

STORM SEWER IMPROVEMENTS

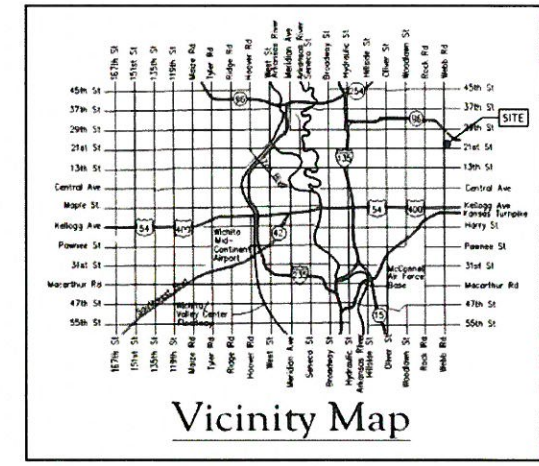
to serve

CAP Webb Storage Facility

Lot 4 Tallgrass East Commercial

CITY OF WICHITA, KANSAS

Gary Janzen, P.E. City Engineer
 Project Number
 591 PPD (133119)



AS BUILT PLANS

Contractor: APEX Excavating
 Inspector: Larry Powell, Baughman Co.
 As BUILT by: KEK, 1/23/20

GENERAL NOTES:

- The Contractor shall comply with all applicable safety regulations. All construction shall be completed following current City Standard Specifications and Special Provisions.
- Contractor will be required to provide notice to utility companies a minimum of seventy-two (72) hours prior to any excavation, as follows:
 Kansas One-Call 687-2470
 The Contractor must notify the following in case of an emergency:
 AT&T 1-800-246-8464
 Black Hills Energy 1-800-694-8989
 City of Wichita Water & Sewer 1-316-219-8921
 City of Wichita Stormwater 1-316-268-4090
 City of Wichita Traffic 1-316-268-4034
 Cox Communications 1-888-249-3530
 Kansas Gas Service 1-888-482-4950
 Westar Energy 1-800-544-4857
- Utility service lines, poles, etc. are to be adjusted as necessary by others prior to construction unless the plans specifically call for their adjustment by the Contractor or unless the plans specifically identify a utility to be adjusted by its owner during construction. Existing utilities and their location, as shown on the plans, represent the best information obtainable for design. The Contractor will be required to work around existing utilities within the right-of-way which do not conflict with proposed construction.
- Rubble from the removal of miscellaneous structures and excess excavation which is to be wasted shall be disposed of on sites to be provided by the Contractor. These sites shall be approved by the Engineer as to suitability, appearance and site location. Locations, in the opinion of the Engineer, that will leave an unsightly appearance will not be approved. All disposal sites must be approved by the Kansas Department of Health and Environment. Material either stockpiled or disposed of in a flood plain will require a Kansas State Board of Agriculture permit. Any material dumped in waters of the United States or wetlands is subject to U.S. Corps. of Engineers permitting regulations. Any material buried or stockpiled beyond approved construction limits will require additional archaeological investigations unless buried in a previously approved borrow location.
- Trees and shrubs in public right-of-way which are in direct conflict with proposed new construction shall be removed by the Contractor with the City Engineer's approval. Trees and shrubs which are not in direct conflict with proposed new construction shall be saved and protected from damage.
- The Contractor shall give all property owners and/or tenants of developed property abutting the construction of this project a minimum of ten (10) days notice prior to start of construction.
- The Contractor shall be responsible for preserving property irons. The Contractor will be required to re-establish any property irons which are damaged or destroyed by his construction operations. Such irons shall be re-established by a licensed land surveyor in accordance with state laws.
- The Engineering Division shall field locate water valves one time during construction when requested by the Contractor. It shall be the Contractor's responsibility to preserve such field locations during the construction process. Water valves, valve boxes or fire hydrants damaged during construction shall be repaired by Contractor at his own expense. Valve boxes and water meters within the project limits shall be adjusted to match final grades by the contractor.
- The Contractor shall notify the inspecting engineer and Tom Mason at 316-268-4574 with the City of Wichita with the anticipated construction start date and notify them of project completion. Staking and inspection for this project will be the responsibility of the Contractor.
- If traffic will be impacted by construction, a traffic control plan must be submitted and approved by the City Traffic Engineer, Brian Coan at traffic@wichita.gov before traffic@wichita.gov before construction can begin. The Contractor shall be responsible for all traffic control measures to facilitate construction. All construction zone markings and signage shall conform to the latest version of the Manual on Uniform Traffic Control Devices (MUTCD) as published by the US Dept. of Transportation, Federal Highway Administration. All costs associated with construction markings and signage shall be the Contractor's responsibility.
- All elevations shown are NAVD 88.
- All areas disturbed during construction that will not be under proposed pavement shall be restored to match existing conditions.
- Any sidewalk, drive approach, or street pavement removed to construct project must have a pavement cut permit and be replaced by the City contractor. Permits can be obtained by calling 316-268-4501 or 316-268-4480.
- City maintenance of storm sewer ends at the last structure in the easement or right-of-way.
- A portion of excess excavated material shall be mounded around manholes which extend more than one (1) foot above the existing ground. Such mound shall be constructed with new development a six (6) foot diameter flat top with 4 to 1 side slopes down to the original ground. The elevation of the flat top of the mound shall be 0.4 foot below the top to the manhole.
- Geotechnical report available upon request.
- Contractor shall limit the extent of trench openings overnight and weekends to less than 50 feet.
- The inspecting firm shall submit to the City Stormwater Maintenance Division a digital copy of the CCTV inspection of the conduits and structures following construction. The digital file formation shall be compatible with the City input template. A copy of the template is available upon request at 316-268-4090.
- The Contractor shall protect from damage and support existing utilities through construction as approved by the utility owner and the Engineer at the contractor's expense.

