STROUDWATER PRESERVE

STROUDWATER DEVELOPMENT PARTNERS, LLC
PORTLAND, MAINE

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

LEGEND

EXISTING		PROPOSED
REFER TO THE EXISTING CONDITIONS PLAN FOR ADDITIONAL INFORMATION		
	UNDERDRAIN	
	WETLAND	
	ROAD	
	SIDEWALK	
	UTILITY PAVEMENT CUTS	
	TEMPORARY CONSTRUCTION FENCE	
	SILT FENCE	
	EDGE OF EX. PAVEMENT	
	CURB	
	MONUMENT	
	IRON PIPE	
	IRON MARKER	
	SIGN	
	LAMP OR LIGHT POLE	
	UTILITY POLE	
	GUY WIRE	
	GAS VALVE	
	WATER VALVE	
	WATER SHUTOFF	
	FIRE HYDRANT	
S	SEWER MANHOLE	S
	CATCH BASIN	
D	DRAIN MANHOLE	D
MH	MANHOLE	
B	BOLLARD	
UE—UE—UE	UNDERGROUND ELECTRIC LINE	
UG—UG—UG	UNDERGROUND CABLE	
W—W—W	UNDERGROUND WATER LINE	4"W 4"W
64	MINOR CONTOURS (1 FT)	64
65	MAJOR CONTOURS (5 FT)	65
G—G—G	GAS LINE	SVG SVG
OIL—OIL—OIL	OIL LINE	
SD—SD—SD	STORM DRAIN LINE	
	SEWER FORCE MAIN	FM FM
SS—SS—SS	GRAVITY SEWER LINE	S S
	EXISTING/PROPOSED BUILDING	
	FOUNDATION DRAIN	
OHE—OHE—OHE	OVERHEAD ELECTRICAL/TELEPHONE/CABLE	
	UNDERGROUND ELECTRICAL/TELEPHONE/CABLE	UGE/T/C
	PROPERTY/LOT LINE	
	SETBACKS	
	RIGHT OF WAY	
	EASEMENT	

INDEX

UTILITIES

SEWER:

DEPARTMENT OF PUBLIC WORKS (DPW)
55 PORTLAND STREET
PORTLAND, MAINE 04101
CONTACT: KEITH GRAY, P.E.
(207) 874–8834

WATER:

PORTLAND WATER DISTRICT
225 DOUGLASS STREET
PO BOX 3553
PORTLAND, MAINE 04104
ATTN: MEANS DIVISION
(207) 774–5961

ELECTRIC:

CENTRAL MAINE POWER COMPANY (CMP)
162 CANCO ROAD
PORTLAND, MAINE 04103
CONTACT: PAUL DUPERRE
(207) 828–2882

TELEPHONE:

CONSOLIDATED COMMUNICATIONS
45 FOREST AVENUE
PORTLAND, MAINE 04101
CONTACT: PAT MORRISON
(207) 745–9363

CABLE:

SPECTRUM CABLE
118 JOHNSON ROAD
PORTLAND, MAINE, 04102
CONTACT: MARK PELLETIER
(877) 546–0962

NATURAL GAS:

UNITIL SERVICE CORP.
1075 FOREST AVENUE
PORTLAND, ME 04103
CONTACT: BRIDGET HARMON
(207) 541–2536

PIPELINE:

PORTLAND PIPE LINE CORPORATION
30 HILL STREET
SOUTH PORTLAND, ME 04106
CONTACT: KENNETH BROWN
(207)767–0449

PROJECT TEAM

DEVELOPER:

STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE
CONTACT: MIKE BARTON, LEED AP
(207) 939–5432

ARCHITECT:

RYAN SENATORE ARCHITECTURE
PORTLAND, MAINE
CONTACT: RYAN SENATORE, R.A.
(207) 650–6414

SURVEYOR:

TITCOMB ASSOCIATES
FALMOUTH, MAINE
CONTACT: NICK ELLISTON P.L.S.
(207) 797–9199

WETLAND SCIENTIST:

MARK HAMPTON ASSOCIATES, INC.
PORTLAND, MAINE
CONTACT: MARK HAMPTON, C.S.S.
(207) 756–2900

TRAFFIC ENGINEER:

TRAFFIC SOLUTIONS
PORTLAND, MAINE
CONTACT: BILL BRAY, P.E.
(207) 400–6890

LANDSCAPE ARCHITECT:

SOREN DENIORD DESIGN STUDIO
PORTLAND, MAINE
CONTACT: SOREN DENIORD
(207) 400–2450

CALL BEFORE YOU DIG
1–888–DIG–SAFE
1–888–344–7233

APPLICABLE PERMITS

1. LEVEL III SITE/SUBDIVISION PLAN PERMIT – CITY OF PORTLAND
2. SITE LOCATION OF DEVELOPMENT PERMIT – CITY OF PORTLAND (UNDER DELEGATED REVIEW)
3. MAINE CONSTRUCTION GENERAL PERMIT – MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
4. NATURAL RESOURCES PROTECTION ACT PERMIT – MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION
5. TRAFFIC MOVEMENT PERMIT – CITY OF PORTLAND (UNDER DELEGATED REVIEW)
6. MAINE GENERAL PERMIT (GP) – ARMY CORPS OF ENGINEERS

ISSUED FOR CONSTRUCTION

ABBREVIATIONS

PARTIAL LIST OF ABBREVIATIONS AND THEIR CORRESPONDING MEANING. PLEASE CONTACT THE ENGINEER FOR ANY CLARIFICATION	
ABS	ACRYLONITRILE–BUTADIENE–STYRENE
APPROX.	APPROXIMATE
BC	BOTTOM OF CURB
BMP	BEST MANAGEMENT PRACTICE
BOT.	BOTTOM
CB	CATCH BASIN
CF	CUBIC FOOT
CI	CAST IRON
CIP	CAST IN PLACE
CM	CONSTRUCTION MANAGER
CMP	CENTRAL MAINE POWER
CONC.	CONCRETE
CY	CUBIC YARD
DIP	DUCTILE IRON PIPE
DIA.	DIAMETER
DIM.	DIMENSION
EA.	EACH
ELEC.	ELECTRICAL
ELEV.	ELEVATION
EQUIV.	EQUIVALENT
EST.	ESTIMATE
EX.	EXISTING
FFE	FINISH FLOOR ELEVATION
FT.	FEET
GAL.	GALVANIZED
HDPE	HIGH DENSITY POLYETHYLENE
ID	INNER DIAMETER
IN.	INCH
INV.	INVERT
L	LENGTH
MAX.	MAXIMUM
MDOT	MAINE DEPARTMENT OF TRANSPORTATION
MFG.	MANUFACTURED
MH	MANHOLE
MIN.	MINIMUM
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OHE/T/C	OVERHEAD ELECTRIC/TELEPHONE/CABLE
PC	PRECAST
PE	PROFESSIONAL ENGINEER
PL	PROPERTY LINE
PLS	PROFESSIONAL LAND SURVEYOR
PP	POLYPROPYLENE
PROP.	PROPOSED
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
PWD	PORTLAND WATER DISTRICT
R	RADIUS
RD	ROOF DRAIN
RET.	RETAINING
ROW	RIGHT OF WAY
S	SLOPE
SD	STORM DRAIN
SDR	STANDARD DIMENSION RATIO
SF	SQUARE FEET
SMH	SEWER MANHOLE
SPEC.	SPECIFICATION
SS	STAINLESS STEEL
TC	TOP OF CURB
TW	TOP OF WALL
TYP.	TYPICAL
UD	UNDERDRAIN
UGE	UNDERGROUND ELECTRIC

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	9/22/17
FINAL APP.	WHS	10/23/17
CITY COMMENTS	WHS	11/21/17
CONSTRUCTION	WHS	4/18/18

DRAWING NAME: COVER SHEET & LEGEND
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH ST. PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
4-16-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-01

GENERAL NOTES:

1. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE ANY POTENTIAL CONFLICTS WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR MAINTENANCE OF ALL EROSION CONTROL MEASURES SHOWN ON THE PLAN. IF DEEMED NECESSARY BY THE OWNER OR OWNER'S REPRESENTATIVE, ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED AT NO ADDITIONAL COST TO THE OWNER.
3. THE CONTRACTOR SHALL PREPARE THEIR OWN MATERIAL SCHEDULE BASED ON THE PLANS AND FIELD VERIFICATION BY THE CONTRACTOR. ALL MATERIAL SCHEDULES SHOWN WITHIN THE PLAN SET ARE FOR GENERAL INFORMATION ONLY.
4. ALL CONSTRUCTION METHODS, TESTING AND MATERIALS SHALL CONFORM TO THE MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS, THE CITY OF PORTLAND AND SERVICING UTILITY REQUIREMENTS, IF ANY. IN CASES WHERE THESE CONFLICT THE MOST STRINGENT SPECIFICATION SHALL APPLY AT NO ADDITIONAL COST TO THE OWNER.
5. THE SITE CONTRACTOR SHALL MAINTAIN A SET OF PAPER AND CAD DRAWINGS WHICH SHALL RECORD THE ACTUAL LOCATION, DIMENSIONS, ELEVATIONS, MATERIALS OF THEIR WORK, INDICATING THEREON ALL VARIATIONS FROM THE CONTRACT DRAWINGS. THE CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE COMPLETE SET OF REPRODUCIBLE RECORD DRAWINGS, IN AUTOCAD FORMAT AND PAPER, STAMPED "AS-BUILT". IF AUTOCAD NOT AVAILABLE EXCLUDE FROM BID IN WRITING.
6. THE CONTRACTOR WILL REMAIN SOLELY AND COMPLETELY RESPONSIBLE FOR ENFORCEMENT OF AND COMPLIANCE WITH 1) ALL CONTRACT PLANS AND SPECIFICATIONS, 2) APPLICABLE INTERNATIONAL BUILDING CODE REQUIREMENTS, AND 3) ALL SITE WORKING CONDITIONS AND SAFETY REQUIREMENTS, DAY AND NIGHT, FOR BOTH PERSONS AND PROPERTY, IN EACH CASE BOTH BY THE CONTRACTOR AND ITS SUBCONTRACTORS. THESE INCLUDE ALL OSHA, NIOSH, U.S. EPA AND ANY OTHER APPLICABLE GOVERNMENTAL REGULATIONS.
7. EXISTING CONDITIONS, BOUNDARY SURVEY, AND TOPOGRAPHY FROM THE PLAN TITLED EXISTING CONDITIONS SURVEY BY TITCOMB ASSOCIATES FOR DIVERSACORP LLC, DATED 6/6/2017 LAST REVISED 2/21/2018.
8. TEST PIT DATA HAVE BEEN OBTAINED BY MARK HAMPTON ASSOCIATES, INC. AND SHALL BE INCLUDED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL ALSO REVIEW THE REPORT PRIOR TO SUBMITTING A BID.
9. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ACCESS TO THE SITE AND ALL ADJACENT PROPERTIES AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL TEMPORARY MARKINGS, SIGNAGE AND INCIDENTALS TO MAINTAIN A SAFE VEHICLE AND PEDESTRIAN ACCESS THOUGH THE LIFE OF THE PROJECT. THE CONTRACTOR SHALL NOTIFY THE PORTLAND PUBLIC SAFETY DIVISION ROUTINELY REGARDING TEMPORARY IMPACTS OR CHANGES TO SITE ACCESS CONDITIONS.
10. CONSTRUCTION MANAGEMENT PLAN NARRATIVE BY ACORN ENGINEERING, INC. AND STROUDWATER DEVELOPMENT PARTNERS, LLC SHALL BE REFERRED TO FOR ANTICIPATED PROJECT SCHEDULE AND CLOSURES. TRAFFIC CONTROL SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
11. CONTRACTOR TO DETERMINE SOIL CLASSIFICATION INDEPENDENTLY FOR TRENCH, SHORING, AND OTHER SIMILAR CONSTRUCTION MEANS AND METHODS APPLICATIONS.
12. THE CONTRACTOR SHALL CONDUCT A PRE-CONSTRUCTION SURVEY OF INTERIOR SUBGRADE AND ABOVE GRADE ACCESSIBLE WALLS, CEILINGS, FLOORS, ROOF AND VISIBLE EXTERIOR AS VIEWED FROM THE GRADE LEVEL. THIS SHALL BE COMPLETED AT A MINIMUM FOR ABUTTING PROPERTIES. AT A MINIMUM, DOCUMENTATION SHALL INCLUDE PHOTOGRAPHS.
13. THE CONTRACTOR SHALL PROVIDE A GPS MODEL OF THE PROPERTY TO PROVIDE TO ACORN ENGINEERING.
14. THE CONTRACTOR SHALL SURVEY ROCK SURFACE PRIOR TO EXCAVATION AND DEVELOP VOLUME CALCULATIONS TO SHARE WITH ACORN, IF ANY.

CIVIL SITE NOTES:

1. THE CONTRACTOR SHALL SUBMIT IN WRITING ANY REQUESTS TO MODIFY THE CONTRACT DOCUMENTS.
2. ALL SHOP AND ERECTION DRAWINGS SHALL BE CHECKED AND STAMPED BY THE GENERAL CONTRACTOR PRIOR TO SUBMISSION FOR ENGINEER'S REVIEW. ANY UNCHECKED OR NON-STAMPED SUBMITTALS WILL BE RETURNED WITHOUT REVIEW.
3. CONTRACTOR SHALL THOROUGHLY INSPECT AND SURVEY EXISTING STRUCTURES AND SITE TO VERIFY CONDITIONS THAT AFFECT THE WORK SHOWN ON THE DRAWINGS. CONTRACTOR TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO PROCEEDING.
4. DETAILS SHOWN APPLY TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE INDICATED.
5. ALTHOUGH ALL DUE DILIGENCE HAS BEEN APPLIED TO MAKE THE DRAWINGS AS COMPLETE AS POSSIBLE, NOT ALL DETAILS ARE ILLUSTRATED, NOR IS EVERY EXCEPTION CONDITION ADDRESSED WITHIN THE CONTRACT DOCUMENTS.
6. ALL PROPRIETARY CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
7. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL WORK, INCLUDING DIMENSION AND LAYOUT VERIFICATION, MATERIALS COORDINATION, SHOP DRAWING REVIEW, AND THE WORK OF ANY SUBCONTRACTORS.
8. UNLESS OTHERWISE SPECIFICALLY INDICATED, THE DRAWINGS DO NOT DESCRIBE OR DIRECT MEANS OR METHODS OF CONSTRUCTION.
9. THE CONTRACTOR, IN THE PROPER SEQUENCE, SHALL PERFORM OR SUPERVISE ALL WORK NECESSARY TO ACHIEVE THE FINAL COMPLETED STRUCTURE, AND TO PROTECT THE STRUCTURE, WORKMEN, AND OTHERS DURING THE CONSTRUCTION. SUCH WORK SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR CONSTRUCTION EQUIPMENT, SHORING FOR EXCAVATION, FORMWORK, SCAFFOLDING, SAFETY DEVICES AND PROGRAMS OF ALL KINDS, SUPPORT AND BRACING FOR CRANES AND OTHER ERECTION EQUIPMENT.
10. DO NOT BACKFILL AGAINST RETAINING WALLS UNTIL SUPPORTING SLABS AND FLOOR FRAMING ARE IN PLACE AND SECURELY ANCHORED, UNLESS ADEQUATE BRACING IS PROVIDED.
11. TEMPORARY BRACING SHALL REMAIN IN PLACE UNTIL ALL FLOORS, WALLS, ROOFS AND OTHER SUPPORTING ELEMENTS ARE IN PLACE.
12. THE ENGINEER BEARS NO RESPONSIBILITY FOR THE ABOVE ITEMS, AND OBSERVATION VISITS TO THE SITE DO NOT IN ANY WAY INCLUDE INSPECTION OF THEM.

SPECIAL INSPECTION NOTES:

1. ALL SITE SOILS-RELATED WORK AND FOOTING EXCAVATIONS PRIOR TO PLACING FORMS, AS WELL AS SITE DRAINAGE, SHALL BE REVIEWED BY THE PROJECT GEOTECHNICAL ENGINEER.
2. NORMAL REVIEWS BY LOCAL BUILDING DEPARTMENT.
3. NOTIFY 48 HOURS PRIOR TO REQUIRED REVIEW.
4. REQUIRED SPECIAL INSPECTIONS PER I.B.C. SECTION 1705.6 BY AN APPROVED SPECIAL INSPECTOR RETAINED BY OWNER. CONTRACTOR TO COORDINATE SPECIAL INSPECTIONS.
5. SPECIAL INSPECTOR SHALL BE A QUALIFIED PERSON WHO SHALL DEMONSTRATE COMPETENCE, TO THE SATISFACTION OF THE BUILDING OFFICIAL, FOR INSPECTION OF THE PARTICULAR TYPE OF CONSTRUCTION OR OPERATION REQUIRING SPECIAL INSPECTION.
6. DUTIES AND RESPONSIBILITIES OF THE SPECIAL INSPECTOR SHALL BE TO OBSERVE AND/OR TEST THE WORK ASSIGNED AND OUTLINE ABOVE FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS, ALL DISCREPANCIES SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE CONTRACTOR FOR CORRECTION.
7. THE SPECIAL INSPECTOR SHALL FURNISH REGULAR REPORTS TO THE BUILDING OFFICIAL, THE ARCHITECT AND ENGINEER OF RECORD, AND OTHER DESIGNATED PERSONS. PROGRESS REPORTS FOR CONTINUOUS INSPECTION SHALL BE FURNISHED WEEKLY. INDIVIDUAL REPORTS OF PERIODIC INSPECTIONS SHALL BE FURNISHED WITHIN ONE WEEK OF INSPECTION DATES. THE REPORTS SHALL NOTE UNCORRECTED DEFICIENCIES, AND NET CHANGES TO THE APPROVED CONSTRUCTION DOCUMENTS AUTHORIZED BY THE ENGINEER OF RECORD.
8. THE SPECIAL INSPECTOR SHALL SUBMIT A FINAL SIGNED REPORT WITHIN TEN DAYS OF THE FINAL INSPECTION STATING WHETHER THE WORK REQUIRING A SPECIAL INSPECTION WAS, TO THE BEST OF THE INSPECTOR'S KNOWLEDGE AND BELIEF, IN CONFORMANCE WITH THE APPROVED CONSTRUCTION DOCUMENTS AND THE APPLICABLE WORKMANSHIP PROVISIONS OF THE INTERNATIONAL BUILDING CODE. WORK NOT IN COMPLIANCE SHALL BE NOTED IN THE REPORT.
9. SPECIAL INSPECTION FIRM SHALL BE EMPLOYED BY OWNER.

LAYOUT NOTES:

1. EXISTING MONUMENTS DELINEATING PROPERTY LINES OR RIGHT OF WAYS SHALL NOT BE DISTURBED DURING CONSTRUCTION OPERATIONS. IN THE CASE A MONUMENT IS DISTURBED, AT THE CONTRACTOR'S EXPENSE, THE MONUMENT SHALL BE RESET TO ITS ORIGINAL LOCATION AND ELEVATION BY A REGISTERED LAND SURVEYOR. PROPOSED MONUMENTS AND PROPERTY PINS TO BE SET BY A REGISTERED LAND SURVEYOR.
2. ALL DIMENSIONS ON THE FOLLOWING SHEETS TAKE PRECEDENT OVER SCALED DIMENSIONS. EACH DRAWING WITH A BAR SCALE MEANS THAT THE DRAWING/DETAIL HAS BEEN SCALED AS ACCURATELY AS POSSIBLE, AND THE BAR SCALE IS FOR GENERAL REFERENCE ONLY. IF NO BAR SCALE IS PRESENT, THEN THERE IS NO SCALE TO THAT DRAWING/DETAIL. AT NO TIME SHOULD DRAWINGS BE SCALED FROM. ANY DISCREPANCIES BETWEEN DRAWINGS, DETAILS, SPECIFICATIONS AND THE FIELD CONDITION SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
3. SIGNAGE, STRIPING, AND PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
4. ALL TRAFFIC CONTROL SIGNS INDICATED ON THE SITE LAYOUT PLAN ARE TO MEET ALL REQUIREMENTS & CONDITIONS OF THE CITY OF PORTLAND, MAINE DEPARTMENT OF TRANSPORTATION AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
5. THE CONTRACTOR SHALL OBTAIN THE SERVICES OF A LICENSED PROFESSIONAL LAND SURVEYOR TO PROVIDE A MINIMUM OF TWO TEMPORARY BENCHMARKS WITHIN THE SITE AND TO LOCATE PROPOSED FOUNDATION CORNERS.
6. CONTRACTOR TO ENSURE THAT DRIVEWAYS AND MAILBOXES ADJACENT TO THE PROJECT REMAIN FUNCTIONAL AND IN USE AT ALL TIMES.

PERMITTING NOTES

1. THIS PROJECT IS SUBJECT TO THE TERMS AND CONDITIONS OF THE FOLLOWING PERMITS: SITE PLAN – LEVEL III AND SUBDIVISION PERMIT (CITY OF PORTLAND), MAINE CONSTRUCTION GENERAL PERMIT (MAINE DEP), SITE LAW PERMIT (CITY OF PORTLAND UNDER DELEGATED REVIEW), NRPA PERMIT (MAINE DEP). TRAFFIC MOVEMENT PERMIT (CITY OF PORTLAND UNDER DELEGATED REVIEW), AND MAINE GENERAL PERMIT (ARMY CORPS OF ENGINEERS).
2. THE CONTRACTOR SHALL REVIEW THE ABOVE REFERENCED PERMITS PRIOR TO SUBMITTING A BID FOR THIS PROJECT, AND INCLUDE COSTS AS NECESSARY TO COMPLY WITH THE CONDITIONS OF THESE PERMITS.
3. THE CLIENT HAS NOT REQUESTED NOR HAS ACORN COMPLETED A PHASE I – ENVIRONMENTAL SITE ASSESSMENT FOR THE PROPERTY.

GRADING AND DRAINAGE NOTES:

1. TOPSOIL STRIPPED FROM THE SITE THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED WITHIN THE PROPOSED LIMIT OF WORK AREA. ANY EXCESS LOAM SHALL REMAIN PROPERTY OF THE OWNER.
2. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY; NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING.
3. THE OWNER SHALL BE RESPONSIBLE FOR OBTAINING ANY EASEMENT OR TEMPORARY CONSTRUCTION RIGHTS AS NECESSARY BY PRIVATE ADJACENT LAND OWNERS. THE CONTRACTOR SHALL NOT DISTURB ANY SOIL BEYOND THE PROPERTY LINE WITHOUT NOTIFYING AND OBTAINING SUCH EASEMENT OR TEMPORARY CONSTRUCTION RIGHT FROM THE OWNER. PRIOR TO THE CONTRACTOR PRICING THE WORK THE CONTRACTOR SHALL REQUEST PROOF OF SUCH EASEMENT OR TEMPORARY RIGHTS. SHOULD EASEMENTS OR TEMPORARY RIGHTS NOT BE AVAILABLE THE CONTRACTOR SHALL INCLUDE COST FOR BRACING AND SHORING AS NECESSARY.
4. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. THE MINIMUM SLOPE SHALL MEET OR EXCEED 0.5% IN ALL CASES. ALL SLOPES SHALL BE AWAY FROM BUILDINGS AND TOP OF PAVEMENT SHALL BE AT OR BELOW EXISTING FINISH FLOOR ELEVATIONS.
5. NO ADDITIONAL PAYMENT FOR UNSUITABLE MATERIALS.
6. ALL STORM DRAIN PIPE SHALL BE SMOOTH BORE INTERIOR PROVIDING A MANNINGS ROUGHNESS COEFFICIENT OF N=0.012 OR LESS.
7. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE.
8. NATIVE SOILS: CONTRACTOR RESPONSIBLE FOR REVIEWING THE TEST PIT SOIL PROFILES AS PROVIDED AS PART OF THE CLASS B HIGH INTENSITY SOIL SURVEY BY MARK HAMPTON ASSOCIATES DATED 5/10/2017. CONTRACTOR TO AVOID DISTURBING SUBGRADE SOILS. SHOULD THE SUBGRADE BECOME YIELDING OR DIFFICULT TO WORK, DISTURBED AREAS SHALL BE EXCAVATED AND BACKFILLED WITH COMPACTED SELECT FILL OR CRUSHED STONE AT NO ADDITIONAL EXPENSE TO THE OWNER. ALL SUBGRADE PREPARATION IS SUBJECT TO THE RECOMMENDATIONS OF THE PROJECT GEOTECHNICAL ENGINEER.

EROSION CONTROL NOTES:

1. ALL ROUTINE MAINTENANCE ACTIVITIES SHALL BE CONDUCTED IN SUCH A WAY TO LIMIT THE AMOUNT OF DISTURBED AREA AT ONE TIME TO THE EXTENT PRACTICABLE.
2. PRIOR TO THE START OF ANY CLEARING/LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL INSTALL APPLICABLE EROSION CONTROL DEVICES SUCH AS PERIMETER SILT FENCE, AND OTHER APPLICABLE MEASURES. IN THE EVENT THE CONTRACTOR IS NOT SURE A EROSION CONTROL MEASURE SHOULD BE IMPLEMENTED, THE CONTRACTOR SHALL CONTACT THE ENGINEER OF RECORD TO CONFIRM IMPLEMENTATION OF ANY EROSION CONTROL DEVICES.
3. ALL GROUND AREAS GRADED FOR CONSTRUCTION SHALL BE GRADED, LOAMED, SEEDED AND MULCH SHALL BE APPLIED AS SOON AS POSSIBLE WITHIN 7 DAYS FOLLOWING THE COMPLETION OF ANY SOIL DISTURBANCE, AND PRIOR TO ANY STORM EVENT.
4. EROSION AND SEDIMENTATION CONTROL MEASURES SHALL SHALL BE INSTALLED TO THE SATISFACTION OF THE CITY. THE CONTRACTOR SHALL REFERENCE THE APPROVED EROSION AND SEDIMENTATION CONTROL REPORT FOR TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES IN ADDITION TO THE PLAN SET. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE D.E.P.'S PERMIT CONDITIONS, FINDINGS OF FACT AND ORDER (IF ANY), AND THE CURRENT MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.
5. PRIOR TO PAVING, THE CONTRACTOR SHALL REMOVE ALL SEDIMENT FROM STORM DRAINS, CATCH BASINS, AND APPURTENANCES.
6. REFER TO THE EROSION CONTROL DETAILS & NOTES FOR ADDITIONAL INFORMATION.

UTILITY NOTES:

1. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED UPON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION IS NOT TO BE RELIED UPON AS BEING EXACT OR COMPLETE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO TEST PIT TO DETERMINE THE EXACT LOCATION AND ELEVATION OF UTILITIES TO COORDINATE WITH THE PROPOSED CONNECTIONS OR CROSSING. ANY DISCREPANCIES SHALL BE IMMEDIATELY REPORTED TO THE CIVIL ENGINEER FOR FURTHER DIRECTIONS BEFORE ANY ADDITIONAL WORK PROCEEDS.
2. CONTRACTOR SHALL, AT NO ADDITIONAL COST TO THE OWNER, CONDUCT EXPLORATORY EXCAVATIONS AT LOCATIONS WHERE PROPOSED EXCAVATION WILL INTERSECT WITH EXISTING UTILITIES, PRIOR TO THE ORDERING OF STRUCTURES.
3. ALL NEW SANITARY MANHOLES SHALL BE VACUUM TESTED BEFORE BACKFILLING. TESTING SHALL BE COMPLETED IN ACCORDANCE WITH TECHNICAL REPORT #16 (TR-16): GUIDES FOR THE DESIGN OF WASTEWATER TREATMENT WORKS, PREPARED BY THE NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION.
4. SEWER MANHOLES SHALL BE 4' ID UNLESS OTHERWISE STATED ON THE PLANS.
5. CONTRACTOR TO PROVIDE 5.50' OF COVER FROM TOP OF PIPE TO FINISH GRADE FOR WATER MAINS.
6. THRUST BLOCKS SHALL BE USED FOR THRUST RESTRAIN ON WATER MAINS. DETAIL AND LIMITS FOR THRUST BLOCKS ARE SHOWN ON SHEET C-43.
7. WATER INFRASTRUCTURE SHALL BE TESTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT DOCUMENT "WATER AND SEWER CONSTRUCTION SPECIFICATIONS AND PROCEDURE", MOST RECENT REVISION.
8. ALL REQUIRED FITTINGS FOR THE WATER MAIN ARE NOT SHOWN ON DRAWINGS. CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY FITTINGS REQUIRED TO CONSTRUCT THE WATER MAIN IN ACCORDANCE WITH CITY OF PORTLAND, STATE OF MAINE, AND AMERICAN WATER WORKS ASSOCIATION STANDARDS AND REGULATIONS.
9. CONTRACTOR SHALL COORDINATE WORK REGARDING ANY WATER MAIN CONNECTION AND WATER MAIN SHUTDOWN WITH THE PORTLAND WATER DISTRICT AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.
10. ALL WATER PIPE INSTALLATION SHALL CONFORM WITH THE PORTLAND WATER DISTRICT SPECIFICATIONS AND PROCEDURES, MOST RECENT EDITION.
11. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.
12. SEWER, GAS, TELEPHONE, ELECTRICITY, CABLE, WATER AND ANY OTHER UTILITY CONNECTIONS SHALL BE REVIEWED BY PLUMBING, ELECTRICAL, AND MECHANICAL DESIGNER FOR CONSISTENCY WITH THEIR PLANS PRIOR TO CONSTRUCTION.
13. COORDINATE EXIT POINT FOR SECONDARY SERVICE WITH THE ARCHITECT/ELECTRICAL ENGINEER. SECONDARY LINE LOCATIONS NOT PROVIDED BY ACORN ENGINEERING, INC. ARE SHOWN WITHIN THE UTILITY PLAN.
14. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN ALL THE NECESSARY PERMITS FOR THE INSTALLATION OF THE UTILITIES AND STORMDRAINS WITHIN THE PUBLIC RIGHT OF WAY. THE CONTRACTOR SHALL SUBMIT A MAINTENANCE OF TRAFFIC PLAN TO THE CITY IN ACCORDANCE WITH THE CITY OF PORTLAND TECHNICAL MANUAL PRIOR TO ANY WORK.
15. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL BOXES, FITTINGS, CONNECTORS, COVER PLATES AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THE DRAWINGS TO RENDER INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL AT NO EXTRA EXPENSE TO THE OWNER.

Received
City of Portland, Maine
Permitting and Inspections Department
Approved with Conditions
DEC 07 2018

SUBMITTALS

SCHEDULE OF SUBMITTALS FOR STROUDWATER PRESERVE			SUBMITTAL 1		REVISION 1	
ITEM NUMBER	ITEM	SUBMITTAL	APPROVAL STATUS	RETURNED DATE	APPROVAL STATUS	RETURNED DATE
1	WORK SCHEDULE	WEEKLY WORK SCHEDULE				
2	UNDERDRAIN	6" DIAM. PERFORATED PIPE, SDR 35 PVC OR CORRUGATED HDPE				
		MANUFACTURER'S PRODUCT SHEET				
		SAND MDOT 703.22				
3	GRANITE CURB	GRANITE CURB MANUFACTURER'S PRODUCT SHEET				
		FILTER FABRIC MANUFACTURER'S PRODUCT SHEET				
4	SIDEWALK DETECTABLE WARNING PANEL	MANUFACTURER'S PRODUCT SHEET				
5	PAVEMENT (LOCAL & COLLECTOR)	HMA MIX DESIGN MDOT 403.09 GRADE C (12.5 MM)				
		HMA MIX DESIGN MDOT 403.09 GRADE B (19.0 MM)				
		BASE GRAVEL 703.06 TYPE B				
		SUBBASE GRAVEL MDOT 703.06 TYPE D				
		PAVEMENT AGGREGATE SAMPLE				
6	GRANITE STREET MONUMENT	MANUFACTURER'S PRODUCT SHEET				
7	BICYCLE HITCH	EXTERIOR BIKE HITCH MANUFACTURER'S PRODUCT SHEET				
8	SITE SIGNAGE	STOP SIGN MANUFACTURER'S PRODUCT SHEET				
		NO PARKING THIS SIDE OF STREET MANUFACTURER'S PRODUCT SHEET				
9	TRASH ENCLOSURE	FENCE & GATE MANUFACTURER'S PRODUCT SHEET				
10	LIGHT POLE	LIGHT POLE MANUFACTURER'S PRODUCT SHEET				
		LIGHT POLE BASE MANUFACTURER'S PRODUCT SHEET				
11	FIRE HYDRANT	FIRE HYDRANT MANUFACTURER'S PRODUCT SHEET				
		SWIVEL TEE & GATE VALVE MANUFACTURER'S PRODUCT SHEET				
12	THRUST BLOCKING	THRUST BLOCKING PLAN				
13	SERVICE CONNECTION	WATER SERVICE CONNECTION PLAN				
		WATER SERVICE MANUFACTURER'S PRODUCT SHEET				
		SERVICE SADDLE MANUFACTURER'S PRODUCT SHEET				
14	WATER METER PIT	WATER METER PIT MANUFACTURER'S PRODUCT SHEET				
		PIT COVER & FRAME MANUFACTURERS PRODUCT SHEET				
		BALL VALVE MANUFACTURER'S PRODUCT SHEET				
15	TAPPING SLEEVE & VALVE	MANUFACTURER'S PRODUCT SHEET				
16	CONNECTION TO EXISTING SEWER	SEWER CONNECTION PLAN				
		SEWAGE BYPASS PLAN				
17	SEWER CONNECTION	SEWER WYE/TEE MANUFACTURER'S PRODUCT SHEET				
		WYE/TEE GASKET MANUFACTURER'S PRODUCT SHEET				
		WYE/TEE CONNECTION PLAN				
18	FORCEMAIN & SANITARY SEWER PIPE	SEWER PIPE MANUFACTURER'S PRODUCT SHEET				
		SAND MDOT 703.22 TYPE B SIEVE ANALYSIS				
		3/4" CRUSHED STONE SIEVE ANALYSIS				
		PIPE GASKETS MANUFACTURER'S PRODUCT SHEET				
19	LOW PRESSURE PUMP	PUMP MANUFACTURER'S PRODUCT SHEET				
		MANUFACTURER'S SEWER SYSTEM PLAN & FLOW CALCS				
20	UTILITY TRENCH LINES	CONDUIT MANUFACTURER'S PRODUCT SHEET				
21	CLEANOUT	CLEANOUT MANUFACTURER'S PRODUCT SHEET				
		CLEANOUT PIPE MANUFACTURER'S PRODUCT SHEET				
22	CATCH BASIN	CATCH BASIN MANUFACTURER'S PRODUCT SHEET				
		BASIN COVERS & FRAMES MANUFACTURER'S PRODUCT SHEET				
23	CATCH BASIN INLET PROTECTION	MANUFACTURER'S PRODUCT SHEET				
24	STORM DRAIN	DRAIN PIPING MANUFACTURER'S PRODUCT SHEET				
		SAND MDOT 703.22 TYPE B SIEVE ANALYSIS				
		3/4" CRUSHED STONE SIEVE ANALYSIS				
		CATCH BASIN HOOD MANUFACTURER'S PRODUCT SHEET				
25	WATER PIPE	PIPE MANUFACTURER'S PRODUCT SHEET				
		MDOT 703.22 TYPE B UD BACKFILL				
26	WATER VALVE	WATER VALVE MANUFACTURER'S PRODUCT SHEET				
		VALVE BOX MANUFACTURER'S PRODUCT SHEET				
		BOX COVER MANUFACTURERS PRODUCT SHEET				
27	CONNECTION TO EXISTING WATER	CONNECTION PLAN SHOP DRAWING				
28	DRAIN MANHOLE	DRAIN MANHOLE MANUFACTURER'S PRODUCT SHEET				
		MANHOLE JOINT STRIPS MANUFACTURER'S PRODUCT SHEET				
		MANHOLE RISERS MANUFACTURER'S PRODUCT SHEET				
		MANHOLE FRAMES & COVERS MANUFACTURER'S PRODUCT SHEET				
29	SEWER MANHOLE	MANUFACTURER'S SEWER MANHOLE SPECIFICATION SHEET				
		MANHOLE JOINT STRIPS MANUFACTURER'S PRODUCT SHEET				
		MANHOLE RISERS MANUFACTURER'S PRODUCT SHEET				
		MANHOLE FRAMES, COVERS MANUFACTURER'S PRODUCT SHEET				
		STRUCTURE SCHEDULE FROM MANUFACTURER				
30	VEGETATED UNDERDRAINED SOIL FILTER	IMPERMEABLE LINER MANUFACTURER'S SHEET				
		UNDERDRAIN MANUFACTURER'S PRODUCT SHEET				
		MDOT 703.22 TYPE C CRUSHED STONE SIEVE ANALYSIS				
		COARSE GRAVEL TYPE B SIEVE ANALYSIS				
		SOIL FILTER SIEVE ANALYSIS				
		LOAM TOPSOIL SIEVE ANALYSIS				
31	HIGH PERFORMANCE FILTER BMP (FOCALPOINT)	FILTER BMP MANUFACTURERS PRODUCT SHEET				
		FILTER BMP LAYOUT SHOP DRAWINGS AND INVERT ELEVATIONS				
		FILTER BMP STRUCTURE COMPONENTS				
32	STORMWATER TREE BOX (FILTERRA)	TREE BOX MANUFACTURER'S PRODUCT SHEET				
		TREE BOX STRUCTURE COMPONENTS				
33	OUTLET CONTROL STRUCTURE	OUTLET CONTROL STRUCTURE MANUFACTURER'S PRODUCT SHEET				
34	EROSION CONTROL MIX	CERTIFICATION LETTER				

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	9/22/17
FINAL APP.	WHS	10/25/17
CITY COMMENTS	WHS	11/21/17
CONSTRUCTION	WHS	4/18/18

DRAWING NAME: GENERAL NOTES
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

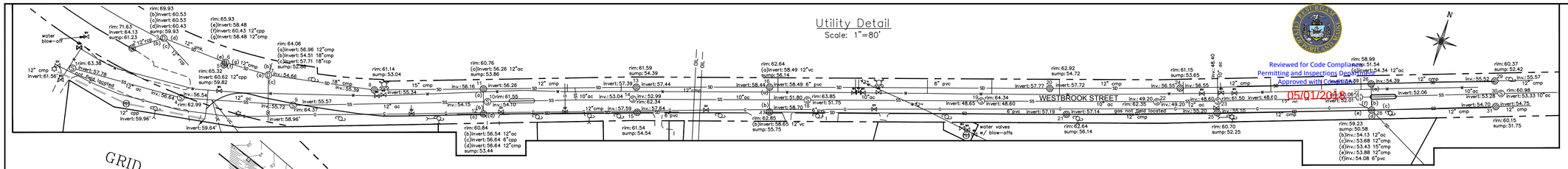
ACORN ENGINEERING, INC.
ENGINEERING
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

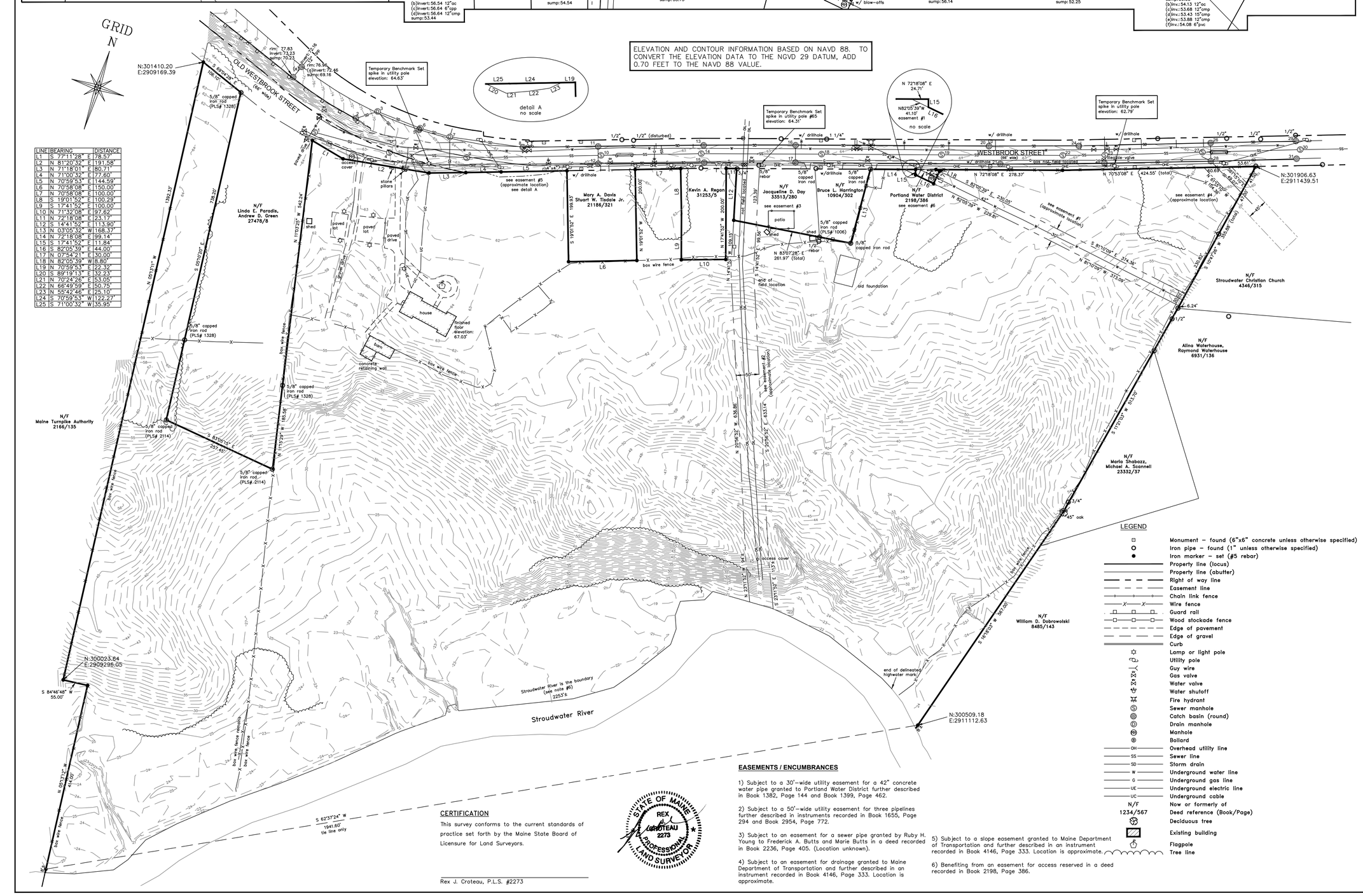
FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11410 — 4-16-18 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-02

Utility Detail
Scale: 1"=80'





LINE	BEARING	DISTANCE
L1	S 72°11'28" E	78.57'
L2	N 81°20'32" E	191.58'
L3	N 71°18'01" E	80.71'
L4	N 71°00'32" E	77.60'
L5	N 70°59'53" E	144.59'
L6	N 70°58'08" E	150.00'
L7	N 70°58'08" E	100.00'
L8	S 19°01'52" E	100.29'
L9	S 17°41'52" E	100.00'
L10	N 71°32'08" E	97.62'
L11	N 72°18'08" E	23.17'
L12	S 14°41'52" E	113.90'
L13	N 03°05'32" W	168.37'
L14	N 72°18'08" E	99.14'
L15	S 17°41'52" E	11.84'
L16	S 82°05'39" E	44.00'
L17	N 07°54'21" E	30.00'
L18	N 82°05'39" W	8.80'
L19	N 70°59'53" E	22.32'
L20	S 89°19'13" E	32.23'
L21	N 70°24'26" E	53.05'
L22	N 66°49'59" E	50.75'
L23	N 55°42'46" E	25.10'
L24	S 70°59'53" W	122.27'
L25	S 71°00'32" W	35.95'

CERTIFICATION

This survey conforms to the current standards of practice set forth by the Maine State Board of Licensure for Land Surveyors.

STATE OF MAINE REX CROTEAU 2273 PROFESSIONAL LAND SURVEYOR

Rex J. Croteau, P.L.S. #2273

EASEMENTS / ENCUMBRANCES

1) Subject to a 30'-wide utility easement for a 42" concrete water pipe granted to Portland Water District further described in Book 1382, Page 144 and Book 1399, Page 462.

2) Subject to a 50'-wide utility easement for three pipelines further described in instruments recorded in Book 1655, Page 294 and Book 2954, Page 772.

3) Subject to an easement for a sewer pipe granted by Ruby H. Young to Frederick A. Butts and Marie Butts in a deed recorded in Book 2236, Page 405. (Location unknown).

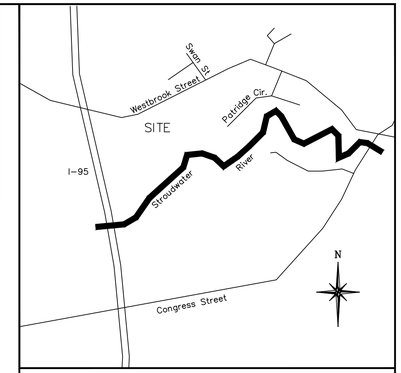
4) Subject to an easement for drainage granted to Maine Department of Transportation and further described in an instrument recorded in Book 4146, Page 333. Location is approximate.

5) Subject to a slope easement granted to Maine Department of Transportation and further described in an instrument recorded in Book 4146, Page 333. Location is approximate.

6) Benefiting from an easement for access reserved in a deed recorded in Book 2198, Page 386.

LEGEND

- Monument – found (6"x6" concrete unless otherwise specified)
- Iron pipe – found (1" unless otherwise specified)
- Iron marker – set (#5 rebar)
- Property line (locus)
- Property line (abutter)
- Right of way line
- Easement line
- Chain link fence
- Wire fence
- Guard rail
- Wood stockade fence
- Edge of pavement
- Edge of gravel
- Curb
- Lamp or light pole
- Utility pole
- Guy wire
- Gas valve
- Water valve
- Water shutoff
- Fire hydrant
- Sewer manhole
- Catch basin (round)
- Drain manhole
- Manhole
- Bollard
- OH — Overhead utility line
- SS — Sewer line
- SD — Storm drain
- W — Underground water line
- G — Underground gas line
- UE — Underground electric line
- UC — Underground cable
- N/F — Now or formerly of
- 1234/567 — Deed reference (Book/Page)
- Deciduous tree
- Existing building
- Flagpole
- Tree line



VICINITY MAP
No Scale

NOTES

1) Book and Page references are to the Cumberland County Registry of Deeds.

2) Bearings are referenced to grid north, Maine State Plane Coordinate System, NAD83, West Zone.

3) Elevations are based on NAVD88 datum as derived from GPS observations. Benchmarks are as shown.

4) Utility information on this plan is approximate, based on location of visible features and information contained on plans and drawings provided by others. DigSafe and/or the appropriate utilities should be contacted prior to any construction.

5) Property lies within Zone X and Zone A based on FIRM Community #230051 Panel #0012 C, dated December 8, 1998. Zone X is defined as an area of 500-year flood; area of 100-year flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 100-year flood. Zone A is an area with no base flood elevation determined.

6) The location of the highwater mark on northerly side of Stroudwater River was delineated by others and located by Titcomb Associates. The location of the southerly side of Stroudwater River is approximate based on aerial imagery.

7) The two crude oil lines were marked out by Portland Pipe Line and located by Titcomb Associates. Titcomb Associates makes no guarantee or warranty as to the accuracy of the pipeline elevation data.

PLAN REFERENCES

1) Plan of a Standard Boundary Survey made for Onex Company by Nadeau & Lodge, Inc., dated February 21, 2003 and revised through October 9, 2003.

2) Second Amended Subdivision Plat of Portland Technology Park made for City of Portland by SGC Engineering LLC, dated September 29, 2011, revised through March 8, 2016 and recorded in Plan Book 216, Page 63.

3) Portland Water District 42" Concrete Pipe Line Right of Way Plans prepared by Harry Fuller, dated August 1931 and recorded in Plan Book 20, Page 39. (Location is approximate).

4) Portland Pipe Line Co. Survey of Property of Ruby H. Young, dated October 8, 1941 prepared by Francis A. Griffin and recorded in Plan Book 27, Page 37. (Location is approximate).

5) Stroudwater Woods made for S.&E. Cimino by Owen Haskell, Inc. dated October 25, 1979 and recorded in Plan Book 125, Page 21.

6) Partial Boundary Survey for Andrew D. Green by Lewis & Wasina, Inc. dated December 10, 2004 and revised through December 14, 2004 and recorded in Plan Book 205, Page 299.

7) Plan of Property made for Advent Christian Church of Portland by H.I. & E.C. Jordan dated October 18, 1979 and recorded in Plan Book 125, Page 10.

8) Plan of Property made for Theodore and Therese Barris by Wayne T. Wood dated January 1994 and revised through January 27, 1994, unrecorded.

AREA

2,408,245 square feet, 55.3 acres

OWNERS OF RECORD

Onex Company
14598/346

Diversacorp
33834/269

SCALE IN FEET
100 0 100 200
1" = 100'

Rev. 1	02/21/18	NGVD 29 conversion note / property corner coords.	RJC

PLAN OF

Existing Conditions of Camelot Farm

1700 Westbrook Street — Portland, Maine

MADE FOR

Diversacorp LLC

5 Stone Pony Circle — Saco, Maine

JOB #216100	DATE: 06/16/17	SCALE: 1" = 100'
BOOK #897		
216100.dwg		
FILE #9856		

Titcomb Associates
133 Gray Road, Falmouth, Maine 04105
(207)797-9199 www.titcombsurvey.com

GENERAL NOTES:

1. ANY EXISTING ASPHALT TO BE REMOVED SHALL BE STRIPPED AND PROPERLY DISPOSED OF OFFSITE.
2. GRANITE CURB TO BE REMOVED AND PROPERLY DISPOSED OF. NEW CURB TO BE INSTALLED AND SET PER DETAIL.
3. ALL DISPOSAL OF DEMOLITION DEBRIS OR WASTE SHALL BE IN ACCORDANCE WITH ALL LOCAL, STATE, & FEDERAL REGULATIONS. CONTRACTOR SHALL PROVIDE OWNER WITH APPROPRIATE "BILLS OF LADING" TO DEMONSTRATE PROPER DISPOSAL OF ALL MATERIALS.
4. SITE DEMOLITION SHALL NOT OCCUR UNTIL PROPER ABATEMENT PROCEDURES HAVE OCCURRED. ABATEMENT, IF NECESSARY, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
5. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANIES AND DIG SAFE AT LEAST 72 HOURS PRIOR TO EXCAVATION TO REQUEST EXACT FIELD LOCATION FOR UTILITIES. OTHERWISE IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FIELD VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND LOCATE POTENTIAL CONFLICT WITH THE APPROVED PLANS PRIOR TO CONSTRUCTION.
6. CONTRACTOR TO COORDINATE SITE DEMOLITION WITH STROUDWATER DEVELOPMENT PARTNERS, LLC.
7. NOTE THAT ALL CONSTRUCTION SIGNAGE IS TEMPORARY AND WILL BE REMOVED AT PROJECT COMPLETION.
8. SEDIMENT BARRIERS TO BE INSTALLED ALONG ALL DOWN-GRADIENT LIMITS OF WORK AS DEPICTED.
9. CONTRACTOR SHALL PLACE CATCH BASIN INLET PROTECTION ON CATCH BASINS AND FIELD INLETS DOWN-GRADIENT OF ALL NON-STABILIZED SURFACES, PER DETAIL.
10. CONTRACTOR SHALL INSTALL CONSTRUCTION ENTRANCE AT ALL LOCATIONS OF INGRESS AND EGRESS DURING EACH PHASE OF CONSTRUCTION TO THE SITE. SEE DETAIL.
11. THIS PLAN IS NOT INCLUSIVE OF ALL EXISTING ITEMS TO BE REMOVED AS PART OF SITE CONSTRUCTION INCLUDING BUT NOT LIMITED TO LANDSCAPING, UTILITIES, WORK WITHIN THE ROW, ETC. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PORTLAND REGULATIONS.
12. CONTRACTOR TO REFER TO AND FOLLOW THE DOCUMENTS ENTITLED "CONSTRUCTION MANAGEMENT PLAN" & "EROSION AND SEDIMENTATION CONTROL REPORT".
13. PORTLAND PIPELINE TO BE CONTACTED BEFORE CONSTRUCTION. REFER TO DOCUMENT ON PROPER CONSTRUCTION PRACTICES TITLED "DESIGN OF PROJECTS ON OR NEAR PORTLAND PIPE LINE CORPORATION RIGHTS-OF-WAY".
14. WETLANDS NOT TO BE DISTURBED DURING THE LIFE OF THE PROJECT SHALL BE FLAGGED PRIOR TO THE START OF CONSTRUCTION. EDGE OF WETLAND IMPACTS TO BE DELINEATED BY ONE ROW OF STUMP GRINDINGS AND ONE ROW OF SILT FENCE. REFER TO EROSION & SEDIMENTATION CONTROL DETAILS.
15. PRIVATE SEPTIC SYSTEM EXISTS ON SITE PER DEPARTMENT OF PUBLIC WORKS RECORDS. CONTRACTOR IS TO BE CAUTIONED THAT THERE IS AN SEPTIC TANK THAT SERVICES THE EXISTING BUILDING THAT HAS NOT BEEN IDENTIFIED BY DIGSAFE OR THE EXISTING CONDITIONS PLAN. CONTRACTOR TO COORDINATE TANK REMOVAL AT NO ADDITIONAL COST TO THE OWNER.
16. IT IS ANTICIPATED THAT ONE TRAVEL LANE WITHIN WESTBROOK ST WILL BE CLOSED DURING UTILITY CONSTRUCTION FOR APPROX. THREE DAYS; CONTRACTOR TO DEFINE FINAL CLOSURE DURATION AND MAINTAIN ALTERNATING TRAFFIC PATTERNS, AND BE RESPONSIBLE FOR OBTAINING THE NECESSARY STREET OPENING AND ROAD CLOSURE PERMITS FROM THE CITY DURING CONSTRUCTION.
17. EROSION CONTROL BLANKET SHALL BE INSTALLED ON ALL SLOPES 3:1 OR STEEPER. REFER TO DETAIL FOR INSTALLATION GUIDE.
18. CONTRACTOR TO COORDINATE CONSTRUCTION ACTIVITIES WITH ABUTTERS INCLUDING ANTICIPATED SCHEDULE AND SCREENING TO BE PROVIDED.
19. CONTRACTOR TO BE RESPONSIBLE FOR SWEEPING WESTBROOK STREET AS REQUIRED.
20. PRIMARY CONSTRUCTION ACCESS IS INTENDED TO BE FROM PROPOSED STREET ENTRANCES. CONSTRUCTION ACCESS TO BE LIMITED ON OLD WESTBROOK ST. AT NO TIME SHALL CONSTRUCTION VEHICLES, INCLUDING DELIVERY VEHICLES, CLOSE OR BLOCK WESTBROOK ST.

