Environmental Protection

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD DESIGNS AND GUIDELINES FOR GREEN INFRASTRUCTURE PRACTICES

MAY 2022

UPDATED: MAY 13, 2022

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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GENERAL NOTES

GENERAL GREEN INFRASTRUCTURE NOTES

1. CONTRACTOR TO REFER TO STANDARDS FOR GREEN INFRASTRUCTURE DETAILS FOR THE CONSTRUCTION OF ALL RIGHT-OF-WAY GI PRACTICES.
2. CONTRACTOR SHALL STAKE LOCATION OF RIGHT-OF-WAY GI PRACTICES FOR APPROVAL BY ENGINEER PRIOR TO EXCAVATION WORK.
3. NO CHANGES SHALL BE MADE TO THE DESIGN OR LAYOUT WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. LAYOUT THE WORK AS PER NORTHING AND EASTING COORDINATES AND GI PRACTICE DIMENSIONS SHOWN ON PLANS AND FIELD VERIFY. WRITTEN ASSET DIMENSIONS SHALL GOVERN. DO NOT SCALE DISTANCES OR ASSET DIMENSIONS FOR LAYOUT PURPOSES.
4. THE CONTRACTOR SHALL BE REQUIRED TO REMOVE AND REPLACE ALL EXISTING SIDEWALK FLAGS ADJACENT TO THE GI PRACTICE. WHENEVER AN ADJACENT FLAG HAS A WIDTH OF LESS THAN OR EQUAL TO 36", THE CONTRACTOR SHALL REPLACE ONE ADDITIONAL FULL FLAG BEYOND. ALL REPLACEMENTS SHALL BE IN FULL COMPLIANCE WITH THE APPLICABLE SECTIONS OF THE STANDARD HIGHWAY SPECIFICATIONS.
5. CONSTRUCTION JOINTS TO MATCH EXISTING SIDEWALK AS MUCH AS POSSIBLE.
6. DO NOT SCORE WITHIN 18" OF HEADERS OR INLET/OUTLET SURFACE OPENINGS.
7. EXPANSION JOINTS AND FILLER PER NYC DOT HIGHWAY SPECIFICATIONS.
8. THE CONTRACTOR SHALL BE PREPARED TO CUT, CAP AND/OR REROUTE IRRIGATION LINES FOUND IN THE FIELD AS REQUIRED TO SUIT THE INSTALLATION OF GREEN INFRASTRUCTURE.
9. THE CONTRACTOR SHALL REMOVE AND RESTORE ONE-AND-A-HALF (1 1/2') 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.
10. AUTHORIZED PARKING - FOR ANY GREEN INFRASTRUCTURE PRACTICE THAT WILL IMPACT AUTHORIZED PARKING SPACES TO THE CONSTRUCTION OF GREEN INFRASTRUCTURE PRACTICES, THE CONTRACTOR SHALL CONTACT AND COORDINATE WITH THE DEPARTMENT OF TRANSPORTATION (NYCDOT) AUTHORIZED PARKING AND SPECIAL USE UNIT AT LEAST TWO WEEKS IN ADVANCE OF CONSTRUCTION. CONTACT PERSON: MERISA GILMAN, SENIOR PROGRAM MANAGER, 212-839-3240, MGILMAN@DOT.NYC.GOV
11. TREES (WHEN APPLICABLE):
    a. 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.
    b. NO TREE SHALL BE REMOVED BY THE CONTRACTOR UNTIL SPECIFICALLY ORDERED IN WRITING TO DO SO BY THE ENGINEER AND WITH APPROVAL FROM DPR
    c. TREES SHALL BE STAKED AS PER DPR STANDARD DETAILS OF CONSTRUCTION. TREE STAKES ARE TO BE REMOVED BY THE CONTRACTOR NOT LESS THAN ONE YEAR AFTER PLANTING.
    d. REPLACEMENT TREES SHALL BE PLANTED WITHIN THE PROJECT AS DIRECTED BY THE ENGINEER IN ACCORDANCE WITH STANDARD HIGHWAY SPECIFICATIONS.
12. 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.
13. 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. GI PRACTICE.

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STANDARDS FOR RIGHT-OF-WAY GREEN INFRASTRUCTURE PRACTICES

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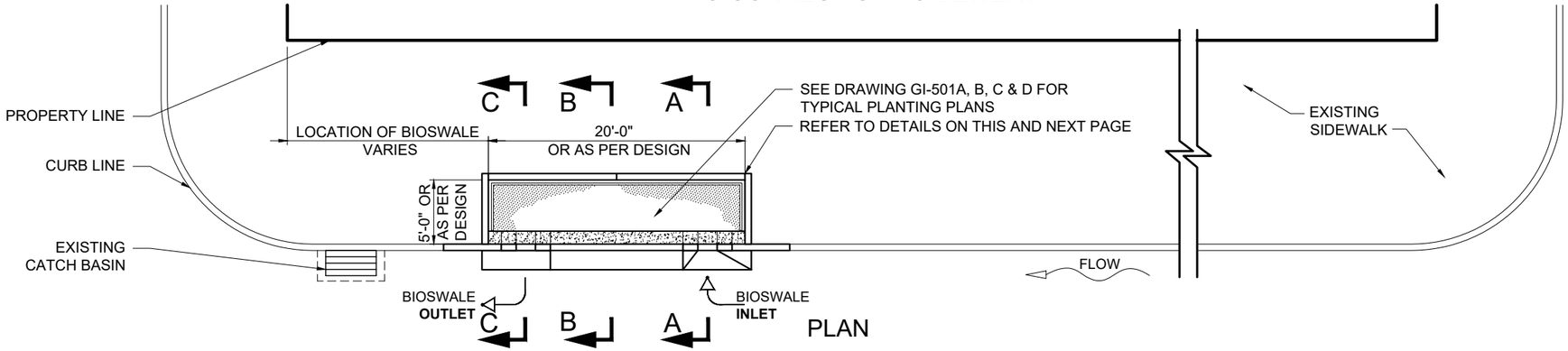
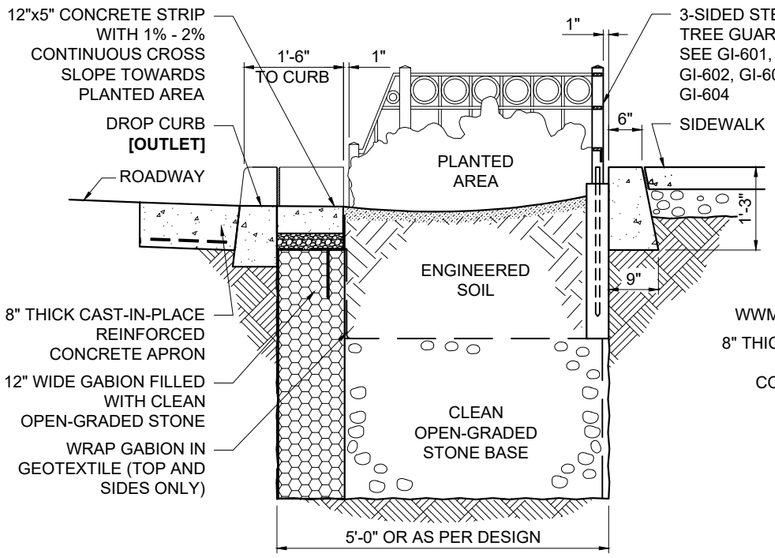
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

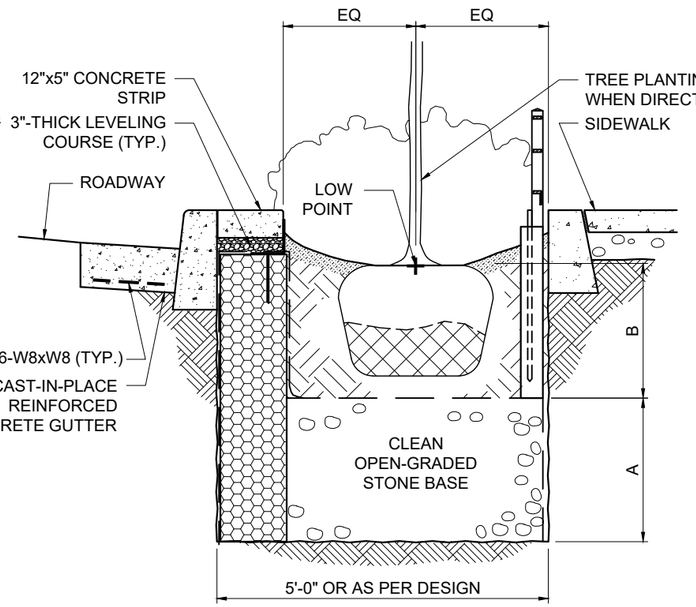
STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1

- NO CONNECTION TO SEWERS

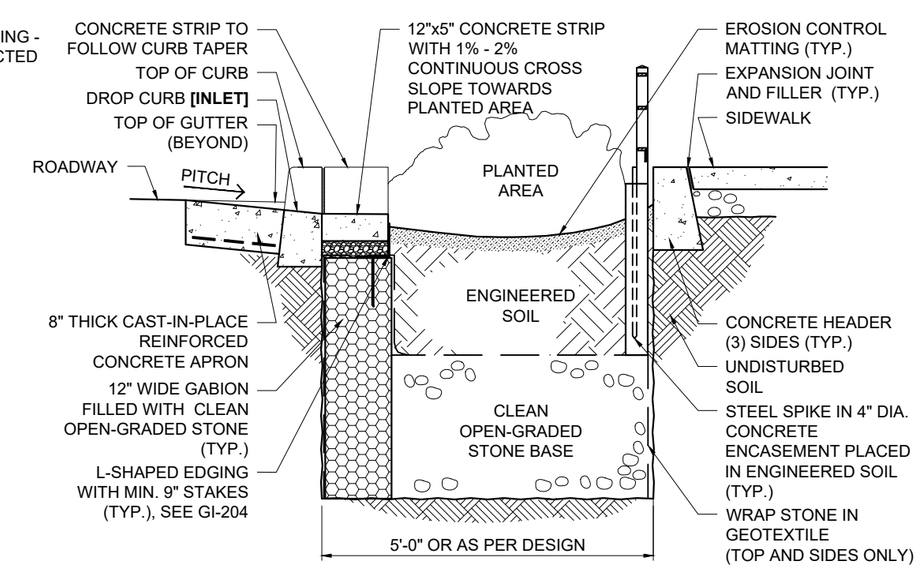




SECTION C-C
AT BIOSWALE OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT BIOSWALE INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	2'-6"	2'-0"
NO TREE	3'-0"	1'-6"

Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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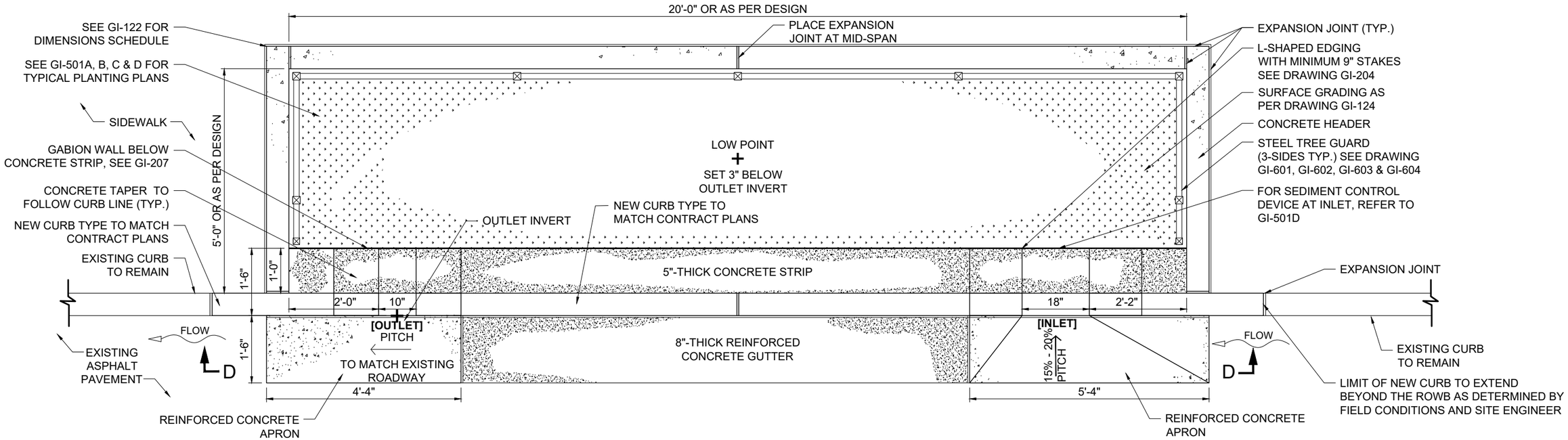
STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1

- NO CONNECTION TO SEWERS



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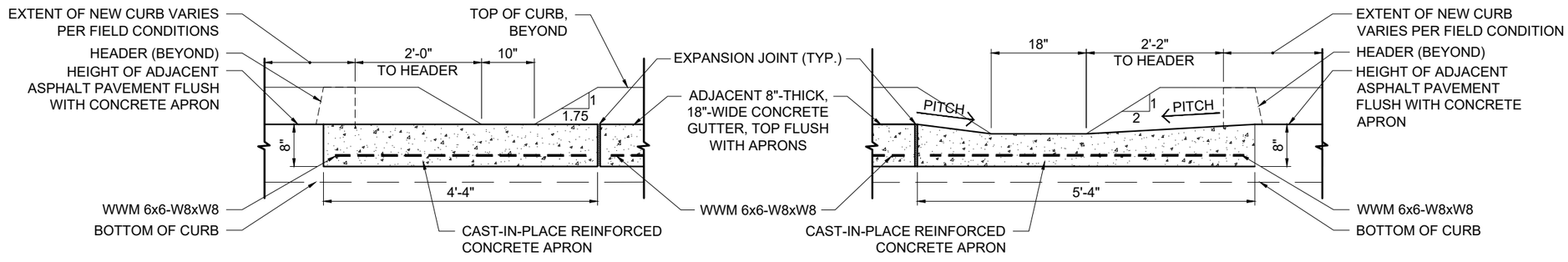

SECTION D-D

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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DATE

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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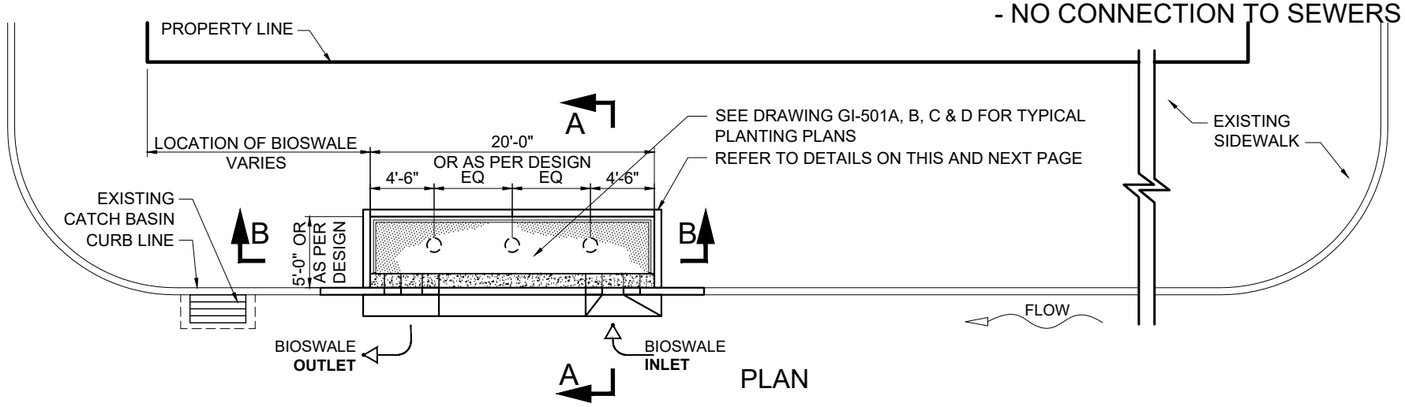
STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1A - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS



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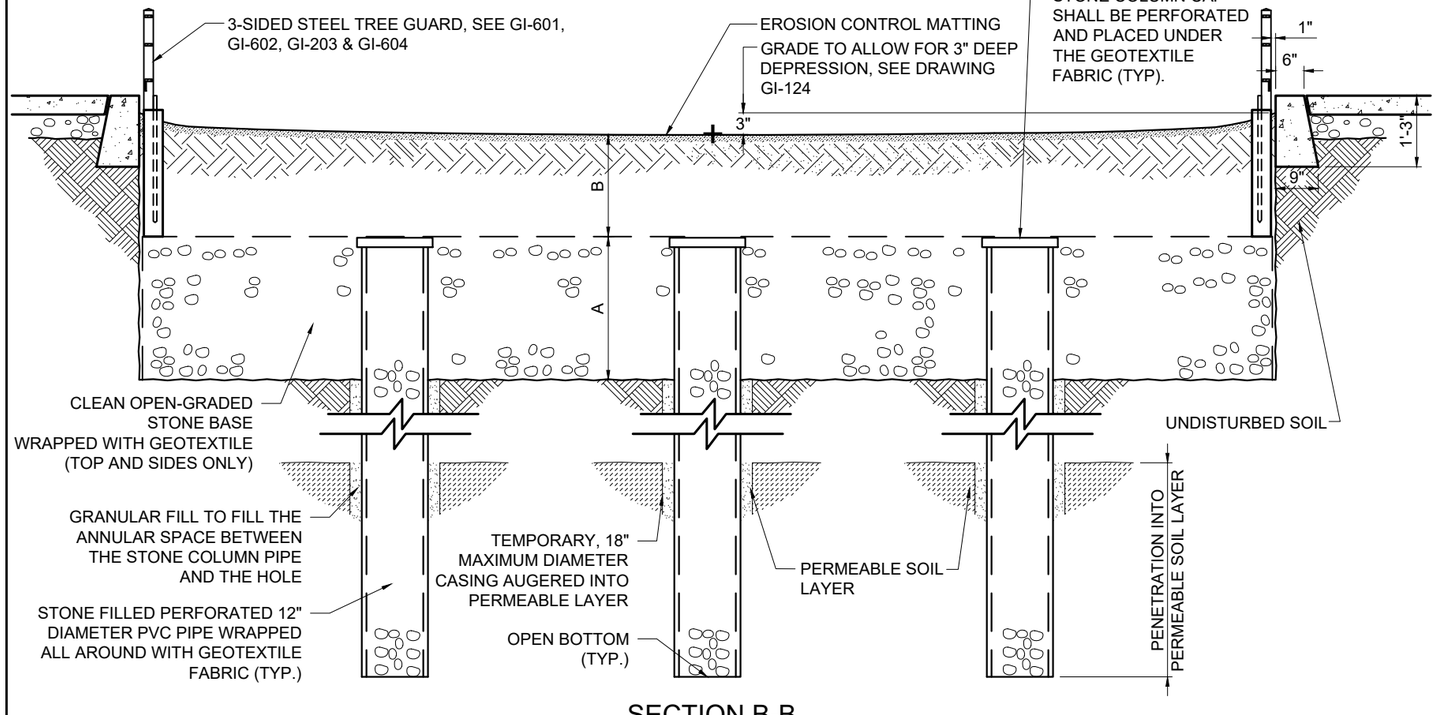
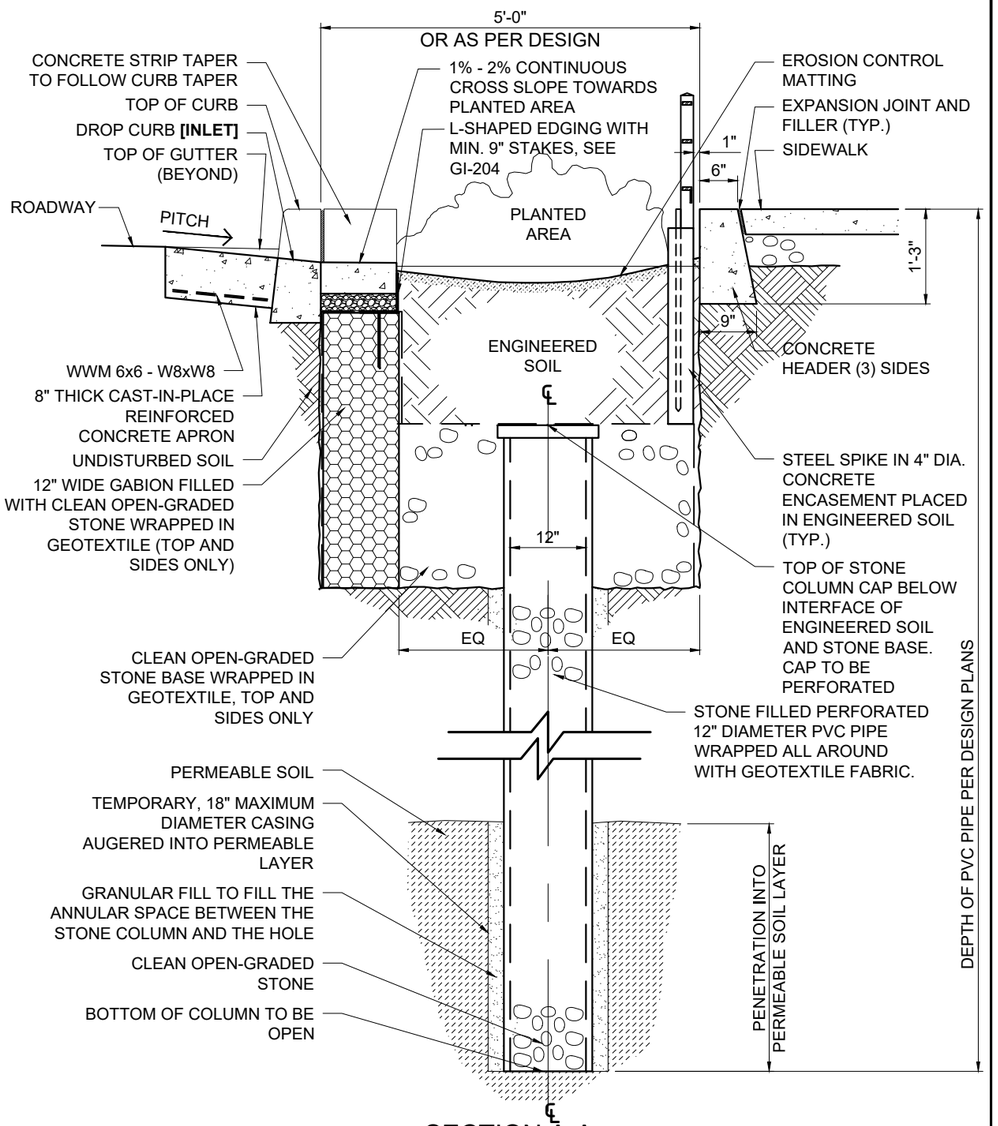


SECTION B-B

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	2'-6"	2'-0"
NO TREE	3'-0"	1'-6"



SECTION A-A
AT BIOSWALE STONE COLUMN

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P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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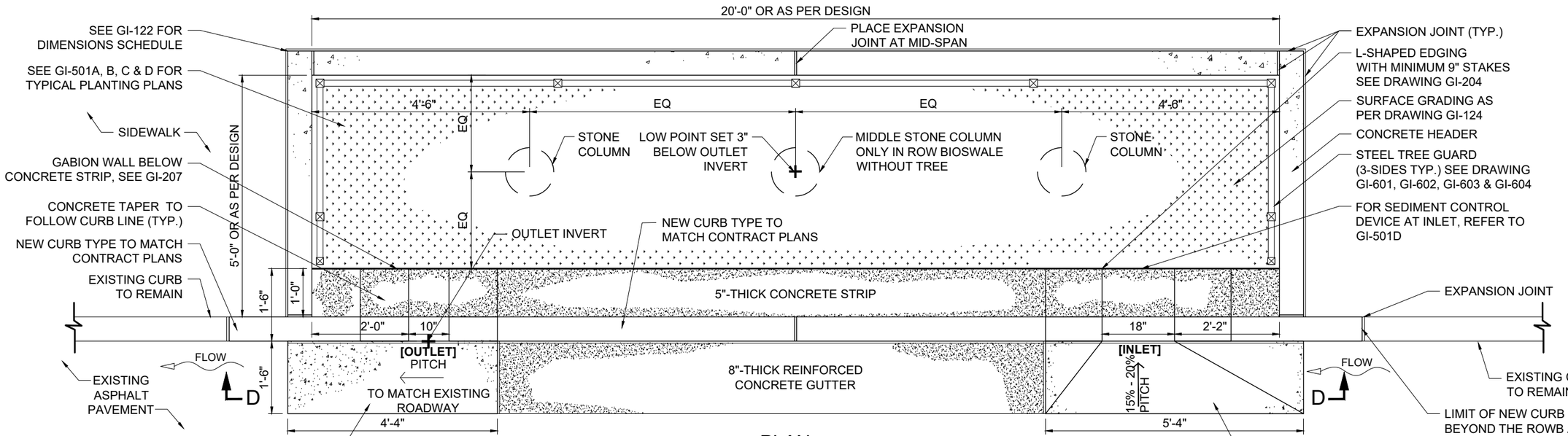
STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1A - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS



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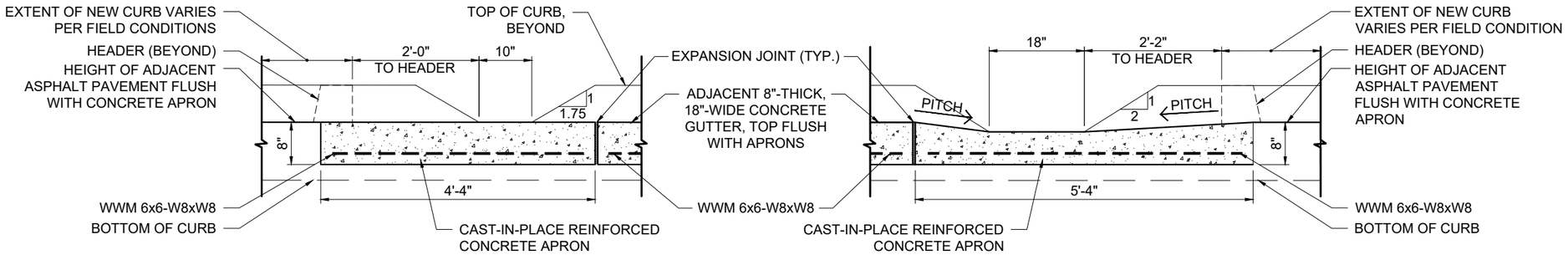

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P.E.

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GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
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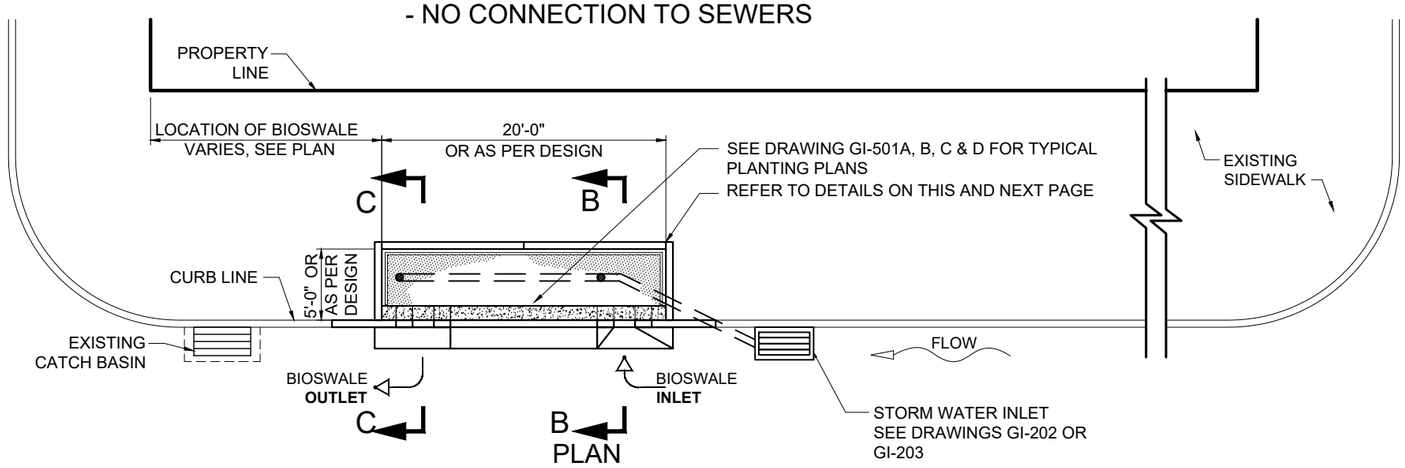
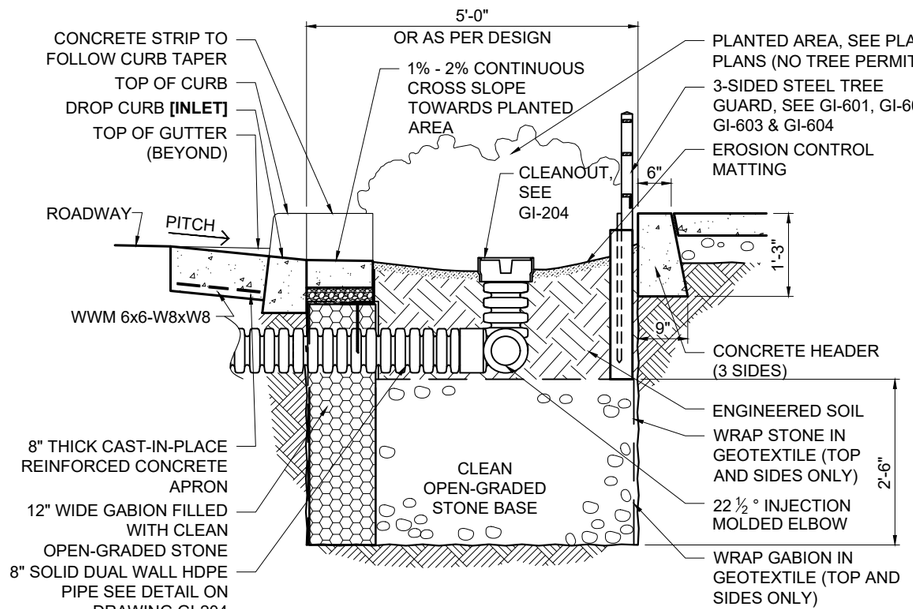
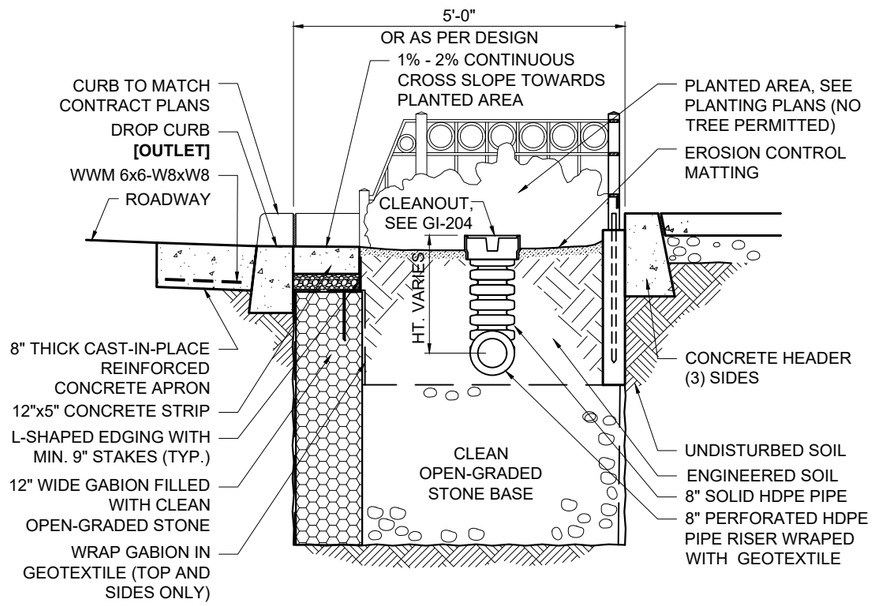
STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1B - WITH STORMWATER INLET

- NO CONNECTION TO SEWERS





SECTION B-B
AT BIOSWALE INLET



SECTION C-C
AT BIOSWALE OUTLET

NOTES:
1. NO STAKE SHALL BE DRIVEN INTO HDPE DUAL WALL PIPE.
2. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
3. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, DATE
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1B - WITH STORMWATER INLET

- NO CONNECTION TO SEWERS

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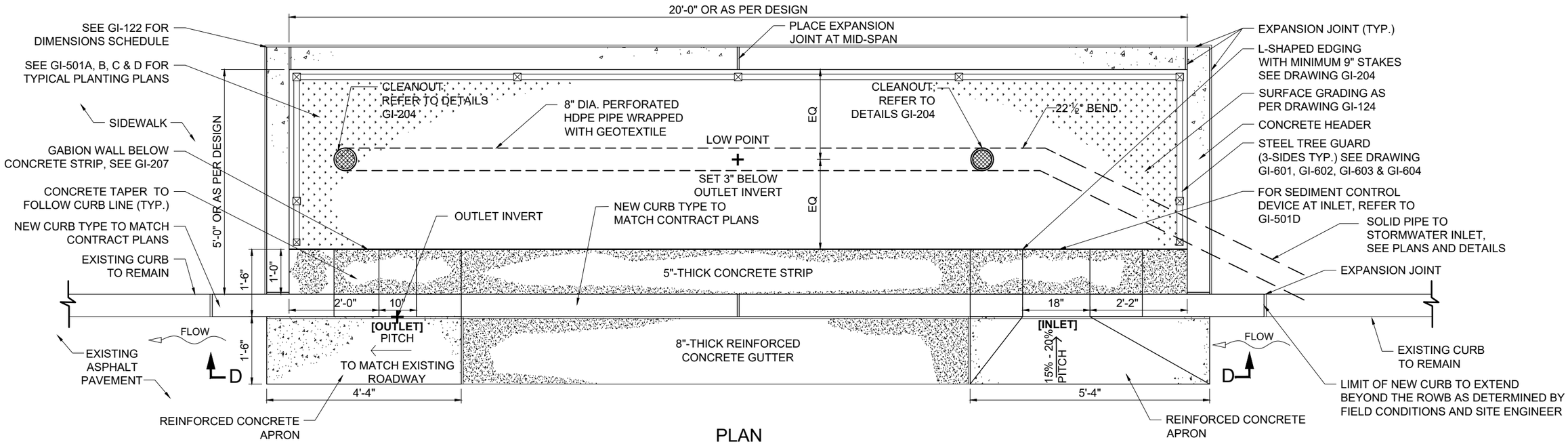

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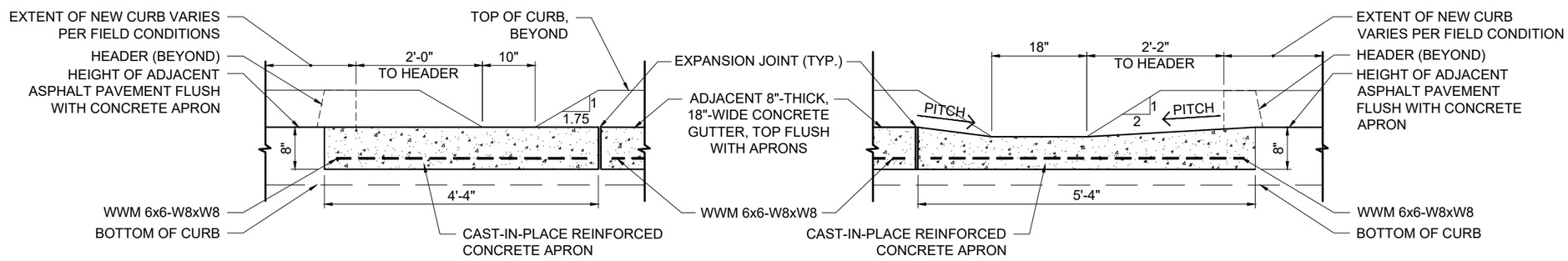

SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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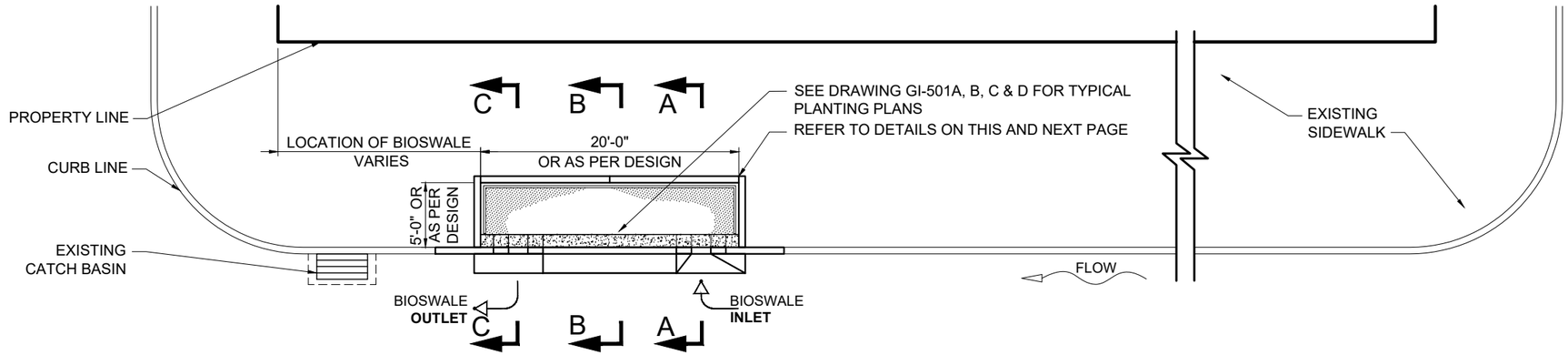
STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1C - WITH STORMWATER CHAMBER

- NO CONNECTION TO SEWERS



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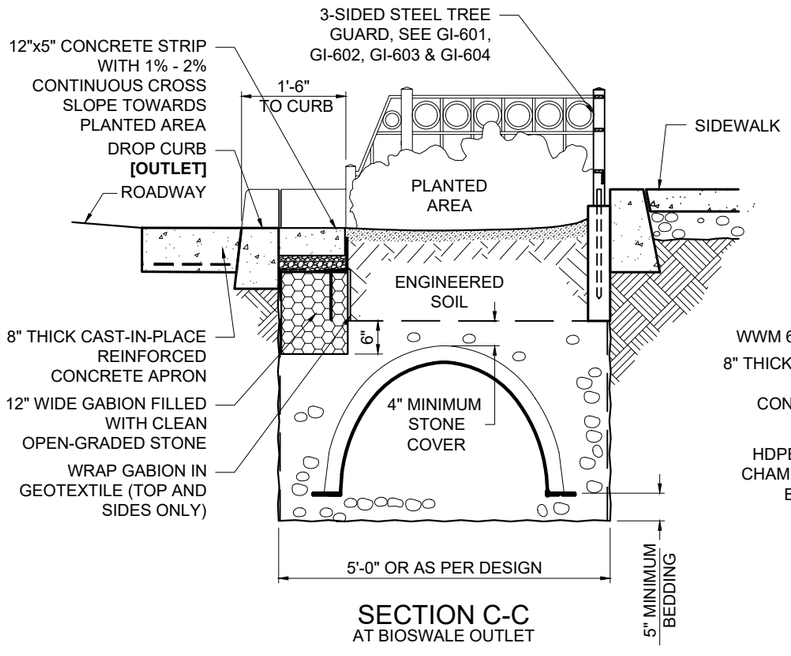
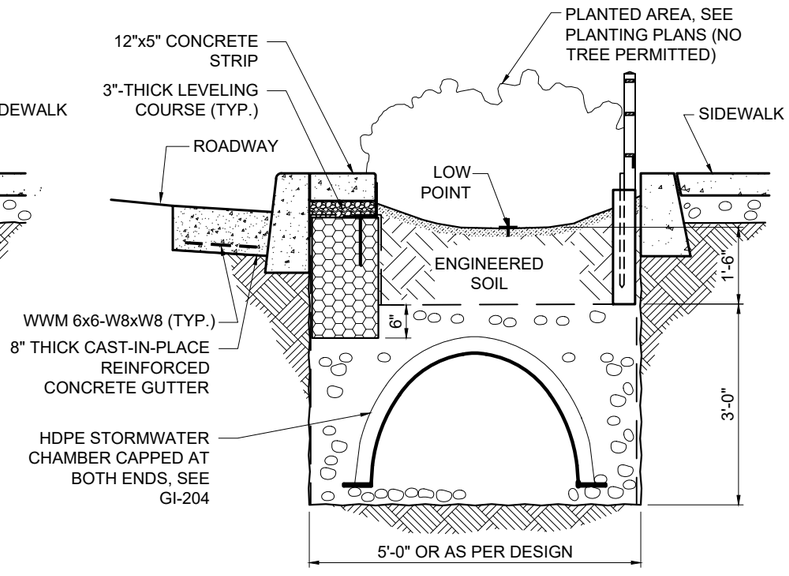
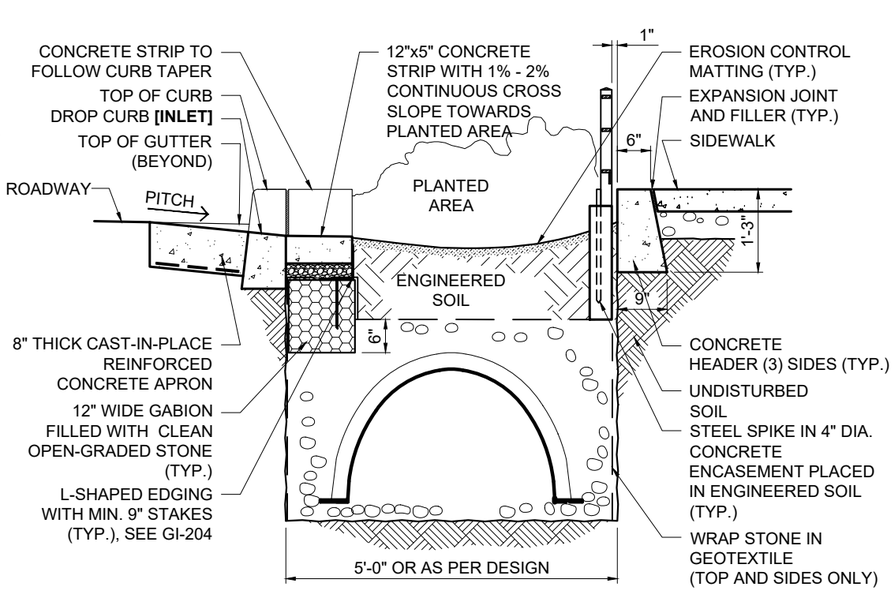


SECTION C-C
AT BIOSWALE OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT BIOSWALE INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

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P.E.
MANAGING DIRECTOR,
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STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1C - WITH STORMWATER CHAMBER

- NO CONNECTION TO SEWERS

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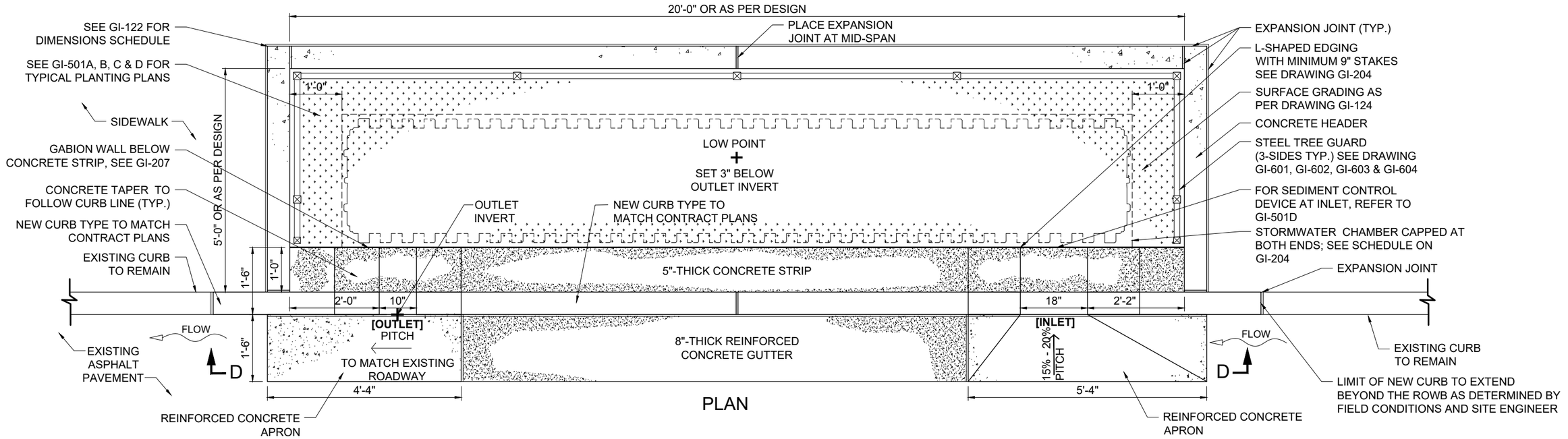

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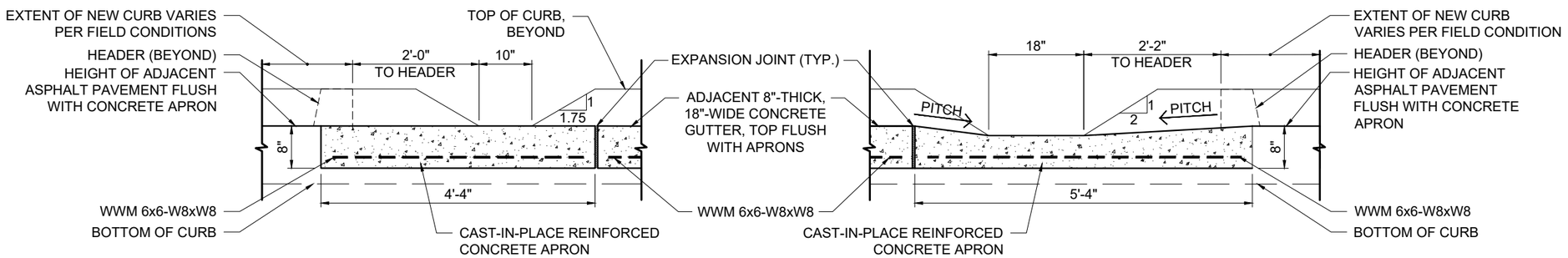

SECTION D-D

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P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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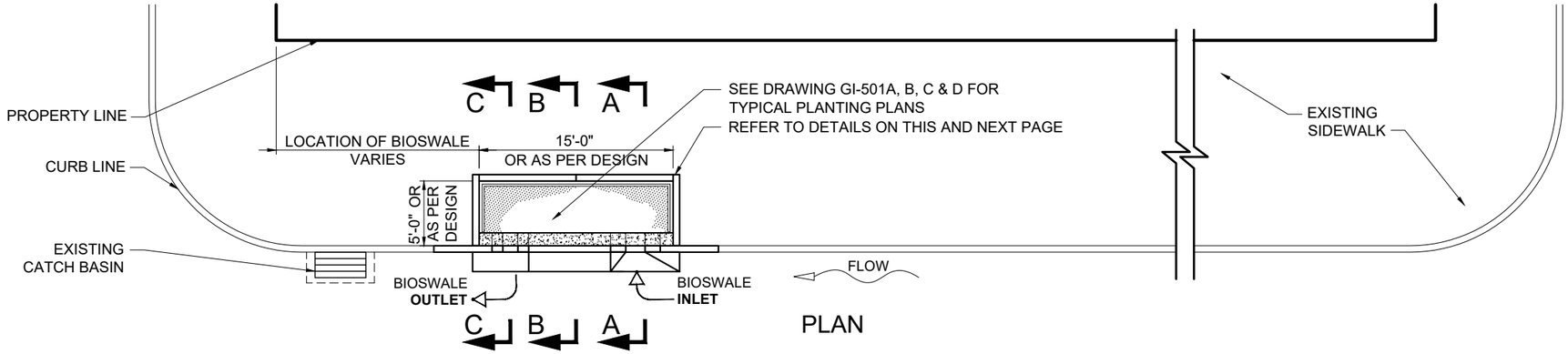
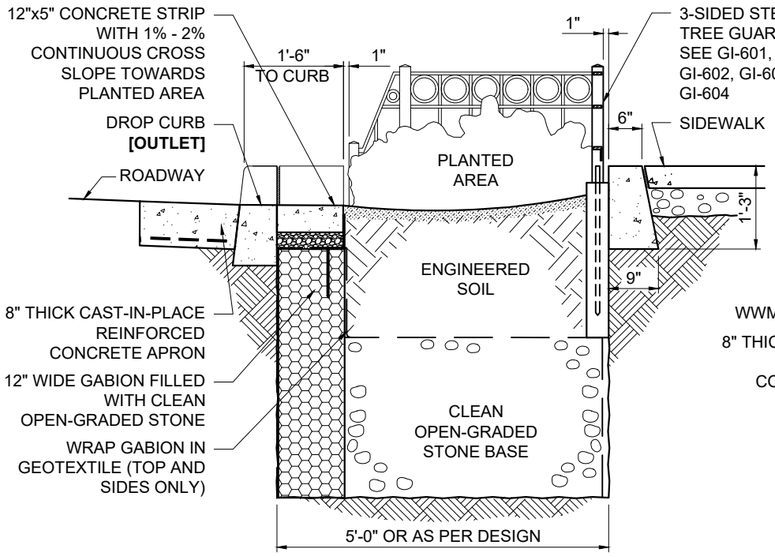
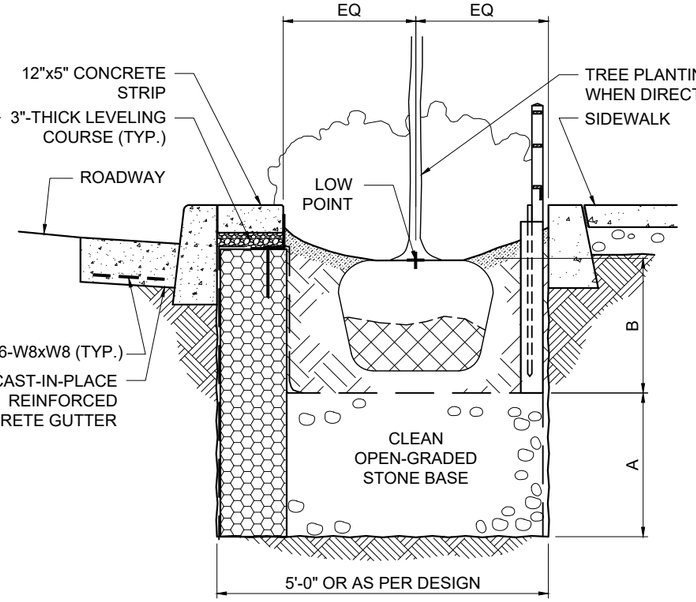
STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2

- NO CONNECTION TO SEWERS



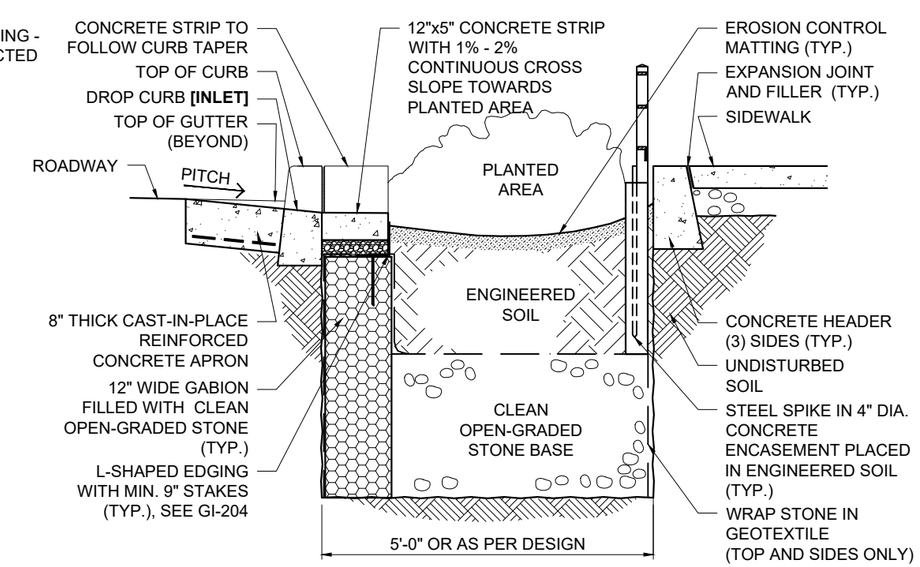


SECTION C-C
AT BIOSWALE OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]

DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	2'-6"	2'-0"
NO TREE	3'-0"	1'-6"



SECTION A-A
AT BIOSWALE INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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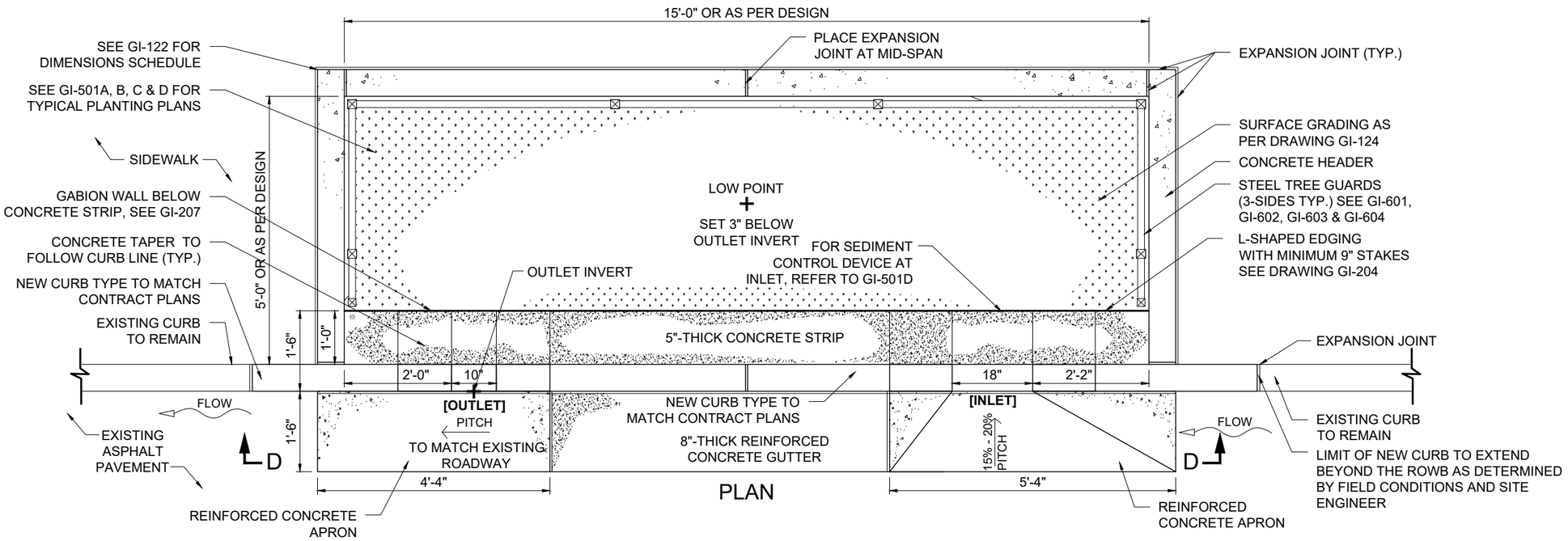
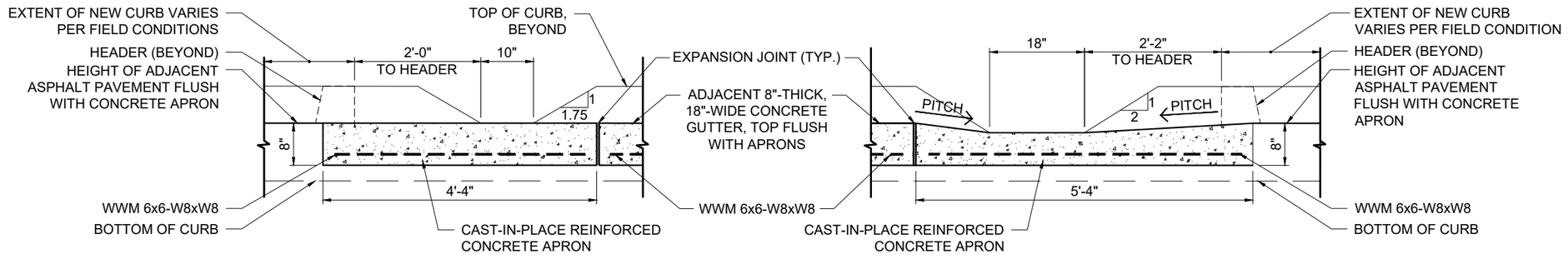
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2

- NO CONNECTION TO SEWERS





SECTION D-D

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

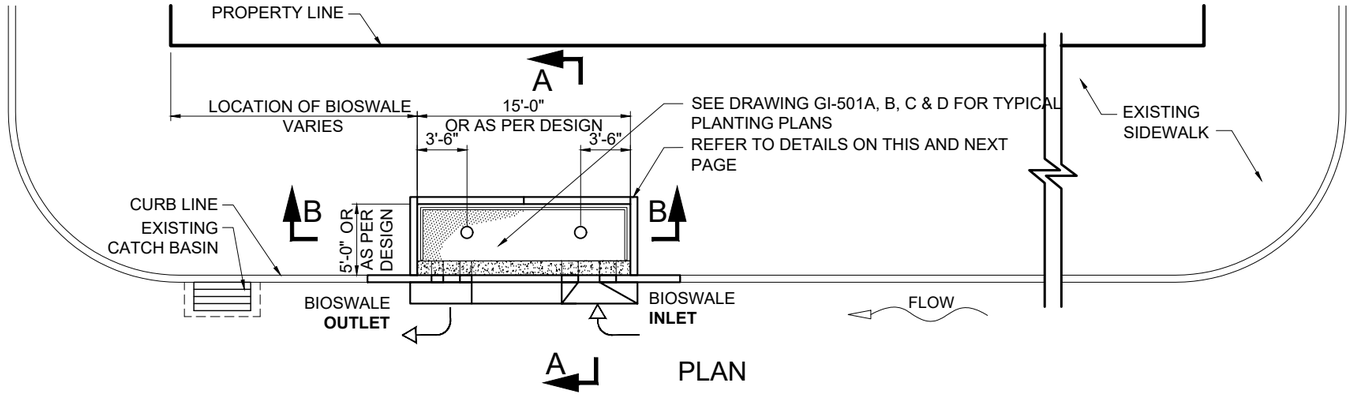
05-13-2022
DATE

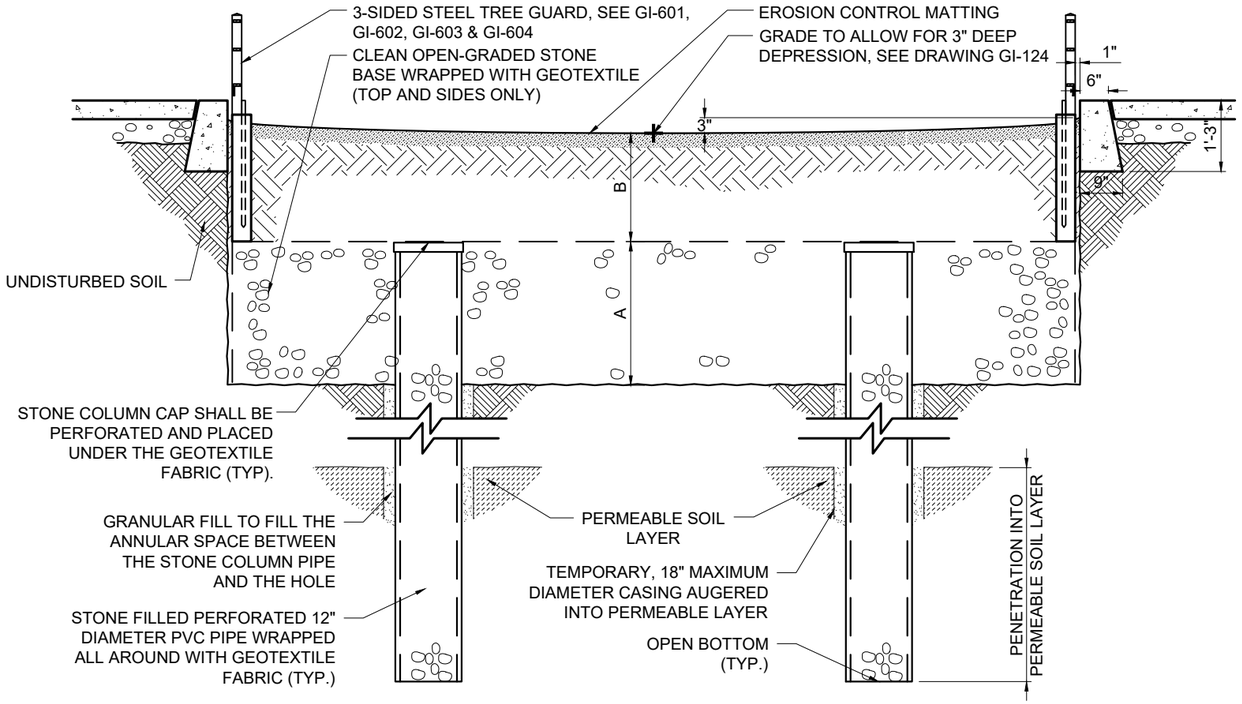
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2A - WITH STONE COLUMNS

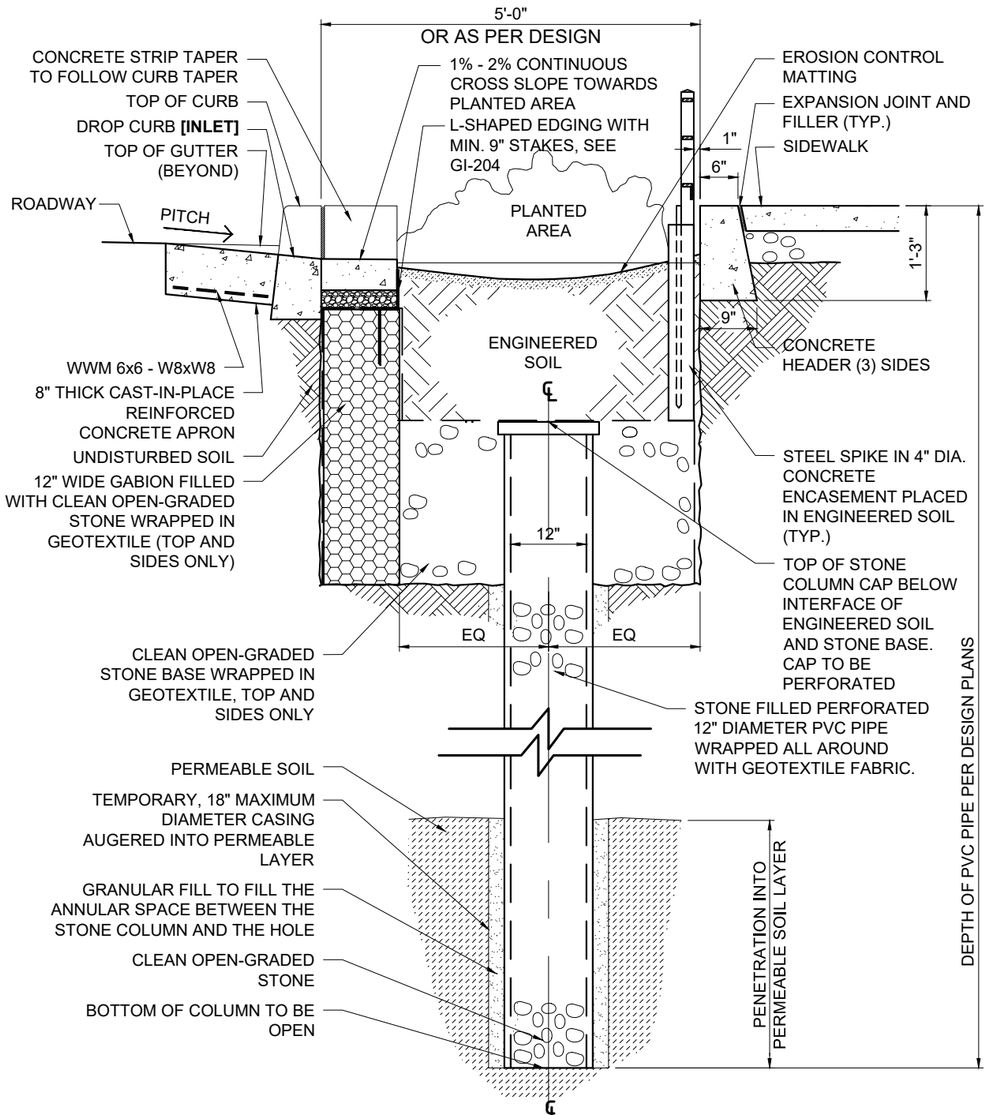
- NO CONNECTION TO SEWERS

GI–111





SECTION B-B



SECTION A-A
AT BIOSWALE STONE COLUMN

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	2'-6"	2'-0"
NO TREE	3'-0"	1'-6"

Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
DATE

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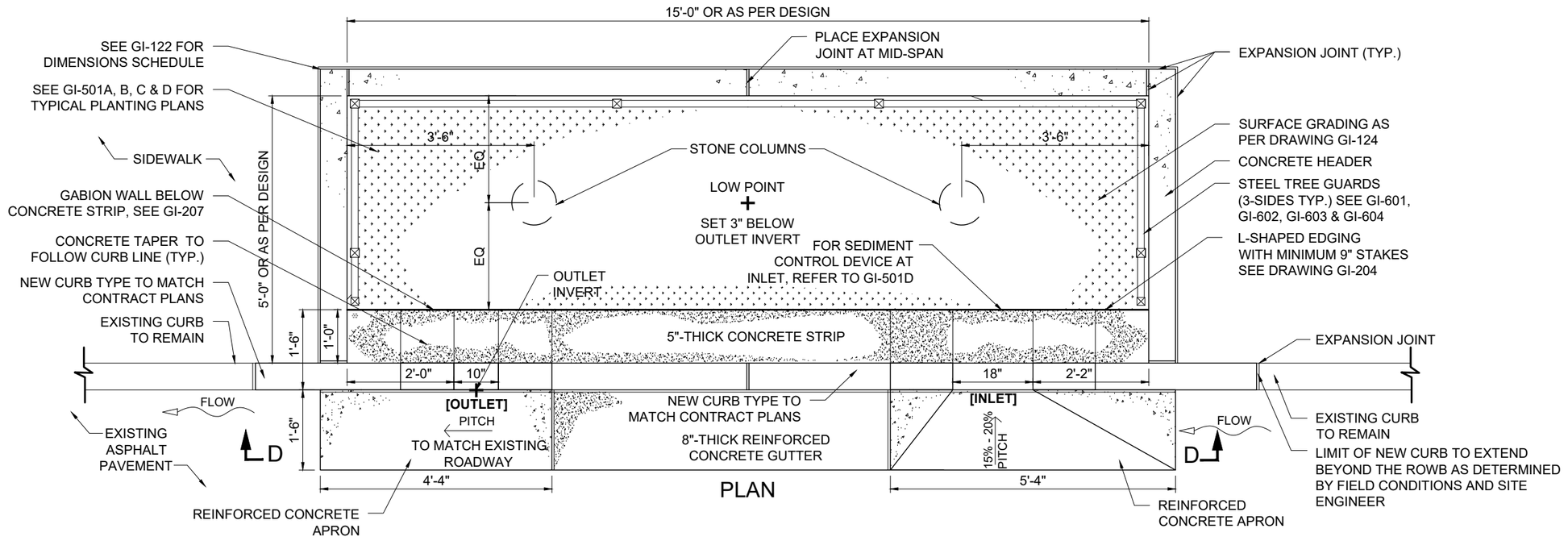
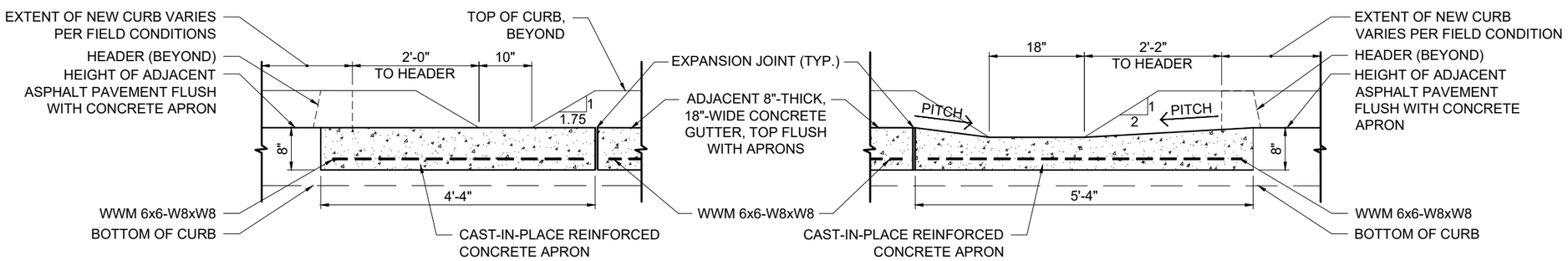
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2A - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS



PLAN



SECTION D-D

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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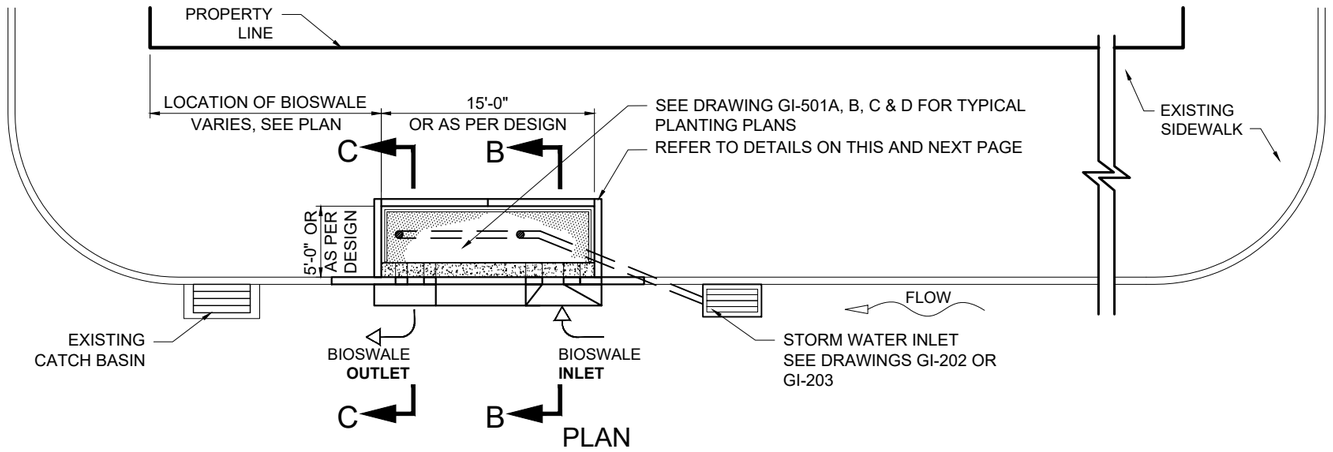
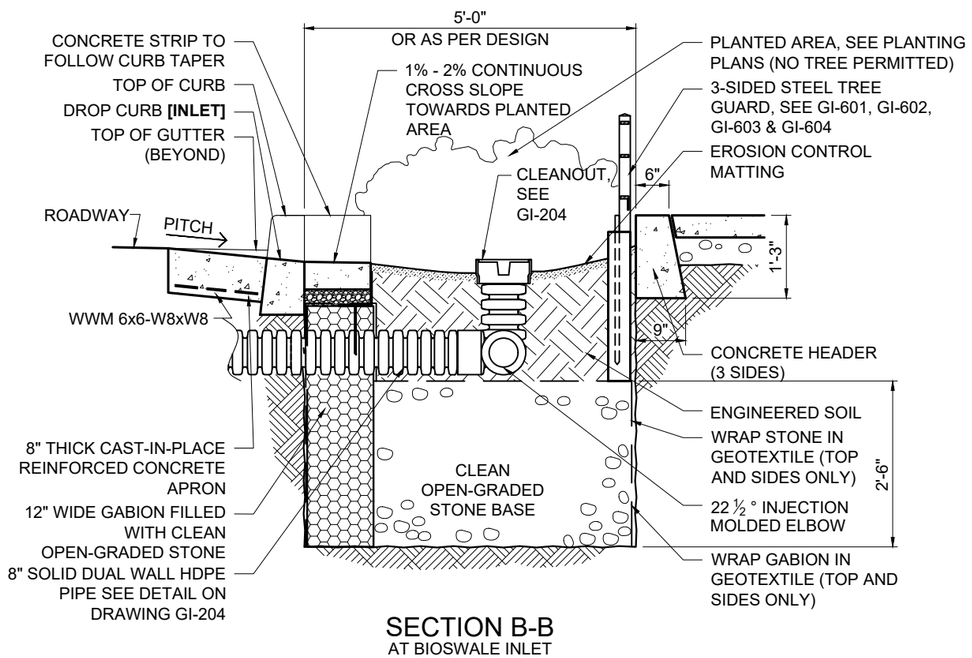
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

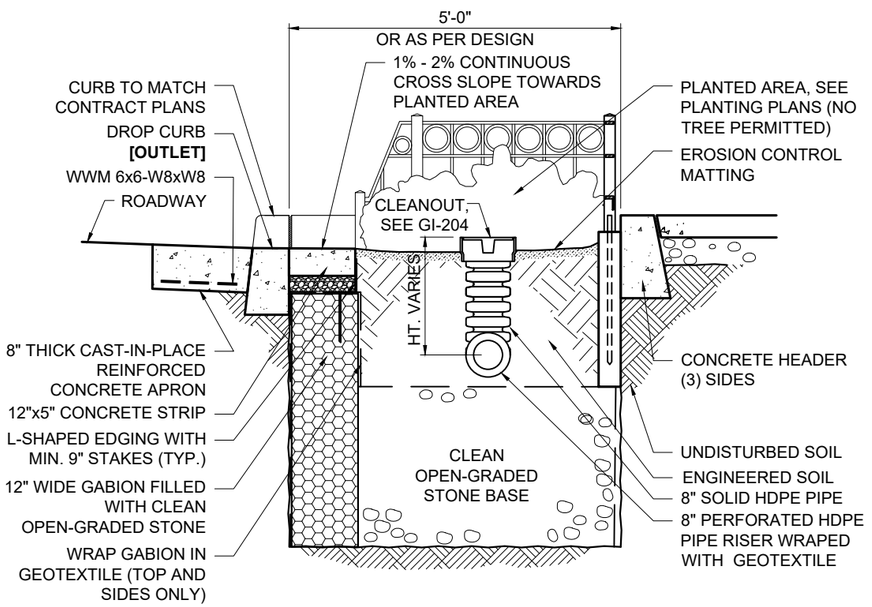
STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2B - WITH STORMWATER INLET

- NO CONNECTION TO SEWERS





SECTION B-B
AT BIOSWALE INLET



SECTION C-C
AT BIOSWALE OUTLET

NOTES:
1. NO STAKE SHALL BE DRIVEN INTO HDPE DUAL WALL PIPE.
2. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
3. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, DATE
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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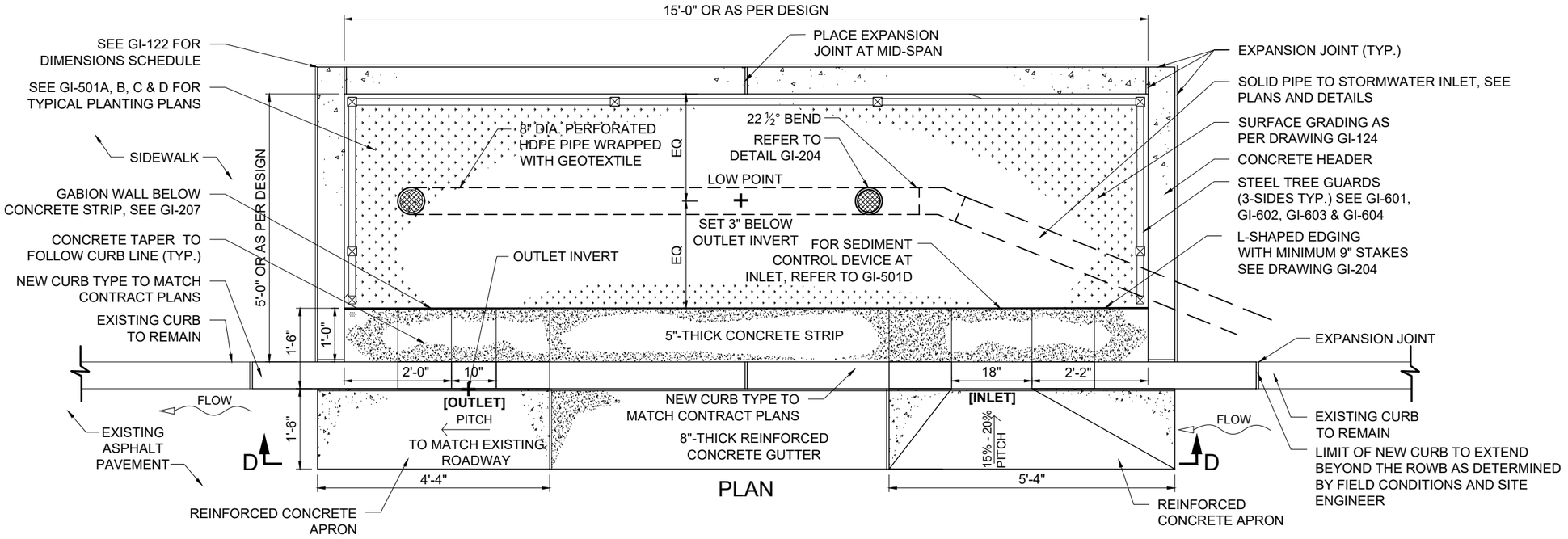
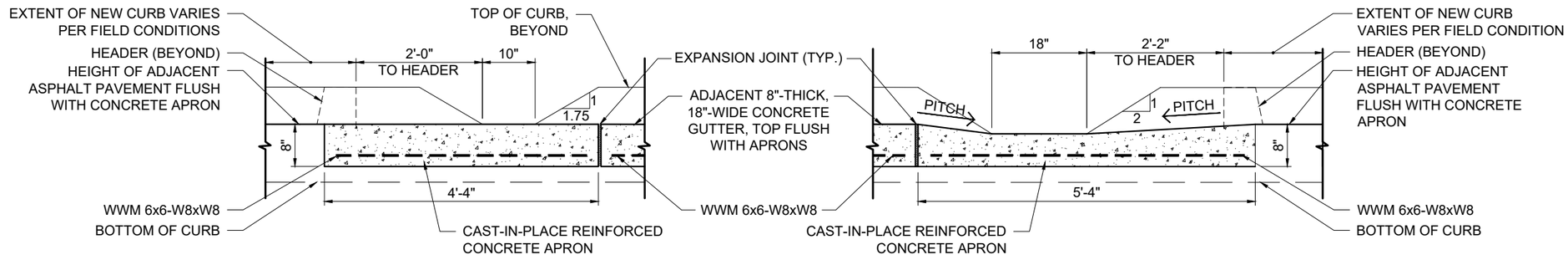
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2B - WITH STORMWATER INLET

- NO CONNECTION TO SEWERS



PLAN



SECTION D-D

Rooppesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

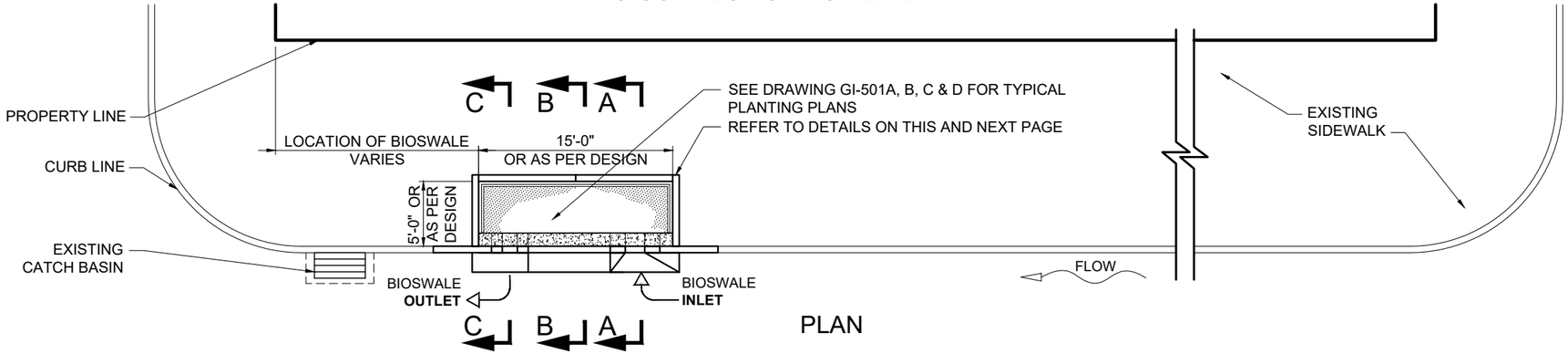
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

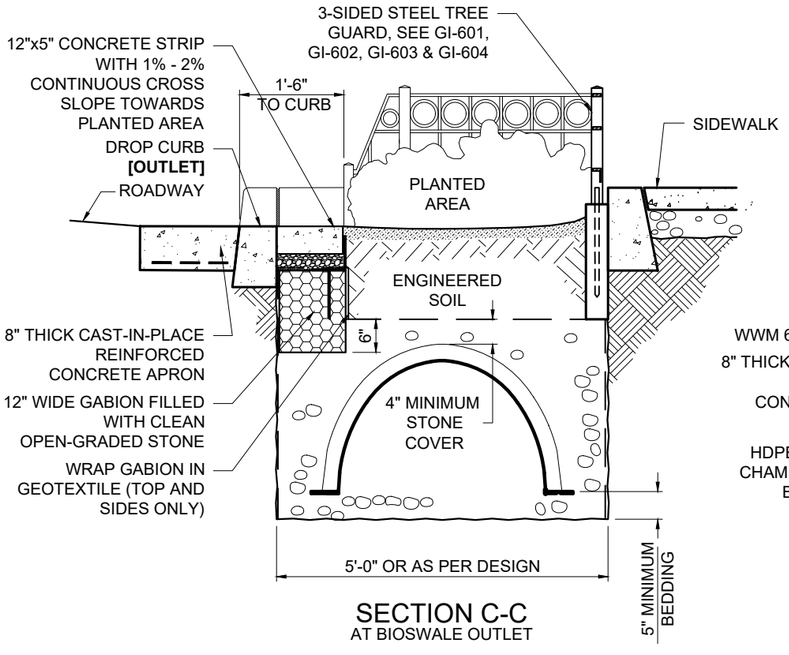
STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2C - WITH STORMWATER CHAMBER

- NO CONNECTION TO SEWERS

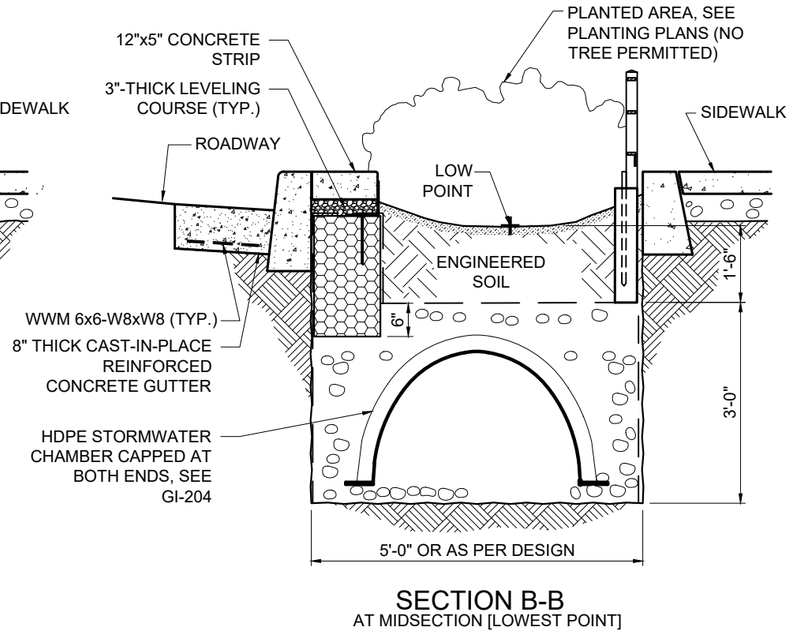
GI–115



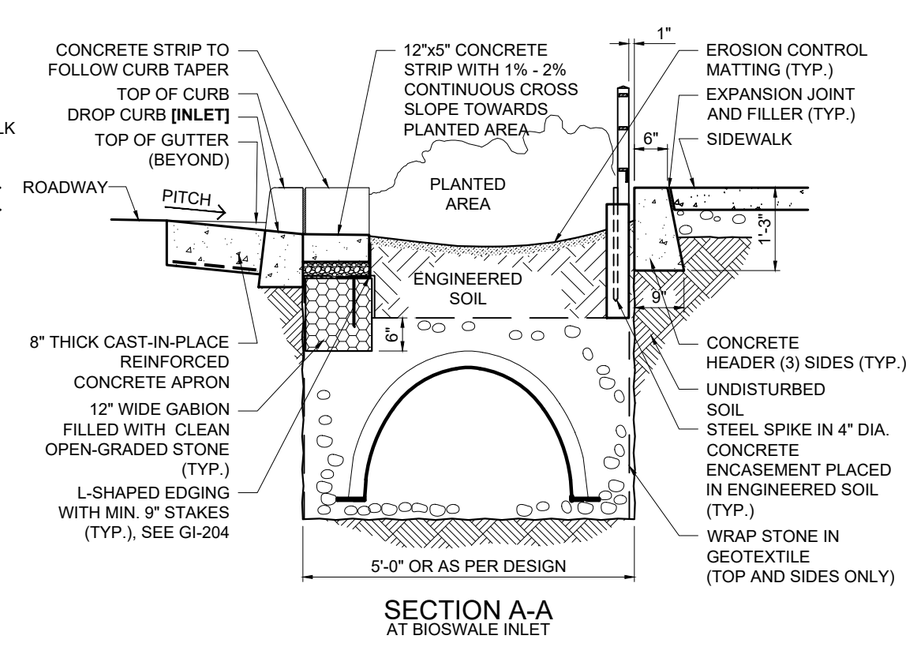
PLAN



SECTION C-C
AT BIOSWALE OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT BIOSWALE INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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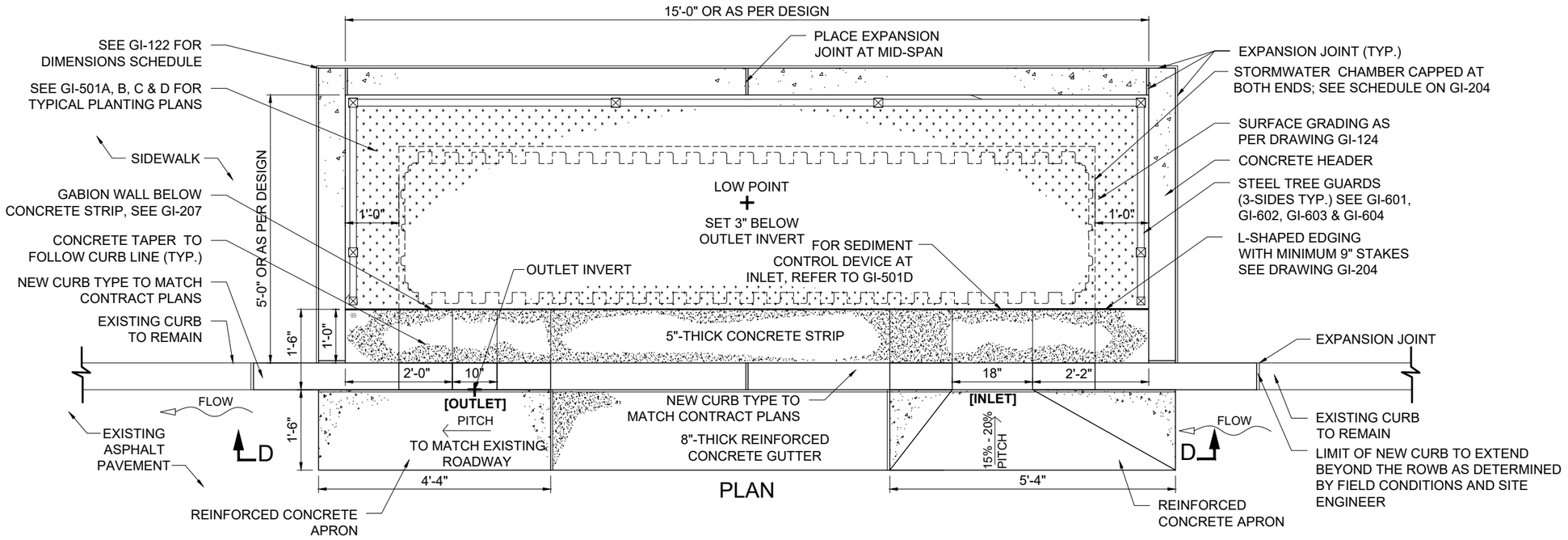
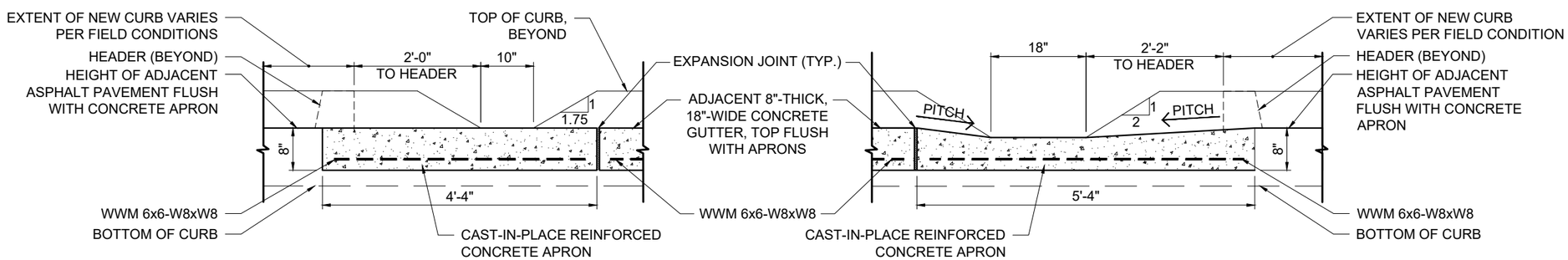
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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

- NO CONNECTION TO SEWERS



PLAN



SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

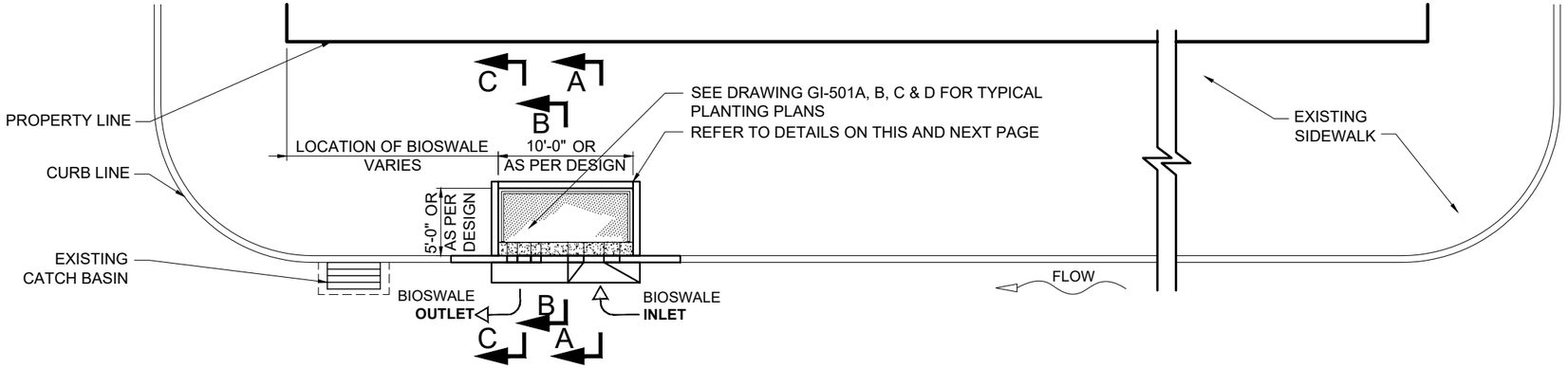
05-13-2022
DATE

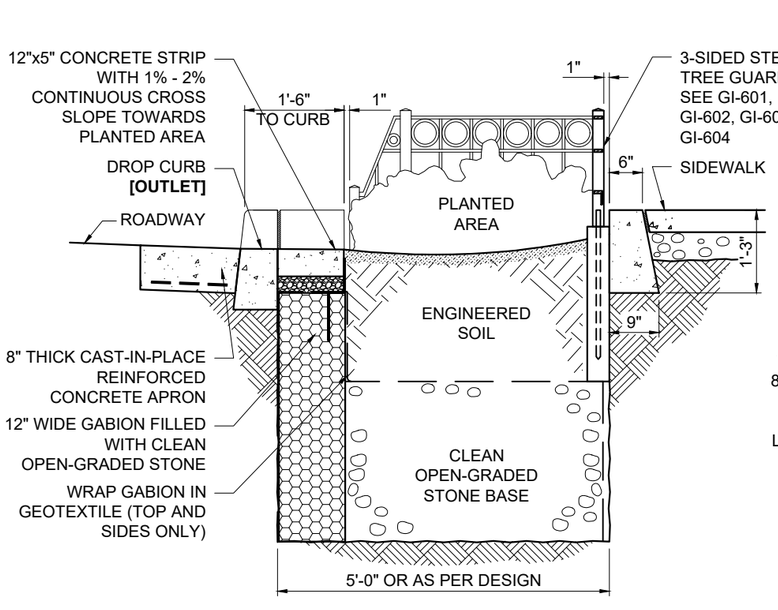
GI–117

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

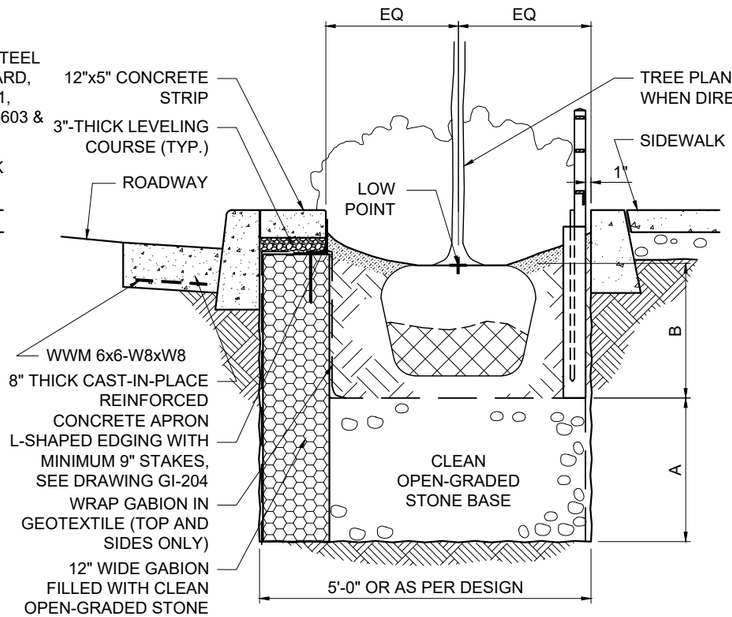
STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3

- NO CONNECTION TO SEWERS

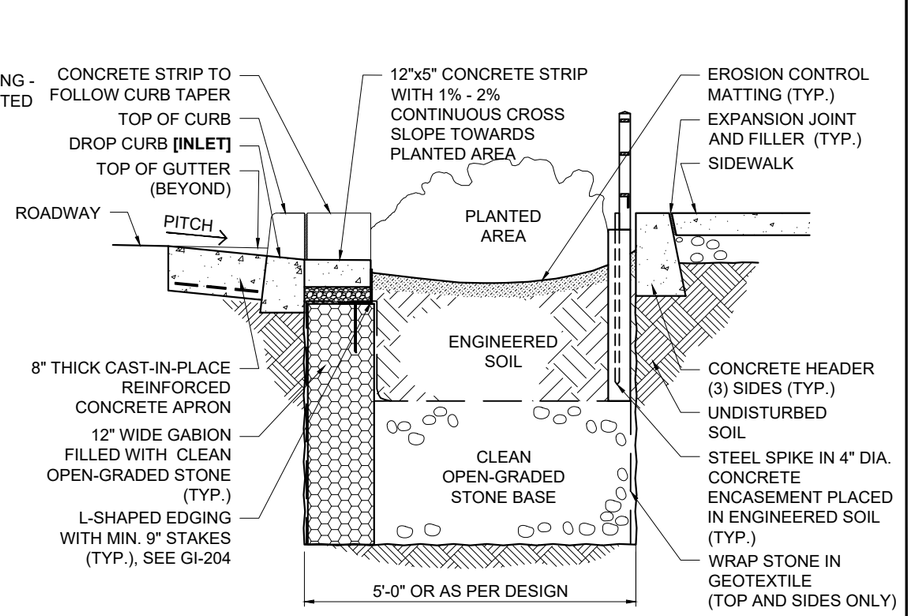




SECTION C-C
AT BIOSWALE OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT BIOSWALE INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	2'-6"	2'-0"
NO TREE	3'-0"	1'-6"

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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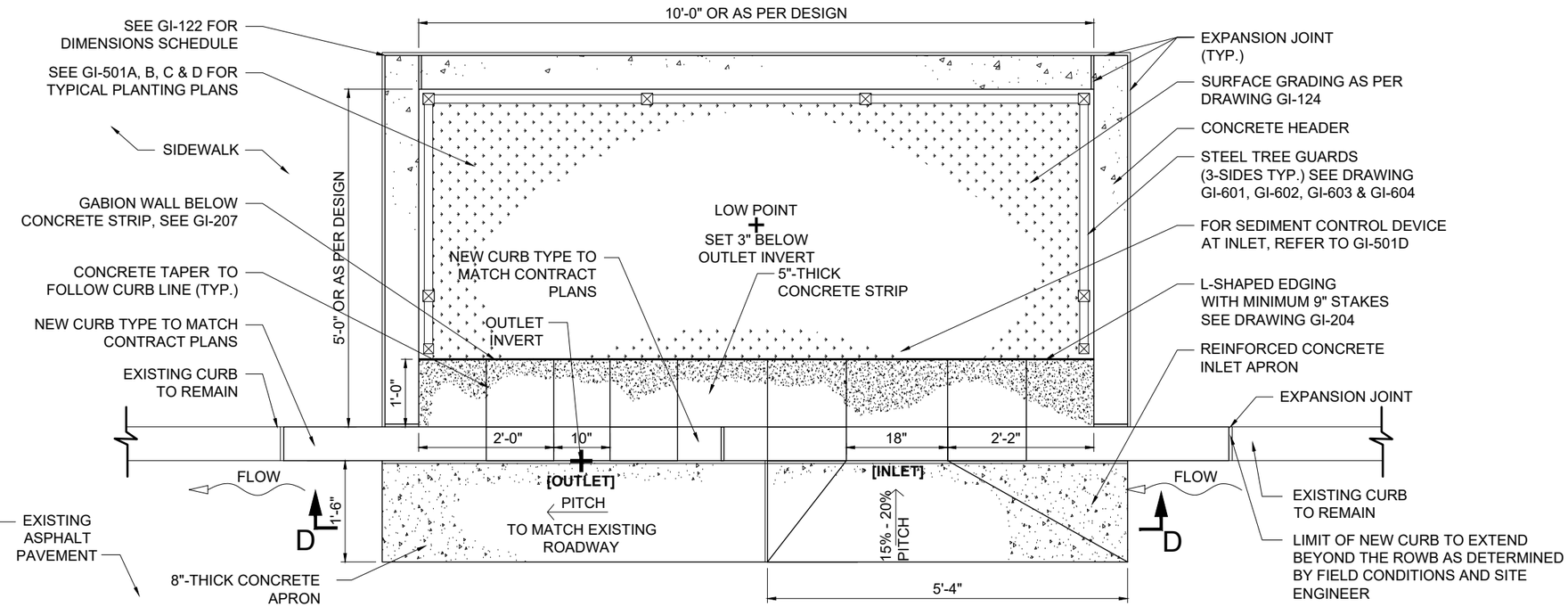
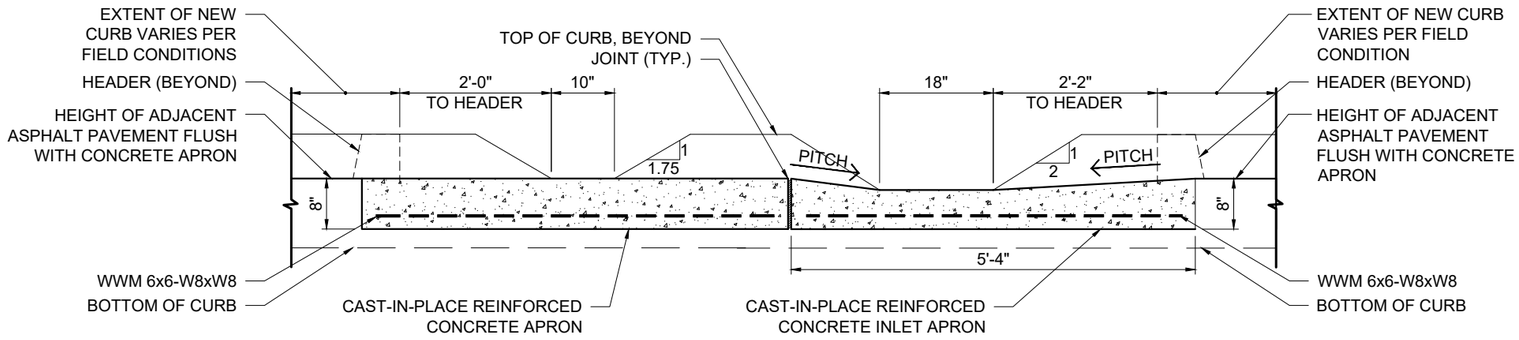
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3

