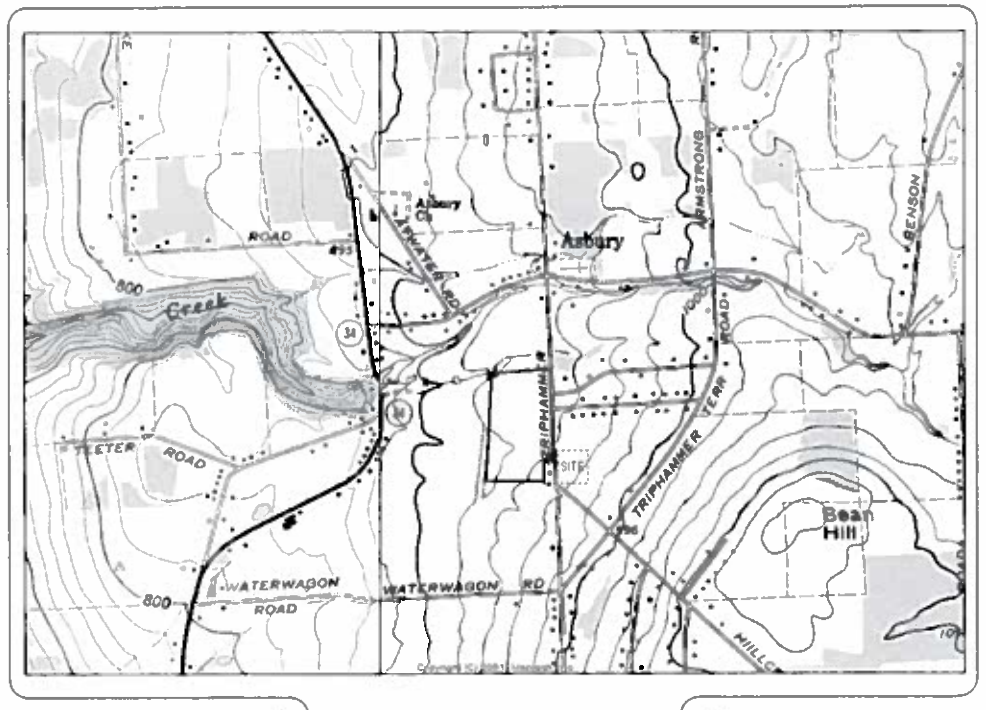
RECEIVED
6/29/2015
MLOS.

CAYUGA FARMS TOWNHOMES
NORTH TRIPHAMMER ROAD
LANSING, TOMPKINS CO. NEW YORK



LOCATION MAP

N.T.S.

DRAWING INDEX

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ST-1	OVERALL SITE PLAN
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ST-4	PROPOSED ROAD PROFILE
ST-5	WATER AND SEWER DETAILS
ST-6	STORM AND SEWER DETAILS
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ST-14	POND 3 PLAN
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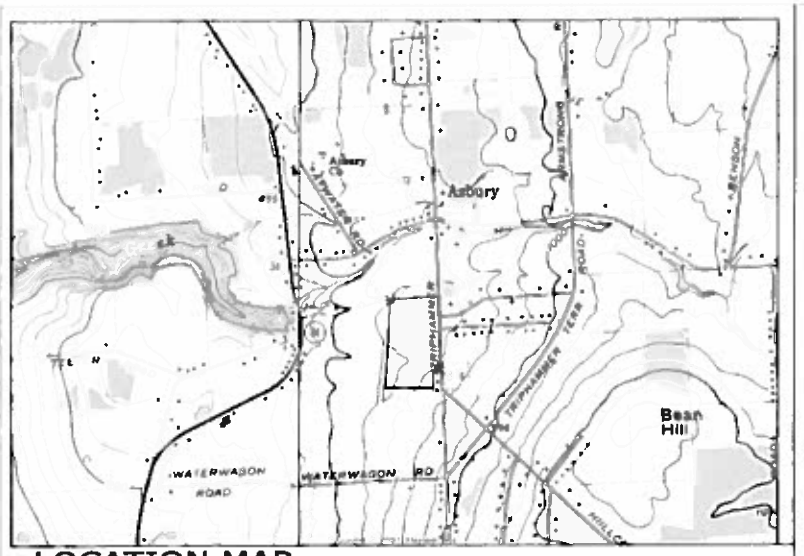
ST-16	HYDROLOGY WORKSHEET - EXSITING
ST-17	HYDROLOGY WORKSHEET - PROPOSED

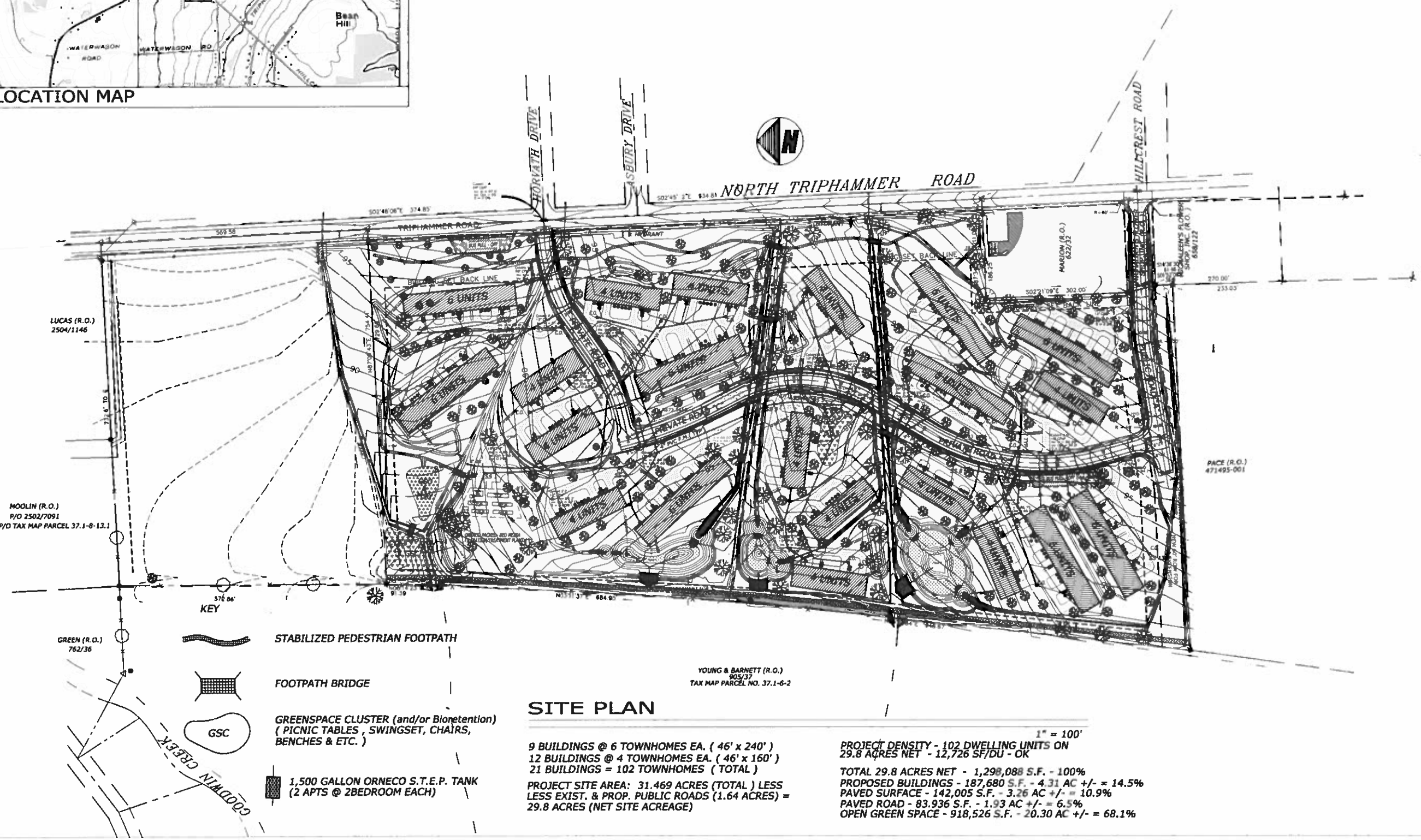
PREPARED BY:

TIMOTHY C . BUHL P.E.
35 FIRE LANE 24
AUBURN, NY 13021

DATE: JUNE 16, 2015



LOCATION MAP



SITE PLAN

1" = 100'

9 BUILDINGS @ 6 TOWNHOMES EA. (46' x 240')
12 BUILDINGS @ 4 TOWNHOMES EA. (46' x 160')
21 BUILDINGS = 102 TOWNHOMES (TOTAL)

PROJECT SITE AREA: 31.469 ACRES (TOTAL) LESS
LESS EXIST. & PROP. PUBLIC ROADS (1.64 ACRES) =
29.8 ACRES (NET SITE ACREAGE)

PROJECT DENSITY - 102 DWELLING UNITS ON
29.8 ACRES NET - 12,726 SF/DU - OK

TOTAL 29.8 ACRES NET - 1,298,088 S.F. - 100%
PROPOSED BUILDINGS - 187,680 S.F. - 4.31 AC +/- = 14.5%
PAVED SURFACE - 142,005 S.F. - 3.26 AC +/- = 10.9%
PAVED ROAD - 83.936 S.F. - 1.93 AC +/- = 6.5%
OPEN GREEN SPACE - 918,526 S.F. - 20.30 AC +/- = 68.1%

REVISIONS

No.	Date	Initial	Description

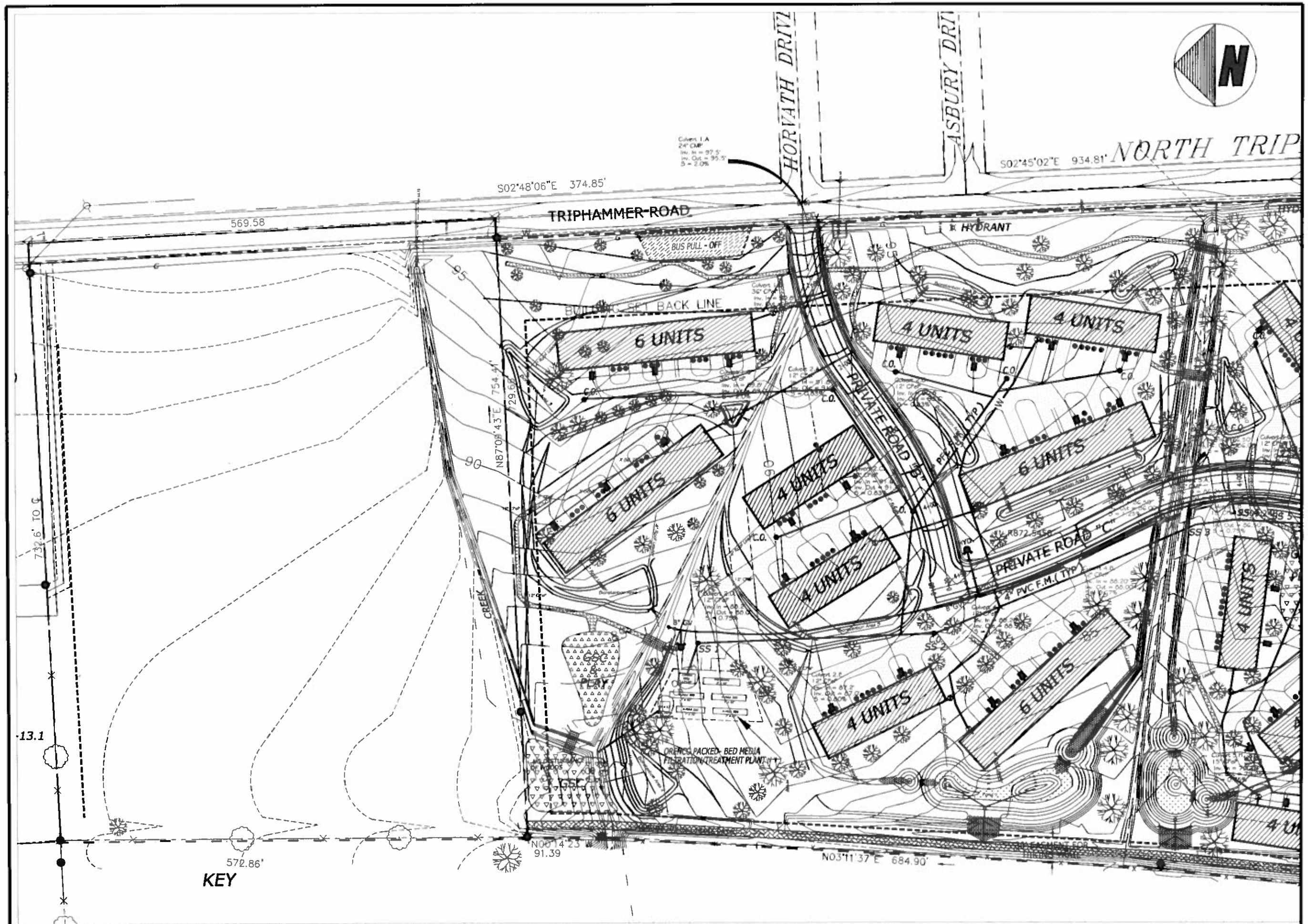
PRELIMINARY PLAN

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT. GROUP, LLC
495 BROADWAY, 7th Fl.
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.
GOODRICH HILL ROAD, LOCKE N.Y. 13092 607 423-1919

DATE: JUNE 5, 2015
SCALE: 1"=100'
DRAWN: A&B DESIGN
JOB: 10-07
SHEET: ST-1



REVISIONS

No.	Date	Description

SITE PLAN

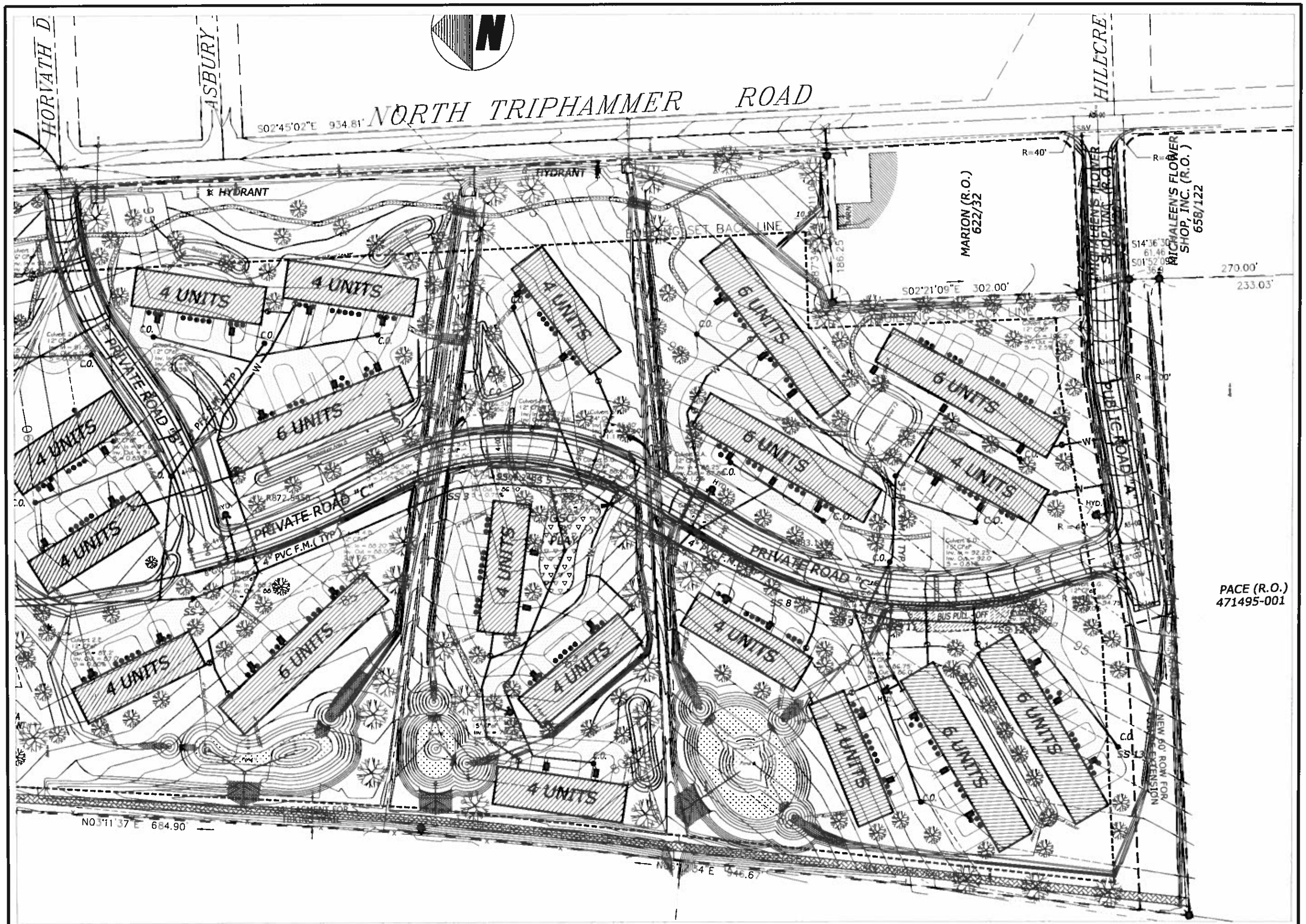
CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT. GROUP, LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.

GOODRICH HILL ROAD, LANSING N.Y. 13202 607 423-1916

DATE: JUNE 5, 2015
SCALE: 1"=50'
DRAWN: A&B DESIGN
JOB: 10-07
SHEET: ST-2



REVISIONS

No.	Date	Description

SITE PLAN

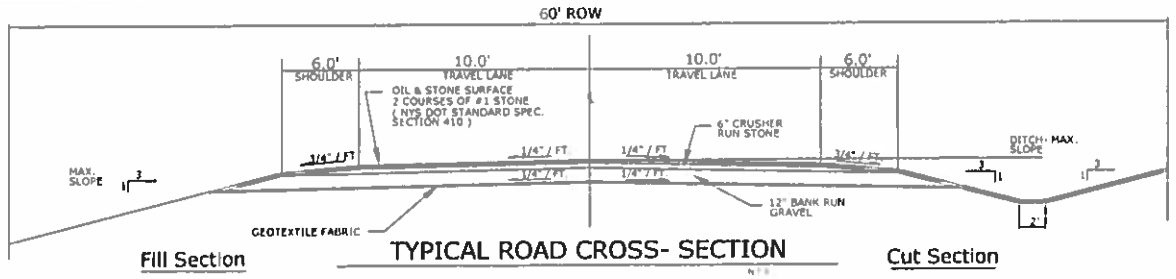
CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT.GROUP,LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

TIMOTHY C. BUHL,P.E.

