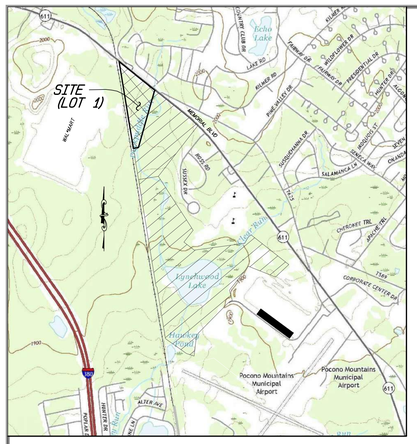


LOCATION MAP

1" = 2000'

0 2000 4000

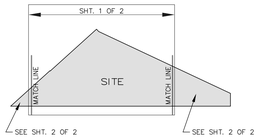
INFILTRATION TEST PROBES

TEST #	EXISTING ELEV.	TEST ELEV.	PROBE ELEV.	INFIL. RATE	REMARKS
T1	1955.54	1949.50	1943.50	1.80	WATER @ 1949.50
T2	1955.24	1949.70	1944.20	0.27	WATER @ 1948.20
T3	1948.01	1946.50	1943.00	1.80	WATER @ 1943.50
T4	1952.92	1948.90	1944.90	5.13	N/A
T5	1947.51	1945.00	1941.50	2.16	N/A

GRAPHIC SCALE

1" = 50'

0 50 100 150



KEYMAP

LEGEND

- PROPOSED CURB
- PROPOSED CURB DEPRESSION FOR STORMWATER (5' WIDE)
- EXISTING EDGE OF WATER
- RIPARIAN BUFFER
- EXISTING EDGE OF WOODS
- WETLAND DELINEATION LINE
- WETLAND AREA SYMBOL
- 100 YR. FEMA FLOODPLAIN (SPECIAL FLOOD HAZARD AREA ZONE A)
- EXISTING STORM SEWER & INLET
- EXISTING STORM SEWER & HEADWALL
- PROPOSED STORM SEWER & INLET
- PROPOSED STORM SEWER & END SECTION
- EXISTING UTILITY POLE
- EXISTING RIPRAP
- PROPOSED RIPRAP
- SLANTED TEXT — EXISTING FEATURES ARE LABELED WITH SLANTED TEXT
- VERTICAL TEXT — PROPOSED FEATURES ARE LABELED WITH VERTICAL TEXT
- EXISTING CONTOURS
- PROPOSED CONTOURS
- SOILS LINE
- INLET FILTER (PERMANENT)
- PROPOSED DECIDUOUS SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED DECIDUOUS SHADE TREE
- LIMIT OF DISTURBANCE (L.O.D.)
- NPDES PERMIT BOUNDARY
- NPDES PERMIT BOUNDARY & LIMIT OF DISTURBANCE
- INFILTRATION TEST PROBE # & LOCATION
- PROPOSED DRAINAGE AREA LINE
- INFILTRATION BASIN – MRC FACILITY
- INFILTRATION BASIN
- BIORETENTION AREAS/ RAIN GARDEN
- EXISTING TREES TO BE PROTECTED WITHIN 100' OF PROPOSED IMPERVIOUS
- EXISTING TREES TO BE PROTECTED 20' OF PROPOSED IMPERVIOUS

LANDOWNERS STATEMENT

I ACKNOWLEDGE THAT ANY REVISION TO THE APPROVED DRAINAGE PLAN MUST BE APPROVED BY COOLBAUGH TOWNSHIP AND THAT A REVISED EGSC PLAN MUST BE SUBMITTED TO THE MONROE COUNTY CONSERVATION DISTRICT FOR A DETERMINATION OF ADEQUACY.

