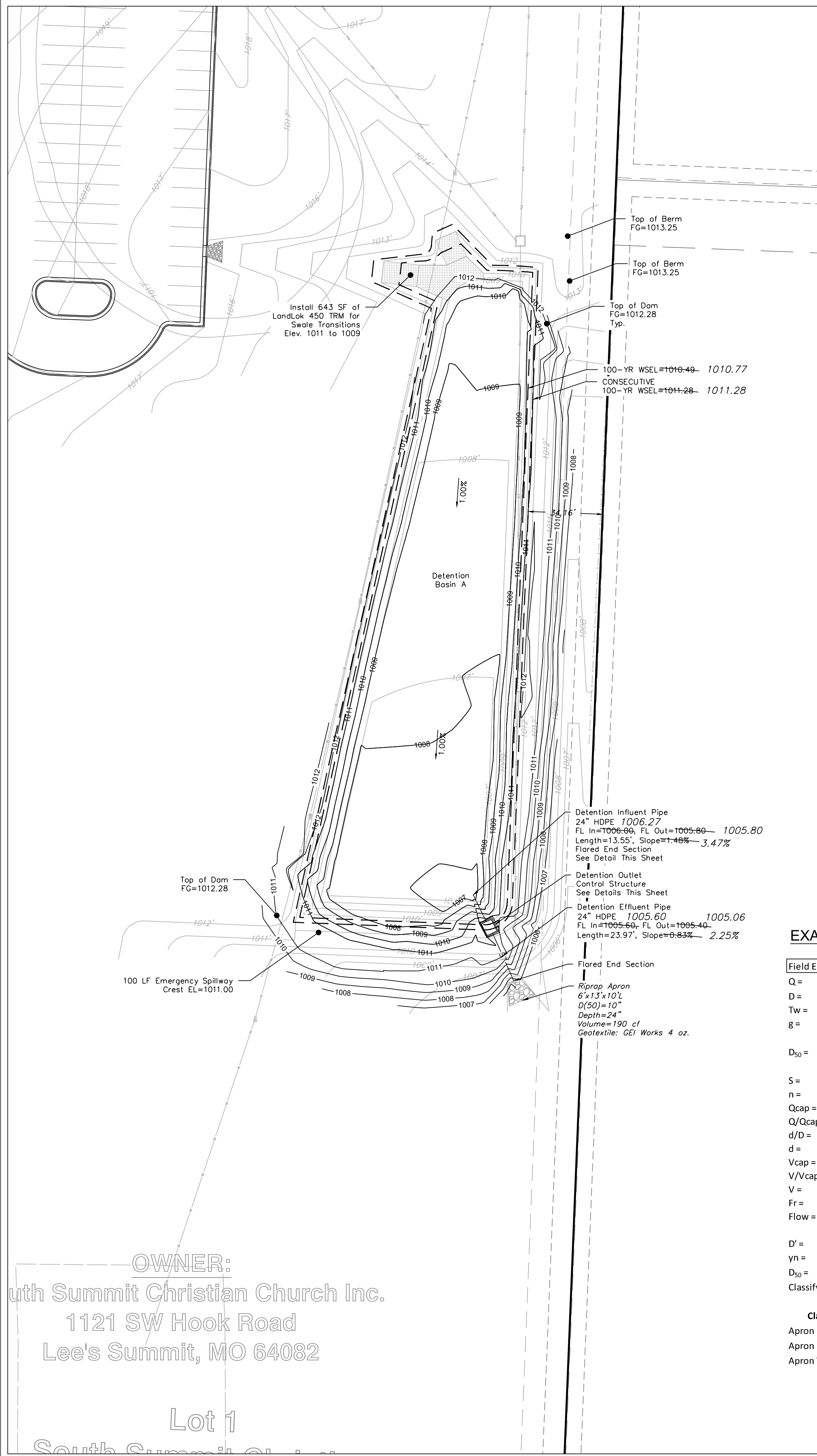
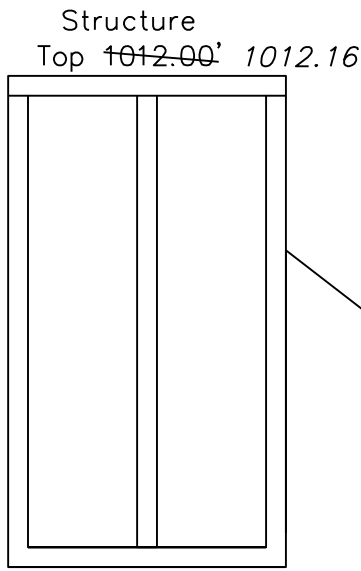


