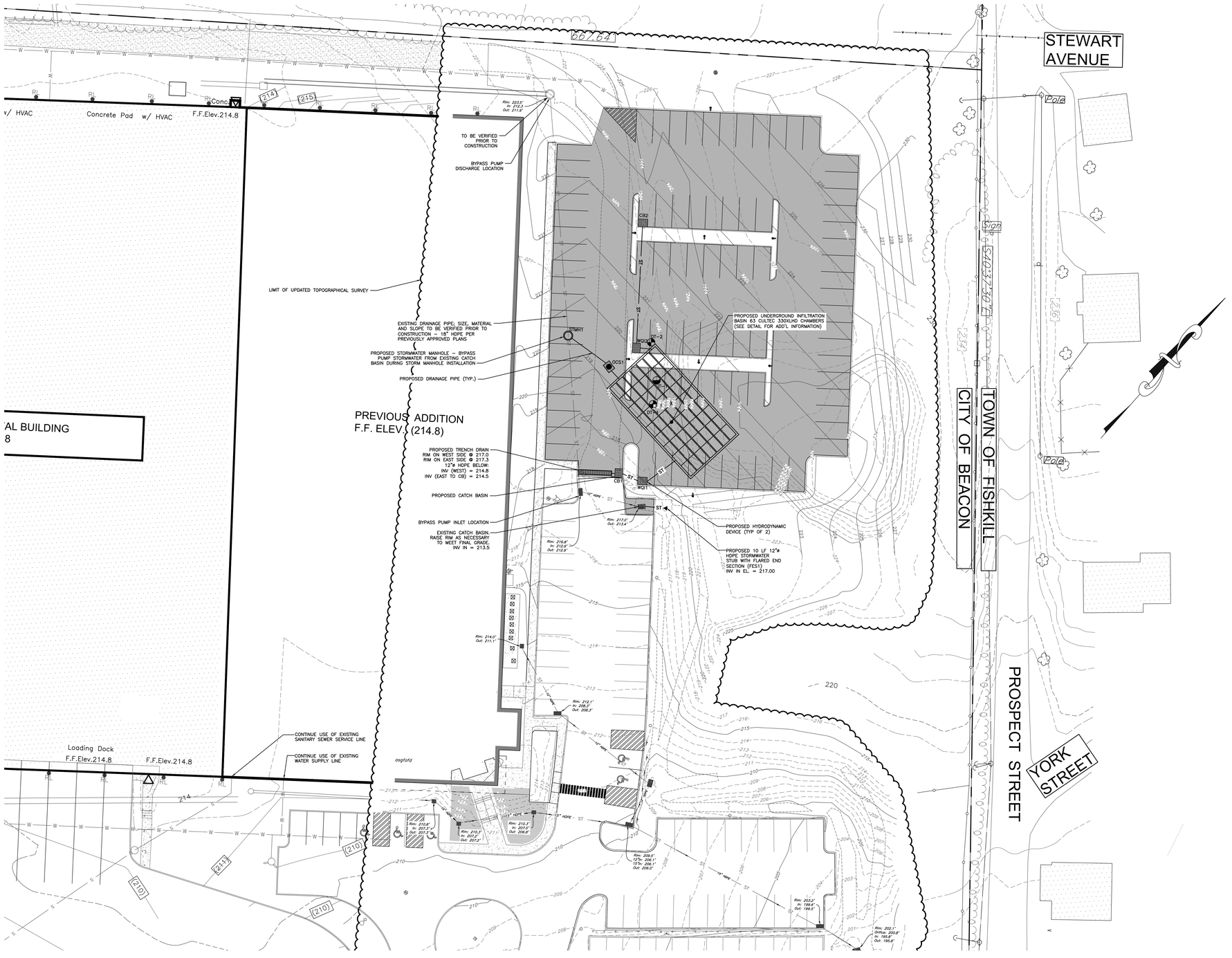


UTILITY PLAN
SCALE: 1" = 20'
GRAPHIC SCALE

20 0 10 20 40 80
(IN FEET)
1 inch = 20 ft.

INSPECTION SCHEDULE & LONG TERM MAINTENANCE OF STORMWATER STRUCTURES

CATCH BASINS AND PIPING:

ALL CATCH BASINS SHALL BE INSPECTED AFTER EACH STORM EVENT FOR SEDIMENT ACCUMULATION, AND DEBRIS, AND REMOVE AS NECESSARY. WHEN SEDIMENT ACCUMULATION WITHIN THE CATCH BASIN SUMP REACHES 1/2 OF THE SUMP DEPTH, IT SHALL BE REMOVED. ASSOCIATED PIPING SHALL BE INSPECTED ANNUALLY AND ACCUMULATED SEDIMENT SHALL BE REMOVED AS NEEDED.