JOHN HERMAN, PRESIDENT
ORCHARD BJK COMPANY, LLC

DATE

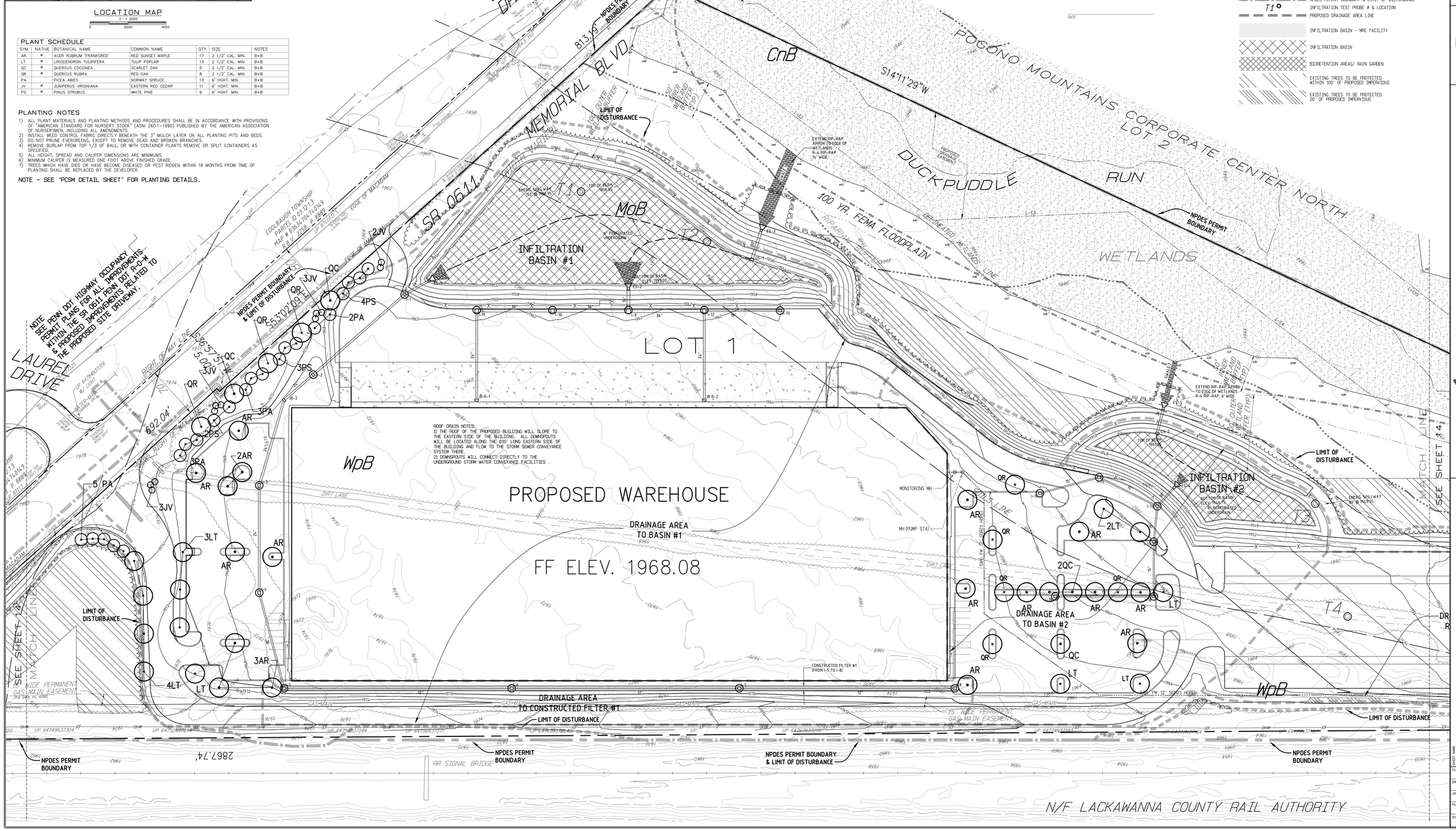
PLANT SCHEDULE

SYM.	NATIVE	BOTANICAL NAME	COMMON NAME	QTY.	SIZE	NOTES
AR	*	ACER RUBRUM 'FRANKSRED'	RED SUNSET MAPLE	17	2 1/2" CAL. MIN.	B+B
LT	*	LIRIODENDRON TULIPIFERA	TULIP POPLAR	13	2 1/2" CAL. MIN.	B+B
QC	*	QUERCUS COCCINEA	SCARLET OAK	5	2 1/2" CAL. MIN.	B+B
QR	*	QUERCUS RUBRA	RED OAK	8	2 1/2" CAL. MIN.	B+B
PA		PICEA ABIES	NORWAY SPRUCE	13	6' HGHT. MIN.	B+B
JV	*	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	11	6' HGHT. MIN.	B+B
PS	*	PINUS STROBUS	WHITE PINE	9	6' HGHT. MIN.	B+B

PLANTING NOTES

1) ALL PLANT MATERIALS AND PLANTING METHODS AND PROCEDURES SHALL BE IN ACCORDANCE WITH PROVISIONS OF "AMERICAN STANDARD FOR NURSERY STOCK" (ASN Z60.1–1990) PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, INCLUDING ALL AMENDMENTS.
2) INSTALL WEED CONTROL FABRIC DIRECTLY BENEATH THE 3" MULCH LAYER ON ALL PLANTING PITS AND BEDS.
3) DO NOT PRUNE EVERGREENS, EXCEPT TO REMOVE DEAD AND BROKEN BRANCHES.
4) REMOVE BURLAP FROM TOP 1/3 OF BALL, OR WITH CONTAINER PLANTS REMOVE OR SPLIT CONTAINERS AS SPECIFIED.
5) ALL HEIGHT, SPREAD AND CALIPER DIMENSIONS ARE MINIMUMS.
6) MINIMUM CALIPER IS MEASURED ONE FOOT ABOVE FINISHED GRADE.
7) TREES WHICH HAVE DIED OR HAVE BECOME DISEASED OR PEST RIDDEN WITHIN 18 MONTHS FROM TIME OF PLANTING SHALL BE REPLACED BY THE DEVELOPER.

NOTE – SEE "PCSM DETAIL SHEET" FOR PLANTING DETAILS.



NO.	DATE	DESCRIPTION
NO.6 (BMP)	12/16/22	REVISED PER MCCD & GEP REVIEWS
NO.7 (BMP)	8/25/22	REVISED PER MCCD COMMENTS
NO.8 (BMP)	6/24/22	REVISED DWV; PER PENNDOT COMMENTS ; BLDG. DWS
NO.5 (BMP)	6/21/22	REVISED PER MCCD COMMENTS
NO.4 (BMP)	4/14/22	REVISED PER TWP. REVIEW
NO.3 (BMP)	2/24/22	REVISED PER TWP. REVIEW
NO.2 (BMP)	1/7/22	REVISED FOR MCCD SUBMITTAL
NO.1 (BMP)	11/24/21	REVISED PER TWP. REVIEW

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL DUAIN HARTMAN
ENGINEER
No. PE039881
SEAL

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PHONE (610) 926 – 7070 • FAX (610) 926 – 7171
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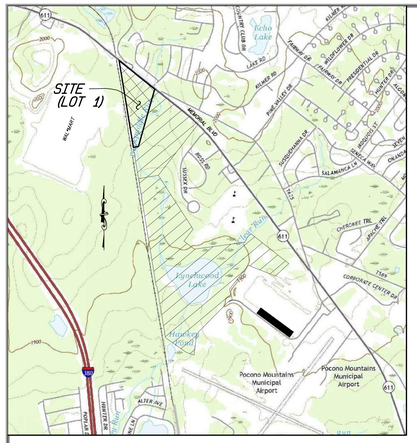
SCHLOUCH INCORPORATED

SHEET NAME: PCSM PLAN Sht. 1 of 2

JOB NAME: POCONO MOUNTAINS CORPORATE CENTER NORTH WAREHOUSE – LOT 1
COOLBAUGH TOWNSHIP
MONROE COUNTY, PENNSYLVANIA

CLIENT	ORCHARD BJK CO. LLC
DRAWN BY	WHP
DATE	10/21/21
JOB NO.	20402110
SCALE	1"=50'
FILE NAME	PMCC–North.dwg
SHEET #	13 of 22



LOCATION MAP

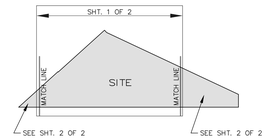
1" = 2000'

0 2000 4000

GRAPHIC SCALE

1" = 50'

0 50 100 150



KEYMAP

LEGEND

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- PROPOSED CURB DEPRESSION FOR STORMWATER (5' WIDE)
- EXISTING EDGE OF WATER
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- EXISTING EDGE OF WOODS
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- NPDES PERMIT BOUNDARY
- NPDES PERMIT BOUNDARY & LIMIT OF DISTURBANCE
- T1 — INFILTRATION TEST PROBE # & LOCATION
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- INFILTRATION BASIN - MRC FACILITY
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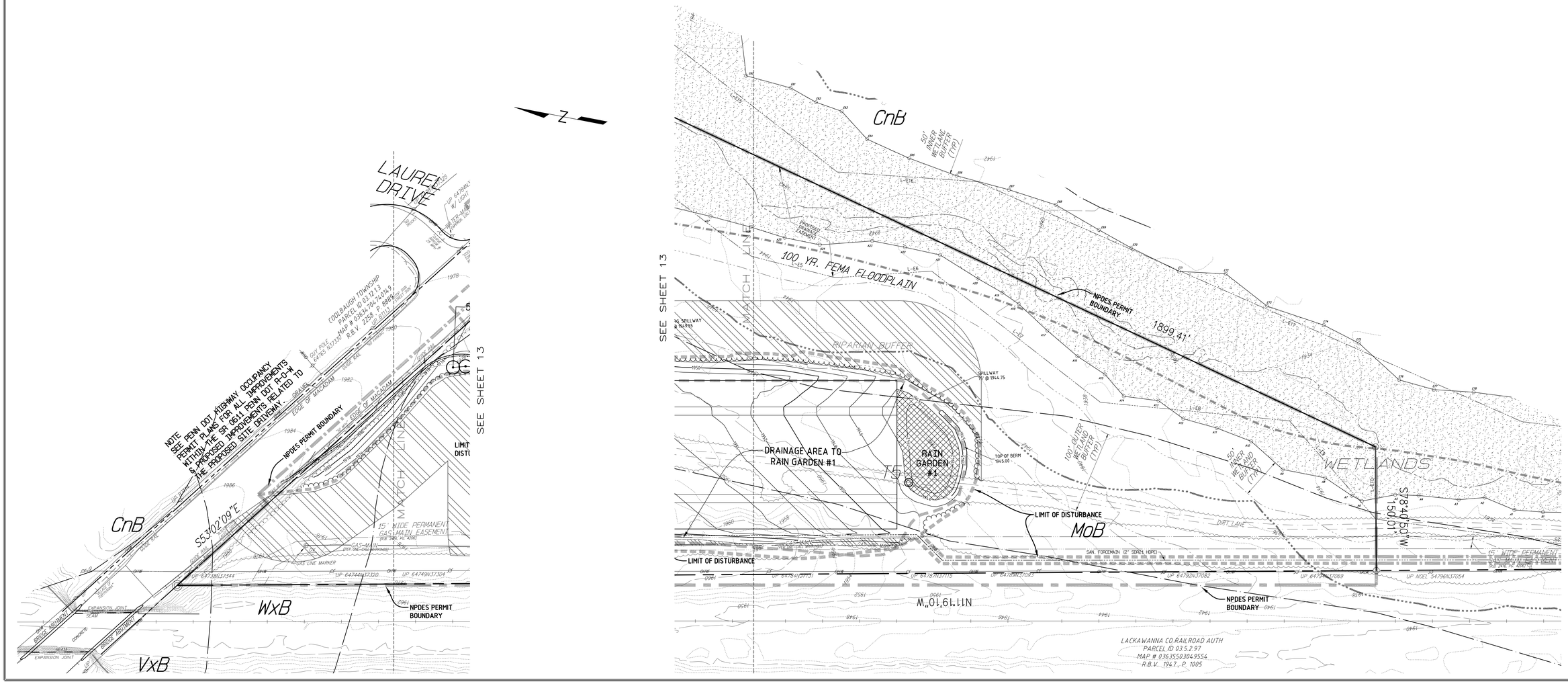

