TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA
MARCH 22, 2013
REVISED JULY 5, 2013
City Engineering Division Project #12022 S

LEGEND

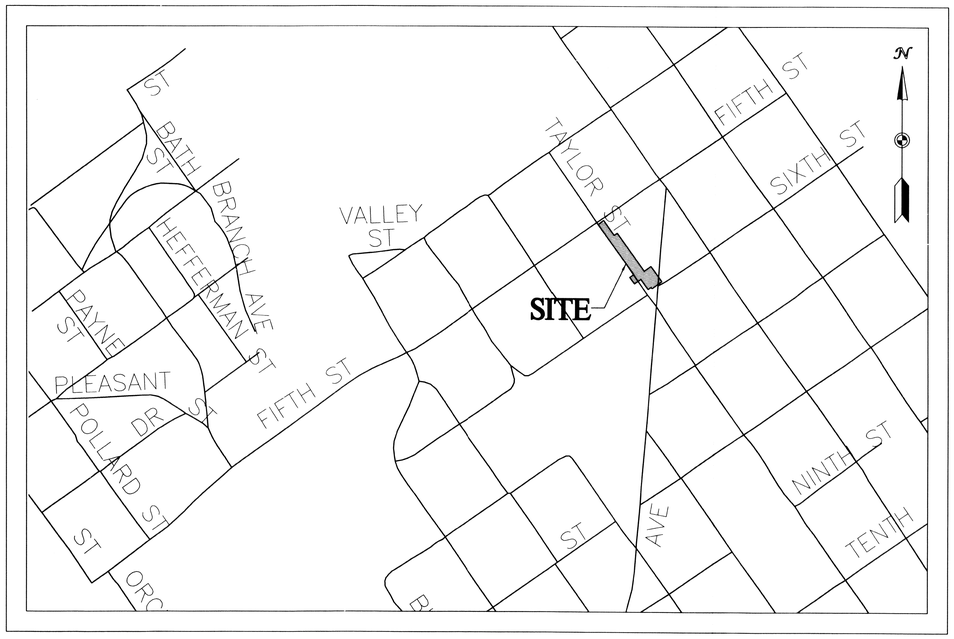
	ABANDONED OR DEMOLISH
500	CONTOUR (INTERVAL AS INDICATED ON SITE PLAN)
	EC-2 LINER
	EDGE OF EXISTING PAVEMENT
X X	FENCE
GAS	GAS LINE
OHC	OVERHEAD CABLE LINE
OHE	OVERHEAD ELECTRIC LINE
OHT	OVERHEAD TELEPHONE LINE
PL	PROPERTY LINE
R/W	RIGHT-OF-WAY
SAN	SANITARY SEWER
• 499.50	SPOT ELEVATION
SS	STORM SEWER
UGE	UNDERGROUND ELECTRICAL LINE
UGT	UNDERGROUND TELEPHONE LINE
W	WATER LINE
	WOOD LINE
	UTILITY EASEMENTS
	DRAINAGE EASEMENT
	CONCRETE
	NEW PAVEMENT
	STONE
	BENCHMARK
	DOUBLE WATER METER SETTING
	DROP INLET
FH	FIRE HYDRANT
IPF	IRON PIN FOUND
IPS	IRON PIN SET
	LIGHT POLE
	POWER POLE
SAN	SAN. SEWER MANHOLE
CO	SANITARY CLEAN OUT
	TELEPHONE POLE WITH GUY WIRE & ANCHOR
	TREE
WM	WATER METER
WV	WATER VALVE
ARV	AIR RELEASE VALVE
C F	CUT / FILL LINES
C2-1	STRUCTURE NUMBER 1, PLAN C-2
	TEMPORARY CONSTRUCTION AND GRADING EASEMENT DESIGNATION
	PERMANENT SLOPE AND DRAINAGE EASEMENT DESIGNATION

NOTE: 1. THE SIZE OF SYMBOLS MAY VARY FROM THOSE SHOWN.

2. ALL ABBREVIATIONS AND SYMBOLS SHOWN MAY NOT BE USED.

ABBREVIATIONS

ADT	AVERAGE DAILY TRAFFIC	NTS	NOT TO SCALE
ARV	AIR RELEASE VALVE	PL	PROPERTY LINE
BC	BACK OF CURB	PC	POINT OF CURVATURE
BM	BENCH MARK	PI	POINT OF INTERSECTION
CD	COMBINATION UNDERDRAIN	PT	POINT OF TANGENT
CG	CURB & GUTTER	POB	POINT OF BEGINNING
℄	CENTER LINE	POE	POINT OF ENDING
CMP	CORRUGATED METAL PIPE	PRC	POINT OF REVERSE CURVE
CO	CLEAN OUT	PVC	POINT OF VERTICAL CURVATURE
CP	CONTROL POINT	PVI	POINT OF VERTICAL INTERSECTION
CY	CUBIC YARDS	PVT	POINT OF VERTICAL TANGENT
DIA	DIAMETER	PUE	PUBLIC UTILITY EASEMENT
DIP	DUCTILE IRON PIPE	PVC	POLYVINYL CHLORIDE PIPE
EL	ELEVATION	RCP	REINFORCED CONCRETE PIPE
ELEC	ELECTRIC	RT	RIGHT
EVT	EVENT POINT	R/W	RIGHT OF WAY
EX	EXISTING	SAN	SANITARY
FF	FINISHED FLOOR	SD	SIGHT DISTANCE
FH	FIRE HYDRANT ASSEMBLY	STA	STATION
GM	GAS METER	STD	STANDARD
GV	GAS VALVE	SY	SQUARE YARDS
INV	INVERT	TYP	TYPICAL
IPF	IRON PIN FOUND	UD	UNDERDRAIN
IPS	IRON PIN SET	UON	UNLESS OTHERWISE NOTED
LT	LEFT	VC	VERTICAL CURVE LENGTH
MH	MANHOLE	VPD	VEHICLES PER DAY
ML	MAINLINE	VSD	VERTICAL SIGHT DISTANCE
NIC	NOT IN CONTRACT	WM	WATER METER
		WV	WATER VALVE



INDEX OF SHEETS

SHEET NO.	DRAWING NO.	TITLE
1 OF 7	CS1	COVER SHEET
2 OF 7	G1	EXISTING CONDITIONS & DEMOLITION
3 OF 7	C1	SITE PLAN
4 OF 7	EC1	EROSION & SEDIMENT CONTROL PLAN & NARRATIVE
5 OF 7	D1	DETAILS
6 OF 7	D2	DETAILS
7 OF 7	L1	LANDSCAPE PLAN

PROJECT DESCRIPTION:

THE PURPOSE OF THIS PLAN IS TO TO CONSTRUCT A STORMWATER DETENTION POND ON THE CORNER LOT OF TAYLOR AND PARK STREET TO MEET STORMWATER QUANTITY AND QUALITY STANDARDS FOR THE IMPERVIOUS AREA OF THE CITY OF LYNCHBURG'S EXISTING AND EXPANDED PARKING AREA ALONG TAYLOR STREET. THE PROJECT INVOLVES THE DISTURBANCE OF APPROXIMATELY 0.265 AC.

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF LYNCHBURG MANUAL OF SPECIFICATIONS AND STANDARD DETAILS, LATEST REVISION. SITE SPECIFICATIONS AND DETAILS NOT COVERED BY THE CITY MANUAL SHALL CONFORM TO THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S ROAD AND BRIDGE 2007 SPECIFICATIONS AND 2008 STANDARDS, AND VIRGINIA DEPARTMENT OF HEALTH REGULATIONS.

2. CONTACT MISS UTILITY 1-800-552-7001 FORTY-EIGHT (48) HOURS PRIOR TO ANY GRADING OR DIGGING TO HAVE UNDERGROUND UTILITIES MARKED. THIS PLAN DOES NOT GUARANTEE THE EXISTENCE, NON EXISTENCE, SIZE TYPE, LOCATION, ALIGNMENT OR DEPTH OF ANY OR ALL UNDERGROUND UTILITIES OR OTHER FACILITIES. THE CONTRACTOR SHALL PERFORM WHATEVER TEST EXCAVATION OR OTHER INVESTIGATION NECESSARY TO VERIFY TIE-IN INVERTS, LOCATIONS AND CLEARANCES, AND SHALL REPORT IMMEDIATELY ANY DISCREPANCIES. UTILITY COMPANIES SHALL BE NOTIFIED IN ADVANCE OF ANY EXCAVATION IN THE PROXIMITY OF THEIR UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AT HIS EXPENSE ANY EXISTING UTILITIES DAMAGED DURING CONSTRUCTION.

3. CONTACT CITY'S CONSTRUCTION COORDINATOR JOE SMITH AT 455-4449 A MINIMUM SEVENTY-TWO (72) HOURS PRIOR TO ANY GRADING, DIGGING, OR SERVICE INTERRUPTION FOR PUBLIC UTILITIES.

4. ALL DISTURBED AREAS SHALL BE RETURNED TO LIKE OR BETTER CONDITIONS WHETHER THEY ARE GRASSED, LANDSCAPED, GRAVEL, OR OTHER. CONTRACTOR SHALL REPLACE ANY CULVERTS DAMAGED BY CONSTRUCTION.