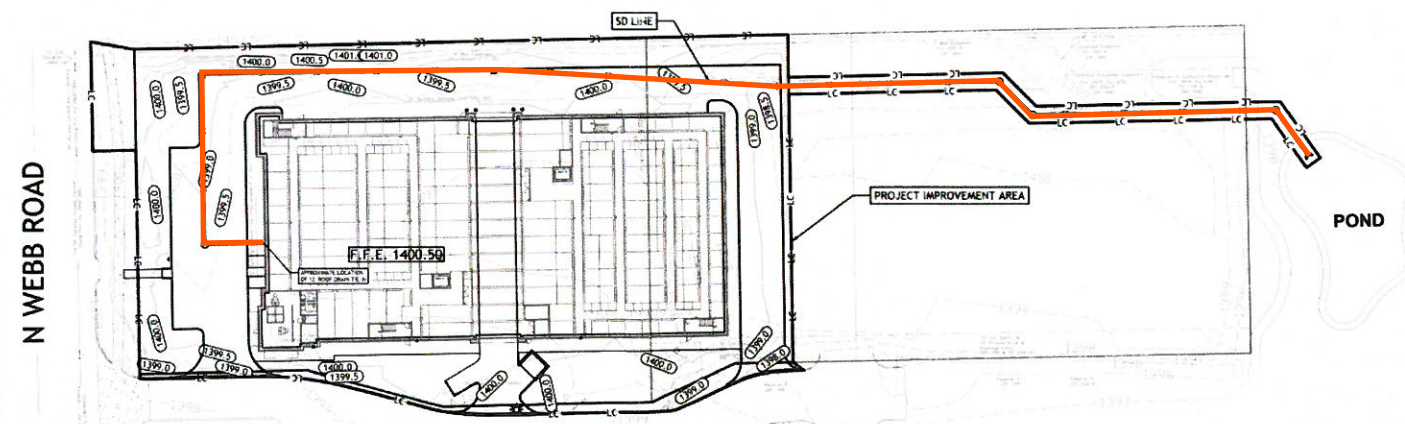
Benchmark

- BM#1: City of Wichita Benchmark on Top of Curb south of the existing Fire Hydrant (Notes on Abbott Land Survey Plat) Elev. = 1399.19
- BM#2: City of Wichita Benchmark on North Rim of Storm Inlet along Webb Road approx. 60 N. and 20 W. of the SW Property Corner (Notes on Abbott Land Survey Plat) Elev. = 1398.50

Sheet Index

- Title Sheet 1
- SD Line Plan & Profile 2
- Erosion Control/Grading Plan 3
- Details 4
- Copy of Plat 5

*SWS and Erosion Control Details available at City of Wichita Website.



