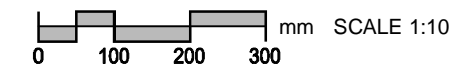
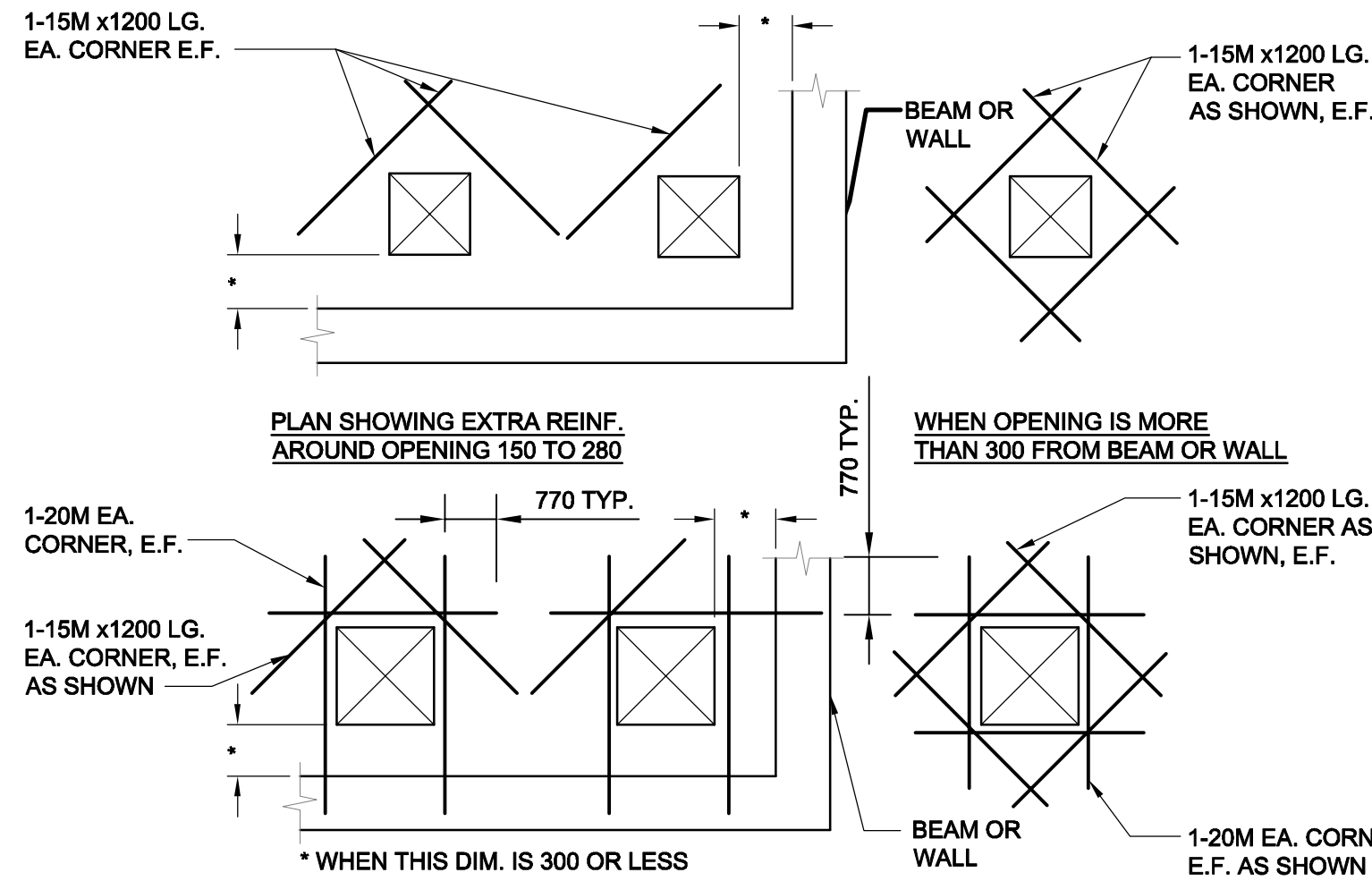
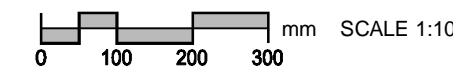


