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RALPH A. CATALDO
No. 3330
REGISTERED
9-27-88
PROFESSIONAL ENGINEER

Drawn by MAD

Checked by RDL

Revised on
JULY 18, 2008 – PER RIDEM COMMENTS AND UPDATED SURVEY INFORMATION
AUGUST 29, 2008 – NO REVISIONS THIS SHEET.

CATALDO ASSOCIATES INC.
CIVIL ENGINEERS
1408 ATWOOD AVENUE (401) 453-3300
JOHNSTON, RI 02919 FAX: (401) 453-4117
ca@cataldoeng.com

50 Holden Street
Providence, Rhode Island 02906
Phone: (401) 272-1730
Fax: (401) 273-7156
E-mail: rgbinfo@rgb.net
www.rgb.net
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Project

# RHODE ISLAND FIRE ACADEMY

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SEP - 8 2008

# EXETER, RI

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 17 2008 FILE # 08-0110
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Horbert

Drawing Status

R.I.D.E.M. Submission

Issued On 4/08/2008

Sheet Contents

EXISTING CONDITIONS PLAN

Project Number. 5493-9008

Drawing No.

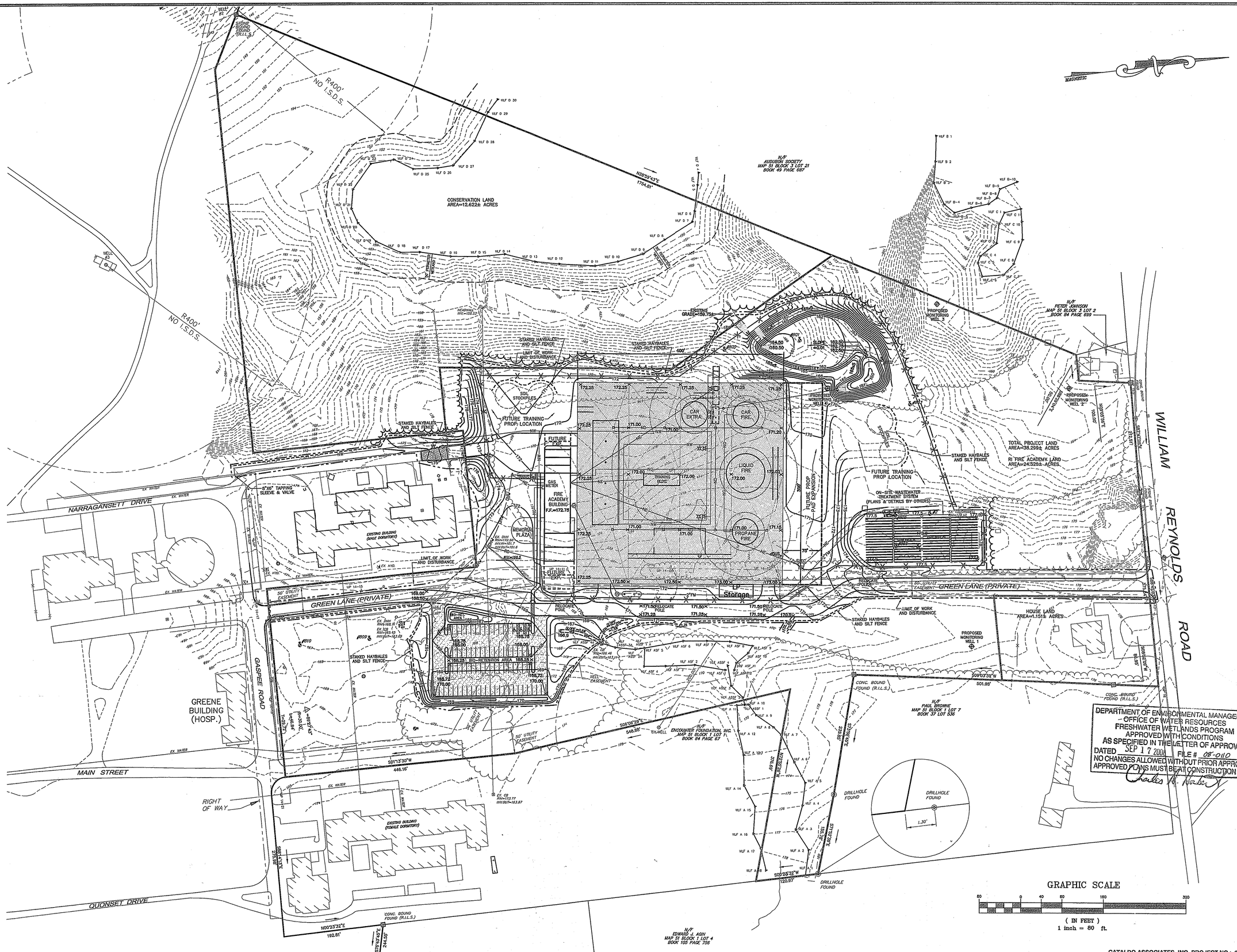
C100

Sheet 1 of 7

CATALDO ASSOCIATES INC. PROJECT NO.: 3148-02

GRAPHIC SCALE
60 0 30 60 120 240
( IN FEET )
1 inch = 60 ft.

P:\3148 (RGB_ RI_FIRE_ACADEMY)\3148-02 Engineering\dwg\3148-02_RIFA_Civil Plans_REV1.dwg 8/28/2008 4:27:40 PM EDT

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RALPH A. CATALDO
No. 3330
REGISTERED 5-21-08
PROFESSIONAL ENGINEER

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AUGUST 29, 2008 – PER RIDEM COMMENTS.

CATALDO ASSOCIATES INC.
CIVIL ENGINEERS
1408 ATWOOD AVENUE (401) 453-3300
JOHNSTON, RI 02919 FAX: (401) 453-4117
cs@cataldoeng.com

50 Holden Street
Providence, Rhode Island 02908
Phone: (401) 272-1730
Fax: (401) 273-7155
E-mail: rgbinfo@rgb.net
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Project
# RHODE ISLAND FIRE ACADEMY

SEP - 8 2008

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
– OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
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Charles M. Horbert

# EXETER, RI

Drawing Status
R.I.D.E.M. Submission

Issued On 4/08/2008

Sheet Contents
OVERALL SITE PLAN

Project Number. 5493-9008

Drawing No.
C101

Sheet 2 of 7

CATALDO ASSOCIATES INC. PROJECT NO.: 3148-02

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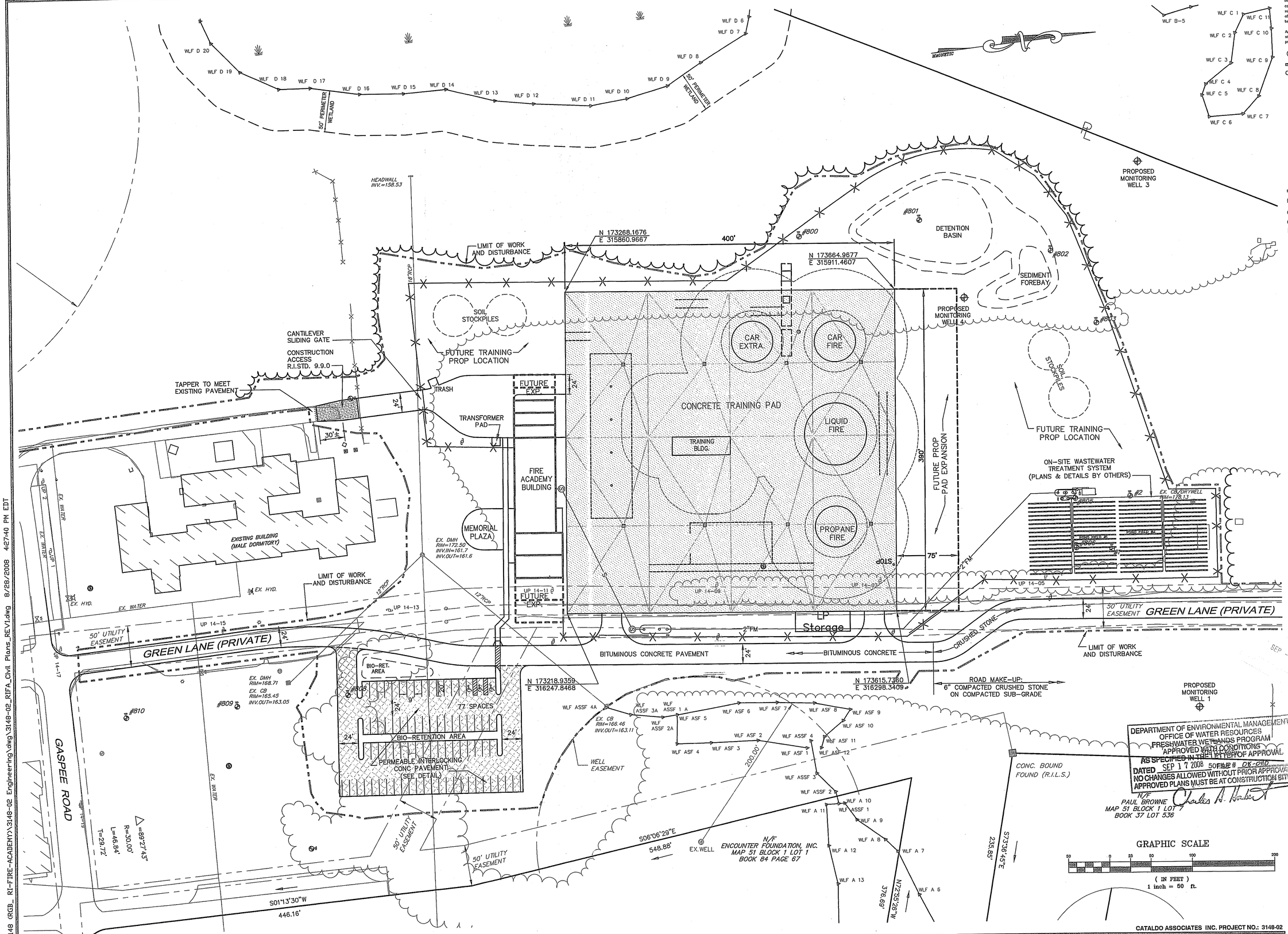