- NO CONNECTION TO SEWERS



PLAN



SECTION D-D

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

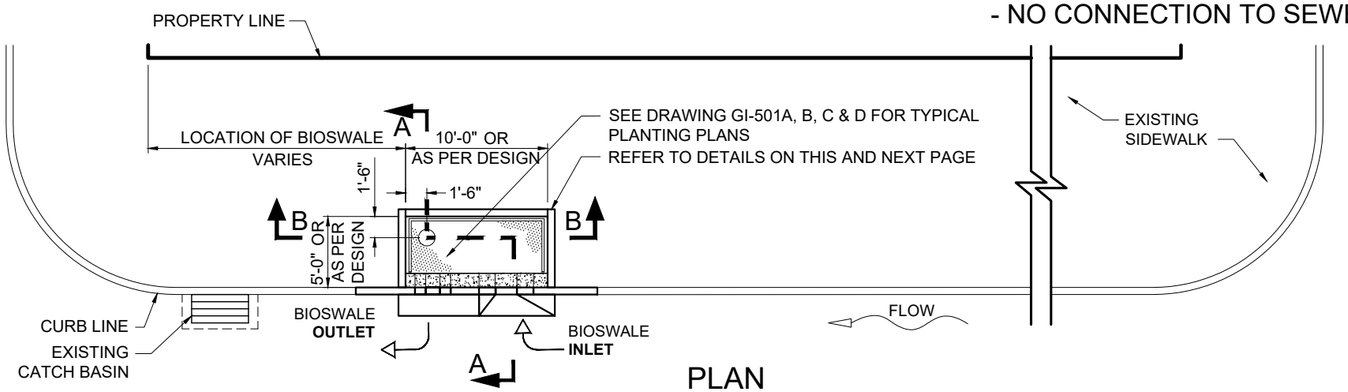
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

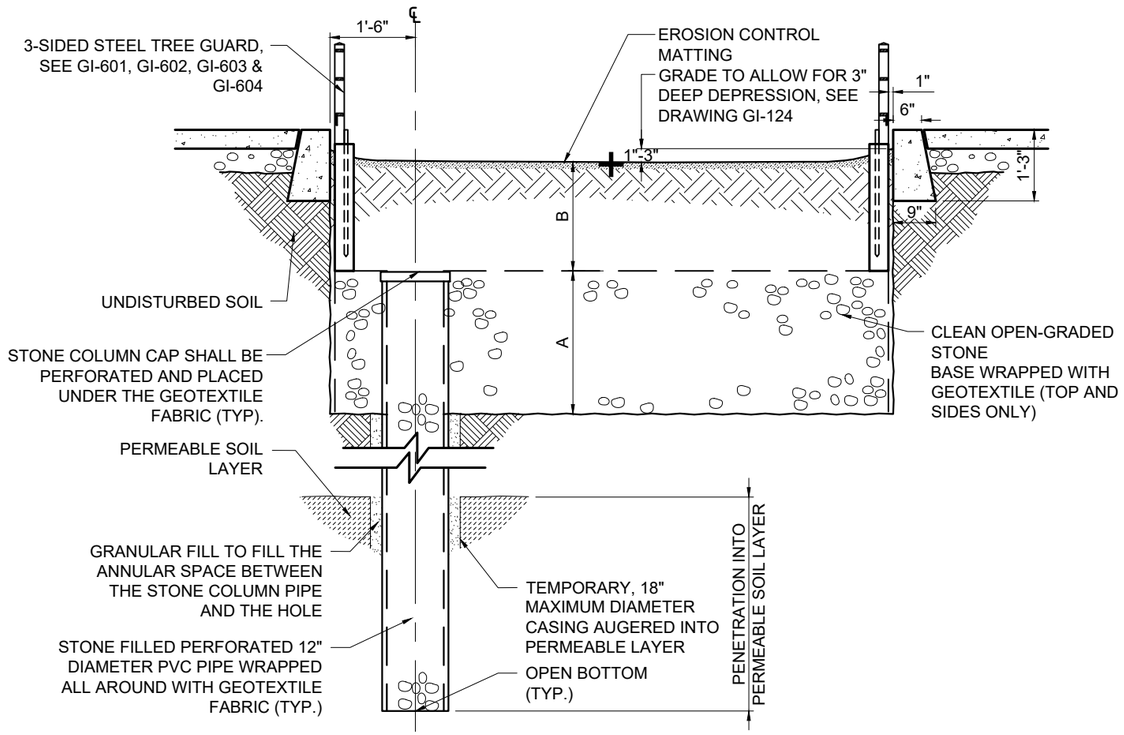
STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3A - WITH STONE COLUMN

- NO CONNECTION TO SEWERS

GI–119

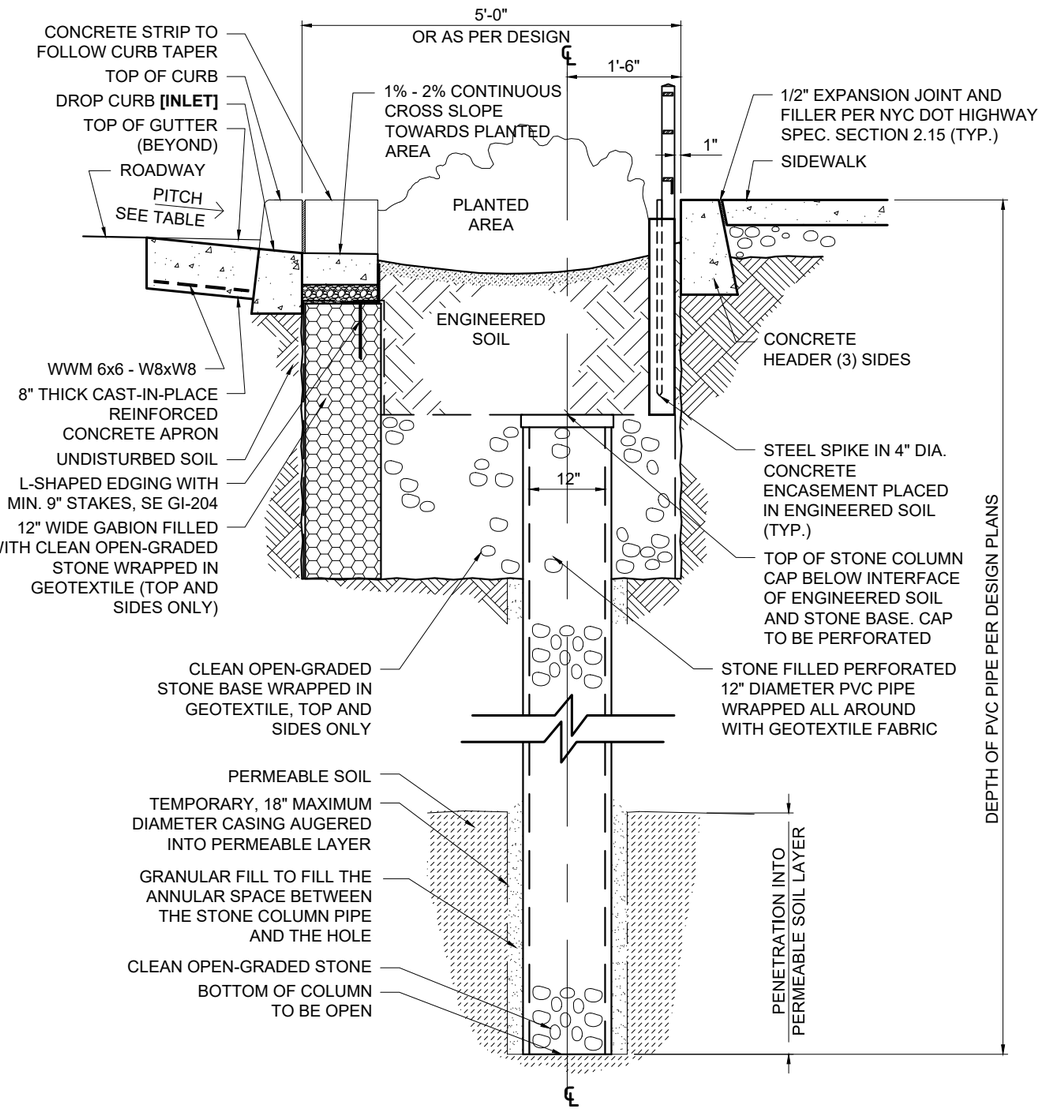


PLAN



SECTION B-B

DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	2'-6"	2'-0"
NO TREE	3'-0"	1'-6"



SECTION A-A
AT BIOSWALE STONE COLUMN

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

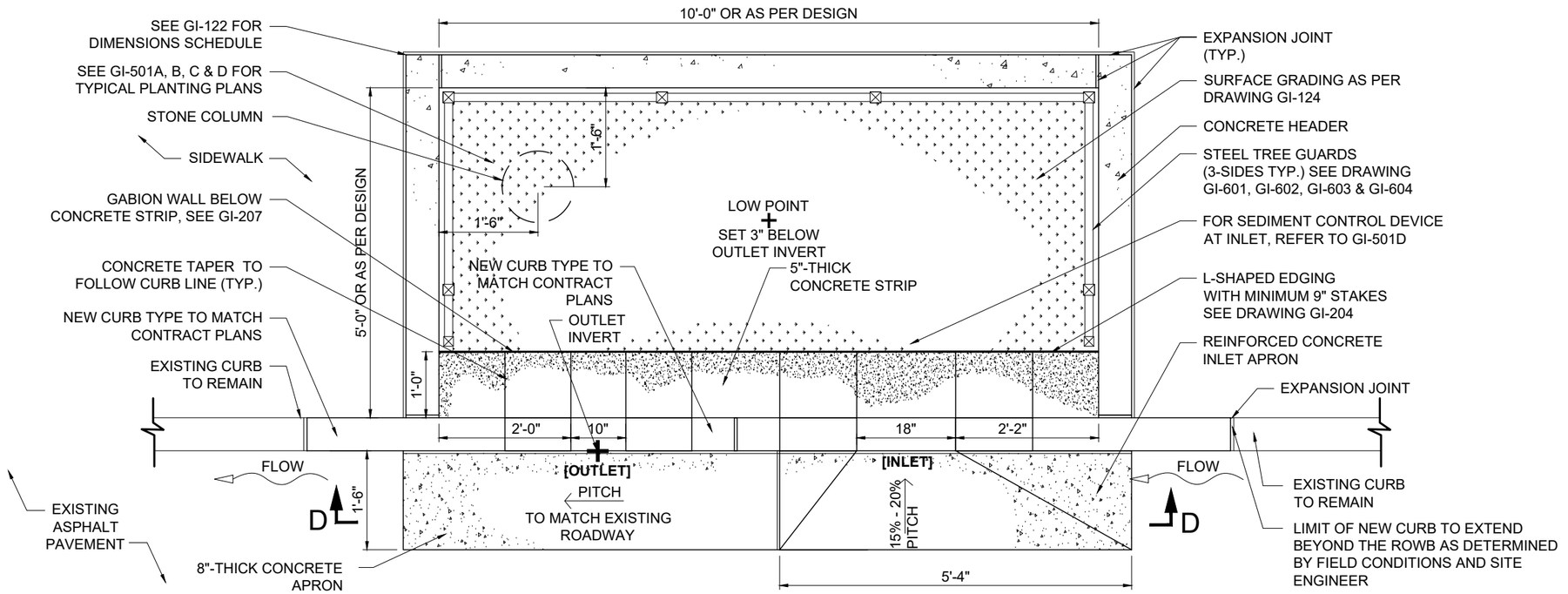
05-13-2022
DATE

GI–120

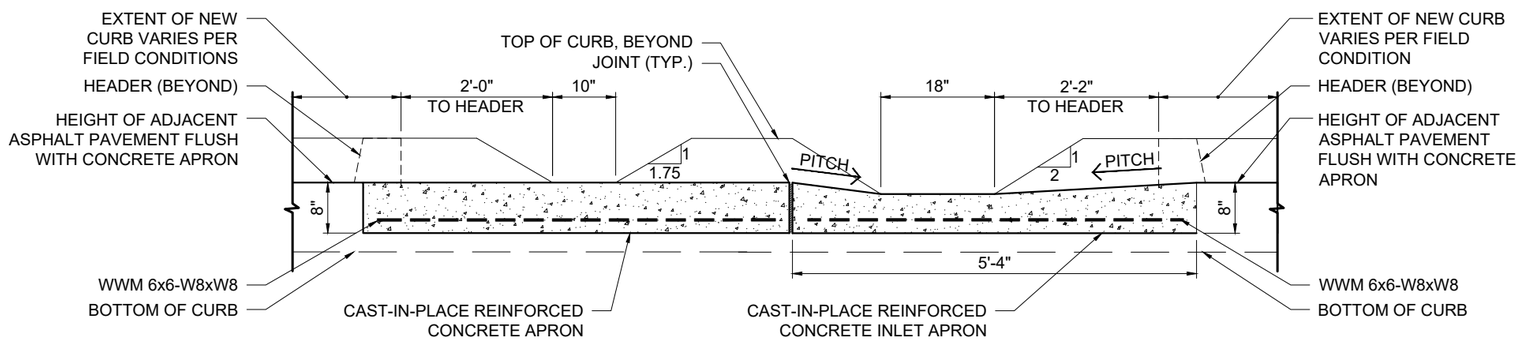
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3A - WITH STONE COLUMN

- NO CONNECTION TO SEWERS



PLAN



SECTION D-D

Roopesh Joshi P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

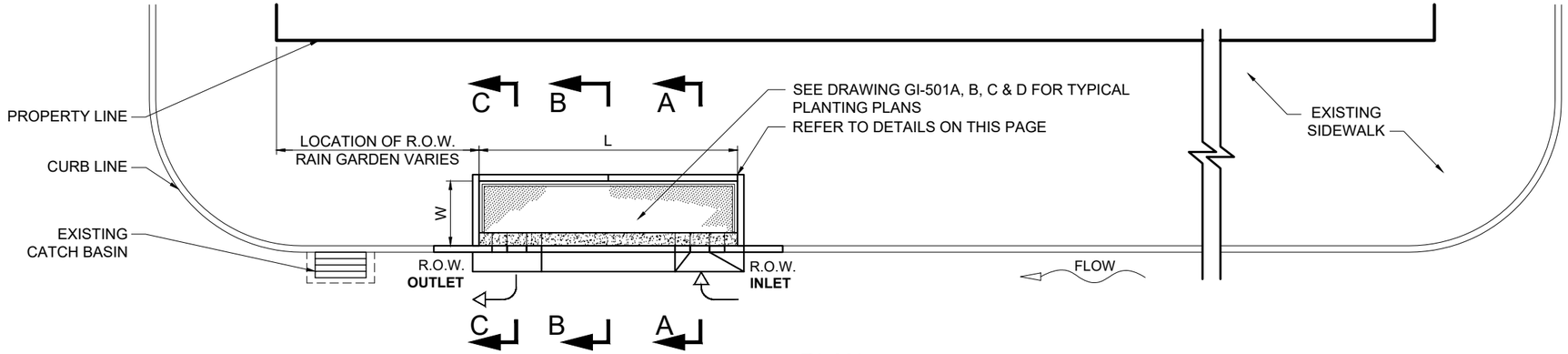
DATE

GI–121

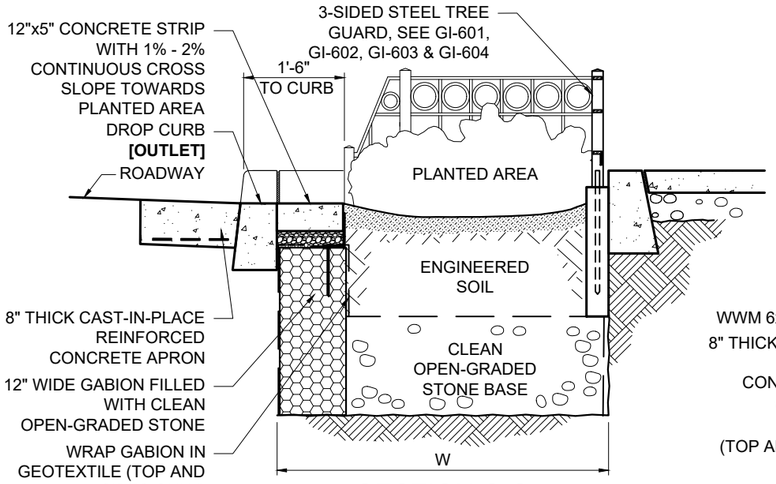
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR R.O.W. RAIN GARDEN TYPE1, TYPE 2, AND TYPE 3

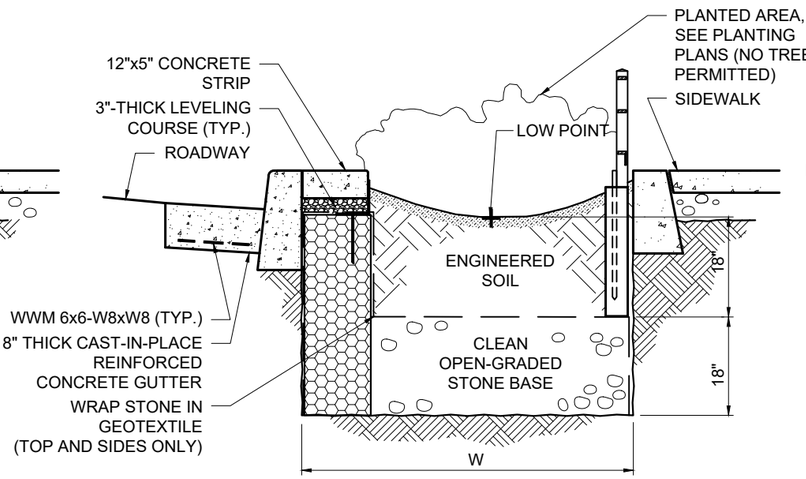
- NO CONNECTION TO SEWERS



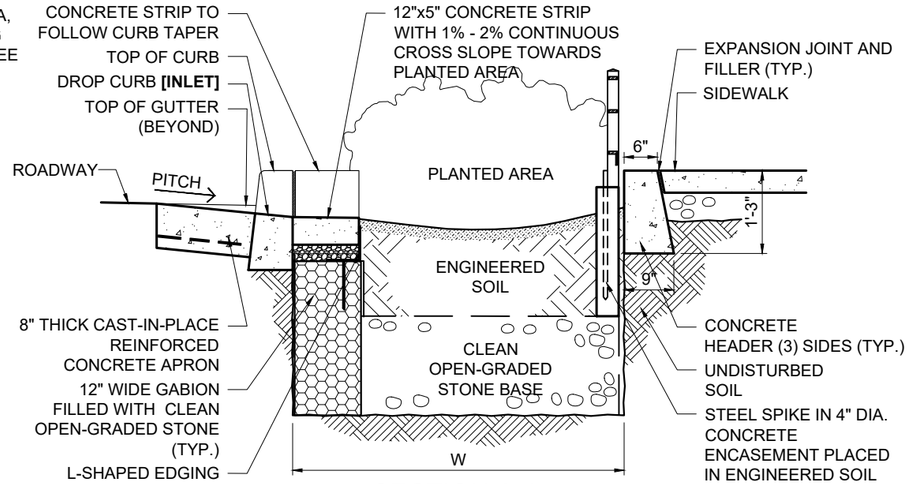
PLAN



SECTION C-C
AT R.O.W. OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT R.O.W. INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.
3. PLAN LAYOUT DIMENSIONS AND PLANTING PLAN AS PER GI-122 FOR THE R.O.W. RAIN GARDEN TYPE SPECIFIED.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

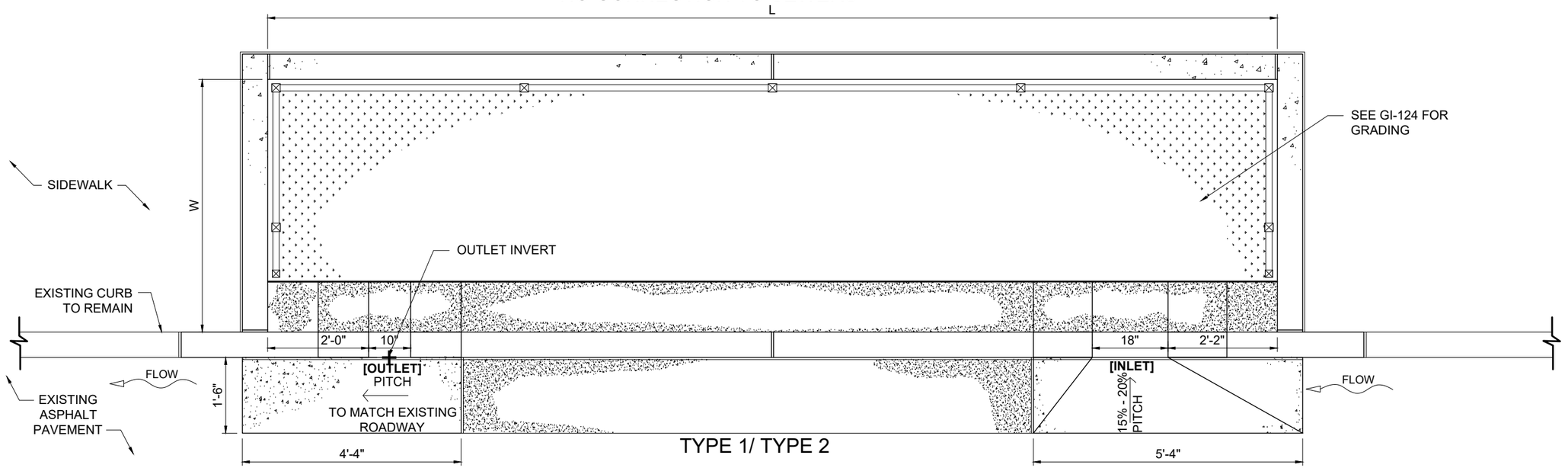
05-13-2022
DATE

GI–122

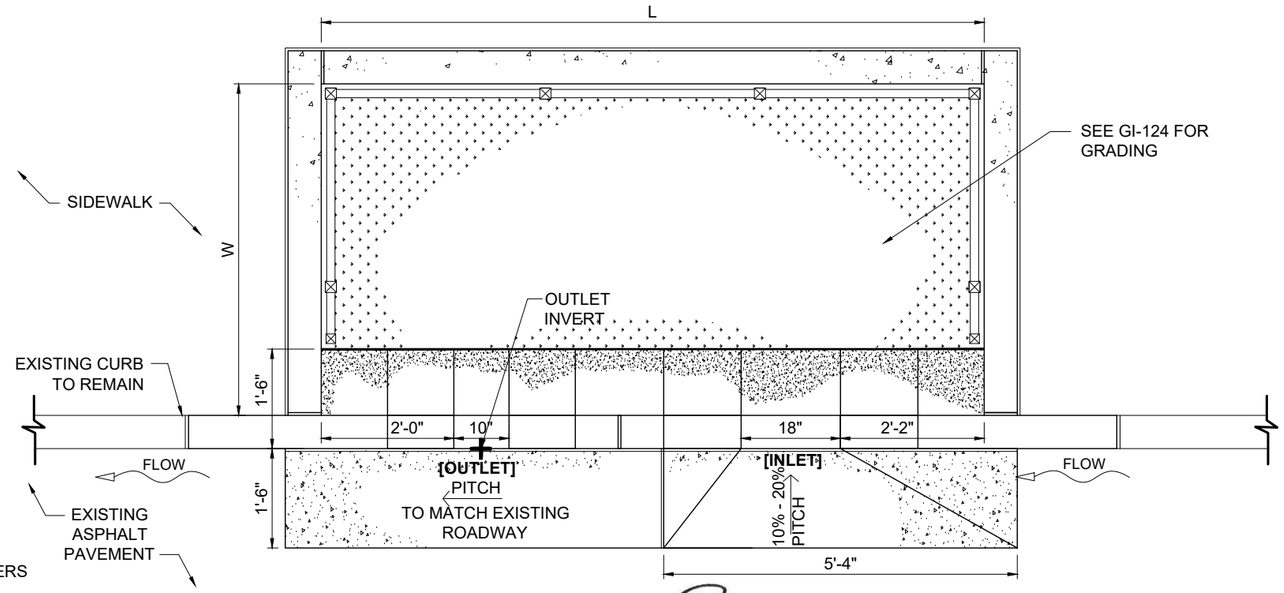
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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

- NO CONNECTION TO SEWERS



TYPE 1/ TYPE 2



TYPE 3

R.O.W. BIOSWALE OR RAIN GARDEN DETAILS			PLANTING PLAN
LENGTH (L), 1FT. INCREMENT	WIDTH (W), 6 IN. INCREMENT	TYPE	PAGE NUMBER
17' ≤ L ≤ 20'	4'-0" TO 6'-0"	TYPE 1	GI-501A-C
13' ≤ L ≤ 16'	4'-0" TO 6'-0"	TYPE 2	
10' ≤ L ≤ 12'	4'-0" TO 6'-0"	TYPE 3	

DIMENSION AND PLANTING PLAN SCHEDULE

NOTES:

1. STANDARD CROSS-SECTIONAL DETAILS AND NOTES AS PER THE R.O.W. BIOSWALE OR R.O.W. RAIN GARDEN TYPE SPECIFIED.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR WILL CONFIRM THE LEVELS OF THE R.O.W. BIOSWALE OR R.O.W. RAIN GARDEN TO PREVENT FLOODING.
3. DOT APPROVAL REQUIRED FOR ALL WIDTHS GREATER THAN 5'.
4. 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.
5. TREES SPECIES AS DIRECTED BY DPR. TREES ARE ONLY PERMITTED IN R.O.W. BIOSWALES WITH AN ENGINEERED SOIL LAYER 24" DEEP.

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

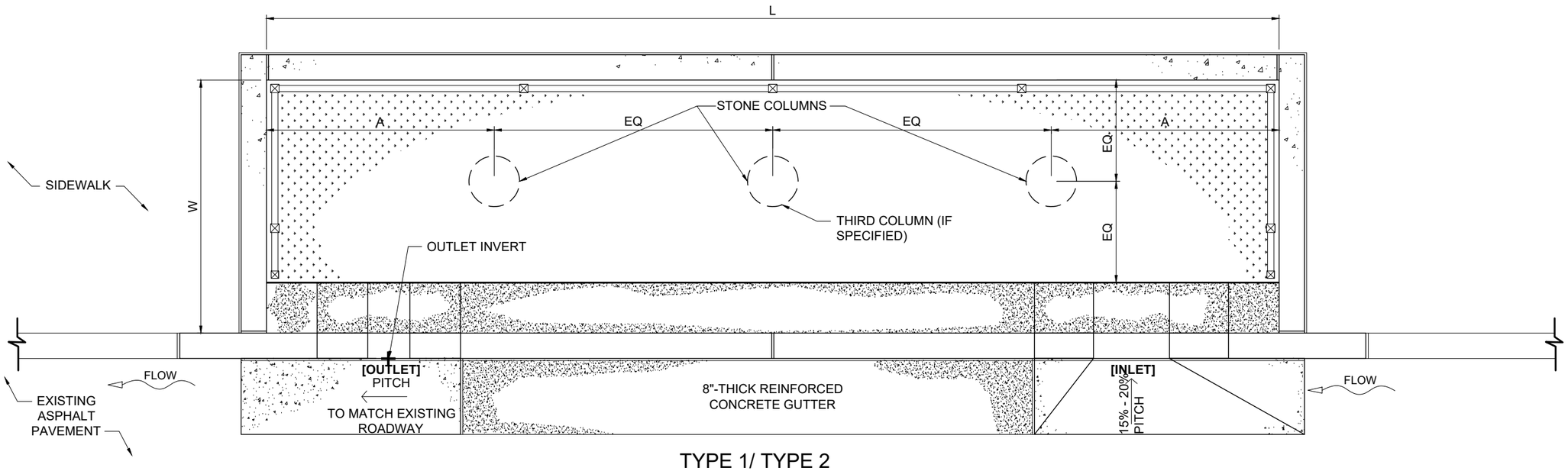
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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

- NO CONNECTION TO SEWERS

GI–123



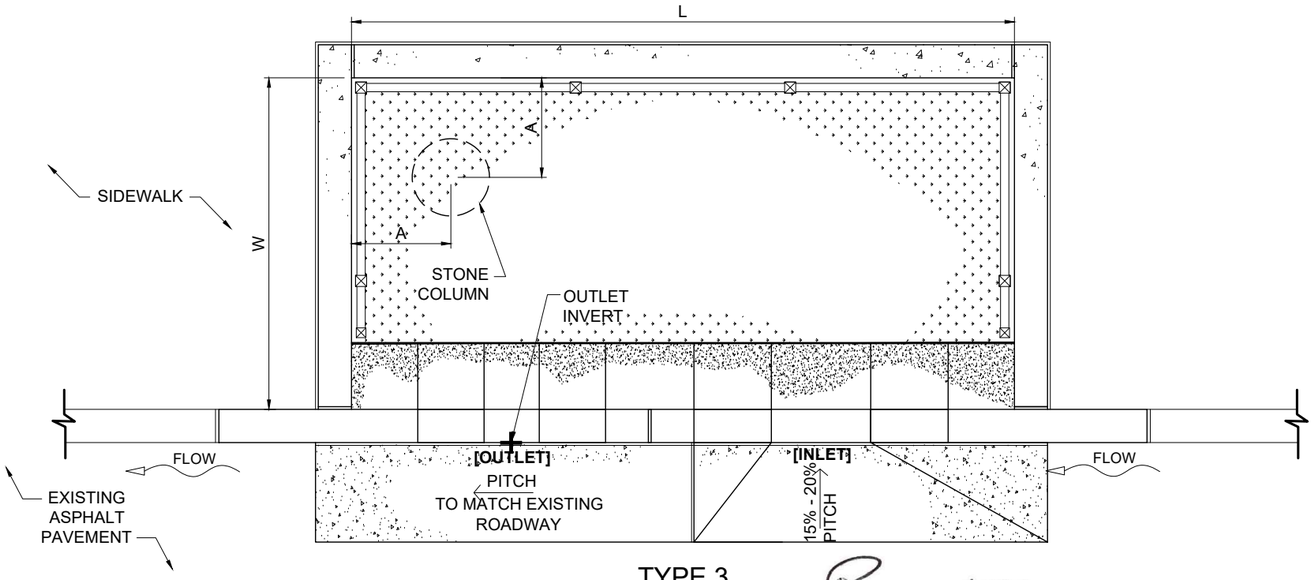
TYPE 1/ TYPE 2

R.O.W. BIOSWALE DETAILS			STONE COLUMN DETAILS	
LENGTH (L), 1FT. INCREMENT	WIDTH (W), 6 IN. INCREMENT	TYPE	NUMBER OF COLUMNS	A
17' ≤ L ≤ 20'	4'-0" TO 6'-0"	TYPE 1	3	4'-6"
13' ≤ L ≤ 16'	4'-0" TO 6'-0"	TYPE 2	2	3'-6"
10' ≤ L ≤ 12'	4'-0" TO 6'-0"	TYPE 3	1	1'-6"

DIMENSION SCHEDULE

NOTES:

1. STANDARD STONE COLUMN CROSS SECTIONAL DETAILS AS SPECIFIED.
2. THIRD STONE COLUMN LOCATED IN CENTER OF ROWB.
3. ROWB WITH THREE STONE COLUMNS WILL NOT CONTAIN A TREE.
4. TOP OF STONE COLUMN COVER BELOW INTERFACE OF ENGINEERED SOIL AND STONE BASE.
5. DEPTH OF BOTTOM OF STONE COLUMNS SHALL BE MEASURED FROM SURFACE GRADE.



TYPE 3

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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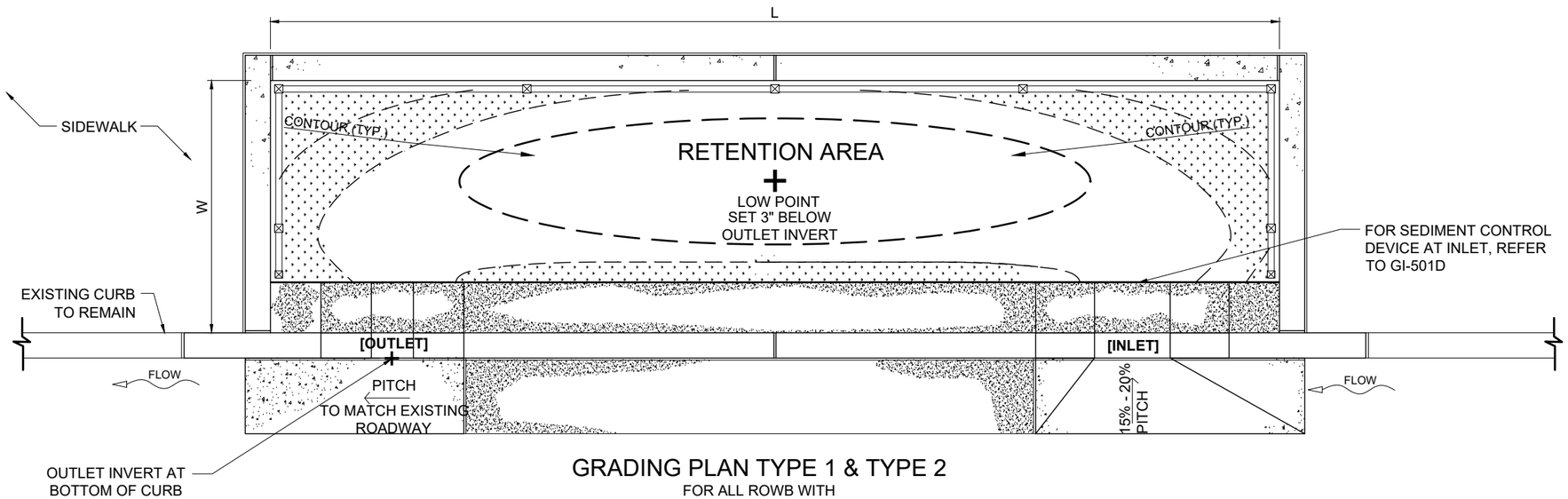
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

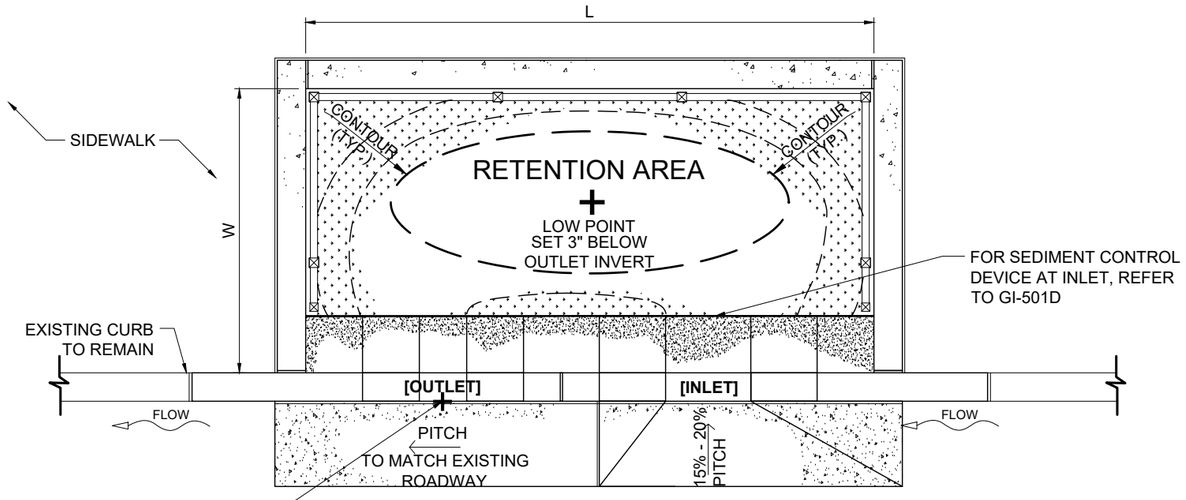
SURFACE GRADING PLANS FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

- NO CONNECTION TO SEWERS



GRADING PLAN TYPE 1 & TYPE 2

FOR ALL ROWB WITH
L = 13' OR GREATER



GRADING PLAN TYPE 3

FOR ALL ROWB L = LESS THAN 13'

NOTES:

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

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

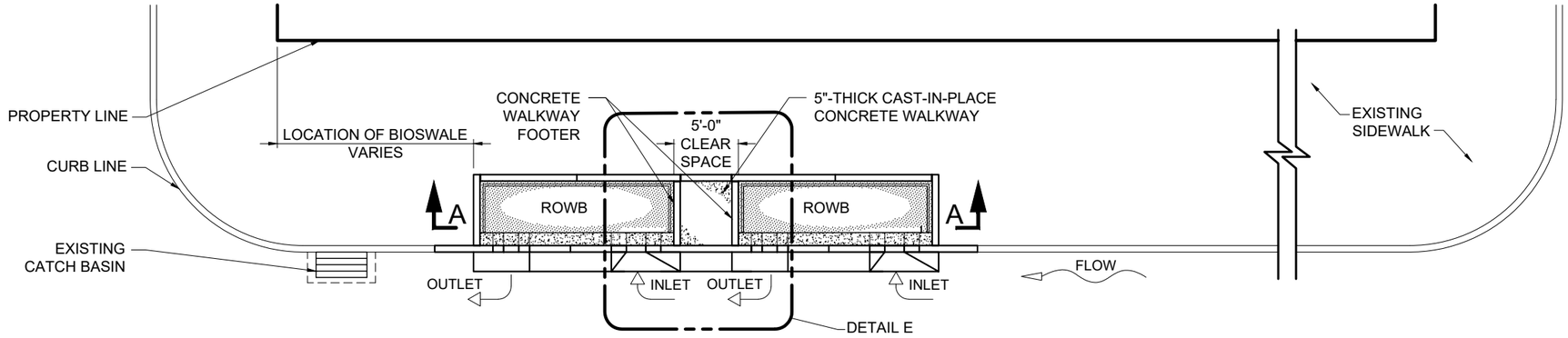
05-13-2022
DATE

GI–125

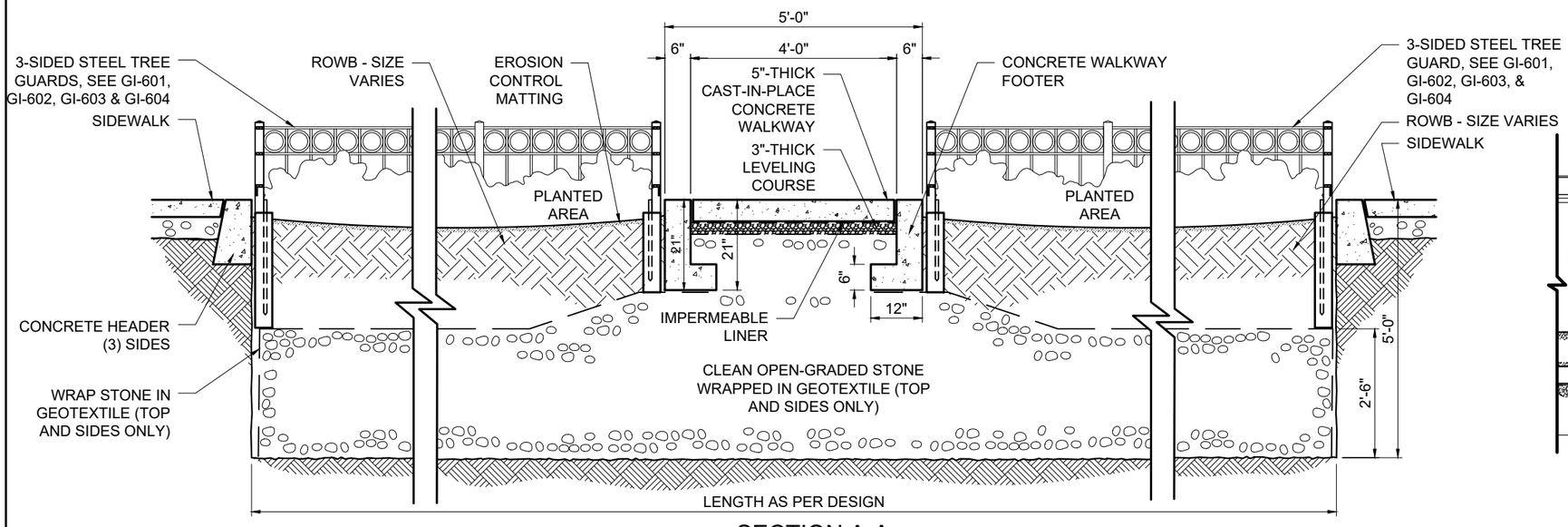
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR HYDRAULICALLY CONNECTED R.O.W. BIOSWALE

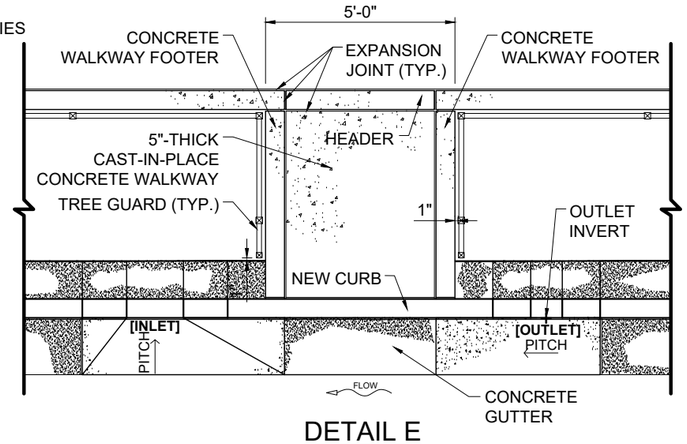
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A



DETAIL E
CONCRETE WALKWAY

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

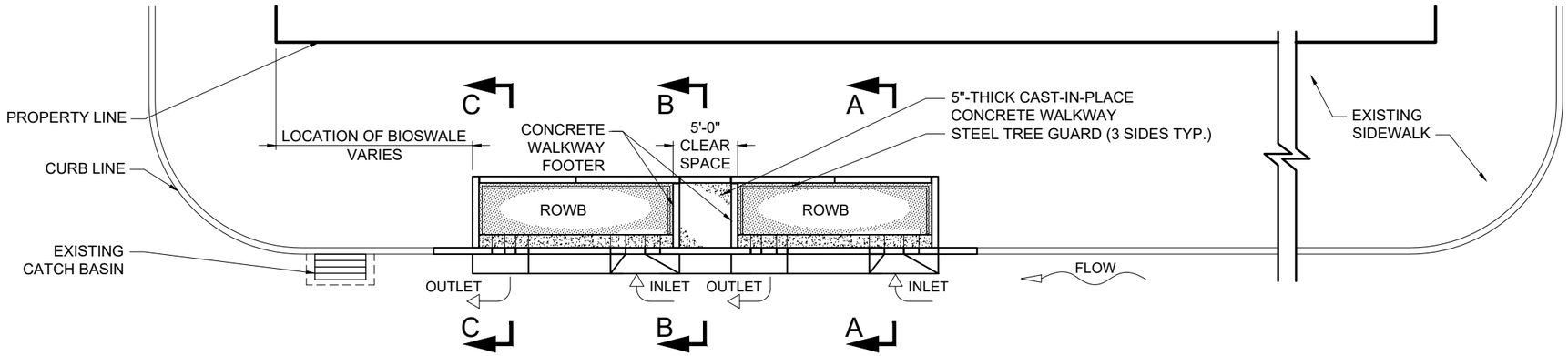
GI–125A

GI–125A

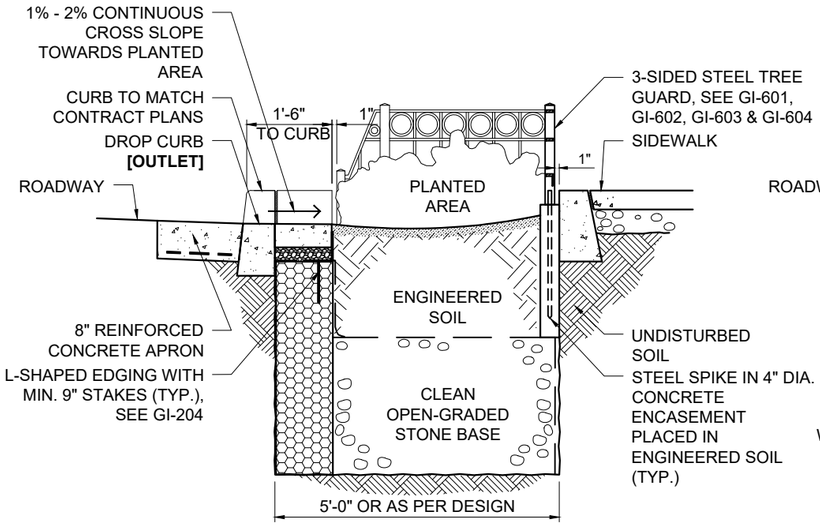
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR HYDRAULICALLY CONNECTED R.O.W. BIOSWALE

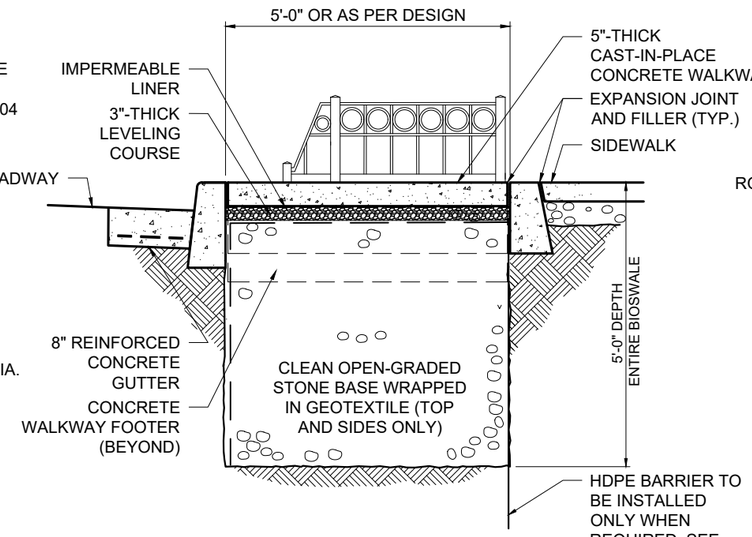
- NO CONNECTION TO SEWERS



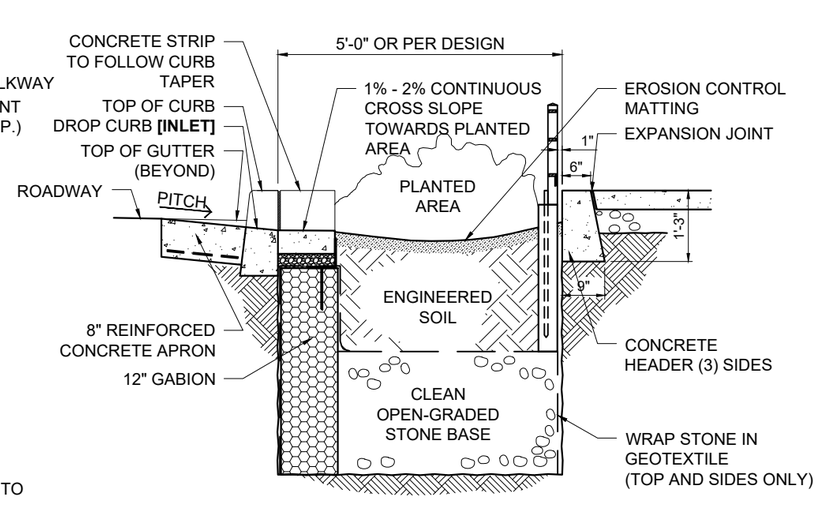
PLAN



SECTION C-C
AT OUTLET



SECTION B-B
AT WALKWAY



SECTION A-A
AT INLET

NOTE:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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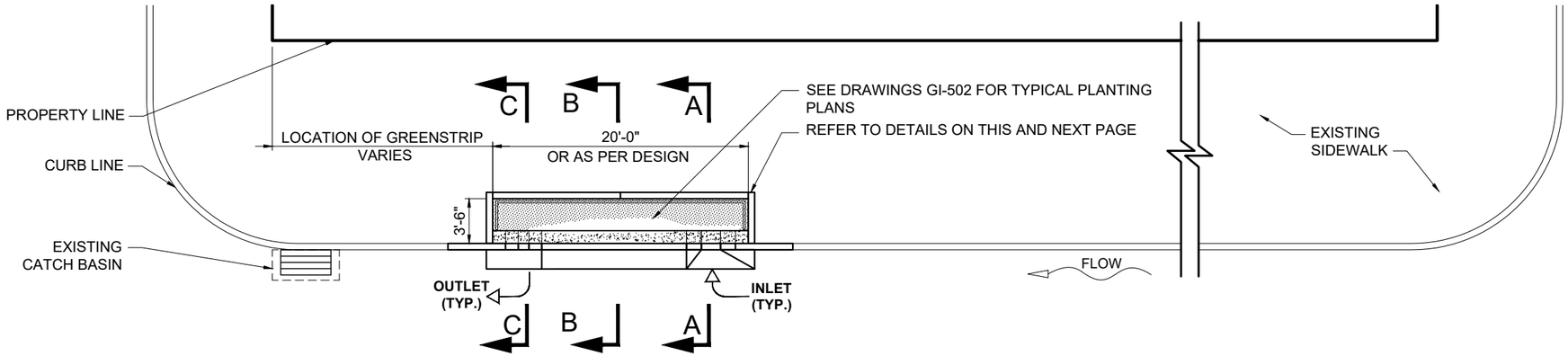
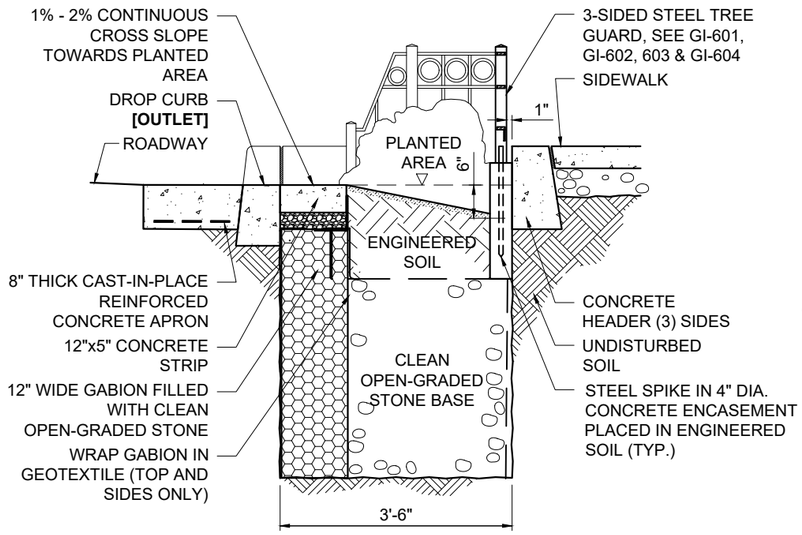
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x3'-6" R.O.W. GREENSTRIP TYPE 1

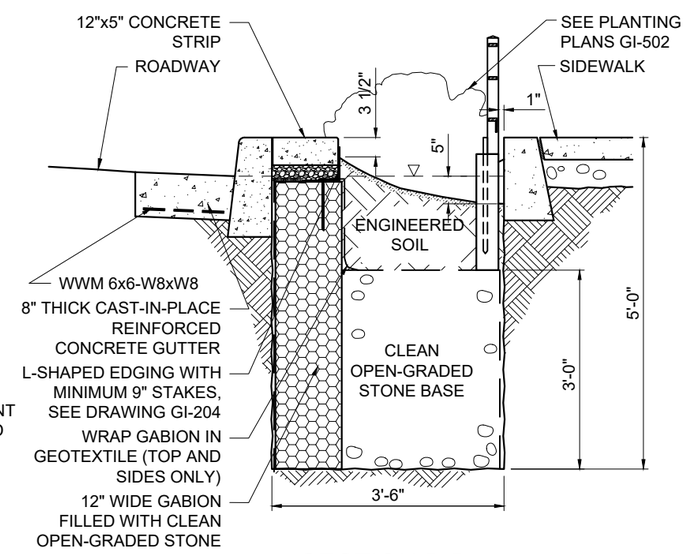
- NO CONNECTION TO SEWERS



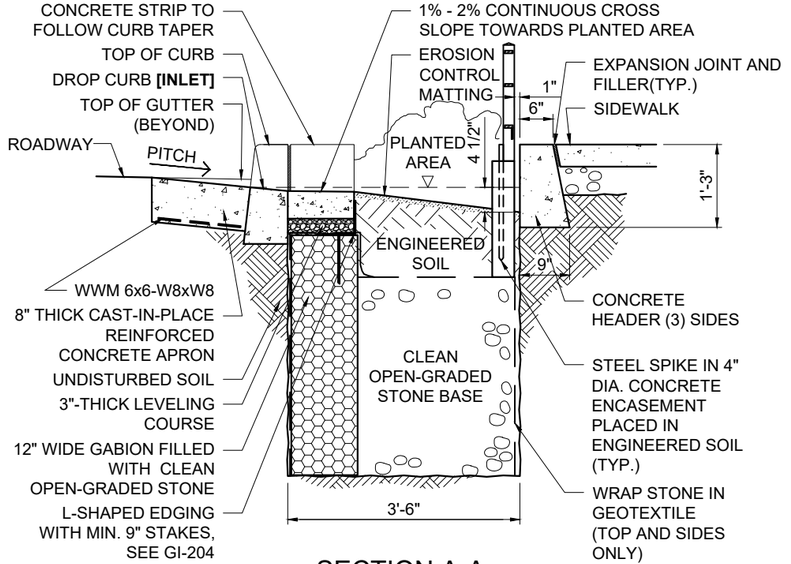
PLAN



SECTION C-C
AT GREENSTRIP OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT GREENSTRIP INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x3'-6" R.O.W. GREENSTRIP TYPE 1

- NO CONNECTION TO SEWERS

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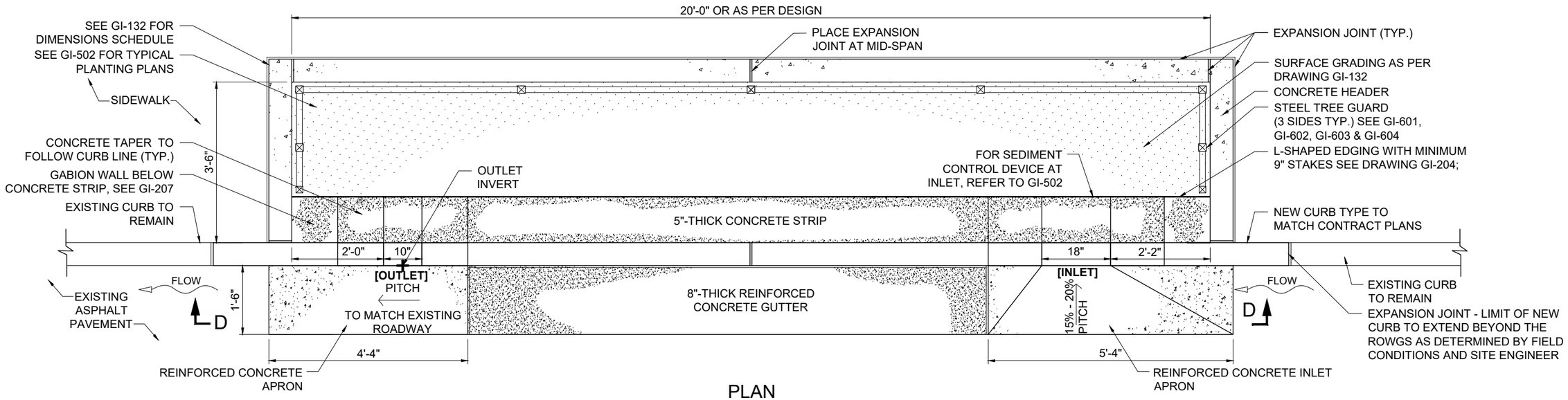
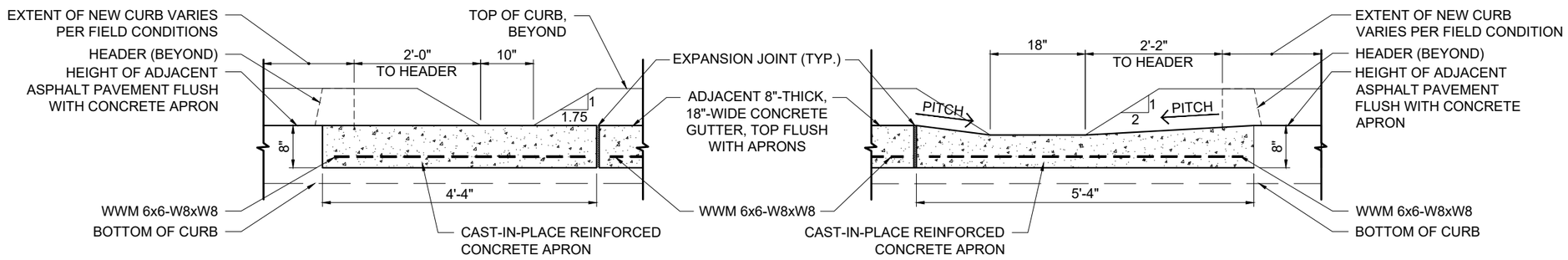


PLAN



SECTION D-D

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

GI–128

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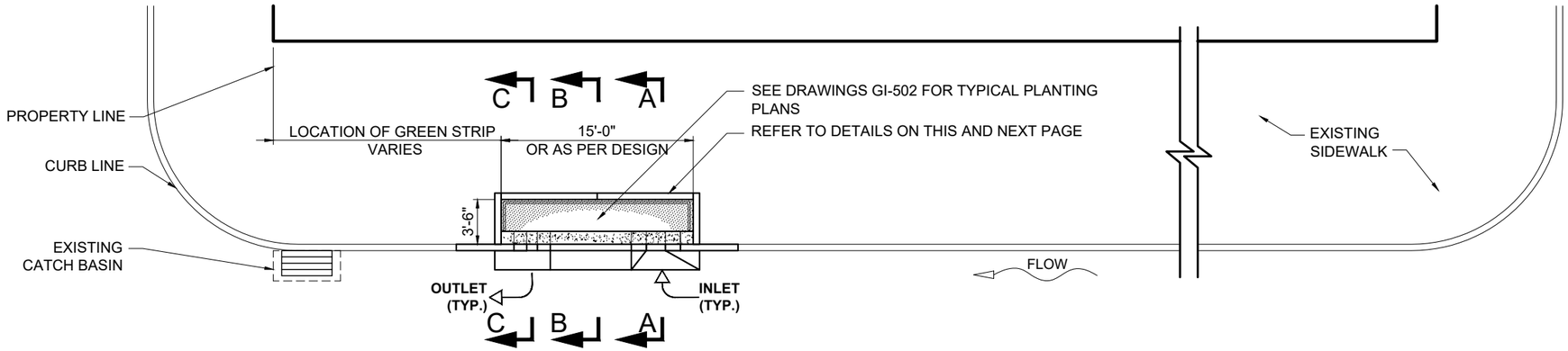
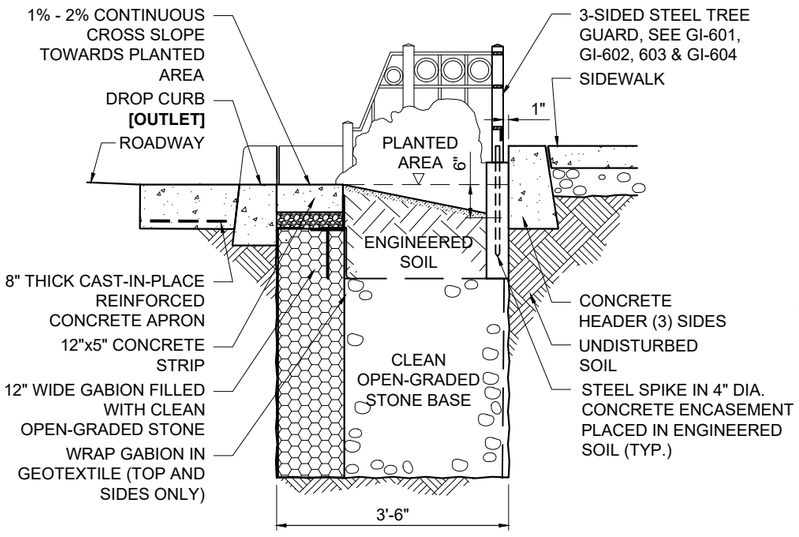
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x3'-6" R.O.W. GREENSTRIP TYPE 2

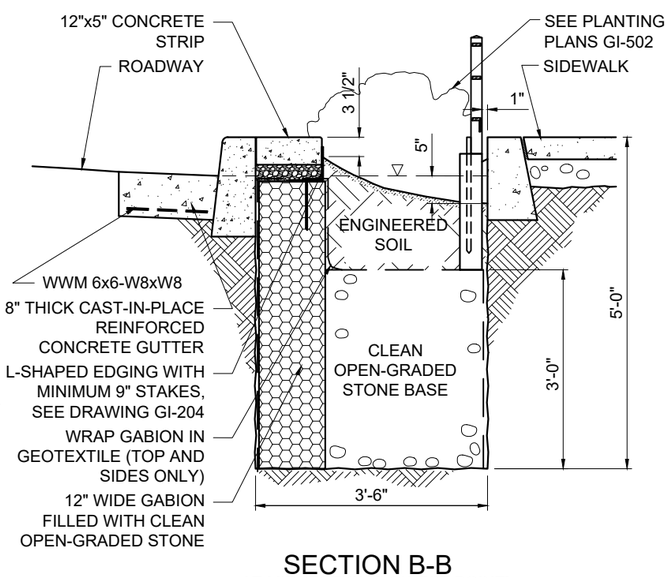
- NO CONNECTION TO SEWERS



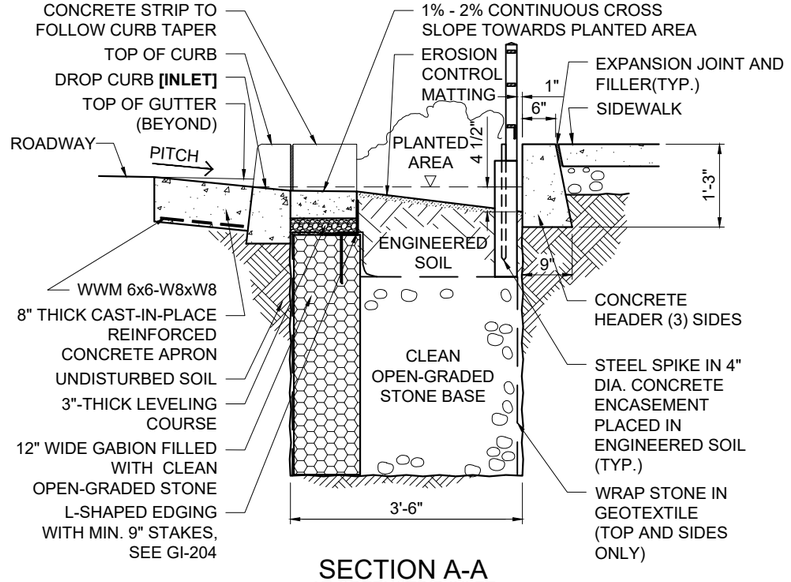
PLAN



SECTION C-C
AT GREENSTRIP OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT GREENSTRIP INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

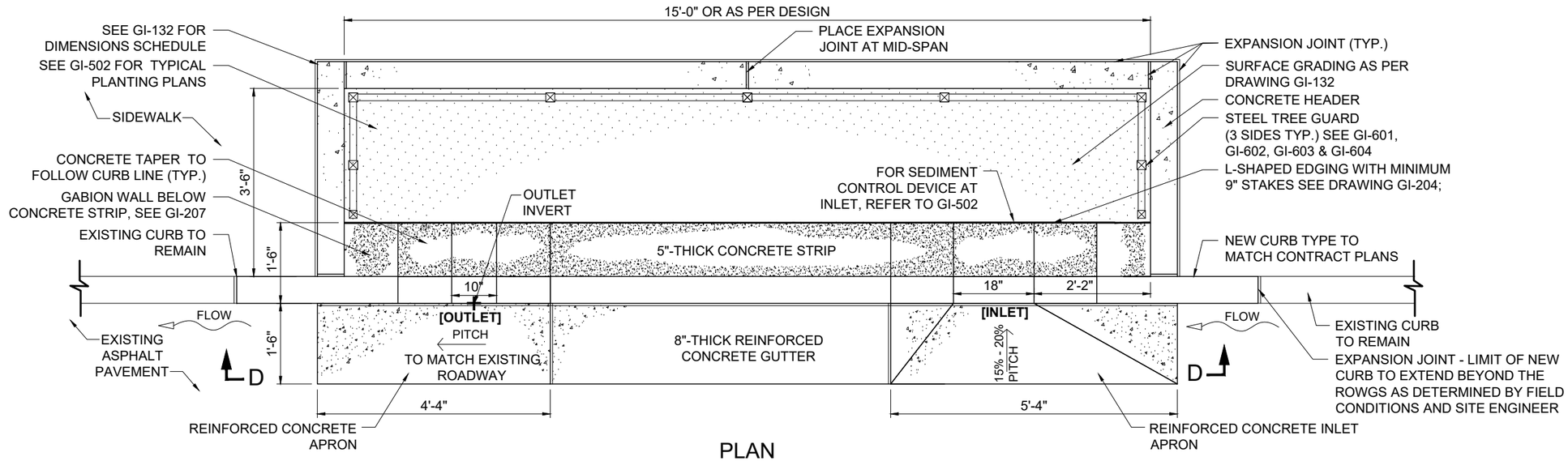
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

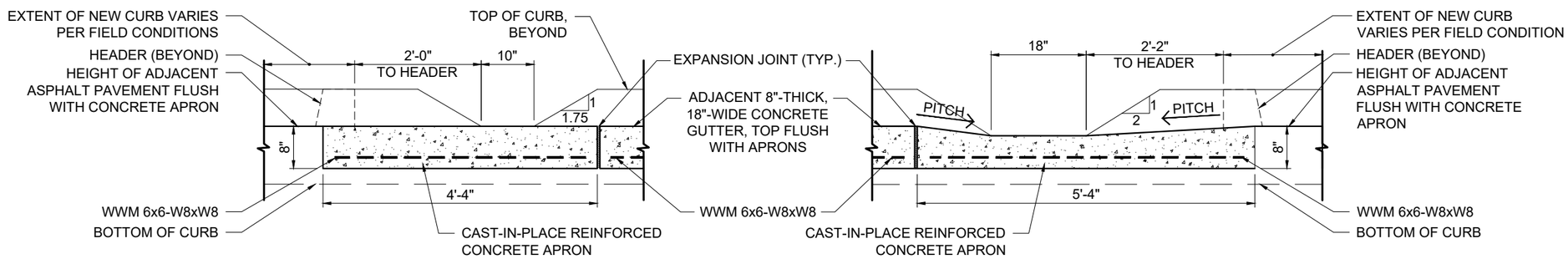
STANDARD FOR 15'x3'-6" R.O.W. GREENSTRIP TYPE 2

- NO CONNECTION TO SEWERS

GI–129



PLAN



SECTION D-D

Rooppeshjoshi P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

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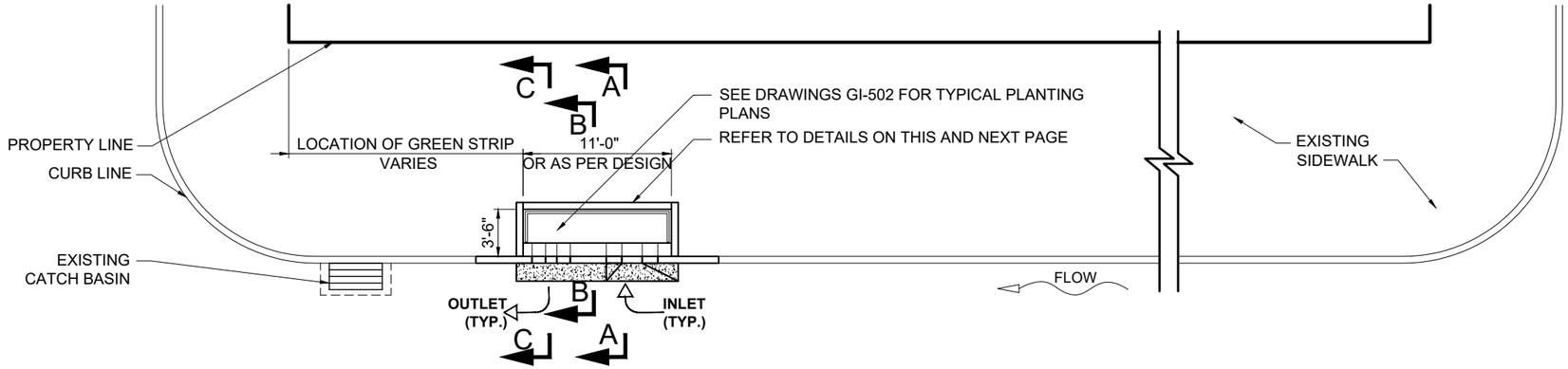
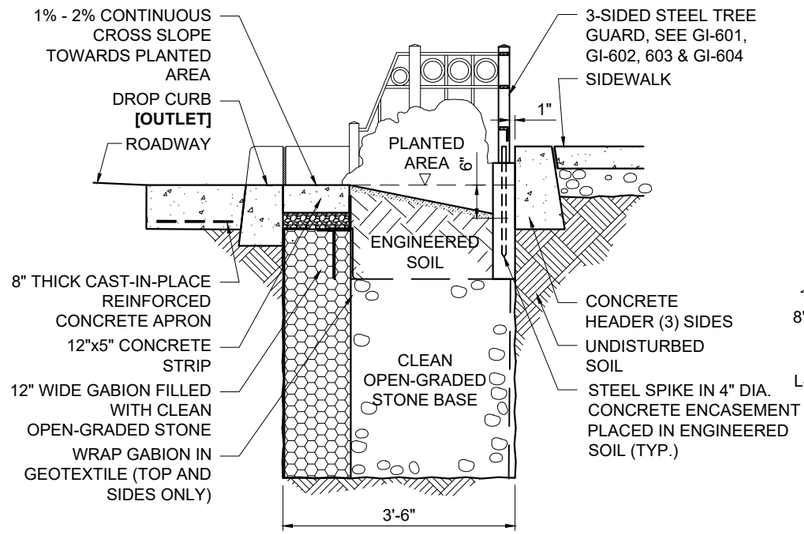
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 11' x 3'-6" R.O.W. GREENSTRIP TYPE 3

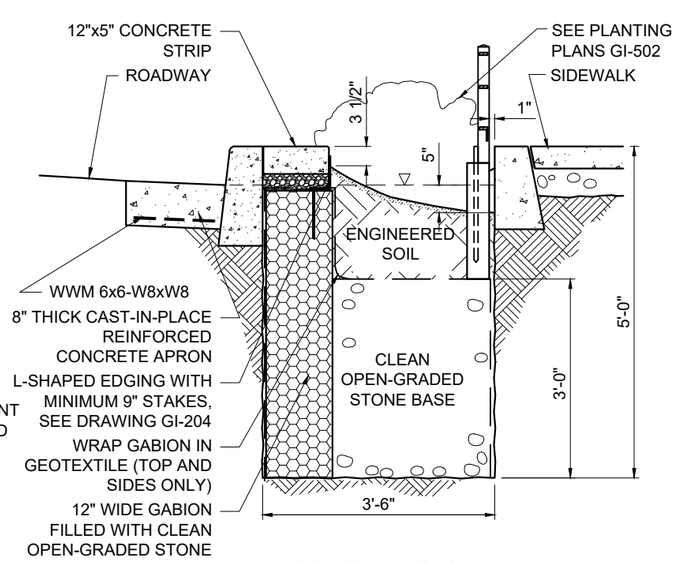
- NO CONNECTION TO SEWERS



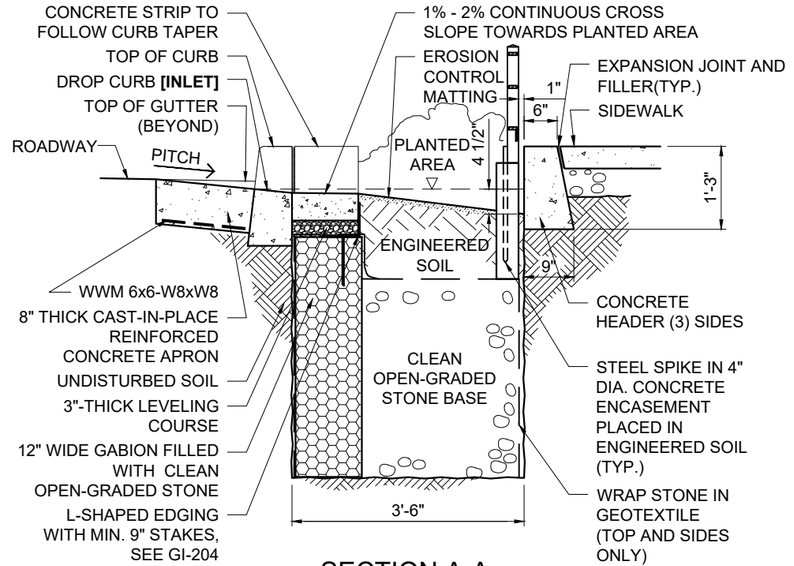
PLAN



SECTION C-C
AT GREENSTRIP OUTLET



SECTION B-B
AT MIDSECTION [LOWEST POINT]



SECTION A-A
AT GREENSTRIP INLET

NOTES:
1. CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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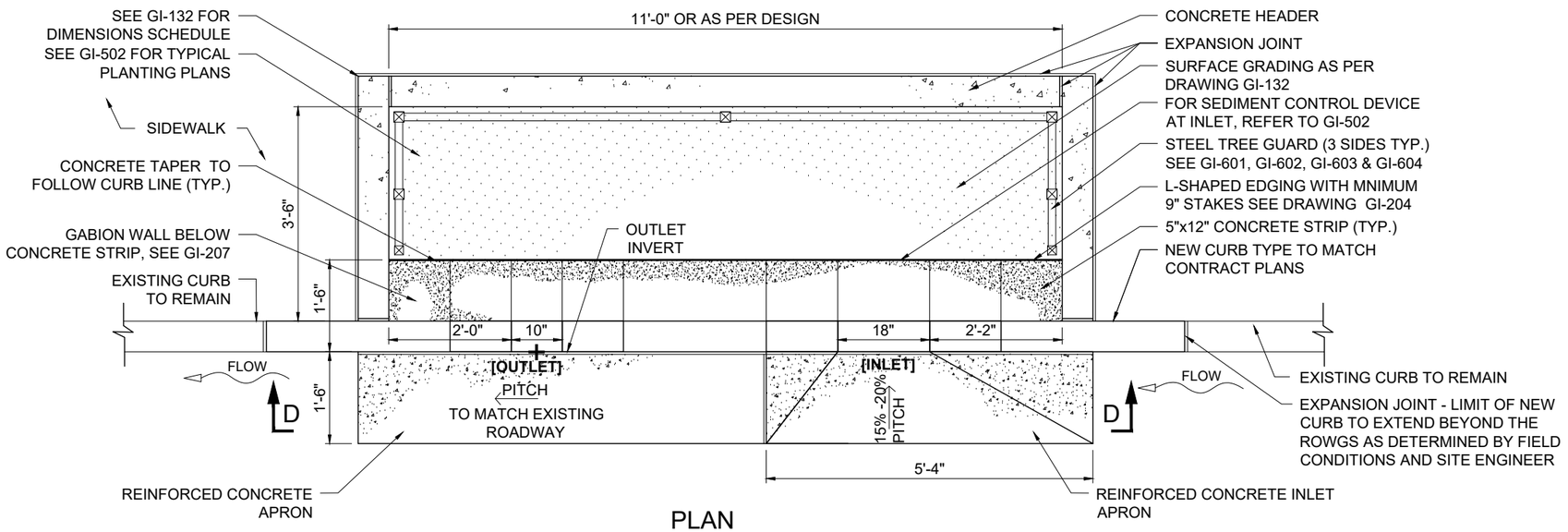
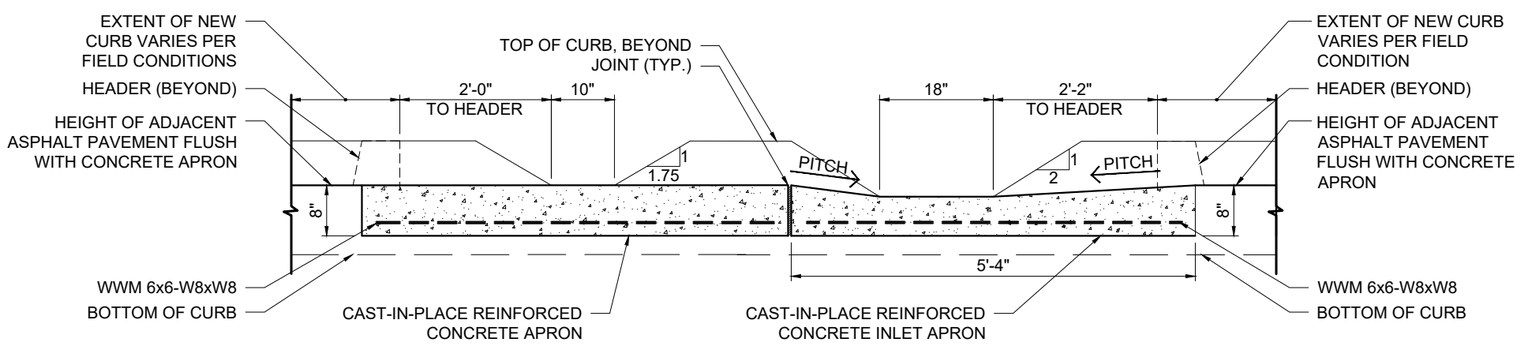
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 11' x 3'-6" R.O.W. GREENSTRIP TYPE 3

- NO CONNECTION TO SEWERS



PLAN



SECTION D-D

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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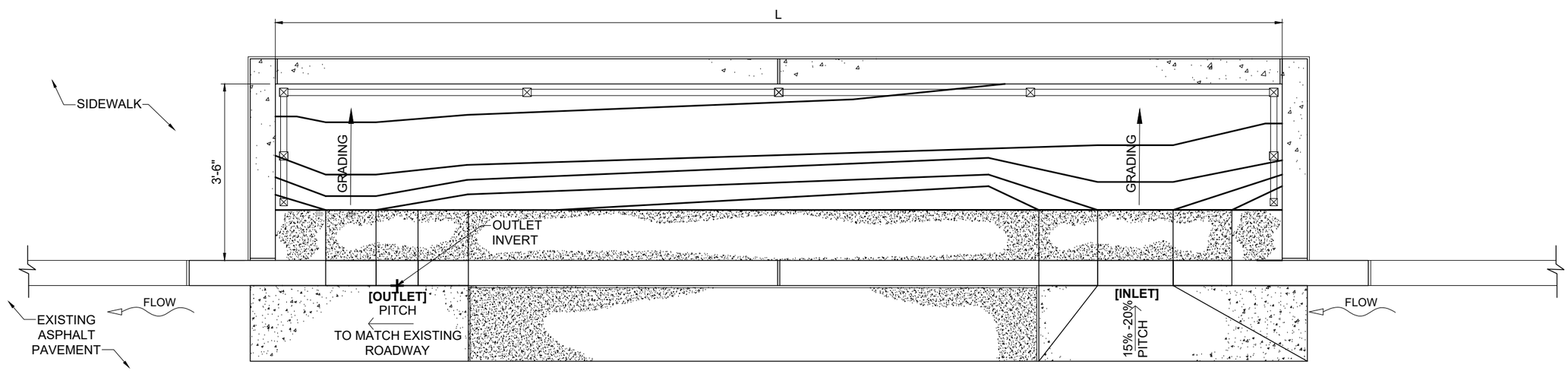
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

SURFACE GRADING & DIMENSION SCHEDULE PLANS FOR R.O.W. GREENSTRIPS

- NO CONNECTION TO SEWERS



TYPE 1 & TYPE 2 GRADING PLAN

GRADING NOTES:

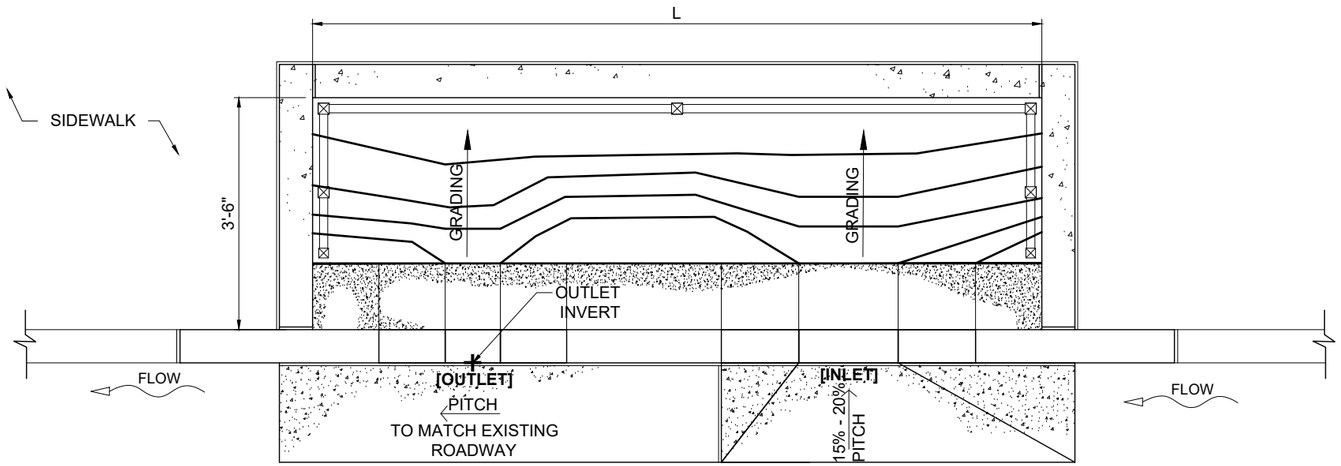
1. ALL SURFACE GRADING TO TAPER TOWARDS THE LOW POINT.
2. CONTOUR LINES SHOWN ON THIS DRAWING ARE SCHEMATIC ONLY AND DEPEND ON THE STREET GRADE.

R.O.W. GREEN STRIP			PLANTING PLAN
LENGTH (L), 1FT. INCREMENT	WIDTH	TYPE	PAGE NUMBER
17' ≤ L ≤ 20'	3'-6"	TYPE 1	GI-502
13' ≤ L ≤ 16'		TYPE 2	
11' ≤ L ≤ 12'		TYPE 3	

DIMENSION AND PLANTING PLAN SCHEDULE

DIMENSION AND PLANTING NOTES:

1. STANDARD CROSS-SECTIONAL DETAILS AND NOTES AS PER THE R.O.W. GREENSTRIP TYPE SPECIFIED.



TYPE 3 GRADING PLAN

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

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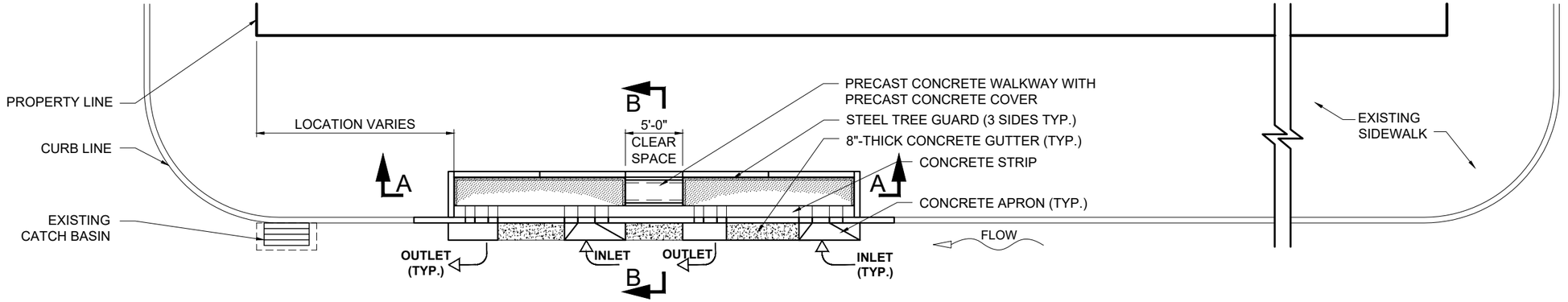
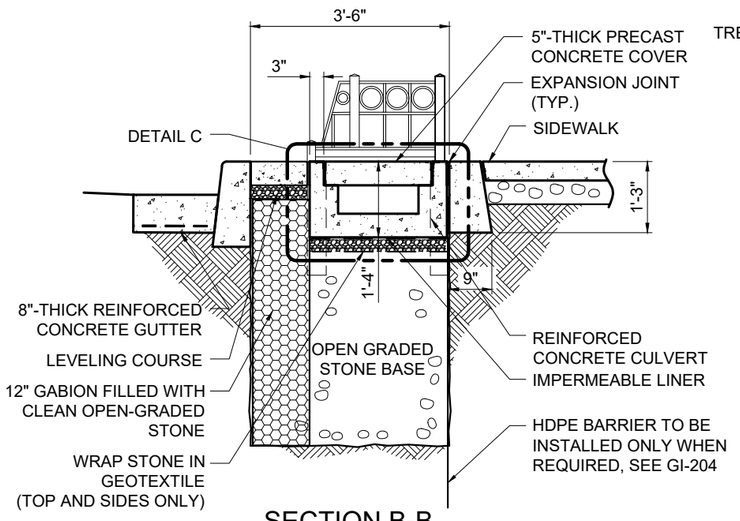
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR HYDRAULICALLY CONNECTED R.O.W. GREENSTRIPS

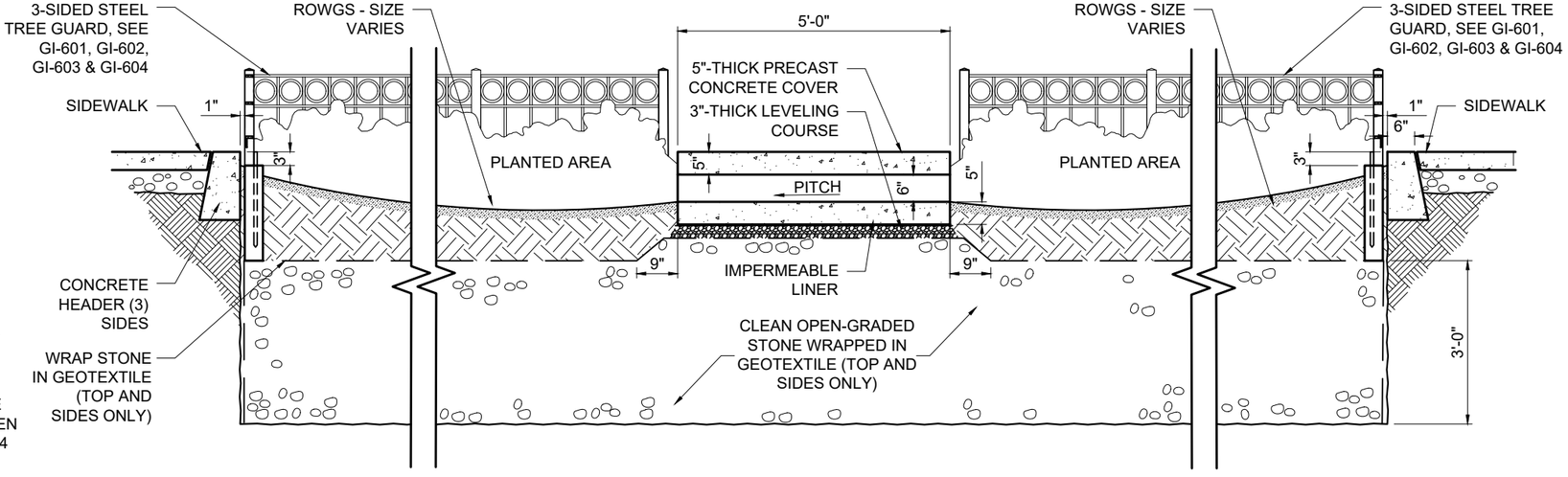
- NO CONNECTION TO SEWERS



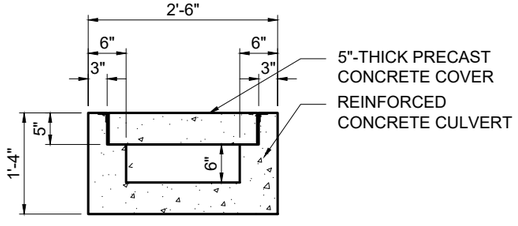
PLAN



SECTION B-B
AT PEDESTRIAN PATHWAY



SECTION A-A



DETAIL C

NOTES:
1. CAST-IN-PLACE CONCRETE REQUIRES IMPERMEABLE LINER UNDERNEATH.
2. ALL INLET AND OUTLET COMPONENTS INCLUDING TAPERS TO BE CAST-IN-PLACE.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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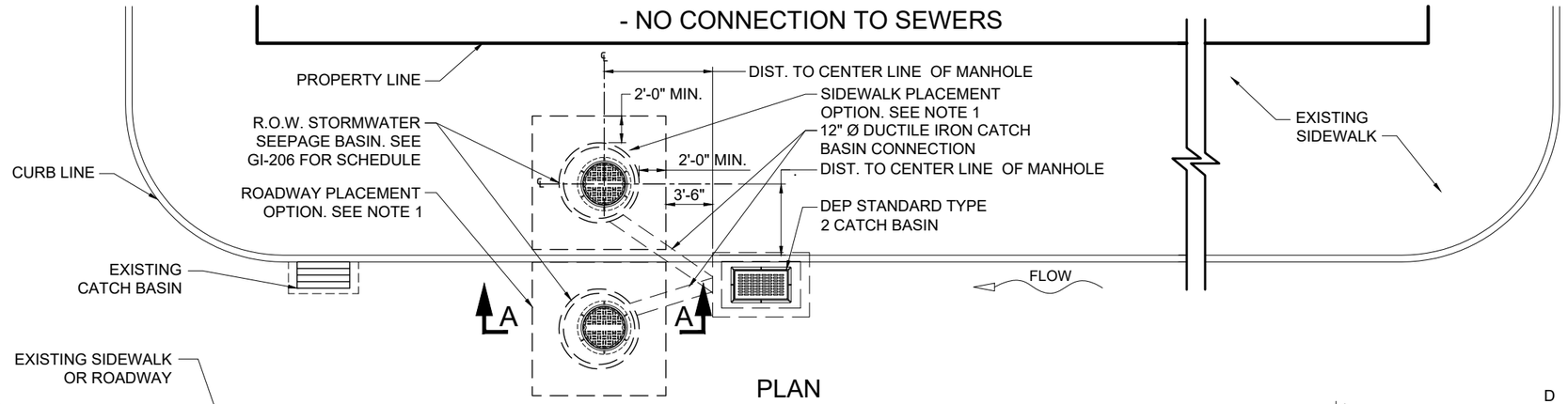
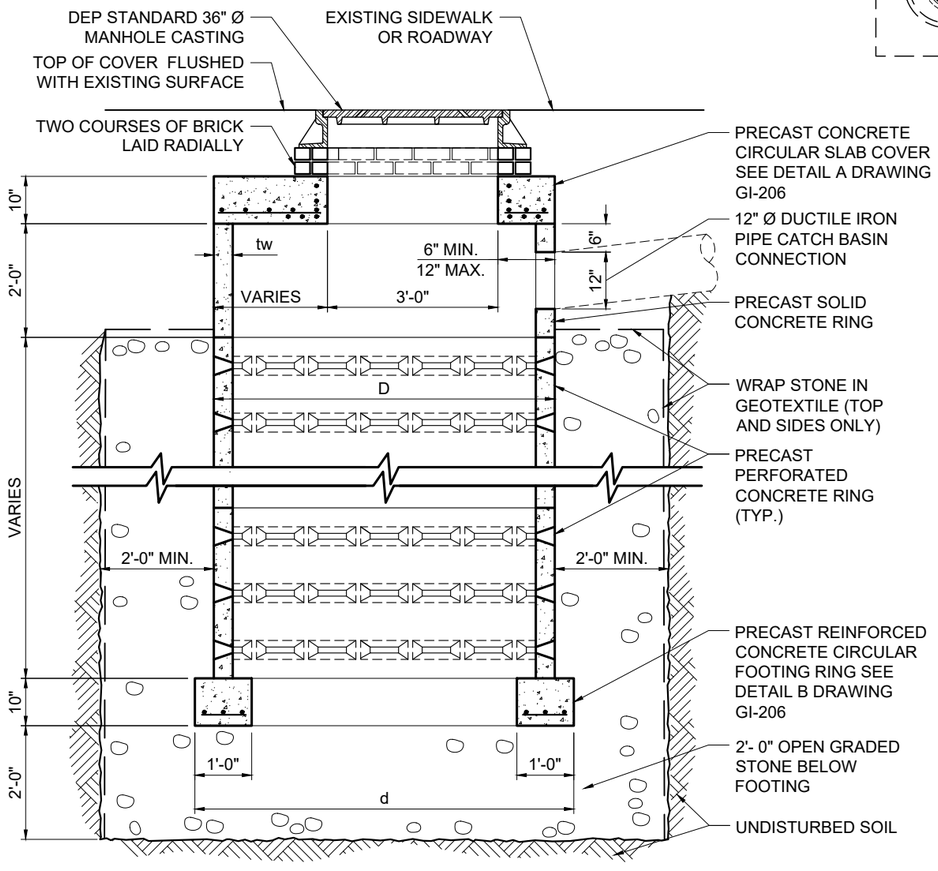
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR R.O.W. STORMWATER SEEPAGE BASIN WITH TYPE 2 CATCH BASIN

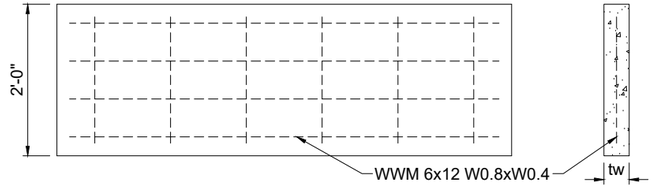
- NO CONNECTION TO SEWERS



PLAN

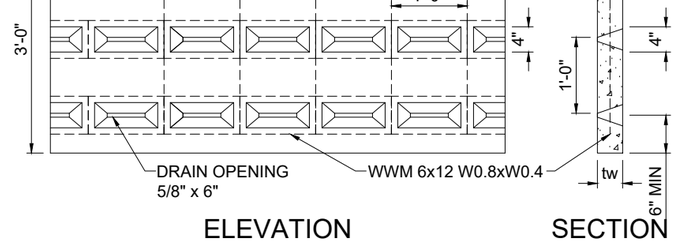


SECTION A-A



ELEVATION SECTION

PRECAST SOLID CONCRETE RING



ELEVATION SECTION

PRECAST PERFORATED CONCRETE RING

NOTES:

1. THE LOCATION OF THE ROW SEEPAGE BASIN SHALL BE SUCH THAT THE OPENING IN THE TOP SLAB TOGETHER WITH FRAME AND COVER SHALL BE ENTIRELY IN THE ROADWAY AREA OR ENTIRELY IN THE SIDEWALK AREA.
2. ALL SLABS AND RINGS SHALL BE PLACED ON A ONE HALF (1/2) INCH THICK FULL BED OF FRESH MORTAR.
3. SEEPAGE BASIN SOLID RING AND SEEPAGE RING REINFORCING COMPLIES WITH AREA REQUIREMENTS OF ASTM C478. EXCEPT THAT ALL WALL SECTIONS SHALL BE REINFORCED WITH WWM 6x12 W0.8xW0.4 PLACED IN CENTER OF WALL. IN SOLID RING 1-#4 HOOP SHALL BE PLACED AROUND ALL CAST PIPE OPENINGS. (THE 1-#4 HOOP WILL BE REQUIRED AT CORED OPENINGS FOR BASIN CONNECTIONS IN SOLID RINGS.) (ALL VALUES OF AREA OF STEEL (AS) ARE IN SQUARE INCHES AND ARE A MINIMUM.)
4. PRECAST PIPE OPENINGS AND CORED OPENINGS FOR CATCH BASIN CONNECTION WILL BE PLACED IN SOLID RING ONLY. NO CORED OPENING WILL BE ALLOWED IN SEEPAGE RINGS.
5. CORED OPENINGS IN SOLID RING WILL BE PERMITTED FOR UP TO 12" DIA. DUCTILE IRON CATCH BASIN CONNECTION ONLY.
6. PIPE OPENINGS WILL NOT BE PERMITTED THROUGH JOINTS. DISTANCE FROM TOP OR BOTTOM OF ANY SOLID RING SECTION SHALL BE A MINIMUM OF 6" FOR CORED OPENINGS FOR BASIN CONNECTIONS.
7. CONCRETE DESIGN MIX = 5,000 PSI (MIN. 28 DAY STRENGTH=4,000 PSI; MAX. W/C=0.47). REBARS - FS = 60,000 PSI. WWM - FS=65,000 PSI.
8. OPENINGS FOR SPACING AND HANDLING WILL BE ALLOWED IN UPPER PORTION OF SOLID RING. HOWEVER, THE CONTRACTOR SHALL FILL ALL SUCH OPENINGS WITH NON SHRINK GROUT IMMEDIATELY AFTER INSTALLATION.
9. IN NO CASE SHALL THE AREA OF THE DRAIN OPENING BE LESS THAN 3.0 SQ. IN.
10. THE CONTRACTOR SHALL HAND COMPACT THE OPEN GRADED STONE BENEATH THE CIRCULAR FOOTING PRIOR TO SETTING THE FOOTING IN PLACE.

