

STORMWATER DETENTION OUTFLOW SUMMARY				
	PRE-REDEVELOPMENT	80% PRE-REDEVELOPMENT	POST-REDEVELOPMENT	POST-ROUTED
25 YR - 6 HR	7.83 cfs	6.28 cfs	9.77 cfs	6.01 cfs
100 YR - 24 HR	28.60 cfs	22.88 cfs	31.48 cfs	14.04 cfs
				ELEVATION
				399.82
				400.82

STRUCTURE SCHEDULE				
NAME	TYPE	RIM/WEL	LE IN	LE OUT
AA-1	48" Dia. Curb Inlet	408.70'	(PP-15) 406.70	(AA1) 408.20
AA-2	48" Dia. Curb Inlet	407.80'	(AA1) 405.00 (AA2) 405.00 (PP-4) 405.80 (PP-2) 405.80	(AA2) 404.60
AA-3	Concrete Rectangular Headwall	403.06'	(AA2) 401.00	
AA-4	48" Dia. Curb Inlet	409.00'	(PP-6) 407.00	(AA3) 408.50

PIPE SCHEDULE				
NAME	SIZE	TYPE	LENGTH	SLOPE
AA1	12"	R.C.P.	109.29'	1.10%
AA2	18"	R.C.P.	110.31'	3.26%
AA3	12"	R.C.P.	63.34'	2.37%
PP-1	4"	Corrugated HDPE Pipe	68.35'	2.12%
PP-2	4"	Corrugated HDPE Pipe	64.00'	1.48%
PP-3	4"	Corrugated HDPE Pipe	79.25'	0.82%
PP-4	4"	Corrugated HDPE Pipe	87.57'	1.94%
PP-5	4"	Corrugated HDPE Pipe	139.47'	1.08%
PP-6	4"	Corrugated HDPE Pipe	13.50'	1.48%
PP-7	4"	Corrugated HDPE Pipe	45.00'	1.11%
PP-8	4"	Corrugated HDPE Pipe	55.00'	1.00%
PP-9	4"	Corrugated HDPE Pipe	6.00'	1.67%
PP-10	4"	Corrugated HDPE Pipe	57.50'	0.96%
PP-11	4"	Corrugated HDPE Pipe	57.50'	0.96%
PP-12	4"	Corrugated HDPE Pipe	29.52'	1.02%
PP-13	4"	Corrugated HDPE Pipe	27.98'	1.07%
PP-14	4"	Corrugated HDPE Pipe	53.24'	1.68%
PP-15	4"	Corrugated HDPE Pipe	60.74'	0.99%
PP-16	4"	Corrugated HDPE Pipe	55.00'	1.00%
PP-17	4"	Corrugated HDPE Pipe	13.00'	1.15%
PP-18	4"	Corrugated HDPE Pipe	58.00'	1.64%
PP-19	4"	Corrugated HDPE Pipe	40.00'	1.75%
PP-20	4"	Corrugated HDPE Pipe	40.00'	1.37%
PP-21	4"	Corrugated HDPE Pipe	30.00'	1.83%
PP-22	4"	Corrugated HDPE Pipe	28.00'	1.61%
PP-23	4"	Corrugated HDPE Pipe	53.24'	1.97%

KEYNOTES (Grading Plan)

- CONSTRUCT PRECAST CONCRETE CURB INLET CATCH BASIN WHERE INDICATED ON PLAN AND PER STRUCTURE SCHEDULE THIS SHEET. CONTRACTOR SHALL SUBMIT TO OWNER'S ENGINEER SHOP DRAWINGS OF STRUCTURE AND GRATE SELECTIONS. CONTRACTOR SHALL BACKFILL CATCH BASIN STRUCTURES TO SUBGRADE WITH 1'-FOOT OF UNWASHED #57 STONE. CONTRACTOR SHALL TIE PERFORATED PIPE UNDERDRAINS INTO CATCH BASIN STRUCTURES WHERE INDICATED ON PLAN.
- INSTALL REINFORCED CONCRETE PIPE WHERE INDICATED ON PLAN AND PER PIPE SCHEDULE, THIS SHEET. INSTALL PER DETAIL 7, SHEET C6.2.
- INSTALL PRECAST CONCRETE SLOPED AND FLARED HEADWALL WHERE INDICATED ON PLAN AND PER STRUCTURE SCHEDULE, THIS SHEET. CONTRACTOR SHALL SUBMIT TO OWNER'S ENGINEER SHOP DRAWINGS OF STRUCTURES SELECTED.
- INSTALL 20"x10" (AVG.) RIP-RAP OUTLET PROTECTION AS SHOWN ON PLAN AND PER DETAIL 17, SHEET C6.1.
- INSTALL APPROXIMATELY 65'x15' OF NORTH AMERICAN GREEN P300 (OR APPROVED EQUAL) PERMANENT TURF REINFORCEMENT WHERE INDICATED ON PLAN. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
- INSTALL 48" DIAMETER PRECAST CONCRETE DETENTION BASIN OUTLET STRUCTURE WHERE INDICATED ON PLAN. INSTALL ON END OF EXISTING 18" C.M.P. OUTLET PIPE. MODIFY STRUCTURE BY CASTING (OR CORE DRILLING) ORIFICES INTO STRUCTURE WALL AS SHOWN ON DETAIL 15, SHEET C6.1. INSTALL HOE LOD48 TRASH RACK (OR APPROVED EQUAL).
- INSTALL 4" PERFORATED PIPE WITH FILTER SOCK UNDERDRAINS BENEATH ASPHALT PAVEMENT WHERE INDICATED ON PLAN AND PER DETAIL 18, SHEET C6.1.

