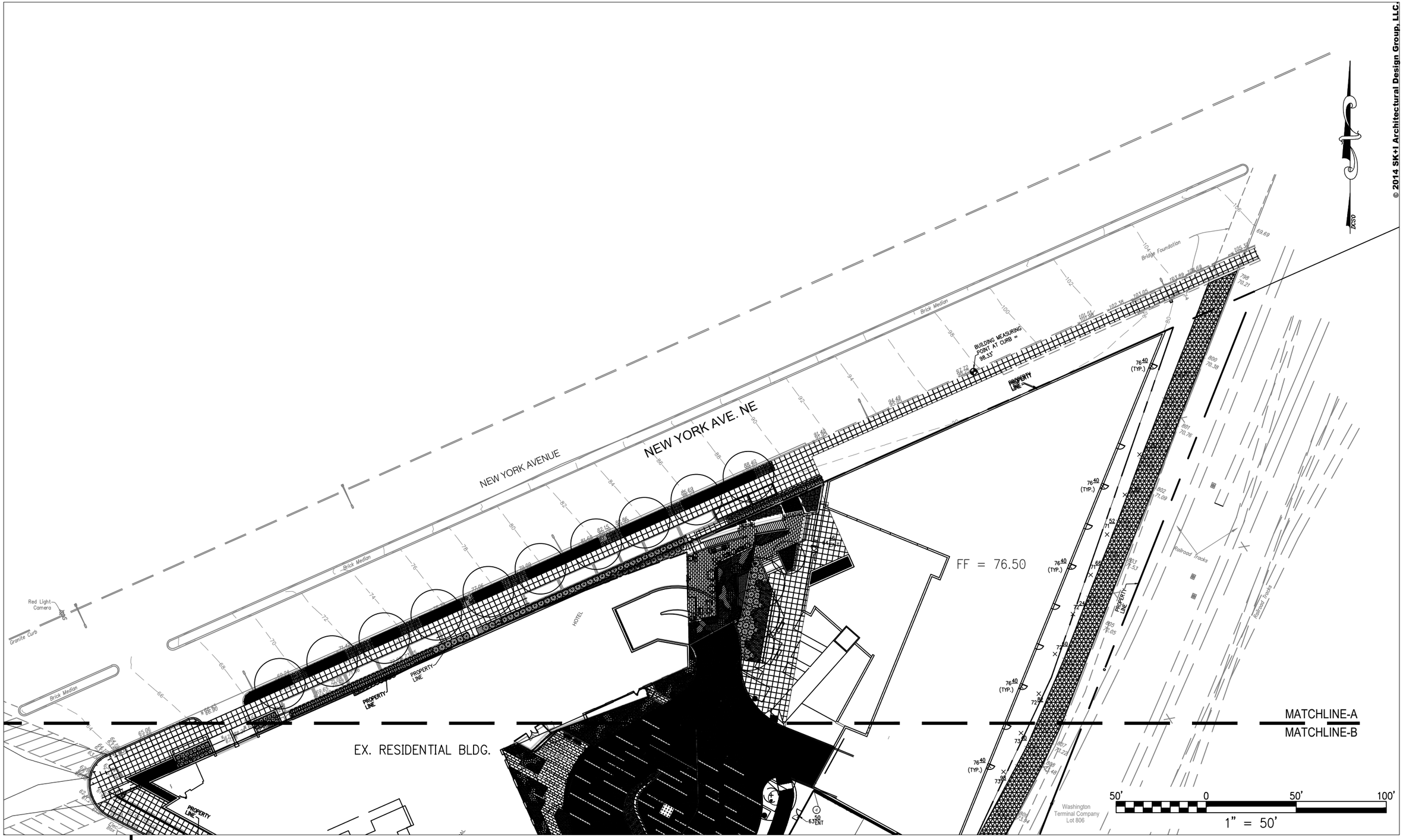


MRP | REALTY

Washington Gateway | Washington, DC

Grading Plan A

December 30, 2016 | **C-106A**

SK+I ARCHITECTURE

ZONING COMMISSION
District of Columbia
CASE NO.06-14D
EXHIBIT NO.46A8

NEW YORK AVE. NE

FLORIDA AVENUE

FLORIDA AVE. NE

EX. RESIDENTIAL BLDG.

FF = 76.50

MATCHLINE-A
MATCHLINE-B

HOTEL

RESIDENTIAL

PROPERTY LINE

Red Light Camera

Brick Median

6"Granite Curb

Conc.Sidewalk

1'Brick edge of pavement

1'Conc. Edge of Pavement

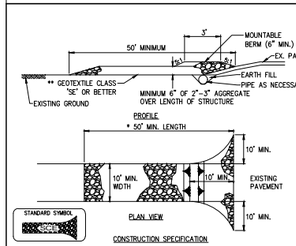
VAULT

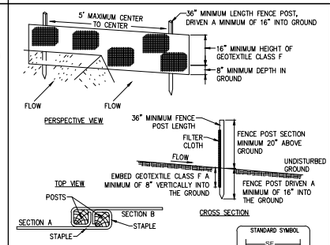
Railroad Tracks

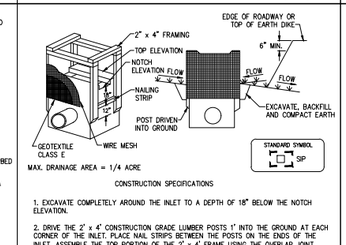
Washington Terminal Company Lot 806

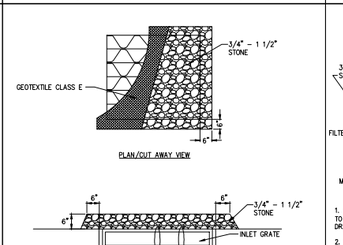
50' 0 50' 100'