5. COMPACT LAYERS OF FILL TO 100 PERCENT BY ASTM D 698 (STANDARD PROCTOR) BENEATH AND WITHIN 25 FEET OF BUILDINGS, STRUCTURES AND WITHIN STORMWATER POND EMBANKMENTS. COMPACT LAYERS OF FILL TO 95 PERCENT BY ASTM D 698 (STANDARD PROCTOR) WITHIN CITY'S RIGHT-OF-WAY, PAVEMENTS, WALKS, AND ROAD SHOULDERS. IN OTHER UNPAVED AREAS, COMPACT TO 90 PERCENT BY ASTM D 698 (STANDARD PROCTOR). IF THE DENSITY OF THE ADJACENT SOIL IS MORE THAN THE DENSITY SPECIFIED, THEN COMPACT TO A DENSITY NOT LESS THAN THE DENSITY OF THE ADJACENT SOIL.

6. POSITIVE AND ADEQUATE ROADSIDE DRAINAGE SHALL BE RESTORED BY THE CONTRACTOR PRIOR TO RELEASE OF PAYMENT AND PERFORMANCE BONDS. WRITTEN ACCEPTANCE OF THE DRAINAGE FACILITIES MUST BE PROVIDED BY THE EROSION AND SEDIMENT CONTROL ADMINISTRATOR PRIOR TO RELEASE OF BONDS. ESTABLISHMENT OF PERMANENT STABILIZATION IS INCLUDED IN THIS REQUIREMENT.

7. STONE WITHIN BIOFILTER AND UNDER PERVIOUS PAVERS SHALL BE VDOT NO.57 WASHED STONE.

8. CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE CITY TRANSPORTATION ENGINEER TWO WEEKS PRIOR TO CONSTRUCTION.

UTILITY CONTACTS

WATER & SEWER:	CITY OF LYNCHBURG UTILITIES DEPARTMENT ATTN: HARRY DOSS 525 TAYLOR STREET LYNCHBURG, VA. 24501 (434)455-4271	ELECTRICITY:	AMERICAN ELECTRIC POWER 4001 MAYFLOWER DRIVE LYNCHBURG, VA 24501 (434) 522-4281
TELEPHONE:	VERIZON VIRGINIA INC. ENGINEERING DEPARTMENT 553 LEESVILLE ROAD LYNCHBURG, VA 24502 (434) 237-9522 REPAIR: 1-888-663-0363	GAS:	COLUMBIA GAS OF VIRGINIA INC. CUSTOMER SERVICE RICHMOND VA 23236 1-888-460-4332
		CABLE:	COMCAST DIGITAL CABLE 2820 LINKHORNE DRIVE LYNCHBURG, VA 24588 (888) 266-2278

NOTE: CONTRACTOR SHALL VERIFY CONTACT INFORMATION FOR EMERGENCY REPAIR SERVICE AND INSTALLATION, PRIOR TO ANY CONSTRUCTION ACTIVITES.

OWNER: CITY OF LYNCHBURG
CONTACT: JIM TAILIAN, PE
(434) 455-3953

ENGINEER: WARNER WHITE ENGINEERING PARTNERS, INC.
118 CORNERSTONE STREET
LYNCHBURG, VA 24502
CONTACT: JAMEY L. WHITE, PE
(434) 534-3201

RECEIVED
JUL 08 2013
COMMUNITY DEVELOPMENT

City of Lynchburg Project # 12022-WS

Approved: City Engineer — Date 7/22/13

UTILITIES DEPT JUL 15 2013

Approved: Water Resources Engineer — Date 8 July 2013

Approved: Erosion and Sediment Control Administrator — Date

NO.	REVISION	BY	DATE
2	REVISED CITY SIGNATURE BLOCK	GLM	7-5-13
1	REVISED TO ADDRESS CITY COMMENTS DATED APRIL 17, 2013	GLM	6-10-13

COMMONWEALTH OF VIRGINIA — JAMEY L. WHITE — Lic. No. 47808 — 7-5-13 — PROFESSIONAL ENGINEER

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

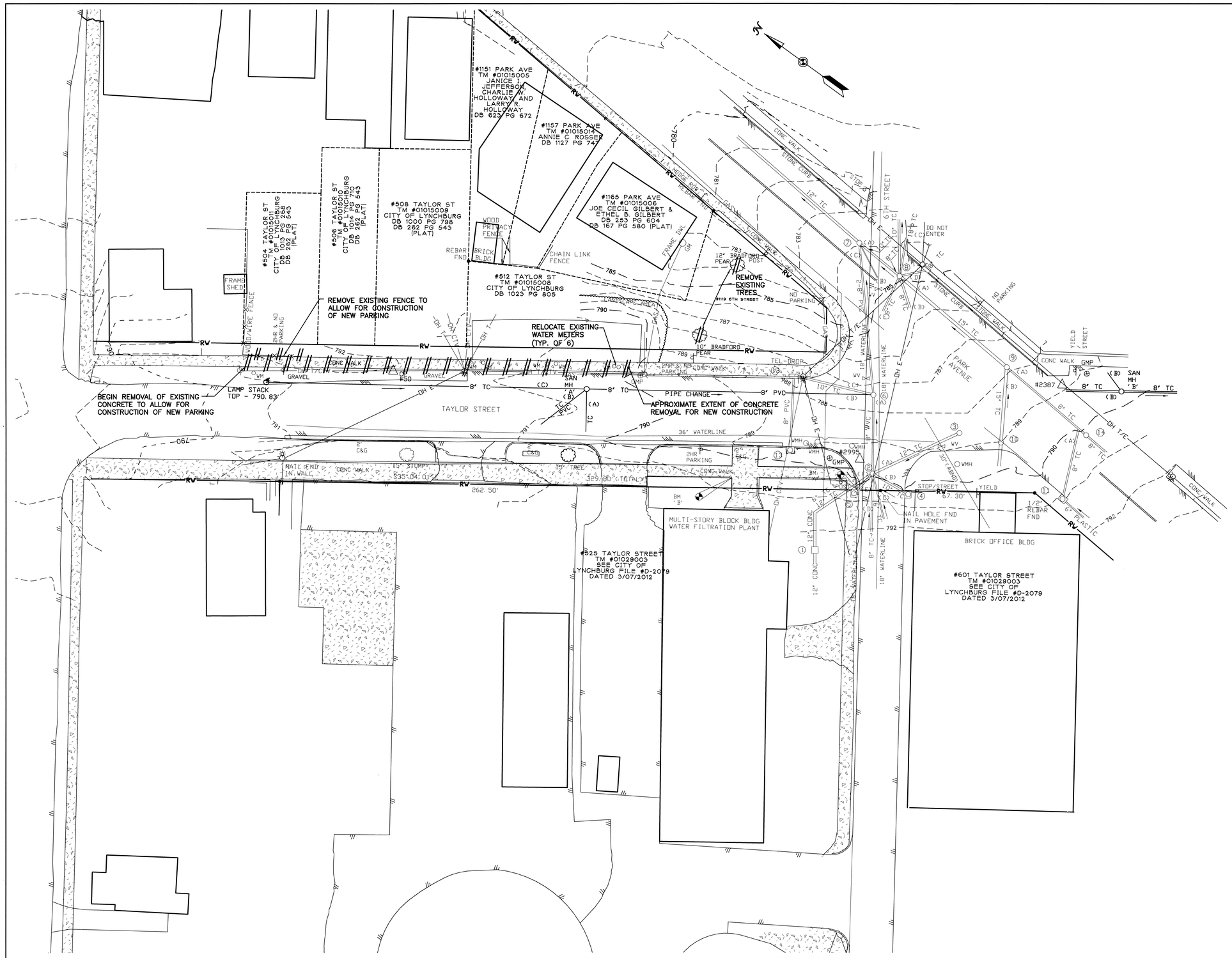
DRAWN BY: GLM
DESIGNED BY: JLW
REVIEWED BY: TJW
PROJECT No. 12025.00
SCALE: GRAPHIC

PROJECT: CITY PROJECT: #12022-SS
TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA

TITLE: COVER SHEET

DATE: REV. 7-5-13 3-22-13
DRAWING No: CS1
SHEET NUMBER: 1 OF 7

FILE: P:\2012\12025.00 Taylor Street Water Quality Project\Site Plan\12025CS1.dwg



MINIMUM STANDARDS CERTIFICATION:

THIS TAYLOR STREET STORMWATER FACILITY TOPOGRAPHIC SURVEY WAS COMPLETED UNDER THE DIRECT AND RESPONSIBLE CHARGE OF MICHAEL CASSIDY L.S. FROM AN ACTUAL GROUND SURVEY MADE UNDER MY SUPERVISION; THAT THE IMAGERY AND/OR ORIGINAL DATA WAS OBTAINED ON (DATE) 7-23-12 ; AND THAT THIS PLAT, MAP, OR DIGITAL GEOSPATIAL DATA INCLUDING METADATA MEETS MINIMUM ACCURACY STANDARDS UNLESS OTHERWISE NOTED.

Signature 2396 Lic. No.

