

**EROSION & SEDIMENTATION CONTROL NOTES (CONTINUED):**

18. ALL DISTURBED OR EXPOSED AREAS SUBJECT TO EROSION SHALL BE STABILIZED WITH MULCH OR SEEDED FOR TEMPORARY VEGETATIVE COVER. NO AREA SUBJECT TO EROSION SHALL BE LEFT DISTURBED AND UNSTABILIZED FOR PERIODS LONGER THAN IS ABSOLUTELY NECESSARY TO CARRY OUT THAT PORTION OF THE CONSTRUCTION WORK OR SIX MONTHS AFTER SOIL HAS BEEN DISTURBED WHICHEVER IS LESS.
19. CULVERT/PIPE INLETS AND OUTFALLS SHALL BE PROTECTED BY HAYBALE FILTERS AND STONE CHECK DAMS UNTIL DISTURBED AREAS ARE PERMANENTLY STABILIZED.
20. HAYBALE DIKES SHALL BE CONSTRUCTED AT ALL EXISTING & PROPOSED CATCH BASINS. NO SEDIMENTATION SHALL ENTER THE ON-SITE OR OFF-SITE DRAINAGE SYSTEMS AT ANY TIME.
21. ALL EROSION CONTROL MEASURES SHALL BE ROUTINELY INSPECTED BY THE CONTRACTOR, CLEANED AND REPAIRED OR REPLACED AS NECESSARY THROUGHOUT ALL PHASES OF CONSTRUCTION. IN ADDITION, INSPECTIONS AND SHALL TAKE PLACE WEEKLY AND BEFORE AND AFTER EACH 1/4" RAINFALL EVENT. CONTRACTOR TO PROVIDE ALL WEEKLY REPORTS IN CONJUNCTION WITH THE EROSION CONTROL / NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM CONSTRUCTION SITE PERMIT REQUIREMENTS (NPDES PERMIT) TO OWNER AND ENGINEER ON A WEEKLY BASIS OR MORE FREQUENTLY AS NECESSARY.
22. ALL PROPOSED SLOPES 3:1 OR STEEPER SHALL BE STABILIZED WITH JUTE MESH AND PROTECTED FROM EROSION UNTIL WORK IS COMPLETE AND GROUND COVER IS ESTABLISHED.
23. THE CONTRACTOR SHALL KEEP ON SITE AT ALL TIMES ADDITIONAL HAYBALES AND EXTRA SILTATION FENCING FOR INSTALLATION AT THE DIRECTION OF THE ENGINEER OR THE CITY ENGINEER TO MITIGATE ANY EMERGENCY CONDITION.
24. AS CONSTRUCTION DISTURBANCE IS GREATER THAN 1 ACRE, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) CONSTRUCTION GENERAL PERMIT NOI, AND STORM WATER POLLUTION PREVENTION PLAN (SWPPP) WILL NEED TO BE SUBMITTED TO THE EPA. THE NPDES PERMIT FOR STORM WATER DISCHARGE, & CONSTRUCTION GENERAL PERMIT NOI WILL BE REQUIRED TO BE SUBMITTED AT LEAST 14 DAYS PRIOR TO COMMENCING CONSTRUCTION BY THE CONTRACTOR.
25. OWNER AND CONTRACTOR ARE RESPONSIBLE FOR COMPLIANCE WITH THE CONSTRUCTION GENERAL PERMIT NOI, WEEKLY SWPPP INSPECTION REPORTS TO BE PERFORMED BY CONTRACTOR. COPIES OF ALL SWPPP INSPECTION REPORTS SHALL BE PROVIDED TO THE CITY OF ACTON, EPA, DEP, OR ANY OTHER AUTHORITY REQUESTING WITHIN 3 DAYS OF EACH INSPECTION.
26. APPLICABLE WORK AND MATERIALS SHALL COMPLY WITH ALL CITY OF ACTON, MA DEP, EPA CONSTRUCTION GENERAL PERMIT STANDARDS. ALL CONSTRUCTION SHALL CONFORM TO THE APPLICABLE SITE PLAN REGULATIONS FROM THE CITY OF ACTON AND USDA SOIL CONSERVATION SERVICE VEGETATIVE PRACTICES IN SITE DEVELOPMENT.
27. A WATERING TRUCK SHALL BE USED TO PERIODICALLY SPRINKLE CONSTRUCTION AREAS IN ORDER TO KEEP THE LEVEL OF DUST TO A MINIMUM DURING THE DRY MONTHS AND AS REQUIRED.
28. IF DEWATERING IS NECESSARY IT SHALL ONLY BE COMPLETED AS FOLLOWS: THE DISCHARGE SHALL BE STOPPED IMMEDIATELY IF THE RECEIVING AREA SHOWS ANY SIGN OF INSTABILITY OR EROSION, ALL CHANNELS, SWALES, AND DITCHES DUG FOR DISCHARGING WATER FROM THE EXCAVATED AREA SHALL BE STABLE PRIOR TO DIRECTING DISCHARGE TO THEM. IF A CONSTRUCTION EQUIPMENT BUCKET IS USED, IT SHALL EMPTY THE MATERIAL TO A STABLE AREA. NO DEWATERING SHALL OCCUR DURING PERIODS OF INTENSE, HEAVY RAIN. FLOW TO THE SEDIMENT REMOVAL STRUCTURE SHALL NOT EXCEED THE STRUCTURES CAPACITY TO SETTLE AND FILTER FLOW OR IS VOLUME CAPACITY. WHENEVER POSSIBLE, THE DISCHARGE FROM THE SEDIMENT REMOVAL STRUCTURE SHALL DRAIN TO A WELL-VEGETATED BUFFER BY SHEET FLOW WHILE MAXIMIZING THE DISTANCE TO THE NEAREST WATER RESOURCE AND MINIMIZING THE SLOPE OF THE BUFFER AREA. THERE SHALL BE NO DIRECT DISCHARGE TO EXISTING WETLANDS OR STREAMS. ALL DISCHARGE SHALL BE IN COMPLIANCE WITH STATE, LOCAL, AND FEDERAL REQUIREMENTS.
