

NOTES:-

- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.0m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
- HOUSE CONNECTION SHALL BE UPVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT C) AND SLOPE 1%.
- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D4FOR TYPICAL ARRANGEMENT.
- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
- FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38
- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000
- FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

LEGEND:-

- SCOPE OF WORK
- SAFWA 2 SEWAGE NETWORK
- OTHER PACKAGE SAFWA 3
- SAFWA 2 SEWAGE MANHOLE
- FLOW DIRECTION
- OUTFALL
- PIPE CONCRETE ENCASMENT
- INSPECTION CHAMBER
- CLEAN OUT
- GRP
- U/S I.L.
- D/S I.L.
- PIPELINE SIZE
- PIPELINE LENGTH AND SLOPE
- MANHOLE NUMBER
- GROUND LEVEL
- INVERT LEVEL
- EASTING
- NORTHING
- STORM WATER DRAINAGE CROSSING PIPE

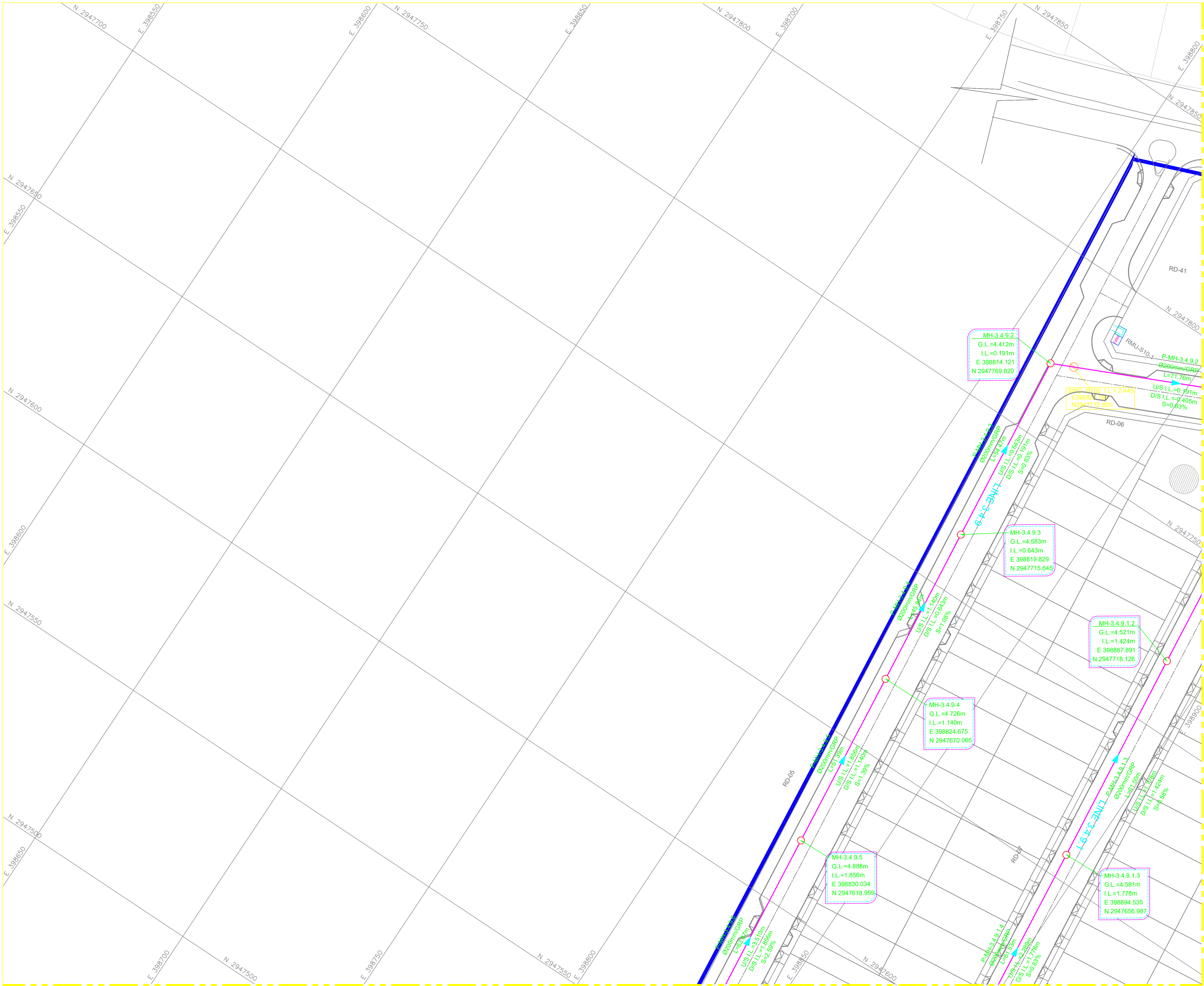
0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023
0.0	صدرت من اجل المراجعة	اليوم
	ISSUED FOR PREVISION	DATE

PROJECT TITLE: **GRANT LANDS PROJECT**

CLIENT: مالك المشروع

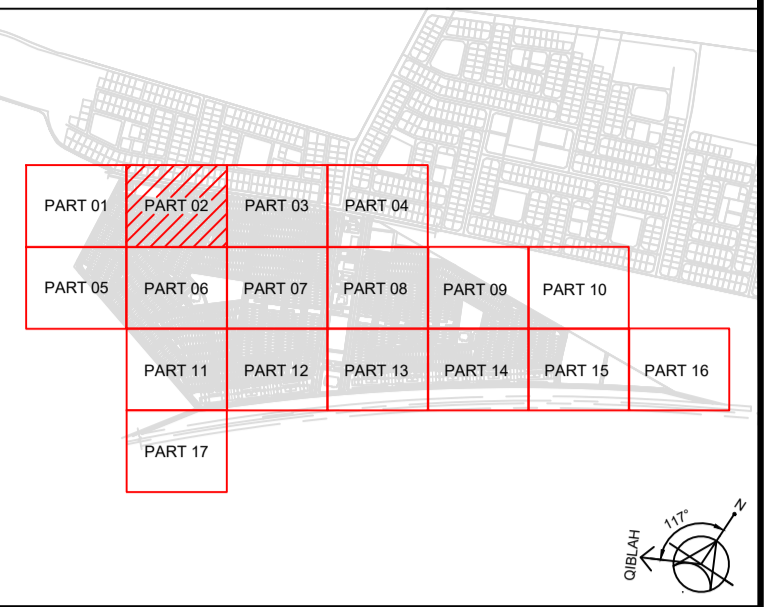
CONSULTANT: **دار الرياض**
DAR AL RIYADH
 DESIGN & CONSTRUCTION MANAGEMENT SERVICES
 PO Box 260170
 RYADH, SAUDI ARABIA 11591
 ENGINEERING CONTRACTOR: **الرواف للمقاولات**

DESIGN ITEM:	INFRASTRUCTURE	البنية التحتية
DRAWING TITLE:	QATIF SITE 2 SEWAGE COLLECTION NETWORK GENERAL PLAN/ LINK NODE DIAGRAM	مخطط الشبكة
DRAWING NO.:	1418DF-QTF(2)-220-I-PS-RW-SD-201M	رقم المخطط
PROJECT NO.:	1418DF	رقم المشروع
START DATE:	SEP 2023	تاريخ البدء
SCALE:	1:500	مقياس الرسم
PHASE:	SD	مرحلة / المخطط
DRAWN BY:	مهندس	رسم من قبل
CHECKED BY:	مهندس	مراجعة
APPROVED BY:	مهندس	موافقة
SIGN:	التوقيع	التوقيع



MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P5

KEY PLAN: مفتاح الخريطة

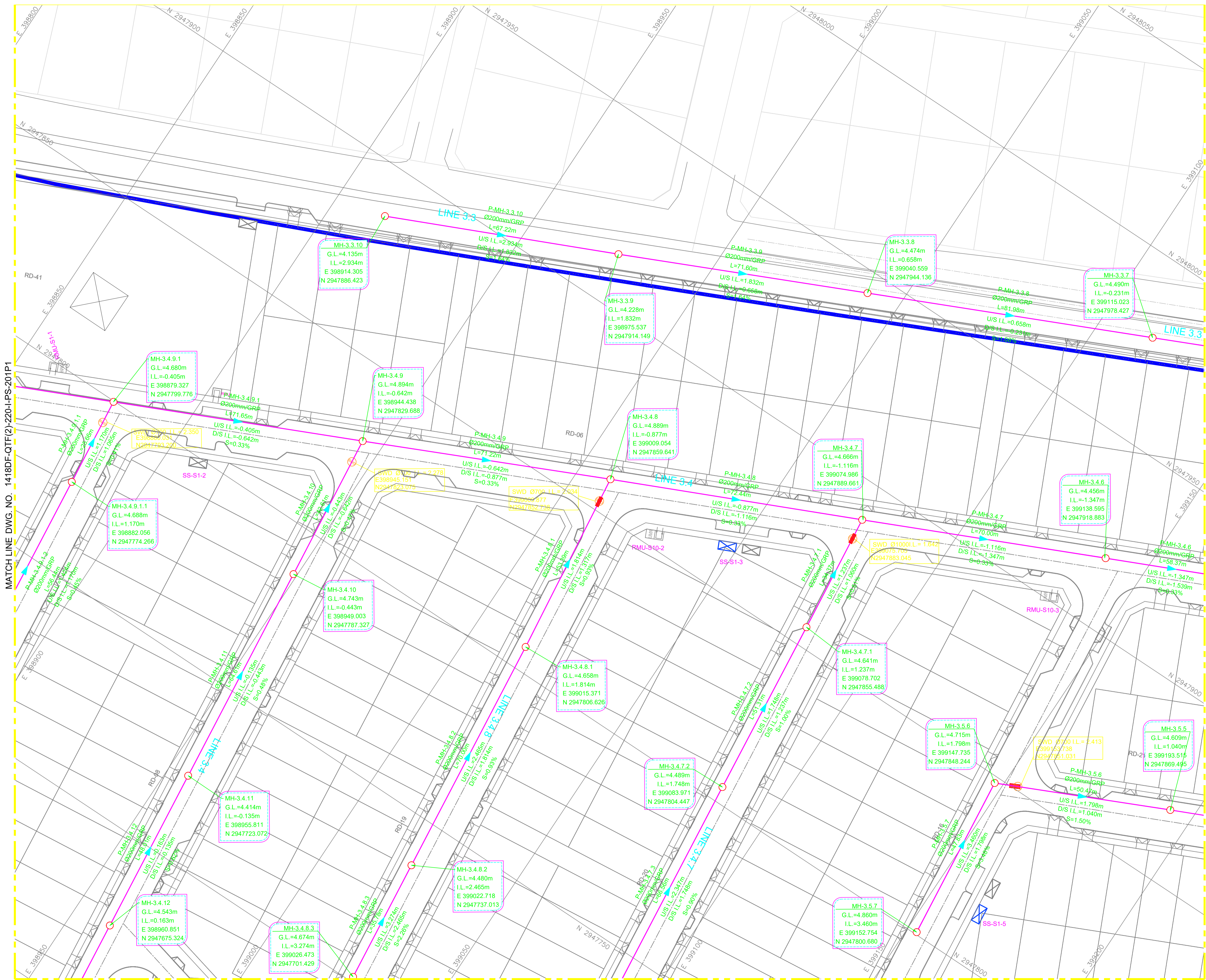


- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY NWC FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE UPVC 150 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TEEN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES, ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D4FOR TYPICAL ARRANGEMENT.
 - FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE-FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

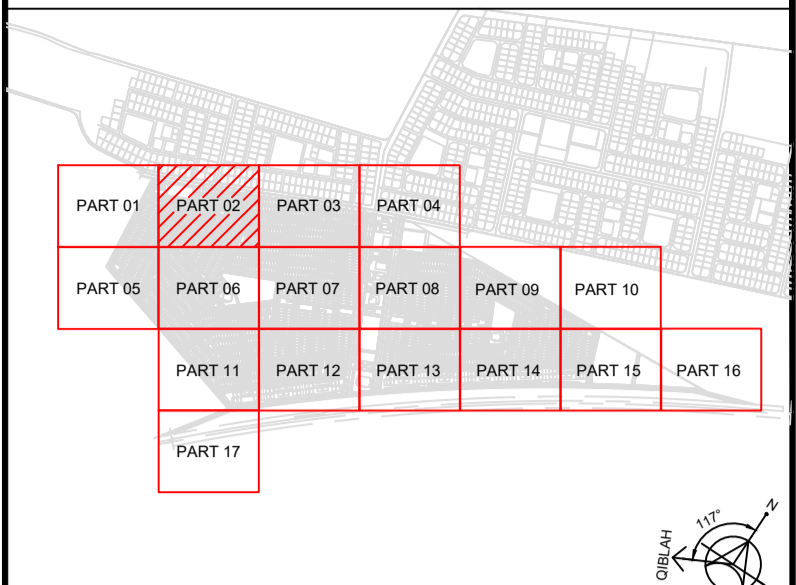
- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

Ø400 mm	PIPELINE SIZE
L=87.8 m, S=0.250 m/km	PIPELINE LENGTH AND SLOPE
MH-8	MANHOLE NUMBER
G.L.=4.42m	GROUND LEVEL
I.L.=2.77m	INVERT LEVEL
E 398710.767	EASTING
N 2947889.206	NORTHING
(C)	STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من أجل
0.0	ISSUED FOR PREVISION	09/2023	من أجل
PROJECT TITLE	GRANT LANDS PROJECT		
CLIENT	مالك المشروع		
CONSULTANT	دار الرياض DAR AL RIYADH DESIGN & CONSTRUCTION MANAGEMENT SERVICES Tel: +966112062088 Fax: +966112062089		
DESIGN ITEM	INFRASTRUCTURE		
DRAWING TITLE	QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (1 OF 17)		
DRAWING NO.	رقم المخطط	رقم صادر رقم /	مراجعة رقم /
1418DF-QTF(2)-220-I-PS-RW-SD-201P1	1418DF-QTF(2)-220-I-PS-RW-SD-201P1	1:500	1:500
PROJECT NO.	رقم المشروع	START DATE	تاريخ البدء
1418DF-QTF(2)-220-I-PS-RW-SD-201P1	1418DF-QTF(2)-220-I-PS-RW-SD-201P1	SEPT. 2023	1:500
DRAWN BY	رسم من قبل	CHECKED BY	مراجعة من قبل
DESIGNED BY	تصميم من قبل	CERTIFIED BY	مراجعة من قبل
APPROVED BY	مراجعة من قبل	APPROVED BY	مراجعة من قبل
SIGN.	التوقيع	SIGN.	التوقيع