Roopesh Joshi P.E. 05-13-2022

MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

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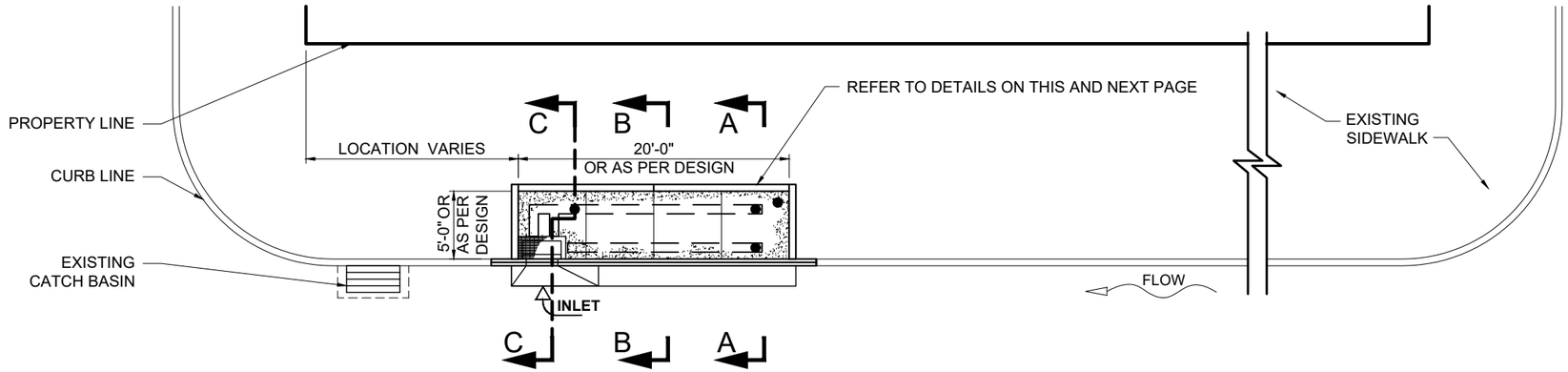
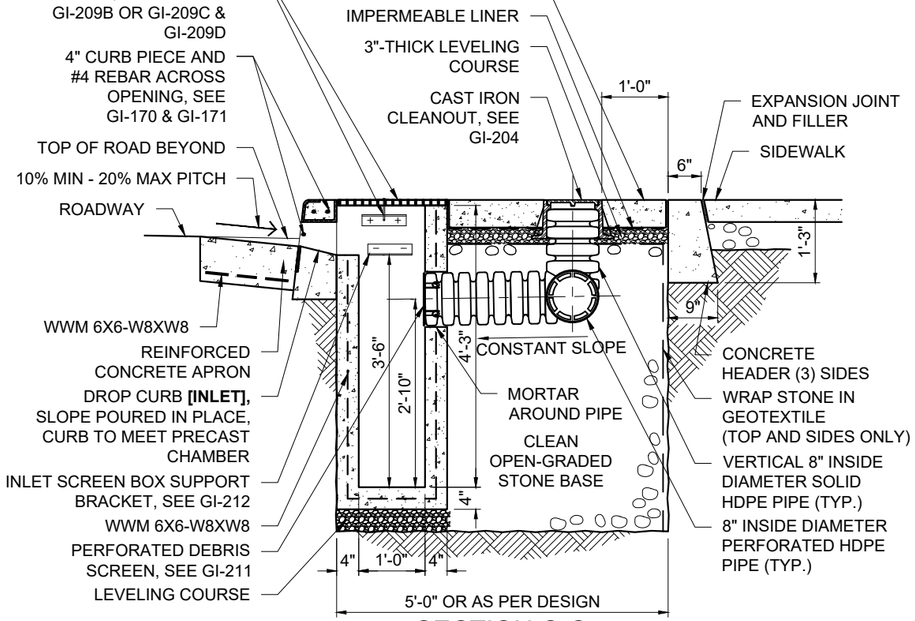
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 1

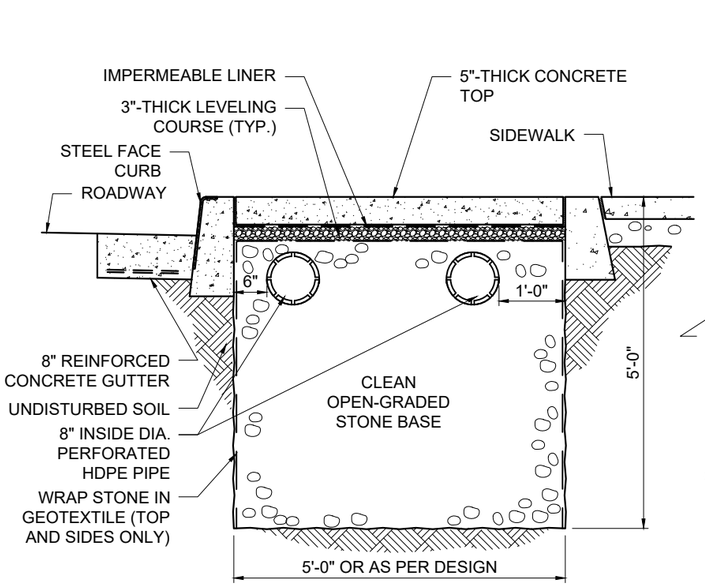
- NO CONNECTION TO SEWERS



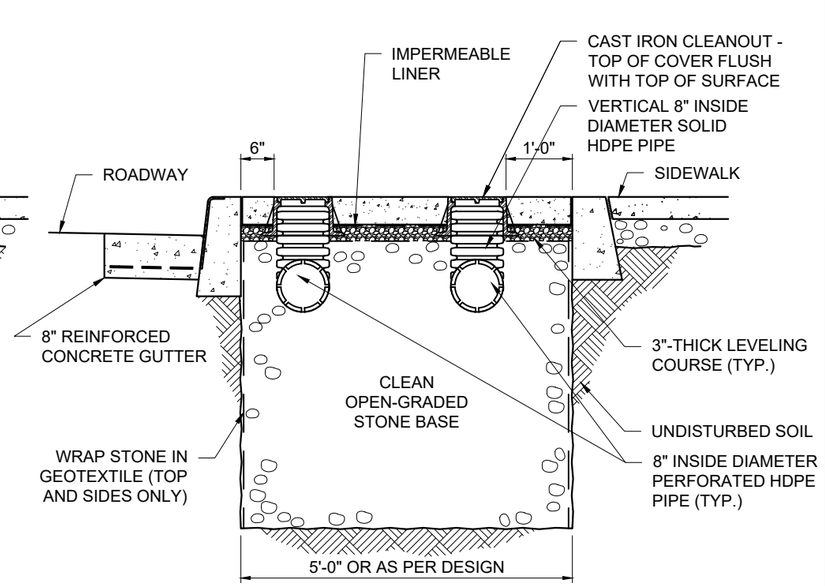
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

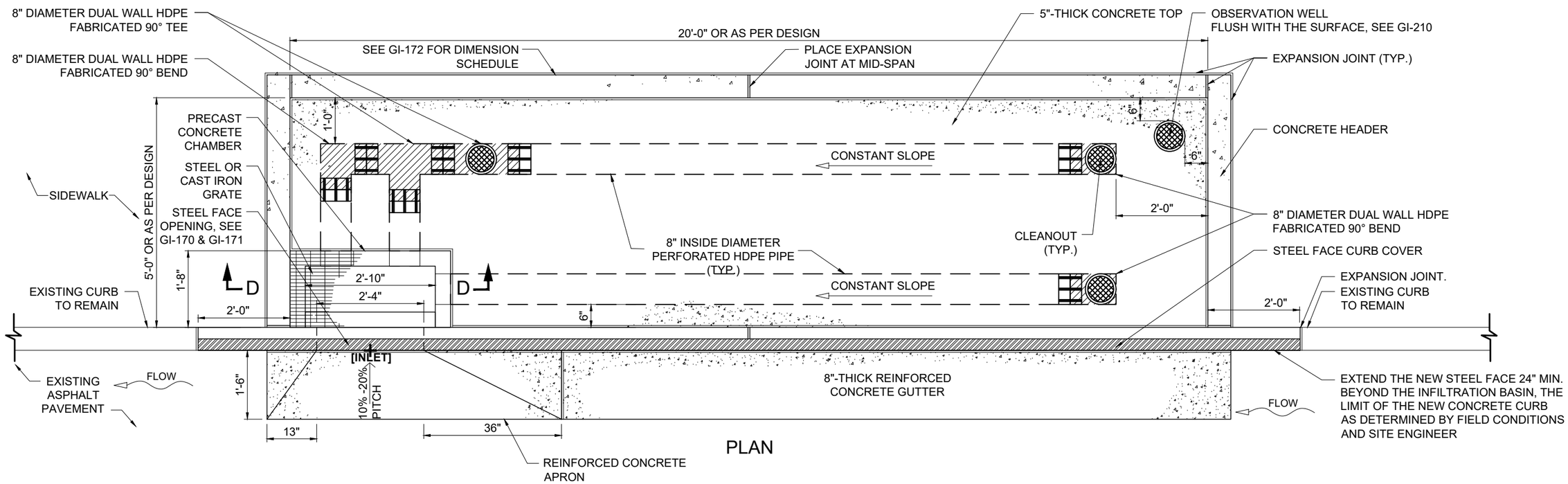
05-13-2022
DATE

GI–137

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 1

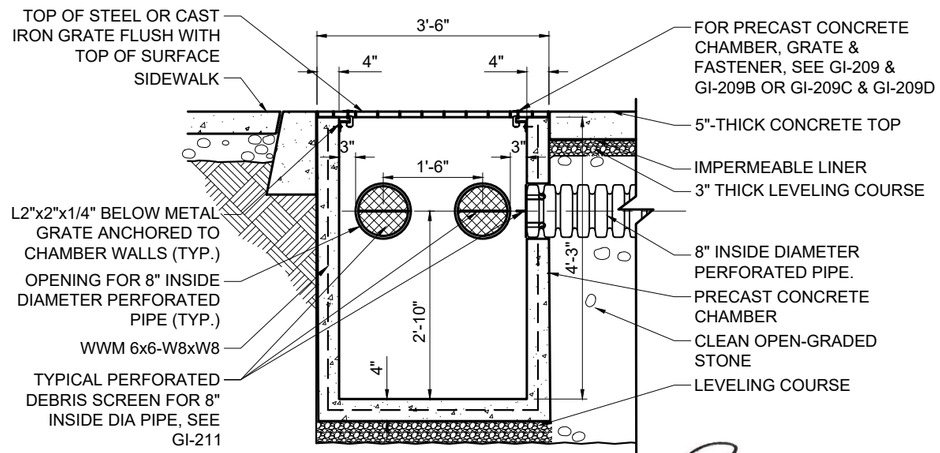
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

05-13-2022
DATE

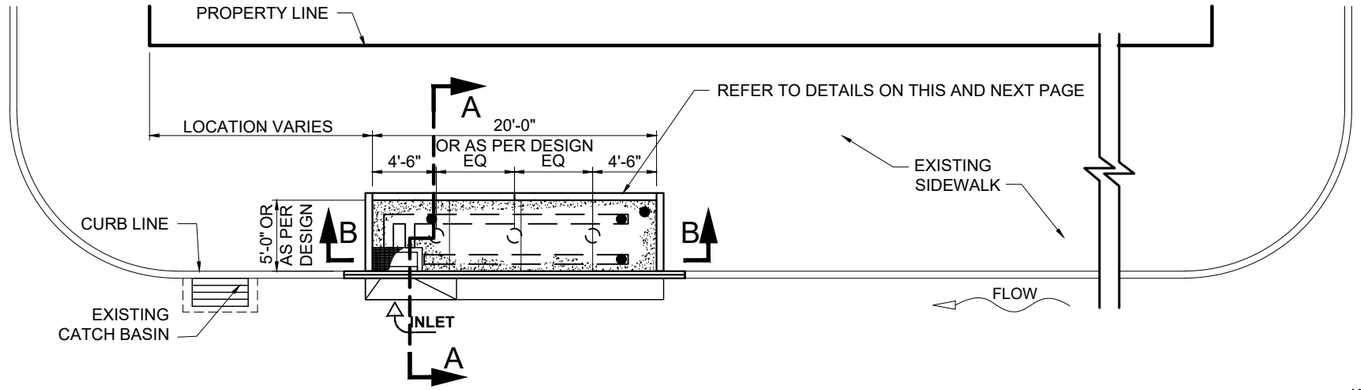
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–138

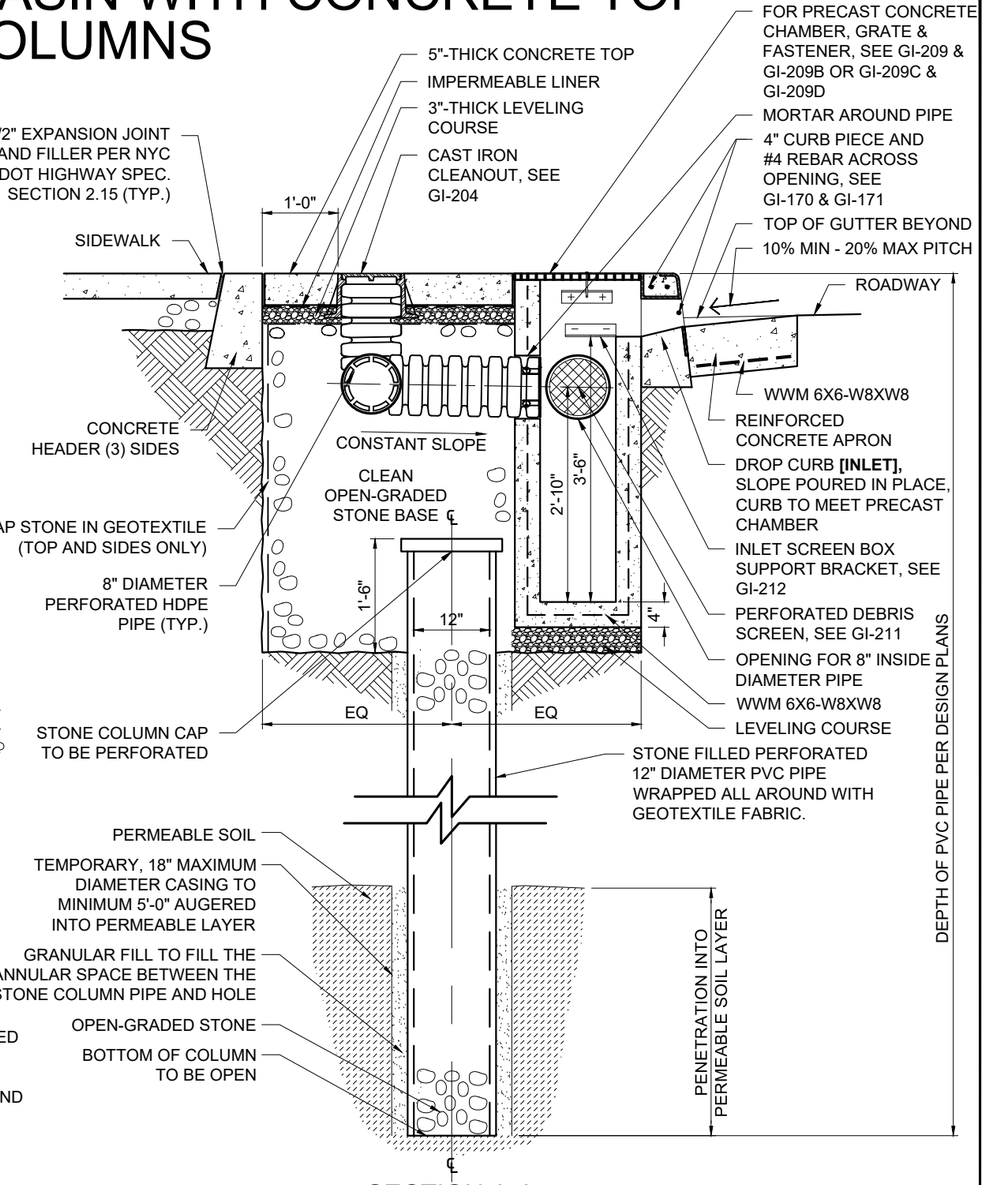
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 1A - WITH STONE COLUMNS

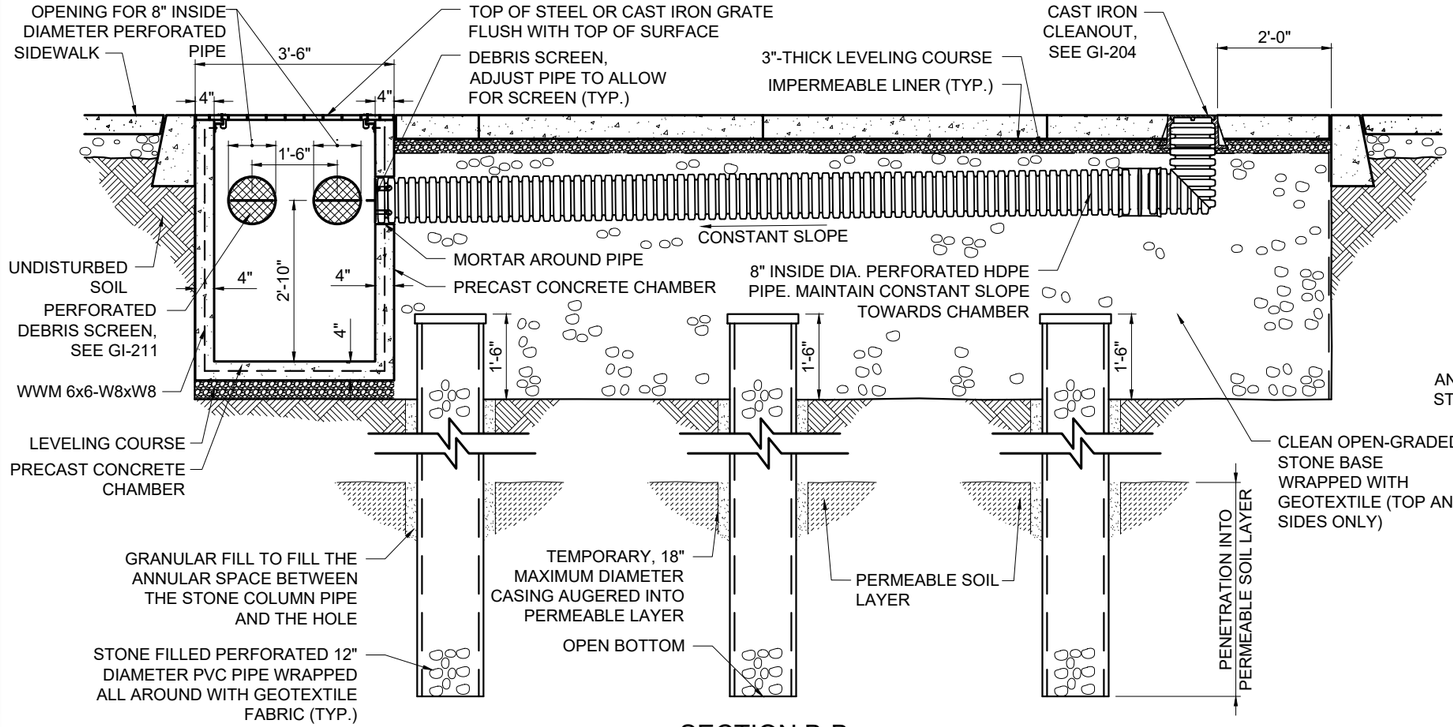
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A
AT INFILTRATION BASIN STONE COLUMN



SECTION B-B

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

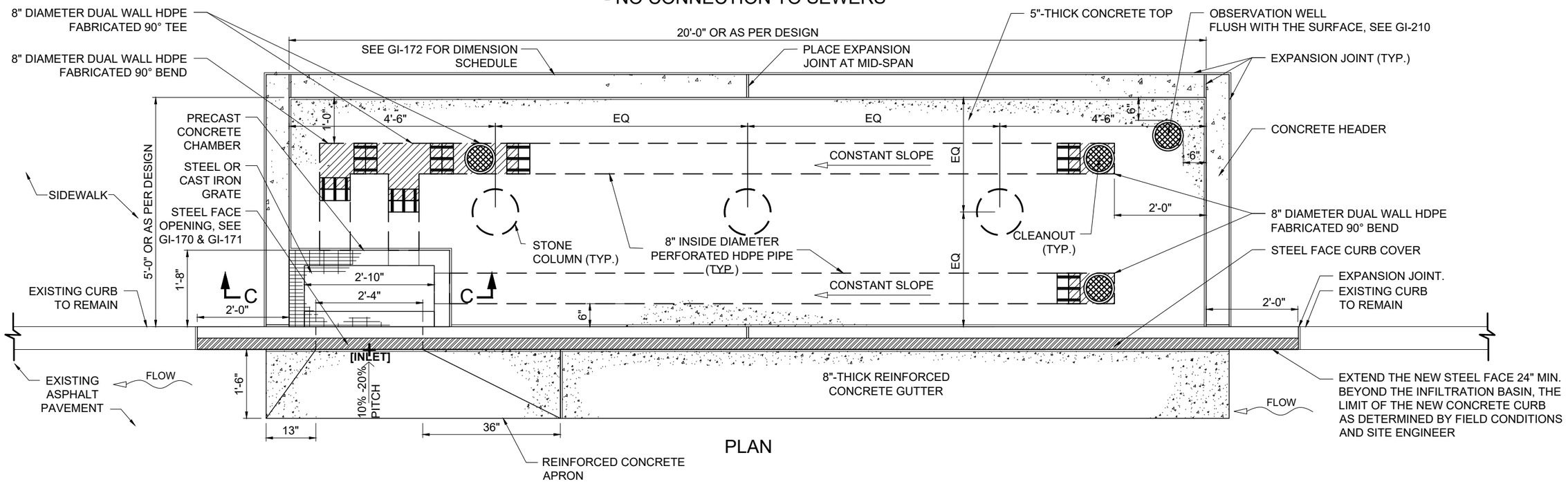
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 1A - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS

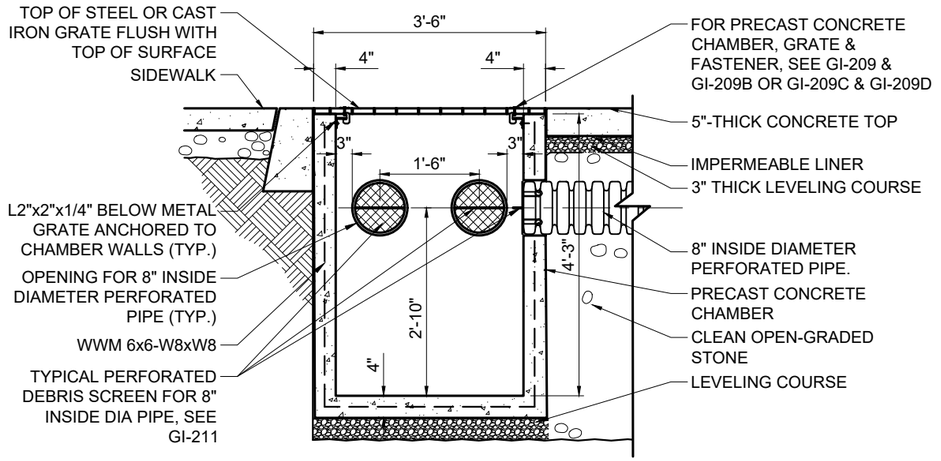
GI–139



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION C-C

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.

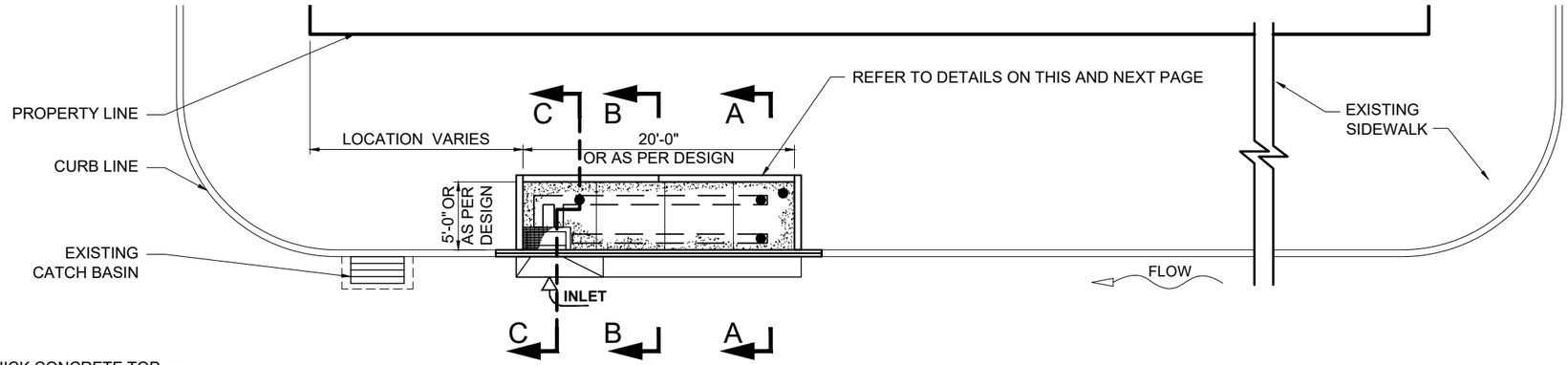
Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
DATE

GI–140

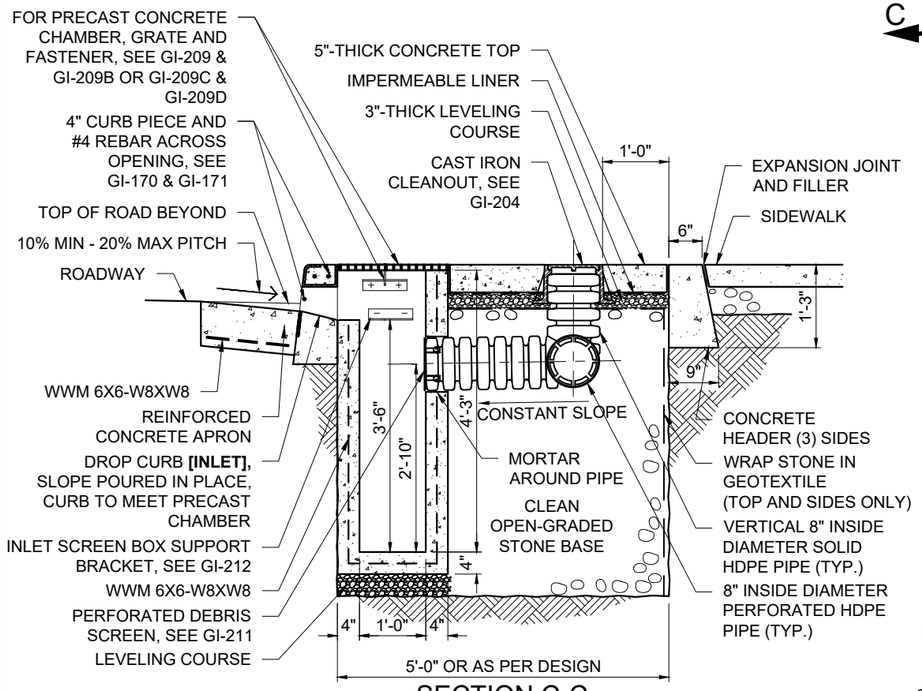
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 1C - WITH STORMWATER CHAMBER

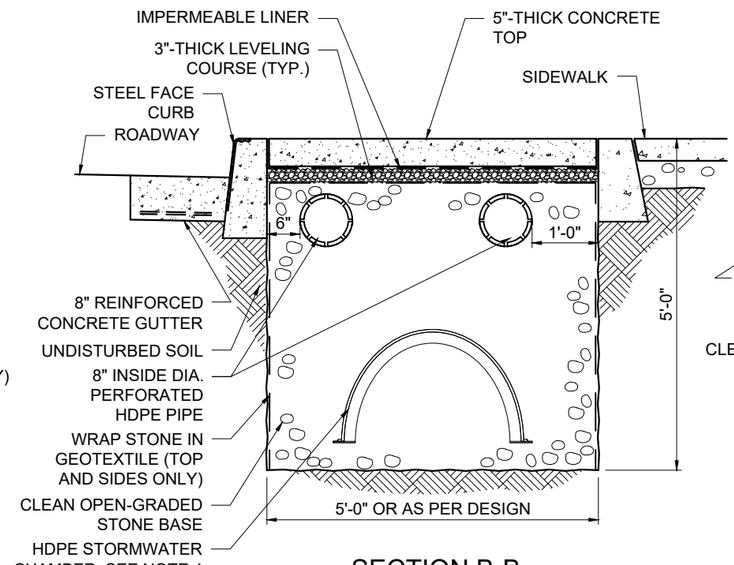
- NO CONNECTION TO SEWERS



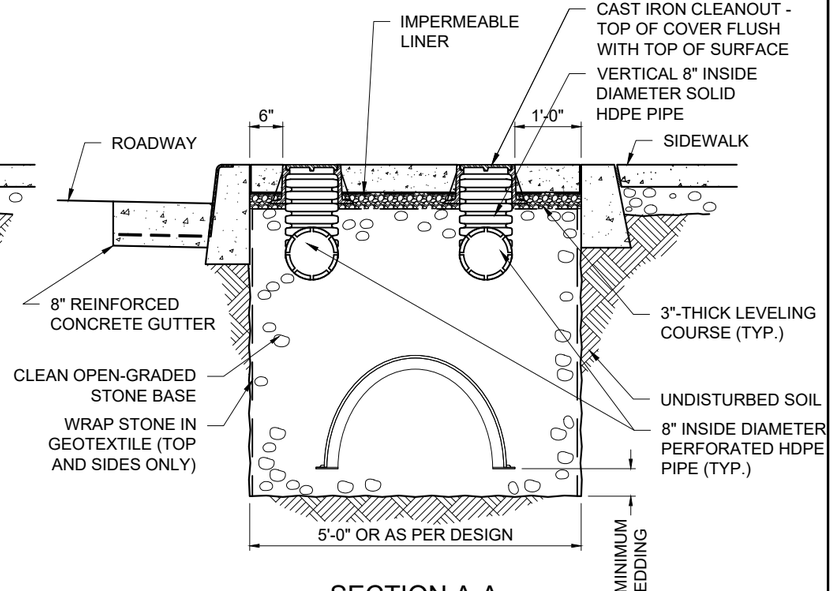
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.
4. USE SMALLEST HDPE STORMWATER CHAMBER SIZE PER GI-204

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

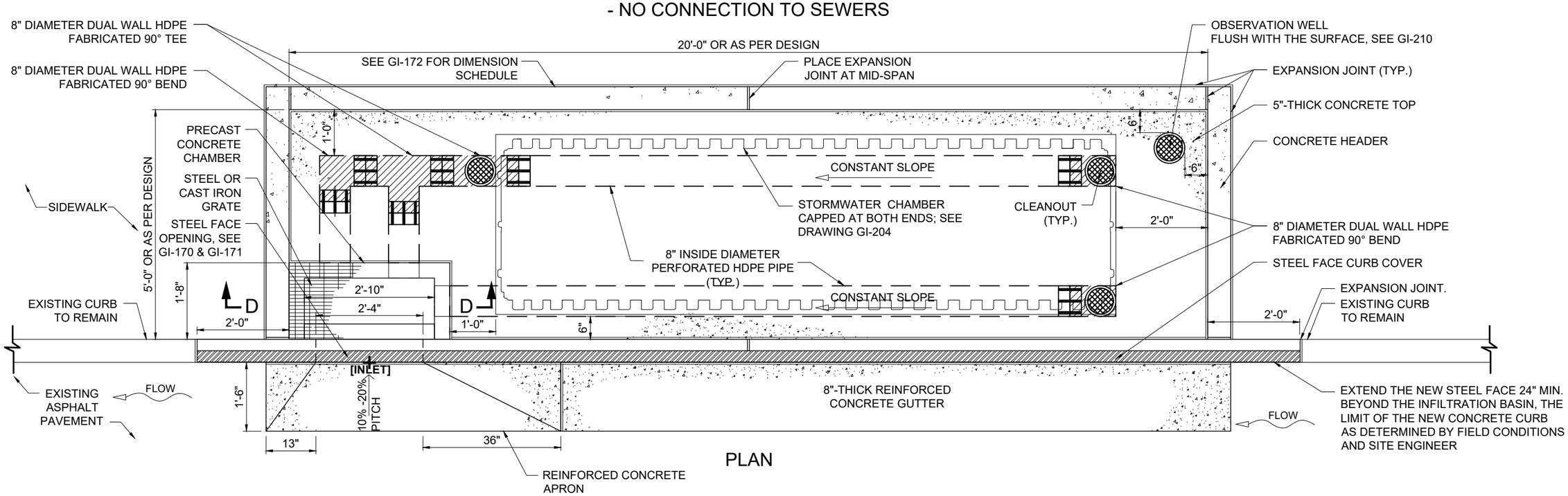
05-13-2022
DATE

GI–141

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 1C - WITH STORMWATER CHAMBER

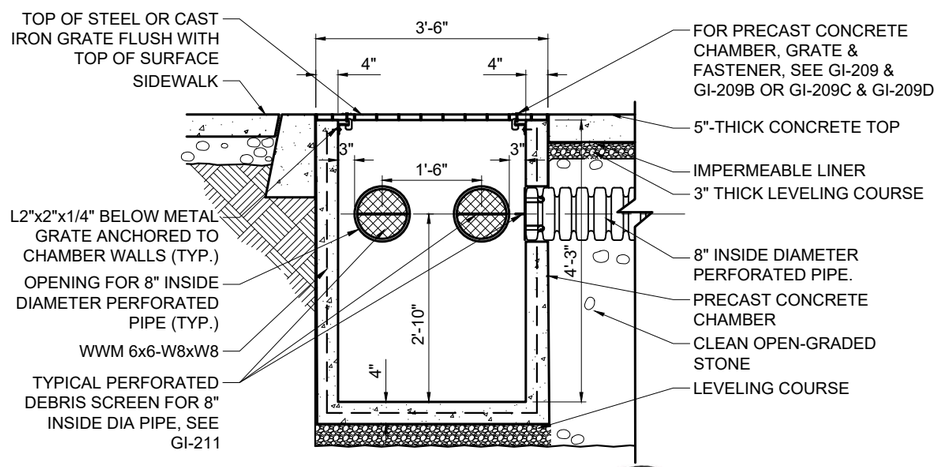
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

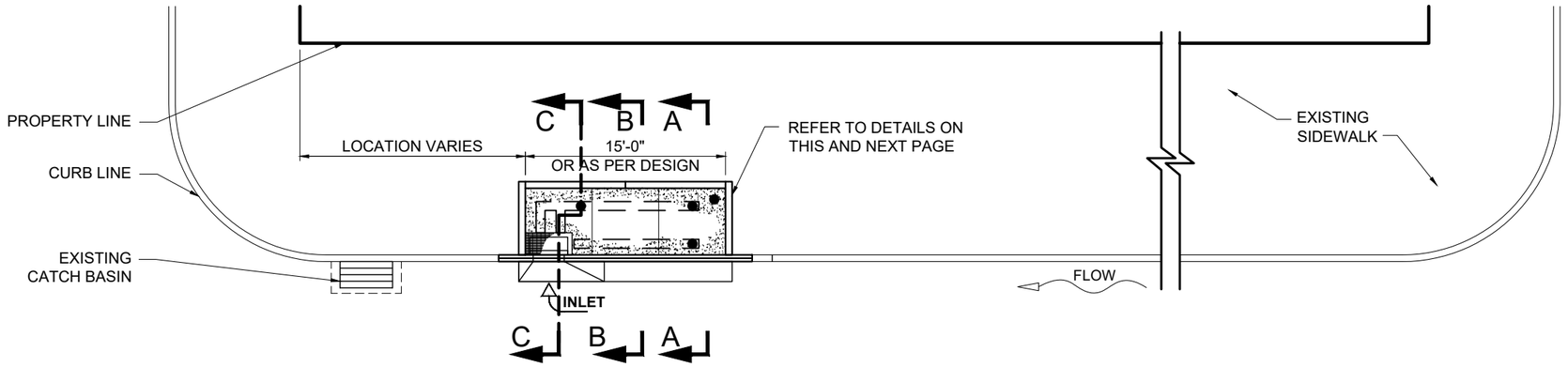
05-13-2022
DATE

GI–142

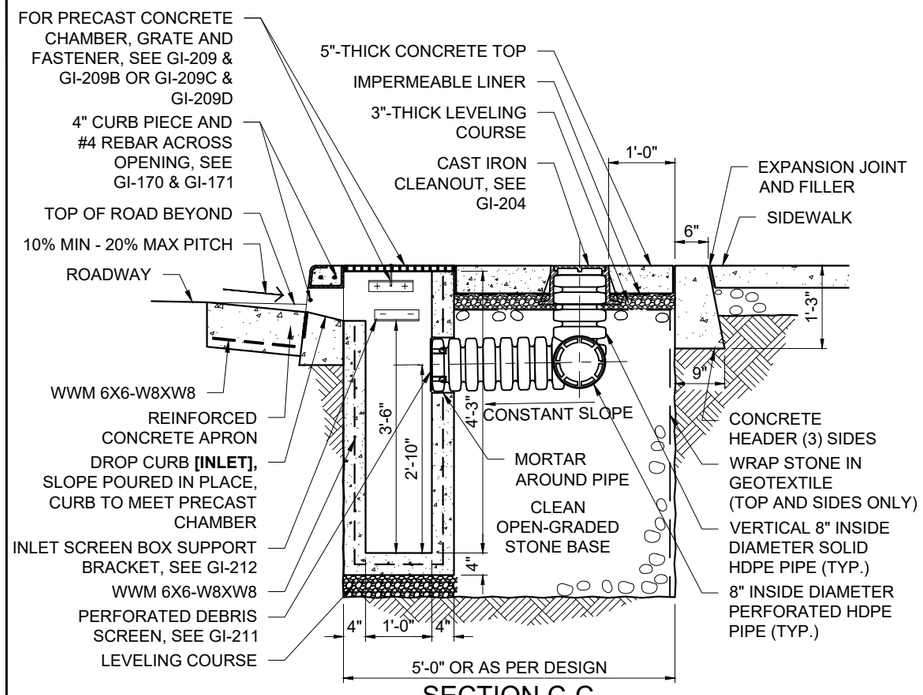
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 2

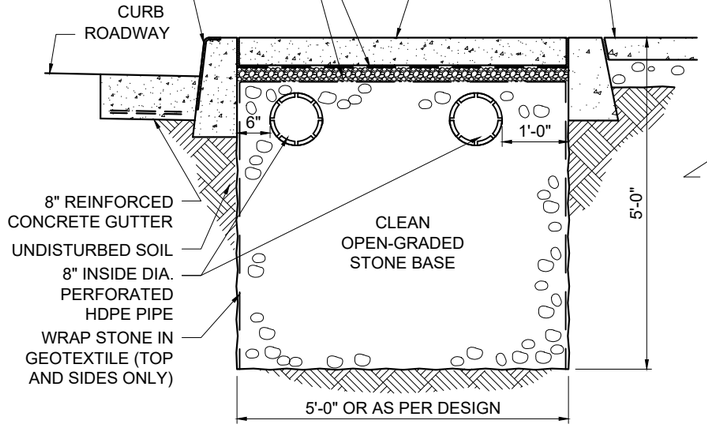
- NO CONNECTION TO SEWERS



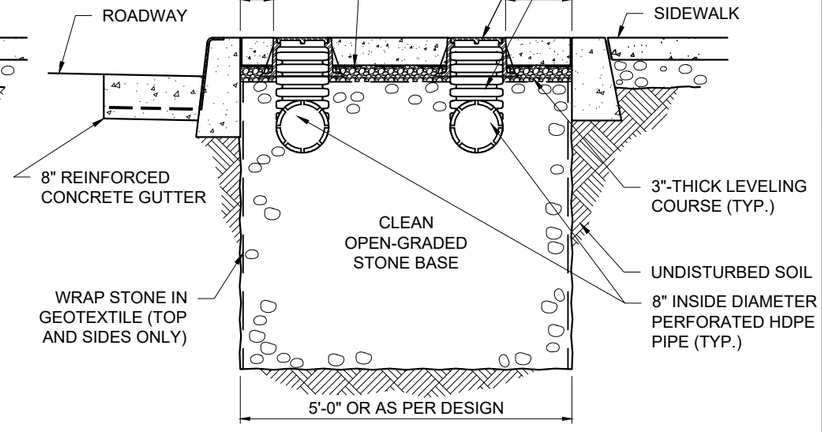
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

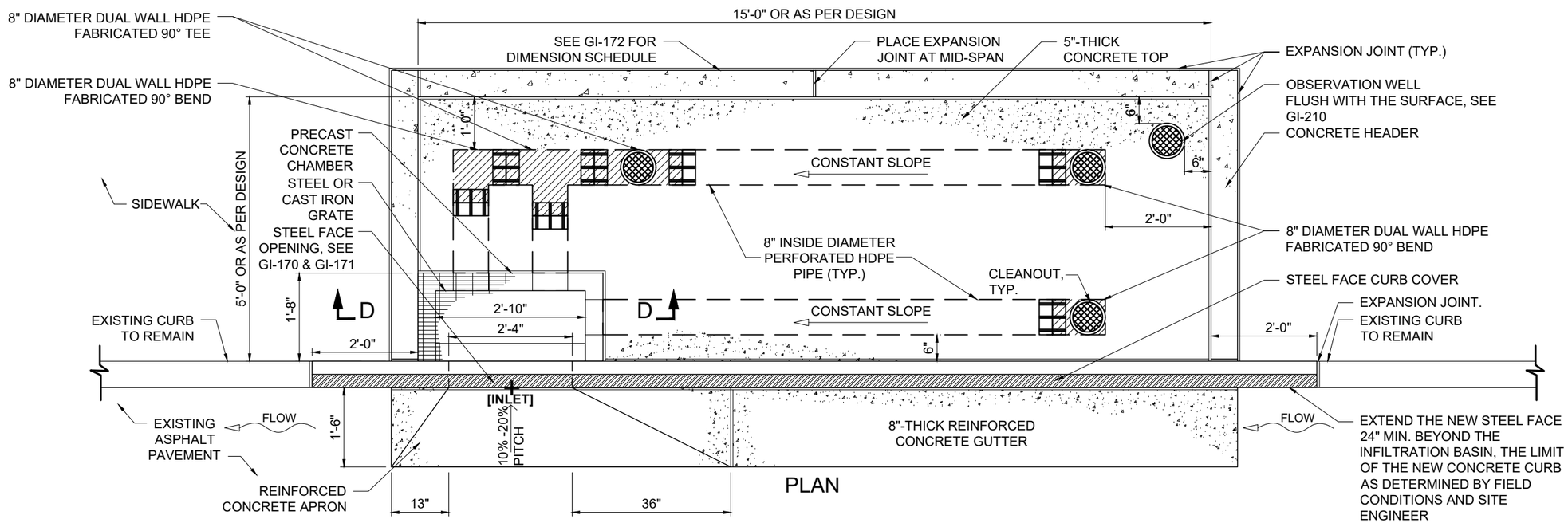
05-13-2022
DATE

GI–143

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 2

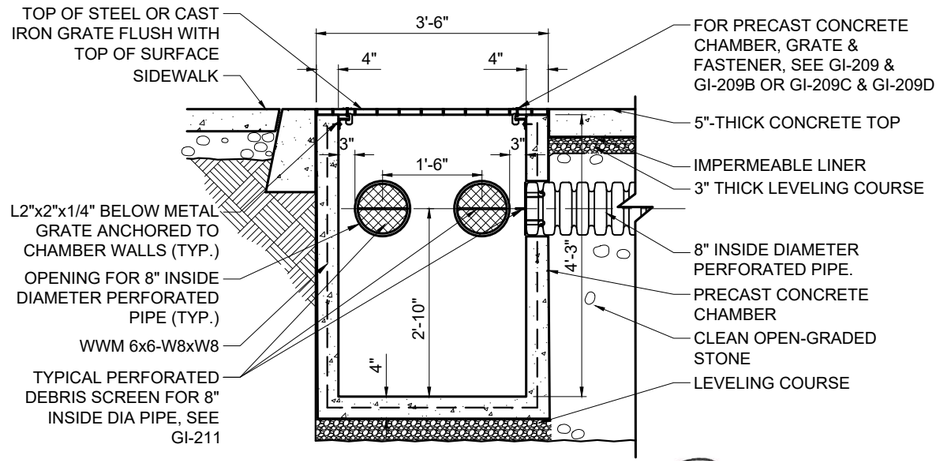
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

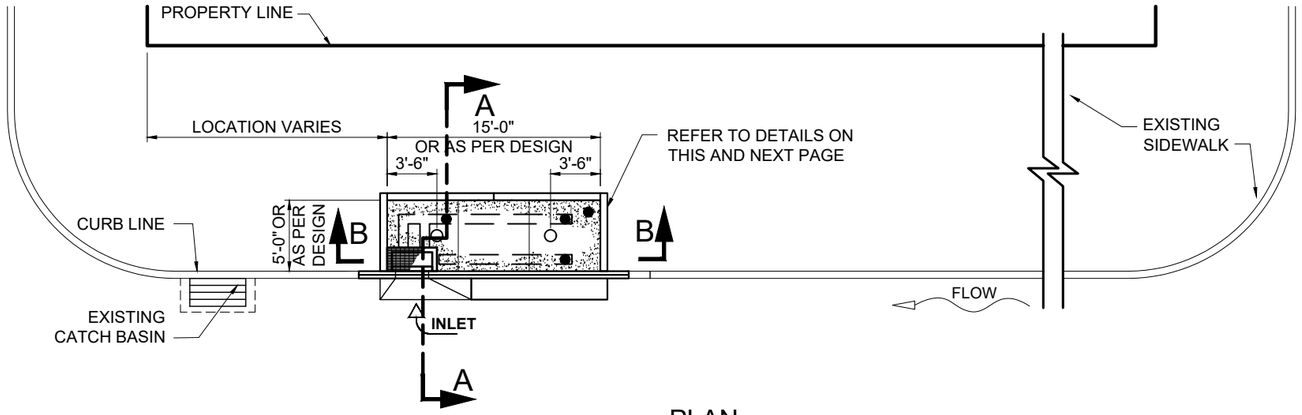
05-13-2022
DATE

GI–144

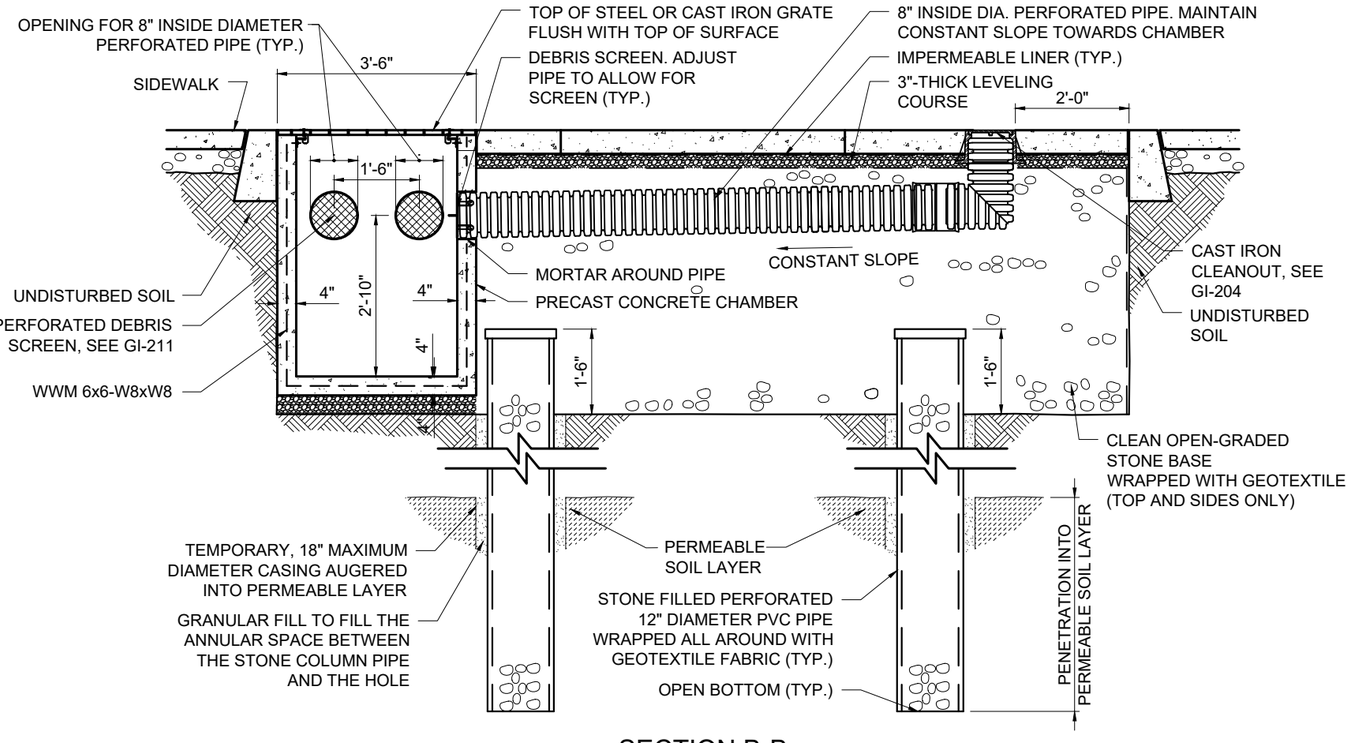
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 2A - WITH STONE COLUMNS

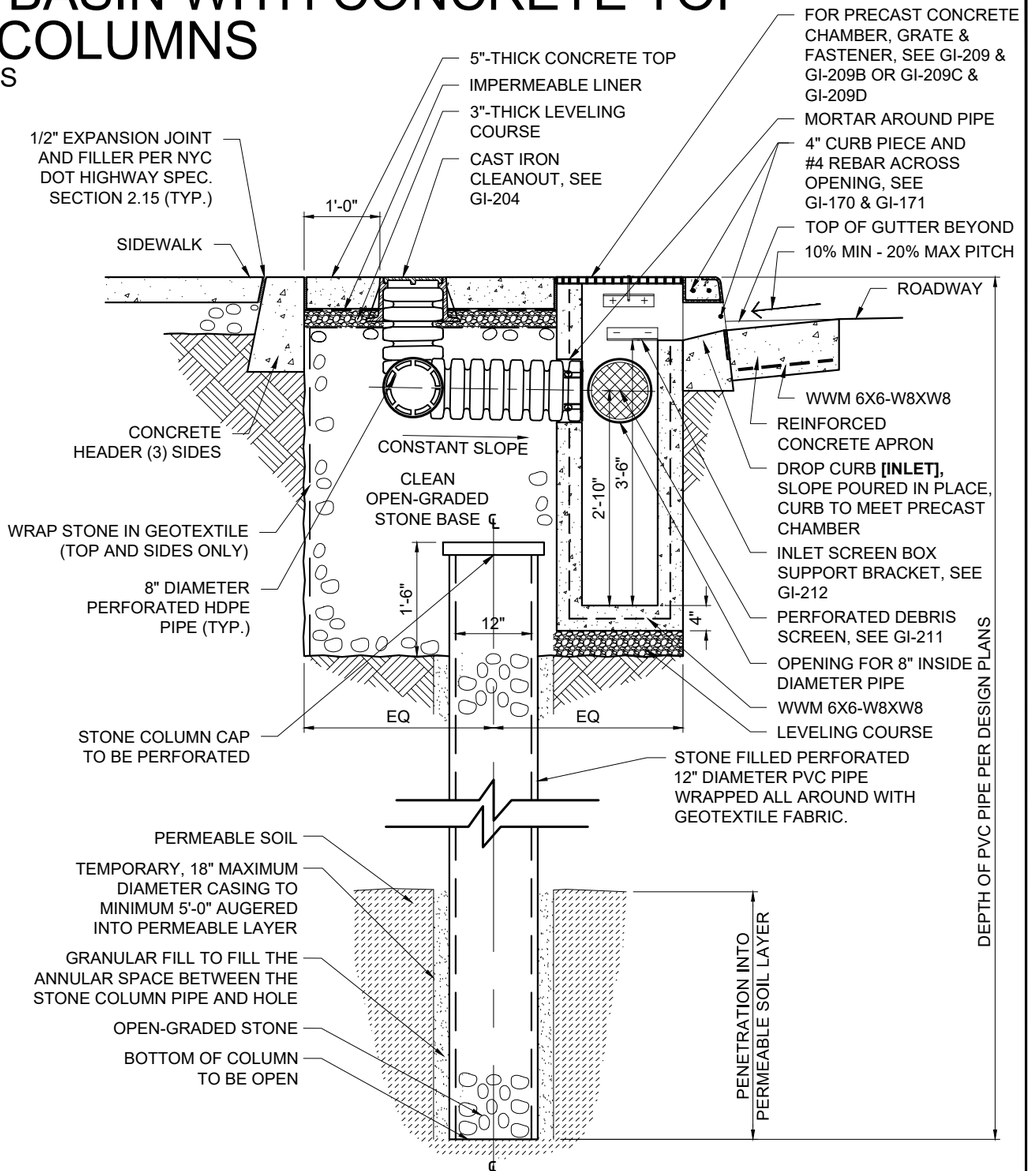
- NO CONNECTION TO SEWERS



PLAN



SECTION B-B



SECTION A-A
AT INFILTRATION BASIN STONE COLUMN

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

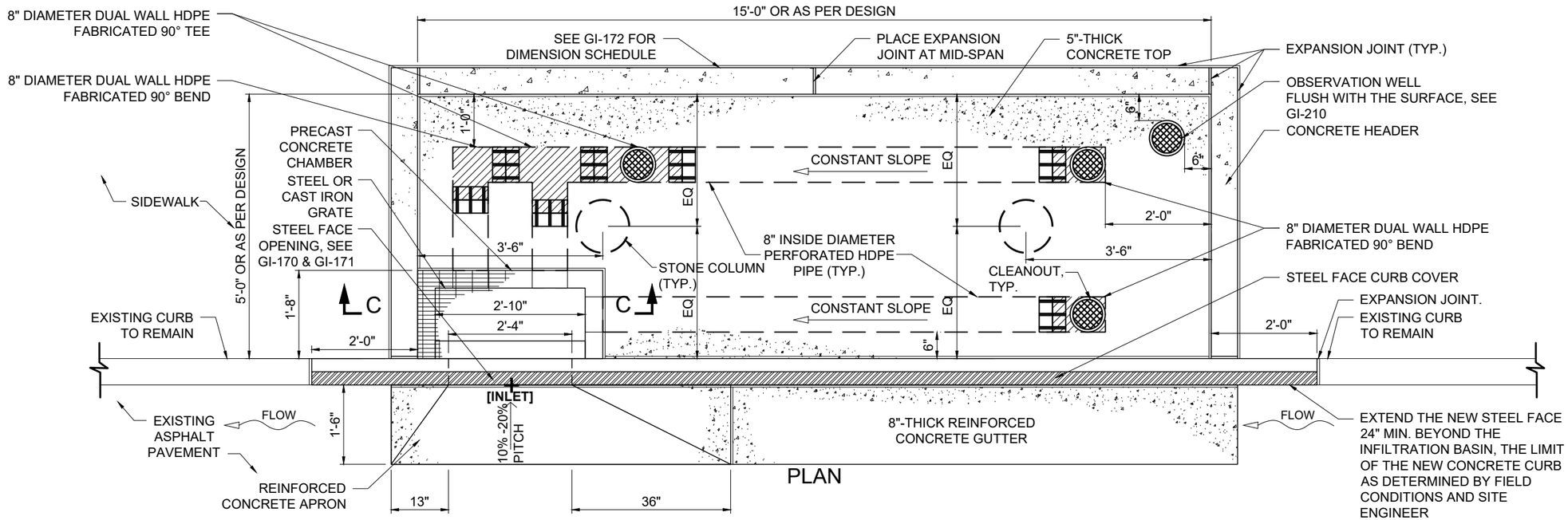
DATE

GI–145

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 2A - WITH STONE COLUMNS

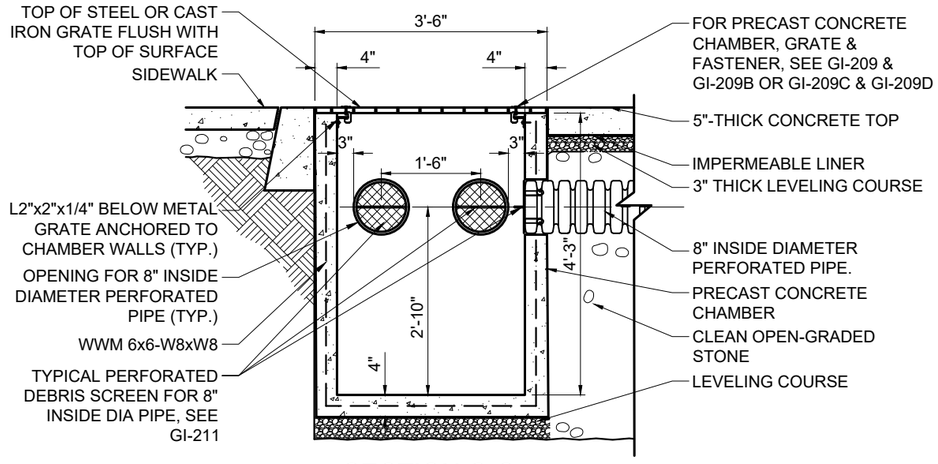
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION C-C

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.

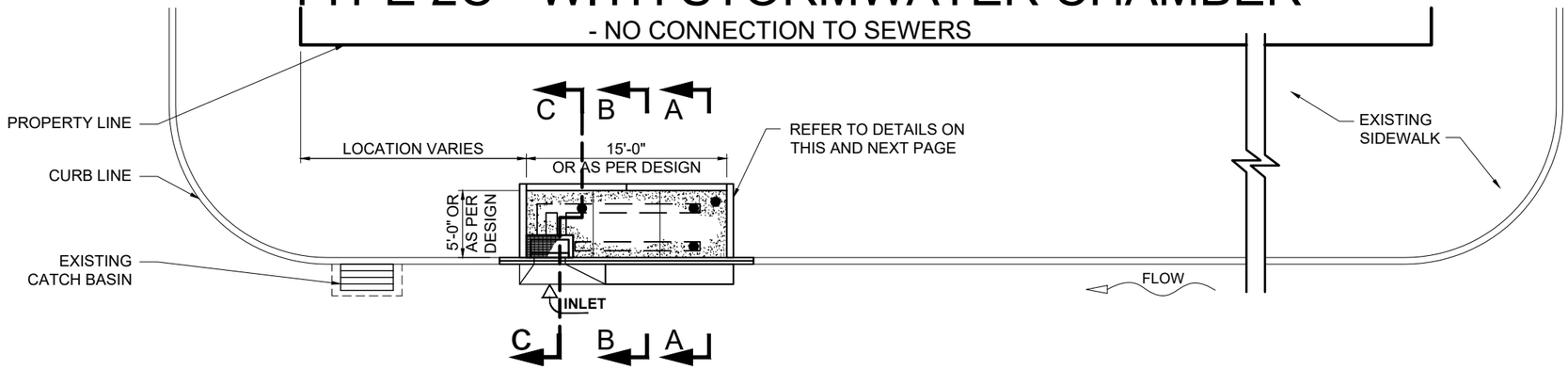
Roopesh Joshi
P.E.
05-13-2022
DATE

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

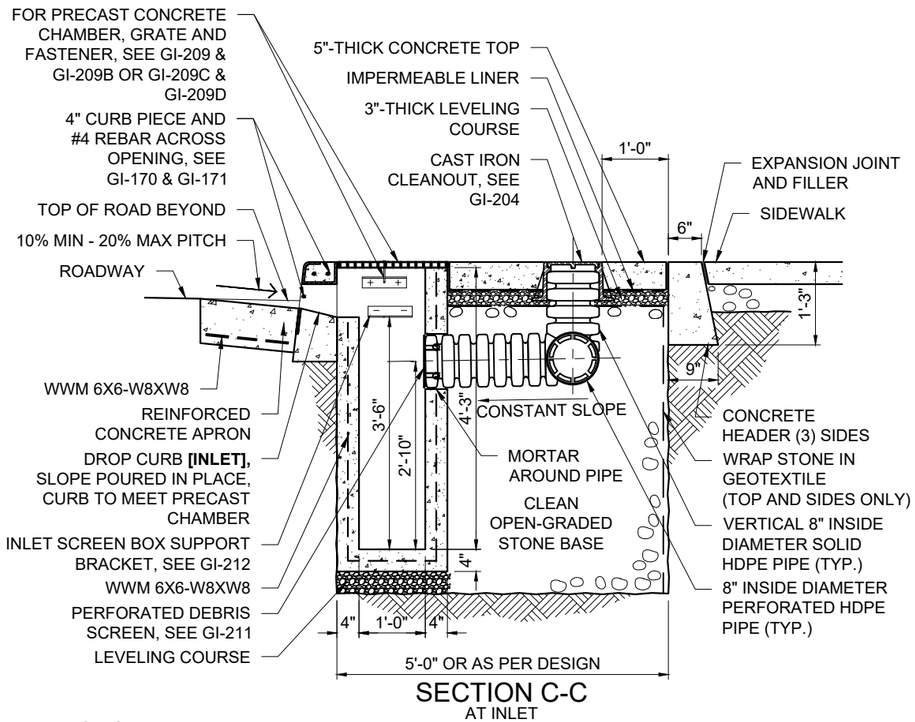
GI–146

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

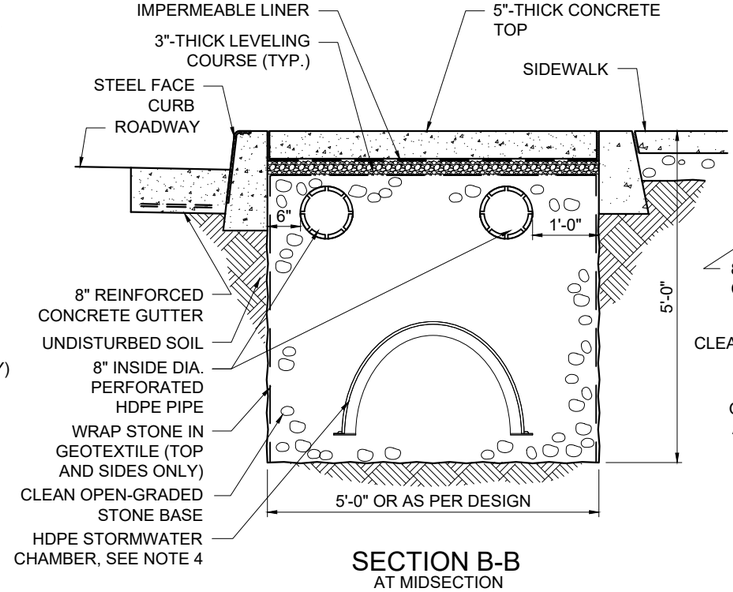
STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 2C - WITH STORMWATER CHAMBER



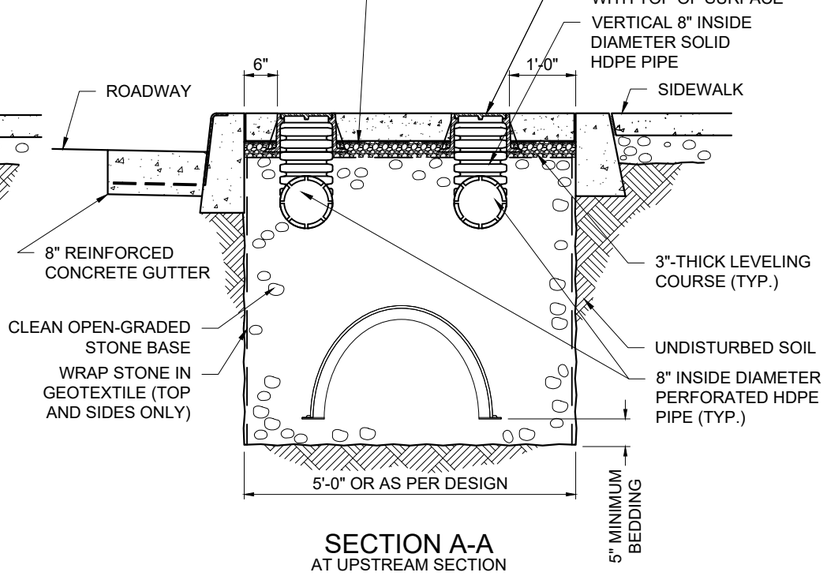
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.
4. USE SMALLEST HDPE STORMWATER CHAMBER SIZE PER GI-204

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

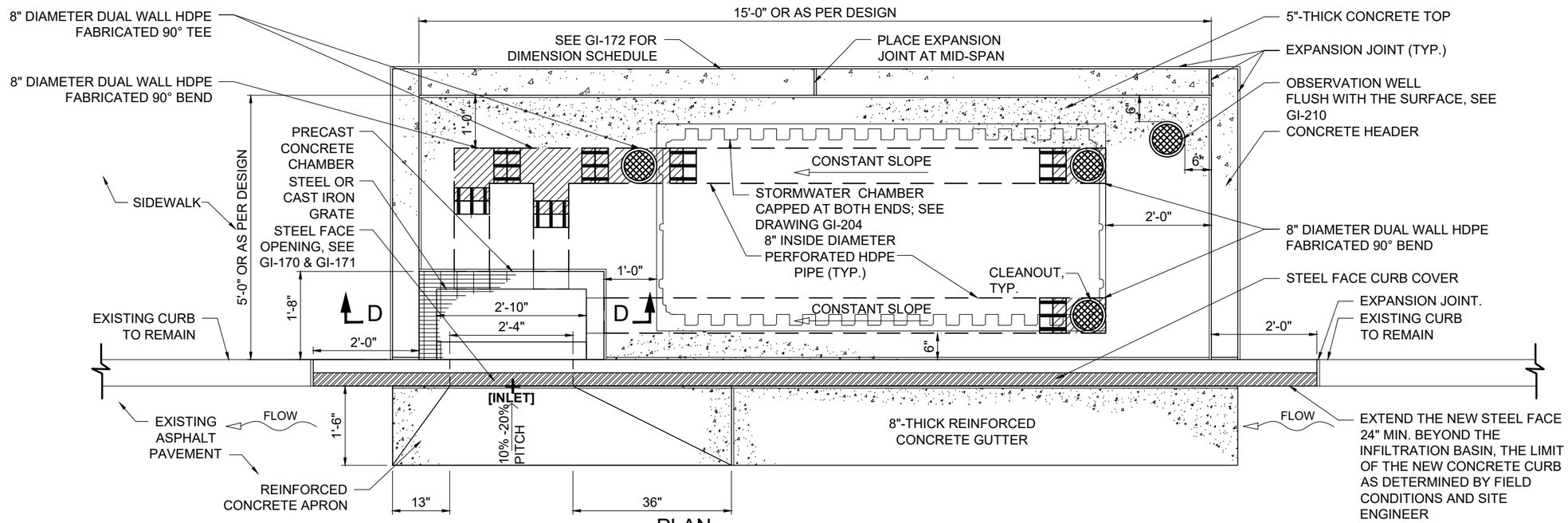
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 2C - WITH STORMWATER CHAMBER

- NO CONNECTION TO SEWERS

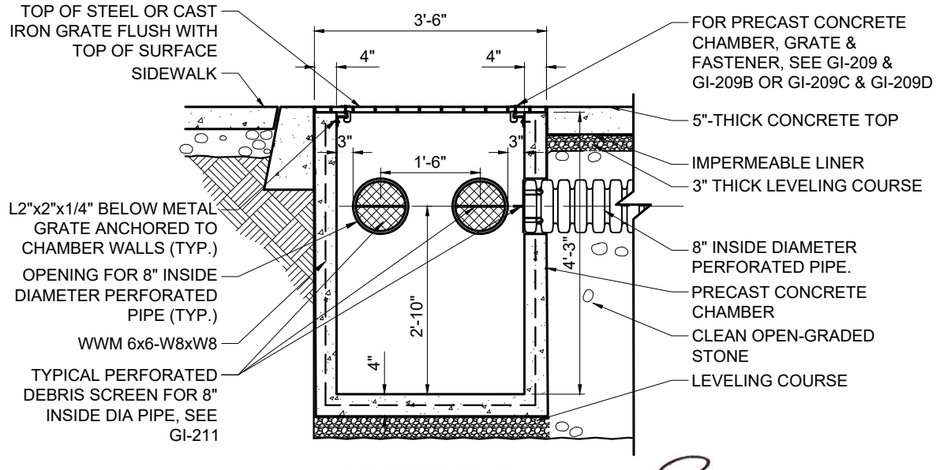
GI–147



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	APRON PITCH
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

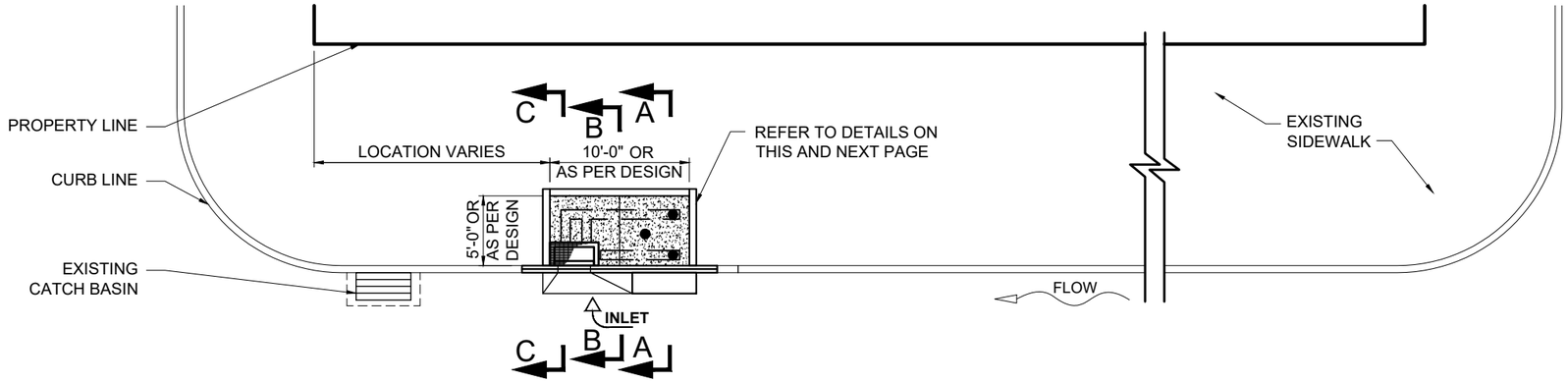
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

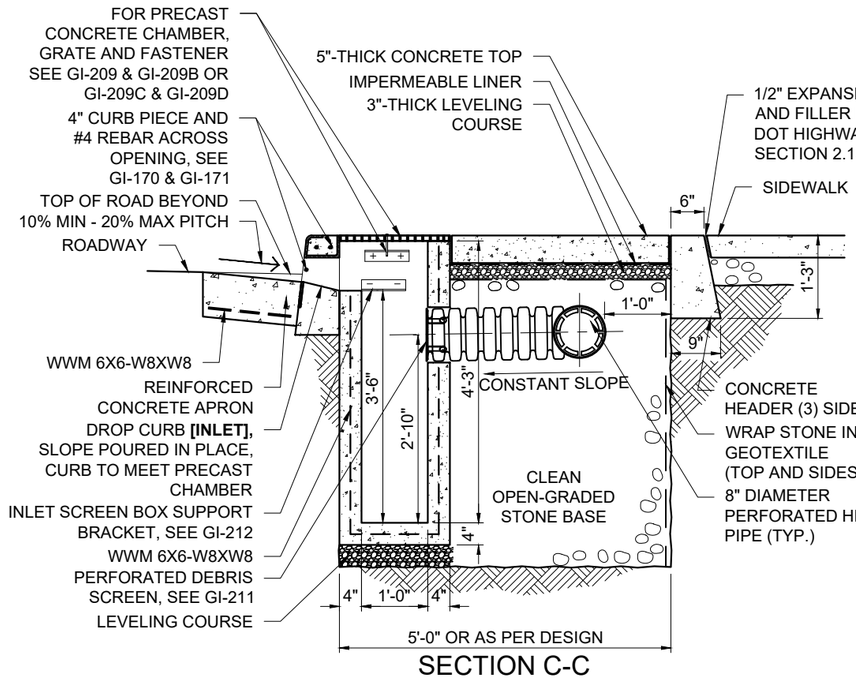
STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 3

- NO CONNECTION TO SEWERS

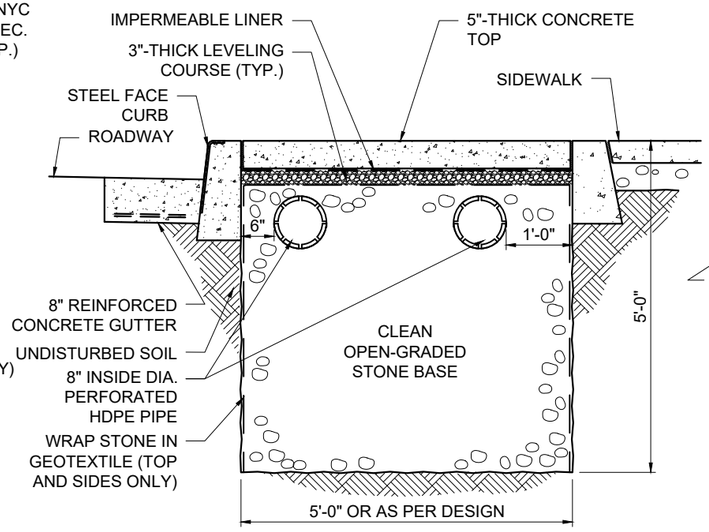
GI–148



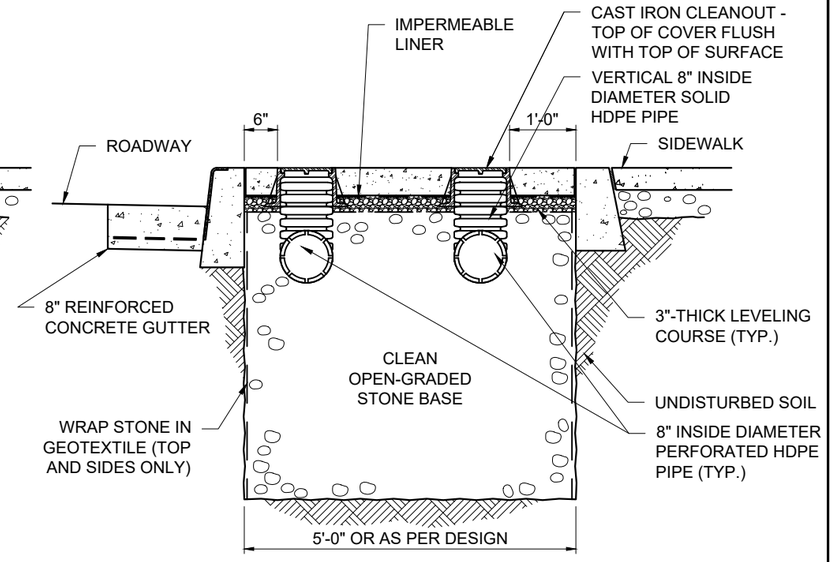
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 3

- NO CONNECTION TO SEWERS

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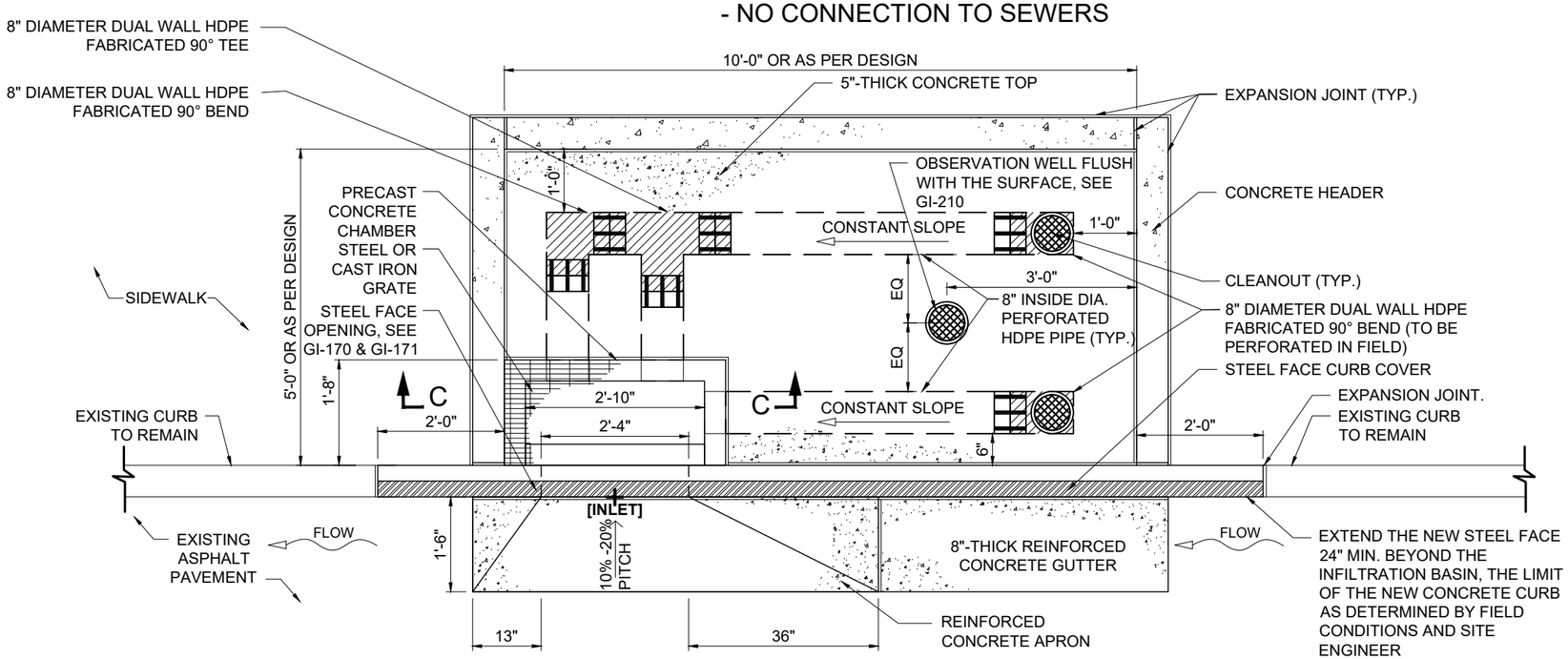
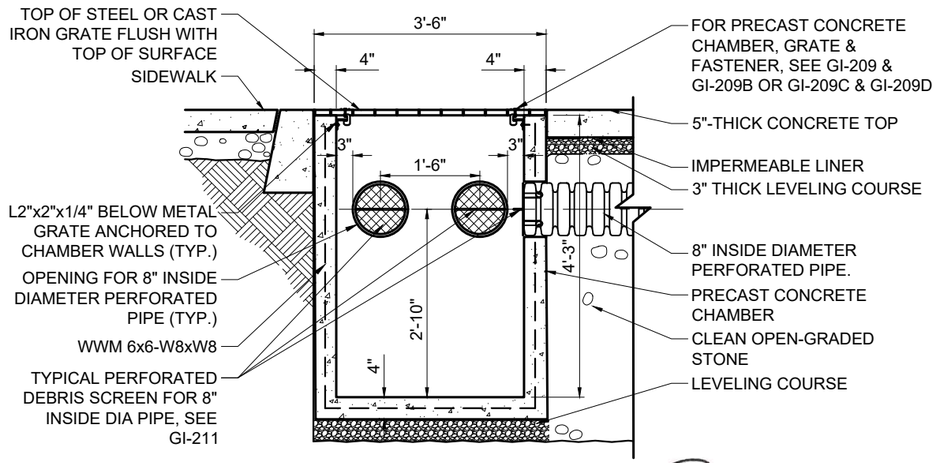


PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	APRON PITCH
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION C-C

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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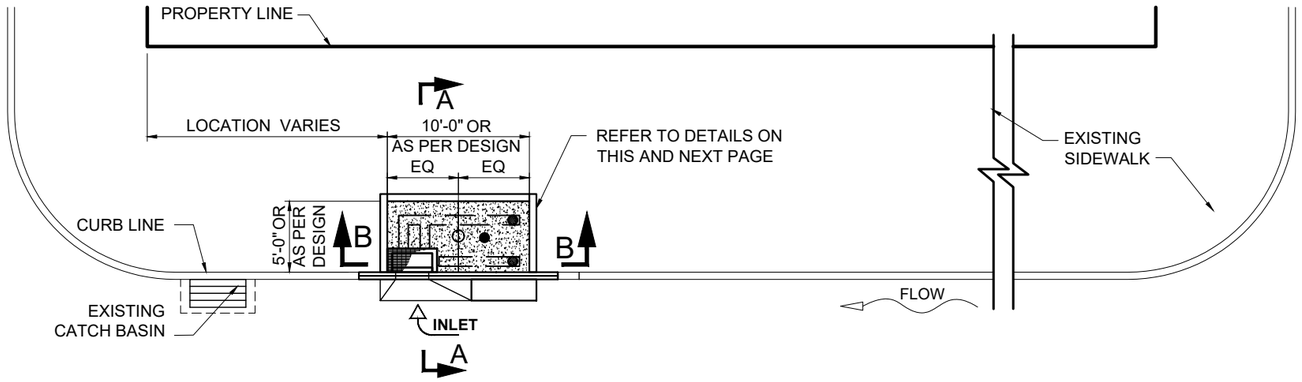
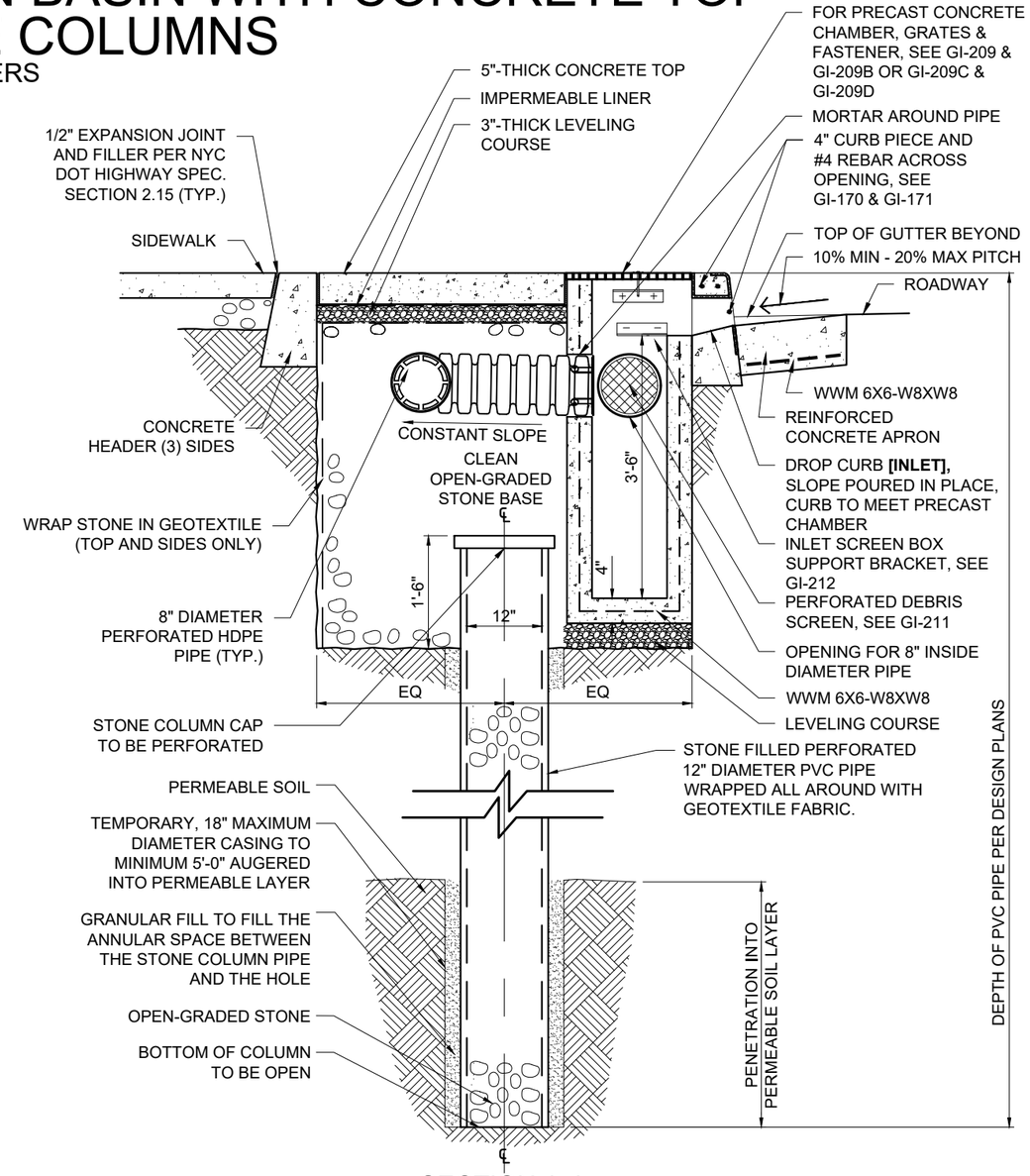
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 3A - WITH STONE COLUMNS

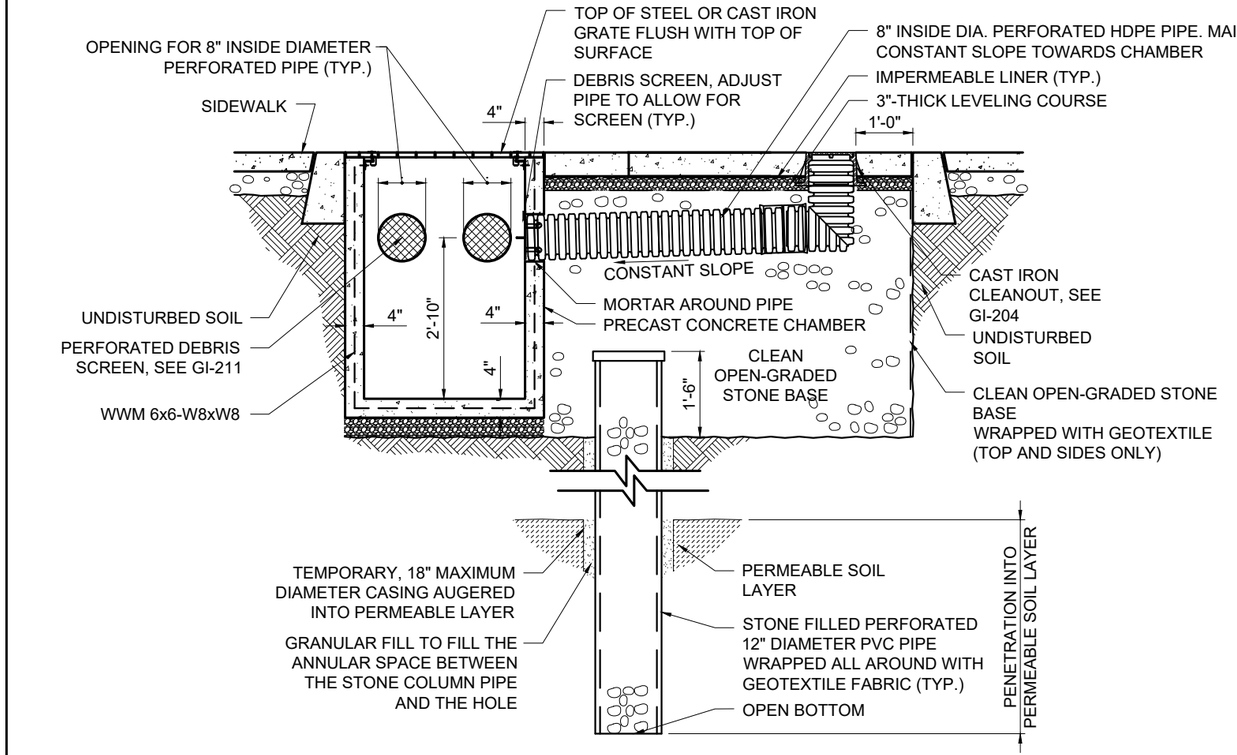
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A
AT INFILTRATION BASIN STONE COLUMN



SECTION B-B

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

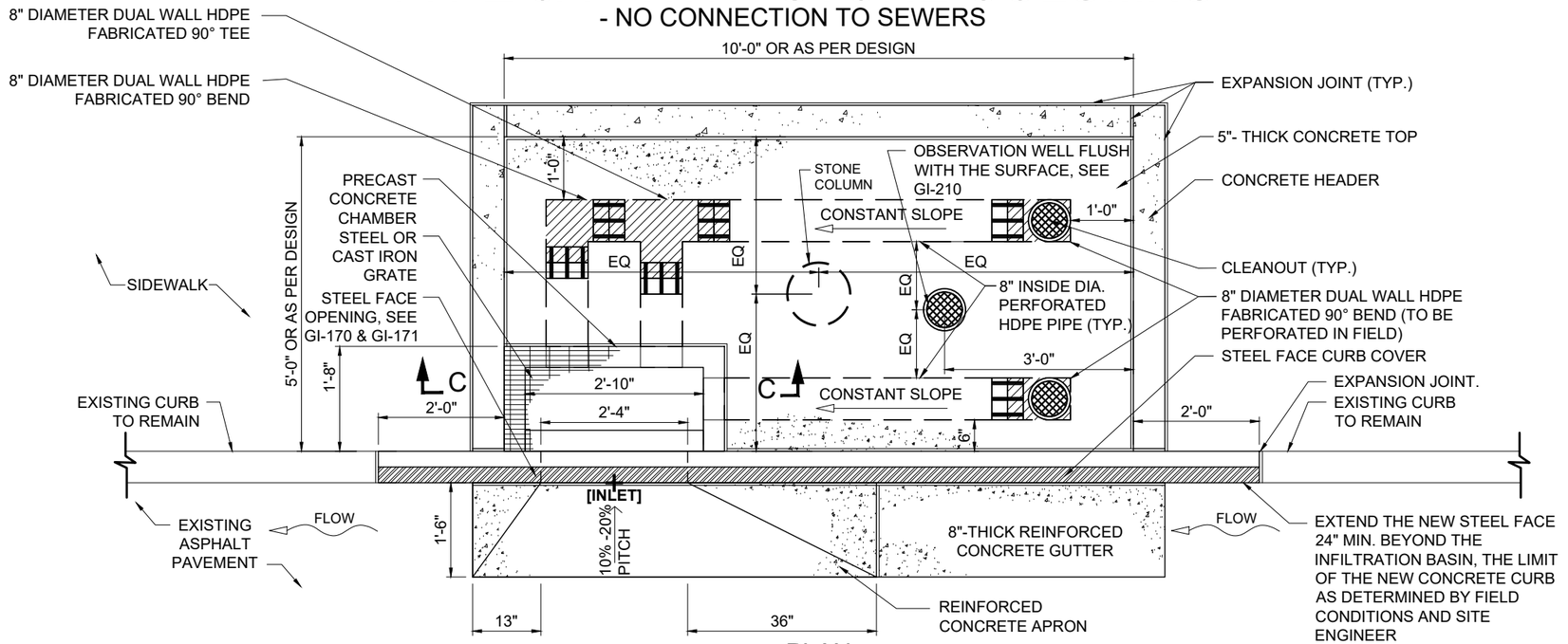
05-13-2022
DATE

GI–151

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH CONCRETE TOP TYPE 3A - WITH STONE COLUMNS

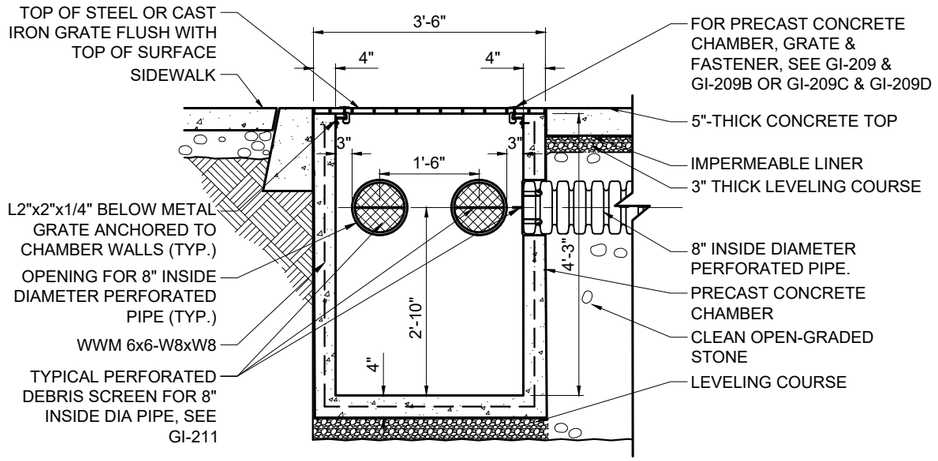
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION C-C

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS.

