

September 11, 2017 15251

Zach Mosher, City Planner Economic and Community Development City of Auburn 60 Court Street Auburn, Maine 04210

# <u>City of Auburn Planning Board –Site Plan and Special Exception Application</u> <u>Central Maine Community College Proposed Athletic Fields Project</u>

Dear Mr. Mosher:

Please find attached one initial copy of site plan and supporting information for the Site Plan and Special Exception Application submitted to the City of Auburn Planning Board for the Central Maine Community College\_proposal for redevelopment of their Athletic Fields off the front internal access drive from Turner Street located within the Suburban Residential District. The following plans and materials submitted following our recent informal meeting with the Planning Staff. The site plan application will also simultaneously require a special Exception approval as well due to the finding that this is an expansion of a recreational area within the residential based zoning district. We feel the information is complete and sufficient to allow the Planning Board to schedule the College for the next available public hearing to be held on October 11, 2017.

Central Maine Community College has proposed the regrading and reorientation of their existing recreational fields consisting of natural grass turf fields, such that they may utilize the space more effectively for Softball Baseball and a NCAA regulation soccer or multi-purpose field (which will overlap the outfield areas). The revised athletic fields will include the options to provide LED field lighting, freestanding scoreboards, options for an electronic message board, a future maintenance building garage (1260SF) to host field equipment, and will include other small amenities, such as dugout, batting cage, and bleacher areas. Since the use already exists, we anticipate that it is considered accessory to the College use and will not generate additional parking or traffic impacts. However as shown on the plan there is ample commuter parking areas immediately adjacent to the location of the fields.

The College is current under a Site Development of Location Application permit (014929-22-A-N) due to their building and parking lot expansions through the years. The proposed field project will create less than 0.05 acres of new impervious surface which is an allowed expansion (up to 30,000 SF added impervious) for an educational institution under the Maine DEP regulations without need to provide revised stormwater. The majority of the field location is existing grass lawn areas, with exception of some small tree clearing for the baseball backstop atop the hill, in the rear of the site. We are adding some collection yard inlets, along the edges of the field closest to the exiting parking lot, and will provide some under drains for the infields on both baseball and softball fields.

Overall, we will be levelling the grass areas, and creating a steeper slope on the northerly end of the site. This will actually create a longer travel path for the runoff, and not alter the surface condition such it will not warrant a full stormwater management computation as we are improving the overall surface condition to reduce slope and runoff time of concentration. If necessary we can assess the surface conditions to the City Engineer to verify the immediate disturbed surface area limits and runoff cover factor (CN) and provide a rational method of runoff generated, if necessary. Since this is not in the Lake Auburn Watershed no phosphorus computations are required.

Additionally we have provided a geotechnical investigation for soils conditions across the field. Also included is a photometrics plan for the proposed sports lighting that is to be proposed by Musco Lighting. Typically these are mounted on metal poles approximately 80-85 feet high, and will consist of LED fixtures for energy savings. We have located seven poles which will each have an array of lights around the perimeter of all the fields and will be designed such that each ballfield can be run separately. However it is likely that when an event is on the multipurpose "internal" overlapping field, all lights will be operable. Two scoreboards are proposed to be added in the future but are included on the plan, as will be a display message board for entering visitors which will be placed above the proposed retaining wall nearest the entrance drive coming into the campus. This will be situated about 700+ feet into the driveway as measured from the Turner Street entrance. We understand that the sign itself will require a separate permit for installation, but is shown on the site plan for planning purposes only.

The site will utilize existing private utility services for electrical, power, water, and cable/communications from existing campus infrastructure. Though not finalized the College may consider the use of irrigation to water and maintain their fields grass surfaces. The entire field will be enclosed in 6 foot high black vinyl coated chain-link fence for security purposes and to restrict open use of the field to assist in maintaining the playing surface for athletic uses.

We look forward to meeting with the Planning Staff a application review on September 20<sup>th</sup>, and also with the Planning Board at its next meeting scheduled for October 11<sup>th</sup>. We feel that this is a rather simple application to restore the existing active field, but understand that some of the more passive grass areas which will now be dedicated to the formal athletics, and the City will want to review this conversion of use. If questions arise regarding the Site Plan application or if additional information is needed, please feel free to contact our office.

Sincerely, SEBAGO TECHNICS, INC.

aner K mon

James R. Seymour, P.E. Sr. Project Manager JRS:jrs/Ilg Enc. cc:



September 19, 2017 15251

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Central Maine Community College has proposed the regrading and reorientation of their existing recreational fields consisting of natural grass turf fields, such that they may utilize the space more effectively for Softball Baseball and a NCAA regulation soccer or multi-purpose field (which will overlap the outfield areas). The revised athletic fields will include the options to provide LED field lighting, freestanding scoreboards, options for an electronic message board, a future maintenance building garage (1260SF) to host field equipment, and will include other small amenities, such as dugout, batting cage, and bleacher areas. Since the use already exists, we anticipate that it is considered accessory to the College use and will not generate additional parking or traffic impacts. However as shown on the plan there is ample commuter parking areas immediately adjacent to the location of the fields.

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Sincerely, SEBAGO TECHNICS, INC.

James R. Seymour, P.E. Sr. Project Manager JRS:jrs/Ilg Enc.

# **PART 1- SPECIAL EXCEPTION**

*Our application meets the conditions of the Special Exception Law Section 60-1336 as follows:* 

(1) Will your special exception application fulfill the specific requirements, of the zone the property is located in relative to such exception?

ANSWER: The special application will fulfil the specific requirements of the Suburban Residential Zone, meeting the applicable setbacks and densities in the zone. The college exists and the location of the planned development is essentially a redevelopment and minor expansion of the area.

(2) Will the special exception application neither create nor aggravate a traffic hazard, a fire hazard or any other safety hazard?

ANSWER: The proposed use as an athletic recreational area already exists at this same location. The use of the recreation athletic fields will not aggravate nor create a traffic hazard or other safety issue. The use exists, and there is ample parking and circulation access around the fields such that we do not anticipate any additional traffic, and we have provided multiple gates around the field for security and point access.

(3) Will the special exception application block or hamper the recommendations of the 2010 Comprehensive Plan regarding the pattern of highway circulation or of planned major public or semipublic land acquisition?.

ANSWER: The proposed use already exists. The new facility will be expanded to accommodate the College's need for NCAA regulation fields to fit baseball, softball, and soccer fields. There will be no substantive increase in traffic or changes to highway circulation resulting from the development, and the use will be a valuable asset to the community.

(4) Will the special exception alter the essential characteristics of the neighborhood and/or depreciate the value of property adjoining and neighboring the property under application? ANSWER: The proposed special exception will not alter the character of the neighborhoods given it remote location away from adjoining residences, and that it already exists within a college campus. We do not see this as creating deprecating value to adjoining properties, and see this as possibly a moderate improvement that may actually improve some property values by bringing athletic amenities to the area.

(5) Have reasonable provisions have been made for adequate land space, lot width, lot area, stormwater management in accordance with the requirements of a Site Plan (Section 60-1301) such as, green space, driveway layout, road access, off-street parking, landscaping, building separation, sewage disposal, water supply, fire safety, and where applicable, a plan or contract for perpetual maintenance of all the common green space and clustered off-street parking areas to ensure all such areas will be maintained in a satisfactory manner? ANSWER: As previously discussed the land under proposal for improvements is already a recreational grass surfaced area housing a smaller non regulation soccer field and baseball field. We have provided a site plan application addressing the concerns for the design under the Site Plan Review Criteria. There is a very minor impervious increase under 5000 SF and the site will be designed to be nearly level with collection of runoff to be directed into existing wetland buffers and are not in the watershed of Lake Auburn. No additional services other than water and electricity will be needed and those already exist within the campus. We will provide a landscape plan addressing some of the approach areas of the field from the Main Access drive. Maintenance will be conducted by the College as part of its routine campus maintenance of the grounds.

(6) Are the standards imposed in the special exception, at least as stringent as those elsewhere imposed by the city building code and by the provisions of this chapter? ANSWER: Due the fact that there are only a few minor structures, and the improvements are related to earthmoving activities, we are certain that the standards are equal to those required by the building code or Site Plan review, or as required by the Maine DEP for an amended Site Location of Development Permit addressing environmental concerns.

(7) Are essential city services which will be required for the project are presently available or can be made available without disrupting the city's master development plan? **ANSWER:** All the improvements, required essential services and maintenance of the proposed athletic field complex will be done by the College and will not have a burden on City Services nor disrupt their master plan development. The fields will promote extremely minimal impacts to the services and the land.

### **PART 2- SITE PLAN REVIEW**

*Our application meets the following provisions of the Site Plan Review Law- Section 60-1277 as follows:* 

(1) Does your site plan protect adjacent areas against detrimental or offensive uses on the site by provision of adequate surface water drainage, buffers against artificial and reflected light, sight, sound, dust and vibration; and preservation of light and air? ANSWER: The proposed site plan will note place any detrimental uses that will create offensive impacts to surface runoff, visual intrusiveness given the distance and natural buffers to the nearest abutters. There will be new LED pole lighting introduced for evening play. We have provided a photometric plan that indicates that with the selected pole height of near 80 feet that the light can be broadcast in a very deliberate and direct manner such there will be no spillover or direct glare that will impact anyone other than those immediately on the field or within extreme proximity of the field edges. Since the area already is used for sporting competitions and we are not altering the clearing toward Turner Street we foresee no changes in sound impacts. In addition there is a similar use of a baseball field by St Dominic's on a nearby lot. (2) Is the convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent areas adequately addressed?

ANSWER The field location for activities already exists and thereby the historic patterns for both vehicular and pedestrian access have been long established. There will be no parking allowed on the edge of the field and the approach drive, and there is ample parking in a commuter lot adjacent to the fields. As most if not all events will occur in the afternoon when parking is available in these lots, we foresee no problems with internal circulation to gain access or park near the fields.

(3) Are the proposed methods of disposal for wastes adequately addressed? ANSWER: There will be very little waste generated by the proposed fields other than grass clippings which are disposed for composting on the parcel. There will be some minor increases of solid waste possible from spectators and that will be part of the routine maintenance of the campus facility management. A small maintenance facility building will be constructed to house field equipment and vehicles like mowers, and gators.

(4) Does your site plan provide adequate protection of environment features on the site and in adjacent areas?

ANSWER: The footprint for the site improvements is very modest, as compared to the footprint of same surface cover with grass. Only a small area of trees (behind the baseball backstop) will be cleared. Most of the construction activities will include grading the site to make one level surface to house a baseball and softball field, and to place a common overlapping multipurpose field across the outfields. The site will protect newly created slopes with erosion control measures, stone riprap, and a retaining wall, to eliminate impacts to adjacent wetlands. Stormwater will not be a relevant part given that the site will eliminate many of the sloping areas and will be promoting collection through underdrain systems We foresee not measurable increase in runoff rates and due to the very limited surface type changes (mowed grass to playing grass) we foresee no impacts to the quality of the runoff.



# **Development Review Application**

City of Auburn Planning and Permitting Department

# PROJECT NAME: Central Maine Community College Athletic Fields

### PROPOSED DEVELOPMENT ADDRESS: 1250 Turner St. Auburn

299-003 PARCEL ID#:

REVIEW TYPE:

Site Plan 🙀 Site Subdivision 🗆 Sub-Planned Unit Development 🗆

Site Plan Amendment D Subdivision Amendment D Special Exception IX Form Based Code Plan I

PROJECT DESCRIPTION: CMCC proposes redevelopment of their Campus athletic fields such that existing grass recreational area located at the front of the lot can be regraded and orientated to allow for more organized sporting events by provideing separate softball and baseball fields and an overlapping multipurpose field for fall sports. The project is propsoing outdoor field lighting as well as scoreboards, fenced aeras, and general storage equipment building.

### CONTACT INFORMATION:

	Maine Community College
Name: Scott Kn	app,Ed.D-President
Address: 1250 T	urner St, Auburn, ME
Zip Code 04210	
Work #: 755-523	0
Cell #:	
Fax #:	
Home #:	
Email: sknapp@	Dcmcc.edu
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Project Represent:	ative Sebago Technics Inc
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Name: James Se	ymour PE
Name: James Se Address: 75 John I	ymour PE Roberts Rd Suite 1A
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Name:         James Se           Address:         75 John S           Zip Code So. Portla           Work #:         200-2083           Cell #:         632-1199           Fax #:         856-2206           Home #:	ymour PE Roberts Rd Suite 1A and, ME 04106

Name:       Address:         Zip Code       Work #:         Cell #:       Fax #:         Home #:       Email:         Other professional representatives for the project (surveyors, engineers, etc.),         Name:       Address:         Zip Code       Work #:         Cell #:       Fax #:         Home #:       Email:	Property Owner	Same as applicant
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# **PROJECT DATA**

The following information is required where applicable, in order complete the application

IMPERVIOUS SURFACE AREA/RATIO As shown in the highlighted area (351,760 SF)

Existing Total Impervious Area	0_sq. ft.
Proposed Total Paved Area	<u>4420</u> sq. ft.
Proposed Total Impervious Area Proposed	4420sq. ft.
Impervious Net Change	4420 sq. ft.
Impervious surface ratio existing	<u>0</u> % of lot area
Impervious surface ratio proposed	1.2% of lot area
BUILDING AREA/LOT COVERAGE	
Existing Building Footprint	0_sq. ft.
Proposed Building Footprint	<u>4420</u> sq. ft.
Proposed Building Footprint Net change	
Existing Total Building Floor Area	0_sq. ft.
Proposed Total Building Floor Area	4420sq. ft.
Proposed Building Floor Area Net Change	4420sq. ft
New Building ?	yes (yes or no)
Building Area/Lot coverage existing	0 % of lot area
Building Area/Lot coverage proposed	1.2 % of lot area
ZONING or FORM BASED CODE DISTRICT	
Existing	Suburban Residential
Proposed, if applicable	
LAND USE	
Existing	<u>_Institution/College-Recreation</u>
Proposed	-same
RESIDENTIAL, IF APPLICABLE	
Existing Number of Residential Units	
Proposed Number of Residential Units	
Subdivision Proposed Number of Lots	
PARKING SPACES	
Existing Number of Parking Spaces.	NA
Proposed Number of Parking Spaces	
Number of Handicapped Parking Spaces	
Proposed Total Parking Spaces	NA

#### 

### SITE LOCATION OF DEVELOPMENT AND STORMWATER MANAGEMENT

Existing Impervious Area	50. ft.
Proposed Disturbed Area	351,760 sq. ft.
Proposed Impervious Area	sq. ft.

