

SPOT SHOT LEGEND

XXXX FINISHED FLOOR SPOT

 $XX\frac{XX}{G} \times$ GROUND SPOT

 $XX\frac{XX}{TC} \times$ TOP OF CURB SPOT

 $XX_{BC}^{XX} \times$ BOTTOM OF CURB SPOT

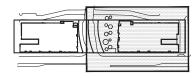
 $XX\frac{XX}{TW} \times$ TOP OF WALL SPOT

XXXX BOTTOM OF WALL SPOT

XXXX TOP OF STEPS SPOT

XXXX BOTTOM OF STEPS SPOT

XXXX/MAT × MATCH EXISTING SPOT





SOUTHEAST + SOUTHWEST M STREET PARCELS

Perkins Eastman **DC**

Bowman

CIVIL - GRADING PLAN - EAST BLDG (375) 375 & 425**40 NINGECOMMISS**

425 M STREET SW UTILITY NARRATIVE THE REDEVELOPMENT OF 425 M STREET SW WILL INCLUDE NEW UTILITIES SERVICING THE SITE. NEW DOMESTIC AND FIRE PROTECTION SERVICES WILL BE PROVIDED BY A SERIONT CONNECTION FROM THE EXISTING 8" WATER MAIN IN M STREET SW. NEW SANITARY HARDE COMPANY USA CONNECTION WILL TIE INTO THE EXISTING 10" SANITARY SEWER MAIN WITHIN THE WESTERN LIMITS OF THE PROPERTY. STORMWATER SERVICE WILL BE PROVIDED FROM A CONNECTION TO AN EXISTING 18" STORM SEWER MAIN IN 4TH STREET SW. NOTE: INSIDE WATER METER TO BE PENDING COORDINATION BETWEEN DC WATER AND THE OWNER. EXTERNAL WATER METER VAULT MAY BE ADDED TO THE PLAN DURING FINAL ENGINEERING PHASE.

UTILITY KEYNOTES

- 1 NEW ELECTRICAL TRANSFORMERS.
- 2 NEW 4" DIP DOMESTIC SERVICE.
- 3 NEW 6" DIP FIRE SERVICE.
- 4 NEW 6" WATER VALVE.
- 5 NEW 6" x 4" REDUCER.
- 6 NEW 8" x 6" TEE WITH THRUST BLOCK.
- 7 NEW 8" PVC SDR-35 SANITARY LATERAL.
- 8 NEW 15" RCP CL IV STORM LATERAL.
- 9 NEW DOGHOUSE MANHOLE.
- 10 NEW CONNECTION TO EXISTING MANHOLE.
- 11 NEW GRATE INLET.
- 12 NEW PRIVATE 12" PVC SCH-40 STORM.
- 13 NEW 45° BEND.
- 14 NEW CLEANOUT MANHOLE.

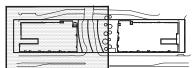
WATER AND SEWER DEMAND (425 M STREET SW)

WATER

(170 GPD PER UNIT X 301 UNITS) + (14.4 GPD PER SF X 16,580 SF) + (0.288 GPD PER SF X 16,040 SF) = 294,542 GPD

294,542 GPD = 0.46 CFS

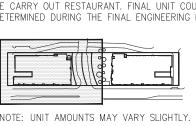
DEMANDS ARE BASED ON AVERAGE WASTEWATER FLOW FACTOR PER WSSC PIPELINE DESIGN MANUAL OF 2008. ALL RETAIL IS ASSUMED TO BE CARRY OUT RESTAURANT. FINAL UNIT COUNTS WILL BE DETERMINED DURING THE FINAL ENGINEERING PHASE.



NOTE: UNIT AMOUNTS MAY VARY SLIGHTLY. REFER









LOT 8

SW

8

LOT 833 7,020 SF

4TH STREET (PRIVATE) 90' WI

A=147.60 Δ=31°05'28

A=154.63 Δ=27°56'5

R=362.0

A=150.48

14

N=5 0' A=5 11 Δ=58°33'57"

R=18.

Δ=23°49'05"

SOUTHEAST + SOUTHWEST M STREET PARCELS

GRAPHIC SCALE 1" = 40'

LOT 827

1101 ATH STREET SW OWNER: N/F USOBE WATERFRONT STATION LLC USAA REAL ESTATE COMPANY

LOT 826

SQUARE 542

46,768 SF

425 M STREET SW

V (OBSERVED) - DUE WEST (RECORI

M STREET SW (PUBLIC)

120' ROW

PPROX LIMITS OF WMATA WATERFRONT STATION

"SKYHOUSE WEST" CONDOS

2518-2781 KILLED TAX LOT 829 12/30/2014

<u>/ 11</u>

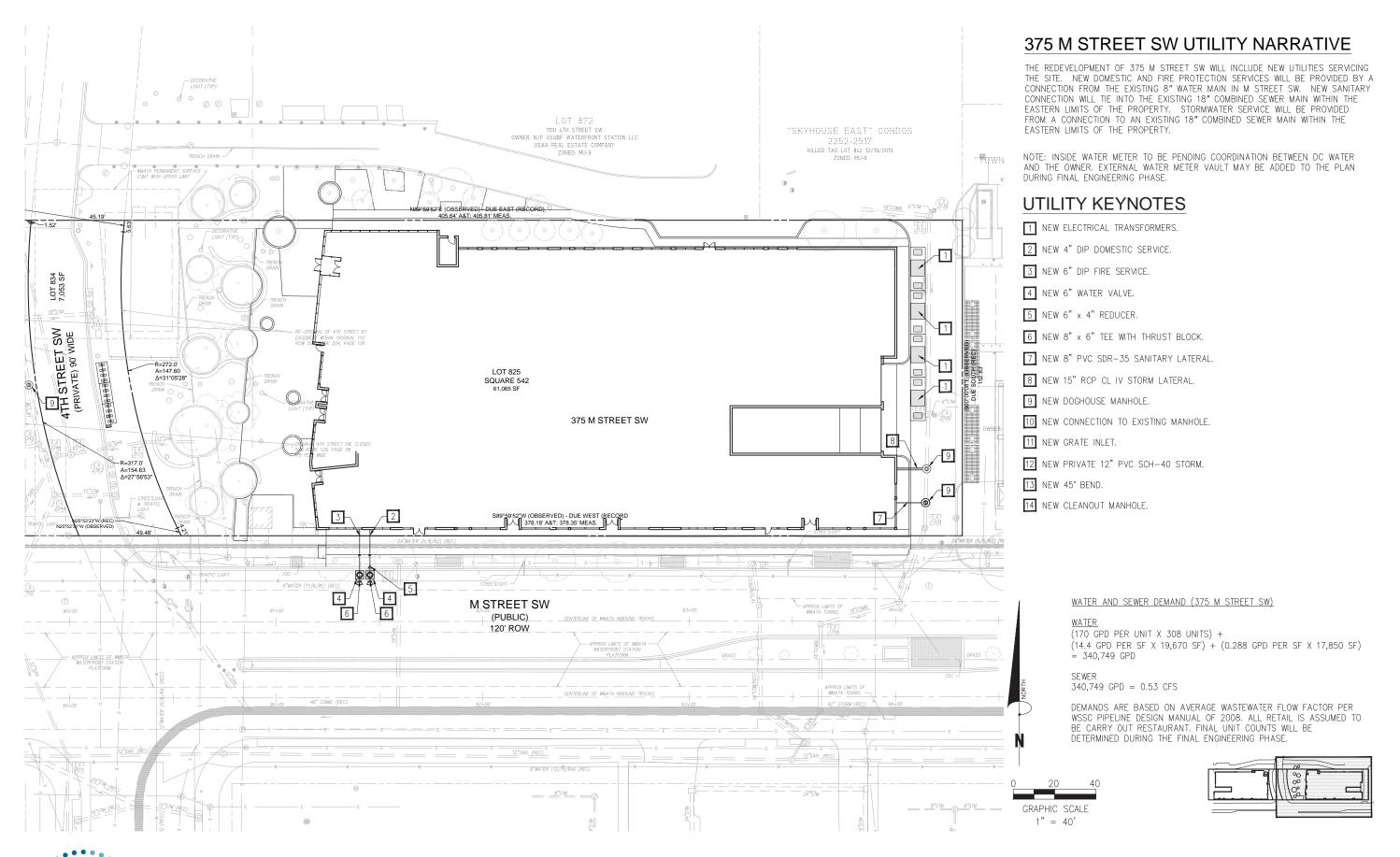
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~10

CENTERLINE OF WMATA INBOUND TRACKS





CIVIL - UTILITY PLAN - EAST BLDG (375)

