| LineNo. | Flow Type | Length | Slope | Velocity | Tc | Intensity | Land use | Composite | DrainageArea | Q |
|---|---|---|---|---|---|---|---|---|---|---|
| | | (ft) | (%) | (ft/s) | (min) | (in/hr) | % | C value | (ac) | (cfs) |
| 1 | | 257.7 | 0.4 | 5.6 | 37.8 | 2.32 | 100 | 0 | 0 | 17.14 |
| 2 | Gutter | 10.0 | 0.2 | 4.31 | 25.7 | 2.94 | 100 | 0.54 | 0.35 | 12.8 |
| 3 | Gutter | 31.0 | 0.19 | 2.95 | 25.5 | 2.96 | 100 | 0.54 | 0.09 | 12.3 |
| 4 | Sheet Flow | 172.0 | 0.2 | 3.93 | 24.7 | 3.01 | 100 | 0.54 | 1.1 | 12.36 |
| 5 | | 194.6 | 0.2 | 3.44 | 23.8 | 3.07 | 100 | 0 | 0 | 10.81 |
| 6 | | 135.0 | 0.3 | 2.99 | 19.7 | 3.4 | 100 | 0 | 0 | 3.67 |
| 7 | Gutter | 206.0 | 0.38 | 1.78 | 16.8 | 3.68 | 100 | 0.54 | 0.85 | 2.19 |
| 8 | Gutter | 31.0 | 0.39 | 0.42 | 15.6 | 3.82 | 100 | 0.54 | 0.25 | 0.52 |
| 9 | Sheet Flow | 146.3 | 0.3 | 4.29 | 23.2 | 3.12 | 100 | 0.54 | 1.33 | 7.59 |
| 10 | Gutter | 138.6 | 0.38 | 3.08 | 22.5 | 3.17 | 100 | 0.54 | 0.92 | 5.45 |
| 11 | Gutter | 31.0 | 0.39 | 3.17 | 22.3 | 3.19 | 100 | 0.54 | 2.26 | 3.89 |
| 12 | Gutter | 149.5 | 0.38 | 1.41 | 18 | 3.56 | 100 | 0.54 | 0.58 | 1.73 |
| 13 | Gutter | 31.0 | 0.39 | 0.52 | 17 | 3.67 | 100 | 0.54 | 0.32 | 0.63 |
| 14 | | 159.4 | 0.3 | 3.66 | 19.2 | 3.45 | 100 | 0 | 0 | 5.36 |
| 15 | Gutter | 253.1 | 0.3 | 3.78 | 17.9 | 3.58 | 100 | 0.54 | 1.05 | 5.56 |
| 16 | Gutter | 31.0 | 0.29 | 2.89 | 17.7 | 3.59 | 100 | 0.54 | 1.83 | 3.55 |
| 17 | Gutter | 307.0 | 0.38 | 3.38 | 36 | 2.4 | 100 | 0.54 | 0.09 | 3.52 |
| 18 | Gutter | 31.0 | 0.39 | 3.03 | 35.9 | 2.41 | 100 | 0.54 | 0.09 | 3.42 |
| 19 | | 19.6 | 0.51 | 2.92 | 35.7 | 2.41 | 100 | 0 | 0 | 3.31 |
| 20 | Ditch | 6.1 | 0.33 | 2.99 | 35.7 | 2.41 | 100 | 0.54 | 2.54 | 3.31 |

# HEC-22

HYDROLOGY CALCULATION METHOD USED.