- 1. If the proposed disturbance is greater than one acre, then the applicant shall apply for a Maine Construction General Permit (MCGP) with MDEP.
- 2. If the proposed impervious area is greater than one acre including any impervious area crated since 11/16/05, then the applicant shall apply for a MDEP Stormwater Management Permit, Chapter 500, with the City.
- 3. If total impervious area (including structures, pavement, etc) is greater than 3 acres since 1971 but less than 7 acres, then the applicant shall apply for a Site Location of Development Permit with the City. If more than 7 acres then the application shall be made to MDEP unless determined otherwise.
- 4. If the development is a subdivision of more than 20 acres but less than 100 acres then the applicant shall apply for a Site Location of Development Permit with the City. If more than 100 acres then the application shall be made to MDEP unless determined otherwise.

TRAFFIC ESTIMATE Total traffic estimated in t

Total traffic estimated in the peak hour-existing	NApassenger car equivalents (PCE)
(Since July 1, 1997)	

Total traffic estimated in the peak hour-proposed (Since July 1, 1997) NA passenger car equivalents (PCE) If the proposed increase in traffic exceeds 100 one-way trips in the peak hour then a traffic movement permit will be required.

<ol> <li>Property is located in the <u>Su</u></li> <li>Parcel Area: <u>124.8 Ac</u> ac</li> </ol>	burban Residential res / <u>5,436,288 SF</u>	zoning/form   square feet(sf)	oased code district.	
Regulations	Required/Allowed	Provided		
Min Lot Area	0.5Ac	/ 124.8		
Street Frontage		1		
Min Front Yard	25	1		
Min Rear Yard	25	1		
Min Side Yard		1		
Max. Building Height	35	1		
Use Designation	College/rec	1		
Parking Requirement		,	area or dwelling uni	t NA
Total Parking:	<ul> <li>Existing no char</li> </ul>	<b>∖gé</b>	,	
Overlay zoning districts_(if any):		/	/	
Urban impaired stream watershed?	YES/NO If yes, wate	ershed nameN	0	

# DEVELOPMENT REVIEW APPLICATION SUBMISSION\_

Submissions shall include fifteen (15) complete packets containing the following materials:

- 1. 5 Full size plans and 10 smaller (no larger than 11" x 17") plans containing the information found in the attached sample plan checklist.
- Application form that is completed and signed by the property owner or designated representative. (NOTE: All applications will be reviewed by staff and any incomplete application will not be accepted until all deficiencies are corrected.
- 3. Cover letter stating the nature of the project.
- 4. Narrative which explains how the project meets the intent, objectives or conditions of the required Zoning sections, such as Special Exception, Site Plan Law, Subdivision Law or the Form Based Code Ordinance.
- 5. All written submittals including evidence of right, title and interest.
- 6. Copy of the checklist completed for the proposal listing the material contained in the submitted application.
- 7. Any additional materials as required by the Form Based Code (Chapter 60-546) if applicable.
- 8. PDF files for all plans and application materials.

Refer to the application checklist for a detailed list of submittal requirements.

Additional information regarding zoning and form based code can be found on-line at: http://www.auburnmaine.gov/Pages/Government/Planning-Permitting-and-Code or, Contact the City Planner at: 207-333-6601 ext. 1156 or dgreene@auburnmaine.gov

#### **Application Certification:**

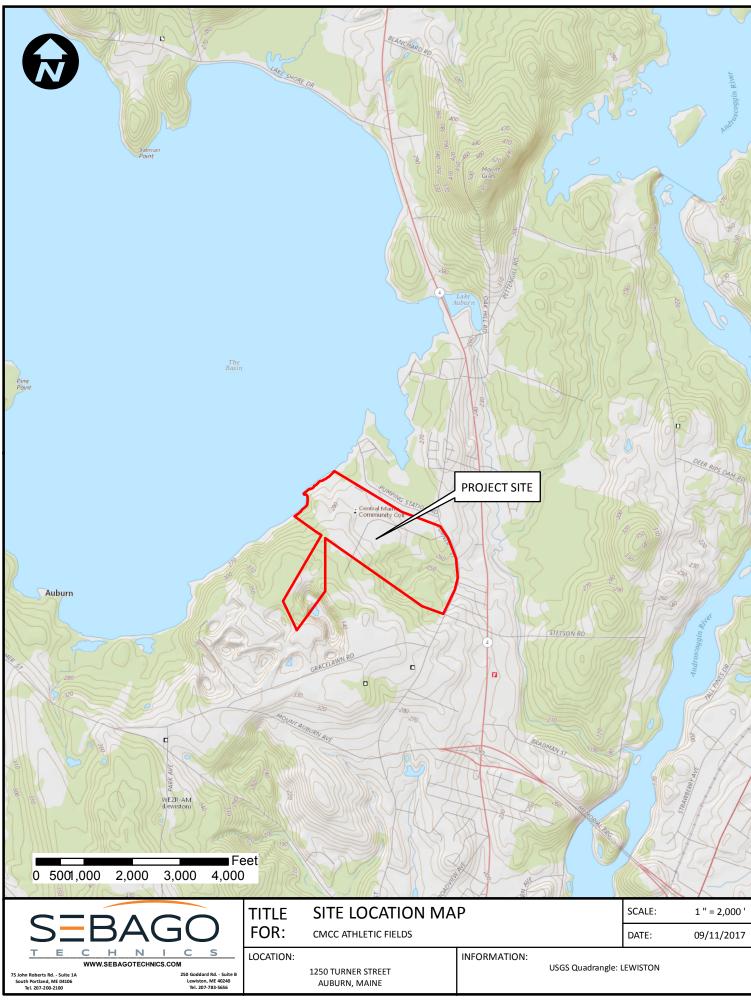
I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, I certify that the City's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

This application is for development review <u>only</u>; a Performance Guarantee, Inspection Fee, Building Permit Application and other associated fees and permits will be required prior to construction.

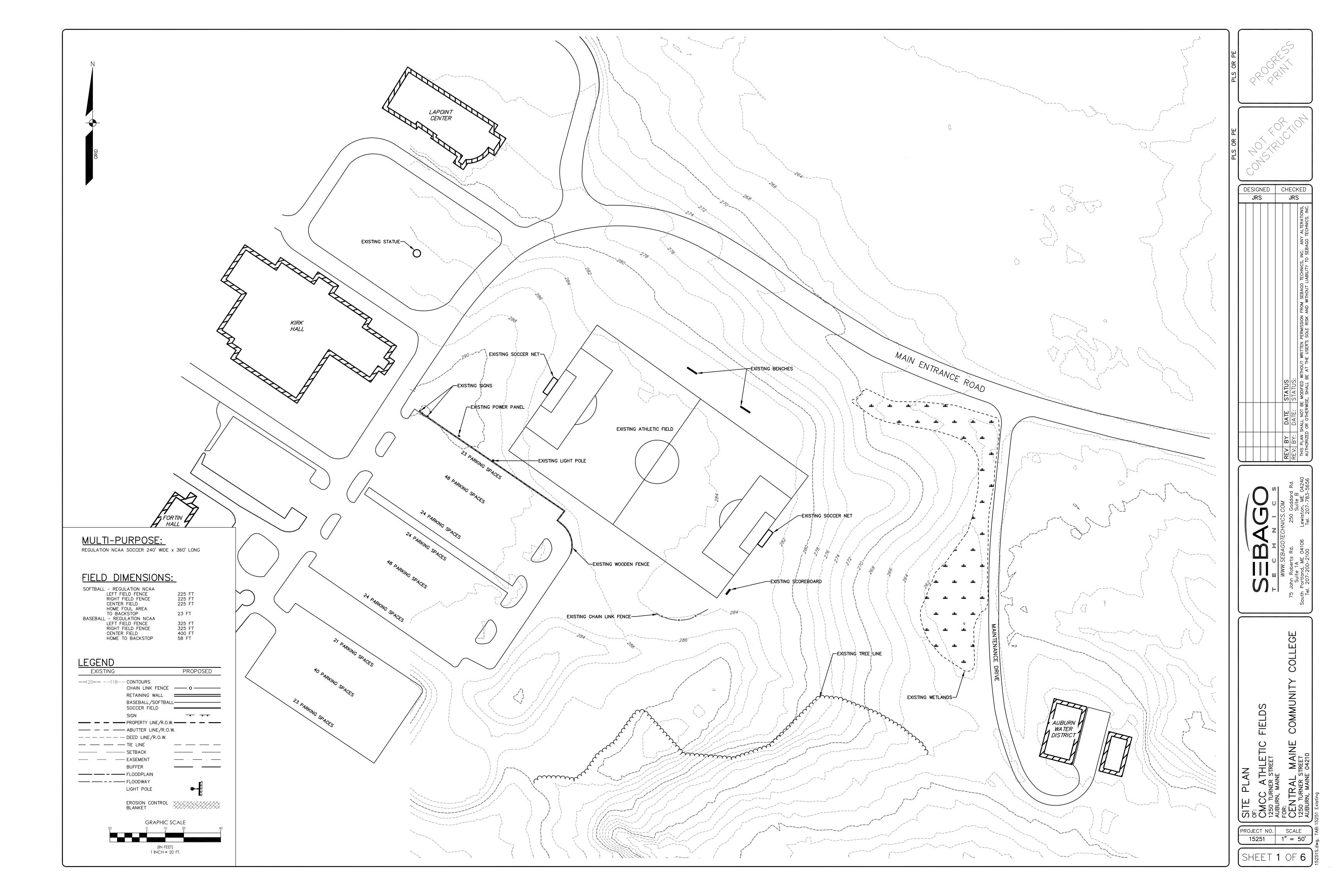
Signature of Applicant:

Date: 125072017

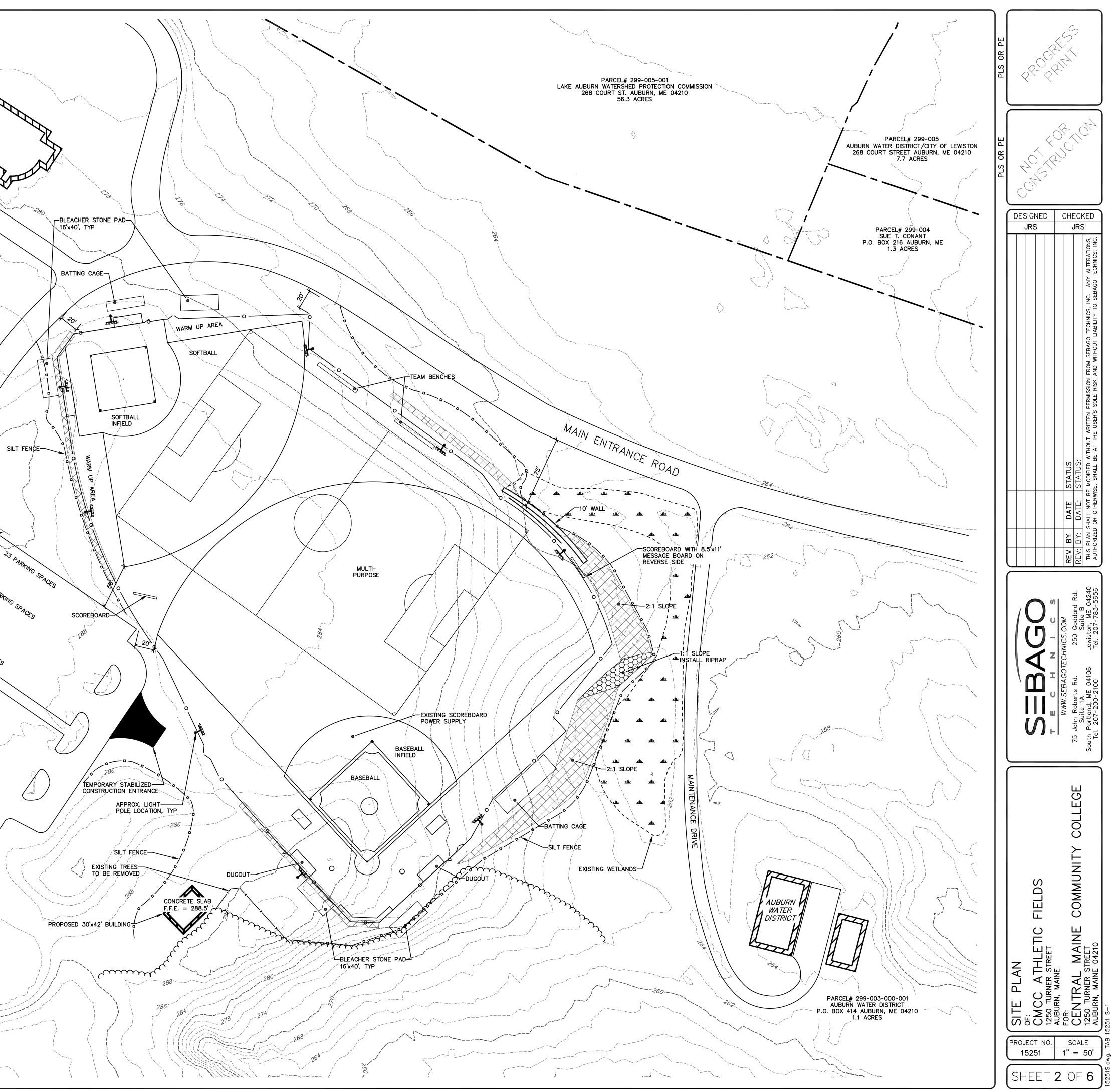
Rev. 8-3-16



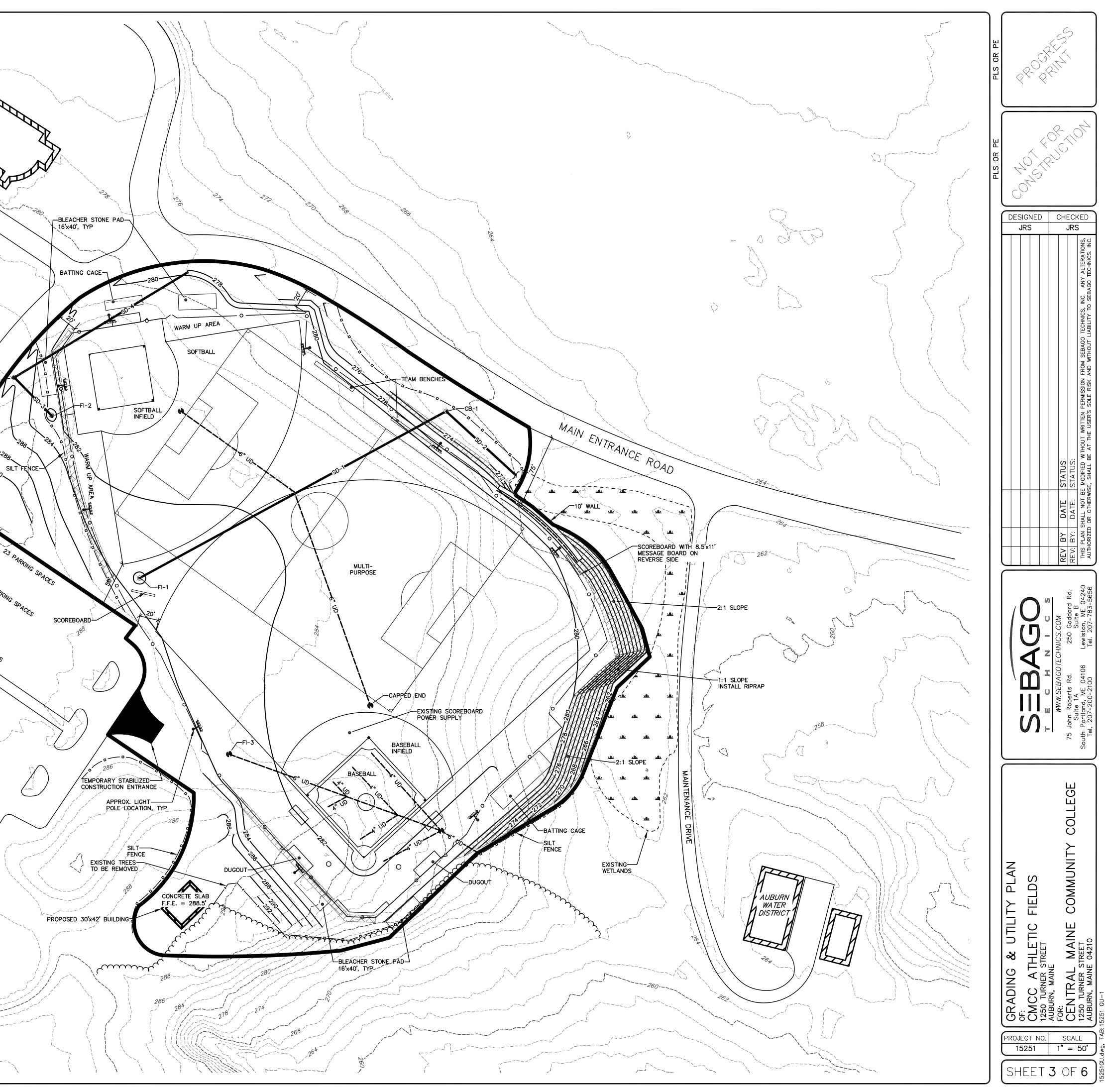
15251LocationMap\_STI 8.5x11P.mxd



	CENTRAL MAIN 3 ADAMS ST. SOL 12	EL# 299-003 E COMMUNITY COLLEGE JTH PORTLAND, ME 04106 4.8 ACRES NG STATUE
<ul> <li>CENERAL NOTES:</li> <li>THE RECORD OWNER OF THE PARCEL IS THE MAINE TECHNICAL COLLEGE SYSTEM BY DEED DATED DECEMBER 17, 2002 AND RECORDED AT THE ANDROSCOGGIN COUNTY REGISTRY OF DEEDS BOOK 5229 PAGE 40.</li> <li>THE PROPERTY SHOWN AS THE CITY OF AUBURN TAX MAP 299-003 AND IS LOCATED IN THE SUBURBAN RESIDENTIAL DISTRICT.</li> <li>TOTAL PARCEL AREA IS EQUAL TO 124.8 ACRES.</li> <li>THE PROPOSED PORTION OF THE PROJECT IS NOT LOCATED IN A DESIGNATED FLOOD ZONE, AND WETLANDS ARE IDENTIFIED BY FLOWI IMAGERY AND ON THE FIELD LOCATIONS AS COMPILED BY SEBAGO TECHNICS.</li> <li>THE PROJECT IS SUBJECT TO A MAINE DEPARTMENT OF ENVIRONMENTAL SITE LOCATION OF DEVELOPMENT PERMIT (014929-22-A-N) AND THIS WILL REQUIRE DELEGATED REVIEW FROM THE CITY OF AUBURN.</li> <li>THE PROJECT IS SERVED BY PUBLIC WATER AND SEWER. THE PROPOSED PROJECT WILL HAVE NO BURDEN ON WASTEWATER, AND WILL ONLY HAVE AN IMPACT FOR PUBLIC WATER FOR THE CITY OF AUBURN.</li> <li>THE PROPOSED FIELD PROJECT WILL REQUIRE DELEGATED REVIEW MATERING SYSTEMS.</li> <li>THE PROJECT IS SERVED BY PUBLIC WATER AND SEWER. THE PROPOSED PROJECT WILL HAVE NO BURDEN ON WASTEWATER, AND WILL ONLY HAVE AN IMPACT FOR PUBLIC WATER FOR THE CITY OF AUBURN.</li> <li>THE PROPOSED FIELD PROJECT WILL REQUIRE PRIVATE UNDERGROUND SERVICE EXTENSION OF ELECTRICAL AND COMMUNICATION SERVICES THAT EXIST FROM WITHIN THE CAMPUS.</li> </ul>	KIRK HALL ZONING OF PROPERTY: SR - SUBURBAN RESIDENTIAL	EXISTING POWER PANEL SILT SILT EXISTING POWER PANEL SILT SILT SILT SILT SILT SILT SILT SIL
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	KIRK HALL	CB-2-
STORM DRAIN STRUCTURE DATA		280
STORM DRAIN STRUCTURE DATA STRUCTURE RIM INV. IN INV. OUT DIAM.		
CB-1 271.68 271.00 270.50 48"		
CB-2         285.65         279.58         279.08         48"           FI-1         280.90         272.85         2'x2'           FI-2         281.90         279.86         2'x2'		EXISTING POWER PANEL
FI-3 283.37 277.42 2'x2'		) ( A A A A A A A A A A A A A A A A A A
SD-1 12" 368.97' 0.50%		24 P.
SD-2         12"         100.23'         0.50%           SD-3         12"         55.78'         0.50%           SD-4         12"         215.06'         0.50%		<sup>2</sup> A PARKING SPACES <sup>2</sup> A PARKING SPACES <sup>2</sup> A PARKING SPACES <sup>4</sup> B
MULTI-PURPOSE: REGULATION NCAA SOCCER 240' WIDE x 360' LONG		PARKING SPACES
FIELD DIMENSIONS: SOFTBALL - REGULATION NCAA LEFT FIELD FENCE 225 FT RIGHT FIELD FENCE 225 FT CENTER FIELD 225 FT HOME FOUL AREA TO BACKSTOP 23 FT		<sup>2</sup> A PARKING SPACES <sup>21</sup> P
BASEBALL - REGULATION NCAA LEFT FIELD FENCE 325 FT RIGHT FIELD FENCE 325 FT CENTER FIELD 400 FT HOME TO BACKSTOP 58 FT	TO PAG	<sup>21</sup> PARKING SPACES
EXISTING     PROPOSED      120118     CONTOURS     120	23 PARKING SPAC	SPACES
RETAINING WALL BASEBALL/SOFTBALL SOCCER FIELD SIGN STORM DRAIN UNDER DRAIN DRAINAGE MANHOLE		
CATCH BASIN		
EROSION CONTROL BLANKET GRAPHIC SCALE		
(IN FEET) 1 INCH = 50 FT.		



