

LANDSCAPE CONSTRUCTION DRAWINGS

- L1. LAYOUT PLAN
- L2. PLANTING PLAN
- L3. IRRIGATION PLAN
- L4. SECTIONS & DETAILS
- L5. BENCH DETAILS & TYPICAL DETAILS



S2  
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CONSULTANT INFORMATION



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PROJECT INFORMATION

**GATEWAY SOUTH**

762 85 STREET S.W.  
CALGARY, AB

This drawing supersedes previous issues. Do not scale the drawing.  
All landscape drawings remain the property of the Landscape Architect.  
This drawing is the property of NAVAGRAH LANDSCAPE ARCHITECTURE + URBAN DESIGN LTD. The drawing may not be reproduced without the permission of the Landscape Architect.

ISSUED FOR	DATE
CONSULTANT COORDINATION	17.01.08
CONSULTANT COORDINATION	17.02.08
CONSTRUCTION	17.03.08

SCALE	1:200
DATE	18.08.31
DRAWN BY	MP
CHECKED BY	YN
PROJECT NO.	1656GASO

DRAWING TITLE

**COVER PAGE**

DRAWING NO.

**L0**

File Location: N:\Projects\1656GASO, Gateway South\Current\Construction Drawings\1656GASO, Gateway South\_Site Landscape Plan\_170207 - Standard\1656GASO, Gateway South\_Site Landscape Plan\_170309.dwg    Plotted: March 9, 2017 1:19:16 PM by yogeshwar navagrah









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**GATEWAY SOUTH**

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ISSUED FOR:	DATE
CONSULTANT COORDINATION	16.08.31
CONSULTANT COORDINATION	16.12.01
CONSULTANT COORDINATION	17.01.03
CONSTRUCTION	17.02.09

SCALE	1:200
DATE	16.08.31
DRAWN BY	MP
CHECKED BY	VN
PROJECT NO.	1656GASO

DRAWING TITLE  
**PLANTING PLAN**

DRAWING NO.

**L2**

**1** PLANTING PLAN - LEVEL 1  
scale - 1:200

**2** PLANTING PLAN - LEVEL 2  
scale - 1:200

**legend**

	REGULAR GREY COLOR CONCRETE
	CHARCOAL COLOUR CONCRETE COLOUR: BLACK ONLY INTERSTAR NR-570R (2 BAGS)
	EXPOSED CONCRETE: 60mm THICK PAVERS, COLOUR & SIZES AS SHOWN ON DETAIL 1/L6
	600x600x60mm PAVERS TO BE INSTALLED ON BLACKJACK ONESTOP PEDESTALS (OR EQUIVALENT), COLORS & SIZES AS SHOWN ON DETAIL 5/L6
	20MM ROUNDE ROCK INSTALLED TO 100MM DEPTH
	PLANTING BED
	40mm ROUNDE ROCK INSTALLED TO DEPTH OF 100mm.
	FESCUE SOD
	1070mm HIGH GUARDRAIL ON CONCRETE CURB. REFER TO SECTION 3/L4
	1070mm (MIN.) GUARDRAIL ON CONCRETE RETAINING WALL. HEIGHT VARIES BASED ON TOP OF WALL GRADES. REFER TO SECTION 3/L4
	1200mm HIGH GUARDRAIL ON CONCRETE BASE (LEVEL 2). REFER TO SECTION 3/L4
	1800mm HIGH PRIVACY SCREEN ON CONCRETE BASE (LEVEL 2). REFER TO SECTION 3/L4
	BICYCLE PARKING: PRODUCT: 35 LOOP BY MANUFACTURER: LANDSCAPE FORMS FINISH: METALLIC SILVER, QTY: 8 INSTALL AS PER MANUFACTURE'S SPECS
	GARBAGE RECEPTACLE (PRODUCT: 35 PITCH LITTER RECEPTACLE, SIDE OPENING MANUFACTURER: LANDSCAPE FORMS) FINISH: METALLIC SILVER, QTY: 3 INSTALL AS PER MANUFACTURER'S SPECS
	FIRE HYDRANT
	BOLLARDS PRODUCT: 6" LIGHT COLUMN SECURITY BOLLARD WITH INTERNAL SECURITY CORE AND WITH 180 DEGREES PERFORATED SHIELD MANUFACTURER: FORMS + SURFACES FINISH: SILVER POWDERCOAT, QTY: 14 INSTALL AS PER MANUFACTURER'S SPECS
	RAISED PAVEMENT MARKERS PRODUCT: 3M TWO WAY MARKER (RPM) (COLOUR T80), QTY: 31
	STORM STORAGE TANK ACCESS MANHOLE. MANHOLE CAP INSTALLED TO BE FLUSH WITH CONCRETE SURFACE
	DECIDUOUS TREES
	CONIFEROUS TREES
	PROPERTY LINE
	PERENNIALS
	CONIFEROUS SHRUBS
	DECIDUOUS SHRUBS

**notes**

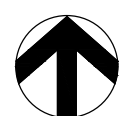
1. ALL LANDSCAPE CONSTRUCTION TO CONFORM TO CANADIAN LANDSCAPE STANDARDS - CURRENT EDITION.
2. ALL PLANT MATERIAL FOR TO THE CANADIAN NURSERY TRADES ASSOCIATION STANDARDS.
3. ALL PLANT MATERIAL SIZES SHOWN ARE MINIMUM SIZES.
4. VERIFY ALL DIMENSIONS, ELEVATIONS, AND DATUM. REPORT ANY ERRORS AND/OR DISCREPANCIES TO THE OWNER PRIOR TO CONSTRUCTION.
5. DO NOT SCALE DRAWINGS.
6. ALL PLANTING BEDS TO HAVE A MINIMUM OF 75MM DEPTH FOOTHILLS PREMIUM MULCH UNLESS OTHERWISE NOTED.
7. ALL SOFT SURFACE LANDSCAPE AREAS TO BE IRRIGATED WITH UNDERGROUND IRRIGATION SYSTEM.
8. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.

**planting schedule**

common name	latin name	size / spread	quantity
coniferous trees			
LODGEPOLE PINE	PINUS CONTORTA 'LATIFOLIA'	2000MM HEIGHT	04
LODGEPOLE PINE	PINUS CONTORTA 'LATIFOLIA'	3000MM HEIGHT	05
deciduous trees			
PATMORE GREEN ASH	FRAXINUS PENNSYLVANICA 'PATMORE'	75MM CAL.	10
PATMORE GREEN ASH	FRAXINUS PENNSYLVANICA 'PATMORE'	50MM CAL.	08
TREMBLING ASPEN	POPULUS TREMULOIDES	75MM CAL.	13
TREMBLING ASPEN	POPULUS TREMULOIDES	50MM CAL.	07
AMERICAN ELM	ULMUS AMERICANA	75MM CAL.	07
boulevard trees			
BUR OAK	QUERCUS MACROCARPA	75MM CAL.	15
common name	latin name	size / spread	quantity
deciduous shrubs			
DWARF ARCTIC WILLOW	SALIX PURPUREA 'NANA'	600MM HEIGHT	21
GOLDEN FLOWERING CURRANT	RIBES AUREUM	600MM HEIGHT	24
WOLF WILLOW	ELAEAGNUS COMMUTATA	600MM HEIGHT	25
CHERRY BOMB BARBERRY	BERBERIS THUNBERGII 'MONBOMB'	600MM HEIGHT	40
coniferous shrubs			
DWARF MUGO PINE	PINUS MUGO 'PUMILO'	600MM SPREAD	09

common name	latin name	size / spread	quantity
perennials			
PURPLE PALACE CORAL BELLS	HEUCHERA MICRANTHA 'PURPLE PALACE'	#2 POT	97
SILVER MOUND	ARTEMISIA SCHMIDTIANA	#2 POT	96
SIBERIAN BUGLOSS	BRUNNERA MACROPHYLLA	#2 POT	90
SNOW-IN-SUMMER	CERASTIUM TOMENTOSUM	#2 POT	38
ALASKA SHASTA DAISY	LEUCANTHEMUM SUPERBUM 'ALASKA'	#2 POT	43
HAPPY RETURNS DAYLILY	HEMEROCALLIS X 'HAPPY RETURNS'	#2 POT	123
PARDON ME DAYLILY	HEMEROCALLIS X 'PARDON ME'	#2 POT	126
PRZEWALSKI LIGULARIA	LIGULARIA PRZEWALSKI	#2 POT	56
common name	latin name	size / spread	quantity
grasses			
BLUE FESCUE	FESTUCA OVINA GLAUCA	#2 POT	204
KARL FOERSTER GRASS	CALAMAGROSTIS ACUTIFLORA 'KARL FOERSTER'	#2 POT	166
RIBBON GRASS	PHALARIS ARUNDINACEA VAR. PICTA	#2 POT	98





WESTWARD AVENUE SW

AREA OUTSIDE PROPERTY BOUNDARY IS PART OF BOULEVARD DESIGN  
AND OUT OF LANDSCAPE ARCHITECTS' SCOPE FOR THIS PROJECT

AREA OUTSIDE PROPERTY BOUNDARY IS PART OF BOULEVARD DESIGN  
AND OUT OF LANDSCAPE ARCHITECTS' SCOPE FOR THIS PROJECT

Emitter Pipe Installation Details:

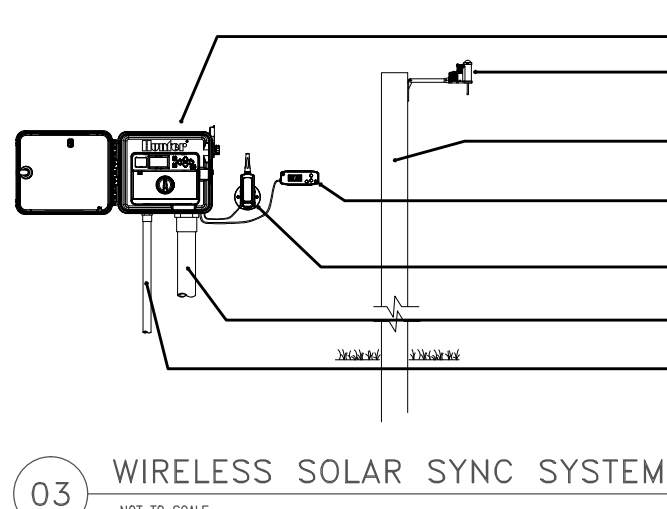
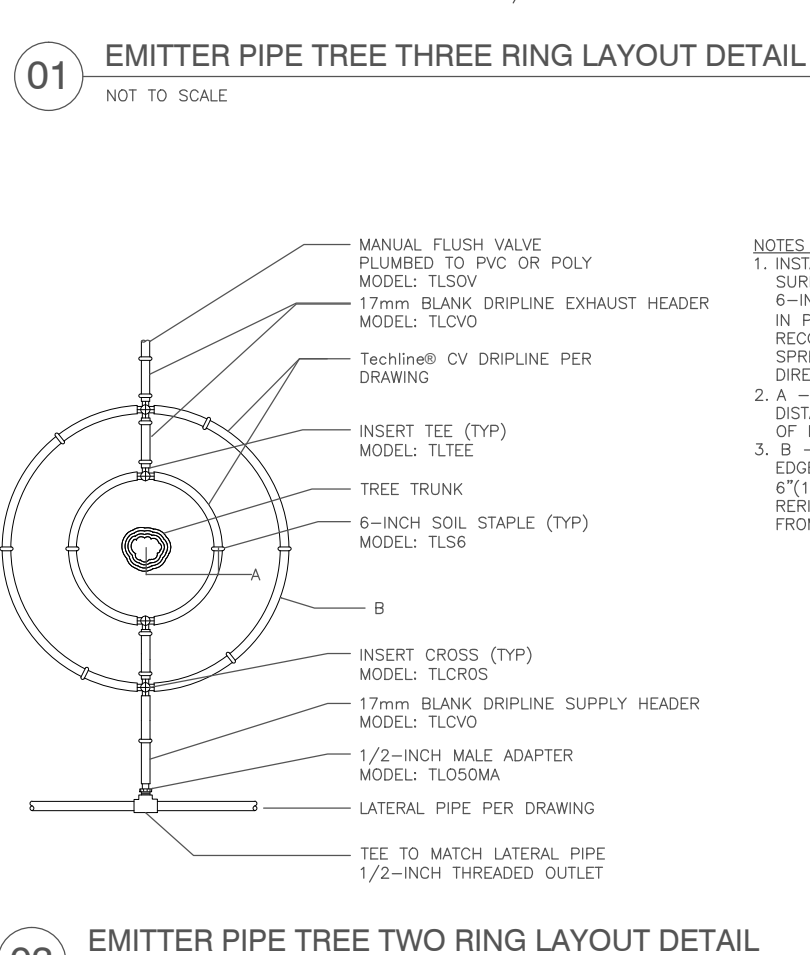
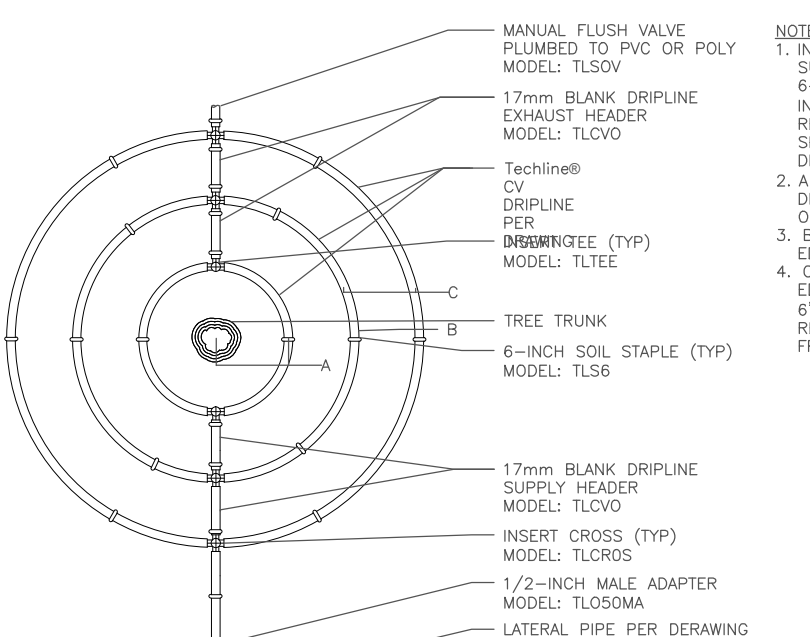
For Emitter Pipe Installed At Trees - Use Detail 01  
For Emitter Pipe Installed At Coniferous and Deciduous Shrubs - Use Detail 02

