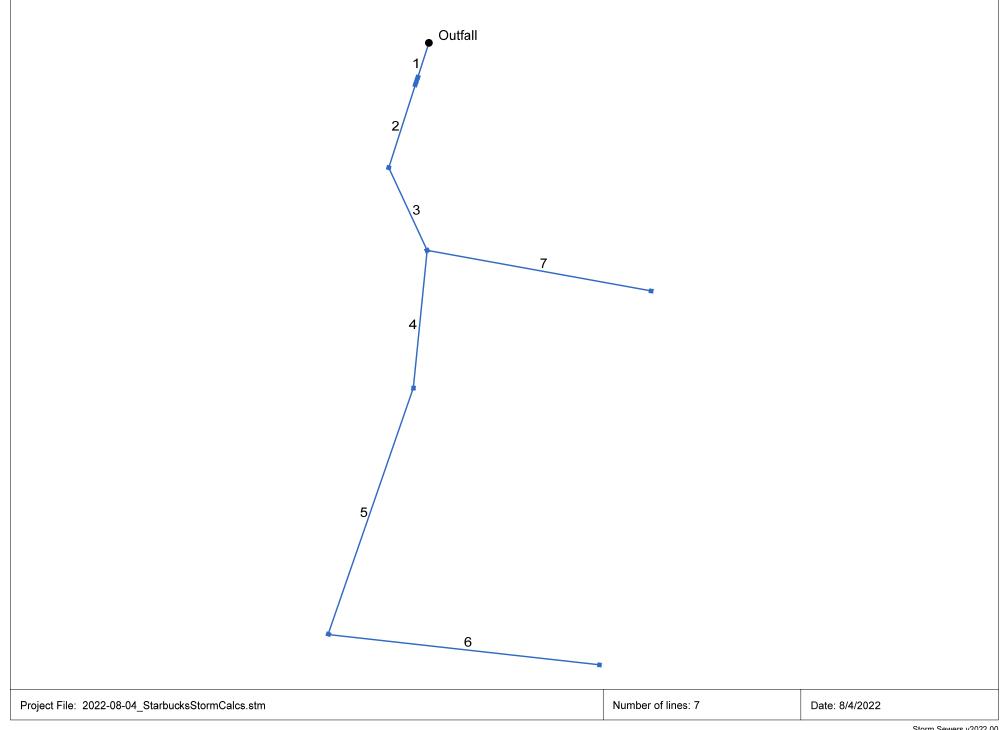


Hydraflow Storm Sewers Extension for Autodesk® Civil 3D® Plan



COEC RPT 10-YEAR CAPACITY

| Line No. | Inlet ID | Drng Area | Total Area | Runoff Coeff | Total CxA | Inlet Time | Тс | Flow Rate | Capac Full | Line Size | Line Slope | Invert Up | Invert Dn | HGL Up | HGL Dn | Gnd/Rim El Up | Gnd/Rim El Dn | Cover Up | Cover Dn |
|-------------|-------------|--------------|---------------|-----------------|--------------|---------------|-------|--------------|---------------|--------------|---------------|--------------|--------------|-----------|-----------|------------------|------------------|-------------|-------------|
| | | (ac) | (ac) | (C) | | (min) | (min) | (cfs) | (cfs) | (in) | (%) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) |
| 1 | Ex. CB | 0.34 | 2.15 | 0.40 | 0.99 | 10.0 | 22.2 | 3.64 | 6.06 | 15 | 0.75 | 751.41 | 751.26 | 752.55 | 752.51 | 755.00 | 755.00 | 2.34 | 2.49 |
| 2 | 5 | 0.21 | 1.81 | 0.80 | 0.86 | 10.0 | 21.9 | 3.16 | 4.39 | 15 | 0.39 | 751.63 | 751.45 | 752.69 | 752.62 | 755.91 | 755.00 | 3.03 | 2.30 |
| 3 | 4 | 0.22 | 1.60 | 0.65 | 0.69 | 10.0 | 21.6 | 2.57 | 4.40 | 15 | 0.39 | 751.81 | 751.63 | 752.87 | 752.83 | 757.75 | 755.91 | 4.69 | 3.03 |
| 4 | 3 | 0.11 | 0.74 | 0.80 | 0.32 | 10.0 | 20.9 | 1.22 | 1.91 | 12 | 0.25 | 754.54 | 754.37 | 755.12 | 754.95 | 758.69 | 757.75 | 3.15 | 2.38 |
| 5 | 2 | 0.06 | 0.63 | 0.60 | 0.24 | 10.0 | 19.1 | 0.93 | 1.94 | 12 | 0.25 | 754.87 | 754.54 | 755.36 | 755.17 | 758.49 | 758.69 | 2.62 | 3.15 |
| 6 | 1 | 0.57 | 0.57 | 0.35 | 0.20 | 17.0 | 17.0 | 0.84 | 1.93 | 12 | 0.25 | 755.21 | 754.87 | 755.68 | 755.50 | 759.21 | 758.49 | 3.00 | 2.62 |
| 7 | 6 | 0.64 | 0.64 | 0.35 | 0.22 | 15.0 | 15.0 | 1.00 | 1.92 | 12 | 0.25 | 754.65 | 754.37 | 755.16 | 754.88 | 758.94 | 757.75 | 3.29 | 2.38 |
| | | | | | | | | | | | | | | | | | | | |
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Project File: 2022-08-04_StarbucksStormCalcs.stm