29. INITIATE STABILIZATION IMMEDIATELY IF CONSTRUCTION WORK TEMPORARILY OR PERMANENTLY CEASES.
30. ALL DISCHARGES FROM POLLUTION SOURCES SUCH AS FUELS, WASTEWATER FROM WASH OUT OF CONCRETE, WASTEWATER FROM CLEAN OUT OF PAINTS, FORM RELEASE OILS, CURING COMPOUND AND OTHER CONSTRUCTION CHEMICALS, POLLUTANT USED FOR MAINTENANCE OF VEHICLES AND EQUIPMENT, SOAPS & SOLVENTS, TOXIC OR HAZARDOUS SUBSTANCES, CHEMICALS AND OILS FROM EQUIPMENT IS PROHIBITED. IF A POLLUTANT IS DISCHARGED IT NEEDS TO BE IMMEDIATELY CLEANED UP BY REMOVING THE CHEMICAL AND AFFECTED SOIL OR AREA OF SPILL FROM THE SITE. DO NOT HOSE DOWN AND SPREAD SPILLED ITEM. ALL CHEMICALS USED ON THE SITE SHALL BE IN LEAK-PROOF CONTAINERS STORED AWAY FROM SURFACE WATERS, STORMWATER INLETS, AND DRAINAGE MEASURES. SPILL KITS SHALL BE AVAILABLE ONSITE FOR EMERGENCY USE. THERE SHALL BE A SECONDARY CONTAINMENT OR ALL CHEMICALS IN ADDITION TO SPILL-PROOF CONTAINERS.
31. PRIOR TO COMMENCEMENT OF CONSTRUCTION, APPLICABLE CONTRACTOR PERSONNEL MUST HAVE AN UNDERSTANDING OF THE EPA CONSTRUCTION GENERAL PERMIT REQUIREMENTS, AND THEIR SPECIFIC RESPONSIBILITIES UNDER THE PERMIT. AT A MINIMUM PERSONNEL MUST BE TRAINED AND UNDERSTAND THE FOLLOWING: LOCATION OF ALL STORMWATER CONTROLS AND HOW TO MAINTAIN THEM, PROCEDURES FOR COMPLYING WITH THE POLLUTION PREVENTION REQUIREMENTS, PROCEDURES FOR CONDUCTING INSPECTIONS, RECORDING FINDINGS, AND TAKING CORRECTIVE ACTION.
32. ALL SEDIMENT TRACKED ONTO ROADWAYS MUST BE REMOVED AT END OF EACH WORK DAY.
33. ALL USE OF CATIONIC TREATMENT CHEMICALS (EXAMPLES INCLUDE POLYMERS, CHITOSAN, CATIONIC PAM, FLOCCULANTS OR OTHER CHEMICAL UTILIZED FOR STABILIZATION) ARE PROHIBITED. IF ALL OTHER AVAILABLE STABILIZATION MEASURES ARE NOT POSSIBLE AND USE OF CATIONIC CHEMICALS IS ABSOLUTELY NECESSARY THE CONTRACTOR WILL NEED TO CONTACT THE EPA NEW ENGLAND OFFICE IN WRITING FOR APPROVAL AND SPECIFIC REQUIREMENTS (MAXIMUM DOSAGE RATE, RESIDUAL TESTING, SPECIFIC LIMITATIONS, ETC) PRIOR TO USE.
34. IF USING NON-VEGETATIVE STABILIZATION MEASURES, IT MUST BE COMPLETED NO LATER THAN 14 DAYS AFTER INITIATING STABILIZATION. ALL AREAS OF EXPOSED SOILS MUST BE COVERED.
35. INSPECTIONS OF EROSION CONTROL MEASURES SHALL BE AT LEAST ONCE EVERY 7 DAYS BY THE CONTRACTOR. AT A MINIMUM INSPECTIONS SHALL INCLUDE ALL DISTURBED AREAS, ALL STORMWATER CONTROLS AND POLLUTION PREVENTION MEASURES. ALL LOCATIONS WHERE STABILIZATION MEASURES HAVE BEEN IMPLEMENTED, EQUIPMENT AND MATERIAL STORAGE AREAS, ALL AREAS WHERE STORMWATER FLOWS AND ALL POINTS OF DISCHARGE. WHEN CORRECTIVE ACTIONS ARE REQUIRED, THE CONTRACTOR MUST IMMEDIATELY TAKE ALL STEPS TO PREVENT POLLUTANT DISCHARGES UNTIL A PERMANENT SOLUTION IS IMPLEMENTED. AS NECESSARY NEW OR MODIFIED CONTROLS MUST BE INSTALLED AND OPERATIONAL, THE REPAIR MUST BE COMPLETED WITHIN 7 DAYS FROM THE TIME OF DISCOVERY. WITHIN 24 HOURS OF A TRIGGERING CONDITION OCCURRING THAT REQUIRES A CORRECTIVE ACTION, A CORRECTIVE ACTION REPORT MUST BE COMPLETED.

