

**PLAN VIEW**

- WATER FEATURE OPTIONS:**
- **VOR3505 (WITH RIVER MAZE)**
    1. 1X SOFT RAIN + 2X RIVER MAZE
    2. 1X MIST + 2X RIVER MAZE
  - **VOR3505B (WITHOUT RIVER MAZE)**
    1. 1X MIST + 1X SOFT RAIN
    2. 2X MIST
    3. 2X SOFT RAIN

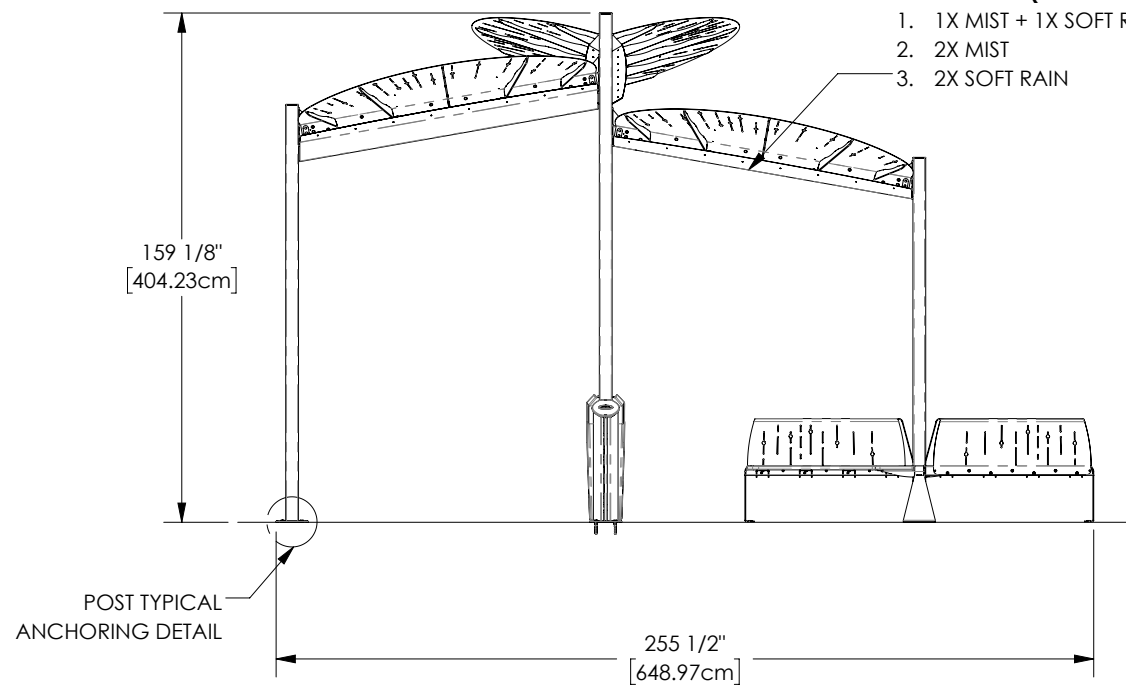
- GENERAL NOTES:**
- 1) "BY OTHERS" MAY REFER TO SERVICE PROVIDERS OTHER THAN THE EQUIPMENT MANUFACTURER. PLEASE REFER TO PROJECT SPECIFICATION FOR DETAILS OF RESPONSIBILITY.
  - 2) PIPE LOCATIONS ARE APPROXIMATE AND SUBJECT TO CHANGE.
  - 3) USE ANTI-SEIZE ON ALL THREADS.
  - 4) DRAINAGE SOLUTIONS ARE OPTIONAL AND UNDER THE RESPONSABILITY OF THE INSTALLER.
  - 5) ABRIO PRODUCTS ARE ASSEMBLED ON-SITE BY INSTALLER. REFER TO ASSEMBLY GUIDE FOR STEP-BY-STEP INSTRUCTIONS.

- ELECTRICAL NOTES:**
- 1) NO LIVE ELECTRICAL CONNECTION TO BE DONE. SOLAR BATTERY SYSTEM IN OPERATION.
  - 2) FAILURE TO FOLLOW VORTEX APPLICATION GUIDELINES, DRAWINGS, WIRING DIAGRAM & CABLE SPECIFICATIONS WILL VOID PRODUCT WARRANTY.
  - 3) IF YOU HAD SEVERAL DAYS WITHOUT SUN (3 OR MORE), THE SYSTEM WILL GO TO A SLEEP MODE, WHICH WILL SHUTDOWN THE SYSTEM TO PROTECT THE CONTROLLER AND THE BATTERY UNTIL IT'S RECHARGED TO 20% (3-5 SUNNY HOURS).

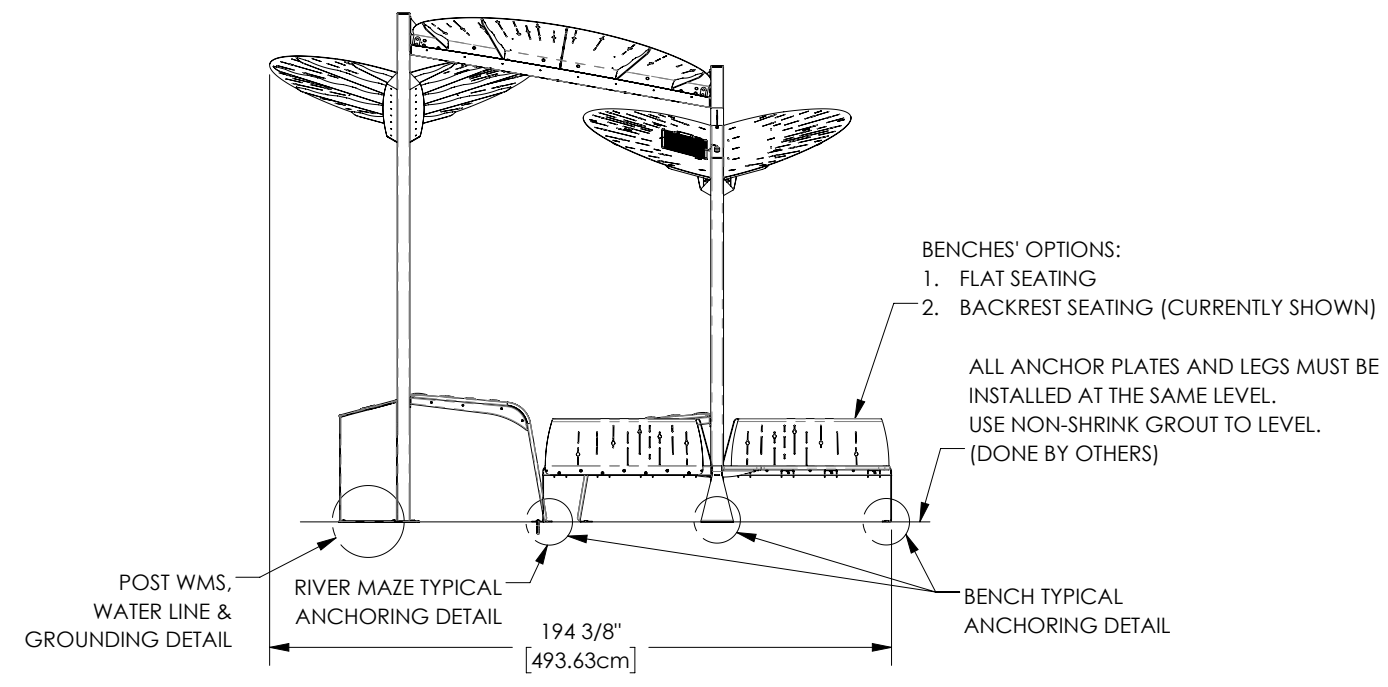
- OPTIMAL SOLAR ORIENTATION (DONE BY OTHERS):**
- SOUTH FACING FOR NORTH OF THE EQUATOR
  - NORTH FACING FOR SOUTH OF THE EQUATOR
  - AVOID SHADOW AREAS FOR INSTALLATION

- ABRIO OPTIONS:**
- BENCH OPTIONS:**
1. FLAT SEATING
  2. BACKREST SEATING

- WATER FEATURE OPTIONS:**
- **VOR3505 (WITH RIVER MAZE)**
    1. 1X SOFT RAIN + 2X RIVER MAZE
    2. 1X MIST + 2X RIVER MAZE
  - **VOR3505B (WITHOUT RIVER MAZE)**
    1. 1X MIST + 1X SOFT RAIN
    2. 2X MIST
    3. 2X SOFT RAIN