Stormwater Certification

New Development or Redevelopment (Circle One)

Stormwater Permit # SWO2019-0033

NOI Permit # S-AR94-1551

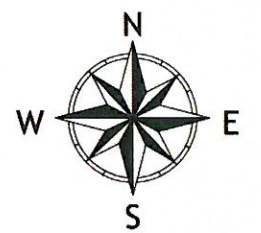
These construction plans were prepared in accordance with the current Stormwater management Regulations as set forth in the City of Wichita's Stormwater Management Ordinance 16.32 and the policies/guidelines presented in the Wichita/Sedgwick County Stormwater Manual

Site Area (Acres) = 1.78
 Disturbed Area (Acres) = 2.00
 Water Quality Treatment: Off-Site BMP Program
 Downstream Channel Protection: N/A
 Detention: Existing Wet Detention Pond
 The BMP used for this development is See Erosion Control Plan

APPROVED AS NOTED
 BY WICHITA PUBLIC WORKS ENGINEERING
 AND STORMWATER DIVISION

Engineering: [Signature]
 Stormwater: [Signature]

NOTE TO CONTRACTORS
 Inspection and testing for this project is to be provided by a Licensed Consulting Engineering Firm under contract with the Owner/Developer. Said inspection to be in accordance with the City of Wichita standard construction engineering practices and certified by a Licensed Professional Engineer in the state of Kansas. No work shall be performed the Contractor without such inspection nor shall any work be commenced without written authorization by City Engineering. All Construction and Materials shall comply with the current City of Wichita Specifications and Standards and Special Provisions. (on file and available at Wichita.gov).
 An approved copy of these plans signed by City staff are required on-site.



Project Number: 2018-127
 DWG Name: 2018-127 PPD.dwg
 Drawing Scale: as noted
 Date of Project: 01/2019
 Figures as Noted

Christopher L. Price, P.E.
 bluewater civil design, llc
 bluewatercivil.com • info@bluewatercivil.com
 718 Lowndes Hill Road • Greenville, SC 29607

CAP WEBB
 INDOOR STORAGE FACILITY
 N. Webb Road & E. 21st Street N
 Wichita, Kansas