### OUTSIDE CORNER REINFORCING

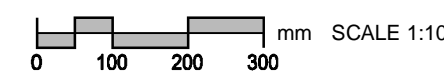


### DETAIL

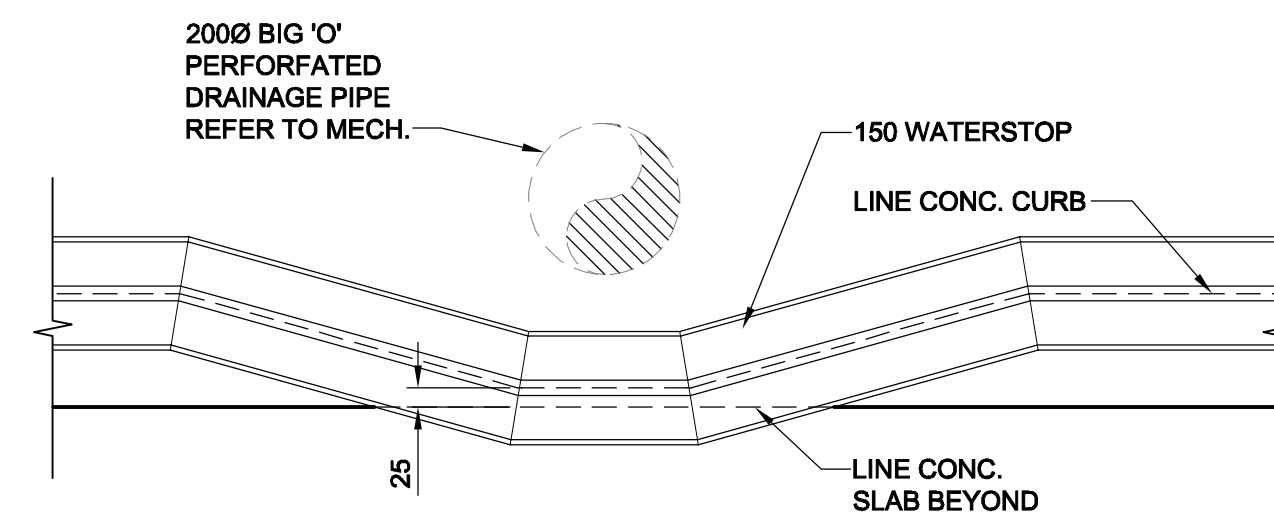
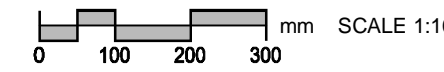


1. NUMBER OF REINFORCING BARS TO BE CUT AT OPENING TO BE KEPT AT A MINIMUM. DEFLECT AS MANY BARS AS POSSIBLE AROUND OPENING.
2. REINFORCING BARS TO BE KEPT MINIMUM 50 CLEAR OF OPENING.
3. CIRCULAR OPENINGS TO BE TREATED IN SAME MANNER AS RECTANGULAR UNLESS OTHERWISE DETAILED.

