

DESCRIPTION OF PROJECT

THIS PROJECT INVOLVES RECONSTRUCTION OF BRIDGE #37 OVER THE GIHON RIVER ON VERMONT ROUTE 15 IN THE TOWN OF JOHNSON. THE SITE IS LOCATED 0.372 MILES WEST OF THE INTERSECTION OF VERMONT ROUTES 15 AND 100C. THE GIHON RIVER IS CHARACTERIZED AS A SMALL RIVER IN TERRAIN WITH STEEPLY SLOPED FORESTED UPLANDS, A MODERATELY DEVELOPED FLOOD PLAIN AND A STEAM BED OF GRAVEL OVER DEEP SANDY SILT. IT HAS A DRAINAGE AREA OF 65 SQUARE MILES.

FEATURES OF CONCERN WITH RESPECT TO EROSION PREVENTION INCLUDE: THE GIHON RIVER, A CLASS II WETLAND IN THE SOUTHWEST QUADRANT AND THE CONFLUENCE OF THE GIHON AND LAMOILLE RIVER WHICH IS APPROXIMATELY 0.25 MILES SOUTH OF ROUTE 15. A NEW SINGLE SPAN BRIDGE WILL BE CONSTRUCTED ON EXISTING ALIGNMENT. TRAFFIC WILL BE MAINTAINED ON A TWO-WAY TEMPORARY BRIDGE TO BE LOCATED DOWNSTREAM OF THE EXISTING BRIDGE. TOTAL ROADWAY APPROACH WORK, INCLUDING BOTH APPROACHES, IS APPROXIMATELY 650 FEET.

TOTAL DISTURBED AREA (EXCLUDING WASTE, BORROW AND STAGING AREAS): 1.25 AC.

SITE INVENTORY AND ANALYSIS

OFF SITE DRAINAGE CHARACTERISTICS

THE LAND SURROUNDING THE PROJECT SITE CONSISTS OF WELL ESTABLISHED VEGETATION, WITH MODERATE TO STEEP SLOPES OF LAWN, VARIOUS GRASSES, BRUSH, DECIDUOUS AND CONIFEROUS TREES. THE TOPOGRAPHY RUNS GENERALLY TOWARD THE RIVER FROM THE EAST AND WEST. RUNOFF GENERALLY LEAVES THE SITE IN A CLOSED DRAINAGE SYSTEM.

DRAINAGE, WATERWAYS, BODIES OF WATER

THE GIHON RIVER IS CHARACTERIZED AS A SMALL RIVER IN TERRAIN WITH STEEPLY SLOPED FORESTED UPLANDS, A MODERATELY DEVELOPED FLOOD PLAIN AND A STEAM BED OF GRAVEL OVER DEEP SANDY SILT. IT HAS A DRAINAGE AREA OF 65 SQUARE MILES. THE CONFLUENCE OF THE GIHON AND LAMOILLE RIVER IS APPROXIMATELY 0.25 MILES SOUTH OF ROUTE 15. THERE IS A CLASS II WETLAND IN THE SOUTHWEST QUADRANT.

TOPOGRAPHY, EXISTING ROADS, BUILDINGS, UTILITIES

THE SITE SURROUNDING THE BRIDGE IS URBAN IN NATURE WITH A MIX OF RESIDENTIAL AND COMMERCIAL USES. IT IS GENERALLY FLAT WITH THE EXCEPTION OF THE SLOPES LEADING DOWN TO THE RIVER WHICH ARE 1-2 OR STEEPER. ROUTE 15 IS APPROXIMATELY 32 FEET WIDE TO THE WEST AND 40 FEET WIDE, WITH ON STREET PARKING, TO THE EAST OF THE BRIDGE. A LOW VOLUME TOWN HIGHWAY (#37) INTERSECTS ROUTE 15 200' WEST OF THE BRIDGE. UTILITIES CONSIST OF OVERHEAD ELECTRIC, TELEPHONE AND CABLE AS WELL AS UNDERGROUND WATER AND SEWER FACILITIES. THE WATER AND SEWER UTILITIES PASS UNDER THE GIHON RIVER.