IF THIS DRAWING IS A REDUCTION GRAPHIC SCALE MUST BE USED

20' 0 20'

NO.	REVISION	BY	DATE
1	REVISED TO ADDRESS CITY COMMENTS DATED APRIL 17, 2013	GLM	6-10-13

COMMONWEALTH OF VIRGINIA
JAMEY L. WHITE
Lic. No. 47808
6-10-13
PROFESSIONAL ENGINEER

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

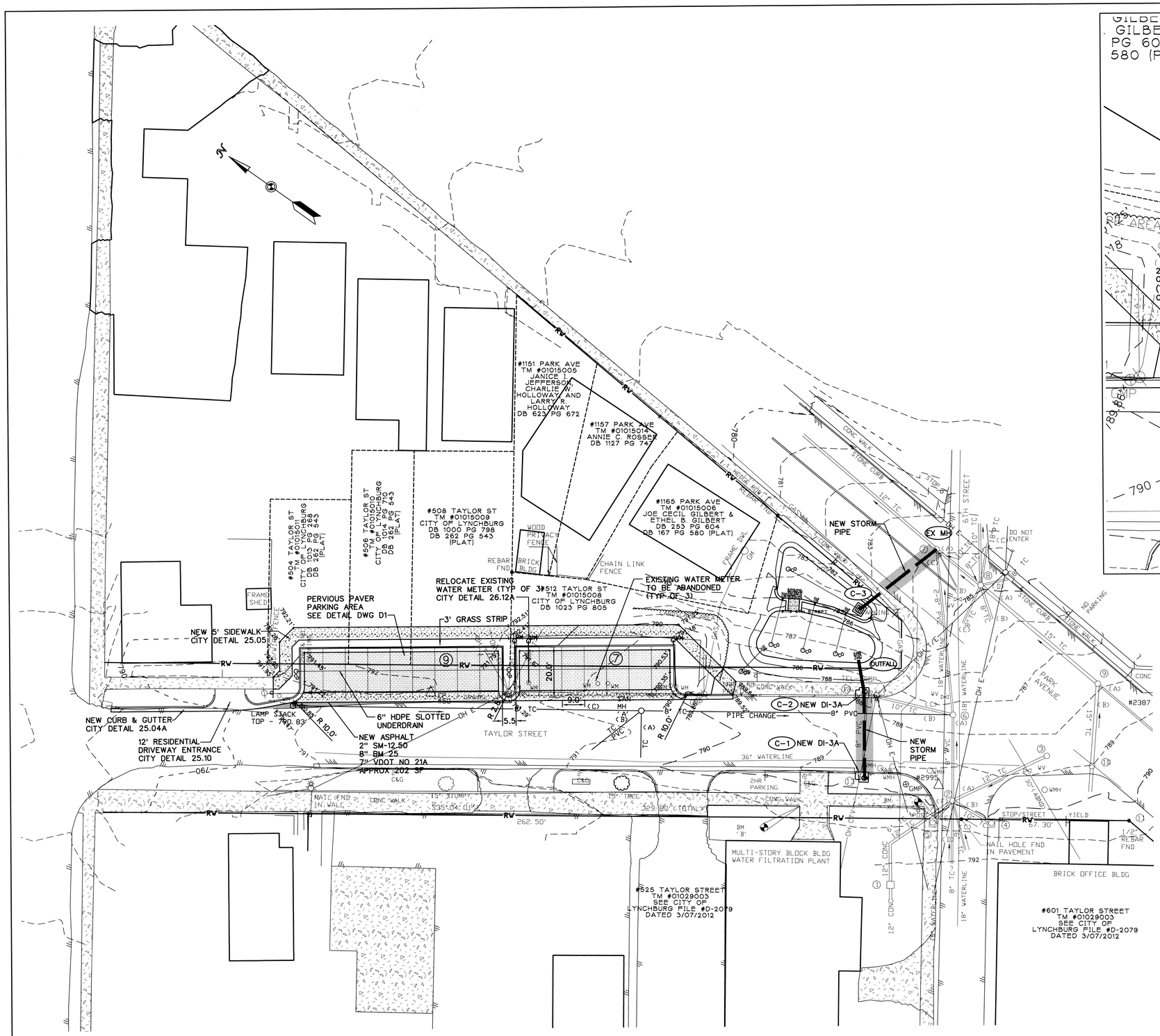
DRAWN BY: GLM
DESIGNED BY: JLW
REVIEWED BY: TJW
PROJECT No. 12025.00
SCALE: GRAPHIC

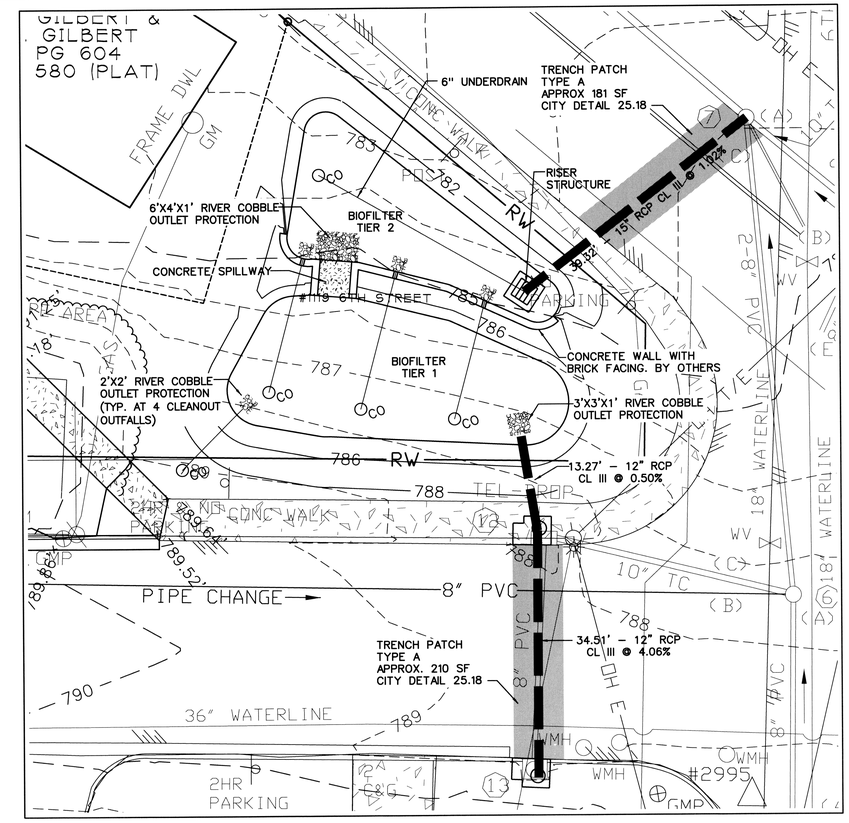
PROJECT: CITY PROJECT: #12022-SS
TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA

TITLE: EXISTING CONDITIONS & DEMOLITION

DATE: REV. 6-10-13 3-22-13
DRAWING No: G1
SHEET NUMBER: 2 OF 7

FILE: P:\2012\12025.00 Taylor Street Water Quality Project\Site Plan\12025G1.dwg





ENLARGED PLAN

SCALE: 1" = 10'

C-1 DI-3A
TOP MANHOLE – 788.94
INV OUT – 786.20

C-2 DI-3A
TOP – 788.45
INV IN – 784.80
INV OUT – 784.57

OUTFALL INV OUT = 784.50

C-3 STD DI-1
TOP = 782.00
INV OUT = 777.69'
STRUC. DIA.=48"

EX MH EXISTING MANHOLE
RIM = 783.89
NEW INV IN = 777.40
(A) INV IN = 777.40
(B) INV IN = 777.40 (4" PVC IN OLD 10" TC)
(C) INV IN = 781.00
(C) INV IN = 779.90
INV OUT = 777.30

IF THIS DRAWING IS A REDUCTION GRAPHIC SCALE MUST BE USED

20' 0 20'

NO.	REVISION	BY	DATE
1	REVISED TO ADDRESS CITY COMMENTS DATED APRIL 17, 2013	GLM	6-10-13

COMMONWEALTH OF VIRGINIA
JAMEY L. WHITE
Lic. No. 47808
6-10-13
PROFESSIONAL ENGINEER

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

DRAWN BY: GLM
DESIGNED BY: JLW
REVIEWED BY: TJW
PROJECT No. 12025.00
SCALE: GRAPHIC

PROJECT: CITY PROJECT: #12022-SS
TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA

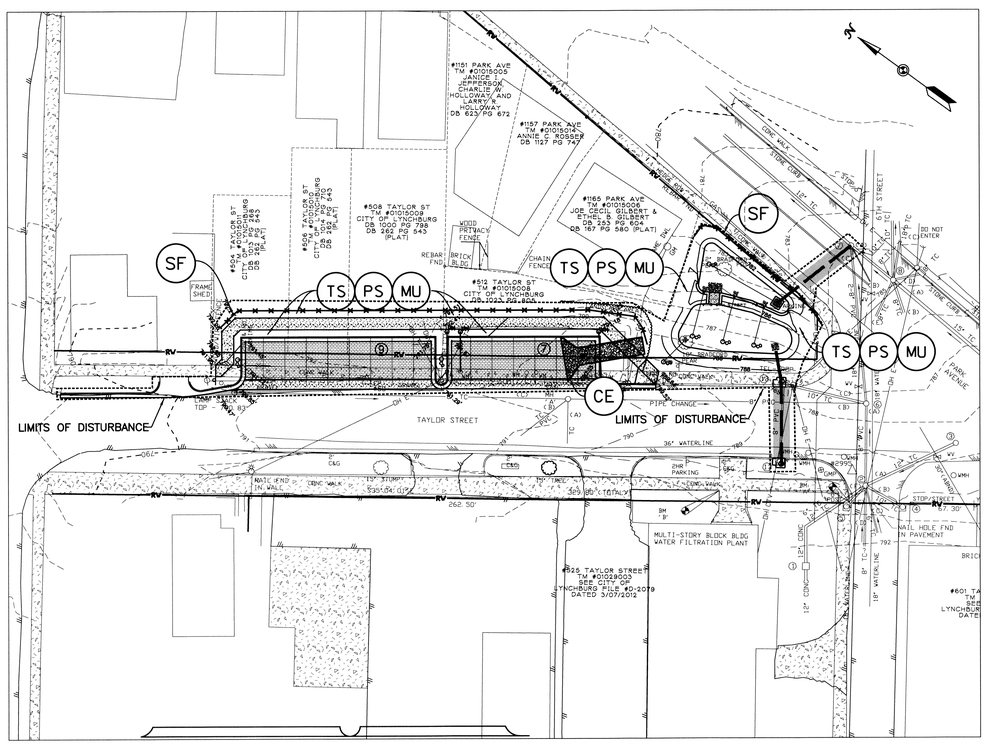
TITLE: SITE PLAN

DATE: REV. 6-10-13 3-22-13
DRAWING No: C1
SHEET NUMBER: 3 OF 7

FILE: P:\2012\12025.00 Taylor Street Water Quality Project\Site Plan\12025C1.dwg

EROSION & SEDIMENT CONTROL LEGEND

3.02	TEMPORARY STONE CONSTRUCTION ENTRANCE	CE	
3.05	SILT FENCE	SF	X—X—X
3.31	TEMPORARY SEEDING	TS	—TS—
3.32	PERMANENT SEEDING	PS	—PS—
3.35	MULCHING	MU	—MU—



