SEPTEMBER 2026

PUBLIC HEALTH ENGINEERING DEPARTMENT, KHYBER PAKHTUNKHWA

KPRIISP - DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

SANITATION SCHEME

JAMRUD

DISTRICT - KHYBER

TENDER DRAWINGS

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

TENDER DRAWING

GENERAL DRAWINGS

NO.	DRAWING NO.	TITLE
1	KPR/SS/KHD/JAM-3300	LIST OF DRAWINGS
2	KPR/SS/KHD/JAM-3301	GENERAL NOTES SHEET 1 OF 5
3	KPR/SS/KHD/JAM-3302	GENERAL NOTES SHEET 2 OF 5
4	KPR/SS/KHD/JAM-3303	GENERAL NOTES SHEET 3 OF 5
5	KPR/SS/KHD/JAM-3304	GENERAL NOTES SHEET 4 OF 5
6	KPR/SS/KHD/JAM-3305	GENERAL NOTES SHEET 5 OF 5

SEWERAGE SYSTEM

SEWER NETWORK

NO.	DRAWING NO.	TITLE
1	KPR/SS/KHD/JAM-3310	LAYOUT KEY PLAN
2	KPR/SS/KHD/JAM-3311	LAYOUT PLAN SHEET-1
3	KPR/SS/KHD/JAM-3312	LAYOUT PLAN SHEET-2
4	KPR/SS/KHD/JAM-3313	LAYOUT PLAN SHEET-3
5	KPR/SS/KHD/JAM-3314	LAYOUT PLAN SHEET-4
6	KPR/SS/KHD/JAM-3315	LAYOUT PLAN SHEET-5
7	KPR/SS/KHD/JAM-3316	LAYOUT PLAN SHEET-6
8	KPR/SS/KHD/JAM-3317	LAYOUT PLAN SHEET-7
9	KPR/SS/KHD/JAM-3318	LAYOUT PLAN SHEET-8
10	KPR/SS/KHD/JAM-3319	LAYOUT PLAN SHEET-9
11	KPR/SS/KHD/JAM-3320	LAYOUT PLAN SHEET-10
12	KPR/SS/KHD/JAM-3321	LAYOUT PLAN SHEET-11
13	KPR/SS/KHD/JAM-3333	LAYOUT PLAN SHEET-12
14	KPR/SS/KHD/JAM-3323	LAYOUT PLAN SHEET-13
15	KPR/SS/KHD/JAM-3324	LAYOUT PLAN SHEET-14
16	KPR/SS/KHD/JAM-3325	LAYOUT PLAN SHEET-15
17	KPR/SS/KHD/JAM-3326	LAYOUT PLAN SHEET-16
18	KPR/SS/KHD/JAM-3327	LAYOUT PLAN SHEET-17
19	KPR/SS/KHD/JAM-3328	LAYOUT PLAN SHEET-18
20	KPR/SS/KHD/JAM-3329	LAYOUT PLAN SHEET-19
21	KPR/SS/KHD/JAM-3330	LAYOUT PLAN SHEET-20
33	KPR/SS/KHD/JAM-3331	LAYOUT PLAN SHEET-21
23	KPR/SS/KHD/JAM-3332	LAYOUT PLAN SHEET-33
24	KPR/SS/KHD/JAM-3333	LAYOUT PLAN SHEET-23
25	KPR/SS/KHD/JAM-3334	LAYOUT PLAN SHEET-24
26	KPR/SS/KHD/JAM-3335	LAYOUT PLAN SHEET-25
27	KPR/SS/KHD/JAM-3336	LAYOUT PLAN SHEET-26
28	KPR/SS/KHD/JAM-3337	LAYOUT PLAN SHEET-27
29	KPR/SS/KHD/JAM-3338	LAYOUT PLAN SHEET-28
30	KPR/SS/KHD/JAM-3339	LAYOUT PLAN SHEET-29
31	KPR/SS/KHD/JAM-3340	LAYOUT PLAN SHEET-30
32	KPR/SS/KHD/JAM-3340-A	LAYOUT PLAN SHEET-31
33	KPR/SS/KHD/JAM-3340-B	LAYOUT PLAN SHEET-32

SEWAGE TREATMENT PLANT (STP 1)

1	KPR/SS/KHD/JAM-3341-A	STP-1 : PROCESS FLOW DIAGRAM
2	KPR/SS/KHD/JAM-3341-B	STP-1 : GENERAL LAYOUT PLAN
3	KPR/SS/KHD/JAM-3341-C	STP-1 : SCREEN CHAMBER PLAN AND SECTION
4	KPR/SS/KHD/JAM-3341-D	STP-1 : DISSIPATOR CHAMBER PLAN & SECTION
5	KPR/SS/KHD/JAM-3341-E	STP-1 : ANAEROBIC BAFFLED REACTOR PLAN
6	KPR/SS/KHD/JAM-3341-F	STP-1 : ANAEROBIC BAFFLED REACTOR SECTION
7	KPR/SS/KHD/JAM-3341-G	STP-1 : SLUDGE DRYING BED PLAN AND SECTION
8	KPR/SS/KHD/JAM-3341-H	STP-1 : OPERATOR ROOM PLAN AND SECTION
9	KPR/SS/KHD/JAM-3346-A	STP-1 : SCREEN CHAMBER & LIFT STATION BOTTOM SLAB REINF. PLAN
10	KPR/SS/KHD/JAM-3346-B	STP-1 : SCREEN CHAMBER & LIFT STATION TOP SLAB REINF. PLAN
11	KPR/SS/KHD/JAM-3346-C	STP-1 : SCREEN CHAMBER & LIFT STATION REINF. SECTION
12	KPR/SS/KHD/JAM-3346-D	STP-1 : DISSIPATOR CHAMBER REINF. PLAN AND SECTION
13	KPR/SS/KHD/JAM-3346-E	STP-1 : ANAEROBIC BAFFLED REACTOR REINF. PLAN
14	KPR/SS/KHD/JAM-3346-F	STP-1 : ANAEROBIC BAFFLED REACTOR REINF. SECTION
15	KPR/SS/KHD/JAM-3346-G	STP-1 : SLUDGE DRYING BED REINFORCEMENT SECTION
16	KPR/SS/KHD/JAM-3346-H	STP-1 : ROOF FRAMING PLAN & BEAM DETAILS OF OPERATOR ROOM

SEWAGE TREATMENT PLANT (STP 2&3)

1	KPR/SS/KHD/JAM-3341-AA	STP-2&3 : PROCESS FLOW DIAGRAM
2	KPR/SS/KHD/JAM-3341-BB	STP-2&3 : GENERAL LAYOUT PLAN
3	KPR/SS/KHD/JAM-3341-CC	STP-2&3 : SCREEN CHAMBER PLAN AND SECTION
4	KPR/SS/KHD/JAM-3341-DD	STP-2&3 : DISSIPATOR CHAMBER PLAN & SECTION
5	KPR/SS/KHD/JAM-3341-EE	STP-2&3 : ANAEROBIC BAFFLED REACTOR PLAN
6	KPR/SS/KHD/JAM-3341-FF	STP-2&3 : ANAEROBIC BAFFLED REACTOR SECTION
7	KPR/SS/KHD/JAM-3341-GG	STP-2&3 : SLUDGE DRYING BED PLAN AND SECTION
8	KPR/SS/KHD/JAM-3341-HH	STP-2&3 : OPERATOR ROOM PLAN AND SECTION
9	KPR/SS/KHD/JAM-3346-AA	STP-2&3 : SCREEN CHAMBER & LIFT STATION BOTTOM SLAB REINF.PLAN
10	KPR/SS/KHD/JAM-3346-BB	STP-2&3 : SCREEN CHAMBER & LIFT STATION TOP SLAB REINF. PLAN
11	KPR/SS/KHD/JAM-3346-CC	STP-2&3 : SCREEN CHAMBER & LIFT STATION REINF. SECTION
12	KPR/SS/KHD/JAM-3346-DD	STP-2&3 : DISSIPATOR CHAMBER REINF. PLAN AND SECTION
13	KPR/SS/KHD/JAM-3346-EE	STP-2&3 : ANAEROBIC BAFFLED REACTOR REINF. PLAN
14	KPR/SS/KHD/JAM-3346-FF	STP-2&3 : ANAEROBIC BAFFLED REACTOR REINF. SECTION
15	KPR/SS/KHD/JAM-3346-GG	STP-2&3 : SLUDGE DRYING BED REINFORCEMENT SECTION
16	KPR/SS/KHD/JAM-3346-HH	STP-2&3 : ROOF FRAMING PLAN & BEAM DETAILS OF OPERATOR ROOM

SEPTIC TANK & SOAKAGE PIT

1	KPR/SS/KHD/JAM-3351	SEPTIC TANK : TYPE – I (01 HOUSE) PLAN AND SECTION
2	KPR/SS/KHD/JAM-3352	SOAKAGE PIT : TYPE – I (01 HOUSE) PLAN AND SECTION
3	KPR/SS/KHD/JAM-3353	SEPTIC TANK : TYPE – II (2-5 HOUSE) PLAN AND SECTION
4	KPR/SS/KHD/JAM-3354	SOAKAGE PIT : TYPE – II (2-5 HOUSE) PLAN AND SECTION
5	KPR/SS/KHD/JAM-3355	SEPTIC TANK : TYPE – III (6-10 HOUSE) PLAN AND SECTION
6	KPR/SS/KHD/JAM-3356	SOAKAGE PIT : TYPE – III (6-10 HOUSE) PLAN AND SECTION
7	KPR/SS/KHD/JAM-3357	SEPTIC TANK : TYPE – IV (11-20 HOUSE) PLAN AND SECTION
8	KPR/SS/KHD/JAM-3358	SOAKAGE PIT : TYPE – IV (11-20 HOUSE) PLAN AND SECTION
9	KPR/SS/KHD/JAM-3359	SEPTIC TANK : TYPE – V (21-35 HOUSE) PLAN AND SECTION
10	KPR/SS/KHD/JAM-3360	SOAKAGE PIT : TYPE – V (21-35 HOUSE) PLAN AND SECTION
11	KPR/SS/KHD/JAM-3361	SEPTIC TANK : TYPE – VI (36-50 HOUSE) PLAN AND SECTION
12	KPR/SS/KHD/JAM-3362	SOAKAGE PIT : TYPE – VI (36-50 HOUSE) PLAN AND SECTION
13	KPR/SS/KHD/JAM-3363	SEPTIC TANK : TYPE-I (01 HOUSE) REINF. PLAN AND SECTION
14	KPR/SS/KHD/JAM-3364	SEPTIC TANK : TYPE-II (2-5 HOUSE) REINF. PLAN AND SECTION
15	KPR/SS/KHD/JAM-3365	SEPTIC TANK : TYPE-III (6-10 HOUSE) REINF. PLAN AND SECTION
16	KPR/SS/KHD/JAM-3366	SEPTIC TANK : TYPE-IV (11-20 HOUSE) REINF. PLAN AND SECTION
17	KPR/SS/KHD/JAM-3367	SEPTIC TANK : TYPE-V (21-35 HOUSE) REINF. PLAN AND SECTION
18	KPR/SS/KHD/JAM-3368	SEPTIC TANK : TYPE-VI (36-50 HOUSE) REINF. PLAN AND SECTION

TYPICAL DRAWINGS

1	KPR/SS/KHD/JAM-3371	TYPICAL PIPE TRENCH DETAILS
2	KPR/SS/KHD/JAM-3372	TYPICAL MANHOLE DETAILS
3	KPR/SS/KHD/JAM-3373	TYPICAL HOUSE CONNECTION WITH MAIN SEWER DETAIL
4	KPR/SS/KHD/JAM-3374	TYPICAL BOUNDARY WALL DETAILS

STORMWATER DRAINAGE SYSTEM

TYPICAL DRAWINGS

NO.	DRAWING NO.	TITLE
1	KPR/SS/KHD/JAM-3391	TYPICAL DRAIN DETAILS SHEET-1
2	KPR/SS/KHD/JAM-3392	TYPICAL DRAIN DETAILS SHEET-2
3	KPR/SS/KHD/JAM-3393	TYPICAL DRAIN DETAILS SHEET-3
4	KPR/SS/KHD/JAM-3394	TYPICAL DRAIN DETAILS SHEET-4
5	KPR/SS/KHD/JAM-3395	TYPICAL DRAIN DETAILS SHEET-5
6	KPR/SS/KHD/JAM-3396	TYPICAL DRAIN DETAILS SHEET-6

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

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PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

LIST OF DRAWINGS
JAMRUD
(DISTRICT KHYBER)

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/SS/KHD/JAM-3300

No.	Revision	By	Date

GENERAL DRAWINGS

TENDER DRAWING

GENERAL NOTES

1. THESE NOTES ARE APPLICABLE TO ALL DRAWINGS UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE IN METERS UNLESS NOTED OTHERWISE.
3. ALL DRAWINGS SHALL BE READ IN CONJUNCTION WITH OTHER SERVICES DRAWINGS, SPECIFICATIONS AND ANY SUCH WRITTEN INSTRUCTIONS AS MAY BE ISSUED.
4. UNLESS OTHER WISE INDICATED ON DRAWINGS, THE PROPOSED PIPELINES ARE TO BE BUILT AS SHOWN ON DRAWINGS. INVERT LEVELS OF THE PROPOSED PIPELINES UNDER THIS CONTRACT SHALL BE AS PER LAYOUT PLAN AND PROFILE DRAWINGS.
5. TOPOGRAPHIC INFORMATION & FEATURES HAVE BEEN BASED ON PRELIMINARY SURVEY. FEATURES ENCOUNTERED AT SITE BUT NOT MENTIONED IN DRAWINGS SHALL BE DEALT IN THE MANNER GIVEN IN DRAWINGS & SPECIFICATIONS OR AS DIRECTED BY THE ENGINEER.
6. THE EXISTING GROUND LEVEL SHOWN ON DRAWINGS ARE BASED ON PRELIMINARY SURVEY CARRIED OUT BY THE ENGINEER. THE CONTRACTOR SHOULD ASCERTAIN, CHECK AND VERIFY THE EXISTING LEVELS AT THE TIME OF EXECUTION JOINTLY WITH THE ENGINEER.
7. ALL SUB SURFACE INFORMATION SHOWN ON THE DRAWINGS OR INDICATED IN ANY OTHER WAY ARE PRELIMINARY. SUCH INFORMATION IS INCLUDED SOLELY FOR THE CONVENIENCE OF THE CONTRACTOR. THE EMPLOYER TAKES NO RESPONSIBILITY FOR ANY MISCALCULATION, OMISSION OR ERROR IN THE DOCUMENTS PROVIDED TO THE CONTRACTOR IN CASE LOOSE STRATA IS ENCOUNTERED, CONTRACTOR SHALL SEEK APPROVAL OF ENGINEER PRIOR TO EXECUTION OF WORKS.
8. THE CONTRACTOR SHALL ENGAGE A QUALIFIED SURVEYOR APPROVED BY THE ENGINEER FOR SETTING OUT THE WORKS.
9. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK AND VERIFY LOCATION OF ANY OVER OR UNDERGROUND UTILITY SERVICES WHETHER SHOWN ON THE DRAWINGS OR NOT AND TAKE DUE CARE TO PROTECT THESE AGAINST DAMAGE DURING CONSTRUCTION.
10. THE CONTRACTOR SHALL PROTECT THE WORKS AGAINST FLOODING AT STREAM LOCATIONS/ NULLAHS.
11. THE ENGINEER MAY VARY THE GRADES, SLOPES, FOUNDATIONS, LEVELS AND OTHER FEATURES OF DESIGN, AS NECESSARY, TO CONFORM TO THE VARYING SITE CONDITIONS DURING THE EXECUTION OF WORK. ALL SUCH CHANGES SHALL BE GOVERNED BY THE RELEVANT CONDITIONS OF CONTRACT.
12. ALL FILL AND CUT SLOPES ARE TO BE TRIMMED AND BLENDED TO MEET REQUIRED CONDITIONS AS PER CONTRACT AND AS DIRECTED BY THE ENGINEER. ALL AREAS DISTURBED DURING CONSTRUCTION SHALL BE GRADED AND FINISHED AS INDICATED ON THE TYPICAL SECTIONS OR AS DIRECTED BY THE ENGINEER.
13. THE ENGINEER SHALL DETERMINE IN THE FIELD THE FINAL LOCATION, AXIS, ORIENTATION (OR DIRECTION OF FLOW) & THE INVERT ELEVATIONS OF ALL STRUCTURES. THE ENGINEER MAY ALSO ADD, DELETE OR ALTER SIZES OR TYPE OF THE STRUCTURES AS SHOWN ON THE DRAWINGS WHERE HE MAY DEEM NECESSARY. ALL SUCH CHANGES SHALL BE GOVERNED BY THE RELEVANT CONDITIONS OF THE CONTRACT.
14. THE LOCATIONS, ELEVATIONS, SKEW ANGLE & GRADES OF ALL STRUCTURES SHALL BE CHECKED DURING STAKE OUT SURVEY BEFORE EXECUTION OF THE WORKS SUFFICIENTLY IN ADVANCE TO THE SATISFACTION OF THE ENGINEER. ADJUSTMENTS IN THE DRAWINGS IF ANY, SHALL BE APPROVED BY THE ENGINEER BEFORE EXECUTION.
15. THE CONTRACTOR MUST SEEK PRIOR APPROVAL FROM THE ENGINEER FOR EXECUTION OF ANY WORK DEVIATING FROM THE SPECIFICATION.
16. THE CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS OF ALL FITTINGS AS PER STANDARD. FOR APPROVAL OF THE ENGINEER BEFORE EXECUTION OF WORK.
17. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LEVELS ON SITE AND RESOLVE ALL DISCREPANCIES WITH THE ENGINEER BEFORE COMMENCEMENT OF WORKS.
18. FOR PURPOSE OF THIS CONTRACT, THE ADDITIONAL PLANS AND DRAWINGS SHALL BE ISSUED TO THE CONTRACTOR DURING THE COURSE OF HIS WORKS AS DEEMED NECESSARY BY THE ENGINEER.
19. THE CONTRACTOR SHALL FULLY ACQUAINT HIMSELF WITH THE TYPICAL SITE CONDITIONS AND MEASURE OF THE WORKS RELATED WITH EXTENSION OF REMEDIAL WORKS SHALL BE CARRIED OUT STRICTLY IN ACCORDANCE WITH THE SPECIFICATION AND UNDER THE DIRECT SUPERVISION OF THE ENGINEER.
20. THE CONTRACTOR SHALL SUBMIT HIS PROPOSED METHOD STATEMENT FOR THE CONSTRUCTION OF ALL STRUCTURES FOUNDATION PRIOR TO THE COMMENCEMENT OF WORK, FOR ENGINEER'S APPROVAL/RECORD.
21. FOR DETAILS OF CUTS, SLOPES, EMBANKMENTS AND RIPRAP ETC. PLEASE REFER GEO-TECHNICAL REPORT AND RELEVANT DRAWINGS.
22. ALL FIXTURES, FITTINGS AND ACCESSORIES SHALL BE INSTALLED IN CO-ORDINATION WITH ARCHITECTURAL DRAWINGS. ARRANGEMENT OF PLUMBING / PIPING EQUIPMENT ON PLUMBING / PIPING DRAWINGS IS TENTATIVE & INDICATIVE. EXACT ARRANGEMENT OF EQUIPMENT SHALL BE MADE IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASE OF MAINTENANCE AND THE CONTRACTOR SHALL BE RESPONSIBLE TO PROVIDE TIE-UP DIMENSIONS OF ALL STRUCTURAL SLEEVES IN COORDINATION WITH THE ARCHITECTURAL DRAWINGS.
23. USE DIMENSIONED ARCHITECTURAL AND STRUCTURAL DRAWINGS TO VERIFY THE SPACE NECESSARY FOR LOCATING PIPING.
24. THE DISTANCE BETWEEN WATER SUPPLY PIPES & SEWER PIPES SHALL BE AT LEAST 3 METERS HORIZONTALLY AND 0.5 METERS VERTICALLY. IF DUE TO SPACE CONSTRAINT THIS DISTANCE CANNOT BE MAINTAINED, MAXIMUM FEASIBLE DISTANCE WILL BE FINALIZED BY THE ENGINEER.
25. USE FIELD MEASUREMENTS TO VERIFY DIMENSIONS WHERE AREAS ARE CONGESTED AND EXACT LOCATION IS CRITICAL.
26. THE LOCATION OF FIXTURES AND PIPES ARE SCHEMATIC. EXACT LOCATION TO BE INDICATED ON SHOP DRAWING DULY CO-ORDINATE WITH OTHER WORKS AND CROSS CHECKED WITH ARCHITECTURAL DRAWING.
27. PROVIDE AIR RELEASE VALVES AT ALL HIGH POINTS IN THE PIPING SYSTEM.
28. THE INVERT LEVEL OF ENTIRE MANHOLE TO BE VERIFIED ON SITE.
29. THE CONTRACTOR SHALL CAREFULLY RECORD ALL CHANGES DURING THE PROGRESS OF WORK AND 3 SETS OF AS-BUILT DRAWINGS (SOFT & HARD COPIES) SHOWING EXACT ROUTES OF ALL PIPES & FIXTURES AND SAME SHALL BE SUBMITTED TO THE CLIENT / CONSULTANT.
30. CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS TO ENGINEER FOR APPROVAL BEFORE STARTING WORK AT SITE.
31. THE CONTRACTOR SHOULD STRICTLY FOLLOW THE SAFETY PROCEDURES AND MEASURES FOR WORK FORCE & BUILDING. THE CONTRACTOR ENSURE THAT HIS WORK DOES NOT CREATE ANY HAZARD & HURDLES TO ALL STAKEHOLDER OF THE PROJECT.
32. THE CONTRACTOR SHALL RECORD ALL TEST RESULTS AND SUBMITTED THE SAME TO THE CONSULTANT.
33. PIPES SHALL BE TESTED HYDROLOGICALLY @ 1.5 TIMES OF WORKING PRESSURE; PIPE SHALL BE WATCHED FOR 12 HOURS FOR ANY DROP IN PRESSURE AND ANY VISIBLE LEAKS.
34. ANY PIPE SHOWING LEAKS OR PRESSURE DROP BEYOND 5 PSI SHALL BE REJECTED.
35. ALL OPENINGS IN THE DRAINAGE PIPING SYSTEM SHALL BE CLOSED AND WATER SHALL BE RUN INTO THE PIPES AND THE TEST PRESSURE AT THE LOWERED END SHALL BE BUILT UP BY OPERATING FORCE PUMP

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD GENERAL NOTES SHEET–1 OF 5	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : N.T.S Drawing No : KPR/SS/KHD/JAM-3301	No. / Revision / By / Date	

1- GENERAL

1. THESE NOTES ARE APPLICABLE TO ALL STRUCTURAL DRAWINGS UNLESS NOTED OTHERWISE.
2. STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER DISCIPLINE DRAWINGS, DOCUMENTS, AND SPECIFICATIONS ETC. AS MAY BE ISSUED DURING THE COURSE OF THE CONTRACT. ANY DISCREPANCY IN THE CONTRACT DOCUMENTS SHALL BE REFERRED TO THE ENGINEER FOR DECISION BEFORE PROCEEDING.
3. ALL DIMENSIONS ARE IN FPS UNLESS NOTED OTHERWISE. LEVELS AND ELEVATIONS ARE IN FPS.
4. SETTING-OUT DIMENSIONS AND SIZES OF STRUCTURAL MEMBERS SHALL NOT BE OBTAINED BY SCALING THE DRAWINGS.
5. ANY SETTING-OUT DIMENSIONS SHOWN ON THE DRAWINGS SHALL BE VERIFIED ON SITE AND WITH OTHER SERVICES DRAWINGS. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS.
6. ALL DESIGN, WORKMANSHIP AND MATERIAL SHALL BE IN ACCORDANCE WITH THE CURRENT ACI, UBC , ASTM , AASHTO AND AISC STANDARDS AND PROJECT DESIGN CRITERIA UNLESS NOTED OTHERWISE. EQUIVALENT BRITISH OR ANY OTHER INTERNATIONAL STANDARDS MAY BE ACCEPTABLE SUBJECT TO APPROVAL OF THE ENGINEER.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THE SAFETY OF CONSTRUCTION AT ALL TIMES AND SHALL ENSURE THAT NO PART OF INTERMEDIATE COMPLETED CONSTRUCTION IS HAZARDOUS (FOR EXAMPLE; SIDES OF EXCAVATION, STARTER BARS ETC.)
8. THE CONTRACTOR SHALL PROVIDE TEMPORARY BRACING AND SHORING AGAINST LATERAL FORCES AND ALL CONSTRUCTION LOADS THROUGHOUT THE CONSTRUCTION PROCESS.
9. BEAMS, SLABS, COLUMNS, WALLS AND FOUNDATION ELEMENTS SHALL NOT BE SLEEVED OR BOXED-OUT OR HAVE THE REINFORCEMENT INTERRUPTED EXCEPT AS INDICATED ON THE STRUCTURAL DRAWINGS.

2- EXCAVATION AND DE-WATERING

1. ALL EXCAVATION SHALL BE BASED ON ENGINEERING SHOP DRAWINGS PREPARED BY THE CONTRACTOR, INCLUDING PLANS AND SECTIONS OF EXCAVATION SEQUENCES. THE EXCAVATION SEQUENCES SHALL BE CONTROLLED TO MATCH THE REQUIREMENTS OF THE DESIGN OF THE SOIL RETENTION SYSTEM AND SHALL INCLUDE MONITORING OF WALL AND GROUND MOVEMENTS.
2. THE EXCAVATION RETENTION SYSTEM SHALL BE DESIGNED AND INSTALLED BY THE CONTRACTOR, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH THE GEOTECHNICAL DESIGN PARAMETERS AND SOIL PRESSURES AS INDICATED IN THE GEOTECHNICAL INVESTIGATION REPORT.
3. THE CONTRACTOR SHALL PROVIDE POSITIVE PROTECTION (MAT/SHEET COVERING) FOR ALL EXCAVATED SLOPES TO PROTECT SLOPES FROM INSTABILITY AND DETERIORATION DUE TO ENVIRONMENTAL CONDITIONS.
4. ADEQUATE TEMPORARY DRAINAGE SYSTEM INCLUDING DEWATERING SYSTEMS, DRAIN CHANNELS, SUMPS SHALL BE PROVIDED TO ENSURE DRY SITE CONDITIONS AND STABILITY OF THE BASE OF THE EXCAVATION AT ALL TIMES. THE DESIGN OF SUCH DRAINS IN DISCHARGE POINTS SHALL BE APPROVED BY THE ENGINEER.
5. THE DE-WATERING SYSTEM SHALL BE MAINTAINED UNTIL ALL LOWER LEVEL AND GROUND LEVEL SLABS, PERIMETER WALLS AND WATERPROOFING ARE INSTALLED AND THE PERMANENT BUILDING DRAINAGE SYSTEM IS FULLY OPERATIONAL.

3- FOUNDATIONS

1. THE FOUNDATION IS DESIGNED ON AN ASSUMED NET BEARING CAPACITY OF 1.5 TON/SQ.FT. HOWEVER, BEFORE EXECUTION OF THE WORK DETAIL GEOTECHNICAL INVESTIGATION IS TO BE SUBMITTED TO THE ENGINEER, TO ESTABLISH SOIL CHARACTERISTICS AND RECORD GROUND WATER LEVELS. RESULTS OF THE TEST MAY EFFECT THE DESIGN AND IT MAY HAS TO BE UPDATED IF REQUIRED BEFORE FURTHER PROCEEDING.
2. LOOSE POCKETS OF SOIL WHICH ARE ENCOUNTERED SHALL BE REMOVED AND REPLACED WITH SUITABLE SOIL COMPACTED TO ACHIEVE THE DESIRED BEARING PRESSURE.
3. ANY ADJACENT FOOTING IN THE VICINITY OF THE WORK SHALL BE PROPERLY PROTECTED BEFORE EXECUTION OF WORK.

4- BACK FILLING

1. EXCAVATED MATERIAL MAY BE USED FOR BACKFILLING TO STRUCTURES OR EARTH FILLING IN EMBANKMENTS ONLY AFTER THE APPROVAL OF THE ENGINEER.
2. NO BACKFILL SHALL BE PLACED NEXT TO ANY CAST IN PLACE CONCRETE UNLESS THE CONCRETE ATTAINS ITS FULL 28 DAYS STRENGTH.
3. ALL BACKFILL MATERIAL SHALL BE GRANULAR IN NATURE THAT IS SAND-GRAVEL MIX AND COMPACTED IN MAXIMUM OF 225mm THICK LAYERS.
4. BACK FILL AGAINST BOTH SIDES OF WALLS EQUALLY UNTIL THE LOWER ELEVATION IS ATTAINED.
5. BACKFILLING OF BOUNDARY AND LANDSCAPE WALLS SHALL BE CARRIED OUT SIMULTANEOUSLY ON BOTH SIDES OF THE WALLS.
6. SALT/RICH SOIL SHALL NOT BE USED AS BACKFILL MATERIAL AROUND OR UNDER THE STRUCTURES.

5- STONE SOLING

1. STONE SOLING SHALL BE HARD DURABLE ROCK FROM AN APPROVED SOURCE; IT SHALL BE SOUND, CLEAN, UN-WEATHERED, UN-FRACTURED AND FREE FROM IMPURITIES SUCH AS EARTH OR DECOMPOSED ROCK.
2. THE STONES SHALL BE WEIGHT NOT LESS THAN 20KG AND SHALL NOT BE LESS THAN 200mm IN LENGTH OR WIDTH. THEY SHALL BE ROUGHLY HAMMERED DRESSED SO THAT THEY FIT CLOSELY TOGETHER ANY VACANT SPACE BETWEEN STONES SHALL BE FILLED WITH STONE OF SMALLER DIMENSION.
3. GROUND UNDERNEATH STONE SOLING SHALL BE COMPACTED UPTO 95% OF MODIFIED AASHTO.

6- CONCRETE

1. SAMPLING AND TESTING OF CONCRETE SHALL BE DONE IN ACCORDANCE WITH TECHNICAL SPECIFICATIONS (ASTM STANDARD C39) UNLESS NOTED OTHERWISE ON DRAWINGS.
2. OPC CONFORMING TO ASTM C150 SHALL BE USED EXCEPT FOR FOUNDATION & SHAFT BELOW N.S.L. WHERE SRC CONFORMING TO ASTM C150 SHALL BE USED.
3. CONCRETE SHALL HAVE THE FOLLOWING 28 DAYS COMPRESSIVE CYLINDRICAL STRENGTH.

   a. BASE SLAB , SHAFT, TANK WALLS AND COLUMN : (TYPE-A:- 1:1:2) 4000 PSI
   b. LANDING , TOP SLAB AND BEAMS : (TYPE-B:- 1:1.5:3) 3000 PSI
   c. BLINDING CONCRETE : 2000 PSI
   d. THE MIN. 28 DAYS COMPRESSIVE STRENGTH OF CC BLOCK FOR BLOCK MASONRY WORK SHALL NOT BE LESS THAN 1500 PSI (10 N/MM2).

21. EXTERNAL CONCRETE SURFACE IN CONTACT WITH SOIL SHALL BE TREATED WITH MIN. TWO COATS OF BITUMINOUS PAINT, WHETHER SHOWN OR NOT SHOWN IN THE DRAWINGS.
22. ALL OPENINGS FOR PIPING AND CONVEYANCE SHALL BE FORMED IN POSITION BEFORE CASTING CONCRETE.
23. NO PENETRATIONS, RECESSES OR CHASES OTHER THEN THOSE SHOWN ON THE STRUCTURAL DRAWINGS SHALL BE MADE IN CONCRETE MEMBERS WITHOUT APPROVAL OF THE ENGINEER.
24. ALL CONCRETE ADMIXTURES USED E.G. WATER REDUCING AGENTS, RETARDER PLASTICIZERS ETC. SHALL BE FROM APPROVED SUPPLIER AND MAKE AND TO BE USED STRICTLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AFTER APPROVAL FROM THE ENGINEER.
25. ALL CONCRETE SHALL BE CURED IN ACCORDANCE WITH THE SPECIFICATIONS.
26. ALL EXPOSED CONCRETE SURFACES INCLUDING INTERNAL FACES OF TANK WALLS AND SHAFT SHALL HAVE FAIR FACE FINISH AND THOSE BURIED INTO GROUND SHALL HAVE FINISH ACCEPTABLE TO RECEIVE WATER PROOFING.
27. THE FOLLOWING CONCRETE CLEAR COVER TO PRIMARY REINFORCEMENT SHALL BE PROVIDED, UNLESS LARGER COVER IS NOTED ON THE STRUCTURAL DRAWINGS.
    a. CONCRETE EXPOSED TO EARTH = 75mm
    b. CONCRETE EXPOSED TO WATER = 50mm
    c. CONCRETE EXPOSED TO WEATHER = 40mm
    d. COLUMN/ BEAM = 40mm TO STIRRUPS

CLEAR COVER SHALL NOT BE LESS THAN 25mm OR BAR DIAMETER WHICHEVER IS GREATER.

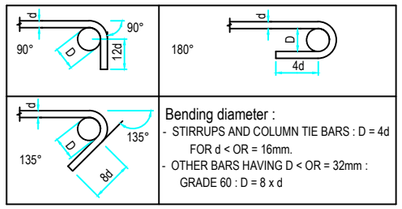
10. BEFORE COMMENCING CONCRETING THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER FOR HIS APPROVAL ALL DETAILED PROPOSALS FOR THE SEQUENCES OF PLACING CONCRETE AND THE POSITIONS OF ALL VERTICAL AND HORIZONTAL CONSTRUCTION JOINTS. SUCH PROPOSALS SHALL BE SUBMITTED TO THE ENGINEER AT LEAST TWO WEEKS BEFORE SCHEDULED DATE OF CONCRETING NO CONCRETE SHALL BE PLACED UNTIL THE STEEL REINFORCEMENT AND FORMWORK HAVE BEEN CHECKED AND APPROVED BY THE ENGINEER IN WRITING ALL FRESH CONCRETE SHALL BE PROTECTED BY APPROVED MEANS FROM RAIN, SUN AND DRY WIND TO MAINTAIN SUITABLE TEMPERATURE AND MOISTURE.

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD GENERAL NOTES SHEET–2 OF 5	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3302		
				Approved By : RABEEA REHMAN			

7- REINFORCING STEEL

1. ALL REINFORCING BARS SHALL CONFORM TO ASTM-615, GRADE 60 TYPE 2 DEFORMED HIGH YIELD BARS WITH MINIMUM YIELD STRENGTH OF 60,000 PSI.
2. ALL REINFORCING BARS SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED, SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE CURRENT ACI 318-14 AND ACI 315 UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS.
3. ALL STARTER BARS SHALL BE SURVEYED AND LOCATION CONFIRMED IN AS-BUILT CONDITION PRIOR TO PLACING WALL/COLUMN REINFORCEMENT AND ANY DISCREPANCIES SHALL BE REPORTED TO THE CONSULTANT FOR INSTRUCTIONS.
4. STARTER BARS PROVIDED TO WALLS AND COLUMNS SHALL BE SIMILAR IN NUMBER AND SIZE AND SPACING TO THE VERTICAL BARS ABOVE UNLESS NOTED OTHERWISE.

a. STANDARD HOOKS



b. LAPPED SPLICES AND EMBEDMENT LENGTH

1. ALL LAPPED SPLICES SHALL BE TENSION SPLICES, AS PER TABLE NO.1, CONFORMING TO ACI 318, UNLESS OTHERWISE NOTED. FOR SMALLER HEIGHTS OF WALLS UPTO, 3 METRES, LAPPING OF REBARS IS NOT ALLOWED, UNLESS OTHERWISE NOTED. NOT MORE THAN 50% OF THE BARS SHALL BE SPLICED AT ONE LOCATION, UNLESS OTHERWISE SHOWN ON DRAWINGS. FOR EMBEDMENT LENGTH, REFER TO TABLE NO. 2.

c. METAL WORK

1. MATERIALS TO BE IN ACCORDANCE WITH THE SPECIFICATIONS.
2. ALL WELDED CONSTRUCTION UNLESS OTHERWISE NOTED.
3. ALL STEEL TO BE PAINTED OR GALVANIZED AS DIRECTED BY THE ENGINEER.
4. ALL SHEAR EDGES TO BE GROUND SMOOTH.
5. ALL WELDS SHALL BE 5MM CONTINUOUS FILLET WELD, E70XX ELECTRODE UNLESS OTHERWISE NOTED ON DRAWING.

d. DETAILED BAR BENDING SCHEDULE

1. DETAILED BAR BENDING SCHEDULE SHALL BE PREPARED BY THE CONTRACTOR AND SUBMITTED FOR ENGINEER'S APPROVAL.

e. EMBEDDED ITEMS

1. ALL EMBEDDED ITEMS SHALL BE SECURED IN POSITION ACCORDING TO THE DRAWINGS BEFORE PROCEEDING WITH THE CONCRETING.

TABLE NO.1

(i) SPLICE LENGTH IN TENSION

(a) TOP BARS

Bar Size / fc' (MPa)	SPLICE LENGTH (mm)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
21	710	945	1180	1410	2060	2355	2645	2940	3240
28	610	820	1020	1225	1780	2040	2995	2550	2805

(b) OTHER BARS

Bar Size / fc' (MPa)	SPLICE LENGTH (mm)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
21	550	730	905	1085	1590	1815	2035	2265	2490
28	475	630	790	945	1375	1570	1765	1960	2160

(ii) Splice Length in Compression

Bar Size / fc' (MPa)	SPLICE LENGTH IN COMPRESSION (mm)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
28	300	380	480	575	670	765	860	955	1050

Table No.2

Embedment Length

Bar Size / fc' (MPa)	DEVELOPMENT LENGTH (mm)								
	#3	#4	#5	#6	#7	#8	#9	#10	#11
28	375	475	600	700	1050	1175	1325	1475	1625
21	450	550	675	825	1200	1375	1550	1700	1875

CLIENT :
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CONSULTANT:
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KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
GENERAL NOTES
SHEET–3 OF 5

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3303
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

8- WATERPROOFING AND WATERSTOPS

1. FOUNDATION AND BASEMENT WALLS SHALL BE WATERPROOFED WITH SPECIFIED TYPE OF WATERPROOFING, WHETHER SHOWN OR NOT ON THE DRAWINGS AS PER SPECIFICATIONS.
2. FOR CONCRETE IN CONTACT WITH SOIL ABOVE WATER TABLE LEVEL EXTERNAL FACES OF THE SUBSTRUCTURES INCLUDING TIE BEAMS, COLUMN NECKS AND FOOTING SHALL HAVE APPROVED BITUMEN EMULSION PROTECTIVE COATING. THE COATING AT THE BOTTOM OF THE TIE BEAMS & FOOTING SHALL BE ACHIEVED BY COATING THE TOP OF THE BLINDING UNLESS NOTED OTHERWISE.
3. WATERSTOPS SHALL BE PROVIDED AT ALL CONSTRUCTION JOINTS OF WALLS OR SLABS EXPOSED TO THE GROUND, WEATHER OR WATER, SUCH AS RESERVOIR WALL, BASE SLAB, ETC. WHETHER SHOWN ON DRAWINGS OR NOT. WITH THE APPROVAL OF THE ENGINEER.
4. UNLESS OTHERWISE SHOWN ON THE DRAWINGS, THE WIDTH OF THE WATERSTOPS SHALL BE AT LEAST EQUAL TO THE THICKNESS OF THE CONCRETE MEMBER TO WHICH IT IS EMBEDDED, UP TO A MAXIMUM WIDTH OF 250mm.
5. THE PVC FOR PVC WATERSTOPS SHALL BE HIGH GRADE VIRGIN POLYVINYL CHLORIDE CONTAINING NO FILLER, RECLAIMED OR SCRAP MATERIAL. IT SHALL COMPLY WITH THE REQUIREMENTS OF ASTM C-923 BUT SHALL HAVE IMPROVED TENSILE QUALITIES. THE MINIMUM TENSILE STRENGTH SHALL BE 13.78 N/MM^2 AND THE MINIMUM ELONGATION AT BREAK SHALL BE 350%.

9- CONSTRUCTION JOINT

1. PRIOR TO CONSTRUCTION OF ANY STRUCTURE, THE CONTRACTOR IS TO SUBMIT A PROPOSAL DEPICTING LOCATION OF CONSTRUCTION JOINTS AND SEQUENCE OF CONSTRUCTION TO SUIT THEIR CONCRETING PROGRAM TO THE ENGINEER FOR APPROVAL.
2. CONSTRUCTION JOINTS OR POUR BREAKS (VERTICAL & HORIZONTAL), WHERE NOT SHOWN ON PLANS OR DETAILS, SHALL BE LOCATED AND FORMED TO THE APPROVAL OF THE ENGINEER.

10- JOINT FILLER

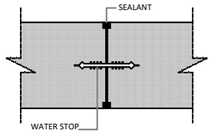
1. THE CONTRACTOR SHALL SUPPLY AND FIX PRE-MOULDED JOINT FILLERS IN ALL EXPANSION JOINTS AND WHERE SHOWN ON THE DRAWINGS. UNLESS OTHERWISE SPECIFIED THE JOINT FILLER SHALL BE OF RESIN OR BITUMEN BONDED CORK OR IMPREGNATED FIBERBOARD.

11- STANDARD TRIMMING DETAIL FOR STRUCTURAL OPENINGS.

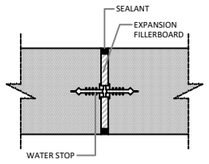
A. ADDITIONAL TRIMMER BARS TO STRUCTURAL OPENINGS SHALL BE PROVIDED AS DETAILED HERE IN. DIAMETER AND GRADE OF TRIMMER BARS REINFORCEMENT SHALL BE THE SAME AS THE MAXIMUM DIAMETER REINFORCING BARS OF THE STRUCTURE THROUGH WHICH THE OPENING IS FORMED.

B. NO TRIMMER BARS ARE REQUIRED FOR OPENINGS NOT GREATER THAN 150mm BUT NO REINFORCING BARS SHALL BE CUT. REINFORCING BARS SHALL BE ADJUSTED IN POSITION TO AVOID OPENING.

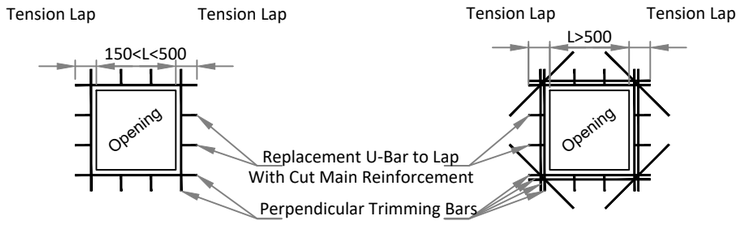
C. UNLESS OTHERWISE SHOWN ON THE STRUCTURAL DRAWINGS, TRIMMING BAR DETAILS FOR THE DIFFERENT SIZE OPENINGS ARE AS SHOWN.



CONSTRUCTION JOINT



EXPANSION JOINT



CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD GENERAL NOTES SHEET–4 OF 5	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No.	Revision / By / Date
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3304		
				Approved By : RABEEA REHMAN			

TENDER DRAWING

ELECTRICAL :

1. FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL ELECTRICAL DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS STATED OTHERWISE.

2. THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE ELECTRICAL WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OR DEVIATIONS, THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.

3. ALL ELECTRICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL, MECHANICAL DRAWINGS & ALL OTHER RELEVANT DETAILS.

4. DIMENSIONS/MEASUREMENTS GIVEN IN LAYOUT AND DETAILED DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE THE ACTUAL DIMENSIONS/MEASUREMENTS ACCORDING TO STRUCTURAL AND ARCHITECTURAL DRAWINGS.

5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL RELEVANT DETAILS TO THE ENGINEER FOR APPROVAL ACCORDING TO THE GENERAL CONDITIONS OF CONTRACT WELL IN TIME BEFORE COMMENCEMENT OF THAT WORK.

6. PROPER CO-ORDINATION OF ELECTRICAL WORKS WITH OTHER SERVICES SHALL BE CARRIED OUT AT SITE.

7. ALL NON-CURRENT CARRYING PARTS I.E. OUTER CASINGS OF EQUIPMENT SUCH AS HT & LT PANELS, DISTRIBUTION BOARDS, CABLE TRAYS, AUXILIARY CONSTRUCTIONS FOR EQUIPMENT ETC. SHALL BE CONNECTED TO THE GROUNDING/EARTHING SYSTEM AT REQUIRED NUMBER OF POINTS WITH SPECIFIED SIZES OF CONDUCTORS. WATER PIPES ALONG ELECTRICAL LINE SHALL BE BONDED TO THE EARTHING SYSTEM WITH 10 SQ. MM SINGLE CORE, COPPER CONDUCTOR PVC CABLE.

8. ELECTRICAL POINTS FOR EQUIPMENT SHALL BE INSTALLED IN CO-ORDINATION WITH THE RELEVANT DRAWINGS OF OTHER SERVICES, SUCH AS COMMUNICATION SYSTEMS, PLUMBING ETC. THE LOCATION ON ELECTRICAL DRAWINGS IS ONLY INDICATIVE.

9. ARRANGEMENT OF ELECTRICAL EQUIPMENTS ON ELECTRICAL DRAWINGS ARE TENTATIVE. EXACT ARRANGEMENT OF EQUIPMENTS SHALL BE MADE IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASE OF MAINTENANCE.

10. LOADS ON ALL PHASES SHALL BE BALANCED AT THE TESTING/COMMISSIONING STAGE.

11. CONDUIT/DUCT RUN UNDER FLOOR SHALL HAVE A MINIMUM COVER OF 50MM FROM TOP OF CONDUIT/DUCT TO FINISHED FLOOR LEVEL.

12. RUN GREEN-YELLOW OR GREEN SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED SIZES AS PROTECTIVE EARTH CONDUCTOR (ECC) ALL ALONG LIGHT AND POWER WIRING. WHEREVER THE SIZE IS NOT SPECIFIED THE FOLLOWING CRITERIA SHALL BE OBSERVED TO DETERMINE MINIMUM CROSS SECTIONAL AREAOF EARTH CONTINUITY CONDUCTOR (ECC) IN RELATION TO THE AREA OF ITS PHASE CONDUCTORS. RUN SEPARATE ECC FOR EACH CIRCUIT.

    - ECC & PHASE CONDUCTOR OF SAME SIZE FOR UPTO AND INCLUDING 16 SQ. MM CABLES.
    - 16 SQ. MM ECC FOR PHASE CONDUCTOR OF 25 SQ. MM & 35 SQ. MM CABLES.
    - FOR CABLES OF 50 SQ. MM AND ABOVE SIZES, ECC IS HALF SIZE OF PHASE CONDUCTOR.
    - MAXIMUM SIZE OF ECC IS 70 SQ. MM.

13. ALL WIRING TO LIGHT AND SOCKET CIRCUITS AND FOR CONTROLS SHALL BE CARRIED OUT WITH SINGLE CORE PVC INSULATED COPPER CONDUCTOR CABLE OF SPECIFIED VOLTAGE GRADE IN CONCEALED PVC CONDUIT OF SPECIFIED SIZE.

14. CIRCUIT WIRING FROM DB TO LIGHT CIRCUIT SHALL BE CARRIED OUT WITH 2.5 SQ.MM CABLE AND TO 5/10/13/15A SOCKETS WITH 4.0 SQ. MM CABLE. WIRING FROM SWITCH TO LIGHT POINT AND FROM LIGHT POINT TO LIGHT POINT SHALL BE WITH 1.5 SQ. MM CABLE.GROUP CONTROLLED LIGHT SHALL BE WITH 2.5 SQ. MM CABLES.

15. LIGHT CONTROL SWITCH BOARD SHALL BE INSTALLED 50 MM AWAY FROM THE SIDE OF DOOR IN ROOMS.

16. BEFORE DETERMINING THE CUT LENGTHS OF CABLE, THE ACTUAL MEASUREMENT AT SITE SHALL BE MADE WITH PROVISION FOR SLACK AT LT PANELS/DISTRIBUTION BOARDS AND SPARE LENGTH FOR LOOPS AS REQUIRED.

17. ALL UNDERGROUND PIPES AFTER INSTALLATION SHALL BE PLUGGED AND SEALED AT BOTH ENDS AND JOINTS TO AVOID INGRESS OF WATER INTO PIPES.

18. THE NO. OF SINGLE CORE CABLES IN ANY CONDUIT SHALL BE DETERMINED SUCH THAT THE RATIO OF CABLE AREA INCLUDING PROTECTIVE EARTH CONDUCTOR TO CONDUIT AREA IS NOT MORE THAN 0.4:1.0. WHERE DIFFERENT SIZES OF CABLES RUN IN SAME CONDUIT, THE SIZE SHALL BE BASED ON ACTUAL CABLE AREA. WHEREVER CONDUIT SIZE IS NOT SPECIFIED, 20 MM DIA CONDUIT SHALL BE INSTALLED PROVIDED IT MEETS THE ABOVE CRITERIA.THE FOLLOWING TABLE IS GIVEN AS GENERAL GUIDELINE.

19. NORMAL & EMERGENCY CIRCUITS SHALL RUN IN SEPARATE CONDUITS.

20. ALL WIRING FOR CONTROLS SHALL BE CARRIED OUT WITH SINGLE CORE PVC CABLES OF SPECIFIED VOLTAGE GRADE AND SIZES.

21. THE WIRING SHALL BE CONTINUOUS LOOPING-IN TYPE AND NO JOINT IN WIRES SHALL BE ALLOWED.

22. THE WIRING SYSTEM SHALL BE CARRIED OUT ONLY AFTER THE CONDUIT SYSTEM IS COMPLETELY INSTALLED AND ALL OUTLET BOXES ETC. ARE FIXED IN POSITION.

23. MOUNTING HEIGHTS OF ELECTRICAL FITTINGS WHEN MEASURED FROM FINISHED FLOOR LEVEL (F.F.L) TO THE BOTTOM OF FITTINGS SHALL BE AS UNDER, UNLESS OTHERWISE SHOWN OR INSTRUCTED.

    - DISTRIBUTION BOARD 1420mm
    - ON/OFF PUSH BUTTON STATION 1420mm
    - LIGHT CONTROL SWITCH (ONE WAY/ TWO WAY) 1420mm
    - 5A SOCKET OUTLETS IN GENERAL AREAS 300mm
    - 10A SOCKET OUTLETS IN GENERAL AREAS 300mm
    - 16A SOCKET OUTLETS FOR EQUIPMENT TO BE CO-ORDINATED AT SITE WITH RESPECTIVE TRADE.

24. ALL LED LIGHT FIXTURES ARE TO BE P.F CORRECTED.

25. ALL LED LIGHTS SHALL BE OF COLOR TEMPERATURES 5500K-6500K FOR INTERIOR LIGHTING AND 3500K TO 4500K FOR EXTERIOR LIGHTING.

26. ALL EXTERIOR LIGHTING FIXTURES SHOULD BE AT LEAST IP65 RATED.

27. MS STEEL CONDUIT SHALL BE USED FOR SURFACE WIRING & PVC CONDUITS SHALL BE USED FOR CONCEALED WIRING.

MECHANICAL :

1. FOLLOWING NOTES SHALL IN GENERAL APPLY TO ALL MECHANICAL EQUIPMENTS IN THE DRAWINGS. THE INSTRUCTIONS IN THESE NOTES SHALL BE FOLLOWED UNLESS STATED OTHERWISE.

2. THESE NOTES SHALL BE APPLICABLE TO THE ENTIRE MECHANICAL WORKS. IF THE SITE CONDITIONS NECESSITATE ANY ALTERATIONS OR DEVIATIONS, THE DIRECTIONS OF THE ENGINEER SHALL BE OBSERVED AS FINAL INSTRUCTIONS.

3. ALL MECHANICAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH ARCHITECTURAL, STRUCTURAL, ELECTRICAL DRAWINGS & ALL OTHER RELEVANT DETAILS.

4. DIMENSIONS/MEASUREMENTS GIVEN IN LAYOUT AND DETAILED DRAWINGS ARE APPROXIMATE. THE CONTRACTOR SHALL BE RESPONSIBLE TO CALCULATE THE ACTUAL DIMENSIONS/MEASUREMENTS ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, STRUCTURAL AND ARCHITECTURAL DRAWINGS.

5. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WITH ALL RELEVANT DETAILS TO THE ENGINEER FOR APPROVAL ACCORDING TO THE GENERAL CONDITIONS OF CONTRACT WELL IN TIME BEFORE COMMENCEMENT OF THAT WORK.

6. PROPER CO-ORDINATION OF MECHANICAL WORKS WITH OTHER SERVICES SHALL BE CARRIED OUT AT SITE.

7. EQUIPMENT SHALL BE INSTALLED IN CO-ORDINATION WITH THE RELEVANT DRAWINGS OF OTHER SERVICES, SUCH AS ELECTRICAL SYSTEM, PLUMBING ETC. THE LOCATION OF MECHANICAL EQUIPMENT ON DRAWINGS IS ONLY INDICATIVE.

8. ARRANGEMENT OF MECHANICAL EQUIPMENTS ON THE DRAWINGS ARE TENTATIVE. EXACT ARRANGEMENT OF EQUIPMENTS SHALL BE MADE ACCORDING TO MANUFACTURER'S RECOMMENDATIONS, AND, IN VIEW OF ITS PHYSICAL DIMENSIONS AND EASE OF MAINTENANCE.

9. ANY PIPING, PLUMBING AND OTHER TYPE OF CONFLICTS WOULD BE AVOIDED. FINAL ARRANGEMENTS SHALL BE FREE OF SUCH CONFLICTS, AS PER MANUFACTURER'S RECOMMENDATIONS AND AS PER ENGINEER'S DECISION.

10. ALL PIPES, APPURTENANCES AND PLUMBING AFTER INSTALLATION SHALL BE HYDROSTATICALLY TESTED AT 1.5 TIMES WORKING PRESSURE, AS PER STANDARDS. ANY LEAKAGE SHALL REQUIRE PROPER DISASSEMBLY AND REPLACEMENT OR REPAIR, AS PER STANDARDS AND AS PER DIRECTIONS OF THE ENGINEER.

11. LOCATION OF PUMPS AND OTHER EQUIPMENT (DISTANCE FROM THE WALL, CENTER TO CENTER DISTANCE, ETC.) SHALL BE RECHECKED WITH THE PUMP MANUFACTURER'S REQUIREMENT.

12. IT IS THE CONTRACTOR'S RESPONSIBILITY TO IDENTIFY ANY ISSUES REGARDING DISCREPANCIES IN THE DRAWING AND SHARE SUCH ISSUES WITH THE ENGINEER BEFORE EXECUTION OF WORKS.