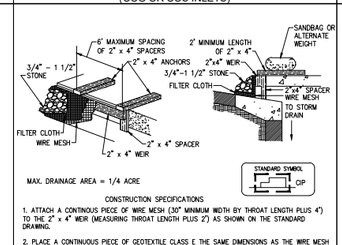
1" = 50'

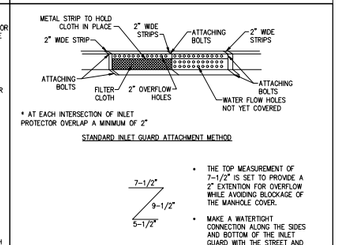


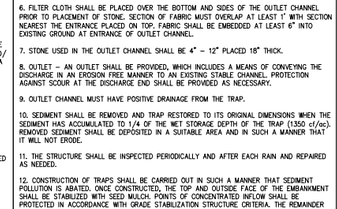


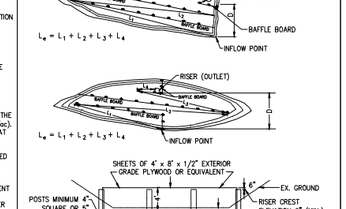


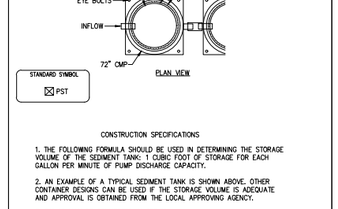


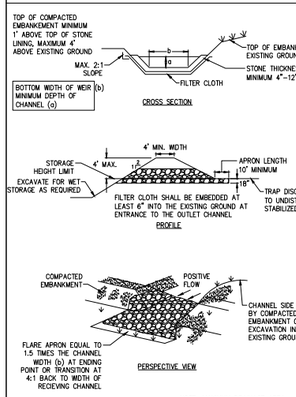












DETAIL 1 - STABILIZED CONSTRUCTION ENTRANCE

CONSTRUCTION SPECIFICATION

1. LENGTH – MINIMUM OF 50' (*30' FOR SINGLE RESIDENCE LOT).
2. WIDTH – 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
3. GEOTEXTILE FABRIC (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. ** THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
4. STONE – CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
5. SURFACE WATER – ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" STONE OVER THE PIPE. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO CONVEYED. A 6" MINIMUM WILL BE REQUIRED. THE MOUNTABLE BERM IS REQUIRED ON ALL SCEs NOT LOCATED AT A HIGH SPOT.
6. LOCATION – A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.

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DETAIL 4 - SILT FENCE

CONSTRUCTION SPECIFICATIONS

1. FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16' MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" x 1 1/2" SQUARE (MIN.) CUT, OR 1 3/4" DIAMETER (MIN.) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHTING NOT LESS THAN 1.00 POUND PER LINEAR FOOT.

2. GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F.

TENSILE STRENGTH	50 LBS/IN (MIN.)	TEST: ASTM D-4595
TENSILE MODULUS	20 LBS/IN (MIN.)	TEST: ASTM D-4595
FLOW RATE	0.3 GAL/FT2/MINUTE (MAX.)	TEST: ASTM D-5141
FILTERING EFFICIENCY	75% (MIN.)	TEST: ASTM D-5141

3. WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.

4. SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 30% OF THE FABRIC HEIGHT.

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DETAIL 6A - STANDARD INLET PROTECTION

MAX. DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

1. EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18" BELOW THE NOTCH ELEVATION.

2. DRIVE THE 2' x 4' CONSTRUCTION GRADE LUMBER POSTS 1' INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2' x 4' FRAME USING THE OVERLAP JOINT SHOWN ON DETAIL 6A. THE TOP OF THE FRAME (WEIR) MUST BE 6" BELOW ADJACENT ROADWAYS WHERE FLOODING AND SAFETY ISSUES MAY ARISE.

3. STRETCH THE 1/2" x 1/2" WIRE MESH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. THE ENDS MUST MEET AND OVERLAP AT A POST.

4. STRETCH THE GEOTEXTILE CLASS E TIGHTLY OVER THE WIRE MESH WITH THE GEOTEXTILE EXTENDING FROM THE TOP OF THE FRAME TO 18" BELOW THE INLET NOTCH ELEVATION. FASTEN THE GEOTEXTILE FIRMLY TO THE FRAME. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED THAN FASTENEND DOWN.

5. BACKFILL AROUND THE INLET IN COMPACTING 6" LAYERS UNTIL THE LAYER OF EARTH IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.

6. IF THE INLET IS NOT IN A SUMP, CONSTRUCT A COMPACTED EARTH DIKE ACROSS THE DITCH LINE DIRECTLY BELOW IT. THE TOP OF THE EARTH DIKE SHOULD BE AT LEAST 6" HIGHER THAN THE TOP OF THE FRAME.

7. THE STRUCTURE MUST BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND THE GEOTEXTILE REPLACED WHEN IT BECOMES CLOGGED.

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DETAIL 6B - AT GRADE INLET PROTECTION

CONSTRUCTION SPECIFICATIONS

1. LIFT GRATE AND WRAP WITH GEOTEXTILE CLASS E TO COMPLETELY COVER ALL OPENINGS, THEN SET GRATE BACK IN PLACE.

2. PLACE 3/4" TO 1 1/2" STONE. 4"-6" THICK ON THE GRATE TO SECURE THE FABRIC AND PROVIDE ADDITIONAL FILTRATION.

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DETAIL 6C - CURB INLET PROTECTION (COG OR COS INLETS)

MAX. DRAINAGE AREA = 1/4 ACRE

CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINOUS PIECE OF WIRE MESH (30" MINIMUM WIDTH BY THROAT LENGTH PLUS 4') TO THE 2" x 4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD DRAWING.

