

PROTECTED SIDE

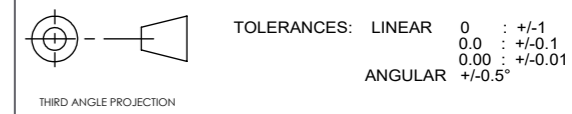
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- NOTES:**
1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
 2. DO NOT SCALE DRAWING.
 3. ALL CONCRETE TO BE IN ACCORDANCE WITH BS 8500
 4. MIXES TO BE REINFORCED CONCRETE - C30/C40
 5. ALL MATERIAL & WORKMANSHIP TO BE IN ACCORDANCE WITH RECOMMENDATIONS OF BS-EN 1992 EUROCODE 2
- Foundation sizes given are for customer guidance and suited to sub-soils with good load bearing capabilities. Where adverse site conditions are met professional advice to be sought.



| Rev | Init | Revision Notes | ER No. | Date |
|-----|------|----------------|--------|----------|
| A | MB | FIRST ISSUE | - | 18/04/19 |
| B | - | - | - | -/-/- |
| C | - | - | - | -/-/- |
| D | - | - | - | -/-/- |
| E | - | - | - | -/-/- |

PRODUCT TYPE:
 SHALLOWMOUNT BOLLARDS

IMPACT RATING:
 72-40

SLEEVE DETAIL:
 CITY OF LONDON FERROCAST

PRODUCT RANGE:
 RHINO GUARD

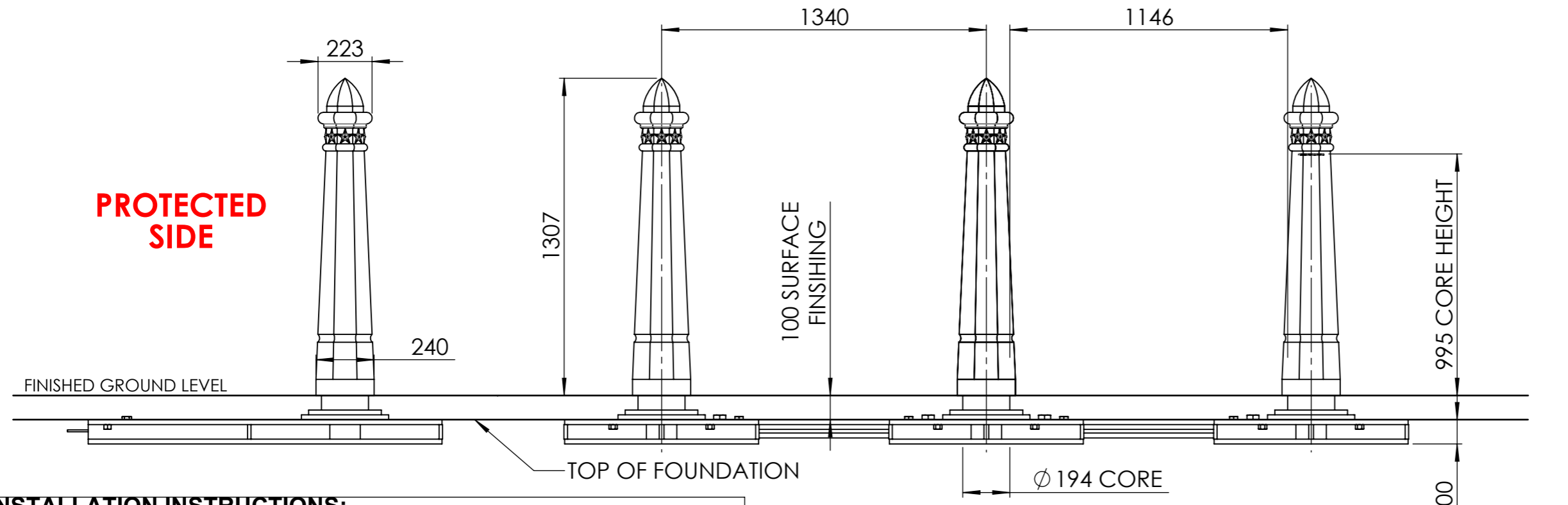
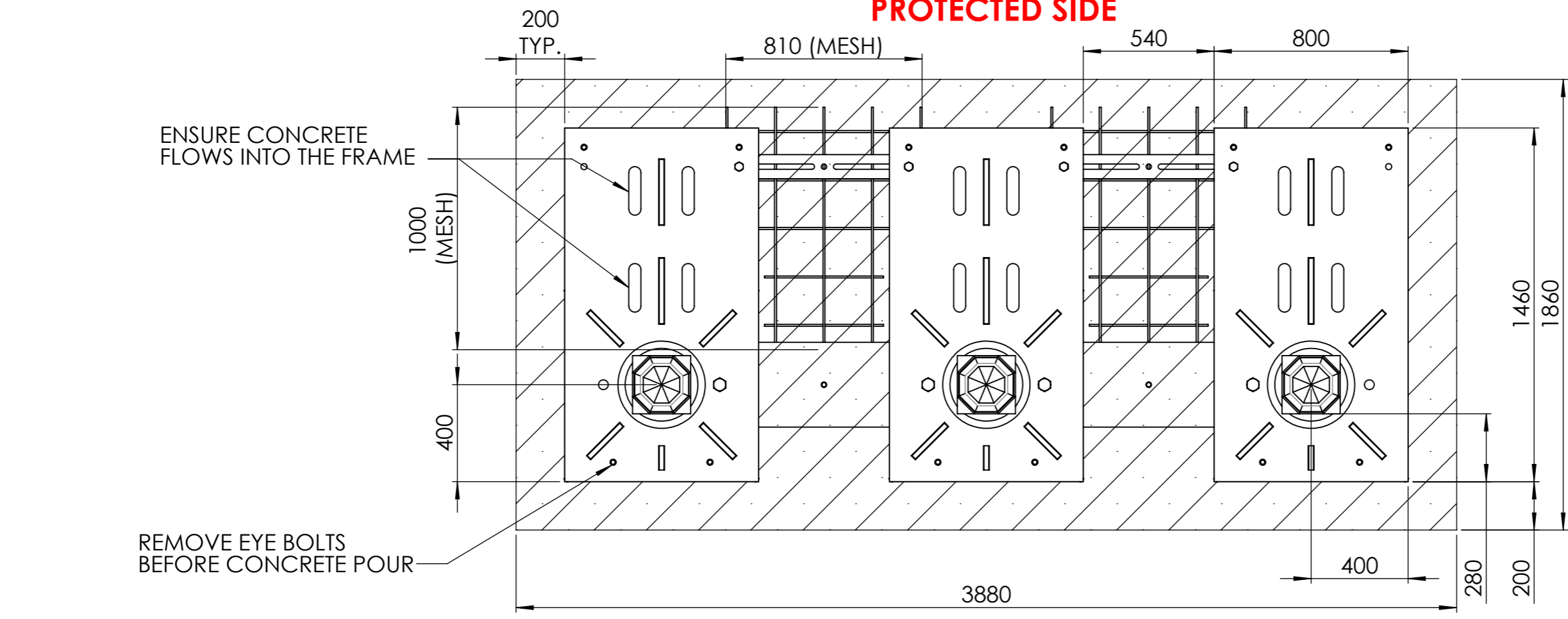
PRODUCT WEIGHT:
 520KG SINGLE UNIT