Number of lines: 7

Date: 8/4/2022

NOTES: ** Critical depth

COEC RPT 25-YEAR HGL

| Line No. | Inlet ID | Drng Area | Total Area | Runoff Coeff | Total CxA | Inlet Time | Тс | Flow Rate | Capac Full | Line Size | Line Slope | Invert Up | Invert Dn | HGL Up | HGL Dn | Gnd/Rim El Up | Gnd/Rim El Dn | Cover Up | Cover Dn |
|-------------|-------------|--------------|---------------|-----------------|--------------|---------------|-------|--------------|---------------|--------------|---------------|--------------|--------------|-----------|-----------|------------------|------------------|-------------|-------------|
| | | (ac) | (ac) | (C) | | (min) | (min) | (cfs) | (cfs) | (in) | (%) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft) |
| 1 | Ex. CB | 0.34 | 2.15 | 0.40 | 0.99 | 10.0 | 21.5 | 4.25 | 6.06 | 15 | 0.75 | 751.41 | 751.26 | 752.56 | 752.51 | 755.00 | 755.00 | 2.34 | 2.49 |
| 2 | 5 | 0.21 | 1.81 | 0.80 | 0.86 | 10.0 | 21.3 | 3.69 | 4.39 | 15 | 0.39 | 751.63 | 751.45 | 752.76 | 752.66 | 755.91 | 755.00 | 3.03 | 2.30 |
| 3 | 4 | 0.22 | 1.60 | 0.65 | 0.69 | 10.0 | 21.0 | 2.99 | 4.40 | 15 | 0.39 | 751.81 | 751.63 | 753.01 | 752.93 | 757.75 | 755.91 | 4.69 | 3.03 |
| 4 | 3 | 0.11 | 0.74 | 0.80 | 0.32 | 10.0 | 20.4 | 1.42 | 1.91 | 12 | 0.25 | 754.54 | 754.37 | 755.18 | 755.01 | 758.69 | 757.75 | 3.15 | 2.38 |
| 5 | 2 | 0.06 | 0.63 | 0.60 | 0.24 | 10.0 | 18.9 | 1.08 | 1.94 | 12 | 0.25 | 754.87 | 754.54 | 755.42 | 755.24 | 758.49 | 758.69 | 2.62 | 3.15 |
| 6 | 1 | 0.57 | 0.57 | 0.35 | 0.20 | 17.0 | 17.0 | 0.96 | 1.93 | 12 | 0.25 | 755.21 | 754.87 | 755.73 | 755.56 | 759.21 | 758.49 | 3.00 | 2.62 |
| 7 | 6 | 0.64 | 0.64 | 0.35 | 0.22 | 15.0 | 15.0 | 1.14 | 1.92 | 12 | 0.25 | 754.65 | 754.37 | 755.20 | 754.93 | 758.94 | 757.75 | 3.29 | 2.38 |
| | | | | | | | | | | | | | | | | | | | |

Project File: 2022-08-04_StarbucksStormCalcs.stm

Number of lines: 7

Date: 8/4/2022

NOTES: ** Critical depth

DOWNSPOUT LINES SIZING

| COMPUTATION FOR STORM SEWER DESIGN | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------------------|-----------------------|-------------------|-------------------|-------|-----------|-------------|-----------|------------|-------------------|-----------------------|--------------------|-----------------------|----------------------|------------------------|--------------|------------------------|---------------------|-------------------------------|---------------|-------------------------|------------|--------------|------------------|--------------------------|--------------|--------------|---|--------------------------------------|
| MANNING FORMULA: n : | = | | | 0.013 | PROJECT: | Starbucks | Site Plan | | INTENSITY ZONE: C | | | | | | | | | DESIGN STORM: 25 | | | DATE: | | 8/4/2022 | | | SHT NO. 1 | | T |
| Catchbasin No. | Begin/ End Sta. | Δ "A" Square Feet | Δ "A" Acres | "C" | Δ "CA" | SUM "CA" | Δ "T" | SUM "T" | " " 2_YR | "Q" DISCH. 2_YR | "I" <u>5</u> YR | "Q" DISCH. 5_YR | " " <u>10_</u> YR | "Q" DISCH. 10_YR | "I" 25_YR | "Q" DISCH. 25_YR | "I" <u>50</u> YR | "Q" DISCH. <u>50</u> YR | " " 100_YR | "Q" DISCH. 100_YR | "L" FT. | Slope (%) | Slope (ft/ft) | Pipe Dia. (Inches) | "V" (FPS) | CAP (CFS) | Flow Line Elev. Inlet/ Outlet | Travel Time Thru Pipe (MIN) |
| DS - West | | 1350 | 0.03 | 0.90 | 0.03 | 0.03 | 10.00 | 10.00 | 4.08 | 0.11 | 4.82 | 0.13 | 5.32 | 0.15 | 6.01 | 0.17 | 6.50 | 0.18 | 7.04 | 0.20 | | 1.00% | 0.0100 | 8.00 | 3.47 | 1.21 | | 0.00 |
| DS - South | | 1350 | 0.03 | 0.90 | 0.03 | 0.03 | 10.00 | 10.00 | 4.08 | 0.11 | 4.82 | 0.13 | 5.32 | 0.15 | 6.01 | 0.17 | 6.50 | 0.18 | 7.04 | 0.20 | | 1.00% | 0.0100 | 8.00 | 3.47 | 1.21 | | 0.00 |
| | | | 0.00 | | 0.00 | | | | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | | | 0.0000 | | 0.00 | 0.00 | | 0.00 |
| DS - Total | | 2700 | 0.06 | 0.90 | 0.06 | 0.06 | 10.00 | 10.00 | 4.08 | 0.23 | 4.82 | 0.27 | 5.32 | 0.30 | 6.01 | 0.34 | 6.50 | 0.36 | 7.04 | 0.39 | | 1.00% | 0.0100 | 8.00 | 3.47 | 1.21 | | 0.00 |