2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" x 4" WEIR.

3. SECURELY NAIL THE 2" x 4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATE BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).

4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2' LENGTHS OF 2" x 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" x 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.

5. THE ASSEMBLY SHALL BE PLACE SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.

6. FORM THE 1/2" x 1/2" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF THE CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 3/4" x 1 1/2" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.

7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.

8. ASSURE THAT THE STORM FLOW DOES NOT BYPASS THE INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE TO DIRECT THE FLOW TO THE INLET.

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DETAIL 6E - AT GRADE INLET GUARD

* AT EACH INTERSECTION OF INLET PROTECTOR OVERLAP A MINIMUM OF 2"

- THE TOP MEASUREMENT OF 7-1/2" IS SET TO PROVIDE A 2" EXTENTION FOR OVERFLOW WHILE AVOIDING BLOCKAGE OF THE MANHOLE COVER.
- MAKE A WATERTIGHT CONNECTION ALONG THE SIDES AND BOTTOM OF THE INLET GUARD WITH THE STREET AND CURB.

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DETAIL 9 - EARTH DIKE

	DIKE A	DIKE B
a–DIKE HEIGHT	18"	30"
b–DIKE WIDTH	24"	36"
c–FLOW WIDTH	4'	6'
d–FLOW DEPTH	12"	24"

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

1. SEED AND COVER WITH STRAW MULCH.
2. SEED AND COVER WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.
3. 4"-7" STONE OR RECYCLED CONCRETE EQUIVALENT PRESSED INTO THE SOIL 7" MINIMUM.

CONSTRUCTION SPECIFICATIONS

1. ALL TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.

2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.

4. ALL TREES, BRUSH, STAMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE.

5. THE DIKE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPEDE NORMAL FLOW.

6. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.

7. ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.

8. INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

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DETAIL 11 - PERIMETER DIKE / SWALE

STABILIZATION
PD/S-1 SEED AND MULCH (DRAINAGE ≤ 1 ACRE)
PD/S-2 SEED AND COVER WITH SOIL STABILIZATION MATTING OR LINE WITH SOD (DRAINAGE BETWEEN 1 AND 2 ACRES)

CONSTRUCTION SPECIFICATIONS

1. ALL PERIMETER DIKE/SWALES SHALL HAVE AN UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.

2. RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.

3. RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET INTO AN UNDISTURBED STABILIZED AREA AT A NON-EROSIVE VELOCITY.

4. THE SWALE SHALL BE EXCAVATED OR SHAPED TO LINE, GRADE, AND CROSS-SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED IN THE STANDARD.

5. FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.

6. STABILIZATION WITH SEED AND MULCH OR AS SPECIFIED OF THE AREA DISTURBED BY THE DIKE AND SWALE SHALL BE COMPLETED WITHIN 7 DAYS UPON REMOVAL.

7. INSPECTION AND REQUIRED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN EVENT.

NOTE: THE MAXIMUM DRAINAGE FOR THIS PRACTICE IS 2 ACRES.

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DETAIL 12 - PIPE OUTLET SEDIMENT TRAP - ST I

NOTE: RISER EMBEDDED 9" INTO CONCRETE OR 1/4" STEEL PLATE ATTACHED TO RISER WITH A CONTINUOUS WELD ON BOTTOM AND 2' OF STONE PLACED ON STEEL PLATE TWICE THE RISER DIAMETER (MIN.)

CONSTRUCTION SPECIFICATIONS

1. THE AREA UNDER THE EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.

2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

3. THE TOTAL VOLUME AS MEASURED FROM THE BOTTOM TO RISER CREST ELEVATION SHALL BE 3600 CUBIC FEET PER ACRE OF DRAINAGE AREA (SEE TABLE 11). THE TOP OF EMBANKMENT MUST BE ≥ 1' ABOVE THE RISER CREST ELEVATION.

4. SEDIMENT SHALL BE REMOVED AND THE TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE WET STORAGE DEPTH OF THE TRAP (900 CF/AC). THE SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

5. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRS.

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PIPE OUTLET SEDIMENT TRAP - ST I

6. CONSTRUCTION OPERATIONS SHALL BE CARRIED CUT IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE USING THE LIFE OF THE TRAP.

7. THE STRUCTURE SHALL BE REMOVED AND AREA STABLIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

8. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.

9. ALL PIPE CONNECTIONS SHALL BE WATERTIGHT.

10. ABOVE THE WET STORAGE ELEVATION, THE RISER SHALL BE PERFORATED WITH 1/2" WIDE BY 6" LONG SLITS OR 1" DIAMETER HOLES SPACED 6" VERTICALLY AND HORIZONTALLY. NO PERFORATIONS WILL BE ALLOWED WITHIN 6" OF THE HORIZONTAL BARREL.

11. THE RISER SHALL BE WRAPPED WITH 1/2" HARDWARE CLOTH (WIRE) THEN WRAPPED WITH GEOTEXTILE CLASS E. THE FILTER CLOTH SHALL EXTEND 6" ABOVE THE HIGHEST SLIT AND 6" BELOW THE LOWEST SLIT. WHERE ENDS OF FILTER CLOTH COME TOGETHER, ,THEY SHALL BE OVERLAPPED, FOLDED AND FASTENED TO PREVENT BYPASS. FILTER CLOTH SHALL BE REPLACED AS NECESSARY TO PREVENT CLOGGING.

12. STRAPS OR CONNECTING BANDS SHALL BE USED TO HOLD THE FILTER CLOTH AND WIRE FABRIC IN PLACE. THEY SHALL BE PLACED AT THE TOP AND BOTTOM OF THE CLOTH.