HYDRODYNAMIC DEVICE:

THE CDS STORMWATER TREATMENT SYSTEM IS A HIGH-PERFORMANCE HYDRODYNAMIC SEPARATOR AND REQUIRES REGULAR INSPECTION AND MAINTENANCE TO ENSURE OPTIMAL PERFORMANCE. MAINTENANCE FREQUENCY WILL BE DRIVEN BY SITE CONDITIONS. THE MANUFACTURER SUGGESTS QUARTERLY VISUAL INSPECTIONS TO DETERMINE THE ACCUMULATION OF POLLUTANTS, AND SUGGESTS ANNUAL REMOVAL OF ACCUMULATED POLLUTANTS. VORTEX UNITS SHALL BE INSPECTED QUARTERLY, GENERALLY AROUND THE CHANGE OF EACH SEASON. INSPECTIONS AND MAINTENANCE SHALL BE PERFORMED BY QUALIFIED PERSONNEL WITH ADEQUATE TRAINING IN THESE TYPES OF UNITS. THE UNITS SHALL BE CLEANED BY VACUUM TRUCK. ADDITIONAL CLEANINGS SHOULD BE ANTICIPATED DURING THE FIRST YEAR OF OPERATION. THE RECOMMENDED CLEANOUT OF SOLIDS WITHIN THE CDS UNIT'S SUMP SHOULD OCCUR AT 75% OF THE SUMP CAPACITY.

UNDERGROUND DETENTION/INFILTRATION:

BEST MANAGEMENT PRACTICE FOR MAINTAINING OPTIMUM PERFORMANCE OF THE UNDERGROUND INFILTRATION SYSTEM IS A COMBINATION OF THE FOLLOWING:

1. PROPER MAINTENANCE OF THE PRETREATMENT HYDRODYNAMIC DEVICE,
2. REMOVAL OF ACCUMULATED SEDIMENT FROM THE UPSTREAM CATCH BASIN AND STORMWATER COLLECTION SYSTEM, AND
3. MAINTAINING THE SITE IMPERVIOUS AND LAWN AREAS IN A STABLE CONDITION. ANY FUTURE LAND DISTURBANCE ASSOCIATED WITH MAINTENANCE OF THE BUILDINGS AND GROUNDS SHALL CAREFULLY PREPARE AN EROSION AND SEDIMENT CONTROL PLAN TO LIMIT TRANSPORT OF SEDIMENT LADEN RUNOFF TO THE COLLECTION SYSTEM.

THE CULTEC SYSTEM SHALL BE EQUIPPED WITH AN INSPECTION PORT LOCATED ON THE INLET ROW. THE INSPECTION PORT IS A CIRCULAR CAST IRON PLACED IN A RECTANGULAR CONCRETE COLLAR. WHEN THE LID IS REMOVED, A 6-INCH PIPE WITH A SCREW-IN PLUG WILL BE EXPOSED. REMOVE THE PLUG. THIS WILL PROVIDE ACCESS TO THE CULTEC CHAMBER ROW BELOW. FROM THE SURFACE, THROUGH THIS ACCESS, THE SEDIMENT MAY BE MEASURED AT THIS LOCATION. A STADIA ROD MAY BE USED TO MEASURE THE DEPTH OF SEDIMENT IF ANY IN THIS ROW. ADDITIONALLY, CCTV INSPECTION OF THIS ROW CAN BE DEPLOYED THROUGH THIS ACCESS PORT TO DETERMINE IF ANY SEDIMENT HAS ACCUMULATED. IF THE DEPTH OF SEDIMENT IS IN EXCESS OF 3 INCHES, THEN THIS ROW SHOULD BE CLEANED WITH HIGH PRESSURE WATER THROUGH A CULVERT CLEANING NOZZLE. THIS WOULD BE CARRIED OUT THROUGH THE UPSTREAM PRETREATMENT DEVICE. THE ACCESS POINT THROUGH THE HYDRODYNAMIC DEVICE REQUIRES A TECHNICIAN TRAINED IN CONFINED SPACE ENTRY WITH PROPER GAS DETECTION EQUIPMENT. THIS INDIVIDUAL MUST BE EQUIPPED WITH THE PROPER SAFETY EQUIPMENT FOR ENTRY INTO THE HYDRODYNAMIC DEVICE. THE INLET ROW IS PLACED ON A POLYETHYLENE LINER TO PREVENT SCOURING OF THE WASHED STONE BENEATH THIS ROW. THIS FACILITATES THE FLUSHING OF THIS ROW WITH HIGH PRESSURE WATER THROUGH A CULVERT CLEANING NOZZLE. THE NOZZLE IS DEPLOYED THROUGH THE HYDRODYNAMIC DEVICE AND EXTENDED TO THE END OF THE ROW. THE WATER IS TURNED ON AND THE INLET ROW IS BACK-FLUSHED INTO THE HYDRODYNAMIC DEVICE WHERE IT IS REMOVED BY USING A VACUUM TRUCK.