VEGETATION

THE VEGETATION SURROUNDING THE PROJECT SITE CONSISTS OF A COMBINATION OF LAWN, GRASS AND BRUSH WITH A FEW SHADE TREES IN LAWN AREAS. THERE ARE NO AGRICULTURAL FIELDS NEAR THE PROJECT LIMITS. IMPACTS TO VEGETATION WILL BE LIMITED TO THAT WHICH ARE AFFECTED BY THE CONSTRUCTION OF THE NEW BRIDGE ON THE EXISTING ALIGNMENT AND CONSTRUCTION OF THE DETOUR.

SOILS

A DETAILED DESCRIPTION OF THE SOIL TYPES EXPECTED TO BE ENCOUNTERED IN THE PROJECT AREA IS INCLUDED IN THE PROJECT PLAN SHEET TITLED "EXISTING CONDITIONS SITE PLAN".

SOIL NAME	DEPTH	ERODIBILITY
ONDWA FINE SANDY LOAM	0'-60'	NOT HIGHLY ERODIBLE
UDIFLUVENTS	0'-60'	NOT HIGHLY ERODIBLE
FREQUENTLY FLOODED		

SENSITIVE RESOURCE AREAS

THE PROJECT IS LOCATED WITHIN THE JOHNSON VILLAGE HISTORIC DISTRICT. BRIDGE #37 CONTRIBUTES TO THE HISTORIC CHARACTER OF THE DISTRICT. NO "THREATENED & ENDANGERED SPECIES" OR ARCHAEOLOGICAL RESOURCES HAVE BEEN IDENTIFIED WITHIN THE PROJECT LIMITS. THE GIHON RIVER, A CLASS II WETLAND, IN THE SOUTHWEST QUADRANT OF THE PROJECT, AND THE ASSOCIATED BUFFERS ARE THE ONLY IDENTIFIED RESOURCES.

PROXIMITY TO NATURAL OR MAN-MADE WATER FEATURES

DISTURBANCE OF SOILS NEAR NATURAL OR MAN-MADE WATERWAYS CONSISTS OF THAT WHICH IS NECESSARY TO CONSTRUCT TWO NEW CONCRETE ABUTMENTS AND A TEMPORARY DETOUR.

DESCRIPTION OF SLOPES

THE EXISTING AND PROPOSED SLOPES IN THE PROJECT AREA ARE REPRESENTED ON THE EXISTING AND FINAL CONDITIONS SITE PLANS, WHERE THE SLOPE INDICATORS ARE SHOWN, AND THE CROSS SECTIONS. THE ARROWS ASSOCIATED WITH THE SLOPE INDICATORS POINT DOWN THE SLOPE.

EXISTING SLOPES

THE PROJECT IS LOCATED ON AN URBAN AREA WITH GENERALLY FLAT SLOPES WITH THE EXCEPTION OF THOSE ADJACENT TO THE RIVER. SLOPES ALONG THE RIVER ARE IN GENERAL STEEP, RANGING 1-2 TO 1-1. BETWEEN STA. 101+75 AND 102+75 RT THERE ARE 1-2 SLOPES EXTENDING DOWN FROM AN EXISTING SIDEWALK TO THE NORTHERN EDGE OF A FLAT CLASS II WETLAND. FROM THE EASTERLY EDGE OF THE WETLAND, THERE ARE STEEP SLOPES EXTENDING TO THE RIVER.

PROPOSED SLOPES

THE PROPOSED SLOPES WITHIN THE PROJECT ARE SIMILAR TO THE EXISTING SLOPES. THERE WILL BE VERY LITTLE CHANGE. A NEW SIDEWALK IS PROPOSED ALONG THE NORTH SIDE OF ROUTE 15 FROM TH 37 TO THE EAST SIDE OF THE BRIDGE WHERE IT TIES INTO AN EXISTING SIDEWALK. THE SLOPES ALONG THE CHANNEL BANKS WILL BE LINED WITH HEAVY STONE AT 1-1.5 (67%) SLOPE.

TEMPORARY EROSION AND SEDIMENT CONTROL

1. PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE PROJECT DEMARCATION FENCING SHALL BE PLACED ALONG THE PERIMETER OF THE PROJECT AS SHOWN ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS. THE INSTALLATION OF THE DEMARCATION FENCING WILL BE PERFORMED SUCH THAT NO VEGETATION ON THE OUTSIDE OF THE FENCING IS DISTURBED.