EROSION PRE-CONSTRUC		MEASURES					<u>HECK DAMS:</u> SH NED AND THAT
ADJACENT TO SOIL OR SED BY REMOVINO STABILIZED.	) ANY DRAINAGE CHAN IMENT STOCKPILES ANI GACCUMULATED SEDIM WHERE A DISCHARGE T	INELS WITHIN THE DISTURBED STORMWATER PREVENTED ENT, OR REMOVING AND REF O A STORM DRAIN INLET OC	D AREA. SEDIMENT B. FROM RUNNING ONTO PLACING THE BARRIEF CCURS, IF THE STORM	ARRIERS SHOULD BE IN THE STOCKPILE. MAINT R, UNTIL THE DISTURBED 1 DRAIN CARRIES WATER	TAIN THE SEDIMENT BARRIERS	<u>HAY BAL</u> MANUFAC BY THE F MANUFAC	E CHECK DAMS: CTURED CHECK E PROPER LOCAL, CTURE'S RECOMM
PRIOR TO CO THE SCE IS	A STABILIZED PAD OF	Y INSTALL A STABILIZED CO	A GEOTEXTILE FILTER	R FÁBRIĆ, USED TO PRE	TS OF EGRESS FROM THE SITE. EVENT TRAFFIC FROM TRACKING E STABILIZED.	INLET PR IMMEDIATI DISPOSAL	AIN INLET PROT OTECTION SHALL E AND UPSTREA OF TRAPPED S E PROTECTION N
PRIOR TO CC COMPONENTS SCHEDULE A BE PROVIDED GIVEN TO TH	NSTRUCTION, THE CON OF THE WORK AND K PRE-CONSTRUCTION M TO THE MUNICIPALITY	TRACTOR SHALL PREPARE A EY DATES SHOWING DATE O EETING WITH THE MUNICIPAL THREE DAYS PRIOR TO THE STURBANCE IN THE SCHEDUL	A DETAILED SCHEDULE F DISTURBANCE AND STAFF. THREE COPIL SCHEDULED PRE-CO	E AND MARKED UP PLA COMPLETION OF THE W ES OF THE SCHEDULE A ONSTRUCTION MEETING.	N INDICATING AREAS AND ORK. THE CONTRACTOR SHALL AND MARKED UP PLAN SHALL SPECIAL ATTENTION SHALL BE	CONCRET THE HEIG CRUSHED	E DROP INLET P E BLOCK AND S HT OF THE CON STONE SHALL TURED SEDIMEN
DURING CONSTRUC						PLANS, M	IAY BE USED IF
INSPECT DIST PRECIPITATIO BEFORE AND PERSON WITH	N, AND LOCATIONS WH WITHIN 24 HOURS AF	JS AREAS, EROSION CONTRO ERE VEHICLES ENTER OR EX TER A STORM EVENT (RAINF,	IT THE SITE. INSPECT ALL), AND PRIOR TO	T THESE AREAS AT LEA COMPLETING PERMANEN	THAT ARE EXPOSED TO ST ONCE A WEEK AS WELL AS IT STABILIZATION MEASURES. A DITIONS IN THE PERMIT, SHALL	PRIOR TO TRAFFIC FROM THI SWEPT OI	CLEARING AND WILL EXIT THE C E CONSTRUCTION R WASHED TO F CTION EXITS SH
2. MAINTENANCE IF BEST MAN PROBLEM BU NECESSARY,	: AGEMENT PRACTICES ( T NO LATER THAN THE IMPLEMENTATION MUST	BMPS) NEED TO BE REPAIRE E END OF THE NEXT WORKDA BE COMPLETED WITHIN 7 C EFFECTIVE OPERATING CON	AY. IF ADDITIONAL BN ALENDAR DAYS AND	IPS OR SIGNIFICANT RE PRIOR TO ANY STORM	PAIR OF BMPS ARE EVENT (RAINFALL). ALL	EXPOSED SUCH AS	NTROL DURING ( ROADWAY ARE/ CALCIUM CHLO REGULATING AG
3. DOCUMENTAT KEEP A LOG QUALIFICATIO OPERATION A TO THE PAR OR PROVED REQUIRING M	ION: (REPORT) SUMMARIZIN NS OF THE PERSON M ND MAINTENANCE OF CEL. MAJOR OBSERVAT NADEQUATE FOR A PA	G THE INSPECTIONS AND AN AKING THE INSPECTIONS, THI EROSION AND SEDIMENTATIOI IONS MUST INCLUDE BMPS T RTICULAR LOCATION, AND LO DING REPLACEMENT, AND LO	IY CORRECTIVE ACTIC E DATE(S) OF THE IN N CONTROLS, MATERI HAT NEED MAINTENA OCATION(S) WHERE A	N TAKEN. THE LOG MU ISPECTIONS, AND MAJOI ALS STORAGE AREAS, A NCE, BMPS THAT FAILE DDITIONAL BMPS ARE N	ST INCLUDE THE NAME(S) AND R OBSERVATIONS ABOUT THE AND VEHICLES ACCESS POINTS D TO OPERATE AS DESIGNED	TEMPORA MONTHS. APPLICAT SEEDS (F 3/2003 ( 15TH OF	RY VEGETATION: RY VEGETATION THIS PROCEDU ION OF SEED SI TAST GROWING A OR LATER. ALT THE CONSTRUC
	PY OF THE LOG FOR ,	LE TO DEPARTMENT STAFF A A PERIOD OF AT LEAST THR			UEST. THE PERMITTEE SHALL ANENT STABILIZATION.	REVEGETA THE APPI	NT VEGETATION: ATION MEASURES LICATION OF SEI MINTER EROSION
SECTION. THE STORMWATER	PLAN MUST ADDRESS	. THIS PLAN MAY BE COMBI	NCE OF THE PROJEC	T'S PERMANENT EROSIC	N CONTROL MEASURES AND	A. FOU FREE ROO	<u>PREPARATION:</u> R (4) INCHES O E OF SUBSOIL, ( ITS OR OTHER C .S TESTS SHALL
ALL MEASURI CONTROL, IN FACILITIES, A OTHER THAN	CLUDING THE STANDAR ND MEASURES MUST E THOSE LISTED BELOW	DS AND CONDITIONS IN THE	PERMIT, SHALL CONI D DEFICIENCIES MUST TION ON A SPECIFIC	DUCT THE INSPECTIONS. BE CORRECTED. AREAS SITE. INSPECTION OR M	S, FACILITIES, AND MEASURES AINTENANCE TASKS OTHER	AME BE /	TAKEN PROMPTL INDMENTS SHALI APPLIED AS FOL 1 20-20 FERTILIZE
SPRING. ACC MAY BE REM GRADING OF TO ENSURE NOT IMPEDED SHOULDER. IF	MULATIONS OF WINTER JMULATIONS ON PAVE OVED BY GRADING EXC GRAVEL ROADS, OR GI THAT STORMWATER DR BY ACCUMULATIONS WATER BARS OR OPI	ESS SAND TO THE PAVEMEN RADING OF THE GRAVEL SHO AINS IMMEDIATELY OFF THE OF GRADED MATERIAL ON TH	PAVEMENT SWEEPING NT EDGE AND REMOV DULDERS OF GRAVEL ROAD SURFACE TO A HE ROAD SHOULDER D TO DIVERT RUNOFF	. ACCUMULATIONS OF S ING IT MANUALLY OR B OR PAVED ROADS, MUS DJACENT BUFFER AREA OR BY EXCAVATION OF	CAND ALONG ROAD SHOULDERS Y A FRONT-END LOADER. ST BE ROUTINELY PERFORMED S OR STABLE DITCHES, AND IS	(N-F GRO CAL <sup>I</sup> C. WOR THE <u>APPLICAT</u>	UND LIMESTONE CIUM & MAGNES K LIME AND FEI AREA TO FIRM <u>10N OF SEED:</u> DING: SHALL BE
DATE ON WH MAINTENANCE TASK REQUIR REMOVAL. TH	(REPORT) SUMMARIZIN ICH EACH INSPECTION E COMPLETED, AND TH ES THE CLEAN-OUT OI E LOG MUST BE MADE EE SHALL RETAIN A C	OR MAINTENANCE TASK WAS E NAME OF THE INSPECTOR F ANY SEDIMENTS OR DEBRI	S PERFORMED, A DES OR MAINTENANCE PE S, INDICATE WHERE T NT STAFF AND A COF	CRIPTION OF THE INSPE RSONNEL PERFORMING HE SEDIMENT AND DEB PY PROVIDED TO THE D	THE TASK. IF A MAINTENANCE RIS WAS DISPOSED AFTER EPARTMENT UPON REQUEST.	MAY SEEI CRE RED	Y BE APPLIED AS D <u>TYPE</u> EPING RED FESC TOP L FESCUE AL:
	ROL APPLICATIONS	<b>S &amp; MEASURES</b> ROL MEASURES SHALL BE C				REC	E. A SPECIFI OMMEND SEED N ED 3/2003 OR
CURRENT MA AND IN ACCO PLACE BEFOF ADEQUATE A	INE DEPARTMENT OF E DRDANCE WITH THE ER RE THE ACTIVITY BEGIN ND TIMELY TEMPORARY	NVIRONMENTAL PROTECTION OSION CONTROL PLAN AND I	CHAPTER 500 RULES DETAILS IN THE PLAN IN PLACE AND FUNC	S, THE DEPARTMENTS B I SET. EROSION CONTRO CTIONAL UNTIL THE SITE	EST MANAGEMENT PRACTICES	SIMU C. <u>MUL</u>	<u>ROSEEDING:</u> SH. JLTANEOUSLY W <u>CHING:</u> SHALL ( RATIVE FOR DE
DISTURBANCE DISCHARGES DOUBLED. IF DISCHARGES	RACTICABLE, NO DISTU ACTIVITIES TAKE PLA THROUGH THE DISTURI DISTURBANCE ACTIVITI THROUGH THE DISTURI	CE BETWEEN 30 FEET AND 5 BED AREAS TOWARD THE PR ES TAKE PLACE LESS THAN	50 FEET OF ANY PRO OTECTED NATURAL R 30 FEET FROM ANY OTECTED NATURAL R	DTECTED NATURAL RESC ESOURCE, PERIMETER E PROTECTED NATURAL F ESOURCE, PERIMETER E	ECTED NATURAL RESOURCE. IF DURCE, AND STORMWATER ROSION CONTROLS MUST BE RESOURCE, AND STORMWATER ROSION CONTROLS MUST BE	BENEFICIA ANGLES THE JOIN IMMEDIATI	IG SEEDBED PRE AL SUCH AS DIT TO THE DIRECTIO TS ONCE LAID I ELY AFTER INST CTION YEAR, HO
BE MULCHED	ED AREAS SHALL BE N D WITHIN 7 DAYS SHA IMMEDIATELY FOLLOWI	NG SEEDING. EROSION CONT	TROL BLANKETS ARE	RECOMMENDED TO BE		TRENCH DE	
SEPTEMBER TYPES OF MU HAY OR STR	5TH OF THE CONSTRU JLCH: <u>AW:</u> SHALL BE APPLIEI	CTION YEAR (SEE WINTER EF ) AT A RATE OF 75 LBS/1,0	ROSION CONTROL NO <sup>-</sup> 200 S.F. (1.5 TONS F	TES). PER ACRE).	OPES GREATER THAN 5% AFTER	SECONDA AVOID FL STRUCTUI	RY CONTAINMEN OODING AND SE RE BE LOCATED
SUCH THAT THICKNESS C NOT BE USEI EROSION CON	THE THICKNESS ON SLO N SLOPES BETWEEN 3 O ON SLOPES GREATER ITROL BLANKET: SHALI	OPES 3:1 OR LESS IS 2 INC :1 AND 2:1 SHALL BE 4 INC	HES PLUS 1/2 INCH HES PLUS 1/2 INCH CONTINUOUS CONTA	I PER 20 FEET OF SLOP PER 20 FEET OF SLOP CT BETWEEN THE MAT /	PE UP TO 100 FEET. THE E UP TO 100 FEET. THIS SHALL	<u>STANDAR</u> SLOPES E WILL CON	FOR TIMELY
WITH A FOUR RE-ESTABLISI	OF SOIL OR SUBSOIL S -INCH LAYER OF WOOI HED PRIOR TO ANY RA	D WASTE EROSION CONTROL INFALL. ANY SOIL STOCKPILE	MIX. THIS WILL BE D	ONE WITHIN 24 HOURS	S.F. (1.5 TONS PER ACRE) OR OF STOCKING AND H HAY OR STRAW) WITHIN 100	SLOPE FC	DR LATE FALL A <u>STABILIZE TH</u> SEED THE DI EROSION CON
4. NATURAL RES ANY AREAS SHALL BE ST WITHIN 48 HO SHALL BE PL BE PROTECTE FEET FROM A	ABILIZED USING TEMPO DURS OF EXPOSURE OF ACED BETWEEN ANY N D A MINIMUM DISTANC PROTECTED RESOURC	ANY NATURAL RESOURCES, DRARY MULCHING (AS DESCR R PRIOR TO ANY STORM EVE IATURAL RESOURCE AND THE E OF 100 FEET ON EITHER E AND STORMWATER DISCHA	BED IN PART 1. OF NT. SEDIMENT BARRI DISTURBED AREA. F SIDE FROM THE RESC	THIS SECTION) OR OTH ERS (AS DESCRIBED IN PROJECTS CROSSING TH DURCE. IF DISTURBANCE	% MATURE VEGETATION CATCH, ER NON-ERODIBLE COVER PART 4. OF THIS SECTION) IE NATURAL RESOURCE SHALL TAKES PLACE LESS THAN 30 THE RESOURCE, PERIMETER		30 DAYS. IF NOVEMBER 1, 2(C.) OF THI STABILIZE TH BY NOVEMBE ROLLING THE ROOT GROWT SLOPES HAVI STABILIZE TH
5. SEDIMENT BA PRIOR TO TH OR JUST BEL PROTECT AG	E BEGINNING OF ANY OW THE LIMITS OF CLE AINST CONSTRUCTION F	CONSTRUCTION, SEDIMENT B	OR JUST ABOVE AN NT BARRIERS SHALL	Y ADJACENT PROPERTY BE MAINTAINED BY THE		D.	CONTROL MIX REMOVE ANY HAVING GRAE <u>STABILIZE TH</u> NOVEMBER 15 FOR STABILIT
SILT FENCE:	SHALL BE INSTALLED IENDED THAT SILT FEN	PER THE DETAIL ON THE PL	ANS. THE EFFECTIVE	HEIGHT OF THE FENCE	SHALL NOT EXCEED 36 INCHES. SO AS TO AVOID ADDITIONAL	DISTURBE THEN THE	D FOR THE TIME D SOILS ON AR E CONTRACTOR
<u>HAY BALES:</u> MUST REMAIN	SHALL BE INSTALLED I PARALLEL WITH THE		NSTALLATION TO PRE	VENT DETERIORATION O	ING-TIED AND THESE BINDINGS F THE BINDINGS. BALES SHALL JTTING ONE ANOTHER.	Α.	STABILIZE TH WINTER RYE STRAW AT 75 MONITOR GRO AT LEAST 75
MATERIAL AN THE MIX COM	D CONTAIN A WELL-GF	INSTALLED PER THE DETAIL RADED MIXTURE OF PARTICLE THE STANDARDS DESCRIBED IIS BARRIER.	SIZES AND MAY CO	NTAIN ROCKS LESS TH	AN 4 INCHES IN DIAMETER.	В.	AT LEAST 75 OVER-WINTER STABILIZE TH OCTOBER 1. THE SOD TO
CONTINUOUS MIX PLACED	<u>CONTAINED BERM:</u> SH WITHIN A SYNTHETIC T		ORMS AS A STURDY	SEDIMENT BARRIER THA		С.	GROWTH INTC <u>STABILIZE TH</u> OR STRAW A THROUGH THI DISTURBED A
THE DESIGN REMOVED ON	STALLED PER THE DET PLANS IMMEDIATELY AI LY AFTER THE ROADW,	AIL ON THE PLANS. CHECK FTER FINAL GRADING. CHEC AYS ARE PAVED AND THE V ENEATH THE CHECK DAM MU	K DAMS SHALL BE 2 EGETATED SWALE AR	FEET HIGH. TEMPORÁ E ESTABLISHED WITH A	RY CHECK DAMS MAY BE T LEAST 85%-90% OF VIGOROUS	D.	NETTING TO F <u>STABILIZE TH</u> CONTROL MIX ANY SNOW A

S: SHOULD BE CONSTRUCTED OF 2 TO 3 INCH STONE AND PLACED SUCH THAT COMPLETE COVERAGE OF THE SWALE THAT THE CENTER OF THE DAM IS 6 INCHES LOWER THAT THE OUTER EDGES. DAMS: WE DO NOT RECOMMEND THE USE OF HAY BALES AS CHECK DAMS.

HECK DAMS: MANUFACTURED CHECK DAMS, AS SPECIFIED IN THE DETAIL ON THE PLANS, MAY BE USED IF AUTHORIZED DCAL, STATE OR FEDERAL REGULATING AGENCIES. THESE UNITS SHALL BE INSTALLED IN ACCORDANCE WITH THE ECOMMENDATIONS.

PROTECTION SHALL BE PLACED AROUND A STORMDRAIN DROP INLETOR CURB INLET PRIOR TO PERMANENT STABILIZATION OF THE PSTREAM DISTURBED AREAS. THEY SHALL BE CONSTRUCTED IN A MANNER THAT WILL FACILITATE CLEAN-OUT AND PPED SEDIMENTS AND MINIMIZE INTERFERENCE WITH CONSTRUCTION ACTIVITIES. ANY RESULTANT PONDING OF WATER CTION METHOD MUST NOT CAUSE EXCESSIVE INCONVENIENCE OR DAMAGE TO ADJACENT AREAS OR STRUCTURES. NLET PROTECTION: WE DO NOT RECOMMEND THE USE OF HAY BALES AS INLET PROTECTION.

AND STONE INLET SEDIMENT FILTER (DROP OR CURB INLET): SHALL BE INSTALLED PER THE DETAIL ON THE PLANS. HE CONCRETE BLOCK BARRIER CAN VARY BUT MUST BE BETWEEN 12 AND 24 INCHES TALL. A MINIMUM OF 1 INCH SHALL BE USED.

EDIMENT BARRIERS AND FILTER (DROP OR CURB INLET): MANUFACTURED FILTERS, AS SPECIFIED IN THE DETAIL ON THE SED IF INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. RUCTION EXIT:

IG AND/OR GRUBBING THE SITE A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE CONSTRUCTED WHEREVER THE CONSTRUCTION SITE ONTO A PAVED ROADWAY IN ORDER TO MINIMÍZE THE TRACKING OF SEDIMENT AND DEBRIS UCTION SITE ONTO PUBLIC ROADWAYS. THE ENTRANCES AND ADJACENT ROADWAY AREAS SHALL BE PERIODICALLY TO FURTHER MINIMIZE THE TRACKING OF MUD, DUST OR DEBRIS FROM THE CONSTRUCTION AREA. STABILIZED ITS SHALL BE CONSTRUCTED IN AREAS SPECIFIED ON THE PLANS AND AS DETAILED ON THE PLANS.