6000 BOSCO HILL ROAD, LOCKE N.Y. 13092 607 423-1919

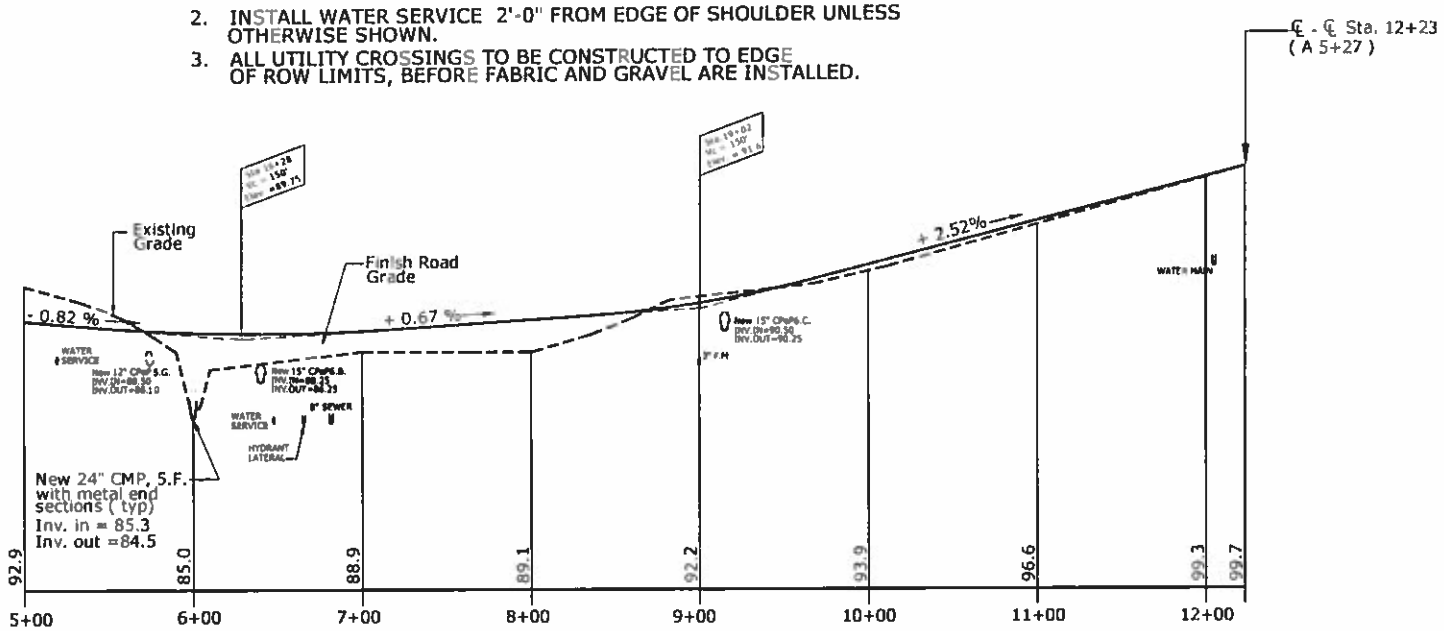
DATE: JUNE 5, 2015
SCALE: 1"=50'
DRAWN: A&B DESIGN
JOB: 10-07
SHEET: ST-3



Fill Section — TYPICAL ROAD CROSS- SECTION — Cut Section

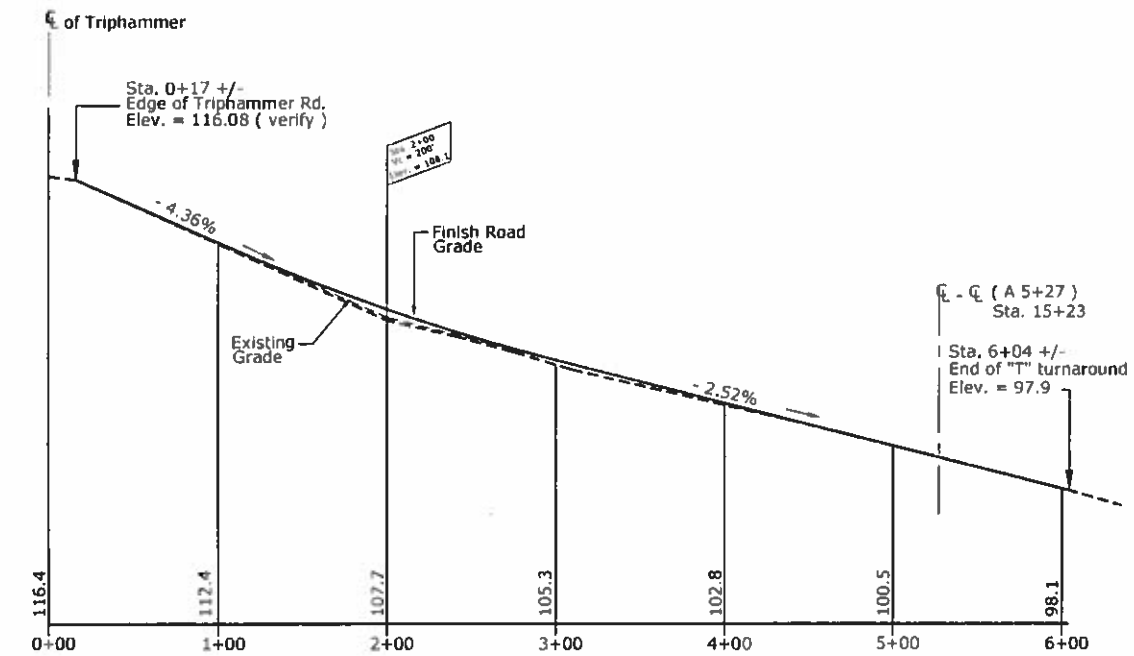
NOTES:

1. SEE TOWN OF LANSING SPECIFICATIONS FOR TOWN HIGHWAYS.
2. INSTALL WATER SERVICE 2'-0" FROM EDGE OF SHOULDER UNLESS OTHERWISE SHOWN.
3. ALL UTILITY CROSSINGS TO BE CONSTRUCTED TO EDGE OF ROW LIMITS, BEFORE FABRIC AND GRAVEL ARE INSTALLED.



PROPOSED ROAD " C " PROFILE

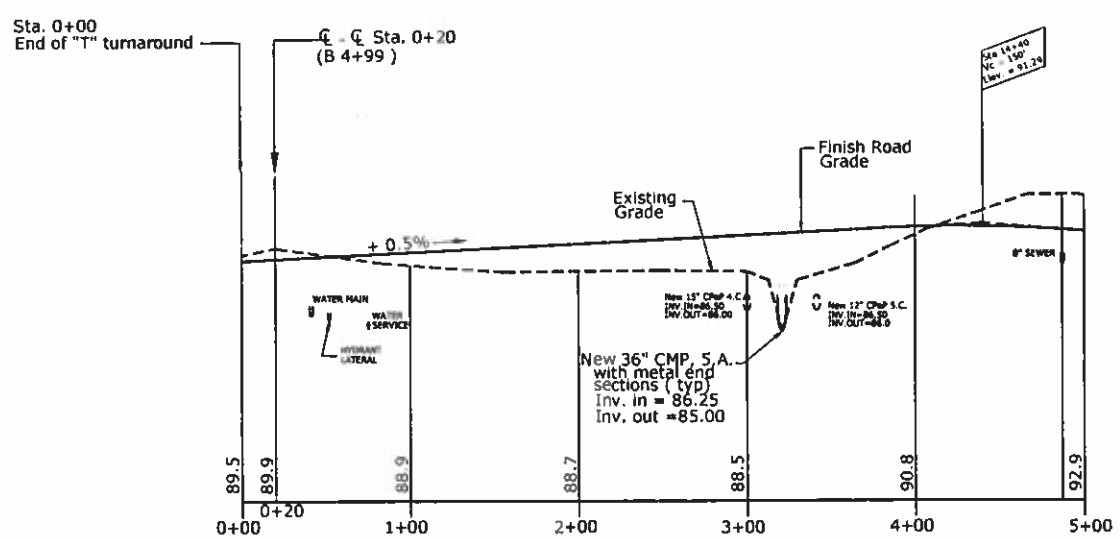
HORIZONTAL SCALE : 1"= 50'
VERTICAL SCALE : 1"=5'
DATUM ELEVATION : 75.0



PROPOSED ROAD "A" PROFILE

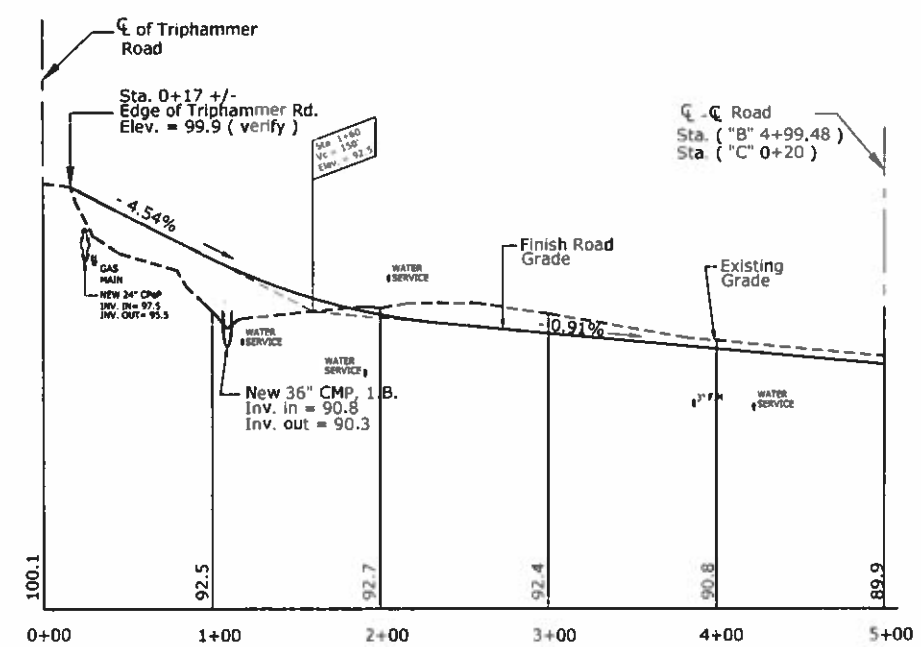
HORIZONTAL SCALE : 1"= 50'
VERTICAL SCALE : 1"=5'
DATUM ELEVATION : 90.0

Verify exist. grade from Triphammer Road to sta. 2+00 before construction



PROPOSED ROAD " C " PROFILE

HORIZONTAL SCALE : 1"= 50'
VERTICAL SCALE : 1"=5'
DATUM ELEVATION : 75.0



PROPOSED ROAD " B " PROFILE

HORIZONTAL SCALE : 1"= 50'
VERTICAL SCALE : 1"=5'

REVISIONS

No.	Date	SYM	Description

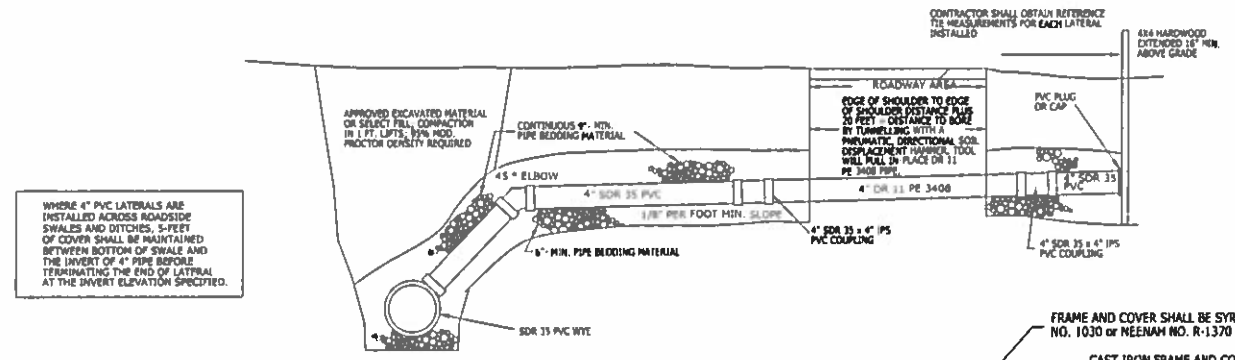
PROPOSED ROAD PROFILE

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

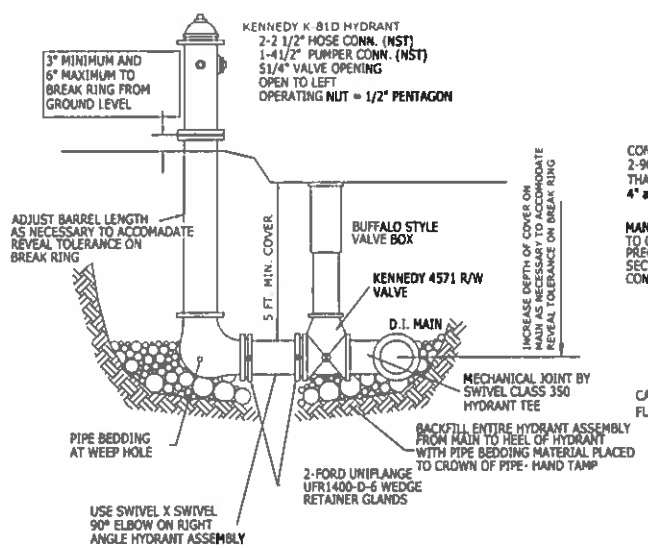
WB ASSET MNGMT. GROUP, LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.
GOODRICH HILL ROAD, LOCKE N.Y. 13092 607 423-1916

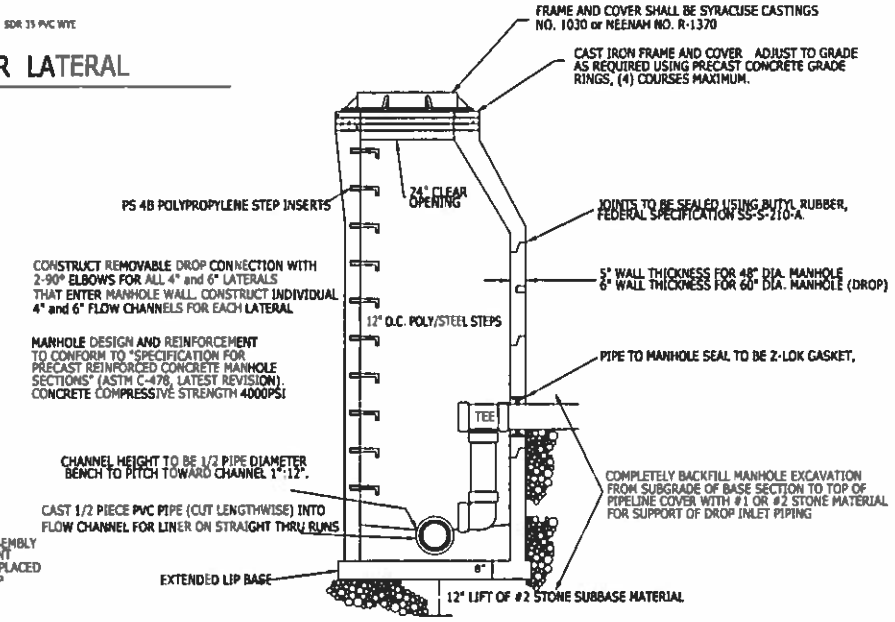
DATE: JUNE 5, 2015
SCALE: AS SHOWN
DRAWN: SDG
JOB: 10-07
SHEET: ST-4



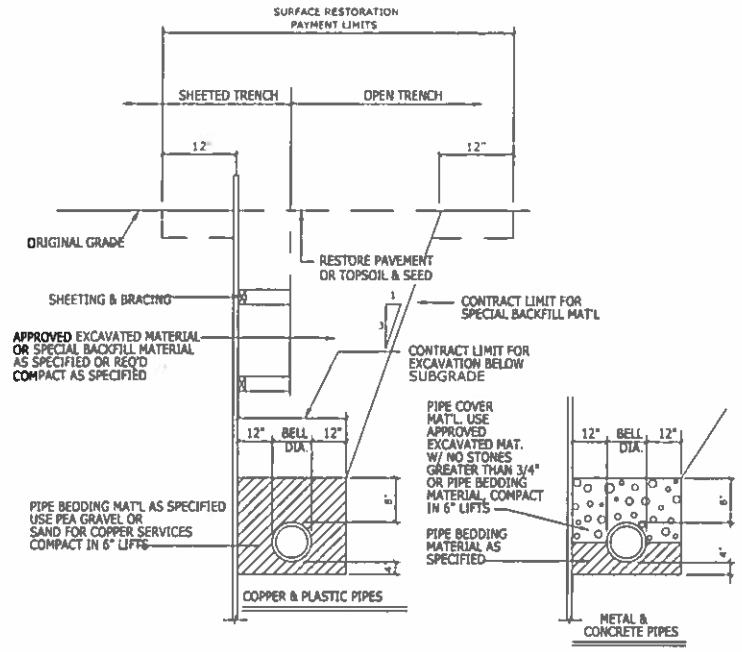
SANITARY SEWER LATERAL



HYDRANT AND VALVE ASSEMBLY

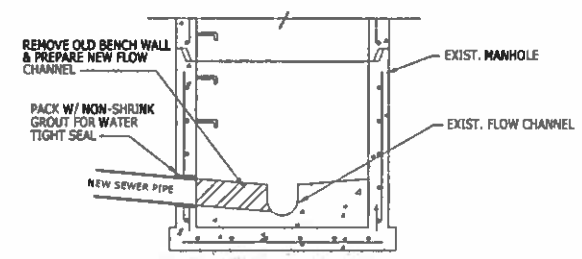


PRE-CAST SANITARY MANHOLE



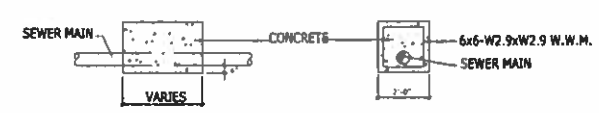
TYPICAL TRENCH DETAIL

N.T.S.

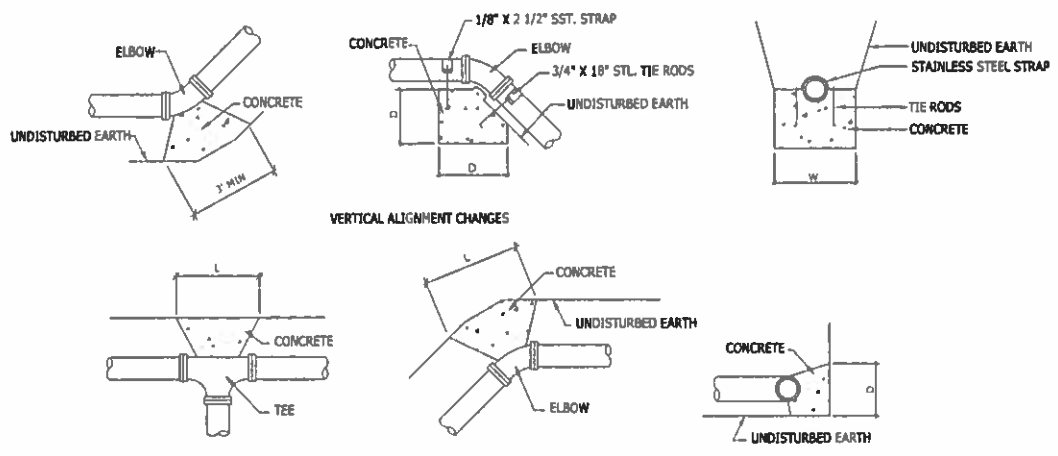


TYP. CONN. TO EXIST. MANHOLE

N.T.S.



ENCASEMENT DETAIL



HORIZONTAL ALIGNMENT CHANGE S

HORIZONTAL

	TEE		45°		22 1/2°		11 1/4°	
	L	D	L	D	L	D	L	D
6"	2.5'	1.5'	2.0'	1.5'	1.5'	1.0'	1.5'	1.0'
8"	3.5'	1.5'	2.5'	2.0'	1.5'	1.5'	2.0'	1.0'
10"	3.5'	2.5'	3.0'	2.5'	3.0'	1.5'	2.5'	1.0'
12"	4.0'	3.5'	4.0'	3.0'	3.5'	2.0'	3.0'	1.5'

VERTICAL

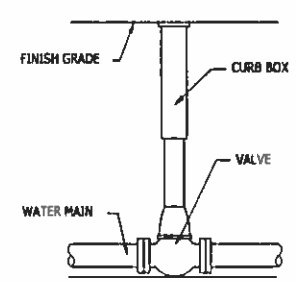
	45°		22 1/2°		11 1/4°	
	D	W	D	W	D	W
6"	3.0'	5.0'	2.0'	4.0'	2.0'	3.0'
8"	3.5'	5.0'	2.5'	4.0'	2.5'	3.0'
10"	4.5'	5.0'	3.5'	4.0'	3.0'	3.0'
12"	5.0'	5.0'	3.5'	4.0'	3.0'	3.0'

NOTES:

1. INSTALL THRUST BLOCKS AT ALL TEES & ELBOWS
2. SIDES OF BLOCKS SHALL BE FORMED SO THAT NO CONCRETE CONTACTS BELLS, GLANDS, OR BOLTS
3. ALL CONC. FOR THRUST BLOCKS TO BE A MIN. OF 2500 P.S.I.

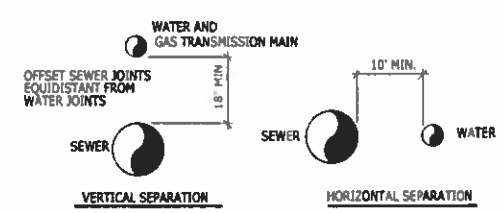
THRUST BLOCK DETAILS

N.T.S.



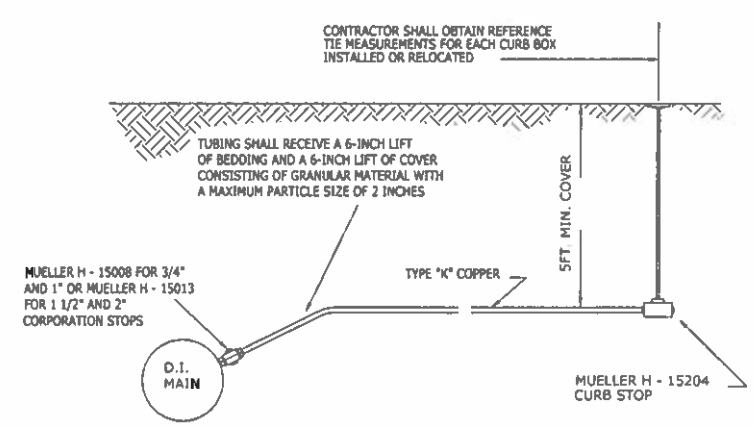
TYPICAL VALVE

N.T.S.



TYPICAL SEPARATION

N.T.S.



