

# GENERAL NOTES:

1. ALL WORK SHALL BE DONE IN STRICT COMPLIANCE WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES, STANDARD ORDINANCES, RULES AND REGULATIONS.
2. EXISTING UTILITIES AND STRUCTURES SHOWN HEREIN WERE OBTAINED FROM THE AVAILABLE RECORD DRAWINGS. THE LOCATION OF ALL UNDERGROUND UTILITIES ARE APPROXIMATE; THEIR ACTUAL LOCATION SHALL BE VERIFIED BY THE CONTRACTOR. THE CONTRACTOR SHALL CONTACT DIG SAFELY NEW YORK (URPA) AND ALL MUNICIPAL AGENCIES HAVING JURISDICTION SEVENTY-TWO (72) HOURS PRIOR TO ANY EXCAVATING AND/OR CONSTRUCTION. (1-800-962-7962 OR 811).
3. CONSTRUCTION OF ALL PROPOSED UTILITIES SHALL BEGIN AT ITS POINT OF CONNECTION TO THE EXISTING UTILITY OR AT THE LOWEST POINT IN THE SYSTEM. RIMS, GRATES, INVERTS, CLEARANCES AND LOCATION AT CROSSINGS SHALL BE VERIFIED PRIOR TO THE BEGINNING OF CONSTRUCTION. THE ENGINEER MUST BE NOTIFIED AT LEAST TWENTY-FOUR (24) HOURS IN ADVANCE OF ANY INSTALLATION TO BE ABLE TO PROVIDE OBSERVATION AS REQUIRED. THE CONTRACTOR SHALL KEEP A COMPLETE AND DETAILED RECORD OF ALL UNDERGROUND UTILITIES INSTALLED AND ENCOUNTERED SO THE ENGINEER IS ABLE TO USE THE RECORDS FOR THE PREPARATION OF RECORD DRAWINGS AS REQUIRED BY THE LOCAL MUNICIPALITY.
4. WHEN CROSSING EXISTING UTILITIES WITH PROPOSED UTILITIES, CONTRACTOR SHALL COORDINATE SUCH CROSSINGS WITH THE RESPECTIVE MUNICIPAL AGENCIES AND UTILITY COMPANIES HAVING JURISDICTION OVER THE EXISTING UTILITIES.
5. ALL PROPOSED UTILITIES AND APPURTENANCES SHALL BE CONSTRUCTED IN COMPLIANCE WITH THE LOCAL MUNICIPALITY'S CODES AND REGULATIONS GOVERNING THE INSTALLATION OF SUCH UTILITIES.
6. THE ENGINEER RESERVES THE RIGHT TO EXAMINE ANY WORK DONE ON THIS PROJECT AT ANY TIME TO MUNICIPAL AGENCIES HAVING JURISDICTION OVER THE REQUIREMENTS OF THE CONTRACT DOCUMENTS, AS INTENDED AND INTERPRETED BY THE ENGINEER.
7. MISCELLANEOUS WORK NOT SPECIFICALLY SHOWN ON THE CONTRACT DRAWINGS SUCH AS PATCHING, BLOCKING, TRIMMING, ETC., SHALL BE PERFORMED AS REQUIRED TO MAKE THE WORK COMPLETE AND FUNCTIONAL.
8. ALL DISTURBED, NON-SURFACED, AREAS SHALL RECEIVE FERTILIZER, TOPSOIL, SEED, AND MULCH, EXCEPT AS OTHERWISE NOTED.
9. THE CONTRACTOR SHALL:
  - 9.1. VERIFY ALL CONDITIONS IN THE FIELD PRIOR TO COMMENCEMENT OF WORK AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
  - 9.2. EXAMINE THE SITE AND INCLUDE IN THEIR WORK THE EFFECT OF ALL EXISTING CONDITIONS ON THEIR WORK.
  - 9.3. PROVIDE AND INSTALL ALL MATERIALS AND PERFORM ALL WORK, IN ACCORDANCE WITH RECOGNIZED GOOD STANDARD PRACTICES.
  - 9.4. HOLD THE OWNER HARMLESS AGAINST ANY AND ALL CLAIMS ARISING FROM WORK DONE BY THE CONTRACTOR ON THE SITE.
10. WATER MAINS AND APPURTENANCES SHALL BE INSTALLED, TESTED, AND ACCEPTED IN ACCORDANCE WITH THE TOWN OF BETHLEHEM DEPARTMENT OF PUBLIC WORKS RULES AND REGULATIONS.
11. SANITARY SEWERS SHALL BE INSTALLED AND ACCEPTED IN ACCORDANCE WITH THE TOWN OF BETHLEHEM DEPARTMENT OF PUBLIC WORKS RULES AND REGULATIONS.
12. ALL BACKFILL USED IN TRENCHES WITHIN ROADWAY, ACCESS DRIVE, AND PARKING AREAS SHALL BE PLACED IN MAXIMUM SIX (6) INCH LIFTS AND COMPACTED BY MEANS OF A MECHANICAL COMPACTOR BETWEEN LIFTS, UNLESS OTHERWISE NOTED.
13. WHEN BACKFILLING AROUND PROPOSED OR EXISTING STRUCTURES, MATERIAL SHALL BE PLACED IN MAXIMUM SIX (6) INCH LIFTS AND COMPACTED BY MEANS OF A MECHANICAL COMPACTOR BETWEEN LIFTS.
14. CONTRACTOR SHALL ADJUST RIM/TOP OF FRAME ELEVATIONS TO PROPOSED FINISHED GRADES FOR ALL UTILITIES LOCATED WITHIN LIMITS OF PROPOSED WORK.
15. NO SUMP PUMP, CELLAR, OR FOOTING DRAINS SHALL BE CONNECTED, TEMPORARILY OR PERMANENTLY, TO ANY SANITARY SEWER.
16. SEWER/WATER CROSSINGS - UNLESS OTHERWISE NOTED ON THE PLANS, SEWERS SHALL BE LAID AT LEAST TEN FEET (10') HORIZONTALLY FROM ANY EXISTING OR PROPOSED WATER MAIN. VERTICAL SEPARATION SHALL BE MAINTAINED TO PROVIDE A MINIMUM OF EIGHTEEN INCHES (18") BETWEEN THE SEWER AND WATER MAIN CROSSINGS.
17. CONTRACTOR SHALL PROTECT ALL SURFACE WATERS FROM SILTATION DURING CONSTRUCTION WITH APPROPRIATE MEASURES INCLUDING, BUT NOT LIMITED TO, APPLYING TOPSOIL, SEED, AND MULCH TO DISTURBED AREA AND INSTALLING SILT FENCING AROUND WORK.
18. ALL WATER MAINS AND APPURTENANCES SHALL COMPLY WITH THEIR RESPECTIVE AWWA STANDARDS.
19. PRESSURE AND LEAKAGE TESTS SHALL BE PERFORMED ON THE WATER SYSTEM, AND RESULTS MUST CONFORM TO ALL APPROPRIATE AWWA STANDARDS AND RESPECTIVE MUNICIPAL STANDARDS. PRESSURE TESTING SHALL BE 1.5 TIMES THE WORKING PRESSURE OR A MINIMUM OF 150 PSI, WHICHEVER IS GREATEST, UNLESS THE SYSTEM COMPONENTS ARE RATED FOR LESS.

