

I, CLERK OF THE TOWN OF ACTON, MASSACHUSETTS HEREBY CERTIFY THE NOTICE OF APPROVAL OF THIS PLAN BY THE ACTON PLANNING BOARD HAS BEEN RECEIVED AND RECORDED AT THIS OFFICE AND NO APPEAL WAS RECEIVED DURING THE TWENTY DAYS NEXT AFTER SUCH RECEIPT AND RECORDING OF SAID NOTICE.

THIS PLAN IS SUBJECT TO A SENIOR RESIDENCE SPECIAL PERMIT WITH CONDITIONS AND LIMITATIONS, DATED

APPROVED BY:
TOWN OF ACTON
PLANNING BOARD

DATE

TOWN CLERK

DATE

DRAINAGE SYSTEM OPERATION AND MAINTENANCE PLAN

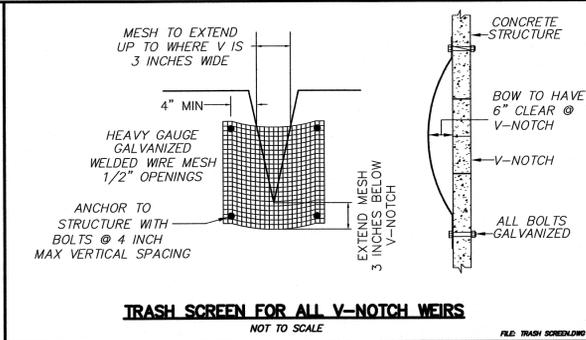
THE IMPLEMENTATION, INSPECTION, AND REPAIR OF THE EROSION CONTROLS IS THE RESPONSIBILITY OF THE SITE CONTRACTOR DURING CONSTRUCTION.

THE INSPECTION AND OPERATION OF THE STORM WATER MANAGEMENT SYSTEM UPON COMPLETION OF CONSTRUCTION IS THE RESPONSIBILITY OF THE OWNER.

SITE OWNER:
THE RESIDENCE AT QUAIL RIDGE, LLC.
3548 GREAT ROAD
SKYLINE DRIVE
ACTON, MA 01720
(OR ANY FUTURE OWNER)
PARTIES RESPONSIBLE FOR LONG TERM OPERATION/MAINTENANCE:
THE RESIDENCE AT QUAIL RIDGE, HOME OWNERS ASSOCIATION
SCHEDULE FOR INSPECTION AND MAINTENANCE:
(OR ANY FUTURE OWNER)
DEEP SUMP AND HOODED CATCH BASINS
THE DEEP SUMP FOR THE CATCH BASINS SHALL BE INSPECTED AND CLEANED ANNUALLY. THE CATCH BASINS HAVE A FOUR FOOT DEEP SUMP AND THE WATER LEVEL IS MAINTAINED BY THE DISCHARGE PIPE AT FOUR FEET. THE DISCHARGE PIPE IS HIDDEN FROM VIEW BY A HOODED OUTLET.