COPPER WATER SERVICE

REVISIONS		
No.	Date	Description

WATER AND SEWER DETAILS

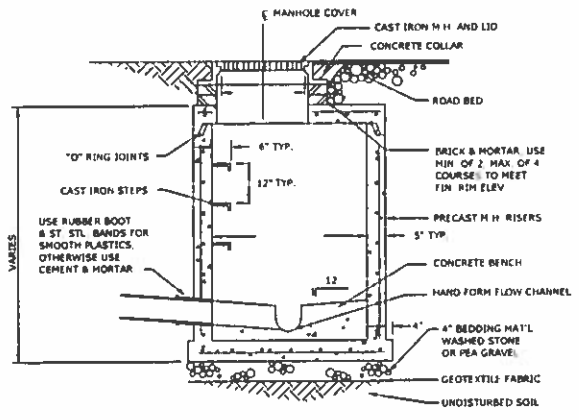
CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT.GROUP,LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

STATE OF NEW YORK · TIMOTHY C. BUHL · LICENSED PROFESSIONAL ENGINEER

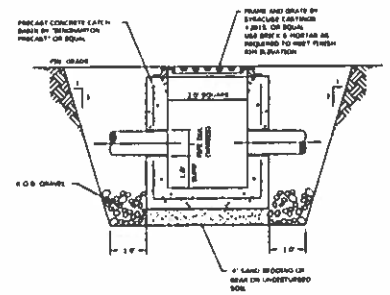
TIMOTHY C. BUHL,P.E.
GOODSPEED HILL ROAD, LOCKE N.Y. 13092 607 423-1919

DATE: JUNE 5, 2015
SCALE: AS SHOWN
DRAWN: A&B DESIGN
JOB: 10-07
SHEET: ST-5



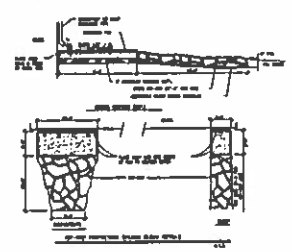
TYP. STORM MANHOLE

N.T.S.

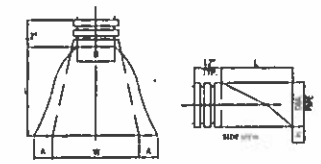


TYPICAL CATCH BASIN

N.T.S.

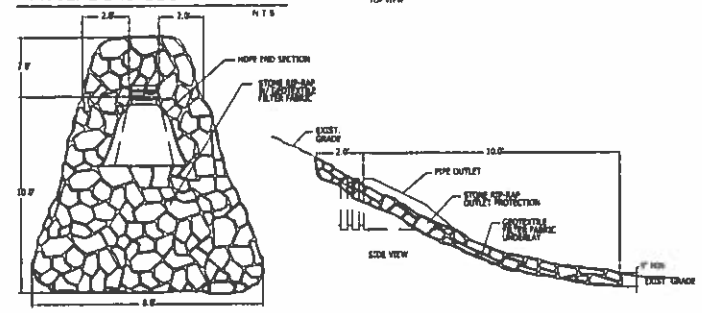


PIPE DIAMETER	PART No.	DIMENSIONS					
		A(±1)	B MAX	H(±1)	L(1/2±1)	W(2±1)
12" AND 15"	1218RP	6.5"	10"	6.5"	25"	29"
18"	1818RP	7.5"	15"	6.5"	32"	35"
24"	2418RP	7.5"	18"	6.5"	36"	45"

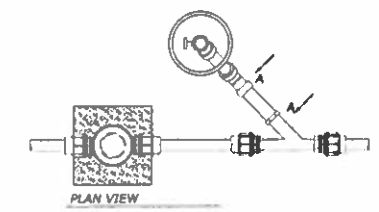


TYPICAL END SECTION DETAILS

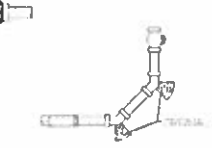
N.T.S.



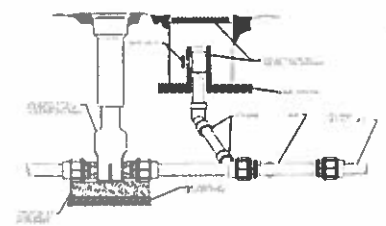
RIP-RAP PROTECTION OUTLET DETAILS



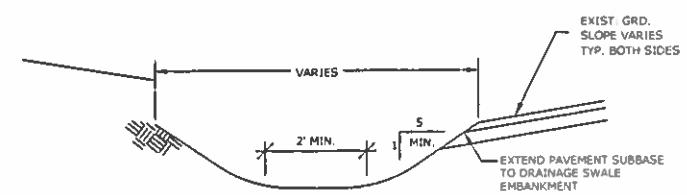
PLAN VIEW



VIEW A-A

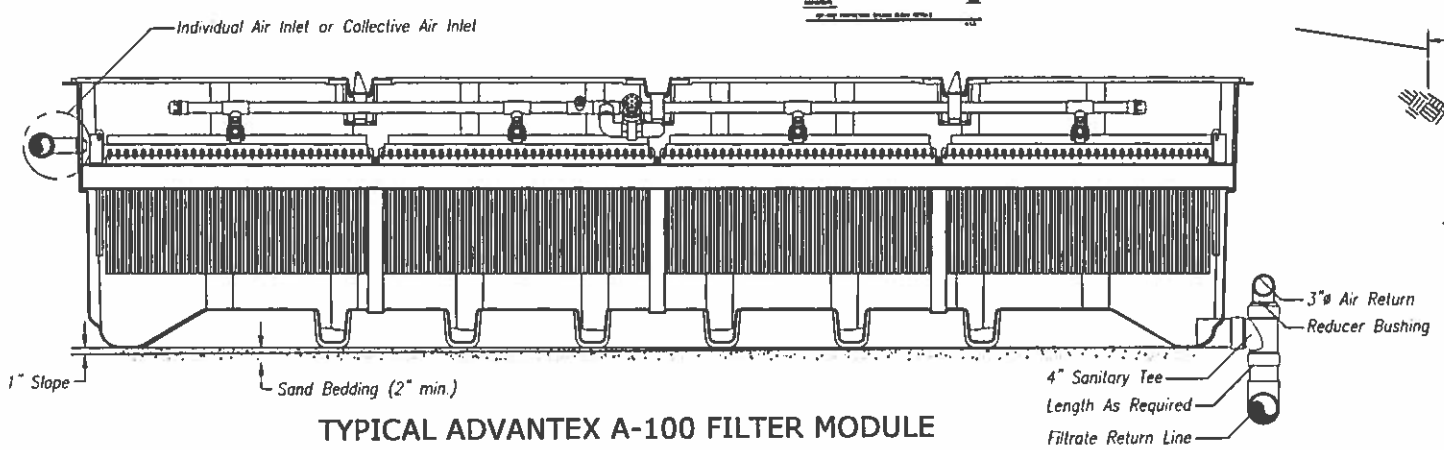


TYPICAL FLUSHING CONNECTION ON LPSS MAIN

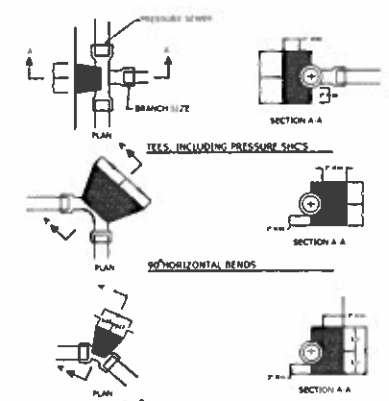


GRASS LINED DRAINAGE SWALE

N.T.S.



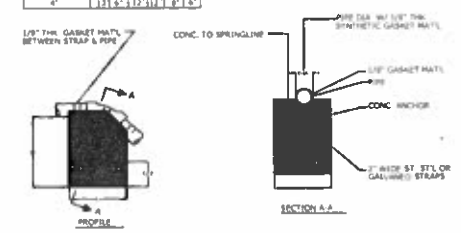
TYPICAL ADVANTEX A-100 FILTER MODULE



NOTES

1. USE MIX NO.1 CONCRETE
2. CARRY ALL BEARING SURFACES TO UNDISTURBED GROUND OR FIRM SUBGRADE.
3. BUTTRESS SIZED FOR 100 psi.
4. DO NOT ENCASE JOINT'S

PIPE SIZE	B	C	D	E	F	G
11 1/4° & 11 1/2°	4"	4"	5"	5"	3"	3"
22 1/2°	5"	5"	6"	6"	3"	3"
	5"	5"	8"	8"	3"	3"
45°	6"	6"	8"	8"	4"	4"
	8"	8"	12"	12"	4"	4"



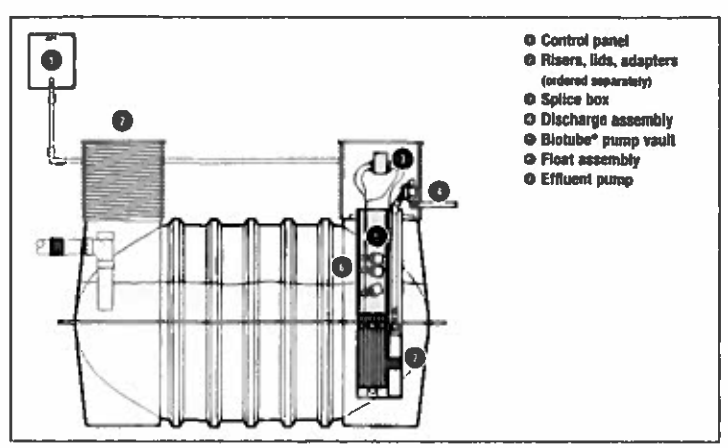
PIPE SIZE		L	12	15	18	18
11 1/4°		W	10	12	15	18
		D	10	15	15	18
22 1/2°		L	15	20	20	24
		W	15	20	20	24
		D	12	12	18	20
45°		L	20	24	24	30
		W	20	20	24	30
		D	12	20	24	24

NOTES

1. GALVANIZED OR ST. ST'L. STRAPS SHALL BE 20 GAGE & 2" WIDE.
2. STRAPS SHALL BE SPACED IN CONC. A DISTANCE OF D/2.
3. 1/8" THK. SYNTHETIC GASKET MATERIAL SHALL BE PLACED BETWEEN STRAP & PIPE.
4. PAINT EXPOSED GALV. STRAPS W/2 COATS OF BITUMINOUS PAINT.
5. USE MIX NO.1 CONCRETE
6. CARRY ALL BEARING SURFACE TO UNDISTURBED EARTH OR FIRM SUB GRADE.

THRUST BLOCK DETAILS

N.T.S.



TYPICAL PRO-STEP TANK

REVISIONS

No.	Date	Description

STORM AND SEWER DETAILS

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

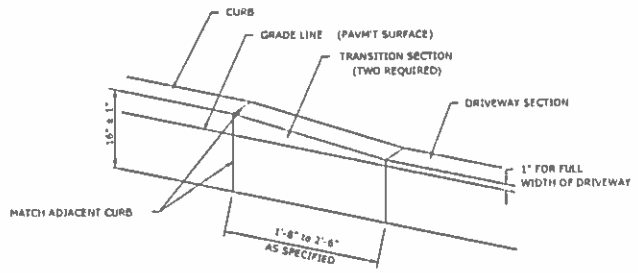
WB ASSET MNGMT. GROUP LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

STATE OF NEW YORK · TIMOTHY C. BUHL · LICENSED PROFESSIONAL ENGINEER

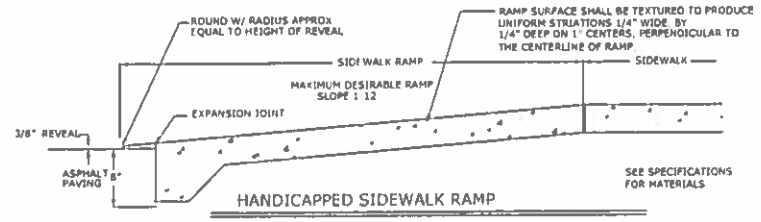
TIMOTHY C. BUHL, P.E.

6000 BRIDGE HILL ROAD, LOCKE N.Y. 13092 607 422-1819

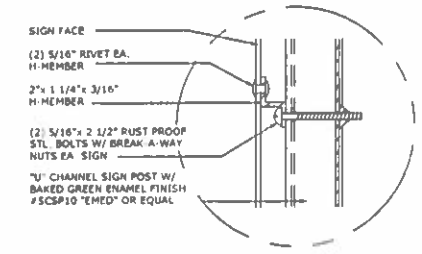
DATE JUNE 5, 2015
SCALE AS SHOWN
DRAWN A&B DESIGN
JOB: 10-07
SHEET
ST-6

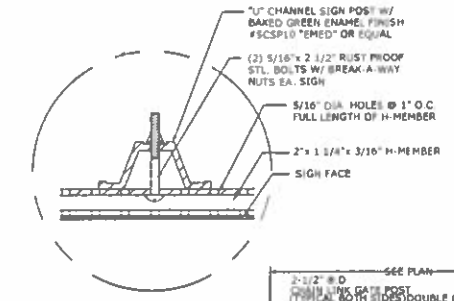


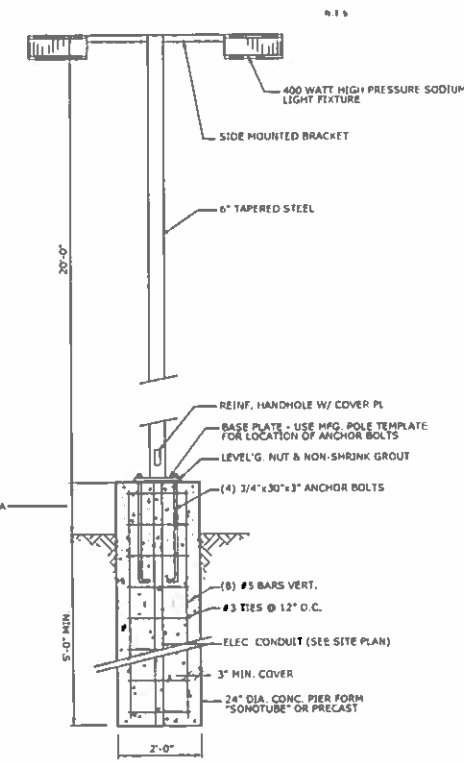
CURB DRIVEWAY TRANSITION



HANDICAPPED SIDEWALK RAMP

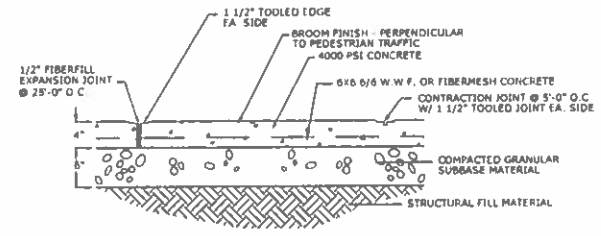






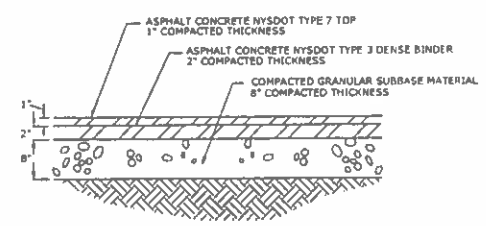
LIGHT POLE DETAIL

N.T.S.



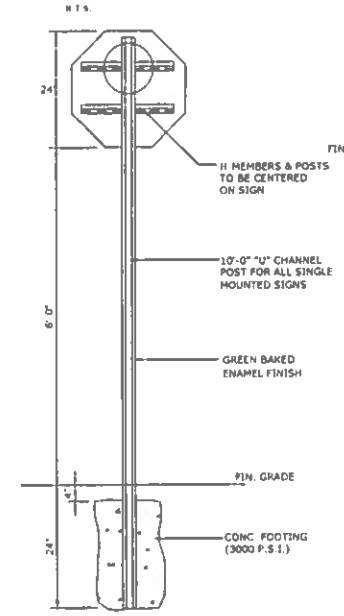
SECTION - CONCRETE WALK

N.T.S.

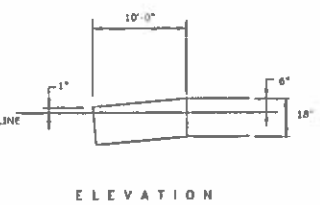


SECTION - ASPHALT PAVEMENT

N.T.S.

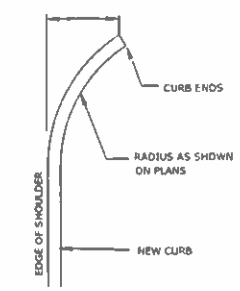


POLE MOUNTED SIGN DETAIL

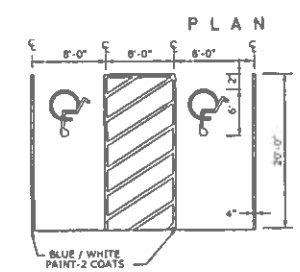


CURB TERMINATION DETAIL

N.T.S.

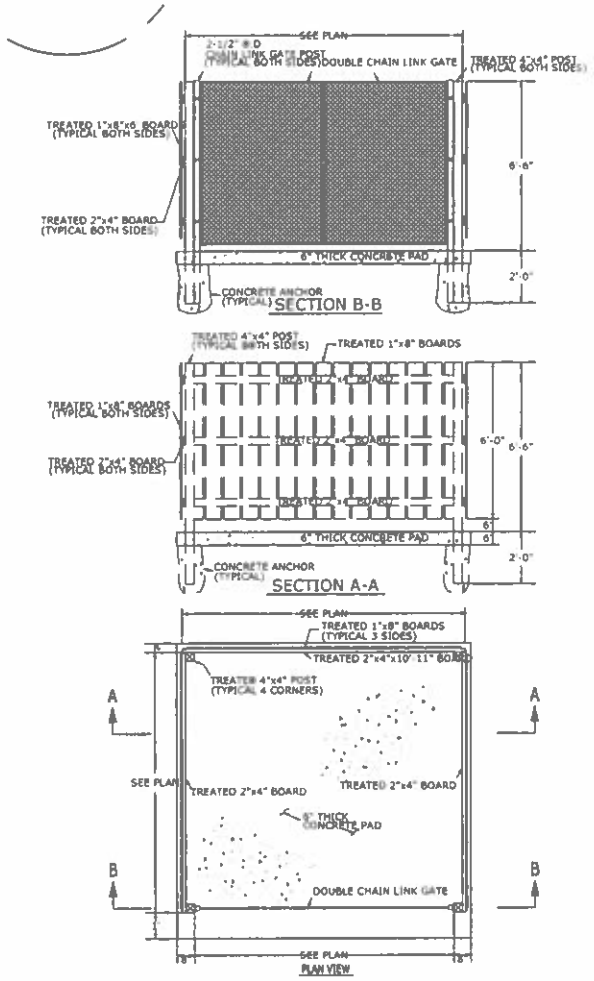


PLAN



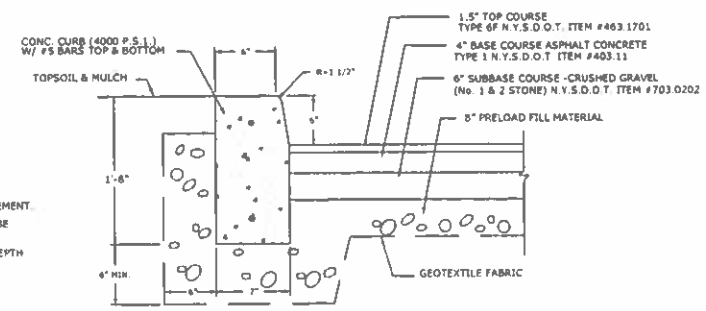
TYPICAL PARKING STRIPING DETAIL

N.T.S.



DUMPSTER ENCLOSURE DETAIL

N.T.S.

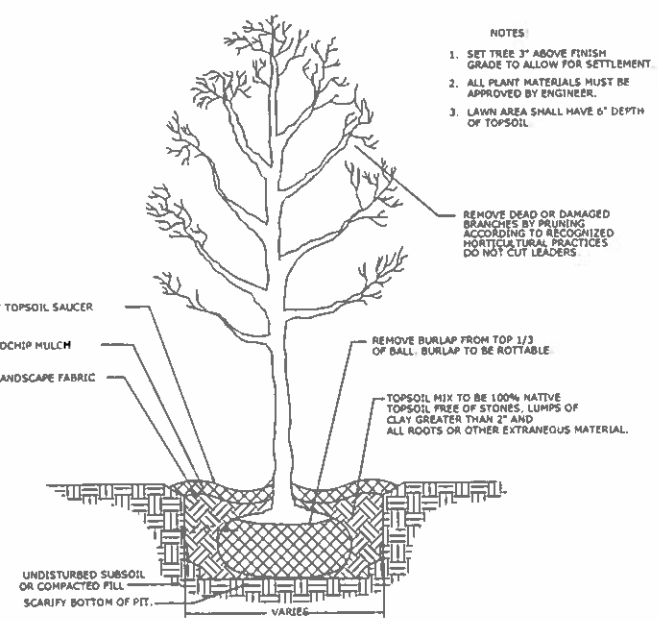


CONC. CURB / ASPHALT PAVEMENT SECTION

N.T.S.

NOTES:

1. SET TREE 3" ABOVE FINISH GRADE TO ALLOW FOR SETTLEMENT.
2. ALL PLANT MATERIALS MUST BE APPROVED BY ENGINEER.
3. LAWN AREA SHALL HAVE 6" DEPTH OF TOPSOIL.

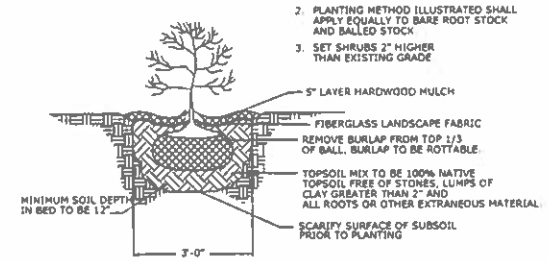


TREE PLANTING

N.T.S.

