



| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------------|--------|---------------|----|----|----|----------------------|--------|--------|--------|-------------------|--------|--------|--------|---------------------|-----------------|--|--|---------------------|---------------|--|--|----------------------|-------|-------|--|-------------------|------|-------|-------|------------|---|--|--|----------------|--|--|--|--|--|--|---------------|-----|-----|----------------------|--------|--------|-------------------|--------|--------|---------------------|-----------------|--|---------------------|---------------|--|----------------------|-------|--|-------------------|------|-------|------------|---|--|----------------|--|--|---|--|--|---------------|------|-----|-----|----------------------|--------|--------|--------|-------------------|--------|--------|--------|---------------------|-----------------|--|--|---------------------|---------------|--|--|----------------------|-------|-------|--|-------------------|------|-------|-------|------------|---|--|--|----------------|--|--|--|--|--|--|---------------|-----|-----|-----|----------------------|--------|--------|--------|-------------------|--------|--------|--------|---------------------|-----------------|--|--|---------------------|---------------|--|--|----------------------|-------|--|--|-------------------|------|--|-------|------------|---|--|--|----------------|--|--|--|
| <div><div>SCALE: H: 1/2000 V: 1/200</div><div></div><div>DATUM ELEV = 535.00m</div><table><tr><td>STAKES NUMBER</td><td>A9</td><td>A1</td><td>A2</td></tr><tr><td>NATURAL GROUND LEVEL</td><td>543.28</td><td>543.86</td><td>544.99</td></tr><tr><td>TOP OF PIPE LEVEL</td><td>542.48</td><td>543.06</td><td>544.19</td></tr><tr><td>PIPES DIAMETER (MM)</td><td colspan="3">OD 63 HDPE PN16</td></tr><tr><td>SPECIAL ACCESSORIES</td><td colspan="3"><div>EC</div></td></tr><tr><td>PARTIAL DISTANCE (M)</td><td>17.89</td><td>21.13</td><td></td></tr><tr><td>CUMULATE DISTANCE</td><td>0.00</td><td>17.89</td><td>39.02</td></tr><tr><td>HECTOMETER</td><td colspan="3">0</td></tr><tr><td>NATURE OF SOIL</td><td colspan="3"></td></tr></table></div> | | | STAKES NUMBER | A9 | A1 | A2 | NATURAL GROUND LEVEL | 543.28 | 543.86 | 544.99 | TOP OF PIPE LEVEL | 542.48 | 543.06 | 544.19 | PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | | SPECIAL ACCESSORIES | <div>EC</div> | | | PARTIAL DISTANCE (M) | 17.89 | 21.13 | | CUMULATE DISTANCE | 0.00 | 17.89 | 39.02 | HECTOMETER | 0 | | | NATURE OF SOIL | | | | <div><div>SCALE: H: 1/2000 V: 1/200</div><div></div><div>DATUM ELEV = 535.00m</div><table><tr><td>STAKES NUMBER</td><td>AE1</td><td>AE2</td></tr><tr><td>NATURAL GROUND LEVEL</td><td>542.28</td><td>541.53</td></tr><tr><td>TOP OF PIPE LEVEL</td><td>541.48</td><td>540.73</td></tr><tr><td>PIPES DIAMETER (MM)</td><td colspan="2">OD 63 HDPE PN16</td></tr><tr><td>SPECIAL ACCESSORIES</td><td colspan="2"><div>EC</div></td></tr><tr><td>PARTIAL DISTANCE (M)</td><td>27.85</td><td></td></tr><tr><td>CUMULATE DISTANCE</td><td>0.00</td><td>27.85</td></tr><tr><td>HECTOMETER</td><td colspan="2">0</td></tr><tr><td>NATURE OF SOIL</td><td colspan="2"></td></tr></table></div> | | | STAKES NUMBER | AE1 | AE2 | NATURAL GROUND LEVEL | 542.28 | 541.53 | TOP OF PIPE LEVEL | 541.48 | 540.73 | PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | SPECIAL ACCESSORIES | <div>EC</div> | | PARTIAL DISTANCE (M) | 27.85 | | CUMULATE DISTANCE | 0.00 | 27.85 | HECTOMETER | 0 | | NATURE OF SOIL | | | <div><div>SCALE: H: 1/2000 V: 1/200</div><div></div><div>DATUM ELEV = 535.00m</div><table><tr><td>STAKES NUMBER</td><td>AA11</td><td>AF1</td><td>AF2</td></tr><tr><td>NATURAL GROUND LEVEL</td><td>544.34</td><td>543.36</td><td>541.93</td></tr><tr><td>TOP OF PIPE LEVEL</td><td>543.54</td><td>542.56</td><td>541.13</td></tr><tr><td>PIPES DIAMETER (MM)</td><td colspan="3">OD 63 HDPE PN16</td></tr><tr><td>SPECIAL ACCESSORIES</td><td colspan="3"><div>EC</div></td></tr><tr><td>PARTIAL DISTANCE (M)</td><td>24.12</td><td>24.00</td><td></td></tr><tr><td>CUMULATE DISTANCE</td><td>0.00</td><td>24.12</td><td>48.11</td></tr><tr><td>HECTOMETER</td><td colspan="3">0</td></tr><tr><td>NATURE OF SOIL</td><td colspan="3"></td></tr></table></div> | | | STAKES NUMBER | AA11 | AF1 | AF2 | NATURAL GROUND LEVEL | 544.34 | 543.36 | 541.93 | TOP OF PIPE LEVEL | 543.54 | 542.56 | 541.13 | PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | | SPECIAL ACCESSORIES | <div>EC</div> | | | PARTIAL DISTANCE (M) | 24.12 | 24.00 | | CUMULATE DISTANCE | 