CONSTRUCTION ENTRANCE NOTES:

1. THE FOUR EXISTING PARKING SPACES SHALL BE UNUSEABLE DURING CONSTRUCTION OF BIOFILTER TO ALLOW FORSITE ACCESS OF EQUIPMENT.
2. ALL EXISTING PARKING SHALL BE TEMPORARILY RELOCATED DURING PERVIOUS CONCRETE & CURB INSTALLATION.

IF THIS DRAWING IS A REDUCTION
GRAPHIC SCALE MUST BE USED

30' 0 30'

I. PROJECT DESCRIPTION

THE PURPOSE OF THIS PLAN IS TO TO CONSTRUCT A STORMWATER DETENTION POND ON THE CORNER LOT OF TAYLOR AND PARK STREET TO MEET STORMWATER QUANTITY AND QUALITY STANDARDS FOR THE IMPERVIOUS AREA OF THE CITY OF LYNCHBURG'S EXISTING AND EXPANDED PARKING AREA ALONG TAYLOR STREET. THE AREA OF DISTURBANCE IS APPROXIMATELY 0.265 AC.

II. EXISTING SITE CONDITIONS
THE SITE IS LOCATED IN THE CITY OF LYNCHBURG ALONG TAYLOR ST. AND PARK AVE.

III. ADJACENT PROPERTIES
THE PROJECT SITE IS BOUND BY RESIDENTIAL AND COMMERCIAL DEVELOPMENT.

IV. OFF-SITE AREAS
NO OFF-SITE ACTIVITY IS FORESEEN FOR THIS PROJECT.

V. SOILS
UL—URBAN LAND

VI. CRITICAL AREAS
THERE ARE NO CRITICAL AREAS IN THE PROJECT AREA.

VII. EROSION AND SEDIMENT CONTROL MEASURES
ALL VEGETATIVE AND STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SHALL BE CONSTRUCTED AND MAINTAINED BY THE CONTRACTOR IN ACCORDANCE WITH THE LATEST EDITION OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, AND THE VIRGINIA DEPARTMENT OF TRANSPORTATION'S ROAD AND BRIDGE STANDARDS.

A. STRUCTURAL PRACTICES

B. VEGETATIVE PRACTICES

1. TEMPORARY SEEDING (TS), SPEC. 3.31:
TEMPORARY SEEDING SHALL BE PROVIDED IMMEDIATELY ON SEDIMENT BASIN EMBANKMENTS AND AREAS TO REMAIN DENUDED FOR MORE THAN 30 DAYS.
2. PERMANENT SEEDING (PS), SPEC. 3.32:
PERMANENT SEEDING SHALL BE PROVIDED ON SITE TO PROVIDE STABILIZATION FOR ALL DISTURBED AREAS.
3. SOIL STABILIZATION BLANKETS & MATTING (B/M), SPEC. 3.36:
ALL PERMANENT AND TEMPORARY SEEDING SHALL BE COVERED WITH EC-2 IMMEDIATELY UPON COMPLETION OF SEED APPLICATION.

C. MANAGEMENT STRATEGIES/MINIMUM STANDARDS

1. CONSTRUCTION SHALL BE PLANNED SO THAT GRADING OPERATIONS CAN BEGIN AND END AS SOON AS POSSIBLE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE INSTALLATION, MAINTENANCE, AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL PRACTICES.
3. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR
4. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
5. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE ENOUGH TO SURVIVE AND WILL INHIBIT EROSION.
6. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
7. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
8. SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
9. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
10. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE.
11. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
12. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
13. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
14. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
15. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
16. ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE MET.
17. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED.
18. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:

A. NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE STABILIZATION.
E. RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
F. APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.

19. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS MANNER. THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
20. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
21. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME, VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND CRITERIA:

A. CONCENTRATED STORMWATER RUNOFF LEAVING A DEVELOPMENT SITE SHALL BE DISCHARGED DIRECTLY INTO AN ADEQUATE NATURAL OR MAN-MADE RECEIVING CHANNEL, PIPE OR STORM SEWER SYSTEM. FOR THOSE SITES WHERE RUNOFF IS DISCHARGED INTO A PIPE OR PIPE SYSTEM, DOWNSTREAM STABILITY ANALYSES AT THE OUTFALL OF THE PIPE OR PIPE SYSTEM SHALL BE PERFORMED.
B. ADEQUACY OF ALL CHANNELS AND PIPES SHALL BE VERIFIED IN THE FOLLOWING MANNER:
(1) THE APPLICANT SHALL DEMONSTRATE THAT THE TOTAL DRAINAGE AREA TO THE POINT OF ANALYSIS WITHIN THE CHANNEL IS ONE HUNDRED TIMES GREATER THAN THE CONTRIBUTING DRAINAGE AREA OF THE PROJECT IN QUESTION; OR
(2) (A) NATURAL CHANNELS SHALL BE ANALYZED BY THE USE OF A TWO-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP CHANNEL BANKS NOR CAUSE EROSION OF CHANNEL BED OR BANKS.
(B) ALL PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL NOT OVERTOP ITS BANKS AND BY THE USE OF A TWO-YEAR STORM TO DEMONSTRATE THAT STORMWATER WILL NOT CAUSE EROSION OF CHANNEL BED OR BANKS; AND
(C) PIPES AND STORM SEWER SYSTEMS SHALL BE ANALYZED BY THE USE OF A TEN-YEAR STORM TO VERIFY THAT STORMWATER WILL BE CONTAINED WITHIN THE PIPE OR SYSTEM.
C. IF EXISTING NATURAL RECEIVING CHANNELS OR PREVIOUSLY CONSTRUCTED MAN-MADE CHANNELS OR PIPES ARE NOT ADEQUATE, THE APPLICANT SHALL:
(1) IMPROVE THE CHANNELS TO A CONDITION WHERE A TEN-YEAR STORM WILL NOT OVERTOP THE BANKS AND A TWO-YEAR STORM WILL NOT CAUSE EROSION TO THE CHANNEL BED OR BANKS; OR
(2) IMPROVE THE PIPE OR PIPE SYSTEM TO A CONDITION WHERE THE TEN-YEAR STORM IS CONTAINED WITHIN THE APPURTENANCES; OR
(3) DEVELOP A SITE DESIGN THAT WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TWO-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A NATURAL CHANNEL OR WILL NOT CAUSE THE PRE-DEVELOPMENT PEAK RUNOFF RATE FROM A TEN-YEAR STORM TO INCREASE WHEN RUNOFF OUTFALLS INTO A MAN-MADE CHANNEL; OR
(4) PROVIDE A COMBINATION OF CHANNEL IMPROVEMENT, STORMWATER DETENTION OR OTHER MEASURES WHICH IS SATISFACTORY TO THE PLAN-APPROVING AUTHORITY TO PREVENT DOWNSTREAM EROSION.
D. THE APPLICANT SHALL PROVIDE EVIDENCE OF PERMISSION TO MAKE THE IMPROVEMENTS.
E. ALL HYDROLOGIC ANALYSES SHALL BE BASED ON THE EXISTING WATERSHED CHARACTERISTICS AND THE ULTIMATE DEVELOPMENT OF THE SUBJECT PROJECT.
F. IF THE APPLICANT CHOOSES AN OPTION THAT INCLUDES STORMWATER DETENTION, HE SHALL OBTAIN APPROVAL FROM THE LOCALITY OF A PLAN FOR MAINTENANCE OF THE DETENTION FACILITIES. THE PLAN SHALL SET FORTH THE MAINTENANCE REQUIREMENTS OF THE FACILITY AND THE PERSON RESPONSIBLE FOR PERFORMING THE MAINTENANCE.
G. OUTFALL FROM A DETENTION FACILITY SHALL BE DISCHARGED TO A RECEIVING CHANNEL, AND ENERGY DISSIPATORS SHALL BE PLACED AT THE OUTFALL OF ALL DETENTION FACILITIES AS NECESSARY TO PROVIDE A STABILIZED TRANSITION FROM THE FACILITY TO THE RECEIVING CHANNEL.
H. ALL ON-SITE CHANNELS MUST BE VERIFIED TO BE ADEQUATE.
I. INCREASED VOLUMES OF SHEET FLOWS THAT MAY CAUSE EROSION OR SEDIMENTATION ON ADJACENT PROPERTY SHALL BE DIVERTED TO A STABLE OUTLET, ADEQUATE CHANNEL, PIPE OR PIPE SYSTEM, OR TO A DETENTION FACILITY.
J. IN APPLYING THESE STORMWATER MANAGEMENT CRITERIA, INDIVIDUAL LOTS OR PARCELS IN A RESIDENTIAL, COMMERCIAL OR INDUSTRIAL DEVELOPMENT SHALL NOT BE CONSIDERED TO BE SEPARATE DEVELOPMENT PROJECTS. INSTEAD, THE DEVELOPMENT, AS A WHOLE, SHALL BE CONSIDERED TO BE A SINGLE DEVELOPMENT PROJECT. HYDROLOGIC PARAMETERS THAT REFLECT THE ULTIMATE DEVELOPMENT CONDITION SHALL BE USED IN ALL ENGINEERING CALCULATIONS.
K. ALL MEASURES USED TO PROTECT PROPERTIES AND WATERWAYS SHALL BE EMPLOYED IN A MANNER WHICH MINIMIZES IMPACTS ON THE PHYSICAL, CHEMICAL AND BIOLOGICAL INTEGRITY OF RIVERS, STREAMS AND OTHER WATERS OF THE STATE.