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				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3305		
				Approved By : RABEEA REHMAN			

SEWERAGE SYSTEM

TENDER DRAWING

NOTES:

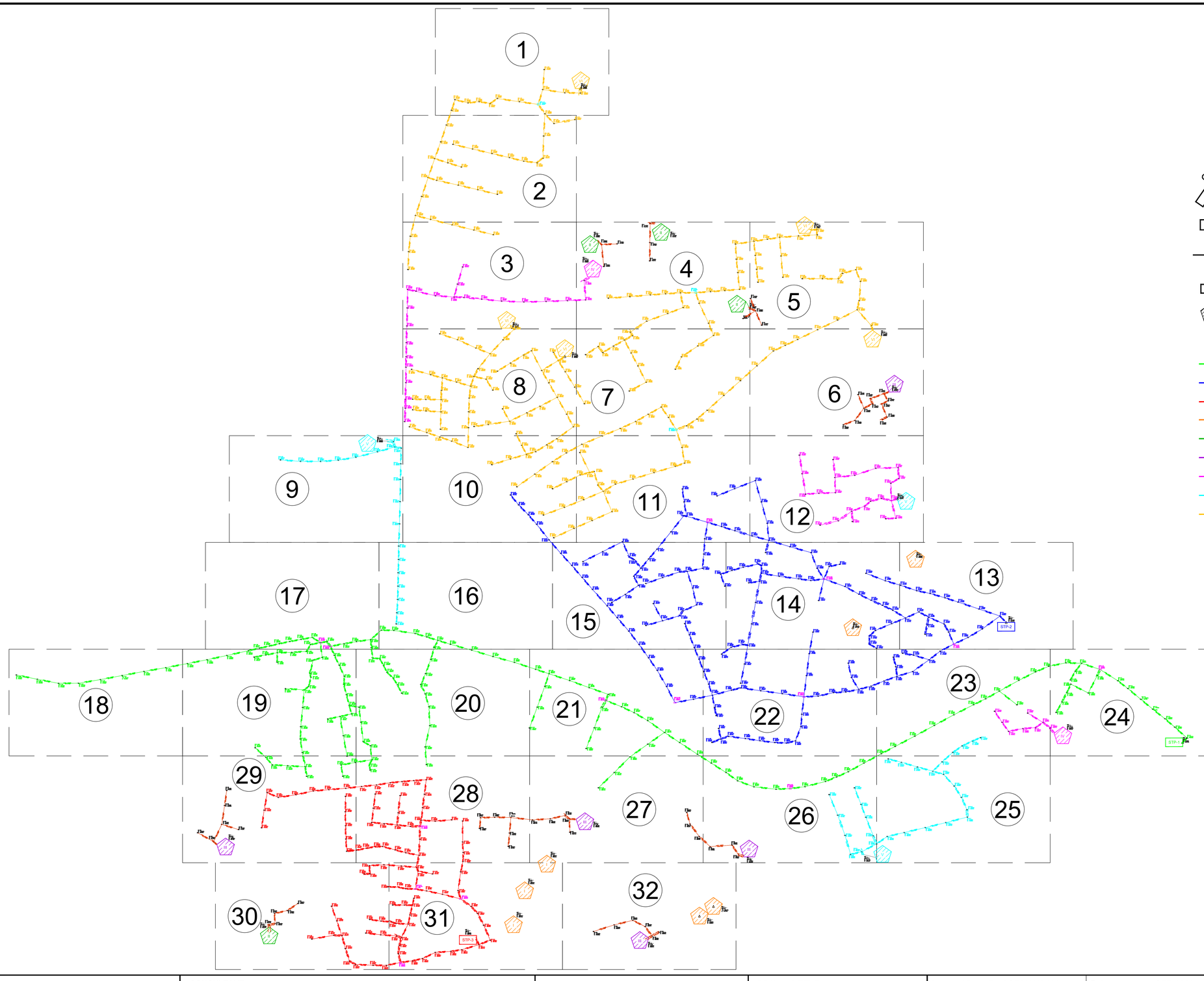
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1 – PIPE LENGTH = 5,295 m
- STP-2 – PIPE LENGTH = 5,425 m
- STP-3 – PIPE LENGTH = 2,814 m
- ST-TYPE-I
- ST-TYPE-II – PIPE LENGTH = 396 m
- ST-TYPE-III – PIPE LENGTH = 1100 m
- ST-TYPE-IV – PIPE LENGTH = 1,784 m
- ST-TYPE-V – PIPE LENGTH = 2,373 m
- ST-TYPE-VI – PIPE LENGTH = 7,025 m



CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

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PROJECT:

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DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT KEY PLAN

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JM-3310
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

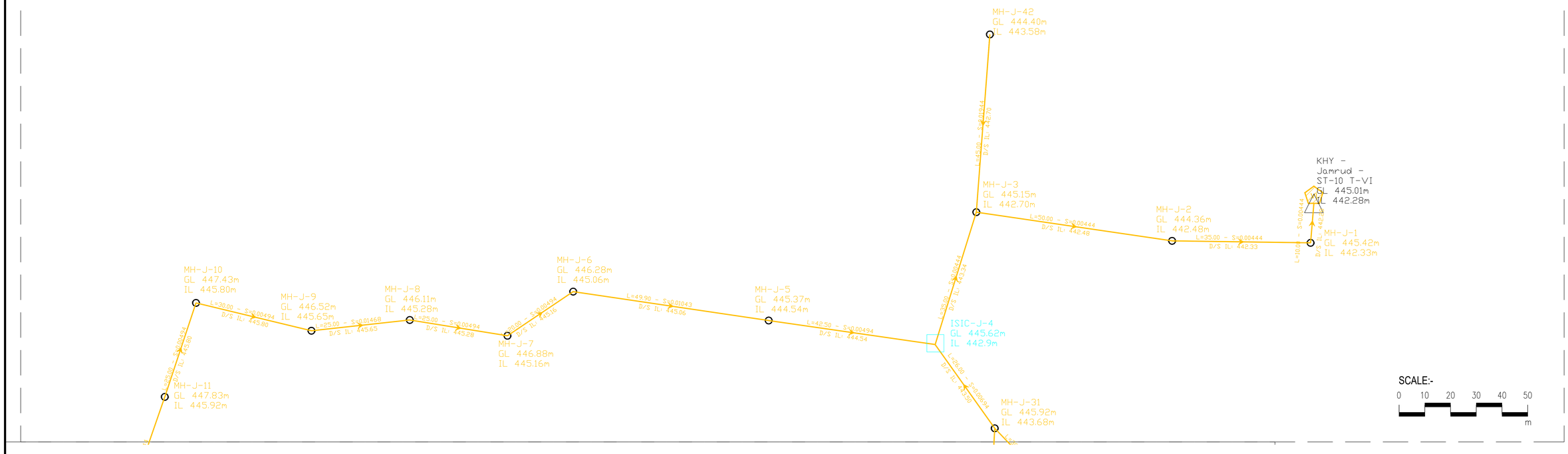
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2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

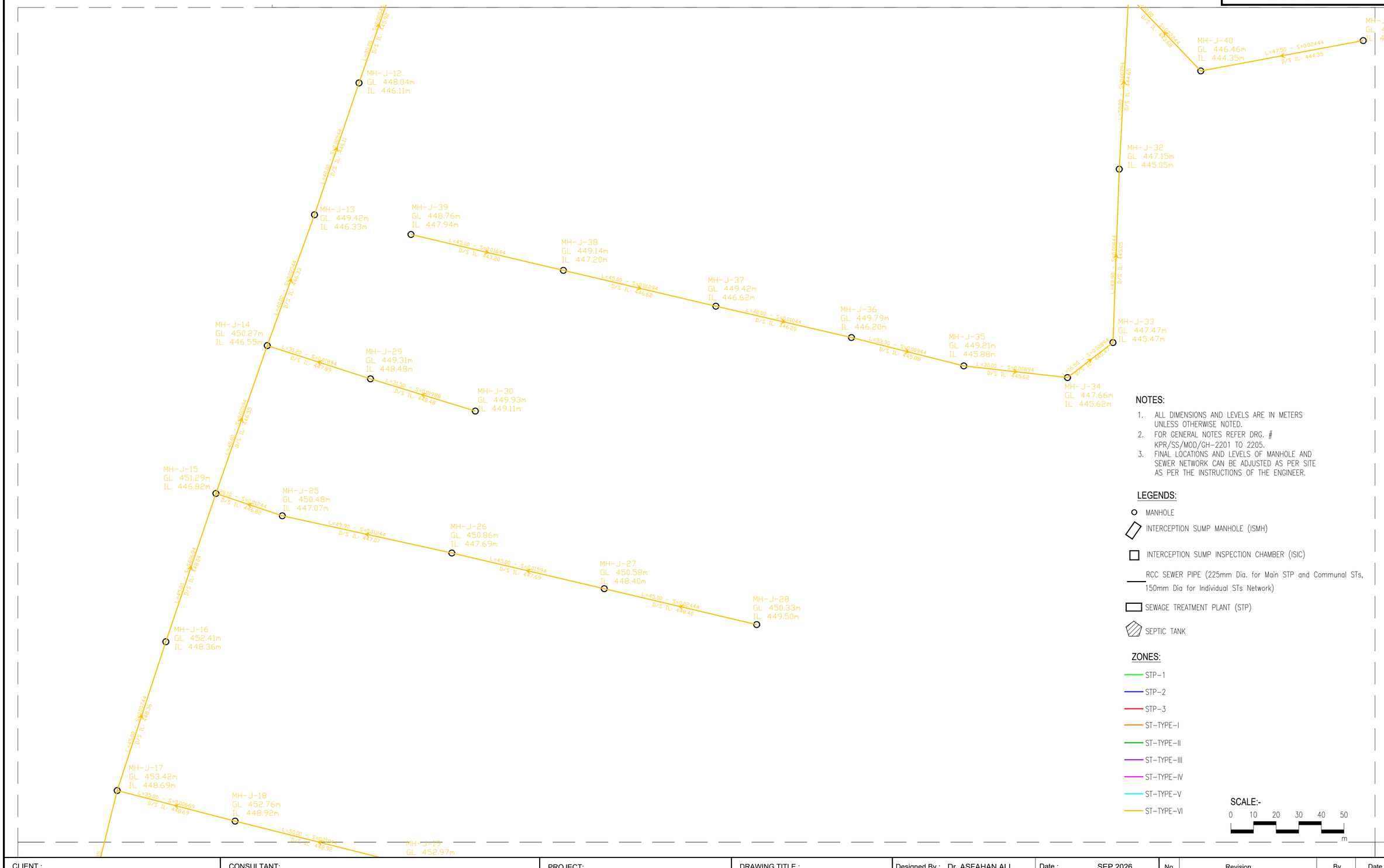


CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-1

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3311
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

0 10 20 30 40 50 m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-2

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3312
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

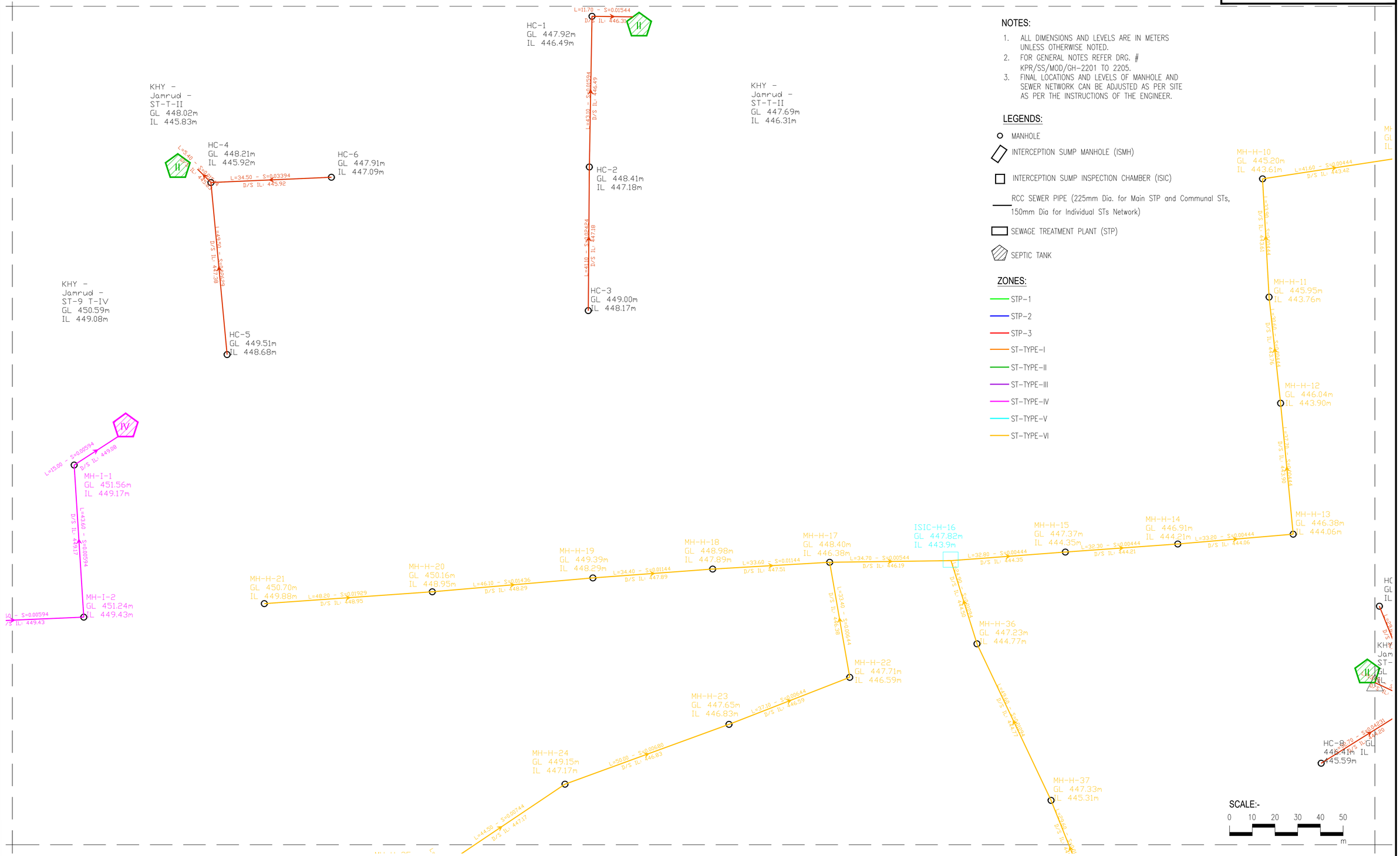
DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-3

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3313
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

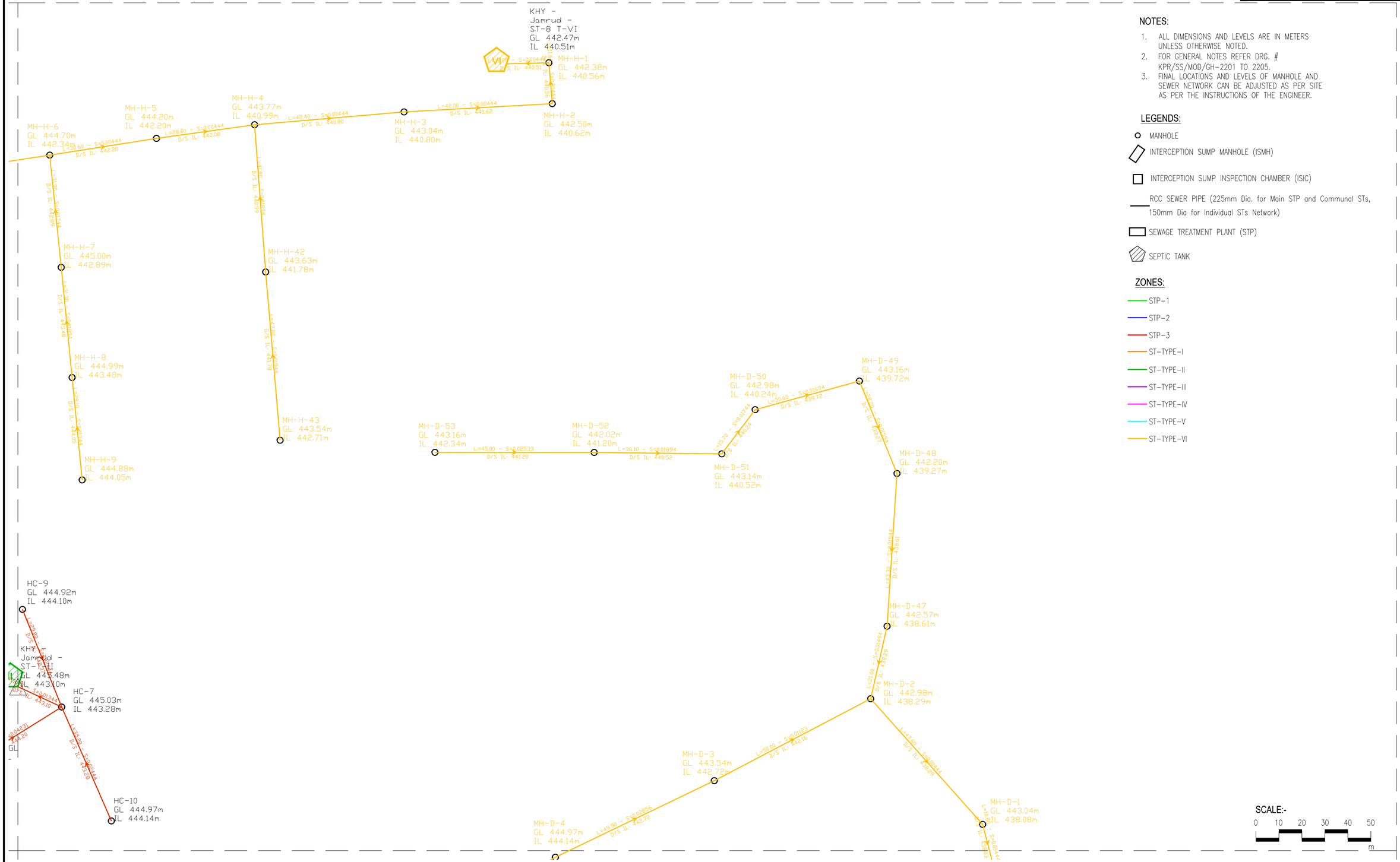
- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT :	PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT:	Techno-Consult International JV Ultimate Engineering Consultants — New Era of Development
PROJECT:	KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE :	JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-4

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3314
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

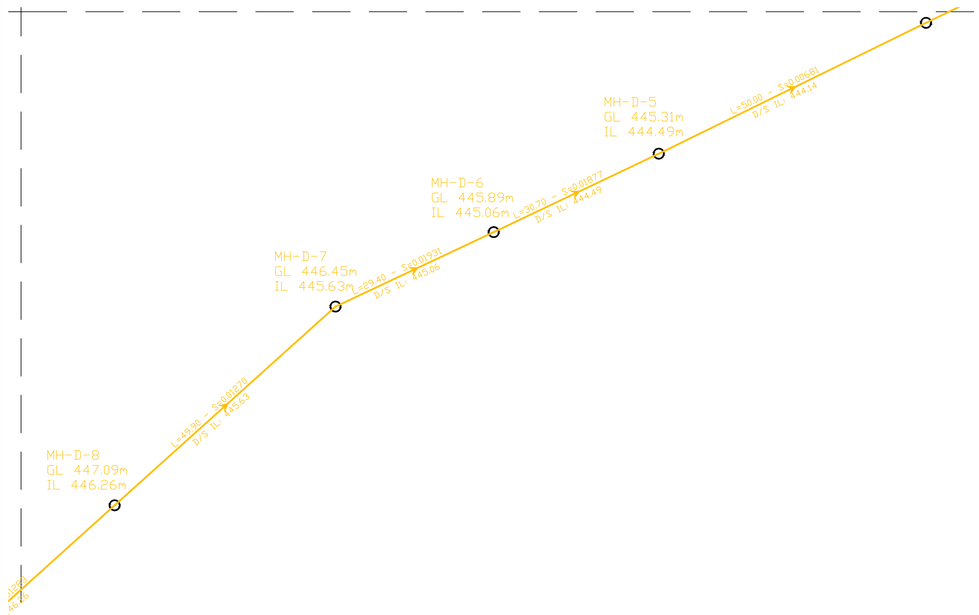
DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-5

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3315
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



KHY - Jamrud - ST-4 T-VI
GL 443.03m
IL 438.03m

NOTES:

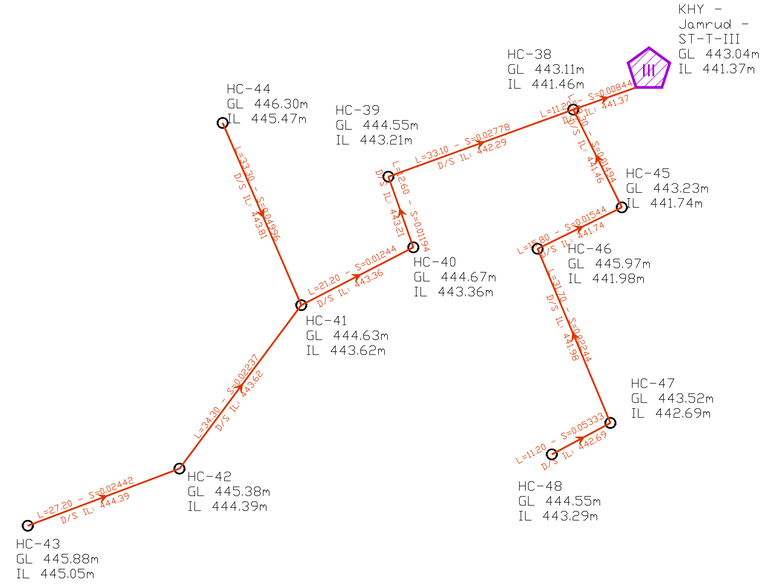
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI



SCALE:-

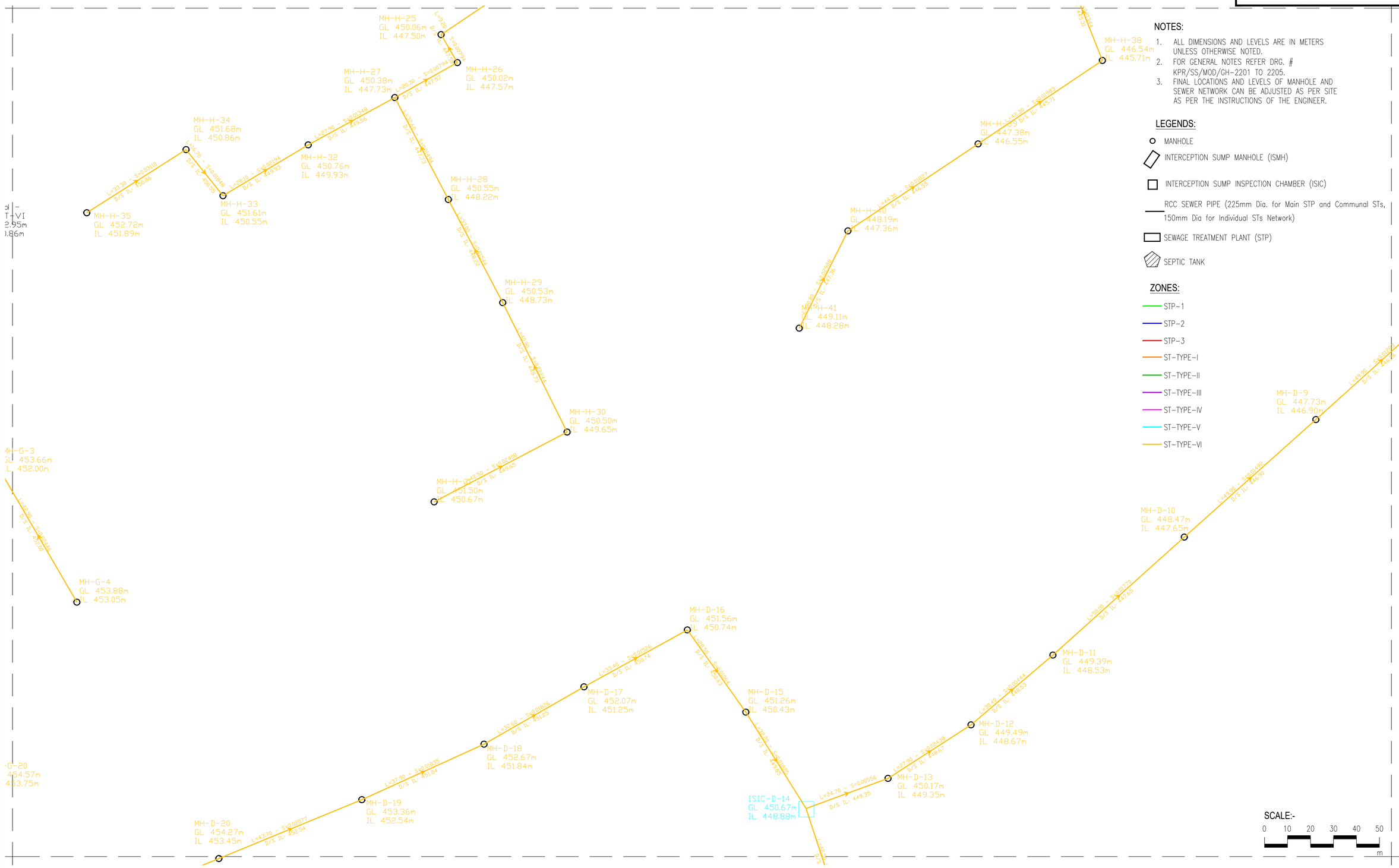
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-6

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3316
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-
0 10 20 30 40 50
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-7

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3317
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

MH-F-31 GL 456.61m IL 455.79m
L=41.70 - S=0.003394 D/S IL: 454.37
MH-F-30 GL 456.80m IL 454.37m
L=45.40 - S=0.01894 D/S IL: 453.51
MH-F-29 GL 455.80m IL 453.51m
L=34.30 - S=0.01394 D/S IL: 453.03
MH-F-3 GL 455.35m IL 453.03m
L=42.30 - S=0.00444 D/S IL: 452.84
MH-F-32 GL 455.12m IL 452.84m
L=24.30 - S=0.00444 D/S IL: 452.69
MH-F-33 GL 455.26m IL 452.69m
L=42.30 - S=0.00444 D/S IL: 452.53
MH-G-7 GL 453.94m IL 452.87m
L=20.00 - S=0.01544 D/S IL: 452.87
MH-G-8 GL 454.01m IL 453.18m
L=34.80 - S=0.00882 D/S IL: 453.18
MH-G-9 GL 455.11m IL 453.90m
L=34.80 - S=0.01643 D/S IL: 453.90
MH-G-10 GL 455.91m IL 455.09m
L=45.90 - S=0.00444 D/S IL: 452.87
MH-G-5 GL 453.33m IL 452.50m
L=43.30 - S=0.00444 D/S IL: 451.93
MH-G-6 GL 453.77m IL 452.13m
L=43.30 - S=0.00444 D/S IL: 451.86
MH-G-1 GL 453.25m IL 450.94m
L=23.70 - S=0.00444 D/S IL: 450.84
MH-G-2 GL 453.51m IL 451.36m
L=40.60 - S=0.01594 D/S IL: 451.06
MH-G-11 GL 454.17m IL 453.16m
L=37.30 - S=0.00444 D/S IL: 453.16
MH-G-12 GL 454.47m IL 453.32m
L=43.40 - S=0.01184 D/S IL: 453.65
MH-G-13 GL 455.19m IL 454.16m
L=32.90 - S=0.00994 D/S IL: 454.16
MH-G-14 GL 455.99m IL 454.49m
L=43.90 - S=0.01144 D/S IL: 454.49
MH-G-15 GL 456.62m IL 454.98m
L=48.60 - S=0.01444 D/S IL: 455.14
MH-G-16 GL 457.09m IL 455.84m
L=31.90 - S=0.02422 D/S IL: 455.64
MH-G-17 GL 457.43m IL 456.61m
L=24.70 - S=0.00444 D/S IL: 456.50
MH-G-18 GL 456.58m IL 455.76m
L=36.70 - S=0.02444 D/S IL: 455.98
MH-G-19 GL 454.54m IL 453.56m
L=31.60 - S=0.00594 D/S IL: 453.36
MH-G-20 GL 454 IL 453.
L=46.00 - S=0.00590 D/S IL: 453.73
MH-G-28 GL 456.31m IL 455.49m
L=24.30 - S=0.00444 D/S IL: 455.38
MH-I-15 GL 458.60m IL 456.20m
L=37.50 - S=0.01494 D/S IL: 455.64
MH-I-16 GL 458.64m IL 456.70m
L=31.80 - S=0.01544 D/S IL: 456.20
MH-I-17 GL 459.11m IL 457.07m
L=23.20 - S=0.01594 D/S IL: 456.70
MH-I-18 GL 459.58m IL 457.66m
L=35.90 - S=0.01624 D/S IL: 457.07
MH-I-19 GL 459.96m IL 458.31m
L=37.50 - S=0.00744 D/S IL: 457.66
MH-I-20 GL 460.41m IL 458.76m
L=20.00 - S=0.02244 D/S IL: 458.31
MH-I-21 GL 460.61m IL 459.79m
L=20.00 - S=0.03425 D/S IL: 458.76
MH-F-18 GL 458.60m IL 457.78m
L=44.40 - S=0.04029 D/S IL: 455.99
MH-F-17 GL 456.81m IL 455.99m
L=27.30 - S=0.01444 D/S IL: 455.59
MH-F-8 GL 456.72m IL 455.59m
L=33.30 - S=0.00594 D/S IL: 455.40
MH-F-7 GL 456.42m IL 455.40m
L=32.40 - S=0.00594 D/S IL: 455.20
MH-F-6 GL 456.48m IL 454.46m
L=22.90 - S=0.00994 D/S IL: 454.46
MH-F-5 GL 456.26m IL 453.38m
L=9.80 - S=0.00444 D/S IL: 453.29
MH-F-4 GL 456.38m IL 453.29m
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MH-F-28 GL 455.80m IL 454.98m
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MH-F-9 GL 458.05m IL 456.33m
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L=21.00 - S=0.00744 D/S IL: 456.49
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MH-F-12 GL 459.87m IL 458.97m
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MH-F-11 GL 458.49m IL 456.78m
L=27.40 - S=0.00444 D/S IL: 456.78
MH-F-14 GL 458.55m IL 457.73m
L=30.00 - S=0.02444 D/S IL: 457.73
MH-F-26 GL 459.86m IL 459.04m
L=41.00 - S=0.03405 D/S IL: 457.64
MH-F-25 GL 458.61m IL 457.64m
L=31.90 - S=0.01852 D/S IL: 457.23
MH-F-20 GL 457.19m IL 455.00m
L=36.90 - S=0.00994 D/S IL: 454.71
MH-F-19 GL 456.98m IL 454.71m
L=20.70 - S=0.00244 D/S IL: 454.66
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KHY - Jamrud - ST-7 T-V GL 452.95 IL 450.86r

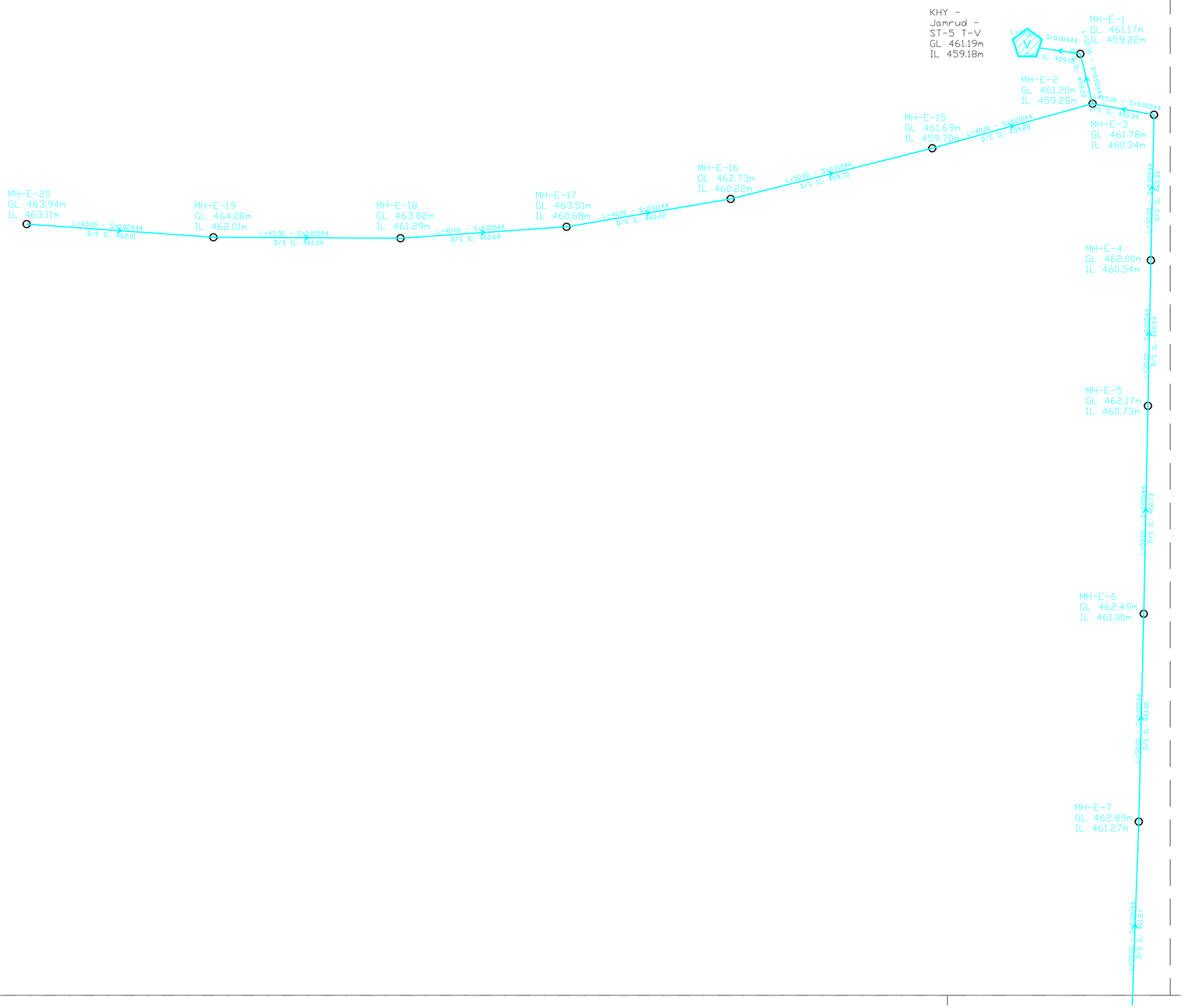
SCALE:-
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CLIENT :	PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT:	Techno-Consult International JV Ultimate Engineering Consultants New Era of Development
PROJECT:	KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE :	JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET–8

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3318
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

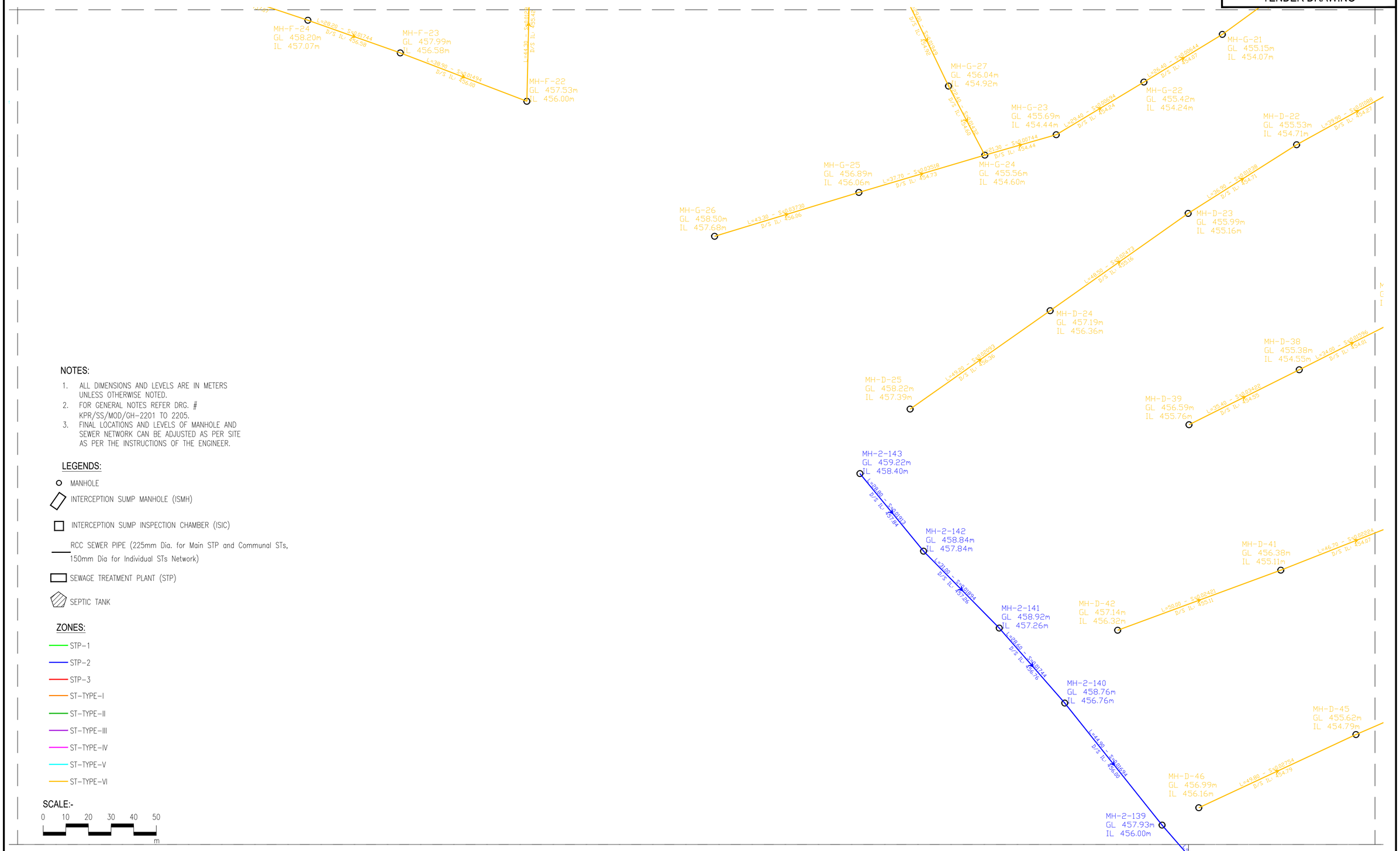
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-9	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REMAN Approved By : RABEEA REMAN	Date : SEP 2026 Scale : N.T.S Drawing No : KPR/SS/KHD/JM-3319		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

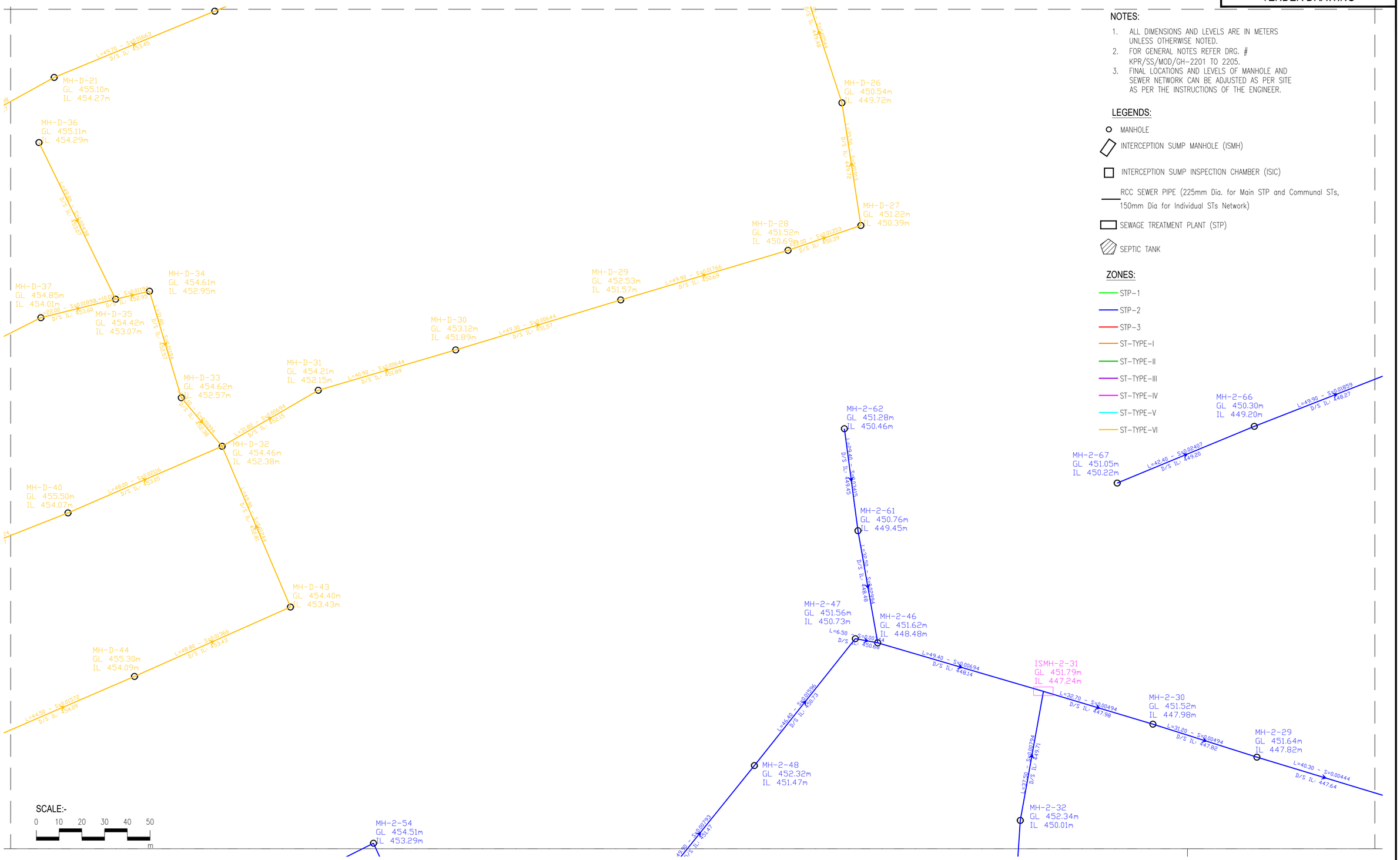
SCALE:-

0 10 20 30 40 50

m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-10	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REMAN Approved By : RABEEA REMAN	Date : SEP 2026 Scale : N.T.S Drawing No : KPR/SS/KHD/JM-3320	No. / Revision / By / Date	

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-11

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3321
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

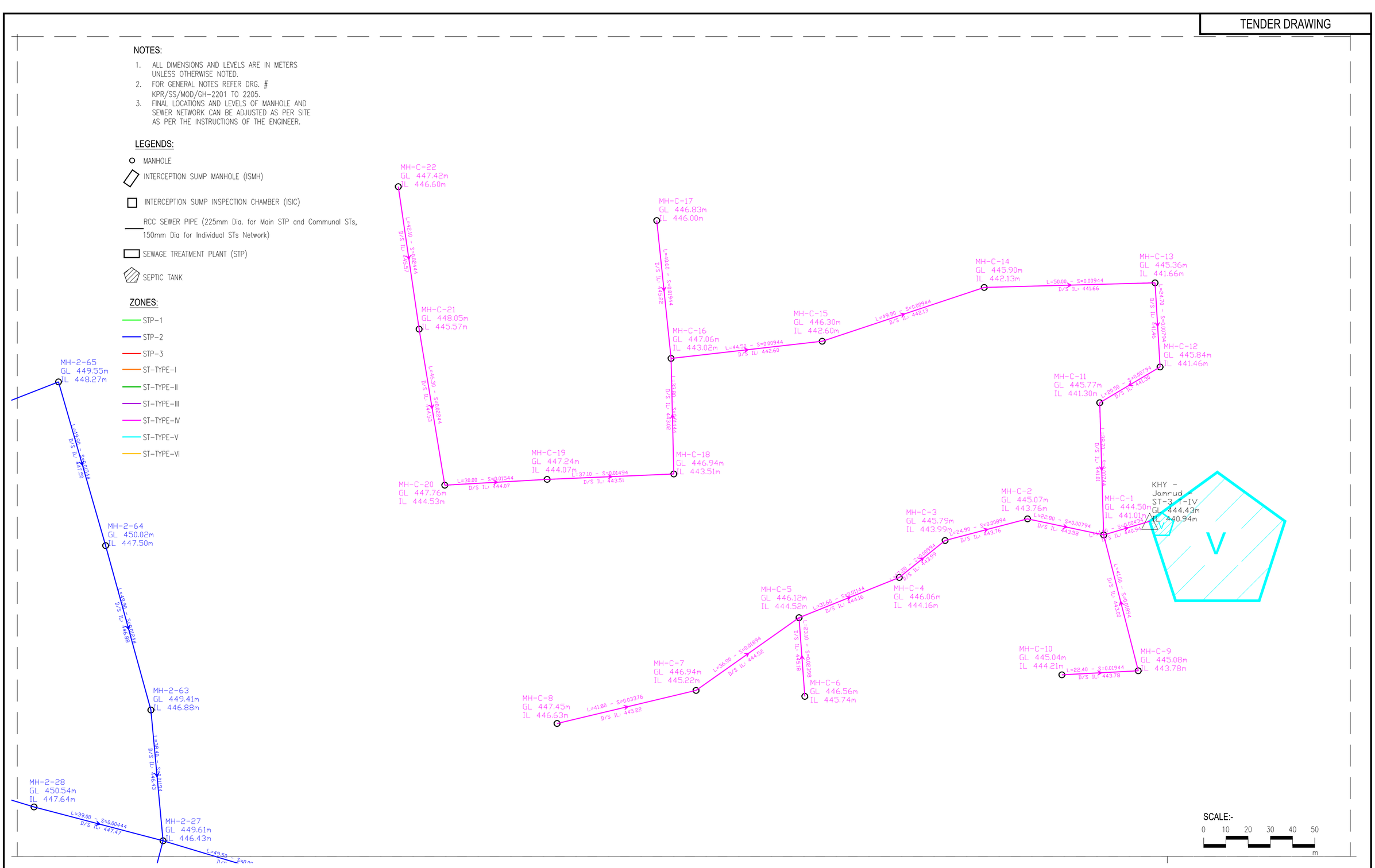
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI



SCALE:-

0 10 20 30 40 50

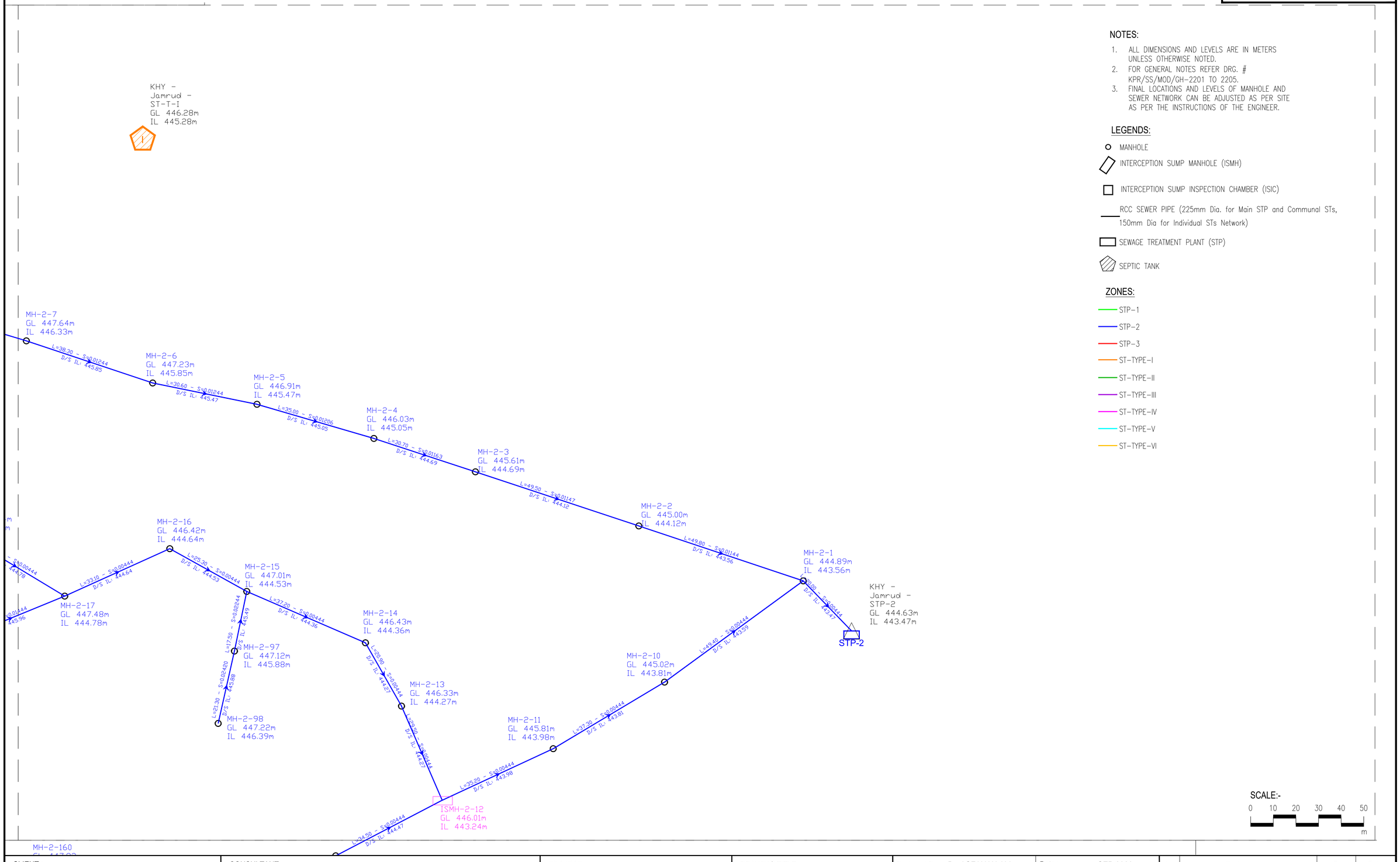
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-12

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3322
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

0 10 20 30 40 50

m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

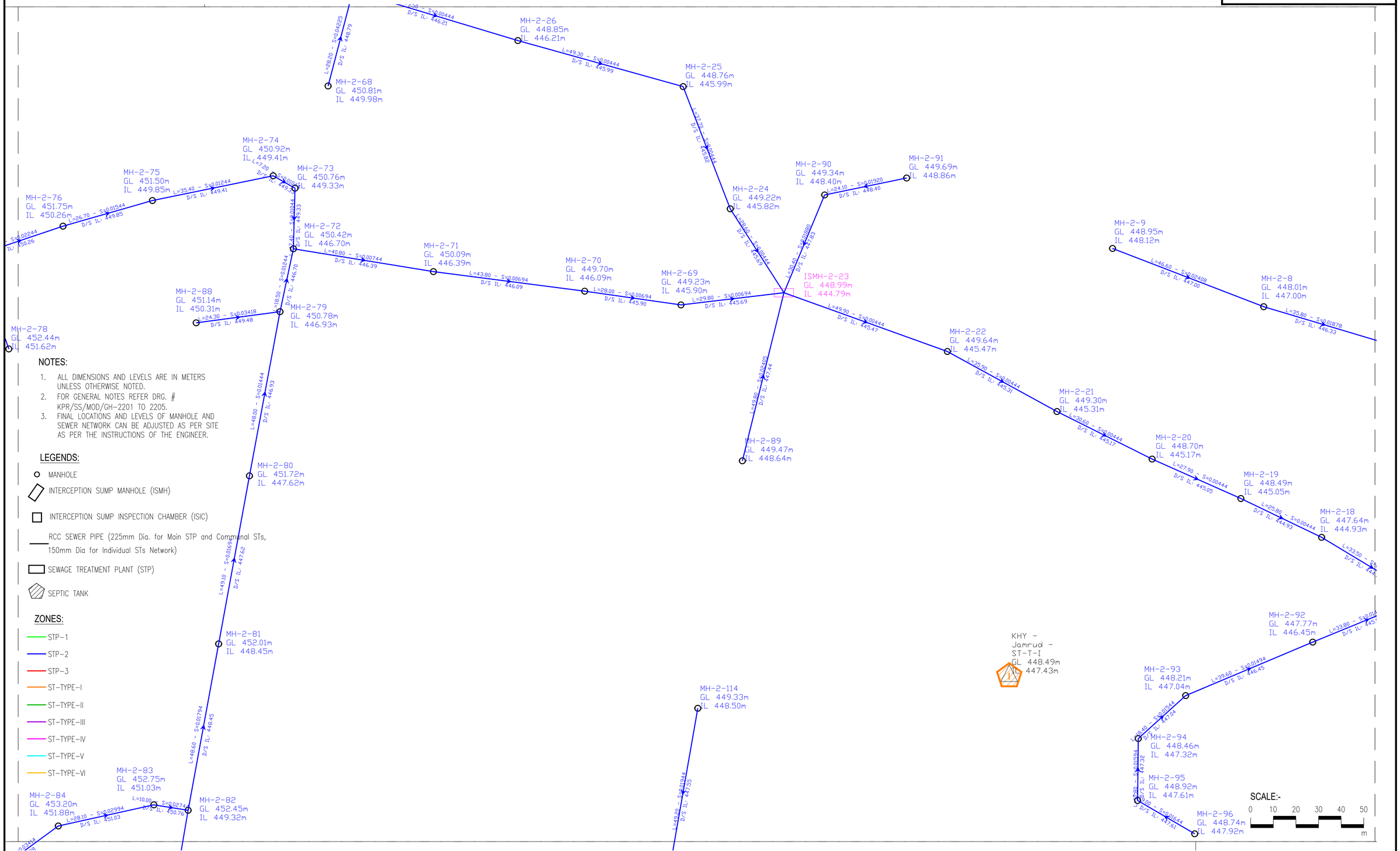
DRAWING TITLE :

JAMRUD
SEWERAGE SYSTEM
LAYOUT PLAN
SHEET–13

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3323
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

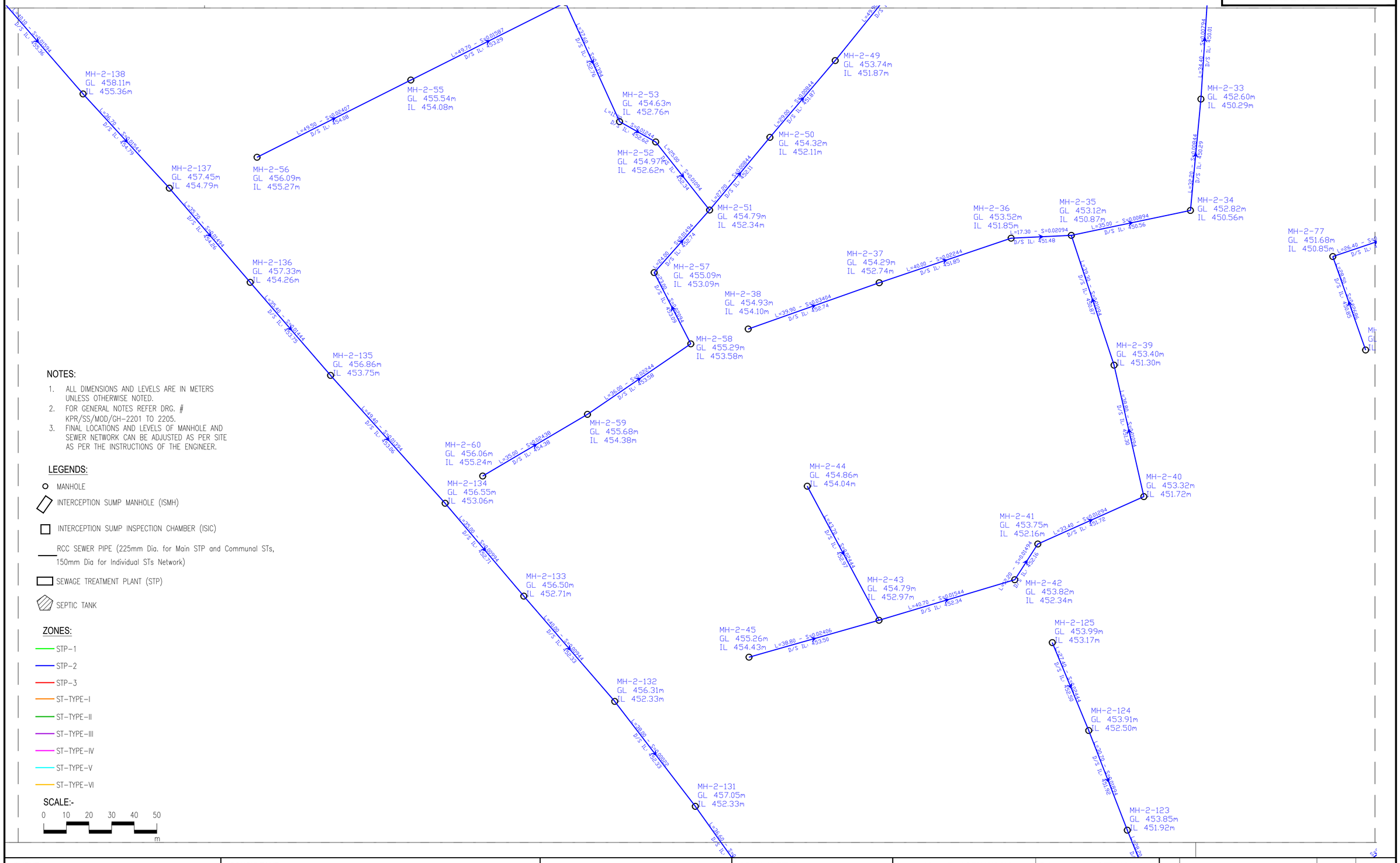
- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-14	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REMAN	Drawing No : KPR/SS/KHD/JM-3324		
				Approved By : RABEEA REMAN			

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

0 10 20 30 40 50 m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

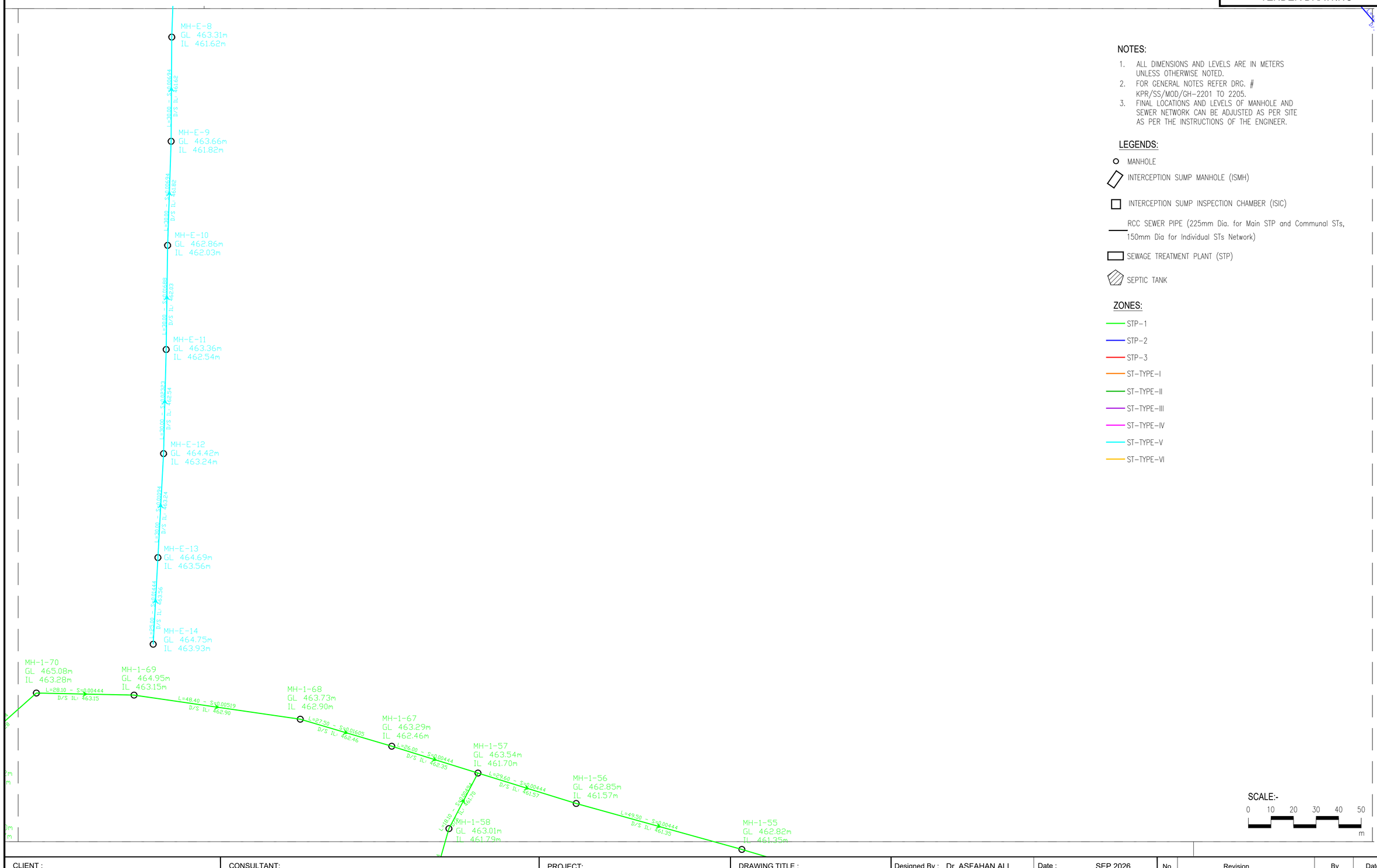
DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-15

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3325
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

0 10 20 30 40 50

m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants

New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-16

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3326
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

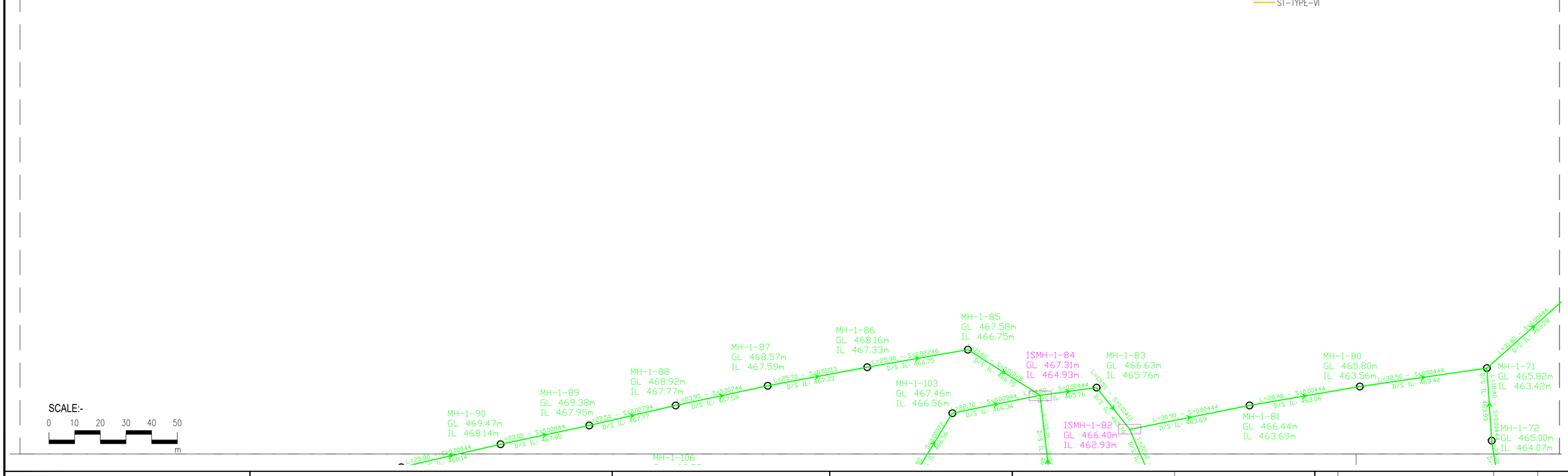
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

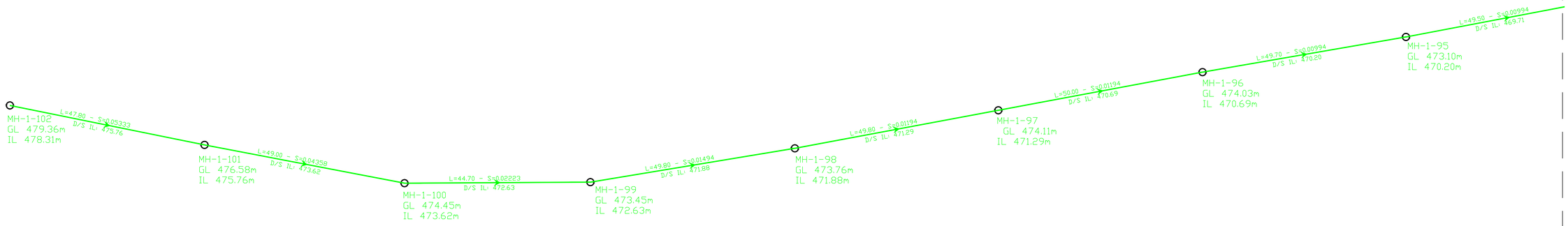
ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI



CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-17	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No.	Revision / By / Date
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REMAN	Drawing No : KPR/SS/KHD/JM-3327		
				Approved By : RABEEA REMAN			

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

0 10 20 30 40 50

m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

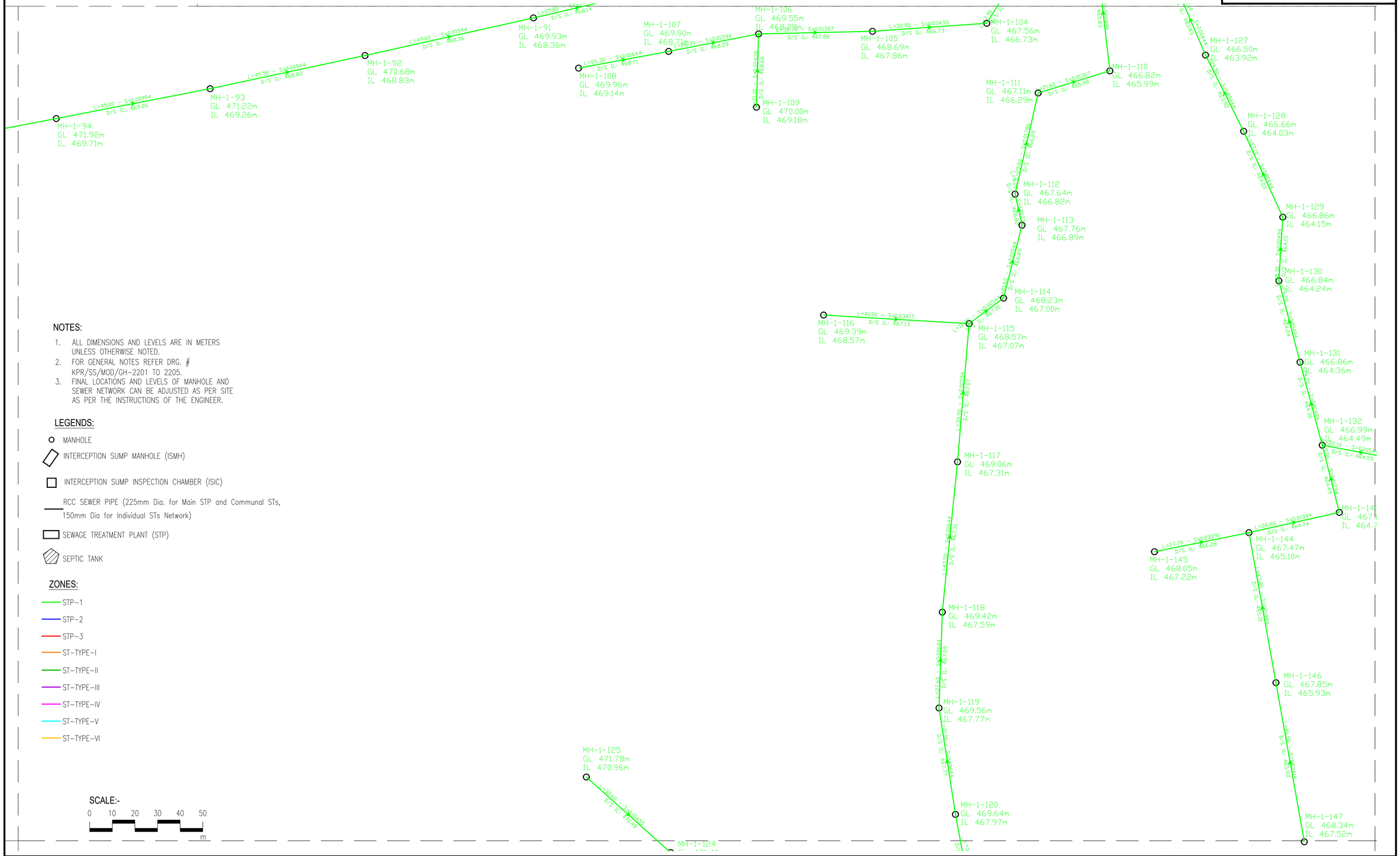
DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-18

