

EXISTING SYMBOLS

DRAINAGE	
	DITCH CENTERLINE
	EXISTING DRAINAGE PIPE
	EXISTING DROP INLET

MANMADE ROADSIDE FEATURES	
	FENCE - WOOD
	GUARDRAIL - STEEL BEAM
	FENCE - CHAINLINK

NATURAL ROADSIDE FEATURES	
	TREE - DECIDUOUS
	GRASS LAWN

SURVEY CONTROL & MONUMENTATION	
B.M.	SURVEY BENCHMARK LOCATION
T.P.	SURVEY TIE POINT LOCATION
△	SURVEY TRAVERSE POINT
⊙	POINT OF CURVATURE OR TANGENCY
⊙	POINT OF INTERSECTING TANGENTS
POB	POINT OF BEGINNING
POE	POINT OF END
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PT	POINT OF TANGENT

ABBREVIATIONS

DND	DO NOT DISTURB
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UTILITY	
	SANITARY SEWER MANHOLE
	UTILITY POLE GUY WIRE ANCHOR
	UTILITY POLE
	WATER METER
	WATER VALVE
	MISCELLANEOUS POST
	MANHOLE - UNDETERMINED OWNER

OTHER	
	EXISTING CONTOUR

PROPOSED SYMBOLS

CONSTRUCTION	
	CONSTRUCTION BASELINE
	CROSS-SECTIONS
	LIMIT OF CONSTRUCTION
	REINFORCED TURF
	PERMANENT ASPHALT PAVEMENT REMOVAL
	TEMPORARY ASPHALT PAVEMENT REMOVAL
	CONCRETE SIDEWALK REMOVAL
	PROPOSED CONCRETE SIDEWALK
	DELAWARE NO. 2 STONE
	DELAWARE NO. 57 STONE

EROSION & SEDIMENT CONTROL	
	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE
	REINFORCED SILT FENCE
	TEMPORARY ASPHALT BERM
	DEWATERING BAG
	PIPE SLOPE DRAIN
	PERIMETER FILTER CONTROL

UNOFFICIAL
WEBSITE
COPY

IDENTIFIERS	
	FENCE
	PIPE
	REMOVE BY CONTRACTOR
	RIPRAP
	OUTFALL
	INLET
	TEMPORARY ASPHALT BERM
	INLET PROTECTION
	SILT FENCE
	PERIMETER FILTER CONTROL
	EXISTING STRUCTURE

GENERAL NOTES

- THIS PROJECT IS TO BE CONSTRUCTED IN ACCORDANCE WITH THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS", DATED AUGUST 2001 AND THE DELAWARE DEPARTMENT OF TRANSPORTATION "STANDARD CONSTRUCTION DETAILS", DATED 2001, INCLUDING ALL REVISIONS UP TO THE DATE OF ADVERTISEMENT.
- THE CONTRACTOR SHALL GIVE TWO (2) WEEKS NOTICE TO THE PROPERTY OWNER WHEN ANY FIXTURE, SHRUB OR OTHER OBJECT MUST BE REMOVED FROM THE RIGHT OF WAY OR EASEMENT AREA. IF THE OWNER HAS NOT ATTEMPTED TO SALVAGE THIS PROPERTY, THE CONTRACTOR SHALL REMOVE IT WITHOUT OBLIGATION. COMPENSATION SHALL BE INCIDENTAL TO THE CONTRACT.
- STAGING AREAS - PROPER EROSION AND SEDIMENT CONTROL MEASURES AS DETERMINED BY THE ENGINEER SHALL BE INSTALLED IN ALL STAGING AREAS. ALL AREAS USED BY THE CONTRACTOR FOR STAGING OPERATIONS SHALL BE FULLY RESTORED BY THE CONTRACTOR UPON COMPLETION OF THE CONTRACT. IF THE STAGING AREA IS PAVED, IT SHALL BE RESTORED TO ITS ORIGINAL CONDITION. IF THE AREA IS UNPAVED, IT SHALL BE RE-GRADED, TOPSOILED, SEEDED AND MULCHED IN ACCORDANCE WITH DELAWARE STANDARD SPECIFICATIONS 732, 734 AND 735, FOR TOPSOIL, SEED AND MULCH RESPECTIVELY, TO THE SATISFACTION OF THE ENGINEER. THE SEED SHALL ADHERE TO THE SPECIFICATIONS OF SECTION 734 FOR PERMANENT GRASS SEEDING - DRY GROUND. ALL COSTS ASSOCIATED WITH RESTORATION OF THE STAGING AREA SHALL BE AT THE CONTRACTOR'S EXPENSE. IF THE ENGINEER DETERMINES THAT A SATISFACTORY STAND OF GRASS DOES NOT EXIST AT THE TIME OF FINAL INSPECTION, ALL COSTS ASSOCIATED WITH REESTABLISHING A SATISFACTORY STAND OF GRASS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- SITE REVIEWER - AN EROSION CONTROL SITE REVIEWER SHALL BE A PERSON FROM THE CONTRACTOR'S STAFF ASSIGNED TO EROSION AND SEDIMENT CONTROL IMPLEMENTATION AND MAINTENANCE AND SHALL BE REQUIRED ON SPECIFIC PROJECTS. THE NAME AND DNREC CERTIFICATION NUMBER OF EACH SITE REVIEWER SO REQUIRED SHALL BE SUBMITTED TO THE DEPARTMENT AT THE TIME OF BID. THE NAME OF THE DELAWARE REGISTERED PROFESSIONAL ENGINEER PROVIDING DIRECTION AND SUPERVISION OF THE SITE REVIEWER, AS REQUIRED IN SECTION 12.3 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS, SHALL ALSO BE SUBMITTED TO THE DEPARTMENT AT THE TIME OF BID. THE SITE REVIEWER REQUIREMENTS IN EFFECT ON THIS PROJECT SHALL BE MARKED WITH AN "X" BELOW:

EROSION POTENTIAL FOR THIS PROJECT	SITE REVIEWER REQUIREMENT
() INSIGNIFICANT	NONE
() MINOR	CONTRACTOR CERTIFICATION COURSE TRAINING ONLY, AS DEFINED IN SECTION 13 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
(X) MEDIUM	AT THE TIME OF BID OF THE CONTRACT, EITHER THE SUPERINTENDENT OR A SEPARATE INDIVIDUAL FROM THE CONTRACTOR'S STAFF SHALL BE A CERTIFIED CONSTRUCTION REVIEWER (CCR), AS DEFINED IN SECTION 12 OF THE DELAWARE SEDIMENT AND STORMWATER REGULATIONS.
() MAJOR	SUPERINTENDENT AND AN INDIVIDUAL FROM CONTRACTOR'S STAFF SHALL BE CCR. ONE INDIVIDUAL FROM THE CONTRACTOR'S STAFF MUST BE A CCR AT THE TIME OF BID OF THE CONTRACT. THE SUPERINTENDENT MUST BECOME A CCR WITHIN ONE YEAR AFTER THE AWARD OF CONTRACT.

- ELECTRONIC PROJECT FILES THAT WILL BE MADE AVAILABLE TO THE CONTRACTOR INCLUDE:

()	NONE
(X)	ASCII DATA FILES WITH COORDINATES AND ELEVATIONS FOR PROPOSED POINTS AS SELECTED BY THE ENGINEER.
()	RASTER FILES, IN .CAL FILE FORMAT, FOR ALL PLAN SHEETS.
()	EXISTING DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	PROPOSED DIGITAL TERRAIN MODEL, IN .DTM FILE FORMAT, COMPATIBLE WITH SOFTWARE CURRENTLY USED BY DELDOT.
()	DESIGN FILE, IN .DGN FILE FORMAT, CONTAINING ONLY THE PROPOSED 3D TRIANGLES OF THE PROPOSED DIGITAL TERRAIN MODEL (DTM).

NOTE: THE DOCUMENT ENTITLED "RELEASE FOR DELIVERY OF DOCUMENTS IN ELECTRONIC FORM TO A CONTRACTOR" MUST BE SIGNED BY ALL PARTIES PRIOR TO THE DELIVERY OF ANY ELECTRONIC PROJECT FILES.

- AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED TRAFFIC CONTROL SUPERVISOR REQUIREMENT FOR THIS PROJECT.

(X)	THE CONTRACTOR SHALL NOT BE REQUIRED TO HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT OR ANOTHER ATSSA CERTIFIED MEMBER OF THE CONTRACTOR'S PROJECT STAFF MAY BE THE ATSSA SUPERVISOR.
()	THE CONTRACTOR SHALL HAVE AN ATSSA SUPERVISOR ASSIGNED TO THIS PROJECT. THE ATSSA SUPERVISOR'S SOLE JOB SHALL BE SUPERVISION OF THE INSTALLATION, OPERATION AND MAINTENANCE OF TRAFFIC CONTROL DEVICES FOR THIS PROJECT. THE CONTRACTOR'S GENERAL SUPERINTENDENT FOR THIS PROJECT SHALL NOT BE THE ATSSA SUPERVISOR.

- THE DISTURBED AREA FOR THIS PROJECT IS 0.87 ACRES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADHERING TO THE CONSTRUCTION SITE POLLUTION PREVENTION SPECIFICATIONS AS DETAILED IN SECTION 3.6 OF THE "DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK". ALL COSTS ASSOCIATED WITH ADHERING TO THE STANDARDS SHALL BE INCIDENTAL TO THE OVERALL CONTRACT COSTS.
- OWNER CONTACT INFORMATION
NAME: CHRISTIANA SCHOOL DISTRICT
REPRESENTATIVE: NICHOLAS VACIRCA, FACILITIES CAPITAL PROJECT MANAGER
ADDRESS: 925 BEAR-CORBITT ROAD
BEAR, DE 19701
PHONE: (302)454-2400 (x209)
- DEVELOPER CONTACT INFORMATION
NAME: DELAWARE DEPARTMENT OF TRANSPORTATION
REPRESENTATIVE: LATONYA GILLIAM, NPDES ENGINEER
ADDRESS: 800 BAY ROAD
DOVER, DE 19903
PHONE: (302)760-2191

PROJECT NOTES

- THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF ALL INFORMATION SHOWN ON THESE PLANS INCLUDING ALL EXISTING IMPROVEMENTS AND ELEVATIONS AND SHALL PROVIDE THE ENGINEER A COPY OF THE VERIFICATION PRIOR TO THE COMMENCEMENT OF ANY SITE ACTIVITY. IF EXISTING CONDITIONS AND/OR ELEVATIONS DIFFER FROM THIS PLAN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF DAMAGED OR DESTROYED LANDSCAPE THAT IS DESIGNATED TO REMAIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL INSTALLED PIPING UNTIL COMPLETION OF CONSTRUCTION. ADEQUATE TEMPORARY COVER SHALL BE PLACED TO PROTECT PIPES WITH SHALLOW COVER FROM DAMAGE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR SITE PERSONNEL AND TRAFFIC SAFETY AT ALL TIMES AND FOR PERFORMING ALL CONSTRUCTION ACTIVITIES IN COMPLIANCE WITH THE CURRENT OCCUPATIONAL SAFETY AND HEALTH ACT AND ALL RULES AND REGULATIONS THERETO.
- ANY DAMAGE TO ITEMS NOTED TO BE RELOCATED OR RESET BY THE CONTRACTOR, AT THE DISCRETION OF THE ENGINEER, SHALL BE REPAIRED AND/OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.
- THE PROJECT SITE SHALL BE ACCESSED FROM CHAPMAN ROAD.
- UNLESS OTHERWISE NOTED ON THE PLANS, THE CONTRACTOR SHALL, AS PART OF HIS PROJECT SCHEDULE, SUBMIT TO THE ENGINEER AN ESTIMATE OF THE MONTHLY PAYMENTS EXPECTED TO BE RECEIVED ON THE CONTRACT. THIS WILL BE REFERENCED AS THE "MONTHLY PAYMENT CHART".

A CHART IN MICROSOFT EXCEL, MICROSOFT WORD, OR HAND WRITTEN FORMAT WILL BE ACCEPTABLE FOR THIS PURPOSE. THE CHART SHOULD INCLUDE, AS A MINIMUM, COLUMNS FOR THE MONTH, YEAR AND ESTIMATED MONTHLY PAYMENTS. THE TOTAL OF ALL ESTIMATED MONTHLY PAYMENTS SHOULD EQUAL THE AWARDED CONTRACT TOTAL BID PRICE.

THE ENGINEER MAY REQUEST AN UPDATED "MONTHLY PAYMENT CHART" AT HIS DISCRETION, DEPENDING ON THE ACCURACY OF THE INITIAL ESTIMATES AND ACCORDING TO THE OVERALL NEEDS OF THE DEPARTMENT.

THE "MONTHLY PAYMENT CHART" WILL NOT BE CONSIDERED A BINDING DOCUMENT BY EITHER THE CONTRACTOR OR THE DEPARTMENT AND IS CONSIDERED SOLELY INFORMATIONAL.

ON PROJECTS REQUIRING CPM SCHEDULES, THE CONTRACTOR MAY, BUT IS NOT REQUIRED TO, "COST LOAD" THE CPM SCHEDULE IN ORDER TO GENERATE THE MONTHLY SPEND PAYMENT CHART.

COSTS TO PREPARE AND/OR UPDATE THE "MONTHLY PAYMENT CHART" ARE ADDRESSED AS FOLLOWS:

- ON CONTRACTS REQUIRING CPM SCHEDULES AND UPDATES, PREPARATION OF THE INITIAL CHART SHALL BE INCIDENTAL TO ITEM 76350B. UPDATES SHALL BE INCIDENTAL TO ITEM 763509.
- ON CONTRACTS NOT REQUIRING CPM SCHEDULES, THE COST TO PREPARE AND UPDATE THE "MONTHLY PAYMENT CHART" SHALL BE INCLUDED IN ITEM 763000 - INITIAL EXPENSE.

- THE ENGINEER MAY REQUIRE THE CONTRACTOR TO EXCAVATE TEST PITS ALONG PROPOSED DRAINAGE RUNS, AT POINTS OF POSSIBLE UTILITY CONFLICTS, TO DETERMINE IF A CONFLICT EXISTS. ANY CONFLICTS SHALL BE COORDINATED BY THE CONTRACTOR, WITH THE ENGINEER AND THE UTILITY COMPANY INVOLVED. THE ENGINEER SHALL ULTIMATELY DETERMINE THE SOLUTION TO THE UTILITY CONFLICT. TEST HOLES SHALL BE MEASURED AND PAID FOR IN ACCORDANCE WITH ITEM 208000 - EXCAVATION AND BACKFILL FOR PIPE TRENCHES, BUT ONLY TO THE ACTUAL DEPTH EXCAVATED.
- THIS PROJECT IS COVERED UNDER AN NPDES GENERAL PERMIT FOR CONSTRUCTION. UNDER THE GENERAL PERMIT, COMPLIANCE WITH DELDOT'S APPROVED SEDIMENT AND STORMWATER MANAGEMENT PLANS WILL CONSTITUTE COMPLIANCE WITH THE NPDES INDUSTRIAL PERMITTING REQUIREMENTS FOR THIS CONSTRUCTION PROJECT. A COPY OF THE NPDES GENERAL PERMIT AND NOI IS KEPT ON FILE IN EACH OF THE CONSTRUCTION OFFICES AND THE DEPARTMENT'S TEAM SUPPORT SECTION. A COPY OF THE GENERAL PERMIT OR THE NOI CAN BE OBTAINED UPON REQUEST FROM EITHER THE DEPARTMENT'S STORMWATER ENGINEER OR THE APPROPRIATE CONSTRUCTION ENGINEER.

MISCELLANEOUS

- ALL EXISTING DRAINAGE SYSTEMS SHOWN ARE TO REMAIN OPERATIONAL UNLESS DENOTED FOR ABANDONMENT.
- THE EXISTING PAVEMENT OF THE CHRISTIANA HIGH SCHOOL SHALL NOT BE DAMAGED DURING CONSTRUCTION OF THIS PROJECT EXCEPT AS REQUIRED TO CONSTRUCT THE PROPOSED IMPROVEMENTS. THIS PAVEMENT IF DAMAGED SHALL BE SUBJECT TO THE REQUIREMENTS OF PROJECT NOTE 5 AND MUST BE RESTORED TO THE PRE-CONSTRUCTION CONDITIONS AS DETERMINED BY THE ENGINEER. COST ASSOCIATED WITH THE REPAIR OF SAID ITEMS SHALL BE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL CONTACT ROBERT SHARKEY (302-454-2400 EXT. 292) TO COORDINATE ACCESS TO THE SITE AND COORDINATE CONSTRUCTION ACTIVITIES A MINIMUM OF ONCE PER WEEK.
- DUE TO THE PROXIMITY OF RESIDENCES, CONSTRUCTION ACTIVITIES SHALL NOT START BEFORE 7 A.M. AND SHALL NOT PROCEED PAST 8:00 P.M.
- MAINTENANCE OF TRAFFIC DURING LANE CLOSURES AND LANE SHIFTS SHALL CONFORM TO TYPICAL APPLICATION 3 OF THE DELAWARE MUTCD.
- THERE ARE NO ENVIRONMENTAL PERMITS ASSOCIATED WITH THIS PROJECT. AS SUCH, AN ENVIRONMENTAL COMPLIANCE SHEET WAS NOT PREPARED. JURISDICTIONAL AREAS ARE DEPICTED ON SHEET 9 BASED ON THE RESULTS OF A SITE INVESTIGATION CONDUCTED ON JANUARY 16, 2013.
- LONG TERM MAINTENANCE OF THE STORMWATER MANAGEMENT FACILITIES SHOWN ON THESE PLANS SHALL BE THE RESPONSIBILITY OF THE CHRISTIANA SCHOOL DISTRICT IN ACCORDANCE WITH THE THREE PARTY AGREEMENT FILED UNDER TAX PARCEL 09-028.00-058.

EROSION AND SEDIMENT CONTROL NOTES

- DUST CONTROL IS TO BE CONTROLLED EXCLUSIVELY THROUGH THE USE OF WATER. COSTS ASSOCIATED WITH THE FURNISHING AND APPLICATION OF WATER FOR DUST CONTROL SHALL BE INCIDENTAL TO ALL THE CONTRACT BID ITEMS.
- CONSTRUCTION ENTRANCES. IT IS INTENDED THAT MUD TRACKING BE ELIMINATED ON ALL STATE MAINTAINED ROADWAYS ADJOINING THE PROJECT. ALL PAVED SURFACES ADJOINING THE PROJECT SHALL BE LEFT IN A BROOM CLEAN CONDITION AT THE END OF EACH DAY.