LIME & FERTILIZER SPECIFICATIONS

LIME
PIEDMONT AND APPALACHIAN REGION:
2 TONS/ACRE PULVERIZED AGRICULTURAL GRADE LIMESTONE (90 LBS/1,000 SQ. FT.)
NOTE: AND AGRICULTURAL GRADE OF LIMESTONE SHOULD ALWAYS BE USED.

FERTILIZER
MIXED GRASSES AND LEGUMES:
1,000 LBS/ACRE 10-20-10 OR EQUIVALENT NUTRIENTS (23 LBS/1,000 SQ. FT.)
LEGUME STANDS ONLY:
1,000 LBS/ACRE 5-20-10 (23 LBS/1,000 SQ.FT) IS PREFERRED; HOWEVER, 1,000LBS/ACRE OF 10-20-10 OR EQUIVALENT MAY BE USED.
GRASS STANDS ONLY:
1,000 LBS/ACRE 10-21-10 OR EQUIVALENT NUTRIENTS, (23 LBS/1,000 SQ. FT.) OTHER FERTILIZER FORMULATIONS, INCLUDING SLOW-RELEASE SOURCES OF NITROGEN (PREFERRED FROM A WATER QUALITY STANDPOINT), MAY BE USED PROVIDED THEY CAN SUPPLY THE SAME AMOUNTS AND PROPORTIONS OF PLANT NUTRIENTS.

INCORPORATION
LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE TOP 4-6 INCHES OF SOIL BY DISCING OR OTHER MEANS WHENEVER POSSIBLE. FOR EROSION CONTROL, WHEN APPLYING LIME AND FERTILIZER WITH A HYDROSEEDER, APPLY TO A ROUGH, LOOSE SURFACE.

VIII. SEQUENCE OF CONSTRUCTION

1. INSTALL E&S MEASURES AS REQUIRED WITH THE PROGRESSION OF CONSTRUCTION.
2. PERFORM GRADING FOR BIOFILTER.
3. INSTALL NEW STORM PIPING & STRUCTURES.
4. INSTALL RETAINING WALL.
5. APPLY TEMPORARY SEEDING TO AREAS THAT STAY DENUDED AND UNTOUCHED FOR THIRTY DAYS.
6. CONTRUCT NEW SIDEWALK, CURB & GUTTER, & PERVIOUS PAVER PARKING
7. CONSTRUCT NEW ASPHALT PAVING.
8. PLACE BIOFILTER MEDIA.
9. INSTALL BIOFILTER PLANTINGS.

IX. ENFORCEMENT
THE CITY OF LYNCHBURG RETAINS THE AUTHORITY TO ADD OR DELETE EROSION CONTROL MEASURES

X. CONTACT PARTY FOR E&S IMPLEMENTATION

J.P. MORRIS, P.E.
(434) 455-3918

TEMPORARY SEEDING SCHEDULE TS

PLANTING DATES	SPECIES	RATE (LBS./ACRE)
SEPTEMBER 1 - FEBRUARY 15	50/50 MIX OF ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM) & CEREAL (WINTER) RYE (SECALE CEREALE)	50-100
FEBRUARY 16 - APRIL 30	ANNUAL RYEGRASS (LOLIUM MULTI-FLORUM)	60-100
MAY 1 - AUGUST 31	GERMAN MILLET (SETARIA ITALICA)	50

PERMANENT SEEDING SCHEDULE PS

MINIMUM LAWN CARE	TOTAL POUNDS PER ACRE
COMMERCIAL OR RESIDENTIAL	175 - 200 LBS
KENTUCKY 31 OR TURF-TYPE TALL FESCUE	95 - 100 %
IMPROVED PERENNIAL RYEGRASS	0 - 5 %
KENTUCKY BLUE GRASS	0 - 5 %
HIGH MAINTENANCE LAWN CARE	200 - 250 LBS
KENTUCKY 31 OR TURF-TYPE TALL FESCUE	100 %
GENERAL SLOPE & ROAD SIDE DITCHES (3:1 OR LESS)	
KENTUCKY 31 FESCUE	128 LBS
RED TOP GRASS	2 LBS
SEASONAL NURSE CROP *	20 LBS
	150 LBS
LOW MAINTENANCE SLOPE (STEEPER THAN 3:1)	
KENTUCKY 31 FESCUE	108 LBS
RED TOP GRASS	2 LBS
SEASONAL NURSE CROP *	20 LBS
CROWNVETCH **	20 LBS
	150 LBS

* USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW

FEBRUARY 16 - APRIL	ANNUAL RYE
MAY 1 - AUGUST 15	FOXTAIL MILLET
AUGUST 16 - OCTOBER	ANNUAL RYE
NOVEMBER - FEBRUARY 15	WINTER RYE

** SUBSTITUTE SERICEA LESPEDEZA FOR CROWNVETCH EAST OF FARMVILLE, VIRGINIA (MAY THROUGH SEPTEMBER USE HULLED SERICEA, ALL OTHER PERIODS USE UNHULLEDSERICEA). IF FLATPEA IS USED IN LIEU OF CROWNVETCH, INCREASE RATE TO 30 LBS/ACRE. ALL LEGUME SEED MUST BE PROPERLY INOCULATED. WEEPING LOVEGRASS MAY BE ADDED TO ANY SLOPE OR LOW-MAINTENANCE MIX DURING WARMER SEEDING PERIODS; ADD 10-20 LBS/ACRE IN MIXES.

NO.	REVISION	BY	DATE
1	REVISED TO ADDRESS CITY COMMENTS DATED APRIL 17, 2013	GLM	6-10-13

COMMONWEALTH OF VIRGINIA
JAMEY L. WHITE
Lic. No. 47808
6-10-13
PROFESSIONAL ENGINEER

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

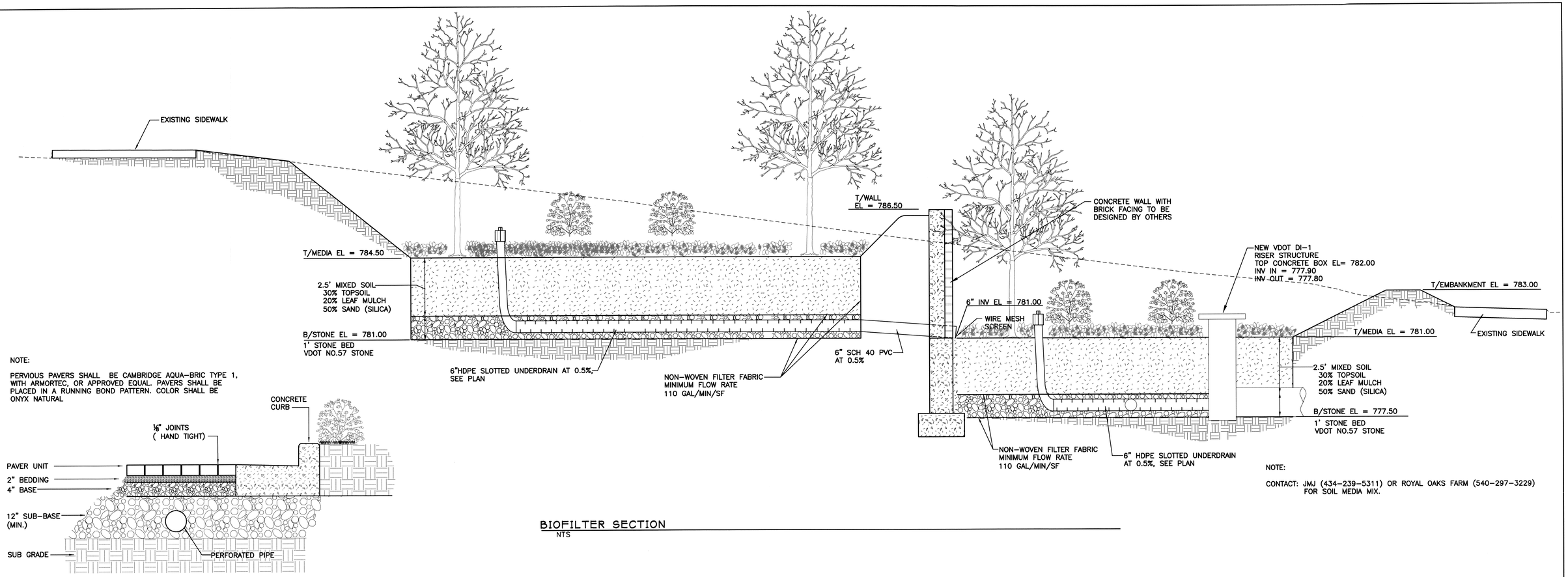
DRAWN BY: GLM
DESIGNED BY: JLW
REVIEWED BY: TJW
PROJECT No. 12025.00
SCALE: GRAPHIC