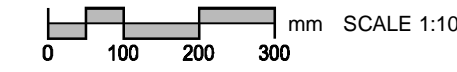
### TYPICAL REINFORCING AROUND OPENINGS IN CONCRETE SLAB OR WALL



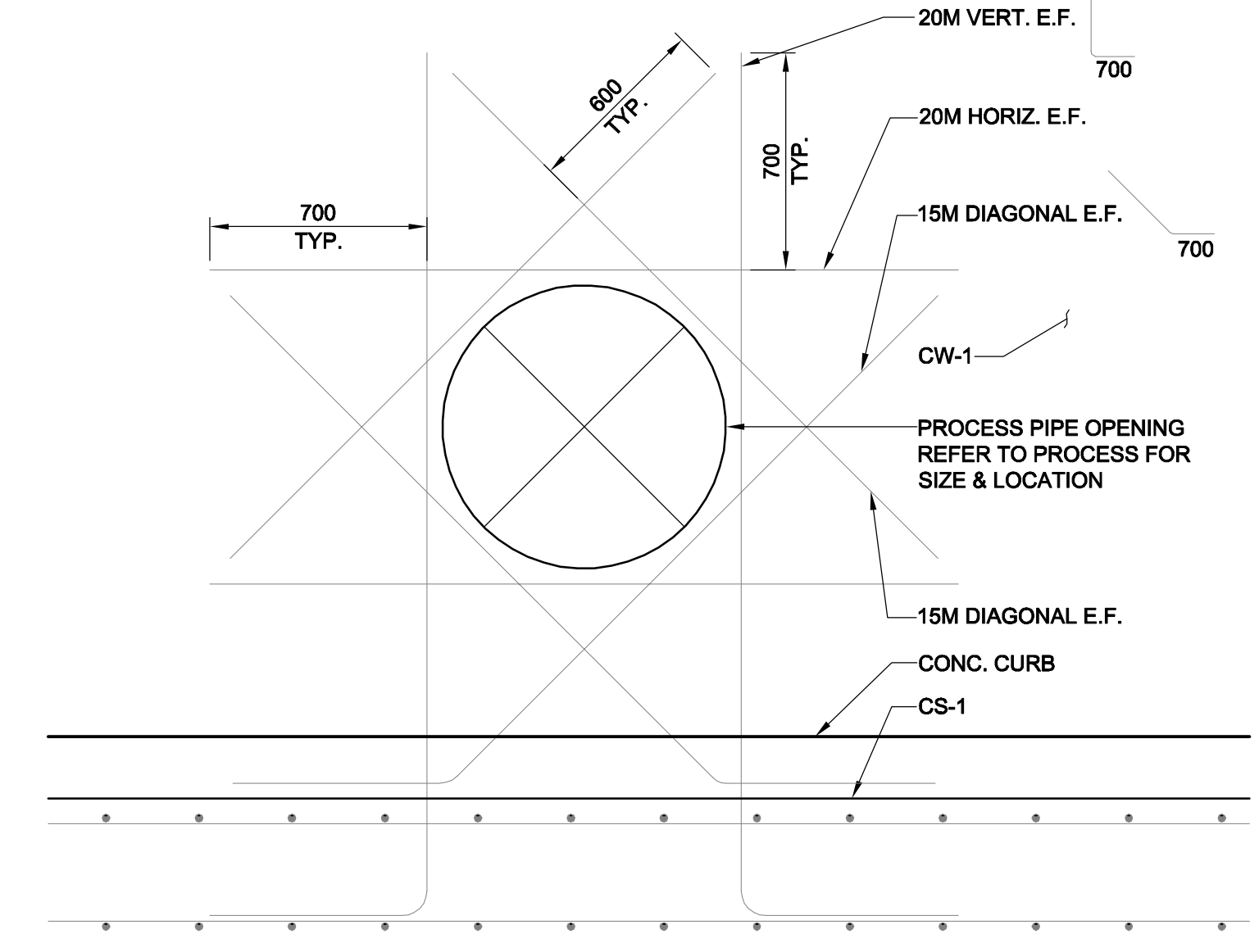
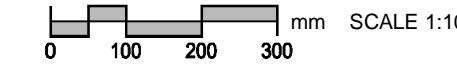
### DETAIL



