

S11-CST-700 PROPOSED BRIDGE - GENERAL ARRANGEMENT PLAN AND ELEVATION

S12-CST-700 PROPOSED BRIDGE - GENERAL ARRANGEMENT DETAILS

S25-CST-700 PROPOSED BRIDGE - FOUNDATION DETAILS DRIVEN PRECAST PILE OPTION

S26-CST-700 PROPOSED BRIDGE - FOUNDATION DETAILS DRIVEN STEEL PILE OPTION

BRIDGE STRUCTURE - TEMPORARY WORKS

S101-CST-700 PROPOSED BRIDGE - CONSTRUCTION SEQUENCE SHEET 1

S102-CST-700 PROPOSED BRIDGE - CONSTRUCTION SEQUENCE SHEET 2

S151-CST-700 PROPOSED BRIDGE - GENERAL ARRANGEMENT WORKSITE AREAS

DRAINAGE DESIGN

D101-CST-700 CONSTRUCTION STORMWATER - MANAGEMENT SYSTEM

D102-CST-700 OPERATIONAL STORMWATER - MANAGEMENT SYSTEM

No.	BY	DATE	DESCRIPTION	APPD

15/08/2011 A.P.T. J.K. M.C.

Date Drawn Design Appd

Client
FAIRMEAD BUSINESS PTY LIMITED

Job Title
HOMEBUSH BAY BRIDGE

Scale at A1

Discipline

ARUP

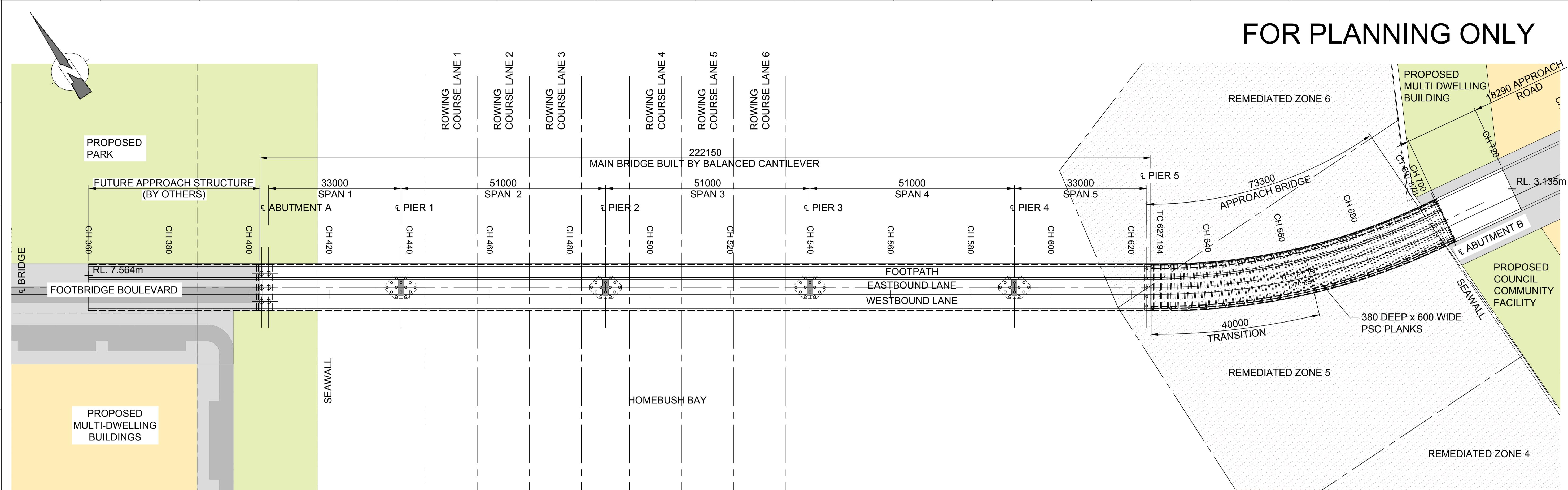
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Drawing Title
PROPOSED BRIDGE
COVER SHEET
DRAWING INDEX

Drawing Status
CONCEPT DESIGN

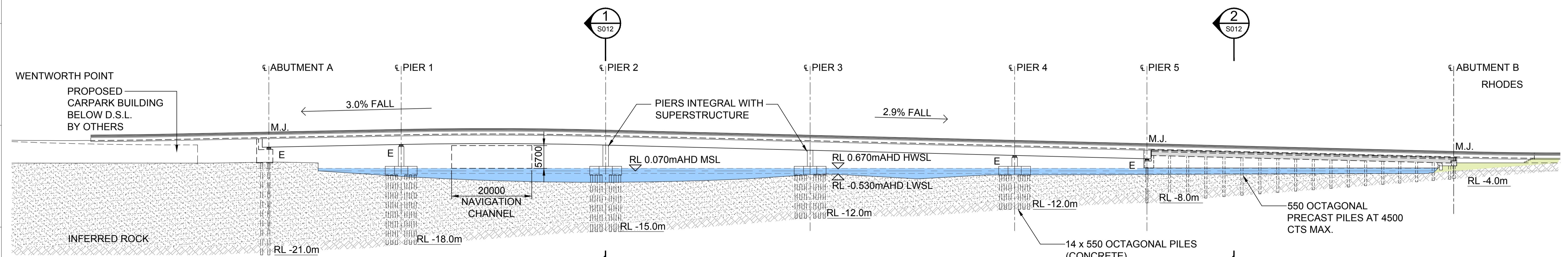
Job No 221379 Drawing No S001-CST-700 Issue -

FOR PLANNING ONLY



BRIDGE - PLAN

SCALE 1:500



BRIDGE - ELEVATION

SCALE 1:500

GENERAL NOTES:

1. DIMENSIONS ARE IN MILLIMETRES UNLESS NOTED OTHERWISE.
2. ALL LEVELS ARE IN METERS RELATIVE TO AHD
3. DESIGN LOADING - T44 TO 'AUSTROAD 96'
4. DESIGN SPEED = 50km/H
5. EARTHQUAKE DESIGN CATEGORY = BEDC-1
6. M.J. DENOTES MOVEMENT JOINT
7. FOR ROAD PROFILES REFER TO DRG No's C101-CST-700 AND C102.
8. SPAN LENGTHS ARE SHOWN ALONG CONTROL LINE MC00.

No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

0 10 20 30 40 50
SCALE 1:500m

15/08/2011 A.P.T. J.K. M.C.

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Client
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Job Title

HOMEBUSH BAY BRIDGE

Scale at A1

Discipline

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Drawing Title
PROPOSED BRIDGE
GENERAL ARRANGEMENT
PLAN AND ELEVATION