**FRONT ELEVATION VIEW**

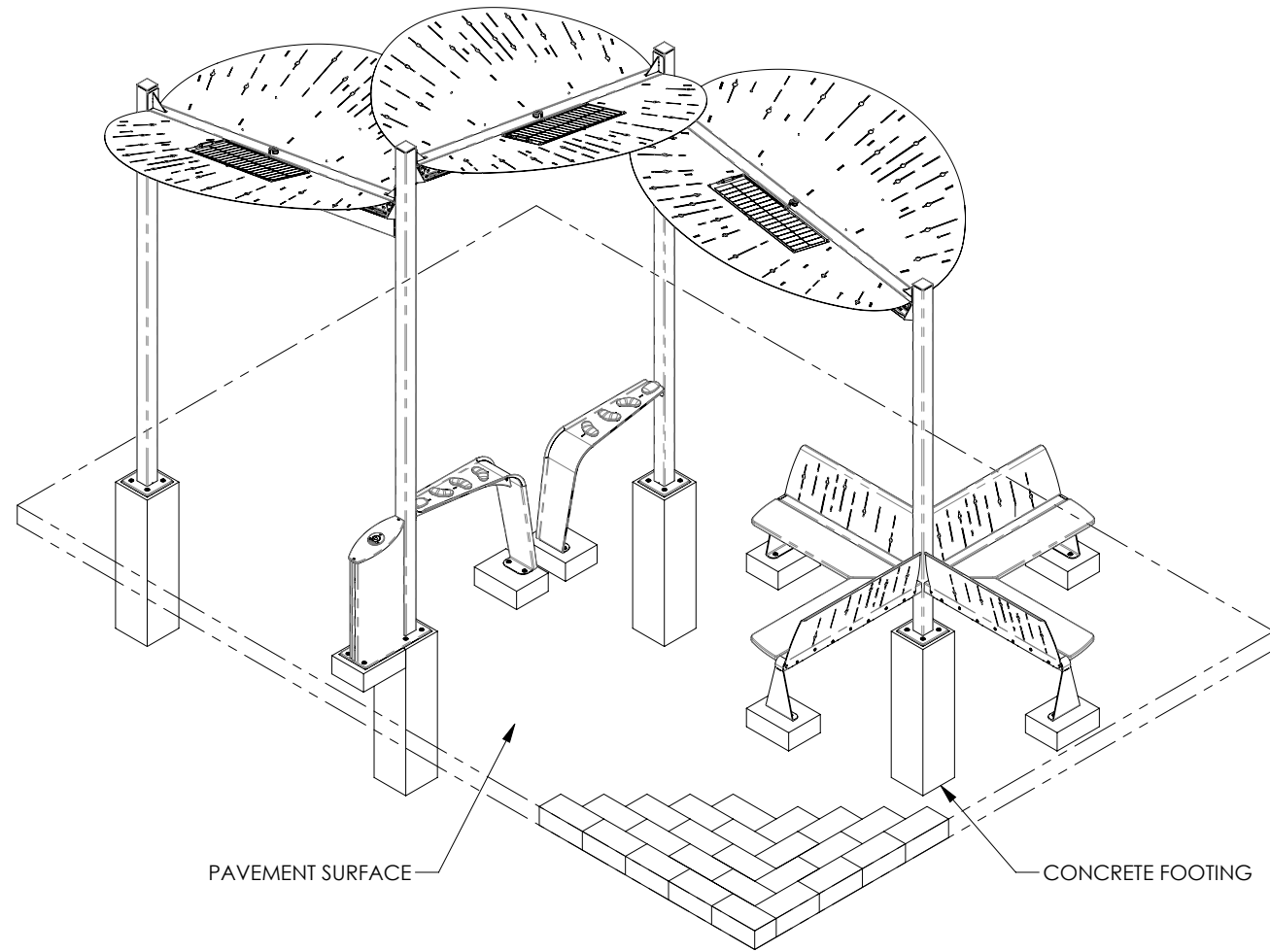


**SIDE ELEVATION VIEW**

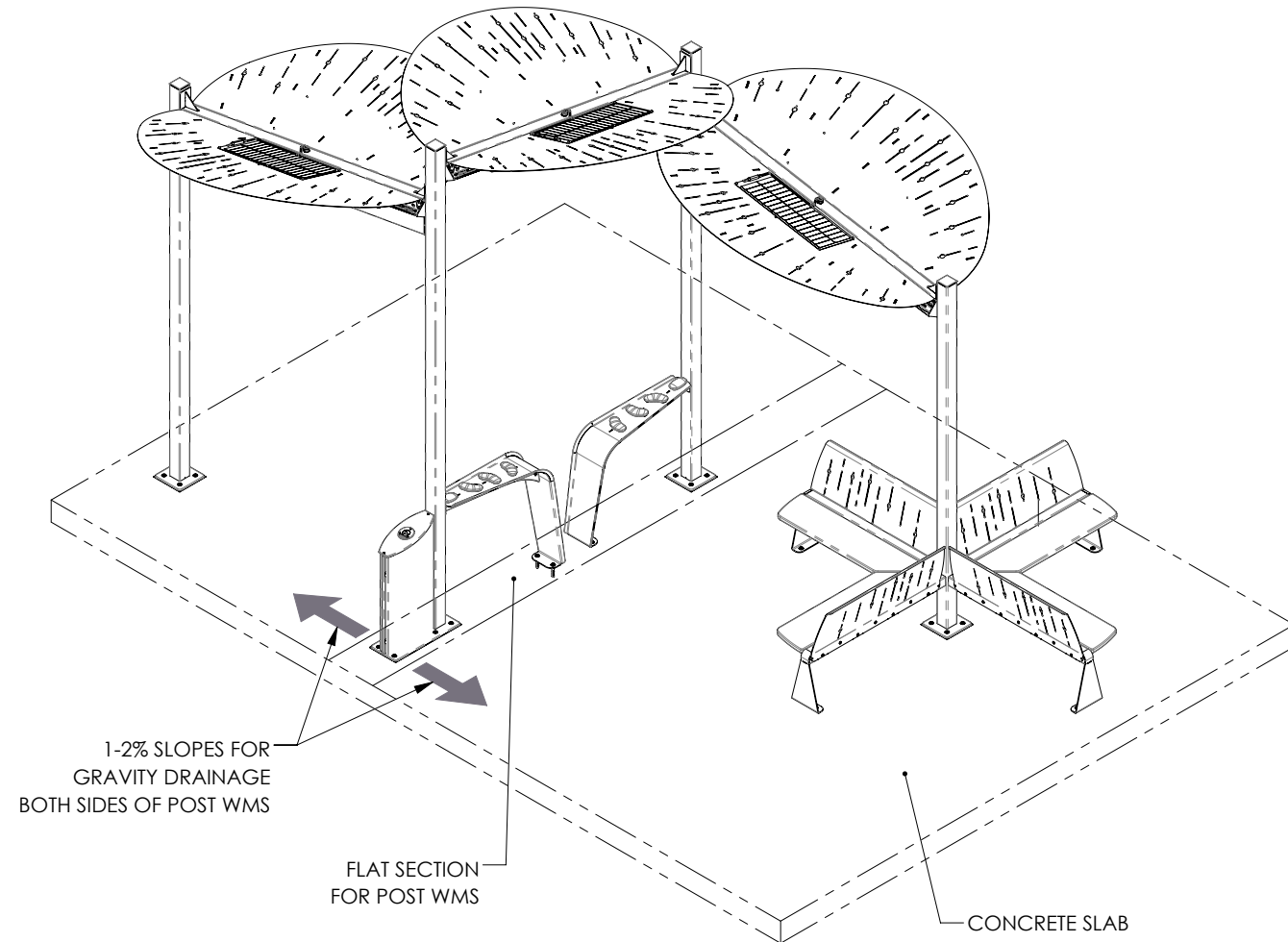
**ABRIO 05 - VOR 3505 - VOR 3505B  
 INSTALLATION DRAWING**

## INSTALLATION OPTIONS

**OPTION #1:**  
PAVEMENT SURFACE WITH CONCRETE FOOTINGS  
(PERMEABLE OR ON A 1-2% SLOPE)



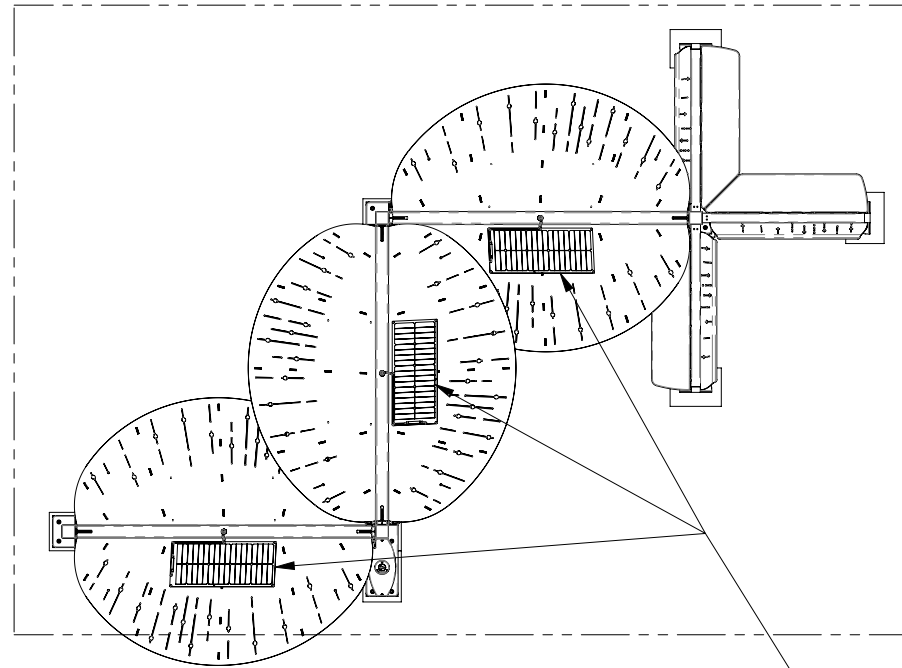
**OPTION #2:**  
CONCRETE SLAB  
(ON A 1-2% SLOPE)



