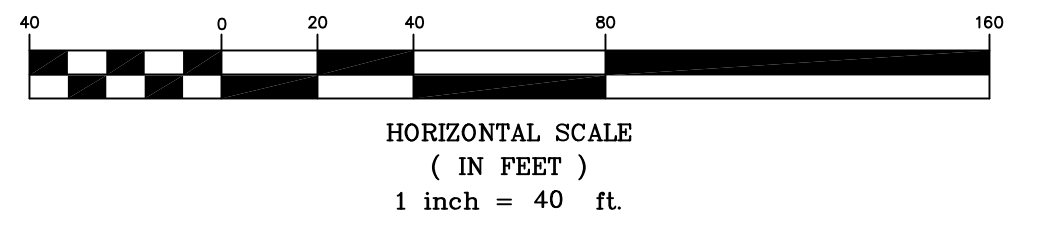


- 1 Onsite drainage basin, draining to SWS inlet SE at corner of 10th and Oliver
Area = 0.78 acres
 - 2 Onsite drainage basin, draining to 10th St. (towards east)
Area = 0.59 acres
 - 3 Onsite drainage basin, Draining to southeast, towards 9th St.
Area = 3.49 acres
- Drainage Basin Boundary
- Flow Arrows



Project Narrative:
The site is located on the southeast corner of Oliver and 10th St. North. The site is developed and has school building, parking lot and playground. The northeast part of the property has a soccer field covered with grass. The proposed site consists of addition of classrooms into the existing building. A total of 3600 SF of building area will be added. The existing drainage pattern indicates that the west portion west of existing building drains to the Oliver. A 0.56 acres of the north property drains to the 10th St and rest drains to the southeast, towards the 9th street. The proposed drainage pattern follows the existing conditions indicated by flow arrows.

Water Quality and TSS Removal

No water quality and TSS removal is expected as the total site disturbance is less than an acre. However stormwater water quality needs to be addressed if the cumulative soil disturbance reaches 1.0 acre or more in future.

Channel Protection

No extended detention for channel protection is required as the total site disturbance is less than 5.0 acres.

Flood Control, Flow Calculations (2-, 5-, 10-, 25- and 100-yr)

No flood detention for this site is expected as the total impervious area added is very insignificant to cause adverse impact. Following tables show the drainage basin and corresponding flow and change of flow from existing to proposed condition. The east basin, basin 3 in current condition drains through the residential property on east. A Flood detention or extension of SWS at 9th St. to the property is required if any future development in grass area result in increase in flow to the east residential properties.

EXISTING CONDITION:
Total Site Area, A1 = 4.86 acres,
Total Impervious Area = 2.15 acres,
Playground Area = 0.15 acres
Grass Area = 2.56 acres
Hydrological Soil Group = B

EXISTING SITE									
DRAINAGE AREA	ACRES	Tc min	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
Onsite, Area 1	0.78	15	89	2.33	3.21	3.83	4.62	6.11	East basin draining into Inlet at 10th and Oliver
Onsite, Area 2	0.59	15	88	1.7	2.37	2.84	3.44	4.56	North basin , draining into 10th St.
Onsite Area 3	3.49	23	86	7.40	10.54	12.75	15.61	20.98	Southeast basin draining into 9th St.

DEVELOPED CONDITION:
Total Site Area, A1 = 4.86 acres,
Total Impervious Area = 2.22 acres,
Playground Area = 0.15 acres
Grass Area = 2.41 acres
Hydrological Soil Group = B

DEVELOPED SITE									
DRAINAGE AREA	ACRES	Tc min	CN	Q2	Q5	Q10	Q25	Q100	REMARKS
Onsite, Area 1	0.78	15	89	2.33	3.21	3.83	4.62	6.11	East basin draining into Inlet at 10th and Oliver
Onsite, Area 2	0.59	15	88	1.7	2.37	2.84	3.44	4.56	North basin , draining into 10th St.
Onsite Area 3	3.49	23	87	7.69	10.84	13.06	15.91	21.28	Southeast basin draining into 9th St.

Engineer's Notes:

- Site drainage calculations were developed using the SCS Method for peak flow. Weighted CN and Tc values were established based on existing and proposed site conditions.
- The site drainage will be maintained as existing condition. Each drainage basin will remain same in developed condition.
- No offsite area drains to or through the property.
- The stormwater quality (WQV) needs to be addressed if the future development results in cumulative area of disturbance equals or exceeds 1.0 acre.
- The stormwater quantity (flood detention) needs to be addressed if the future development results in cumulative impervious area equals or exceeds 1.0 acre.
- Any future grading shall follow the drainage pattern as shown on plan, indicated by flow arrows.
- Stormsewer at 9th street needs to be extended to the site if there is significant addition of impervious area (over existing grass area) resulting in increase in Q.
- There is no sign of wetland and the property is not in the floodplain. (FIRM Panel 20173C0359E, February, 2 2007.)
- The drainage plan is developed based on existing and 3600 SF classrooms i added. Flood detention and or storm sewer extension to the site may be required if future development (impervious area) added to the existing grass area on the east.

Adams Elementary School Addition
Drainage Plan
Wichita, Kansas



PROJECT NUMBER			
KEM NO. 12104	FILE	DATE 09/2012	SHEET 1.0
DESIGN GP	DRAWN GP	REVISED	