## DEMOLITION NOTES:

1. ALL DEMOLITION MATERIALS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES, INCLUDING: TOWN OF BETHLEHEM, NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION AND ALL OTHER AGENCIES.
2. ALL DEMOLITION MATERIALS SHALL BE DISPOSED OF AT AN APPROVED AND PERMITTED FACILITY, FOR THEIR RESPECTIVE MATERIAL.
3. CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH ALL REQUIRED PERMITS.
4. EXISTING UTILITY CONNECTIONS (WATER, SANITARY SEWER, GAS, ELECTRIC, TELEPHONE, CABLE) SHALL BE TERMINATED AT THE SERVICE MAIN IN ACCORDANCE WITH UTILITY COMPANY REQUIREMENTS. ALL ON-SITE PIPING, WIRING AND CONDUIT SHALL BE REMOVED AS INDICATED ON SHEET C-090, "DEMOLITION PLAN."
5. CONTRACTOR IS RESPONSIBLE TO CONTACT AND COORDINATE ALL WORK WITH UTILITY COMPANIES.
6. CONTRACTOR IS RESPONSIBLE TO MINIMIZE THE AMOUNT OF DUST AND NOISE POLLUTION GENERATED DURING DEMOLITION OPERATIONS.
7. IF HAZARDOUS WASTE IS ENCOUNTERED DURING DEMOLITION WORK, THE CONTRACTOR SHALL CEASE WORK IMMEDIATELY, CONTACT THE APPROPRIATE REGULATORY AGENCIES, AND CONTACT THE DESIGN ENGINEER. THE CONTRACTOR SHALL COMPLY WITH ALL JURISDICTIONAL REQUIREMENTS. HAZARDOUS WASTE MUST BE REMOVED BY A PERMITTED HAZARDOUS WASTE CONTRACTOR TO A PERMITTED HAZARDOUS WASTE SITE.
8. DEMOLITION SHALL INCLUDE, BUT IS NOT LIMITED TO, REMOVAL OF: FOUNDATION WALLS, FLOOR SLABS, SURFACE PAVEMENTS, WALLS, ROOFS AND ALL OTHER STRUCTURES NOT SCHEDULED TO REMAIN. BASES SHALL NOT BE REMOVED UNLESS SPECIFICALLY CALLED FOR ON SHEET C-090, "DEMOLITION PLAN."
9. ALL DEPRESSIONS IN THE GROUND SURFACE RESULTING FROM DEMOLITION WORK SHALL BE BACKFILLED WITH CLEAN, GRANULAR FILL MATERIALS MEETING NEW YORK STATE DEPARTMENT OF TRANSPORTATION TYPE 4 SPECIFICATIONS. FILL SHALL BE COMPLETED TO MINIMUM 90% MODIFIED PROCTOR DENSITY AND PLACED IN 12" LIFTS MAXIMUM.
10. TREE PRESERVATION AND PROTECTION: A MINIMUM TWO-FOOT (2') HIGH PROTECTIVE FENCE WILL BE ERRECTED AROUND ALL LARGE TREES AT THE DRIP LINE TO PREVENT DAMAGE DURING CONSTRUCTION. SILT FENCE MATERIALS MAY BE USED FOR THIS PURPOSE. THE LARGE TREES TO BE PROTECTED WILL BE FIELD IDENTIFIED.