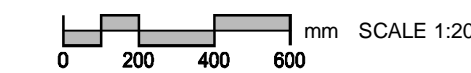
### WATERSTOP DETAIL @ PIPES



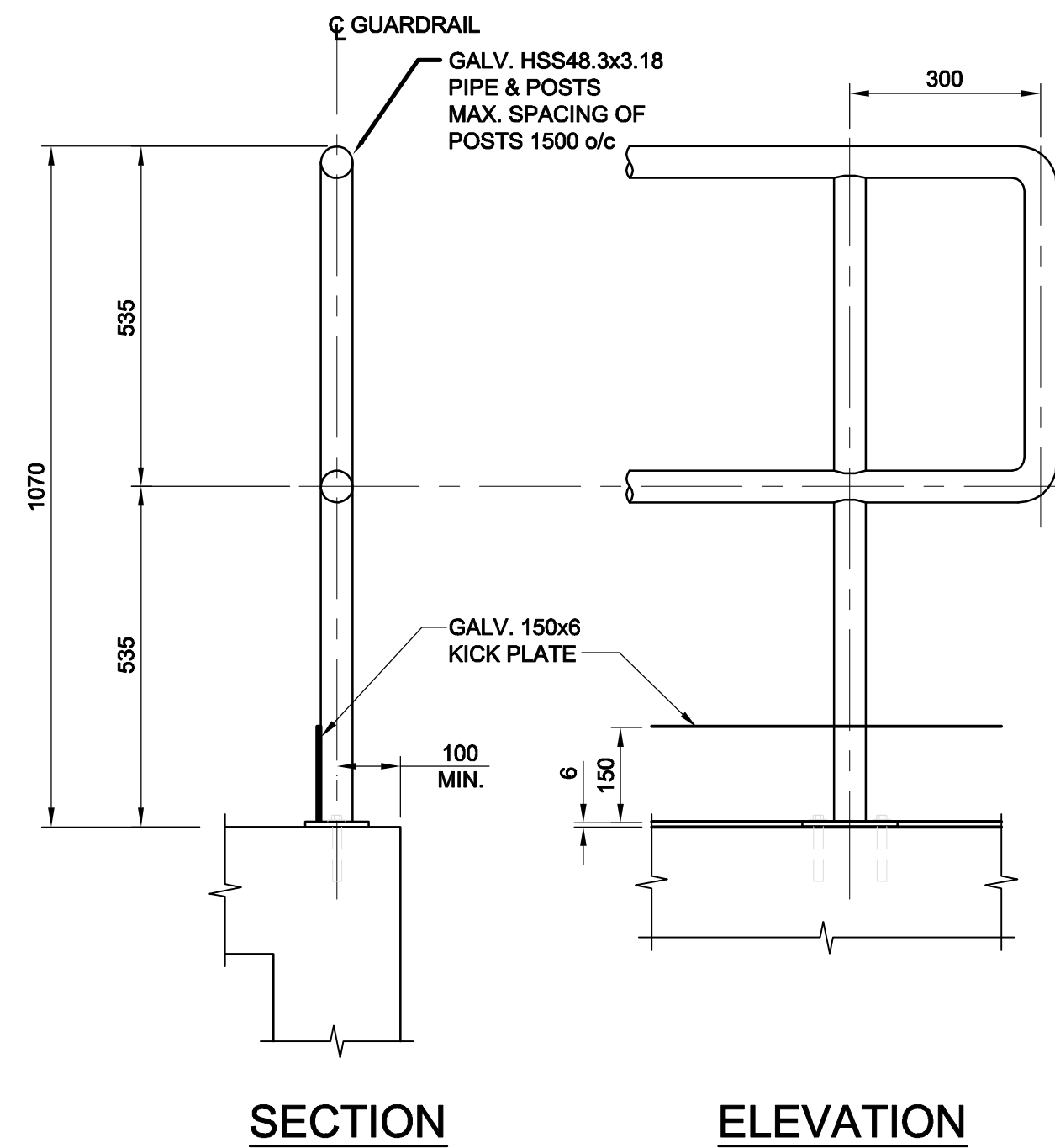
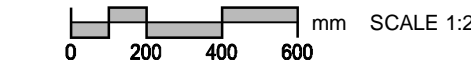
### DETAIL



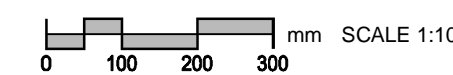
### TYPICAL REINF. DETAIL @ WALL PENETRATIONS