JRING CONSTRUCTION SHALL BE ACHIEVED BY THE USE OF A WATERING TRUCK TO PERIODICALLY SPRINKLE THE AREAS AS NECESSARY TO REDUCE DUST DURING THE DRY MONTHS. APPLYING OTHER DUST CONTROL PRODUCTS CHLORIDE OR OTHER MANUFACTURED PRODUCTS ARE ALLOWED IF AUTHORIZED BY THE PROPER LOCAL, STATE AND/OR ING AGENCIES. HOWEVER, IT IS THE CONTRACTOR'S ULTIMATE RESPONSIBILITY TO MITIGATE DUST AND SOIL LOSS FROM

TATION SHALL BE APPLIED TO DISTURBED AREAS THAT WILL NOT RECEIVE FINAL GRADING FOR PERIODS UP TO 12 OCEDURE SHOULD BE USED EXTENSIVELY IN AREAS ADJACENT TO NATURAL RESOURCES. SEEDBED PREPARATION AND EED SHALL BE CONDUCTED AS INDICATED IN THE PERMANENT VEGETATION SECTION OF THIS NARRATIVE. SPECIFIC WING AND SHORT LIVING) SHALL BE SELECTED FROM THE MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL DATED ALTERNATIVE EROSION CONTROL MEASURES SHOULD BE USED IF SEEDING CAN NOT BE DONE BEFORE SEPTEMBER STRUCTION YEAR.

ASURES SHALL COMMENCE IMMEDIATELY UPON COMPLETION OF FINAL GRADING OF AREAS TO BE LOAMED AND SEEDED. OF SEED SHALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR, PLEASE REFER ROSION CONTROL NOTES FOR MORE DETAIL. REVEGETATION MEASURES SHALL CONSIST OF THE FOLLOWING:

HES OF LOAM SHALL BE SPREAD OVER DISTURBED AREAS AND SMOOTHED TO A UNIFORM SURFACE. LOAM SHALL BE 3SOIL, CLAY LUMPS, STONES AND OTHER OBJECTS OVER 2 INCHES OR LARGER IN ANY DIMENSION, AND WITHOUT WEEDS, THER OBJECTIONABLE MATERIAL.

SHALL BE TAKEN AT THE TIME OF SOIL STRIPPING TO DETERMINE FERTILIZATION REQUIREMENTS. SOILS TESTS SHALL ROMPTLY AS TO NOT INTERFERE WITH THE 14-DAY LIMIT ON SOIL EXPOSURE. BASED UPON TEST RESULTS, SOIL SHALL BE INCORPORATED INTO THE SOIL PRIOR TO FINAL SEEDING. IN LIEU OF SOIL TESTS, SOIL AMENDMENTS MAY AS FOLLOWS:

APPLICATION RATE RTII IZFR 18.4 LBS./1,000 S.F. OR EQUAL) STONE (50% 138 LBS./1,000 S.F. AGNESIUM OXIDE)

ND FERTILIZER INTO THE SOIL AS NEARLY AS PRACTICAL TO A DEPTH OF 4 INCHES WITH PROPER EQUIPMENT. ROLL FIRM THE SEEDBED EXCEPT ON CLAY OR SILTY SOILS OR COARSE SAND.

ALL BE CONDUCTED BETWEEN APRIL 1ST AND OCTOBER 1ST OF THE CONSTRUCTION YEAR. GENERALLY A SEED MIXTURE PLIED AS FOLLOWS: (MDEP SEED MIX 2 IS DISPLAYED)

APPLICATION RATE 0.46 LBS/1,000 S.F. (20 LBS/ACRE) FESCUE 0.05 LBS/1,000 S.F. ( 2 LBS/ACRE) 0.46 LBS/1.000 S.F. (20 LBS/ACRE) 0.97 LBS/1,000 S.F. (42 LBS/ACRE)

PECIFIC SEED MIXTURE SHOULD BE CHOSEN TO MATCH THE SOILS CONDITION OF THE SITE. VARIOUS AGENCIES CAN SEED MIXTURES. MDEP RECOMMENDED SEED MIXTURES ARE IN THE EROSION AND SEDIMENT CONTROL BMP MANUAL 03 OR LATER.

SHALL BE CONDUCTED ON PREPARED AREAS WITH SLOPES LESS THAN 2:1. LIME AND FERTILIZER MAY BE APPLIED SLY WITH THE SEED. RECOMMENDED SEEDING RATES MUST BE INCREASED BY 10% WHEN HYDROSEEDING. HALL COMMENCE IMMEDIATELY AFTER SEED IS APPLIED. REFER TO THE TEMPORARY MULCHING SECTION OF THIS FOR DETAILS.

ED PREPARATION, SOD CAN BE APPLIED IN LIEU OF SEEDING IN AREAS WHERE IMMEDIATE VEGETATION IS MOST S DITCHES, AROUND STORMWATER DROP INLETS AND AREAS OF AESTHETIC VALUE. SOD SHOULD BE LAID AT RIGHT. RECTION OF FLOW, STARTING AT THE LOWEST ELEVATION. SOD SHOULD BE ROLLED OR TAMPED DOWN TO EVEN OUT AID DOWN, WHERE FLOW IS PREVALENT THE SOD MUST BE PROPERLY ANCHORED DOWN, IRRIGATE THE SOD INSTALLATION. IN MOST CASES, SOD CAN BE ESTABLISHED BETWEEN APRIL 1ST AND NOVEMBER 15TH OF THE AR, HOWEVER, REFER TO THE WINTER EROSION CONTROL NOTES FOR ANY ACTIVITIES AFTER OCTOBER 1ST.

NG AND TEMPORARY STREAM DIVERSION:

TRUCTION TRENCH DEWATERING OR TEMPORARY STREAM DIVERSION WILL PASS FIRST THROUGH A FILTER BAG OR AINMENT STRUCTURE (E.G. HAY BALE LINED POOL) PRIOR TO DISCHARGE. THE DISCHARGE SITE SHALL BE SELECTED TO AND SEDIMENT DISCHARGES TO A PROTECTED RESOURCE. IN NO CASE SHALL THE FILTER BAG OR CONTAINMENT CATED WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE. MELY STABILIZATION:

TIMELY STABILIZATION OF DISTURBED SLOPES -- THE CONTRACTOR WILL CONSTRUCT AND STABILIZE STONE-COVERED BER 15. THE CONTRACTOR WILL SEED AND MULCH ALL SLOPES TO BE VEGETATED BY SEPTEMBER 15. THE MDEP Y AREA HAVING A GRADE GREATER THAN 8% (12.5H:1V) TO BE A SLOPE. IF THE CONTRACTOR FAILS TO STABILIZE VEGETATED BY SEPTEMBER 15, THEN THE CONTRACTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE FALL AND WINTER.

ZE THE SOIL WITH TEMPORARY VEGETATION AND EROSION CONTROL MATS -- BY OCTOBER 1 THE CONTRACTOR WILL HE DISTURBED SLOPE WITH WINTER RYE AT A SEEDING RATE OF 3 POUNDS PER 1,000 SQUARE FEET AND APPLY I CONTROL MATS OVER THE MULCHED SLOPE. THE CONTRACTOR WILL MONITOR GROWTH OF THE RYE OVER THE NEXT YS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER AT LEAST 75% OF THE DISTURBED SLOPE BY BER 1. THEN THE APPLICANT WILL COVER THE SLOPE WITH A LAYER OF EROSION CONTROL MIX AS DESCRIBED IN ITEM OF THIS STANDARD OR WITH STONE RIPRAP AS DESCRIBED IN ITEM 2(D.) OF THIS STANDARD. E THE SLOPE WITH SOD -- THE CONTRACTOR WILL STABILIZE THE DISTURBED SLOPE WITH PROPERLY INSTALLED SOD PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SLOPE WITH WIRE PINS, THE SOD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE GROWTH INTO THE DISTURBED SOIL. THE APPLICANT WILL NOT USE LATE-SEASON SOD INSTALLATION TO STABILIZE HAVING A GRADE GREATER THAN 33% (3H:1V).

ZE THE SLOPE WITH EROSION CONTROL MIX -- THE CONTRACTOR WILL PLACE A SIX-INCH LAYER OF EROSION DL MIX ON THE SLOPE BY NOVEMBER 15. PRIOR TO PLACING THE EROSION CONTROL MIX, THE APPLICANT WILL ANY SNOW ACCUMULATION ON THE DISTURBED SLOPE. DO NOT USE EROSION CONTROL MIX TO STABILIZE SLOPES GRADES GREATER THAN 1H:1V OR HAVING GROUNDWATER SEEPS ON THE SLOPE FACE. ZE THE SLOPE WITH STONE RIPRAP -- THE CONTRACTOR WILL PLACE A LAYER OF STONE RIPRAP ON THE SLOPE BY BER 15. THE APPLICANT WILL HIRE A REGISTERED PROFESSIONAL ENGINEER TO DETERMINE THE STONE SIZE NEEDED FABILITY AND TO DESIGN A FILTER LAYER FOR UNDERNEATH THE RIPRAP.

E TIMELY STABILIZATION OF DISTURBED SOILS -- BY SEPTEMBER 15 THE CONTRACTOR WILL SEED AND MULCH ALL ON AREAS HAVING A SLOPE LESS THAN 8%. IF THE CONTRACTOR FAILS TO STABILIZE THESE SOILS BY THIS DATE, CTOR WILL TAKE ONE OF THE FOLLOWING ACTIONS TO STABILIZE THE SOIL FOR LATE FALL AND WINTER.

ZE THE SOIL WITH TEMPORARY VEGETATION -- BY OCTOBER 1 THE CONTRACTOR WILL SEED THE DISTURBED SOIL WITH RYE AT A SEEDING RATE OF 3 POUNDS PER 1000 SQUARE FEET, LIGHTLY MULCH THE SEEDED SOIL WITH HAY OR AT 75 POUNDS PER 1000 SQUARE FEET, AND ANCHOR THE MULCH WITH PLASTIC NETTING. THE APPLICANT WILL R GROWTH OF THE RYE OVER THE NEXT 30 DAYS. IF THE RYE FAILS TO GROW AT LEAST THREE INCHES OR COVER NST 75% OF THE DISTURBED SOIL BEFORE NOVEMBER 15, THEN THE APPLICANT WILL MULCH THE AREA FOR WINTER PROTECTION AS DESCRIBED IN ITEM 3(C.) OF THIS STANDARD. <u>ZE THE SOIL WITH SOD</u> -- THE APPLICANT WILL STABILIZE THE DISTURBED SOIL WITH PROPERLY INSTALLED SOD BY

PROPER INSTALLATION INCLUDES THE APPLICANT PINNING THE SOD ONTO THE SOIL WITH WIRE PINS, ROLLING OD TO GUARANTEE CONTACT BETWEEN THE SOD AND UNDERLYING SOIL, AND WATERING THE SOD TO PROMOTE ROOT INTO THE DISTURBED SOIL. THE SOL WITH MULCH -- BY NOVEMBER 15 THE APPLICANT WILL MULCH THE DISTURBED SOIL BY SPREADING HAY RAW AT A RATE OF AT LEAST 150 POUNDS PER 1000 SQUARE FEET ON THE AREA SO THAT NO SOIL IS VISIBLE

GH THE MULCH. PRIOR TO APPLYING THE MULCH, THE APPLICANT WILL REMOVE ANY SNOW ACCUMULATION ON THE BED AREA. IMMEDIATELY AFTER APPLYING THE MULCH, THE APPLICANT WILL ANCHOR THE MULCH WITH PLASTIC TO PREVENT WIND FROM MOVING THE MULCH OFF THE DISTURBED SOIL. ZE THE SOIL WITH EROSION CONTROL MIX -- THE CONTRACTOR WILL PLACE A MINIMUM TWO-INCH LAYER OF EROSION OL MIX ON THE SOIL BY NOVEMBER 15. PRIOR TO PLACING THE EROSION CONTROL MIX, THE APPLICANT WILL REMOVE NOW ACCUMULATION ON THE DISTURBED SLOPE.

HOUSEKEEPING:

THE FOLLOWING GENERAL PERFORMANCE STANDARDS APPLY TO THE PROPOSED PROJECT. SPILL PREVENTION:

CONTROLS MUST BE USED TO PREVENT POLLUTANTS FROM CONSTRUCTION AND WASTE MATERIALS STORED ON SITE TO ENTER STORMWATER. WHICH INCLUDES STORAGE PRACTICES TO MINIMIZE EXPOSURE OF THE MATERIALS TO STORMWATER. THE SITE CONTRACTOR OR OPERATOR MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

GROUNDWATER PROTECTION: DURING CONSTRUCTION, LIQUID PETROLEUM PRODUCTS AND OTHER HAZARDOUS MATERIALS WITH THE POTENTIAL TO CONTAMINATE GROUNDWATER MAY NOT BE STORED OR HANDLED IN AREAS OF THE SITE DRAINING TO AN INFILTRATION AREA AN "INFILTRATION AREA" IS ANY AREA OF THE SITE THAT BY DESIGN OR AS A RESULT OF SOILS, TOPOGRAPHY AND OTHER RELEVANT FACTORS ACCUMULATES RUNOFF THAT INFILTRATES INTO THE SOIL. DIKES, BERMS, SUMPS, AND OTHER FORMS OF SECONDARY CONTAINMENT THAT PREVENT DISCHARGE TO GROUNDWATER MAY BE USED TO ISOLATE PORTIONS OF THE SITE FOR THE PURPOSES OF STORAGE AND HANDLING OF THESE MATERIALS. ANY PROJECT PROPOSING INFILTRATION OF STORMWATER MUST PROVIDE ADEQUATE PRE-TREATMENT OF STORMWATER PRIOR TO DISCHARGE OF STORMWATER TO THE INFILTRATION AREA. OR PROVIDE FOR TREATMENT WITHIN THE INFILTRATION AREA. IN ORDER TO PREVENT THE ACCUMULATION OF FINES, REDUCTION IN INFILTRATION RATE, AND CONSEQUENT FLOODING AND DESTABILIZATION.