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CATALDO ASSOCIATES INC.
CIVIL ENGINEERS
1408 ATWOOD AVENUE (401) 453-3300
JOHNSTON, RI 02919 FAX: (401) 453-4117
ca@cataldoeng.com

50 Holden Street
Providence, Rhode Island 02908
Phone: (401) 272-1730
Fax: (401) 273-7155
E-mail: rgbinfo@rgb.net
www.rgb.net

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# RHODE ISLAND FIRE ACADEMY

# EXETER, RI

Drawing Status

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Issued On 4/08/2008

Sheet Contents

SITE LAYOUT PLAN

Project Number. 5493-9008

Drawing No.

C102

Sheet 3 of 7

CATALDO ASSOCIATES INC. PROJECT NO.: 3148-02

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No. 3330
REGISTERED
8-29-08
PROFESSIONAL ENGINEER

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AUGUST 29, 2008 – PER RIDEM COMMENTS.

CATALDO ASSOCIATES INC.
CIVIL ENGINEERS
1408 ATWOOD AVENUE (401) 453-3300
JOHNSTON, RI 02919 FAX: (401) 453-4117
ca@cataldoeng.com

50 Holden Street
Providence, Rhode Island 02908
Phone: (401) 272-1730
Fax: (401) 273-7156
E-mail: rgbinfo@rgb.net
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# RHODE ISLAND FIRE ACADEMY

EXETER, RI

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 17 2008
PROPOSED FILE # 08-010
NO CHANGES AND/OR DEVIATIONS WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Drawing Status

R.I.D.E.M. Submission

Issued On 4/08/2008

Sheet Contents

GRADING AND UTILITY PLAN

Project Number. 5493-9008

Drawing No.

C103

Sheet 4 of 7

## PROPOSED DRAINAGE SYSTEM

| STRUCTURE | RIM ELEV. | DISCHARGE FROM | DISCHARGE TO | IN PIPE DIA.(LENGTH) | INV IN | OUT PIPE DIA.(LENGTH) | INV OUT | SLOPE FT./FT. |
|---|---|---|---|---|---|---|---|---|
| CB-1 | 170.00 | – | CB-2 | –(–) | – | 12"(97') | 167.00 | S=0.008 |
| CB-2 | 170.00 | CB-1 | CB-4 | 12"(97') | 166.22 | 18"(97') | 165.72 | S=0.004 |
| CB-3 | 170.25 | – | CB-4 | –(–) | – | 12"(97') | 167.25 | S=0.008 |
| CB-4 | 170.00 | CB-2<br>CB-3 | CB-8<br>CB-8 | 18"(97')<br>12"(97') | 165.33<br>166.47 | 24"(195')<br>24"(195') | 164.83<br>164.83 | S=0.004<br>S=0.004 |
| CB-5 | 170.00 | – | CB-6 | –(–) | – | 12"(97') | 167.00 | S=0.006 |
| CB-6 | 170.00 | CB-5 | CB-8 | 12"(97') | 166.42 | 18"(97') | 165.92 | S=0.005 |
| CB-7 | 170.00 | – | CB-8 | –(–) | – | 12"(87') | 167.00 | S=0.006 |
| CB-8 | 170.00 | CB-4<br>CB-6<br>CB-7 | OWS<br>OWS<br>OWS | 24"(195')<br>18"(97')<br>12"(87') | 164.05<br>165.43<br>166.48 | 24"(10')<br>24"(10')<br>24"(10') | 164.00<br>164.00<br>164.00 | S=0.010<br>S=0.010<br>S=0.010 |

CATALDO ASSOCIATES INC. PROJECT NO.: 3148-02

GRAPHIC SCALE
50 0 25 50 100 200
( IN FEET )
1 inch = 50 ft.

P:\3148 (RGB_ RI-FIRE-ACADEMY)\3148-02 Engineering\dwg\3148-02_RIFA_Civil Plans_REV1.dwg 8/28/2008 4:27:40 PM EDT

## GENERAL NOTES

1. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO OBTAIN ANY AND ALL PERMITS REQUIRED BY THE STATE AND THE MUNICIPALITY IN WHICH WORK IS BEING PERFORMED PRIOR TO START OF ANY WORK.
2. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO DOCUMENT EXISTING CONDITIONS OF SURROUNDING PROPERTIES AND TO MAINTAIN THE INTEGRITY OF THE SAME. ANY DAMAGE TO AND THE COST OF REPAIR OF UTILITIES, ROADWAYS, STRUCTURES AND SURROUNDING PROPERTY SHALL BE FULLY BORNE BY THE CONTRACTOR.
3. ALL WORKMANSHIP AND MATERIALS SHALL MEET OR EXCEED THE LATEST STANDARDS OF THE MUNICIPALITY, AND THE LATEST RHODE ISLAND STANDARDS, SPECIFICATIONS AND DETAILS PUBLISHED FOR ROAD AND BRIDGE CONSTRUCTION.
4. CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES, THE MUNICIPAL PUBLIC WORKS DEPARTMENT, FIRE DEPARTMENT AND THE DEPARTMENT OF TRANSPORTATION FOR VERIFICATION OF APPROVED LOCATIONS SHOWN HEREON PRIOR TO START OF CONSTRUCTION. IF ANY DISCREPANCIES ARE NOTED, THE CONTRACTOR SHALL CONTACT THIS ENGINEER IMMEDIATELY FOR A RESOLUTION.
5. THE LOCATION OF ALL EXISTING UTILITIES IS APPROXIMATE ONLY AND SHALL BE VERIFIED BY CONTRACTOR PRIOR TO START OF CONSTRUCTION.
6. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO CONTACT DIG-SAFE AND UTILITY COMPANIES FOR EXACT ON-SITE LOCATION OF EXISTING UNDERGROUND UTILITIES AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO START OF CONSTRUCTION.
7. CONTRACTOR SHALL OBTAIN REQUIRED INSPECTION SCHEDULE OF THE MUNICIPALITY. UTILITY COMPANIES AND ALL OTHER REQUIRED PARTIES AND SHALL STRICTLY ADHERE TO THOSE REQUIREMENTS.
8. CONTRACTOR SHALL KEEP A COPY OF ALL APPROVALS ON-SITE DURING CONSTRUCTION. CONTRACTOR SHALL READ ALL APPROVALS PRIOR TO START OF CONSTRUCTION AND SHALL CLARIFY ANY QUESTIONS BEFOREHAND. CONSTRUCTION APPROVALS SHALL INCLUDE BUT NOT LIMITED TO THE APPROVALS FROM THE LOCAL MUNICIPALITY, THE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT AND ANY OTHER AGENCY HAVING APPROVAL JURISDICTION OVER THE PROJECT.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND PROTECTION OF PEDESTRIAN AND VEHICULAR TRAFFIC INCLUDING POLICE PROTECTION. ALL TEMPORARY CONSTRUCTION SIGNS, BARRICADES AND LANE CLOSURES SHALL BE IN CONFORMANCE WITH THE LATEST 'MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES' (MUTCD) AND RIDOT REQUIREMENTS, AND SHALL BE APPROVED BY RIDOT PRIOR TO START OF CONSTRUCTION.

## UTILITY NOTES

1. LOCATION OF EXISTING ABOVE GROUND AND UNDERGROUND UTILITIES STRUCTURES ON THE PROJECT SITE, AND STRUCTURES INDICATED ARE APPROXIMATE ONLY, AND THOSE INDICATED ARE NOT NECESSARILY ALL WHICH MAY EXIST ON THE SITE. CONTRACTOR SHALL DETERMINE ACTUAL LOCATIONS OF ALL UTILITIES AND WHETHER THEY ARE INDICATED OR NOT. CONTRACTOR SHALL ASSUME THE RESPONSIBILITY FOR ANY DAMAGE TO THE UTILITY LINES, WHETHER SHOWN ON THE PLANS OR NOT, DURING WORK ON THE PROJECT.
2. UTILITY CONTRACTOR SHALL OBTAIN APPROVALS OF ALL GOVERNING AGENCIES HAVING JURISDICTION OVER THE PROJECT PRIOR TO INSTALLATION.
3. UTILITY CONTRACTOR WILL BE RESPONSIBLE FOR ALL TAP AND TIE-IN FEES REQUIRED, AS WELL AS COST OF UNDERGROUND SERVICE CONNECTIONS TO THE BUILDING.
4. ALL WATER AND SANITARY LEADS TO BUILDING SHALL END 5' OUTSIDE THE BUILDING LIMITS AS SHOWN ON PLAN AND SHALL BE PROVIDED WITH A TEMPORARY PLUG AT END.
5. ALL TRENCHING, PIPE LAYING, AND BACKFILLING SHALL BE IN ACCORDANCE WITH FEDERAL, STATE AND LOCAL OSHA REGULATIONS.