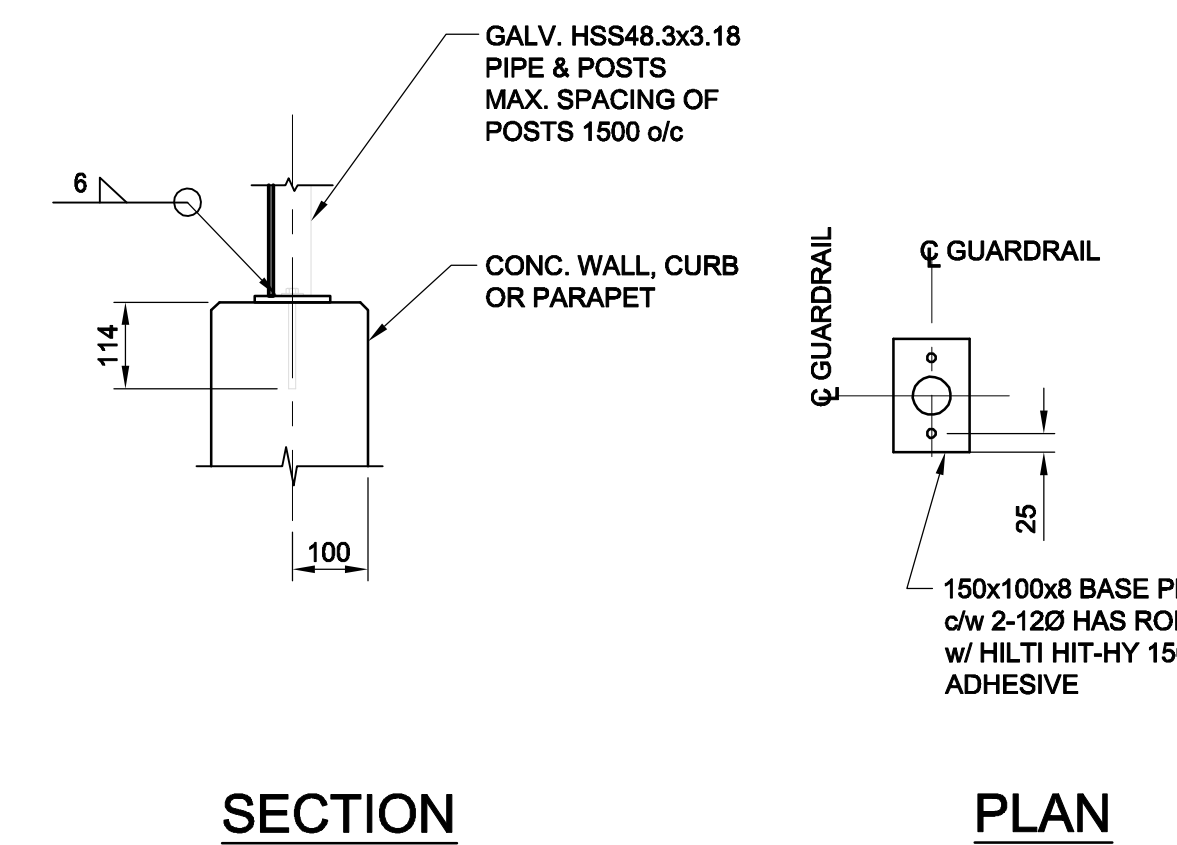
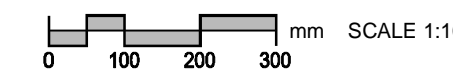
### DETAIL



