



**Environmental  
Protection**

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

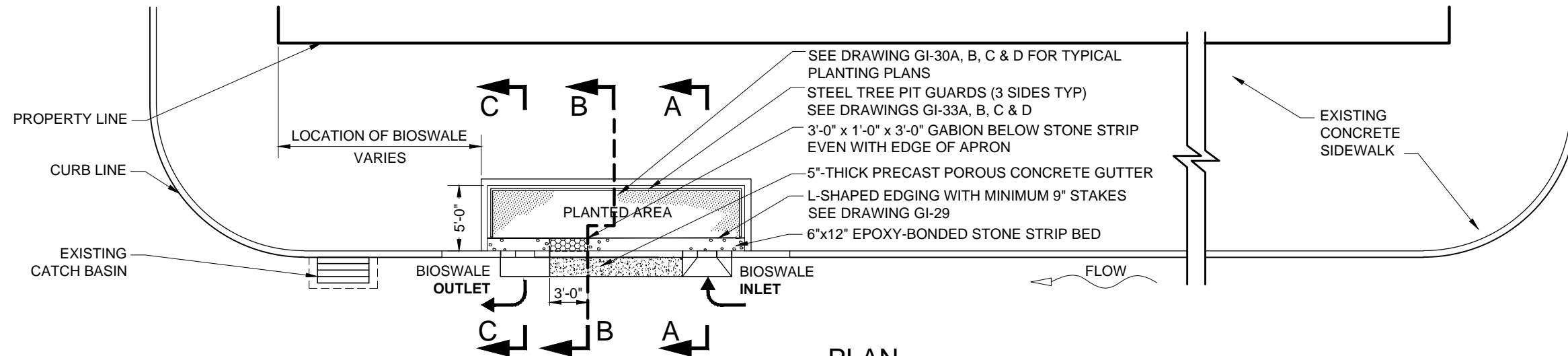
# STANDARDS FOR GREEN INFRASTRUCTURE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

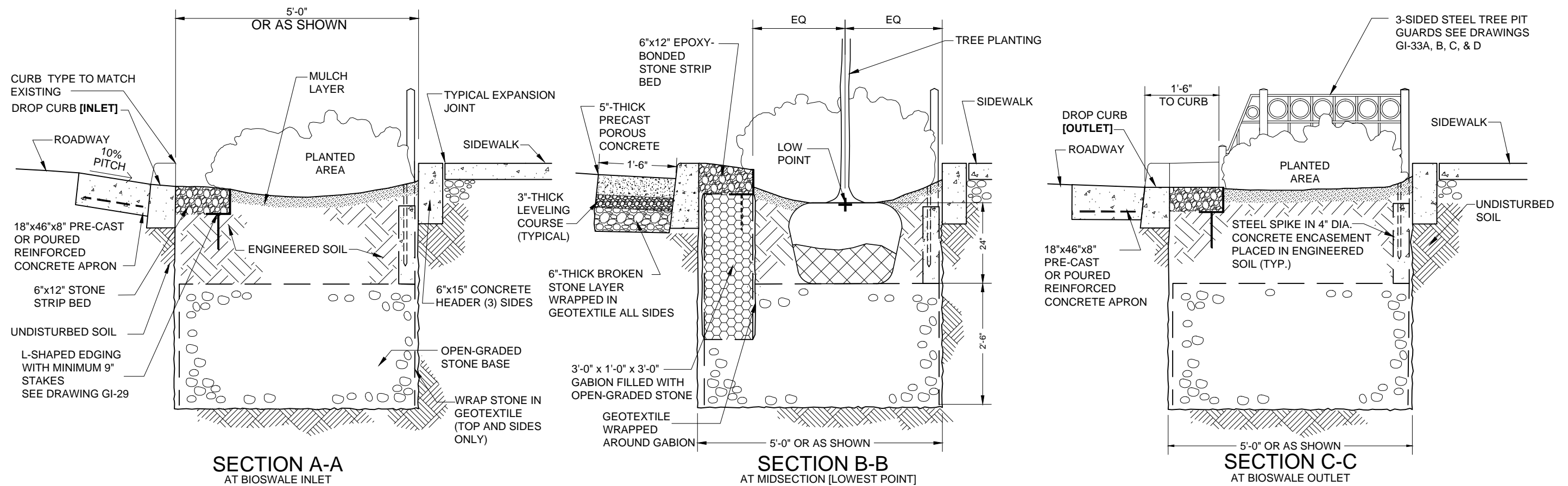
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CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1**  
 - NO CONNECTION TO SEWERS



PLAN

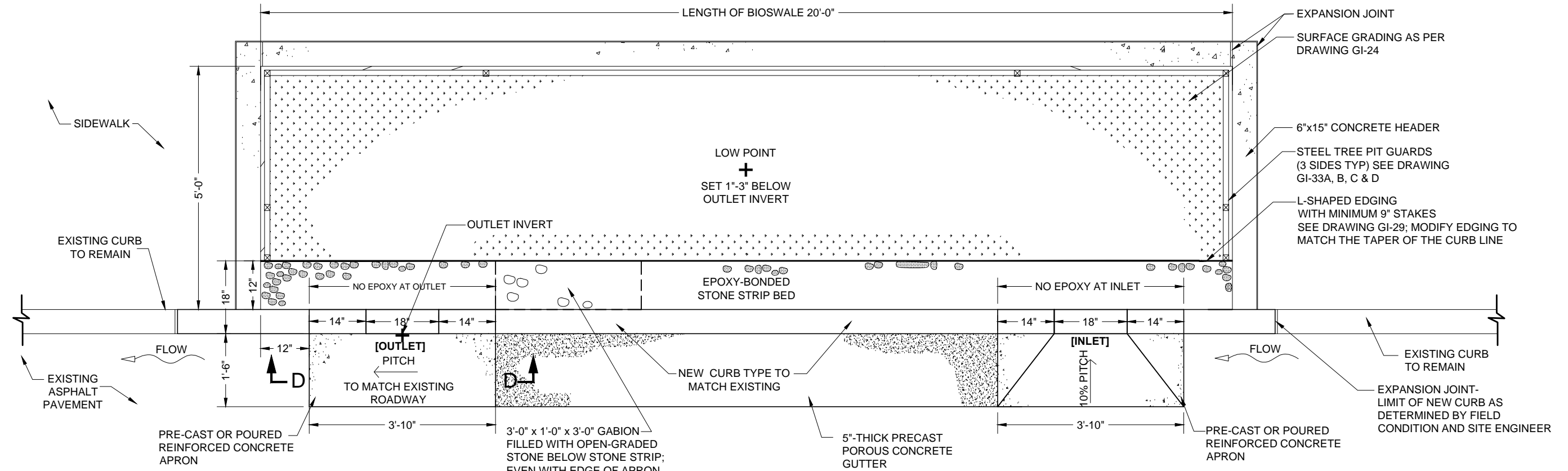


*Maadi Farag*

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 ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
 DATE

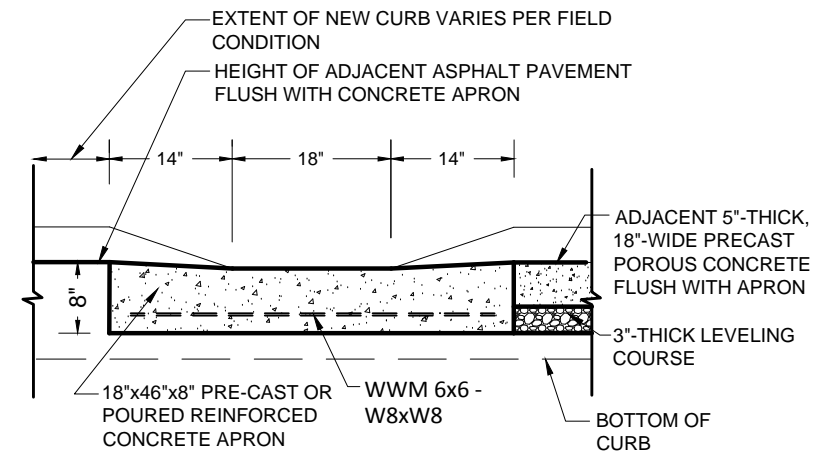
CITY OF NEW YORK  
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OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1**  
- NO CONNECTION TO SEWERS



**PLAN**

**NOTES:**

1. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE THE ADJACENT EXISTING SIDEWALK FLAG TO NEAREST SIDEWALK JOINT BEYOND THE LIMITS OF THE BIOSWALE. THE CONTRACTOR SHALL REPLACE THAT SIDEWALK IN KIND IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF STANDARD HIGHWAY SPECIFICATION.
2. THE CONTRACTOR SHALL REMOVE AND RESTORE TWO (2) FOOT WIDTH OF THE WEARING COURSE AND ONE-AND-A-HALF (1 1/2) FOOT WIDTH OF ROADWAY CONCRETE PAVEMENT BASE ALONG THE CURB LINE AND ADJACENT TO THE CONCRETE APRONS, WHERE REQUIRED. ALL WORK MUST BE COMPLETED IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD HIGHWAY SPECIFICATIONS.
3. THE CONTRACTOR SHALL OBTAIN THE NECESSARY TREE PLANTING PERMIT FROM THE NYC DEPARTMENT OF PARKS AND RECREATION (DPR) PRIOR TO THE START OF WORK. ALL NECESSARY TREE PLANTING SHALL BE SUPERVISED BY CERTIFIED ARBORISTS.
4. NO TREE SHALL BE REMOVED BY THE CONTRACTOR UNTIL SPECIFICALLY ORDERED IN WRITING TO DO SO BY THE ENGINEER AND WITH APPROVAL FROM DPR.
5. TREES SHALL BE STAKED AS PER DOT STANDARD DETAILS OF CONSTRUCTION. TREE STAKES ARE TO BE REMOVED BY THE CONTRACTOR NOT LESS THAN ONE YEAR AFTER PLANTING.
6. THE CONTRACTOR SHALL NOT BE PERMITTED TO OPERATE AUXILIARY EQUIPMENT WHICH GENERATES EXHAUST OR OTHER HEAT UPWARD (E.G., GENERATORS AND COMPRESSORS), UNDER THE BRANCHES OF TREES WHERE THE BRANCHES ARE LESS THAN 25' ABOVE THE GROUND, UNLESS APPROVED BY THE ENGINEER IN CONSULTATION WITH THE CERTIFIED ARBORIST.
7. THE CONTRACTOR SHALL NOT BE PERMITTED TO STORE, STOCKPILE, OR LAY DOWN, ANY CONSTRUCTION MATERIAL INCLUDING, BUT NOT LIMITED TO, LUMBER, FUEL, AND OIL CONTAINERS, PIPES, AND/OR PIPE FITTINGS, BARRICADES, HAND TOOLS, HOSES, RECEPTACLES, AND ASPHALT WITHIN ANY EXISTING TREE PIT OR R.O.W. BIOSWALE.
8. REPLACEMENT TREES SHALL BE PLANTED WITHIN THE PROJECT AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH STANDARD HIGHWAY SPECIFICATIONS.
9. STONE STRIP BED TO BE BONDED WITH EPOXY TO KEEP STONES IN PLACE. STONES IN FRONT OF INLETS AND OUTLETS ARE TO BE LEFT LOOSE AND UNBONDED



**SECTION D-D**

*Maadi Farag*

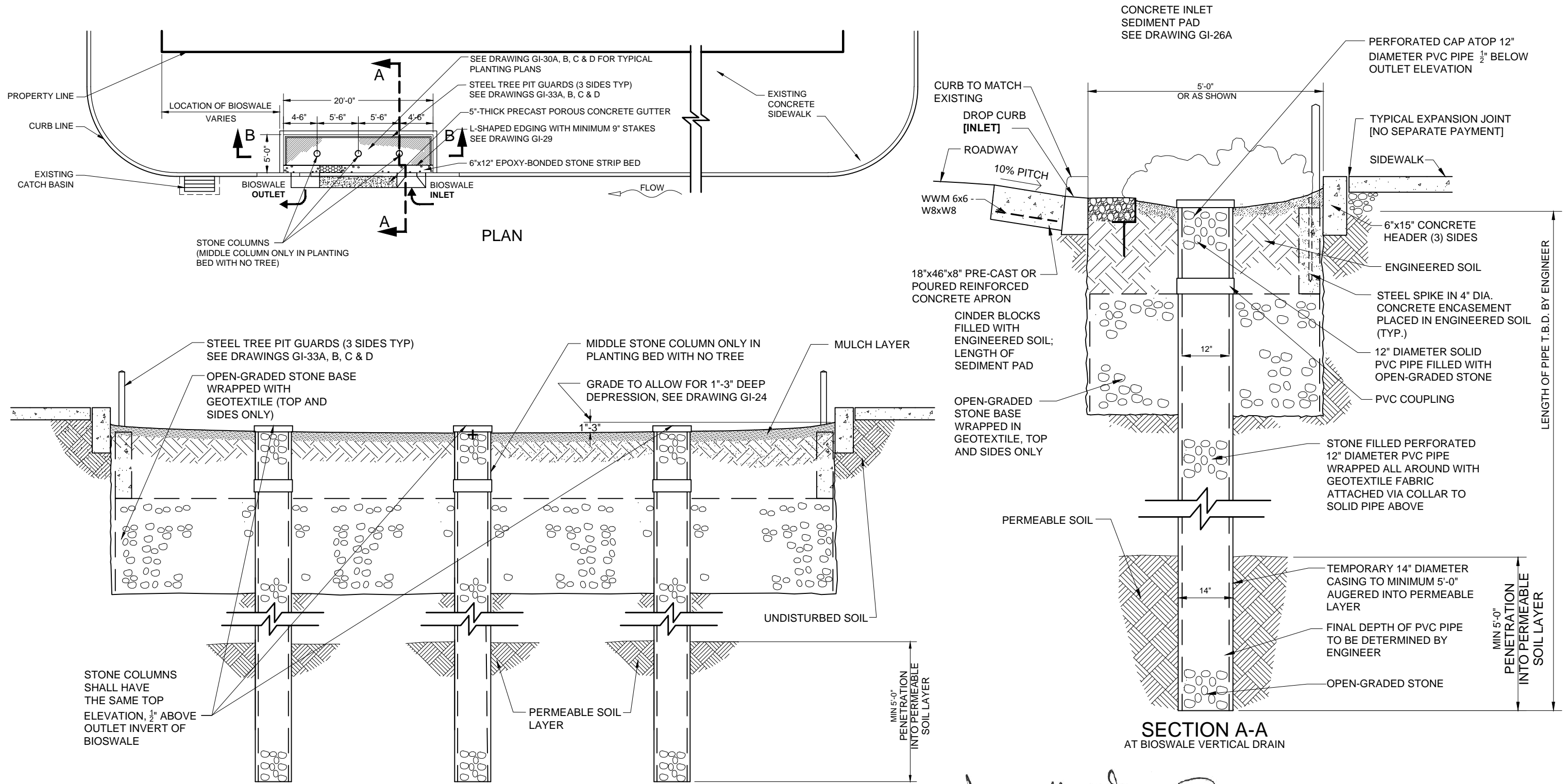
P.E., F. ASCE  
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
DATE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# STANDARD FOR 20'X5' R.O.W. BIOSWALE TYPE 1A - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS



*Maadi Faraj*

P.E., F. ASCE

08-29-2014

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

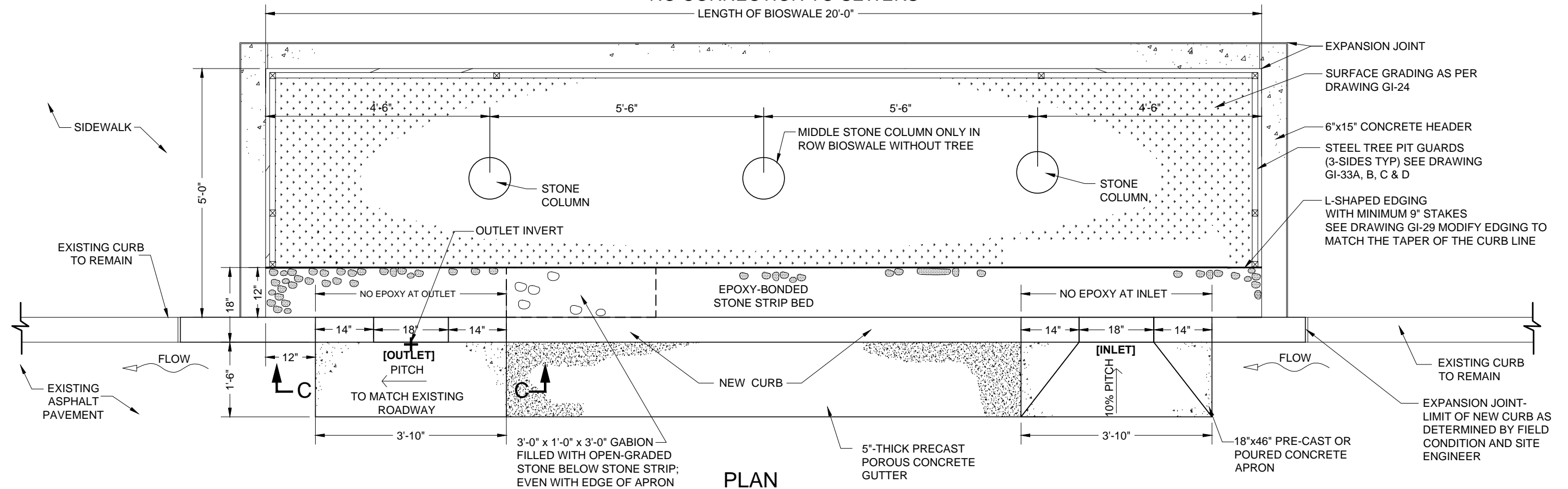
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CITY OF NEW YORK  
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OFFICE OF GREEN INFRASTRUCTURE

STANDARD FOR 20'X5' R.O.W. BIOSWALE TYPE 1A - WITH STONE COLUMNS

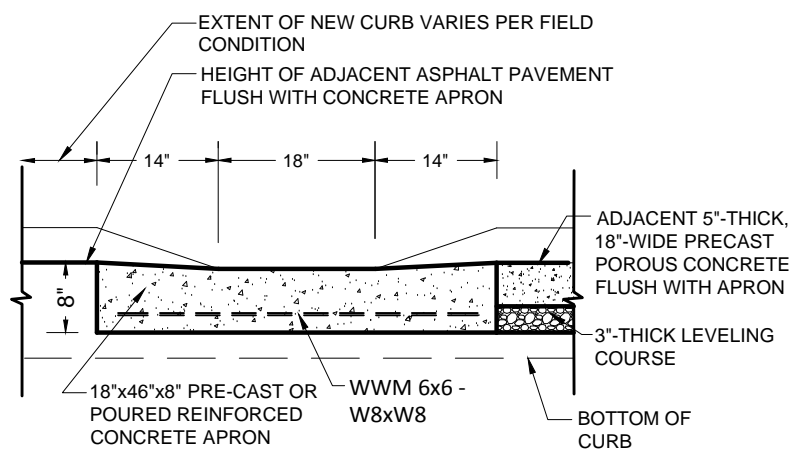
- NO CONNECTION TO SEWERS



PLAN

NOTES:

1. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE THE ADJACENT EXISTING SIDEWALK FLAG TO NEAREST SIDEWALK JOINT BEYOND THE LIMITS OF THE BIOSWALE. THE CONTRACTOR SHALL REPLACE THAT SIDEWALK IN KIND IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF STANDARD HIGHWAY SPECIFICATION.
2. THE CONTRACTOR SHALL REMOVE AND RESTORE TWO (2') FOOT WIDTH OF THE WEARING COURSE AND ONE-AND-A-HALF (1 1/2') FOOT WIDTH OF ROADWAY CONCRETE PAVEMENT BASE ALONG THE CURB LINE AND ADJACENT TO THE CONCRETE APRONS, WHERE REQUIRED. ALL WORK MUST BE COMPLETED IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD HIGHWAY SPECIFICATIONS.
3. THE CONTRACTOR SHALL OBTAIN THE NECESSARY TREE PLANTING PERMIT FROM THE NYC DEPARTMENT OF PARKS AND RECREATION (DPR) PRIOR TO THE START OF WORK. ALL NECESSARY TREE PLANTING SHALL BE SUPERVISED BY CERTIFIED ARBORISTS.
4. NO TREE SHALL BE REMOVED BY THE CONTRACTOR UNTIL SPECIFICALLY ORDERED IN WRITING TO DO SO BY THE ENGINEER AND WITH APPROVAL FROM DPR.
5. TREES SHALL BE STAKED AS PER DOT STANDARD DETAILS OF CONSTRUCTION. TREE STAKES ARE TO BE REMOVED BY THE CONTRACTOR NOT LESS THAN ONE YEAR AFTER PLANTING.
6. THE CONTRACTOR SHALL NOT BE PERMITTED TO OPERATE AUXILIARY EQUIPMENT WHICH GENERATES EXHAUST OR OTHER HEAT UPWARD (E.G., GENERATORS AND COMPRESSORS), UNDER THE BRANCHES OF TREES WHERE THE BRANCHES ARE LESS THAN 25' ABOVE THE GROUND, UNLESS APPROVED BY THE ENGINEER IN CONSULTATION WITH THE CERTIFIED ARBORIST.
7. THE CONTRACTOR SHALL NOT BE PERMITTED TO STORE, STOCKPILE, OR LAY DOWN, ANY CONSTRUCTION MATERIAL INCLUDING, BUT NOT LIMITED TO, LUMBER, FUEL, AND OIL CONTAINERS, PIPES, AND/OR PIPE FITTINGS, BARRICADES, HAND TOOLS, HOSES, RECEPTACLES, AND ASPHALT WITHIN ANY EXISTING TREE PIT OR R.O.W. BIOSWALE.
8. REPLACEMENT TREES SHALL BE PLANTED WITHIN THE PROJECT AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH STANDARD HIGHWAY SPECIFICATIONS.
9. STONE STRIP BED TO BE BONDED WITH EPOXY TO KEEP STONES IN PLACE. STONES IN FRONT OF INLETS AND OUTLETS ARE TO BE LEFT LOOSE AND UNBONDED
10. 14" DIAMETER CASING TO BE AUGERED TO DEPTH AS PER ENGINEER. 12" DIAMETER PVC PIPE WRAPPED ALL AROUND WITH GEOTEXTILE FABRIC INSERTED IN THE 14" CASING.



SECTION C-C

*Madi Farag*

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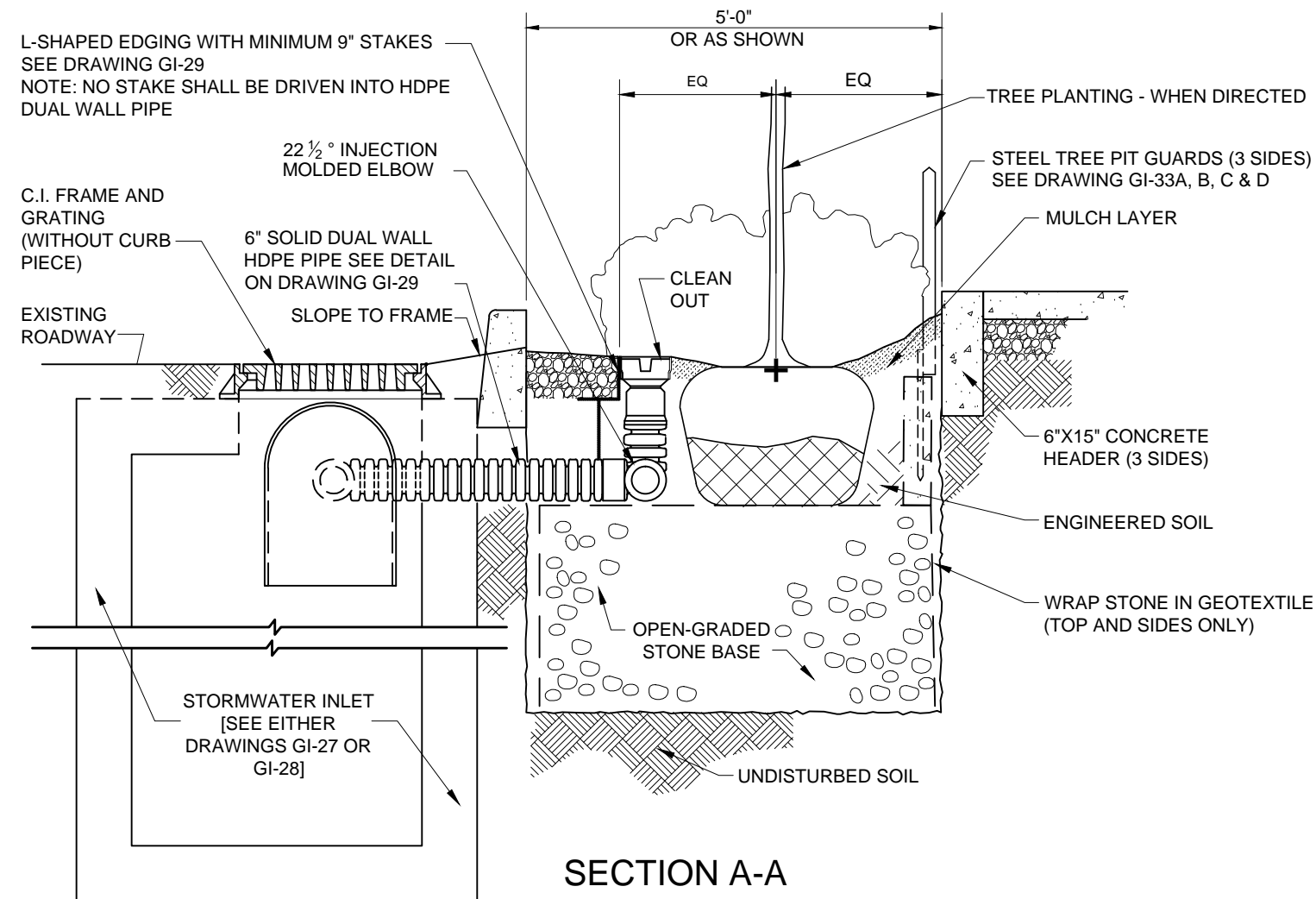
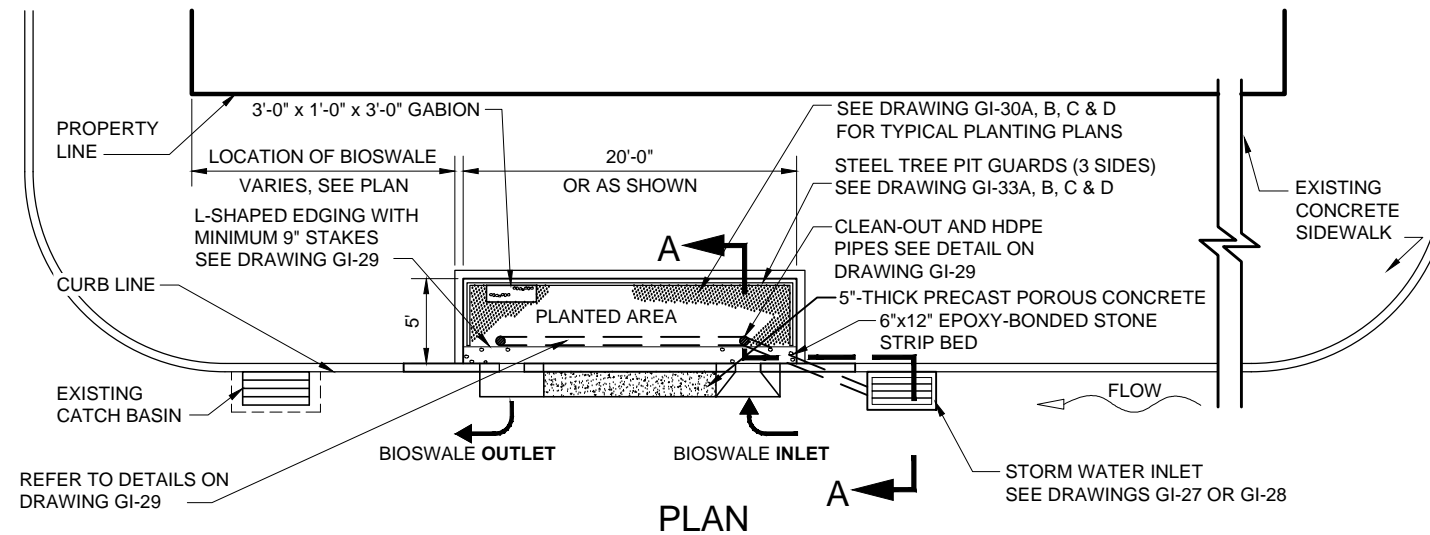
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014

DATE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

STANDARD FOR 20'X5' R.O.W. BIOSWALE TYPE 1B - WITH STORMWATER INLET  
- NO CONNECTION TO SEWERS



NOTES:

1. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE THE ADJACENT EXISTING SIDEWALK FLAG TO NEAREST SIDEWALK JOINT BEYOND THE LIMITS OF THE BIOSWALE. THE CONTRACTOR SHALL REPLACE THAT SIDEWALK IN KIND IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF STANDARD HIGHWAY SPECIFICATION.
2. THE CONTRACTOR SHALL REMOVE AND RESTORE (2') FOOT WIDTH OF THE WEARING COURSE AND ONE-AND-A-HALF (1 1/2) FOOT WIDTH OF ROADWAY CONCRETE PAVEMENT BASE ALONG THE CURB LINE AND ADJACENT TO THE CONCRETE APRONS, WHERE REQUIRED. ALL WORK MUST BE COMPLETED IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD HIGHWAY SPECIFICATIONS.
3. THE CONTRACTOR SHALL OBTAIN THE NECESSARY TREE PLANTING PERMIT FROM THE NYC DEPARTMENT OF PARKS AND RECREATION (DPR) PRIOR TO THE START OF WORK. ALL NECESSARY TREE PLANTING SHALL BE SUPERVISED BY CERTIFIED ARBORISTS.
4. NO TREE SHALL BE REMOVED BY THE CONTRACTOR UNTIL SPECIFICALLY ORDERED IN WRITING TO DO SO BY THE ENGINEER AND WITH APPROVAL FROM DPR.
5. TREES SHALL BE STAKED AS PER DOT STANDARDS. TREE STAKES ARE TO BE REMOVED BY THE CONTRACTOR NOT LESS THAN ONE YEAR AFTER PLANTING.
6. THE CONTRACTOR SHALL NOT BE PERMITTED TO OPERATE AUXILIARY EQUIPMENT WHICH GENERATES EXHAUST OR OTHER HEAT UPWARD (E.G., GENERATORS AND COMPRESSORS), UNDER THE BRANCHES OF TREES WHERE THE BRANCHES ARE LESS THAN 25' ABOVE THE GROUND, UNLESS APPROVED BY THE ENGINEER IN CONSULTATION WITH THE CERTIFIED ARBORIST.
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8. REPLACEMENT TREES SHALL BE PLANTED WITHIN THE PROJECT AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH STANDARD HIGHWAY SPECIFICATIONS.
9. STONE STRIP BED TO BE BONDED WITH EPOXY TO KEEP STONES IN PLACE. STONES IN FRONT OF INLETS AND OUTLETS ARE TO BE LEFT LOOSE AND UNBONDED.