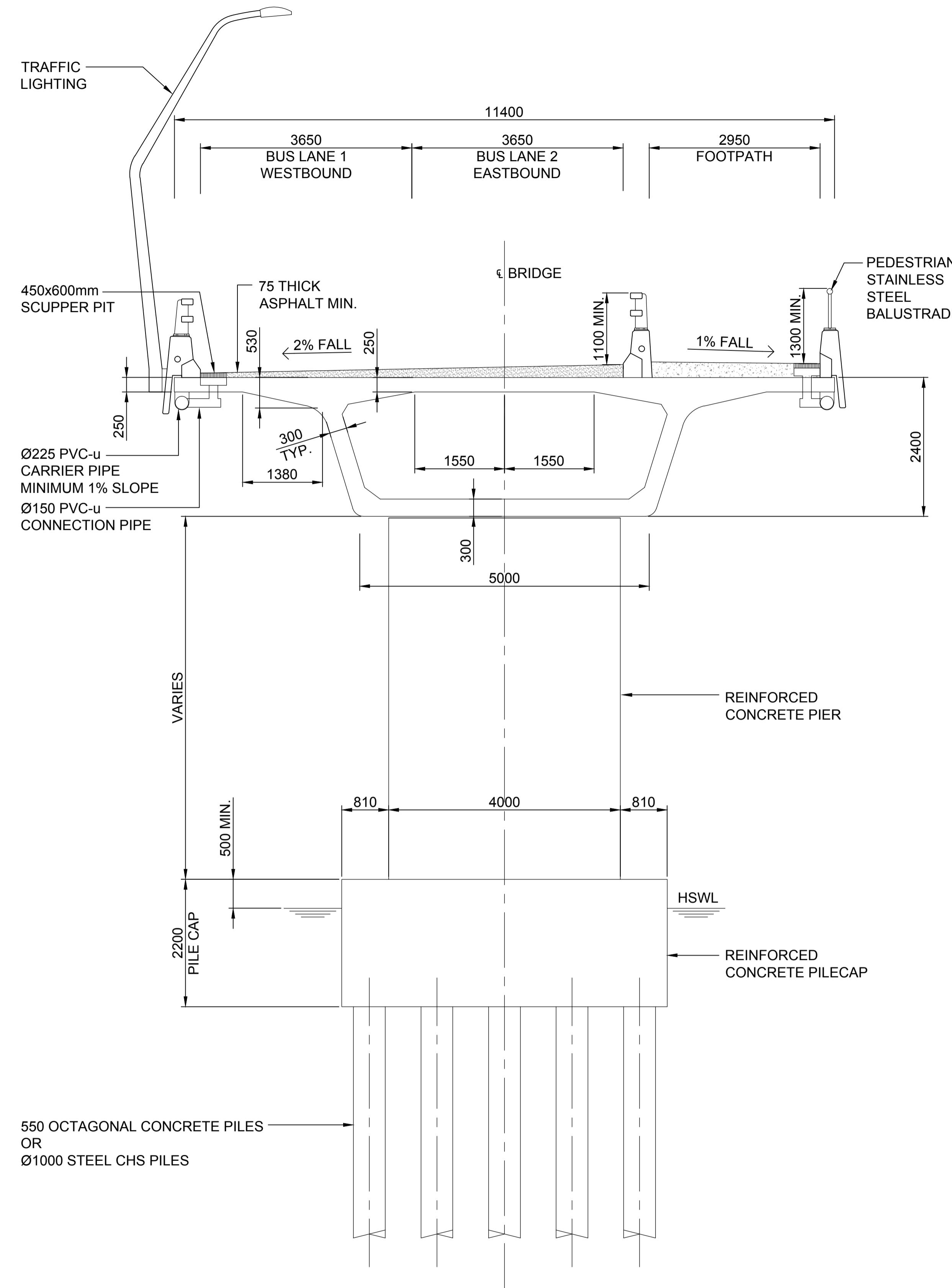
Drawing Status
CONCEPT DESIGN

Job No
221379

Drawing No
S011-CST-700

Issue
-

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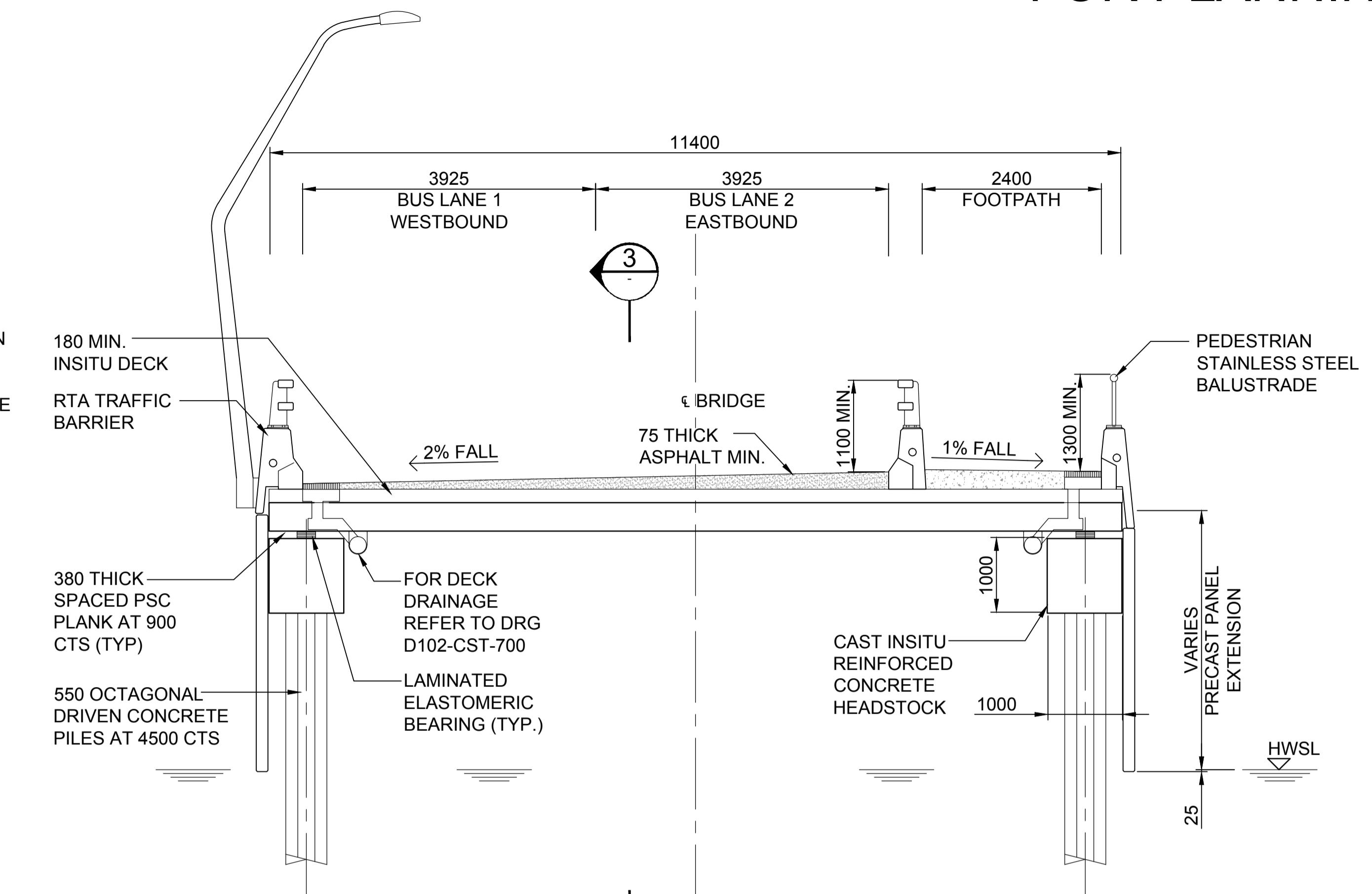
SECTION 1 PREFERRED OPTION - CONVENTIONAL BOX GIRDER

SCALE 1:50

S011

0 1 2 3 4 5
SCALE 1:50m

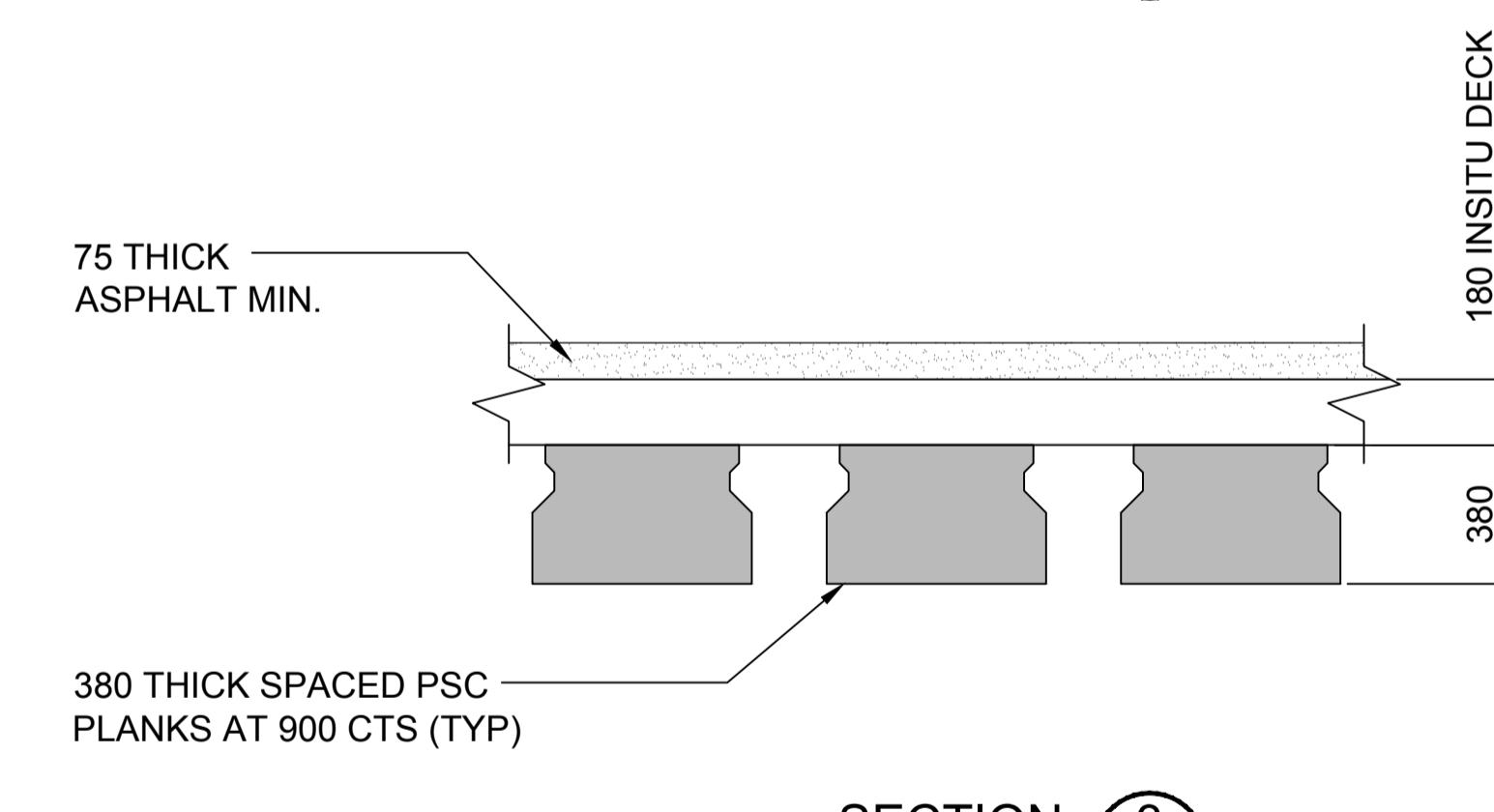
No.	BY	DATE	DESCRIPTION	APPD
Do not scale				