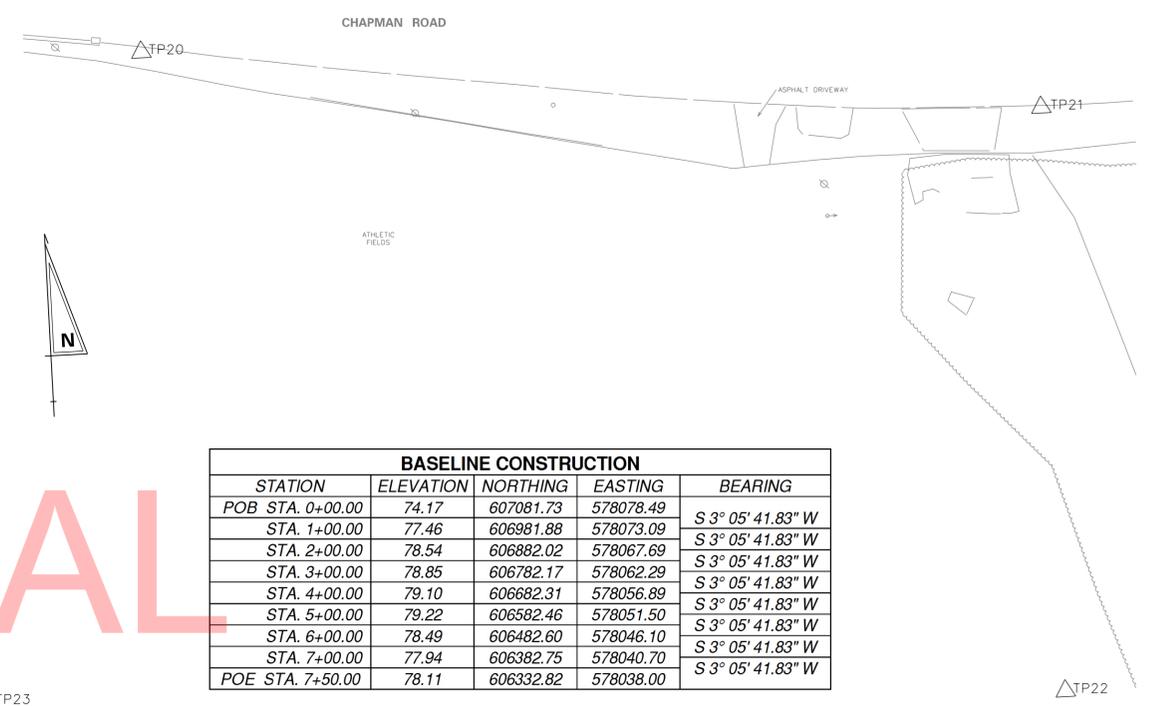
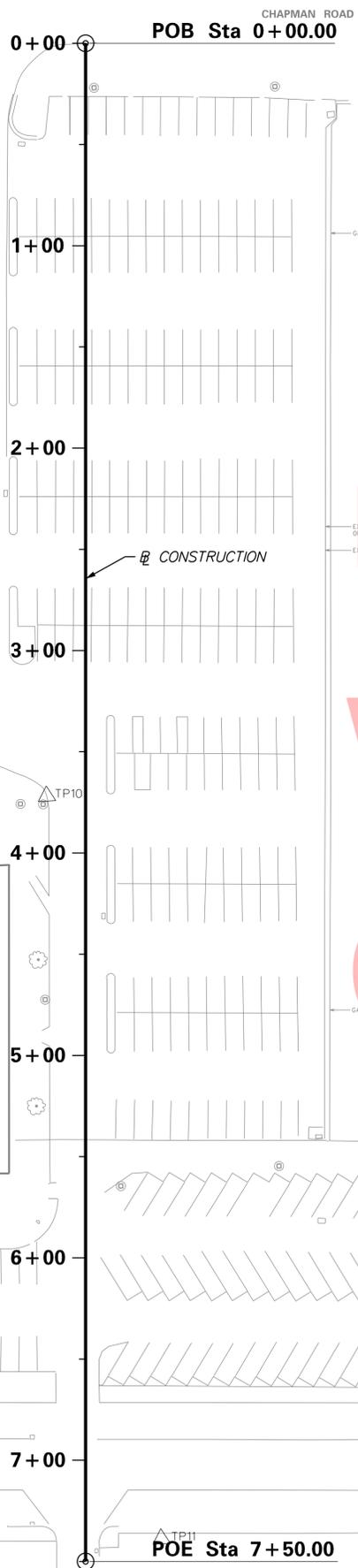


ADDENDUMS / REVISIONS	

**CHRISTIANA HIGH SCHOOL
STORMWATER MANAGEMENT
RETROFITS**

CONTRACT	PN-01
T201380203	DESIGNED BY: <u> GAI </u>
COUNTY	CHECKED BY: <u> ND </u>
NEW CASTLE	

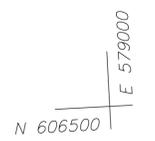
PROJECT NOTES	SHEET NO.
	3
	TOTAL SHTS.
	24



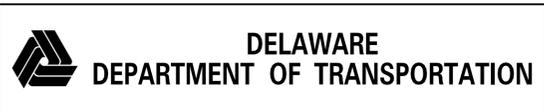
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WEBSITE
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BASELINE CONSTRUCTION				
STATION	ELEVATION	NORTHING	EASTING	BEARING
POB STA. 0+00.00	74.17	607081.73	578078.49	S 3° 05' 41.83" W
STA. 1+00.00	77.46	606981.88	578073.09	S 3° 05' 41.83" W
STA. 2+00.00	78.54	606882.02	578067.69	S 3° 05' 41.83" W
STA. 3+00.00	78.85	606782.17	578062.29	S 3° 05' 41.83" W
STA. 4+00.00	79.10	606682.31	578056.89	S 3° 05' 41.83" W
STA. 5+00.00	79.22	606582.46	578051.50	S 3° 05' 41.83" W
STA. 6+00.00	78.49	606482.60	578046.10	S 3° 05' 41.83" W
STA. 7+00.00	77.94	606382.75	578040.70	S 3° 05' 41.83" W
POE STA. 7+50.00	78.11	606332.82	578038.00	S 3° 05' 41.83" W

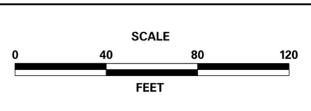
SURVEY CONTROL POINTS			
TRAVERSE POINT	ELEVATION	NORTHING	EASTING
10	79.60	606711.46	578039.21
11	77.98	606342.02	578076.08
20	61.08	607021.54	578680.76
21	49.08	606976.20	579072.80
22	46.37	606721.18	579069.74
23	72.56	606741.87	578598.42



DATUM REFERENCE:
HORIZONTAL - THIS PROJECT IS REFERENCED TO THE DELAWARE STATE PLANE COORDINATE SYSTEM (NAD 83/91).
VERTICAL - THIS PROJECT IS REFERENCED TO NAVD 88 AND BASED ON THE FOLLOWING STATE OF DELAWARE BENCHMARKS ESTABLISHED BY THE DELAWARE DEPARTMENT OF TRANSPORTATION:
NAME: CHA1, NORTHING: 607166.8368, EASTING: 578020.0021, ELEVATION: 73.7367
DESCRIPTION: BENCHMARK CHA1 IS LOCATED IN THE GRASS STRIP BETWEEN CHAPMAN ROAD AND SANDALWOOD DRIVE JUST WEST OF THE ENTRANCE TO THE GLEN EAGLE VILLAGE APARTMENT COMPLEX.



ADDENDUMS / REVISIONS	



**CHRISTIANA HIGH SCHOOL
STORMWATER MANAGEMENT
RETROFITS**

CONTRACT T201380203	HV-01
COUNTY NEW CASTLE	DESIGNED BY: <u>GAI</u> CHECKED BY: <u>ND</u>

**HORIZONTAL AND
VERTICAL CONTROL**

SHEET NO. 4
TOTAL SHTS. 24

CHAPMAN ROAD

POB Sta 0+00.00

N 607000
E 577900
N 606800
E 577900

09-028.00-058
CHRISTIANA SCHOOL DISTRICT
DEED RECORD H115

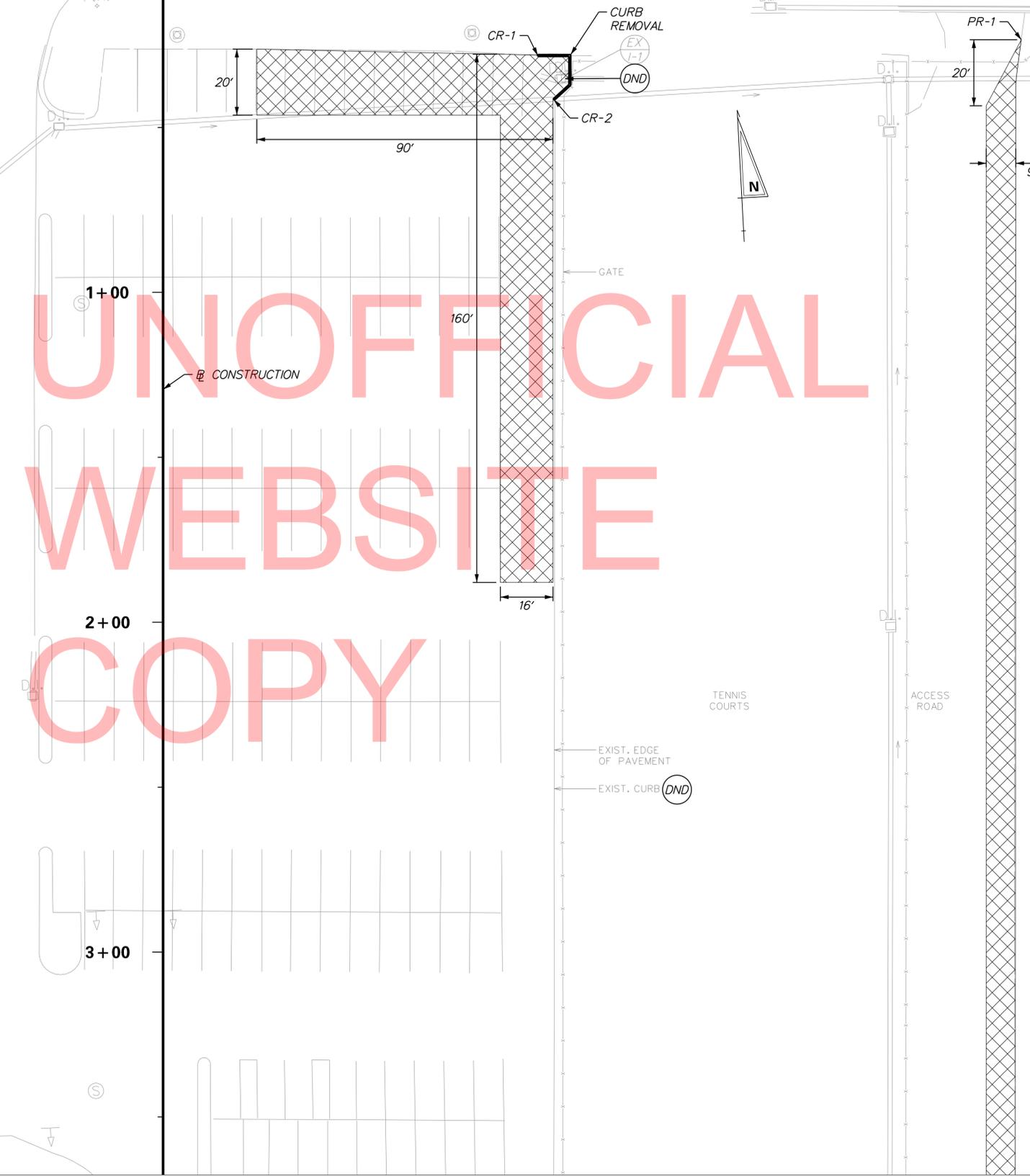
CHRISTIANA
HIGH SCHOOL
BUILDING

0+00

1+00

2+00

3+00



PERMANENT PAVEMENT REMOVAL SCHEDULE

STATION	OFFSET	VOLUME (CY)
0+36.26	28.50 TO 123.86 L	33
0+46.26 TO 1+87.94	110.50 L	42
0+23.42 TO 3+67.50	250 L	56

PAID UNDER EXCAVATION AND EMBANKMENT PAY ITEM

**PERMANENT PAVEMENT REMOVAL POINT
(ALONG ACCESS ROAD)**

PT.	STATION	OFFSET
PR-1	0+23.42	260.77 L

NOTE: PAVEMENT REMOVAL TAPER FROM PR-1 TO FULL WIDTH OF 9' SHALL BE A LENGTH OF 20'.

LEGEND:

- PERMANENT ASPHALT PAVEMENT REMOVAL
- TEMPORARY ASPHALT PAVEMENT REMOVAL
- CONCRETE SIDEWALK REMOVAL

SCHEDULE FOR SAW CUTTING, HOT MIX

STATION	OFFSET	LENGTH (LF)
0+26.26 TO 0+46.26	28.50 TO 123.86 L	104
0+46.26 TO 1+87.94	102.50 TO 118.50 L	300
0+23.42 TO 3+67.50	250 L	345

CURB REMOVAL SCHEDULE

PT.	STATION	OFFSET	LENGTH
CR-1	0+28.19	113.86 L	25
CR-2	0+41.55	118.75 L	

MATCHLINE STA 3+67.5 SR-02

MATCHLINE STA 3+67.5 SR-01

CURB REMOVAL SCHEDULE			
PT.	STATION	OFFSET	LENGTH
CR-3	6+72.30	164.00 L	47
CR-4	6+99.02	201.43 L	

TEMPORARY PAVEMENT REMOVAL SCHEDULE		
STATION	OFFSET	VOLUME (CY)
5+41.96 TO 5+59.04	116.11 L	3
5+81.04 TO 6+64.22	220.57 L	12

PAID UNDER EXCAVATION AND EMBANKMENT PAY ITEM

TREE REMOVAL SCHEDULE		
QTY.	STATION	OFFSET
1	5+25.10	24.19 R

CONCRETE SIDEWALK REMOVAL SCHEDULE		
STATION	OFFSET	AREA (SY)
5+78.94	154.61 R	30
6+63.67	154.45 TO 14.45 R	249

SCHEDULE FOR SAW CUTTING CONCRETE, FULL DEPTH		
STATION	OFFSET	LENGTH (LF)
6+55.98 TO 6+71.98	154.45 R	16

PERMANENT PAVEMENT REMOVAL SCHEDULE		
STATION	OFFSET	VOLUME (CY)
3+96.94 TO 5+41.94	110.04 L	43
5+70.04	20.67 TO 224.67 L	83
6+81.17	154.45 TO 14.45 R	50
3+67.50 TO 5+58.05	250 L	34

PAID UNDER EXCAVATION AND EMBANKMENT PAY ITEM

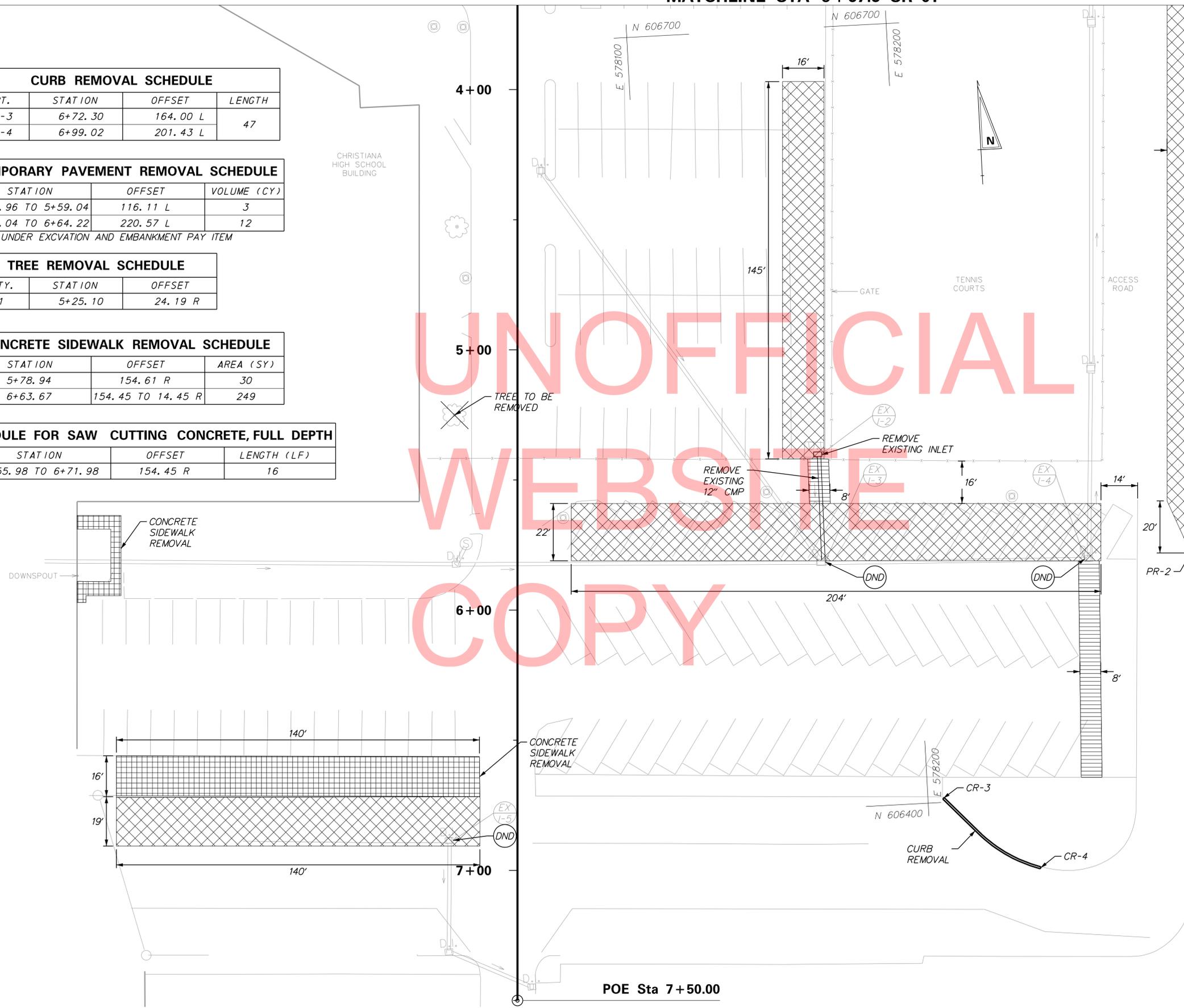
PERMANENT PAVEMENT REMOVAL POINT (ALONG ACCESS ROAD)		
PT.	STATION	OFFSET
PR-2	5+78.05	259.25 L

NOTE: PAVEMENT REMOVAL TAPER FROM PR-2 TO FULL WIDTH OF 9' SHALL BE A LENGTH OF 20'.