DETENTION BASIN PLAN

SCALE: 1" = 30'

NOTES:

- THE BASIN SHALL BE CONSTRUCTED WITH THE EROSION AND SEDIMENT CONTROL MEASURES.
- AN AS-BUILT DETENTION BASIN PLAN SHALL BE SUBMITTED AND ACCEPTED PRIOR TO ISSUANCE OF A CERTIFICATE OF SUBSTANTIAL COMPLETION. THE FOLLOWING AS-BUILT PARAMETERS MUST BE CHECKED FOR COMPLIANCE: STORAGE, TOP OF DAM ELEVATION, EMERGENCY SPILLWAY ELEVATION, WEIR/ORIFICE ELEVATIONS, TOP OF CONTROL STRUCTURE AND BOTTOM OF BASIN ELEVATION.

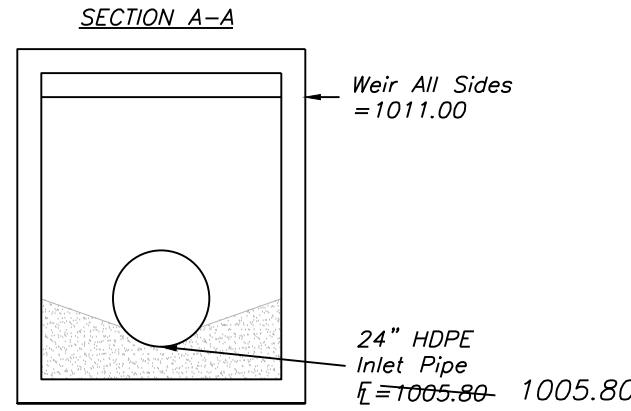
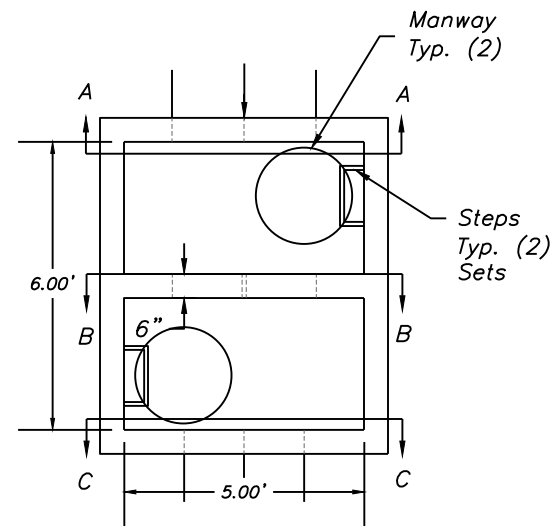


Top Pond EL 1012.28'
Maximum Storage 87,788 c.f.

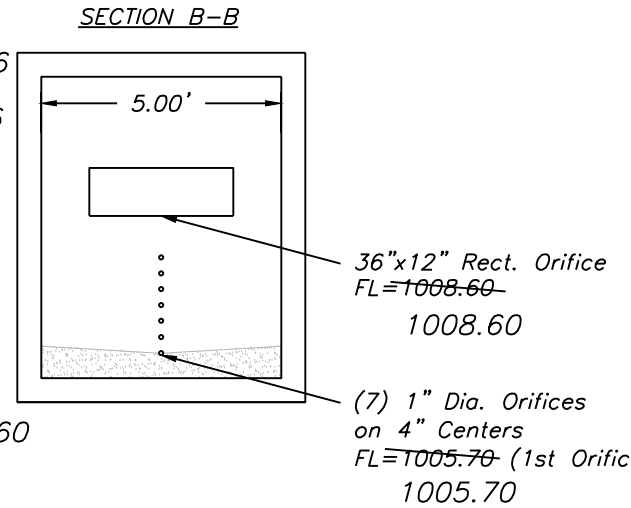
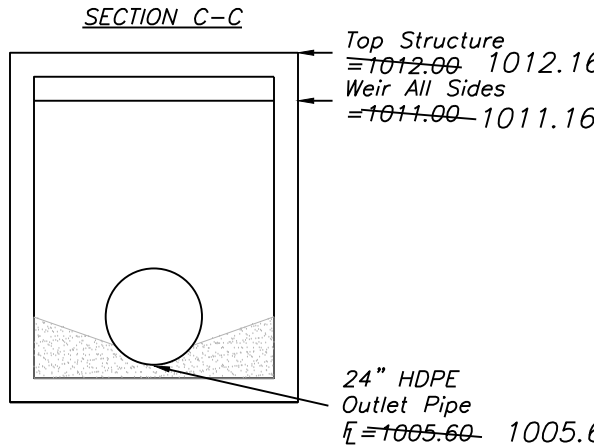
100 Year Clogged
WSE=1011.28' 1011.28
100 Year
WSE=1010.49' 1010.77

SECTION VIEW - BASIN A N.T.S.