# EROSION & SEDIMENT CONTROL PLAN NOTES:

1. EROSION CONTROLS SHALL BE AS SHOWN ON THE OVERALL/EROSION CONTROL PLAN.
2. ALL PROPOSED EROSION CONTROLS SHALL BE INSTALLED PRIOR TO BEGINNING OF CONSTRUCTION. FINAL LOCATION AND CONSTRUCTION SHALL BE REVIEWED BY THE ENGINEER.
3. STAKEOUT OF ALL PROPOSED EROSION CONTROLS SHALL BE DONE BY A NEW YORK STATE LICENSED PROFESSIONAL SURVEYOR.
4. REMOVE EROSION CONTROLS ONLY UNDER THE AUTHORIZATION OF THE ENGINEER.
5. CONTRACTOR MUST PROTECT ALL SURFACE WATERS FROM SILTATION DURING CONSTRUCTION WITH APPROPRIATE MEASURES INCLUDING, BUT NOT LIMITED TO, PLACING STRAW BALES AND SILT FENCING AROUND WORK.
6. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIRED. ADDITIONAL MEASURES MAY BE REQUIRED, BASED ON FIELD CONDITIONS, DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
7. EROSION AND SEDIMENT METHODS SHALL COMPLY WITH "THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL," LATEST EDITION.
8. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAINFALL EVENT, THE CONTRACTOR SHALL REPAIR THE EROSION AND SEDIMENT CONTROL DEVICES AS NECESSARY AND AS DIRECTED BY THE ENGINEER.
9. ALL TEMPORARY EXPOSED FACES OF EARTH CUTS AND FILLS SHALL BE VEGETATED OR PROTECTED FROM EROSION IMMEDIATELY UPON COMPLETION OF EARTHWORK OR IF WORK IN THESE AREAS IS TO BE SUSPENDED FOR FOURTEEN (14) DAYS. PROVISIONS SHALL BE MADE IN ORDER TO MINIMIZE THE AREA TO BE DISTURBED AND TO PREVENT THE CONCENTRATION OF STORM WATER RUNOFF AND EROSION OF DISTURBED EARTH SLOPES.
10. UPON COMPLETION OF GRADING OPERATIONS THE DISTURBED AREAS SHALL BE STABILIZED BY THE FOLLOWING METHODS, DEPENDING UPON THE CLASSIFICATION OF THE AREA AS EITHER TO RECEIVE PERMANENT OR TEMPORARY SEEDING:
 

**SEED BED PREPARATION**

  - 10.1. LIME TO A PH OF 6.0
  - 10.2. FERTILIZE WITH 600 LBS OF 5-10-10 OR EQUIVALENT PER ACRE (14 LBS./1000 SQ. FT.) THE SOIL AMENDMENTS SHALL BE WORKED INTO THE SEED BED WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT.

**TEMPORARY SEEDINGS**

ANNUAL RYEGRASS SEED SHALL BE APPLIED AT A RATE OF 0.9 LBS PER 1000 SQUARE FEET. USE WINTER RYE IF SEEDING DURING OCTOBER/NOVEMBER.

**PERMANENT SEEDINGS**

SEEDING SHALL CONSIST OF 1 LB PER 1000 SQUARE FEET OF SEED CONTAINING AT LEAST 50% FAST SPROUTING PERENNIAL RYE GRASS AND 10% PINK CLOVER OR ALFALFA. THE SEED MIX SHALL BE SPREAD BY UTILIZING A CYCLONE SEEDER, DRILL, OR OUTDRIPPER. SEED DEPTH SHALL BE FROM 1/4 TO 1/2 INCH DEEP. SEED MAY ALSO BE APPLIED BY APPROPRIATE HYDROSEEDING METHODS. ALL SEEDED AREAS SHALL BE MULCHED WITH STRAW MULCH APPLIED AT RATE OF 2 TON/ACRE (90 LBS PER 1000 SQUARE FEET) AND ANCHORED WITH "TERRA-TACK" OR EQUIVALENT.

  11. IF STABILIZATION BY SEEDING CANNOT OCCUR DURING THE RECOMMENDED SEEDING PERIODS, TOPSOIL, FILL AND EXCAVATED MATERIALS AREAS SHALL BE TEMPORARILY STABILIZED WITH ANCHORED MULCH UNTIL SUCH TIME AS EFFECTIVE SEEDING CAN OCCUR.
  12. STOCKPILE MATERIALS SHALL NOT BE LOCATED WITHIN TWENTY-FIVE FEET (25') OF ANY DITCH, STREAM, OR OTHER SURFACE WATER BODY.
  13. IF CONSTRUCTION IS SUSPENDED, OR SECTIONS COMPLETED, AREAS SHALL BE SEEDDED AND/OR MULCHED IMMEDIATELY.
  14. GRADING DISTURBANCE IS LIMITED TO A MAXIMUM OF FIVE (5) ACRES. IF A GREATER DISTURBANCE IS REQUIRED, THE CONTRACTOR SHALL SUBMIT A GRADING DISTURBANCE PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL. AT A MINIMUM, BI-WEEKLY INSPECTIONS BY THE ENGINEER SHALL BE REQUIRED IF THE FIVE (5) ACRE MINIMUM IS EXCEEDED.
  15. SEDIMENT SHALL BE REMOVED FROM TRAPS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE BASIN DEPTH.
  16. COMPLY WITH THE APPLICABLE STIPULATIONS SET FORTH IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT BY L. SIPPERLY & ASSOCIATES, L.L.C.