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3328
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

0 10 20 30 40 50 m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

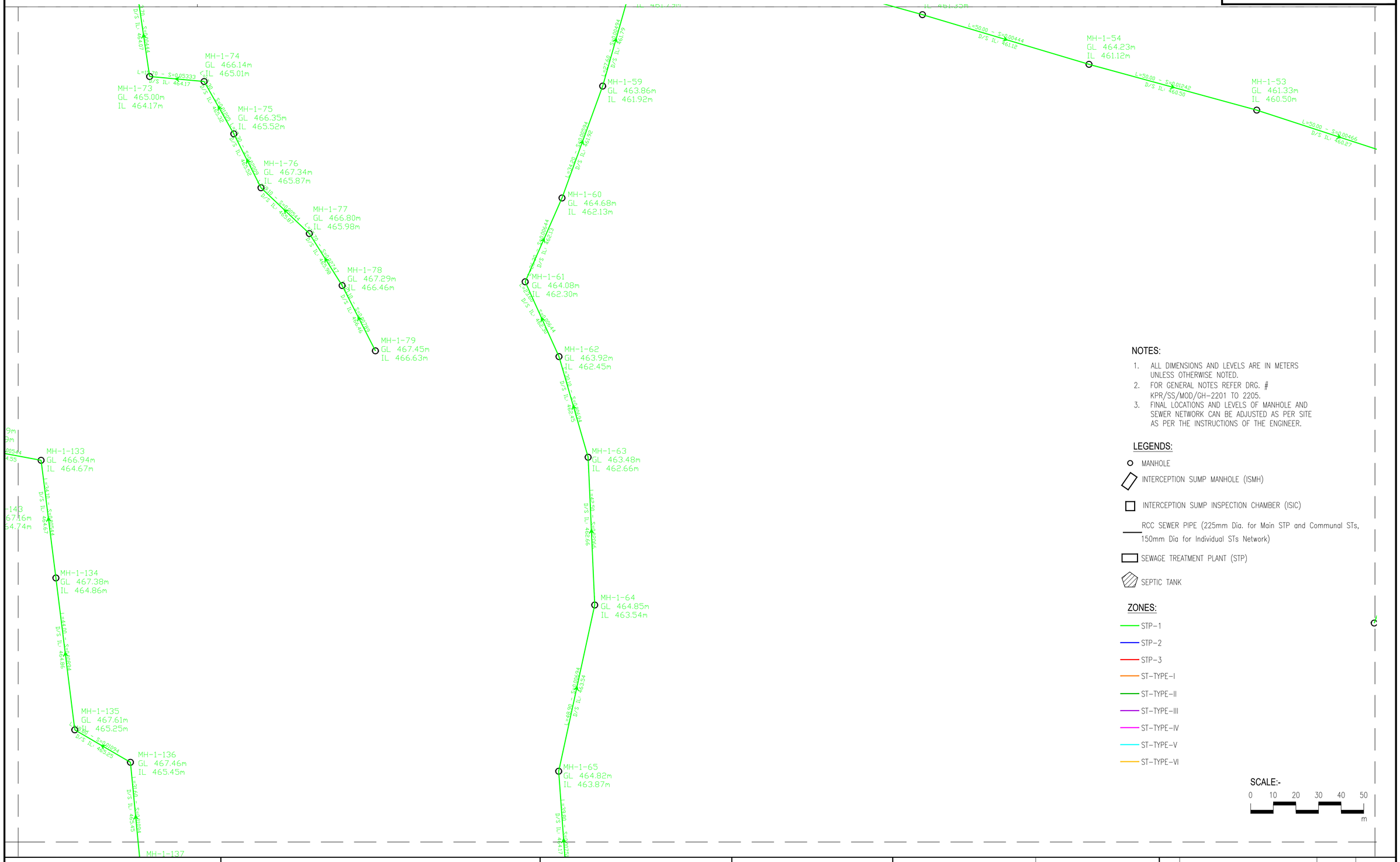
DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-19

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3329
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-

0 10 20 30 40 50

m

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

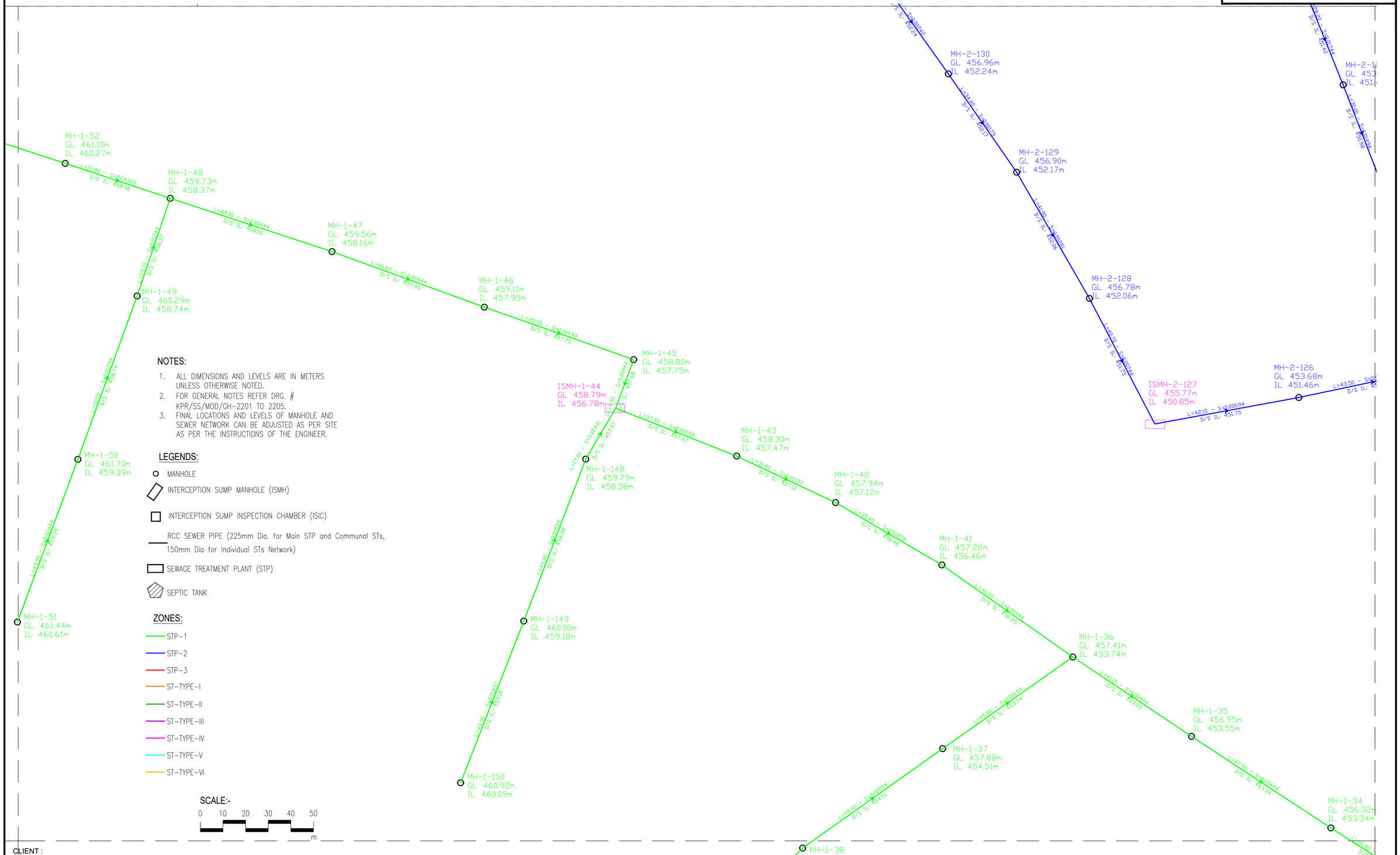
JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-20

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3330
Approved By :	RABEEA REMAN		

CLIENT

No.	Revision	By	Date

TENDER DRAWING



CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

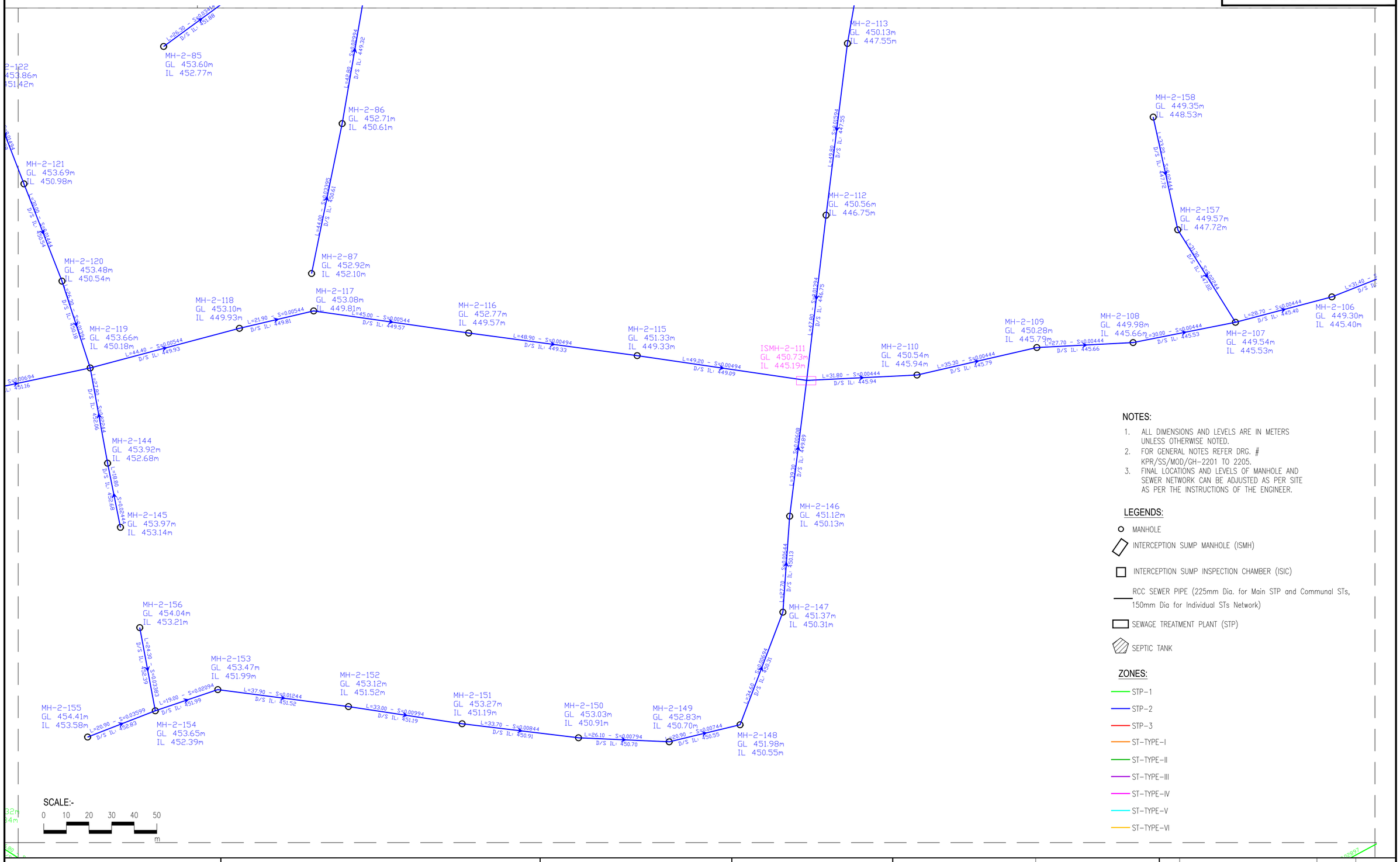
DRAWING TITLE :

JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-21

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3331
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

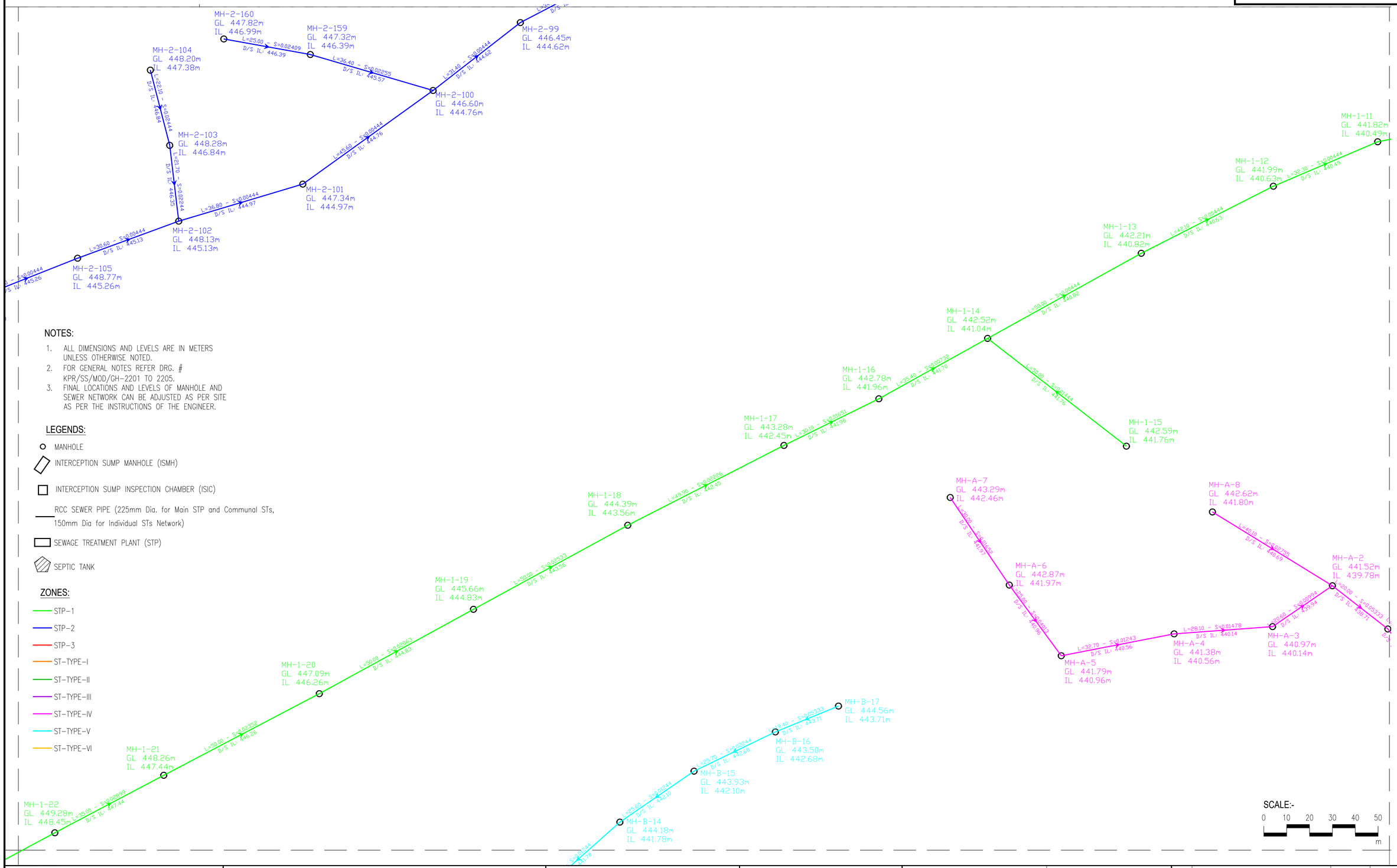
- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT :	CONSULTANT:	PROJECT:	DRAWING TITLE :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-22

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3332
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

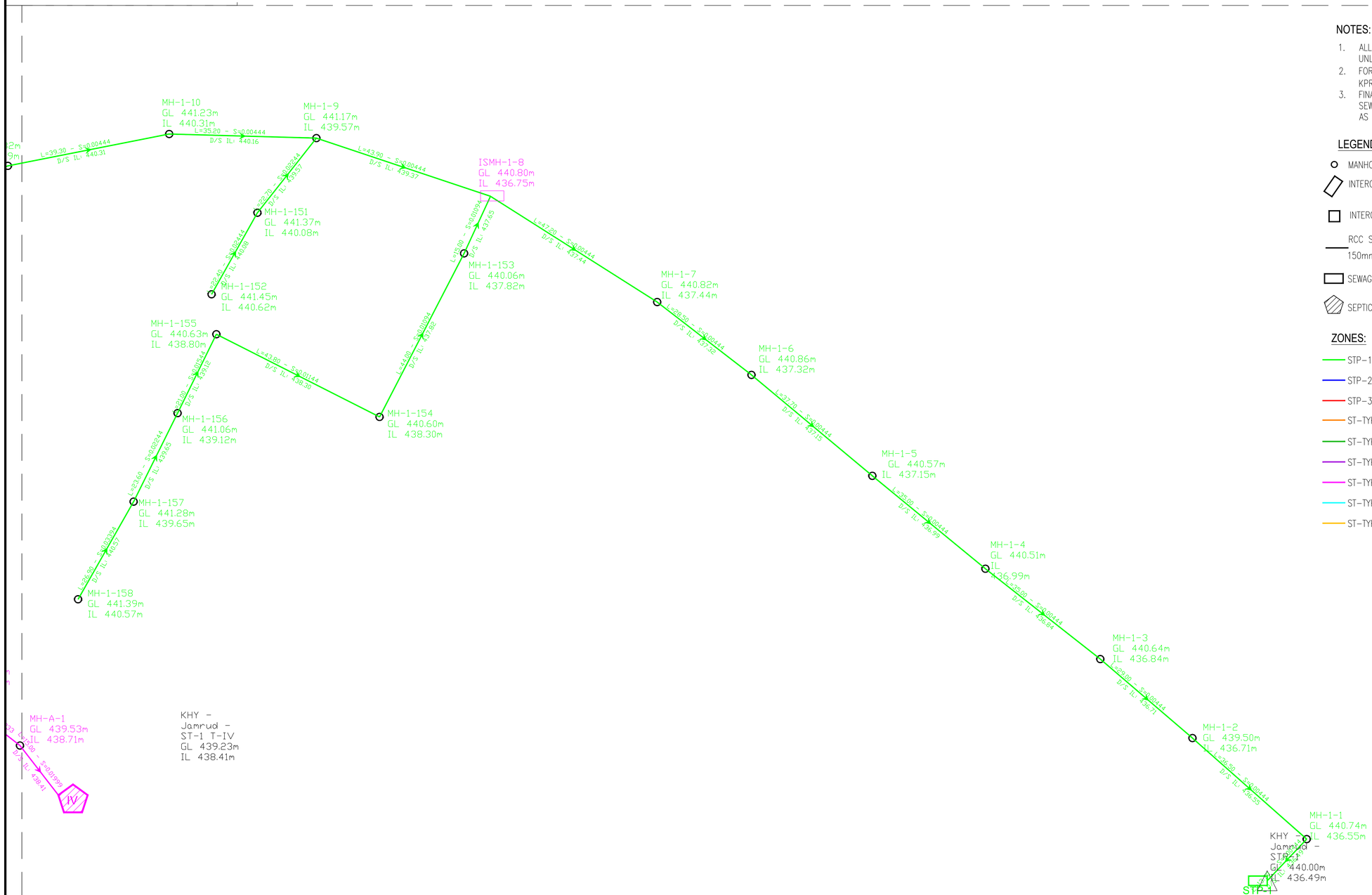
ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:-
0 10 20 30 40 50
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-23	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REMAN	Drawing No : KPR/SS/KHD/JM-3333		
				Approved By : RABEEA REMAN			

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

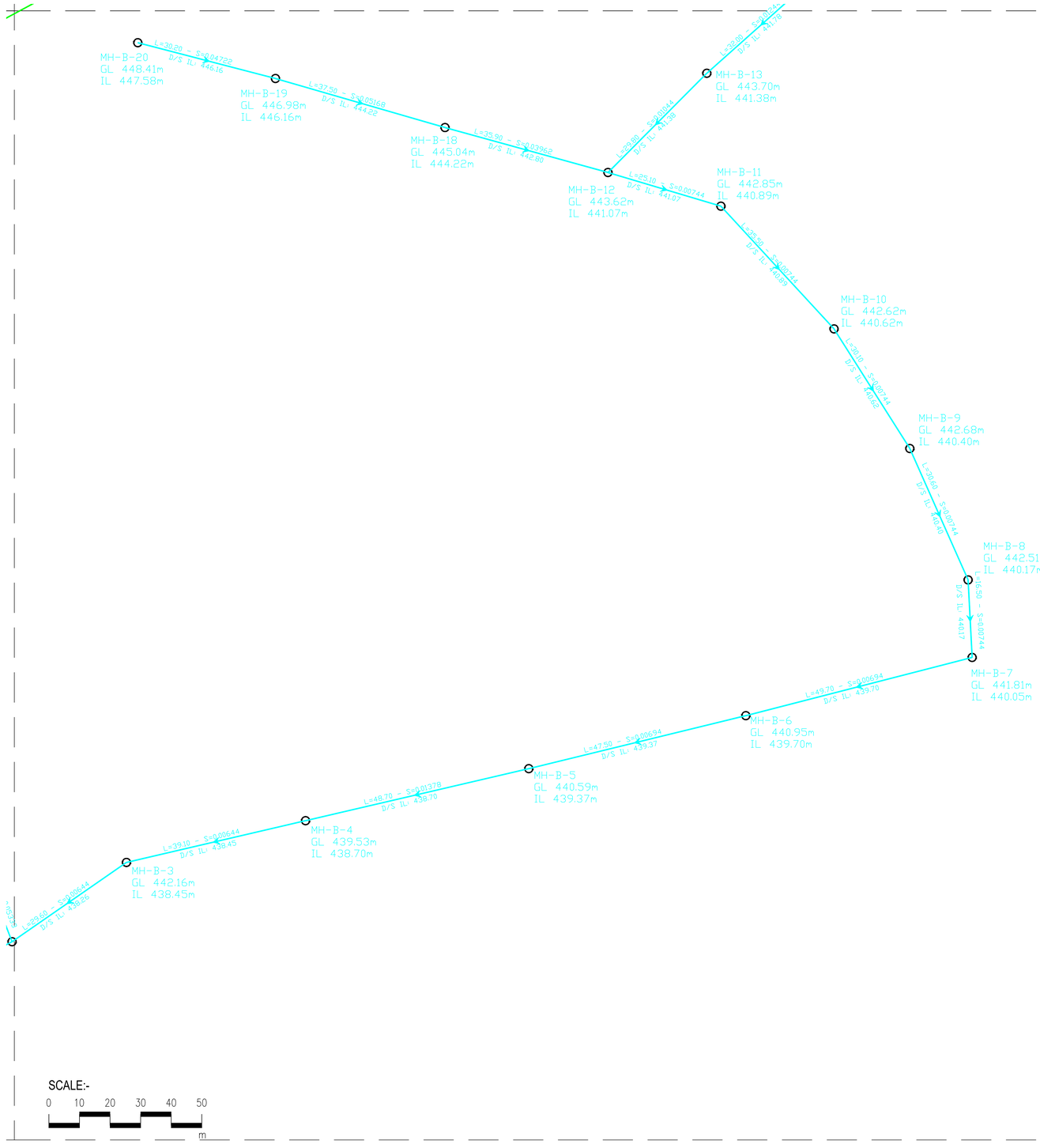
PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-24

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3334
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

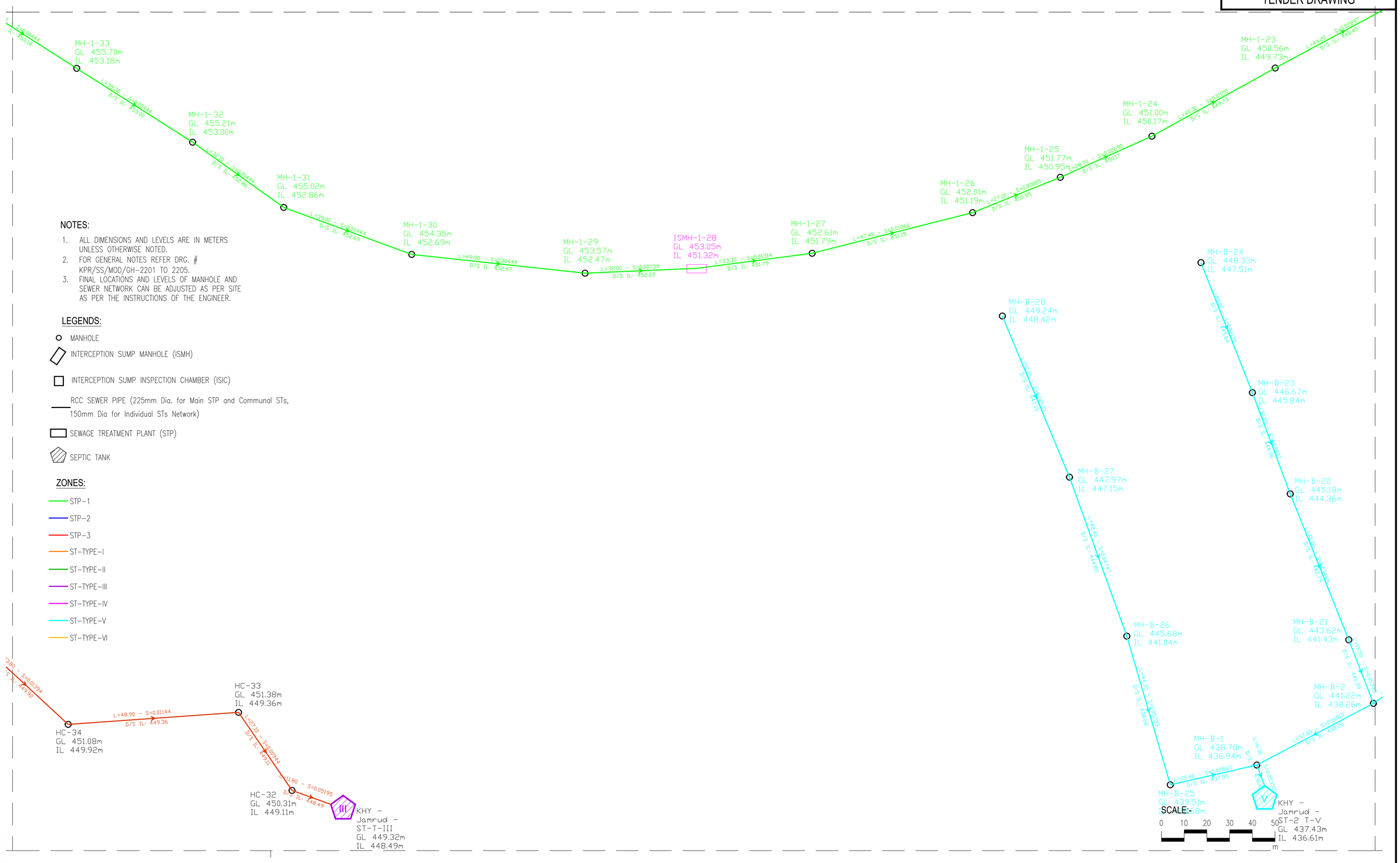
DRAWING TITLE :

JAMRUD
SEWERAGE SYSTEM
LAYOUT PLAN
SHEET-25

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3335
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING



CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-26

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3336
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

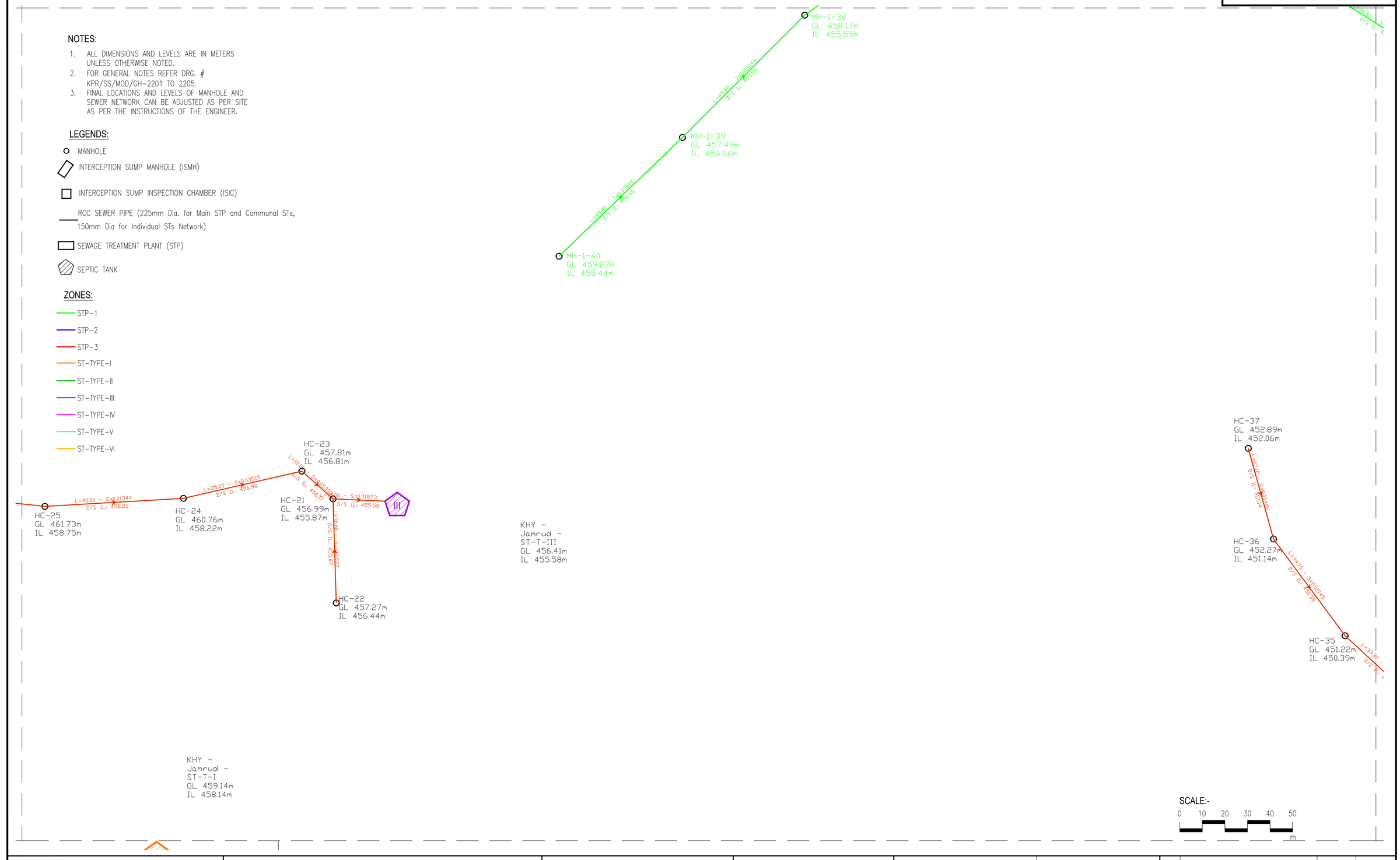
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

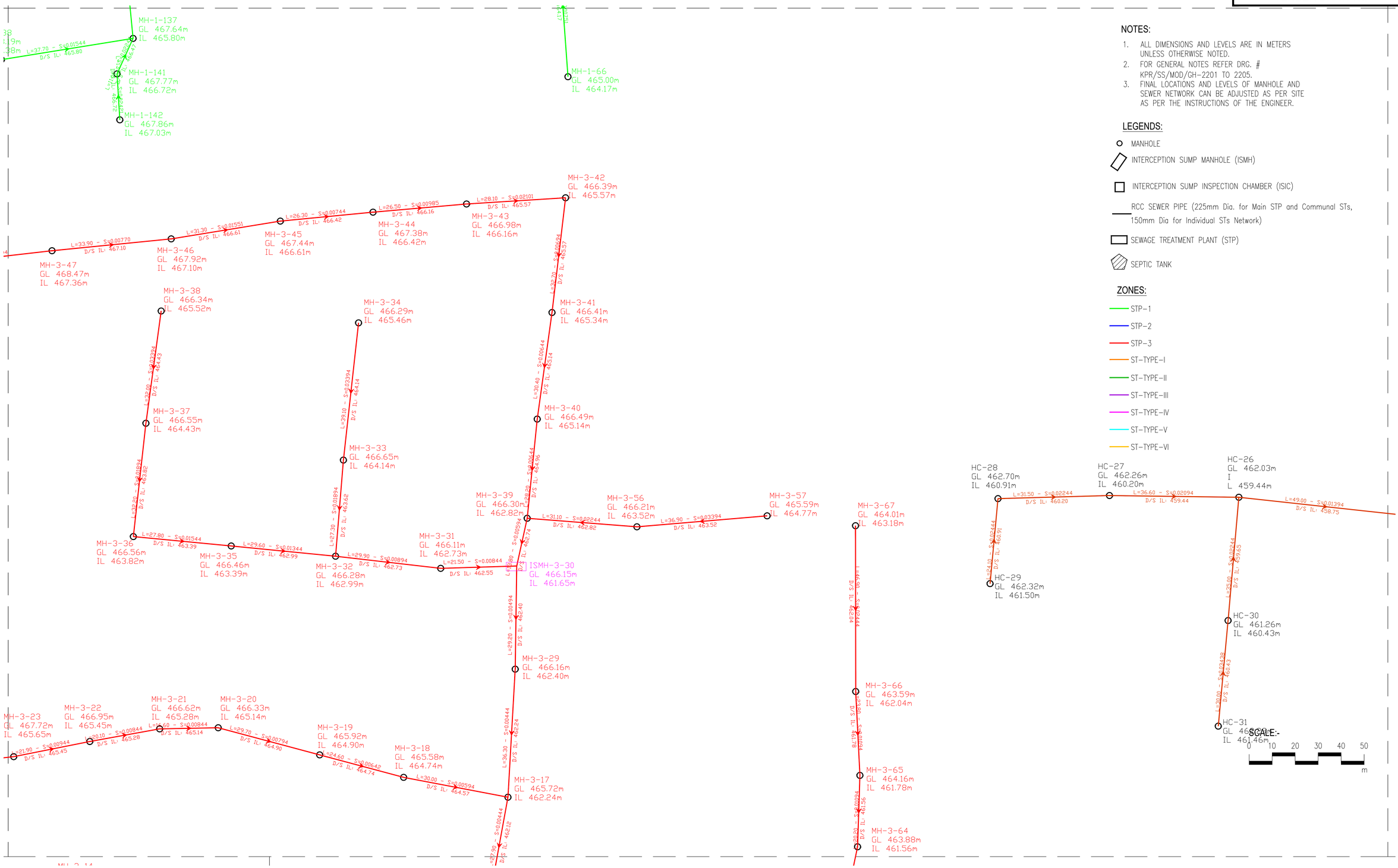
ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI



CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-27	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REMAN Approved By : RABEEA REMAN	Date : SEP 2026 Scale : N.T.S Drawing No : KPR/SS/KHD/JM-3337	No. / Revision / By / Date	

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

CLIENT :	PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT:	Techno-Consult International JV Ultimate Engineering Consultants New Era of Development
PROJECT:	KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE :	JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-28

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3338
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

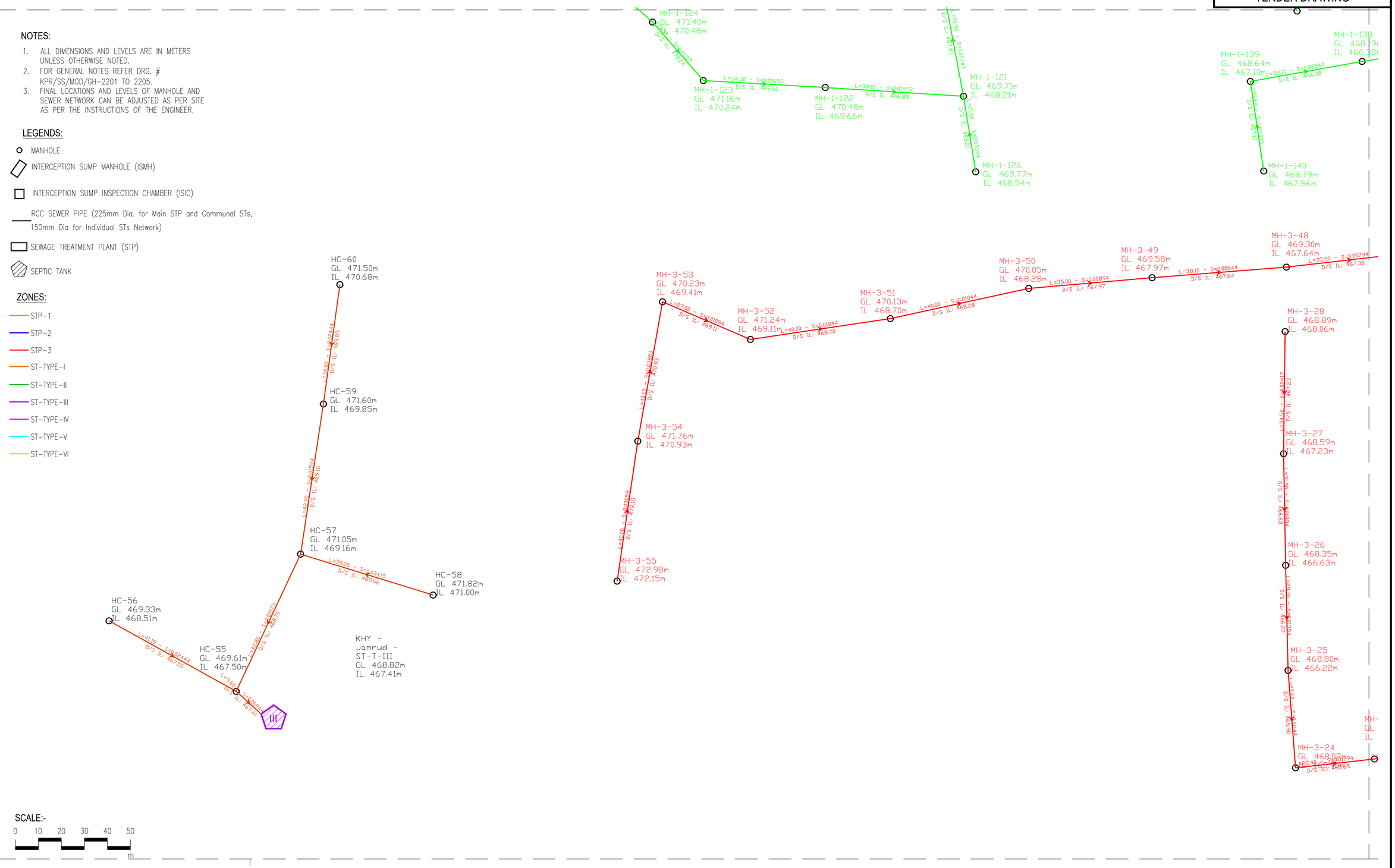
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI



CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-29	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REMAN	Drawing No : KPR/SS/KHD/JM-3339		
				Approved By : RABEEA REMAN			

TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

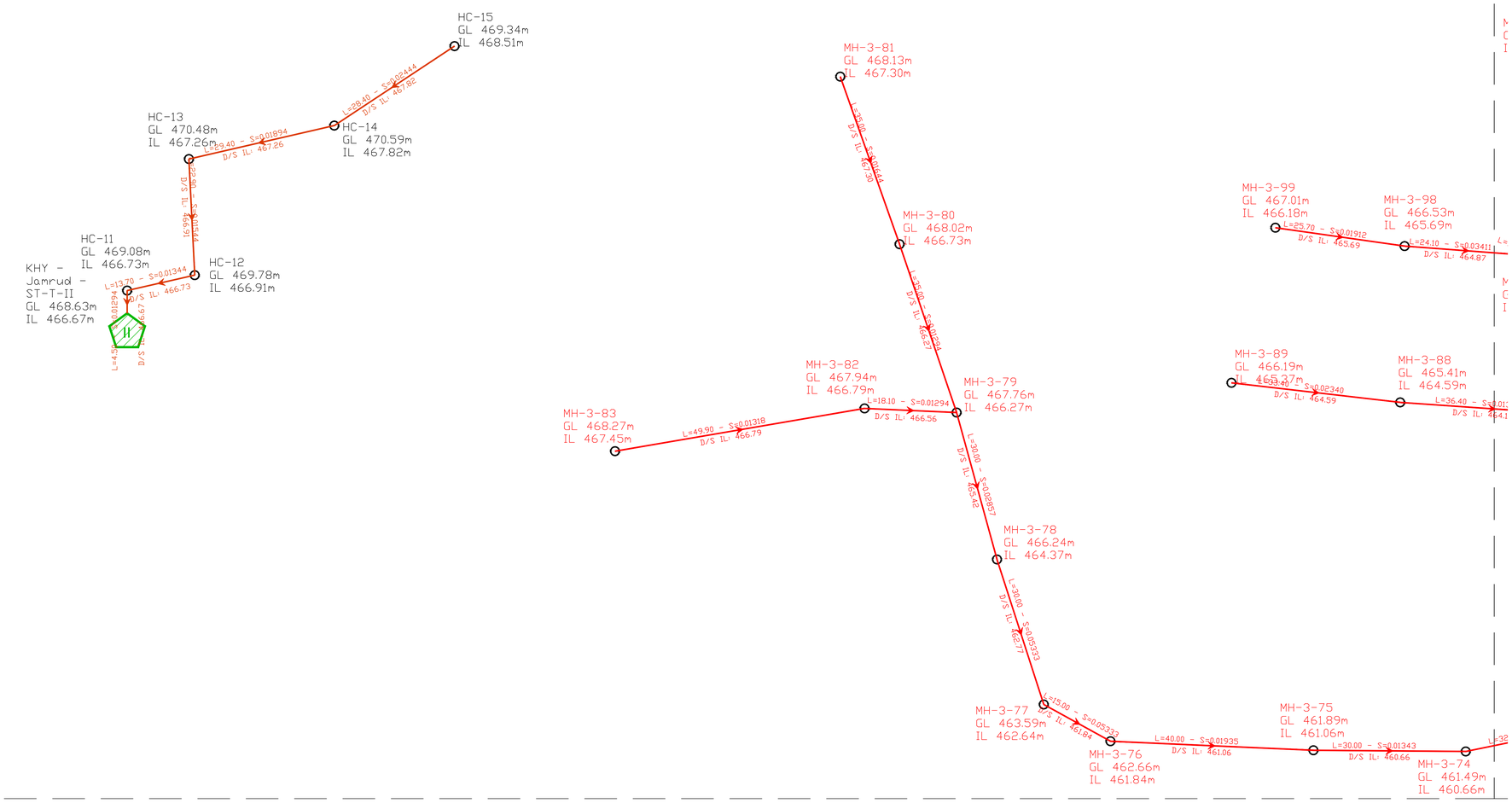
- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

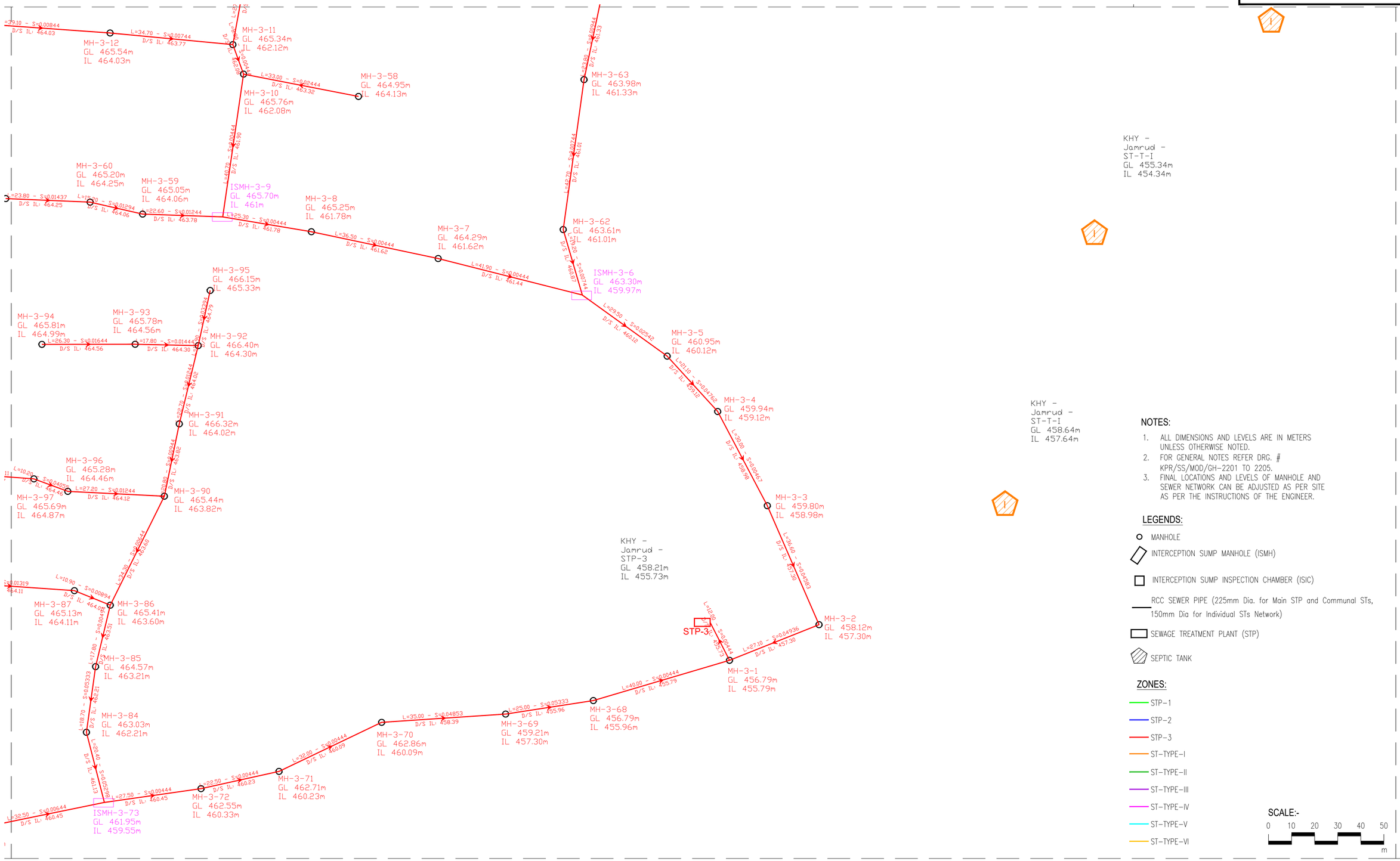
SCALE:-

0 10 20 30 40 50 m



CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-30	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REMAN	Drawing No : KPR/SS/KHD/JM-3340		
				Approved By : RABEEA REMAN			

TENDER DRAWING



NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI

SCALE:- 0 10 20 30 40 50 m

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-31

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REMAN	Drawing No :	KPR/SS/KHD/JM-3340-A
Approved By :	RABEEA REMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

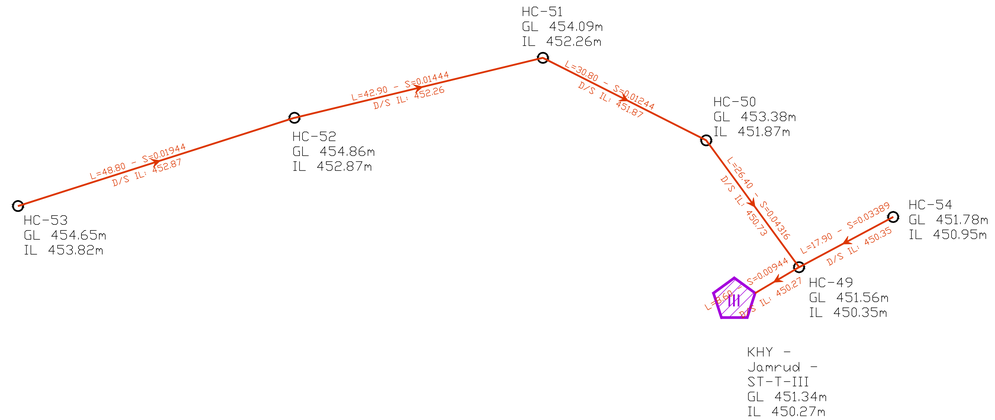
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205.
3. FINAL LOCATIONS AND LEVELS OF MANHOLE AND SEWER NETWORK CAN BE ADJUSTED AS PER SITE AS PER THE INSTRUCTIONS OF THE ENGINEER.

LEGENDS:

- MANHOLE
- INTERCEPTION SUMP MANHOLE (ISMH)
- INTERCEPTION SUMP INSPECTION CHAMBER (ISIC)
- RCC SEWER PIPE (225mm Dia. for Main STP and Communal STs, 150mm Dia for Individual STs Network)
- SEWAGE TREATMENT PLANT (STP)
- SEPTIC TANK

ZONES:

- STP-1
- STP-2
- STP-3
- ST-TYPE-I
- ST-TYPE-II
- ST-TYPE-III
- ST-TYPE-IV
- ST-TYPE-V
- ST-TYPE-VI



SCALE:-

0 10 20 30 40 50

m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEWERAGE SYSTEM LAYOUT PLAN SHEET-32	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : N.T.S		
				Checked By : RABEEA REMAN	Drawing No : KPR/SS/KHD/JM-2240-B		
				Approved By : RABEEA REMAN			

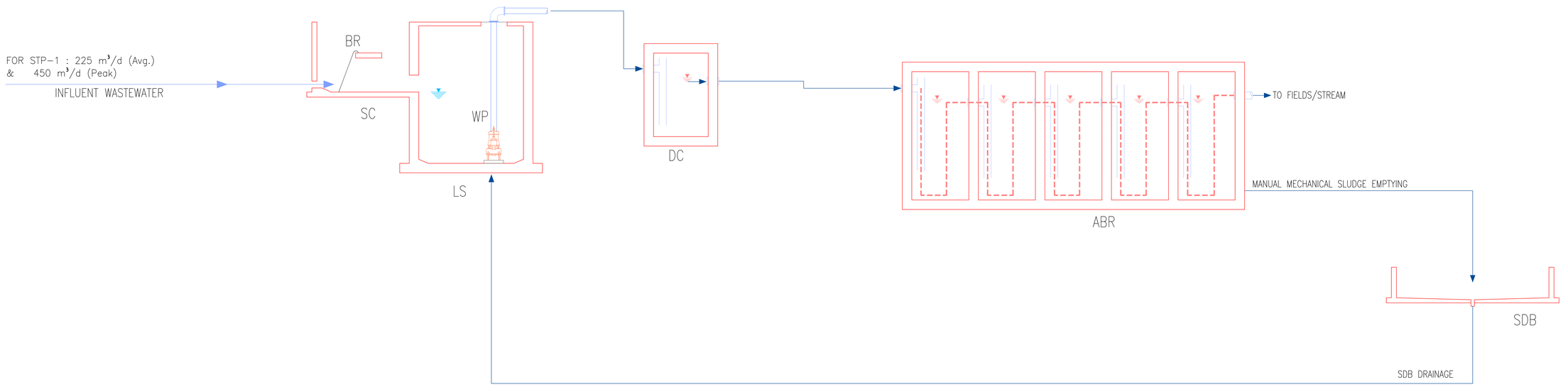
SEWAGE TREATMENT PLANT (STP 1)

SC	SCREEN CHAMBER
LS	LIFT STATION
DC	DISSIPATOR CHAMBER
ABR	ANAEROBIC BAFFLED REACTOR
SDB	SLUDGE DRYING BEDS
BR	BAR RACK
WP	WASTEWATER PUMP WITH FLOAT SWITCHES GUIDE RAIL AND LIFTING SETUP

TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE GENERAL NOTES.
3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LOCATION OF PUMPS (DISTANCE FROM THE WALL, AND CENTER TO CENTER DISTANCE) SHALL BE RECHECKED WITH THE PUMP MANUFACTURER'S REQUIREMENT.
5. STEEL GIRDER : SIZES AND ARRANGEMENT SHALL BE PROVIDED BY THE PUMP MANUFACTURER.
6. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.



WASTEWATER TREATMENT PROCESS FLOW DIAGRAM

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
STP 1
WASTEWATER
PROCESS FLOW DIAGRAM

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3341-A
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

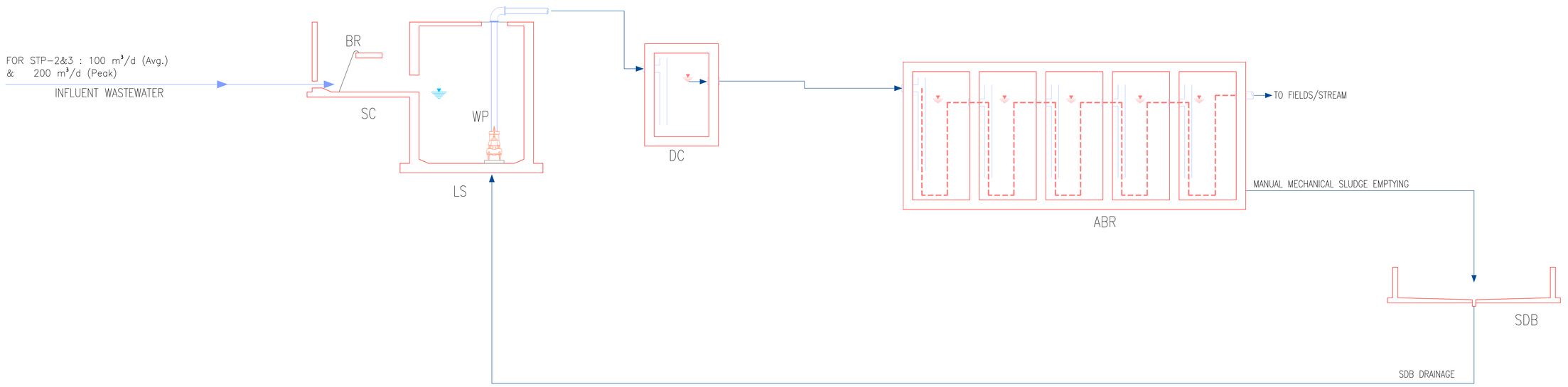
SEWAGE TREATMENT PLANT (STP2 & 3)

SC	SCREEN CHAMBER
LS	LIFT STATION
DC	DISSIPATOR CHAMBER
ABR	ANAEROBIC BAFFLED REACTOR
SDB	SLUDGE DRYING BEDS
BR	BAR RACK
WP	WASTEWATER PUMP WITH FLOAT SWITCHES GUIDE RAIL AND LIFTING SETUP

TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE GENERAL NOTES.
3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LOCATION OF PUMPS (DISTANCE FROM THE WALL, AND CENTER TO CENTER DISTANCE) SHALL BE RECHECKED WITH THE PUMP MANUFACTURER'S REQUIREMENT.
5. STEEL GIRDER : SIZES AND ARRANGEMENT SHALL BE PROVIDED BY THE PUMP MANUFACTURER.
6. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.



WASTEWATER TREATMENT PROCESS FLOW DIAGRAM

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
STP 2 & 3
WASTEWATER
PROCESS FLOW DIAGRAM

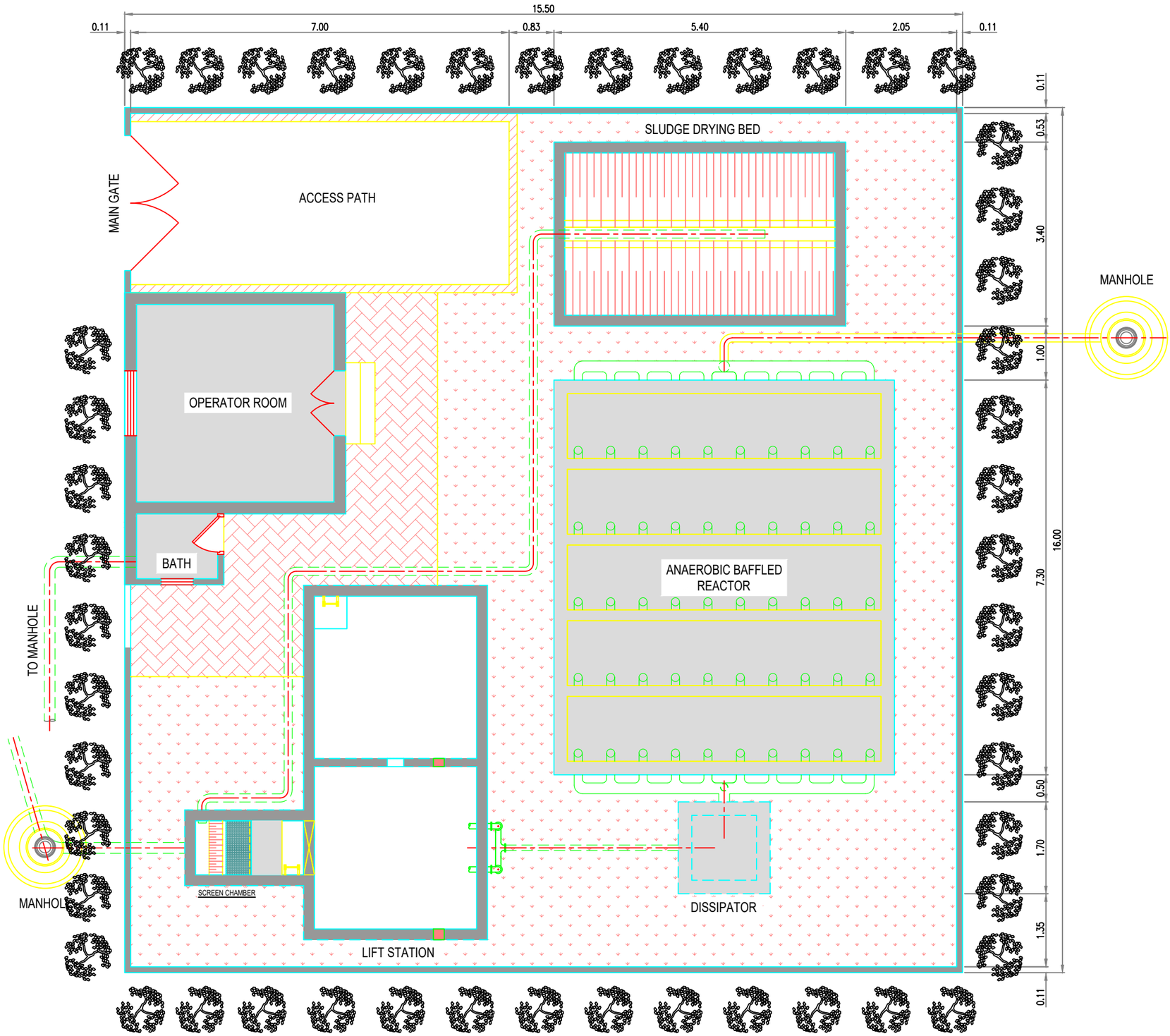
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	N.T.S
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3341-AA
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE GENERAL NOTES.
3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.