SCHEDULE FOR SAW CUTTING, HOT MIX		
STATION	OFFSET	LENGTH (LF)
3+96.94 TO 5+41.94	102.04 TO 118.04 L	310
5+59.04 TO 5+81.04	20.67 TO 224.67 L	452
6+56.00 TO 6+91.00	154.45 TO 14.45 R	334
3+67.50 TO 5+78.05	250 L	213
5+41.96 TO 5+59.04	116.11 L	51
5+81.04 TO 6+64.22	220.57 L	183

LEGEND:

	PERMANENT ASPHALT PAVEMENT REMOVAL
	TEMPORARY ASPHALT PAVEMENT REMOVAL
	CONCRETE SIDEWALK REMOVAL



POE Sta 7+50.00

CURB SCHEDULE						
NO.	ITEM DESCRIPTION	LENGTH	BEG IN STA.	OFFSET	END STA.	OFFSET
C-1	P. C. C. CURB, TYPE 1	104	0+26.50	34.03 L	0+41.53	118.75 L

NOTES:

1. PLUG PIPE OPENING AFTER REMOVAL OF EXISTING INFLOW PIPE. THE COST FOR PLUGGING PIPE OPENINGS IN EXISTING STRUCTURES SHALL BE INCIDENTAL TO THE LUMP SUM PAY ITEM FOR "REMOVAL OF STRUCTURES AND OBSTRUCTIONS".
2. CLEANOUTS SHALL BE INSTALLED AT THE END OF EACH FACILITY UNDERDRAIN. CLEANOUTS SHALL BE PAID UNDER PAY ITEM FOR LF OF PVC PIPE.
3. INSTALLATION OF EDUCATIONAL SIGNS WILL BE PAID FOR UNDER THE LUMP SUM ITEM "SIGN". FOR INSTALLATION OF SIGN SUPPORT, SEE DETAIL ON SHEET DT-01.

N 607000
E 577900

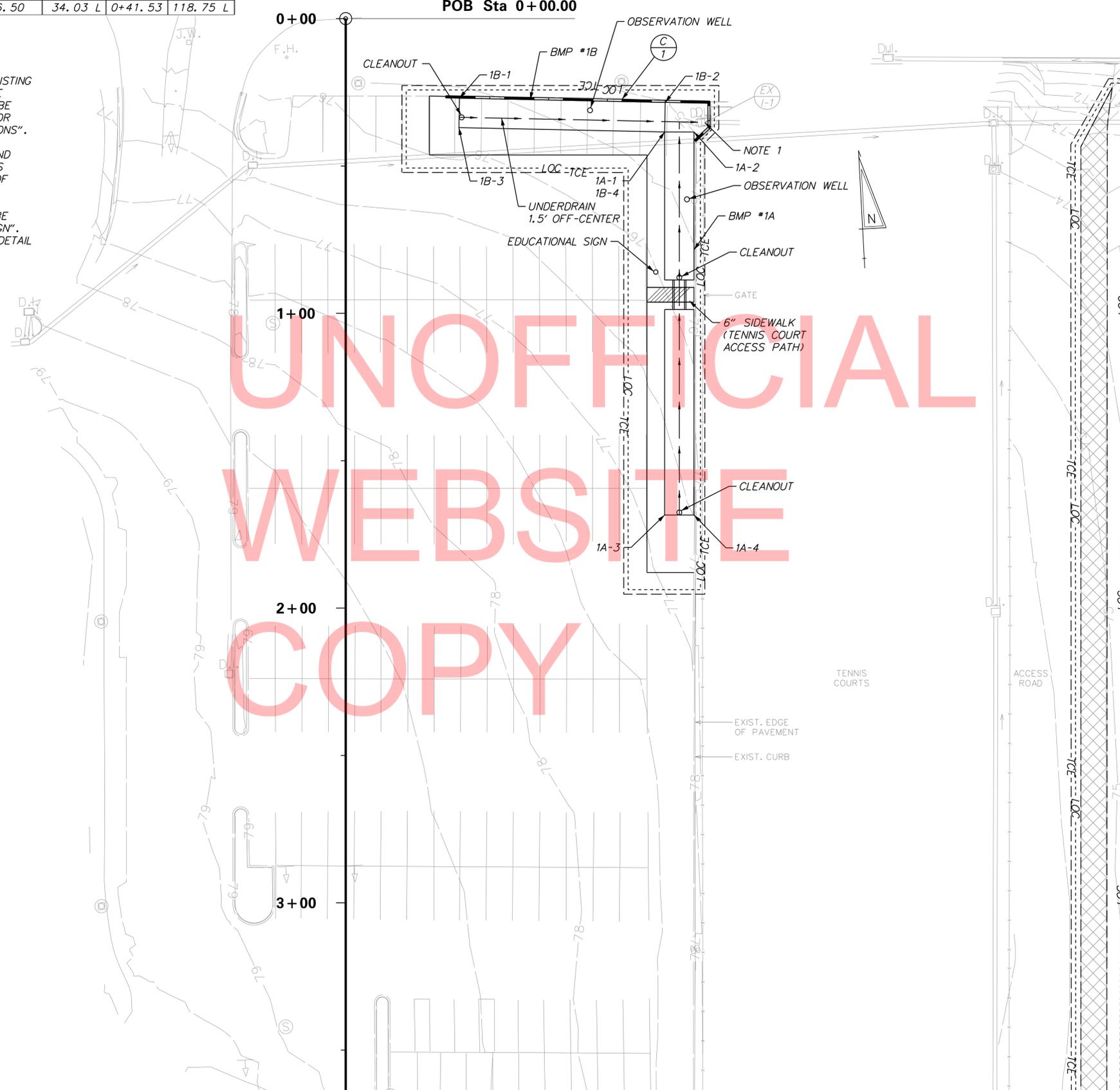
09-028.00-058
CHRISTIANA SCHOOL DISTRICT
DEED RECORD H115

CHRISTIANA
HIGH SCHOOL
BUILDING

N 606800
E 577900

CHAPMAN ROAD

POB Sta 0+00.00



BIORETENTION FACILITY SCHEDULE

BMP #	TYPE	DETAIL SHEET
BMP #1A	BIORETENTION	DT-01
	PT.	STATION OFFSET
	1A-1	0+38.44 108.50 L
	1A-2	0+38.44 118.50 L
	1A-3	1+68.44 108.50 L
BMP #1B	BIORETENTION	DT-01
	PT.	STATION OFFSET
	1B-1	0+26.98 38.72 L
	1B-2	0+28.44 108.71 L
	1B-3	0+36.97 38.51 L

P.C.C. SIDEWALK, 6" SCHEDULE

BEG IN STA.	OFFSET	END STA.	OFFSET	WIDTH	LENGTH	SF
0+93.69	102.50 L	0+93.69	118.50 L	5	16	80

OBSERVATION WELL SCHEDULE

STATION	OFFSET	FACILITY
0+61.31	116.09 L	BMP #1A
0+31.09	83.12 L	BMP #1B

EDUCATIONAL SIGN SCHEDULE

STATION	OFFSET	FACILITY
0+86.00	105.50 L	BMP #1A

MATCHLINE STA 3+67.5 CP-02

MATCHLINE STA 3+67.5 CP-01

NOTES:

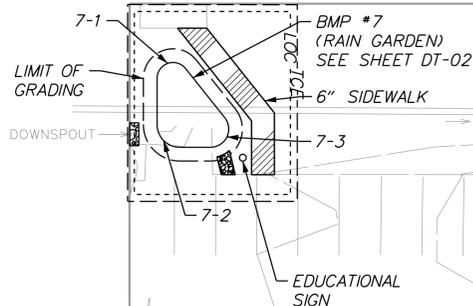
1. PLUG OVERFLOW PIPE FROM SANITARY MANHOLE TO DROP INLET ON BOTH ENDS.
2. PLUG PIPE OPENING AFTER REMOVAL OF EXISTING INFLOW PIPE. THE COST FOR PLUGGING PIPE OPENINGS IN EXISTING STRUCTURES SHALL BE INCIDENTAL TO THE LUMP SUM PAY ITEM FOR "REMOVAL OF STRUCTURES AND OBSTRUCTIONS".
3. REFER TO SHEETS SS-01 AND SS-02 FOR ALTERATIONS TO PARKING SPACES.
4. FIRST BOLLARD SHALL BE PLACED 4' FROM THE EDGE OF THE EXISTING INLET.
5. CLEANOUTS SHALL BE INSTALLED AT THE END OF EACH FACILITY UNDERDRAIN. CLEANOUTS SHALL BE PAID UNDER PAY ITEM FOR LF OF PVC PIPE.
6. INSTALLATION OF EDUCATIONAL SIGNS WILL BE PAID FOR UNDER THE LUMP SUM ITEM "SIGNS". FOR INSTALLATION OF SIGN SUPPORT, SEE DETAIL ON SHEET DT-01.
7. REFER TO DETAIL ON SHEET DT-02 FOR PAVEMENT PATCH SECTION TO BE USED IN ALL AREAS OF PIPE INSTALLATION UNDER EXISTING PAVEMENT.

CHRISTIANA HIGH SCHOOL BUILDING

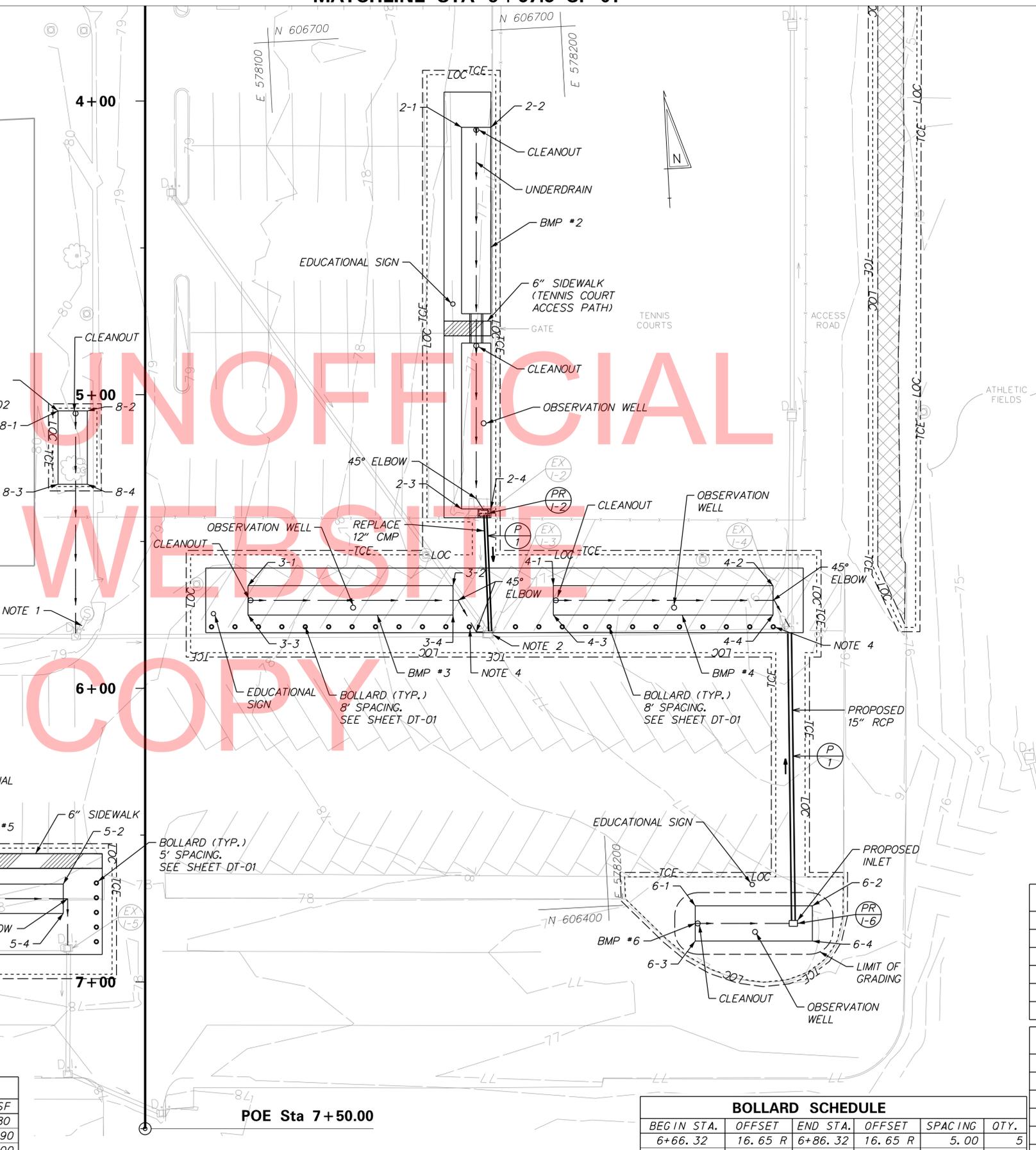
BMP #8 (ROOFTOP DISCONNECT RECHARGE AREA) SEE SHEET DT-02

DRAINAGE INLET SCHEDULE						
NO.	STATION	OFFSET (CENTER)	BOX SIZE	GRATE	T.G. EL.	INV. EL.
PR-1-2	5+40.10	115.65 L	34" x 24"	TYPE 1	76.6	71.4
PR-1-6	6+80.08	221.29 L	34" x 24"	TYPE 3	76.5	71.0

DRAINAGE PIPE SCHEDULE						
NO.	SIZE / TYPE	CLASS	LENGTH	SLOPE	INT. EL.	DIS. EL.
P-1	15" RCP	3	98	0.82%	71.0	70.2
P-2	12" RCP	3	40	0.50%	71.4	71.2



P.C.C. SIDEWALK, 6" SCHEDULE								
BEGIN STA.	OFFSET	MID STA.	OFFSET	END STA.	OFFSET	WIDTH	LENGTH	SF
4+77.44	102.04 L	--	--	4+77.44	118.04 L	5	16	80
5+63.64	155.88 R	5+83.01	140.38 R	5+95.65	140.38 R	5	38	190
6+58.82	154.65 R	--	--	6+58.82	14.65 R	5	140	700



BIORETENTION FACILITY SCHEDULE

BMP #2	TYPE	DETAIL SHEET
	BIORETENTION	DT-01
PT.	STATION	OFFSET
2-1	4+08.94	108.04 L
2-2	4+08.94	118.04 L
2-3	5+38.94	108.04 L
2-4	5+38.94	118.04 L
BMP #3	TYPE	DETAIL SHEET
	BIORETENTION	DT-01
PT.	STATION	OFFSET
3-1	5+65.04	35.12 L
3-2	5+65.04	105.12 L
3-3	5+75.04	35.12 L
3-4	5+75.04	105.12 L
BMP #4	TYPE	DETAIL SHEET
	BIORETENTION	DT-01
PT.	STATION	OFFSET
4-1	5+65.04	139.34 L
4-2	5+65.04	214.34 L
4-3	5+75.04	139.34 L
4-4	5+75.04	214.34 L
BMP #5	TYPE	DETAIL SHEET
	BIORETENTION	DT-01
PT.	STATION	OFFSET
5-1	6+66.68	137.94 R
5-2	6+66.68	27.94 R
5-3	6+76.68	137.94 R
5-4	6+76.68	27.94 R
BMP #6	TYPE	DETAIL SHEET
	BIORETENTION	DT-01
PT.	STATION	OFFSET
6-1	6+74.08	187.79 L
6-2	6+74.08	227.79 L
6-3	6+86.08	187.79 L
6-4	6+86.08	227.79 L
BMP #7	TYPE	DETAIL SHEET
	RAIN GARDEN	DT-02
PT.	STATION	OFFSET
7-1	5+71.32	161.22 R
7-2	5+88.18	162.09 R
7-3	5+87.38	148.28 R
BMP #8	TYPE	DETAIL SHEET
	RECHARGE AREA	DT-02
PT.	STATION	OFFSET
8-1	5+05.52	29.73 R
8-2	5+05.52	19.73 R
8-3	5+30.52	29.73 R
8-4	5+30.52	19.73 R

OBSERVATION WELL SCHEDULE

STATION	OFFSET	FACILITY
5+09.75	115.54 L	BMP #2
5+72.54	73.00 L	BMP #3
5+72.54	180.59 L	BMP #4
6+73.98	79.21 R	BMP #5
6+82.97	208.22 L	BMP #6

EDUCATIONAL SIGN SCHEDULE

STATION	OFFSET	FACILITY
4+69.11	105.05 L	BMP #2
5+74.59	23.30 L	BMP #3
6+63.76	79.41 R	BMP #5
6+66.82	207.26 L	BMP #6
5+91.93	144.80 R	BMP #7

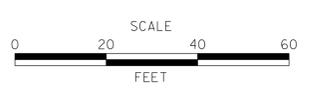
BOLLARD SCHEDULE

BEGIN STA.	OFFSET	END STA.	OFFSET	SPACING	QTY.
6+66.32	16.65 R	6+86.32	16.65 R	5.00	5
5+79.04	22.67 L	5+79.04	222.67 L	5.00	24