| From | | To | | Length | LineSize | InvertUp | HGLUp | InvertDn | HGLDn | Slope | RimElev | Inlet Q | Bypass Q | Q | Full Pipe | Velocity | Spread |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Structure | Type | Structure | Type | (ft) | (in) | (ft) | (ft) | (ft) | (ft) | (%) | (ft) | (cfs) | (cfs) | (cfs) | (cfs) | (ft/s) | Feet |
| 1 | MH | Outfall | MH | 257.7 | 36 | 1269.19 | 1270.51 | 1268.16 | 1269.52 | 0.4 | 1276.15 | .... | .... | 17.14 | 45.67 | 5.6 | .... |
| 2 | Curb Inlet | 1 | MH | 10.0 | 30 | 1269.31 | 1270.77 | 1269.29 | 1270.75 | 0.2 | 1275.16 | 0.59 | .... | 12.8 | 19.88 | 4.31 | 9 |
| 3 | Curb Inlet | 2 | Curb Inlet | 31.0 | 30 | 1268.97 | 1270.93 | 1268.91 | 1270.91 | 0.19 | 1275.27 | 0.23 | .... | 12.3 | 19.54 | 2.95 | 5 |
| 4 | Dp-Grate | 3 | Curb Inlet | 172.0 | 24 | 1269.91 | 1272.01 | 1269.57 | 1271.57 | 0.2 | 1275.01 | 2.42 | .... | 12.36 | 10.9 | 3.93 | .... |
| 5 | MH | 4 | Dp-Grate | 194.6 | 24 | 1270.4 | 1272.51 | 1270.01 | 1272.13 | 0.2 | 1276.96 | .... | .... | 10.81 | 10.97 | 3.44 | .... |
| 6 | MH | 5 | MH | 135.0 | 15 | 1270.91 | 1273.06 | 1270.5 | 1272.69 | 0.3 | 1276.07 | .... | .... | 3.67 | 3.86 | 2.99 | .... |
| 7 | Curb Inlet | 6 | MH | 206.0 | 15 | 1271.78 | 1273.4 | 1271 | 1273.2 | 0.38 | 1275.21 | 1.76 | .... | 2.19 | 4.3 | 1.78 | 12.5 |
| 8 | Curb Inlet | 7 | Curb Inlet | 31.0 | 15 | 1272 | 1273.48 | 1271.88 | 1273.48 | 0.39 | 1275.21 | 0.52 | .... | 0.52 | 4.35 | 0.42 | 9.5 |
| 9 | Dp-Grate | 5 | MH | 146.3 | 18 | 1270.94 | 1273.34 | 1270.5 | 1272.69 | 0.3 | 1275.12 | 2.86 | .... | 7.59 | 6.24 | 4.29 | .... |
| 10 | Curb Inlet | 9 | Dp-Grate | 138.6 | 18 | 1271.57 | 1273.8 | 1271.04 | 1273.49 | 0.38 | 1275.53 | 1.8 | .... | 5.45 | 7.04 | 3.08 | 9 |
| 11 | Curb Inlet | 10 | Curb Inlet | 31.0 | 15 | 1271.79 | 1273.97 | 1271.67 | 1273.88 | 0.39 | 1275.54 | 3.89 | .... | 3.89 | 4.35 | 3.17 | 11.5 |
| 12 | Curb Inlet | 6 | MH | 149.5 | 15 | 1271.57 | 1273.29 | 1271 | 1273.2 | 0.38 | 1275.21 | 1.34 | .... | 1.73 | 4.32 | 1.41 | 12 |
| 13 | Curb Inlet | 12 | Curb Inlet | 31.0 | 15 | 1271.79 | 1273.34 | 1271.67 | 1273.34 | 0.39 | 1275.23 | 0.63 | .... | 0.63 | 4.35 | 0.52 | 12.5 |
| 14 | MH | 1 | MH | 159.4 | 18 | 1269.77 | 1270.87 | 1269.29 | 1270.51 | 0.3 | 1276.56 | .... | .... | 5.36 | 6.24 | 3.66 | .... |
| 15 | Curb Inlet | 14 | MH | 253.1 | 18 | 1270.63 | 1271.74 | 1269.87 | 1271.1 | 0.3 | 1275.33 | 2.14 | .... | 5.56 | 6.23 | 3.78 | 10 |
| 16 | Curb Inlet | 15 | Curb Inlet | 31.0 | 15 | 1270.82 | 1272.19 | 1270.73 | 1272.11 | 0.29 | 1275.33 | 3.55 | .... | 3.55 | 3.77 | 2.89 | 9 |
| 17 | Curb Inlet | 1 | MH | 307.0 | 18 | 1270.46 | 1271.33 | 1269.29 | 1270.51 | 0.38 | 1274.1 | 0.22 | .... | 3.52 | 4.32 | 3.38 | 5 |
| 18 | Curb Inlet | 17 | Curb Inlet | 31.0 | 15 | 1270.68 | 1271.73 | 1270.56 | 1271.68 | 0.39 | 1274.1 | 0.22 | .... | 3.42 | 4.35 | 3.03 | 5 |
| 19 | Junc | 18 | Curb Inlet | 19.6 | 15 | 1270.78 | 1271.83 | 1270.68 | 1271.81 | 0.51 | 1272.31 | .... | .... | 3.31 | 5 | 2.92 | .... |
| 20 | Flume | 19 | Junc | 6.1 | 15 | 1270.81 | 1271.86 | 1270.79 | 1271.85 | 0.33 | 1272.33 | 3.31 | .... | 3.31 | 4.01 | 2.99 | .... |