**1** IRRIGATION PLAN - LEVEL 1  
scale - 1:200

WESTWARD AVENUE SW

PROPERTY LINE

**2** IRRIGATION PLAN - LEVEL 2  
scale - 1:200



**03** WIRELESS SOLAR SYNC SYSTEM  
NOT TO SCALE

Irrigation Schedule - Rooting										
ZONE	HEAD TYPE	BODY/ NOZZLE	PSI	FLOW (GPM)	VEGETATION	DAYS OF WEEK	NO. OF CYCLES	CYCLE TIME	SOAK TIME	
1	Emitter Pipe	26 GPH	30	3.7	TREES/SHRUBS/ PERENNIALS	Daily	6	5	20	
2	Fixed Spray	570 Series	35	11.9	TURF	Daily	3	5	20	
3	Emitter Pipe	26 GPH	30	1.4	TREES/SHRUBS/ PERENNIALS	Daily	6	5	20	
4	Emitter Pipe	26 GPH	30	4.3	TREES/SHRUBS/ PERENNIALS	Daily	6	5	20	
5	Emitter Pipe	26 GPH	30	7.8	TREES/SHRUBS/ PERENNIALS	Daily	6	5	20	
6	Emitter Pipe	26 GPH	30	2.1	TREES/SHRUBS/ PERENNIALS	Daily	6	5	20	
7	Fixed Spray	570 Series	35	6.6	TURF	Daily	5	4	20	
8	Emitter Pipe	26 GPH	30	2.8	TREES/SHRUBS/ PERENNIALS	Daily	6	5	20	
9	Emitter Pipe	26 GPH	30	2.1	TREES/SHRUBS/ PERENNIALS	Daily	6	5	20	

Irrigation Schedule - Established Root										
ZONE	HEAD TYPE	BODY/ NOZZLE	PSI	FLOW (GPM)	VEGETATION	DAYS OF WEEK	NO. OF CYCLES	CYCLE TIME	SOAK TIME	
1	Emitter Pipe	26 GPH	30	3.7	TREES/SHRUBS/ PERENNIALS	Daily	3	7	20	
2	Fixed Spray	570 Series	35	11.9	TURF	Daily	3	5	20	
3	Emitter Pipe	26 GPH	30	1.4	TREES/SHRUBS/ PERENNIALS	Daily	3	7	20	
4	Emitter Pipe	26 GPH	30	4.3	TREES/SHRUBS/ PERENNIALS	Daily	3	7	20	
5	Emitter Pipe	26 GPH	30	7.8	TREES/SHRUBS/ PERENNIALS	Daily	3	7	20	
6	Emitter Pipe	26 GPH	30	2.1	TREES/SHRUBS/ PERENNIALS	Daily	3	7	20	
7	Fixed Spray	570 Series	35	6.6	TURF	Daily	3	5	20	
8	Emitter Pipe	26 GPH	30	2.8	TREES/SHRUBS/ PERENNIALS	Daily	3	7	20	
9	Emitter Pipe	26 GPH	30	2.1	TREES/SHRUBS/ PERENNIALS	Daily	3	7	20	

Note:  
- Contractor shall adjust the watering times to adjust for local site conditions

#### Notes:

The irrigation system is designed based on the following:  
- Water service size is at least 1.5" (38mm)  
- Minimum water service static pressure is 65 PSI  
The irrigation system product and installation requirements will be as outlined in the specifications included in the bid package except where the specifications differ from these notes. In which case these notes will take precedence.  
Irrigation plan is graphical in nature. The contractor shall install the irrigation system in accordance with the plan unless site conditions require that component locations be adjusted. The contractor shall not install any component per the drawing where it is obvious that doing so will cause the irrigation system to not function correctly.

#### Backflow Device

1 - The backflow device shall be tested prior to the commissioning of the irrigation system. If the device fails the test it will immediately be replaced with a new device which will be tested. Once the backflow device has passed the testing a copy of the test results will be provided to the client.

#### Valve Boxes

- All valve boxes shall be fitted with lockable lids.
- Each valve box shall be sized to allow the device(s) that it encloses to be removed through the valve box lid operating without disassembling the device(s).
- The valve boxes shall be mounted on bricks or concrete blocks so the top of the valve boxes shall be flush with the turf or mulch. The bricks or concrete blocks will rest on a bed of drain rock having a minimum depth of 3" (75mm).
- There shall be a space between the bottom of the device(s) and the top of the drain rock of at least 4" (100mm).
- No part of any valve box will rest directly on any device(s) that are enclosed by the valve box nor will any part of a valve box rest on any pipe, wire or cable.
- All openings in or under the valve box through which any pipe, wire or cables shall enter or exit the valve box will be secured to prevent dirt or debris from entering the valve box.

#### Flow Sensor

- If the flow sensor cannot be installed in the location specified in the drawing then the flow sensor shall be installed in a properly sized, lockable valve box.
- To ensure proper flow through the flow sensor, the inlet and outlet pipes shall be straight for a minimum distance of 10 times the diameter of the flow sensor.
- Signal cable shall be shielded twisted pair.

#### Flush Valves

- The contractor shall install at locations shown on drawing. More flush valves shall be installed in each emitter pipe zone, determined by site conditions, to ensure the emitter pipe will be properly vented.

#### Sleeves

- Sleeves shall be installed so top of the sleeves shall be at least 6" (150mm) below the road bed material and will project at least 12" (300mm) into the soft landscape. The ends of the sleeves will be capped and the locations marked with flags. Construction marking tape will be tied to the sleeve end and will be routed to the surface in a loose zig-zag pattern as the excavation is backfilled.

#### Pipe

- All pipe sizes, types and locations shall be as marked on the drawing unless site conditions require alterations. All changes shall be noted on the as-built drawings.
- Mainline and lateral pipes mounted from a parkade ceiling shall be installed according to all applicable codes, guidelines and regulations.
- All locations where supply risers pass through concrete slabs and walls shall be properly sealed to prevent water or debris from entering building.
- All PVC pipe connections shall be solvent welded.
- All low density poly pipe connections shall use properly sized insert fittings and stainless steel clamps.
- Emitter pipe connections shall use properly sized barbed fittings. Stainless steel clamps will be used where the water pressure exceeds 45 PSI.

#### 7 - Pipe depths shall be:

Mainline pipe - trench depth shall be deep enough to ensure a minimum coverage of 10" (250mm) on top of the pipe  
Lateral pipe - trench depth shall be deep enough to ensure a minimum coverage of 12" (300mm) on top of the pipe  
Emitter pipe - trench depth shall be deep enough to ensure a minimum coverage of 4" (100mm) on top of the pipe

#### 8 - Mainline pipes shall be flushed prior to installing control valves

#### 9 - Lateral pipes shall be flushed prior to connecting emitter pipe

#### 10 - Emitter pipe will be installed on the finished grade or on the rootball of the trees or shrubs below the landscape fabric and/or mulch

#### 11 - Emitter pipe will be secured in position using staples placed at 3 ft intervals

- Where emitter pipe is positioned "in-line" in the island shrub beds, the pipe will be installed so that the emitter are placed in an equidistant triangle pattern.

#### 12 - Where emitter pipe is positioned as a ring(s) around shrubs, the pipe will be placed as described in detail drawings

#### Control Wires

- All control wires shall be 14 gauge TVU direct burial type
- The common wires shall be 12 gauge TVU direct burial type
- All wire connection will be made in approved valve boxes using waterproof connectors such as DEVIDOR or equivalent. No wire connection is permitted to be buried.
- Where the wire and piping are placed in the same trench, the wire will be placed at the bottom of the trench so the pipe will provide protection for the wire. Where the wire is trench or powered in, the wire will have at least 12" (300mm) of cover.

#### Irrigation System Controller

- The watering schedules will be used until the plants are well established. The controller will then be configured to schedule watering times based on ET values received from the on-site weather sensor.

#### Control Valves

- Control valves will be installed in properly sized valve boxes that will permit the control valve to be removed through the valve box lid opening without disassembling the control valve
- A union shall be installed immediately before and after each control valve
- An isolation valve, sized to match the control valve, will be installed immediately before the union upstream of each control valve

#### Master Valve

- Installation shall be the same as for the control valves except an isolation valve will also be installed immediately after the downstream union

#### Weather Sensor

- The weather sensor shall be installed in a location where it will be exposed to the elements but will not be affected by spray from the sprinklers and safe from vandalism

#### Maintenance Notes:

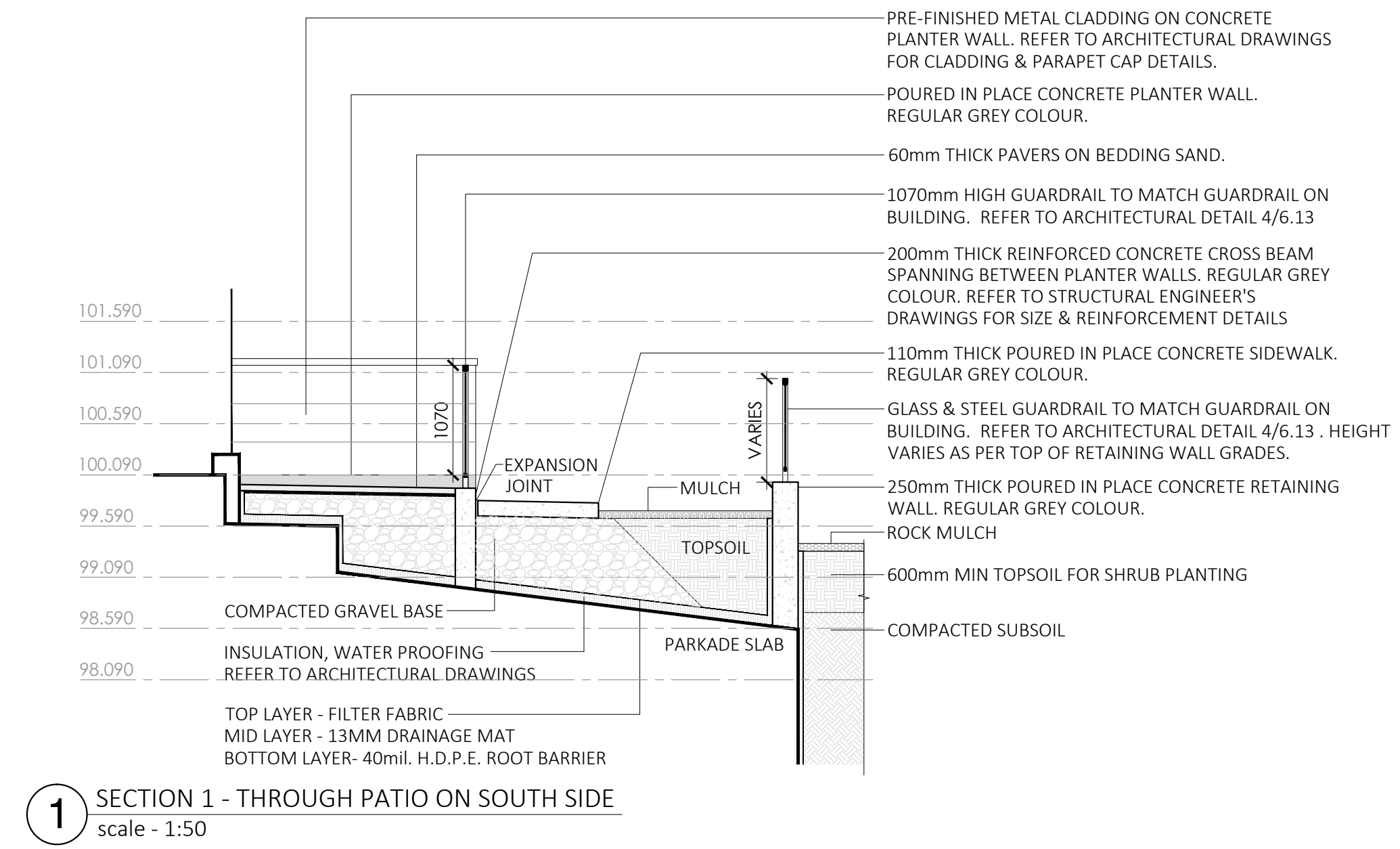
- Irrigation system components shall be maintained according to the manufacturer's recommendations and/or as stated below.
- When an irrigation system component is removed for maintenance the fittings(pipe end(s)) shall be securely capped or plugged to prevent debris, insects or animals from entering the irrigation system
- Wintering:  
- Use a compressor with a minimum capacity of 150 CFM  
- The compressor output pressure shall be set no higher than 50 PSI
- Spring Start-up:  
- Test each zone and make any necessary adjustments or repairs  
- Review controller program and adjust as necessary  
- Inspect Solar Sync, replica batteries  
- The backflow device will be tested annually and any necessary repairs completed immediately