**CONSTRUCTION GENERAL PERMIT NOTES AND NARRATIVE:**

**NARRATIVE:** THE STORMWATER POLLUTION PREVENTION PLANS CONSIST OF THE EROSION CONTROL PLANS TOGETHER WITH AN EXISTING CONDITIONS PLANS, GRADING PLANS, ABBREVIATIONS AND NOTES SHEETS, AND DETAIL SHEETS.

THE EROSION CONTROL PLAN WILL BE IMPLEMENTED TO:

- A. TREAT EROSION AS SOON AS POSSIBLE AFTER DISTURBANCE.
- B. PREVENT SEDIMENT FROM LEAVING THE CONSTRUCTION AREA AND ENTERING THE RECEIVING WATERS.
- C. CONSTRUCTION ACTIVITIES SHALL BE SCHEDULED TO MINIMIZE EROSION.
- D. ONLY DISTURB, CLEAR, OR GRADE AREAS NECESSARY FOR CONSTRUCTION.

**MAINTENANCE:**

ALL MEASURES STATED ON THE STORMWATER POLLUTION PREVENTION PLANS, SHALL BE MAINTAINED IN FULLY FUNCTIONAL CONDITION BY CONTRACTOR UNTIL NO LONGER REQUIRED FOR A COMPLETED PHASE OF WORK OR FINAL STABILIZATION OF THE SITE. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE CHECKED BY A QUALIFIED PERSON IN ACCORDANCE WITH THE CONTRACT DOCUMENTS OR THE APPLICABLE PERMIT, WHICHEVER IS MORE STRINGENT, AND REPAIRED IN ACCORDANCE WITH THE FOLLOWING:

1. INLET PROTECTION DEVICES AND BARRIERS SHALL BE REPAIRED OR REPLACED IF THEY SHOW SIGNS OF UNDERMINING, OR DETERIORATION.
2. ALL SEEDED AREAS SHALL BE CHECKED REGULARLY TO SEE THAT A HEALTHY STAND OF GRASS IS MAINTAINED. AREAS SHOULD BE FERTILIZED, WATERED, AND RESEED AS NEEDED.
3. ALL SEDIMENT CONTROLS SHALL BE REPAIRED TO THEIR ORIGINAL CONDITIONS IF DAMAGED. SEDIMENT SHALL BE REMOVED FROM THE TUBULAR SEDIMENT CONTROLS WHEN IT REACHES HALF THE HEIGHT OF THE CONTROL MEASURE OR AS REQUESTED BY THE OWNER OR ENGINEER.
4. THE CONSTRUCTION ENTRANCES SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE CONSTRUCTION ENTRANCES AS CONDITIONS DEMAND.
5. THE TEMPORARY PARKING AND STORAGE AREA SHALL BE KEPT IN GOOD CONDITION (SUITABLE FOR PARKING AND STORAGE). THIS MAY REQUIRE PERIODIC TOP DRESSING OF THE TEMPORARY PARKING AS CONDITIONS DEMAND.
6. OUTLET STRUCTURES IN THE SEDIMENTATION BASINS SHALL BE MAINTAINED IN OPERATIONAL CONDITIONS AT ALL TIMES. SEDIMENT SHALL BE REMOVED FROM SEDIMENT BASINS OR TRAPS WHEN THE DESIGN CAPACITY HAS BEEN REDUCED BY 50%.

**ABBREVIATIONS:**

ABAN	ABANDON	L	LENGTH
ADA	AMERICANS WITH DISABILITIES ACTS	LB	LEACHING BASIN
ADJ	ADJUST	LP	LIGHT POLE
B	BORING	MAT	MATERIAL
BC	BOTTOM OF CURB	MAX	MAXIMUM
BIT	BITUMINOUS	MH	MANHOLE
BCB	BITUMINOUS CONCRETE BERM	MIN	MINIMUM
BLDG	BUILDING	MISC	MISCELLANEOUS
BM	BENCH MARK	MTD	MOUNTED
BOS	BOTTOM OF SLOPE	MW	MONITORING WELL
BOW	BOTTOM OF WALL	N	NORTH
BRK	BRICK	NIC	NOT IN CONTRACT
BV&B	BUTTERFLY VALVE & BOX	NO	NUMBER
BVW	BORDERING VEGETATED WETLAND	NTS	NOT TO SCALE
CATV	CABLE TELEVISION	OC	ON CENTER
CB	CATCH BASIN	OD	OUTSIDE DIAMETER
CF	CUBIC FEET	OHW	OVERHEAD WIRE
CFS	CUBIC FEET PER SECOND	OVHD	OVERHEAD
CI	CAST IRON (PIPE)	OW	OBSERVATION WELL
CL	CENTERLINE	PC	POINT OF CURVATURE
CLDI	CEMENT LINED DUCTILE IRON (PIPE)	PCC	PRECAST CONCRETE CURB
CLF	CHAIN LINK FENCE	PI	POINT OF INTERSECTION
CM	CONSTRUCTION MANAGER	PKG	PARKING
CMP	CORRUGATED METAL PIPE	PL	PROPERTY LINE
CO	CLEAN OUT	PLMB	PLUMBING
CONC	CONCRETE	POC	POINT ON CURVATURE
CONST	CONSTRUCTION	POT	POINT ON TANGENT
CONT	CONTRACTOR	PRC	POINT OF REVERSE CURVATURE
CRD	COORDINATE	PROP, P	PROPOSED
CPP	CORRUGATED POLYETHYLENE PIPE	PT	POINT (OR POINT OF TANGENT)
CUL	CULVERT	PVC	POLYVINYL CHLORIDE (PIPE)
CY	CUBIC YARD		
DB	DISTRIBUTION BOX	R&R	REMOVE & RESET/REPLACE
DBL	DOUBLE	R&S	REMOVE & STACK
DEM	DEMOLISH	RCP	REINFORCED CONCRETE PIPE
DET	DETENTION	RD	ROAD (OR ROOF DRAIN)
DI	DUCTILE IRON (PIPE)	RED	REDUCER
DIA	DIAMETER	RELOC	RELOCATE
DIM	DIMENSION	REM	REMOVE
DMH	DRAIN MANHOLE	RET	RETAIN, RETAINING OR RETENTION
DW	DOMESTIC WATER (OR DRY WELL)	R/W	RIGHT OF WAY
DWG	DRAWING	RR	RAILROAD
DYCL	DOUBLE YELLOW CENTERLINE	RWL	RAIN WATER LEADER
		RWY	ROADWAY
EHH	ELECTRIC HANDHOLE	SD	SUBDRAIN
EL	ELEVATION	SF	SQUARE FEET
ELEC	ELECTRIC	SGC	SLOPED GRANITE CURB
EMH	ELECTRIC MANHOLE	SMH	SEWER MANHOLE
EOP	EDGE OF PAVEMENT	SP	STANDPIPE
EOR	EDGE OF ROAD	SPEC	SPECIFICATION
EOW	EDGE OF WETLANDS	STA	STATION
ETC	ELECTRIC, TELEPHONE, CABLE	STC	STORMCEPTOR
EXIST	EXISTING	STD	STANDARD
EXT	EXTERIOR	STRTL	STRUCTURAL
FA	FIRE ALARM	SWEL	SOLID WHITE EDGE LINE
FCC	FLUSH CONCRETE CURB	SW	SIDEWALK
FES	FLARED END SECTION	SWLL	SOLID WHITE LANE LINE
FFE	FINISH FLOOR ELEVATION	SYCL	SOLID YELLOW CENTERLINE
FLNP	FIRE LANE NO PARKING		
FPS	FEET PER SECOND	TB	TEST BORING
FS	FIRE SERVICE	TC	TOP OF CURB
FT	FOOT/FEET	TD	TRENCH DRAIN
		TEL, T	TELEPHONE
		TMH	TELEPHONE MANHOLE
		TOS	TOP OF SLOPE
		TOW	TOP OF WALL
		TP	TEST PIT
		TS&V	TAPPING SLEEVE & VALVE
		TYP	TYPICAL
		UD	UNDERDRAIN
		UL	UNDERWRITERS LABORATORY
		UP	UTILITY POLE
		V	VERTICAL
		VCP	VITRIFIED CLAY PIPE
		VERT	VERTICAL
		VGC	VERTICAL GRANITE CURB
		WD	WOOD
		WG	WATER GATE
		WM	WATER MAIN
		WMH	WATER MANHOLE
		WSO	WATER SHUTOFF