# ABRIO 05 - VOR 3505 - VOR 3505B INSTALLATION DRAWING

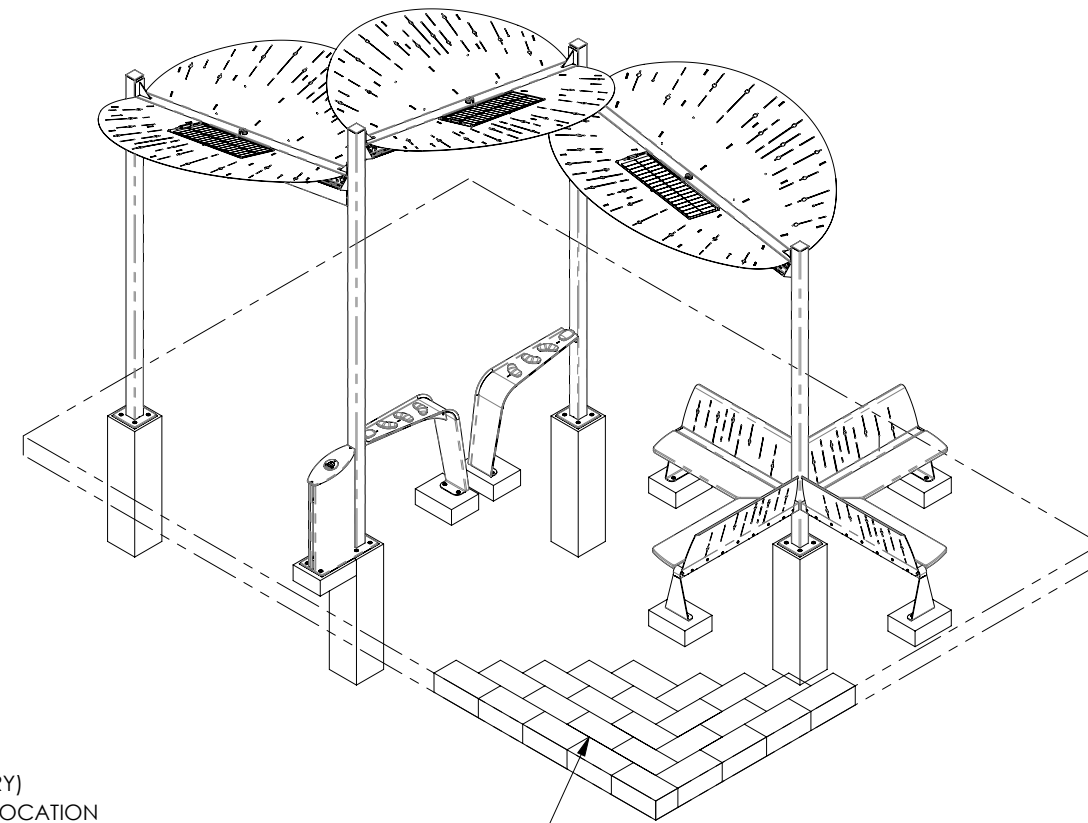
# INSTALLATION OPTION #1: PAVEMENT SURFACE WITH CONCRETE FOOTINGS

\*REFER TO TYPICAL ANCHORING DETAILS\*



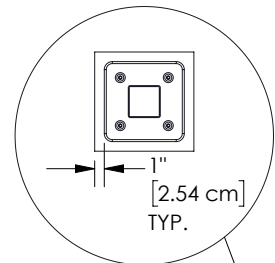
**PLAN VIEW**

SOUTH FACING SOLAR PANEL (MANDATORY)  
ACCORDING TO NORTHERN HEMISPHERE LOCATION  
(PLEASE CONSIDER HEMISPHERE LOCATION)  
AVOID SHADOW OR OBSTRUCTED AREAS



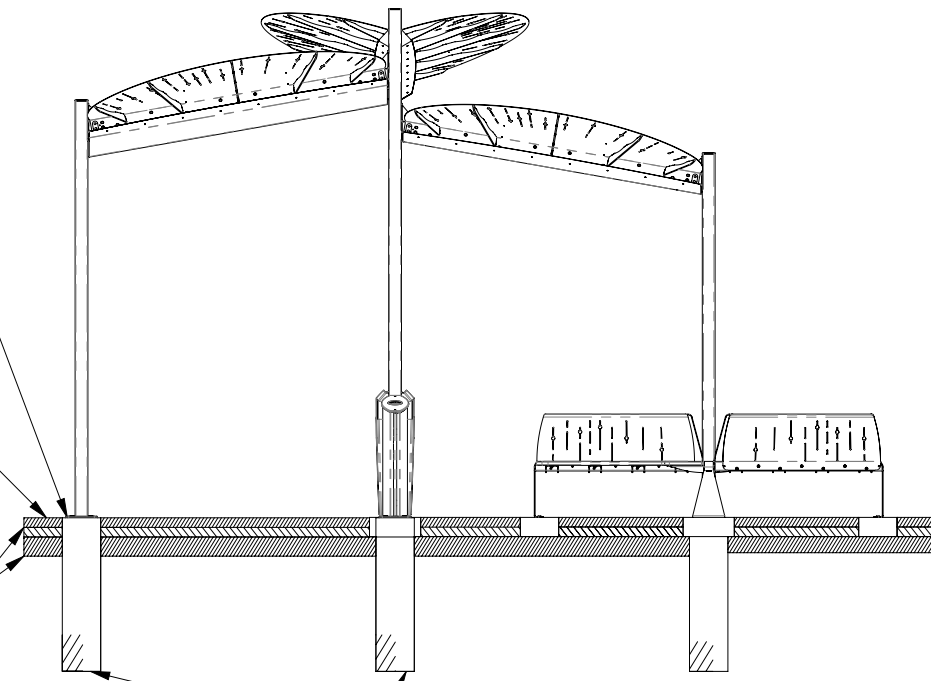
PAVEMENT SURFACE

ANCHOR PLATES MUST BE  
CENTERED WITH FOOTINGS



PAVEMENT SURFACE  
PERMEABLE OR  
ON A 1-2% SLOPE  
FOR GRAVITY DRAINAGE  
(SUPPLIED AND  
DONE BY OTHERS)

MULTILEVEL COMPACTED  
GRANULAR BEDS  
(SUPPLIED AND  
DONE BY OTHERS)



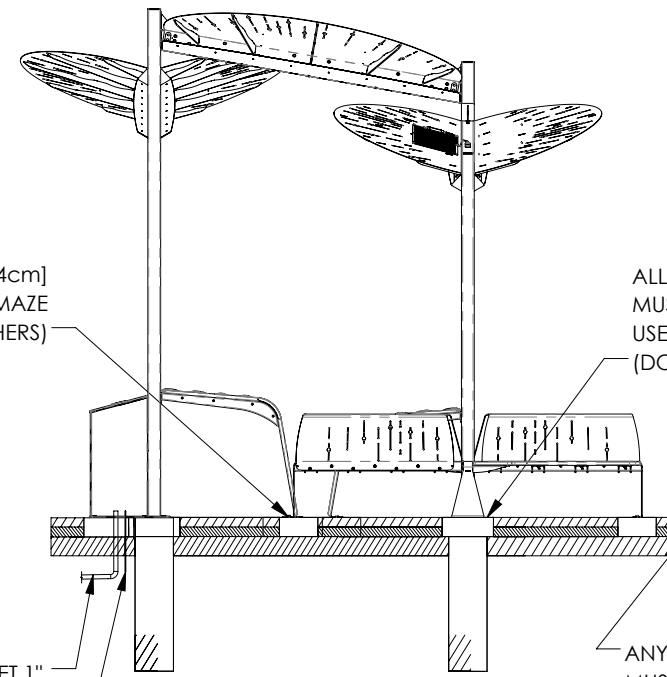
**FRONT ELEVATION VIEW**

LIGHTWEIGHT CONCRETE FOOTINGS  
MINIMUM DENSITY OF 90 LBS/FT<sup>3</sup> [14.14 kN/m<sup>3</sup>]  
VERIFY LOCAL CODES FOR TYPE, THICKNESS  
& REINFORCEMENT REQUIREMENTS