KEY PLAN: مفتاح الخريطة



- NOTES:-**
- 1- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - 2- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - 3- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - 4- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - 5- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - 6- ALL SEWAGE FORCE MAIN SHOULD BE DUCTILE IRON CLASS K 9.
 - 7- HOUSE CONNECTION SHALL BE UPVC 150 MM DIAMETER WITH STARTING DEPTH 0.80 m (AT C) AND SLOPE 1%.
 - 8- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - 9- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - 10- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-PS-201P2 FOR TYPICAL ARRANGEMENT.
 - 11- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - 12- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - 13- FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-PS-201P1 TO 1418DF-QTF(2)-220-PS-201P11.
 - 14- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - 15- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - 16- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - 17- FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - 18- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - 19- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - 20- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTINGS
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من قبل
0.0	ISSUED FOR PREVISION	09/2023	من قبل
0.0	مصدر من اجل الموافقة	09/2023	من قبل
0.0	ISSUED FOR PREVISION	09/2023	من قبل

GRANT LANDS PROJECT

CLIENT: مالك المشروع

CONSULTANT: استشاري المشروع

دار الرييادح
DESIGN & CONSTRUCTION MANAGEMENT SERVICES
Tel: +96612962088 Fax: +96612962088

الرواف للمقاولات
الهيئة السعودية للمقاولات

INFRASTRUCTURE

DRAWING TITLE: QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (2 OF 17)

DRAWING NO: 1418DF-QTF(2)-220-I-PS-RW-SD-201P2

PROJECT NO: 1418DF

START DATE: 15/07/2022

SCALE: 1:500

PHASE: AT SD

DESIGNED BY: [Name]

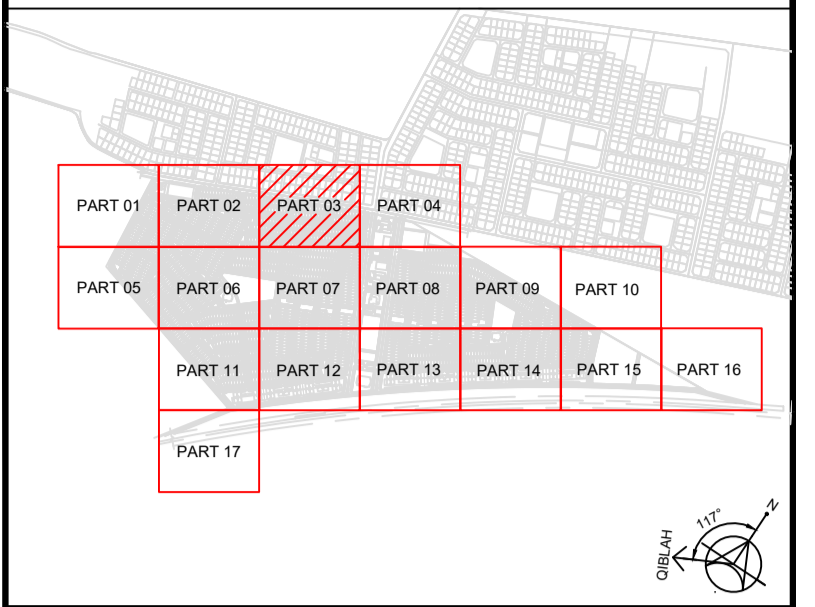
CHECKED BY: [Name]

CERTIFIED BY: [Name]

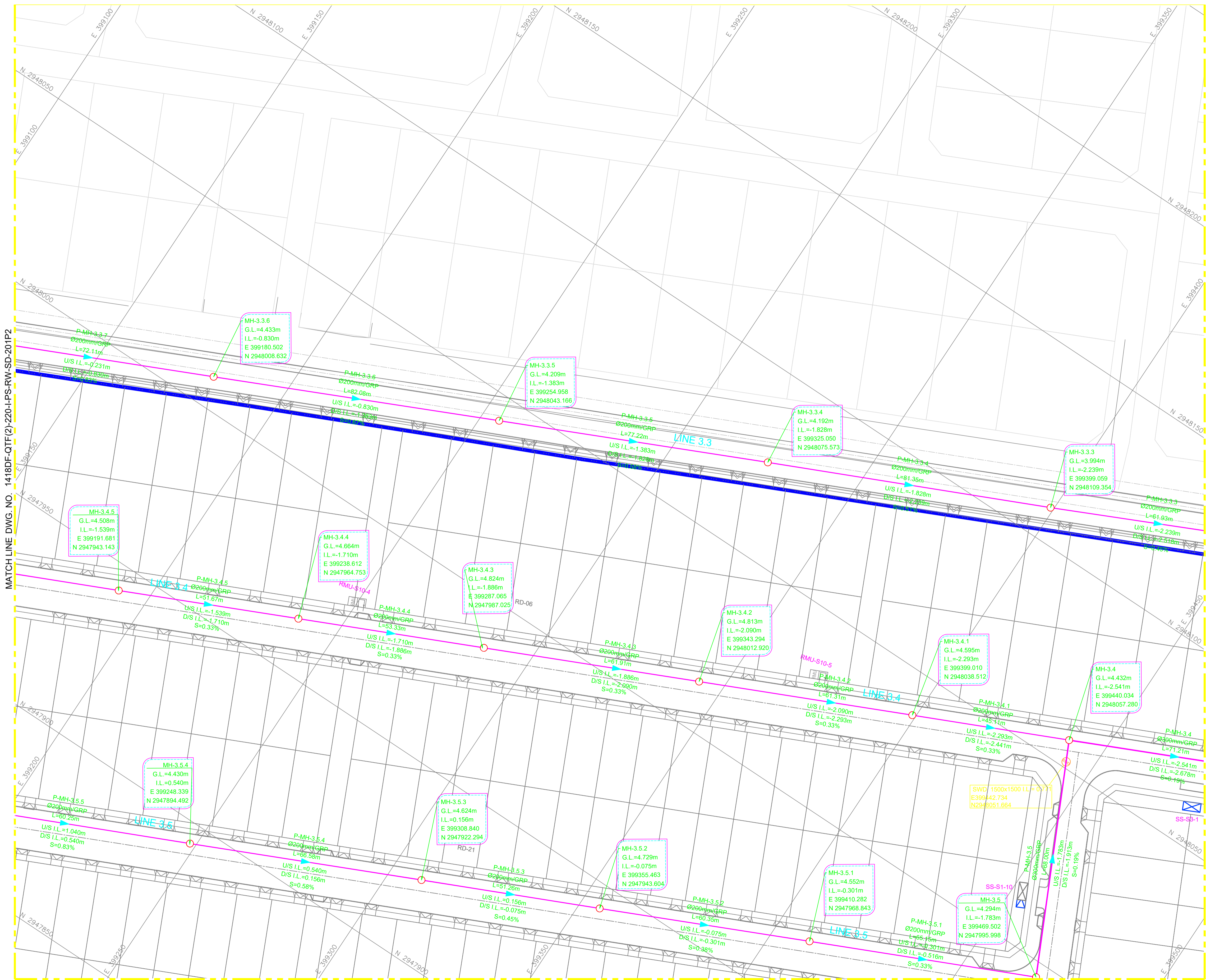
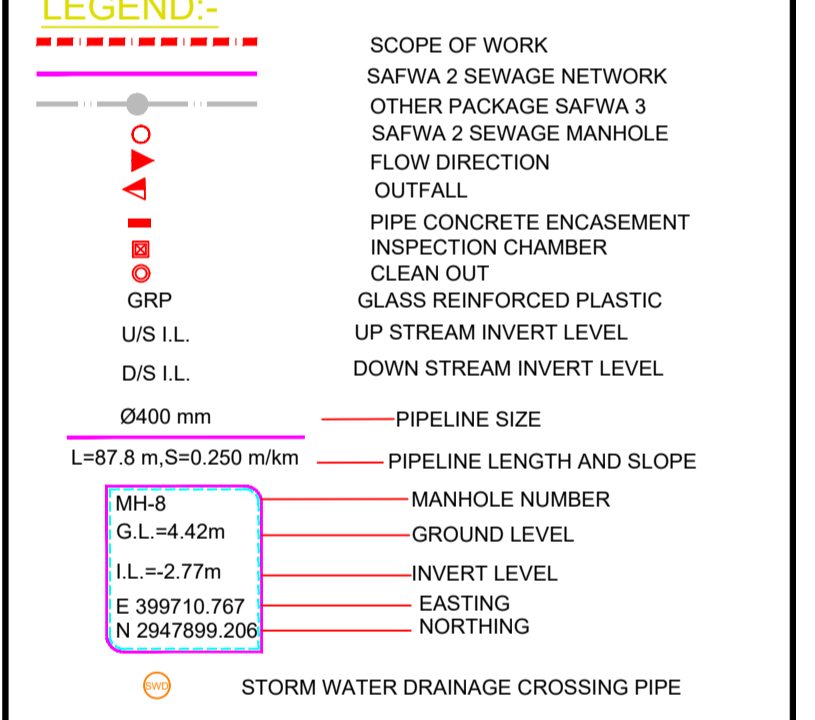
APPROVED BY: [Name]

DATE: 15/07/2022

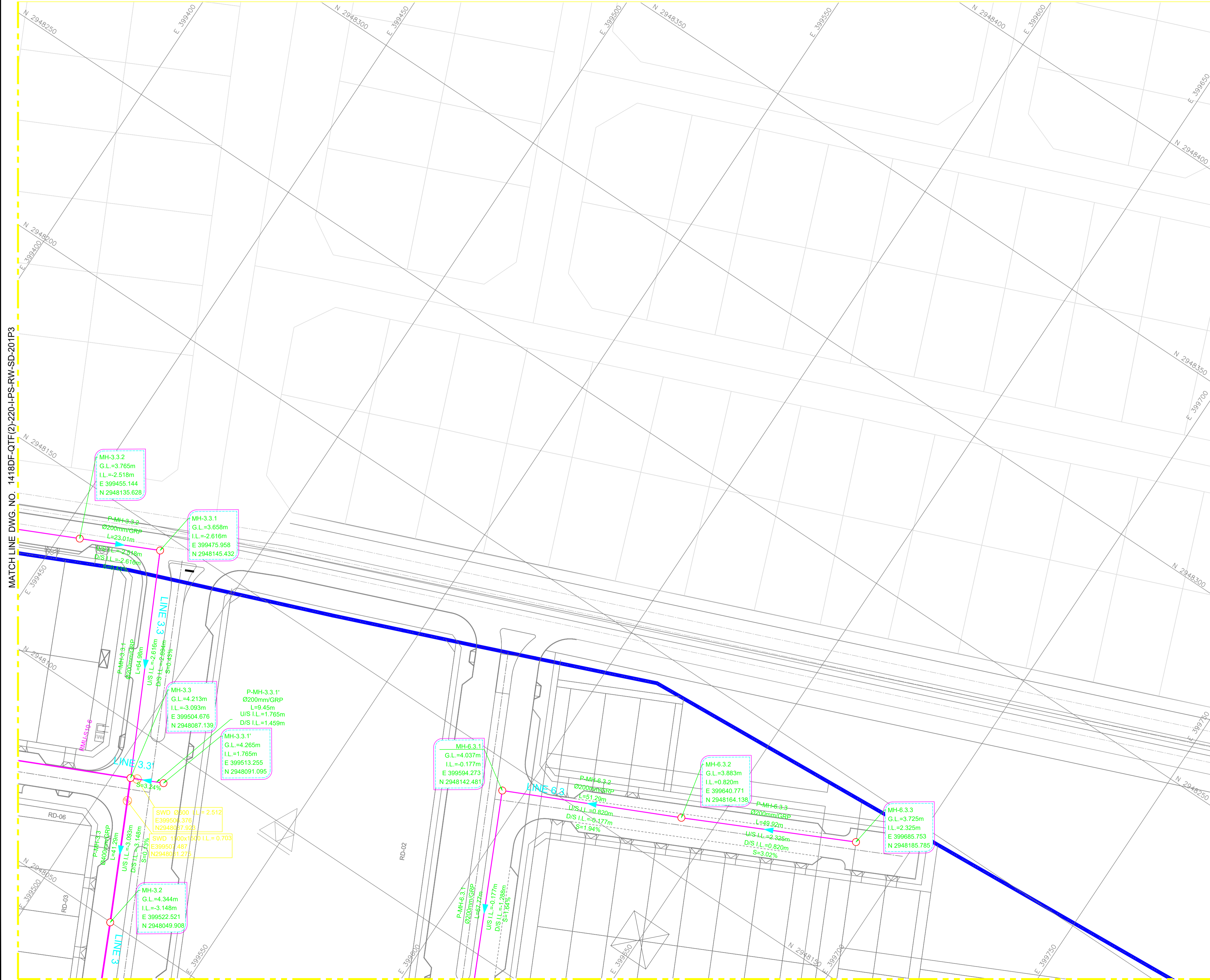
MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P6



- NOTES:-**
- 1- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - 2- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - 3- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - 4- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - 5- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY NWC FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - 6- ALL SEWAGE FORCE MAIN SHOULD BE DUCTILE IRON CLASS K 9.
 - 7- HOUSE CONNECTION SHALL BE PVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - 8- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - 9- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING OF THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - 10- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG: 1418DF-QTF(2)-220-IPS-RW-SD-201P4 FOR TYPICAL ARRANGEMENT.
 - 11- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - 12- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - 13- FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-IPS-2031 TO 1418DF-QTF(2)-220-IPS-20311.
 - 14- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - 15- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - 16- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - 17- FOR UTILITY CORRIDOR REFER TO SHEET NO. IPS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - 18- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - 19- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL) UNLESS OTHERWISE INDICATED.
 - 20- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.