## GRADING AND DRAINAGE NOTES

1. ALL EXISTING STRUCTURES, UNLESS OTHERWISE NOTED TO REMAIN, FENCING, TREES, & ETC., WITHIN CONSTRUCTION AREA SHALL BE REMOVED & DISPOSED OF OFF SITE.
2. SITE GRADING SHALL NOT PROCEED UNTIL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
3. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES HAVING UNDERGROUND UTILITIES ON SITE OR IN RIGHT-OF-WAY PRIOR TO EXCAVATION. CONTRACTOR SHALL CONTACT UTILITY LOCATING COMPANY AND LOCATE ALL UTILITIES PRIOR TO GRADING START.
4. ALL DRAINAGE PIPING SHALL BE RCP UNLESS OTHERWISE NOTED.
5. ALL DRAINAGE STRUCTURES SHALL BE REINFORCED CONCRETE CLASS III, UNLESS OTHERWISE NOTED.
6. ALL REMAINING EXISTING CATCH BASINS, DRAIN PIPING, & ASSOCIATED STORM DRAINAGE STRUCTURES WITHIN THE PROJECT LIMITS TO BE CLEANED & FLUSHED PRIOR TO COMPLETION OF OF THE PROJECT.

## LANDSCAPING NOTES

1. ALL DISTURBED AREAS ARE TO BE REVEGETATED AS SOON AS POSSIBLE, ALL BANKS AND SLOPING AREAS ARE TO RECEIVE A MINIMUM OF 6" OF CLEAN TOPSOIL, THEN SEEDED. LEVEL AREAS TO RECEIVE 4" MIN. OF CLEAN TOPSOIL AND SEEDED. ALL AREAS DISTURBED BY CONSTRUCTION NOT DESIGNATED FOR OTHER TYPE OF SURFACE SHALL BE LOAMED AND SEEDED.
2. SEED SHALL CONSIST OF A BLEND OF KENTUCKEY BLUE GRASSES. PLANT BY SUPPLIERS SPECIFICATIONS.
3. LIME SHALL BE APPLIED AS NECESSARY.
4. USE OF HAY OR STRAW MULCH DURING SLOPE STABILIZATION IN CONJUCTION WITH TEMPORARY SEEDING. APPLY MULCH AT A RATE OF 75 TO 100 LBS. PER 1000 SQUARE FEET.
5. STOCKPILE ALL STRIPPED TOPSOIL FOR LATTER USE. THE LOCATION IS TO BE APPROVED BY THE OWNER OR DESIGNATED AUTHORITY. MULCH AND TEMPORARY SEED THE STOCKPILE.
6. REMOVE ALL ROCKS 3" OR LARGER IN PLANTING AREA.
7. ALL CLEARING SHALL CONFORM TO THE LIMITS AS SHOWN ON PLANS. CLEARING LIMITS ARE TO BE MARKED IN THE FIELD BY THE OWNER OR DESIGNATED AUTHORITY.

## *RIDOT NOTES - PROVISIONS TO "MUTCD"*

1. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTINUE TO PERFORM ALL WORK IN COMPLIANCE WITH THE TRAFIC CONTROL REQUIREMENTS OF THE MUTCD AND THE RHODE ISLAND DEPARTMENT OF TRANSPORTATION BEYOND THE LIMITS OF THE WORK ZONE SHOWN ON THIS PLAN.
2. ALL TRAFFIC CONTROL DEVICES OF OPERATIONS SHALL BE IN CONFORMANCE WITH THE 2003 EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) WITH LATEST REVISIONS AND ADDENDA.

## ORDER OF PROCEDURE

1. IMMEDIATELY UPON COMPLETION OF THE CLEARING AND GRUBBING OPERATION AND PRIOR TO ANY ROUGH GRADING, TEMPORARY HAYBALES OR SANDBAGS SHALL BE PLACED OUTSIDE THE LIMITS OF CONSTRUCTION AS PER THE PLANS (I.E. ALONG NEW ROADWAYS, STREAM BANKS, CRITICAL AREAS, ETC.). REFER TO THE GENERAL PLANS FOR EROSION CONTROL DETAILS AND THEIR PLACEMENT.
2. ALL EROSION AND SEDIMENTATION CONTROL STRUCTURES SHALL BE PERIODICALLY MAINTAINED AS PER THE RESPECTIVE PROGRAMS FOR TEMPORARY CONTROL.
3. IF WORK PROGRESS IS TO BE INTERRUPTED AT ANY TIME, REFERENCE EROSION AND SEDIMENTATION PROGRAMS FOR TEMPORARY CONTROL.
4. TEMPORARY HAYBALES AND SANDBAGS ALONG AND AT THE ENDS OF ROADWAYS MAY ALSO BE REMOVED AFTER FINAL SOIL STABILIZATION HAS BEEN ACHIEVED AND APPROVED.
5. ALL ROADWAY/DRIVEWAY CONSTRUCTION AND UTILITIES ARE TO BE COMPLETED WITHIN ONE YEAR OF FINAL APPROVAL.

## SOIL EROSION

1. ALL DISTURBED AREA MUST BE SEEDED WITHIN THE CONSTRUCTION SEASON.
2. TEMPORARY SEEDING MUST BE DONE WITHIN 1 MONTH AFTER DISTURBANCE.
3. ALL DISTURBED AREAS MUST BE PERMANENTLY SEEDED BETWEEN APRIL 1ST AND OCTOBER 15TH. IF NOT, THEY MUST BE TEMPORARILY SEEDED.

## *CATCH BASIN CLEANOUT SCHEDULE*

1. INSPECTIONS OF ALL CATCH BASINS ON-SITE SHALL OCCUR ON AN ANNUAL BASIS TO CHECK FOR DEBRIS REMOVAL (SEDIMENT AND HYDROCARBONS) AND STRUCTURAL INTEGRITY OR DAMAGE. SUCH DEFICIENCIES MUST BE CORRECTED IMMEDIATELY.
2. SEDIMENTS MUST BE REMOVED FROM CATCH BASINS WHEN SUMPS ARE HALF FILLED AND/OR AT TWO YEARS INTERVALS..
3. REPAIRS OR REPLACEMENT OF INLET / OUTLET STRUCTURES, OR OTHER ELEMENTS OF THE FACILITY MUST BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR / REPLACEMENT MUST BE DONE IMMEDIATELY.
4. ALL TRASH AND LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ANY CATCH BASIN INCLUDING INLET AND OUTLET STRUCTURES. THIS MUST BE ACCOMPLISHED AT LEAST TWICE A YEAR, PREFERABLY SPRING AND FALL.
5. HAYBALES SHALL BE PLACED AROUND CATCH BASINS DURING CONSTRUCTION TO STOP DEBRIS FROM ENTERING SUMP AND DRAIN PIPES. ACCUMULATED SEDIMENTS SHALL BE REMOVED FROM ALL CATCH BASINS AND STORM DRAIN PIPES IMMEDIATELY AFTER SITE STABILIZATION.
6. THE SITE OWNER WILL BE RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF ALL CATCH BASINS AND OTHER DRAINAGE STRUCTURES UPON ACCEPTANCE OF THE WORK.

## DETENTION POND MAINTENANCE

1. GRASSES MUST BE PLANTED AROUND AND WITHIN THE POND IMMEDIATELY FOLLOWING CONSTRUCTION TO STABILIZE THE SLOPES AND PREVENT EROSION.
2. SIDE-SLOPES, EMBANKMENTS, AND THE UPPER STAGE OF THE POND MUST BE MOWED AT LEAST ONCE DURING THE GROWING SEASON BY AUGUST 15TH. ALL TRASH AND LITTER SHALL BE REMOVED FROM THE POND DURING MOWING OPERATIONS.
3. SEDIMENTS MUST BE REMOVED FROM THE POND AT TWO YEAR INTERVALS AND AS NECESSARY.
4. THE OUTLET STRUCTURE AND ALL OUTFLOW CHANNELS MUST BE INSPECTED ANNUALLY. EXTENDED DETENTION DEVICES MUST BE INSPECTED AT LEAST TWICE A YEAR. INSPECTIONS DURING THE FIRST SIX MONTHS OF OPERATIONS MUST BE ACCOMPLISHED OFTEN, ESPECIALLY AFTER RAINFALL EVENTS.
5. THE GRASSED AREAS OF THE POND MUST BE INSPECTED AT LEAST TWICE PER YEAR TO CHECK FOR EROSION. PROBLEM AREAS MUST BE RESEEDED IMMEDIATELY.
6. SIDE-SLOPES, EMBANKMENTS, AND THE UPPER STAGE OF POND SHALL BE MOWED AT LEAST ONCE PER GROWING SEASON, TO PREVENT UNWANTED WOODY GROWTH.
7. ALL TRASH AND LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ANY STORMWATER FACILITY INCLUDING INLET AND OUTLET STRUCTURES. THIS MUST BE ACCOMPLISHED AT LEAST TWICE A YEAR, PREFERABLY SPRING AND FALL.
8. INSPECTIONS OF ALL CATCH BASINS ON-SITE SHALL OCCUR ON AN ANNUAL BASIS TO CHECK FOR DEBRIS REMOVAL (SEDIMENT AND HYDROCARBONS) AND STRUCTURAL INTEGRITY OR DAMAGE. SUCH DEFICIENCIES MUST BE CORRECTED IMMEDIATELY. SEDIMENTS MUST BE REMOVED FROM CATCH BASINS WHEN SUMPS ARE HALF FILLED.
9. REPAIRS OR REPLACEMENT OF INLET / OUTLET STRUCTURES, RIP-RAP CHANNELS, OR OTHER ELEMENTS OF THE FACILITY MUST BE DONE WITHIN 30 DAYS OF DEFICIENCY REPORTS. IF AN EMERGENCY SITUATION IS IMMINENT THEN REPAIR / REPLACEMENT MUST BE DONE IMMEDIATELY.