UTILITY NOTE

- CONTRACTORS SHALL BE RESPONSIBLE FOR UTILITY AGENCY COORDINATION AND PAYMENT OF ALL FEES ASSOCIATED WITH THE UTILITY CONNECTIONS INCLUDING: TAP FEES, METERS, ETC. FOR ALL UTILITIES.
- CONTRACTOR SHALL UNCOVER AND VERIFY LOCATION AND ELEVATIONS AT THE IN AND CROSSING LOCATIONS PRIOR TO ANY UNDERGROUND PIPE INSTALLATION.

BENCHMARKS

- BENCHMARK INFORMATION MAY BE OBTAINED BY CONTACTING:  
BRANSON SURVEYS, 330 2nd STREET, HENDERSON, KENTUCKY, 42420  
PHONE: 270-827-5447

THE LOCATION OF UNDERGROUND UTILITIES SHOWN ARE BASED ON OBSERVED EVIDENCE AND AVAILABLE PLANS. LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. OTHER UTILITIES MAY EXIST AND NOT BE SHOWN HEREON.

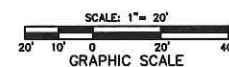
THIS PROPERTY IS NOT LOCATED IN A 100-YEAR FLOOD HAZARD AREA AS INDICATED BY FLOOD INSURANCE RATE MAP NOS. 21101C0228F & 21101C0229F, DATED SEPTEMBER 29, 2017.

NOTES

- CONTRACTOR SHALL READ AND FOLLOW ALL RECOMMENDATIONS PRESENTED WITHIN THE GEOTECHNICAL REPORT PREPARED BY ALT & WITZO, DATED FEBRUARY 11, 2018. SPECIFICALLY THE CONTRACTOR SHALL BE AWARE OF AND FOLLOW ALL RECOMMENDATIONS PERTAINING TO CHEMICAL TREATMENT OF SOILS PURSUANT TO APPROPRIATE MOISTURE CONTENT AND ALL PROOF ROLLING REQUIREMENTS.
- DCA, CRUSHED STONE, OR OTHER GRANULAR ROCK MATERIALS USED FOR BACKFILL OR BASE MATERIAL SHALL BE COMPACTED TO A MINIMUM OF 95% OF MODIFIED PROCTOR DENSITY (ASTM D1557).
- FILL AND BACKFILL MATERIALS SHALL BE PLACED IN LAYERS NOT TO EXCEED 8 INCHES TO BE COMPACTED BY HEAVY COMPACTION EQUIPMENT, AND NOT TO EXCEED 4 INCHES IF COMPACTED BY HAND-OPERATED EQUIPMENT.
- SUBGRADE AND FILL LOCATIONS SHOULD BE "PROOFROLLED" TO EVALUATE THE SUITABILITY FOR FILL AND PAVEMENT PLACEMENT. THE PROOFROLLING SHOULD BE PERFORMED USING HEAVY EQUIPMENT (FULLY LOADED SINGLE OR DOUBLE AXLE DUMP TRUCK OF APPROXIMATE WEIGHT OF 20-25 TONS) PASSING REPEATEDLY OVER THE SUBGRADE/COMPACTED FILL AT A SLOW RATE OF SPEED.

LEGEND

PROPOSED PAVEMENT SPOT ELEVATION	XXXX.XX
PROPOSED TOP OF CURB/ BOTTOM OF CURB ELEVATIONS	(12' XXX.XX) (6' XXX.XX)
PROPOSED PAVEMENT SPOT GRADE AND DIRECTION	XXX.XX
EXISTING CONTOUR W/ELEVATION	--- 383 ---
PROPOSED CONTOUR W/ELEVATION	--- 383 ---



South Middle School Improvements



800 S. Alves Street  
Henderson, KY 42420



In association with:  
  
QK4  
110 North Water Street, Suite B  
Henderson, Kentucky 42420  
Telephone: 270.212.2177  
Facsimile: 502.581.0406  
Website: www.qk4.com



Construction Documents

Revisions:		
#	Description	Date

Designed By: L. Shelton  
Drawn By: L. Shelton  
Checked By: K. Holtz

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Sheet title:  
GRADING & DRAINAGE PLAN

Architect's Project No: 1812-332  
Date: February, 2019

Drawing No:

C4.1