FUGITIVE SEDIMENT AND DUST: ACTIONS MUST BE TAKEN TO ENSURE THAT ACTIVITIES DO NOT RESULT IN NOTICEABLE EROSION OF SOILS OR FUGITIVE DUST EMISSIONS DURING OR AFTER CONSTRUCTION. OIL MAY NOT BE USED FOR DUST CONTROL, BUT OTHER WATER ADDITIVES MAY BE CONSIDERED AS NEEDED. A STABILIZED CONSTRUCTION ENTRANCE (SCE) SHOULD BE INCLUDED TO MINIMIZE TRACKING OF MUD AND SEDIMENT. IF OFF-SITE TRACKING OCCURS, PUBLIC ROADS SHOULD BE SWEPT IMMEDIATELY AND NO LESS THAN ONCE A WEEK AND PRIOR TO SIGNIFICANT STORM EVENTS. OPERATIONS DURING DRY MONTHS, THAT EXPERIENCE FUGITIVE DUST PROBLEMS, SHOULD WET DOWN UNPAVED ACCESS ROADS ONCE A WEEK OR MORE FREQUENTLY AS NEEDED WITH A WATER ADDITIVE TO SUPPRESS FUGITIVE SEDIMENT AND DUST.

DEBRIS AND OTHER MATERIALS: MINIMIZE THE EXPOSURE OF CONSTRUCTION DEBRIS, BUILDING AND LANDSCAPING MATERIALS, TRASH, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE AND OTHER MATERIALS TO PRECIPITATION AND STORMWATER RUNOFF. THESE MATERIALS MUST BE PREVENTED FROM BECOMING A POLLUTANT SOURCE.

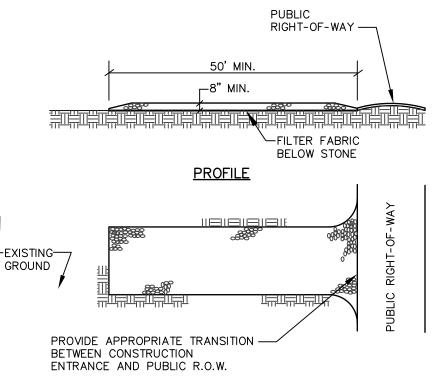
EXCAVATION DE-WATERING: Ε. EXCAVATION DE-WATERING IS THE REMOVAL OF WATER FROM TRENCHES, FOUNDATIONS, COFFER DAMS, PONDS, AND OTHER AREAS WITHIN THE CONSTRUCTION AREA THAT RETAIN WATER AFTER EXCAVATION. IN MOST CASES THE COLLECTED WATER IS HEAVILY SILTED AND HINDERS CORRECT AND SAFE CONSTRUCTION PRACTICES. THE COLLECTED WATER REMOVED FROM THE PONDED AREA, EITHER THROUGH GRAVITY OR PUMPING, MUST BE SPREAD THROUGH NATURAL WOODED BUFFERS OR REMOVED TO AREAS THAT ARE SPECIFICALLY DESIGNED TO COLLECT THE MAXIMUM AMOUNT OF SEDIMENT POSSIBLE, LIKE A COFFERDAM SEDIMENTATION BASIN. AVOID ALLOWING THE WATER TO FLOW OVER DISTURBED AREAS OF THE SITE. EQUIVALENT MEASURES MAY BE TAKEN IF APPROVED BY THE DEPARTMENT.

AUTHORIZED NON-STORMWATER DISCHARGES: IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES EXIST, THEY MUST BE IDENTIFIED AND STEPS SHOULD BE TAKEN TO ENSURE THE IMPLEMENTATION OF APPROPRIATE POLLUTION PREVENTION MEASURES FOR THE NON-STORMWATER COMPONENT(S) OF THE DISCHARGE. AUTHORIZED NON-STORMWATER DISCHARGES

DISCHARGES FROM FIREFIGHTING ACTIVITY; FIRE HYDRANT FLUSHINGS; VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED); DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS: ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS; PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS

MATERIALS HAVE NOT OCCURRED. UNLÉSS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED; UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE; UNCONTAMINATED GROUNDWATER OR SPRING WATER; FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED; UNCONTAMINATED EXCAVATION DEWATERING; POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; LANDSCAPE IRRIGATION:

UNAUTHORIZED NON-STORMWATER DISCHARGES: THE DEP DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON\_STORMWATER. SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING: WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS; FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE: SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE



<u>PLAN</u>

- 1. STONE SIZE- AASHTO DESIGNATION M43, SIZE NO. 2 (2 1/2" TO 1 1/2"). USE CRUSHED STONE.
- 2. LENGTH- AS SHOWN ON PLANS, MIN. 50 FEET.
- 3. THICKNESS- NOT LESS THAN EIGHT (8) INCHES.
- 5. MAINTENANCE- THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE NOT TO SCALE

4. WIDTH- NOT LESS THAN FULL WIDTH OF ALL POINT OF INGRESS OR EGRESS.

CONSTRUCTION NOTES

1. ALL WORK SHALL CONFORM TO THE APPLICABLE CODES AND ORDINANCES.

2. CONTRACTOR SHALL VISIT THE SITE AND FAMILIARIZE HIM OR HERSELF WITH ALL CONDITIONS AFFECTING THE PROPOSED WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING HIM OR HERSELF WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED AS SHOWN PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO THE COMMENCEMENT OF WORK.

3. CONTRACTOR SHALL NOTIFY ENGINEER OF ALL PRODUCTS OR ITEMS NOTED AS "EXISTING" WHICH ARE NOT FOUND IN THE FIELD. 4. INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S

RECOMMENDATIONS AND OWNER'S REQUIREMENTS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

5. CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS IN THE FIELD PRIOR TO FABRICATION AND ERECTION OF ANY MATERIAL. ANY UNUSUAL CONDITIONS SHALL BE REPORTED TO THE ATTENTION OF THE ENGINEER.

6. CONTRACTOR SHALL CLEAN AND REMOVE DEBRIS AND SEDIMENT DEPOSITED ON PUBLIC STREETS, SIDEWALKS, ADJACENT AREAS, OR OTHER PUBLIC WAYS DUE TO CONSTRUCTION. 7. CONTRACTOR SHALL INCORPORATE PROVISIONS AS NECESSARY IN CONSTRUCTION TO PROTECT EXISTING STRUCTURES, PHYSICAL FEATURES, AND MAINTAIN SITE STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL RESTORE ALL AREAS TO ORIGINAL CONDITION AND AS DIRECTED BY DESIGN DRAWINGS.

8. SITE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO CONSTRUCTION. 9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH "MAINE EROSION AND SEDIMENT CONTROL BMPS" PUBLISHED BY THE BUREAU OF LAND AND WATER QUALITY OF THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION, MARCH 2003 OR LATEST EDITION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO POSSESS A COPY OF THE EROSION CONTROL PLAN AT ALL TIMES.

10. THE CONTRACTOR IS HEREBY CAUTIONED THAT ALL SITE FEATURES SHOWN HEREON ARE BASED ON FIELD OBSERVATIONS BY THE SURVEYOR AND BY INFORMATION PROVIDED BY UTILITY COMPANIES. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CONTACT DIG SAFE (811) AT LEAST THREE (3) BUT NOT MORE THAN THIRTY (30) DAYS PRIOR TO COMMENCEMENT OF EXCAVATION OR DEMOLITION TO VERIFY HORIZONTAL AND VERTICAL LOCATION OF ALL UTILITIES.

11. CONTRACTOR SHALL BE AWARE THAT DIG SAFE ONLY NOTIFIES ITS "MEMBER" UTILITIES ABOUT THE DIG. WHEN NOTIFIED, DIG SAFE WILL ADVISE CONTRACTOR OF MEMBER UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR IDENTIFYING AND CONTACTING NON-MEMBER UTILITIES DIRECTLY. NON-MEMBER UTILITIES MAY INCLUDE TOWN OR CITY WATER AND SEWER DISTRICTS AND SMALL LOCAL UTILITIES, AS WELL AS USG PUBLIC WORKS SYSTEMS.

12. CONTRACTORS SHALL BE RESPONSIBLE FOR COMPLIANCE WITH THE REQUIREMENTS OF 23 MRSA 3360-A. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE APPROPRIATE UTILITIES TO OBTAIN AUTHORIZATION PRIOR TO RELOCATION OF ANY EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THESE PLANS. IF A UTILITY CONFLICT ARISES, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE OWNER, THE MUNICIPALITY AND APPROPRIATE UTILITY COMPANY PRIOR TO PROCEEDING WITH ANY RELOCATION.

13. ALL PAVEMENT MARKINGS AND DIRECTIONAL SIGNAGE SHOWN ON THE PLAN SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) STANDARDS. 14. ALL PAVEMENT JOINTS SHALL BE SAWCUT PRIOR TO PAVING TO PROVIDE A DURABLE AND UNIFORM JOINT.

15. NO HOLES, TRENCHES OR STRUCTURES SHALL BE LEFT OPEN OVERNIGHT IN ANY EXCAVATION ACCESSIBLE TO THE PUBLIC OR IN PUBLIC RIGHTS-OF-WAY.

16. ALL WORK WITHIN THE PUBLIC RIGHT-OF-WAY SHALL REQUIRE A M.D.O.T. PERMIT AS WELL AS PERMITS FROM THE TOWN AS APPLICABLE.

17. THE PROPOSED LIMITS OF CLEARING SHOWN HEREON ARE APPROXIMATE BASED UPON THE PROPOSED LIMITS OF SITE GRADING. THE APPLICANT RESERVES THE RIGHT TO PERFORM NORMAL FOREST MANAGEMENT ACTIVITIES OUTSIDE OF THE CLEARING LIMIT AS SHOWN. TREE REMOVAL OUTSIDE OF THE LIMITS OF CLEARING MAY BE NECESSARY TO REMOVE DEAD OR DYING TREES OR TREE LIMBS. THIS REMOVAL IS DUE TO POTENTIAL SAFETY HAZARDS AND TO PROMOTE PROPER FOREST GROWTH.

18. IMMEDIATELY UPON COMPLETION OF CUTS/FILLS. THE CONTRACTOR SHALL STABILIZE DISTURBED AREAS IN ACCORDANCE WITH EROSION CONTROL NOTES AND AS SPECIFIED ON PLANS.

19. THE CONTRACTOR SHALL BE FULLY AND SOLELY RESPONSIBLE FOR THE REMOVAL REPLACEMENT AND RECTIFICATION OF ALL DAMAGED AND DEFECTIVE MATERIAL AND WORKMANSHIP IN CONNECTION WITH THE CONTRACT WORK. THE CONTRACTOR SHALL REPLACE OR REPAIR AS DIRECTED BY THE OWNER ALL SUCH DAMAGED OR DEFECTIVE MATERIALS WHICH APPEAR WITHIN A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.

20. ALL WORK PERFORMED BY THE GENERAL CONTRACTOR AND/OR TRADE SUBCONTRACTOR SHALL CONFORM TO THE REQUIREMENTS OF LOCAL, STATE OR FEDERAL LAWS, AS WELL AS ANY OTHER GOVERNING REQUIREMENTS, WHETHER OR NOT SPECIFIED ON THE DRAWINGS. 21. WHERE THE TERMS "APPROVED EQUAL", "OTHER APPROVED", "EQUAL TO", "ACCEPTABLE" OR OTHER GENERAL QUALIFYING TERMS ARE USED IN THESE NOTES, IT SHALL BE

UNDERSTOOD THAT REFERENCE IS MADE TO THE RULING AND JUDGMENT OF SEBAGO TECHNICS, INC. 22. THE GENERAL CONTRACTOR SHALL PROVIDE ALL NECESSARY PROTECTION FOR THE WORK UNTIL TURNED OVER TO THE OWNER.

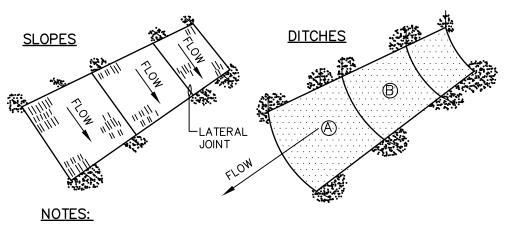
23. THE GENERAL CONTRACTOR SHALL MAINTAIN A CURRENT AND COMPLETE SET OF CONSTRUCTION DRAWINGS ON SITE DURING ALL PHASES OF CONSTRUCTION FOR USE OF ALL

24. THE CONTRACTOR SHALL TAKE FULL RESPONSIBILITY FOR ANY CHANGES AND DEVIATION OF APPROVED PLANS NOT AUTHORIZED BY THE ARCHITECT/ENGINEER AND/OR CLIENT/OWNER.

25. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN. ANY MODIFICATION TO SUIT FIELD DIMENSION AND CONDITION SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ANY WORK.

26. BEFORE THE FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL REMOVE ALL EQUIPMENT AND MATERIALS, REPAIR OR REPLACE PRIVATE OR PUBLIC PROPERTY WHICH MAY HAVE BEEN DAMAGED OR DESTROYED DURING CONSTRUCTION, CLEAN THE AREAS WITHIN AND ADJACENT TO THE PROJECT WHICH HAVE BEEN OBSTRUCTED BY HIS/HER OPERATIONS, AND LEAVE THE PROJECT AREA NEAT AND PRESENTABLE.