# OUTFALL CONTROL STRUCTURE NOTES:

1. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST EDITION OF THE AMERICAN INSTITUTE OF STEEL CONSTRUCTION FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS.
2. WELDING SHALL CONFORM TO AMERICAN WELDING SOCIETY-STRUCTURAL WELDING CODE, LATEST EDITION.
3. STAKEOUT OF ALL PROPOSED EROSION CONTROLS SHALL BE DONE BY A NEW YORK STATE LICENSED PROFESSIONAL SURVEYOR.
4. REMOVE EROSION CONTROLS ONLY UNDER THE AUTHORIZATION OF THE ENGINEER.
5. CONTRACTOR MUST PROTECT ALL SURFACE WATERS FROM SILTATION DURING CONSTRUCTION WITH APPROPRIATE MEASURES INCLUDING, BUT NOT LIMITED TO, PLACING STRAW BALES AND SILT FENCING AROUND WORK.
6. EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THIS PLAN ARE THE MINIMUM REQUIRED. ADDITIONAL MEASURES MAY BE REQUIRED, BASED ON FIELD CONDITIONS, DURING CONSTRUCTION AS DIRECTED BY THE ENGINEER.
7. EROSION AND SEDIMENT METHODS SHALL COMPLY WITH "THE NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL," LATEST EDITION.
8. EROSION AND SEDIMENT CONTROL DEVICES SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAINFALL EVENT, THE CONTRACTOR SHALL REPAIR THE EROSION AND SEDIMENT CONTROL DEVICES AS NECESSARY AND AS DIRECTED BY THE ENGINEER.
9. ALL TEMPORARY EXPOSED FACES OF EARTH CUTS AND FILLS SHALL BE VEGETATED OR PROTECTED FROM EROSION IMMEDIATELY UPON COMPLETION OF EARTHWORK OR IF WORK IN THESE AREAS IS TO BE SUSPENDED FOR FOURTEEN (14) DAYS. PROVISIONS SHALL BE MADE IN ORDER TO MINIMIZE THE AREA TO BE DISTURBED AND TO PREVENT THE CONCENTRATION OF STORM WATER RUNOFF AND EROSION OF DISTURBED EARTH SLOPES.
10. UPON COMPLETION OF GRADING OPERATIONS THE DISTURBED AREAS SHALL BE STABILIZED BY THE FOLLOWING METHODS, DEPENDING UPON THE CLASSIFICATION OF THE AREA AS EITHER TO RECEIVE PERMANENT OR TEMPORARY SEEDING:
 

**SEED BED PREPARATION**

  - 10.1. LIME TO A PH OF 6.0
  - 10.2. FERTILIZE WITH 600 LBS OF 5-10-10 OR EQUIVALENT PER ACRE (14 LBS./1000 SQ. FT.) THE SOIL AMENDMENTS SHALL BE WORKED INTO THE SEED BED WITH A DISC, SPRINGTOOTH HARROW, OR OTHER SUITABLE EQUIPMENT.

**TEMPORARY SEEDINGS**

ANNUAL RYEGRASS SEED SHALL BE APPLIED AT A RATE OF 0.9 LBS PER 1000 SQUARE FEET. USE WINTER RYE IF SEEDING DURING OCTOBER/NOVEMBER.

**PERMANENT SEEDINGS**

SEEDING SHALL CONSIST OF 1 LB PER 1000 SQUARE FEET OF SEED CONTAINING AT LEAST 50% FAST SPROUTING PERENNIAL RYE GRASS AND 10% PINK CLOVER OR ALFALFA. THE SEED MIX SHALL BE SPREAD BY UTILIZING A CYCLONE SEEDER, DRILL, OR OUTDRIPPER. SEED DEPTH SHALL BE FROM 1/4 TO 1/2 INCH DEEP. SEED MAY ALSO BE APPLIED BY APPROPRIATE HYDROSEEDING METHODS. ALL SEEDED AREAS SHALL BE MULCHED WITH STRAW MULCH APPLIED AT RATE OF 2 TON/ACRE (90 LBS PER 1000 SQUARE FEET) AND ANCHORED WITH "TERRA-TACK" OR EQUIVALENT.

  11. IF STABILIZATION BY SEEDING CANNOT OCCUR DURING THE RECOMMENDED SEEDING PERIODS, TOPSOIL, FILL AND EXCAVATED MATERIALS AREAS SHALL BE TEMPORARILY STABILIZED WITH ANCHORED MULCH UNTIL SUCH TIME AS EFFECTIVE SEEDING CAN OCCUR.
  12. STOCKPILE MATERIALS SHALL NOT BE LOCATED WITHIN TWENTY-FIVE FEET (25') OF ANY DITCH, STREAM, OR OTHER SURFACE WATER BODY.
  13. IF CONSTRUCTION IS SUSPENDED, OR SECTIONS COMPLETED, AREAS SHALL BE SEEDDED AND/OR MULCHED IMMEDIATELY.
  14. GRADING DISTURBANCE IS LIMITED TO A MAXIMUM OF FIVE (5) ACRES. IF A GREATER DISTURBANCE IS REQUIRED, THE CONTRACTOR SHALL SUBMIT A GRADING DISTURBANCE PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL. AT A MINIMUM, BI-WEEKLY INSPECTIONS BY THE ENGINEER SHALL BE REQUIRED IF THE FIVE (5) ACRE MINIMUM IS EXCEEDED.
  15. SEDIMENT SHALL BE REMOVED FROM TRAPS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE-HALF THE BASIN DEPTH.
  16. COMPLY WITH THE APPLICABLE STIPULATIONS SET FORTH IN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) PREPARED FOR THIS PROJECT BY L. SIPPERLY & ASSOCIATES, L.L.C.