Owner:
 CAP Storage Pool 1, LLC
 935 S. Main St. Ste 202
 Greenville, SC 29601

06/19/2019
 26582
 REVISIONS

Revised 12/19

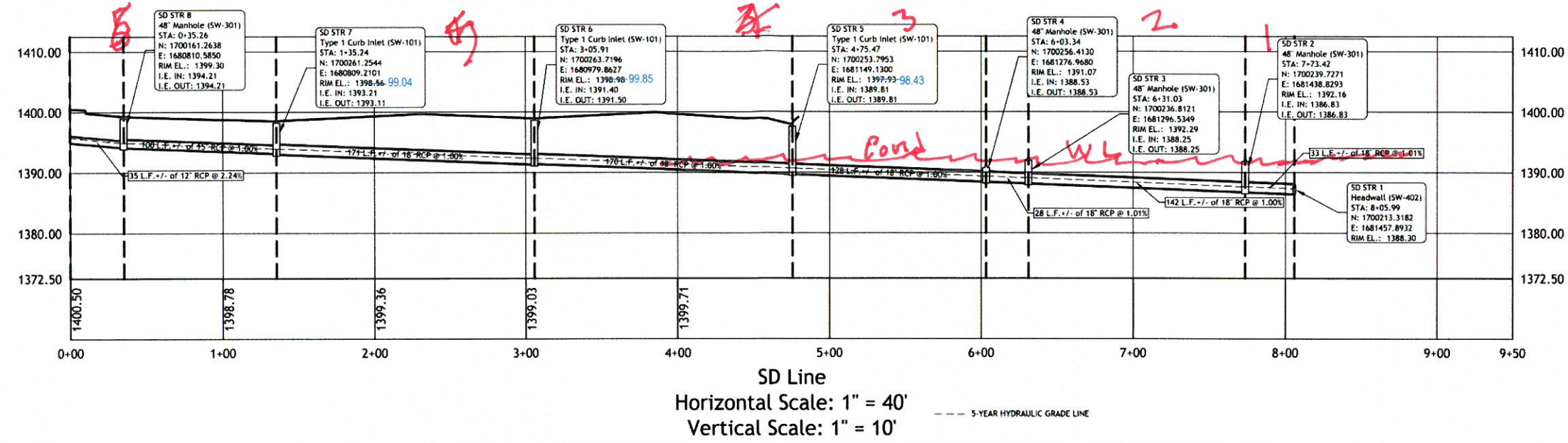
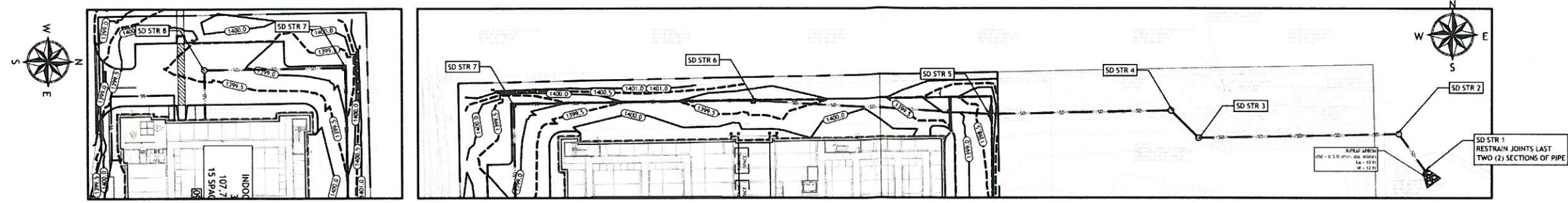
PLAN REVISION: A 03-28-19 Issued for Permit Review
 B 06-21-19 Issued for Permit Review

Title Sheet
 1



PLN#	REVISION	DATE	BY	COMMENT
A	01-20-19	Issued for Permit Review		
B	08-21-19	Issued for Permit Review		

SD Line Plan & Profile



2 - YEAR																						
Line ID	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	Incr.C x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
SD PIPE 1	33	0	1.33	0.98	0	1.33	15	20.7	2.8	3.64	0	3.64	10.57	3.74	18	1.01	1386.5	1386.83	1387.42	1387.56	1388.3	1392.16
SD PIPE 2	142	0	1.33	0.98	0	1.33	15	19.7	2.9	3.76	0	3.76	10.49	4.37	18	1	1386.83	1388.25	1387.56	1388.99	1392.16	1392.29
SD PIPE 3	28	0	1.33	0.98	0	1.33	15	19.5	2.9	3.78	0	3.78	10.56	4.34	18	1.01	1388.25	1388.53	1388.99	1389.27	1392.29	1390.33
SD PIPE 4	128	0	1.33	0.98	0	1.33	15	18.5	3	3.88	0	3.88	10.51	4.41	18	1	1388.53	1389.81	1389.27	1390.56	1390.33	1397.93
SD PIPE 5	170	0.17	1.33	0.98	0.17	1.33	15	17.3	3.1	4.03	0	4.03	10.48	4.48	18	1	1389.81	1391.5	1390.56	1392.27	1397.93	1398.98
SD PIPE 6	171	0.34	1.16	0.98	0.33	1.14	15	15.9	3.2	3.68	0	3.68	10.51	3.88	18	1	1391.4	1393.11	1392.27	1393.84	1398.98	1398.56
SD PIPE 7	100	0	0.82	0.98	0	0.82	15	15.2	3.3	2.67	0	2.67	6.46	4.2	15	1	1393.21	1394.21	1393.84	1394.86	1398.56	1399.3
SD PIPE 8	35	0.82	0.82	0.98	0.8	0.8	15	15	3.3	2.68	0	2.68	5.33	4.74	12	2.24	1394.21	1395	1394.86	1395.7	1399.3	0