2. AFTER THE CLEARING OF TREES AND SHRUBS, BUT PRIOR TO ANY GRUBBING AND EXCAVATION, CONSTRUCT PERIMETER EROSION PREVENTION MEASURES AS SHOWN ON THE PLANS. DURING GRUBBING OPERATIONS, STONE CHECK DAM BARRIERS SHALL BE INSTALLED AT ANY OBVIOUS CONCENTRATED FLOW DISCHARGE POINTS, OR AS DIRECTED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR.

AFTER PERIMETER CONTROLS ARE IN PLACE, AND PRIOR TO GRADING OPERATIONS, CONSTRUCT TEMPORARY ONSITE SETTLING BASINS WHERE NECESSARY. GRADE DISTURBED AREAS TO DRAIN TOWARD SETTLING BASINS WHERE POSSIBLE. WATER WHICH HAS BEEN ADEQUATELY TREATED IN SETTLING BASINS MAY BE DIRECTED TO NEARBY UNDISTURBED STREAMS OR SWALES.

3. ALL AREAS OF EXPOSED SOILS (TEMPORARY OR PERMANENT) SHALL BE STABILIZED AS SOON AS PRACTICABLE AND BEFORE ANY PREDICTED RAINFALL EVENT. SLOPES 1-3 OR STEEPER SHALL BE STABILIZED WITH EROSION MATTING AND SEED. OTHER SLOPES SHALL BE STABILIZED WITH SEED AND MULCH OR EROSION MATTING. ALL SLOPES WILL BE CHECKED EACH SITE VISIT AND ANY ERODED AREAS WILL BE IMMEDIATELY REPAIRED. TEMPORARY STABILIZATION METHODS WILL BE USED AS NECESSARY UNTIL FINAL STABILIZATION MEASURES ARE IN PLACE.

4. PRIOR TO ANY CONSTRUCTION OR STAGING, THE CONTRACTOR WILL INSTALL STABILIZED CONSTRUCTION ENTRANCES LEADING TO STAGING AREAS AND THE PROJECT SITE TO PREVENT THE TRACKING OF SILTS AND SEDIMENTS OFFSITE. COARSE STONE FILL OVER FILTER FABRIC SHOULD BE USED WHERE AN ALREADY ESTABLISHED STABLE ENTRANCE DOES NOT EXIST. THE CRUSHED STONE PRODUCT USED FOR THE CONSTRUCTION OF THE STABILIZED CONSTRUCTION ENTRANCES SHALL BE MONITORED EACH SITE VISIT FOR SEDIMENT ACCUMULATION AND REPLACED AS NECESSARY. STABILIZED CONSTRUCTION ENTRANCES SHALL ALSO BE ESTABLISHED AND MAINTAINED AT ALL OFFSITE WASTE AND BORROW AREAS. THE MINIMUM SIZE OF A STABILIZED CONSTRUCTION ENTRANCE SHALL BE 14 FEET WIDE BY 50 FEET LONG.

5. ALL TEMPORARY EROSION PREVENTION DEVICES WILL STAY IN PLACE UNTIL FINAL GRASS GROWTH HAS BEEN ESTABLISHED AND COMPLETE STABILIZATION OF THE AREAS HAS OCCURRED. ONCE STABILIZATION HAS OCCURRED, ALL TEMPORARY EROSION PREVENTION MEASURES WILL BE REMOVED AND ALL DISTURBED AREAS WILL BE STABILIZED.

6. DRAINAGE STRUCTURES WILL BE CLEANED AS NECESSARY TO REMOVE ANY SEDIMENT BUILDUP IN THE SUMP OF THE STRUCTURES OR AT THE INLET OF THE STRUCTURE. ANY INLET CONTROL FOUND TO BE INEFFECTIVE WILL BE REPLACED AS NECESSARY AND WILL BE DONE IMMEDIATELY. ALL SEDIMENTS REMOVED WILL BE DEPOSITED IN AN UPLAND PORTION OF THE PROJECT SITE, OR DISPOSED OFFSITE IN THE DESIGNATED PROJECT WASTE SITE.