POE Sta 7+50.00



ADDENDUMS / REVISIONS	



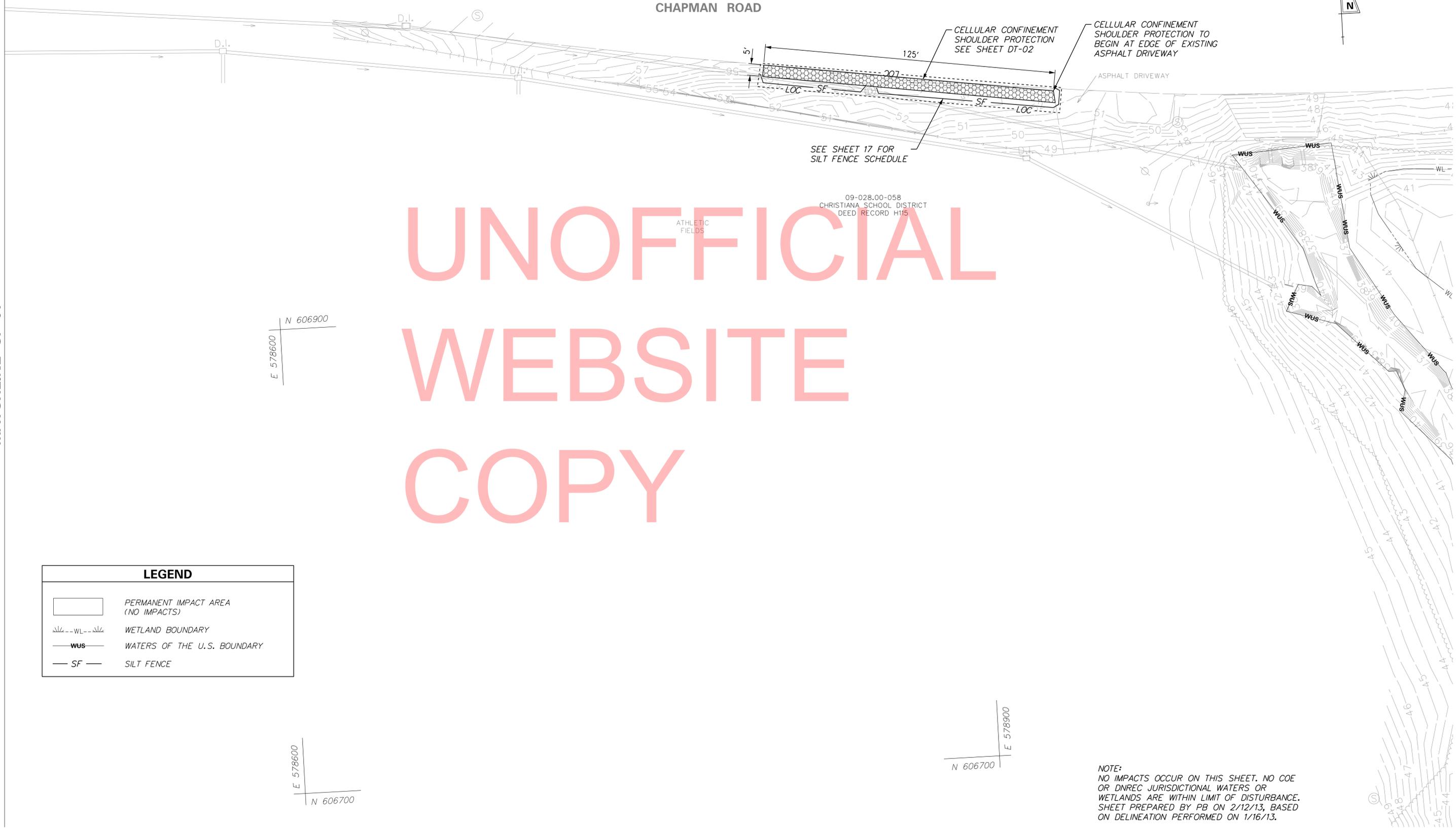
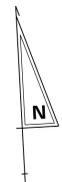
CHRISTIANA HIGH SCHOOL
STORMWATER MANAGEMENT
RETROFITS

CONTRACT T201380203	DESIGNED BY: GAL	CP-02
COUNTY NEW CASTLE		
	CHECKED BY: ND	

CONSTRUCTION PLAN		SHEET NO. 8
		TOTAL SHTS. 24

MATCHLINE CP-01

CHAPMAN ROAD



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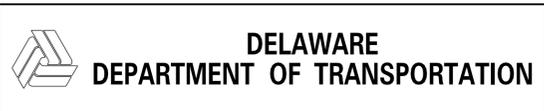
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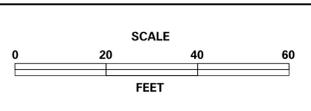
E 578900
N 606700

LEGEND	
	PERMANENT IMPACT AREA (NO IMPACTS)
	WETLAND BOUNDARY
	WATERS OF THE U.S. BOUNDARY
	SILT FENCE

NOTE:
NO IMPACTS OCCUR ON THIS SHEET. NO COE OR DNREC JURISDICTIONAL WATERS OR WETLANDS ARE WITHIN LIMIT OF DISTURBANCE. SHEET PREPARED BY PB ON 2/12/13, BASED ON DELINEATION PERFORMED ON 1/16/13.



ADDENDUMS / REVISIONS



CHRISTIANA HIGH SCHOOL
STORMWATER MANAGEMENT
RETROFITS

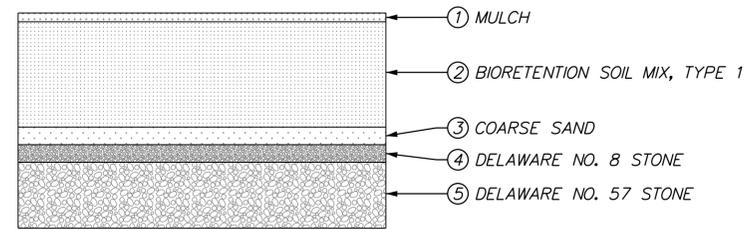
ENVIRONMENTAL COMPLIANCE	
CONTRACT T201380203	CP-03
COUNTY NEW CASTLE	DESIGNED BY: <u>GAL</u> CHECKED BY: <u>ND</u>

CONSTRUCTION PLAN

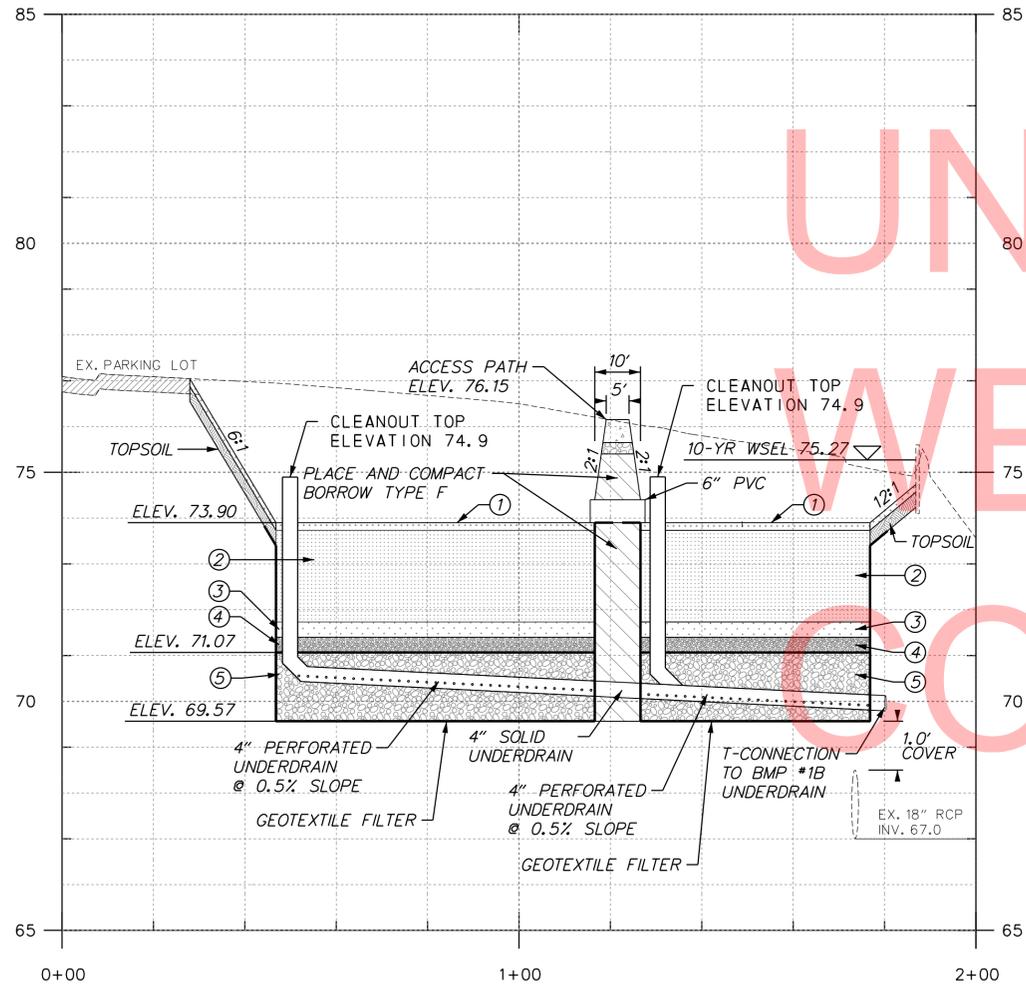
SHEET NO. 9
TOTAL SHTS. 24

SEQUENCE OF CONSTRUCTION FOR BMP #1A

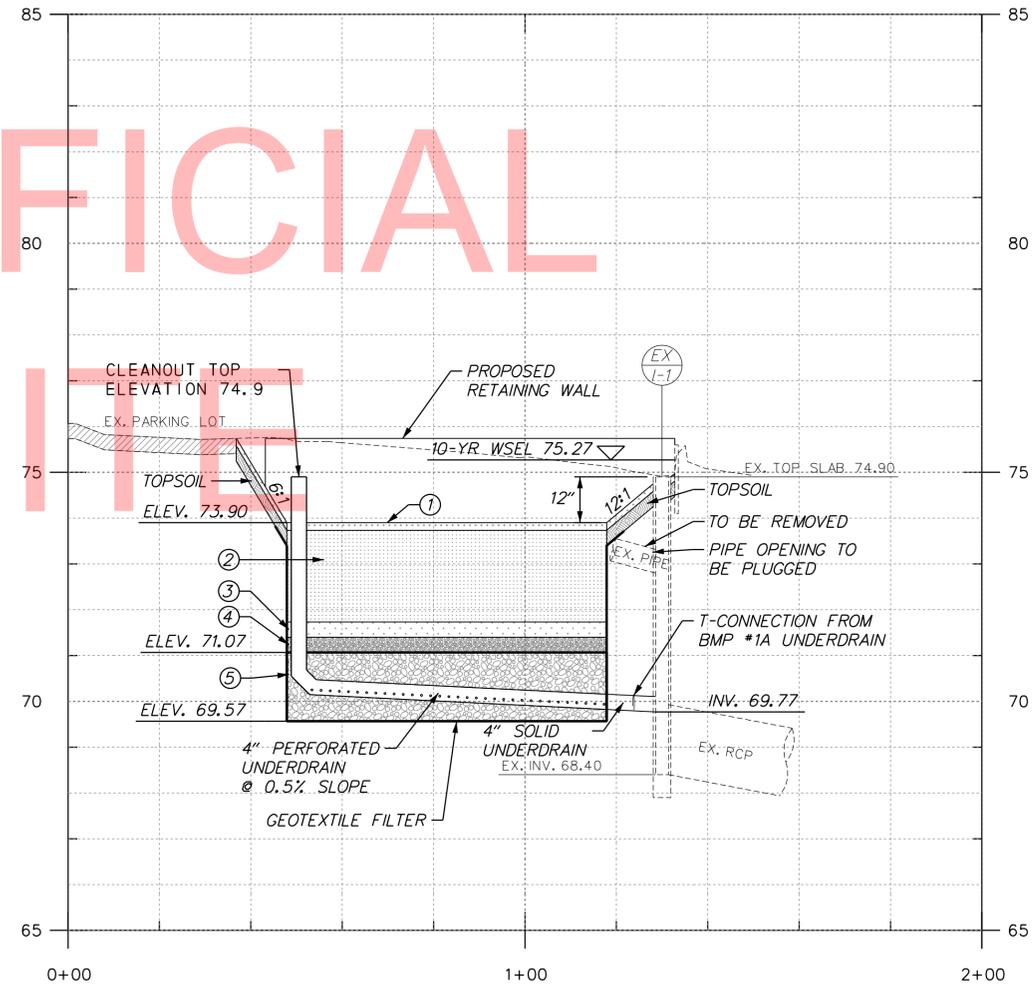
1. EXCAVATE AND INSTALL UNDERDRAIN CONNECTION TO INLET EX. I-1.
2. EXCAVATE AREA FOR NORTHERN BIORETENTION CELL ACCESS PATH, INSTALL UNDERDRAIN, GEOTEXTILE, BIORETENTION MATERIAL AND BORROW TYPE F. BIORETENTION MATERIAL AND BORROW SHALL BE INSTALLED IN 4" TO 6" LIFTS, AND THE BORROW SHALL BE COMPACTED. DO NOT INSTALL 6" PVC AND ACCESS PATH AT THIS TIME.
3. EXCAVATE AREA FOR SOUTHERN BIORETENTION CELL AND INSTALL UNDERDRAIN, GEOTEXTILE AND BIORETENTION MATERIAL.
4. ONCE BIORETENTION CELLS ARE INSTALLED AND STABILIZED, INSTALL 6" PVC AND HAND TAMP BORROW ABOVE PVC. INSTALL BASE COURSE FOR ACCESS PATH.
5. FOR BIOSWALE LAYER DETAILS SEE DWG. NO. DT-01.



BIORETENTION FACILITY TYPICAL SECTION
(REFER TO DETAIL ON SHEET DT-01)



BMP #1A

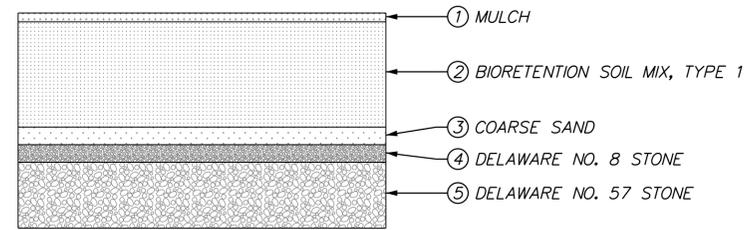


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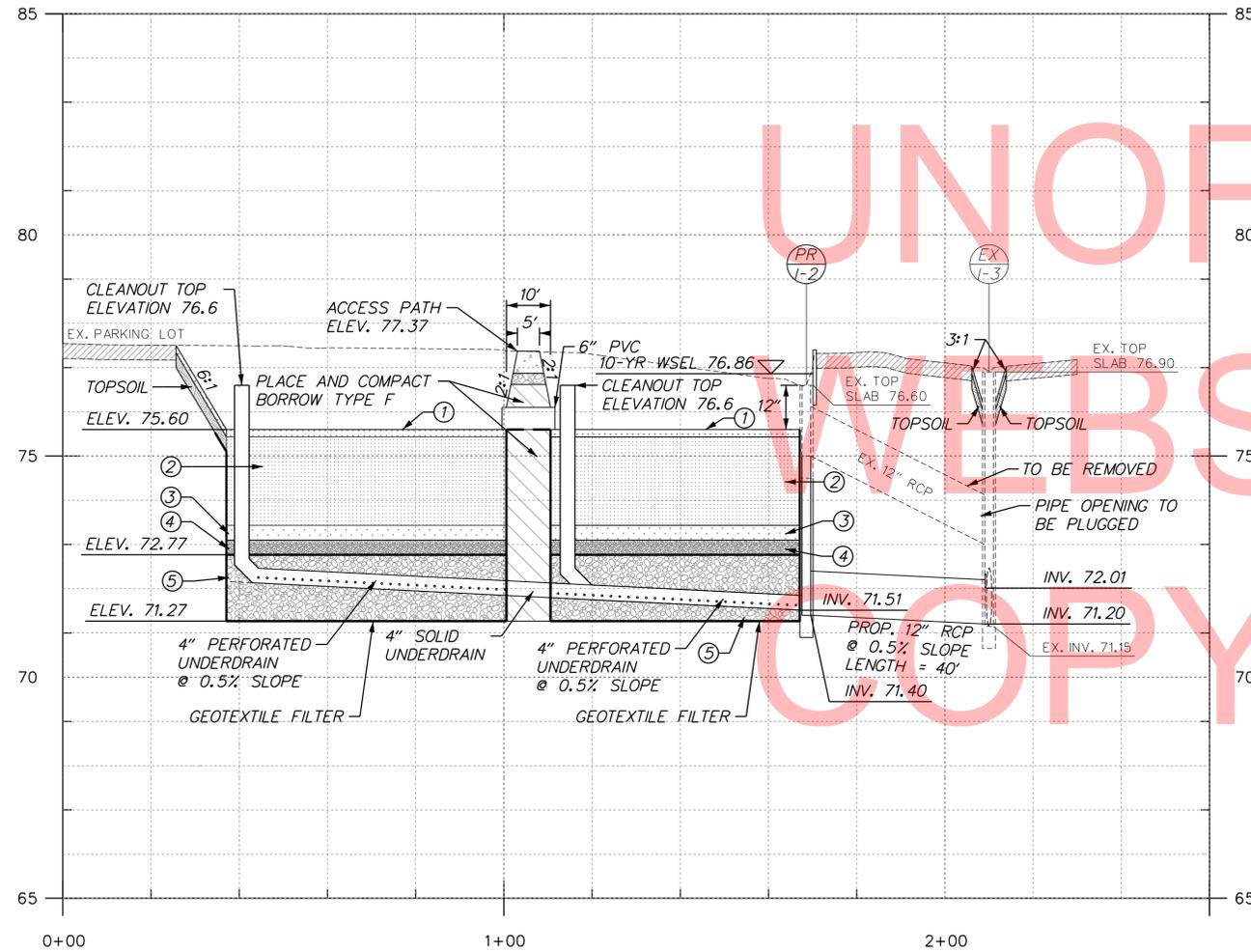
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SEQUENCE OF CONSTRUCTION FOR BMP #2