NOTES:

1. FIBERGLASS LANDSCAPE FABRIC TO BE USED BENEATH INDIVIDUAL TREES AND SHRUBS ONLY. NOT TO BE USED BENEATH MASS PLANTINGS.
2. PLANTING METHOD ILLUSTRATED SHALL APPLY EQUALLY TO BARE ROOT STOCK AND BALLED STOCK.
3. SET SHRUBS 2" HIGHER THAN EXISTING GRADE.

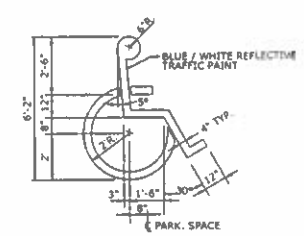


SHRUB PLANTING

N.T.S.

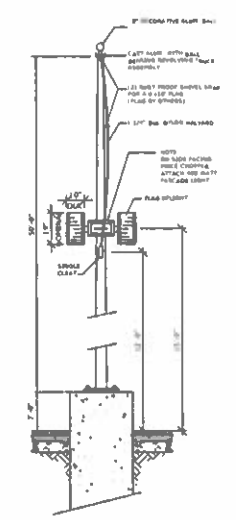
1. ALL PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH SUBCHAPTER "E" OF THE NEW YORK STATE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (M.U.T.C.D.) LINE WIDTHS AND SPACING SHALL BE THE SAME AS INDICATED ON DRAWING(S).

2. AFTER THE CONTRACTOR HAS ESTABLISHED MARKING LINE POINTS FOR THE MARKINGS, AS PER SECTION 687 3.04 OF THE N.Y.S. STANDARD SPECIFICATIONS, CONSTRUCTION AND MATERIALS, JANUARY 2, 1985, BY PAINT OR OTHER APPROVED MEANS, THE E.I.C. SHALL REVIEW AND APPROVE OR REVISE THESE LOCATIONS TO MEET FIELD CONDITIONS. NECESSARY LOCATION ADJUSTMENTS WILL BE MADE PRIOR TO PLACING PAVEMENT MARKINGS.



HANDICAPPED PAVEMENT MARKING DETAIL

N.T.S.



FLAG POLE (ELEVATION)

N.T.S.

REVISIONS

No.	Date	Description

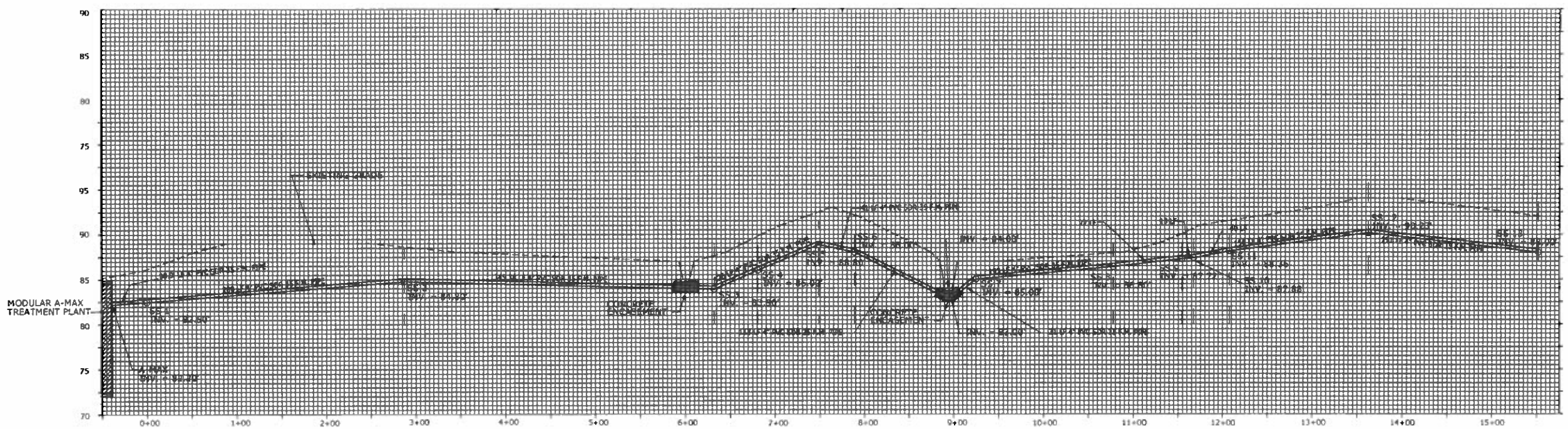
GENERAL SITE DETAILS

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT. GROUP, LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.
GARDNER HILL ROAD, LOCKE N.Y. 13092 607 423-1913

DATE: JUNE 5, 2015
SCALE: AS SHOWN
DRAWN: A&B DESIGN
JOB: 10-07
SHEET: ST-7



PROPOSED SANITARY SEWER PROFILE

HORIZONTAL SCALE 1" 50'
VERTICAL SCALE 1" 5'

REVISIONS

No.	Date	STR.	Description

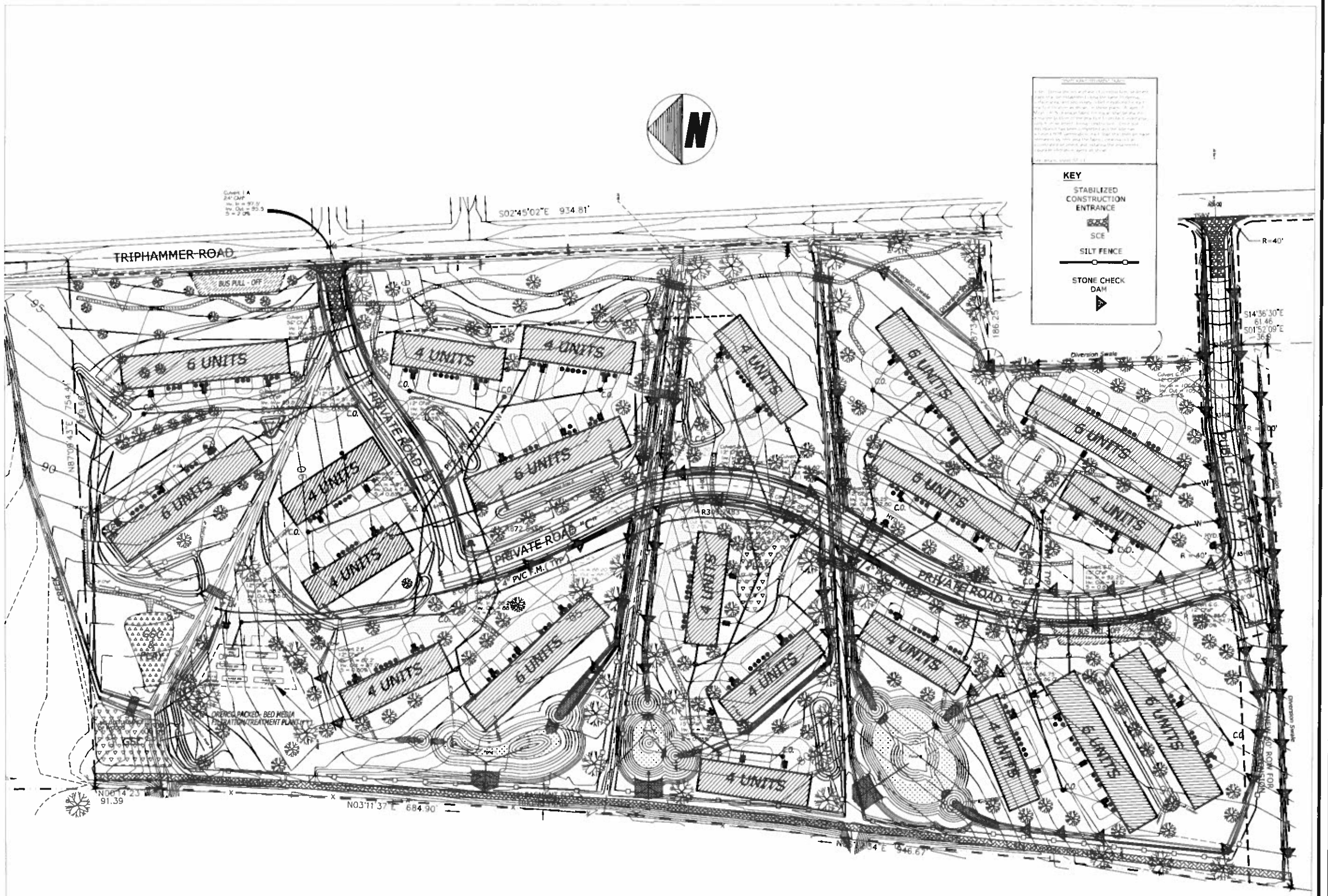
SANITARY SEWER PROFILE

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT. GROUP, LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.
GOODRICH HILL ROAD, LOCKE N.Y. 13092 607 423-1919

DATE JUNE 5, 2015
SCALE 1" 60'
DRAWN SDG
JOB: 10-07
SHEET
ST-8



REVISIONS

No.	Date	Description

E&SC PLAN

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT.GROUP,LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

TIMOTHY C. BUHL,P.E.
GOODRICH HILL ROAD, LOCKE N.Y. 13092 607 423-1916

DATE: JUNE 5, 2015
SCALE: 1"=60'
DRAWN: SDG
JOB: 10-07
SHEET:
ST-9

GENERAL NOTES

NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL, AUGUST 2005

1. PHYSICALLY MARK LIMITS OF LAND DISTURBANCE ON THE SITE WITH TAPE, SIGNS, OR ORANGE CONSTRUCTION FENCE, SO THAT WORKERS CAN SEE THE AREAS TO BE PROTECTED.

2. DIVERT OFF-SITE RUNOFF FROM HIGHLY ERODIBLE SOILS AND STEEP SLOPES TO STABLE AREAS.

3. CLEAR ONLY WHAT IS REQUIRED FOR IMMEDIATE CONSTRUCTION ACTIVITY. LARGE PROJECTS SHOULD BE CLEARED AND GRADED AS CONSTRUCTION PROGRESSES. AREAS EXCEEDING TWO ACRES IN SIZE SHOULD NOT BE DISTURBED WITHOUT A SEQUENCING PLAN THAT REQUIRES PRACTICES TO BE INSTALLED AND THE SOIL STABILIZED, AS DISTURBANCE BEYOND THE TWO ACRES CONTINUES. MASS CLEARINGS AND GRADING OF ENTIRE SITE SHOULD BE AVOIDED.

4. RESTABILIZE DISTURBED AREAS AS SOON AS POSSIBLE AFTER CONSTRUCTION IS COMPLETED. ON SITES GREATER THAN TWO ACRES IN SIZE, WAITING UNTIL ALL DISTURBED AREAS ARE READY FOR SEEDING IS UNACCEPTABLE. FOURTEEN DAYS SHALL BE THE MAXIMUM EXPOSURE PERIOD. MAINTENANCE MUST BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION. EXCEPT AS NOTED BELOW, ALL SITES SHALL BE SEEDED AND STABILIZED WITH EROSION CONTROL MATERIALS, SUCH AS STRAW MULCH, JUTE MESH, OR EXCELSIOR, INCLUDING AREAS WHERE CONSTRUCTION HAS BEEN SUSPENDED OR SECTIONS COMPLETED:

A. FOR ACTIVE CONSTRUCTION AREAS SUCH AS BORROW OR STOCKPILE AREAS, ROADWAY IMPROVEMENTS AND AREAS WITHIN 50 FT. OF A BUILDING UNDER CONSTRUCTION, A PERIMETER SEDIMENT CONTROL SYSTEM CONSISTING, FOR EXAMPLE, OF SILT FENCING OR HAY BALES, SHALL BE INSTALLED AND MAINTAINED TO CONTAIN SOIL. EXPOSED DISTURBED AREAS ADJACENT TO A CONVEYANCE THAT PROVIDES RAPID OFF-SITE DISCHARGE OF SEDIMENT, SUCH AS A CUT SLOPE AT AN ENTRANCE, SHALL BE COVERED WITH PLASTIC OR GEOTEXTILE FABRIC TO PREVENT SOIL LOSS UNTIL IT CAN BE STABILIZED. STABILIZED CONSTRUCTION ENTRANCES WILL BE MAINTAINED TO CONTROL VEHICLE TRACKING MATERIAL OFF-SITE.

B. ON THE CUT SIDE OF ROADS, DITCHES SHALL BE STABILIZED IMMEDIATELY WITH ROCK RIP-RAP OR OTHER NON-ERODIBLE LINERS (EG. ROLLED EROSION PRODUCTS), OR WHERE APPROPRIATE, VEGETATIVE MEASURES SUCH AS SOD.

C. PERMANENT SEEDING SHOULD OPTIMALLY BE UNDERTAKEN IN THE SPRING FROM MARCH THROUGH MAY, AND IN LATE SUMMER AND EARLY FALL FROM SEPTEMBER TO OCTOBER 15. DURING THE PEAK SUMMER MONTHS AND IN THE FALL AFTER OCTOBER 15, WHEN SEEDING IS FOUND TO BE IMPRACTICABLE, AN APPROPRIATE TEMPORARY MULCH SHALL BE APPLIED. PERMANENT SEEDING MAY BE UNDERTAKEN DURING THE SUMMER IF PLANS PROVIDE FOR ADEQUATE WATERING. TEMPORARY SEEDING WITH RYE CAN BE UTILIZED THROUGH NOVEMBER.

D. ALL SLOPES STEEPER THAN 3:1 (H:V), OR 33.3%, AS WELL AS PERIMETER DIKES, SEDIMENT BASINS AND TRAPS, AND EMBANKMENTS SHALL, UPON COMPLETION, BE IMMEDIATELY STABILIZED WITH SOD, SEED AND ANCHORED STRAW MULCH, OR OTHER APPROVED STABILIZATION MEASURES. AREAS OUTSIDE OF THE PERIMETER SEDIMENT CONTROL SYSTEM SHALL NOT BE DISTURBED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY TO ENSURE CONTINUED STABILIZATION.

E. TEMPORARY SEDIMENT TRAPPING DEVICES SHALL NOT BE REMOVED UNTIL PERMANENT STABILIZATION IS ESTABLISHED IN ALL CONTRIBUTORY DRAINAGE AREAS. SIMILARLY, STABILIZATION SHALL BE ESTABLISHED PRIOR TO CONVERTING SEDIMENT TRAPS/BASINS INTO PERMANENT (POST-CONSTRUCTION) STORMWATER MANAGEMENT PRACTICES.

5. WHERE TEMPORARY WORK ROADS OR HAUL ROADS CROSS STREAM CHANNELS, ADEQUATE WATERWAY OPENINGS SHALL BE CONSTRUCTED USING SPANS, CULVERTS, WASHED ROCK BACKFILL, OR OTHER ACCEPTABLE, CLEAN METHODS THAT WILL ENSURE THAT ROAD CONSTRUCTION AND THEIR USE DO NOT RESULT IN TURBIDITY AND SEDIMENT DOWNSTREAM. ALL CROSSING ACTIVITIES AND APPURTENANCES ON STREAMS REGULATED BY ARTICLE 15 OF THE ENVIRONMENTAL CONSERVATION LAW SHALL BE IN COMPLIANCE WITH A PERMIT ISSUED PURSUANT TO ARTICLE 15 OF THE ECL.

6. MAKE SURE THAT ALL CONTRACTORS AND SUB-CONTRACTORS UNDERSTAND THE ESC PLAN AND SIGN THE CERTIFICATION STATEMENT REQUIRED BY NYSDEC GP.

7. DESIGNATE RESPONSIBILITY FOR THE ESC PLAN TO ONE INDIVIDUAL. THIS PERSON SHALL BE NAMED IN THE NOTICE OF INTENT.

8. AN ESC PLAN INSPECTION PROGRAM MEETING THE REQUIREMENTS OF THE NYSDEC GP, IS NECESSARY TO DETERMINE WHEN ESC MEASURES NEED MAINTENANCE OR REPAIR. PAY PARTICULAR ATTENTION TO INSPECTIONS REQUIRED AFTER RAINFALL. THE INSPECTION PROGRAM SHALL ALSO STATE THE COMPLETION OF IDENTIFIED REPAIR AND MAINTENANCE ITEMS.

9. IF CONSTRUCTION ACTIVITIES CONTINUE DURING WINTER, ACCESS POINTS SHOULD BE ENLARGED AND STABILIZED TO PROVIDE FOR SNOW STOCKPILING. IN ADDITION SNOW MANAGEMENT PLAN SHOULD BE PREPARED WITH ADEQUATE STORAGE AND CONTROL OF MELTWATER. A MINIMUM 25 FOOT BUFFER SHALL BE MAINTAINED FROM PERIMETER CONTROLS SUCH AS SILT FENCING. KEEP DRAINAGE STRUCTURES OPEN AND FREE OF SNOW AND ICE DAMS. INSPECTION AND MAINTENANCE ARE NECESSARY TO ENSURE THE FUNCTION OF THESE PRACTICES DURING RUNOFF EVENTS.

LAND GRADING SPECIFICATIONS

1. ALL FILLS SHALL BE COMPACTED AS REQUIRED TO REDUCE EROSION, SLIPPAGE, SETTLEMENT, SUBSIDENCE OR OTHER RELATED PROBLEMS. FILL INTENDED TO SUPPORT BUILDINGS, STRUCTURES AND CONDUITS, ETC. SHALL BE COMPACTED IN ACCORDANCE WITH LOCAL REQUIREMENTS OR CODES.

2. ALL FILL TO BE PLACED AND COMPACTED IN LAYERS NOT TO EXCEED 9 INCHES IN THICKNESS.

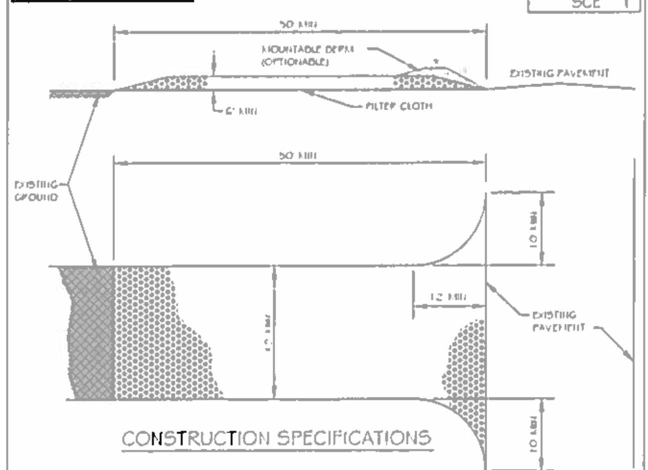
3. EXCEPT FOR APPROVED LANDFILLS, FILL MATERIAL SHALL BE FREE OF FROZEN PARTICLES, BRUSH, ROOTS, SOD, OR OTHER FOREIGN OR OTHER OBJECTIONABLE MATERIALS THAT WOULD INTERFERE WITH OR PREVENT CONSTRUCTION OF SATISFACTORY FILLS.

4. SEEPS OR SPRINGS ENCOUNTERED DURING CONSTRUCTION SHALL BE HANDLED IN ACCORDANCE WITH THE STANDARD AND SPECIFICATION FOR SUBSURFACE DRAIN OR OTHER APPROVED METHOD.

5. STOCKPILES, BORROW AREAS AND SPOIL AREAS SHALL BE SHOWN ON THE PLANS AND SHALL BE SUBJECT TO THE PROVISIONS OF THIS STANDARD AND SPECIFICATION.

STABILIZED CONSTRUCTION ENTRANCE

SYMBOL SCE



CONSTRUCTION SPECIFICATIONS

1. STONE SIZE - USE 2" STONE OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH - NOT LESS THAN 50 FEET (EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30 FOOT MIN. LENGTH WOULD APPLY).
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWELVE (12) FOOT MIN. BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS. TWENTY FOUR (24) FOOT IF SINGLE ENTRANCE TO SITE.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 5:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS OF WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS OF WAY MUST BE REMOVED IMMEDIATELY.
8. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.
10. TEMPORARY CONSTRUCTION ENTRANCES, EXITS AND TEMPORARY ACCESS SHALL BE SUBJECT TO THE APPROVAL OF THE APPROPRIATE AUTHORITIES.

TOP SOILING SPECIFICATIONS

1. PRESERVE EXISTING TOPSOIL IN PLACE WHERE POSSIBLE, THEREBY REDUCING THE NEED FOR ADDED TOPSOIL.

2. AS NEEDED, INSTALL EROSION CONTROL PRACTICES SUCH AS DIVERSIONS, CHANNELS, SEDIMENT TRAPS, AND STABILIZING MEASURES, OR MAINTAIN IF ALREADY INSTALLED.

3. COMPLETE ROUGH GRADING AND FINAL GRADE, ALLOWING FOR DEPTH OF TOPSOIL TO BE ADDED.

4. SCARIFY ALL COMPACT, SLOWLY PERMEABLE, MEDIUM AND FINE TEXTURED SUBSOIL AREAS. SCARIFY AT APPROXIMATELY RIGHT ANGLES TO THE SLOPE DIRECTION IN SOIL AREAS THAT ARE STEEPER THAN 5%. AREAS THAT HAVE BEEN OVERLY COMPACTED SHALL BE DECOMPACTED TO A MINIMUM DEPTH OF 12-INCHES WITH A DEEP RIPPER OR CHISEL PLOW PRIOR TO TOPSOILING.