*Magedi Farag*

P.E., F. ASCE

ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

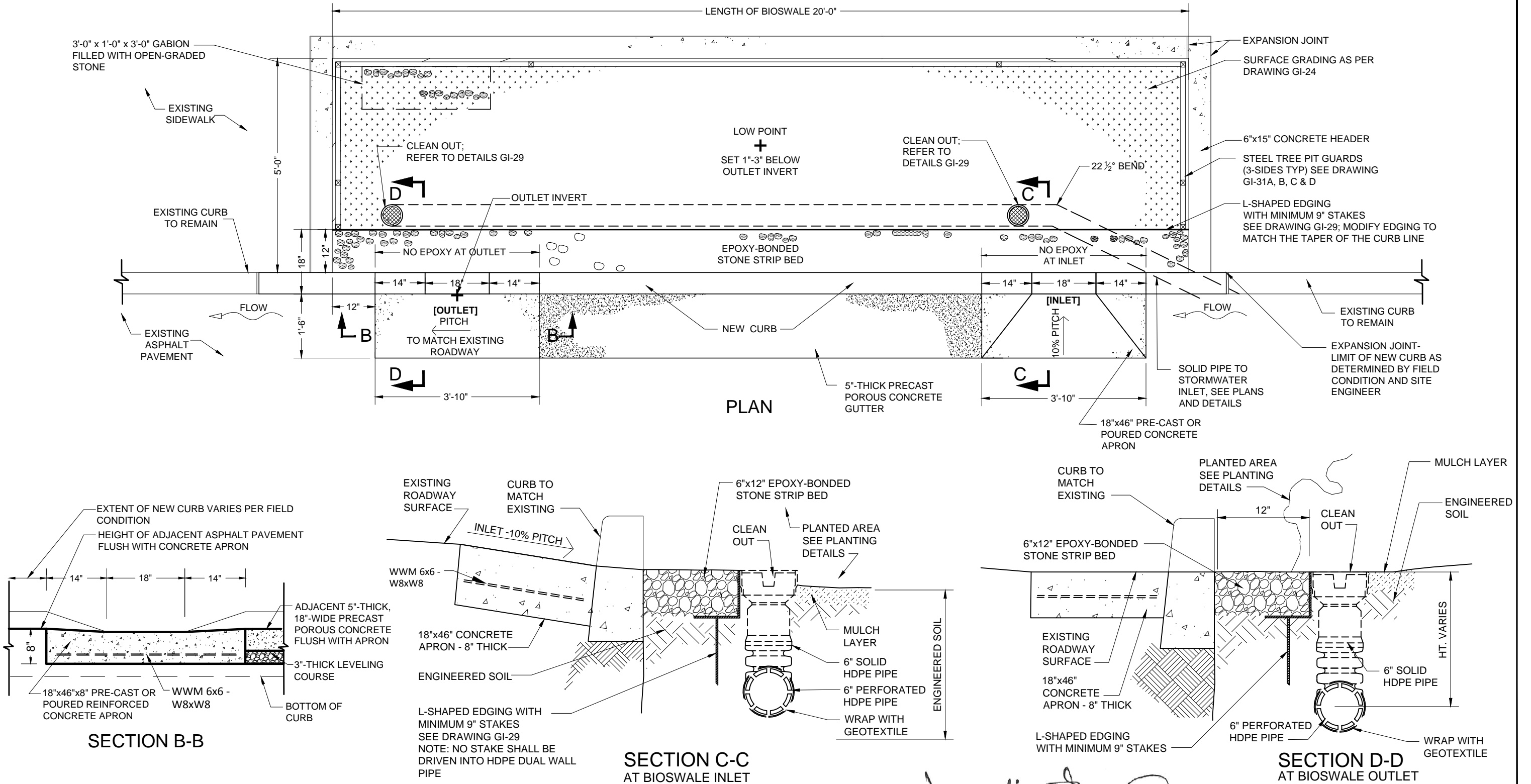
08-29-2014

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CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# STANDARD FOR 20'X5' R.O.W. BIOSWALE TYPE 1B - WITH STORMWATER INLET

- NO CONNECTION TO SEWERS



*Magedi Farag*

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ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
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08-29-2014

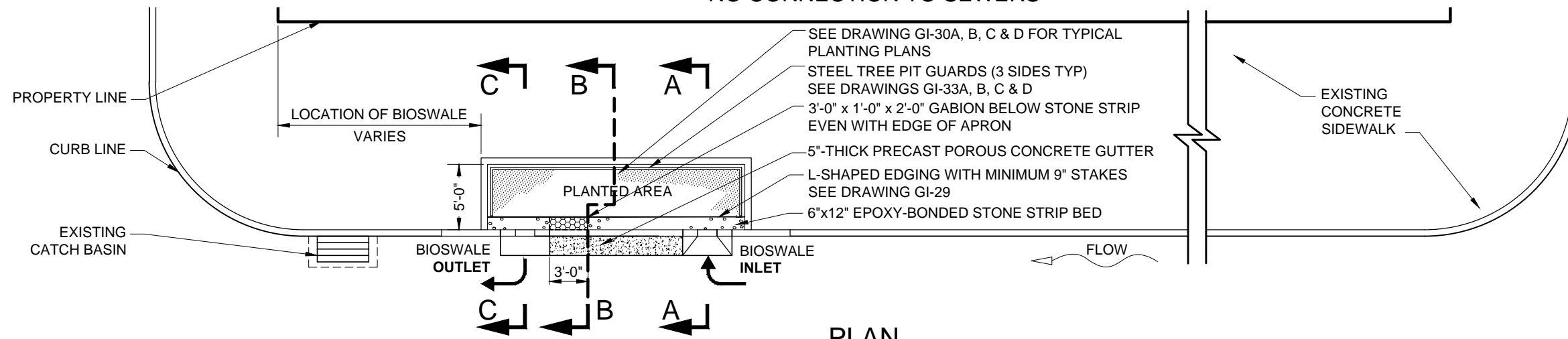
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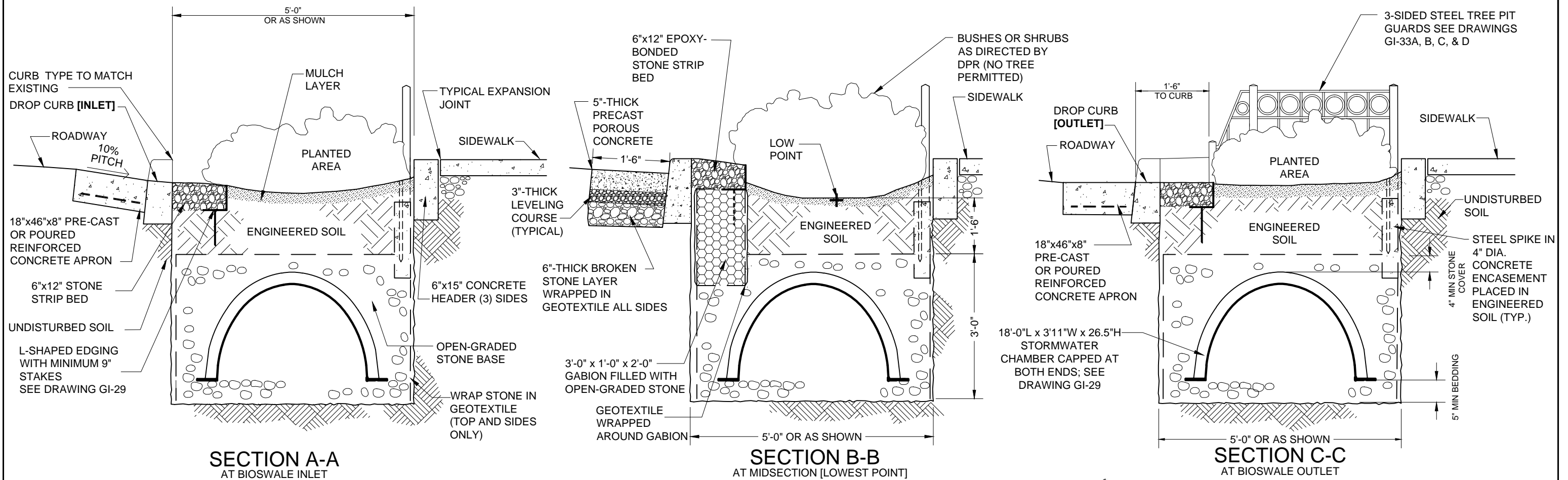
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OFFICE OF GREEN INFRASTRUCTURE

# STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1C - WITH STORMWATER CHAMBER

- NO CONNECTION TO SEWERS



PLAN



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08-29-2014

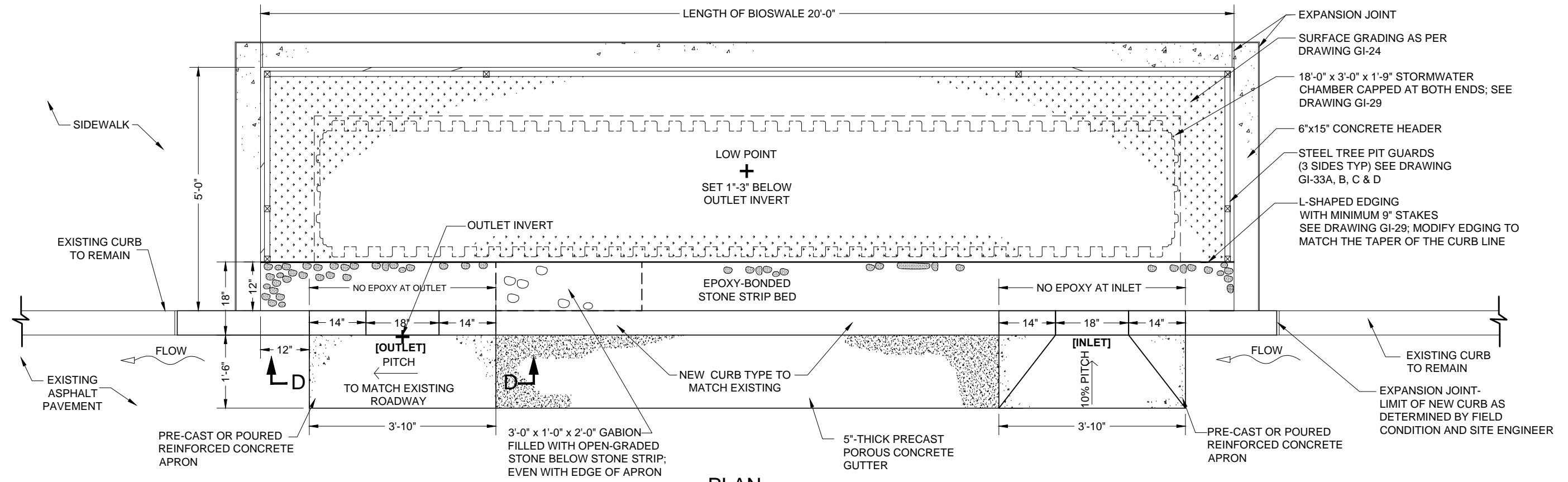
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STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1C - WITH STORMWATER CHAMBER

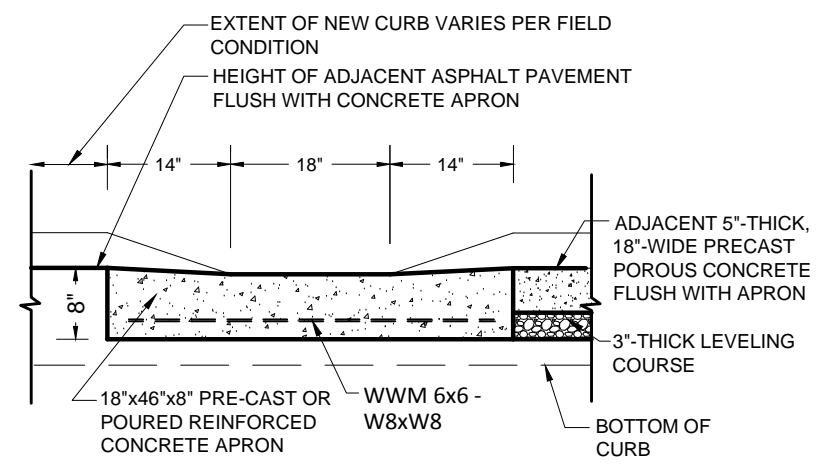
- NO CONNECTION TO SEWERS



PLAN

NOTES:

1. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE THE ADJACENT EXISTING SIDEWALK FLAG TO NEAREST SIDEWALK JOINT BEYOND THE LIMITS OF THE BIOSWALE. THE CONTRACTOR SHALL REPLACE THAT SIDEWALK IN KIND IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF STANDARD HIGHWAY SPECIFICATION.
2. THE CONTRACTOR SHALL REMOVE AND RESTORE TWO (2') FOOT WIDTH OF THE WEARING COURSE AND ONE-AND-A-HALF (1 1/2') FOOT WIDTH OF ROADWAY CONCRETE PAVEMENT BASE ALONG THE CURB LINE AND ADJACENT TO THE CONCRETE APRONS, WHERE REQUIRED. ALL WORK MUST BE COMPLETED IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD HIGHWAY SPECIFICATIONS.
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9. STONE STRIP BED TO BE BONDED WITH EPOXY TO KEEP STONES IN PLACE. STONES IN FRONT OF INLETS AND OUTLETS ARE TO BE LEFT LOOSE AND UNBONDED



SECTION D-D

*Maadi Faruq*

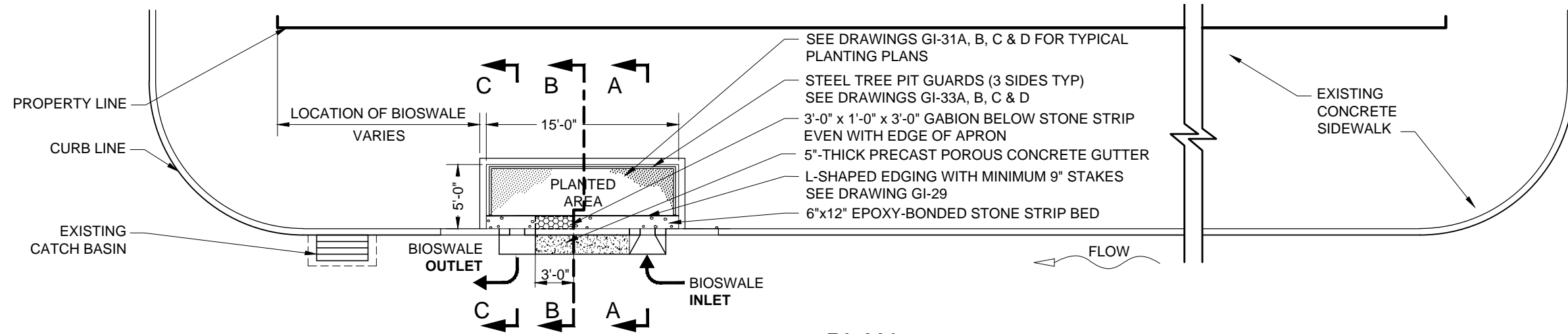
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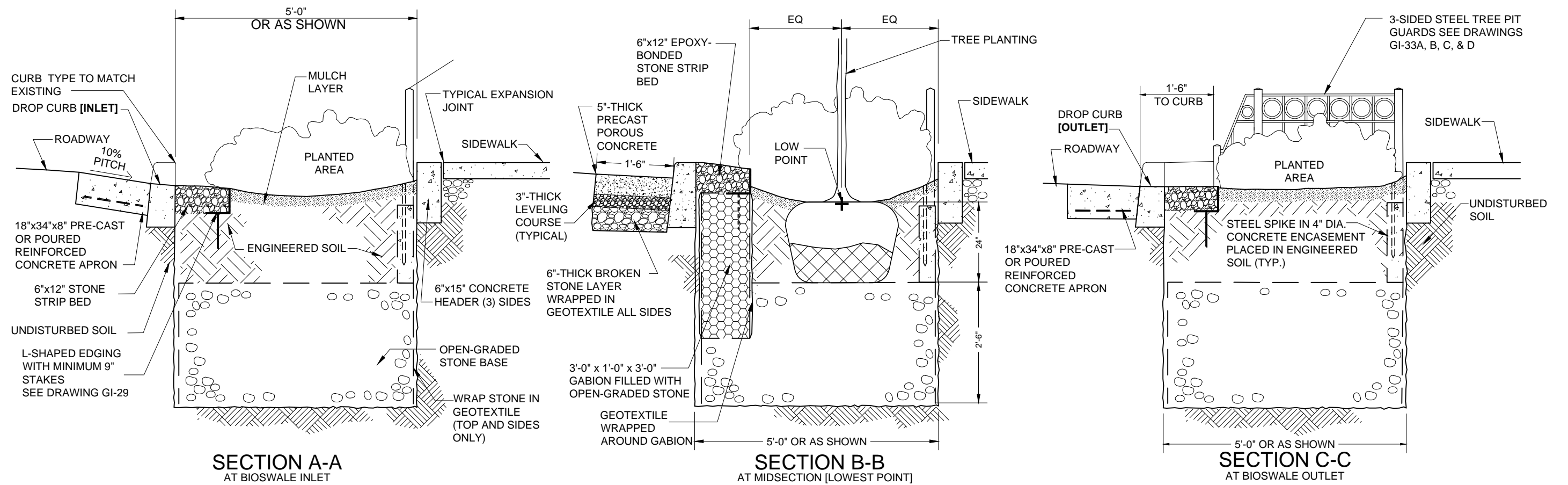
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DATE

CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2**  
 - NO CONNECTION TO SEWERS



PLAN



SECTION A-A  
AT BIOSWALE INLET

SECTION B-B  
AT MIDSECTION [LOWEST POINT]

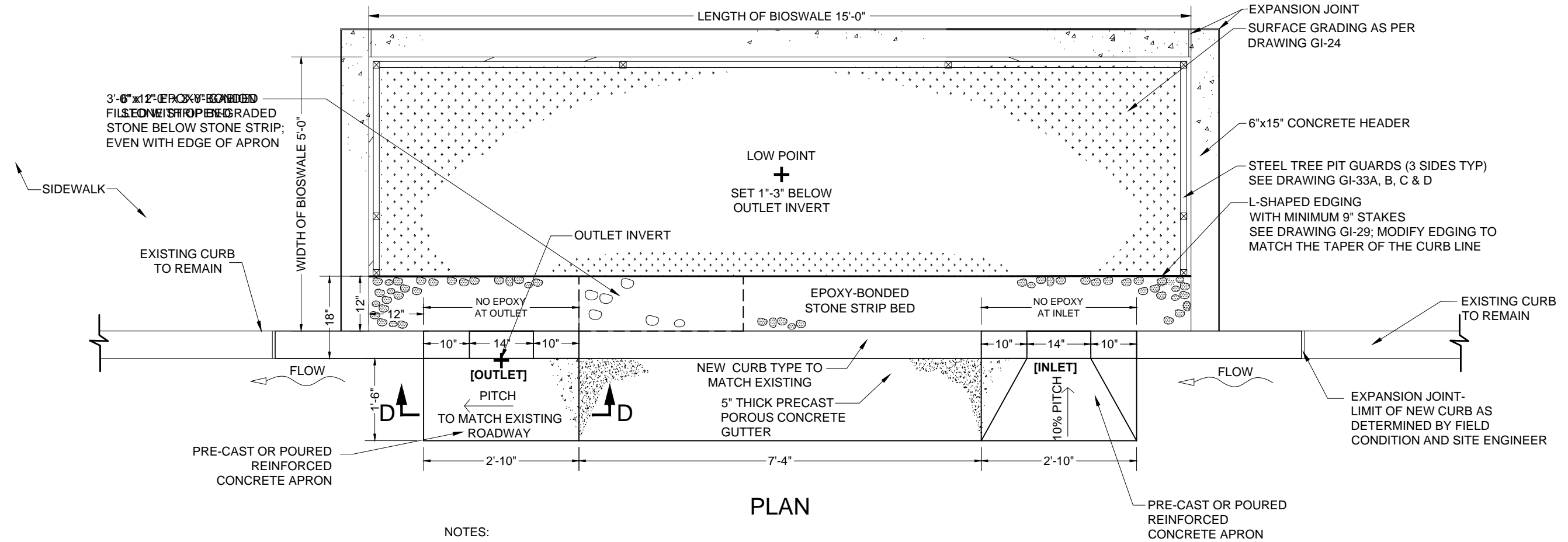
SECTION C-C  
AT BIOSWALE OUTLET

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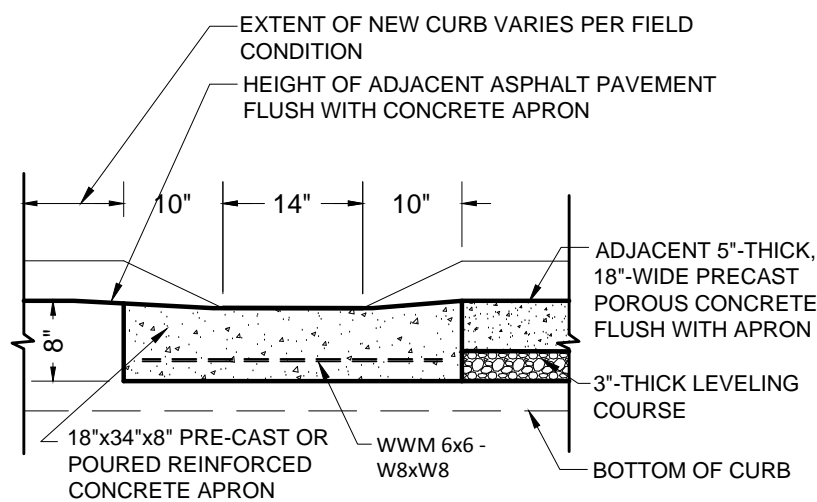
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**STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2**  
- NO CONNECTION TO SEWERS



PLAN

NOTES:

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SECTION D-D

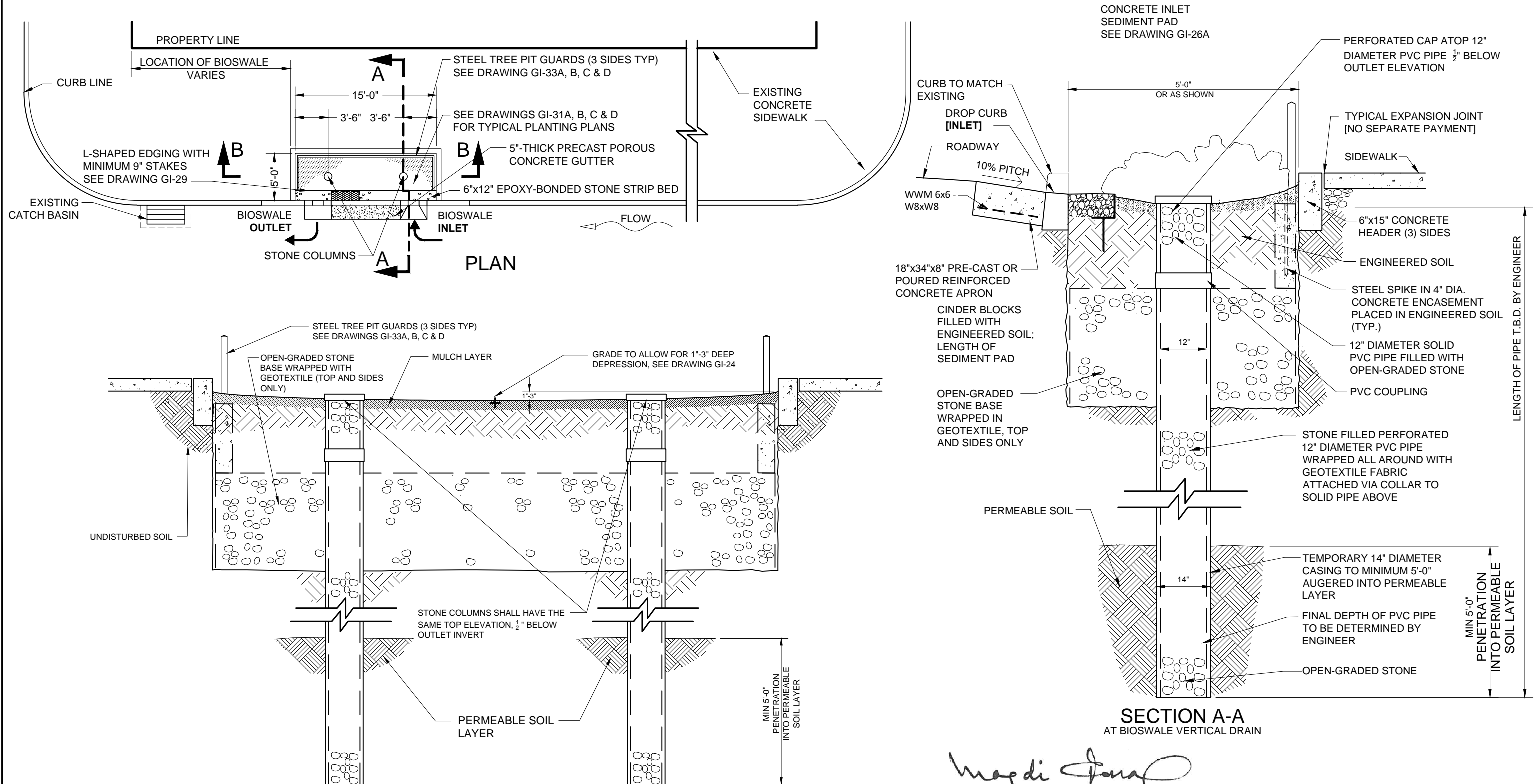
*Maadi Faruq*

P.E., F. ASCE  
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
DATE



CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR 15'X5' R.O.W. BIOSWALE TYPE 2A - WITH STONE COLUMNS**  
 - NO CONNECTION TO SEWERS



*Magedi Farouk*

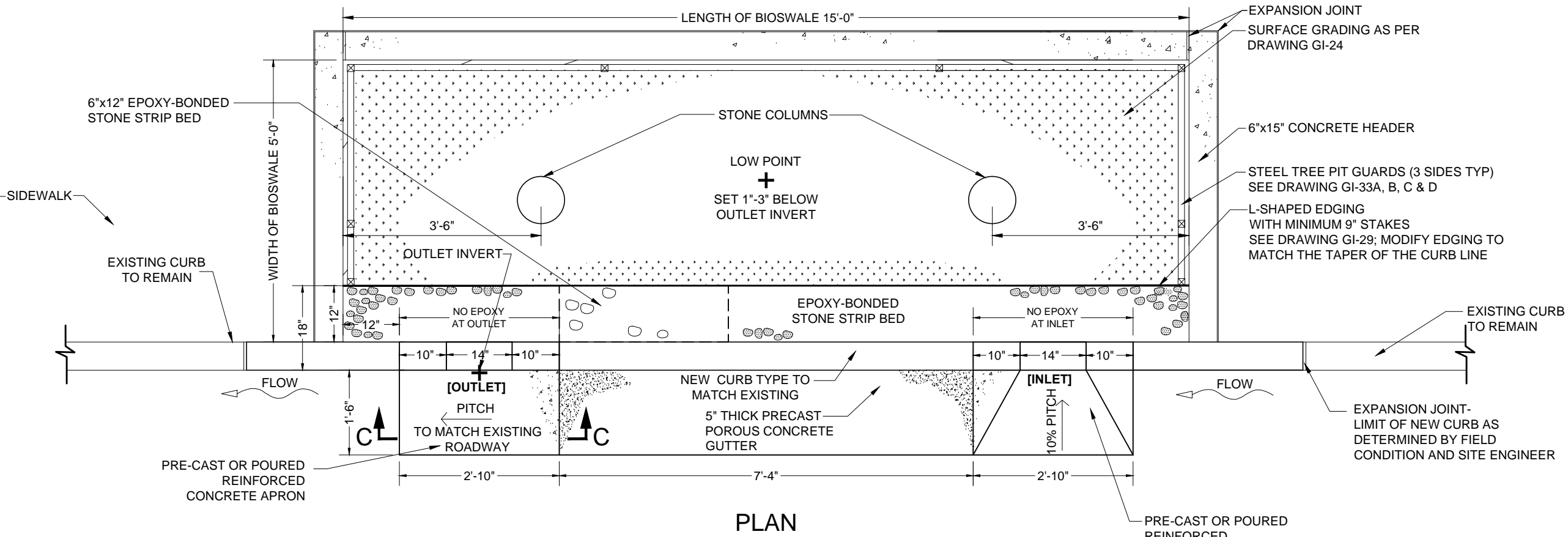
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08-29-2014

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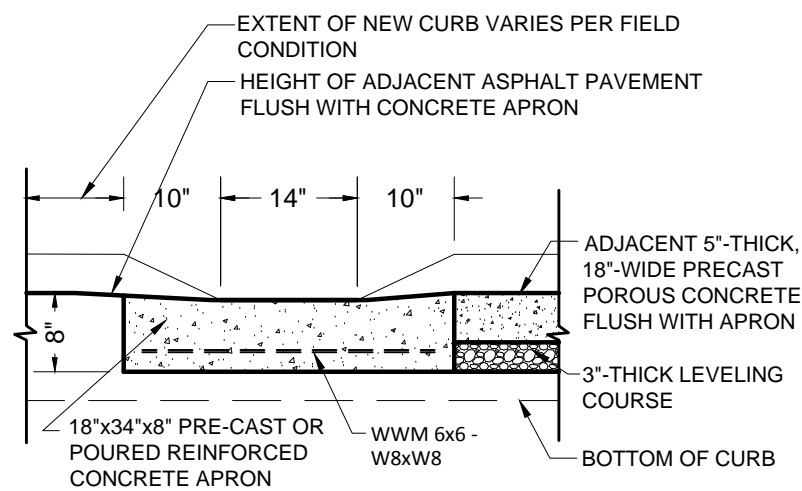
CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR 15'X5' R.O.W. BIOSWALE TYPE 2A - WITH STONE COLUMNS**  
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PLAN

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10. 14" DIAMETER CASING TO BE AUGERED TO DEPTH AS PER ENGINEER. 12" DIAMETER PVC PIPE WRAPPED ALL AROUND WITH GEOTEXTILE FABRIC INSERTED IN THE 14" CASING.