7. ALL MATERIAL STOCKPILES, INCLUDING BUT NOT LIMITED TO, GRUBBING MATERIAL, SAND BORROW, EARTH BORROW, GRANULAR BORROW, TOPSOIL, SUBBASE, AND ANY EXCAVATED WASTE PILES SHALL HAVE SILT FENCE INSTALLED AROUND THE BASE OF THE STOCKPILE. ANY OFFSITE AREAS WHERE BORROW OR EXCAVATED MATERIALS WILL BE STOCKPILED WILL HAVE SILT FENCE AROUND THE BASE OF EACH STOCKPILE. REMOVAL OF THE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES SHALL BE PERFORMED ONLY AFTER APPROVAL BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR. ALL DISPOSAL SITES SHALL HAVE AN EROSION PREVENTION AND SEDIMENT CONTROL PLAN.

8. THE NEW SUBSTRUCTURES WILL BE CONSTRUCTED IN THE DRY. ALL WATER PUMPED FROM SUBSTRUCTURE AND OTHER EXCAVATION AREAS WILL BE PUMPED TO EITHER A DIRT BAG SILT CONTAINMENT DEVICE, OR AN EXCAVATED SEDIMENT BASIN. THE FIRST PUMPING OF THE EXCAVATIONS WILL CONTAIN THE HIGHEST SEDIMENT LOAD. IT MAY BE NECESSARY TO CONSTRUCT ADDITIONAL SETTLING BASINS, OR TO CONTROL THE RATE OF DRAWDOWN OF THE EXCAVATIONS. AFTER COMPLETION OF THE SUBSTRUCTURES, ALL COLLECTED SEDIMENTS SHOULD BE REMOVED FROM THE SETTLING BASINS AND THE GROUND SHAPED TO ITS FINAL GRADE. DISPOSE OF THE COLLECTED SEDIMENTS IN AN UPLAND PORTION OF THE PROJECT, OR IN A MANNER APPROVED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR THAT WILL NOT RESULT IN SEDIMENTS OR POLLUTANTS ENTERING THE STREAM.

9. NEW DRAINAGE CULVERTS THAT ARE BEING CONSTRUCTED IN THE SAME LOCATION AS EXISTING CULVERTS SHALL BE ISOLATED FROM THE NEW WORK BY MEANS OF DAMMING AND PUMPING INTO A SETTLING BASIN, OR BY INSTALLING A TEMPORARY PIPE OF SUFFICIENT SIZE TO HANDLE EXPECTED FLOWS.

10. IN AREAS OF CONCENTRATED RUNOFF ABOVE NEWLY CONSTRUCTED FILL SLOPES, FLEXIBLE SLOPE PIPES OR OTHER APPROVED DIVERSION METHODS WILL BE USED TO TRANSPORT RUNOFF DOWN THE FILL SLOPES TO SETTLING BASINS.

11. CONSTRUCTION OF THE BRIDGE REQUIRES A FOUR PHASE TRAFFIC CONTROL SEQUENCE. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ASSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION PREVENTION AND SEDIMENT CONTROL. THE CONTRACTOR SHALL EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION ACTIVITIES PROCEED.

PRIOR TO CONSTRUCTING THE DETOUR THE CONTRACTOR WILL LAY A GEOTEXTILE TO HELP ENSURE THAT, UPON REMOVAL OF THE DETOUR, THE CONDITIONS WITHIN THE BUFFER ARE RETURNED BACK TO THEIR ORIGINAL STATE. DETOUR FILL MATERIAL SHALL BE REMOVED TO ORIGINAL GROUND OUTSIDE OF THE ULTIMATE CONSTRUCTION LIMITS. AS THE TEMPORARY DETOUR FILLS ARE REMOVED, ALL EXPOSED SOIL SURFACES WILL BE STABILIZED AS PREVIOUSLY NOTED.

SEDIMENT SETTLING BASIN SIZING CRITERIA

PUMP FLOW RATE		REQUIRED SURFACE AREA		LENGTH 2:1 WIDTH			
Q (gpm)	Q (m ³ /s)	(ft ²)	(m ²)	L (ft)	W (ft)	L (m)	W (m)
50	0.0032	595	55	35.0	17.0	10.6	5.3
100	0.0063	1200	111	49.0	24.5	15.0	7.5
150	0.0095	1776	165	59.6	29.8	18.2	9.1
200	0.0126	2368	220	68.8	34.4	21.0	10.5
250	0.0158	2970	276	77.0	38.5	23.4	11.7
300	0.0189	3560	330	84.4	42.2	25.8	12.9
350	0.0221	4155	386	91.2	45.6	27.8	13.9

FINAL EROSION CONTROL MEASURES

1. ALL AREAS OF EXPOSED SOILS SHALL BE STABILIZED AS SOON AS PRACTICABLE AND BEFORE ANY PREDICTED RAINFALL EVENT. SLOPES 1-3 OR STEEPER SHALL BE STABILIZED WITH EROSION MATTING AND SEED. OTHER SLOPES SHALL BE STABILIZED WITH SEED AND MULCH OR EROSION MATTING. TEMPORARY STABILIZATION METHODS WILL BE USED AS NECESSARY UNTIL FINAL STABILIZATION MEASURES ARE IN PLACE.