5. REMOVE REFUSE, WOODY PLANT PARTS, STONES OVER 3-INCHES IN DIAMETER, AND OTHER LITTER.

6. TOPSOIL SHALL HAVE AT LEAST 6% BY WEIGHT OF FINE TEXTURED STABLE ORGANIC MATERIAL, AND NO GREATER THAN 20%. MUCK SOIL SHALL NOT BE CONSIDERED TOPSOIL.

7. TOPSOIL SHALL HAVE NOT LESS THAN 20% FINE TEXTURED MATERIAL (PASSING THE NO. 200 SIEVE) AND NOT MORE THAN 15% CLAY.

8. TOPSOIL TREATED WITH SOIL STERILANTS OR HERBICIDES SHALL BE SO IDENTIFIED TO THE PURCHASER.

9. TOPSOIL SHALL BE RELATIVELY FREE OF STONES OVER 1 1/2-INCHES IN DIAMETER, TRASH, NOXIOUS WEEDS SUCH AS NUT SEDGE AND QUACKGRASS, AND WILL HAVE LESS THAN 10% GRAVEL.

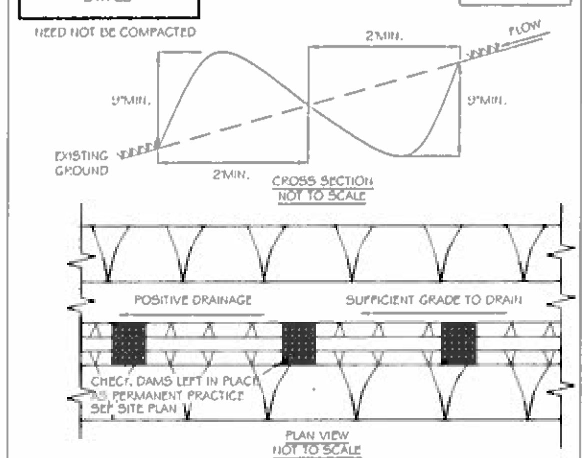
10. TOPSOIL CONTAINING SOLUBLE SALTS GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.

11. TOPSOIL SHALL BE DISTRIBUTED TO A UNIFORM DEPTH OVER THE AREA. IT SHALL NOT BE PLACED WHEN IT IS PARTIALLY FROZEN, MUDDY, OR ON FROZEN SLOPES OR OVER ICE, SNOW, OR STANDING WATER PUDDLES.

12. TOPSOIL PLACED AND GRADED ON SLOPES STEEPER THAN 5% SHALL BE PROMPTLY FERTILIZED, SEEDED, MULCHED, AND STABILIZED BY "TRACKING" WITH SUITABLE EQUIPMENT.

GRASSED/VEGETATED SWALE

SYMBOL



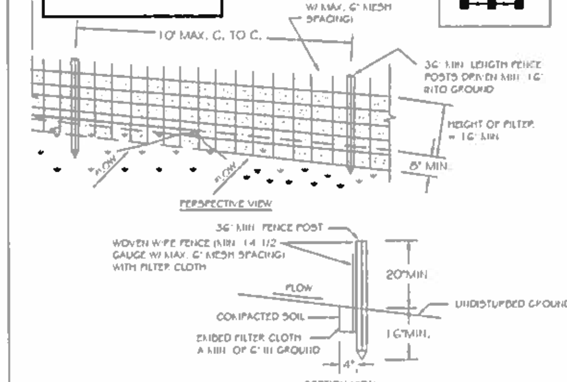
CONSTRUCTION SPECIFICATIONS

GRASSED/VEGETATED SWALE

1. DRAINAGE AREA SHALL BE LESS THAN 5 ACRES.
2. HEIGHT SHALL BE NO LESS THAN 18 INCHES FROM BOTTOM OF SWALE TO TOP OF DIKE EVENLY DIVIDED BETWEEN DIKE HEIGHT AND SWALE DEPTH.
3. BOTTOM WIDTH OF DIKE SHALL BE NO LESS THAN 2 FEET.
4. WIDTH OF SWALE SHALL BE NO LESS THAN 2 FEET.
5. SWALE SHALL HAVE POSITIVE DRAINAGE TO AN ADEQUATELY STABILIZED OUTLET TO AN UNDISTURBED AREA. MAXIMUM ALLOWABLE GRADE NOT TO EXCEED 8%.
6. THE DISTURBED AREA OF THE DIKE AND SWALE SHALL BE STABILIZED WITHIN 7 DAYS OF INSTALLATION, IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS FOR TEMPORARY SWALES.
7. DIVERTED RUNOFF FROM A DISTURBED OR EXPOSED UPLAND AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE SUCH AS A TRAP, BASIN, OR TO AN AREA PROTECTED BY ANY OF THESE PRACTICES.
8. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

SILT FENCE

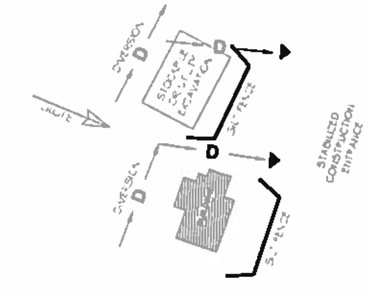
SYMBOL



CONSTRUCTION SPECIFICATIONS

1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES. POSTS SHALL BE STEEL EITHER "T" OR "U" TYPE OR HARDWOOD.
2. FILTER CLOTH TO BE TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION. FENCE SHALL BE WOVEN WIRE, 12 1/2 GAUGE, 6" MAXIMUM MESH OPENING.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER LAPPED BY SIX INCHES AND FOLDED. FILTER CLOTH SHALL BE EITHER FILTER X, MIRAFI 100X, STABILINKA T140N, OR APPROVED EQUIVALENT.
4. PREFABRICATED UNITS SHALL BE GEOFAB, ENVIROFENCE, OR APPROVED EQUIVALENT.
5. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

SEDIMENT & EROSION CONTROL MEASURES TYPICAL N.T.S.

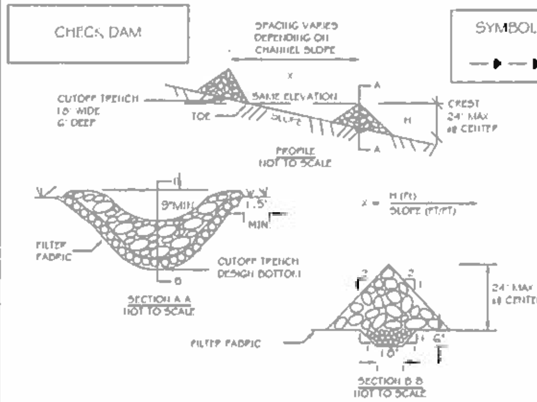


MATERIAL STOCKPILING

1. FOR RESIDENTIAL CONSTRUCTION, ONE SPECIFIC AREA ON EACH LOT SHALL BE DESIGNATED FOR TEMPORARY STOCKPILING OF TOPSOIL AND ALL OTHER CONSTRUCTION MATERIALS CONTAINING FINES THAT CAN BE MOVED BY RUNOFF. THIS AREA SHALL BE AS SMALL AS PRACTICABLE.
2. STOCKPILES WILL HAVE DOWN HILL SIDE PERIMETER SILT FENCING PROTECTION. REFERENCE SILT FENCE DETAILS THESE PLANS.
3. STOCKPILES WILL BE SEEDED AND MULCHED IF ANTICIPATED TO BE LEFT IN PLACE 14 DAYS OR MORE. REFERENCE DETAIL SHEET NOTES AND SPECIFICATIONS THIS PLANT SET AND STORMWATER POLLUTION PREVENTION PLAN (SWPPP) ACCOMPANYING THIS PLAN SET.
4. SILT FENCE AND OTHER TEMPORARY CONTROL MEASURES SHALL BE IN PLACE BEFORE STOCKPILING OF MATERIALS.

CHECK DAM

SYMBOL



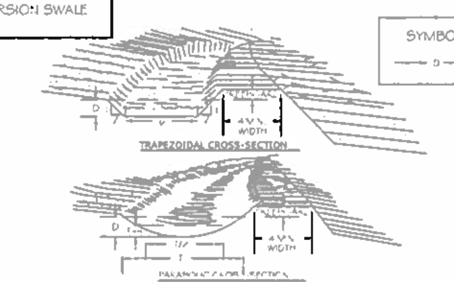
CONSTRUCTION SPECIFICATIONS

1. STONE WILL BE PLACED ON A FILTER FABRIC FOUNDATION TO THE LINES, GRADES AND LOCATIONS SHOWN IN THE PLAN.
2. SET SPACING OF CHECK DAMS TO ASSUME THAT THE ELEVATIONS OF THE CREST OF THE DOWNSTREAM DAM IS AT THE SAME ELEVATION OF THE TOE OF THE UPSTREAM DAM.
3. EXTEND THE STONE A MINIMUM OF 1.5 FEET BEYOND THE DITCH BANKS TO PREVENT CUTTING AROUND THE DAM.
4. PROTECT THE CHANNEL DOWNSTREAM OF THE LOWEST CHECK DAM FROM SCOUR AND EROSION WITH STONE OR LINER AS APPROPRIATE.
5. ENSURE THAT CHANNEL APPURTENANCES SUCH AS CULVERT ENTRANCES BELOW CHECK DAMS ARE NOT SUBJECT TO DAMAGE OR BLOCKAGE FROM DISPLACED STONE.

MAXIMUM DRAINAGE AREA 2 ACRES

DIVERSION SWALE

SYMBOL



CONSTRUCTION SPECIFICATIONS

1. ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIVERSION.
2. THE DIVERSION SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN, AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.
3. FILLS SHALL BE COMPACTED AS NEEDED TO PREVENT UNEQUAL SETTLEMENT THAT WOULD CAUSE DAMAGE IN THE COMPLETE DIVERSION.
4. ALL EARTH REMOVED AND NOT NEEDED IN CONSTRUCTION SHALL BE SPREAD OR DISPOSED OF SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIVERSION.
5. STABILIZATION SHALL BE DONE ACCORDING TO THE APPROPRIATE STANDARD AND SPECIFICATIONS FOR VEGETATIVE PRACTICES.
A. FOR DESIGN VELOCITIES OF LESS THAN 3.5 FT. PER. SEC., SEEDING AND MULCHING MAY BE USED FOR THE ESTABLISHMENT OF THE VEGETATION. IT IS RECOMMENDED THAT, WHEN CONDITIONS PERMIT, TEMPORARY DIVERSIONS OR OTHER MEANS SHOULD BE USED TO PREVENT WATER FROM ENTERING THE DIVERSION DURING THE ESTABLISHMENT OF THE VEGETATION.
B. FOR DESIGN VELOCITIES OF MORE THAN 3.5 FT. PER. SEC., THE DIVERSION SHALL BE STABILIZED WITH SOD, WITH SEEDING PROTECTED BY JUTE OR EXCELSIOR MATTING OR WITH SEEDING AND MULCHING INCLUDING TEMPORARY DIVERSION OF THE WATER UNTIL THE VEGETATION IS ESTABLISHED.

EXCERPTS FROM NYS STANDARDS AND SPECIFICATIONS FOR EROSION AND SEDIMENT CONTROL AUGUST 2005

REVISIONS	No.	Date	SYM.
			Description

E&SC DETAILS

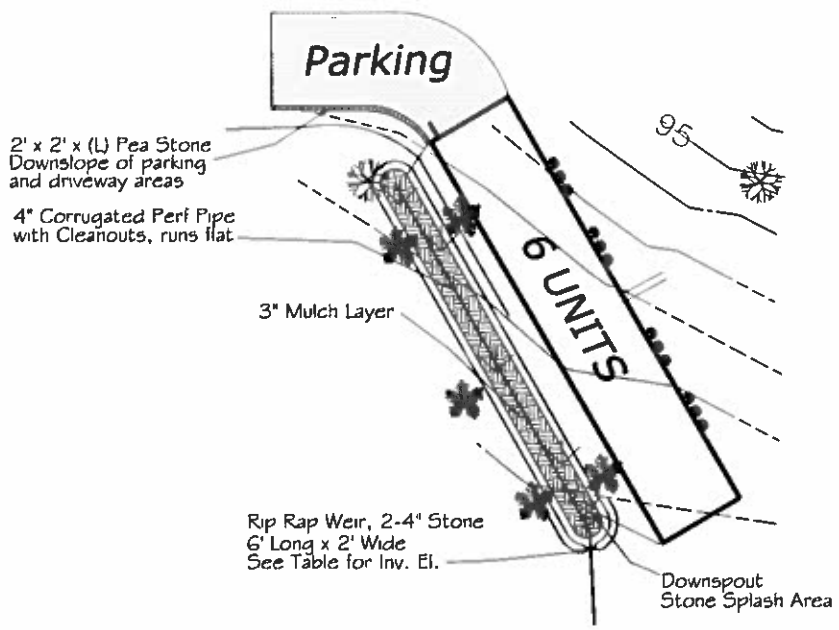
CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT.GROUP,LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

STATE OF NEW YORK – TIMOTHY C. BUHL – LICENSED PROFESSIONAL ENGINEER

TIMOTHY C. BUHL P.E.
GOODRICH HILL ROAD , LOCKE N.Y. 13092 607-423-1919

DATE: JUNE 5, 2015
SCALE: NTS
DRAWN: SDG
JOB: 10-07
SHEET: ST-10



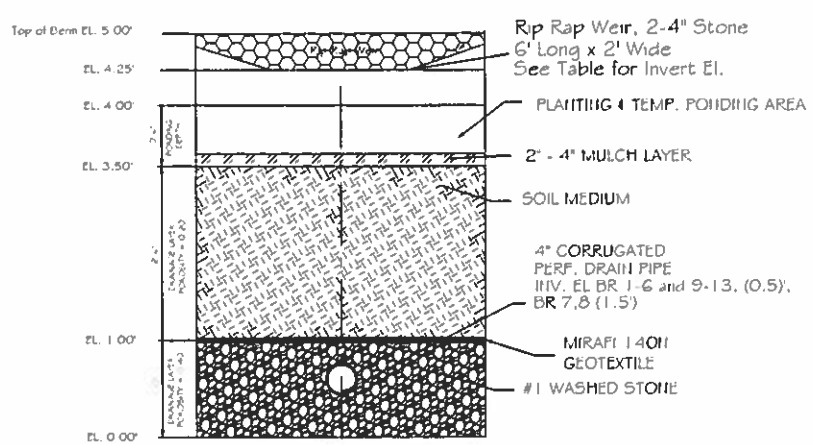
Bioretention Plan, Typ.

Bioretention Area Details

Location	Bottom Length (ft)	Bottom Width (ft)	Bottom Surface Area (Sqft)	Floor of Practice El. (ft)	Underdrain Pipe El (ft)	Underdrain Pipe Length from Practice to Daylight (ft)	Underdrain Daylight El. (ft)	Emergency Overflow Inv. El. (ft)
Bioretention Area 1	85	40	3400	86.0	83.0	52.0	82.5	86.75
Bioretention Area 2	88	30	2640	83.0	80.0	50.0	79.5	83.75
Bioretention Area 3	139	25	3475	93.0	90.0	256.0	89.5	93.75
Bioretention Area 4	25	20	500	90.0	87.0	65.0	86.5	90.75
Bioretention Area 5	89	15	1280	94.0	91.0	189.0	90.5	94.75
Bioretention Area 6	89	15	1280	94.0	91.0	213.0	90.5	94.75
Bioretention Area 7	100	19	1900	91.0	89.0	195.0	88.5	91.75
Bioretention Area 8	225	15	3375	90.0	88.0	32.0	87.5	90.75
Bioretention Area 9	175	27	4725	88.0	85.0	191.0	84.5	88.75
Bioretention Area 10	80	27	2121	90.0	87.0	156.0	86.5	90.70
Bioretention Area 11	100	18	1795	79.0	76.0	74.0	75.5	79.60
Bioretention Area 12	130	35	4550	96.0	93.0	156.0	92.5	96.75
Bioretention Area 13	209	16	3284	89.0	86.0	159.0	85.5	89.50

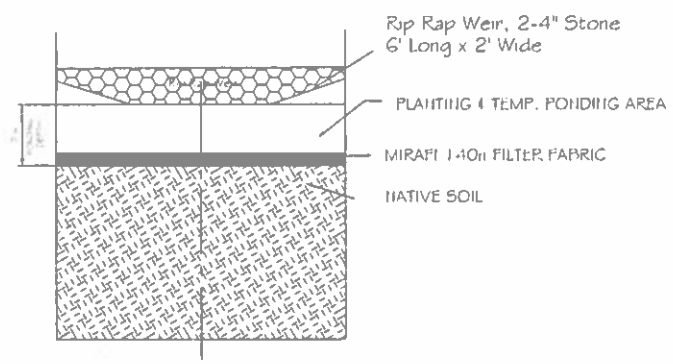
Bioretention Suggested Plantings - USDA Zone 5A

SHRUBS	HERBACEOUS PLANTS
Witch Hazel Hamemelis virginiana	Cinnamon Fern Osmunda cinnamomea
Winterberry Ilex verticillata	Cutleaf Coneflower Rudbeckia laciniata
Arrowwood Viburnum dentatum	Woolgrass Scirpus cyperinus
Brook-side Alder Alnus serrulata	New England Aster Aster novae-angliae
Red-Osier Dogwood Cornus stolonifera	Fox Sedge Carex vulpinoidea
Sweet Pepperbush Clethra alnifolia	Spotted Joe-Pye Weed Eupatorium maculatum
	Switch Grass Panicum virgatum
	Great Blue Lobelia Lobelia siphatica
	Wild Bergamot Mondarda fistulosa
	Red Milkweed Ascelpias incarnata



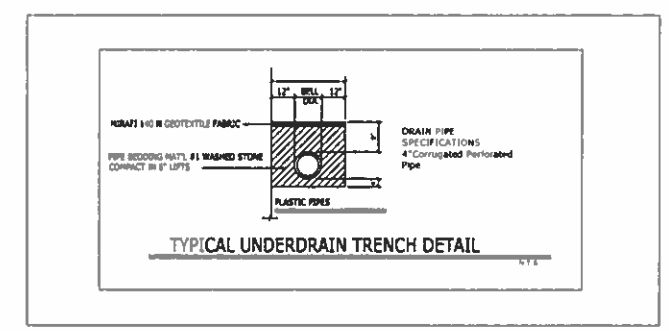
Bioretention Underdrain Layers, Typ.

Temporary Sediment Trap, All



NOTES ON INFILTRATION PRACTICES

Note 1: During the initial phase of construction, sediment traps shall be established using the same footprint, surface area, and secondary outlet elevations as shown in these plans. A layer of Mirafi 140 N drainage fabric (or equal) shall be placed along the bottom of the traps to protect underlying soils from sediment during construction. Once soil disturbance has been completed and the site has achieved 80% germination, the traps shall be converted to bioretention areas by removing the fabric, cleaning out all accumulated sediment and then installing the engineered subgrade infiltration layers as shown in these plans.



SPECIFICATIONS FOR BIORETENTION SYSTEMS

Planting Soil

The soil shall be a uniform mix, free of stones, stumps, roots or other similar objects larger than two inches. No other materials or substances shall be mixed or dumped within the bioretention area that may be harmful to plant growth, or prove a hindrance to the planting or maintenance operations. The planting soil shall be free of noxious weeds.

Planting soil shall be of a sandy loam consistency containing approximately 35-60% sand, 30-55% silt, and 10-25% clay.

Compaction

Minimize compaction of both the base of the bioretention area and the required backfill. Place soil in lifts 12" or great. Do not use heavy equipment within the bioretention area basin.

REVISIONS

No.	Date	S.H.	Description
	06-05-15		Added 06/12

BIORETENTION AREA DETAILS

CAYUGA FARMS TOWNHOMES
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LANSING, NEW YORK

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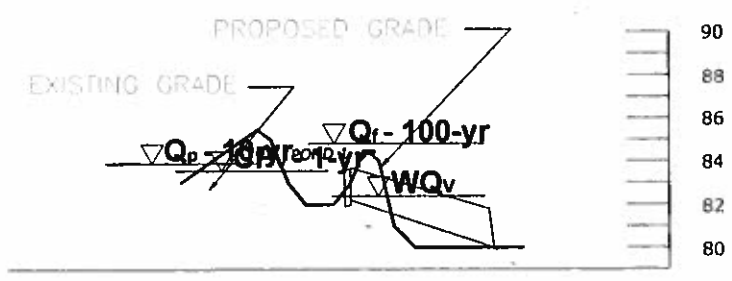
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.
GOODRICH HILL ROAD, LODI, N.Y. 13092 607 423-1919

DATE: JUNE 5, 2015
SCALE: NTS
DRAWN: SDG
JOB. 10-07
SHEET: ST-11

Q_f : 100-YR (") EVENT
POND PEAK VOL. = 30,050-CF, PEAK DEPTH = 6.91', EL. = 84.91'
Q_p : 10-YR (") EVENT
POND PEAK VOL.= 19,272-CF, PEAK DEPTH = 5.87', EL. = 83.87'
C_{pv} : 1-YR (") EVENT
POND PEAK VOL.* = 12,912-CF, PEAK DEPTH = 5.14', EL.= 83.14'

WQ_v : WATER QUALITY VOLUME* =4,249-CF, DEPTH = 3.55' , EL.= 81.55'
* - calculated using zero exfiltration, saturated or frozen soil conditions.