SCALE:-

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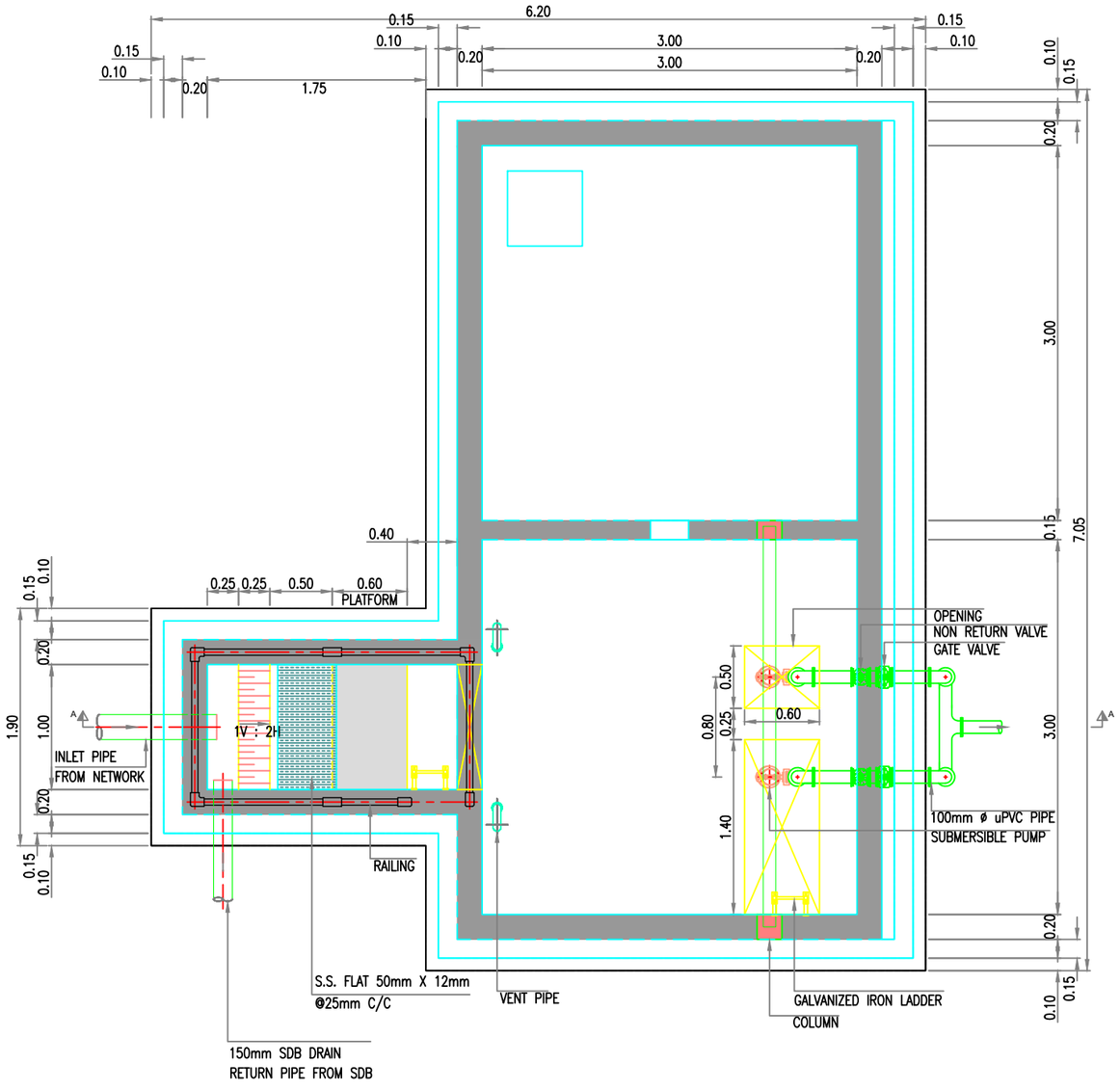
CLIENT: PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE: JAMRUD STP 2 & 3 LAYOUT PLAN	Designed By: Dr. ASFAHAN ALI	Date: SEP 2026		
				Drawn By: NAEEM BAKHSH	Scale: AS SHOWN		
				Checked By: RABEEA REHMAN	Drawing No: KPR/SS/KHD/JAM-3341-BB		
				Approved By: RABEEA REHMAN			

No.	Revision	By	Date

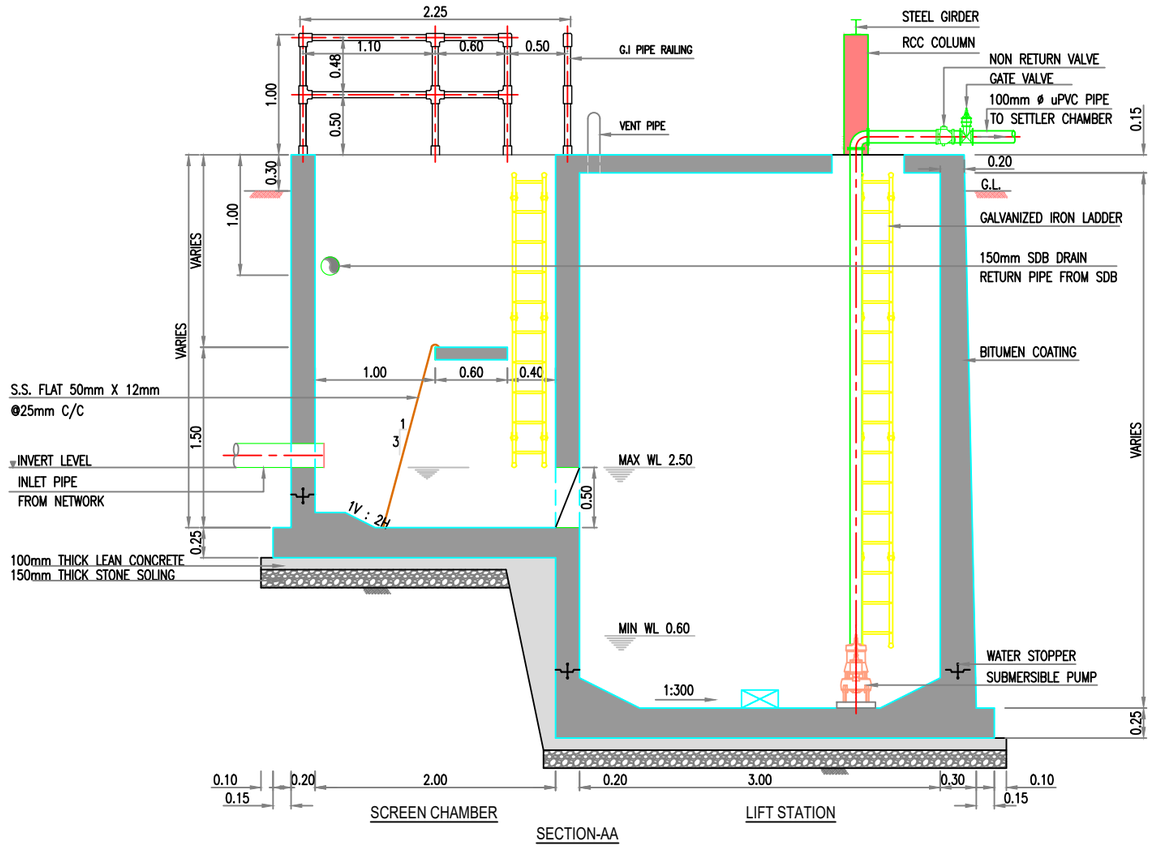
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE GENERAL NOTES.
3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LOCATION OF PUMPS (DISTANCE FROM THE WALL, AND CENTER TO CENTER DISTANCE) SHALL BE RECHECKED WITH THE PUMP MANUFACTURER'S REQUIREMENT.
5. STEEL GIRDER : SIZES AND ARRANGEMENT SHALL BE PROVIDED BY THE PUMP MANUFACTURER.
6. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.



SCREEN CHAMBER PLAN LIFT STATION



SECTION-AA

SCREEN CHAMBER LIFT STATION

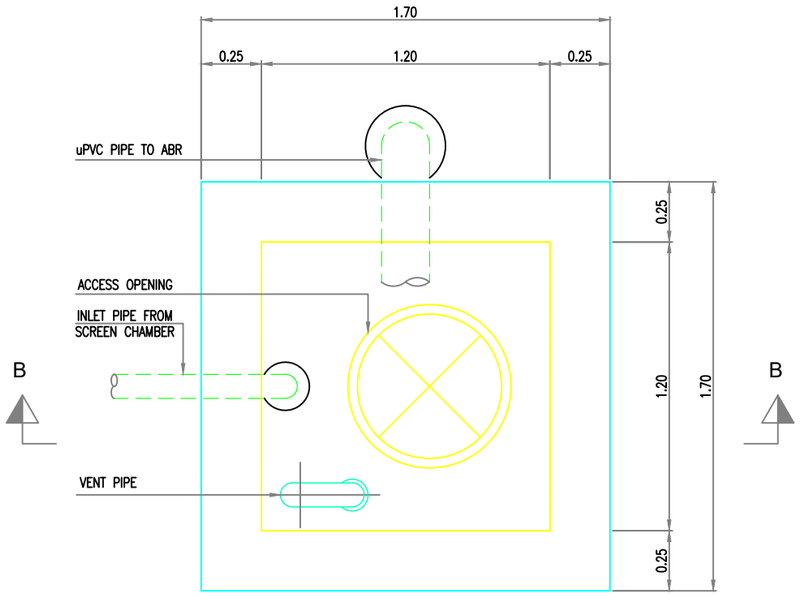
SCALE :-
0 0.5 1.0 1.5 2.0 m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 SCREEN CHAMBER AND LIFT STATION PLAN & SECTION	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : AS SHOWN Drawing No : KPR/SS/KHD/JAM-3341-CC	No. / Revision / By / Date

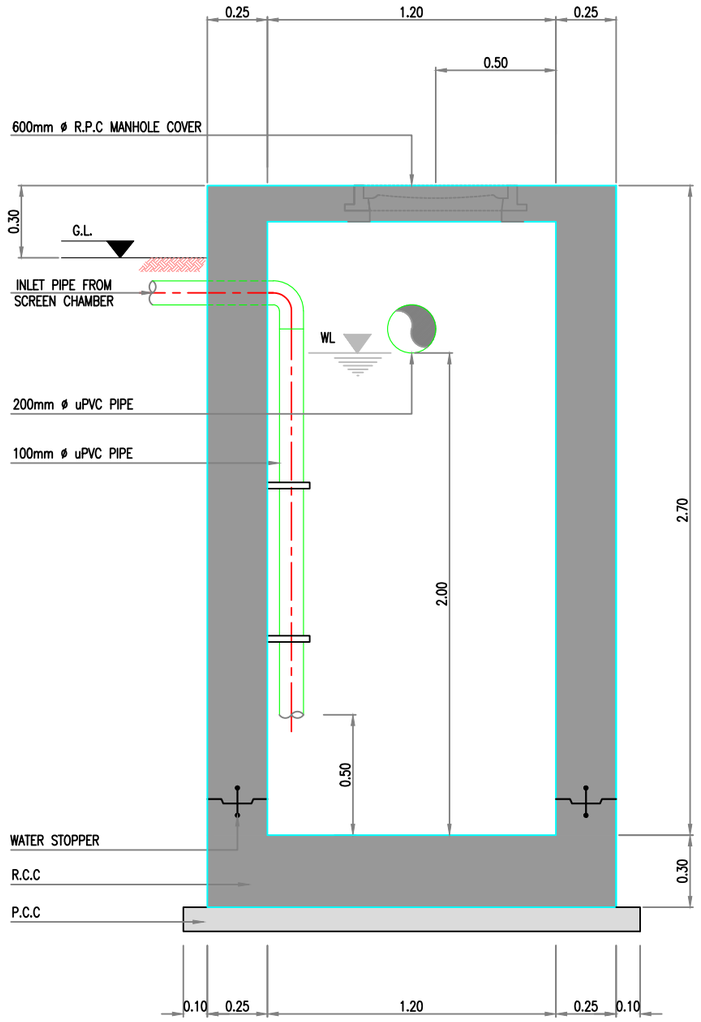
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
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PLAN



SECTION - BB

SCALE :-

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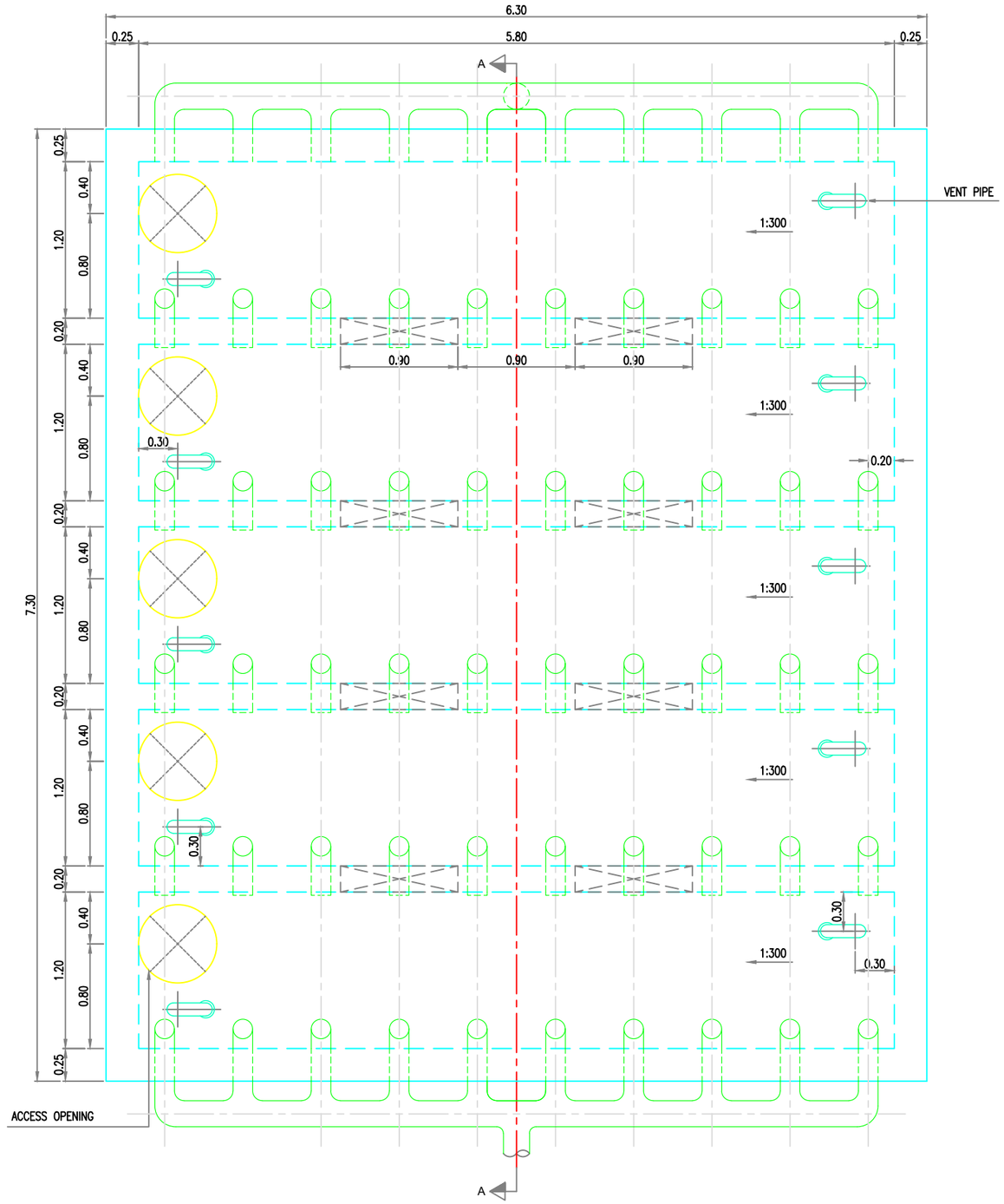
CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 DISSIPATOR CHAMBER (PLAN & SECTION)	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026		
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3341-DD		
				Approved By : RABEEA REHMAN			

No.	Revision	By	Date

TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
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PLAN

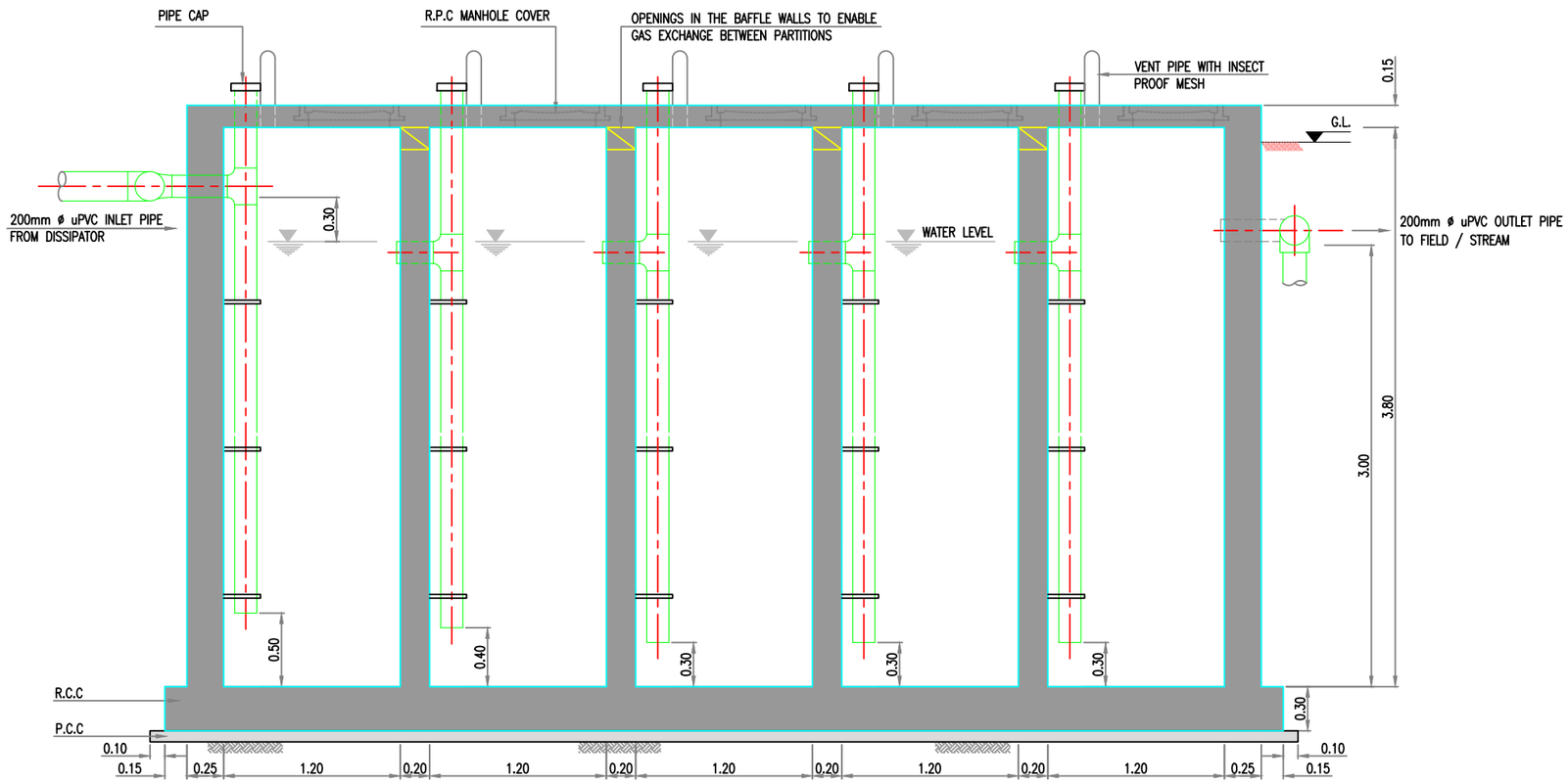
SCALE :-
0 0.5 1 2
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 ANAEROBIC BAFFLED REACTOR PLAN	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3341-EE		
				Approved By : RABEEA REHMAN			

TENDER DRAWING

NOTES:

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SECTION - AA

SCALE :-

0 0.5 1 2

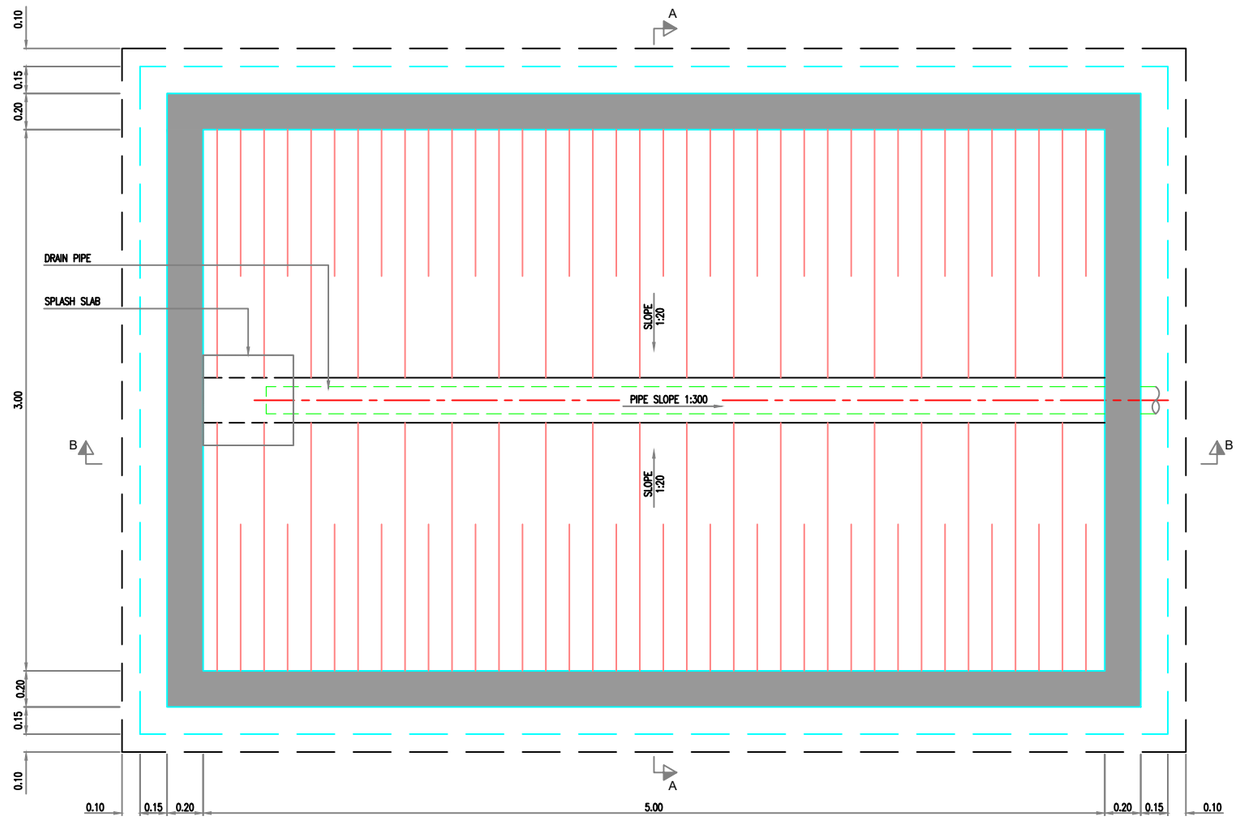
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 ANAEROBIC BAFFLED REACTOR SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3341-FF		
				Approved By : RABEEA REHMAN			

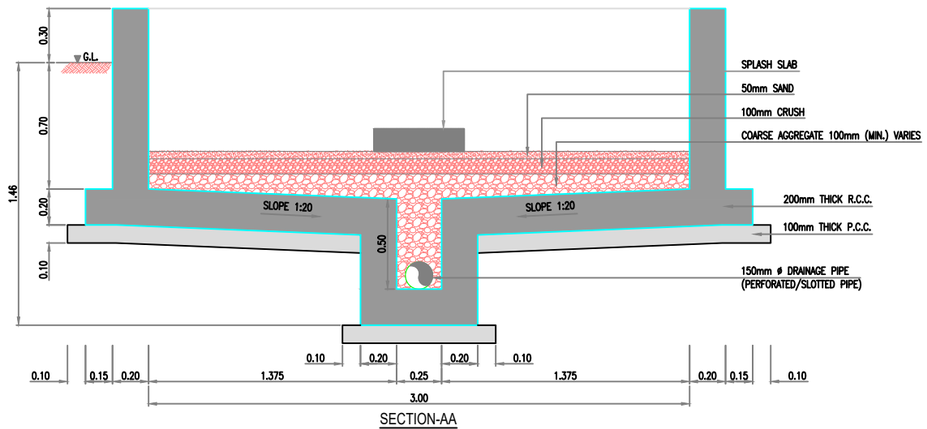
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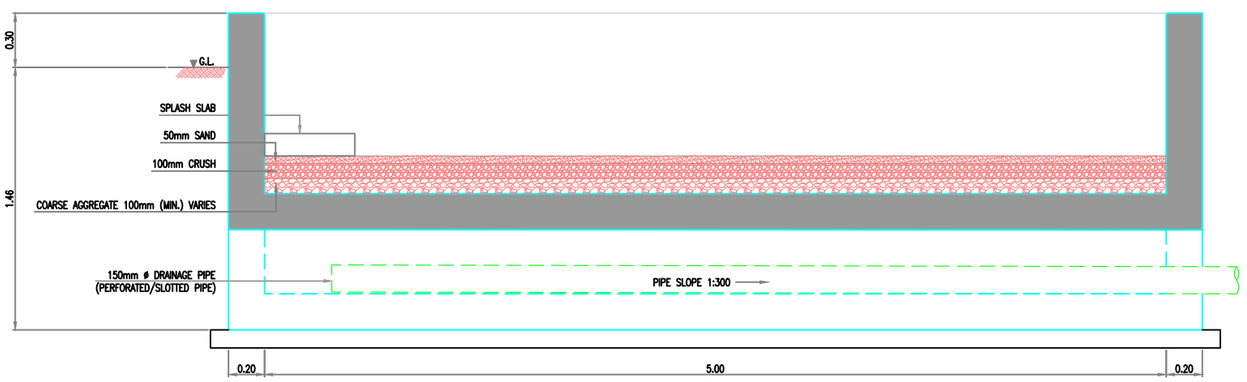
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PLAN



SECTION-AA



SECTION-BB

SCALE :-

0 0.5 1 m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

JAMRUD
STP 2 & 3
SLUDGE DRYING BED
PLAN AND SECTIONS

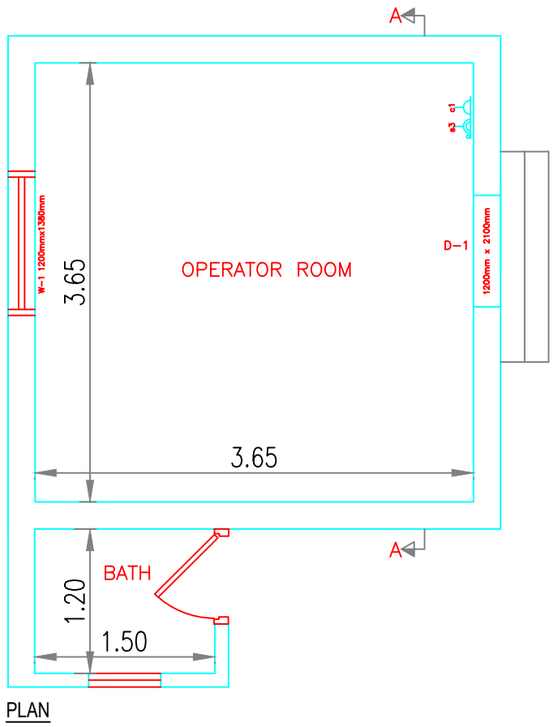
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3341-GG
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

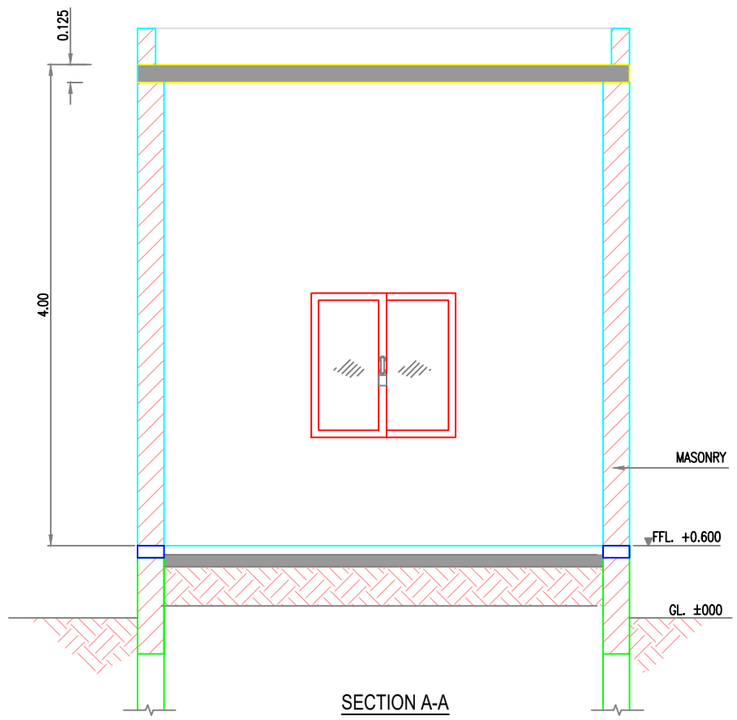
TENDER DRAWING

NOTES:

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3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.



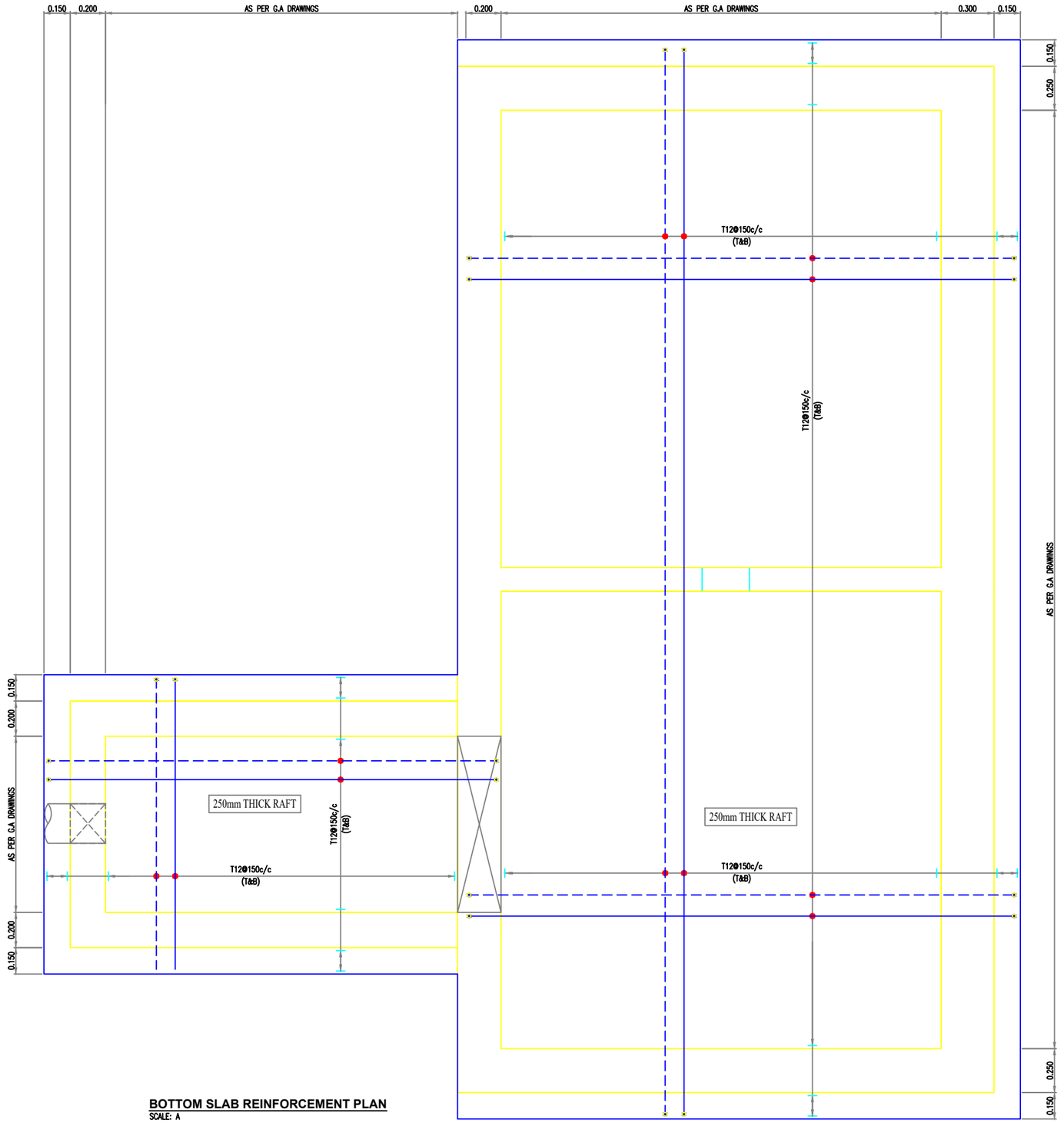
PLAN



SECTION A-A

SCALE :-
0 0.5 1 2
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 OPERATOR ROOM PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3341-HH		
				Approved By : RABEEA REHMAN			



BOTTOM SLAB REINFORCEMENT PLAN
SCALE: A

TENDER DRAWING

NOTES :

1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH:
   DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H
4. FOUNDATION IS DESIGNED FOR BEARING PRESSURE OF 2.8 TSF. CONTRACTOR SHALL VERIFY AND RECONFIRM SOIL CHARACTERISTICS INCLUDING BEARING CAPACITY THROUGH SOIL INVESTIGATION BEFORE EXECUTION OF WORK AT SITE. DESIGN MAY REVISED IF ANY VARIATION AND OBSERVATION FOUND IN SOIL INVESTIGATION.
5. MINIMUM COMPRESSIVE CYLINDRICAL STRENGTH (f'c) OF CONCRETE AT 28 DAYS SHALL BE AT LEAST 4000psi. FOR ALL STRUCTURAL ELEMENT.
6. REINFORCING STEEL SHALL BE CONFIRMING WITH ASTM-615 GRADE 420 DEFORMED HIGH YIELD STEEL BARS, HAVING MINIMUM YIELD STRENGTH 2 OF
   fy = 420MPa (N/mm²)

SCALE A:-
0 0.2 0.4 0.6 0.8
m

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT
KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV
Ultimate Engineering Consultants
New Era of Development

PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
STP 2 & 3
SCREEN CHAMBER & LIFT STATION BOTTOM SLAB REINF. PLAN

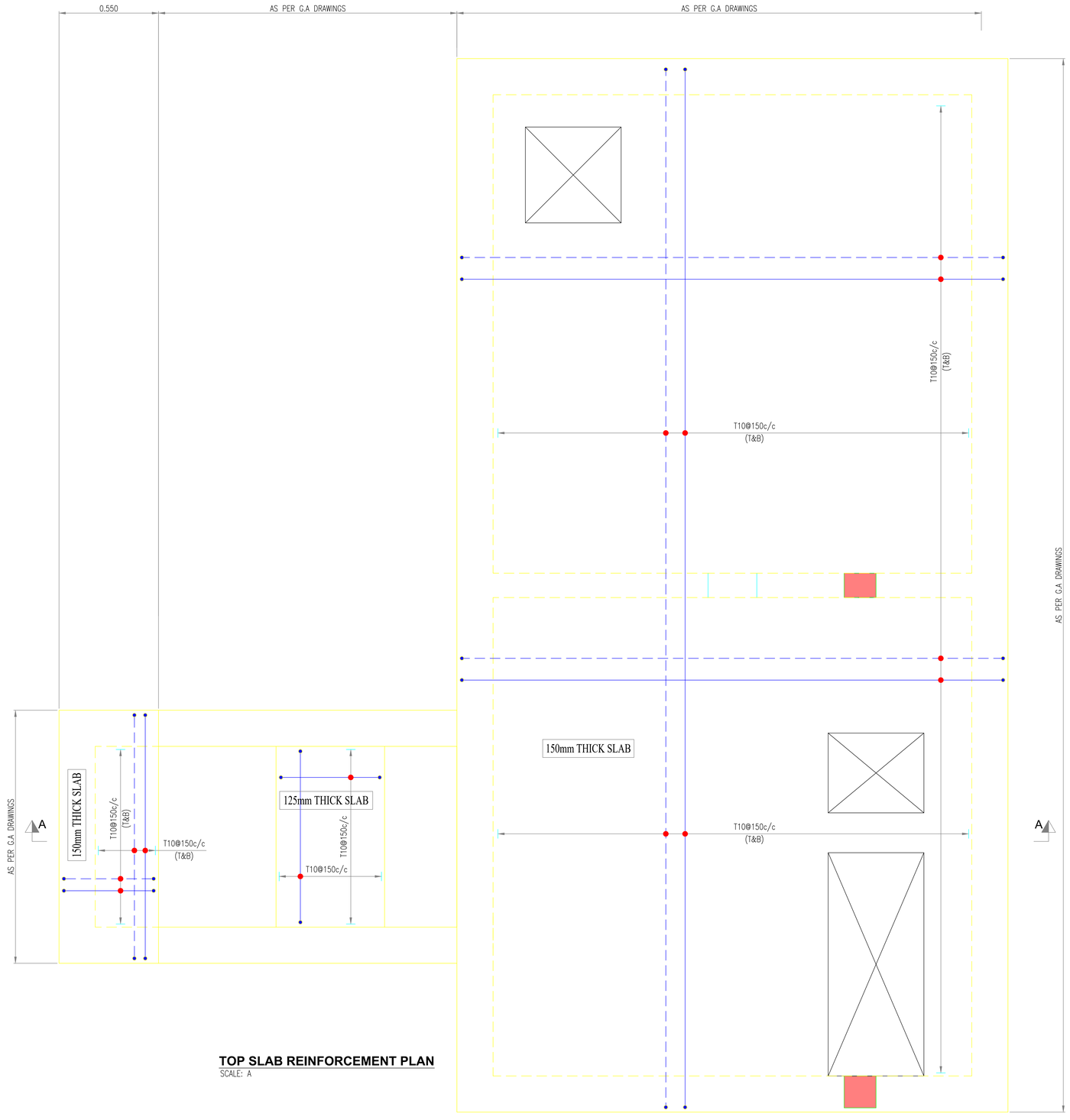
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/WSS/KHD/JAM-3346-AA

No.	Revision	By	Date

TENDER DRAWING

NOTES :

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2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



TOP SLAB REINFORCEMENT PLAN
SCALE: A

SCALE A:-
0 0.2 0.4 0.6 0.8
m

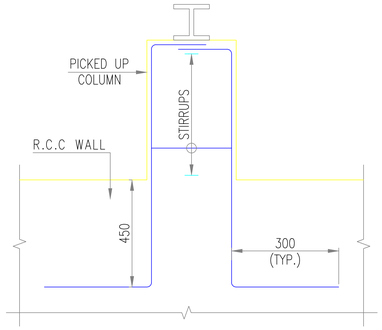
CLIENT :	PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA		
CONSULTANT:	Techno-Consult International JV Ultimate Engineering Consultants New Era of Development		
PROJECT:	KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA		
DRAWING TITLE :	JAMRUD STP 2 & 3 SCREEN CHAMBER & LIFT STATION TOP SLAB REINF. PLAN		
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/WSS/KHD/JAM-3346-BB
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

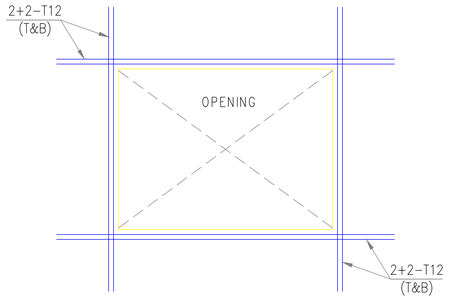
TENDER DRAWING

NOTES :

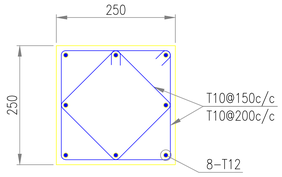
1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
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3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



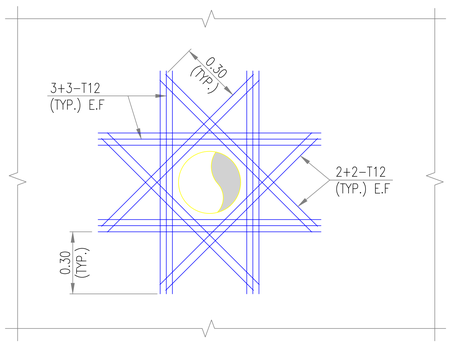
TYPICAL PICKED UP COLUMN REINF. DETAIL
SCALE: NTS



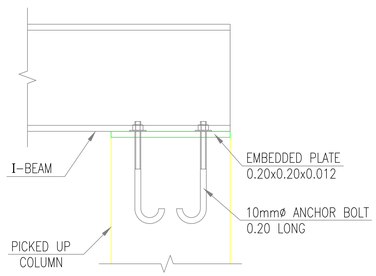
TYPICAL OPENING REINF. DETAIL
SCALE: NTS



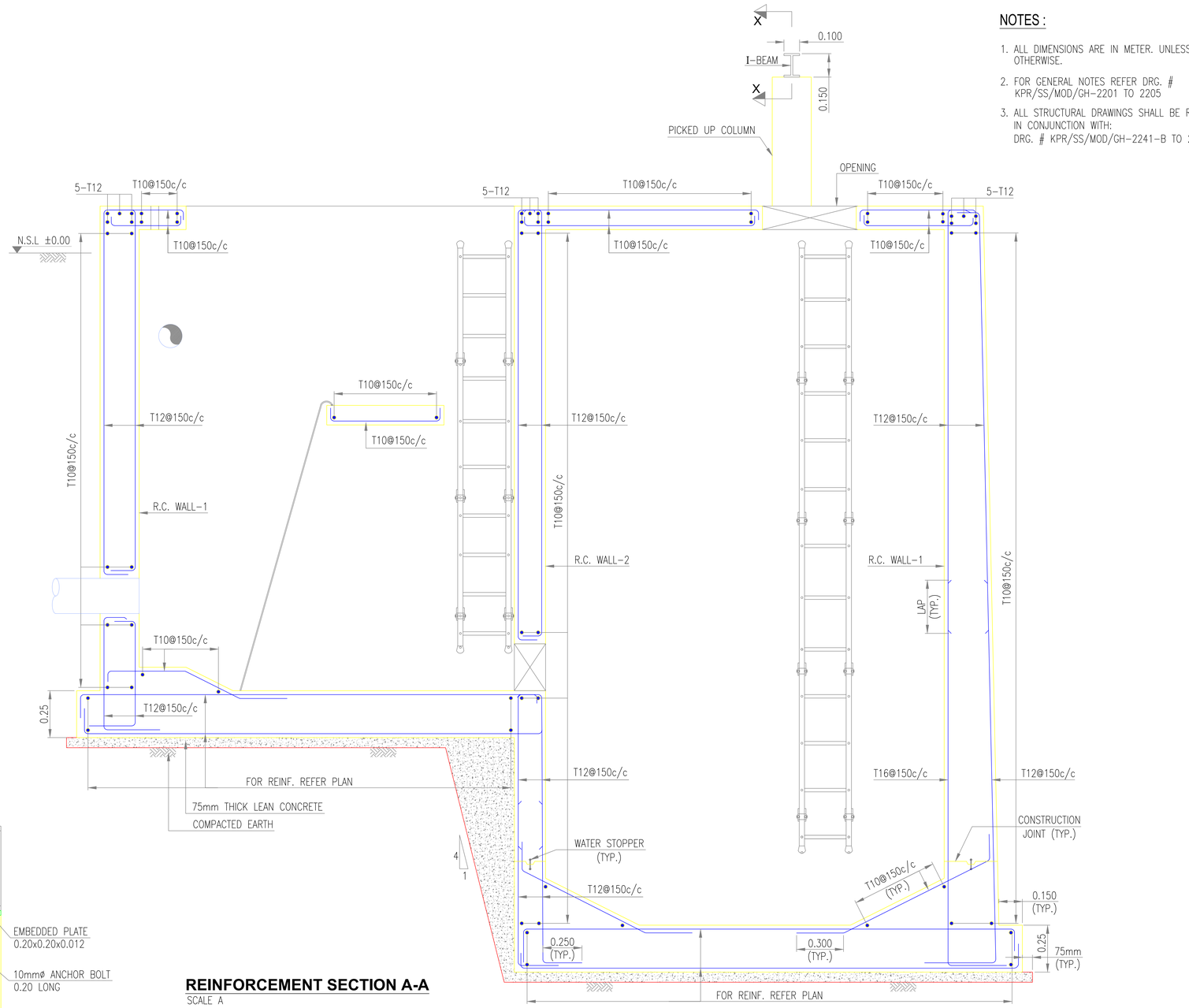
TYPICAL SECTION OF C-1
SCALE: NTS



TYPICAL PIPE OPENING REINF. DETAIL
SCALE: NTS



SECTION X-X
SCALE: NTS



REINFORCEMENT SECTION A-A
SCALE A

SCALE A:-
0 0.3 0.6 0.3 0.6
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 SCREEN CHAMBER & LIFT STATION REINF. SECTION

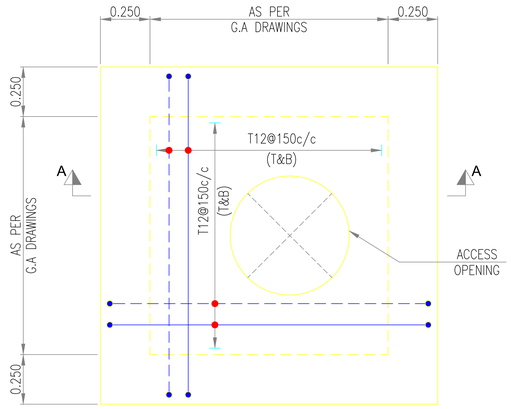
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/WSS/KHD/JAM-3346-CC
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

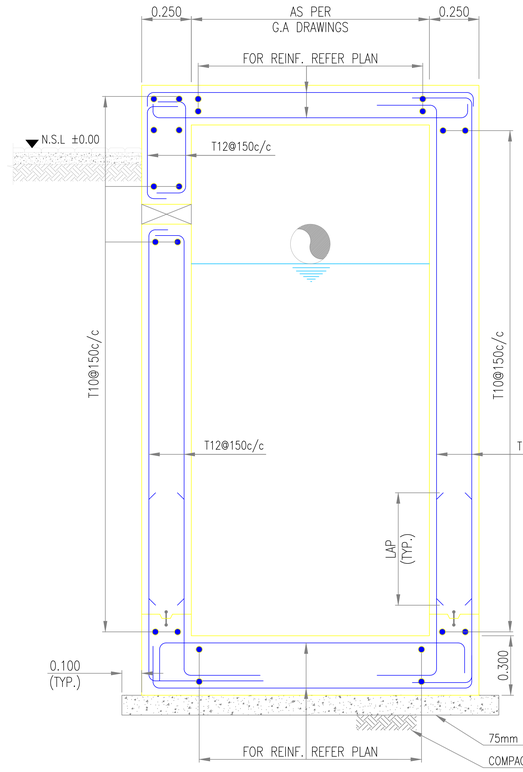
TENDER DRAWING

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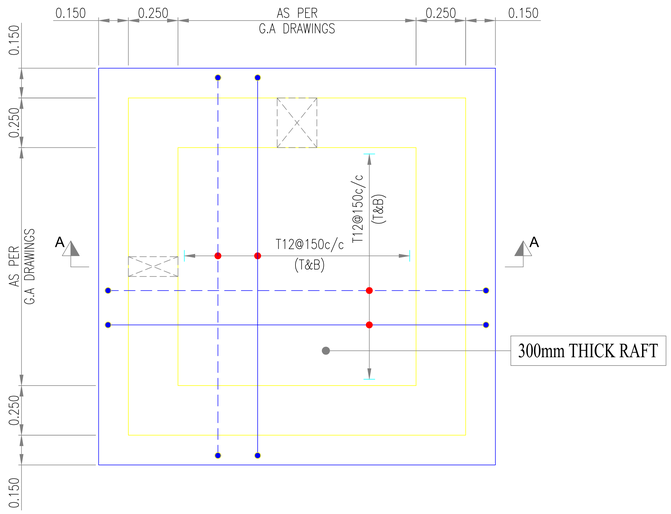
1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



TOP SLAB REINFORCEMENT PLAN
SCALE: A



REINFORCEMENT SECTION A-A
SCALE: A



BOTTOM SLAB REINFORCEMENT PLAN
SCALE: A

SCALE A:-
0 0.3 0.6 0.3 0.6
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 DISSIPATOR REINF. PLANS AND SECTION

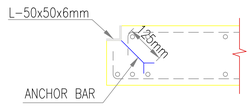
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/WSS/KHD/JAM-3346-DD

No.	Revision	By	Date

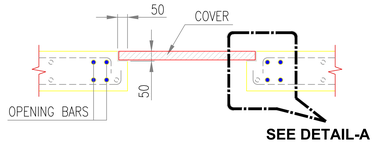
TENDER DRAWING

NOTES :

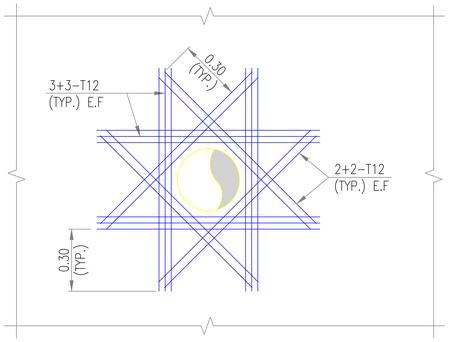
1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



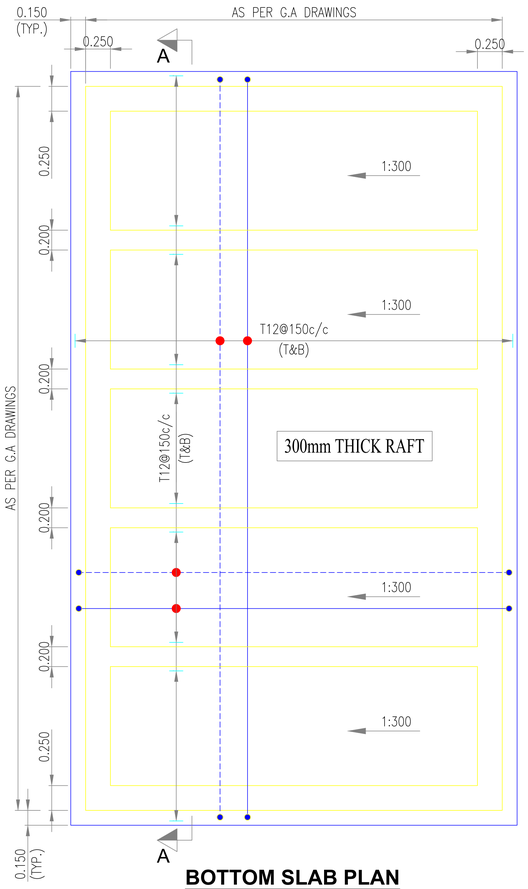
DETAIL-A
NTS



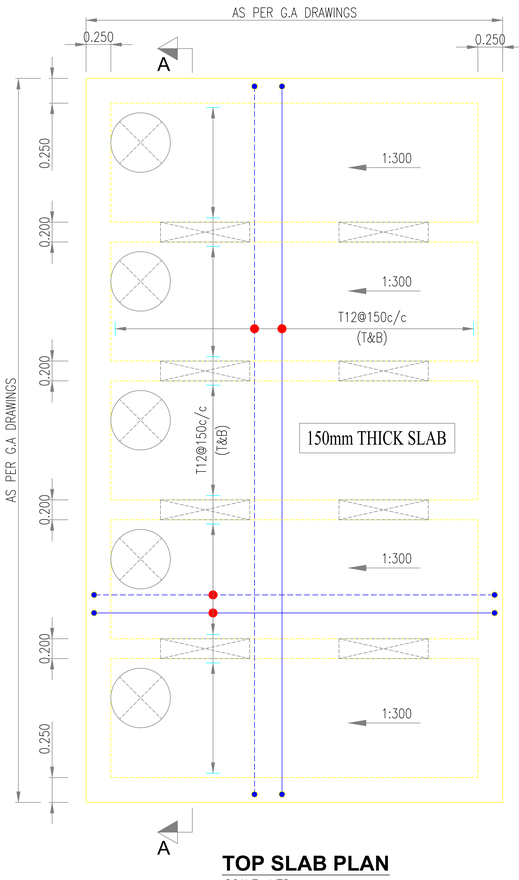
TYPICAL MANHOLE DETAILS
SCALE NTS



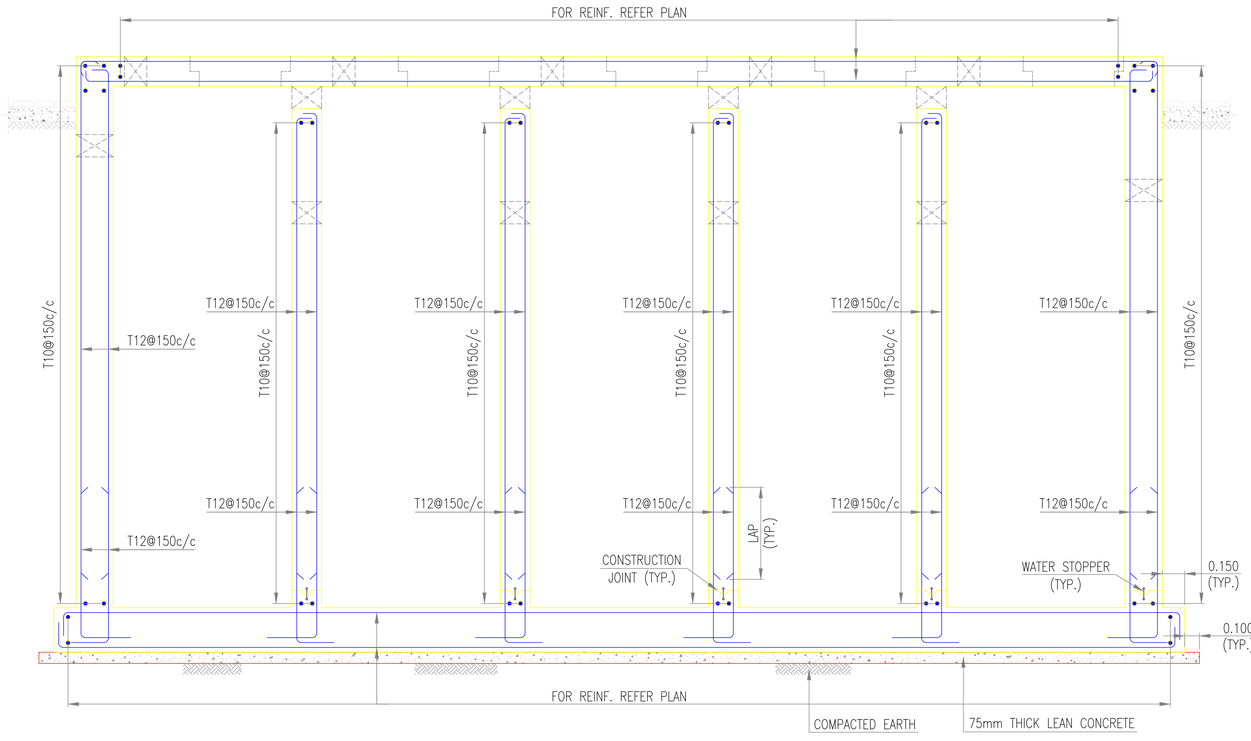
TYPICAL PIPE OPENING REINF. DETAIL
SCALE: NTS



BOTTOM SLAB PLAN
SCALE: NTS



TOP SLAB PLAN
SCALE: NTS



SECTION A-A
SCALE: A

SCALE A:-
0 0.5 1 1.5
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 ANAEROBIC BAFFLED REACTOR REINF. PLAN AND SECTION

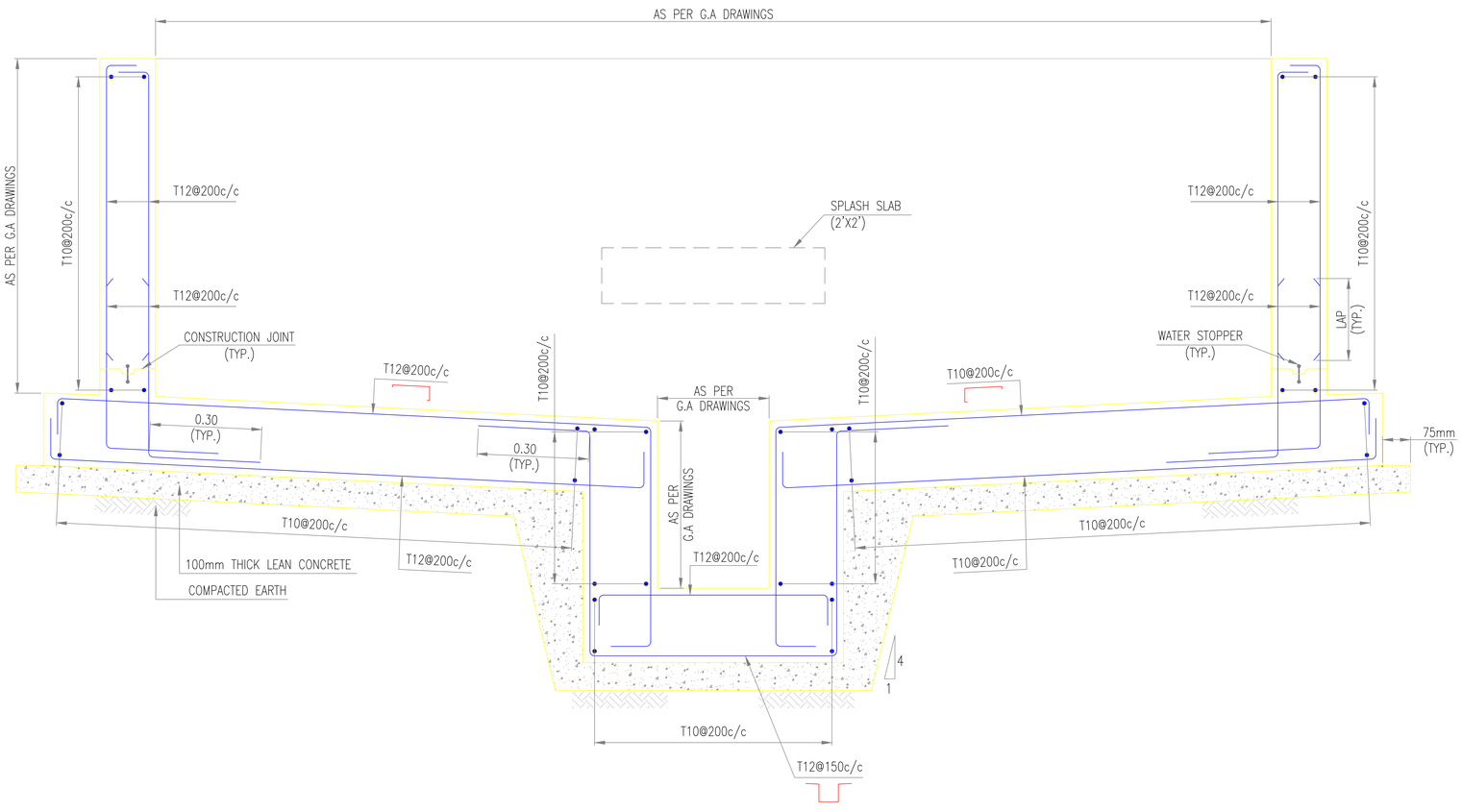
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/WSS/KHD/JAM-3346-EE
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

TENDER DRAWING

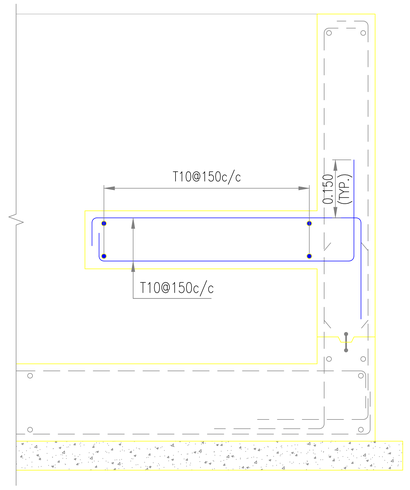
NOTES :

1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



REINFORCEMENT DETAIL OF SLUDGE DRYING BED

SCALE: A



TYPICAL SECTION OF SPLASH SLAB

SCALE: A

SCALE A:-

0 0.25 0.5 0.75

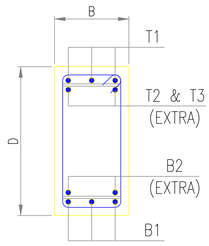
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 SLUDGE DRYING BED REINFORCEMENT SECTIONS	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : SHUJA UDDIN	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No :		
				Approved By : RABEEA REHMAN	KPR/WSS/KHD/JAM-3346-FF		

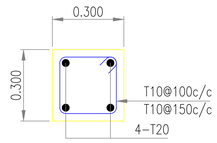
TENDER DRAWING

SCHEDULE OF FOOTINGS

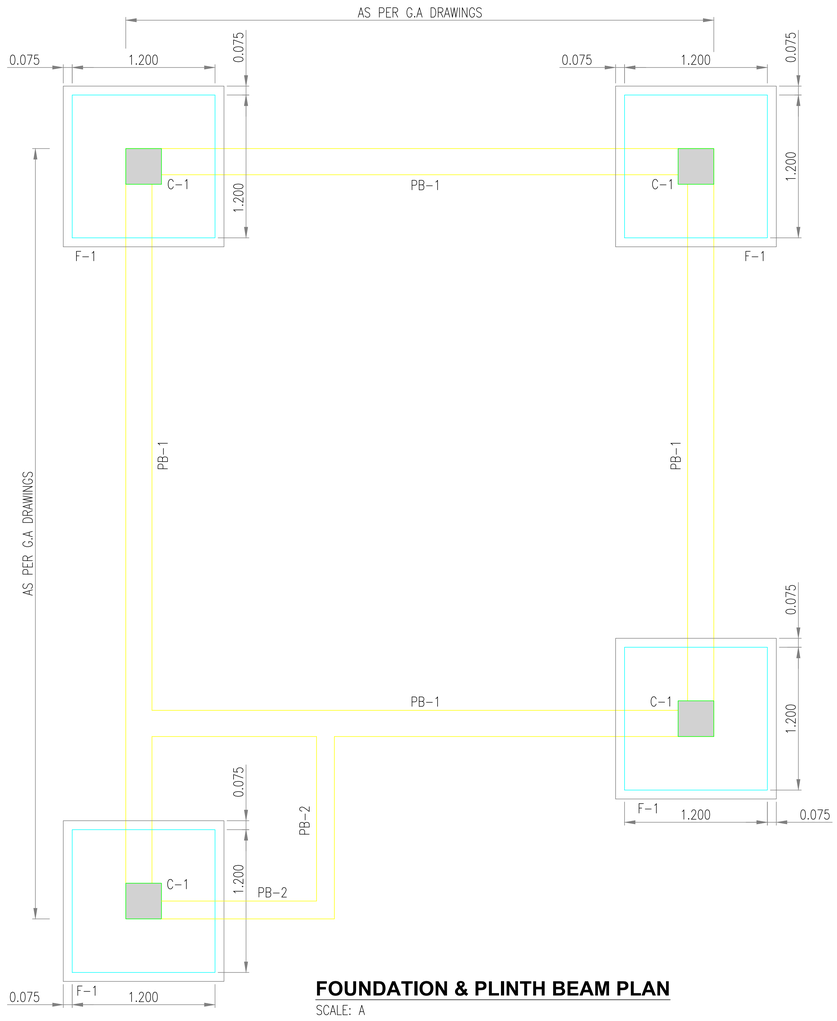
MARK	NO OF FOOTING	FOOTING SIZE		DEPTH	BOTTOM REINFORCEMENT		TOP REINFORCEMENT		REMARKS
		A	B	T	B-1	B-2	T-1	T-2	
F1	01	1.20	1.20	0.25	T10@125c/c	T10@125c/c	T10@125c/c	T10@125c/c	–