THE DEPTH OF THE SEDIMENT IN A BASIN SHALL NOT EXCEED A DEPTH OF 18 INCHES AS DETERMINED BY PROBING WITH A STICK. IF THE STICK HITS THE BOTTOM WITHIN 30 INCHES OF THE WATER LEVEL, MORE THAN 18 INCHES OF SEDIMENT HAS ACCUMULATED AND MUST BE REMOVED. LICENSED PERSONS SHOULD REMOVE AND DISPOSE OF THE CONTENTS OF THE SUMP IN ACCORDANCE WITH APPLICABLE REGULATIONS.
SEDIMENT FOREBAY:
THE SEDIMENT FOREBAY SHALL BE INSPECTED AFTER EVERY MAJOR STORM EVENT FOR THE FIRST THREE MONTHS AFTER CONSTRUCTION. THE SEDIMENT FOREBAY SHALL BE INSPECTED TWICE YEARLY THEREAFTER.
SEDIMENT SHALL BE REMOVED FROM THE SEDIMENT FOREBAY UPON DISCOVERY OF 2 INCHES OF SEDIMENT ACCUMULATION.
ERODED OR BARREN SPOTS SHALL BE RECOVERED WITH STONE IMMEDIATELY AFTER INSPECTION TO PREVENT EROSION AND ACCUMULATION OF SEDIMENT.
SEDIMENT SHALL BE REMOVED FROM THE FOREBAY AS NEEDED, AT LEAST ONCE EVERY 10 YEARS. THIS PROCEDURE SHALL NOT TAKE PLACE UNTIL THE FLOOR OF THE FOREBAY IS THOROUGHLY DRY.
DETENTION BASIN/INFILTRATION BASIN/WATER QUALITY SWALE
THE SEDIMENT FOREBAY SHOULD BE CLEANED OUT ONCE PER YEAR TO THE DEPTHS SPECIFIED ON THE SENIOR RESIDENCE SPECIAL PERMIT PLANS BY STAMSKI AND McNARY, INC.
*SEDIMENT SHALL BE REMOVED FROM THE INFILTRATION BASIN BY HAND ONCE EVERY 10 YEARS TO THE DEPTHS SPECIFIED ON THE SENIOR RESIDENCE SPECIAL PERMIT PLANS BY STAMSKI AND McNARY, INC. DATED OR IF THERE IS STANDING WATER WITHIN THE BASIN 72 HOURS AFTER A RAINFALL EVENT.
*SEDIMENT SHALL BE REMOVED FROM THE DETENTION BASIN BY HAND ONCE EVERY 10 YEARS TO THE DEPTHS SPECIFIED ON THE SENIOR RESIDENCE SPECIAL PERMIT PLANS BY STAMSKI AND McNARY, INC. DATED OR IF THERE IS STANDING WATER WITHIN THE BASIN 72 HOURS AFTER A RAINFALL EVENT.
*DURING THE FIRST THREE YEARS AFTER CONSTRUCTION, THE DETENTION BASIN SHALL BE INSPECTED DURING THE GROWING AND NON-GROWING SEASON TWICE PER YEAR. DATA GATHERED DURING THESE INSPECTIONS SHOULD BE RECORDED, MAPPED AND ASSESSED.
- GRASSES SHALL BE INSPECTED FOR SURVIVAL RATE. ANY BARE AREAS SHALL BE RESEED PRIOR TO THE END OF THE GROWING SEASON.
- THE DETENTION BASINS SHALL BE INSPECTED FOR AREAS OF CONCENTRATED SEDIMENT DEPOSITS. CONCENTRATED SEDIMENT DEPOSITS SHALL BE REMOVED BY HAND.
- SIDESLOPES OF THE DETENTION BASINS SHALL BE INSPECTED FOR EROSION. ALL ERODED AREAS SHALL RECEIVE 6" OF LOAM AND SEED ACCORDING TO THE SENIOR RESIDENCE SPECIAL PERMIT PLANS BY STAMSKI AND McNARY, INC.
- THE DETENTION BASINS OUTLET STRUCTURE SHALL BE INSPECTED FOR OBSTRUCTIONS. ALL OBSTRUCTIONS SHALL BE REMOVED UPON INSPECTION. ALL SEDIMENT THAT HAS ACCUMULATED IN THE STRUCTURE SHALL BE REMOVED BY HAND.