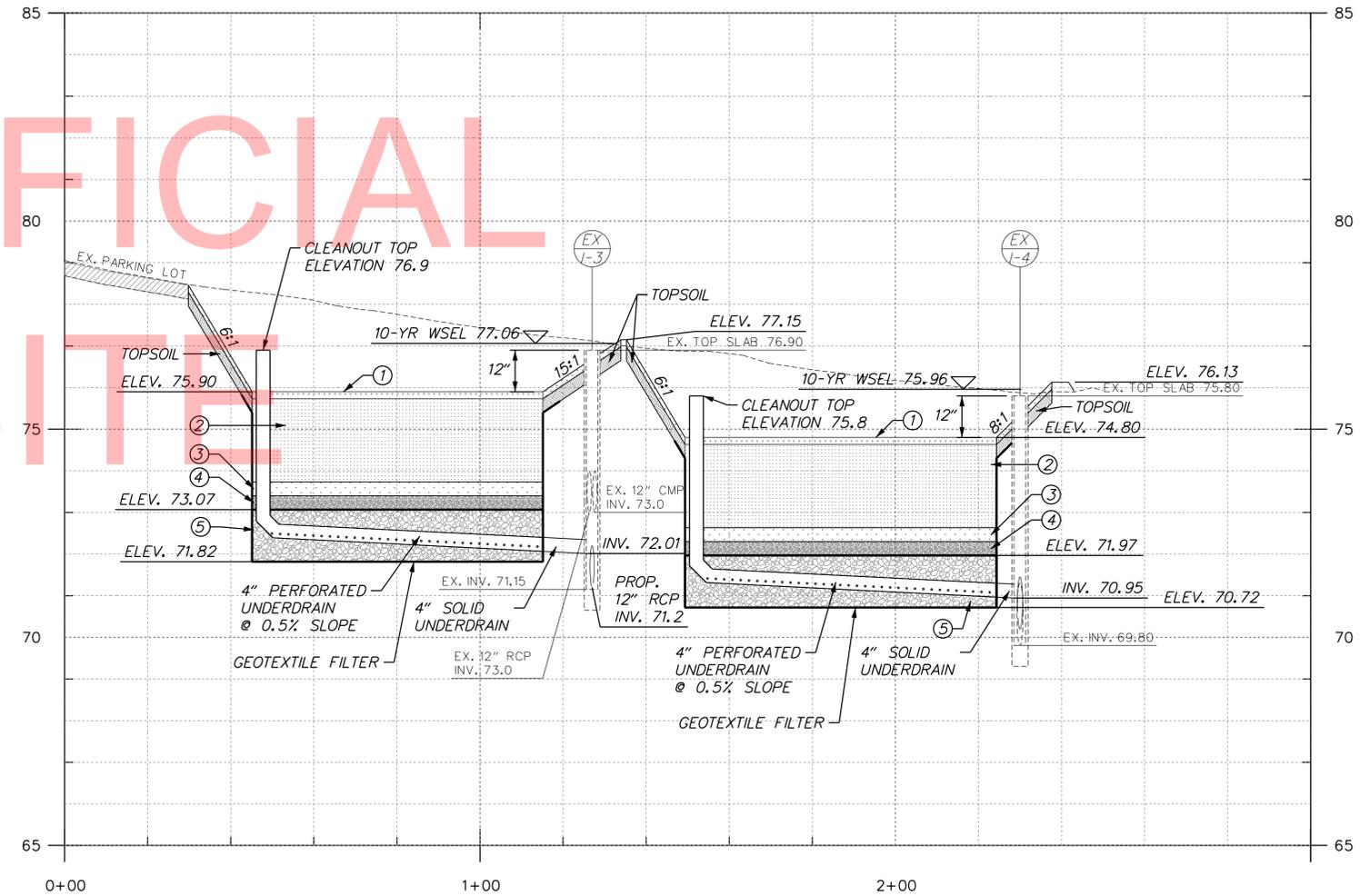
1. EXCAVATE AND INSTALL UNDERDRAIN CONNECTION TO INLET EX. I-1.
2. EXCAVATE AREA FOR NORTHERN BIORETENTION CELL ACCESS PATH, INSTALL UNDERDRAIN, GEOTEXTILE, BIORETENTION MATERIAL AND BORROW TYPE F. BIORETENTION MATERIAL AND BORROW SHALL BE INSTALLED IN 4" TO 6" LIFTS, AND THE BORROW SHALL BE COMPACTED. DO NOT INSTALL 6" PVC AND ACCESS PATH AT THIS TIME.
3. EXCAVATE AREA FOR SOUTHERN BIORETENTION CELL AND INSTALL UNDERDRAIN, GEOTEXTILE AND BIORETENTION MATERIAL.
4. ONCE BIORETENTION CELLS ARE INSTALLED AND STABILIZED, INSTALL 6" PVC AND HAND TAMP BORROW ABOVE PVC. INSTALL BASE COURSE FOR ACCESS PATH.
5. FOR BIOSWALE LAYER DETAILS SEE DWG. NO. DT-01.



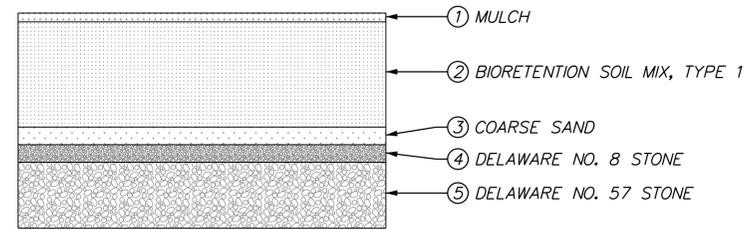
BIORETENTION FACILITY TYPICAL SECTION
(REFER TO DETAIL ON SHEET DT-01)



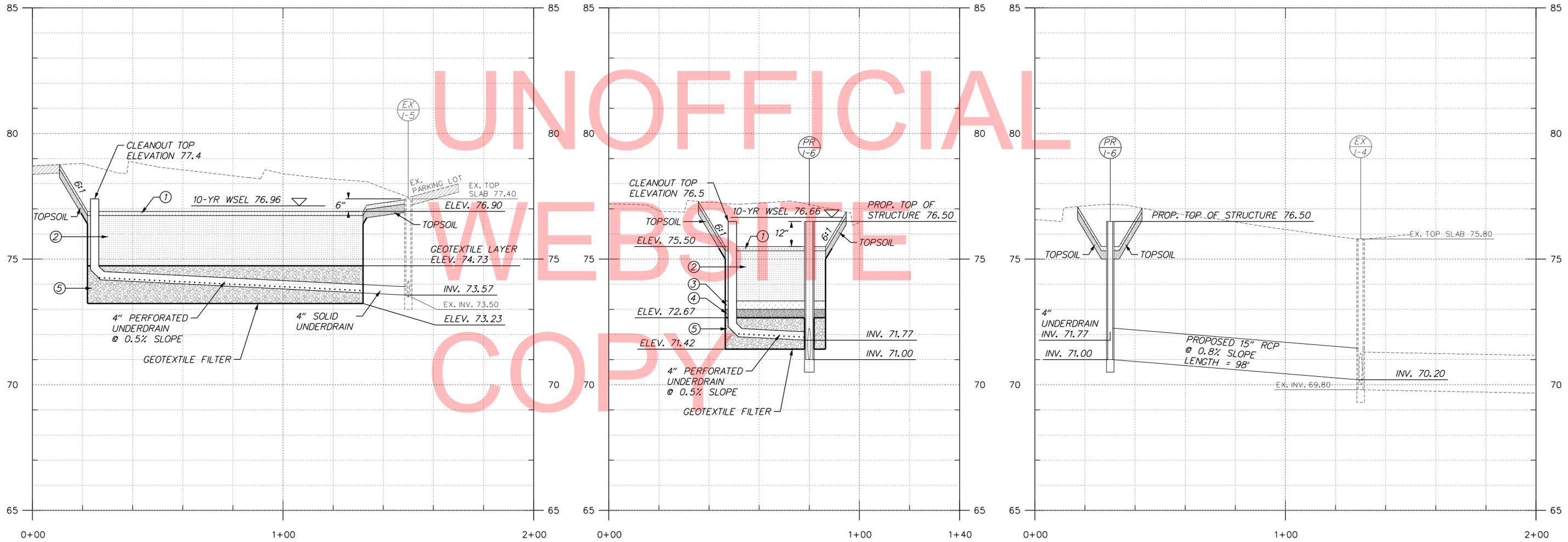
BMP #2



BMP #3 & #4



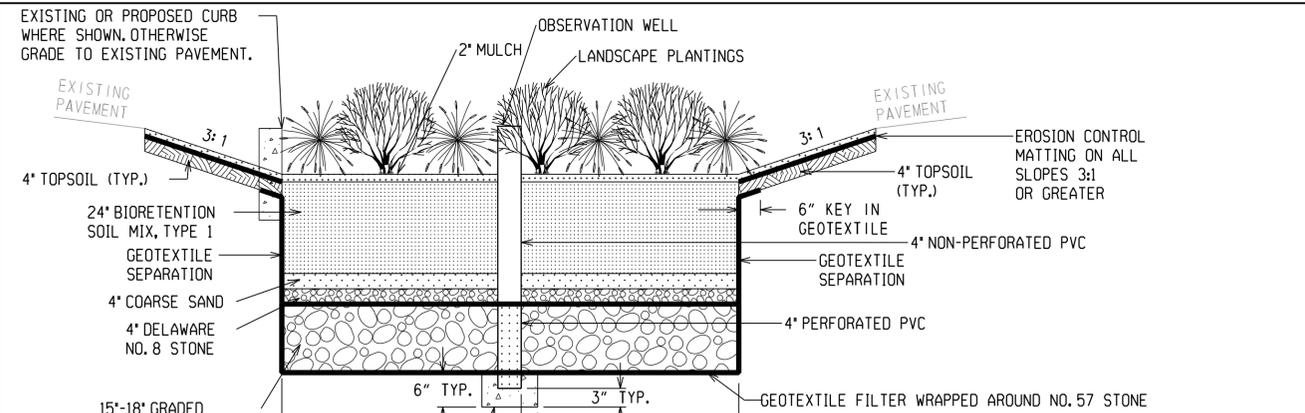
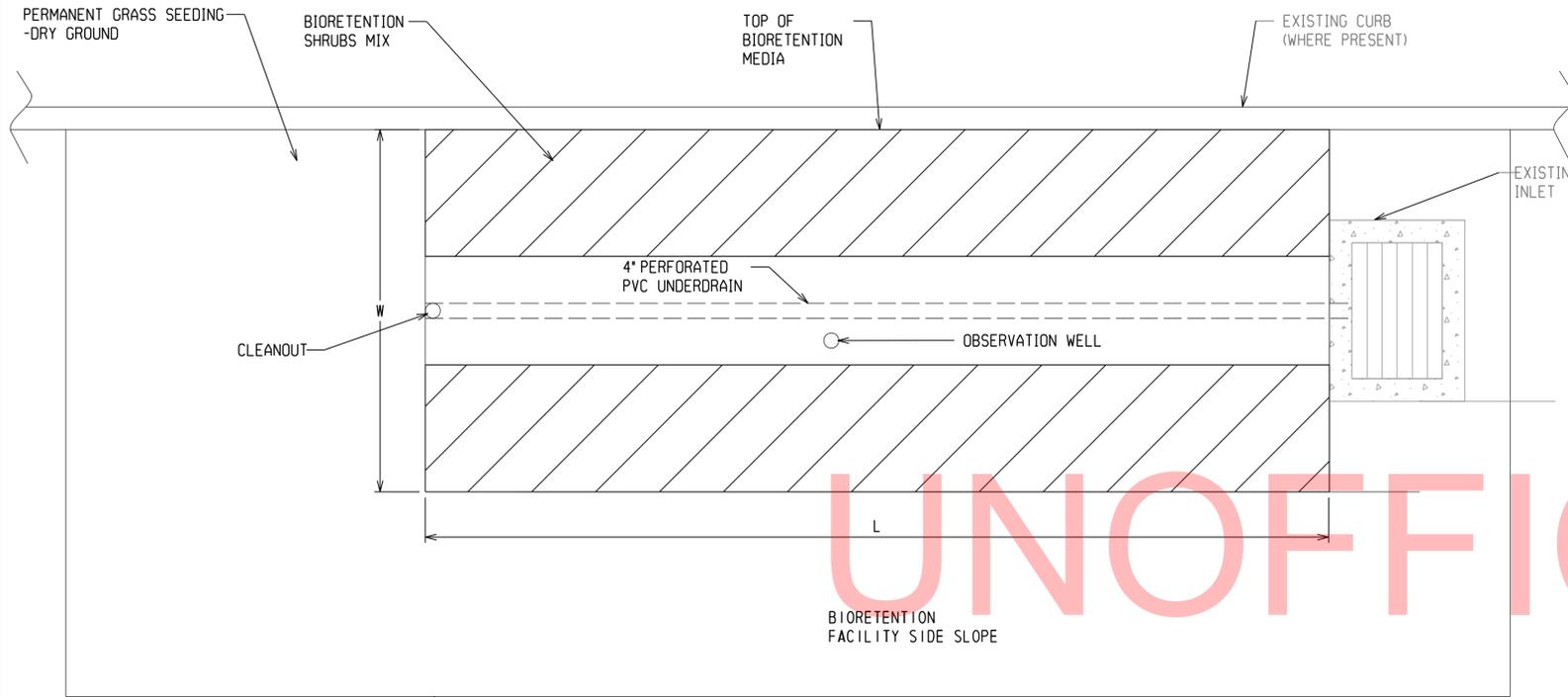
BIORETENTION FACILITY TYPICAL SECTION
(REFER TO DETAIL ON SHEET DT-01)



BMP #5

BMP #6

PROPOSED PIPE PR-1-6 TO EX-1-4

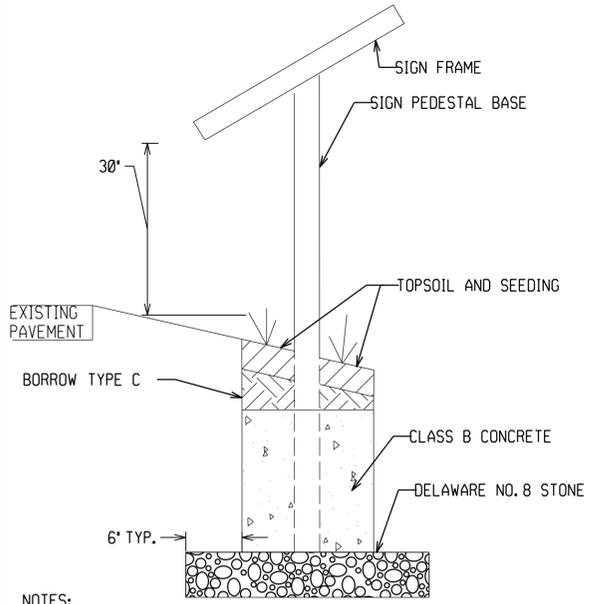
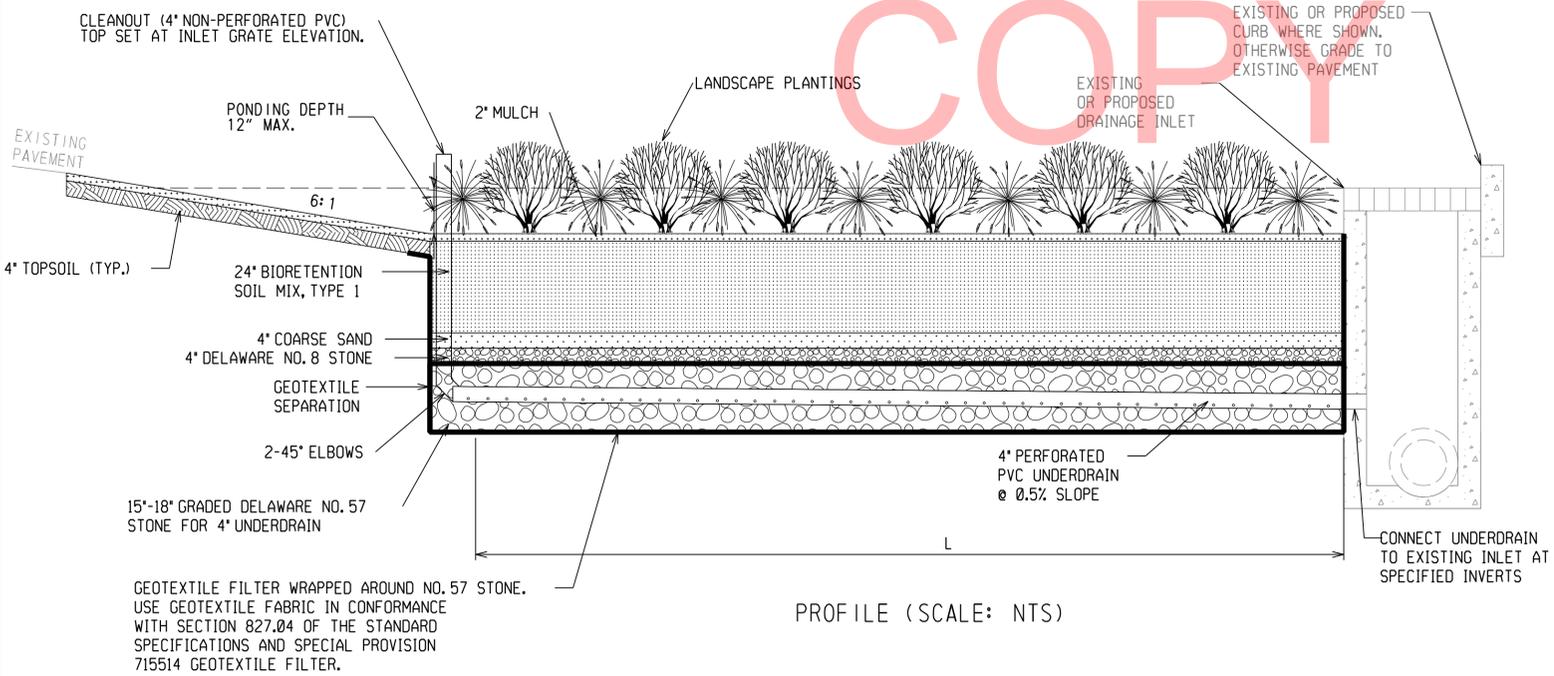


- NOTES:
- PERFORATED PVC UNDERDRAIN PIPE IS TO BE WRAPPED WITH 1/4" GALVANIZED HARDWARE CLOTH.
 - MAINTAIN 3" MIN. COVER ABOVE AND BELOW THE PERFORATED PVC UNDERDRAIN.
 - OBSERVATION WELL SHALL BE PVC WITH WATERFRONT SCREW CAP. DEPTH TO INVERT SHALL BE FIELD MEASURED AND PERMANENTLY MARKED ON CAP.
 - COST OF CONCRETE PAD AND GEOTEXTILE IS INCIDENTAL TO THE COST FOR THE OBSERVATION WELL.
 - COARSE SAND SHALL BE MEASURED AND PAID IN TONS AS 'BORROW, TYPE B' ITEM.
 - EROSION CONTROL MATTING IS REQUIRED ON SLOPES OF 3:1 OR GREATER AND IN AREAS OF CONCENTRATED FLOW.
 - BIORETENTION MEDIA SHALL BE A UNIFORM MIX CONSISTING OF TOPSOIL, COMPOST MATERIAL, SAND, SPHAGNUM PEAT MOSS, AND MULCH. BIORETENTION SOIL MIX SHALL CONFORM TO SUBSECTION 271502. THE BIORETENTION SOIL MIX FOR ALL BIORETENTION FACILITIES IS INTENDED AS A DEMONSTRATION APPLICATION AND DOES NOT STRICTLY CONFORM TO DNREC CRITERIA.
 - GEOTEXTILE SEPARATION SHALL BE GEOTEXTILE FABRIC TYPE GS-1. REFER TO SHEET 19 FOR MATERIAL SPECIFICATIONS.