## *DETENTION POND CONSTRUCTION NOTES:*

1. DETENTION POND EMBANKMENT AREAS ADJACENT TO OUTLET STRUCTURE ARE TO BE CONSTRUCTED WITH COMMON BORROW COMPACTED TO 95% IN ONE FOOT LIFTS AND THEN LOAMED AND SEEDED.
2. TREES AND SHRUBS SHALL NOT BE PLANTED ON ANY IMPOUNDING EMBANKMENT.
3. BOTTOM AND SIDE ARE TO BE LOAMED A MINIMUM OF 6" AND SEEDED WITH A CONSERVATION TYPE MIXTURE.
4. ALL PIPE ANTI-SEEP COLLARS, TRASH RACKS, FLARED END SECTIONS, JOINTS, GASKETS, FITTINGS, ETC. SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S SPECIFICATIONS.
5. FOR OVERALL SITE DEVELOPMENT DURING CONSTRUCTION THE ENTIRE AREA OF THE PROPOSED DETENTION POND SHOULD BE ROPED OFF TO PREVENT COMPACTION OF THE UNDERLYING SOILS BY HEAVY EQUIPMENT. THE BASIN SHOULD BE EXCAVATED WITH LIGHT EARTH-MOVING EQUIPMENT TO PREVENT COMPACTION OF SOILS BENEATH THE BASIN FLOOR OR SIDE SLOPES. LIGHT EARTH-MOVING EQUIPMENT DOES NOT INCLUDE BULLDOZERS OR STANDARD SIZE PAY-LOADERS.
6. THE ENTIRE POND MUST BE STABILIZED WITH A DENSE LAYER OF GRASS FOLLOWING POND CONSTRUCTION. AT POND BOTTOM AND SIDE SLOPE WHERE INFILTRATION OCCURS, THE INSTALLER MUST APPLY 6" PERMEABLE LOAM SOIL AND TURF TYPE TALL FESCUES OR REED CANARY GRASSES WITH FILTER FABRIC BEDDING MATERIAL TO PROMOTE GOOD VEGETATIVE GROWTH AND INFILTRATION.
7. ALL CONTROL PRACTICES MUST BE IN ACCORDANCE WITH THE MOST RECENT EDITION OF THE "RI SOIL EROSION AND SEDIMENT CONTROL HANDBOOK".
8. DETENTION POND OUTLET PIPE SHALL BE EQUIPPED WITH ANTI-SEEP COLLARS.
9. ALL RCP PIPE ANTI-SEEP COLLARS, TRASH RACKS, FLARED END SECTIONS, JOINTS, GASKETS, FITTINGS, ETC. SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH PIPE MANUFACTURER'S SPECIFICATIONS.

## SHORT TERM MAINTENANCE PLAN

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEDING, PROTECTING AND MAINTAINING ALL DISTURBED SLOPES, EITHER NEWLY CREATED OR CURENTLY EXPOSED. THE CONTRACTOR SHALL REGULARLY INSPECT ALL SEEDED AREAS TO SEE THAT AN ADEQUATE COVER IS MAINTAINED.
2. THE CONTRACTOR MUST REPAIR OR RESEED ANY AREAS THAT DO NOT DEVELOP WITHIN A PERIOD OF ONE YEAR AND SHALL DO SO AT NO ADDITIONAL EXPENSE.
3. ALL HAYBALES, TEMPORARY TREATMENTS (HAY, STRAW, ETC.) AND TEMPORARY PROTECTION SHALL BE MAINTAINED BY THE CONTRACTOR THROUGHOUT CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL AN ACCEPTABLE GROUND COVER IS ESTABLISHED.
4. THE CONTRACTOR SHALL MAINTAIN ALL TOPSOIL STOCKPILES AND SEDIMENT BARRIERS THROUGHOUT CONSTRUCTION. EXTREME CARE SHALL BE TAKEN TO ENSURE THAT SEDIMENTS DO NOT SPILL OVER THE SEDIMENT BARRIER.
5. THE HAYBALES OR SILT FENCE SHALL BE CHECKED BY THE CONTRACTOR ON A WEEKLY BASIS AND AFTER EACH STORM EVENT FOR UNDERMINING OR DETERIORATION. THE CONTRACTOR SHALL REPAIR OR REPLACE THE HAYBALES AS NECESSARY. THE CONTRACTOR SHALL CLEAN THE ACCUMULATED SEDIMENT IF HALF OF THE ORIGINAL HEIGHT OF THE HAYBALES BECOMES FILLED WITH SEDIMENTS.
6. THE CONTRACTOR SHALL INSPECT RIPRAP AREAS AFTER EACH STORM AND REPAIR AS NECESSARY.
7. THE CONTRACTOR SHALL MAINTAIN THE DRAINAGE SYSTEM THROUGHOUT CONSTRUCTION. THE ACCUMULATED SEDIMENTS IN THE CATCH BASINS SHALL BE REMOVED AND DRAINAGE PIPES FLUSHED BY THE CONTRACTOR AT THE END OF CONSTRUCTION.
8. THE CONSTRUCTION SUPERINTENDENT SHALL BE RESPONSIBLE FOR THE MAINTENANCE PROGRAM DURING THE CONSTRUCTION PHASE. THE SUPERINTENDENT SHALL SEE THAT THE APPROPRIATE WORKERS ARE AWARE OF THE PROVISIONS OF THE PLAN.
9. THE CONSTRUCTION OF THE DRAINAGE SYSTEM SHALL BE SUPERVISED BY THE OWNER OR DESIGNATED AUTHORITY. A REPORT AND AS-BUILT PLAN SHALL BE MADE AVAILABLE TO THE OWNER UPON REQUEST.

## LONG TERM MAINTENANCE PLAN

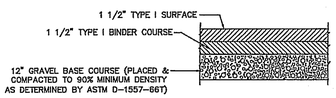
1. THE SITE OWNER SHALL BE RESPONSIBLE FOR ALL PHASES OF THE LONG-TERM MAINTENANCE OF THE DRAINAGE SYSTEM AND VEGETATIVE COVER. THEY SHALL ALSO BE RESONSIBLE FOR THE LONG-TERM MAINTENANCE OF ALL COMPONENTS OF THE DRAINAGE SYSTEM. THE DRAINAGE SYSTEM SHALL BE CHECKED SEMI-ANNUALLY.
2. INSPECTIONS DURING THE FIRST SIX MONTHS OF OPERATIONS MUST BE ACCOMPLISHED OFTEN, ESPECIALLY AFTER RAINFALL EVENTS. THE SITE OWNER SHALL BE RESPONSIBLE FOR THE INSPECTION OF ALL RIPRAP AREAS AND PIPE OUTLETS ON AN ANNUAL BASIS AND FOLLOWING ALL MAJOR STORM EVENTS. REPAIRS SHALL BE UNDERTAKEN AS CONDITIONS WARRANT.
3. THE SITE OWNER SHALL BECOME RESPONSIBLE FOR THE MAINTENANCE OF THE DRAINAGE FACILITY UPON ACCEPTANCE. THEY SHALL BE RESPONSIBLE FOR MAINTAINING SUFFICIENT VEGETATIVE COVER (GRASS BETWEEN 2"-10" OR VEGETATION AS SPECIFIED).
4. THE SITE OWNER SHALL BE RESPONSIBLE FOR THE SEMI-ANNUAL INSPECTION OF THE GRASSED AREAS FOR EROSION PROBLEMS. PROBLEM AREAS MUST BE RESEEDED IMMEDIATELY TO STABILIZE EXPOSED SOILS, THEREBY PREVENTING EROSION AND POTENTIAL CLOGGING OF OUTFLOW STRUCTURES.
5. AT PROJECT COMPLETION AND ACCEPTANCE BY THE OWNER, THEY SHALL BECOME RESPONSIBLE FOR OVERALL IMPLEMENTATION OF THE MAINTENANCE PROGRAM. THIS SHOULD BE ACCOMPLISHED ON A SEMI-ANNUAL BASIS, PREFERABLY SPRING AND FALL.
6. THE SITE OWNER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL TRASH, LITTER AND OTHER DEBRIS SHALL BE REMOVED FROM ANY STORMWATER FACILITY.
7. THE SITE OWNER WILL BE RESPONSIBLE FOR INSPECTION AND MAINTENANCE OF ALL CATCH BASINS, DETENTION POND AND OTHER DRAINAGE STRUCTURES.
8. SEDIMENTS MUST BE REMOVED FROM THE POND WHEN SEDIMENTS ACCUMULATED MORE THAN 0.2 FEET DEPTH, AND/OR TWO YEARS INTERVALS.
9. THE PARTY RESPONSIBLE FOR INSPECTION OF ANY COMPONENT OF THE DRAINAGE SYSTEM SHALL, WHERE APPLICABLE, COMPLETE A REPORT OUTLINING ANY DEFICIENCES DISCOVERED DURING INSPECTION. IF THERE ARE ANY DEFICIENCES, THE SITE OWNER SHALL BE RESPONSIBLE FOR REMEDYING THE SITUATION WITHIN THIRTY DAYS. IF AN EMERGENCY SITUATION IS IMMINENT THEN IMMEDIATE MEASURES MUST BE TAKEN TO REMEDY THE SITUATION TO AVERT FAILURE OR DANGER TO NEARBY RESIDENTS.
10. THE TOWN ENGINEER OR DEPARTMENT OF PUBLIC WORKS, UPON REQUEST, RESERVES THE RIGHT TO INSPECT SAID DRAINAGE FACILITIES AND REQUEST RECORDS OF MAINTENANCE, ANNUALLY.
11. FOR INFILTRATION POND (BOTTOM 1.6' OF THE BASIN) THE CAPACITY OF A POND WILL DECREASE REQUIRING DEEP TILLING OF THE POND FLOOR EVERY SEVERAL YEARS (5-10) TO RESTORE THE ORIGINAL INFILTRATION RATE. TILLING SHOULD BE DONE WHEN THERE IS AN OBVIOUS LOSS OF INFILTRATION, ESPECIALLY WHEN STANDING WATER IS PRESENT IN THE POND FOR MORE THAN 72 HOURS AFTER A RAINFALL EVENT. TILLING CAN BE ACCOMPLISHED WITH A ROTARY TILLER OR DISC HARROW. IN SOME CASES THE ADDITION OF SAND WILL ASSIST IN RESTORING INFILTRATION CAPACITY. AFTER TILLING, POND FLOORS MUST BE RESEEDED IMMEDIATELY TO PREVENT EROSION OF THE POND BOTTOM.