## SOIL RESTORATION REQUIREMENTS

TYPE OF SOIL DISTURBANCE	SOIL RESTORATION REQUIREMENTS	COMMENTS/EXAMPLE
NO SOIL DISTURBANCE	RESTORATION NOT PERMITTED	PRESERVATION OF NATURAL FEATURES
MINIMAL SOIL DISTURBANCE	RESTORATION NOT REQUIRED	CLEARING AND GRUBBING
AREAS WHERE TOPSOIL IS STRIPPED ONLY - NO CHANGE IN GRADE	HSG A & B: APPLY SIX INCHES (6") OF TOPSOIL HSG C & D: AERATE* AND APPLY SIX INCHES (6") OF TOPSOIL	PROTECT AREA FROM ANY ONGOING CONSTRUCTION ACTIVITIES
AREAS OF CUT OR FILL	HSG A & B: AERATE* AND APPLY SIX INCHES (6") OF TOPSOIL HSG C & D: APPLY FULL SOIL RESTORATION*	
HEAVY TRAFFIC AREAS ON SITE (ESPECIALLY IN A ZONE 5-25 FEET AROUND BUILDINGS BUT NOT WITHIN A 5 FOOT PERIMETER AROUND FOUNDATION WALLS)	APPLY FULL SOIL RESTORATION** (USE-COMPACTION AND COMPOST ENHANCEMENT)	KEEP CONSTRUCTION EQUIPMENT FROM CROSSING THESE AREAS. TO PROTECT NEWLY INSTALLED PRACTICE FROM ANY ONGOING CONSTRUCTION ACTIVITIES CONSTRUCT A SINGLE PHASE OPERATION FENCE AREA
AREAS WHERE RUNOFF REDUCTION OR INfiltration PRACTICES ARE APPLIED	RESTORATION NOT REQUIRED, BUT MAY BE APPLIED TO ENHANCE THE REDUCTION SPECIFIED FOR APPROPRIATE PRACTICE	
REDEVELOPMENT PROJECTS	SOIL RESTORATION** IS REQUIRED ON REDEVELOPMENT PROJECTS IN AREAS WHERE EXISTING IMPERVIOUS AREA WILL BE CONVERTED TO PERVIOUS AREA.	

\* AERATION INCLUDES THE USE OF MACHINES SUCH AS TRACTOR-DRAWN IMPLEMENTS WITH COULTERS MAKING A NARROW SLIT IN THE SOIL, A ROLLER WITH MANY SPINES MAKING INDENTATION IN THE SOIL, OR PROMOS WHICH FUNCTION LIKE A MINI-SUBSOILER.

\*\* SOIL RESTORATION PER "DEEP RIPPING AND DE-COMPACTION, DEC 2008." [http://www.dec.ny.gov/docs/water\\_pdf/waterdec0808.pdf](http://www.dec.ny.gov/docs/water_pdf/waterdec0808.pdf)

## SEPTIC SYSTEM NOTES AND SPECIFICATIONS

1. DISTRIBUTION BOX TO BE PRECAST CONCRETE WITH REMOVABLE COVER FOR CLEANING ACCESS. BOX TO HAVE SUFFICIENT OUTLETS FOR LATERALS, AND TO BE CONSTRUCTED WITH AN INVERTOR BATTLE AND SPEED LEVELERS\*. AS MANUFACTURED BY TUF-TITE OR AN APPROVED EQUIVALENT. DISTRIBUTION BOX SHALL BE MANUFACTURED BY FORT MILLER CO. OR EQUIVALENT.
1. SEPTIC TANK SHALL HAVE MINIMUM LIQUID CAPACITY OF 1,250 GALLONS. CONSTRUCTION SHALL BE PRECAST CONCRETE AS MANUFACTURED BY FORT MILLER CO. OR AN APPROVED EQUIVALENT. SEPTIC TANK SHALL BE CAPABLE OF HANDLING H-20 LOADING.
1. GREASE TRAP SHALL HAVE MINIMUM LIQUID CAPACITY OF 1,250 GALLONS. CONSTRUCTION SHALL BE PRECAST CONCRETE AS MANUFACTURED BY FORT MILLER CO. OR AN APPROVED EQUIVALENT. SEPTIC TANK SHALL BE CAPABLE OF HANDLING H-20 LOADING.
1. BUILDING TO SEPTIC TANK AND GREASE TRAP: 4" SOLID PIPE, TIGHT JOINTS, MIN. SLOPE 1/4" PER FOOT. (PVC, CAST IRON)
2. GREASE TRAP TO SEPTIC TANK AND SEPTIC TANK TO PUMP STATION: 4" SOLID PIPE, TIGHT JOINTS, MIN. SLOPE 1/8" PER FOOT. (PVC, CAST IRON)
3. PUMP STATION TO DISTRIBUTION BOX: FORCE MAIN CONNECTION, 1-1/2" DIA. HDPE (SDR 11, I.D. 1.530")
4. DISTRIBUTION BOX TO TILE FIELD LATERALS: 4" SOLID PIPE, TIGHT JOINTS, MIN. SLOPE 1/8" PER FOOT (PVC, CAST IRON). FIRST 5 FEET OF DISCHARGE PIPE FROM DISTRIBUTION BOX SHALL BE INSTALLED LEVEL.
5. TILE FIELD LATERALS: 4" PERFORATED PVC PIPE SLOPE 1/32" TO 1/16" PER FOOT.
- GENERAL NOTES:
  1. SURFACE OF THE WASTEWATER DISPOSAL AREA SHALL BE GRADED IN A MANNER SO AS TO SHED SURFACE RUNOFF. AREA(S) ADJACENT TO THE WASTEWATER DISPOSAL AREA SHALL BE GRADED TO DIRECT SURFACE FLOW AWAY FROM THE DISPOSAL AREA.
  2. SURFACE OF THE WASTEWATER DISPOSAL AREA TO BE GRASSED. NO HEAVY EQUIPMENT OR VEHICULAR TRAFFIC IS TO BE ALLOWED ON THE TILE FIELD.
  3. MINIMUM HORIZONTAL SEPARATION BETWEEN WATER AND SANITARY LINES SHALL BE 10'-0".
  4. 20' MINIMUM HORIZONTAL SEPARATION SHALL BE BETWEEN THE BUILDING AND THE TILE FIELD LATERALS.
  5. 10' MINIMUM HORIZONTAL SEPARATION SHALL BE BETWEEN PROPERTY LINE AND THE TILE FIELD LATERALS.
  6. TILE FIELD LATERALS SHALL BE 4" DIAMETER PERFORATED PIPE OF PVC OR BUTYRATED FIBER, COILED OR FLEXIBLE PERFORATED UNDERDRAIN PIPE SHALL NOT BE USED.
  7. MINIMUM HORIZONTAL SEPARATION BETWEEN WELL OR WATER SUCTION LINE AND SEWERAGE UNITS:
    - 7.1. TILE FIELD LATERALS: 100'
    - 7.2. DISTRIBUTION BOX: 100'
    - 7.3. SEPTIC TANK: 50'
  8. EXISTING GROUND SURFACE IN TILE FIELD AREA TO BE THOROUGHLY CLEARED, GRUBBED AND TOPSOIL REMOVED PRIOR TO THE PLACEMENT OF ANY FILL MATERIAL.
  9. CONSTRUCTION OF EFFLUENT PUMP\* SYSTEM WILL BE REQUIRED FOR INSTALLATION WHERE FINISHED FLOOR ELEVATION OF EXISTING AND/OR PROPOSED BUILDINGS IS BELOW ELEVATION OF THE WASTEWATER DISPOSAL AREA. VOLUME FOR EACH DISE SHALL NOT EXCEED 75% OF AVAILABLE VOLUME IN DISTRIBUTION LATERALS.
  10. COMPLETED WASTEWATER DISPOSAL SYSTEM COMPONENTS SHALL BE INSPECTED BY A REPRESENTATIVE OF ALBANY COUNTY HEALTH DEPARTMENT AND THE DESIGN ENGINEER DURING PUMP STATION/DOSING TANK PERFORMANCE TEST UTILIZING WATER AND PRIOR TO BACKFILLING BUILDING SEWERS, SEPTIC TANK, SEPTIC DISCHARGE PIPES, ALL CONCRETE STRUCTURES, DISCHARGE LINES, DISTRIBUTION SYSTEM.
  11. SHOP DRAWINGS AND MATERIAL CERTIFICATION FOR ALL COMPONENTS OF THE WASTEWATER DISPOSAL SYSTEM SHALL BE SUBMITTED FOR APPROVAL TO THE ENGINEER.