BRACKET WEIGHT:
 130KG FRONT
 10KG REAR

SHEET TITLE:
 MARSHALLS HVM - 72-40 SUPER
 SHALLOWMOUNT FOUNDATION DETAIL

DRAWING NUMBER:
IWA14-FO-72-40

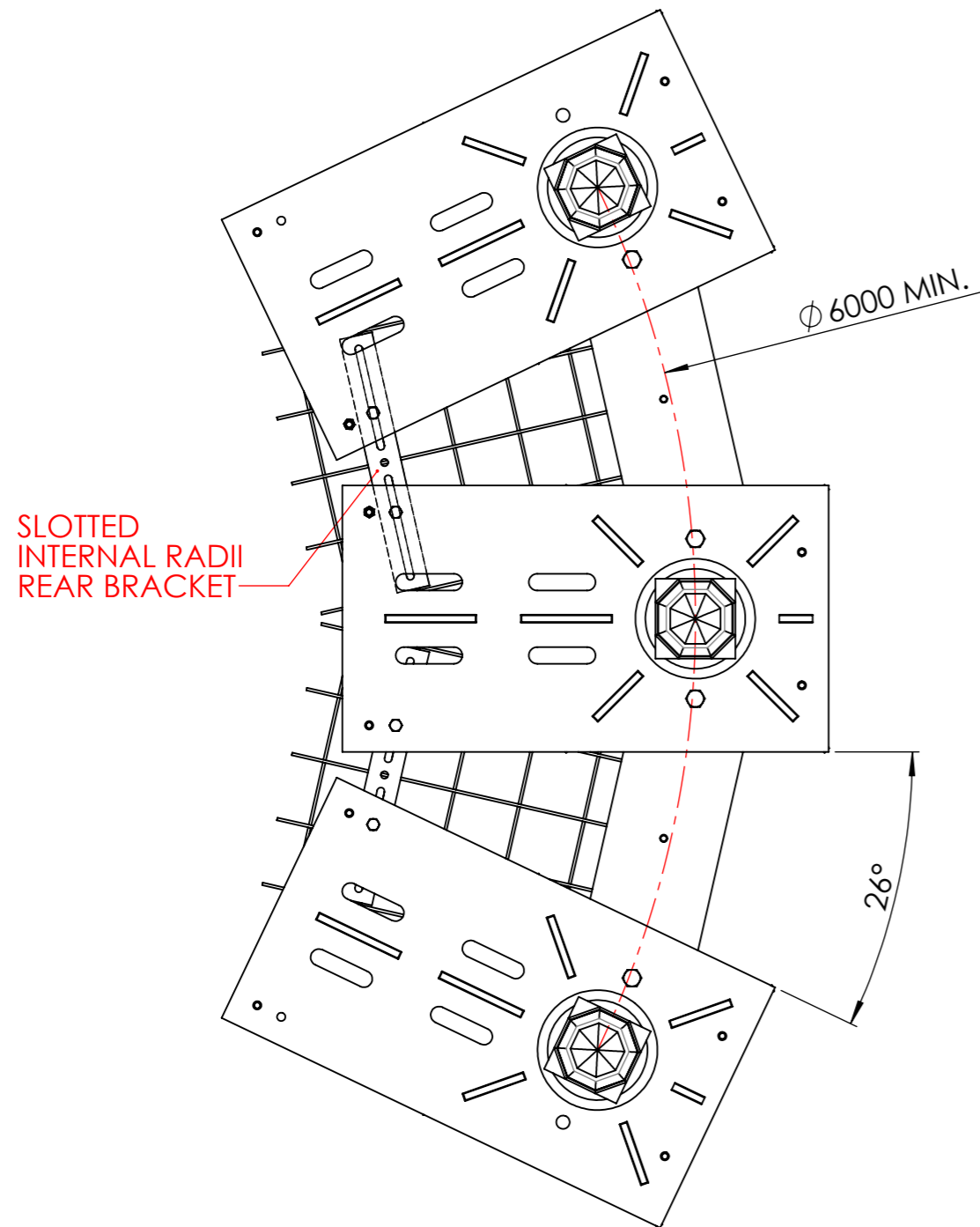
| DRAWN BY | REVISION |
|----------|--------------|
| MB | [A] |
| DATE | |
| 18/04/19 | |
| SCALE | SHEET 1 of 2 |
| 1:20@A3 | |