SECTION B – B
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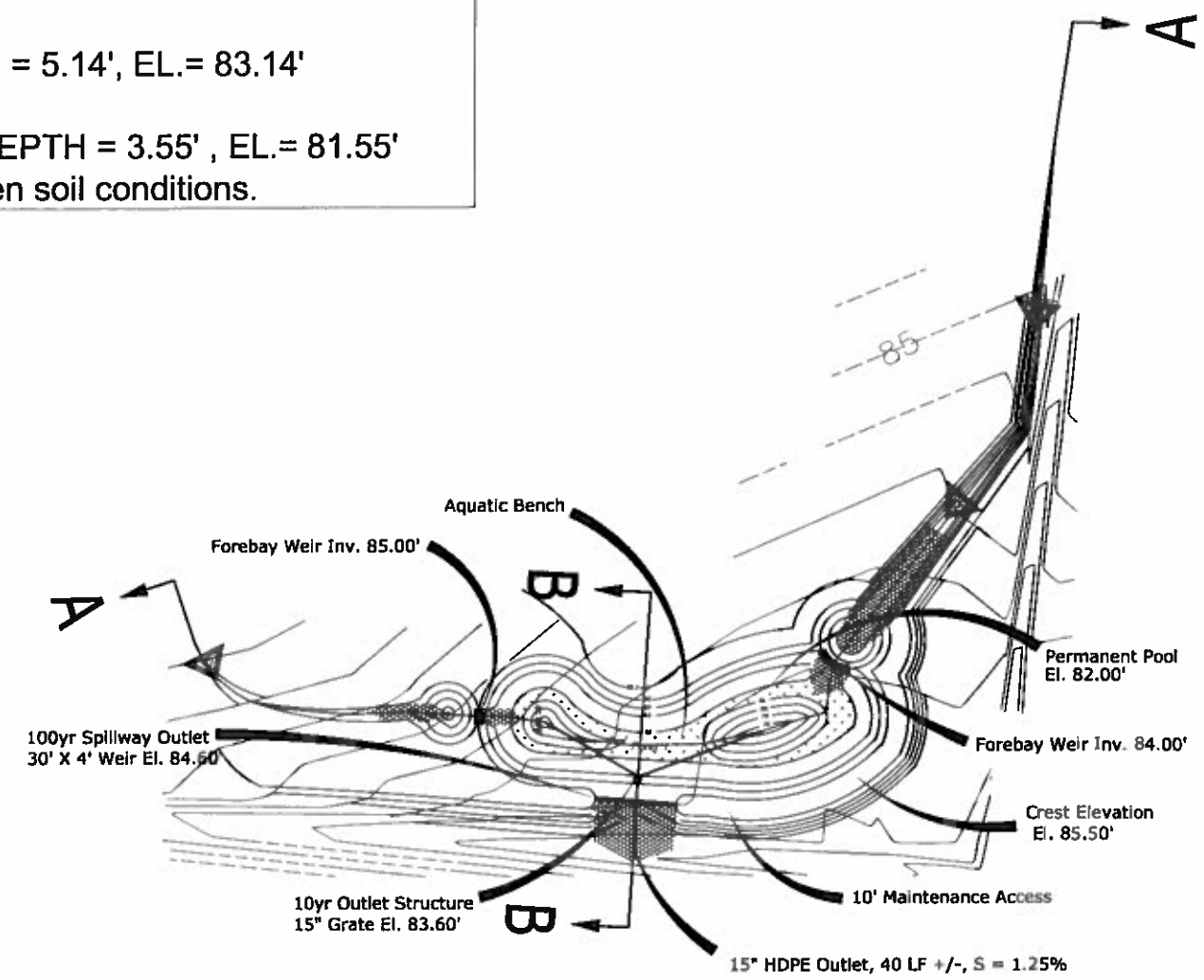

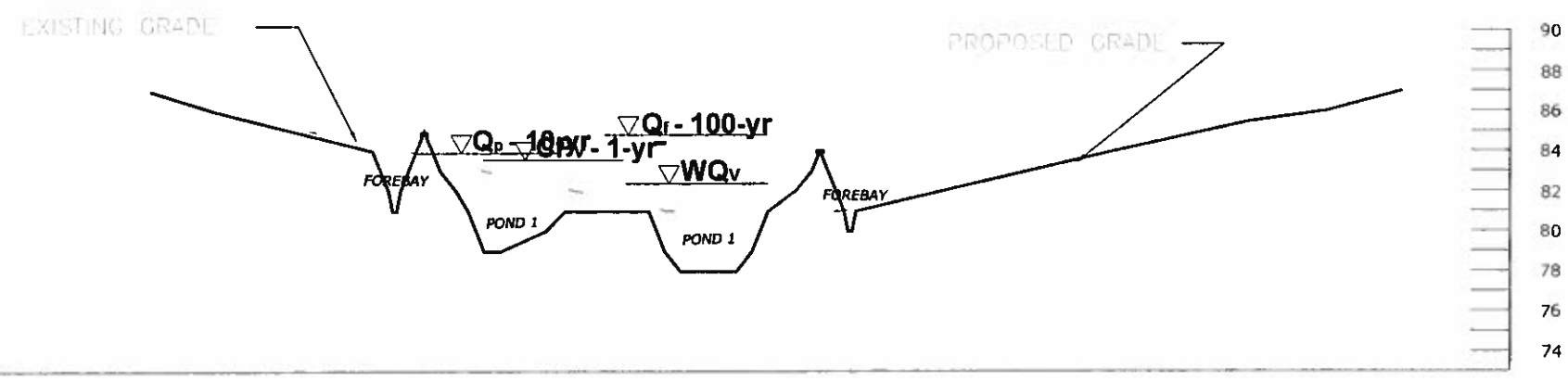

SECTION A – A
Vertical Scale = 10X Horizontal

REVISIONS

No.	Date	Description

POND 1 PLAN

CAYUGA FARMS TOWNHOMES
N. TRUPHAMMER ROAD
LANSING, NEW YORK

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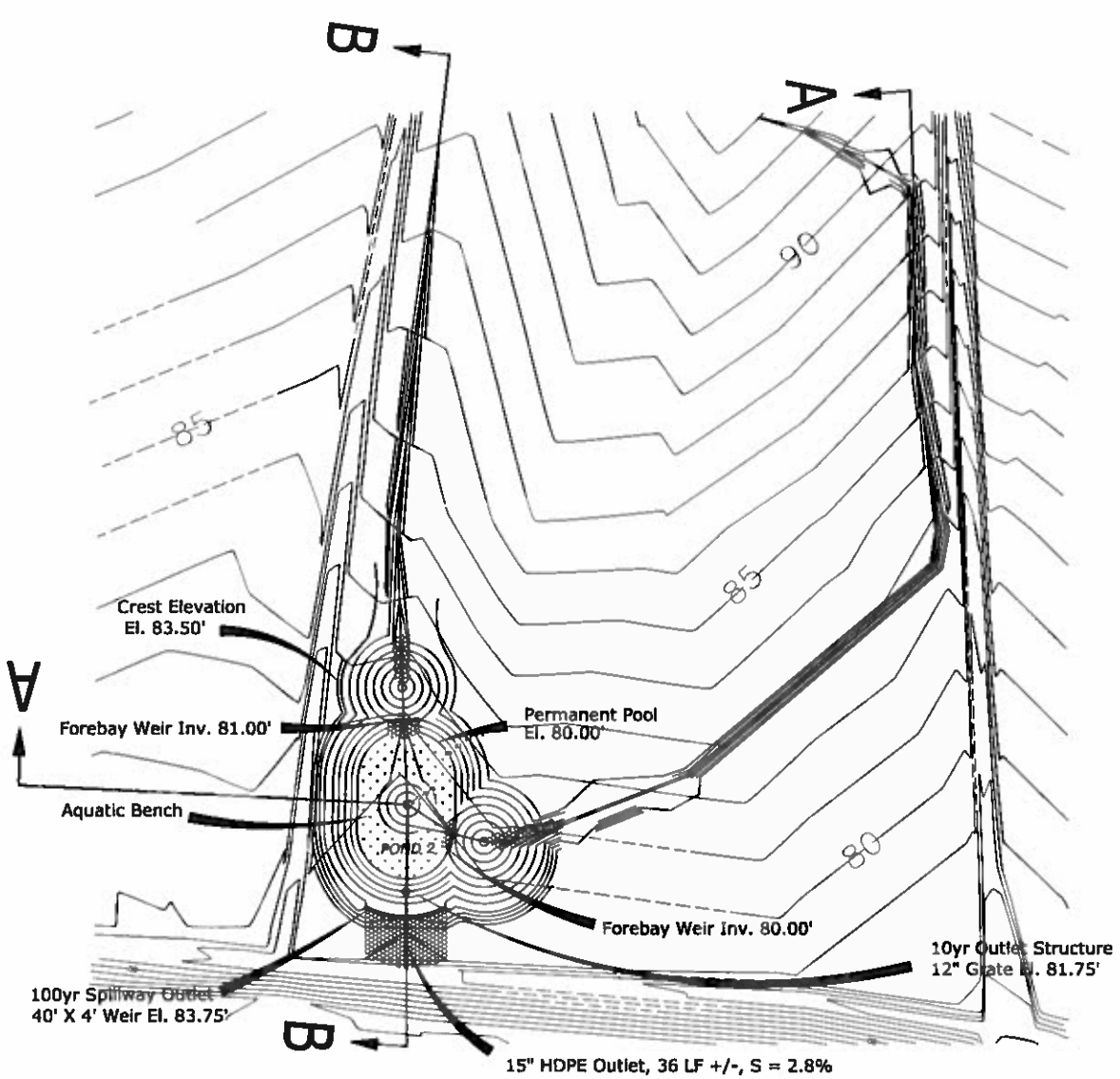
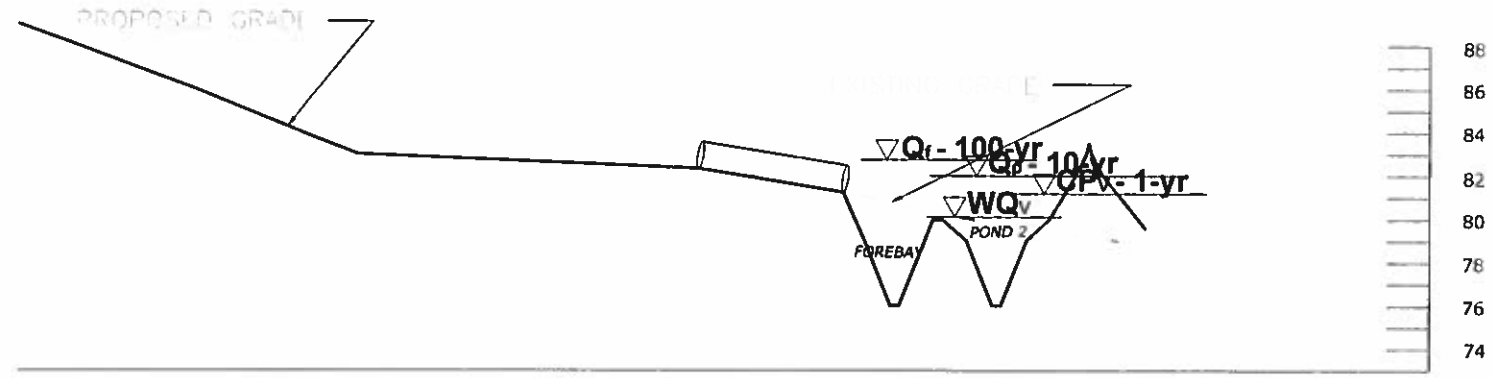
TIMOTHY C. BUHL, P.E.

GOODMAN HILL ROAD, LOCKE N.Y. 13092 607 422-1919

DATE: JUNE 5, 2015
SCALE: 1" = 40'
DRAWN: SDG
JOB: 10-07
SHEET: ST-12





SECTION A – A
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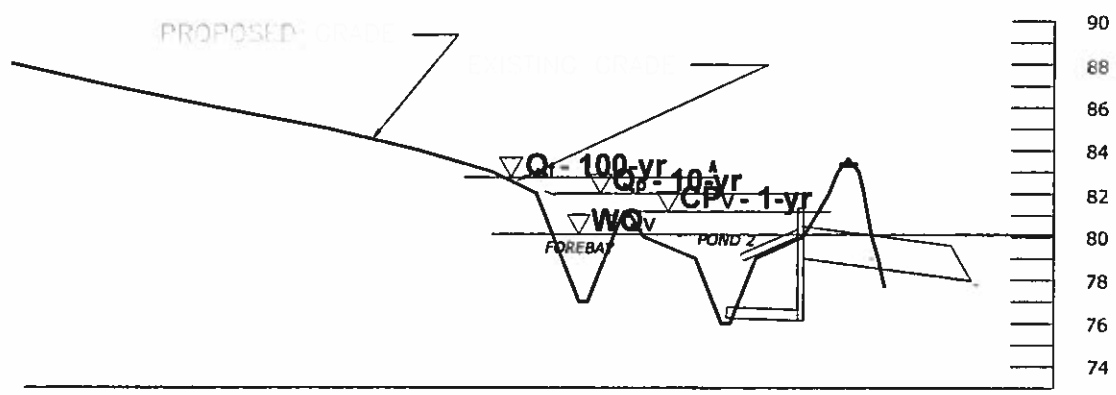

SECTION B – B
Vertical Scale = 10X Horizontal

Q_f : 100-YR (") EVENT
POND PEAK VOL. = 20,305-CF, PEAK DEPTH = 7.79', EL. = 83.79'

Q_p : 10-YR (") EVENT
POND PEAK VOL.= 11,599-CF, PEAK DEPTH = 6.07', EL. = 82.07'

C_{pv} : 1-YR (") EVENT
POND PEAK VOL.* = 9,207-CF, PEAK DEPTH = 5.61', EL.= 81.61'

WQ_v : WATER QUALITY VOLUME* = 3,239-CF, DEPTH = 4.23' , EL.= 80.23'
* - calculated using zero exfiltration, saturated or frozen soil conditions.

REVISIONS

No.	Date	Description

POND 2 PLAN

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

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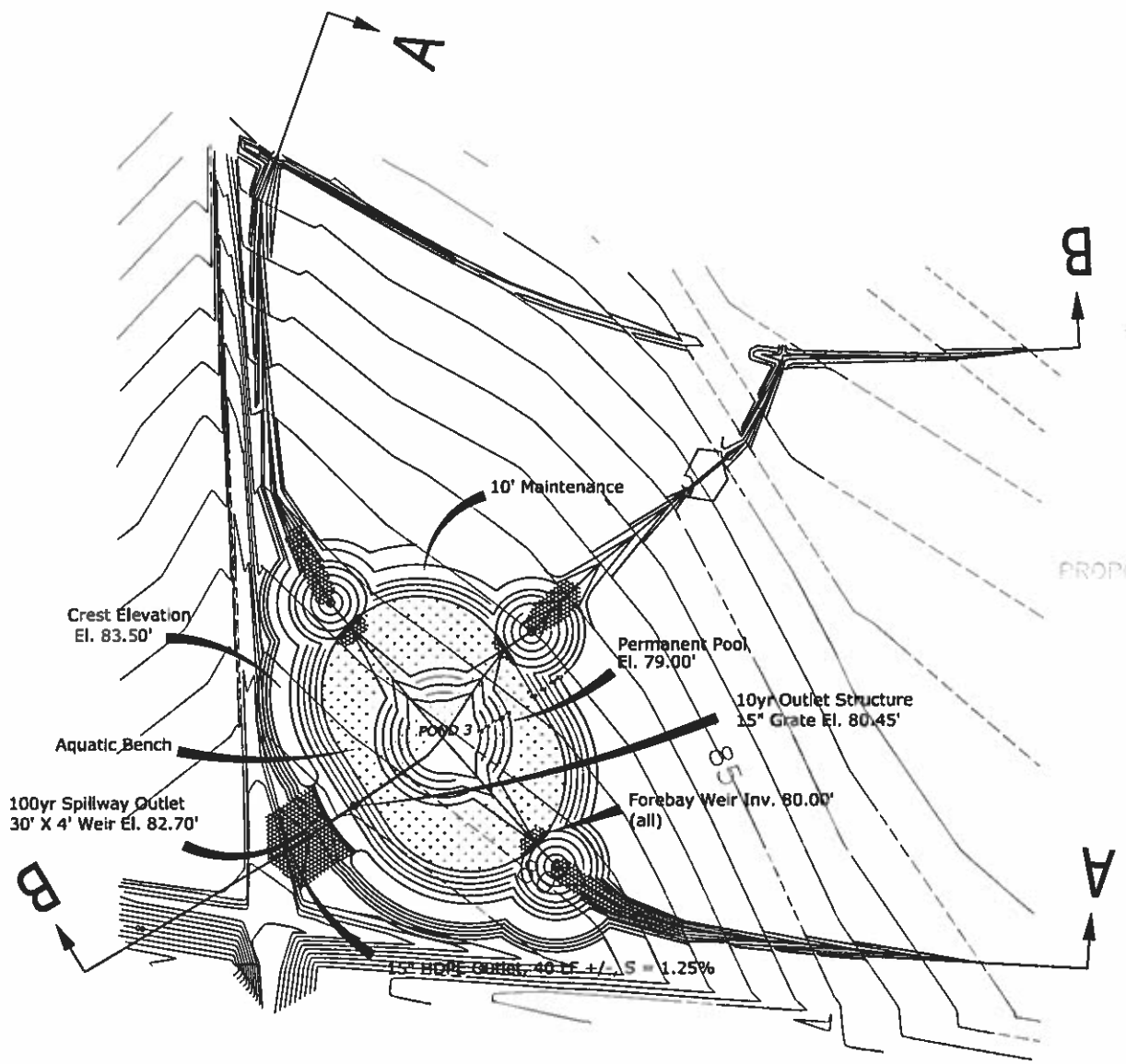
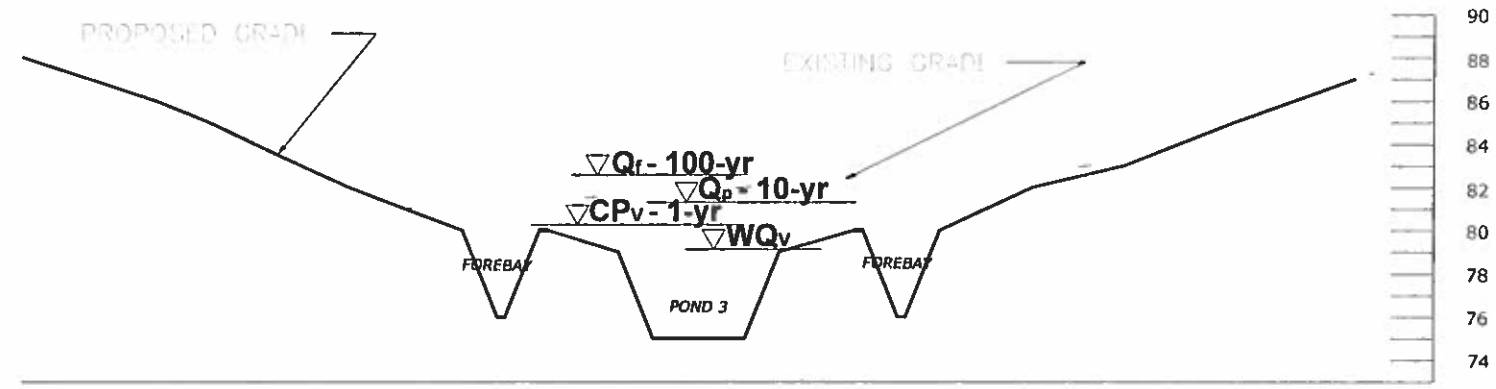
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.