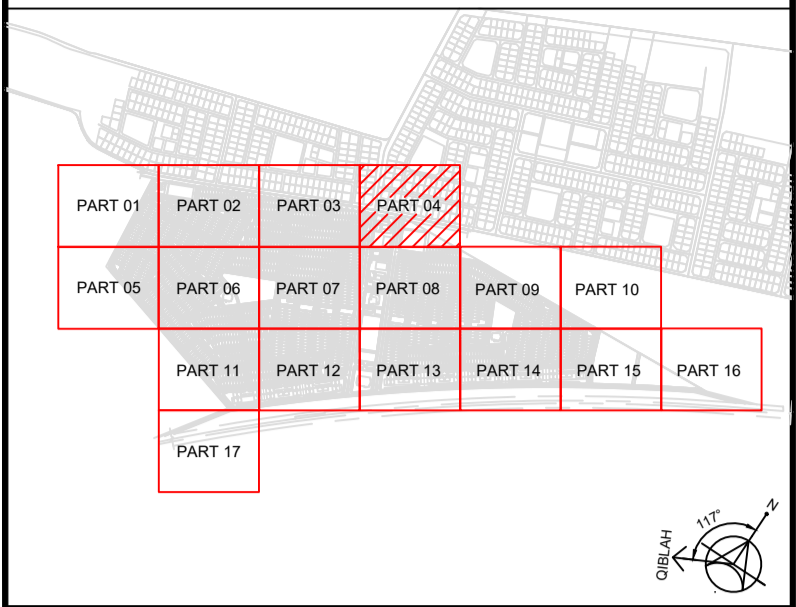
0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من أجل
0.0	ISSUED FOR PREVISION	09/2023	من أجل
PROJECT TITLE: GRANT LANDS PROJECT			
CLIENT: دار الأراضي			
CONSULTANT: دار الرياض DAR AL RIYADH			
DESIGN ITEM: INFRASTRUCTURE			
DRAWING TITLE: QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (3 OF 17)			
DRAWING NO: 1418DF-QTF(2)-220-IPS-RW-SD-201P3			
PROJECT NO: 1418DF			
DATE: 15/07/2022			
SCALE: 1:500			
PHASE: AT SD			
DRAWN BY: AT SD			
CHECKED BY: AT SD			
APPROVED BY: AT SD			
SIGN: AT SD			



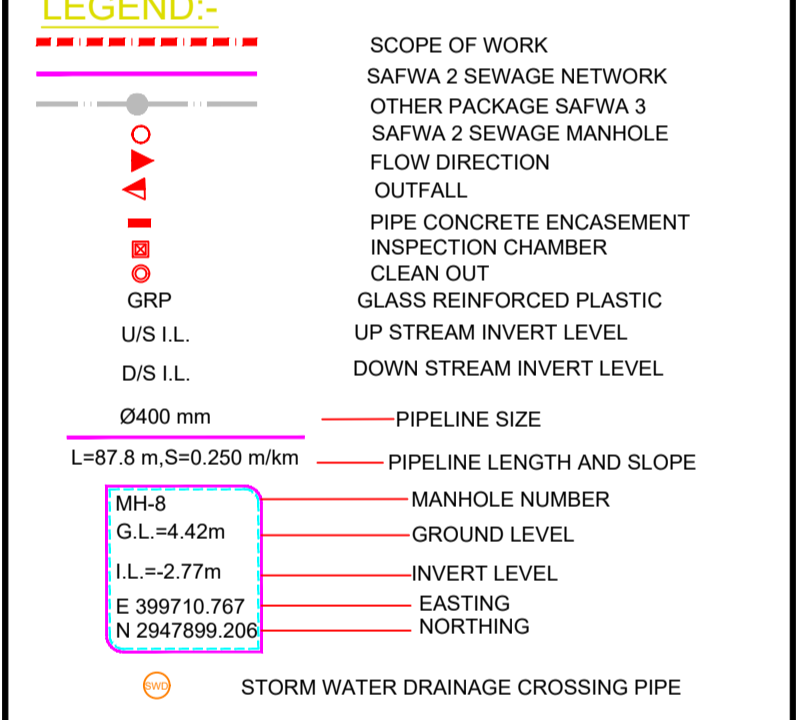
MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P3

MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P8

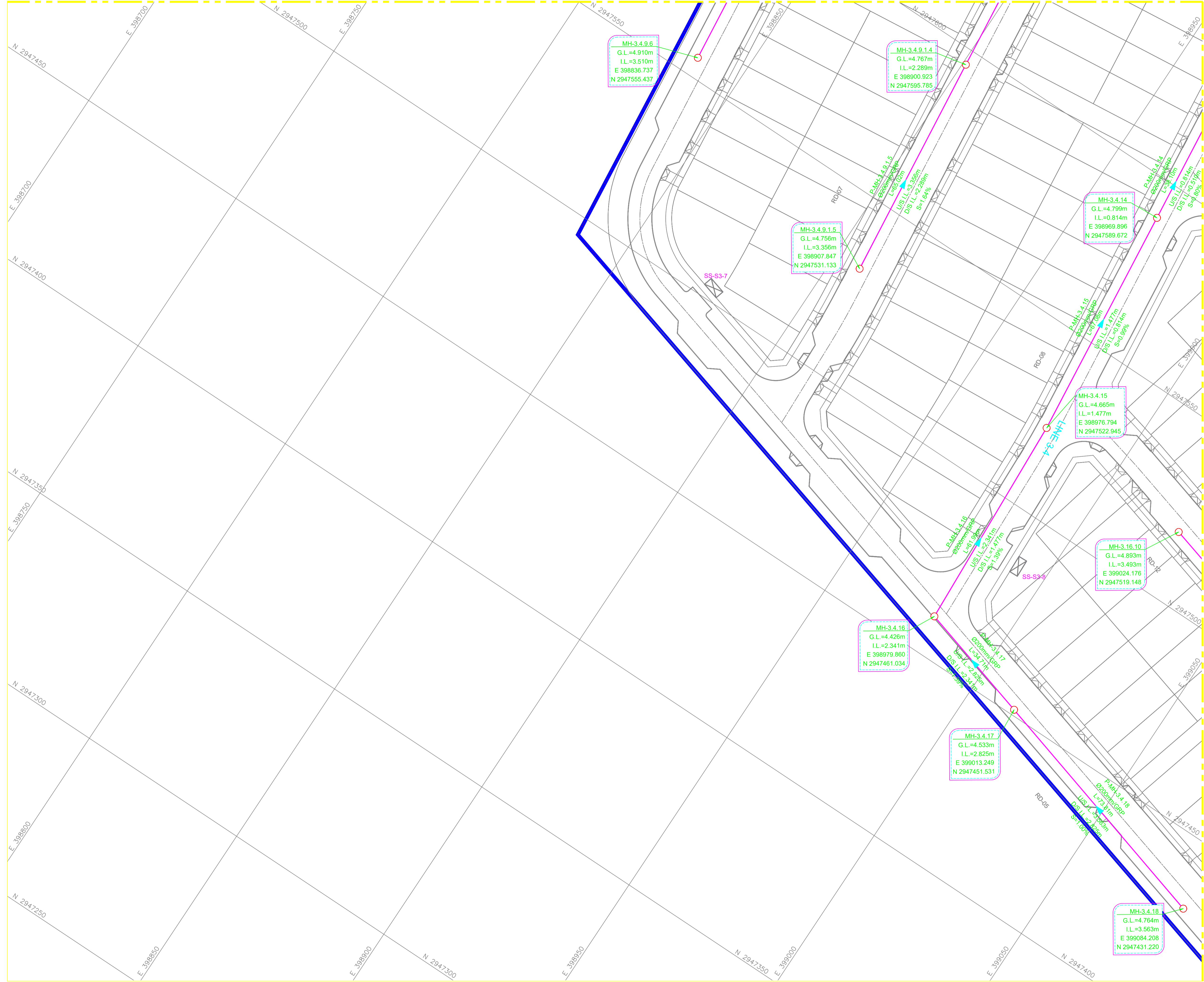
KEY PLAN: مفتاح الخريطة



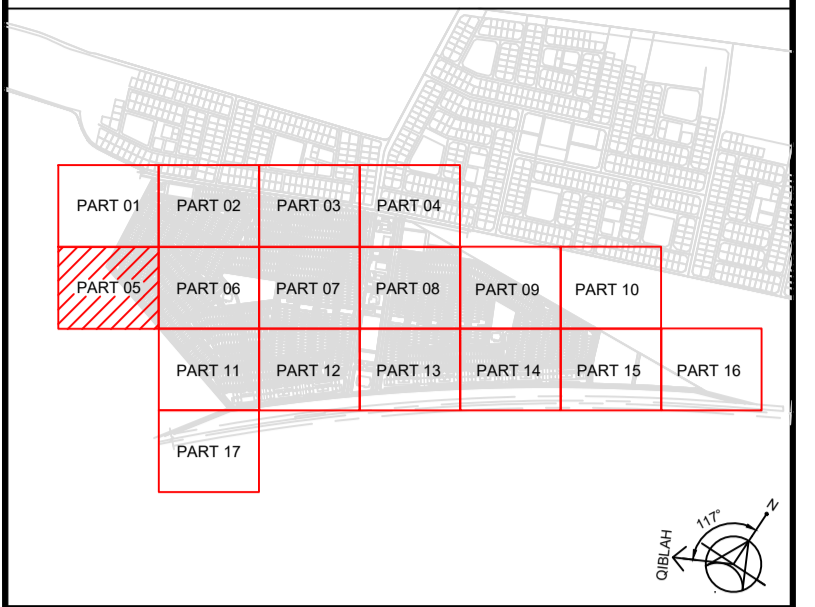
- NOTES:-**
- 1- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - 2- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - 3- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - 4- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - 5- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY NWC FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - 6- ALL SEWAGE FORCE MAIN SHOULD BE DUCTILE IRON CLASS K 9.
 - 7- HOUSE CONNECTION SHALL BE UPVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - 8- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - 9- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - 10- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D4FOR TYPICAL ARRANGEMENT.
 - 11- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - 12- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - 13- FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - 14- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - 15- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - 16- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - 17- FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - 18- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - 19- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - 20- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.



0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من أجل
0.0	ISSUED FOR PREVISION	سادة من أجل المراجعة	من أجل
PROJECT TITLE	GRANT LANDS PROJECT		
CLIENT	مالك المشروع		
CONSULTANT	 دار الرياض DAR AL RIYADH DESIGN & CONSTRUCTION MANAGEMENT SERVICES		
DESIGN ITEM	INFRASTRUCTURE		
DRAWING TITLE	QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (4 OF 17)		
DRAWING NO.	1418DF-QTF(2)-220-I-PS-RW-SD-201P4	رقم المخطط	مراجعة رقم / صادر رقم /
PROJECT NO.	1418DF	رقم المشروع	ISSUE NO. / REV NO.
START DATE	15/07/2022	تاريخ البدء	0.0
SCALE	1:500	مقياس الرسم	PHASE
DATE	15/07/2022	تاريخ المراجعة	AT / SD
DRAWN BY	مهندس من قبل	CHECKED BY	الموافق
DESIGNED BY	الموافق	CERTIFIED BY	الموافق
APPROVED BY	الموافق	APPROVED BY	الموافق
DATE	الموافق	DATE	الموافق



KEY PLAN: مفتاح الخريطة



- NOTES:-**
- 1- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - 2- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - 3- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - 4- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT. FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - 5- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 8 BAR & STIFFNESS 10000 N/M².
 - 6- ALL SEWER FORCE MAIN SHOULD BE DUCTILE IRON CLASS K 9.
 - 7- HOUSE CONNECTION SHALL BE PVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - 8- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - 9- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - 10- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D4 FOR TYPICAL ARRANGEMENT.
 - 11- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - 12- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - 13- FOR SEWER NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - 14- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - 15- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - 16- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - 17- FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - 18- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - 19- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - 20- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASUREMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GRP
 - U/S I.L.
 - D/S I.L.
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من قبل
0.0	سادة من اجل المراجعة	اليوم	من المصمم
0.0	ISSUED FOR PREVISION	DATE	BY
0.0	مجان المشروع	DATE	BY

GRANT LANDS PROJECT

CLIENT: ملك المشروع

CONSULTANT: دار الرياض D.A.R AL RIYADH

DESIGN & CONSTRUCTION MANAGEMENT SERVICES

RD Box 260170 RYDHAN SAUDI ARABIA 11391 Tel: +96611206088 Fax: +96611206089

ENGINEERING CONTRACTOR: الرواف للمقاولات

DESIGN ITEM: **INFRASTRUCTURE**

DRAWING TITLE: **QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (5 OF 17)**

DRAWING NO: 1418DF-QTF(2)-220-I-PS-RW-SD-201P5

PROJECT NO: 1418DF

START DATE: SEPT 2022

SCALE: 1:500

DATE: AT

PHASE: SD

REVISION: 0.0

ISSUE NO. / REV NO.

DATE: 09/2023

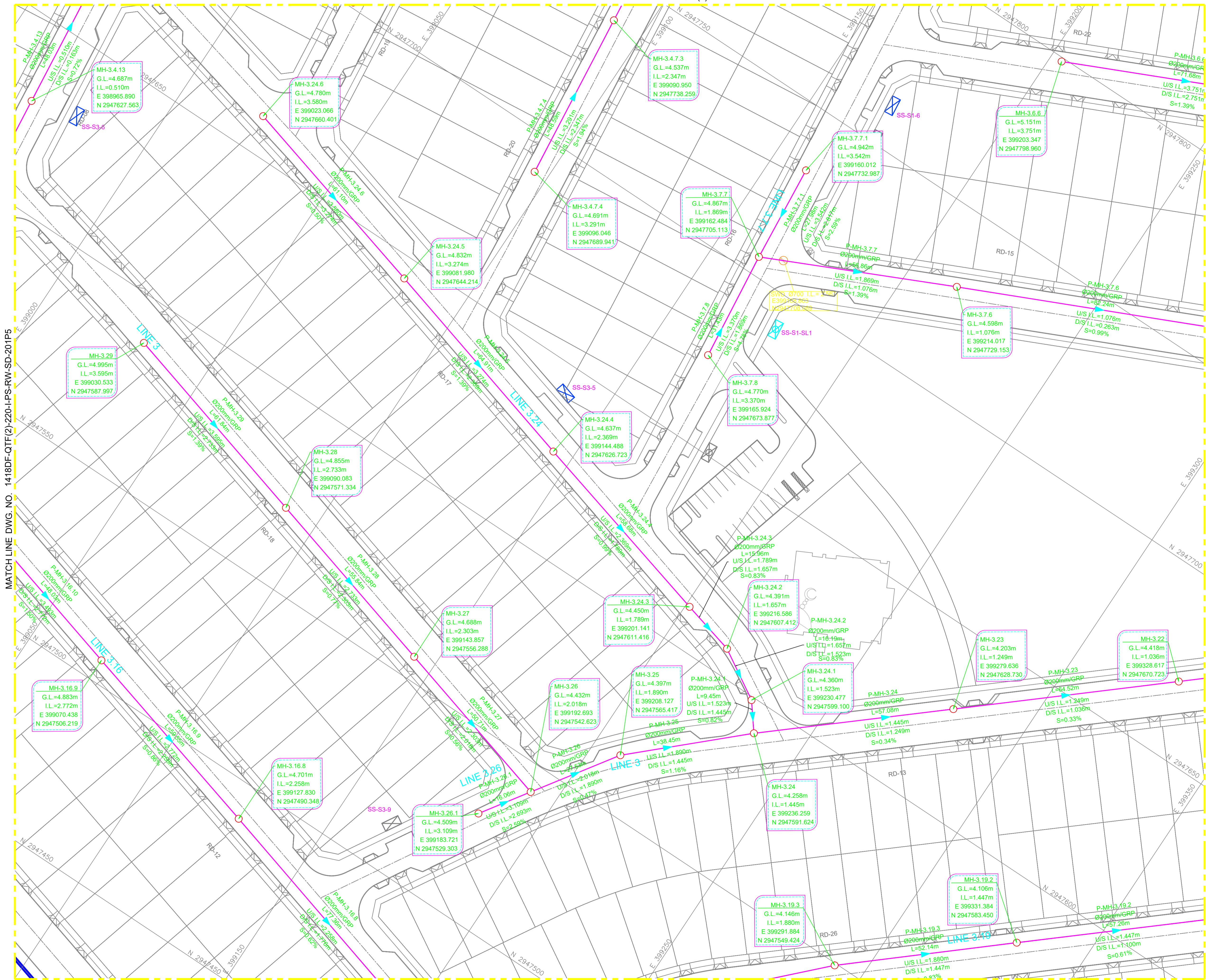
BY: [Signature]