2. ANY NEW FILL SLOPES THAT ARE DESIGNED WITH STONE FILL BLANKETS FOR SLOPE STABILIZATION SHALL BE CONSTRUCTED WITH THE STONE FILL BEING PLACED AS THE EMBANKMENT CONSTRUCTION PROGRESSES.

3. STONE FILL FOR CHANNEL STABILIZATION AT THE OUTLET ENDS OF CULVERTS IS TO BE PLACED PRIOR TO INSTALLATION OF THE CULVERTS. ALL WORK ON NEW CULVERTS SHOULD PROCEED FROM THE OUTLET TOWARDS THE INLET. STONE CHECK DAMS ARE TO BE INSTALLED ON UNDISTURBED GROUND DOWNSTREAM OF THE STONE FILL PADS AT OUTLETS. STONE FILL FOR DITCH STABILIZATION SHALL BE PLACED DURING THE SAME WORKING DAY THAT THE DITCH EXCAVATION WAS PERFORMED, UNLESS DIRECTED OTHERWISE BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR.

4. THE SUBBASE MATERIAL SHOULD BE PLACED AS SOON AS THE SUBGRADE HAS REACHED ITS FINAL GRADE AND SLOPE. THE TEMPORARY TRAVELING SURFACE WILL BE GRADED TO PROMOTE SHEET FLOW OFF THE SURFACE ONTO THE ADJACENT SLOPES, OR FLOWS WILL BE DIRECTED TO COLLECTION AREAS AND SHALL BE TRANSPORTED DOWN THE FILL SLOPES TO SETTLING BASINS.

5. THE CHANNEL STONE FILL SLOPES WILL BE COMPLETED, AND GRUBBING MATERIAL WILL BE APPLIED TO STONE FILLED AREAS AROUND EACH ABUTMENT. THE GRUBBING MATERIAL SHALL NOT BE PLACED BENEATH THE NEW STRUCTURE OR BELOW THE ORDINARY HIGH WATER ELEVATION. REFER TO THE HYDRAULICS INFORMATION ON THE PRELIMINARY INFORMATION SHEET. THE NEWLY PLACED GRUBBING MATERIAL SHALL BE STABILIZED WITH EROSION MATTING AND SEED.

6. ALL GRADED AREAS SHALL BE PERMANENTLY STABILIZED FOLLOWING FINAL GRADING ACTIVITIES. ALL AREAS THAT ARE GRADED OUTSIDE OF THE GROWING SEASON SHALL BE TREATED WITH SLOPE STABILIZATION UNTIL SEEDING & MULCHING CAN BE PERFORMED.

7. REMOVAL OF TEMPORARY EROSION PREVENTION / SEDIMENT CONTROL DEVICES SHALL COMMENCE ONLY AFTER ALL UP SLOPE AREAS ARE STABILIZED AND WELL ESTABLISHED, AND THE RESIDENT ENGINEER OR ONSITE COORDINATOR HAS APPROVED THE REMOVAL.

GENERAL EROSION & SEDIMENT CONTROL GUIDELINES

1. THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS ARE INTENDED AS A GUIDE FOR PREVENTING SOIL EROSION AND CONTROLLING SEDIMENT. THE WORK OUTLINED IN THIS NARRATIVE CONSISTS OF APPLYING MEASURES THROUGHOUT THE DURATION OF THE PROJECT TO CONTROL EROSION AND MINIMIZE THE SEDIMENTATION OF THE RECEIVING WATERS. AN ALTERNATE EROSION PREVENTION AND SEDIMENT CONTROL PLAN MAY BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE AGENCY OF TRANSPORTATION. THE PLAN PREPARER WILL BE AVAILABLE FOR ONSITE CONSULTATIONS WITH THE RESIDENT ENGINEER OR ONSITE COORDINATOR WITHIN TWENTY FOUR HOURS OF THE REQUEST.