MAINTENANCE GUIDELINES:

1. THE OWNER SHALL KEEP A MAINTENANCE LOG WHICH SHALL INCLUDE DETAILS OF ANY EVENTS WHICH WOULD HAVE AN EFFECT ON THE SYSTEM'S OPERATIONAL CAPACITY.
2. THE OPERATION AND MAINTENANCE PROCEDURE SHALL BE REVIEWED PERIODICALLY AND CHANGED TO MEET SITE CONDITIONS.
3. MAINTENANCE OF THE STORMWATER MANAGEMENT SYSTEM SHALL BE PERFORMED BY QUALIFIED WORKERS AND SHALL FOLLOW APPLICABLE OCCUPATIONAL HEALTH AND SAFETY REQUIREMENTS.
4. DEBRIS REMOVED FROM THE STORMWATER MANAGEMENT SYSTEM SHALL BE DISPOSED OF IN ACCORDANCE WITH APPLICABLE LAWS AND REGULATIONS.

SUGGESTED MAINTENANCE SCHEDULE (TO BE RE-ASSESSED BY THE OPERATOR PERIODICALLY BASED ON SITE CONDITIONS AND EVALUATION OF SYSTEM FUNCTIONALITY):

1. YEAR 1: INSPECT INLETS AND OUTLETS MONTHLY FOR ANY CLOGGING, AND REMOVE DEBRIS AS MAY BE NECESSARY. INSPECT THE SURFACE AROUND THE CHAMBERS FOR ANY DEPRESSIONS.
2. YEAR 2 AND AFTER: INSPECT INLETS AND OUTLETS EVERY SPRING AND FALL FOR ANY CLOGGING, AND REMOVE DEBRIS AS MAY BE NECESSARY. INSPECT THE SURFACE AROUND THE CHAMBERS FOR ANY DEPRESSIONS.
3. 2 YEARS AFTER COMMISSIONING: INSPECT THE INTERIOR OF THE STORMWATER MANAGEMENT CHAMBERS THROUGH INSPECTION PORT FOR DEFICIENCIES USING CCTV OR COMPARABLE TECHNIQUE.
4. 9 YEARS AFTER COMMISSIONING, AND EVERY 9 YEARS THEREAFTER (OR AS MAY BE NEEDED): CLEAN STORMWATER MANAGEMENT CHAMBERS AND FEED CONNECTORS OF ANY DEBRIS. INSPECT THE INTERIOR OF THE STORMWATER MANAGEMENT CHAMBERS THROUGH INSPECTION PORT FOR DEFICIENCIES USING CCTV OR COMPARABLE TECHNIQUE.
5. 45 YEARS AFTER COMMISSIONING: A PROFESSIONAL ENGINEER SHALL ASSESS THE REMAINING LIFE EXPECTANCY OF THE STORMWATER MANAGEMENT CHAMBERS AND RECOMMEND ACTIONS TO REHABILITATE, RESTORE OR REPLACE THE STORMWATER MANAGEMENT CHAMBERS AS MAY BE REQUIRED.
6. ANNUALLY: CONFIRM THAT NO UNAUTHORIZED MODIFICATIONS HAVE BEEN PERFORMED TO THE SITE THAT MAY IMPACT THE ADEQUATE FUNCTIONING OF THE SYSTEM.
7. PERIODICALLY: MONITOR WATER LEVELS IN THE CHAMBER SYSTEM FOLLOWING SIGNIFICANT STORM EVENTS. DEWATERING OF THE SYSTEM SHOULD TAKE NO LONGER THAN 24 HOURS.