#### Irrigation Legend

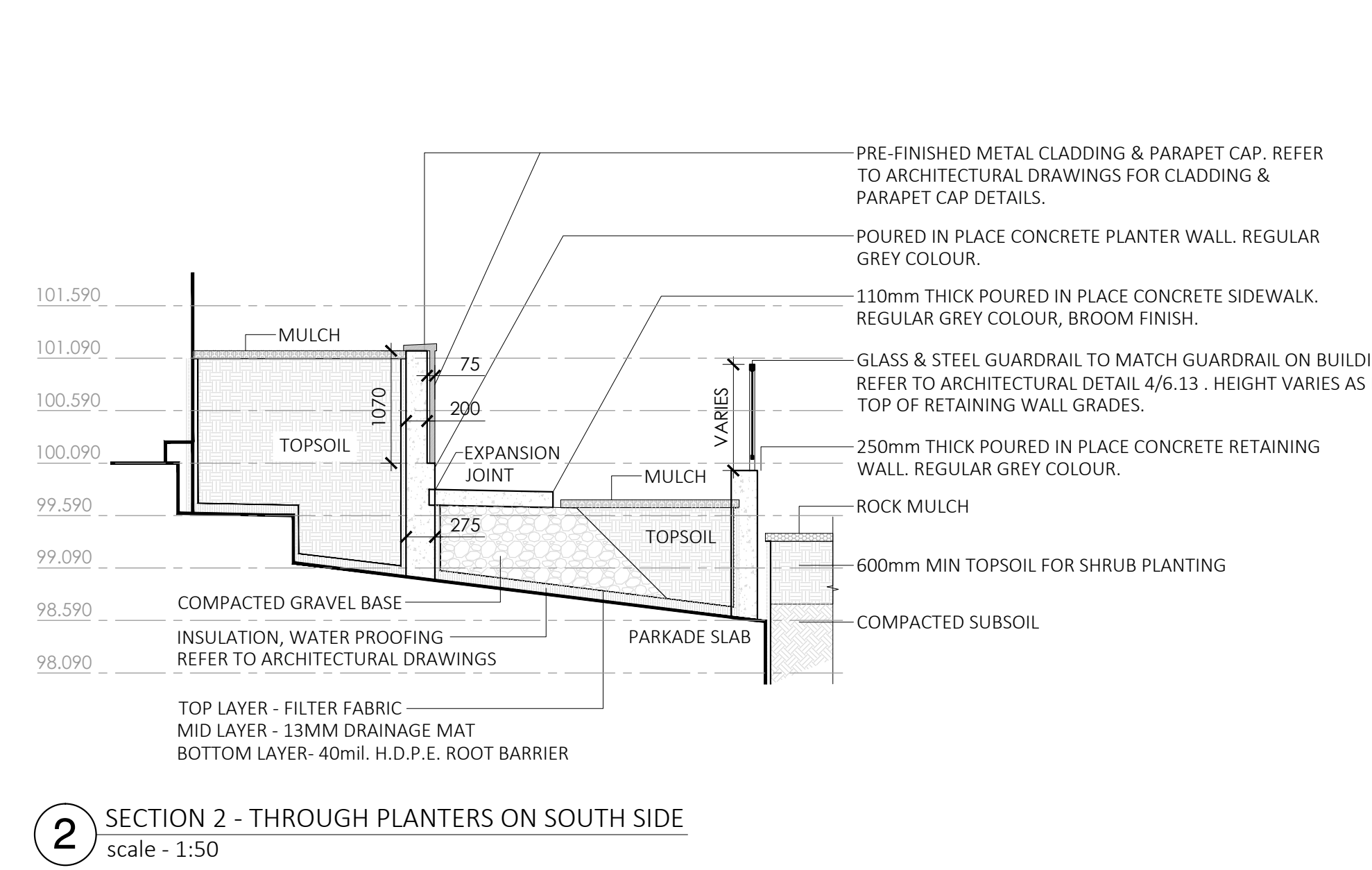
Qty**	Symbol	Description
14	●	Toro O-TSH - 570Z-4P
1	●	Toro O-TSQ - 570Z-4P
1	●	Toro O-TST - 570Z-4P
18	●	Toro O-SH - 570Z-4P
4	●	Toro O-QZ - 570Z-4P
11	●	Toro O-TSH - 570Z-4P
4	●	Toro O-TSQ - 570Z-4P
2	●	Toro O-TST - 570Z-4P
1	●	Toro O-TSH - 570Z-4P
4	●	Toro O-TSQ - 570Z-4P
2	●	Toro O-TST - 570Z-4P
1	●	Watts 507A-207 - 1 1/2"
4	●	Hunter SV1010
2	●	Hunter ICV1010
4	●	Hunter PCZ-101
1	●	Hunter IC-1200-PL
1	●	Brass 1 1/2" isolation valve
2	●	Brass 3/4" isolation valve
1	●	Hunter FCT-100
2	●	Hunter Wireless Solar Sync
2	●	Needle Air Potted Valve
10	●	Needle Manual Flush Valve
3	●	Hunter HY-100
322 (m)	---	Lateral - 13mm L.D.
556 (m)	---	Lateral - 19mm L.D.
58 (m)	---	Lateral - 25mm L.D.
21 (m)	---	Lateral - Class 160 1 1/2"
136 (m)	---	Lateral - Type L Copper 1 1/2"
145 (m)	---	Lateral - Type L Copper 3/4"
195 (m)	---	Mainline - Class 160 1 1/2"
39 (m)	---	Mainline - Type L Copper 1 1/2"
13 (m)	---	Sleeve - Schedule 40 1 1/2"
29 (m)	---	Sleeve - Schedule 40 1"
6 (m)	---	Sleeve - Schedule 40 3/4"
4 (m)	---	Sleeve - Schedule 40 3"
1375 (m)	---	Needline TFCV25-12

\*\* Quantities are approximate.  
Contractor to verify actual quantities

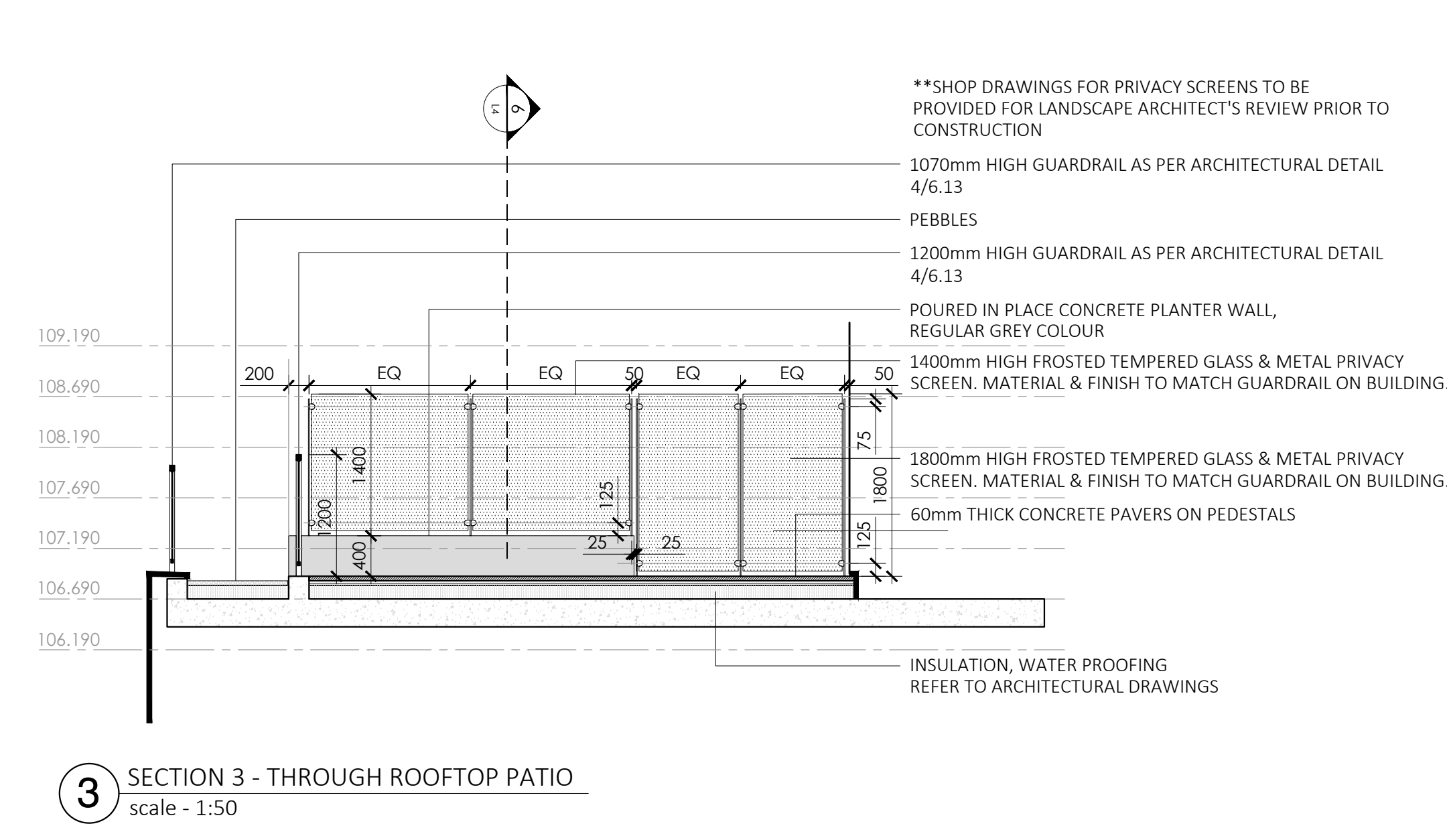




1 SECTION 1 - THROUGH PATIO ON SOUTH SIDE  
scale - 1:50



2 SECTION 2 - THROUGH PLANTERS ON SOUTH SIDE  
scale - 1:50



3 SECTION 3 - THROUGH ROOFTOP PATIO  
scale - 1:50

legend

DESCRIPTION OF COMMON LANDSCAPE MATERIALS -

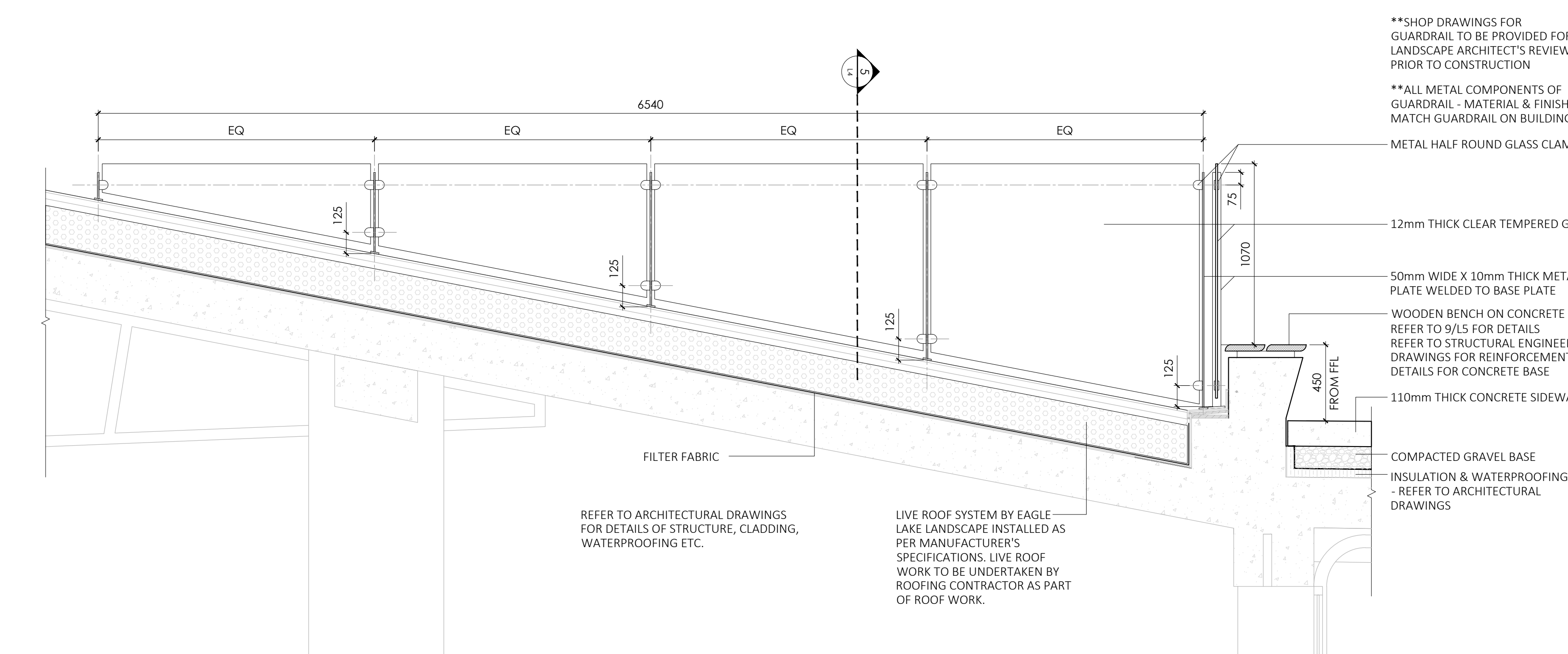
COMPACTED SUBSOIL: REMOVE ORGANIC SOILS. RECOMPACT EXPOSED SOIL TO 98% MIN. (IF NECESSARY ADD GRANULAR FILL TO BRING BASE TO APPROPRIATE GRADE. COMPACTED TO 98% MIN.)

COMPACTED GRAVEL BASE: 150mm MIN. OF 25MM CRUSHED GRAVEL COMPACTED TO 98%

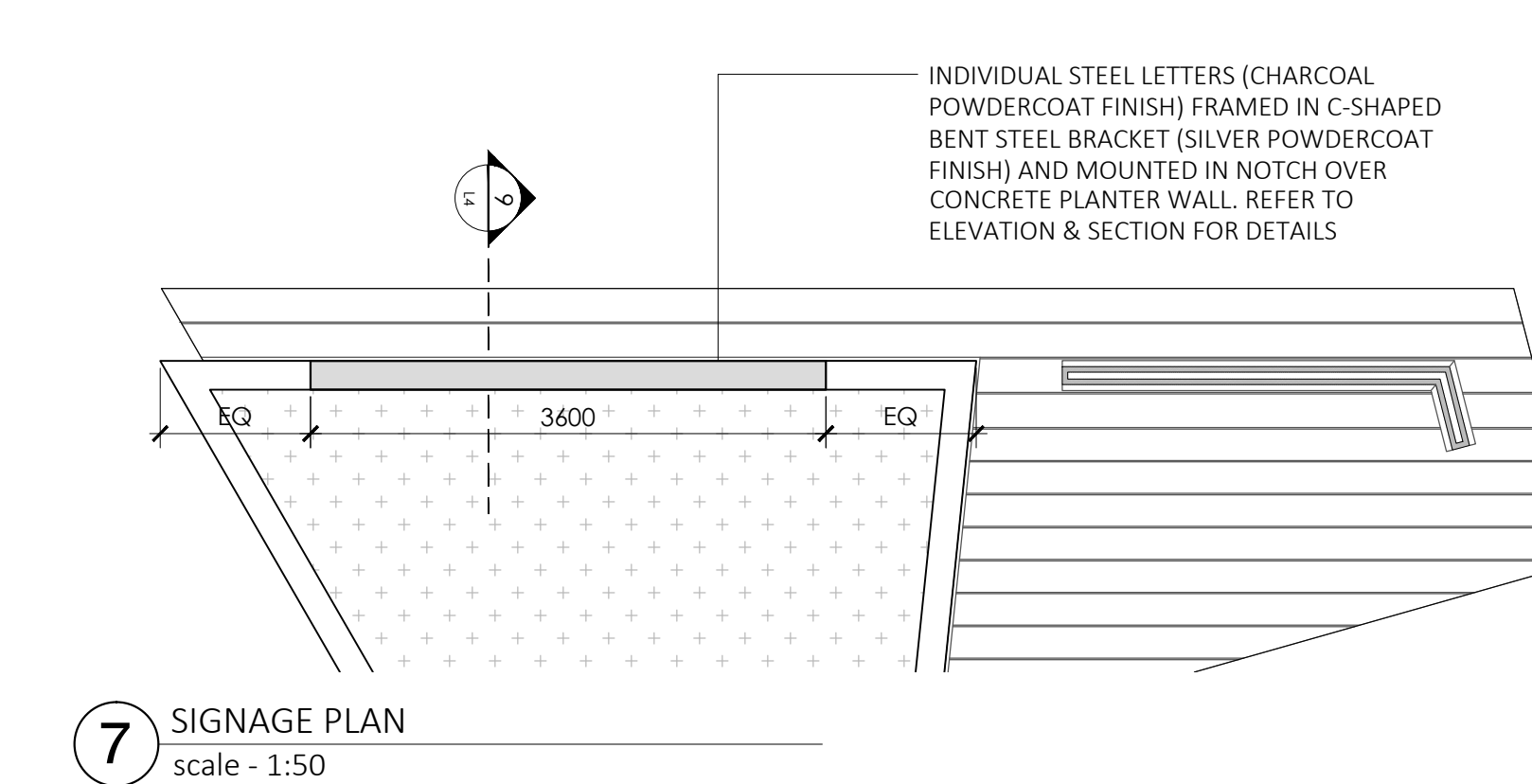
MULCH: 75mm THICK ALPINE MULCH STARTING 50MM FROM ROOT FLARE. REFER TO TOPSOIL SPECIFICATIONS