SOUTHEAST + SOUTHWEST M STREET PARCELS

DOEE SOIL EROSION AND SEDIMENT CONTROL PLAN **GENERAL NOTES**

- FOLLOWING INITIAL LAND DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR INTERIM STABILIZATION MUST BE COMPLETED WITHIN SEVEN (7) CALEDWAR DAYS FOR THE SURFACES OF ALL PERMATER CONTROLS, DIKES, SWALES, DITCHES, PERMETER SLOYES, AND SLOYES GREATER THAN THREE (3) HORZOTHAL TO DOKE (1) SWIELD, INDIGES, PRIMITED SOFES, AND SOFES OF STREET STREET OF THE OF THE OWN AND THE PROJECT SITE. THESE RECUIREMENTS DO NOT APPLY TO AREAS SHOWN ON THE PEAN THAT ARE USED FOR MATERIAL STORAGE OTHER THAN STOCKPILLED, OF FOR THOSE SHEES ON THE PEAN THAT ARE USED FOR MATERIAL ACTIVITIES ARE BEING PERFORMED. MAINTENANCE SHALL BE PERFORMED AS NECESSARY SO THAT STABILIZED AREAS CONTINUOUSLY WEET THE APPROPRIATE REQUIREMENTS OF THE DISTRICT OF CONTINUOUSLY WEET THE APPROPRIATE REQUIREMENTS OF THE DISTRICT OF COUNTRY. AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL (ESC)
- 2. ESC MEASURES SHALL BE IN PLACE BEFORE AND DURING LAND DISTURBANCE.
- CONTACT DOEE INSPECTION (202) 535-2977 TO SCHEDULE A PRECONSTRUCTION MEETING AT LEAST THREE (3) BUSINESS DAYS BEFORE THE COMMENCEMENT OF A LAND-DISTURBING ACTIVITY.
- 4. A COPY OF THE APPROVED PLAN SET WILL BE MAINTAINED AT THE CONSTRUCTION SITE FROM THE DATE THAT CONSTRUCTION ACTIVITIES BEGIN TO THE DATE OF FINAL STABILIZATION AND WILL BE AVAILABLE FOR
- 5. ESC MEASURES SHALL BE IN PLACE TO STABILIZE AND EXPOSED AREA AS SOON AS PRACTICABLE AFTER CONSTRUCTION ACTIVITY HAS TEMPORABILY OR PERMANENTLY CEASED BUT NO LATER THAN FOURTEEN (14) DAYS FOLLOWING CESSATION, EXCEPT THAT TEMPORARY OR PERMANENT STABILIZATION SHALL BE: IN PLACE AT THE END OF EACH DAY OF UNDERGROUND UTILITY WORK THAT IS NOT CONTAINED WITHIN A LARGER DEVELOPMENT SITE.
- STOCKPILED MATERIAL BEING ACTIVELY USED DURING A PHASE OF CONSTRUCTION SHALL BE PROTECTED AGAINST EROSION BY ESTABLISHING AND MAINTAINING PERIMETER CONTROLS AROUND THE STOCKPILE.
- STOCKPILED MATERIAL NOT BEING ACTIVELY USED OR ADDED TO SHALL BE STABILIZED WITH MULCH, TEMPORARY VECETATION, HYDRO-SEED OR PLASTIC WITHIN FIFTEEN (15) CALENDAR DAYS AFTER ITS LAST USE OR ADDITION.
- 8. PROTECT BEST MANAGEMENT PRACTICES FROM SEDIMENTATION AND OTHER DAMAGE DURING CONSTRUCTION FOR PROPER POST CONSTRUCTION OPFRATION.
- REQUEST A DOEE INSPECTOR'S APPROVAL AFTER THE INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING.
- REQUEST A DOSE INSPECTOR'S APPROVAL AFTER FINAL STABILIZATION OF THE SITE AND BEFORE THE REMOVAL OR EROSION AND SEDIMENT CONTROLS.
- 11. Final stabilization means that all land-disturbing activities at the site have been completed and either of the following gritera have been met; (1) a uniform (for example, evenly distribute), without large bare areas) perennal vectative cover with a density of seventy percent (70%) of the native background vectative cover for the area have been established on all unpaved areas and areas not covered by permaken's tricutures, or (2) counvality termannent stabilization measures have been employed (such as the use of riprap, gabions, or geotextiles).
- 12. FOLLOW THE REQUIREMENTS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY APPROVED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) AND MAINTAIN A LEGIBLE COPY OF THIS SWPPP ON SITE.
- 13. POST A SIGN THAT NOTIFIES THE PUBLIC TO CONTACT DOEE IN THE EVENT OF EROSION OR OTHER POLUTION. THE SIGN WILL BE PLACED AT EACH ENTRANCE TO THE SITE OF AS DIRECTED BY THE DOEE INSPECTIOR, EACH SIGN WILL BE LESS THAM I BY 22 RICHOLES IN SIZE AND MABE OF MATERIALS THAT WILL WITHSTAND WEATHER FOR THE DURATION OF THE PROJECT, LETTERNOW WILL BE AT LEAST I NOT IN HOIGHT AND EASILY PERDADALE BY HE PUBLIC FROM A DISTANCE OF THEMEVE FEET (12 FT). THE SIGN MUST DISTANCE OF THE SIZE OF TH THE FUBLIC, IN SUBSTANTIALLY THE FOLLOWING FORM: "TO REPORT EROSION, RUNGEF, OR STORMWATER POLLUTION" AND WILL PROVIDE THE CONSTRUCTION ADDRESS, DOEE'S TELEPHONE NUMBER (202–535–2977), DOEE'S DAILA ADDRESS (RES.OFEULURGBOC.GOV), AND THE 311 MOBILE APP HEADING ("CONSTRUCTION—EROSION RUNOFF").

IF A SITE DISTURBS 5,000 SQUARE FEET OF LAND OR GREATER, THE ESC PLAN MUST CONTAIN THE FOLLOWING STATEMENT:

14. A RESPONSIBLE PERSON MUST BE PRESENT OR AVAILABLE WHILE THE SITE IS IN A LAND-DISTURBING PHASE. THE RESPONSIBLE PERSON IS CHARGED WITH BEING AVAILABLE TO (A) INSPECT THE SITE AND ITS ESC MEASURES AT LEAST ONCE BINERLY AND AFTER A RAINFALL EVENT TO IDENTIFY AND REMEDY EACH POTENTIAL OR ACTUAL EROSION PROBLEM. (B) RESPOND TO EACH POTENTIAL OR ACTUAL EROSION PROBLEM. (B) CSPEAR ON SITE WITH DOES TO REMEDY EACH POTENTIAL OR ACTUAL EROSION PROBLEM. A RESPONSIBLE PERSON SHALL BE (A) LICENSED IN THE DISTRICT OF COLUMBIA AS A CHUL OR CEDECHNICAL ENORIES, A LAND SURVEYOR, OR AGHIETIC OR (B) CERTIFIED THROUGH A TRAINING PROGRAM THAT DOEE APPROVES, INCLUDING A COURSE ON REOSION CONTROL PROVIDED BY MOTHER JUSTICIONAL OF THE PROTOS ESSIONAL ASSOCIATION, DURING CONSTRUCTION, THE RESPONSIBLE PERSON SHALL REEP ON SITE PROTO OF PROTOCESSIONAL SIDE OF A DOES APPORTED THE OWNER OF A DOES APPORTED THROUGH AT THE PROPOSED BY ANOTHER JUSTICIONAL OF THE PROTO OF PROFESSIONAL SIDE OF A DOES APPORTED THE PROSPECTION OF A DOES APPORTED THROUGH AT THE PROPOSED AS ASSOCIATION, DURING CONSTRUCTION, THE RESPONSIBLE PERSON SHALL REEP ON SITE PROTO OF PROFESSIONAL LICENSING OR OF SUCCESSFUL COMPLETION OF A DOES APPORTED THROUGH AT THE PROPOSEMIA.

STREET SWEEPING

- STREETS WITHIN ONE MILE (1.6km) SHALL BE INSPECTED DAILY, ANY DROPPED SOIL, DUST AND/OR DEBRIS
 SHALL BE REMOVED.
- VACUUM TYPE STREET CLEANER SHALL BE USED TO EFFECTIVELY REMOVE TOTAL DUST AND DIRT ON PAVED SURFACES.
- ROADS SHALL BE SWEPT ON A WEEKLY BASIS (MINIMUM) DURING ALL ON AND OFF-SITE HAULING OPERATIONS FOR UP TO ONE MILE

2.0 STANDARDS AND SPECIFICATIONS FOR STABLIZED CONSTRUCION ENTRANCE WITH WASH

<u>DEFINITION:</u> A STABILIZED LAYER OF AGGREGATE, THAT IS UNDERLAIN WITH GEOTEXTILE CLASS SE ENHANCED BY THE USE OF A WASH RACK. STABILIZED ENTRANCES ARE LOCATED AT ANY POINT WHERE TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE.

<u>PURPOSE</u>: STABILIZED CONSTRUCTION ENTRANCES REDUCE TRACKING OF SEDIMENT ONTO STREETS OR P RIGHTS-OF-WAY AND PROVIDE A STABLE AREA FOR ENTRANCE OR EXIT FROM THE CONSTRUCTION SITE

CONDITIONS WHERE PRACTICE APPLIES, STABILIZED CONSTRUCTION ENTRANCES WITH WASH RACKS SHOULD BE CONSIDERED WHEREVER SOIL AND/OR TRAFFIC CONDITIONS ON SITE REQUIRE WASHING THE CONSTRUCTION VEHICLE WHELSE PRIOR TO EXISTING THE SITE OF AVOID EXCESSIVE TRACKING OF WIDO ONTO A HIGHWAY.

SPECIFICATIONS: STABILIZED CONSTRUCTON ENTRANCES WITH WASH FACKS SHOULD BE CONSTRUCTED TO THE MINIMUM LENGTH MOY, AND THICKNESS DIMENSIONS SHOWN ON STANDARD CONSTRUCTION DETAIL 2. A METAL WASH RACK IS AN ACCEPTABLE ALTERNATIVE TO THE REINFORCED CONCRETE ONE SHOWN.

APPROACHES TO THE WASH RACK SHOULD BE LINED WITH CRUSHED AGGREGATE (2^n-3^n) ROCK A MINIMUM OF 25' ON BOTH SIDES.

THE WASH RACK SHOULD DISCHARGE TO A SEDIMENT REMOVAL FACILITY, SUCH AS A VEGETATED FILTER STRIP OR INTO A CHANNEL LEADING TO A SEDIMENT REMOVAL DEVICE, SUCH AS A SEDIMENT TRAP OR TANK.

STABILIZED CONSTRUCTION ENTRANCES WITH WASH RACKS SHOULD BE MAINTAINED TO THE SPECIFIED DIMENSIONS BY ADDING ROCK MATERIAL SHOULD BE MAINTAINED ON SITE FOR THIS PURPOSE. SEDIMENT DEPOSITED ON PAYED ROADWAYS SHALL BE REMOVED AND RETURNED TO THE CONSTRUCTION SITE. NOTE: WASHING THE ROADWAY OR SMEEPING THE DEPOSITS INTO ROADWAY DITCHES, SEWERS, CULVERTS, OR OTHER DRAINAGE WAYS IS NOT ACCEPTABLE UNLESS A SEDIMENT FILTER BED IS INSTALLED IN THE DITCH OR CATCH BASIN.