13. FILL MATERIAL AROUND THE PIPE SPILLWAY SHALL BE HAND COMPACTED IN 4" LAYERS. A MINIMUM OF 2' OF HAND-COMPACTED BACKFILL SHALL BE PLACED OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.

14. THE RISER SHALL BE ANCHORED WITH EITHER A CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. CONCRETE BASES SHALL BE AT LEAST TWICE THE RISER DIAMETER, 1/4" MINIMUM THICKNESS AND ATTACHED TO THE BOTTOM OF THE RISER BY A CONTINUOUS WELD TO FORM A WATERTIGHT CONNECTION. THEN PLACE 2' OF STONE, GRAVEL OR TAMPED EARTH ON THE PLATE.

15. ANTI SEEP COLLARS SHALL BE CONSTRUCTED IN ACCORDANCE WITH PLANS (REF. TABLE 18 AND DETAILS 17 AND 18).

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DETAIL 13 - STONE OUTLET SEDIMENT TRAP - ST II

NOTE: MAXIMUM D.A. = 5 AC.

CONSTRUCTION SPECIFICATIONS

1. AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.

2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS AND OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.

3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.

4. THE STONE USED IN THE OUTLET SHALL BE SMALL RIP-RAP 4" TO 7" IN SIZE WITH A 1" THICK LAYER OF 3/4" TO 1 1/2" WASHED AGGREGATE PLACED ON THE UPSTREAM FACE OF THE OUTLET. STONE FACING SHALL BE AS NECESSARY TO PREVENT CLOGGING. GEOTEXTILE CLASS SE MAY BE SUBSTITUTED FOR THE STONE FACING BY PLACING IT ON THE INSIDE FACE OF THE STONE OUTLET.

5. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO ONE HALF OF THE WET STORAGE DEPTH OF THE TRAP. REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

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STONE OUTLET SEDIMENT TRAP - ST II

6. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRS MADE AS NEEDED.

7. CONSTRUCTION OF TRAPS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT POLLUTION IS ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATION INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TOP.

8. THE STRUCTURE SHALL BE DEWATERED BY APPROVED METHODS. REMOVED AND THE AREA STABLIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

9. REFER TO SECTION G FOR SPECIFICATIONS CONCERNING TRAP DEWATERING.

10. MINIMUM TRAP DEPTH SHALL BE MEASURED FROM THE WEIR ELEVATION.

11. THE ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO THE TRAP MUST EQUAL OR EXCEED THE ELEVATION OF THE TRAP EMBANKMENT.

12. GEOTEXTILE CLASS SE SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO THE PLACEMENT OF STONE. SECTIONS OF FILTER CLOTH MUST OVERLAP AT LEAST 1' WITH THE SECTION NEAREST THE ENTRANCE PLACED ON TOP. THE FILTER CLOTH SHALL BE EMBEDDED AT LEAST 6" INTO EXISTING GROUND AT THE ENTRANCE OF THE OUTLET CHANNEL.

13. OUTLET – AN OUTLET SHALL BE PROVIDED, INCLUDING A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL.

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DETAIL 14 - RIP-RAP OUTLET SEDIMENT TRAP - ST III

NOTE: MAXIMUM DRAINAGE AREA = 10 AC.

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RIP-RAP OUTLET SEDIMENT TRAP - ST III

1. THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.

2. THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE 4', MEASURED AT CENTERLINE OF EMBANKMENT.

3. ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.

4. ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF TRAP EMBANKMENT.

5. STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME MEASURED FROM TOP OF EXCAVATION. (FOR STORAGE REQUIREMENTS SEE TABLE 12).

6. FILTER CLOTH SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTION OF FABRIC MUST OVERLAP AT LEAST 1' WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST 6" INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.

7. STONE USED IN THE OUTLET CHANNEL SHALL BE 4" – 12" PLACED 18" THICK.

8. OUTLET – AN OUTLET SHALL BE PROVIDED, WHICH INCLUDES A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL. PROTECTION AGAINST SCOUR AT THE DISCHARGE END SHALL BE PROVIDED AS NECESSARY.

9. OUTLET CHANNEL MUST HAVE POSITIVE DRAINAGE FROM THE TRAP.

10. SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/4 OF THE WET STORAGE DEPTH OF THE TRAP (1350 cf/ac). REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE.

11. THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AND AFTER EACH RAIN AND REPAIRED AS NEEDED.

12. CONSTRUCTION OF TRAPS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT POLLUTION IS ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.

13. THE STRUCTURE SHALL BE DEWATERED BY APPROVED METHODS, REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE B-14-16	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

DETAIL 22 - SEDIMENT BASIN/TRAP BAFFLES

$L_e = L_1 + L_2$

$L_e = L_1 + L_2 + L_3 + L_4$

$L_e = L_1 + L_2 + L_3 + L_4$

D = DISTANCE BETWEEN INFLOW AND OUTFLOW
A = AREA OF PERMANENT POOL
W_e = EFFECTIVE WIDTH
L_e = TOTAL DISTANCE FROM THE INFLOW POINT AROUND THE BAFFLES TO THE RISER

FORMULA: $W_e = (A/2)^{1/2}$
$L_e \geq W_e \times 2$

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE D-15-32	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

DETAIL 34 - PORTABLE SEDIMENT TANK (HORIZONTAL)

SOURCE: USDA – SCS

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE G-26-3	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

DETAIL 35 - PORTABLE SEDIMENT TANK (VERTICAL)

CONSTRUCTION SPECIFICATIONS

1. THE FOLLOWING FORMULA SHOULD BE USED IN DETERMINING THE STORAGE VOLUME OF THE SEDIMENT TANK: 1 CUBIC FOOT OF STORAGE FOR EACH GALLON PER MINUTE OF PUMP DISCHARGE CAPACITY.