## INSPECTION NOTE

1. THE SEPTIC SYSTEM SHALL BE INSPECTED AND APPROVED BY A REPRESENTATIVE OF THE ALBANY COUNTY HEALTH DEPARTMENT, ACCOMPANIED BY THE DESIGN ENGINEER, AT VARIOUS TIMES DURING CONSTRUCTION. BEFORE CONSTRUCTION COMMENCES OR AT THE FOLLOWING POINTS:
  - A. BEFORE BACKFILLING BUILDING SEWERS, SEPTIC TANKS AND GREASE TRAPS, SEPTIC TANK DISCHARGE PIPES, ALL CONCRETE STRUCTURES (INCLUDING PUMP STATIONS), DISCHARGE LINES, ETC.
  - B. DURING PUMP STATION/DOSING TANK PERFORMANCE TESTS, UTILIZING WATER.
  - C. PRIOR TO BACKFILLING DISTRIBUTION SYSTEM, ABSORPTION TRENCHES.

THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 5 DAYS PRIOR TO HAVING THE RESPECTIVE WORK COMPLETE AND READY FOR INSPECTION. THE ENGINEER WILL COORDINATE WITH THE ALBANY COUNTY DEPARTMENT OF HEALTH.

## TOWN STANDARD NOTES:

1. CONSTRUCTION FENCE MUST BE INSTALLED ALONG WETLAND BOUNDARIES AND BUFFERS WITHIN 25 FT OF ANY ACTIVITY.
2. ALL DISTURBED SOILS MUST BE STABILIZED WITH A MINIMUM COVER OF MULCH WITHIN 14 DAYS OF LAST ACTIVITY.
3. ALL E&S MEASURES MUST BE INSPECTED AND MAINTAINED IN COMPLIANCE WITH §128-49 OF THE TOWN CODE.
4. ALL CUT & FILL SLOPES WITHIN THE AREA OF DISTURBANCE MUST HAVE A MAXIMUM SLOPE OF 3:1 (H:V) OR 33%.
5. ALL DRIVEWAYS AND WALKWAYS CONSTRUCTED ON THE PROPERTY MUST NOT EXCEED A MAXIMUM SLOPE OF 10%.
6. FINAL GRADING MUST ENSURE POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES WITH A MINIMUM SLOPE OF 1%.
7. TYPICALLY, GARAGE FINISHED FLOOR (GFF) IS TO BE 18" ABOVE THE EXISTING ROADWAY CENTERLINE ELEVATION.
8. NOTIFY THE ENGINEERING DIVISION OF ANY DEVIATIONS IN BUILDING LOCATION OR GRADE FROM APPROVED PLANS.

## BASIS FOR SEPTIC SYSTEM DESIGN:

WATER CONSUMPTION DATA WAS COLLECTED FROM A SIMILAR, EXISTING FACILITY OWNED AND OPERATED BY AFIRM SPORTS, INC. LOCATED IN COLONIE, NEW YORK. THE EXISTING COLONIE FACILITY IS TWICE THE SIZE OF THE CURRENTLY PROPOSED BETHLEHEM FACILITY. DATA WAS FURNISHED BY THE OWNER AND COLLECTED OVER TWO (2), SIX (6) MONTH PERIODS.

### 1<sup>ST</sup> SIX-MONTH PERIOD

[12/03/2012 - 06/07/2013]  
104,550 GALLONS = 4,021 GAL./WK.

### 2<sup>ND</sup> SIX-MONTH PERIOD

[05/31/2012 - 12/03/2012]  
110,130 GALLONS = 4,236 GAL./WK.