Roopesh Joshi P.E. 05-13-2022

MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

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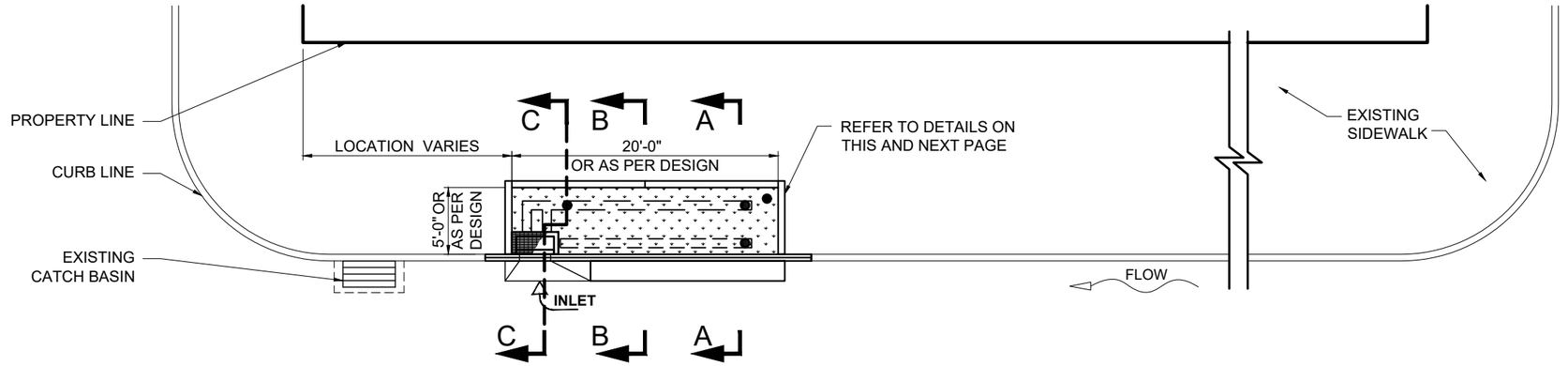
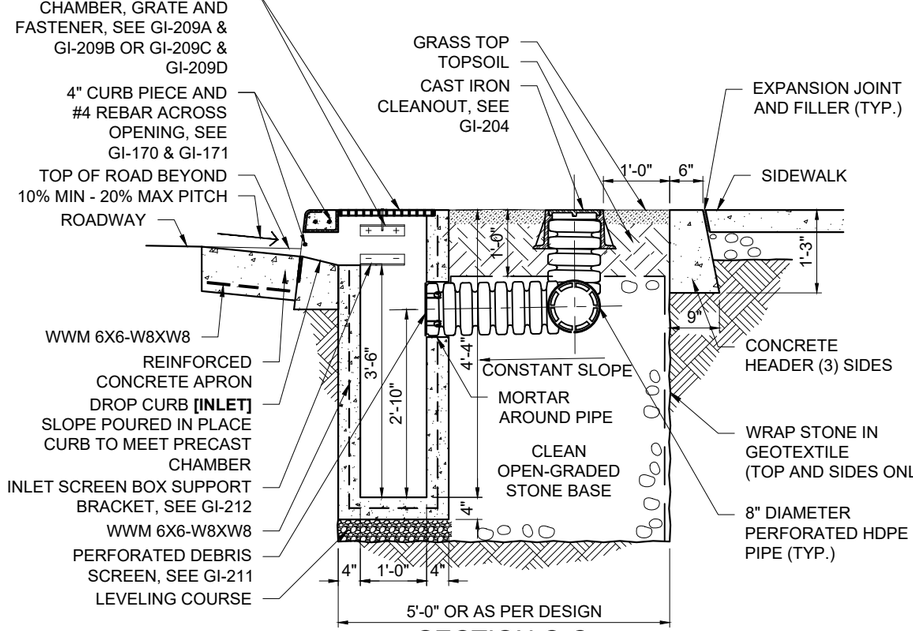
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 1

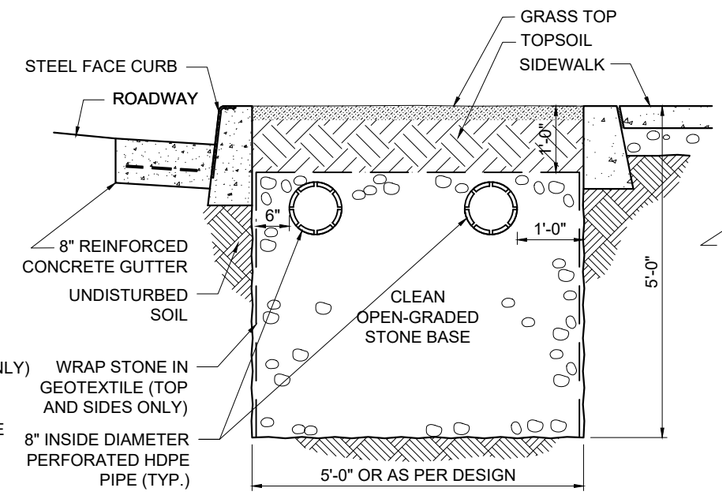
- NO CONNECTION TO SEWERS



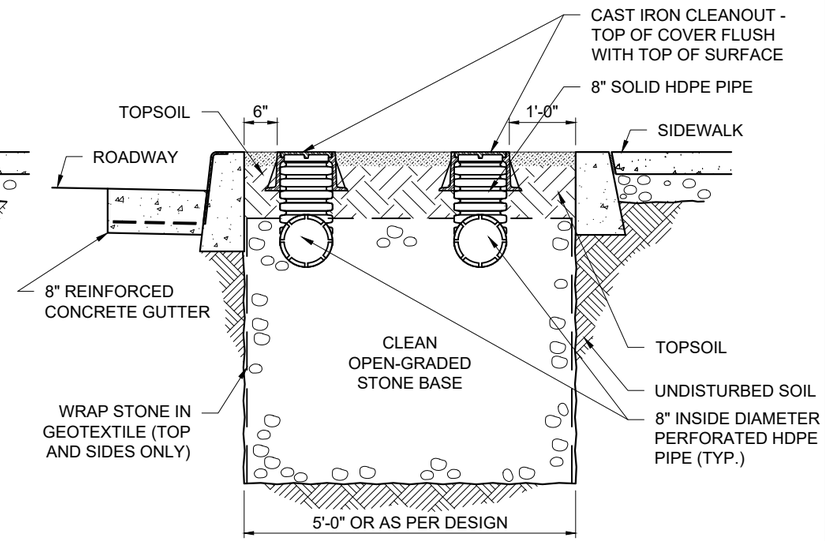
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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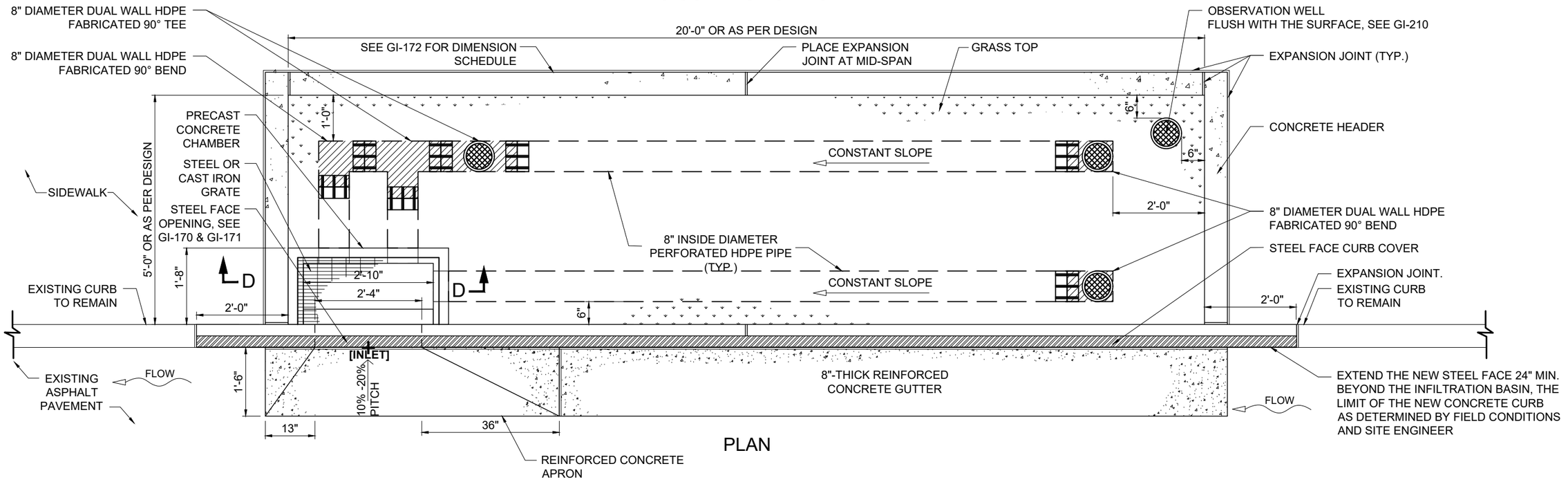
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 1

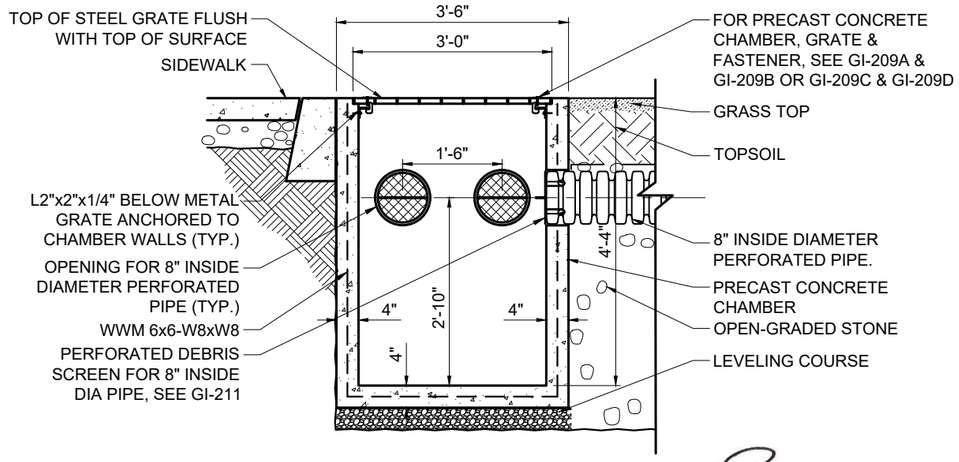
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

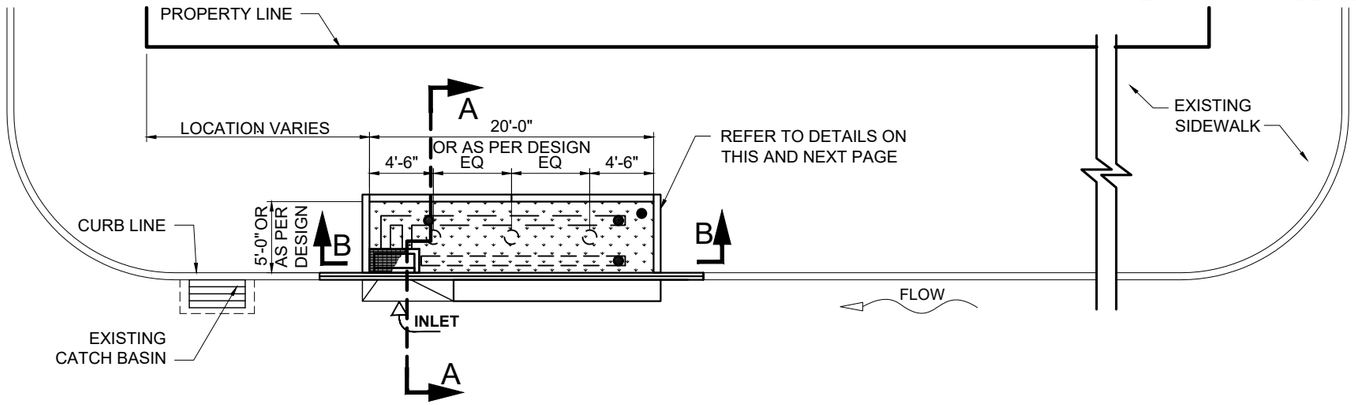
05-13-2022
DATE

GI–154

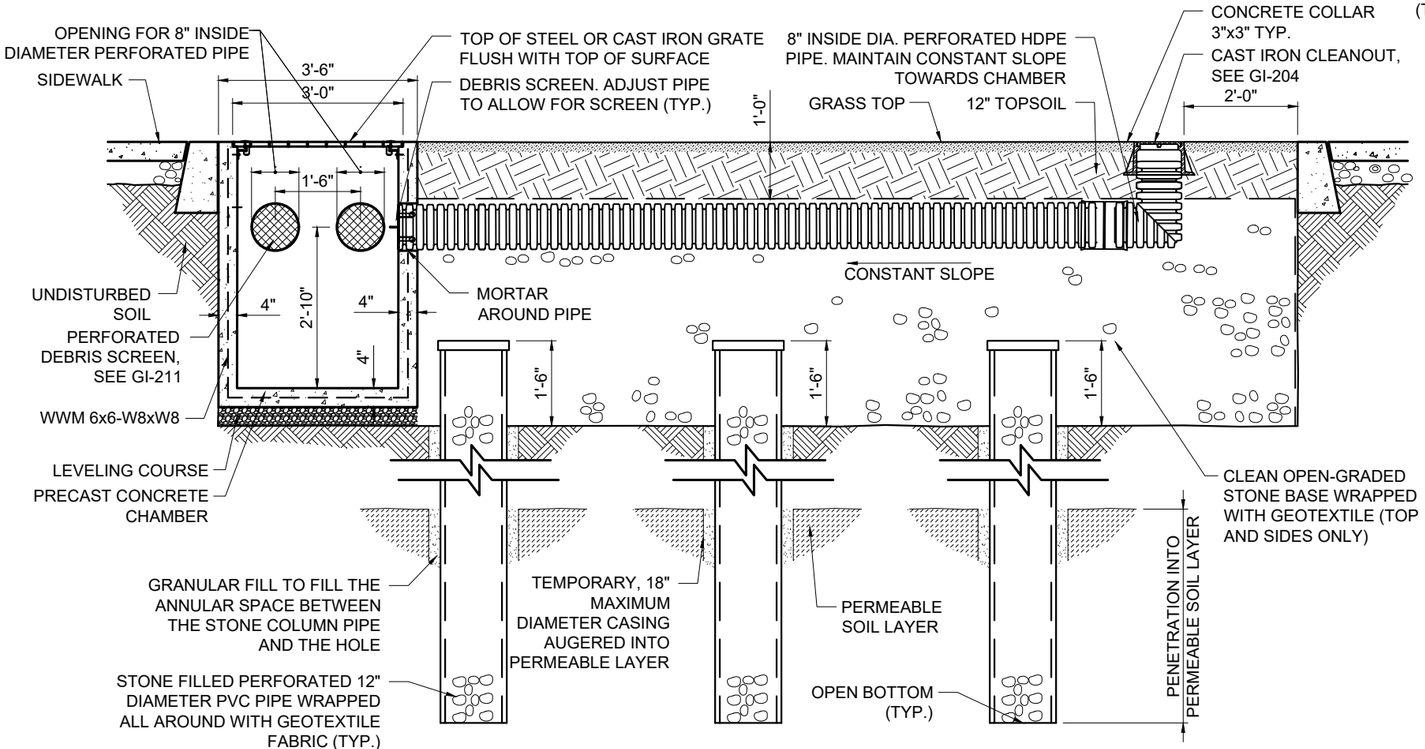
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP
TYPE 1A - WITH STONE COLUMNS

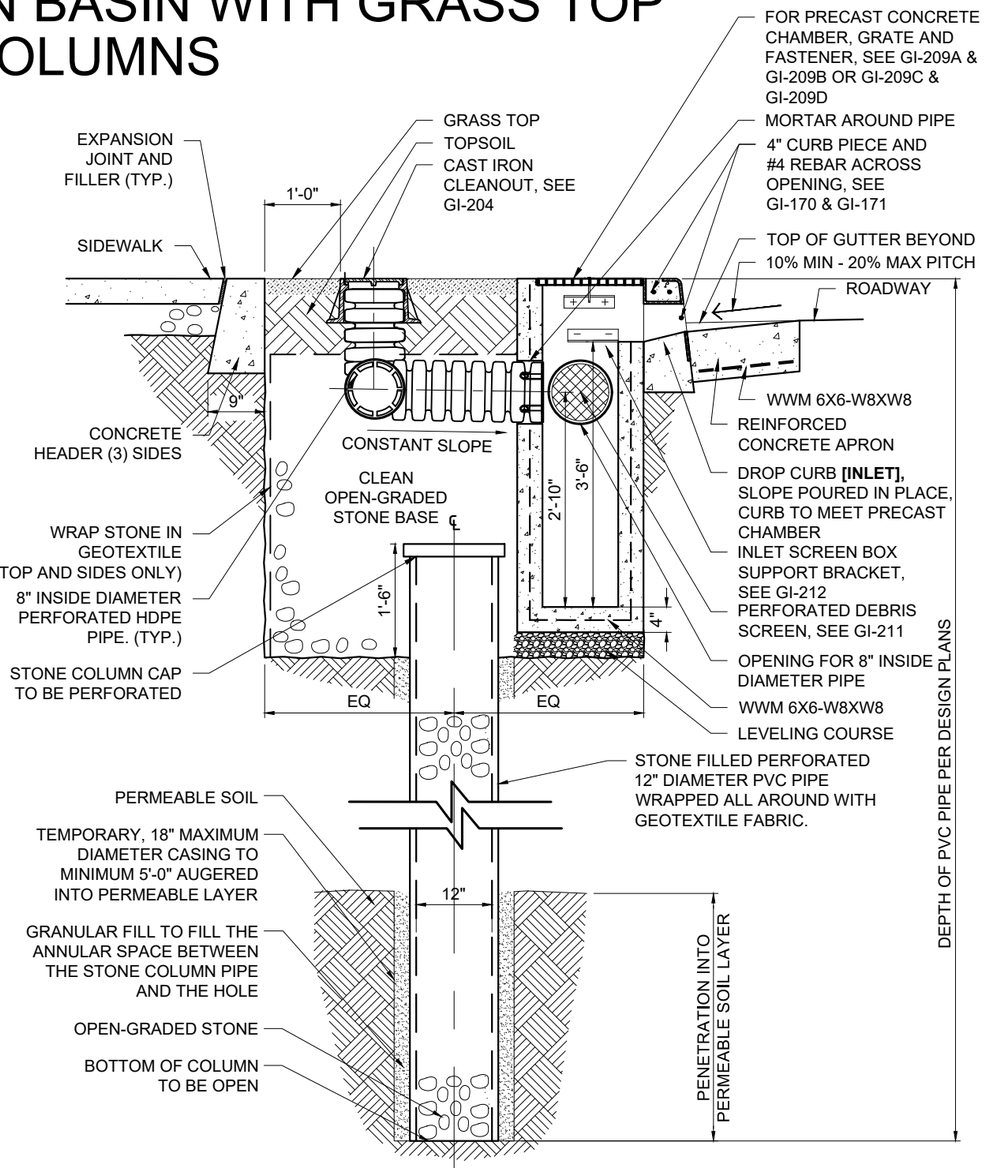
- NO CONNECTION TO SEWERS



PLAN



SECTION B-B



SECTION A-A
AT INFILTRATION BASIN STONE COLUMN

Roopesh Joshi
P.E.
05-13-2022
DATE

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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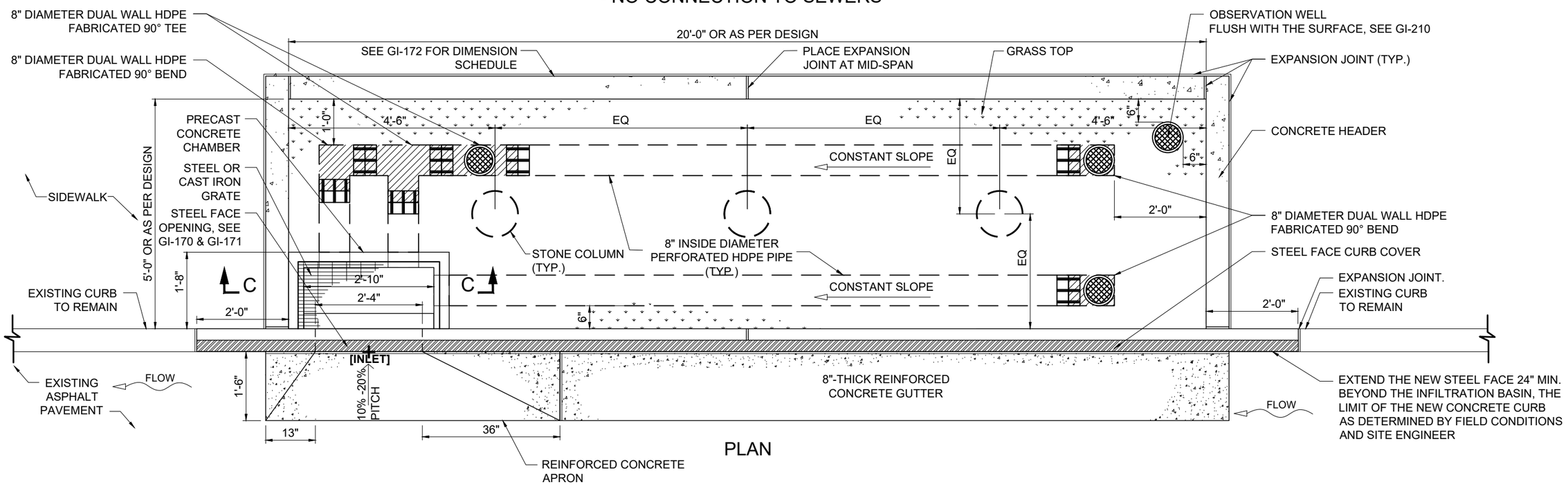
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

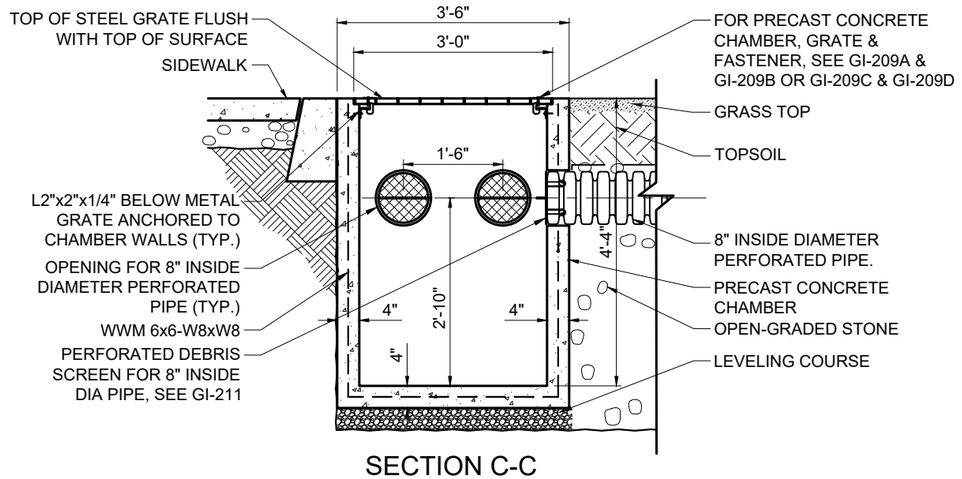
STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP
TYPE 1A - WITH STONE COLUMNS
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION C-C

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171

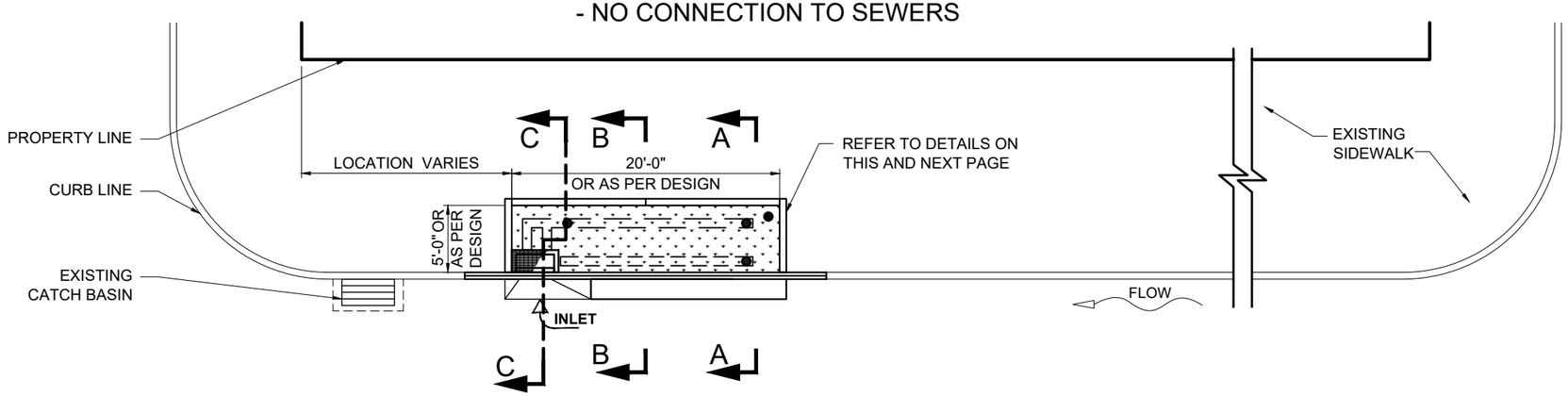
Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
DATE

GI–156

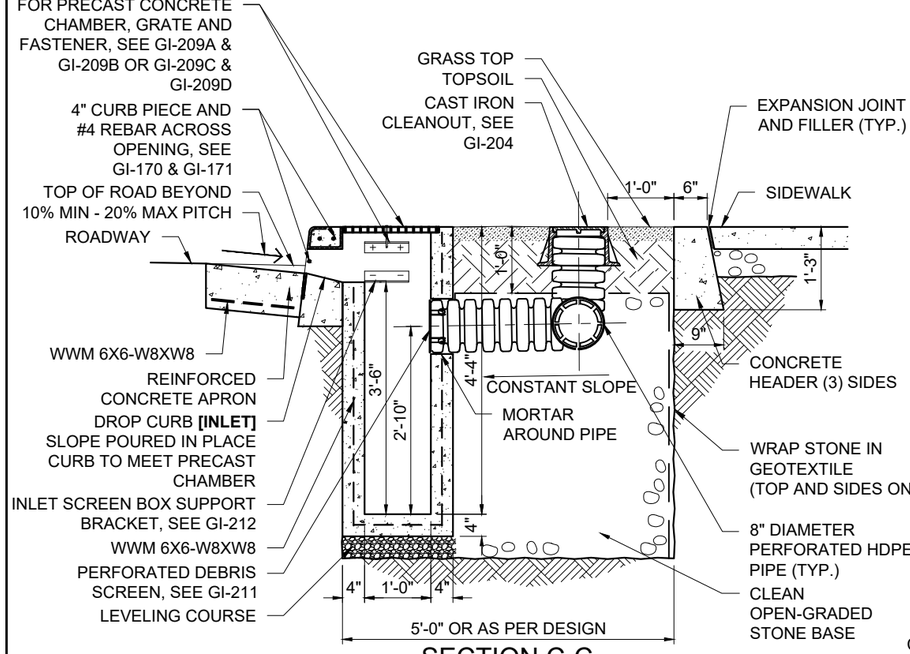
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP
TYPE 1C - WITH STORMWATER CHAMBER

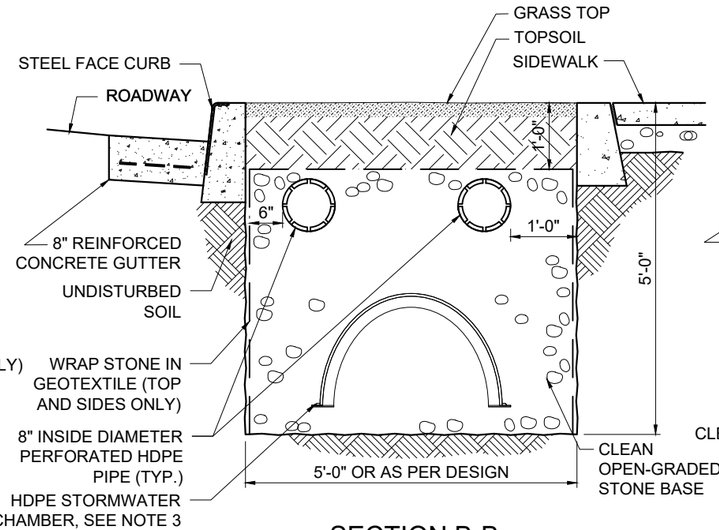
- NO CONNECTION TO SEWERS



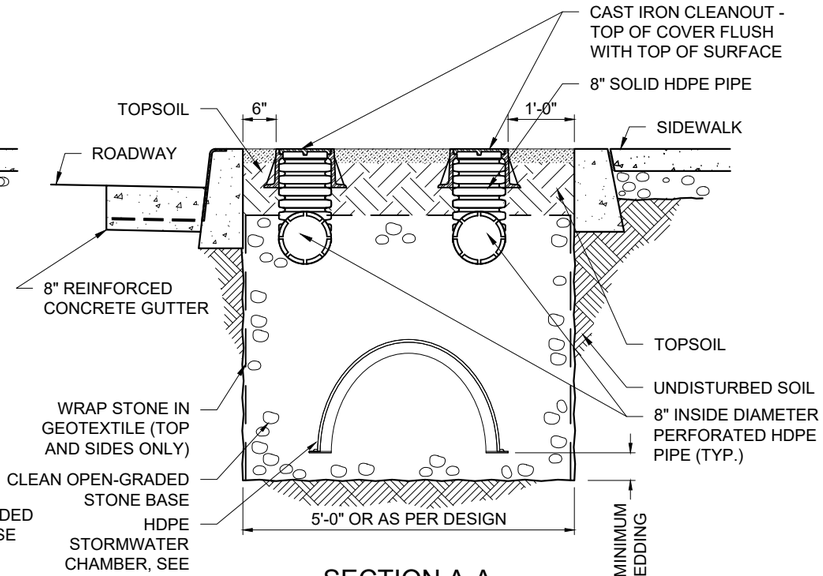
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. USE SMALLEST HDPE STORMWATER CHAMBER SIZE PER GI-204

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

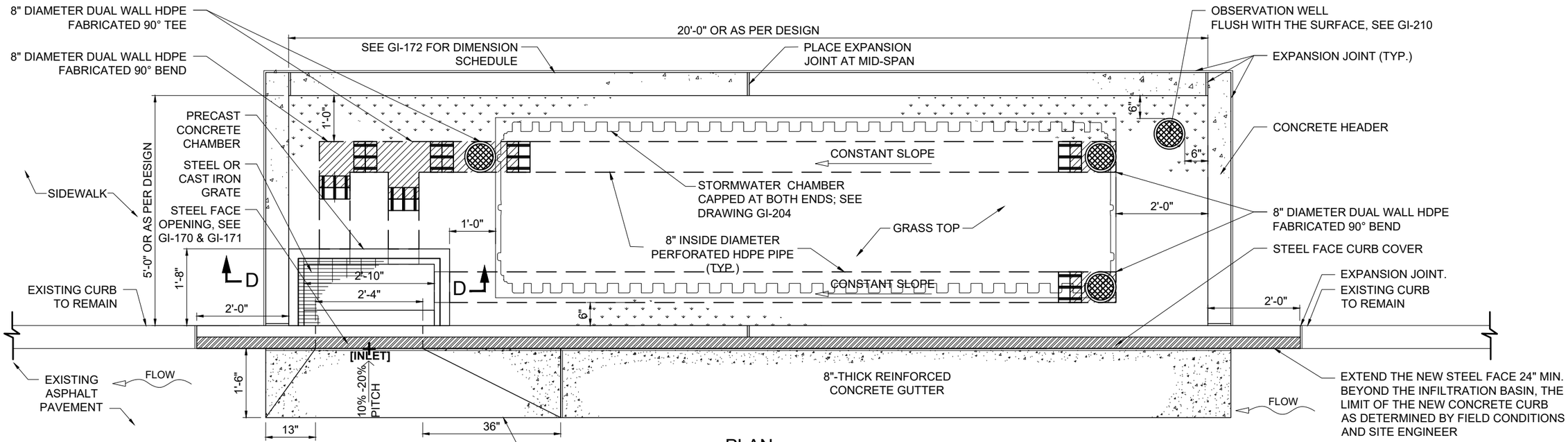
05-13-2022
DATE

GI–157

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 1C - WITH STORMWATER CHAMBER

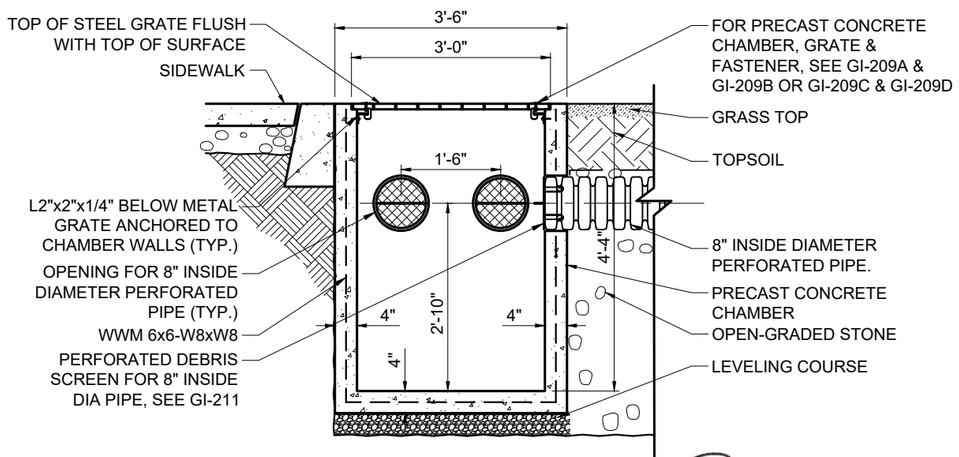
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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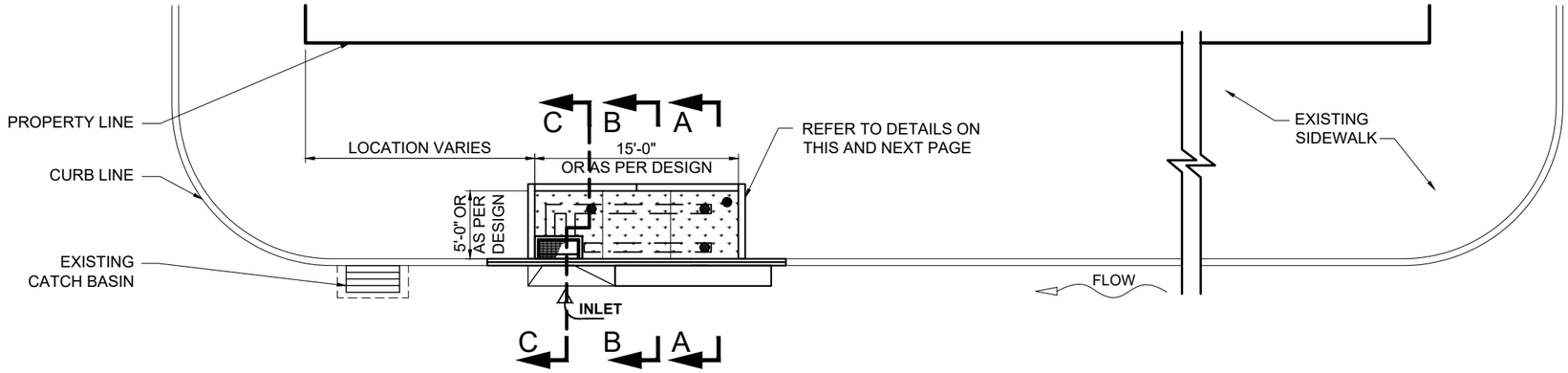
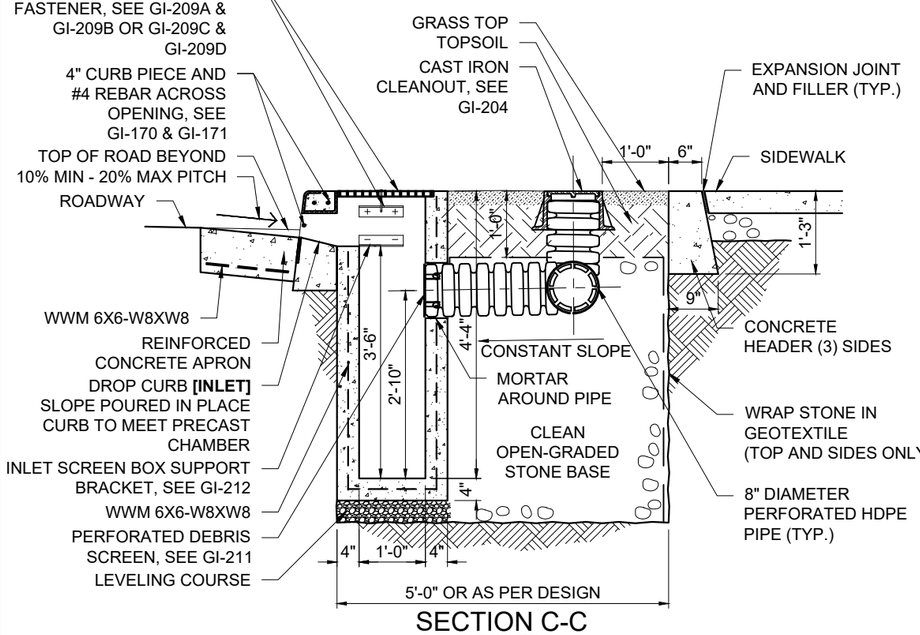
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 2

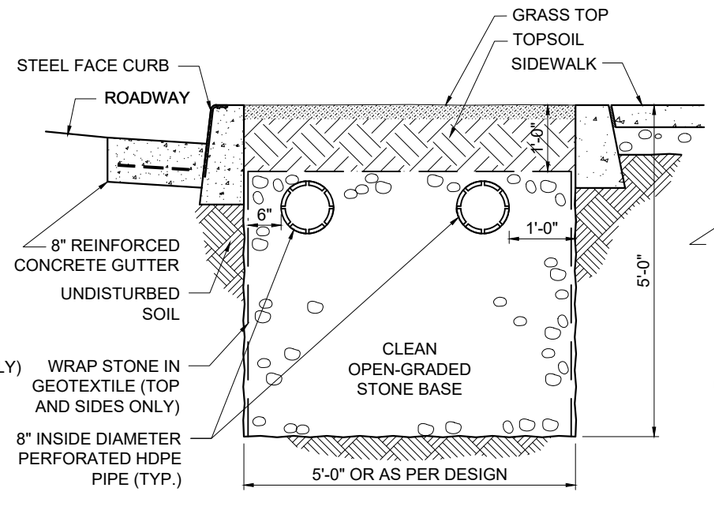
- NO CONNECTION TO SEWERS



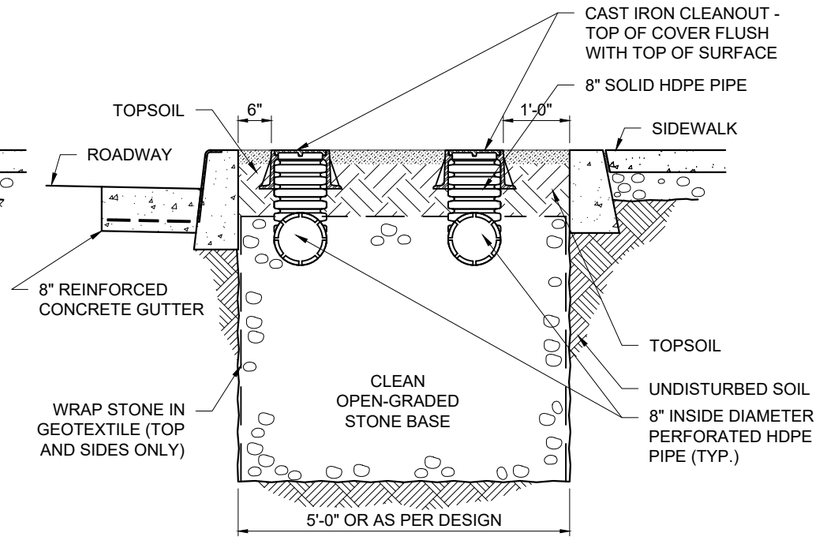
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171

Roopesh Joshi P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

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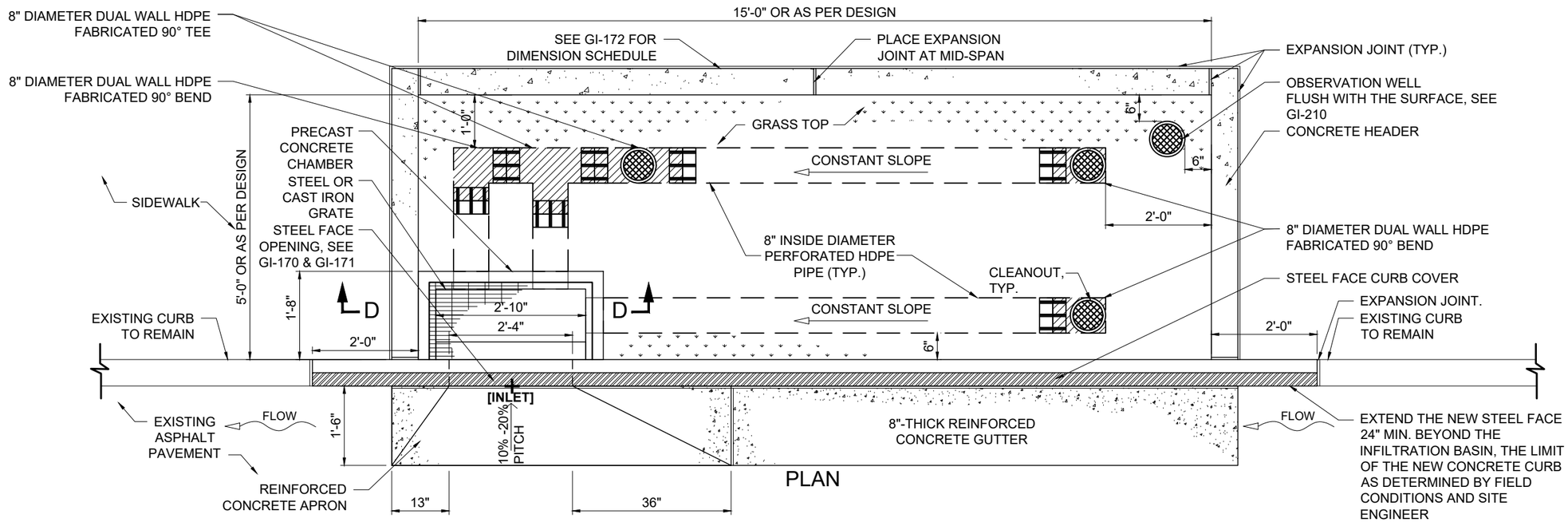
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 2

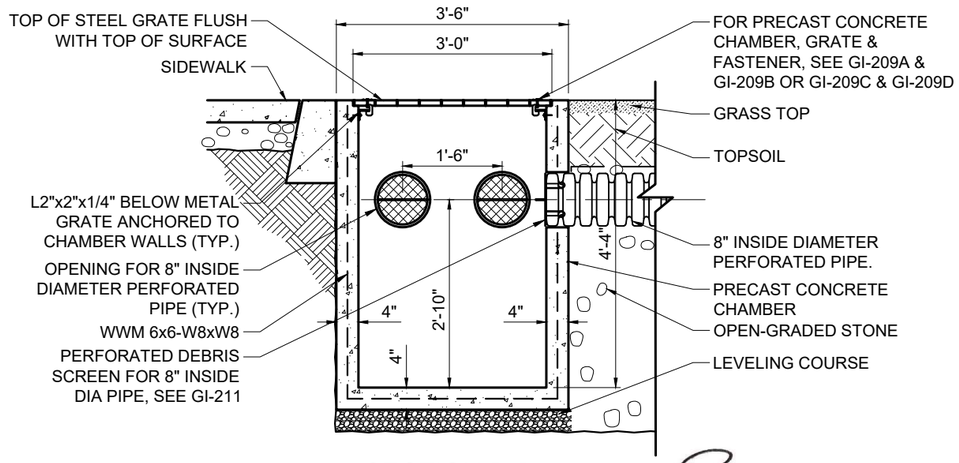
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

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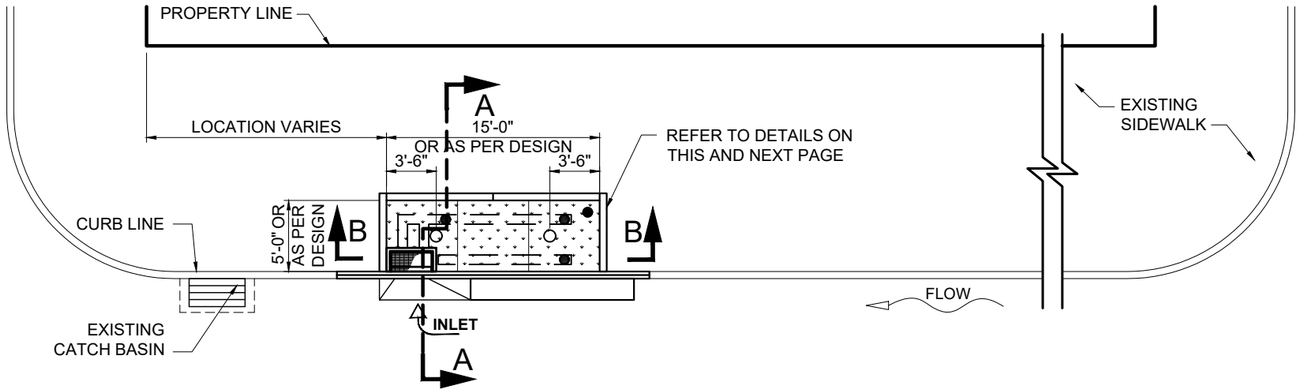
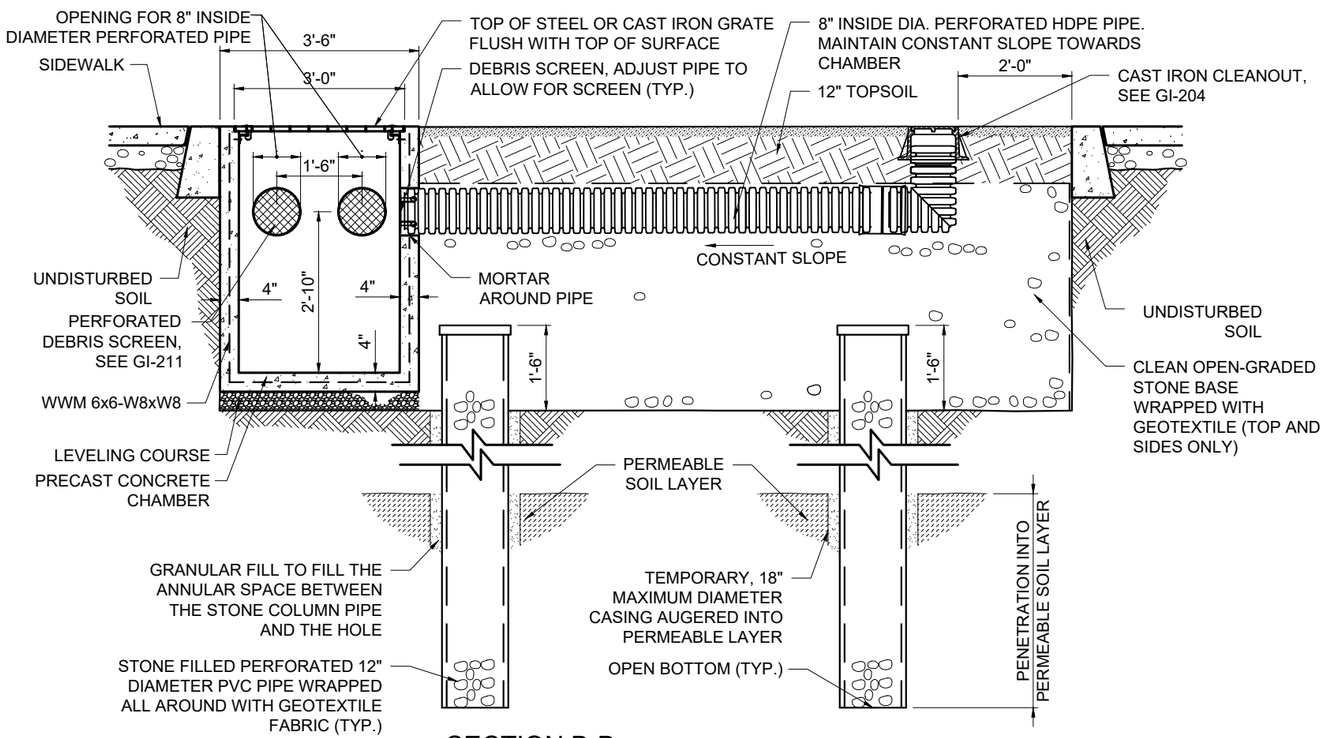
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP
TYPE 2A - WITH STONE COLUMNS

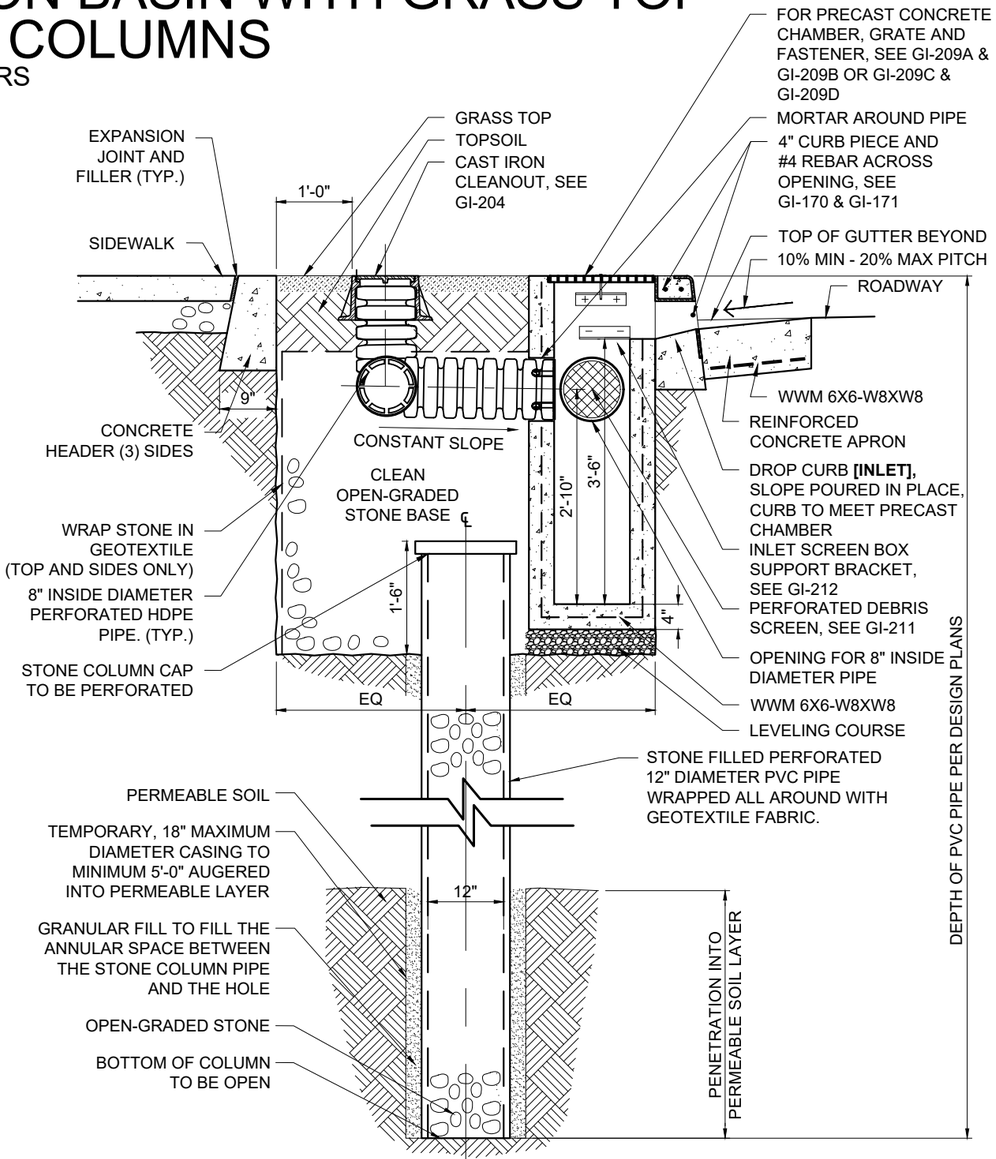
- NO CONNECTION TO SEWERS



PLAN



SECTION B-B



SECTION A-A
AT INFILTRATION BASIN STONE COLUMN

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

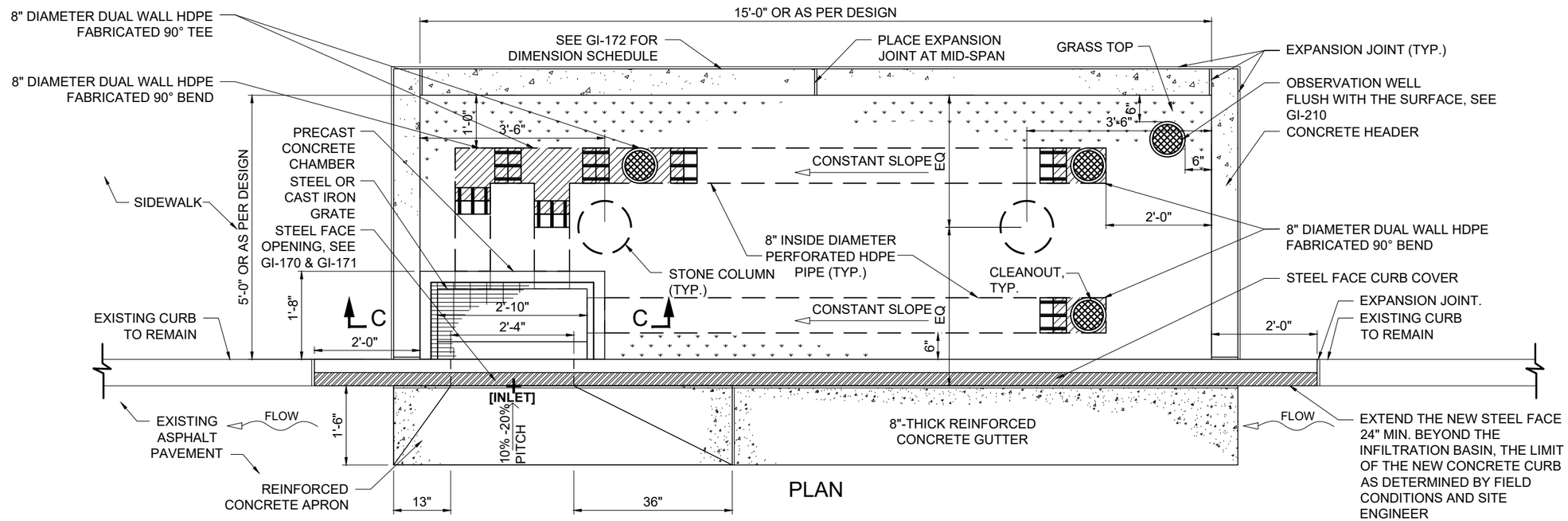
05-13-2022
DATE

GI–161

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 2A - WITH STONE COLUMNS

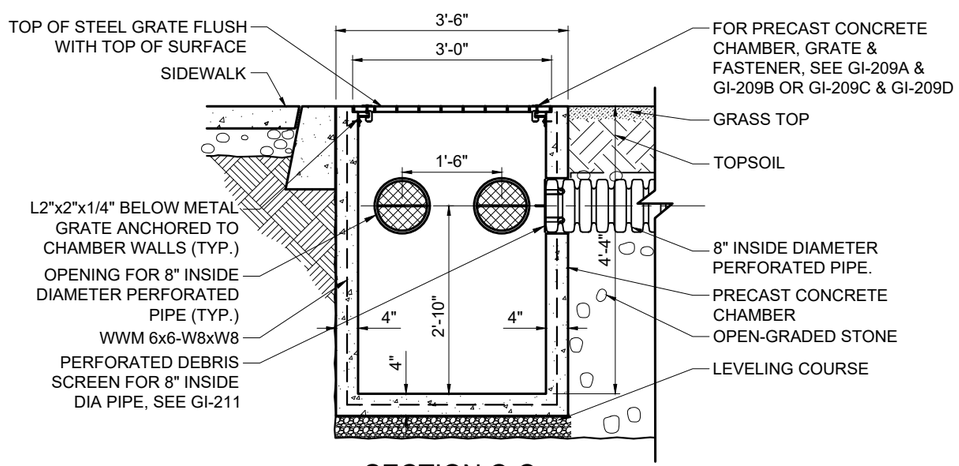
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION C-C

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

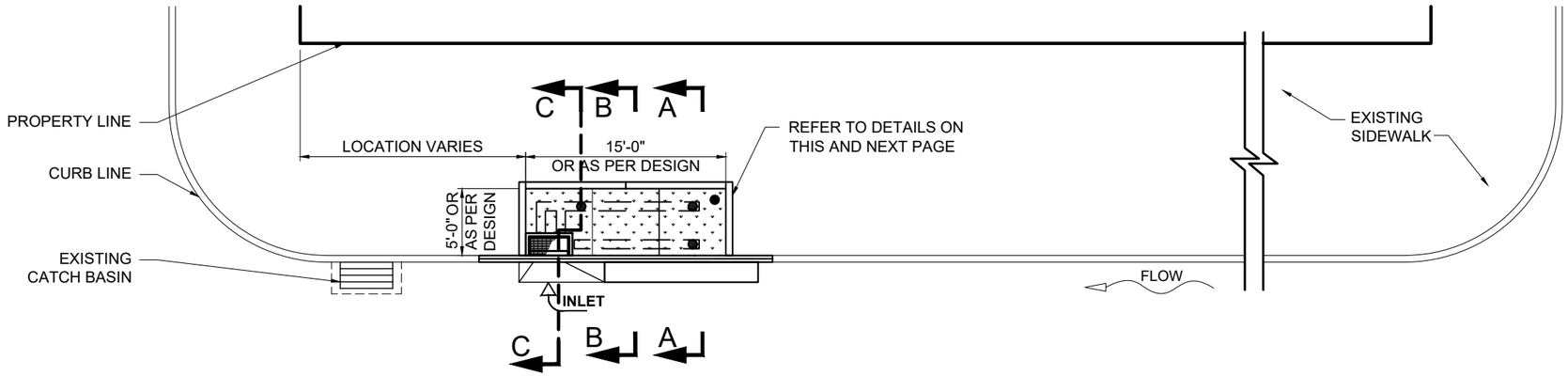
GI–162

GI–162

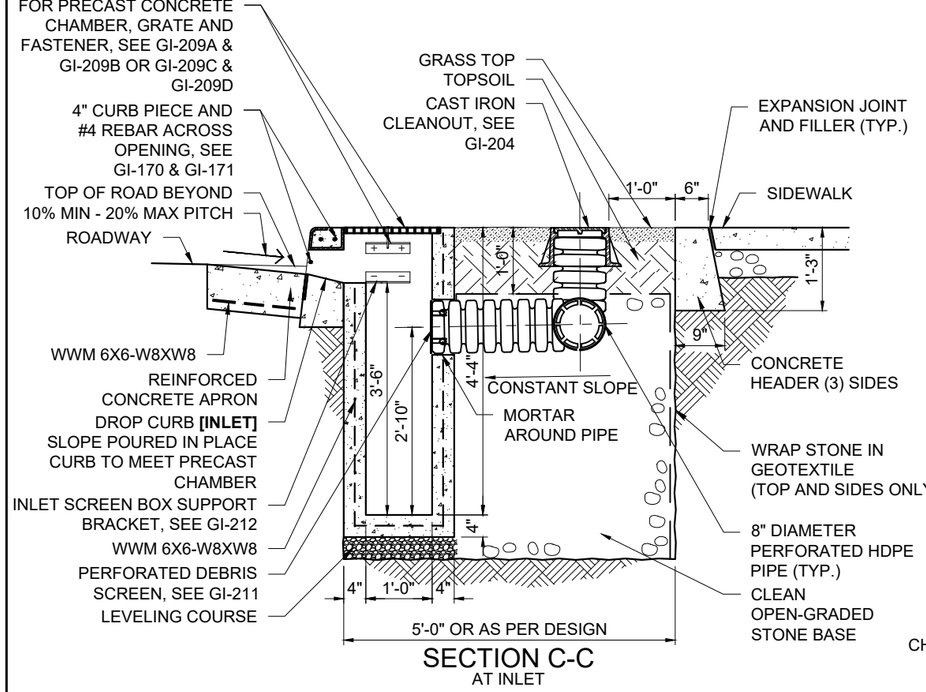
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP
TYPE 2C - WITH STORMWATER CHAMBER

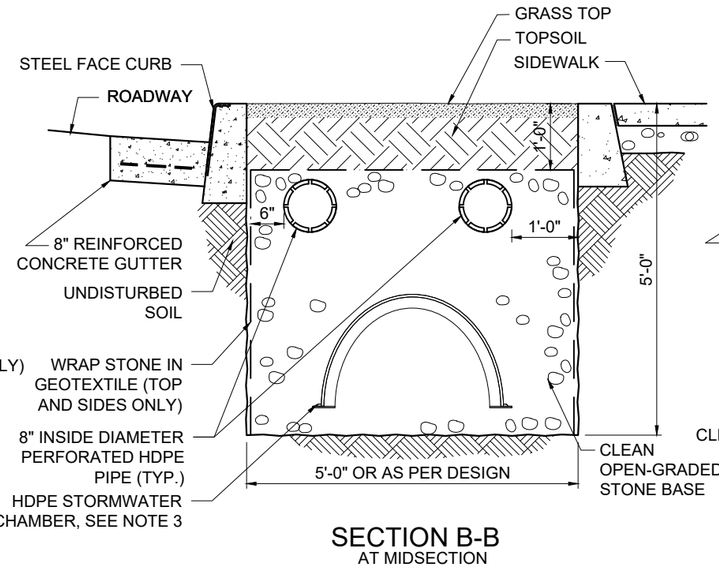
- NO CONNECTION TO SEWERS



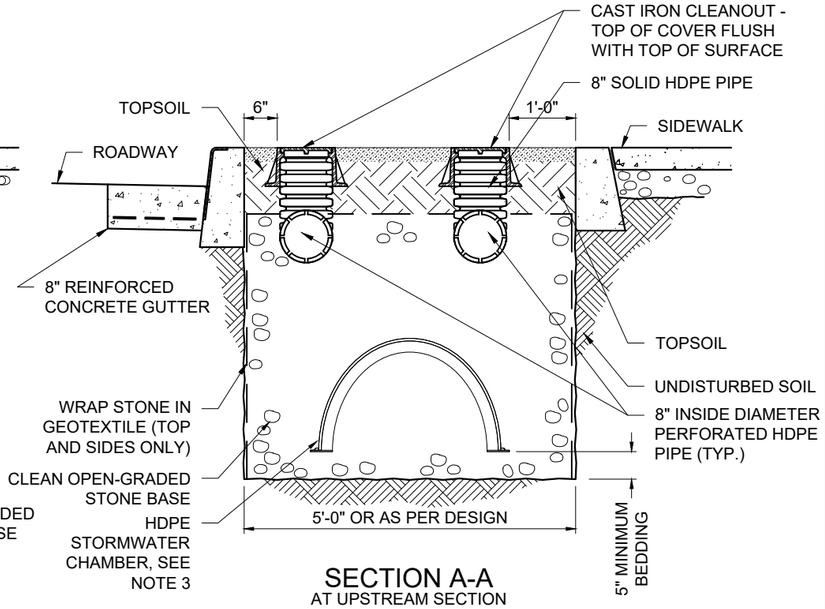
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. USE SMALLEST HDPE STORMWATER CHAMBER SIZE PER GI-204

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

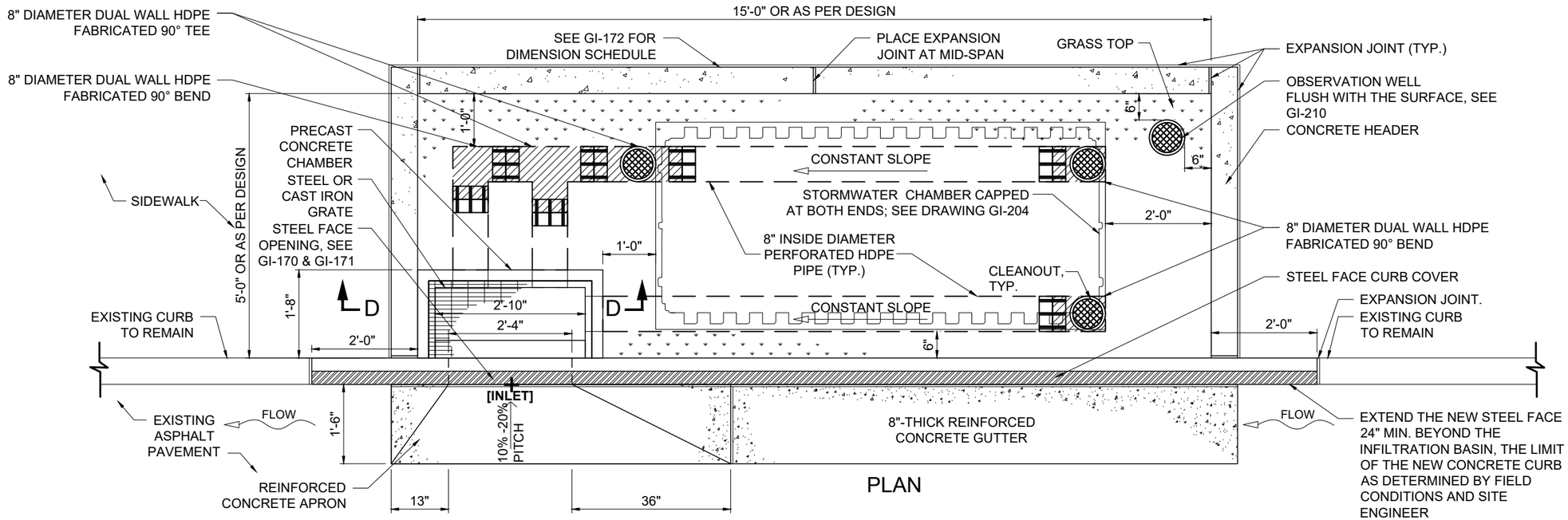
05-13-2022
DATE

GI–163

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 15'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 2C - WITH STORMWATER CHAMBER

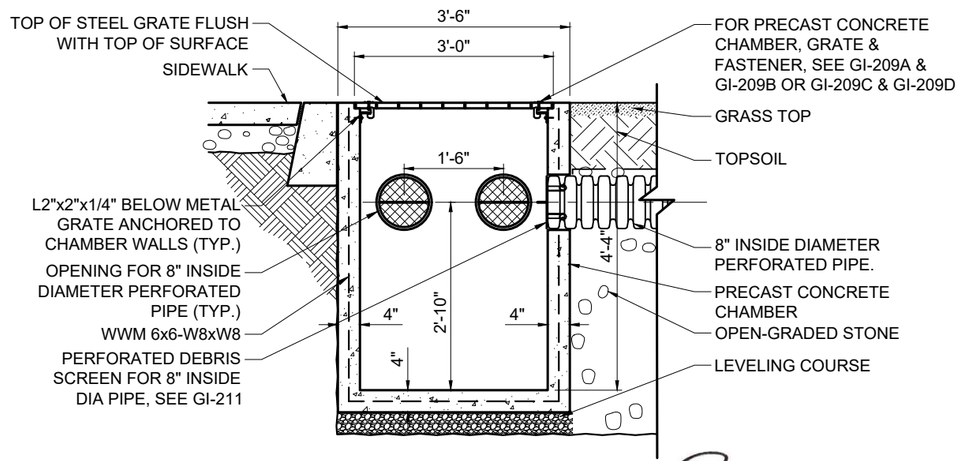
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

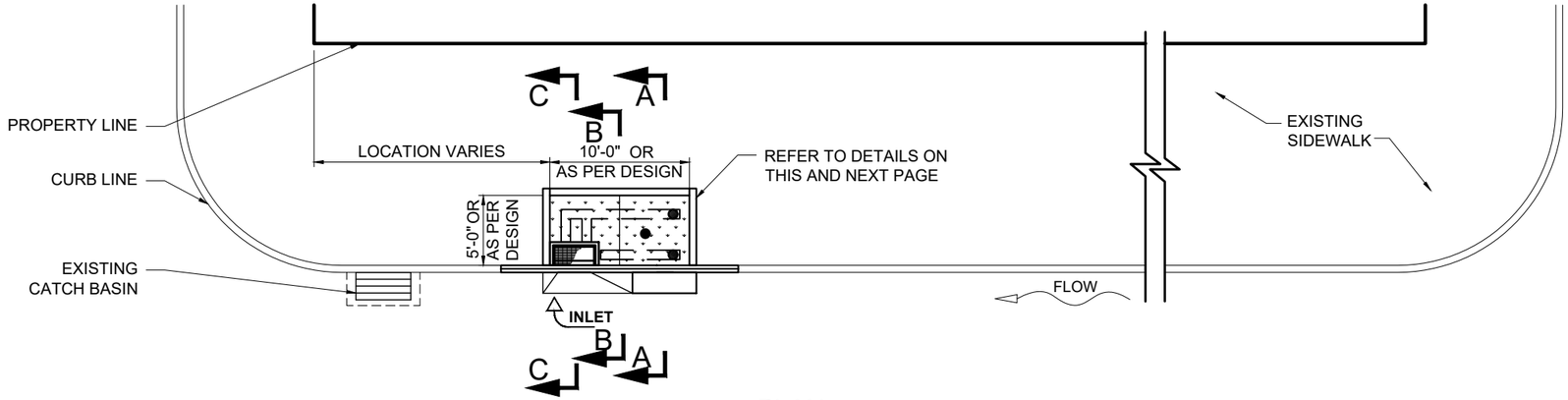
GI–164

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

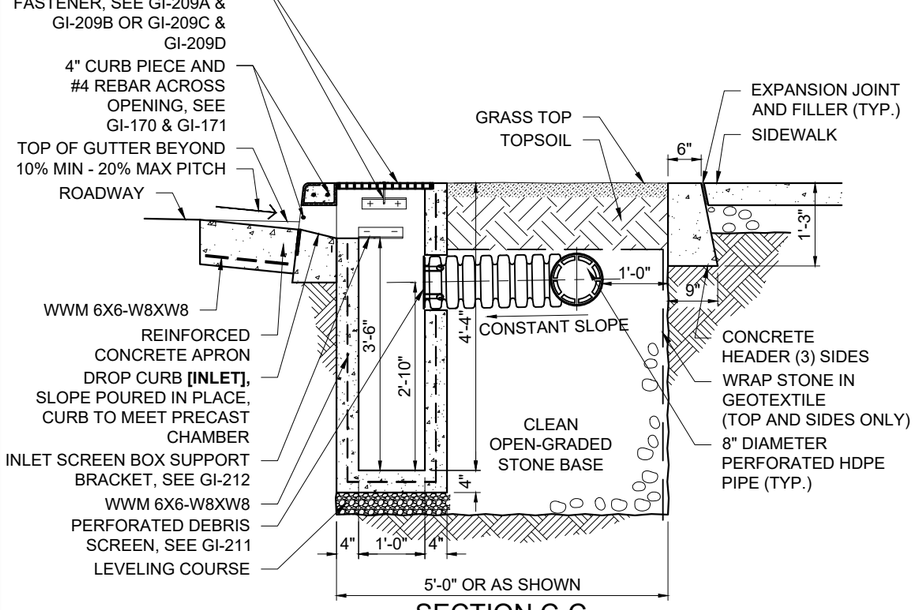
GI–164

STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 3

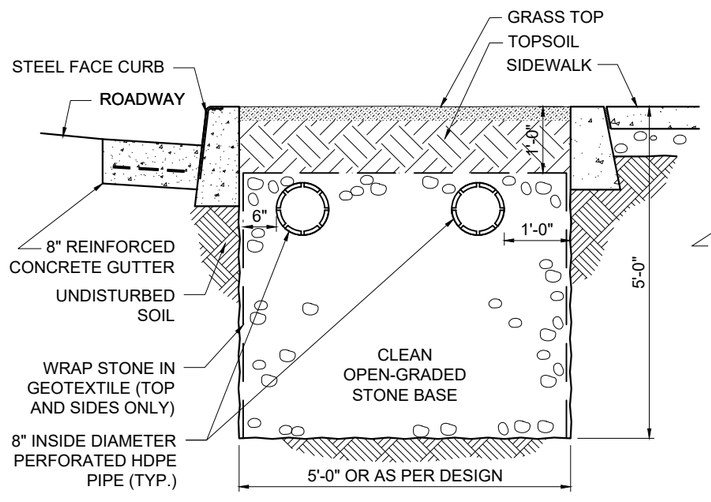
- NO CONNECTION TO SEWERS



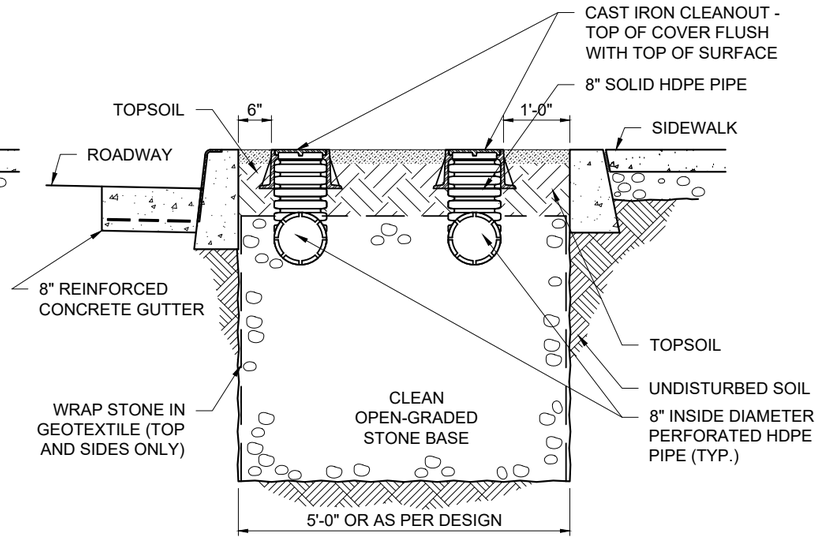
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

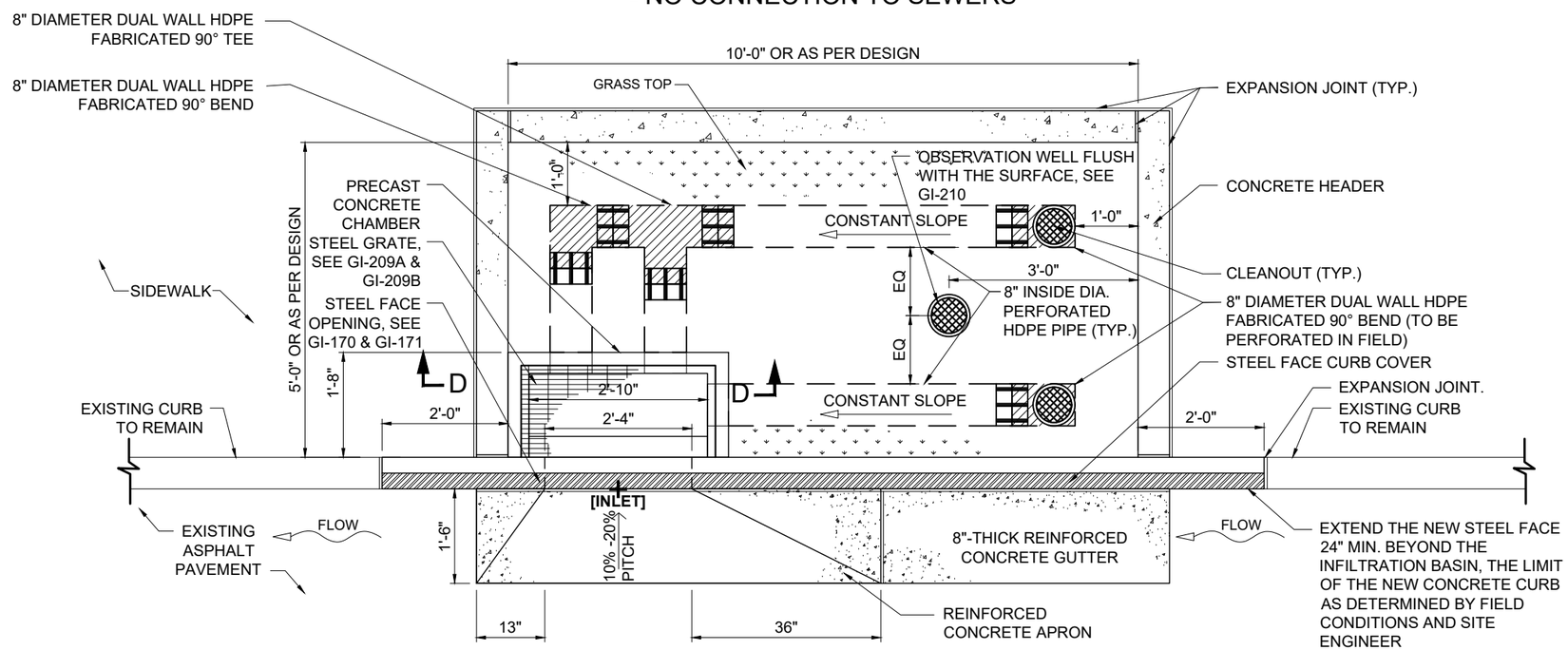
05-13-2022
DATE

GI–165

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 3

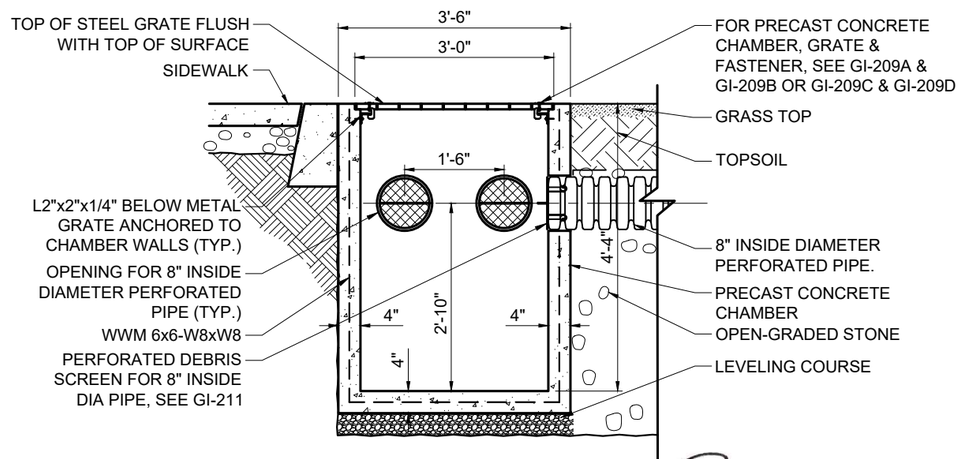
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

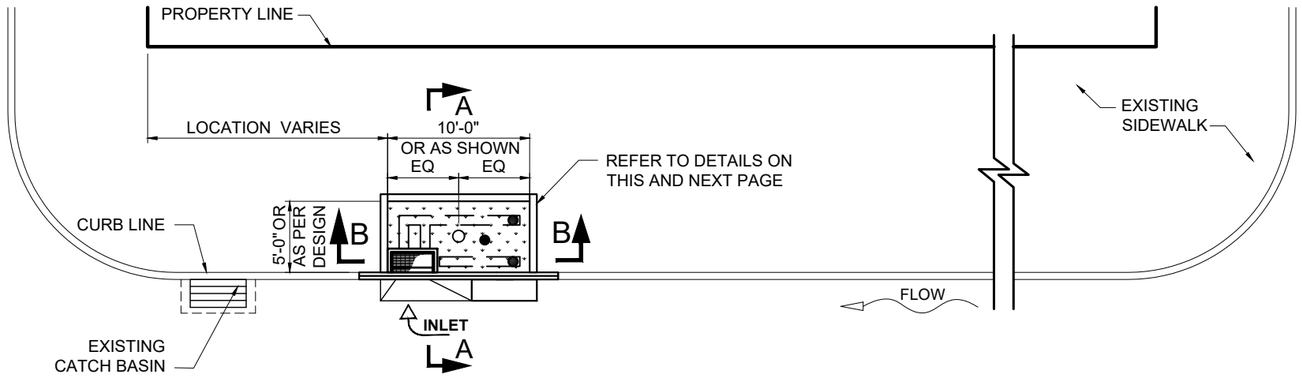
05-13-2022
DATE

GI–166

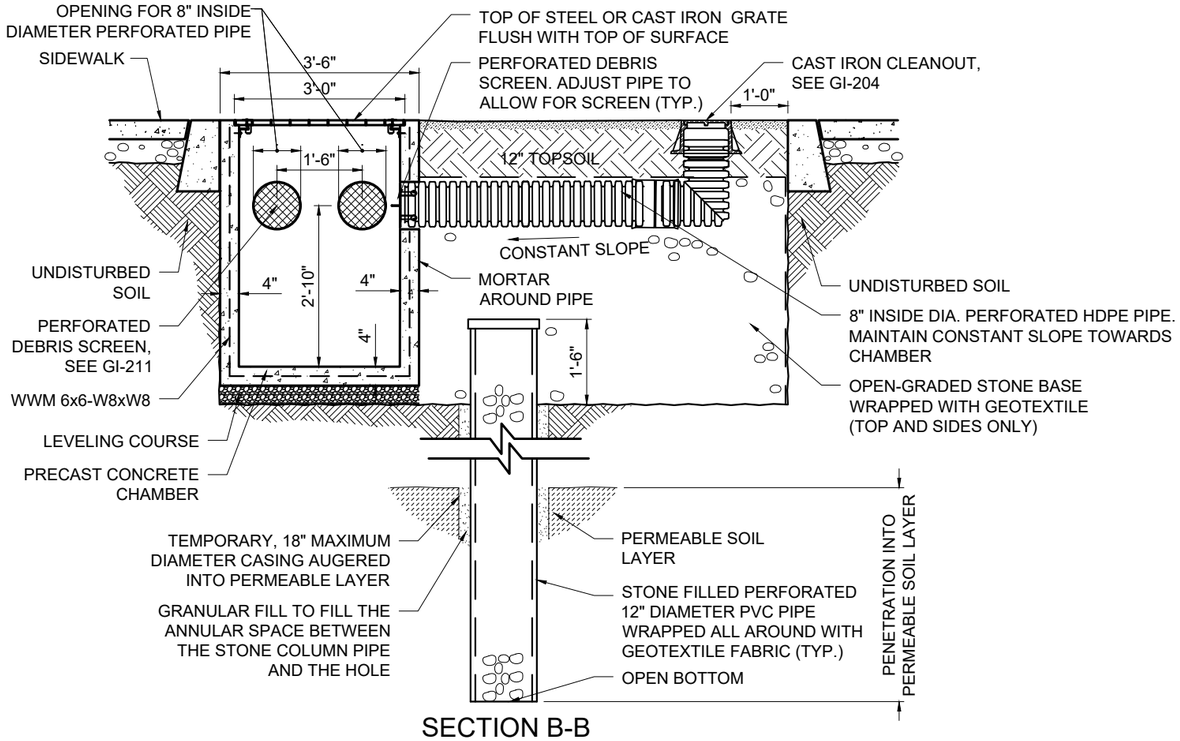
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 3A - WITH STONE COLUMN

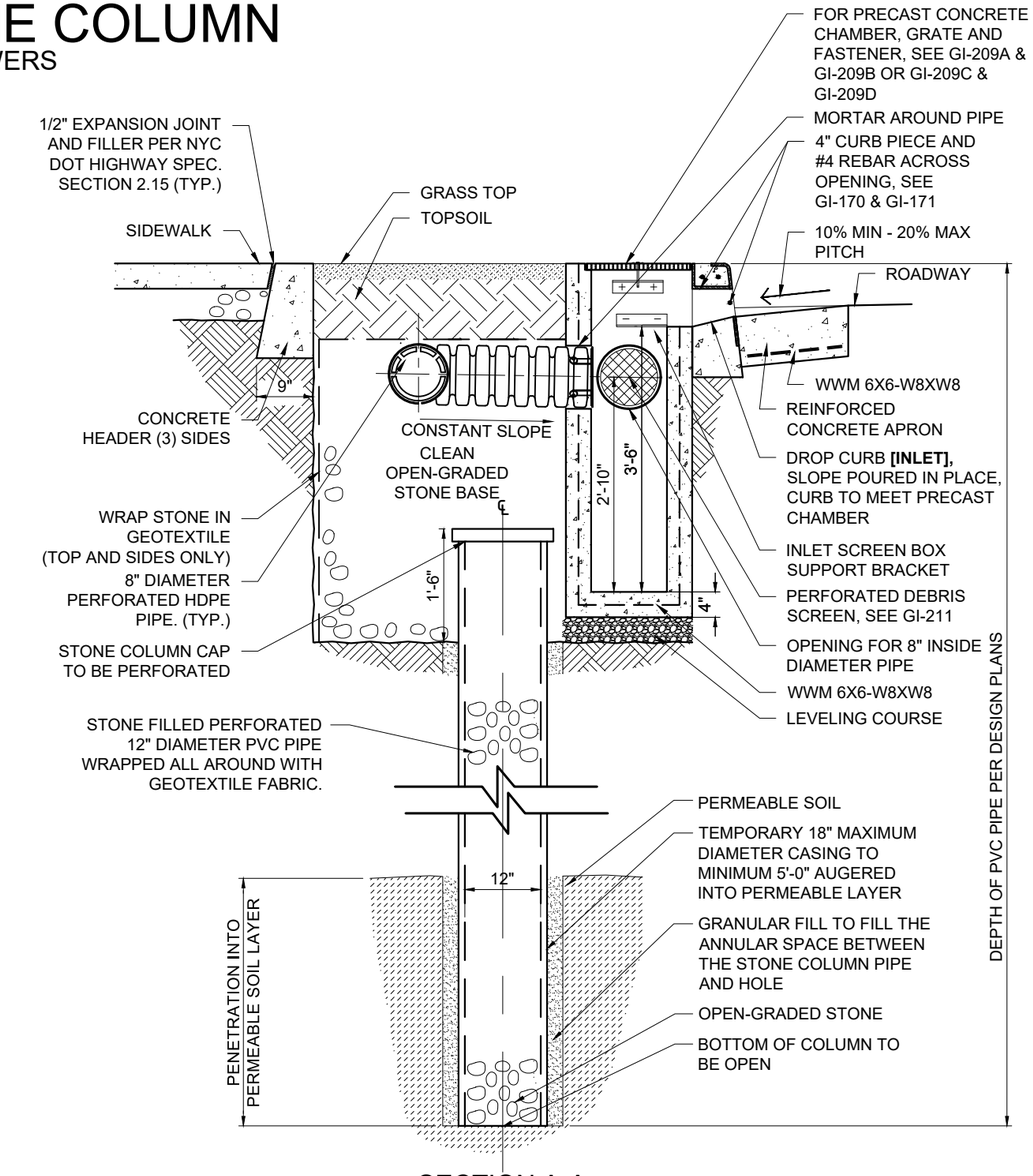
- NO CONNECTION TO SEWERS



PLAN



SECTION B-B



SECTION A-A
AT INFILTRATION BASIN STONE COLUMN

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

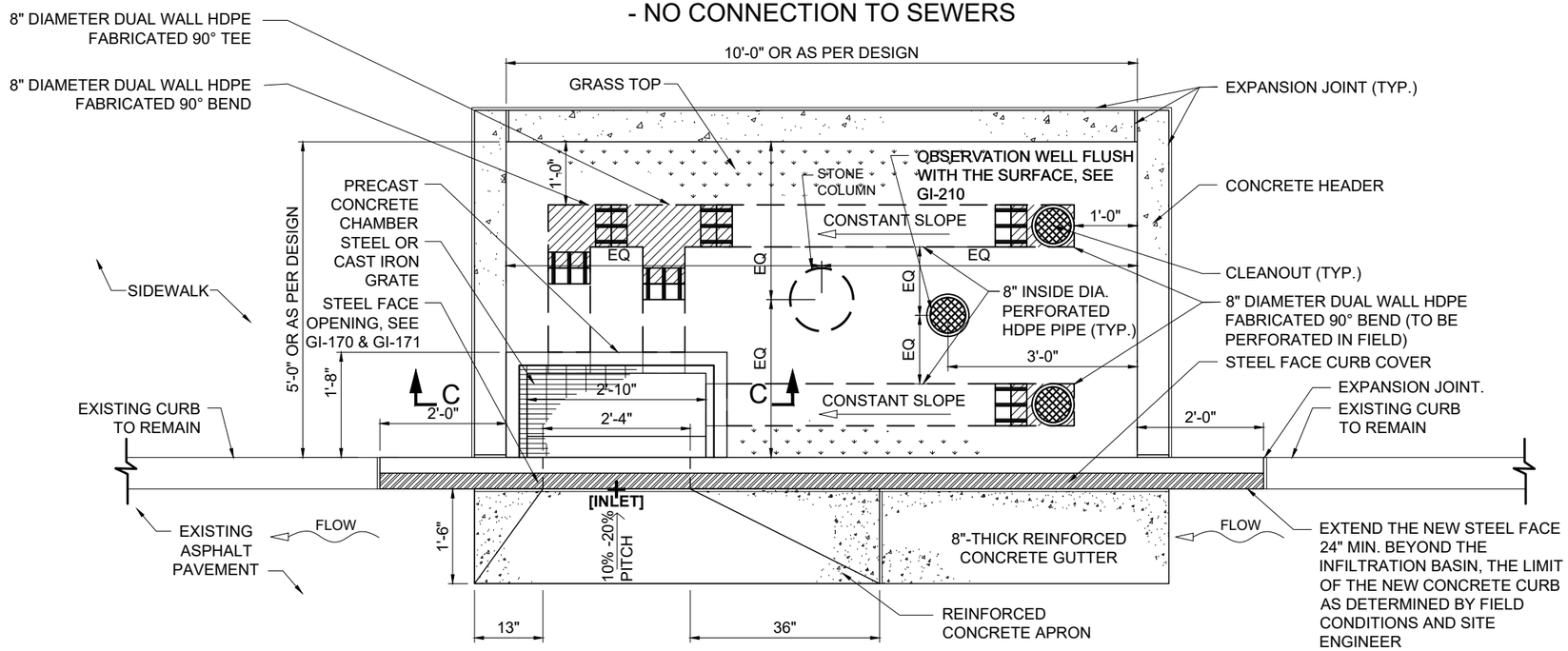
05-13-2022
DATE

GI–167

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 10'x5' R.O.W. INFILTRATION BASIN WITH GRASS TOP TYPE 3A - WITH STONE COLUMN

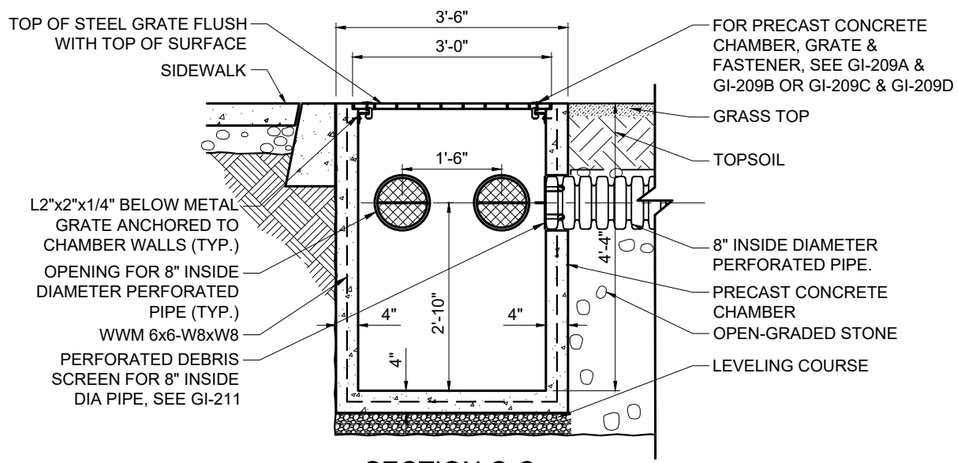
- NO CONNECTION TO SEWERS



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION C-C

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171

Roopesh Joshi
P.E.
05-13-2022
DATE

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

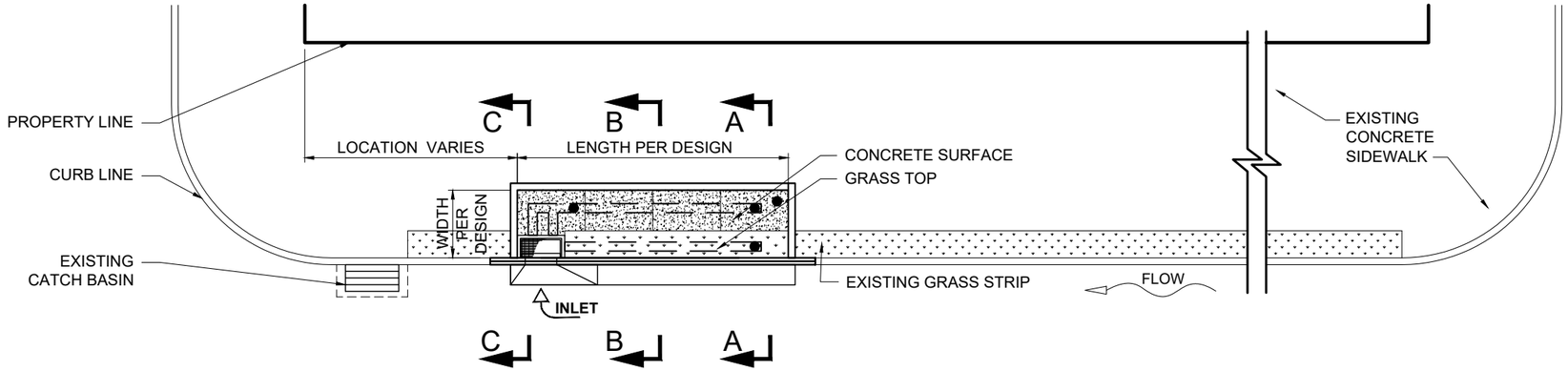
GI–168

GI–168

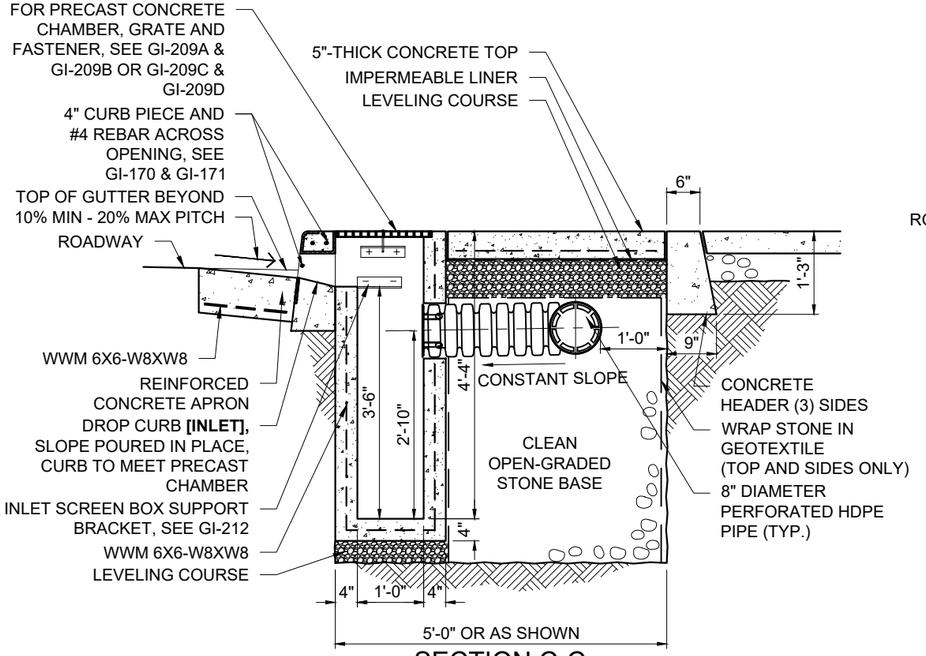
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR R.O.W. INFILTRATION BASIN WITH COMBINATION OF CONCRETE & GRASS TOP

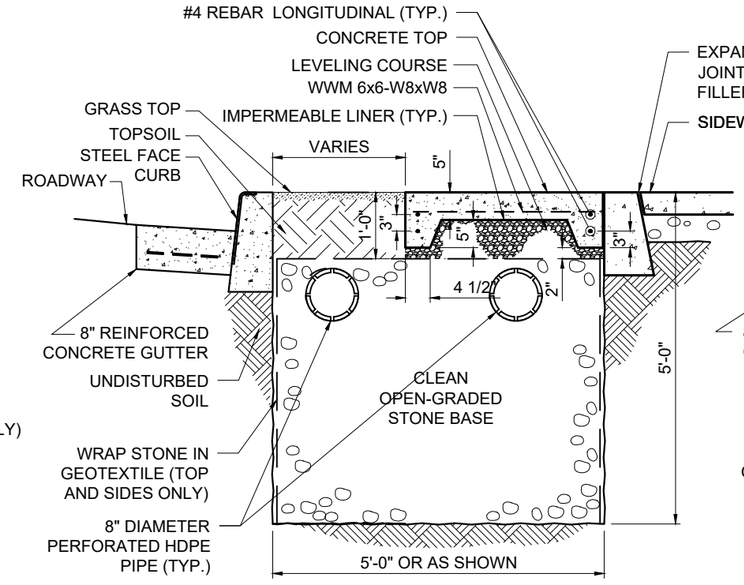
- NO CONNECTION TO SEWERS



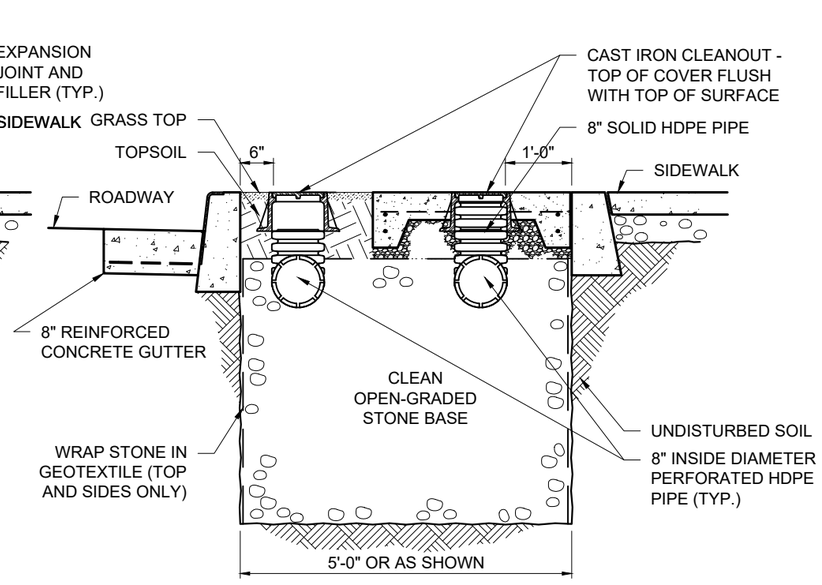
PLAN



SECTION C-C
AT INLET



SECTION B-B
AT MIDSECTION



SECTION A-A
AT UPSTREAM SECTION

NOTES:

1. THE CONTRACTOR SHALL HAND-COMPACT 1'-0" IN DEPTH OF OPEN GRADED STONE STARTING AT THE BASE OF THE INFILTRATION BASIN PRIOR TO ADDING ADDITIONAL OPEN GRADED STONE.
2. FOR STEEL FACE OPENING DIMENSIONS AND STEEL REBAR DETAILS SEE GI-170 & GI-171
3. CAST IN PLACE CONCRETE TOP REQUIRES AN IMPERMEABLE LINER. SEE SPECIFICATIONS FOR IMPERMEABLE LINER REQUIREMENTS

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

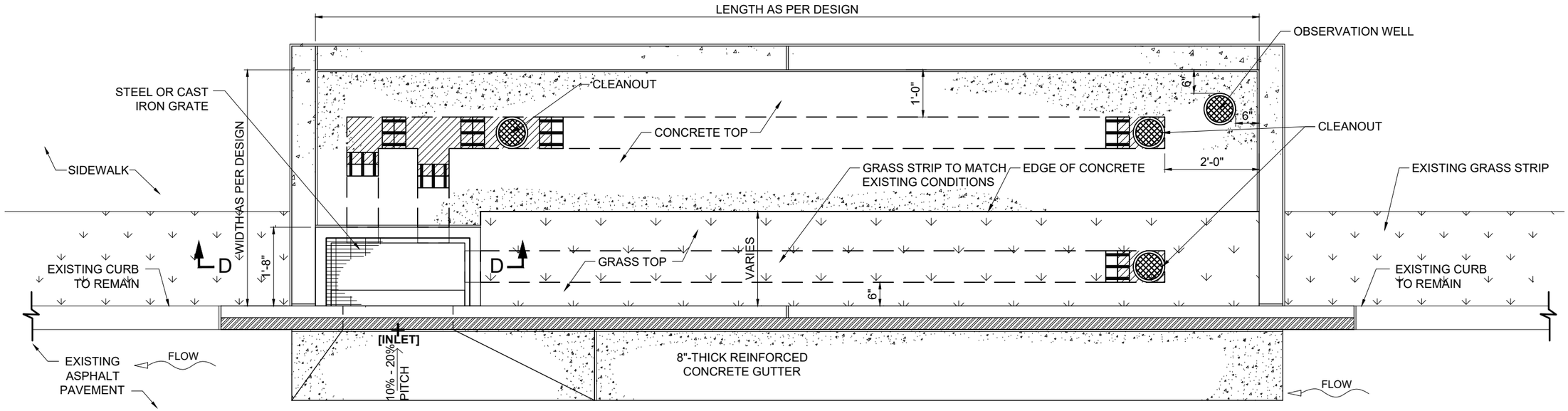
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR R.O.W. INFILTRATION BASIN WITH COMBINATION OF CONCRETE & GRASS TOP

- NO CONNECTION TO SEWERS

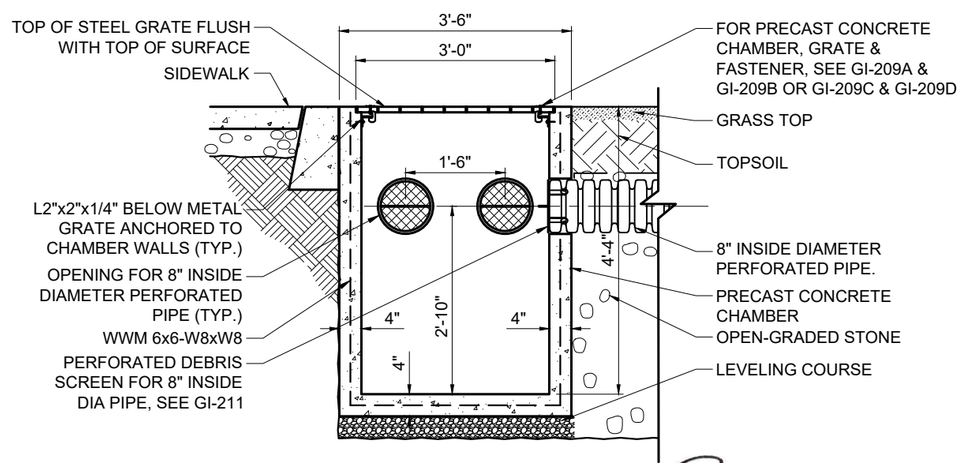
GI–169



PLAN

CONCRETE APRON PITCH SCHEDULE	
CURB REVEAL (INCHES)	**APRON PITCH**
2.5 TO < 3	20% TO ≥ 17%
3 TO < 3.5	17% TO ≥ 14%
3.5 TO < 4	14% TO ≥ 11%
4 TO 4.5	11% TO ≥ 10%
> 4.5	10%
LONGITUDINAL STREET SLOPE	
≤ 5%	10% MIN
≥ 5%	12% MIN

* 2" MINIMUM OPENING TO BE MAINTAINED UNLESS ADDITIONAL DIRECTION SHOWN ON DETAILED CONSTRUCTION DRAWINGS.



SECTION D-D

Roopesh Joshi
P.E.

05-13-2022
DATE

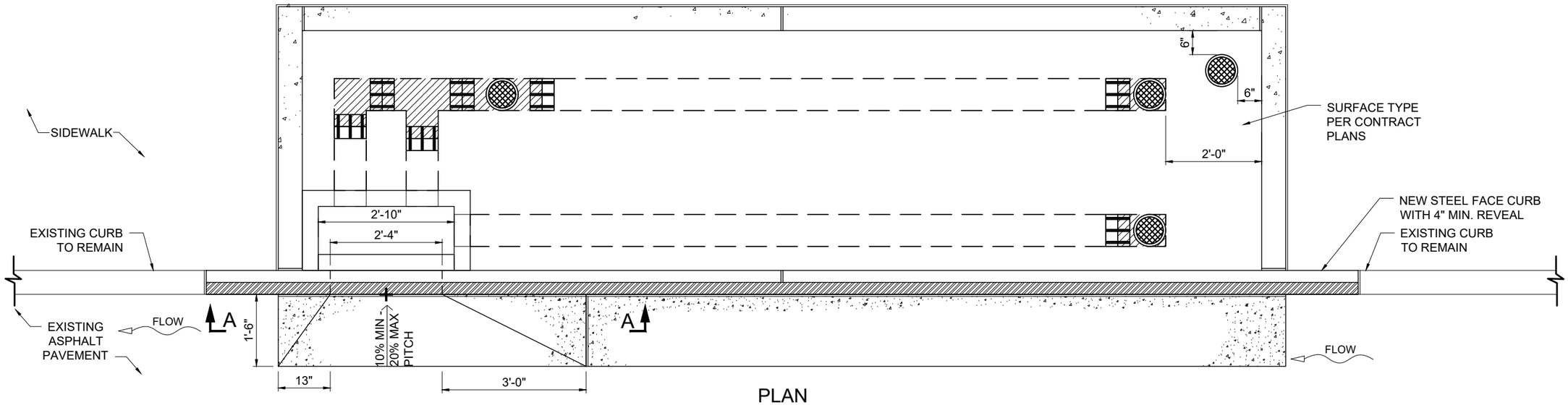
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–170

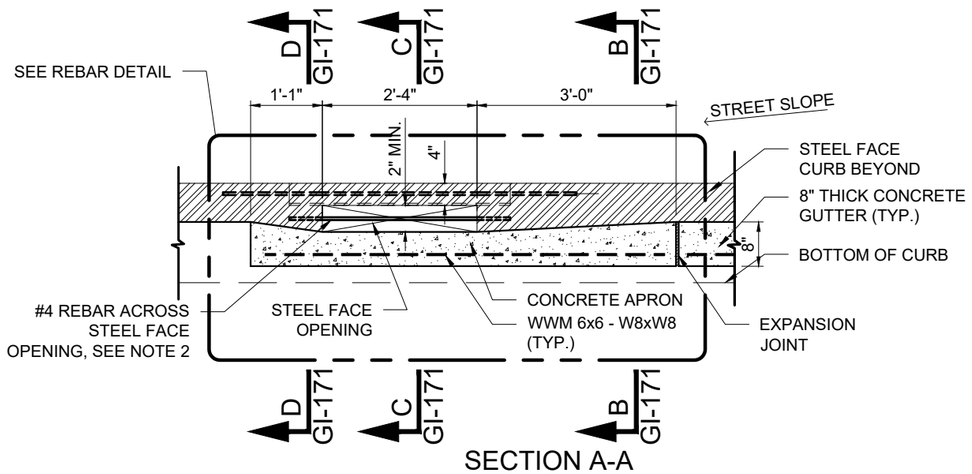
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. INFILTRATION BASINS STEEL FACE CURB OPENING DETAILS

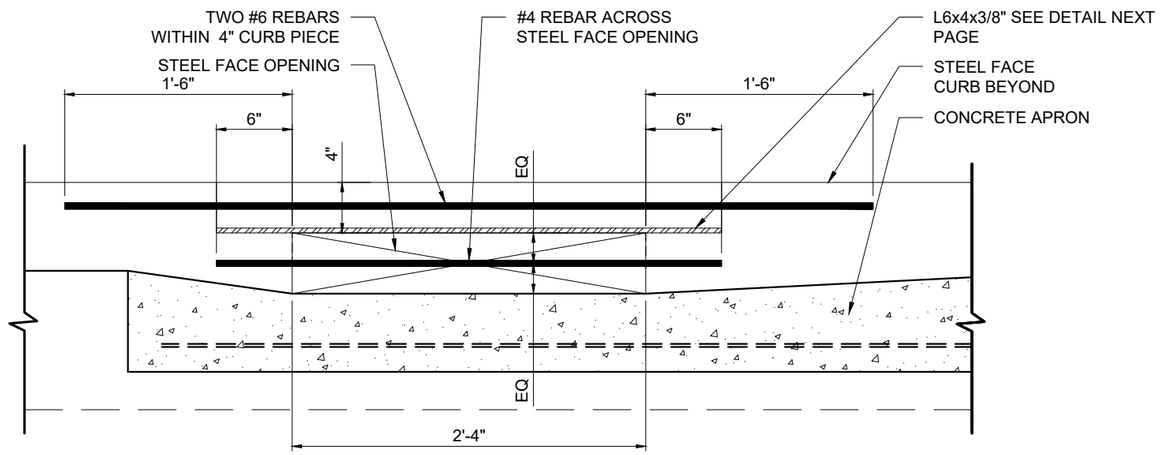
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A



REBAR DETAIL

NOTES:

1. STANDARD CROSS-SECTIONAL DETAILS AND NOTES AS PER THE R.O.W. INFILTRATION BASIN TYPE SPECIFIED.
2. REBAR REQUIRED FOR OPENINGS GREATER OR EQUAL TO 2.5"

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

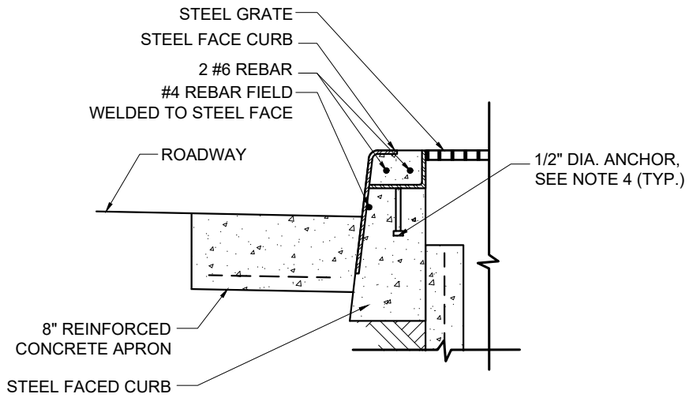
05-13-2022
DATE

GI–171

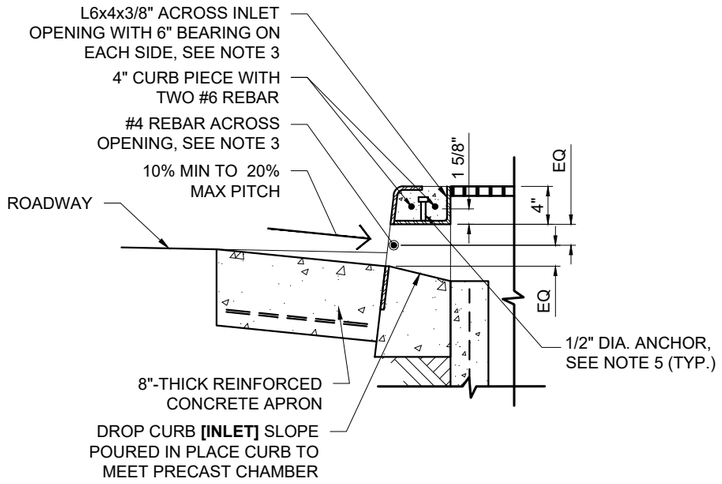
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. INFILTRATION BASINS STEEL FACE CURB OPENING DETAILS

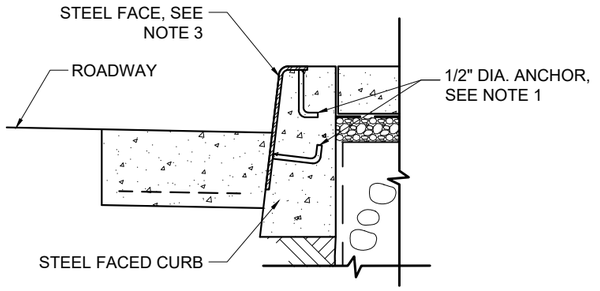
- NO CONNECTION TO SEWERS



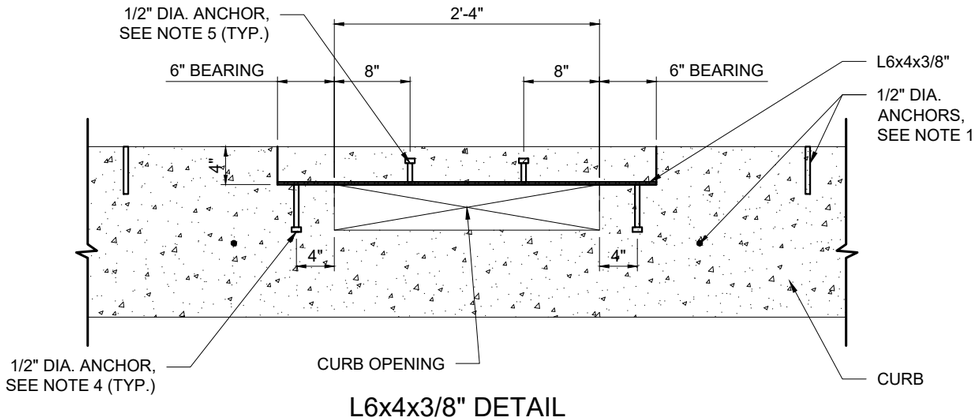
SECTION D-D
STEEL FACE CURB DETAIL



SECTION C-C
STEEL FACE CURB OPENING DETAIL



SECTION B-B
STEEL FACE CURB DETAIL



L6x4x3/8" DETAIL

NOTES:
1. 1/2" DIAMETER x 5" HEADED ANCHOR STUDS (GRANULAR OR SOLID FLUX FILLED) SHALL BE PLACED AT 1'-0" MAXIMUM, CENTER TO CENTER- STAGGERED AS PER NYCDOT STANDARD DETAIL H-1010 ALONG FULL LENGTH OF STEEL FACING, EXCEPT FOR CURB OPENING
2. STRUCTURAL STEEL SHALL BE ASTM DESIGNATION A36
3. SURFACE TO BE CLEANED AND PAINTED AS PER NYCDOT STANDARD HIGHWAY SPECIFICATIONS, SECTION 2.13. COLOR OF TOP COAT SHALL BE GRAY AS APPROVED BY ENGINEER
4. 1/2" DIAMETER x 5" HEADED ANCHOR STUD (GRANULAR OR SOLID FLUX FILLED) SHALL BE PLACED AT EACH END OF L6x4x3/8", OFFSET 4" FROM INLET
5. 1/2" DIAMETER x 2 1/2" HEADED ANCHOR STUD (GRANULAR OR SOLID FLUX FILLED) SHALL BE PLACED ON L6x4x3/8" ABOVE CURB OPENING

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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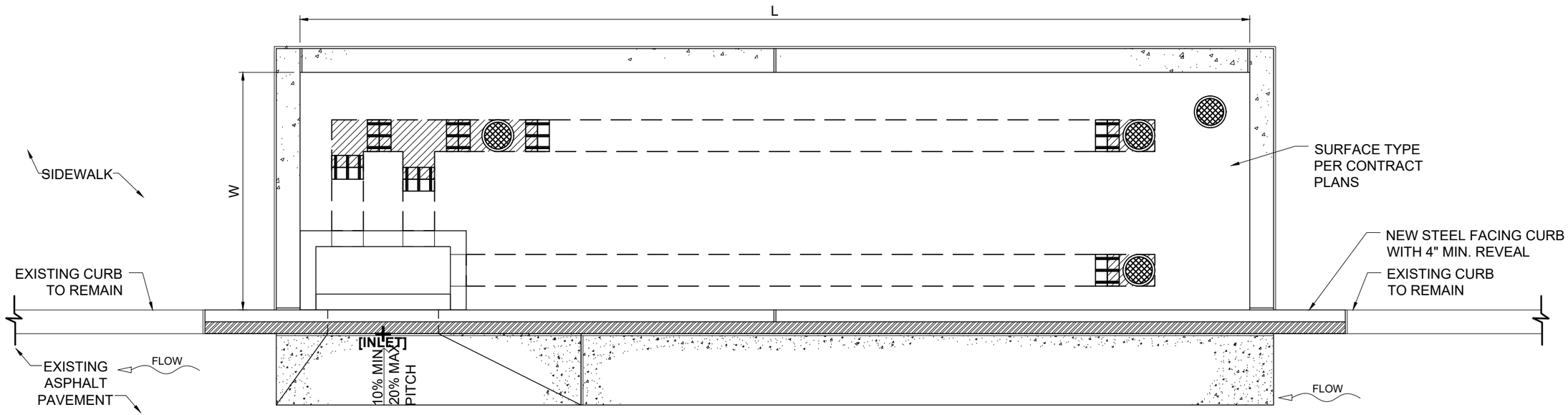
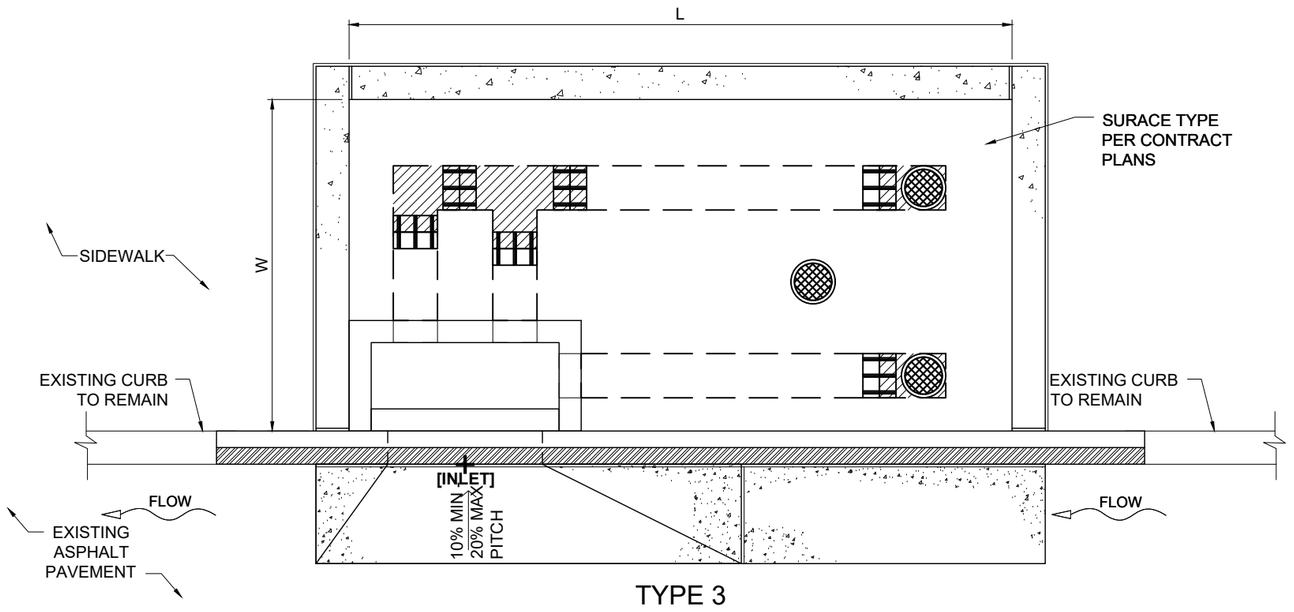
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DIMENSIONS SCHEDULE FOR VARIABLE SIZE R.O.W. INFILTRATION BASINS

- NO CONNECTION TO SEWERS



TYPE 1/TYPE 2



TYPE 3

R.O.W. INFILTRATION BASIN DIMENSIONS		
LENGTH (L), 1FT. INCREMENT	WIDTH (W), 6 IN. INCREMENT	TYPE
17' ≤ L ≤ 20'	4'-0" TO 6'-0"	TYPE 1
13' ≤ L ≤ 16'	4'-0" TO 6'-0"	TYPE 2
10' ≤ L ≤ 12'	4'-0" TO 6'-0"	TYPE 3

DIMENSIONS SCHEDULE

NOTES:

1. STANDARD CROSS-SECTIONAL DETAILS AND NOTES AS PER THE R.O.W. INFILTRATION BASIN TYPE SPECIFIED.
2. DOT APPROVAL REQUIRED FOR ALL WIDTHS GREATER THAN 5'.