DAMAGED WASH RACKS SHOULD BE REPAIRED AS NECESSARY TO MAINTAIN THEIR EFFECTIVENESS.

A STABILIZED CONSTRUCTION ENTRANCE WITHOUT A WASH RACK IS SHOWN ON STANDARD CONSTRUCTION DETAIL 1

37.0 STANDARDS AND SPECIFICATIONS FOR LAND

<u>DEFINITION:</u> RESHAPING OF THE EXISTING LAND SURFACE IN ACCORDANCE WITH A PLAN AS DETERMINED BY ENGINEERING SURVEY AND LAYOUT.

PURPOSE: THE PURPOSE OF A LAND GRADING SPECIFICATION IS TO PROVIDE FOR EROSION CONTROL AND VEGETATIVE ESTABLISHMENT ON THOSE AREAS WHERE THE EXISTING LAND SURFACE IS TO BE RESHAPED BY

ISSIGN_CRITERIA: THE GROUNG FLAN SHULD BE BASED UPON THE INCORPORATION OF BUILDING DESIGNS AND STREET LANGUIS THAT IT AND UTILIZE DESIGNS FOROSCARMY AND DESPARES HAVINGAL SURROUBENINGS TO AVOID EXTREME GRADE MODIFICATIONS, INFORMATION SUBMITTED MUST PROVIDE SUFFICIENT TOPOGRAPHIC SURVEYS AND SOIL INVESTIGATIONS TO DETERMINE MUSTATIONS THAT MUST BE IMPOSED UPON THE GRADING OPERATION FELATED TO SLOPE STABILITY, EFFECT ON ADJACENT PROPERRIES AND DRAINAGE PATTERNS, MEASURES FOR DRAINAGE AND WATER REMOVAL, AND VECETATIVE TREATMENT, ETC.

THE PLAN MUST SHOW EXISTING AND PROPOSED CONTOURS OF THE AREA(S) TO BE GRADED. THE PLAN SHALL ALSO INCLUDE PRACTICES FOR EROSING CONTROL, SLOPE STRBILZATION, SAFE DISPOSAL OF RUNGEY MATER AND DRAMACE, SUCH AS WATERWAYS, LINED DITIONES, REVERVES ELOPE BEDINES (INCLUDE GRADE SHADE AND CROSS—SECTION), GRADE STABILIZATION STRUCTURES, RETAINING WALLS, AND SURFACE AND SUBSTRACE DRAINS. THE PLAN SHALL ALSO INCLUDE PHASING OF THESE PRACTICES. THE FOLLOWING SHALL BE INCORPORATION INTO

PROVISIONS SHALL BE MADE TO SAFELY CONDUCT SURFACE RUNOFF TO STORM DRAINS, PROTECTED OUTLETS TO STABILIZE WATER COURSES TO INSURE THAT SURFACE RUNOFF WILL NOT DAMAGE SLOPES OR OTHER

2. CUT AND FILL SLOPES THAT ARE TO BE STABILIZED WITH GRASSES SHALL NOT BE STEEPER THAN 2:1. (WHERE THE SLOPE IS TO BE MOWED THE SLOPE SHOULD BE NO STEEPER THAN 3:1, 4:1 IS PREFERRED BECAUSE OF SAFETY FACTORS BELIATE TO MOWING STEP SLOPES) SLOPES EXCESSION 2:1 SHALL REQUIRE SPECIAL DESIGN AND STABILIZATION CONSIDERATIONS THAT SHALL BE ADEQUATELY SHOWN ON THE PLANS.

3. REVERSE BENCHES SHALL BE PROVIDED WHENEVER THE VERTICAL INTERVAL (HEIGHT) OF ANY 2:1 SLOPE EXCEDS 20 FEET; FOR 3:1 SLOPE IT SHALL BE INDREASED TO 30 FEET AND FOR 4:1 TO 40 FEET, BENCHES SHALL BE LOCATED TO DOUGE THE SLOPE FACE AS EQUALLY AS POSSIBLE AND SHALL CONVEY THE WATER TO A STABLE QUILLET. SOLIS, SEEPS, ROCK OUTCROPS, ETC., SHALL ALSO BE TAKEN INTO CONSIDERATION WHEN DESCRIMING BENCHES.

- A. BENCHES SHALL BE A MINIMUM OF SIX-FEET WIDE TO PROVIDE FOR EASE OF MAINTENANCE.
- B. BENCHES SHALL BE DESIGNED WITH A REVERSE SLOPE OF 6:1 OR FLATTER TO THE TOE OF THE UPPER SLOPE AND WITH A MINIMUM OF ONE FOOTI IN DEPTH. SENCH GRADIENT TO THE OUTLET SHALL BE BETWEEN 2 PERCENT AND 3 PERCENT, NOLESS ACCOMPANIED BY APPROPRIATE DESIGN AND COMPUTATIONS.

4. SURFACE WATER SHALL BE DIVERTED FROM THE FACE OF ALL CUT AND/OR FILL SLOPES BY THE USE OF EARTH DIKES, DITCHES AND SWALES OR CONVEYED DOWNSLOPE BY THE USE OF A DESIGNED STRUCTURE, EXCEPT

- A. THE FACE OF THE SLOPE IS OR SHALL BE STABILIZED AND THE FACE OF ALL GRADED SLOPES SHALL BE PROTECTED FROM SURFACE RUNOFF UNTIL THEY ARE STABILIZED.
- B. THE FACE OF THE SLOPE SHALL NOT BE SUBJECT TO ANY CONCENTRATE FLOWS OF SURFACE WATER SUCH AS FROM NATURAL DRAINAGEWAYS, GRADED SWALES, DOWNSPOUTS, ETC.

5. CUT SLOPES OCCURRING IN RIPABLE ROCK SHALL BE SERRATED AS SHOWN IN DETAIL 70 (WATERSHED PROTECTION DIVISION, DISTRICT OF COLUMBIA DEPARTMENT OF HEALTH, PAGE 1–37–5), SERRATED SLOPES ON THE FOLLOWING DIAGRAM. THESE SERRATIONS SHALL BE MADE WITH CONVENTIONAL EQUIPMENT AS THE EXCAVATION IS MADE. EACH STEP OR SERRATION SHALL BE CONSTRUCTED ON THE CONTOUR AND MILL HAVE STEPS CUT AT NORMAL TIMO-FOOT INTERVALS WITH NORMALS THEE—FOOT HOROZOTHAL SELEVES. THESE STEPS WILL VARY DEPARTMENT OF THE SLOPE RATIO OR THE CUT SLOPE. THE NORMAL TIMO-FOOT HERE OF AND LONGER AND CONTROL TO HERE AND STRUCK, LIVE FETTING THE OFFICE AND LONGER LIVE OVER AND CONCERN LIVE STRUCK AND LONGER LIVE OVER AND CONCERN LIVE STRUCK AND CONCERN LIVE AND CONCERN LIVE STRUCK AND CONCERN LIVE STRUCK AND CONCERN LIVE STRUCK AND CONCERN LIVE AND CONCERN LIVE STRUCK AND CONCERN LIVE AND CONCERN LIVE STRUCK AND CONCERN LIVE STRUCK AND CONCERN LIVE AND CONCERN LIVE STRUCK AND CONCERN LIVE AND CONCERN LIVE STRUCK AND CONCERN LIVE AND CONCERN LIVE STRUCK LIVE STRUCK AND CONCERN LIVE AND CONCERN LIVE STRUCK LIVE S

SUBSURFACE DRAINAGE SHALL BE PROVIDED WHERE NECESSARY TO INTERCEPT SEEPAGE THAT WOULD OTHERWISE ADVERSELY AFFECT SLOPE STABILITY OR CREATE EXCESSIVELY WET SITE CONDITIONS.

7. SLOPES SHALL NOT BE CREATED SO CLOSE TO PROPERTY LINES AS TO ENDANGER ADJOINING PROPERTIES WITHOUT ADEQUATELY PROTECTING SUCH PROPERTIES AGAINST SEDIMENTATION, EROSION, SLIPPAGE, SETTLEMENT,

8. FILL MATERIAL SHALL BE FREE OF SNOW, ICE, FROZED MATERIALS, TRASH, BRICK, CLAY LUMPS, HAZARDOUS MATERIAL, BROKEN, CUANGETE, TREE ROOTS, SOO, ASHES, DOBERS, GLASS, FLASTER, GROANC MATTER, BRUSH, BROKES IN DIAMETER WHERE COMPACTED BY HAND ON BECHANICAL THAMPERS OR OVER B HORES IN DIAMETER WHERE COMPACTED BY HAD ON BECHANICAL THAMPERS OR OVER B HORES IN DIAMETER WHERE COMPACTED BY ROLLERS OR OTHER EQUIPMENT, FROZEN MATERIAL SHALL NOT BE PLACED IN THE FILL NOR SHALL THE FILL MATERIAL EXPLACED ON FROZEN FOUNDERS.

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

10. ALL DISTURBED AREAS SHALL BE STRUCTURALLY OR VEGETATIVELY IN COMPLIANCE WITH 42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION.

38.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

DEFINITION: PLACEMENT OF TOPSOIL OVER PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT

<u>PURPOSE.</u> TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

- I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
- B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
- C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION. AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE FLANK.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF THE TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED IN THE NRCS DISTRICT OF COLUMBIA SOIL SURVEY MANUAL

II. TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

I. A TOPSOIL SHALL BE A LOAM, SANDY LOAM. CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCENTIST AND APPROVED BY THE WATERSHED PROTECTION DIVISION, RECARDLESS, TOPSOIL SAND AND EA A MIXTURE OF CONTRASTING TEXTURED SUBSOIL AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CHORDER, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STOKES, ROOTS, REASH, OR OTHER MATERIALS LARGER THAN 1 172 INCHES IN DIAMETER.