SECTION C-C

*Magedi Farag*

P.E., F. ASCE

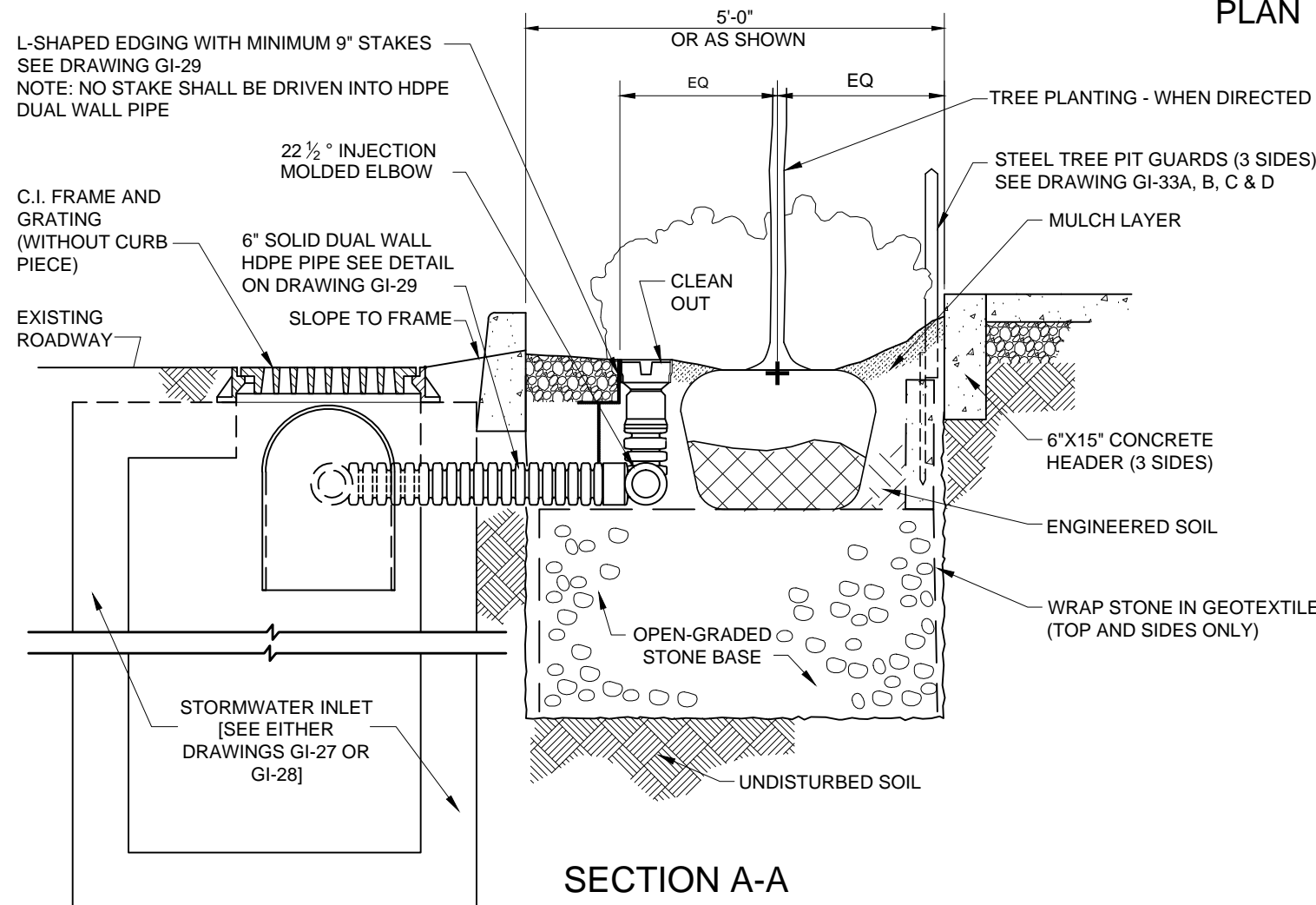
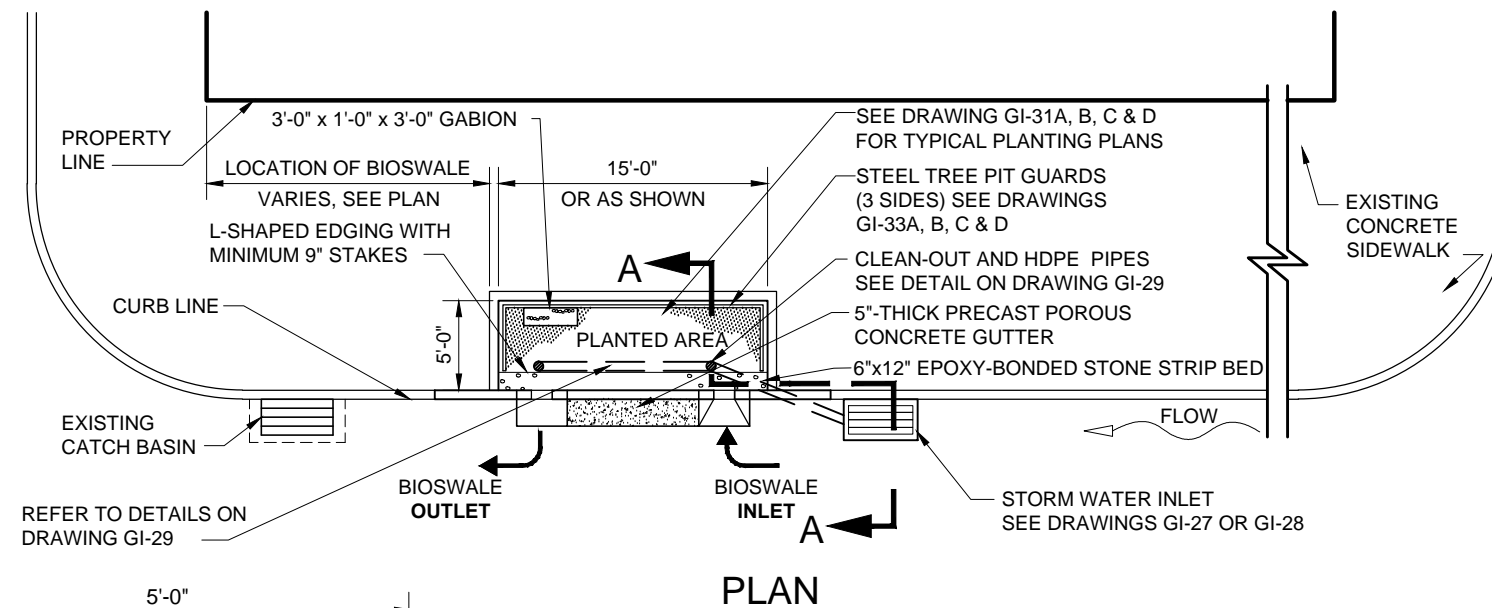
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

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CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

STANDARD FOR 15'X5' R.O.W. BIOSWALE TYPE 2B - WITH STORMWATER INLET  
- NO CONNECTION TO SEWERS



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*Magedi Farouk*

P.E., F. ASCE

08-29-2014

ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

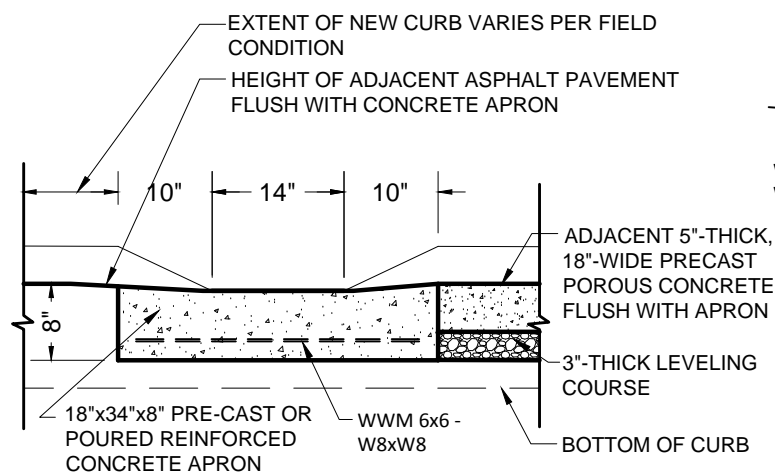
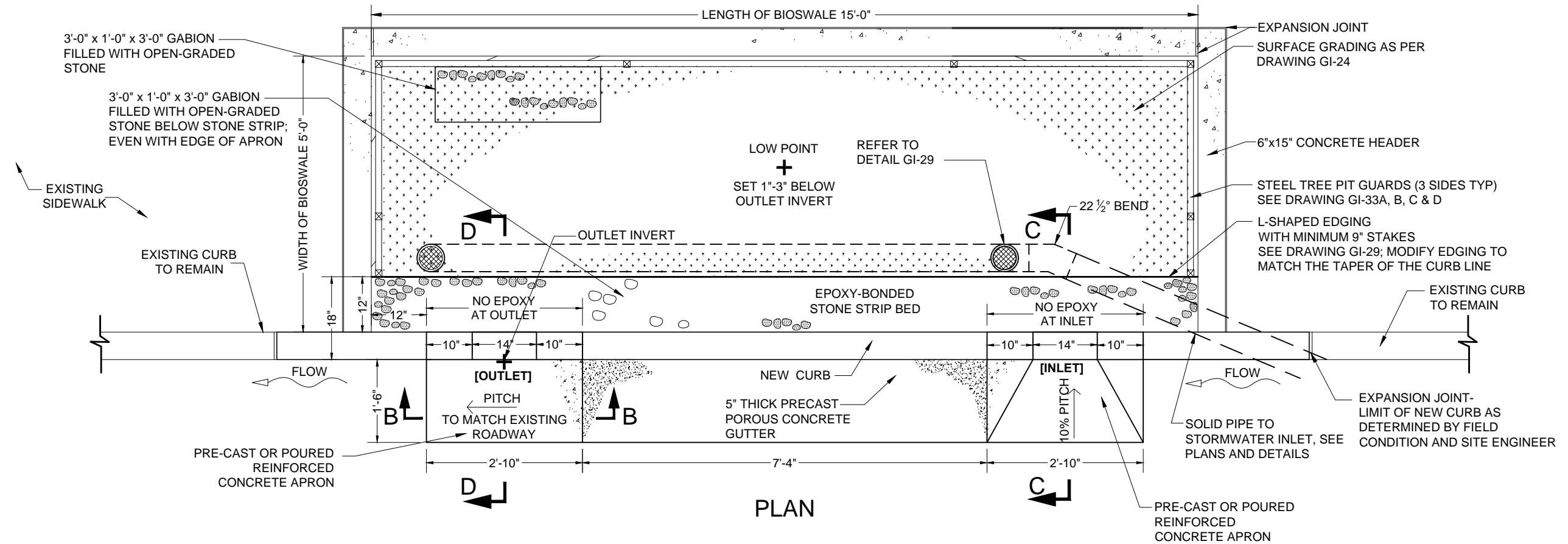
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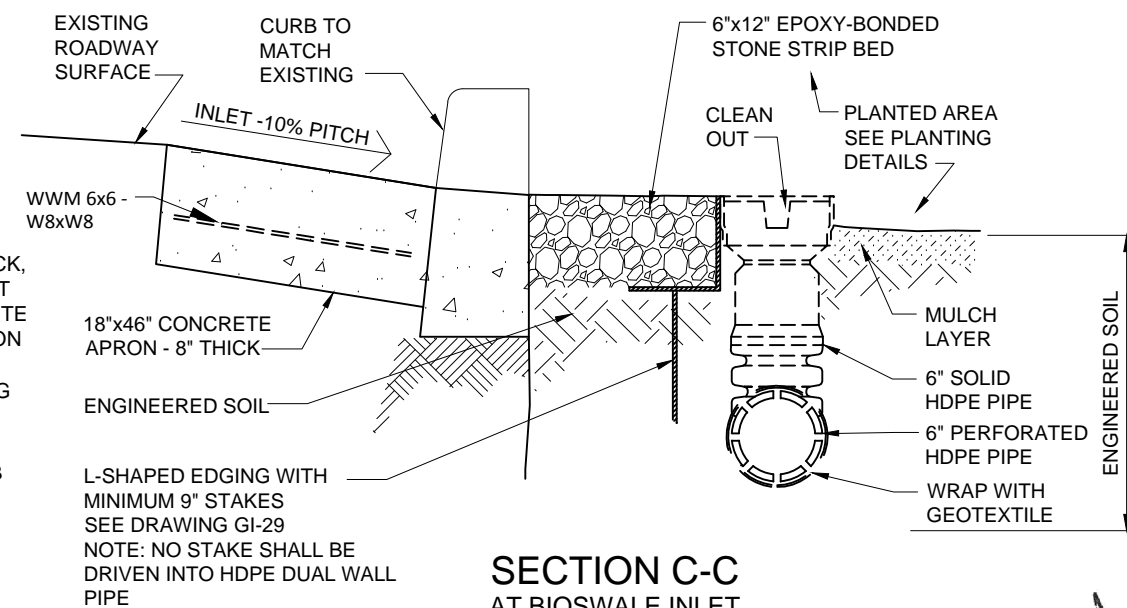
CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# STANDARD FOR 15'X5' R.O.W. BIOSWALE TYPE 2B - WITH STORMWATER INLET

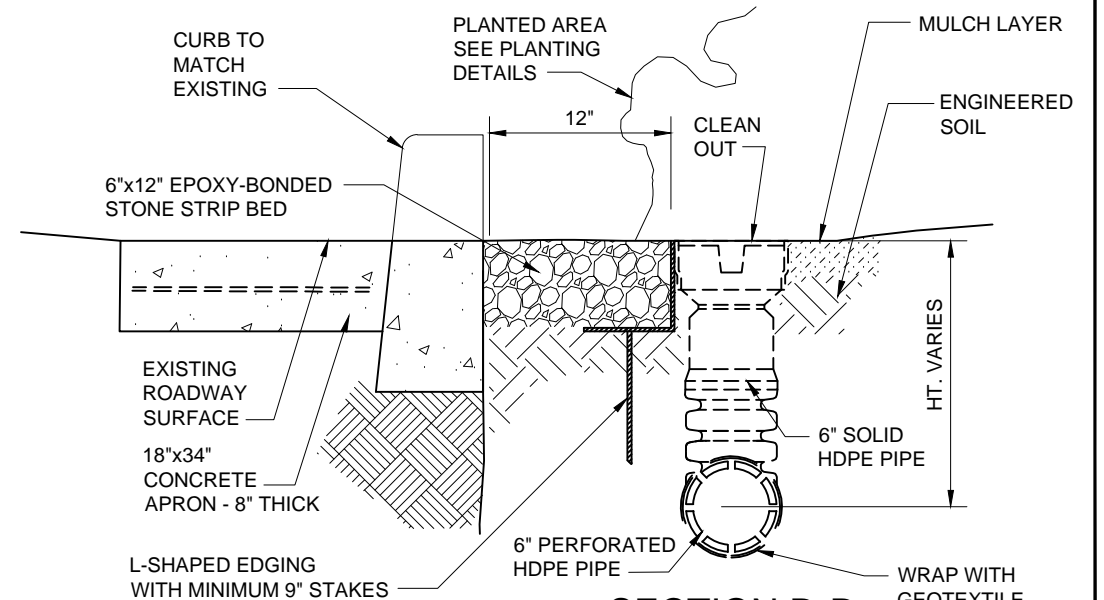
- NO CONNECTION TO SEWERS



SECTION B-B



SECTION C-C  
AT BIOSWALE INLET



SECTION D-D  
AT BIOSWALE OUTLET

*Maeddi Farah*

P.E., F. ASCE

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08-29-2014

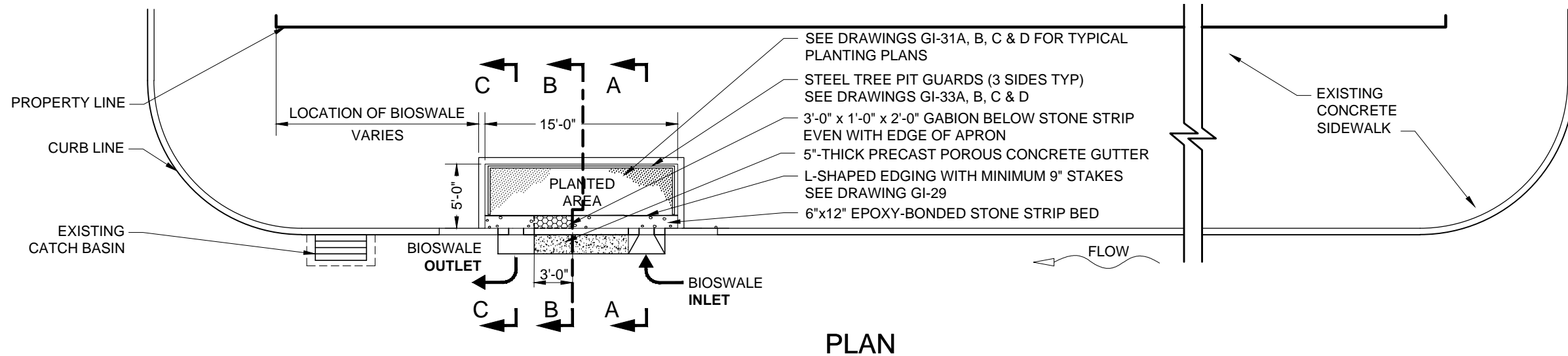
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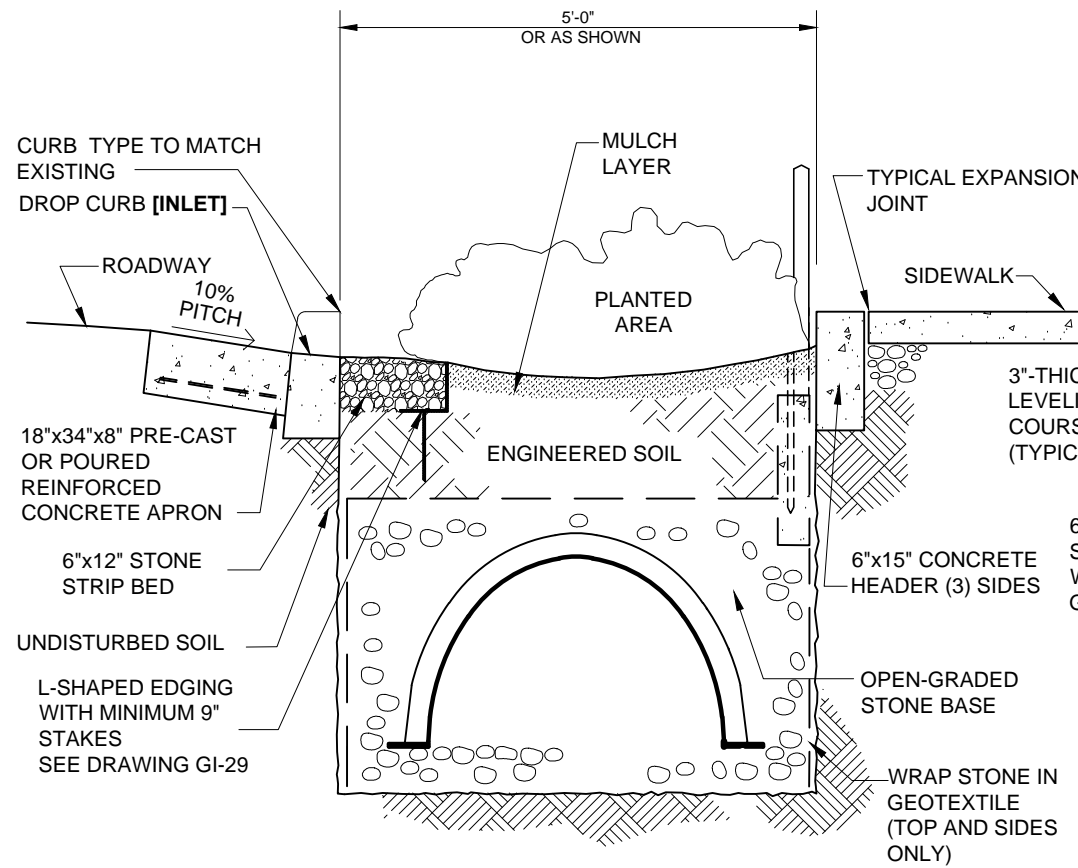
CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2C - WITH STORMWATER CHAMBER

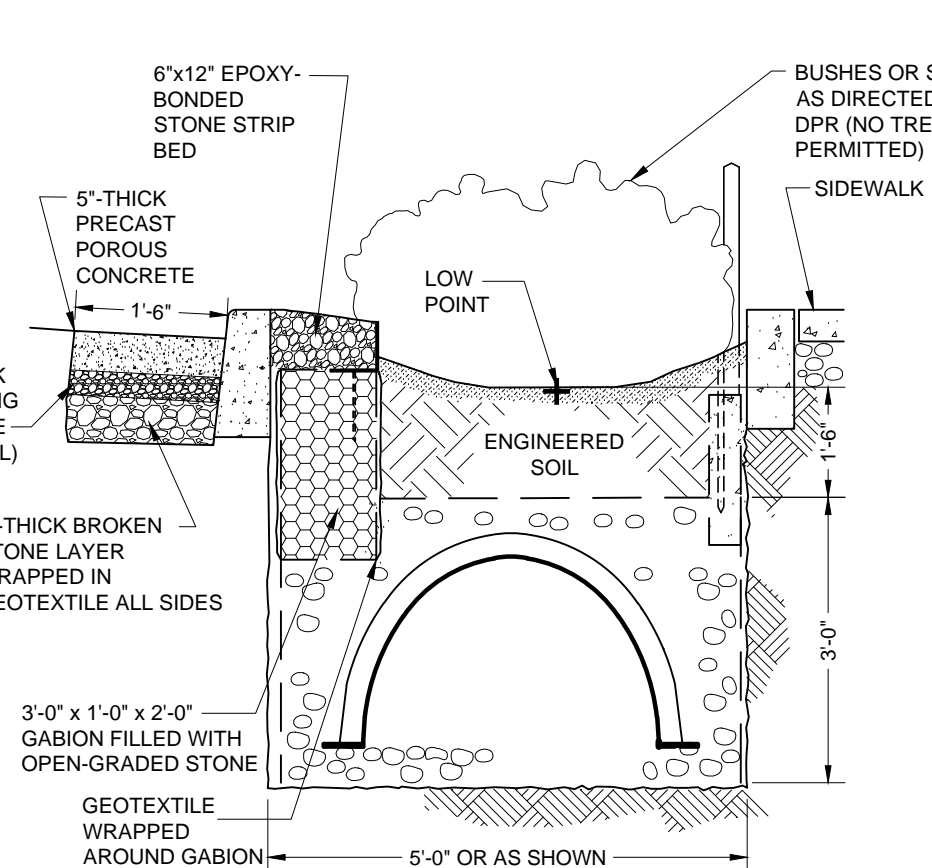
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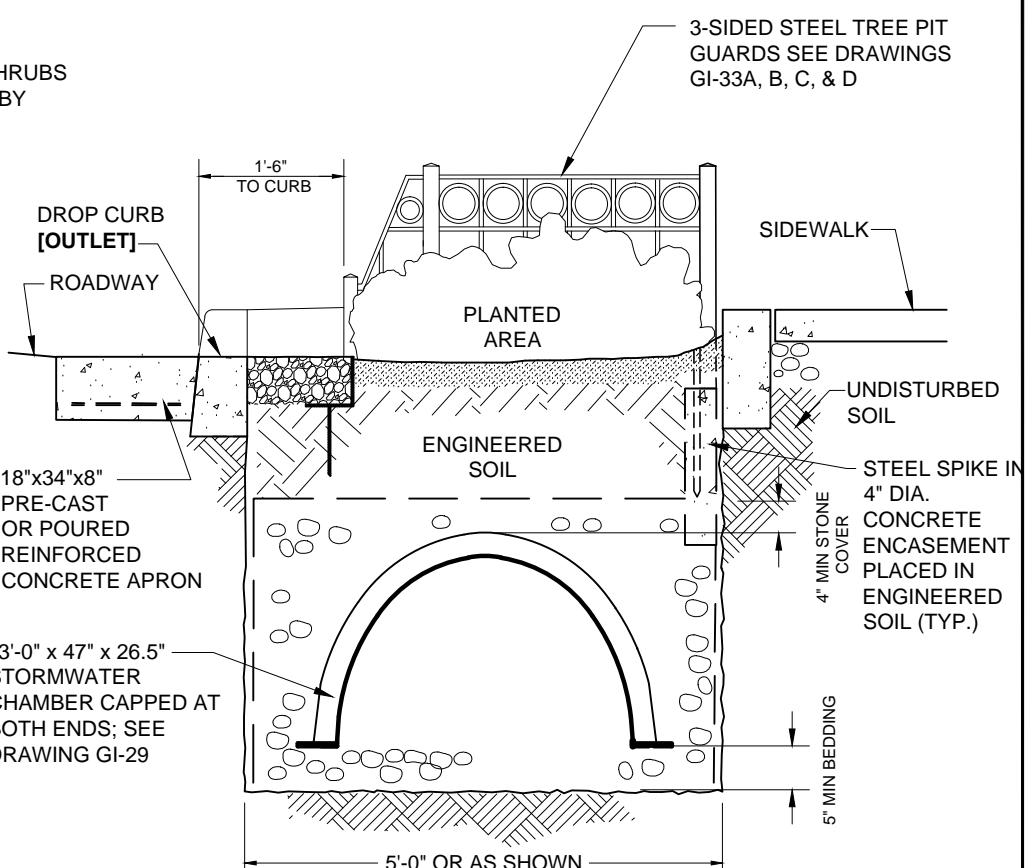
PLAN



SECTION A-A  
AT BIOSWALE INLET



SECTION B-B  
AT MIDSECTION [LOWEST POINT]



SECTION C-C  
AT BIOSWALE OUTLET

*Maadi Faraj*

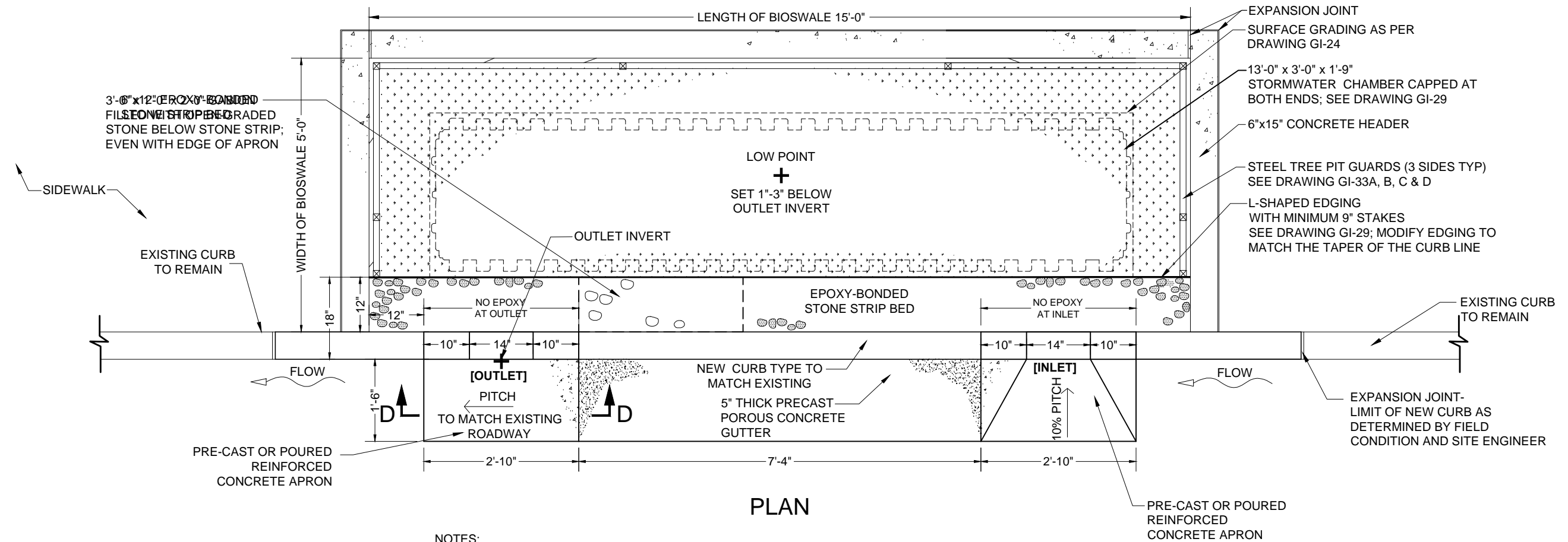
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STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2C - WITH STORMWATER CHAMBER

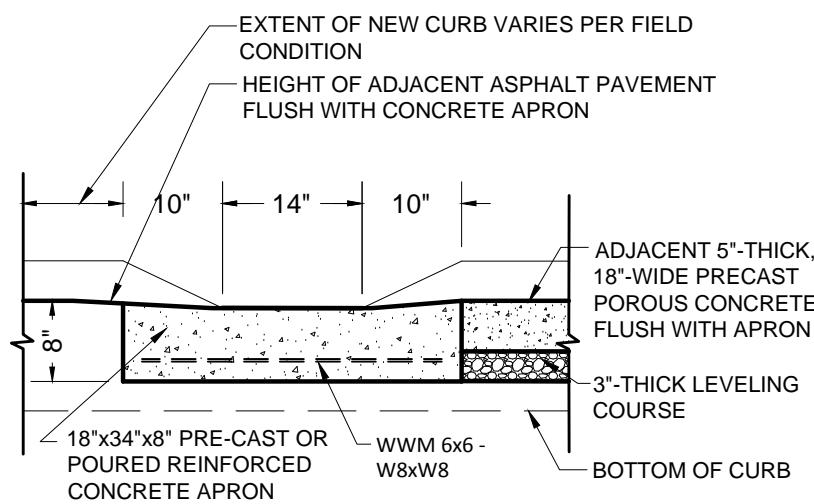
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PLAN

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SECTION D-D

*Maadi Faraj*

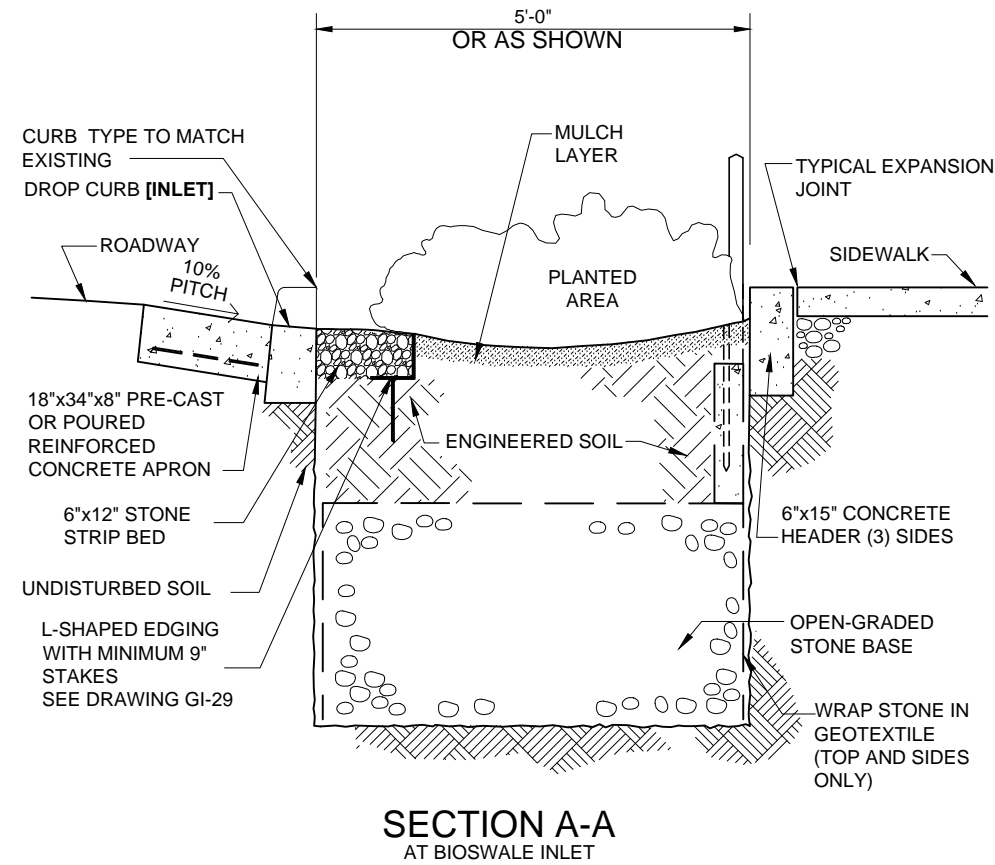
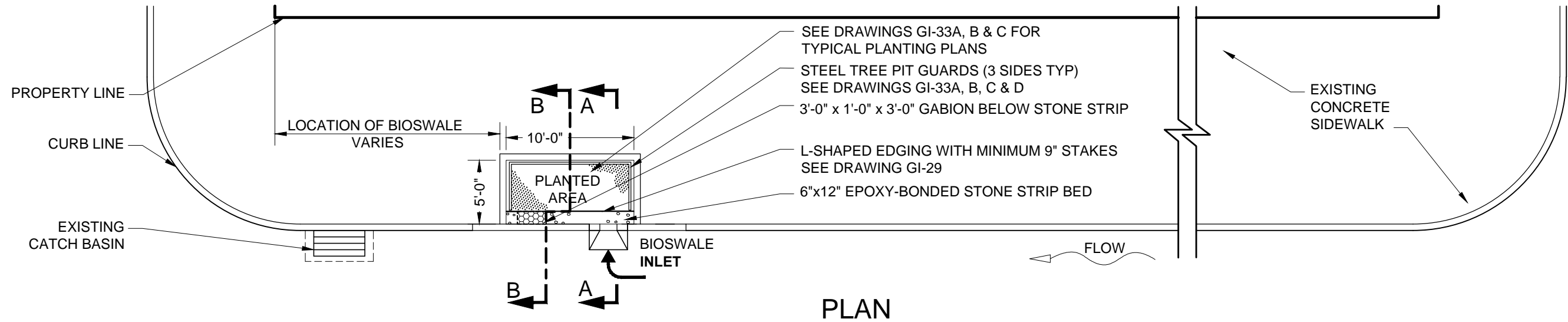
P.E., F. ASCE

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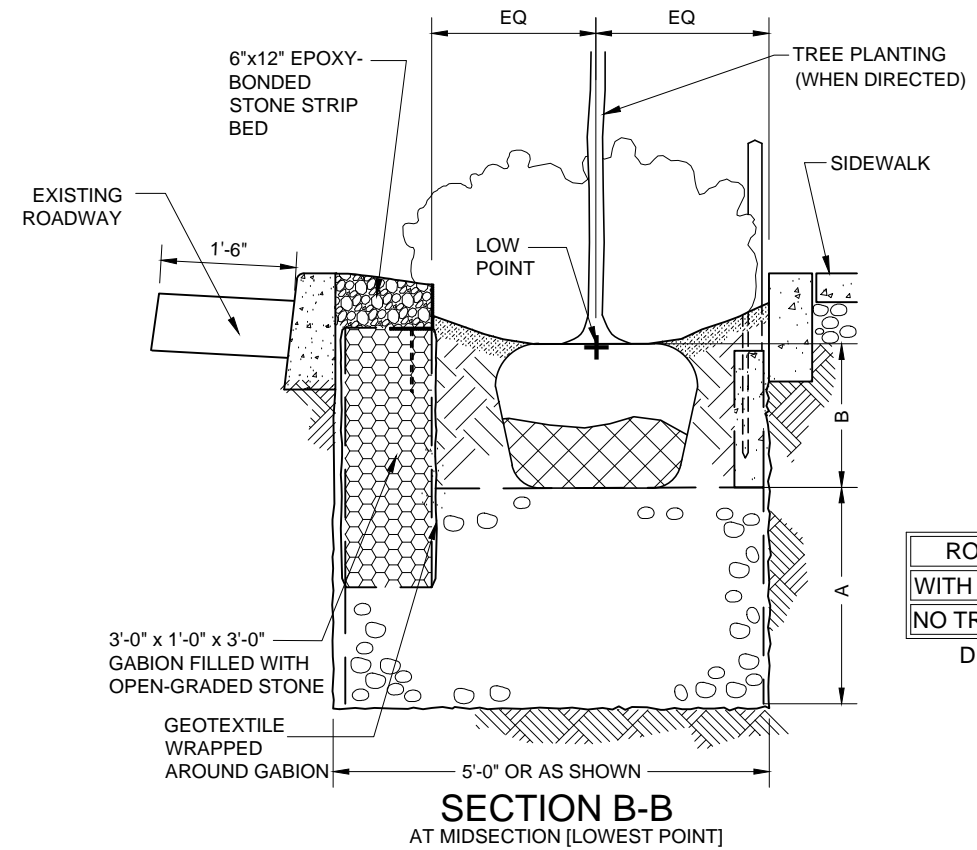
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CITY OF NEW YORK  
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**STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3**  
 - NO CONNECTION TO SEWERS