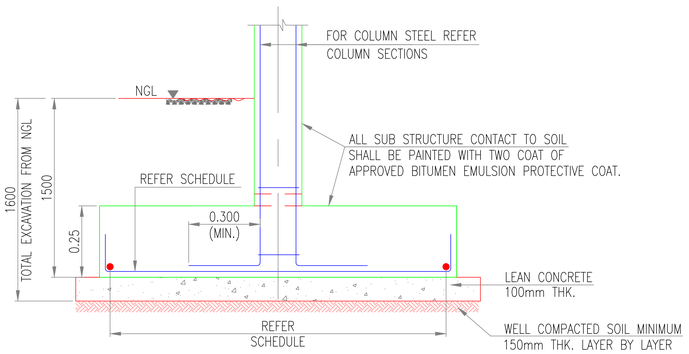
TYPICAL BEAM DETAIL
SCALE B



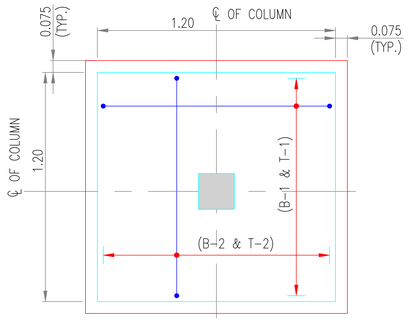
SECTION OF C-1
SCALE B



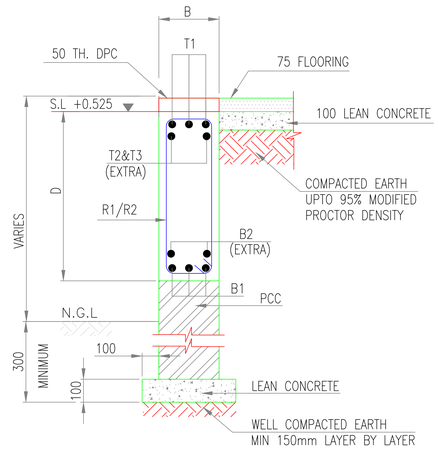
FOUNDATION & PLINTH BEAM PLAN
SCALE: A



TYP. ISOLATED FOOTING SECTION
SCALE B



PLAN OF FOOTING F1
SCALE A



TYPICAL SECTION OF EXTERNAL PLINTH BEAM
SCALE B

SCALE A:-
0 0.5 1 1.5 2 m

SCALE B:-
0 0.25 0.5 0.75 1 m

NOTES :

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3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
STP 2 & 3
FOUNDATION PLAN & COLUMN DETAILS OF OPERATOR ROOM

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/WSS/KHD/JAM-3346-GG
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

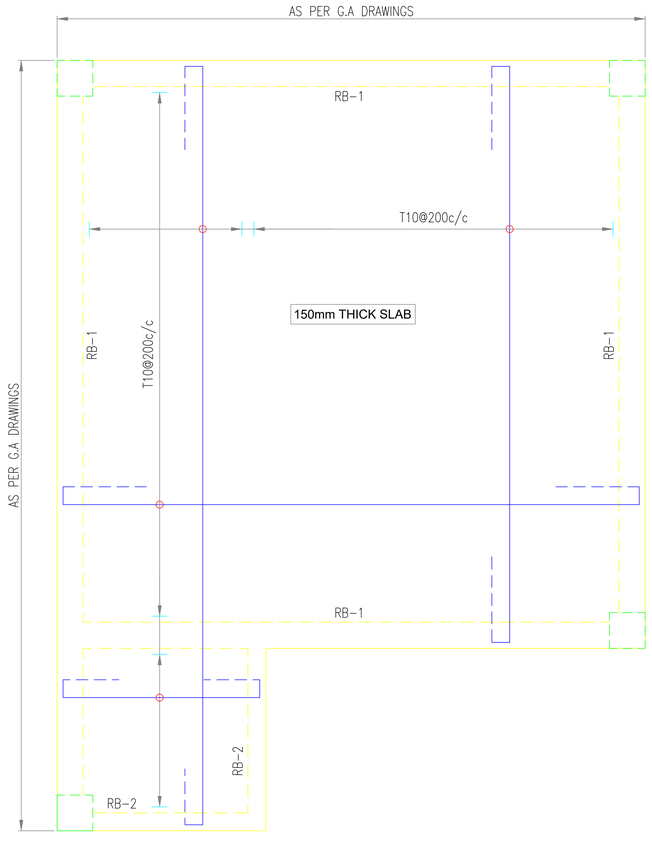
TENDER DRAWING

SCHEDULE OF BEAMS

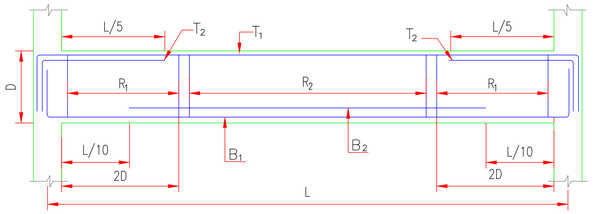
BEAM NO.	BEAM SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT			STIRRUPS		REMARKS
	B	D	B1	B2	T1	T2	T3	R1	R2	
PB-1	220	600	2-T16	–	2-T12	1-T12	–	T10@100c/c	T10@200c/c	
PB-2	150	600	2-T16	–	2-T12	1-T12	–	T10@100c/c	T10@200c/c	
RB-1	220	600	2-T12	–	2-T12	–	–	T10@100c/c	T10@200c/c	
RB-2	150	600	2-T12	–	2-T12	–	–	T10@100c/c	T10@200c/c	

NOTES :

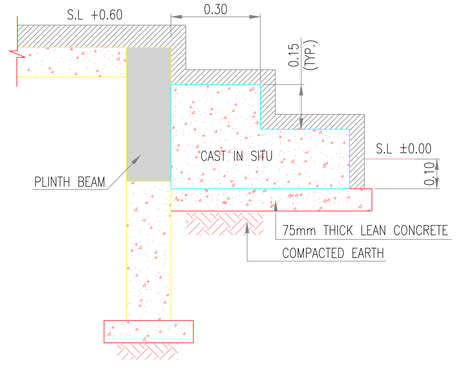
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2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



ROOF FRAMING PLAN
SCALE: A



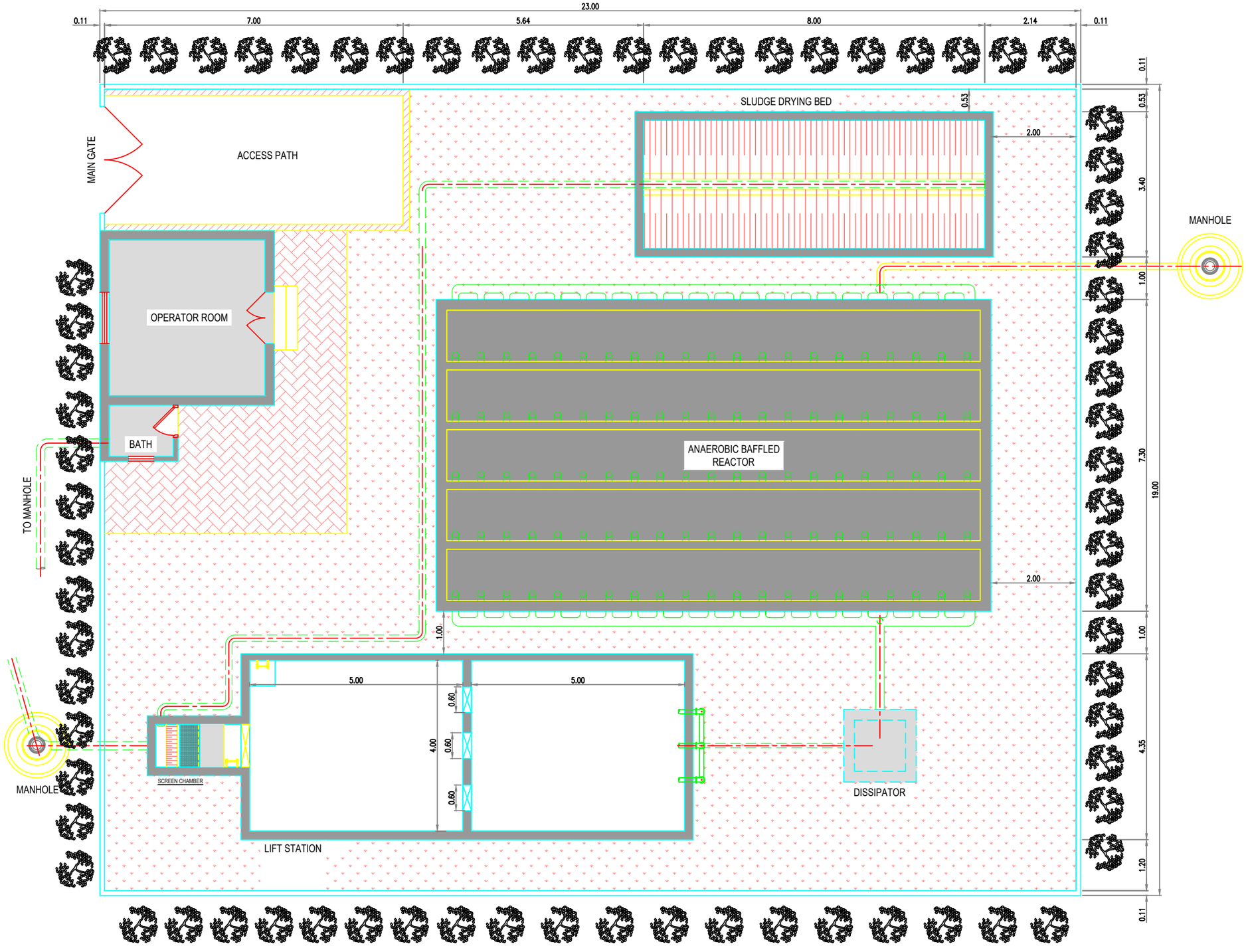
TYP. ELEV. OF BEAM (SINGLE SPAN)
NTS



TYPICAL STEPS DETAILS
SCALE NTS

SCALE A:-
0 0.5 1 1.5 2
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 2 & 3 ROOF FRAMING PLAN & BEAM DETAILS OF OPERATOR ROOM	Designed By : Dr. ASFAHAN ALI Drawn By : SHUJA UDDIN Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : AS SHOWN Drawing No : KPR/WSS/KHD/JAM-3346-HH	No. / Revision / By / Date	



LAYOUT PLAN

SCALE:-

0 1 2 3 4 m

TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE GENERAL NOTES.
3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

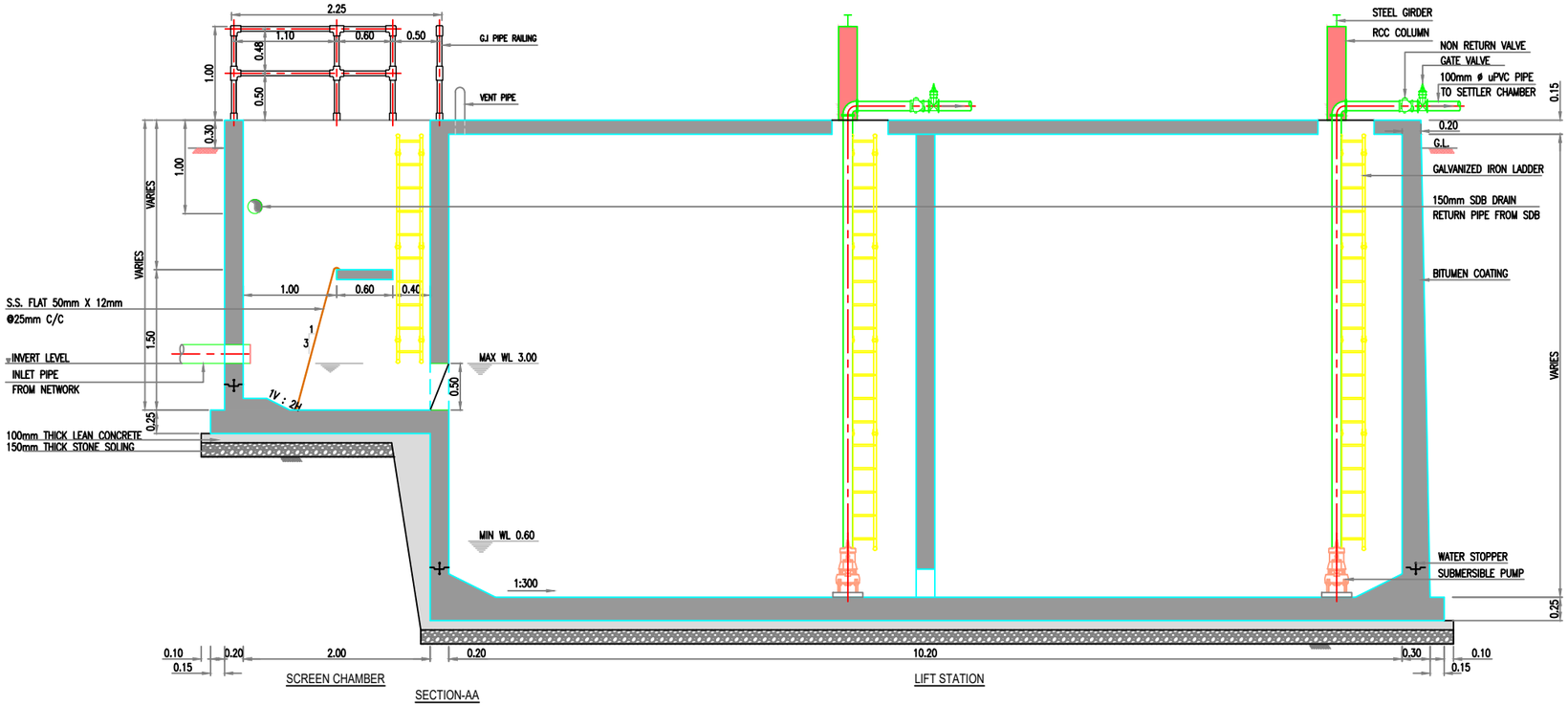
CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
STP 1
LAYOUT PLAN

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/SS/KHD/JAM-3341-B

No.	Revision	By	Date



TENDER DRAWING

NOTES:

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3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LOCATION OF PUMPS (DISTANCE FROM THE WALL, AND CENTER TO CENTER DISTANCE) SHALL BE RECHECKED WITH THE PUMP MANUFACTURER'S REQUIREMENT.
5. STEEL GIRDER : SIZES AND ARRANGEMENT SHALL BE PROVIDED BY THE PUMP MANUFACTURER.
6. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

JAMRUD
STP 1
SCREEN CHAMBER AND LIFT STATION
PLAN & SECTION

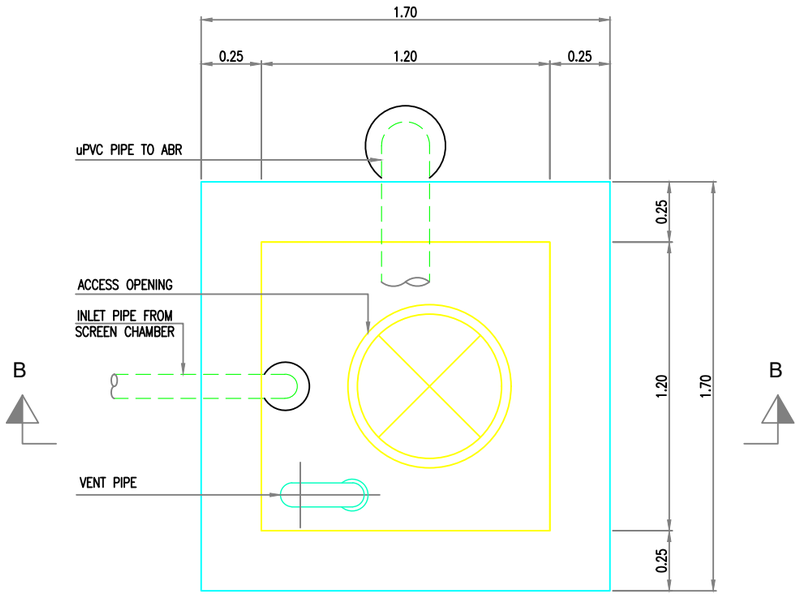
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/SS/KHD/JAM-3341-C

No.	Revision	By	Date

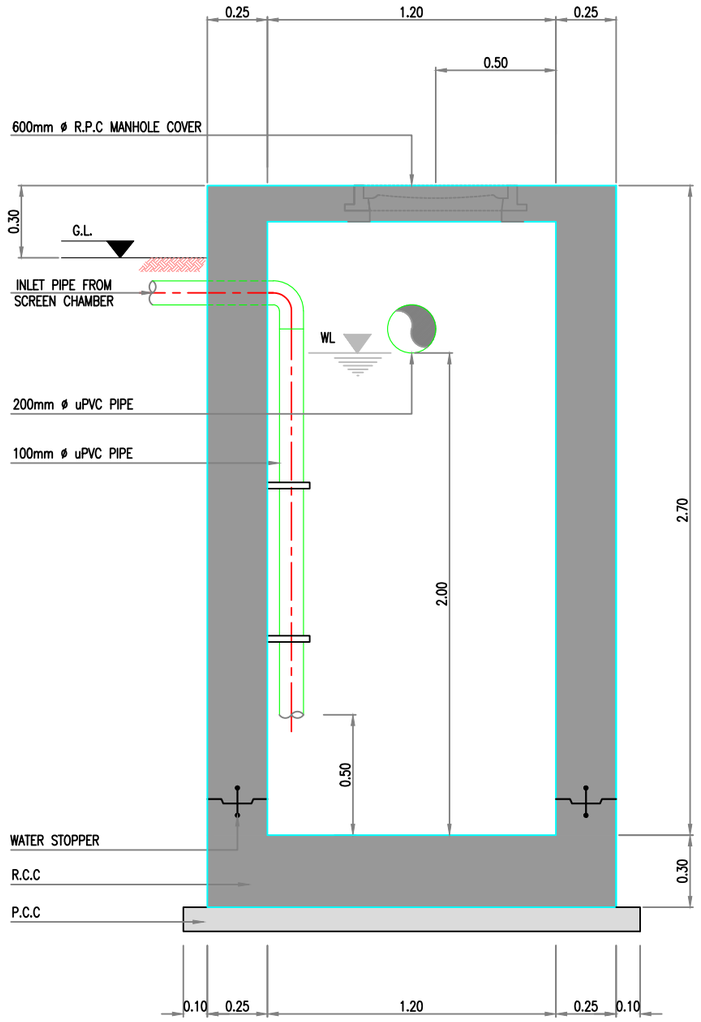
TENDER DRAWING

NOTES:

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PLAN



SECTION - BB

SCALE :-

0 0.25 0.50 0.75 1.0 m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 DISSIPATOR CHAMBER (PLAN & SECTION)	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026		
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3341-D		
				Approved By : RABEEA REHMAN			

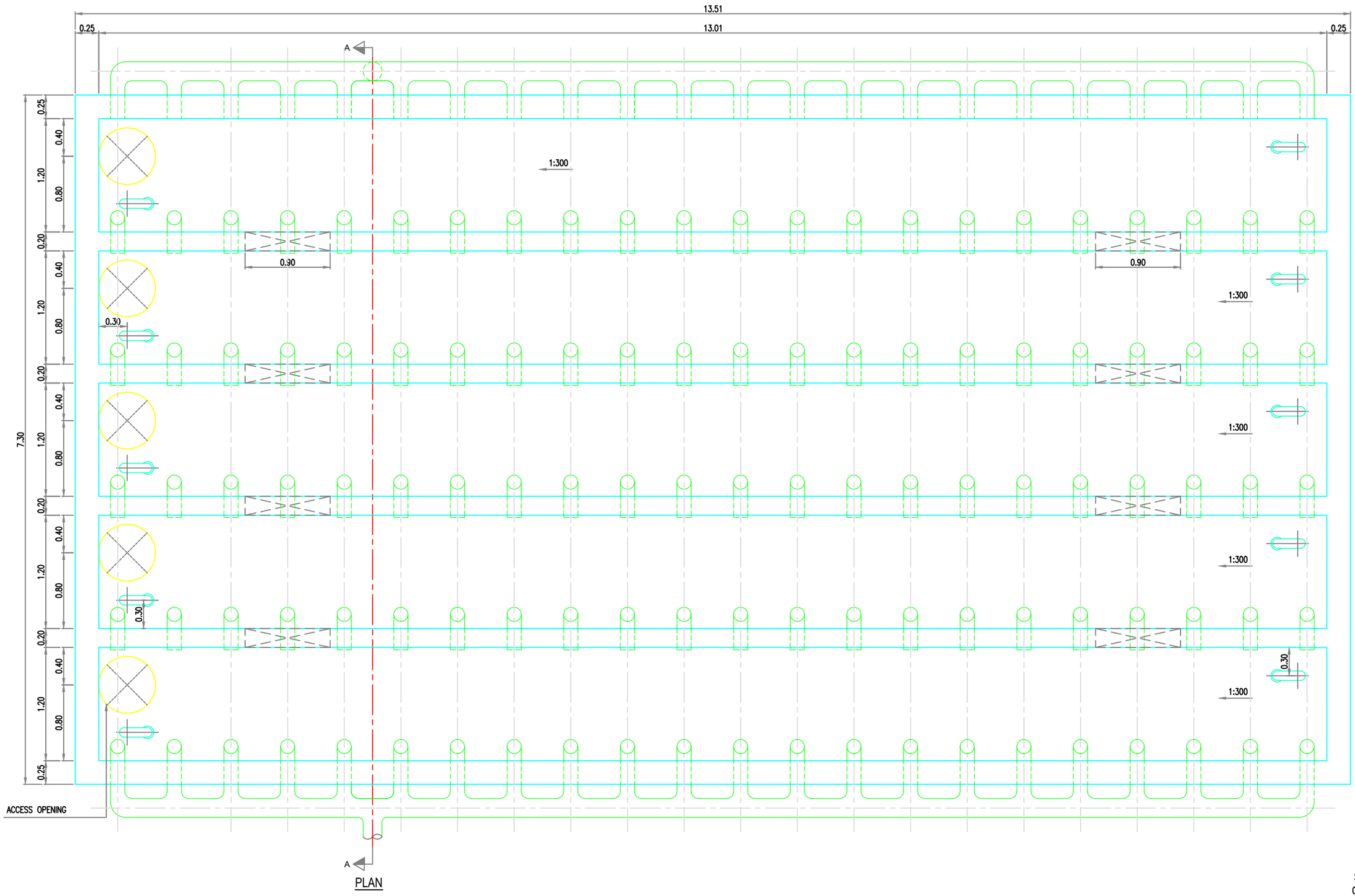
No.	Revision	By	Date

TENDER DRAWING

NOTES:

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VENT PIPE



PLAN

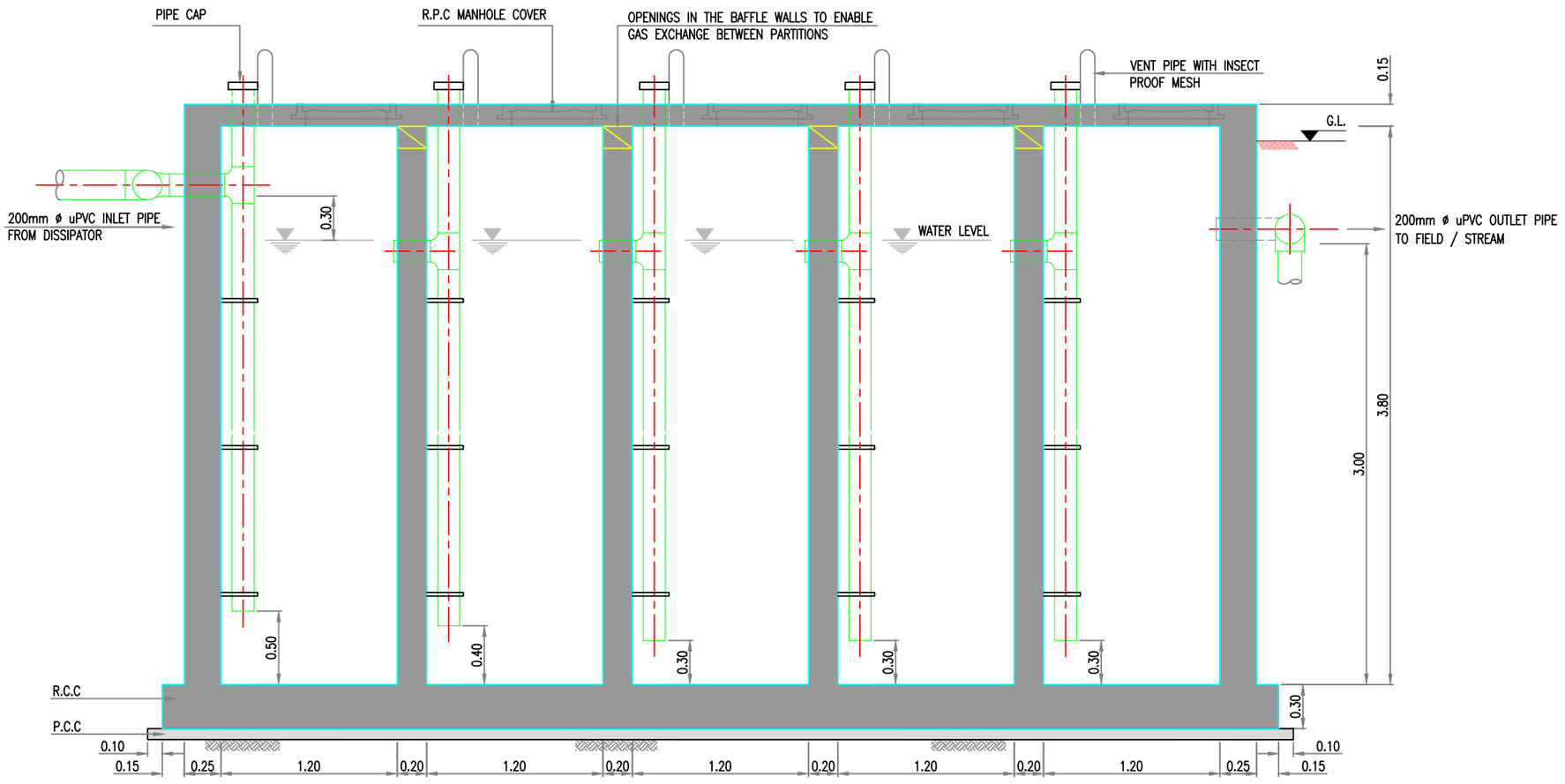
SCALE :-
0 0.5 1 2
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 ANAEROBIC BAFFLED REACTOR PLAN	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3341-E		
				Approved By : RABEEA REHMAN			

TENDER DRAWING

NOTES:

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SECTION - AA

SCALE :-

0 0.5 1 2

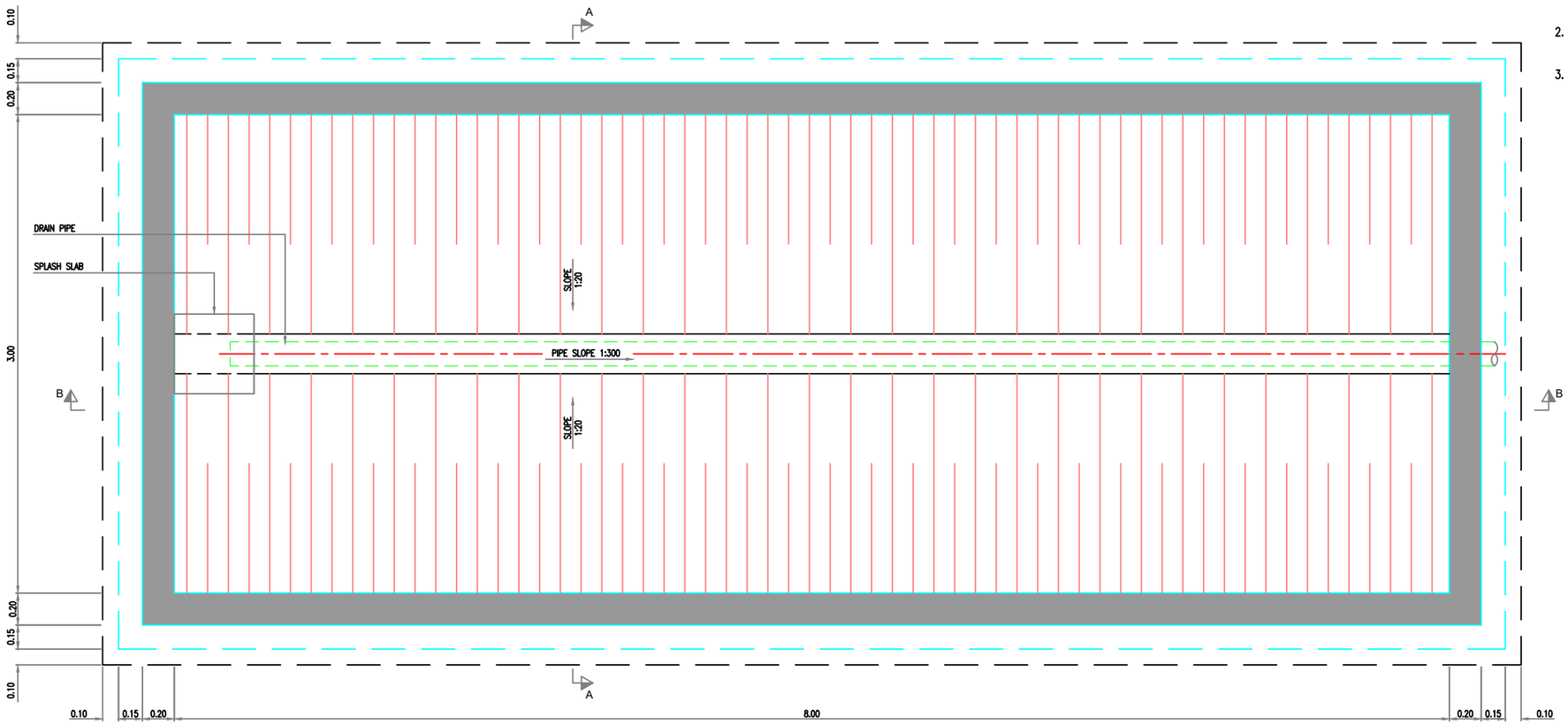
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 ANAEROBIC BAFFLED REACTOR SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3341-F		
				Approved By : RABEEA REHMAN			

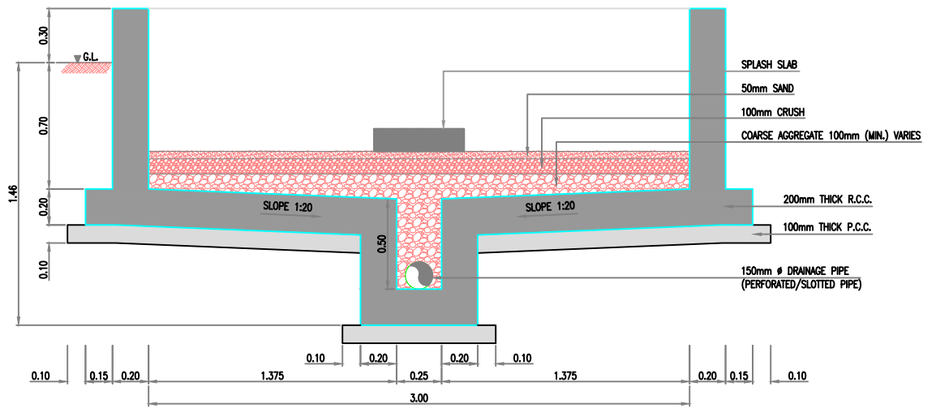
TENDER DRAWING

NOTES:

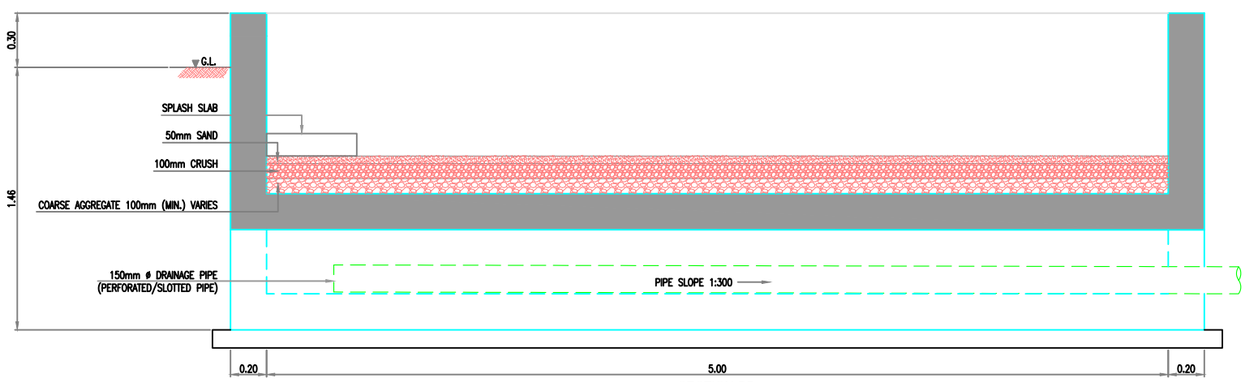
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PLAN



SECTION-AA



SECTION-BB

SCALE :-

0 0.5 1 m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

JAMRUD
STP 1
SLUDGE DRYING BED
PLAN AND SECTIONS

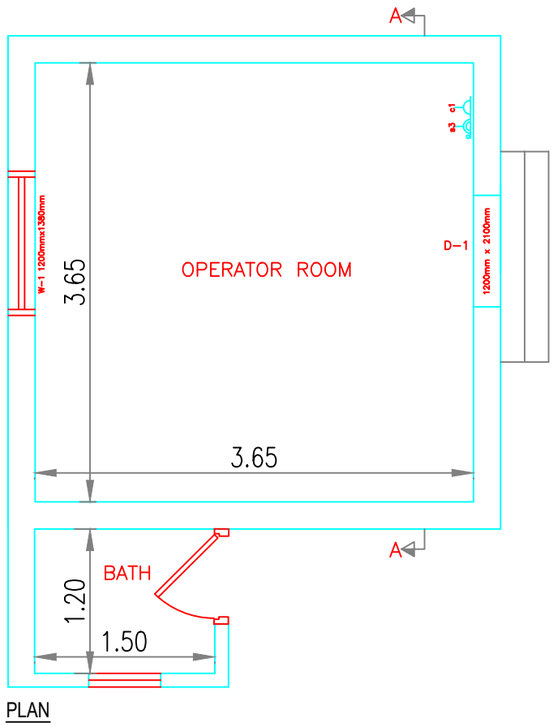
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/SS/KHD/JAM-3341-G

No.	Revision	By	Date

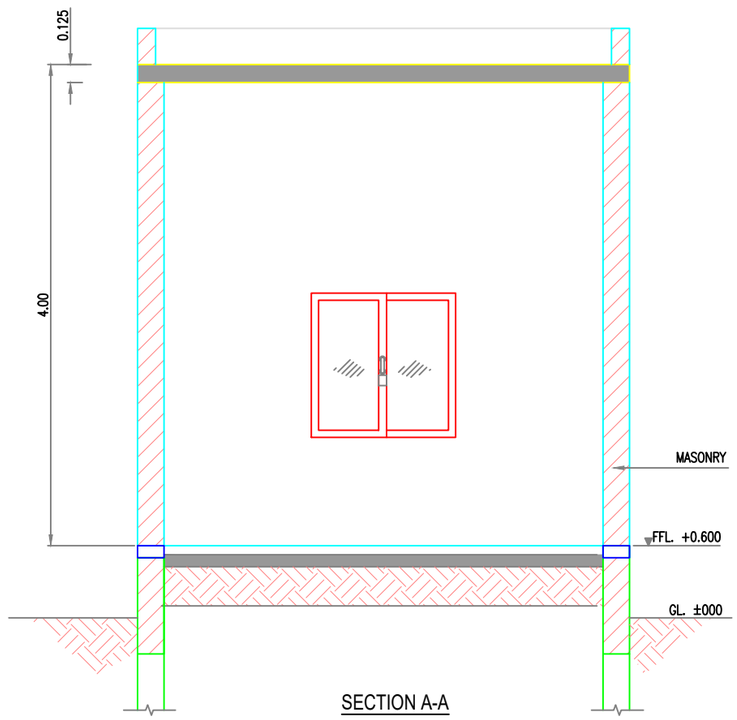
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE GENERAL NOTES.
3. FOR MECHANICAL AND ELECTRICAL ITEMS CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL.
4. LAYOUT, ORIENTATION AND GROUND ELEVATION OF STP AND RELATED STRUCTURES SHALL BE FINALIZED AS PER SITE CONDITIONS (LAND AVAILABILITY, V.L.D., AND TERRAIN), UNDER THE INSTRUCTIONS OF THE ENGINEER.



PLAN



SECTION A-A

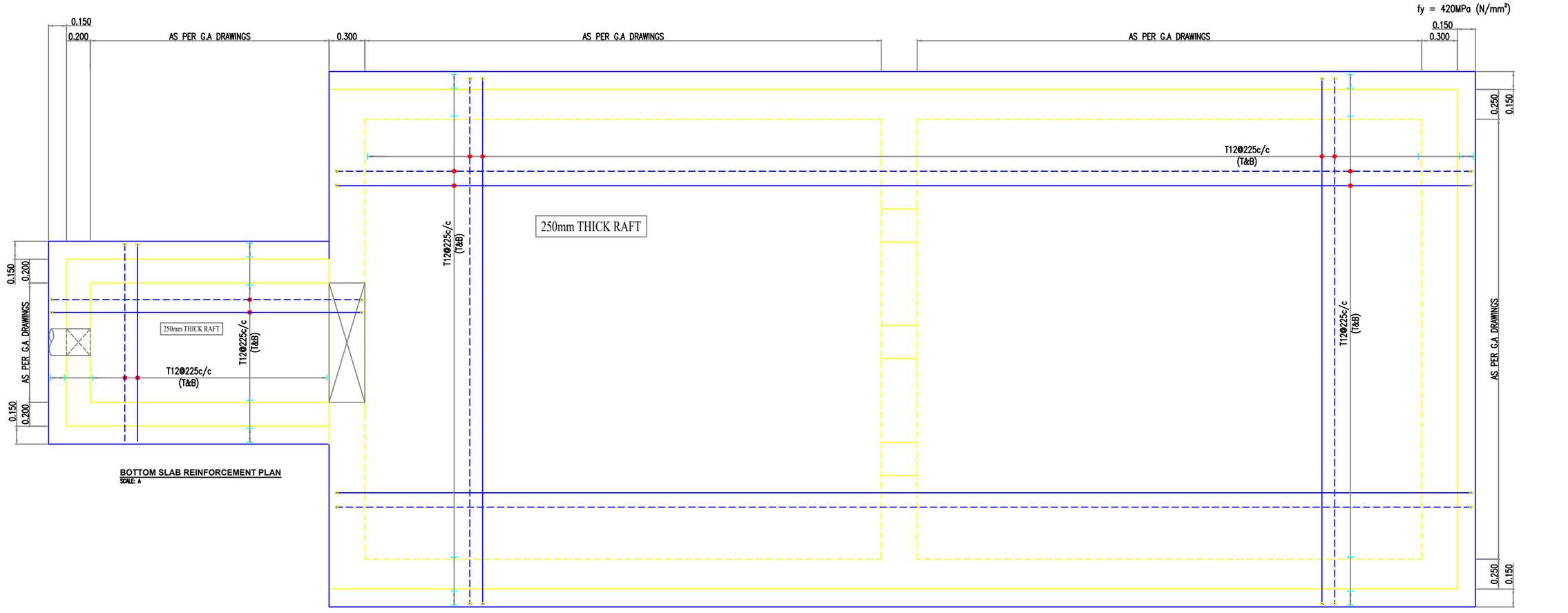
SCALE :-
0 0.5 1 2
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 OPERATOR ROOM PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : AS SHOWN Drawing No : KPR/SS/KHD/JAM-3341-H	No. / Revision / By / Date	

TENDER DRAWING

NOTES :

1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H
4. FOUNDATION IS DESIGNED FOR BEARING PRESSURE OF 2.8 TSF. CONTRACTOR SHALL VERIFY AND RECONFIRM SOIL CHARACTERISTICS INCLUDING BEARING CAPACITY THROUGH SOIL INVESTIGATION BEFORE EXECUTION OF WORK AT SITE. DESIGN MAY REVISED IF ANY VARIATION AND OBSERVATION FOUND IN SOIL INVESTIGATION.
5. MINIMUM COMPRESSIVE CYLINDRICAL STRENGTH (f'c) OF CONCRETE AT 28 DAYS SHALL BE AT LEAST 4000psi. FOR ALL STRUCTURAL ELEMENT.
6. REINFORCING STEEL SHALL BE CONFIRMING WITH ASTM-615 GRADE 420 DEFORMED HIGH YIELD STEEL BARS, HAVING MINIMUM YIELD STRENGTH 2 OF
fy = 420MPa (N/mm²)



BOTTOM SLAB REINFORCEMENT PLAN
SCALE: A

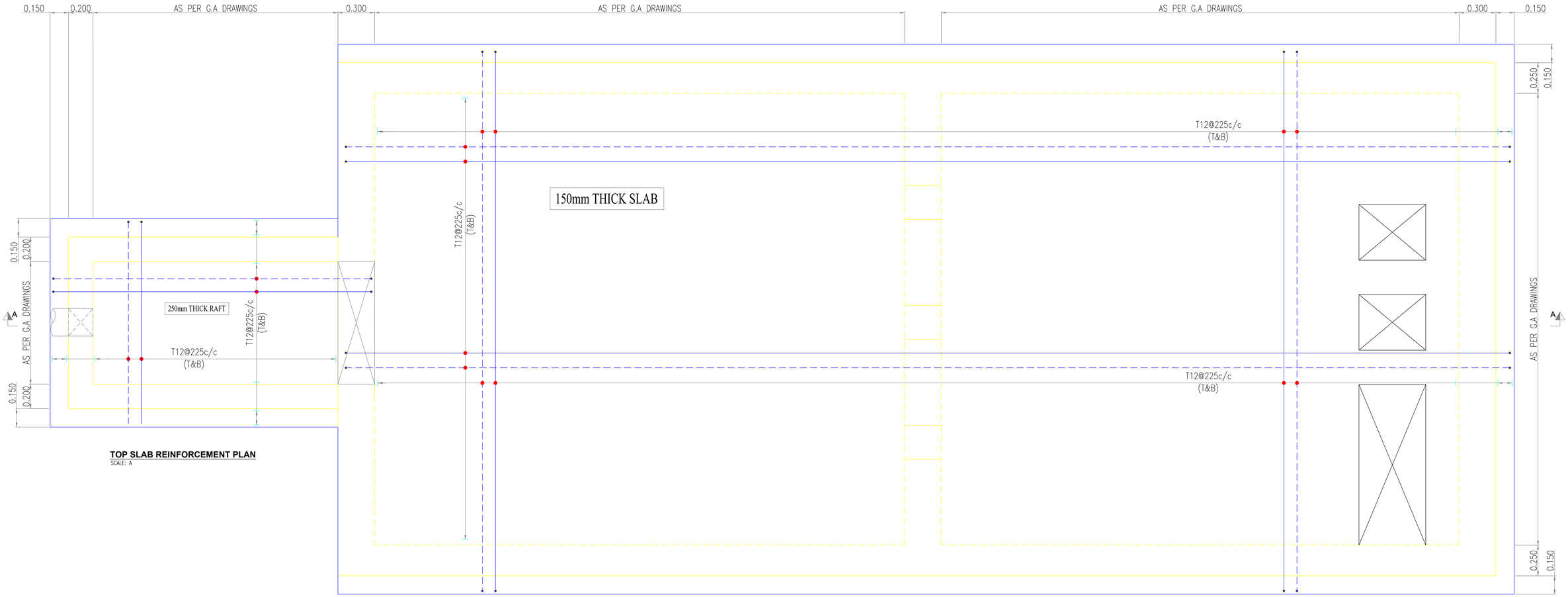
SCALE A:-
0 0.2 0.4 0.6 0.8
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 SCREEN CHAMBER & LIFT STATION BOTTOM SLAB REINF. PLAN	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : SHUJA UDDIN	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No :		
				Approved By : RABEEA REHMAN	KPR/SS/KHD/JAM-3346-A		

TENDER DRAWING

NOTES :

1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



TOP SLAB REINFORCEMENT PLAN
SCALE: A

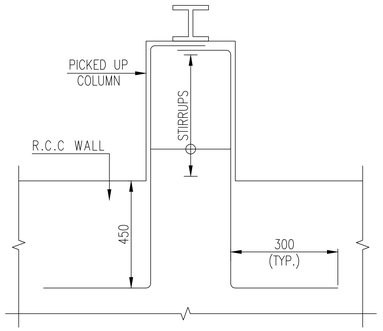
SCALE A:-
0 0.2 0.4 0.6 0.8
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 SCREEN CHAMBER & LIFT STATION TOP SLAB REINF. PLAN	Designed By : Dr. ASFAHAN ALI Drawn By : SHUJA UDDIN Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : AS SHOWN Drawing No : KPR/SS/KHD/JAM-3346-B	No. / Revision / By / Date	

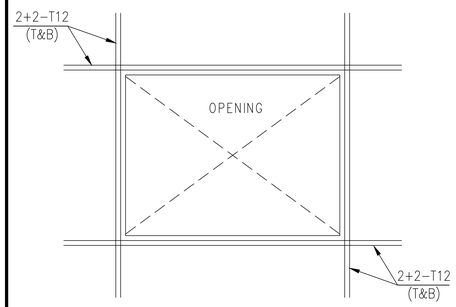
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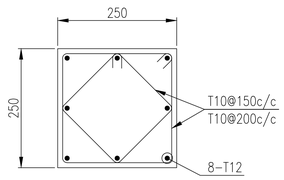
1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



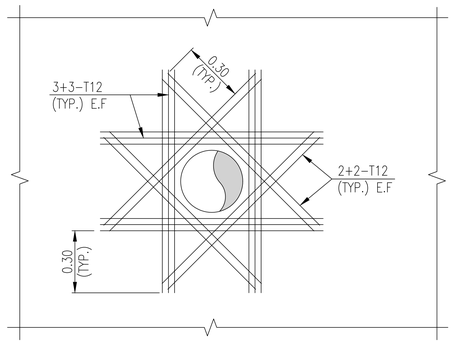
TYPICAL PICKED UP COLUMN REINF. DETAIL
SCALE: NTS



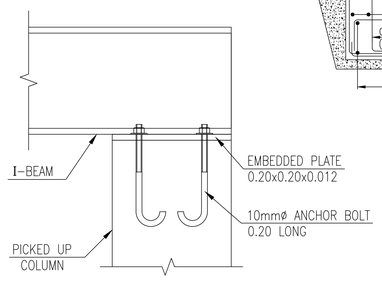
TYPICAL OPENING REINF. DETAIL
SCALE: NTS



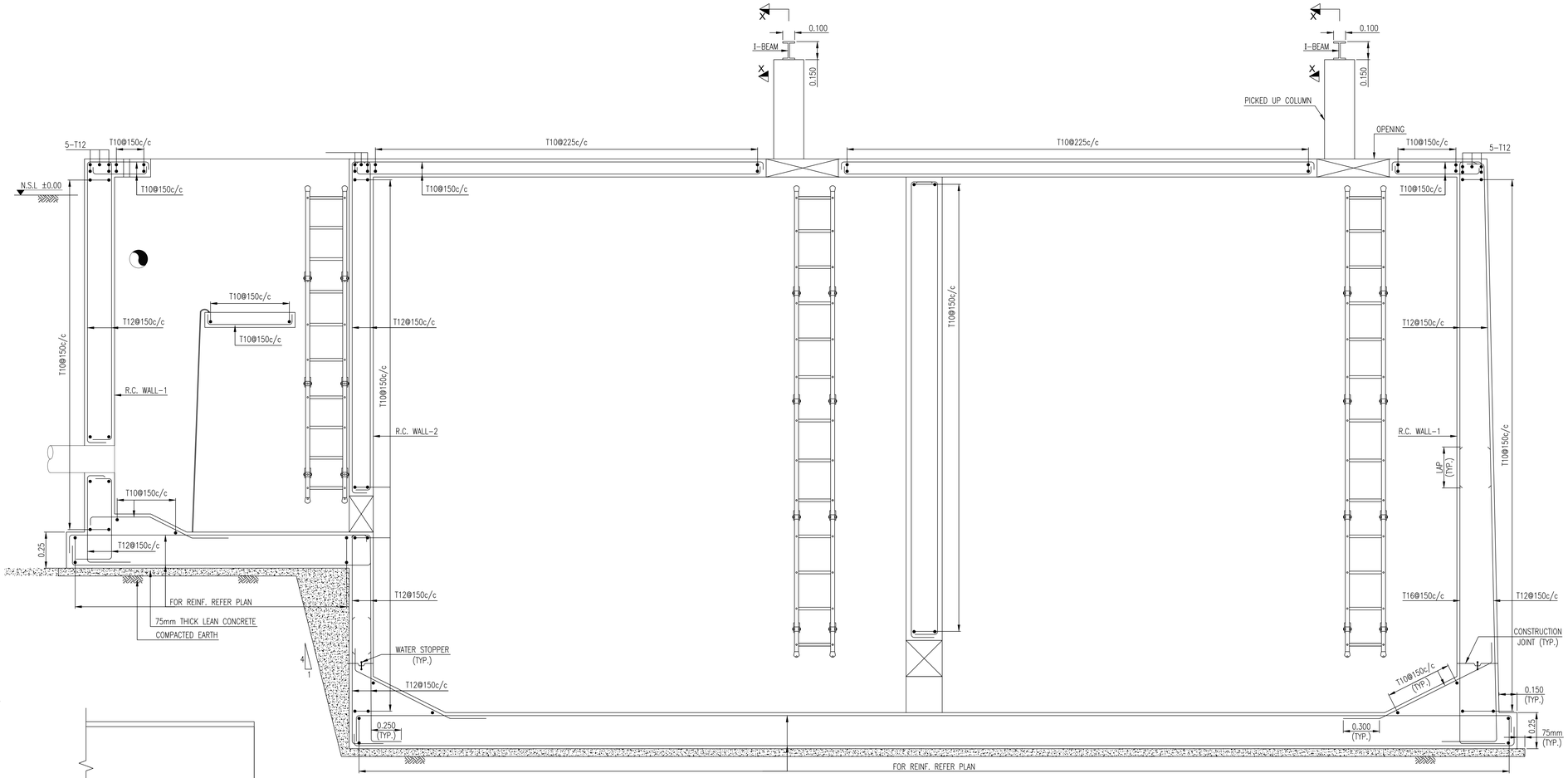
TYPICAL SECTION OF C-1
SCALE: NTS



TYPICAL PIPE OPENING REINF. DETAIL
SCALE: NTS



SECTION X-X
SCALE: NTS



REINFORCEMENT SECTION A-A
SCALE A

SCALE A:-
0 0.3 0.6 0.3 0.6
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 SCREEN CHAMBER & LIFT STATION REINF. SECTION

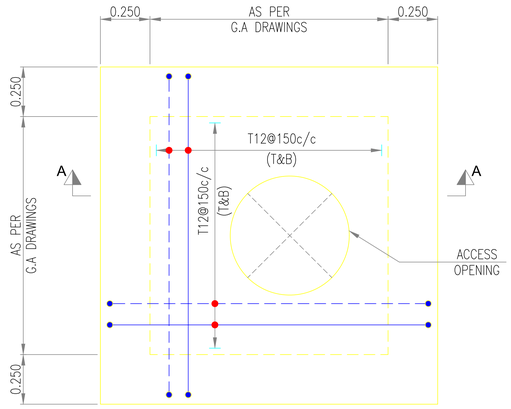
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3346-C
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

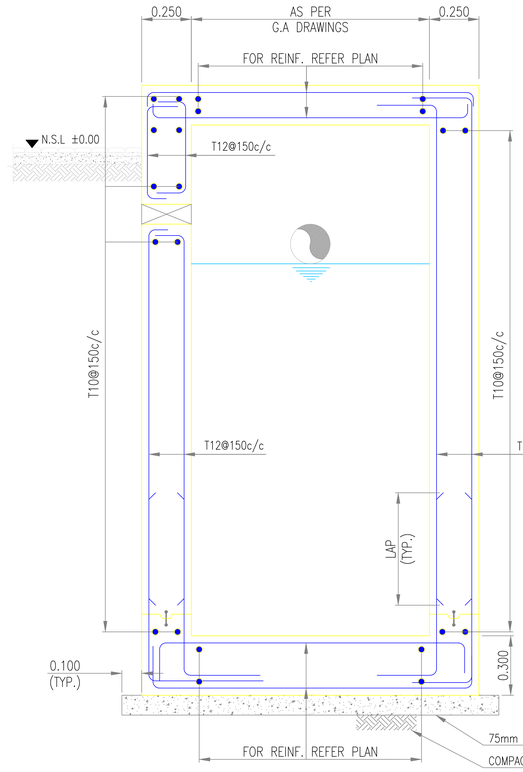
TENDER DRAWING

NOTES :

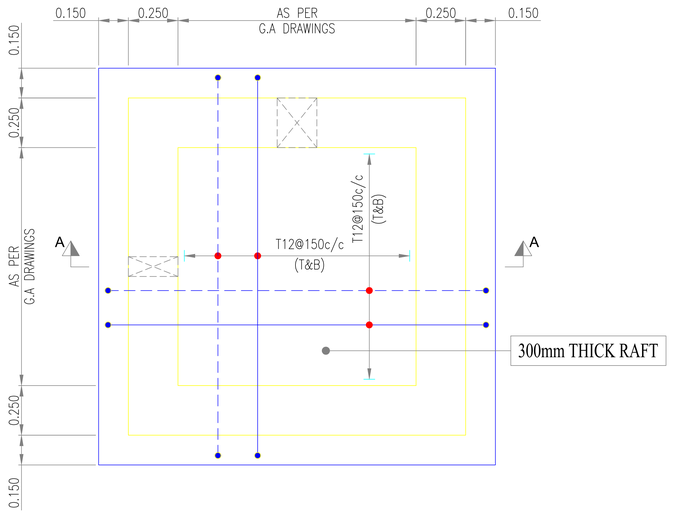
1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



TOP SLAB REINFORCEMENT PLAN
SCALE: A



REINFORCEMENT SECTION A-A
SCALE: A



BOTTOM SLAB REINFORCEMENT PLAN
SCALE: A

SCALE A:-
0 0.3 0.6 0.3 0.6
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 DISSIPATOR REINF. PLANS AND SECTION

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3346-D
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

TENDER DRAWING

NOTES :

1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



TOP SLAB PLAN
SCALE: NTS



BOTTOM SLAB PLAN
SCALE: NTS

SCALE A:-
0 0.5 1 1.5
m

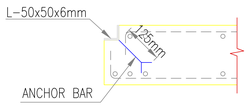
CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 ANAEROBIC BAFFLED REACTOR REINF. PLAN	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026		
				Drawn By : SHUJA UDDIN	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3346-E		
				Approved By : RABEEA REHMAN			

No.	Revision	By	Date

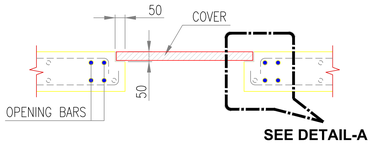
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NOTES :

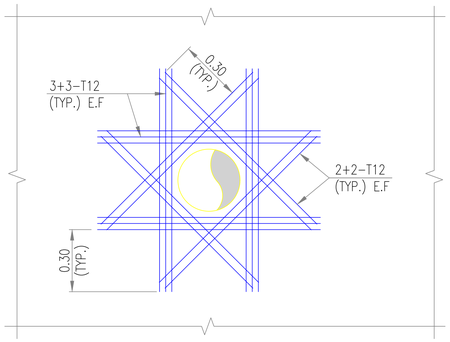
1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



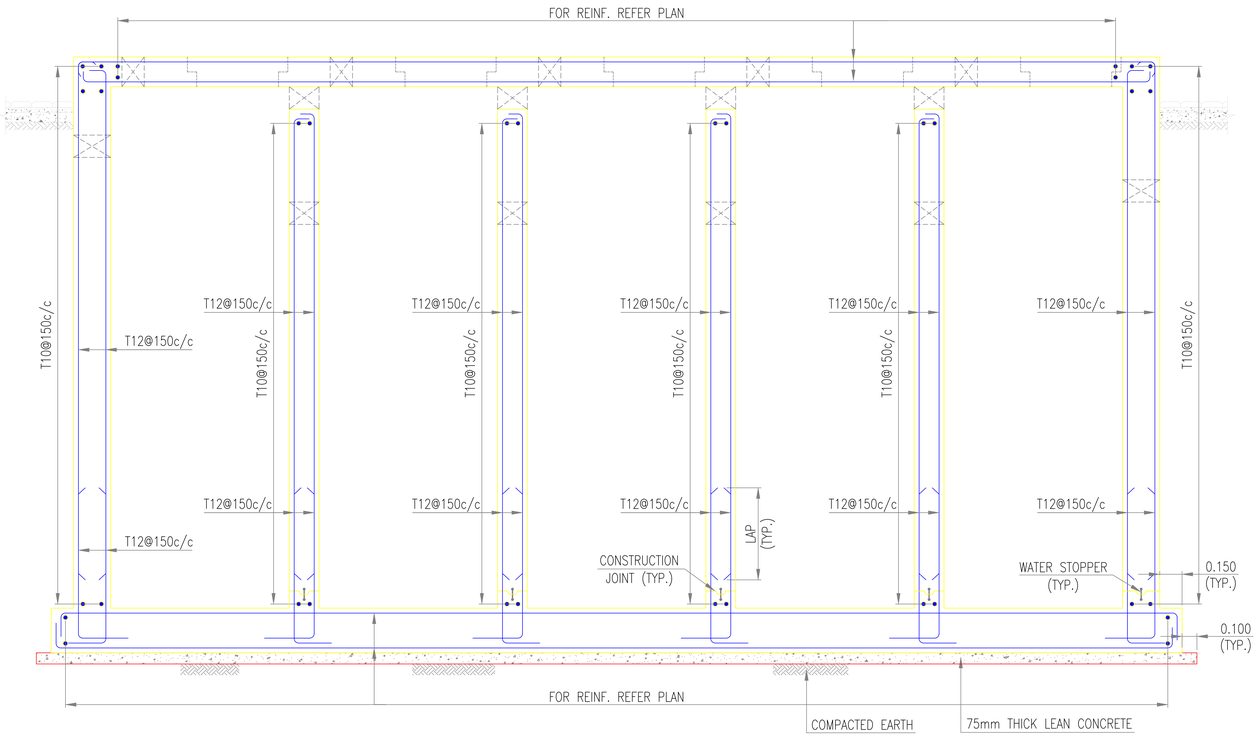
DETAIL-A
NTS



TYPICAL MANHOLE DETAILS
SCALE NTS



TYPICAL PIPE OPENING REINF. DETAIL
SCALE: NTS



SECTION A-A
SCALE: A

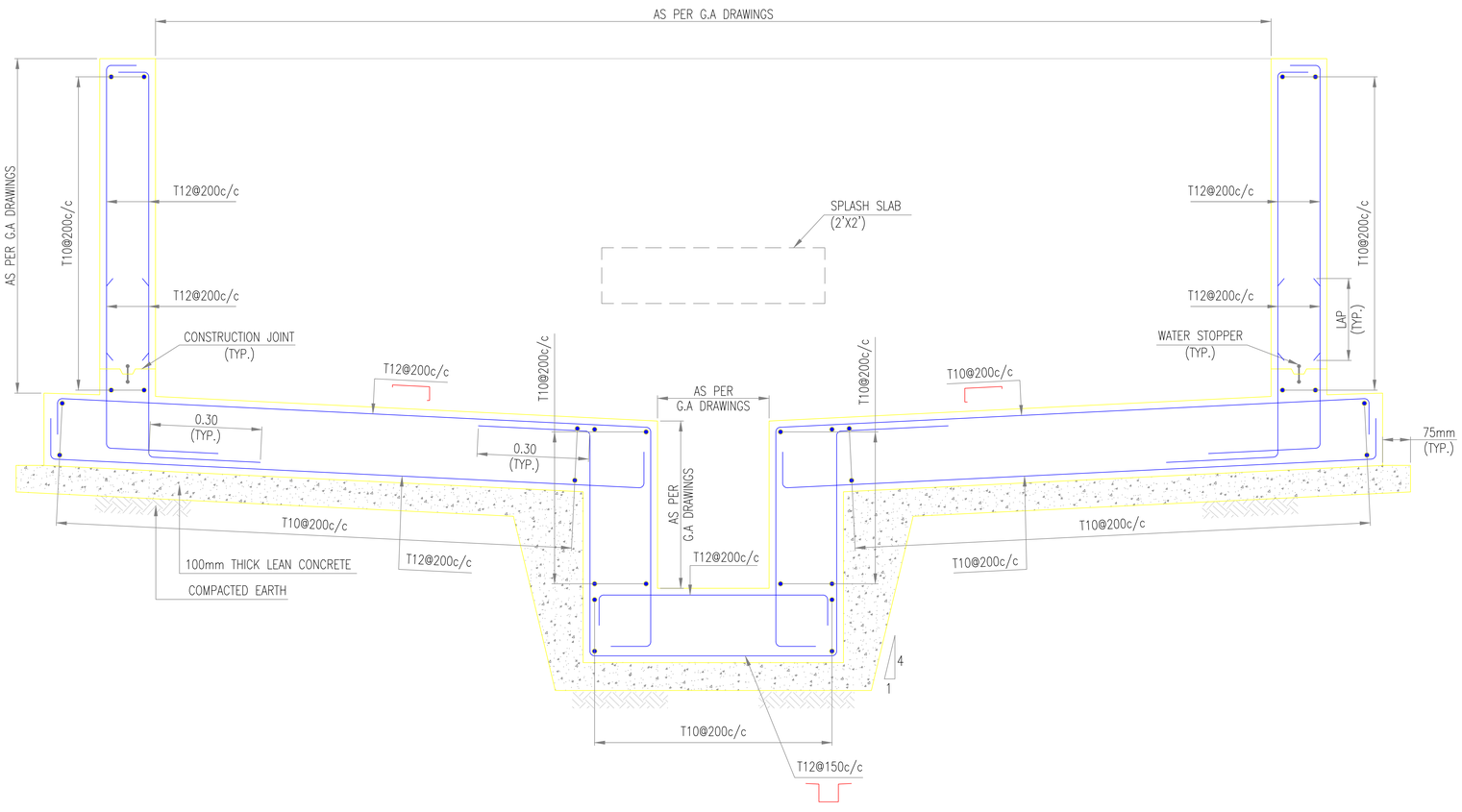
SCALE A:-
0 0.5 1 1.5
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 ANAEROBIC BAFFLED REACTOR REINF. SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No.	Revision	By	Date
				Drawn By : SHUJA UDDIN	Scale : AS SHOWN				
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3346-F				
				Approved By : RABEEA REHMAN					