CHECKED BY: [Signature]

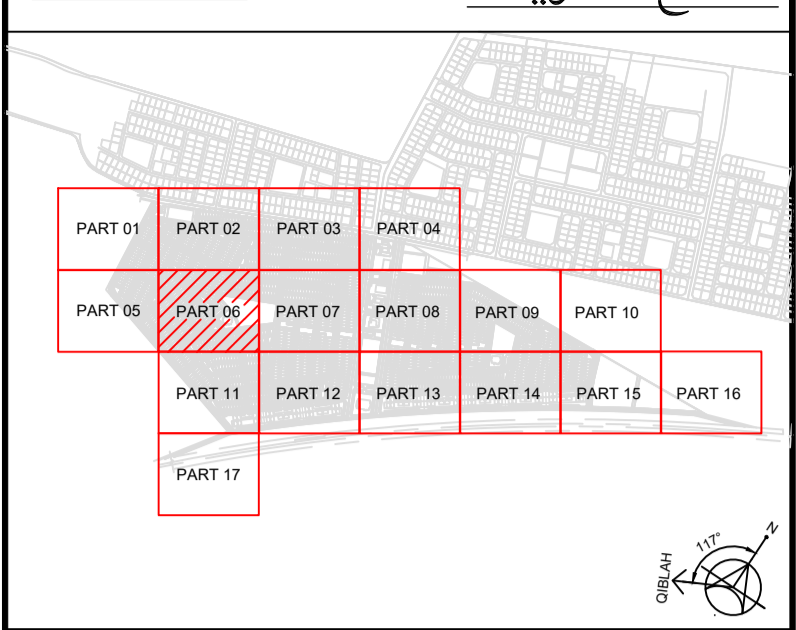
CERTIFIED BY: [Signature]

APPROVED: [Signature]

DATE: 09/2023



KEY PLAN: مفتاح الخريطة

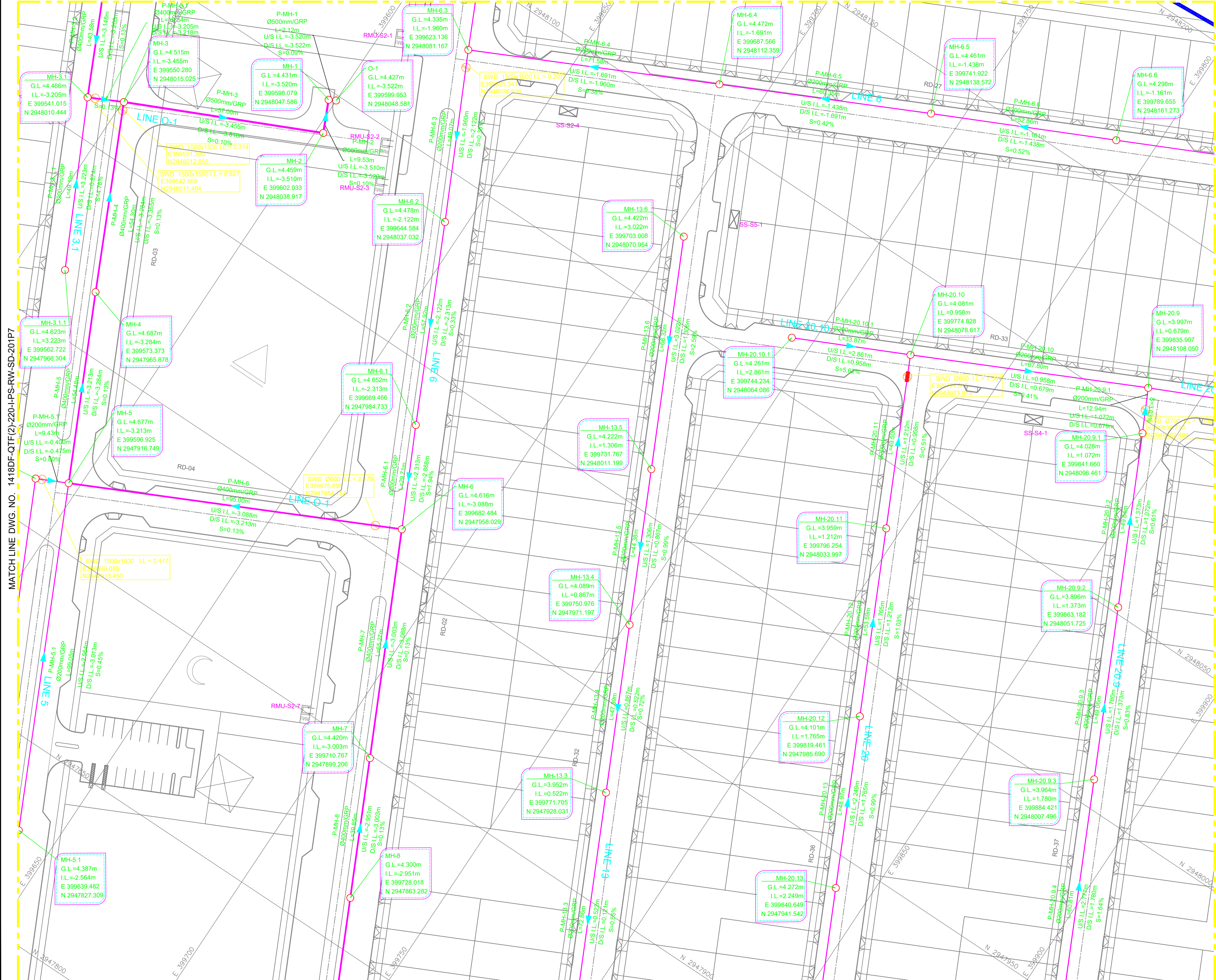


- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT UNDER THE SIDEWALK THE FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY NWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE UPVC 150 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING UTILITIES INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES WITH RESPECT TO ALL DISBURS AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE UTILITIES ETC AND BUILDINGS SEWAGE NETWORK. DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203DF FOR TYPICAL ARRANGEMENT.
 - FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - FOR SEWER NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203 TO 1418DF-QTF(2)-220-I-PS-20311.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY DETERMINED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EXISTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من أجل
0.0	ISSUED FOR PREVISION	09/2023	من أجل
PROJECT TITLE	GRANT LANDS PROJECT	CLIENT	مملكة البحرين
CLIENT	دار الرياض	CONSULTANT	دار الرياض
PO Box 20170	WINDY SHAH SAUDI ARABIA 11391	ENGINEERING CONTRACTOR:	مملكة البحرين
DESIGN & CONSTRUCTION MANAGEMENT SERVICES	Tel: +966112062088	رؤساء المصممات	مملكة البحرين
DESIGN & CONSTRUCTION MANAGEMENT SERVICES	Fax: +966112062088	مملكة البحرين	
DESIGN & CONSTRUCTION MANAGEMENT SERVICES	رؤساء المصممات		
DESIGN & CONSTRUCTION MANAGEMENT SERVICES	رؤساء المصممات		

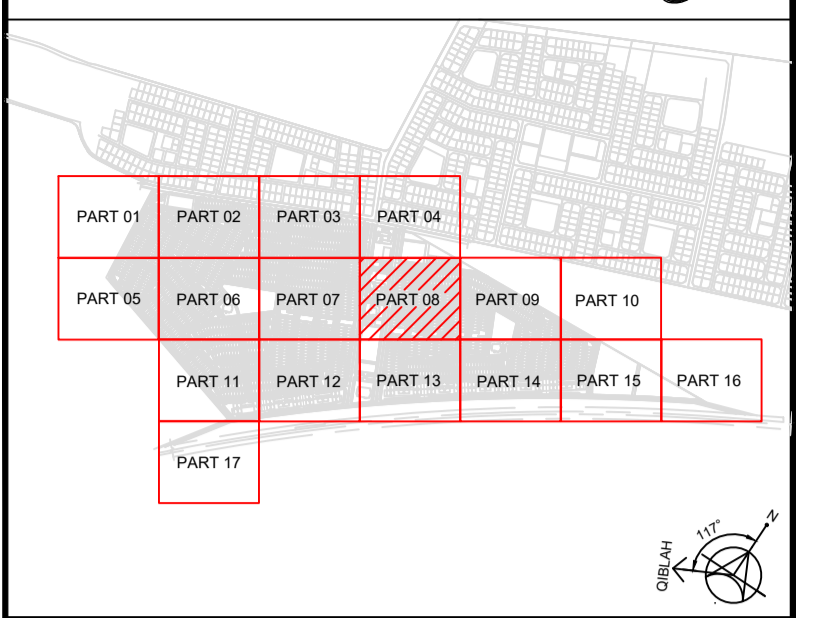
DESIGN ITEM	INFRASTRUCTURE	موقع المخطط
DRAWING TITLE	QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (6 OF 17)	موقع المخطط
DRAWING NO.	1418DF-QTF(2)-220-I-PS-RW-SD-201P6	مراجعة رقم / صادر رقم / رقم المخطط
PROJECT NO.	1418DF	ISSUE NO. / REV. NO.
PROJECT DATE	1418DF	0.0
START DATE	1418DF	0.0
SCALE	1:500	التاريخ / المرحلة / المخطط
DATE	1418DF	0.0
BY	1418DF	0.0
CHECKED BY	1418DF	0.0
CERTIFIED BY	1418DF	0.0
APPROVED BY	1418DF	0.0
SIGN	1418DF	0.0



MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P7

MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P9

KEY PLAN: مفتاح الخريطة

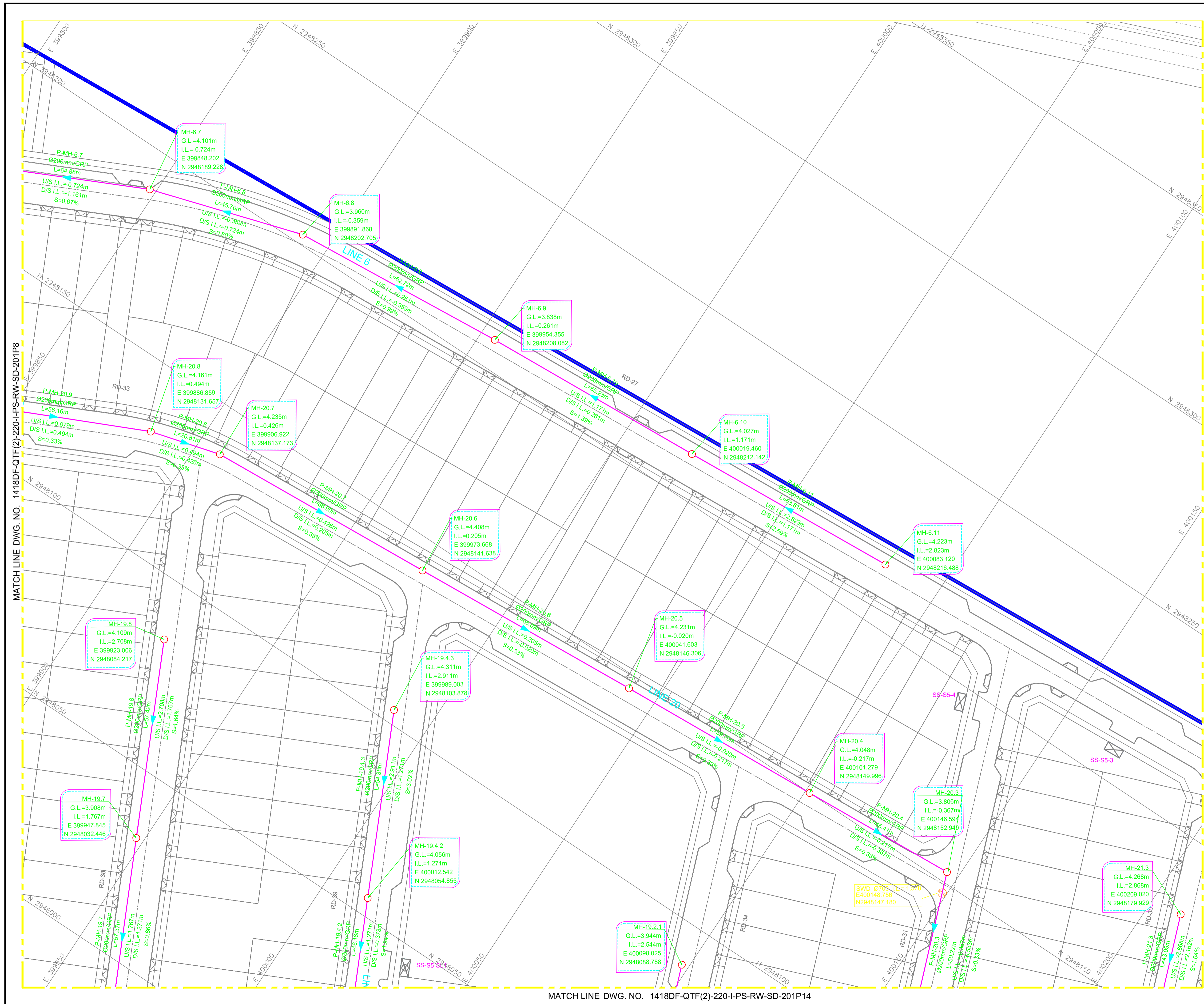


- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE UPVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203DF4 FOR TYPICAL ARRANGEMENT.
 - FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - FOR SEWER NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM WGS84 ZONE 38).
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL) UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