SHEET	DATE	REVISIONS
N0.8 (WHP)	12/16/22	REVISED PER NCCD & CGP REVIEWS
N0.7 (WHP)	9/23/22	REVISED PER NCCD COMMENTS
N0.6 (WHP)	6/24/22	REVISED DWY. PER PENNDOT COMMENTS ; BLDG. DM'S
N0.5 (WHP)	6/21/22	REVISED PER NCCD COMMENTS
N0.4 (WHP)	4/14/22	REVISED PER TWP. REVIEW
N0.3 (WHP)	2/24/22	REVISED PER TWP. REVIEW
N0.2 (WHP)	1/7/22	REVISED FOR NCCD SUBMITTAL
N0.1 (WHP)	11/29/21	REVISED PER TWP. REVIEW
SHEET	DATE	DESCRIPTION

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL DUAIN HARTMAN
ENGINEER
No. PE039881

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PCSM PLAN
Sht. 2 of 2

POCONO MOUNTAINS CORPORATE CENTER NORTH WAREHOUSE – LOT 1

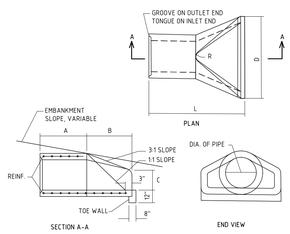
COOLBAUGH TOWNSHIP
MONROE COUNTY, PENNSYLVANIA

SHEET NAME

JOB NAME

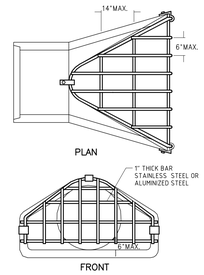
CLIENT: ORCHARD BJK CO. LLC

DRAWN BY: WHP	DATE: 10/21/21
JOB NO.: 20402110	SCALE: 1"=50'
FILE NAME: PMCC–North.dwg	
SHEET #: 14 of 22	

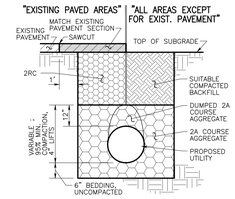


DIMENSIONS FOR END SECTION CONCRETE PIPE									
EQUI.	L (in)	A (in)	B (in)	C (in)	D (in)	R (in)	T (in)	WT.
36"	97	35	63	15	72	24	4	4100
54"	98	33	65	27	90	33	5.5	8240
60"	99	27	60	30	96	36	6	8730

CONCRETE END SECTION

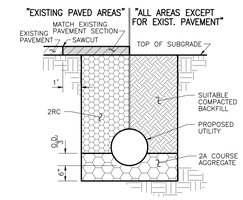


TRASH GUARD FOR FLARED END SECTIONS



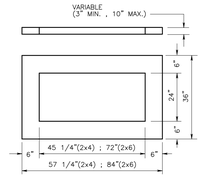
STORM SEWER PIPE (SLCPP & CMP ALUMINIZED) BEDDING/BACKFILL

NOTE:
DO NOT PROVIDE STONE BEDDING OR BACKFILL AROUND DETENTION BASIN OUTLET PIPES.

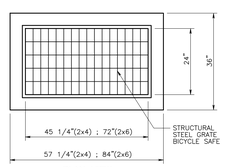


STORM SEWER PIPE (RCP) BEDDING/BACKFILL

NOTE:
DO NOT PROVIDE STONE BEDDING OR BACKFILL AROUND DETENTION BASIN OUTLET PIPES.

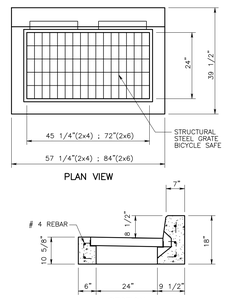


GRADE ADJUST RING (PRECAST)



NOTES:
1) TOP UNITS ARE CONSTRUCTED TO WITHSTAND H20 LOADING.
2) THE MATERIALS, DESIGN AND CONSTRUCTION OF PRECAST REINFORCING CONCRETE TOP UNITS SHALL MEET THE COMMONWEALTH OF PENNA. DEPARTMENT OF TRANSPORTATION BUREAU OF DESIGN, STANDARDS FOR ROADWAY CONSTRUCTION RC-34.
3) CONCRETE DIMENSIONS SHOWN ARE NOMINAL AND MINIMUM DIMENSIONS. ALL VERTICAL SURFACES ARE DRAFTED.
4) TOP UNITS ARE PROVIDED WITH DEFORMED STEEL REINF.

TYPE M INLET



NOTES:
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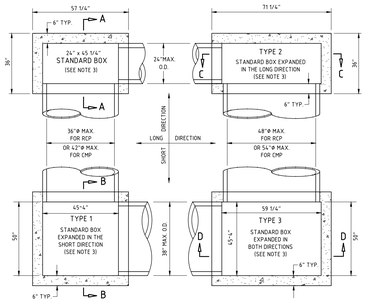
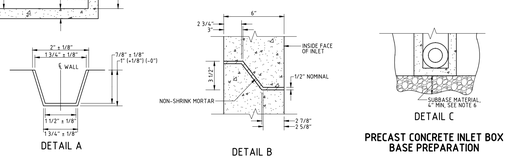
3) CONCRETE DIMENSIONS SHOWN ARE NOMINAL AND MINIMUM DIMENSIONS. ALL VERTICAL SURFACES ARE DRAFTED.
4) TOP UNITS ARE PROVIDED WITH DEFORMED STEEL REINF.