27. ALL SUBSURFACE UTILITY LINES SHOWN HEREON ARE BASED SOLELY ON THE FIELD LOCATION OF VISIBLE STRUCTURES, SMH'S, CB'S, HYDRANTS, ETC.. IN CONJUNCTION WITH DESIGN AND OR AS-BUILT PLANS SUPPLIED TO SEBAGO TECHNICS INC. BY OTHERS. PRIOR TO ANY CONSTRUCTION, EXCAVATION, TEST BORINGS, DRILLING, ETC.. DIG SAFE MUST BE NOTIFIED AND A SITE IDENTIFICATION NUMBER ALONG WITH A SAFE TO DIG DATE OBTAINED. THE SITE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING THE LOCATION, DEPTH AND MATERIAL OF ALL SUBSURFACE UTILITY LINES SHOWN HEREON AND ANY AND ALL OTHERS LOCATED ON SITE WITHIN THE CONSTRUCTION AREA.

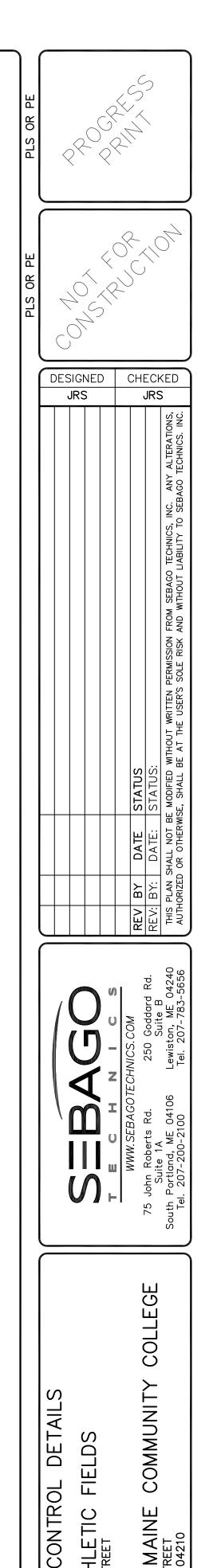


1. BURY THE TOP END OF THE MESH MATERIAL IN A 6" TRENCH AND BACKFILL AND TAMP TRENCHING SECURE END WITH STAPLES AT 6" SPACING, 4" DOWN FROM EXPOSED END.

- 2. FLOW DIRECTION JOINTS TO HAVE UPPER END OF LOWER STRIP BURIED WITH UPPER LAYERS OVERLAPPED 4" AND STAPLED. OVERLAP B OVER A.
- 3. LATERAL JOINTS TO HAVE 4" OVERLAP OF STRIPS. STAPLE 18" ON CENTER. 4. STAPLE OUTSIDE LATERAL EDGE 2" ON CENTER.

5. WIRE STAPLES TO BE MIN OF #11 WIRE 6" LONG AND 1-1/2" WIDE. 6. USE NORTH AMERICAN GREEN DS 150 OR APPROVED EQUAL.

EROSION CONTROL BLANKET NOT TO SCALE



**A** |ШёОё≼сОё₫ SCALE

NTS SHEET 4 OF 6

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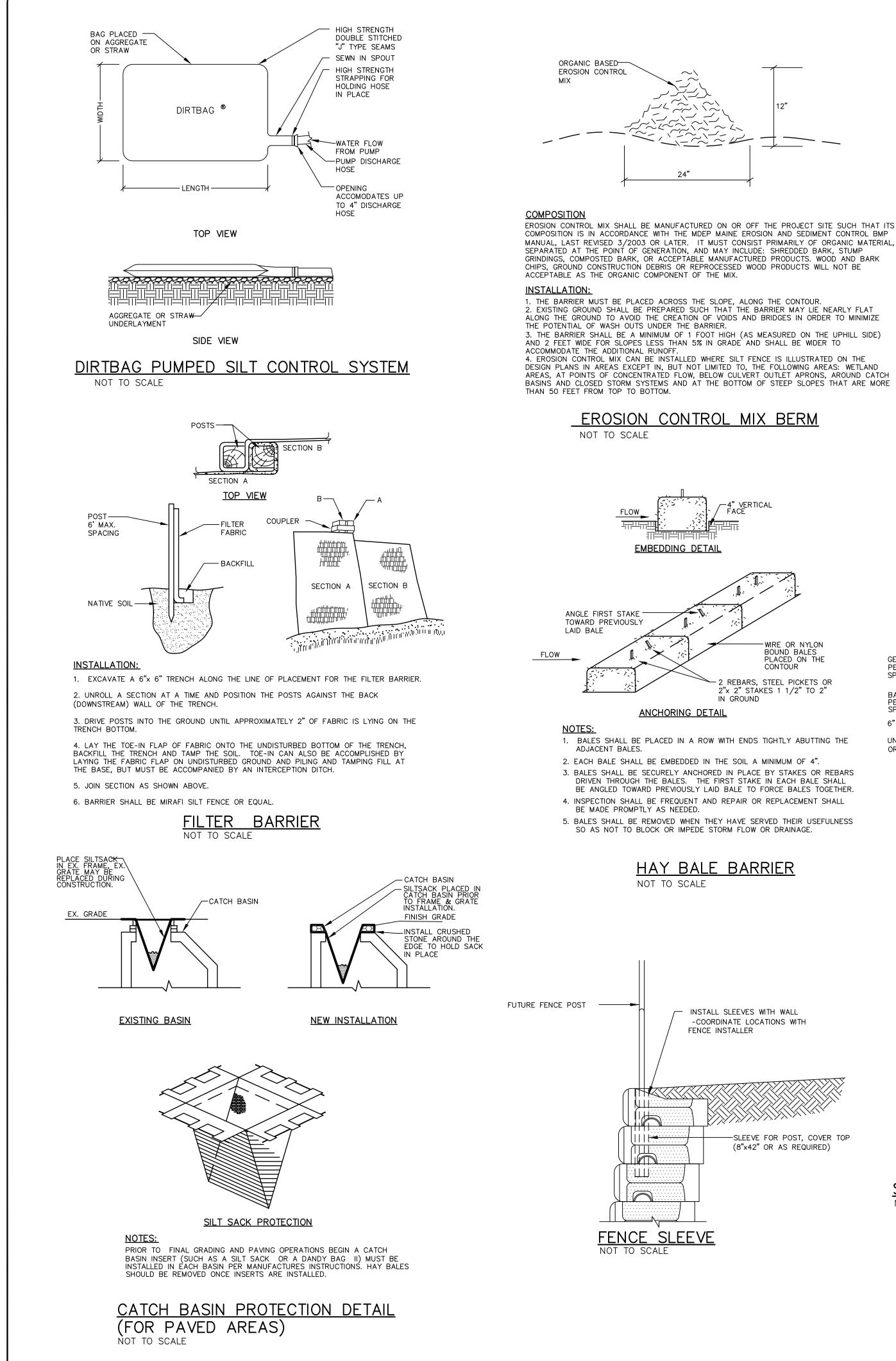
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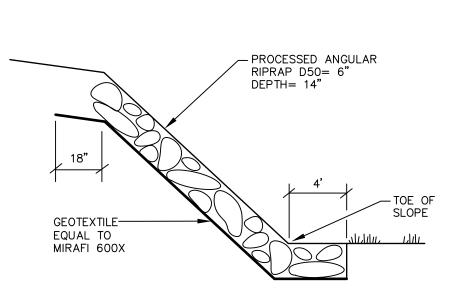
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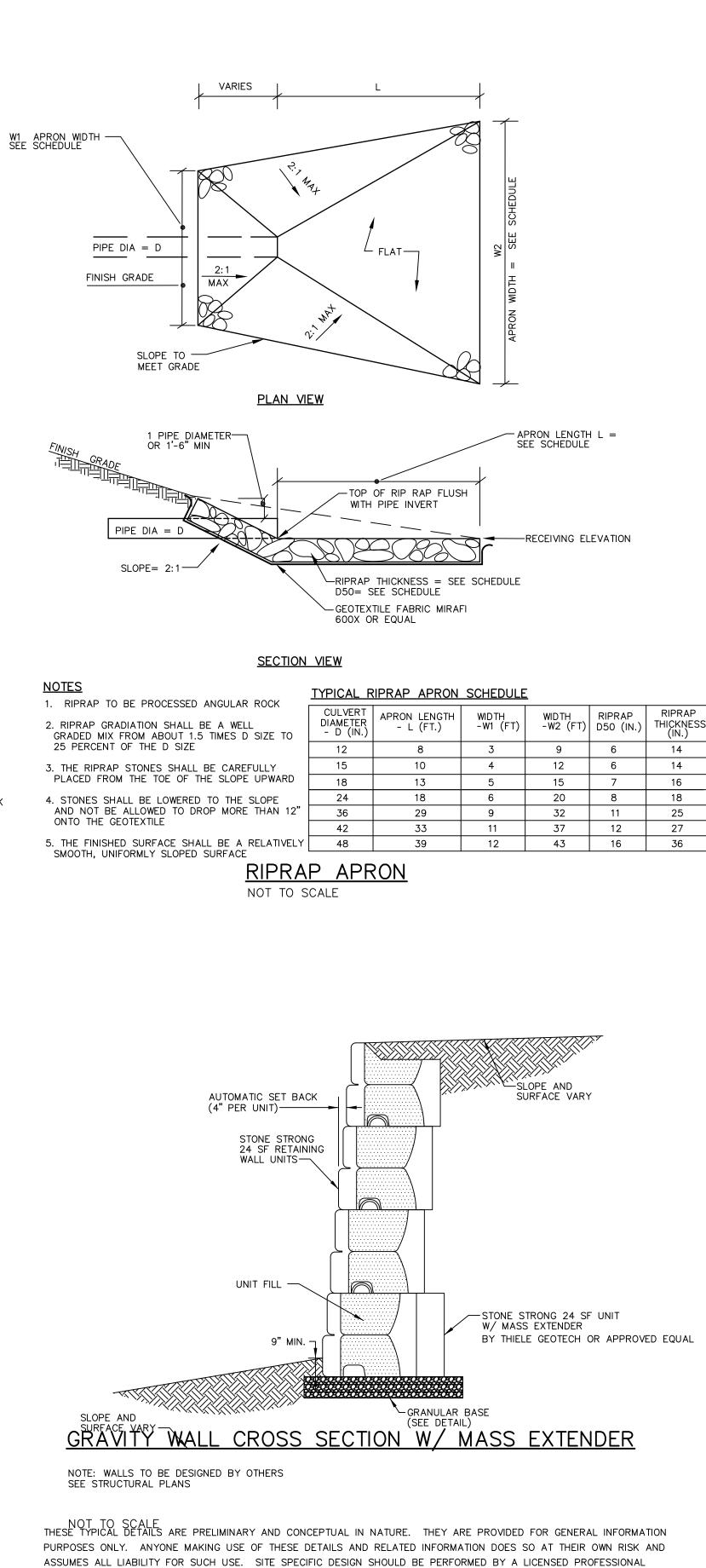
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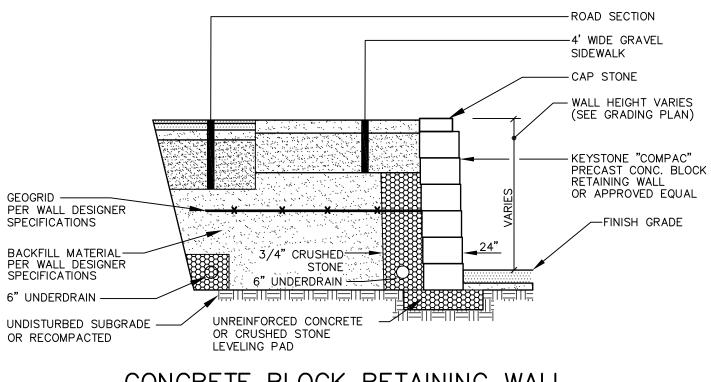
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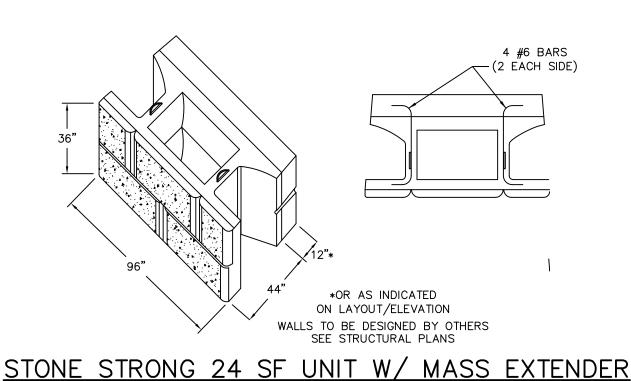