PROJECT: CITY PROJECT: #12022-SS
TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA

TITLE: EROSION & SEDIMENT CONTROL PLAN

DATE: REV. 6-10-13 3-22-13
DRAWING No: EC1
SHEET NUMBER: 4 OF 7

FILE: P:\2012\12025.00 Taylor Street Water Quality Project\Site Plan\12025EC1.dwg



NOTE:

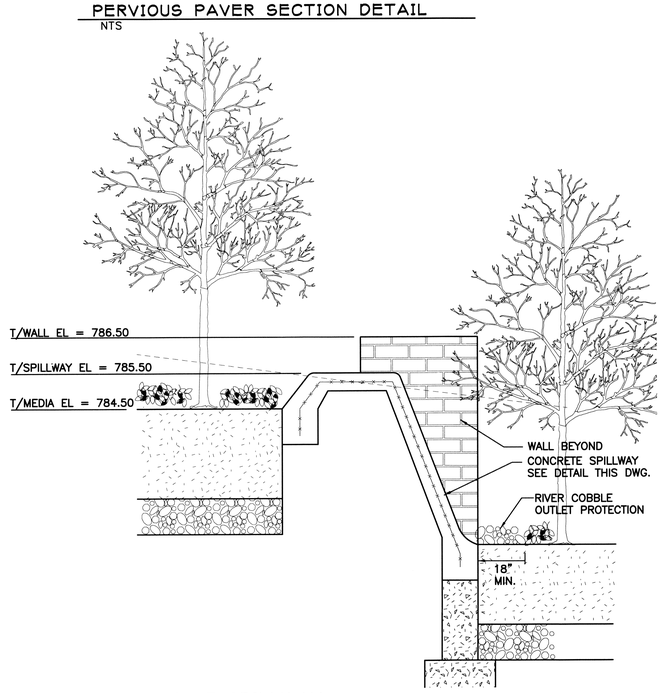
PERVIOUS PAVERS SHALL BE CAMBRIDGE AQUA-BRIC TYPE 1, WITH ARMORTEC, OR APPROVED EQUAL. PAVERS SHALL BE PLACED IN A RUNNING BOND PATTERN. COLOR SHALL BE ONYX NATURAL

NOTE:

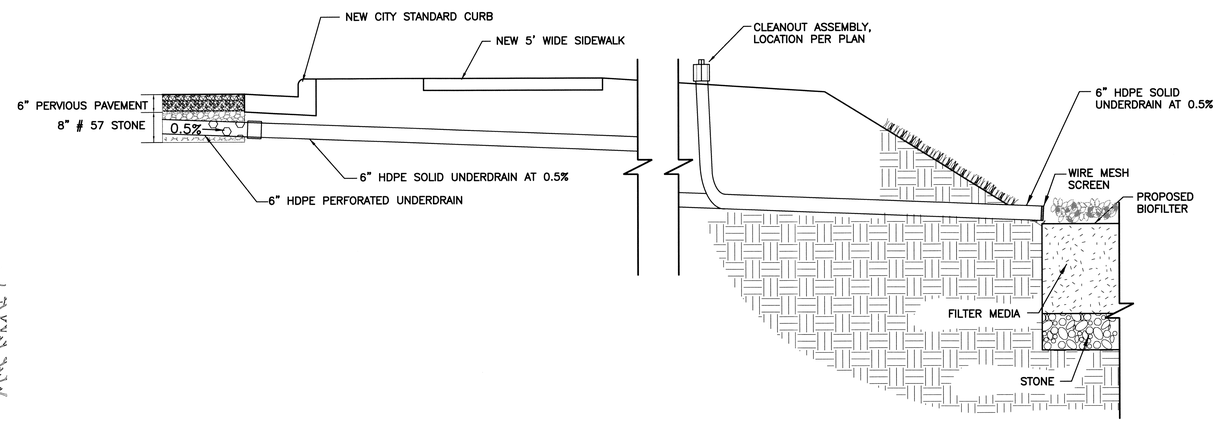
CONTACT: JMJ (434-239-5311) OR ROYAL OAKS FARM (540-297-3229) FOR SOIL MEDIA MIX.

BIOFILTER SECTION
NTS

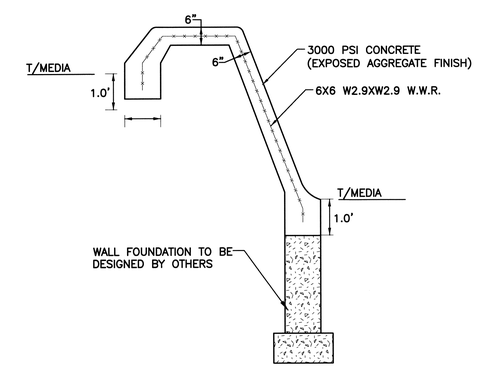
PERVIOUS PAVER SECTION DETAIL
NTS



SECTION AT SPILLWAY
NTS



PERVIOUS PARKING SECTION
NTS



SPILLWAY DETAIL
NTS

NO.	REVISION	BY	DATE
1	REVISED TO ADDRESS CITY COMMENTS DATED APRIL 17, 2013	GLM	6-10-13

COMMONWEALTH OF VIRGINIA
JAMEY L. WHITE
Lic. No. 47808
6-10-13
PROFESSIONAL ENGINEER

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

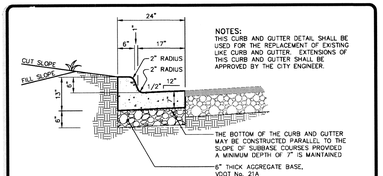
DRAWN BY: GLM
DESIGNED BY: JLW
REVIEWED BY: TJW
PROJECT No. 12025.00
SCALE: GRAPHIC

PROJECT: CITY PROJECT: #12022-SS
TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA

TITLE: DETAILS

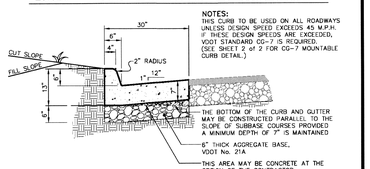
DATE: REV. 6-10-13
3-22-13
DRAWING No: D1
SHEET NUMBER: 5 OF 7

FILE: P:\2012\12025.00 Taylor Street Water Quality Project\Site Plan\12025D1.dwg



NOTES:
THIS CURB AND GUTTER DETAIL SHALL BE USED FOR THE REPLACEMENT OF EXISTING LIKE CURB AND GUTTER EXTENSIONS OF THIS CURB AND GUTTER SHALL BE APPROVED BY THE CITY ENGINEER.

25.04A – STANDARD CITY COMBINED 6" CURB & GUTTER



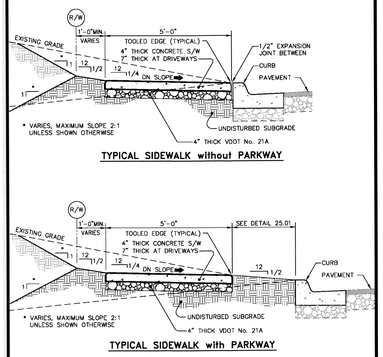
NOTES:
THIS CURB TO BE USED ON ALL ROADWAYS UNLESS DESIGN SPEED EXCEEDS 45 M.P.H. IF THESE DESIGN SPEEDS ARE EXCEEDED, VDOT STANDARD CG-7 IS REQUIRED. (SEE SHEET 2 of 2 FOR CG-7 MOUNTABLE CURB DETAIL.)

25.04B – STANDARD VDOT COMBINATION 6" CURB & GUTTER (CG-6)*

* PER 2001 VDOT ROAD AND BRIDGE STANDARDS OR LATEST REVISION

NOTES:
1. SCORE CURB / VALLEY GUTTER AT 10' O.C.
2. PROVIDE 1/2" EXPANSION JOINTS AT 90' O.C.
3. CONCRETE TO BE 3000 P.S.I. @ 28 DAYS, AIR ENTRAINED.
4. THESE NOTES APPLY TO SHEETS 1 THRU 3 OF THIS DETAIL.

THE CITY OF LYNCHBURG
STD. CURB & GUTTER & VALLEY GUTTER DETAIL
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 25.04 | REVISION DATE: 12-15-2011 | SHEET # 1 OF 3

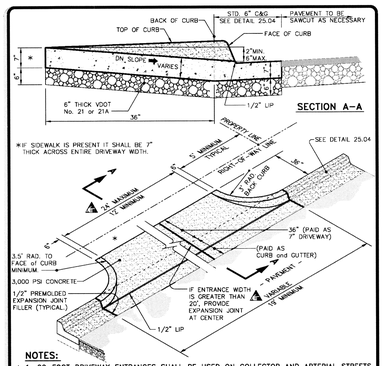


TYPICAL SIDEWALK without PARKWAY

TYPICAL SIDEWALK with PARKWAY

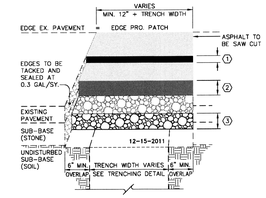
NOTES:
1. PROVIDE 3/4" DEEP TOOLED SCORE AT 5'-0" O.C.
2. EXPANSION JOINTS TO BE PLACED 30'-0" O.C. LONGITUDINALLY, ADJACENT TO CURBS, AND WHEN BUTTING EXISTING STRUCTURES, CONCRETE, OR BUILDINGS.