**SECTION A-A**  
AT BIOSWALE INLET



**SECTION B-B**  
AT MIDSECTION [LOWEST POINT]

ROWB	A	B
WITH TREE	2'-6"	24" MIN
NO TREE	3'-0"	18" MIN

DEPTH SCHEDULE

*Maqdi Faraj*

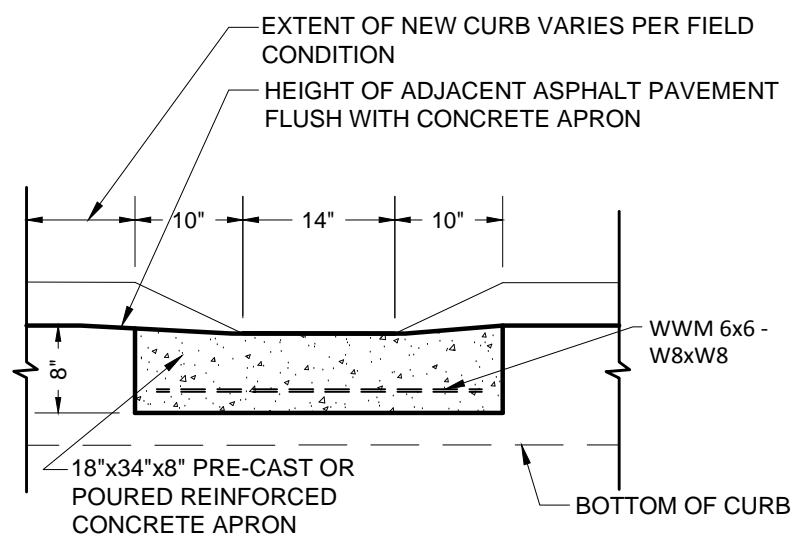
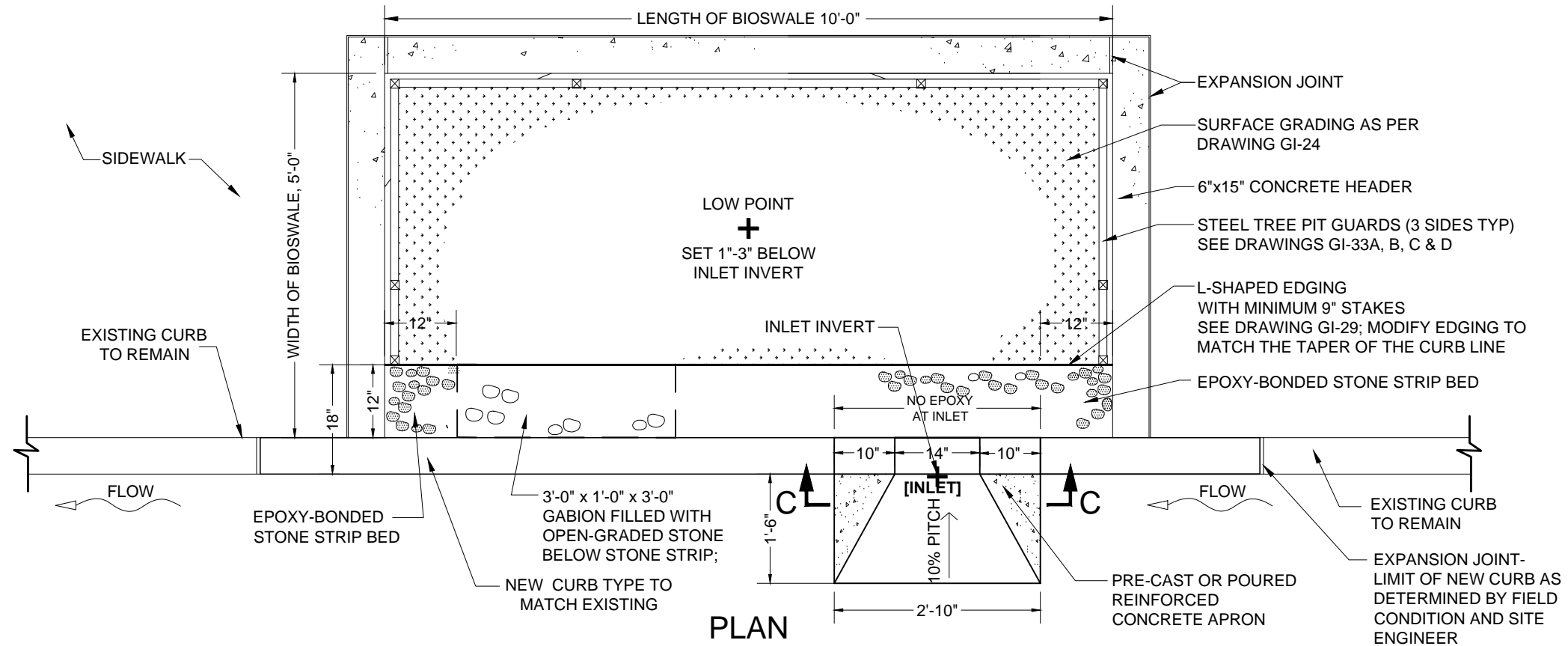
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**SECTION C-C**

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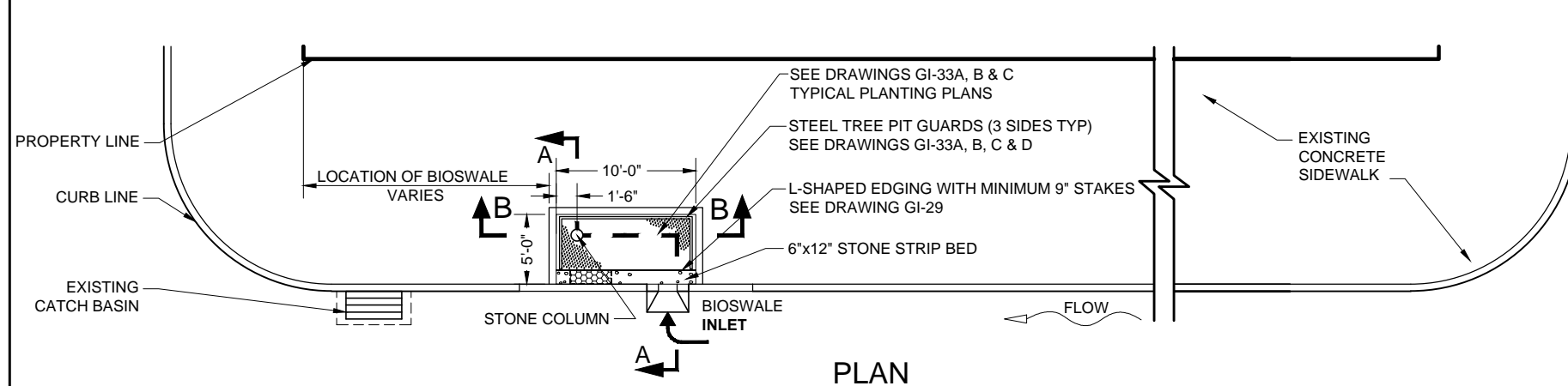
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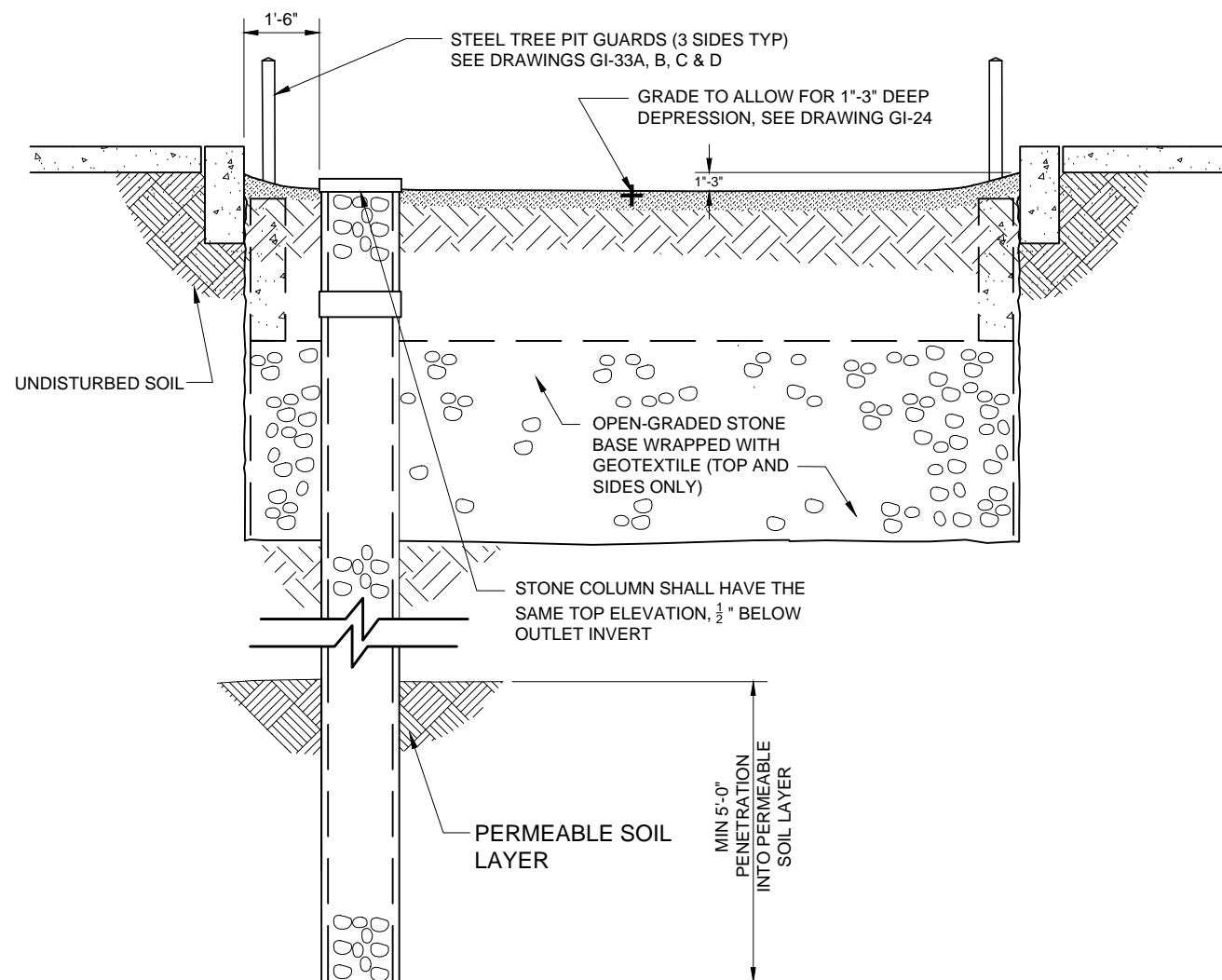
CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# STANDARD FOR 10'X5' R.O.W. BIOSWALE TYPE 3A - WITH STONE COLUMN

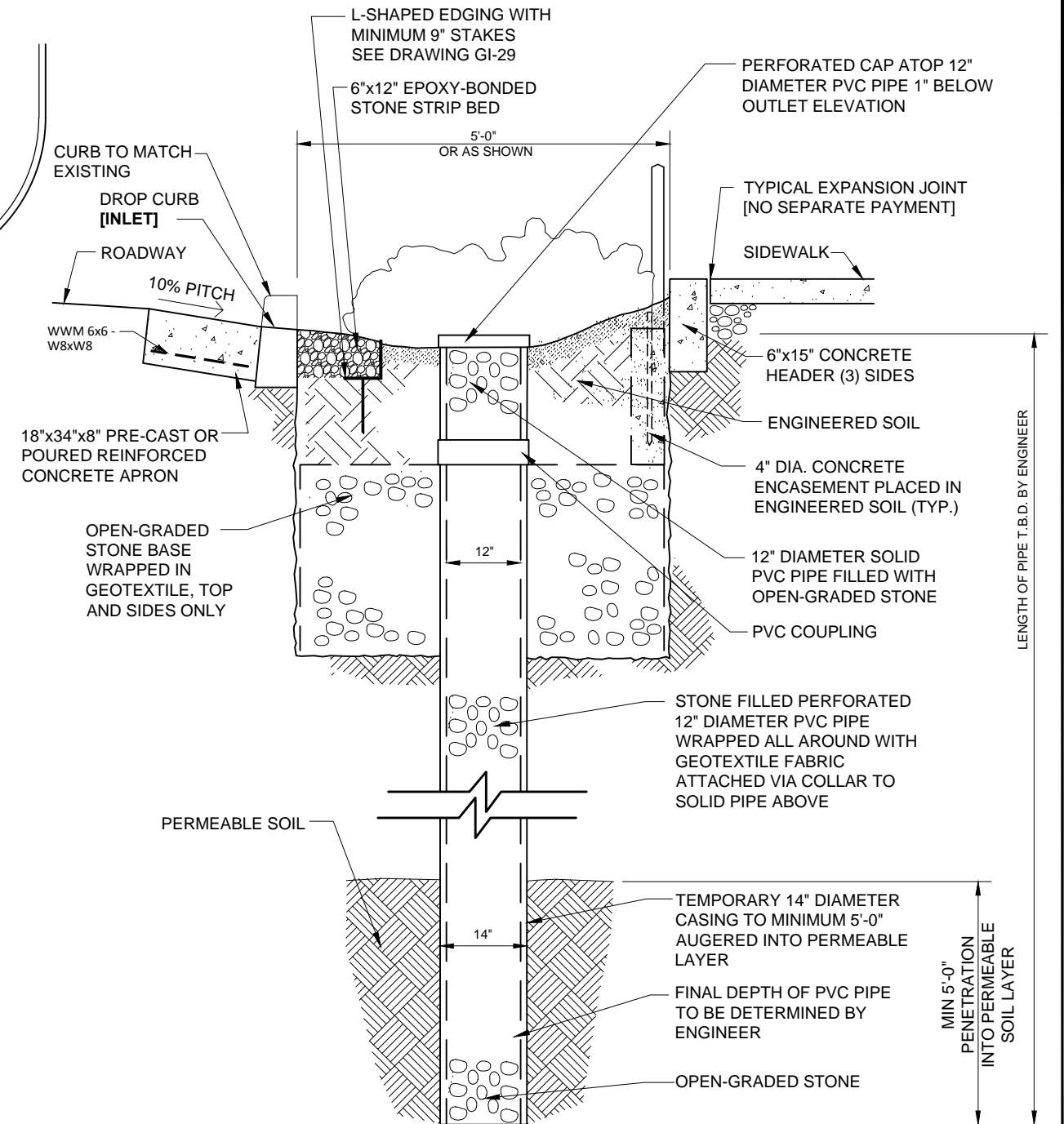
- NO CONNECTION TO SEWERS



PLAN



SECTION B-B



SECTION A-A  
AT BIOSWALE VERTICAL DRAIN

*Magedi Farag*

P.E., F. ASCE

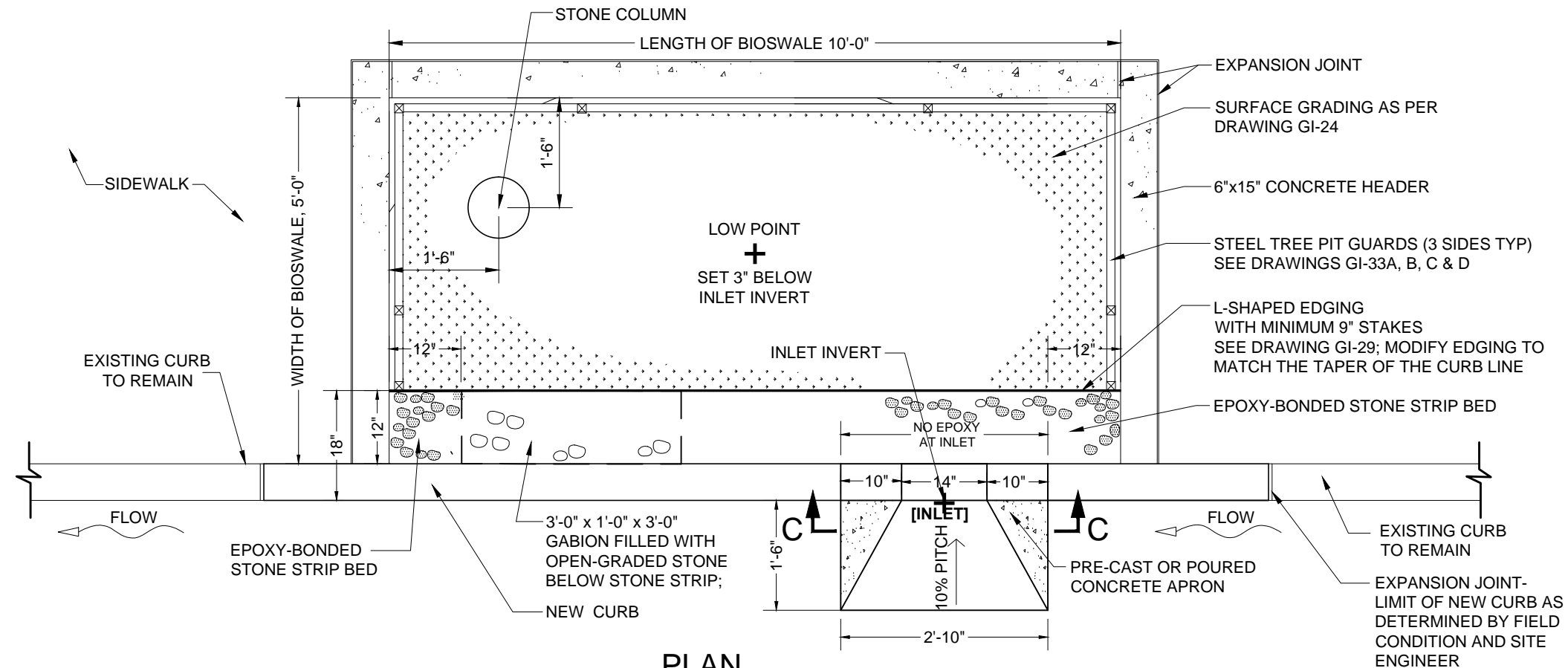
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DATE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

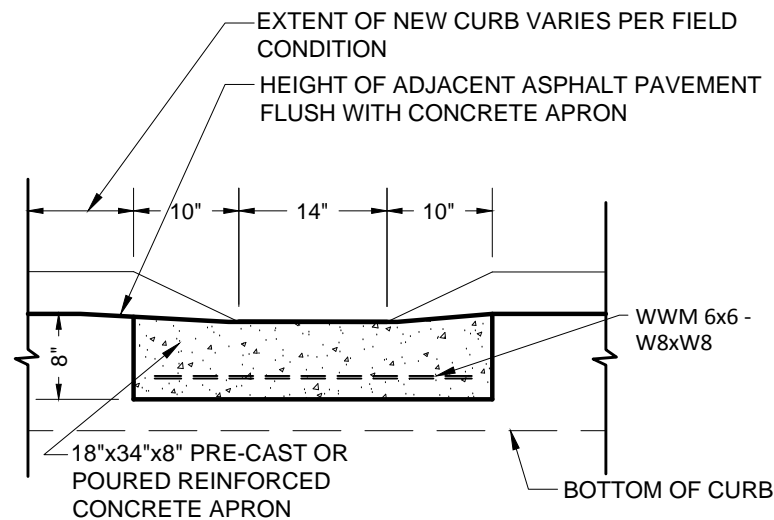
STANDARD FOR 10'X5' R.O.W. BIOSWALE TYPE 3A - WITH STONE COLUMNS  
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PLAN

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7. THE CONTRACTOR SHALL NOT BE PERMITTED TO STORE, STOCKPILE, OR LAY DOWN, ANY CONSTRUCTION MATERIAL INCLUDING, BUT NOT LIMITED TO, LUMBER, FUEL, AND OIL CONTAINERS, PIPES, AND/OR PIPE FITTINGS, BARRICADES, HAND TOOLS, HOSES, RECEPTACLES, AND ASPHALT WITHIN ANY EXISTING TREE PIT OR R.O.W. BIOSWALE.
8. REPLACEMENT TREES SHALL BE PLANTED WITHIN THE PROJECT AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH STANDARD HIGHWAY SPECIFICATIONS.
9. STONE STRIP BED TO BE BONDED WITH EPOXY TO KEEP STONES IN PLACE. STONES IN FRONT OF INLETS AND OUTLETS ARE TO BE LEFT LOOSE AND UNBONDED
10. 14" DIAMETER CASING TO BE AUGERED TO DEPTH AS PER ENGINEER. 12" DIAMETER PVC PIPE WRAPPED ALL AROUND WITH GEOTEXTILE FABRIC INSERTED IN THE 14" CASING.



SECTION C-C

*Magedi Farag*

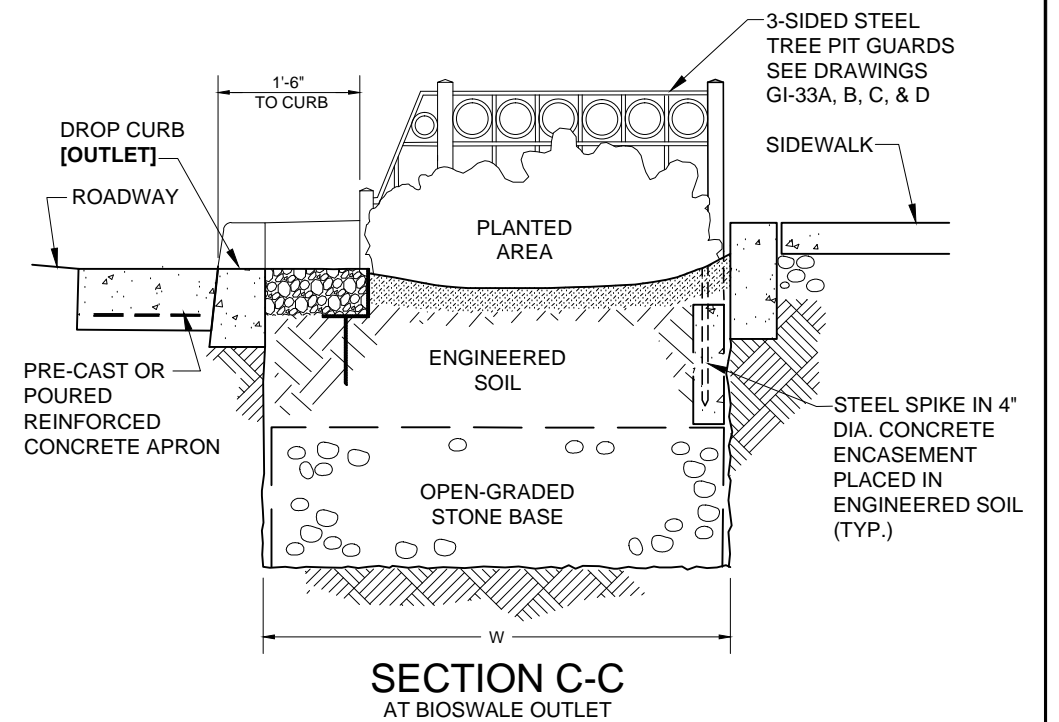
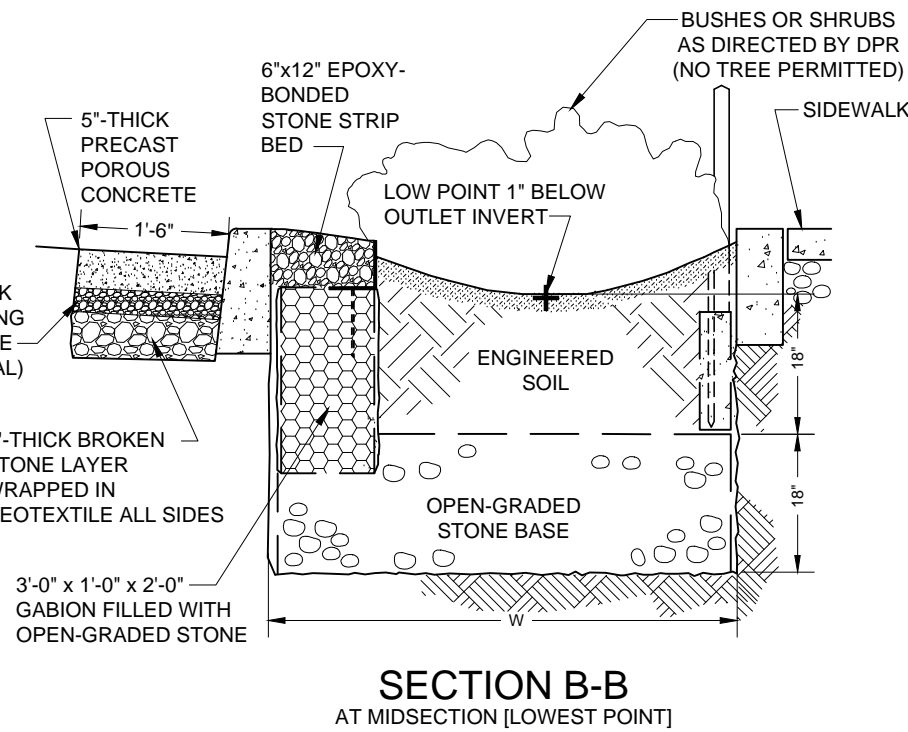
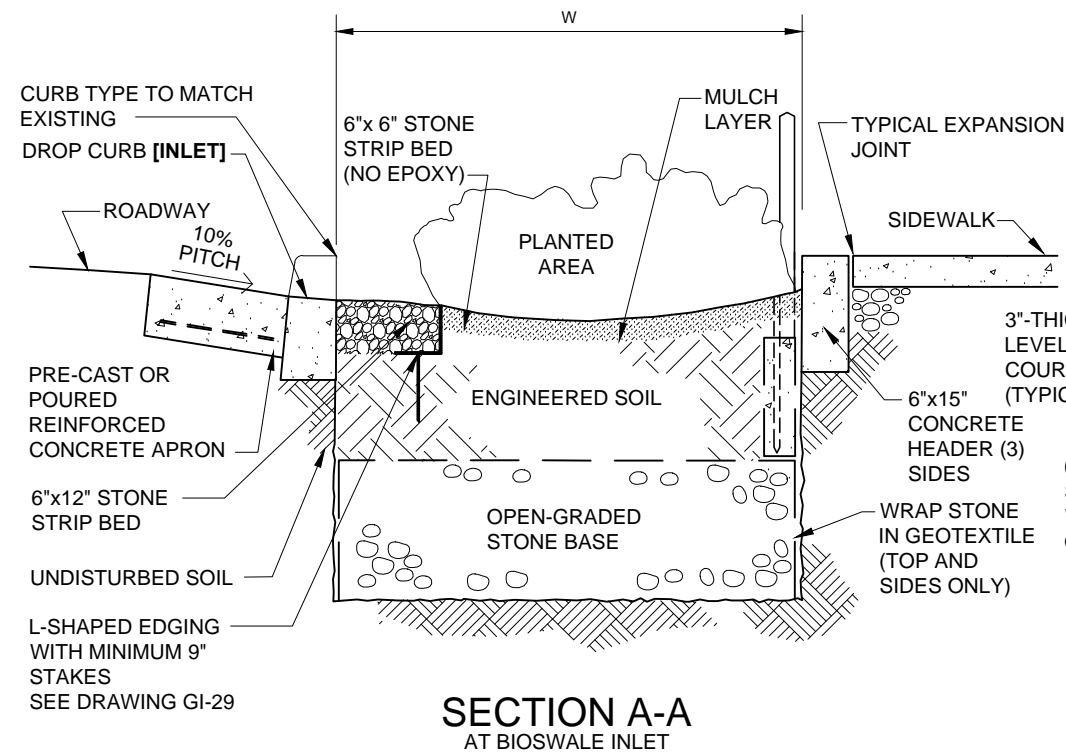
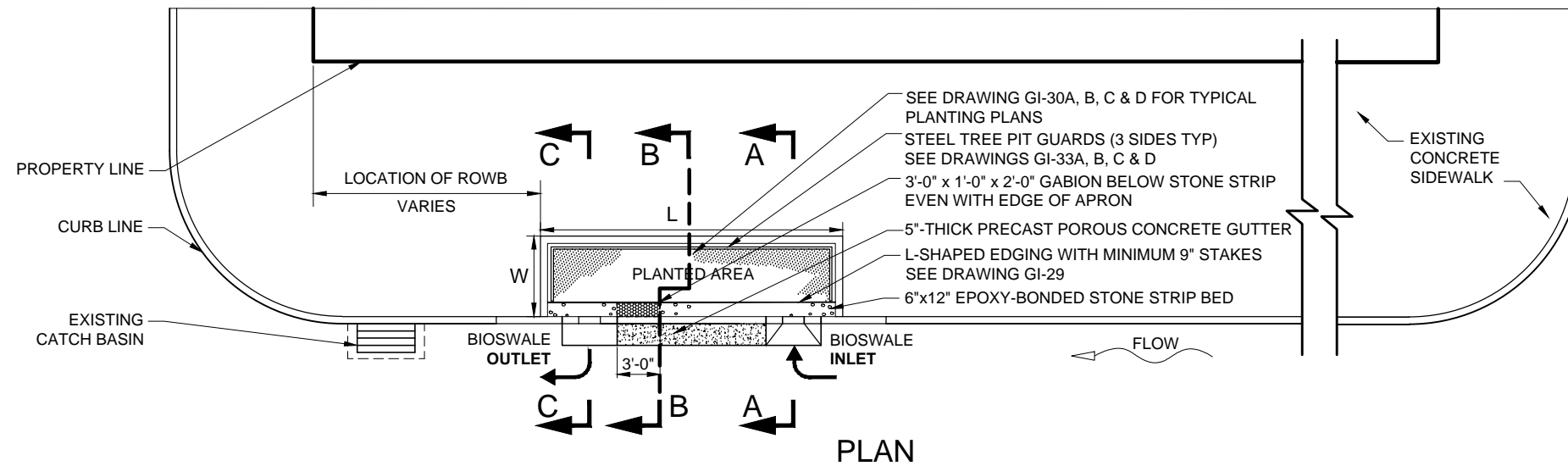
P.E., F. ASCE

ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014

DATE

CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR R.O.W. RAIN GARDEN TYPE 1, TYPE 2, AND TYPE 3**  
 - NO CONNECTION TO SEWERS



R.O.W. RAIN GARDEN DETAILS		
LENGTH (L)	WIDTH (W)	TYPE
17' ≤ L ≤ 20'	4'-0" TO 6'-0"	TYPE 1
13' ≤ L < 17'	4'-0" TO 6'-0"	TYPE 2
10' ≤ L < 13'	4'-0" TO 6'-0"	TYPE 3

NOTE: PLAN LAYOUT DIMENSIONS AND PLANTING PLAN AS PER GI-22 FOR THE R.O.W. RAIN GARDEN TYPE SPECIFIED.