## SEDIMENTATION CONTROL PROGRAM

1. ALL EXPOSED SLOPES, INCLUDING STOCKPILES OF MATERIAL, SHALL RECEIVE TEMPORARY SEDIMENTATION AND EROSION CONTROLS. THIS WILL INCLUDE LOAMING AND SEEDING, MULCHING, HAYMATS, ETC., TO STABILIZE THE AREA.
2. SILT FENCE (TEMPORARY) SHALL BE
   - INSTALLED DOWNSLOPE OF THE LIMITS OF PROPOSED CONSTRUCTION AS SHOWN ON THE DRAWINGS.
   - INSTALLED PRIOR TO THE COMMENCEMENT OF THE PROPOSED ALTERATIONS.
   - MAINTAINED ON A REGULAR BASIS.
3. ALL DRAINAGE STRUCTURES SHALL BE SURROUNDED BY HAYBALES TO PREVENT INFILTRATION OF SEDIMENTS.
4. ADDITIONAL HAYBALES OR SANDBAGS SHALL BE LOCATED AS CONDITIONS WARRANT OR AS DIRECTED BY THE OWNER OR HIS DESIGNEE.
5. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
6. SHOULD SEDIMENTS ENTER A CRITICAL AREA, (WETLAND, BUFFER ZONE, ABUTTING PROPERTY) THE CONTRACTOR SHALL IMMEDIATELY CLEAN AND RESTORE THE EFFECTED AREA.
7. CARE SHALL BE TAKEN SO AS NOT TO PLACE "REMOVED SEDIMENTS" WITHIN THE PATH OF EXISTING, NEWLY CREATED (BOTH TEMPORARY AND PERMANENT) OR PROPOSED WATERCOURSES OR THOSE AREAS SUBJECTED TO STORMWATER FLOWAGE.
8. CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
9. THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
10. CATCH BASINS, DETENTION POND AND OTHER DRAINAGE FACILITIES SHALL BE THOROUGHLY PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION. IF SEDIMENTS ENTER FACILITIES DURING CONSTRUCTION, THE STRUCTURES SHALL BE CLEARED AND, IF NECESSARY, REMOVED AND REINSTALLED WITH ALL EXPENSE TO BE BORNE BY CONTRACTOR.
11. RI STANDARD TYPE R-4 RIP-RAP SHALL BE INSTALLED AT THE FLARED END SECTION OUTLETS, UNLESS OTHERWISE NOTED.
12. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING DRAINAGE AND RUNOFF FLOW DURING STORMS AND PERIODS OF RAINFALL.
13. SEDIMENTATION CONTROL DEVICES SHALL BE INSPECTED CLOSELY AND MAINTAINED PROMPTLY AFTER EACH RAINFALL AND AT LEAST ONCE A WEEK.

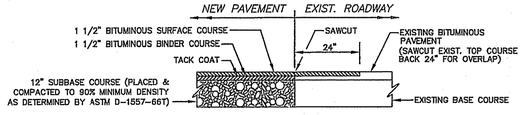
## SEWER RELATION TO WATER MAINS

1. HORIZONTAL SEPARATION: SEWERS SHALL BE LAID AT A MINIMUM OF 10 FEET (3.0m), HORIZONTALLY, FROM ANY EXISTING OR PROPOSED WATER MAIN. SHOULD LOCAL CONDITIONS PREVENT A LATERAL SEPARATION OF 10 FEET, A SEWER MAY BE LAID CLOSER THAN 10 FEET TO A WATER MAIN IF:
   A. IT IS LAID IN A SEPARATE TRENCH, OR IF
   B. IT IS LAID IN THE SAME TRENCH WITH THE WATER MAINS LOCATED AT ONE SIDE ON A BENCH OF UNDISTURBED EARTH, AND IF
   C. IN EITHER CASE THE ELEVATION OF THE TOP (CROWN) OF THE SEWER IS AT THE LEAST 18 INCHES(46cm) BELOW THE BOTTOM (INVERT) OF THE WATER MAIN.
2. VERTICAL SEPARATION: WHENEVER SEWER MUST CROSS UNDER WATER MAINS, THE SEWER SHALL BE LAID AT SUCH AN ELEVATION THAT THE TOP OF THE SEWER IS AT LEAST 18 INCHES (46 cm) BELOW THE BOTTOM OF THE WATER MAIN. WHEN THE ELEVATION OF THE SEWER CANNOT BE VARIED TO MEET THE ABOVE REQUIREMENTS, THE SEWER MAIN SHALL BE CONSTRUCTED WITH MECHANICAL-JOINT PIPE FOR A DISTANCE OF 10 FEET (3.0m) ON EACH SIDE OF THE WATER. ONE FULL LENGTH OF WATER MAIN SHOULD BE CENTERED OVER THE SEWER SO THAT BOTH JOINTS WILL BE AS FAR FROM THE SEWER AS POSSIBLE.
3. WHEN IT IS IMPOSSIBLE TO OBTAIN HORIZONTAL AND/OR VERTICAL SEPARATION AS STIPULATED ABOVE, THE SEWER SHALL BE CONSTRUCTED OF MECHANICAL-JOINT CEMENT LINED DUCTILE IRON PIPE OR OTHER EQUIVALENT BASED ON WATER TIGHTNESS AND STRUCTURAL SOUNDNESS. BOTH PIPES SHALL BE PRESSURE TESTED BY AN APPROVED METHOD TO ASSURE WATER TIGHTNESS AND THE SEWER MUST BE SLEEVED.
4. WHEN CROSSING A WATER MAIN THE SEWER LINE SHALL BE CONSTRUCTED WITH A 10 FOOT SECTION OF DUCTILE IRON WITH MECHANICAL COUPLINGS AT EACH END AND ENCASED WITH 6" OF CONCRETE FOR 10' ON EITHER SIDE OF THE INTERSECTION OF THE PIPES.




TYPICAL ROADWAY PAVEMENT CROSS SECTION

NOT TO SCALE




NOTES: 1- PROVIDE BITUMINOUS TACK COAT AT ALL SAWCUTS.
2- PAVEMENT ON STATE PROPERTY ACCORDING TO RI STANDARD.