0.00 | 24.12 | 48.11 | HECTOMETER | 0 | | | NATURE OF SOIL | | | | <div><div>SCALE: H: 1/2000 V: 1/200</div><div></div><div>DATUM ELEV = 535.00m</div><table><tr><td>STAKES NUMBER</td><td>AA9</td><td>AG1</td><td>AG2</td></tr><tr><td>NATURAL GROUND LEVEL</td><td>542.87</td><td>542.60</td><td>542.02</td></tr><tr><td>TOP OF PIPE LEVEL</td><td>542.07</td><td>541.80</td><td>541.22</td></tr><tr><td>PIPES DIAMETER (MM)</td><td colspan="3">OD 63 HDPE PN16</td></tr><tr><td>SPECIAL ACCESSORIES</td><td colspan="3"><div>EC</div></td></tr><tr><td>PARTIAL DISTANCE (M)</td><td>27.85</td><td></td><td></td></tr><tr><td>CUMULATE DISTANCE</td><td>0.00</td><td></td><td>27.85</td></tr><tr><td>HECTOMETER</td><td colspan="3">0</td></tr><tr><td>NATURE OF SOIL</td><td colspan="3"></td></tr></table></div> | | | STAKES NUMBER | AA9 | AG1 | AG2 | NATURAL GROUND LEVEL | 542.87 | 542.60 | 542.02 | TOP OF PIPE LEVEL | 542.07 | 541.80 | 541.22 | PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | | SPECIAL ACCESSORIES | <div>EC</div> | | | PARTIAL DISTANCE (M) | 27.85 | | | CUMULATE DISTANCE | 0.00 | | 27.85 | HECTOMETER | 0 | | | NATURE OF SOIL | | | |
| STAKES NUMBER | A9 | A1 | A2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURAL GROUND LEVEL | 543.28 | 543.86 | 544.99 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOP OF PIPE LEVEL | 542.48 | 543.06 | 544.19 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIAL ACCESSORIES | <div>EC</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PARTIAL DISTANCE (M) | 17.89 | 21.13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUMULATE DISTANCE | 0.00 | 17.89 | 39.02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HECTOMETER | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURE OF SOIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAKES NUMBER | AE1 | AE2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURAL GROUND LEVEL | 542.28 | 541.53 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOP OF PIPE LEVEL | 541.48 | 540.73 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIAL ACCESSORIES | <div>EC</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PARTIAL DISTANCE (M) | 27.85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUMULATE DISTANCE | 0.00 | 27.85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HECTOMETER | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURE OF SOIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAKES NUMBER | AA11 | AF1 | AF2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURAL GROUND LEVEL | 544.34 | 543.36 | 541.93 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOP OF PIPE LEVEL | 543.54 | 542.56 | 541.13 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIAL ACCESSORIES | <div>EC</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PARTIAL DISTANCE (M) | 24.12 | 24.00 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUMULATE DISTANCE | 0.00 | 24.12 | 48.11 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HECTOMETER | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURE OF SOIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| STAKES NUMBER | AA9 | AG1 | AG2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURAL GROUND LEVEL | 542.87 | 542.60 | 542.02 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TOP OF PIPE LEVEL | 542.07 | 541.80 | 541.22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PIPES DIAMETER (MM) | OD 63 HDPE PN16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SPECIAL ACCESSORIES | <div>EC</div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PARTIAL DISTANCE (M) | 27.85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CUMULATE DISTANCE | 0.00 | | 27.85 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| HECTOMETER | 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| NATURE OF SOIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

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, D.A.V.

DOUBLE AIR VALVE

, G.V.

GATE VALVE

FIRE HYDRANT

OBLIGATORY INTAKE POINT

END CAP

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| REV. | DATE | DRAWN BY | CHECKED BY | APPROVED BY | MODIFICATION | STATUTS |
| UNITED NATIONS DEVELOPMENT PROGRAMME LEBANON | | | | | | |
| NORTH LEBANON WATER SUPPLY CONSTRUCTION OF WADI KHALED 2 WATER SUPPLY SYSTEM | | | | | | |
| HNAIDER WATER SUPPLY SYSTEM LINE D2.5 (A9–AD2) & D2.6 (AE1–AE2) & D2.7 (AA11–AF2) & D2.8 (AA9–AG2) | | | | | | |
| SCALE : - | | DATE : SEPTEMBER 2014 | | DRAWING N° : WS-WK-209-A.dwg | | |
| LIBANCONSULT AGM Consulting Engineers | | | | | N° : W.S.W.K.2.0.9 | REV. A |