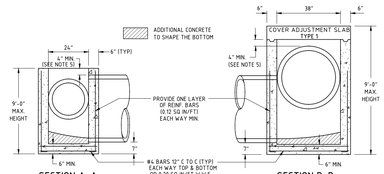
TYPE C INLET

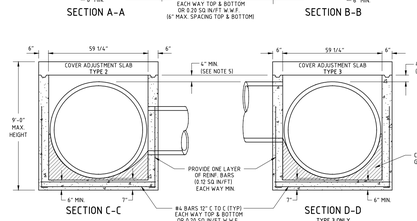


NOTES:
1. CONSTRUCT INLET BOXES IN ACCORDANCE WITH THE REQUIREMENTS OF PUBLICATION 408, SECTION 714.
2. PERMIT ONLY PRECAST INLET BOXES SUPPLIED BY A MANUFACTURER LISTED IN BULLETIN 15. USE CLASS AA CEMENT CONCRETE FOR PRECAST BOXES. FOR DEVIATIONS OR MODIFICATIONS OF THE STANDARDS, SUBMIT SHOP DRAWINGS FOR APPROVAL.
3. PROVIDE STANDARD INLET BOXES AND COVER ADJUSTMENT SLABS WITH A 24"x 44" OPENING TO ACCOMODATE STANDARD TOP COMPONENTS.
4. FOR INLETS THAT DEVIATE FROM THE STANDARD SUBMIT SPECIAL DETAILS AND DESIGN FOR THE INLET WALLS AND BASE TO THE BUREAU OF CONSTRUCTION FOR REVIEW AND APPROVAL. CONSTRUCT INLETS THAT EXCEED 5' IN HEIGHT WITH STEPS SIMILAR TO MANHOLES (SEE RC-39M). FOR INLETS OTHER THAN AS SHOWN ON THE STANDARDS, PROVIDE REINFORCEMENT BASED ON HS-25 LOADING AND IN ACCORDANCE WITH PUBLICATION 408M.
5. LOCATE PIPE OR PIPES, AS INDICATED, WITH THE INLET BOTTOM SHAPED TO CHANNEL THE FLOW TOWARD THE OUTLET PIPE. WHEN PROJECT CONDITIONS REQUIRE PIPE BLOCKOUTS TO BE FORMED WITHIN 4" FROM THE TOP OF THE INLET BOX, PROVIDE AN ADDITIONAL #3 REINFORCEMENT BAR LOCATED 1 5/8" FROM THE TOP OF THE INLET BASE, FULL WIDTH ALONG THE INLET FACE. REMOVE ANY VISIBLE PORTION OF THE BAR, IF REQUIRED DURING INSTALLATION AND PRIOR TO JOINING THE PIPE TO THE INLET. IF REINFORCED CONCRETE PIPE IS USED, THE PIPE BLOCKOUT MAY BE FORMED 'FLUSH' WITH THE INLET BASE. LIMIT PIPE BLOCKOUT OF WALL TO 1".
6. PLACE SUBBASE MATERIAL MEETING THE REQUIREMENTS OF PUBLICATION 408, SECTION 350-2, IN LAYERS 4" THICK, COMPACTED TO A DENSITY SATISFACTORY TO THE ENGINEER AND INCIDENTAL TO THE INLET PAY ITEM.
7. FOR PIPE DIAMETERS LARGER THAN 48" RCP OR 54" CMP, USE A MODIFIED INLET BOX.
8. TAPERS MAY BE PROVIDED ON VERTICAL FACES OF PRECAST INLET BOX BASE UNITS TO FACILITATE FORM STRIPPING. TAPERS WILL RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VARY TO A MAXIMUM OF 1".
9. PROVIDE SUITABLE LIFTING DEVICES FOR HANDLING AND INSTALLATION. GALVANIZE METAL DEVICES AS SPECIFIED IN PUBLICATION 408 SECTION 705. TAPERS MAY BE PROVIDED ON INSIDE VERTICAL FACES OF PRECAST INLET TOPS OT FACILITATE FORM STRIPPING. TAPERS WILL RESULT IN INTERNAL BOTTOM DIMENSIONS THAT VARY TO A MAXIMUM OF 1".

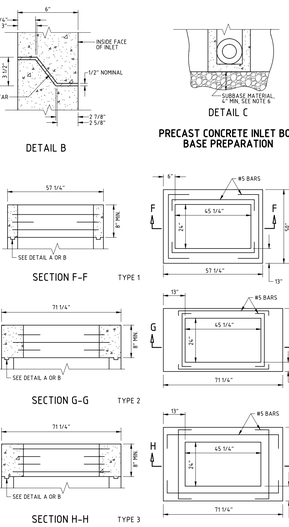


PRECAST CONCRETE INLET BOX BASE PREPARATION

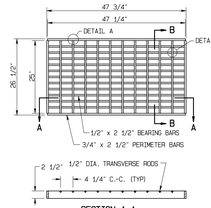




NOTE
JUNCTION BOXES SHALL BE TYPE 1 BOXES WITH 8" SLAB TOP (HS-25 LOADING UNDER PAVING) AND 24" MANHOLE FRAME AND L.O. LIDS SHALL HAVE THE WORDS "STORM SEWER" CAST IN RAISED LETTERS.

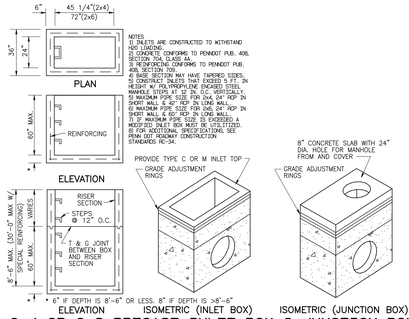


COVER ADJUSTMENT SLABS



NOTES
1) STRUCTURAL STEEL GRATE DESIGNED TO WITHSTAND H20 LOADING.
2) STRUCTURAL STEEL GRATE TO BE COATED WITH 1 COAT OF BITUMINOUS PAINT.
3) TOLERANCES SHALL BE 1/8"+/-
4) STRUCTURAL STEEL TO MEET OR EXCEED REQUIREMENTS OF AASHTO-M183 OR ASTM-A36.
5) GRATE SPACERS TO BE FLUSH WITH THE SURFACE OF THE GRATE.
6) ALL WELDS TO BE DONE BY CERTIFIED WELDERS AS PER PUB. 408, SECTION 1105.03.

BICYCLE SAFE GRATE (2x4 INLET)



NOTES
1) INLETS ARE CONSTRUCTED TO WITHSTAND H20 LOADING.
2) MATERIALS CONFORMS TO PENNDOT PUB. 408, SECTION 704, CLASS AA.
3) REINFORCING CONFORMS TO PENNDOT PUB. 408, SECTION 709.
4) BASE SECTION MAY HAVE TAPERED SIDES, SQUARE OR ROUND PIPE OPENINGS, 5' IN HEIGHT W/ PVC/POLYPLINE ENCASED STEEL MANHOLE STEPS AT 12 IN. O.C. VERTICALLY. SUITABLE FOR PIPES UP TO 24" CMP OR 24" RCP IN SHORT WALL & 60" RCP IN LONG WALL. 60 MAXIMUM PIPE SIZE FOR 24" RCP IN SHORT WALL & 60" RCP IN LONG WALL. 70.0" MAXIMUM PIPE SIZE IS EXCEEDED A 24" RCP IN SHORT WALL OR A 60" RCP IN LONG WALL. 48 FOR ADDITIONAL INFORMATION, SEE PENN DOT ROADWAY CONSTRUCTION STANDARDS RC-34.