OPTIONAL 6"X6" [15.24X15.24cm]  
DRAIN FRONT RIVER MAZE  
(SUPPLIED AND DONE BY OTHERS)

ALL ANCHOR PLATES AND LEGS  
MUST BE INSTALLED AT THE SAME LEVEL.  
USE NON-SHRINK GROUT TO LEVEL.  
(DONE BY OTHERS)

DRINKING WATER LINE INLET 1"  
TO 1 1/2" [25.4 TO 38.1mm] NPT  
1-2% SLOPE BACK TO WATER SUPPLY.  
REFER TO CONSTRUCTION DOCUMENTS  
FOR LINE SIZE DETAILS.  
(LINE CONNECTION SUPPLIED  
AND DONE BY OTHERS)



**SIDE ELEVATION VIEW**

#8 AWG BARE COPPER  
GROUNDING/BONDING WIRE  
(SUPPLIED AND DONE BY OTHERS)

ANY ADDITIONAL DRAINAGE SOLUTION  
MUST GO TO SANITARY/STORM SEWER  
REFER TO LOCAL CODE.  
(SUPPLIED AND DONE BY OTHERS)

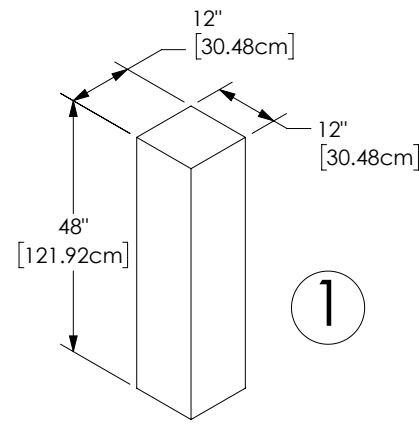
# ABRIO 05 - VOR 3505 - VOR 3505B INSTALLATION DRAWING

# INSTALLATION OPTION #1: CONCRETE FOOTINGS, WATER INLET AND GROUNDING WIRE POSITIONING



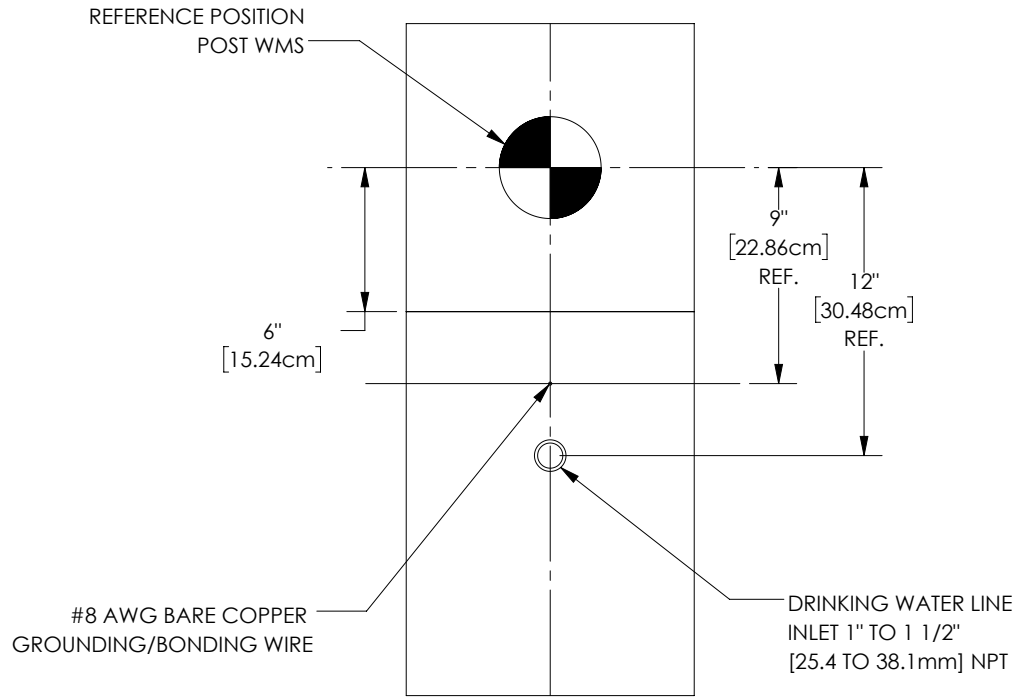
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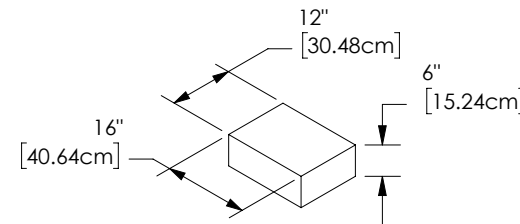


## POST FOOTING DIMENSIONS & DETAILS

DIMENSIONS MAY VARY, BUT CONCRETE VOLUME MUST BE MINIMUM 5500 IN<sup>3</sup> (3.183 FT<sup>3</sup>) [0.09 m<sup>3</sup>]  
 LIGHTWEIGHT CONCRETE OF MINIMUM DENSITY = 90 LBS/FT<sup>3</sup> [14.14 kN/m<sup>3</sup>]

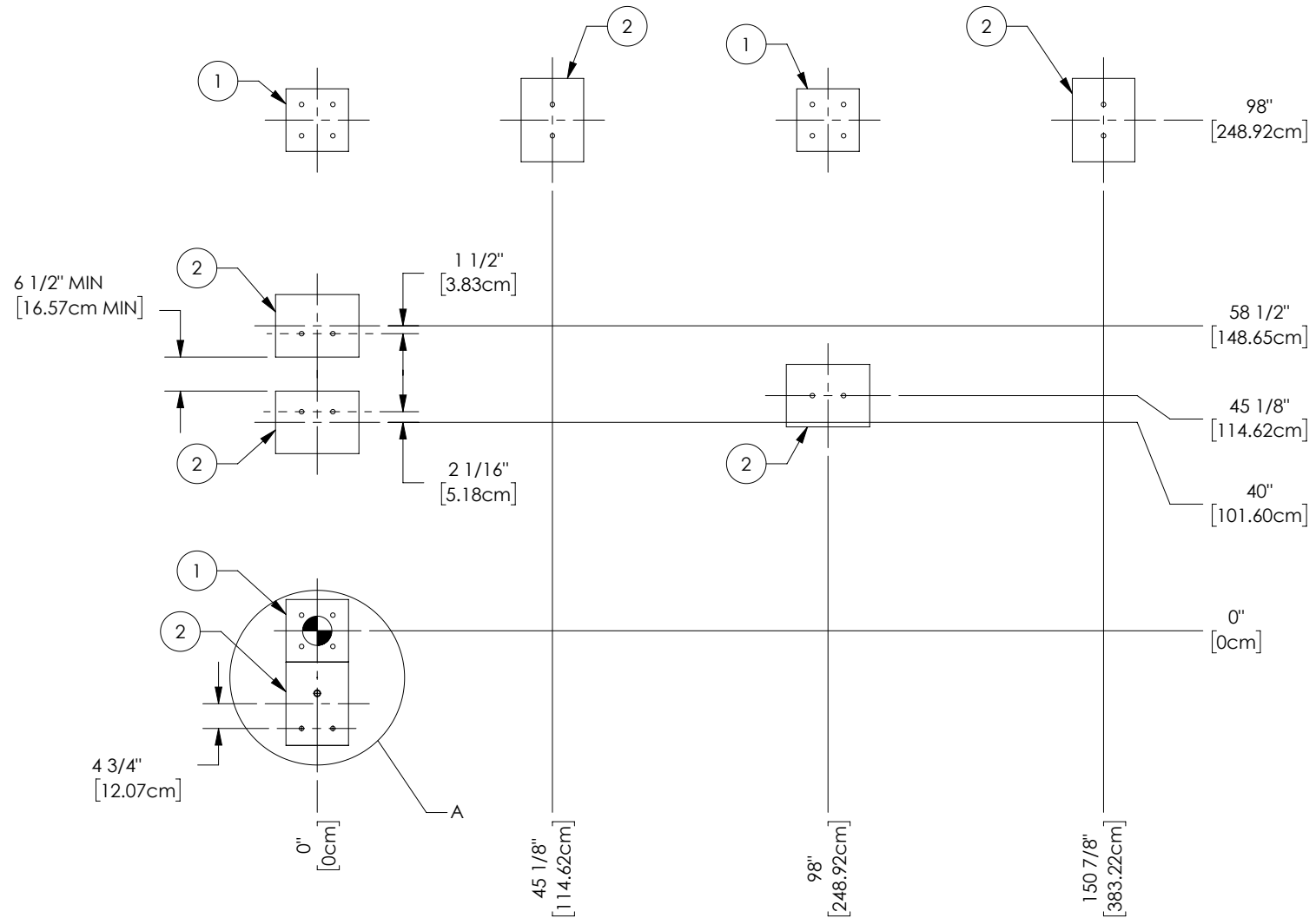
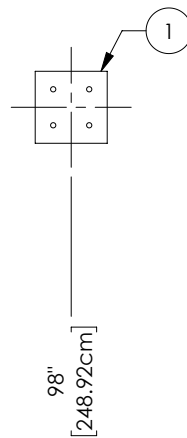
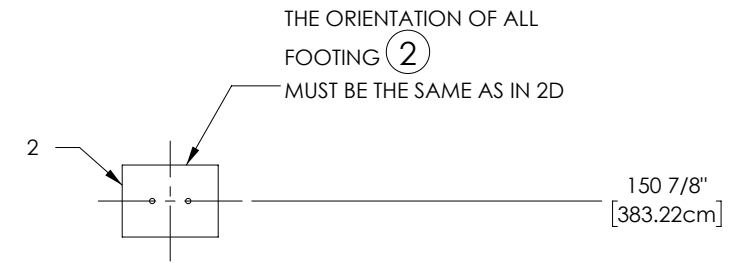
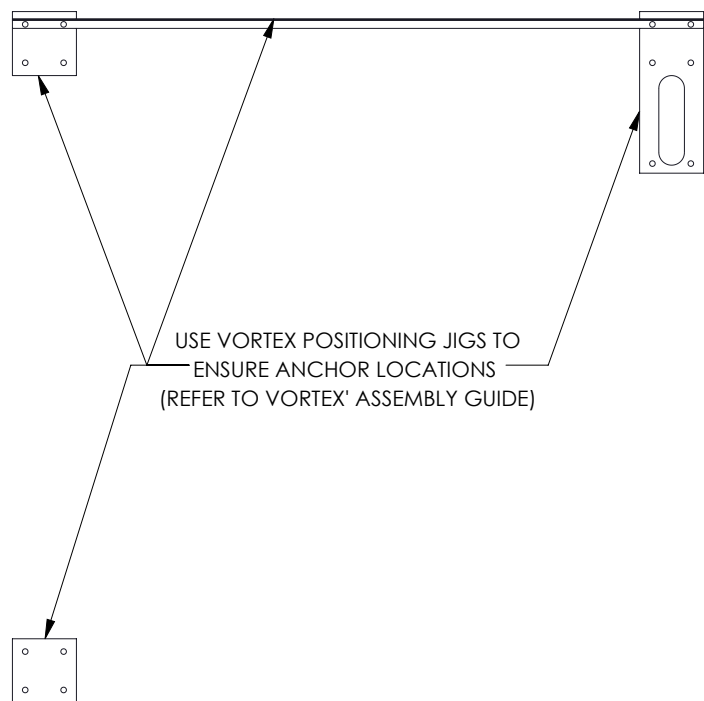