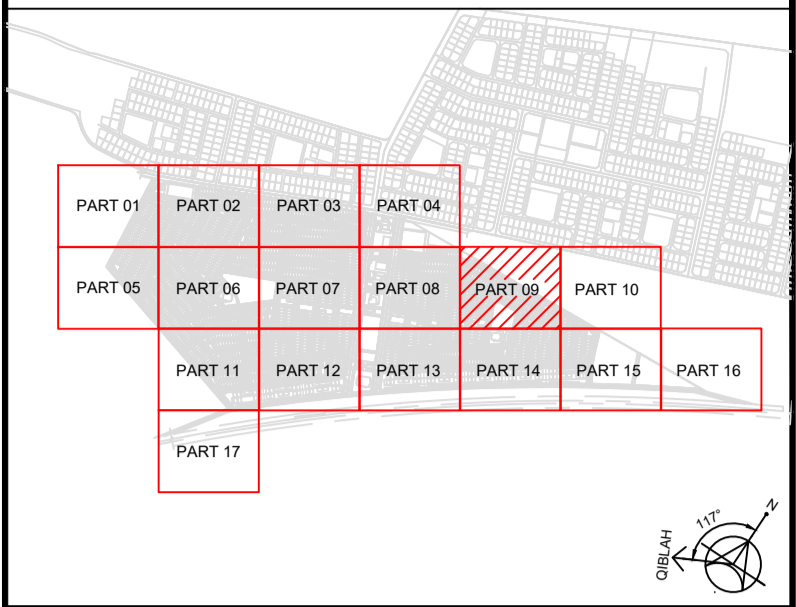
- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC UP STREAM INVERT LEVEL
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من أجل
0.0	ISSUED FOR PREVISION	09/2023	من أجل
PROJECT TITLE			
GRANT LANDS PROJECT			
CLIENT			
مملكة البحرين			
CONSULTANT			
دار الرياض			
PO Box 20170 Winkon Bldg, BAHAMA 11391 ENGINEERING CONTRACTOR			
DESIGNER			
INFRASCTURE			
DRAWING TITLE			
QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (8 OF 17)			
DRAWING NO.			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			
PROJECT NO.			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			
DRAWN BY			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			
SIGN			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من أجل
0.0	ISSUED FOR PREVISION	09/2023	من أجل
PROJECT TITLE			
GRANT LANDS PROJECT			
CLIENT			
مملكة البحرين			
CONSULTANT			
دار الرياض			
PO Box 20170 Winkon Bldg, BAHAMA 11391 ENGINEERING CONTRACTOR			
DESIGNER			
INFRASCTURE			
DRAWING TITLE			
QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (8 OF 17)			
DRAWING NO.			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			
PROJECT NO.			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			
DRAWN BY			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			
SIGN			
1418DF-QTF(2)-220-I-PS-RW-SD-201P8			



KEY PLAN: مفتاح الخريطة



- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK. FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK. FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY NWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE PVC 150 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO
 - SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWER NETWORK.
 - FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-2031 TO 1418DF-QTF(2)-220-I-PS-20311.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من قبل
0.0	ISSUED FOR REVISION	09/2023	من قبل
GRANT LANDS PROJECT			
CLIENT	مملكة البحرين		
CONSULTANT	 دار الرياض DAR AL RIYADH DESIGN & CONSTRUCTION MANAGEMENT SERVICES P.O. Box 290170 Riyadh, Saudi Arabia 11591 ENGINEERING CONTRACTOR: Tel: +966112962088 Fax: +966112962088		
DESIGN ITEM	INFRASTRUCTURE		
DRAWING TITLE	QATIF SITE 2 SEWAGE COLLECTION NETWORK PART 10 (9 OF 17)		
DRAWING NO.	1418DF-QTF(2)-220-I-PS-RW-SD-201P9	رقم المخطط	مراجعة رقم / تاريخ المخطط
PROJECT NO.	1418DF	رقم المشروع	ISSUE NO. / REV. NO.
DATE	SEPT 2022	تاريخ الترخيص	0.0
DRAWN BY	AT	رسم	المرحلة / المصنف
CHECKED BY	AT	مراجعة	1
CERTIFIED BY	AT	مراجعة	1
APPROVED BY	AT	مراجعة	1
SIGN	التوقيع	التوقيع	التوقيع

MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P8

MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P14

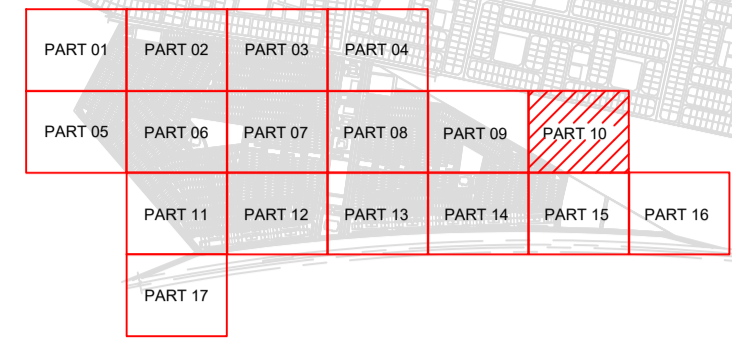
MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P14



MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P9

MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P15

KEY PLAN: مفتاح الخريطة



- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/m².
 - HOUSE CONNECTION SHALL BE UPVC 150 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT C) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - SURVEY EXISTING FACILITIES INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING OF THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWER NETWORK.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM WGS84 ZONE 38).
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GRP
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023
0.0	سادة من اجل المراجعة	09/2023
0.0	ISSUED FOR PREVISION	09/2023
0.0	سادة من اجل المراجعة	09/2023

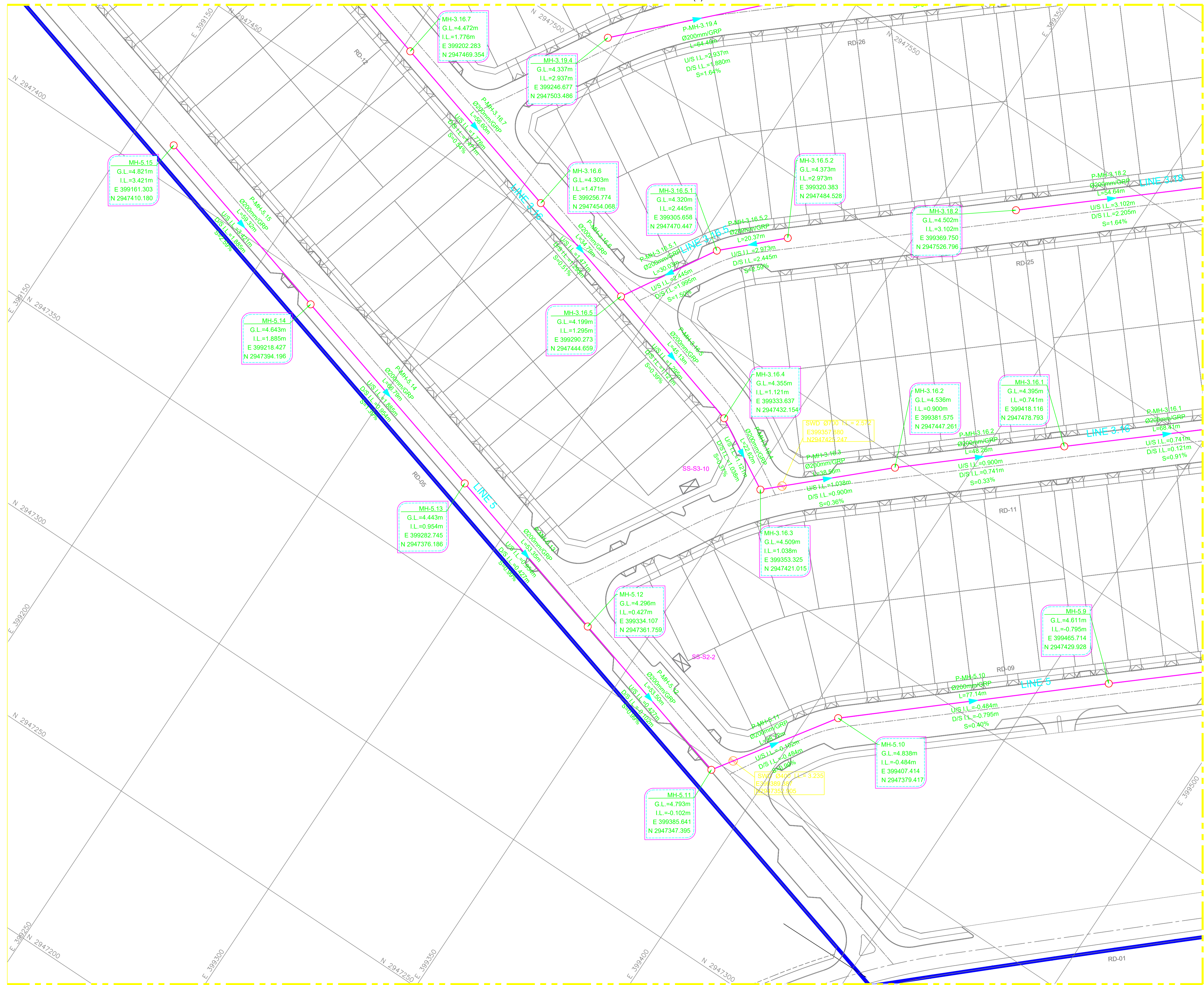
PROJECT TITLE
GRANT LANDS PROJECT

CLIENT
 مملكة البحرين

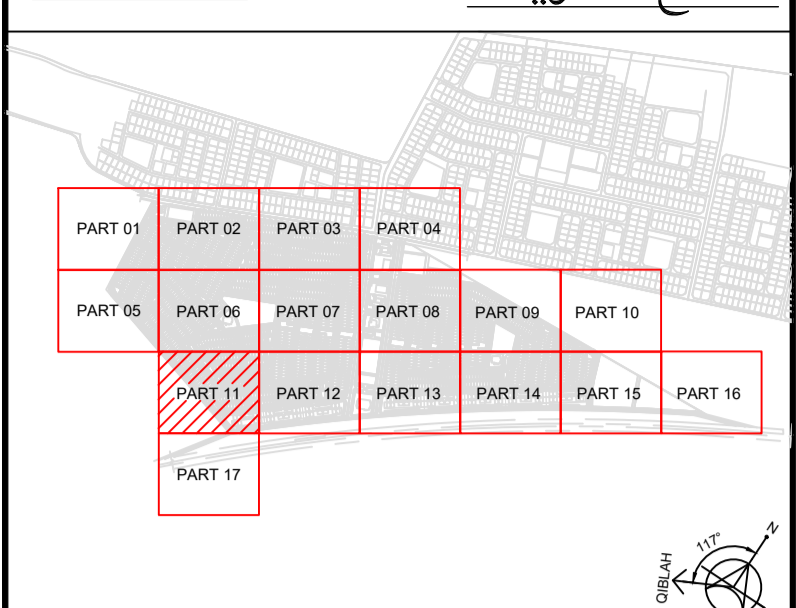
CONSULTANT
 ماستر ارياض

ENGINEERING CONTRACTOR
 ماستر ارياض

DESIGN ITEM		INFRASTRUCTURE
DRAWING TITLE		QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (10 OF 17) - NOT USED
DRAWING NO.	1418DF-QTF(2)-220-I-PS-RW-SD-201P10	رقم المخطط / ماسد رقم / ماسد رقم / ماسد رقم
PROJECT NO.	1418DF	رقم المشروع
START DATE	15/07/2022	تاريخ البدء
SCALE	1:500	مقياس الرسم
PHASE	AT SD	مرحلة / الماسد / الماسد
DRAWN BY	AT SD	رسم من قبل
CHECKED BY	AT SD	مراجعة
CERTIFIED BY	AT SD	مصدق
APPROVED	AT SD	مصدق
SIGN	AT SD	التوقيع