STORMCEPTOR:
INSPECTION AND MAINTENANCE OF THE IN-LINE STORMCEPTOR CAN BE PERFORMED FROM THE SURFACE, WITHOUT ENTRY INTO THE UNIT. PERFORM MAINTENANCE ONCE THE STORED VOLUME REACHES 15% OF THE STORMCEPTOR CAPACITY, OR IMMEDIATELY IN THE EVENT OF A SPILL.
PERFORM QUARTERLY INSPECTIONS DURING THE FIRST YEAR OF INSTALLATION TO ACCURATELY ESTABLISH THE MAINTENANCE SCHEDULE.
REMOVE OIL AND SEDIMENT THROUGH THE 24-INCH DIAMETER OUTLET RISER PIPE. ALTERNATIVELY, FLOATABLES AND HYDROCARBONS MAY BE REMOVED THROUGH THE 6-INCH OIL INSPECTION PORT.
DISPOSAL FROM STORMCEPTOR ARE SIMILAR TO THAT OF ANY OTHER BEST MANAGEMENT PRACTICE (BMP). CONSULT LOCAL GUIDELINES OR YOUR STORMCEPTOR AREA MARKETING MANAGER PRIOR TO DISPOSING THE SEPARATOR CONTENTS.
EMERGENCY CONTACTS:
IN THE EVENT OF A HAZARDOUS MATERIALS SPILL ON THE SITE THE FOLLOWING PARTIES SHALL BE CONTACTED:
FIRE DEPARTMENT: PH: 978-264-9645
THE RESIDENCE AT QUAIL RIDGE, LLC.
RECORDS:
*THE OWNER SHALL MAINTAIN AN INSPECTION LOG OF ALL ELEMENTS OF THE STORM WATER MANAGEMENT PLAN. THE OWNER SHALL MAINTAIN A MAINTENANCE LOG DOCUMENTING THE INSPECTION AND MAINTENANCE OF THE DRAINAGE STRUCTURES UNDER HIS CONTROL. A COPY OF THE EROSION CONTROL AND STORM WATER MAINTENANCE PLAN AND INSPECTION LOGS SHALL BE KEPT ONSITE AT ALL TIMES.



TRASH SCREEN FOR ALL V-NOTCH WEIRS
NOT TO SCALE

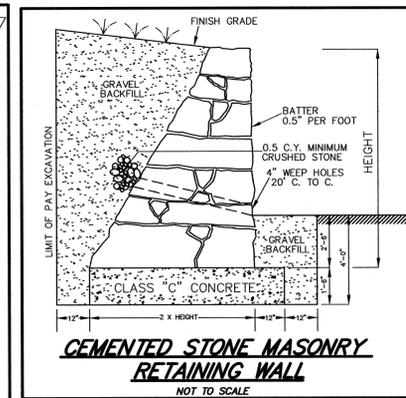
TOP OF BERM ELEVATION - SEE PLAN
1' 10'

12" RIPRAP
MAINTAIN LEVEL SPILLWAY ELEVATION

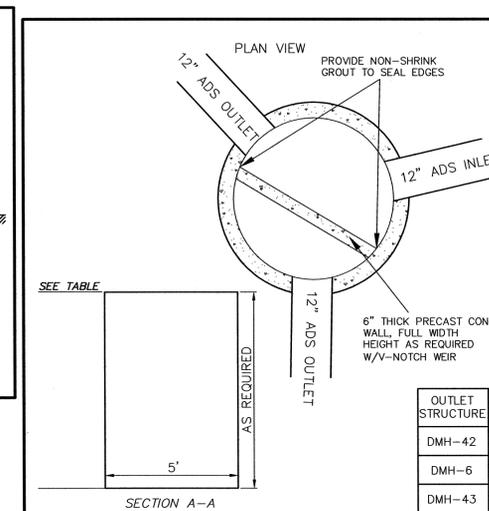
6" BANK RUN GRAVEL

BASIN #	SPILLWAY (ELEV.)	BASIN #	SPILLWAY (ELEV.)
9	234.0	17	218.5
10	224.0	20	166.3
11	220.0	21	158.1
12	225.0	27	226.0
13	187.1	29	224.5
15	199.2	31	219.6
16	224.5		