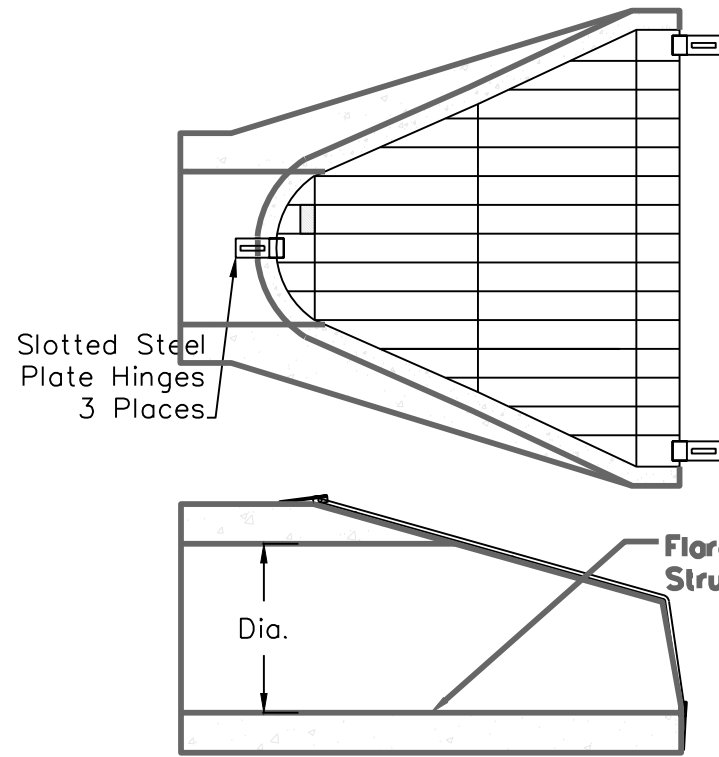
Storm	2-YR	10-YR	100-YR
Nominal Storage (cf)	23,828	35,439	54,908
Allowable Release Rate POI-A (cfs)	2.98	11.92	17.88



Structural Notes:
4,000 PSI Concrete
Grade 60 Rebar
Top: #5 Bars @ 6" O.C.E.W.
Walls: #5 Bars @ 12" O.C.E.W.
Slo: #5 Bars @ 6" O.C.E.W.



CONTROL STRUCTURE - BASIN A 1/4" = 1'-0"



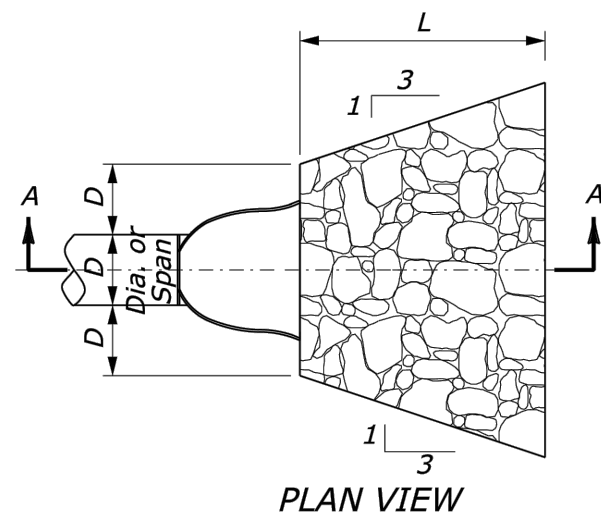
Galvanized
Trash Guard
For Influent Flored Ends