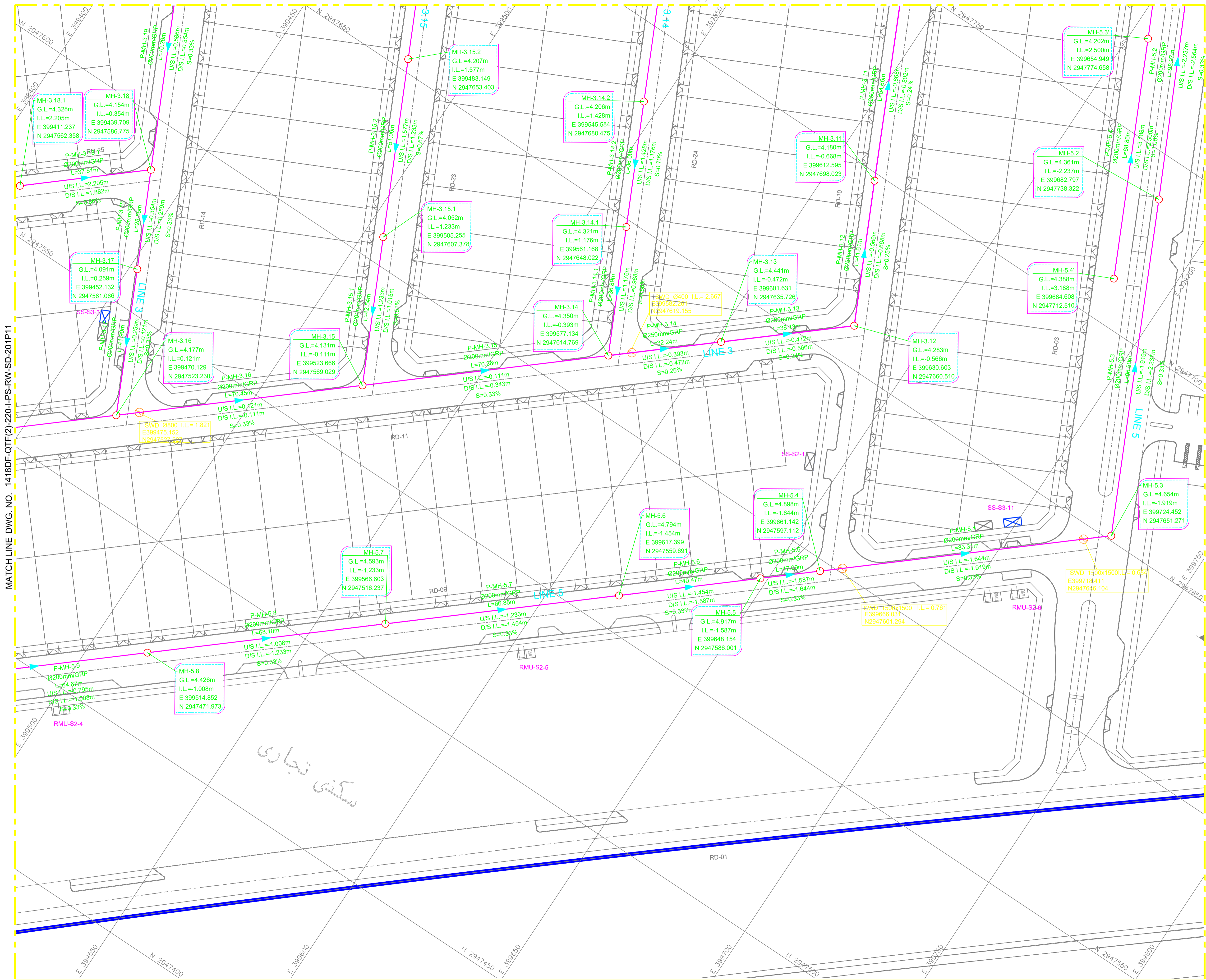
KEY PLAN: مفتاح الخريطة



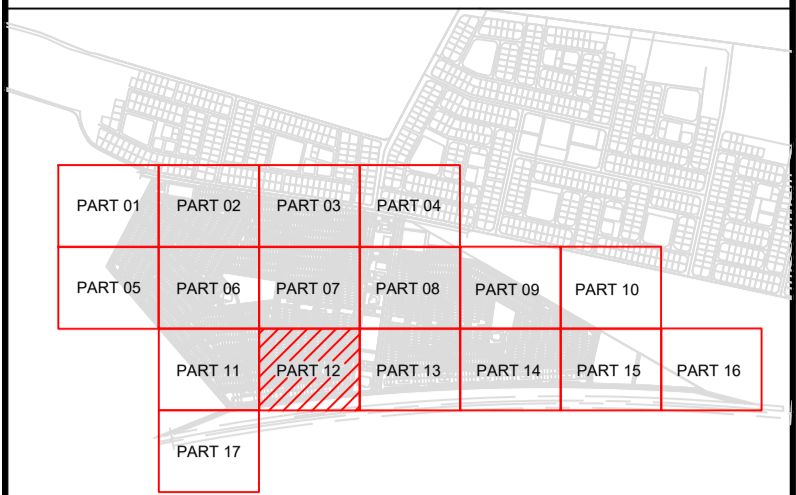
- NOTES:-**
- 1- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - 2- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - 3- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - 4- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - 5- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MNC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 8 BAR & STIFFNESS 10000 N/M².
 - 6- ALL SEWER FORCE MAIN SHOULD BE DUCTILE IRON CLASS K 9.
 - 7- HOUSE CONNECTION SHALL BE UPVC 150 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT C) AND SLOPE 1%.
 - 8- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - 9- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - 10- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWER NETWORKS DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D FOR TYPICAL ARRANGEMENT.
 - 11- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - 12- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - 13- FOR SEWER NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D TO 1418DF-QTF(2)-220-I-PS-20311.
 - 14- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - 15- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - 16- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - 17- FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - 18- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - 19- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - 20- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من قبل
0.0	ISSUED FOR PREVISION	09/2023	من قبل
PROJECT TITLE: GRANT LANDS PROJECT			
CLIENT: الهيئة العامة للغرد والمناطق			
CONSULTANT: دار الرياض			
DESIGN ITEM: INFRASTRUCTURE			
DRAWING TITLE: QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (11 OF 17)			
DRAWING NO: 1418DF-QTF(2)-220-I-PS-RW-SD201P11			
PROJECT NO: 1418DF			
START DATE: 15/07/2022			
SCALE: 1:500			
DATE: AT SD			
DRAWN BY: م. م. م. م.			
CHECKED BY: م. م. م. م.			
APPROVED BY: م. م. م. م.			
SIGN: م. م. م. م.			



KEY PLAN: مفتاح الخريطة



- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY NWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE PVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK.
 - SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK.
 - CONTRACTOR SHALL FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL) UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من قبل
0.0	مادة من اجل المراجعة	التاريخ	من قبل
0.0	ISSUED FOR PREVISION	DATE	BY

GRANT LANDS PROJECT

CLIENT: مؤسسة نجران

CONSULTANT: دار الرياض

DESIGNER: DAR AL RIYADH

DESIGN & CONSTRUCTION MANAGEMENT SERVICES

PO Box 20170
Riyadh, SAUDI ARABIA 11591
ENGINEERING CONTRACTORS

DESIGN TITLE: **INFRASTRUCTURE**

DRAWING TITLE: **QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (12 OF 17)**

DRAWING NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P12

PROJECT NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P12

DATE: 15/07/2022

SCALE: 1:500

PHASE: AT SD

REVISION: 0.0

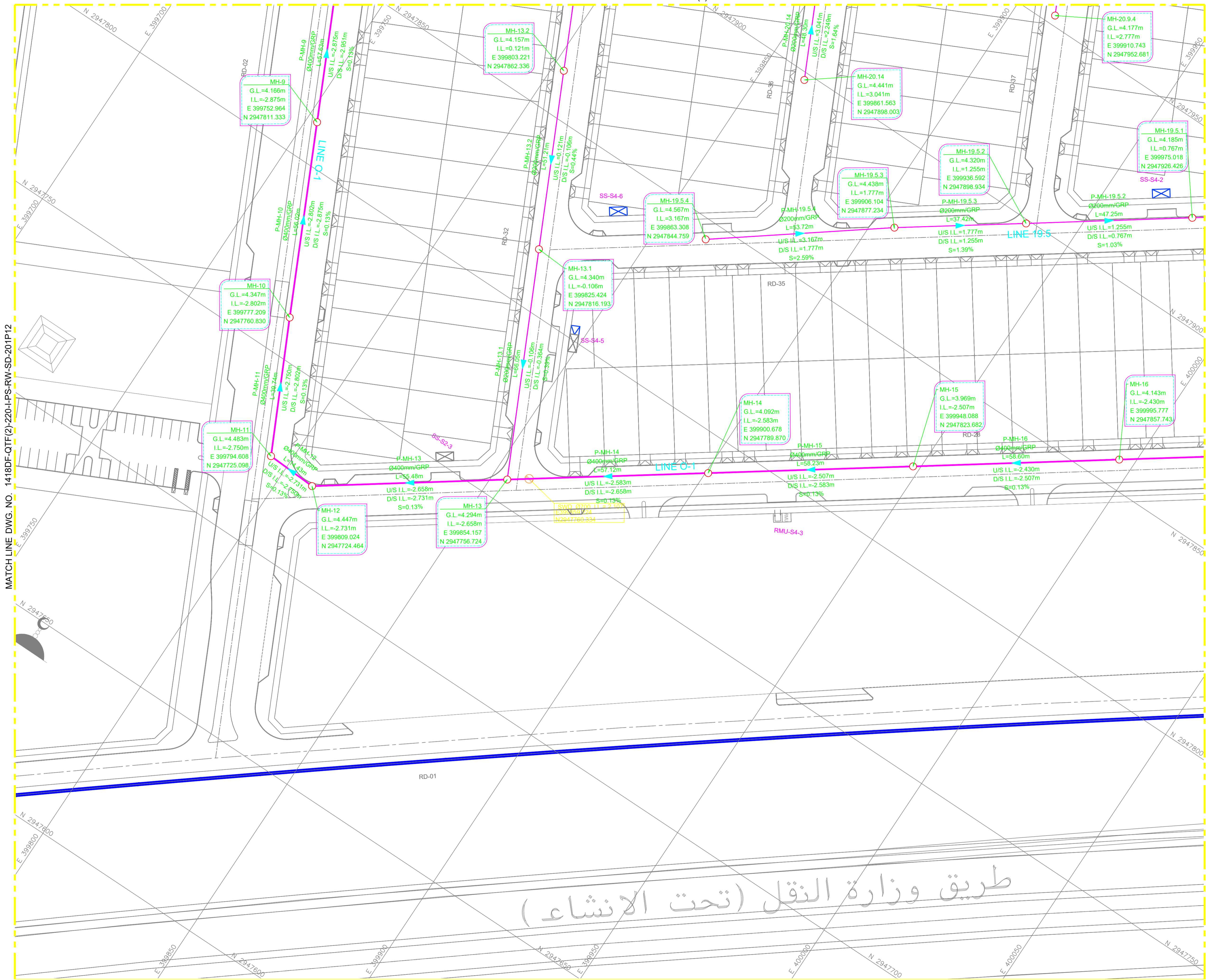
DATE: 15/07/2022

BY: [Signature]

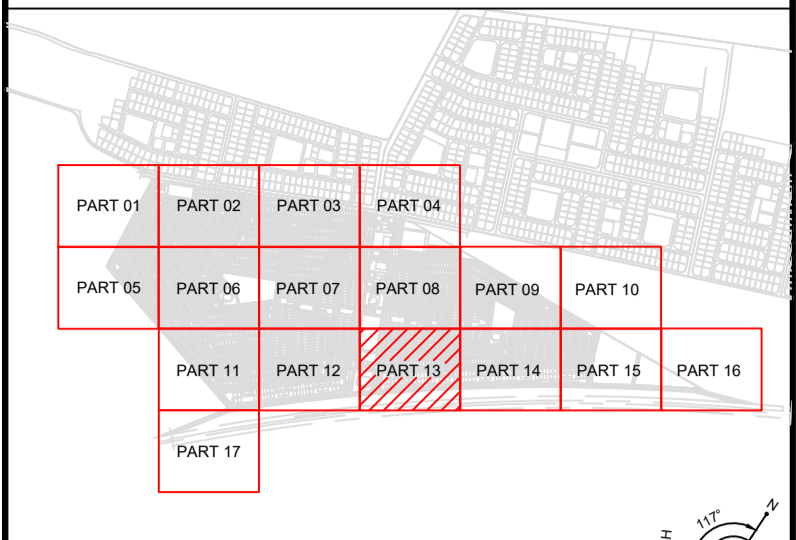
CHECKED BY: [Signature]

APPROVED BY: [Signature]

DATE: 15/07/2022



KEY PLAN: مفتاح الخريطة



- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 8 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE PVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING OF THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES, ETC AND BUILDINGS SEWER NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D4FOR TYPICAL ARRANGEMENT.
 - FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - FOR SEWER NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من أجل
0.0	ISSUED FOR PREVISION	09/2023	من أجل
PROJECT TITLE	GRANT LANDS PROJECT		
CLIENT	مالك المشروع		
CONSULTANT	استشاري المشروع		

DAR AL RIYADH

 DESIGN & CONSTRUCTION MANAGEMENT SERVICES

 PO Box 260170

 RYHONJ SAUDI ARABIA 11391

 ENGINEERING CONTRACTORS

 Tel: +966112062088

 Fax: +966112062099

 موقع المشروع

 دار الرياض

 الخدمات الهندسية

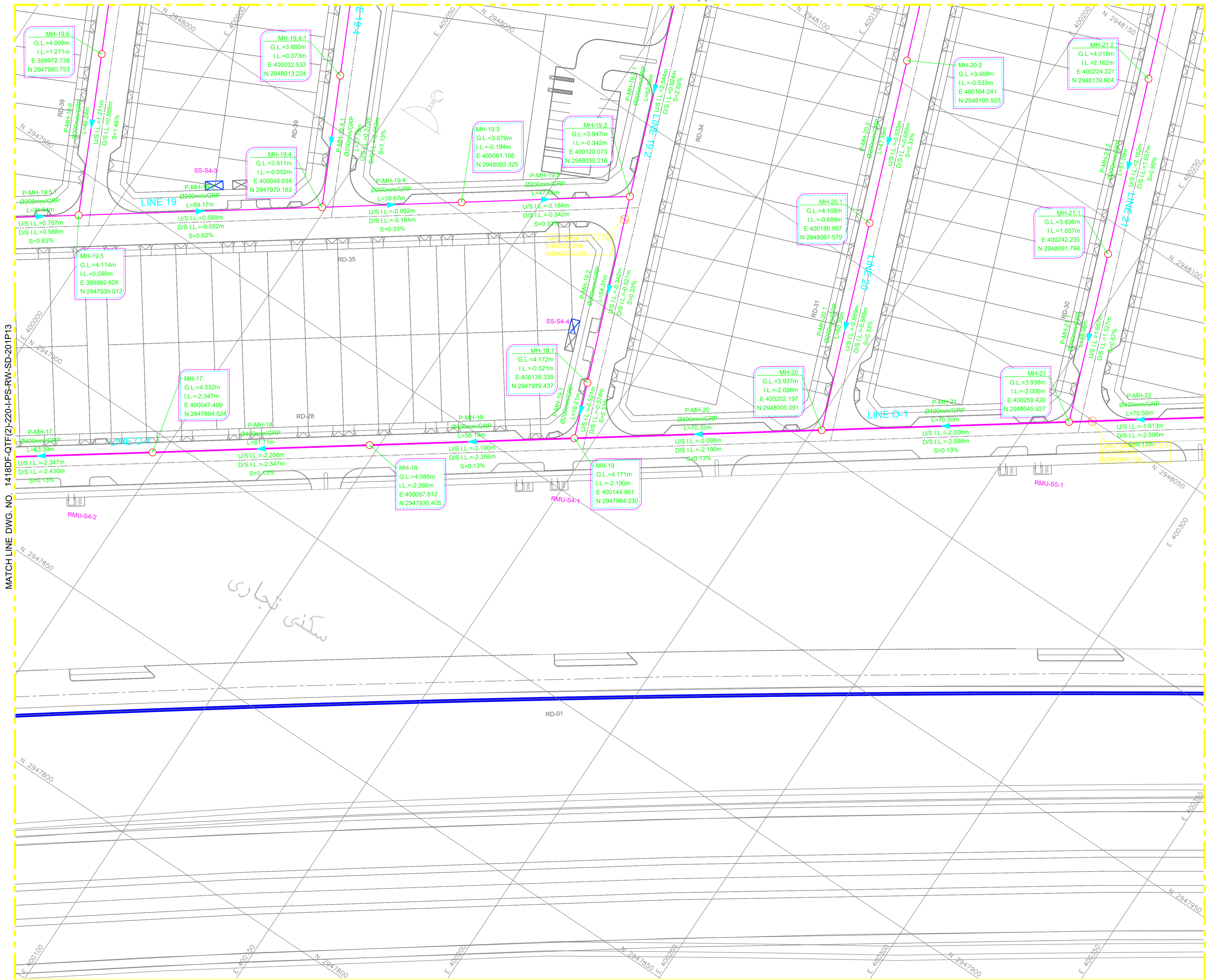
 الرياض - المملكة العربية السعودية

 رقم الهاتف: +966112062088

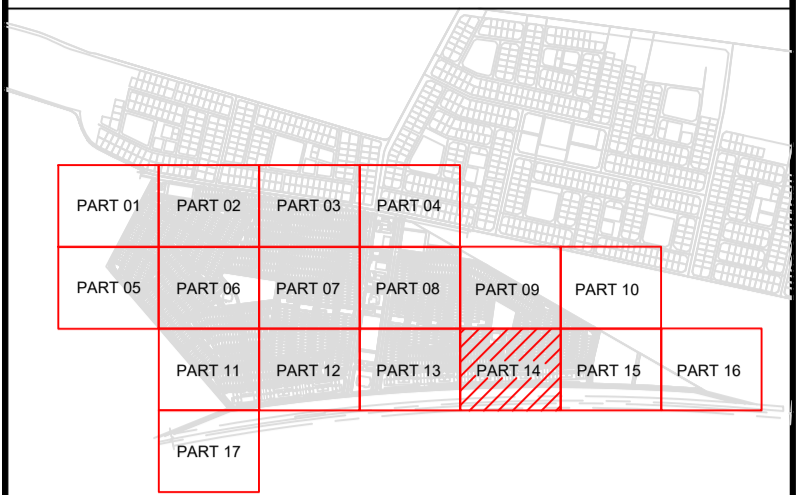
 الفاكس: +966112062099

طريق وزارة النقل (تحت الإنشاء)