2. AN EXAMPLE OF A TYPICAL SEDIMENT TANK IS SHOWN ABOVE. OTHER CONTAINER DESIGNS CAN BE USED IF THE STORAGE VOLUME IS ADEQUATE AND APPROVAL IS OBTAINED FROM THE LOCAL APPROVING AGENCY.

3. TANKS MAY BE CONNECTED IN SERIES.

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE G-26-4	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

DETAIL 74 - TREE PROTECTION

NOTE: ALL PROTECTIVE FENCING SHALL EXTEND BEYOND THE TREE DRIPLINE

NOTE: ALL PROTECTIVE FENCING SHALL EXTEND BEYOND THE TREE DRIPLINE

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCE CONSERVATION SERVICE	PAGE K-43-3	WATERSHED PROTECTION DIVISION DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH

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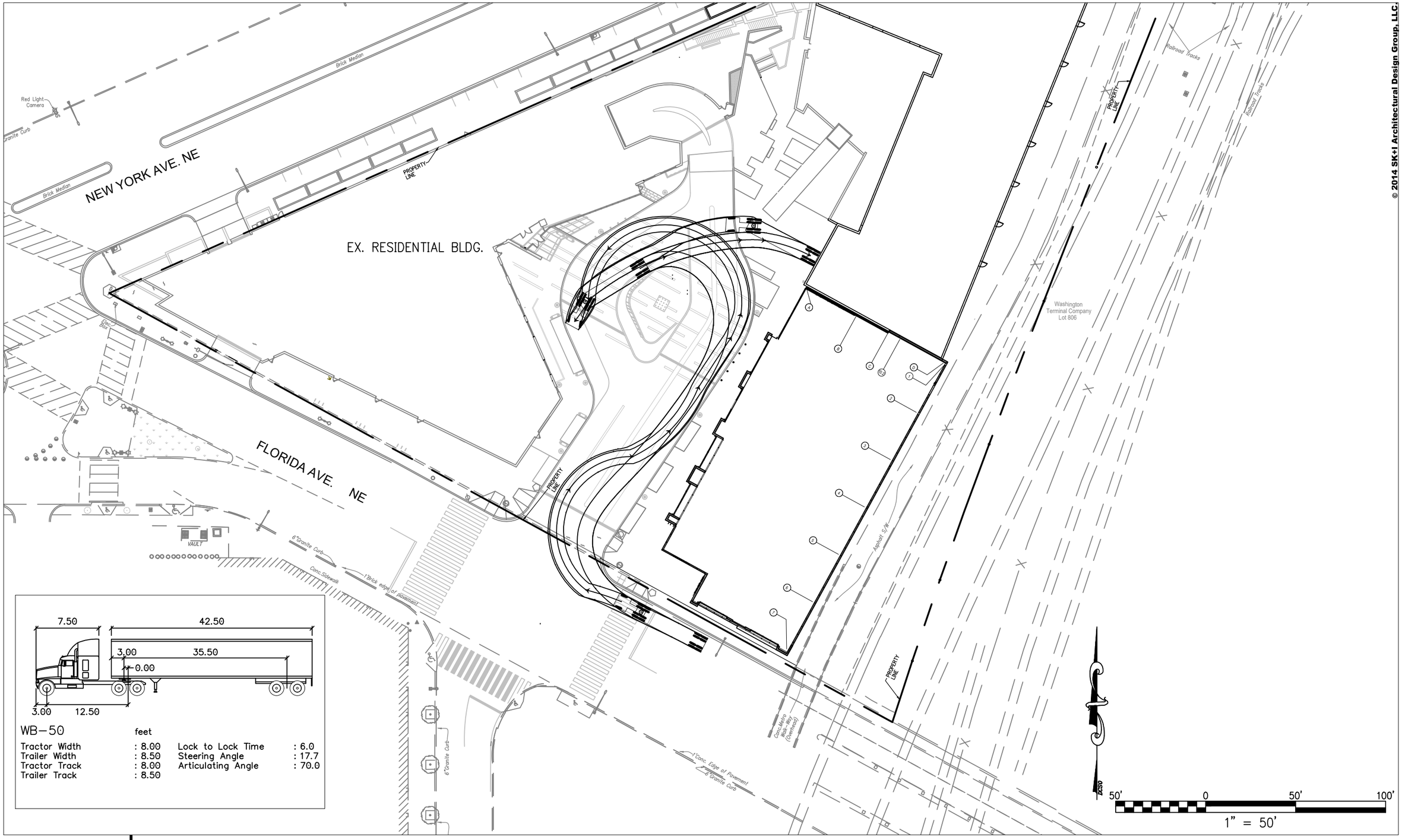
ARCHITECTURE

Washington Gateway | Washington, DC
Erosion & Sediment Control Details

December 30, 2016

C-503

P:\2008\053_WashGW\CAD\ENG\dwg\WG PUD Residential-Office_Sheets\C-503 E&SC Details.dwg, 12/20/2016 1:20:17 PM, yhan



WB–50 feet

Tractor Width	: 8.00	Lock to Lock Time	: 6.0
Trailer Width	: 8.50	Steering Angle	: 17.7
Tractor Track	: 8.00	Articulating Angle	: 70.0
Trailer Track	: 8.50		