TOPSOIL: 4.8MM x 152.4MM (3/8" x 6" INCH) CLEANLINE XL COMMERCIAL GRADE LANDSCAPE EDGER

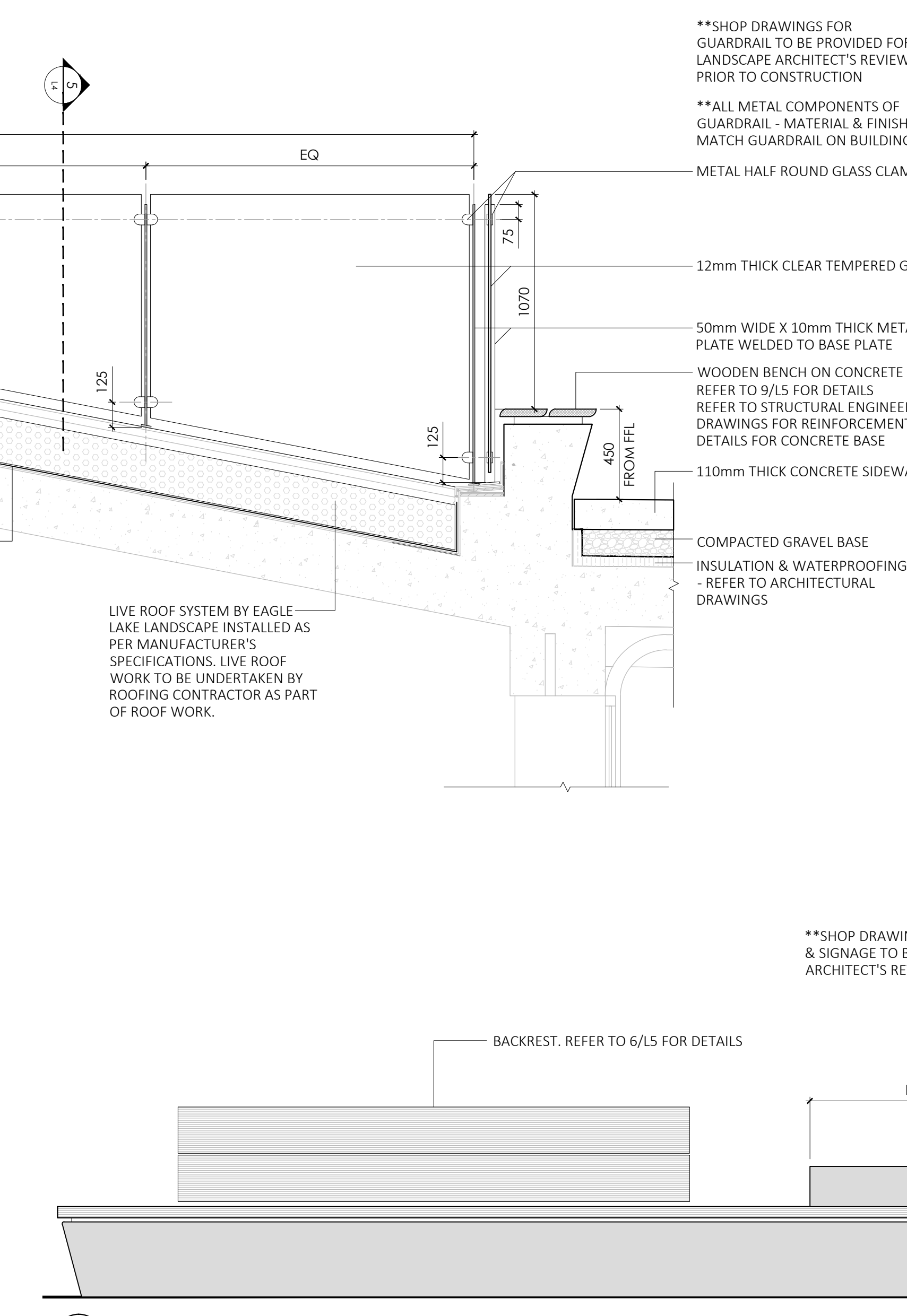
LANDSCAPE EDGER: 1



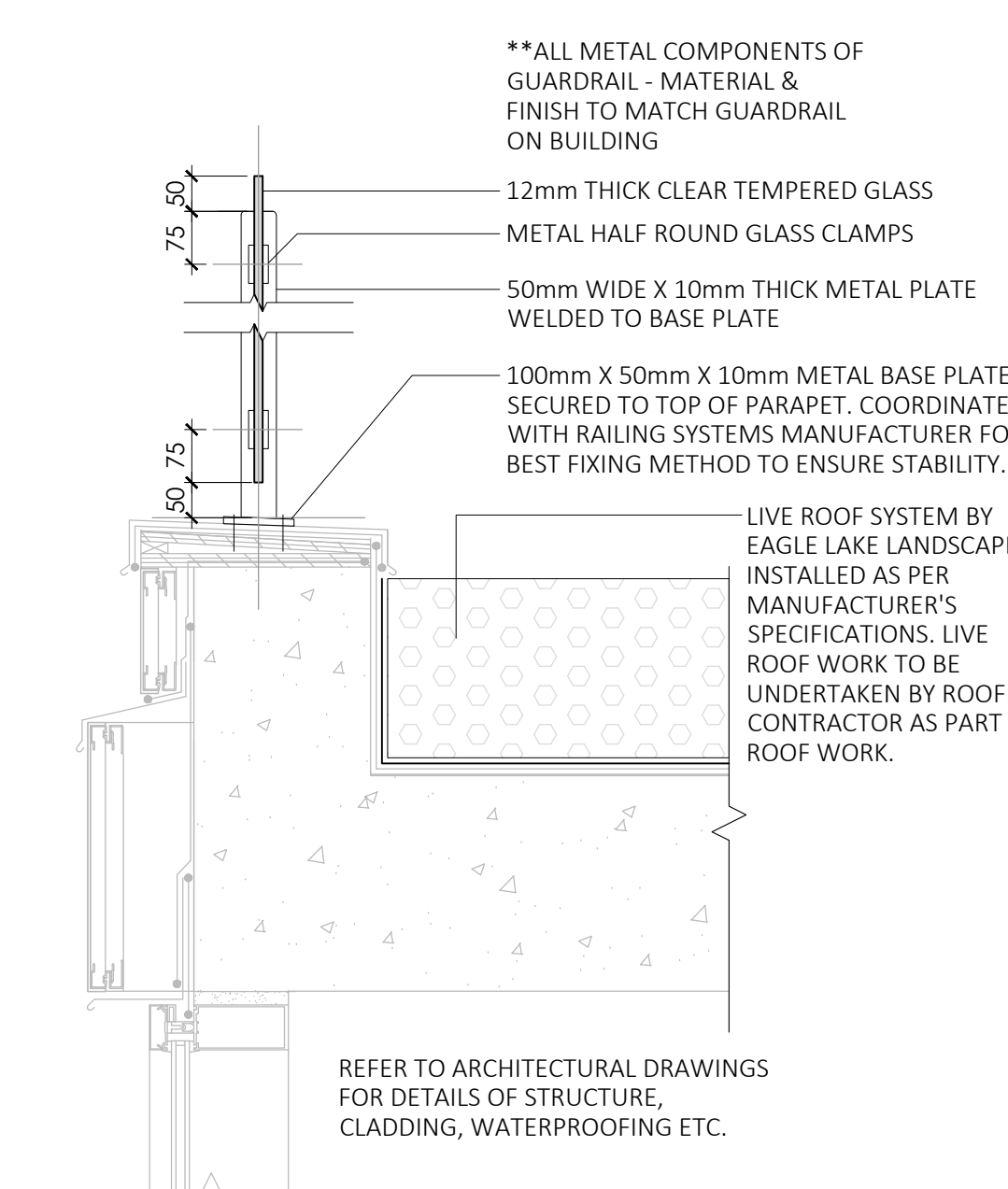
4 SECTION 4 - THROUGH SLOPING PARKADE ROOF  
scale - 1:20