2x4 OR 2x6 PRECAST INLET BOX & JUNCTION BOX

PRECAST CONCRETE BOXES FOR STORM INLETS AND JUNCTION BOXES

NO.	DATE	DESCRIPTION
NO.8 (WHP)	12/8/22	REVISED PER MCCD & CGP REVIEWS
NO.7 (WHP)	9/23/22	REVISED PER MCCD COMMENTS
NO.6 (WHP)	6/24/22	REVISED DWG. PER PENNDOT COMMENTS - BLDG. DM'S
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NO.4 (WHP)	4/14/22	REVISED PER TWP. REVIEW
NO.3 (WHP)	2/24/22	REVISED PER TWP. REVIEW
NO.2 (WHP)	1/7/22	REVISED FOR MCCD SUBMITTAL
NO.1 (WHP)	11/22/21	REVISED PER TWP. REVIEW

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
MICHAEL DUAIN HARTMAN
ENGINEER
No. PE039880

SEAL

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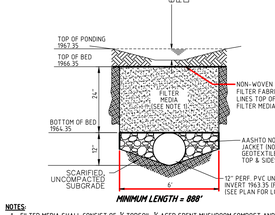
PCSM DETAIL SHEET

POCONO MOUNTAINS CORPORATE CENTER NORTH WAREHOUSE – LOT 1

COOLBAUGH TOWNSHIP
MONROE COUNTY, PENNSYLVANIA

SHEET NAME
JOB NAME

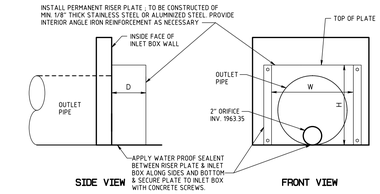
CLIENT	ORCHARD BJK CO. LLC
DRAWN BY WHP	DATE 10/21/21
JOB NO. 20402110	SCALE NONE
FILE NAME	PMCC-North.dwg
SHEET #	15 of 22



NOTES:

1. FILTER MEDIA SHALL CONSIST OF ⅓ TOPSOIL, ⅓ AGED SPENT MUSHROOM COMPOST AND ⅓ SAND.
2. FILTER MEDIA MATERIAL SPECIFICATIONS:
   - TOPSOIL SHALL COMPLY WITH THE SPECIFICATIONS ON THE E&SC PLAN.
   - MUSHROOM COMPOST SHALL BE AGED AT LEAST 6 MONTHS. PROOF OF AGING SHALL BE PROVIDED TO BY THE SUPPLIER PRIOR TO USE OF THE COMPOST.
   - SAND SHALL BE ASTM-C-33 (OR AASHTO M-6) SIZE (0.02"–0.04"), CONCRETE SAND, CLEAN, MEDIUM TO FINE SAND, NO ORGANIC MATERIAL.
3. DO NOT INSTALL FILTER MEDIA UNTIL ALL CONTRIBUTING AREAS HAVE ACHIEVED PERMANENT STABILIZATION.
4. SEE THE PCSM BMP CONSTRUCTION SEQUENCE FOR A DETAILED SEQUENCE OF CONSTRUCTION.

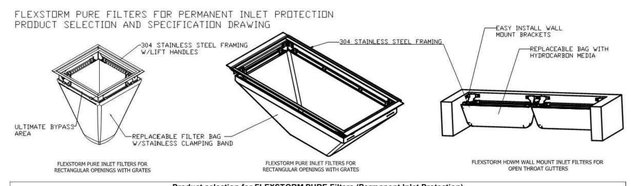
CONSTRUCTED FILTER #1



STRUCTURE	OUTLET PIPE DIA (IN.)	OUTLET PIPE INVERT (FT.)	TOP OF PLATE (FT.)	W (IN.)	D (IN.)	H (IN.)
I–5	18	1963.35	1966.35	24	12	24

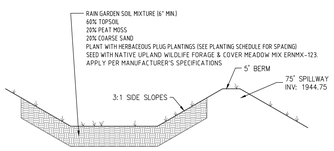
NOTE
1) RISER PLATE IS CLOSED ON FRONT, BOTH SIDES & BOTTOM FACES. THE ONLY OPEN FACE WHEN MOUNTED TO THE INLET BOX IS THE TOP

CONSTRUCTED FILTER OUTLET RISER PLATE DETAIL



Product selection for FLEXSTORM PURE Filters (Permanent Inlet Protection)

Descrip	Inlet Type	Grate Size	Opening Size	Bag Cap (ft^3)	Flow Ratings (CFS) FX/FX+	PC/PC+	Bypass	FX	FX+	PC	PC+
2' x 2' Frame and Grate	Square/Rect (SQ)	24 x 24	22 x 22	3.3	1.8	1.6	4.8	62MHD22FX	62MHD22FXP	62MHD22PC	62MHD22PCP
2' x 4' Pennndot Type M & C	Square/Rect (SQ)	26.5 x 48	24 x 44.5	6.3	3.1	2.2	9.5	62PENNMHDFX	62PENNMHDFXP	62PENNMHDPC	62PENNMHDPCP
2' x 6' Frame and Grate	Concrete Box (HD4)	26.5 x 75	24 x 72	10.0	4.8	4.1	13.0	62PENNHD2x6FX	62PENNHD2x6FXP	62PENNHD2x6PC	62PENNHF2x6PCP
3 x 3 Frame and Grate	Square/Rect (SQ)	37.5 x 37.5	36 x 36	7.2	4.4	3.2	9.6	62HDXLFX	62HDXLFXP	62HDXLPC	62HDXLPCP
48" Open Throat Curb Inlet	Wall Mount (WM)	N/A	48	3.3	2.5	4.2	N/A*	62HDWM48FX	62HDWM48FXP	62HDWM48PC	62HDWM48PCP



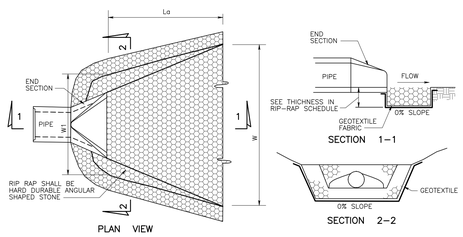
RAIN GARDEN	ELEVATIONS TOP	BOTTOM
1	1945.00	1942.00

NOTES
1) SEE INDIVIDUAL BMP CONSTRUCTION SEQUENCE AND CRITICAL STAGES OF IMPLEMENTATION – "RAIN GARDEN/BIORETENTION" (THIS PAGE).
2) INFILTRATION TESTING MUST BE PERFORMED PRIOR TO INSTALLATION OF THE RAIN GARDENS TO CONFIRM DESIGN RATES ARE MET. THE COOLBAUGH TOWNSHIP AND THE CONSERVATION DISTRICT SHALL BE NOTIFIED IN ADVANCE OF THE TESTING AND RECEIVE A COPY OF THE TEST RESULTS.