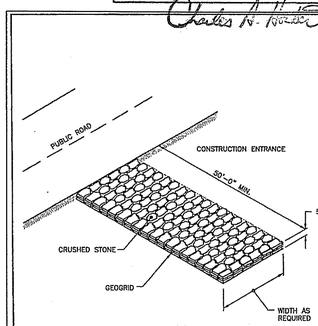
PAVEMENT CUT & MATCH (INTO STATE ROAD)

NOT TO SCALE

## LEGEND

| EXISTING | DESCRIPTION | PROPOSED |
|---|---|---|
| —PL— | PROPERTY LINE | |
| | ABUTTER LINE | |
| | TEST PIT | |
| | FINISHED FLOOR ELEVATION | F.F.ELEV. |
| DH (FND) IR (FND) | DRILL HOLE/IRON ROD | DH (SET) IR (SET) |
| RIHB (FND) | RI HIGHWAY BOUND | RIHB (SET) |
| STK (FND) | STAKE | STK (SET) |
| CB | CATCH BASIN | CB |
| D | DRAIN MANHOLE | DMH |
| E | ELECTRIC MANHOLE | ELEC. MH |
| S | SEWER MANHOLE | S |
| GG | GAS GATE | GG |
| WG | WATER GATE | WG |
| | HYDRANT | |
| | LIGHT POLE | |
| UP | UTILITY POLE | |
| W | WELL | |
| —S— | SANITARY SEWER | —S— |
| | SEWER FORCE MAIN | —FM— |
| —D— | STORM DRAIN | —ND— |
| —W— | WATER | —NW— |
| —G— | GAS | —NG— |
| —E— | ELECTRIC | —NE— |
| | OVERHEAD ELECTRIC | —OHW— |
| —RD— | ROOF DRAIN | —RD— |
| | CONTOUR | —170— |
| | SPOT ELEVATION | 170X25 |
| | CHAIN LINK FENCE | |
| | GUARDRAIL | |
| EOP | EDGE OF PAVEMENT | |
| | STONE WALL | |
| | HANDICAP PARKING | |
| | SAWCUT PAVEMENT AND CONCRETE | |
| | HAYBALES AND OR SILT FENCE | |
| | LIMIT OF DISTURBANCE | |
| | EDGE OF WOODS | |
| | OIL/WATER SEPARATOR | OWS |
| | ON-SITE WASTEWATER TREATMENT SYSTEM | OWTS |
| | WETLAND FLAG | WLF |
| | AREA SUBJECT TO STORM FLOW | WLF ASSF |
| | AREA SUBJECT TO FLOODING | WLF ASF |

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 1 7 2008 FILE # 08-0110
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE
Charles A. Horbert




NOTE: SHALL BE IN ACCORDANCE WITH SECTION 211 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

CONSTRUCTION ACCESS

| REVISIONS | | |
|---|---|---|
| NO. | BY | DATE |
| | | |
| | | |
| | | |
| | | |

R.I. STANDARD 9.9.0

Chief Engineer, Traffic Engineering — Chief Traffic Engineer — JUNE 15, 1998

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Certification

RALPH A. CATALDO — No. 3330 — REGISTERED — 8-29-08 — PROFESSIONAL ENGINEER

Drawn by MAD

Checked by RDL

Revised on

JULY 18, 2008 – PER RIDEM COMMENTS AND UPDATED SUR INFORMATION (NO REVISIONS T SHEET)

AUGUST 29, 2008 – NO REVISIONS THIS SHEET.

CATALDO ASSOCIATES INC.
CIVIL ENGINEERS
1408 ATWOOD AVENUE (401) 453-3300
JOHNSTON, RI 02919 FAX: (401) 453-4117
ca@cataldoeng.com

50 Holden Street
Providence, Rhode Island 02906
Phone: (401) 272-1730
Fax: (401) 273-7166
E-mail: rgbinfo@rgb.net
www.rgb.net

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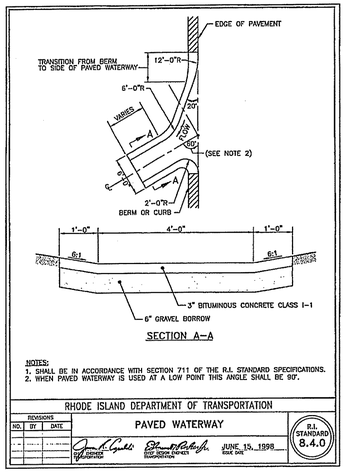
Project

# RHODE ISLAND




SECTION A–A

NOTES:
1. SHALL BE IN ACCORDANCE WITH SECTION 711 OF THE R.I. STANDARD SPECIFICATIONS.
2. WHEN PAVED WATERWAY IS USED AT A LOW POINT THIS ANGLE SHALL BE 90°.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

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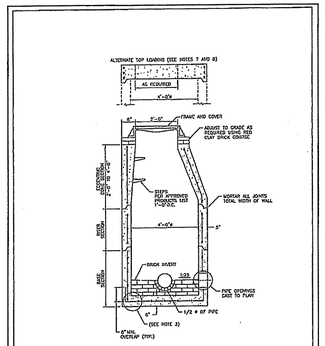
| NO. | BY | DATE |

PAVED WATERWAY

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 8.4.0




NOTES:
1. STEEL TO BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONCRETE STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN./FT. FOR BOTTOM SLAB, 0.12 SQ. IN./FT. FOR WALLS, 0.06 SQ. IN./FT. FOR TOP SLAB AND SHALL BE PLACED AT THE CENTER OF THE CONCRETE SECTION.
3. STEEL REINFORCEMENT FOR BASE SECTION BOTTOM SLAB, BE A MINIMUM OF 0.12 SQ. IN./LIN. FT. (BOTH WAYS).
4. STEPS SHALL CONFORM TO STD. 3.2.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
5. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY, NO JACKHAMMERS, CHISELS OR SHOVELS ON PRESTRESSED TOOLS WILL BE ALLOWED.
6. CORING HOLES OF 8" DIA. OR LESS IS PERMITTED FOR THE "CORE SECTION" OF PCC 4'-0" CATCH BASIN ONLY.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS STEEL REINFORCED SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 3.2.0 FOR MANHOLE STEP DETAIL.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

| REVISIONS | | |
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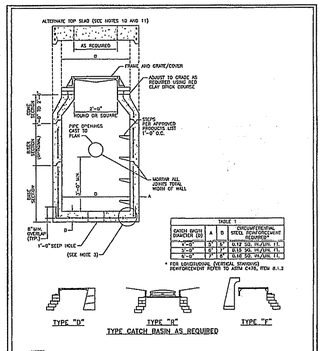
| NO. | BY | DATE |

PRECAST 4'-0" ROUND MANHOLE

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.2.0




TYPE 1

| CASTED OPENING DIAMETER (D) | A | B | CONCRETE/STEEL REINFORCEMENT REQUIRED* |
|---|---|---|---|
| 1'-0" | 3" | 1'-3" | 6.12 SQ. IN./LIN. FT. |
| 2'-0" | 6" | 1'-6" | 6.12 SQ. IN./LIN. FT. |
| 3'-0" | 9" | 1'-9" | 6.12 SQ. IN./LIN. FT. |

* PER LONGITUDINAL (VERTICAL DIRECTION) REINFORCEMENT REFERS TO AASHTO CASTS, ITEM M 83.2

TYPE CATCH BASIN AS REQUIRED

NOTES:
1. STEEL TO BE IN ACCORDANCE WITH SECTION 709 OF THE R.I. STANDARD SPECIFICATIONS.
2. CONCRETE STEEL REINFORCEMENT REQUIRED = 0.12 SQ. IN./FT. FOR BOTTOM SLAB, 0.12 SQ. IN./FT. FOR WALLS, 0.06 SQ. IN./FT. FOR TOP SLAB AND SHALL BE PLACED AT THE CENTER OF THE CONCRETE SECTION.
3. STEPS SHALL CONFORM TO STD. 3.2.0 AND SHALL BE INSTALLED AT THE CASTING PLANT.
4. ANY NECESSARY ADJUSTMENTS DURING CONSTRUCTION WILL BE DONE BY SAW-CUTTING AND/OR CORING ONLY, NO JACKHAMMERS, CHISELS OR SHOVELS ON PRESTRESSED TOOLS WILL BE ALLOWED.
5. CORING HOLES OF 8" DIA. OR LESS IS PERMITTED FOR THE "CORE SECTION" OF PCC 4'-0" CATCH BASIN ONLY.
6. THE CONCRETE OF THE CASTING MUST BE WITHIN 2'-0" FROM THE STEPS.
7. ALTERNATE TOP SLAB IS STEEL REINFORCED TO MEET OR EXCEED H-25 LOADING (SEE STD. 4.7.2).
8. ALTERNATE TOP SLAB IS STEEL REINFORCED SECTION DOES NOT FIT BECAUSE OF STRUCTURE DEPTH.
9. REFER TO STD. 3.2.0 FOR MANHOLE STEP DETAIL.
10. ALTERNATE TOP SLAB (SEE NOTES 10 AND 11)
11. THE CASTING SHALL BE EPOXY COATED.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

| REVISIONS | | |
|---|---|---|
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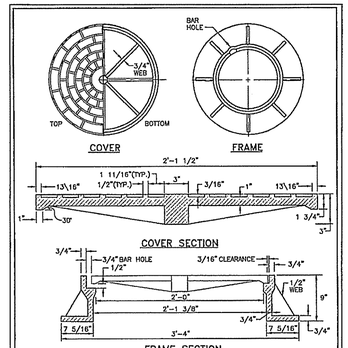
PRECAST 4'-0", 5'-0", OR 6'-0" ROUND CATCH BASIN

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 4.4.0




NOTES:
1. FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.
2. FRAME AND COVER SEATS MUST HAVE MACHINE FINISH.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

| REVISIONS | | |
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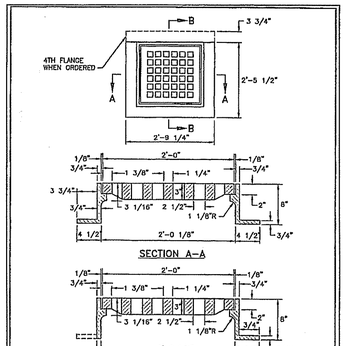
HEAVY-DUTY ROUND FRAME AND COVER

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 6.2.1




NOTE:
FRAME AND GRATE SHALL CONFORM TO SECTION M.04 OF THE R.I. STANDARD SPECIFICATIONS.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

| REVISIONS | | |
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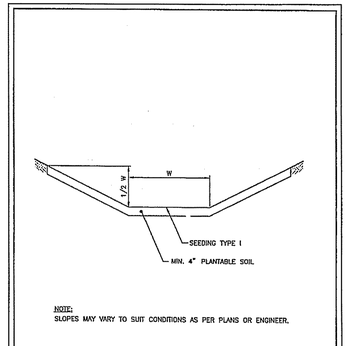
SQUARE FRAME AND GRATE

JUNE 15, 1998 ISSUE DATE

R.I. STANDARD 6.3.0




NOTE:
SLOPES MAY VARY TO SUIT CONDITIONS AS PER PLANS OR ENGINEER.