2. AN ASSIGNED INDIVIDUAL WHO IS NOT PERMANENTLY ASSOCIATED WITH THE DAY-TO-DAY OPERATIONS OF THE PROJECT SHALL MONITOR THE CONSTRUCTION SITE. THE INSPECTOR WILL BE FAMILIAR WITH THIS PLAN AND WITH EROSION PREVENTION & SEDIMENT CONTROL PROCEDURES AND WITH ROAD AND BRIDGE CONSTRUCTION TECHNIQUES.

THE INSPECTOR SHALL PERFORM A "SITE VISIT" AT LEAST ONCE EVERY SEVEN CALENDAR DAYS AND AS SOON AS POSSIBLE BUT NO LATER THAN 24 HOURS AFTER ANY STORM EVENT WHICH GENERATES A DISCHARGE OF STORMWATER RUNOFF FROM THE CONSTRUCTION SITE. DURING THE SITE VISIT, THE INSPECTOR SHALL INSPECT ALL EROSION AND SEDIMENT CONTROL STRUCTURES AND MEASURES AND PREPARE A MONITORING REPORT. A COPY OF THE MONITORING REPORT SHALL BE GIVEN TO THE RESIDENT ENGINEER OR ONSITE COORDINATOR AFTER EACH SITE VISIT. THE REPORT WILL BE A WRITTEN REPORT STATING THE DATE OF THE REVIEW, A DESCRIPTION OF THE EROSION PREVENTION AND SEDIMENT CONTROL MEASURES REVIEWED. ALSO INCLUDED WILL BE THE EFFECTIVENESS OF THE EROSION PREVENTION / CONTROL MEASURES, ANY DEFICIENCIES, AND CORRECTIVE ACTIONS TO BE UNDERTAKEN.

3. THE CONTRACTOR WILL USE OTHER TEMPORARY OR PERMANENT EROSION CONTROL DEVICES AS NECESSITATED BY THE SEQUENCE OF CONSTRUCTION AND AS DIRECTED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR. SEE SECTION 105.23 OF THE 2001 VERMONT STANDARD SPECIFICATIONS FOR CONSTRUCTION. THE RESIDENT ENGINEER OR ONSITE COORDINATOR MAY DIRECT THE INSTALLATION OF CERTAIN EROSION PREVENTION MEASURES IN ORDER TO FORESTALL OR MITIGATE POTENTIAL OR EXISTING EROSION PROBLEMS, OR TO RESPOND TO STORM EVENTS OR DAMAGE BY CONSTRUCTION OPERATIONS.

4. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION, USE, AND REMOVAL OF EROSION PREVENTION AND SEDIMENT CONTROL MEASURES WITH CONSTRUCTION ACTIVITIES TO ASSURE ECONOMICAL, EFFECTIVE, AND CONTINUOUS EROSION PREVENTION AND SEDIMENT CONTROL. THE CONTRACTOR SHALL EMPLOY TEMPORARY STABILIZATION PRACTICES IN INCREMENTAL STAGES AS CONSTRUCTION ACTIVITIES PROCEED.

5. THE CONTRACTOR SHALL INSTALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURES AS SEQUENCED ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLAN SHEETS, OR AS DIRECTED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR. THE TYPE, SIZE, AND LOCATION OF ANY MEASURE SHALL NOT BE CHANGED UNLESS PRIOR APPROVAL IS OBTAINED FROM THE RESIDENT ENGINEER OR ONSITE COORDINATOR. ANY APPROVED CHANGES SHALL BE NOTED ON THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS AND DISCUSSED IN THE WEEKLY REPORT. THE CONTRACTOR SHALL INSPECT ALL EROSION PREVENTION MEASURES DAILY AND AFTER EACH RAINFALL EVENT. THE CONTRACTOR SHALL REPAIR ALL DAMAGED EROSION PREVENTION MEASURES IMMEDIATELY. ALL EROSION PREVENTION MEASURES THAT TRAP SEDIMENT, SUCH AS SETTLING BASINS, SILT FENCES AND CHECK DAMS, SHALL BE CLEANED OUT WHEN THEIR CAPACITY REACHES 50%.