LEGEND:

- WETLAND IMPACT AREA
- PROP. SLOPES 3:1 OR GREATER
- PUBLIC TRAIL NETWORK
- TEMP. CONSTRUCTION ROAD
- LIMIT OF DISTURBANCE
- LIMIT OF PHASE I DISTURBANCE
- EROSION CONTROL MIX BERM
- TEMPORARY CONSTRUCTION FENCE
- SILT FENCE
- EX. TREE TO BE REMOVED
- EX. STAND OF TREES TO BE REMOVED

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

Stroudwater River

PHASE I

PHASE II

PHASE III

APPROX LOCATION OF EROSION CONTROL MIX BERM PER DETAIL, TYP. MIN. 2' HIGH MIN. 4' WIDE

SEDIMENTATION BASIN OUTLET PIPE TO BE OUTFITTED WITH A SILT SACK DURING BASIN CONSTRUCTION AND SOIL DISTURBANCE, TYP. OF 3

PROP. TREE REMOVAL AREA: APPROX. 2,500 SF

APPROX. LOCATION OF SILT FENCE PER DETAIL, TYP.

PERMANENT DETENTION POND TO ACT AS TEMPORARY SEDIMENTATION BASIN PER DETAIL. INSTALL POND DURING RESPECTIVE PHASE OF PROJECT, TYP. OF 3

WETLAND IMPACT #1: 274 SF

N/F Marla Shabazz, Michael A. Scannell 23332/37

CROSSED HATCH DENOTES RE-GRADED AREAS OF 3:1 OR STEEPER. INSTALL EROSION CONTROL BLANKET PER DETAIL

PROPOSED 5' MAJOR CONTOUR, TYP. REFERENCE GRADING PLANS FOR PROPOSED MINOR CONTOURS

EX. FENCES NEXT TO RESIDENTIAL ABUTTERS TO REMAIN, TYP. MAINTAIN AND PROTECT DURING CONSTRUCTION

N/F Alina Waterhouse, Raymond Waterhouse 6931/136

REFER TO ROAD PROFILE PLANS FOR WORK WITHIN EASEMENT AREA. CONTRACTOR TO COORDINATE WITH PWD BEFORE STARTING CONSTRUCTION

N/F Stroudwater Christian Church 4346/315

PROP. TREE REMOVAL AREA: APPROX. 16,250 SF

EX. HEALTHY TREES OUTSIDE OF THE BUILDING ENVELOPE AS IDENTIFIED ON THE EXISTING CONDITIONS PLAN TO REMAIN

CONTRACTOR TO COORDINATE WITH MDOT BEFORE STARTING CONSTRUCTION ACTIVITIES WITHIN EASEMENT AREA

PROP. 78.00' CURB CUT

APPROX. EXTENT OF UTILITY PAVEMENT CUTS

APPROX. LOCATION OF CONTRACTOR PARKING DURING PHASE I

LIMIT OF DISTURBANCE, TYP.

PROP. ROW: 50.00'

REFER TO ROAD PROFILE PLANS FOR WORK WITHIN EASEMENT AREA. CONTRACTOR TO COORDINATE WITH PPLC BEFORE STARTING CONSTRUCTION

REFER TO ROAD PROFILES FOR PHASING OF UTILITIES CONSTRUCTION

EX. FOUNDATION TO BE REMOVED DURING PHASE I

EXTENT OF PHASE I PAVING

N/F Central Water District 2198/386

N/F Bruce L. Harrington 10904/302

N/F Jacqueline D. Day 33513/280

Kevin A. Regan 31253/5

TEMP. CONSTRUCTION FENCING WITH SCREEN COVERING TO BE INSTALLED ALONG ABUTTING PROPERTIES

PROP. TREE REMOVAL AREA: APPROX. 17,500 SF

HEALTHY TREES WITHIN EX. STAND OUTSIDE OF THE BUILDING ENVELOPE AS IDENTIFIED ON THE EXISTING CONDITIONS PLAN TO REMAIN

PUBLIC ACCESS TO BE PROVIDED TO OPEN SPACE DURING PHASE I & II CONSTRUCTION

APPROX. LOCATION OF TEMP. LANE CLOSURES DURING UTILITY TRENCHING.

WETLAND IMPACT #2: 1,203 SF

WETLAND IMPACT #3: 772 SF

WETLAND IMPACT #4: 919 SF

EXTENT OF EX. WETLANDS TO REMAIN PROTECTED DURING CONSTRUCTION, TYP.

EXISTING STAND OF TREES AS IDENTIFIED ON THE EXISTING CONDITIONS PLAN BEYOND THE LIMIT OF DISTURBANCE TO REMAIN

CONTRACTOR TO LOCATE AND REMOVE EXISTING SEPTIC TANK. REFER TO NOTE 15

EX. STRUCTURES ANTICIPATED TO BE REMOVED DURING PHASE II, TYP.

APPROX. LOCATION OF TREE TO BE REMOVED, TYP. OF 32

APPROX. EXTENT OF CUT FOR PHASE I SITE FILL. AREA TO BE ROUGHLY GRADED TO FINISH ELEVATION AND STABILIZED PRIOR TO END OF PHASE I CONSTRUCTION.

PROP. TREE REMOVAL AREA: APPROX. 12,300 SF

Mary A. Davis Stuart W. Tisdale Jr. 21186/321

PROP. SPACE RESERVED FOR PHASE I MATERIALS STOCKPILING. AREA TO BE SURROUNDED BY DOUBLE LINE OF EROSION CONTROL BERMS

APPROX. EXTENT OF PHASE I DISTURBANCE

EX. UNDERGROUND CABLE AND ELECTRIC SERVICE TO BE REMOVED

PROP. 78.00' CURB CUT

WETLAND IMPACT #5: 6,705 SF

WETLAND IMPACT #6: 4,410 SF

PROP. EARTHEN SOUND BERM PER DETAIL.

PROPOSED PRUD BUILDING FOOTPRINT, TYP.

APPROX. LOCATION OF CONTRACTOR PARKING DURING PHASE III

N/F Maine Turnpike Authority 2166/135

EXTENT OF PHASE II PAVING

EX. FENCE TO BE REMOVED WITHIN LIMIT OF DISTURBANCE, TYP.

EXISTING STAND OF TREES AS IDENTIFIED ON THE EXISTING CONDITIONS PLAN TO REMAIN

PROP. TEMP. CONSTRUCTION ACCESS ROAD FOR MATERIAL HAULING

AREA SUBJECT TO SELECT TREE REMOVAL TO PROVIDE PHASE II CONSTRUCTION ACCESS: APPROX. 24,000 SF

EX. LIGHT POSTS WITHIN PROPERTY TO BE REMOVED, TYP.

EX. PAVEMENT TO BE REMOVED, TYP.

PROP. STABILIZED CONSTRUCTION ENTRANCE PER DETAIL, TYP.

N/F Linda E. Paradis, Andrew D. Green 27478/8

PUBLIC ACCESS AND OPEN SPACE EASEMENT TO REMAIN ACCESSIBLE DURING PHASE II & III CONSTRUCTION PERIOD

TEMPORARY FULL CUTOFF LAMP AT GATED ENTRANCE, TYP.

APPROX. LOCATION OF CONTRACTOR PARKING DURING PHASE II

TEMPORARY CONSTRUCTION FENCE WITH KNOX BOX ON GATED ACCESS

CONTRACTOR TO LOCATE AND RETIRE EX. DOMESTIC WATER SERVICE IN COORDINATION WITH PWD

WETLAND IMPACT #7: 330 SF

OLD WESTBROOK STREET (PVT)

EX. DRIVEWAY TO REMAIN ACCESSIBLE, TYP. OF 5

WESTBROOK STREET

100 0 100 200

SCALE: 1" = 100'

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 8/22/17
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
PERFORMANCE GUARANTEE	WHS 4/13/18
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: DEMOLITION, CONSTRUCTION MANAGEMENT & EROSION CONTROL PLAN

PROJECT NAME: STROUDWATER PRESERVE

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING

ACORN ENGINEERING, INC.
70 MAIN STREET, SACO, MAINE 04102
158 DANFORTH STREET, PORTLAND, MAINE 04101
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	SJL
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — 4-16-18 — LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-03

GENERAL NOTES:

1. ROS ZONE BOUNDARY AS DEFINED BY THE ZONING MAP AMENDMENT PASSED BY THE CITY COUNCIL ON 7/24/17.
2. FINAL SITE SIGNAGE PLAN TO BE REVIEWED AND ACCEPTED BY THE CITY'S TRAFFIC ENGINEER.
3. THE REARMOST OPEN SPACE LOT EXTENDS FROM THE STROUDWATER RIVER TO THE OUTERMOST LOT LINES.
4. FINAL TRAIL LOCATION WITHIN THE OPEN SPACE TO BE DETERMINED BY PORTLAND TRAILS OR CITY OF PORTLAND.
5. THE PROJECT IS ANTICIPATED TO BE BUILT IN THREE PHASES. INFRASTRUCTURE FOR EACH PHASE WILL BE BUILT TO MEET CITY OF PORTLAND FIRE DEPARTMENT STANDARDS. SUBDIVISION PLANS PER PHASE ARE RECORDED WITH CCRD AT:

5.1. PHASE I:

BOOK _____ PAGE _____

5.2. PHASE II:

BOOK _____ PAGE _____

5.3. PHASE III:

BOOK _____ PAGE _____

SPACE AND BULK STANDARDS		
ZONE:	R-3	PROPOSED
SINGLE FAMILY HOUSE LOTS		
MINIMUM LOT SIZE	6,500 SF	6,500 SF
MINIMUM STREET FRONTAGE	50'	50'
FRONT YARD	25'	25'
REAR YARD – PRINCIPAL	25'	25'
REAR YARD – ACCESSORY	5'	5'
MAXIMUM SIDE YARD*	16'	16'
MAXIMUM LOT COVERAGE	35%	MAX 35%
MINIMUM LOT WIDTH**	65'	65'
MAXIMUM BUILDING HEIGHT	35'	< 35'
MAXIMUM ACCESSORY HEIGHT	18'	< 18'
PLANNED RESIDENTIAL UNIT DEVELOPMENT (PRUD)		
MINIMUM LOT AREA PER DWELLING UNIT	6,500 SF	6,500 SF
MAXIMUM NUMBER OF DWELLING UNITS***	38	25
MAX NUMBER OF UNITS PER BUILDING (>5 AC)	6	5
MAX NUMBER OF UNITS PER BUILDING (<5 AC)	2	N/A
MAX LENGTH OF BUILDING (W/ INTEGRAL GARAGES)	140'	140'
MIN BUILDING SETBACK FROM EXTERNAL PROPERTY LINES (>4 UNITS PER BUILDING)	35'	35'
MIN DISTANCE BETWEEN BUILDINGS	16'	17.12'
MINIMUM RECREATIONAL OPEN SPACE	300 SF/DU = 7,500 SF	43,496 SF
MIN CONTIGUOUS AREA OF RECREATIONAL USE	6,000 SF	6,105 SF
MIN WIDTH RECREATIONAL AREA	50'	60.03'

*PLAN DISPLAYS 16' SETBACK. REFER TO SIDE SETBACK SUMMARY TABLE PER SECTION 14-88 OF CITY OF PORTLAND LAND ORDINANCE
**DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.
***REFER TO PRUD LAND USE ORDINANCE NARRATIVE FOR CALCULATIONS

LOT SUMMARY		
SINGLE-FAMILY HOUSE LOTS	95	95 UNITS
TWO-FAMILY HOUSE LOTS	2	4 UNITS
PLANNED RESIDENTIAL UNIT DEVELOPMENT (PRUD)	1	25 UNITS
OPEN SPACE LOTS	2	0 UNITS
TOTAL	100	124 UNITS

PHASING SUMMARY		
PHASE I	46 LOTS	46 UNITS
PHASE II	51 LOTS	53 UNITS
PHASE III	1 LOT	25 UNITS

SIDE SETBACK SUMMARY	
	MIN
1 & 1.5-STORY	8'
2-STORY	14'
2.5-STORY	16'
CORNER LOT	20'

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

EXTENT OF REGULATORY FLOODWAY PER THE NATIONAL FLOOD INSURANCE PROGRAM
ZONE A
EXTENT OF 100-YR FEMA FLOODPLAIN PER THE NATIONAL FLOOD INSURANCE PROGRAM, PRELIMINARY FLOOD INSURANCE RATE MAP DATED 4/14/2017 (APPROX. 27')
EX. STROUDWATER HIGH LEVEL WATER MARK PER THE EXISTING CONDITIONS PLAN
EXTENT OF THE RESOURCE PROTECTION OVERLAY ZONE PER CITY OF PORTLAND GIS
STROUDWATER RIVER
EXTENT OF SHORELAND OVERLAY ZONE (250' SETBACK FROM THE STROUDWATER RIVER HIGH WATER MARK)
PHASE III: PRUD LOT
PROP. PRIVATE HYDRANT #1
EXTENT OF DRAINAGE EASEMENT
EXTENT OF DRAINAGE EASEMENT
STORMWATER INFRASTRUCTURE WITHIN OPEN SPACE LOT SUBJECT TO ACCESS, DRAINAGE, AND MAINTENANCE EASEMENT, TYP.
PROP. DETENTION BASIN DESIGNED FOR RECREATIONAL SKATING POND USE
PROPERTY LINE, TYP.
EXTENT OF DRAINAGE EASEMENT
PROP. EXTENT OF ACCESS ROAD. SEE C-32
EX. 50.00' EASEMENT TO PORTLAND PIPELINE (PPL) TO REMAIN. REFER TO EXISTING CONDITIONS PLAN.
ROS
R-3
PROP. "NO PARKING THIS SIDE OF STREET" SIGNS PLACED APPROX. EVERY 130' PER DETAIL, TYP. OF 26
PROP. EXTENT OF ACCESS ROAD. SEE C-31
EXTENT OF OPEN SPACE LOT
PROP. PUBLIC HYDRANT #5
N/F Marla Shabazz, Michael A. Soannell 23332/37
PRINCIPAL BUILDING SETBACKS NOT TO EXTEND INTO BUFFER, TYP.
PROP. UTILITY EASEMENT, TYP
PROP. LOT PROPERTY LINES, TYP.
115' DRAINAGE EASEMENT, TYP.
PROP. BIKE HITCH (1) INSTALLED WITHIN ROW PER DETAIL, TYP. OF 3
PROP. LEVEL GRAVEL PARKING (3 SPACES)
PROP. PRIVATE PRUD DRIVEWAY PER DETAIL
PROP. EARTHERN SOUND BERM
N/F Maine Turnpike Authority 2166/135
MAINE TURNPIKE (I-95)
N/F Alina Waterhouse, Raymond Waterhouse 6931/136
PROP. DEED PROTECTED LANDSCAPE BUFFER, TYP. OF 2
PHASE I
PROP. PUBLIC HYDRANT #2
12' DRAINAGE EASEMENT
PHASE II
PROP. PUBLIC HYDRANT #3
12' DRAINAGE EASEMENT
APPROX. 300' OF PROP. 6-FOOT CEDAR BOARD FENCE
LIMIT OF PHASE II BUILDOUT
EX. 30.00' UTILITY EASEMENT TO PWD TO REMAIN. (REFER TO EXISTING CONDITIONS PLAN.)
N/F Stroudwater Christian Church 4346/315
MAXIMUM PRINCIPAL BUILDING SETBACKS, TYP.
PROP. STOP SIGNS PER DETAIL INSTALLED AT EACH INTERSECTION, TYP. OF 8.
PROP. PUBLIC HYDRANT #1
LIMIT OF PHASE I BUILDOUT
PROP. 50.00' ROW
PROP. PUBLIC HYDRANT #4
5' BITUMINOUS SIDEWALK PER DETAIL
PROP. DRIVEWAY APRON PER DETAIL, TYP. FINAL LOCATION SUBJECT TO CHANGE DURING INDIVIDUAL LOT CONSTRUCTION. DRIVEWAY SEPARATION TO COMPLY WITH CITY TECHNICAL STANDARDS.
EX. 45.00' UTILITY EASEMENT TO MDOT TO REMAIN. (REFER TO EXISTING CONDITIONS PLAN.)
PROP. PUBLIC LOCAL ROAD BUILT TO CITY OF PORTLAND STANDARDS PER DETAIL
EXTENT OF EXISTING SITE WETLANDS, TYP. REFER TO THE HIGH INTENSITY SOIL SURVEY FOR TEST PIT SOIL PROFILES AND DATA SHEETS
N/F Portland Water District 98/384
N/F Bruce L. Harrington 1090/302
N/F Jacqueline D. Day 33513/280
Kevin A. Regan 31253/5
Mary A. Davis Stuart W. Tisdale Jr. 21186/321
N/F Linda E. Paradis, Andrew D. Green 27478/8
30.00' DEED PROTECTED LANDSCAPED BUFFER ALONG WESTBROOK ST, TYP. OF 3
30.00' PUBLIC ACCESS EASEMENT GRANTED TO PORTLAND TRAILS
35.00' OPEN SPACE EASEMENT
WESTBROOK STREET
OLD WESTBROOK STREET
SWAIN ST
EX. LANDSCAPED ISLAND, TYP. OF 2
VERTICAL GRANITE CURB WITH UNDERDRAIN PER DETAIL
EX. PUBLIC HYDRANT #1
EX. PROPERTY LINE
PROP. PROPERTY LINE SUBJECT TO BOUNDARY AGREEMENT WITH THE ABUTTING PROPERTIES
APPROX. EX. EDGE OF PAVEMENT
EX. BITUMINOUS SIDEWALK AND CURBING TO REMAIN
CONSTRUCTION OF NEW SIDEWALK SHALL REQUIRE DRIVEWAY APRONS TO BE REBUILT (PER DETAIL). RELOCATION OF MAILBOXES (AS NECESSARY). CONTRACTOR TO COORDINATE AND CARRY THE COST FOR RELOCATION OF UTILITY POLES TO MAINTAIN 5' SIDEWALK WIDTH (APPROX. 7 POLES)
PROP. BITUMINOUS SIDEWALK AND VERTICAL GRANITE CURB PER DETAIL. EX. CURB TO BE REMOVED AND REPLACED PER CITY OF PORTLAND TECHNICAL STANDARDS. EX. CURB CUTS TO REMAIN
OPEN SPACE LOT WITH PUBLIC ACCESS FROM WESTBROOK STREET
PROP. BIKE HITCH (1) INSTALLED WITHIN ROW PER DETAIL, TYP. OF 3
PROP. LOCATION OF FUTURE METRO BUS STATION
EX. PUBLIC HYDRANT #2
8.00', TYP.
PROP. BLOCK CROSSWALK: 24" LINES, 4' O.C. PER DETAIL, TYP.
REFER TO TRAFFIC ENGINEER'S REPORT FOR PEDESTRIAN SAFETY IMPROVEMENTS
PROP. BIKE HITCH (1) INSTALLED WITHIN ROW PER DETAIL, TYP. OF 3
APPROX. LOCATION OF EX. PORTLAND TRAILS FORE SANCTUARY TRAIL SYSTEM
APPROX. EXTENT OF PROP. DRIVEWAY WITH TURNAROUNDS, TYP. OF 4. PROP. DRIVEWAYS TO BE SPACED AT LEAST 20' FROM OTHER DRIVEWAYS PER CITY OF PORTLAND STANDARD
EX. GRAVEL ROAD. SPACE FOR APPROX. 4 PARKING SPACES AT TRAILHEAD

LEGEND:
- EX. WETLANDS
- DEED PROTECTED LANDSCAPED BUFFERS
- PUBLIC TRAIL ACCESS TO OPEN SPACE
- PROP. VERTICAL CURB
- PROP. PRUD BUILDING
- LOT LINE
- MIN BUILDING SETBACK
- BLOCK CROSSWALK
- WOODEN GUARDRAILS
- CEDAR FENCING

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS
RECEIVED: _____
RECORDED IN _____
ATTEST: _____ REGISTRAR

100 0 100 100
SCALE: 1" = 100'

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
TRAFFIC	WHS 6/5/17
FEMA	WHS 6/6/17
PHOTOMETRIC	OJD 6/16/17
PRELIM APP	WHS 8/25/17
FINAL APP	WHS 10/25/17
TRAFFIC REVIEW	WHS 11/9/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
PFD REVIEW	OJD 12/4/17
CONSTRUCTION	WHS 4/18/18

DRAWING NAME: OVERALL SUBDIVISION PLAN
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING
ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2855

FILE: 1079_CIVIL
JN: 1079
SCALE: 1"=100'
DESIGNED BY: OJD
DRAWN BY: OJD
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
NO. 11401
REGISTERED PROFESSIONAL ENGINEER
4-16-18

DRAWING NO.
C-10

GENERAL NOTES:

1. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO THE ROAD PROFILE PLANS (4), SHEETS C-20 TO C-23, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING & DRAINAGE PLANS (3), SHEETS C-31 TO C-33, MOST RECENT VERSION.
3. TOTAL SITE AREA INCLUDES 55.3 ACRES (2,408,860 S.F.). R.O.W. WIDTH FOR WESTBROOK STREET IS 66 FEET PER EXISTING CONDITIONS PLAN. REFER TO EXISTING CONDITIONS PLAN COMPLETED BY TITCOMB ASSOCIATES DATED 6/16/17.
4. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY TITCOMB ASSOCIATES. MONUMENTS TO LOCATED BY TITCOMB PRIOR TO INSTALLATION BY SITE CONTRACTOR.
5. PER THE PORTLAND GIS WEBSITE AS OF 10/10/17 AND ZONING MAP AMENDMENT PASSED BY CITY COUNCIL ON 7/24/17, THE SITE IS BOUNDED BY:
   - 5.1. NORTH R-1 RESIDENTIAL, OP OFFICE PARK, & ROS RECREATIONAL OPEN SPACE
   - 5.2. WEST R-1 RESIDENTIAL & R-2 RESIDENTIAL
   - 5.3. SOUTH OP OFFICE PARK
   - 5.4. EAST I-L INDUSTRIAL LAND & MAINE TURNPIKE
6. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S CHART, BLOCK, LOT: 229-A-2, 246-A-3, 247-A-3, 248-A-3, 256-A-3, 246-A-6, 247-A-2, & 245-B-5
7. PROPOSED HOUSE LOTS REMAIN OUTSIDE THE 100-YR FEMA FLOODPLAIN PER THE NATIONAL FLOOD INSURANCE PROGRAM, PRELIMINARY FLOOD INSURANCE RATE MAP DATED 4/14/2017 (APPROX. 27').
8. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
9. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO 100 LOTS INCLUDING 95 SINGLE FAMILY HOUSE LOTS, TWO (2) TWO-FAMILY LOTS, ONE (1) PRUD LOT, AND TWO (2) OPEN SPACE LOTS FOR A TOTAL OF 124 DWELLING UNITS.
10. WETLAND IMPACTS ASSOCIATED WITH THE DEVELOPMENT OF STROUDWATER PRESERVE ARE PERMITTED UNDER THE TIER I NRPA WETLAND ALTERATION PERMIT (#L-27619-TC-A-N) DATED 11/20/17 FOR 14,980 SF OF DISTURBANCE. ANY ADDITIONAL IMPACTS WILL REQUIRE ADDITIONAL PERMITTING.
11. THE SINGLE FAMILY AND TWO-FAMILY HOUSE LOTS ARE TO BE SUBJECT TO HOMEOWNERS ASSOCIATION (HOA) DOCUMENTS. THE HOA DOCUMENTS OUTLINE THE MAINTENANCE AND MANAGEMENT OF STORMWATER BMPS AND INFRASTRUCTURE UNDER THE DESIGNATED OWNERSHIP OF THE HOA; REFER TO THE STORMWATER BMP OWNERSHIP & MAINTENANCE SUMMARY TABLE. THE HOA WILL BE RESPONSIBLE FOR MAINTENANCE AND REPLACEMENT OF THE SEWER FORCEMAIN FROM THE WESTBROOK STREET CONNECTION. HOMEOWNERS WILL BE RESPONSIBLE FOR INDIVIDUAL SERVICE LATERALS AND PUMPS.
12. THE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE ASSOCIATIONS SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
13. DRIVEWAY LOCATIONS AS SHOWN ARE SUBJECT TO CHANGE DURING CONSTRUCTION BUT SHALL REMAIN IN COMPLIANCE WITH THE DESIGN AND SEPARATION STANDARDS SET BY THE TECHNICAL MANUAL.
14. THE PROJECT IS ANTICIPATED TO BE BUILT IN THREE PHASES. INFRASTRUCTURE FOR EACH PHASE WILL BE BUILT TO MEET CITY OF PORTLAND FIRE DEPARTMENT STANDARDS. SUBDIVISION PLANS PER PHASE ARE RECORDED WITH CCRD AT:
   - 14.1. PHASE II:
     BOOK _____ PAGE _____
   - 14.2. PHASE III:
     BOOK _____ PAGE _____
15. THE HOMEOWNERS ASSOCIATION MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:
   - 15.1. HOMEOWNERS ASSOCIATION DOCUMENTS:
     BOOK _____ PAGE _____
   - 15.2. HOMEOWNERS ASSOCIATION POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT:
     BOOK _____ PAGE _____
   - 15.3. PER CITY REQUIREMENT, THE PROPERTY IS SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AND DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS. THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AS APPROVED BY THE CITY IS RECORDED AT:
     BOOK _____ PAGE _____

CONDITIONAL USE, WAIVERS & CONDITIONS OF APPROVAL:

CONDITIONAL USE

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) THAT THE PROPOSED CONDITIONAL USE FOR WORKFORCE HOUSING DOES MEET THE STANDARDS OF SECTION 14-484 WITH THE FOLLOWING CONDITIONS:

1. THAT THE APPLICANT AND THE CITY SHALL ENTER INTO AN AGREED UPON AFFORDABLE HOUSING AGREEMENT (AHA) PRIOR TO THE ISSUANCE OF A BUILDING PERMIT; AND
2. THAT THE AFFORDABLE HOUSING AGREEMENT SHALL BE FILED AS COVENANT TO THE PROPERTY'S DEED WITH THE CUMBERLAND COUNTY REGISTRY OF DEEDS PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

WAIVERS

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) TO WAIVE THE REQUIREMENT FOR A SIDEWALK ALONG THE NORTH SIDE OF THE NEW STREET WITHIN THE NEW SUBDIVISION WITH THE CONDITION THAT FINAL PLAN SHOW THE SIDEWALK RELOCATED TO THE OUTER SIDE OF THE STREET NETWORK.

TRAFFIC MOVING PERMIT

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) THAT THE PLAN IS IN CONFORMANCE WITH 23 MRSA 704-A AND CHAPTER 305 RULES AND REGULATIONS PERTAINING TO TRAFFIC MOVEMENT PERMITS, WITH THE FOLLOWING CONDITIONS OF APPROVAL:

1. IF IT IS DETERMINED THAT A DEDICATED LEFT-TURN LANE ON WESTBROOK STREET IS WARRANTED, THE APPLICANT SHALL BE RESPONSIBLE FOR ALL COST FOR IMPLEMENTATION AND THE DESIGN SHALL MEET WITH THE APPROVAL OF DPW
2. IN CONJUNCTION WITH AN APPROVED OUTER CONGRESS TRANSPORTATION AND STREETSCAPE PLAN, THE APPLICANT SHALL MAKE A $12,600 CONTRIBUTION PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
3. A VARIABLE SPEED INDICATOR SHALL BE REQUIRED TO BE INSTALLED ON WESTBROOK STREET AT A LOCATION ACCEPTABLE AND THE CITY REQUEST THAT AN ADDITIONAL SPEED STUDY SHALL BE CONDUCTED UPON COMPLETION OF PHASE 1 AND IMPLEMENTATION OF THE ASSOCIATED CROSSWALKS AND SIDEWALK ON WESTBROOK STREET. IF THE SPEED STUDY INDICATES EXCESSIVE VEHICLE SPEEDS, THE APPLICANT SHALL IMPLEMENT TRAFFIC CALMING MITIGATION STRATEGIES ACCEPTABLE TO THE CITY.

SUBDIVISION STANDARDS

SUBDIVISION STANDARDS OF THE LAND USE CODE AND THE SITE LOCATION OF DEVELOPMENT ACT, SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL, WHICH MUST BE MET PRIOR TO THE SIGNING OF THE PLAT:

1. THE APPLICANT SHALL SUBMIT HOMEOWNER ASSOCIATION DOCUMENTS FOR REVIEW AND APPROVAL BY CORPORATION COUNSEL THAT ADDRESS:
   - 1.1. THE STORMWATER MAINTENANCE AGREEMENTS FOR THE DEVELOPMENT:
   - 1.2. STORMWATER DRAINAGE EASEMENTS; AND
   - 1.3. EASEMENTS FOR THE OPEN SPACE LOT; AND
   - 1.4. FINAL CONDITIONS OF APPROVAL.
2. THAT THE SUBDIVISION PLAT SHALL BE FINALIZED TO THE SATISFACTION OF THE PLANNING AUTHORITY, DEPARTMENT OF PUBLIC WORKS (DPW) AND CORPORATION COUNSEL AND TO INCLUDE REFERENCES TO STORMWATER DRAINAGE, STORMWATER MANAGEMENT, AND OPEN SPACE AND PUBLIC ACCESS AND FINAL CONDITIONS OF APPROVAL; AND
3. THE APPLICANT SHALL SUBMIT A FINAL PLAN AND SPECIFICATIONS, FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY AND THE DPW, THAT ARE IN CONFORMANCE WITH THE PROPOSED LED FIXTURE SPECIFICATIONS FOR THE STREET LIGHTS; AND
4. THE APPLICANT SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE RRFB'S FOLLOWING THE FIELD REVIEW. THE CITY IS REQUESTING THAT THE APPLICANT SHALL EVALUATE, AND IF NECESSARY, SHALL INSTALL LIGHTS FOR SAFE ILLUMINATION OF THE PROPOSED CROSSWALKS; AND
5. THE APPLICANT SHALL SUBMIT THE FOLLOWING FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY AND DPW:
   - 5.1. A SIMPLE STORMWATER PLAN THAT SHOWS ALL OF THE TREATMENT SYSTEMS AND THEIR TRIBUTARY DRAINAGE AREAS, INCORPORATING THE TREATMENT TABLE PROVIDED BY THE APPLICANT; AND
   - 5.2. UPDATED DESIGN PLANS REFLECTING CHANGES MADE TO THE HYDRAFLOW MODEL.
6. THE DEVELOPER/CONTRACTOR/SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE CONSTRUCTION STORMWATER MANAGEMENT PLAN AND SEDIMENT AND EROSION CONTROL PLAN BASED ON CITY STANDARDS AND STATE GUIDELINES. THE OWNER/OPERATOR OF THE APPROVED STORMWATER MANAGEMENT SYSTEM AND ALL ASSIGNS SHALL COMPLY WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS. THAT THE APPLICANT SHALL PROVIDE A STORMWATER MAINTENANCE AGREEMENT FOR THE STORMWATER DRAINAGE SYSTEM, SHALL BE SUBMITTED, SIGNED, AND RECORDED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT WITH A COPY TO THE DPW; AND
7. CONFIRMATION LETTERS FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) SHALL BE SUBMITTED TO THE PLANNING DIVISION UPON RECEIPT.
8. THE APPLICANT SHALL SUBMIT A REVISED LANDSCAPED PLAN THAT ADDRESSES THE CITY ARBORIST'S COMMENTS (DATED 11.22.2017) FOR REVIEW AND APPROVAL BY THE CITY ARBORIST AND PLANNING AUTHORITY.

EASEMENTS:

ALL PROPOSED EASEMENTS TO BE REVIEWED BY TITCOMB ASSOCIATES AND RECORDED IN CCRD. ALL EXISTING EASEMENTS ARE TO REMAIN.

EXISTING EASEMENTS:

1. SUBJECT TO A 30'-WIDE UTILITY EASEMENT FOR A 42" CONCRETE WATER PIPE GRANTED TO PORTLAND WATER DISTRICT FURTHER DESCRIBED IN BOOK 1382, PAGE 144 AND BOOK 1399, PAGE 462.
2. SUBJECT TO A 50'-WDE UTILITY EASEMENT FOR THREE PIPELINES FURTHER DESCRIBED IN INSTRUMENTS RECORDED IN BOOK 1655, PAGE 294 AND BOOK 2954, PAGE 772.
3. SUBJECT TO AN EASEMENT FOR A SEWER PIPE GRANTED BY RUBY H. YOUNG TO FREDERICK A. BUTTS AND MARIE BUTTS IN A DEED RECORDED IN BOOK 2236, PAGE 405. (LOCATION UNKNOWN).
4. SUBJECT TO AN EASEMENT FOR DRAINAGE GRANTED TO MAINE DEPARTMENT OF TRANSPORTATION AND FURTHER DESCRIBED IN AN INSTRUMENT RECORDED IN BOOK 4146, PAGE 333. LOCATION IS APPROXIMATE.
5. SUBJECT TO A SLOPE EASEMENT GRANTED TO MAINE DEPARTMENT OF TRANSPORTATION FURTHER DESCRIBED IN AN INSTRUMENT RECORDED IN BOOK 4146, PAGE 333. LOCATION IS APPROXIMATE.
6. BENEFITTING FROM AN EASEMENT FOR ACCESS RESERVED IN A DEED RECORDED IN BOOK 2198, PAGE 386.

PROPOSED EASEMENTS:

1. OPEN SPACE EASEMENTS BOOK _____ PAGE _____
2. PUBLIC ACCESS EASEMENTS BOOK _____ PAGE _____
3. DRAINAGE EASEMENTS BOOK _____ PAGE _____
4. UTILITY EASEMENTS BOOK _____ PAGE _____

SURVEY NOTES:

1. BOOK AND PAGE REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
2. BEARINGS ARE REFERENCED TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, NAD83, WEST ZONE.
3. ELEVATIONS ARE BASED ON NAVD88 DATUM AS DERIVED FROM GPS OBSERVATIONS. REFER TO THE EXISTING CONDITIONS PLAN BY TITCOMB ASSOCIATES DATED 6/16/17 LAST REVISED 2/21/18 FOR BENCHMARK LOCATIONS.
4. UTILITY INFORMATION ON THIS PLAN IS APPROXIMATE, BASED ON LOCATION OF VISIBLE FEATURES AND INFORMATION CONTAINED ON PLANS AND DRAWINGS PROVIDED BY OTHERS. DIGSAFE AND/OR THE APPROPRIATE UTILITIES SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION.
5. PROPERTY IS WITHIN ZONE X AND ZONE A BASED ON FIRM COMMUNITY #230051 PANEL #0012 C, DATED DECEMBER 8, 1998. ZONE X IS DEFINED AS AN AREA OF 500-YEAR FLOOD; AREA OF 100-YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD. ZONE A IS AN AREA WITH NO BASE FLOOD ELEVATION DETERMINED.
6. THE LOCATION OF THE HIGHWATER MARK ON NORTHERLY SIDE OF STROUDWATER RIVER WAS DELINEATED BY OTHERS AND LOCATED BY TITCOMB ASSOCIATES. THE LOCATION OF THE SOUTHERLY SIDE OF STROUDWATER RIVER IS APPROXIMATE BASED ON AERIAL IMAGERY.
7. THE TWO CRUDE OIL LINES WERE MARKED OUT BY PORTLAND PIPE LINE AND LOCATED BY TITCOMB ASSOCIATES. TITCOMB ASSOCIATES MAKES NO GUARANTEE OR WARRANTY AS TO THE ACCURACY OF THE PIPELINE ELEVATION DATA.

PLAN REFERENCES:

1. PLAN OF A STANDARD BOUNDARY SURVEY MADE FOR ONEX COMPANY BY NADEAU & LOOKE, IN., DATED FEBRUARY 21, 2003 AND REVISED THROUGH OCTOBER 9, 2003.
2. SECOND AMENDED SUBDIVISION PLAT OF PORTLAND TECHNOLOGY PARK MADE FOR CITY OF PORTLAND BY SGC ENGINEERING, LLC, DATED SEPTEMBER 29, 2011, REVISED THROUGH MARCH 8, 2016 AND RECORDED IN PLAN BOOK 216, PAGE 63.
3. PORTLAND WATER DISTRICT 42" CONCRETE PIPE LINE RIGHT OF WAY PLANS PREPARED BY HARRY FULLER, DATED AUGUST 1931 AND RECORDED IN PLAN BOOK 20, PAGE 39. (LOCATION IS APPROXIMATE).
4. PORTLAND PIPE LINE CO. SURVEY OF PROPERTY OF RUBY H. YOUNG, DATED OCTOBER 8, 1941 PREPARED BY FRANCIS A. GRIFFIN AND RECORDED IN PLAN BOOK 27, PAGE 37. (LOCATION IS APPROXIMATE).
5. STROUDWATER WOODS MADE FOR S.&E. CIMINO BY OWEN HASKELL, INC. DATED OCTOBER 25, 1979 AND RECORDED IN PLAN BOOK 125, PAGE 21.
6. PARTIAL BOUNDARY SURVEY FOR ANDREW D. GREEN BY LEWIS & WASINA, INC. DATED DECEMBER 10, 2004 AND REVISED THROUGH DECEMBER 14, 2004 AND RECORDED IN PLAN BOOK 205, PAGE 299.
7. PLAN OF PROPERTY MADE FOR ADVENT CHRISTIAN CHURCH OF PORTLAND BY H.I. & E.C. JORDAN DATED OCTOBER 18, 1979 AND RECORDED IN PLAN BOOK 125, PAGE 10.
8. PLAN OF PROPERTY MADE FOR THEODORE AND THERESE BARRIS BY WAYNE T. WOOD DATED JANUARY 1994 AND REVISED THROUGH JANUARY 27, 1994, UNRECORDED.
9. PLAN OF EXISTING CONDITIONS OF CAMELOT FARM MADE FOR DIVERSACORP LLC BY TITCOMB ASSOCIATES DATED JUNE 16, 2017 AND REVISED THROUGH FEBRUARY 21, 2018.

SPACE AND BULK STANDARDS

ZONE:	R-3	PROPOSED
MINIMUM LOT SIZE	6,500 SF	6,500 SF
MINIMUM STREET FRONTAGE	50'	50'
FRONT YARD	25'	25'
REAR YARD - PRINCIPAL	25'	25'
REAR YARD - ACCESSORY	5'	5'
SIDE YARD	16'	16'
MAXIMUM LOT COVERAGE	35%	MAX 35%
MINIMUM LOT WIDTH*	65'	65'
MAXIMUM BUILDING HEIGHT	35'	< 35'
MAXIMUM ACCESSORY HEIGHT	18'	< 18'

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.

STORMWATER BMP OWNERSHIP & MAINTENANCE SUMMARY

CITY	HOA
FP-1, FP-4, FP-5, FP-7, FP-9	FP-2, FP-3, FP-6, FP-8, FP-10
*REFER C-31 FOR BMP LOCATIONS	

DATUM REFERENCE NOTE:

ELEVATION AND CONTOUR INFORMATION BASED ON NAVD 88. TO CONVERT THE ELEVATION DATA TO NGVD DATUM, ADD 0.70 FEET TO THE NAVD 88 VALUE.

LEGEND:

- EX. WETLANDS
- DEED PROTECTED LANDSCAPED BUFFERS
- POTENTIAL IZ LOTS
- LOT LINE
- EASEMENT BOUNDARY
- BLOCK CROSSWALK
- WOODEN GUARDRAILS
- PROP. REBAR PROPERTY PINS
- PROP. GRANITE MONUMENTS

THIS SURVEY CONFORMS TO THE CURRENT STANDARDS OF PRACTICE SET FORTH BY THE MAINE STATE BOARD OF LICENSURE FOR LAND SURVEYORS.

REX CROTEAU, MAINE P.L.S. #2273 DATE: 03/16/18
TITCOMB ASSOCIATES

DEVELOPER:
STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE
CONTACT: MICHAEL BARTON

CIVIL/SITE ENGINEER:
ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILLIAM SAVAGE, P.E.

SURVEYOR:
TITCOMB ASSOCIATES
FALMOUTH, MAINE
CONTACT: REX CROTEAU, P.L.S.

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND
COUNTY REGISTRY OF DEEDS

RECEIVED: _____

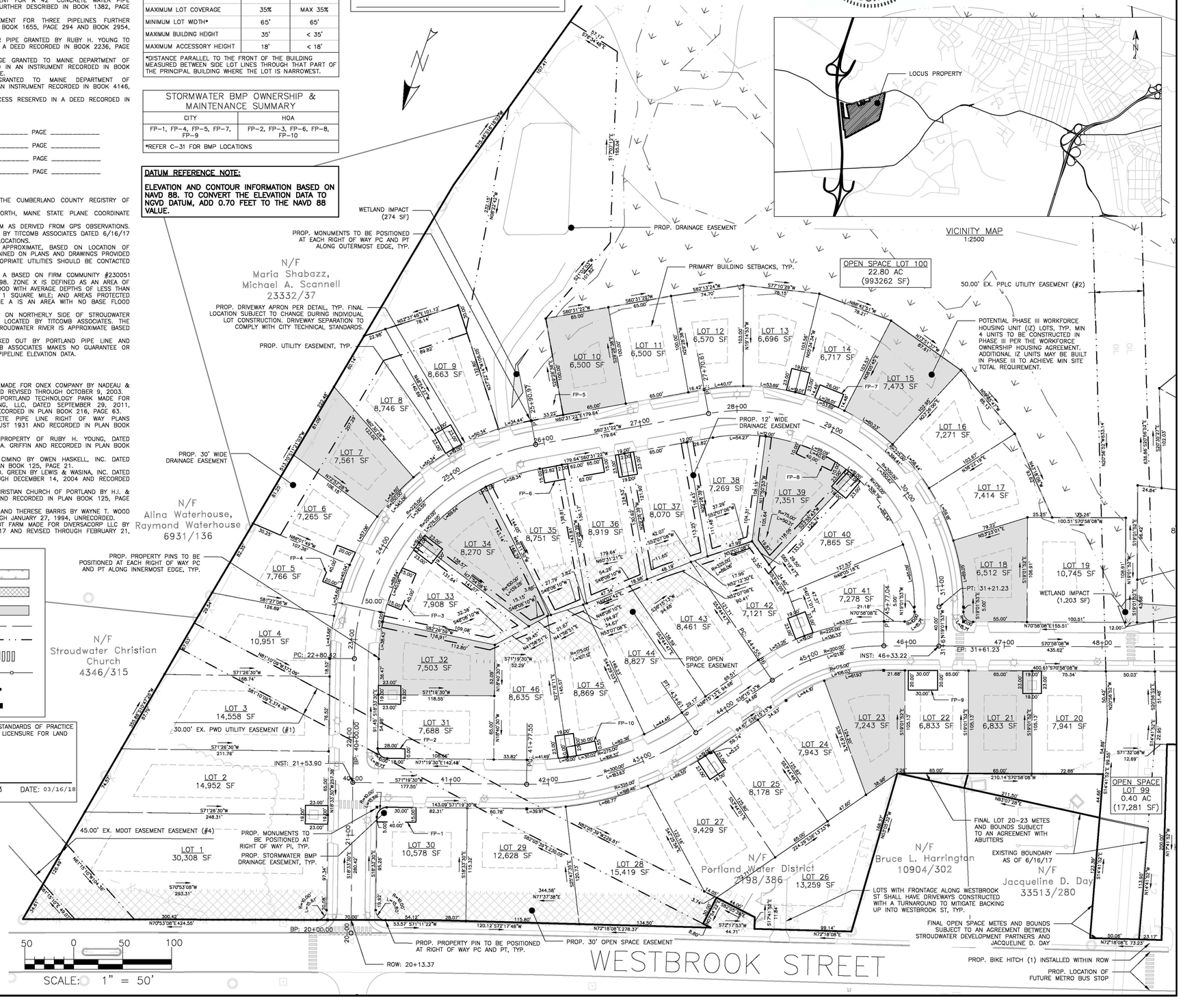
RECORDED IN _____

ATTEST: _____
REGISTRAR

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

STATE OF MAINE REX CROTEAU 2273 PROFESSIONAL LAND SURVEYOR

FINAL APP
NOT ISSUED FOR CONSTRUCTION



ACORN ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2855

ISSUED FOR	BY	DATE
FINAL APP	WHS	10/25/17
DPW REVIEW	WHS	11/9/17
CITY COMMENTS	WHS	11/21/17
PLAT REVIEW	WHS	2/15/18

DRAWING NAME: SUBDIVISION PLAT - PHASE I
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=50'
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11416 2-20-18 PROFESSIONAL ENGINEER

DRAWING NO.
C-11

GENERAL NOTES:

1. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO THE ROAD PROFILE PLANS (4), SHEETS C-20 TO C-23, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING & DRAINAGE PLANS (3), SHEETS C-31 TO C-33, MOST RECENT VERSION.
3. TOTAL SITE AREA INCLUDES 55.3 ACRES (2,408,860 S.F.). R.O.W. WIDTH FOR WESTBROOK STREET IS 66 FEET PER EXISTING CONDITIONS PLAN. REFER TO EXISTING CONDITIONS PLAN COMPLETED BY TITCOMB ASSOCIATES DATED 6/16/17.
4. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY TITCOMB ASSOCIATES. MONUMENTS TO LOCATED BY TITCOMB PRIOR TO INSTALLATION BY SITE CONTRACTOR.
5. PER THE PORTLAND GIS WEBSITE AS OF 10/10/17 AND ZONING MAP AMENDMENT PASSED BY CITY COUNCIL ON 7/24/17, THE SITE IS BOUNDED BY:
   - 5.1. NORTH R-1 RESIDENTIAL, OP OFFICE PARK, & ROS RECREATIONAL OPEN SPACE
   - 5.2. WEST R-1 RESIDENTIAL & R-2 RESIDENTIAL
   - 5.3. SOUTH OP OFFICE PARK
   - 5.4. EAST I-L INDUSTRIAL LAND & MAINE TURNPIKE
6. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S CHART, BLOCK, LOT: 229-A-2, 246-A-3, 247-A-3, 248-A-3, 256-A-3, 246-A-6, 247-A-2, & 245-B-5
7. PROPOSED HOUSE LOTS REMAIN OUTSIDE THE 100-YR FEMA FLOODPLAIN PER THE NATIONAL FLOOD INSURANCE PROGRAM, PRELIMINARY FLOOD INSURANCE RATE MAP DATED 4/14/2017 (APPROX. 27').
8. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
9. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO 100 LOTS INCLUDING 95 SINGLE FAMILY HOUSE LOTS, TWO (2) TWO-FAMILY LOTS, ONE (1) PRUD LOT, AND TWO (2) OPEN SPACE LOTS FOR A TOTAL OF 124 DWELLING UNITS.
10. WETLAND IMPACTS ASSOCIATED WITH THE DEVELOPMENT OF STROUDWATER PRESERVE ARE PERMITTED UNDER THE TIER I NRPA WETLAND ALTERATION PERMIT (#L-27619-TC-A-N) DATED 11/20/17 FOR 14,980 SF OF DISTURBANCE. ANY ADDITIONAL IMPACTS WILL REQUIRE ADDITIONAL PERMITTING.
11. THE SINGLE FAMILY AND TWO-FAMILY HOUSE LOTS ARE TO BE SUBJECT TO HOMEOWNERS ASSOCIATION (HOA) DOCUMENTS. OUTLINE THE MAINTENANCE AND MANAGEMENT OF STORMWATER BMPS AND INFRASTRUCTURE UNDER THE DESIGNATED OWNERSHIP OF THE HOA; REFER TO THE STORMWATER BMP OWNERSHIP & MAINTENANCE SUMMARY TABLE. THE HOA WILL BE RESPONSIBLE FOR MAINTENANCE AND REPLACEMENT OF THE SEWER FORCEMAIN FROM THE WESTBROOK STREET CONNECTION. HOMEOWNERS WILL BE RESPONSIBLE FOR INDIVIDUAL SERVICE LATERALS AND PUMPS.
12. THE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE ASSOCIATIONS SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
13. DRIVEWAY LOCATIONS AS SHOWN ARE SUBJECT TO CHANGE DURING CONSTRUCTION BUT SHALL REMAIN IN COMPLIANCE WITH THE DESIGN AND SEPARATION STANDARDS SET BY THE TECHNICAL MANUAL.
14. THE PROJECT IS ANTICIPATED TO BE BUILT IN THREE PHASES. INFRASTRUCTURE FOR EACH PHASE WILL BE BUILT TO MEET CITY OF PORTLAND FIRE DEPARTMENT STANDARDS. SUBDIVISION PLANS PER PHASE ARE RECORDED WITH CCRD AT:
   - 14.1. PHASE I:
     BOOK _____ PAGE _____
   - 14.2. PHASE III:
     BOOK _____ PAGE _____
15. THE HOMEOWNERS ASSOCIATION MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:
   - 15.1. HOMEOWNERS ASSOCIATION DOCUMENTS:
     BOOK _____ PAGE _____
   - 15.2. HOMEOWNERS ASSOCIATION POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT:
     BOOK _____ PAGE _____
   - 15.3. PER CITY REQUIREMENT, THE PROPERTY IS SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AND DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS. THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AS APPROVED BY THE CITY IS RECORDED AT:
     BOOK _____ PAGE _____

CONDITIONAL USE, WAIVERS & CONDITIONS OF APPROVAL:

CONDITIONAL USE

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) THAT THE PROPOSED CONDITIONAL USE FOR WORKFORCE HOUSING DOES MEET THE STANDARDS OF SECTION 14-484 WITH THE FOLLOWING CONDITIONS:

1. THAT THE APPLICANT AND THE CITY SHALL ENTER INTO AN AGREED UPON AFFORDABLE HOUSING AGREEMENT (AHA) PRIOR TO THE ISSUANCE OF A BUILDING PERMIT; AND
2. THAT THE AFFORDABLE HOUSING AGREEMENT SHALL BE FILED AS COVENANT TO THE PROPERTY'S DEED WITH THE CUMBERLAND COUNTY REGISTRY OF DEEDS PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

WAIVERS

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) TO WAIVE THE REQUIREMENT FOR A SIDEWALK ALONG THE NORTH SIDE OF THE NEW STREET WITHIN THE NEW SUBDIVISION WITH THE CONDITION THAT FINAL PLAN SHOW THE SIDEWALK RELOCATED TO THE OUTER SIDE OF THE STREET NETWORK.

TRAFFIC MOVING PERMIT

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) THAT THE PLAN IS IN CONFORMANCE WITH 23 MRSA 704-A AND CHAPTER 305 RULES AND REGULATIONS PERTAINING TO TRAFFIC MOVEMENT PERMITS, WITH THE FOLLOWING CONDITIONS OF APPROVAL:

1. IF IT IS DETERMINED THAT A DEDICATED LEFT-TURN LANE ON WESTBROOK STREET IS WARRANTED, THE APPLICANT SHALL BE RESPONSIBLE FOR ALL COST FOR IMPLEMENTATION AND THE DESIGN SHALL MEET WITH THE APPROVAL OF DPW.
2. IN CONJUNCTION WITH AN APPROVED OUTER CONGRESS TRANSPORTATION AND STREETSCAPE PLAN, THE APPLICANT SHALL MAKE A $12,600 CONTRIBUTION PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
3. A VARIABLE SPEED INDICATOR SHALL BE REQUIRED TO BE INSTALLED ON WESTBROOK STREET AT A LOCATION ACCEPTABLE AND THE CITY REQUEST THAT AN ADDITIONAL SPEED STUDY SHALL BE CONDUCTED UPON COMPLETION OF PHASE 1 AND IMPLEMENTATION OF THE ASSOCIATED CROSSWALKS AND SIDEWALK ON WESTBROOK STREET. IF THE SPEED STUDY INDICATES EXCESSIVE VEHICLE SPEEDS, THE APPLICANT SHALL IMPLEMENT TRAFFIC CALMING MITIGATION STRATEGIES ACCEPTABLE TO THE CITY.

SUBDIVISION STANDARDS

SUBDIVISION STANDARDS OF THE LAND USE CODE AND THE SITE LOCATION OF DEVELOPMENT ACT, SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL, WHICH MUST BE MET PRIOR TO THE SIGNING OF THE PLAT:

1. THE APPLICANT SHALL SUBMIT HOMEOWNER ASSOCIATION DOCUMENTS FOR REVIEW AND APPROVAL BY CORPORATION COUNSEL THAT ADDRESS:
   - 1.1. THE STORMWATER MAINTENANCE AGREEMENTS FOR THE DEVELOPMENT;
   - 1.2. STORMWATER DRAINAGE EASEMENTS; AND
   - 1.3. EASEMENTS FOR THE OPEN SPACE LOT; AND
   - 1.4. FINAL CONDITIONS OF APPROVAL.
2. THAT THE SUBDIVISION PLAT SHALL BE FINALIZED TO THE SATISFACTION OF THE PLANNING AUTHORITY, DEPARTMENT OF PUBLIC WORKS (DPW) AND CORPORATION COUNSEL AND TO INCLUDE REFERENCES TO STORMWATER DRAINAGE, STORMWATER MANAGEMENT, AND OPEN SPACE AND PUBLIC ACCESS AND FINAL CONDITIONS OF APPROVAL; AND
3. THE APPLICANT SHALL SUBMIT A FINAL PLAN AND SPECIFICATIONS FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY AND THE DPW, THAT ARE IN CONFORMANCE WITH THE PROPOSED LED FIXTURE SPECIFICATIONS FOR THE STREET LIGHTS; AND
4. THE APPLICANT SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE RRFB'S FOLLOWING THE FIELD REVIEW. THE CITY IS REQUESTING THAT THE APPLICANT SHALL EVALUATE, AND IF NECESSARY, SHALL INSTALL LIGHTS FOR SAFE ILLUMINATION OF THE PROPOSED CROSSWALKS; AND
5. THE APPLICANT SHALL SUBMIT THE FOLLOWING FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY AND DPW:
   - 5.1. A SIMPLE STORMWATER PLAN THAT SHOWS ALL OF THE TREATMENT SYSTEMS AND THEIR TRIBUTARY DRAINAGE AREAS, INCORPORATING THE TREATMENT TABLE PROVIDED BY THE APPLICANT; AND
   - 5.2. UPDATED DESIGN PLANS REFLECTING CHANGES MADE TO THE HYDRAFLOW MODEL.
6. THE DEVELOPER/CONTRACTOR/SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE CONSTRUCTION STORMWATER MANAGEMENT PLAN AND SEDIMENT AND EROSION CONTROL PLAN BASED ON CITY STANDARDS AND STATE GUIDELINES. THE OWNER/OPERATOR OF THE APPROVED STORMWATER MANAGEMENT SYSTEM AND ALL ASSIGNS SHALL COMPLY WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS. THAT THE APPLICANT SHALL PROVIDE A STORMWATER MAINTENANCE AGREEMENT FOR THE STORMWATER DRAINAGE SYSTEM, SHALL BE SUBMITTED, SIGNED, AND RECORDED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT WITH A COPY TO THE DPW; AND
7. CONFIRMATION LETTERS FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) SHALL BE SUBMITTED TO THE PLANNING DIVISION UPON RECEIPT.
8. THE APPLICANT SHALL SUBMIT A REVISED LANDSCAPED PLAN THAT ADDRESSES THE CITY ARBORIST'S COMMENTS (DATED 11.22.2017) FOR REVIEW AND APPROVAL BY THE CITY ARBORIST AND PLANNING AUTHORITY.

