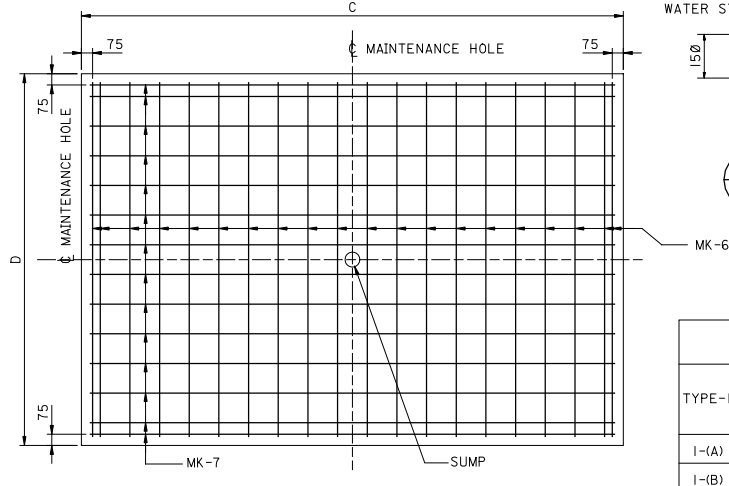
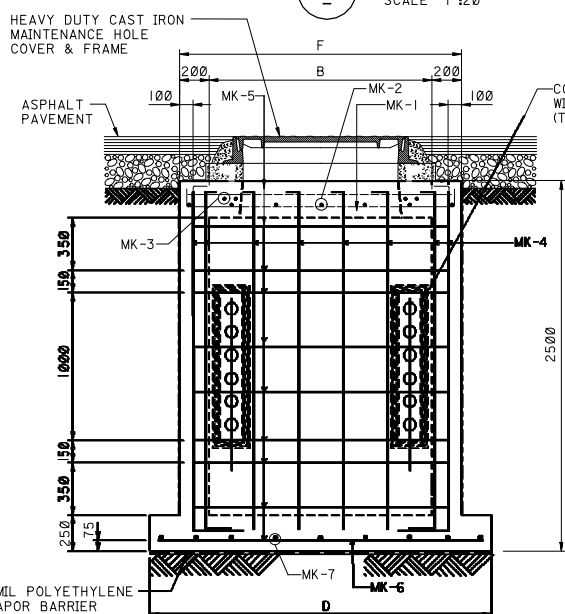
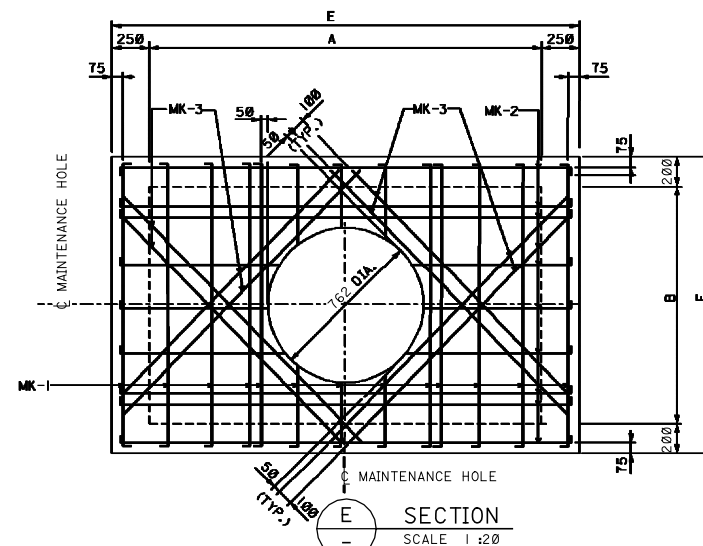