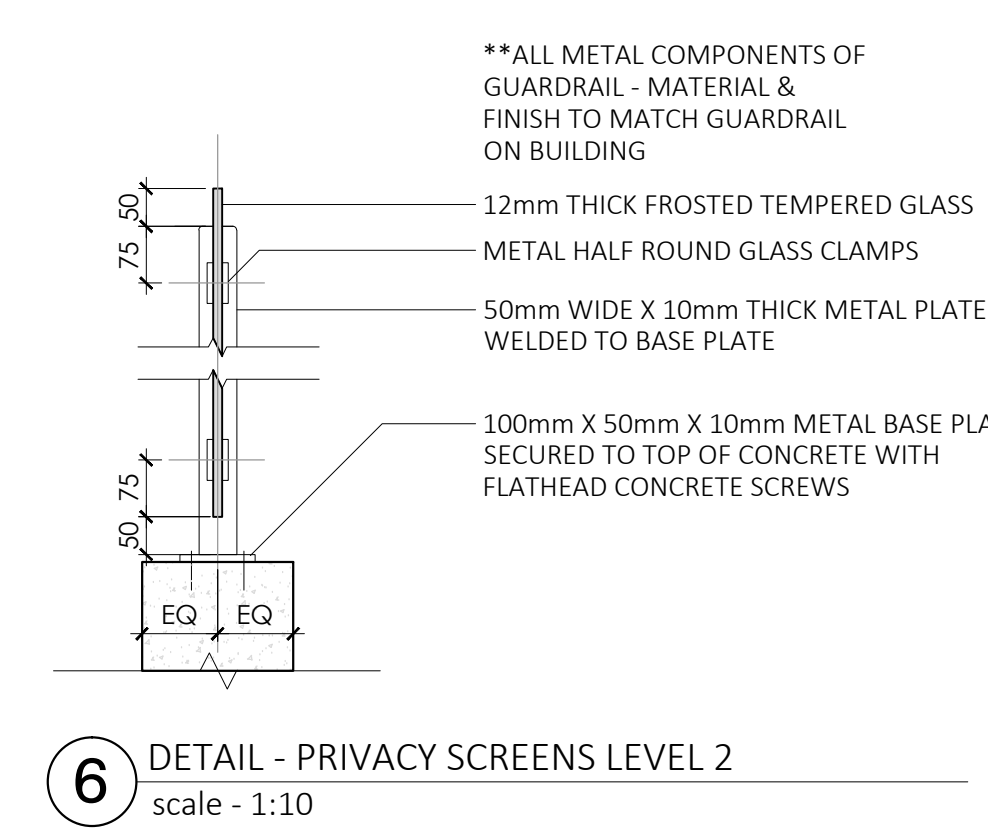
7 SIGNAGE PLAN  
scale - 1:50



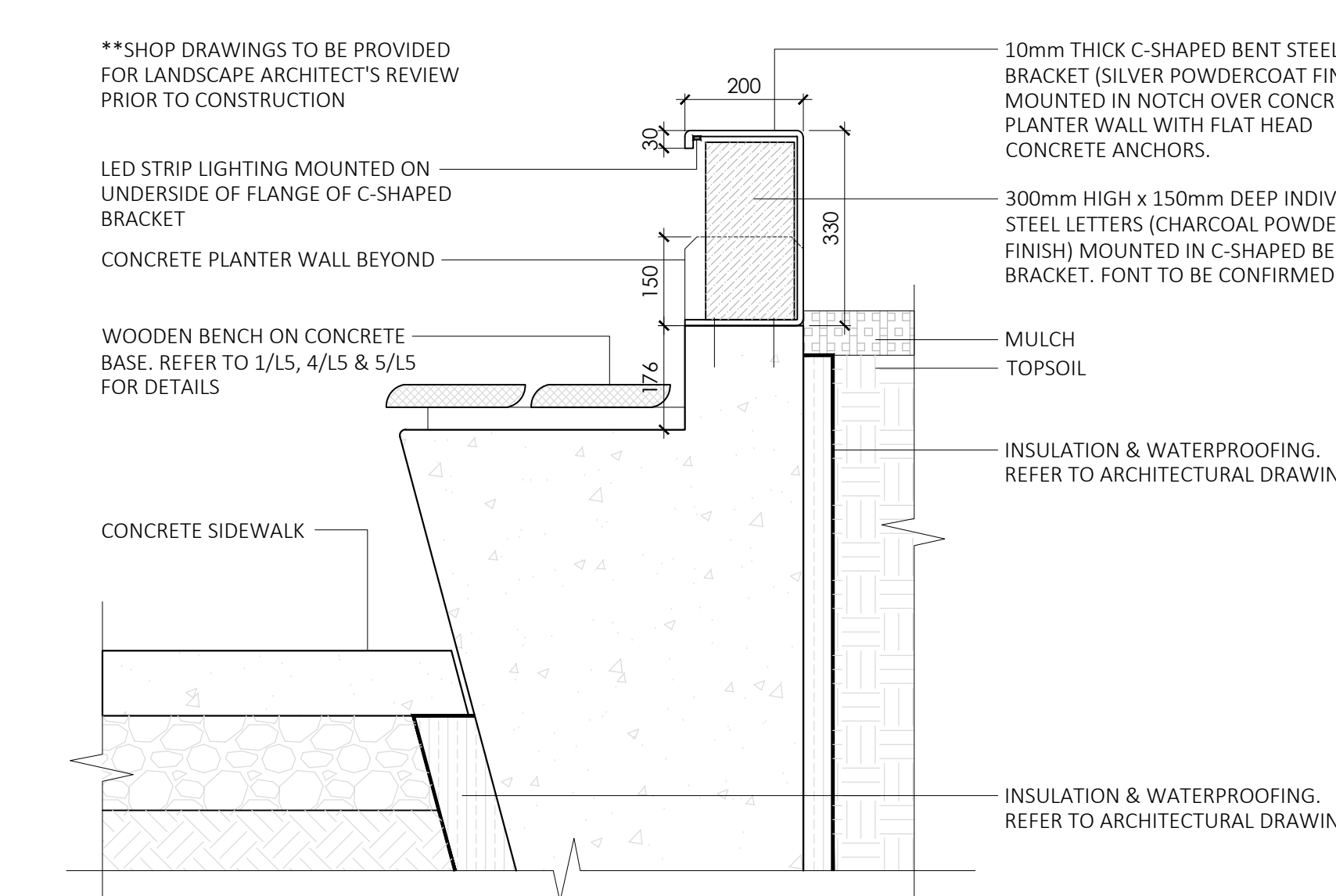
8 SIGNAGE ELEVATION  
scale - 1:20



5 DETAIL - GUARDRAIL ALONG DRIVEWAY RAMP  
scale - 1:10

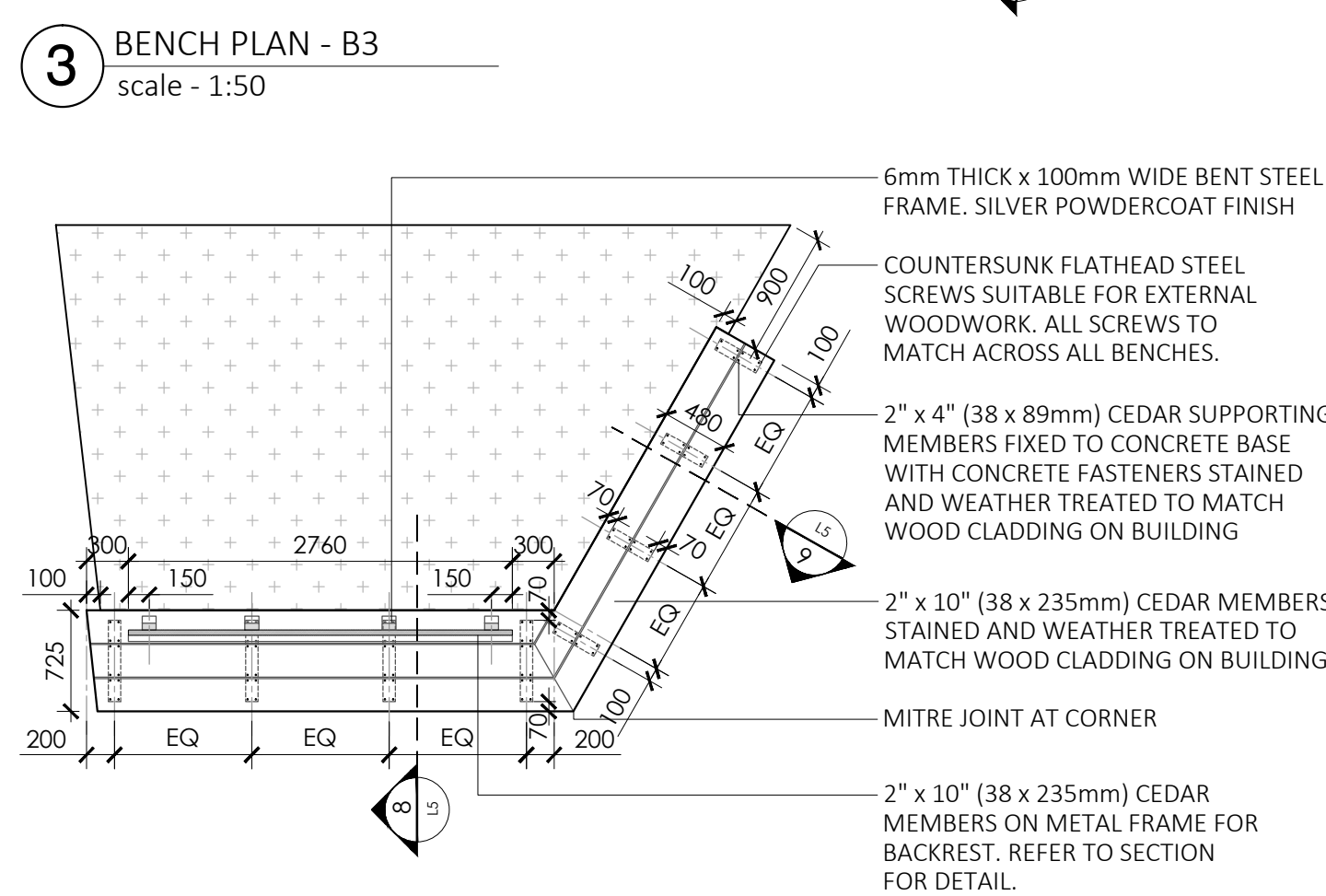
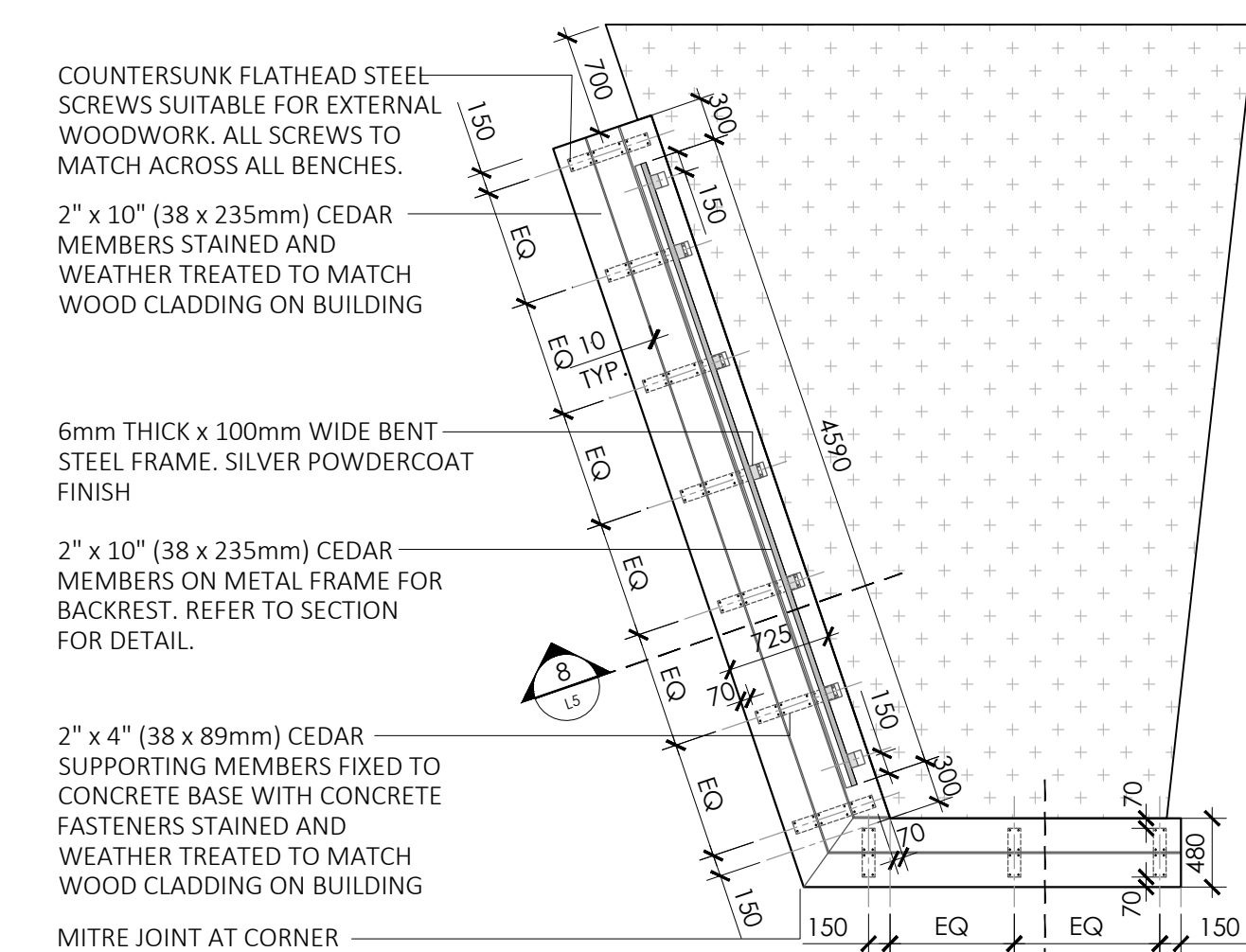
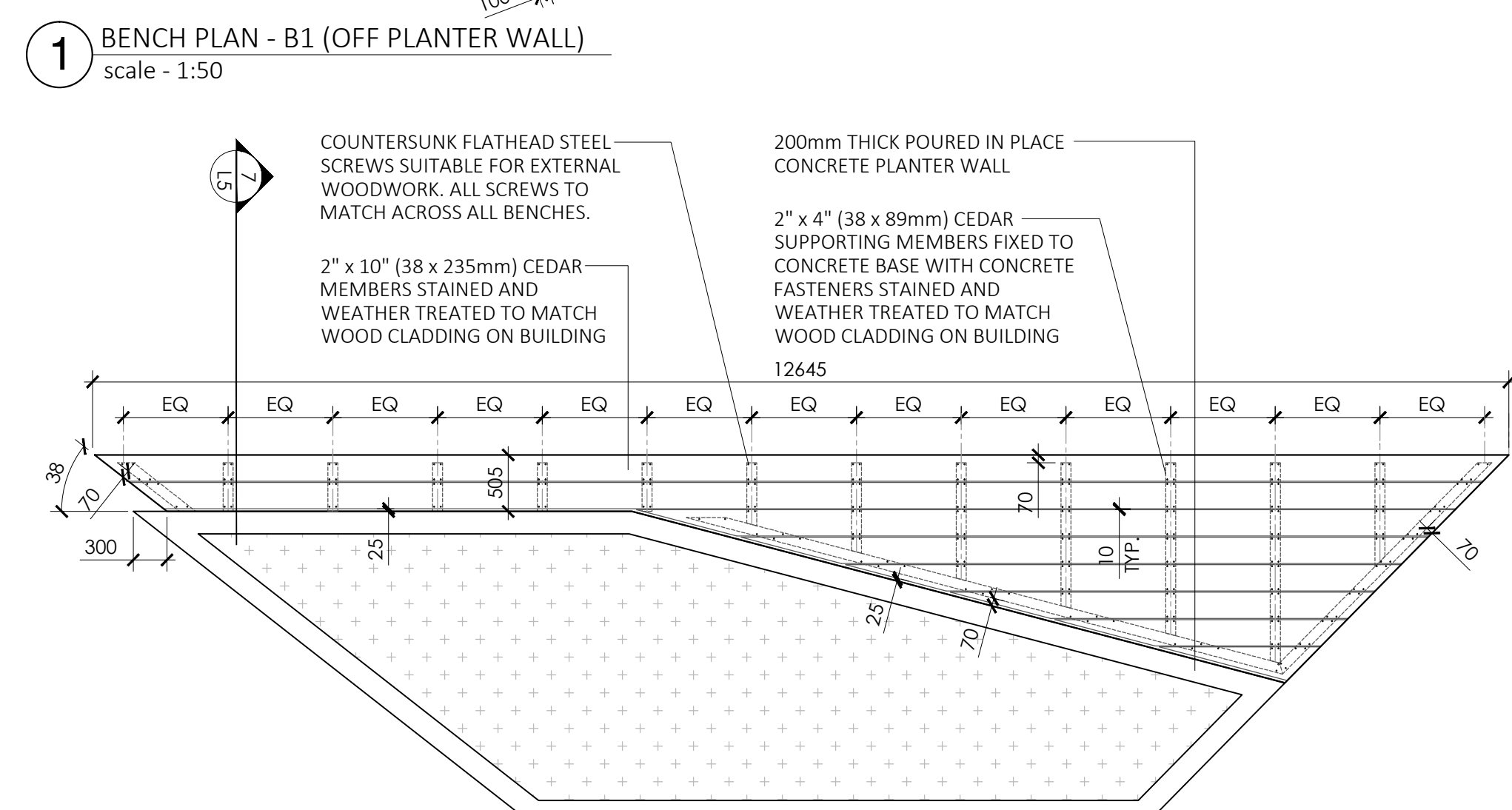
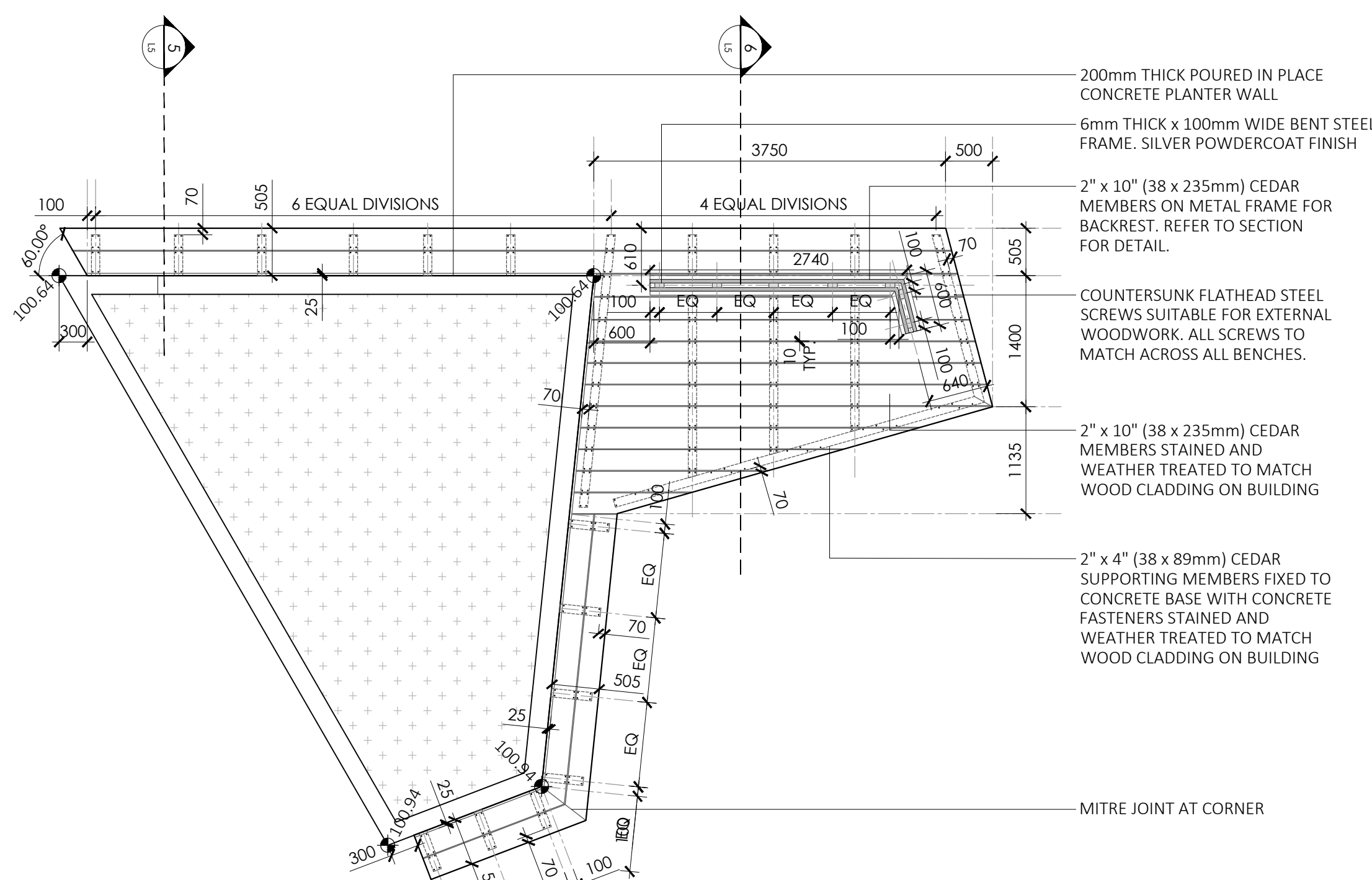