EXAMPLE CALCULATION

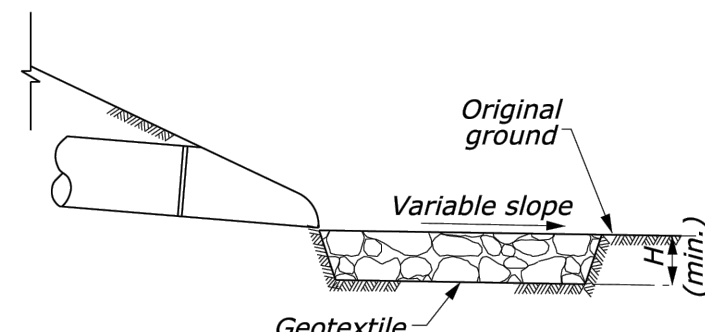
Field End Section #	1-1
Q =	17.21 cfs
D =	2 ft
Tw =	0.8 ft
g =	32.2 ft/s ²
D ₅₀ =	5.23 inches
S =	0.0083 ft/ft
n =	0.01
Qcap =	26.72 ft ³ /s
d/D =	0.58
d =	1.16 ft
Vcap =	8.51 ft ² /s
V/Vcap =	1.0599
V =	9.02 ft/s
Fr =	1.48
Flow =	Supercritical
D' =	1.58 ft
yn =	1.16 ft
D ₅₀ =	7.16 inches
Classify	7.16 inches

Class 3	Use D ₅₀ = 10	10.00 ft	Use	10.00 ft
Apron Length =	5 * D	24.00 inches	Use	24.00 inches
Apron Depth =	2.4 * D ₅₀	12.67 ft	Use	13.00 ft
Apron Width =	3*D*(2/3)L			

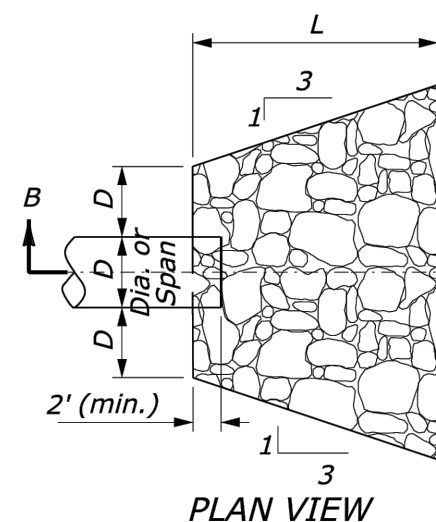
STANDARD RIPRAP APRON DETAIL



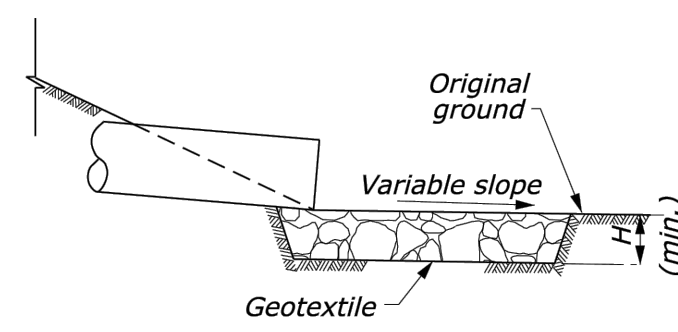
CULVERT WITH STANDARD END SECTION



SECTION A-A



CULVERT WITHOUT STANDARD END SECTION



SECTION B-B

- NOTES:
- ALL RIPRAP APRONS SHALL CONFORM TO THE STANDARD CONFIGURATION SHOWN IN THE STANDARD DETAIL ABOVE UNLESS OTHERWISE NOTED. PLAN VIEW DIMENSIONS SHOWN SHALL BE MET OR EXCEEDED INCLUDING AREAS OF LONGITUDINAL AND/OR TRANSVERSE SLOPE.
 - DIMENSIONS FOR EACH RIPRAP APRON AND ASSOCIATED RIPRAP ARE DETAILED IN THE PLAN SET.
 - GEOTEXTILE SHALL BE "GEI WORKS 4 OUNCE" NON-WOVEN FILTER FABRIC DESIGNED FOR FILTRATION, STABILIZATION AND SEPARATION WRAPPED CONTINUOUSLY ALONG THE SIDEWALLS AND BOTTOM OF THE PREPARED AREA OR SLOPE.
 - WATER FLOW = 120 GPM/SF
 - GRAB STRENGTH (MIN) = 400 N
 - PUNCTURE STRENGTH (MIN) = 178 N
 - TRAPEZOIDAL TEAR (MIN) = 133 N
 - ELONGATION (MIN) = 15%

RECORD DRAWING
The information provided on this drawing conforms to construction records; it is not intended for construction, implementation or recording purposes; and it is solely based on information obtained by my firm.

"400-00 100.10", "4-00% 1.15% slope", or "8-inch HDPE-PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 11/15/2023
Certified by: Matthew J. Schlicht
Title: Engineer
Firm: Engineering Solutions