SECTION 2

SCALE 1:50

S011



SECTION 3

SCALE 1:20

S011

GENERAL NOTES:

1. BEARINGS ARE NOT SHOWN. FOR BEARING ARRANGEMENT, REFER TO DRG No.'S S051.
2. SUPERSTRUCTURE CONCRETE GRADE IS 50MPa.

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www.arup.comDrawing Title PROPOSED BRIDGE
GENERAL ARRANGEMENT
DETAILS - SHEET 1 OF 2

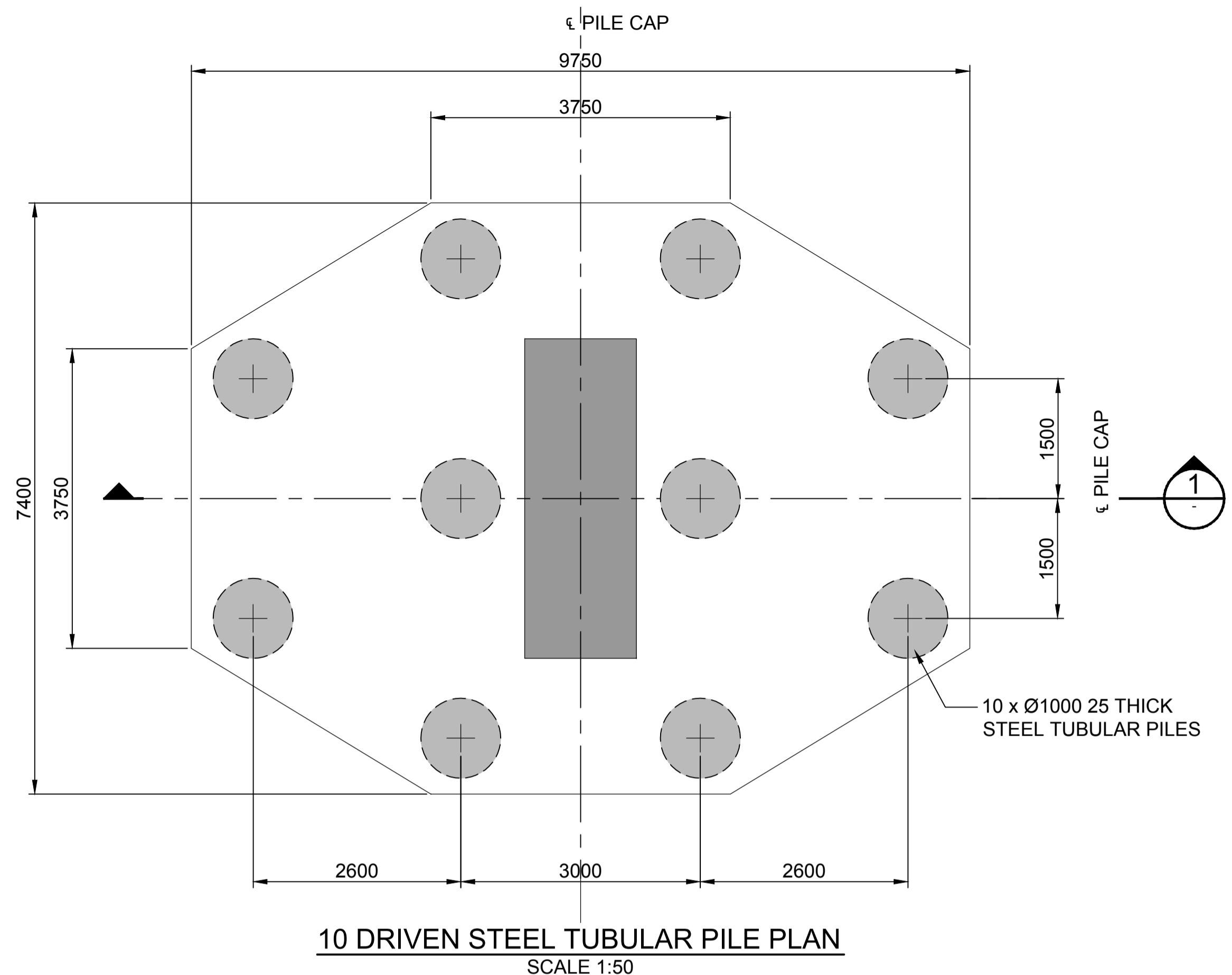
Drawing Status CONCEPT DESIGN

Job No 221379 Drawing No S012-CST-700 Issue -

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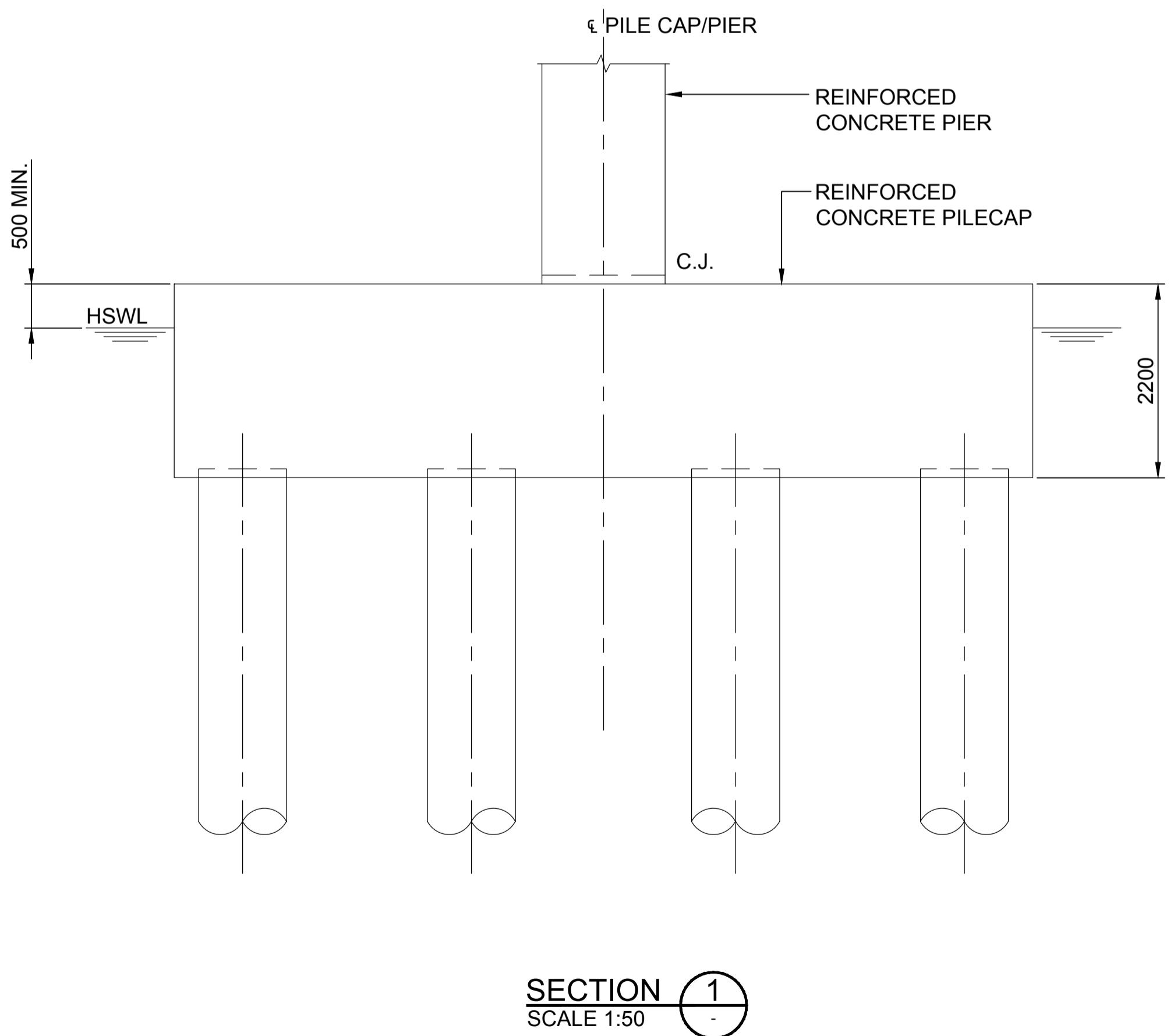
Date Drawn Design Appd