DETAIL A  
SCALE 1 : 8



## BENCH, RIVER MAZE AND WMS FOOTING DIMENSIONS & DETAILS

\*DIMENSIONS MAY VARY, BUT CONCRETE VOLUME MUST BE MINIMUM 1005 IN<sup>3</sup> (0.582 FT<sup>3</sup>) [0.165 m<sup>3</sup>]  
 LIGHTWEIGHT CONCRETE OF MINIMUM DENSITY = 90 LBS/FT<sup>3</sup> [14.14 kN/m<sup>3</sup>]



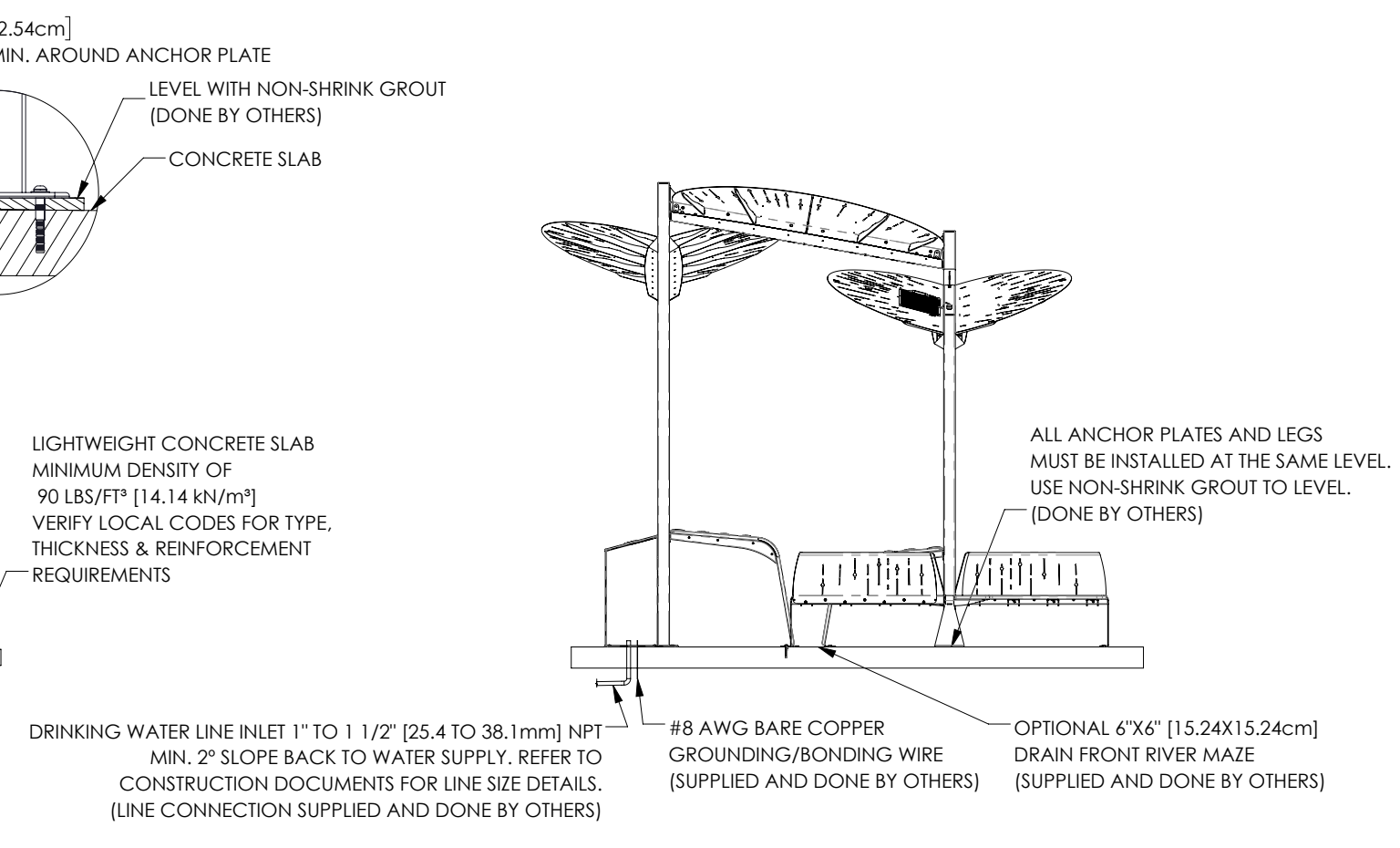
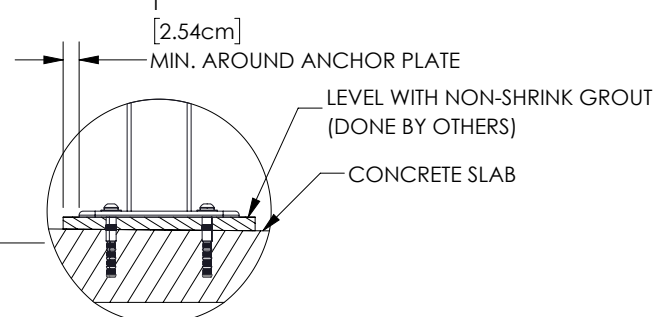
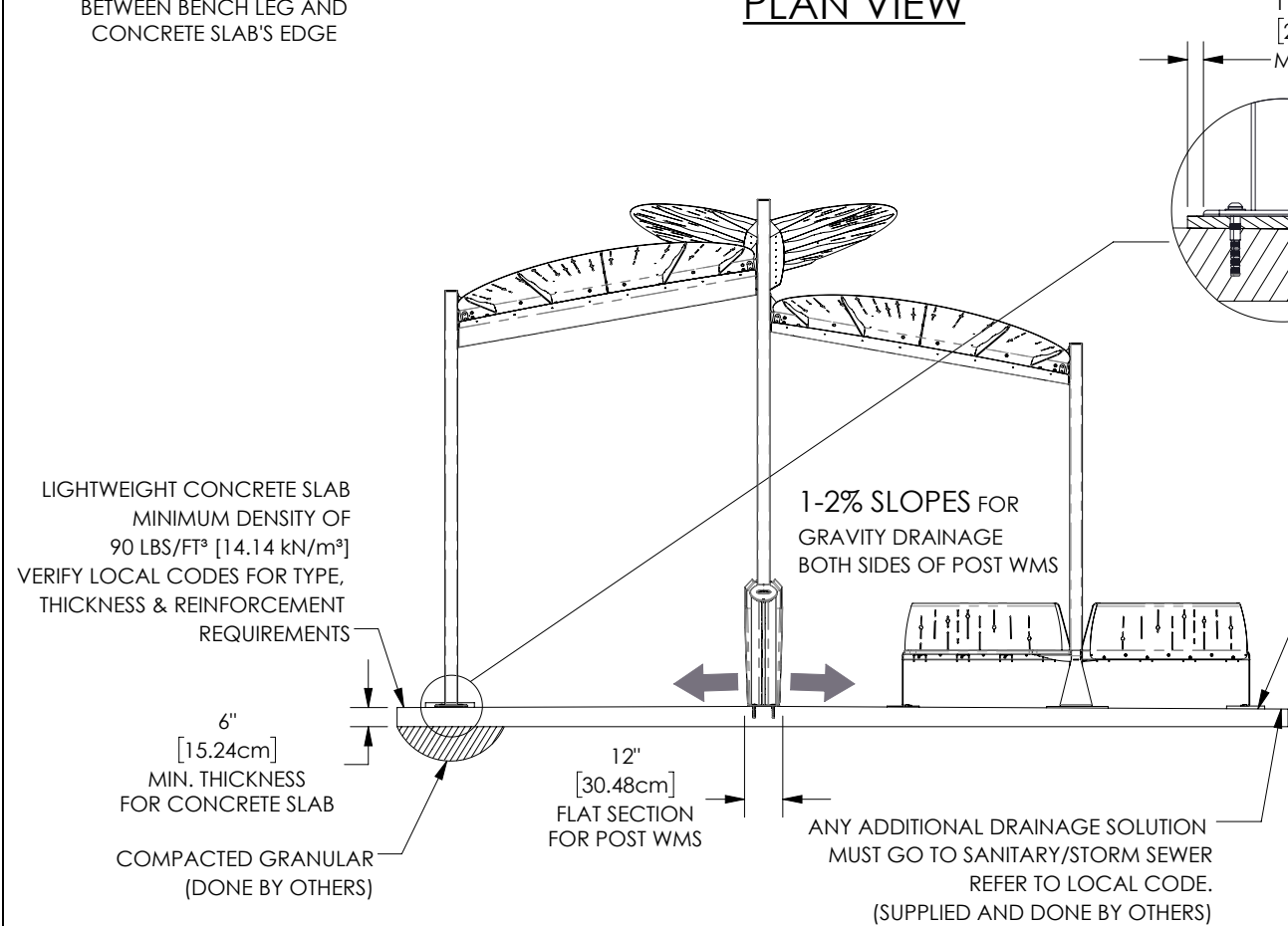
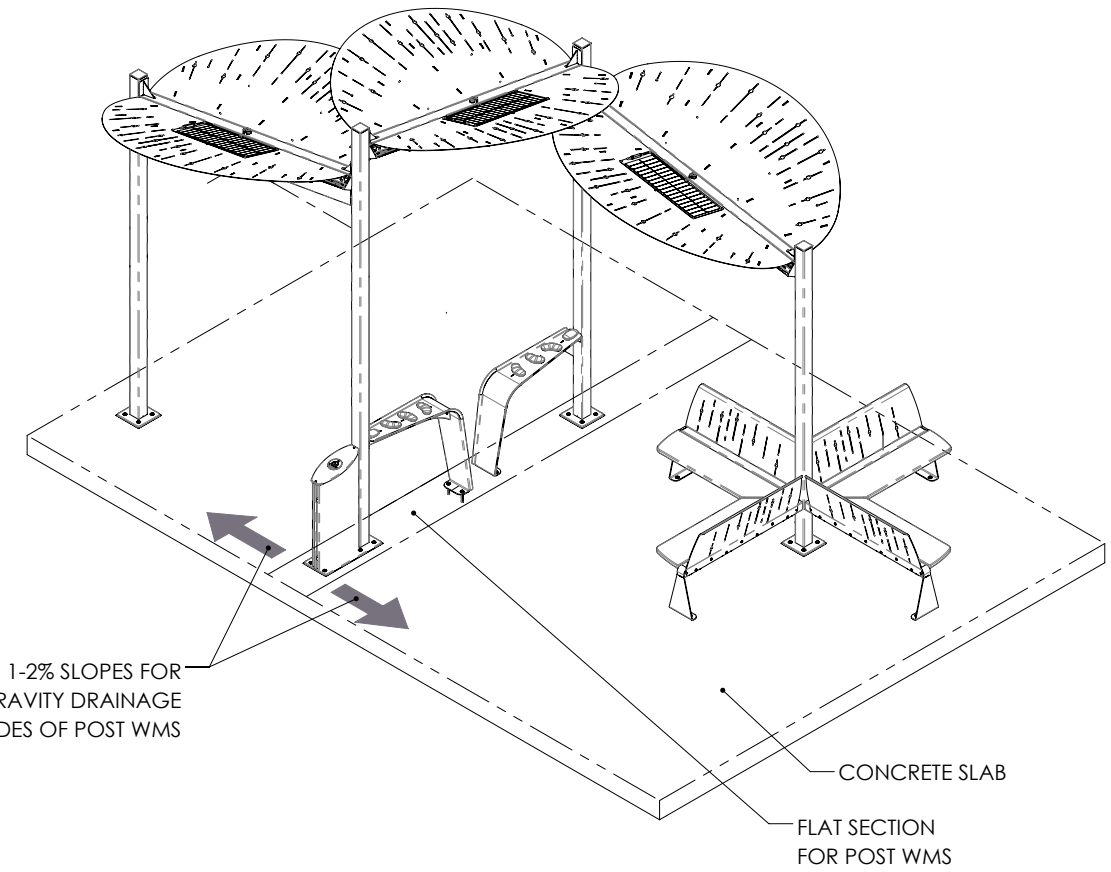
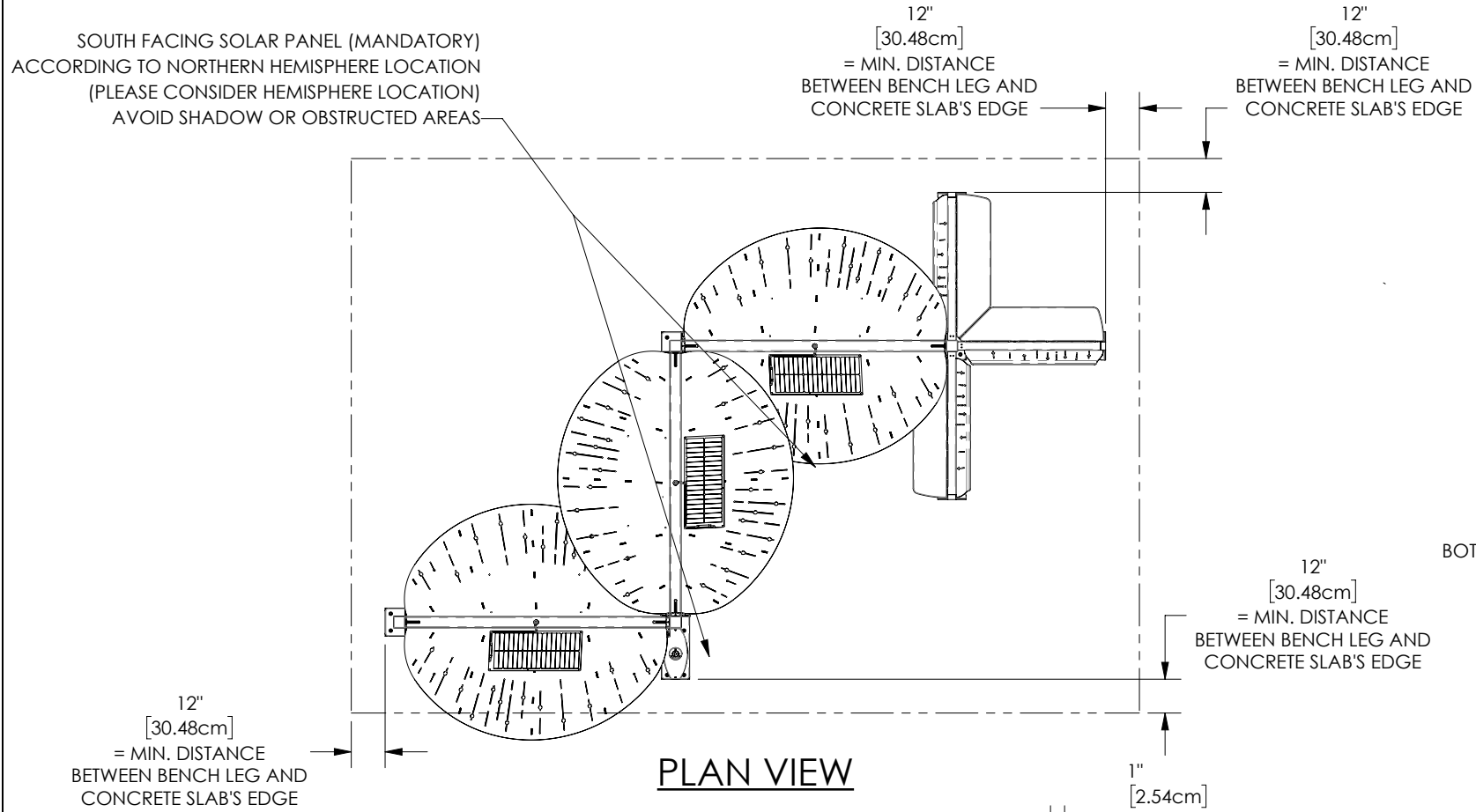
PLAN VIEW