TENDER DRAWING

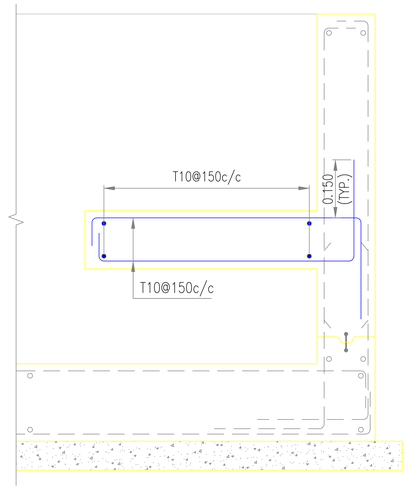
NOTES :

1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



REINFORCEMENT DETAIL OF SLUDGE DRYING BED

SCALE: A



TYPICAL SECTION OF SPLASH SLAB

SCALE: A

SCALE A:-

0 0.25 0.5 0.75

m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 SLUDGE DRYING BED REINFORCEMENT SECTIONS	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : SHUJA UDDIN	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3346-G		
				Approved By : RABEEA REHMAN			

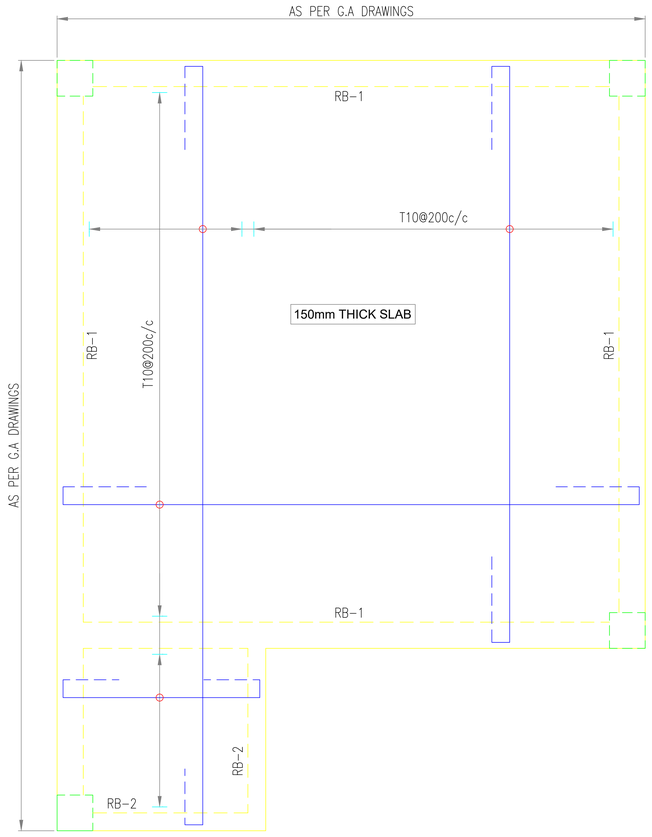
TENDER DRAWING

SCHEDULE OF BEAMS

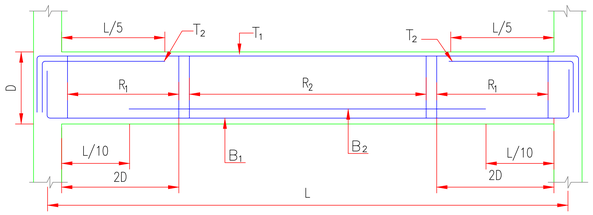
BEAM NO.	BEAM SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT			STIRRUPS		REMARKS
	B	D	B1	B2	T1	T2	T3	R1	R2	
PB-1	220	600	2-T16	–	2-T12	1-T12	–	T10@100c/c	T10@200c/c	
PB-2	150	600	2-T16	–	2-T12	1-T12	–	T10@100c/c	T10@200c/c	
RB-1	220	600	2-T12	–	2-T12	–	–	T10@100c/c	T10@200c/c	
RB-2	150	600	2-T12	–	2-T12	–	–	T10@100c/c	T10@200c/c	

NOTES :

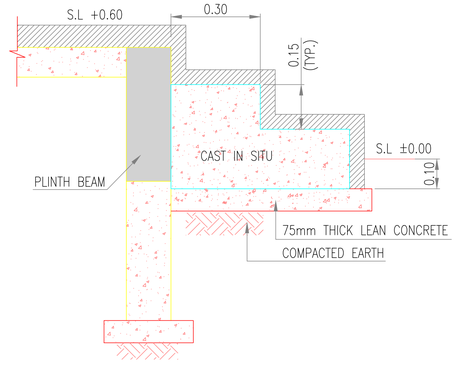
1. ALL DIMENSIONS ARE IN METER. UNLESS NOTED OTHERWISE.
2. FOR GENERAL NOTES REFER DRG. # KPR/SS/MOD/GH-2201 TO 2205
3. ALL STRUCTURAL DRAWINGS SHALL BE READ IN CONJUNCTION WITH: DRG. # KPR/SS/MOD/GH-2241-B TO 2241-H



ROOF FRAMING PLAN
SCALE: A



TYP. ELEV. OF BEAM (SINGLE SPAN)
NTS



TYPICAL STEPS DETAILS
SCALE NTS

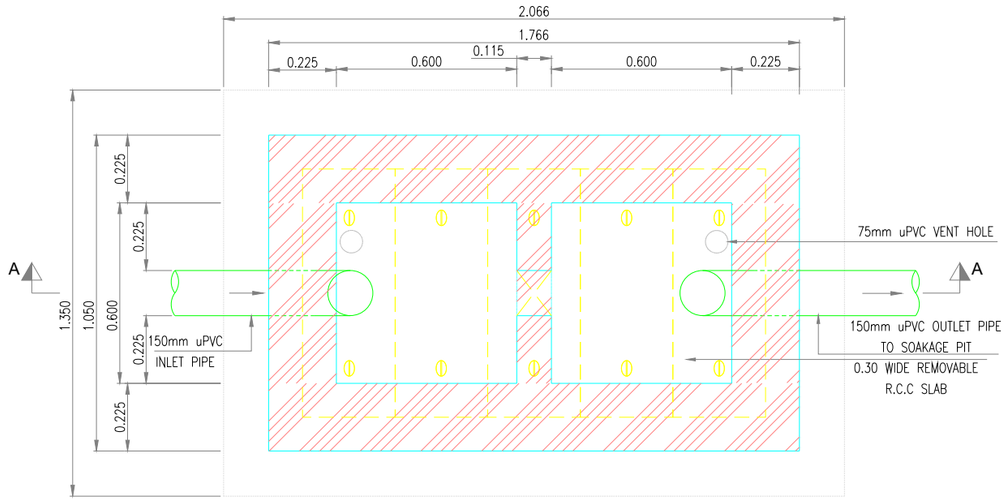
SCALE A:-
0 0.5 1 1.5 2
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD STP 1 ROOF FRAMING PLAN & BEAM DETAILS OF OPERATOR ROOM	Designed By : Dr. ASFAHAN ALI Drawn By : SHUJA UDDIN Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : AS SHOWN Drawing No : KPR/SS/KHD/JAM-3346-H	No. / Revision / By / Date	

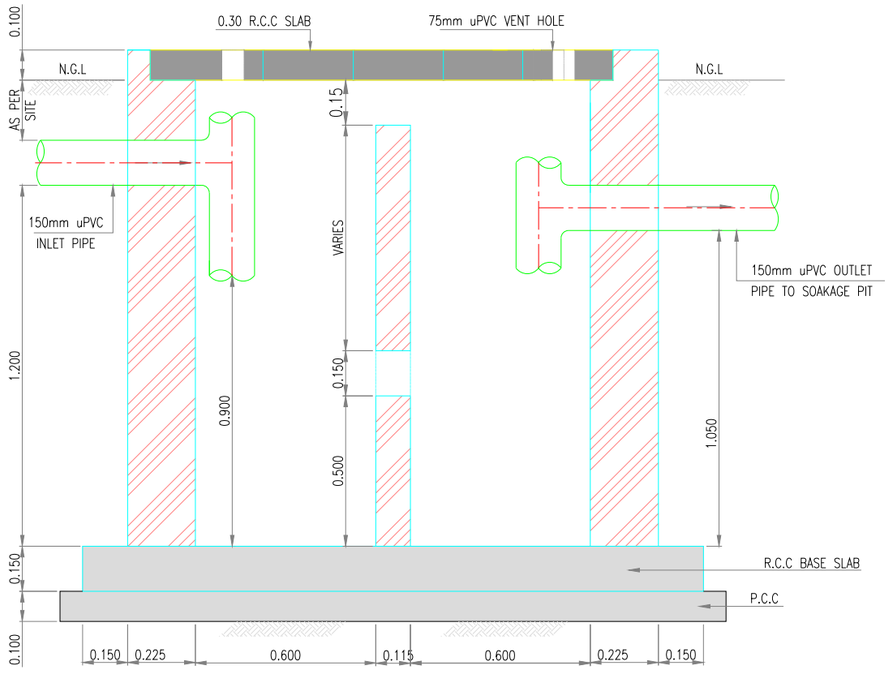
TENDER DRAWING

NOTES:

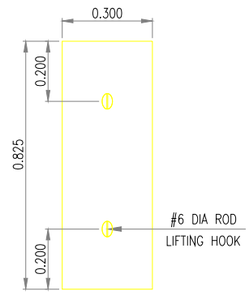
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



PLAN



SECTION A-A



TYPICAL REMOVABLE
R.C.C. SLAB PLAN

SCALE:-
0 0.2 0.4 0.6 0.8 1.0
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE–I (01 HOUSE) PLAN AND SECTION

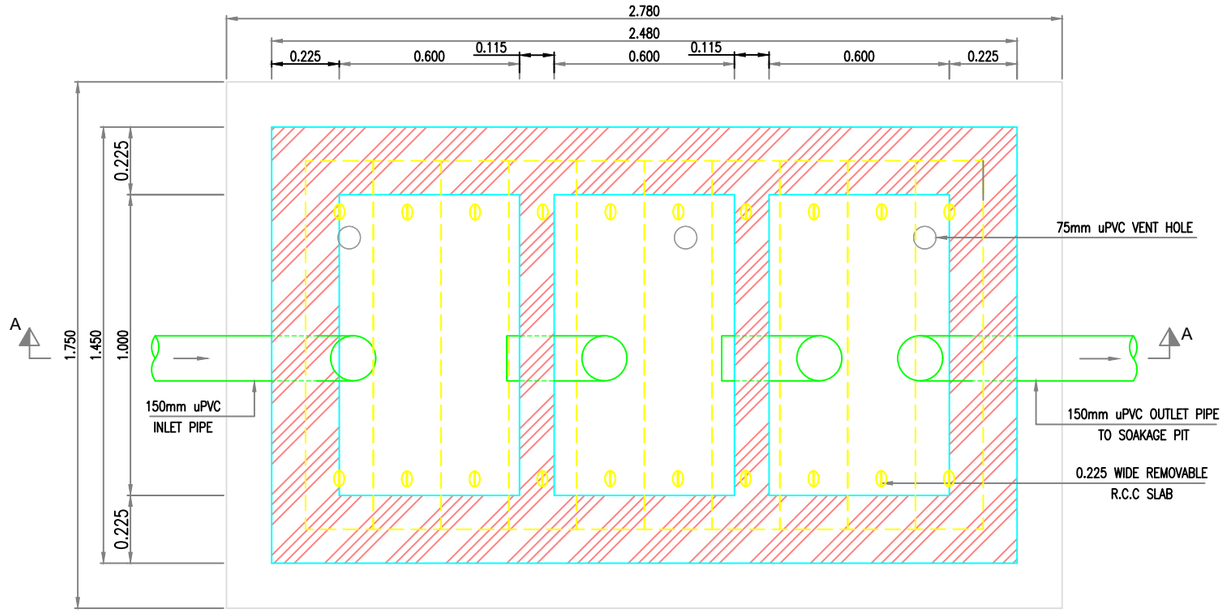
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3351
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

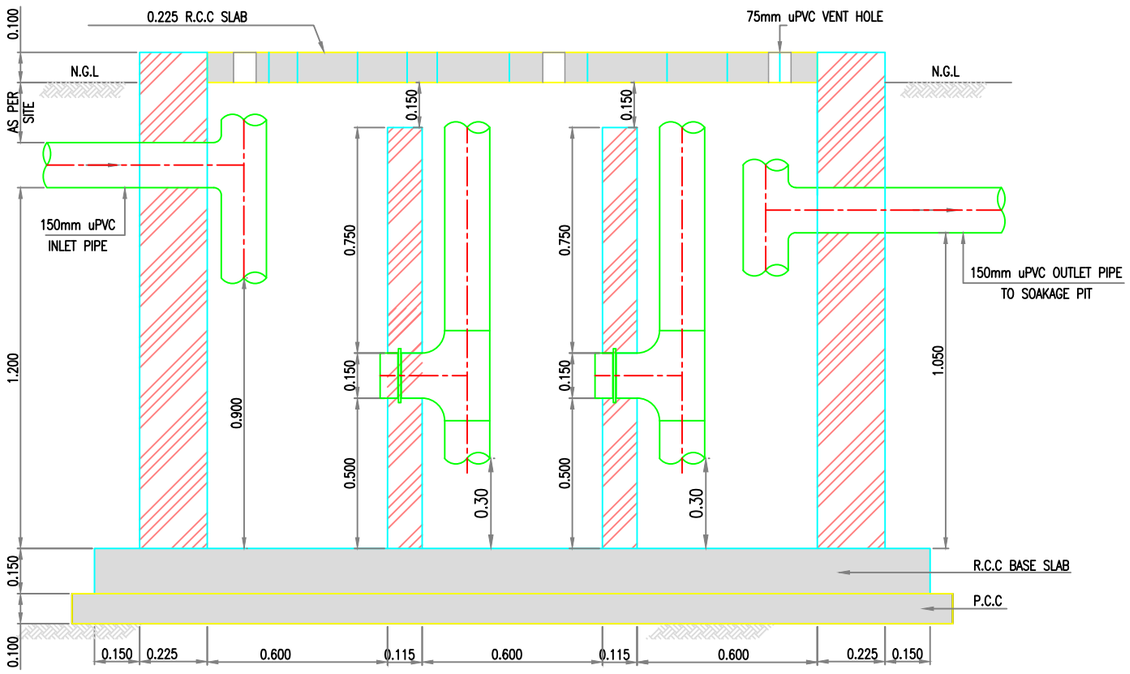
TENDER DRAWING

NOTES:

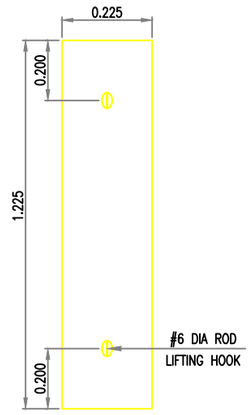
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



PLAN



SECTION A-A



TYPICAL REMOVABLE
R.C.C. SLAB PLAN

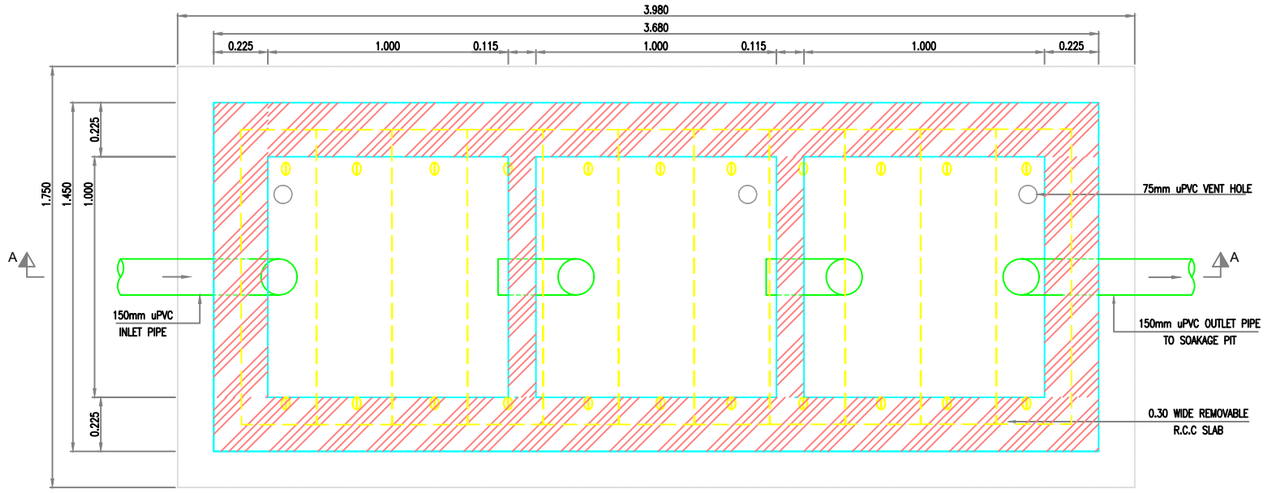
SCALE:-
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE–II (2 TO 5 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3353		
				Approved By : RABEEA REHMAN			

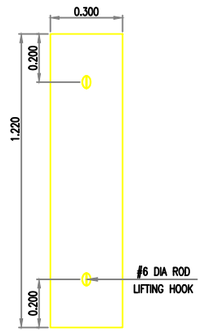
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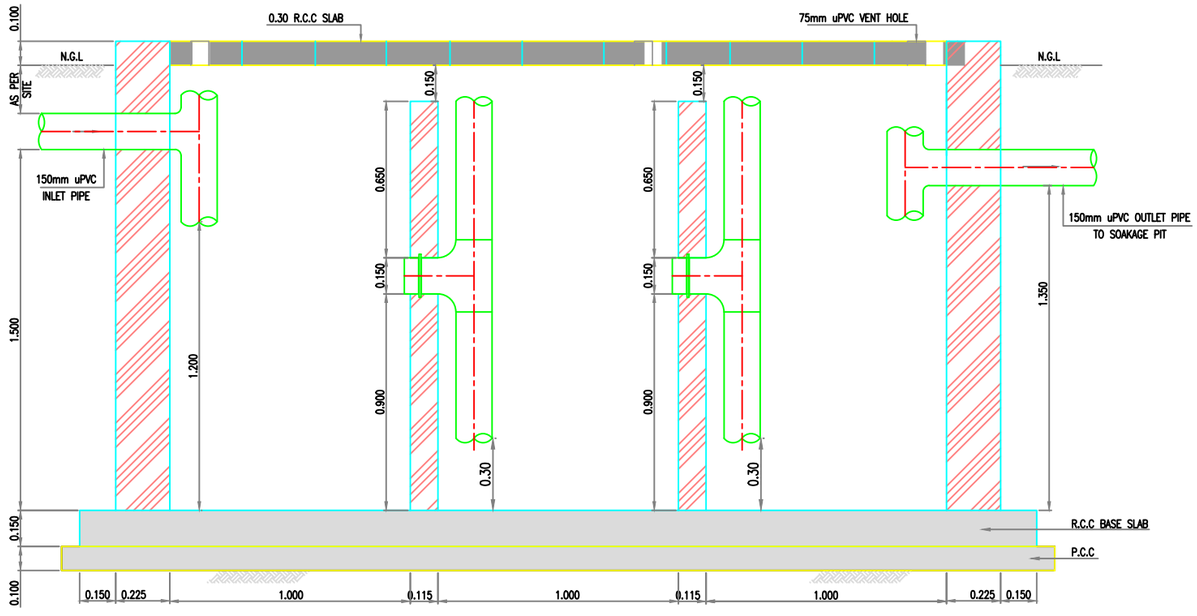
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



PLAN



TYPICAL REMOVABLE
R.C.C. SLAB PLAN



SECTION A-A

SCALE:-
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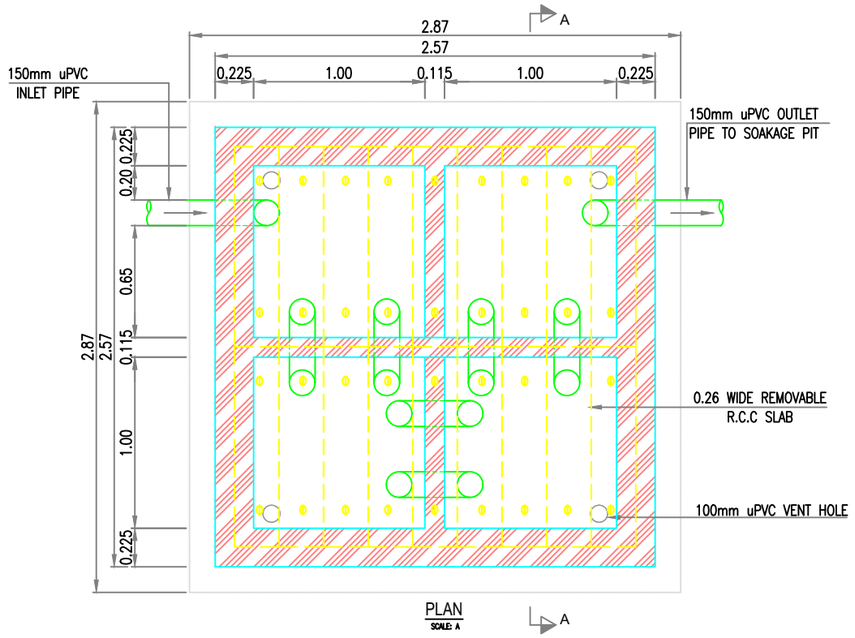
CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE–III (6 TO 10 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026		
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3355		
				Approved By : RABEEA REHMAN			

No.	Revision	By	Date

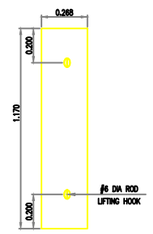
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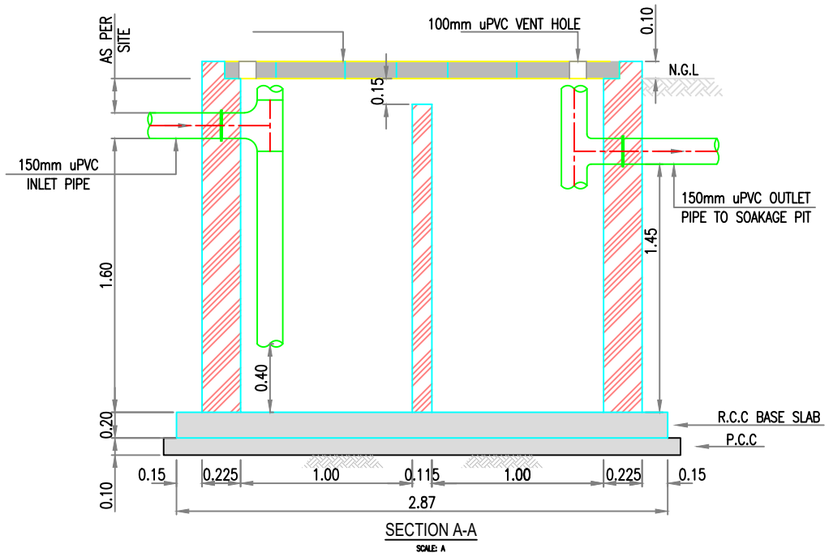
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



PLAN
SCALE: A



TYPICAL REMOVABLE
R.C.C. SLAB PLAN



SECTION A-A
SCALE: A

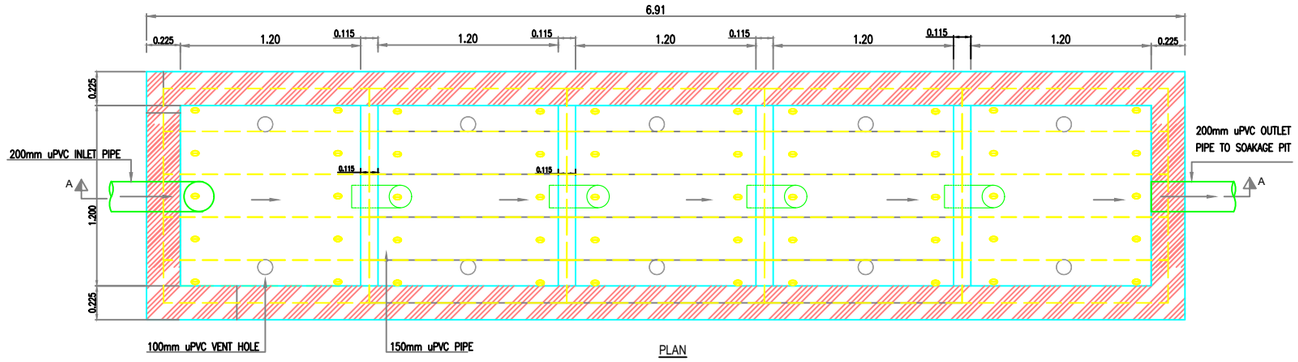
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE–IV (22 TO 20 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3357		
				Approved By : RABEEA REHMAN			

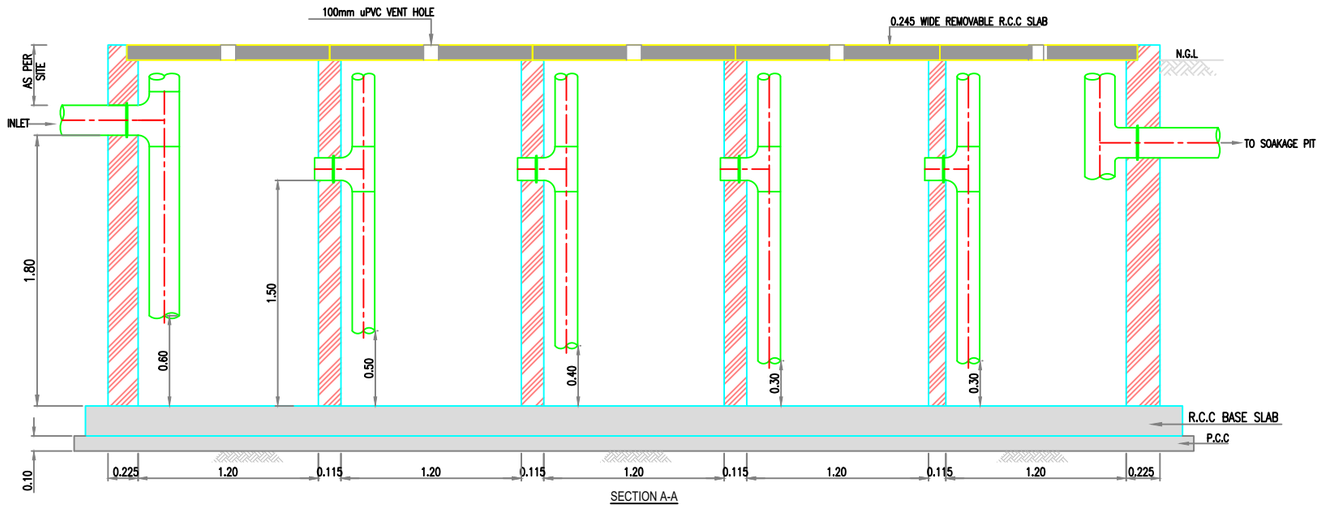
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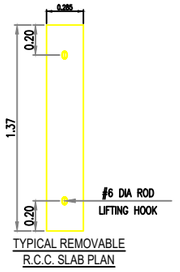
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



PLAN



SECTION A-A



TYPICAL REMOVABLE R.C.C. SLAB PLAN

SCALE :-

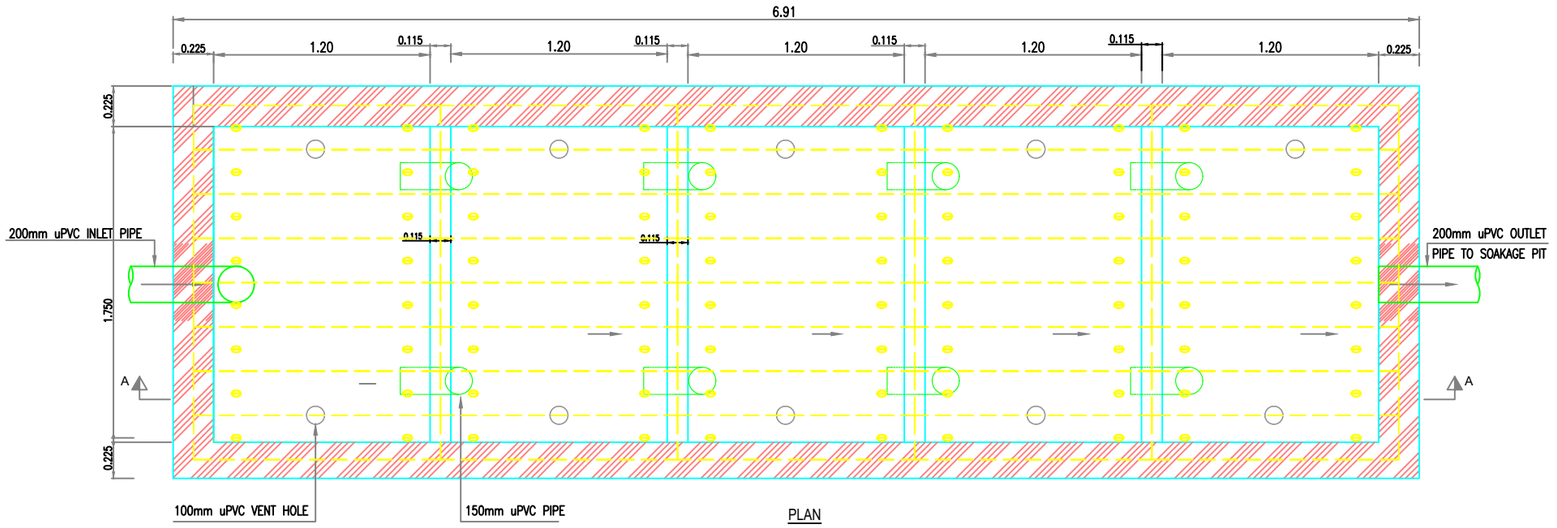
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE–V (21 TO 35 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3359		
				Approved By : RABEEA REHMAN			

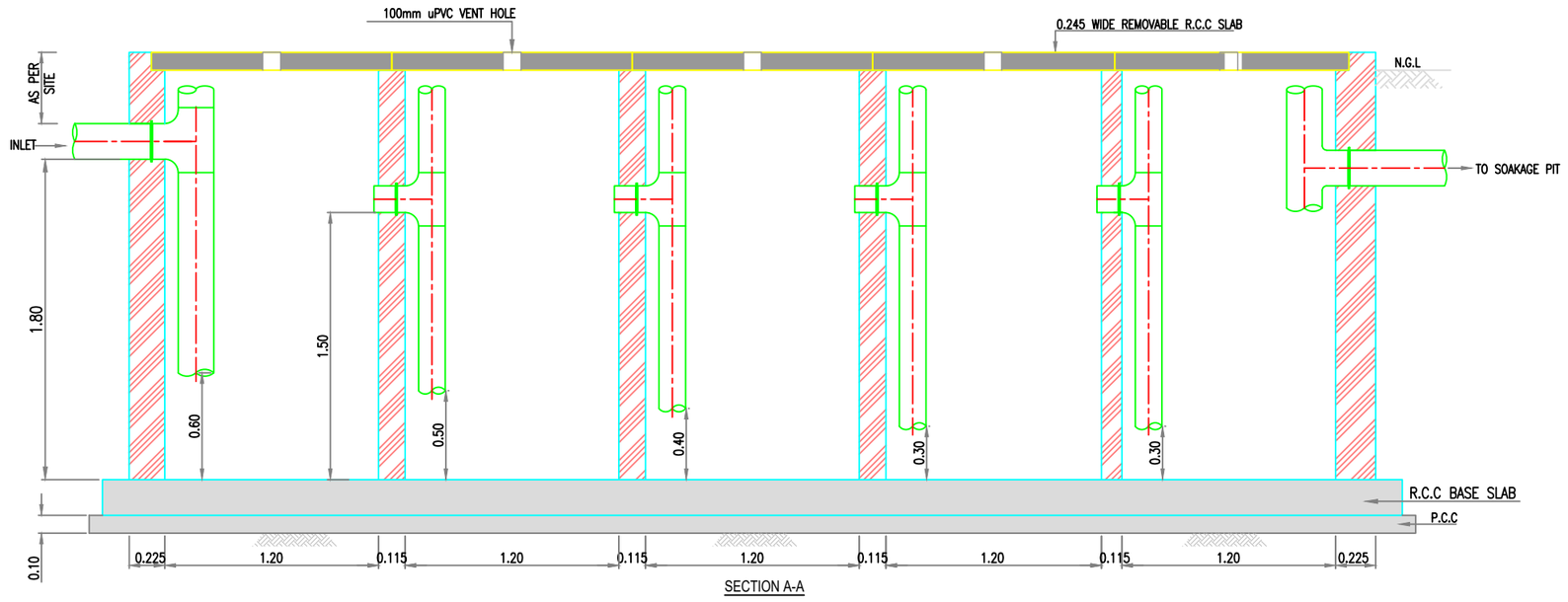
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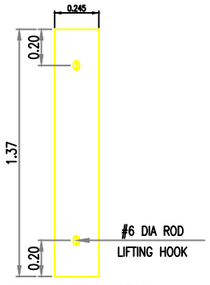
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



PLAN



SECTION A-A



TYPICAL REMOVABLE R.C.C. SLAB PLAN

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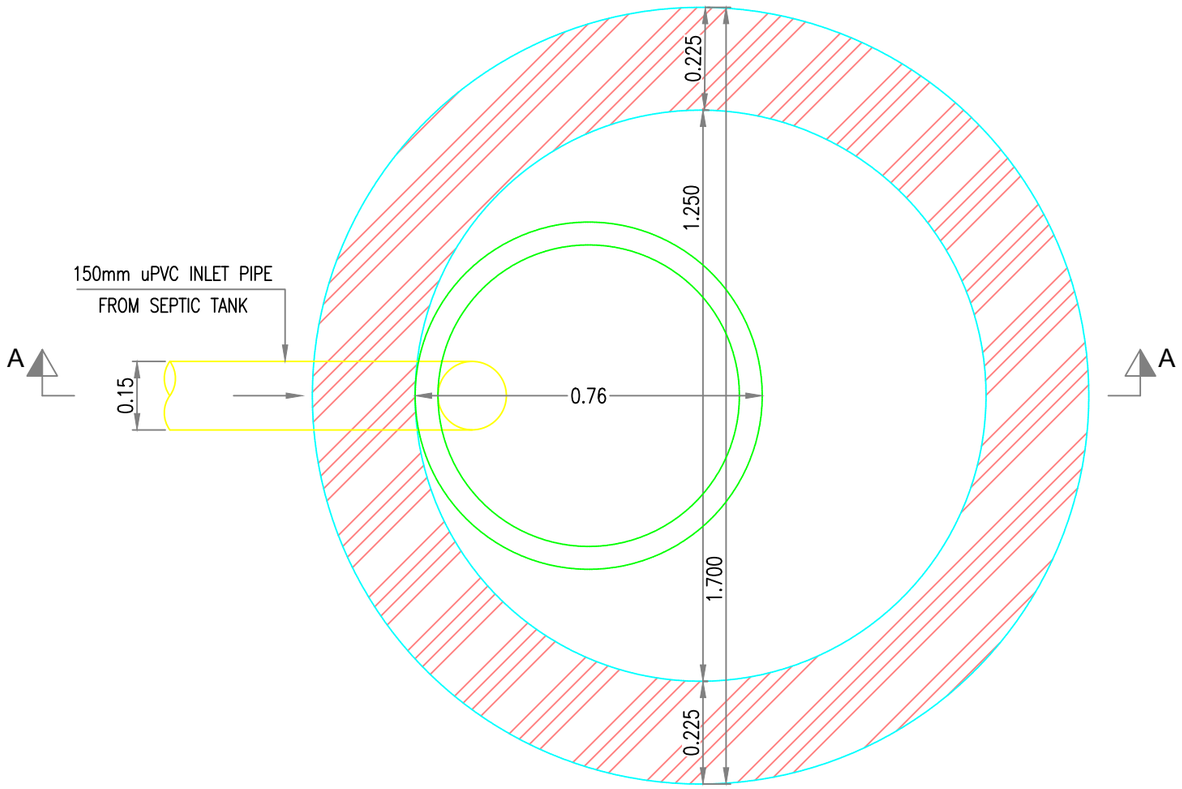
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE-VI (36 TO 50 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3361		
				Approved By : RABEEA REHMAN			

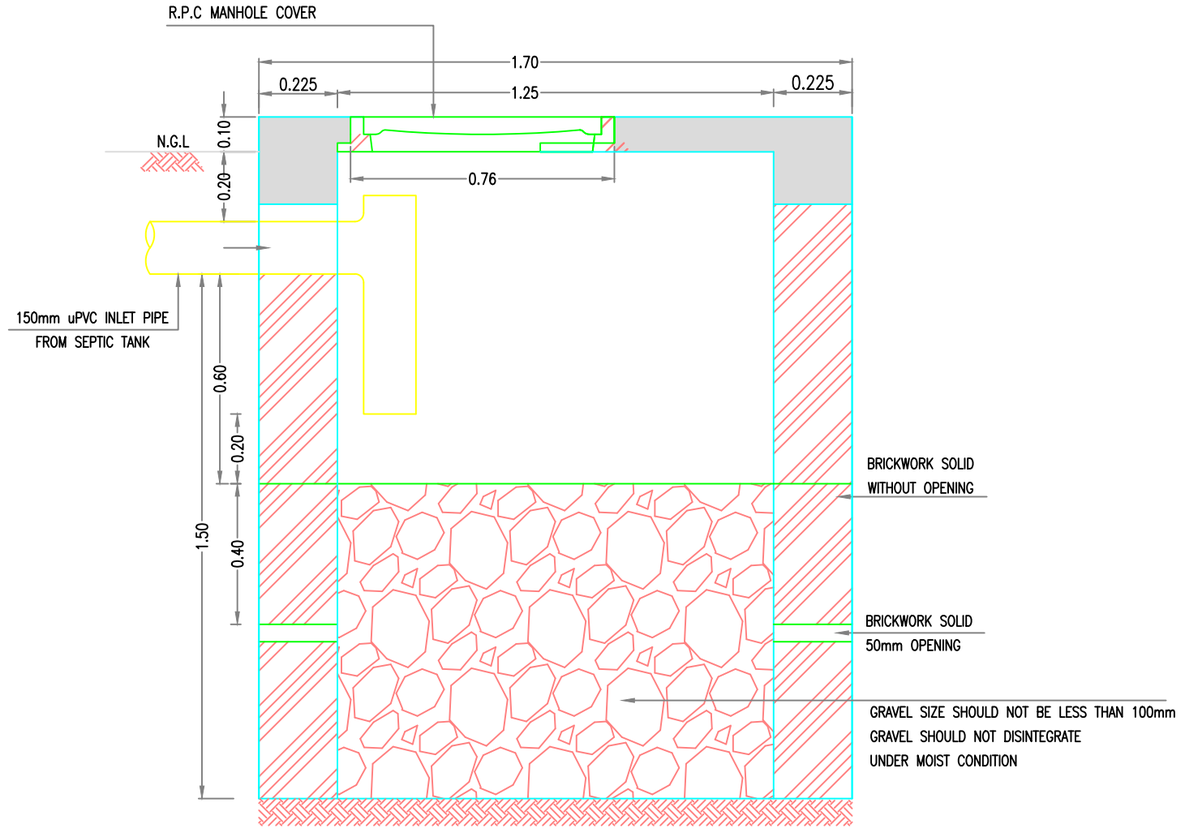
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. SOAKAGE PIT BOTTOM SHOULD BE ABOVE THE WATER TABLE.



PLAN OF SOAKAGE PIT



SECTION A-A

SCALE:-

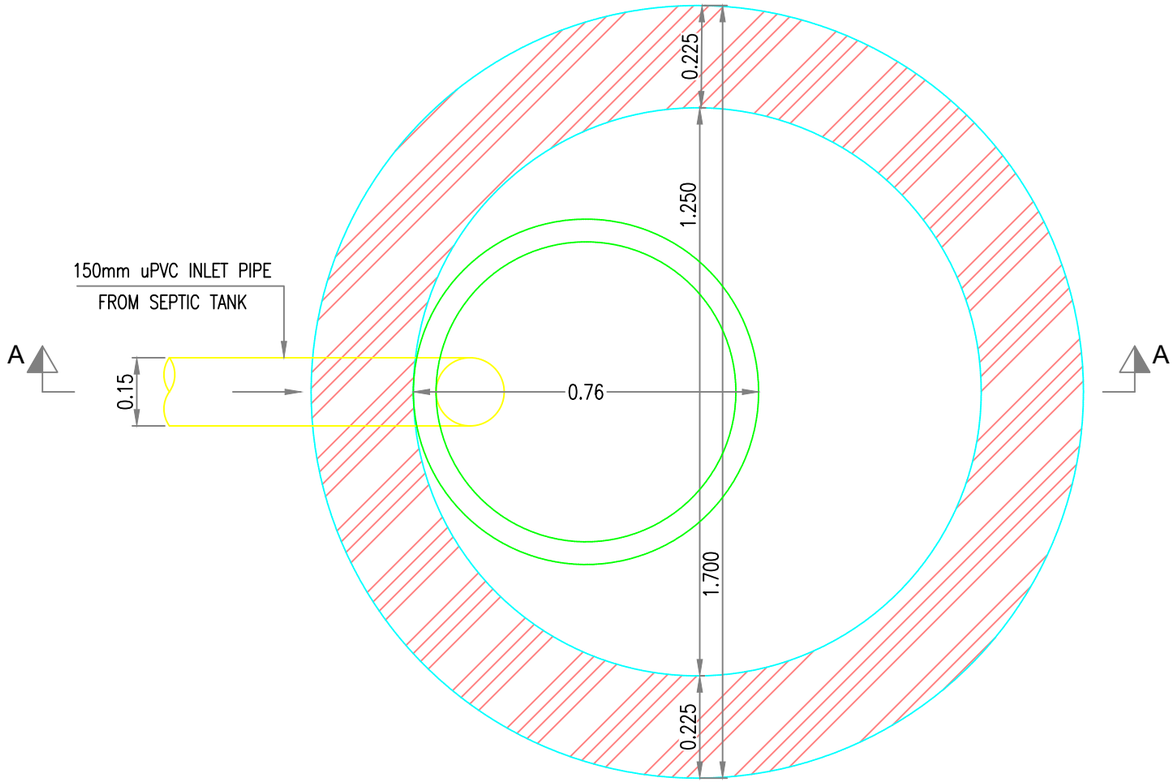
0 0.20 0.40 0.60 0.80 1.00 m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SOAKAGE PIT TYPE–I (01 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : AS SHOWN Drawing No : KPR/SS/KHD/JAM-3352	No. / Revision / By / Date	

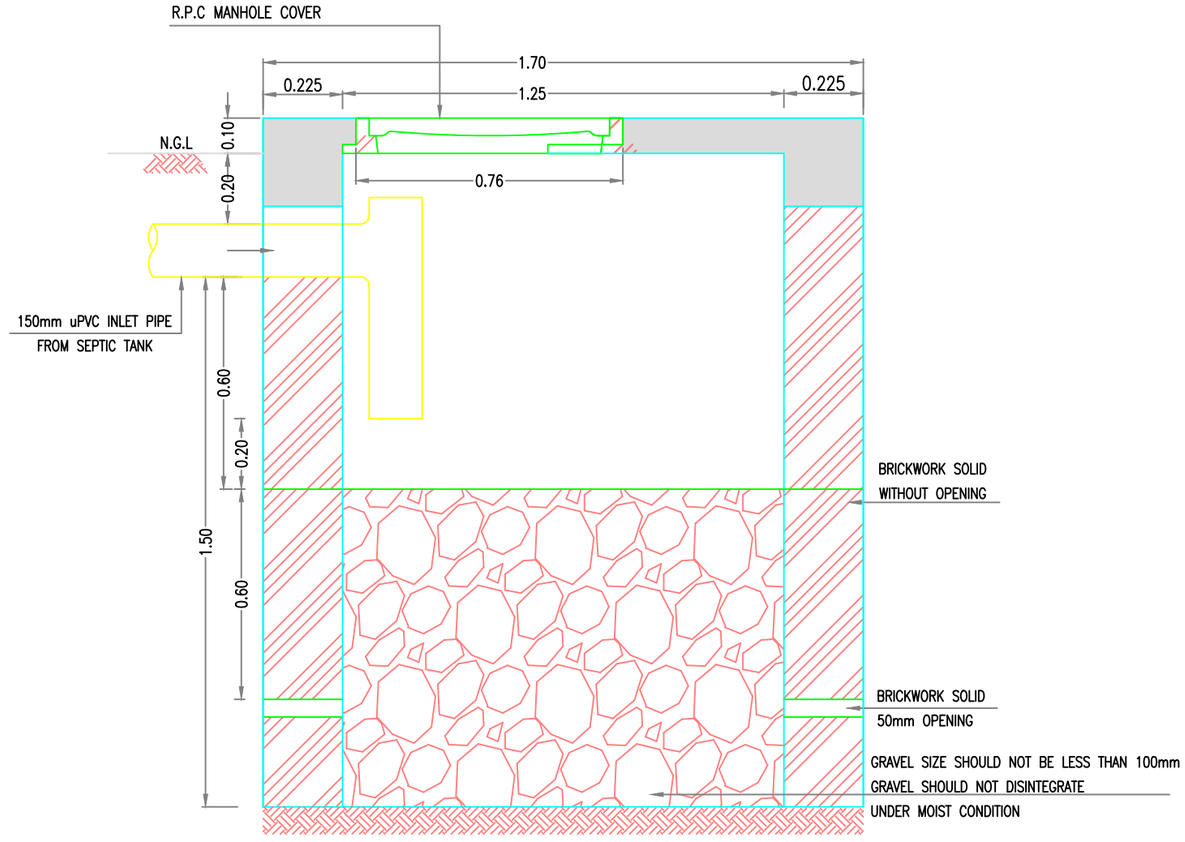
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. SOAKAGE PIT BOTTOM SHOULD BE ABOVE THE WATER TABLE.



PLAN OF SOAKAGE PIT



SECTION A-A

SCALE:-

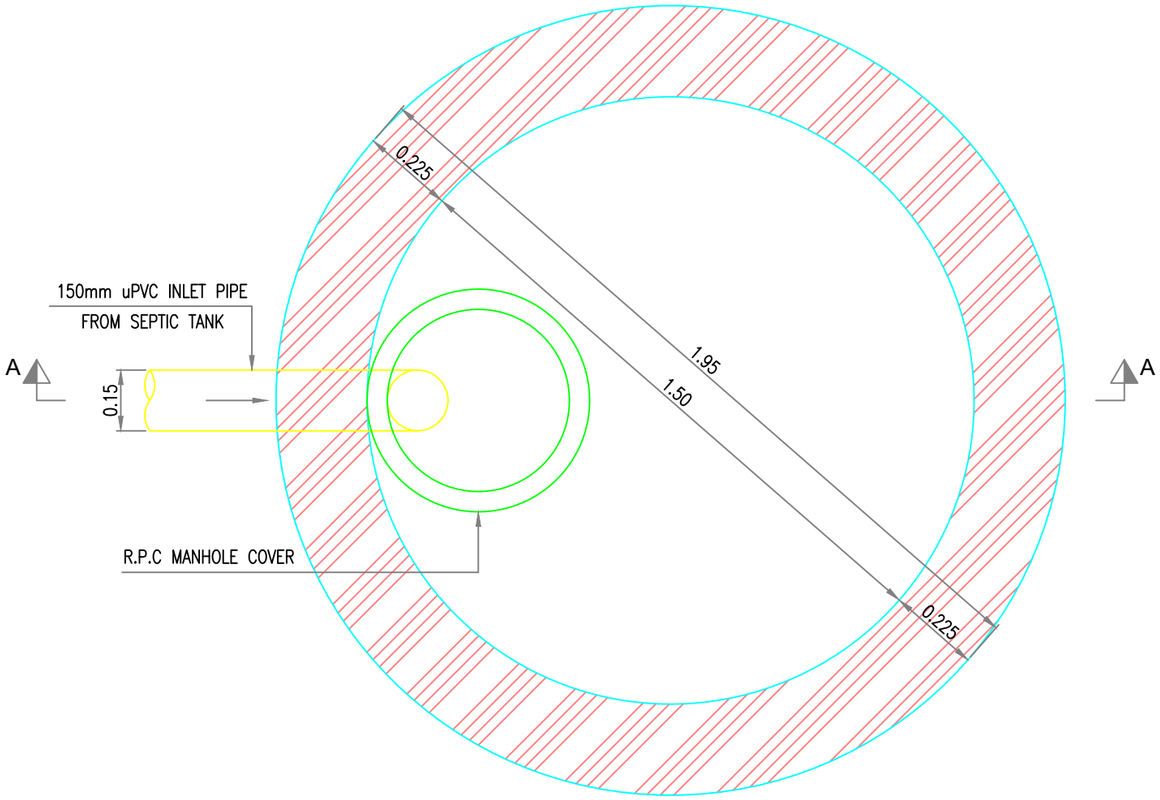
0 0.20 0.40 0.60 0.80 1.00 m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SOAKAGE PIT TYPE–II (2 TO 5 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3354		
				Approved By : RABEEA REHMAN			

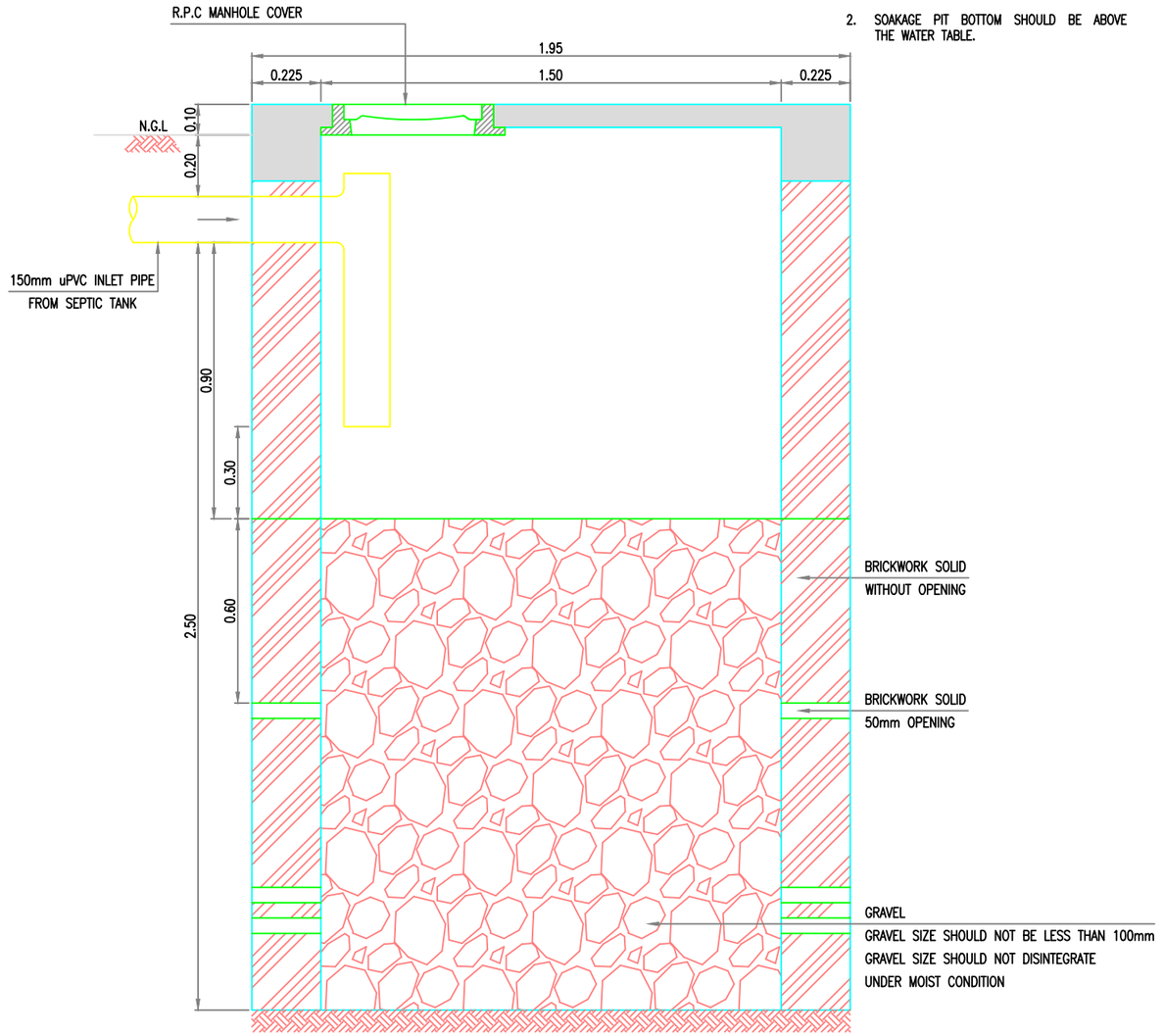
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. SOAKAGE PIT BOTTOM SHOULD BE ABOVE THE WATER TABLE.



PLAN OF SOAKAGE PIT



SECTION A-A

SCALE:-

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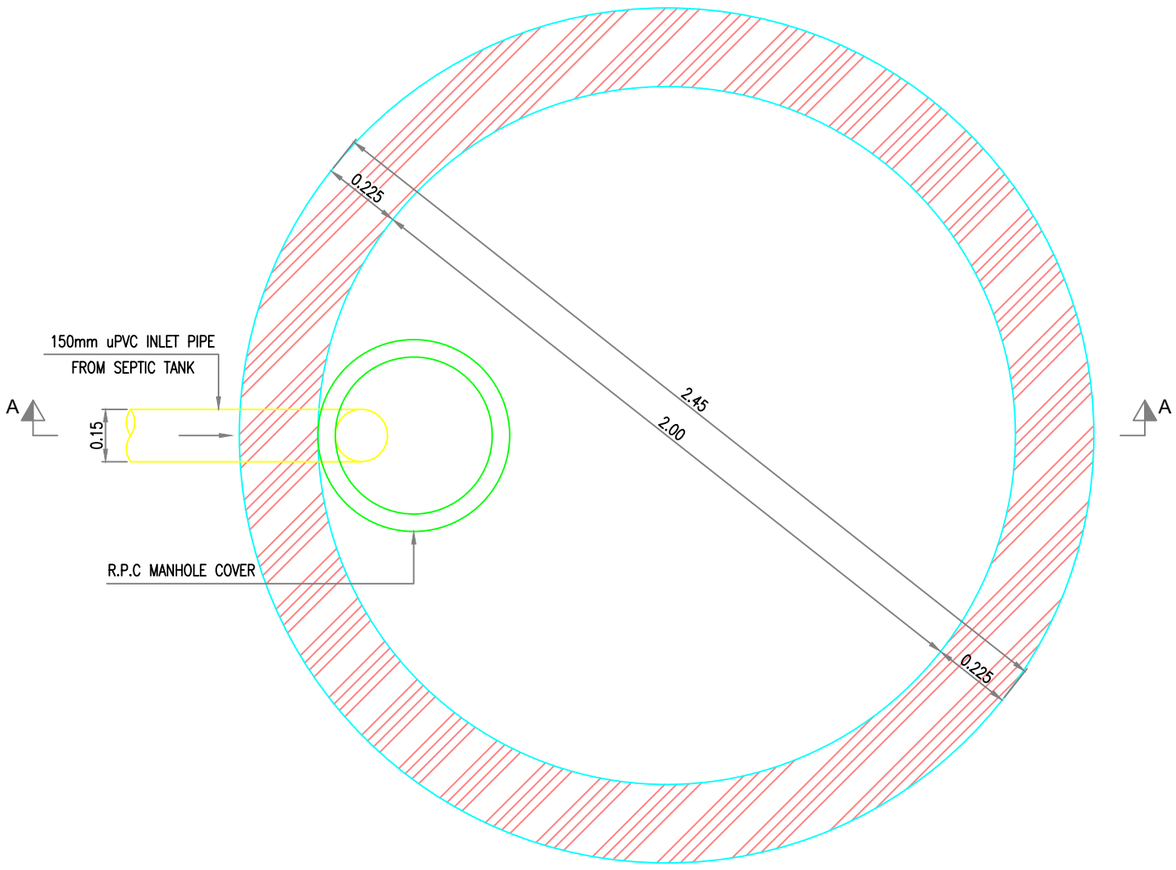
CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SOAKAGE PIT TYPE–III (6 TO 10 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026		
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3356		
				Approved By : RABEEA REHMAN			

No.	Revision	By	Date

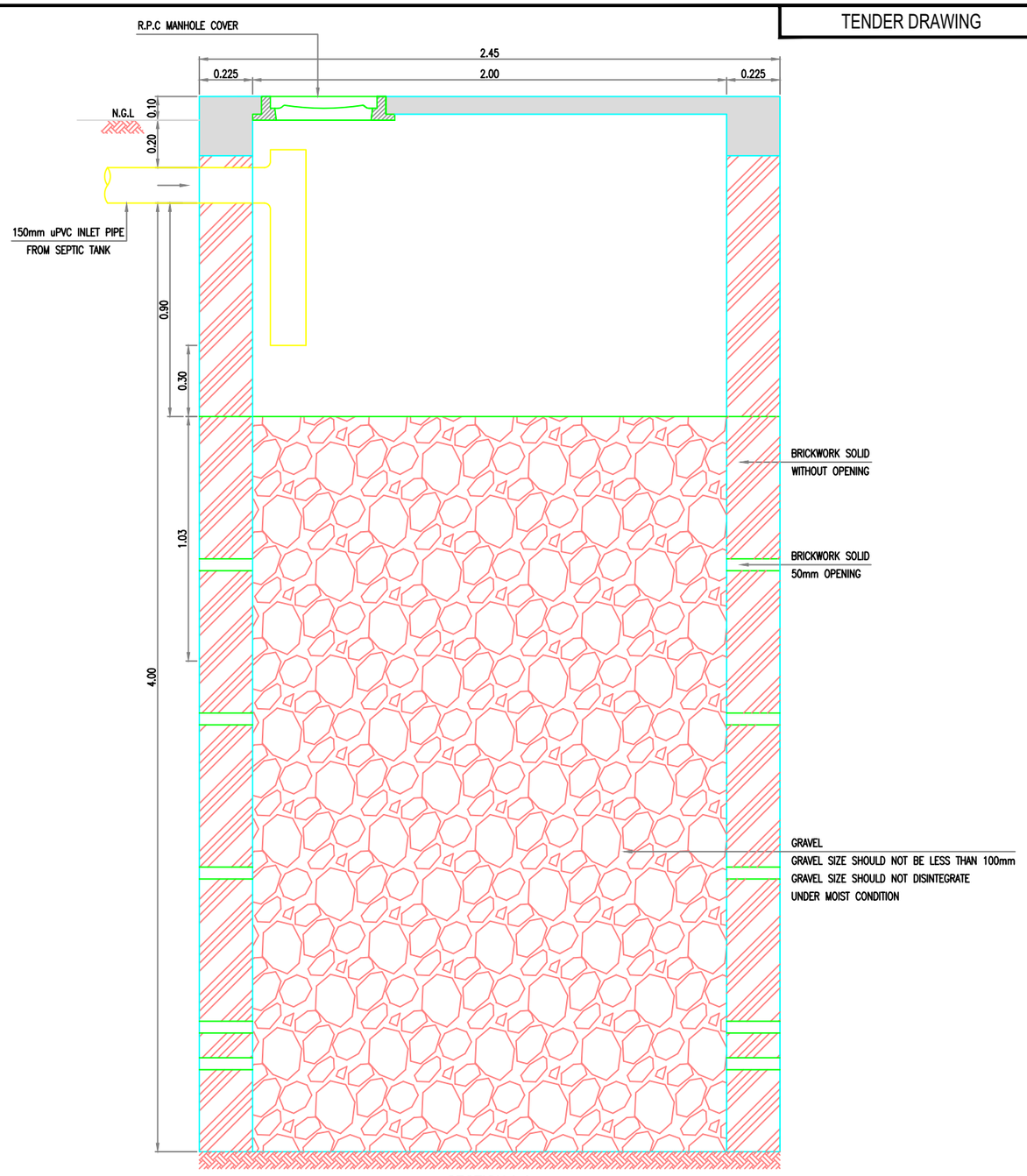
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. SOAKAGE PIT BOTTOM SHOULD BE ABOVE THE WATER TABLE.