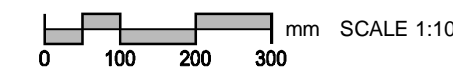
### GALV. STEEL GUARDRAIL



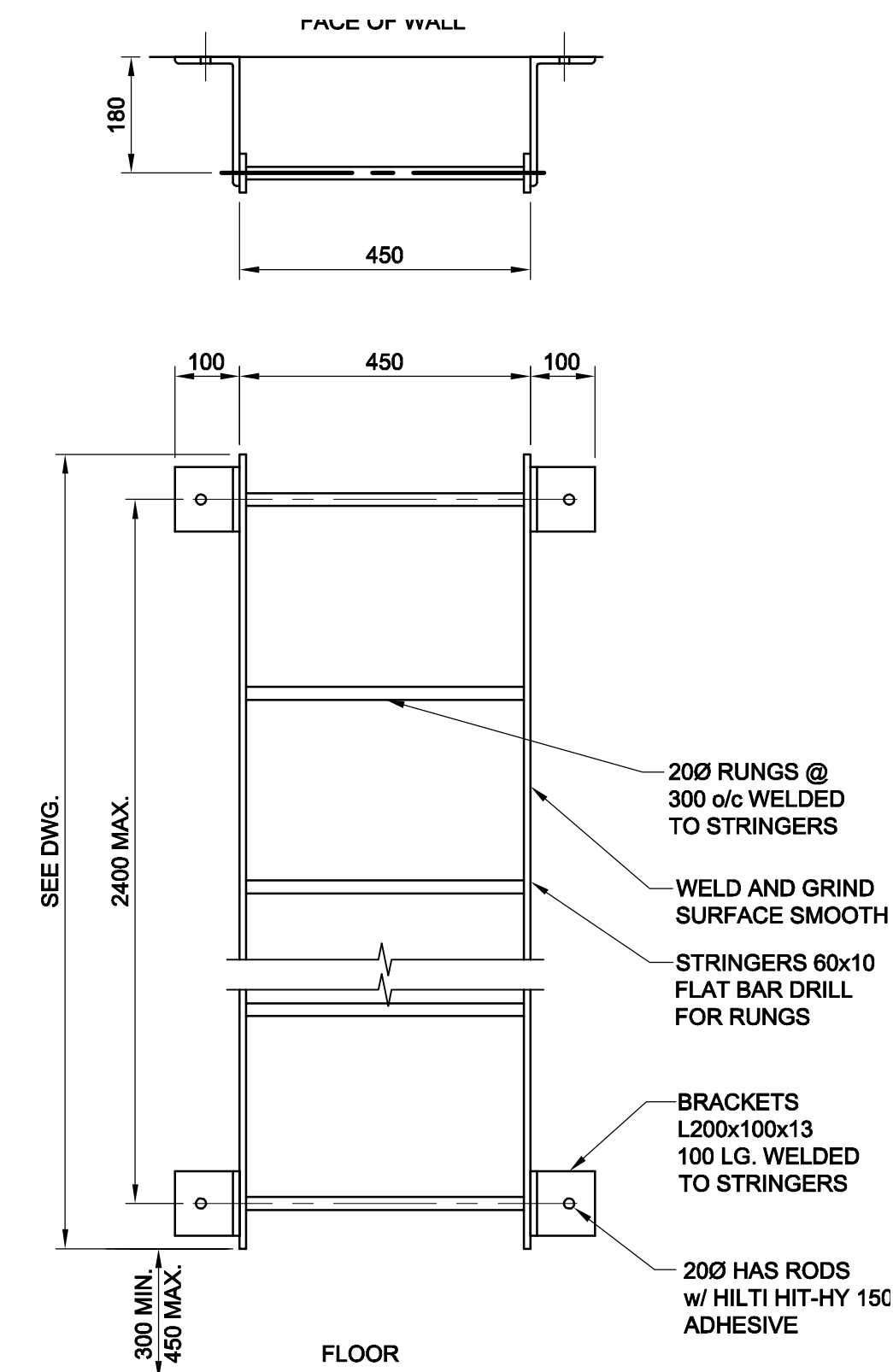
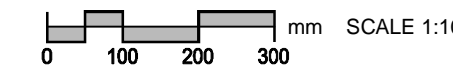
### DETAIL