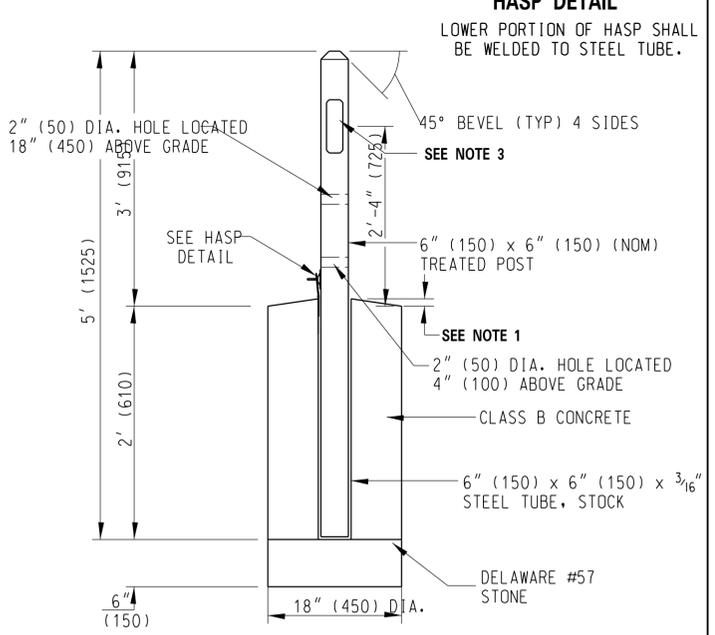
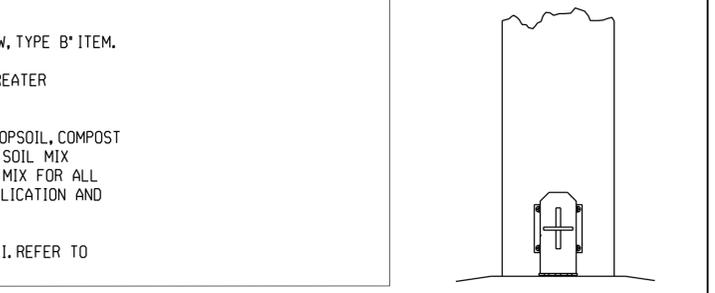
BIORETENTION FACILITY DIMENSIONS			
	L (FT)	W (FT)	FACILITY OUTLET
BMP #1A	120	10	EXISTING I-1
BMP #1B	70	10	EXISTING I-1
BMP #2	120	10	PROPOSED I-2
BMP #3	70	10	EXISTING I-3
BMP #4	75	10	EXISTING I-4
BMP #5	110	10	EXISTING I-5
BMP #6	40	12	PROPOSED I-6

SAW CUT AND REMOVE EXISTING PAVEMENT. GRADE SLOPE TO MATCH EXISTING GRADE.

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- NOTES:
- THE CONCRETE FOUNDATION SHALL BE A MINIMUM OF 24" DEEP AND A MAXIMUM DIAMETER OF 24", AND SHALL OTHERWISE CONFORM TO THE REQUIREMENTS AS SPECIFIED BY THE SIGN PEDESTAL MANUFACTURER.
 - THE SIGN PEDESTAL SHALL BE SET TO ALLOW FOR THE PLACEMENT OF 4" OF TOPSOIL ABOVE THE CONCRETE FOUNDATION, TO MEET SURFACE GRADES. ANY GAPS BETWEEN THE CONCRETE FOUNDATION AND THE TOPSOIL SHALL BE FILLED WITH BORROW, TYPE C.



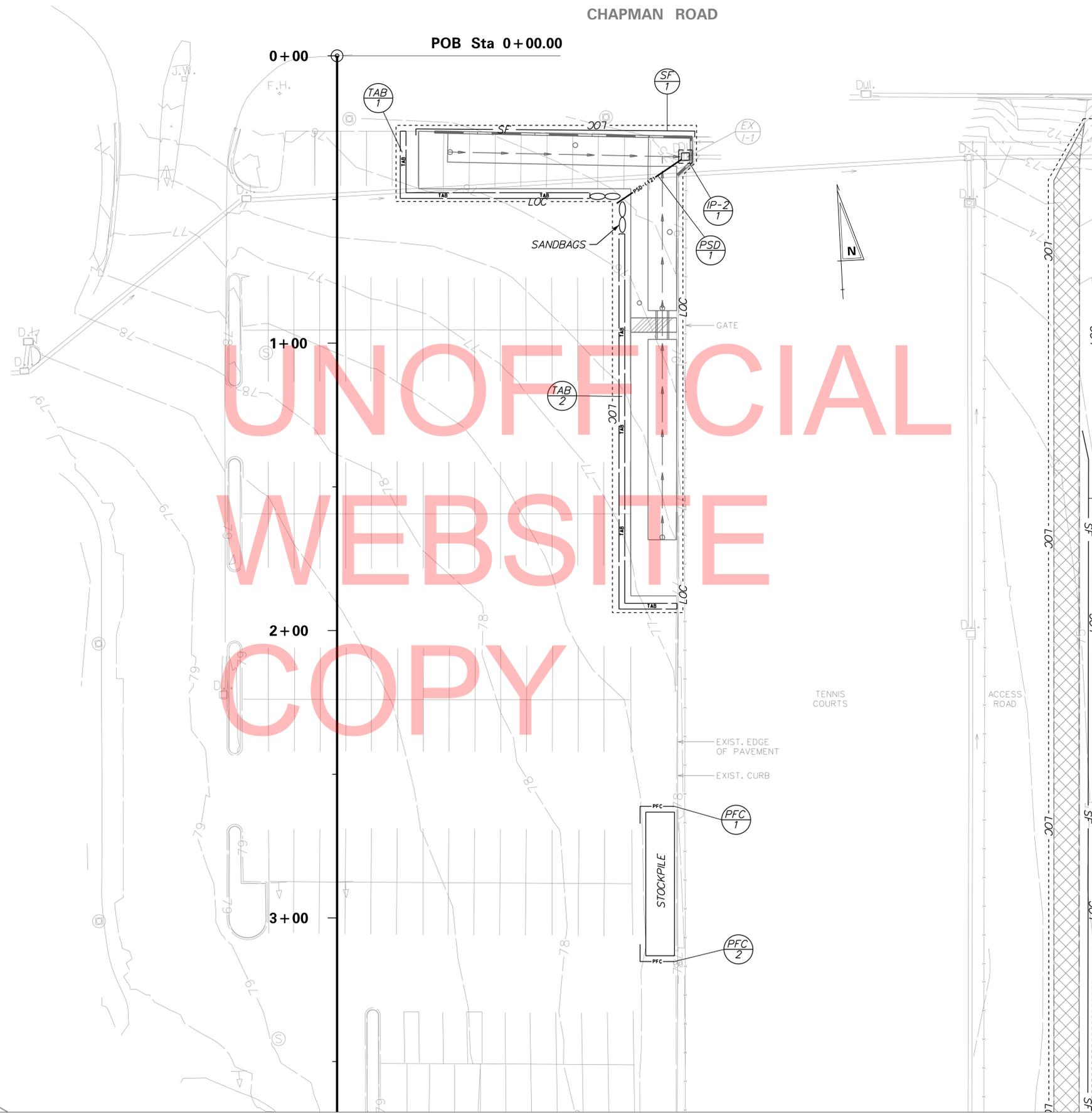
- NOTES:
- STEEL TUBE TO EXTEND 1/2" (13) ABOVE GROUND WITH CONCRETE TO SLOPE AWAY FROM TUBE TO KEEP WATER AND SEDIMENT FROM DRAINING INTO TUBE.
 - SHAVE THE POST AS NECESSARY SO THAT IT WILL FIT IN THE STEEL TUBE.
 - THE APPROPRIATE TYPE 3 OBJECT MARKER SHALL BE PLACED ON THE FRONT AND BACK OF EACH BOLLARD AS PER THIS DETAIL.

ADDENDUMS / REVISIONS	

CONTRACT	DT-01
T201380203	DESIGNED BY: <u> GAL </u>
COUNTY	CHECKED BY: <u> ND </u>
NEW CASTLE	

SEQUENCE OF CONSTRUCTION:

- 1) CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION MEETING.
 - 2) THE PROJECT SITE SHALL BE ACCESSED FROM THE MAIN CHAPMAN ROAD ENTRANCE TO THE SCHOOL.
 - 3) THE CONTRACTOR HAS THE OPTION OF CONSTRUCTING THE FACILITIES IN ANY ORDER THEY CHOOSE PROVIDED THAT RUNOFF FROM ANY DISTURBED AREAS WITHIN THE LOC FOR EACH FACILITY IS TREATED WITH SEDIMENT CONTROL DEVICES BEFORE IT LEAVES THE LOC. ADDITIONALLY CLEANWATER DIVERSIONS FOR A FACILITY SHALL BE MAINTAINED UNTIL THE FACILITY IS STABILIZED WITH ESTABLISHED VEGETATION.
 - 4) INSTALL PERIMETER SEDIMENT CONTROLS (SF, TAB, PSD, IP) AS SHOWN ON THE EROSION AND SEDIMENT CONTROL PLAN.
 - 5) EXCAVATE AREA. ANY MATERIAL STORED AT THE SITE SHALL BE PLACED IN AN AREA APPROVED BY THE SEDIMENT CONTROL INSPECTOR. THE STORED MATERIALS SHALL BE CONTAINED WITHIN SEDIMENT CONTROL DEVICES AND/ OR BE COVERED WITH A TARP BY THE END OF THE WORK DAY.
 - 6) CONSTRUCT BIORETENTION FACILITIES AND RAIN GARDEN. WHEN PLACING BIORETENTION MEDIA, THE CONTRACTOR SHALL NOT DRIVE ANY EQUIPMENT OVER THE MEDIA.
 - 7) CONSTRUCT ROOFTOP DISCONNECTION RECHARGE AREA AND GEOCELL MATTING AS SHOWN ON PLANS.
 - 8) CONSTRUCT SIDEWALKS/ CURBS, INLET MODIFICATIONS, AND ANY OTHER ITEMS AS SHOWN.
 - 9) INSTALL LANDSCAPING PLANTS.
 - 10) ONCE FACILITIES ARE STABILIZED WITH ESTABLISHED VEGETATION, AND WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE CONTRACTOR SHALL REMOVE THE SEDIMENT CONTROL DEVICES.
 - 11) STOCKPILE AREAS ARE PROVIDED FOR THE TEMPORARY STORAGE OF CONSTRUCTION MATERIAL.
 - 12) CONTRACTOR SHALL SUBMIT AS-BUILT DOCUMENTS TO DNREC FOR APPROVAL FOR ALL STORMWATER MANAGEMENT FACILITIES.
- ALL SOILS WITHIN PROJECT LIMITS ARE URBAN LAND WHICH IS A TYPE D SOIL.



LEGEND

	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE
	REINFORCED SILT FENCE
	TEMPORARY ASPHALT BERM
	DEWATERING BAG
	PIPE SLOPE DRAIN
	PERIMETER FILTER CONTROL

PERIMETER FILTER CONTROL

NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
PFC-1	2+61.18	117.73'	2+67.18	105.73'	12'
PFC-2	3+09.18	117.73'	3+15.18	105.73'	12'

INLET PROTECTION - 2

NO.	STA.	OFFSET	QUANTITY
IP-2-1	0+35.37	122.06 L	1
IP-2-2	0+14.07	382.05 L	1

SILT FENCE SCHEDULE

NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
SF-1	0+27.02	27.52 L	0+28.25	124.80 L	102
SF-2	1+30.40	260.05 L	3+67.55	261.96 L	238

TEMPORARY ASPHALT BERM

NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
TAB-1	0+26.25	23.36 L	0+48.71	88.44 L	90
TAB-2	0+61.93	36.00 L	1+91.54	188.61 L	151

PIPE SLOPE DRAIN (12")

NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
PSD-1	0+51.46	97.67 L	0+36.44	119.62 L	28

NOTE - SAND BAGS SHALL BE INCIDENTAL TO THE COST OF THE PSD

MATCHLINE STA 3+67.5 CS-02

<p>DELAWARE DEPARTMENT OF TRANSPORTATION</p>	ADDENDUMS / REVISIONS	<p>SCALE</p> <p>FEET</p>	<p>CHRISTIANA HIGH SCHOOL STORMWATER MANAGEMENT RETROFITS</p>	<p>CONTRACT T201380203</p> <p>COUNTY NEW CASTLE</p>	<p>CS-01</p> <p>DESIGNED BY: <u> GAI </u></p> <p>CHECKED BY: <u> ND </u></p>	<p>EROSION & SEDIMENT CONTROL PLAN</p>	<p>SHEET NO. 15</p> <p>TOTAL SHTS. 24</p>	

MATCHLINE CS-03

SILT FENCE SCHEDULE					
NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
SF-2	3+67.55	261.96 L	5+78.90	259.54 L	212
SF-3	5+04.92	19.99 R	5+31.07	20.17 R	29
SF-4	5+61.80	147.50 R	5+99.11	138.36 R	51

TEMPORARY ASPHALT BERM					
NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
TAB-3	3+94.20	117.94 L	5+42.71	99.32 L	160
TAB-4	5+56.66	18.04 L	5+56.66	18.04 L	485
TAB-5	6+56.68	156.63 R	6+94.74	12.93 R	169

INLET PROTECTION - 2			
NO.	STA.	OFFSET	QUANTITY
IP-2-3	5+40.52	115.52 L	1
IP-2-4	5+81.83	117.09 L	1
IP-2-5	5+80.42	220.19 L	1
IP-2-6	6+88.59	26.36 R	1

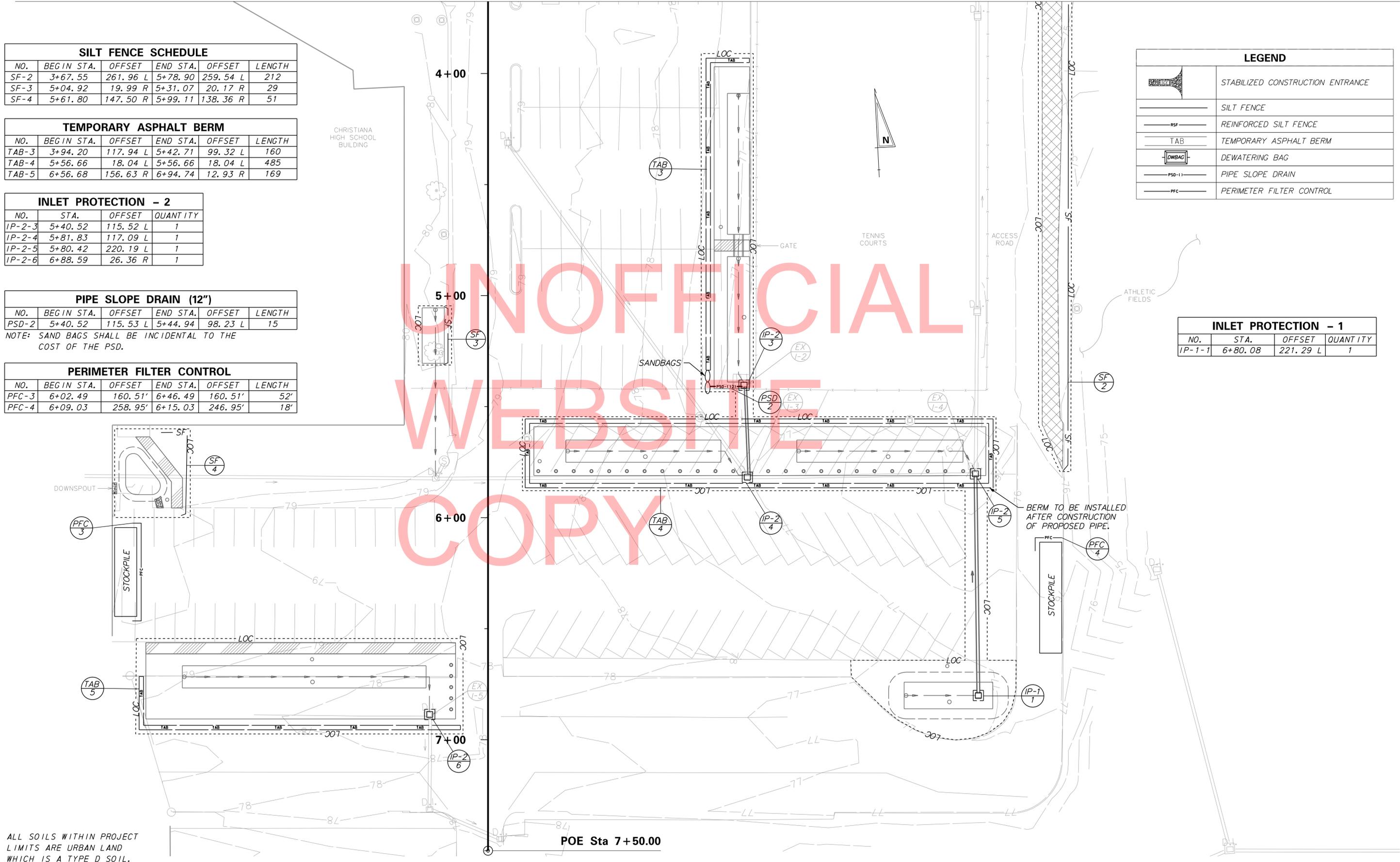
PIPE SLOPE DRAIN (12")					
NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
PSD-2	5+40.52	115.53 L	5+44.94	98.23 L	15

NOTE: SAND BAGS SHALL BE INCIDENTAL TO THE COST OF THE PSD.

