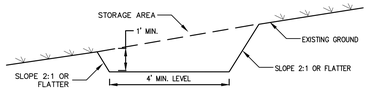
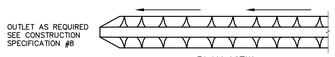
POSITIVE DRAINAGE: 0.5% OR STEEPER DEPENDENT ON TOPOGRAPHY



CROSS SECTION

POSITIVE DRAINAGE: 0.5% OR STEEPER DEPENDENT ON TOPOGRAPHY



PLAN VIEW

NOTE:

ADAPTED FROM DETAILS PROVIDED BY: USDA – NRCS,
NEW YORK STATE DEPARTMENT OF TRANSPORTATION,
NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION,
NEW YORK STATE SOIL & WATER CONSERVATION COMMITTEE

	Ditch A
Drainage Area	<5 Ac.
Bottom Width of Flow Channel	4 ft.
Depth of Flow Channel	1 ft.
Side Slopes	2:1 or flatter
Grade	0.5% Min. 10% Max.

For drainage areas larger than 10 acres, refer to the Standard and Specification for Grassed Waterways on page 3.23 and 3.24.

Type of Treatment	Channel Grade[1]	Flow Channel	
		A (<5 Ac.)	B (5-10 Ac.)
1	0.5-3.0%	Seed & Straw Mulch	Seed & Straw Mulch
2	3.1-5.0%	Seed & Straw Mulch	Seed and cover with RECP[2]. Sod, or lined with plastic or 2" stone
3	5.1-8.0%	Seed and cover with RECP[2]. Sod, or line with plastic or 2 in. stone	Line with 4-8 in. rip-rap or, geo-textile
4	8.1-10%	Line with 4-8 in. rip-rap or geotextile	Site Specific Design

1 In highly erodible soils, as defined by the local approving agency, refer to the next higher slope grade for type of stabilization.
2 Rolled Erosion Control Product.

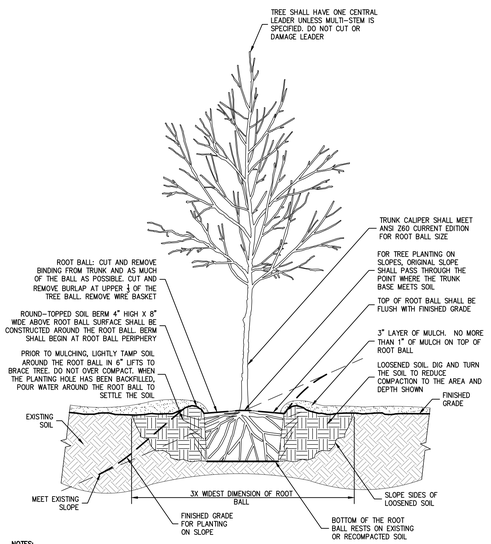
CONSTRUCTION SPECIFICATIONS:

1. ALL CONSTRUCTION DITCHES SHALL HAVE UNINTERUPTED POSITIVE GRADE TO AN OUTLET.
2. DIVERTED RUNOFF FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
3. DIVERTED RUNOFF FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED STABILIZED AREA AT NON-EROSIVE VELOCITY.
4. 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 SWALE.
5. THE DITCH 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.
6. FILLS SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DITCH.
8. STABILIZATION SHALL BE AS PER THE FLOW CHANNEL STABILIZATION CHART BELOW:

TYPE OF TREATMENT	CHANNEL GRADE	A (5 AC. OR LESS)
1.	0.5–3.0%	SEED AND STRAW MULCH
2.	3.1–5.0%	SEED AND STRAW MULCH
3.	5.1–8.0%	SEED AND COVER WITH NORTH AMERICAN GREEN ROLLMAX C–350.
4.	8.1–10.%	LINED WITH 4–8" RIP–RAP OR NORTH AMERICAN GREEN ROLLMAX P–550 GEOTEXTILE.

9. PERIODIC INSPECTION AND REQUIRED MAINTENANCE MUST BE PROVIDED AFTER EACH RAIN EVENT.

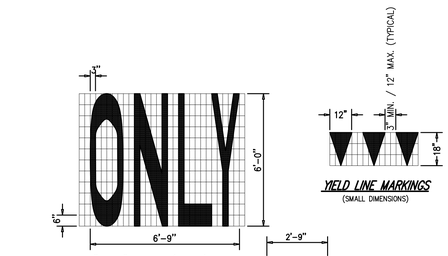
TEMPORARY CONSTRUCTION DITCH — 39



NOTES:

1. ALL PLANTING BEDS SHALL BE FREE OF WEEDS AND GRASS PRIOR TO AND FOLLOWING INSTALLATION OF PLANTS.
2. PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
3. PROPOSED PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.
4. SEE TREE STAKING DETAIL IF STAKING IS REQUIRED.