THE CITY OF LYNCHBURG
STANDARD SIDEWALK DETAIL
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 25.05 | REVISION DATE: 12-15-2011 | SHEET # 1 OF 1



NOTES:
1. 20-FOOT DRIVEWAY ENTRANCES SHALL BE USED ON COLLECTOR AND ARTERIAL STREETS.
2. RESIDENTIAL DRIVEWAYS SHALL NOT BE CONSTRUCTED IN THE RADIUS OF A CORNER LOT.
3. VDOT STANDARDS MAY BE SUBSTITUTED IF APPROVED BY CITY ENGINEER.
4. GRAVEL DRIVEWAYS ON COLLECTOR AND ARTERIAL STREETS SHALL BE PAVED A MINIMUM OF 10 FEET FROM EDGE OF CURB OR TO THE RIGHT-OF-WAY LINE, WHICHEVER IS GREATER.
5. ENTIRE ENTRANCE INCLUDING GUTTER AND APRON SHALL BE POURED MONOLITHICALLY.
6. WIDTH OF CURB & GUTTER SHALL MATCH WIDTH OF EXISTING CURB & GUTTER.
7. DRIVEWAY ENTRANCES TO BE APPROVED BY CITY ENGINEER PRIOR TO PLACEMENT OF CONC.

THE CITY OF LYNCHBURG
RESIDENTIAL DRIVEWAY ENTRANCE
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 25.11 | REVISION DATE: 12-15-2011 | SHEET # 1 OF 1

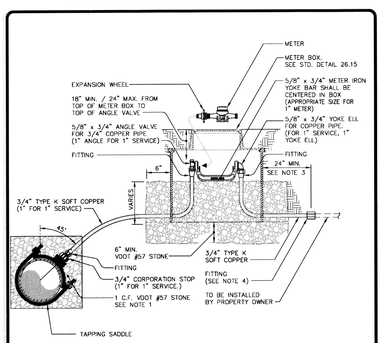


PATCH DESIGN FOR ASPHALT STREETS

TYPE STREET	ARTERIAL and INDUSTRIAL	COLLECTOR	RESIDENTIAL
TYPE PATCH	TYPE A	TYPE B	TYPE C
1	2" SM-12.5D	2" SM-12.5D	2" SM-12.5A
2	8" BM25	6" BM25	4" BM25
3	7" VDOT NO.21A	4" VDOT NO.21A	4" VDOT NO.21A
PATCH DEPTH	TOTAL = 17"	TOTAL = 12"	TOTAL = 10"

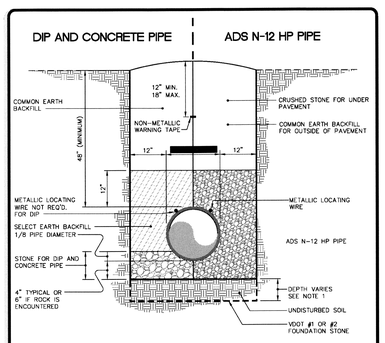
NOTES:
1. PAVEMENT SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.

THE CITY OF LYNCHBURG
TRENCH PATCH ASPHALT STREETS – TYPE A,B,& C
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 25.18 | REVISION DATE: 12-15-2011 | SHEET # 1 OF 1



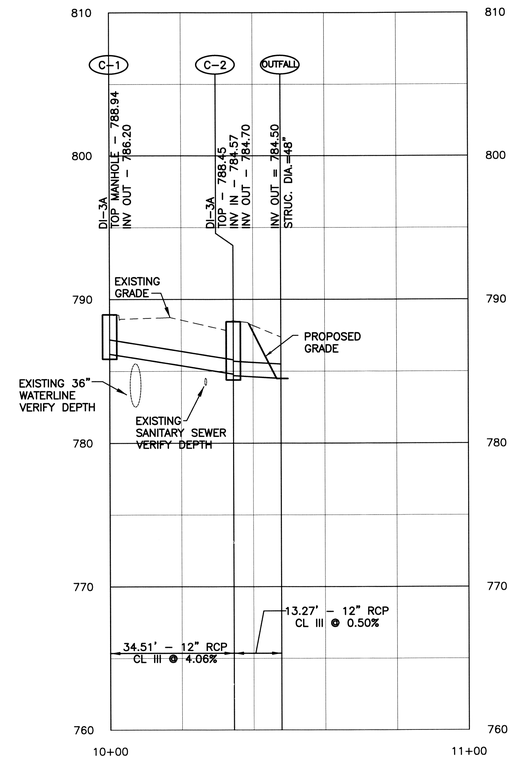
NOTES:
1. FULLY ENCOMPASS TAPPING SADDLE WITH STONE.
2. METER BOX TO BE LOCATED ON THE RIGHT-OF-WAY SIDE OF PROPERTY LINE.
3. WHEN METER BOX IS SET IN SIDEWALK, PIGTAIL TO EXTEND 2 FEET BEYOND EDGE OF SIDEWALK.
4. FITTING TO BE USED WHEN CONNECTING TO EXISTING SERVICE, OTHERWISE CRIMP END OF SERVICE LINE.
5. METER & EXPANSION WHEEL TO BE FURNISHED & INSTALLED BY CITY.
6. THIS DETAIL IS FOR EXISTING SERVICE REPLACEMENT PROJECTS ONLY.

THE CITY OF LYNCHBURG
3/4 INCH WATER SERVICE (1 INCH WATER SERVICE SIMILAR) (EXISTING CONNECTIONS ONLY)
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 26.12A | REVISION DATE: 12-15-2011 | SHEET # 1 OF 1

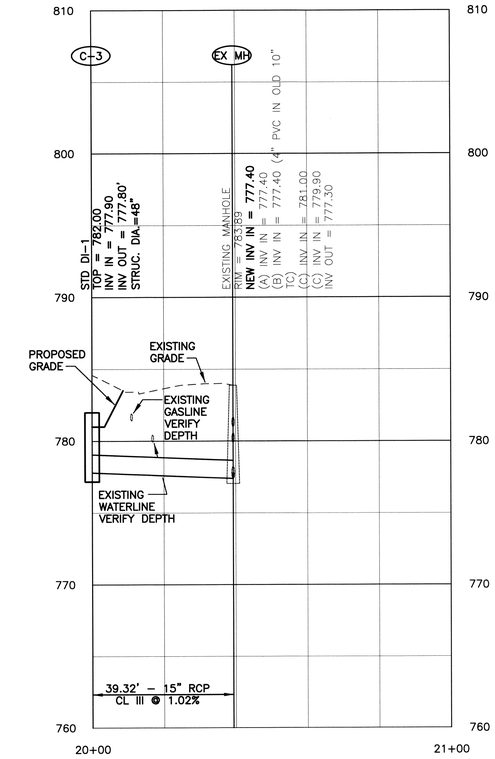


NOTES:
1. FOUNDATION STONE SHALL BE REQUIRED WHEN SOIL CONDITIONS ARE UNSUITABLE.
2. EXTRA DEPTH EXCAVATION SHALL BE PAID FOR AS ANYTHING BEYOND 4" OF COVER TO TOP OF PIPE.
3. AN ADDITIONAL 1 INCH DEPTH OF BEDDING MATERIAL WILL BE REQUIRED FOR EACH ADDITIONAL 2 FEET OF TRENCH DEPTH IN EXCESS OF 16 FEET UP TO A MAXIMUM OF 12 INCHES.
4. NON-METALLIC WARNING TAPE AND METALLIC LOCATING WIRE NOT REQUIRED FOR CULVERTS UNDER ROAD.

THE CITY OF LYNCHBURG
STORM SEWER LINE TRENCH DETAIL
USE WITH THE CITY OF LYNCHBURG STANDARD SPECIFICATIONS ONLY
SCALE: NOT TO SCALE | DETAIL # 27.01A | REVISION DATE: 12-15-2011 | SHEET # 1 OF 1



C-1 TO OUTFALL
AT BIO-FILTER TIER 1



C-3 TO EXISTING
MANHOLE

IF THIS SHEET IS A REDUCTION THE GRAPHIC SCALE MUST BE USED
VERT: 5' 0 5'
HORIZ: 20' 0 20'