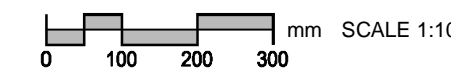
### GALV. STEEL GUARDRAIL ANCHORAGE



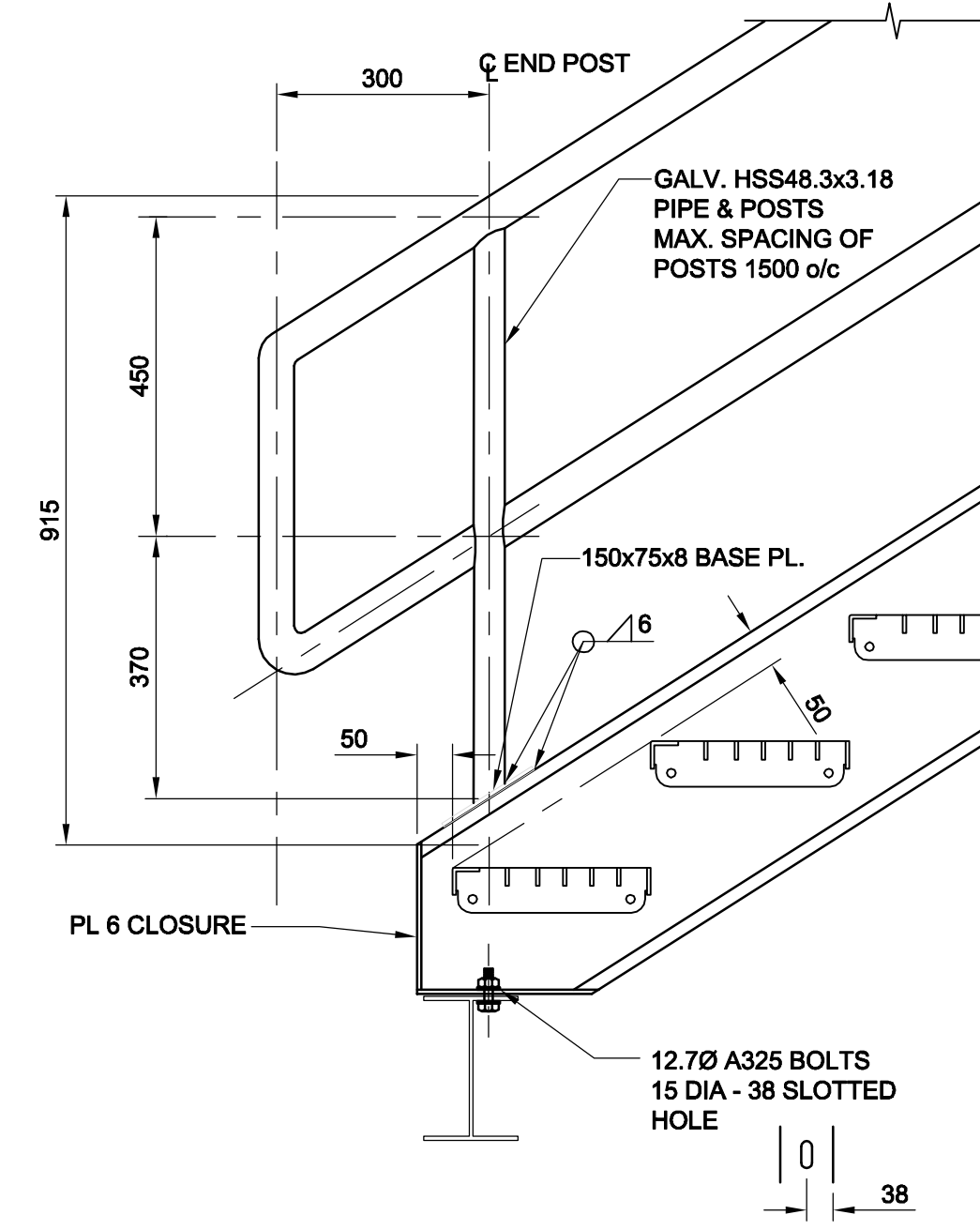
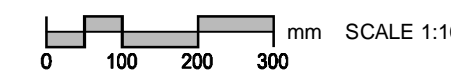
### DETAIL