III. WHERE SUBSOL IS EITHER HIGHLY ACIDIC OR COMPOSED HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-B TONS/ACRE (200-400 LBS/),000 SF) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE SIDIRBUIED LIMPORALY OVER DESIGNATED AREAS AND WORKED INTO HE SOL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

38.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL (CONT'D)

- III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
- i. Place topsoil (if required) and apply soil amendments as specified in 42.0 vegetative stabilization section I vegetative stabilization method and materials.
- IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
- I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
- b. ORGANIC CONTENT OF TOPSOIL SHALL NOT BE LESS THAN 1.5% BY WEIGHT.
- c. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
- NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE WATERSHED PROTECTION AGENCY, MAY BE USED IN-LIEU OF NATURAL TOPSOIL.
- ii. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 42.0 VEGETATIVE STABILIZATION SECTION I VEGETATIVE STABILIZATION METHOD AND MATERIALS.

V. TOPSOIL APPLICATION

i. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT $4^{\prime\prime}$ - $8^{\prime\prime}$ HIGHER IN ELEVATION.

III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUT
THICKNESS OF 4" SPREADING SHALL BE PERFORMED IN SLICH A MANNER THAT SODDING OR SEFTING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARINES IN THE SURFACE RESULTING FROM TOPSOLING OR GENERAL PREPARATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

iv. TOPSOIL SHALL BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDEED PREPARATION.

VI. ALTERNATIVE FOR PERMANENT SEEDING — INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW: I. COMPOSTED SLUDGE MATERIAL FOR USE: AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 AGRES SHALL BE TESTED TO THE PRESCRIBE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 AGRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

a. COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATE FROM, A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY EITHER THE STATE OF MARYLAND OR THE STATE OF MEDICINA.

b. COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1.0% NITROGEN, 1.5% PHOSPHOROUS, AND 0.2% POTASSIUM, AND HAVE A pH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.

c. COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SF. II. COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4. LBS/1,000 SF AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VA, PUB. #1, COOPERATIVE EXTENSIVE SERVICE: LINUSPRINTY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES REVISED 1973

42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. SITE PREPARATION I. INSTALL EROSION AND SEDIMENT CONTROL STRUCTURES (EITHER TEMPORARY OR PERMANENT) SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, WATERWAYS. OR SEDIMENT CONTROL BASINS.

II. PERFORM ALL GRADING OPERATIONS AT RIGHT ANGLES TO THE SLOPE. FINAL GRADING AND SHAPING NOT USUALLY NECESSARY FOR TEMPORARY SEEDING. iii. SCHEDULE REQUIRED SOIL TESTS TO DETERMINE SOIL AMENDMENT COMPOSITION AND APPLICATION RATES FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES.

B. SOIL AMENDMENTS (FERTILIZER AND LIME SPECIFICATIONS)

I. SOIL TESTS MUST BE PERFORMED TO DETERMINE THE EXACT RATIONS AND APPLICATION RATES FOR BOTH LIME AND FERRILIZED ON SITES HANNIG BISTUBEDE AREAS OVER 5 ACRES. SOIL ANALYSIS MAY BE PERFORMED BY THE UNIVERSITY OF THE DISTRICT OF COLUMBIA OR A CERTIFIED COMMERCIAL LABORATORY, SOIL SAMPLES TAKEN FOR ENGINEERING EVIPOSES MAY ALSO BE USED FOR OFILINGLACIA MAYSES.

II. FERTILIZERS SHALL BE UNIFORM IN COMPOSITION, FREE FLOWING AND SUITABLE FOR ACCURATE APPLICATION AND APPROVED EQUIPMENT. MANUALE MAY BE SUBSTITUTED FOR FERTILIZER WITH PRIOR APPROVIAL AUTHORITY FERTILIZERS SHALL ALL BE DELEVERED TO THE STEE FULLY LABELED ACCORDING TO THE APPLICABLE STATE FERTILIZER LAWS AND SHALL BEAR THE NAME, TRADE NAME OR TRADEAUX, AND AVARRANTEE OF THE PRODUCER.

CONTAINS AT LEAST 50% TOTAL OXIDES (CALCIUM OXIDE PIUS MACHESIUM OXIDE), LIMESTONE SHALL BE GROUND TO SUCH FIRMESS THAT AT LEAST 50% WILL PASS THROUGH A #100 MESH SIEVE AND 98-100% WILL PASS THROUGH A #20 MESH SIEVE. III. LIME MATERIALS SHALL BE GROUND LIMESTONE (HYDRATED OR BURNT LIME MAY BE SUBSTITUTED) WHI

IV. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3"-5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS. C. SEEDBED PREPARATION

i. TEMPORARY SEEDING

- a. SEEDBED PREPARATION SHALL CONSIST OF LOOSENING SOIL TO A DEPTH OF 3" TO 5" BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT, SUCH AS DISC HARROWS OR CHISEL PLOWS OF RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT SHOULD NOT BE ROLLED OR DEFACED UNIQUE ON CONSTRUCTION EQUIPMENT. AFTER THE SOIL IS LOOSENED, IT SHOULD NOT BE ROLLED DEFACED SHOOTH BUT LETT IN THE ROUGHENED CONDITION. SLOPED AREAS (GREATER THAN 3:1) SHOULD BE TRACKED LEAVING THE SUPFACE IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE.
- b. APPLY FERTILIZER AND LIME AS PRESCRIBED ON THE PLANS.
- c. INCORPORATE LIME AND FERTILIZER INTO THE TOP 3" 5" OF SOIL BY DISKING OR OTHER SUITABLE MEANS. ii. PERMANENT SEEDING
- a. MINIMUM SOIL CONDITIONS REQUIRED FOR PERMANENT VEGETATIVE ESTABLISHMENT 1. SOIL pH SHALL BE BETWEEN 6.0 AND 7.0
- 3. THE SOIL SHALL CONTAIN LESS THAN 40% CLAY BUT ENOUGH FINE GRAINED MATERIAL (>30% SILT PLUS ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MANTENANCE.

 SEEDING GRASS AND LEGUMES TO ESTABLISH GROUND COVER FOR A MINIMUM PERIOD OF ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MANTENANCE.

 ONE YEAR ON DISTURBED AREAS GENERALLY RECEIVING LOW MANTENANCE.

 A. SEED MIXTURES PERMANENT SEEDING SUMMARY

 BE ACCEPTABLE.
- 4. SOIL SHALL CONTAIN 1.5% MINIMUM ORGANIC MATTER BY WEIGHT.
- 5. SOIL MUST CONTAIN SUFFICIENT PORE SPACE TO PERMIT ADEQUATE ROOT PENETRATION. 6. IF THESE CONDITIONS CANNOT BE MET BY SOILS ON-SITE, ADDING TOPSOIL IS REQUIRED IN ACCORDANCE WITH SECTION 38, STANDARD AND SPECIFICATION FOR TOPSOIL.
- b. AREAS PREVIOUSLY GRADED IN CONFORMANCE WITH THE DRAWINGS SHALL BE MAINTAINED IN A TRUE AND EYEN GRADE, THEN SCARFIED OR OTHERWISE LOGSEADS TO A DEPTH OF 3'-5" TO PERMIT BONDING OF THE TOPIC LOT THE SURFICE AREA AND TO CREATE HORZONTAL EROSION OFFICK SLOTIS TO PREVENT TOPSOIL FROM SLOND DOWN A SLOPE.
- c. APPLY SOIL AMENDMENTS AS PER SOIL TEST OR AS INCLUDED ON THE PLANS.
- c. MIX SOIL AMENDMENTS INTO THE TOP 3"—5" OF TOPSOIL BY DISKING OR OTHER SUITABLE MEANS. LAWN AREAS SHOULD BE RAKED TO SMOOTH THE SURFACE, REMOVE LARGE OBJECTS LIKE STONES AND BRANDHES, AND READ'T HE AREA FOR SEED APPLICATION, MEDIES STEE CONDITIONS WILL NOT PERMIT MORMAL SEEDBED PREPARATION, LOOSEN SURFACE SOIL BY DRAGGING WITH A HEAVY CHAIN OR OTHER EQUIPMENT TO ROUGHEN THE SURFACE. SEEP SLOPES (STEPER THAM 3".1) SHOULD BE TRACKED BY A DOZER LEAWING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE CONTOUR OF THE SLOPE. THE TOP 1"-3" O SOIL SHOULD BE LOOSE AND FRIABLE. SEEDBED LOOSENING MAY NOT BE NECESSARY ON NEWLY DISTURBED

42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION (CONT'D)

I. ALL SEED MUST MEET THE REQUIREMENTS OF THE DISTRICT OF COLUMBIA DPW STANDARD AND SPECIFICATIONS FOR HIGHWAYS AND STRUCTURES AND SPECIFICATION 4.2.0 VEGETATIVE STABILIZATION. ALL SEED SHALL BE SUBJECT TO RE-TESTING BY A RECOGNIZED SEED LABORATORY. ALL SEED USED SHALL HAVE BEEN TESTED WITHIN THE 6 MONTHS IMMEDIATELY PRECEDING THE DATE OF SOMING SUCH MATERIAL ON THIS JOB.

NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED. II. INOCULANT — THE INOCULANT FOR TREATING LEGIME SEED IN THE SEED MIXTURES SHALL BE A PURE CULTURE OF NITROGEN-FOWND BACTERIA PREPARED SPECIFICALLY FOR THE SPECIES, INOCULANTS SHALL NOT BE USED LATER THAN THE DATE INDICATED ON THE CONTAINER, ADD FRESH NOCULANT AS DIRECTED ON PACKAGE, USE FOUR TIMES THE RECOMMENDED RATE WHEN HYDROSEEDING, NOTE: IT IS VERY IMPORTANT TO KEEP INOCULANT AS DOOL AS POSSBIEL UNTIL USED.