RAIN GARDEN DETAIL

* PROVIDE IN ALL PROPOSED INLETS *

PERMANENT INLET FILTER DETAIL



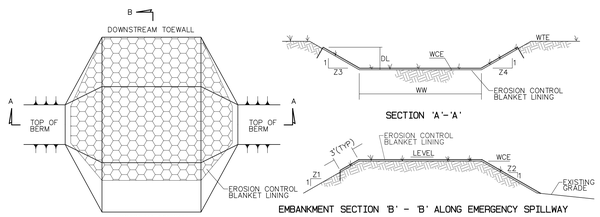
PERCENT PASSING (SQUARE OPENING) PENNDOT CLASSIFICATION CLASSE SIZE NO.	R-8	R-7	R-6	R-5	R-4	R-3
ROCK SIZE (INCH)						
48	100*					
30		100*				
24	15–50		100*			
18		15–50		100*		
15	0–15					
12			15–50		100*	
9		0–15		15–50		
6			0–15		15–50	100*
4				0–15		
3					0–15	15–50
2						0–15
NOMINAL PLACEMENT THICKNESS (INCH)	72"	45"	36"	27"	18	9"

* MAXIMUM ALLOWABLE ROCK SIZE

RIP RAP CHART					
END SECTION NO.	PIPE DIA. (IN)	La (FT)	W (FT)	W1 (FT)	PENNDOT CLASSIFICATION
ES1	24	17.0	23.0	6.0	R-4
ES2	36	28.0	37.0	9.0	R-4
ES3	30	16.0	23.5	7.5	R-5
ES4	18	13.0	17.5	4.5	R-4
ES4	24	12.0	18.0	6.0	R-4

NOTES
1) ALL APRONS SHALL BE CONSTRUCTED TO THE DIMENSIONS SHOWN. TERMINAL WIDTHS SHALL BE ADJUSTED AS NECESSARY TO MATCH RECEIVING CHANNELS.
2) ALL APRONS SHALL BE INSPECTED AT LEAST WEEKLY AND AFTER EACH RUNOFF EVENT. DISPLACED RIPRAP WITHIN THE APRON SHALL BE REPLACED IMMEDIATELY.

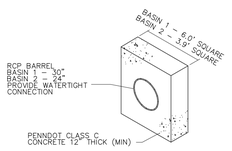
RIP RAP APRON DETAIL



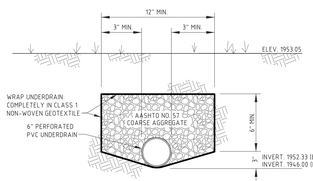
BASIN NO.	WEIR Z3 (FT.)	Z4 (FT.)	TOP ELEV WTE (FT.)	CREST ELEV WCE (FT.)	WIDTH Ww (FT.)	LINING*
1	3	3	1958.45	1956.95	150	NAG SC250**
2	3	3	1951.55	1949.55	80	NAG SC250**
RG#1	3	3	1945.00	1944.75	75	NAG SC250**

* EMERGENCY SPILLWAY LINING MUST EXTEND THE ENTIRE LENGTH OF THE OUTSIDE SLOPE.
** NORTH AMERICAN GREEN OR EQUIVALENT LINING: USE STAPLE PATTERN 'E'.

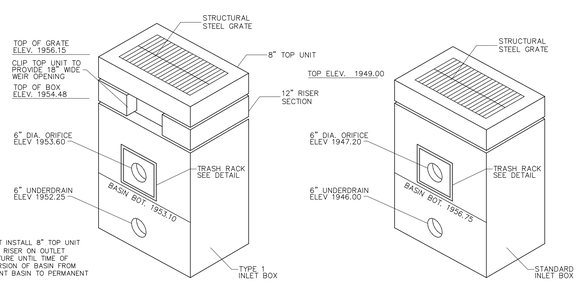
BASIN EMERGENCY SPILLWAY



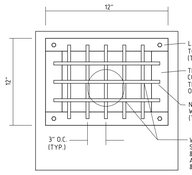
TYPICAL ANTI-SEEP COLLAR



BASIN UNDERDRAIN

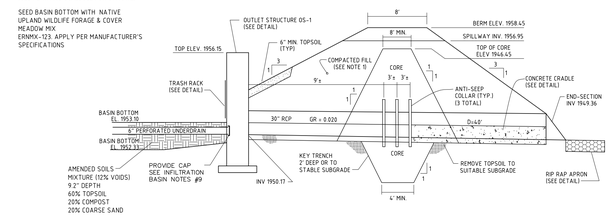


OUTLET STRUCTURE (OS-1) OUTLET STRUCTURE (OS-2)

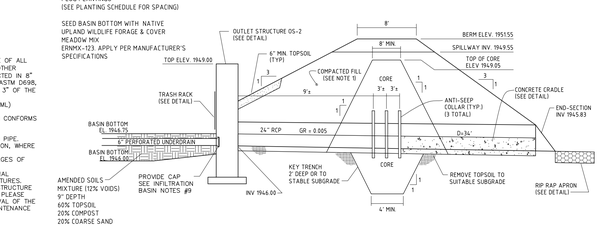


BASIN TRASH RACK DETAIL

INFILTRATION BASIN NOTES:
1. EMBANKMENT MATERIAL SHALL CONSIST OF SUITABLE MATERIAL FREE OF ALL ROOTS, SOD, FROZEN SOIL, ROCK OVER 4" IN DIAMETER, AND ANY OTHER MATERIAL, NOT APPROVED BY THE ENGINEER. FILL SHALL BE COMPACTED IN 8" LIFTS TO AT LEAST 95% OF STANDARD MAXIMUM DRY DENSITY PER ASTM D698, STANDARD PROCTOR.PRIOR TO PLACEMENT OF A NEW LIFT, THE TOP 3" OF THE PREVIOUS LIFT SHALL BE SCARIFIED.
2. CORE MATERIAL TO BE CLAYEY SOIL (UNIFIED CLASS CL, ML OR CL–ML) COMPACTED TO 98% MAXIMUM DRY DENSITY.
3. EMBANKMENT CORE MAY BE ELIMINATED IF THE ENTIRE EMBANKMENT CONFORMS TO NOTE 2. KEY TRENCH CORE IS STILL REQUIRED.
4. RCP OUTLET PIPE SHALL BE PROVIDED WITH WATERTIGHT COUPLERS.
5. DO NOT PROVIDE STONE BEDDING OR BACKFILL AROUND THE OUTLET PIPE.
6. PIPE LENGTH IS MEASURED TO THE OUTFALL END OF THE END SECTION, WHERE APPLICABLE.
7. SEE INDIVIDUAL BMP CONSTRUCTION SEQUENCE AND CRITICAL STAGES OF IMPLEMENTATION – "DETENTION BASIN" (THIS PAGE).
8. SEE GRADING & UTILITY PLAN, AND PROFILE SHEETS FOR ADDITIONAL DETAILED INFORMATION OF THE STORM SEWER PIPING AND STRUCTURES.
9. THE UNDERDRAIN SHOULD BE SHOWN EXTENDING INTO THE OUTLET STRUCTURE AND SHOULD BE NOTED TO BE PERMANENTLY CAPPED. IN ADDITION, PLEASE ADD NOTES THAT MCCD SHALL BE CONTACTED PRIOR TO THE REMOVAL OF THE PERMANENT CAP FOR MAINTENANCE. UPON COMPLETION OF THE MAINTENANCE ACTIVITIES, THE PERMANENT CAP SHALL BE REINSTALLED.