EASEMENTS:

ALL PROPOSED EASEMENTS TO BE REVIEWED BY TITCOMB ASSOCIATES AND RECORDED IN CCRD. ALL EXISTING EASEMENTS ARE TO REMAIN.

EXISTING EASEMENTS:

1. SUBJECT TO A 30'-WIDE UTILITY EASEMENT FOR A 42" CONCRETE WATER PIPE GRANTED TO PORTLAND WATER DISTRICT FURTHER DESCRIBED IN BOOK 1382, PAGE 144 AND BOOK 1399, PAGE 462.
2. SUBJECT TO A 50'-WDE UTILITY EASEMENT FOR THREE PIPELINES FURTHER DESCRIBED IN INSTRUMENTS RECORDED IN BOOK 1655, PAGE 294 AND BOOK 2954, PAGE 772.
3. SUBJECT TO AN EASEMENT FOR A SEWER PIPE GRANTED BY RUBY H. YOUNG TO FREDERICK A. BUTTS AND MARIE BUTTS IN A DEED RECORDED IN BOOK 2236, PAGE 405. (LOCATION UNKNOWN).
4. SUBJECT TO AN EASEMENT FOR DRAINAGE GRANTED TO MAINE DEPARTMENT OF TRANSPORTATION AND FURTHER DESCRIBED IN AN INSTRUMENT RECORDED IN BOOK 4146, PAGE 333. LOCATION IS APPROXIMATE.
5. SUBJECT TO A SLOPE EASEMENT GRANTED TO MAINE DEPARTMENT OF TRANSPORTATION FURTHER DESCRIBED IN AN INSTRUMENT RECORDED IN BOOK 4146, PAGE 333. LOCATION IS APPROXIMATE.
6. BENEFITTING FROM AN EASEMENT FOR ACCESS RESERVED IN A DEED RECORDED IN BOOK 2198, PAGE 386.

PROPOSED EASEMENTS:

1. OPEN SPACE EASEMENTS BOOK _____ PAGE _____
2. PUBLIC ACCESS EASEMENTS BOOK _____ PAGE _____
3. DRAINAGE EASEMENTS BOOK _____ PAGE _____
4. UTILITY EASEMENTS BOOK _____ PAGE _____

SURVEY NOTES:

1. BOOK AND PAGE REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
2. BEARINGS ARE REFERENCED TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, NAD83, WEST ZONE.
3. ELEVATIONS ARE BASED ON NAVD88 DATUM AS DERIVED FROM GPS OBSERVATIONS. REFER TO THE EXISTING CONDITIONS PLAN BY TITCOMB ASSOCIATES DATED 6/16/17 LAST REVISED 2/21/18 FOR BENCHMARK LOCATIONS.
4. UTILITY INFORMATION ON THIS PLAN IS APPROXIMATE, BASED ON LOCATION OF VISIBLE FEATURES AND INFORMATION CONTAINED ON PLANS AND DRAWINGS PROVIDED BY OTHERS. DIGSAFE AND/OR THE APPROPRIATE UTILITIES SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION.
5. PROPERTY IS WITHIN ZONE X AND ZONE A BASED ON FIRM COMMUNITY #230051 PANEL #0012 C, DATED DECEMBER 8, 1998. ZONE X IS DEFINED AS AN AREA OF 500-YEAR FLOOD; AREA OF 100-YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD. ZONE A IS AN AREA WITH NO BASE FLOOD ELEVATION DETERMINED.
6. THE LOCATION OF THE HIGHWATER MARK ON NORTHERLY SIDE OF STROUDWATER RIVER WAS DELINEATED BY OTHERS AND LOCATED BY TITCOMB ASSOCIATES. THE LOCATION OF THE SOUTHERLY SIDE OF STROUDWATER RIVER IS APPROXIMATE BASED ON AERIAL IMAGERY.
7. THE TWO CRUDE OIL LINES WERE MARKED OUT BY PORTLAND PIPE LINE AND LOCATED BY TITCOMB ASSOCIATES. TITCOMB ASSOCIATES MAKES NO GUARANTEE OR WARRANTY AS TO THE ACCURACY OF THE PIPELINE ELEVATION DATA.

PLAN REFERENCES:

1. PLAN OF A STANDARD BOUNDARY SURVEY MADE FOR ONEX COMPANY BY NADEAU & LODGE, IN., DATED FEBRUARY 21, 2003 AND REVISED THROUGH OCTOBER 9, 2003.
2. SECOND AMENDED SUBDIVISION PLAT OF PORTLAND TECHNOLOGY PARK MADE FOR CITY OF PORTLAND BY SGC ENGINEERING, LLC, DATED SEPTEMBER 29, 2011, REVISED THROUGH MARCH 8, 2016 AND RECORDED IN PLAN BOOK 216, PAGE 63.
3. PORTLAND WATER DISTRICT 42" CONCRETE PIPE LINE RIGHT OF WAY PLANS PREPARED BY HARRY FULLER, DATED AUGUST 1931 AND RECORDED IN PLAN BOOK 20, PAGE 39. (LOCATION IS APPROXIMATE).
4. PORTLAND PIPE LINE CO. SURVEY OF PROPERTY OF RUBY H. YOUNG, DATED OCTOBER 8, 1941 PREPARED BY FRANCIS A. GRIFFIN AND RECORDED IN PLAN BOOK 27, PAGE 37. (LOCATION IS APPROXIMATE).
5. STROUDWATER WOODS MADE FOR S.&E. CIMINO BY OWEN HASKELL, INC. DATED OCTOBER 25, 1979 AND RECORDED IN PLAN BOOK 125, PAGE 21.
6. PARTIAL BOUNDARY SURVEY FOR ANDREW D. GREEN BY LEWIS & WASINA, INC. DATED DECEMBER 10, 2004 AND REVISED THROUGH DECEMBER 14, 2004 AND RECORDED IN PLAN BOOK 205, PAGE 299.
7. PLAN OF PROPERTY MADE FOR ADVENT CHRISTIAN CHURCH OF PORTLAND BY H.L. & E.C. JORDAN DATED OCTOBER 16, 1979 AND RECORDED IN PLAN BOOK 125, PAGE 10.
8. PLAN OF PROPERTY MADE FOR THEODORE AND THERESE BARRIS BY WAYNE T. WOOD DATED JANUARY 1994 AND REVISED THROUGH JANUARY 27, 1994, UNRECORDED.
9. PLAN OF EXISTING CONDITIONS OF CAMELOT FARM MADE FOR DIVERSACORP LLC BY TITCOMB ASSOCIATES DATED JUNE 16, 2017 AND REVISED THROUGH FEBRUARY 21, 2018.

DATUM REFERENCE NOTE:

ELEVATION AND CONTOUR INFORMATION BASED ON NAVD 88. TO CONVERT THE ELEVATION DATA TO NGVD DATUM, ADD 0.70 FEET TO THE NAVD 88 VALUE.

SPACE AND BULK STANDARDS		
ZONE:	R-3	PROPOSED
MINIMUM LOT SIZE	6,500 SF	6,500 SF
MINIMUM STREET FRONTAGE	50'	50'
FRONT YARD	25'	25'
REAR YARD – PRINCIPAL	25'	25'
REAR YARD – ACCESSORY	5'	5'
SIDE YARD	16'	16'
MAXIMUM LOT COVERAGE	35%	MAX 35%
MINIMUM LOT WIDTH*	65'	65'
MAXIMUM BUILDING HEIGHT	35'	< 35'
MAXIMUM ACCESSORY HEIGHT	18'	< 18'

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.

STORMWATER BMP OWNERSHIP & MAINTENANCE SUMMARY	
CITY	HOA
FP-11, FP-12, FP-13, FP-15, FP-18, FP-19	FP-14, FP-16, FP-17, FP-20

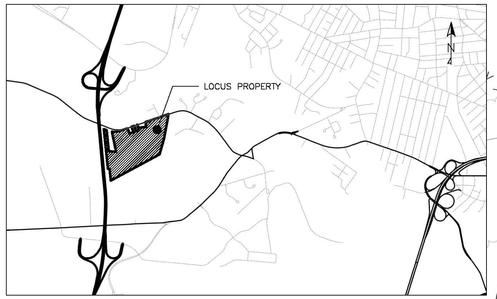
*REFER C-32 FOR BMP LOCATIONS

LEGEND:

- EX. WETLANDS
- DEED PROTECTED LANDSCAPED BUFFERS
- POTENTIAL IZ LOTS
- LOT LINE
- EASEMENT BOUNDARY
- BLOCK CROSSWALK
- WOODEN GUARDRAILS
- PROP. REBAR PROPERTY PINS
- PROP. GRANITE MONUMENTS

REX J. CROTEAU 2273 STATE OF MAINE PROFESSIONAL LAND SURVEYOR

VICINITY MAP
1:2500



THIS SURVEY CONFORMS TO THE CURRENT STANDARDS OF PRACTICE SET FORTH BY THE MAINE STATE BOARD OF LICENSURE FOR LAND SURVEYORS.

REX CROTEAU, MAINE P.L.S. #2273 DATE: 03/19/2018
TITCOMB ASSOCIATES

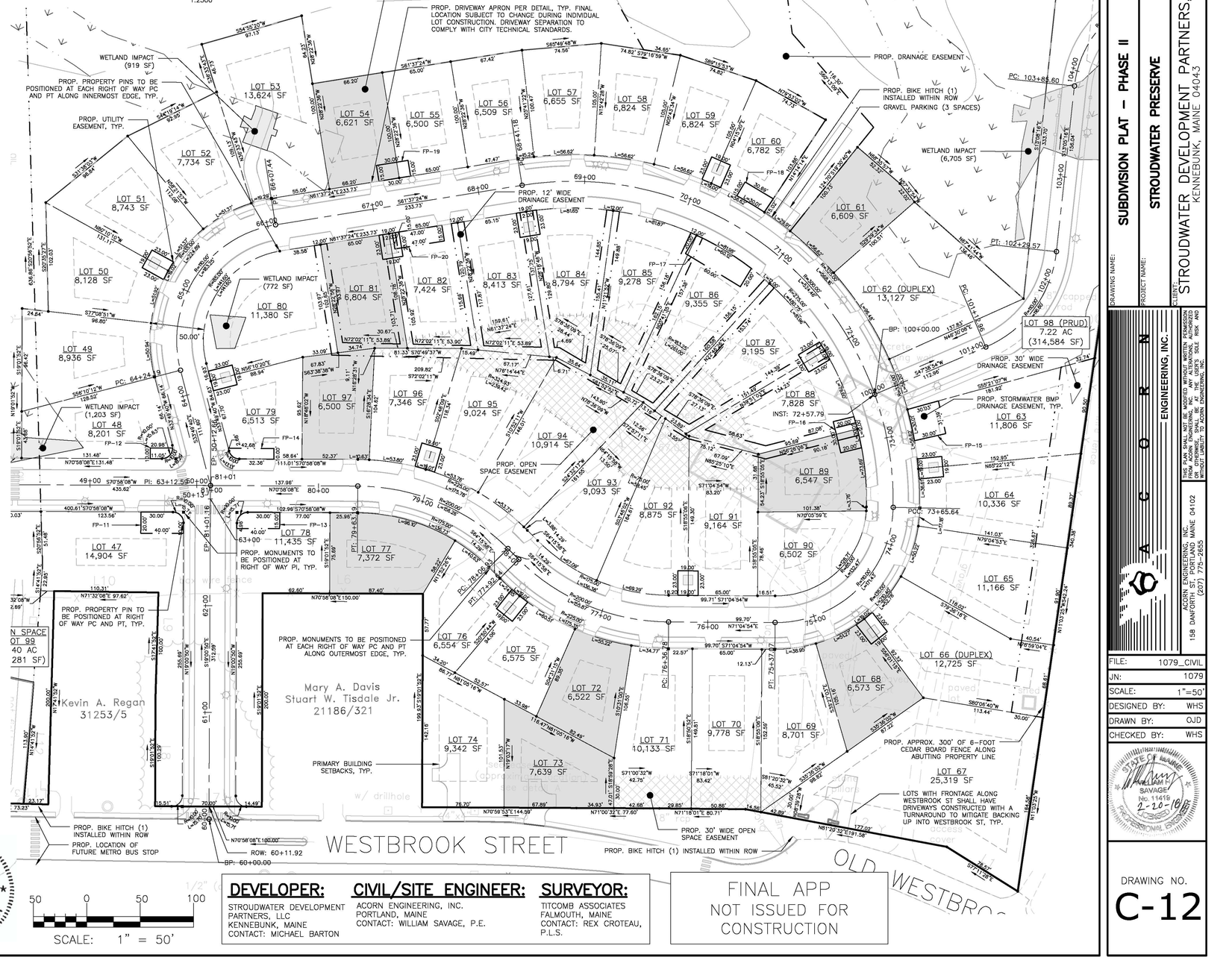
Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
03/22/2018

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS
RECEIVED: _____
RECORDED IN _____
ATTEST: _____ REGISTRAR

APPROVED: PORTLAND PLANNING BOARD
CHAIRPERSON: DATE:

OPEN SPACE LOT 100
22.80 AC
(993262 SF)

POTENTIAL PHASE I WORKFORCE HOUSING UNIT (IZ) LOTS, TYP. MIN 5 UNITS TO BE CONSTRUCTED IN PHASE III PER THE WORKFORCE OWNERSHIP HOUSING AGREEMENT.



50 0 50 100
SCALE: 1" = 50'

DEVELOPER:
STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE
CONTACT: MICHAEL BARTON

CIVIL/SITE ENGINEER:
ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILLIAM SAVAGE, P.E.

SURVEYOR:
TITCOMB ASSOCIATES
FALMOUTH, MAINE
CONTACT: REX CROTEAU, P.L.S.

FINAL APP
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
PLAT REVIEW	WHS 2/15/18

DRAWING NAME: SUBDIVISION PLAT – PHASE II
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC. — ENGINEERING, INC.
ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=50'
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE WILLIAM H. SAVAGE No. 11419 2-20-18 LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-12

SPACE AND BULK STANDARDS		
ZONE:	R-3	PROPOSED
LOT STANDARDS		
MINIMUM LOT SIZE	6,500 SF	6,500 SF
MINIMUM STREET FRONTAGE	50'	50'
FRONT YARD	25'	25'
REAR YARD – PRINCIPAL	25'	25'
REAR YARD – ACCESSORY	5'	5'
SIDE YARD	16'	16'
MAXIMUM LOT COVERAGE	35%	MAX 35%
MINIMUM LOT WIDTH*	65'	65'
MAXIMUM BUILDING HEIGHT	35'	< 35'
MAXIMUM ACCESSORY HEIGHT	18'	< 18'
PLANNED RESIDENTIAL UNIT DEVELOPMENT (PRUD) STANDARDS		
MINIMUM LOT AREA PER DWELLING UNIT	6,500 SF	6,500 SF
MAXIMUM NUMBER OF DWELLING UNITS**	38	25
MAX NUMBER OF UNITS PER BUILDING (>5 AC)	6	5
MAX NUMBER OF UNITS PER BUILDING (<5 AC)	2	N/A
MAX LENGTH OF BUILDING (W/ INTEGRAL GARAGES)	140'	140'
MIN BUILDING SETBACK FROM EXTERNAL PROPERTY LINES (>4 UNITS PER BUILDING)	35'	35'
MIN DISTANCE BETWEEN BUILDINGS	16'	17.12'
MINIMUM RECREATIONAL OPEN SPACE	300 SF/DU = 7,500 SF	43,496 SF
MIN CONTIGUOUS AREA OF RECREATIONAL USE	6,000 SF	6,105 SF
MIN WIDTH RECREATIONAL AREA	50'	60.03'

*DISTANCE PARALLEL TO THE FRONT OF THE BUILDING MEASURED BETWEEN SIDE LOT LINES THROUGH THAT PART OF THE PRINCIPAL BUILDING WHERE THE LOT IS NARROWEST.
**REFER TO PRUD LAND USE ORDINANCE NARRATIVE FOR CALCULATIONS

LEGEND:

- EX. WETLANDS
- PUBLIC TRAIL NETWORK
- BITUMINOUS CURB
- PROP PRUD BUILDING
- POTENTIAL IZ UNITS
- LOT LINE
- EASEMENT BOUNDARY
- BLOCK CROSSWALK
- WOODEN GUARDRAILS
- PROP. REBAR PROPERTY PINS

UNIT TABULATION	
UNIT NUMBER	FLOOR AREA
12-14, 22-24, 32-34, 42-44, 52-54	2,349 SF
11, 15, 21, 25, 31, 35, 41, 45, 51, & 55	2,359 SF
*UNIT AREA MEASURED FROM OUTSIDE OF EXTERIOR WALLS TO THE CENTER OF SHARED WALLS	

GENERAL NOTES:

1. FOR INFORMATION REGARDING PROPOSED UTILITY CHANGES, REFER TO THE ROAD PROFILE PLANS (4), SHEETS C-20 TO C-24, MOST RECENT VERSION.
2. FOR INFORMATION REGARDING PROPOSED GRADING CHANGES, REFER TO GRADING & DRAINAGE PLANS (3), SHEETS C-31 TO C-33, MOST RECENT VERSION.
3. REFER TO ARCHITECTURAL PLANS FOR PRUD FLOOR PLANS AND BUILDING HEIGHTS.
4. TOTAL SITE AREA INCLUDES 55.3 ACRES (2,408,860 S.F.). R.O.W. WIDTH FOR WESTBROOK STREET IS 66 FEET PER EXISTING CONDITIONS PLAN. REFER TO EXISTING CONDITIONS PLAN COMPLETED BY TITCOMB ASSOCIATES DATED 6/16/17.
5. SITE BOUNDARIES PER EXISTING CONDITIONS PLAN AND PROPERTY PINS TO BE SET BY TITCOMB ASSOCIATES.
6. PER THE PORTLAND GIS WEBSITE AS OF 10/10/17 AND ZONING MAP AMENDMENT PASSED BY CITY COUNCIL ON 7/24/17, THE SITE IS BOUNDED BY:
   - 6.1. NORTH R-1 RESIDENTIAL, OP OFFICE PARK, & ROS RECREATIONAL OPEN SPACE
   - 6.2. WEST R-1 RESIDENTIAL & R-2 RESIDENTIAL
   - 6.3. SOUTH OP OFFICE PARK
   - 6.4. EAST I-L INDUSTRIAL LAND & MAINE TURNPIKE
7. LOCUS PARCEL IS SHOWN ON THE CITY OF PORTLAND ASSESSOR'S CHART, BLOCK, LOT: 229-A-2, 246-A-3, 247-A-3, 248-A-3, 256-A-3, 246-A-6, 247-A-2, & 245-B-5
8. PROPOSED DEVELOPED AREA REMAINS OUTSIDE THE 100-YR FEMA FLOODPLAIN PER THE NATIONAL FLOOD INSURANCE PROGRAM, PRELIMINARY FLOOD INSURANCE RATE MAP DATED 4/14/2017 (APPROX. 27').
9. ALL BUILDING CORNER OFFSETS TO BOUNDARY LINES ARE FROM CORNERBOARDS AND NOT BUILDING FOUNDATION, UNLESS OTHERWISE NOTED.
10. THIS SHEET IS THE SUBDIVISION PLAT FOR THE CREATION OF UP TO 100 LOTS INCLUDING 95 SINGLE FAMILY HOUSE LOTS, TWO (2) TWO-FAMILY LOTS, ONE (1) PRUD LOT, AND TWO (2) OPEN SPACE LOTS FOR A TOTAL OF 124 DWELLING UNITS.
11. THE PRUD LOT IS TO BE SUBJECT TO CONDOMINIUM ASSOCIATION DOCUMENTS. THE CONDOMINIUM ASSOCIATION DOCUMENTS OUTLINE THE MAINTENANCE AND MANAGEMENT OF THE PRUD ROADWAY, DRIVEWAYS, SIDEWALKS, STORMWATER BMPS AND INFRASTRUCTURE, PRIVATE UTILITIES, AND SEWER INFRASTRUCTURE AS THE RESPONSIBILITY OF THE ASSOCIATION. THE CONDOMINIUM ASSOCIATION WILL BE RESPONSIBLE FOR MAINTENANCE AND REPLACEMENT OF THE SEWER FORCEMAIN, INCLUDING BUILDING LATERALS AND PUMPS, FROM THE CONNECTION TO THE EX. SEWER MANHOLE CLEANOUT INSTALLED IN PHASE I.
12. THE CONDOMINIUM ASSOCIATION SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT, WHICH SPECIFIES ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS AT A MINIMUM. IN ADDITION, THE ASSOCIATIONS SHALL BE RESPONSIBLE FOR COMPLYING WITH THE CONDITIONS OF THE SUBMITTED STORMWATER MANAGEMENT PLAN AND THE APPROVED PLANS, AND MEET CITY STANDARDS AND STATE GUIDELINES.
13. THE PROJECT IS ANTICIPATED TO BE BUILT IN THREE PHASES. INFRASTRUCTURE FOR EACH PHASE WILL BE BUILT TO MEET CITY OF PORTLAND FIRE DEPARTMENT STANDARDS. SUBDIVISION PLANS PER PHASE ARE RECORDED WITH CCRD AT:
    - 13.1. PHASE I:
      BOOK _____ PAGE _____
    - 13.2. PHASE II:
      BOOK _____ PAGE _____
14. THE CONDOMINIUM ASSOCIATION MUST COMPLY TO THE FOLLOWING AS APPROVED BY THE CITY:
    - 14.1. CONDOMINIUM ASSOCIATION DOCUMENTS:
      BOOK _____ PAGE _____
    - 14.2. CONDOMINIUM ASSOCIATION POST-CONSTRUCTION STORMWATER MANAGEMENT AGREEMENT:
      BOOK _____ PAGE _____
    - 14.3. PER CITY REQUIREMENT, THE PROPERTY IS SUBJECT TO THE CONDITIONS AND REQUIREMENTS OF THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AND DECLARATION OF COVENANTS, CONDITIONS AND RESTRICTIONS. THE WORKFORCE OWNERSHIP HOUSING AGREEMENT AS APPROVED BY THE CITY IS RECORDED AT:
      BOOK _____ PAGE _____

WAIVERS & CONDITIONS OF APPROVAL:

CONDITIONAL USE

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) THAT THE PROPOSED CONDITIONAL USE FOR WORKFORCE HOUSING DOES MEET THE STANDARDS OF SECTION 14-484 WITH THE FOLLOWING CONDITIONS:

1. THAT THE APPLICANT AND THE CITY SHALL ENTER INTO AN AGREED UPON AFFORDABLE HOUSING AGREEMENT (AHA) PRIOR TO THE ISSUANCE OF A BUILDING PERMIT; AND
2. THAT THE AFFORDABLE HOUSING AGREEMENT SHALL BE FILED AS COVENANT TO THE PROPERTY'S DEED WITH THE CUMBERLAND COUNTY REGISTRY OF DEEDS PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.

WAIVERS

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) TO WAIVE THE [illegible] FOR A SIDEWALK ALONG THE NORTH SIDE OF THE NEW STREET WITHIN THE NEW SUBDIVISION, WITH THE CONDITION THAT FINAL PLAN SHOW THE SIDEWALK RELOCATED TO THE OUTER SIDE OF THE STREET NETWORK.

TRAFFIC MOVING PERMIT

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) THAT THE PLAN IS IN CONFORMANCE WITH 23 MRSA 704-A AND CHAPTER 305 RULES AND REGULATIONS PERTAINING TO TRAFFIC MOVEMENT PERMITS, WITH THE FOLLOWING CONDITIONS OF APPROVAL:

1. IF IT IS DETERMINED THAT A DEDICATED LEFT-TURN LANE ON WESTBROOK STREET IS WARRANTED THE APPLICANT SHALL BE RESPONSIBLE FOR ALL COST FOR IMPLEMENTATION AND THE DESIGN SHALL MEET WITH THE APPROVAL OF DPW
2. IN CONJUNCTION WITH AN APPROVED OUTER CONGRESS TRANSPORTATION AND STREETSCAPE PLAN, THE APPLICANT SHALL MAKE A $12,600 CONTRIBUTION PRIOR TO THE ISSUANCE OF A BUILDING PERMIT.
3. A VARIABLE SPEED INDICATOR SHALL BE REQUIRED TO BE INSTALLED ON WESTBROOK STREET AT A LOCATION ACCEPTABLE AND THE CITY REQUEST THAT AN ADDITIONAL SPEED STUDY SHALL BE CONDUCTED UPON COMPLETION OF PHASE 1 AND IMPLEMENTATION OF THE ASSOCIATED CROSSWALKS AND SIDEWALK ON WESTBROOK STREET. IF THE SPEED STUDY INDICATES EXCESSIVE VEHICLE SPEEDS, THE APPLICANT SHALL IMPLEMENT TRAFFIC CALMING MITIGATION STRATEGIES ACCEPTABLE TO THE CITY.

Reviewed for Code Compliance
Portland, Maine Planning Department
05/01/2018

SUBDIVISION STANDARDS

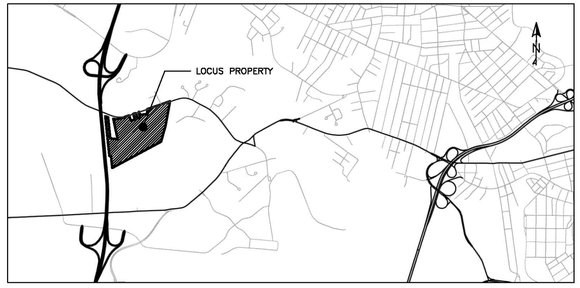
SUBDIVISION STANDARDS OF THE LAND USE CODE AND THE SITE LOCATION OF DEVELOPMENT ACT, SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL, WHICH MUST BE MET PRIOR TO THE SIGNING OF THE PLAT:

1. THE APPLICANT SHALL SUBMIT HOMEOWNER ASSOCIATION DOCUMENTS FOR REVIEW AND APPROVAL BY CORPORATION COUNSEL THAT ADDRESS:
   - 1.1. THE STORMWATER MAINTENANCE AGREEMENTS FOR THE DEVELOPMENT:
   - 1.2. STORMWATER DRAINAGE EASEMENTS; AND
   - 1.3. EASEMENTS FOR THE OPEN SPACE LOT; AND
   - 1.4. FINAL CONDITIONS OF APPROVAL.
2. THAT THE SUBDIVISION PLAT SHALL BE FINALIZED TO THE SATISFACTION OF THE PLANNING AUTHORITY, DEPARTMENT OF PUBLIC WORKS (DPW) AND CORPORATION COUNSEL AND TO INCLUDE REFERENCES TO STORMWATER DRAINAGE, STORMWATER MANAGEMENT, AND OPEN SPACE AND PUBLIC ACCESS AND FINAL CONDITIONS OF APPROVAL; AND
3. THE APPLICANT SHALL SUBMIT A FINAL PLAN AND SPECIFICATIONS, FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY AND THE DPW, THAT ARE IN CONFORMANCE WITH THE PROPOSED LED FIXTURE SPECIFICATIONS FOR THE STREET LIGHTS; AND
4. THE APPLICANT SHALL BE RESPONSIBLE FOR THE INSTALLATION OF THE RRFB'S FOLLOWING THE FIELD REVIEW. THE CITY IS REQUESTING THAT THE APPLICANT SHALL EVALUATE, AND IF NECESSARY, SHALL INSTALL LIGHTS FOR SAFE ILLUMINATION OF THE PROPOSED CROSSWALKS; AND
5. THE APPLICANT SHALL SUBMIT THE FOLLOWING FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY AND DPW:
   - 5.1. A SIMPLE STORMWATER PLAN THAT SHOWS ALL OF THE TREATMENT SYSTEMS AND THEIR TRIBUTARY DRAINAGE AREAS, INCORPORATING THE TREATMENT TABLE PROVIDED BY THE APPLICANT; AND
   - 5.2. UPDATED DESIGN PLANS REFLECTING CHANGES MADE TO THE HYDRAFLOW MODEL.
6. THE DEVELOPER/CONTRACTOR/SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE CONSTRUCTION STORMWATER MANAGEMENT PLAN AND SEDIMENT AND EROSION CONTROL PLAN BASED ON CITY STANDARDS AND STATE GUIDELINES. THE OWNER/OPERATOR OF THE APPROVED STORMWATER MANAGEMENT SYSTEM AND ALL ASSIGNS SHALL COMPLY WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS. THAT THE APPLICANT SHALL PROVIDE A STORMWATER MAINTENANCE AGREEMENT FOR THE STORMWATER DRAINAGE SYSTEM, SHALL BE SUBMITTED, SIGNED, AND RECORDED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT WITH A COPY TO THE DPW; AND
7. CONFIRMATION LETTERS FROM THE DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) SHALL BE SUBMITTED TO THE PLANNING DIVISION UPON RECEIPT.
8. THE APPLICANT SHALL SUBMIT A REVISED LANDSCAPED PLAN THAT ADDRESSES THE CITY ARBORIST'S COMMENTS (DATED 11.22.2017) FOR REVIEW AND APPROVAL BY THE CITY ARBORIST AND PLANNING AUTHORITY.

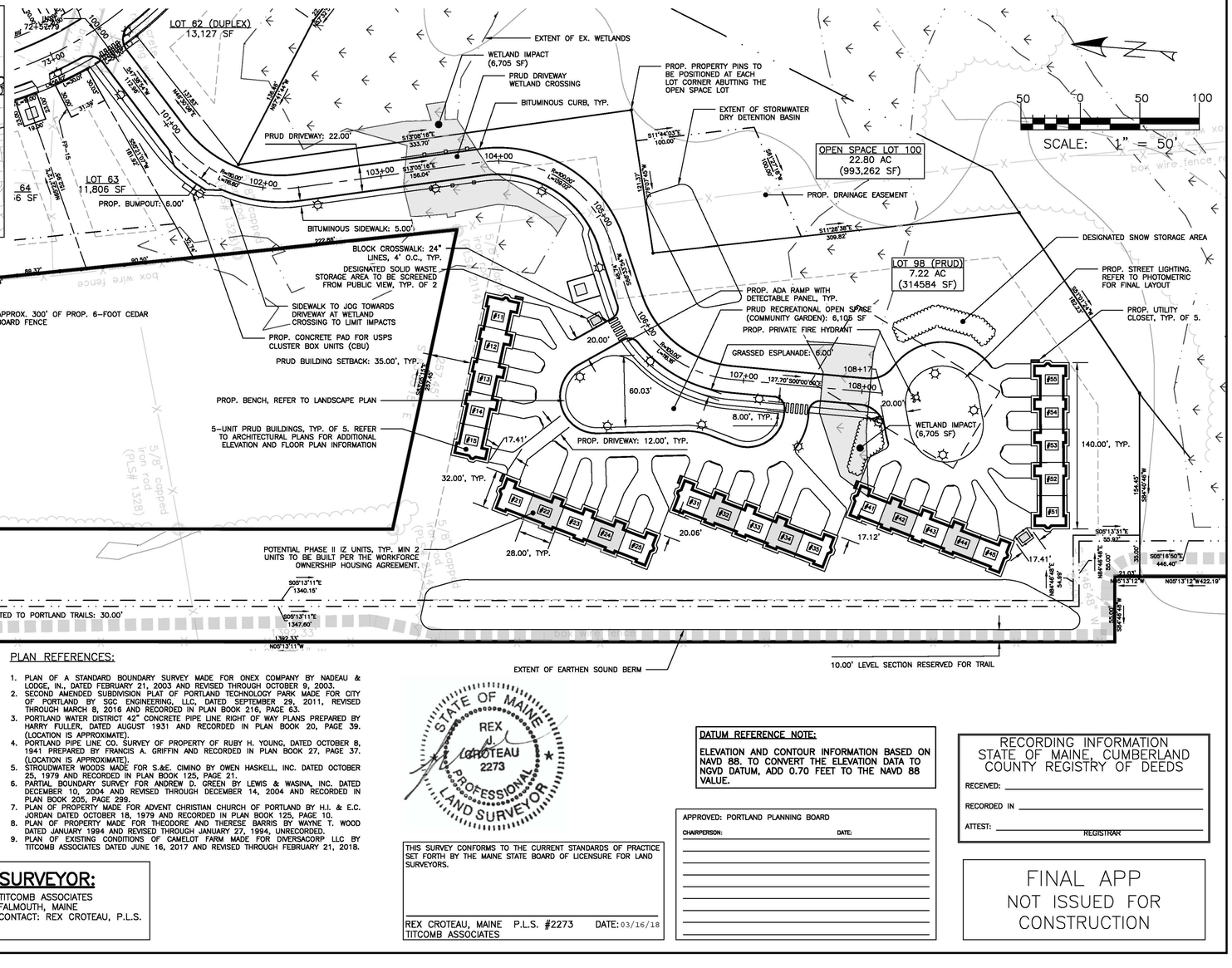
SITE PLAN STANDARDS

THE PLANNING BOARD VOTED UNANIMOUSLY 6-0 (STANLEY ABSENT) THAT THE PLAN IS IN CONFORMANCE WITH THE SITE PLAN STANDARDS OF THE LAND USE CODE AND THE SITE LOCATION OF DEVELOPMENT ACT, SUBJECT TO THE FOLLOWING CONDITIONS OF APPROVAL:

1. CONFIRMATION LETTERS FROM THE DEP SHALL BE SUBMITTED TO THE PLANNING DIVISION UPON RECEIPT; AND
2. THE DEVELOPER/CONTRACTOR/SUBCONTRACTOR MUST COMPLY WITH CONDITIONS OF THE CONSTRUCTION STORMWATER MANAGEMENT PLAN AND SEDIMENT AND EROSION CONTROL PLAN BASED ON CITY STANDARDS AND STATE GUIDELINES. THE OWNER/OPERATOR OF THE APPROVED STORMWATER MANAGEMENT SYSTEM AND ALL ASSIGNS SHALL COMPLY WITH THE CONDITIONS OF CHAPTER 32 STORMWATER INCLUDING ARTICLE III, POST CONSTRUCTION STORMWATER MANAGEMENT, WHICH SPECIFIES THE ANNUAL INSPECTIONS AND REPORTING REQUIREMENTS. THAT THE APPLICANT SHALL PROVIDE A STORMWATER MAINTENANCE AGREEMENT FOR THE STORMWATER DRAINAGE SYSTEM, SHALL BE SUBMITTED, SIGNED, AND RECORDED PRIOR TO THE ISSUANCE OF A BUILDING PERMIT WITH A COPY TO THE DPW; AND
3. THE APPLICANT SHALL SUBMIT A FINAL PLAN AND SPECIFICATIONS, FOR REVIEW AND APPROVAL BY THE PLANNING AUTHORITY AND THE DPW, THAT ARE IN CONFORMANCE WITH THE PROPOSED LED FIXTURE SPECIFICATIONS FOR THE STREET LIGHTS.
4. THE APPLICANT SHALL SUBMIT A REVISED LANDSCAPED PLAN THAT ADDRESSES THE CITY ARBORIST'S COMMENTS (DATED 11.22.2017) FOR REVIEW AND APPROVAL BY THE CITY ARBORIST AND PLANNING AUTHORITY.



VICINITY MAP
1:2500



EASEMENTS:

ALL PROPOSED EASEMENTS TO BE REVIEWED BY TITCOMB ASSOCIATES AND RECORDED IN CCRD. ALL EXISTING EASEMENTS ARE TO REMAIN.

EXISTING EASEMENTS:

1. SUBJECT TO A 30'-WIDE UTILITY EASEMENT FOR A 42" CONCRETE WATER PIPE GRANTED TO PORTLAND WATER DISTRICT FURTHER DESCRIBED IN BOOK 1382, PAGE 144 AND BOOK 1399, PAGE 462.
2. SUBJECT TO A 50'-WDE UTILITY EASEMENT FOR THREE PIPELINES FURTHER DESCRIBED IN INSTRUMENTS RECORDED IN BOOK 1655, PAGE 294 AND BOOK 2954, PAGE 772.
3. SUBJECT TO AN EASEMENT FOR A SEWER PIPE GRANTED BY RUBY H. YOUNG TO FREDERICK A. BUTTS AND MARIE BUTTS IN A DEED RECORDED IN BOOK 2238, PAGE 405. (LOCATION UNKNOWN).
4. SUBJECT TO AN EASEMENT FOR DRAINAGE GRANTED TO MAINE DEPARTMENT OF TRANSPORTATION AND FURTHER DESCRIBED IN AN INSTRUMENT RECORDED IN BOOK 4146, PAGE 333. LOCATION IS APPROXIMATE.
5. SUBJECT TO A SLOPE EASEMENT GRANTED TO MAINE DEPARTMENT OF TRANSPORTATION FURTHER DESCRIBED IN AN INSTRUMENT RECORDED IN BOOK 4146, PAGE 333. LOCATION IS APPROXIMATE.
6. BENEFITTING FROM AN EASEMENT FOR ACCESS RESERVED IN A DEED RECORDED IN BOOK 2198, PAGE 386.

PROPOSED EASEMENTS:

1. OPEN SPACE EASEMENTS BOOK _____ PAGE _____
2. PUBLIC ACCESS EASEMENTS BOOK _____ PAGE _____
3. DRAINAGE EASEMENTS BOOK _____ PAGE _____
4. UTILITY EASEMENTS BOOK _____ PAGE _____

SURVEY NOTES:

1. BOOK AND PAGE REFERENCES ARE TO THE CUMBERLAND COUNTY REGISTRY OF DEEDS.
2. BEARINGS ARE REFERENCED TO GRID NORTH, MAINE STATE PLANE COORDINATE SYSTEM, NAD83, WEST ZONE.
3. ELEVATIONS ARE BASED ON NAVD88 DATUM AS DERIVED FROM GPS OBSERVATIONS. REFER TO THE EXISTING CONDITIONS PLAN BY TITCOMB ASSOCIATES DATED 6/16/17 LAST REVISED 2/21/18 FOR BENCHMARK LOCATIONS.
4. UTILITY INFORMATION ON THIS PLAN IS APPROXIMATE, BASED ON LOCATION OF VISIBLE FEATURES AND INFORMATION CONTAINED ON PLANS AND DRAWINGS PROVIDED BY OTHERS. DIGSAFE AND/OR THE APPROPRIATE UTILITIES SHOULD BE CONTACTED PRIOR TO ANY CONSTRUCTION.
5. PROPERTY IS WITHIN ZONE X AND ZONE A BASED ON FIRM COMMUNITY #230051 PANEL #0012 C, DATED DECEMBER 8, 1998. ZONE X IS DEFINED AS AN AREA OF 500-YEAR FLOOD; AREA OF 100-YEAR FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR DRAINAGE AREAS LESS THAN 1 SQUARE MILE; AND AREAS PROTECTED BY LEVEES FROM 100-YEAR FLOOD. ZONE A IS AN AREA WITH NO BASE FLOOD ELEVATION DETERMINED.
6. THE LOCATION OF THE HIGHWATER MARK ON NORTHERLY SIDE OF STROUDWATER RIVER WAS DELINEATED BY OTHERS AND LOCATED BY TITCOMB ASSOCIATES. THE LOCATION OF THE SOUTHERLY SIDE OF STROUDWATER RIVER IS APPROXIMATE BASED ON AERIAL IMAGERY.
7. THE TWO CRUDE OIL LINES WERE MARKED OUT BY PORTLAND PIPE LINE AND LOCATED BY TITCOMB ASSOCIATES. TITCOMB ASSOCIATES MAKES NO GUARANTEE OR WARRANTY AS TO THE ACCURACY OF THE PIPELINE ELEVATION DATA.

PLAN REFERENCES:

1. PLAN OF A STANDARD BOUNDARY SURVEY MADE FOR ONEX COMPANY BY NADEAU & LODGE, IN., DATED FEBRUARY 21, 2003 AND REVISED THROUGH OCTOBER 9, 2003.
2. SECOND AMENDED SUBDIVISION PLAT OF PORTLAND TECHNOLOGY PARK MADE FOR CITY OF PORTLAND BY SGC ENGINEERING, LLC, DATED SEPTEMBER 29, 2011, REVISED THROUGH MARCH 8, 2016 AND RECORDED IN PLAN BOOK 216, PAGE 63.
3. PORTLAND WATER DISTRICT 42" CONCRETE PIPE LINE RIGHT OF WAY PLANS PREPARED BY HARRY FULLER, DATED AUGUST 1931 AND RECORDED IN PLAN BOOK 20, PAGE 39. (LOCATION IS APPROXIMATE).
4. PORTLAND PIPE LINE CO. SURVEY OF PROPERTY OF RUBY H. YOUNG, DATED OCTOBER 8, 1941 PREPARED BY FRANCIS A. GRIFFIN AND RECORDED IN PLAN BOOK 27, PAGE 37. (LOCATION IS APPROXIMATE).
5. STROUDWATER WOODS MADE FOR S.&E. CIMINO BY OWEN HASKELL, INC. DATED OCTOBER 25, 1979 AND RECORDED IN PLAN BOOK 125, PAGE 21.
6. PARTIAL BOUNDARY SURVEY FOR ANDREW D. GREEN BY LEWIS & WASINA, INC. DATED DECEMBER 10, 2004 AND REVISED THROUGH DECEMBER 14, 2004 AND RECORDED IN PLAN BOOK 205, PAGE 299.
7. PLAN OF PROPERTY MADE FOR ADVENT CHRISTIAN CHURCH OF PORTLAND BY H.I. & E.C. JORDAN DATED OCTOBER 18, 1979 AND RECORDED IN PLAN BOOK 125, PAGE 10.
8. PLAN OF PROPERTY MADE FOR THEODORE AND THERESE BARRIS BY WAYNE T. WOOD DATED JANUARY 1994 AND REVISED THROUGH JANUARY 27, 1994, UNRECORDED.
9. PLAN OF EXISTING CONDITIONS OF CAMELOT FARM MADE FOR DIVERSACORP LLC BY TITCOMB ASSOCIATES DATED JUNE 16, 2017 AND REVISED THROUGH FEBRUARY 21, 2018.

DEVELOPER:
STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE
CONTACT: MICHAEL BARTON

CIVIL/SITE ENGINEER:
ACORN ENGINEERING, INC.
PORTLAND, MAINE
CONTACT: WILLIAM SAVAGE, P.E.

SURVEYOR:
TITCOMB ASSOCIATES
FALMOUTH, MAINE
CONTACT: REX CROTEAU, P.L.S.

STATE OF MAINE — REX L. CROTEAU 2273 — PROFESSIONAL LAND SURVEYOR

THIS SURVEY CONFORMS TO THE CURRENT STANDARDS OF PRACTICE SET FORTH BY THE MAINE STATE BOARD OF LICENSURE FOR LAND SURVEYORS.

REX CROTEAU, MAINE P.L.S. #2273 DATE: 03/16/18
TITCOMB ASSOCIATES

DATUM REFERENCE NOTE:

ELEVATION AND CONTOUR INFORMATION BASED ON NAVD 88. TO CONVERT THE ELEVATION DATA TO NGVD DATUM, ADD 0.70 FEET TO THE NAVD 88 VALUE.

APPROVED: PORTLAND PLANNING BOARD

CHAIRPERSON: DATE:

RECORDING INFORMATION
STATE OF MAINE, CUMBERLAND COUNTY REGISTRY OF DEEDS

RECEIVED: _____
RECORDED IN _____
ATTEST: _____ REGISTRAR

FINAL APP
NOT ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
PLAT REVIEW	WHS 2/15/18

SUBDIVISION PLAT – PHASE III
STROUDWATER PRESERVE
DRAWING NAME:
PROJECT NAME:
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
PORTLAND, MAINE 04102
158 DANFORTH STREET (207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=50'
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE No. 11416 — 2-20-18 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-13

PLANT LEGEND

(154) ACER RUBRUM - RED MAPLE (29 'RED POINTE' / 86 'KARPICK')
2" caliper

(19) QUERCUS BICOLOR - SWAMP WHITE OAK
3" caliper

(27) MYRICA PENSYLVANICA - BAYBERRY
3'-4'

(54) PINUS STROBUS - EASTERN WHITE PINE
8'-10'

(55) JUNIPERUS VIRGINIANA - RED CEDAR
6'-7'

(15) JUNIPERUS VIRGINIANA - RED CEDAR
4'-5'

PRUD SHRUB AND PERENNIAL PLANTINGS

FOCAL POINT STORMWATER BMP PLANTINGS
(820 1 GAL) PANICUM VIRGATUM PLANTED 18" O.C.

MEADOWS (ALL DISTURBED AREAS)
NEW ENGLAND CONSERVATION / WILDLIFE SEED MIX

The New England Conservation/Wildlife Mix provides a permanent cover of grasses, wildflowers, and legumes. For both good erosion control and wildlife habitat value. The mix is designed to be a no maintenance seeding, and is appropriate for cut and fill slopes, detention basin side slopes, and disturbed areas adjacent to commercial and residential projects.

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

PRUD SHRUB AND PERENNIAL PLANTINGS (PER CITY OF PORTLAND STANDARDS)

FOLLY

POSSIBLE RIPARIAN SUCCESSION AREA AND LARCH GROVE

POSSIBLE MEADOW MANAGEMENT STRATEGY: INCREASED BIODIVERSITY & POLLINATOR SPECIES WITH NATIVE SEED MIX AND ANNUAL MOWING

STORMWATER BMP POND (WINTER SKATING RINK)

LOOP TRAIL

COMMUNITY GARDEN

HEALTHY EXISTING PINE TREES TO REMAIN IN 30' BUFFER ALONG WESTBROOK STREET

TRAIL HEAD

TRAIL CONNECTOR

50 100 200
N

NOT FOR CONSTRUCTION

Soren deNiord Design Studio
43 Wellwood Road
Portland, ME
04103
T: 207-400-2450
E: soren@sorendeniord.com

STROUDWATER PRESERVE

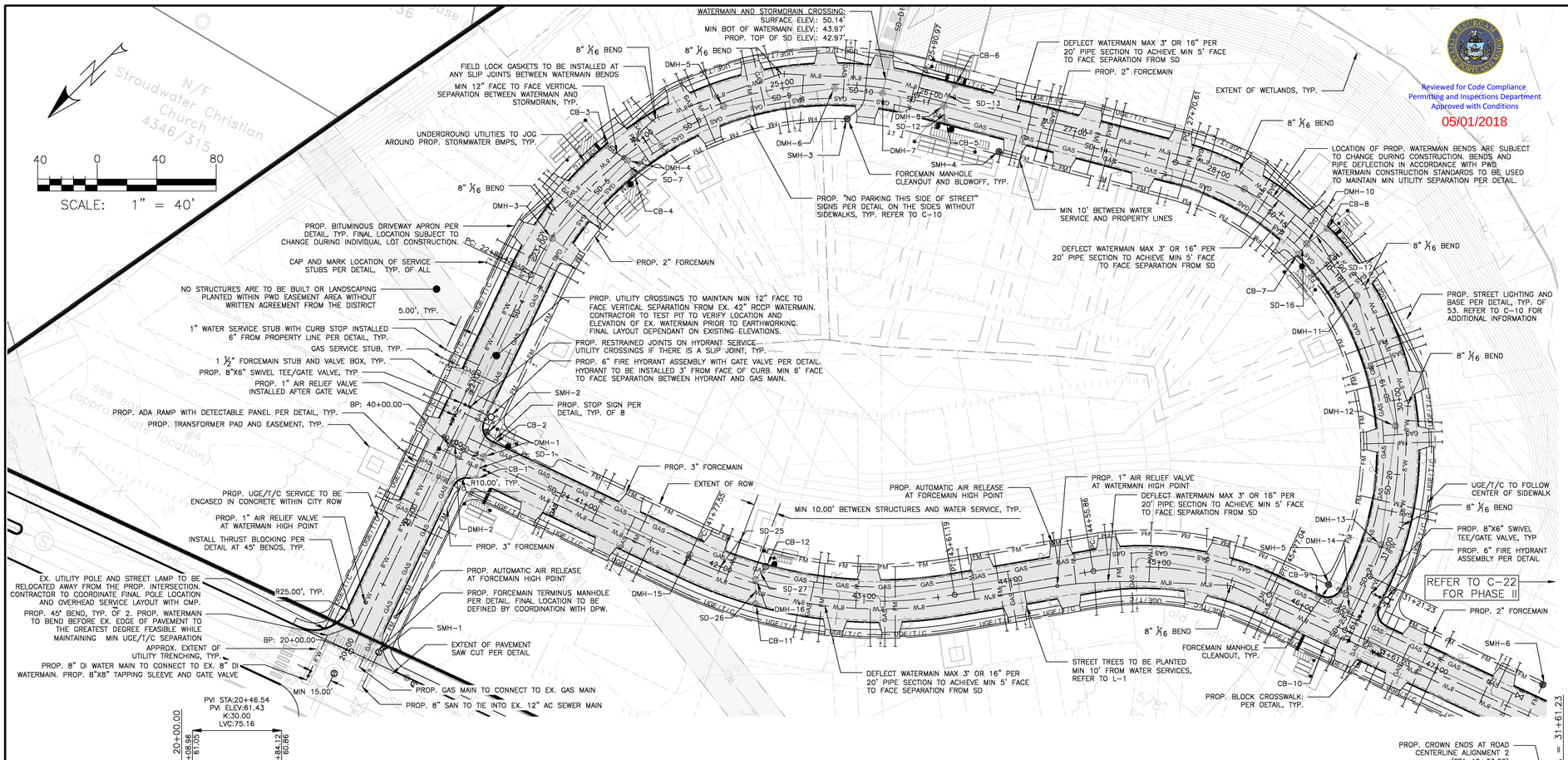
WESTBROOK STREET
PORTLAND, MAINE

No:	Revision / Submission	Date:
	FINAL SUBMISSION	

revisions:
date: February 22, 2018
scale: As Noted
drawn: XX
checked: XX

L1.0

LANDSCAPE PLAN



CENTERLINE ALIGNMENT – 1 (PHASE I)

HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

GENERAL NOTES:

1. THE PROJECT IS ANTICIPATED TO BE BUILT IN THREE PHASES. INFRASTRUCTURE FOR EACH PHASE WILL BE BUILT TO MEET CITY OF PORTLAND FIRE DEPARTMENT STANDARDS.
2. FINAL SITE SIGNAGE TO BE REVIEWED AND ACCEPTED BY THE CITY'S TRAFFIC ENGINEER. PROPOSED LAYOUT AS OUTLINED ON C-10, OVERALL SUBDIVISION PLAN.
3. LOCATION OF PROPOSED CONNECTIONS TO EX. INFRASTRUCTURE IN WESTBROOK ST ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
4. CONTRACTOR IS TO BE CAUTIONED THAT THERE IS A SEPTIC TANK THAT SERVICES THE EXISTING BUILDING THAT HAS NOT BEEN IDENTIFIED BY DIGSAFE OR THE EXISTING CONDITIONS PLAN. CONTRACTOR TO COORDINATE TANK REMOVAL AT NO ADDITIONAL COST TO THE OWNER. REFER TO C-03.
5. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO SERVICE STUB. UNLESS SPECIFIED OTHERWISE.
6. CONTRACTOR TO MEET ONSITE WITH PORTLAND PIPE LINE CORPORATION (PPLC) PRIOR TO STARTING ANY LAND DISTURBANCE WITHIN THE PIPELINE EASEMENT.
7. SEWER UTILITIES: SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. SEWER UTILITIES TO REMAIN PRIVATE AND OWNED BY THE HOMEOWNER'S ASSOCIATION. SEWER LAYOUT TO BE PER THE EONE SEWER SYSTEMS DESIGN OR AN APPROVED EQUAL. FINAL FORCEMAIN UTILITY, SERVICES, AND ASSOCIATED APERTURES LAYOUT ARE TO BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE PRODUCT SUPPLIER. STRUCTURES AND PIPE NETWORK AS SHOWN ARE APPROX. AND ARE SUBJECT TO CHANGE. FINAL STRUCTURE SCHEDULE TO BE PROVIDED BY THE MANUFACTURER. CONTRACTOR TO TEST PIT AND LOCATE THE EX. 12" AC SEWER MAIN WITHIN WESTBROOK ST PRIOR TO ORDERING STRUCTURES.
8. WATER UTILITIES: WATER MAIN CONSTRUCTION, WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. REFER TO PWD SPECIFICATIONS AND PROCEDURES SECTION 1: GENERAL INFORMATION FOR DISTRICT REQUIREMENTS ON EX. EASEMENTS. EACH PHASE MUST HAVE A MAIN EXTENSION AGREEMENT WITH PWD PRIOR TO CONSTRUCTION. PWD TO REVIEW AND ACCEPT FINAL DRAWINGS PRIOR TO CONSTRUCTION. CONTRACTOR TO PERFORM TEST PIT EXCAVATION FOR EX. 42" RCCP MAIN PRIOR TO PWD APPROVAL OF PHASE III DESIGN. PWD PERSONNEL MUST BE PRESENT DURING EXCAVATION; CONTRACTOR TO COORDINATE.
9. ELECTRIC UTILITIES: TELEPHONE/CABLE SERVICES TO BYPASS TRANSFORMER. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
10. GAS UTILITIES: PROJECT GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE REVIEWED AND ACCEPTED BY UNITIL.
11. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY THE CONTRACTOR WORKING WITH CHARTER/SPECTRUM COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE.
12. NEW FIRE HYDRANTS ARE PROPOSED WITHIN THE SITE SO THAT THE BUILDINGS ARE AT MOST 500' FROM A HYDRANT. HYDRANTS ARE TO BE BUILT TO CITY OF PORTLAND FIRE DEPARTMENT AND PORTLAND WATER DISTRICT STANDARDS. FINAL FIRE HYDRANTS TO BE ACCEPTED BY THE CITY.
13. DRIVEWAY LOCATIONS AS SHOWN ARE SUBJECT TO CHANGE DURING CONSTRUCTION BUT SHALL REMAIN AT LEAST 20 FEET APART AS MEASURED BETWEEN EDGE OF DRIVEWAY AT THE PROPERTY LINE PER SECTION 1.7 OF THE CITY OF PORTLAND TECHNICAL STANDARDS. DRIVEWAYS TO AVOID COVERING THE WATER SERVICES AND CURB STOPS TO THE GREATEST EXTENT FEASIBLE.
14. DEVELOPER TO BE RESPONSIBLE FOR RETIRING WATER SERVICES THAT ARE INSTALLED BUT NOT IN USE AT PROJECT COMPLETION. SERVICES TO BE RETIRED IN ACCORDANCE WITH PWD STANDARDS.