THE FACILITY OWNER SHALL PROVIDE FOR THE PERIODIC INSPECTION OF THE STORMWATER FACILITIES IN ACCORDANCE WITH THE SWPPP, AND SHALL HAVE THE FACILITIES INSPECTED ON A YEARLY BASIS BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF NEW YORK, TO DETERMINE THE CONDITION AND INTEGRITY OF THE STORMWATER CONTROL MEASURES. THE INSPECTING PROFESSIONAL SHALL PREPARE AND SUBMIT TO THE CITY OF BEACON WITHIN 30 DAYS OF THE INSPECTION BUT NOT LATER THAN JUNE 1 OF EACH YEAR, A WRITTEN REPORT OF THE FINDINGS INCLUDING RECOMMENDATIONS FOR THOSE ACTIONS NECESSARY FOR THE CONTINUATION OF THE STORMWATER CONTROL MEASURES. SEE "APPENDIX O" OF THE STORMWATER POLLUTION PREVENTION PLAN FOR DETAILED OPERATIONS AND MAINTENANCE PROCEDURES.

EXISTING UNDERGROUND UTILITY NOTES:

1. CONTRACTOR SHALL DIG TEST PITS TO VERIFY LOCATION, SIZE AND PIPE MATERIAL OF EXISTING UNDERGROUND UTILITIES. IF ANY EXISTING UTILITIES ARE NOT IN THE LOCATION WHERE THEY ARE SHOWN ON THE PLAN, IT SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION IMMEDIATELY.

POST CONSTRUCTION NOTES:

1. RECORD DRAWINGS OF THE PROJECT INCLUDING ALL UTILITIES WILL BE PROVIDED TO THE BUILDING INSPECTOR AFTER CONSTRUCTION IS COMPLETE.
2. AN OPERATION AND MAINTENANCE PLAN MANUAL SHALL BE PROVIDED TO THE CITY OF BEACON BUILDING INSPECTOR FOLLOWING COMPLETION OF THE STORMWATER FACILITIES.

STORM SEWER STRUCTURE TABLE	
STRUCTURE	STRUCTURE DETAILS
CB1	RIM = 217.52 SUMP = 213.50 CB1–WQI1 INV OUT = 214.50
CB2	RIM = 222.35 SUMP = 218.30 CB2–WQI2 INV OUT = 219.30
EX. CB1	RIM = 217.50 SUMP = 212.50 FES1–EX. CB1 INV IN = 213.50
OCS1	RIM = 219.40 SUMP = 212.40 INF CH–OCS1 INV IN = 213.40 OCS1–STMH1 INV OUT = 213.40
STMH1	RIM = 219.50 SUMP = 211.80 OCS1–STMH1 INV IN = 212.80
WQI1	RIM = 217.85 SUMP = 213.30 CB1–WQI1 INV IN = 214.40 WQI1–INF CH INV OUT = 214.30
WQI2	RIM = 220.15 SUMP = 213.60 CB2–WQI2 INV IN = 217.10 WQI2–INF CH INV OUT = 214.60

STORM SEWER PIPE TABLE			
PIPE NAME	LENGTH	SIZE AND MATERIAL	SLOPE
CB1–WQI1	10 LF	15" ø CORR HDPE	1.00%
CB2–WQI2	67 LF	15" ø CORR HDPE	3.26%
FES1–EX. CB1	14 LF	15" ø CORR HDPE	25.01%
INF CH–OCS1	9 LF	15" ø CORR HDPE	1.13%
OCS1–STMH1	28 LF	12" ø CORR HDPE	2.17%
WQI1–INF CH	23 LF	15" ø CORR HDPE	1.09%
WQI2–INF CH	9 LF	15" ø CORR HDPE	6.44%

CHECKED BY: DGK

REVISIONS:

NO.	DATE	DESCRIPTION	BY

DRAWN BY: CMB

REVISIONS:

NO.	DATE	DESCRIPTION	BY
1	12/25/18	PER PLANNING BOARD COMMENTS	CMB
2	1/29/19	PER PLANNING BOARD COMMENTS	CMB
3	3/29/19	PER PLANNING BOARD COMMENTS	AG

Dig Safely. New York 800-962-7962 (It's the Law)
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SEAL

UTILITY PLAN

511 FISHKILL AVENUE

511 FISHKILL AVENUE
CITY OF BEACON
DUTCHESS COUNTY, NEW YORK
TAX ID: 6055-04-506250

JOB #: 2018-041
DATE: 11/27/18
SCALE: 1" = 20'
TITLE: UT-1
SHEET: 11 OF 13

UNAUTHORIZED ALTERATIONS OR ADDITIONS TO THIS DRAWING IS A VIOLATION OF SECTION 7209.2 OF THE NEW YORK EDUCATION LAW