RHODE ISLAND DEPARTMENT OF TRANSPORTATION

| REVISIONS | | |
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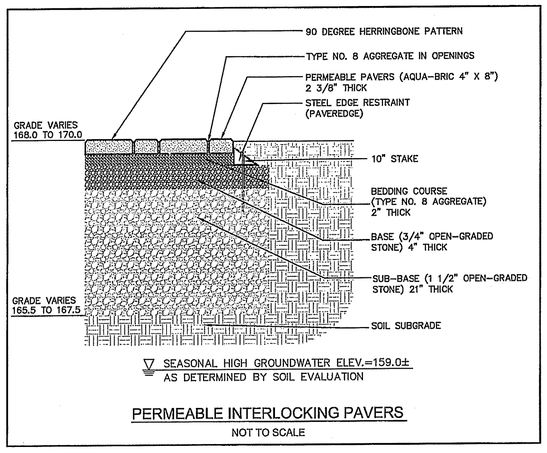
| NO. | BY | DATE |

SEEDED DITCH

JUNE 15, 1998 ISSUE DATE

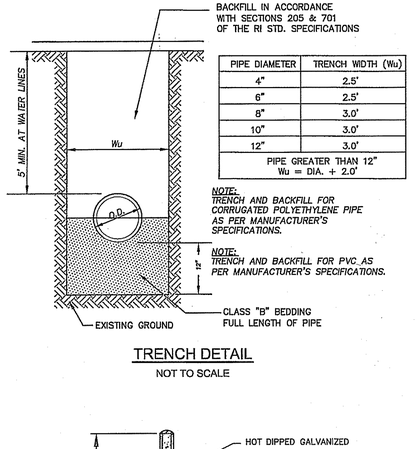
R.I. STANDARD 8.1.0




▽ SEASONAL HIGH GROUNDWATER ELEV.=159.0±
AS DETERMINED BY SOIL EVALUATION

PERMEABLE INTERLOCKING PAVERS

NOT TO SCALE



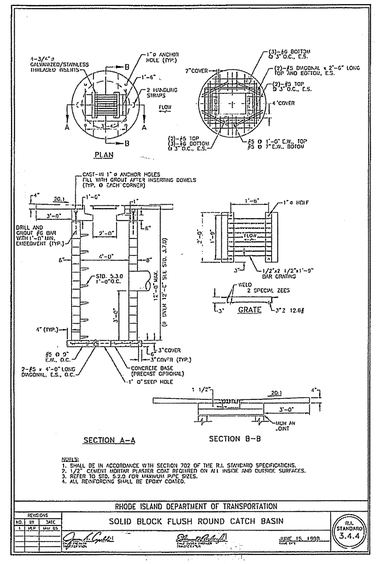

| PIPE DIAMETER | TRENCH WIDTH (Wu) |
|---|---|
| 4" | 2.5' |
| 6" | 2.5' |
| 8" | 3.0' |
| 10" | 3.0' |
| 12" | 3.0' |
| PIPE GREATER THAN 12" Wu = DIA. + 2.0' | |

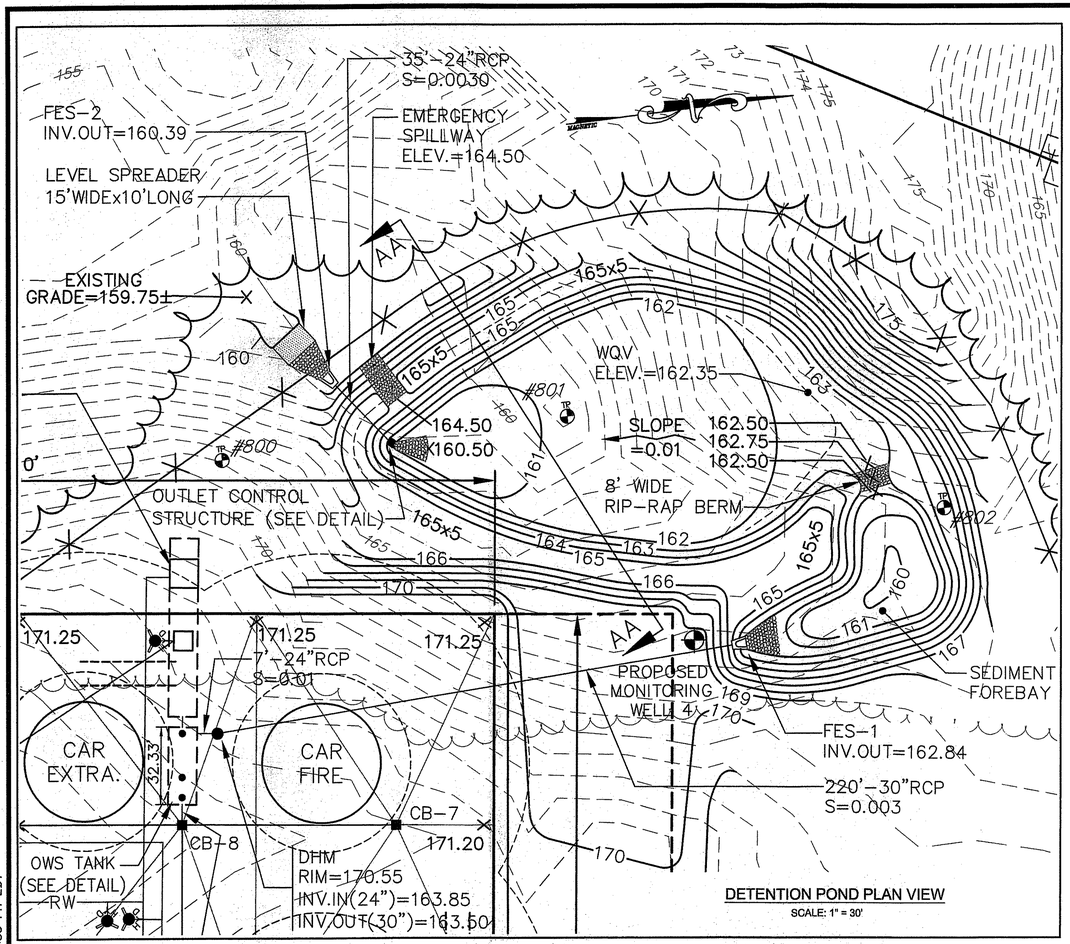
*NOTE:*
*TRENCH AND BACKFILL FOR CORRUGATED POLYETHYLENE PIPE AS PER MANUFACTURER'S SPECIFICATIONS.*

*NOTE:*
*TRENCH AND BACKFILL FOR PVC AS PER MANUFACTURER'S SPECIFICATIONS.*

TRENCH DETAIL

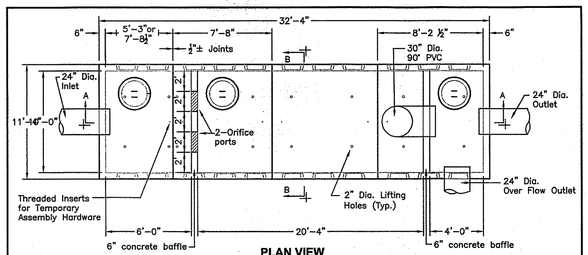
NOT TO SCALE


4-3/4"ø GALVANIZED/STAINLESS THREADED ROD/NUTS
1"ø ANCHOR HOLE (TYP.)
1'-6"
2 HOOKING STRAPS
PLAN
3"COVER
(3)-#5 BOTTOM @ 5'-0" O.C. E.S.
(2)-#5 DIAGONAL x 2'-0" LONG TOP AND BOTTOM, E.S.
4"COVER
(3)-#5 TOP @ 5'-0" O.C. E.S.
#5 @ 1'-0" E.W. TOP AND @ 5'-0" O.C. BOTTOM
CAST-IN 1" ø ANCHOR HOLES FILL WITH GROUT AFTER INSERTING DOWELS (TYP. @ EACH CORNER)
DRILL AND GROUT #5 BAR WITH 1'-10" MIN. EMBEDMENT (TYP.)
#5 @ 5'-0" O.C. (TYP.)
3'-0"
1'-6"
1'-0"
1'-0"
1'-0

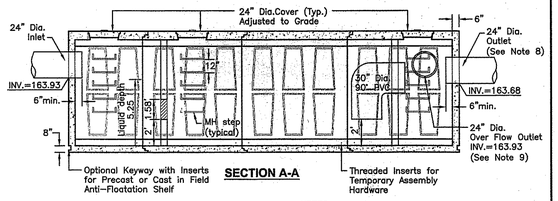



DETENTION POND PLAN VIEW

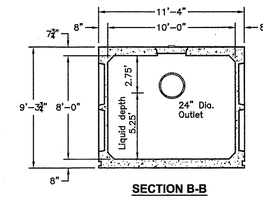
SCALE: 1" = 30'




PLAN VIEW




SECTION A-A




SECTION B-B

NOTES:

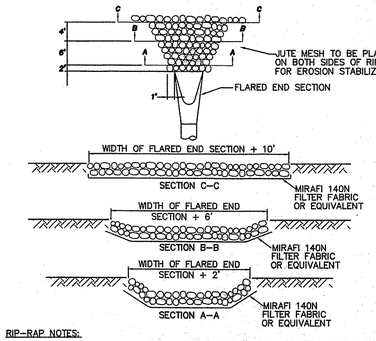
1. Concrete : 5,000 P.S.I Minimum Strength @ 28 Days
2. Steel Reinforcing- ASTM A-615 Grade 60
3. Cover to Steel - 1'
4. Designed Per - ACI 318 & AASHTO Standard Specs. for Highway Bridges
5. Loading - AASHTO HS20 Truck
6. Earth Cover - 0' Min. to 8' Max.
7. Contractor to verify size and location of Openings
8. 24' Outlet to 50,000 Gallon Underground Storage Tank shall be Valved shut when Storage Tank is Full. Use Electronically Operated Knife Valve.
9. Over-Flow Outlet shall be closed during Training Exercises. Open for Stormwater by-pass to Detention Basin. Use Electronically Operated Knife Valve.