6 DETAIL - PRIVACY SCREENS LEVEL 2  
scale - 1:10

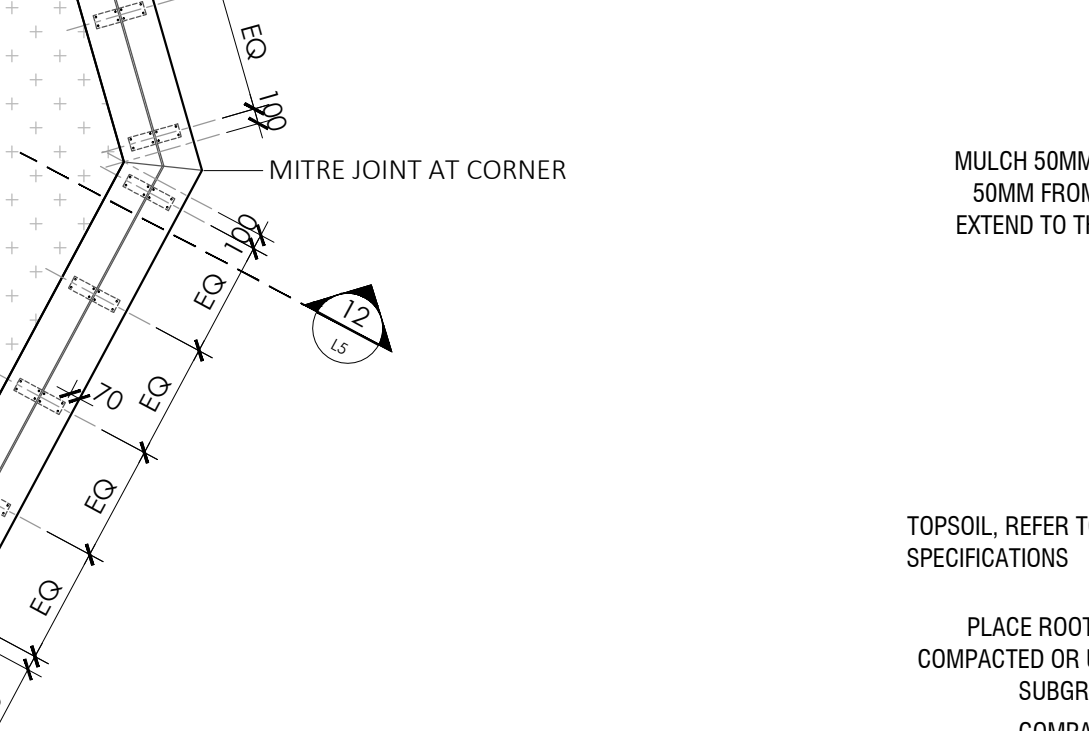
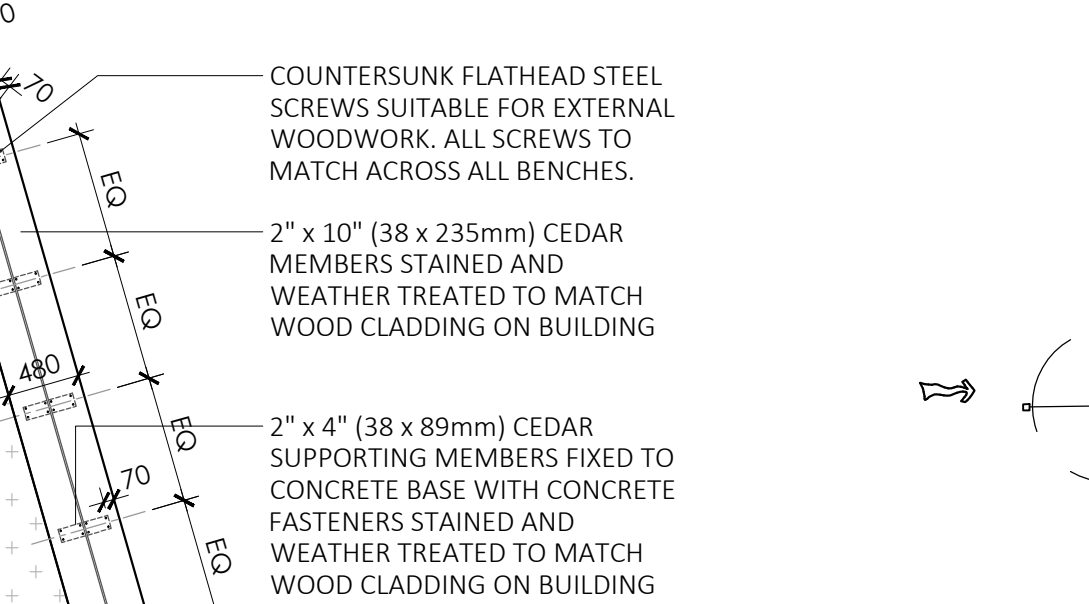
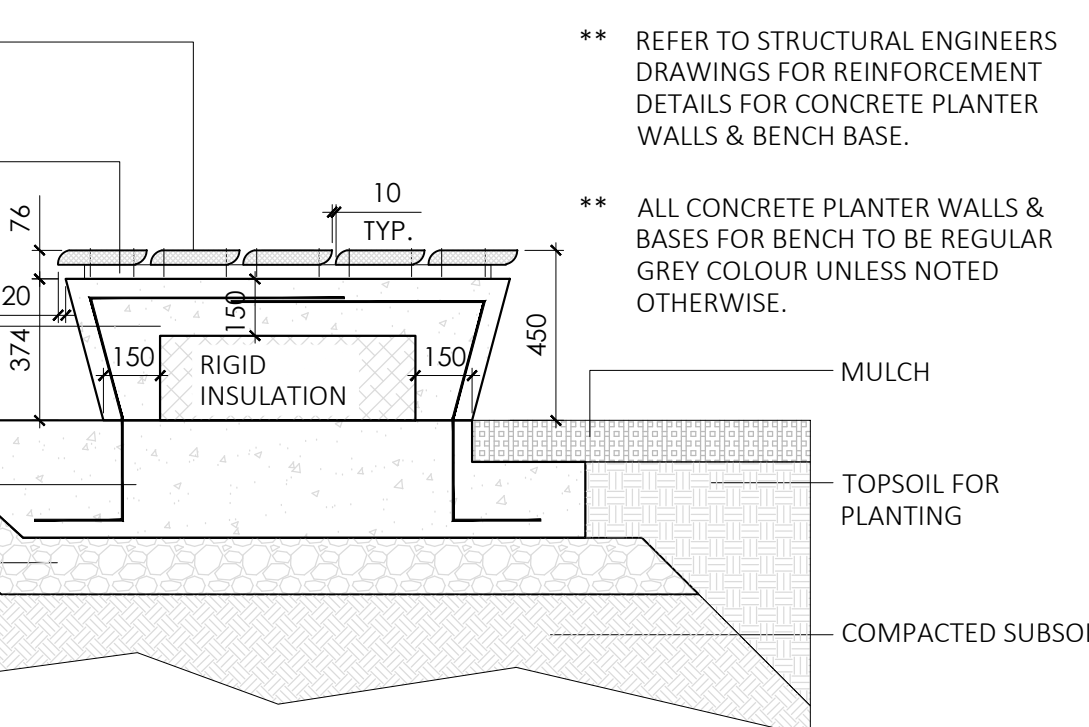
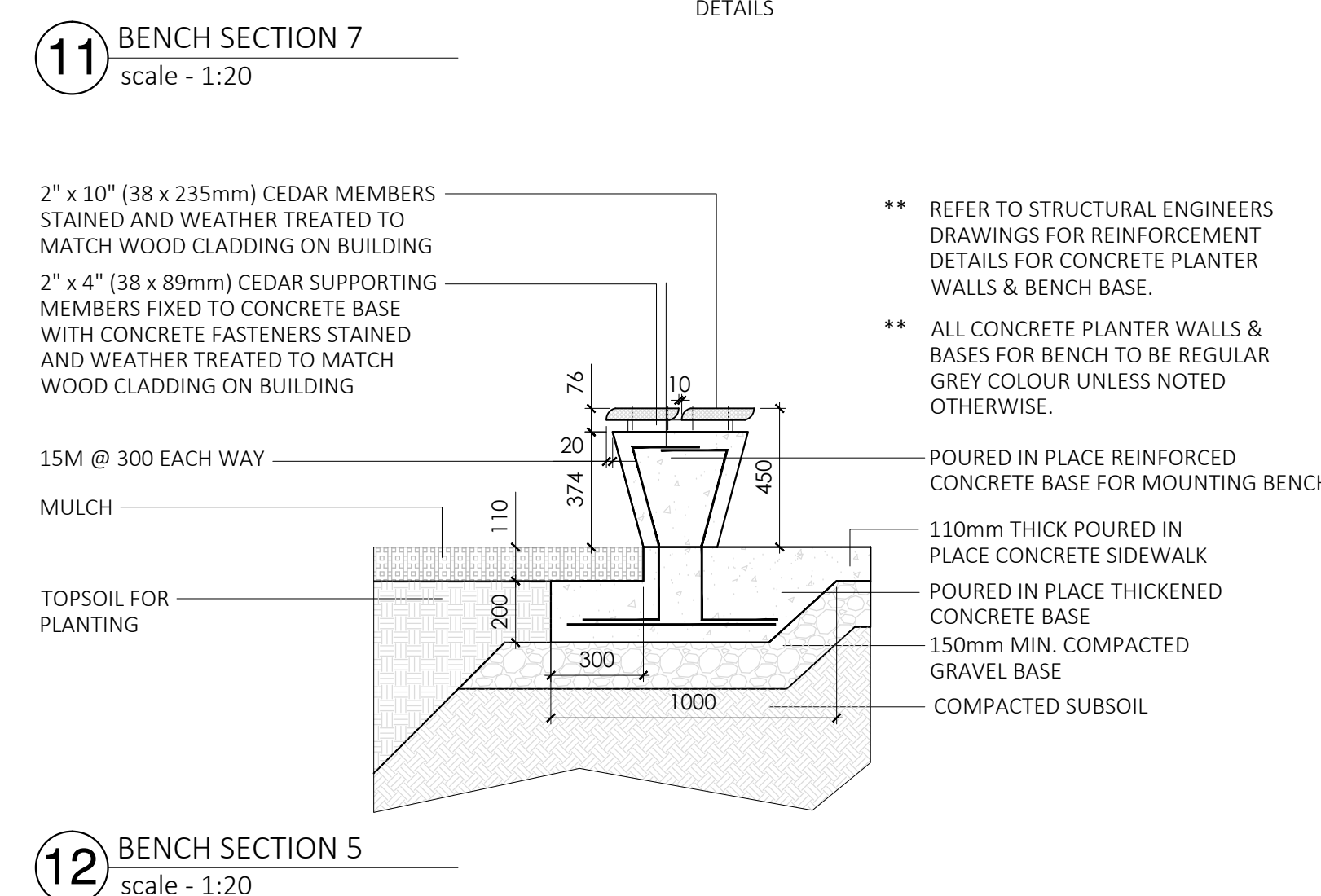
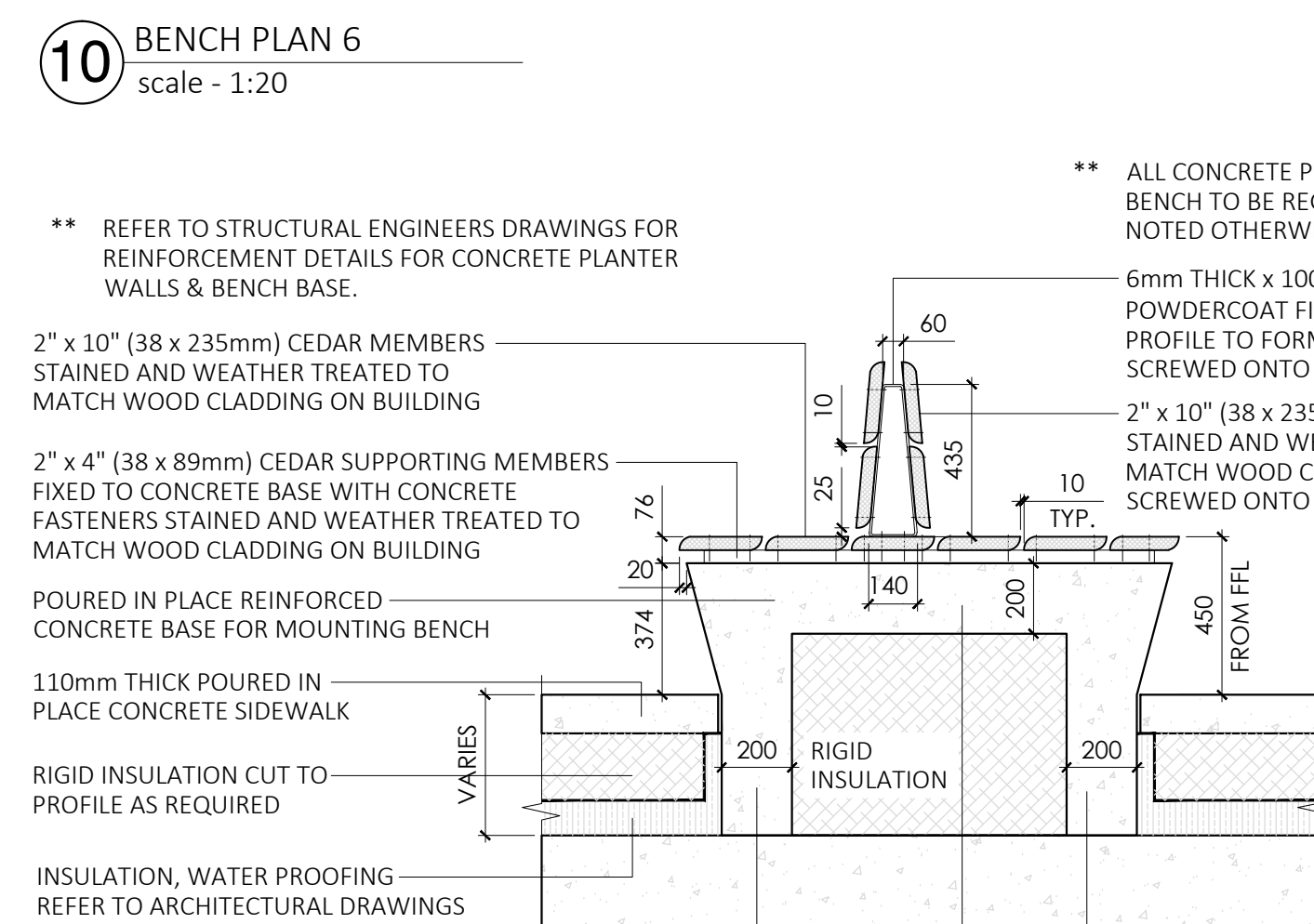
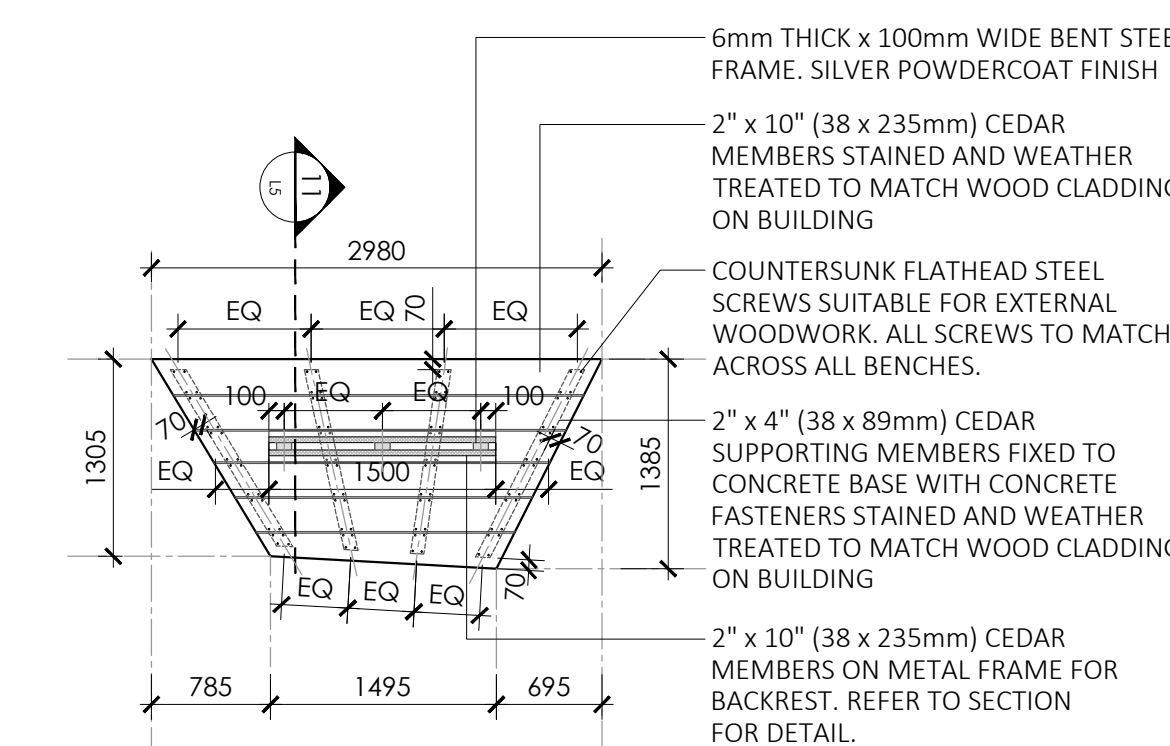
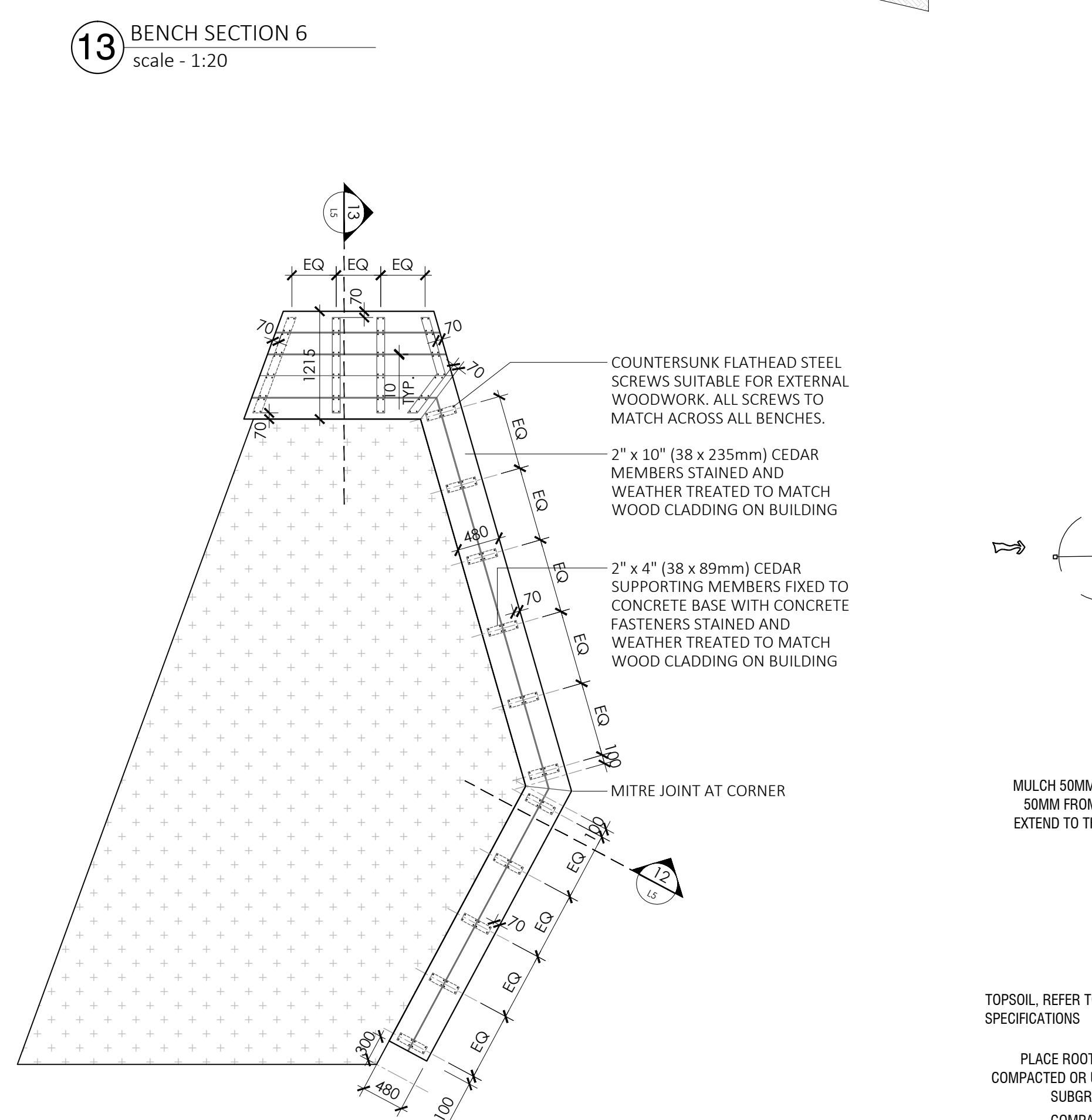
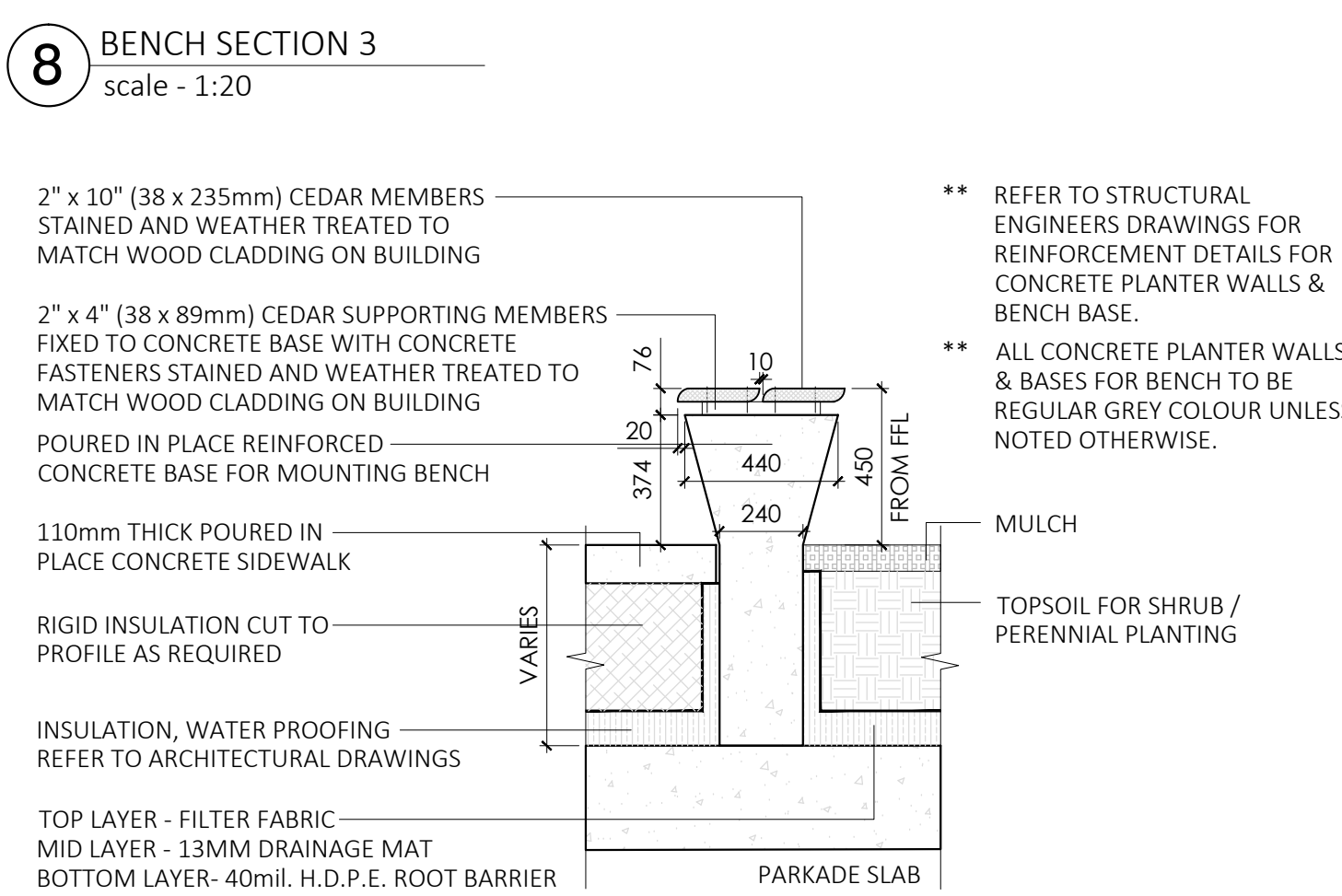