TREE PLANTING (DECIDUOUS AND EVERGREEN) — 43



YIELD LINE MARKINGS (SMALL DIMENSIONS)

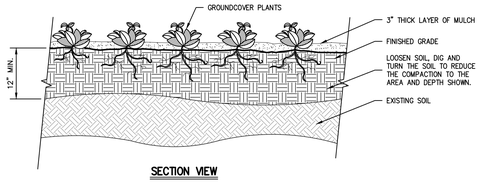
"ONLY" DETAIL (WHITE)

ELONGATED ARROWS FOR PAVEMENT MARKINGS

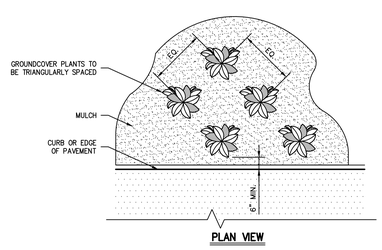
NOTES:

1. ALL PAVEMENT MARKINGS SHALL BE PLACED IN ACCORDANCE WITH THE MUTCD AND NYS SUPPLEMENT.
2. ALL DIMENSIONS AND THE PLACEMENT OF ARROWS, SYMBOLS, AND TEXT SHOWN ARE TYPICAL AND SHALL APPLY UNLESS OTHERWISE INDICATED IN THE CONTRACT DOCUMENTS.

PAVEMENT TEXT & ARROWS (ON-SITE) — 40



SECTION VIEW

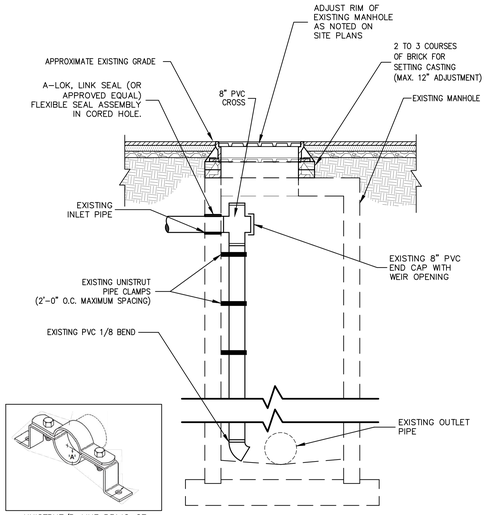


PLAN VIEW

NOTES:

1. SEE PLANTING PLAN FOR GROUNDCOVER SPECIES, SIZE, AND SPACING DIMENSION.
2. SETTLE SOIL AROUND ROOT BALL OF EACH GROUNDCOVER PLANT PRIOR TO MULCHING.
3. ALL PLANTING BEDS SHALL BE FREE OF WEEDS AND GRASS PRIOR TO AND FOLLOWING INSTALLATION OF PLANTS.
4. PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
5. PROPOSED PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

GROUNDCOVER — 44

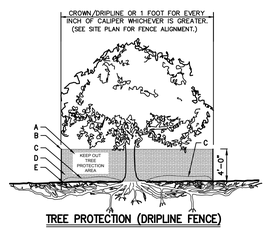


UNISTRUT/B–LINE B3148–87 8" OFFSET PIPE CLAMP–ZINC

NOTES:

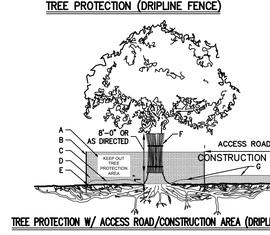
1. ALL NECESSARY PATCHING FOR STRUCTURE SHALL BE ACCOMPLISHED WITH NON–SHRINKING CEMENT MORTAR GROUT, APPROVED EQUAL TO SIKA–SET AS MANUFACTURED BY THE SIKA CHEMICAL CORP.
2. A NEW CONCRETE INVERT SHALL BE FORMED AT THE END OF THE INTERNAL DROP CONNECTION TO PROVIDE A SMOOTH DISCHARGE INTO THE EXISTING CONCRETE INVERT IN ACCORDANCE WITH RECOMMENDED STANDARDS FOR WASTEWATER FACILITIES, 2004 EDITION.