DESIGN ITEM	INFRASTRUCTURE		
DRAWING TITLE	QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (13 OF 17)		
DRAWING NO.	رقم المخطط	مراجعة رقم / صادر رقم	رقم المخطط
1418DF-QTF(2)-220-I-PS-RW-SD-201P13		0.0	
PROJECT NO.	رقم المشروع	تاريخ الترخيص	مراجعة رقم / صادر رقم
1418DF		1/5/2022	0.0
DATE	تاريخ الترخيص	SCALE	مراجعة رقم / صادر رقم
1418DF		1:500	0.0
DRAWN BY	رسم من قبل	CHECKED BY	مراجعة رقم / صادر رقم
AT SD		AT SD	
DATE	تاريخ الترخيص	CHECKED BY	مراجعة رقم / صادر رقم
1418DF		AT SD	
DRAWN BY	رسم من قبل	CHECKED BY	مراجعة رقم / صادر رقم
AT SD		AT SD	
DATE	تاريخ الترخيص	CHECKED BY	مراجعة رقم / صادر رقم
1418DF		AT SD	



KEY PLAN: مفتاح الخريطة



- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 8 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE PVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWER NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D4 FOR TYPICAL ARRANGEMENT.
 - FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - FOR SEWER NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

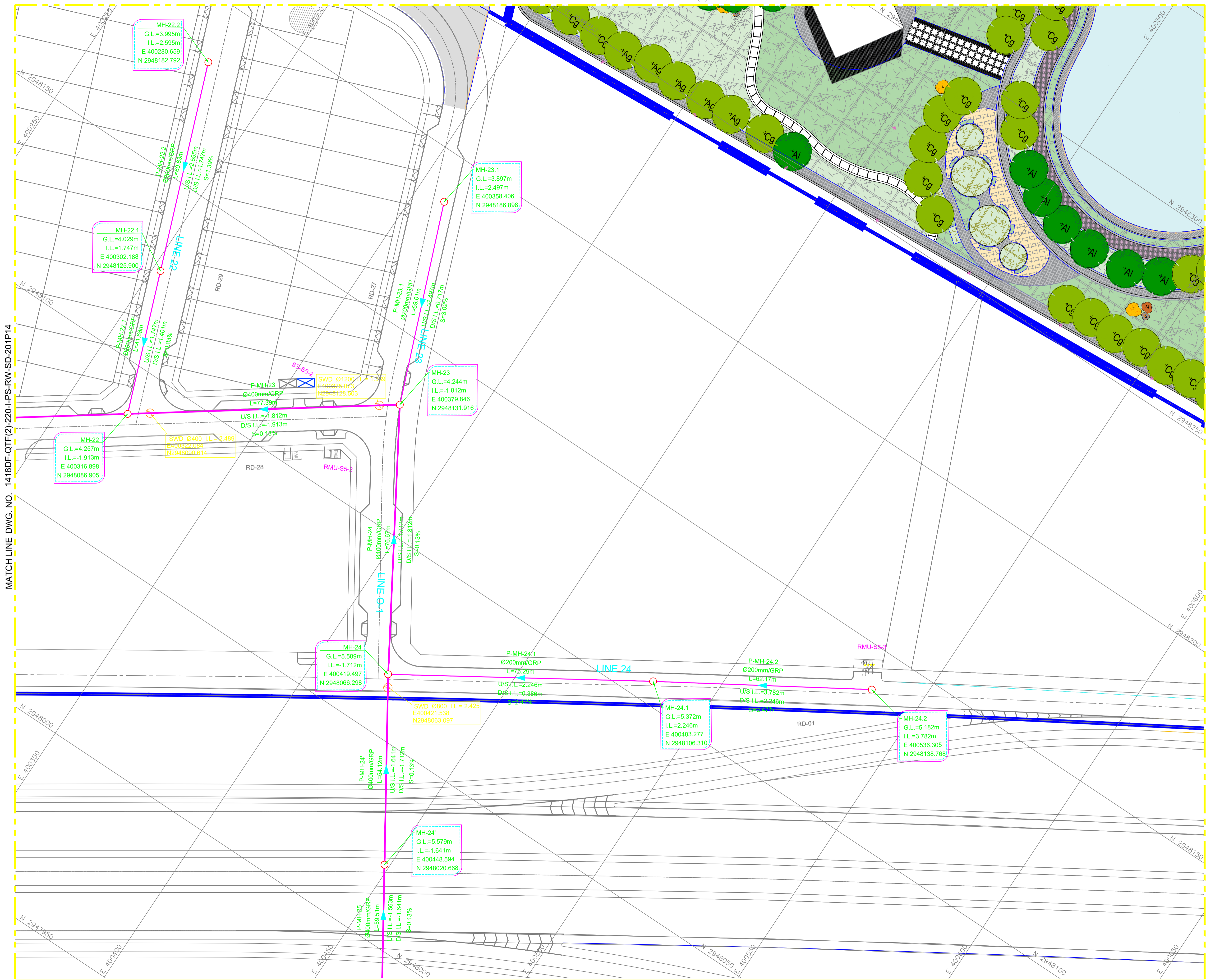
- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P13

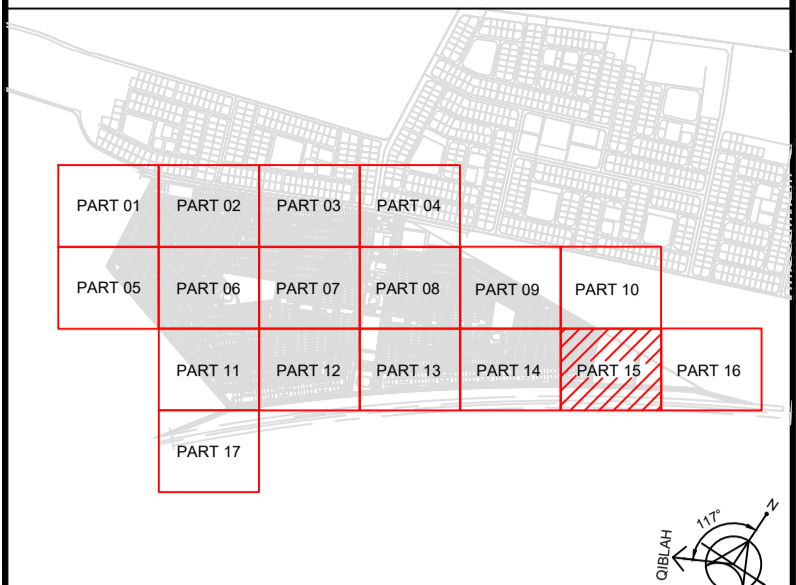
MATCH LINE DWG. NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P15

سكنى نجارى

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من إقرار
0.0	سادة من أجل الموافقة	اليوم	من إقرار
0.0	ISSUED FOR PREVISION	DATE	BY
PROJECT TITLE			
GRANT LANDS PROJECT			
CLIENT			
CONSULTANT			
PO Box 20170 WYDAM SAUDI ARABIA 11391 ENGINEERING CONTRACTORS:			
DESIGN ITEM			
INFRASTRUCTURE			
DRAWING TITLE			
QATIF SITE 2 SEWAGE COLLECTION NETWORK PART 14 (14 OF 17)			
DRAWING NO.			
1418DF-QTF(2)-220-I-PS-RW-SD-201P14			
PROJECT NO.			
1418DF			
DRAWN BY			
AT / SD			
DATE			
1 SEPT 2022			
SCALE			
1:500			
PHASE			
AT / SD			
APPROVED			
SIGNATURE			
التوقيع			



KEY PLAN: مفتاح الخريطة



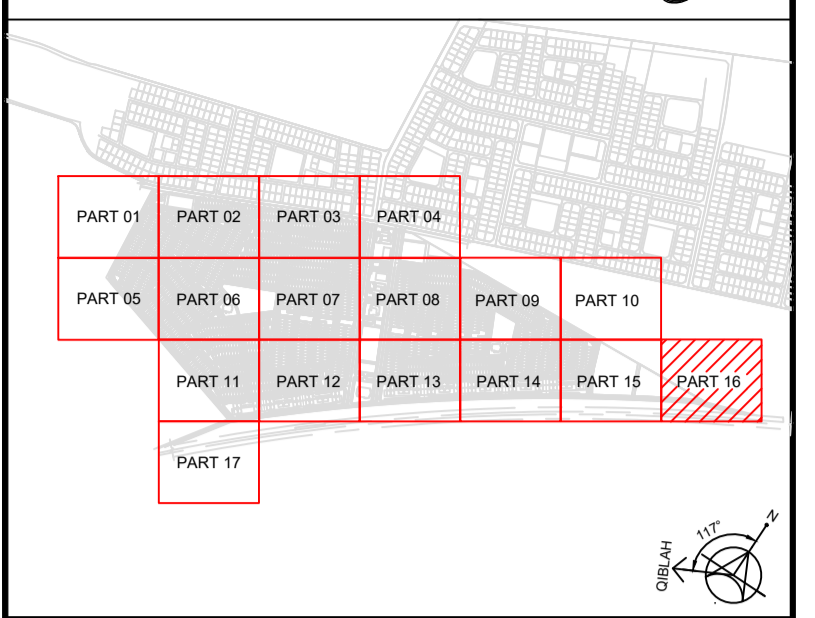
- NOTES:-**
- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
 - HOUSE CONNECTION SHALL BE UPVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
 - CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING OF THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203DF FOR TYPICAL ARRANGEMENT.
 - FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

- LEGEND:-**
- SCOPE OF WORK
 - SAFWA 2 SEWAGE NETWORK
 - OTHER PACKAGE SAFWA 3
 - SAFWA 2 SEWAGE MANHOLE
 - FLOW DIRECTION
 - OUTFALL
 - PIPE CONCRETE ENCASMENT
 - INSPECTION CHAMBER
 - CLEAN OUT
 - GLASS REINFORCED PLASTIC
 - UP STREAM INVERT LEVEL
 - DOWN STREAM INVERT LEVEL
 - PIPELINE SIZE
 - PIPELINE LENGTH AND SLOPE
 - MANHOLE NUMBER
 - GROUND LEVEL
 - INVERT LEVEL
 - EASTING
 - NORTHING
 - STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من قبل
0.0	سادة من اجل المراجعة	التاريخ	من قبل
PROJECT TITLE	GRANT LANDS PROJECT		
CLIENT	مالك المشروع		
CONSULTANT	دار الرياض DAR AL RIYADH DESIGN & CONSTRUCTION MANAGEMENT SERVICES P.O. Box 20170 RYHAB SAUDI ARABIA 11391 ENGINEERING CONTRACTORS		
DESIGN ITEM	INFRASTRUCTURE		
DRAWING TITLE	QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (15 OF 17)		
DRAWING NO.	رقم المخطط	مراجعة رقم / صادر رقم / رقم المخطط	ISSUE NO. / REV. NO.
1418DF-QTF(2)-220-I-PS-RW-SD-201P10	1418DF-QTF(2)-220-I-PS-RW-SD-201P10	0.0	0.0
PROJECT NO.	رقم المشروع	SCALE	التصميم / المرحلة
1418DF-QTF(2)-220-I-PS-RW-SD-201P10	1418DF-QTF(2)-220-I-PS-RW-SD-201P10	1:500	AT SD
DRAWN BY	رسم من قبل	CHECKED BY	المراجعة / المراجعة
		CERTIFIED BY	الموافق / الموافق
SIGN	التوقيع	SIGN	التوقيع



KEY PLAN: مفتاح الخريطة



- NOTES:-**
- 1- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
 - 2- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
 - 3- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
 - 4- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
 - 5- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY MWC. FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 8 BAR & STIFFNESS 10000 N/M².
 - 6- ALL SEWAGE FORCE MAIN SHOULD BE DUCTILE IRON CLASS K 9.
 - 7- HOUSE CONNECTION SHALL BE PVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT C) AND SLOPE 1%.
 - 8- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
 - 9- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
 - 10- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG: 1418DF-QTF(2)-220-I-PS-203DF FOR TYPICAL ARRANGEMENT.
 - 11- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
 - 12- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
 - 13- FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
 - 14- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
 - 15- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
 - 16- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
 - 17- FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
 - 18- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
 - 19- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
 - 20- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