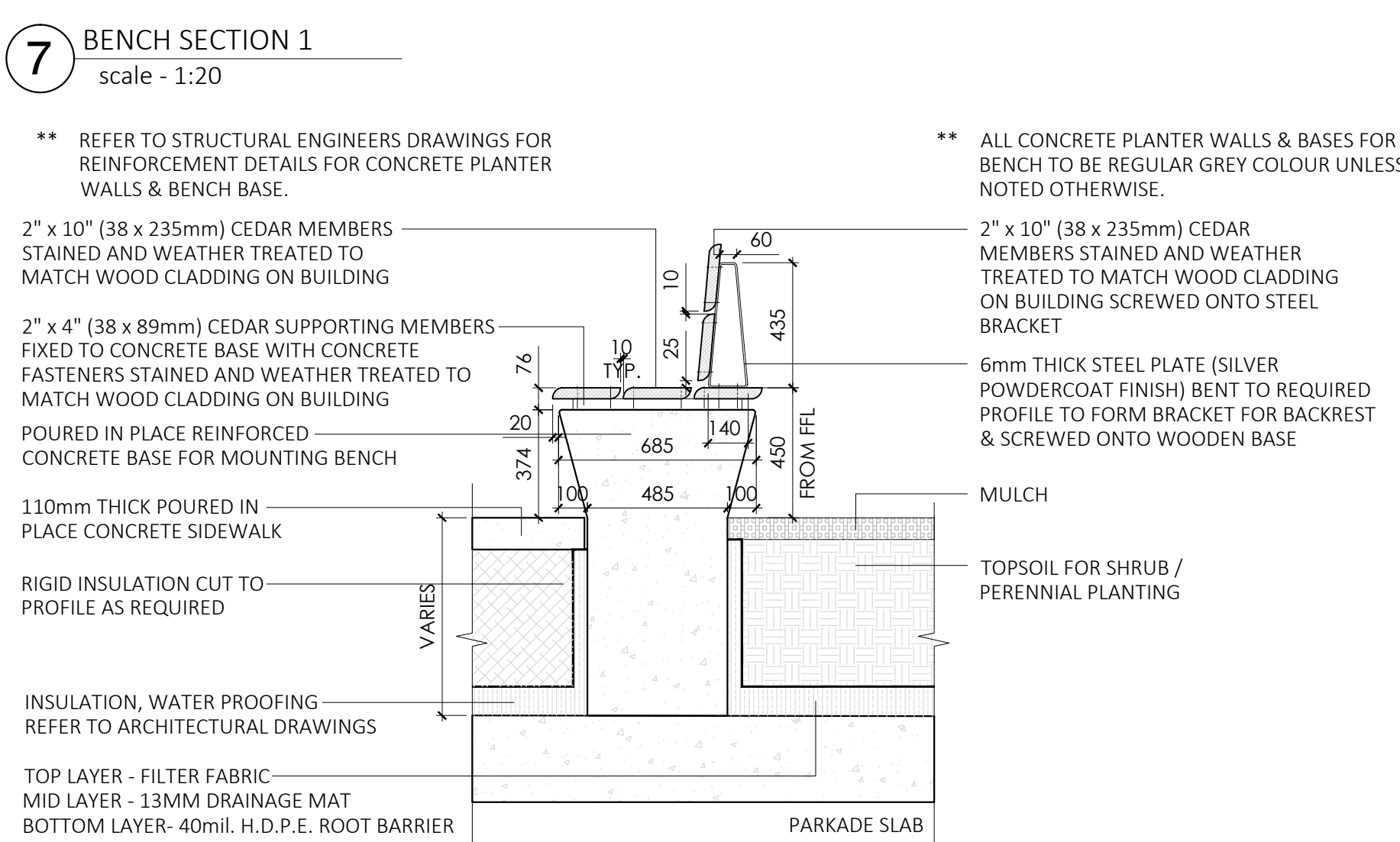
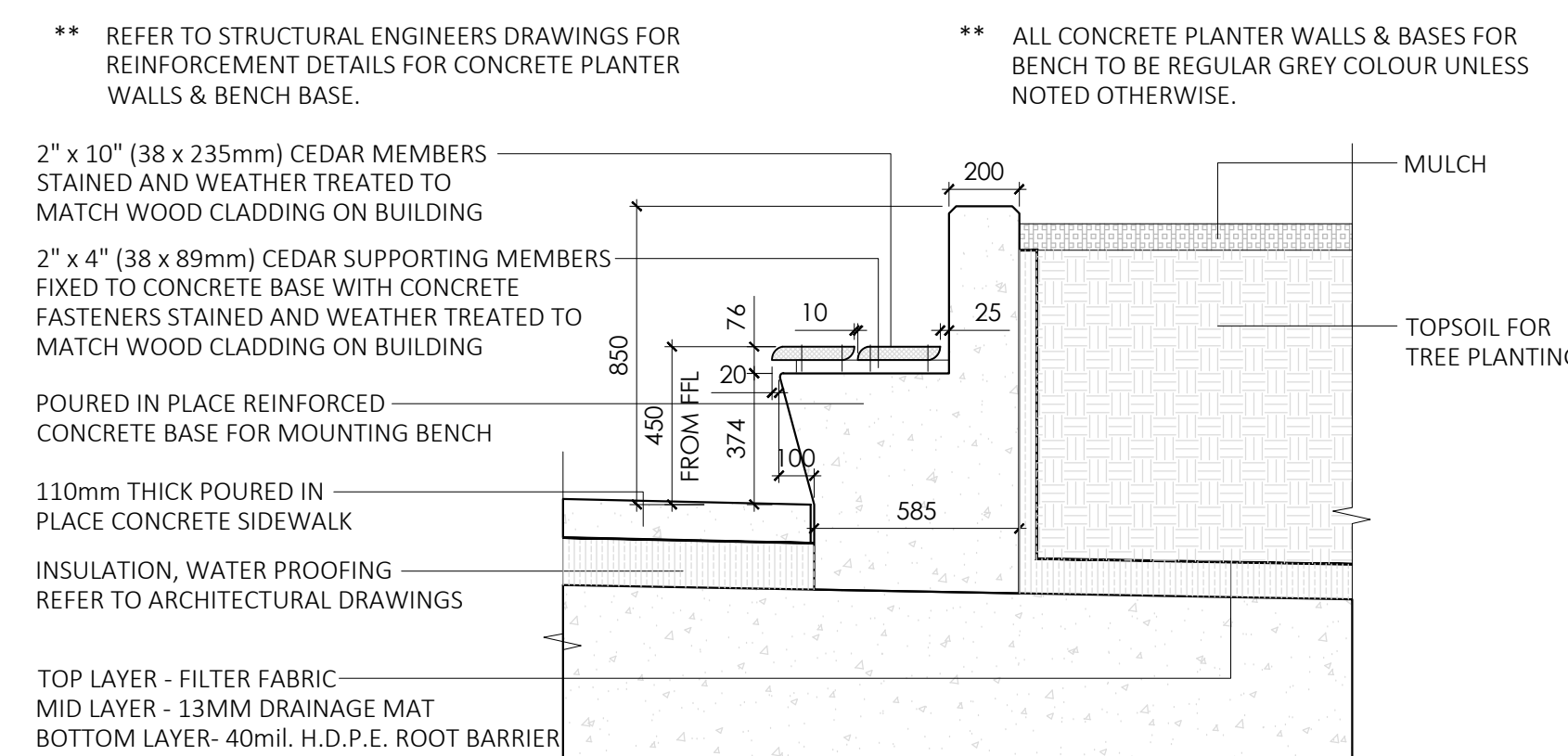
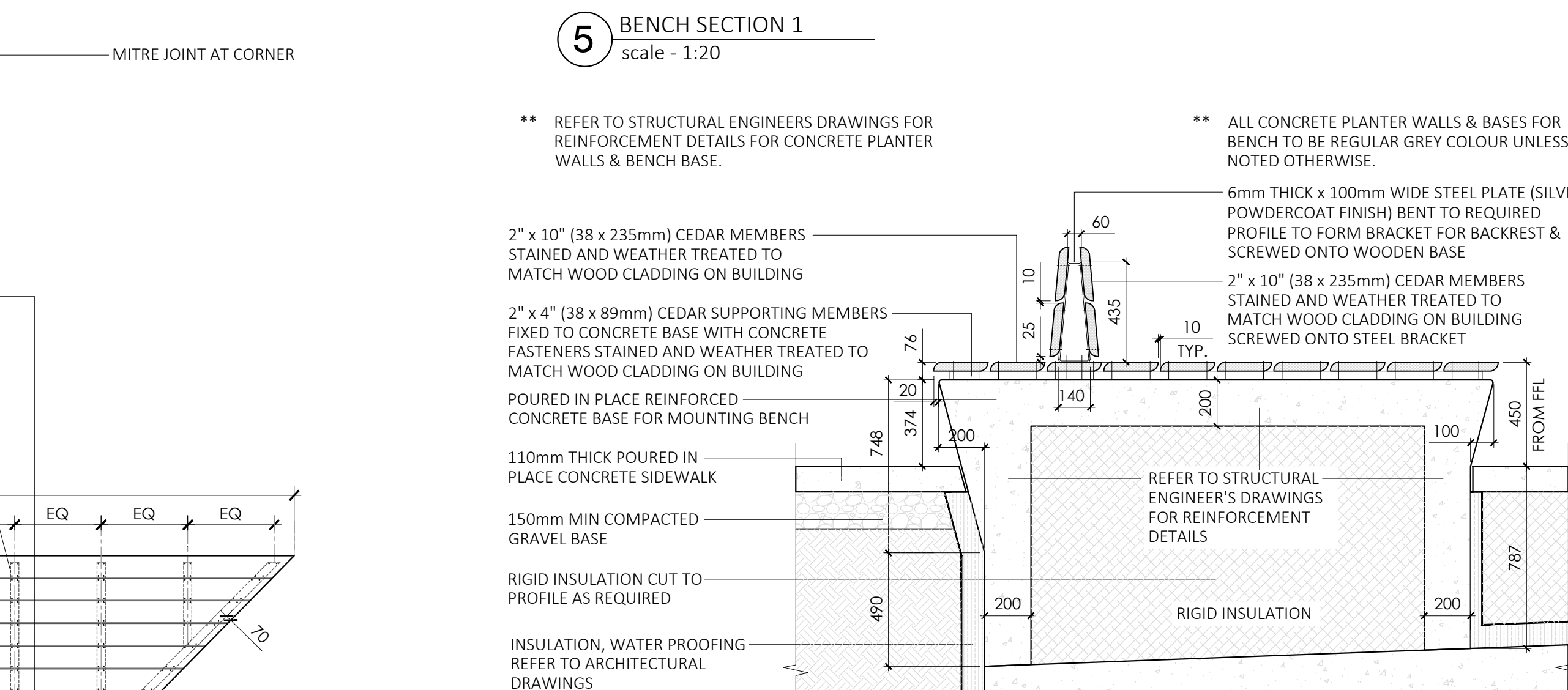
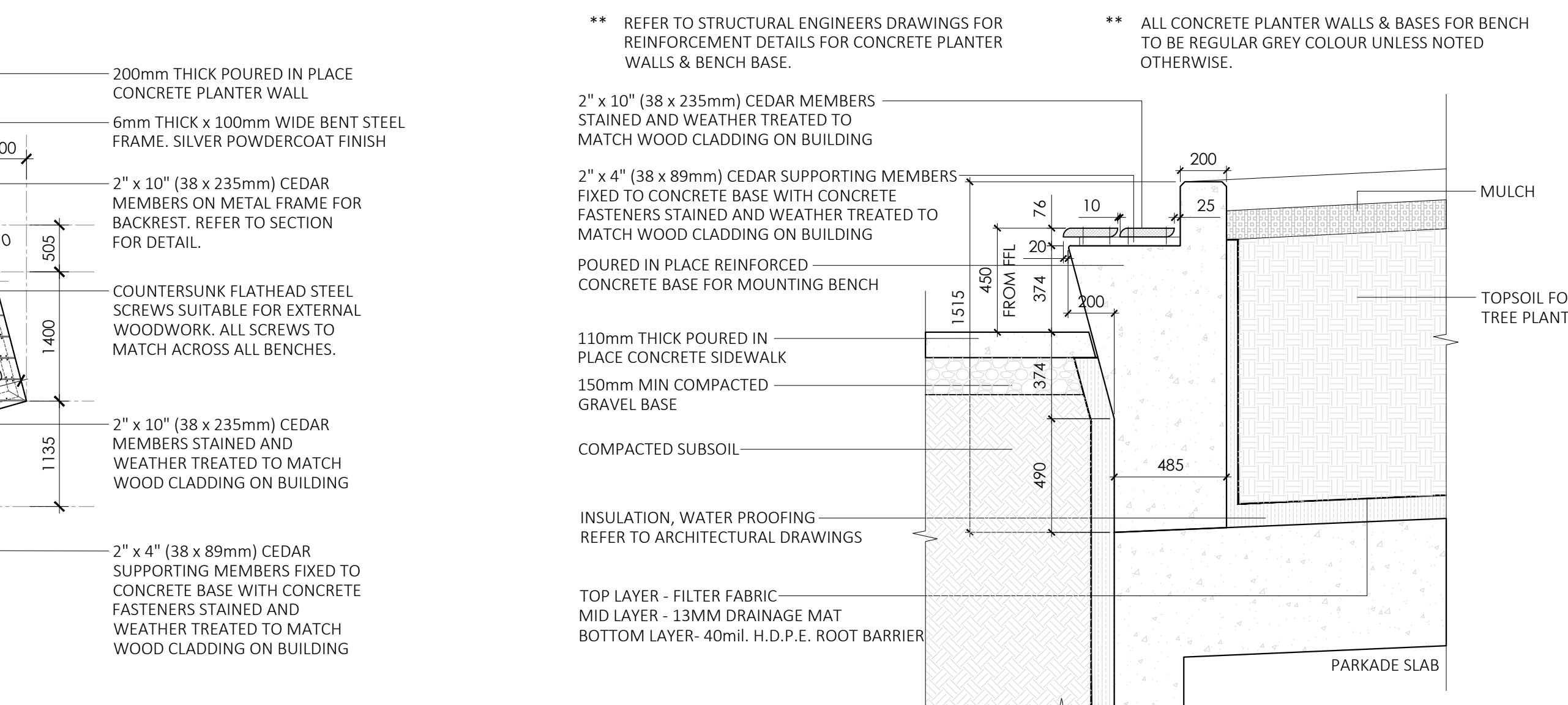


9 SIGNAGE SECTION  
scale - 1:10





NOTE:  
 \*\* SHOP DRAWINGS FOR ALL BENCHES TO BE PROVIDED FOR LANDSCAPE ARCHITECT'S REVIEW PRIOR TO CONSTRUCTION  
 \*\* ALL METALWORK MATERIAL & FINISH TO MATCH GUARDRAIL ON BUILDING



legend

DESCRIPTION OF COMMON LANDSCAPE MATERIALS -	
COMPACTED SUBSOIL:	REMOVE ORGANIC SOILS. RECOMPACT EXPOSED SOIL TO 98% MIN. (IF NECESSARY ADD GRANULAR FILL TO BRING BASE TO APPROPRIATE GRADE. COMPACTED TO 98% MIN.)
COMPACTED GRAVEL BASE:	150MM MIN. OF 25MM CRUSHED GRAVE COMPACTED TO 98%
MULCH:	75mm THICK ALPINE MULCH STARTING 50MM FROM ROOT FLARE.
TOPSOIL:	REFER TO TOPSOIL SPECIFICATIONS