6. THE RESIDENT ENGINEER'S OR ONSITE COORDINATOR'S APPROVAL SHOULD BE OBTAINED PRIOR TO INSTALLING ANY EROSION PREVENTION / SEDIMENT CONTROL MEASURE NOT SPECIFIED IN THE EROSION PREVENTION AND SEDIMENT CONTROL PLANS. HOWEVER, IN EMERGENCY SITUATIONS WHERE THE RESIDENT ENGINEER OR ONSITE COORDINATOR IS NOT IMMEDIATELY AVAILABLE, THE CONTRACTOR SHOULD REPAIR OR INSTALL THE MEASURES AS HE/SHE DEEMS NECESSARY AND REPORT THE INCIDENT TO THE RESIDENT ENGINEER OR ONSITE COORDINATOR AS SOON AS PRACTICAL.

7. THE CONTRACTOR SHALL CONTROL ALL SEDIMENT-LADEN RUNOFF GENERATED WITHIN THE PROJECT SITE. CLEAN RUNOFF FROM OUTSIDE THE PROJECT SITE SHALL BE ROUTED THROUGH THE PROJECT SITE USING DIVERSION BERMS, DIVERSION CHANNELS, AND TEMPORARY OR PERMANENT CULVERTS.

8. CONSTRUCTION EQUIPMENT WILL NOT BE ALLOWED TO OPERATE ON THE DOWNHILL SIDE OF THE PERIMETER CONTROL MEASURES, CROSS A FLOWING STREAM, OR DISTURB THE EXISTING STREAM BANKS, UNLESS AUTHORIZED BY THE RESIDENT ENGINEER OR ONSITE COORDINATOR.

9. ALL IN-STREAM CONSTRUCTION MUST TAKE PLACE IN A DRY CHANNEL BETWEEN JUNE 1ST AND OCTOBER 1ST.

10. IN GENERAL, PRESERVE EXISTING VEGETATION, SHRUBS, AND TREES WHENEVER POSSIBLE.

11. SILT FENCE SHALL BE PLACED AT THE TOES OF ALL FILL SLOPES AND SHALL BE CONSTRUCTED SO THAT FLOWS CANNOT BYPASS THE ENDS. AREAS DIRECTLY BELOW (DOWNHILL) OF THE SILT FENCES MUST BE UN-DISTURBED AND VEGETATED.

12. ALL EROSION PREVENTION AND SEDIMENT CONTROL MEASURE WILL BE INSPECTED EACH SITE VISIT BY THE DESIGNATED INSPECTOR, AS DESCRIBED BELOW:
 A. THESE MEASURES WILL BE MAINTAINED IN GOOD CONDITION. ANY MEASURES THAT ARE INEFFECTIVE WILL BE REPAIRED OR REPLACED IMMEDIATELY.
 B. SEDIMENT DEPOSITS WILL BE REMOVED WHEN THEY REACH ONE-HALF THE HEIGHT OF THE SEDIMENT CONTROL DEVICE.
 C. ALL SEDIMENTS REMOVED WILL BE DEPOSITED IN AN UPLAND PORTION OF THE PROJECT SITE, OR DISPOSED OFFSITE IN THE DESIGNATED PROJECT WASTE SITE.

13. BOTH TEMPORARY & PERMANENT SEEDING & MULCHING WILL BE CHECKED EACH SITE VISIT FOR VEGETATIVE GROWTH. ANY AREAS REQUIRING RE-VEGETATION WILL BE REPAIRED IMMEDIATELY.

14. THE PROJECT COMPLETION DATE HAS BEEN SET TO ENSURE ALL FINAL EROSION PREVENTION MEASURES FOR THE ESTABLISHMENT OF PERMANENT VEGETATION WILL TAKE PLACE DURING THE GROWING SEASON. THEREFORE, WINTER STABILIZATION METHODS WILL NOT BE SHOWN ON THE PLANS OR DESCRIBED IN THE NARRATIVE.

<h1>EROSION PREVENTION AND SEDIMENT CONTROL NARRATIVE</h1>		SURVEYED BY	N/A	DATE	N/A
		DRAWN BY	TUS	DATE	X/XX
		SQUAD LEADER	JAW		
		DESIGN FILE NO.	91296		
IPARM FILE		DATE PLOTTED			
PROJ. NAME	JOHNSON				
PROJ. NO.	BRS 030-2(17)S				
SHEET	26	OF	85	SHEETS	