PLAN OF SOAKAGE PIT



SECTION A-A

SCALE:-

0 0.20 0.40 0.60 0.80 1.00

m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

JAMRUD
SOAKAGE PIT
TYPE–IV
(11 TO 20 HOUSE)
PLAN AND SECTION

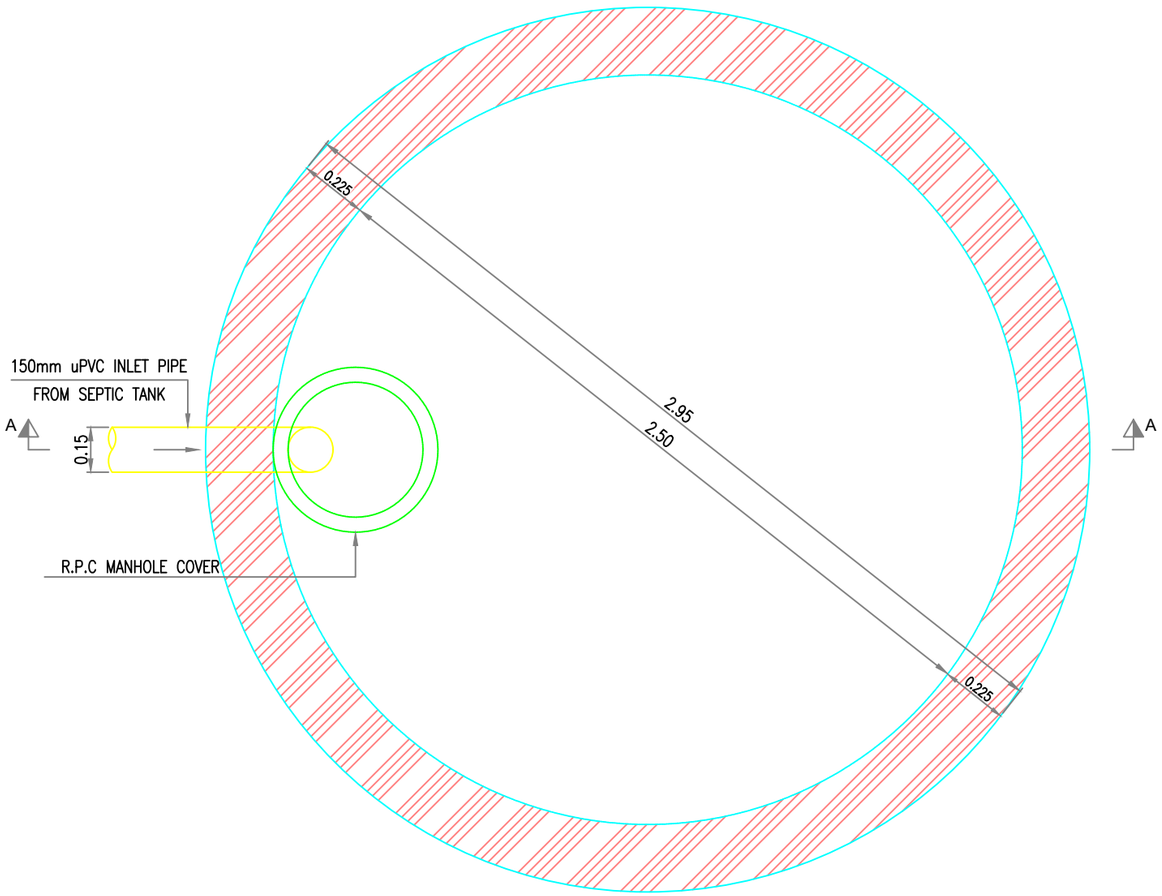
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/SS/KHD/JAM-3358

No.	Revision	By	Date

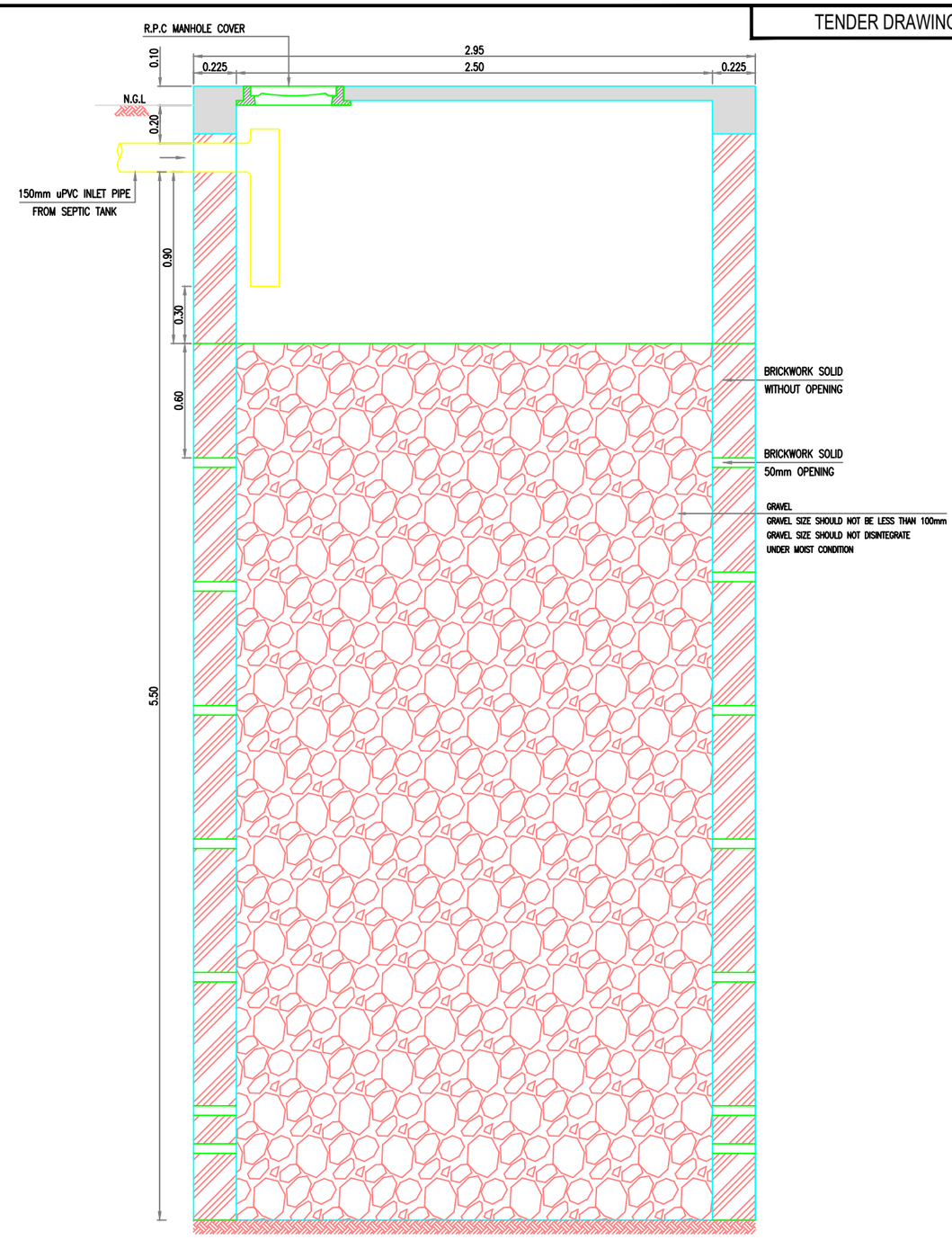
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. SOAKAGE PIT BOTTOM SHOULD BE ABOVE THE WATER TABLE.



PLAN OF SOAKAGE PIT



SECTION A-A

SCALE:-

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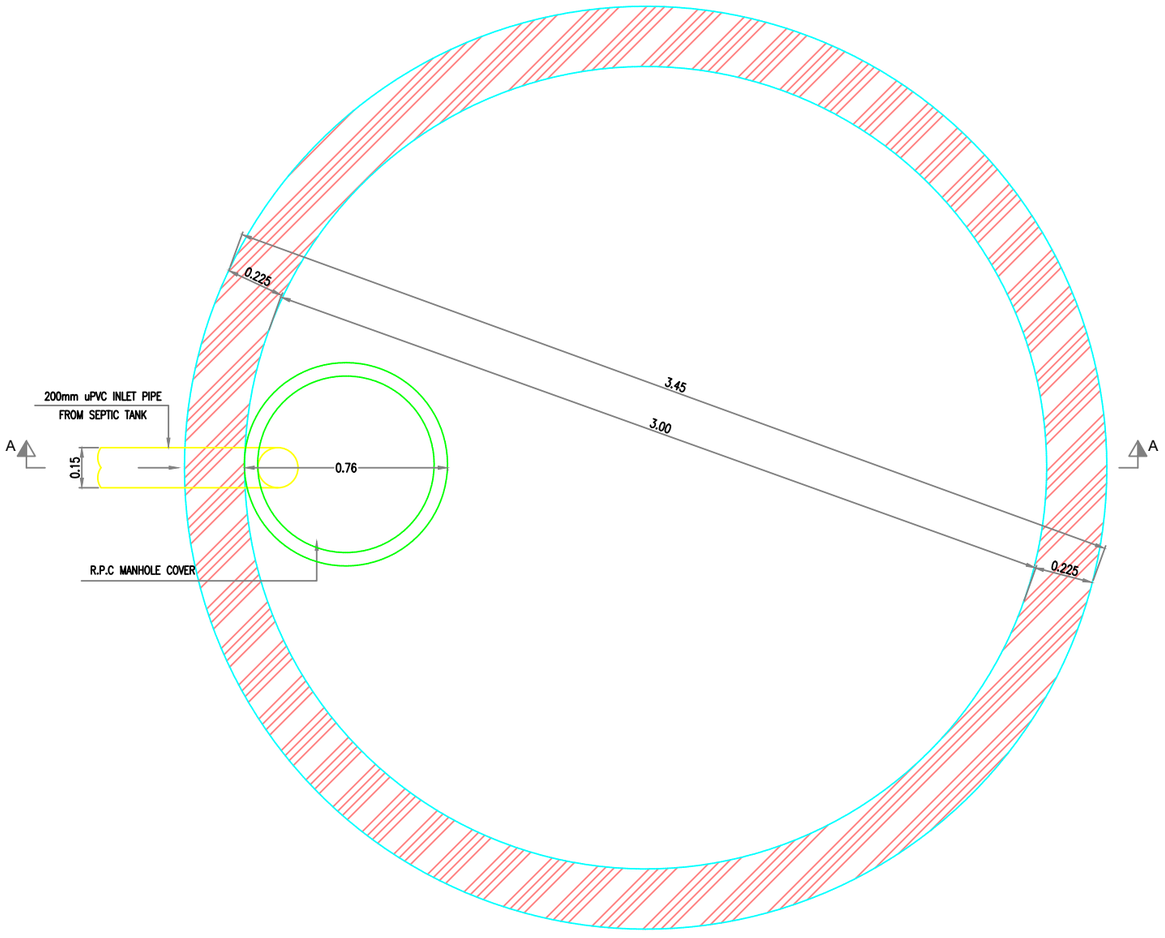
CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SOAKAGE PIT TYPE–V (21 TO 35 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026		
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3360		
				Approved By : RABEEA REHMAN			

No.	Revision	By	Date

TENDER DRAWING

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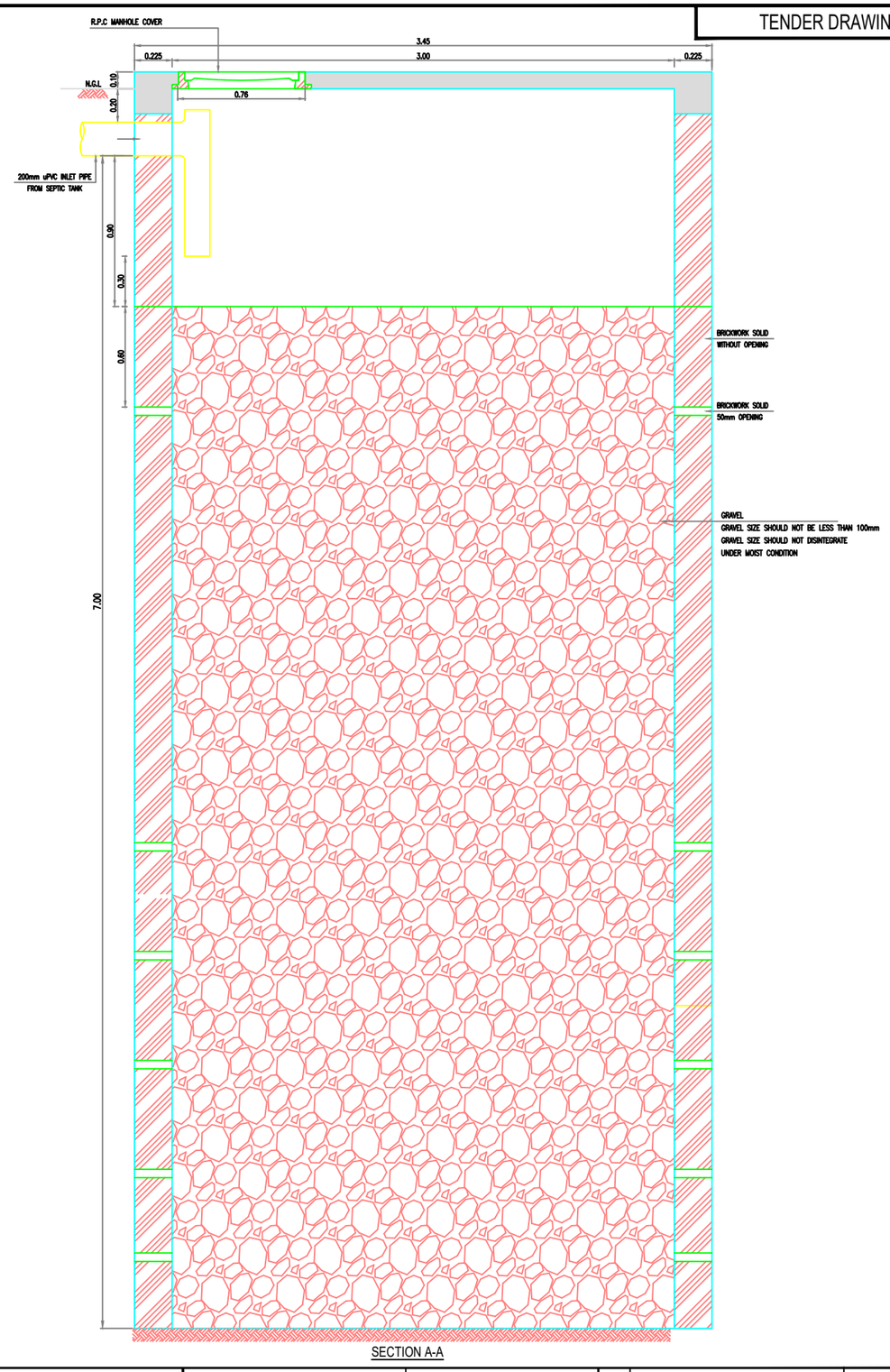
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.
2. SOAKAGE PIT BOTTOM SHOULD BE ABOVE THE WATER TABLE.



PLAN OF SOAKAGE PIT

SCALE:-

0 0.20 0.40 0.60 0.80 1.00 m



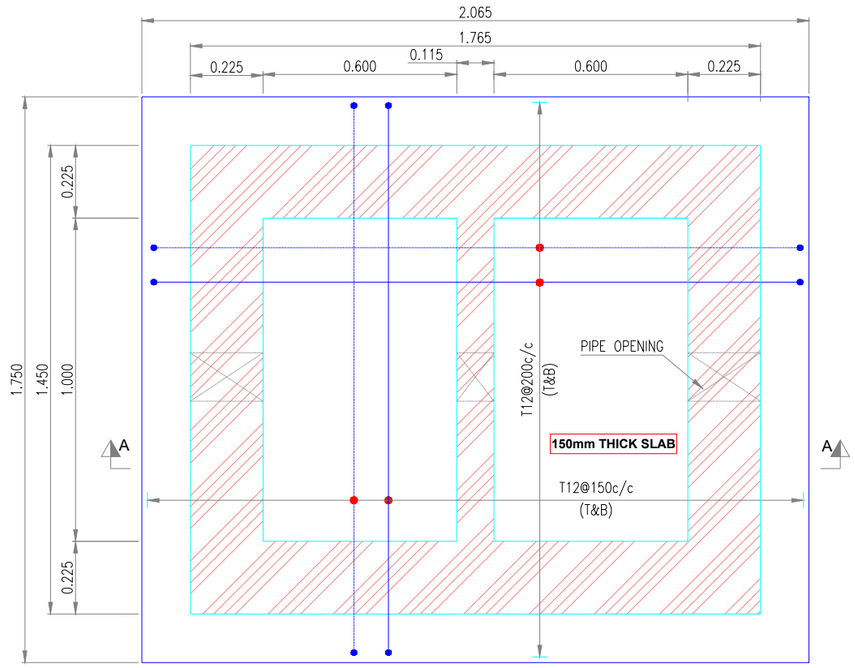
SECTION A-A

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SOAKAGE PIT TYPE-VI (36 TO 50 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI Drawn By : NAEEM BAKHSH Checked By : RABEEA REHMAN Approved By : RABEEA REHMAN	Date : SEP 2026 Scale : AS SHOWN Drawing No : KPR/SS/KHD/JAM-3362	No. / Revision / By / Date	

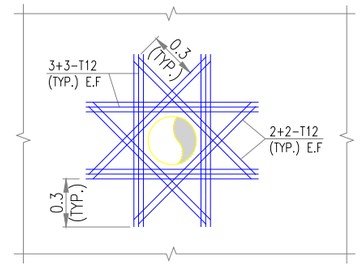
TENDER DRAWING

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.

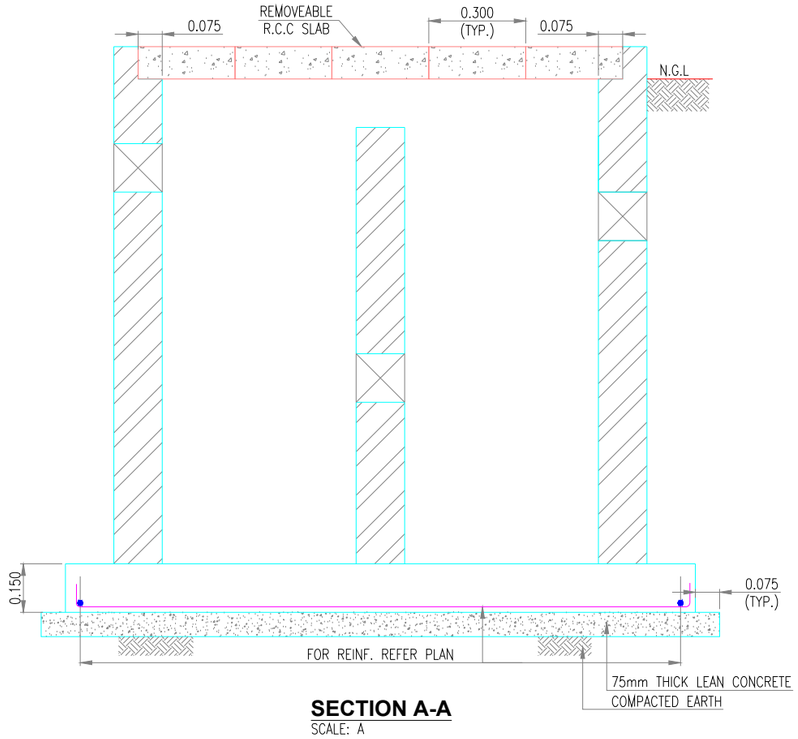


BASE SLAB REINF. PLAN



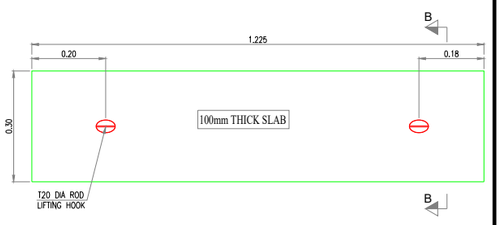
TYPICAL PIPE OPENING REINF. DETAIL

SCALE: NTS



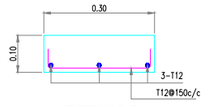
SECTION A-A

SCALE: A



TYPICAL REMOVEABLE R.C.C. SLAB PLAN

SCALE: B



SECTION B-B

SCALE: NTS

SCALE:-

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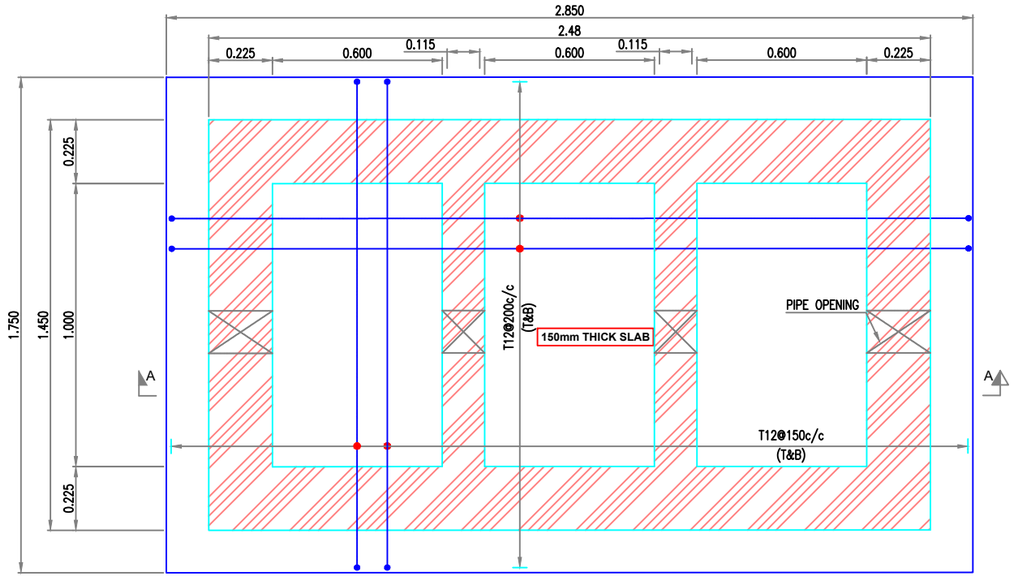
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE–I (01 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3363		
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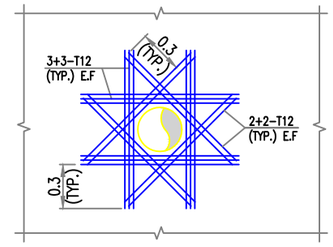
TENDER DRAWING

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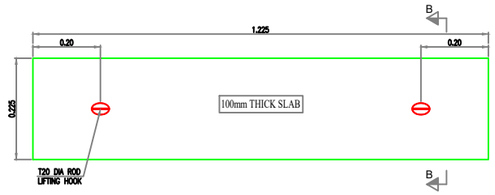
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



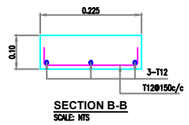
BASE SLAB REINF. PLAN
SCALE: A



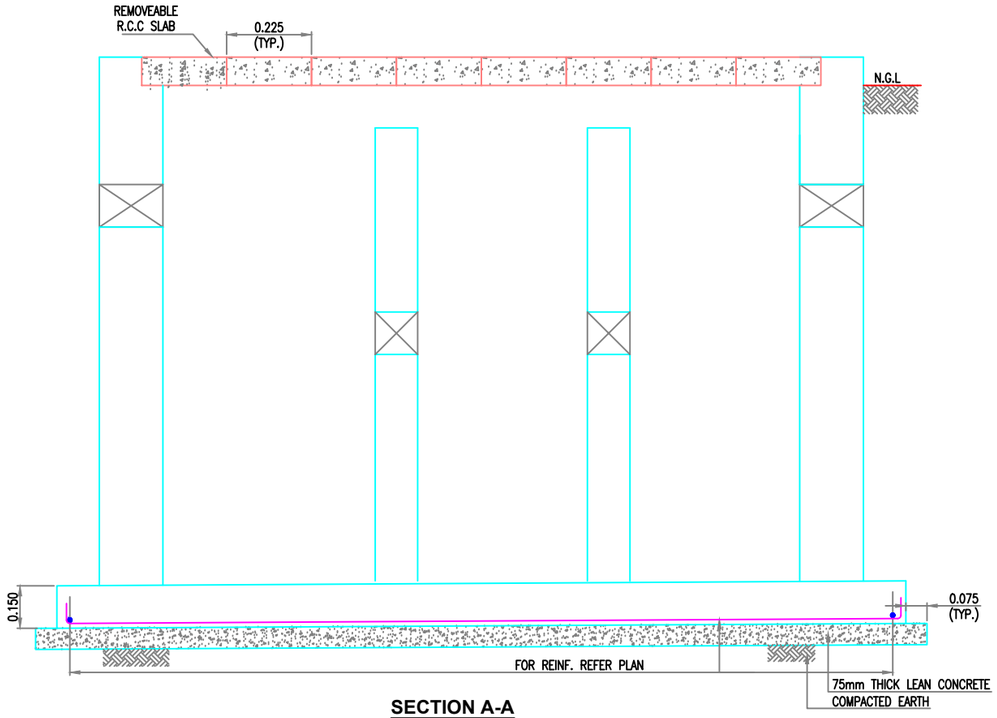
TYPICAL PIPE OPENING REINF. DETAIL
SCALE: NTS



TYPICAL REMOVEABLE R.C.C. SLAB PLAN
SCALE: B



SECTION B-B
SCALE: NTS



SECTION A-A
SCALE: A

SCALE:-
0 0.2 0.4 0.6 0.8 1.0
m

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
SEPTIC TANK
TYPE-II
(2 TO 5 HOUSE)
PLAN AND SECTION

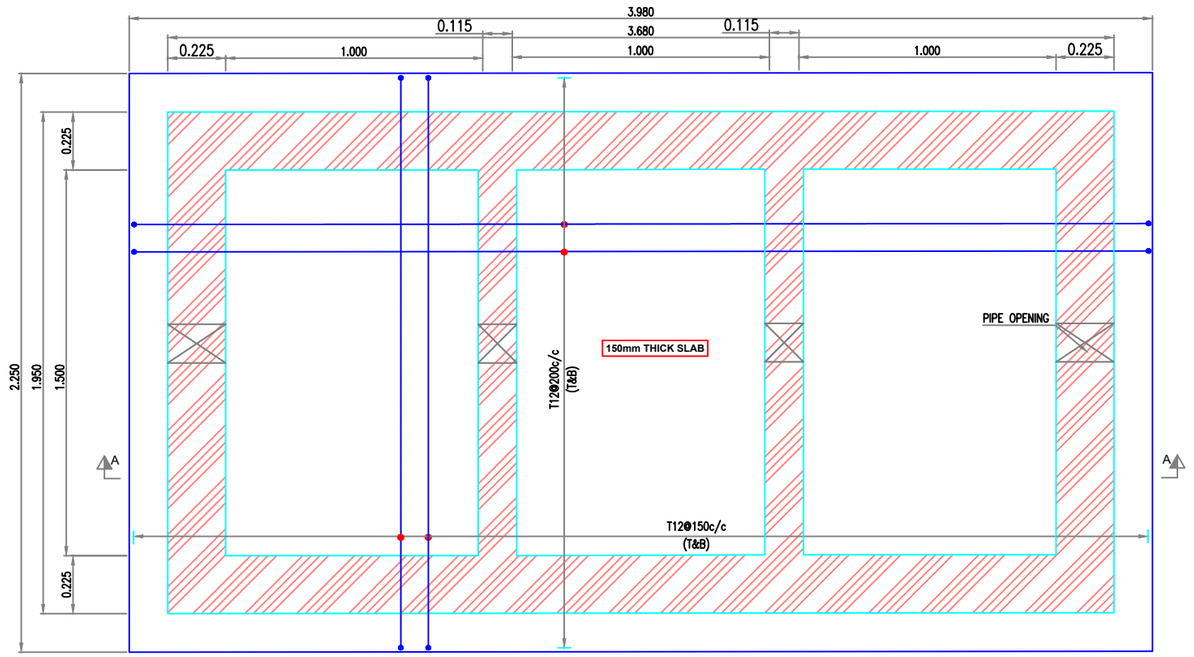
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3364
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

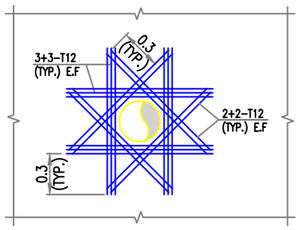
TENDER DRAWING

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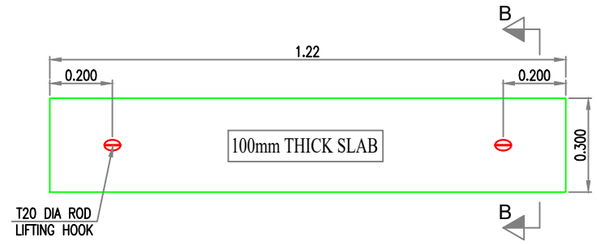
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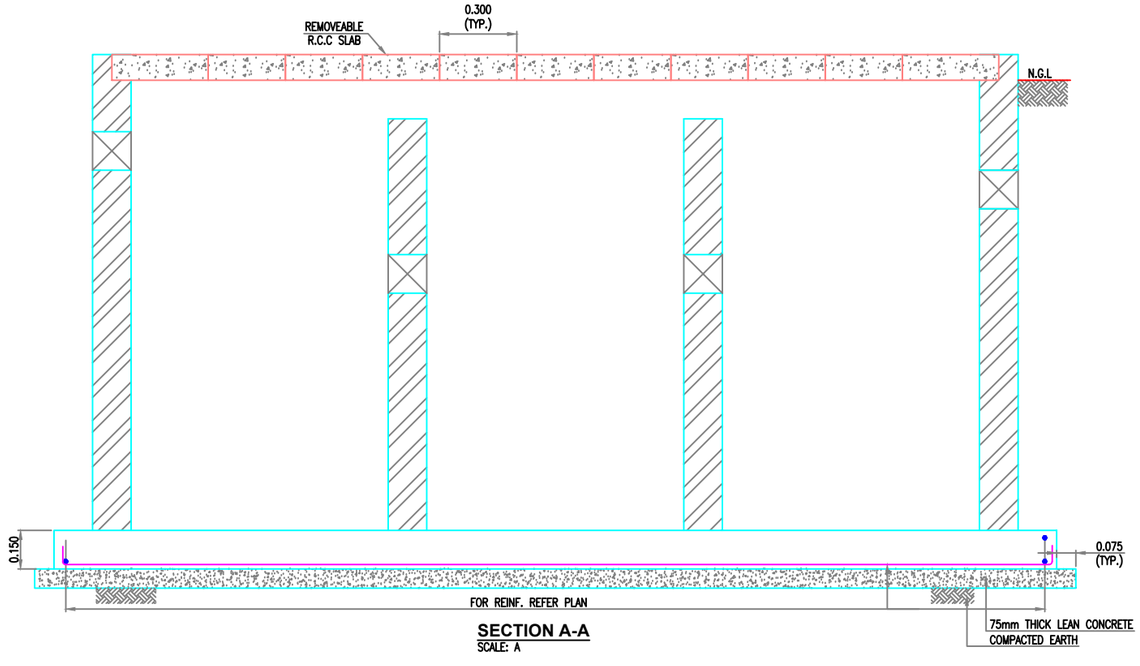
BASE SLAB REINF. PLAN
SCALE: A



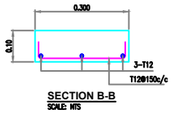
TYPICAL PIPE OPENING REINF. DETAIL
SCALE: NTS



TYPICAL REMOVEABLE R.C.C. SLAB PLAN
SCALE: NTS



SECTION A-A
SCALE: A

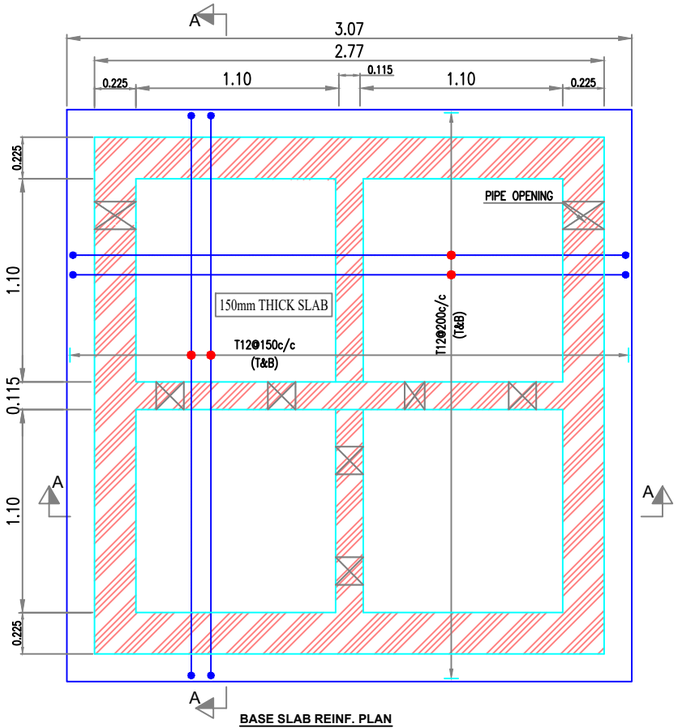


SECTION B-B
SCALE: NTS

SCALE:-
0 0.20 0.40 0.60 0.80 1.00
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE-III (6 TO 10 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No.	Revision / By / Date
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3365		
				Approved By : RABEEA REHMAN			

TENDER DRAWING

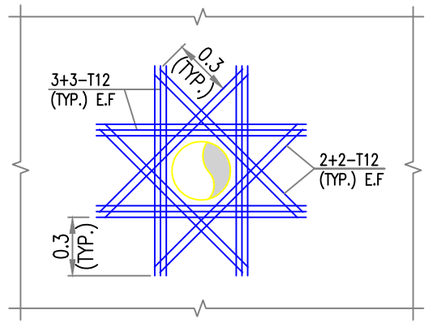


BASE SLAB REINF. PLAN

SCALE: A

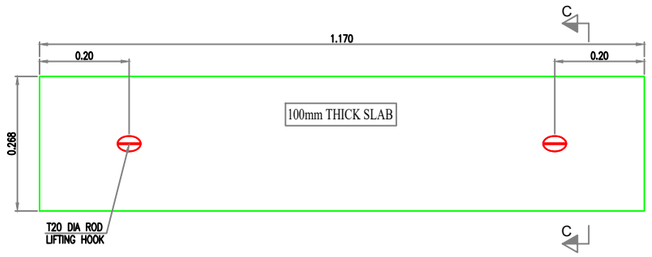
NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



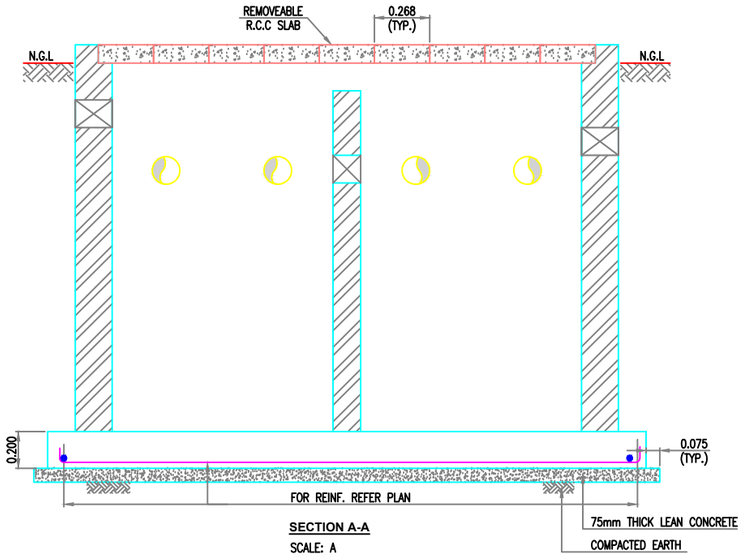
TYPICAL PIPE OPENING REINF. DETAIL

SCALE: NTS



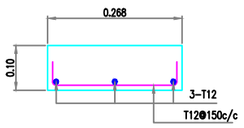
TYPICAL REMOVEABLE R.C.C. SLAB PLAN

SCALE: B



SECTION A-A

SCALE: A



SECTION C-C

SCALE: NTS

SCALE :-

0 0.5 1 2

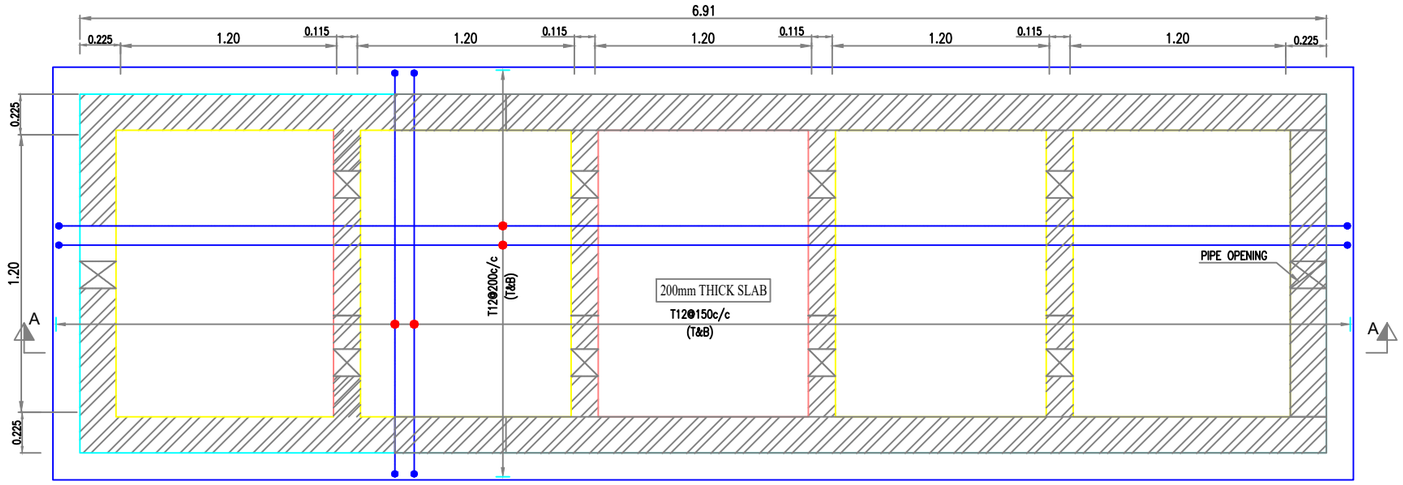
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE-IV (11 TO 20 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No :		
				Approved By : RABEEA REHMAN	KPR/SS/KHD/JAM-3366		

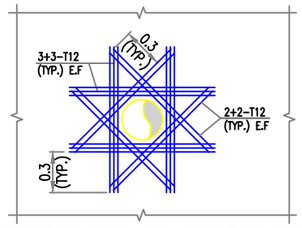
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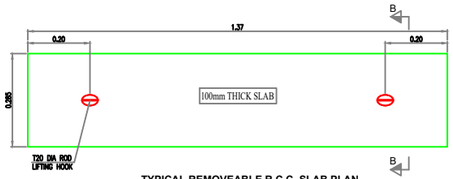
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



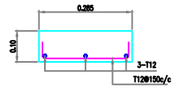
BASE SLAB REINF. PLAN
SCALE: A



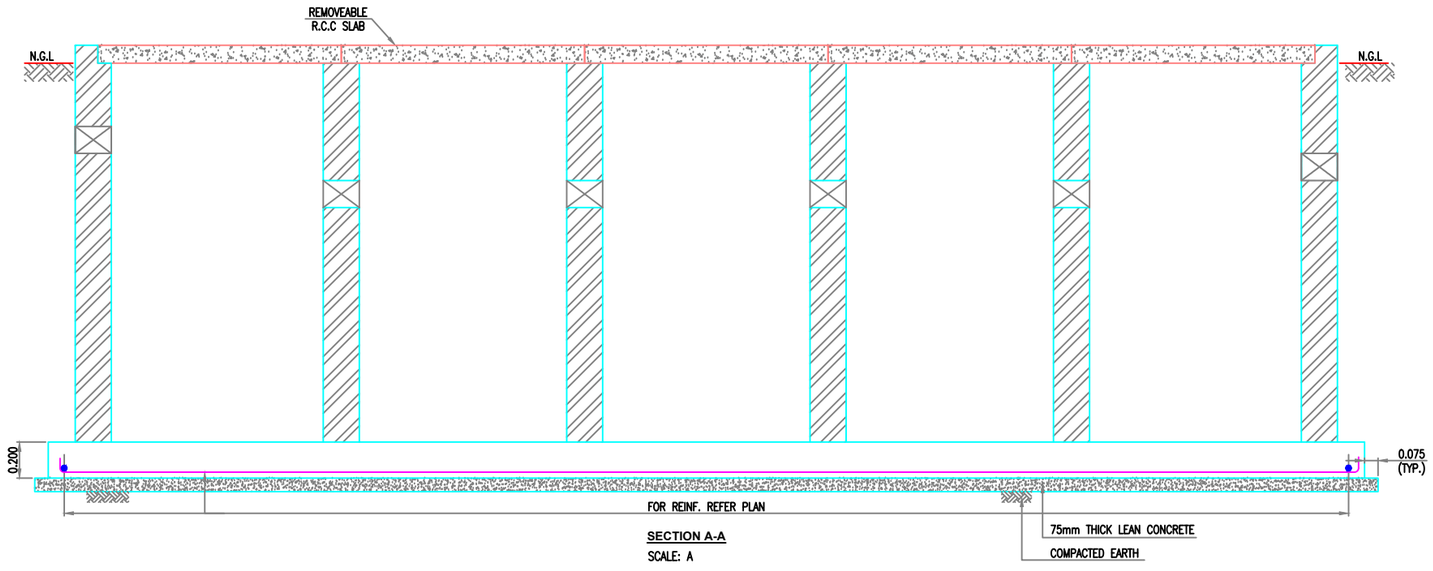
TYPICAL PIPE OPENING REINF. DETAIL
SCALE: NTS



TYPICAL REMOVEABLE R.C.C. SLAB PLAN
SCALE: B



SECTION C-C
SCALE: NTS

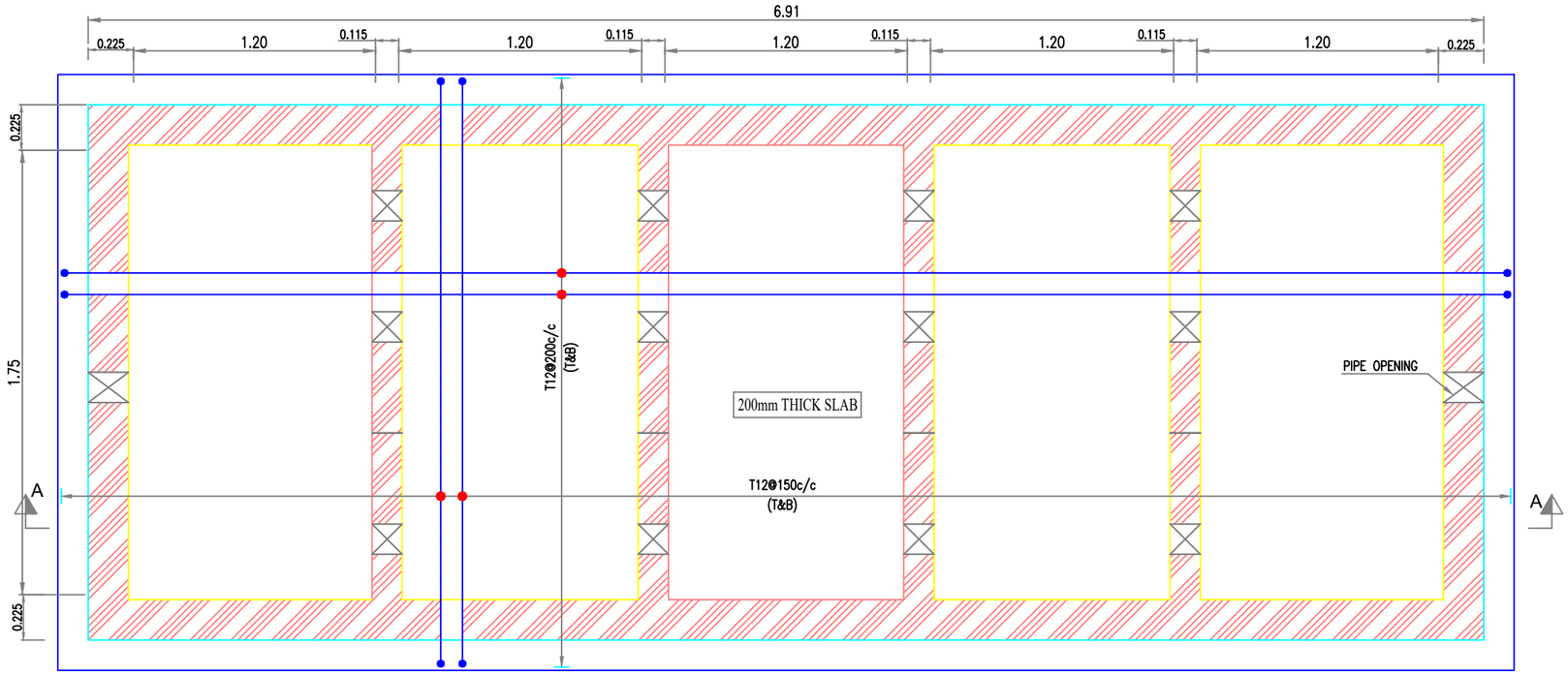


SECTION A-A
SCALE: A

SCALE :-
0 0.5 1 2
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE-V (21 TO 35 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3367		
				Approved By : RABEEA REHMAN			

TENDER DRAWING

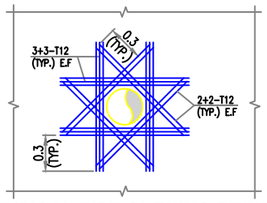


BASE SLAB REINF. PLAN

SCALE: A

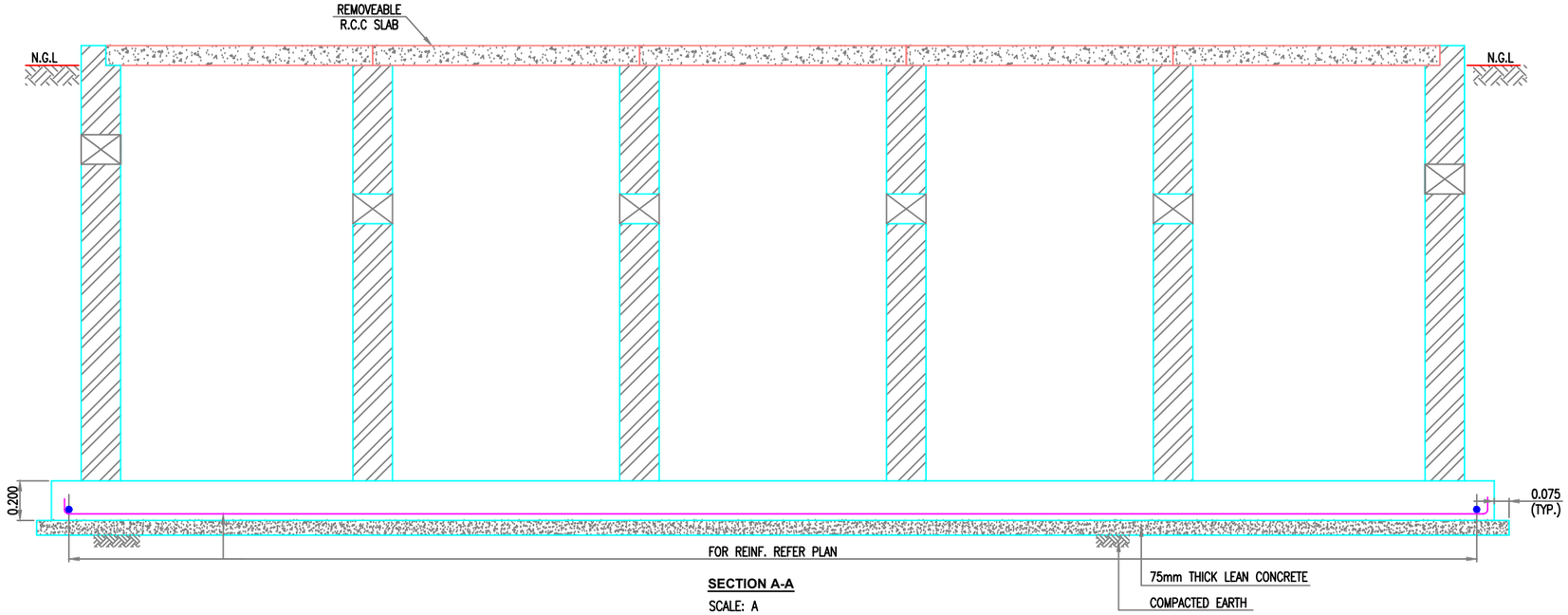
NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



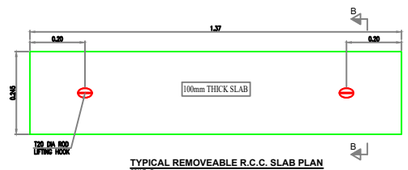
TYPICAL PIPE OPENING REINF. DETAIL

SCALE: NTS



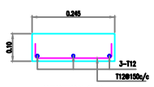
SECTION A-A

SCALE: A



TYPICAL REMOVEABLE R.C.C. SLAB PLAN

SCALE: B



SECTION C-C

SCALE: NTS

SCALE :-

0 0.25 0.50 0.75 1

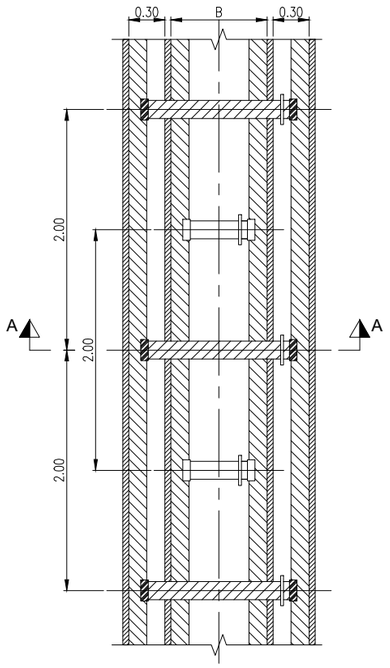
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CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD SEPTIC TANK TYPE–VI (36 TO 50 HOUSE) PLAN AND SECTION	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/KHD/JAM-3368		
				Approved By : RABEEA REHMAN			

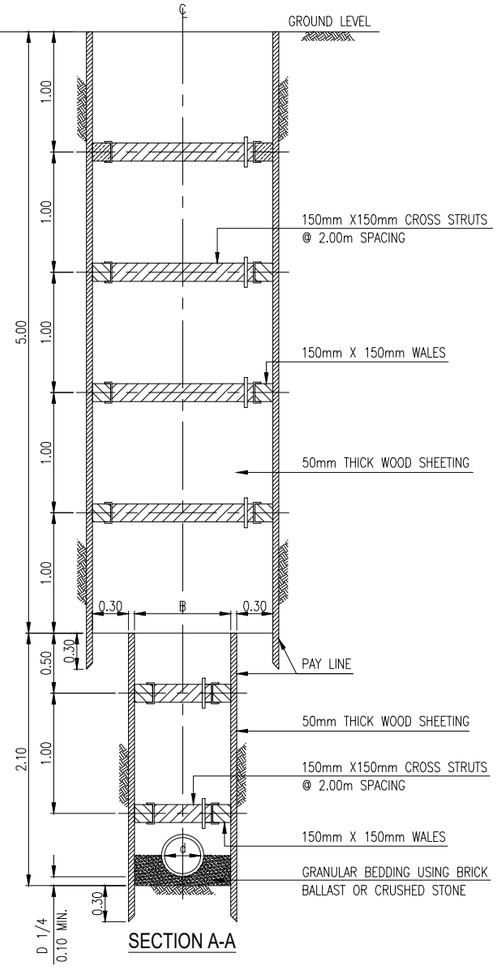
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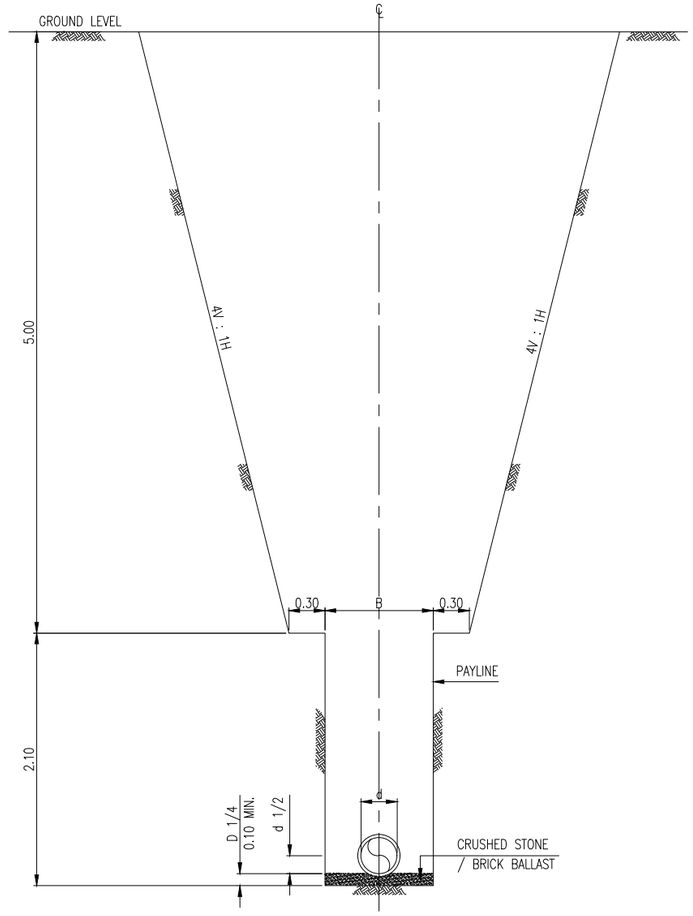
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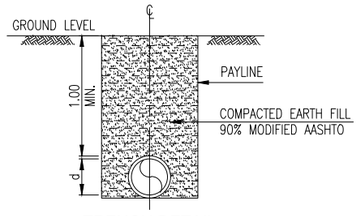
PLAN
TRENCH WITH TIMBERING AND BRACING



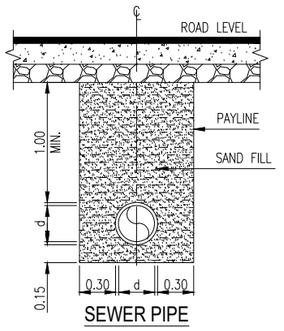
SECTION A-A



SECTION OF TRENCH WITHOUT
TIMBERING AND BRACING



TRENCH DETAIL
SEWER PIPE



SEWER PIPE

SCHEDULE OF TRENCH

SR. NO.	PIPE INSIDE DIAMETER ("D")	TRENCH B WITH TIMBERING	TRENCH B WITHOUT TIMBERING
1	225mm (9")	675mm (27")	900mm (36")
2	300mm (12")	800mm (32")	900mm (36")
3	375mm (15")	900mm (36")	1050mm (42")
4	450mm (18")	975mm (39")	1150mm (46")
5	525mm (21")	1075mm (43")	1250mm (50")
6	600mm (24")	1150mm (46")	1350mm (54")

SCALE:-

0 0.5 1.0 1.5 2.0

m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :

JAMRUD
TYPICAL PIPE TRENCH DETAILS

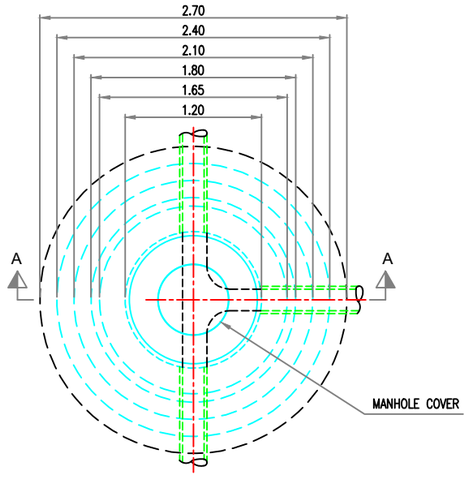
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	NAEEM BAKHSH	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	
Approved By :	RABEEA REHMAN		KPR/SS/KHD/JAM-3371

No.	Revision	By	Date

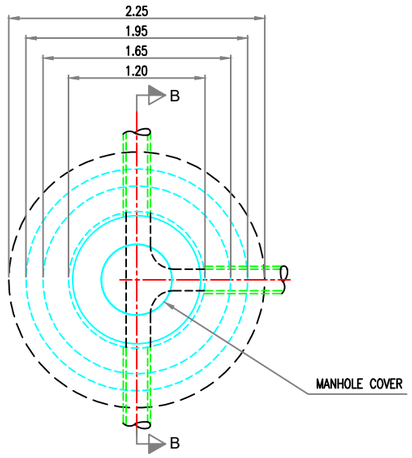
TENDER DRAWING

NOTES:

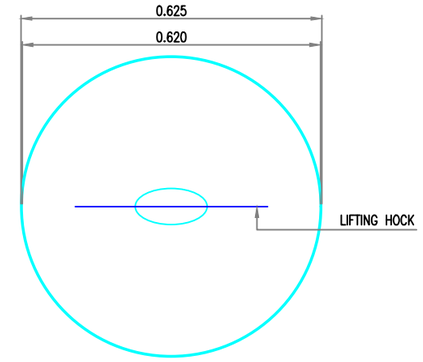
1. ALL DIMENSIONS ARE IN METERS. UNESS OTHERWISE NOTED.