LEGEND:-

	SCOPE OF WORK
	SAFWA 2 SEWAGE NETWORK
	OTHER PACKAGE SAFWA 3
	SAFWA 2 SEWAGE MANHOLE
	FLOW DIRECTION
	OUTFALL
	PIPE CONCRETE ENCASEMENT
	INSPECTION CHAMBER
	CLEAN OUT
	GLASS REINFORCED PLASTIC
	U/S I.L.
	UP STREAM INVERT LEVEL
	D/S I.L.
	DOWN STREAM INVERT LEVEL
	PIPELINE SIZE
	PIPELINE LENGTH AND SLOPE
	MANHOLE NUMBER
	GROUND LEVEL
	INVERT LEVEL
	EASTING
	NORTHING
	STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023	من قبل
0.0	ISSUED FOR PREVISION	09/2023	من قبل
PROJECT TITLE	GRANT LANDS PROJECT		
CLIENT	مالك المشروع		
CONSULTANT	استشاري المشروع		

0.0

ISSUE FOR APPROVAL / SHOPDRAWING 09/2023 من قبل

ISSUED FOR PREVISION 09/2023 من قبل

PROJECT TITLE **GRANT LANDS PROJECT**

CLIENT مالك المشروع

CONSULTANT استشاري المشروع

دار الرياض
DAR AL RIYADH
DESIGN & CONSTRUCTION MANAGEMENT SERVICES
P.O. Box 260170 RYADH SAUDI ARABIA 11591
ENGINEERING CONTRACTORS: **الرواف للمقاولات**

DESIGN ITEM **INFRASTRUCTURE** البنية التحتية

DRAWING TITLE **QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (16 OF 17) - NOT USED** مخطط الشبكة

DRAWING NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P16 رقم المخطط

PROJECT NO. 1418DF-QTF(2)-220-I-PS-RW-SD-201P16 رقم المشروع

DATE: 1418DF-QTF(2)-220-I-PS-RW-SD-201P16 تاريخ الإصدار

SCALE: 1:500 مقياس الرسم

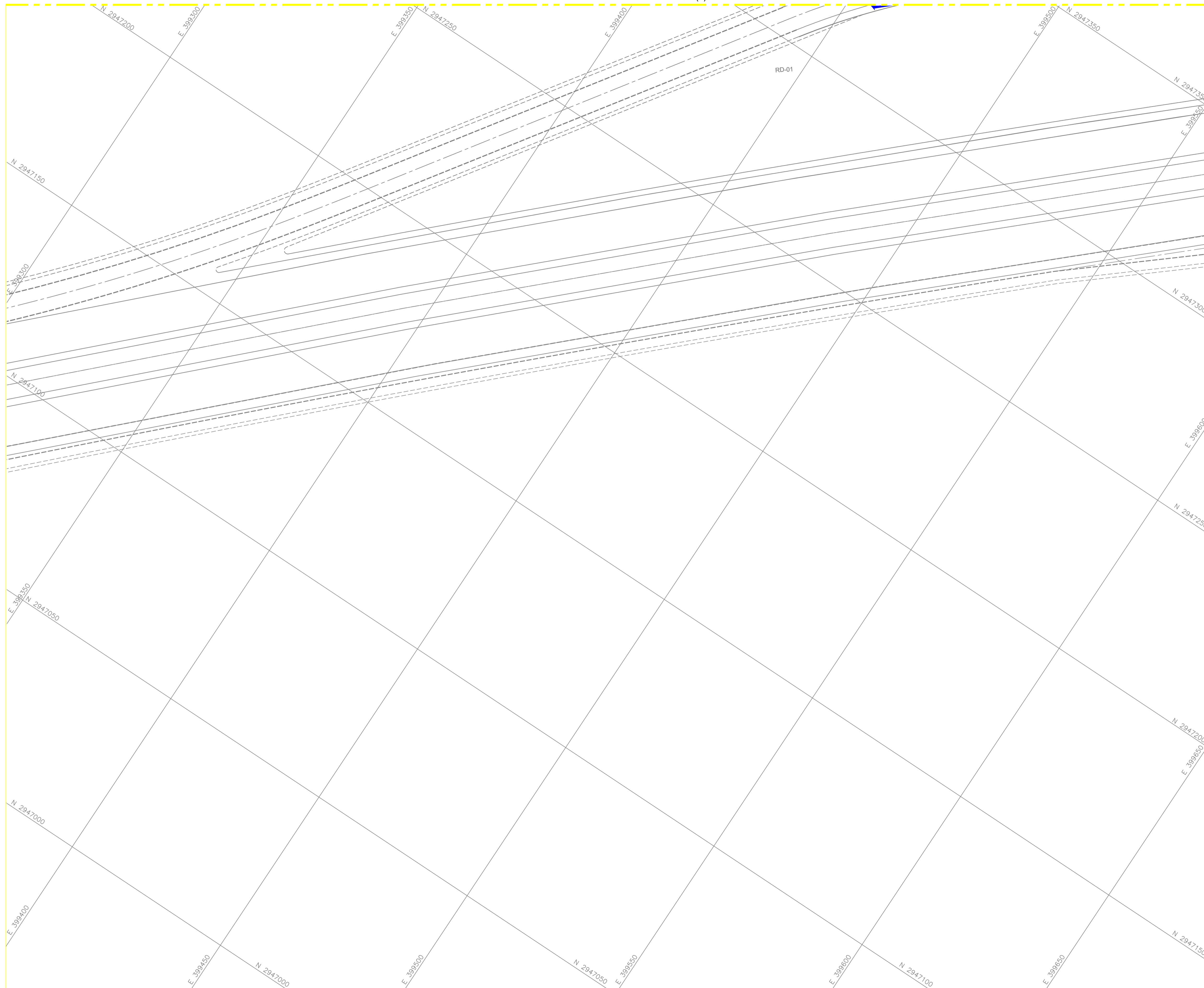
PHASE: AT SD المرحلة / المخطط

DRAWN BY: [Signature] رسم من قبل

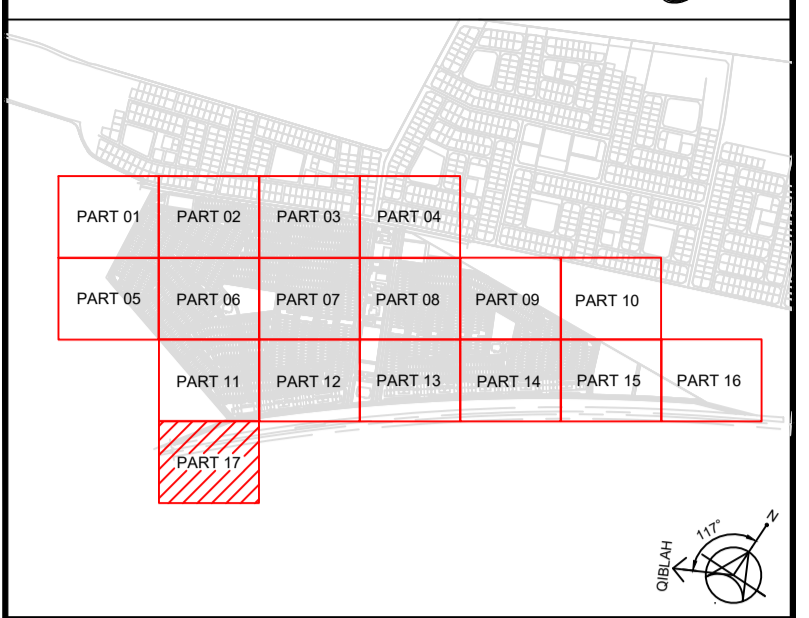
CHECKED BY: [Signature] تم التحقق من قبل

APPROVED BY: [Signature] الموافق

DATE: 09/2023 تاريخ الإصدار



KEY PLAN: مفتاح الخريطة



NOTES:-

- 1- PIPE DIAMETERS ARE SHOWN IN MILLIMETERS FOR NOMINAL DIAMETERS UNLESS OTHERWISE INDICATED ALL DIMENSIONS ARE SHOWN IN METERS.
- 2- SEWERS SHALL BE LAID SUCH THAT THE MINIMUM SOIL COVER OVER PIPE CROWN EQUAL 1.10m UNDER GREEN AREA AND WALKWAYS AND EQUAL 1.20m UNDER TRAFFIC ROADS UNLESS OTHERWISE INDICATED.
- 3- MINIMUM PIPE DIAMETER SHALL BE 200mm FOR GRAVITY SEWER NETWORK AND 160mm FOR HOUSE CONNECTIONS.
- 4- FINISHED GRADE ELEVATION IS DEFINED AS ROAD ASPHALT LEVEL FOR UTILITIES UNDER THE ASPHALT FOR UTILITIES UNDER THE SIDEWALK FINISHED GRADE WILL BE THE FINISHED LEVEL OF THE SIDE WALK FINISHED GRADE FOR UTILITIES IN OPEN LANDSCAPE AREA SHALL BE LANDSCAPE LEVEL.
- 5- ALL MAIN SEWER PIPE MATERIAL SHALL BE GRP AS INSTRUCTED BY NWC FOR DIAMETER UP TO 600mm WITH NOMINAL PRESSURE 6 BAR & STIFFNESS 10000 N/M².
- 6- ALL SEWAGE FORCE MAIN SHOULD BE DUCTILE IRON CLASS K 9.
- 7- HOUSE CONNECTION SHALL BE UPVC 100 MM DIAMETER WITH STARTING DEPTH 0.80 M (AT IC) AND SLOPE 1%.
- 8- CONTRACTOR SHALL CARRY OUT ALL SURVEYS AND SITE INVESTIGATIONS OF EXISTING UTILITIES ASSOCIATED WITH THE WORK TO:
 - a- SURVEY EXISTING FACILITIES, INCLUDING UNDERGROUND AND ABOVE GROUND UTILITIES, WITH RESPECT TO ALL DISCIPLINES AS APPROPRIATE.
 - b- IDENTIFY AND VERIFY ALL INTERFACES, TIE-IN POINTS AND INTERLOCKS BETWEEN DIFFERENT FACILITIES.
- 9- CONTRACTOR SHALL CARRY OUT AND SHALL BE RESPONSIBLE FOR THE COMPLETE SHOP DRAWINGS INCLUDING UPDATE AND RE-ISSUING THE SUBMITTED DRAWINGS AFTER INCORPORATING ACTUAL SITE DATA.
- 10- CONTRACTOR SHALL VERIFY THE EXACT LOCATIONS OF ALL HOUSE CONNECTIONS IN COMPLIANCE WITH MOMRAH UTILITY ARRANGEMENT STANDARDS AND AFTER COORDINATION WITH LANDSCAPE, UTILITIES, ETC AND BUILDINGS SEWAGE NETWORK DESIGN AND SUBMIT ALL THE NECESSARY SHOP-DRAWINGS THAT REFLECTS THE ACTUAL LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION REFER TO DWG. 1418DF-QTF(2)-220-I-PS-203D4 FOR TYPICAL ARRANGEMENT.
- 11- FINAL LOCATION OF INSPECTION CHAMBERS SHALL BE SELECTED ON SITE AND SHALL BE APPROVED BY ENGINEER BEFORE CONSTRUCTION.
- 12- BENCHING SLOPE IN MANHOLES SHOULD NOT EXCEED 10%.
- 13- FOR SEWAGE NETWORK DETAILS REFER TO DETAIL DRAWINGS NO. 1418DF-QTF(2)-220-I-PS-203D1 TO 1418DF-QTF(2)-220-I-PS-203D11.
- 14- CONTRACTOR TO FOLLOW LATEST STANDARD / TYPICAL DRAWINGS AND SPECIFICATIONS FOR NATIONAL WATER COMPANY (NWC).
- 15- ALL COORDINATES ARE IN METERS AND REFERENCED TO UNIVERSAL TRANSVERSE MERCATOR COORDINATES SYSTEM (UTM) WGS84 ZONE 38.
- 16- FOR MANHOLES AND CHAMBERS INTERNAL AND EXTERNAL WALLS PROTECTION REFER TO SPECIFICATION NO. 071000.
- 17- FOR UTILITY CORRIDOR REFER TO SHEET NO. I-PS-600 AND THE MOMRAH UTILITY ARRANGEMENT STANDARDS.
- 18- FOR THE CONVENIENCE OF THE DESIGN, THE CONTRACTOR SCOPE OF WORK IS TO CHECK THE EXACT ROUTING AND LENGTH AND SUBMIT COMPLETE SHOP DRAWING FOR ENGINEER APPROVAL.
- 19- ALL LEVELS ARE IN METERS AND REFERENCED TO MEAN SEA LEVEL (MSL), UNLESS OTHERWISE INDICATED.
- 20- THE PROVIDED DESIGN OF FORCE-MAIN PART INCLUDING TYPE, COUNT & LOCATION OF VALVE CHAMBERS IS PRELIMINARY, WHILE THE EXACT FORCE-MAIN PROFILE AND TYPE, COUNT & LOCATION OF ALL VALVE CHAMBERS SHALL BE ACCURATELY SPECIFIED AFTER THE COMPLETE FORCE-MAIN LINE FINAL DESIGN THROUGH THE TOTAL PATH AND AFTER COORDINATION WITH THE RELEVANT AUTHORITIES.

LEGEND:-

	SCOPE OF WORK
	SAFWA 2 SEWAGE NETWORK
	OTHER PACKAGE SAFWA 3
	SAFWA 2 SEWAGE MANHOLE
	FLOW DIRECTION
	OUTFALL
	PIPE CONCRETE ENCASMENT
	INSPECTION CHAMBER
	CLEAN OUT
	GRP
	GLASS REINFORCED PLASTIC
	U/S I.L.
	UP STREAM INVERT LEVEL
	D/S I.L.
	PIPELINE SIZE
	PIPELINE LENGTH AND SLOPE
	MANHOLE NUMBER
	GROUND LEVEL
	INVERT LEVEL
	EASTING
	NORTHING
	STORM WATER DRAINAGE CROSSING PIPE

0.0	ISSUE FOR APPROVAL / SHOPDRAWING	09/2023

PROJECT TITLE	GRANT LANDS PROJECT
---------------	---------------------

CLIENT: منارة المياه

CONSULTANT: دار الرياض

DESIGNER: الرواف للمقاولات

DESIGN ITEM	INFRASTRUCTURE
DRAWING TITLE	QATIF SITE 2 SEWAGE COLLECTION NETWORK PART PLAN (17 OF 17) - NOT USED
DRAWING NO.	1418DF-QTF(2)-220-I-PS-RW-SD-201P11
PROJECT NO.	1418DF
START DATE	1 SEPT 2022
SCALE	1:500
DATE	AT SD
DESIGNED BY	
CHECKED BY	
CERTIFIED BY	
APPROVED BY	
SIGN.	