## OIL / WATER SEPARATOR (OWS)

N.T.S.

| | | |
|---|---|---|
| Oldcastle Precast® / Rotondo Precast® Division<br>41 Airelda Road, Rehoboth, Massachusetts 02769<br>Phone: 508.336.7600 Fax: 508.336.7707 | LWT8X10-16<br>FILE NAME: 324UWTL\WT8X10_DET.DWG<br>ISSUE DATE: November, 2004<br>www.rotondoprecastma.com | 8'-0" x 10'-0"x Varies<br>Utility Tank<br>Light Weight and Water Tight |

Copyright © 2004 Oldcastle Precast, Inc.

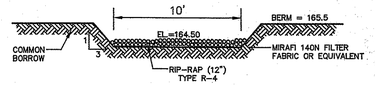



RIP-RAP NOTES:

1. RIP-RAP SHALL MEET THE SPECIFICATIONS OF SECTION M.10.03.2 (STONE FOR RIPRAP) IN THE LATEST STATE STANDARDS AND SPECIFICATIONS PUBLISHED FOR ROAD AND BRIDGE CONSTRUCTION.
   RIP-RAP REQUIREMENTS:
   - R-4 GRADED RIP-RAP STONE (4" MIN./14" MAX. IN DIAM.)
   - RIP-RAP SHALL BE PLACED ONE (1) FOOT IN DEPTH
   - BEDDING MATERIAL SHALL CONSIST OF 3/4" CRUSHED STONE AND PLACED 6" IN DEPTH UNDER FILTER FABRIC
2. DIMENSIONS MAY BE MODIFIED BY ENGINEER TO MEET FIELD CONDITIONS.

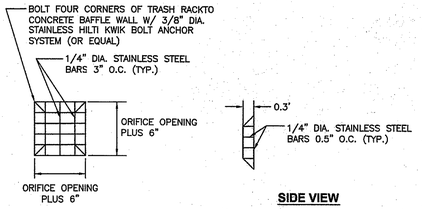
RIP-RAP AT FLARED END SECTIONS

NOT TO SCALE




EMERGENCY SPILLWAY DETAIL

NOT TO SCALE

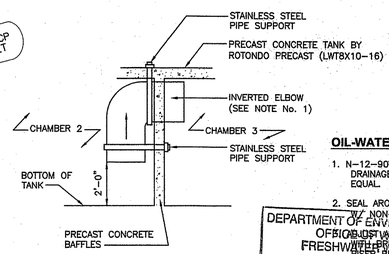



FRONT VIEW

SIDE VIEW

## TRASH RACK DETAIL

N.T.S.



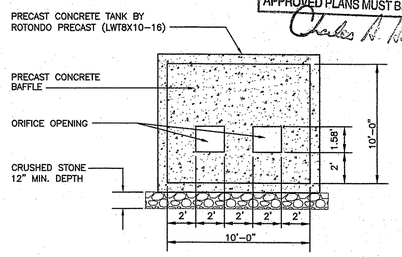

## OIL-WATER SEPARATOR NOTES

1. N-12-90° ELBOWS BY ADVANCED DRAINAGE SYSTEMS, INC. OR APPROVED EQUAL.
2. SEAL AROUND ALL PIPE OPENINGS W/ NON-SHRINK GROUT.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED SEP 17 2008 FILE # 08-0110
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

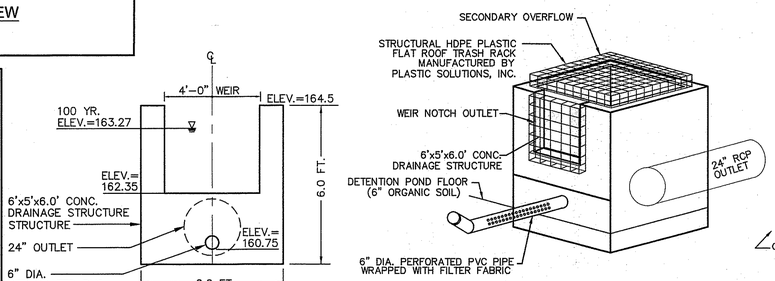
## PIPE SUPPORT DETAIL

N.T.S.




## PRECAST CONCRETE BAFFLE DETAIL

N.T.S.




PERSPECTIVE VIEW

OUTLET STRUCTURE

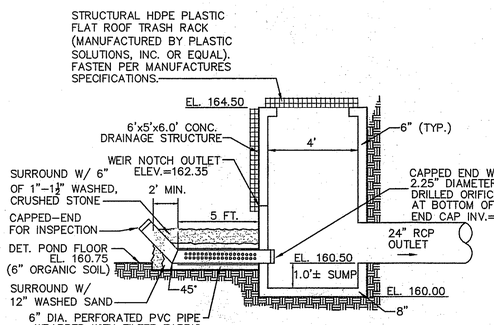
NOT TO SCALE




SECTION VIEW

OUTLET STRUCTURE

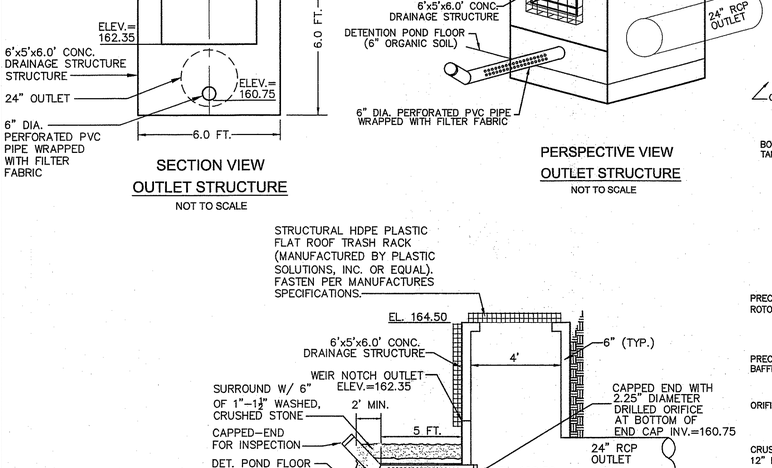
NOT TO SCALE




SECTION VIEW

OUTLET STRUCTURE

NOT TO SCALE




NOTES:

1. POND TO HAVE SEDIMENT BAY STORAGE VOLUME OF ± 3360 cu ft BOTTOM OF SEDIMENT BAY AREA TO BE AT ELEVATION 160.00 ft.
2. THE POND WILL HAVE A PERCOLATION RATE OF 10 MINUTES PER INCH WHEN MAINTAINED PROPERLY BY SEASONAL CLEANINGS.

DETENTION POND
CROSS-SECTION AA

SCALE: HORIZ. 1" = 30'
VERT. 1" = 3'

DETENTION POND DATA

| | ELEVATION (FT) | STORAGE VOLUME (CU.FT.) |
|---|---|---|
| 2 YR. STORM | 162.15 | 11,376 |
| 10 YR. STORM | 162.76 | 20,773 |
| 25 YR. STORM | 162.96 | 24,211 |
| 100 YR. STORM | 163.27 | 29,735 |

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Certification

Drawn by MAD

Checked by RDL

Revised on
JULY 18, 2008 – PER RIDEM COMMENTS
AUGUST 29, 2008 – PER RIDEM COMMENTS

CATALDO ASSOCIATES INC.
CIVIL ENGINEERS
1408 ATWOOD AVENUE (401) 453-3300
JOHNSTON, RI 02919 FAX: (401) 453-4117
ca@cataldoeng.com

50 Holden Street
Providence, Rhode Island 02908
Phone: (401) 272-1730
Fax: (401) 273-7156
E-mail: rgbinfo@rgb.net
www.rgb.net
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Architecture · Engineering · Interior Design

Project

# RHODE ISLAND FIRE ACADEMY

SEP - 8 2008

# EXETER, RI

Drawing Status

R.I.D.E.M. Submission

Issued On 4/08/2008

Sheet Contents

DETAILS - 2

Project Number. 5493-9008

Drawing No.

C106

Sheet 7 of 7

CATALDO ASSOCIATES INC. PROJECT NO.: 3148-02

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