INTERNAL DROP CONNECTION TO EXISTING MANHOLE — 41



A	8.5"X11" SIGN LAMINATED IN PLASTIC SPACED EVERY 50' ALONG FENCE.
B	2"X6" STEEL POSTS OR APPROVED EQUAL.
C	5" THICK LAYER OF MULCH.
D	TREE PROTECTION FENCE: HIGH DENSITY POLYETHYLENE FENCING WITH 3.5" X 1.5" OPENINGS; COLOR ORANGE. STEEL POSTS INSTALLED AT 8' O.C.
E	MAINTAIN EXISTING GRADE WITHIN THE TREE PROTECTION FENCE UNLESS OTHERWISE INDICATED ON THE PLANS.
F	INSTALL ROUGH SAWN WOOD WHERE AND AS DIRECTED BY PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SEE CHART FOR WOOD SIZE BOUND WITH 9 GAUGE WIRE.
G	8'–12" THICK LAYER OF MULCH ON MAINTENANCE ROAD. 5" THICK LAYER INSIDE TREE PROTECTION AREA.

TREE DIAMETER	ROUGH SAWN WOOD SIZE
<12"	2"X2"
13"–24"	2"X4"
>25"	2"X6"

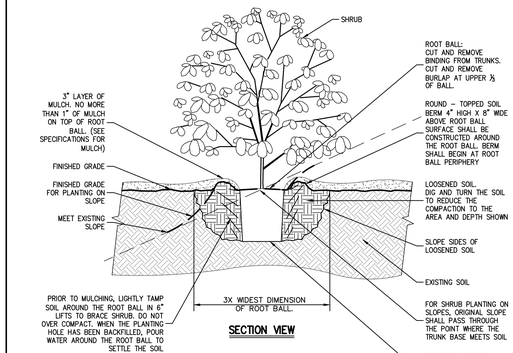


TREE PROTECTION W/ ACCESS ROAD/CONSTRUCTION AREA (DRIPLINE FENCE)

NOTES:

1. SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
2. IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
3. NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
4. NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
5. SEE SITE PLANS FOR IDENTIFICATIONS/LOCATIONS OF INDIVIDUAL TREES TO BE PROTECTED.
6. ALL EXCAVATION WITHIN THE CROWN/DRIPLINE OF ANY TREE SHALL BE PERFORMED UNDER THE DIRECT SUPERVISION OF THE PROJECT LANDSCAPE ARCHITECT OR PROFESSIONAL ARBORIST. SPECIAL MEASURES, SUCH AS THE USE OF AN AIR SPADE MAY BE REQUIRED.
7. THE CONTRACTOR MAY PROPOSE THE USE OF ENGINEERED MATTING OR OTHER ENGINEERED PRODUCTS IN LIEU OF MULCH, WHICH SHALL BE SUBJECT TO THE REVIEW AND APPROVAL OF ALL AUTHORITIES HAVING JURISDICTION.

TREE PROTECTION — 45



SECTION VIEW

NOTES:

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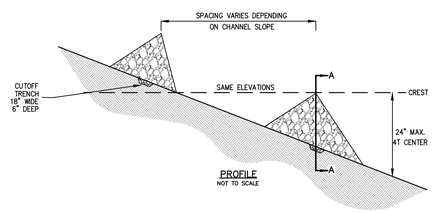
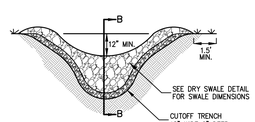
2. PLANTS IN CONTAINERS MUST HAVE THE FIBROUS ROOTS PULLED APART.
3. PROPOSED PLANT MATERIAL SHALL BEAR THE SAME RELATION TO FINISHED GRADE AS IT BORE TO PREVIOUS EXISTING GRADE.

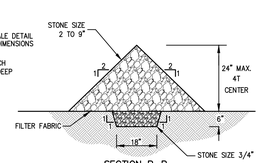
SHRUB PLANTING — 42



PROFILE
NOT TO SCALE



SECTION A–A
NOT TO SCALE



SECTION B–B
NOT TO SCALE

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 ASSURE 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 BANK 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 STONES.

STONE CHECK DAM — 46

REGENERON
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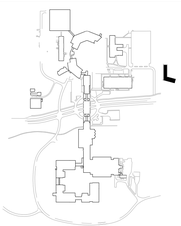
61 Main Street
Sayreville, NJ 08872
Phone: (732) 432-5757

Architect:
Gensler
1700 Broadway, Suite 400
New York, New York 10019
Phone: (212) 492-1400
Fax: (212) 492-1472

Landscape Architect (Playground):
Langan
21 Penn Plaza, 360 West 31st Street, 8th Floor
New York, New York 10001
Phone: (212) 479-5400
Fax: (212) 479-5444

MEP/IT/Security Engineer:
Cosentini Associates
498 Seventh Avenue
New York, New York 10018
Phone: (212) 615-3600
Fax: (212) 615-3700

No.	Date	Description



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0	05/20/2022	ISSUED FOR PERMIT
1	06/20/2022	100% CONSTRUCTION DOCUMENTS
2	07/01/2022	100% CONSTRUCTION DOCUMENTS - 1

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Scale: N.T.S.

C–905

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