*Maadi Farag*

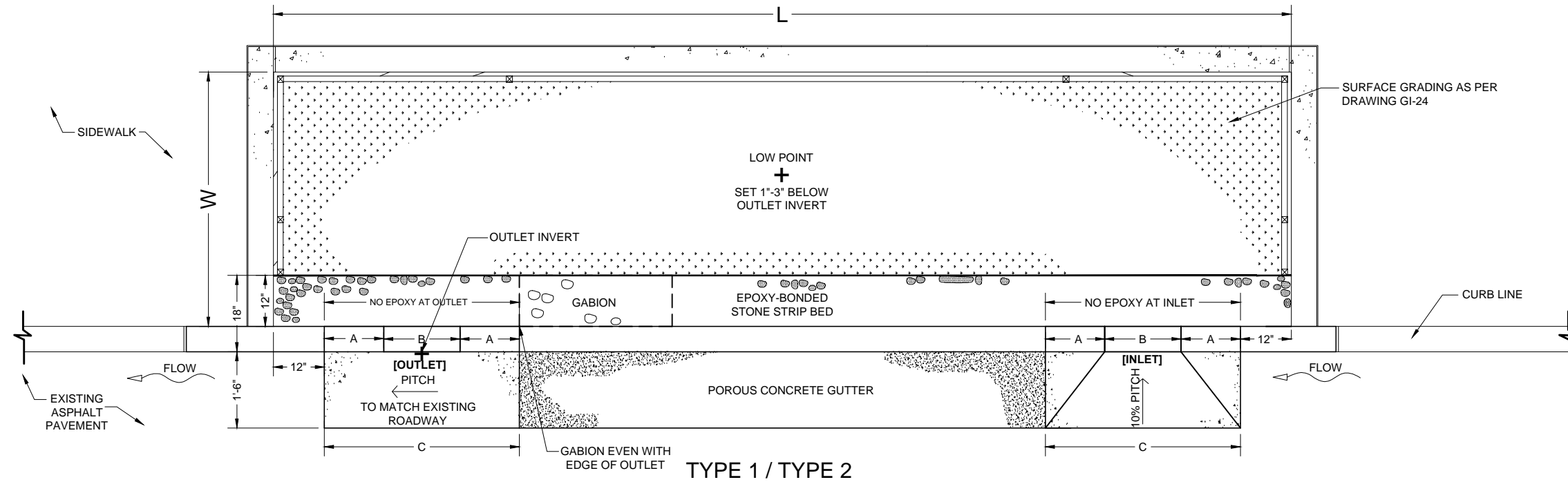
P.E., F. ASCE  
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 DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
 DATE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# DIMENSION SCHEDULE FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

- NO CONNECTION TO SEWERS

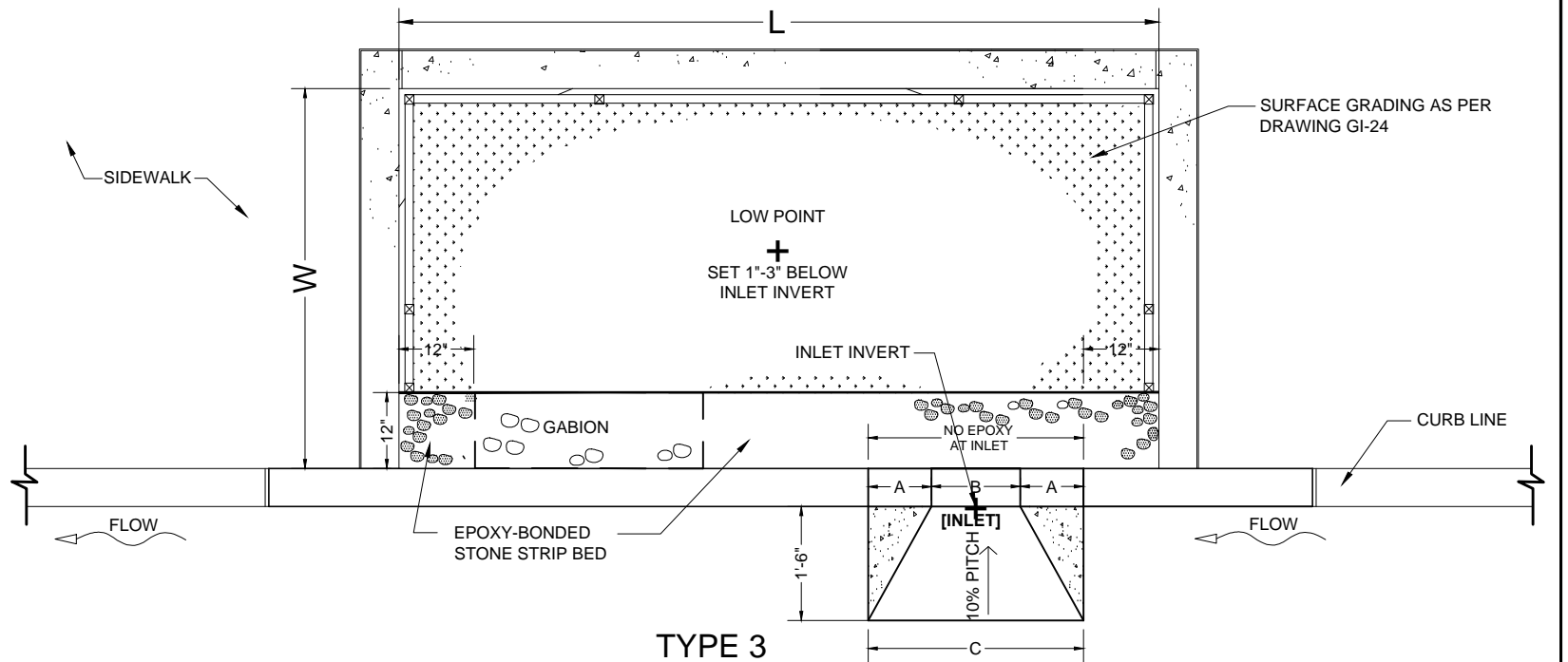


TYPE 1 / TYPE 2

R.O.W. BIOSWALE OR RAIN GARDEN DETAILS			INLET/OUTLET DIMENSIONS			PLANTING PLAN
LENGTH (L)	WIDTH (W)	TYPE	A	B	C	TYPE / PAGE NUMBER
$17' \leq L \leq 20'$	4'-0" TO 6'-0"	TYPE 1	14"	18"	3'-10"	TYPE 1 / GI-30A-D
$13' \leq L < 17'$	4'-0" TO 6'-0"	TYPE 2	10"	14"	2'-10"	TYPE 2 / GI-31A-D
$10' \leq L < 13'$	4'-0" TO 6'-0"	TYPE 3	10"	14"	2'-10"	TYPE 3 / GI-32A-D

## DIMENSION AND PLANTING PLAN SCHEDULE

- NOTES:
- STANDARD CROSS-SECTIONAL DETAILS AND NOTES AS PER THE R.O.W. BIOSWALE OR R.O.W. RAIN GARDEN TYPE SPECIFIED.
  - PRIOR TO CONSTRUCTION, THE CONTRACTOR WILL CONFIRM THE LEVELS OF THE R.O.W. BIOSWALE OR R.O.W. RAIN GARDEN TO PREVENT FLOODING.
  - DOT APPROVAL REQUIRED FOR ALL WIDTHS GREATER THAN 5'.
  - PLANTING QUANTITIES AND PLANS FOR VARIABLE WIDTH R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS AS PER THE PAGE NUMBERS SPECIFIED, DISTRIBUTED EVENLY.
  - TREES SPECIES AS DIRECTED BY DPR. TREES ARE ONLY PERMITTED IN R.O.W. BIOSWALES WITH AN ENGINEERED SOIL LAYER 24" DEEP.



TYPE 3

*Madi Faraj*

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DEPARTMENT OF ENVIRONMENTAL PROTECTION

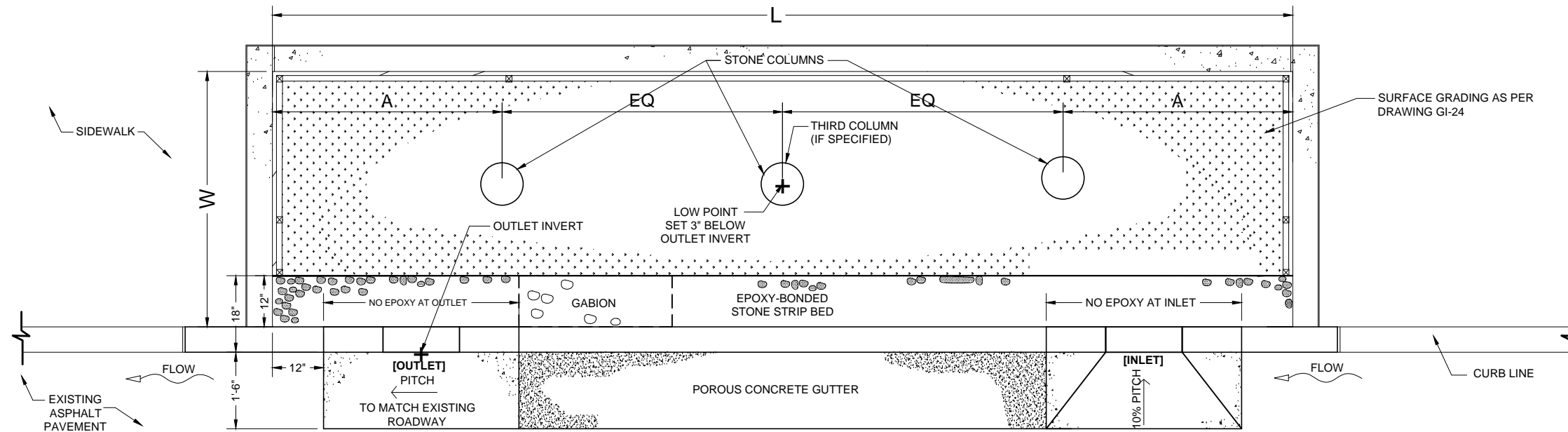
08-29-2014  
DATE



CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE

**STONE COLUMN SCHEDULE FOR VARIABLE SIZE R.O.W. BIOSWALE**

- NO CONNECTION TO SEWERS



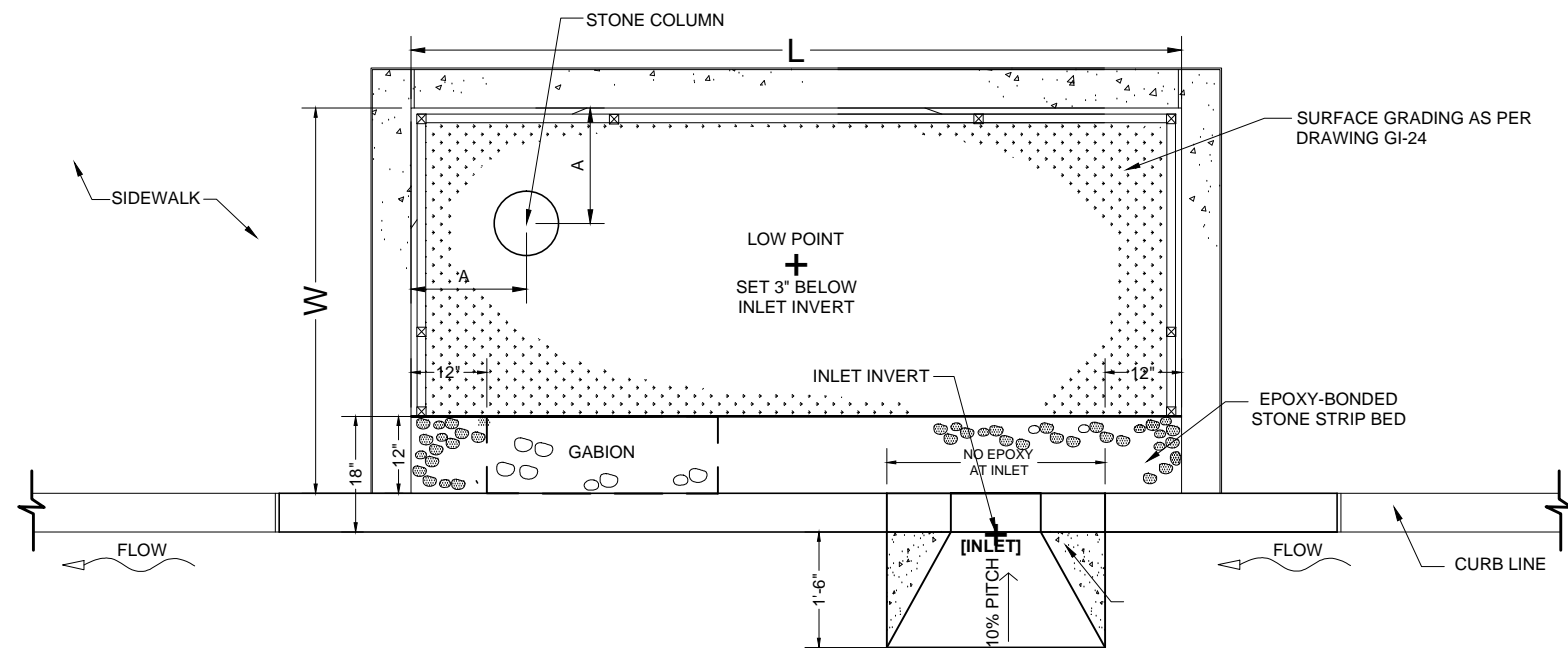
TYPE 1 / TYPE 2

R.O.W. BIOSWALE DETAILS			STONE COLUMN DETAILS	
LENGTH (L)	WIDTH (W)	TYPE	NUMBER OF COLUMNS	A
$17' \leq L \leq 20'$	4'-0" TO 6'-0"	TYPE 1	3	4'-6"
$13' \leq L < 17'$	4'-0" TO 6'-0"	TYPE 2	2	3'-6"
$10' \leq L < 13'$	4'-0" TO 6'-0"	TYPE 3	1	1'-6"

**DIMENSION SCHEDULE**

NOTES:

- STANDARD STONE COLUMN CROSS-SECTIONAL DETAILS AS SPECIFIED.
- THIRD COLUMN LOCATED IN CENTER OF ROWB.
- ROWB WITH THREE COLUMNS WILL NOT CONTAIN A TREE.



TYPE 3

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 DEPARTMENT OF ENVIRONMENTAL PROTECTION

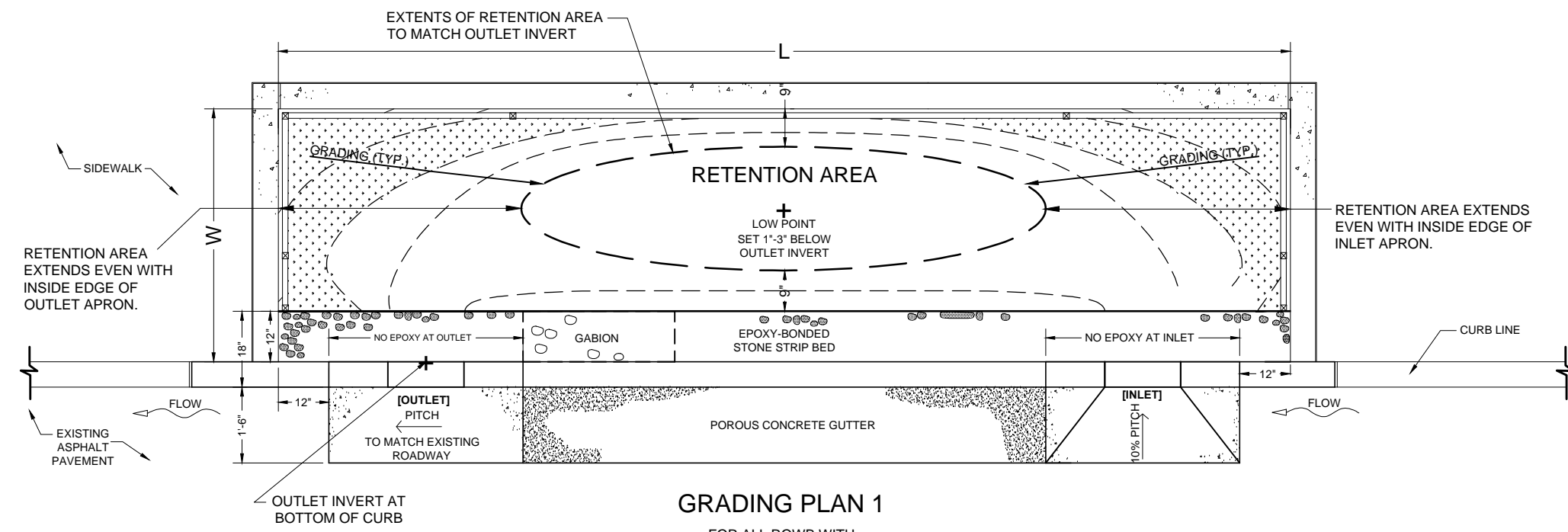
08-29-2014

DATE

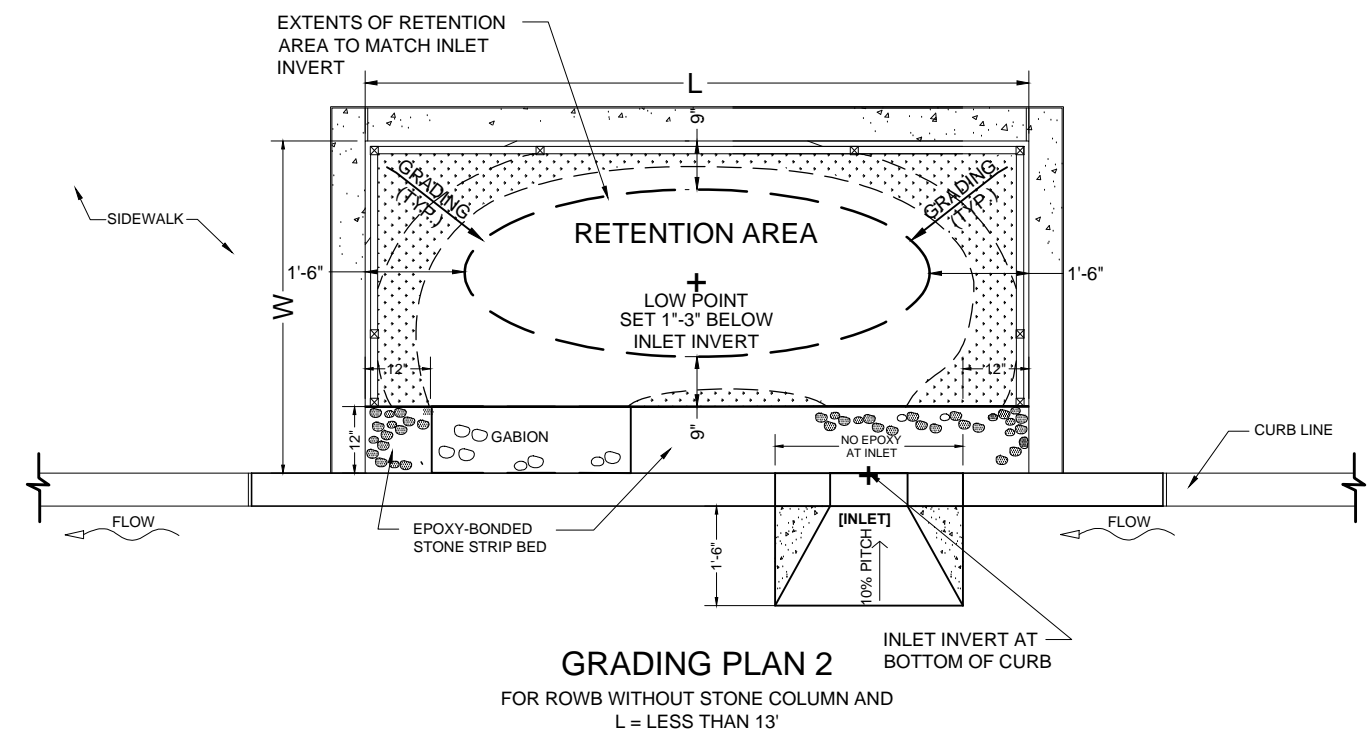
CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# SURFACE GRADING PLANS FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

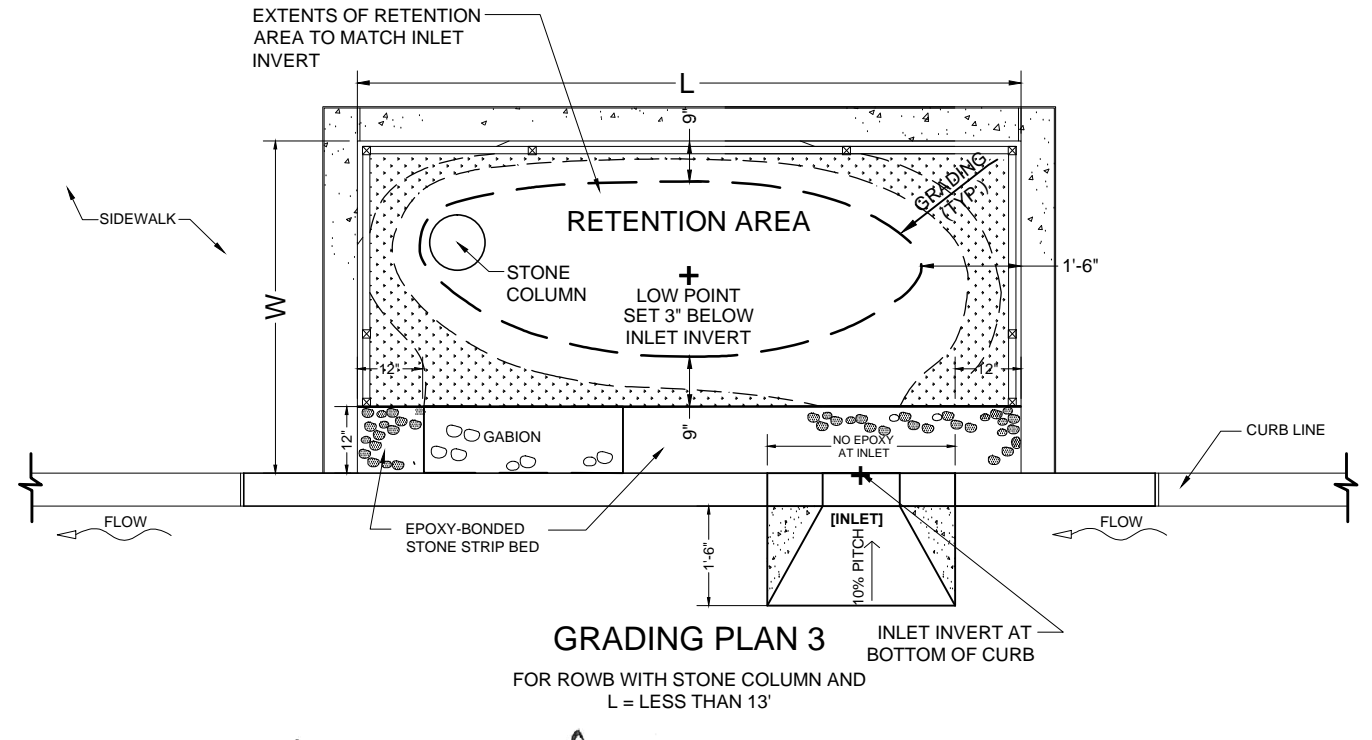
- NO CONNECTION TO SEWERS



**GRADING PLAN 1**  
FOR ALL ROWB WITH  
L = 13' OR GREATER



**GRADING PLAN 2**  
FOR ROWB WITHOUT STONE COLUMN AND  
L = LESS THAN 13'



**GRADING PLAN 3**  
FOR ROWB WITH STONE COLUMN AND  
L = LESS THAN 13'

NOTES:

1. ALL SURFACE GRADING TO TAPER TOWARD THE LOW POINT.
2. CONTOUR LINES SHOWN ON THIS DRAWING ARE SCHEMATIC ONLY AND DEPEND ON THE STREET GRADE.

*Moadi Faraj*

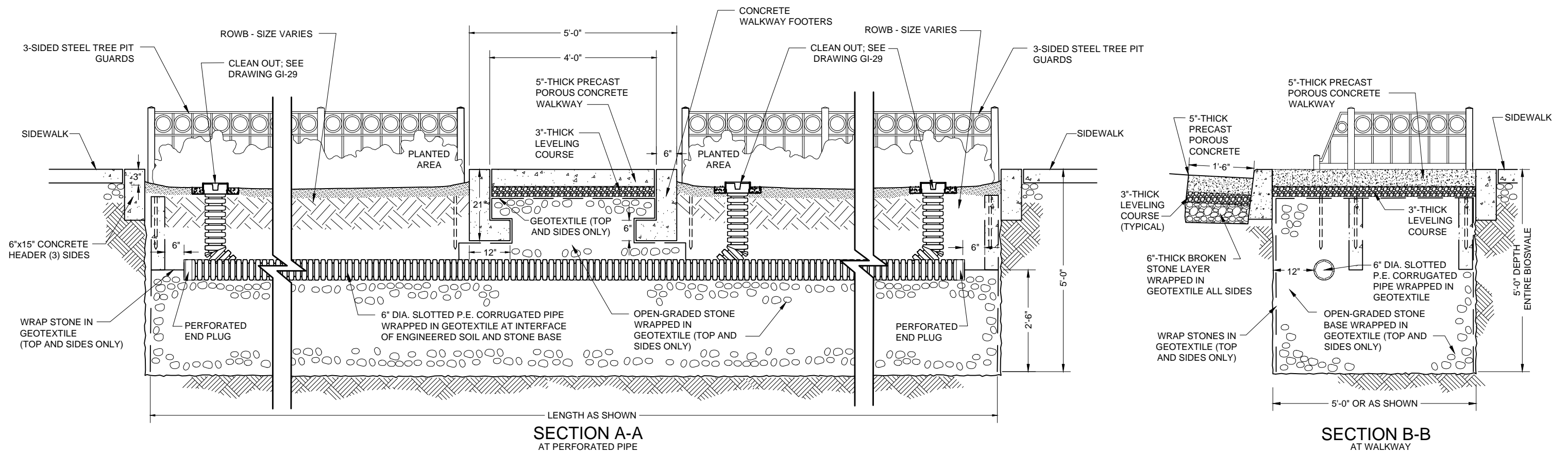
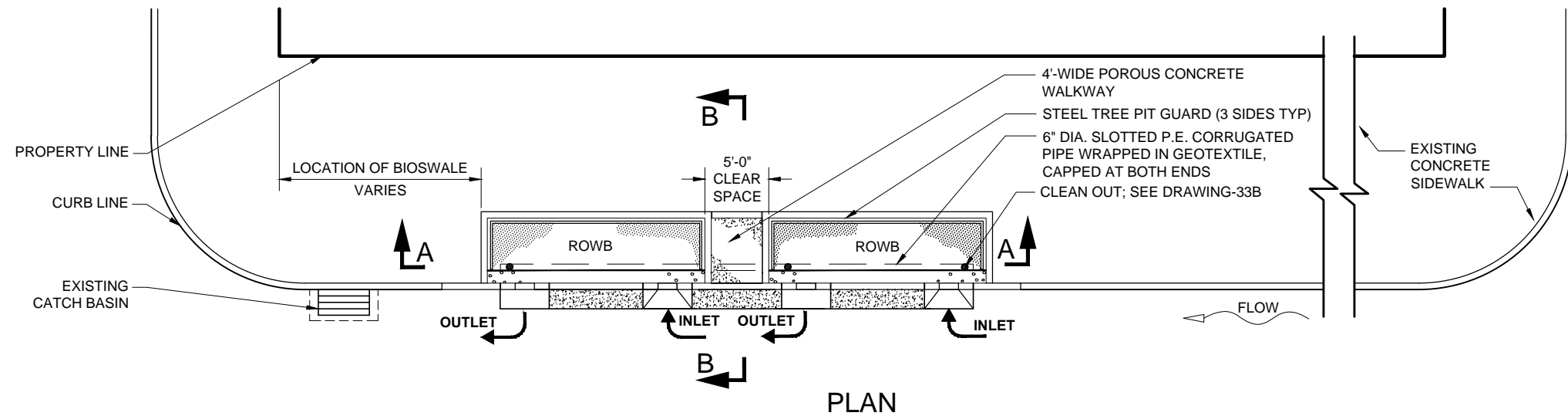
P.E., F. ASCE  
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
DATE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

# DETAIL FOR HYDRAULICALLY CONNECTED R.O.W.B. - PERFORATED PIPE

- NO CONNECTION TO SEWERS



P.E., F. ASCE

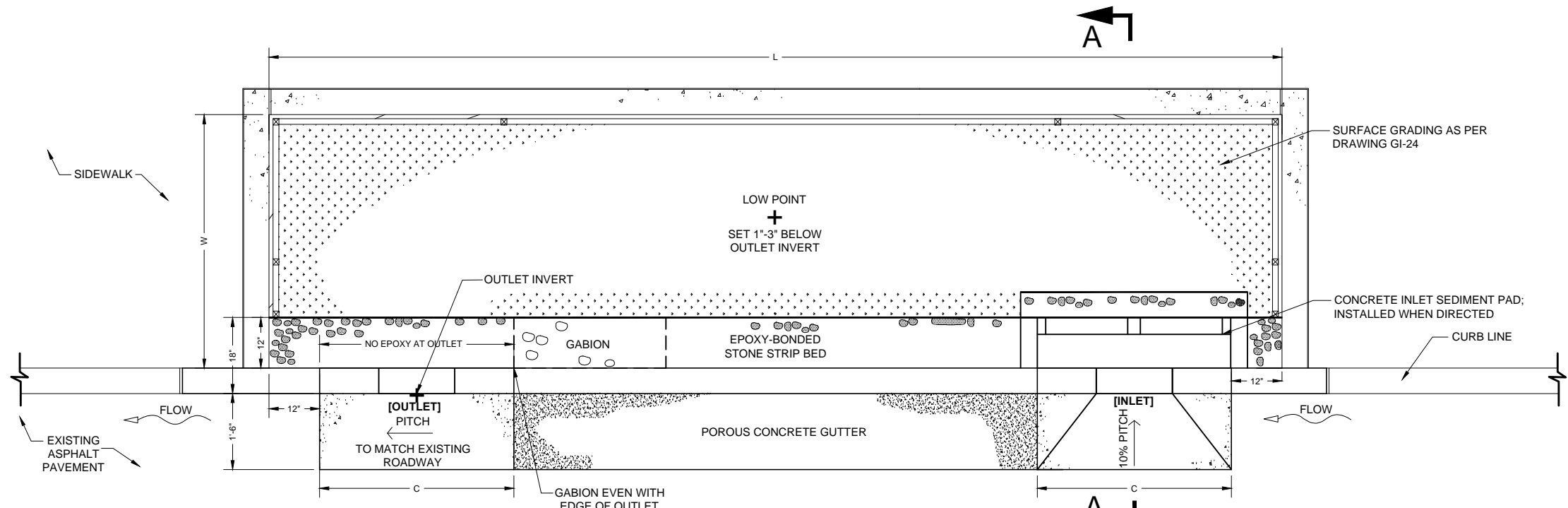
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014

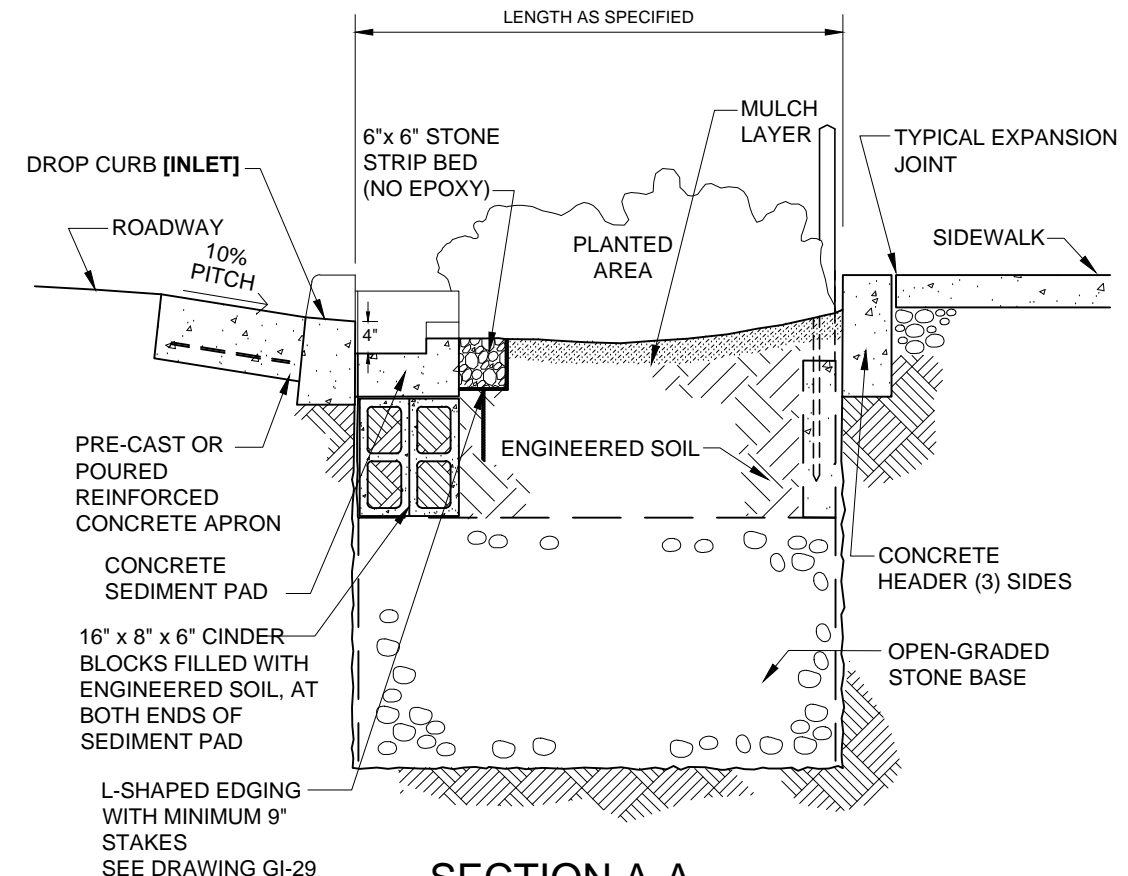
DATE

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OFFICE OF GREEN INFRASTRUCTURE

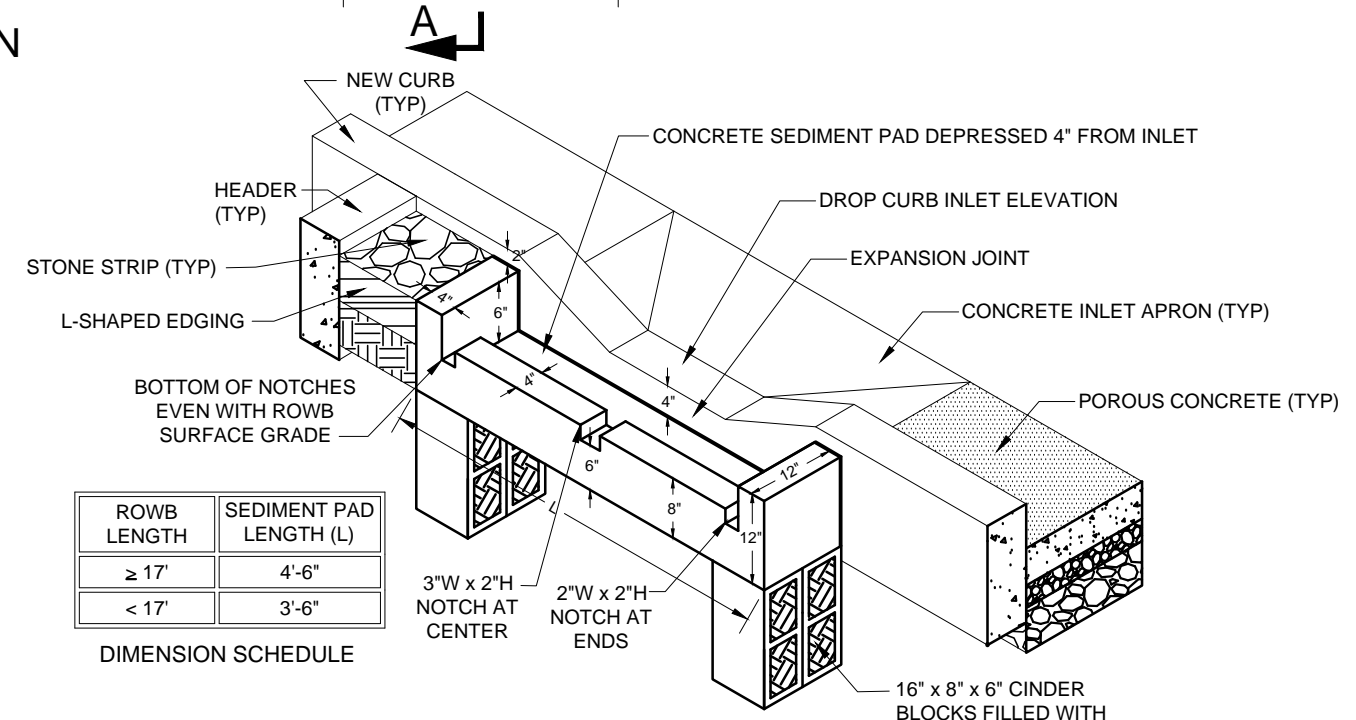
# STANDARD FOR R.O.W. BIOSWALE INLET WITH SEDIMENT PAD



PLAN



SECTION A-A  
AT BIOSWALE INLET



ISOMETRIC VIEW

N.T.S.