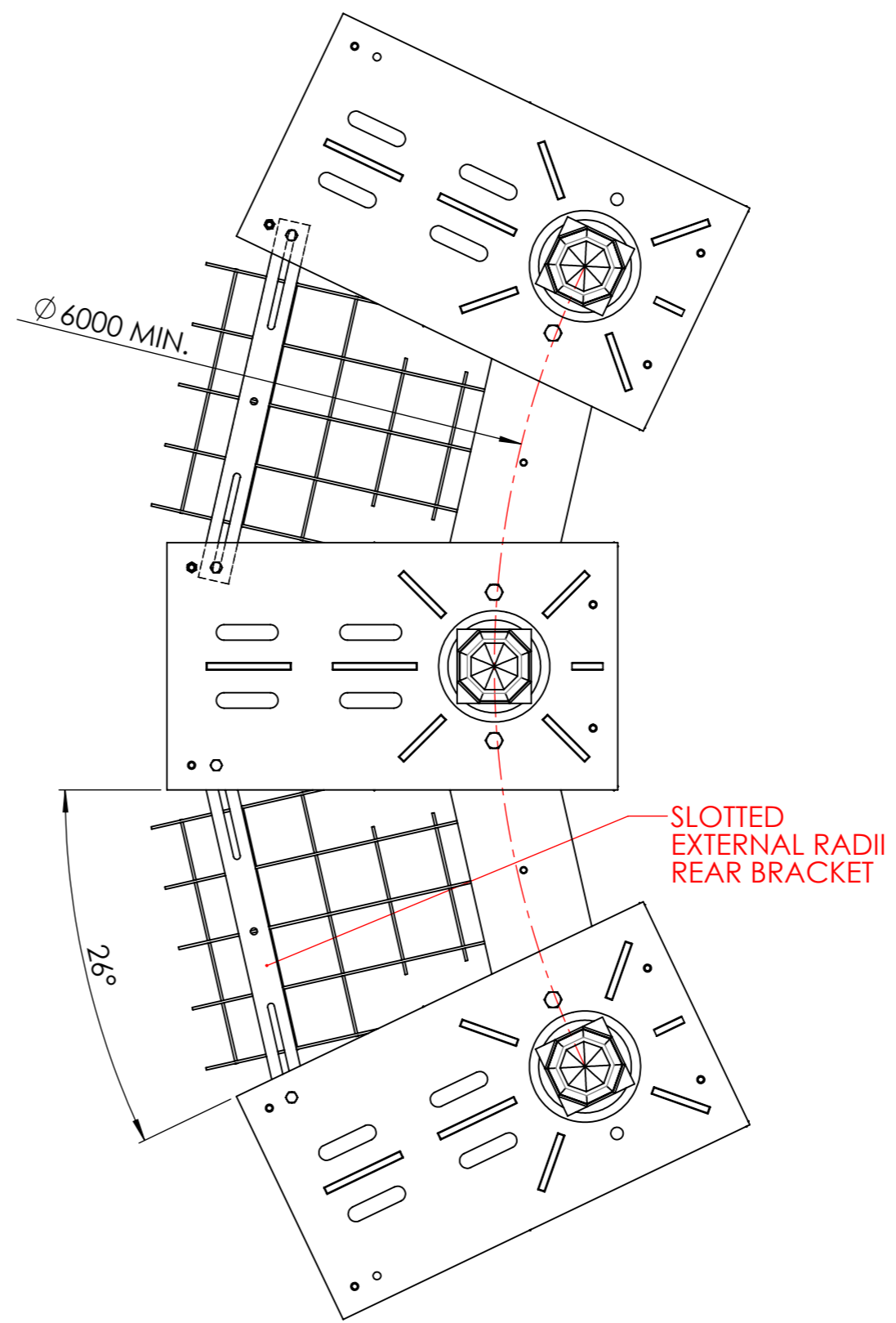
INSTALLATION INSTRUCTIONS:
 EXCAVATE SUITABLE FOUNDATION FOR BOLLARDS
 CONNECT LIFTING EQUIPMENT TO EACH UNIT & LAY IN POSITION
 REMOVE LIFTING EYES
 FASTEN UNITS TOGETHER WITH BRACKETS, NUTS AND WASHERS. M30 FRONT. M20 REAR.
 ADD REBAR MESH BETWEEN FRAMES. MID-HEIGHT.
 CAST CONCRETE C30/C40 SLUMP MINIMUM
 ALLOW FOUNDATION TO CURE
 FINISH TOP LEVEL IN ACCORDANCE WITH SITE REQUIREMENTS.
 BOND/SCREW FERROCAST SLEEVE TO BOLLARD CORE.

PRODUCT CLASSIFICATION:
 B-FOUNDATION/PASSIVE/BOLLARD
PERFORMANCE RATING:
 IWA14-1:2013 BOLLARD
 V/7200[N2A]/64/90:7.6

INTERNAL RADIUS EXAMPLE DETAIL



EXTERNAL RADIUS EXAMPLE DETAIL



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| | | | |
|--|--------------------|------|-----------|
| | TOLERANCES: LINEAR | 0 | : +/-1 |
| | | 0.0 | : +/-0.1 |
| | | 0.00 | : +/-0.01 |
| | ANGULAR | | +/-0.5° |

THIRD ANGLE PROJECTION

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SHALLOWMOUNT BOLLARDS

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72-40

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CITY OF LONDON FERROCAST

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RHINO GUARD

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MARSHALLS HVM - 72-40 SUPER
SHALLOWMOUNT FOUNDATION DETAIL
- RADII & ANGLES

DRAWING NUMBER:
IWA14-FO-72-40

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|-------------------------|------------------------|
| DRAWN BY MB | REVISION [A] |
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| SCALE 1:20@A3 | SHEET 2 of 2 |