MINIMUM HORIZONTAL UTILITY SERVICE SEPARATION

UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	–	6'	5'	4'	6'
WATER	6'	–	5'*	6'	3'
SEWER	5'	5'*	–	5'	10'
GAS	4'	6'	5'	–	3'
STORMWATER	6'	3'	10'	3'	–

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.

STORM DRAIN SCHEDULE

NAME	SIZE	LENGTH	SLOPE	INLET ELEVATION
SD-1	12"	15.62'	0.50%	56.66'
SD-2	12"	10.70'	0.50%	56.66'
SD-3	15"	19.09'	0.50%	54.60'
SD-4	15"	152.34'	1.82%	54.40'
SD-5	15"	72.80'	2.60%	51.53'
SD-6	12"	16.47'	0.50%	51.77'
SD-7	12"	10.39'	0.50%	51.75'
SD-8	18"	74.12'	1.95%	49.03'
SD-9	18"	75.73'	2.54%	47.49'
SD-10	18"	32.33'	1.48%	45.43'
SD-11	24"	39.27'	0.50%	43.97'
SD-12	12"	11.04'	0.50%	46.82'
SD-13	12"	15.98'	0.50%	46.82'
SD-14	18"	209.49'	1.75%	47.74'
SD-15	18"	55.86'	2.51%	49.24'
SD-16	12"	9.10'	0.50%	51.50'
SD-17	12"	17.12'	0.50%	51.52'
SD-18	15"	48.52'	1.55%	50.24'
SD-19	15"	91.19'	2.16%	52.31'
SD-20	15"	80.53'	3.00%	54.83'
SD-21	15"	49.23'	3.01%	56.41'
SD-22	12"	21.08'	1.26%	58.98'
SD-23	12"	24.18'	0.50%	58.78'
SD-24	12"	153.54'	0.83%	56.22'
SD-25	12"	47.23'	0.50%	56.55'
SD-26	12"	16.14'	0.50%	58.70'
SD-27	12"	11.35'	0.50%	58.71'
SD-D1	30"	98.38'	0.50%	40.80'

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PWD REVIEW	WHS 10/23/17
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
FM REVIEW	OJD 2/5/18
UTILITIES REVIEW	WHS 2/23/18
PWD ATS	OJD 3/22/18
CONSTRUCTION	WHS 4/16/18

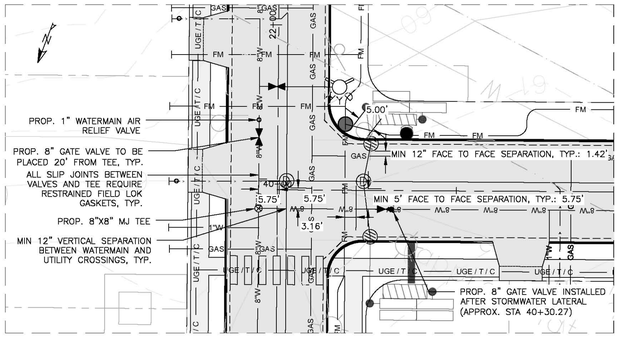
DRAWING NAME: ROAD PROFILE – 1
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

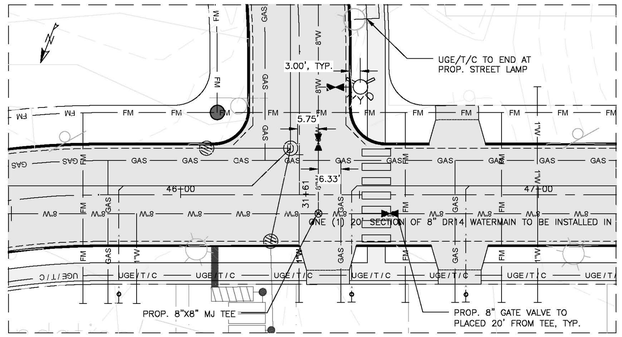
FILE: 1079_CIVIL
JN: 1079
SCALE: SEE PLAN
DESIGNED BY: WHS
DRAWN BY: OJD
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11416
4-16-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-20



INTERSECTION #1
1" = 20'

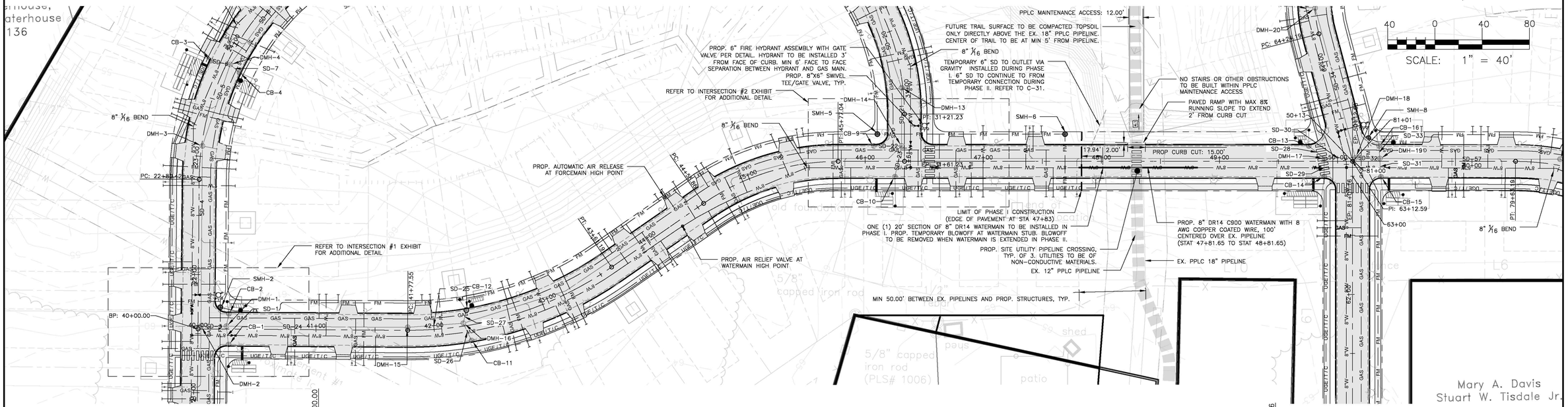


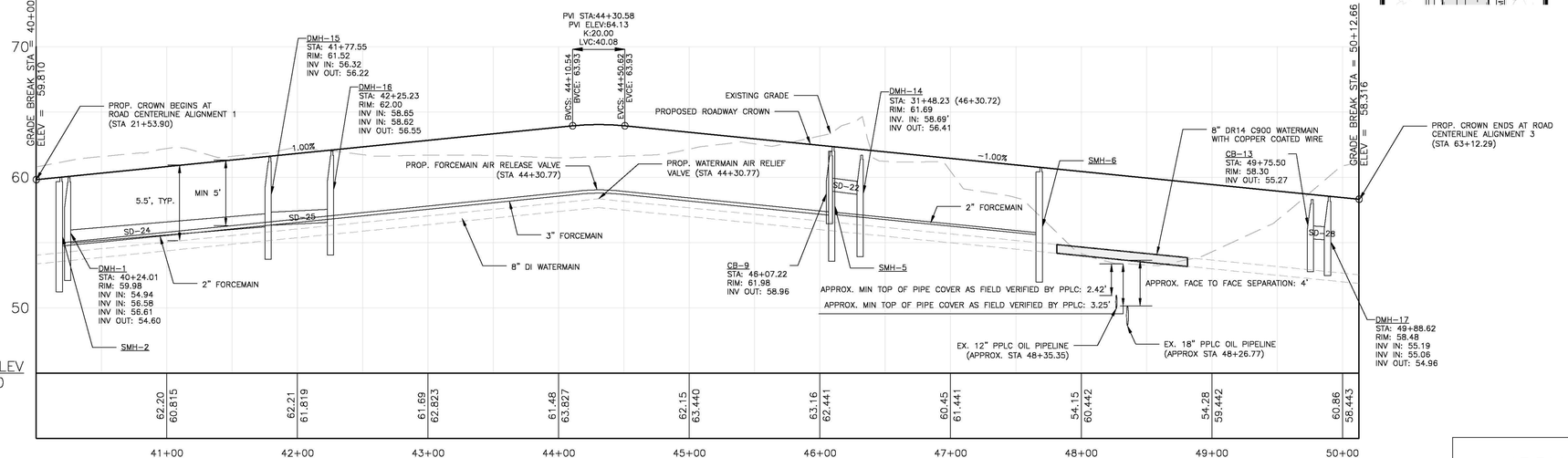
INTERSECTION #2
1" = 20'

MINIMUM HORIZONTAL UTILITY SERVICE SEPARATION					
UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	–	6'	5'	4'	6'
WATER	6'	–	5'*	6'	3'
SEWER	5'	5'*	–	5'	10'
GAS	4'	6'	5'	–	3'
STORMWATER	6'	3'	10'	3'	–

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018





CENTERLINE ALIGNMENT – 2 (PHASE I)
HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PWD REVIEW	OJD 10/23/17
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/31/17
FM REVIEW	OJD 2/5/17
UTILITIES REVIEW	WHS 3/23/18
PWD ATS	OJD 3/22/18
CONSTRUCTION	WHS 4/16/18

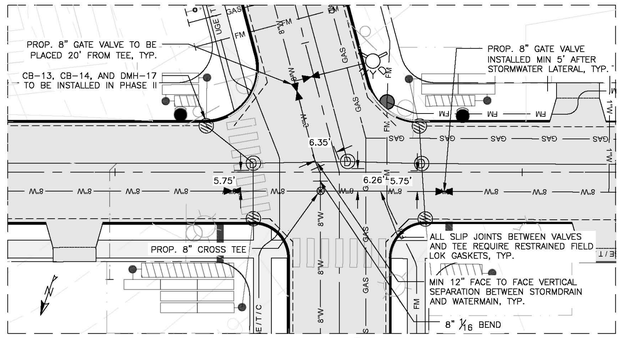
DRAWING NAME: ROAD PROFILE – 2
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

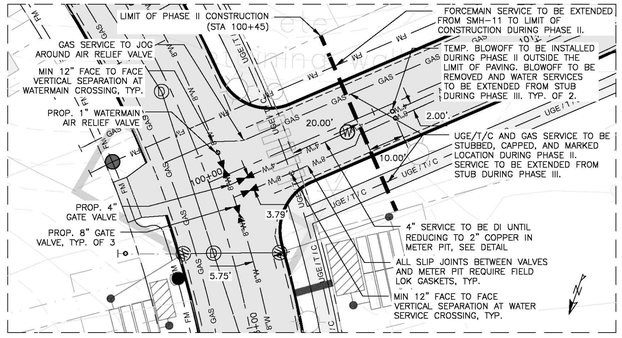
FILE:	1079_CIVIL
JN:	1079
SCALE:	SEE PLAN
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
REGISTERED PROFESSIONAL ENGINEER
4-16-18

DRAWING NO.
C-21



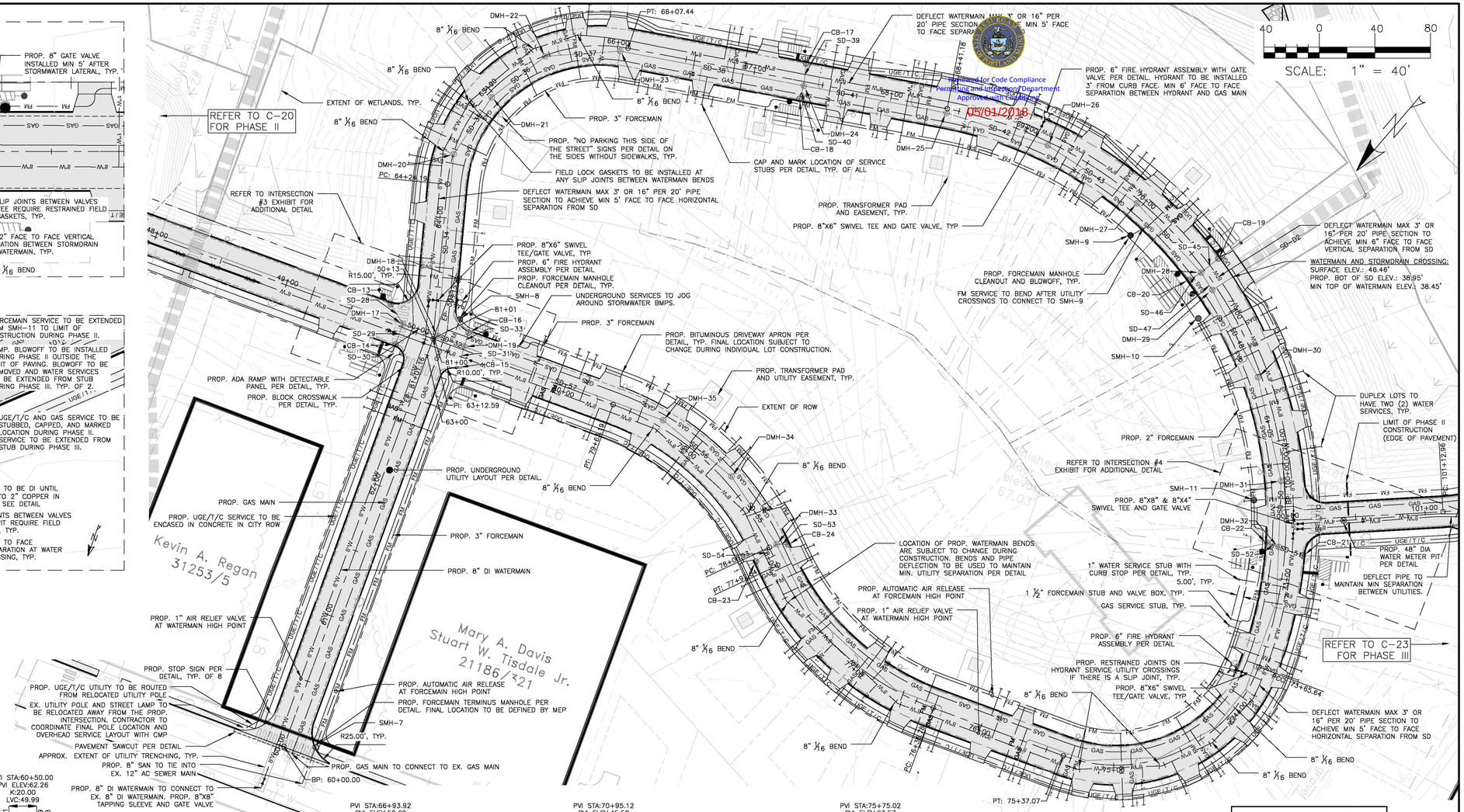
INTERSECTION #3
1" = 20'

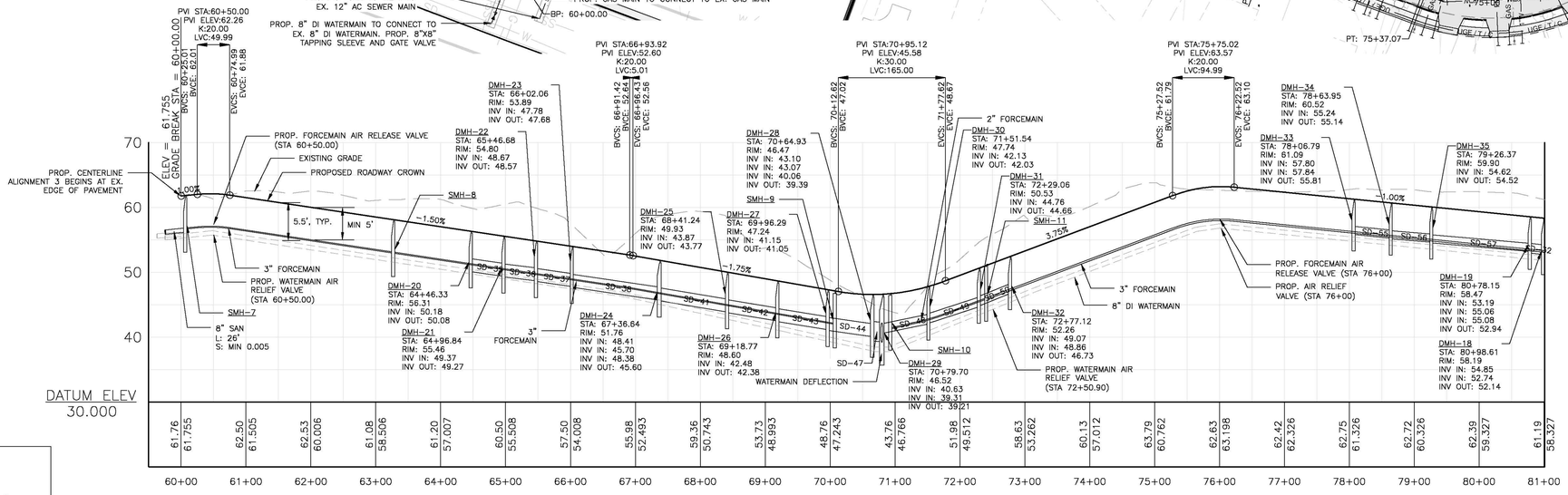


INTERSECTION #4
1" = 20'

MINIMUM HORIZONTAL UTILITY SERVICE SEPARATION					
UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	–	6'	5'	4'	6'
WATER	6'	–	5'*	6'	3'
SEWER	5'	5'*	–	5'	10'
GAS	4'	6'	5'	–	3'
STORMWATER	6'	3'	10'	3'	–

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.





CENTERLINE ALIGNMENT – 3 (PHASE II)
HORIZONTAL SCALE 1"=100'
VERTICAL SCALE 1"=10'

STORM DRAIN SCHEDULE			
NAME	SIZE	LENGTH	SLOPE
SD-28	12"	16.79'	0.50%
SD-29	12"	15.50'	0.50%
SD-30	12"	23.45'	0.50%
SD-31	12"	15.54'	0.50%
SD-32	18"	17.78'	1.10%
SD-33	12"	10.52'	0.50%
SD-34	24"	131.21'	1.49%
SD-35	24"	49.31'	1.44%
SD-36	24"	48.60'	1.23%
SD-37	24"	53.99'	1.46%
SD-38	24"	134.43'	1.48%
SD-39	12"	16.05'	0.50%
SD-40	12"	10.09'	0.50%
SD-41	24"	104.60'	1.65%
SD-42	24"	76.61'	1.68%
SD-43	24"	76.67'	1.61%
SD-44	24"	67.86'	1.45%
SD-45	12"	16.02'	0.50%
SD-46	12"	10.03'	0.50%
SD-47	36"	14.62'	0.52%
SD-48	18"	67.54'	2.07%
SD-49	18"	76.67'	3.29%
SD-50	18"	47.48'	4.14%
SD-51	12"	18.48'	0.50%
SD-52	12"	8.46'	0.50%
SD-53	12"	8.15'	0.50%
SD-54	12"	19.34'	0.50%
SD-55	15"	58.54'	0.98%
SD-56	15"	63.82'	0.81%
SD-57	15"	152.53'	0.87%
SD-02	36"	127.91'	4.86%

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PWD REVIEW	OJD 10/23/17
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/3/17
CITY COMMENTS	WHS 11/31/17
FM REVIEW	OJD 2/5/17
UTILITIES REVIEW	WHS 2/23/18
PWD ATS	OJD 3/22/18
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: ROAD PROFILE – 3
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	SEE PLAN
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
Mark Dunn
SAVAGE
No. 11410
LICENSED
PROFESSIONAL ENGINEER
4-16-18

DRAWING NO.
C-22

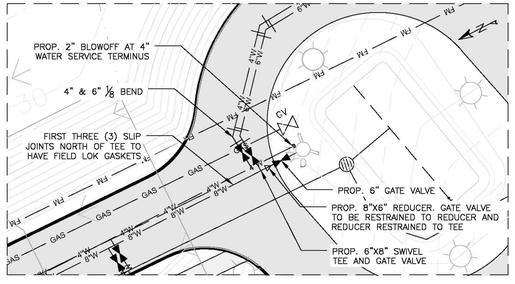
GENERAL NOTES:

1. THE PROJECT IS ANTICIPATED TO BE BUILT IN THREE PHASES. INFRASTRUCTURE FOR EACH PHASE WILL BE BUILT TO MEET CITY OF PORTLAND FIRE DEPARTMENT STANDARDS.
2. FINAL SITE SIGNAGE TO BE REVIEWED AND ACCEPTED BY THE CITY'S TRAFFIC ENGINEER. PROPOSED LAYOUT AS OUTLINED ON C-10, OVERALL SUBDIVISION PLAN.
3. LOCATION OF PROPOSED CONNECTIONS ARE APPROXIMATE. CONTRACTOR TO CONTACT ENGINEER IF FIELD INFORMATION VARIES FROM INFORMATION ON PLANS.
4. CONTRACTOR IS TO BE CAUTIONED THAT THERE IS A SEPTIC TANK THAT SERVICES THE EXISTING BUILDING THAT HAS NOT BEEN IDENTIFIED BY DIGSAFE OR THE EXISTING CONDITIONS PLAN. CONTRACTOR TO COORDINATE TANK REMOVAL AT NO ADDITIONAL COST TO THE OWNER. REFER TO C-03.
5. FOR ALL UTILITIES, ACORN ENGINEERING DESIGN LIMITS EXTEND TO OUTSIDE WALL OF BUILDING. METERING OF UTILITIES TO BE COMPLETED BY M.E.P. UNLESS SPECIFIED OTHERWISE.
6. CONTRACTOR TO COORDINATE WITH ARCHITECT ON FINAL UTILITY CONNECTION LOCATION TO EACH PRUD BUILDING AND UNIT.
7. SEWER UTILITIES: CONTRACTOR TO COORDINATE WITH ARCHITECT FOR FINAL SERVICE CONNECTION. SEWER UTILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH CITY OF PORTLAND TECHNICAL STANDARDS. SEWER UTILITIES TO REMAIN PRIVATE AND OWNED BY THE CONDOMINIUM ASSOCIATION. SEWER LAYOUT TO BE PER THE EONE SEWER SYSTEMS DESIGN OR AN APPROVED EQUAL. FINAL FORCEMAIN UTILITY, SERVICES, AND ASSOCIATED APERTURES LAYOUT ARE TO BE SUBMITTED BY THE CONTRACTOR FOR APPROVAL BY THE PRODUCT SUPPLIER. STRUCTURES AND PIPE NETWORK AS SHOWN ARE APPROX. AND ARE SUBJECT TO CHANGE. FINAL STRUCTURE SCHEDULE TO BE PROVIDED BY THE MANUFACTURER.
8. WATER UTILITIES: FINAL PIPE SIZING PROVIDED BY M.E.P. ENGINEER AND FIRE PROTECTION DESIGNER. INTERNAL METERING, BACKFLOW PREVENTION, AND PRESSURE REDUCERS TO BE COMPLETED BY M.E.P. ENGINEER. DOMESTIC WATER PIPE SIZES WILL DETERMINE THE FINAL WATER METERING OPTIONS. METER MAY BE SMALLER THAN PROPOSED WATER MAIN. WATER MAIN CONSTRUCTION, WATER METERING, PRESSURE REDUCER AND BACKFLOW PREVENTION TO BE IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARDS. FINAL WATER METER SIZE AND LOCATION FOR PRUD LOT TO BE COORDINATED WITH PORTLAND WATER DISTRICT. CONTRACTOR TO FOLLOW METERING GUIDELINES OF THE PORTLAND WATER DISTRICT AND CITY OF PORTLAND. PRUD BUILDINGS (5) TO BE SUBJECT TO PWD'S RESIDENTIAL BACKFLOW REQUIREMENTS; BACKFLOW PROTECTION DEVICE TO BE INSTALLED IN THE UTILITY CLOSET. EACH PHASE TO HAVE A MAIN EXTENSION AGREEMENT WITH PWD PRIOR TO CONSTRUCTION. CONTRACTORS TO NOTE THAT IF AN ALTERNATIVE MATERIAL IS USED FOR THE SERVICES OTHER THAN DUCTILE IRON, ADDITIONAL EXTERNAL RESTRAINTS ARE TO BE INSTALLED. LAYOUTS WITH ALTERNATIVE MATERIALS ARE TO BE REVIEWED AND APPROVED BY PWD.
9. ELECTRIC UTILITIES: ELECTRIC DESIGN TO BE FINALIZED BY M.E.P. ENGINEER. ELECTRICAL LOAD TO BE DETERMINED BY M.E.P. ENGINEER. METER LOCATIONS AND TRANSFORMER SIZES DEFINED BY M.E.P. FINAL TRANSFORMER PAD LOCATIONS TO BE DEFINED WITH COORDINATION AND APPROVAL FROM CMP. EXTENT OF UTILITY EASEMENT TO BE DEFINED BY FINAL TRANSFORMER SIZE. TELEPHONE/CABLE SERVICES TO BYPASS TRANSFORMER. M.E.P. TO FINALIZE SERVICE CONNECTION TO PRUD BUILDINGS; SERVICE CONNECTION NOT SHOWN ON PLANS. ALL ELECTRIC CONSTRUCTION SHALL CONFORM TO CMP GUIDEBOOK OF STANDARD REQUIREMENTS, MOST RECENT EDITION. DESIGN SUBJECT TO FINAL APPROVAL FROM CMP.
10. GAS UTILITIES: PROJECT GAS LOAD, GAS UTILITY DESIGN, AND FINAL GAS SERVICE LOCATION AND METERS TO BE DEFINED BY M.E.P.
11. CABLE AND TELEPHONE PULLBOXES AND PEDESTAL LOCATIONS TO BE DETERMINED BY THE CONTRACTOR WORKING WITH CHARTER/SPECTRUM COMMUNICATIONS AND FAIRPOINT PRIOR TO CONSTRUCTION. CONTRACTOR TO COORDINATE.
12. NEW FIRE HYDRANTS ARE PROPOSED WITHIN THE SITE SO THAT THE SINGLE FAMILY HOUSE AND PRUD BUILDINGS ARE AT MOST 500' FROM A HYDRANT. HYDRANTS ARE TO BE BUILT TO CITY OF PORTLAND FIRE DEPARTMENT AND PORTLAND WATER DISTRICT STANDARDS. FINAL FIRE HYDRANT WITHIN THE PRUD LOT TO REMAIN PRIVATE AND MAINTAINED BY CONDOMINIUM ASSOCIATION. CONDOMINIUM ASSOCIATION TO HAVE A MAINTENANCE AGREEMENT AS ACCEPTED BY THE REVIEWING AUTHORITY THAT OUTLINES COMPLIANCE WITH PORTLAND WATER DISTRICT AND CITY OF PORTLAND CODE OF ORDINANCES (CHAPTER 10) REQUIREMENTS.

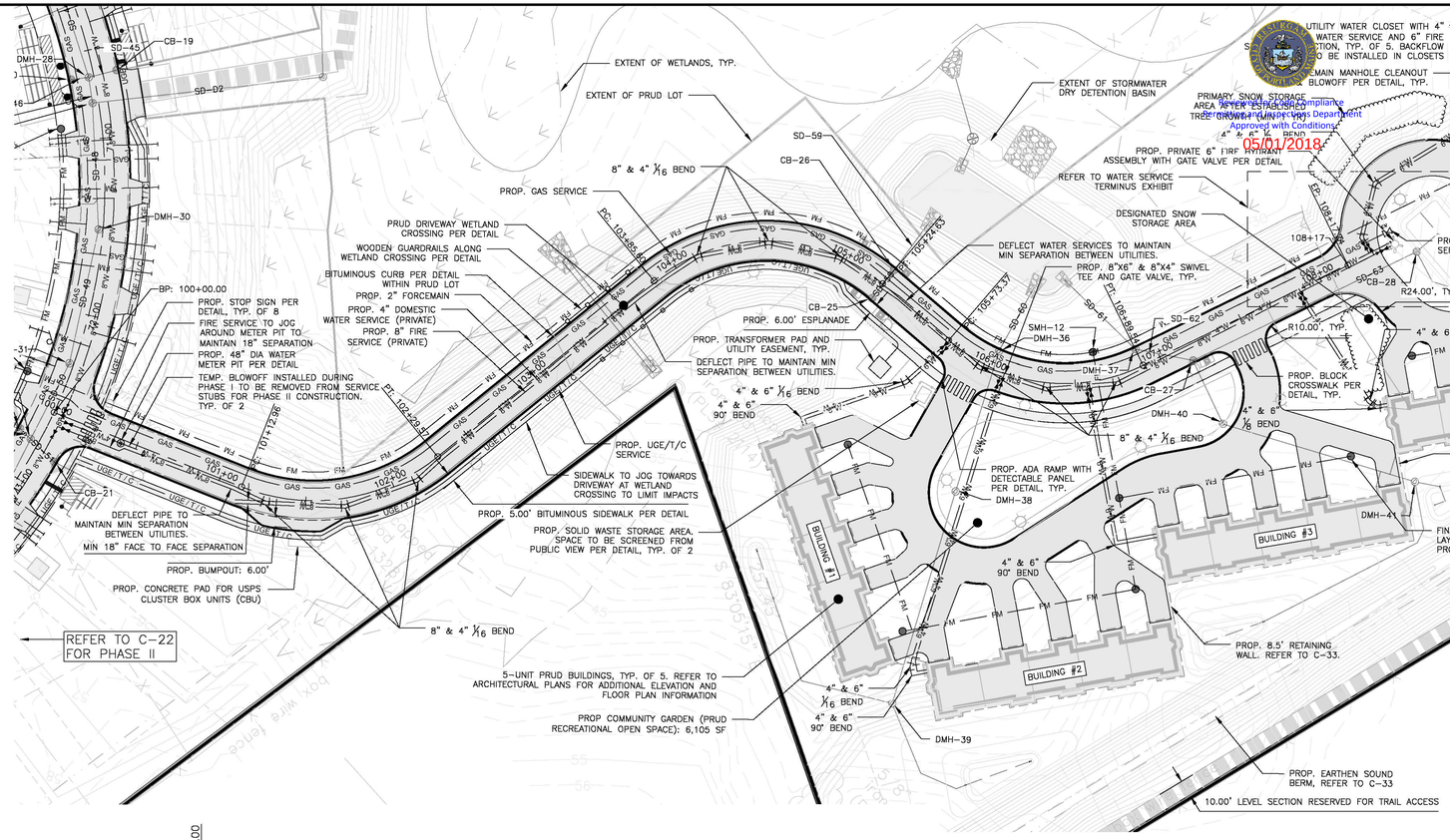
MINIMUM HORIZONTAL UTILITY SERVICE SEPARATION

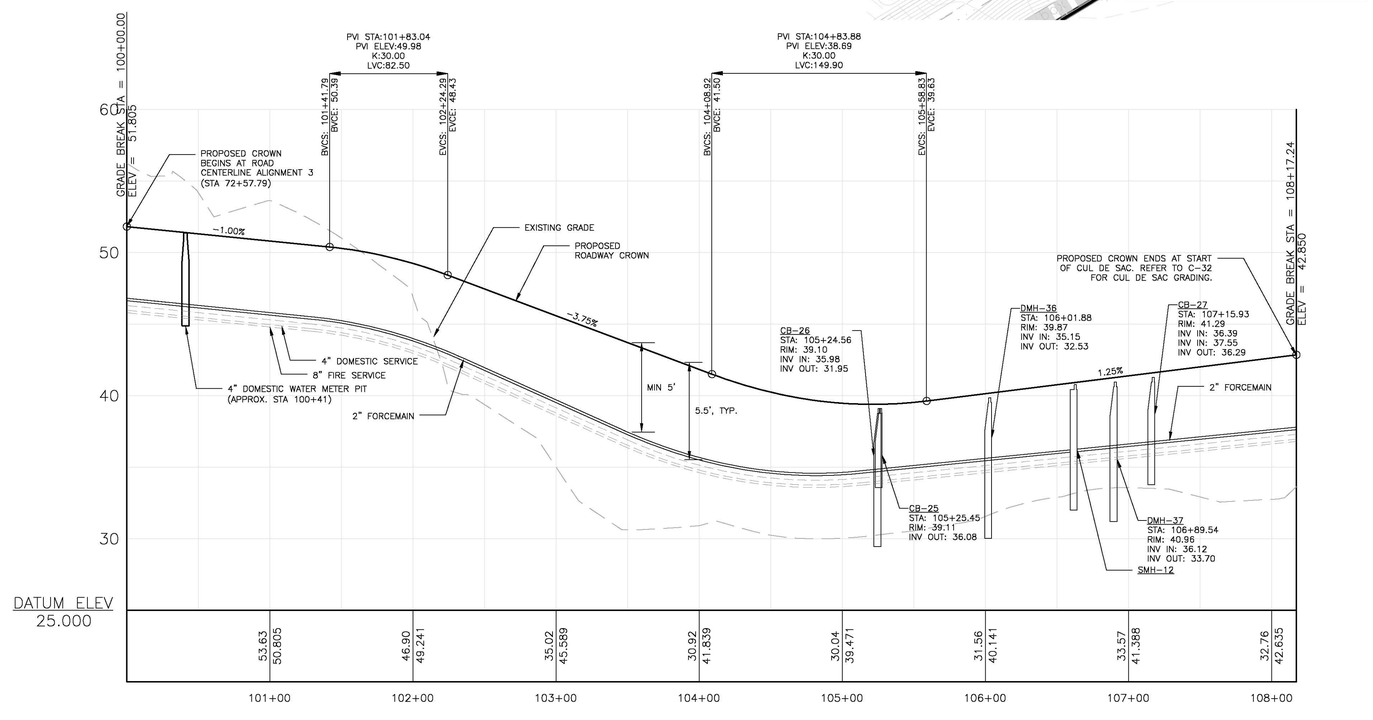
UTILITY	UGE/T/C	WATER	SEWER	GAS	STORMWATER
UGE/T/C	–	6'	5'	4'	6'
WATER	6'	–	5'*	6'	3'
SEWER	5'	5'*	–	5'	10'
GAS	4'	6'	5'	–	3'
STORMWATER	6'	3'	10'	3'	–

*PERMISSIBLE ONLY IF SEWER IS LAID MIN. 18" BELOW WATER SERVICE; OTHERWISE, 10' OF HORIZONTAL SEPARATION MUST BE MAINTAINED.



WATER SERVICE TERMINUS EXHIBIT
1" = 20'





CENTERLINE ALIGNMENT – 4 (PHASE III)
HORIZONTAL SCALE 1"=50'
VERTICAL SCALE 1"=5'

STORM DRAIN SCHEDULE

NAME	SIZE	LENGTH	SLOPE
SD-58	12"	20.08'	0.50%
SD-59	18"	33.79'	7.99%
SD-60	18"	41.05'	7.99%
SD-61	12"	55.59'	8.00%
SD-62	12"	33.10'	0.50%
SD-63	12"	137.28'	0.50%

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PWD REVIEW	OJD	10/23/17
FINAL APP	WHS	10/25/17
DPW REVIEW	WHS	11/9/17
CITY COMMENTS	WHS	11/21/17
FM REVIEW	OJD	2/5/17
UTILITIES REVIEW	WHS	3/23/18
PWD ATS	OJD	3/22/18
CONSTRUCTION	WHS	4/16/18

DRAWING NAME: ROAD PROFILE – 4
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE: 1079_CIVIL
JN: 1079
SCALE: SEE PLAN
DESIGNED BY: WHS
DRAWN BY: OJD
CHECKED BY: WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
4-16-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-23

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET.
3. REFER TO THE STORMWATER REPORT FOR STORMWATER AND SURFACE ANALYSIS.
4. REFER TO SHEET C-47 FOR ADDITIONAL INVERT INFORMATION AND STRUCTURE SCHEDULES FOR DETENTION PONDS.
5. CONTRACTOR TO FLAG EDGE OF WETLANDS PRIOR TO EARTHWORKING. EDGE OF WETLAND IMPACTS TO BE DELINEATED BY ONE ROW OF STUMP GRINDINGS AND ONE ROW OF SILT FENCE. REFER TO EROSION & SEDIMENTATION CONTROL DETAILS.

STRUCTURE TABLE

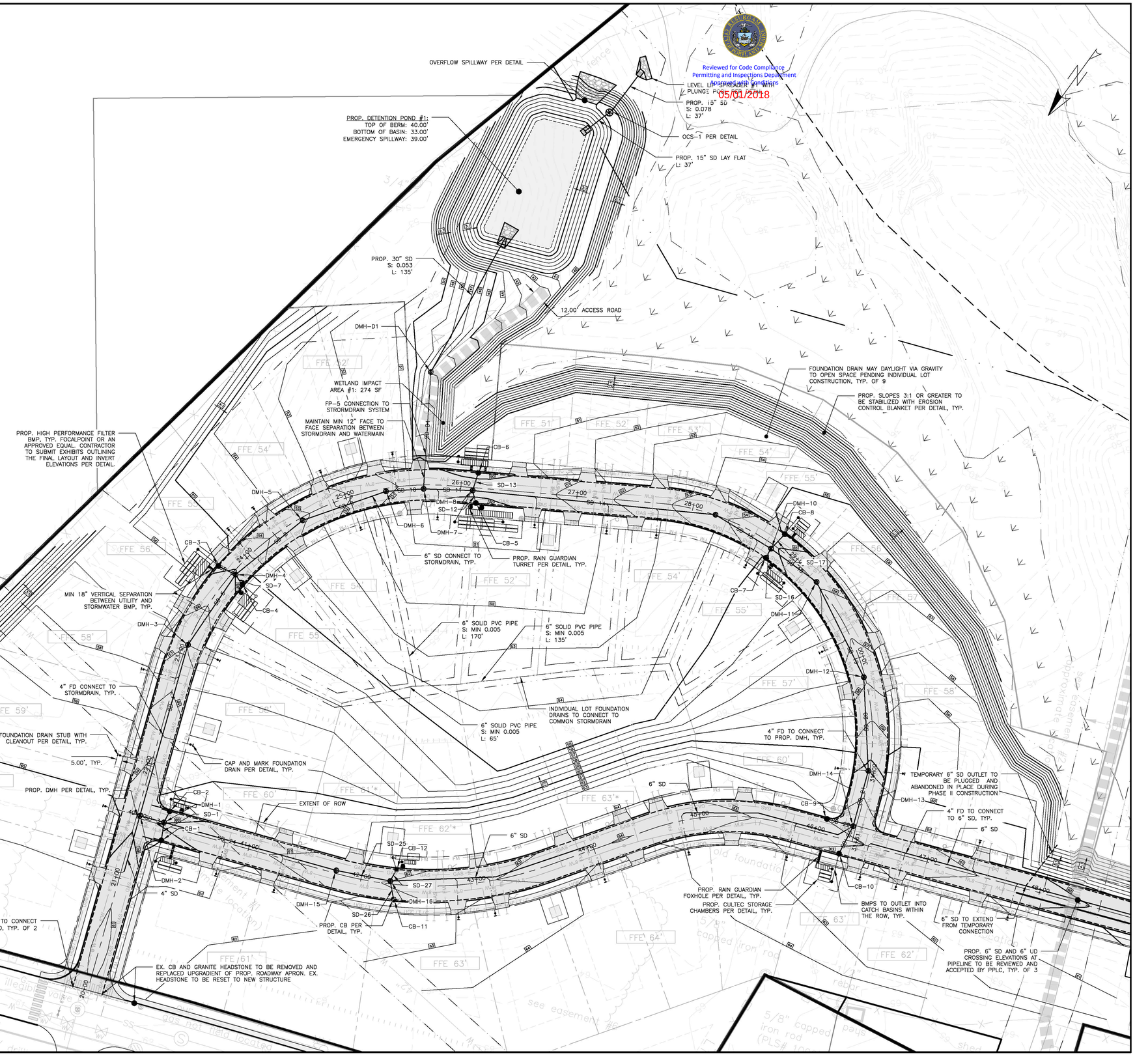
NAME	DIA	RIM	INV. IN / PIPE (SIZE)	INV. OUT / PIPE (SIZE)	STA / OFFSET
CB-1	48"	59.68'		56.66' / SD-1 (12")	40+25.96 / 13.00 (R)
CB-2	48"	59.68'		56.66' / SD-2 (12")	40+26.05 / -13.00 (L)
CB-3	48"	54.79'		51.77' / SD-6 (12")	23+78.56 / -12.99 (L)
CB-4	48"	54.77'		51.75' / SD-7 (12")	23+79.84 / 13.00 (R)
CB-5	48"	49.85'		46.82' / SD-12 (12")	26+13.88 / 13.00 (R)
CB-6	48"	49.85'		46.82' / SD-13 (12")	26+13.88 / -13.00 (L)
CB-7	48"	54.52'		51.50' / SD-16 (12")	28+77.48 / 13.00 (R)
CB-8	48"	54.54'		51.52' / SD-17 (12")	28+78.92 / -13.00 (L)
CB-9	48"	61.98'		58.96' / SD-22 (12")	46+07.22 / -13.00 (L)
CB-10	48"	61.80'		58.78' / SD-23 (12")	46+25.14 / 13.00 (R)
CB-11	48"	61.72'		58.70' / SD-26 (12")	42+29.66 / 13.00 (R)
CB-12	48"	61.73'		58.71' / SD-27 (12")	42+29.66 / -13.00 (L)
DMH-1	48"	59.98'	54.94' / SD-24 (12") 56.58' / SD-1 (12") 56.61' / SD-2 (12")	54.60' / SD-3 (15")	40+24.01 / -2.50 (L)
DMH-2	48"	59.70'	54.50' / SD-3 (15")	54.40' / SD-4 (15")	21+56.40 / 2.50 (R)
DMH-3	48"	56.92'	51.63' / SD-4 (15")	51.53' / SD-5 (15")	23+08.91 / 0.70 (R)
DMH-4	48"	55.00'	49.64' / SD-5 (15") 51.69' / SD-6 (12") 51.70' / SD-7 (12")	49.03' / SD-8 (18")	23+82.60 / 2.96 (R)
DMH-5	48"	53.13'	47.59' / SD-8 (18")	47.49' / SD-9 (18")	24+57.98 / 2.50 (R)
DMH-6	48"	51.19'	45.56' / SD-9 (18")	45.43' / SD-10 (18")	25+34.96 / 2.61 (R)
DMH-7	60"	50.49'	44.95' / SD-10 (18") 43.96' / SD-11 (24")	40.80' / SD-D1 (30")	25+67.74 / 3.47 (R)
DMH-8	48"	50.17'	46.74' / SD-13 (12") 46.76' / SD-12 (12") 44.07' / SD-14 (18")	43.97' / SD-11 (24")	26+10.27 / 2.56 (R)
DMH-10	48"	54.77'	49.49' / SD-18 (15") 51.43' / SD-17 (12") 51.45' / SD-16 (12")	49.24' / SD-15 (18")	28+76.55 / 3.95 (R)
DMH-11	48"	55.82'	50.34' / SD-19 (15")	50.24' / SD-18 (15")	29+25.27 / -1.11 (L)
DMH-12	48"	57.81'	52.41' / SD-20 (15")	52.31' / SD-19 (15")	30+17.24 / 1.10 (R)
DMH-13	48"	60.25'	54.93' / SD-21 (15")	54.83' / SD-20 (15")	30+98.81 / 1.25 (R)
DMH-14	48"	61.69'	58.69' / SD-22 (12")	56.41' / SD-21 (15")	31+48.23 / 2.50 (R)
DMH-15	48"	61.52'	56.32' / SD-25 (12")	56.22' / SD-24 (12")	41+77.55 / -2.50 (L)
DMH-16	48"	62.00'	58.65' / SD-27 (12") 58.62' / SD-26 (12")	56.55' / SD-25 (12")	42+25.23 / -2.50 (L)
DMH-D1	48"	47.00'	40.31' / SD-D1 (30")	40.21' / SD (30")	

STORMWATER BMP OWNERSHIP & MAINTENANCE SUMMARY

CITY	HOA
FB-1, FP-4, FP-5, FP-7, FP-9	FP-2, FP-3, FP-6, FP-8, FP-10

DATUM REFERENCE NOTE:

ELEVATION AND CONTOUR INFORMATION BASED ON NAVD 88. TO CONVERT THE ELEVATION DATA TO NGVD DATUM, ADD 0.70 FEET TO THE NAVD 88 VALUE.



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

40 0 40 80

SCALE: 1" = 40'

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
UTILITIES REVIEW	WHS 2/22/18
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: GRADING & DRAINAGE PLAN – PHASE I

PROJECT NAME: STROUDWATER PRESERVE

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING, INC.
158 DANFORTH STREET, PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=40'
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
NO. 11491
REGISTERED PROFESSIONAL ENGINEER
4-16-18

DRAWING NO.
C-31

GENERAL NOTES:

1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET.
3. REFER TO THE STORMWATER REPORT FOR STORMWATER AND SURFACE ANALYSIS.
4. REFER TO SHEET C-47 FOR ADDITIONAL INVERT INFORMATION AND STRUCTURE SCHEDULES FOR DETENTION PONDS.
5. CONTRACTOR TO FLAG EDGE OF WETLANDS PRIOR TO EARTHWORKING. EDGE OF WETLAND IMPACTS TO BE DELINEATED BY ONE ROW OF STUMP GRINDINGS AND ONE ROW OF SILT FENCE. REFER TO EROSION & SEDIMENTATION CONTROL DETAILS.

STRUCTURE TABLE

NAME	DIA	RIM	INV. IN / PIPE (SIZE)	INV. OUT / PIPE (SIZE)	STA / OFFSET
CB-13	48"	58.30'		55.27' / SD-28 (12")	49+75.50 / -12.98 (L)
CB-14	48"	59.00'		55.14' / SD-29 (12")	49+88.65 / 13.00 (R)
CB-15	48"	58.16'		55.14' / SD-31 (12")	80+77.18 / -13.10 (L)
CB-16	48"	58.15'		55.13' / SD-33 (12")	80+78.80 / 12.91 (R)
CB-17	48"	51.49'		48.46' / SD-39 (12")	67+35.31 / -13.00 (L)
CB-18	48"	51.49'		48.46' / SD-40 (12")	67+35.31 / 13.00 (R)
CB-19	48"	46.17'		43.15' / SD-45 (12")	70+64.18 / -13.00 (L)
CB-20	48"	46.18'		43.15' / SD-46 (12")	70+64.18 / 13.00 (R)
CB-21	48"	52.19'		49.16' / SD-51 (12")	72+81.87 / -13.00 (L)
CB-22	48"	51.93'		48.90' / SD-52 (12")	72+74.82 / 13.00 (R)
CB-23	48"	60.92'		57.90' / SD-54 (12")	78+01.79 / -12.97 (L)
CB-24	48"	60.90'		57.88' / SD-53 (12")	78+03.17 / 13.01 (R)
DMH-17	48"	58.48'	55.19' / SD-28 (12") 55.06' / SD-29 (12")	54.96' / SD-30 (12")	49+88.62 / -2.50 (L)
DMH-18	60"	58.19'	54.85' / SD-30 (12") 52.74' / SD-32 (18")	52.14' / SD-34 (24")	80+98.61 / 3.01 (R)
DMH-19	48"	58.47'	53.19' / SD-57 (15") 55.06' / SD-31 (12") 55.08' / SD-33 (12")	52.94' / SD-32 (18")	80+78.15 / 2.41 (R)
DMH-20	48"	56.31'	50.18' / SD-34 (24")	50.08' / SD-35 (24")	64+46.33 / 0.29 (R)
DMH-21	48"	55.46'	49.37' / SD-35 (24")	49.27' / SD-36 (24")	64+96.84 / 3.52 (R)
DMH-22	48"	54.80'	48.67' / SD-36 (24")	48.57' / SD-37 (24")	65+46.68 / 0.49 (R)
DMH-23	48"	53.89'	47.78' / SD-37 (24")	47.68' / SD-38 (24")	66+02.06 / 2.98 (R)
DMH-24	60"	51.76'	48.41' / SD-40 (12") 45.70' / SD-38 (24") 48.38' / SD-39 (12")	45.60' / SD-41 (24")	67+36.64 / 3.00 (R)
DMH-25	48"	49.93'	43.87' / SD-41 (24")	43.77' / SD-42 (24")	68+41.24 / 3.00 (R)
DMH-26	48"	48.60'	42.48' / SD-42 (24")	42.38' / SD-43 (24")	69+18.77 / 2.50 (R)
DMH-27	48"	47.24'	41.15' / SD-43 (24")	41.05' / SD-44 (24")	69+96.29 / 2.50 (R)
DMH-29	72"	46.52'	39.31' / SD-47 (36") 40.63' / SD-48 (18")	39.21' / SD-D2 (36")	70+79.70 / 3.49 (R)
DMH-30	48"	47.74'	42.13' / SD-49 (18")	42.03' / SD-48 (18")	71+51.54 / 2.50 (R)
DMH-31	48"	50.53'	44.76' / SD-50 (18")	44.66' / SD-49 (18")	72+29.06 / 2.50 (R)
DMH-32	48"	52.26'	49.07' / SD-51 (12") 48.86' / SD-52 (12")	46.73' / SD-50 (18")	72+77.12 / 4.84 (R)
DMH-33	48"	61.09'	57.80' / SD-54 (12") 57.84' / SD-53 (12")	55.81' / SD-55 (15")	78+06.79 / 5.71 (R)
DMH-34	48"	60.52'	55.24' / SD-55 (15")	55.14' / SD-56 (15")	78+63.95 / 5.41 (R)
DMH-35	48"	59.90'	54.62' / SD-56 (15")	54.52' / SD-57 (15")	79+26.37 / 5.27 (R)
DMH-D2	72"	40.00'	33.00' / SD-D2 (36")	32.90' / SD (36")	

STORMWATER BMP OWNERSHIP & MAINTENANCE SUMMARY

CITY	HOA
FB-11, FP-12, FP-13, FP-15, FP-18, FP-19	FP-14, FP-16, FP-17, FP-20

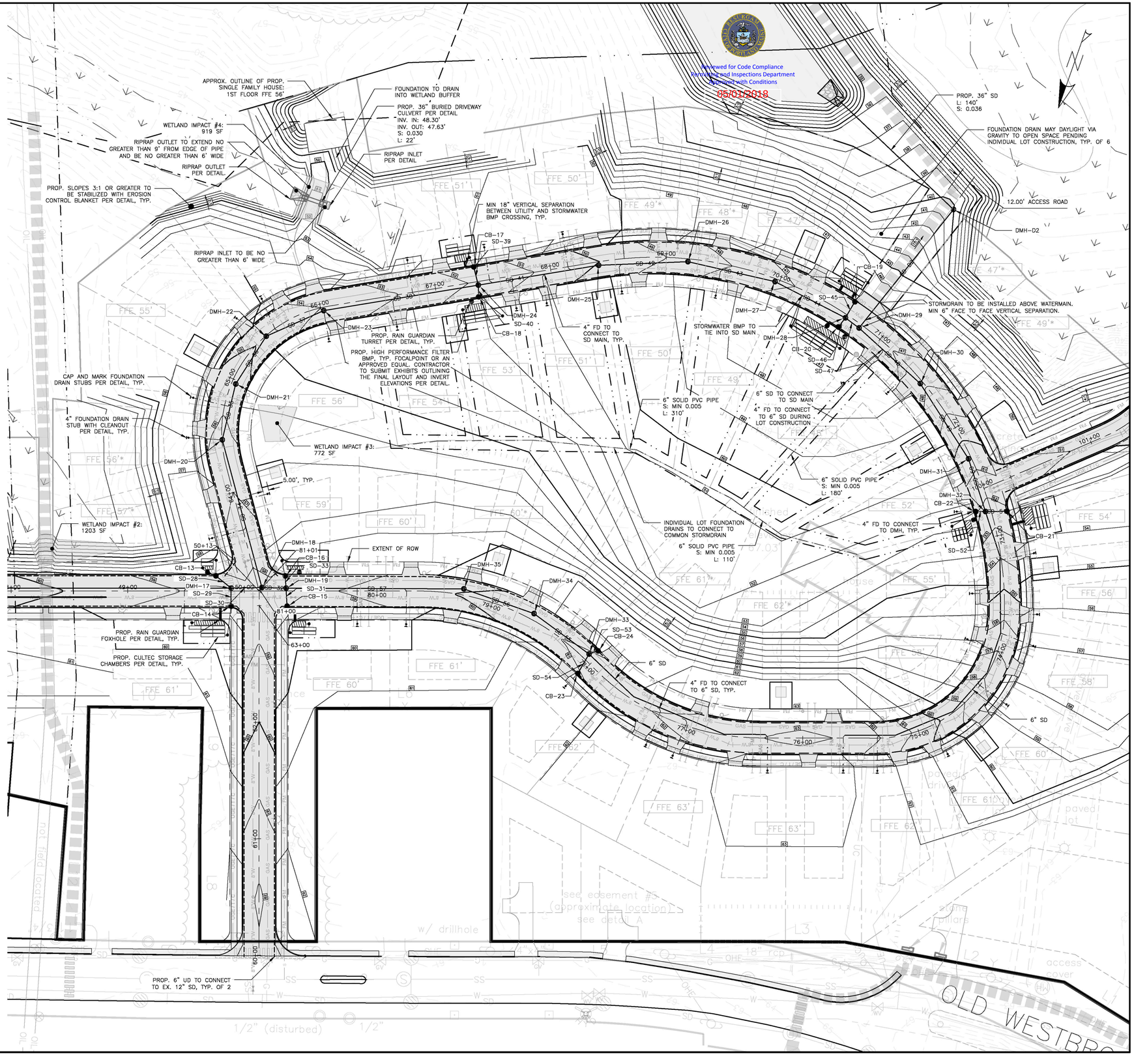
DATUM REFERENCE NOTE:

ELEVATION AND CONTOUR INFORMATION BASED ON NAVD 88. TO CONVERT THE ELEVATION DATA TO NGVD DATUM, ADD 0.70 FEET TO THE NAVD 88 VALUE.