AVERAGE WEEKLY FLOW RATE =  $(4021 + 4236) / 2 = 4,128$  GAL./WK.

THE EXISTING COLONIE FACILITY OPERATES FOR A TOTAL OF 41 1/2 HOURS A WEEK. THE COLONIE FACILITY IS OPEN FOR 34 HOURS MONDAY THROUGH FRIDAY AND 12 HOURS SATURDAY AND SUNDAY. USING THIS INFORMATION A PEAK DAILY FLOW RATE IS ESTIMATED AS FOLLOWS:

### EXISTING COLONIE FACILITY

AVG. WEEKEND DAY FLOW RATE:  $(12 \text{ HR.} \times 4,128 \text{ GAL./WK.}) / 41.5 \text{ HR./WK.} = 1,194$  GPD

### PROPOSED BETHLEHEM FACILITY

(1/2 SIZE OF COLONIE FACILITY)

AVG. WEEKEND DAY FLOW RATE:  $1,194 \text{ GPD} \times 0.5 = 597$  GPD

\* DATA COLLECTED FROM SIMILAR FACILITY INCLUDES BATHROOMS, LOCKER ROOM WITH SHOWERS, AND FOOD PREPARATION. EXISTING FACILITY FLOWS TWICE THE FLOOR AREA OF THE PROPOSED FACILITY AND SERVES TWICE AS MANY PATRONS.

\*\* PROPOSED FACILITY WILL NOT HAVE SHOWERS.

## ABBREVIATIONS

<p>Ø CENTERLINE</p> <p>φ DIAMETER</p> <p>A.C.I. AMERICAN CONCRETE INSTITUTE</p> <p>A.S.T.M. AMERICAN SOCIETY OF TESTING</p> <p>A.W.W.A. AMERICAN WATER WORKS</p> <p>A.D.B.E. AS ORDERED BY ENGINEER</p> <p>B.C. BOTTOM OF CURB</p> <p>B.M. BENCHMARK</p> <p>BUILDING</p> <p>C.I. CAST IRON</p> <p>C.B. CATCH BASIN</p> <p>C.M.P. CORRUGATED METAL PIPE</p> <p>C.O. CLEAN-OUT</p> <p>CONC. CONCRETE</p> <p>DK. DARK</p> <p>D.W.L. DASHED WHITE LINE</p> <p>D.Y.L. DOUBLE YELLOW LINE</p> <p>DIA. DIAMETER</p> <p>DWG. DRAWING</p> <p>E.A. EACH</p> <p>E.N.C. ENGINEER-IN-CHARGE</p> <p>ELEC. ELECTRICAL</p> <p>ELEV. ELEVATION</p> <p>EX. EXISTING</p> <p>F.F.E. FINISHED FLOOR ELEVATION</p> <p>FT. FEET (OR FOOT)</p> <p>GALV. GALVANIZED</p> <p>G.P.D. GALLONS PER DAY</p> <p>G.F.F. GARAGE FINISH FLOOR</p> <p>H.C. HANDICAPPED</p> <p>HDPE. HIGH DENSITY POLYETHYLENE</p> <p>HOR. HORIZONTAL</p> <p>HT. HEIGHT</p> <p>INCL. INCLUDED (IN)</p> <p>INF. INFILTRATION</p> <p>I.D. INSIDE DIAMETER</p> <p>J.B. JUNCTION BOX</p> <p>K.O. KNOCK-OUT</p> <p>L.F. LINEAR FEET</p> <p>LI. LIGHT</p> <p>M. METERS</p> <p>MANHOLE MANHOLE</p> <p>MIN. MINIMUM</p> <p>NYSDDEC. NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION</p> <p>N.O.M. NOMINAL</p> <p>N.I.C. NOT IN CONTRACT</p> <p>N.T.S. NOT TO SCALE</p> <p>NO. NUMBER</p> <p>P.M.T. PAVEMENT</p> <p>PERC. PERCOLATION</p> <p>P.V.C. POLYVINYL CHLORIDE</p> <p>P.S.I. POUNDS PER SQUARE INCH</p> <p>QTY. QUANTITY</p> <p>R.C.P. REINFORCED CONCRETE PIPE</p> <p>R.O.D. ROOF DRAIN</p> <p>REF. REFER TO REFERENCE</p> <p>SAN. SANITARY SEWER</p> <p>ST. STORM SEWER</p> <p>S.W.L. SOLID WHITE LINE</p> <p>S.Y.L. SOLID YELLOW LINE</p> <p>S.T.D. STANDARD DIMENSION RATIO</p> <p>STA. STATION</p> <p>SQ. FT. SQUARE FEET</p> <p>SWPPP. STORMWATER POLLUTION PREVENTION PLAN</p> <p>T.O.P. TOP OF CURB</p> <p>T.W. TOP OF WALL</p> <p>TYP. TYPICAL</p> <p>V.F.F. VERIFY IN FIELD</p> <p>W.F. WELDED WIRE FABRIC</p> <p>W/ WITH</p> <p>W/O WITHOUT</p>	<p>Ø R.F. IRON ROD FOUND</p> <p>□ FOUND CONCRETE MONUMENT</p> <p>— PROPERTY LINE</p> <p>— OVERHEAD ELECTRIC LINE</p> <p>— SANITARY SEWER</p> <p>— WATER LINE</p> <p>— GAS MAIN</p> <p>— WATER VALVE</p> <p>— HYDRANT</p> <p>— UTILITY POLE</p> <p>— INTERMEDIATE CONTOUR</p> <p>— SPOT ELEVATION</p> <p>— STREAM</p> <p>— EDGE OF WOODS</p> <p>— SANITARY MANHOLE</p> <p>— CATCH BASIN</p> <p>— DECIDUOUS TREE</p> <p>— CONIFEROUS TREE</p> <p>— SOIL BORING</p> <p>— WETLAND FLAG</p> <p>— TEST PIT</p> <p>— SPOT ELEVATION</p> <p>— CHECK DAM</p> <p>— INLET PROTECTION</p> <p>— BUILDING</p> <p>— FENCING (TYPE VARIES)</p> <p>— HOSTABLE NET</p> <p>— WOOD GUIDE RAIL</p> <p>— TRAFFIC SIGN/SIGN</p>
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## SEWAGE DISPOSAL SYSTEM DESIGN:

TOTAL DAILY FLOW: 600 GPD

SOIL TEST RESULTS INDICATE IN THE AREA OF TEST PITS #1 AND #2 THERE EXISTS 43" OF USABLE SOIL. A SHALLOW ABSORPTION TRENCH TRENCH SYSTEM IS PROPOSED

PERCOLATION RESULTS: 7 MIN.  
DESIGN RATE: 6-7 MINUTES/INCH  
APPLICATION RATE: 1.00 GPD/FT<sup>2</sup>

THE REQUIRED LENGTH OF CONVENTIONAL ABSORPTION TRENCH IS AS FOLLOWS:

600 GPD / 1.00 GPD/FT<sup>2</sup> = 600 FT<sup>2</sup>  
600 FT<sup>2</sup> / 2 FT<sup>2</sup>/LF OF TRENCH = 300 LF

INSTALL 6 LATERALS AT 50 FEET EACH = 300 FEET ≥ 300 FEET MIN.

## SEPTIC TANK AND GREASE TRAP SIZING:

TYPE OF FACILITY: SPORTS STADIUM (NO SHOWERS)  
TOTAL DAILY FLOW (Q): 600 GPD

SEPTIC TANK  
CALCULATED SEPTIC TANK CAPACITY\*: 1.5 X Q = 1.5 X 600 GPD = 900 GAL.

PROPOSED SEPTIC TANK CAPACITY: 1,250 GALLON MINIMUM CAPACITY

INSTALL A 1,250 GALLON SEPTIC TANK AS MANUFACTURED BY THE FORT MILLER CO. OR APPROVED EQUIVALENT

## GREASE TRAP

CALCULATED GREASE TRAP CAPACITY\*:  
(Q X GL X ST X 1/2 X LF) = SIZE OF GREASE TRAP

WHERE:  
Q = NUMBER OF SEATS IN DINING AREA (50 SEATS)  
GL = GALLONS OF WASTEWATER PER MEAL (5 GAL.)  
ST = STORAGE CAPACITY FACTOR (2.5, ON-SITE)  
HR = NUMBER OF HOURS OPEN (4 HOURS)  
LF = LOADING FACTOR (1.0, RECREATIONAL AREAS)

(50 X 5 GAL. X 2.5 X 1/2 X 1.0 = 1,250 GAL.

PROPOSED GREASE TRAP CAPACITY: 1,250 GALLON MINIMUM CAPACITY

INSTALL A 1,250 GALLON GREASE TRAP AS MANUFACTURED BY THE FORT MILLER CO. OR APPROVED EQUIVALENT

† TABLE B OF THE NYSDEC "DESIGN STANDARDS FOR WASTEWATER TREATMENT WORKS," 1988

‡ REDUCTION FOR WATER-SAVING PLUMBING FIXTURES, PP. 10, NYSDEC "DESIGN STANDARDS..." 1988

## LEGEND

### EXISTING

<p>— RIGHT-OF-WAY</p> <p>— LOT LINE</p> <p>— EASEMENT</p> <p>— BUILDING LINE</p> <p>— ST—ST—ST SANITARY SEWER</p> <p>— SS—SS—SS SANITARY SEWER</p> <p>— WATER MAIN</p> <p>— WATER SERVICE</p> <p>— SANITARY SEWER LATERAL</p> <p>— SUMP PUMP LATERAL</p> <p>— STORM MANHOLE</p> <p>— RETAINING WALL</p> <p>— LIMIT OF GRADING</p> <p>— SILT FENCE</p> <p>— HYDRANT</p> <p>— WATER VALVE</p> <p>— SIDEWALK</p> <p>— ASPHALT PAVEMENT</p> <p>— GREEN SPACE/LAWN</p> <p>— INDEX CONTOUR</p> <p>— CONTOUR</p> <p>— SPOT ELEVATION</p> <p>— CHECK DAM</p> <p>— INLET PROTECTION</p> <p>— BUILDING</p> <p>— FENCING (TYPE VARIES)</p> <p>— HOSTABLE NET</p> <p>— WOOD GUIDE RAIL</p> <p>— TRAFFIC SIGN/SIGN</p>	<p>— EXISTING</p> <p>— PROPOSED</p>
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PLANNING BOARD  
TOWN OF BETHLEHEM  
ALBANY COUNTY, NEW YORK  
By direction of the Chairman.  
These drawings are hereby approved.  
See sheet(s) \_\_\_\_\_  
for date and signature.

ALBANY COUNTY DEPARTMENT OF HEALTH  
DIVISION OF ENVIRONMENTAL HEALTH SERVICES  
By direction of the Commissioner of Health, these plans are hereby approved. See first sheet for date and signature.

ALBANY COUNTY DEPARTMENT OF HEALTH

AFRIM'S SPORTS DOME  
AT BETHLEHEM SOCCER CLUB  
GENERAL NOTES

450 WEMPLE ROAD  
ALBANY COUNTY

TOWN OF BETHLEHEM  
STATE OF NEW YORK

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