*Magdi Farag*

P.E., F. ASCE

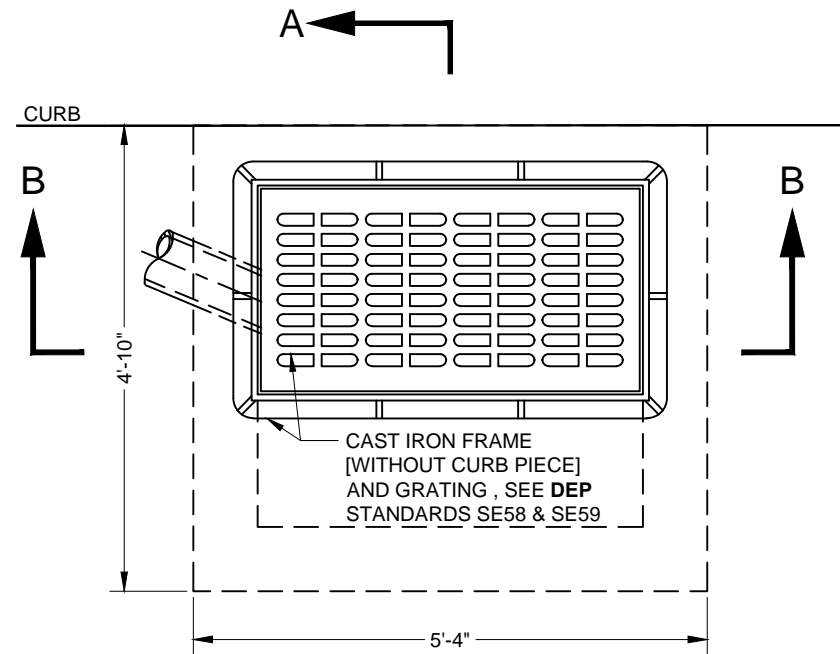
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014

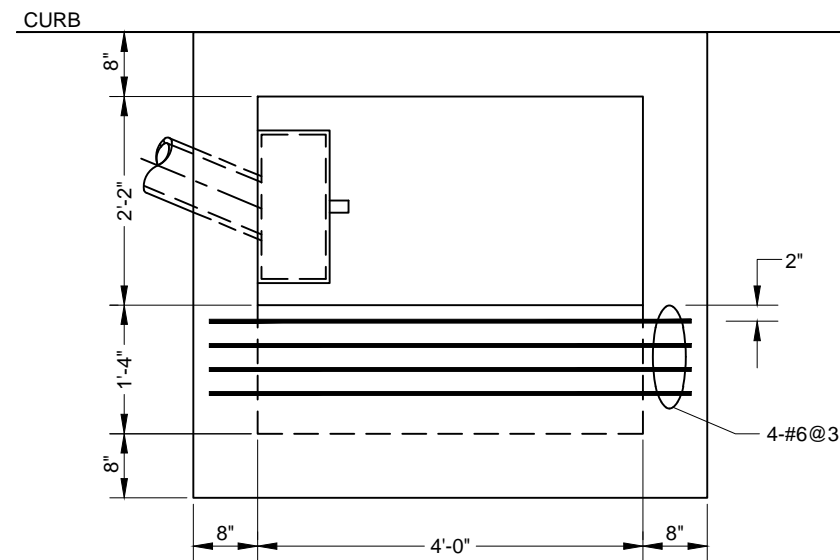
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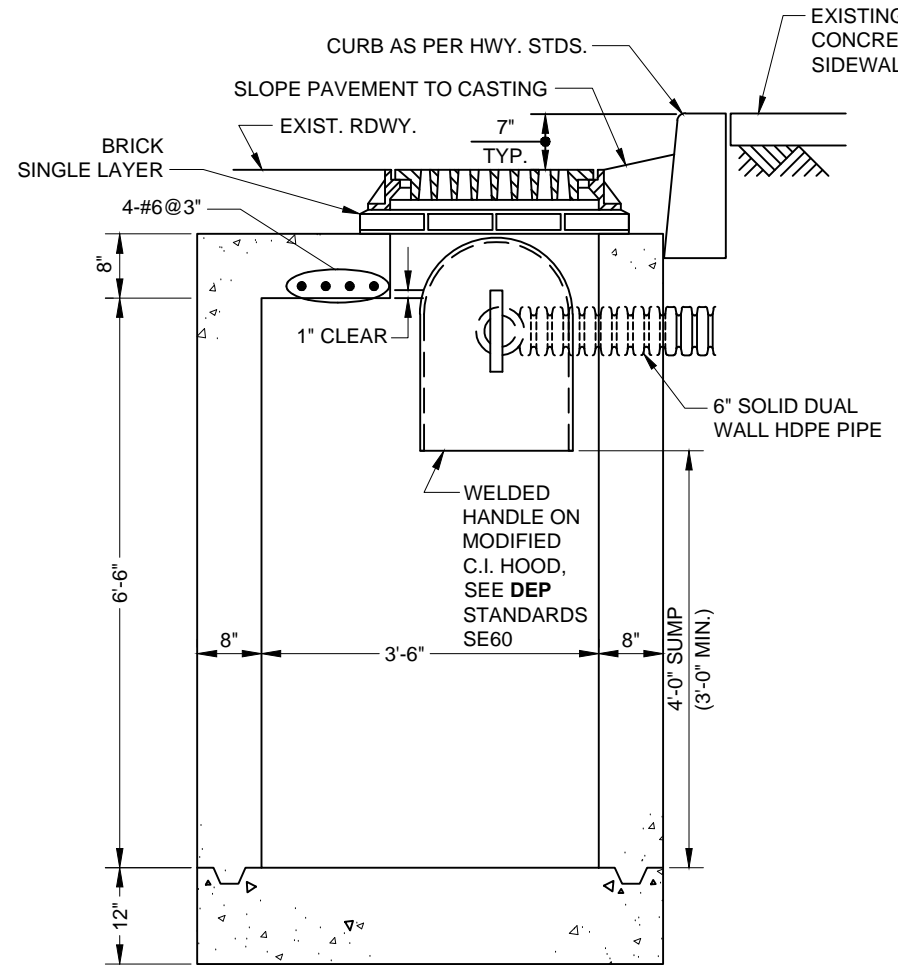
CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR STORMWATER INLET**  
 FOR R.O.W. BIOSWALE TYPE 1B AND TYPE 2B - NO CONNECTION TO SEWERS



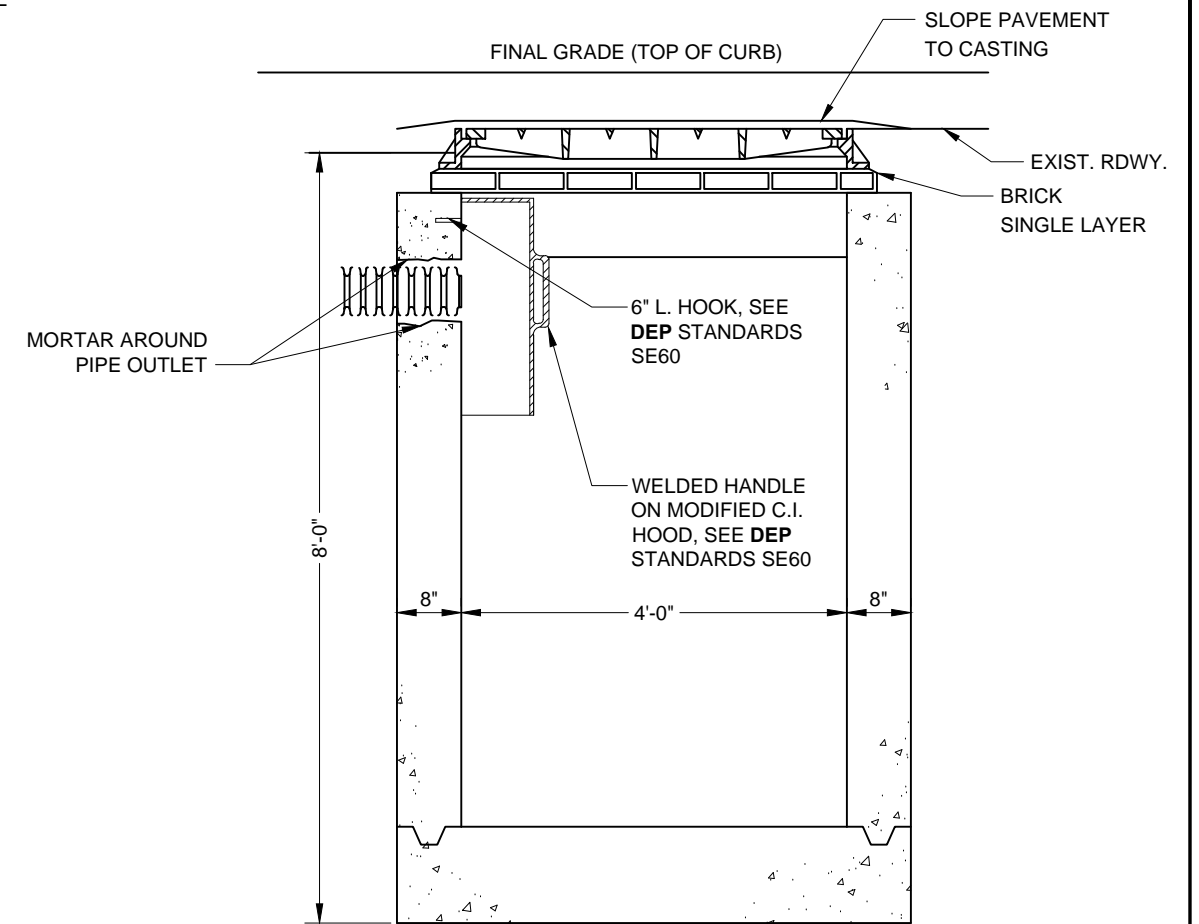
A ←  
**PLAN [WITH CASTING]**



**PLAN [WITH REINFORCEMENTS]**



**SECTION A-A**



**SECTION B-B**

**NOTES:**

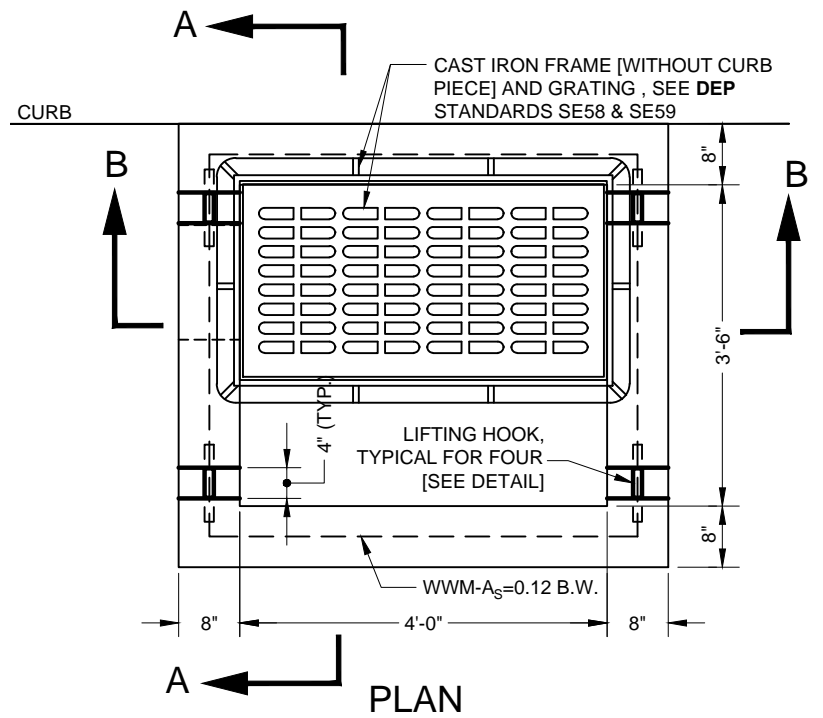
- (1) LOCATION OF CURB SHALL BE AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- (2) LOCATION AND ANGLE OF 6" PVC OUTLET PIPE MAY BE VARIED TO SUIT FIELD CONDITIONS.
- (3) KEYED CONSTRUCTION JOINTS ARE REQUIRED BETWEEN ANY SUCCESSIVE POURS.
- (4) CONCRETE IS TO BE CLASS 40. REBARS-GRADE 60.

*Magdi Farag*

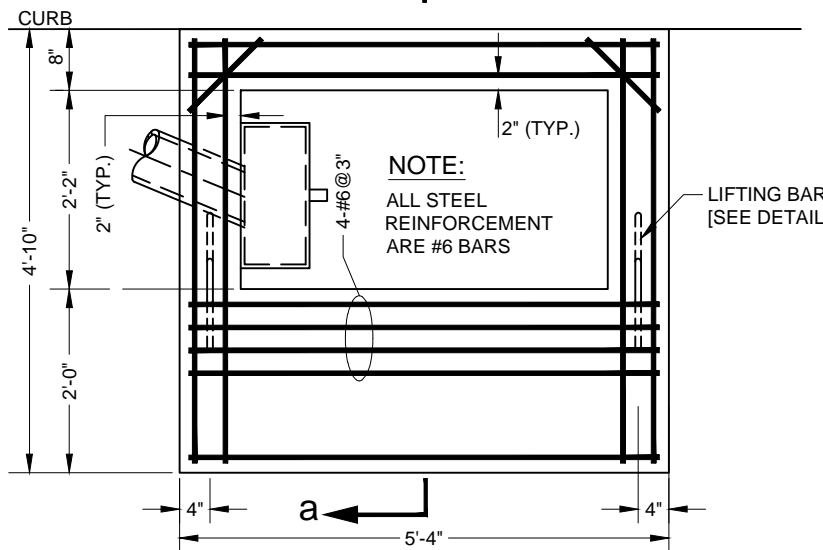
P.E., F. ASCE  
 ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
 DATE

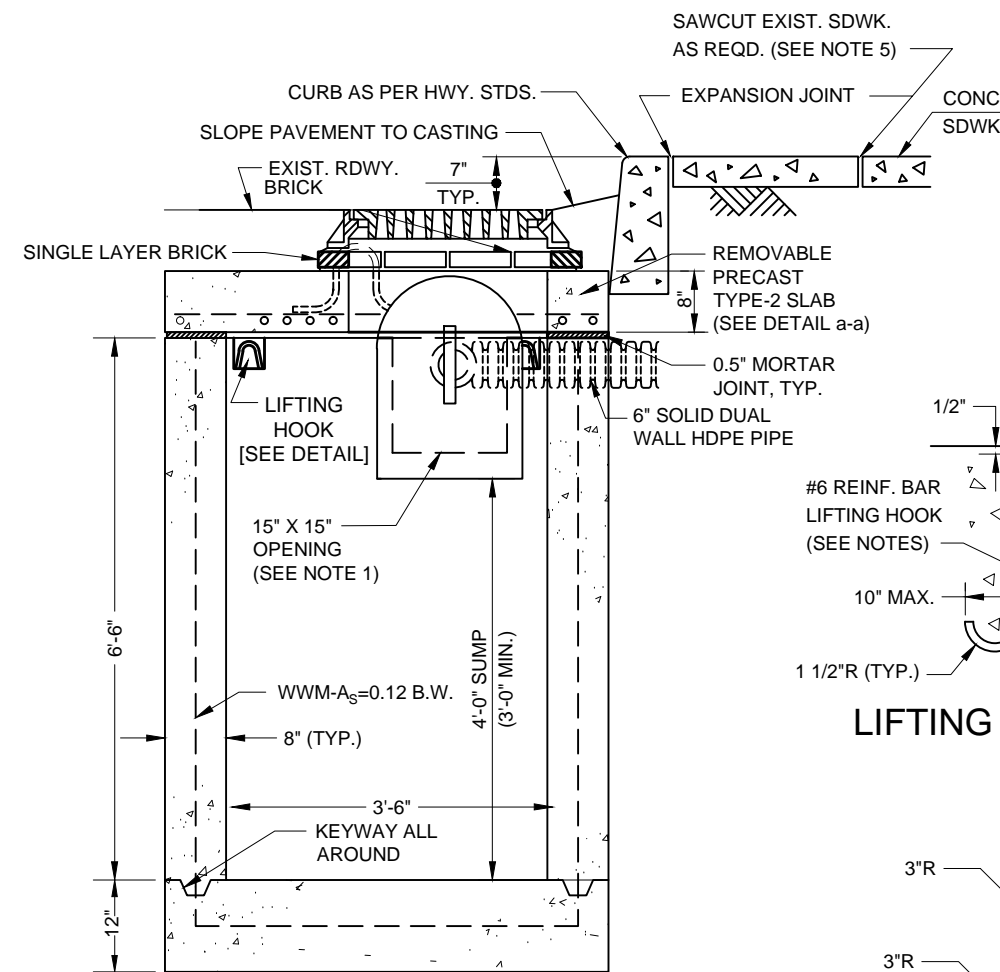
CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD FOR PRECAST STORMWATER INLET**  
 FOR R.O.W. BIOSWALE TYPE 1B AND 2B - NO CONNECTION TO SEWERS



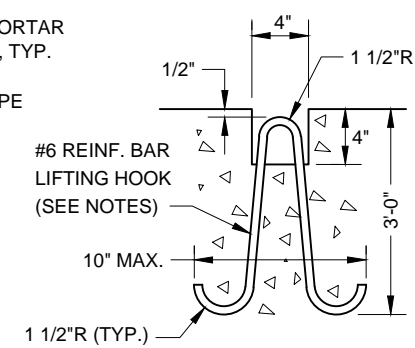
PLAN



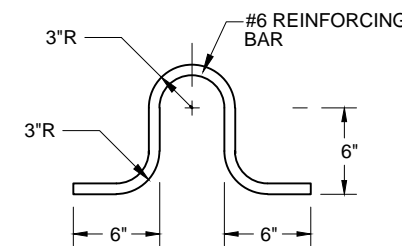
REINFORCEMENT PLAN  
 [REMOVABLE PRECAST TYPE 2 SLAB]



SECTION A-A



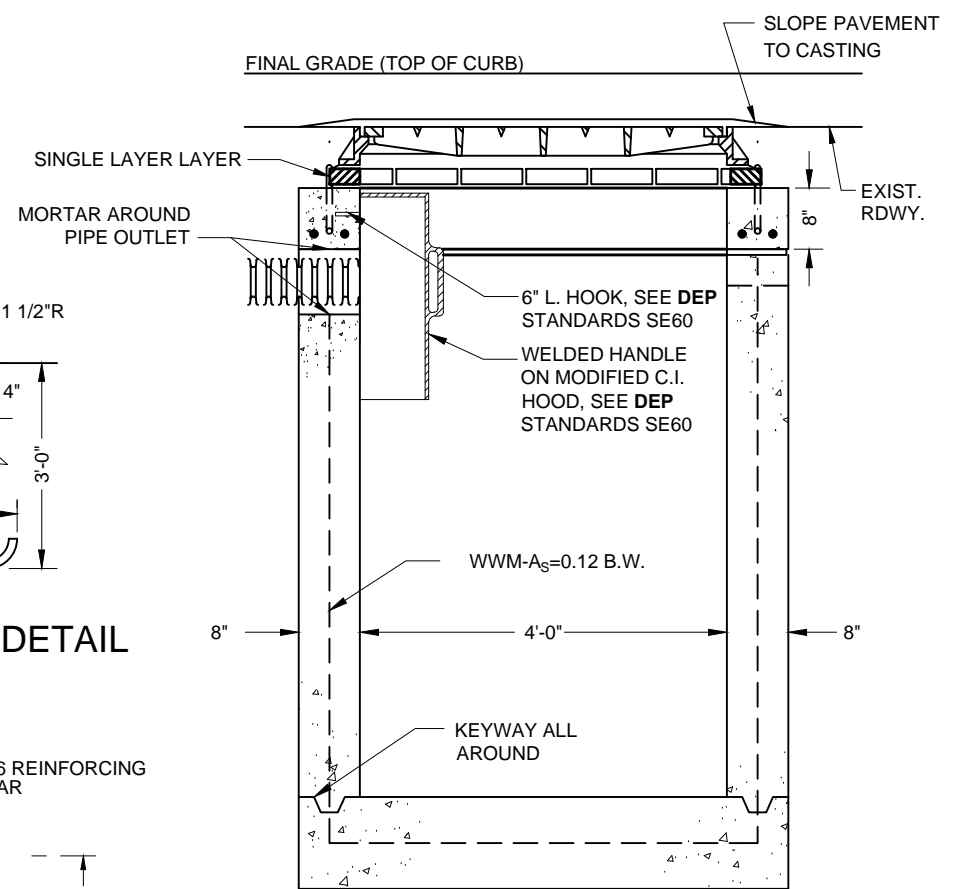
LIFTING HOOK DETAIL  
 (N.T.S.)



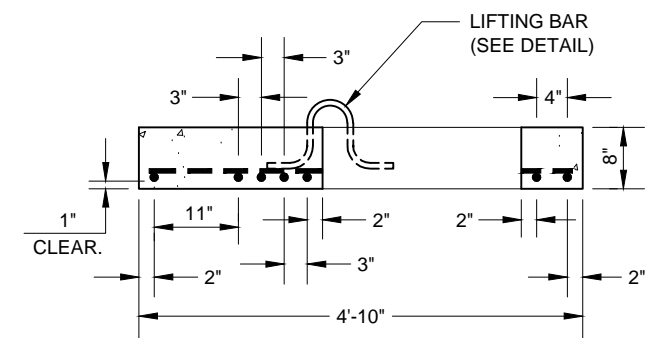
LIFTING BAR DETAIL  
 [IN REMOVABLE PRECAST TYPE 2 SLAB]

NOTES:

- (1) LOCATION OF OPENING SHALL BE DETERMINED PRIOR TO THE MANUFACTURING OF BASIN BY FIELD MEASUREMENTS.
- (2) LOCATION OF CURB SHALL BE AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- (3) LOCATION AND ANGLE OF 6" PVC OUTLET PIPE MAY BE VARIED TO SUIT FIELD CONDITIONS.
- (4) LIFTING HOOKS SHALL BE LOCATED IN THE SECTION AS PER MANUFACTURERS RECOMMENDATIONS AND GROUTED PRIOR TO BACKFILLING. (FOUR (4) LIFTING HOOKS SHALL BE PROVIDED FOR EACH SECTION AND SHALL BE PLACED SYMMETRICALLY AND IN SUCH A MANNER AS TO PROVIDE FOR THE EVEN LIFTING OF THE SECTION.)
- (5) LIFTING BAR TO BE CUT FLUSH TO SURFACE AFTER PLACEMENT OF PRECAST TYPE 2 SLAB.
- (6) CONCRETE IS TO BE CLASS 40 AND 5% AIR ENTRAINED. REBARS-GRADE 60. WWM-F<sub>S</sub>=65,000 PSI.
- (7) MODIFY STANDARD CAST IRON HOOD AND HOOKS [SE60] AS PER DRAWING