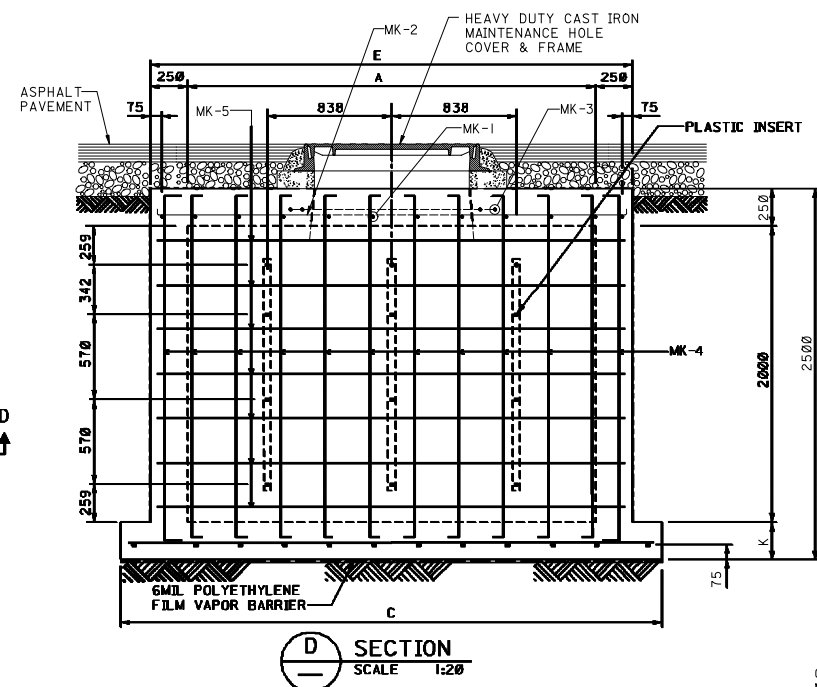
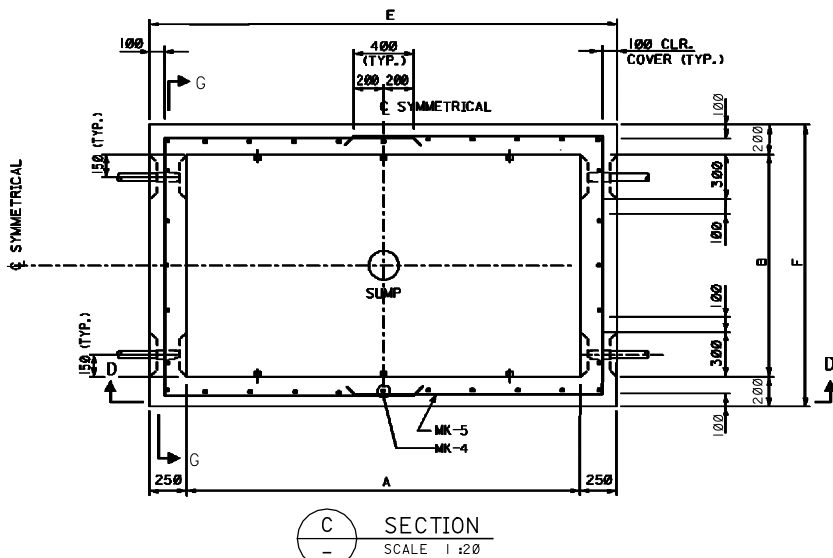