NO.	REVISION	BY	DATE
1	REVISED TO ADDRESS CITY COMMENTS DATED APRIL 17, 2013	GLM	6-10-13

COMMONWEALTH OF VIRGINIA
JAMEY L. WHITE
Lic. No. 47808
6-10-13
PROFESSIONAL ENGINEER

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

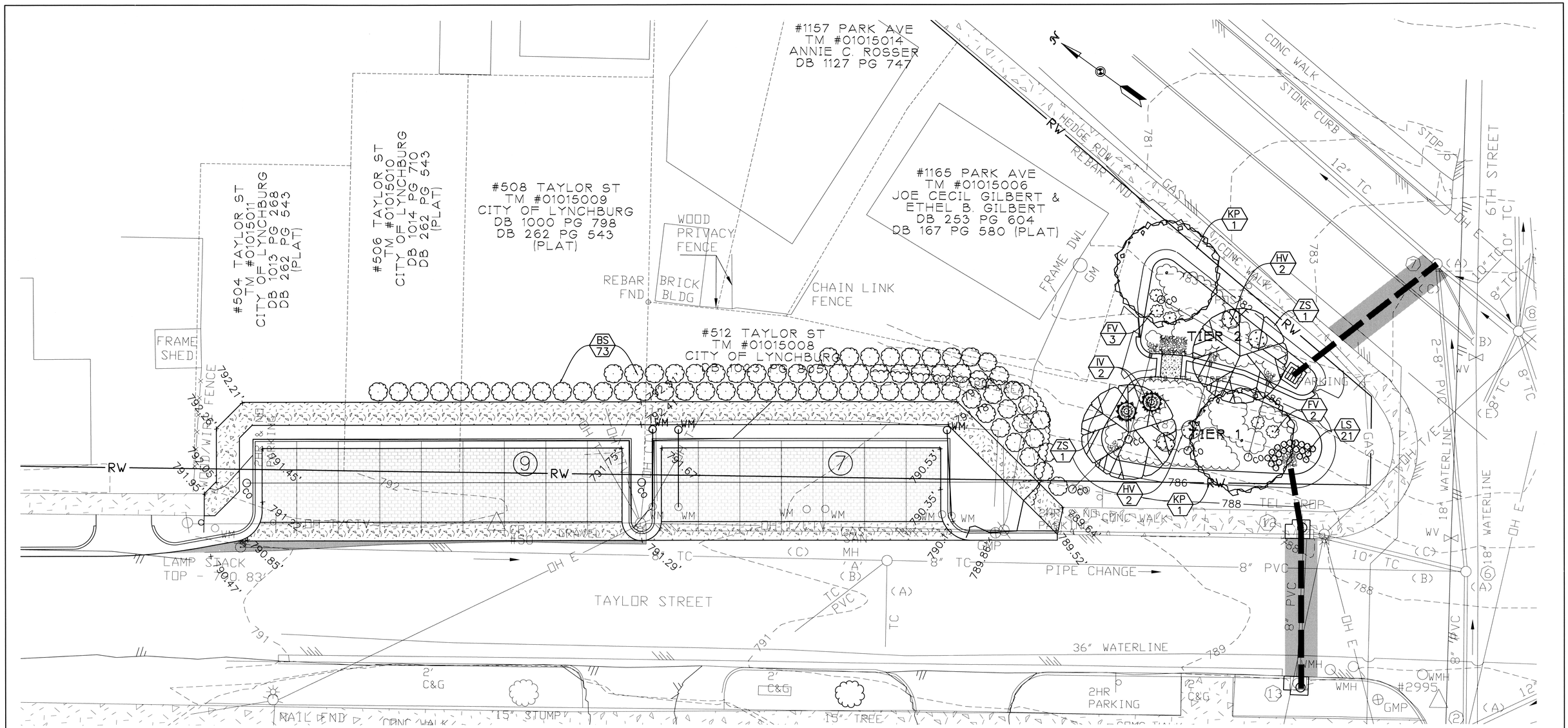
DRAWN BY: GLM
DESIGNED BY: JLW
REVIEWED BY: TJW
PROJECT No. 12025.00
SCALE: GRAPHIC

PROJECT: CITY PROJECT: #12022-SS
TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA

TITLE: DETAILS

DATE: REV. 6-10-13 3-22-13
DRAWING No: D2
SHEET NUMBER: 6 OF 7

FILE: P:\2012\12025.00 Taylor Street Water Quality Project\Site Plan\12025D2.dwg



SOIL PREPARATION
FOR INDIVIDUAL PLANTINGS OR SMALL GROUPINGS THIS PREPARATION CAN BE DONE WITHIN THE PLANTING HOLE. FOR LARGER GROUPINGS, THE PLANTING AREA THROUGHOUT THE ENTIRE AREA SHALL BE PREPARED.

1. REMOVE ANY SOD, ROOTS, ROCKS AND DEBRIS FROM THE AREA.
2. LOOSEN THE SOIL TO A MINIMUM DEPTH OF 8" AND BREAK ANY CLODS.
3. APPLY MEASURED AMOUNTS OF FERTILIZER AND MINERAL AMENDMENTS. (SEE SCHEDULE BELOW)
4. MIX SOIL THOROUGHLY
5. INSURE THAT ALL PLANTING HOLES ARE TWICE THE SIZE OF THE ROOT BALL.

FERTILIZER AND SOIL AMENDMENTS

MATERIAL	AMOUNT PER 100 SF
5-5-5 ALL PURPOSE FERTILIZER	6-8 LBS.
REGULAR OR DOLOMITIC LIMESTONE	5 LBS.
GYPSUM	2 LBS.

12 MONTH WATERING SCHEDULE
1. NEW PLANTINGS SHALL BE WATERED AT TIME OF PLANTING AT A RATE OF APPROXIMATELY 1" OVER THE PLANTED AREA.
2. DURING THE FIRST MONTH PLANTS SHALL BE WATERED EVERY OTHER DAY AT A RATE OF ½" OVER THE PLANTED AREA.
3. DURING THE MONTHS OF MARCH THROUGH OCTOBER PLANTS SHALL RECEIVE WATER AT A RATE OF 3" TO 4" A MONTH. WATERING SHOULD TAKE PLACE WEEKLY TO SUPPLEMENT RAINFALL TO ACHIEVE THIS RATE.

NOTE:
AFTER PLANTING, MULCH ALL AREAS TO A DEPTH OF 6". INDIVIDUAL TREES SHALL BE MULCHED IN A RING 4' IN DIAMETER. CARE SHOULD BE TAKEN NOT TO PULL THE MULCH UP TIGHT TO THE PLANT STEM AS THIS CAN CAUSE DISEASE OR INSECT PROBLEMS. LANDSCAPE FABRIC SHALL BE PLACED ON THE GROUND PRIOR TO MULCHING AS A WEED BARRIER EXCEPT IN THE BIO-RETENTION BASIN.

LANDSCAPE REQUIREMENTS:
1. A MINIMUM OF THREE SPECIES OF TREE AND TREE SPECIES OF SHRUBS SHOULD BE SELECTED TO INSURE DIVERSITY.
2. 10 TREES AND SHRUBS PER 1,000 SF OF BASIN AREA, (2:1 TO 3:1 RATIO OF SHRUBS TO TREES).
3. HERBACEOUS COVER IS IMPORTANT TO PREVENT EROSION OF THE MULCH AND THE SOIL LAYERS.

TIER 1 :
REQUIRED: 745 SF/1,000 SF= 0.75 X 10= 7.5 TREES AND SHRUBS
PROPOSED: 8 TREES AND SHRUBS
(2 TREES AND 6 SHRUBS WITH HERBACIOUS COVER)

TIER 2 :
REQUIRED: 491 SF/1,000 SF= 0.49 X 10= 4.9 TREES AND SHRUBS
PROPOSED: 5 TREES AND SHRUBS
(2 TREES AND 3 SHRUBS WITH HERBACIOUS COVER)

SYMBOL	LABEL	QUANTITY	BOTANICAL NAME	COMMON NAME	PLANTING SIZE	ULTIMATE SIZE
TREE						
	ZS	2	ZELKOVA SERRATA	VILLAGE ASH	2" CALIPER	50' H X 30' W
	KP	2	KOELREUTRIA PANICULATA	GOLDENRAIN TREE	1½" CALIPER	40' H X 30' W
SHRUBS						
	IV	2	ILEX VERTICILLATA	WINTERBERRY	1' HEIGHT	3' H X 6' W
	FV	5	FORSYTHIA VIRIDISSMA 'BRONXENSIS'	GREEN STEM FORSYTHIA	1/2' H	1' H X 3' W
	HV	4	HAMAMELIS VIRGINIANA	WITCH-HAZEL	1/2' H	1' H X 1½' W
	BS	73	JUNIPERUS SQUAMATA 'BLUE STAR'	BLUE STAR JUNIPER	2' H	2' H X 4' W
HERBACEOUS						
	LS	21	LIRIOPE SPICATA	CREEPING LIRIOPE	1' H	1' H X 1' W
	VM	60	VINCA MAJOR	PERIWINKLE 'VINCA'	1' H	1' H X 5' W

IF THIS DRAWING IS A REDUCTION GRAPHIC SCALE MUST BE USED
10' 0 10'

NO.	REVISION	BY	DATE
1	REVISED TO ADDRESS CITY COMMENTS DATED APRIL 17, 2013	GLM	6-10-13

COMMONWEALTH OF VIRGINIA
JAMEY A. WHITE
Lic. No. 47808
6-10-13
PROFESSIONAL ENGINEER

WARNER WHITE
ENGINEERING PARTNERS
118 CORNERSTONE STREET
LYNCHBURG, VIRGINIA 24502
PHONE: 434-534-3201 FAX: 434-534-3202

DRAWN BY: GLM
DESIGNED BY: JLW
REVIEWED BY: TJW
PROJECT No. 12025.00
SCALE: GRAPHIC

PROJECT: CITY PROJECT: #12022-SS
TAYLOR STREET
WATER QUALITY PLAN
LYNCHBURG, VIRGINIA

TITLE: LANDSCAPING PLAN

DATE: REV. 6-10-13 3-22-13
DRAWING No: L1
SHEET NUMBER: 7 OF 7

FILE: P:\2012\12025.00 Taylor Street Water Quality Project\Site Plan\12025L1.dwg