EMERGENCY SPILLWAY DETAIL
NOT TO SCALE

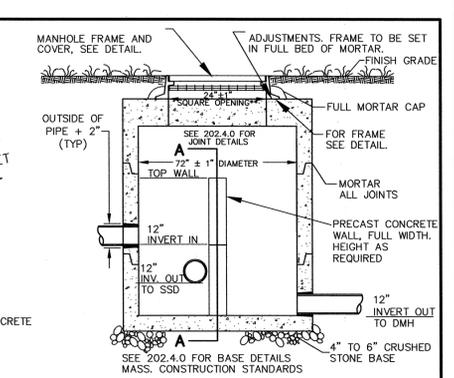


CEMENTED STONE MASONRY RETAINING WALL
NOT TO SCALE

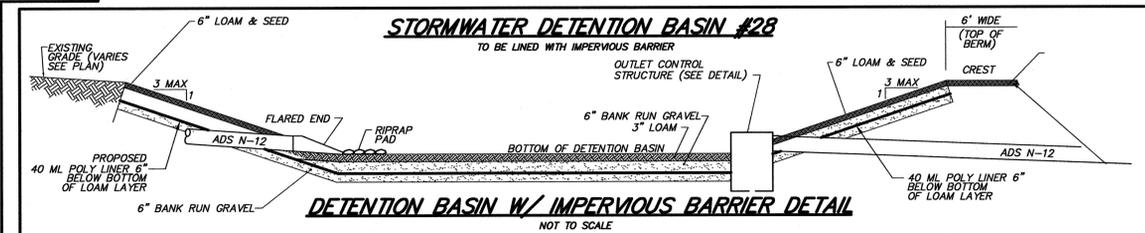


DIVERSION MANHOLE STRUCTURE
NOT TO SCALE

NOTE: SEE PRECAST CONCRETE MANHOLE DETAIL FOR MANHOLE SPECIFICATIONS.

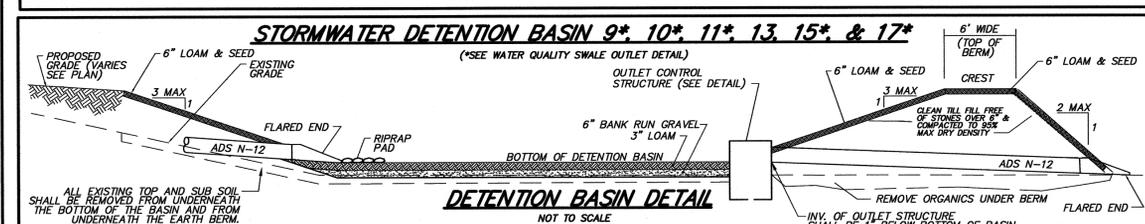


OUTLET STRUCTURE	INVERT IN	OUTLET TO SSD	OUTLET TO DMH	TOP OF WALL ELEV.	RIM ELEVATION ±
DMH-42	12"-207.27	205.75	202.00	207.50	212.15
DMH-6	12"-197.11	196.07	197.01	199.00	201.94
DMH-43	12"-185.40	185.30	15"-186.78	187.50	189.81



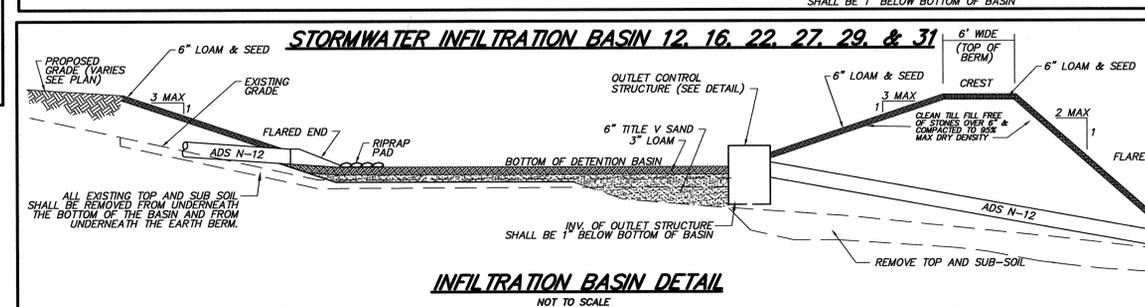
STORMWATER DETENTION BASIN #28
TO BE LINED WITH IMPERVIOUS BARRIER

DETENTION BASIN W/ IMPERVIOUS BARRIER DETAIL
NOT TO SCALE



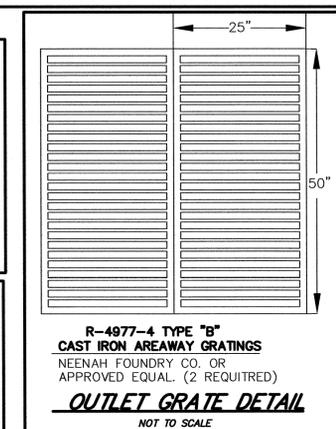
STORMWATER DETENTION BASIN 9*, 10*, 11*, 13, 15* & 17*
(*SEE WATER QUALITY SWALE OUTLET DETAIL)