40 0 40 80

SCALE: 1" = 40'

ISSUED FOR CONSTRUCTION



ISSUED FOR	BY DATE
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
UTILITIES REVIEW	WHS 2/22/18
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: **GRADING & DRAINAGE PLAN – PHASE II**

PROJECT NAME: **STROUDWATER PRESERVE**

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=40'
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
4-16-18
LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-32

GENERAL NOTES:

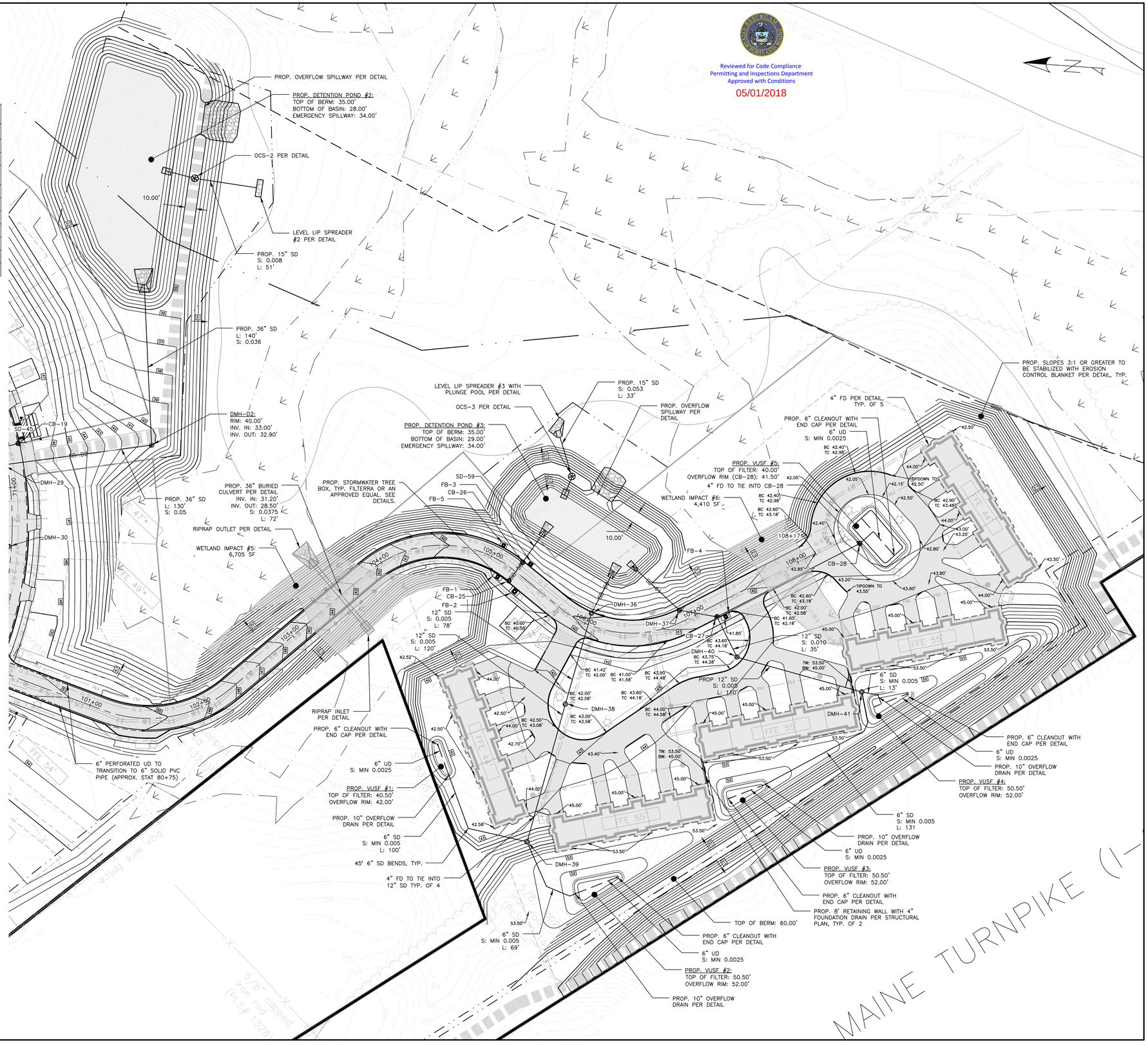
1. ALL WORK WITHIN THE CITY STREET RIGHT OF WAY SHALL MEET CITY OF PORTLAND TECHNICAL MANUAL STANDARDS.
2. CONTRACTOR SHALL ENSURE THAT UNDERDRAINS ARE CONSTRUCTED WITH POSITIVE OUTLET.
3. REFER TO THE STORMWATER REPORT FOR STORMWATER AND SURFACE ANALYSIS.
4. REFER TO SHEET C-47 & C-48 FOR ADDITIONAL INVERT INFORMATION AND STRUCTURE SCHEDULES FOR DETENTION PONDS AND VEGETATED UNDERDRAINED SOIL FILTERS (VUSF).
5. CONTRACTOR TO FLAG EDGE OF WETLANDS PRIOR TO EARTHWORKING. EDGE OF WETLAND IMPACTS TO BE DELINEATED BY ONE ROW OF STUMP GRINDINGS AND ONE ROW OF SILT FENCE. REFER TO EROSION & SEDIMENTATION CONTROL DETAILS.

STRUCTURE TABLE

NAME	DIA	RIM	INV. IN / PIPE (SIZE)	INV. OUT / PIPE (SIZE)	STA / OFFSET
CB-25	48"	39.11'		36.08' / SD-58 (12")	105+25.45 / 9.98 (R)
CB-26	48"	39.10'	35.98' / SD-58 (12")	31.95' / SD-59 (18")	105+24.56 / -10.07 (L)
CB-27	48"	41.29'	36.39' / SD-63 (12") 37.55' / 12" SD	36.29' / SD-62 (12")	107+15.93 / 9.99 (R)
CB-28	48"	40.50'		37.08' / SD-63 (12")	
DMH-36	48"	39.87'	35.15' / 12" SD	32.53' / SD-60 (18")	106+01.88 / -10.06 (L)
DMH-37	48"	40.96'	36.12' / SD-62 (12")	33.70' / SD-61 (12")	106+89.54 / -10.00 (L)
DMH-38	48"	43.00'	35.63' / 12" SD	35.53' / 12" SD	
DMH-39	48"	47.50'		36.23' / 12" SD	
DMH-40	48"	43.00'	38.00' / 12" SD	37.90' / 12" SD	
DMH-41	48"	53.00'		38.55' / 12" SD	

DATUM REFERENCE NOTE:

ELEVATION AND CONTOUR INFORMATION BASED ON NAVD 88. TO CONVERT THE ELEVATION DATA TO NGVD DATUM, ADD 0.70 FEET TO THE NAVD 88 VALUE.



40 0 40 80

SCALE: 1" = 40'

ISSUED FOR CONSTRUCTION

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

ISSUED FOR	BY DATE
FINAL APP	WHS 10/25/17
DPW REVIEW	WHS 11/9/17
CITY COMMENTS	WHS 11/21/17
UTILITIES REVIEW	WHS 2/23/18
SW REVIEW	WHS 3/19/18
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: **GRADING & DRAINAGE PLAN – PHASE III**

PROJECT NAME: **STROUDWATER PRESERVE**

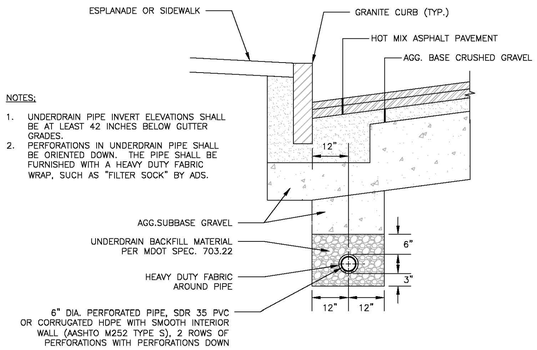
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=40'
DESIGNED BY:	WHS
DRAWN BY:	OJD
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11419
4-16-18
REGISTERED PROFESSIONAL ENGINEER

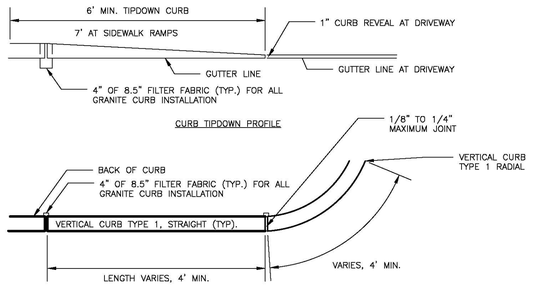
DRAWING NO.
C-33



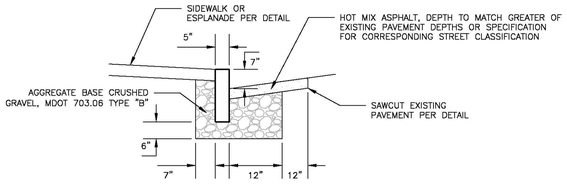
NOTES:

1. UNDERDRAIN PIPE INVERT ELEVATIONS SHALL BE AT LEAST 42 INCHES BELOW GUTTER GRADES.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN. THE PIPE SHALL BE FURNISHED WITH A HEAVY DUTY FABRIC WRAP, SUCH AS "FILTER SOCK" BY ADS.

UNDERDRAIN INSTALLATION – TYPE "B"
NOT TO SCALE



VERTICAL GRANITE CURB PLAN VIEW

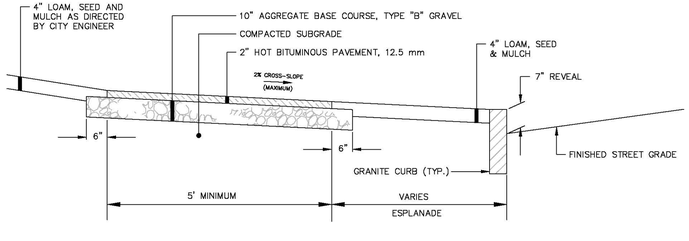


VERTICAL GRANITE CURB CROSS SECTION

VERTICAL GRANITE CURB AND TIPDOWN INSTALLATION
NOT TO SCALE

NOTE:

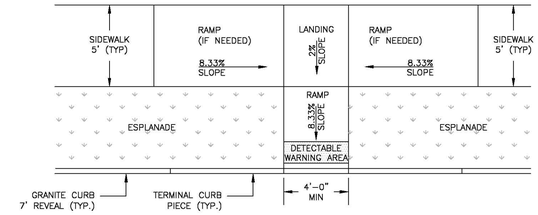
COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557



BITUMINOUS SIDEWALK
NOT TO SCALE

NOTES:

1. ALL RAMPS SHALL COMPLY WITH ADA STANDARDS TO THE GREATEST EXTENT PRACTICAL.
2. GRANITE CURB ADJACENT TO LANDING SHALL BE FLUSH WITH STREET.
3. SIDEWALK MATERIAL PER CITY SIDEWALK MATERIAL POLICY.

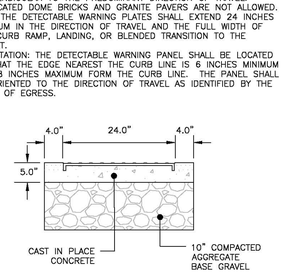


PLAN VIEW

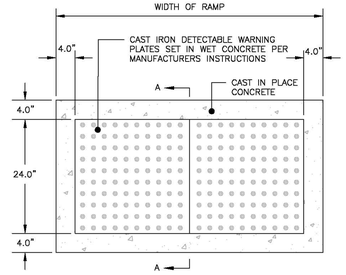
PERPENDICULAR ADA RAMP LAYOUT FOR NARROW SIDEWALK WITH ESPLANADE
NOT TO SCALE

NOTES:

1. ALL DETECTABLE WARNING PLATES SHALL BE UNCOATED CAST IRON. FOLLOW MANUFACTURER'S INSTRUCTIONS FOR INSTALLATION.
2. CAST IN PLACE CONCRETE SHALL MEET SPECIFICATIONS FOR MDOT CLASS A STRUCTURAL CONCRETE, MINIMUM COMPRESSIVE STRENGTH 4,000 PSI. THE EXPOSED CONCRETE BORDER SHALL RECEIVE A UNIFORM BROOM FINISH PERPENDICULAR TO THE FLOW OF PEDESTRIAN TRAFFIC.
3. TRUNCATED DOMES SHALL BE ALIGNED IN ROWS, PARALLEL AND PERPENDICULAR TO THE PREDOMINANT DIRECTION OF TRAVEL. TRUNCATED DOME BRICKS AND GRANITE PAVERS ARE NOT ALLOWED.
4. SIZE: THE DETECTABLE WARNING PLATES SHALL EXTEND 24 INCHES MINIMUM IN THE DIRECTION OF TRAVEL AND THE FULL WIDTH OF THE CURB RAMP, LANDING, OR BLENDED TRANSITION TO THE STREET.
5. ORIENTATION: THE DETECTABLE WARNING PANEL SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 INCHES MINIMUM AND 8 INCHES MAXIMUM FORM THE CURB LINE. THE PANEL SHALL BE ORIENTED TO THE DIRECTION OF TRAVEL AS IDENTIFIED BY THE POINT OF EGRESS.



SECTION A–A

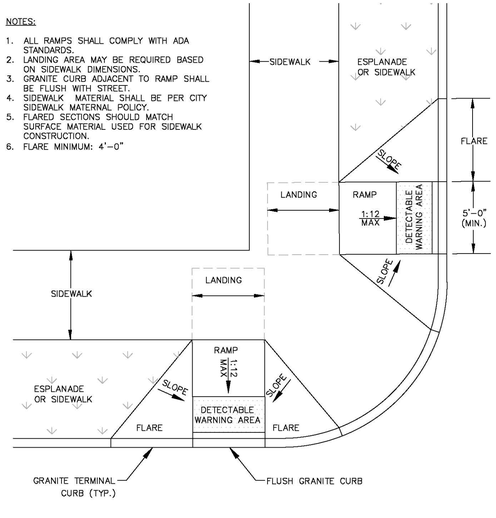


PLAN VIEW

SIDEWALK RAMP DETECTABLE WARNING PANEL
NOT TO SCALE

NOTES:

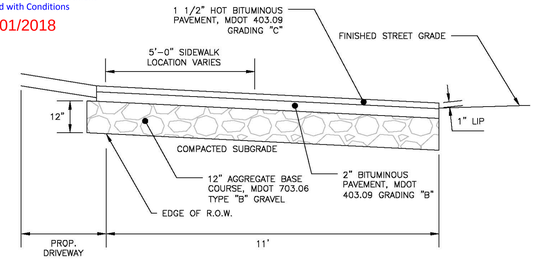
1. ALL RAMPS SHALL COMPLY WITH ADA STANDARDS.
2. LANDING AREA MAY BE REQUIRED BASED ON SIDEWALK DIMENSIONS.
3. GRANITE CURB ADJACENT TO RAMP SHALL BE FLUSH WITH STREET.
4. SIDEWALK MATERIAL SHALL BE PER CITY SIDEWALK MATERIAL POLICY.
5. FLARED SECTIONS SHOULD MATCH SURFACE MATERIAL USED FOR SIDEWALK CONSTRUCTION.
6. FLARE MINIMUM: 4'–0"



PREFERRED SIDEWALK RAMP LAYOUT AT INTERSECTION
NOT TO SCALE

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

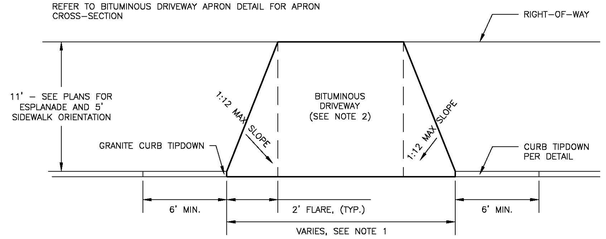
2. PROVIDE 2% CROSS-SLOPE MAXIMUM ALONG PEDESTRIAN ACCESS ROUTE (5' MINIMUM)
3. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557



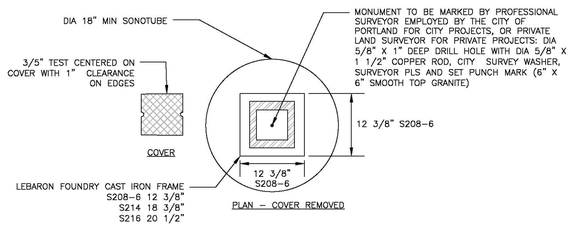
BITUMINOUS DRIVEWAY APRON DETAIL
NOT TO SCALE

NOTE:

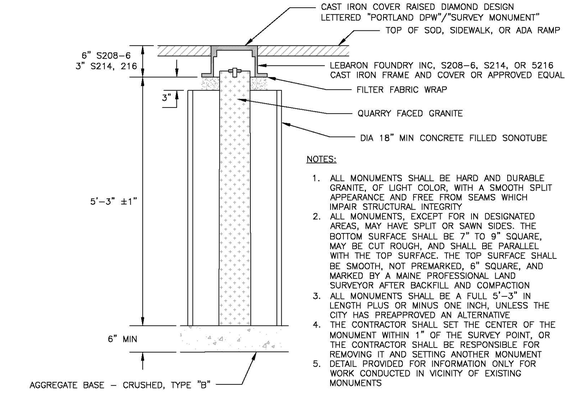
REFER TO BITUMINOUS DRIVEWAY APRON DETAIL FOR APRON CROSS-SECTION



DRIVEWAY APRON LAYOUT DETAIL
NOT TO SCALE



PLAN – COVER REMOVED



NOTES:

1. ALL MONUMENTS SHALL BE HARD AND DURABLE GRANITE, OF LIGHT COLOR, WITH A SMOOTH SPLIT APPEARANCE AND FREE FROM SEAMS WHICH IMPAIR STRUCTURAL INTEGRITY
2. ALL MONUMENTS, EXCEPT FOR IN DESIGNATED AREAS, MAY HAVE SPLIT OR SAWN SIDES. THE BOTTOM SURFACE SHALL BE 7" TO 9" SQUARE, MAY BE CUT ROUGH, AND SHALL BE PARALLEL WITH THE TOP SURFACE. THE TOP SURFACE SHALL BE SMOOTH, NOT PREMARKED, 6" SQUARE, AND MARKED BY A MAINE PROFESSIONAL LAND SURVEYOR AFTER BACKFILL AND COMPACTION
3. ALL MONUMENTS SHALL BE A FULL 5'–3" IN LENGTH PLUS OR MINUS ONE INCH, UNLESS THE CITY HAS PREAPPROVED AN ALTERNATIVE
4. THE CONTRACTOR SHALL SET THE CENTER OF THE MONUMENT WITHIN 1" OF THE SURVEY POINT, OR THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING IT AND SETTING ANOTHER MONUMENT
5. DETAIL PROVIDED FOR INFORMATION ONLY FOR WORK CONDUCTED IN VICINITY OF EXISTING MONUMENTS

GRANITE STREET MONUMENT
NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	8/22/17
FINAL APP.	WHS	10/25/17
DPW REVIEW	WHS	11/27/17
CITY COMMENTS	WHS	11/31/17
CONSTRUCTION	WHS	4/16/18

DRAWING NAME: **SITE DETAILS – 1**

PROJECT NAME: **STROUDWATER PRESERVE**

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

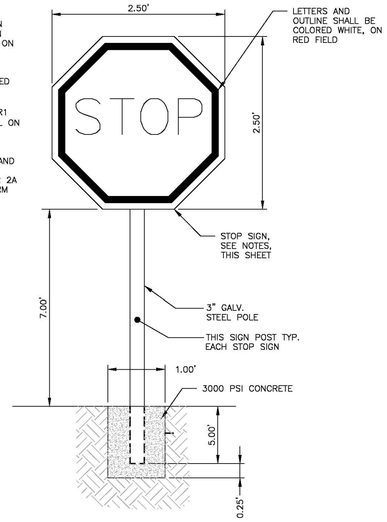
FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — 4-16-18 — PROFESSIONAL ENGINEER

DRAWING NO.
C-40

NOTES:

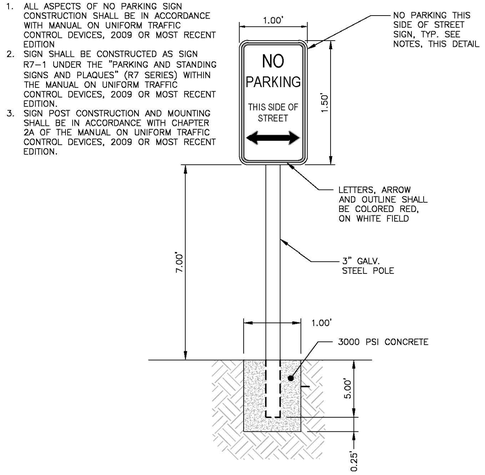
1. ALL ASPECTS OF STOP SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
2. SIGN SHALL BE CONSTRUCTED AS SIGN R1-1 UNDER THE "REGULATORY SIGNS, BARRICADES, AND GATES" (R1 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



STOP SIGN DETAIL
NOT TO SCALE

NOTES:

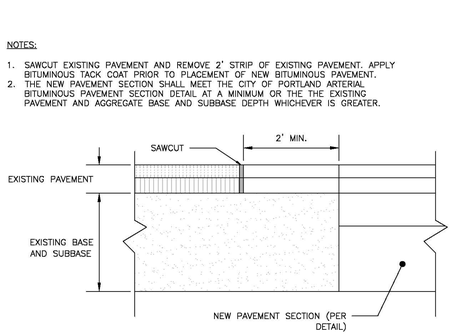
1. ALL ASPECTS OF NO PARKING SIGN CONSTRUCTION SHALL BE IN ACCORDANCE WITH MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION
2. SIGN SHALL BE CONSTRUCTED AS SIGN R7-1 UNDER THE "PARKING AND STANDING SIGNS AND PLAQUES" (R7 SERIES) WITHIN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.
3. SIGN POST CONSTRUCTION AND MOUNTING SHALL BE IN ACCORDANCE WITH CHAPTER 2A OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 2009 OR MOST RECENT EDITION.



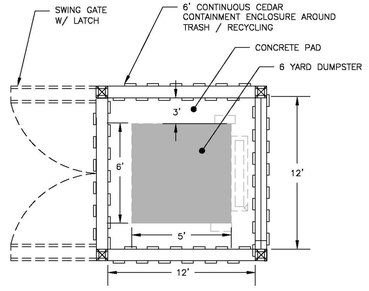
NO PARKING DETAIL
NOT TO SCALE

NOTES:

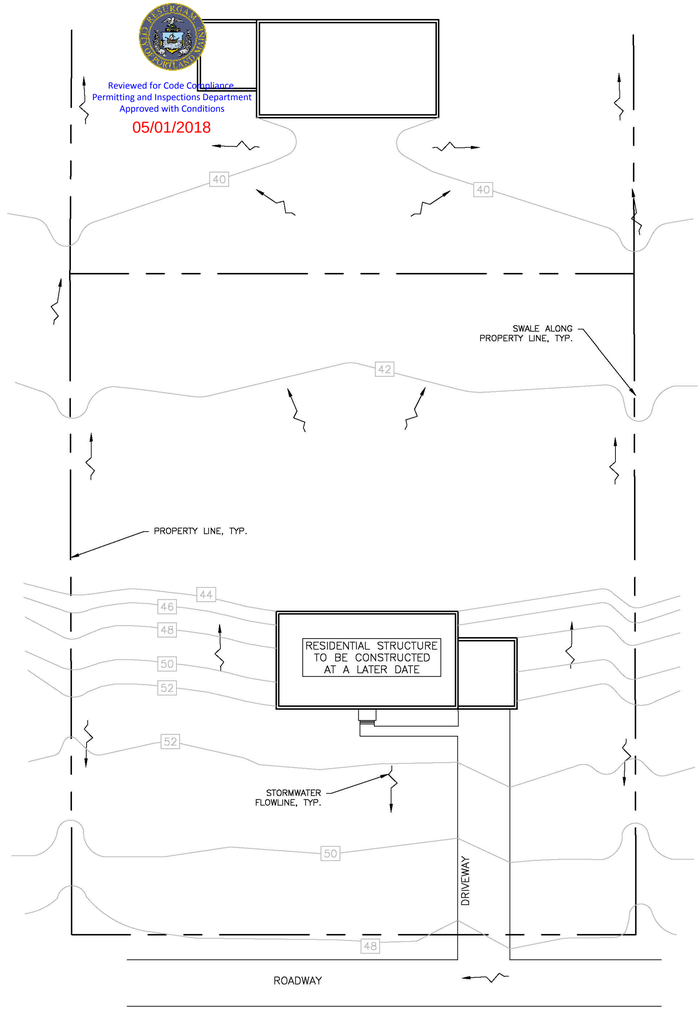
1. SAWCUT EXISTING PAVEMENT AND REMOVE 2' STRIP OF EXISTING PAVEMENT. APPLY BITUMINOUS TACK COAT PRIOR TO PLACEMENT OF NEW BITUMINOUS PAVEMENT.
2. THE NEW PAVEMENT SECTION SHALL MEET THE CITY OF PORTLAND ARTERIAL BITUMINOUS PAVEMENT SECTION DETAIL AT A MINIMUM OR THE THE EXISTING PAVEMENT AND AGGREGATE BASE AND SUBBASE DEPTH WHICHEVER IS GREATER.



PAVEMENT SAWCUT DETAIL
NOT TO SCALE



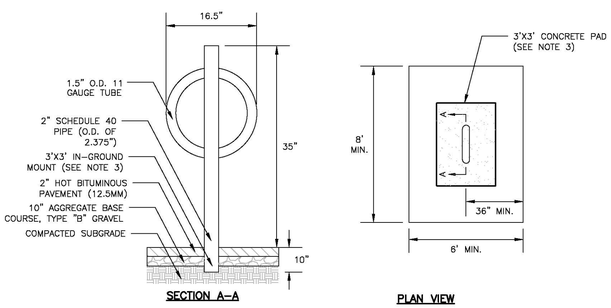
TRASH ENCLOSURE
NOT TO SCALE



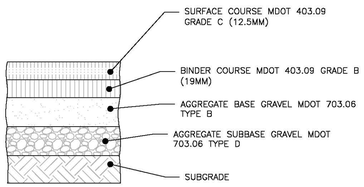
TYPICAL GRADING FOR RESIDENTIAL LOTS
NOT TO SCALE

NOTES:

1. BICYCLE RACK SHALL HAVE CAPACITY FOR TWO BICYCLES.
2. BICYCLE RACK PARTS SHALL BE OF UNIFORM COLOR AND SHALL BE FINISHED IN ACCORDANCE WITH PRODUCT SPECIFICATION. PER CITY OF PORTLAND TECHNICAL STANDARDS ALL BICYCLE RACKS WITHIN THE RIGHT-OF-WAY SHALL MATCH THE FURNITURE COLOR FOR THAT LOCATION AS DESCRIBED IN THE MUNICIPAL LIGHTING STANDARDS; IF NO DESIGNATED COLOR FOR THAT AREA EXISTS, BICYCLE RACKS SHALL BE BLACK.
3. BICYCLE RACK SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S MOST RECENT INSTALLATION RECOMMENDATIONS, AND SHALL BE INSTALLED WITH AN IN-GROUND MOUNT UNLESS OTHERWISE APPROVED BY ENGINEER.
4. BICYCLE RACK SHALL BE "DERO BIKE HITCH", AS MANUFACTURED BY DERO BIKE RACKS.
5. MINIMUM OFFSETS SHOWN. MANUFACTURER'S RECOMMENDED OFFSETS SHALL BE ENFORCED WHERE POSSIBLE.
6. MINIMUM DISTANCE BETWEEN BICYCLE RACKS SHALL BE 24". RECOMMENDED DISTANCE BETWEEN BICYCLE RACKS SHALL BE 38".
7. ALL OFFSETS ARE FROM OUTSIDE EDGES OF ITEMS.
8. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
9. BITUMINOUS PAVEMENT SHALL HAVE A 2% CROSS SLOPE TOWARDS STREET.
10. MINIMUM 6' X 8' PAVED PAD WITH HITCH TO BE CENTERED BETWEEN PROPERTY LINE AND SIDEWALK OR IN ESPLANADE. HITCH TO BE INSTALLED PARALLEL TO STREET. BICYCLE RACK MUST BE PLACED ON PUBLIC PROPERTY.



BICYCLE RACK DETAIL
NOT TO SCALE

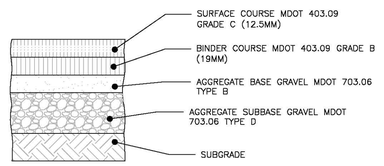


NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557.
2. COLLECTOR BITUMINOUS PAVEMENT PROFILE APPLIES ONLY WITHIN WESTBROOK STREET. R.O.W.
3. SURFACE AND AGGREGATE MATERIALS SHALL MEET THE CITY OF PORTLAND STANDARDS IN ADDITION TO MDOT STANDARDS.

THICKNESS OF LAYERS	
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2-1/2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
18"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND COLLECTOR ROADS BITUMINOUS PAVEMENT PROFILE: WESTBROOK STREET
NOT TO SCALE

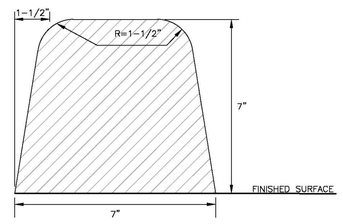


NOTES:

1. COMPACT SUBGRADE TO 95% MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D-1557
2. PRUD DRIVEWAY BUILT TO LOCAL ROAD DEPTH STANDARDS

THICKNESS OF LAYERS	
STANDARD	LAYERS
1-1/2"	SURFACE COURSE MDOT 403.09 GRADE C (12.5mm)
2"	BINDER COURSE MDOT 403.09 GRADE B (19mm)
3"	AGGREGATE BASE GRAVEL MDOT 703.06 TYPE B
15"	AGGREGATE SUBBASE GRAVEL MDOT 703.06 TYPE D

CITY OF PORTLAND LOCAL ROADS BITUMINOUS PAVEMENT PROFILE: SUBDIVISION AND PRUD ROADWAYS
NOT TO SCALE



VERTICAL BITUMINOUS CURB – MOLD 1
NOT TO SCALE

ISSUED FOR

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 9/22/17
FINAL APP.	WHS 10/25/17
DPW REVIEW	WHS 11/15/17
CITY COMMENTS	WHS 11/21/17
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: **SITE DETAILS – 2**

PROJECT NAME: **STROUDWATER PRESERVE**

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH ST. PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

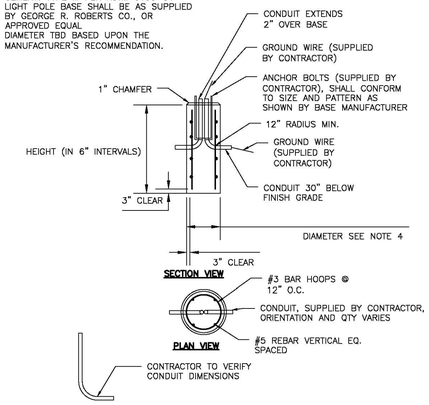
STATE OF MAINE — WILLIAM H. SAVAGE — No. 11410 — 4-16-18 — REGISTERED PROFESSIONAL ENGINEER

ISSUED FOR CONSTRUCTION

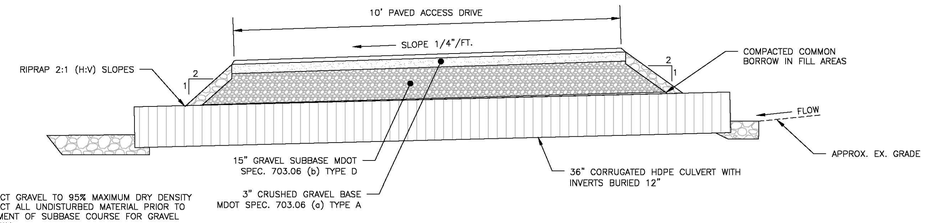
DRAWING NO.
C-41

NOTES:

1. CONCRETE: 5000 PSI @ 28 DAYS
2. CEMENT: TYPE III PER ASTM C150-81
3. LIGHT POLE BASE SHALL BE AS SUPPLIED BY GEORGE R. ROBERTS CO., OR APPROVED EQUAL
4. DIAMETER TBD BASED UPON THE MANUFACTURER'S RECOMMENDATION.



LIGHT POLE BASE
NOT TO SCALE

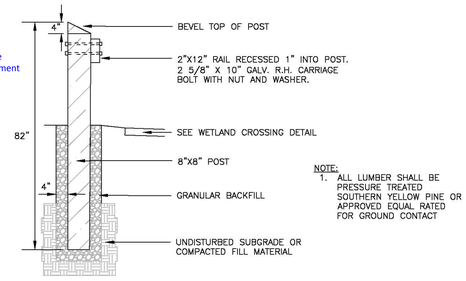


NOTES:

1. COMPACT GRAVEL TO 95% MAXIMUM DRY DENSITY
2. COMPACT ALL UNDISTURBED MATERIAL PRIOR TO PLACEMENT OF SUBBASE COURSE FOR GRAVEL DRIVEWAY

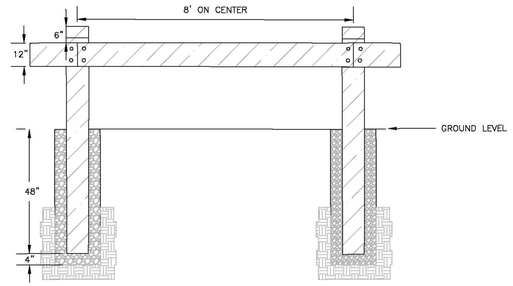
TYPICAL DRIVEWAY SECTION AT WETLAND CROSSING
NOT TO SCALE

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018



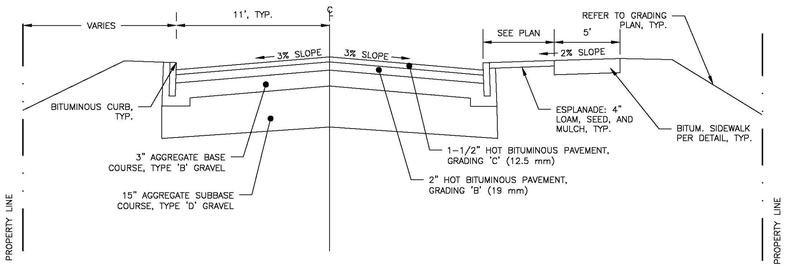
NOTE:
1. ALL LUMBER SHALL BE PRESSURE TREATED SOUTHERN YELLOW PINE OR APPROVED EQUAL RATED FOR GROUND CONTACT

SIDE ELEVATION



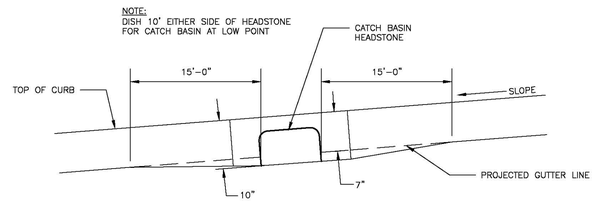
FRONT ELEVATION

WOODEN GUARDRAIL DETAIL
NOT TO SCALE

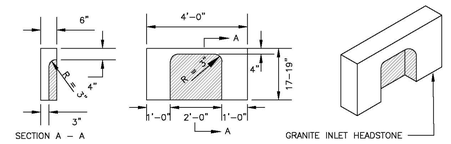


PRUD CROSS SECTION
NOT TO SCALE

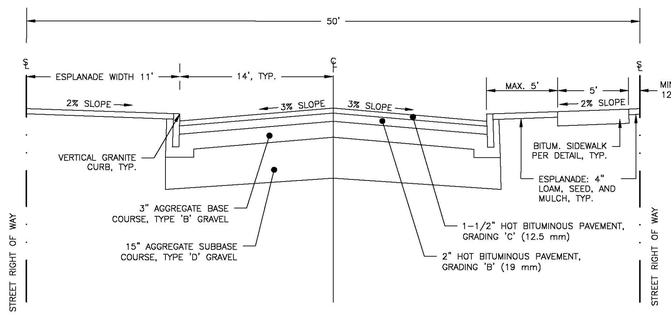
NOTE:
DISH '0' EITHER SIDE OF HEADSTONE FOR CATCH BASIN AT LOW POINT



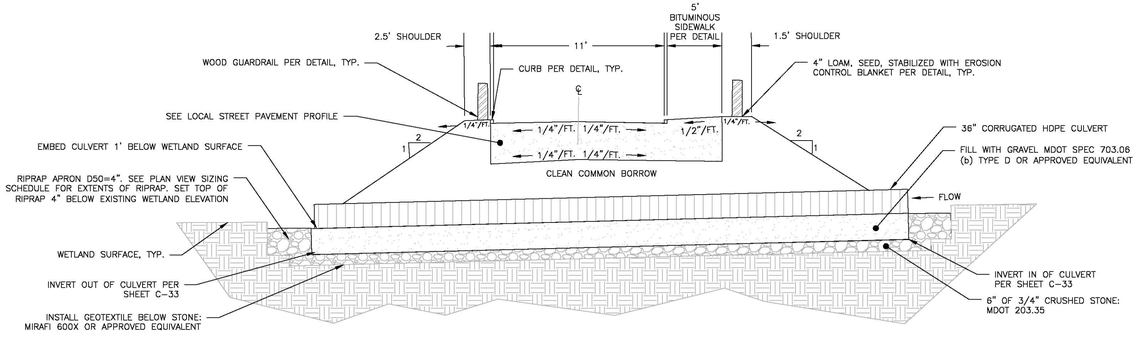
PAVEMENT GRADING ON SLOPES FOR CATCH BASIN AND INLET
NOT TO SCALE



4' GRANITE HEADSTONE FOR CATCH BASIN INLET
NOT TO SCALE

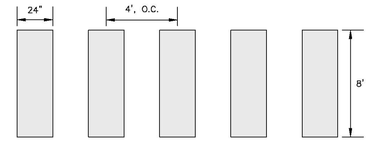


LOCAL STREET CROSS SECTION: PROPOSED PUBLIC ROADS
NOT TO SCALE



TYPICAL PRUD DRIVEWAY SECTION AT WETLAND CROSSING
NOT TO SCALE

NOTE:
1. CROSSWALKS TO BE BUILT IN CONFORMANCE WITH MUTCD STANDARDS, LATEST EDITION.
2. CROSSWALKS ARE TO BE PAINTED WHITE MEETING MAINE DOT SPECIFICATIONS.
3. 8' LENGTH OF BLOCKS TO BE PARALLEL TO THE DIRECTION OF CAR TRAFFIC.



BLOCK CROSSWALK
NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 8/23/17
FINAL APP.	WHS 10/25/17
CORPS REVIEW	WHS 10/31/17
DPW REVIEW	WHS 11/8/17
CITY COMMENTS	WHS 11/21/17
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: SITE DETAILS - 3

PROJECT NAME: STROUDWATER PRESERVE

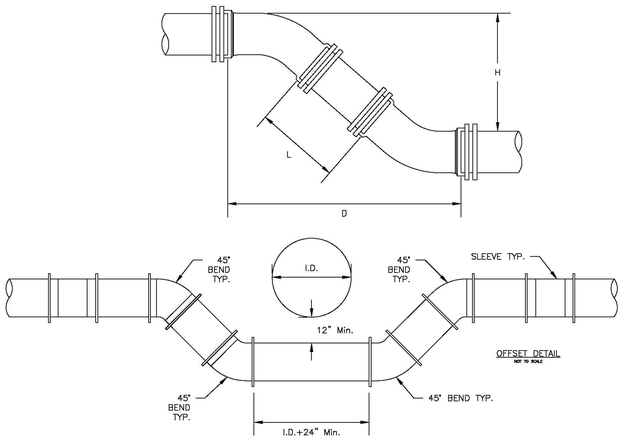
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND MAINE 04102
(207) 775-2855

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
NO. 11410
REGISTERED PROFESSIONAL ENGINEER
4-16-18

DRAWING NO.
C-42

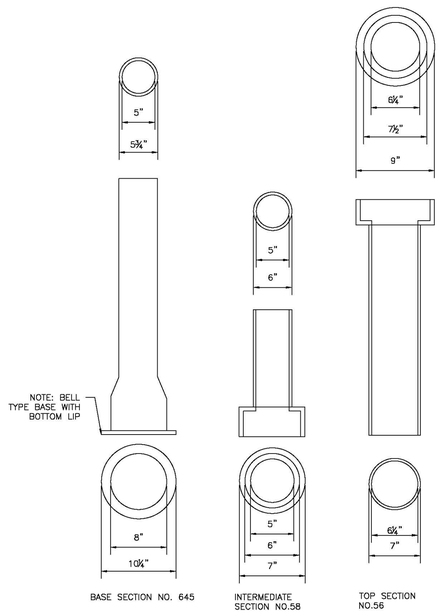


	8" PIPE	
H	D	L
12"	1' 7-1/2"	0' 9-1/2"
13"	1' 8-1/2"	0' 10-7/8"
14"	1' 9-1/2"	1' 0-5/16"
15"	1' 10-1/2"	1' 1-11/16"
16"	1' 11-1/2"	1' 3-1/8"
17"	2' 0-1/2"	1' 4-9/16"
18"	2' 1-1/2"	1' 5-15/16"
19"	2' 2-1/2"	1' 7-3/8"
20"	2' 3-1/2"	1' 8-13/16"
21"	2' 4-1/2"	1' 10-3/16"
22"	2' 5-1/2"	1' 11-5/8"
23"	2' 6-1/2"	2' 1"
24"	2' 7-1/2"	2' 2-7/16"
25"	2' 8-1/2"	2' 3-7/8"
26"	2' 9-1/2"	2' 5-1/4"
27"	2' 10-1/2"	2' 6-11/16"
28"	2' 11-1/2"	2' 8-1/8"
29"	3' 0-1/2"	2' 9-1/2"
30"	3' 1-1/2"	2' 10-15/16"
31"	3' 2-1/2"	3' 0-5/16"
32"	3' 3-1/2"	3' 1-3/4"
33"	3' 4-1/2"	3' 3-3/16"
34"	3' 5-1/2"	3' 4-9/16"
35"	3' 6-1/2"	3' 6"
36"	3' 7-1/2"	3' 7-7/16"
37"	3' 8-1/2"	3' 8-13/16"
38"	3' 9-1/2"	3' 10-1/4"
39"	3' 10-1/2"	3' 11-11/16"
40"	3' 11-1/2"	4' 1-1/16"
41"	4' 0-1/2"	4' 2-1/2"
42"	4' 1-1/2"	4' 3-7/8"
43"	4' 2-1/2"	4' 5-5/16"
44"	4' 3-1/2"	4' 6-3/4"
45"	4' 4-1/2"	4' 8-1/8"
46"	4' 5-1/2"	4' 9-9/16"
47"	4' 6-1/2"	4' 10-15/16"
48"	4' 7-1/2"	5' 0-3/8"
49"	4' 8-1/2"	5' 1-13/16"
50"	4' 9-1/2"	5' 3-3/16"
51"	4' 10-1/2"	5' 4-5/8"
52"	4' 11-1/2"	5' 6-1/16"
53"	5' 0-1/2"	5' 7-7/16"
54"	5' 1-1/2"	5' 8-7/8"
55"	5' 2-1/2"	5' 10-5/16"

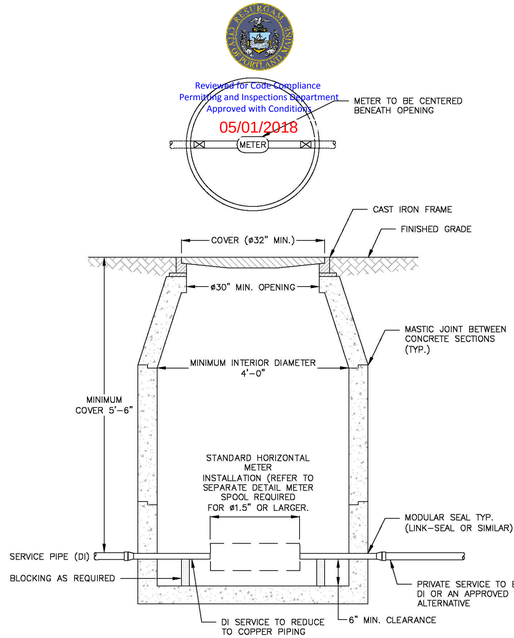
NOTE:

DIMENSIONS APPLICABLE FOR SIGMA COMPACT BENDS. FOR TYLER COMPACT BENDS, ADD 1/2" TO "D" DIMENSION AND SUBTRACT 1/2" FROM "L" DIMENSION. FOR OTHER FITTINGS REFER TO MANUFACTURER'S RECOMMENDATIONS.

TYPICAL MAIN OFFSET
NOT TO SCALE



VALVE BOX & COVER
NOT TO SCALE



METER PIT AND COVER:

1. SPECIAL APPROVAL BY PWD IS REQUIRED, PRIOR TO CONSTRUCTION, FOR ALL PROPOSED METER PIT INSTALLATIONS.
2. BACKFLOW PREVENTION DEVICES MAY NOT BE INSTALLED WITHIN SMALL METER PITS.
3. FINAL METER PIT LAYOUT AND DESIGN SUBJECT TO PWD REVIEW AND APPROVAL.
4. METER PIT SHALL BE LOCATED ON PRIVATE PROPERTY BETWEEN 10' AND 20' FROM THE PROPERTY LINE UNLESS OTHERWISE APPROVED BY PWD.
5. THE METER PIT SHALL BE MADE OF PRECAST CONCRETE OF SUFFICIENT SIZE TO PROVIDE 5.5' MINIMUM GROUND COVER FORM FINISHED GRADE TO THE TOP OF THE SERVICE PIPE.
6. ALL SEAMS BETWEEN CONCRETE SECTIONS SHALL BE SEALED WITH MASTIC JOINT. ALL OPENINGS IN THE CONCRETE FOR SERVICE PIPING SHALL BE SEALED WITH A MODULAR SEAL (LINK-SEAL OR SIMILAR)
7. METER PIT INTERIOR MUST BE AT LEAST 48" IN DIAMETER. THE OPENING MUST BE AT LEAST 30" IN DIAMETER, WITH A CAST IRON FRAME. THE COVER SHALL BE CAST IRON OR STEEL, 32" MINIMUM IN DIAMETER, AND BE EITHER PERMANENTLY LABELED "WATER" OR HAVE NO LABEL. STEEL PLATE MATERIAL SHALL BE COATED WITH A RUST INHIBITOR PAINT.
8. WALL-MOUNTED LADDER RUNGS ARE NOT TO BE INSTALLED WITHIN METER PIT.
9. ALL PIPING INSIDE AND EXTENDING THROUGH THE METER PIT WILL BE MADE OF COPPER, WITH A MINIMUM OF 6" CLEARANCE FROM THE METER PIT FLOOR. USE BLOCKING AS NEEDED TO SUPPORT THE PIPE.
10. CUSTOMER SHALL ENSURE THE METER PIT AND COVER ARE PROPERLY RATED FOR TRAFFIC FLOW, IF APPLICABLE.

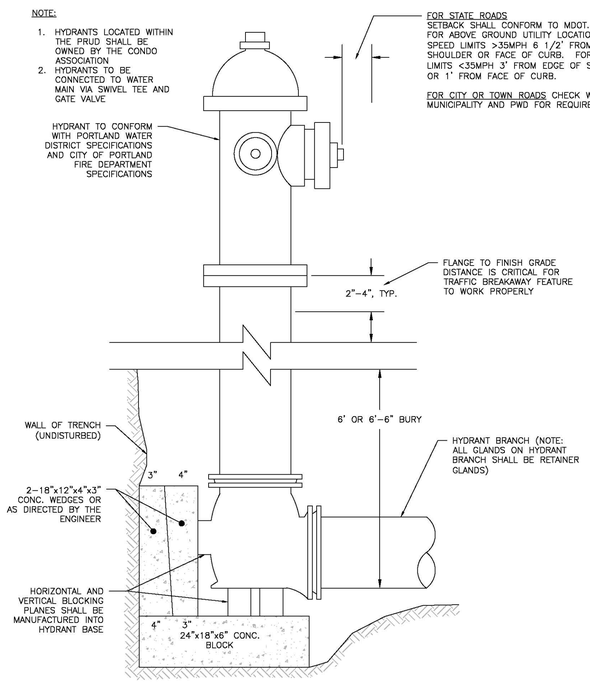
METER INSTALLATION:

11. ONLY PWD PERSONNEL ARE AUTHORIZED TO INSTALL WATER METERS. PWD PERSONNEL ARE ADDITIONALLY AUTHORIZED TO OPERATE METER VALVES AS NEEDED FOR INSTALLATION AND MAINTENANCE.
12. PWD WILL SUPPLY THE WATER METER. ALL OTHER FITTINGS, INCLUDING A METER RESETTER FOR 1" OR SMALLER METERS, SHALL BE SUPPLIED AND INSTALLED BY CUSTOMER.
13. FOR 1.5" AND 2" METERS, CUSTOMER WILL INSTALL A FLANGED METER SPOOL PIECE, SUPPLIED BY PWD AT NO ADDITIONAL CHARGE, PRIOR TO METER SET. THE METER SPOOL WILL BE MADE AVAILABLE FOR CUSTOMER PICKUP AT PWD CUSTOMER SERVICE, 225 DOUGLASS STREET, PORTLAND DURING NORMAL BUSINESS HOURS.
14. CUSTOMER WILL INSTALL TWO BALL VALVES AT LEAST 24" APART FOR METER INSTALLATION, ALLOWING FOR THE WATER METER TO BE CENTERED UNDER THE METER PIT OPENING. THE BALL VALVES SHALL BE SOLDERED IN PLACE.

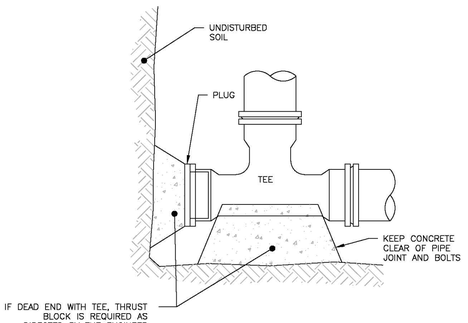
4" DOMESTIC WATER METER PIT
NOT TO SCALE

NOTE:

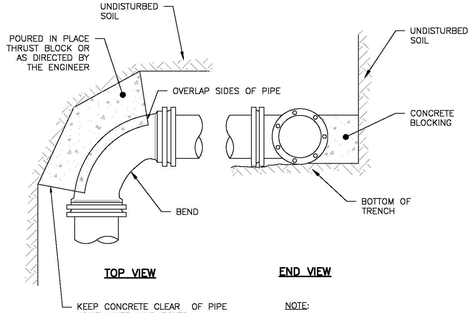
1. HYDRANTS LOCATED WITHIN THE PRUD SHALL BE OWNED BY THE CONDO ASSOCIATION
2. HYDRANTS TO BE CONNECTED TO WATER MAIN VIA SWIVEL TEE AND GATE VALVE



TYPICAL HYDRANT INSTALLATION DETAIL
NOT TO SCALE



END SECTION



TOP VIEW

END VIEW

NOTE:

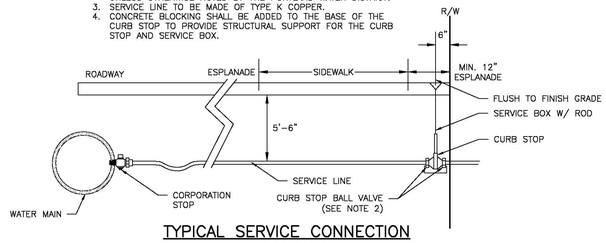
SEE THRUST/RETAINER GLAND SCHEDULE FOR TYPE OF BLOCKING TO BE USED ON BENDS

REGULAR BEND

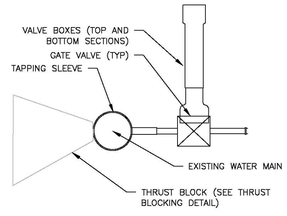
THRUST BLOCKING
NOT TO SCALE

NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES MUST COMPLY WITH PORTLAND WATER DISTRICT (PWD) SPECIFICATIONS.
2. CURB STOP BALL VALVE TO BE MADE OF COPPER OR BRASS UNLESS OTHERWISE NOTED BY THE PORTLAND WATER DISTRICT.
3. SERVICE LINE TO BE MADE OF TYPE K COPPER.
4. CONCRETE BLOCKING SHALL BE ADDED TO THE BASE OF THE CURB STOP TO PROVIDE STRUCTURAL SUPPORT FOR THE CURB STOP AND SERVICE BOX.