# ABRIO 05 - VOR 3505 - VOR 3505B INSTALLATION DRAWING

# INSTALLATION OPTION #2: CONCRETE SLAB

\*REFER TO TYPICAL ANCHORING DETAILS\*

SOUTH FACING SOLAR PANEL (MANDATORY)  
ACCORDING TO NORTHERN HEMISPHERE LOCATION  
(PLEASE CONSIDER HEMISPHERE LOCATION)  
AVOID SHADOW OR OBSTRUCTED AREAS



**FRONT ELEVATION VIEW**

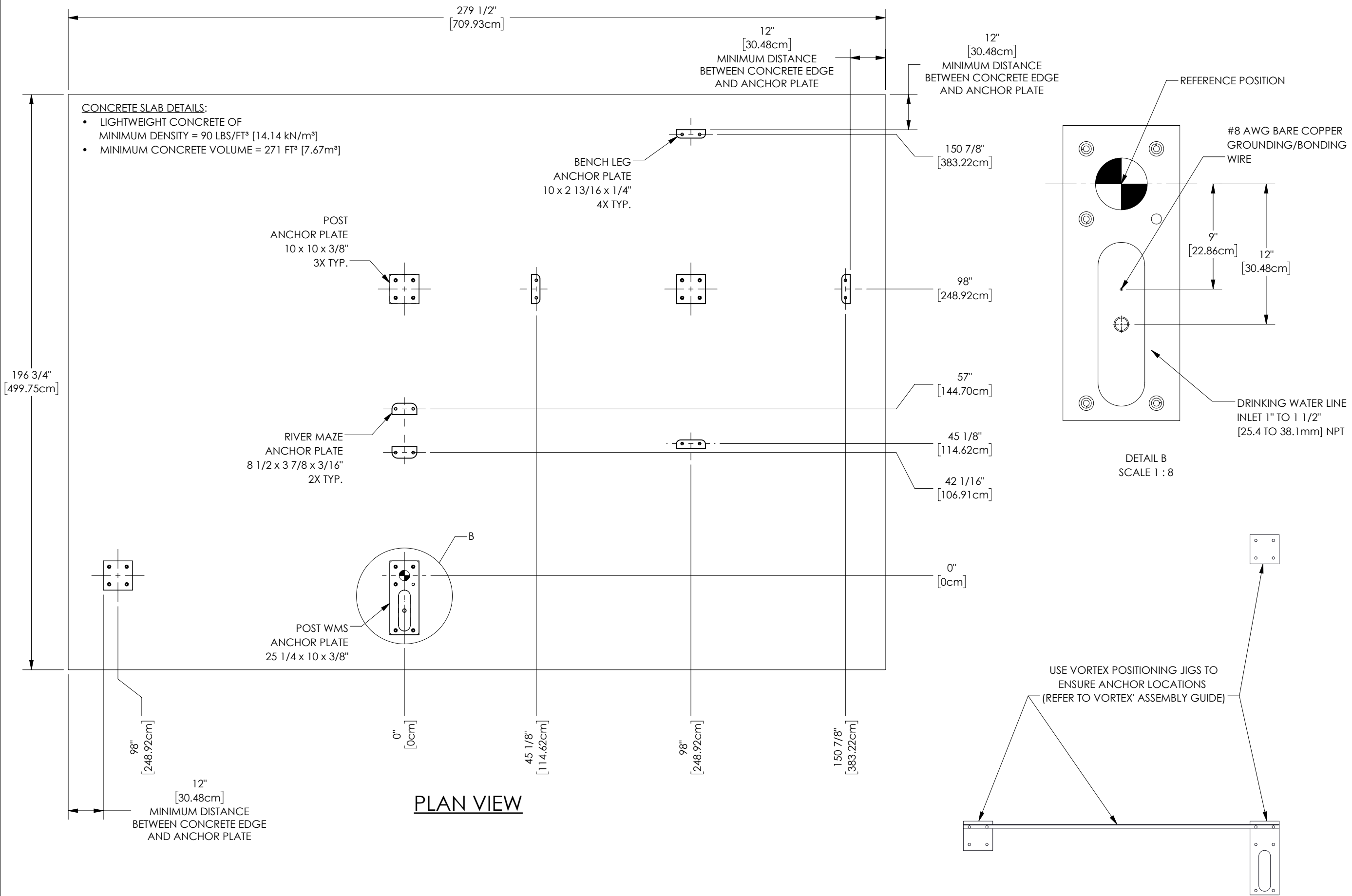
**SIDE ELEVATION VIEW**

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# ABRIO 05 - VOR 3505 - VOR 3505B INSTALLATION DRAWING

**INSTALLATION OPTION #2: CONCRETE SLAB, WATER INLET AND GROUNDING WIRE POSITIONING**

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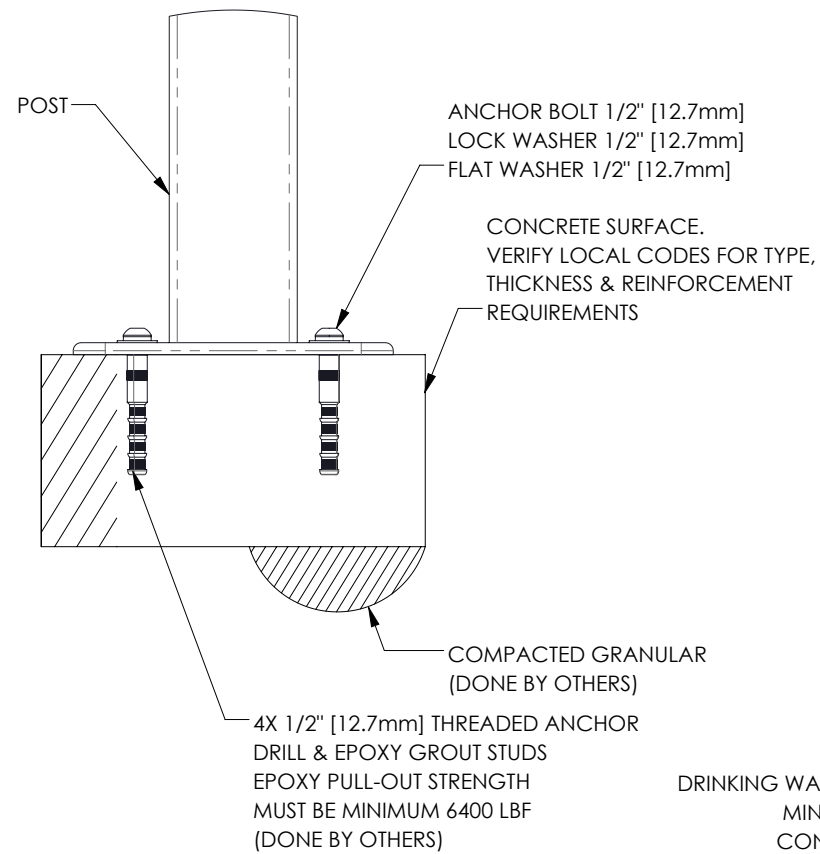