T. METHODS OF SEEDING: APPLY SEED UNIFORMLY WITH HYDROSEEDER (SLURRY INCLUDES SEED AND FERTILIZER), BROADCAST OR PROP SEEDER, OR A CULTIPACKER SEEDER.

i. HYDROSEEDING: a. IF FERTILIZER IS BEING APPLIED AT THE TIME OF SEEDING, THE APPLICATION RATES AMOUNTS WILL NOT EXCEED THE FOLLOWING: NITROGEN; MAXIMUM OF 100 LBS PER AGRE TOTAL OF SOLUBLE NITROGEN; P205 (PHOSPHOROUS): 200 LBS/AC; K20 (POTASSWI): 200 LBS/AC;

b. LIME — USE ONLY GROUND AGRICULTURAL LIMESTONE, (UP TO 3 TONS PER ACRE MAY BE APPLIED BY HYDROSEEDING). NORMALLY, NOT WORE THAN 2 TONS ARE APPLIED BY HYDROSEEDING AT ANY ONE TIME. DO NOT USE BURNT OR HYDRATED LIME WHEN HYDROSFEDING.

c. SEED AND FERTILIZER SHALL BE MIXED ON-SITE AND SEEDING SHALL BE DONE IMMEDIATELY AND WITHOUT INTERRUPTION

II. DRY SEEDING: THIS INCLUDES USE OF CONVENTIONAL DROP OR BROADCAST SPREADERS.

g. SEED SPREAD DRY SHALL BE INCORPORATED INTO THE SUBSOIL AT THE RATES PRESCRIBED ON THE TEMPORARY OR PERMANENT SEEDING SUMMARIES OR TABLES 42 OR 43. THE SEEDED AREA SHALL THEN BE ROLLED WITH A WEIGHTED POLLED TO PROVIDE COLO. SEED ITS SUIT CONTACT. b. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION.

III. DRILL OR CULTIPACKER SEEDING: MECHANIZED SEEDERS THAT APPLY AND COVER SEED WITH SOIL.

a. CULTIPACKING SEEDERS ARE REQUIRED TO BURY THE SEED IS SUCH A FASHION AS TO PROVIDE AT LEAST 1/4 INCH OF SOIL COVERING. SEEDBED MUST BE FIRM AFTER PLANTING.

b. WHERE PRACTICAL, SEED SHOULD BE APPLIED IN TWO DIRECTIONS PERPENDICULAR TO EACH OTHER. APPLY HALF THE SEEDING RATE IN EACH DIRECTION. . MULCH SPECIFICATIONS (IN ORDER OF PREFERENCE)

I. STRAW SHALL CONSST OF THOROUGHLY THERSHED WHEAT, RYE, OR OAT STRAW, REASONABLY BRIGHT IN COLOR, AND SHALL NOT BE MUSTY, MCLDY, CAKED, DECAYED, OR EXCESSIVELY DUSTY AND SHALL BE FREE OF NOXIOUS WEED SEEDS AS SPECIFIED BY THE NRCS SEED LAW.

NOTE: ONLY STERILE STRAW MULCH SHOULD BE USED IN AREAS WHERE ONE SPECIES OF GRASS IS DESIRED. ii. WOOD CELLULOSE FIBER MULCH (WCFM)

a. WCFM SHALL CONSIST OF SPECIALLY PREPARED WOOD CELLULOSE PROCESSED INTO A UNIFORM FIBROUS PHYSICAL STATE. b. WCFM SHALL BE DYED GREEN OR CONTAIN A GREEN DYE 1N THE PACKAGE THAT WILL PROVIDE AN APPROPRIATE COLOR TO FACILITATE VISUAL INSPECTION OF THE UNIFORMLY SPREAD SLURRY.

c. WCFM. INCLUDING DYE. SHALL CONTAIN NO GERMINATION OR GROWTH INHIBITING FACTORS d. WOTH MATERIALS SHALL BE MANUFACTURED AND PROCESSED IN SUCH A MANNER THAT THE WOOD CELLULOSE FIBER MULCH MILL REMAIN IN LUMFORM SUSPENSION IN WATER UNDER AGTATION AND MILL BLEAD WITH SEED, FERTILIZER AND OTHER ADDITINES TO FORM A HONOGENEOUS SLURFY. THE MULCH MATERIAL SHALL FORM A BUSTITER-LIKE GROUND COVER, ON APPLICATION, HANNER MOISTURE. ABSORPTION AND PERCULATION PROPERTIES AND SHALL COVER AND HOLD GRASS SEED IN CONTROL THE SOUR MITHOUS HIGHBRITE HE RECREWITH OF THE GROWN TO THE GROWN TO

e. WCFM MATERIAL SHALL CONTAIN NO ELEMENTS OR COMPOUNDS AT CONCENTRATION LEVELS THAT WILL BE PHYTO-TOXIC f. WCFM MUST CONFORM TO THE FOLLOWING PHYSICAL REQUIREMENTS: FIBER LENGTH TO APPROXIMATELY 1 MM., pH RANGE OF 4.0 TO 8.5, ASH CONTENT OF 1.6% MAXIMUM AND WATER HOLDING CAPACITY OF 90% MINIMUM.

G. MULCHING SEEDED AREAS - MULCH SHALL BE APPLIED TO ALL SEEDED AREAS IMMEDIATELY AFTER SEEDING. I. IF GRADING IS COMPLETED OUTSIDE OF THE SEEDING SEASON, MULCH ALONE SHALL BE APPLIED AS PRESCRIBED IN THI SECTION AND MAINTAINED UNTIL THE SEEDING SEASON RETURNS AND SEEDING CAN BE PERFORMED IN ACCORDANCE WITH THESE SPECIFICATIONS.

II. WHEN STRAW MULCH IS USED, IT SHALL BE SPREAD OVER ALL SEEDED AREAS AT THE RATE OF 2 TONS/AGRE. MULCH SHALL BE APPLED TO A UNIFORM LOOSE DEPTH OF BETWEEN 1° AND 2°, MULCH APPLED SHALL ACHIEVE A UNIFORM DISTRIBUTION AND DEPTH SO THAT THE SOUL SURFACE IS NOT EXPOSED. IF A MULCH ANCHORING TOOL IS TO BE USED, THE RATE SHOULD BE INCREASED TO 2.5 TONS/AGRE.

III. WOOD CELLULOSE FIBER USED AS A MULCH SHALL BE APPLIED AT A NET DRY WEIGHT OF 1,500 LBS. PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE MINED WITH WATER, AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS OF WOOD CELLULOSE FIBER PER 100 GALLONS OF WATER.

H. SECURING STRAW MULCH (MULCH ANCHORING): MULCH ANCHORING SHALL BE PERFORMED IMMEDIATELY FOLLOWING MULCH APPLICATION TO MINIMAZE LOSS BY WING OK WATER. THIS MAY BE DONE BY ONE OF THE FOLLOWING METHODS (LISTED BY PREFERENCE), DEPORTIONS ON THE SIZE OF AREA AND EROSION HAZARD.

I. A MULCH ANCHORING TOOL IS A TRACTOR DRAWN IMPLEMENT DESIGNED TO PUNCH AND ANCHOR MULCH INTO THE SOIL SURFACE A MINIMUM OF 2 INCHES. THIS PRACTICE IS MOST EFFECTIVE ON LARGE AREAS, BUT IS LIMITED TO FLATTER SLOPES WHERE EQUIPMENT CAN OPERATE SAFELY. IF USED ON SLOPING LAND, THIS PRACTICE SHOULD BE USED ON THE CONTOUR IF POSSIBLE.

TO CELLULOSE FIBER MAY BE USED FOR ANCHORING STRAW. THE FIBER BINDER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 LBS/ACRE. THE WOOD CELLULOSE FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50 LBS OF WOOD CELLULOSE FIBER PER TO GOALLONS OF WATER. III. APPLICATION OF LIQUID BINDERS SHOULD BE HEAVER AT THE EDGES WHERE WIND CATCHES MULCH, SUCH AS IN VALLEYS AND ON CRESTS OF BANKS. THE REMAINDER OF AREA SHOULD APPEAR UNIFORM AFTER BINDER APPLICATION. SYNTHETIC

BINDERS — SUCH AS ACRYLIC DLR (AGRO-TACK), DCA-70, PETROSET, TERRA TAX II, TERRA TACK AR OR OTHER APPROVED EQUAL MAY BE USED AT RATES RECOMMENDED BY THE MANUFACTURER TO ANCHOR MULCH. iv. LIGHTWEIGHT PLASTIC NETTING MAY BE STAPLED OVER THE MULCH ACCORDING TO MANUFACTURER'S RECOMMENDATIONS. NETTING IS USUALLY AVAILABLE IN ROLLS 4' TO 15' FEET WIDE AND 300 TO 3,000 FEET LONG.

SECTION II - TEMPORARY SEEDING VEGETATION — ANNUAL GRASS OR GRAIN USED TO PROVIDE COVER ON DISTURBED AREAS FOR UP TO 12 MONTHS. FOR LONGER DURATION OF VEGETATIVE COVER, PERMANENT SEEDING IS REQUIRED.

	D MIXTURE (HA M TABLE 43	FERTILIZER RATE	LIME RATE				
NO.	SPECIES	APPLICATION	SEEDING	SEEDING	(10-10-10)		
		RATE (lb/ac)	DATES	DEPTHS	[
	RYE PLUS FOXTAIL MILLET	150	2/1-4/30 5/1-8/30 8/15-11/30	1	600 lb/ac (14 lb/1000 sf)	2 tons/ac	
	WEEPING LOVEGRASS	4	5/1-8/14	1/4	(14 lb/1000 sf)	(92 lb/1000sf)	

SECTION III - PERMANENT SEEDING

SEED MIXTURE (HARDINESS ZONE 7A) FERTILIZER RATE LI FROM TABLE 42 (10-20-20)								JME RATE
N0.	SPECIES	APPLICATION	SEEDING	SEEDING				1
		RATE (lb/ac)	DATES	DEPTHS	N	P205	K20	
	TALL FESCUE (85%)	125	- 1 1		90 lb/ac	175 lb/ac	175 lb/ac	2 tons/ac
	PERENNIAL RYEGRASS (10%)	15	3/1-5/15	1/4" MIN.	(2.0 lb/ 1000 sf)	(4 lb/ 1000 sf)	(4 lb/ 1000 sf)	(92 lb/ 1000 sf)
	KENTUCKY BLUEGRASS (5%)	10	8/15–11/15	2" MIN.				