TYPICAL SERVICE CONNECTION
NOT TO SCALE

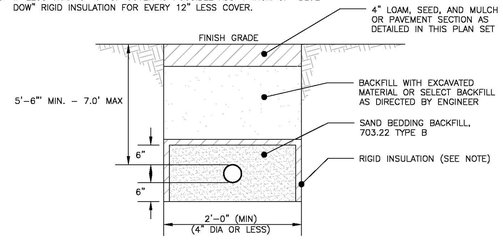


SIDE VIEW

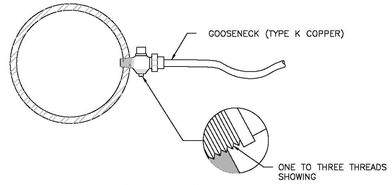
TAPPING SLEEVE AND VALVE
NOT TO SCALE

NOTES:

1. THE WATER TRENCH SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE PORTLAND WATER DISTRICT STANDARD DETAILS & SPECIFICATIONS.
2. IF LESS THAN 5'-6" OF COVER IS POSSIBLE ADD 1 INCH OF "BLUE DOW" RIGID INSULATION FOR EVERY 12" LESS COVER.



WATER SERVICE TRENCH SECTION DETAIL
NOT TO SCALE



SERVICE TAP: 3/4" AND 1" C.C. THREAD
NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 6/22/17
FINAL APP.	WHS 10/25/17
DPW REVIEW	WHS 11/8/17
CITY COMMENTS	WHS 11/21/17
PWD REVIEW	CMD 2/23/18
PWD ATS	OJD 3/22/18
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: UTILITY DETAILS - 1

PROJECT NAME: STROUDWATER PRESERVE

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

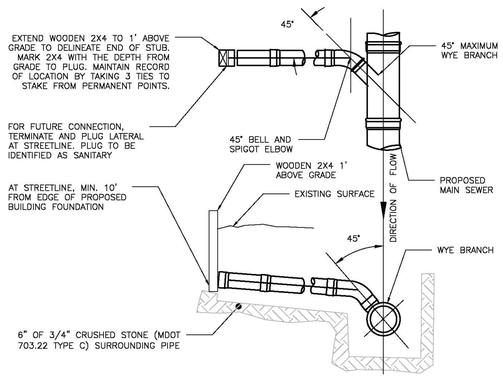
FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
4-16-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-43

NOTES:

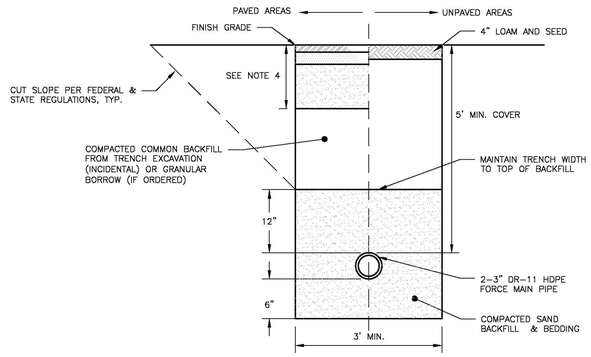
1. LOCATION WITH WARNING TAPE SHALL BE INSTALLED OVER CENTERLINE OF PIPE AT A MAXIMUM OF 24 INCHES BELOW FINISH GRADE.
2. SITE CONTRACTOR TO COORDINATE CONNECTION OF SEWER LATERAL TO HOUSEHOLD PLUMBING WITH ARCHITECTURAL CONTRACTOR
3. CONNECTION OF PROPOSED SEWER LATERAL TO HOUSEHOLD PLUMBING SHOULD INCORPORATE USE OF SIMILAR PIPE MATERIALS. IN THE CASE OF DISSIMILAR PIPES BEING USED, A FERNCO FLEXIBLE COUPLING SHALL BE USED.



SEWER TEE/WYE CONNECTION DETAIL
NOT TO SCALE

NOTES:

1. PLACE TRENCH BACKFILL MATERIAL IN 12" LIFTS.
2. COMPACT MATERIAL LIFTS TO 92% OF MAX. DRY DENSITY.
3. PAVED AREAS SHALL MATCH TYPICAL ROAD SECTION WHEN LOCATED WITHIN PAVED AREAS.
4. WORK WITHIN NEW WESTBROOK STREET SHALL BE COORDINATED WITH THE DEPARTMENT OF PUBLIC WORKS DIRECTOR. PAVEMENT CUT IN WESTBROOK STREET SHALL BE RESTORED TO EXISTING CONDITIONS OR THE COLLECTOR PAVEMENT PROFILE, WHICHEVER IS MORE STRINGENT.

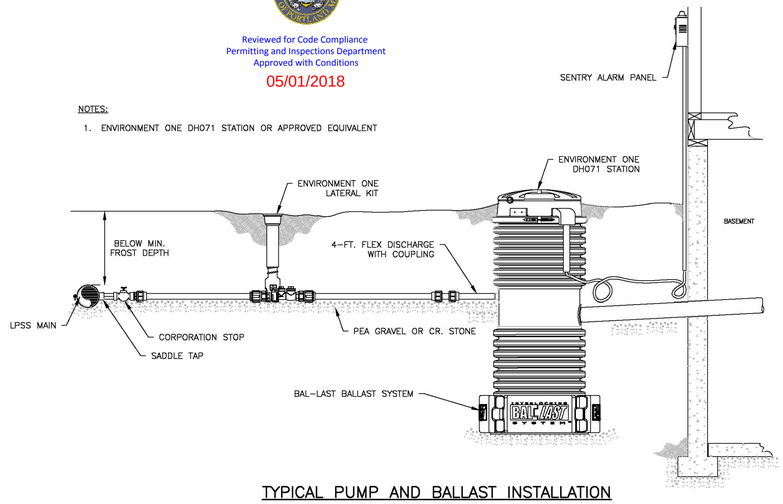


FORCE MAIN TRENCH
NOT TO SCALE

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

NOTES:

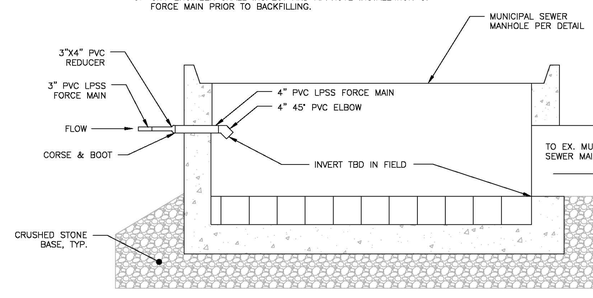
1. ENVIRONMENT ONE DH071 STATION OR APPROVED EQUIVALENT



TYPICAL PUMP AND BALLAST INSTALLATION
NOT TO SCALE

NOTES:

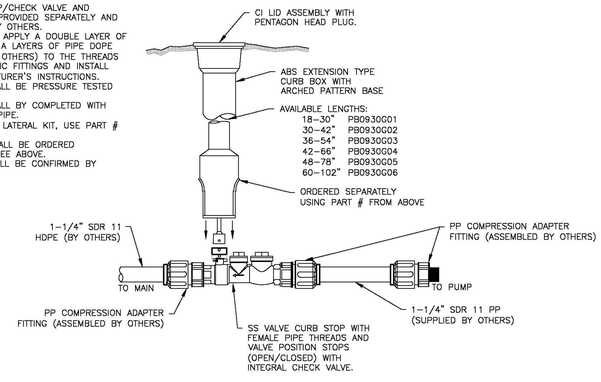
1. USE FLEXIBLE RUBBER BOOT WITH TWO STAINLESS STEEL BANDS.
2. LOCATION OF CORED HOLE IN MANHOLE SHOULD BE FIELD CHECKED PRIOR TO INSTALLATION TO ENSURE ADEQUATE SEPARATION FROM MANHOLE BARREL JOINT.
3. CITY ENGINEER SHALL INSPECT AND APPROVE INSTALLATION OF FORCE MAIN PRIOR TO BACKFILLING.



FORCE MAIN TERMINUS MANHOLE
NOT TO SCALE

NOTES:

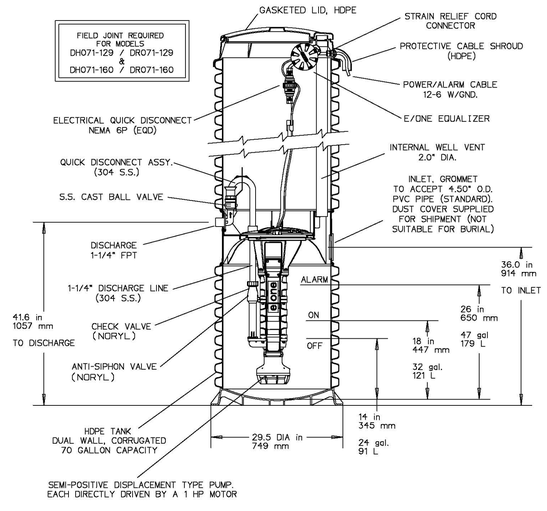
1. SS CURB STOP/CHECK VALVE AND FITTINGS ARE PROVIDED SEPARATELY AND ASSEMBLED BY OTHERS.
2. TO ASSEMBLE, APPLY A DOUBLE LAYER OF TEFLON TAPE, A LAYERS OF PIPE DOPE (SUPPLIED BY OTHERS) TO THE THREADS ON THE PLASTIC FITTINGS AND INSTALL PER MANUFACTURER'S INSTRUCTIONS.
3. ASSEMBLY SHALL BE PRESSURE TESTED BY OTHERS.
4. ASSEMBLY SHALL BY COMPLETED WITH SDR11 HDPE PIPE.
5. TO ORDER SS LATERAL KIT, USE PART # NC0193G0.
6. CURB BOX SHALL BE ORDERED SEPARATELY, SEE ABOVE.
7. PIPE SIZE SHALL BE CONFIRMED BY OTHERS.



FORCE MAIN SHUT-OFF DETAIL
NOT TO SCALE

NOTES:

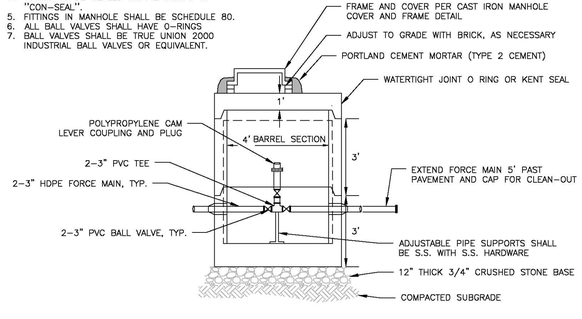
1. DIMENSIONS ARE FOR REFERENCE ONLY AND ARE SUBJECT TO CHANGE.
2. PUMPS TO BE ENVIRONMENT ONE DH071 STATION OR AN APPROVED EQUIVALENT
3. CONCRETE BALLAST MAY BE REQUIRED. SEE INSTALLATION INSTRUCTION FOR DETAILS



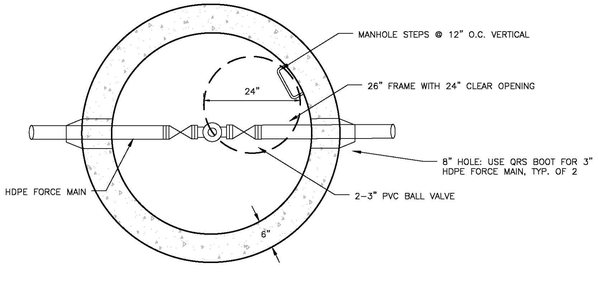
LOW-PRESSURE PUMP STATION DETAIL
NOT TO SCALE

NOTES:

1. CONCRETE TO HAVE A MIN. PSI OF 5,000 @ 28 DAYS.
2. CEMENT: TYPE III PER ASTM C150-81.
3. DESIGN LOADING: H-20 PER ASTM C-478.
4. JOINTS TO BE SEALED WITH 2 STRIPS OF "CON-SEAL".
5. FITTINGS IN MANHOLE SHALL BE SCHEDULE 80.
6. ALL BALL VALVES SHALL HAVE O-RINGS
7. BALL VALVES SHALL BE TRUE UNION 2000 INDUSTRIAL BALL VALVES OR EQUIVALENT.



SIDE PROFILE



PLAN VIEW

FORCE MAIN MANHOLE CLEAN-OUT
NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 9/22/17
FINAL APP.	WHS 10/25/17
DPW REVIEW	WHS 11/6/17
CITY COMMENTS	WHS 11/21/17
CONSTRUCTION	WHS 4/16/18

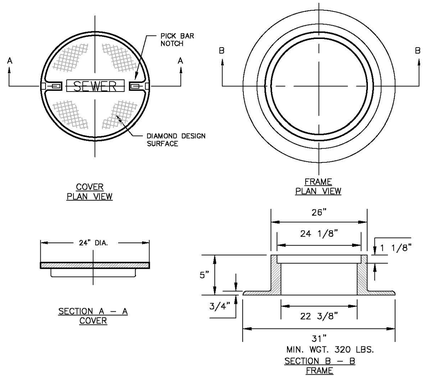
DRAWING NAME: UTILITY DETAILS - 2
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE
WILLIAM H. SAVAGE
No. 11410
4-16-18
REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-44



NOTES:

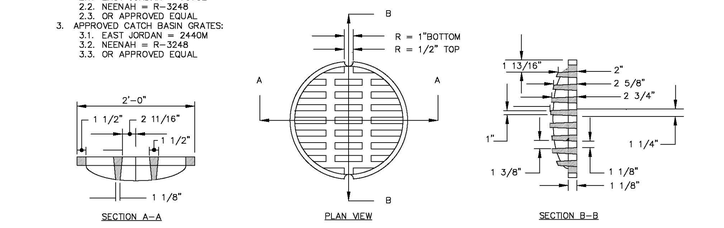
1. ALL SANITARY AND STORMWATER/DRAIN MANHOLE COVERS SHALL BE 24" x 5".
2. ALL SANITARY MANHOLE COVERS AND SHALL HAVE "SEWER" CAST INTO THE COVER.
3. ALL STORM AND SEWER MANHOLE COVERS SHALL BE SOLD AND SHALL HAVE A ⅜" DIAMETER DRILLED PICK HOLE LOCATED 8" FROM THE CENTER OF THE COVER.
4. ALL STORMWATER/DRAIN MANHOLE COVERS SHALL HAVE "DRAIN" CAST INTO THE COVER.
5. APPROVED MANHOLE FRAMES: EAST JORDAN = 1690Z OR APPROVED EQUAL
6. APPROVED MANHOLE COVER: EAST JORDAN = 2160A OR APPROVED EQUAL
7. FRAME AND COVER CONSTRUCTION SHALL BE COMPATIBLE WITH STANDARD PRECAST SEWER MANHOLE DETAIL.
8. EXISTING MANHOLES, CATCH BASINS, FRAMES, AND COVERS SHALL BE SALVAGED BY THE CONTRACTOR, AND SHALL REMAIN THE PROPERTY OF THE CITY OR PORTLAND.

CAST IRON MANHOLE COVER AND FRAME

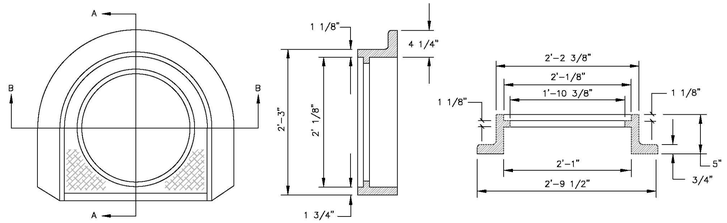
NOT TO SCALE

NOTES:

1. CATCH BASIN FRAMES FOR TYPE A4 CATCH BASIN CURB INLETS SHALL BE ETHERIDGE DR5A OR APPROVED EQUAL.
2. APPROVED CATCH BASIN FRAMES:
   2.1. EAST JORDAN = 7375Z
   2.2. NEENAH = R-3248
   2.3. OR APPROVED EQUAL
3. APPROVED CATCH BASIN GRATES:
   3.1. EAST JORDAN = 2440M
   3.2. NEENAH = R-3248
   3.3. OR APPROVED EQUAL



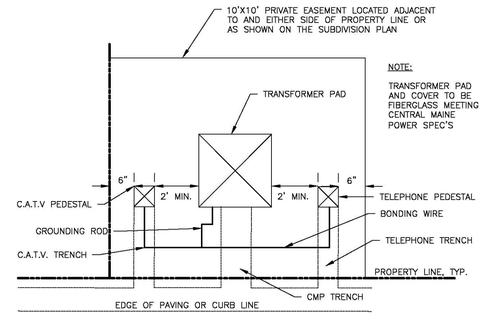
GRATE DETAIL



FRAME DETAIL

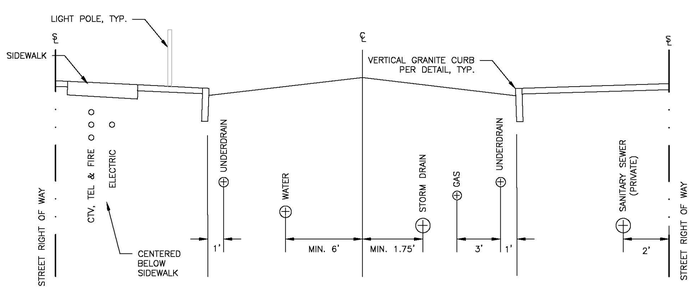
CATCH BASIN FRAME & GRATE

NOT TO SCALE



TYPICAL TRANSFORMER DETAIL

NOT TO SCALE



NOTES:

1. DEPTH OF SANITARY SEWER, STORM DRAIN AND WATER PER ROAD PROFILES.
2. DEPTH OF UNDERDRAIN SHALL BE 3'–6" FROM GUTTER LINE TO PIPE INVERT.
3. MIN. 5' HORIZONTAL FACE TO FACE SEPARATION BETWEEN WATERMAIN AND STORMWATER OR SEWER STRUCTURES.
4. MIN. 12" HORIZONTAL FACE TO FACE SEPARATION BETWEEN GAS MAIN AND STORMWATER OR SEWER STRUCTURES.
5. DEPTHS OF ELECTRIC, TELEPHONE, CABLE TELEVISION AND FIRE TO BE AT LEAST 36 INCHES BELOW FINISH GRADE. DEPTHS OF OTHER UTILITIES PER REQUIREMENTS OF APPLICABLE UTILITY COMPANY. WHEN TREES ARE PROPOSED FOR THE ESPLANADE, THE UTILITIES DESIGNATED FOR THAT LOCATION SHALL MAKE NECESSARY PROVISIONS.
6. APPLICABLE WARNING TAPE SHALL BE PLACES OVER EACH UTILITY.
7. RIGID PVC CONDUIT IS REQUIRED FOR STREET AND DRIVEWAY CROSSINGS AND OTHER PAVEMENT CROSSINGS MORE THAN 12 FEET IN LENGTH. CONDUITS CROSSING STREETS SHALL BE ENCASED IN CONCRETE.

UTILITY LOCATIONS IN STREETS

NOT TO SCALE

NOTES:

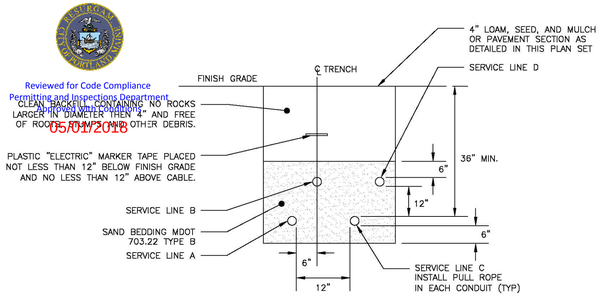
1. MANHOLES MAY BE CONSTRUCTED OF PRECAST REINFORCED CONCRETE, OR CAST IN PLACE.
2. PRECAST REINFORCED CONE BARREL MANUFACTURED PER ASTM SPEC. C-478.
3. ALL MANHOLE RISERS SHALL BE ETHERIDGE 24" OR APPROVAL EQUAL.
4. ALL SANITARY MANHOLES SHALL HAVE A WATERPROOFING COATING APPLIED TO THE EXTERIOR SURFACE.
5. CASTINGS SHALL CONFORM TO ASTM DESIGNATION A48-CLASS 35.

NOTE:

MANHOLE CHANNELS REQUIRING CHANGE OF ALIGNMENT, TO BE BUILT ON SMOOTH RADIUS. IF SIDE PIPES ENTER, CHANNEL TO BE SHAPED TO RECEIVE ADDED SIDE FLOW.

PRECAST CONCRETE MANHOLE

NOT TO SCALE



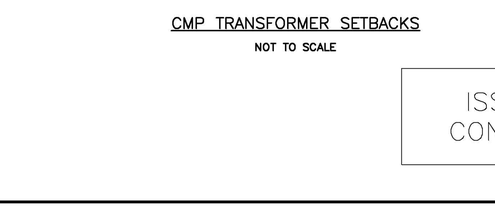
CONDUIT TYPE				
SERVICE	CONDUIT SIZE	GRASS AND PAVED AREAS	UTILITY	REMARKS
A	2–5"	SCHEDULE 40 PVC ELECTRICAL GRADE	PRIMARY POWER	SEE NOTE 1
B	2–4"	SCHEDULE 40 PVC	COMMUNICATION	–
C	2–4"	SCHEDULE 40 PVC ELECTRICAL GRADE	SPARE	IF REQUIRED
D	2–4"	SCHEDULE 40 PVC	CABLE	–

NOTES:

1. ONE CONDUIT CAPPED FOR SPARE, PROVIDE GALVANIZED STEEL LONG SWEEP AT RISER POLE AND EXTEND GALVANIZED CONDUIT TO 10" ABOVE GRADE AT POLE WITH STAND-OFF BRACKETS.
2. MINIMUM SEPARATION OF 24 INCHES BETWEEN PRIMARY CABLE/CONDUIT AND GAS LINES SHALL BE MAINTAINED.

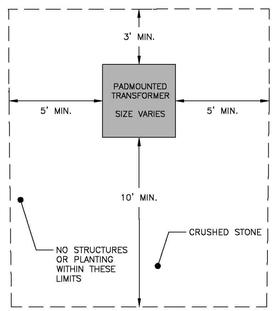
UTILITY TRENCH

NOT TO SCALE



SECONDARY ELECTRICAL TRENCH

NOT TO SCALE



NOTES:

1. WHERE DANGER OF PLOW OR TRAFFIC DAMAGE EXISTS, BARRIERS CONSISTING OF CONCRETE FILLED 6 INCH IPS STEEL POSTS SET 4 FEET DEEP SHALL BE PROVIDED FOR PROTECTION (PRESSURE TREATED 6X6 INCH MIN. TIMBER POSTS MAY BE SUBSTITUTED IN RESIDENTIAL AREAS). POSTS SHALL NOT INTERFERE WITH TRANSFORMER ACCESS. GENERALLY THE POSTS SHALL BE LOCATED NEAR THE CORNERS OF THE TRANSFORMERS.
2. THE SETBACKS DEPICT CLEARANCES FROM OBSTRUCTIONS INCLUDING TREES, SHRUBS, AND FENCES.
3. THERE SHALL BE NO OPENINGS IN THE BUILDING WALL IN BACK OF, BESIDE, OR OVER THE TRANSFORMER UNLESS THE TRANSFORMER IS A MIN. OF 10 FEET FROM THE BUILDING.
4. SIDE CLEARANCES FROM DOORS OR WINDOWS SHALL NOT BE LESS THAN 10 FEET.
5. THERE SHALL BE A MIN. OF 10 FEET BETWEEN THE TRANSFORMER AND ANY GAS METER/REGULATOR, GAS RELIEF VALVE, GAS VENT DISCHARGE, GAS FILLING CONNECTION, OR PROPANE TANK. SOME INSURANCE COMPANIES MAY REQUIRE INCREASED CLEARANCES.
6. TRANSFORMER SHALL BE LOCATED FAR ENOUGH AWAY FROM BUILDING OVERHANGS SO THAT THEY WILL NOT BE SUBJECT TO DAMAGE BY FALLING ICE AND SNOW.
7. IF TRANSFORMER IS NOT INSTALLED IMMEDIATELY UPON THE INSTALLATION OF THE CABLE IN THE PAD, THE CONTRACTOR SHALL PROVIDE AND INSTALL A CMP APPROVED CONCRETE, STEEL, OR FIBERGLASS COVER OVER THE PAD OPENING TO ELIMINATE EXPOSURE OF THE CABLE.

CMP TRANSFORMER SETBACKS

NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 9/22/17
FINAL APP.	WHS 10/25/17
DPW REVIEW	WHS 11/8/17
CITY COMMENTS	WHS 11/31/17
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: UTILITY DETAILS – 3

PROJECT NAME: STROUDWATER PRESERVE

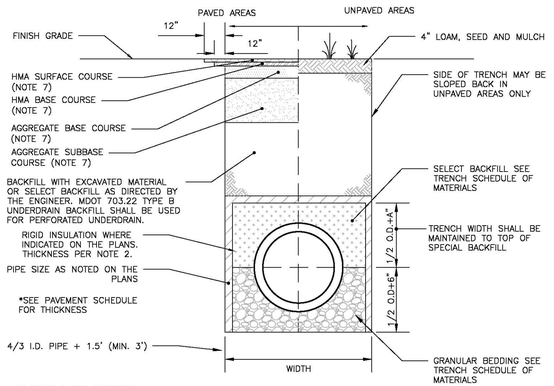
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — 4-16-18 — LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-45

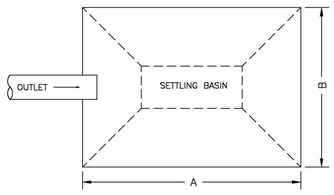


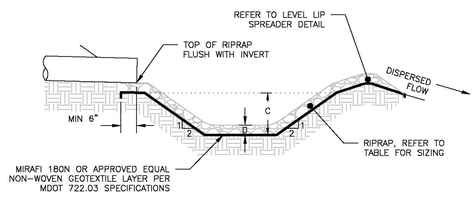
ALLOWABLE PIPE MATERIALS:
- REINFORCED CONCRETE PIPE (RCP) MIN. STRENGTH OF CLASS III
- PVC RING TYPE SEWER (SDR 35) OR EQUIVALENT, MIN PS-46 RATING
- PVC RING TYPE SEWER PIPE MEETING ASTM F 789
- DUCTILE IRON PIPE (DIP)
- ADS N-12 HP TRIPLE-WALL MIN PS-46 RATING
- ADS SANITITE HP MIN. PS-46

SCHEDULE OF MATERIALS		
TYPE OF PIPE	GRANULAR BEDDING	SELECT BACKFILL
CMP DUCTILE IRON RCP	MDOT 703.22 TYPE B UD BACKFILL	MDOT 703.22 TYPE B UD BACKFILL
PVC/HDPE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE B UD BACKFILL
CMP	MDOT 703.22 TYPE C 3/4" CRUSHED STONE	MDOT 703.22 TYPE C 3/4" CRUSHED STONE

NOTES:
1. BRACING AND SHEETING OR OTHER TRENCH PROTECTION TO BE PROVIDED TO MEET APPLICABLE STATE AND O.S.H.A. SAFETY STANDARDS. ALL SUCH TRENCH PROTECTION TO BE THE RESPONSIBILITY OF THE CONTRACTOR.
2. STORM DRAIN COVER BETWEEN 2' AND 3' SHALL INCLUDE 4" OF RIGID INSULATION. COVER BETWEEN 3' AND 4' SHALL INCLUDE 2" RIGID INSULATION. OTHER UTILITIES: ADD 2" OF RIGID INSULATION FOR EACH FOOT ABOVE MINIMUM DEPTH.
3. INSTALL WARNING TAPE DIRECTLY ABOVE UTILITIES AT THE TOP OF SUBGRADE.
4. MINIMUM COVER
   4.1. 2'-0" - STORM DRAIN
   4.2. 5'-0" - SEWER
5. NO TREES SHALL BE PLANTED WITHIN 5' OF A SEWER PIPE OR SERVICE
6. THIS DETAIL SHALL BE APPLIED ONLY TO DRAINAGE PIPE TRENCHES OUTSIDE OF THE CITY OF PORTLAND ROW.
7. THICKNESS AS NOTED BY SURFACE DETAILS

INTERNAL STORM DRAIN AND SEWER TYPICAL TRENCH SECTION
NOT TO SCALE



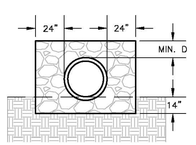


NOTES:
1. RIPRAP AND NON-WOVEN GEOTEXTILE LAYER TO EXTEND AT LEAST 6" BEYOND CULVERT INVERT.
2. EMBANKMENT FOUNDATION AREA SHALL BE CLEARED OF STUMPS, ROOTS, BRUSH, ETC. TO PROVIDE GOOD CONTACT.
3. BASINS ARE TO BE CONSTRUCTED BEFORE THE GROUND IS FROZEN.
4. ALL NATIVE SOIL IS TO BE SCARIFIED BEFORE THE FIRST LAYER OF FILL.
5. ALL EMBANKMENTS NOT SUPPORTED BY RIP RAP SHALL BE COVERED WITH EROSION CONTROL MIX IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN.

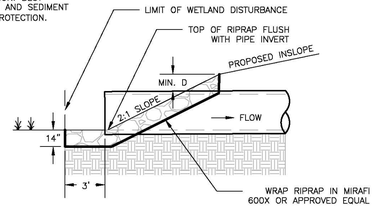
CULVERT DIA	RIPRAP SIZING (D50)	A	B	C	D
12"	5"	4-6'	3-4'	12"	10"
15"	8"	5-7'	3-4'	15"	12"
18"	8"	6-8'	4-6'	18"	16"
24"	10"	8-10'	6-8'	24"	20"
30"	12"	12-14'	8-10'	30"	24"
36"	14"	14-16'	10-12'	36"	28"

RIPRAP PLUNGE POOL
NOT TO SCALE

NOTES:
1. RIPRAP SHALL BE DESCRIBED BY M.D.O.T. 703.26 EXCEPT SIZE SHALL BE AS SHOWN.
2. REFERENCE FOR ADDITIONAL INFORMATION: BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL - CULVERT INLET/OUTLET PROTECTION.



FRONT VIEW

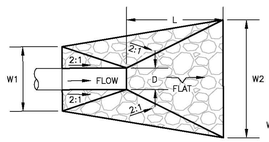


SECTION VIEW

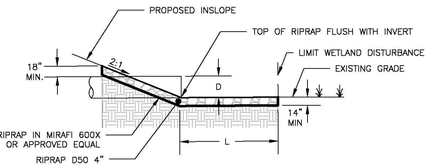
RIPRAP INLET APRON DETAIL
NOT TO SCALE

SCHEDULE - SINGLE CULVERT			
CULVERT DIAMETER (D)	LENGTH (L)	WIDTH (W1)	WIDTH (W2)
D	4.5D	3D	D+L
24"	9'	6'	11'
30"	11.25'	7.5'	13.75'
36"	13.5'	9'	16.5'

NOTES:
1. RIPRAP SHALL BE DESCRIBED BY M.D.O.T. 703.26 EXCEPT SIZE SHALL BE AS SHOWN.
2. REFERENCE FOR ADDITIONAL INFORMATION: BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL - CULVERT INLET/OUTLET PROTECTION.



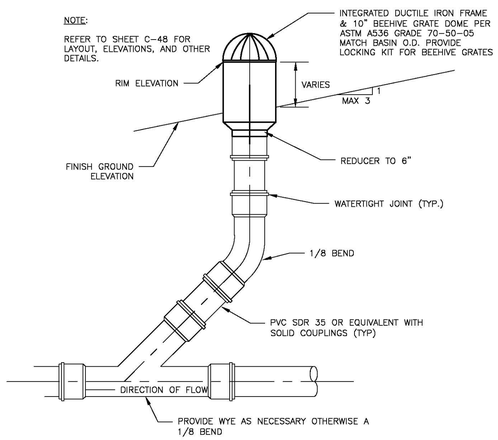
PLAN VIEW



SECTION VIEW

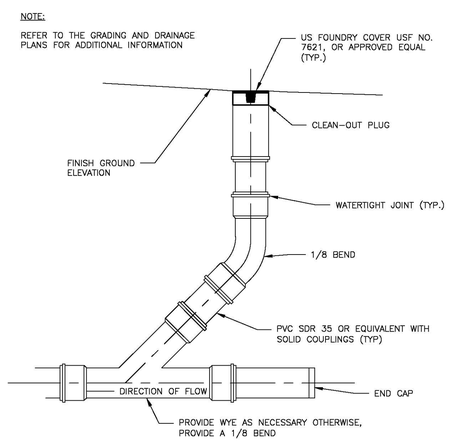
RIPRAP OUTLET APRON DETAIL
NOT TO SCALE

NOTE:
REFER TO SHEET C-48 FOR LAYOUT, ELEVATIONS, AND OTHER DETAILS.

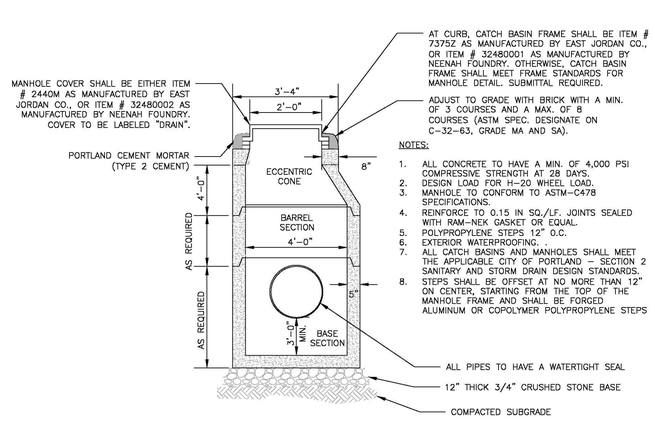


OVERFLOW DRAIN DETAIL
NOT TO SCALE

NOTE:
REFER TO THE GRADING AND DRAINAGE PLANS FOR ADDITIONAL INFORMATION



CLEANOUT DETAIL
NOT TO SCALE

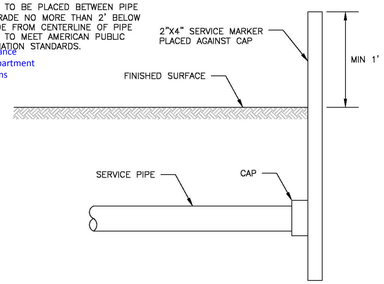


NOTES:
1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. MANHOLE TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.15 IN SQ./LF. JOINTS SEALED WITH RAM-NEK GASKET OR EQUAL.
5. POLYPROPYLENE STEPS 12" O.C.
6. EXTERIOR WATERPROOFING.
7. ALL CATCH BASINS AND MANHOLES SHALL MEET THE APPLICABLE CITY OF PORTLAND - SECTION 2 SANITARY AND STORM DRAIN DESIGN STANDARDS.
8. STEPS SHALL BE OFFSET AT NO MORE THAN 12" ON CENTER, STARTING FROM THE TOP OF THE MANHOLE FRAME AND SHALL BE FORGED ALUMINUM OR COPOLYMER POLYPROPYLENE STEPS

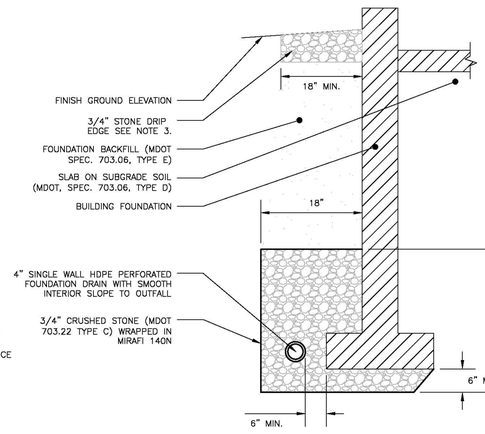
4'-0" DIAMETER PRECAST DRAINAGE MANHOLE
NOT TO SCALE

NOTICE TO CONTRACTOR: THE TOP OF PIPE TO BE PLACED BETWEEN PIPE INVERT AND FINISH GRADE NO MORE THAN 2' BELOW FINISH GRADE FROM CENTERLINE OF PIPE
2. WARNING TAPE TO MEET AMERICAN PUBLIC WORKS ASSOCIATION STANDARDS.

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018



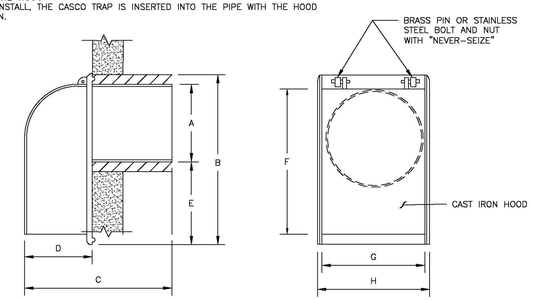
SERVICE CAP AND MARK DETAIL
NOT TO SCALE



NOTES:
1. REFER TO THE BUILDING ARCHITECTS PLANS FOR THE BUILDING FOUNDATION, BACKFILL, ROOF DRAIN, SIDEWALK AND OTHER DETAILS.
2. PERFORATIONS IN UNDERDRAIN PIPE SHALL BE ORIENTED DOWN.
3. INSTALL STONE DRIP EDGE IN A LOCATIONS SUBJECT TO ROOF RUNOFF. WIDTH SHALL BE A MIN. 12" BEYOND THE PROJECT OF THE ROOF EVE.
4. FOUNDATION WALL FOOTINGS SHALL BE CONSTRUCTED TO A MIN. DEPTH OF 4 FT BELOW ADJACENT FINISH GRADE. REFER TO STRUCTURAL ENGINEERS PLANS FOR ADDITIONAL INFORMATION AND MIN. REQUIREMENTS.

FOUNDATION DRAIN DETAIL
NOT TO SCALE

NOTES:
1. TRAP TO BE INSTALLED AT ALL CATCH BASIN OUTLETS.
2. INSTALL "CASCO TRAP" AS MANUFACTURED BY THE ETHERIDGE FOUNDRY, OR APPROVED EQUIVALENT AS SUPPLIED BY THE LEBARON FOUNDRY, MODEL #L, 202 "STANDARD CATCH BASIN TRAP".
3. THE CASCO TRAP IS AN ETHERIDGE STYLE DESIGNED TO ELIMINATE CEMENTING OF THE TRAP.
4. TO INSTALL, THE CASCO TRAP IS INSERTED INTO THE PIPE WITH THE HOOD DOWN.



SIZE	A	B	C	D	E	F	G	H
6"	5 1/2	13 3/8	13 3/8	5 3/8	5 7/8	11 5/8	6 1/2	7 1/4
8"	7 1/2	15	15 3/8	5 1/2	5 3/8	13 3/4	8 3/4	9 3/8
10"	9 1/2	16	16 1/4	6	4 1/2	14 1/8	11 1/2	12 3/8
12"	11 1/2	17	22	8	3 1/2	17	12 1/2	13 3/8
15"	14 1/2	21 3/4	22 3/4	10 1/4	7	20 1/2	14 1/4	15 3/4

CASCO TRAP DETAIL
NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	6/22/17
FINAL APP.	WHS	10/25/17
DPW REVIEW	WHS	11/6/17
CITY COMMENTS	WHS	11/31/17
CONSTRUCTION	WHS	4/16/18

DRAWING NAME: **DRAINAGE DETAILS**
PROJECT NAME: **STROUDWATER PRESERVE**
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

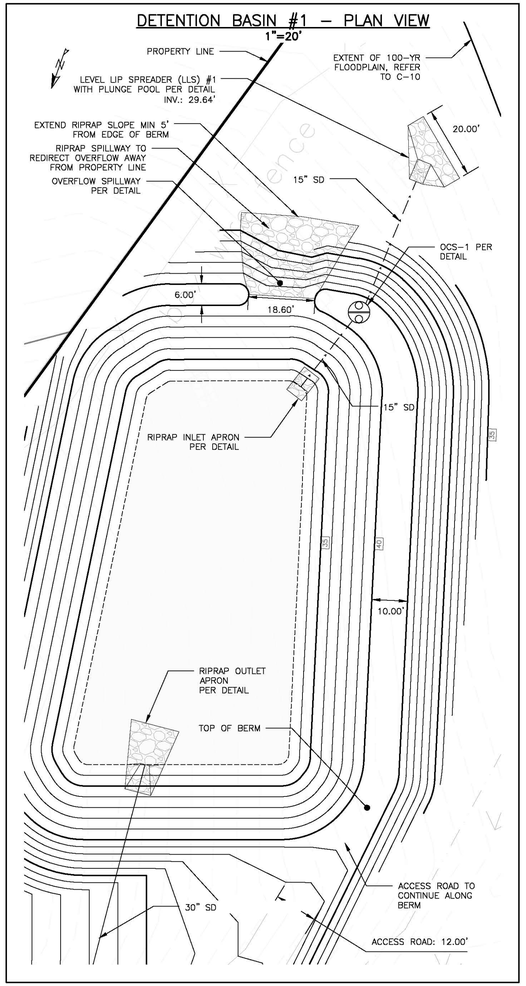
ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2855

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

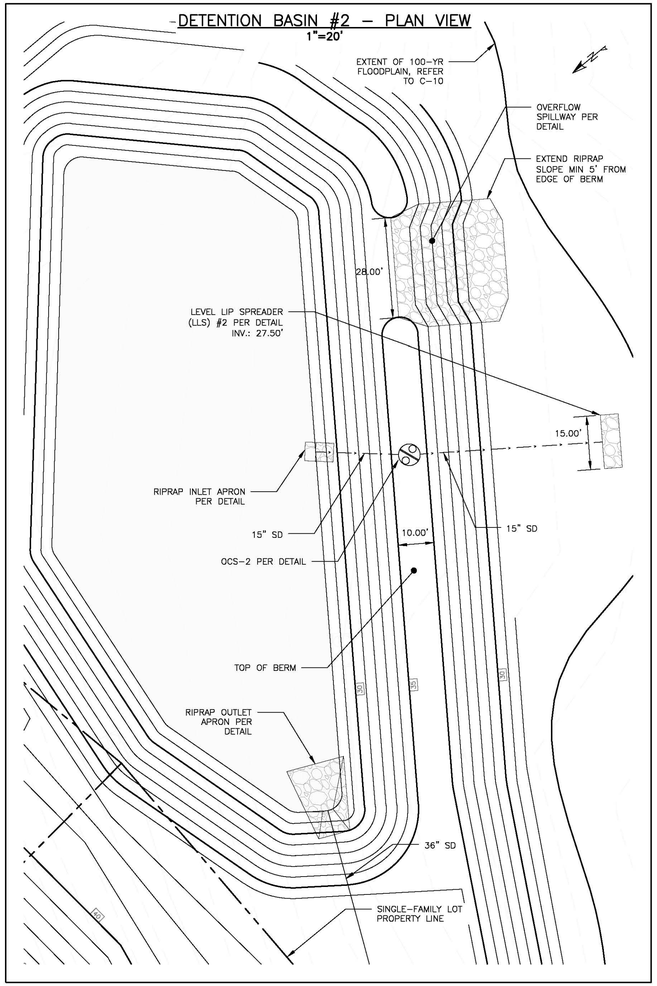
STATE OF MAINE — SCOTT J. LAIRD — SAVAGE — NO. 11430 — 4-16-18 — REGISTERED PROFESSIONAL ENGINEER

DRAWING NO.
C-46

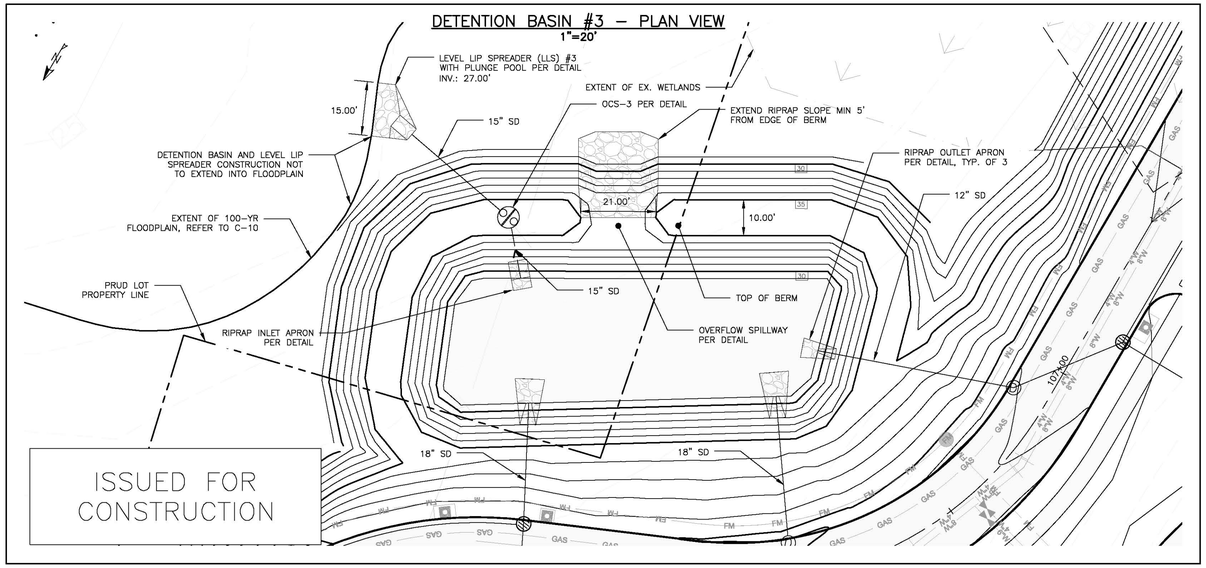
DETENTION BASIN #1 – PLAN VIEW
1"=20'



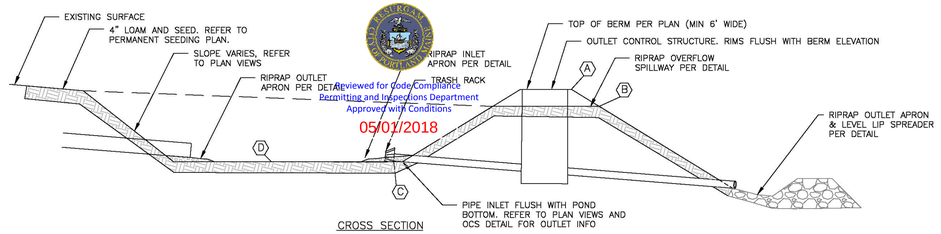
DETENTION BASIN #2 – PLAN VIEW
1"=20'



DETENTION BASIN #3 – PLAN VIEW
1"=20'



ISSUED FOR CONSTRUCTION



CROSS SECTION

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

SCHEDULE			
ITEM	POND 1	POND 2	POND 3
(A) TOP OF BERM	40.0'	35.0'	35.0'
(B) SPILLWAY INVERT	39.4'	34.5'	34.0'
(C) OUTLET INVERT	33.0'	28.0'	29.0'
(D) BOTTOM OF BASIN	33.0'	28.0'	29.0'

NOTES:

1. THE BASIN SURFACE SHALL BE STABILIZED WITH ONE OF THE FOLLOWING SEED MIX: REDTOP, INDIAN GRASS, SWITCHGRASS, OR DEERTONGUE.
2. BERM FILL SHALL COMPACTED TO ATLEAST 90% OF MAX DENSITY.

CONSTRUCTION OBSERVATION:

CONSTRUCTION OBSERVATION SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY ACORN ENGINEERING. THE CONTRACTOR OR OWNERS REPRESENTATIVE SHALL NOTIFY ACORN ENGINEERING A MINIMUM 48 HOURS OR 2 BUSINESS DAYS WHICH EVER IS GREATER PRIOR TO ANY OF THE PHASES OF CONSTRUCTION LISTED BELOW SO THAT THE FOLLOWING SITE VISITS MAY BE SCHEDULED.

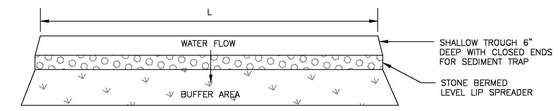
DETENTION BASIN:

1. ONE SITE VISIT AFTER PRELIMINARY GRADING OF DETENTION BASIN.
2. ONE SITE VISIT DURING CONSTRUCTION OF THE DETENTION BASIN.
3. ONE SITE VISIT DURING OUTLET CONTROL STRUCTURE INSTALLATION.
4. ONE SITE VISIT AFTER SLOPES AND BANKS HAVE BEEN REVEGETATED AND STABILIZED.

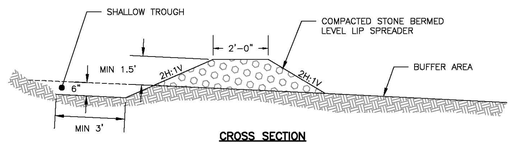
LEVEL LIP SPREADER & PLUNGE POOL:

1. ONE SITE VISIT AFTER PRELIMINARY GRADING OF THE LEVEL LIP SPREADER.
2. ONE SITE VISIT DURING STORMDRAIN INSTALLATION.
3. ONE SITE VISIT DURING CONSTRUCTION OF THE ENTRANCE DRAINAGE CHANNEL OR RIPRAP PLUNGE POOL.

DETENTION BASIN DETAIL
NOT TO SCALE



PLAN VIEW



CROSS SECTION

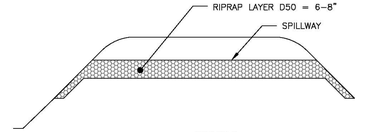
BERM STONE SIZE
% PASSING BY WEIGHT
100
84–100
63–83
42–55
8–12

SCHEDULE	
LLS ID	LENGTH (L)
1	20'
2	15'
3	15'

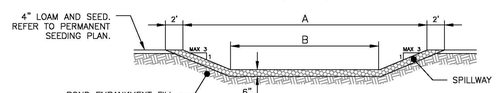
NOTES:

1. FIELDSTONE, ROUGH QUARRIED STONE, BLASTED LEDGE ROCK OR TAILINGS ARE ACCEPTABLE BERM MATERIALS.
2. MEDIAN STONE SIZE TO BE APPROX 3 INCHES AT A MAXIMUM SIZE OF 6 INCHES. SEE TABLE.
3. 2 FOOT LEVEL LIP SECTION SHALL MAINTAIN A FLAT SURFACE AT 0%.
4. PLUNGE POOL TO BE INSTALLED AT CULVERT OUTLETS WITH A SLOPE GREATER 5%. PLUNGE POOL TO REPLACE RIPRAP OUTLET, SEE DETAIL.

LEVEL LIP SPREADER DETAIL
NOT TO SCALE



PROFILE



CROSS SECTION

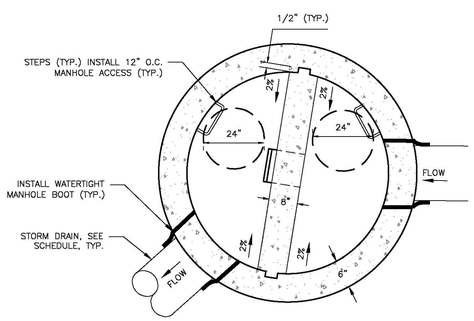
SCHEDULE			
ITEM	POND 1	POND 2	POND 3
A SPILLWAY WIDTH (TOP)	18.6'	28'	21'
B SPILLWAY WIDTH (BOT.)	15'	25'	15'

OVERFLOW SPILLWAY DETAIL
NOT TO SCALE

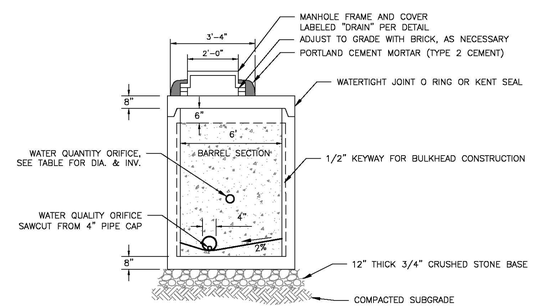
NOTES:

1. ALL CONCRETE TO HAVE A MIN. OF 4,000 PSI COMPRESSIVE STRENGTH AT 28 DAYS.
2. DESIGN LOAD FOR H-20 WHEEL LOAD.
3. STRUCTURE TO CONFORM TO ASTM-C478 SPECIFICATIONS.
4. REINFORCE TO 0.12 IN SQ./LF.
5. ALL PIPES TO HAVE A WATERTIGHT SEAL AND JOINTS TO BE SEALED WITH BUTYL RUBBER.
6. POLYPROPYLENE STEPS 12" O.C.