PERIMETER FILTER CONTROL					
NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
PFC-3	6+02.49	160.51'	6+46.49	160.51'	52'
PFC-4	6+09.03	258.95'	6+15.03	246.95'	18'

LEGEND	
	STABILIZED CONSTRUCTION ENTRANCE
	SILT FENCE
	REINFORCED SILT FENCE
	TEMPORARY ASPHALT BERM
	DEWATERING BAG
	PIPE SLOPE DRAIN
	PERIMETER FILTER CONTROL

INLET PROTECTION - 1			
NO.	STA.	OFFSET	QUANTITY
IP-1-1	6+80.08	221.29 L	1



ALL SOILS WITHIN PROJECT LIMITS ARE URBAN LAND WHICH IS A TYPE D SOIL.

CHAPMAN ROAD



NOTES:

SILT FENCE SCHEDULE					
NO.	BEGIN STA.	OFFSET	END STA.	OFFSET	LENGTH
SF-4	0+43.26	737.69 L	0+48.48	783.08 L	50
SF-5	0+49.09	787.81 L	0+48.98	864.36 L	90

SEQUENCE OF CONSTRUCTION:

1. INSTALL SILT FENCE AS SHOWN PRIOR TO CONSTRUCTION OF CELLULAR CONFINEMENT SLOPE PROTECTION.
2. PRIOR TO INSTALLATION OF REVEGETATION MATS, THE SOIL SHALL BE GRADED AS LEVEL AND SMOOTH AS POSSIBLE. GEOTEXTILE FABRIC CONFORMING TO DELDOT SPECIFICATIONS SHALL BE PLACED OVER THE GRADED SOIL, WHICH SHALL BE TOPPED WITH 6" TOPSOIL SEED MIX. FOLLOWING THE GERMINATION OF THE TOPSOIL, VEGETATED MAT PLACEMENT AND ANCHORING SHALL BE PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE MANUFACTURER, NOTES AND DETAILS ON THE PLANS AND AS DIRECTED BY THE ENGINEER.
3. ONCE THE SITE IS STABILIZED WITH ESTABLISHED VEGETATION, AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE CONTRACTOR SHALL REMOVE THE SILT FENCE.

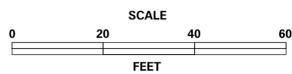
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MATCHLINE CS-01

ALL SOILS WITHIN PROJECT LIMITS ARE URBAN LAND WHICH IS A TYPE D SOIL.



ADDENDUMS / REVISIONS



CHRISTIANA HIGH SCHOOL
STORMWATER MANAGEMENT
RETROFITS

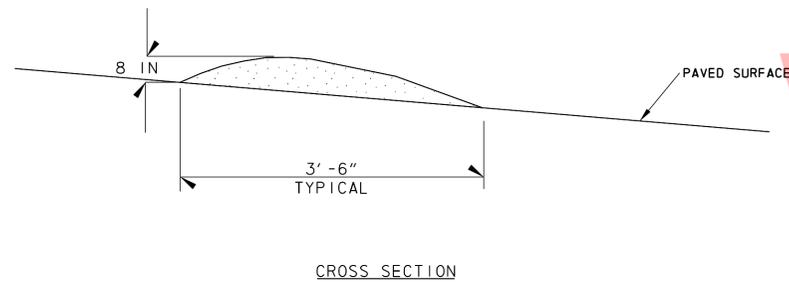
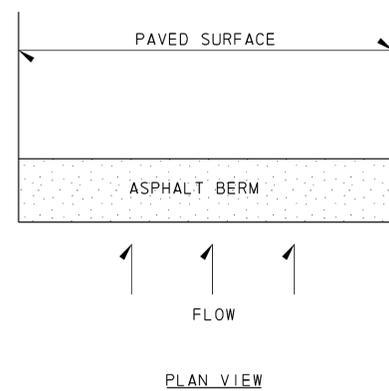
CONTRACT
T201380203
COUNTY
NEW CASTLE

CS-03

DESIGNED BY: GAI
CHECKED BY: ND

EROSION & SEDIMENT
CONTROL PLAN

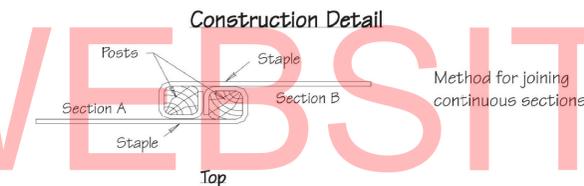
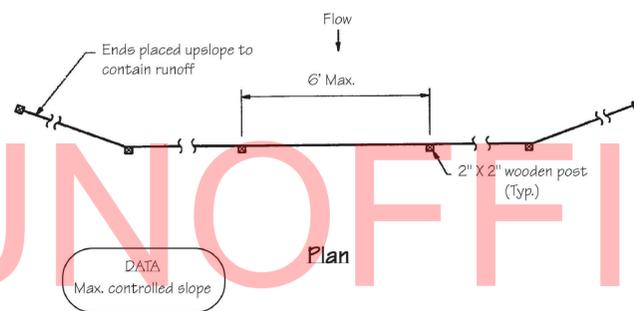
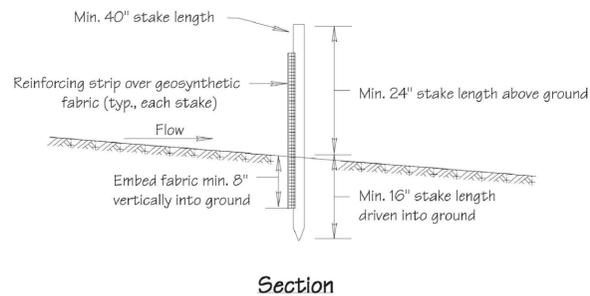
SHEET NO.
17
TOTAL SHTS.
24



TEMPORARY ASPHALT BERM (TAB)
(NOT TO SCALE)

CONSTRUCTION SPECIFICATIONS:

1. CONSTRUCT BERM ON AN UNINTERRUPTED, CONTINUOUS GRADE.
2. INSTALL BERM TO CONFORM TO CROSS SECTION DIMENSIONS OF A UNIFORM HEIGHT OF 8 INCHES MINIMUM AND APPROXIMATE WIDTH OF 3 1/2 FEET.
3. COMPACT ASPHALT BERM.
4. INSPECT AND PROVIDE NECESSARY MAINTENANCE PERIODICALLY AND AFTER EACH RAIN EVENT.
5. UPON REMOVAL OF ASPHALT BERM, RETURN ORIGINAL CONDITIONS OR AS SPECIFIED.
6. TEMPORARY ASPHALT BERM (TAB) SHALL BE MEASURED AND PAID FOR AS TONS OF COLD-LAID BITUMINOUS CONCRETE TEMPORARY ROADWAY MATERIAL (TRM).



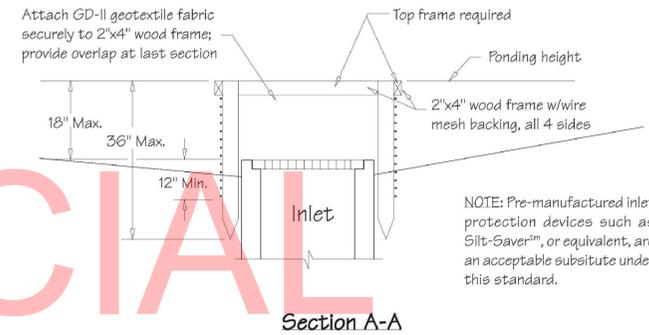
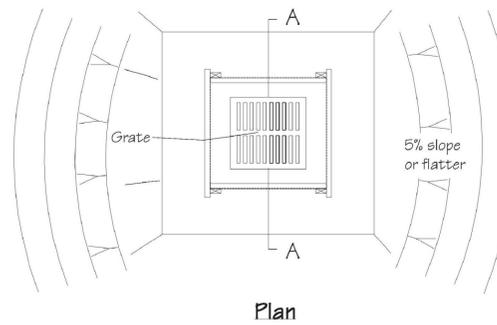
Construction Notes:

1. Geosynthetic fabric to be fastened securely to fence posts with wire ties or staples.
2. When two sections of filter cloth adjoin each other they shall be overlapped by six inches and folded.
3. Maintenance shall be performed as needed and material removed when "bulges" develop in the silt fence.

Materials:

1. Stakes: Steel (either T or U) or 2" x 2" hardwood
2. Geosynthetic Fabric: Type GD-1
3. Reinforcing strip: Wooden lath, plastic strip or other approved equivalent
4. Prefabricated Unit: Geofab, Envirofence, or approved equivalent

SILT FENCE (SF)
(NOT TO SCALE)



Construction Notes:

1. Excavate completely around inlet to a depth of 18" below grate elevation.
2. Drive 2" x 4" post 1' into ground at four corners of inlet. Place nail strips between posts on ends of inlet. Assemble top portion of 2" x 4" frame using overlap joint shown. Top of frame (weir) must be 6" below edge of roadway adjacent to inlet.
3. Stretch wire mesh tightly around frame and fasten securely. Ends must meet at post.
4. Stretch geotextile fabric tightly over wire mesh, the cloth must extend from top of frame to 18" below inlet grate elevation. Fasten securely to frame. Ends must meet at post, be overlapped and folded, then fastened down.
5. Backfill around inlet in compacted 6" layers until at least 12" of geotextile fabric is buried.
6. If the inlet is not in a low point, construct a compacted earth dike in the ditchline below it. The top of this dike is to be at least 6" higher than the top of frame (weir).
7. This structure must be inspected frequently and the filter fabric replaced when clogged.

Materials:

1. Wooden frame is to be constructed of 2" x 4" construction grade lumber.
2. Wire mesh must be of sufficient strength to support filter fabric with water fully impounded against it.
3. Geotextile fabric: Type GD-II

INLET PROTECTION (IP)
(NOT TO SCALE)

OWNER'S CERTIFICATION

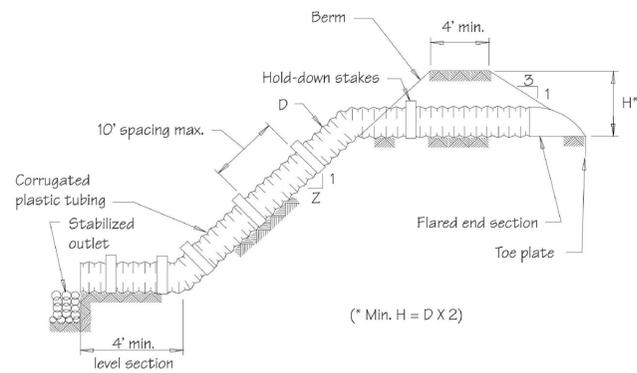
I, THE UNDERSIGNED, CERTIFY THAT ALL LAND CLEARING, CONSTRUCTION AND DEVELOPMENT SHALL BE DONE PURSUANT TO THE APPROVED PLAN.

PRINTED NAME _____ TITLE _____

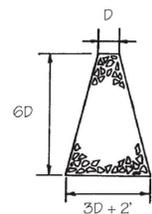
SIGNATURE _____ DATE _____

EROSION & SEDIMENT CONTROL NOTES:

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE CONSTRUCTED AND MAINTAINED IN ACCORDANCE WITH THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, DATED JUNE 2005, AND ALL REVISIONS THEREOF AND ADDITIONS THERETO.
2. INSPECTION OF ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MADE WEEKLY AND AFTER EACH RAINFALL EVENT TO INSURE EFFECTIVE SEDIMENT CONTROL.
3. THE CONTRACTOR MUST NOTIFY DNREC SEDIMENT AND STORMWATER MANAGEMENT PROGRAM IN WRITING FIVE (5) DAYS PRIOR TO COMMENCEMENT OF CONSTRUCTION. FAILURE TO DO SO CONSTITUTES A VIOLATION OF THE APPROVED STORMWATER MANAGEMENT PLAN.
4. REVIEW AND OR APPROVAL OF THE SEDIMENT AND STORMWATER MANAGEMENT PLAN SHALL NOT RELIEVE THE CONTRACTOR FROM HIS OR HER RESPONSIBILITIES FOR COMPLIANCE WITH THE REQUIREMENTS OF THE SEDIMENT AND STORMWATER REGULATIONS, NOR SHALL IT RELIEVE THE CONTRACTOR FROM ERRORS OR OMISSIONS IN THE APPROVED PLAN.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING AND WHEN NECESSARY REPAIRING THE EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT PRACTICES DURING CONSTRUCTION.
6. IF THE APPROVED STORMWATER MANAGEMENT PLAN NEEDS TO BE MODIFIED, ADDITIONAL SEDIMENT AND STORMWATER CONTROL MEASURES MAY BE REQUIRED AS DEEMED NECESSARY BY THE DNREC.
7. FOLLOWING SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 14 CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS, SOIL STOCKPILES, AND ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
8. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ESTABLISHED.
9. ALL AREAS OUTSIDE OF FACILITIES NOT COVERED BY BUILDINGS OR PAVEMENT WILL BE SEEDED USING PERMANENT GRASS SEEDING-DRY GROUND.
10. IF CONSTRUCTION ACTIVITY IS COMPLETED OR CEASES FOR A PERIOD OF 14 DAYS, ALL DISTURBED AREAS SHALL BE STABILIZED FOLLOWING THE SPECIFICATIONS AND STANDARDS IN THE DELAWARE EROSION AND SEDIMENT CONTROL HANDBOOK, DATED JUNE 2005, AND ALL REVISIONS THEREOF AND ADDITIONS THERETO.
11. DUST CONTROL SHALL BE ACHIEVED THROUGH TEMPORARY VEGETATIVE COVER, MULCHING AND/OR SPRINKLING WITH WATER.
12. DELDOT RESERVES THE RIGHT TO ADD, MODIFY, OR DELETE ANY SEDIMENT CONTROL MEASURES AS NECESSARY.



Profile



Stabilized Outlet Detail

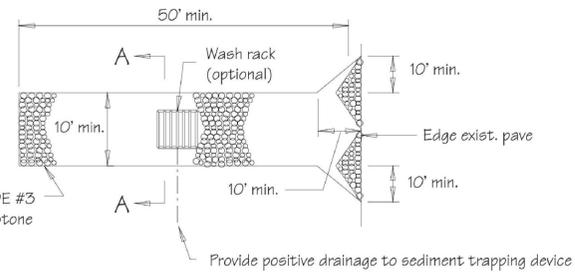
DATA
Contributing D.A.
Height of Berm (H)

Construction Notes:

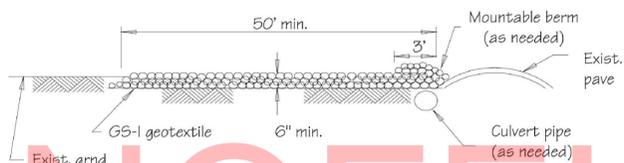
1. The top of the earth berm over the inlet pipe and those berms carrying water to the pipe shall be at least 2X the pipe diameter at all points. Earth berm side slopes steeper than 3:1 shall have stabilization blanket applied.
2. Flexible tubing is preferred. (Alternate materials must receive prior approval.) All connections shall be made with watertight connecting bands.
3. A flared end section shall be attached to the inlet end of the pipe with a watertight connection.
4. The flexible tubing shall be securely anchored to the slope by hold-down stakes spaced 10' on centers. In no case shall less than two (2) anchors be provided.
5. A riprap apron shall be provided at the outlet. This shall consist of R-4 riprap placed as shown on the Standard Detail.
6. The soil around and under the inlet pipe and entrance section shall be hand tamped in 4" increments to the top of the earth dike.
7. Follow-up inspection and any needed maintenance shall be performed after each storm.

MAXIMUM DRAINAGE AREA: 5 ACRES

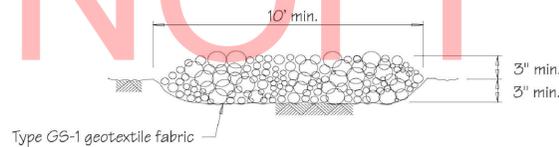
PIPE SLOPE DRAIN (PSD)
(NOT TO SCALE)



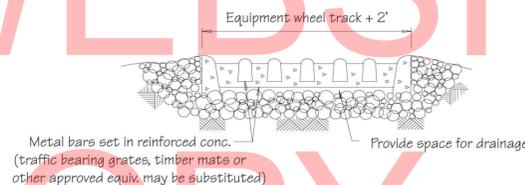
Plan



Profile



Section A-A (Std.)



Section A-A (Opt.)

Construction Notes:

1. Stone size - Use DE #3 stone.
2. Length - As required, but not less than 50 feet (except on a single residence lot where a 30 foot minimum length would apply).
3. Thickness - Not less than size (6) inches.
4. Width - Ten (10) foot minimum, but not less than the full width at points where ingress or egress occurs.
5. Geotextile - Type GS-1; placed over the entire area prior to placing of stone.
6. Surface Water - All surface water flowing or diverted toward construction entrances shall be piped across the entrance. If piping is impractical, a mountable berm with 5:1 slopes will be permitted.
7. Maintenance - The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto public rights-of-way. This may require periodic top dressing with additional stone as conditions demand and repair and/or cleanup of any measures used to trap sediment. All sediment spilled, dropped, washed or tracked onto public rights-of-way must be removed immediately.
8. Washing - Vehicle wheels shall be cleaned to remove sediment prior to entrance onto public rights-of-way. When washing is required, it shall be done on an area stabilized with stone and which drains into an approved sediment trapping device.
9. Inspection - Periodic inspection and needed maintenance shall be provided after each rain.