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GENERAL NOTES:

- Ø1000 x 25 THICK STEEL TUBULAR PILE OPTION
- CONCRETE GRADE IS 40MPa
- STRUCTURAL STEEL GRADE TO BE 350.
- CONNECTION PILE - PILECAP THROUGH REINFORCED CONCRETE PLUG EXTENDING IN THE PILES.
- MINIMUM PILE SPACING CTS = 3000mm.



No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

0 1 2 3 4 5

SCALE 1:50m

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Client
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Job Title
HOMEBUSH BAY BRIDGE

Scale at A1
Discipline

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Drawing Title
PROPOSED BRIDGE FOUNDATION DETAILS DRIVEN STEEL PILE OPTION

Drawing Status
CONCEPT DESIGN

Job No
221379

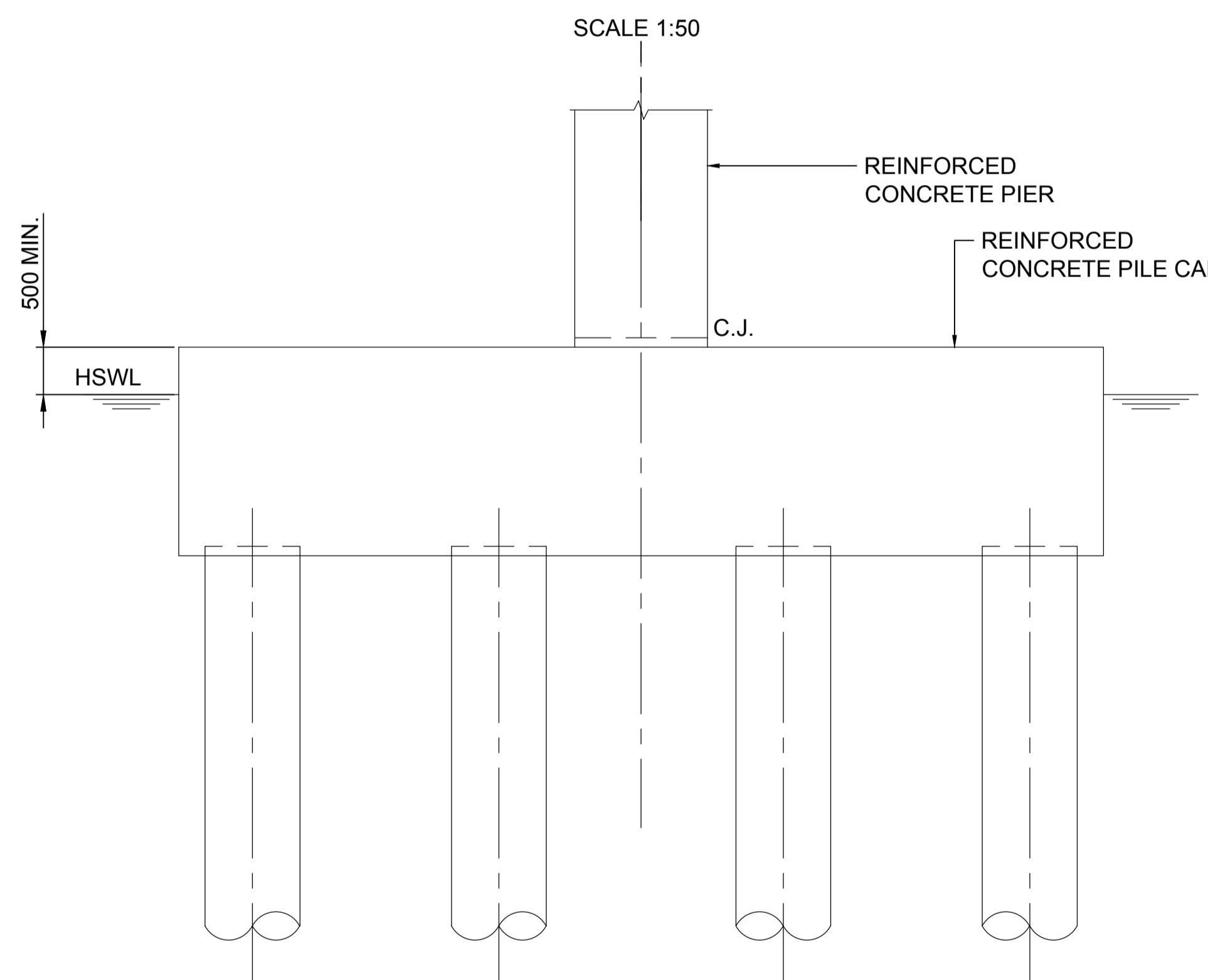
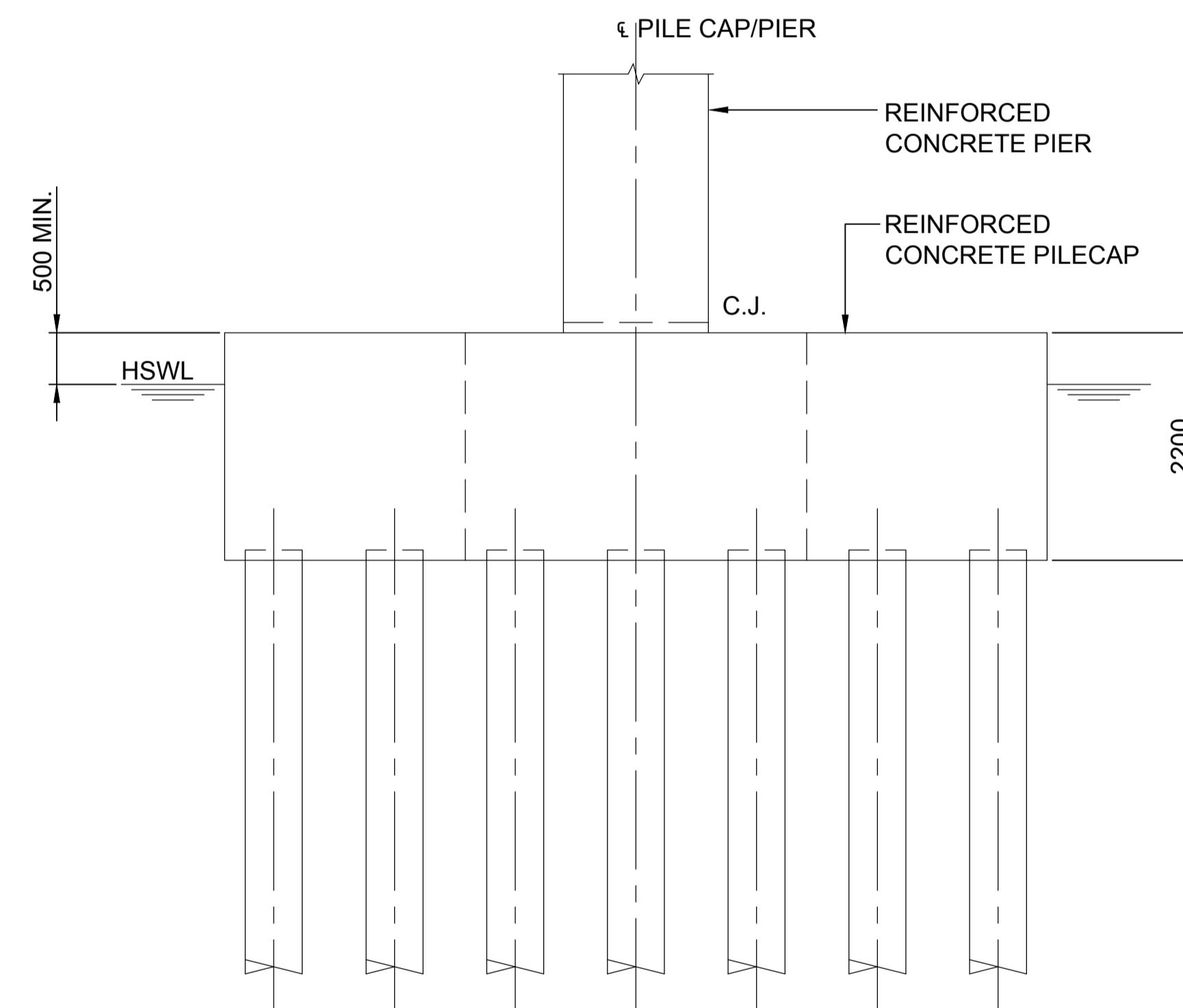
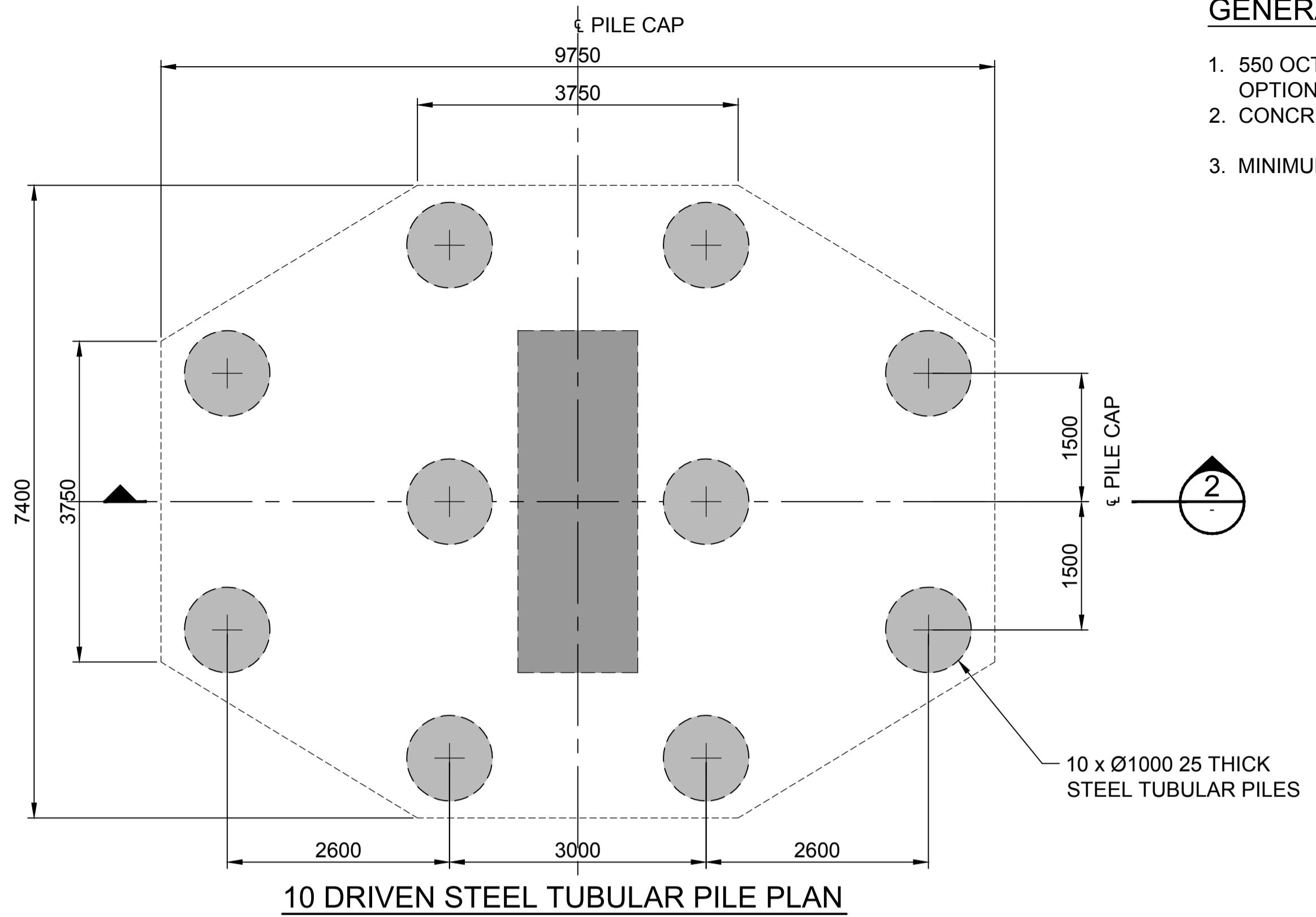
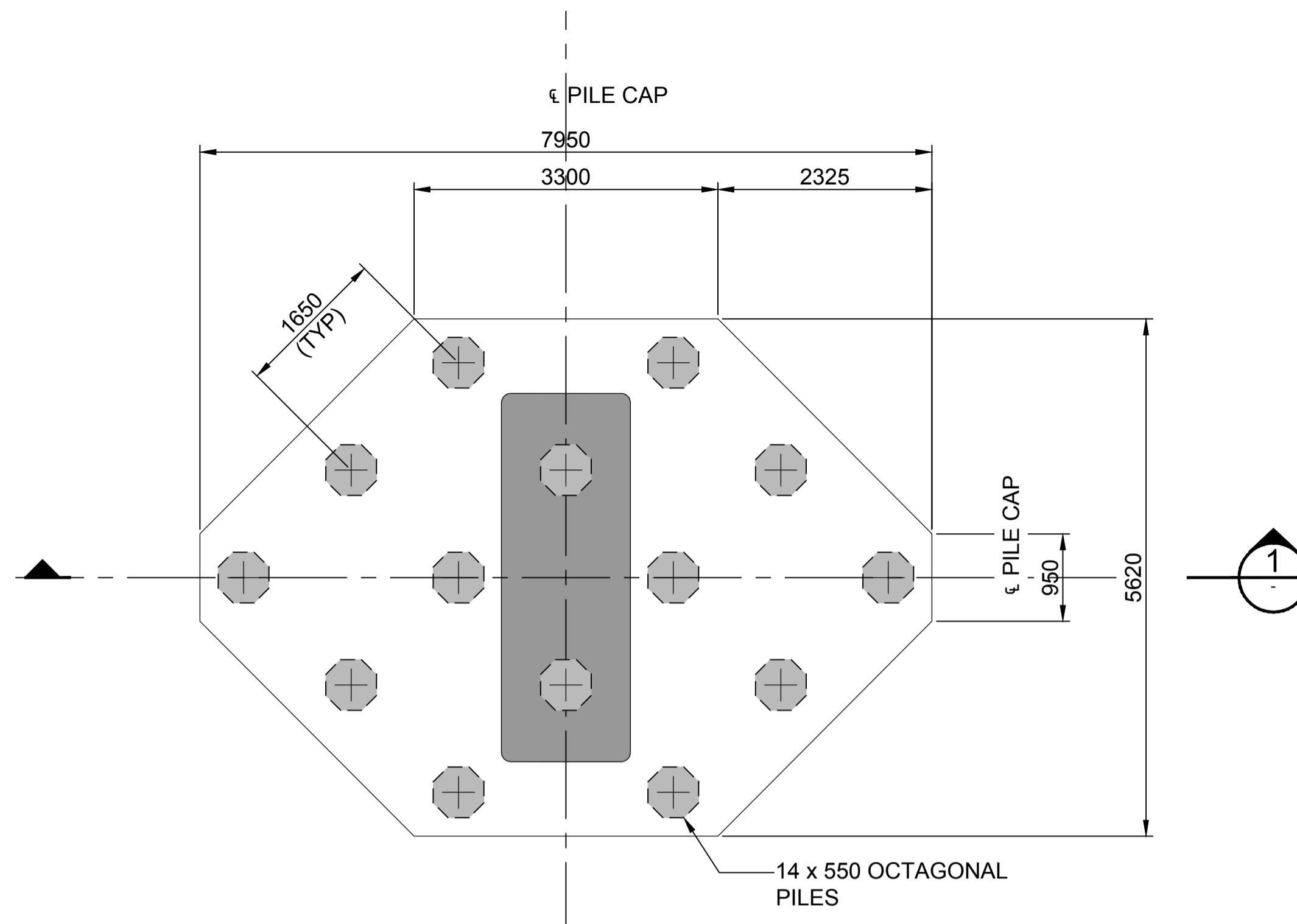
Drawing No
S026-CST-700