DATE: JUNE 5, 2015
SCALE: 1" = 40'
DRAWN: SDG
JOB: 10-07
SHEET: ST-13





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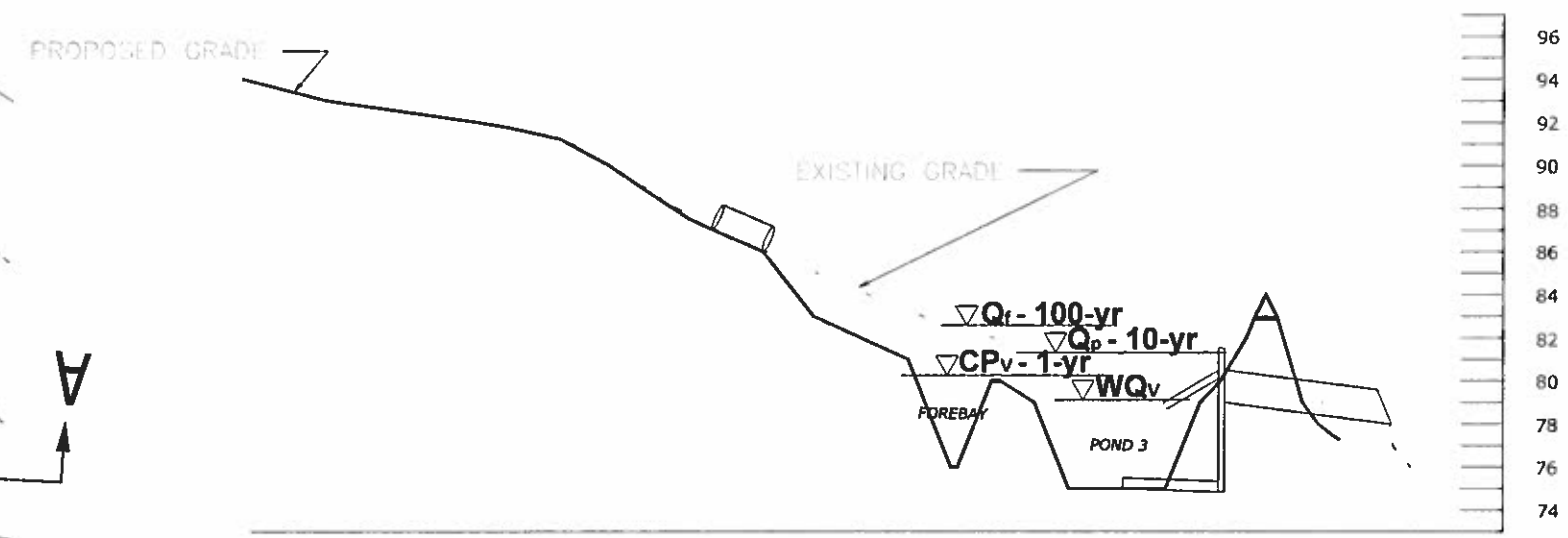

SECTION B – B
Vertical Scale = 10X Horizontal

Q_f : 100-YR (") EVENT
POND PEAK VOL. = 65,735-CF, PEAK DEPTH = 8.08', EL. = 83.08'

Q_p : 10-YR (") EVENT
POND PEAK VOL.= 34,432-CF, PEAK DEPTH = 6.25', EL. = 81.25'

C_{pv} : 1-YR (") EVENT
POND PEAK VOL.* = 24,423-CF, PEAK DEPTH = 5.55', EL.= 80.55'

WQ_v : WATER QUALITY VOLUME* = 10,023-CF, DEPTH = 4.11' , EL.= 79.11'

* - calculated using zero exfiltration, saturated or frozen soil conditions.

REVISIONS

No.	Date	STM.	Description

POND 3 PLAN

CAYUGA FARMS TOWNHOMES
N. TRUPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT.GROUP,LLC
495 BROADWAY, 7th FL.
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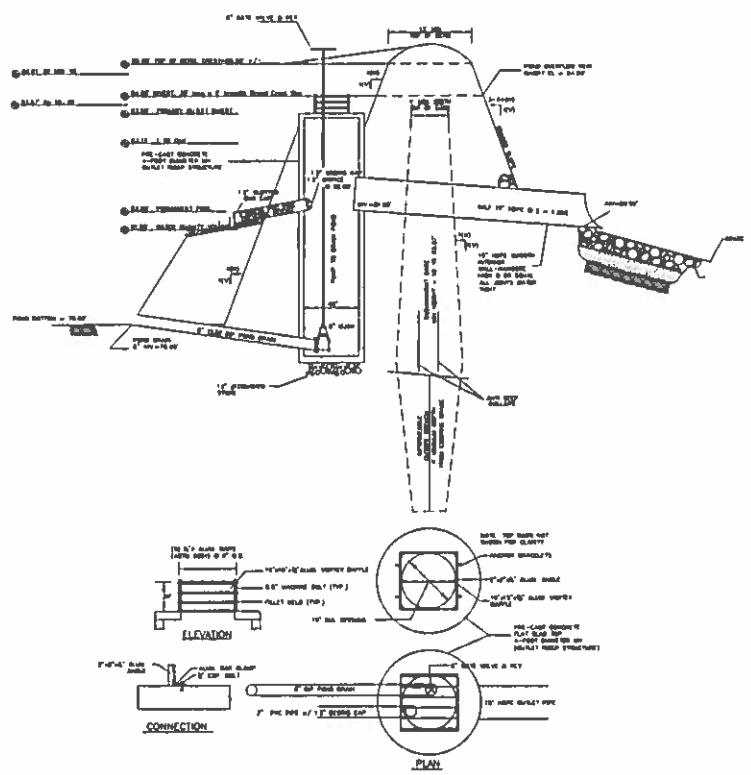
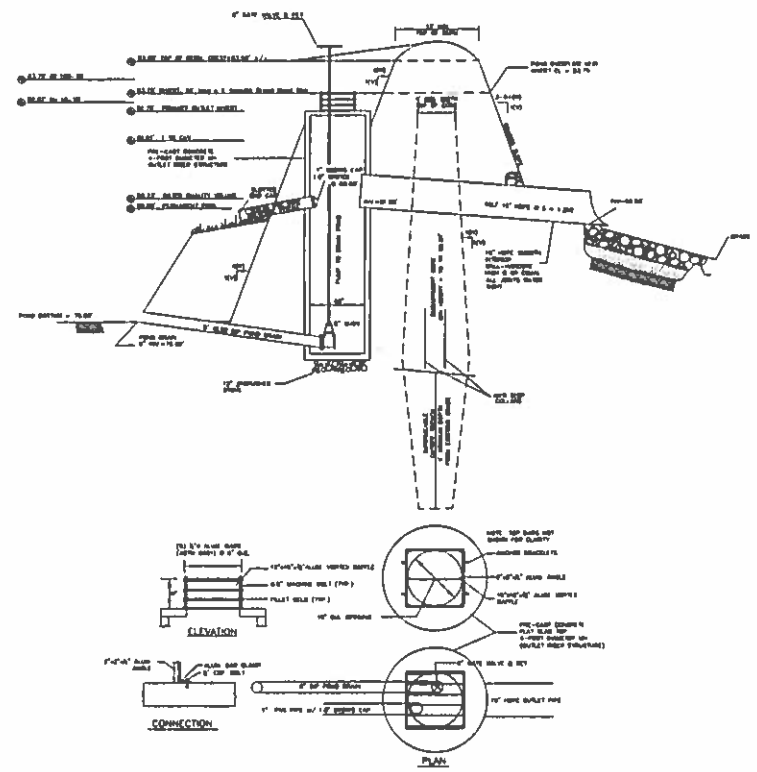
TIMOTHY C. BUHL,P.E.

DATE: JUNE 5, 2015
SCALE: 1" = 40'
DRAWN: SDG
JOB: 10-07
SHEET: ST-14



POND 1 OUTLET STRUCTURE & SECTION DETAILS



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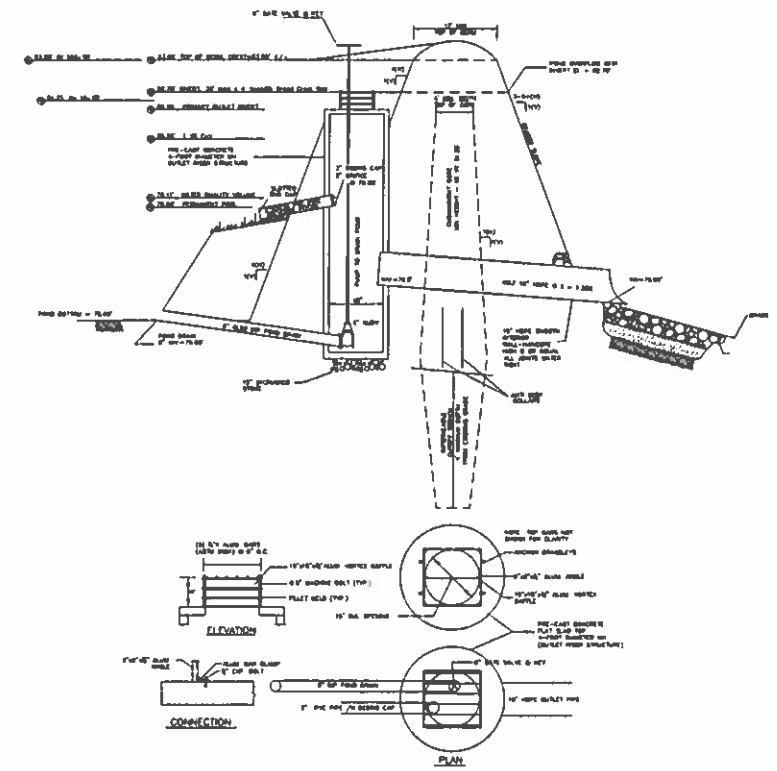
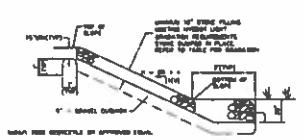
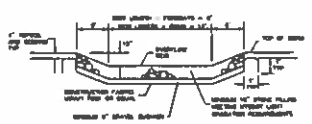


POND 3 OUTLET STRUCTURE & SECTION DETAILS

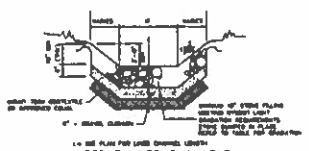
POND OUTLET STRUCTURES & EMBANKMENT DETAILS



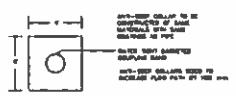
SPILLWAY SLOPES FOREBAY & POND



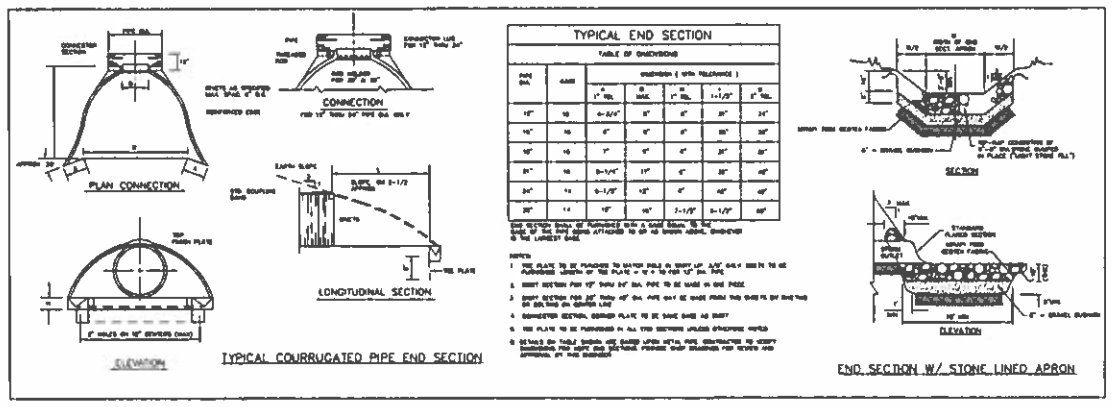
FOREBAY & POND OUTLET WEIRS



STONE LINED CHANNELS



ANTI-SEEP COLLAR



TYPICAL END SECTION

TABLE OF DIMENSIONS

PIPE DIA.	GAGE	DIMENSION (WITH TOLERANCE)				
		A 1" TOL.	B MAX.	C 1" TOL.	I ±1/2"	J 1" TOL.
12"	16	4+3/4"	8"	6"	30"	24"
14"	16	5"	8"	6"	30"	30"
18"	16	7"	8"	6"	30"	36"
21"	16	8+1/4"	11"	6"	30"	42"
24"	14	9+1/2"	12"	6"	42"	48"
30"	14	12"	16"	7+1/2"	54+1/2"	60"

THE SECTION SHALL BE FURNISHED WITH A GAGE EQUAL TO THE GAGE OF THE PIPE AND ATTACHED TO OR TO BE SHOWN HERON, WHICHEVER IS THE LARGEST GAGE.

NOTES:

1. THE PLATE TO BE FURNISHED TO WITHIN HALF A INCH LIP, A/2" ONLY ADD IN TO BE FURNISHED LENGTH OF THE PLATE = 2 + 12 FOR 12" DIA. PIPE.
2. SHORT SECTION FOR 12" THRU 24" DIA. PIPE TO BE MADE IN ONE PIECE.
3. SHORT SECTION FOR 27" THRU 54" DIA. PIPE MAY BE MADE FROM TWO SHEETS BY SHEETING ON SAMPLE LINE.
4. CONNECTION SECTION, CORNER PLATE TO BE MADE SAME AS SHORT.
5. THE PLATE TO BE FURNISHED IN ALL TWO SECTIONS UNLESS OTHERWISE NOTED.
6. DETAILS ON THIS SHEET ARE BASED UPON METAL PIPE CONTRACTED TO VERIFY DIMENSIONS FROM SHOP DWG BEFORE FURNISH SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER.

NOTES:
POND EMBANKMENT CONSTRUCTION

1. EMBANKMENT MATERIAL SPECIFICATIONS. EMBANKMENT SOILS AND CUT OFF TRENCH MATERIAL SHALL BE MATERIAL CONFORMING TO ASTMD 2487 CLASSIFICATION SC, SM, CH, OR CL WITH AT LEAST 30% PASSING #200 SIEVE. SOIL CUT OFF TRENCH MATERIAL SHALL BE FREE OF ROOTS, STRAWS, WEEDS, MUCKSAL SPONGE SMALLER THAN 3-INCHES, FREEZE OR SPONGY MATERIALS. MATERIALS STOCKPILED MATERIAL SHALL BE REMOVED AND DISPOSED FROM TRUCK, TRAPPED AND SPONGY MATERIALS SUBSTANCES OR PROCESSED.
2. EMBANKMENT COMPACTION. EMBANKMENT FILL SHALL BE PLACED IN 12-INCH LIFTS MAXIMUM AND COMPACTED. THE MINIMUM REQUIRED DENSITY SHALL NOT BE LESS THAN 95% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN 2% OF OPTIMUM. ALL DEPARTURES TO BE DETERMINED BY AGENTS OF THE DAM AND BY STANDARD PROCTOR.
3. EMBANKMENT CORE DIMENSIONS. THE CORE SHALL BE PARALLEL TO THE CENTERLINE OF THE EMBANKMENT AS SHOWN ON THE PLANS. THE TOP WIDTH OF THE CORE SHALL BE A MINIMUM OF FOUR FEET. THE HEIGHT SHALL EXTEND UP TO AT LEAST FIVE TO TEN FEET BELOW THE TOP OF THE DAM AS SHOWN ON THE PLANS. THE SIDE SLOPES SHALL BE 1 TO 1 OR FLATTER. THE CORE SHALL BE CONSTRUCTED OF MATERIALS HAVING SUFFICIENT DENSITY, FAILURE, OR FAILURE TO ACHIEVE MINIMUM DENSITY AND MINIMUM PERMEABILITY. THE CORE SHALL BE CONSTRUCTED/PLACED CONCURRENTLY WITH THE OUTER SHELL OF THE EMBANKMENT.
4. EMBANKMENT SURFACE. A 6-INCH LAYER OF TOPSOIL SHALL BE PLACED ON OUTER SURFACE WALL OF THE EMBANKMENT. SOME GRADED GRAVEL SHALL BE INSTALLED BY GENERAL LABORS, FORTHWITH, MAXIMUM, ETC. IN ACCORDANCE WITH NEW YORK STATE STANDARDS AND SPECIFICATIONS FOR DAM, EMBANKMENT AND EMBANKMENT CONTROL. EMBANKMENT SHALL BE KEPT FREE OF WOODY PLANT GROWTH AND TREES.

STONE LINING FOR STORMWATER CONVEYANCE SECTIONS

DIA. PERFORATED PIPE (INCH)	STONE FILLING (TON)	Y MAX. 1' DEPTH	SIDE NOTES	STONE SIZE	PERCENT OF STONE BY WEIGHT	SHORTEST PERIMETER (DEPTH 1')
8"	PVC	11.8 (TN)	3.3:1	SMALLER THAN 3" LARGER THAN 1/2" SMALLER THAN 1/2" TO DUST	50-100 0-50 0-10	0.0014
12"	14GA	13.6 (TN)	3.3:1	LARGER THAN 1/2 LBS LARGER THAN 4" SMALLER THAN 1/2"	50-100 0-50 0-10	0.0032
18"	16GAUG	16.6 (TN)	3.3:1	MEANER THAN 1/2 LBS SMALLER THAN 3"	50-100 0-10	0.0085
30"	HDPE	17.6 (TN)	3.3:1	MEANER THAN 1/2 LBS SMALLER THAN 6"	50-100 0-10	0.0163

1. SOURCE: HYDRAULIC ENGINEERING CIRCULAR NO. 15 DESIGN OF STABLE CHANNELS WITH FLEXIBLE LINING 1st EDITION. USES DESIGN PROCEDURE DEPT. GOOD AND CHANGES, PROTECTING LARGE DESIGN PROCEDURE

NOTES

1. STONE SIZES, GRADED THAN ABOVE, REFER TO THE LARGEST OF THE MAXIMUM AND MINIMUM DIMENSIONS OF A STONE PARTICLE AS DETERMINED BY THE DIAMETER.
2. MATERIALS SMALL GRADING LESS THAN 50 PERCENT OF STONES WITH A RATIO OF MAXIMUM TO MINIMUM DIMENSIONS GREATER THAN THREE.
3. AIR-DRIED SLAKE FURNISH SLAB GRADED OR GRAVEL HAVING AT LEAST ONE FRACTURED FACE FOR ACCEPTABLE SUBSTITUTES FOR STONE LINING THESE ITEMS, PROVIDED THAT SHAPENESS AND GRADATION REQUIREMENTS ARE MET.
4. MATERIALS SMALL CONTAIN A SUFFICIENT AMOUNT OF STONES SMALLER THAN THE AVERAGE STONE SIZE TO FILL THE VOIDS BETWEEN THE STONES.

TYPICAL OUTLET STRUCTURES & EMBANKMENT DETAILS

REFERENCE THE POND PLAN & SECTION SHEETS FOR ELEVATIONS, DIMENSIONS, LINES & GRADES

REVISIONS

No.	Date	STM.	Description

POND DETAILS

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N. TRIPHAMMER ROAD
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SCALE: NTS
DRAWN: SDG
JOB: 10-07
SHEET: ST-15

Existing Subcatchment - 2 (ESC-2)
Proposed Site Conditions - Area = 195,631 SF

Surface Conditions & Soils:
84% OaA, WrB Hydrologic Soil Group (HSG) C
16% IcA Hydrologic Soil Group (HSG) D

Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 73, Brush/Weeds Mix, Good HSG D Soils

Overland Stormwater Runoff - Longest Flowpath = 715 lf +/-
Sheet Flow, Range - 150 lf @ S = 2.8% avg.
Shallow Concentrated Flow - 253 lf @ S = 2.8%
Trap/Vee Channel Flow - 312 lf @ S = 2.09%

To Design Point 1 - (DP 1)

Existing Subcatchment - 3 (ESC-3)
Proposed Site Conditions - Area = 121,182 SF

Surface Conditions & Soils:
91% OaA, LbB Hydrologic Soil Group (HSG) C
9% IcA Hydrologic Soil Group (HSG) D

Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 73, Brush/Weeds Mix, Good HSG D Soils
Runoff Curve Number = 77, Woods, Good HSG D Soils

Overland Stormwater Runoff - Longest Flowpath = 903 lf +/-
Sheet Flow, Range - 150 lf @ S = 4.0% avg.
Trap/Vee Channel Flow - 753 lf @ S = 2.0%

To Design Point 1 - (DP 1)

Existing Subcatchment - 5 (ESC-5)
Proposed Site Conditions - Area = 148,843 SF

Surface Conditions & Soils:
100% CfB, OaA Hydrologic Soil Group (HSG) C

Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 48, Brush/Weeds Mix, Good HSG B Soils

Overland Stormwater Runoff - Longest Flowpath = 888 lf +/-
Sheet Flow, Range - 150 lf @ S = 4.7% avg.
Shallow Concentrated Flow - 170 lf @ S = 2.9%
Trap/Vee Channel Flow - 568 lf @ S = 1.6%

To Design Point 2 - (DP 2)