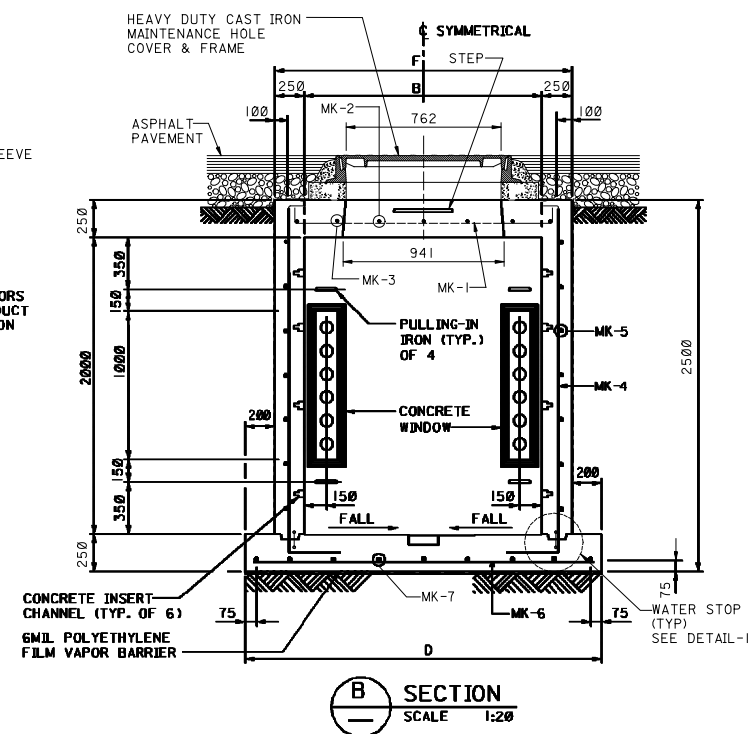
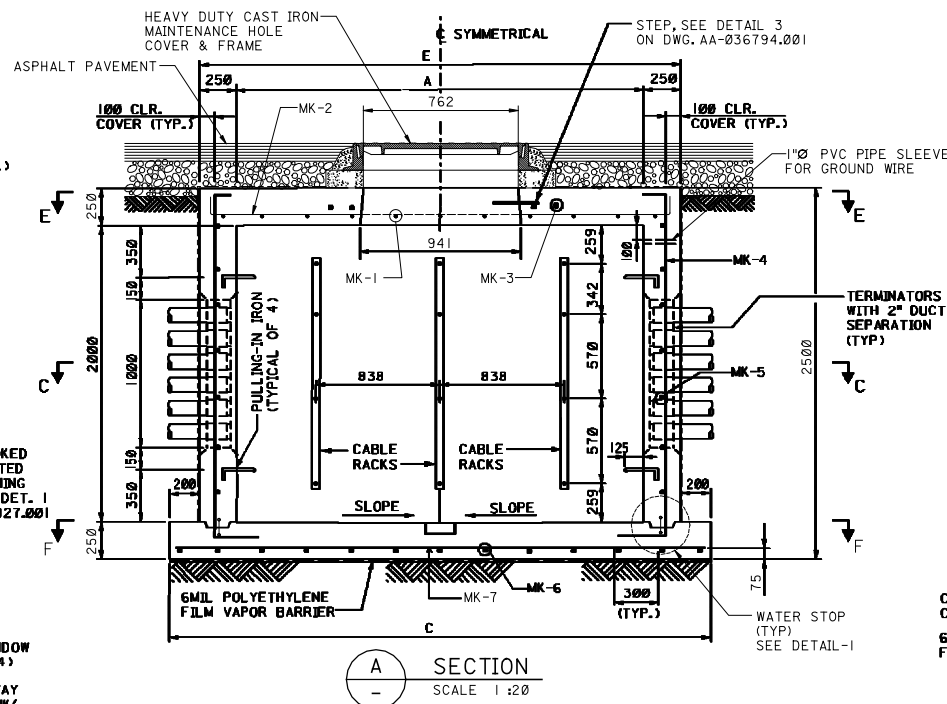
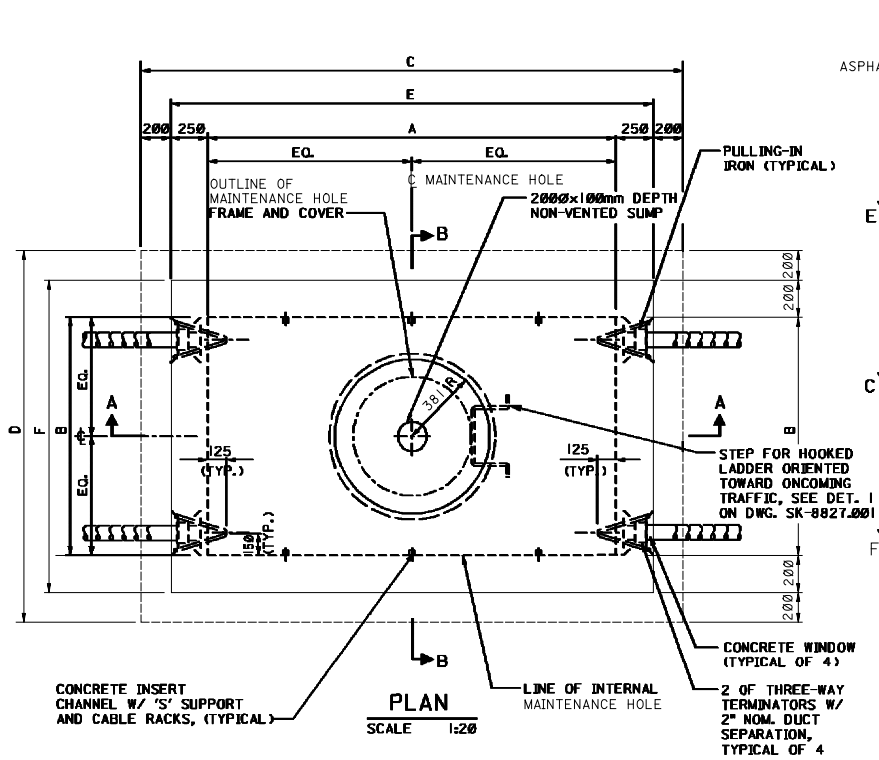