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1D

- NO CONNECTION TO SEWERS

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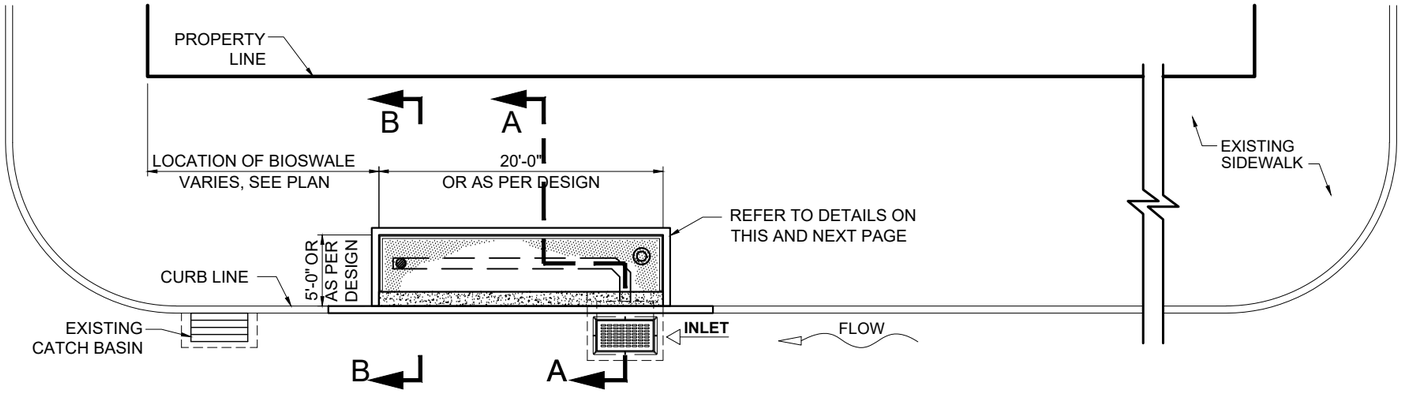
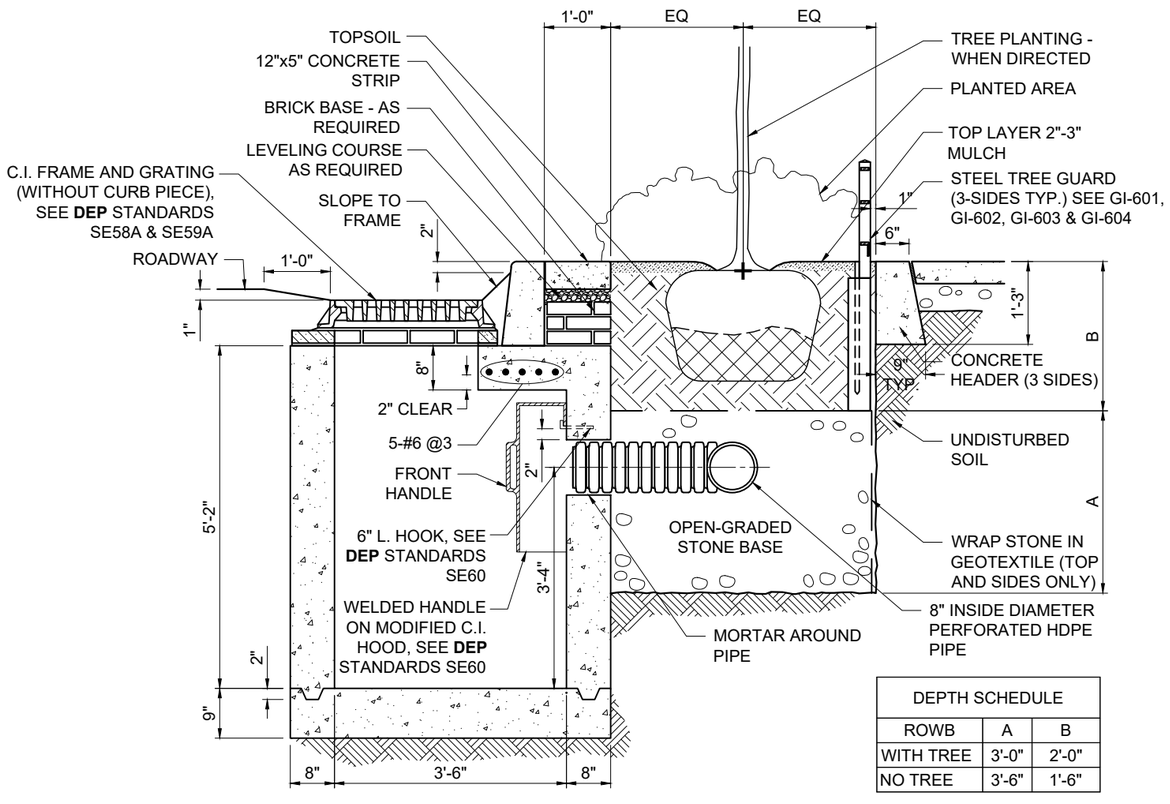
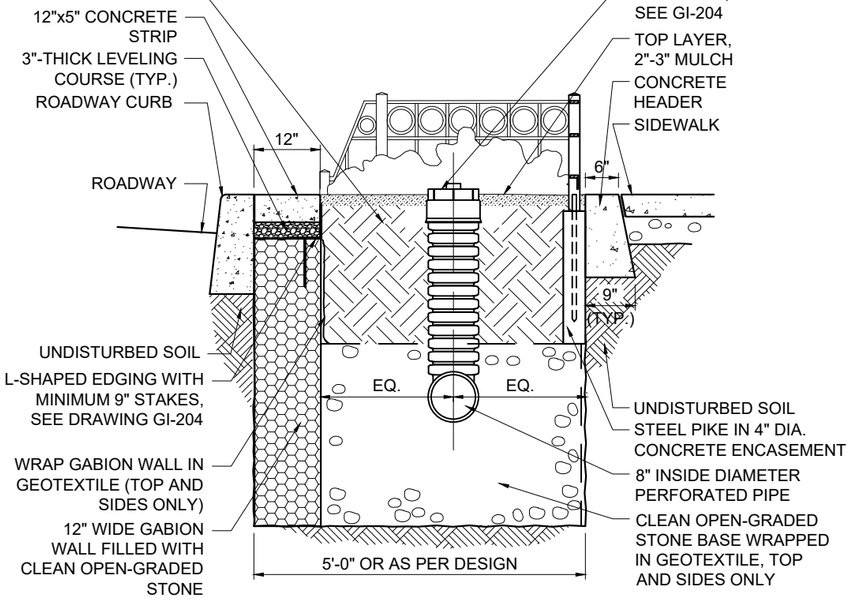




DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	3'-0"	2'-0"
NO TREE	3'-6"	1'-6"

SECTION A-A



SECTION B-B

NOTE:
CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1D

- NO CONNECTION TO SEWERS

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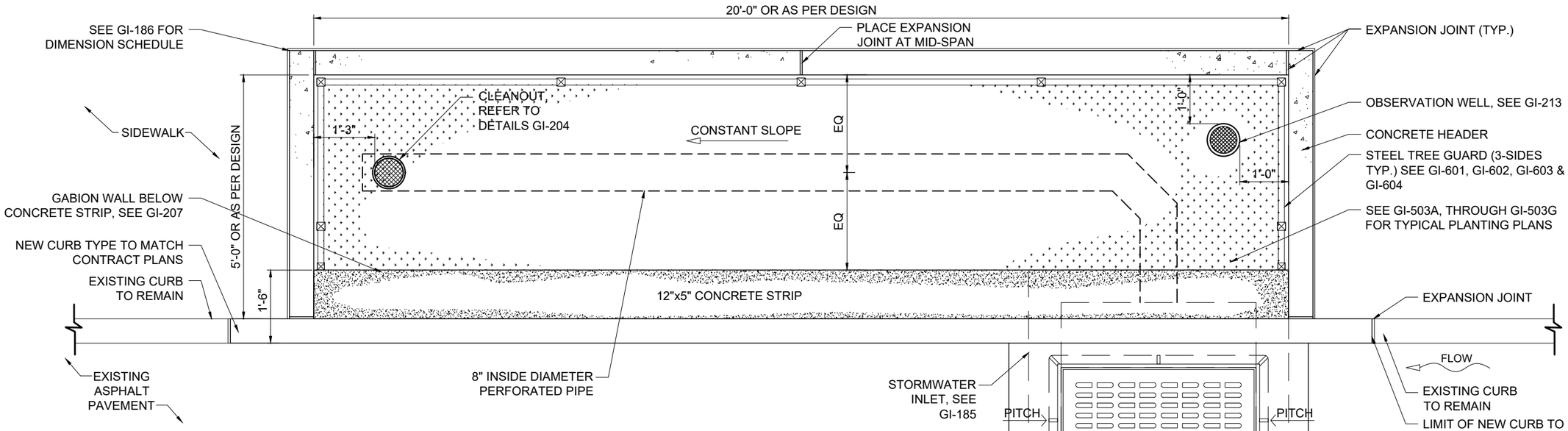
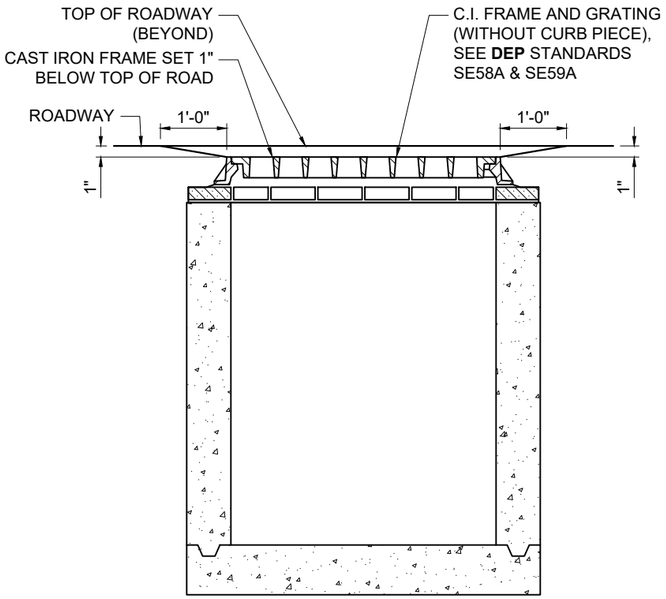


PLAN



SECTION C-C

Roopesh Joshi
P.E.
05-13-2022
DATE

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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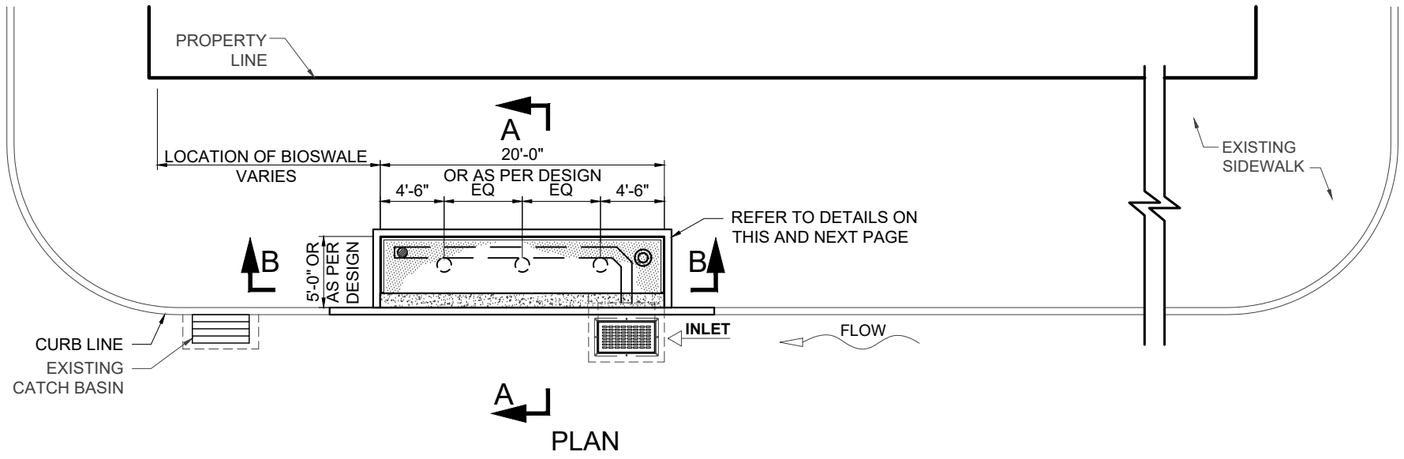
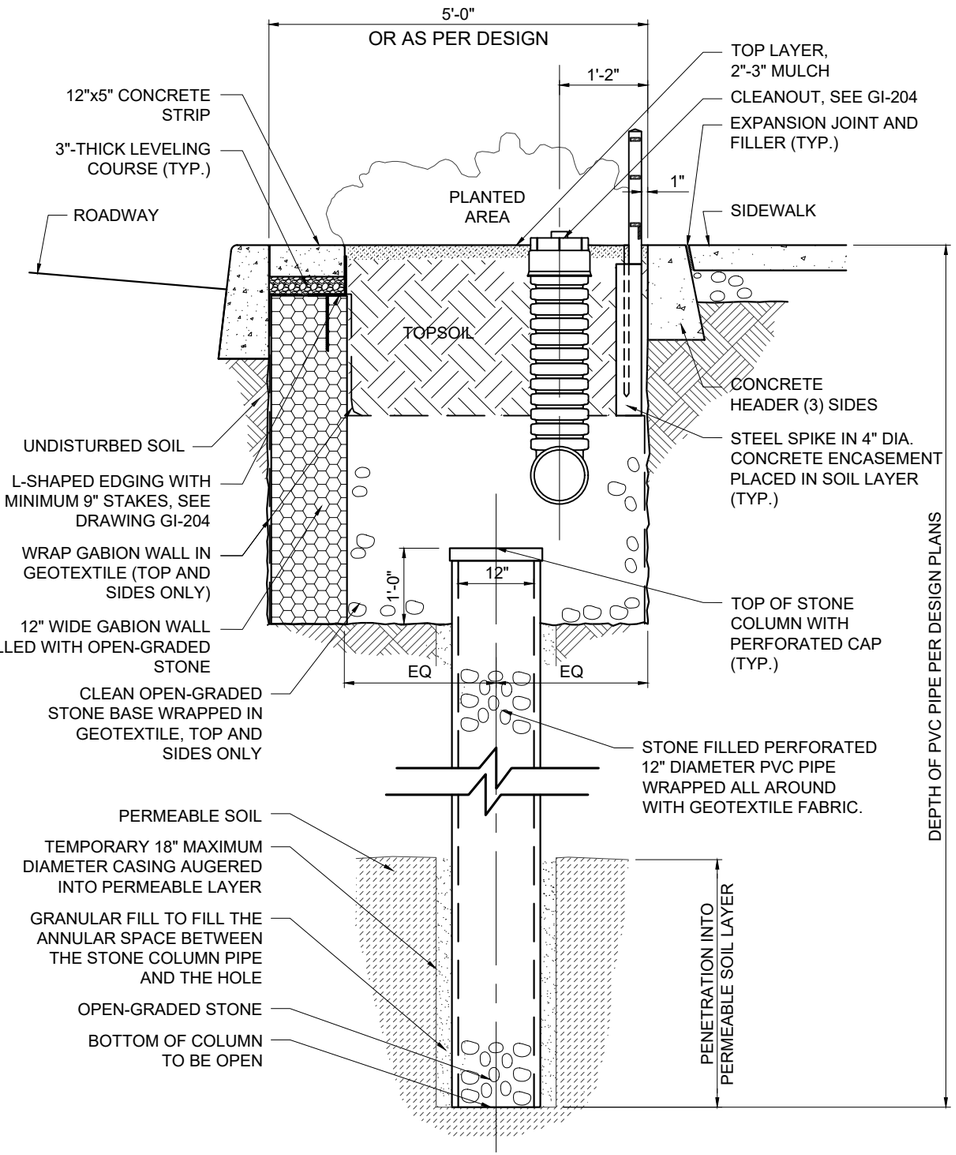
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

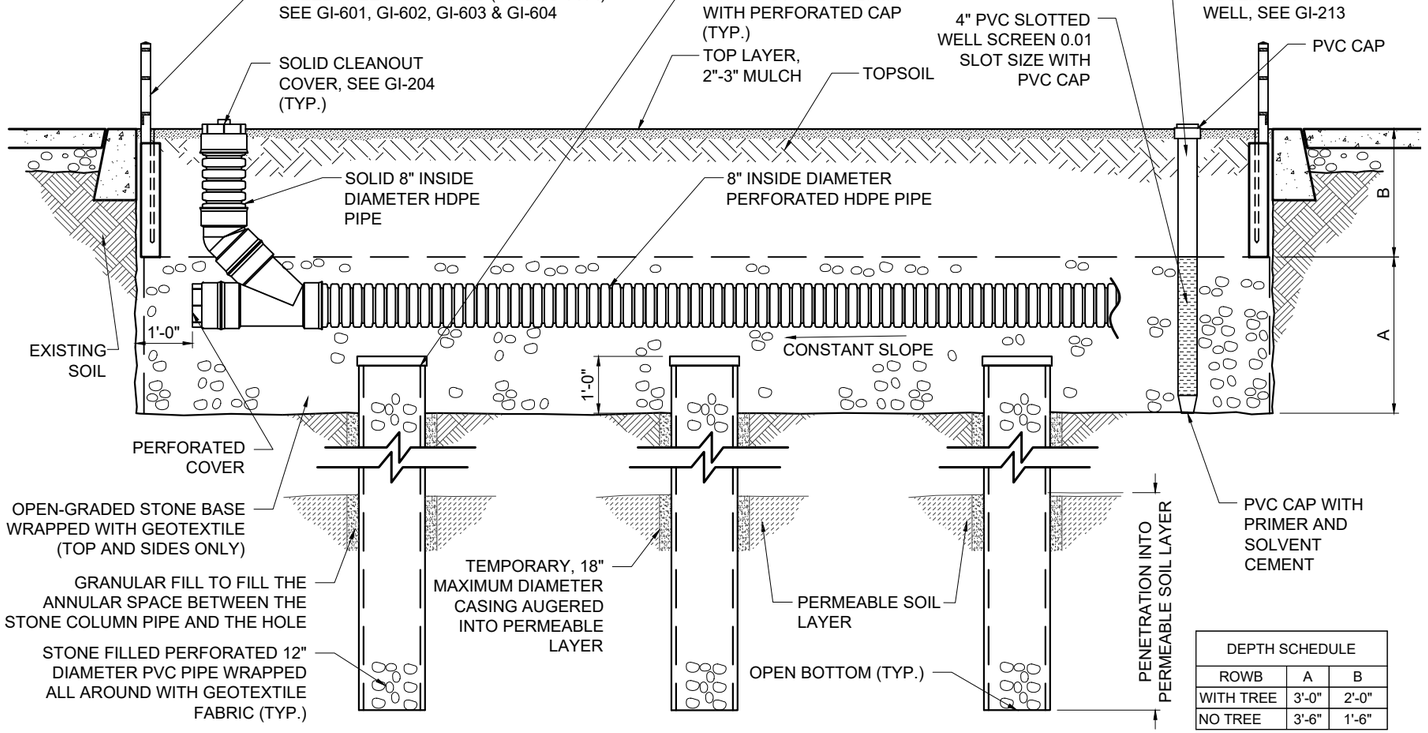
STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1DA - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS





SECTION A-A
AT BIOSWALE STONE COLUMN



DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	3'-0"	2'-0"
NO TREE	3'-6"	1'-6"

SECTION B-B

NOTE:
CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
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STANDARD FOR 20'x5' R.O.W. BIOSWALE TYPE 1DA - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS

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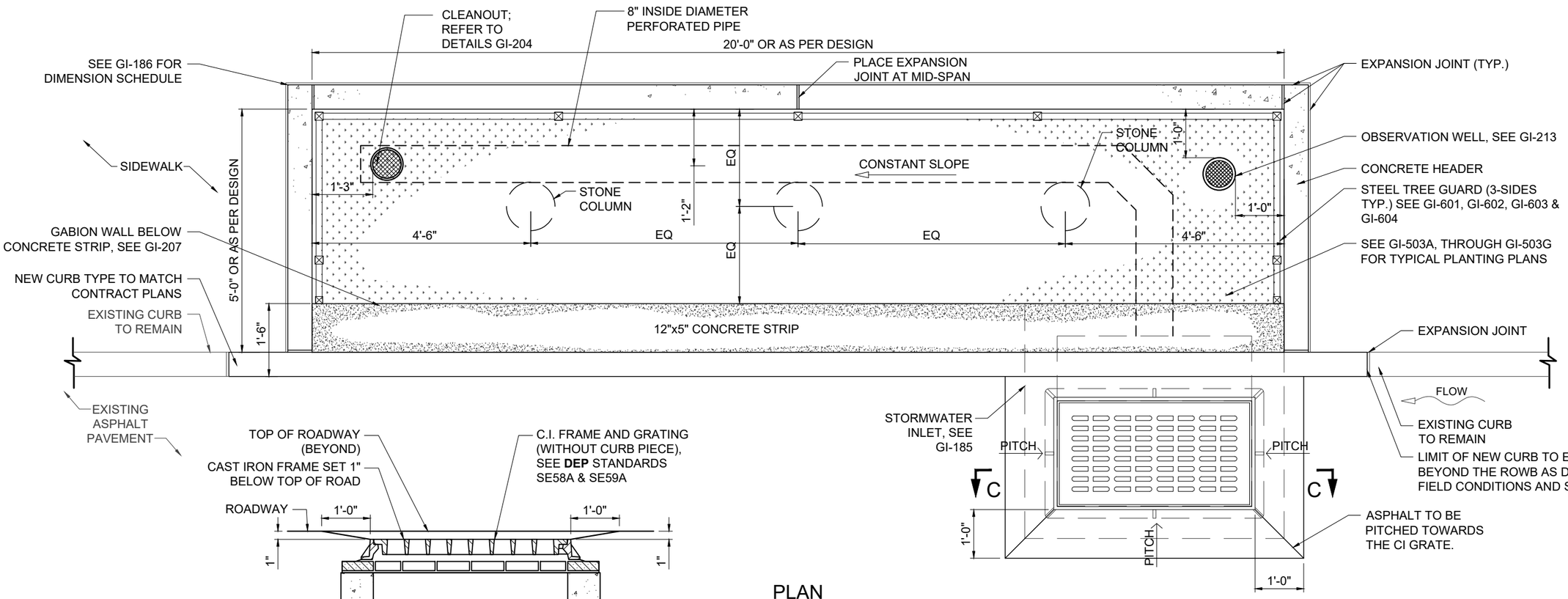
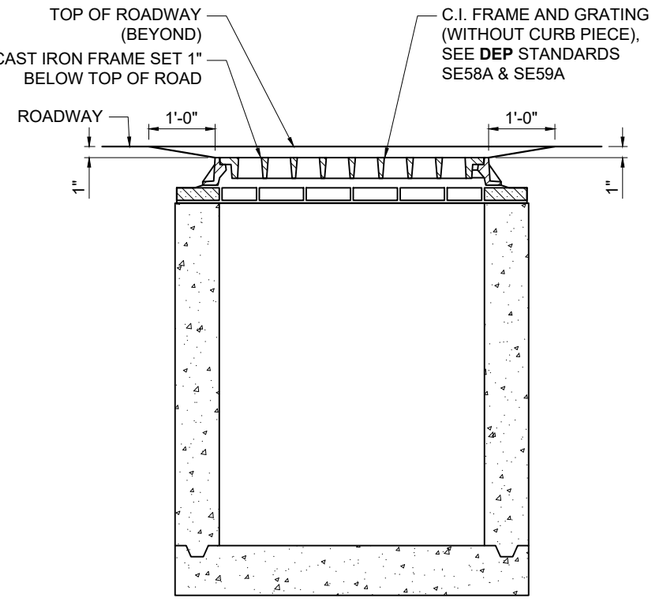


PLAN



SECTION C-C

Roopesh Joshi
P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
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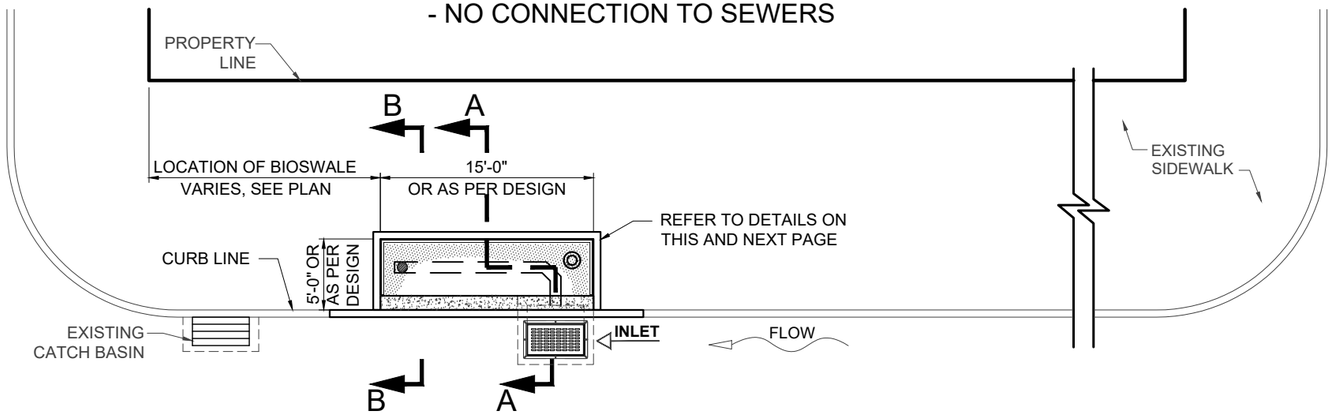
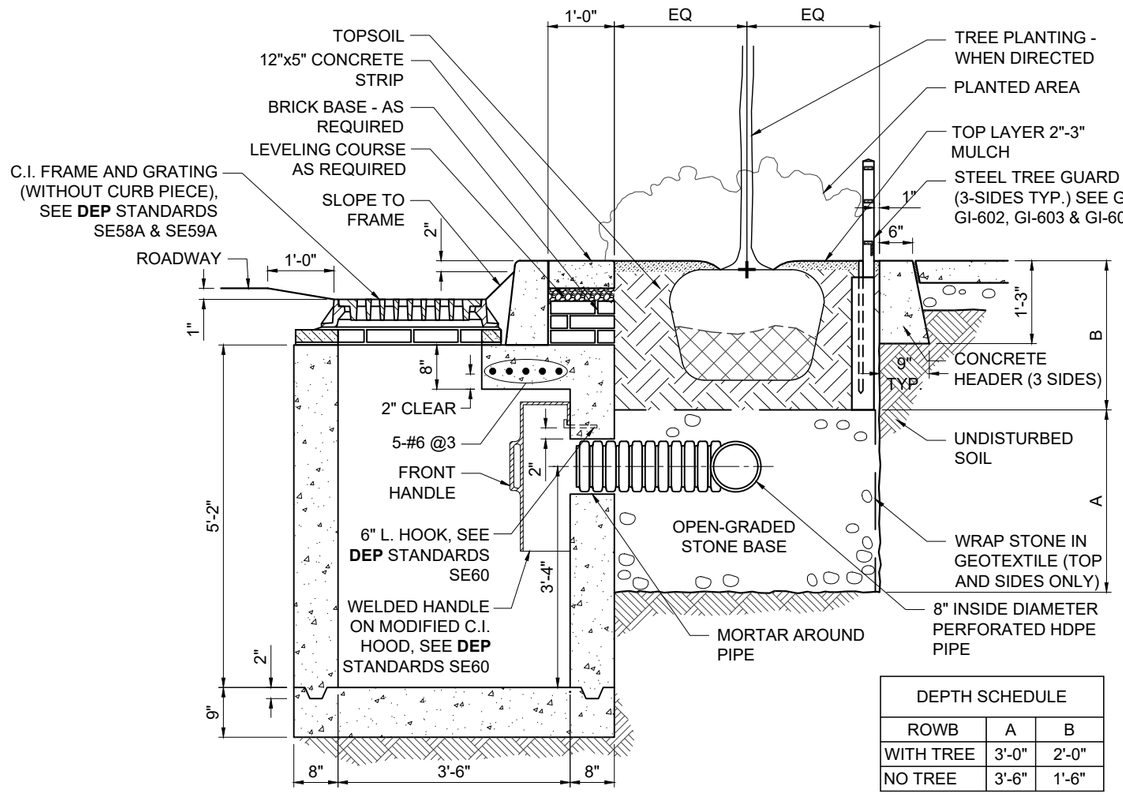
STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2D

- NO CONNECTION TO SEWERS

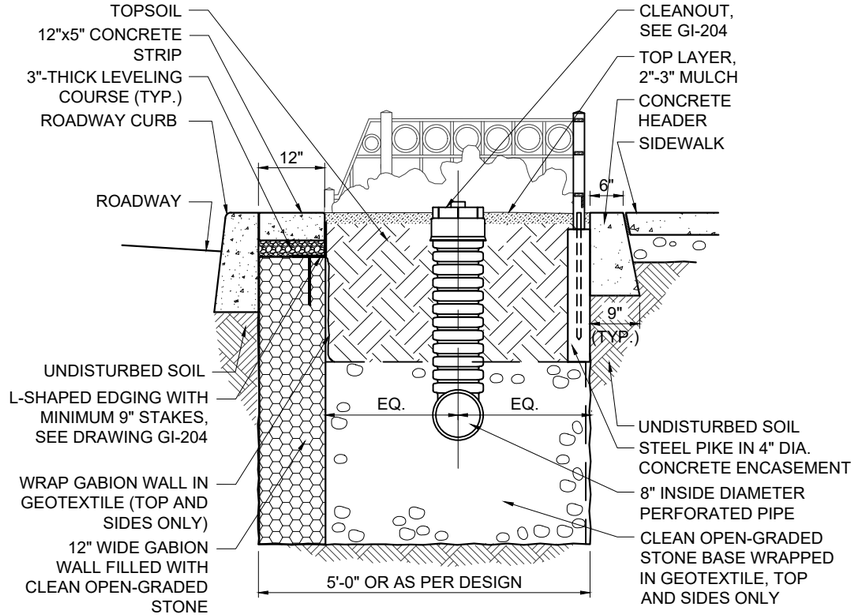


PLAN



DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	3'-0"	2'-0"
NO TREE	3'-6"	1'-6"

SECTION A-A



SECTION B-B

NOTE:
CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
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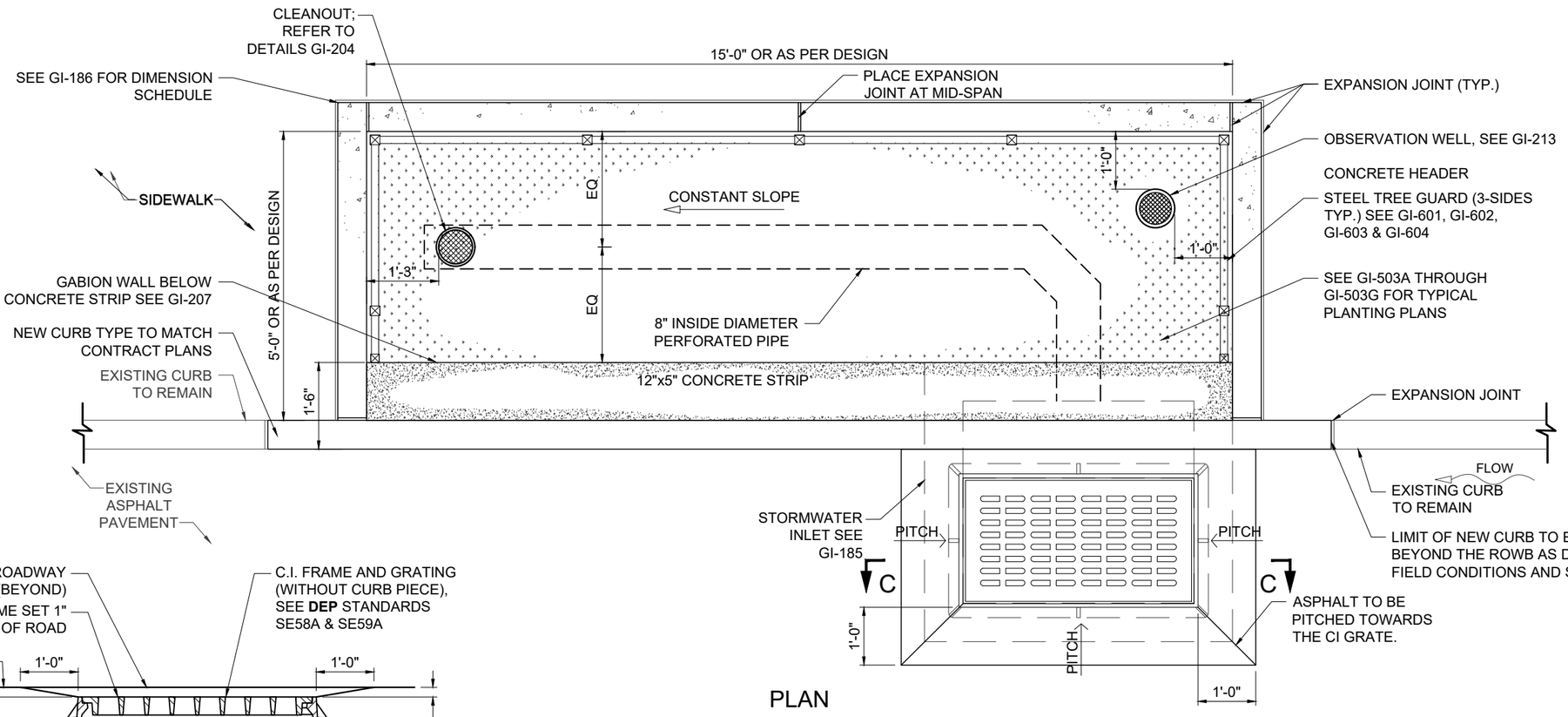
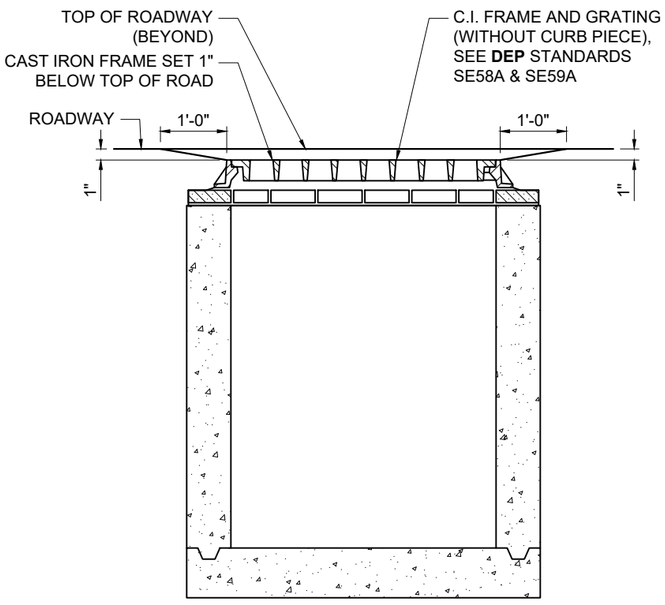
STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2D

- NO CONNECTION TO SEWERS



PLAN



SECTION C-C

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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DEPARTMENT OF ENVIRONMENTAL PROTECTION
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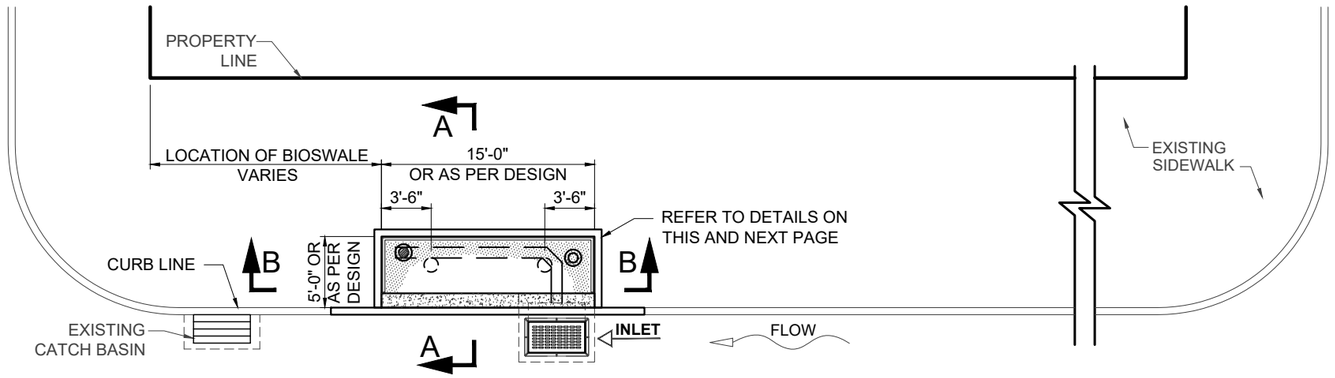
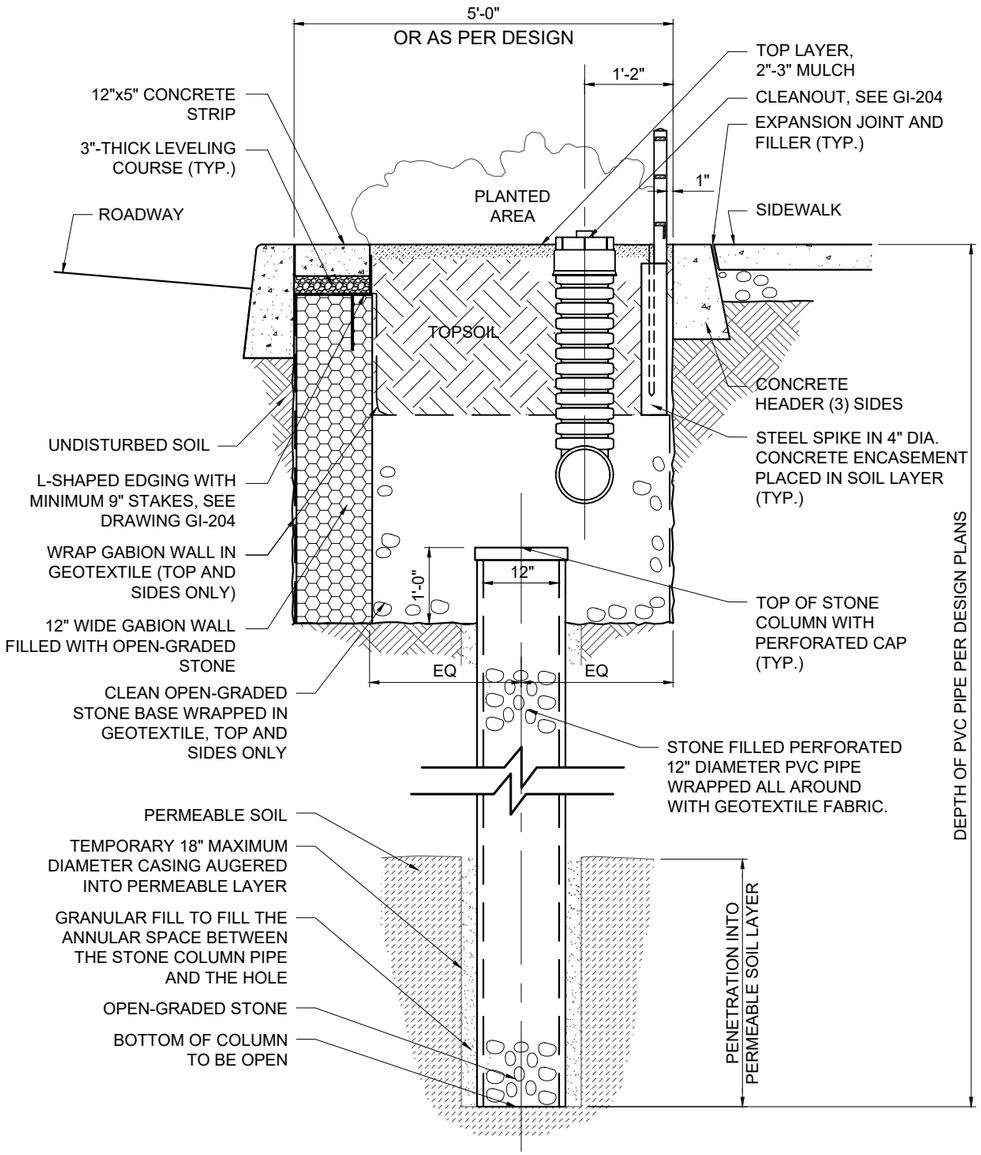
STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2DA - WITH STONE COLUMNS

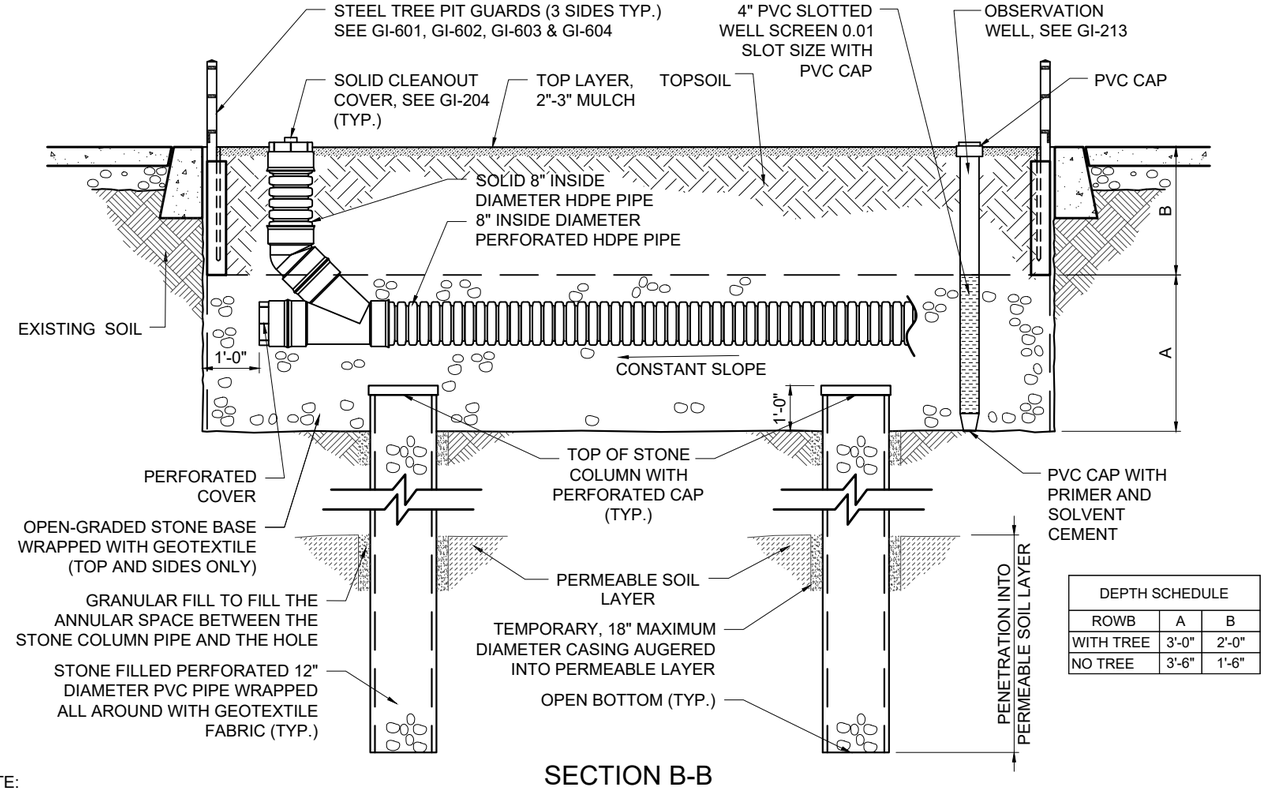
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A
AT BIOSWALE STONE COLUMN



DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	3'-0"	2'-0"
NO TREE	3'-6"	1'-6"

SECTION B-B

NOTE:
CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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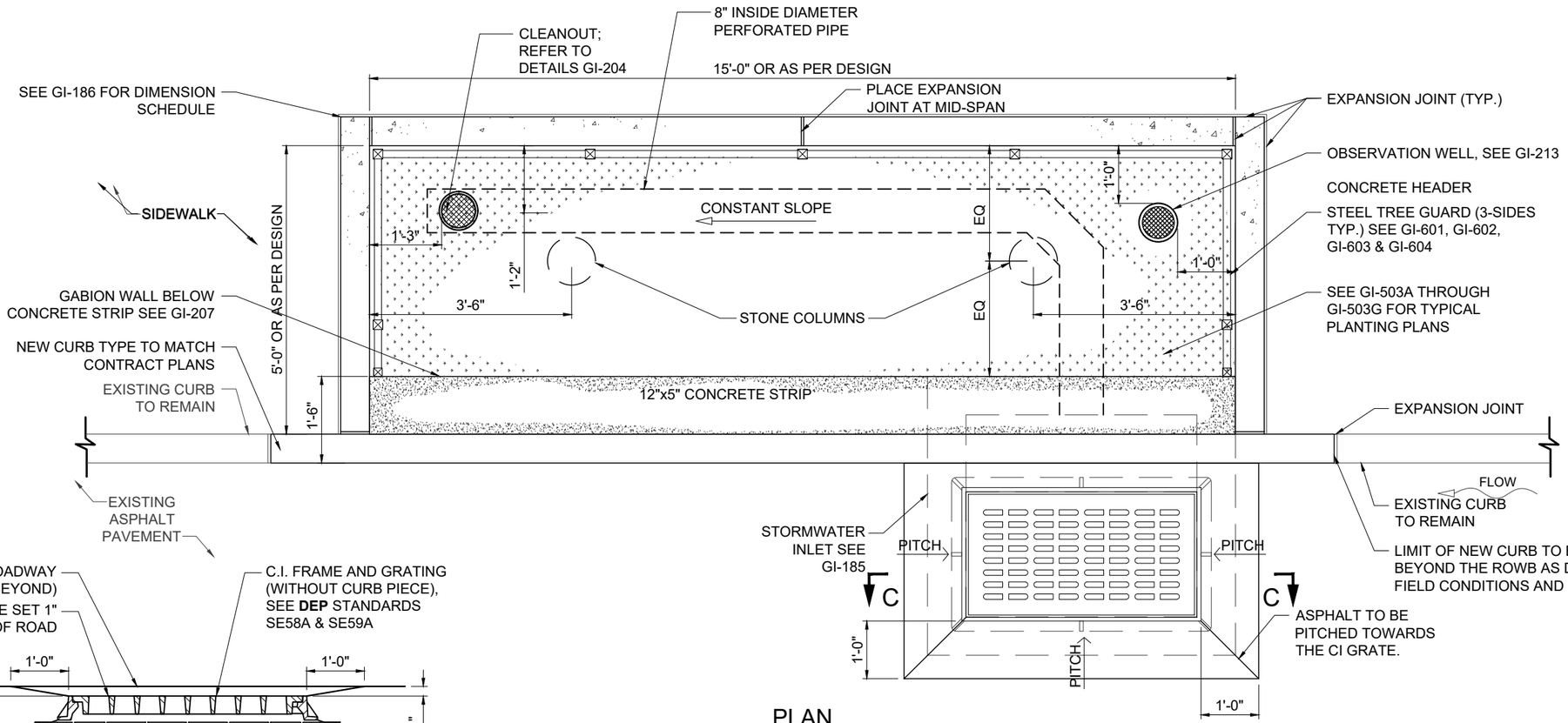
STANDARD FOR 15'x5' R.O.W. BIOSWALE TYPE 2DA - WITH STONE COLUMNS

- NO CONNECTION TO SEWERS



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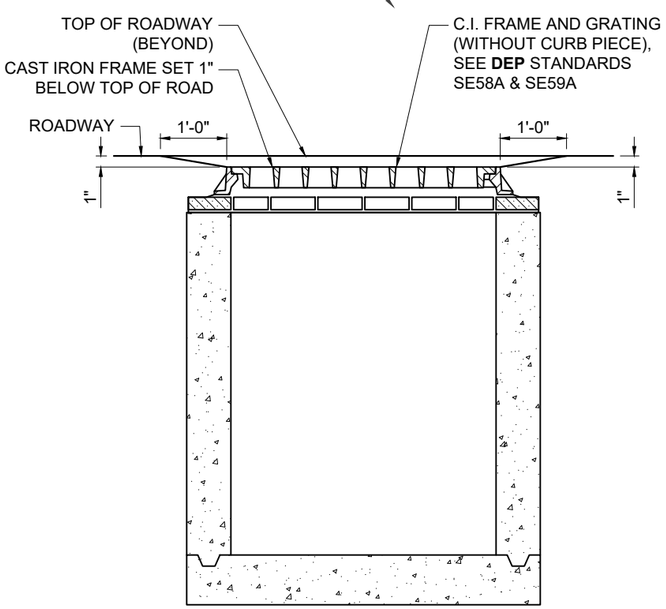

SECTION C-C

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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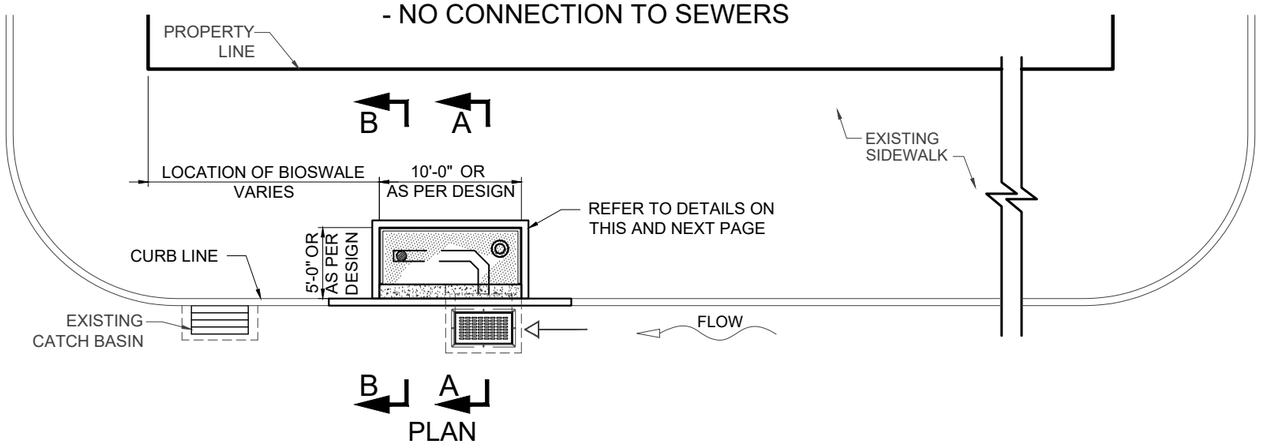
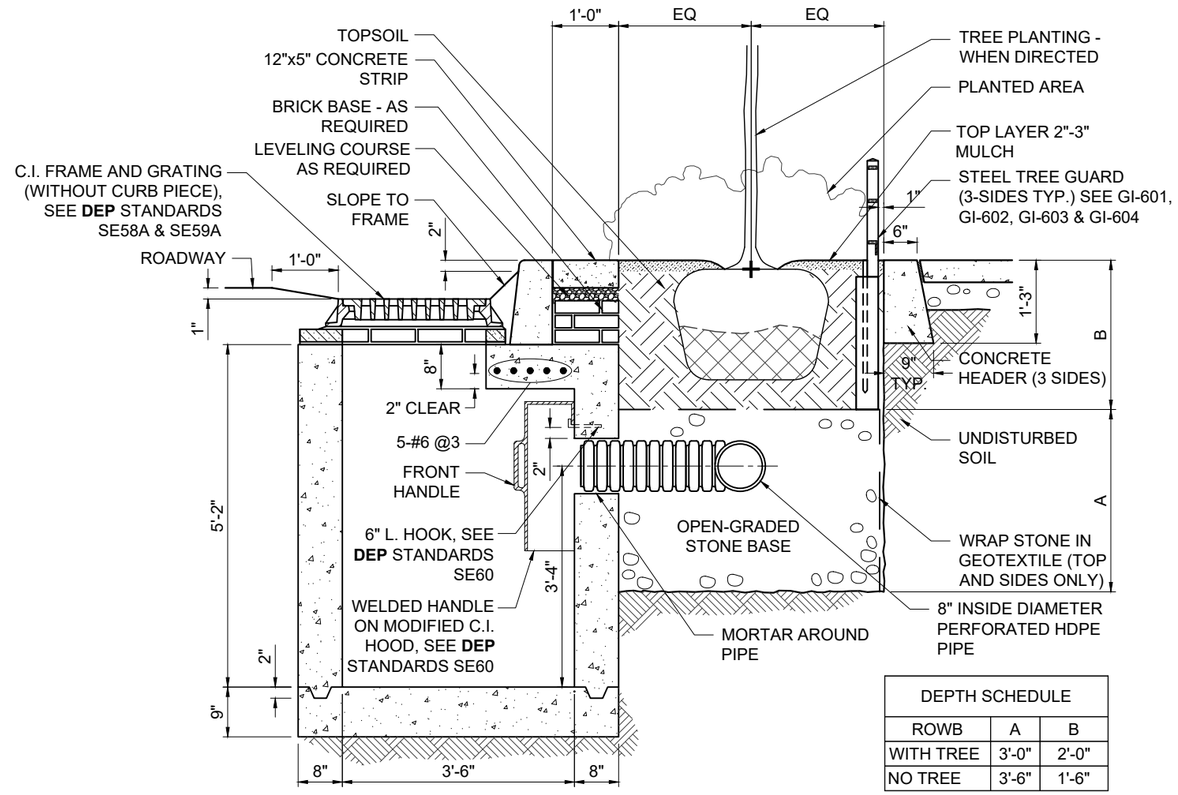
STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3D

- NO CONNECTION TO SEWERS

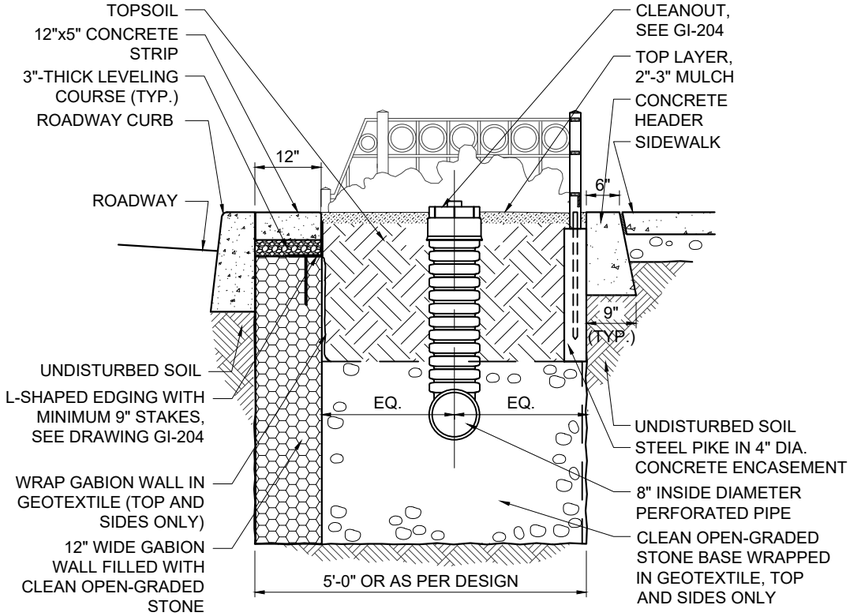


PLAN



DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	3'-0"	2'-0"
NO TREE	3'-6"	1'-6"

SECTION A-A



SECTION B-B

NOTE:
CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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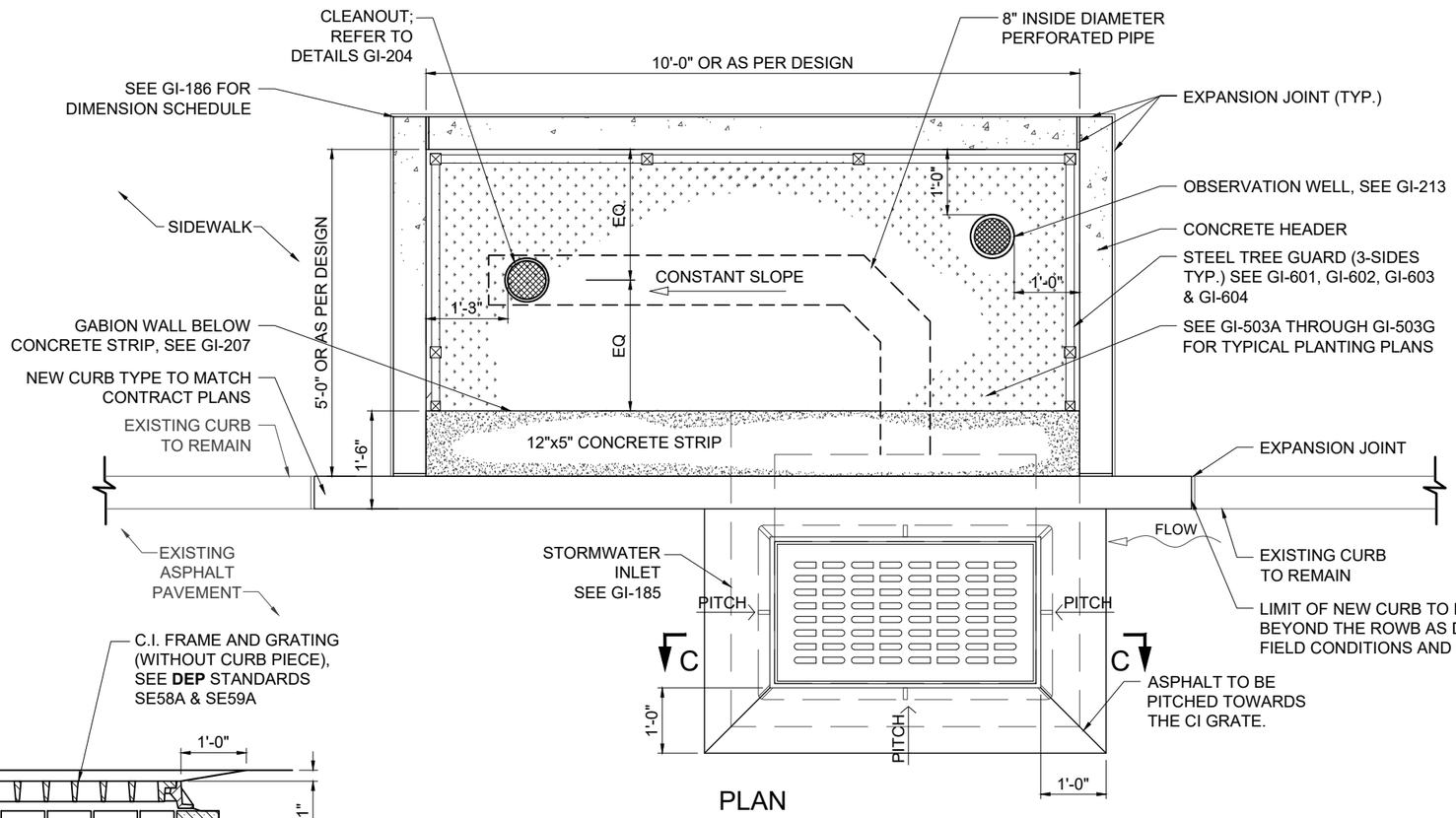
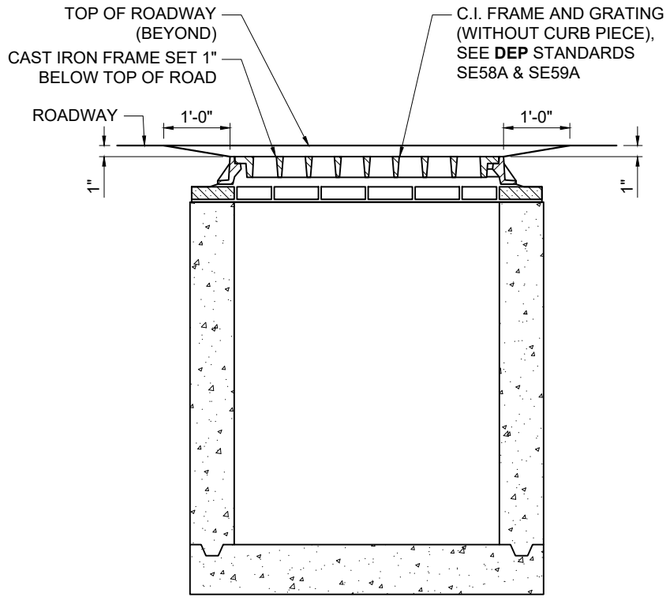
STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3D

- NO CONNECTION TO SEWERS





SECTION C-C

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
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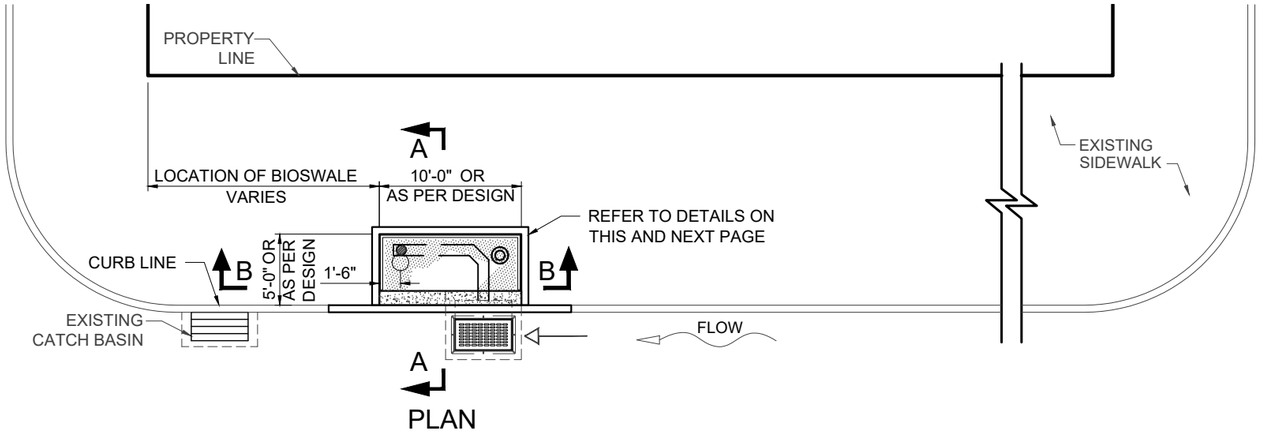
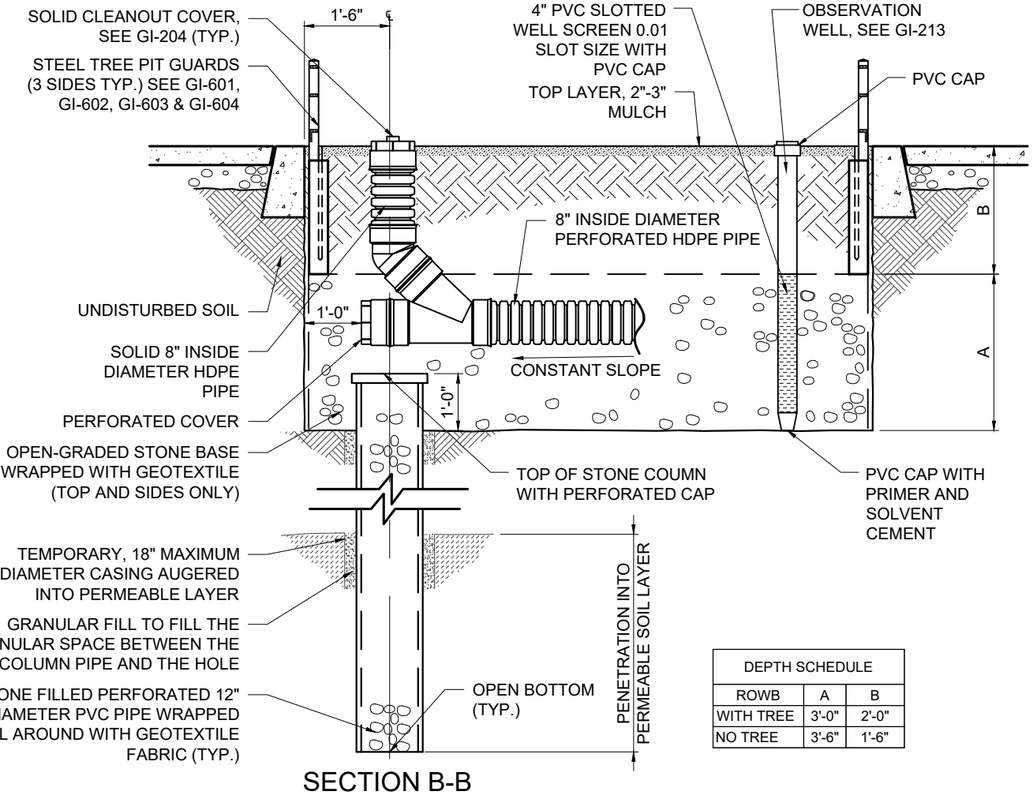
STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3DA - WITH STONE COLUMN

- NO CONNECTION TO SEWERS

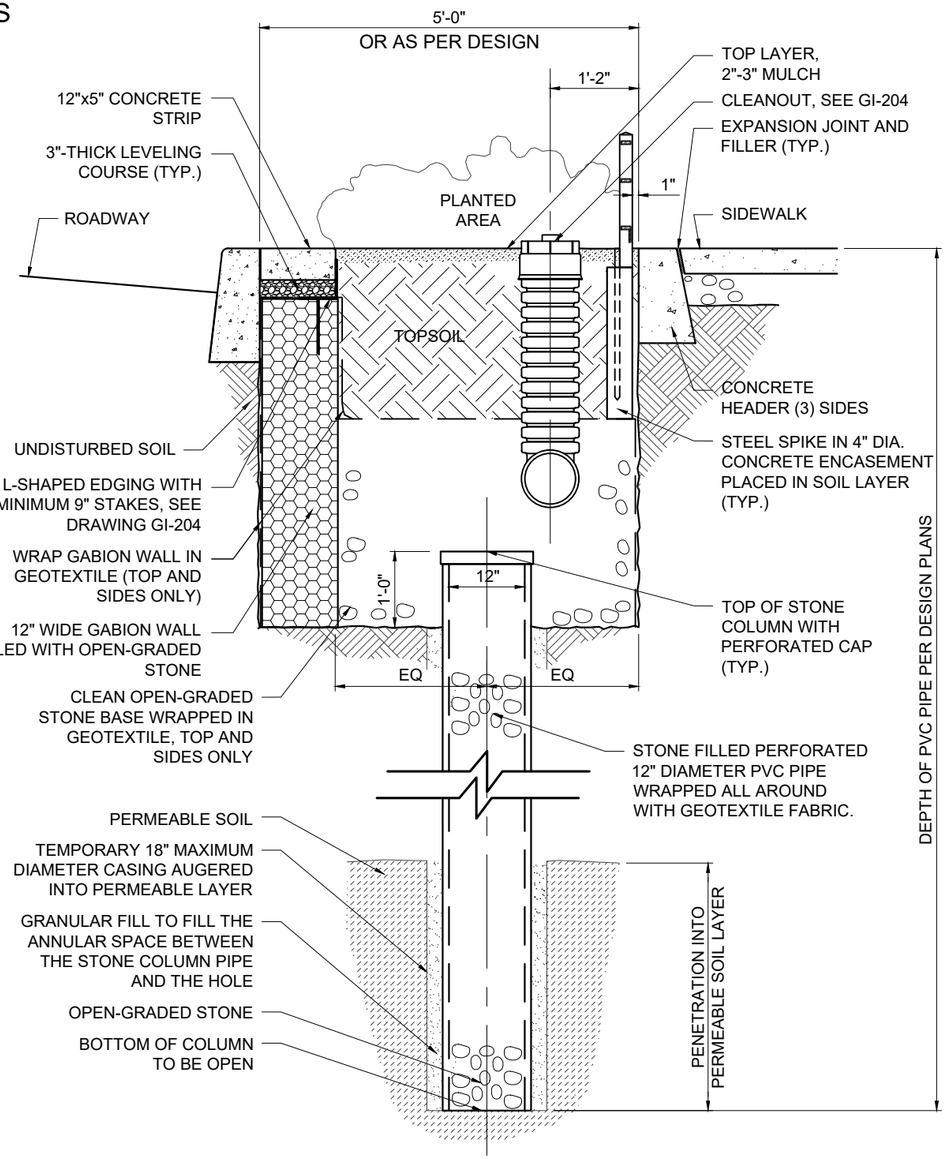


PLAN



DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	3'-0"	2'-0"
NO TREE	3'-6"	1'-6"

SECTION B-B



SECTION A-A
AT BIOSWALE STONE COLUMN

NOTE:
CAST-IN-PLACE CONCRETE STRIP REQUIRES IMPERMEABLE LINER UNDERNEATH

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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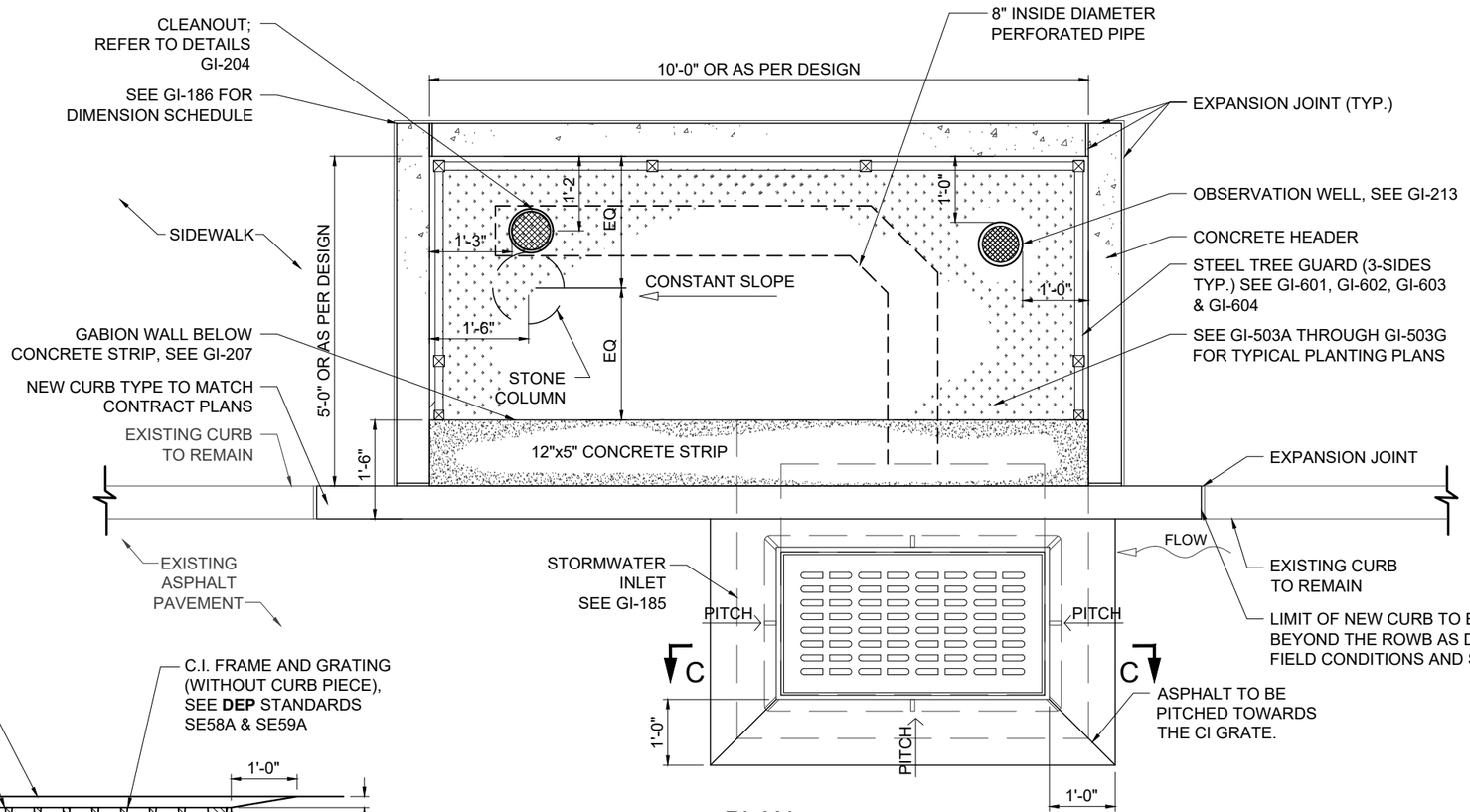
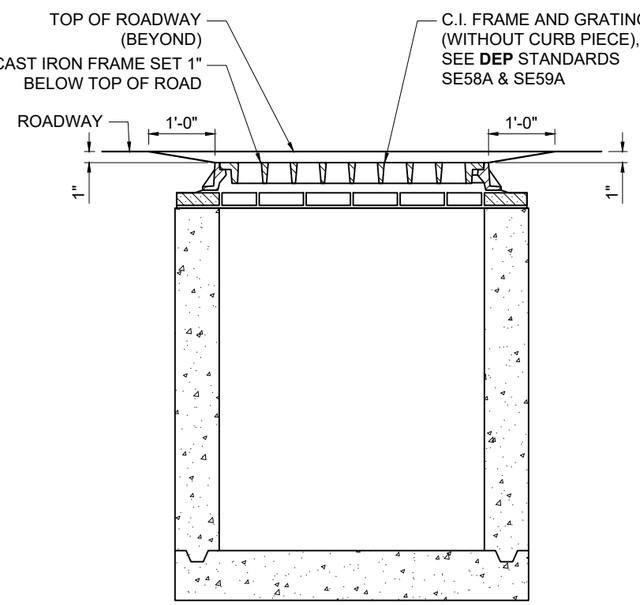
STANDARD FOR 10'x5' R.O.W. BIOSWALE TYPE 3DA - WITH STONE COLUMN

- NO CONNECTION TO SEWERS



PLAN



SECTION C-C

Roopesh Joshi
P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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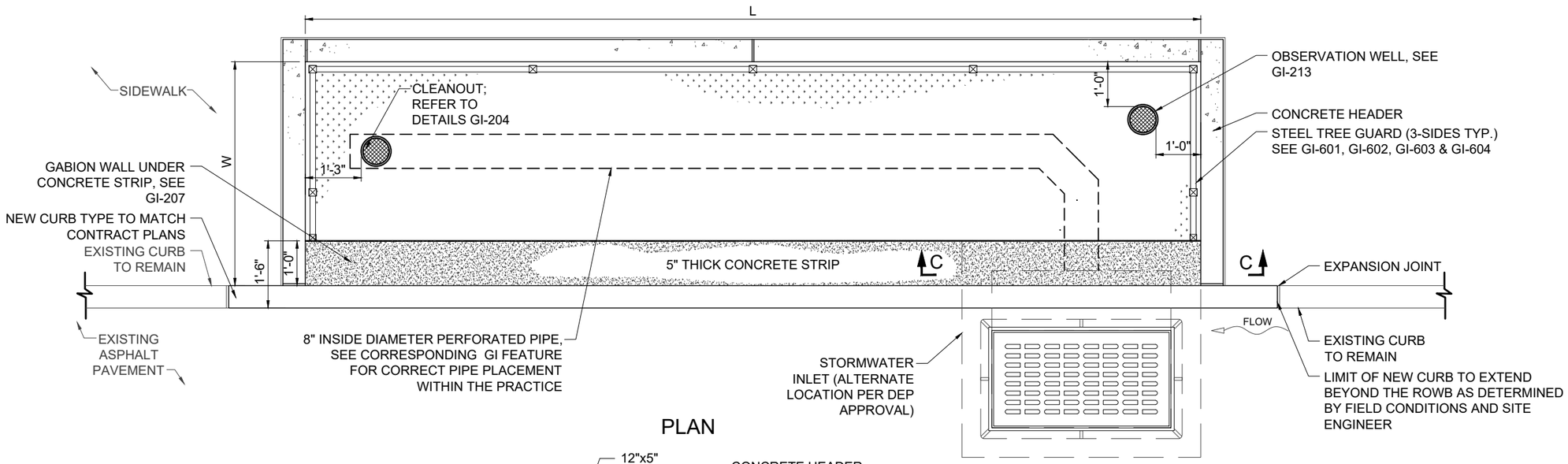
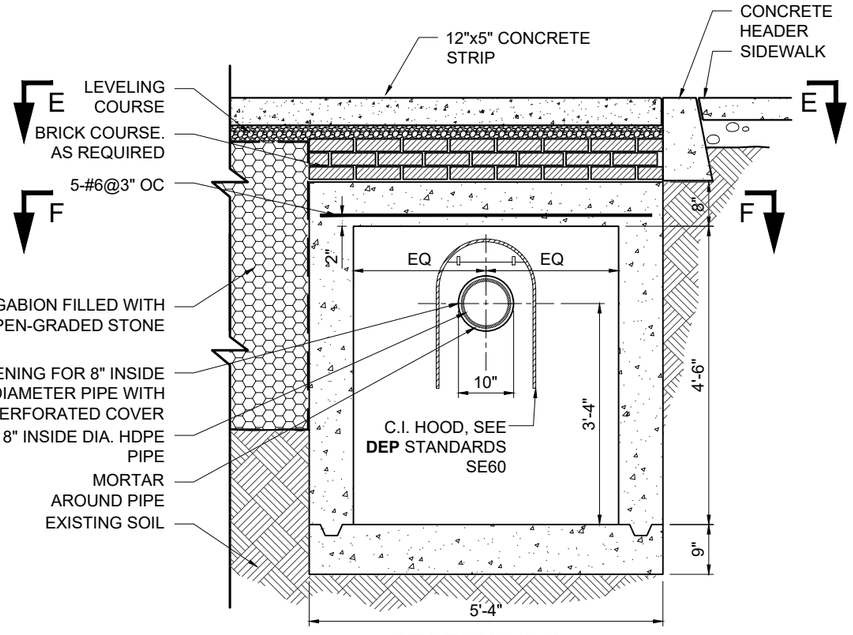
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. BIOSWALE TYPE D STORMWATER INLET SECTIONS & DETAILS

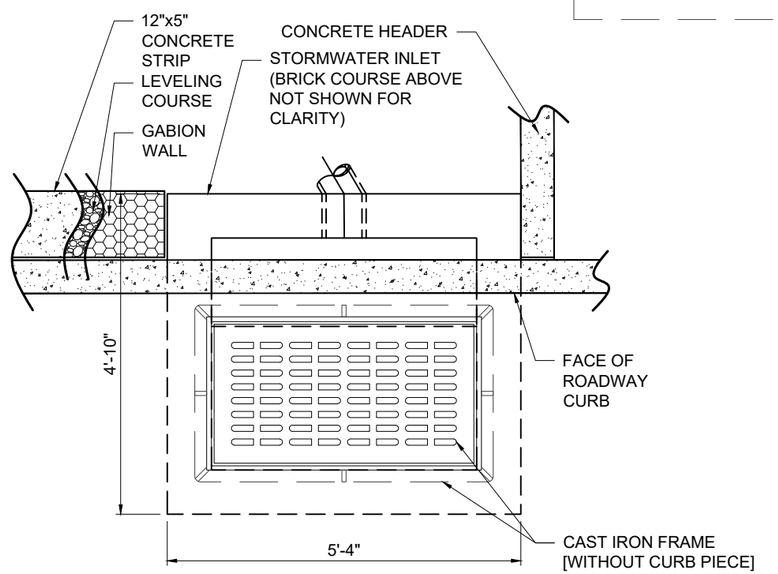
- NO CONNECTION TO SEWERS



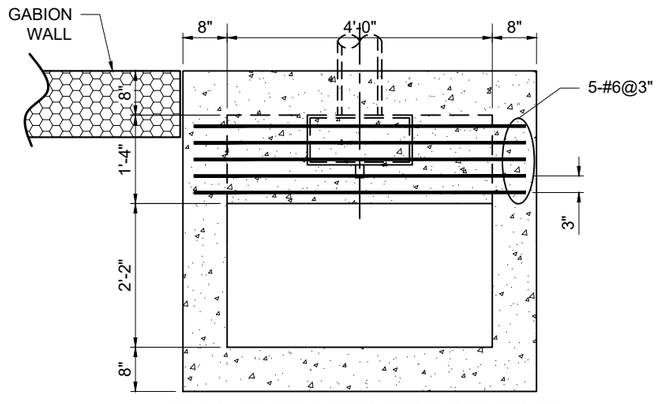
PLAN



SECTION C-C



PLAN [WITH CASTING]
SECTION E-E



PLAN [WITH REINFORCEMENT]
SECTION F-F

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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DATE

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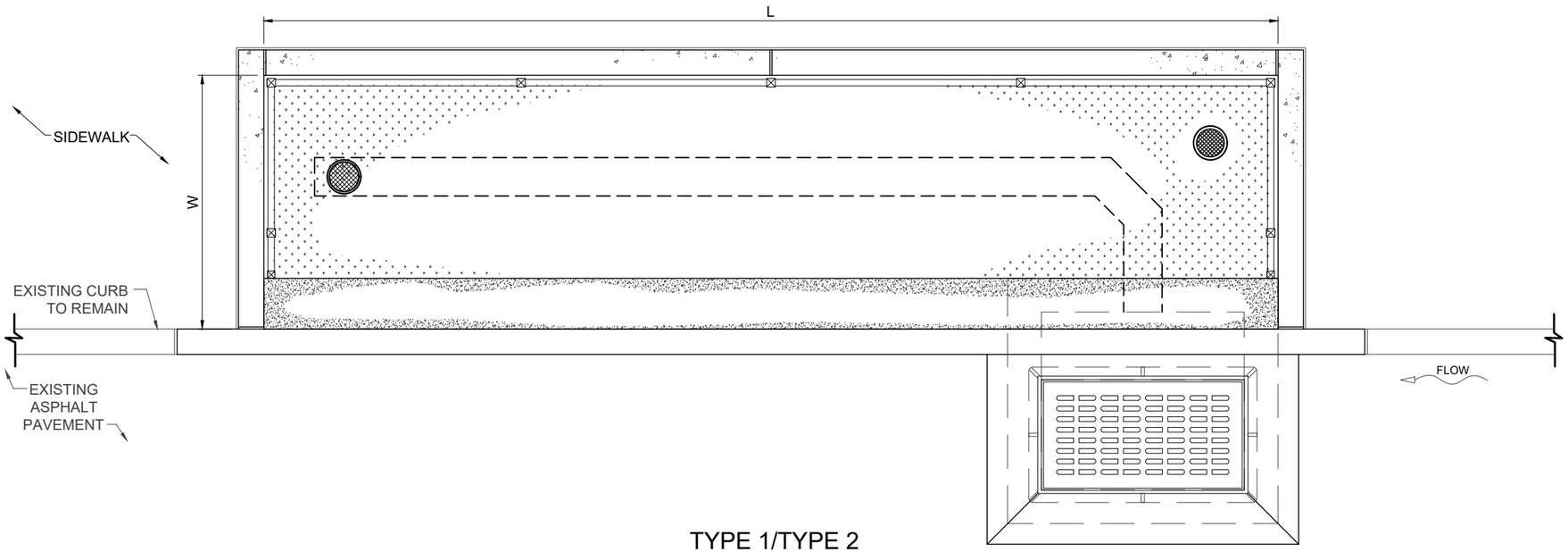
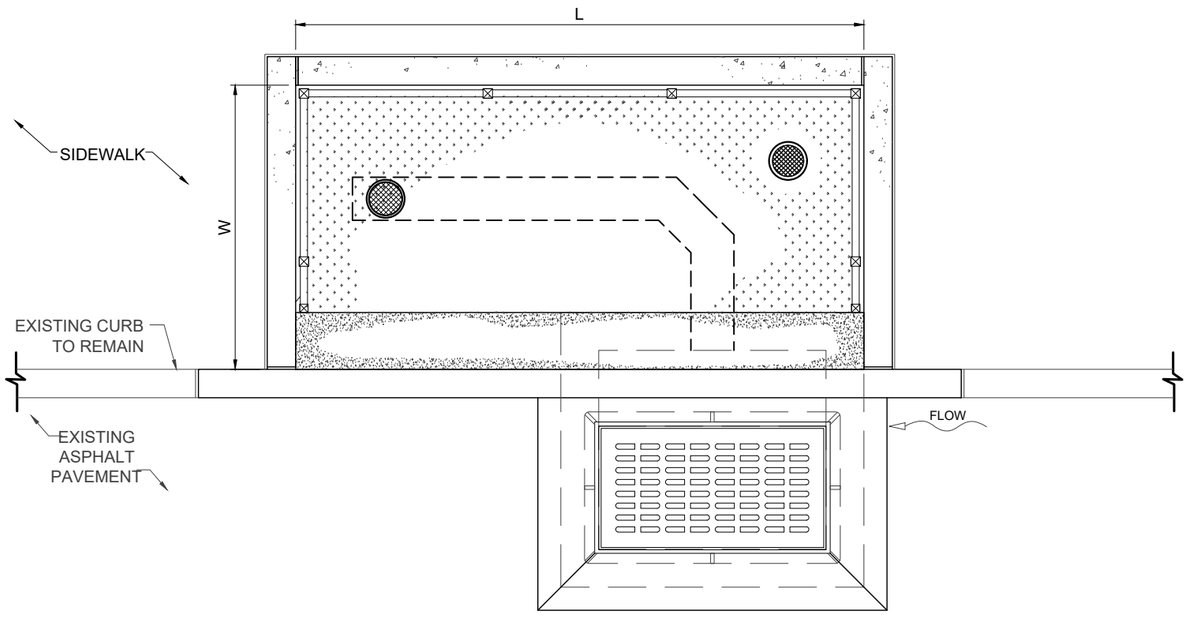
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DIMENSION SCHEDULE FOR VARIABLE SIZE R.O.W. BIOSWALE TYPE D

- NO CONNECTION TO SEWERS



TYPE 1/TYPE 2



TYPE 3

R.O.W.B TYPE D DIMENSIONS		
LENGTH (L), 1FT. INCREMENT	WIDTH (W), 6 IN. INCREMENT	TYPE
17' ≤ L ≤ 20'	4'-0" TO 6'-0"	TYPE 1
13' ≤ L ≤ 16'	4'-0" TO 6'-0"	TYPE 2
10' ≤ L ≤ 12'	4'-0" TO 6'-0"	TYPE 3

DIMENSIONS SCHEDULE

NOTE:

DOT APPROVAL REQUIRED FOR ALL WIDTHS GREATER THAN 5'.

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

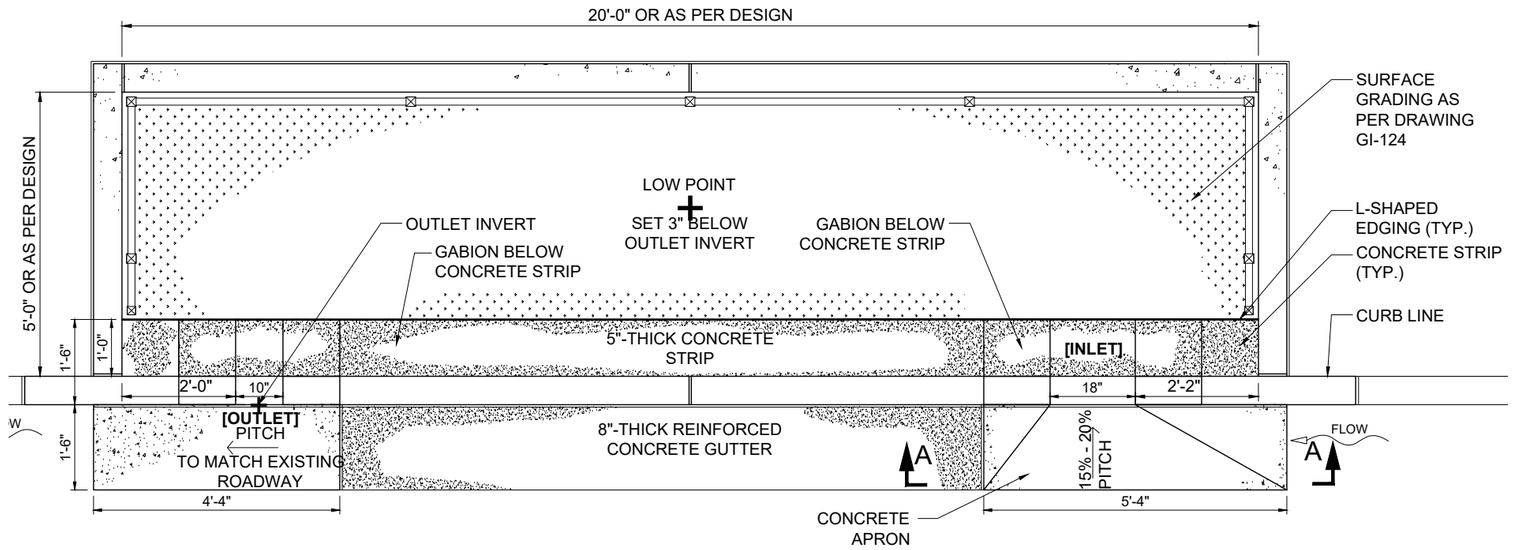
GI–200

GI-200
MISCELLANEOUS DETAILS FOR RIGHT-OF-WAY GREEN INFRASTRUCTURE PRACTICES

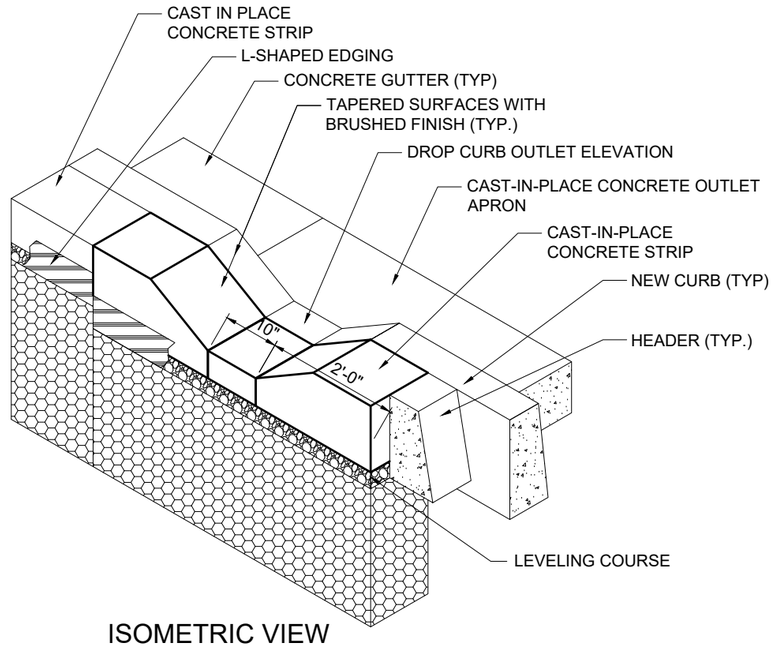
GI–201

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

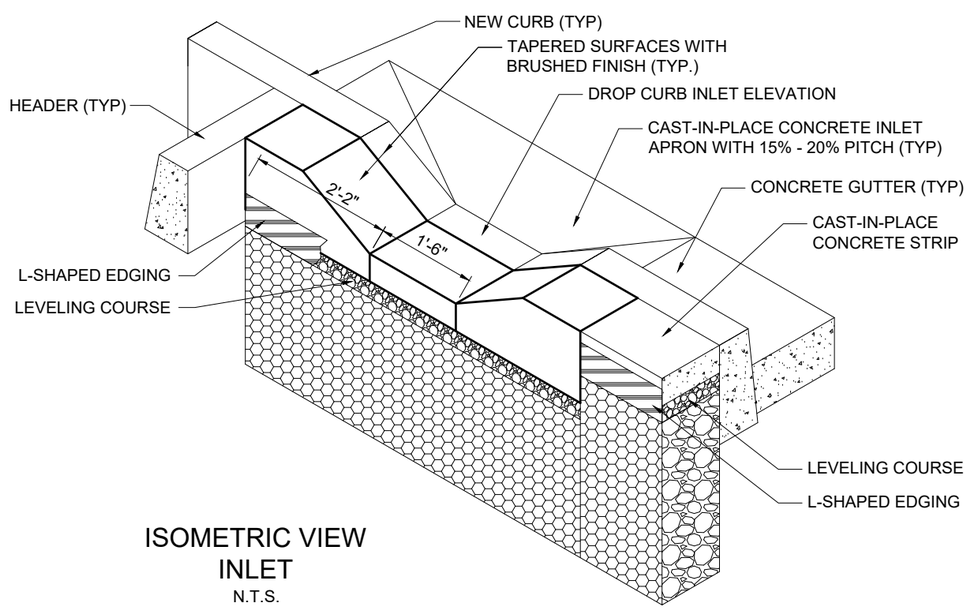
STANDARD FOR ROWB/ROWGS/ROWRG INLET & OUTLET



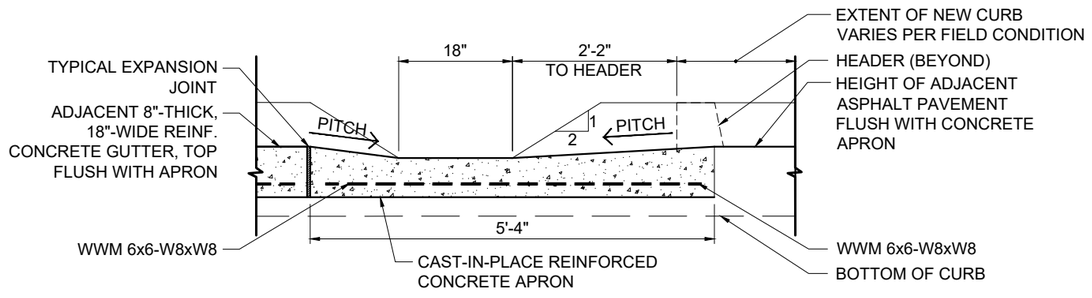
PLAN



ISOMETRIC VIEW
OUTLET
N.T.S.



ISOMETRIC VIEW
INLET
N.T.S.