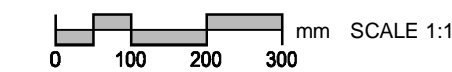
### GALV. STEEL LADDER



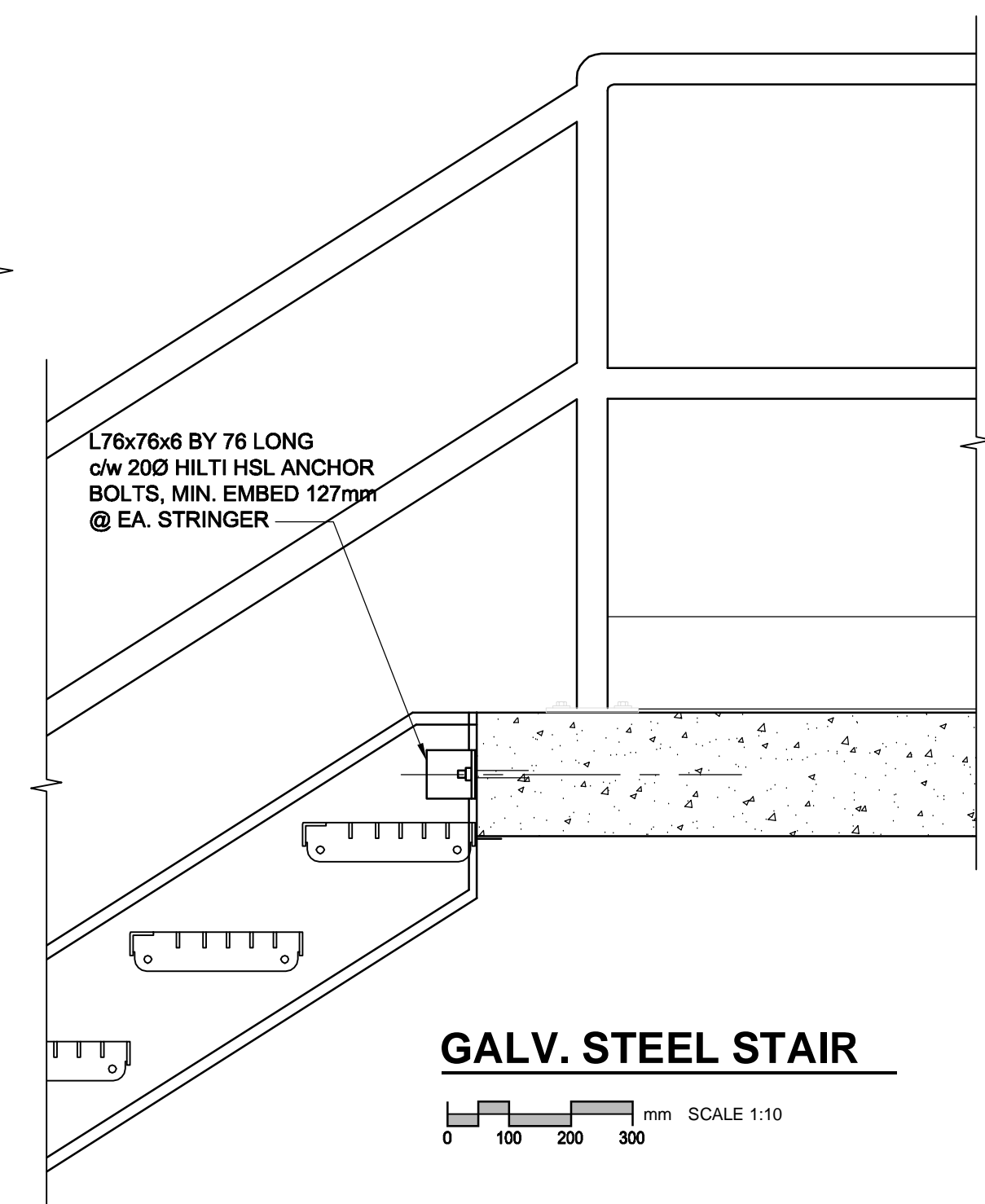
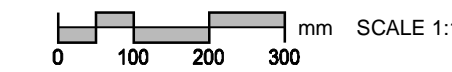
### DETAIL



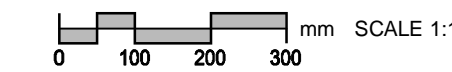
### GALV. STEEL HANDRAIL TO STAIR



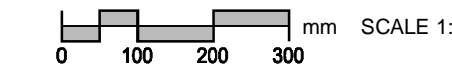
### DETAIL



### GALV. STEEL STAIR



### DETAIL



### LOCATION APPROVED UNDERGROUND STRUCTURES

SUPR. U/G STRUCTURES COMMITTEE	DATE
NOTE: LOCATION OF UNDERGROUND STRUCTURES AS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE. BUT NO GUARANTEE IS GIVEN THAT ALL EXISTING UTILITIES ARE SHOWN OR THAT THE GIVEN LOCATIONS ARE EXACT. CONFIRMATION OF EXISTENCE AND EXACT LOCATION OF ALL SERVICES MUST BE OBTAINED FROM THE INDIVIDUAL UTILITIES BEFORE PROCEEDING WITH CONSTRUCTION.	



DESIGNED BY: KK/GGP		CHECKED BY: GGP	
DRAWN BY: KK		APPROVED BY: Bryan Weber	
HOR. SCALE: AS SHOWN		RELEASED FOR CONSTRUCTION: KZ	
VERT. SCALE: -		DATE: FEB. 9/10	
DATE: 10/02/09		DATE: FEB. 9/10	

PROFESSIONAL'S SEAL
ORIGINAL SIGNED BY: B.F. ABDUL WAHID
DATE: 2010/02/08
CONSULTANT DRAWING NO. D265-250-00_01-S-5001_RX.dwg

BID OPPORTUNITY NO. 16-2010

**THE CITY OF WINNIPEG**  
WATER AND WASTE DEPARTMENT

BRANCH I AQUEDUCT VALVE CHAMBER  
AT McPHILLIPS STREET  
PUMPING STATION

STRUCTURAL  
STANDARD DETAILS

SHEET 22 OF 28  
CITY DRAWING NUMBER  
REV 0  
D-11932