42.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION (CONT'D)

SECTION IV - SOD: TO PROVIDE QUICK COVER ON DISTURBED AREAS (2:1 GRADE OR FLATTER).

A. GENERAL SPECIFICATIONS

II. SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF 3/4", PLUS OR MINUS 1/4", A THE TIME OF CUTTING. MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH, INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIERS WITH AND LENGTH, MAXIMUM ALLOWAGEL EDWATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5%, BROKEN PADS AND TORN OR UNEVEX ENDS WILL NOT BE ACCEPTABLE.

II. STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT NAD RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE JPPERTAIN THE SECTION.

iv. SOD SHALL NOT BE HARVESTED OR TRANSPLANTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL

v. SOD SHALL BE HARVESTED, DELIVERED, AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPLANTED WITHIN THIS PERIOD SHALL BE APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST PRIOR TO ITS INSTALL ATION.

SECTION V - TUREGRASS ESTABLISHMENT

AREAS WEST TUPGRASS MY SE ESSIED INCLUDE LAWNS, PARKS, PLAYGOUNDS, AND COMMERCIAL STITS WHICH MY LEGREDE A LIBROUND TO HIGH LEGRED COMMERCIAL OF MAINTENANCE, AREAS TO RECEIVE SEED SHALL BE ITLLED BY DISKNIC OR OTHER APPROVED METHODS TO A DEPTH OF 2 TO 4 NOVES, LEVELED AND RAKED TO PREPARE A PROPER SEEDEDED. STORES, AND DEBRIS OWER 1 1/2 MOVES TO DIAMETER SHALL BE REMOVED. THE RESULTING SEEDED SHALL BE IN SUCH CONDITION THAT FUTURE MOWING OF GRASSES MILL POSE NO DIFFICULTY.

NOTE: CHOOSE CERTIFIED MATERIAL. CERTIFIED MATERIAL IS THE BEST GUARANTEE OF CULTIVAR PURITY.

I. KENTUCKY BLUEGRASS – FULL SUN MIXTURE – FOR USE IN AREAS THAT RECEIVE INTENSIVE MANAGEMENT. RECOMMENDED CERTIFIED KENTUCKY BLUEGRASS CULTIVARS SEDDING RATE: 1.5 TO 20 LBS/1,000 S. A MINIMUM FIREE BLUEGRASS CULTIVARS SHOULD BE CHOSEN RANGING FROM A MINIMUM OF 10% TO A MAXIMUM OF 35% OF THE MIXTURE BY WEIGHT.

II. KENTUCKY BLUEGRASS/PERENNIAL RYE — FULL SUN MIXTURE — FOR USE IN FULL SUN AREAS WHERE RAPID ESTABLISHMENT IS NECESSARY AND WHEN TURF MILL RECEIVE MEDIUM TO INTENDIA MANAGEMENT. CERTIFIED PERENNIA RYEGRASS CULTURAS/CERTIFIED KEPTICKY BULGGRASS SEEDIN RATE: 2 IBS. MIXTURE/1,000 SF. A MINIMUM OF 3 KENTUCKY BULGGRASS CULTURAS WUST BE CHOSEN, WITH EACH CULTURAR RANGING FROM 10X TO 35X OF THE MIXTURE BY WEIGHT.

III. TALL FESCUE/KENTUCKY BLUEGRASS — FULL SUN MIXTURE — FOR USE IN DROUGHT PRONE ABEAS AND/OR FOR ABEAS RECEIVANG LOW TO MEDIUM MANAGEMENT IN FULL SUN TO MEDIUM SHADE. RECOMMENDED MIXTURE INCLUDES; CERTIFIED TALL FESCUE CULTIVARS 95-100X, CERTIFIED KENTUCKY BLUEGRASS CULTIVARS 0-5% SEEDING RATE: 5 TO 8 LB/),000 5F: ONE OR MORE CULTIVARS MAY BE BLENDED. iv. Kentucky Bluegrass,/fine fescule – shade mixture – for use in areas with shade in Bluegrass lamins. For establishment in high quality, intersively management turef area. Mixture includes, certifier schuldy bluegrass cluthavas 30-407 and certified fine fescule 60-70%. Seeding rate: 11/2-3 lbs/1,000 SF. a minimum of 3 Kentucky Bluegrass cultivars and shows the choise, with each cultivar ranging from a minimum of 10% to a maximum of 3% of the mixture by Neight.

NOTE: TURFGRASS VARIETIES SHOULD BE SELECTED FROM THOSE LISTED IN THE MOST CURRENT UNIVERSITY OF MARYLAND PUBLICATION, AGRONOMY MIMEO #77, "TURFGRASS CULTIVAR RECOMMENDATIONS FOR MARYLAND".

44.0 STANDARDS AND SPECIFICATIONS FOR

DEFINITION: CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

 $\frac{\text{PURPOSE:}}{\text{ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.}}$ CONDITIONS WHERE PRACTICE APPLIES: THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON AN OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

TEMPORARY METHODS:

B. VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER. C. SPRAY-ON ADHESIVES - ON MINERAL SOILS (NOT EFFECTIVE ON MUCK SOILS). KEEP TRAFFIC OFF THESE AREAS

NIC ASPHALT EMULSION 7:1 COARSE SPRAY 12.5:1 FINE SPRAY 4:1 FINE SPRAY 1,200 235 300 LATEX EMULSION RESIN-IN-WATER EMULSION

D. TILLAGE — TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE, THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON MINDWARD BUSIC OF STEL CHISELT-TYPE PLOWS SPACED ABOUT 12" APAIT, SPRING-TOOTHEN HARROWS, AND SIMILAR PLOWS ARE EXAMPLE OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.

E. IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. F. BARRIERS — SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, CRAITE WALLS AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOLI BLOWNG, BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOLI BLOWNG.

G. CALCIUM CHLORIDE — APPLY AT RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS:

A. PERMANENT VEGETATION — SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.

B. TOPSOILING - COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING C. STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

 AGRICULTURAL HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USE IN PREDICTING SOIL LOSS. 2. AGRICULTURAL INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.

WATERFRONT FIRST-STAGE PUD MODIFICATION & SECOND-STAGE PUD APPLICATION

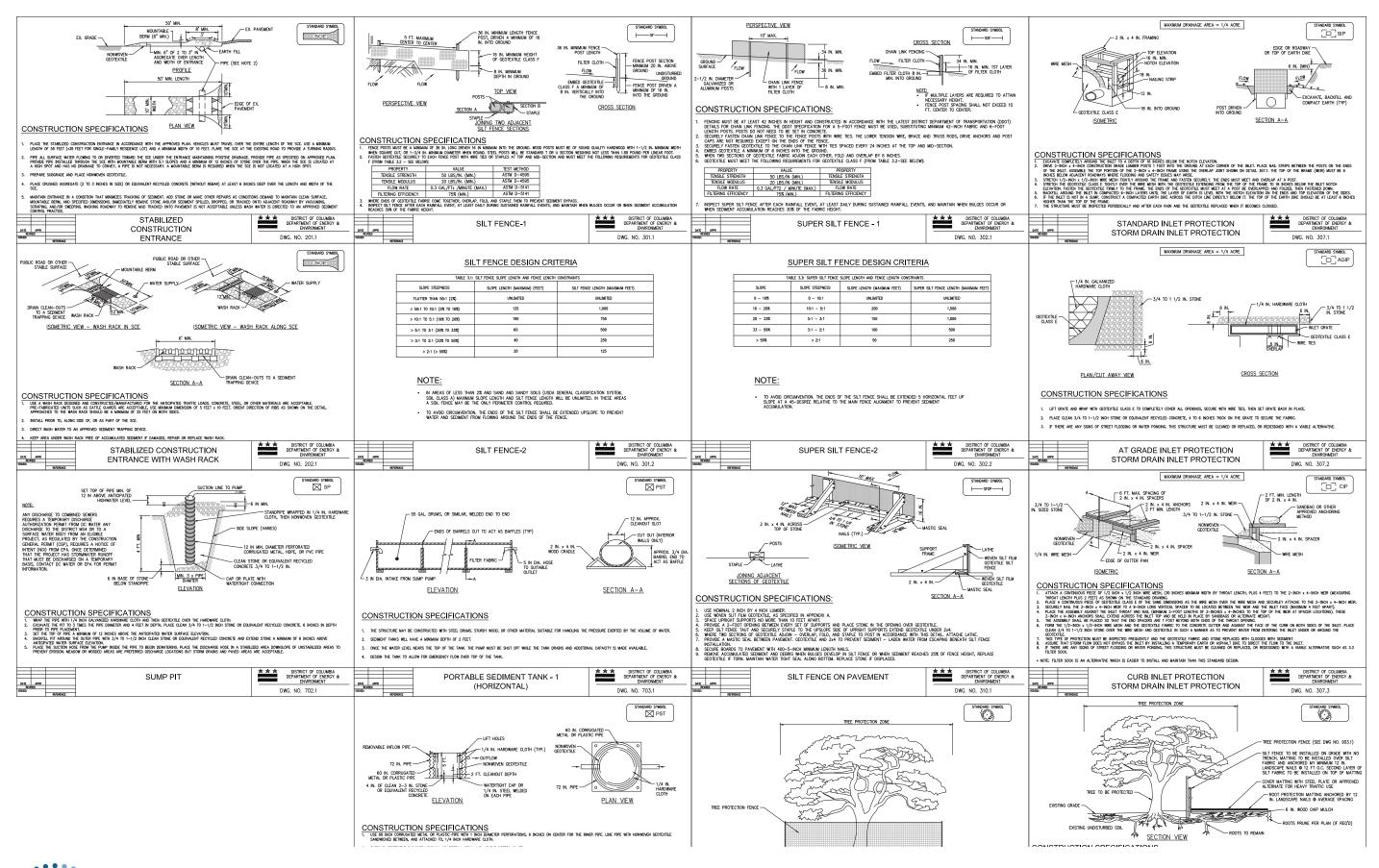
SOUTHEAST + SOUTHWEST M STREET PARCELS

Perkins Eastman **DC**

Bowman

CIVIL - EROSION AND SEDIMENT CONTROL NOTES

375 & 425 M STREET SW





CIVIL - EROSION AND SEDIMENT CONTROL DETAILS

Bowman

SOUTHEAST + SOUTHWEST M STREET PARCELS

STORMWATER MANAGEMENT NARRATIVE:

ACCORDING TO THE 2013 SWM GUIDEBOOK FOR THE DISTRICT OF COLUMBIA. THIS PROJECT SITE DEVELOPMENT IS CATEGORIZED AS A "MAJOR LAND DISTURBANCE" FOR THE ENTIRETY OF THE BUILDING FOOTPRINT, THUS REQUIRING A STORMWATER RETENTION VOLUME (SWRv) BASED ON THE 1.2" STORM EVENT. IN ADDITION TO THE RETAINED VOLUME, THE SWM FACILITIES MUST PROVIDE 15-YR STORM CONTROL FOR PEAK DISCHARGE TO THE PRE-PROJECT RATE.

SITE AREA DISTURBED = 46,940 sf REQUIRED SWRV = 4.459 cf

THE SWRV REQUIREMENT IS ACHIEVED BY THE DESIGN AND IMPLEMENTATION OF GREEN ROOF. THE RUNOFF FROM THE EXISTING BUILDING IS ROUTED DIRECTLY TO GREEN ROOF AREAS FOR TREATMENT. ADDITIONALLY, THE DETENTION REQUIREMENT WILL BE MET THROUGH A COMBINATION OF GREEN ROOF AND DETENTION VAULT. THE STORAGE CAPACITY OF THESE FACILITIES ARE SIZED TO ATTENUATE THE 2-YR STORM PEAK DISCHARGE BACK TO PRE-DEVELOPMENT CONDITION AND THE 15-YR STORM PEAK DISCHARGE BACK TO PRE-PROJECT CONDITIONS.

DESIGN CRITERIA IS BASED OFF THE DISTRICT'S 2013 SWM GUIDEBOOK FOR GREEN ROOF.

STORMWATER MANAGEMENT EXEMPTIONS: "COMPANY USA

CHAPTER 21 DCMR : 517

THE FOLLOWING DEVELOPMENT ACTIVITIES SHALL BE EXEMPT FROM THE PROVISIONS OF THE STORM WATER MANAGEMENT REQUIREMENTS:

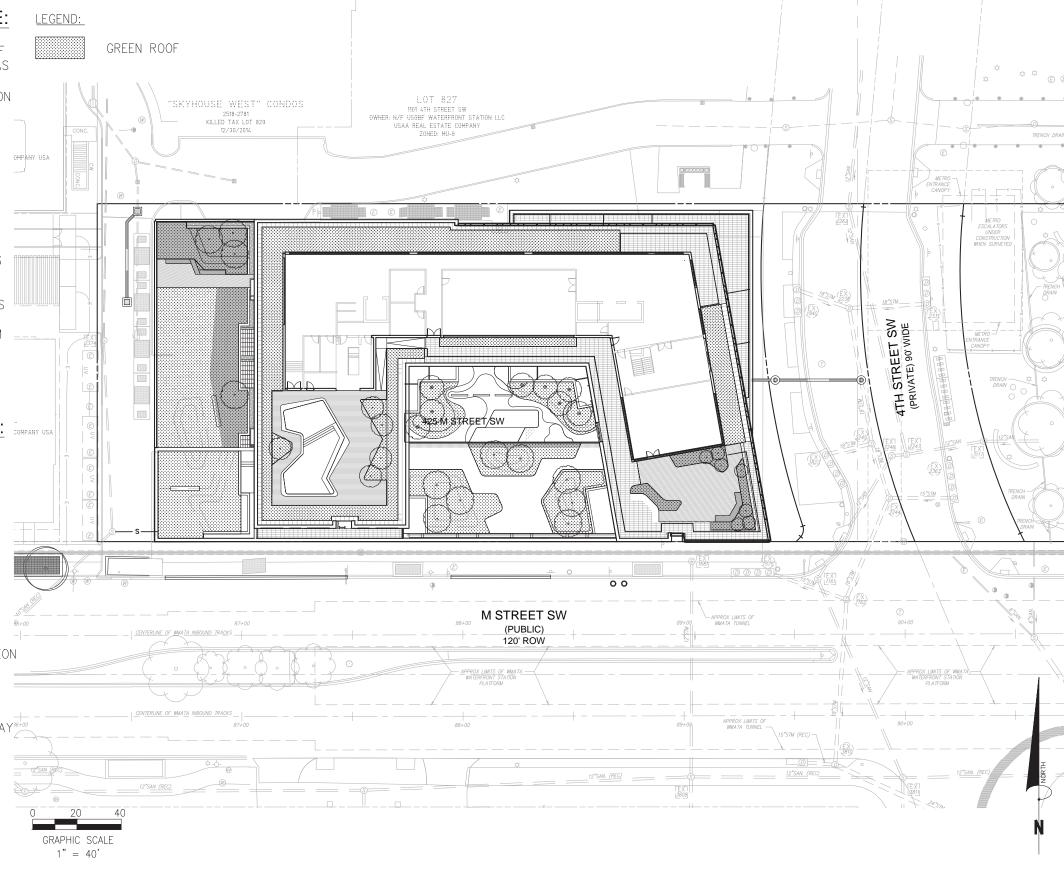
- CUTTING A TRENCH FOR UTILITY WORK AND RELATED REPLACEMENT OF SIDEWALKS AND RAMPS
- REPAVING OR REMILLING THAT DOES NOT EXPOSE THE UNDERLYING SOIL.

GREEN ROOF PROVIDED:

ASSUMED 6" GREEN ROOF AT 0.50 POROSITY

±17,900 sf OF 6" GREEN ROOF IS REQUIRED TO MEET RETENTION REQUIREMENTS.

CONCEPTUAL STORMWATER MANAGEMENT PROVIDED FOR PUD REVIEW ONL. DURING THE FINAL ENGINEERING PHASE, STORMWATER MANAGEMENT DESIGN WILL BE ADVANCED AND MAY 36+00 USE OTHER METHOD WHICH WILL PROVIDE THE REQUIRED RETENTION TO BE IN ACCORDANCE WITH THE 2013 SWM GUIDEBOOK FOR THE DISTRICT OF COLUMBIA.

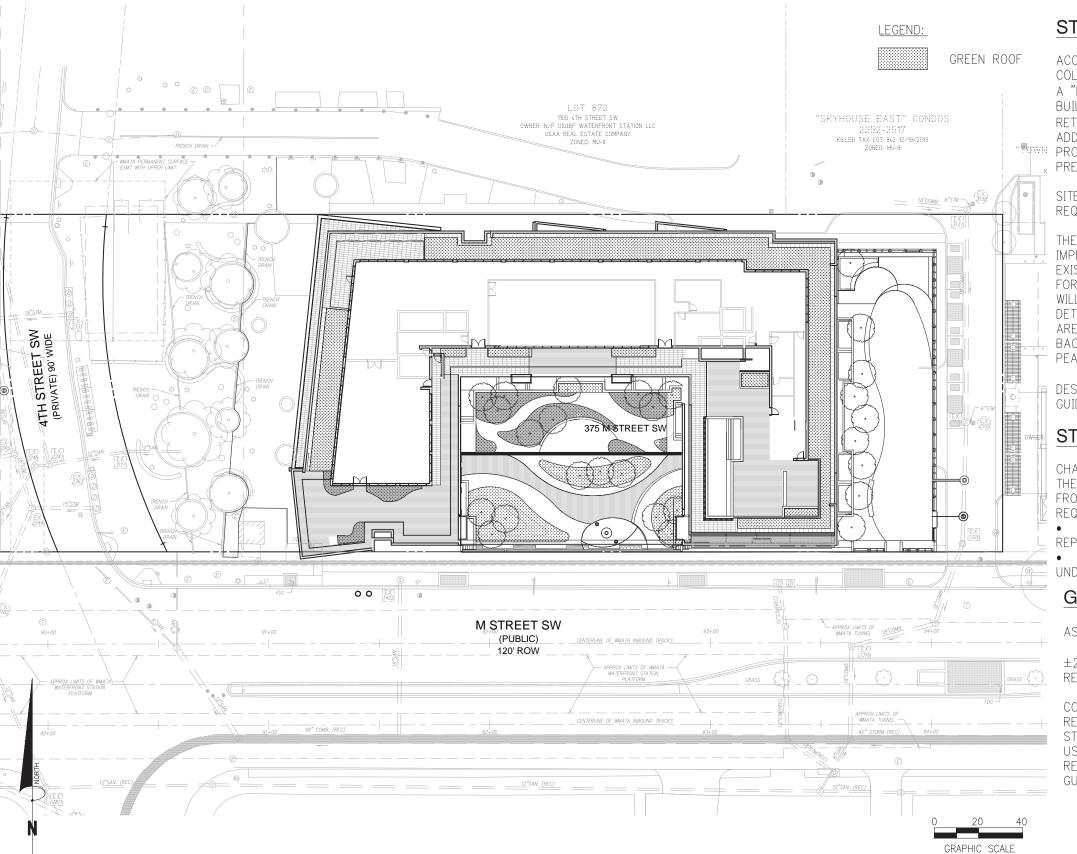




SOUTHEAST + SOUTHWEST M STREET PARCELS

CIVIL - STORMWATER MANAGEMENT PLAN - WEST BLDG (425)

Bowman



STORMWATER MANAGEMENT NARRATIVE:

ACCORDING TO THE 2013 SWM GUIDEBOOK FOR THE DISTRICT OF COLUMBIA, THIS PROJECT SITE DEVELOPMENT IS CATEGORIZED AS A "MAJOR LAND DISTURBANCE" FOR THE ENTIRETY OF THE BUILDING FOOTPRINT, THUS REQUIRING A STORMWATER RETENTION VOLUME (SWRV) BASED ON THE 1.2" STORM EVENT. IN ADDITION TO THE RETAINED VOLUME, THE SWM FACILITIES MUST PROVIDE 15-YR STORM CONTROL FOR PEAK DISCHARGE TO THE PRE-PROJECT RATE.