**ABRIO 05 - VOR 3505 - VOR 3505B  
 INSTALLATION DRAWING**

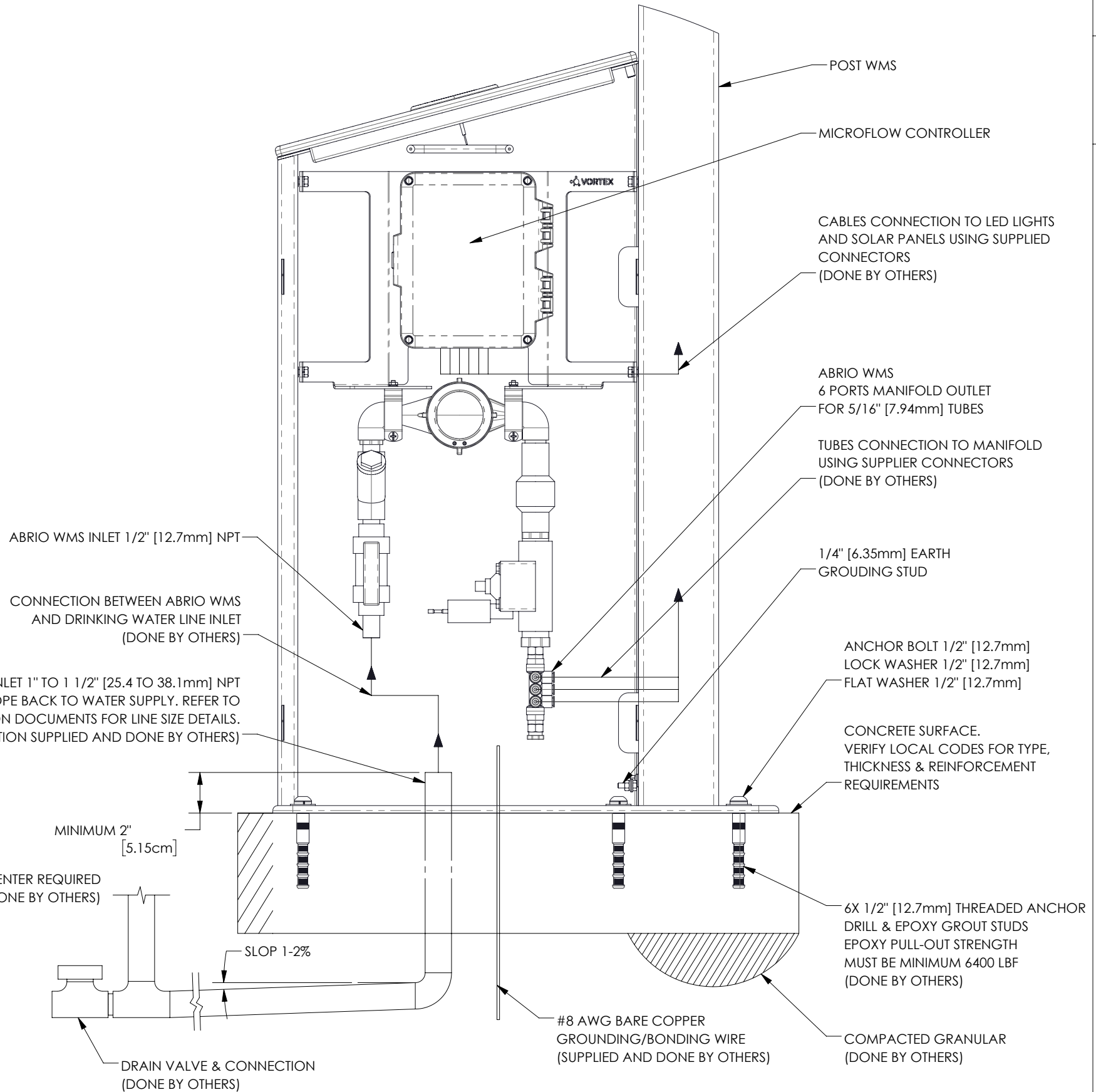
**POSTS TYPICAL ANCHORING STEPS (DONE BY OTHERS)**

\*REFER TO ANCHORING POSITIONS PAGE AND VORTEX' ASSEMBLY GUIDE\*

1. PLACE ANCHORING JIGS AS DETAILED IN THE VORTEX' ASSEMBLY GUIDE
2. MARK ON CONCRETE FOOTING OR SLAB, THE POST'S ANCHORING HOLES' POSITIONS.
3. DRILL ON HOLES' MARKINGS WITH 3/4" DRILL BIT SIZE.
4. CLEAN THE DRILLED HOLES.
5. PUT ANCHORS IN HOLES WITH EPOXY (EPOXY ANCHORING ADHESIVE PULL-OUT STRENGTH MUST BE MINIMUM 6400 LBF)
6. WAIT FOR EPOXY'S CURING TIME
7. ASSEMBLE THE POSTS AS PER VORTEX' ASSEMBLY GUIDE.



**POST TYPICAL ANCHORING DETAIL**



**POST WMS TYPICAL ANCHORING DETAIL**

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**ABRIO 05 - VOR 3505 - VOR 3505B  
 INSTALLATION DRAWING**

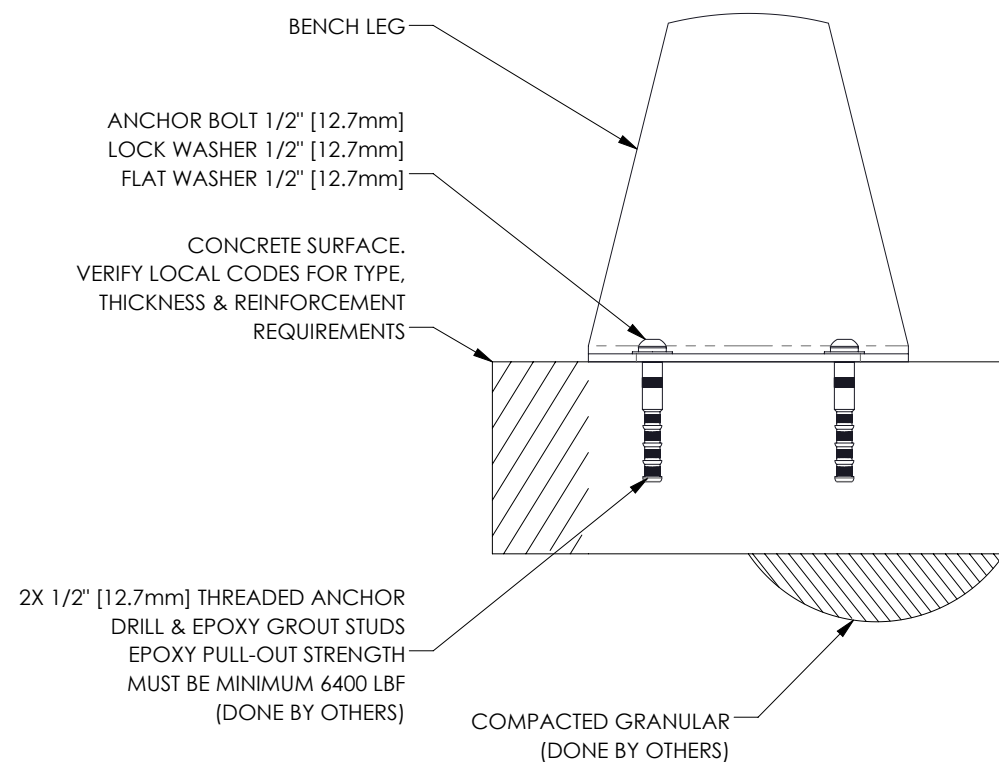
**BENCH TYPICAL ANCHORING STEPS (DONE BY OTHERS):**

1. PLACE BENCH ON POST BRACKET.
2. MARK ON CONCRETE FOOTING OR SLAB, THE BENCH LEG ANCHORING HOLES' POSITIONS.
3. REMOVE BENCH.
4. DRILL ON HOLES' MARKINGS WITH 3/4" DRILL BIT SIZE.
5. CLEAN THE DRILLED HOLES.
6. PUT ANCHORS IN HOLES WITH EPOXY (EPOXY ANCHORING ADHESIVE PULL-OUT STRENGTH MUST BE MINIMUM 6400 LBF)
7. WAIT FOR EPOXY'S CURING TIME
8. ASSEMBLE THE BENCH AS PER VORTEX' ASSEMBLY GUIDE.

**RIVER MAZE TYPICAL ANCHORING STEPS (DONE BY OTHERS):**

1. ASSEMBLE RIVER MAZE ON POST, USING SUPPLIED HARDWARE.
2. MARK ON CONCRETE FOOTING OR SLAB, THE RIVER MAZE LEG ANCHORING HOLES' POSITIONS.
3. REMOVE RIVER MAZE.
4. DRILL ON HOLES' MARKINGS WITH 3/4" DRILL BIT SIZE.
5. CLEAN THE DRILLED HOLES.
6. PUT ANCHORS IN HOLES WITH EPOXY (EPOXY ANCHORING ADHESIVE PULL-OUT STRENGTH MUST BE MINIMUM 6400 LBF)
7. WAIT FOR EPOXY'S CURING TIME
8. ASSEMBLE THE RIVER MAZE AS PER VORTEX' ASSEMBLY GUIDE.

**BENCH TYPICAL ANCHORING DETAIL**



**RIVER MAZE TYPICAL ANCHORING DETAIL**