STABILIZED CONSTRUCTION ENTRANCE (SCE)
(NOT TO SCALE)

Geotextile Properties Table

Type	GS-I	GD-I	GD-II	GD-III	GD-IV
Minimum Grab Tensile Strength (ASTM D-4632)	315 lbs	110 lbs	80 lbs	265 lbs	200 lbs
Maximum Grab Tensile Elongation (ASTM D-4632)	15%	20%	50%	20%	50%
Minimum Trapezoidal Tear Strength (ASTM D-4533)	120 lbs	50 lbs	35 lbs	45 lbs	80 lbs
Minimum Mullen Burst Strength (ASTM D-3786)	600 psi	300 psi	160 psi	420 psi	380 psi
Minimum Puncture Strength (ASTM D-4833)	120 lbs	60 lbs	45 lbs	100 lbs	130 lbs
Apparent Opening Size (ASTM D-4751)	40-80 US Sieve	40-80 US Sieve	40-80 US Sieve	20-40 US Sieve	40-80 US Sieve
Minimum UV Resistance after 500 hours (ASTM D-4355)	70%	70%	70%	70%	70%
Flow-thru Rate (ASTM D-4491)	5 gal/min/sqft maximum	25 gal/min/sqft maximum	110 gal/min/sqft minimum	110 gal/min/sqft minimum	70 gal/min/sqft minimum

NOTE: FOR TYPE GS-1 FABRIC, USE MIRAFI 600X, AMOCO 2006, GEOTEX 315ST OR APPROVED EQUAL.



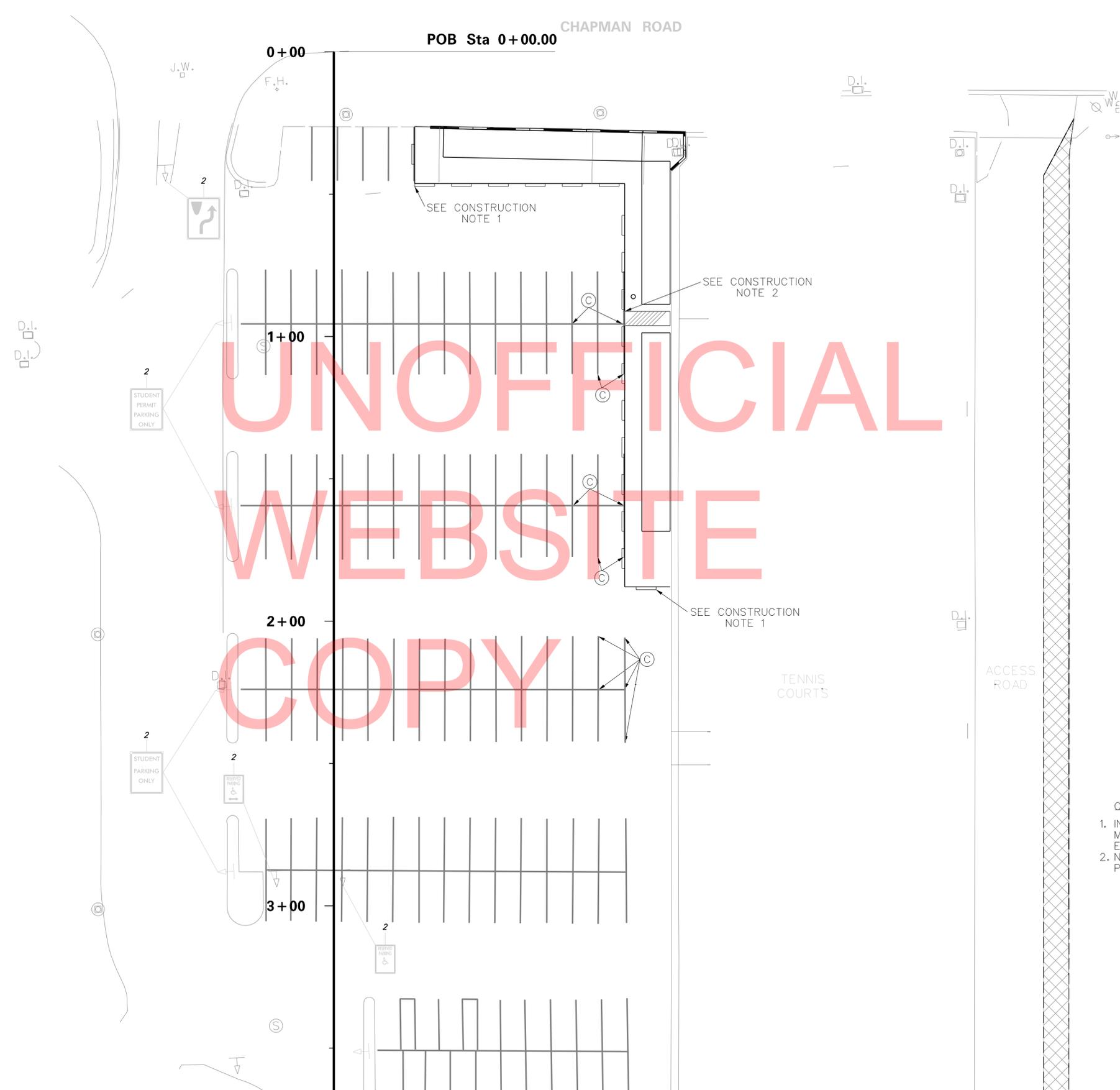
CHAPMAN ROAD
POB Sta 0+00.00

PAVEMENT MARKINGS LEGEND		
SYMBOL	ITEM	QUANTITY
(A)	4" SOLID WHITE PAINT PAVEMENT STRIPING (ITEM 748001)	0 LF
(B)	WHITE PAINT SYMBOL (ITEM 748003)	0 SF
(C)	REMOVAL OF PAVEMENT STRIPING (ITEM 748530)	90 SF

TRAFFIC LEGEND	
	EXISTING SIGN
	PROPOSED SIGN
	PROPOSED PAVEMENT MARKING ARROW

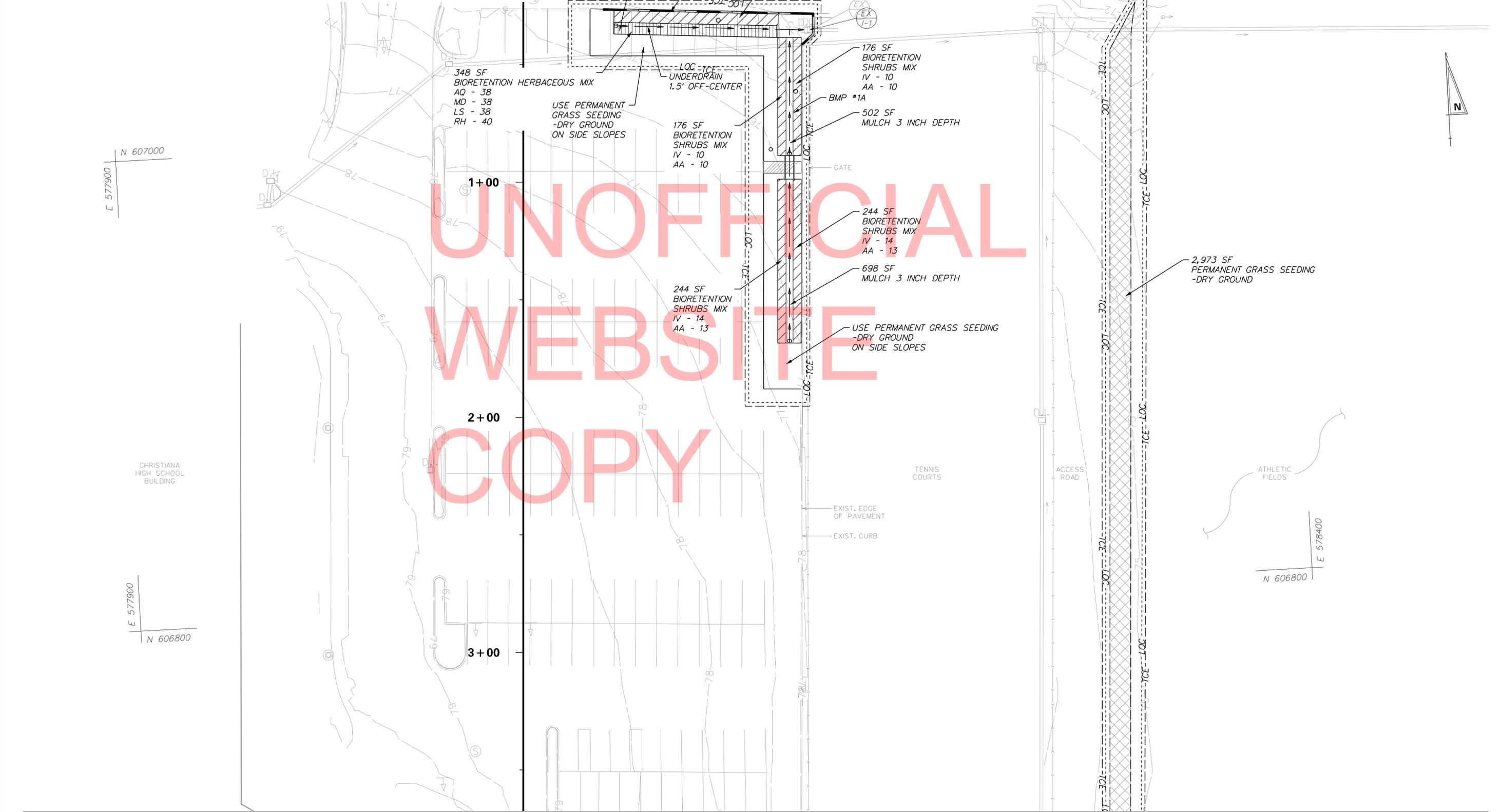
P.C.C. PARKING BUMPER SCHEDULE	
STATION	EA
0+30 TO 1+88	19

- CONSTRUCTION NOTES:
1. INSTALL P.C.C. PARKING BUMPERS ALONG PROPOSED STORMWATER MANAGEMENT FACILITIES. NO MORE THAN 6 FEET SHOULD SEPARATE EACH P.C.C. PARKING BUMPER.
 2. NO P.C.C. PARKING BUMPERS SHALL BE PLACED ADJACENT TO PROPOSED SIDEWALK ACCESS TO TENNIS COURTS.



UNOFFICIAL
WEBSITE
COPY

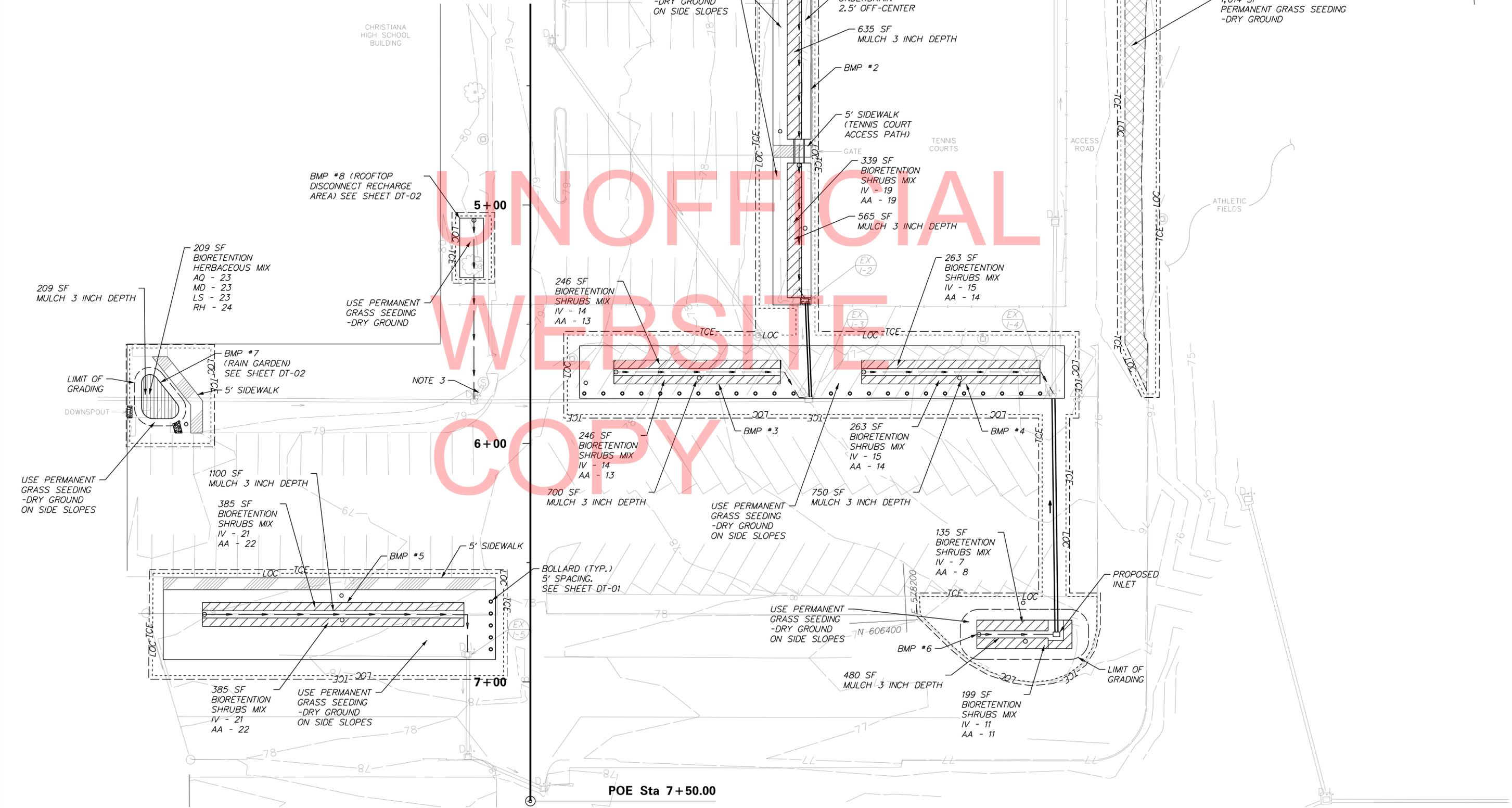
LANDSCAPE PLANTING SCHEDULE - THIS SHEET				
NO.	PLANTING DESCRIPTION	QUANTITY	SIZE	COMMENTS
AA	ARONIA ARBUTIFOLIA - RED CHOKEBERRY	66	3 FT. HT.	3 FT. ON CENTER SPACING
IV	ILEX VERTICILLATA - WINTERBERRY	67	3 FT. HT.	3 FT. ON CENTER SPACING
AQ	AQUILEGIA CANADENSIS - RED COLUMBINE	38	1 QT.	18 IN. ON CENTER SPACING
MD	MONARDA DIDYMA - BEE BALM	38	1 QT.	18 IN. ON CENTER SPACING
LS	LIASTRIS SPICATA - MARSH BLAZING STAR	38	1 QT.	18 IN. ON CENTER SPACING
RH	RUDBECKIA HIRTA - BLACK-EYED SUSAN	40	1 QT.	18 IN. ON CENTER SPACING
1,899 SF MULCH 3 INCH DEPTH				



MATCHLINE STA 3+67.5 LS-02

LANDSCAPE PLANTING SCHEDULE - THIS SHEET				
NO.	PLANTING DESCRIPTION	QUANTITY	SIZE	COMMENTS
AA	ARONIA ARBUTIFOLIA - RED CHOKEBERRY	157	3 FT. HT.	3 FT. ON CENTER SPACING
IV	ILEX VERTICILLATA - WINTERBERRY	158	3 FT. HT.	3 FT. ON CENTER SPACING
AQ	AQUILEGIA CANADENSIS - RED COLUMBINE	23	1 QT.	18 IN. ON CENTER SPACING
MD	MONARDA DIDYMA - BEE BALM	23	1 QT.	18 IN. ON CENTER SPACING
LS	LIASTRIS SPICATA - MARSH BLAZING STAR	23	1 QT.	18 IN. ON CENTER SPACING
RH	RUDBECKIA HIRTA - BLACK-EYED SUSAN	24	1 QT.	18 IN. ON CENTER SPACING

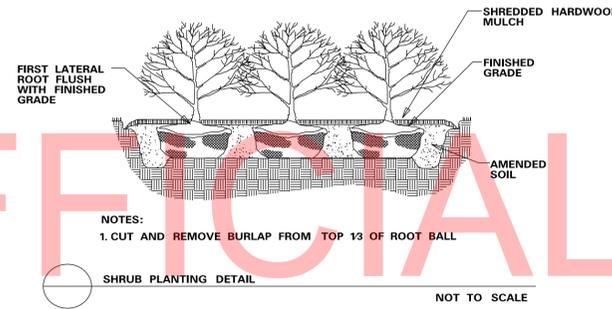
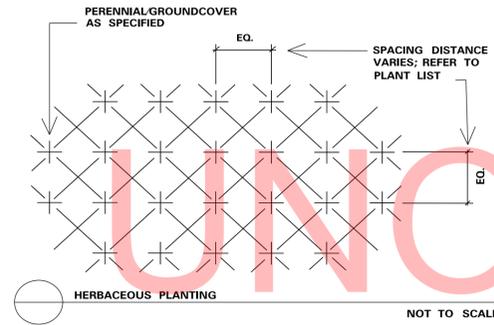
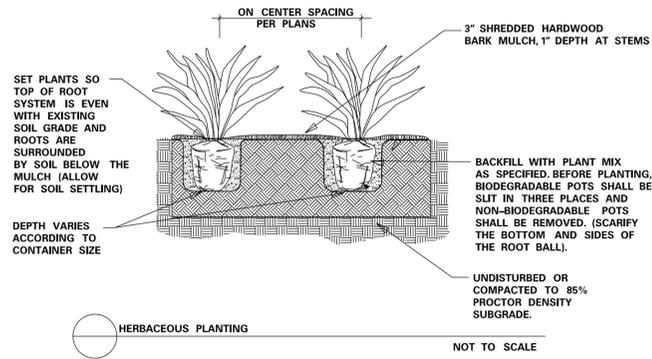
4,439 SF MULCH 3 INCH DEPTH



MASTER PLANT SCHEDULE

SYMBOL	PLANTING DESCRIPTION	QUANTITY	SIZE	COMMENTS
AA	ARONIA ARBUTIFOLIA - RED CHOKEBERRY	223	3 FT. HT.	3 FT. ON CENTER SPACING
IV	ILEX VERTICILLATA - WINTERBERRY	224	3 FT. HT.	3 FT. ON CENTER SPACING
AQ	AQUILEGIA CANADENSIS - RED COLUMBINE	61	1 QT.	18 IN. ON CENTER SPACING
MD	MONARDA DIDYMA - BEE BALM	61	1 QT.	18 IN. ON CENTER SPACING
LS	LIASSTRIS SPICATA - MARSH BLAZING STAR	61	1 QT.	18 IN. ON CENTER SPACING
RH	RUDBECKIA HIRTA - BLACK-EYED SUSAN	64	1 QT.	18 IN. ON CENTER SPACING

6,338 SF MULCH 3 INCH DEPTH



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