DETENTION BASIN DETAIL
NOT TO SCALE

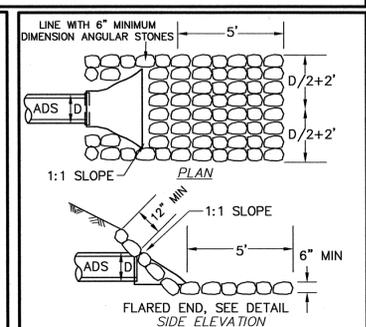


STORMWATER INFILTRATION BASIN 12, 16, 22, 27, 29, & 31

INFILTRATION BASIN DETAIL
NOT TO SCALE

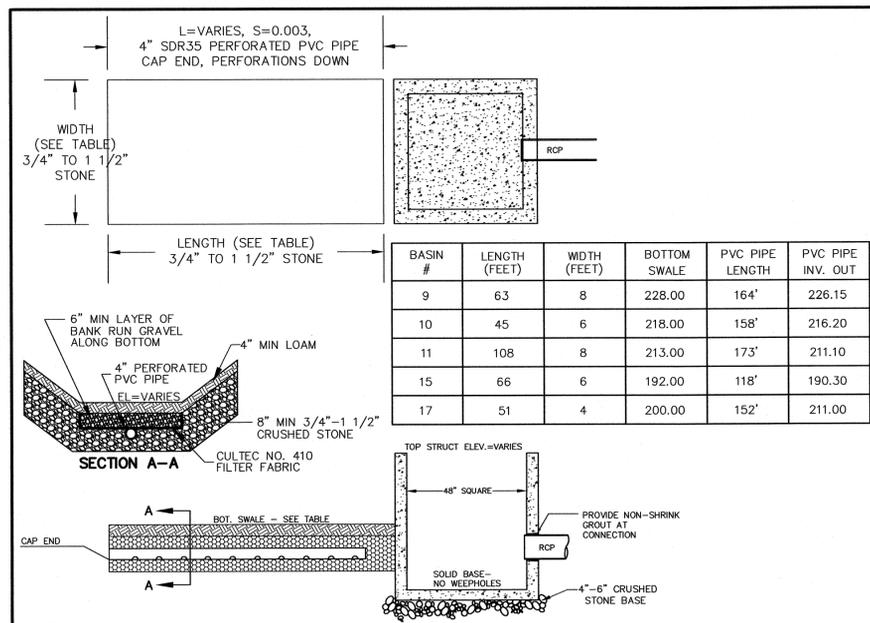


R-4977-4 TYPE "B" CAST IRON AREAWAY GRATINGS
NEENAH FOUNDRY CO. OR APPROVED EQUAL. (2 REQUIRED)
OUTLET GRATE DETAIL
NOT TO SCALE



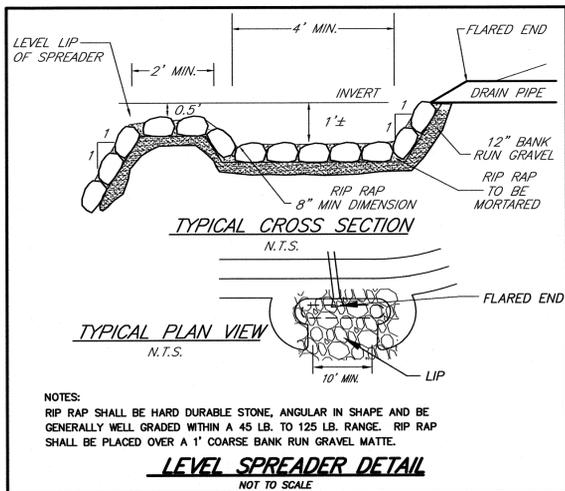
FLARED END SECTION DETAIL
NOT TO SCALE

INLET F.E.S.		OUTLET F.E.S.	
F.E.S. #	INV. (ELEV.)	F.E.S. #	INV. (ELEV.)
9-A	231.10	9-B	229.66
10-A	220.95	10-B	219.47
11-A	214.84	11-B	214.75
12-A	221.22	12-B	214.40
13-A	183.62	13-B	182.67
15-A	193.53	15-C	193.66
15-B	194.96	17-B	214.43
16-A	222.67	20	163.12
17-A	216.18	21	154.89
20	NO F.E.S.	22	192.60
21	NO F.E.S.	27-B	218.57
22-A	206.01	29-C	217.00
22-B	204.80		
22-C	206.50		
27-A	223.22		
29-A	223.00		
29-B	224.97		