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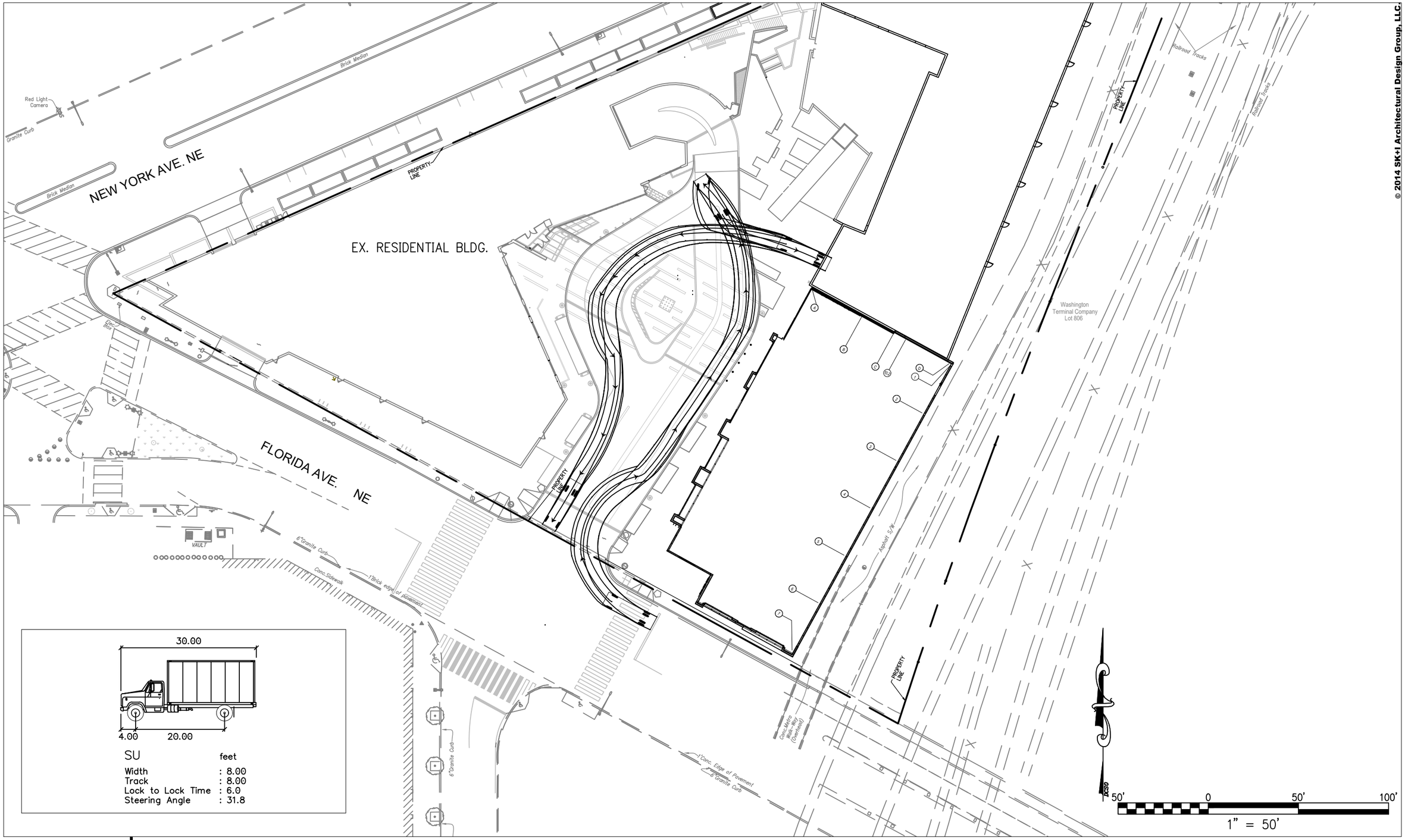
Truck Turning Plan WB-50

December 30, 2016 | **C-601A**

SK+I ARCHITECTURE



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Truck Turning Plan SU

December 30, 2016 | **C-601B**

SK+I ARCHITECTURE

LEGEND:

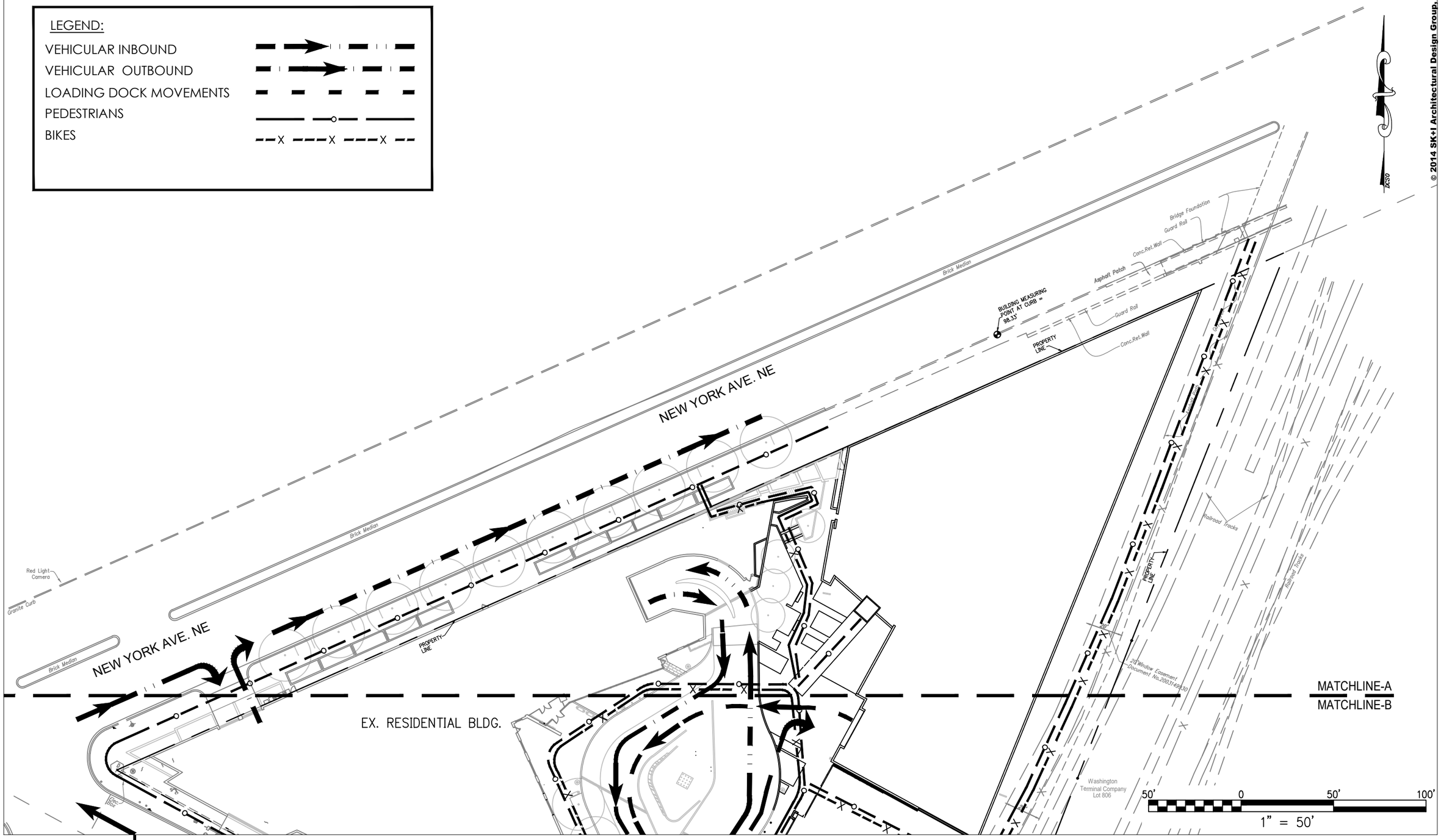
VEHICULAR INBOUND

VEHICULAR OUTBOUND

LOADING DOCK MOVEMENTS

PEDESTRIANS

BIKES



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Circulation Plan A

December 30, 2016 | **C-602A**

SK+I ARCHITECTURE

NEW YORK AVE. NE

FLORIDA AVE. NE

EX. RESIDENTIAL BLDG.

MATCHLINE-A
MATCHLINE-B

Red Light Camera

Granite Curb

Brick Median

PROPERTY LINE

VAULT

6"Granite Curb

Conc.Sidewalk

1'Brick edge of Basement

1'Conc. Edge of Pavement

6"Granite Curb

Edge of Pavement

Conc.Ret. Wall

Washington Terminal Company Lot 806

24' Window Easement Document No.2003141439

Railroad Tracks

Conc.Ret. Wall

Conc.Ret. Wall (overhead)

LEGEND:

VEHICULAR INBOUND

VEHICULAR OUTBOUND

LOADING DOCK MOVEMENTS

PEDESTRIANS

BIKES

50' 0 50' 100'

1" = 50'

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Washington Gateway | Washington, DC

Circulation Plan B

December 30, 2016 | **C-602B**

SK+I ARCHITECTURE

STORMWATER MANAGEMENT NARRATIVE:

THE PROJECT WILL BE UNDER THE 2013 STORMWATER MANAGEMENT REQUIREMENTS PER THE DEPARTMENT OF ENERGY AND ENVIRONMENT. THIS WILL BE A MAJOR LAND DISTURBING ACTIVITY, THEREFORE, THE SITE WILL RETAIN THE FIRST 1.2" OF RAINFALL. GREEN ROOF WILL BE USED TO MEET THE SITE RETENTION AND DETENTION REQUIREMENTS.

GENERAL NOTE:

1. REFER TO ARCHITECTURAL DRAWINGS FOR WATERPROOFING OF SWM STRUCTURE.
2. REFER TO LANDSCAPE DRAWINGS FOR GREEN ROOF DETAILS.
3. REFER TO LANDSCAPE AND ARCHITECTURAL FOR PLANT MATERIALS.
4. REFER TO LANDSCAPE DRAWINGS FOR GREEN ROOF MAINTENANCE NOTES.

NOTE:

"NO PERMITTED STORM WATER BMP IS COMPLETE UNTIL FINAL INSPECTION HAS BEEN CONDUCTED AND AN AS-BUILT PLAN HAS BEEN SUBMITTED TO THE DOEE WITHIN 21 DAYS AFTER FINAL INSPECTION FOR REVIEW AND APPROVAL."

GREEN ROOF INSTALLATION

GIVEN THE DIVERSITY OF EXTENSIVE VEGETATED ROOF DESIGNS, THERE IS NO TYPICAL STEP-BY-STEP CONSTRUCTION SEQUENCE FOR PROPER INSTALLATION. THE FOLLOWING GENERAL CONSTRUCTION CONSIDERATIONS ARE NOTED:

- CONSTRUCT THE ROOF DECK WITH THE APPROPRIATE SLOPE AND MATERIAL.
- INSTALL THE WATERPROOFING METHOD, ACCORDING TO MANUFACTURER⁶S SPECIFICATIONS.
- CONDUCT A FLOOD TEST TO ENSURE THE SYSTEM IS WATERTIGHT BY PLACING AT LEAST 2 INCHES OF WATER OVER THE MEMBRANE FOR 48 HOURS TO CONFIRM THE INTEGRITY OF THE WATERPROOFING SYSTEM. ALTERNATELY, ELECTRIC FIELD VECTOR MAPPING (EFVM) CAN BE DONE TO TEST FOR THE PRESENCE OF LEAKS; HOWEVER, NOT ALL IMPERMEABLE MEMBRANES ARE TESTABLE WITH THIS METHOD. PROBLEMS
- HAVE BEEN NOTED WITH THE USE OF EFVM ON BLACK EPDM AND WITH ALUMINIZED PROTECTIVE COATINGS COMMONLY USED IN CONJUNCTION WITH MODIFIED BITUMINOUS MEMBRANES.
- ADD ADDITIONAL SYSTEM COMPONENTS (E.G., INSULATION, ROOT BARRIER, DRAINAGE LAYER AND INTERIOR DRAINAGE SYSTEM, AND FILTER FABRIC) PER THE MANUFACTURER'S SPECIFICATIONS, TAKING CARE NOT TO DAMAGE THE WATERPROOFING. ANY DAMAGE OCCURRING MUST BE REPORTED IMMEDIATELY. DRAIN COLLARS AND PROTECTIVE FLASHING SHOULD BE INSTALLED TO ENSURE FREE FLOW OF EXCESS STORMWATER.
- THE GROWING MEDIA SHOULD BE MIXED PRIOR TO DELIVERY TO THE SITE. MEDIA MUST BE SPREAD EVENLY OVER THE FILTER FABRIC SURFACE AS REQUIRED BY THE MANUFACTURER. IF A DELAY BETWEEN THE INSTALLATION OF THE GROWING MEDIA AND THE PLANTS IS REQUIRED, ADEQUATE EFFORTS MUST BE TAKEN TO SECURE THE GROWING MEDIA FROM EROSION AND THE SEEDING OF WEEDS. THE GROWING MEDIA MUST BE COVERED AND ANCHORED IN PLACE UNTIL PLANTING. SHEETS OF EXTERIOR GRADE PLYWOOD CAN ALSO BE LAID OVER THE GROWING MEDIA TO ACCOMMODATE FOOT OR WHEELBARROW TRAFFIC. FOOT TRAFFIC AND EQUIPMENT TRAFFIC SHOULD BE LIMITED OVER THE GROWING MEDIA TO REDUCE COMPACTION BEYOND MANUFACTURER'S RECOMMENDATIONS.
- THE GROWING MEDIA SHOULD BE MOISTENED PRIOR TO PLANTING, AND THEN PLANTED WITH THE GROUND COVER AND OTHER PLANT MATERIALS, PER THE PLANTING PLAN OR IN ACCORDANCE WITH ASTM E2400. PLANTS SHOULD BE WATERED IMMEDIATELY AFTER INSTALLATION AND ROUTINELY DURING ESTABLISHMENT.
- IT GENERALLY TAKES 2 TO 3 GROWING SEASONS TO FULLY ESTABLISH THE VEGETATED ROOF. THE GROWING MEDIUM SHOULD CONTAIN ENOUGH ORGANIC MATTER TO SUPPORT PLANTS FOR THE FIRST GROWING SEASON, SO INITIAL FERTILIZATION IS NOT REQUIRED. EXTENSIVE GREEN ROOFS MAY REQUIRE SUPPLEMENTAL IRRIGATION DURING THE FIRST FEW MONTHS OF ESTABLISHMENT. HAND WEEDING IS ALSO CRITICAL IN THE FIRST TWO YEARS.

WMC
WILES MENSCH CORPORATION

INITIAL STORMWATER MANAGEMENT ANALYSIS

Washinton Gateway

4/29/2016

TOTAL SITE AREA:		59,779 SF
	Impervious Area	39,052 SF
	Compacted Cover	3,322 SF
	BMP Area	17,405 SF
TOTAL RETENTION VOLUME REQUIRED:		5,446 CF

	Media Depth (INCHES)	Area of Green Roof (SF)	Storage Capacity of Green Roof (CF)	Additional Area Draining to Green Roof (SF)	Maximum Retention Volume To BMP (CF)	Retention Value (CF)
Extensive Green Roof	6	15,539	3,432	-	2,091	2,091
Intensive Green Roof	8	1,866	536	-	251	251
TOTAL		**17,405**	**3,968**	**-**	**2,342**	**2,342**

** Site Area and Green Roof Depths and Areas Taken From Oculus GAR Diagram Dated 4/15/16*

STORMWATER MANAGEMENT NARRATIVE:
MAXIMUM EXTENT PRACTICABLE IN THE PROW

THE PUBLIC RIGHT OF WAY PORTION OF THIS PROJECT WILL BE UNDER THE 2013 STORMWATER MANAGEMENT REQUIREMENTS PER THE DEPARTMENT OF ENERGY AND ENVIRONMENT. THE SITE WILL MEET THE PROW RETENTION REQUIREMENTS TO THE MAXIMUM EXTENT PRACTICABLE.

GREEN ROOF NOTE:

FERTILIZER IS NOT RECOMMENDED. IF APPLIED, THE FERTILIZER MUST BE A SLOW RELEASE TYPE, RATHER THAN LIQUID OR GASEOUS FORM.

NEW YORK AVE. NE
(120' WIDE PUBLIC STREET)

(80' Wide Public Street)

PROPERTY LINE

GREEN ROOF

GREEN ROOF

GREEN ROOF

BUILDING MEASURING POINT #1 98.33' AT CURB

Conc. Edge of Pavement at Private Curb

Conc. Metro Walk-Way (Overhead)

Asphalt S/W

Bridge Median

Asphalt Patch

Guard Rail

Bridge Foundation

Guard Rail

Asphalt Path

Washington Terminal Company Lot 806

Railroad Tracks

Railroad Tracks

DC50

LEGEND:

COMPACTED COVER (LANDSCAPE AREA)

INTENSIVE GREEN ROOF (8" MIN) DEPTH

EXTENSIVE GREEN ROOF (6" DEPTH)

50' 0 50' 100'

1" = 50'

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Stormwater Management Plan B

December 30, 2016 | **C-701B**

SK+I ARCHITECTURE