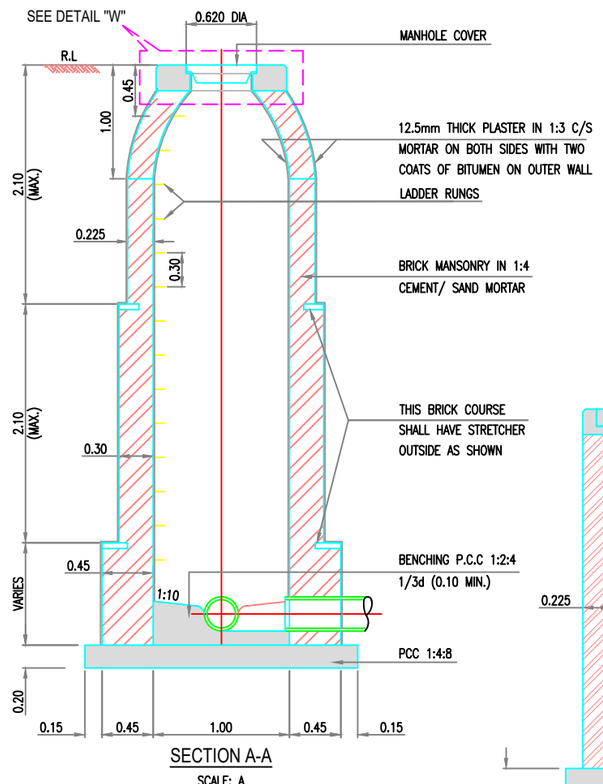
TYPICAL SEWER MANHOLE PLAN (TYPE B)
(FOR DEPTH > 2.10m)



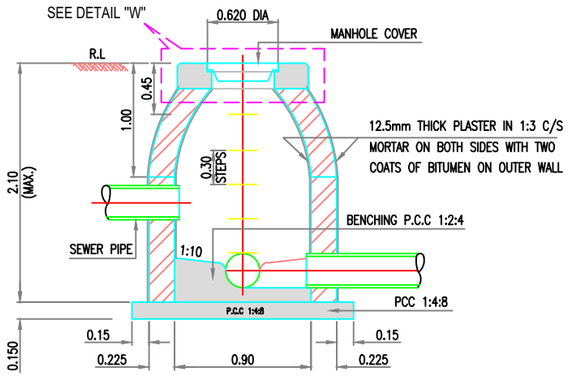
TYPICAL SEWER MANHOLE PLAN (TYPE A)
(FOR DEPTH < 2.10m)



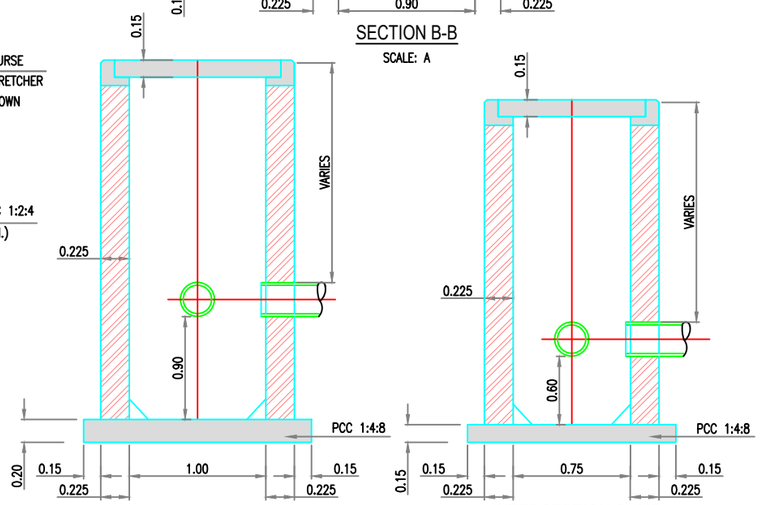
MANHOLE COVER
SCALE: B



SECTION A-A
SCALE: A

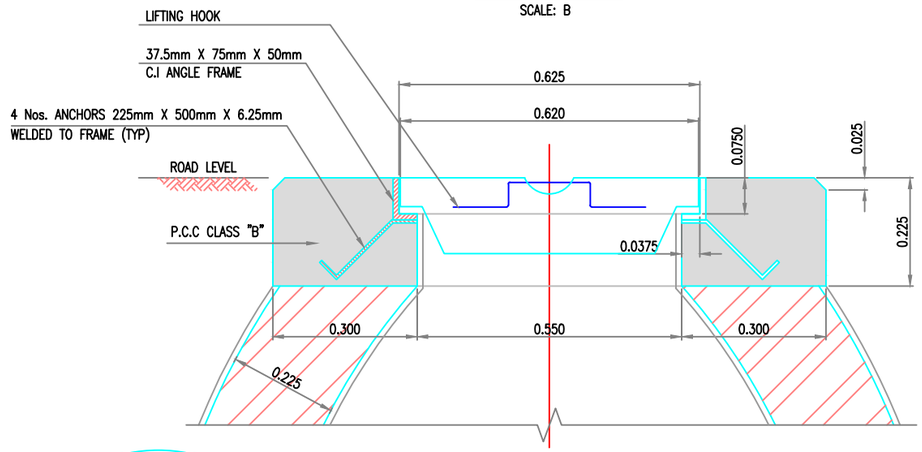


SECTION B-B
SCALE: A

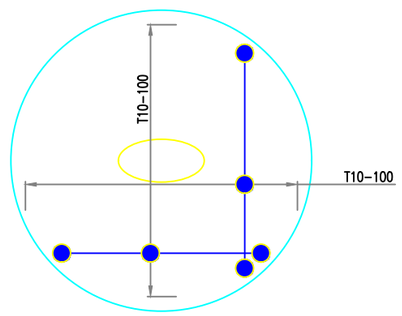


INTERCEPTION SUMP
MANHOLE-1x1m
SCALE: A

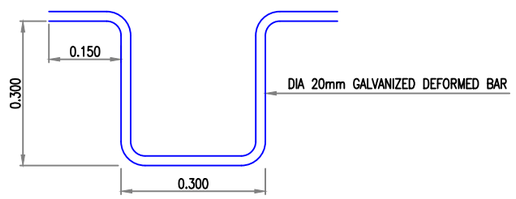
INTERCEPTION SUMP
INSPECTION CHAMBER
0.75x0.75m
SCALE: A



DETAIL "W"
SCALE: B



REINFOR. DETAIL OF MANHOLE COVER
SCALE: B



TYPICAL DETAIL OF RUNG
SCALE: B

SCALE:- A
0 0.5 1.0 1.5 2.0 m

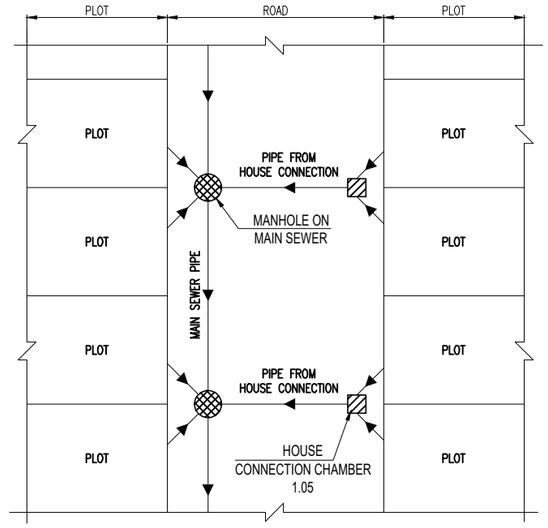
SCALE:- B
0 0.1 0.2 0.3 0.4 0.5 m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD TYPICAL MANHOLE DETAILS	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026	No. / Revision / By / Date	
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/BJD/RG-3372		
				Approved By : RABEEA REHMAN			

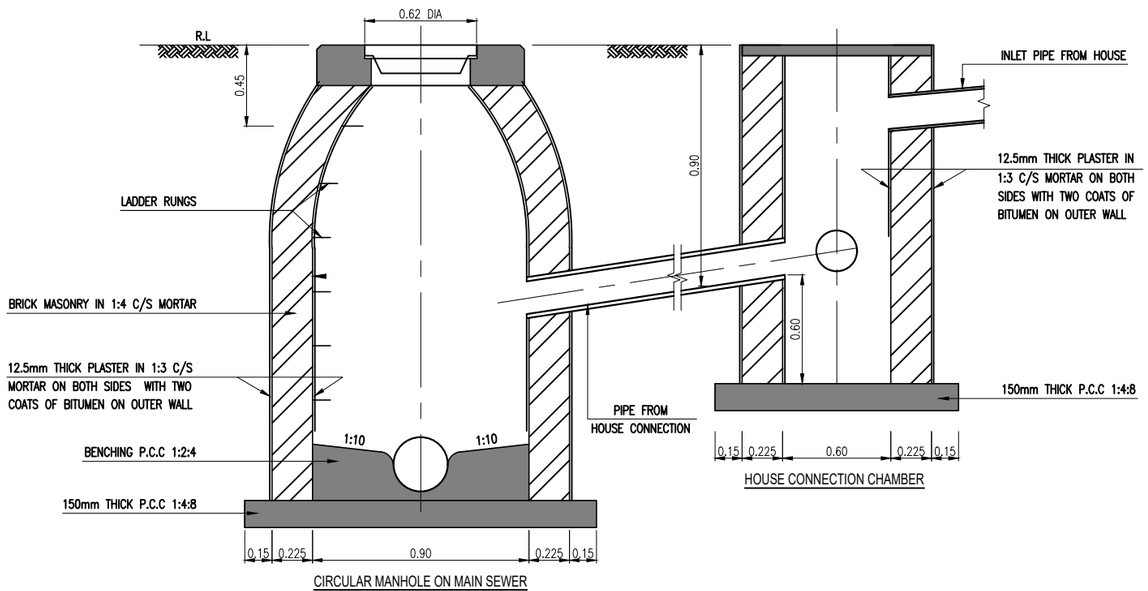
TENDER DRAWING

NOTES:

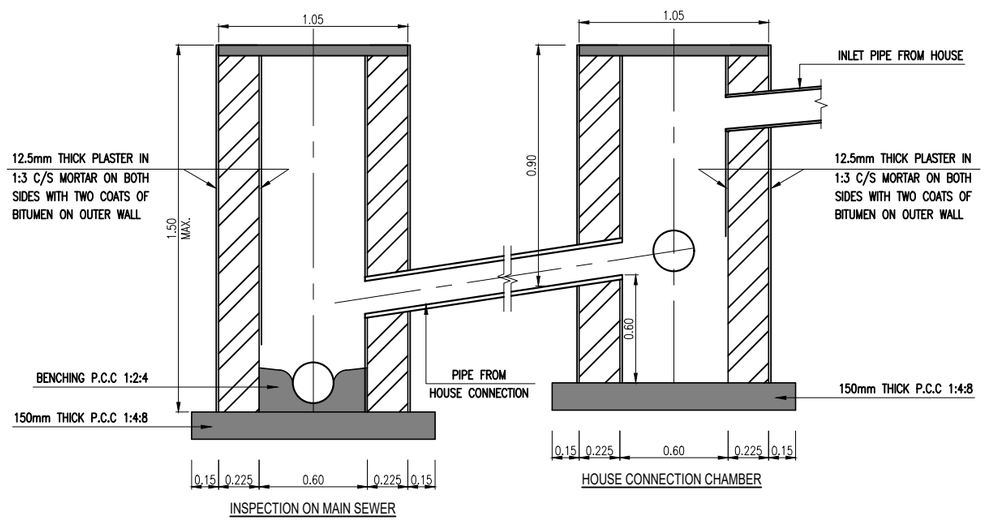
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



HOUSE CONNECTION TYPICAL PLAN



HOUSE CONNECTION TYPICAL SECTION
(FOR CENTERLIZED)



HOUSE CONNECTION TYPICAL SECTION
(FOR DECENTERLIZED)

SCALE:-

0 0.5 1.0 1.5
m

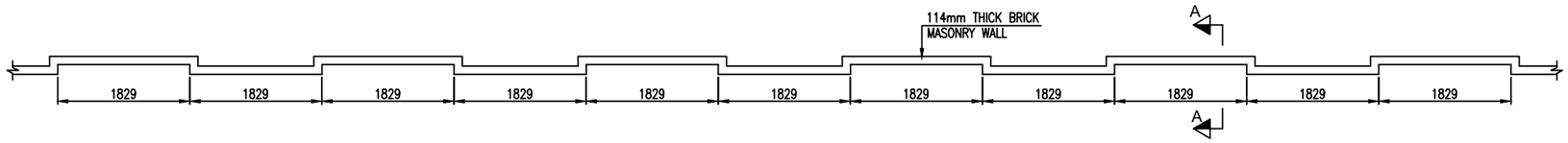
CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD TYPICAL HOUSE CONNECTION WITH MAIN SEWER DETAILS	Designed By : Dr. ASFAHAN ALI	Date : SEP 2026		
				Drawn By : NAEEM BAKHSH	Scale : AS SHOWN		
				Checked By : RABEEA REHMAN	Drawing No : KPR/SS/BJD/RG-3373		
				Approved By : RABEEA REHMAN			

No.	Revision	By	Date

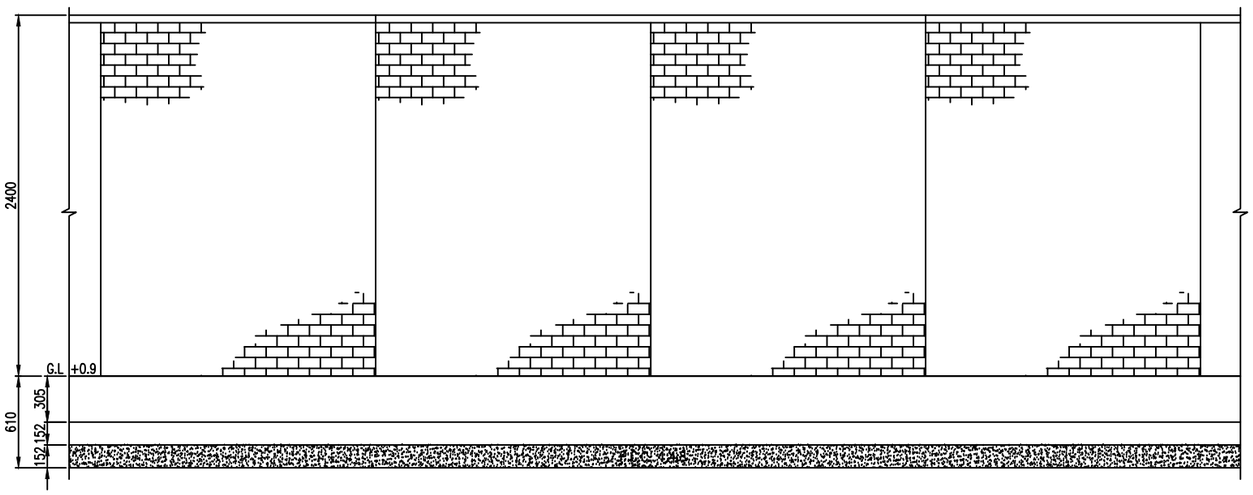
TENDER DRAWING

NOTES:

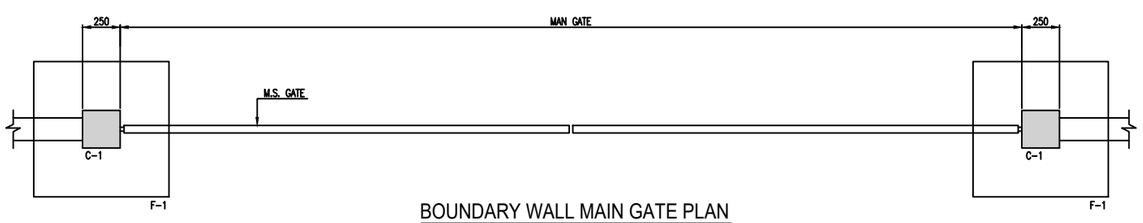
FOR PIPING ARRANGEMENT & MECHANICAL ITEMS, CONTRACTOR SHALL SUBMIT THE SHOP DRAWINGS CONSIDERING MANUFACTURER'S REQUIREMENT FOR THE ENGINEER'S APPROVAL BEFORE EXECUTION.



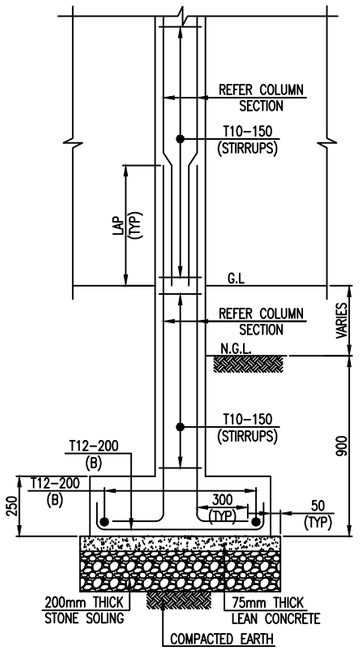
BOUNDARY WALL LAYOUT PLAN
SCALE NTS



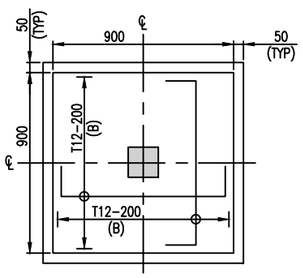
EXTERNAL BOUNDARY WALL ELEVATION
SCALE A



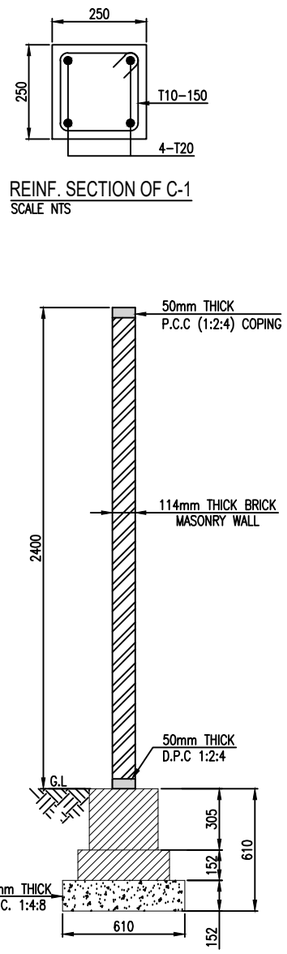
BOUNDARY WALL MAIN GATE PLAN
SCALE A



TYPICAL SECTION OF FOOTING
SCALE B



TYPICAL PLAN OF ISOLATED FOOTING
SCALE B



REINF. SECTION OF C-1
SCALE NTS

SECTION A-A
SCALE B

SCALE: A
0 0.5 1 1.5 m

SCALE: B
0 0.25 0.5 0.75 1 1.5 m

CLIENT: PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE: JAMRUD BOUNDARY WALL PLAN, SECTIONS, ELEVATION AND REINF. DETAILS	Designed By: Dr. ASFAHAN ALI	Date: SEP 2026		
				Drawn By: NAEEM BAKHSH	Scale: AS SHOWN		
				Checked By: RABEEA REHMAN	Drawing No: KPR/SS/KHD/JAM-3374		
				Approved By: RABEEA REHMAN			

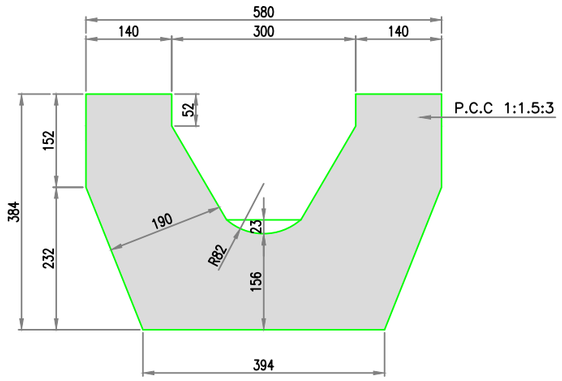
No.	Revision	By	Date

STORMWATER DRAINS

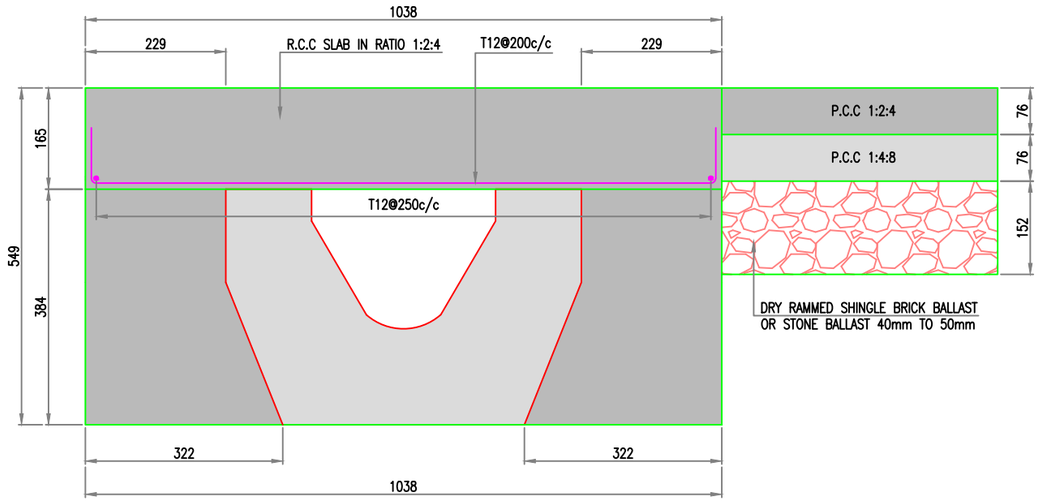
TENDER DRAWING

NOTES:

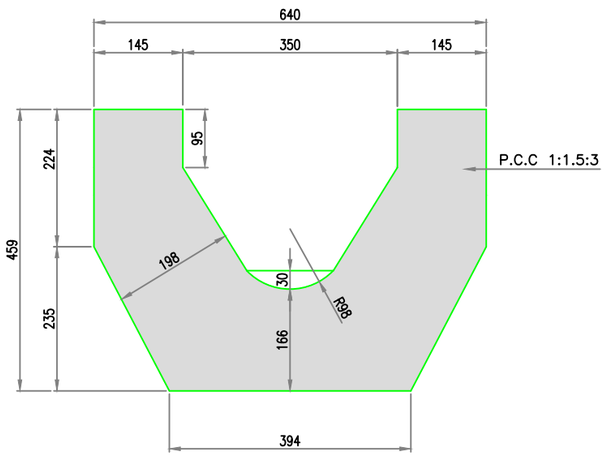
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



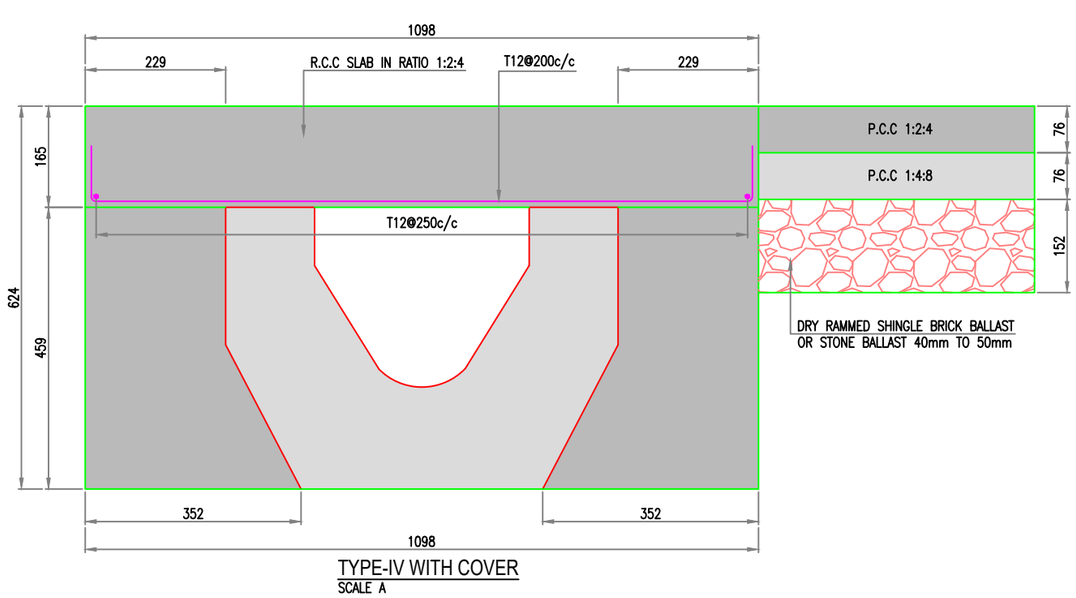
TYPE-III
SCALE A



TYPE-III WITH COVER
SCALE A



TYPE-IV
SCALE A



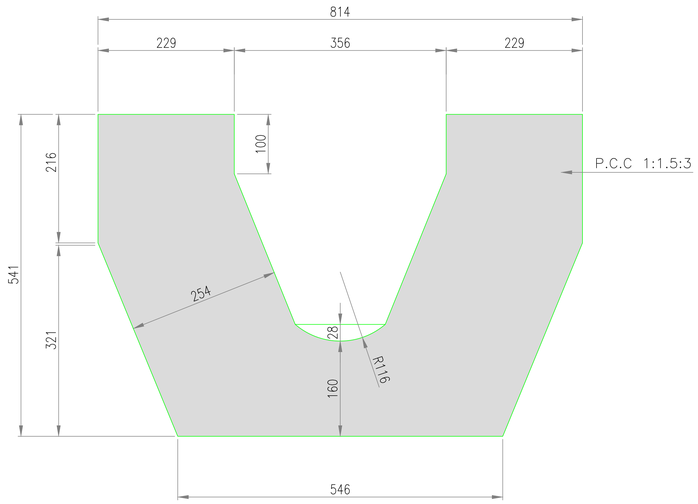
TYPE-IV WITH COVER
SCALE A

SCALE A:-

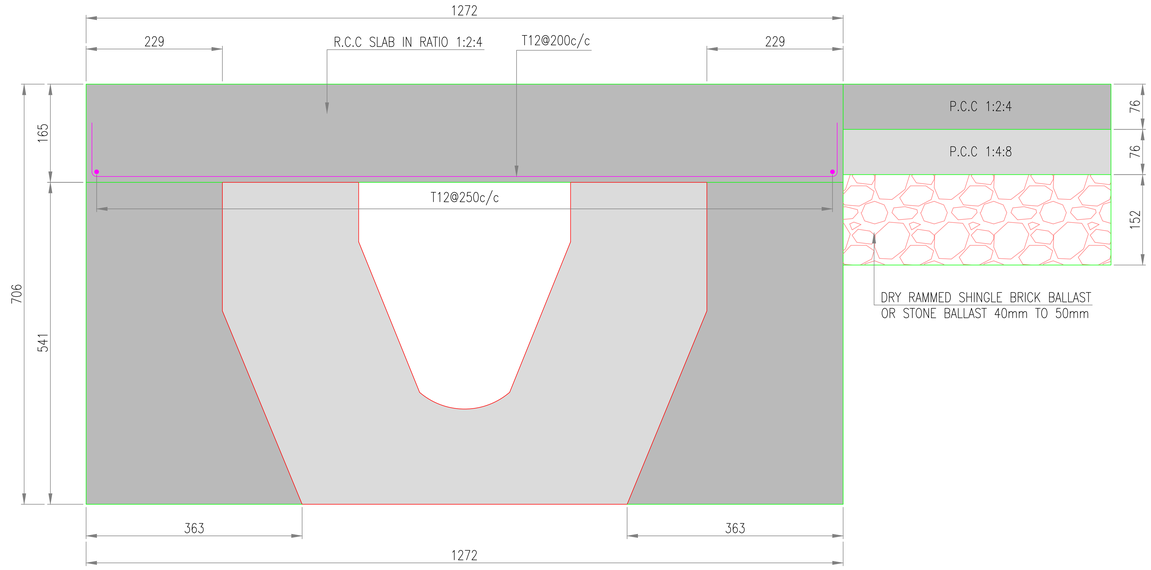
0 0.1 0.2 0.3 0.4 m

CLIENT: PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE: JAMRUD TYPICAL DRAIN DETAILS SHEET-1	Designed By: Dr. ASFAHAN ALI	Date: SEP 2026	No. / Revision / By / Date	
				Drawn By: SHUJA UDDIN	Scale: AS SHOWN		
				Checked By: RABEEA REHMAN	Drawing No: KPR/SS/KHD/JAM-3391		
				Approved By: RABEEA REHMAN			

TENDER DRAWING



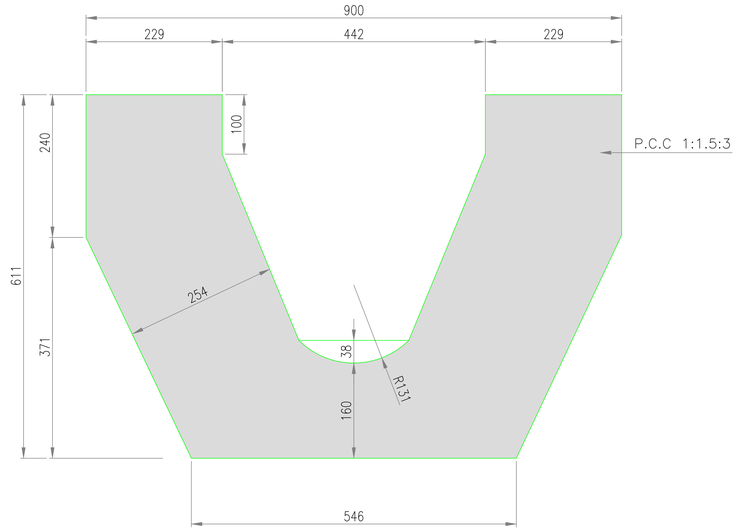
TYPE-V
SCALE A



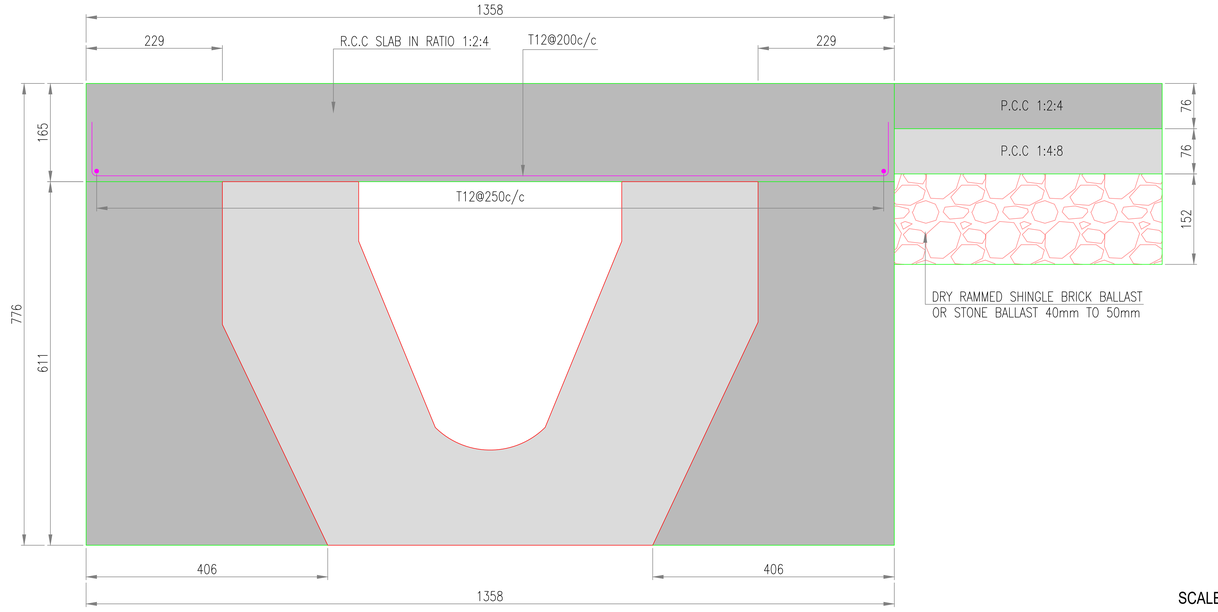
TYPE-V WITH COVER
SCALE A

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



TYPE-VI
SCALE A



TYPE-VI WITH COVER
SCALE A

SCALE A:-



CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

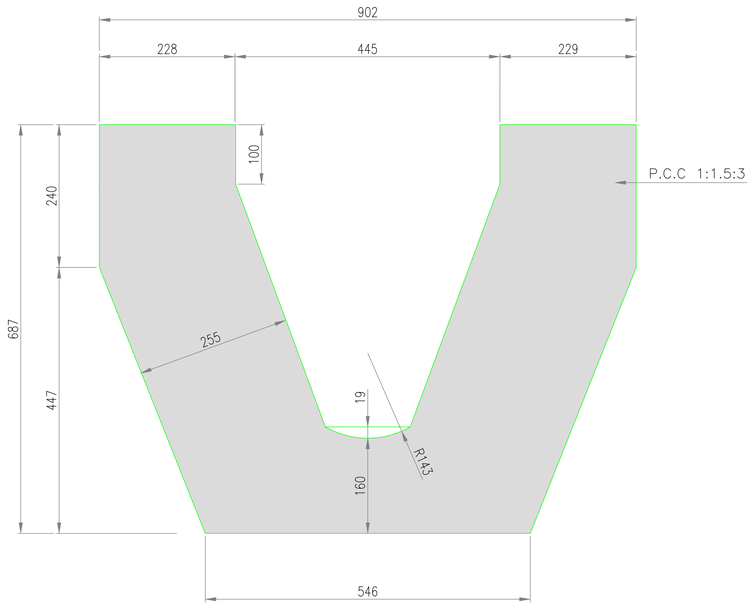
PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
TYPICAL DRAIN DETAILS
SHEET–2

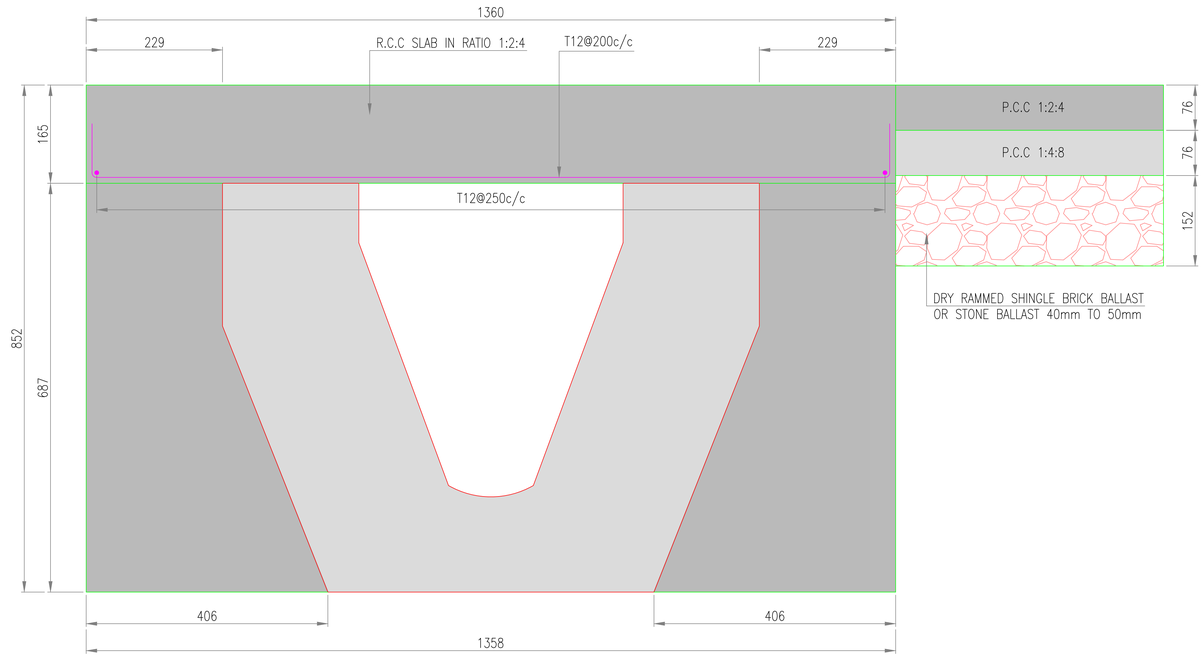
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3392
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

TENDER DRAWING



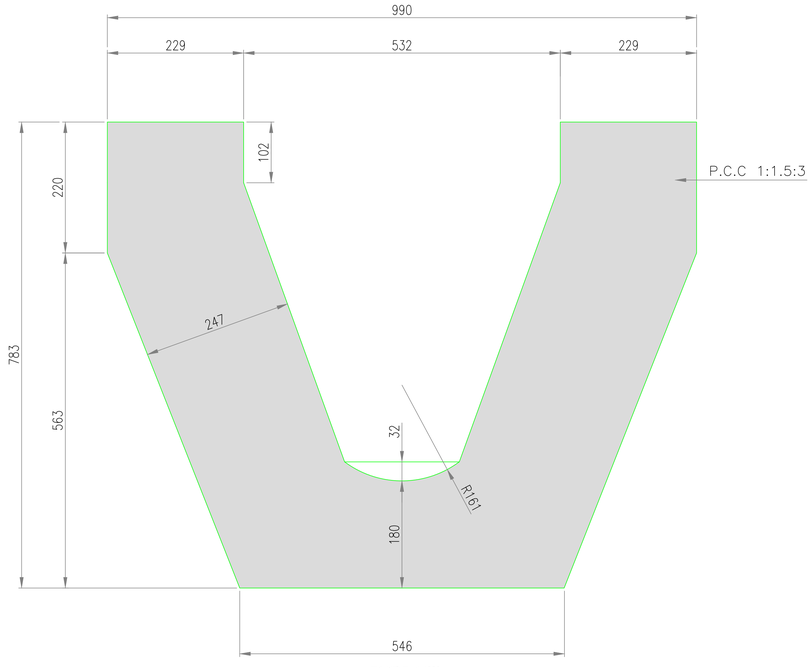
TYPE-VII
SCALE A



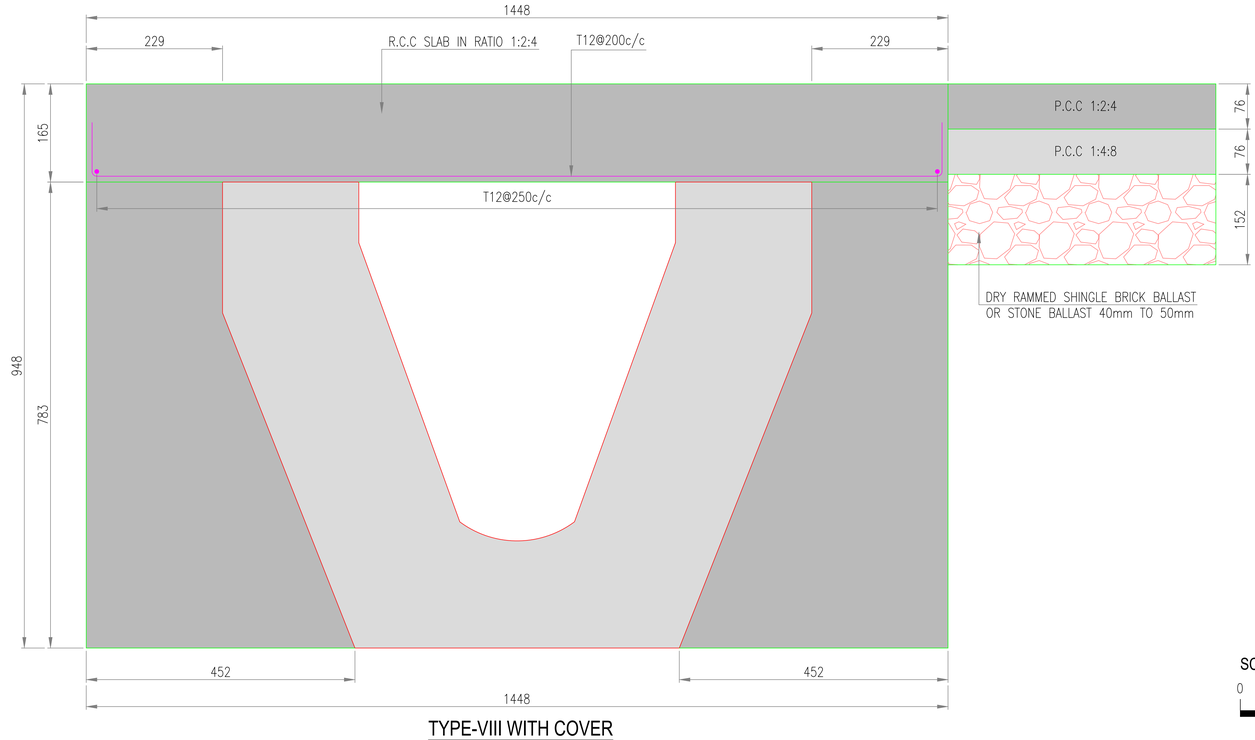
TYPE-VII WITH COVER
SCALE A

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



TYPE-VIII
SCALE A



TYPE-VIII WITH COVER
SCALE A

SCALE A:-



CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD TYPICAL DRAIN DETAILS SHEET–3

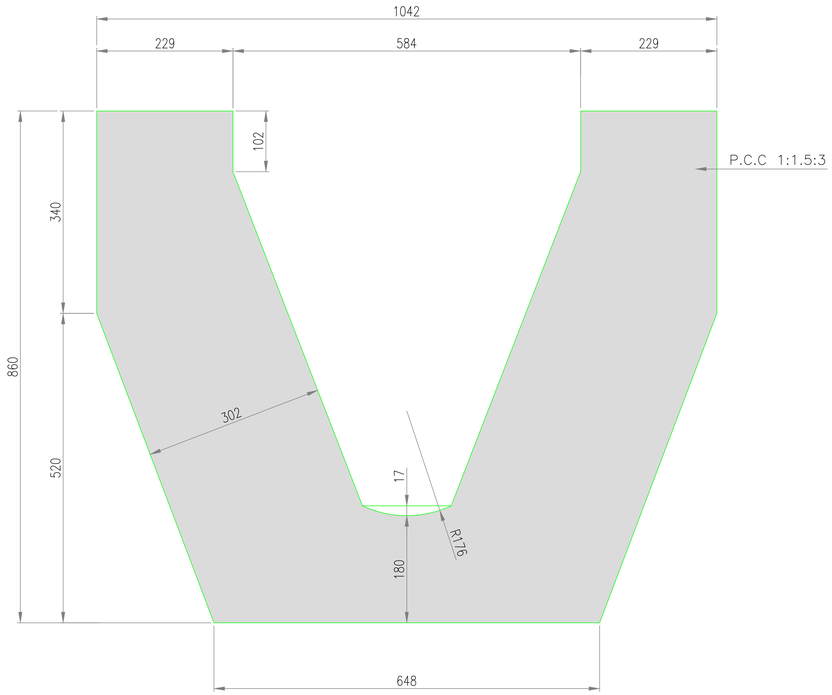
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3393
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

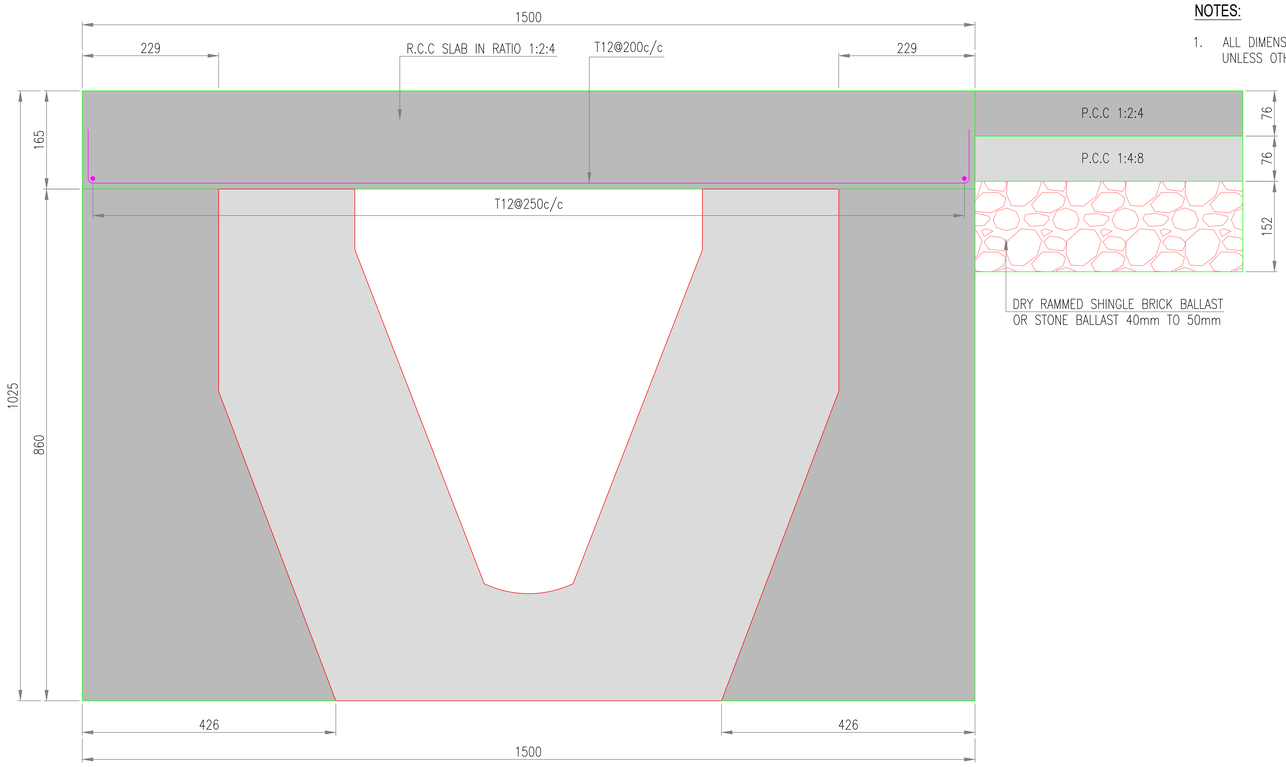
TENDER DRAWING

NOTES:

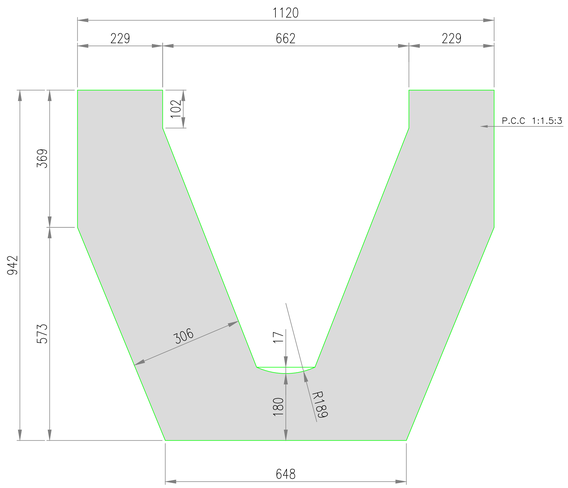
1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



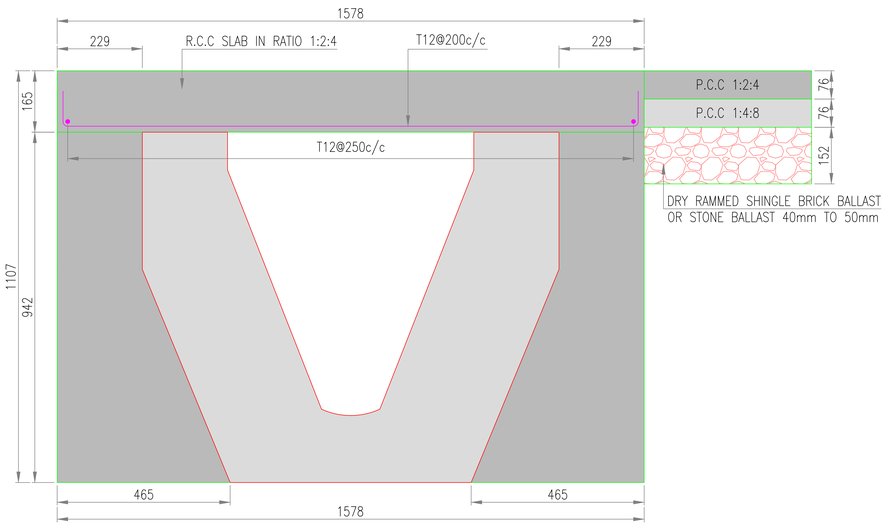
TYPE-IX
SCALE A



TYPE-IX WITH COVER
SCALE A



TYPE-X
SCALE B



TYPE-X WITH COVER
SCALE B

SCALE A:-

0 0.1 0.2 0.3 0.4 m

SCALE B:-

0 0.1 0.2 0.4 0.6 m

CLIENT :

PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:

Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

PROJECT:

KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

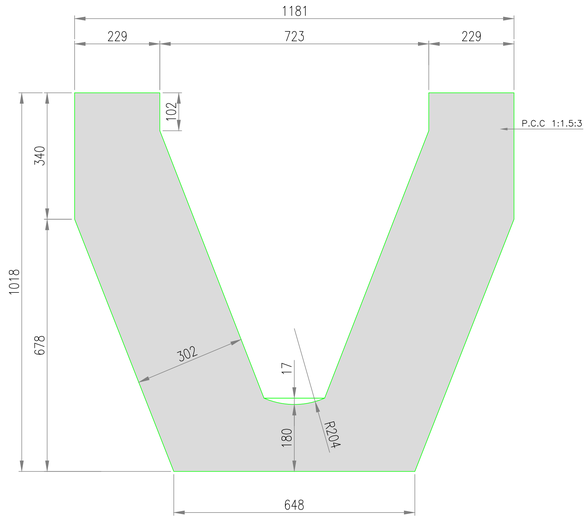
DRAWING TITLE :

JAMRUD
TYPICAL DRAIN DETAILS
SHEET–4

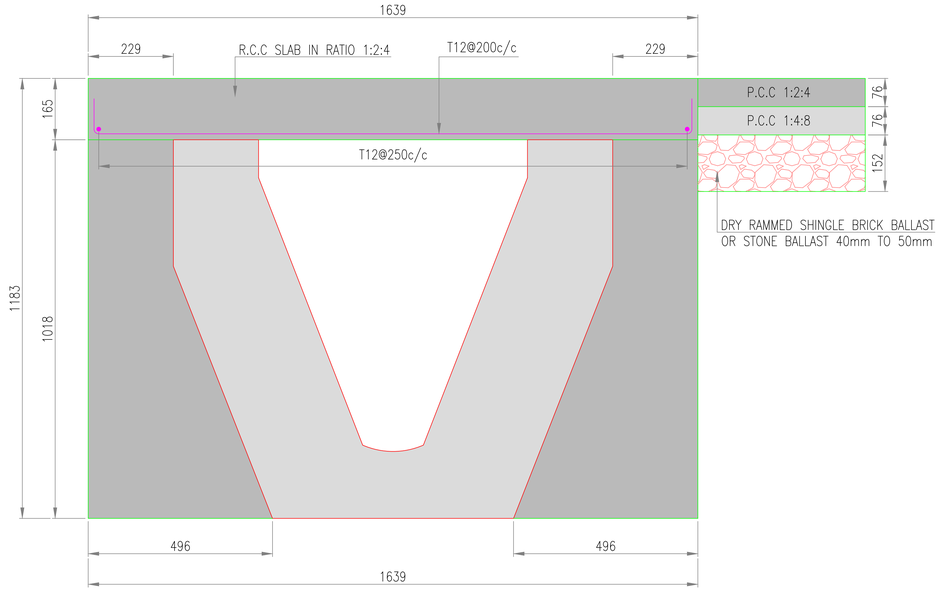
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3394
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

TENDER DRAWING



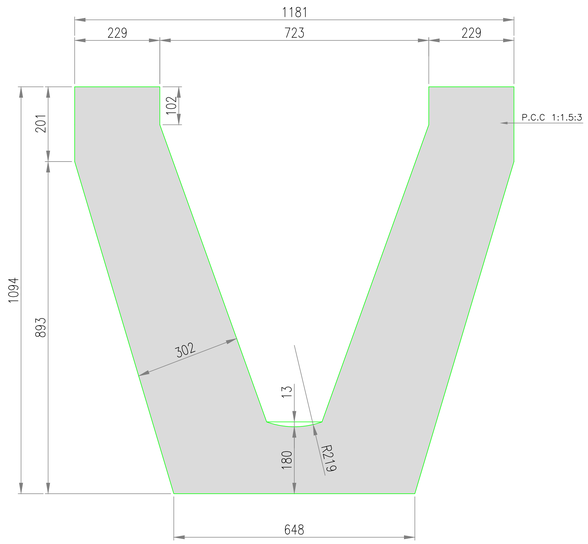
TYPE-XI
SCALE A



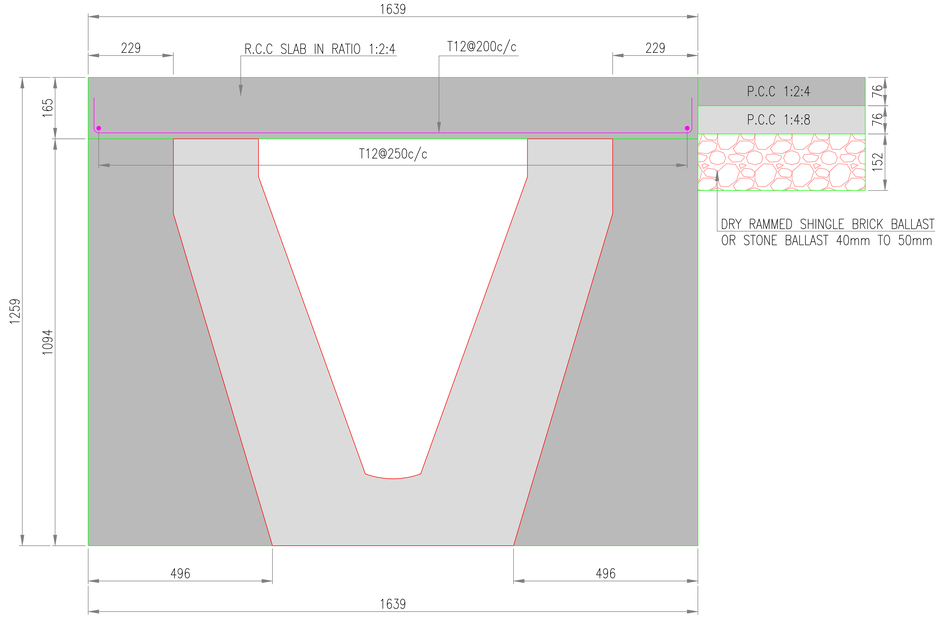
TYPE-XI WITH COVER
SCALE A

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



TYPE-XII
SCALE A



TYPE-XII WITH COVER
SCALE A

SCALE A:-

0 0.1 0.2 0.4 0.6
m

CLIENT :
PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA

CONSULTANT:
Techno-Consult International JV Ultimate Engineering Consultants
New Era of Development

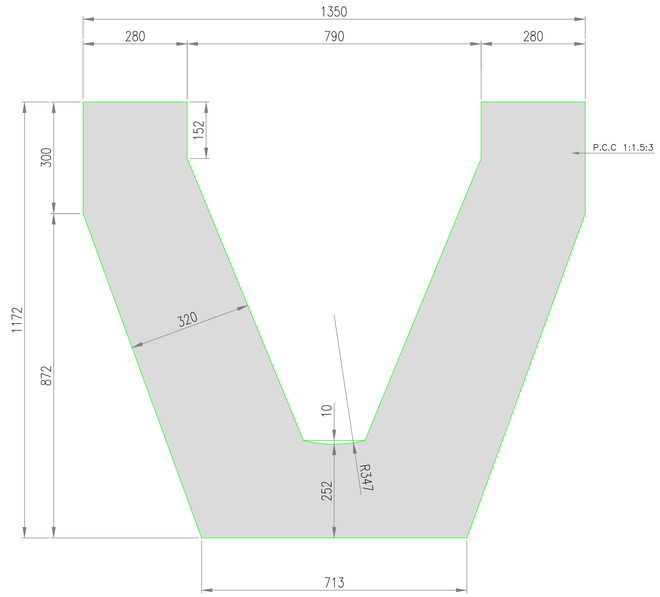
PROJECT:
KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA

DRAWING TITLE :
JAMRUD
TYPICAL DRAIN DETAILS
SHEET–5

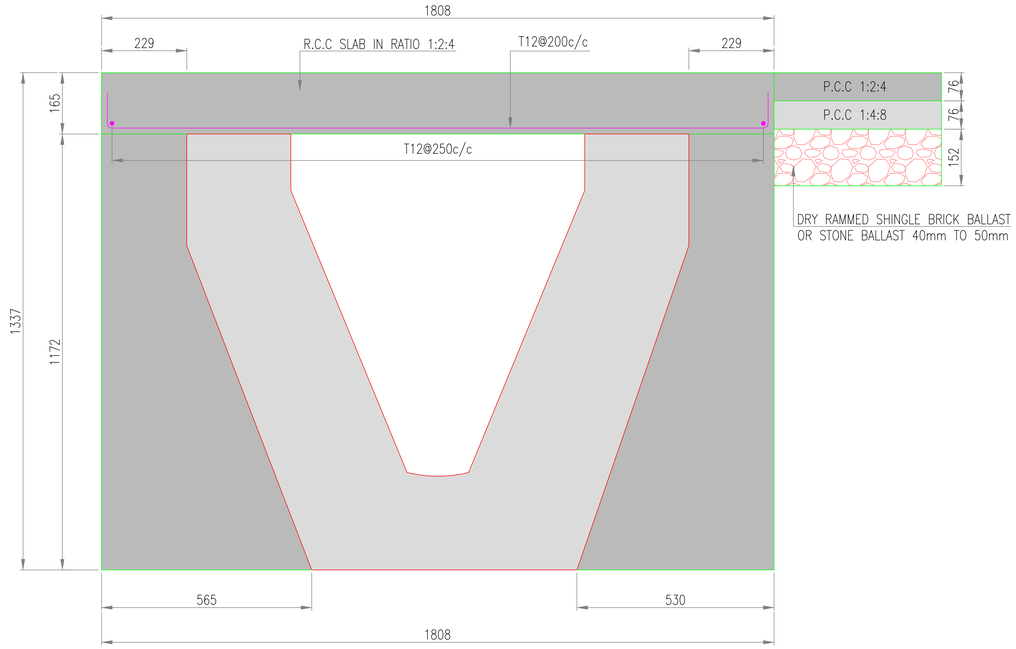
Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3395
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date

TENDER DRAWING



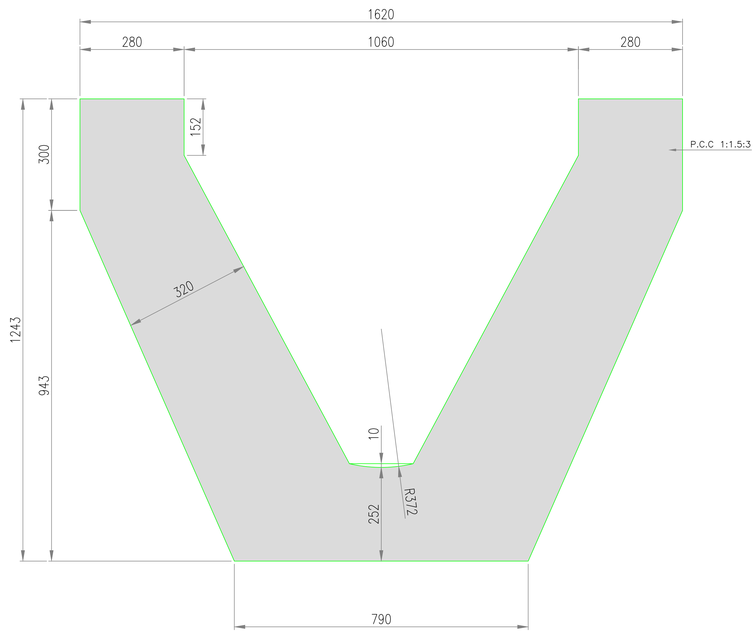
TYPE-XIII
SCALE A



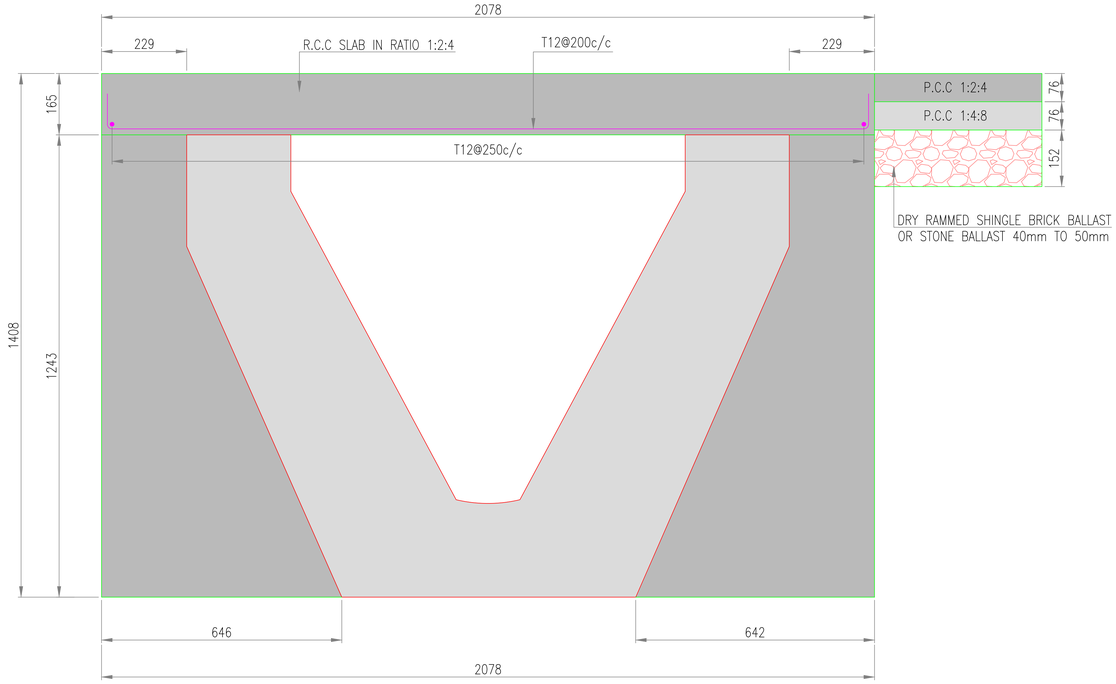
TYPE-XIII WITH COVER
SCALE A

NOTES:

1. ALL DIMENSIONS AND LEVELS ARE IN METERS UNLESS OTHERWISE NOTED.



TYPE-XIV
SCALE A



TYPE-XIV WITH COVER
SCALE A

SCALE A:-

0 0.1 0.2 0.4 0.6
m

CLIENT : PUBLIC HEALTH ENGINEERING DEPARTMENT KHYBER PAKHTUNKHWA	CONSULTANT: Techno-Consult International JV Ultimate Engineering Consultants New Era of Development	PROJECT: KPRIISP – DESIGN REVIEW AND CONSTRUCTION SUPERVISION FOR WATER SUPPLY, SEWERAGE, DRAINAGE AND WASTE WATER TREATMENT PROJECT IN NEWLY MERGED DISTRICTS OF KHYBER PAKHTUNKHWA	DRAWING TITLE : JAMRUD TYPICAL DRAIN DETAILS SHEET–6

Designed By :	Dr. ASFAHAN ALI	Date :	SEP 2026
Drawn By :	SHUJA UDDIN	Scale :	AS SHOWN
Checked By :	RABEEA REHMAN	Drawing No :	KPR/SS/KHD/JAM-3396
Approved By :	RABEEA REHMAN		

No.	Revision	By	Date