INFILTRATION BASIN #1 CROSS-SECTION



INFILTRATION BASIN #2 CROSS-SECTION

OWNER AND APPLICANT
ORCHARD BJK COMPANY, LLC
CENTURY 21
925 BERKSHIRE BLVD., SUITE 100
WYOMISSING, PA 19610

GENERAL NOTES

1. THE PERMITTEE SHALL PROVIDE ENGINEERING CONSTRUCTION OVERSIGHT FOR THE PROPOSED STORM WATER BMPS. ADDITIONAL SOIL TESTING MAY BE REQUIRED PRIOR TO THE INSTALLATION OF INFILTRATION BMPS TO ENSURE PROPER LOCATION AND FUNCTION. A LICENSED PROFESSIONAL KNOWLEDGEABLE IN THE DESIGN AND CONSTRUCTION OF STORM WATER BMPS, PREFERABLY THE DESIGN ENGINEER, SHALL CONDUCT THE OVERSIGHT.
2. THE ANTICIPATED WASTES ARE GENERAL CONSTRUCTION WASTES. THE OPERATOR SHALL REMOVE FROM THE SITE, RECYCLE, OR DISPOSE OF ALL BUILDING MATERIALS AND WASTES IN ACCORDANCE WITH THE DEPARTMENT'S SOLID WASTE MANAGEMENT REGULATIONS AT 25 PA. CODE 260.1 ET SEQ., 271.1 ET SEQ., AND 287.1 ET SEQ. THE CONTRACTOR SHALL NOT ILLEGALLY BURY, DUMP, OR DISCHARGE ANY BUILDING MATERIAL OR WASTES AT THE SITE.
3. IN THE EVENT OF FAILURE OF THE PERMITTEE'S BMP, THE PERMITTEE SHALL CONSULT A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE CAUSE OF THE FAILURE AND REMEDIATIVE MEASURES. FAILURE OF THE BMP'S IS DEFINED AS DRAINAGE OF COLLECTED WATER TAKES LONGER THAN 72 HOURS AFTER A STORM EVENT.
4. THE PROPOSED TREE PLANTINGS SHOWN ON THE PLAN ARE TO BE CONSIDERED PART OF THE STORM WATER MANAGEMENT SYSTEM FOR THE PROPOSED DEVELOPMENT AND ARE NOT TO BE REMOVED WITHOUT PRIOR APPROVAL FROM COOLBAUGH TOWNSHIP, MONROE COUNTY CONSERVATION DISTRICT AND DEP.

RECEIVING WATERCOURSE

THE RECEIVING SURFACE WATERS FOR THE PROJECT AREA IS THE DUCK PUDDLE RUN. THE WATERCOURSE HAS A DESIGNATED WATER USES OF HQ-CWF, MF, RESPECTIVELY, PER 25 PA. CHAPTER 93.9A. THE RECEIVING SURFACE WATERS DOES NOT HAVE AN EXISTING USE. ACCORDING TO CATEGORY 4 OF THE INTEGRATED WATER QUALITY MONITORING AND ASSESSMENT REPORT, THE RECEIVING SURFACE WATERS ARE IDENTIFIED AS NOT IMPAIRED.

RIPARIAN BUFFER MEASUREMENT (PER PENNSYLVANIA CODE SECTION 102.14(C)(3))

RIPARIAN BUFFERS MUST BE MEASURED HORIZONTALLY AND PERPENDICULARLY TO THE BANK WITH NO MORE THAN A 10% VARIATION BELOW THE MINIMUM WIDTH FROM THE NORMAL POOL ELEVATION FOR LAKE, POND OR RESERVOIR AND FROM TOP OF STREAMBANK.

INDIVIDUAL BMP CONSTRUCTION SEQUENCE AND CRITICAL STAGES OF IMPLEMENTATION

DURING CONSTRUCTION AND IMPLEMENTATION OF THE PROPOSED PERMANENT BMP'S, THE FOLLOWING STAGES OF CONSTRUCTION SHALL BE IMPLEMENTED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL OR DESIGNATED INDIVIDUAL:

DURING STAGES DENOTED AS **(CRITICAL STAGES)**, A LICENSED PROFESSIONAL OR DESIGNATED INDIVIDUAL SHALL BE ON-SITE FOR CONSTRUCTION OBSERVATION. CRITICAL STAGE INSPECTION SHOULD INCLUDE THE PREPARATION OF A WRITTEN REPORT AND PHOTOGRAPHS DOCUMENTING THE CRITICAL STAGE INSPECTION. THIS INFORMATION SHALL BE PROVIDED TO MCCD UPON REQUEST.

INFILTRATION BASIN #1 & #2:

UPON STABILIZATION OF ALL UPSLOPE DISTURBED AREAS, INITIATE CONVERSION OF THE SEDIMENT BASIN TO THE PERMANENT INFILTRATION BASIN.

1. FLUSH ACCUMULATED SEDIMENT FROM THE CONTRIBUTING STORM SEWER SYSTEM.
2. DEWATER SEDIMENT BASIN/TRAP.
3. REMOVE BAFFLES, CLEANOUT STAKES, DEWATERING FACILITIES AND SEDIMENT RISER.
4. REMOVE ALL SEDIMENT FROM THE BASIN.
5. **(CRITICAL STAGE)** EXCAVATE BASIN BOTTOM TO BOTTOM OF THE AMENDED SOILS. PERFORM INFILTRATION TESTING TO VERIFY ADEQUATE INFILTRATION CAPACITY. MINIMUM OF (3) TESTS SHALL BE PERFORMED AND THE RESULTS SUBMITTED TO MCCD
6. INSTALL PERFORATED UNDERDRAIN PIPING. PLACE AMENDED SOILS AND IMMEDIATELY IMPLEMENT PERMANENT VEGETATIVE COVER. LINE BASIN BOTTOM AND SIDES WITH EROSION CONTROL BLANKET. INSTALL PERMANENT OUTLET TRASH RACK.
7. **(CRITICAL STAGE)** PERFORM INFILTRATION TESTING TO VERIFY ADEQUATE INFILTRATION CAPACITY. MINIMUM OF (3) TESTS SHALL BE PERFORMED AND THE RESULTS SUBMITTED TO MCCD.

RAIN GARDEN/BIORETENTION

1. **(CRITICAL STAGE)** EXCAVATE FOR THE PROPOSED RAIN GARDEN. EXCAVATION OF THE RAIN GARDEN SHALL BE DONE FROM THE EDGES. AT NO TIME IS EQUIPMENT TO BE DRIVEN THROUGH INFILTRATION AREA.
2. AFTER REACHING PERMANENT SUBGRADE ELEVATION, PERFORM INFILTRATION TESTING TO VERIFY ASSUMED INFILTRATION RATE OF 1.08 IN/HR OR GREATER. A TOTAL OF 1 TEST PER RAIN GARDEN SHALL BE DONE. TEST RESULTS SHALL BE SUBMITTED TO MCCD FOR REVIEW AND APPROVAL.
3. **(CRITICAL STAGE)** PRIOR TO PLACEMENT OF AMENDED SOILS, RAIN GARDEN BOTTOM SHALL BE SCARIFIED TO A DEPTH OF 12". PLACE AMENDED SOILS OVER SCARIFIED AREA WITH A MINIMUM DEPTH OF 12". AFTER PLACEMENT OF AMENDED SOILS, PERFORM INFILTRATION TESTING TO VERIFY ADEQUATE INFILTRATION CAPACITY. TEST RESULTS SHALL BE SUBMITTED TO MCCD FOR REVIEW AND APPROVAL.
4. IMMEDIATELY IMPLEMENT PERMANENT VEGETATIVE COVER. LINE RAIN GARDEN SIDES WITH EROSION CONTROL BLANKET.