WATER QUALITY SWALE OUTLET STRUCTURE
NOT TO SCALE

NOTES:
1. MANHOLE 4' x 4' SQUARE (SHEA CONCRETE OR APPROVED EQUAL) TO CONFORM TO MASS. D.P.W. STANDARD 202-4.0.
2. FACE OF PIPE FLUSH OR NOT TO PROJECT MORE THAN 4" FROM FACE OF WALL ALONG CENTERLINE OF PIPE.

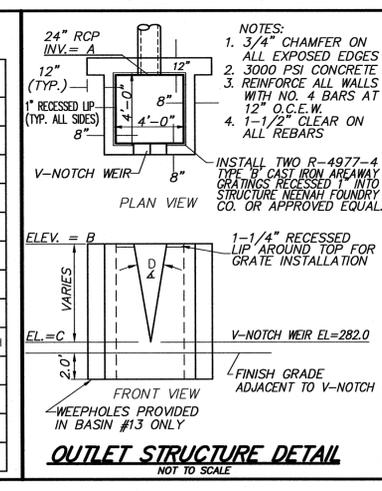


LEVEL SPREADER DETAIL
NOT TO SCALE

NOTES:
RIP RAP SHALL BE HARD DURABLE STONE, ANGULAR IN SHAPE AND BE GENERALLY WELL GRADED WITHIN A 45 LB. TO 125 LB. RANGE. RIP RAP SHALL BE PLACED OVER A 1' COARSE BANK RUN GRAVEL MATTE.

ELEVATION TABLE

OUTLET STRUCTURE	A (ELEV.)	B (ELEV.)	C (ELEV.)	D (ANGLE)
9	230.00	234.00	230.00	5°
10	220.00	224.00	220.00	5°
11	215.00	220.00	215.00	5°
12	220.00	225.00	221.50	5°
13	182.80	187.00	183.00	5°
15	194.00	199.00	194.00	5°
16	218.00	224.00	222.00	10°
17	215.00	218.00	215.00	5°
20	163.50	166.00	NO V-NOTCH	NO V-NOTCH
21	155.00	157.80	155.00	5°
22	201.00	207.50	204.00	30°
27	222.00	226.00	224.00	35°
29	221.00	224.25	223.00	5°



OUTLET STRUCTURE DETAIL
NOT TO SCALE

NOTES:
1. 3/4" CHAMFER ON ALL EXPOSED EDGES
2. 3000 PSI CONCRETE
3. REINFORCE ALL WALLS WITH NO. 4 BARS AT 12" O.C.E.W. WITH 1" RECESSED LIP (TYP. ALL SIDES)
4. 1-1/2" CLEAR ON ALL REBARS
INSTALL TWO R-4977-4 TYPE 'B' CAST IRON AREAWAY GRATINGS RECESSED INTO STRUCTURE NEENAH FOUNDRY CO. OR APPROVED EQUAL
1-1/4" RECESSED LIP AROUND TOP FOR GRATE INSTALLATION
V-NOTCH WEIR EL=282.0
FINISH GRADE ADJACENT TO V-NOTCH
FRONT VIEW
WEEP HOLES PROVIDED IN BASIN #13 ONLY

THE RESIDENCES AT QUAIL RIDGE
SENIOR RESIDENCE SPECIAL PERMIT
ACTON, MASSACHUSETTS
(MIDDLESEX COUNTY)
DETAILS SHEET

FOR: QUAIL RIDGE COUNTRY CLUB, LLC
SCALE: AS SHOWN JULY 18, 2007

STAMSKI AND McNARY, INC.
80 HARRIS STREET ACTON, MASS.
ENGINEERING - PLANNING - SURVEYING