SITE AREA DISTURBED = 61,063 sf REQUIRED SWRV = 5,801 cf

THE SWRV REQUIREMENT IS ACHIEVED BY THE DESIGN AND IMPLEMENTATION OF GREEN ROOF. THE RUNOFF FROM THE EXISTING BUILDING IS ROUTED DIRECTLY TO GREEN ROOF AREAS FOR TREATMENT. ADDITIONALLY, THE DETENTION REQUIREMENT WILL BE MET THROUGH A COMBINATION OF GREEN ROOF AND DETENTION VAULT. THE STORAGE CAPACITY OF THESE FACILITIES ARE SIZED TO ATTENUATE THE 2-YR STORM PEAK DISCHARGE BACK TO PRE-DEVELOPMENT CONDITION AND THE 15-YR STORM PEAK DISCHARGE BACK TO PRE-PROJECT CONDITIONS.

DESIGN CRITERIA IS BASED OFF THE DISTRICT'S 2013 SWM GUIDEBOOK FOR GREEN ROOF.

STORMWATER MANAGEMENT EXEMPTIONS:

CHAPTER 21 DCMR : 517

THE FOLLOWING DEVELOPMENT ACTIVITIES SHALL BE EXEMPT FROM THE PROVISIONS OF THE STORM WATER MANAGEMENT REQUIREMENTS:

- CUTTING A TRENCH FOR UTILITY WORK AND RELATED REPLACEMENT OF SIDEWALKS AND RAMPS
- REPAVING OR REMILLING THAT DOES NOT EXPOSE THE UNDERLYING SOIL.

GREEN ROOF PROVIDED:

ASSUMED 6" GREEN ROOF AT 0.50 POROSITY

±23,200 sf OF 6" GREEN ROOF IS REQUIRED TO MEET RETENTION REQUIREMENTS.

CONCEPTUAL STORMWATER MANAGEMENT PROVIDED FOR PUD REVIEW ONL. DURING THE FINAL ENGINEERING PHASE, STORMWATER MANAGEMENT DESIGN WILL BE ADVANCED AND MAY USE OTHER METHOD WHICH WILL PROVIDE THE REQUIRED RETENTION TO BE IN ACCORDANCE WTIH THE 2013 SWM GUIDEBOOK FOR THE DISTRICT OF COLUMBIA.



CIVIL - STORMWATER MANAGEMENT PLAN - EAST BLDG (375)

1" = 40'



LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: 425 M St SW

6 0 0 Innovation

Date: 8/15/16

Integrative Process

11	3	18	Location and Transportation	16
		16	Credit LEED for Neighborhood Development Location	16
1			Credit Sensitive Land Protection	1
		2	Credit High Priority Site	2
4	1		Credit Surrounding Density and Diverse Uses	5
5			Credit Access to Quality Transit	5
	1		Credit Bicycle Facilities	1
	1		Credit Reduced Parking Footprint	1
1			Credit Green Vehicles	1

6	2	2	Susta	ainable Sites	10
Υ			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
1			Credit	Open Space	1
1	2		Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1

4	1	6	Water	Efficiency	11
Υ			Prereq	Outdoor Water Use Reduction	Required
Υ			Prereq	Indoor Water Use Reduction	Required
Υ			Prereq	Building-Level Water Metering	Required
1	1		Credit	Outdoor Water Use Reduction	2
2		4	Credit	Indoor Water Use Reduction	6
		2	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

12	16	7	Energ	Energy and Atmosphere					
Υ			Prereq	Fundamental Commissioning and Verification	Required				
Υ			Prereq	Minimum Energy Performance	Required				
Υ			Prereq	Building-Level Energy Metering	Required				
Υ			Prereq	Fundamental Refrigerant Management	Required				
6			Credit	Enhanced Commissioning	6				
4	12	4	Credit	Optimize Energy Performance	18				
	1		Credit	Advanced Energy Metering	1				
	2		Credit	Demand Response	2				
		3	Credit	Renewable Energy Production	3				
	1		Credit	Enhanced Refrigerant Management	1				
2			Credit	Green Power and Carbon Offsets	2				

2	6	5	Mater	ials and Resources	13
Υ			Prereq	Storage and Collection of Recyclables	Required
Υ			Prereq	Construction and Demolition Waste Management Planning	Required
	3	2	Credit	Building Life-Cycle Impact Reduction	5
	1	1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
	1	1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
	1	1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

7	7	2	Indoor	Environmental Quality	16
Υ			Prereq	Minimum Indoor Air Quality Performance	Required
Υ			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
1	2		Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
	2		Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1	1		Credit	Interior Lighting	2
	2	1	Credit	Daylight	3
		1	Credit	Quality Views	1
1			Credit	Acoustic Performance	1

5			Credit Innovation	5
1			Credit LEED Accredited Professional	1
			•	
2	2	0	Regional Priority	4
2	2	0	Regional Priority Credit Regional Priority: Access to Quality Transit	4

	2	U	Regional Priority	4
1			Credit Regional Priority: Access to Quality Transit	1
1			Credit Regional Priority: Green Vehicles	1
	1		Credit Regional Priority: Reduced Parking Footprint	1
	1		Credit Regional Priority: Rainwater Management	1

51 37 40	TOTALS		Possible Points:	110

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110

MARCH 16, 2018





LEED v4 for BD+C: New Construction and Major Renovation

Project Checklist

Project Name: 375 M St SW

Date: 8/15/16

51 37

Integrative Process

11	3	18	Locat	Location and Transportation					
		16	Credit	LEED for Neighborhood Development Location	16				
1			Credit	Sensitive Land Protection	1				
		2	Credit	High Priority Site	2				
4	1		Credit	Surrounding Density and Diverse Uses	5				
5			Credit	Access to Quality Transit	5				
	1		Credit	Bicycle Facilities	1				
	1		Credit	Reduced Parking Footprint	1				
1			Credit	Green Vehicles	1				

6	2	2	Susta	ninable Sites	10
Υ			Prereq	Construction Activity Pollution Prevention	Required
1			Credit	Site Assessment	1
		2	Credit	Site Development - Protect or Restore Habitat	2
1			Credit	Open Space	1
1	2		Credit	Rainwater Management	3
2			Credit	Heat Island Reduction	2
1			Credit	Light Pollution Reduction	1

4	1	6	Water	Efficiency	11
Y			Prereq	Outdoor Water Use Reduction	Required
Υ			Prereq	Indoor Water Use Reduction	Required
Υ			Prereq	Building-Level Water Metering	Required
1	1		Credit	Outdoor Water Use Reduction	2
2		4	Credit	Indoor Water Use Reduction	6
		2	Credit	Cooling Tower Water Use	2
1			Credit	Water Metering	1

12	16	7	Energ	gy and Atmosphere	33
Υ			Prereq	Fundamental Commissioning and Verification	Required
Υ			Prereq	Minimum Energy Performance	Required
Υ			Prereq	Building-Level Energy Metering	Required
Υ			Prereq	Fundamental Refrigerant Management	Required
6			Credit	Enhanced Commissioning	6
4	12	4	Credit	Optimize Energy Performance	18
	1		Credit	Advanced Energy Metering	1
	2		Credit	Demand Response	2
		3	Credit	Renewable Energy Production	3
	1		Credit	Enhanced Refrigerant Management	1
2			Credit	Green Power and Carbon Offsets	2

2	6	5	Mater	ials and Resources	13
Υ			Prereq	Storage and Collection of Recyclables	Required
Υ			Prereq	Construction and Demolition Waste Management Planning	Required
	3	2	Credit	Building Life-Cycle Impact Reduction	5
	1	1	Credit	Building Product Disclosure and Optimization - Environmental Product Declarations	2
	1	1	Credit	Building Product Disclosure and Optimization - Sourcing of Raw Materials	2
	1	1	Credit	Building Product Disclosure and Optimization - Material Ingredients	2
2			Credit	Construction and Demolition Waste Management	2

7	7	2	Indoor	r Environmental Quality	16
Υ			Prereq	Minimum Indoor Air Quality Performance	Required
Υ			Prereq	Environmental Tobacco Smoke Control	Required
2			Credit	Enhanced Indoor Air Quality Strategies	2
1	2		Credit	Low-Emitting Materials	3
1			Credit	Construction Indoor Air Quality Management Plan	1
	2		Credit	Indoor Air Quality Assessment	2
1			Credit	Thermal Comfort	1
1	1		Credit	Interior Lighting	2
	2	1	Credit	Daylight	3
		1	Credit	Quality Views	1
1			Credit	Acoustic Performance	1

6	0	0	Innovation	
5			Credit Innovation	5
1			Credit LEED Accredited Professional	1
			_	

2	2	0	Regio	Regional Priority			
1			Credit	Regional Priority: Access to Quality Transit	1		
1			Credit	Regional Priority: Green Vehicles	1		
	1		Credit	Regional Priority: Reduced Parking Footprint	1		
	1		Credit	Regional Priority: Rainwater Management	1		

TOTALS Possible Points: 110

Certified: 40 to 49 points, Silver: 50 to 59 points, Gold: 60 to 79 points, Platinum: 80 to 110



LEED SCORECARD - EAST BLDG (375)