GENERAL NOTES:

1. * RAINFALL INTENSITY TO BE FOR THE DESIGN OF 2-YEAR(RESIDENTIAL), 5-YEAR(COMMERCIAL), 10 YEAR(DOWNTOWN) AND 100-YEAR(CROSS-CULVERTS).
2. A DRAINAGE MAP IS INCLUDED AS A SEPARATE SHEET.
3. OPTIONAL ALTERNATE PIPE LISTED ON THIS SHEET MAY BE FURNISHED IN LIEU OF THE PIPE LISTED UNDER THE BID ITEM "STORM SEWER".
4. UNLESS OTHERWISE SPECIFIED, A CONTINUOUS SYSTEM OF STORM SEWER SHALL BE OF THE SAME TYPE MATERIAL.
5. THE QUANTITIES, DIMENSIONS AND FLOWLINES GIVEN ON THIS SHEET ARE TO BE USED IF THE FOLLOWING TYPES OF "SMOOTH PIPES" ARE FURNISHED: RCP, VCP-ES, BCCM-FP, & RCHPE.
6. GUTTER SPREAD SAHLL BE IN ACCORDANCE WITH THE CITY DESIGN MANUAL.

CITY OF WICHITA
PUBLIC WORKS & UTILITIES
ENGINEERING DIVISION

*TABLE FOR STORMWATER SEWER DESIGN INFORMATION*

CITY ENGINEER
*GARY JANZEN, P.E*

| PROJECT NUMBER | OCA NUMBER | DATE |
|---|---|---|
| | | 01/2015 |

*CITY ENGINEER'S OFFICE*
*CITY HALL - SEVENTH FLOOR*
*455 NORTH MAIN STREET*
*WICHITA, KANSAS 67202-1620*
*(316) 268-4501*

DESIGN | DRAWN | SHEET

SW-411

| REV | DATE | DESCRIPTION | DSN | DWN | CHK |
|---|---|---|---|---|---|
| 2 | 06/07/23 | ADDENDUM UPDATE | LDO | CS | |
| 1 | 05/16/23 | ADDENDUM NO. 1 | LDO | JML | |
| 0 | 03/21/23 | INITIAL RELEASE | SRB | CC | |

LEON D. OSBOURN
9772
6-7-23
KANSAS
PROFESSIONAL ENGINEER

LEON D. OSBOURN
ENGINEER
KS # 9772


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**SYCAMORE POND ADDITION**
**W 50TH STREET S & SYCAMORE AVE**
**WICHITA, KANSAS**

**PHASE 3-STORM SEWER IMPROVEMENTS**
**TABULATED INFORMATION DETAIL**

PROJ. NO. G22_2295
DESIGNER SRB | DRAWN BY CC
CFN 2295DDET
SHEET 15 | REV 2