OUTLET CONTROL STRUCTURE SCHEDULE					
STRUCTURE	RIM	WATER QUALITY ORIFICE INV.	WATER QUANTITY ORIFICE INV.	INV. IN	INV. OUT
OCS-1	40'	33.00' (1.7")	33.95' (6") 36.25' (10")	33.00' (15" SD)	32.90' (15" SD)
OCS-2	35'	28.00' (2.2")	28.70' (6")	28.00' (15" SD)	27.90' (15" SD)
OCS-3	35'	29.10' (2")	30.95' (5")	29.25' (15" SD)	29.25' (15" SD)



PLAN VIEW



SIDE PROFILE

OUTLET CONTROL STRUCTURE
NOT TO SCALE

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 8/22/17
FINAL APP.	WHS 10/25/17
DPW REVIEW	WHS 11/6/17
CITY COMMENTS	WHS 11/21/17
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: **DETENTION BASIN DETAILS**

PROJECT NAME: **STROUDWATER PRESERVE**

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

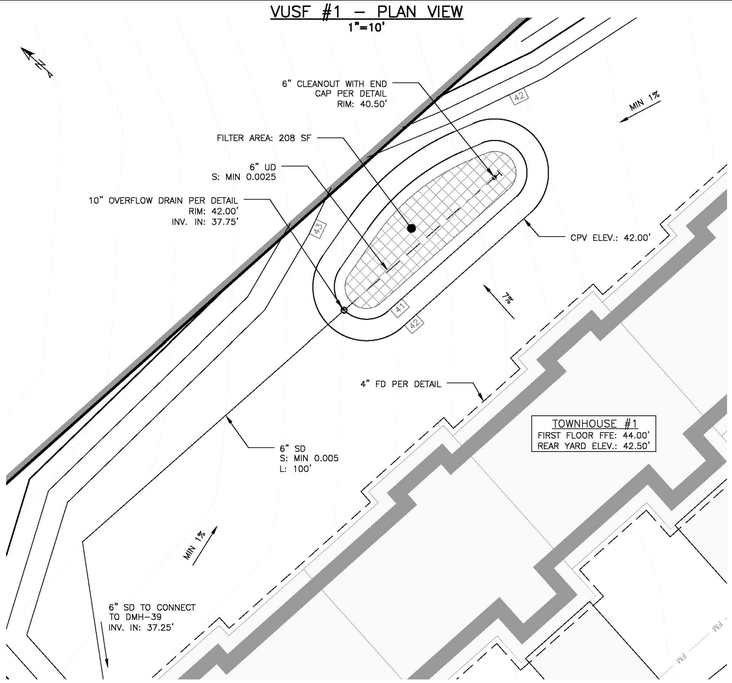
ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	SEE PLAN
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

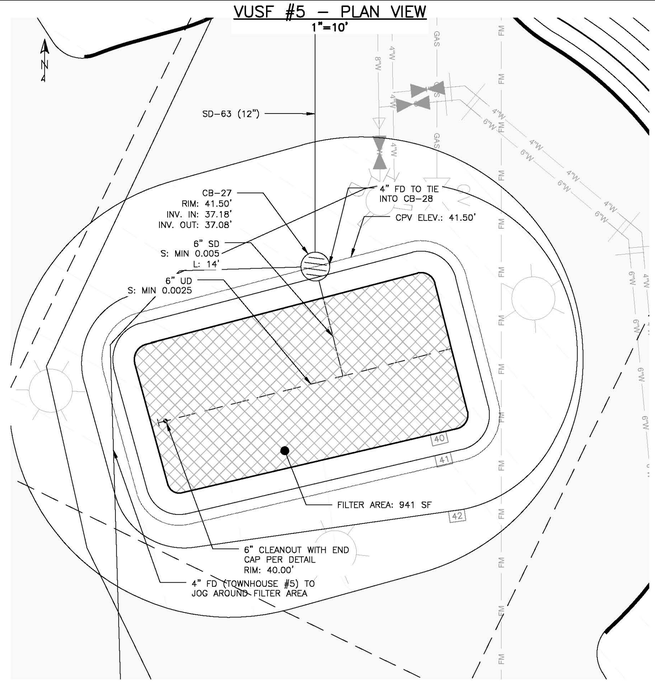
STATE OF MAINE — WILLIAM H. SAVAGE — NO. 11410 — REGISTERED PROFESSIONAL ENGINEER — 4-16-18

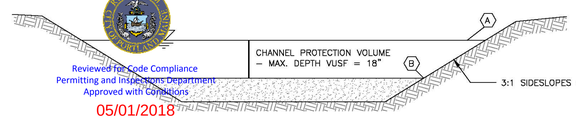
DRAWING NO.
C-47

VUSF #1 – PLAN VIEW
1"=10'



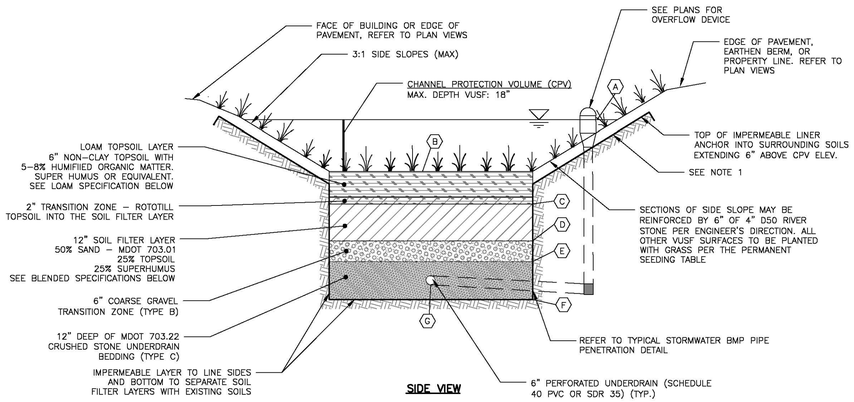
VUSF #5 – PLAN VIEW
1"=10'





Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Corrections
05/01/2018

CROSS SECTION



SIDE VIEW

NOTES:

1. IMPERMEABLE LINER TO BE MIRAFI 180N OR EQUIVALENT.
2. THE SIDESLOPES SHALL BE STABILIZED WITH A MIN. OF 4" LOAM, EROSION CONTROL BLANKETS SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL AND A CONSERVATION SEED MIX.
3. LIGHT COMPACTION SOIL FILTER AND PIPE BEDDING MATERIAL. (90 TO 92% STANDARD PROCTOR). TESTING SHALL BE PERFORMED BY A QUALIFIED MATERIAL TESTING FIRM.
4. THE SOIL FILTER MEDIA SHALL NOT BE CONSTRUCTED UNTIL THE AREA DRAINING TO THE BASIN HAS BEEN PERMANENTLY STABILIZED.
5. TESTING: SIEVE ANALYSIS INCLUDING HYDROMETER TESTING FOR CLAY CONTENT FOR EACH LAYER SHALL BE PERFORMED BY A QUALIFIED SOIL TESTING LABORATORY AND SUBMITTED TO THE PROJECT ENGINEER FOR APPROVAL 2 WEEKS PRIOR TO CONSTRUCTION. ALL TESTING AND SUBMITTALS SHALL BE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE MAINE DEP – TECHNICAL DESIGN MANUAL SECTION 7.2.5 TESTING AND SUBMITTALS.
6. ACORN ENGINEERING, INC., RECOMMENDS THE SOIL FILTER LAYER BE SUPPLIED BY JONES ASSOCIATES, INC., AUBURN, ME.

CONSTRUCTION OBSERVATION:

CONSTRUCTION OBSERVATION SHALL BE PROVIDED FOR EACH PHASE OF CONSTRUCTION BY ACORN ENGINEERING. THE CONTRACTOR OR OWNERS REPRESENTATIVE SHALL NOTIFY ACORN ENGINEERING A MINIMUM 48 HOURS OR 2 BUSINESS DAY WHICH EVER IS GREATER PRIOR TO ANY OF THE PHASES OF CONSTRUCTION LISTED BELOW SO THAT THE FOLLOWING SITE VISITS MAY BE SCHEDULED.

1. ONE SITE VISIT AFTER PRELIMINARY CONSTRUCTION OF THE VUSF GRADES;
2. ONE SITE VISIT DURING THE INSTALLATION OR THE IMPERVIOUS LINER.
3. ONE SITE VISIT AFTER THE UNDERDRAIN PIPES ARE INSTALLED BUT NOT BACKFILLED.
4. ONE SITE VISIT DURING THE CONSTRUCTION OF THE SOIL FILTER LAYER.
5. ONE SITE VISIT DURING THE CONSTRUCTION OF THE TOPSOIL LAYER.
6. ONE SITE VISIT DURING THE FLOODING OF THE VUSF, IF REQUIRED.

6" LOAM TOPSOIL LAYER SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
#4	75 – 95
#10	60 – 90
#40	35 – 85
#200	20 – 70

1. CLAY FRACTION <10% PASSING THE #200 SIEVE. <10% CLAY PASSING THE #200 SIEVE ALLOWED PER EMAIL FROM MARIANNE HUBERT – MDEP TO WILL SAVAGE DATED 9/20/13
2. LOAM SHALL BE LOOSE AND FRIABLE AND SHALL BE FREE FROM ADMIXTURE OF SUBSOIL, REFUSE, LARGE STONES, CLODS OR ROOTS OR RHIZOMES OR "WITCH GRASS" OR OTHER UNDESIRABLE GRASSES.

SOIL FILTER BED –SUPERHUMUS OR EQUIV. SPECIFICATION	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
#200	0 – 5
MINIMAL CLAY CONTENT, NO MORE THAN 3 – 5% PASSING #200 SIEVE	

SOIL FILTER BED – UNDERDRAIN BEDDING (TYPE C)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	100
3/4"	90 – 100
3/8"	0 – 75
#4	0 – 25
#10	0 – 5

12" SOIL FILTER BED – BLENDED SAND, LOAM, SUPERHUMUS SIEVE ANALYSIS	
SIEVE SIZE	% PASSING BY WEIGHT
#10	85 – 100
#20	70 – 100
#60	15 – 40
#200	8 – 15

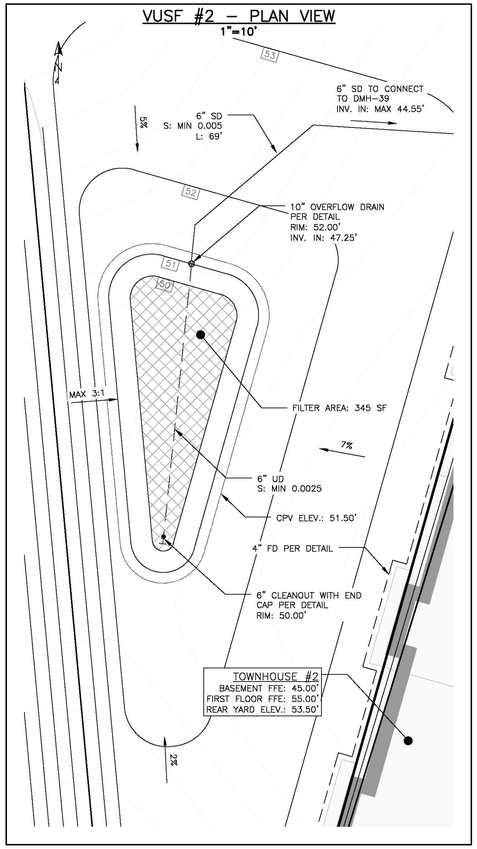
1. CLAY FRACTION <2% PASSING THE #200 SIEVE.
2. SUPERHUMUS OR EQUIV.

SOIL FILTER BED – TRANSITION ZONE (TYPE B)	
SIEVE SIZE	% PASSING BY WEIGHT
1"	90 – 100
1/2"	75 – 100
#4	50 – 100
#20	15 – 80
#50	0 – 5
#200	0 – 5

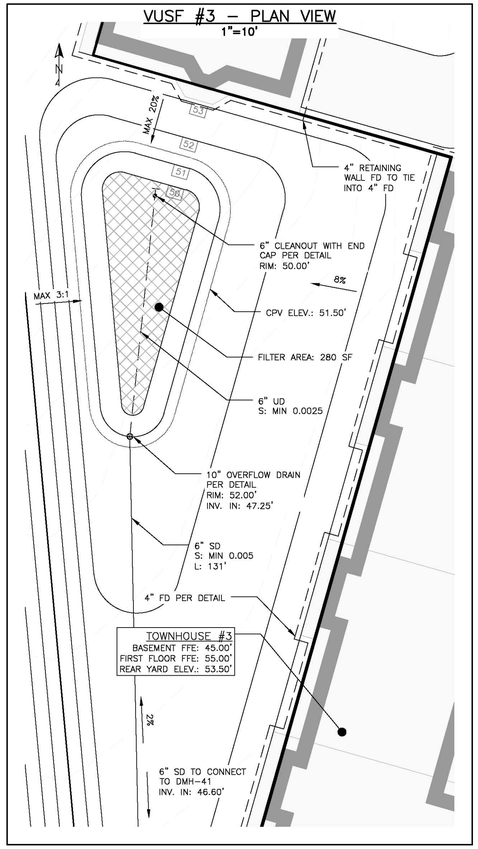
ELEVATION SCHEDULE			
ITEM	VUSF 1	VUSF 2–4	VUSF 5
(A) TOP OF CPV/RIM ELEV.	42.00'	51.50'	41.50'
(B) TOP OF LOAM TOPSOIL LAYER	40.50'	50.00'	40.00'
(C) TOP OF SOIL FILTER	40.00'	49.50'	39.50'
(D) TOP OF GRAVEL	39.00'	48.50'	38.50'
(E) TOP OF STONE	38.50'	48.00'	38.00'
(F) BOTTOM OF STONE	37.50'	47.00'	37.00'
(G) UNDERDRAIN INVERT	VARIES	VARIES	VARIES

VEGETATED UNDERDRAINED SOIL FILTER DETAIL
NOT TO SCALE

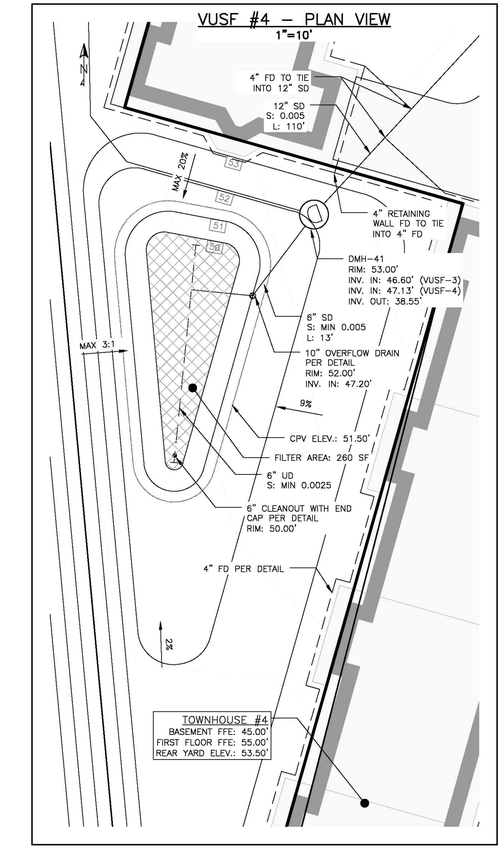
VUSF #2 – PLAN VIEW
1"=10'



VUSF #3 – PLAN VIEW
1"=10'



VUSF #4 – PLAN VIEW
1"=10'



ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	8/22/17
FINAL APP.	WHS	10/25/17
DPW REVIEW	WHS	11/6/17
CITY COMMENTS	WHS	11/21/17
SW REVIEW	WHS	3/19/18
CONSTRUCTION	WHS	4/16/18

DRAWING NAME: **VEGETATED UNDERDRAINED SOIL FILTER DETAILS**
PROJECT NAME: **STROUDWATER PRESERVE**
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
ENGINEERING, INC.
ACORN ENGINEERING, INC.
P.O. BOX 2165, SACO, MAINE 04102
158 DANFORTH STREET
(207) 775-2855

FILE: 1079_CIVIL
JN: 1079
SCALE: SEE PLAN
DESIGNED BY: OJD
DRAWN BY: OJD
CHECKED BY: WHS

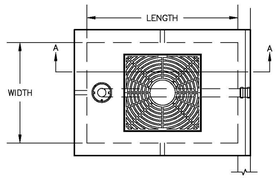
STATE OF MAINE
WILLIAM H. SAVAGE
NO. 11439
REGISTERED PROFESSIONAL ENGINEER
4-16-18

DRAWING NO.
C-48

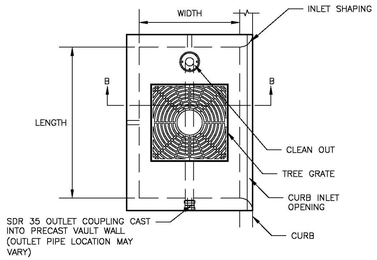
Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

FILTERRA SUMMARY AND SIZING CHART			
FILTERRA ID	TRIBUTARY AREA (ACRES)	IMPERVIOUS AREA (ACRES)	SIZE
FB–1	0.221	0.201	4' X 8'
FB–2	0.743	0.360	6' X 8'
FB–3	0.387	0.182	4' X 8'
FB–4	0.072	0.072	4' X 4'
FB–5	0.127	0.127	4' X 6'

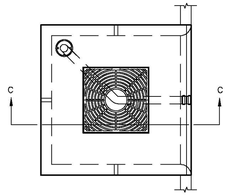
1. ALL STRUCTURES SHALL BE A FILTERRA OR APPROVED EQUIVALENT HIGH PERFORMANCE SOIL FILTER BMP
2. SIZING OF ALL STRUCTURES SHALL BE APPROVED BY THE MANUFACTURER
3. FILTERRAS ARE SOLELY WITHIN PROPOSED PRIVATE PRUD



PLAN VIEW



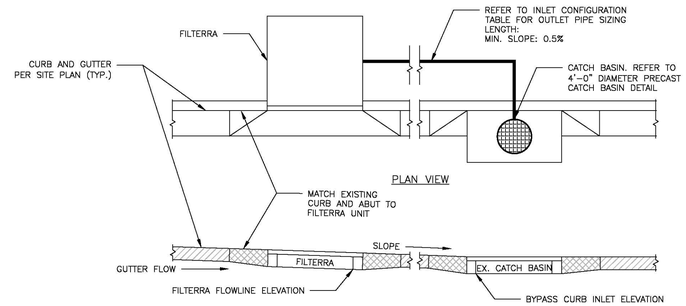
PLAN VIEW



PLAN VIEW

NOTES:

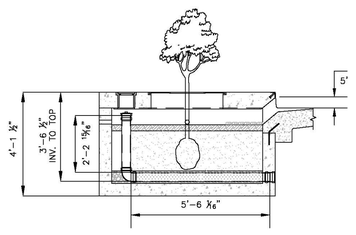
FILTERRA FLOWLINE ELEVATION MUST BE HIGHER THAN BYPASS CURB INLET ELEVATION.



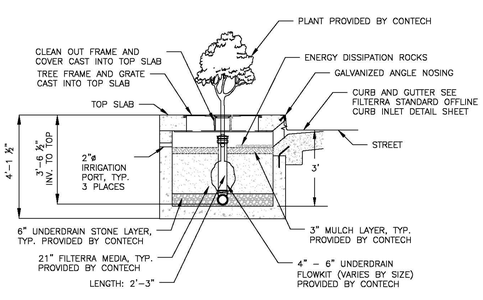
PLAN VIEW

ELEVATION VIEW

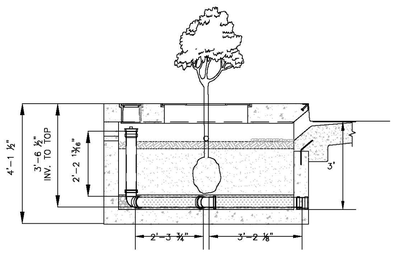
FILTERRA TYPICAL FLOWLINE
NOT TO SCALE



SECTION A–A



SECTION B–B



SECTION C–C

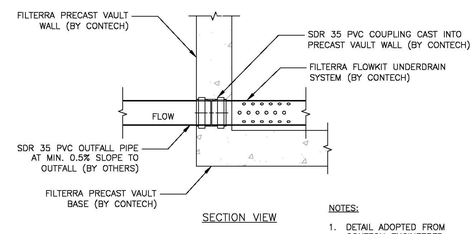
SHORT SIDE INLET CONFIGURATION					
DESIGNATION	SIZE	LENGTH	WIDTH	OUTLET PIPE	TREE GRATE QTY & SIZE
FT0406	4 X 6	6' – 0"	4' – 0"	4" SDR 35	(1) 3' X 3'
FT0408	4 X 8	8' – 0"	4' – 0"	4" SDR 35	(1) 3' X 3'
FT0412	4 X 12	12' – 0"	4' – 0"	4" SDR 35	(2) 3' X 3'
FT0608	6 X 8	8' – 0"	6' – 0"	4" SDR 35	(1) 4' X 4'
FT0610	6 X 10	10' – 0"	6' – 0"	6" SDR 35	(1) 4' X 4'
FT0612	6 X 12	12' – 0"	6' – 0"	6" SDR 35	(2) 4' X 4'
FT0713	7 X 13	13' – 0"	7' – 0"	6" SDR 35	(2) 4' X 4'
INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION					

LONG SIDE INLET CONFIGURATION					
DESIGNATION	SIZE	LENGTH	WIDTH	OUTLET PIPE	TREE GRATE QTY & SIZE
FT0604	6 X 4	6' – 0"	4' – 0"	4" SDR 35	(1) 3' X 3'
FT0804	8 X 4	8' – 0"	4' – 0"	4" SDR 35	(1) 3' X 3'
FT0806	8 X 6	8' – 0"	6' – 0"	4" SDR 35	(1) 4' X 4'
FT1006	10 X 6	10' – 0"	6' – 0"	6" SDR 35	(1) 4' X 4'
FT1204	12 X 4	12' – 0"	4' – 0"	4" SDR 35	(2) 3' X 3'
FT1206	12 X 6	12' – 0"	6' – 0"	6" SDR 35	(2) 4' X 4'
FT1307	13 X 7	13' – 0"	7' – 0"	6" SDR 35	(2) 4' X 4'
INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION					

FILTERRA SYSTEM – RECTANGLE
NOT TO SCALE

SQUARE INLET CONFIGURATION					
DESIGNATION	SIZE	LENGTH	WIDTH	OUTLET PIPE	TREE GRATE QTY & SIZE
FT0404	4 X 4	4' – 0"	4' – 0"	4" SDR 35	(1) 3' X 3'
FT0606	6 X 6	6' – 0"	6' – 0"	4" SDR 35	(1) 3' X 3'
INTERNAL PIPE CONFIGURATION MAY VARY DEPENDING UPON OUTLET LOCATION					

FILTERRA SYSTEM – SQUARE
NOT TO SCALE



SECTION VIEW

NOTES:

1. DETAIL ADOPTED FROM CONTECH ENGINEERED SOLUTIONS, LLC DATED 3/23/15.

FILTERRA OUTFALL PIPE CONNECTION DETAIL
NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	8/22/17
FINAL APP.	WHS	10/25/17
DPW REVIEW	WHS	11/3/17
CITY COMMENTS	WHS	11/21/17
CONSTRUCTION	WHS	4/19/18

DRAWING NAME: **FILTERRA BMP DETAILS**

PROJECT NAME: **STROUDWATER PRESERVE**

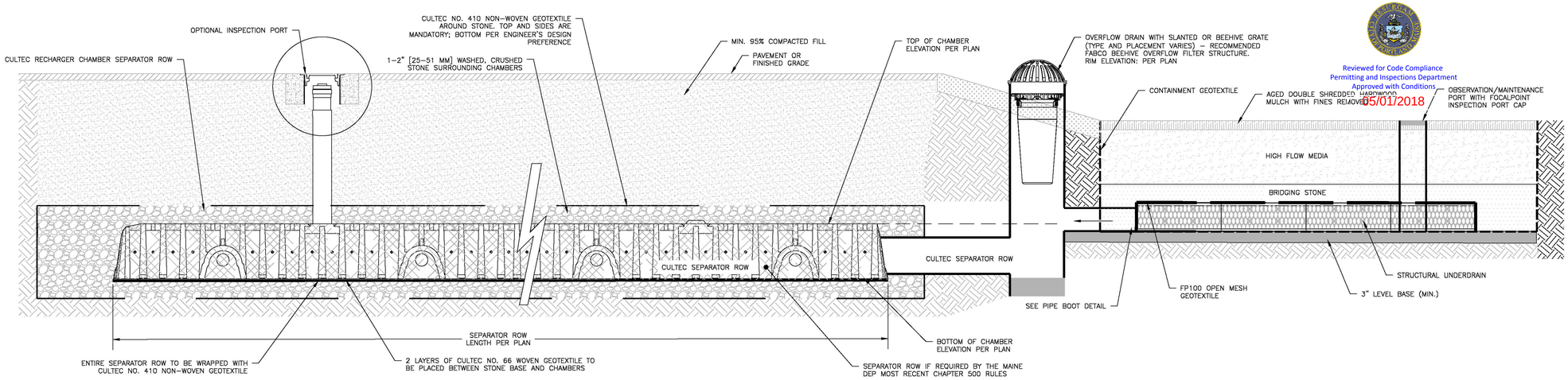
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — 4-16-18 — PROFESSIONAL ENGINEER

DRAWING NO.
C-49



Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

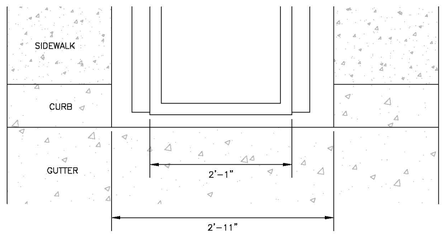
FOCALPOINT TYPICAL SECTION
NOT TO SCALE

FOCALPOINT ID	TRIBUTARY AREA (ACRES)	IMPERVIOUS AREA (ACRES)	TOP BASIN/ BOTTOM BASIN	SIZE
1	0.467	0.160	60.50'/59.50'	3' X 16.4'
2	0.308	0.118	60.25'/59.25'	3' X 11.3'
3	0.486	0.139	55.80'/54.80'	3' X 16.1'
4	1.346	0.231	55.75'/54.75'	5' X 23.6'
5	0.941	0.379	50.50'/49.50'	3' X 35'
6	2.099	0.476	50.50'/49.50'	4' X 48.9'
7	0.292	0.188	55.40'/54.50'	3' X 13.3'
8	0.562	0.156	55.50'/54.50'	3' X 18.5'
9	0.941	0.340	62.65'/61.65'	3' X 15.7'
10	0.249	0.123	62.30'/61.30'	3' X 10.1'
11	0.493	0.227	59.12'/58.12'	3' X 33.7'
12	0.309	0.191	57.75'/56.75'	3' X 6.8'
13	1.153	0.353	59.25'/58.25'	3' X 19.3'
14	0.495	0.191	59.40'/58.40'	3' X 13.8'
15	2.569	0.503	53.60'/52.60'	3' X 39'
16	0.634	0.410	53.40'/52.40'	3' X 18.1'
17	0.441	0.304	47.00'/46.00'	4' X 57.8'
18	1.038	0.271	46.80'/45.80'	3' X 29'
19	0.443	0.155	51.25'/50.25'	4' X 15.6'
20	0.118	0.118	51.00'/50.00'	3' X 33.5'

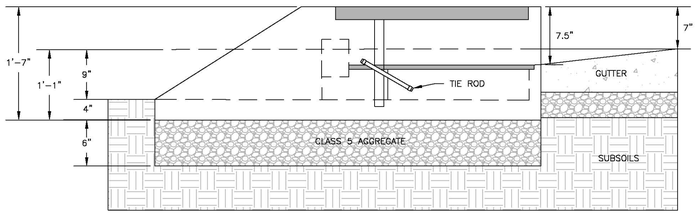
1. ALL STRUCTURES SHALL BE A FOCALPOINT OR APPROVED EQUIVALENT HIGH PERFORMANCE SOIL FILTER BMP
2. SIZING OF ALL STRUCTURES SHALL BE APPROVED BY THE MANUFACTURER

NOTES:

FOXHOLE COULD ALSO BE INSTALLED BEHIND CURB



INSTALLED PLAN VIEW – INLET ONLY

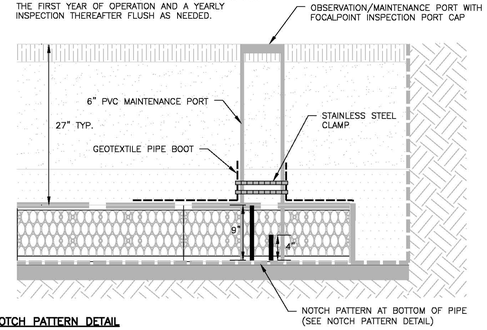


INSTALLED ELEVATION VIEW – INLET/OUTLET ONLY

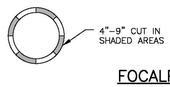
RAIN GUARDIAN FOXHOLE
NOT TO SCALE

OBSERVATION/MAINTENANCE PORT

PORT USED FOR INSPECTION PURPOSES AND FOR SYSTEM MAINTENANCE AS REQUIRED. WATER SHALL BE PUMPED INTO THE SYSTEM AND RESUSPEND ACCUMULATED SEDIMENT. MINIMUM REQUIRED MAINTENANCE INCLUDES A QUARTERLY INSPECTION FOR THE FIRST YEAR OF OPERATION AND A YEARLY INSPECTION THEREAFTER FLUSH AS NEEDED.



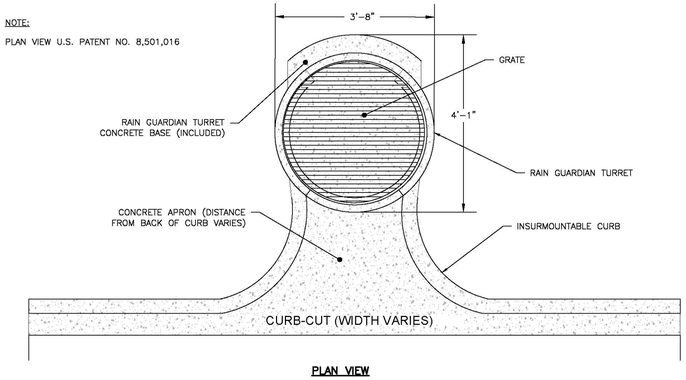
PIPE NOTCH PATTERN DETAIL



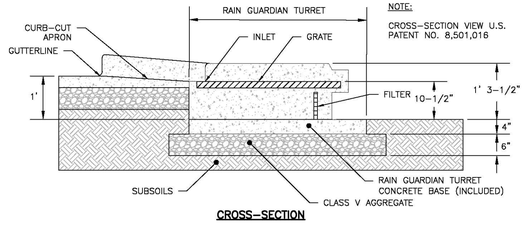
FOCALPOINT OBSERVATION PORT DETAIL
NOT TO SCALE

NOTE:

PLAN VIEW U.S. PATENT NO. 8,501,016

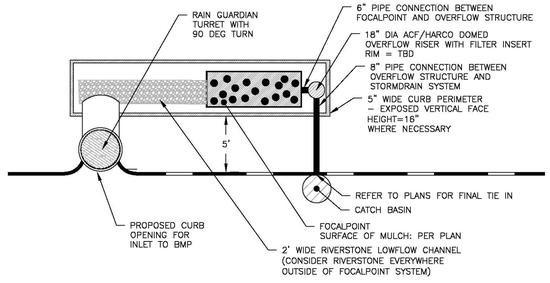


PLAN VIEW



CROSS-SECTION

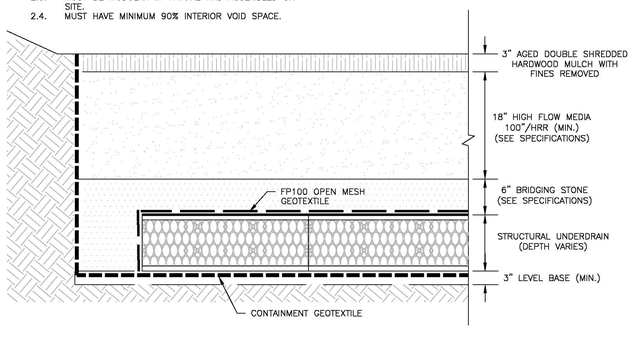
RAIN GUARDIAN TURRET
NOT TO SCALE



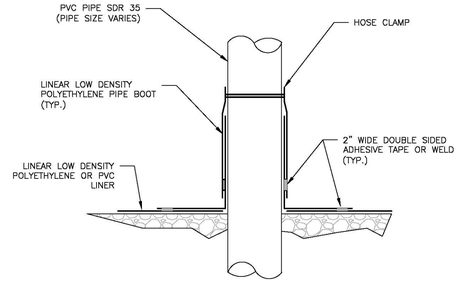
EXAMPLE FOCALPOINT LAYOUT – NON SIDEWALK LOCATION
NOT TO SCALE

FOCALPOINT HP PERFORMANCE SPECIFICATION:

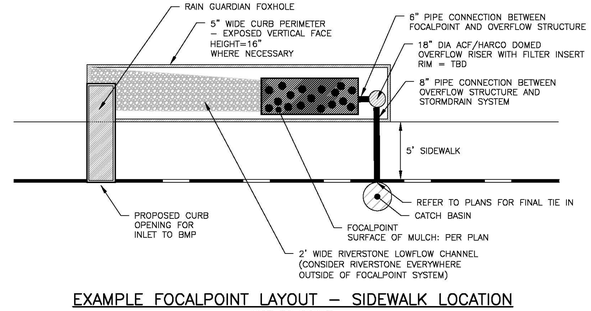
1. HIGH PERFORMANCE MEDIA
   1.1. HIGH PERFORMANCE MEDIA MUST MEET A MINIMUM OF 100" PER HOUR INFILTRATION RATE.
2. HIGH PERFORMANCE STRUCTURAL UNDERDRAIN
   2.1. MUST HAVE A MINIMUM OF 19 SQUARE INCHES OF ORIFICE OPENING PER SQUARE FOOT.
   2.2. MUST MEET H20 LOADING REQUIREMENTS.
   2.3. MUST BE MODULAR IN NATURE AND ASSEMBLED ON SITE.
   2.4. MUST HAVE MINIMUM 90% INTERIOR VOID SPACE.



FOCALPOINT DETAILED CROSS SECTION
NOT TO SCALE



TYPICAL STORMWATER BMP PIPE PENETRATION DETAIL
NOT TO SCALE



EXAMPLE FOCALPOINT LAYOUT – SIDEWALK LOCATION
NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
CITY COMMENTS	WHS	11/21/17
CONSTRUCTION	WHS	4/16/18

FOCALPOINT BMP DETAILS

PROJECT NAME: **STROUDWATER PRESERVE**

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	ADC
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11416 — 4-16-18 — LICENSED PROFESSIONAL ENGINEER

DRAWING NO.
C-52

1.0 EROSION CONTROL MEASURES AND SITE STABILIZATION

AS PART OF THE SITE DEVELOPMENT, THE FOLLOWING TEMPORARY AND PERMANENT EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE IMPLEMENTED. DEVICES SHALL BE INSTALLED AS DESCRIBED IN THIS REPORT OR WITHIN THE PLAN SET. SEE THE MAINE EROSION AND SEDIMENT CONTROL HANDBOOK FOR CONSTRUCTION: BEST MANAGEMENT PRACTICES FOR FURTHER REFERENCE.

1.1 TEMPORARY EROSION CONTROL MEASURES

THE FOLLOWING TEMPORARY EROSION AND SEDIMENTATION CONTROL MEASURES ARE PLANNED FOR THE PROJECT'S CONSTRUCTION PERIOD:

1.1.1 CRUSHED STONE STABILIZED CONSTRUCTION ENTRANCES SHALL BE PLACED AT ALL ACCESS POINTS TO THE PROJECT SITE WHERE THERE ARE DISTURBED AREAS. THE FOLLOWING SPECIFICATIONS SHALL BE FOLLOWED AT A MINIMUM:
- STONE SIZE SHALL BE 2–3 INCHES, OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT.
- THE THICKNESS OF THE ENTRANCE STONE LAYER SHALL BE NO LESS THAN 6 INCHES.
- THE ENTRANCE SHALL NOT BE LESS THAN 20 FEET WIDE, HOWEVER NOT LESS THAN THE FULL WIDTH OF POINTS WHERE INGRESS OR EGRESS OCCURS. THE LENGTH SHALL NOT BE LESS THAN 50 FEET IN LENGTH.
- GEOTEXTILE FABRIC (WOVEN OR NON–WOVEN) SHALL BE PLACED OVER THE ENTIRE ENTRANCE AREA.
- THE ENTRANCE/EXIT SHALL BE MAINTAINED TO THE EXTENT THAT IT WILL PREVENT THE TRACKING OF SEDIMENT ONTO PUBLIC ROAD WAYS.

1.1.2 SILTATION FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED DOWN GRADIENT OF ANY DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL PERMANENT STABILIZATION IS ACHIEVED. THE SILT FENCE OR EROSION CONTROL BERM SHALL BE INSTALLED PER THE DETAILS PROVIDED IN THE PLAN SET AND INSPECTED BEFORE AND IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. REPAIRS SHALL BE MADE IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THE FENCE LINE OR BERM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THE FENCE OR BERM, THE BARRIER SHALL BE REPLACED WITH A STONE CHECK DAM.

1.1.3 HAY MULCH INCLUDING HYDRO SEEDING IS INTENDED TO PROVIDE COVER FOR DENUDED OR SEEDED AREAS UNTIL REVEGETATION IS ESTABLISHED. MULCH PLACED BETWEEN APRIL 15TH AND NOVEMBER 1ST ON SLOPES OF LESS THAN 15 PERCENT SHALL BE COVERED BY FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION. MULCH PLACED BETWEEN NOVEMBER 1ST AND APRIL 15TH ON SLOPES EQUAL TO OR STEEPER THAN 8 PERCENT AND EQUAL TO OR FLATTER THAN 2:1 SHALL USE MATS OR FABRIC NETTING AND ANCHORED WITH STAPLES IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.

1.1.4 AT ANY TIME OF THE YEAR, ALL SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH DOUBLE NET EROSION CONTROL BLANKET BIONET SC150BN BY NORTH AMERICAN GREEN OR APPROVED EQUAL, OR EROSION CONTROL MIX SLOPE PROTECTION AS DETAILED WITHIN THE PLANS.

1.1.5 WESTBROOK STREET AND OLD WESTBROOK STREET SHALL BE SWEPT TO CONTROL MUD AND DUST FROM THE CONSTRUCTION SITE AS NECESSARY. ADD ADDITIONAL STONE TO THE STABILIZED CONSTRUCTION ENTRANCE TO MINIMIZE THE TRACKING OF MATERIAL OFF THE SITE AND ONTO THE SURROUNDING ROADWAYS.

1.1.6 DURING DEMOLITION, CLEARING AND GRUBBING OPERATIONS, STONE CHECK DAMS SHALL BE INSTALLED AT ANY AREAS OF CONCENTRATED FLOW. THE MAXIMUM HEIGHT OF THE CHECK DAM SHALL NOT EXCEED 2 FEET. THE CENTER OF THE CHECK DAM SHALL BE 6 INCHES BELOW THE OUTER EDGES OF THE DAM. THE CONTRACTOR SHALL MULCH THE SIDE SLOPES AND INSTALL STONE CHECK DAMS FOR ALL NEWLY EXCAVATED DITCH LINES WITHIN 24 HOURS OF THEIR CREATION.

1.1.7 SILT FENCE STAKE SPACING SHALL NOT EXCEED 6 FEET UNLESS THE FENCE IS SUPPORTED WITH 14 GAUGE WIRE IN WHICH CASE THE MAXIMUM SPACING SHALL NOT EXCEED 10 FEET. THE SILT FENCE SHALL BE "TOED" INTO THE GROUND.

1.1.8 STORMDRAIN INLET PROTECTION SHALL BE PROVIDED TO STORMDRAINS THROUGH THE USE OF ANY OF THE FOLLOWING: HAY BALE DROP INLET STRUCTURES, SILT FENCE DROP INLET SEDIMENT FILTER, GRAVEL AND WIRE MESH DROP INLET SEDIMENT FILTER, OR CURB INLET SEDIMENT FILTER. BARRIERS SHALL BE INSPECTED AFTER EVERY RAINFALL EVENT AND REPAIRED AS NECESSARY. SEDIMENTS SHALL BE REMOVED WHEN ACCUMULATION HAS REACHED ½ THE DESIGN HEIGHT.

1.1.9 DUST CONTROL SHALL BE ACCOMPLISHED BY THE USE OF ANY OF THE FOLLOWING: WATER, CALCIUM CHLORIDE, STONE, OR AN APPROVED MDEP PRODUCT. DUST CONTROL SHALL BE APPLIED AS NEEDED TO ACCOMPLISH DUST CONTROL.

1.1.10 TEMPORARY LOAM, SEED, AND MULCHING SHALL BE USED IN AREAS WHERE NO OTHER EROSION CONTROL MEASURE IS USED. APPLICATION RATES FOR SEEDING ARE PROVIDED AT THE END OF THIS REPORT.

1.1.11 STOCKPILES SHALL BE STABILIZED WITHIN 7 DAYS OF FORMATION UNLESS A SCHEDULED RAIN EVENT OCCURS PRIOR TO THE 7 DAY WINDOW, IN WHICH CASE THE STOCKPILE SHALL BE STABILIZED PRIOR TO THE RAIN EVENT. METHODS OF STABILIZATION SHALL BE MULCH, EROSION CONTROL MIX, OR EROSION CONTROL BLANKETS/MATS. SILT FENCE OR A WOOD WASTE COMPOST FILTER BERM SHALL BE PLACED DOWNHILL OF ANY SOIL STOCKPILE LOCATION.

1.1.12 FOR DISTURBANCE BETWEEN NOVEMBER 1 AND APRIL 15, PLEASE REFER TO WINTER STABILIZATION PLAN IN THIS REPORT AND THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR FURTHER INFORMATION.

1.1.13 IT IS OF THE UTMOST IMPORTANCE THAT STORMWATER RUNOFF AND POTENTIAL SEDIMENT FROM THE CONSTRUCTION SITE BE DIVERTED AROUND THE PROPOSED UNDERDRAINS UNTIL THE TRENCH IS BACKFILLED.

1.2 PERMANENT EROSION CONTROL MEASURES

THE FOLLOWING PERMANENT EROSION CONTROL MEASURES ARE INTENDED FOR POST DISTURBANCE AREAS OF THE PROJECT.

1.2.1 ALL DISTURBED AREAS DURING CONSTRUCTION, NOT SUBJECT TO OTHER PROPOSED CONDITIONS, SHALL RECEIVE A MINIMUM 4" OF LOAM, LIMED, AND MULCHED. EROSION CONTROL BLANKETS OR MATS SHALL BE PLACED OVER THE MULCH IN AREAS NOTED IN PARAGRAPH 4.1 OF THIS REPORT.
1.2.2 ALL STORMWATER DEVICES SHALL BE INSTALLED AND TRIBUTARY AREAS STABILIZED PRIOR RECEIVING STORMWATER.
1.2.3 REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

2.0 EROSION AND SEDIMENTATION CONTROL PLAN

THE EROSION AND SEDIMENTATION CONTROL PLAN IS INCLUDED WITHIN THE PLAN SET.

3.0 DETAILS AND SPECIFICATIONS

3.1 EROSION CONTROL DETAILS AND SPECIFICATIONS ARE INCLUDED IN THE PLAN SET.

4.0 STABILIZATION PLAN FOR WINTER CONSTRUCTION

WINTER CONSTRUCTION CONSISTS OF EARTHWORK DISTURBANCE BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15. IF A CONSTRUCTION SITE IS NOT STABILIZED WITH PAVEMENT, A ROAD GRAVEL BASE, 75% MATURE VEGETATION COVER OR RIPRAP BY NOVEMBER 15, THEN THE SITE SHALL BE PROTECTED WITH OVER–WINTER STABILIZATION. ANY AREA NOT STABILIZED WITH PAVEMENT, VEGETATION, MULCHING, EROSION CONTROL MIX, EROSION CONTROL MATS, RIPRAP, OR GRAVEL BASE ON A ROAD SHALL BE CONSIDERED OPEN.

THE CONTRACTOR SHALL LIMIT THE WORK AREA TO AREAS THAT WORK WILL OCCUR IN DURING THE SUBSEQUENT 15 DAYS AND SO THAT IT CAN BE MULCHED ONE DAY PRIOR TO A SNOW EVENT. THE CONTRACTOR SHALL STABILIZE WORK AREAS PRIOR TO OPENING ADDITIONAL WORK AREAS TO MINIMIZE AREAS WITHOUT EROSION CONTROL MEASURES.

THE FOLLOWING MEASURES SHALL BE IMPLEMENTED DURING WINTER CONSTRUCTION PERIODS:

4.1 SEDIMENT BARRIERS

DURING FROZEN CONDITIONS, SEDIMENT BARRIERS MAY CONSIST OF EROSION CONTROL MIX BERMS OR ANY OTHER RECOGNIZED SEDIMENT BARRIERS AS FROZEN SOIL PREVENTS THE PROPER INSTALLATION OF HAY BALES OR SILT FENCES.

4.2 MULCHING

ALL AREAS SHALL BE CONSIDERED TO BE DENUDED UNTIL SEEDED AND MULCHED. HAY AND STRAW MULCH SHALL BE APPLIED AT A RATE OF 150 LB. PER 1,000 SQUARE FEET OR 3 TONS/ACRE (TWICE THE NORMAL ACCEPTED RATE OF 75–LBS./1,000 S.F. OR 1.5 TONS/ACRE) AND SHALL BE PROPERLY ANCHORED. EROSION CONTROL MIX MUST BE APPLIED WITH A MINIMUM 4 INCH THICKNESS. MULCH SHALL NOT BE SPREAD ON TOP OF SNOW. THE SNOW SHALL BE REMOVED DOWN TO A ONE–INCH DEPTH OR LESS PRIOR TO APPLICATION. AFTER EACH DAY OF FINAL GRADING, THE AREA SHALL BE PROPERLY STABILIZED WITH ANCHORED HAY OR STRAW OR EROSION CONTROL MATTING. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED OR ADEQUATELY ANCHORED SO THAT GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. BETWEEN THE DATES OF NOVEMBER 1 AND APRIL 15, ALL MULCH SHALL BE ANCHORED BY EITHER MULCH NETTING, TRACKING OR WOOD CELLULOSE FIBER. THE COVER WILL BE CONSIDERED SUFFICIENT WHEN THE GROUND SURFACE IS NOT VISIBLE THROUGH THE MULCH. AFTER NOVEMBER 1ST, MULCH AND ANCHORING OF ALL EXPOSED SOIL SHALL OCCUR AT THE END OF EACH FINAL GRADING WORKDAY.

4.3 SOIL STOCKPILING

STOCKPILES OF SOIL OR SUBSOIL SHALL BE MULCHED FOR OVER WINTER PROTECTION WITH HAY OR STRAW AT TWICE THE NORMAL RATE OR WITH A FOUR–INCH LAYER OF EROSION CONTROL MIX. THIS SHALL BE DONE WITHIN 24 HOURS OF STOCKING AND RE–ESTABLISHED PRIOR TO ANY RAINFALL OR SNOWFALL.

4.4 SEEDING

BETWEEN THE DATES OF OCTOBER 15TH AND APRIL 1ST, LOAM OR SEED SHALL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES FINISHED AREAS SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1ST AND IF THE EXPOSED AREA HAS NOT BEEN LOAMED, FINAL GRADING WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED.

DORMANT SEEDING MAY BE PLACED PRIOR TO THE PLACEMENT OF MULCH OR EROSION CONTROL BLANKETS. IF DORMANT SEEDING IS USED FOR THE SITE, ALL DISTURBED AREAS SHALL RECEIVE 4" OF LOAM AND SEED AT AN APPLICATION RATE OF 5 LBS/1,000 S.F. ALL AREAS SEEDED DURING THE WINTER SHALL BE INSPECTED IN THE SPRING FOR ADEQUATE CATCH. ALL AREAS INSUFFICIENTLY VEGETATED (LESS THAN 75% CATCH) SHALL BE REVEGETATED BY REPLACING LOAM, SEED AND MULCH. IF DORMANT SEEDING IS NOT USED FOR THE SITE, ALL DISTURBED AREAS SHALL BE REVEGETATED IN THE SPRING.

4.5 OVER WINTER STABILIZATION OF DISTURBED SOILS

BY SEPTEMBER 15TH, ALL DISTURBED SOILS ON AREAS HAVING A SLOPE LESS THAN 15% SHALL BE SEEDED AND MULCHED. IF THE DISTURBED AREAS ARE NOT STABILIZED BY THIS DATE, THEN ONE OF THE FOLLOWING ACTIONS SHALL BE TAKEN TO STABILIZE THE SOIL FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION – BY OCTOBER 1ST, SEED THE DISTURBED SOIL WITH WINTER RYE AT A SEEDING RATE OF 3LBS PER 1,000 S.F., LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR STRAW AT 75 LBS PER 1,000 S.F., AND ANCHOR THE MULCH WITH PLASTIC NETTING. MONITOR GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 1ST, THEN MULCH THE AREA FOR OVER–WINTER PROTECTION.

- STABILIZE THE SOIL WITH SOD – STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL.

- STABILIZE THE SOIL WITH MULCH – BY NOVEMBER 15TH, MULCH THE DISTURBED SOIL BY SPREADING HAY OR STRAW AT A RATE OF AT LEAST 150 LBS PER 1,000 S.F. ON THE AREA SO THAT NO SOIL IS VISIBLE THROUGH THE MULCH. IMMEDIATELY AFTER APPLYING THE MULCH, ANCHOR THE MULCH WITH PLASTIC NETTING TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL.

4.6 OVER WINTER STABILIZATION OF DISTURBED SLOPES

ALL STONE–COVERED SLOPES SHALL BE CONSTRUCTED AND STABILIZED BY NOVEMBER 15TH. ALL SLOPES TO BE VEGETATED SHALL BE SEEDED AND MULCHED BY SEPTEMBER 1ST. A SLOPE IS CONSIDERED A GRADE GREATER THAN 15%. IF A SLOPE TO BE VEGETATED IS NOT STABILIZED BY SEPTEMBER 1ST, THEN ONE OF THE FOLLOWING ACTION SHALL BE TAKEN TO STABILIZE THE SLOPE FOR LATE FALL AND WINTER:

- STABILIZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS – BY OCTOBER 1ST THE DISTURBED SLOPE SHALL BE SEEDED WITH WINTER RYE AT A SEEDING RATE OF 3 LBS PER 1,000 S.F. AND THEN INSTALL EROSION CONTROL MATS OR ANCHORED MULCH OVER THE SEEDING. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR FAILS TO COVER AT LEAST 75% A THE SLOPE BY NOVEMBER 1ST, THEN THE CONTRACTOR SHALL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX OR WITH STONE RIPRAP.

- STABILIZE THE SOIL WITH SOD – THE DISTURBED SLOPE SHALL BE STABILIZED WITH PROPERLY INSTALLED SOD BY OCTOBER 1ST. PROPER INSTALLATION INCLUDES THE CONTRACTOR PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, ROLLING THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT GROWTH INTO THE DISTURBED SOIL. THE CONTRACTOR SHALL NOT USE LATE–SEASON SOD INSTALLATION TO STABILIZE SLOPES HAVING A GRADE GREATER THAN 3H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH EROSION CONTROL MIX – EROSION CONTROL MIX SHALL BE PROPERLY INSTALLED BY NOVEMBER 15TH. THE CONTRACTOR SHALL NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES HAVING GRADES GREATER THAN 2H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE.

- STABILIZE THE SOIL WITH STONE RIPRAP – PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY NOVEMBER 15TH. A REGISTERED PROFESSIONAL ENGINEER SHALL BE HIRED TO DETERMINE THE STONE SIZE NEEDED FOR STABILITY ON THE SLOPE AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

5.0 INSPECTION AND MAINTENANCE

A PERSON WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL, INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT, SHALL CONDUCT PERIODIC VISUAL INSPECTIONS OF INSTALLED EROSION CONTROL MEASURES. THE FREQUENCY OF INSPECTION SHALL OCCUR AT LEAST ONCE EVERY TWO WEEKS, AS WELL AS AFTER A "STORM EVENT". A "STORM EVENT" SHALL CONSIST 0.5 INCHES OF RAIN WITHIN A 24 HOUR PERIOD. THE FOLLOWING EROSION AND SEDIMENT CONTROL – BEST MANAGEMENT PRACTICES (BMP'S) SHALL INSPECTED IN THE MANNER AS DESCRIBED.

5.1 SEDIMENT BARRIERS

HAY BALE BARRIERS, SILT FENCES AND FILTER BERMS SHALL BE INSPECTED AND REPAIRED FOR THE FOLLOWING IF THERE ARE ANY SIGNS OF EROSION OR SEDIMENTATION BELOW THEM. IF THERE ARE SIGNS OF UNDERCUTTING AT THE CENTER OR THE EDGES OF THE BARRIER, OR IMPOUNDING OF LARGE VOLUMES OF WATER BEHIND THEM, SEDIMENT BARRIERS SHALL BE REPLACED WITH A TEMPORARY CHECK DAM. SHOULD THE FABRIC ON A SILT FENCE OR FILTER BARRIER DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER IS STILL NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN DEPOSITS REACH APPROXIMATELY ONE–HALF THE HEIGHT OF THE BARRIER. FILTER BERMS SHOULD BE RESHAPED AS NEEDED. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHOULD BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.

5.2 STABILIZED STONE CONSTRUCTION ENTRANCES

THE EXIT SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHALL BE REMOVED ALONG WITH THE COLLECTED SOIL MATERIAL AND REDISTRIBUTED ON SITE IN A STABLE MANNER. THE ENTRANCE SHOULD THEN BE RECONSTRUCTED. THE CONTRACTOR SHALL SWEEP OR WASH PAVEMENT AT EXITS, WHICH HAVE EXPERIENCED MUD–TRACKING ON TO THE PAVEMENT OR TRAVELED WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE. ALL SEDIMENT SHALL BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS.

5.3 MULCHED AREAS

ALL MULCHES MUST BE INSPECTED PERIODICALLY, IN PARTICULAR AFTER RAINSTORMS, TO CHECK FOR RILL EROSION. IF LESS THAN 90% OF THE SOIL SURFACE IS COVERED BY MULCH, ADDITIONAL MULCH SHALL BE IMMEDIATELY APPLIED. NETS MUST BE INSPECTED AFTER RAIN EVENTS FOR DISLOCATION OR FAILURE. IF WASHOUTS OR BREAKAGE OCCUR, RE–INSTALL THE NETS AS NECESSARY AFTER REPAIRING DAMAGE TO THE SLOPE. WHERE MULCH IS USED IN CONJUNCTION WITH ORNAMENTAL PLANTINGS, INSPECT PERIODICALLY THROUGHOUT THE YEAR TO DETERMINE IF MULCH IS MAINTAINING COVERAGE OF THE SOIL SURFACE. REPAIR AS NEEDED.

5.4 DUST CONTROL

WHEN TEMPORARY DUST CONTROL MEASURES ARE USED, REPETITIVE TREATMENT SHALL BE APPLIED AS NEEDED TO ACCOMPLISH CONTROL.

5.5 STORMWATER APPURTENANCES

ALL UNDERDRAINS, STORM DRAINS, AND CATCH BASINS NEED TO BE OPERATING EFFECTIVELY AND FREE OF DEBRIS.

5.6 EROSION AND SEDIMENTATION CONTROL INSPECTIONS:

ACORN ENGINEERING HAS PERSONNEL QUALIFIED TO CONDUCT EROSION AND SEDIMENTATION CONTROL INSPECTIONS. FOR FURTHER INFORMATION CONTACT:

CONTACT: WILL SAVAGE, PE
TELEPHONE: (207) 775–2655

QUALIFICATIONS:

- MAINE PROFESSIONAL ENGINEERING LICENSE #11419
- MAINE DEP – CERTIFIED IN MAINTENANCE & INSPECTION OF STORMWATER BMP'S CERT #14
- CERTIFIED EROSION, SEDIMENT AND STORM WATER INSPECTOR (CESSWI) CERT #0293
- CERTIFIED PROFESSIONAL IN EROSION AND SEDIMENT CONTROL (CPESC) CERT. #4620

THE CONTRACTOR HAS SOLE RESPONSIBILITY FOR COMPLYING WITH THE EROSION AND SEDIMENTATION REPORT/PLAN, INCLUDING CONTROL OF FUGITIVE DUST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MONETARY PENALTIES RESULTING FROM FAILURE TO COMPLY WITH THESE STANDARDS.