SECTION A-A

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

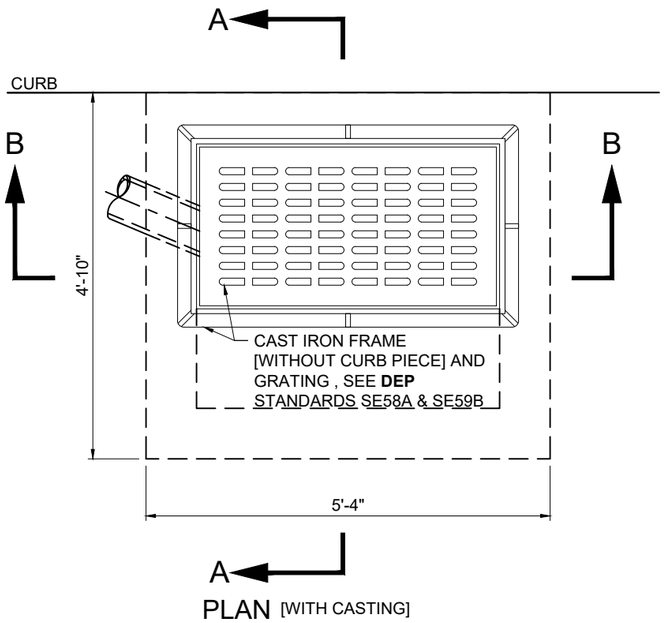
05-13-2022
DATE

GI–202

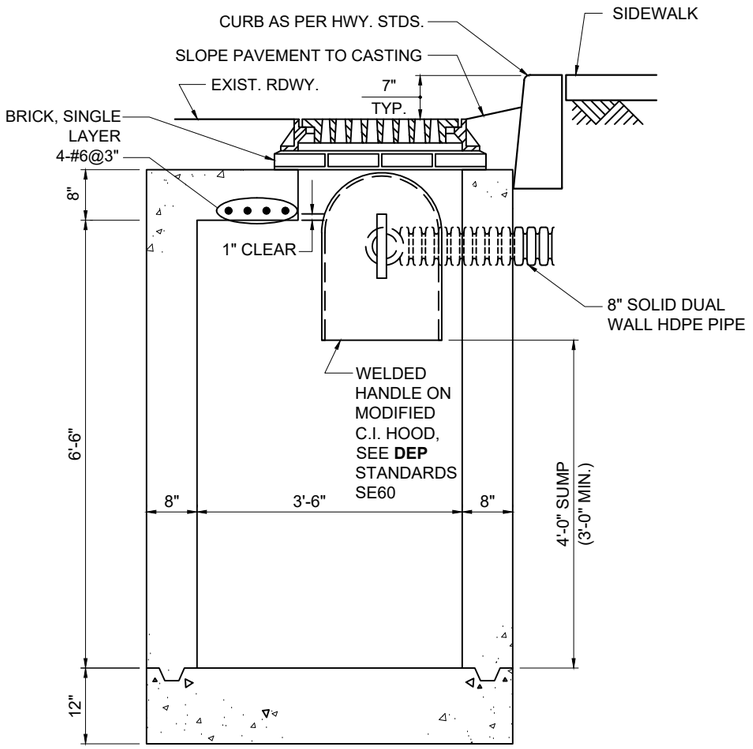
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR STORMWATER INLET

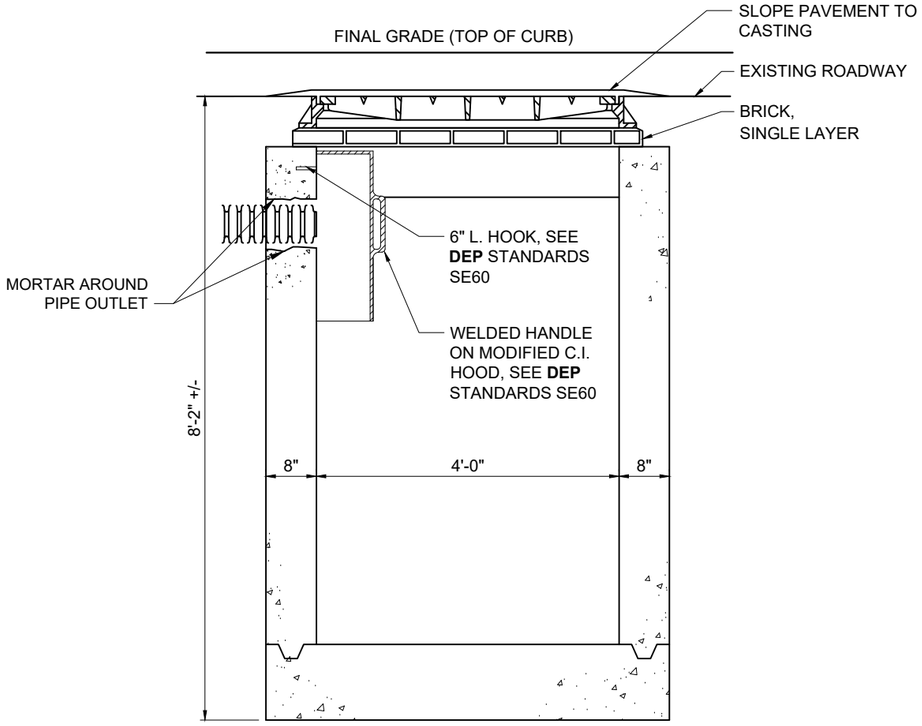
FOR R.O.W. BIOSWALE TYPE 1B AND TYPE 2B - NO CONNECTION TO SEWERS



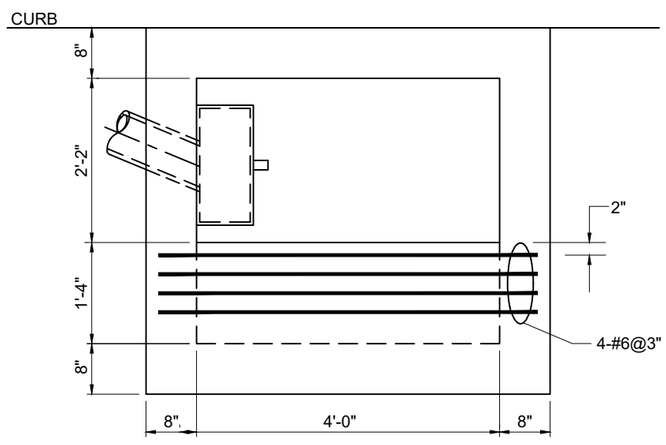
PLAN [WITH CASTING]



SECTION A-A



SECTION B-B



PLAN [WITH REINFORCEMENTS]

NOTES:

1. LOCATION OF CURB SHALL BE AS SHOWN UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
2. LOCATION AND ANGLE OF 8" HDPE 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.

Roopesh Joshi P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

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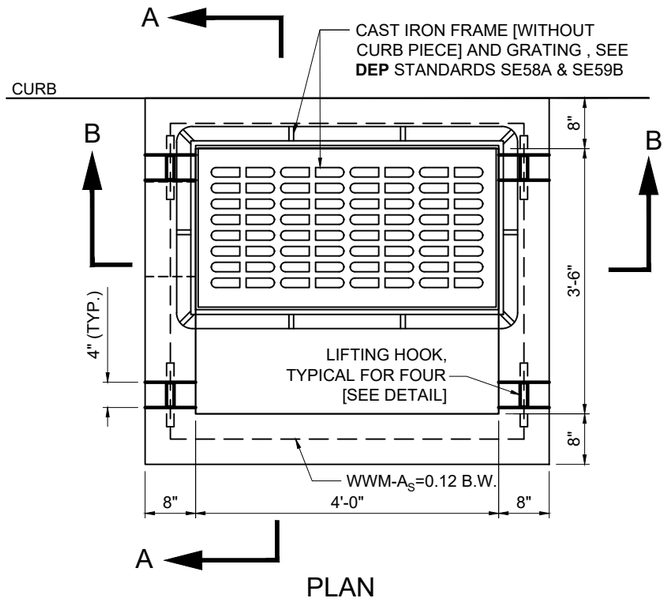
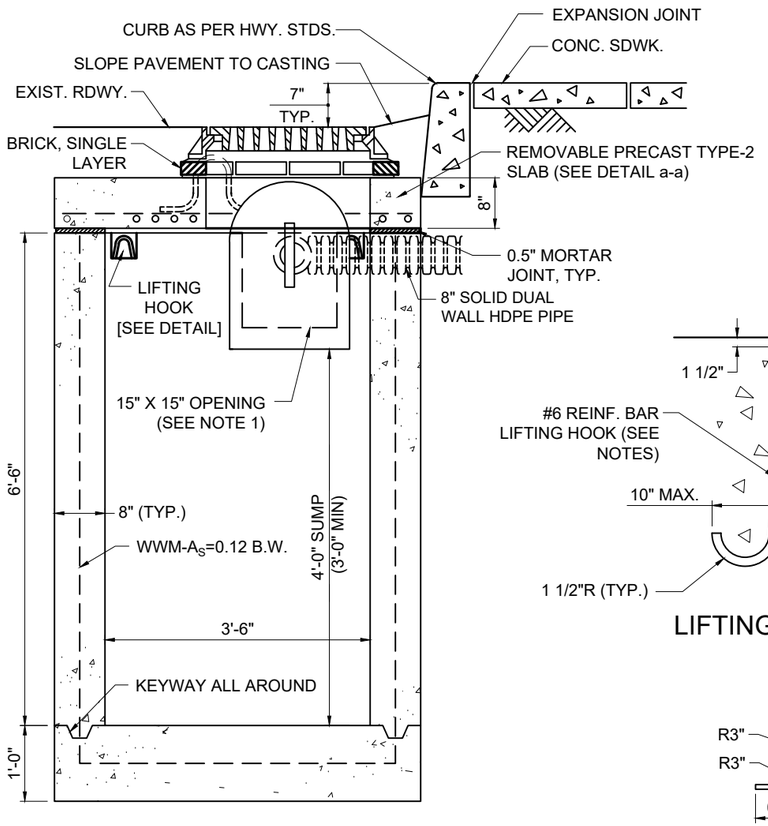
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR PRECAST STORMWATER INLET

FOR R.O.W. BIOSWALE TYPE 1B AND 2B - NO CONNECTION TO SEWERS

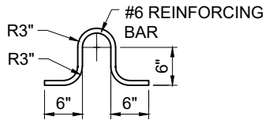


PLAN

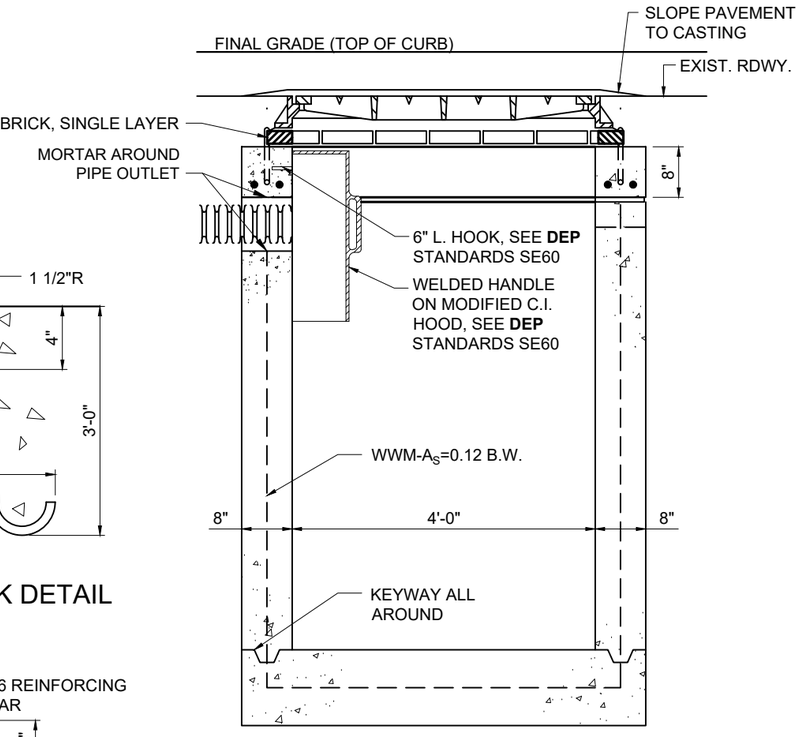


SECTION A-A

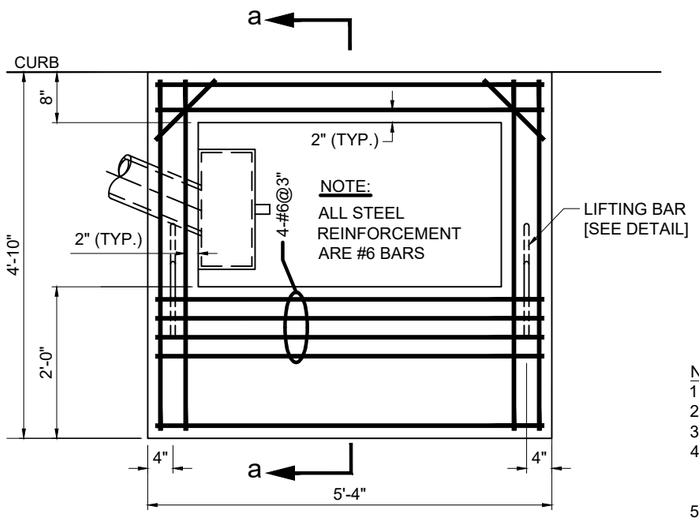
LIFTING HOOK DETAIL
(N.T.S.)



LIFTING BAR DETAIL
[IN REMOVABLE PRECAST TYPE 2 SLAB]

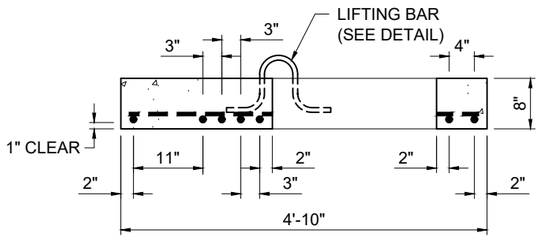


SECTION B-B



REINFORCEMENT PLAN
[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 8" HDPE 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 $_S$ = 65,000 PSI.
7. MODIFY STANDARD CAST IRON HOOD AND HOOKS [SE60] AS PER DRAWING



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

Roopesh Joshi
P.E.
05-13-2022
DATE

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–204

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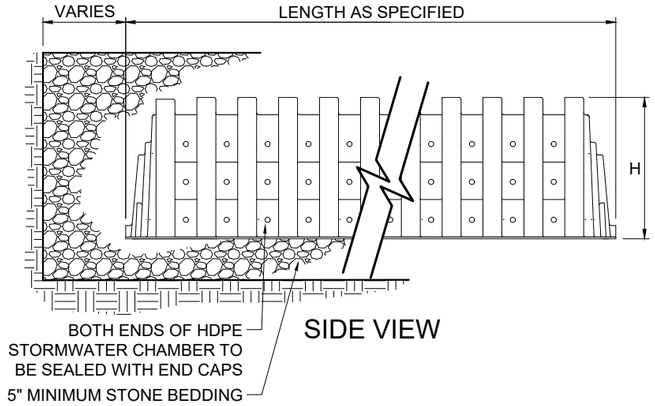
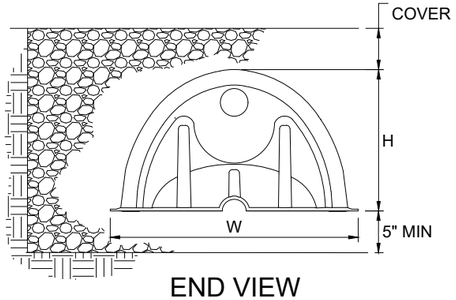
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD R.O.W. SECTIONS AND DETAILS



SIDE VIEW

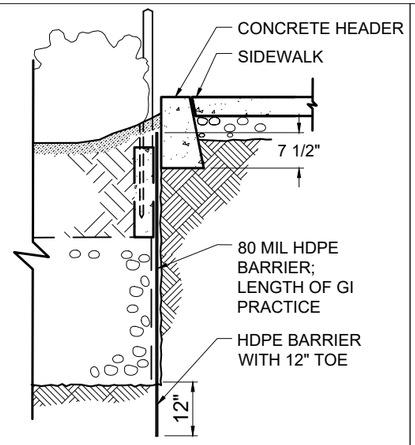


END VIEW

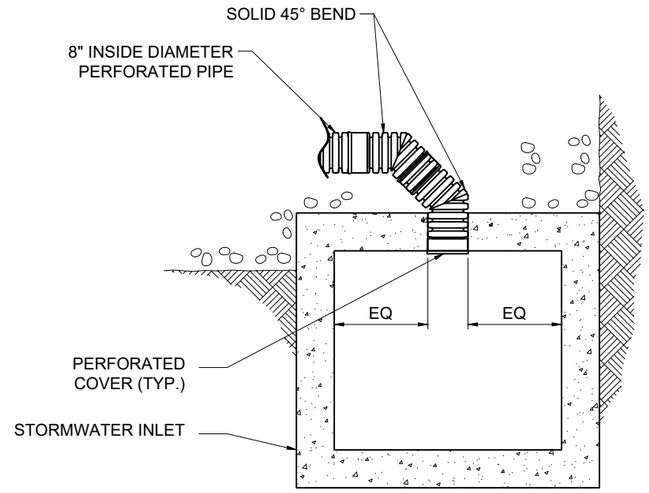
ROW GI WIDTH	W	H
≥ 5'	40"-51"	25"-30"
≤ 4'-6"	34"-36"	16"-20.5"

DIMENSION SCHEDULE

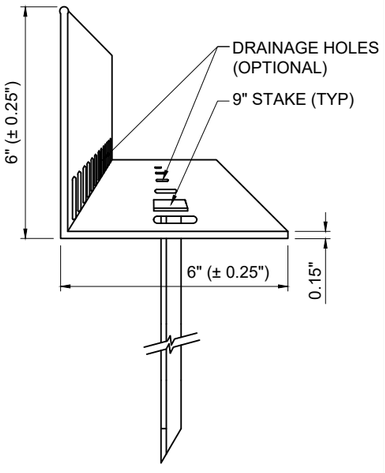
HDPE STORMWATER CHAMBER
N.T.S.



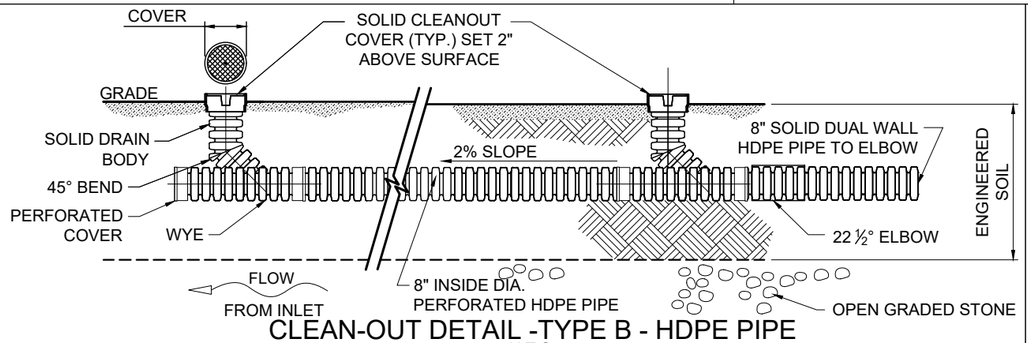
CROSS-SECTION
HDPE BARRIER DETAILS
AGAINST SIDEWALK
(ONLY IF DIRECTED)
N.T.S.



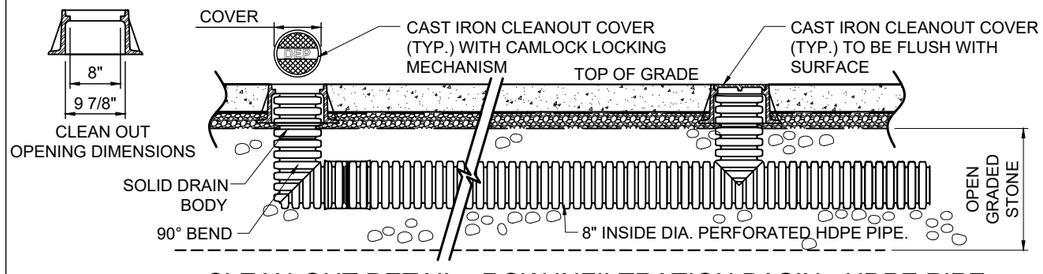
ROWB TYPE D TYPICAL
PIPE/STORMWATER INLET
CONNECTION



L-SHAPED EDGING
N.T.S.

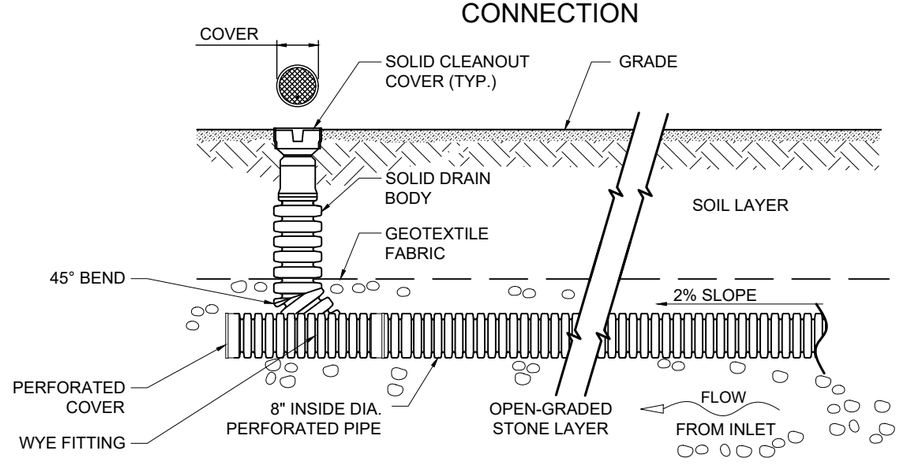


CLEAN-OUT DETAIL -TYPE B - HDPE PIPE
N.T.S.



CLEAN-OUT DETAIL - ROW INFILTRATION BASIN - HDPE PIPE
N.T.S.

NOTES FOR INFILTRATION BASINS:
1. SET THE TOP OF THE SOLID CLEANOUT COVER FLUSH WITH THE SURFACE OR GRADE
2. THE VERTICAL DRAIN BODY SHALL BE SOLID



CLEAN-OUT DETAIL- ROWB TYPE D - HDPE PIPE
N.T.S.

Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
DATE

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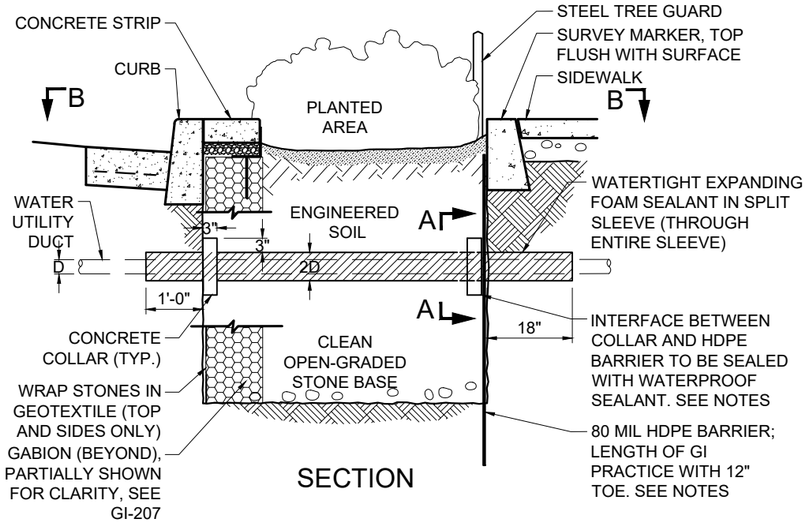
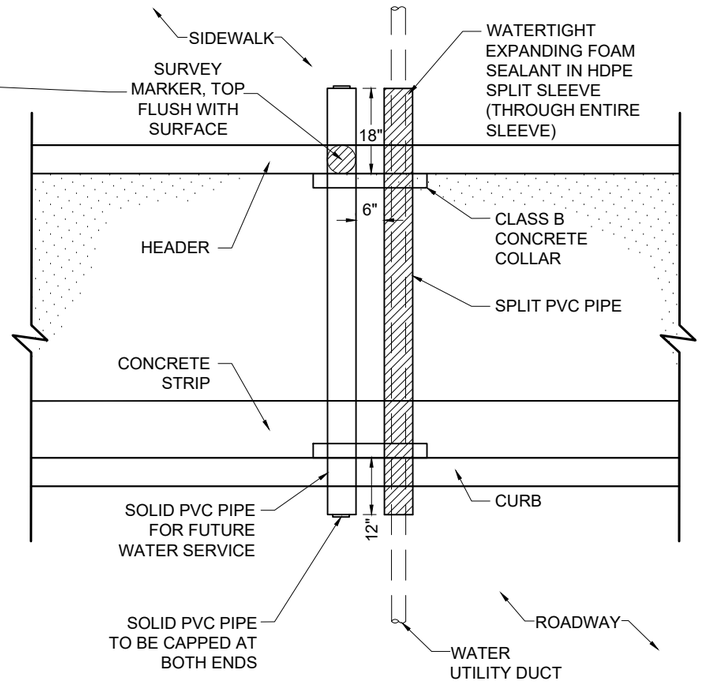
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD R.O.W. SECTIONS AND DETAILS



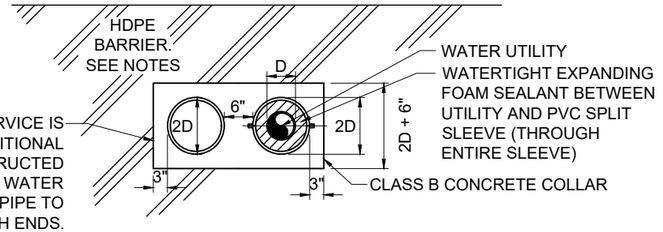
SECTION

BLANK UTILITY SLEEVE MARKER DETAIL



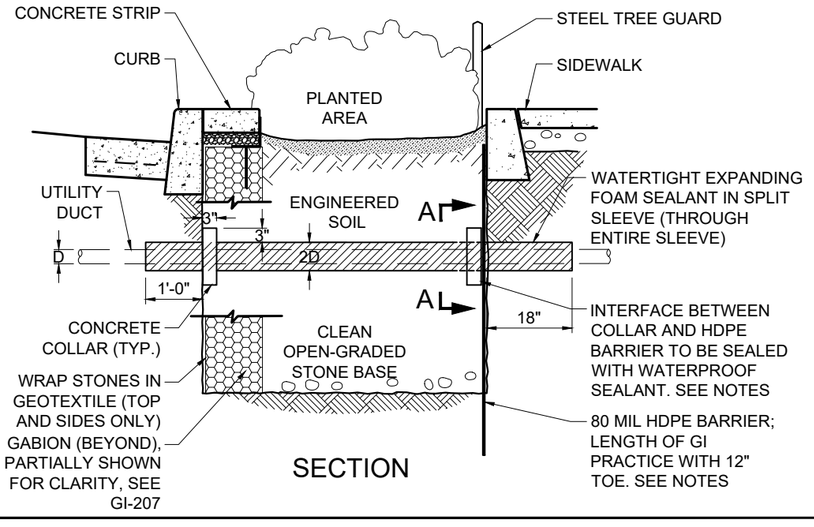
PLAN B-B

NOTES:
1. HDPE BARRIER TO BE INSTALLED WHEN THERE IS AN UTILITY CROSSING AND/OR WHEN THERE IS LESS THAN 10' FROM THE ASSET TO THE BUILDING LINE.
2. ANY SEAMS IN THE HDPE BARRIER MUST HAVE A 1'-0" OVERLAP AND BE SEALED WITH WATERTIGHT SEALANT
3. ADDITIONAL SLEEVE SHALL BE PVC PIPE AND EXTEND OUTWARD AS SHOWN ABOVE.
4. SPLIT PVC PIPE SHALL BE USED TO SLEEVE THE EXISTING WATER SERVICE LINE AND SOLID PVC PIPE SHALL BE USED FOR THE SPARE SLEEVE.

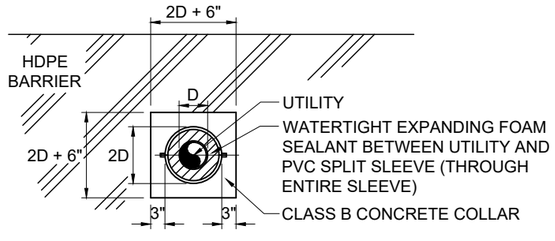


CROSS SECTION A-A

WATER UTILITY CROSSING DETAIL
N.T.S.



SECTION



CROSS SECTION A-A

UTILITY CROSSING DETAIL
N.T.S.

NOTES:
1. HDPE BARRIER TO BE INSTALLED WHEN THERE IS AN UTILITY CROSSING AND/OR WHEN THERE IS LESS THAN 10' FROM THE ASSET TO THE BUILDING LINE.
2. ANY SEAMS IN THE HDPE BARRIER MUST HAVE A 1'-0" OVERLAP AND BE SEALED WITH WATERTIGHT SEALANT.

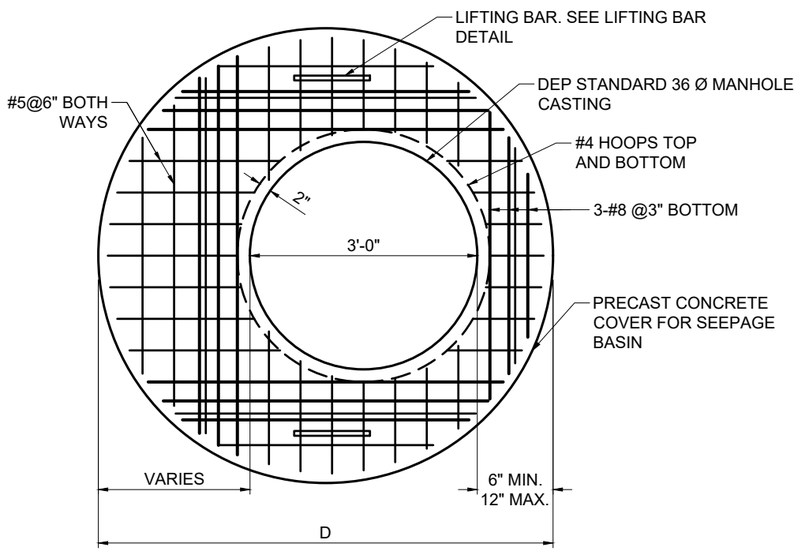
Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

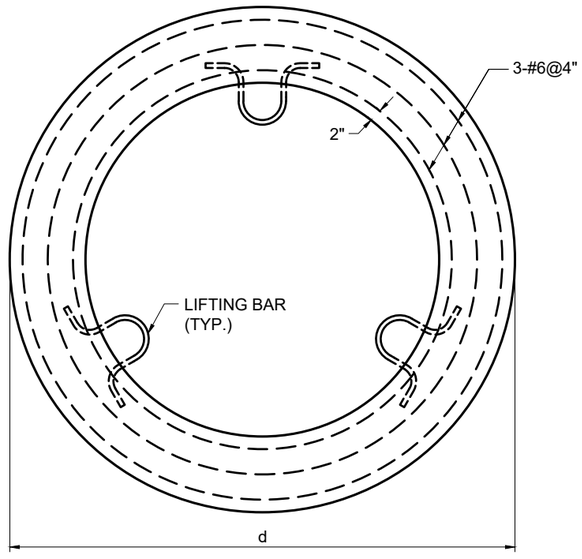
STANDARD DETAILS FOR R.O.W. STORMWATER SEEPAGE BASIN

CIRCULAR REINFORCED CONCRETE SLAB AND FOOTING

GI–206



PLAN OF CIRCULAR SLAB

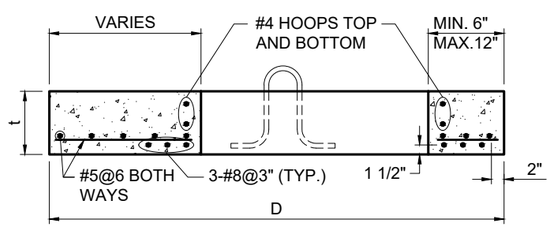


PLAN OF PRECAST CIRCULAR FOOTING RING

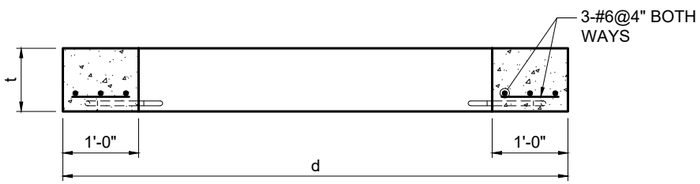
PRECAST SEEPAGE BASIN SCHEDULE				
PRECAST RING TYPE	HEIGHT	VOLUME, CF	VOLUME, GAL	tw, IN
D = 4'- 0" O.D.				
SOLID	2'-0"	17.4	130	4"
PERFORATED*	3'-0"	26.2	195	4"
D = 6'- 0" O.D.				
SOLID	2'-0"	45.0	337	4"
PERFORATED*	3'-0"	67.0	496	4"
D = 8'- 0" O.D.				
SOLID	2'-0"	84.4	631	4"
PERFORATED*	3'-0"	126.7	947	4"

* REFER TO THE MANUFACTURER'S SPECIFICATIONS FOR OPENING DETAILS

PRECAST SEEPAGE BASIN SCHEDULE



SECTION IN CIRCULAR SLAB
DETAIL A

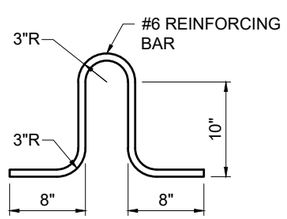


SECTION IN PRECAST CIRCULAR FOOTING RING
DETAIL B

PRECAST CIRCULAR SLAB (FT)	PRECAST CIRCULAR FOOTING RING (FT)	THICKNESS (IN)
D	d	t
4'-0"	4'-8"	10"
6'-0"	6'-8"	10"
8'-0"	8'-8"	10"

NOTE: IN NO CASE SHALL "d" BE LESS THAN THE OUTSIDE DIAMETER OF THE SEEPAGE BASIN

CIRCULAR SLAB AND FOOTING SCHEDULE



LIFTING BAR DETAIL

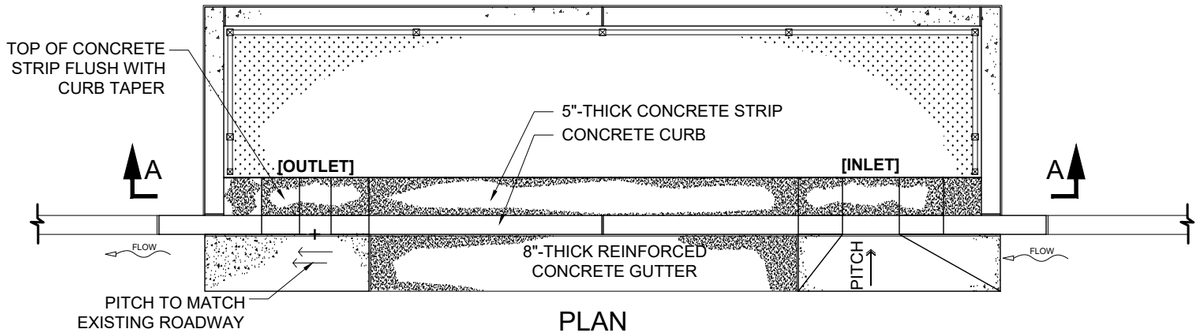
Roopeshjoshi
P.E.
05-13-2022
DATE

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

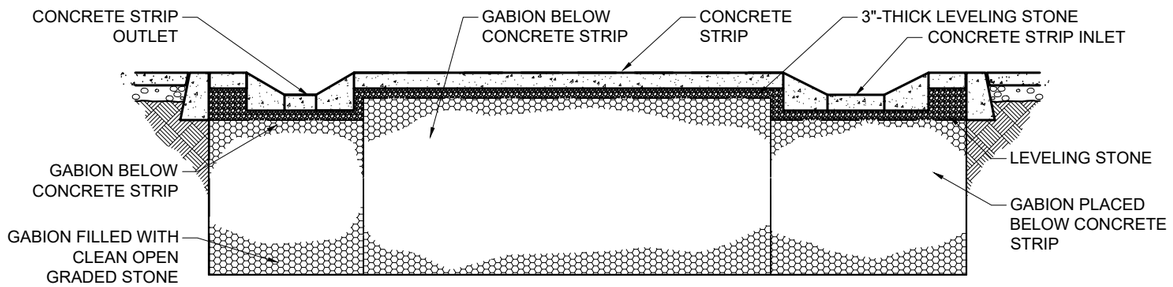
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–207

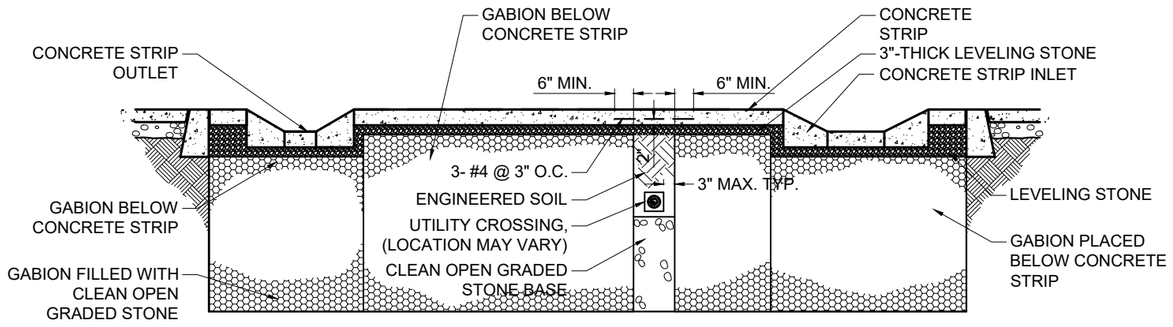
STANDARD R.O.W. SECTIONS AND DETAILS - GABION LAYOUT



PLAN



SECTION A-A
TYPICAL GABION LAYOUT



SECTION A-A
GABION LAYOUT WITH UTILITY CROSSINGS

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
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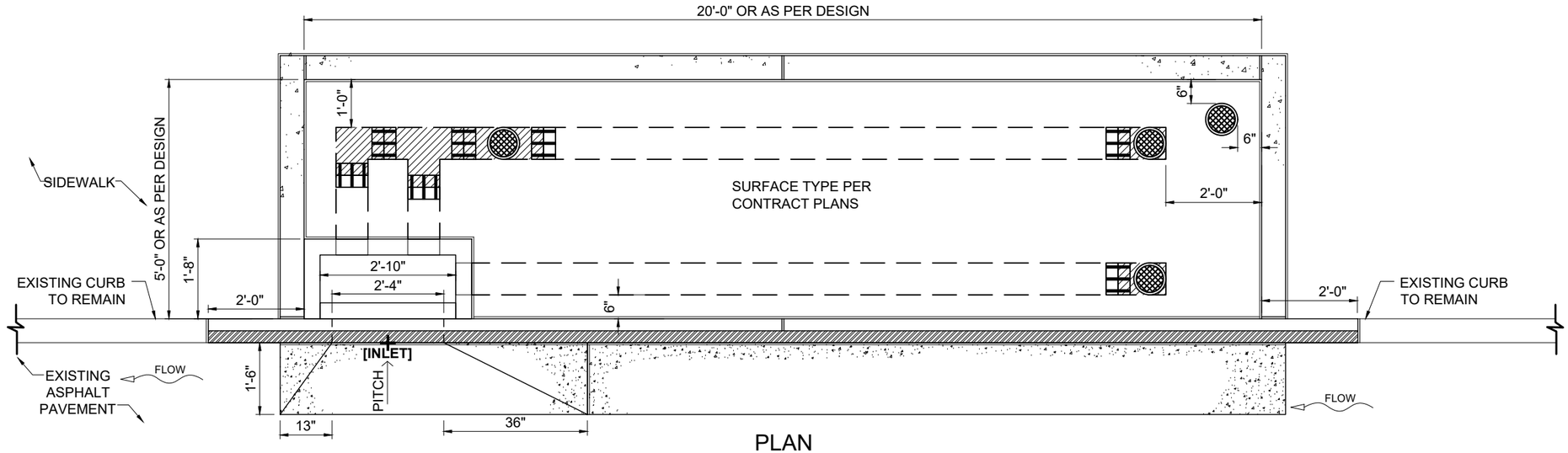
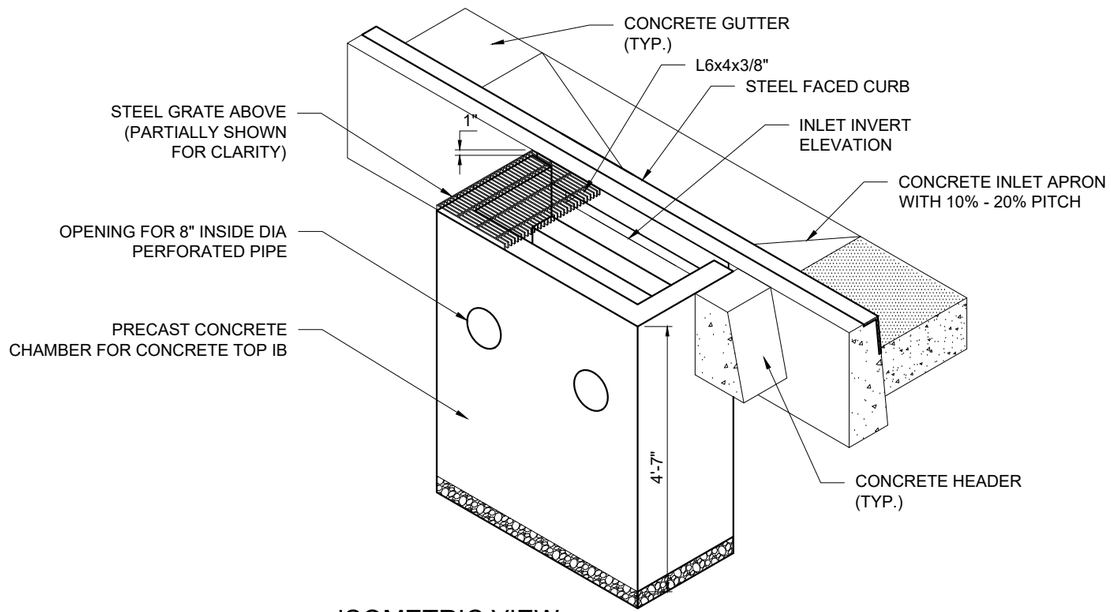
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–208

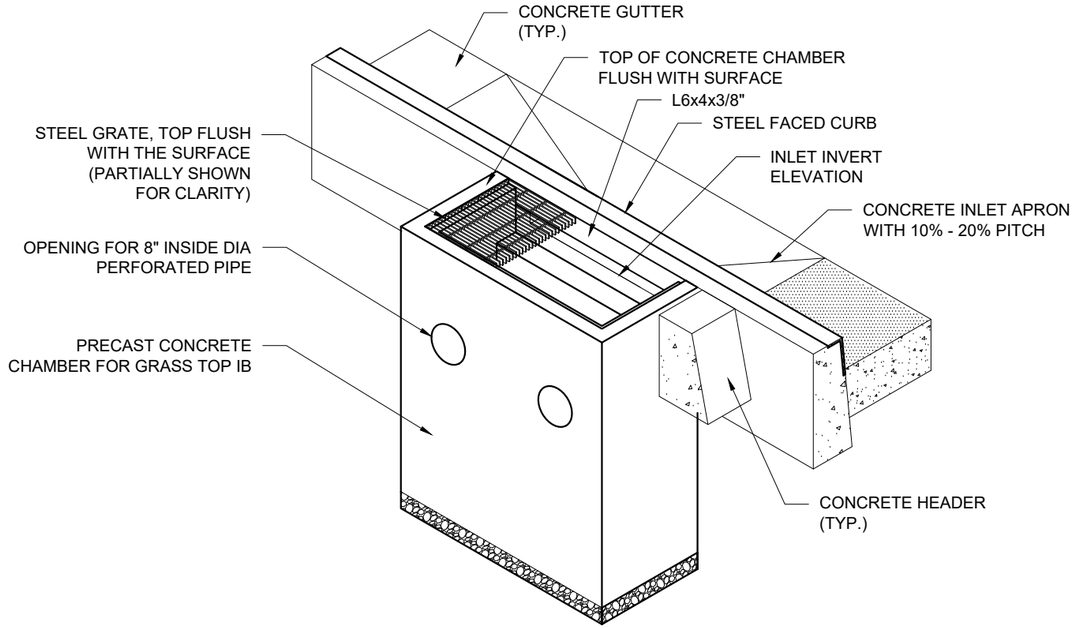
STANDARD FOR R.O.W. INFILTRATION BASIN INLET WITH PRECAST CONCRETE CHAMBER



PLAN



ISOMETRIC VIEW
(STEEL GRATE ABOVE CHAMBER)
N.T.S



ISOMETRIC VIEW
(STEEL GRATE FLUSH WITH CHAMBER)
N.T

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P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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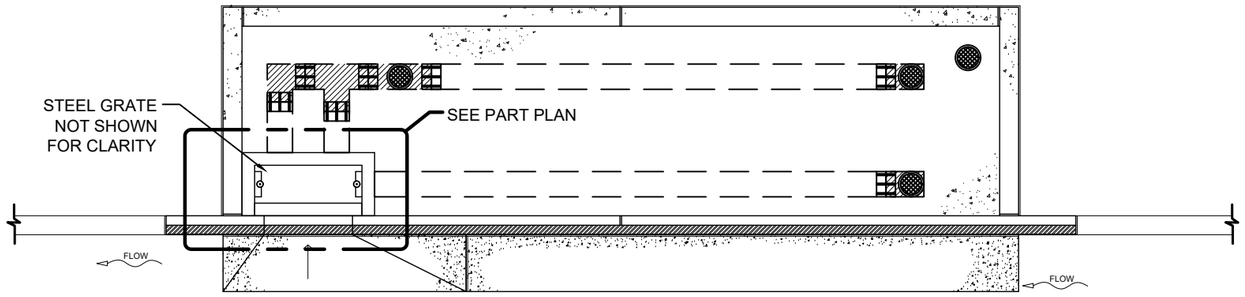
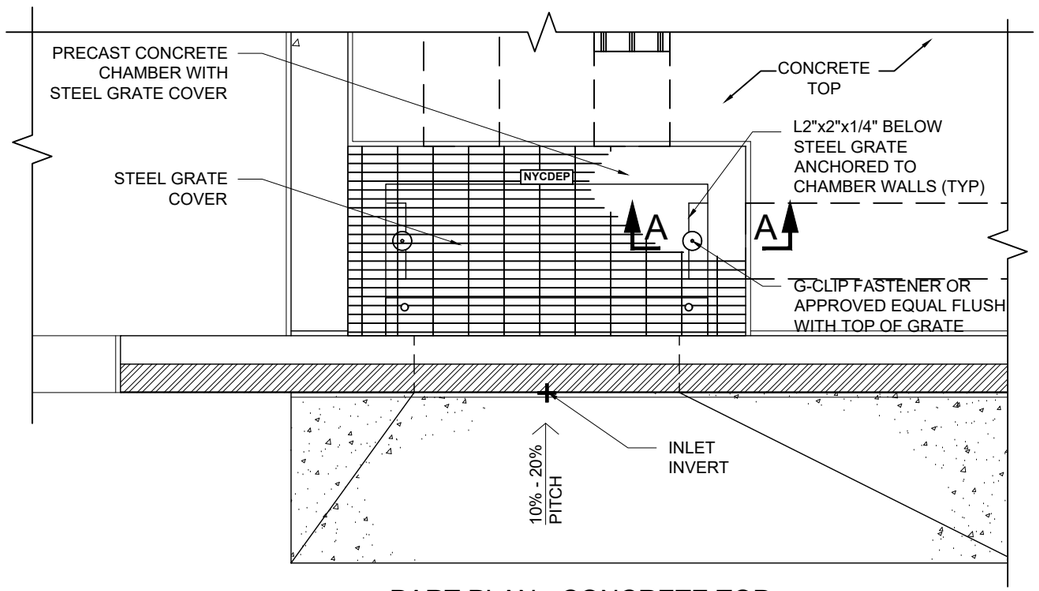
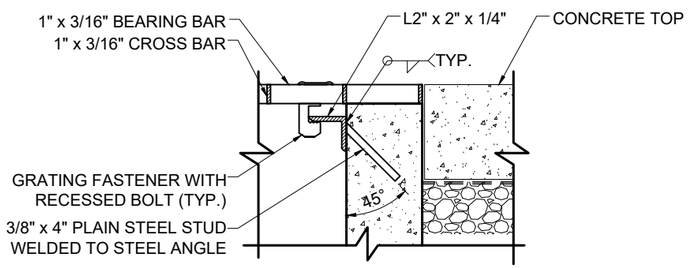
R.O.W. INFILTRATION BASIN STEEL GRATE DETAILS - CONCRETE TOP



PLAN - CONCRETE TOP



PART PLAN - CONCRETE TOP
STEEL GRATE, LIFTING POINTS AND FASTENER DETAIL



DETAIL A-A
CONCRETE TOP STEEL BAR GRATE BRACING

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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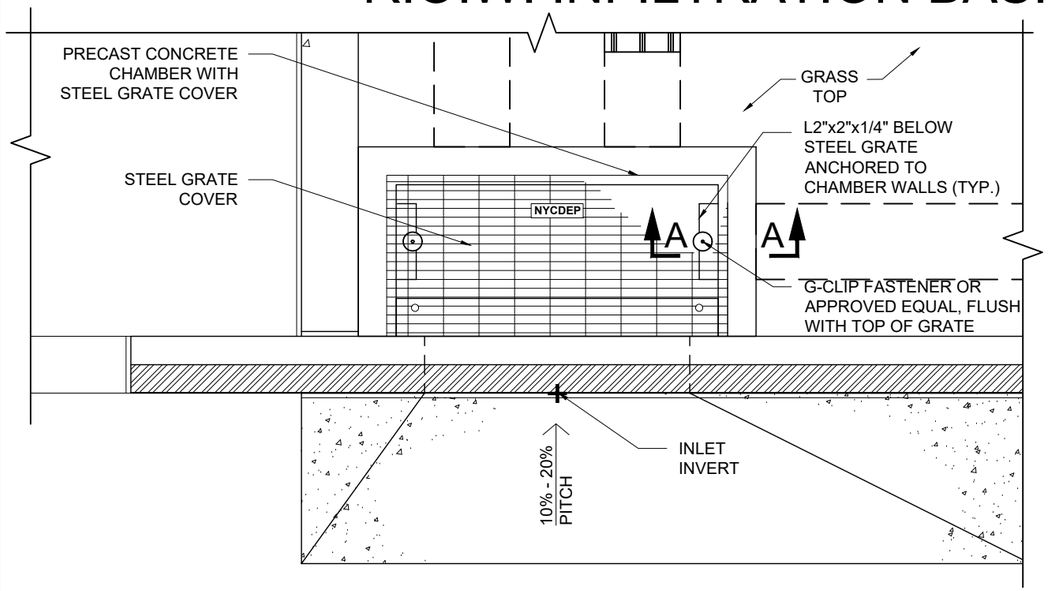
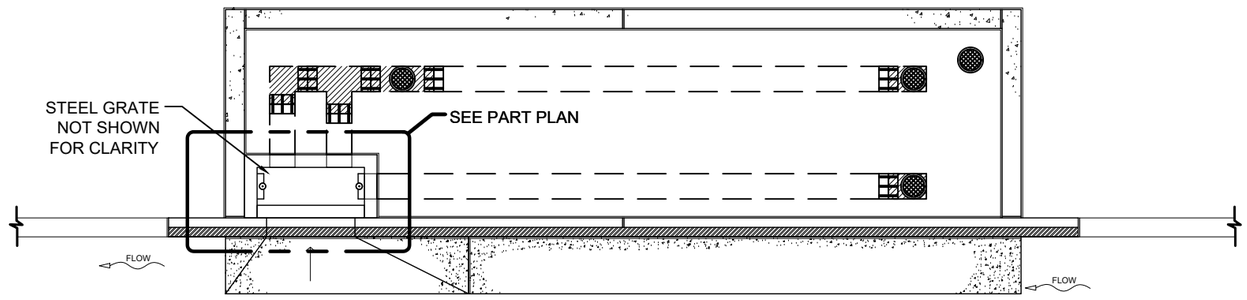
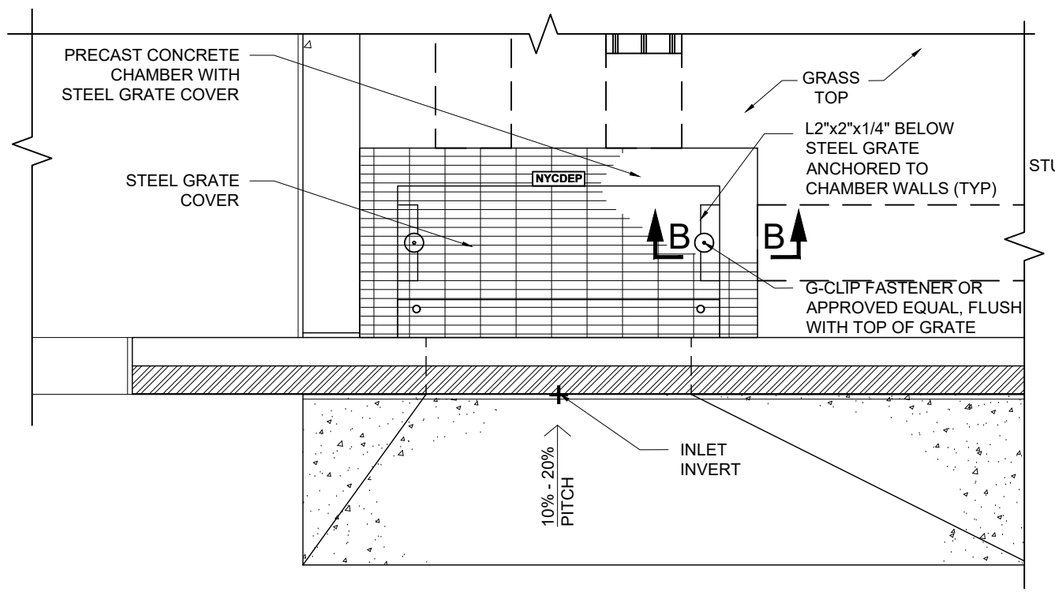
R.O.W. INFILTRATION BASIN STEEL GRATE DETAILS - GRASS TOP



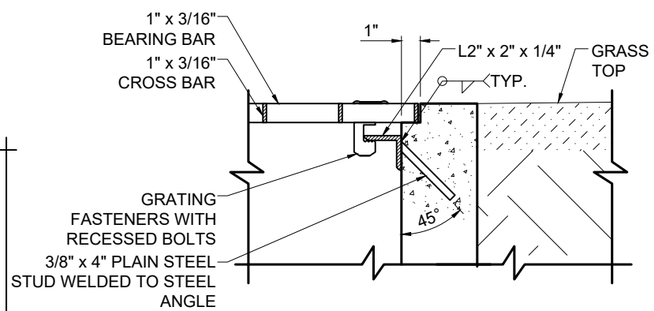
PART PLAN - GRASS TOP
STEEL GRATE, LIFTING POINTS AND FASTENER DETAIL



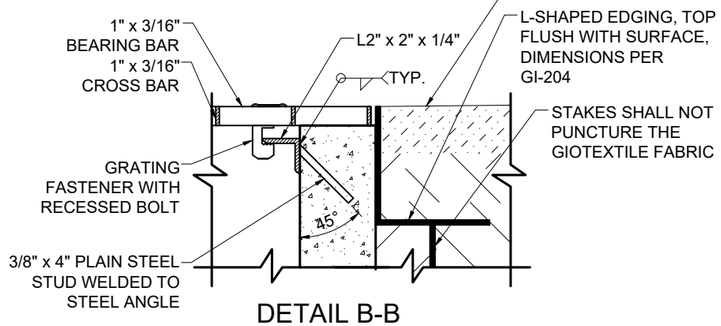
PLAN - GRASS TOP



PART PLAN - GRASS TOP
STEEL GRATE, LIFTING POINTS AND FASTENER DETAIL



DETAIL A-A
STEEL BAR GRATE BRACING



DETAIL B-B
STEEL BAR GRATE BRACING
(PRECAST CONCRETE CHAMBER FOR GRASS TOP IB)

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P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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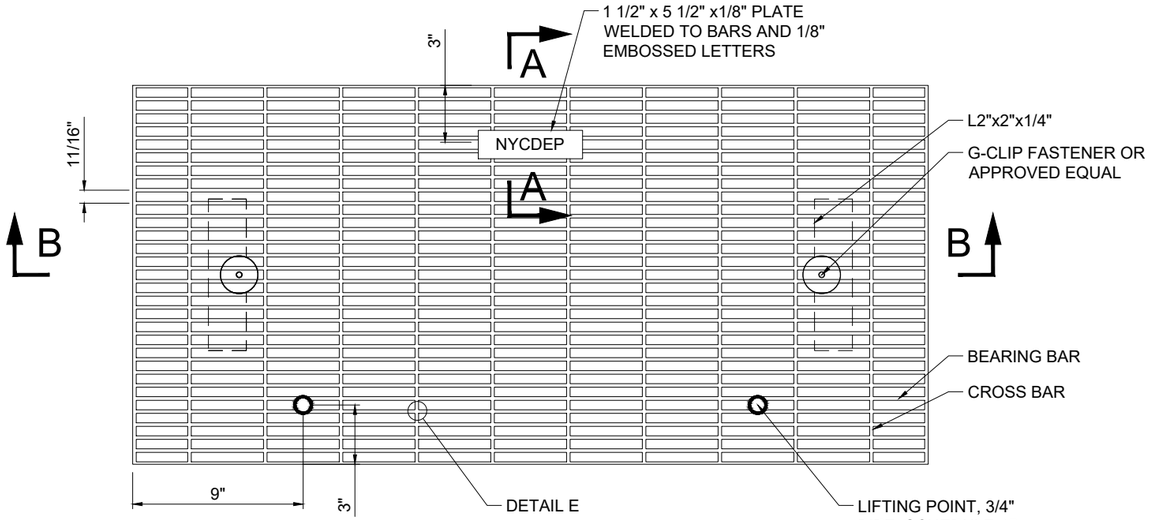
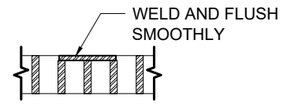
R.O.W. INFILTRATION BASIN STEEL GRATE DETAILS





SECTION A-A

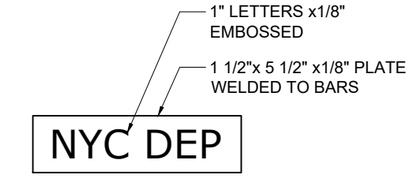
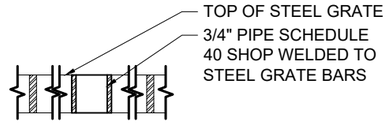
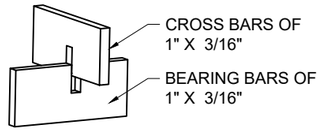


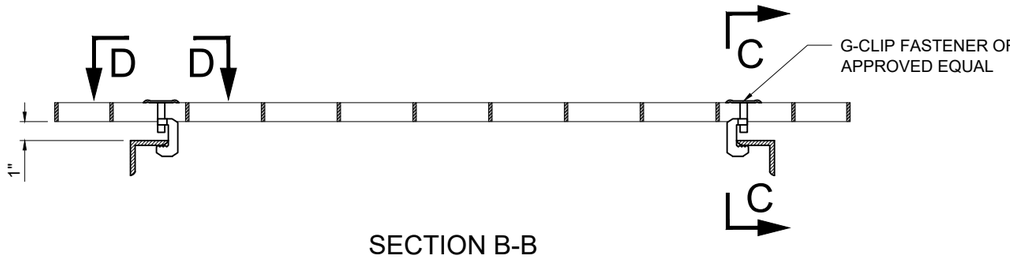
PLATE WITH DEP LOGO



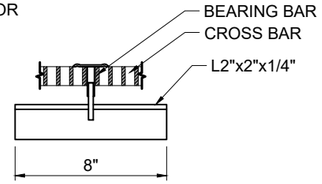
LIFTING POINT DETAIL



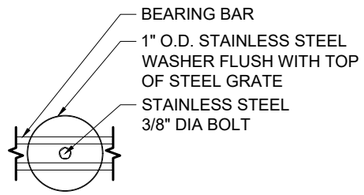
DETAIL E



SECTION B-B



SECTION C-C



SECTION D-D

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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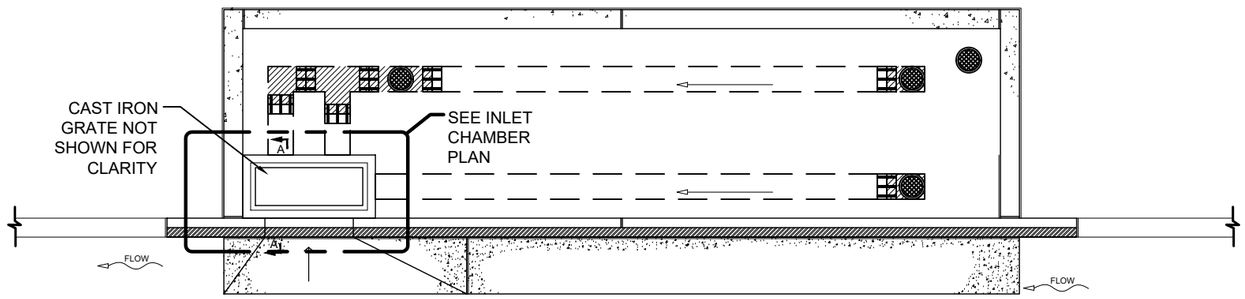
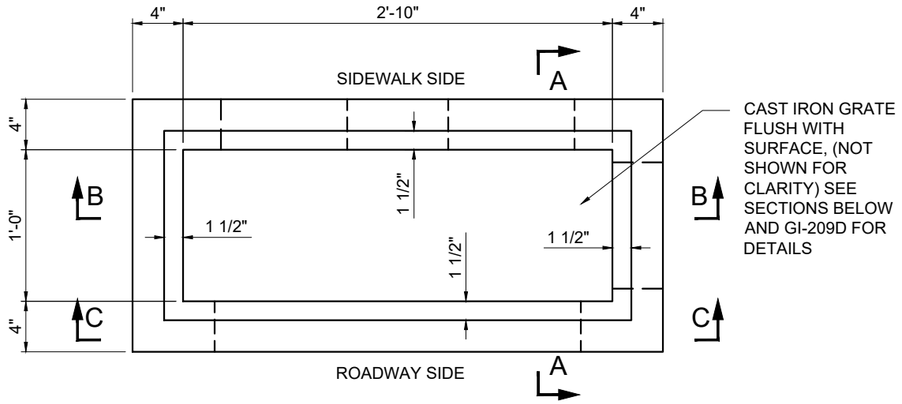
STANDARD FOR R.O.W. INFILTRATION BASIN INLET WITH PRECAST CONCRETE CHAMBER & CAST IRON GRATE

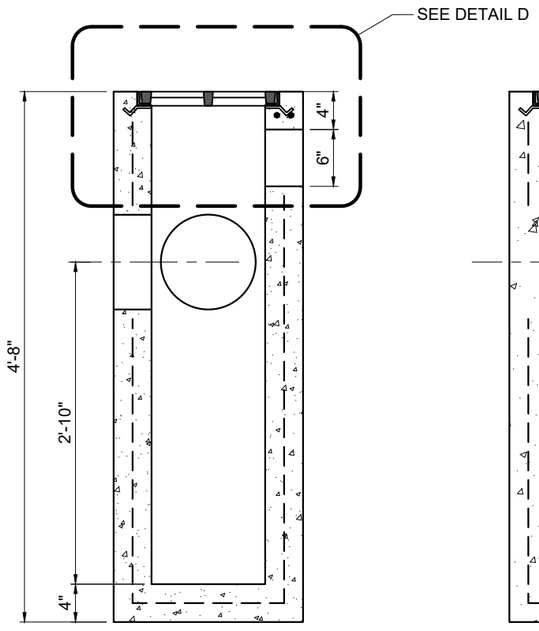
- NO CONNECTION TO SEWERS



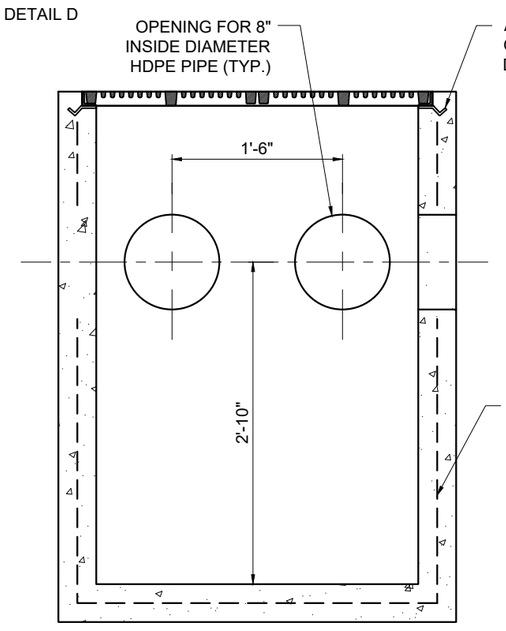
PLAN



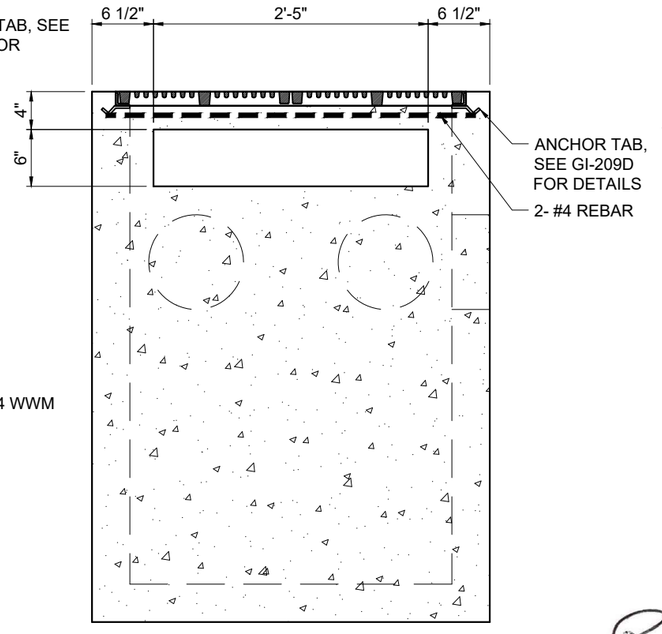
INLET CHAMBER PLAN



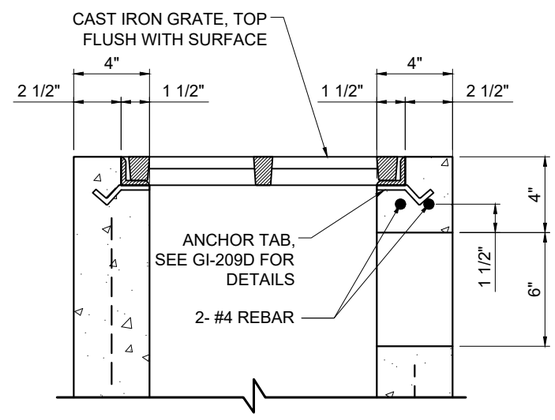
SECTION A-A



SECTION B-B



SECTION C-C



DETAIL D

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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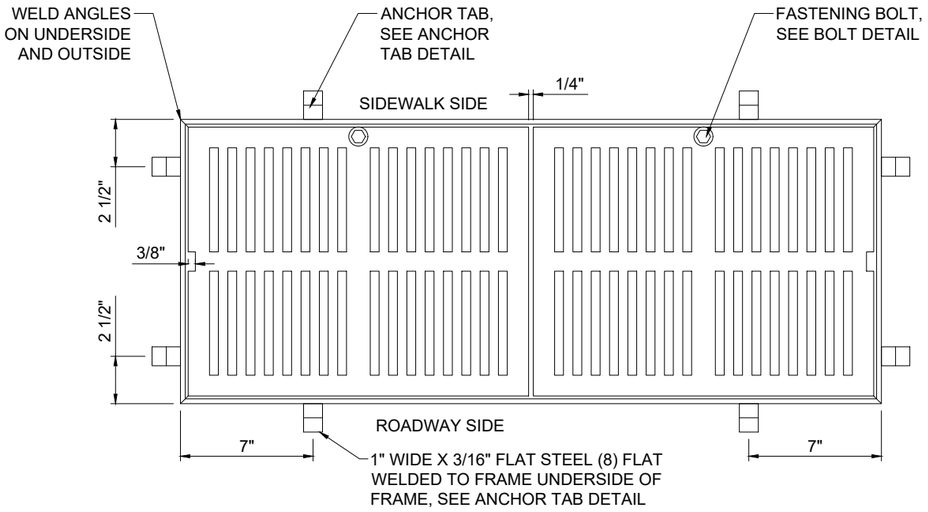
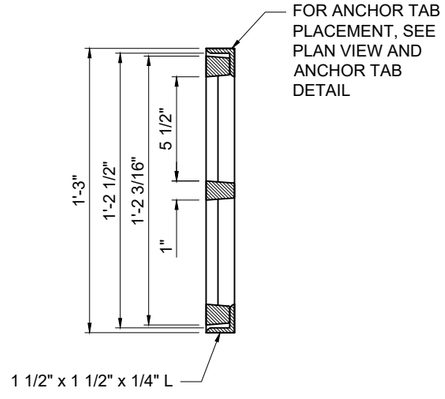
STANDARD FOR R.O.W. INFILTRATION BASIN INLET WITH PRECAST CONCRETE CHAMBER & CAST IRON GRATE

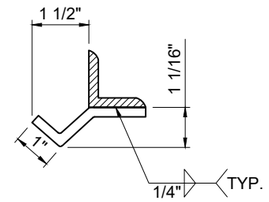
- NO CONNECTION TO SEWERS



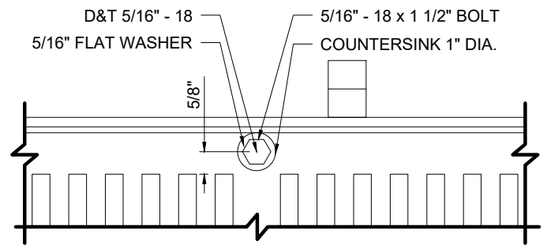
PLAN VIEW



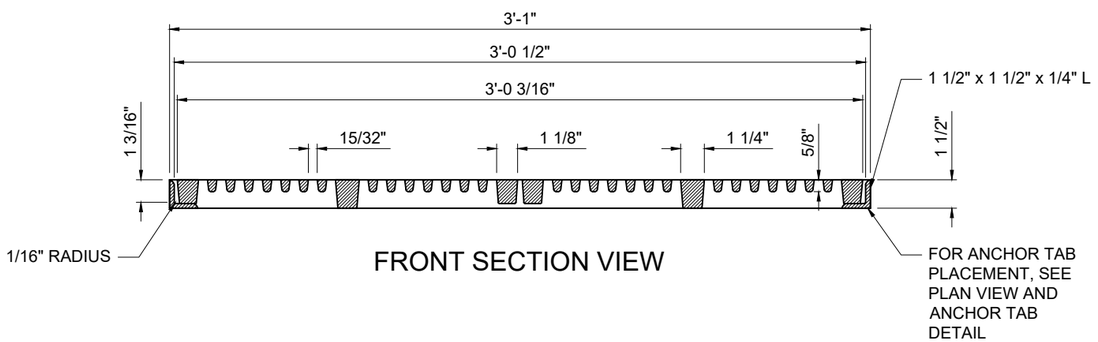
SIDE SECTION VIEW



ANCHOR TAB DETAL



BOLT DETAIL



FRONT SECTION VIEW

NOTE:
MATERIAL - GRATE OF GRAY CAST IRON ASTM A48 CLASS 35B, FRAME OF HOT ROLLED, FABRICATED STEEL, ASTM A36

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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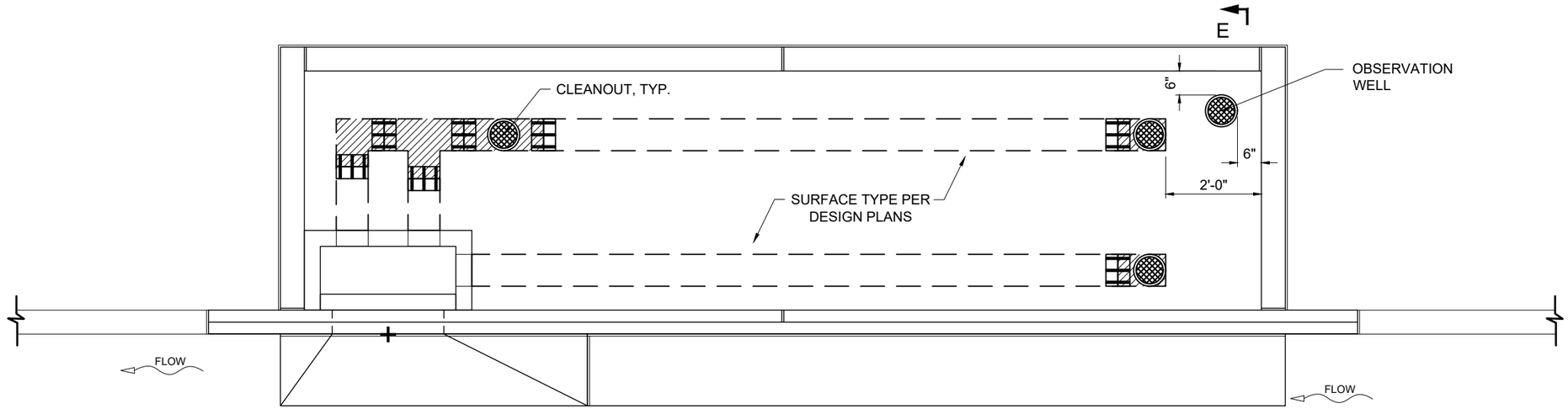
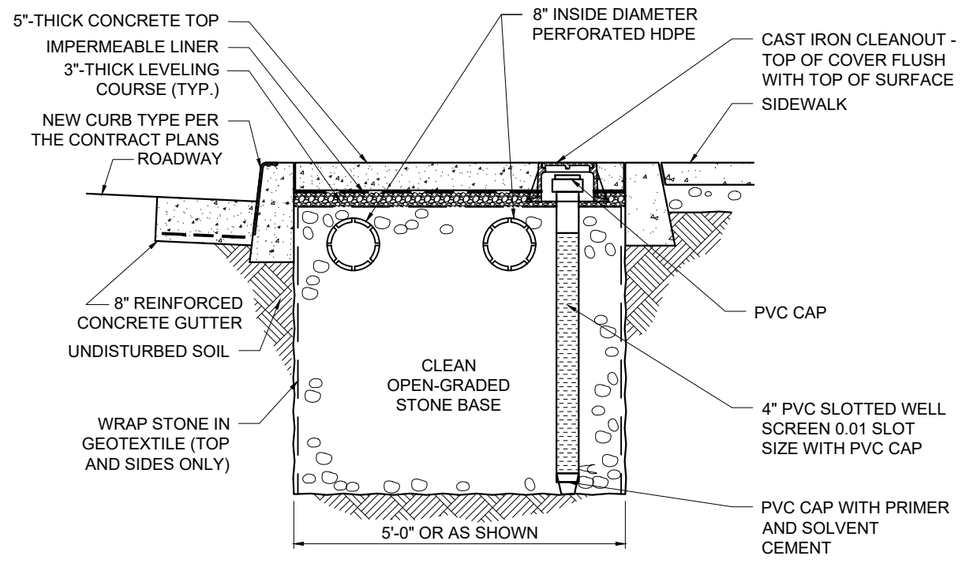
STANDARD FOR R.O.W. INFILTRATION BASIN OBSERVATION WELL

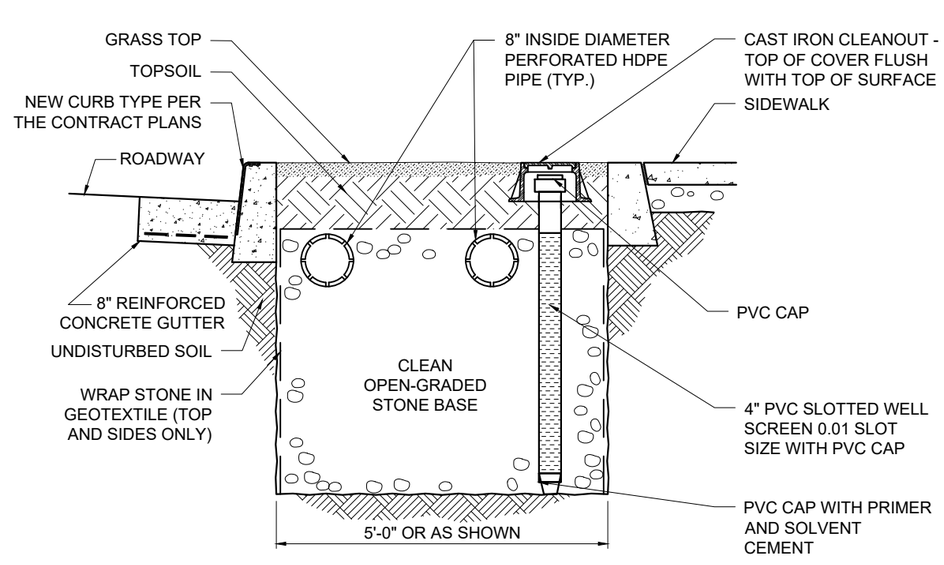
- NO CONNECTION TO SEWERS



PLAN



SECTION E-E
CONCRETE TOP OBSERVATION WELL



SECTION E-E
GRASS TOP OBSERVATION WELL

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P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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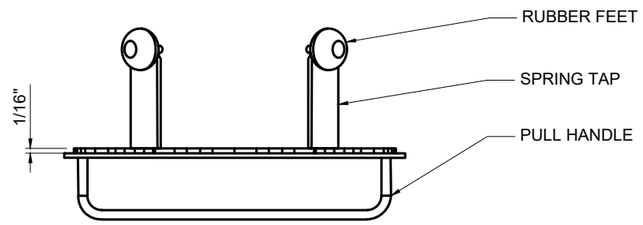
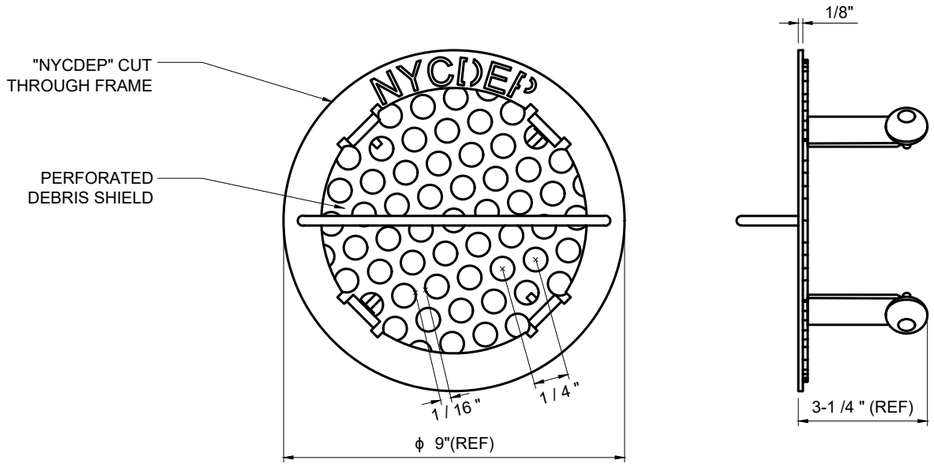
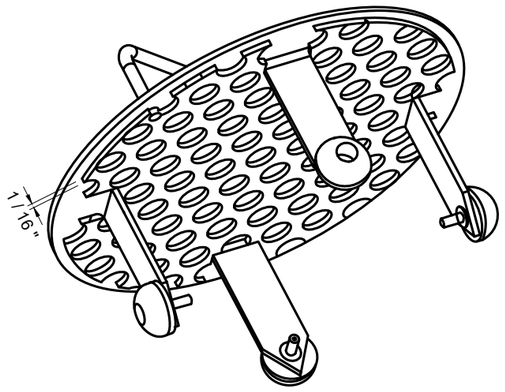
STANDARD R.O.W. INFILTRATION BASIN DEBRIS SCREEN

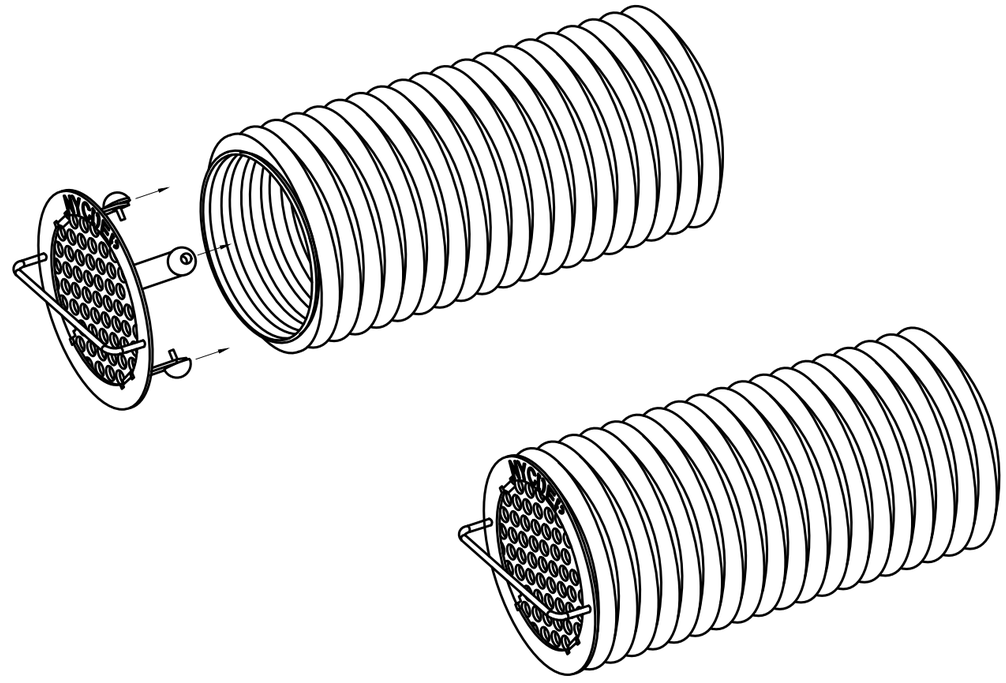




DEBRIS SCREEN



REAR



REFERENCE

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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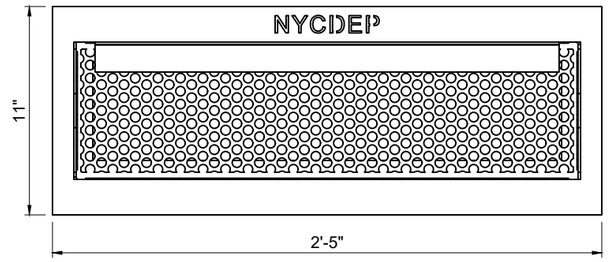
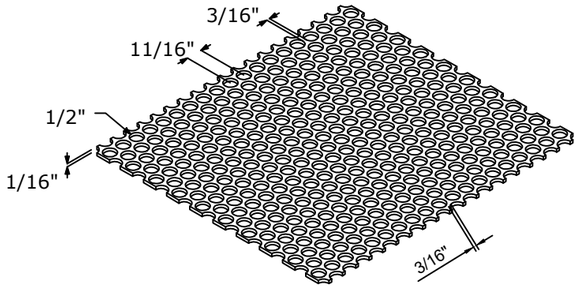
STANDARD R.O.W. INFILTRATION BASIN INLET SCREEN BOX

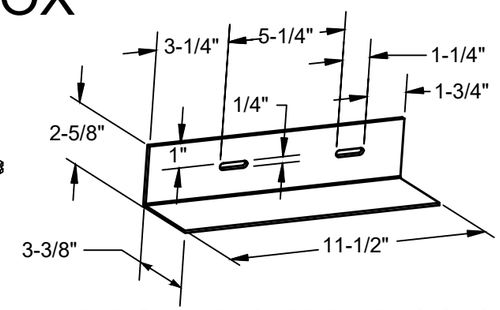
NOTES:
1. WEIGHT (EMPTY): 15 LBS. MAX.
2. MATERIAL: WELDED ALUMINUM CONSTRUCTION.
3. MOUNTING HARDWARE PROVIDED BY MANUFACTURER
4. MINIMUM PERFORMANCE CHARACTERISTICS (TYP):
   - 4.1. DEBRIS CAPACITY: 0.88 CU-FT
   - 4.2. FILTERED FLOW RATE: 1.7 CFS.
   - 4.3. BYPASS FLOW RATE: 0.86 CFS
5. TYPICAL INSTALLATION:
6. INSTALLATION SHOULD BE PERFORMED BY QUALIFIED PERSONNEL ONLY. CAREFULLY REMOVE THE STORM GRATE. THEN LOCATE AND MARK THE HOLES FOR EACH SUPPORT BRACKET (OPTIONAL TEMPLATE AVAILABLE). SECURE THE LEFT AND RIGHT SUPPORT BRACKETS USING THE PROVIDED HARDWARE. LOWER THE INLET SCREEN BOX ONTO THE BRACKETS VERIFY THAT THE INLET SCREENBOX RESTS ~1/8" BELOW THE CHAMBER INLET OPENING. THEN CAREFULLY REPLACE THE STORM GRATE.



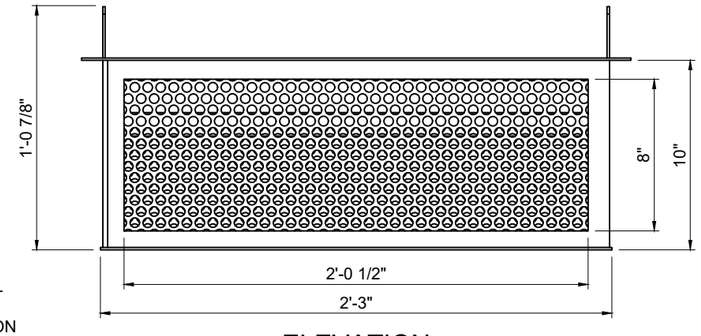
PLAN



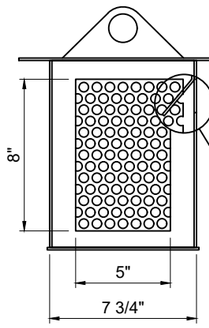
TYPICAL SCREEN CONFIGURATION



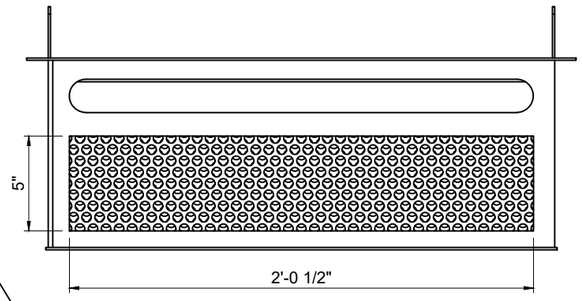
TYPICAL BRACKET DIMENSIONS
(LEFT/RIGHT ARE MIRRORED)



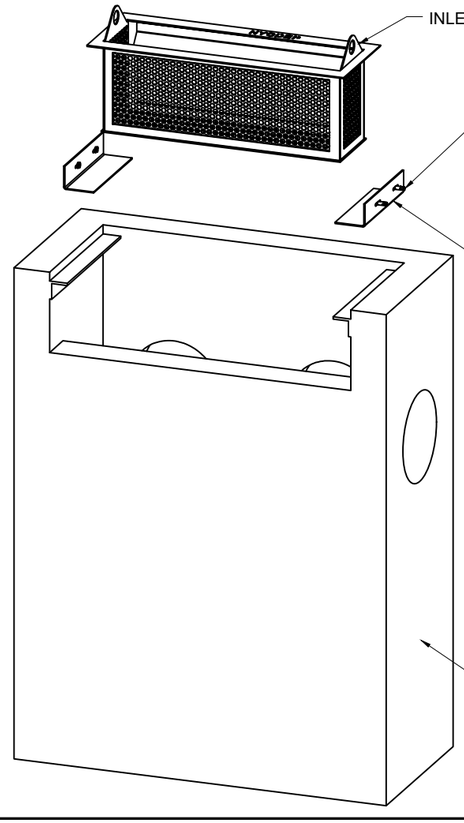
ELEVATION

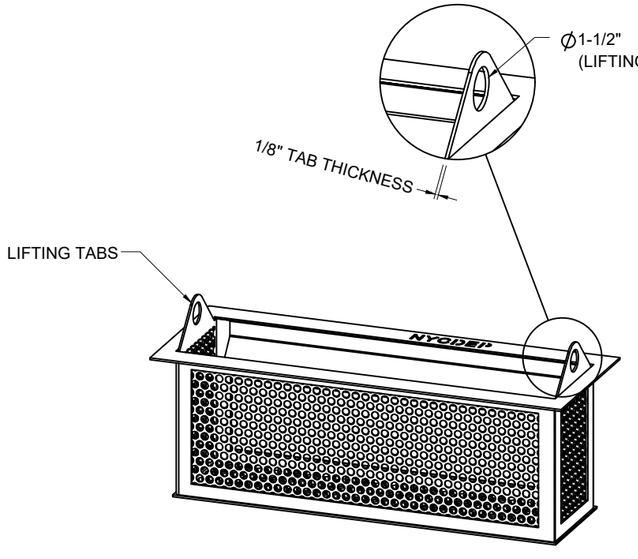


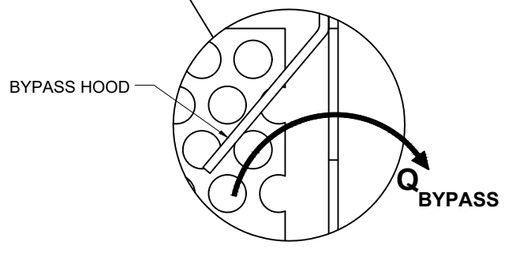
ELEVATION



ELEVATION







REFERENCE VIEWS

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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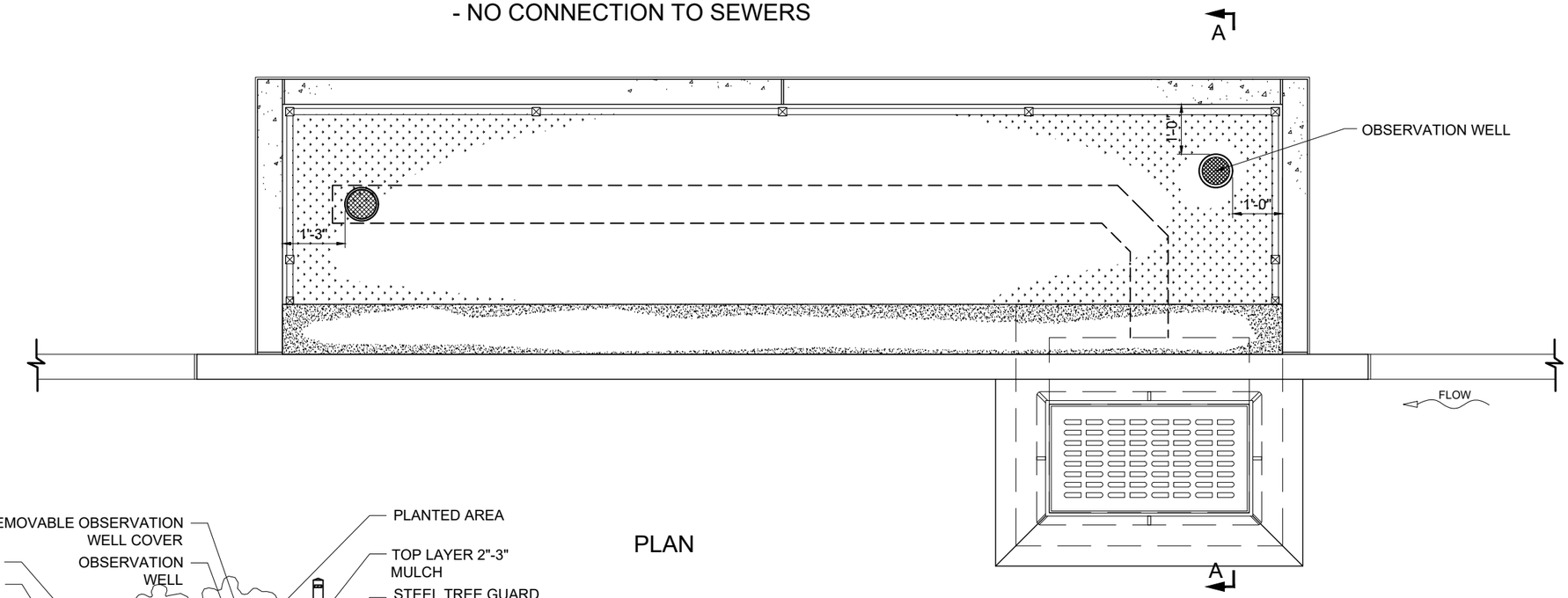
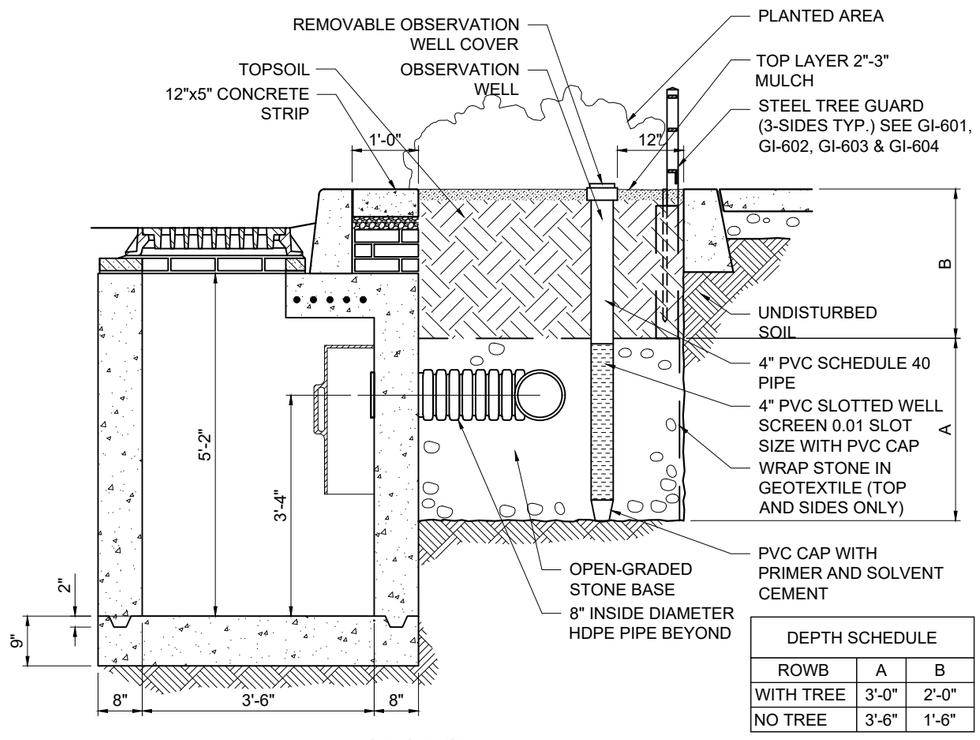
STANDARD FOR R.O.W. BIOSWALE TYPE D OBSERVATION WELL

- NO CONNECTION TO SEWERS



PLAN



SECTION A-A

DEPTH SCHEDULE		
ROWB	A	B
WITH TREE	3'-0"	2'-0"
NO TREE	3'-6"	1'-6"

Roopesh Joshi
P.E.
05-13-2022
DATE

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–300

GI-300
GUIDELINES FOR RIGHT-OF-WAY GREEN INFRASTRUCTURE
STORMWATER GREENSTREET PRACTICES

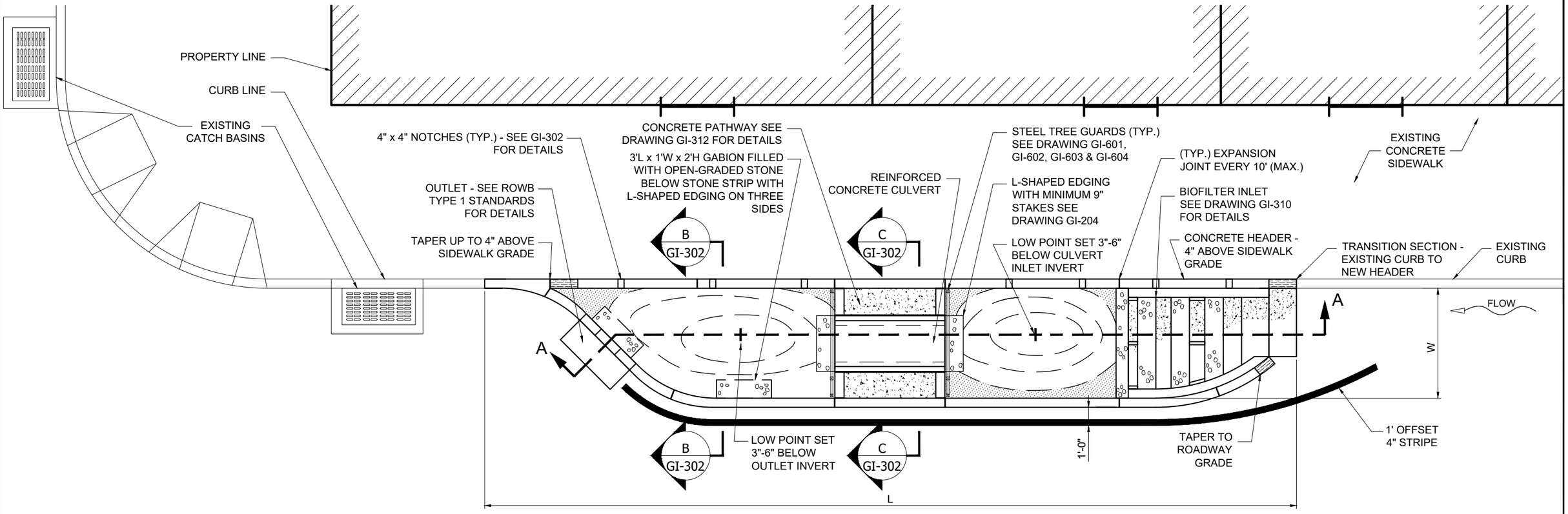
GI–301

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

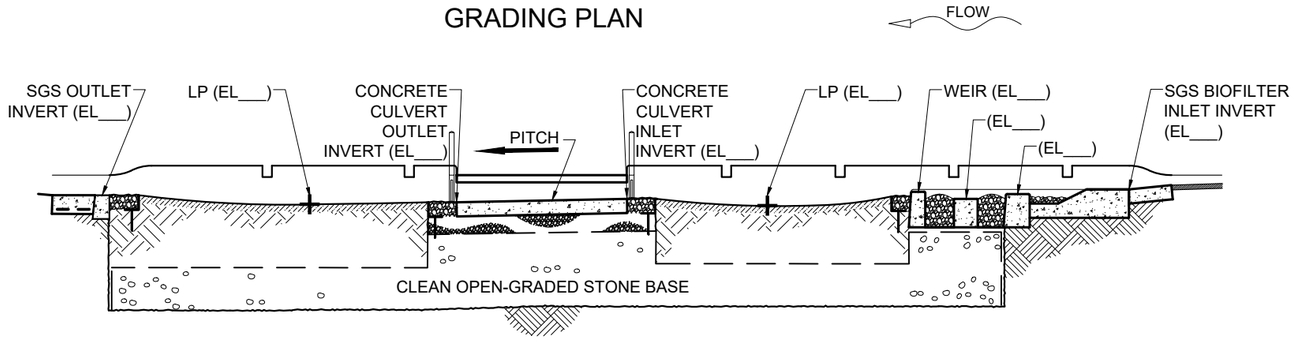
GI–301

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 1 LAYOUT

- NO CONNECTION TO SEWERS



GRADING PLAN



SECTION A-A

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
3. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
4. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
5. PEDESTRIAN PATHWAY WHEN REQUIRED.
6. WHERE (EL___) IS INDICATED, ELEVATION TO BE SHOWN IN CONTRACT PLANS.
7. HEADER NOTCHES ARE PLACED EQUALLY SPACED 4' TO 7' APART.

Roopesh Joshi P.E. 05-13-2022

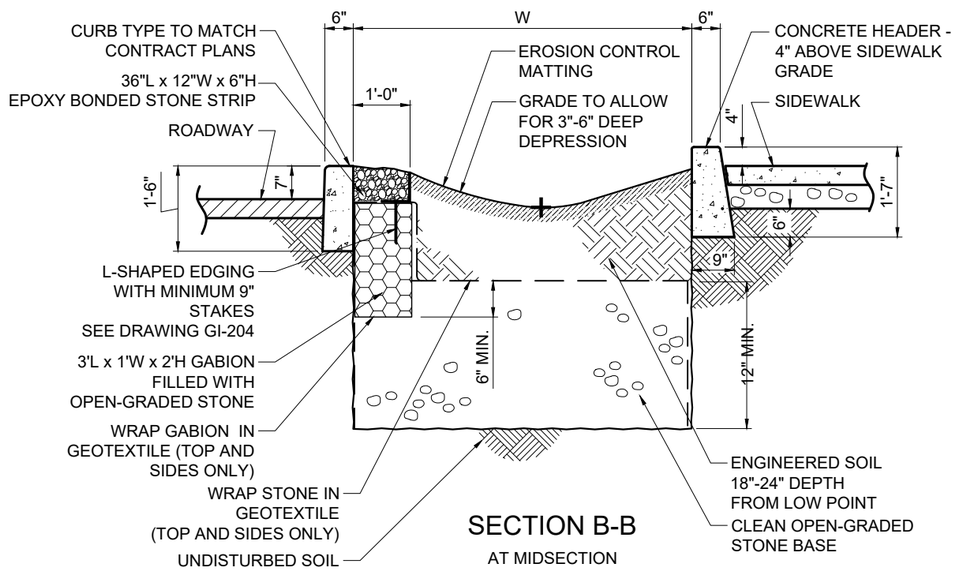
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

GI–302

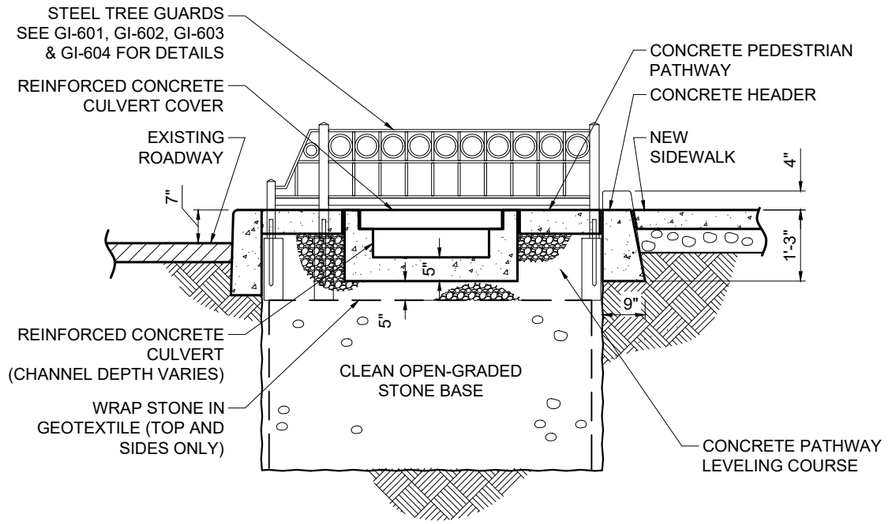
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 1 LAYOUT

- NO CONNECTION TO SEWERS



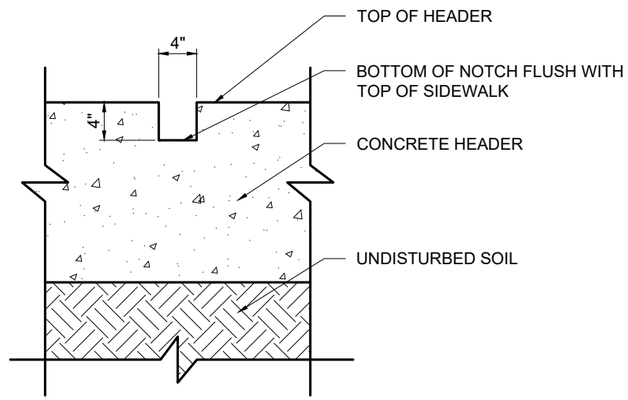
SECTION B-B
AT MIDSECTION



SECTION C-C
AT PEDESTRIAN PATHWAY

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. IMPERVIOUS ROW AREA IS CALCULATED IN TDA ANALYSIS SPREADSHEET.
3. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
4. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
5. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
6. PEDESTRIAN PATHWAY WHEN REQUIRED.
7. WHERE (EL___) IS INDICATED. ELEVATION TO BE SHOWN IN CONTRACT PLANS.
8. PEDESTRIAN PATHWAY CULVERT COVER TO BE CONCRETE WHEN ELEVATION AT SIDEWALK CURB IS HIGHER THAN ELEVATION AT ROADWAY CURB; OTHERWISE, CULVERT COVER TO BE METAL GRATED WITH PATHWAY SLOPING TOWARDS GRATING ON EITHER SIDE.