Issue
-

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GENERAL NOTES:

1. 550 OCTAGONAL PRECAST CONCRETE DRIVEN PILE OPTION SHOWN.
2. CONCRETE GRADE IS 50MPa (PRECAST)
40MPa (CAST INSITU)
3. MINIMUM PILE SPACING CTS = 1650mm



No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

0 1 2 3 4 5
SCALE 1:50m

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Client
FAIRMEAD BUSINESS PTY LIMITED

Job Title
HOMEBUSH BAY BRIDGE

Scale at A1
Discipline

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Drawing Title
PROPOSED BRIDGE
FOUNDATION DETAILS
DRIVEN PILE OPTIONS

Drawing Status
CONCEPT DESIGN

Job No
221379

Drawing No
S025-CST-700

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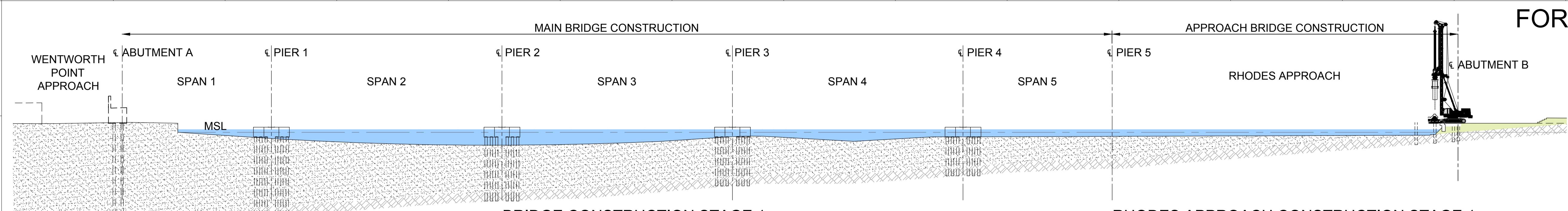
NOTES:

MAIN BRIDGE:

- SEGMENTS ARE CAST INSITU
- SUPERSTRUCTURE CONCRETE GRADE IS 50MPa.
- STABILITY SYSTEM CAN CONSIST OF SHORING TOWERS COMBINED WITH NAILING PRESTRESSING.
- ALTERNATE CONSTRUCTION METHOD FOR END-SPAN 5 CAN BE BY UNBALANCED CANTILEVER AFTER SPAN 4 CLOSURE.

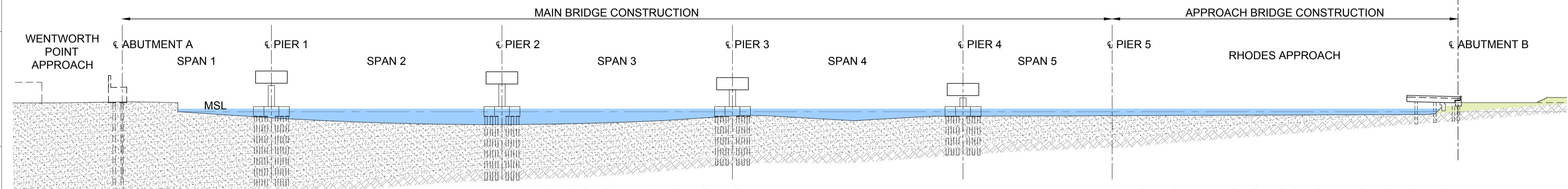
APPROACH BRIDGE:

- ALTERNATE CONSTRUCTION METHOD CAN BE PILING BY BARGE.



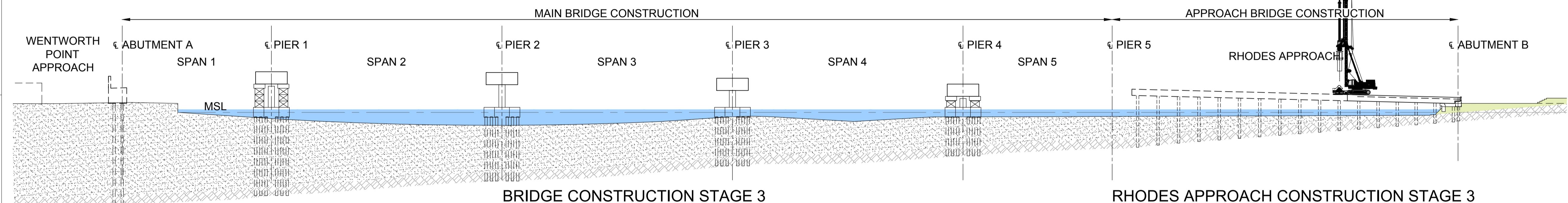
RHODES APPROACH CONSTRUCTION STAGE 1

- DRIVE ABUTMENT B PILES AND FIRST SET OF JETTY PILES



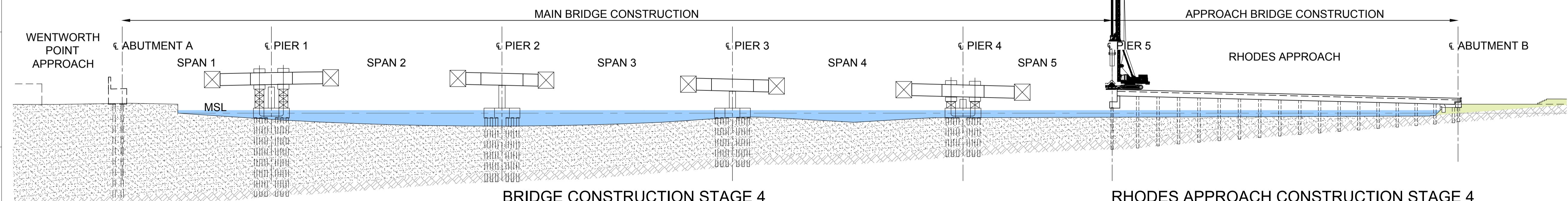
RHODES APPROACH CONSTRUCTION STAGE 2

- CAST ABUTMENT HEADSTOCK
- CONSTRUCT LONGITUDINAL JETTY HEADSTOCK
- ERECT DECK UNITS.



RHODES APPROACH CONSTRUCTION STAGE 3

- LAUNCH PILING RIG ONTO ALREADY BUILT JETTY
- REPEAT OPERATIONS 1 TO 5 UNTIL COMPLETION OF JETTY



RHODES APPROACH CONSTRUCTION STAGE 4

- DRIVE PIER 5 PILES AND LAST SET OF PILES
- CAST PIER 5 HEADSTOCK AND LONGITUDINAL JETTY HEADSTOCKS
- ERECT LAST SET OF DECK UNITS
- COMPLETION OF JETTY.

No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

0 10 20 30 40 50
SCALE 1:500m

15/08/11 A.P.T. J.K. M.C.