6.0 IMPLEMENTATION SCHEDULE

THE FOLLOWING IMPLEMENTATION SEQUENCE IS INTENDED TO MAXIMIZE THE EFFECTIVENESS OF THE ABOVE DESCRIBED EROSION CONTROL MEASURES. CONTRACTORS SHOULD AVOID OVEREXPOSING DISTURBED AREAS AND LIMIT THE AMOUNT OF STABILIZATION AREA.

1. INSTALL A STABILIZED CONSTRUCTION ENTRANCE IN ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC WILL ENTER AND EXIT THE SITE.
2. INSTALL PERIMETER SILT FENCE OR EROSION CONTROL BERM.
3. INSTALL SEDIMENTATION BASINS.
4. COMMENCE INSTALLATION OF DRAINAGE INFRASTRUCTURE.
5. INSTALL ALL OTHER EROSION CONTROL DEVICES AS NECESSARY THROUGHOUT THE REMAINDER OF THIS SCHEDULE.
6. COMMENCE EARTHWORK OPERATIONS, WALL AND FOUNDATION INSTALLATION.
7. COMMENCE INSTALLATION OF UTILITIES.
8. CONTINUE EARTHWORK AND GRADING TO SUBGRADE AS NECESSARY FOR CONSTRUCTION.
9. COMPLETE INSTALLATION OF DRAINAGE INFRASTRUCTURE, AS WELL AS OTHER UTILITY WORK.
10. COMPLETE REMAINING EARTHWORK OPERATIONS.
11. INSTALL SUB–BASE AND BASE GRAVELS IN PAVED AREAS.
12. INSTALL PAVING, CURBING AND BRICKWORK.
13. LOAM, LIME, FERTILIZE, SEED AND MULCH DISTURBED AREAS AND COMPLETE ALL LANDSCAPING.
14. ONCE THE SITE IS STABILIZED, 90% CATCH OF GRASS HAS BEEN OBTAINED, OR MULCHING OF LANDSCAPE AREAS IS COMPLETE REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.
15. TOUCH UP AREAS WITH VIGOROUS CATCH OF GRASS WITH LOAM AND SEED.
16. COMPLETE SITE SIGNAGE AND STRIPING.
17. EXECUTE PROPER MAINTENANCE OF ALL TEMPORARY AND PERMANENT EROSION CONTROL MEASURES THROUGHOUT THE PROJECT.

THE ABOVE IMPLEMENTATION SEQUENCE SHOULD BE GENERALLY FOLLOWED BY THE SITE CONTRACTOR. HOWEVER, THE CONTRACTOR MAY CONSTRUCT SEVERAL ITEMS SIMULTANEOUSLY. THE CONTRACTOR SHALL SUBMIT TO THE OWNER A SCHEDULE OF THE COMPLETION OF THE WORK. THE CONTRACTOR IS TO COMMENCE THE CONSTRUCTION OF MORE THAN ONE ITEM ABOVE, THEY SHALL LIMIT THE AMOUNT OF EXPOSED AREAS TO THOSE AREAS IN WHICH WORK IS EXPECTED TO BE UNDERTAKEN DURING THE FOLLOWING 15 DAYS.

05/01/2018

THE CONTRACTOR SHALL RE–VEGETATE DISTURBED AREAS AS RAPIDLY AS POSSIBLE. ALL AREAS SHALL BE PERMANENTLY STABILIZED WITHIN 7 DAYS OF FINAL GRADING OR BEFORE A STORM EVENT. THE CONTRACTOR SHALL INCORPORATE PLANNED INLETS AND DRAINAGE SYSTEMS AS EARLY AS POSSIBLE INTO THE CONSTRUCTION PHASE.

7.0 CONCLUSION

THE ABOVE EROSION CONTROL NARRATIVE IS INTENDED TO MINIMIZE THE DEVELOPMENT IMPACT BY IMPLEMENTING TEMPORARY AND PERMANENT EROSION CONTROL MEASURES. THE CONTRACTOR SHALL ALSO REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION.

SEEDING PLAN

SITE PREPARATION

THE SEEDED AREAS SHALL BE FEASIBLY GRADED OUT TO PROVIDE THE USE OF EQUIPMENT FOR SEEDBED PREPARATION, SEEDING, MULCH APPLICATION, AND MULCH ANCHORING. IF NECESSARY, THE SITE MAY REQUIRE ADDITIONAL TEMPORARY EROSION CONTROL MEASURES OUTLINED IN THE EROSION CONTROL REPORT.

SEEDBED PREPARATION

FERTILIZER SHALL BE APPLIED TO THE SITE AT A RATE OF 13.8 POUNDS PER 1,000 SQUARE FEET. THE COMPOSITION OF THE FERTILIZER SHALL BE 10–10–10 (N–P2O5–K2O) OR EQUIVALENT.

LIMESTONE SHALL BE APPLIED TO THE SITE AT A RATE OF 138 POUNDS PER 1,000 SQUARE FEET.

SEEDING

THE COMPOSITION AND AMOUNT OF TEMPORARY SEED APPLIED TO A SITE SHALL BE DETERMINED BY THE FOLLOWING TABLE:

TEMPORARY SEED APPLICATION RATES

SEED	LBS / ACRE	RECOMMENDED SEEDING DATES
WINTER RYE	2.57	8/15 TO 10/1
OATS	1.84	4/1 TO 7/1 8/15 TO 9/15
ANNUAL RYEGRASS	0.92	4/1 TO 7/1
SUDANGRASS	0.92	5/15 TO 8/15
PERENNIAL	0.92	8/15 TO 9/15
TOTAL	7.17 LBS/ACRE	

PERMANENT SEED APPLICATION RATES

SEED	LBS / ACRE
KENTUCKY BLUEGRASS	20.00
CREEPING RED FESCUE	20.00
PERENNIAL RYEGRASS	4.80
TOTAL	44.8 LBS/ACRE

MULCHING

MULCH SHALL BE APPLIED AT A RATE OF 70 LBS – 90 LBS PER 1,000 SQUARE FEET. THE MULCH SHALL BE INSTALLED AT A MINIMUM DEPTH OF 4 INCHES. THE SEEDED AREA SHALL BE MULCHED IMMEDIATELY AFTER SEED IS APPLIED. MULCHING DURING THE WINTER SEASON SHALL BE DOUBLE THE NORMAL AMOUNT.

CONCLUSION

PLEASE REFER TO THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL FOR ADDITIONAL INFORMATION PERTAINING TO TEMPORARY SEEDING AND MULCHING.

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY	DATE
PRELIM. APP.	WHS	8/22/17
FINAL APP.	WHS	10/25/17
DPW REVIEW	WHS	11/2/17
CITY COMMENTS	WHS	11/21/17
CONSTRUCTION	WHS	4/16/18

DRAWING NAME: EROSION & SEDIMENTATION CONTROL NOTES
PROJECT NAME: STROUDWATER PRESERVE
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

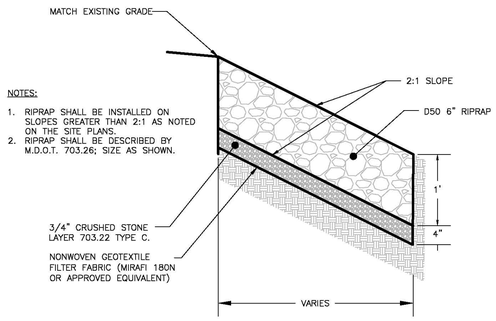
ACORN ENGINEERING, INC.

ACORN ENGINEERING, INC.
158 DANFORTH ST PORTLAND, MAINE 04102
(207) 775–2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	NTS
DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — No. 11419 — 4-16-18 — PROFESSIONAL ENGINEER

DRAWING NO.
C-50

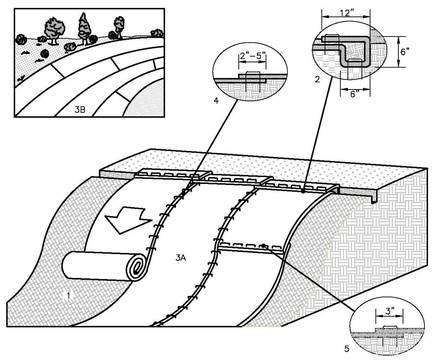


NOTES:

1. RIPRAP SHALL BE INSTALLED ON SLOPES GREATER THAN 2:1 AS NOTED ON THE SITE PLANS.
2. RIPRAP SHALL BE DESCRIBED BY M.D.O.T. 703.26; SIZE AS SHOWN.

RIPRAP CROSS-SECTION

NOT TO SCALE



SLOPE
INSTALLATION DETAIL

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (ECB), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE ECB IN A 6" DEEP X 6" WIDE TRENCH WITH APPROXIMATELY 12" OF ECB EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE ECB WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO THE COMPACTED SOIL AND FOLD THE REMAINING 12" PORTION OF ECB BACK OVER THE SEED AND COMPACTED SOIL. SECURE ECB OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" APART ACROSS THE WIDTH OF THE ECB.
3. ROLL THE ECB (A) DOWN OR (B) HORIZONTALLY ACROSS THE SLOPE. ECB WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL ECB MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE.
4. THE EDGES OF PARALLEL ECB MUST BE STAPLED WITH APPROXIMATELY 2" – 5" OVERLAP DEPENDING ON THE ECB TYPE.
5. CONSECUTIVE ECB SPLICED DOWN THE SLOPE MUST BE END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART ACROSS ENTIRE ECB WIDTH.

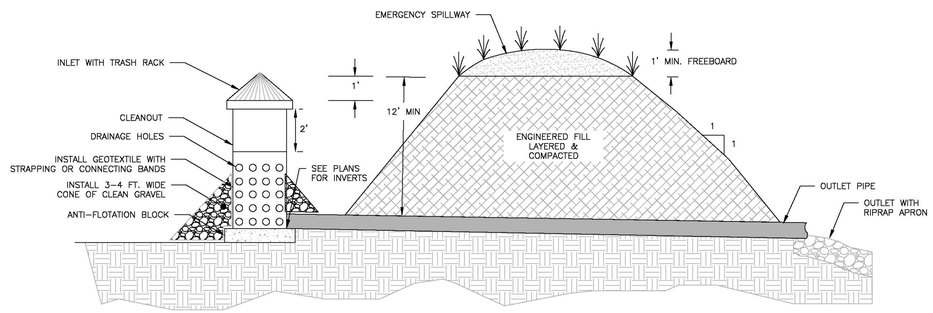
*NOTE:
IN LOOSE SOIL CONDITIONS, THE USE OF STAPLE OR STAKE LENGTHS GREATER THAN 6" MAY BE NECESSARY TO PROPERLY SECURE THE ECB.

EROSION CONTROL BLANKET SLOPE INSTALLATION

NOT TO SCALE

NOTES:

1. EMBANKMENT FOUNDATION AREA SHALL BE CLEARED OF STUMPS, ROOTS, BRUSH, ETC. TO PROVIDE GOOD CONTACT.
2. BASINS ARE TO BE CONSTRUCTED BEFORE THE GROUND IS FROZEN.
3. ALL NATIVE SOIL IS TO BE SCARIFIED BEFORE THE FIRST LAYER OF FILL.
4. ALL EMBANKMENTS NOT SUPPORTED BY RIPRAP SHALL BE COVERED WITH EROSION CONTROL MIX IN ACCORDANCE WITH THE EROSION AND SEDIMENTATION CONTROL PLAN.

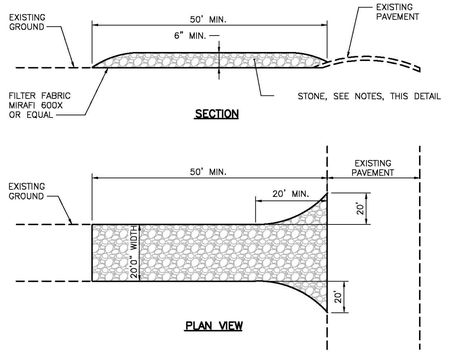


TEMPORARY SEDIMENTATION BASIN CROSS-SECTION

NOT TO SCALE

NOTES:

1. CONTRACTOR SHALL ADD STONE TO ENTRANCE AS MUD/SILT MATERIAL ACCUMULATES
2. STONE SHALL BE 2"–3" COARSE AGGREGATE
3. CONSTRUCTION ENTRANCE SHALL BE GRADED TO NOT ALLOW ANY STORMWATER TO BE CONVEYED OFF SITE. IN SITUATIONS WHERE THIS IS NOT POSSIBLE, ANY STORMWATER CONVEYED OFFSITE SHALL BE TREATED OR RETAINED IN A MANNER APPROVED BY ENGINEER.
4. WHEN NECESSARY, ON–SITE VEHICLES SHALL HAVE THEIR WHEELS CLEANED PRIOR TO LEAVING SITE.
5. CONSTRUCTION ENTRANCE SHALL BE GRADED IN A MANNER THAT PREVENTS TRACKING OF SEDIMENTS ONTO PUBLIC RIGHT–OF–WAY

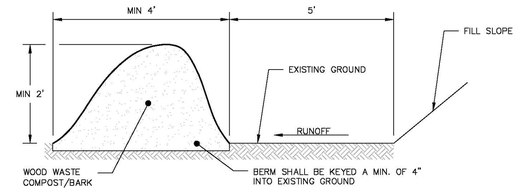


STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE

NOTES:

1. THE EROSION CONTROL MIX SHALL CONFORM TO THE FOLLOWING STANDARDS AND IN ACCORDANCE WITH THE MAINE DOT CHAPTER 700, SECTION 717.04(D):
   - 1.1. pH BETWEEN 5.0 – 8.0
   - 1.2. PARTICLE SIZE (BY WEIGHT):
     - 1.2.1. 100% PASSING A 150 MM (6 IN) SCREEN
     - 1.2.2. 75 TO 85% PASSING A 19 MM (0.75 IN) SCREEN
   - 1.3. SOLUBLE SALTS CONTENT < 4.0 MMHOS/CM
   - 1.4. ORGANIC MATTER 20 TO 100% , DRY WEIGHT BASIS
2. THE BERM SHOULD BE PLACED, UNCOMPACTED, ALONG A RELATIVELY LEVEL CONTOUR, WHEN NECESSARY THE BERM MAY BE PLACED PERPENDICULAR TO THE SLOPE ALONG THE PROPERTY LINE TO CONTAIN THE SEDIMENT PROVIDED A BERM IS LOCATED AT THE BASE OF THE SLOPE.
3. BERMS SHALL REMAIN IN PLACE UNTIL UPSTREAM AREA IS STABILIZED OR 90% CATCH OF VEGETATION IS ATTAINED. BERMS SHALL BE REMOVED OFFSITE OR BY SPREADING SUCH THAT NATIVE EARTH CAN BE SEEN BELOW.

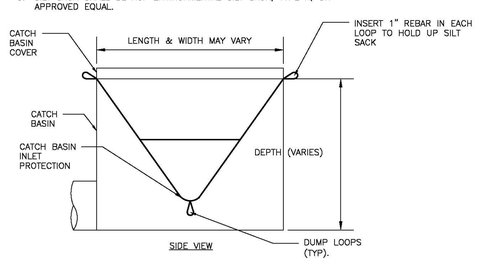


EROSION CONTROL MIX BERM DETAIL

NOT TO SCALE

NOTES:

1. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED DOWNGRADIENT OF PROPOSED PROJECT AND ROUTINELY MAINTAINED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS
2. CATCH BASIN SIZE VARIES. CONTRACTOR TO ENSURE CATCH BASIN INLET PROTECTION MATCHES CATCH BASIN DIMENSIONS.
3. SILT SACK SHALL BE ACF ENVIRONMENTAL SILT SACK, TYPE A, OR APPROVED EQUAL.



CATCH BASIN INLET PROTECTION

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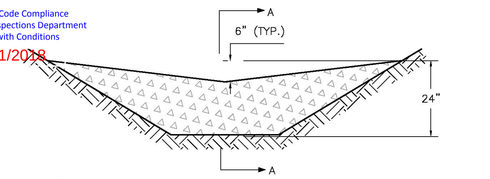
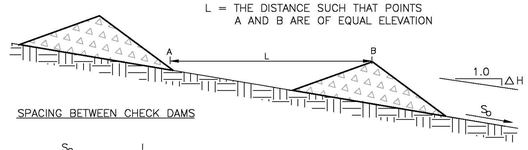
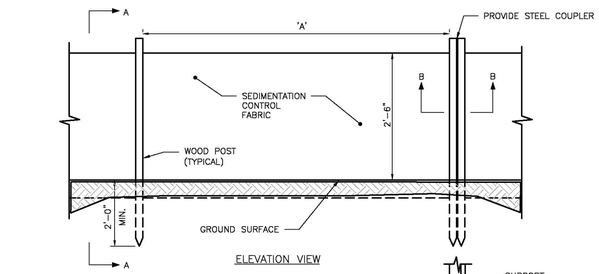




S_0 (FT./FT.)	L (FT.)
0.020	75
0.030	50
0.040	40
0.050	30
0.080	20
0.100	10

STONE CHECK DAM

NOT TO SCALE



SILT FENCE REINFORCEMENT	MAX. SPACING "A"
NONE	6'
WIRE REINFORCEMENT 14 GAUGE, 6" MESH	10'

SILTATION FENCE DETAIL

NOT TO SCALE

ISSUED FOR CONSTRUCTION

ISSUED FOR	BY DATE
PRELIM. APP.	WHS 9/22/17
FINAL APP.	WHS 10/25/17
DPW REVIEW	WHS 11/2/17
CITY COMMENTS	WHS 11/21/17
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: **EROSION & SEDIMENTATION CONTROL DETAILS**

PROJECT NAME: **STROUDWATER PRESERVE**

CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

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FILE:	1079_CIVIL
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DESIGNED BY:	WHS
DRAWN BY:	SJL
CHECKED BY:	WHS

STATE OF MAINE — WILLIAM H. SAVAGE — NO. 11430 — REGISTERED PROFESSIONAL ENGINEER — 4-16-18

DRAWING NO.
C-51

STROUDWATER PRESERVE - PRUD UNITS

PORTLAND, MAINE

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

11/02/17

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Not for Construction

1 CONCEPT RENDERINGS
N.T.S.

RYAN SENATORE **ARCHITECTURE**

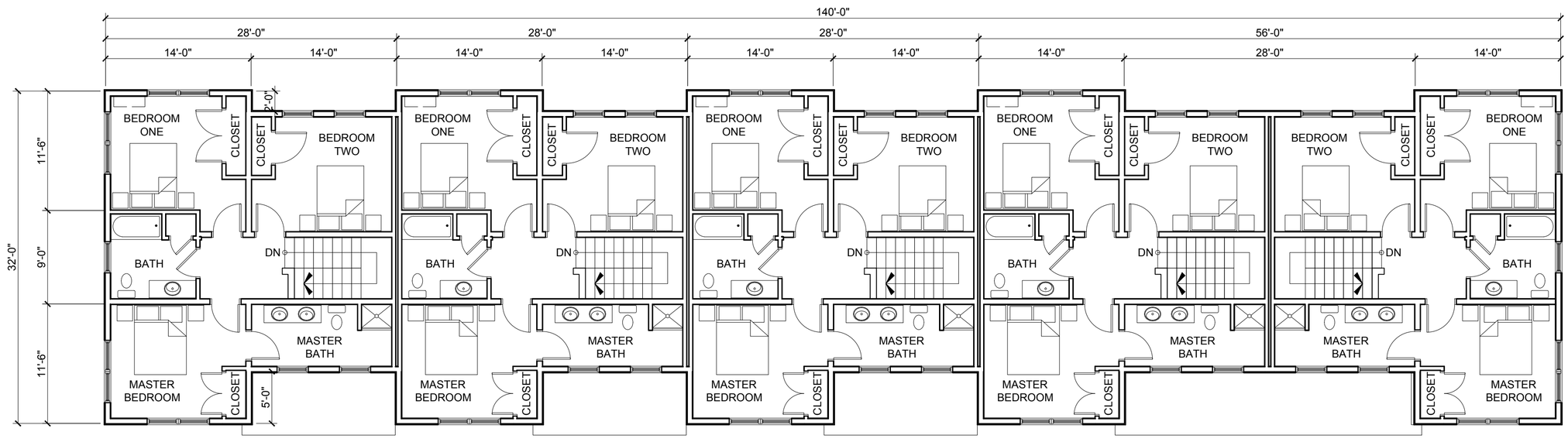
STROUDWATER PRESERVE - PRUD UNITS

PORTLAND, MAINE

11/02/17

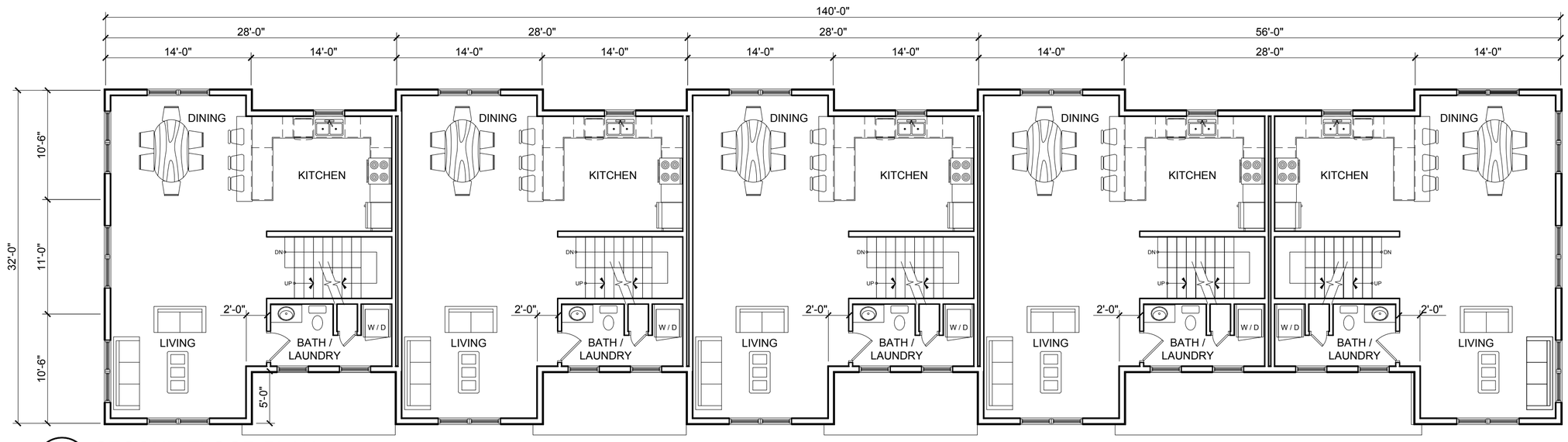
PROGRESS PRINT ONLY
Not for Construction

BUILDINGS 1 & 5



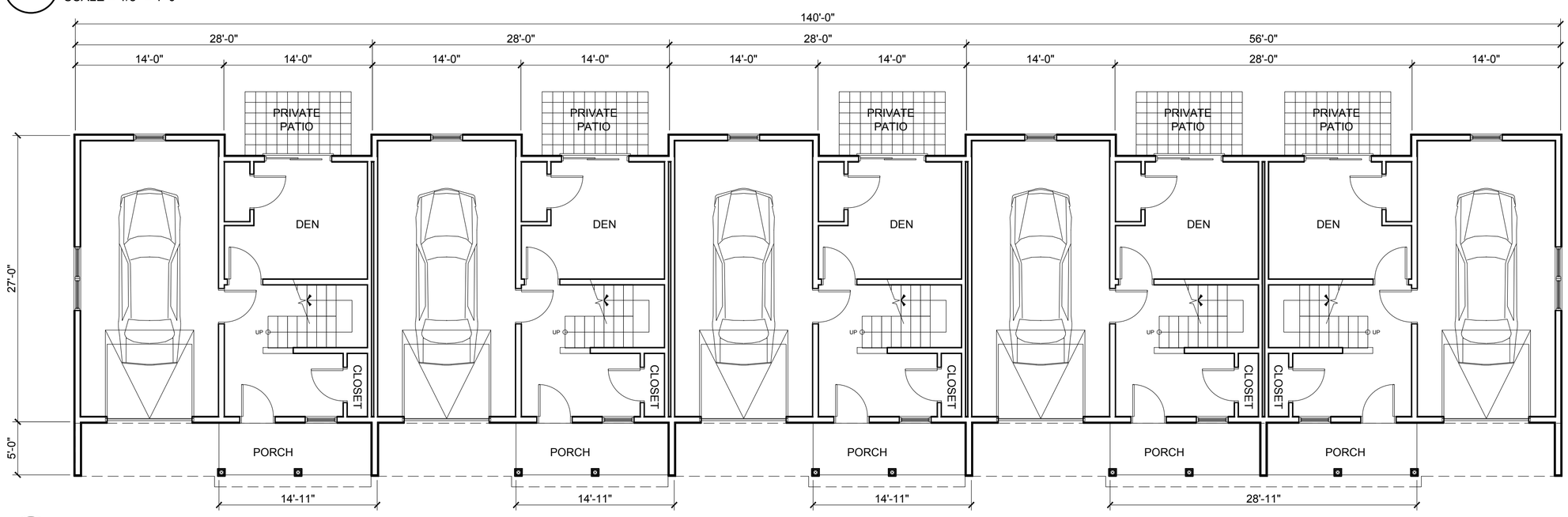
4 THIRD FLOOR PLAN

SCALE = 1/8" = 1'-0"



3 SECOND FLOOR PLAN

SCALE = 1/8" = 1'-0"



2 FIRST FLOOR PLAN

SCALE = 1/8" = 1'-0"

1 ELEVATION

SCALE = 1/8" = 1'-0"

RYAN SENATORE **ARCHITECTURE**

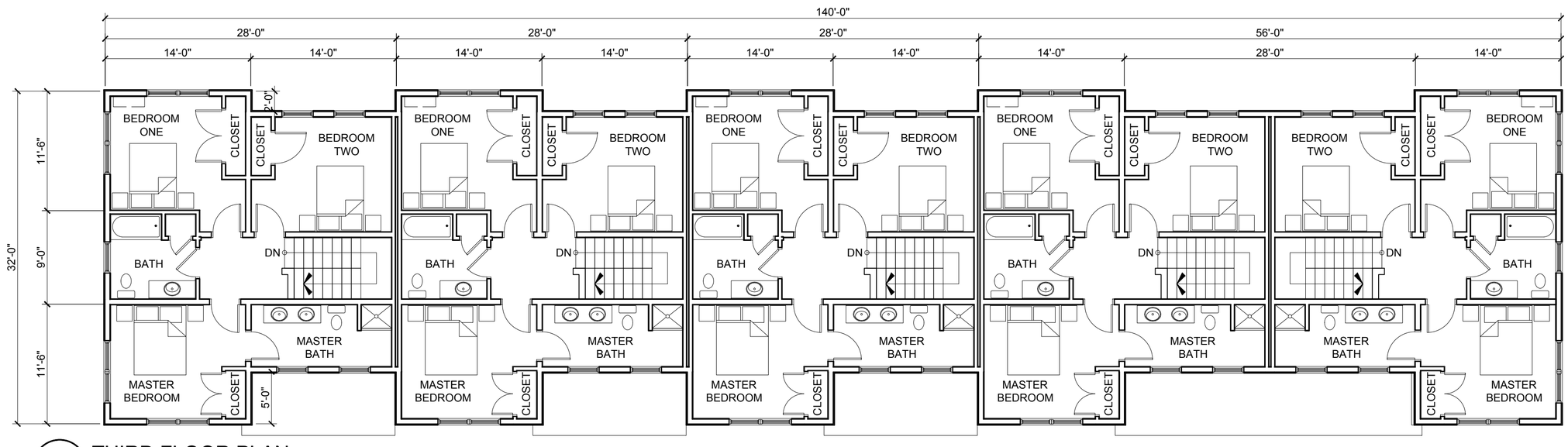
STROUDWATER PRESERVE - PRUD UNITS

PORTLAND, MAINE

11/02/17

PROGRESS PRINT ONLY
Not for Construction

BUILDINGS 2, 3, & 4



4 THIRD FLOOR PLAN

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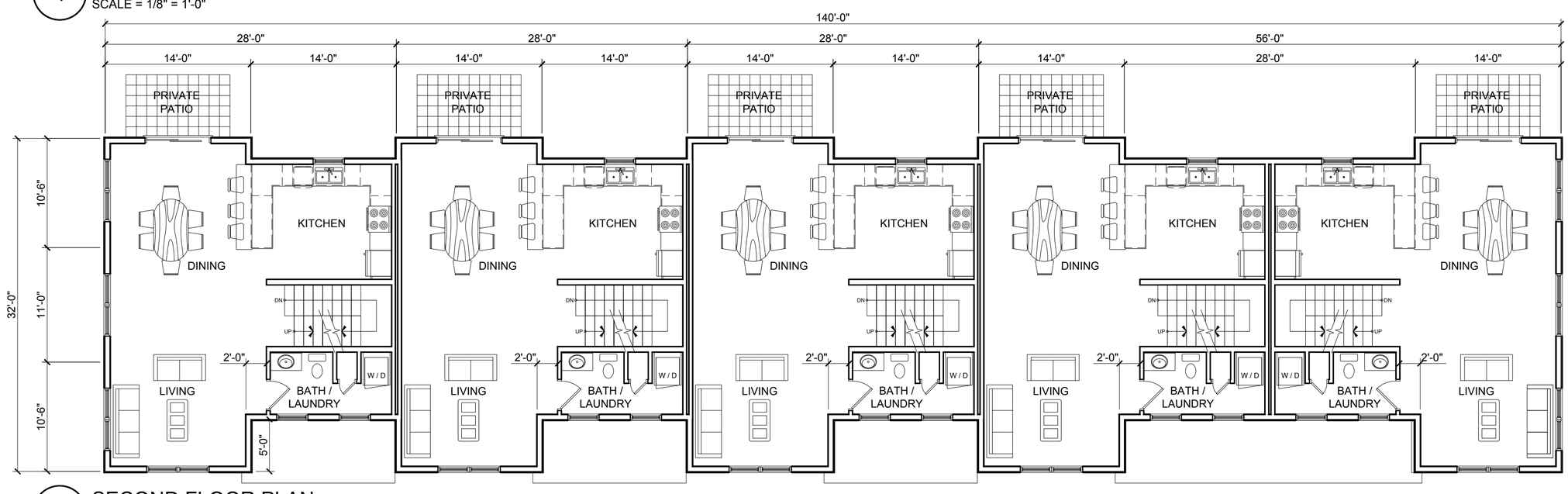
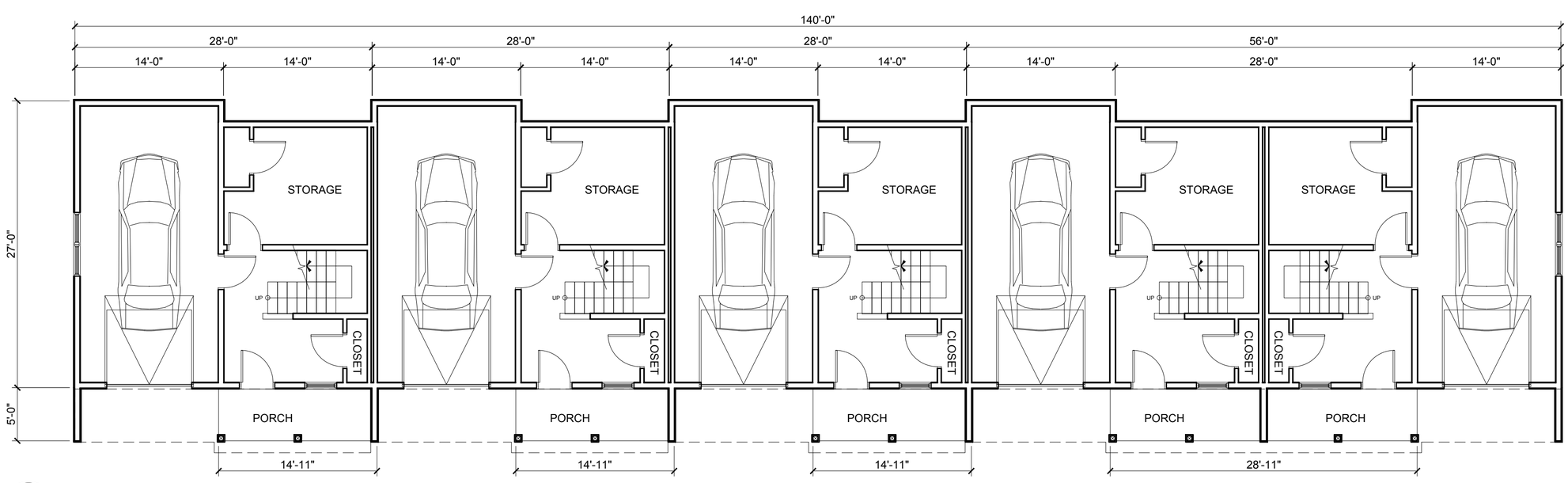


3 SECOND FLOOR PLAN

SCALE = 1/8" = 1'-0"



2 FIRST FLOOR PLAN

SCALE = 1/8" = 1'-0"

1 ELEVATION

SCALE = 1/8" = 1'-0"

RYAN SENATORE **ARCHITECTURE**

STROUDWATER PRESERVE - STORMWATER BMP SIZING CALCULATIONS
1700 Westbrook Street, Portland, ME 04102

	Subcatchment	Stormwater BMP I.D.	Watershed Size (SF)	Trib. Impervious Area (SF)	Trib. Impervious Area (AC)	Trib. Landscaped Area (SF)	Trib. Landscaped Area (AC)	Stormwater BMP Filter Surface Area Sizing: BMP Dimensions A (FT)	BMP Dimensions B (FT)	Treatment Area Required (SF)	Treatment Area Provided (SF)	Stormwater BMP Water Quality Volume (CPV) Calculations [4]: Treatment Volume Required (CF)	Treatment Volume Provided (CF)
PHASE III	3.2	FP-1 [1]	20,329	6,975	0.16	13,354	0.31	3.00	16.40	-- [5]	49.20	-	-
	3.3	FP-2	13,410	5,127	0.12	8,283	0.19	3.00	11.30	-	33.90	-	-
	3.4	FP-3	21,170	6,055	0.14	15,115	0.35	3.00	16.90	-	50.70	-	-
	3.5	FP-4	58,624	10,046	0.23	48,578	1.12	5.00	22.90	-	114.50	-	-
	3.6 & 3.9	FP-5	40,967	16,524	0.38	24,443	0.56	3.00	33.00	-	99.00	-	-
	3.7 & 3.8	FP-6	91,405	20,740	0.48	70,665	1.62	4.00	50.40	-	201.60	-	-
	3.10	FP-7	12,721	8,172	0.19	4,549	0.10	3.00	12.20	-	36.60	-	-
	3.11	FP-8	24,501	6,808	0.16	17,693	0.41	3.00	19.40	-	58.20	-	-
	3.13	FP-10	10,835	5,374	0.12	5,461	0.13	3.00	10.10	-	30.30	-	-
	3.15	FP-9	19,302	6,752	0.16	12,550	0.29	3.00	15.70	-	47.10	-	-
PHASE I	5.1	FP-11	41,011	14,820	0.34	26,191	0.60	3.00	34.30	-	102.90	-	-
	5.4	FP-13	21,480	9,875	0.23	11,605	0.27	3.00	19.40	-	58.20	-	-
	5.5	FP-14	13,445	8,339	0.19	5,106	0.12	3.00	13.80	-	41.40	-	-
	5.8	FP-15	50,222	15,392	0.35	34,830	0.80	3.00	39.00	-	117.00	-	-
	5.9	FP-16	21,581	8,315	0.19	13,266	0.30	3.00	18.10	-	54.30	-	-
	5.10 & 5.12	FP-17	111,906	21,911	0.50	89,995	2.07	4.00	59.40	-	237.60	-	-
	5.11 & 5.13	FP-18	27,633	17,841	0.41	9,792	0.22	3.00	26.90	-	80.70	-	-
	5.14	FP-19	19,221	13,243	0.30	5,978	0.14	4.00	14.30	-	57.20	-	-
	5.15	FP-20	45,228	11,811	0.27	33,417	0.77	3.00	35.00	-	105.00	-	-
	5.16	FP-12	5,127	5,127	0.12	0	0.00	3.00	6.80	-	20.40	-	-
PHASE II PRUD	6.1	VUSF-5 [2]	21,837	13,531	0.31	8,306	0.19	*0.05*	*0.02*	843	941	1855	1906
	6.2	VUSF-4	8,087	2,006	0.05	6,081	0.14	*0.05*	*0.02*	222	260	437	673
	6.3	VUSF-3	9,275	2,006	0.05	7,269	0.17	*0.05*	*0.02*	246	280	476	710
	6.4	VUSF-2	12,451	2,006	0.05	10,445	0.24	*0.05*	*0.02*	310	345	582	847
	6.5	VUSF-1	6,018	2,006	0.05	4,012	0.09	*0.05*	*0.02*	181	208	368	564
	6.6	FB-1 [3]	9,616	8,741	0.20	875	0.02	4.00	8.00	-	32.00	-	-
	6.7	FB-2	32,353	15,675	0.36	16,678	0.38	6.00	8.00	-	48.00	-	-
	6.8	FB-4	16,856	7,906	0.18	8,950	0.21	4.00	8.00	-	32.00	-	-
	6.9	FB-3	3,142	3,142	0.07	0	0.00	4.00	4.00	-	16.00	-	-
	6.10	FB-5	5,542	5,542	0.13	0	0.00	4.00	6.00	-	24.00	-	-

[1] FP: FocalPoint
[2] VUSF: Vegetated Underdrain Soil Filter
[3] FB: Filterra Boxes
[4] Applicable for Vegetated Underdrain Sand Filter (VUSF) only
[5] FocalPoint and Filterra Boxes sized to match required treatment area, per manufacturer

GENERAL NOTES:

1. FOCALPOINT STORMWATER BMPS WERE SIZED ASSUMING AN AVERAGE OF 1500 SF OF IMPERVIOUS SURFACE PER HOUSE LOT. IMPERVIOUS SURFACE AREA INCLUDES THE SINGLE-FAMILY HOUSE FOOTPRINT AND DRIVEWAY.
2. FOCALPOINT BMP OWNERSHIP SELECTED BASED ON TRIBUTARY RUNOFF. THE HOMEOWNER'S ASSOCIATION (HOA) WILL MAINTAIN APPROXIMATELY 43% (9) OF THE STORMWATER BMPS AND THE DPW (CITY) WILL MAINTAIN APPROXIMATELY 57% (11) STORMWATER BMPS.
3. REFER TO THE STORMWATER MANAGEMENT REPORT LAST REVISED OCTOBER 2017 FOR ADDITIONAL INFORMATION.

1 — SUBCATCHMENT NUMBER

SUBCATCHMENT BOUNDARY

POI-1 — POINT OF INTEREST

STORMWATER BMP OWNERSHIP & MAINTENANCE SUMMARY	
CITY	HOA
FB-1, FP-4, FP-5, FP-7, FP-9, FB-11, FP-12, FP-13, FP-15, FP-18, FP-19	FP-2, FP-3, FP-6, FP-8, FP-10, FP-14, FP-16, FP-17, FP-20

Reviewed for Code Compliance
Permitting and Inspections Department
Approved with Conditions
05/01/2018

ISSUED FOR	BY DATE
ACF REVIEW	WHS 01/22/18
SW REVIEW	WHS 3/19/18
CONSTRUCTION	WHS 4/16/18

DRAWING NAME: **STORMWATER MAP**
PROJECT NAME: **STROUDWATER PRESERVE**
CLIENT: STROUDWATER DEVELOPMENT PARTNERS, LLC
KENNEBUNK, MAINE 04043

ACORN ENGINEERING, INC.
158 DANFORTH STREET PORTLAND, MAINE 04102
(207) 775-2655

FILE:	1079_CIVIL
JN:	1079
SCALE:	1"=100'
DESIGNED BY:	WHS
DRAWN BY:	ADG
CHECKED BY:	WHS

STATE OF MAINE — RICHARD SAVAGE — No. 11419 — 4-16-18 — PROFESSIONAL ENGINEER

DRAWING NO.
SW

30. Construction Management Plan

Project Address:

1700 Westbrook Street, Portland, Maine

Project Description:

The proposed project is the development of a conservation subdivision. 95 single-family house lots, two (2) two-family house lots, and a planned residential unit development (PRUD) with 25 dwelling units will be constructed with associated access roads and landscaping; the two (2) proposed open space lots are to include recreation trails built in conjunction with the Portland Trails. Stormwater management will be handled by a combination of high performance filter, tree box, and detention pond BMPs as seen on the Grading & Drainage Plans, Sheets C-31 to C-33. Utilities will be installed per the Road Profiles (4), Sheets C-20 to C-23 including a sewer force main, underground electric and communication conduits, water supply lines, and natural gas. Portions of the existing wetlands are proposed to be filled in to facilitate the development per the associated NRPA permit. Owner/GC to review all reports and permits. Subcontractors to review all pertinent reports and permits prior to bidding or construction.

The project is proposed to be completed in three phases. The first phase is to include the development of the single-family development of the easterly section of the subdivision. The second phase will include the single-family development of the westerly section of the subdivision excluding the PRUD. The third and final phase will include the development of the PRUD.

Project Team Summary:

Owner:	Stroudwater Development Partners, LLC
General Contractor (GC):	Stroudwater Development Partners, LLC
Subcontractors:	TBD
Civil/Site Engineer:	Acorn Engineering, Inc.

The Owner/GC and all subcontractors will work with the City of Portland and adjacent landowners to minimize any project impacts.

The Owner/GC will remain responsible for enforcement of and compliance with 1) all contract plans and specifications in their scope of work and 2) all site working conditions and safety requirements, day and night, for both persons and property, in each case for the duration of their work. These include all OSHA, NIOSH, U.S. EPA, local ordinance and any other applicable governmental regulations. Both the Owner/GC and any subcontractors will remain responsible for safeguarding the general public.

The Owner/GC shall review all permits and conditions associated with the project. Refer to the Civil/Site Plan Set, Sheet C-03 Construction Management & Erosion Control Plan for visual representation of the measures be taken during construction.

The following outline has been developed in accordance with the City of Portland Construction Management Plan General Template and shall be referenced by the Owner/GC during construction.

A. Construction Management Principles

The control of noise, vibrations, ground movement, truck traffic, and other construction related factors will be of utmost importance. Care shall be taken to minimize these effects in the best interest of neighbors and the general public. Owner/GC to ensure that work hours conform to the City of Portland's Ordinance.

B. Development Review of Construction Management Plan

Logistics and safety program shall be submitted at or prior to the preconstruction meeting with Phil DiPierro by the Owner/GC with all pertinent information required by the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

C. Performance Guarantees, Inspection Fees, Preconstruction Meeting, and Permits

Guarantees and fees will be paid at the time of the respective application. Sections 14-530 and 13-532 will be complied with and all necessary permits will be obtained prior to work.

1. Street Opening and Street Occupancy Permits:

Required permits regarding street opening and occupancy will be obtained from the Department of Public Works. The requests shall conform to the approved Construction Management Plan.

2. Blasting:

Although not anticipated, if blasting occurs, it shall conform to Article VIII. In Chapter 14 of the City Code and Section 3.7 in the City's Technical Manual.

3. Building Code:

Employ the best practices, as applicable, of Chapter 33 Safeguards During Construction, from the 2009 International Building Code.

D. Construction Administration and Communication

The Contractor will work closely with adjacent abutters, businesses, and all parties informed, as far in advance as possible, of scheduled work, particularly work anticipated to cause significant noise, vibrations, or dust. Communication in order to comply with all agreements, ordinances, and special permits will be of the utmost importance. Contractor contact information shall be posted on a sign on the construction fence along the Westbrook Street frontage. Additional signage necessary for communication shall be provided but will be temporary and removed upon completion of the project. The contact information for the project personnel (Owner/GC) is:

Mike Barton, LEED AP
Stroudwater Development Partners, LLC
(207) 939-5432

Subcontractor information will be posted along the Westbrook Street frontage once contracted.

E. Construction Schedule

The Owner/GC shall submit a construction timeline at or prior to the preconstruction meeting with Phil DiPierro, City of Portland's Development Review Coordinator/Site Inspector. Construction may occur during the daytime hours as defined in Section 17-18. Construction Activities for Building permit and City Code Section 25-129. Noise, dust and debris. Between September 1 and May 31, the following year, construction activities generating noise exceeding 50 decibels between the hours of 7 pm and 7 am of the following day within 500 feet of any buildings. From June 1 to August 31 construction activity may continue until 8 pm. No construction activity shall begin before 8 am on a Saturday, Sunday, or legal holiday. Extended hours or night work may be requested for special circumstances and street utility work due to the high traffic volume on Westbrook Street during the day. These requests will be subject to approval by the Public Works Authority.

The 55.3-acre site will be able to accommodate storing of construction items as well as space for delivery vehicles. Deliveries will be scheduled between the hours of 7 am to 5 pm.

The estimated timeframe of the proposed project is outlined below:

Projected Phase I Start Date:	Spring 2018
Projected Phase II Start Date:	Spring 2019
Projected Phase III Start Date:	Summer 2020
Projected Completion:	Spring 2022

F. Security

1. The Construction Management & Erosion Control Plan, Sheet C-03, depicts all proposed fencing, other barriers, and access gates (with knox locking devices) with the intent of separating pedestrian and vehicle circulation from the construction site. Construction entrances per detail shall be installed.
2. Structures undergoing construction, alteration, or demolition operations, including those in underground locations, shall comply with NFPA 1 Chapter 16. *Safeguarding Construction, Alteration, and Demolition Operations.*
3. Fire Safety Program: Prior to construction, an overall construction and demolition fire safety program shall be developed. Essential items to be emphasized include the following:
    - Good Housekeeping
    - On-site security
    - Installation of new fire protection systems as construction progresses
    - Preservation of existing systems during demolition
    - Organization and training of an on-site fire brigade
    - Development of a pre-fire plan with the local fire department
    - Rapid communication
    - Consideration of special hazards resulting from previous occupancies
    - Protection of existing structures and equipment from exposure fires resulting from construction, alteration, and demolition operations
4. Blasting, if required, shall conform with all measures of Article VIII. Regulation of Explosives in the Land Use Code and Section 3.7 Standards for Blasting and Regulation of Explosives in Portland's Technical Manual.

5. Temporary security lighting shall be shown on the Construction Management and Erosion Control Plan and all fixtures shall be full cutoffs.

G. Construction Permitting and Traffic Control Plans

1. Construction Activity in Public Streets

Construction activity in the public right-of-way shall be compliant with Chapter 25 Article VII of the City Code. At no time will it be permissible for construction activity including delivery vehicles to close or block streets or affect public safety access without prior notice and approval of the Department of Public Works.

2. Sewer and Stormwater

Sewer and stormwater system connections are controlled by Chapters 24 and 32 of the City Code of Ordinance. Required permits for new connections and/or abandonment of existing connections are available through the Street Opening Clerk at the Department of Public Works. Rules and Regulations for these utility systems are available through the City Engineer's office of the Department of Public Works and in Section II of the Technical Manual. This will apply to the new connections within Westbrook Street.

3. Traffic Control Plans

Construction activity that impacts the existing public street system must be controlled to protect the safety of the construction workers and all modes of the traveling public. The contractor shall submit a satisfactory "Maintenance of Traffic" (MOT) plan prior to any street opening permit approval. This document shall contain all pertinent information from the Maine Department of Transportation's Traffic Control Plan Standard Specification 652.3.3.

The MOT will address the work required for utility connections in Westbrook Street. Traffic will be channelized utilizing drums and cones. Proper signage will be installed prior to and through the work zone. Alternating traffic will be controlled with flaggers. Trenches will be patched with pavement daily.

The MOT plan shall provide for the safe passage of the public through or along the construction work zone. It may be permissible to close Westbrook Street during utility connections and/or detour a mode of traffic when necessary for safety. All requests shall be subject to City approval. MOT plans shall employ the appropriate techniques and devices as called for in the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). In addition:

- Construction speed signing may be used as needed to slow traffic.
- Traffic Control signs shall not be placed where they would create any obstructions to bicycles or pedestrians.
- Flaggers will be utilized when necessary.

All existing modes of travel in the work zone area shall be accommodated if impacted by the activity. The safe passage of pedestrians, bicyclists, transit providers, and motorists are of equal importance when planning and laying out the work zone; no pre-existing travel mode may be eliminated without the express approval of the Department of Public Works. The MOT should also address on-street parking impacts, including deliveries and parking for adjoining businesses and property owners, analysis of roadway capacity or diversion capacity if street closure or change to roadway capacity is required, and coordination with other on-going or future construction or utility projects in the vicinity.

- Traffic control, bicycle, and pedestrian facilities or routes through work zones shall be maintained until the bicycle and pedestrian facilities or routes are ready for safe operation. Traffic control will not be removed to allow vehicle travel at the expense of bicycle and pedestrians.
- Barrier systems utilized to separate the construction activity from the public street and/or sidewalk shall not inhibit sight distances, particularly for visibility of pedestrians and bicyclists.
- ADA compliance in all capacities shall be maintained.

Use of public parking spaces or the blockage of any portion of sidewalk for the purpose of construction activity shall require an occupancy permit and appropriate fee as assessed by the Department of Public Works.

H. Site Management and Controls

1. Regular trash and debris shall be managed appropriately and its removal shall comply with all local, state, and federal regulations.
2. Street cleaning and sweeping shall be followed as outlined in the erosion and sedimentation control notes and report. Damage to the street shall be avoided and shall be the responsibility of the contractor.
3. Dust shall be controlled and shall comply with Section 25-129 and the erosion and sedimentation control notes, plan, and details.
4. Noise shall be controlled and shall comply with Section 17-18 and Section 25-129.
5. Rodent control shall be provided, if applicable, by a professional exterminator and shall be consistent with Chapter 22 of the City Code.
6. Snow and Ice Removal shall be provided. Pursuant to Section 25-173, the Contractor shall ensure a safe means of travel within the work zone by the following steps:
    a. Snow/ice removal shall commence automatically from 1" or greater of snow or ice.
    b. Remove snow as needed within the work zone, including parking spaces. Driveways and site lines shall not be blocked by piles of snow.
    c. Clear all walks and ramps within the work zone.
    d. Sand or salt as needed.
    e. Clear all basin or drainage to help snow melt.
    f. The above steps shall be carried out Sunday–Saturday including holidays.

I. Erosion & Sedimentation Control

1. The Contractor shall install all erosion and sedimentation controls as depicted on the approved Construction Management & Erosion Control Plan, C-03, and the approved erosion and sedimentation control report prior to the pre-construction meeting for inspection by the City. The Contractor shall regularly inspect the control measures no less than weekly and after storm events (0.5" or more in 24 hours). Additionally, temporary and permanent stormwater management systems shall be inspected and maintained to ensure working order. The Contractor shall document all inspection activities and corrective actions and be prepared to provide these documents for inspections by the City, Maine Department of Environmental Protection (MDEP) or the U.S. Environmental Protection Agency (EPA) upon request.

2. The permanent detention ponds per Sheet C-30 will function as temporary sedimentation basins during construction. Refer to the details as well as the Maine DEP Erosion and Sedimentation Control Field Guide for Contractors for more information.

3. Special attention shall be paid to the protection of the Stroudwater River and the wetlands on site. Two sediment barriers are proposed along the development limit and/or the undeveloped wetlands per Sheet C-03: a silt fence as well as an erosion control mix berm, both per detail, shall be installed to prevent sediment transport. At all other down-gradient limits of development, erosion control mix berm shall be installed as depicted on C-03.

4. Flagging of the wetlands to be undisturbed shall take place prior to construction and shall not be removed until all construction is complete.

5. The Contractor shall maintain all tree and landscaping preservation measures as depicted on the landscaping and construction management plans – Sheets L-1 and C-03, respectively.

6. Stored materials shall be identified and avoid being located under/near trees.

J. Construction Staging Area

1. The Contractor shall submit a plan with locations depicted for the location of material staging areas, the location of on-site temporary construction trailers, the location of on-site truck delivery holding areas, the location of on-site truck washing stations, masonry mixing stations, the general location of the construction security fence and the general location of temporary construction dumpsters. This plan shall be submitted at or prior to the preconstruction meeting with Phil DiPierro. Any open storage areas shall be shown on the plan.

2. Delivery Truck Holding Areas On-Site: Holding areas, if necessary, will have ample area to stand-by until needed. The majority of materials delivered to the site will be scheduled such that they are able to be off-loaded immediately. On days when the construction activities require multiple truck deliveries, these deliveries will be carefully scheduled so that there is always adequate on-site area for the holding of trucks until they can be unloaded. Once at the site all vehicles will be brought within the fence line and will make every attempt to avoid queuing on public streets. If, for any reason, on-site holding of the trucks is not feasible, an

off-site location must be designated and shown on the submitted plan referenced above in J.1.

3. All deliveries for materials shall comply with the City's noise requirements.

K. Parking During Construction

1. Adequate parking for construction workers shall be provided on the site or arrangements for off-street parking at an off-site location shall be provided. The parking arrangements are included on C-03. On-site parking for the contractor and subcontractors will occur within the vicinity of the current phase. Parking on either Westbrook Street or Old Westbrook Street will not be allowed.

2. Truck Routes and Volumes: The following quantities are estimated as part of all three phases:

    - Common Fill – TBD upon final surface analysis. Earthwork subcontractor(s) pit to project site.
    - Gravel & Stone – Approx. 8,250 CY. Earthwork subcontractor(s) pit to project site.
    - Hot Mix Asphalt – Approx. 3,500 Tons. Paving subcontractor(s) pit to project site.
    - Excess Site Soils (located in earthen sound berm) – TBD upon final surface analysis. Earthwork subcontractor(s) pit to project site.

The above quantities were developed excluding any pavement or structure development on the single-family lots.

L. Special Measures as Necessary

A pre-construction survey of adjacent properties interior subgrade and above grade accessible walls, ceilings, floors, and visible exterior as viewed from the grade level shall be conducted at a minimum for the abutting properties. Contractor shall coordinate and obtain permission from the owners for this survey. Photographs shall be taken at a minimum to assess any potential damage that may occur as a result of construction activities.