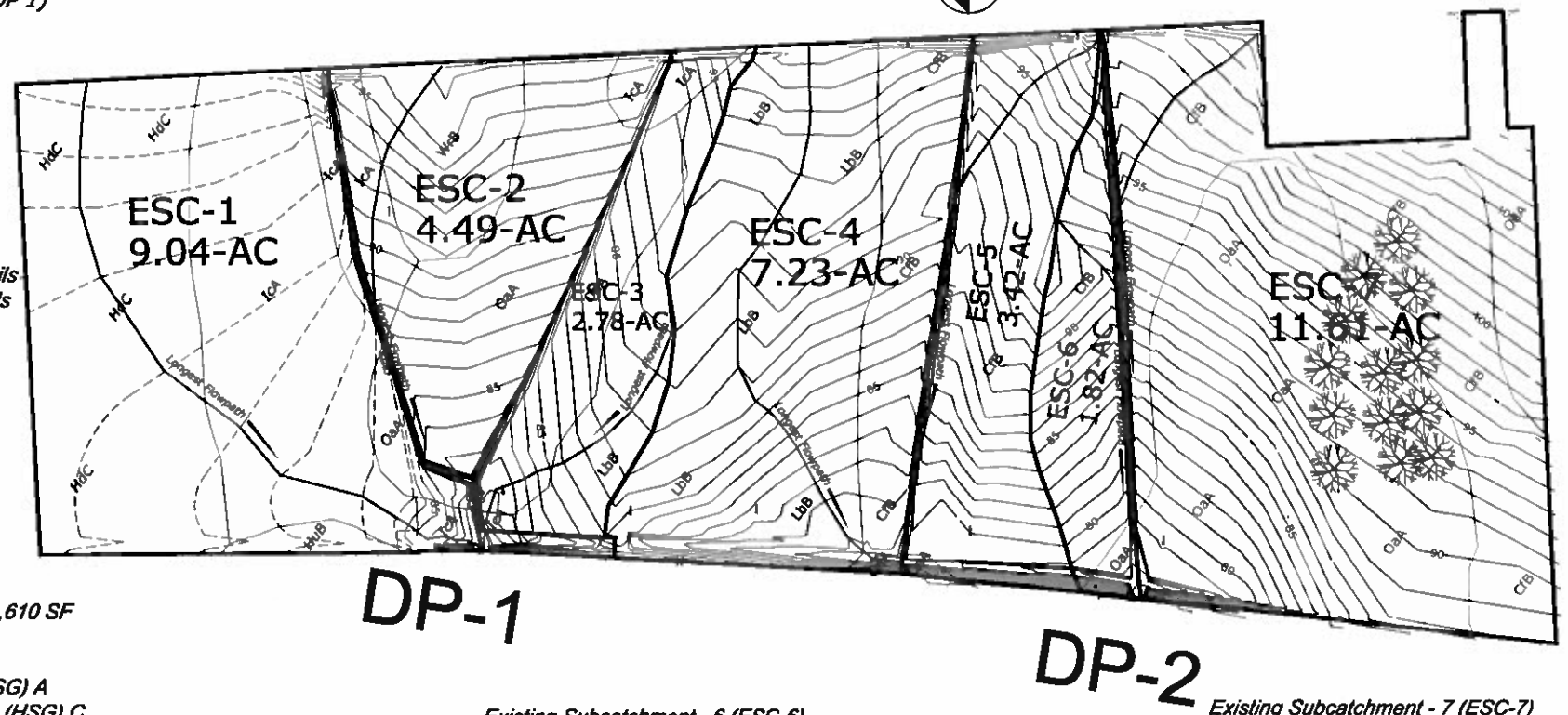
Existing Subcatchment - 4 (ESC-4)
Proposed Site Conditions - Area = 315,079 SF

Surface Conditions & Soils:
100% CfB, OaA, LbB Hydrologic Soil Group (HSG) C

Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 48, Brush/Weeds Mix, Good HSG B Soils

Overland Stormwater Runoff - Longest Flowpath = 913 lf +/-
Sheet Flow, Range - 150 lf @ S = 2.7% avg.
Trap/Vee Channel Flow - 763 lf @ S = 2.4%

To Design Point 2 - (DP 2)



Existing Subcatchment - 1 (ESC-1)
Proposed Site Conditions - Area = 393,610 SF

Surface Conditions & Soils:
47.6% HdC, Hydrologic Soil Group (HSG) A
4.2% OaA, HuB Hydrologic Soil Group (HSG) C
48.2% IcA Hydrologic Soil Group (HSG) D

Runoff Curve Number = 30, Brush/Weeds Mix, Good HSG A Soils
Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 73, Brush/Weeds Mix, Good HSG D Soils
Runoff Curve Number = 32, Woods/grass Comb. Good HSG A Soils
Runoff Curve Number = 72, Woods/grass Comb. Good HSG C Soils
Runoff Curve Number = 79, Woods/grass Comb. Good HSG D Soils

Overland Stormwater Runoff - Longest Flowpath = 1,045 lf +/-
Sheet Flow, Range - 150 lf @ S = 1.3% avg.
Shallow Concentrated Flow - 750 lf @ S = 0.8%
Trap/Vee Channel Flow - 145 lf @ S = 5.5%

To Design Point 1 - (DP 1)

Existing Subcatchment - 6 (ESC-6)
Proposed Site Conditions - Area = 79,284 SF

Surface Conditions & Soils:
100% CfB, OaA Hydrologic Soil Group (HSG) C

Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 48, Brush/Weeds Mix, Good HSG B Soils

Overland Stormwater Runoff - Longest Flowpath = 824lf +/-
Sheet Flow, Range - 150 lf @ S = 3.3% avg.
Shallow Concentrated Flow - 253 lf @ S = 2.4%
Trap/Vee Channel Flow - 421 lf @ S = 3.0%

To Design Point 2 - (DP 2)

Existing Subcatchment - 7 (ESC-7)
Proposed Site Conditions - Area = 505,755 SF

Surface Conditions & Soils:
100% CfB, OaA Hydrologic Soil Group (HSG) C

Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 48, Brush/Weeds Mix, Good HSG B Soils

Overland Stormwater Runoff - Longest Flowpath = 929 lf +/-
Sheet Flow, Range - 150 lf @ S = 4.0% avg.
Shallow Concentrated Flow - 203 lf @ S = 2.9%
Trap/Vee Channel Flow - 576 lf @ S = 2.6%

To Design Point 2 - (DP 2)

EXISTING SITE CONDITIONS
REFERENCE HYDROCAD (HYDRAULIC & HYDROLOGIC) MODELING RESULTS PRESENTED WITH THESE PLANS

REVISIONS
No. Date STM. Description

HYDROLOGIC AND HYDRAULIC WORKSHEET - EXISTING CONDITIONS

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT. GROUP, LLC
495 BROADWAY, 7th FL.
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.
GEOGRAPHER BUILT BRAND, LICENSE N.Y. 130972 607 422-1910

DATE: JUNE 5, 2015
SCALE: NTS
DRAWN SDG
JOB: 10-07
SHEET: ST-16

Proposed Subcatchment - 2 (PSC-2)
Proposed Site Conditions - Area = 369,587 SF (8.48-AC)

Surface Conditions & Soils:
97.9% CfB, OaA, LbB, Hydrologic Soil Group (HSG) C
2.1% IcA, Hydrologic Soil Group (HSG) D

Runoff Curve Number = 98, Paved Parking & Roofs, HSG B&C Soils
Runoff Curve Number = 92, Paved Roads w/Open Ditches, HSG C Soils
Runoff Curve Number = 89, Paved Roads w/Open Ditches, HSG B Soils
Runoff Curve Number = 74, >75% Grass Cover, HSG C Soils
Runoff Curve Number = 61, >75% Grass Cover, HSG B Soils
Runoff Curve Number = 73, Brush, HSG D Soils

PSC-2a - Overland Stormwater Runoff - Longest Flowpath = 100 lf +/-
Sheet Flow, Dense Grass - 100 lf @ S = 4.0% avg.

PSC-bc - Overland Stormwater Runoff - Longest Flowpath = 136 lf +/-
Sheet Flow, Dense Grass - 100 lf @ S = 3.5% avg.
Shallow Concentrated Flow - Pasture, 36 lf @ S = 3.5%

PSC-2c - Overland Stormwater Runoff - Longest Flowpath = 293 lf +/-
Sheet Flow, Short Grass - 100 lf @ S = 4.0% avg.
Shallow Concentrated Flow - Grassed Waterwy, 113 lf @ S = 1.77%
Shallow Concentrated Flow - Paved, 80 lf @ S = 1.5% avg.

PSC-2d - Overland Stormwater Runoff - Longest Flowpath = 262 lf +/-
Sheet Flow, Short Grass - 100 lf @ S = 1.0% avg.
Shallow Conc. Flow - Grassed Waterway, 82 lf @ S = 1.0% avg.

PSC-2e - Overland Stormwater Runoff - Longest Flowpath = 241 lf +/-
Sheet Flow, Short Grass - 100 lf @ S = 3.0% avg.
Shallow Conc. Flow - Paved, 141 lf @ S = 2.4% avg.

PSC-2f - Overland Stormwater Runoff - Longest Flowpath = 241 lf +/-
Sheet Flow, Bermuda Grass - 32 lf @ S = 12.5% avg.
Trap/Vee Channel Flow, 310 lf @ S = 2.6% avg.
Circular Pipe, 15", 40 lf @ S = 7.5% avg.
Trap/Vee Channel Flow, 250 lf @ S = 2.0% avg.

To Design Point 2 - (DP 2)

Proposed Subcatchment - 1 (PSC-1)
Proposed Site Conditions - Area = 195,576 SF (4.49-AC)

Surface Conditions & Soils:
84.0% OaA, Hydrologic Soil Group (HSG) C
16.0% IcA, WrB Hydrologic Soil Group (HSG) D

Runoff Curve Number = 98, Paved Parking & Roofs, HSG C & D Soils
Runoff Curve Number = 98, Paved Roads, HSG D Soils
Runoff Curve Number = 74, >75% Grass Cover, HSG C Soils
Runoff Curve Number = 80, >75% Grass Cover, HSG D Soils
Runoff Curve Number = 87, Dirt parking, HSG C Soils

PSC-1a Overland Stormwater Runoff - Longest Flowpath = 406 lf +/-
Sheet Flow, Smooth Surfaces - 100 lf @ S = 5.0% avg.
Shallow Conc. Flow - 152 lf @ S = 0.70% avg.
Trap/Vee Channel Flow - 154 lf @ S = 1.5% avg.

PSC-1b Overland Stormwater Runoff - Longest Flowpath = 327 lf +/-
Sheet Flow, Smooth Surfaces - 50 lf @ S = 3.0% avg.
Trap/Vee Channel Flow - 277 lf @ S = 0.9% avg.

PSC-1c Overland Stormwater Runoff - Longest Flowpath= 272 lf +/-
Sheet Flow, Dense Grass - 100 lf @ S = 2.8% avg.
Shallow Conc. Flow - Grassed Waterway - 72 lf @ S = 4.0% avg.

To Design Point - (DP 1)

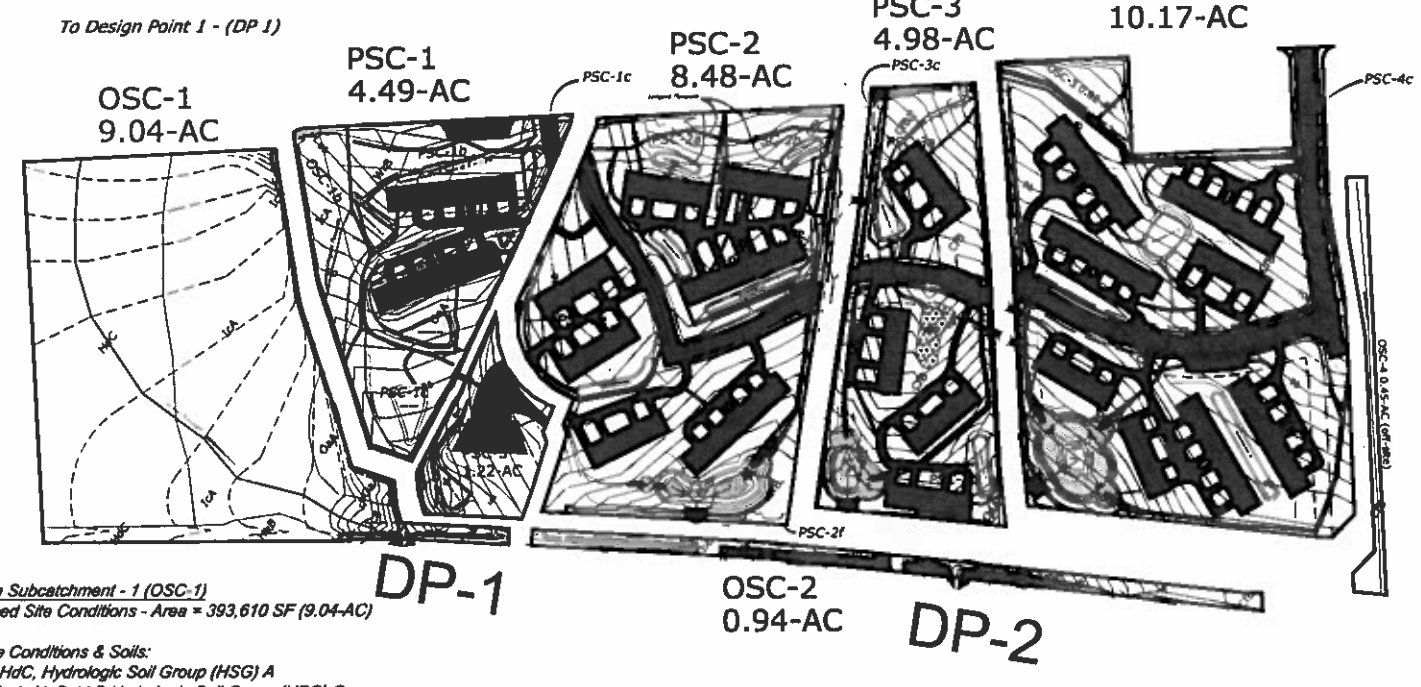
Proposed Subcatchment - 5 (PSC-5)
Proposed Site Conditions - Area = 53,350 SF (1.22-AC)

Surface Conditions & Soils:
96.5% OaA, LbB Hydrologic Soil Group (HSG) C
3.5% IcA Hydrologic Soil Group (HSG) D

Runoff Curve Number = 74, >75% Grass Cover, HSG C Soils
Runoff Curve Number = 80, >75% Grass Cover, HSG D Soils
Runoff Curve Number = 98, Paved Parking and Roofs

Overland Stormwater Runoff - Longest Flowpath = 279 lf +/-
Sheet Flow, Short Grass - 18 lf @ S = 2.7% avg.
Sheet Flow, Smooth Surfaces - 18 lf @ S = 0.56% avg.
Sheet Flow, Short Grass - 31 lf @ S = 2.5% avg.
Sheet Flow, Smooth Surfaces - 33 lf @ S = 2.0% avg.
Shallow Concentrated Flow, Unpaved - 86 lf @ S = 4.0% avg.
Trap/Vee Channel Flow - 76 lf @ S = 2.6% avg.

To Design Point 1 - (DP 1)



Off-Site Subcatchment - 1 (OSC-1)
Proposed Site Conditions - Area = 393,610 SF (9.04-AC)

Surface Conditions & Soils:
47.6% HdC, Hydrologic Soil Group (HSG) A
4.2% OaA, HuB, LbB Hydrologic Soil Group (HSG) C
48.2% IcA Hydrologic Soil Group (HSG) D

Runoff Curve Number = 30, Brush/Weeds Mix, Good HSG A Soils
Runoff Curve Number = 65, Brush/Weeds Mix, Good, HSG C Soils
Runoff Curve Number = 73, Brush/Weeds Mix, Good HSG D Soils
Runoff Curve Number = 32, Woods/grass Comb. Good HSG A Soils
Runoff Curve Number = 72, Woods/grass Comb. Good HSG C Soils
Runoff Curve Number = 79, Woods/grass Comb. Good HSG D Soils

Overland Stormwater Runoff - Longest Flowpath = 1,045 lf +/-
Sheet Flow, Range - 150 lf @ S = 1.3% avg.
Shallow Concentrated Flow - 750 lf @ S = 0.8%
Trap/Vee Channel Flow - 145 lf @ S = 5.5%

To Design Point 1 - (DP 1)

Off-Site Subcatchment - 3 (OSC-3)
Proposed Site Conditions - Area = 27,003 SF

Surface Conditions & Soils:
100% CfB, Hydrologic Soil Group (HSG) C

Runoff Curve Number = 48, Brush/Weed Grass Mix on Good B Soils

Overland Stormwater Runoff - Longest Flowpath = 611 lf +/-
Trap/Vee Channel Flow - 611 lf @ S = 1.5%

To Design Point 2 - (DP 2)

Off-Site Subcatchment - 2 (OSC-2)
Proposed Site Conditions - Area = 40,997 SF

Surface Conditions & Soils:
100% CfB, OaA, LbB, Hydrologic Soil Group (HSG) C

Runoff Curve Number = 48, Brush/Weed Grass Mix on Good B Soils
Runoff Curve Number = 65, Brush/Weed Grass Mix on Good C Soils

Overland Stormwater Runoff - Longest Flowpath = 414 lf +/-
Sheet Flow, Dense Grass - 100 lf @ S = 3.0% avg.
Trap/Vee Channel Flow - 314 lf @ S = 2.9% avg.

To Design Point 2 - (DP 2)

Off-Site Subcatchment - 1b (OSC-1b)
Proposed Site Conditions - Area = 36,302 SF

Surface Conditions & Soils:
37.0% WrB, Hydrologic Soil Group (HSG) C
63.0% IcA, Hydrologic Soil Group (HSG) D

Runoff Curve Number = 65, Brush, HSG C Soils
Runoff Curve Number = 73, Brush, HSG D Soils

Overland Stormwater Runoff - Longest Flowpath = 178lf
Sheet Flow, Dense Grass - 150 lf @ S = 2.2% avg.
Shallow Conc. Flow - Grassed Waterway - 27 lf @ S = 2,2% avg.

To Design Point - (DP 1)

Off-Site Subcatchment - 4 (OSC-4)
Proposed Site Conditions - Area = 19,408 SF

Surface Conditions & Soils:
100% CfB, OaA, Hydrologic Soil Group (HSG) C

Runoff Curve Number = 48, Brush/Weed Grass Mix on Good B Soils
Runoff Curve Number = 65, Brush/Weed Grass Mix on Good C Soils

Overland Stormwater Runoff - Longest Flowpath = 768 lf +/-
Sheet Flow, Dense Grass - 100 lf @ S = 2.6%
Trap/Vee Channel Flow - 668 lf @ S = 2.6%

To Design Point 2 - (DP 2)

Proposed Subcatchment - 3 (PSC-3)
Proposed Site Conditions - Area = 216,869 SF

Surface Conditions & Soils:
100% CfB, OaA, Hydrologic Soil Group (HSG) C

Runoff Curve Number = 98, Paved Parking & Roofs, HSG B&C Soils
Runoff Curve Number = 74, >75% Grass Cover, HSG C Soils
Runoff Curve Number = 61, >75% Grass Cover, HSG B Soils

PSC 3a

Overland Stormwater Runoff - Longest Flowpath = 279 lf +/-
Sheet Flow, Dense Grass - 100 lf @ S = 7.0% avg.
Shallow Concentrated Flow - 179 lf @ S = 6.0%
Trap/Vee Channel Flow - 29 lf @ S = 3.4%

PSC 3b

Overland Stormwater Runoff - Longest Flowpath = 157 lf +/-
Sheet Flow, Smooth Surfaces - 100 lf @ S = 1.0% avg.
Shallow Concentrated Flow, Paved - 34 lf @ S = 1.0% avg.
Shallow Concentrated Flow, Grassed Waterway - 23 lf@ S = 2.0% avg.

PSC 3c

Overland Stormwater Runoff - Longest Flowpath = 658 lf +/-
Sheet Flow, Dense Grass - 44 lf @ S = 15.9% avg.
Trap/Vee Channel Flow - 288 lf @ S = 1.7% avg.
Circular Pipe 15" - 40 lf @ S = 2.5% avg.
Trap/Vee Channel Flow - 286 lf@ S = 2.1% avg.

To Design Point 2 - (DP 2)

Proposed Subcatchment - 4 (PSC-4)
Proposed Site Conditions - Area = 442,909 SF

Surface Conditions & Soils:
100.0% CfB, OaA, Hydrologic Soil Group (HSG) C

Runoff Curve Number = 98, Paved Parking & Roofs, HSG B&C Soils
Runoff Curve Number = 89, Paved Roads w/Open Ditches, HSG B Soils
Runoff Curve Number = 92, Paved Roads w/Open Ditches, HSG C Soils
Runoff Curve Number = 74, >75% Grass Cover, HSG C Soils
Runoff Curve Number = 61, >75% Grass Cover, HSG B Soils

PSC 4a

Overland Stormwater Runoff - Longest Flowpath = 204 lf +/-
Circular Pipe, 4" - 204 lf @ S = 1.0%

PSC 4b

Overland Stormwater Runoff - Longest Flowpath = 998 lf +/-
Trap/Vee Channel Flow - 223 lf @ S =4.5% avg.
Circular Pipe, 12" - 40 lf @ S = 2.5% avg.
Trap/Vee Channel Flow - 443 lf @ S = 2.9% avg.
Circular Pipe, 15" - 40 lf @ S = 2.5% avg
Trap/Vee Channel Flow - 50 lf @ S = 2.5% avg.
Circular Pipe, 15" - 40 lf @ S = 2.5% avg.
Trap/Vee Channel Flow - 65 lf @ S = 4.6% avg.
Circular Pipe, 15" - 24 lf @ S = 6.7% avg.
Trap/Vee Channel Flow -73 lf @ S = 4.1% avg.

To Design Point 2 - (DP 2)

PROPOSED SITE CONDITIONS
REFERENCE HYDROCAD (HYDRAULIC & HYDROLOGIC) MODELING RESULTS PRESENTED WITH THESE PLANS

REVISIONS

No.	Date	By	Description
1	10/14		Added BR12 and OSC19
	9-26-14		

HYDROLOGIC AND HYDRAULIC WORKSHEET - PROPOSED CONDITIONS

CAYUGA FARMS TOWNHOMES
N. TRIPHAMMER ROAD
LANSING, NEW YORK

WB ASSET MNGMT.GROUP, LLC
495 BROADWAY, 7th Fl.
NEW YORK, NY 10012

TIMOTHY C. BUHL, P.E.
GOODRICH HILL ROAD, LOCKE N.Y. 13092 607 423-3919

DATE: JUNE 5, 2015
SCALE: NTS
DRAWN: SDG
JOB: 10-07
SHEET: ST-17