Client
FAIRMEAD BUSINESS PTY LIMITED

Job Title
HOMEBUSH BAY BRIDGE

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Drawing Title
PROPOSED BRIDGE
CONSTRUCTION SEQUENCE
SHEET 1

Drawing Status
CONCEPT DESIGN

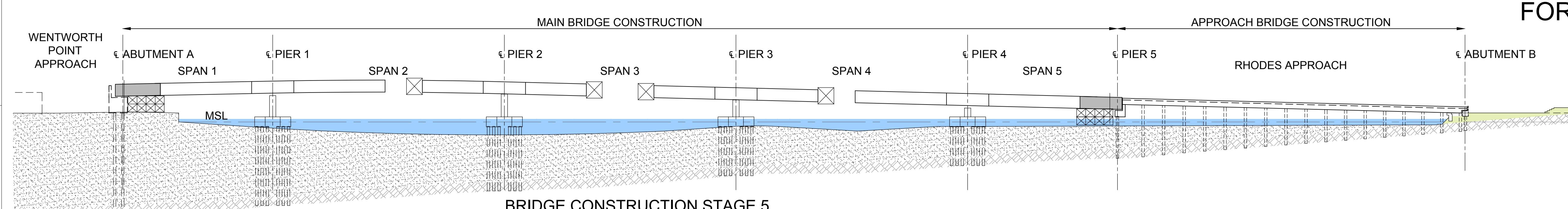
Job No
221379

Drawing No
S101-CST-700

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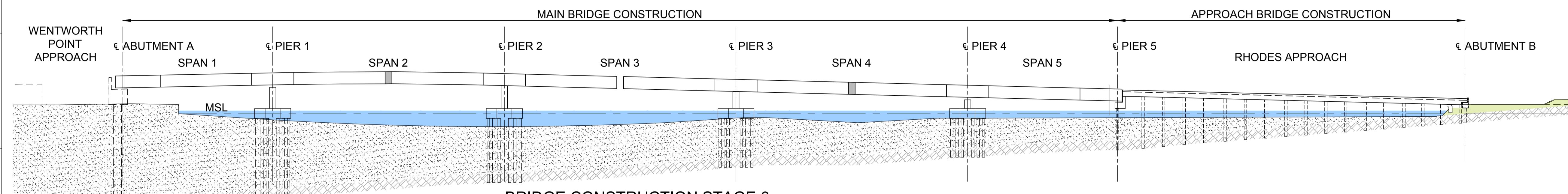
NOTES:

1. FOR NOTES REFER TO DRG No. S101-CST-700.



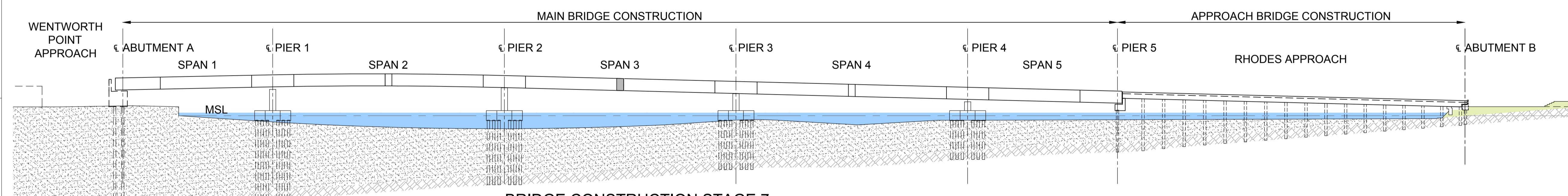
BRIDGE CONSTRUCTION STAGE 5

6. CASTING OF ABUTMENT SEGMENTS ON FALSWORKS. SPANS 1 AND 5 MADE CONTINUOUS.
7. INSTALLATION AND GROUTING OF THE PERMANENT BEARINGS.
8. REMOVAL OF THE STABILITY SYSTEM AT THE ARTICULATED PIERS.



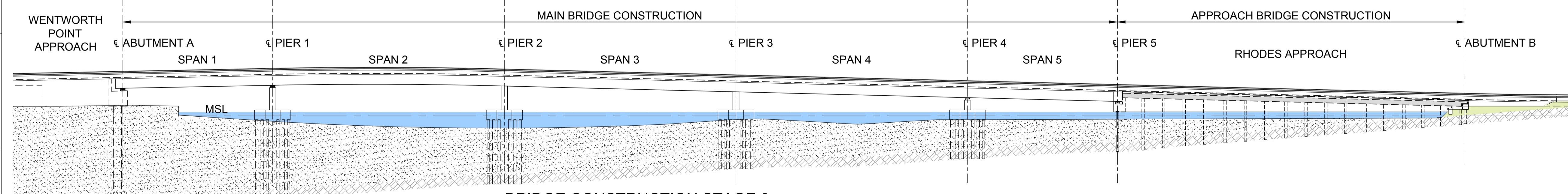
BRIDGE CONSTRUCTION STAGE 6

9. CASTING OF THE KEY SEGMENT AT SPANS 2 AND 4.



BRIDGE CONSTRUCTION STAGE 7

10. CASTING OF THE CENTRAL KEY SEGMENT
11. INSTALLATION OF THE BRIDGE FURNITURE



BRIDGE CONSTRUCTION STAGE 8

12. COMPLETION OF THE BRIDGE.

No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

0 10 20 30 40 50
SCALE 1:500m

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Client
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Job Title
HOMEBUSH BAY BRIDGE

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Drawing Title
PROPOSED BRIDGE
CONSTRUCTION SEQUENCE
SHEET 2

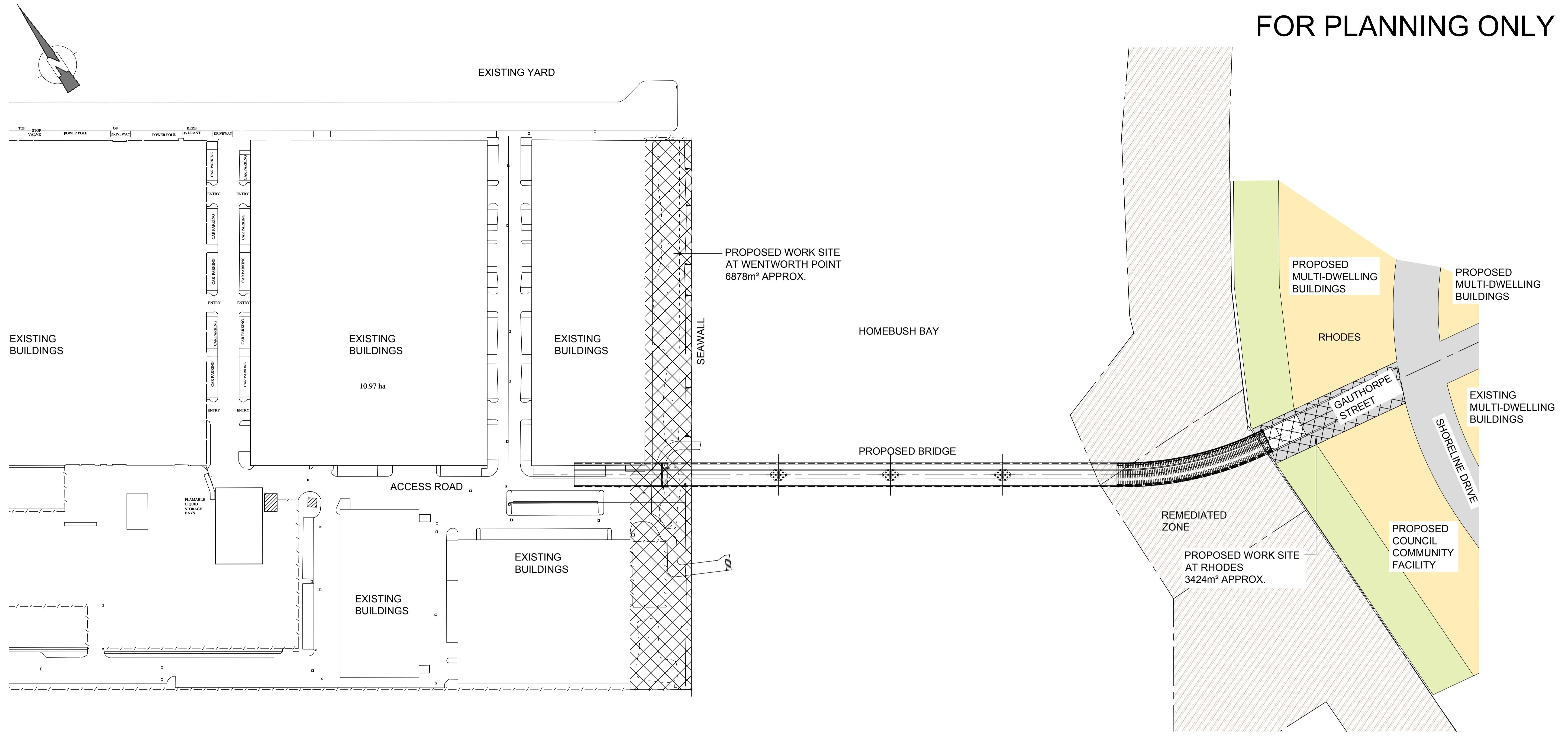
Drawing Status
CONCEPT DESIGN

Job No
221379

Drawing No
S102-CST-700

A1 A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P

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No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