5 - YEAR																						
Line ID	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	Incr.C x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
SD PIPE 1	33	0	1.33	0.98	0	1.33	15	19.6	3.6	4.72	0	4.72	10.57	4.41	18	1.01	1386.5	1386.83	1387.42	1387.66	1388.3	1392.16
SD PIPE 2	142	0	1.33	0.98	0	1.33	15	18.7	3.7	4.84	0	4.84	10.49	4.75	18	1	1386.83	1388.25	1387.66	1389.1	1392.16	1392.29
SD PIPE 3	28	0	1.33	0.98	0	1.33	15	18.6	3.7	4.86	0	4.86	10.56	4.73	18	1.01	1388.25	1388.53	1389.1	1389.38	1392.29	1390.33
SD PIPE 4	128	0	1.33	0.98	0	1.33	15	17.8	3.8	4.97	0	4.97	10.51	4.8	18	1	1388.53	1389.81	1389.38	1390.67	1390.33	1397.93
SD PIPE 5	170	0.17	1.33	0.98	0.17	1.33	15	16.8	3.9	5.12	0	5.12	10.48	4.86	18	1	1389.81	1391.5	1390.67	1392.37	1397.93	1398.98
SD PIPE 6	171	0.34	1.16	0.98	0.33	1.14	15	15.8	4.1	4.63	0	4.63	10.51	4.23	18	1	1391.4	1393.11	1392.37	1393.94	1398.98	1398.56
SD PIPE 7	100	0	0.82	0.98	0	0.82	15	15.1	4.2	3.34	0	3.34	6.46	4.48	15	1	1393.21	1394.21	1393.94	1394.95	1398.56	1399.3
SD PIPE 8	35	0.82	0.82	0.98	0.8	0.8	15	15	4.2	3.35	0	3.35	5.33	5.25	12	2.24	1394.21	1395	1394.95	1395.78	1399.3	0

10 - YEAR																						
Line ID	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	Incr.C x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
SD PIPE 1	33	0	1.33	0.98	0	1.33	15	19	4.3	5.54	0	5.54	10.57	4.92	18	1.01	1386.5	1386.83	1387.42	1387.74	1388.3	1392.16
SD PIPE 2	142	0	1.33	0.98	0	1.33	15	18.2	4.3	5.66	0	5.66	10.49	5.03	18	1	1386.83	1388.25	1387.74	1389.17	1392.16	1392.29
SD PIPE 3	28	0	1.33	0.98	0	1.33	15	18.1	4.4	5.69	0	5.69	10.56	5.02	18	1.01	1388.25	1388.53	1389.17	1389.45	1392.29	1390.33
SD PIPE 4	128	0	1.33	0.98	0	1.33	15	17.4	4.5	5.8	0	5.8	10.51	5.08	18	1	1388.53	1389.81	1389.45	1390.74	1390.33	1397.93
SD PIPE 5	170	0.17	1.33	0.98	0.17	1.33	15	16.6	4.6	5.95	0	5.95	10.48	5.14	18	1	1389.81	1391.5	1390.74	1392.44	1397.93	1398.98
SD PIPE 6	171	0.34	1.16	0.98	0.33	1.14	15	15.7	4.7	5.35	0	5.35	10.51	4.49	18	1	1391.4	1393.11	1392.44	1394	1398.98	1398.56
SD PIPE 7	100	0	0.82	0.98	0	0.82	15	15.1	4.8	3.85	0	3.85	6.46	4.7	15	1	1393.21	1394.21	1394	1395	1398.56	1399.3
SD PIPE 8	35	0.82	0.82	0.98	0.8	0.8	15	15	4.8	3.87	0	3.87	5.33	5.66	12	2.24	1394.21	1395	1395	1395.84	1399.3	0