PROFESSIONAL ENGINEER FOR ALLEN & MAJOR ASSOCIATES, INC.

REV	DATE	DESCRIPTION

APPLICANT/OWNER:  
**100 DISCOVERY WAY LLC**  
 259 TURNPIKE ROAD, SUITE 100  
 SOUTHBOROUGH, MA 01772

PROJECT:  
**BUILDING ADDITION**  
**100 DISCOVERY WAY**  
 ACTON, MA 01720

PROJECT NO.	1453-03	DATE:	11-07-13
SCALE:	NIT 5.30'	DWG. NAME:	C1453-03
DESIGNED BY:	RB/KEA	CHECKED BY:	TJW

PREPARED BY:

**ALLEN & MAJOR ASSOCIATES, INC.**  
 civil & structural engineering • land surveying  
 environmental consulting • landscape architecture  
 www.allenmajor.com  
 100 COMMERCE WAY  
 P.O. BOX 2118  
 WOBURN MA 01888-0118  
 TEL: (781) 935-6889  
 FAX: (781) 935-2896  
 WOBURN, MA • LAKEVILLE, MA • MANCHESTER, NH

THIS DRAWING HAS BEEN PREPARED IN ELECTRONIC FORMAT. CLIENT/CLIENTS REPRESENTATIVE OR CONSULTANT MAY BE PROVIDED COPIES OF DRAWINGS AND SPECIFICATIONS ON MAGNETIC MEDIA FOR HIS/HER INFORMATION AND USE FOR SPECIFIC APPLICATION TO THIS PROJECT. DUE TO THE POTENTIAL THAT THE MAGNETIC INFORMATION MAY BE MODIFIED UNINTENTIONALLY OR OTHERWISE, ALLEN & MAJOR ASSOCIATES, INC. MAY REMOVE ALL INDICATION OF THE DOCUMENTS AUTHORSHIP ON THE MAGNETIC MEDIA. PRINTED REPRESENTATIONS OF THE DRAWINGS AND SPECIFICATIONS ISSUED SHALL BE THE ONLY RECORD COPIES OF ALLEN & MAJOR ASSOCIATES, INC.'S WORK PRODUCT.

DRAWING TITLE:	SHEET NO.
ABBREVIATIONS & NOTES	ABB-2