CONSTRUCTED FILTER

1. EXCAVATE FOR THE TRENCH.
2. **(CRITICAL STAGE)** BEGIN PLACEMENT OF STONE BED AND STORM PIPING. INSTALL THE GEOTEXTILE FABRIC OVER STONE STORAGE AREA.
3. **(CRITICAL STAGE)** BEGIN PLACEMENT OF SOIL MEDIA.
4. UPON COMPLETION OF BACK FILL, PLANT PROPOSED PLANT MATERIAL WITHIN THE SOIL MEDIA AREA. IN AREAS TO RECEIVE DECORATIVE RIVER STONE, COVER SOIL MEDIA WITH GEOTEXTILE FABRIC AND PLACE DECORATIVE RIVER STONE.
5. COMPLETE THE PERMANENT VEGETATIVE STABILIZATION OF ALL REMAINING DISTURBED AREAS.

PCSM REPORTING AND RECORDKEEPING

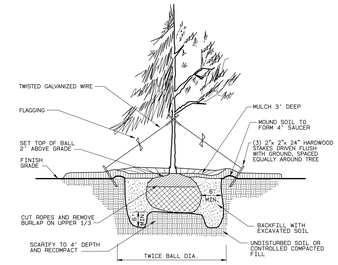
THE PCSM PLAN, INSPECTION REPORTS AND MONITORING RECORDS SHALL BE AVAILABLE FOR REVIEW AND INSPECTION BY THE DEPARTMENT OR THE CONSERVATION DISTRICT.

FINAL CERTIFICATION

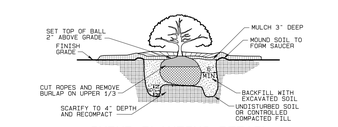
THE PERMITTEE SHALL INCLUDE WITH THE NOTICE OF TERMINATION "RECORD DRAWINGS" WITH A FINAL CERTIFICATION STATEMENT FROM A LICENSED PROFESSIONAL, WHICH READS AS FOLLOWS:

"I (NAME) DO HEREBY CERTIFY PURSUANT TO THE PENALTIES OF 18 P.A.C.S.A. § 4904 TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF, THAT THE ACCOMPANYING RECORD DRAWINGS ACCURATELY REFLECT THE AS-BUILT CONDITIONS, ARE TRUE AND CORRECT, AND ARE IN CONFORMANCE WITH CHAPTER 102 OF THE RULES AND REGULATIONS OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND THAT THE PROJECT SITE WAS CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PCSM PLAN, ALL APPROVED PLAN CHANGES AND ACCEPTED CONSTRUCTION PRACTICES."

1. THE PERMITTEE SHALL RETAIN A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN.
2. THE PERMITTEE SHALL PROVIDE A COPY OF THE RECORD DRAWINGS AS A PART OF THE APPROVED PCSM PLAN TO THE PERSON IDENTIFIED IN THIS SECTION AS BEING RESPONSIBLE FOR THE LONG-TERM OPERATION AND MAINTENANCE OF THE PCSM BMPS.

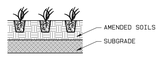


TREE PLANTING DETAIL



SHRUB PLANTING DETAIL

TREE & SHRUB PLANTING NOTES:
1. THE FOLLOWING ARE VARIOUS GROUND COVER TREATMENTS OF PARKING LOT ISLANDS:
   - ISLANDS WITH TWO PROPOSED TREES SHALL HAVE MULCH SAUCERS AROUND TREES AND GRASS SURROUND ON ENTIRE ISLAND COVERED WITH MULCH.
   - ISLANDS WITH ONE PROPOSED TREE SHALL HAVE A MULCH SAUCER AROUND THE TREE AND GRASS SURROUND OR ENTIRE ISLAND COVERED WITH MULCH.
   - ISLANDS WITH UTILITY/SITE LIGHT POLE SHALL HAVE GRASS OR MULCH GROUND COVER.
   - ISLANDS WITH STORMWATER INLETS SHALL HAVE DECORATIVE STONE IN AREA OF WATER FLOW WITH GRASS OR MULCH SURROUND, OR ENTIRE ISLAND COVERED WITH DECORATIVE STONE.



HERBACEOUS PLUG PLANTING DETAIL

PLUG PLANTING NOTES:
1. PLANT SPACING AS PER PLANT SCHEDULE.

PLUG PLANTING SCHEDULE			
BOTANICAL NAME	COMMON NAME	SPACING	NOTES
ASCLEPIAS INCARNATA	SWAMP MILKWEED	12" O.C	PLANT IN GROUPS OF 15 TO 30
EUPATORIUM PURPUREUM SSP. MACULATUM 'GATEWAY'	JOE PYE WEED	12" O.C	PLANT IN GROUPS OF 15 TO 30
IRIS VERSICOLOR	BLUEFLAG	12" O.C	PLANT IN GROUPS OF 15 TO 30
JUNCUS EFFUSUS	SOFT RUSH	12" O.C	PLANT IN GROUPS OF 15 TO 30
LOBELIA CARDINALIS	CARDINAL FLOWER	12" O.C	PLANT IN GROUPS OF 15 TO 30
ONOCLEA SENSIBILIS	SENSITIVE FERN	12" O.C	PLANT IN GROUPS OF 15 TO 30
OSMUNDA REGALIS VAR. SPECTABILIS	ROYAL FERN	12" O.C	PLANT IN GROUPS OF 15 TO 30
SCIRPUS CYPERINUS	WOOL GRASS	12" O.C	PLANT IN GROUPS OF 15 TO 30

PCSM LONG TERM OPERATIONS AND MAINTENANCE REQUIREMENTS

1. UNTIL THE PERMITTEE OR CO-PERMITTEE HAS RECEIVED WRITTEN APPROVAL OF A NOTICE OF TERMINATION, THE PERMITTEE OR CO-PERMITTEE WILL REMAIN RESPONSIBLE FOR COMPLIANCE WITH THE PERMIT TERMS AND CONDITIONS INCLUDING LONG-TERM OPERATION AND MAINTENANCE OF ALL PCSM BMPS ON THE PROJECT SITE AND IS RESPONSIBLE FOR VIOLATIONS OCCURRING ON THE PROJECT SITE.
2. THE PERMITTEE OR CO-PERMITTEE SHALL BE RESPONSIBLE FOR LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPS UNLESS A DIFFERENT PERSON IS IDENTIFIED IN THE NOTICE OF TERMINATION AND HAS AGREED TO LONG-TERM OPERATION AND MAINTENANCE OF PCSM BMPS.
3. FOR ANY PROPERTY CONTAINING A PCSM BMP, THE PERMITTEE OR CO-PERMITTEE SHALL RECORD AN INSTRUMENT WITH THE RECORDER OF DEEDS WHICH WILL ASSURE DISCLOSURE OF THE PCSM BMP AND THE RELATED OBLIGATIONS IN THE ORDINARY COURSE OF A TITLE SEARCH OF THE SUBJECT PROPERTY. THE RECORDED INSTRUMENT MUST IDENTIFY THE PCSM BMP, PROVIDE FOR NECESSARY ACCESS RELATED TO LONG-TERM OPERATION AND MAINTENANCE FOR PCSM BMPS AND PROVIDE NOTICE THAT THE RESPONSIBILITY FOR LONG-TERM OPERATION