CONCRETE HEADER - NOTCH DETAILS

Roopesh Joshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

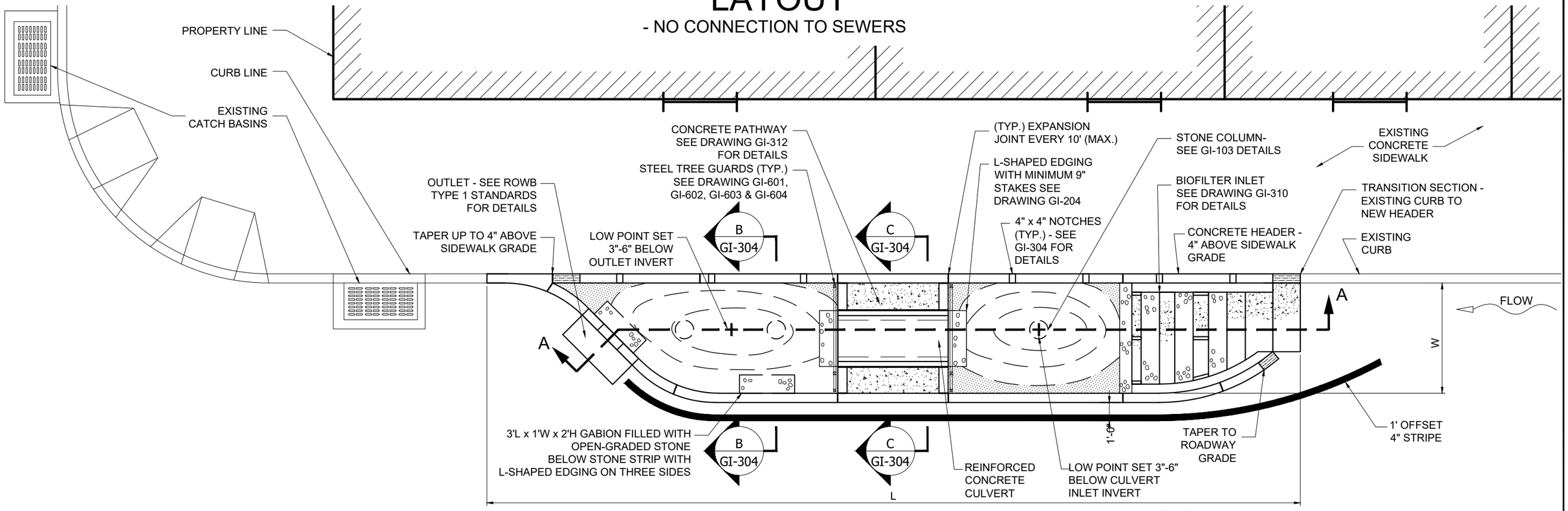
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

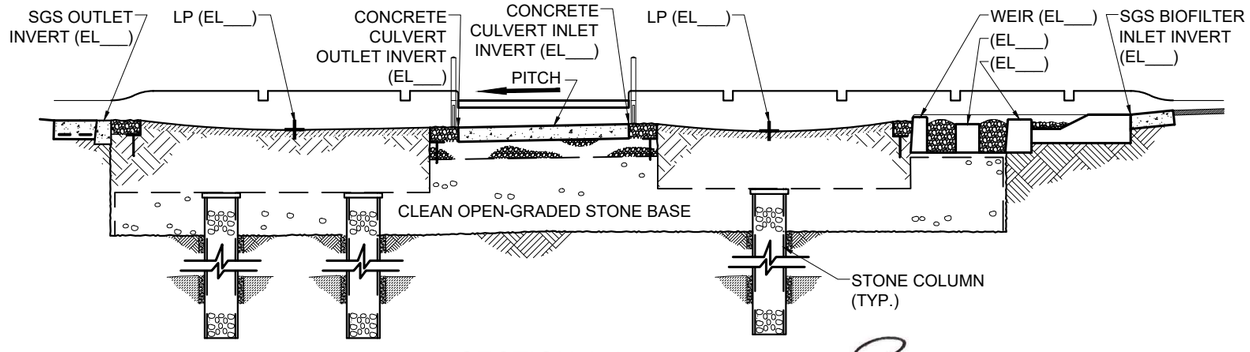
GI–303

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 1A-WITH STONE COLUMNS LAYOUT

- NO CONNECTION TO SEWERS



GRADING PLAN



SECTION A-A

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
3. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
4. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
5. STONE COLUMN AND/OR PEDESTRIAN PATHWAY WHEN REQUIRED.
6. WHERE (EL___) IS INDICATED, ELEVATION TO BE SHOWN IN CONTRACT PLANS.
7. HEADER NOTCHES ARE PLACED EQUALLY SPACED 4' TO 7' APART.
8. 5' (MIN.) DISTANCE BETWEEN STONE COLUMNS; NUMBER OF STONE COLUMNS AS REQUIRED BY DEP.

Roopesh Joshi

P.E. 05-13-2022

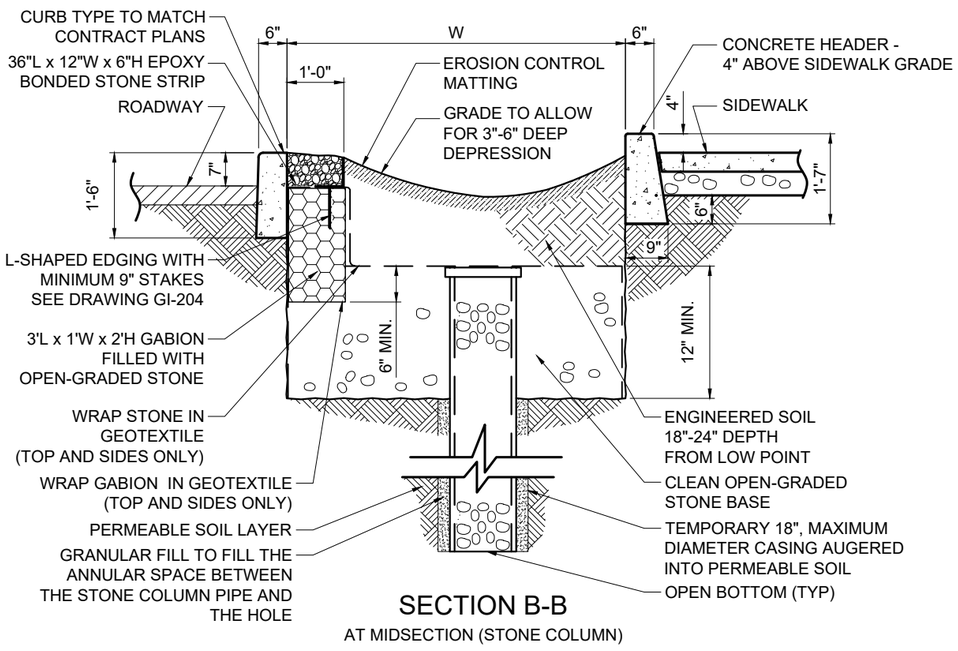
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 1A-WITH STONE COLUMNS LAYOUT

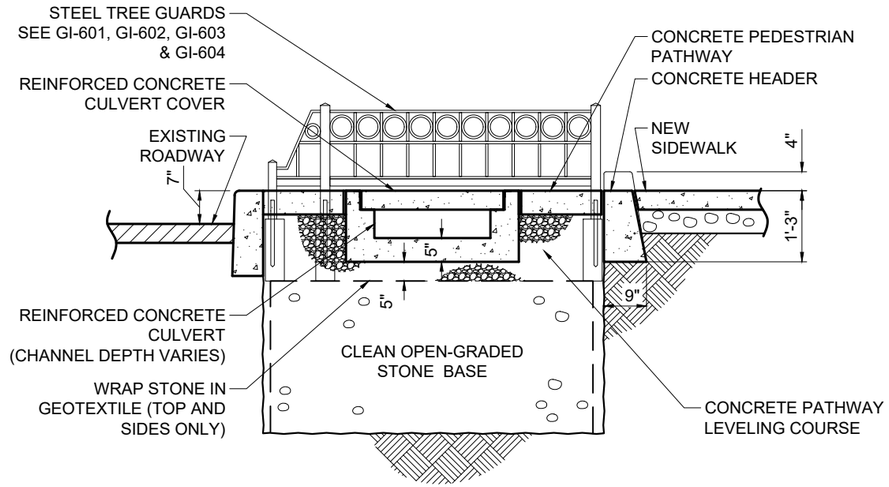
- NO CONNECTION TO SEWERS

GI–304



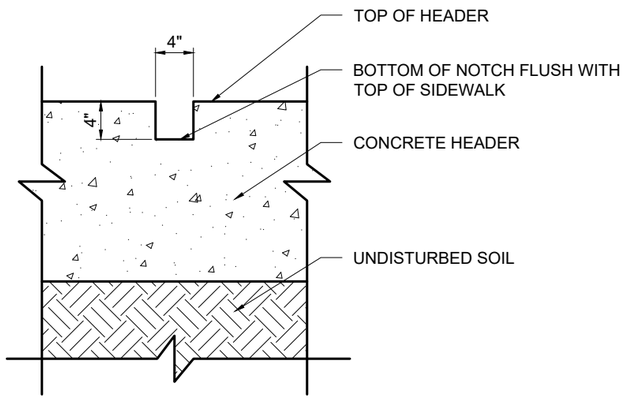
SECTION B-B

AT MIDSECTION (STONE COLUMN)



SECTION C-C

AT PEDESTRIAN PATHWAY



CONCRETE HEADER - NOTCH DETAILS

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. IMPERVIOUS ROW AREA IS CALCULATED IN TDA ANALYSIS SPREADSHEET.
3. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
4. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
5. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
6. STONE COLUMN AND/OR PEDESTRIAN PATHWAY WHEN REQUIRED.
7. WHERE (EL___) IS INDICATED. ELEVATION TO BE SHOWN IN CONTRACT PLANS.
8. PEDESTRIAN PATHWAY CULVERT COVER TO BE CONCRETE WHEN ELEVATION AT SIDEWALK CURB IS HIGHER THAN ELEVATION AT ROADWAY CURB; OTHERWISE, CULVERT COVER TO BE METAL GRATED WITH PATHWAY SLOPING TOWARDS GRATING ON EITHER SIDE.

Roopesh Joshi
P.E.
05-13-2022
DATE

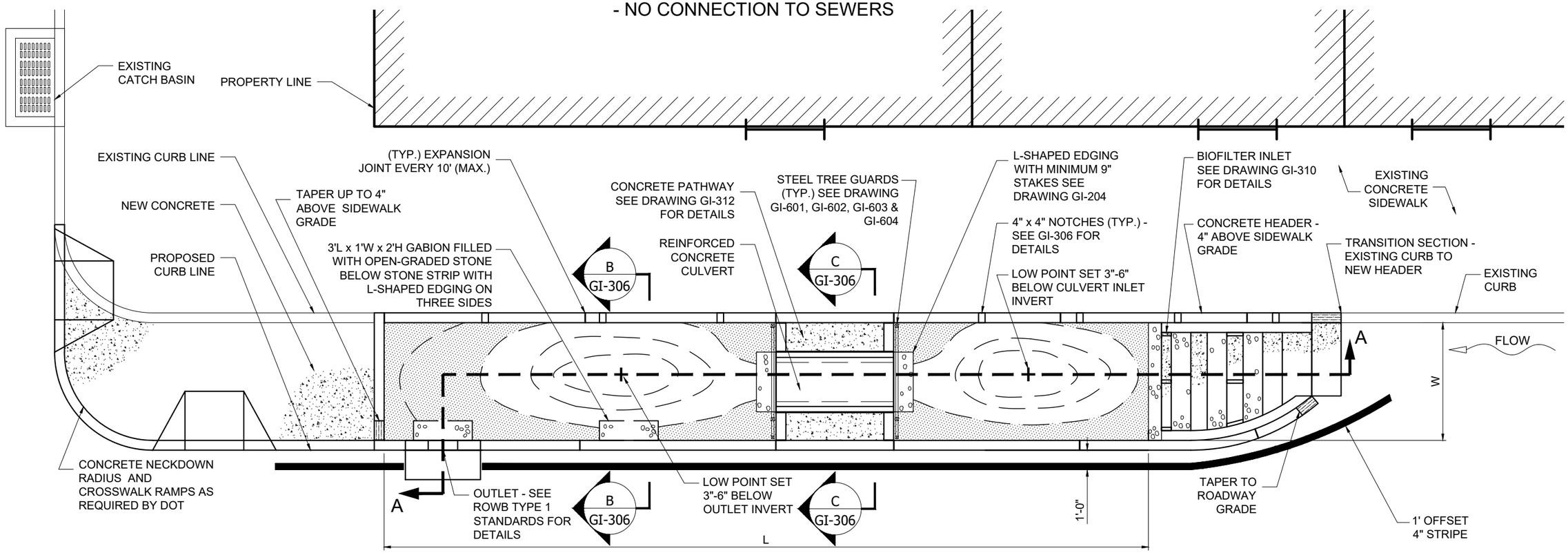
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–305

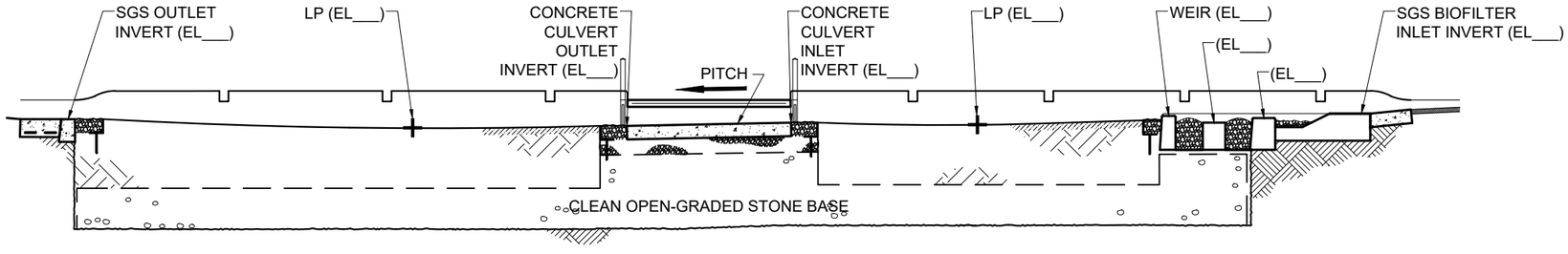
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 2 LAYOUT

- NO CONNECTION TO SEWERS



GRADING PLAN



SECTION A-A

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
3. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
4. IF DEEPER LOW POINT (L.P.) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
5. PEDESTRIAN PATHWAY WHEN REQUIRED.
6. WHERE (EL___) IS INDICATED, ELEVATION TO BE SHOWN IN CONTRACT PLANS.
7. HEADER NOTCHES ARE PLACED EQUALLY SPACED 4' TO 7' APART.

Roopesh Joshi
P.E.
05-13-2022
DATE

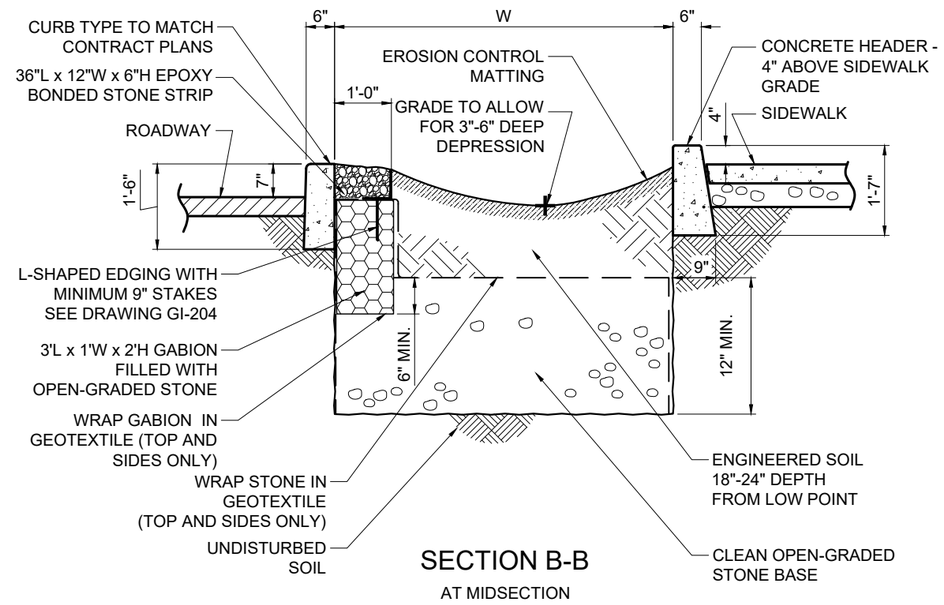
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–306

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

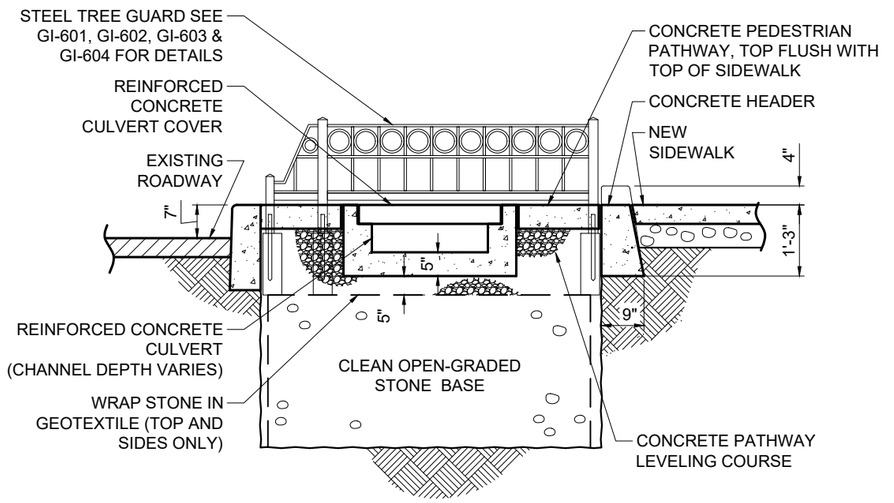
R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 2 LAYOUT

- NO CONNECTION TO SEWERS



SECTION B-B

AT MIDSECTION

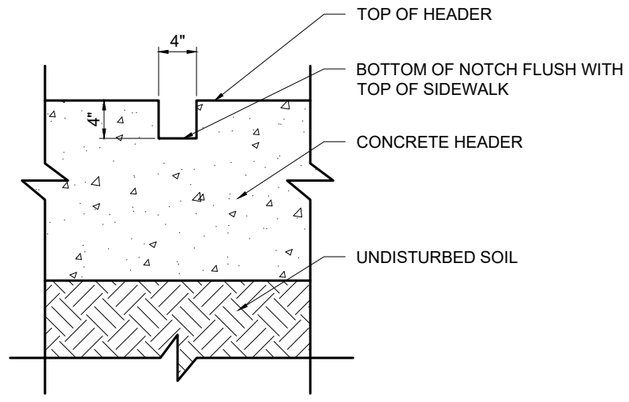


SECTION C-C

AT PEDESTRIAN PATHWAY

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. IMPERVIOUS ROW AREA IS CALCULATED IN TDA ANALYSIS SPREADSHEET.
3. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
4. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
5. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
6. PEDESTRIAN PATHWAY WHEN REQUIRED.
7. WHERE (EL___) IS INDICATED. ELEVATION TO BE SHOWN IN CONTRACT PLANS.
8. PEDESTRIAN PATHWAY CULVERT COVER TO BE CONCRETE WHEN ELEVATION AT SIDEWALK CURB IS HIGHER THAN ELEVATION AT ROADWAY CURB; OTHERWISE, CULVERT COVER TO BE METAL GRATED WITH PATHWAY SLOPING TOWARDS GRATING ON EITHER SIDE.



CONCRETE HEADER - NOTCH DETAILS

Roopesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

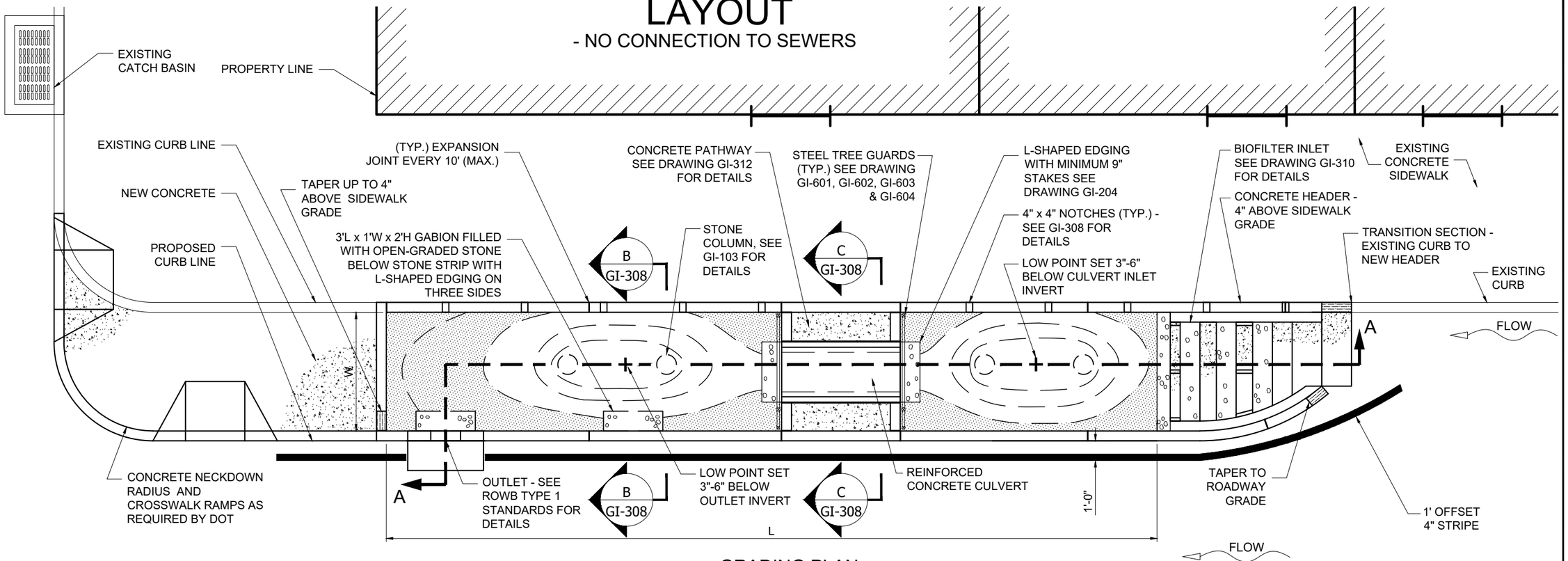
05-13-2022
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

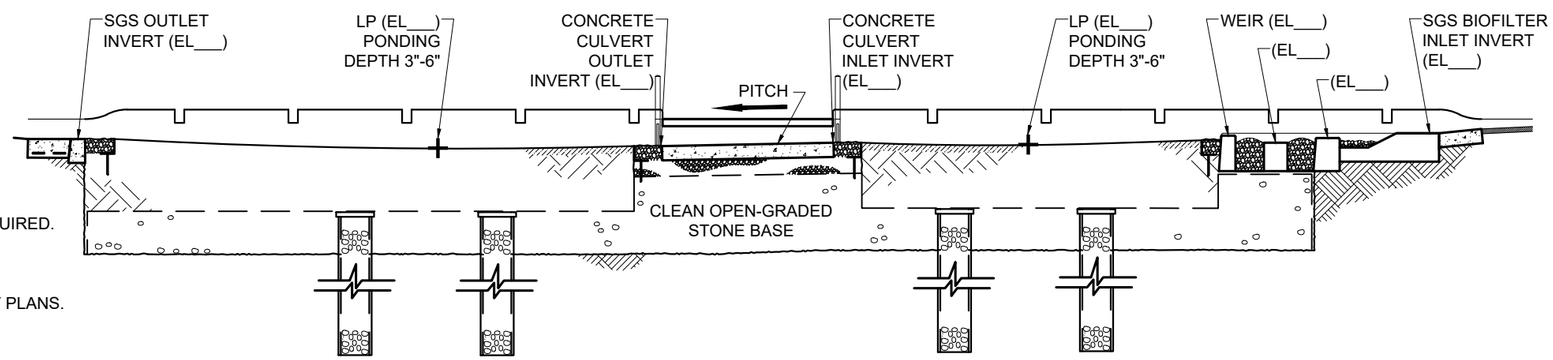
GI–307

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 2A-WITH STONE COLUMNS LAYOUT

- NO CONNECTION TO SEWERS



GRADING PLAN



SECTION A-A

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
3. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
4. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
5. STONE COLUMN AND/OR PEDESTRIAN PATHWAY WHEN REQUIRED.
6. WHERE (EL___) IS INDICATED, ELEVATION TO BE SHOWN IN CONTRACT PLANS.
7. HEADER NOTCHES ARE PLACED EQUALLY SPACED 4' TO 7' APART.
8. 5' (MIN.) DISTANCE BETWEEN STONE COLUMNS; NUMBER OF STONE COLUMNS AS REQUIRED BY DEP.

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

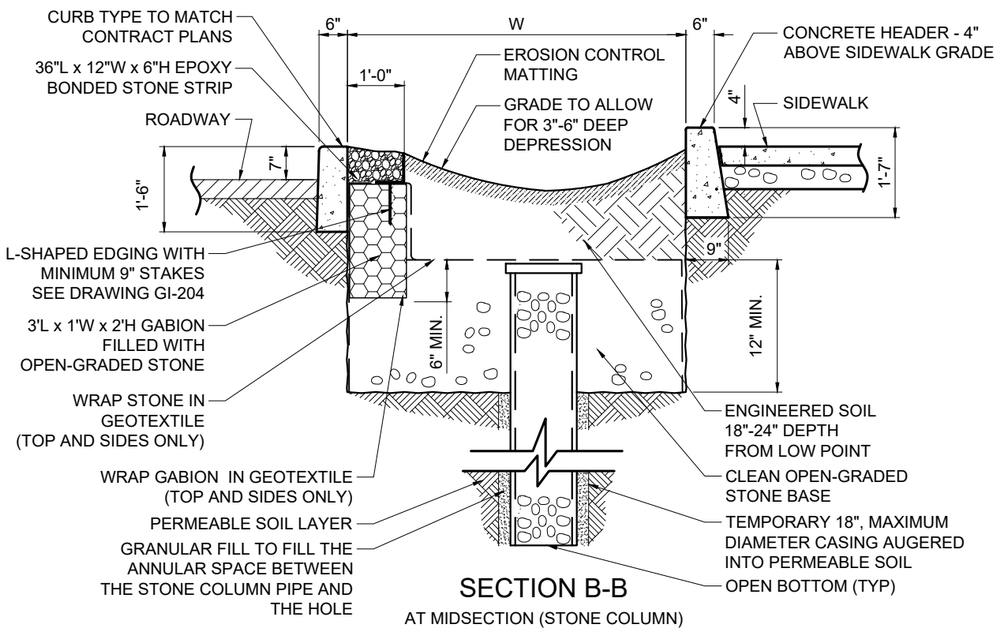
DATE

GI–308

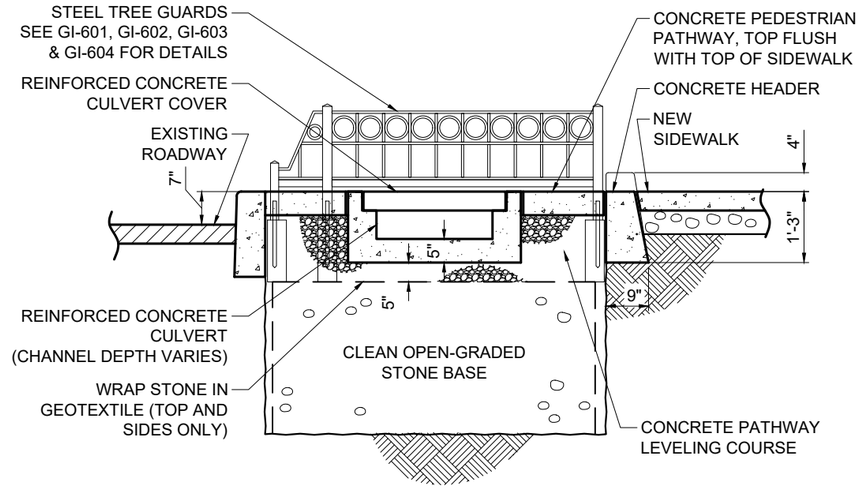
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 2A-WITH STONE COLUMNS LAYOUT

- NO CONNECTION TO SEWERS



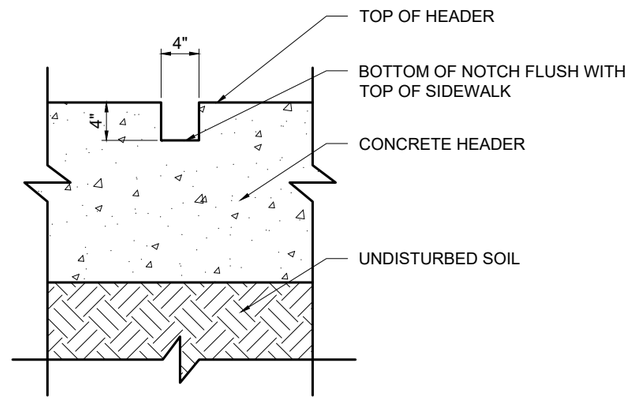
SECTION B-B
AT MIDSECTION (STONE COLUMN)



SECTION C-C
AT PEDESTRIAN PATHWAY

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. IMPERVIOUS ROW AREA IS CALCULATED IN TDA ANALYSIS SPREADSHEET.
3. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
4. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
5. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
6. STONE COLUMN AND/OR PEDESTRIAN PATHWAY WHEN REQUIRED.
7. WHERE (EL___) IS INDICATED. ELEVATION TO BE SHOWN IN CONTRACT PLANS.
8. PEDESTRIAN PATHWAY CULVERT COVER TO BE CONCRETE WHEN ELEVATION AT SIDEWALK CURB IS HIGHER THAN ELEVATION AT ROADWAY CURB; OTHERWISE, CULVERT COVER TO BE METAL GRATED WITH PATHWAY SLOPING TOWARDS GRATING ON EITHER SIDE.



CONCRETE HEADER - NOTCH DETAILS

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

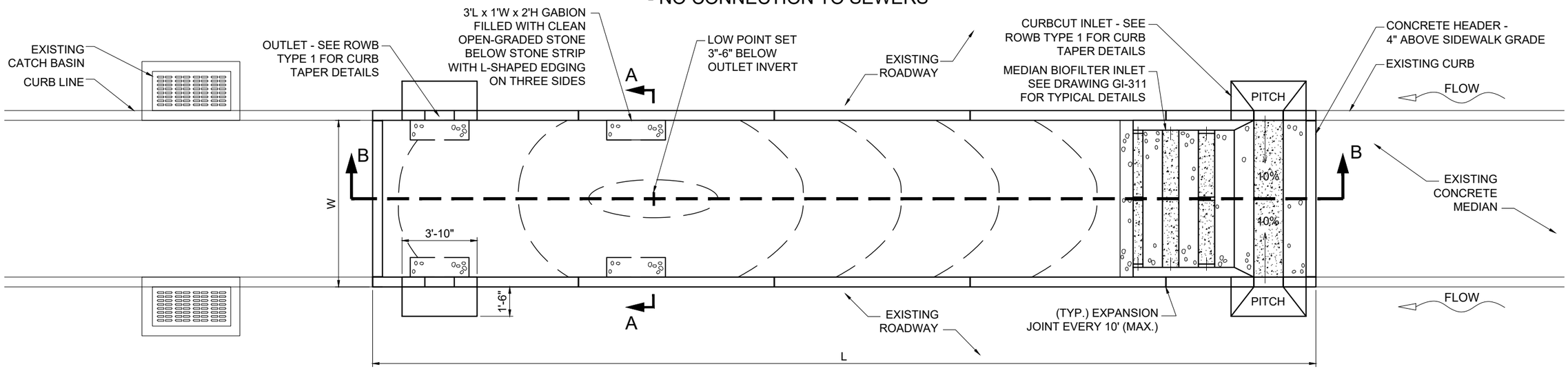
05-13-2022
DATE

GI–309

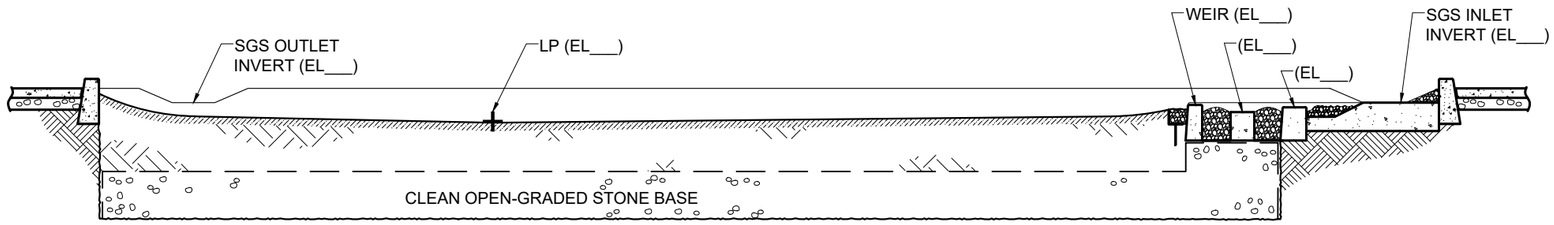
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. STORMWATER GREENSTREET (ROWSGS) TYPE 3 LAYOUT

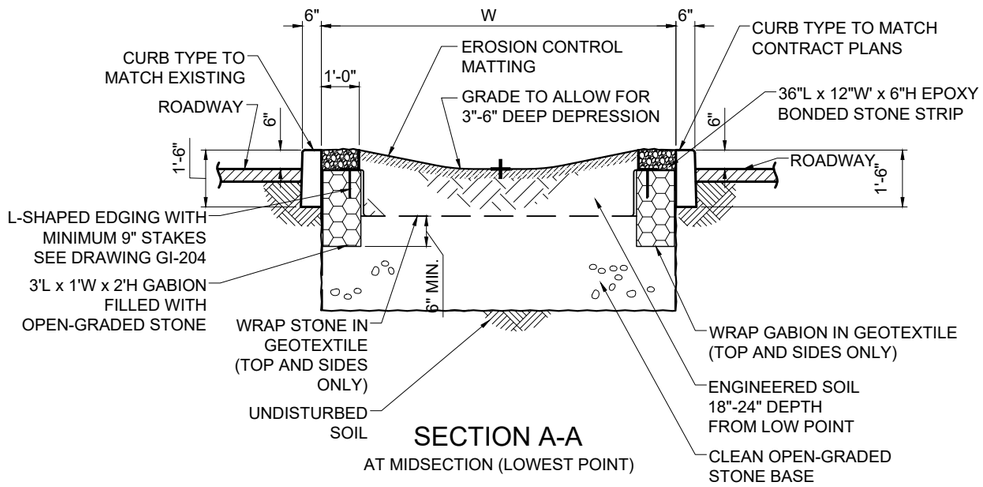
- NO CONNECTION TO SEWERS



GRADING PLAN



SECTION B-B



SECTION A-A
AT MIDSECTION (LOWEST POINT)

NOTES:

1. DEPTH OF SOIL AND STONE SHALL BE DIMENSIONED IN ACCORDANCE WITH STORMWATER GREENSTREET CALCULATIONS.
2. ENGINEERED SOIL DEPTH TO BE 18", AND 24" IF TREE IS PRESENT. STONE DEPTH VARIES. TOTAL DEPTH NOT TO EXCEED 60".
3. DEPTH AND MATERIALS MAY CHANGE DUE TO FIELD CONDITIONS UNDER THE DIRECTION OF THE ENGINEER.
4. IF DEEPER LOW POINT (LP) IS REQUIRED, DEP APPROVAL WILL BE REQUIRED.
5. PEDESTRIAN PATHWAY WHEN REQUIRED.
6. WHERE (EL___) IS INDICATED. ELEVATION TO BE SHOWN IN CONTRACT PLANS.

Roopeshjoshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

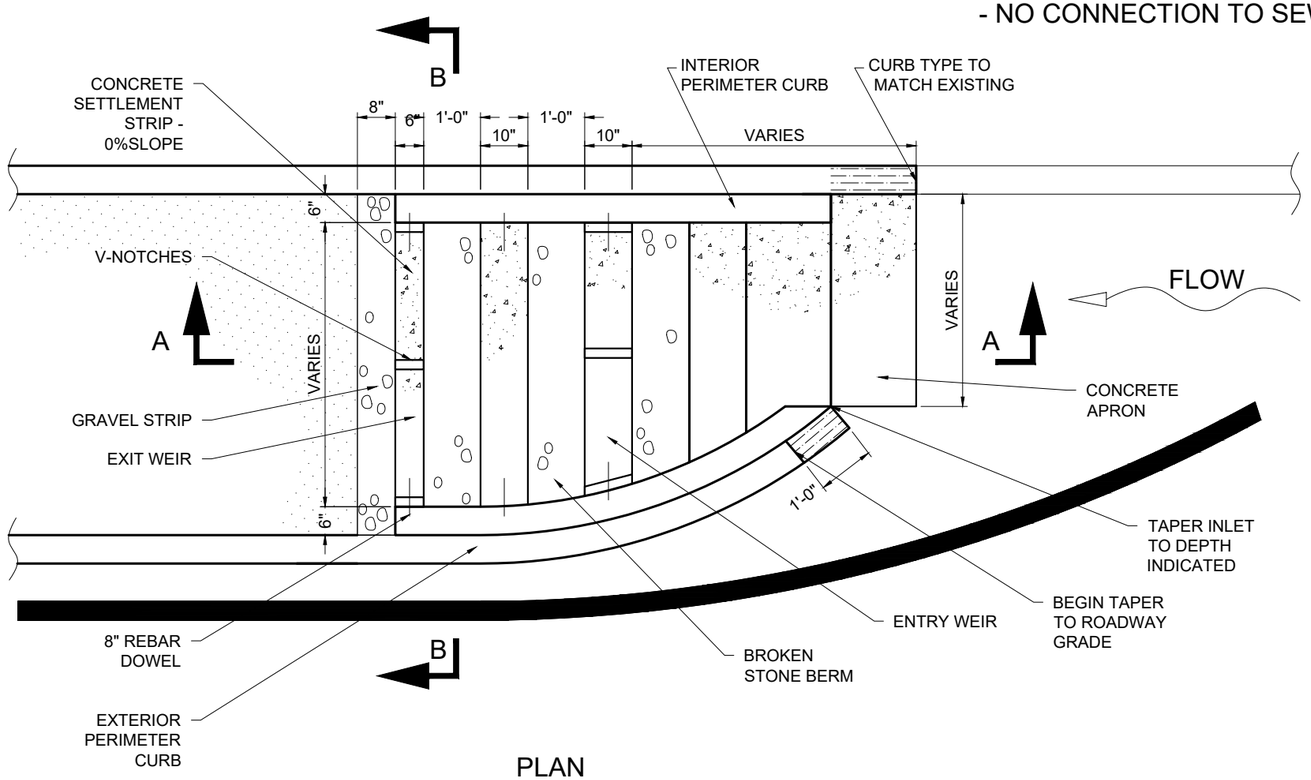
DATE

GI–310

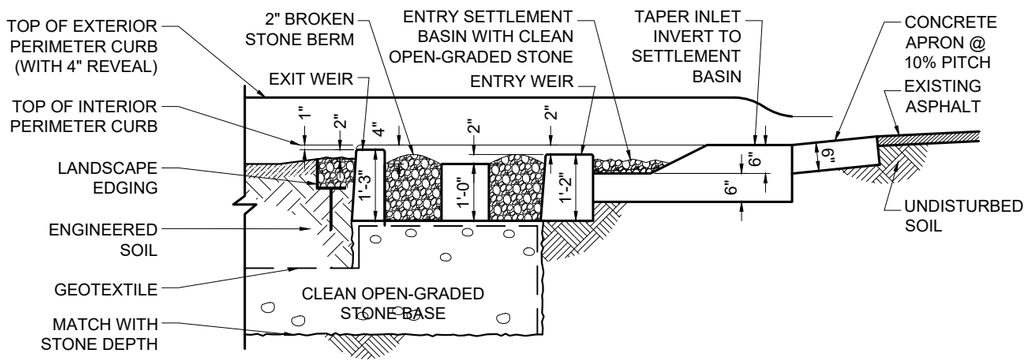
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. STORMWATER GREENSTREET (ROWSGS) BIOFILTER INLET LAYOUT

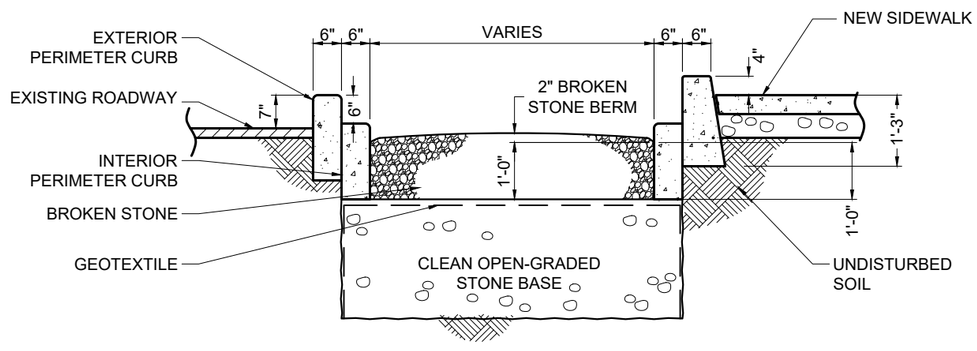
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A



SECTION B-B

NOTES:
1. NUMBER OF BROKEN STONE BERMS MAY VARY AS REQUIRED BY DEP.

Roopesh Joshi
P.E.
05-13-2022
DATE

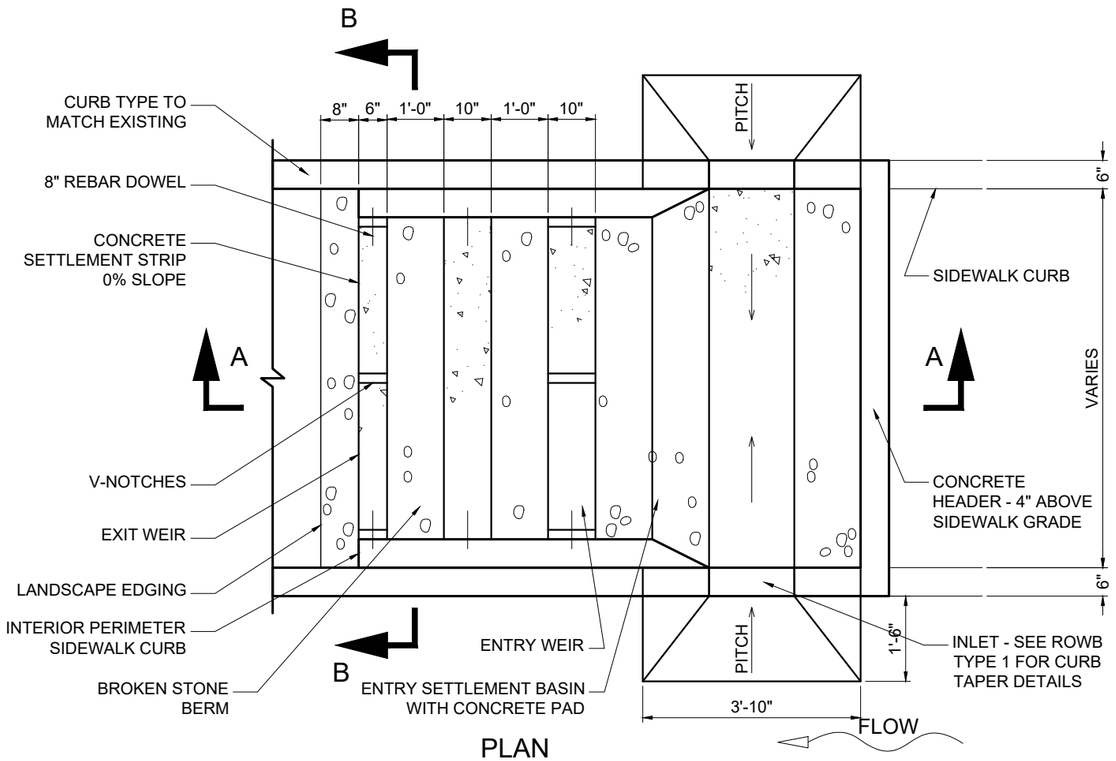
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

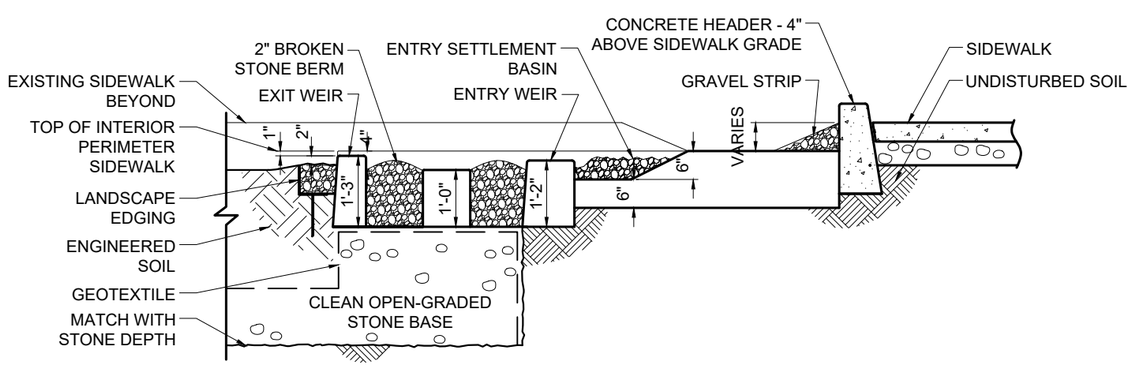
GI–311

R.O.W. STORMWATER GREENSTREET (ROWSGS) MEDIAN BIOFILTER INLET LAYOUT

- NO CONNECTION TO SEWERS

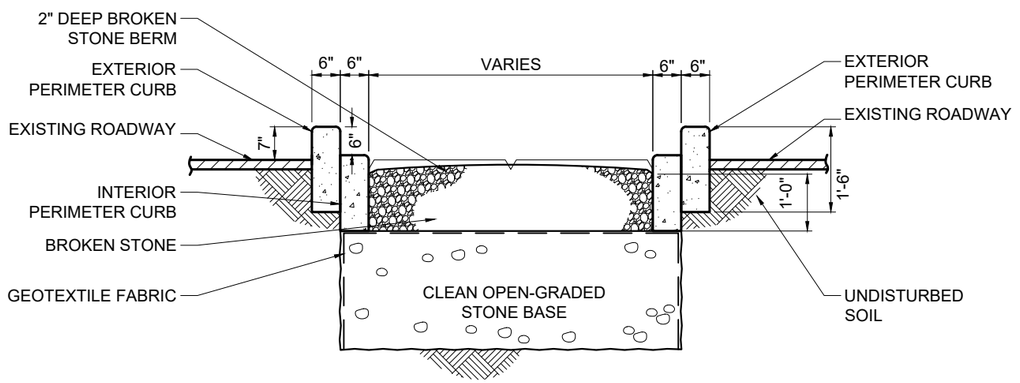


PLAN



SECTION A-A

NOTES:
1. NUMBER OF BROKEN STONE BERMS MAY VARY AS REQUIRED BY DEP.



SECTION B-B

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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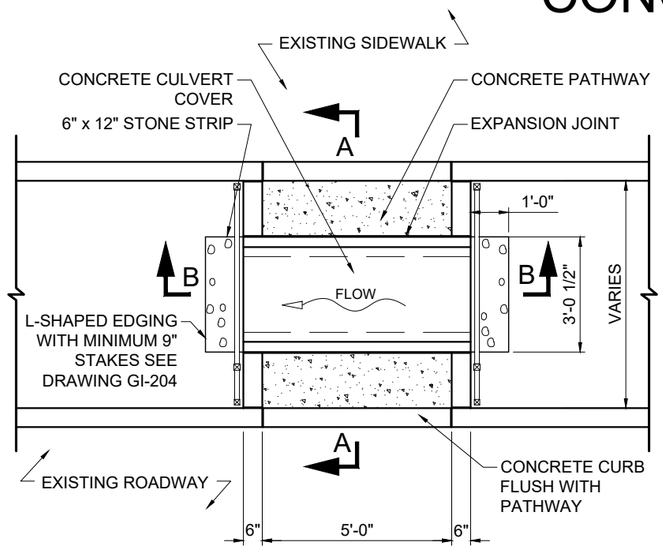
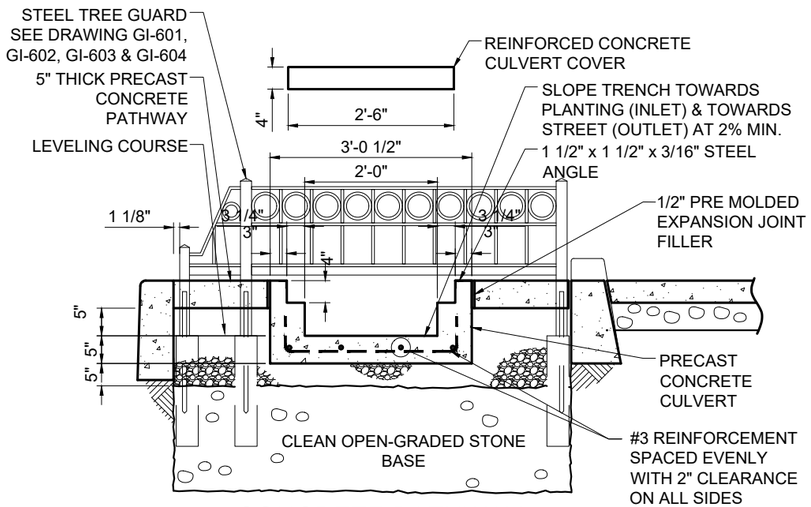
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING AND ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

R.O.W. STORMWATER GREENSTREET (ROWSGS)
CONCRETE AND GRATE PEDESTRIAN PATHWAYS

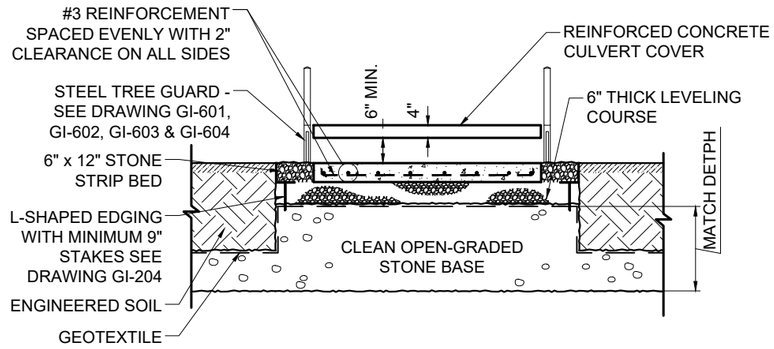
- NO CONNECTION TO SEWERS



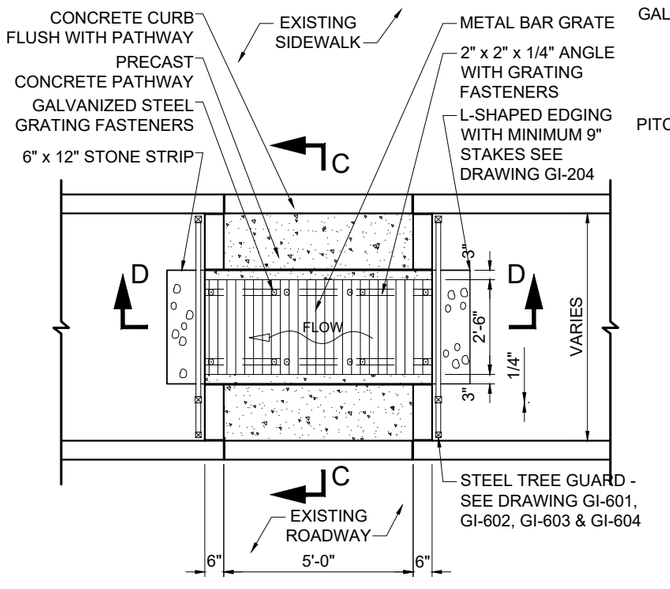
CONCRETE PATHWAY
PLAN



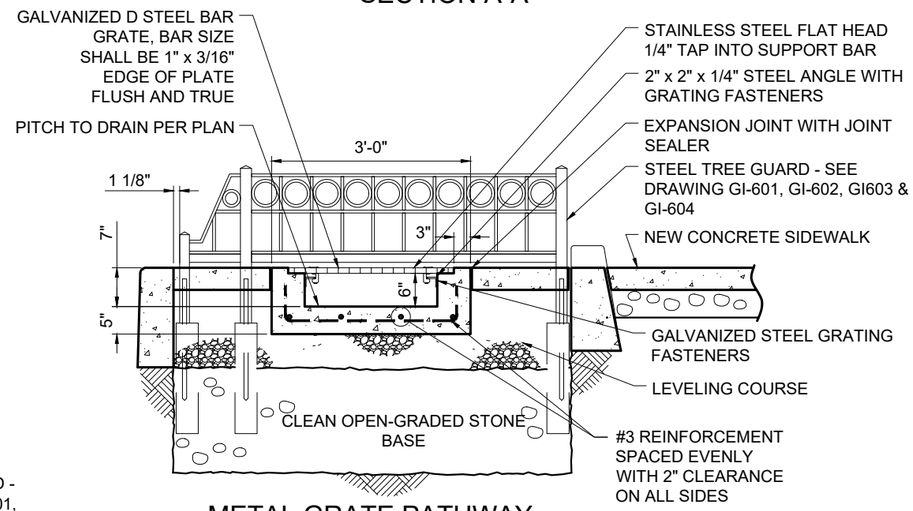
CONCRETE PATHWAY
SECTION A-A



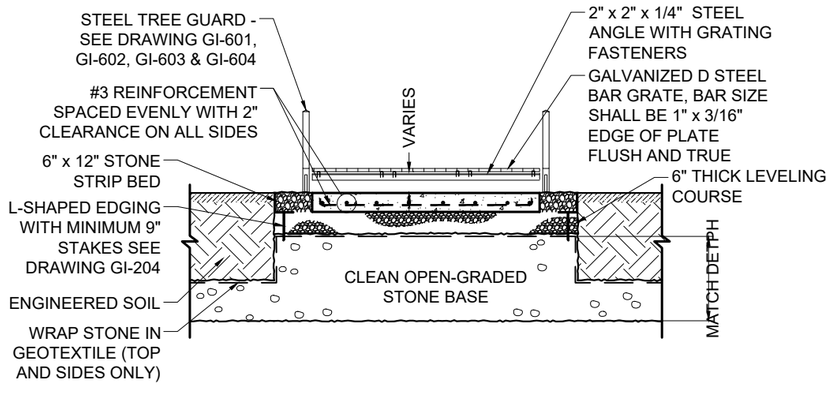
CONCRETE PATHWAY
SECTION B-B



METAL GRATE
PATHWAY PLAN



METAL GRATE PATHWAY
SECTION C-C



METAL GRATE PATHWAY
SECTION D-D

Roopeshjoshi

P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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RIGHT-OF-WAY POROUS PAVEMENT
GREEN INFRASTRUCTURE
STANDARDS

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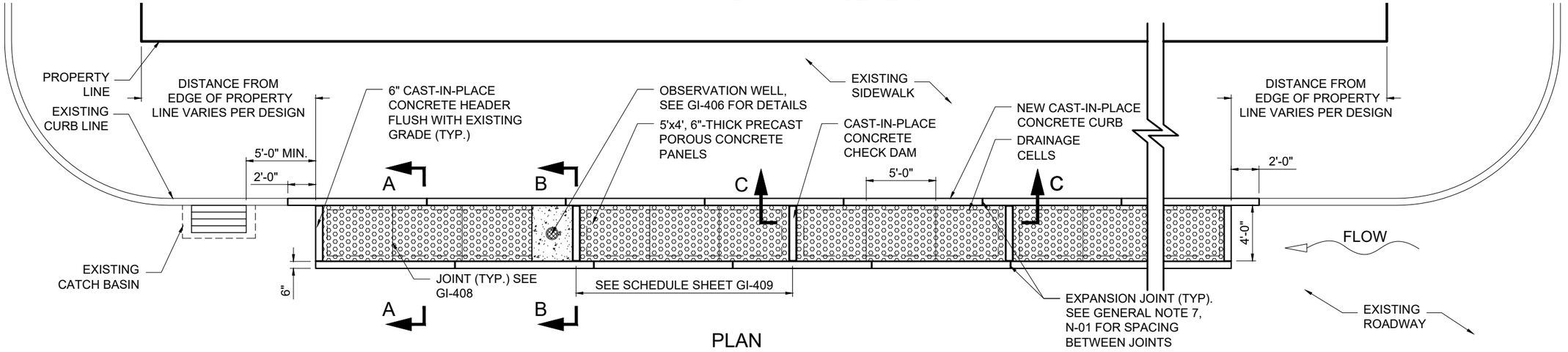
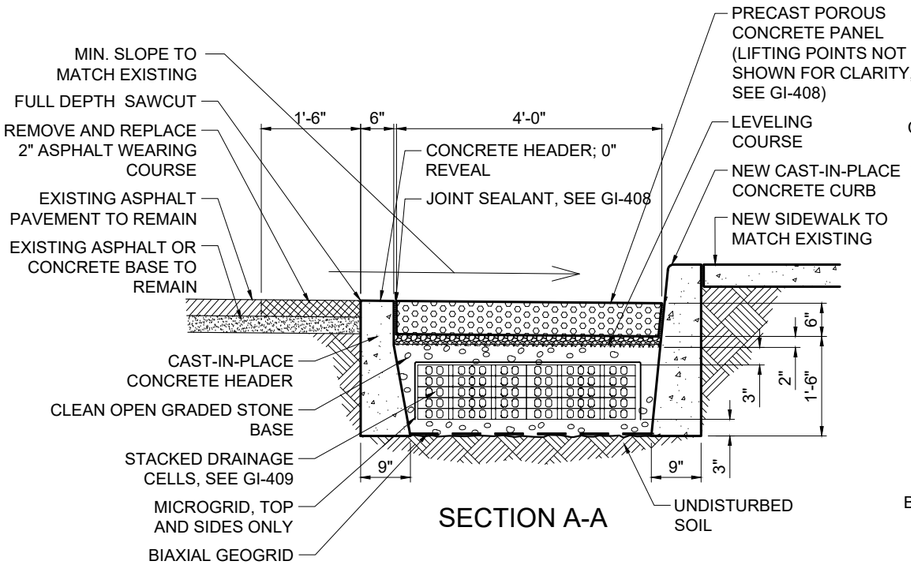
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR 4' WIDE R.O.W. PRECAST POROUS CONCRETE PANELS WITH DRAINAGE CELLS

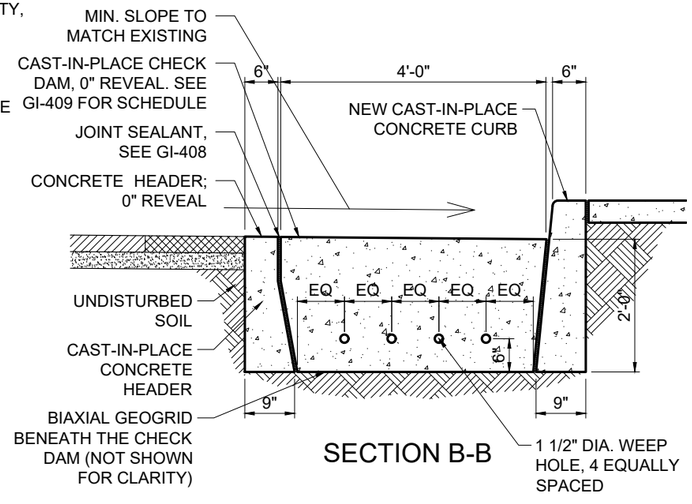
- NO CONNECTION TO SEWERS



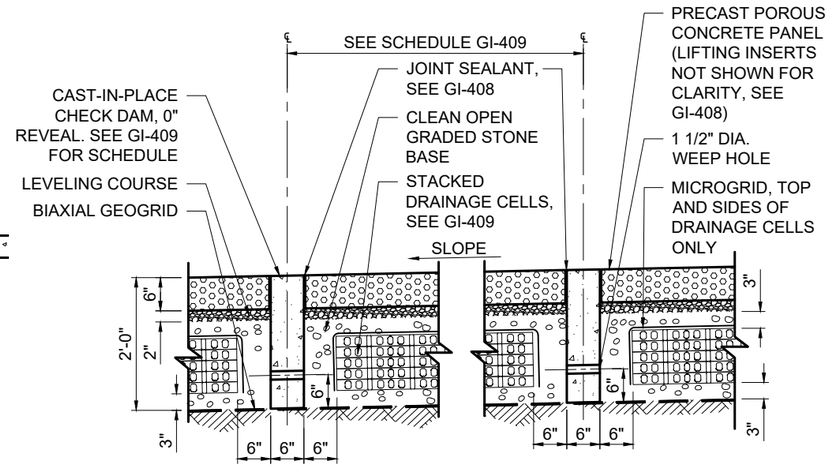
PLAN



SECTION A-A



SECTION B-B



SECTION C-C

Roopesh Joshi

P.E.

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MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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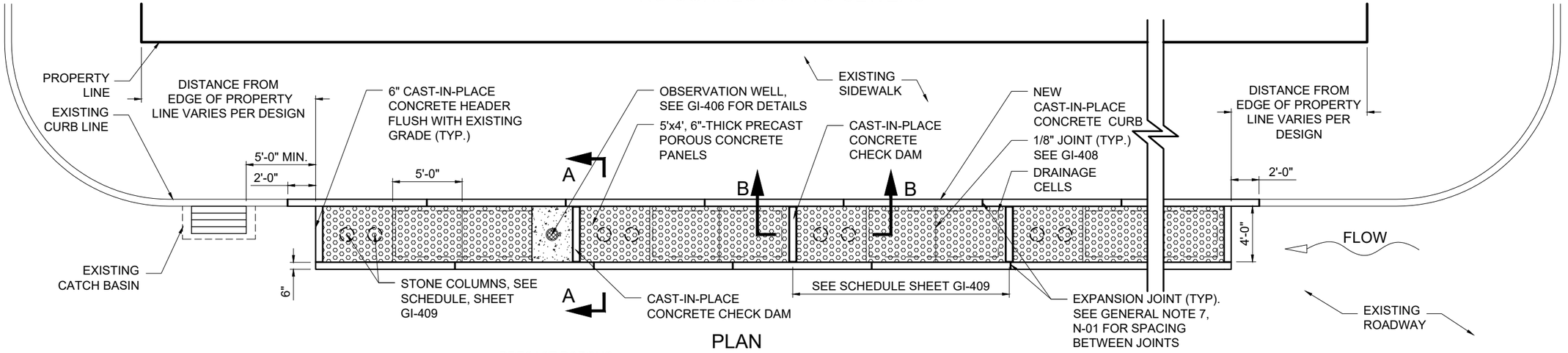
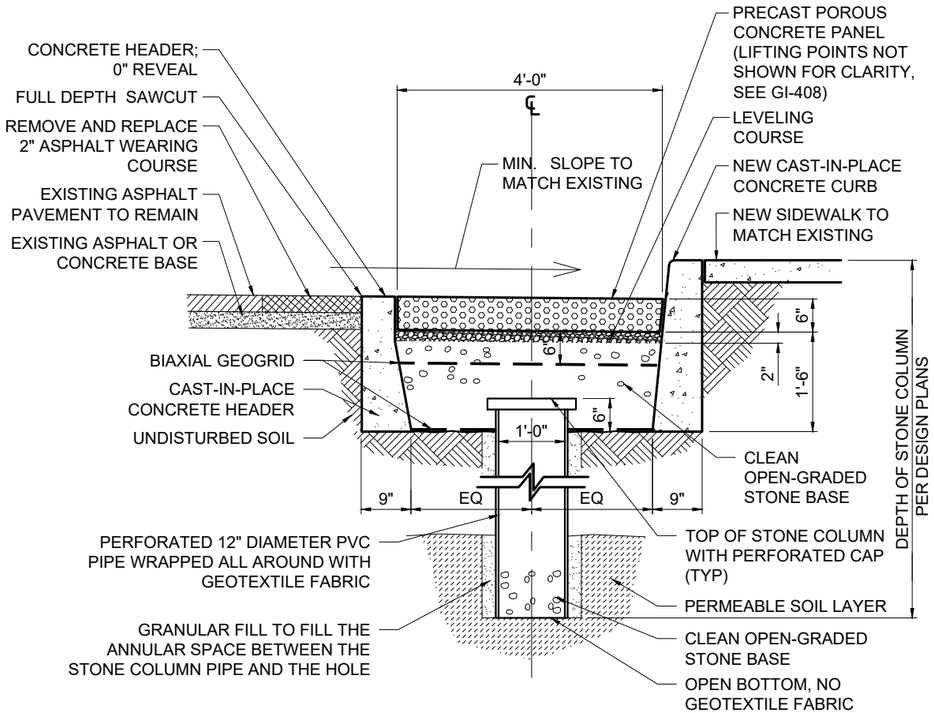
STANDARD FOR 4' WIDE R.O.W. PRECAST POROUS CONCRETE PANELS TYPE A WITH DRAINAGE CELLS AND STONE COLUMNS

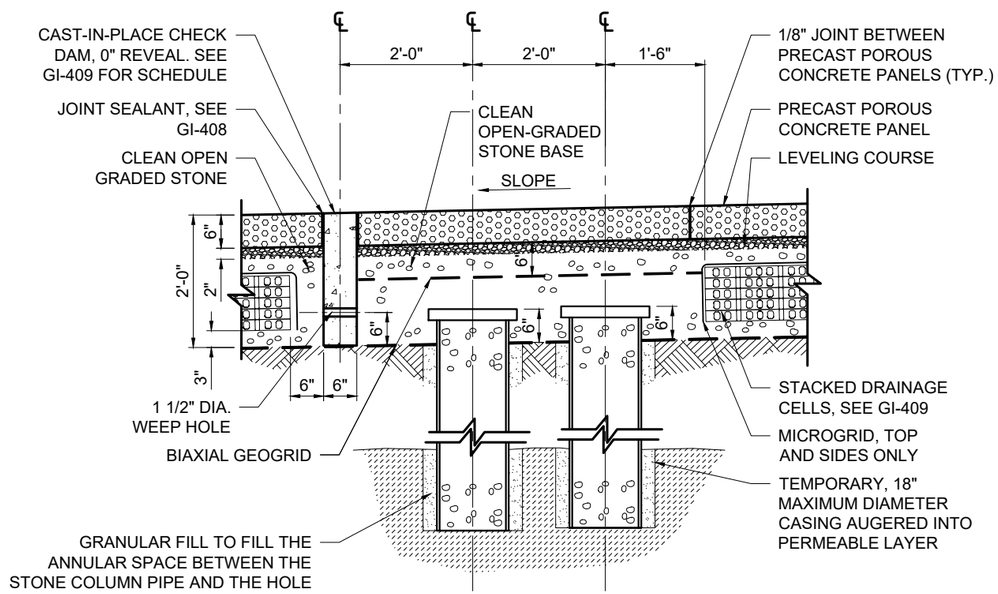
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A



SECTION B-B

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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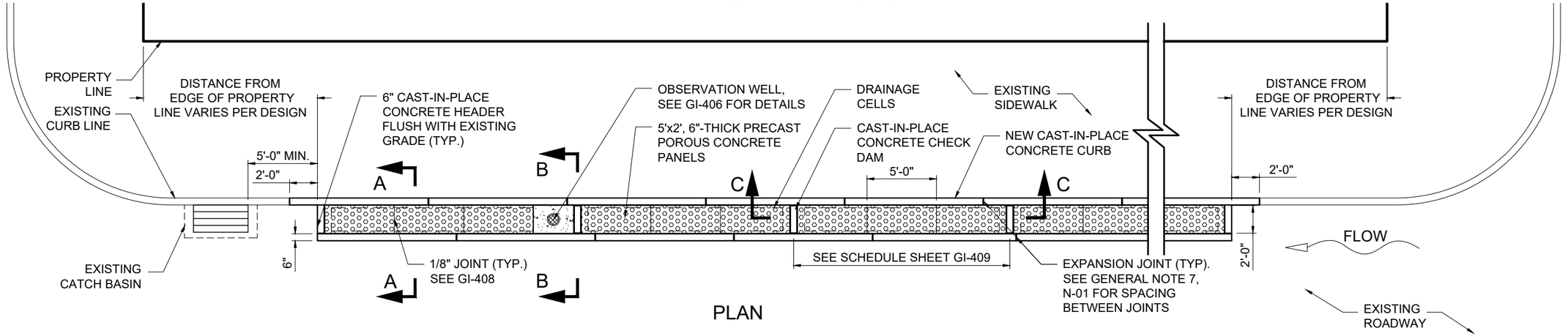
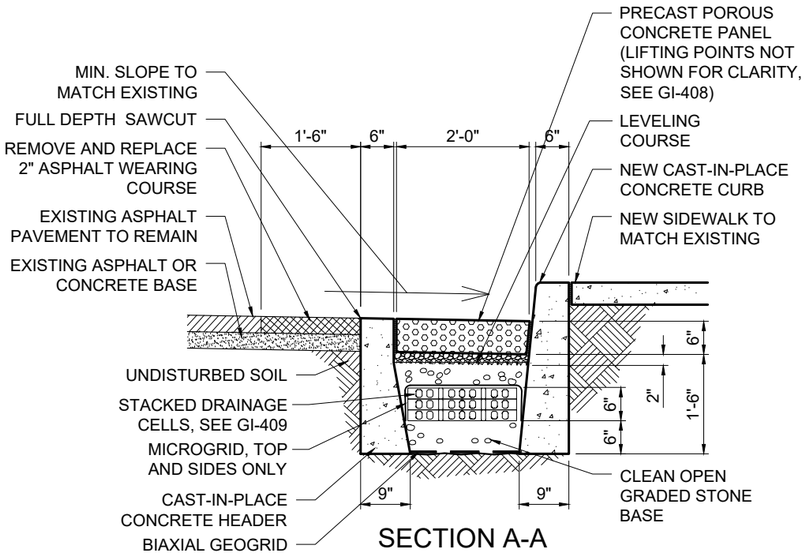
STANDARD FOR 2' WIDE R.O.W. PRECAST POROUS CONCRETE PANELS WITH DRAINAGE CELLS

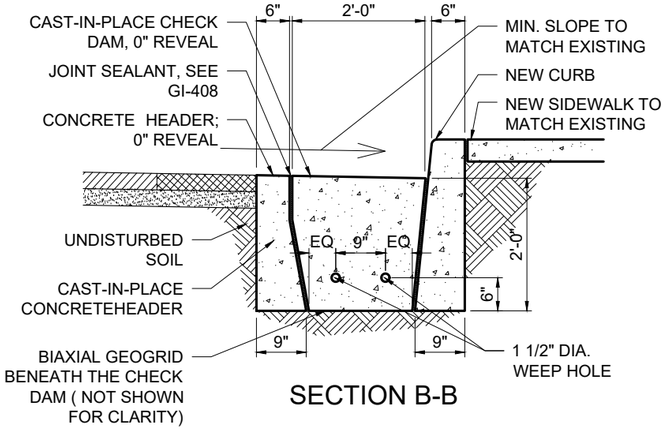
- NO CONNECTION TO SEWERS



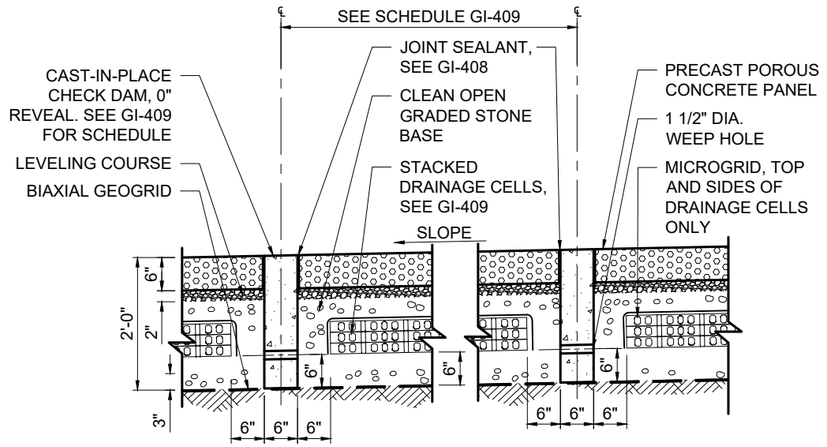
PLAN



SECTION A-A



SECTION B-B



SECTION C-C

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
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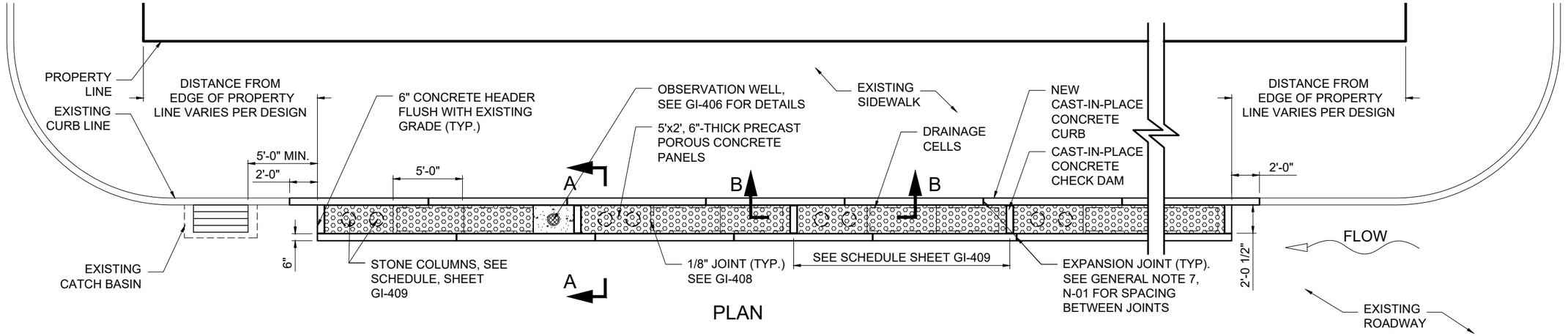
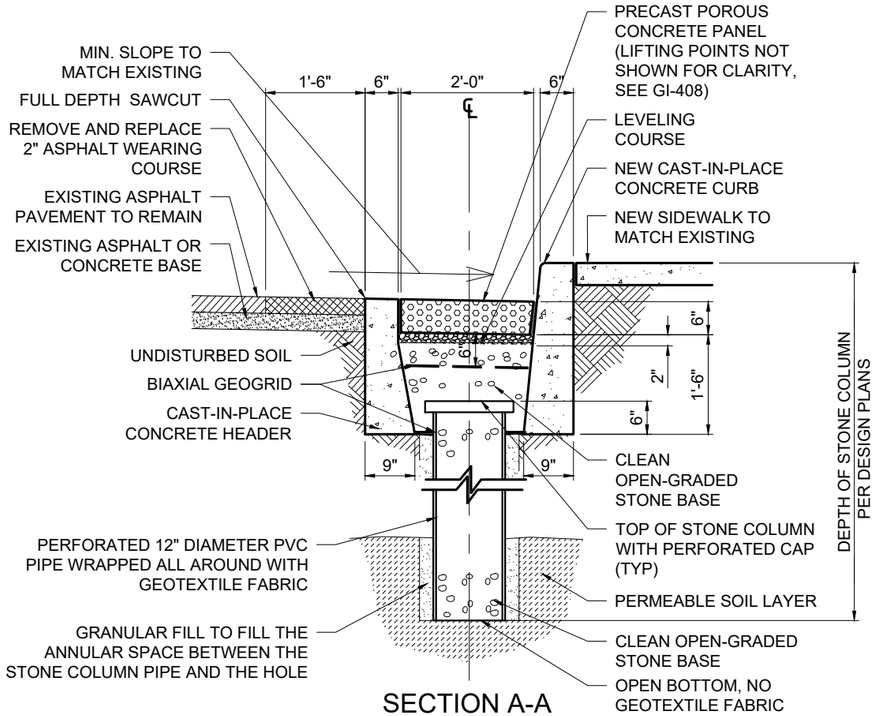
STANDARD FOR 2' WIDE R.O.W. PRECAST POROUS CONCRETE PANELS TYPE A WITH DRAINAGE CELLS AND STONE COLUMNS

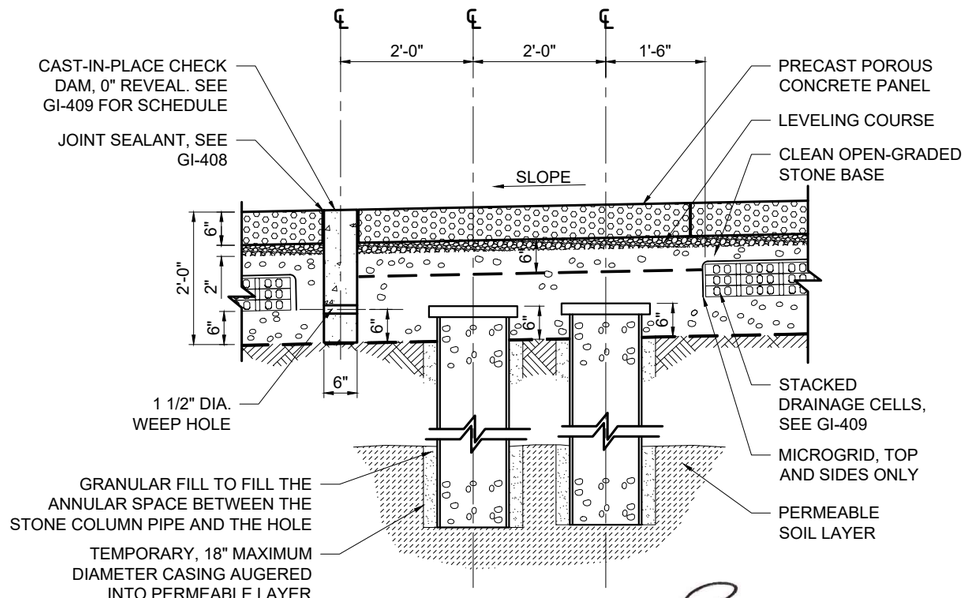
- NO CONNECTION TO SEWERS



PLAN



SECTION A-A



SECTION B-B

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P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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CITY OF NEW YORK
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R.O.W. PRECAST POROUS CONCRETE PANELS - CASTING DETAILS

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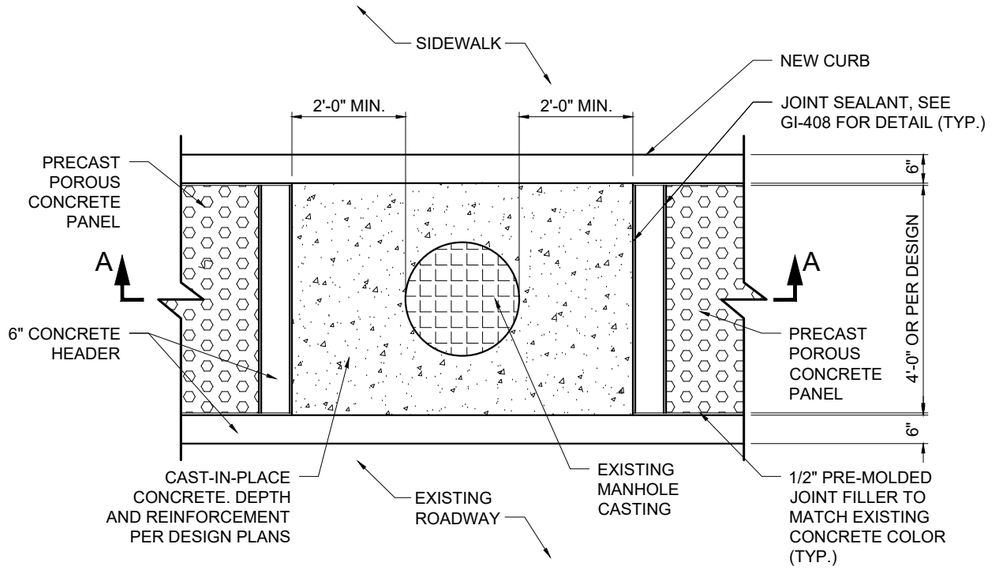
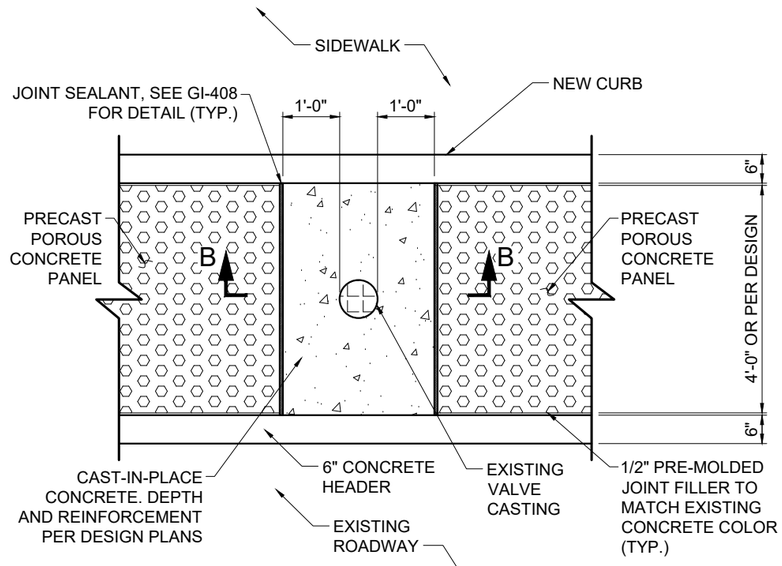
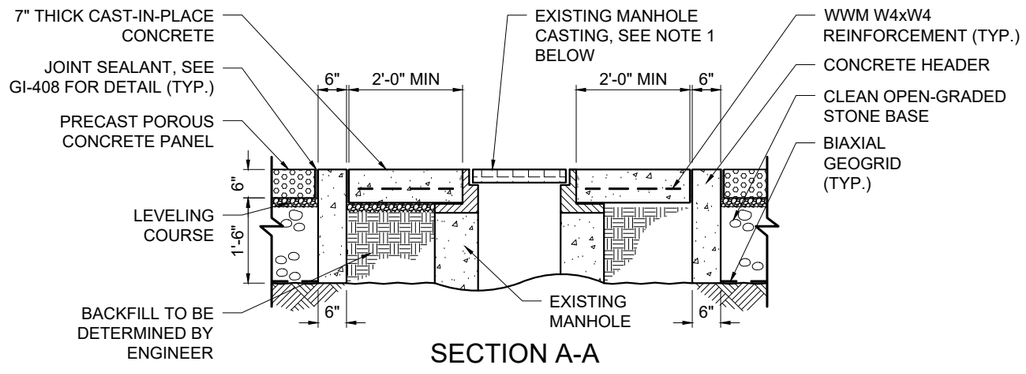


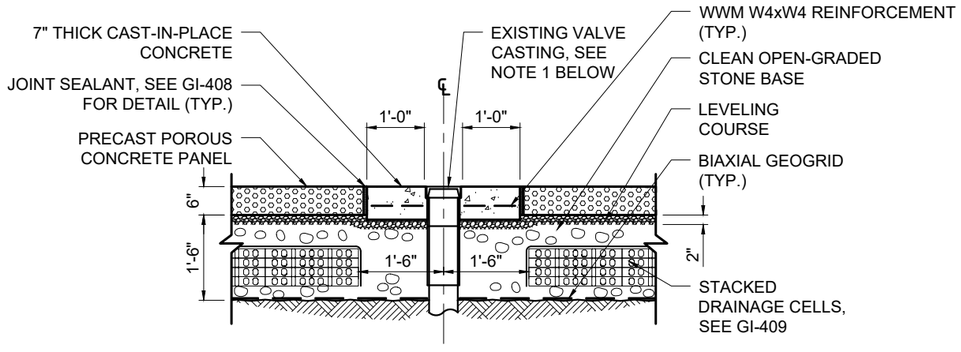
CASTING DETAIL - MANHOLE



CASTING DETAIL - VALVE



SECTION A-A



SECTION B-B

NOTES:
1. CASTINGS INCLUDE BUT NOT LIMITED TO MANHOLES, UTILITY VALVES AND UTILITY GRATES. IF CASTING INTERRUPTS HEADER, DETAILS TO BE COORDINATED WITH UTILITY STAKEHOLDER
2. IMPERMEABLE LINER REQUIRED UNDER CAST-IN-PLACE CONCRETE AT LOCATIONS WITH UTILITY VALVES

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P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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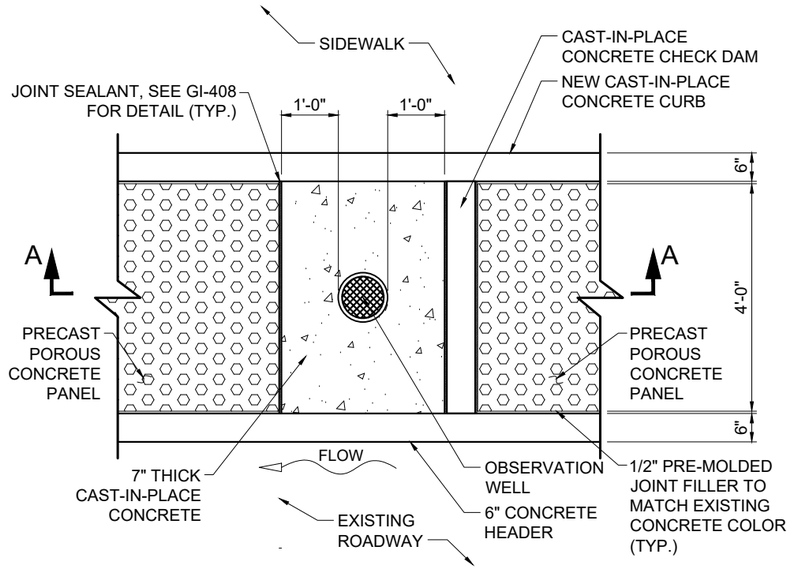
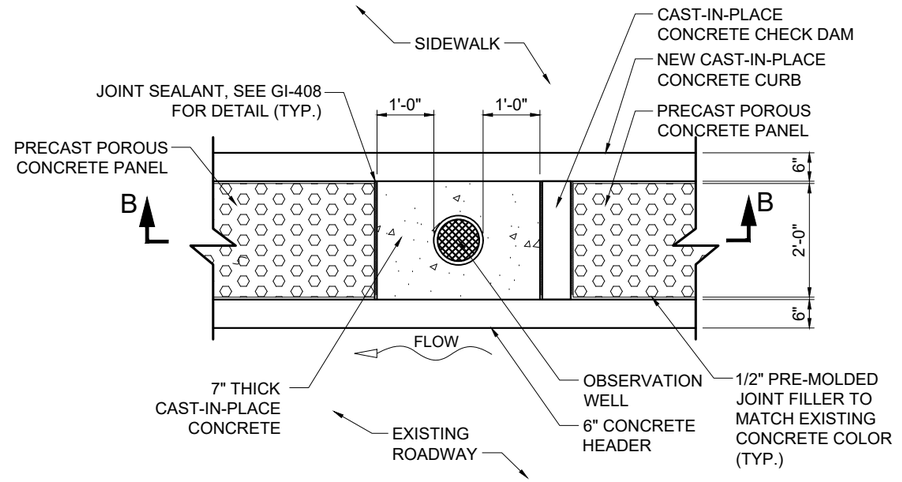
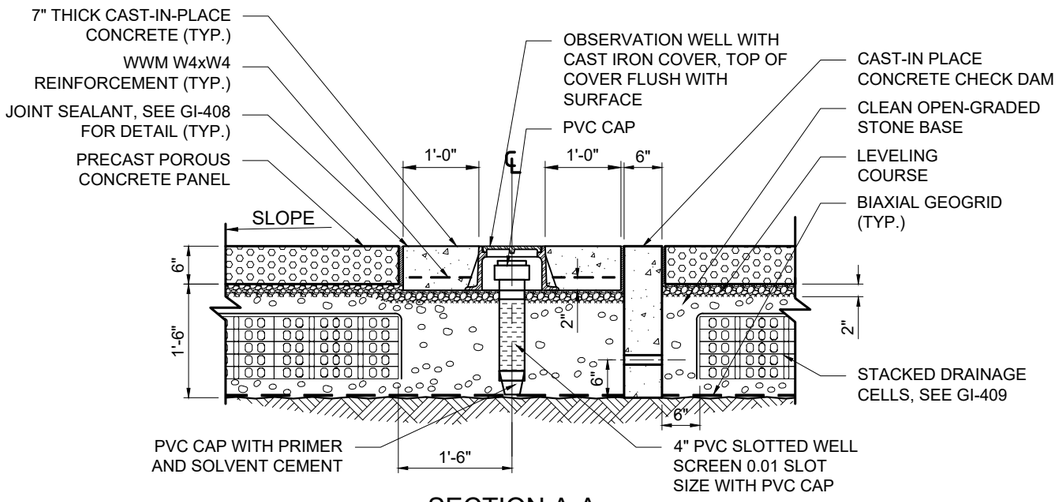
R.O.W. PRECAST POROUS CONCRETE PANELS - OBSERVATION WELL



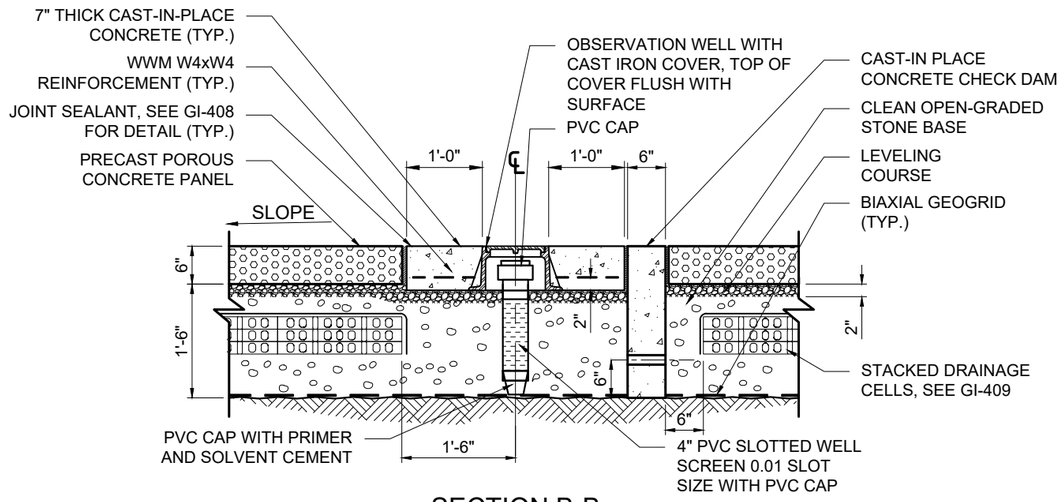
OBSERVATION WELL DETAIL



OBSERVATION WELL DETAIL



SECTION A-A



SECTION B-B

NOTES:
1. WHEN REQUIRED, THE OBSERVATION SHALL BE PLACED DOWNSTREAM FROM A CHECK DAM
2. IMPERMEABLE LINER REQUIRED UNDER CAST-IN-PLACE CONCRETE

Roopesh Joshi P.E. 04-01-2022

MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

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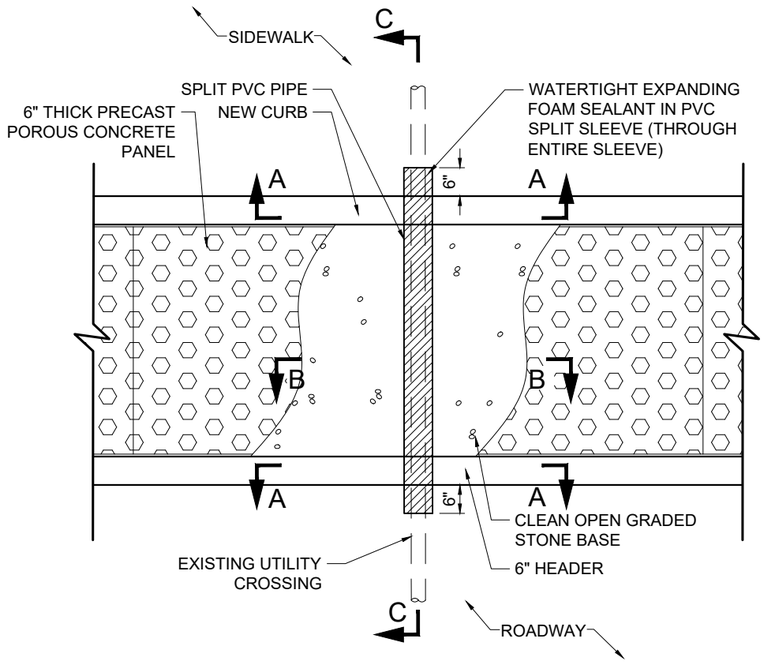
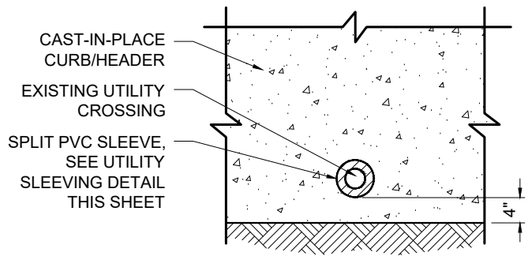
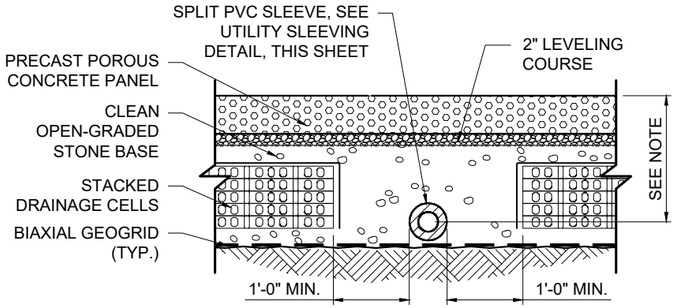
R.O.W. PRECAST POROUS CONCRETE PANELS - UTILITY CROSSING DETAILS



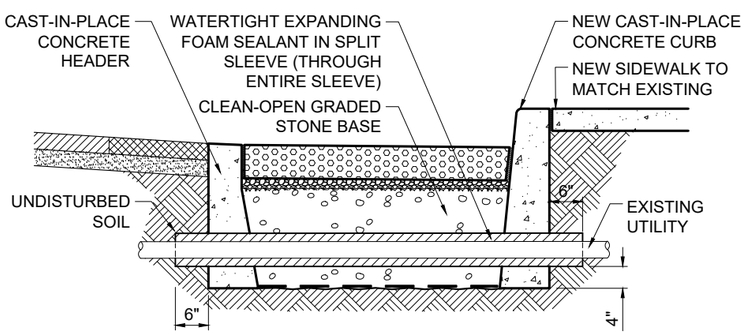
PLAN - UTILITY CROSSING



SECTION A-A



SECTION B-B



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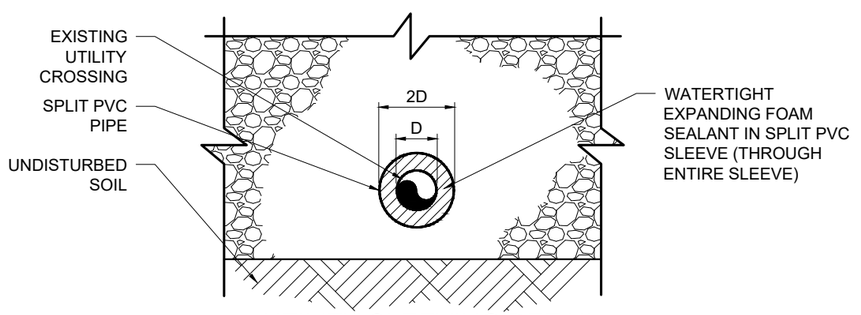

UTILITY SLEEVING DETAIL

NOTE:
SLEEVING DETAILS ONLY APPLICABLE WHEN UTILITY IS FOUND WITHIN 24" OR LESS FROM TOP OF PRECAST POROUS PANEL

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P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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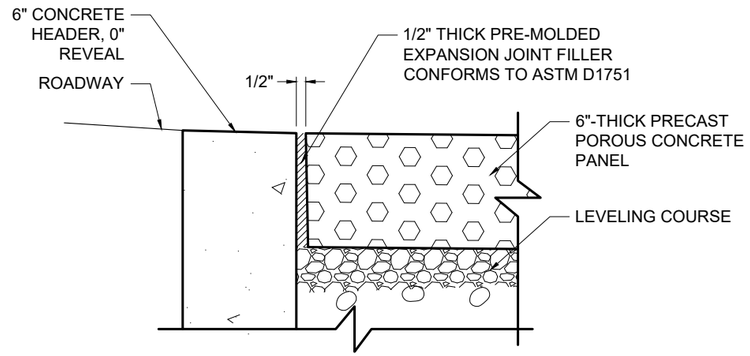
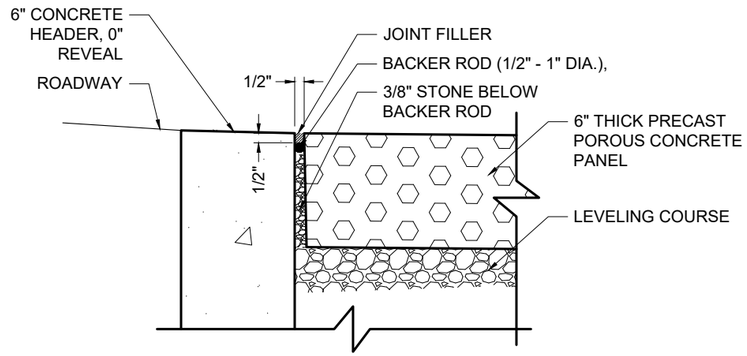
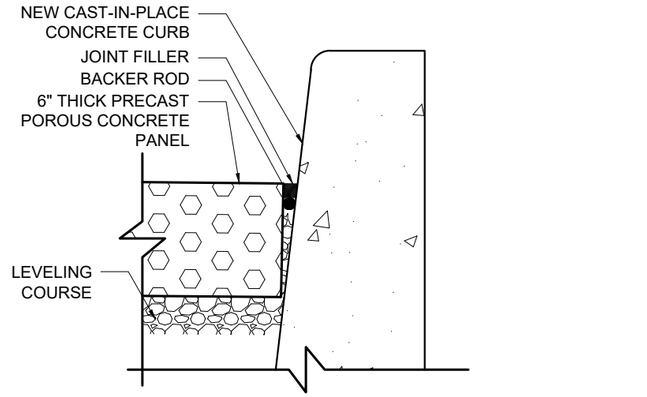
R.O.W. PRECAST POROUS CONCRETE PANELS - SECTIONS AND DETAILS



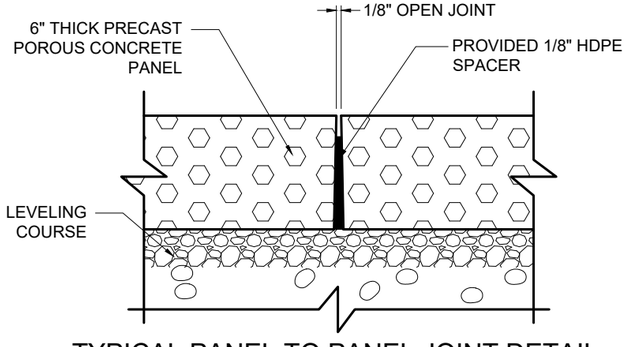
TYPICAL JOINT SEALANT DETAIL
AT CONCRETE HEADER



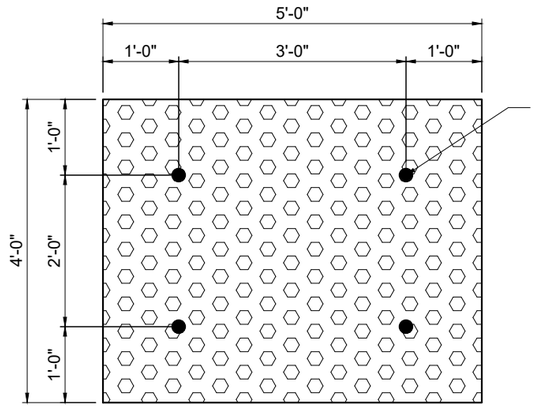
ALTERNATE JOINT SEALANT DETAIL
AT CONCRETE HEADER



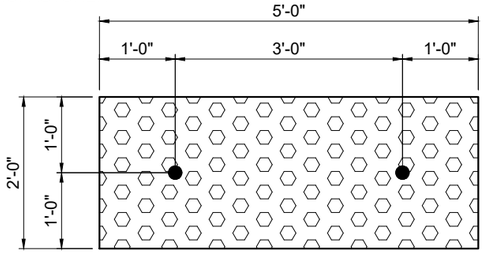
TYPICAL POROUS CONCRETE PANEL JOINT DETAIL
AT CONCRETE CURB



TYPICAL PANEL TO PANEL JOINT DETAIL



5'x4'x6" POROUS PANEL PLAN VIEW



5'x2'x6" POROUS PANEL PLAN VIEW

NOTES:
1. MAXIMUM JOINT SPACE BETWEEN POROUS CONCRETE PANELS IS 1/8".
2. CURB AND HEADER EXPANSION JOINTS AT 10 FEET MAXIMUM SPACING.
3. CONTRACTOR SHALL TRIM (VIA SAWCUT) POROUS CONCRETE PANELS NO MORE THAN 6" ON ANY END
4. NO POROUS CONCRETE PANEL SHALL BE LESS THAN 4 FT IN LENGTH WITHOUT THE ENGINEER'S APPROVAL
5. ADJUST THE LIMIT OF WORK TO AVOID END PANELS LESS THAN 4 FT IN LENGTH.
6. CONTRACTOR SHALL INSTALL 3/4" STONE IN LIFTS OF 6" (MAX.) AND SHALL MAKE TWO PASSES OF A PLATE COMPACTOR (200 LBS MIN.) OVER EACH LIFT PRIOR TO INSTALLATION OF 3/8" LEVELING COURSE.
7. AT THE DIRECTION OF THE ENGINEER, CONTRACTOR TO REPLACE ANY CURB OR DRIVEWAY APRON THAT IS DAMAGED DURING CONSTRUCTION AS PER NYCDOT STANDARDS.
8. SEAL EDGES OF ANY SAWCUTS IN THE WEARING COURSE WITH LIQUID ASPHALT CEMENT AS PER TITLE 34 NYCDOT HIGHWAY RULES (PAGE 71, SECTION 2-11(E)(12)(VIII)).
9. CASTINGS INCLUDE BUT NOT LIMITED TO MANHOLES, UTILITY VALVES AND UTILITY GRATES.