0 20 40 60 80 100
SCALE 1:1000m

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Client
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Job Title
HOMEBUSH BAY BRIDGE

Scale at A1
Discipline

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Drawing Title
PROPOSED BRIDGE
GENERAL ARRANGEMENT
WORKSITE AREAS

Drawing Status
CONCEPT DESIGN

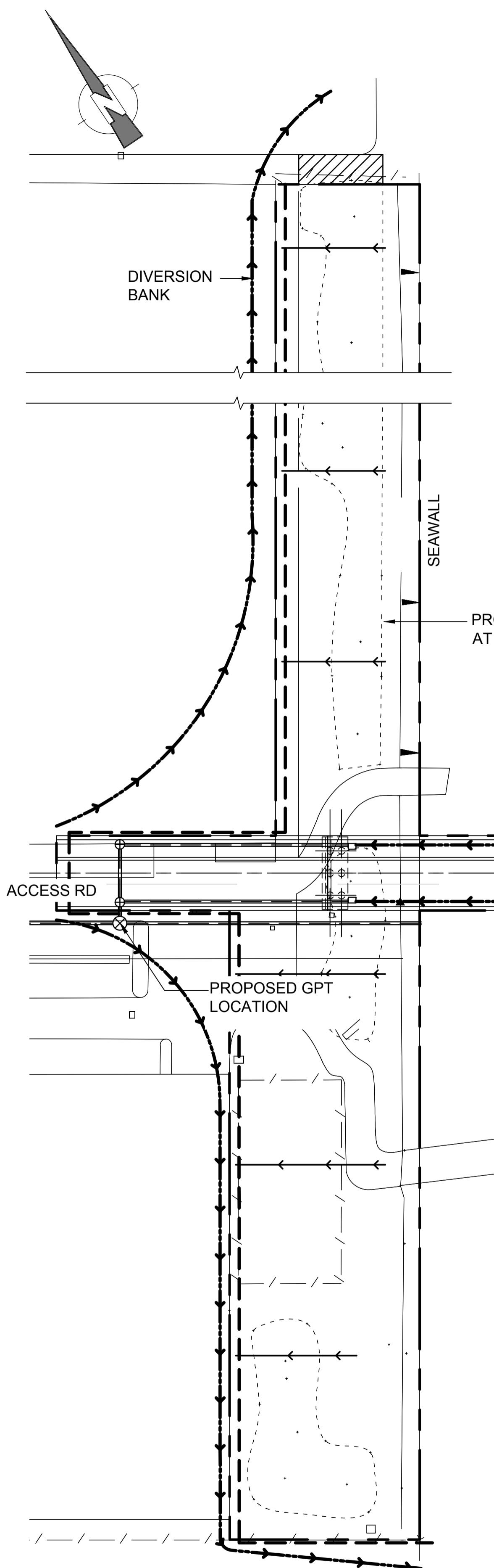
Job No 221379 Drawing No S151-CST-700 Issue -

A1 A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P

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LEGEND:

- SITE BOUNDARY
- TEMPORARY SEDIMENT BASIN
- TEMPORARY SITE ACCESS
- SURFACE FLOW
- DIVERSION BANK
- STRAW BALE DROP INLET SEDIMENT TRAP
- PIPE FLOW
- GEOTEXTILE FILTER FABRIC DROP INLET SEDIMENT TRAP



WORK SITE - PLAN
SCALE 1:500

0 10 20 30 40 50
SCALE 1:500m

15/08/2011 A.P.T. J.K. M.C.

No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

Client
FAIRMEAD BUSINESS PTY LIMITED

Job Title
HOMEBUSH BAY BRIDGE

Scale at A1

Discipline

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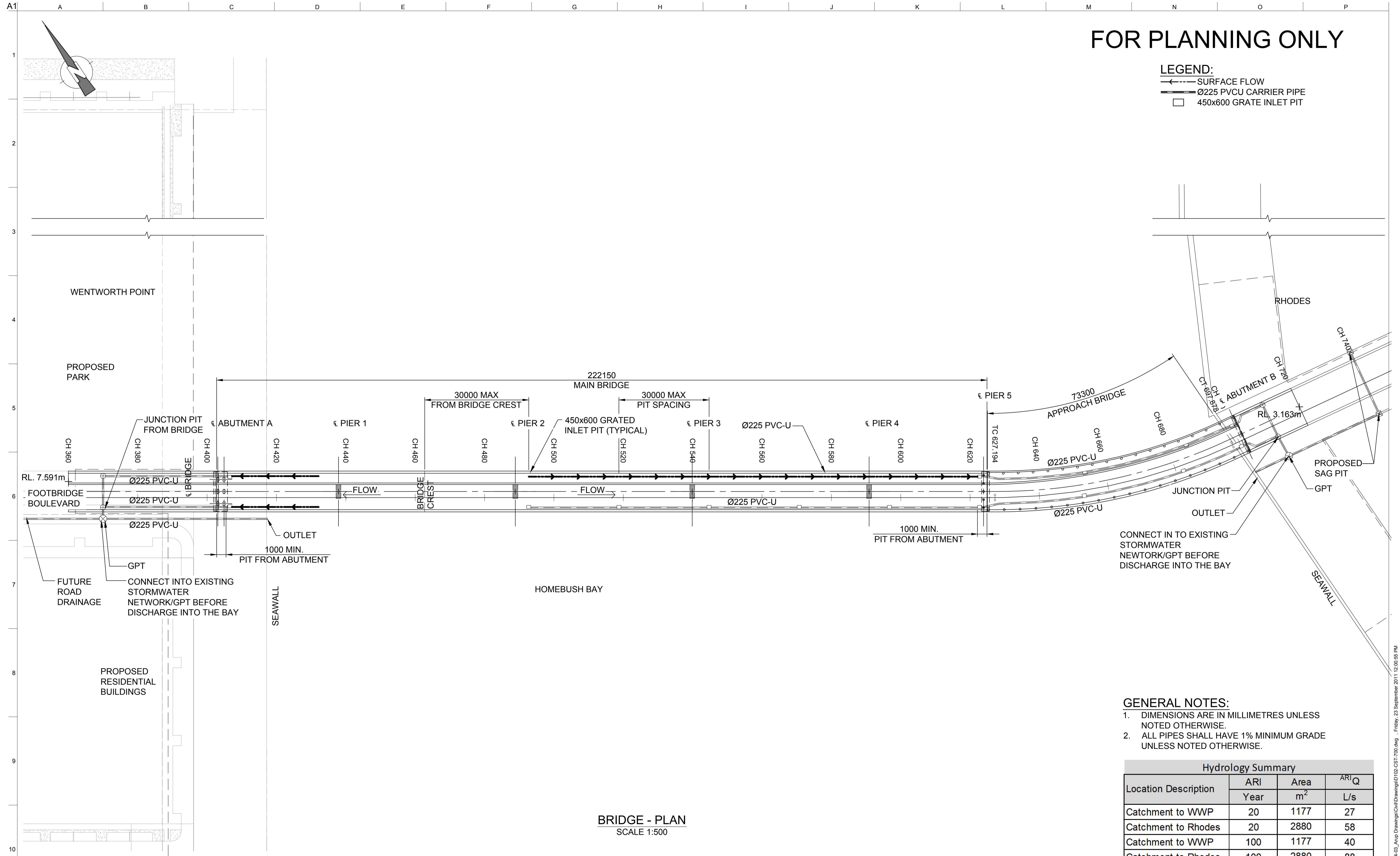
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Drawing Title
CONSTRUCTION SEDIMENT
AND EROSION CONTROL PLAN

Drawing Status
CONCEPT DESIGN

Job No
221379

Drawing No
D101-CST-700



No.	BY	DATE	DESCRIPTION	APPD
Do not scale				

0 10 20 30 40 50
SCALE 1:500m

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Job Title
HOMEBUSH BAY BRIDGE

Scale at A1
Discipline

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Drawing Title
OPERATIONAL STORMWATER
MANAGEMENT SYSTEM

Drawing Status
CONCEPT DESIGN

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