- NOTES: (CONTINUATION)**
- SAND OR SELECT MARL HAVING NO ROCKS EXCEEDING 5mm Ø SHALL BE USED FOR BACKFILL.
 - CONCRETE SHALL NOT BE PLACED UNTIL THE FORMS REINFORCING STEEL, BRAID, PLASTIC INSERT CHANNELS, DUCT TERMINATORS, PULLING-IRONS, STEP FOR HOOKED LADDER ETC. HAVE BEEN INSPECTED BY THE ARAMCO COMMUNICATION INSPECTOR.
 - TWO LAYERS OF BITUMINOUS COATING SHALL BE APPLIED TO ALL SURFACES, IN DIRECT CONTACT WITH SOIL OF REINFORCED CONCRETE ELEMENTS BELOW GRADE AFTER 14 DAYS (MIN) CURING.
 - 6MIL (0.15mm) THK POLYETHYLENE SHEET VAPOR BARRIER SHALL BE PLACED UNDER THE SLABS IN DIRECT CONTACT WITH SOIL.

TABLE : MAINTENANCE HOLE TYPE-I DETAILS

TYPE-I	SIZE L x W x D (METERS)	DIMENSIONS (mm.)					
		A	B	C	D	E	F
I-(A)	2.75x1.85x2.00	2750	1850	3650	2750	3250	2350
I-(B)	3.10x1.85x2.00	3100	1850	4000	2750	3600	2350
I-(C)	3.10x1.85x2.00	3100	1850	4000	2650	3600	2250
I-(D)	3.70x1.85x2.00	3700	1850	4600	2650	4200	2250

REINFORCING BARS

BAR MARK	MAINTENANCE HOLE TYPE			
	I-(A)	I-(B)	I-(C)	I-(D)
MK-1	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.
MK-2	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.
MK-3	2-16Ø	2-16Ø	2-16Ø O.C.	2-16Ø
MK-4	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.
MK-5	12Ø @ 300 O.C.	12Ø @ 300 O.C.	12Ø @ 300 O.C.	12Ø @ 300 O.C.
MK-6	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.
MK-7	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.	16Ø @ 300 O.C.

- NOTES:**
- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE NOTED.
 - DESIGN, FABRICATION, AND CONSTRUCTION SHALL COMPLY WITH SAES-0-001. PRECAST CONCRETE SHALL ALSO COMPLY WITH SAES-0-012.
 - EXCAVATION AND BACKFILL SHALL COMPLY WITH SAES-A-114.
 - ORIGINAL DESIGN LOADING WAS CALCULATED USING A CLASS H-20-40 TRUCK WITH MAXIMUM AXLE LOAD OF 85 KN (19.07 KIPS).
 - REVISED DESIGN LOADING WAS CALCULATED USING A CLASS HS-20 TRUCK WITH MAXIMUM WEIGHT OF 40 TONS & AXLE LOAD OF 170.06 KN (38.14 KIPS).
 - 10mmØ ROUND STEEL BAR STEPS SHALL BE SET SO THAT LEGS EXTEND THROUGH BRICKWORK OR GRADE RINGS.
 - TYPE V PORTLAND CEMENT SHALL BE USED.
 - REINFORCING STEEL SHALL CONFORM TO ASTM-615 GRADE 50 WITH A MINIMUM YIELD STRENGTH, $F_y=345$ MPa (50,000 PSI). BARS SHALL BE EPOXY COATED IN ACCORDANCE WITH 09-SAMSS-106. ALL REINFORCING BARS SHALL COMPLY WITH SASQ SSA2/ 1979.
 - FABRICATION AND INSTALLATION OF FBE COATED REBAR SHALL BE IN ACCORDANCE WITH SAES-0-001 AND 09-SASS-106.
 - REBAR SPACING MAYBE ADJUSTED SLIGHTLY IN THE FIELD TO AVOID CUTTING THE REBARS DUE TO PLACEMENT OF TERMINATOR BANKS.
 - REBAR SHALL BE CUT ONLY BY BAR CROPPER OR HACKSAW.

LEGEND

TYP	TYPICAL
EQ	EQUAL
OC	ON CENTER
CLR	CLEAR

REFERENCE DRAWINGS

BAR BENDING SCHEDULE	AA-036794.004
----------------------	---------------

REVISION VALIDATION

THIS REVISION NO. 04 IS COVERED FOR ALL APPROVAL AND CERTIFICATION REQUIREMENTS, PER SAEP-334, UNDER DRAWING COMPLETION CERTIFICATE NO. 00-00000-0000-000

DESIGN CERTIFICATION (DESIGN AGENCY)	REVIEW FOR KEY DRAWINGS (SAUDI ARAMCO)	OTHER
ENGR./DATE	CERTIFIED BY/DATE CONST. AGENCY/DATE OPERATIONS/DATE	BY/DATE

REV. NO./DATE: 04
REVISION DESCRIPTION: 04

JOB ORDER/EWO NO. 00-00000-0000
THIS REVISION IS NOT TO BE USED FOR CONSTRUCTION UNTIL CERTIFIED AND DATED

SAUDI ARABIAN OIL COMPANY

STD COMMS MAINTENANCE HOLE
MAINTENANCE HOLE TYPE I (20 TONS)
PLAN AND SECTION

STD. DWG. SAUDI ARABIA
PLANT NO. INDEX DRAWING NUMBER SHT. NO. REV. NO.
990 T AA-036794 002 04