Roopesh Joshi
P.E. 04-01-2022
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
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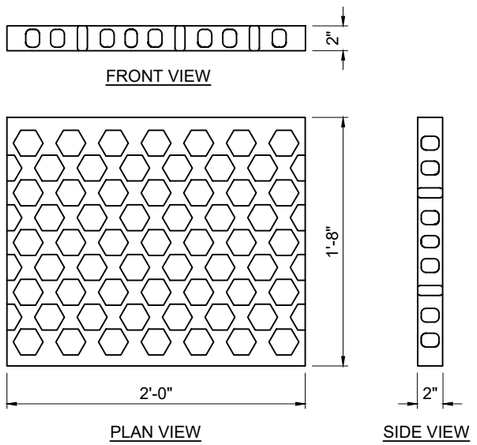
R.O.W. PRECAST POROUS CONCRETE PANELS - SECTIONS AND DETAILS

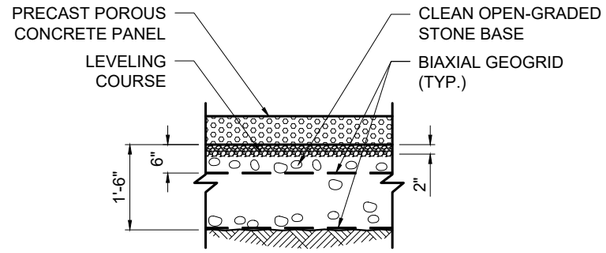


DRAINAGE CELL DIMENSIONS

ROADWAY LONGITUDINAL SLOPE, S (%)	MAXIMUM DISTANCE BETWEEN CHECK DAMS (FT)	NUMBER OF STONE COLUMNS, WHEN REQUIRED
0 ≤ S ≤ 0.5	100	3
0.5 < S ≤ 1.0	50	2
1 < S ≤ 1.5	33	2
1.5 < S ≤ 2.0	25	1
2.0 < S ≤ 2.5	20	1
2.5 < S ≤ 5.0	10	1

NOTE: CHECK DAMS TO BE SPACED EQUALLY

CHECK DAM SPACING SCHEDULE



TYPICAL SECTION
(AT LOCATIONS WITH NO DRAINAGE CELLS)

Roopesh Joshi
P.E. 04-01-2022
MANAGING DIRECTOR, DATE
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–500

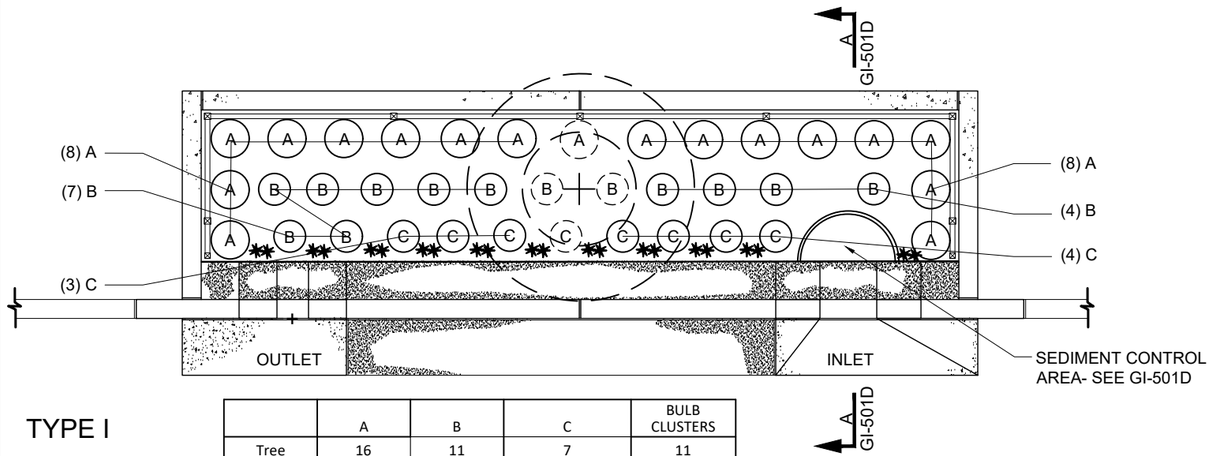
GI-500
PLANTING PLANS FOR RIGHT-OF-WAY GREEN INFRASTRUCTURE PRACTICES

GI–501A

GI–501A

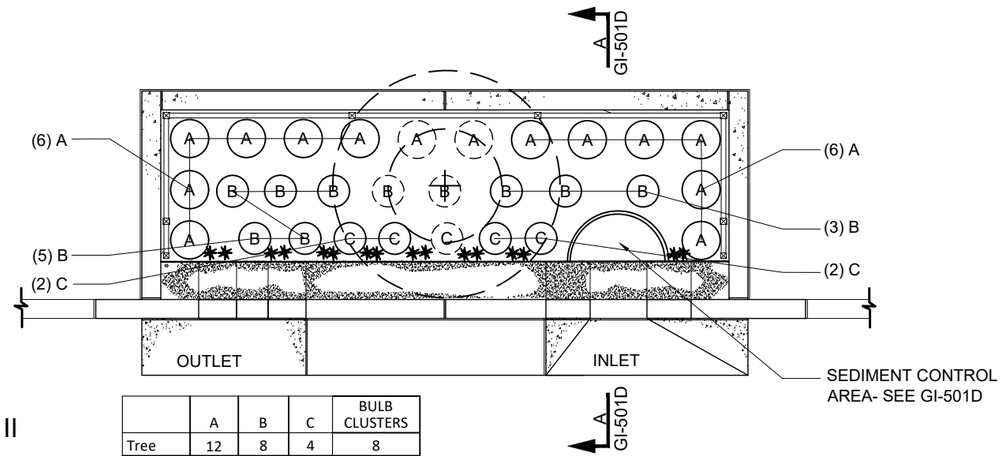
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD PLANTING LAYOUT FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS



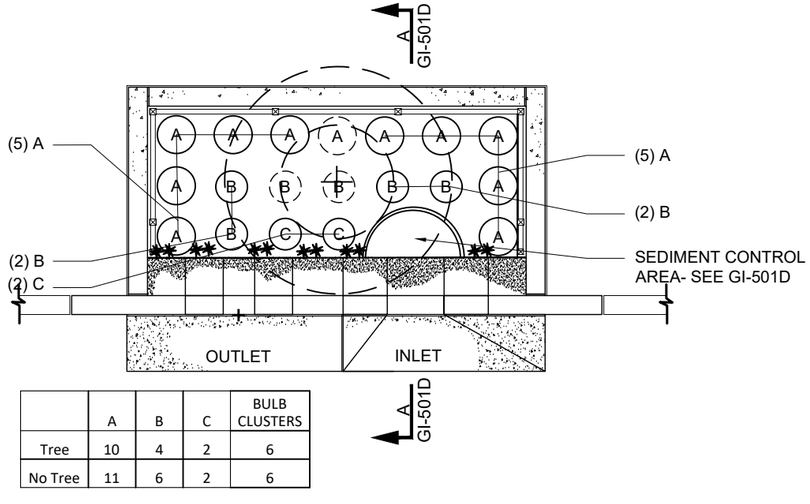
TYPE I

	A	B	C	BULB CLUSTERS
Tree	16	11	7	11
No Tree	17	13	8	11



TYPE II

	A	B	C	BULB CLUSTERS
Tree	12	8	4	8
No Tree	14	10	5	8



TYPE III

	A	B	C	BULB CLUSTERS
Tree	10	4	2	6
No Tree	11	6	2	6

NOTES FOR CONSTRUCTION:

1. PLANTING LOCATIONS ARE SPECIFIC TO EACH TYPE SHOWN.
2. PLANTING PLANS ARE DETERMINED PER THE SCHEDULE ON PLANTING PLANS FOR STANDARD ROWB PAGES, GI-501B AND GI-501C.
3. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR, AND SHOULD CONFORM TO DPR'S STREET TREE SIZE AND FORM.THE AREA DIRECTLY ABOVE THE TREE ROOTBALL (1.5' RADIUS) IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES, IN ACCORDANCE WITH DPR REQUIREMENTS.
4. ALL PLANTS SHALL BE WELL ROOTED AND VIGOROUS. BULBS FOR FALL PLANTING ONLY.
5. SHRUBS SHALL TAKE A FULL, MULTI-STEM FORM.
6. ADDITIONAL PLANTS PLANTED AS SHOWN (DASHED) ONLY IN ROWB WITH NO TREE.
7. AREA DIRECTLY IN FRONT OF INLET SHALL REMAIN UNPLANTED AND RESERVED FOR SEDIMENT CONTROL.
8. SPACE PLANTS 18" ON CENTER WHEN POSSIBLE. SPACING MAY VARY BASED ON ACTUAL SITE CONDITIONS. ADJUSTMENTS MAY BE MADE, AT ENGINEER'S APPROVAL, TO EASE CROWDING DUE TO ASSET SIZE OR OTHER OBSTRUCTION.

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–501B

STANDARD PLANTING SCHEDULE FOR WET AND DRY R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS

SUNNY (SOUTH-FACING) PLANT SCHEDULE FOR WET SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	2-GALLON	18" O.C
B	GRASS	ACORUS AMERICANA	AMERICAN SWEETFLAG	1-GALLON	
C	PERENNIAL	PENSTEMON DIGITALIS	BEARDTONGUE	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULB	AS SHOWN

SHADY (NORTH-FACING) PLANT SCHEDULE FOR WET SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	2-GALLON	18" O.C
B	PERENNIAL	EUPATORIUM RUGOSUM 'CHOCOLATE'	SNAKEROOT	1-GALLON	
C	GRASS	CAREX FLACCA 'BLUE ZINGER'	GLACOUS SEDGE	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULB	AS SHOWN

MIXED SUN AND SHADE (EAST/WEST-FACING) PLANT SCHEDULE FOR WET SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	2-GALLON	18" O.C
B	PERENNIAL	IRIS VERSICOLOR	BLUE FLAG IRIS	1-GALLON	
C	GRASS	CAREX 'ICE DANCE'	SEDGE	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULB	AS SHOWN

WET SITES

SUNNY (SOUTH-FACING) PLANT SCHEDULE FOR DRY SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA	CHOKEBERRY	2-GALLON	18" O.C
B	GRASS	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1-GALLON	
C	PERENNIAL	COREOPSIS 'REDSHIFT'	TICKSEED	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULB	AS SHOWN

SHADY (NORTH-FACING) PLANT SCHEDULE FOR DRY SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	2-GALLON	18" O.C
B	PERENNIAL	EUPATORIUM RUGOSUM 'CHOCOLATE'	SNAKEROOT	1-GALLON	
C	GRASS	LIRIOPE SPICATA	LILY TURF	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULB	AS SHOWN

MIXED SUN AND SHADE (EAST/WEST-FACING) PLANT SCHEDULE FOR DRY SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	ARONIA MELANOCARPA	BLACK CHOKEBERRY	2-GALLON	18" O.C
B	GRASS	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	1-GALLON	
C	PERENNIAL	NEPETA X FAASSENII 'WALKERS LOW'	CATMINT	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULBS	AS SHOWN

DRY SITES

NOTES TO DESIGNER:

PLANTING PLAN SELECTION CRITERIA:

1. PLANTING PLANS ARE BASED ON AMOUNT OF SUN RECEIVED IN EACH LOCATION.
2. TO DETERMINE AMOUNT OF SUN RECEIVED BY EACH LOCATION, CONSIDER DIRECTIONAL ORIENTATION (NORTH/SOUTH/EAST/WEST) AND HEIGHT OF ADJACENT BUILDINGS.
3. PLANTING PLANS ARE BASED ON HYDROLOGIC REGIME (WET/ DRY OR AVERAGE).
4. TO DETERMINE WET/DRY/AVERAGE, CONSIDER SIZE OF TRIBUTARY DRAINAGE AREA AND NUMBER OF ADJACENT BIOSWALES. ESTIMATE INDIVIDUAL TRIBUTARY AREA PER BIOSWALE BY CONSULTING THE INTERIM GEOTECHNICAL REPORT SUMMARY TABLE FOR AVAILABLE UPSTREAM DISTANCE AND MINIMUM REQUIRED UPSTREAM DISTANCE.
5. ADAPTIVE DIRECTION, INCLUDING PALETTE CHANGES, MAY BE GIVEN TO CONTRACTORS FOR PLANT REPLACEMENT WITH AGENCY APPROVAL.

Roopesh Joshi P.E. 05-13-2022

MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–501C

STANDARD PLANTING SCHEDULE FOR R.O.W. COMBINATION WET/DRY BIOSWALES AND R.O.W. RAIN GARDENS

SUNNY (SOUTH-FACING) PLANT SCHEDULE FOR AVERAGE SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA	CHOKEBERRY	2-GALLON	18" O.C
B	PERENNIAL	AESCLEPIAS INCARNATA	SWAMP MILKWEED	1-GALLON	
C	GRASS	PANICUM VIRGATUM 'SHENANDOAH'	SWITCH GRASS	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULBS	AS SHOWN

SHADY (NORTH-FACING) PLANT SCHEDULE FOR AVERAGE SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	ILEX GLABRA 'SHAMROCK'	SHAMROCK INKBERRY	2-GALLON	18" O.C
B	PERENNIAL	PYCNAMTHEMUM MUTICUM	SHORT TOOTHED MOUNTAIN MINT	1-GALLON	
C	PERENNIAL	EUPATORIUM RUGOSUM 'CHOCOLATE'	SNAKEROOT	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULBS	AS SHOWN

MIXED SUN AND SHADE (EAST/WEST-FACING) PLANT SCHEDULE FOR AVERAGE SITES

LOCATION	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
A	SHRUB	PHYSOCARPUS OPULIFOILIUS 'LITTLE DEVIL'	LITTLE DEVIL NINEBARK	2-GALLON	18" O.C
B	PERENNIAL	LIATRIS SPICATA	GAYFEATHER	1-GALLON	
C	GRASS	CAREX FLACCA ‘BLUE ZINGER’	GLACOUS SEDGE	1-GALLON	
✷	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	BULBS	AS SHOWN

COMBINATION WET/DRY SITES

NOTES TO DESIGNER:

PLANTING PLAN SELECTION CRITERIA:

1. PLANTING PLANS ARE BASED ON AMOUNT OF SUN RECEIVED IN EACH LOCATION.
2. TO DETERMINE AMOUNT OF SUN RECEIVED BY EACH LOCATION, CONSIDER DIRECTIONAL ORIENTATION (NORTH/SOUTH/EAST/WEST) AND HEIGHT OF ADJACENT BUILDINGS.
3. INDUSTRIAL VS. RESIDENTIAL PLANTING PLANS ARE BASED ON HIGH VS. LOW PEDESTRIAN TRAFFIC AREAS.
4. ADAPTIVE DIRECTION, INCLUDING PALETTE CHANGES, MAY BE GIVEN TO CONTRACTORS FOR PLANT REPLACEMENT WITH AGENCY APPROVAL.

Roopesh Joshi

P.E. 05-13-2022

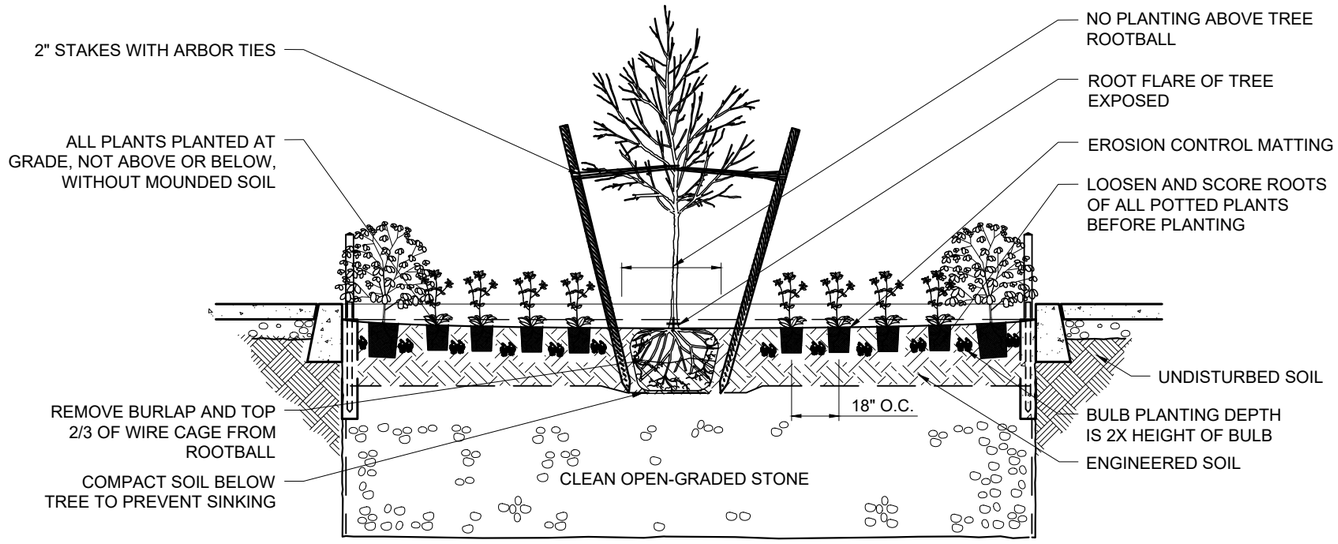
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

GI–501D

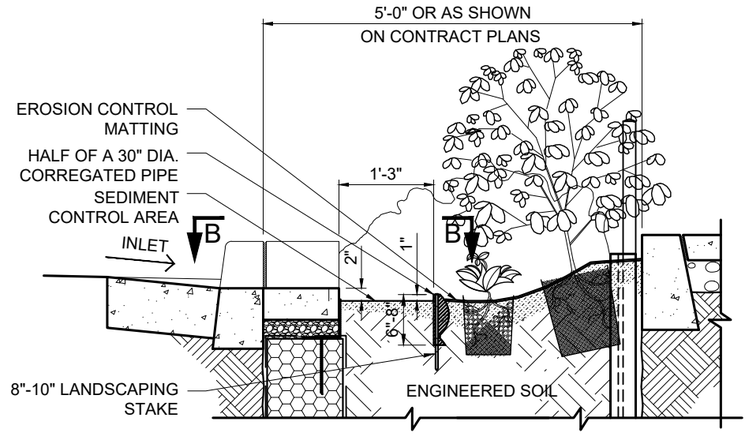
GI–501D

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

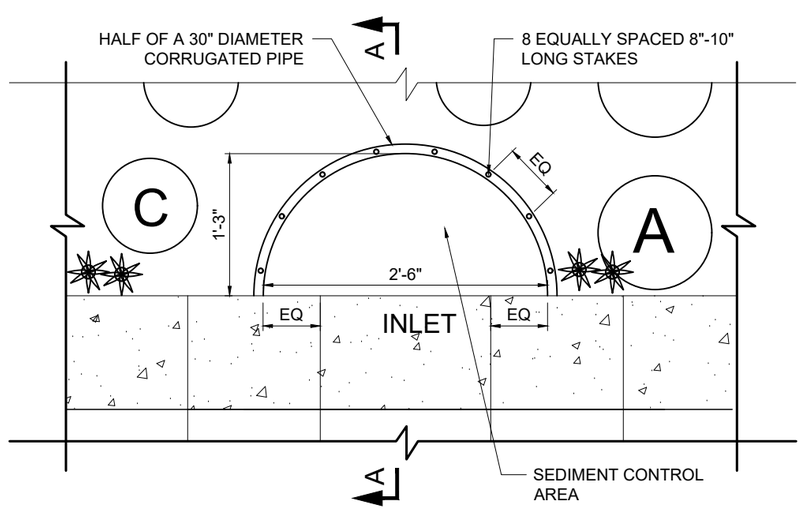
STANDARD PLANTING LAYOUT FOR R.O.W. BIOSWALES AND R.O.W. RAIN GARDENS



PLANTING PLAN DETAIL



SECTION A-A
AT INLET WITH SEDIMENT CONTROL DEVICE



PART PLAN B-B
AT INLET WITH SEDIMENT CONTROL DEVICE

NOTES TO DESIGNER:

PLANTING PLAN SELECTION CRITERIA:

1. PLANTING PLANS ARE BASED ON AMOUNT OF SUN RECEIVED IN EACH LOCATION.
2. TO DETERMINE AMOUNT OF SUN RECEIVED BY EACH LOCATION, CONSIDER DIRECTIONAL ORIENTATION (NORTH/SOUTH/EAST/WEST) AND HEIGHT OF ADJACENT BUILDINGS.
3. INDUSTRIAL VS. RESIDENTIAL PLANTING PLANS ARE BASED ON HIGH VS. LOW PEDESTRIAN TRAFFIC AREAS.
4. ADAPTIVE DIRECTION, INCLUDING PALETTE CHANGES, MAY BE GIVEN TO CONTRACTORS FOR PLANT REPLACEMENT WITH AGENCY APPROVAL.

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

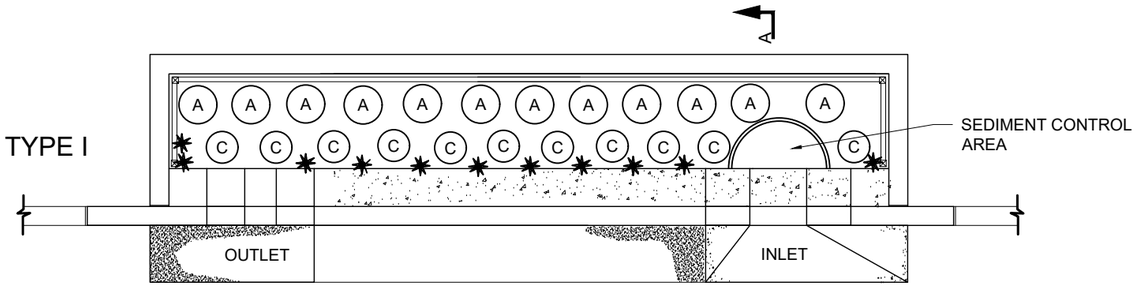
DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

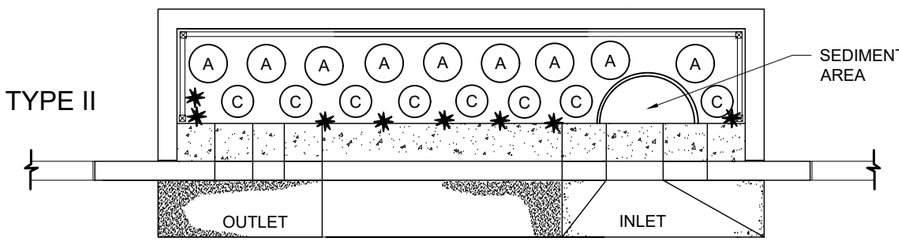
STANDARD PLANTING SCHEDULE AND LAYOUT FOR R.O.W. GREENSTRIPS

GI–502

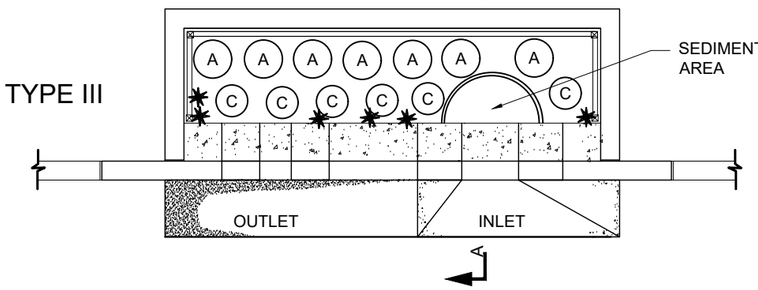
TYPE I



TYPE II



TYPE III



NOTES FOR CONSTRUCTION:

1. PLANTING LOCATIONS ARE SPECIFIC TO EACH PLANT TYPE SHOWN.
2. PLANTING PLANS ARE DETERMINED PER THE SCHEDULE ON PLANTING PLANS FOR STANDARD ROWB PAGES, GI-501B AND GI-501C.
3. ALL PLANTS SHALL BE WELL ROOTED AND VIGOROUS. SHRUBS SHALL HAVE A MULTI-STEM FORM.
4. BULBS ARE ONLY TO BE PLANTED IN FALL.
5. AREA DIRECTLY IN FRONT OF INLET SHALL REMAIN UNPLANTED AND RESERVED FOR SEDIMENT CONTROL.

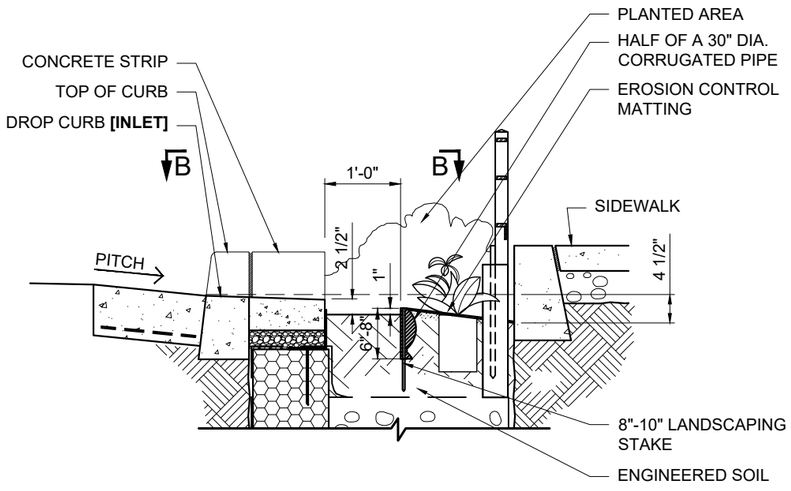
GREENSTRIP PLANT QUANTITIES FOR ALL TYPES

LOCATION	TYPE I	TYPE II	TYPE III	SIZE	SPACING
A	12	9	7	2-GALLON	18" O.C
C	11	8	6	1- GALLON	
✱	11	8	6	BULB	CLUSTER 2 BULBS AT ✱ AS SHOWN

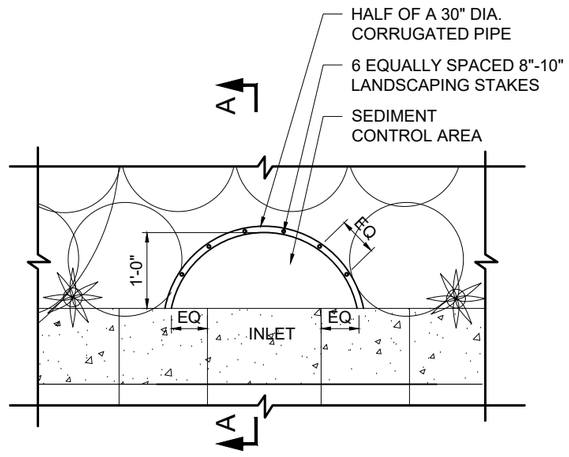
NOTES TO DESIGNER:

PLANTING PLAN SELECTION CRITERIA:

1. PLANTING PLANS ARE BASED ON AMOUNT OF SUN RECEIVED IN EACH LOCATION.
2. TO DETERMINE AMOUNT OF SUN RECEIVED BY EACH LOCATION, CONSIDER DIRECTIONAL ORIENTATION (NORTH/SOUTH/EAST/WEST) AND HEIGHT OF ADJACENT BUILDINGS.
3. PLANTING PLANS ARE BASED ON HYDROLOGIC REGIME (WET/ DRY OR AVERAGE).
4. TO DETERMINE WET/DRY/AVERAGE, CONSIDER SIZE OF TRIBUTARY DRAINAGE AREA AND NUMBER OF ADJACENT BIOSWALES. ESTIMATE INDIVIDUAL TRIBUTARY AREA PER BIOSWALE BY CONSULTING THE INTERIM GEOTECHNICAL REPORT SUMMARY TABLE FOR AVAILABLE UPSTREAM DISTANCE AND MINIMUM REQUIRED UPSTREAM DISTANCE.
5. ADAPTIVE DIRECTION, INCLUDING PALETTE CHANGES, MAY BE GIVEN TO CONTRACTORS FOR PLANT REPLACEMENT WITH AGENCY APPROVAL.



SECTION A-A
AT GREENSTRIP INLET WITH SEDIMENT CONTROL DEVICE



PART PLAN B-B
AT INLET WITH SEDIMENT CONTROL DEVICE

Roopesh Joshi
P.E. 05-13-2022
MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
DATE

GI–503A

GI–503A

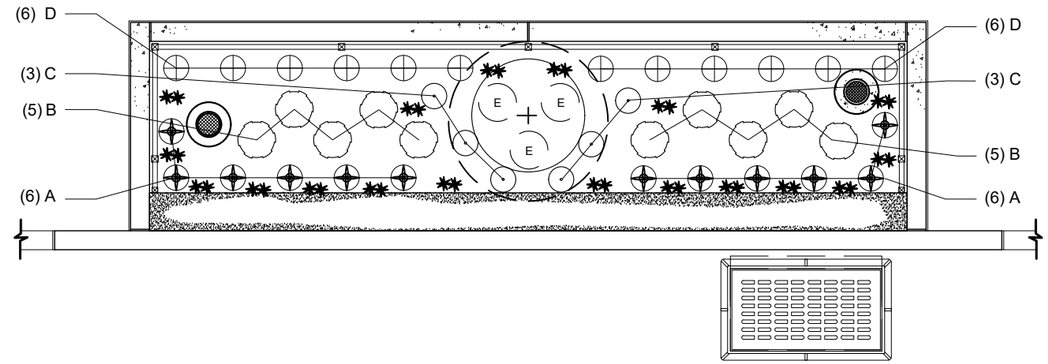
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD PLANTING SCHEDULE & LAYOUT FOR TYPE D R.O.W.

INDUSTRIAL SUN BIOSWALES

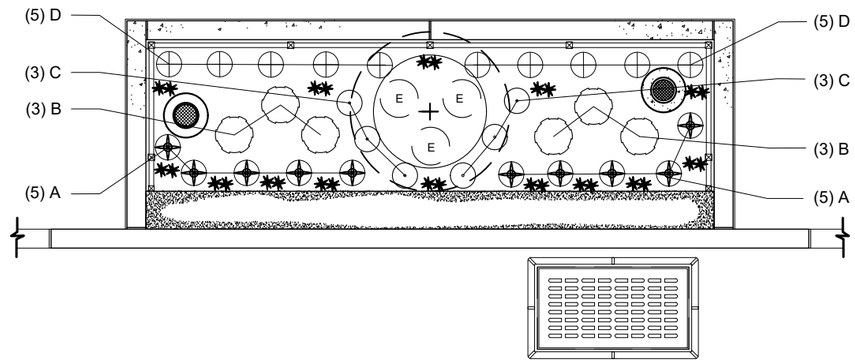
INDUSTRIAL SUN- Type I						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
12	A	PERENNIAL	ECHINACEA 'CHEYENNE SPIRIT'	CONEFLOWER	1-GALLON	18"O.C.
10	B	SHRUB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	CHOKEBERRY	2-GALLON	
6	C	GRASSES	SORGASTRUM NUTANS	INDIAN GRASS	1-GALLON	
12	D	PERENNIAL	NEPETA 'WALKERS LOW'	CATMINT		
18	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	HELIOPSIS HELIANTHOIDES	SMOOTH OXEYE	1-GALLON	18" O.C.

TYPE I



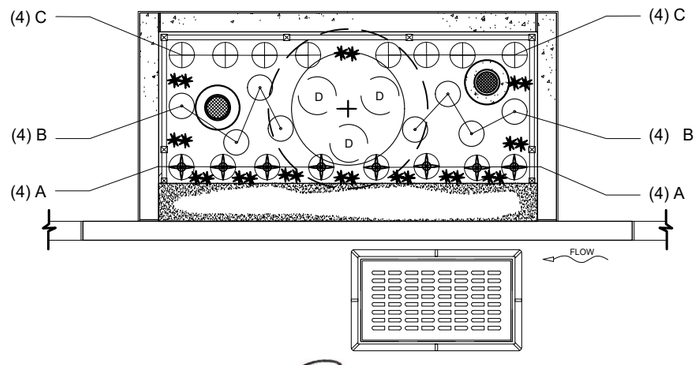
INDUSTRIAL SUN- Type II						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
10	A	PERENNIAL	ECHINACEA 'CHEYENNE SPIRIT'	CONEFLOWER	1-GALLON	18" O.C.
6	B	SHRUB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	CHOKEBERRY	2-GALLON	
6	C	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCHGRASS	1-GALLON	
10	D	PERENNIAL	NEPETA 'WALKERS LOW'	CATMINT		
14	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	HELIOPSIS HELIANTHOIDES	SMOOTH OXEYE	1-GALLON	18" O.C.

TYPE II



INDUSTRIAL SUN-Type III						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
8	A	PERENNIAL	ECHINACEA 'CHEYENNE SPIRIT'	CONEFLOWER	1-GALLON	18" O.C.
8	B	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCHGRASS		
8	C	PERENNIAL	NEPETA 'WALKERS LOW'	CATMINT		
12	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	D	SHRUB	MORELLA PENSYLVANICA	NORTHERN BAYBERRY	2-GALLON	18" O.C.

TYPE III



NOTES FOR CONSTRUCTION:

1. PLANTING LOCATIONS ARE SPECIFIC TO EACH TYPE AND PLAN AS SHOWN. PLANTING PLAN PER DRAWINGS.
2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR, AND SHOULD CONFORM TO DPR'S STREET TREE SIZE AND FORM.THE AREA DIRECTLY ABOVE THE TREE ROOTBALL (1.5' RADIUS) IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES, IN ACCORDANCE WITH DPR REQUIREMENTS.
3. ALL PLANTS SHALL BE WELL ROOTED AND VIGOROUS.
4. BULBS FOR FALL PLANTING ONLY, AT 2X DEPTH OF BULB HEIGHT.
5. SHRUBS SHALL TAKE A FULL, MULTI-STEM FORM.
6. ADDITIONAL PLANTS PLANTED AS SHOWN (DASHED) ONLY IN ROW BIOSWALE WITH NO TREE.
7. ALL AREAS ARE TO RECEIVE 3" MULCH COVER UPON PLANTING. MULCH SHALL NOT COME INTO CONTACT WITH WOODY STEMS OF PLANTS.
8. SPACE PLANTS 18" ON CENTER WHEN POSSIBLE. SPACING MAY VARY BASED ON ACTUAL SITE CONDITIONS. ADJUSTMENTS MAY BE MADE, AT ENGINEER'S APPROVAL, TO EASE CROWDING DUE TO ASSET SIZE OR OTHER OBSTRUCTION.

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

GI–503B

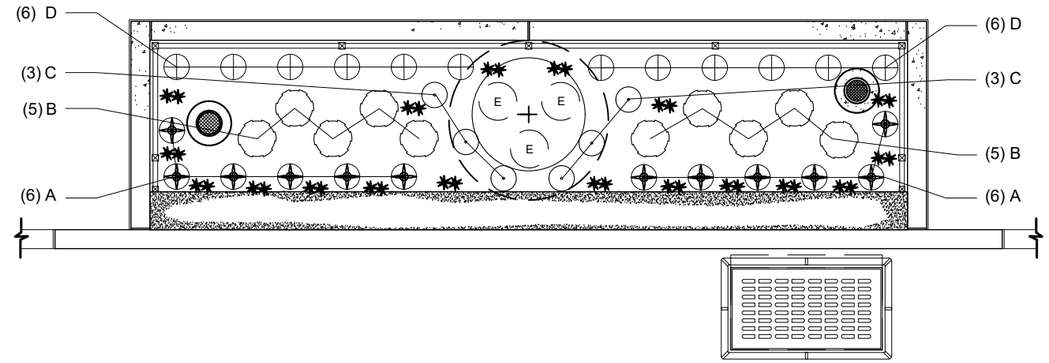
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–503B

STANDARD PLANTING SCHEDULE & LAYOUT FOR TYPE D R.O.W.
INDUSTRIAL SHADE BIOSWALES

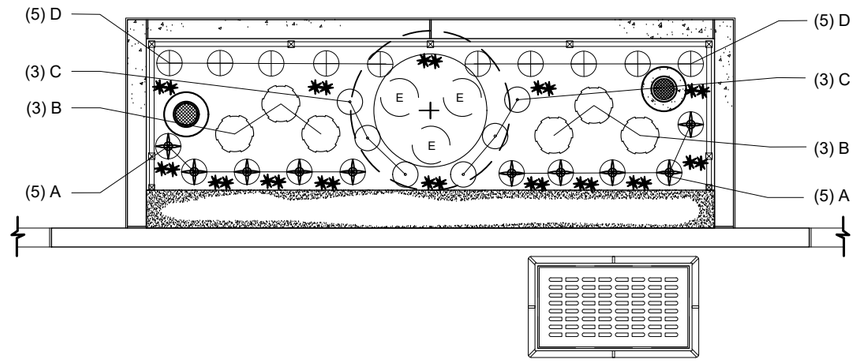
INDUSTRIAL SHADE - Type I						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
12	A	GRASSES	CAREX APPALACHICA	APPALACHIAN SEDGE	1-GALLON	18"O.C.
10	B	SHRUB	ROSA VIRGINIANA	VIRGINIA ROSE	2-GALLON	
6	C	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1-GALLON	
12	D	PERENNIAL	SOLIDAGO CAESIA	BLUESTEM GLODENROD		
18	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	ASTER CORDIFOLIUS	BLUE WOOD ASTER	1-GALLON	18" O.C.

TYPE I



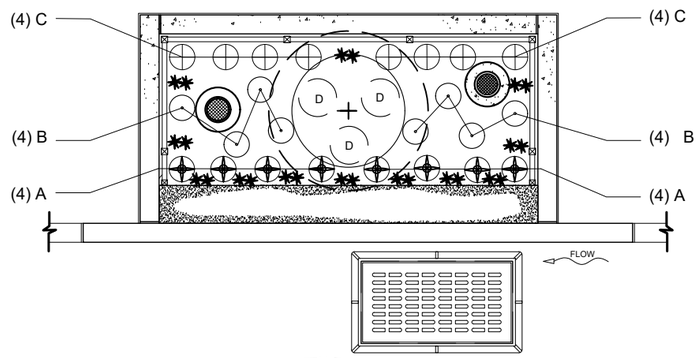
INDUSTRIAL SHADE- TYPE II						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
10	A	GRASSES	CAREX APPALACHICA	APPALACHIAN SEDGE	1-GALLON	18" O.C.
6	B	SHRUB	ROSA VIRGINIANA	VIRGINIA ROSE	2-GALLON	
6	C	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS	1-GALLON	
10	D	PERENNIAL	SOLIDAGO CAESIA	BLUESTEM GLODENROD		
14	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	ASTER CORDIFOLIUS	BLUE WOOD ASTER	1-GALLON	18" O.C.

TYPE II



INDUSTRIAL SHADE- Type III						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
8	A	GRASSES	CAREX APPALACHICA	APPALACHIAN SEDGE	1-GALLON	18" O.C.
8	B	PERENNIAL	ASTER CORDIFOLIUS	BLUE WOOD ASTER		
8	C	PERENNIAL	SOLIDAGO CAESIA	BLUESTEM GLODENROD		
12	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	D	SHRUB	ROSA VIRGINIANA	VIRGINIA ROSE	2-GALLON	18" O.C.

TYPE III



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4. BULBS FOR FALL PLANTING ONLY, AT 2X DEPTH OF BULB HEIGHT.
5. SHRUBS SHALL TAKE A FULL, MULTI-STEM FORM.
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8. SPACE PLANTS 18" ON CENTER WHEN POSSIBLE. SPACING MAY VARY BASED ON ACTUAL SITE CONDITIONS. ADJUSTMENTS MAY BE MADE, AT ENGINEER'S APPROVAL, TO EASE CROWDING DUE TO ASSET SIZE OR OTHER OBSTRUCTION.

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

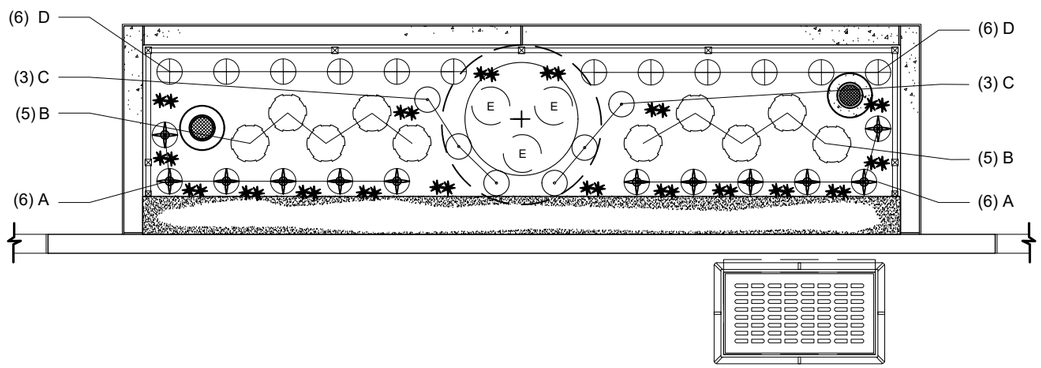
GI–503C

STANDARD PLANTING SCHEDULE FOR TYPE D R.O.W. INDUSTRIAL MIXED BIOSWALES

INDUSTRIAL MIXED SUN/SHADE - Type I

QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
12	A	PERENNIAL	MEEHANIA CORDATA	CREEPING MINT	1-GALLON	18"O.C.
10	B	SHRUB	RHUS AROMATICA 'GRO LOW'	FRAGRANT SUMAC	2-GALLON	
6	C	GRASSES	TRIDENS FLAVUS	PURPLETOP	1-GALLON	
12	D	PERENNIAL	ASTER LATERIFLORUS 'LADY IN BLACK'	CALICO ASTER		
18	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	RATIBIDA PINNATA	PRAIRIE CONEFLOWER	1-GALLON	18" O.C.

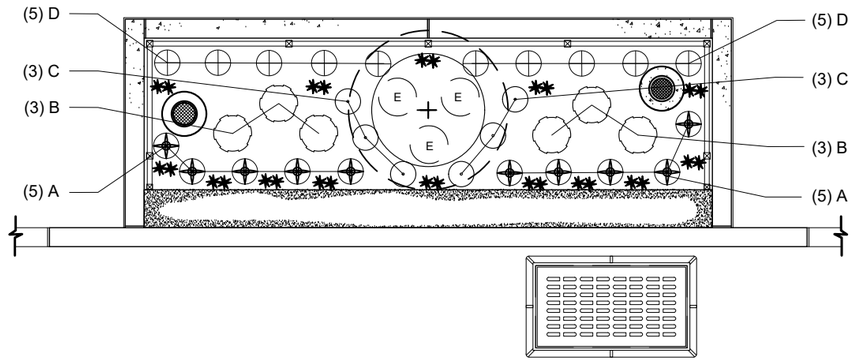
TYPE I



INDUSTRIAL MIXED SUN/SHADE - Type II

QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
10	A	PERENNIAL	MEEHANIA CORDATA	CREEPING MINT	1-GALLON	18" O.C.
6	B	SHRUB	RHUS AROMATICA 'GRO LOW'	FRAGRANT SUMAC	2-GALLON	
6	C	GRASSES	TRIDENS FLAVUS	PURPLETOP	1-GALLON	
10	D	PERENNIAL	ASTER LATERIFLORUS 'LADY IN BLACK'	CALICO ASTER		
14	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	RATIBIDA PINNATA	PRAIRIE CONEFLOWER	1-GALLON	18" O.C.

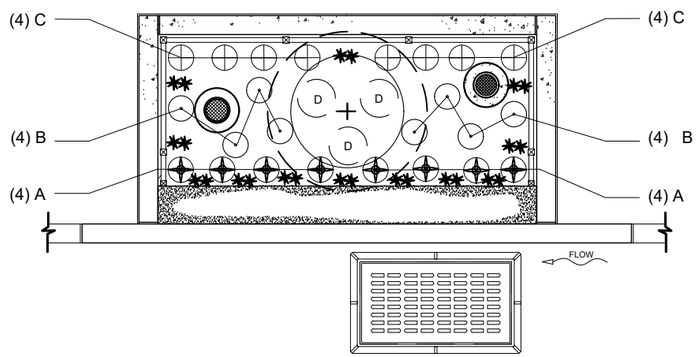
TYPE II



INDUSTRIAL MIXED SUN/SHADE Type III

QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
8	A	PERENNIAL	MEEHANIA CORDATA	CREEPING MINT	1-GALLON	18" O.C.
8	B	GRASSES	TRIDENS FLAVUS	PURPLETOP		
8	C	PERENNIAL	ASTER LATERIFLORUS 'LADY IN BLACK'	CALICO ASTER		
12	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	SHRUB	RHUS AROMATICA 'GRO LOW'	FRAGRANT SUMAC	2-GALLON	18" O.C.

TYPE III



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Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

GI–503D

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD PLANTING SCHEDULE FOR TYPE D R.O.W. RESIDENTIAL SUN BIOSWALES

RESIDENTIAL SUN - Type I

QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
14	A	GROUNDCOVER	ASTER ERICOIDES 'SNOW FLURRY'	HEATH ASTER	1-GALLON	18"O.C.
6	B	SHRUB	HYPERICUM CALYCINUM	ST. JOHN'S WORT	2-GALLON	
12	C	PERENNIAL	ASCLEPIAS TUBEROSA	BUTTERFLY MILKWEED	1-GALLON	
8	D	GRASSES	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUE STEM		
18	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	SHRUB	MORELLA PENSYLVANICA	BAYBERRY	2-GALLON	18" O.C.

RESIDENTIAL SUN - Type II

QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
10	A	GROUNDCOVER	ASTER ERICOIDES 'SNOW FLURRY'	HEATH ASTER	1-GALLON	18" O.C.
6	B	SHRUB	HYPERICUM CALYCINUM	ST. JOHN'S WORT	2-GALLON	
10	C	PERENNIAL	ACHILLEA MILLEFOILIUM 'PAPRIKA'	YARROW	1-GALLON	
8	D	GRASSES	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUE STEM		
14	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	SHRUB	MORELLA PENSYLVANICA	BAYBERRY	2-GALLON	18" O.C.

RESIDENTIAL SUN - Type III

QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
6	A	GROUNDCOVER	ASTER ERICOIDES 'SNOW FLURRY'	HEATH ASTER	1-GALLON	18" O.C.
10	B	PERENNIAL	ACHILLEA MILLEFOILIUM 'PAPRIKA'	YARROW		
8	C	GRASSES	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUE STEM		
12	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	SHRUB	MORELLA PENSYLVANICA	BAYBERRY	2-GALLON	18" O.C.

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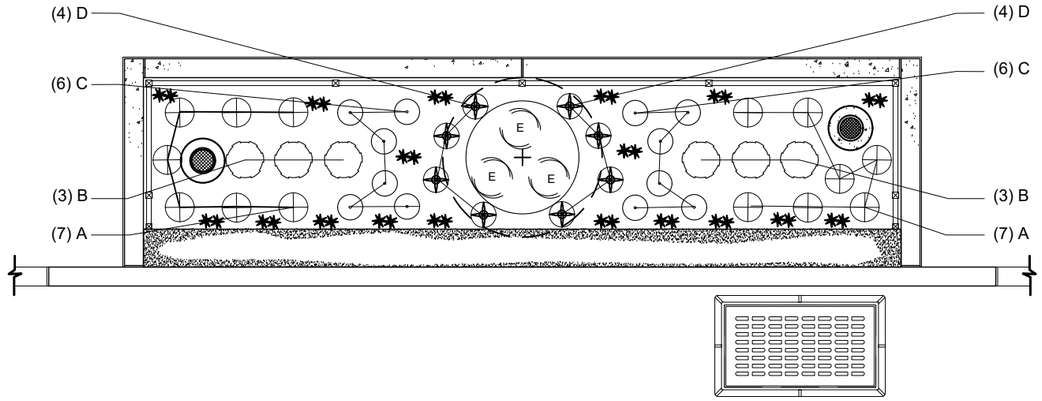

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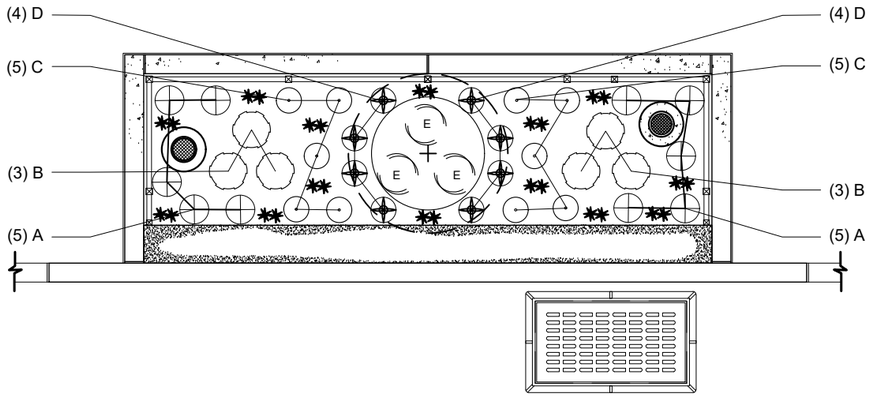

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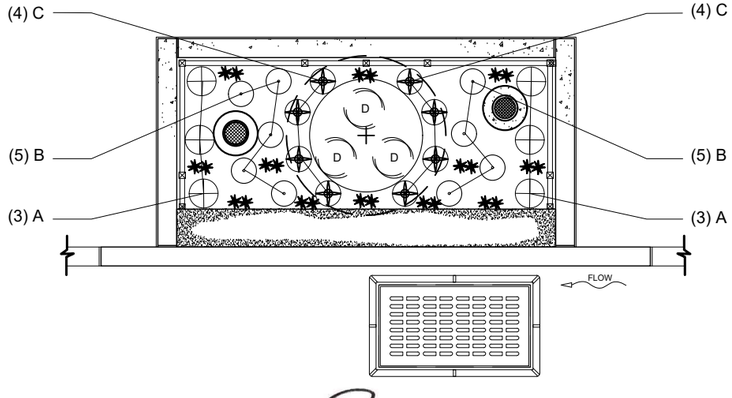

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

GI–503E

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–503E

STANDARD PLANTING SCHEDULE FOR TYPE D R.O.W. RESIDENTIAL SHADE BIOSWALES

RESIDENTIAL SHADE - Type I						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
14	A	GROUNDCOVER	MEEHANIA CORDATA	CREEPING MINT	1-GALLON	18" O.C.
6	B	SHRUB	CEANOTHUS AMERICANUS	NEW JERSEY TEA	2-GALLON	
12	C	PERENNIAL	PYCNANTHEMUM MUTICUM	CLUSTERED MOUNTAIN MINT	1-GALLON	
8	D	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS		
18	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	BAPTISIA AUSTRALIS	WILD INDIGO	2-GALLON	18" O.C.

RESIDENTIAL SHADE - Type II						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
10	A	GROUNDCOVER	MEEHANIA CORDATA	CREEPING MINT	1-GALLON	18" O.C.
6	B	SHRUB	CEANOTHUS AMERICANUS	NEW JERSEY TEA	2-GALLON	
10	C	PERENNIAL	PYCNANTHEMUM MUTICUM	CLUSTERED MOUNTAIN MINT	1-GALLON	
8	D	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS		
14	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	BAPTISIA AUSTRALIS	WILD INDIGO	2-GALLON	18" O.C.

RESIDENTIAL SHADE - Type III						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
6	A	GROUNDCOVER	MEEHANIA CORDATA	CREEPING MINT	1-GALLON	18" O.C.
10	B	PERENNIAL	PYCNANTHEMUM MUTICUM	CLUSTERED MOUNTAIN MINT		
8	C	GRASSES	CHASMANTHIUM LATIFOLIUM	NORTHERN SEA OATS		
12	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	D	SHRUB	CEANOTHUS AMERICANUS	NEW JERSEY TEA	2-GALLON	18" O.C.

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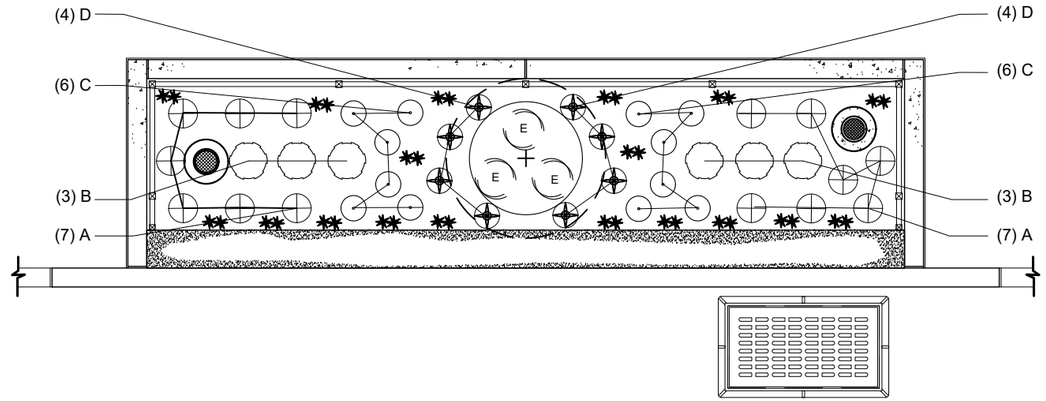

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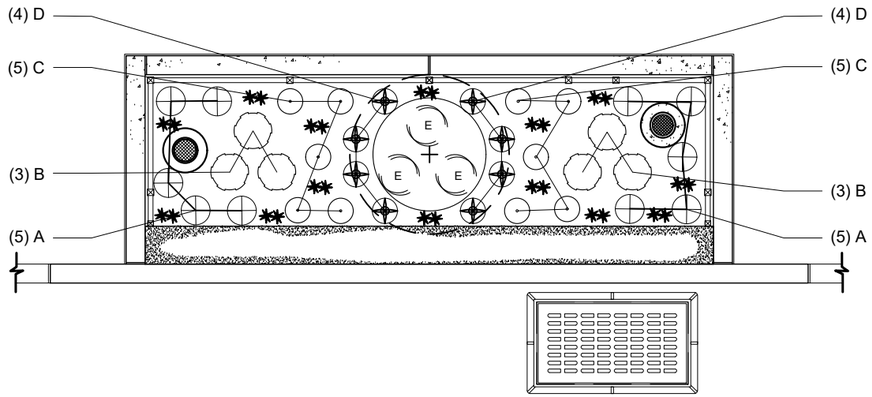

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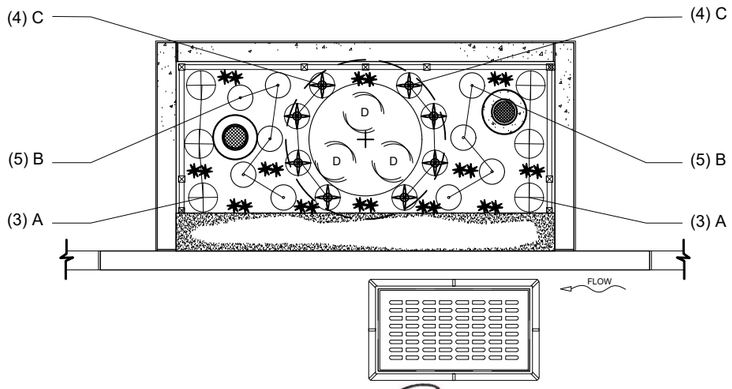

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

DATE

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CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

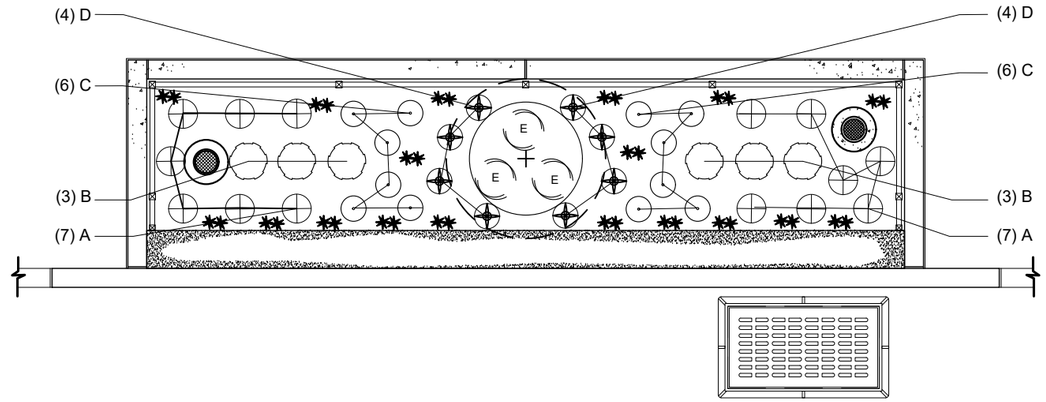
STANDARD PLANTING SCHEDULE FOR TYPE D R.O.W. RESIDENTIAL MIXED BIOSWALES

RESIDENTIAL MIXED SUN/SHADE - Type I						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
14	A	GRASSES	CAREX FLACCA 'BLUE ZINGER'	GLACOUS SEDGE	1-GALLON	18" O.C.
6	B	SHRUB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	CHOKEBERRY	2- GALLON	
12	C	PERENNIAL	AMSONIA 'BLUE ICE'	BLUESTAR	1-GALLON	
8	D	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCHGRASS		
18	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	BAPTISIA AUSTRALIS	WILD INDIGO	2-GALLON	18" O.C.

RESIDENTIAL MIXED SUN/SHADE - Type II						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
10	A	GRASSES	CAREX FLACCA 'BLUE ZINGER'	GLACOUS SEDGE	1-GALLON	18" O.C.
6	B	SHRUB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	CHOKEBERRY	2- GALLON	
10	C	PERENNIAL	AMSONIA 'BLUE ICE'	BLUESTAR	1-GALLON	
8	D	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCHGRASS		
14	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	E	PERENNIAL	BAPTISIA AUSTRALIS	WILD INDIGO	2-GALLON	18" O.C.

RESIDENTIAL MIXED SUN/SHADE Type III						
QTY	SYMBOL	TYPE	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
6	A	GRASSES	CAREX FLACCA 'BLUE ZINGER'	GLACOUS SEDGE	1-GALLON	18" O.C.
10	B	PERENNIAL	AMSONIA 'BLUE ICE'	BLUESTAR		
8	C	GRASSES	PANICUM VIRGATUM 'SHENANDOAH'	SWITCHGRASS		
12	✱	BULB	NARCISSUS 'DUTCH MASTER'	TRUMPET DAFFODIL	CLUSTER OF 2	AS SHOWN
ADDITIONAL PLANTING IN ROW BIOSWALE WITH NO TREE						
3	D	SHRUB	ARONIA ARBUTIFOLIA 'BRILLIANTISSIMA'	CHOKEBERRY	2- GALLON	18" O.C.

TYPE I



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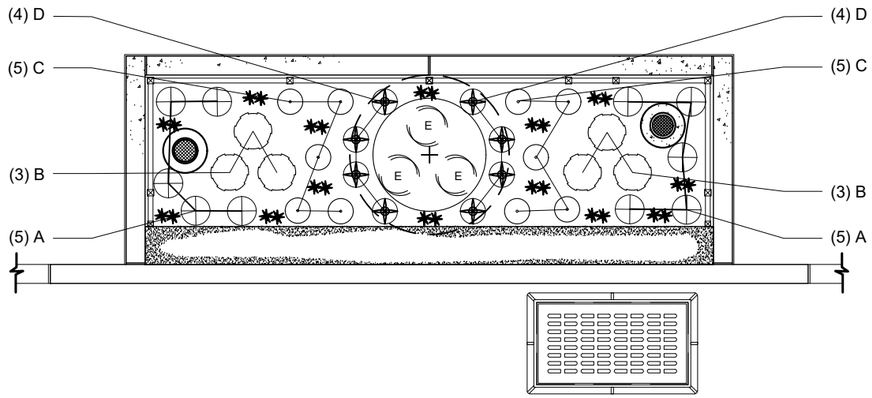

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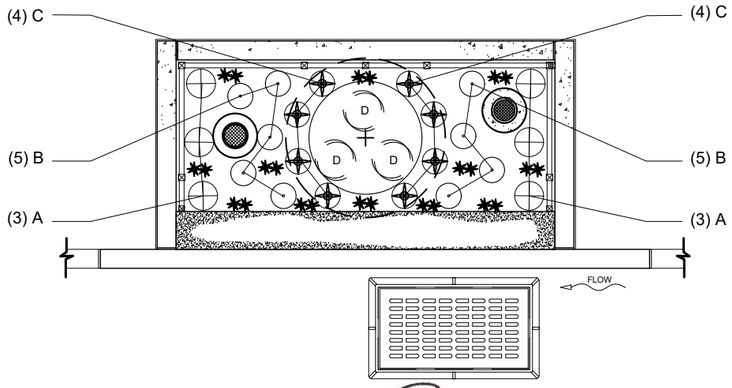

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MANAGING DIRECTOR,
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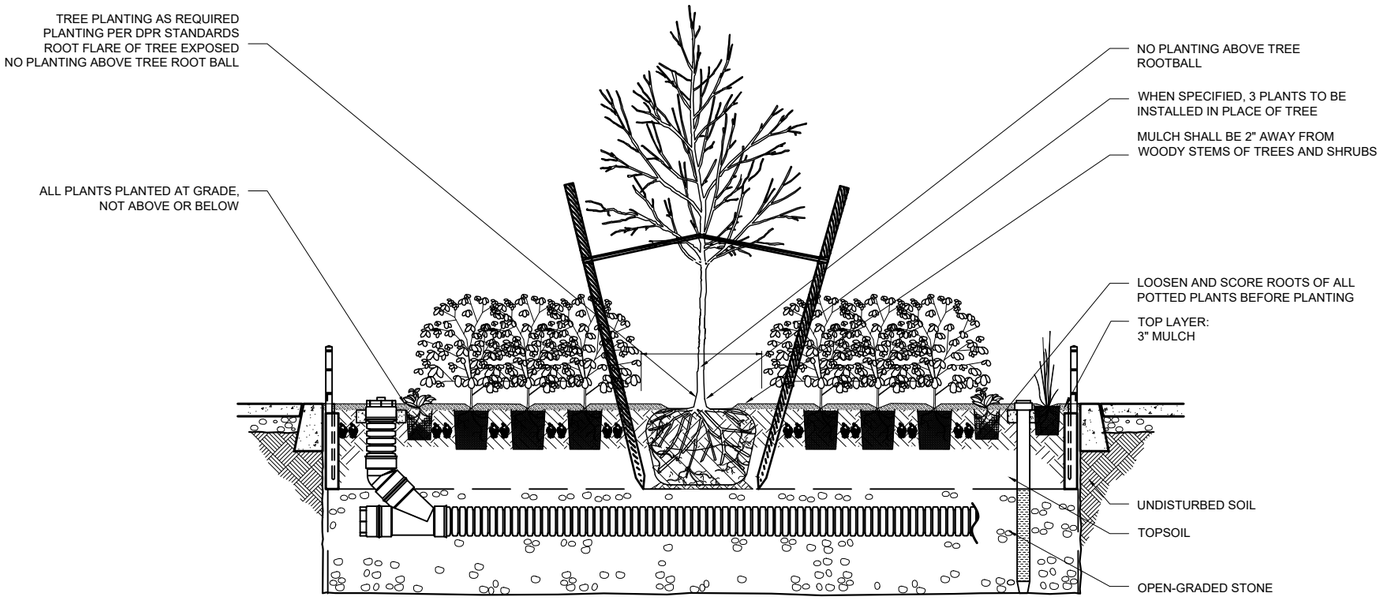
GI–503G

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION
STANDARD PLANTING LAYOUT FOR TYPE D R.O.W. BIOSWALES

GI–503G



PLANTING DETAIL

NOTES FOR CONSTRUCTION:

1. PLANTING LOCATIONS ARE SPECIFIC TO EACH TYPE AND PLAN AS SHOWN. PLANTING PLAN PER DRAWINGS.
2. TREES TO BE INCLUDED IN PLANTING PLANS UPON DIRECTION OF DPR, AND SHOULD CONFORM TO DPR'S STREET TREE SIZE AND FORM.THE AREA DIRECTLY ABOVE THE TREE ROOTBALL (1.5' RADIUS) IS NOT TO BE PLANTED WITH SHRUBS, PERENNIALS, OR GRASSES, IN ACCORDANCE WITH DPR REQUIREMENTS.
3. ALL PLANTS SHALL BE WELL ROOTED AND VIGOROUS.
4. BULBS FOR FALL PLANTING ONLY, AT 2X DEPTH OF BULB HEIGHT.
5. SHRUBS SHALL TAKE A FULL, MULTI-STEM FORM.
6. ADDITIONAL PLANTS PLANTED AS SHOWN (DASHED) ONLY IN ROW BIOSWALE WITH NO TREE.
7. ALL AREAS ARE TO RECEIVE 3" MULCH COVER UPON PLANTING. MULCH SHALL NOT COME INTO CONTACT WITH WOODY STEMS OF PLANTS.
8. SPACE PLANTS 18" ON CENTER WHEN POSSIBLE. SPACING MAY VARY BASED ON ACTUAL SITE CONDITIONS. ADJUSTMENTS MAY BE MADE, AT ENGINEER'S APPROVAL, TO EASE CROWDING DUE TO ASSET SIZE OR OTHER OBSTRUCTION.

NOTES TO DESIGNER:

PLANTING PLAN SELECTION CRITERIA:

1. PLANTING PLANS ARE BASED ON AMOUNT OF SUN RECEIVED IN EACH LOCATION.
2. TO DETERMINE AMOUNT OF SUN RECEIVED BY EACH LOCATION, CONSIDER DIRECTIONAL ORIENTATION (NORTH/SOUTH/EAST/WEST) AND HEIGHT OF ADJACENT BUILDINGS.
3. INDUSTRIAL VS. RESIDENTIAL PLANTING PLANS ARE BASED ON HIGH VS. LOW PEDESTRIAN TRAFFIC AREAS.
4. ADAPTIVE DIRECTION, INCLUDING PALETTE CHANGES, MAY BE GIVEN TO CONTRACTORS FOR PLANT REPLACEMENT WITH AGENCY APPROVAL.

Roopesh Joshi

P.E. 05-13-2022

MANAGING DIRECTOR, GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION — DATE

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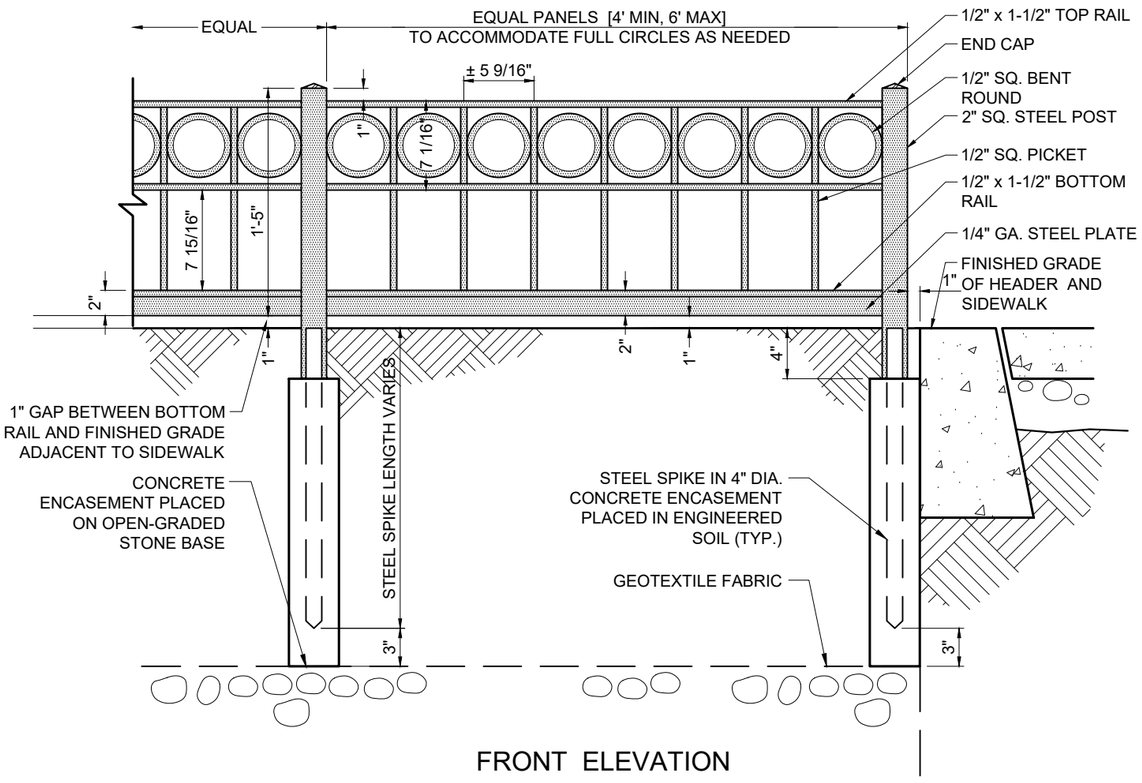
GI–600

GI-600
STEEL GUARDS STANDARDS FOR RIGHT-OF-WAY GREEN INFRASTRUCTURE PRACTICES

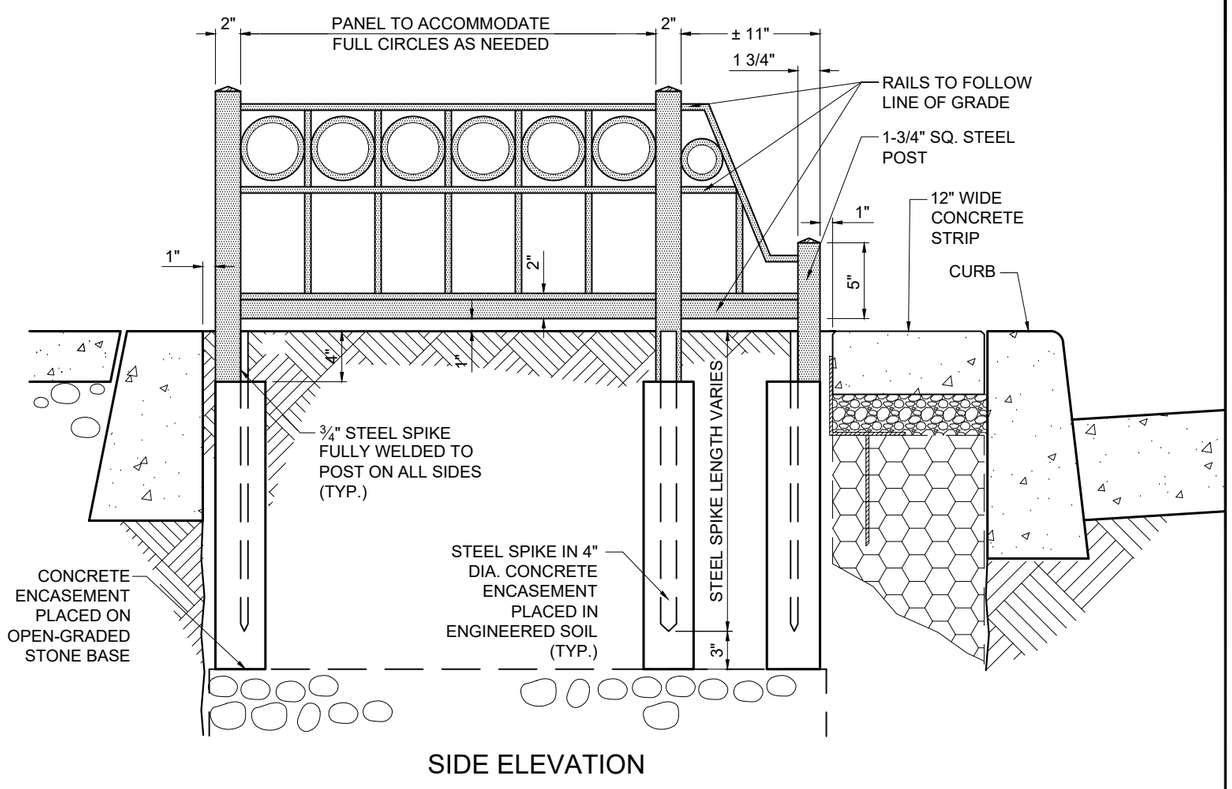
CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

GI–601

STANDARD FOR R.O.W. GI - TYPE 'B' WELDED STEEL GUARD



FRONT ELEVATION



SIDE ELEVATION

NOTES:

1. FIELD MEASUREMENTS MUST BE TAKEN PRIOR TO FABRICATION.
2. ALL STEEL SHALL CONFORM TO SPECIFICATION C1015 OF THE A.I.S.I. (ALTERNATE STEEL PER DEP APPROVAL)
3. ALL JOINTS TO BE WELDED UNLESS NOTED OTHERWISE.
4. ALL STEEL TO BE PAINTED BLACK, SEE SPECIFICATIONS FOR DETAILS.
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 ENCASEMENT AS PER STANDARD DRAWINGS

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

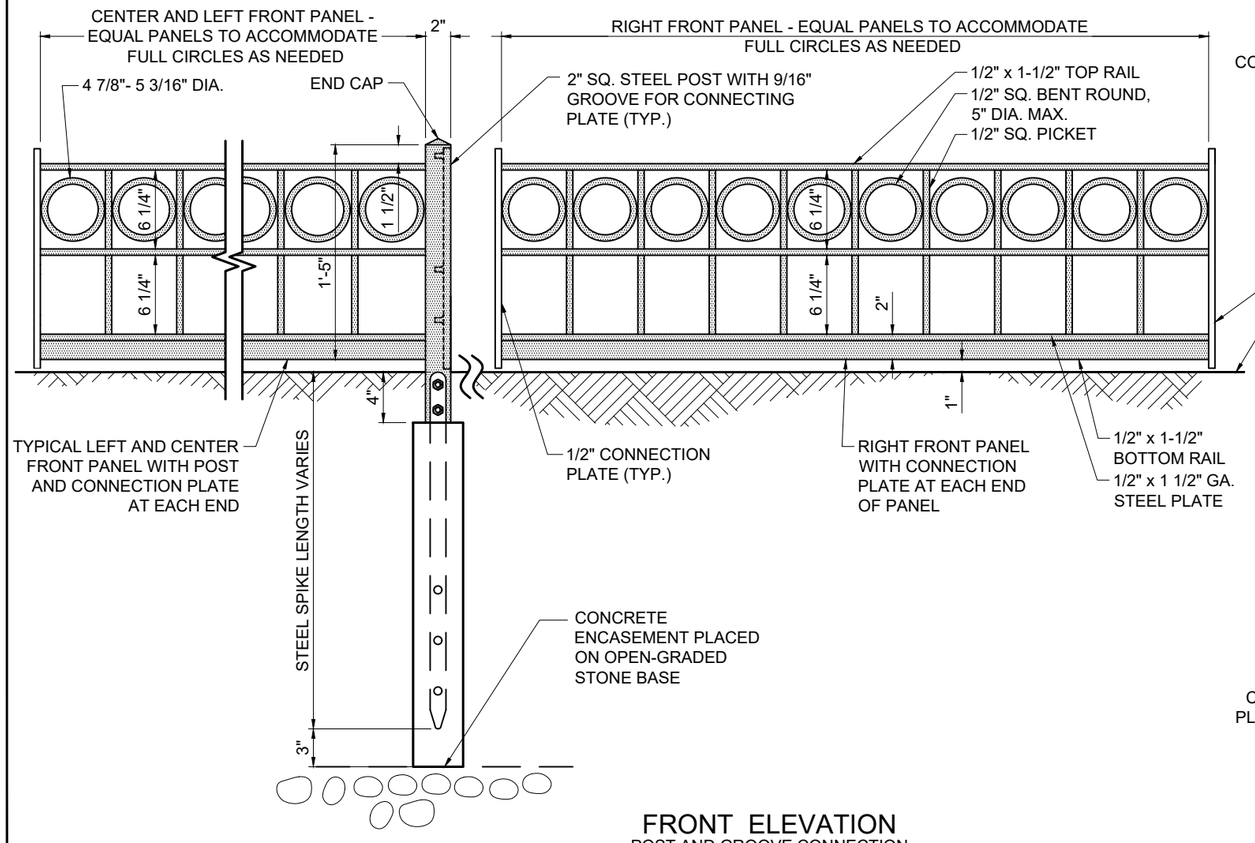
05-13-2022
DATE

GI–602

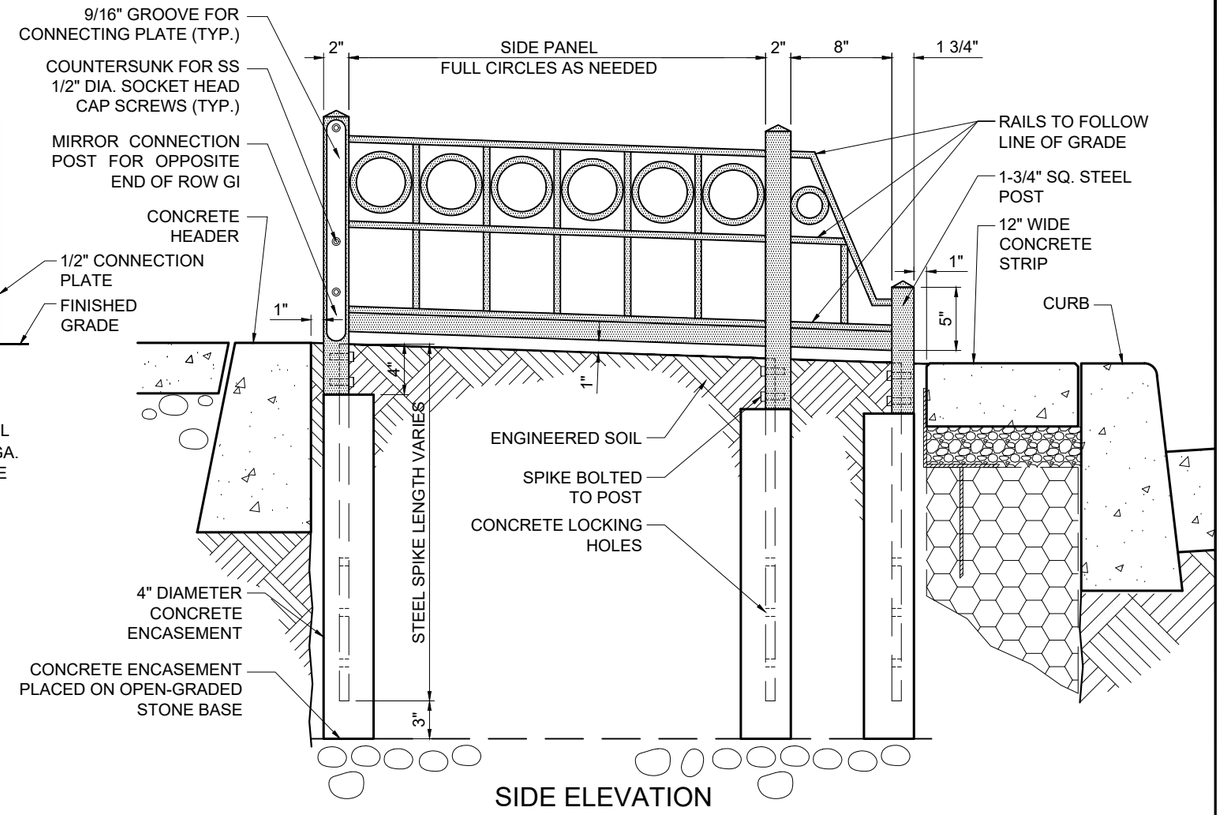
GI–602

CITY OF NEW YORK
DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

STANDARD FOR R.O.W. GI - TYPE 'B-1' STEEL GUARD WITH BOLTED PANELS



FRONT ELEVATION
POST AND GROOVE CONNECTION



SIDE ELEVATION

NOTE: MIRROR CONNECTION POST FOR OPPOSITE END OF ROWGI

NOTES:

1. FIELD MEASUREMENTS MUST BE TAKEN PRIOR TO FABRICATION.
2. ALL STEEL SHALL CONFORM TO SPECIFICATION C1015 OF THE A.I.S.I. (ALTERNATE STEEL PER DEP APPROVAL)
3. ALL JOINTS TO BE WELDED UNLESS NOTED OTHERWISE.
4. ALL POST AND GROOVE CONNECTIONS TO BE BOLTED.
5. ALL VISIBLE BOLTS TO BE COUNTERSUNK AND FLUSHED WITH THE POSTS
6. ALL STEEL TO BE PAINTED BLACK, SEE SPECIFICATIONS FOR DETAIL.
7. RAILS TO FOLLOW LINE OF GRADE.
8. ALL SPIKES OF TREE GUARD TO BE EMBEDDED IN CONCRETE PIERS AS PER STANDARD DRAWINGS

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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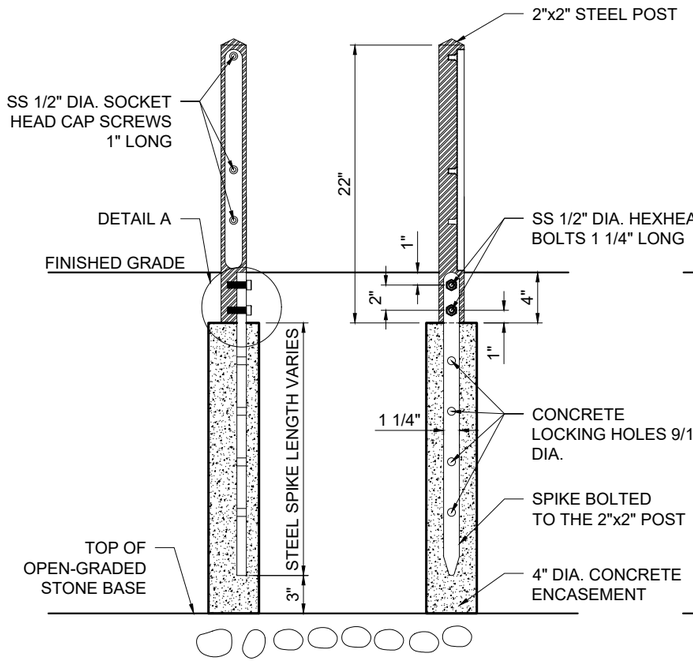
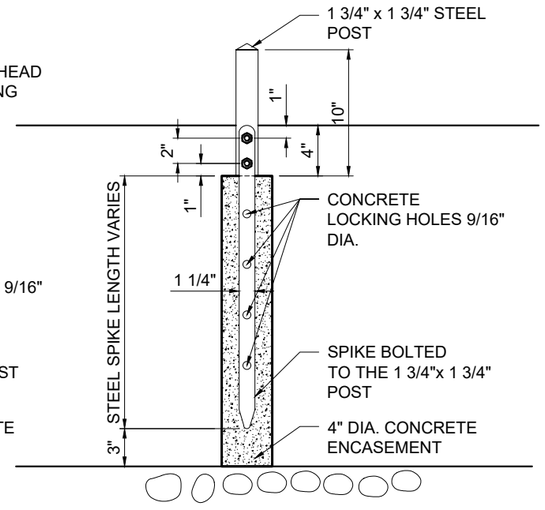
GI–603

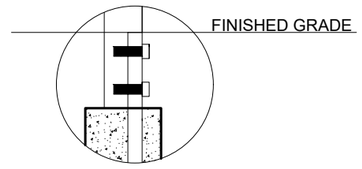
STANDARD DETAILS FOR R.O.W. GI - TYPE 'B-1' STEEL GUARD WITH BOLTED PANELS



STEEL POST 2"x2"

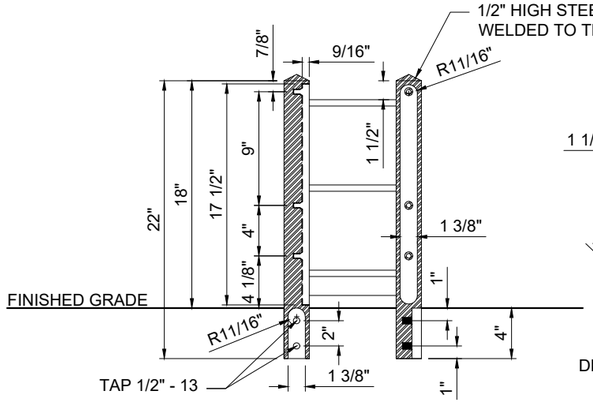


STEEL POST $1\frac{3}{4}$"X$1\frac{3}{4}$"

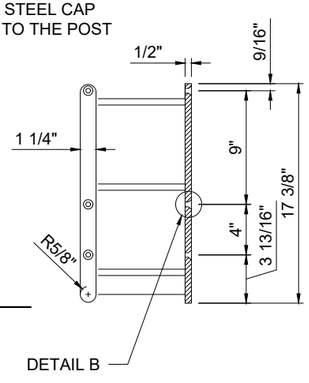


DETAIL A

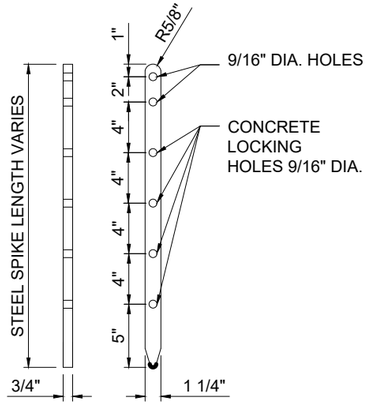
NOTE:
SPIKE EMBEDDED IN MACHINED GROOVE OF THE POST FOR ADDITIONAL STRENGTH AND SUPPORT



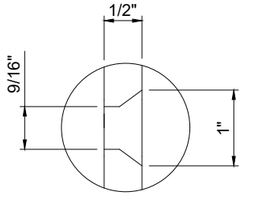
POST AND GROOVE



CONNECTION PLATE



SPIKE



DETAIL B

NOTE:
COUNTERSUNK FOR SOCKET HEAD CAP SCREWS

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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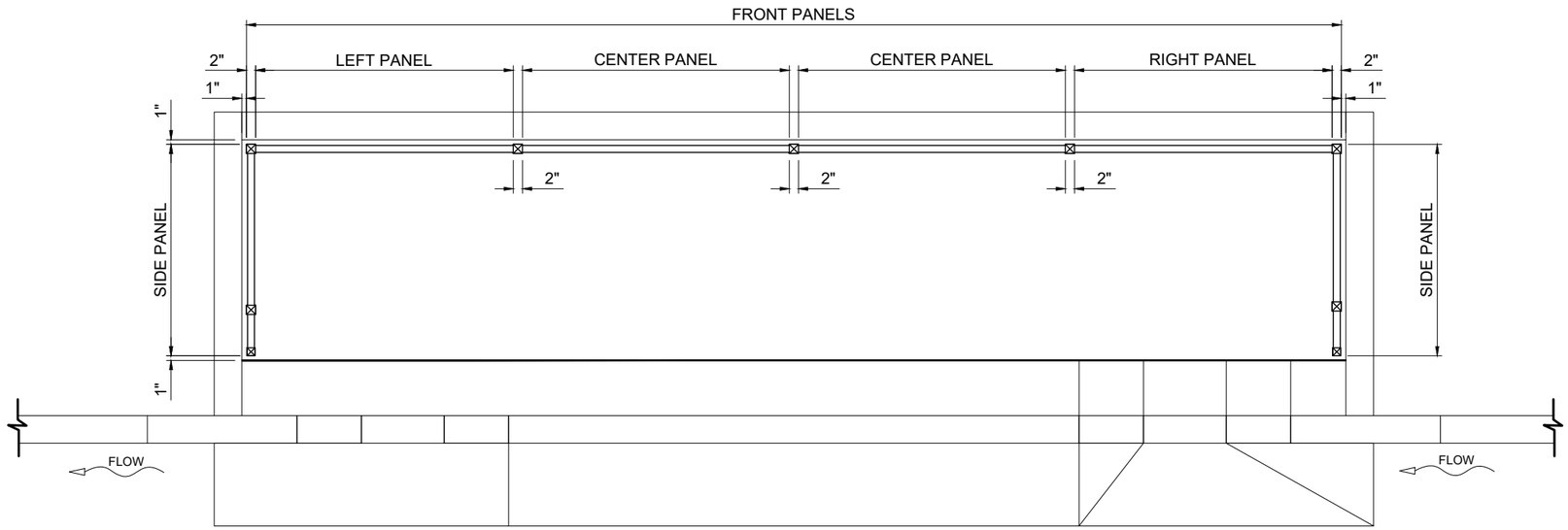
GI–604

DIMENSION SCHEDULE FOR R.O.W. GI - TYPE 'B-1' STEEL GUARD WITH BOLTED PANELS



FRONT AND SIDE PANELS - PLAN

ROW TYPE	ROWB, ROWRG LENGTH, FT	PANELS REQUIRED	LENGTH OF FRONT PANELS, IN			
			LEFT	CENTER	CENTER	RIGHT
TYPE 1	20	4	56	58	58	56
	19	4	56	52	52	56
	18	4	50	52	52	50
	17	4	50	46	46	50
TYEPE 2	16	3	62	58	N/A	62
	15	3	56	58	N/A	56
	14	3	50	58	N/A	50
	13	3	50	46	N/A	50
TYPE 3	12	3	44	46	N/A	44
	11	2	62	N/A	N/A	62
	10	2	56	N/A	N/A	56

FRONT PANELS SCHEDULE

ROWB, ROWRG WIDTH, FT	SIDE PANEL LENGTH, IN
3'-6"	28
4'-0"	34
4'-6"	40
5'-0"	46

SIDE PANELS SCHEDULE

Roopesh Joshi
P.E.
MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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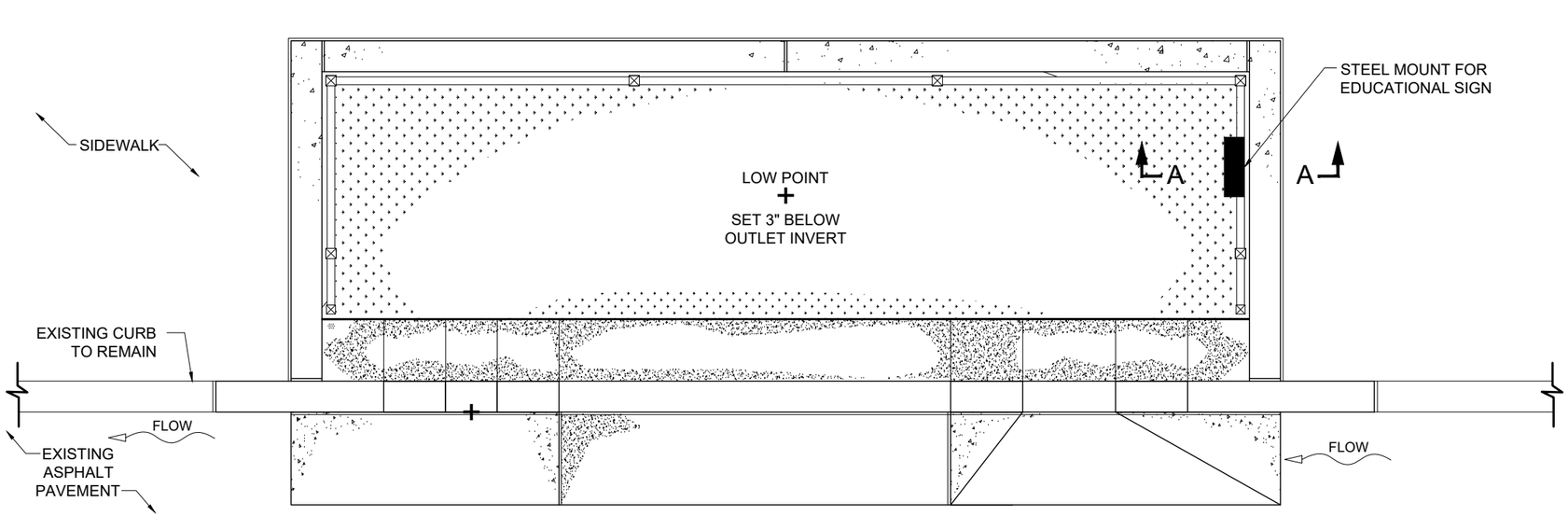
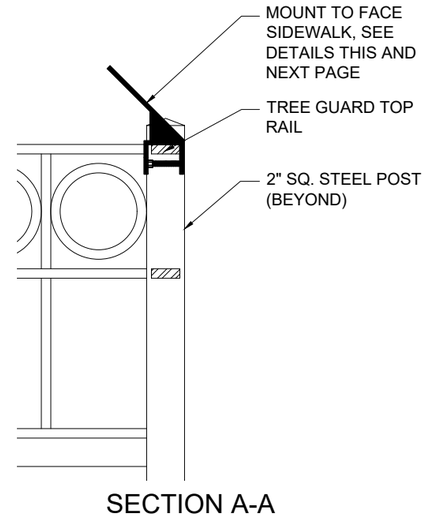
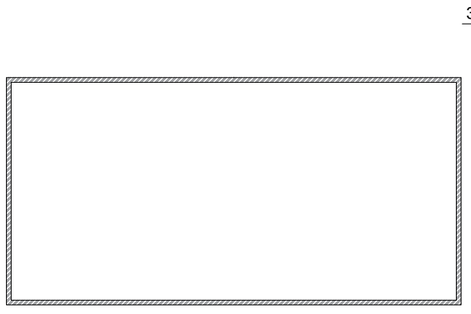
STEEL TREE GUARD MOUNT & EDUCATIONAL SIGN



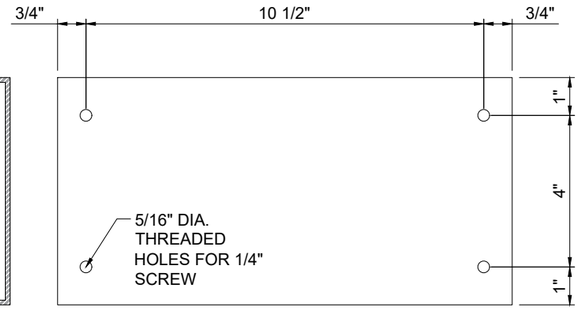
PLAN



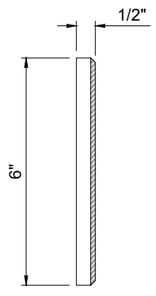
SECTION A-A



PLAN - FRONT VIEW

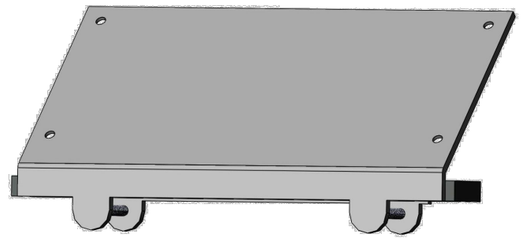


PLAN-BACK VIEW

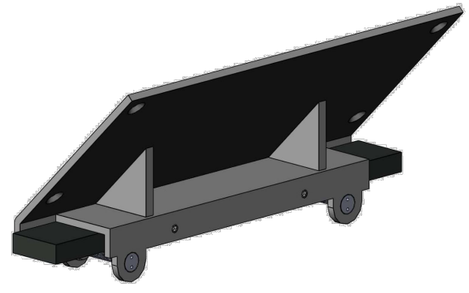


SIDE VIEW

EDUCATIONAL SIGN



ISOMETRIC VIEW 1



ISOMETRIC VIEW 2

MOUNT FOR EDUCATIONAL SIGN

NOTES:
1. EDUCATIONAL SIGN TO BE INSTALLED AS DIRECTED AT EITHER END OF THE GI PRACTICE
   1.1. HOLES TO SHALL NOT PUNCH TROUGH FACE OF SIGN
   1.2. GRAPHICS AS PER SPECIFICATIONS

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MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

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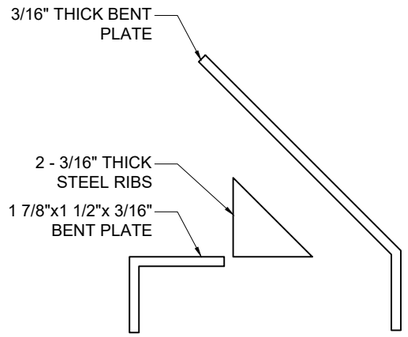
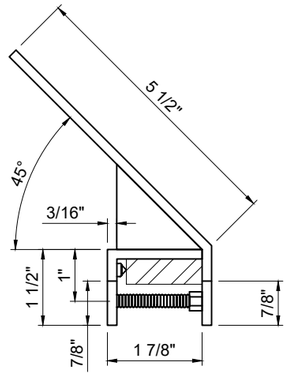
BUREAU OF ENVIRONMENTAL PLANNING & ANALYSIS – GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

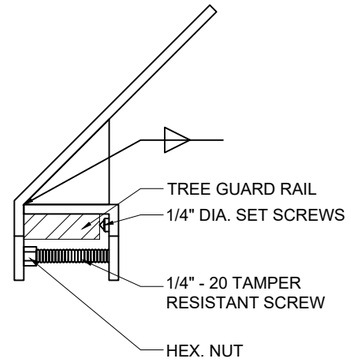
STEEL TREE GUARD MOUNT & EDUCATIONAL SIGN



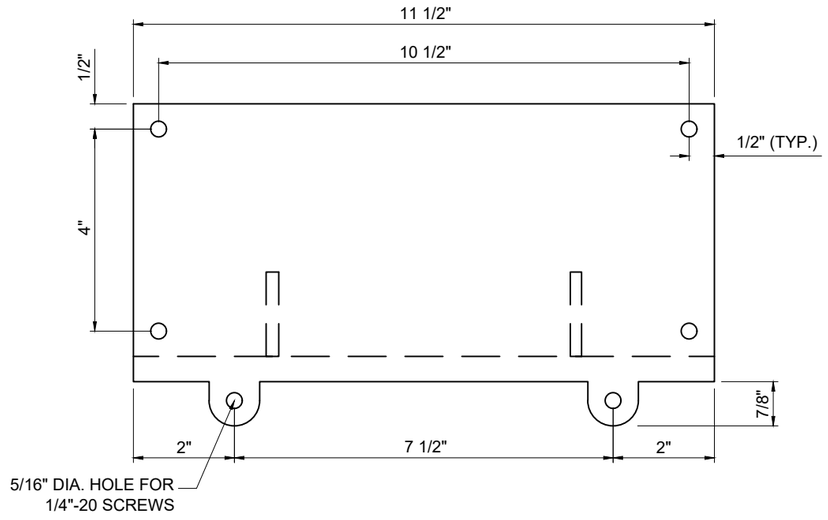
MOUNT COMPONENTS



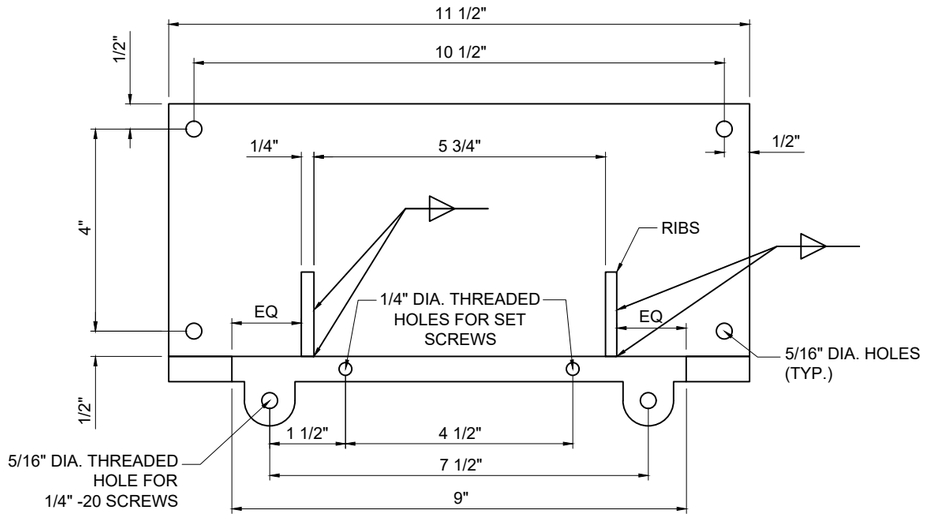
LEFT SIDE VIEW
SECTION



RIGHT SIDE VIEW
SECTION



FRONT VIEW



BACK VIEW

Rooperesh Joshi
P.E.

MANAGING DIRECTOR,
GREEN INFRASTRUCTURE DESIGN & CONSTRUCTION

05-13-2022
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