SECTION B-B



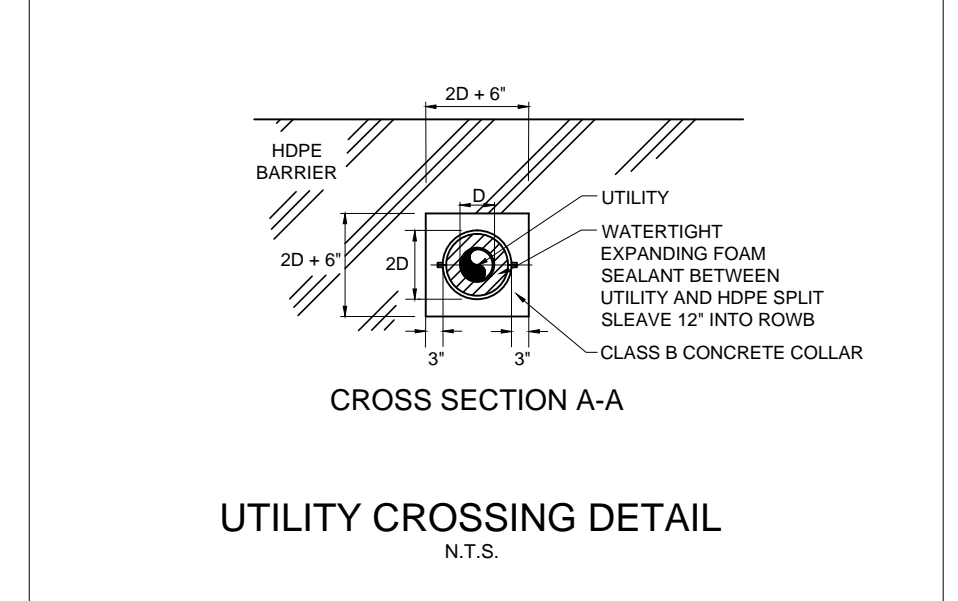
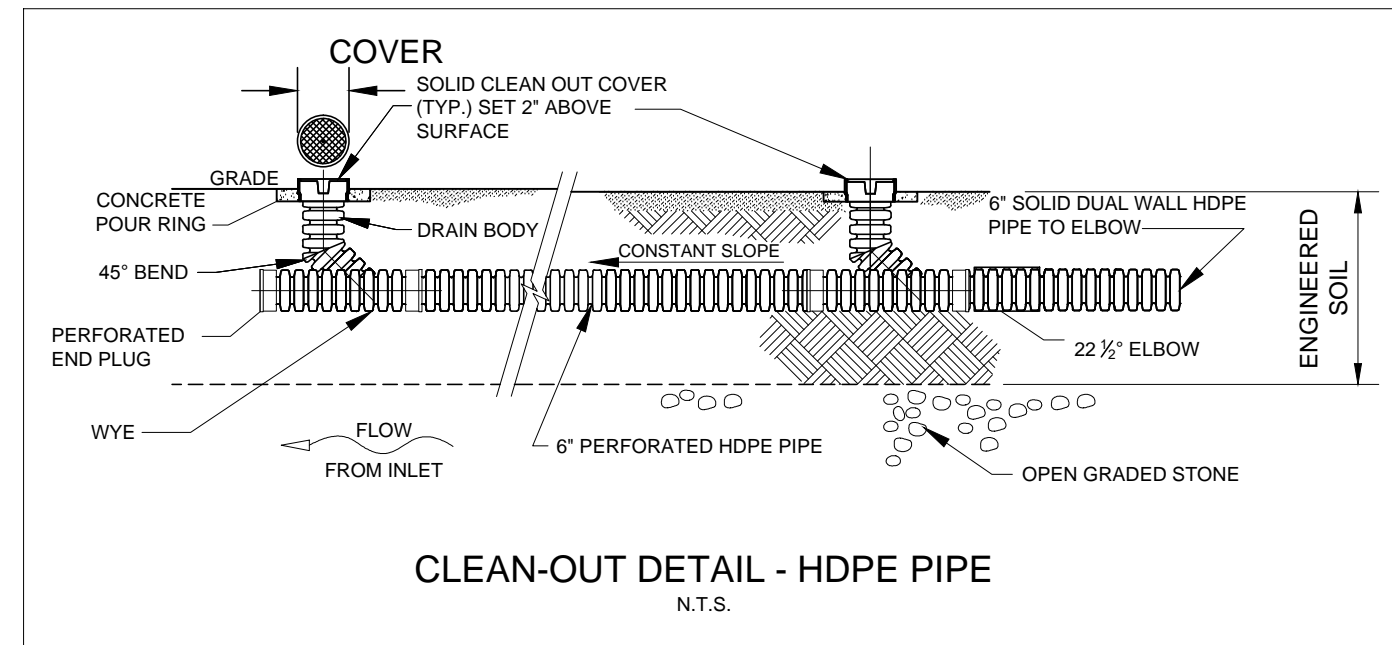
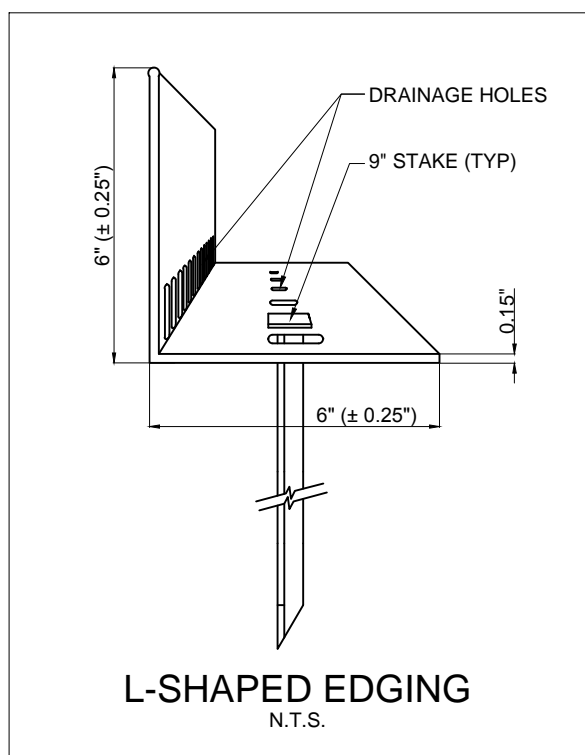
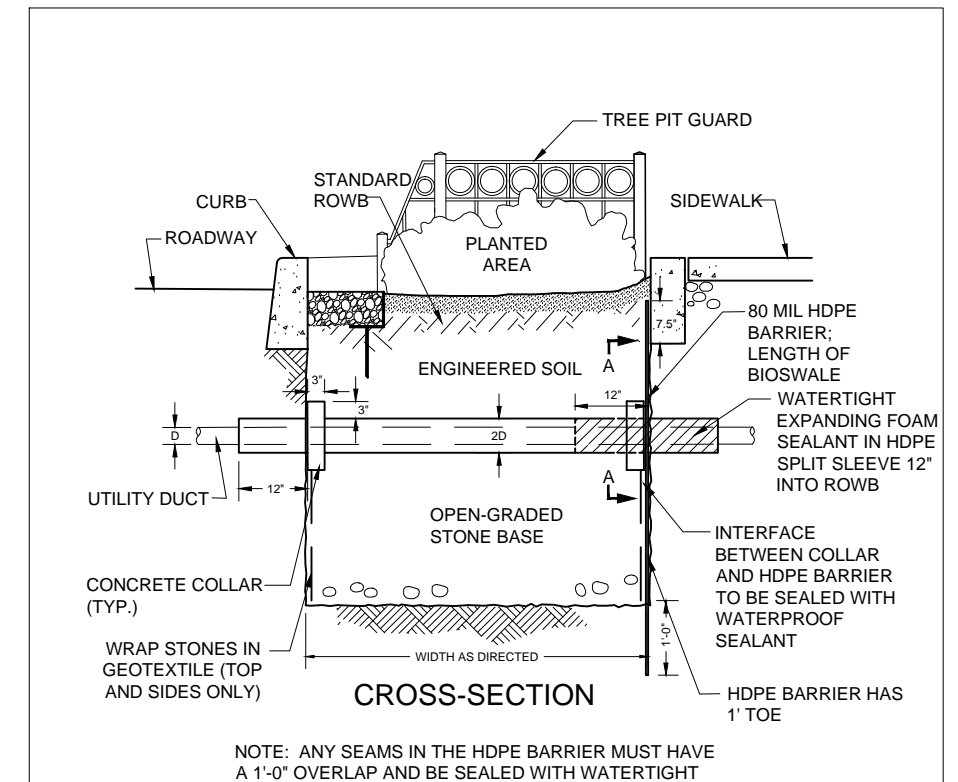
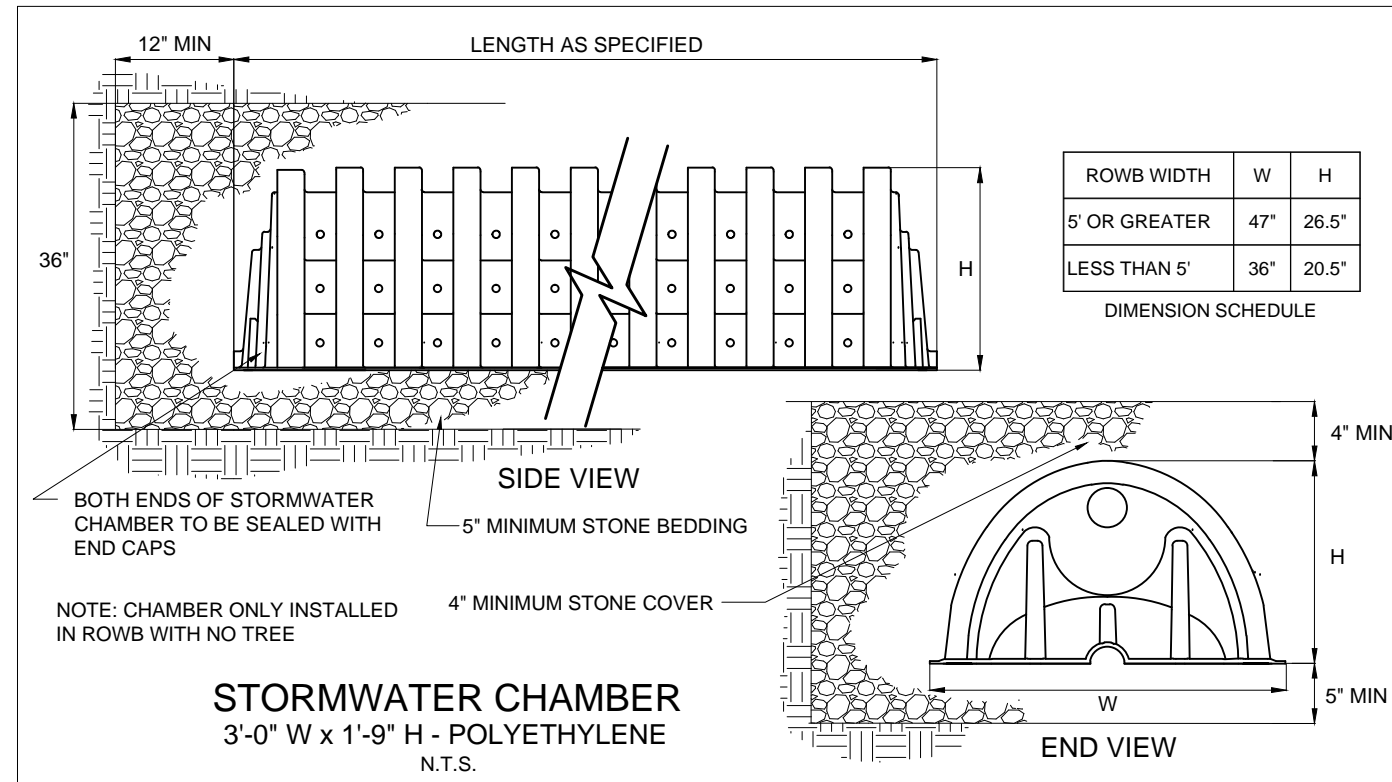
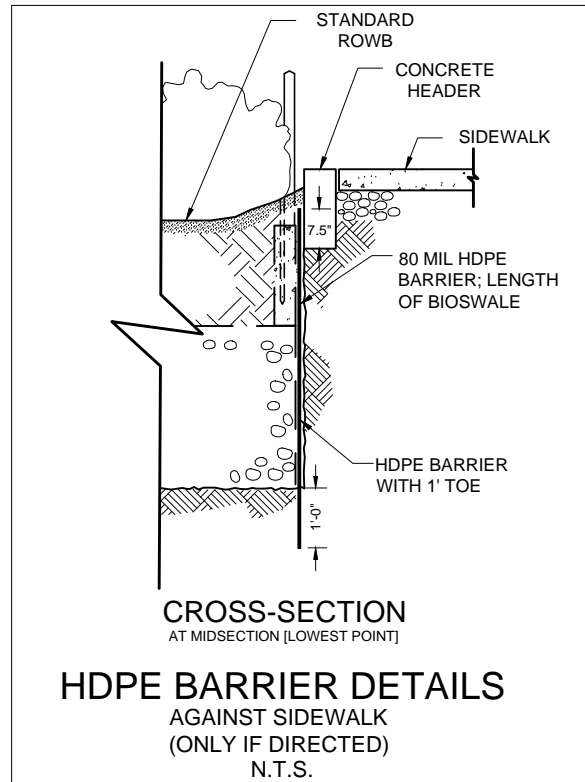
DETAIL a-a  
 [OF REMOVABLE PRECAST TYPE 2 SLAB]

*Magedi Farag*

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 DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
 DATE

CITY OF NEW YORK  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OFFICE OF GREEN INFRASTRUCTURE  
**STANDARD R.O.W. BIOSWALE DETAILS**



*Moadi Faraj*  
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 DEPARTMENT OF ENVIRONMENTAL PROTECTION

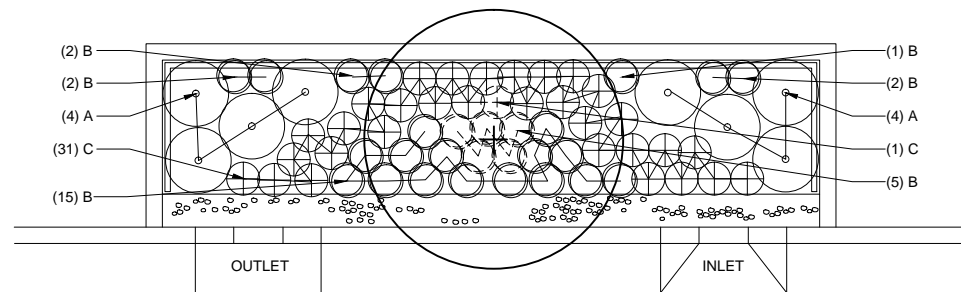
08-29-2014  
 DATE

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OFFICE OF GREEN INFRASTRUCTURE

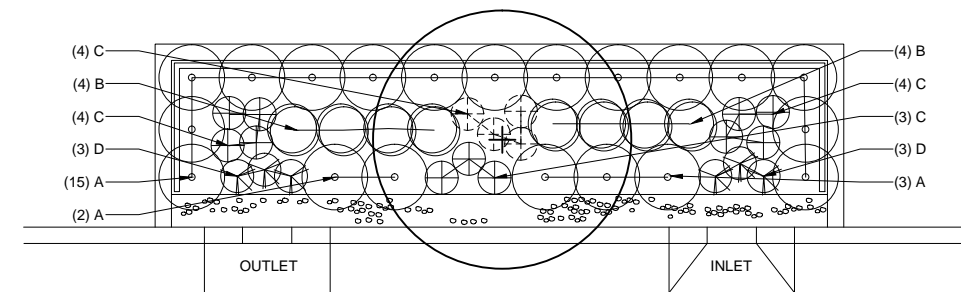
# STANDARD PLANTING PLANS FOR TYPE 1 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

RESIDENTIAL PLAN 1 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
8	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	ROSE	ROSA 'RADRAZZ' KNOCK OUT	SHRUB ROSE	#5 CONT. OR B&B	
31	B	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	
22	C	A	GROUNDCOVER	LIRIOPE SPICATA	LILY TURF	#1 CONT.	12" O.C.
		B	GROUNDCOVER	LIRIOPE MUSCARI 'MONROE WHITE'	LILY TURF	#1 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
5	B	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	
1	C	A	GROUNDCOVER	LIRIOPE SPICATA	LILY TURF	#1 CONT.	12" O.C.
		B	GROUNDCOVER	LIRIOPE MUSCARI 'MONROE WHITE'	LILY TURF	#1 CONT.	

RESIDENTIAL PLAN 2 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
20	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	
8	B	A	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	18" O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	
11	C	A	PERENNIAL	ECHINACEA PURPUREA 'KIM'S KNEE HIGH'	PURPLE CONE FLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	
6	D	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
4	C	A	PERENNIAL	ECHINACEA PURPUREA 'KIM'S KNEE HIGH'	PURPLE CONE FLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	



**RESIDENTIAL PLAN 1**  
ROWBS IN RESIDENTIAL NEIGHBORHOODS WITH LOW VOLUME CIRCULATION



**RESIDENTIAL PLAN 2**  
ROWBS IN RESIDENTIAL NEIGHBORHOODS WITH LOW VOLUME CIRCULATION

**NOTES:**

1. PLANTING LOCATIONS ARE SPECIFIC TO THE INLET AND OUTLET ORIENTATION SHOWN. IF THE INLET AND OUTLET ORIENTATION IS REVERSED, THE PLANTING LOCATIONS MUST BE MIRRORED.
2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR.
3. THE AREA DIRECTLY ABOVE THE TREE ROOTBALL IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES.
4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22.

R.L.A., LEED AP

DIRECTOR OF GREEN INFRASTRUCTURE  
DEPARTMENT OF PARKS AND RECREATION

8-29-2014

DATE

P.E., F. ASCE

ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014

DATE

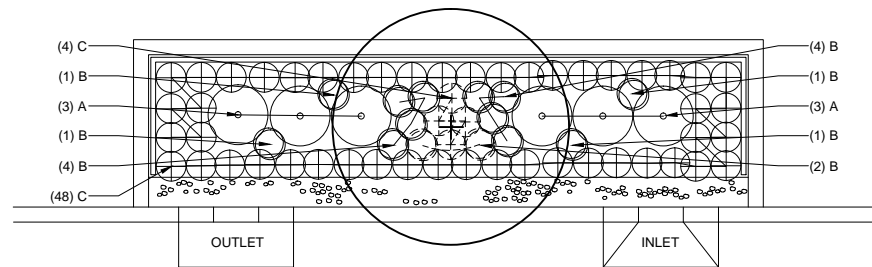


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DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

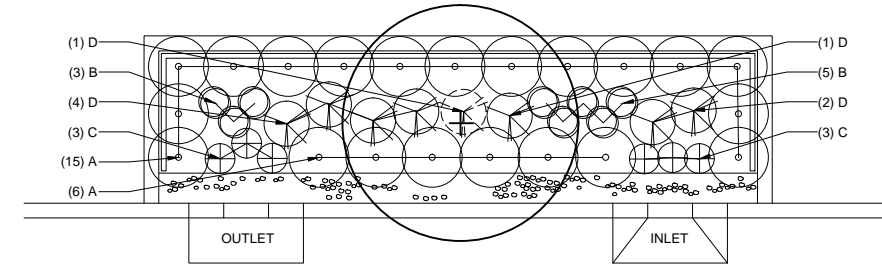
# STANDARD PLANTING PLANS FOR TYPE 1 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

URBAN PLAN 1 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
6	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	
12	B	A	PERENNIAL	HIBISCUS MOSCHEUTOS 'LUNA PINK'	HARDY HIBISCUS	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	
48	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
2	B	A	PERENNIAL	HIBISCUS MOSCHEUTOS 'LUNA PINK'	HARDY HIBISCUS	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	
4	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	

URBAN PLAN 2 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
21	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	
8	B	A	PERENNIAL	ECHINACEA SIMULATA	GLADE PURPLE CONEFLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
6	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	
7	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'HEAVY METAL'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'HEAVY METAL'	SWITCH GRASS	#2 CONT.	



**URBAN PLAN 1**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION



**URBAN PLAN 2**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION

**NOTES:**

1. PLANTING LOCATIONS ARE SPECIFIC TO THE INLET AND OUTLET ORIENTATION SHOWN. IF THE INLET AND OUTLET ORIENTATION IS REVERSED, THE PLANTING LOCATIONS MUST BE MIRRORED.
2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR.
3. THE AREA DIRECTLY ABOVE THE TREE ROOTBALL IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES.
4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22.

R.L.A., LEED AP

DIRECTOR OF GREEN INFRASTRUCTURE  
DEPARTMENT OF PARKS AND RECREATION

8-29-2014

DATE

P.E., F. ASCE

ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

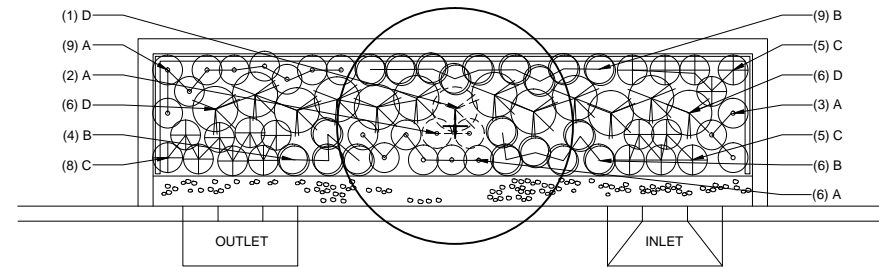
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CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

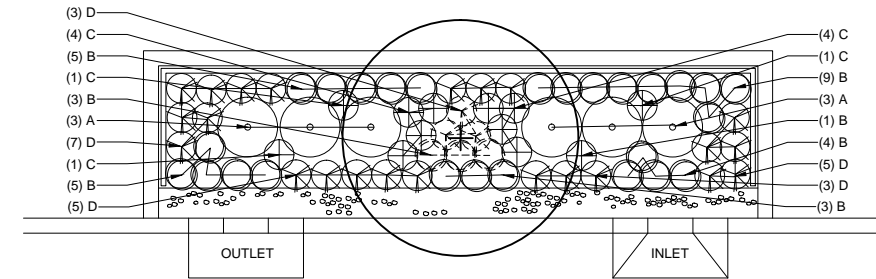
STANDARD PLANTING PLANS FOR TYPE 1 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

URBAN PLAN 3 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
18	A	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
19	B	A	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	12" O.C.
		B	PERENNIAL	HYLOTELEPHIUM 'VERA JAMESON'	STONECROP	#2 CONT.	
18	C	A	PERENNIAL	HEMEROCALIS 'SCARLET OAK'	DAYLILY	#2 CONT.	12" O.C.
		B	GRASSES	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	
12	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
2	A	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
1	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	



**URBAN PLAN 3**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION

SHADY PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
6	A	A	SHRUB	ITEA VIRGINICA 'LITTLE HENRY'	VIRGINIA SWEETSPIRE	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	
26	B	A	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	12" O.C.
		B	GRASSES	HAKONECHLOA MACRA 'ALL GOLD'	JAPANESE FOREST GRASS	#2 CONT.	
12	C	A	PERENNIAL	ASTILBE 'DEUTSCHLAND'	ASTILBE	#2 CONT.	12" O.C.
		B	PERENNIAL	ASTILBE CHINENSIS 'VISION IN RED'	CHINESE ASTILBE	#2 CONT.	
23	D	A	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	12" O.C.
		B	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
3	B	A	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	12" O.C.
		B	GRASSES	HAKONECHLOA MACRA 'ALL GOLD'	JAPANESE FOREST GRASS	#2 CONT.	
3	D	A	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	12" O.C.
		B	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	



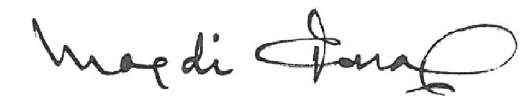
**ESPECIALLY SHADY PLAN**  
ROWBS WITH PARTLY SUNNY OR SHADY LIGHT CONDITIONS

**NOTES:**

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2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR.
3. THE AREA DIRECTLY ABOVE THE TREE ROOTBALL IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES.
4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22.

  
R.L.A., LEED AP  
DIRECTOR OF GREEN INFRASTRUCTURE  
DEPARTMENT OF PARKS AND RECREATION

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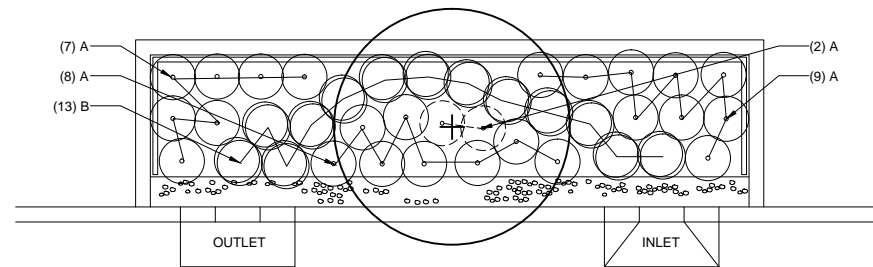
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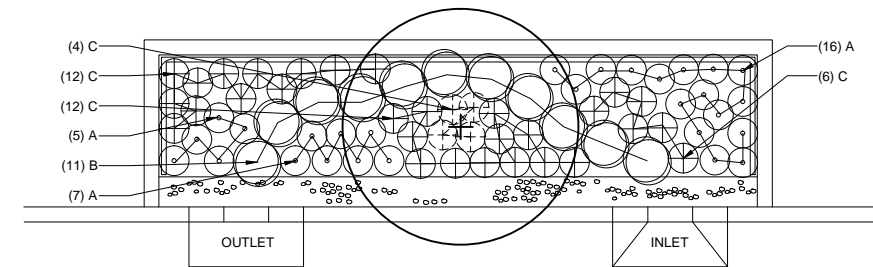
# STANDARD PLANTING PLANS FOR TYPE 1 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

DRY PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
24	A	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	
13	B	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
2	A	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	

WET PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
28	A	A	PERENNIAL	BRUNNERA MACROPHYLLA 'JACK FROST'	SIBERIAN BUGLOSS	#2 CONT.	12" O.C.
		B	PERENNIAL	ACHEMILLA MOLLIS	LADY'S MANTLE	#2 CONT.	
11	B	A	PERENNIAL	IRIS VERSICOLOR	BLUE FLAG	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
30	C	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	PERENNIAL	HEMEROCALLIS 'LADY FLORENCE'	DAYLILY	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
4	C	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	PERENNIAL	HEMEROCALLIS 'LADY FLORENCE'	DAYLILY	#2 CONT.	



**ESPECIALLY DRY PLAN**  
ROWBS WITH LESS THAN 15% STORMWATER RUNOFF MANAGED




**ESPECIALLY WET PLAN**  
ROWBS WITH GREATER THAN 30% STORMWATER RUNOFF MANAGED

**NOTES:**

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4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22.

  
R.L.A., LEED AP  
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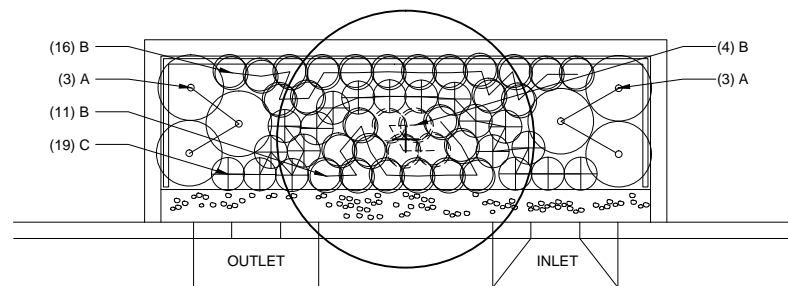
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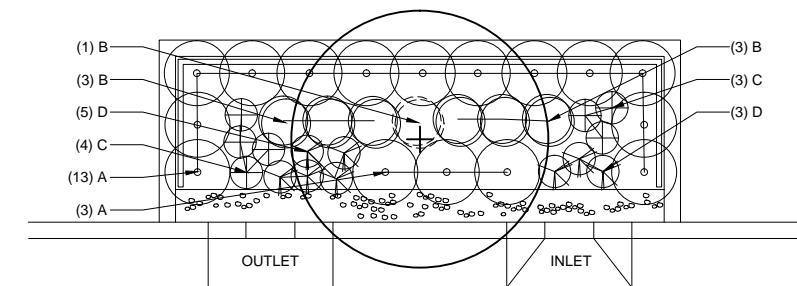
# STANDARD PLANTING PLANS FOR TYPE 2 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

RESIDENTIAL PLAN 1 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
6	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	ROSE	ROSA 'RADRAZZ' KNOCK OUT	SHRUB ROSE	#5 CONT. OR B&B	
27	B	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	
19	C	A	GROUNDCOVER	LIRIOPE SPICATA	LILY TURF	#1 CONT.	12" O.C.
		B	GROUNDCOVER	LIRIOPE MUSCARI 'MONROE WHITE'	LILY TURF	#1 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
4	B	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	

RESIDENTIAL PLAN 2 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
16	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	
6	B	A	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	18" O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	
7	C	A	PERENNIAL	ECHINACEA PURPUREA 'KIM'S KNEEE HIGH'	PURPLE CONE FLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	
8	D	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	B	A	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	18" O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	



**RESIDENTIAL PLAN 1**  
ROWBS IN RESIDENTIAL NEIGHBORHOODS WITH LOW VOLUME CIRCULATION




**RESIDENTIAL PLAN 2**  
ROWBS IN RESIDENTIAL NEIGHBORHOODS WITH LOW VOLUME CIRCULATION

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R.L.A., LEED AP  
DIRECTOR OF GREEN INFRASTRUCTURE  
DEPARTMENT OF PARKS AND RECREATION

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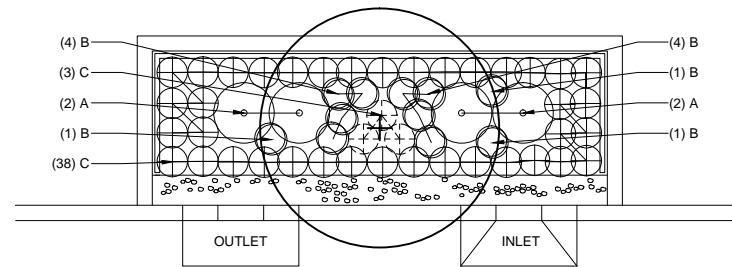


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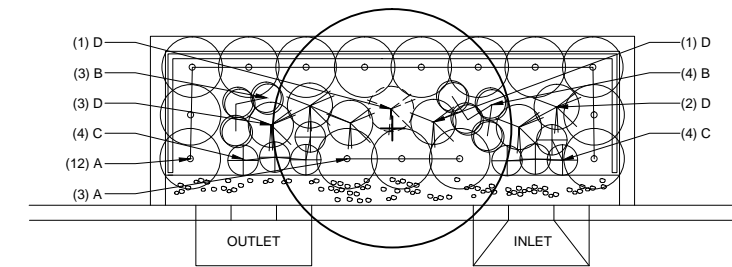
# STANDARD PLANTING PLANS FOR TYPE 2 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

URBAN PLAN 1 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
4	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	
11	B	A	PERENNIAL	HIBISCUS MOSCHEUTOS 'LUNA PINK'	HARDY HIBISCUS	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	
38	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
3	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	

URBAN PLAN 2 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
15	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	
7	B	A	PERENNIAL	ECHINACEA SIMULATA	GLADE PURPLE CONEFLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
8	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	
6	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'HEAVY METAL'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'HEAVY METAL'	SWITCH GRASS	#2 CONT.	



**URBAN PLAN 1**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION



**URBAN PLAN 2**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION

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R.L.A., LEED AP

DIRECTOR OF GREEN INFRASTRUCTURE  
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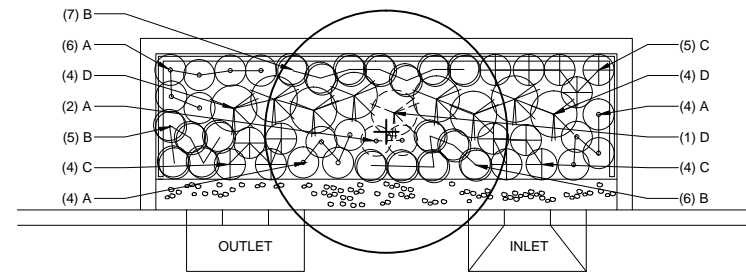
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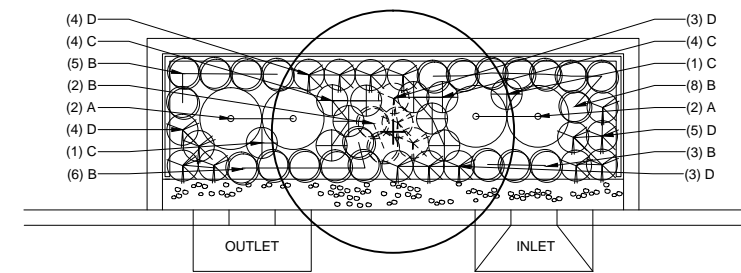
# STANDARD PLANTING PLANS FOR TYPE 2 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

URBAN PLAN 3 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
14	A	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
18	B	A	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	12" O.C.
		B	PERENNIAL	HYLOTELEPHIUM 'VERA JAMESON'	STONECROP	#2 CONT.	
13	C	A	PERENNIAL	HEMEROCALIS 'SCARLET OAK'	DAYLILY	#2 CONT.	12" O.C.
		B	GRASSES	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	
8	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN ROWB WITH NO TREE							
2	A	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
1	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	



**URBAN PLAN 3**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION

SHADY PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
4	A	A	SHRUB	ITEA VIRGINICA 'LITTLE HENRY'	VIRGINIA SWEETSPIRE	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	
22	B	A	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	12" O.C.
		B	GRASSES	HAKONECHLOA MACRA 'ALL GOLD'	JAPANESE FOREST GRASS	#2 CONT.	
10	C	A	PERENNIAL	ASTILBE 'DEUTSCHLAND'	ASTILBE	#2 CONT.	12" O.C.
		B	PERENNIAL	ASTILBE CHINENSIS 'VISION IN RED'	CHINESE ASTILBE	#2 CONT.	
16	D	A	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	12" O.C.
		B	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
2	B	A	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	12" O.C.
		B	GRASSES	HAKONECHLOA MACRA 'ALL GOLD'	JAPANESE FOREST GRASS	#2 CONT.	
3	D	A	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	12" O.C.
		B	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	



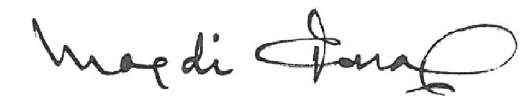
**ESPECIALLY SHADY PLAN**  
ROWBS WITH PARTLY SUNNY OR SHADY LIGHT CONDITIONS

**NOTES:**

1. PLANTING LOCATIONS ARE SPECIFIC TO THE INLET AND OUTLET ORIENTATION SHOWN. IF THE INLET AND OUTLET ORIENTATION IS REVERSED, THE PLANTING LOCATIONS MUST BE MIRRORED.
2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR.
3. THE AREA DIRECTLY ABOVE THE TREE ROOTBALL IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES.
4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22.

  
R.L.A., LEED AP  
DIRECTOR OF GREEN INFRASTRUCTURE  
DEPARTMENT OF PARKS AND RECREATION

8-29-2014  
DATE

  
P.E., F. ASCE  
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

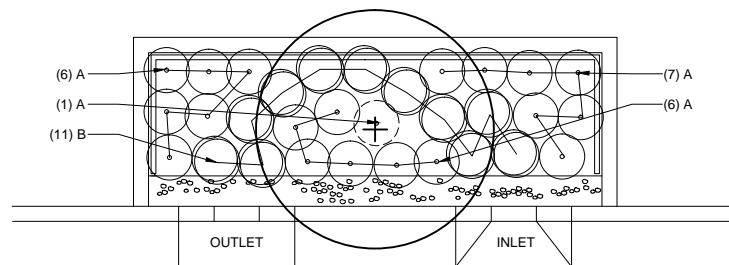
08-29-2014  
DATE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

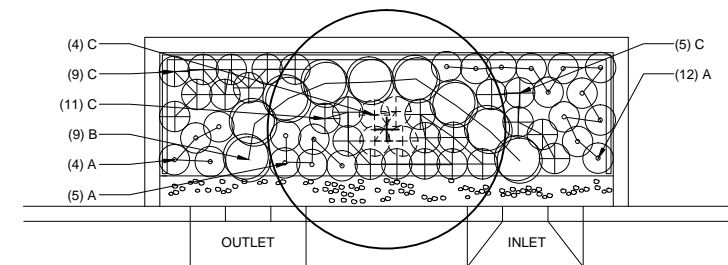
# STANDARD PLANTING PLANS FOR TYPE 2 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

DRY PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
19	A	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	
11	B	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	A	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	

WET PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
21	A	A	PERENNIAL	BRUNNERA MACROPHYLLA 'JACK FROST'	SIBERIAN BUGLOSS	#2 CONT.	12" O.C.
		B	PERENNIAL	ACHEMILLA MOLLIS	LADY'S MANTLE	#2 CONT.	
9	B	A	PERENNIAL	IRIS VERSICOLOR	BLUE FLAG	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
25	C	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	PERENNIAL	HEMEROCALLIS 'LADY FLORENCE'	DAYLILY	#2 CONT.	
ONLY PLANTED IN ROWB WITH NO TREE							
4	C	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	PERENNIAL	HEMEROCALLIS 'LADY FLORENCE'	DAYLILY	#2 CONT.	