25 - YEAR																						
Line ID	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	Incr.C x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
SD PIPE 1	33	0	1.33	0.98	0	1.33	15	18.4	5.1	6.62	0	6.62	10.57	5.57	18	1.01	1386.5	1386.83	1387.42	1387.82	1388.3	1392.16
SD PIPE 2	142	0	1.33	0.98	0	1.33	15	17.8	5.2	6.74	0	6.74	10.49	5.39	18	1	1386.83	1388.25	1387.82	1389.25	1392.16	1392.29
SD PIPE 3	28	0	1.33	0.98	0	1.33	15	17.6	5.2	6.77	0	6.77	10.56	5.38	18	1.01	1388.25	1388.53	1389.25	1389.54	1392.29	1390.33
SD PIPE 4	128	0	1.33	0.98	0	1.33	15	17.1	5.3	6.88	0	6.88	10.51	5.44	18	1	1388.53	1389.81	1389.54	1390.83	1390.33	1397.93
SD PIPE 5	170	0.17	1.33	0.98	0.17	1.33	15	16.4	5.4	7.04	0	7.04	10.48	5.5	18	1	1389.81	1391.5	1390.83	1392.53	1397.93	1398.98
SD PIPE 6	171	0.34	1.16	0.98	0.33	1.14	15	15.6	5.5	6.3	0	6.3	10.51	4.82	18	1	1391.4	1393.11	1392.53	1394.08	1398.98	1398.56
SD PIPE 7	100	0	0.82	0.98	0	0.82	15	15.1	5.6	4.52	0	4.52	6.46	4.99	15	1	1393.21	1394.21	1394.08	1395.07	1398.56	1399.3
SD PIPE 8	35	0.82	0.82	0.98	0.8	0.8	15	15	5.6	4.53	0	4.53	5.33	6.23	12	2.24	1394.21	1395	1395.07	1395.89	1399.3	0

100 - YEAR																						
Line ID	LineLength (ft)	Incr.Area (ac)	TotalArea (ac)	RunoffCoeff. (C)	Incr.C x A	TotalC x A	InletTime (min)	TimeConc (min)	RnfallInt (in/hr)	TotalRunoff (cfs)	AdnlFlow (cfs)	TotalFlow (cfs)	CapacFull (cfs)	Veloc (ft/s)	PipeSize (in)	PipeSlope (%)	Inv ElevDn (ft)	Inv ElevUp (ft)	HGLDn (ft)	HGLUp (ft)	Grnd/RimDn (ft)	Grnd/RimUp (ft)
SD PIPE 1	33	0	1.33	0.98	0	1.33	15	17.8	6.3	8.16	0	8.16	10.57	6.22	18	1.01	1386.5	1386.83	1387.49	1387.94	1388.3	1392.16
SD PIPE 2	142	0	1.33	0.98	0	1.33	15	17.3	6.4	8.28	0	8.28	10.49	5.91	18	1	1386.83	1388.25	1387.94	1389.36	1392.16	1392.29
SD PIPE 3	28	0	1.33	0.98	0	1.33	15	17.2	6.4	8.31	0	8.31	10.56	5.9	18	1.01	1388.25	1388.53	1389.36	1389.65	1392.29	1390.33
SD PIPE 4	128	0	1.33	0.98	0	1.33	15	16.7	6.5	8.42	0	8.42	10.51	5.95	18	1	1388.53	1389.81	1389.65	1390.93	1390.33	1397.93
SD PIPE 5	170	0.17	1.33	0.98	0.17	1.33	15	16.1	6.6	8.57	0	8.57	10.48	6.02	18	1	1389.81	1391.5	1390.93	1392.63	1397.93	1398.98
SD PIPE 6	171	0.34	1.16	0.98	0.33	1.14	15	15.5	6.7	7.64	0	7.64	10.51	5.29	18	1	1391.4	1393.11	1392.63	1394.18	1398.98	1398.56
SD PIPE 7	100	0	0.82	0.98	0	0.82	15	15.1	6.8	5.46	0	5.46	6.46	5.41	15	1	1393.21	1394.21	1394.18	1395.16	1398.56	1399.3
SD PIPE 8	35	0.82	0.82	0.98	0.8	0.8	15	15	6.8	5.48	0	5.48	5.33	7.14	12	2.24	1394.21	1395	1395.16	1395.94	1399.3	0

Benchmark

BM#1: City of Wichita Benchmark on Top of Curb south of the existing Fire Hydrant (Notes on Abbott Land Survey Plat) Elev. = 1398.19

BM#2: City of Wichita Benchmark on North Rim of Storm Inlet along Webb Road approx. 60' N. and 20' W. of the SW Property Corner (Notes on Abbott Land Survey Plat) Elev. = 1398.50

811
 Know what's below.
 Call before you dig.