**ESPECIALLY DRY PLAN**  
ROWBS WITH LESS THAN 15% STORMWATER RUNOFF MANAGED



**ESPECIALLY WET PLAN**  
ROWBS WITH GREATER THAN 30% STORMWATER RUNOFF MANAGED

**NOTES:**

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2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR.
3. THE AREA DIRECTLY ABOVE THE TREE ROOTBALL IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES.
4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22.

R.L.A., LEED AP

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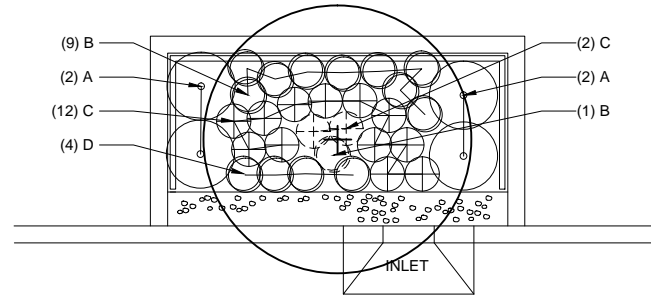
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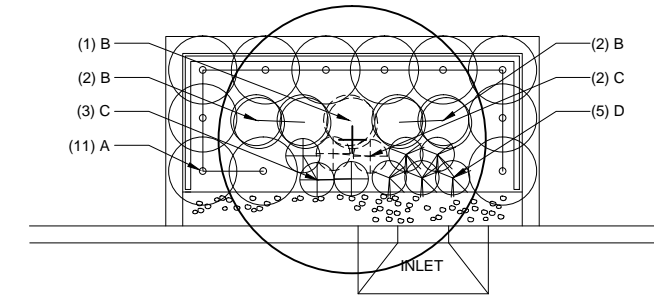
# STANDARD PLANTING PLANS FOR TYPE 3 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

RESIDENTIAL PLAN 1 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
4	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	ROSE	ROSA 'RADRAZZ' KNOCK OUT	SHRUB ROSE	#5 CONT. OR B&B	
13	B	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	
12	C	A	GROUNDCOVER	LIRIOPE SPICATA	LILY TURF	#1 CONT.	12" O.C.
		B	GROUNDCOVER	LIRIOPE MUSCARI 'MONROE WHITE'	LILY TURF	#1 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	B	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	
2	C	A	GROUNDCOVER	LIRIOPE SPICATA	LILY TURF	#1 CONT.	12" O.C.
		B	GROUNDCOVER	LIRIOPE MUSCARI 'MONROE WHITE'	LILY TURF	#1 CONT.	



**RESIDENTIAL PLAN 1**  
ROWBS IN RESIDENTIAL NEIGHBORHOODS WITH LOW VOLUME CIRCULATION

RESIDENTIAL PLAN 2 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
11	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	
4	B	A	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	18" O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	
3	C	A	PERENNIAL	ECHINACEA PURPUREA 'KIM'S KNEEE HIGH'	PURPLE CONE FLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	
5	D	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	B	A	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	18" O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	
2	C	A	PERENNIAL	ECHINACEA PURPUREA 'KIM'S KNEEE HIGH'	PURPLE CONE FLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	




**RESIDENTIAL PLAN 2**  
ROWBS IN RESIDENTIAL NEIGHBORHOODS WITH LOW VOLUME CIRCULATION

- NOTES:**
1. PLANTING LOCATIONS ARE SPECIFIC TO THE INLET AND OUTLET ORIENTATION SHOWN. IF THE INLET AND OUTLET ORIENTATION IS REVERSED, THE PLANTING LOCATIONS MUST BE MIRRORED.
  2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR.
  3. THE AREA DIRECTLY ABOVE THE TREE ROOTBALL IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES.
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R.L.A., LEED AP  
DIRECTOR OF GREEN INFRASTRUCTURE  
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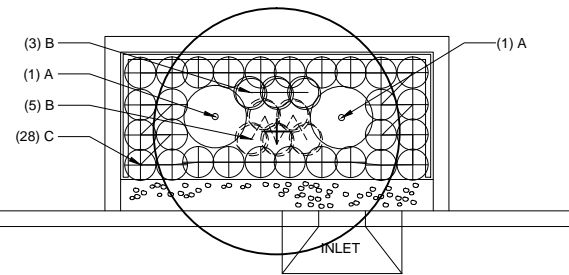


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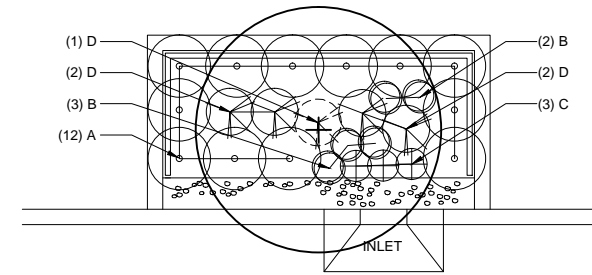
# STANDARD PLANTING PLANS FOR TYPE 3 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

URBAN PLAN 1 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
2	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	ROSE	ROSA PALUSTRIS	SWAMP ROSE	#2/#3 CONT.	
3	B	A	PERENNIAL	HIBISCUS MOSCHEUTOS 'LUNA PINK'	HARDY HIBISCUS	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	
28	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'LITTLE BUNNY'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
5	B	A	PERENNIAL	HIBISCUS MOSCHEUTOS 'LUNA PINK'	HARDY HIBISCUS	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA SUBTOMENTOSA 'HENRY EILERS'	SWEET CONEFLOWER	#2 CONT.	

URBAN PLAN 2 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
12	A	A	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	ILEX GLABRA 'SHAMROCK'	INKBERRY	#5 CONT. OR B&B	
5	B	A	PERENNIAL	ECHINACEA SIMULATA	GLADE PURPLE CONEFLOWER	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
3	C	A	GRASSES	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	12" O.C.
		B	GRASSES	PENNISETUM ALOPECUROIDES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	
4	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'HEAVY METAL'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'HEAVY METAL'	SWITCH GRASS	#2 CONT.	



**URBAN PLAN 1**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION

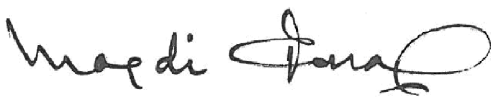


**URBAN PLAN 2**  
ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION

- NOTES:**
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  4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22..

  
R.L.A., LEED AP  
DIRECTOR OF GREEN INFRASTRUCTURE  
DEPARTMENT OF PARKS AND RECREATION

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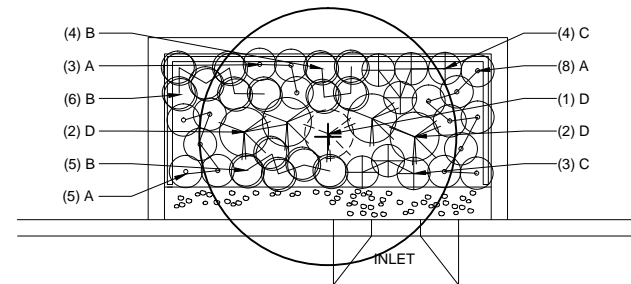
CITY OF NEW YORK  
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 OFFICE OF GREEN INFRASTRUCTURE

# STANDARD PLANTING PLANS FOR TYPE 3 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

URBAN PLAN 3 PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
16	A	A	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	#2 CONT.	12" O.C.
		B	PERENNIAL	RUDBECKIA FULGIDA 'GOLDSTURM'	BLACK-EYED SUSAN	#2 CONT.	
15	B	A	PERENNIAL	NEPETA X FAASSENII 'WALKER'S LOW'	CATMINT	#2 CONT.	12" O.C.
		B	PERENNIAL	HYLOTELEPHIUM 'VERA JAMESON'	STONECROP	#2 CONT.	
7	C	A	PERENNIAL	HEMEROCALIS 'SCARLET OAK'	DAYLILY	#2 CONT.	12" O.C.
		B	GRASSES	HELIOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	
4	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
ONLY PLANTED IN ROWB WITH NO TREE							
1	D	A	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	

**NOTES:**

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**URBAN PLAN 3**  
 ROWBS IN COMMERCIAL AND INDUSTRIAL AREAS WITH HIGHER VOLUME CIRCULATION

R.L.A., LEED AP

DIRECTOR OF GREEN INFRASTRUCTURE  
 DEPARTMENT OF PARKS AND RECREATION

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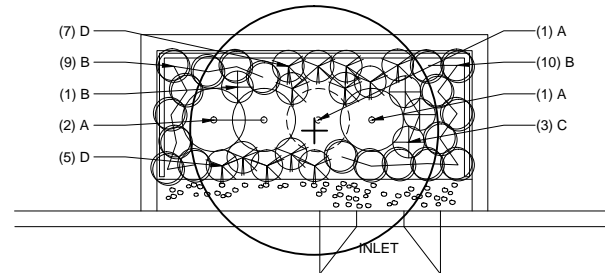
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OFFICE OF GREEN INFRASTRUCTURE

# STANDARD PLANTING PLANS FOR TYPE 3 R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

SHADY PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
3	A	A	SHRUB	ITEA VIRGINICA 'LITTLE HENRY'	VIRGINIA SWEETSPIRE	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	
19	B	A	GRASSES	CAREX 'ICE DANCE'	SEDGE	#2 CONT.	12" O.C.
		B	GRASSES	HAKONECHLOA MACRA 'ALL GOLD'	JAPANESE FOREST GRASS	#2 CONT.	
4	C	A	PERENNIAL	ASTILBE 'DEUTSCHLAND'	ASTILBE	#2 CONT.	12" O.C.
		B	PERENNIAL	ASTILBE CHINENSIS 'VISION IN RED'	CHINESE ASTILBE	#2 CONT.	
12	D	A	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	12" O.C.
		B	GROUNDCOVER	AJUGA REPTANS 'CATLIN'S GIANT'	BUGLEWEED	#1 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
1	A	A	SHRUB	ITEA VIRGINICA 'LITTLE HENRY'	VIRGINIA SWEETSPIRE	#5 CONT. OR B&B	2' O.C.
		B	SHRUB	CLETHRA ANIFOLIA 'HUMMINGBIRD'	SWEET PEPPERBUSH	#5 CONT. OR B&B	

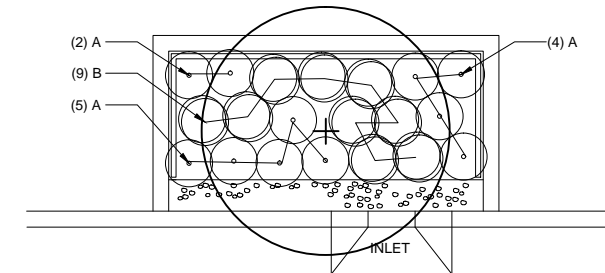


**ESPECIALLY SHADY PLAN**  
ROWBS WITH PARTLY SUNNY OR SHADY LIGHT CONDITIONS

**NOTES:**

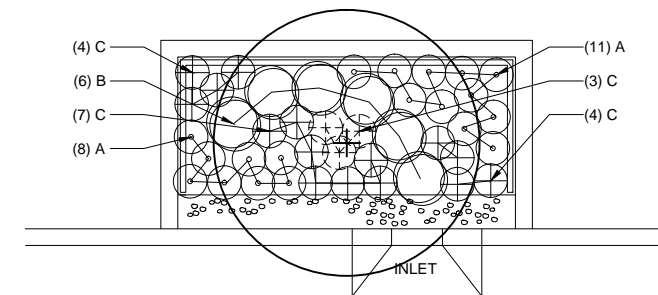
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2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR.
3. THE AREA DIRECTLY ABOVE THE TREE ROOTBALL IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES.
4. PLANTING PLANS FOR VARIABLE SIZE R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS ARE DETERMINED AS PER THE SCHEDULE ON GI-22..

DRY PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
11	A	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	HELICTOTRICHON SEMPERVIRENS	BLUE OAT GRASS	#2 CONT.	
9	B	A	GRASSES	PENNISETUM ALOPECURIODES 'HAMELN'	FOUNTAIN GRASS	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	



**ESPECIALLY DRY PLAN**  
ROWBS WITH LESS THAN 15% STORMWATER RUNOFF MANAGED

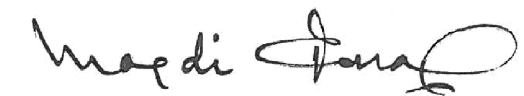
WET PLAN PLANT SCHEDULE							
QUAN	KEY	PLAN VERSION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
19	A	A	PERENNIAL	BRUNNERA MACROPHYLLA 'JACK FROST'	SIBERIAN BUGLOSS	#2 CONT.	12" O.C.
		B	PERENNIAL	ACHEMILLA MOLLIS	LADY'S MANTLE	#2 CONT.	
6	B	A	PERENNIAL	IRIS VERSICOLOR	BLUE FLAG	#2 CONT.	18" O.C.
		B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	#2 CONT.	
15	C	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	PERENNIAL	HEMEROCALLIS 'LADY FLORENCE'	DAYLILY	#2 CONT.	
ONLY PLANTED IN R.O.W. RAIN GARDEN OR R.O.W. BIOSWALE WITH NO TREE							
3	C	A	GRASSES	ACORUS CALAMUS 'VARIEGATUS'	SWEETFLAG	#2 CONT.	12" O.C.
		B	PERENNIAL	HEMEROCALLIS 'LADY FLORENCE'	DAYLILY	#2 CONT.	



**ESPECIALLY WET PLAN**  
ROWBS WITH GREATER THAN 30% STORMWATER RUNOFF MANAGED

  
R.L.A., LEED AP  
DIRECTOR OF GREEN INFRASTRUCTURE  
DEPARTMENT OF PARKS AND RECREATION

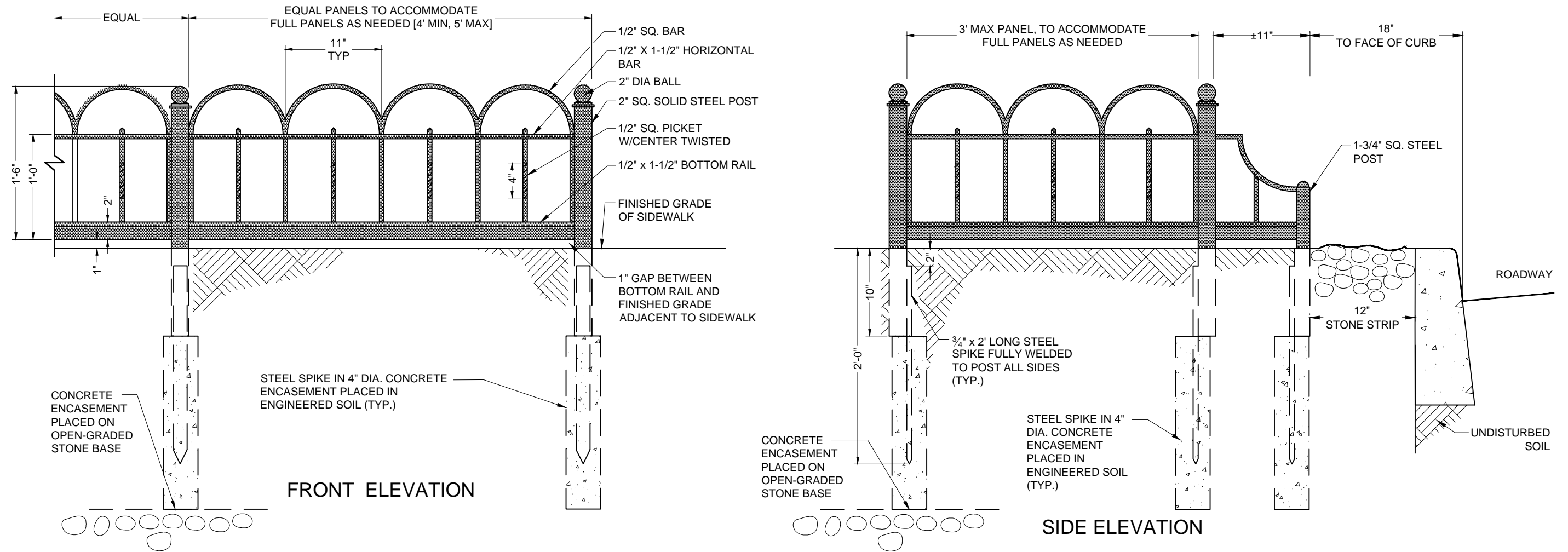
8-29-2014  
DATE

  
P.E., F. ASCE  
ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

08-29-2014  
DATE

CITY OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

STANDARD FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS - TYPE 'A' STEEL GUARD



NOTES

\*\* FINAL DESIGN OF GUARDS TO BE SELECTED BY DPR/DOT UPON REVIEW OF NEIGHBORHOOD'S CONTEXT

1. FIELD MEASUREMENTS MUST BE TAKEN PRIOR TO FABRICATION.
2. ALL STEEL SHALL CONFORM TO SPECIFICATION C1015 OF THE A.I.S.I.
3. ALL JOINTS TO BE WELDED UNLESS NOTED OTHERWISE.
4. ALL STEEL TO BE PAINTED WITH ONE (1) SHOP COAT OF PRIMER AND ONE (1) SHOP COAT OF INTERMEDIATE AND ONE (1) SHOP COAT (OR ROLLED FIELD COAT) OF FINISH TOP COAT IN COMPLIANCE WITH THE REQUIREMENTS OF SUBSECTION 2.13.4 OF THE NYC DOT STANDARD HIGHWAY SPECIFICATIONS. THE COLOR OF TOP COAT SHALL BE BLACK.
5. RAILS TO FOLLOW LINE OF GRADE.
6. ALL STEEL TO BE SOLID STEEL.
7. ALL SPIKES OF TREE GUARD TO BE EMBEDDED IN CONCRETE PIERS AS PER STANDARD DRAWINGS

*Maqdi Faruq*

P.E., F. ASCE

ASSISTANT COMMISSIONER, OFFICE OF GREEN INFRASTRUCTURE  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

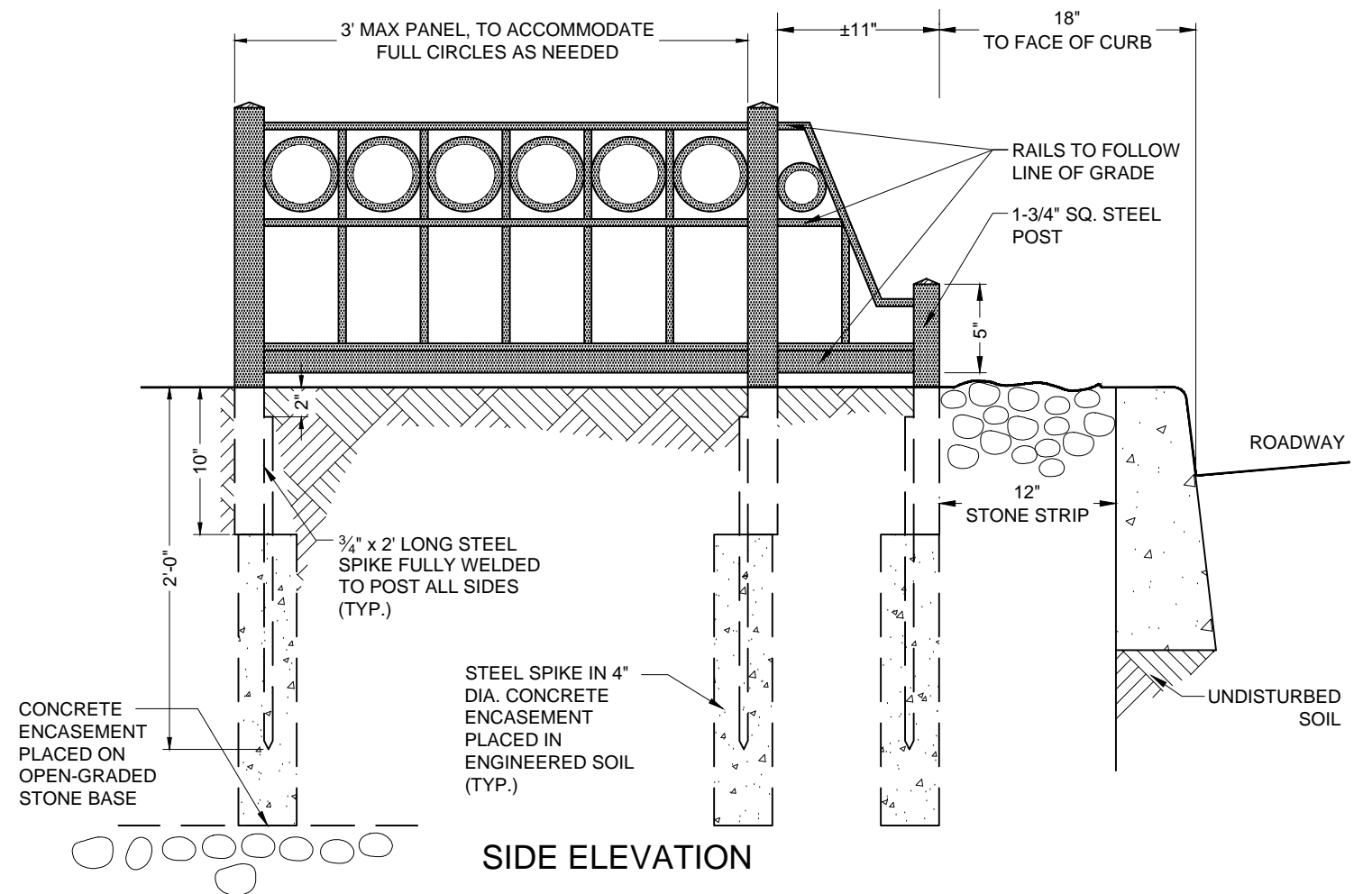
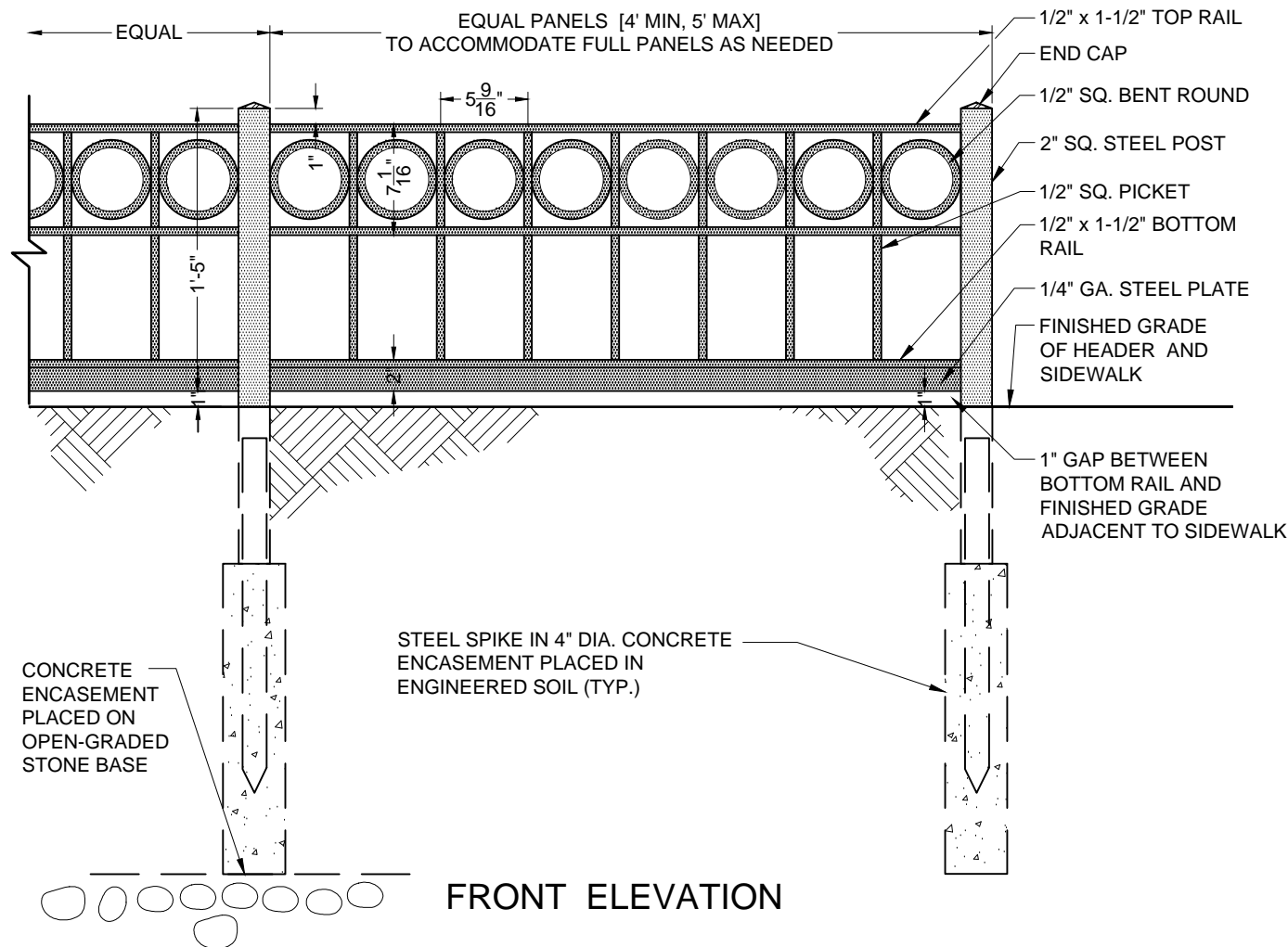
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DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OFFICE OF GREEN INFRASTRUCTURE

STANDARD FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS - TYPE 'B' STEEL GUARD



NOTES

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6. ALL STEEL TO BE SOLID STEEL.
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*Magedi Farag*

P.E., F. ASCE

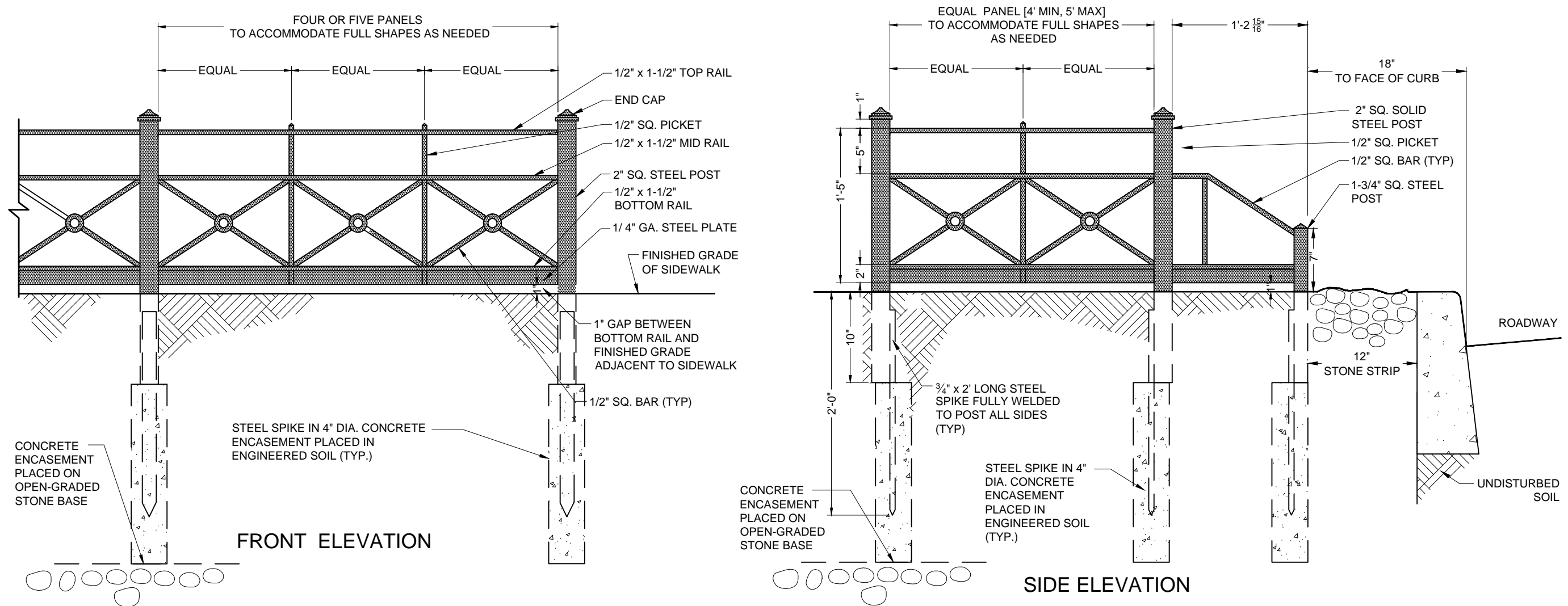
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STANDARD FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS - TYPE 'C' STEEL GUARD



NOTES

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5. RAILS TO FOLLOW LINE OF GRADE.
6. ALL STEEL TO BE SOLID STEEL.
7. ALL SPIKES OF TREE GUARD TO BE EMBEDDED IN CONCRETE PIERS AS PER STANDARD DRAWINGS

*Maqdi Faruq*

P.E., F. ASCE

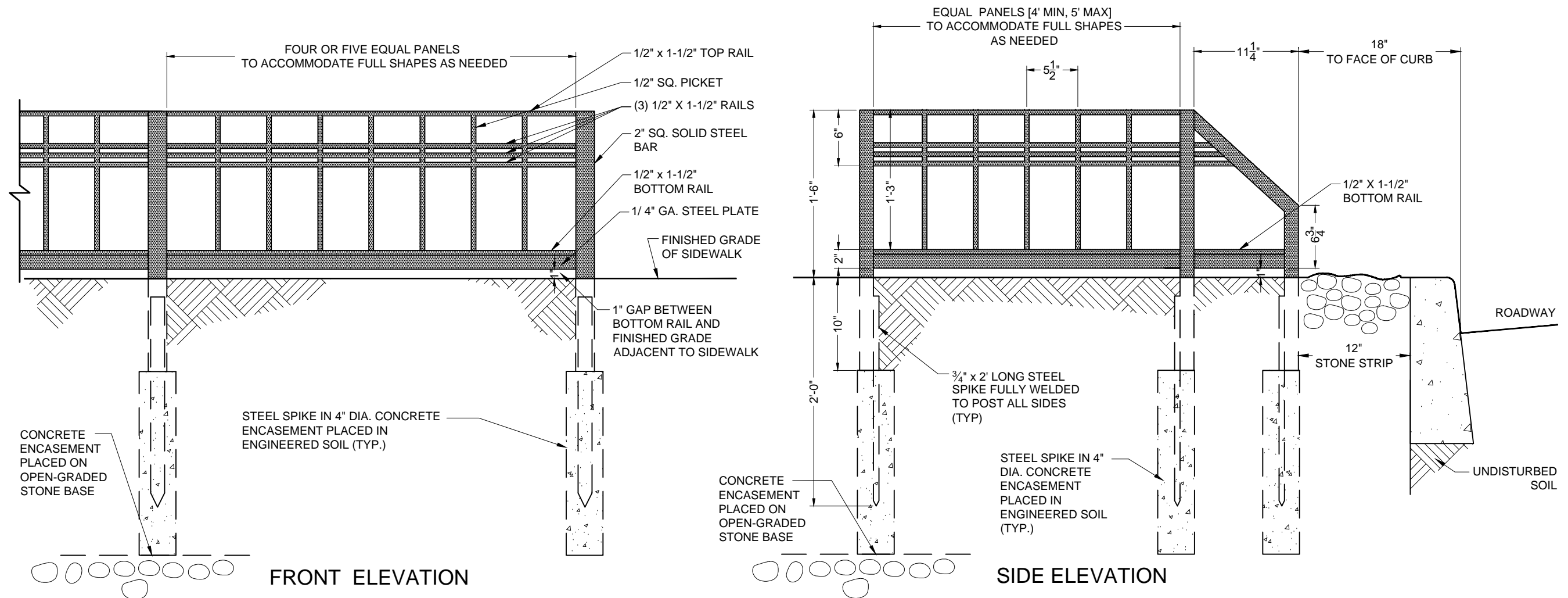
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STANDARD FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS - TYPE 'D' STEEL GUARD



NOTES

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