SIDE SLOPE RIPRAP NOT TO SCALE

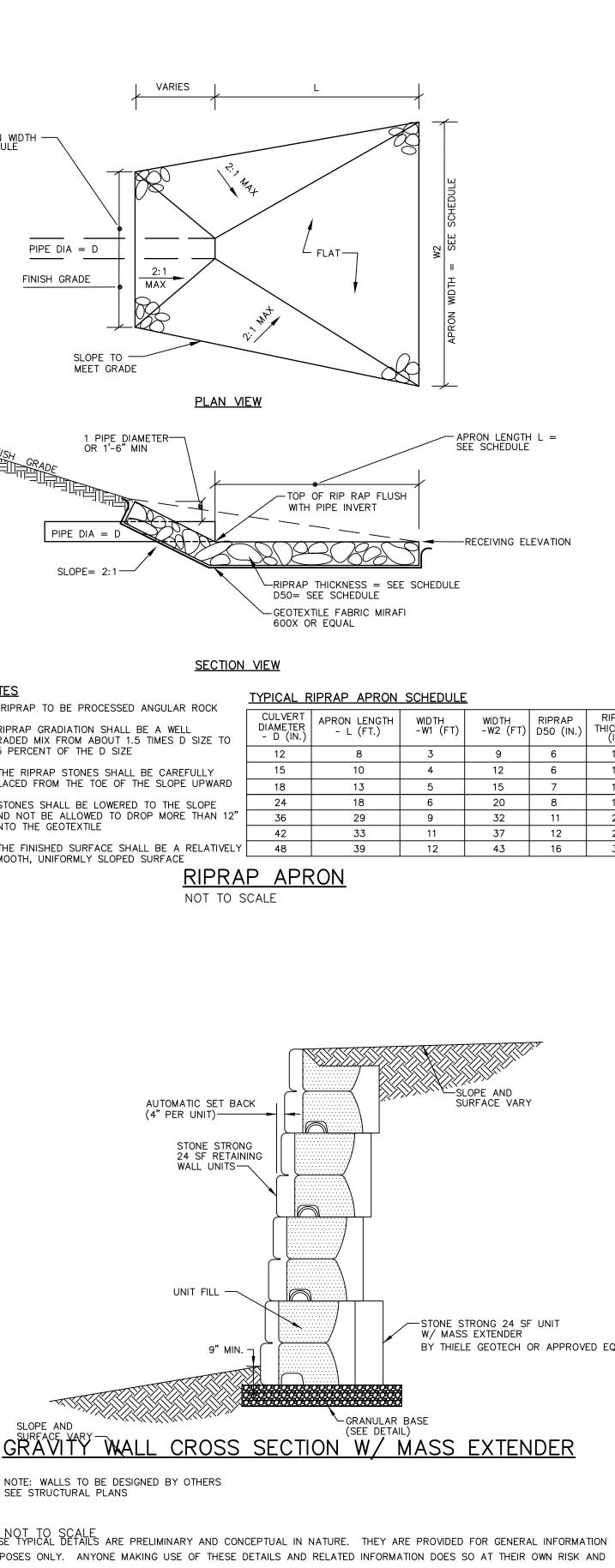




CONCRETE BLOCK RETAINING WALL NOT TO SCALE NOTE: ALL SITE WALLS ARE TO BE DESIGNED BY OTHERS

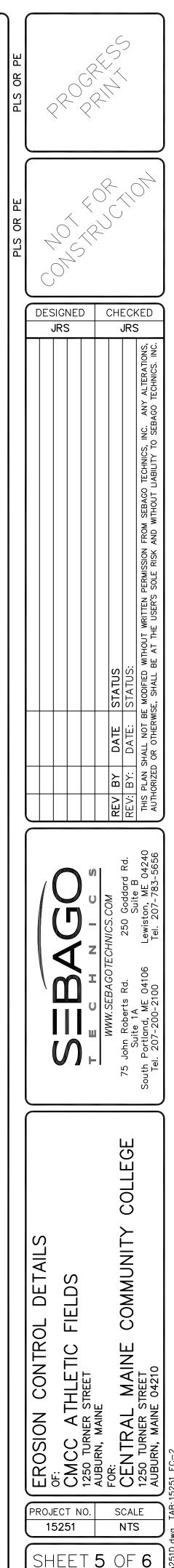


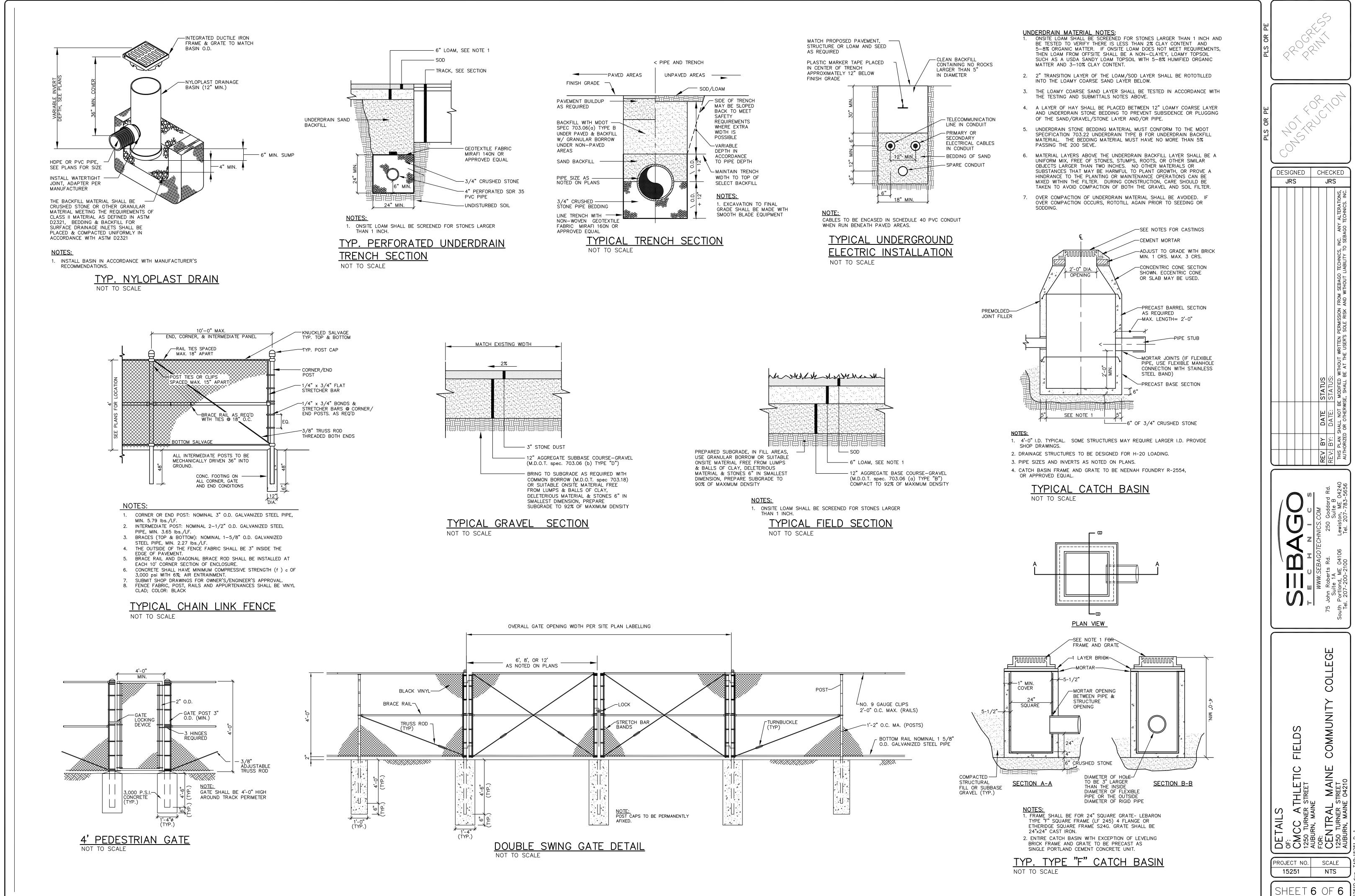
NOT TO SCALE



ENSING NEEDER WHO IS FAMILIAR WITH THE ACTUAL SITE CONDITIONS, MATERIALS, AND LOCAL PRACTICES.

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# Central Maine Community College Athletic Fields

# Lighting System

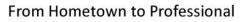
Pole ID	e Summary Pole Height	Mtg Height	Fixture Qty	Luminaire Type	Load	Group
A1-A2	70'	70'	6	TLC-LED-1150	6.90 kW	E
		15'	1	TLC-LED-675	0.68 kW	Е
A3-A4	60'	60'	3	TLC-LED-1150	3.45 kW	А
		15'	1	TLC-LED-675	0.68 kW	А
B1	90'	90'	12	TLC-LED-1150	13.80 kW	D
		15'	1	TLC-LED-675	0.68 kW	D
B2	80'	80'	7	TLC-LED-1150	8.05 kW	E
		15'	1	TLC-LED-675	0.68 kW	E
B3	80'	80'	9	TLC-LED-1150	10.35 kW	В
		15'	2	TLC-LED-675	1.35 kW	В
B4	80'	80'	10	TLC-LED-1150	11.50 kW	С
		15'	2	TLC-LED-675	1.35 kW	С
C1	80'	80'	9	TLC-LED-1150	10.35 kW	D
		15'	1	TLC-LED-675	0.68 kW	D
C2	80'	80'	4	TLC-LED-1150	4.60 kW	Е
		15'	1	TLC-LED-675	0.68 kW	Е
10			81		87.45 kW	

Group Summary						
Group	Description	Avg Load	Max Load	Fixture Qty		
A	Zone 1	8.25 kW	8.25 kW	8		
В	Zone 2	11.7 kW	11.7 kW	11		
С	Zone 3	12.85 kW	12.85 kW	12		
D	Zone 4	25.5 kW	25.5 kW	23		
E	Zone 5	29.15 kW	29.15 kW	27		

Fixture Type Summary							
Туре	Source	Wattage	Lumens	L90	L80	L70	Quantity
TLC-LED-1150	LED 5700K - 75 CRI	1150W	121,000	>51,000	>51,000	>51,000	69
TLC-LED-675	LED 5700K - 75 CRI	675W	48,000				12

# Light Level Summary

Calculation Grid Summar	ŷ						
Grid Name	Calculation Metric	Ave	Illumi Min	nation Max	Max/Min	Groups	Fixture Qty
Baseball (Infield)	Horizontal Illuminance	53	43	64	1.51	C,D,E	62
Baseball (Outfield)	Horizontal Illuminance	34.1	23	54	2.33	C,D,E	62
Soccer	Horizontal Illuminance	30.7	19	42	2.20	B,C,D	46
Softball (Infield)	Horizontal Illuminance	50.4	33	61	1.86	A,B,C	31
Softball (Outfield)	Horizontal Illuminance	30.4	24	41	1.73	A,B,C	31







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PROJECT SUMMARY

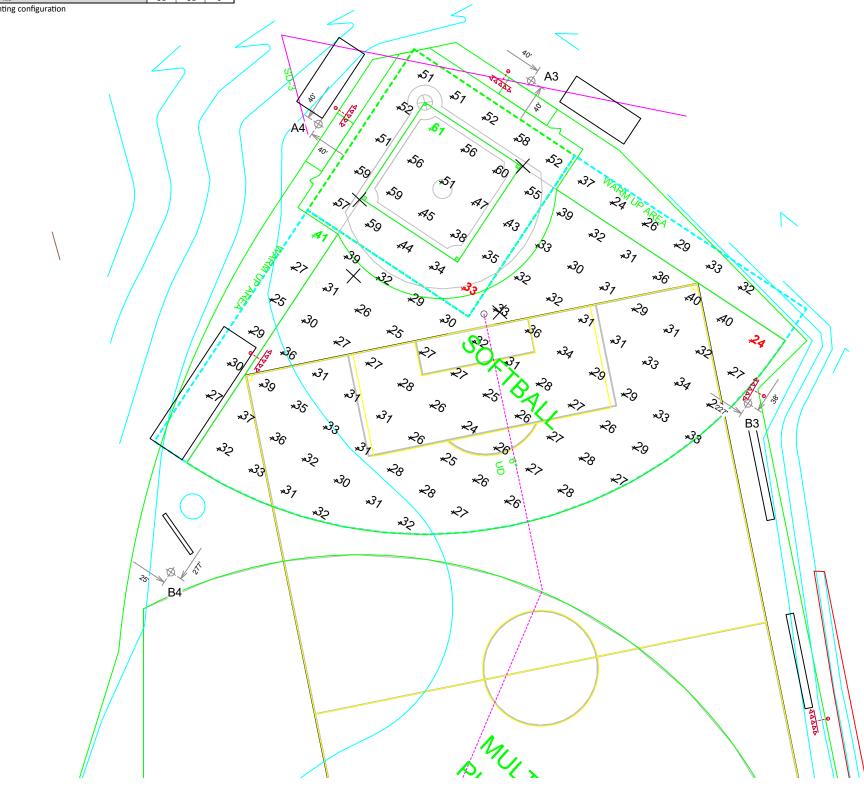
EQUIPMENT LIST FOR AREAS SHOWN									
	Pole			Luminaires					
QTY	LOCATION	SIZE	GRADE ELEVATION	Mounting Height	LUMINAIRE TYPE	QTY / POLE	THIS GRID	OTHER GRIDS	
1	A3	60'	-	15'	TLC-LED-675	1	1	0	
				60'	TLC-LED-1150	3	3	0	
1	A4	60'	1'	16'	TLC-LED-675	1	1	0	
				61'	TLC-LED-1150	3	3	0	
1	B3	80'	-1'	14'	TLC-LED-675	2	2	0	
				79'	TLC-LED-1150	9	9	0	
1	B4	80'	2'	17'	TLC-LED-675	1/1*	2	0	
				82'	TLC-LED-1150	8/2*	10	0	
4			TOTALS			31	31	0	

\* This structure utilizes a back-to-back mounting configuration

SCALE IN FEET 1:50

50'

( )



#### **Central Maine Community College Athletic Fields** Auburn,ME

GRID SUMMARY						
Name:	Softball					
Size:	225'/225'/22	225'/225'/225' - basepath 60'				
Spacing:	20.0' x 20.0'	20.0' x 20.0'				
Height:	3.0' above grade					
ILLUMINATION S						
		-	_			
MAINTAINED HORIZONTA	Infield	Outfield				
Guaranteed Average:	50	30				
Scan Average:	50.36	30.38				
Maximum:	61 41					
Minimum:	33 24					
Avg / Min:	1.53	1.27				
Guaranteed Max / Min:	2	2.5				
Max / Min:	1.86	1.73				
UG (adjacent pts):	1.34	1.66				
CU:	0.50					
No. of Points:	25	94				
LUMINAIRE INFORMATIC	N					
Color / CRI:	5700K - 75 CF	RI				
Luminaire Output:	121,000 / 48,	000 lumens				
No. of Luminaires:	31					
Total Load:	32.8 kW					
		Lum	en Maintenance			
Luminaire Type	L90 hrs	L80 hrs	L70 hrs			
TLC-LED-1150	>51,000	>51,000	>51,000			
TLC-LED-675						
TEC EED 075						

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

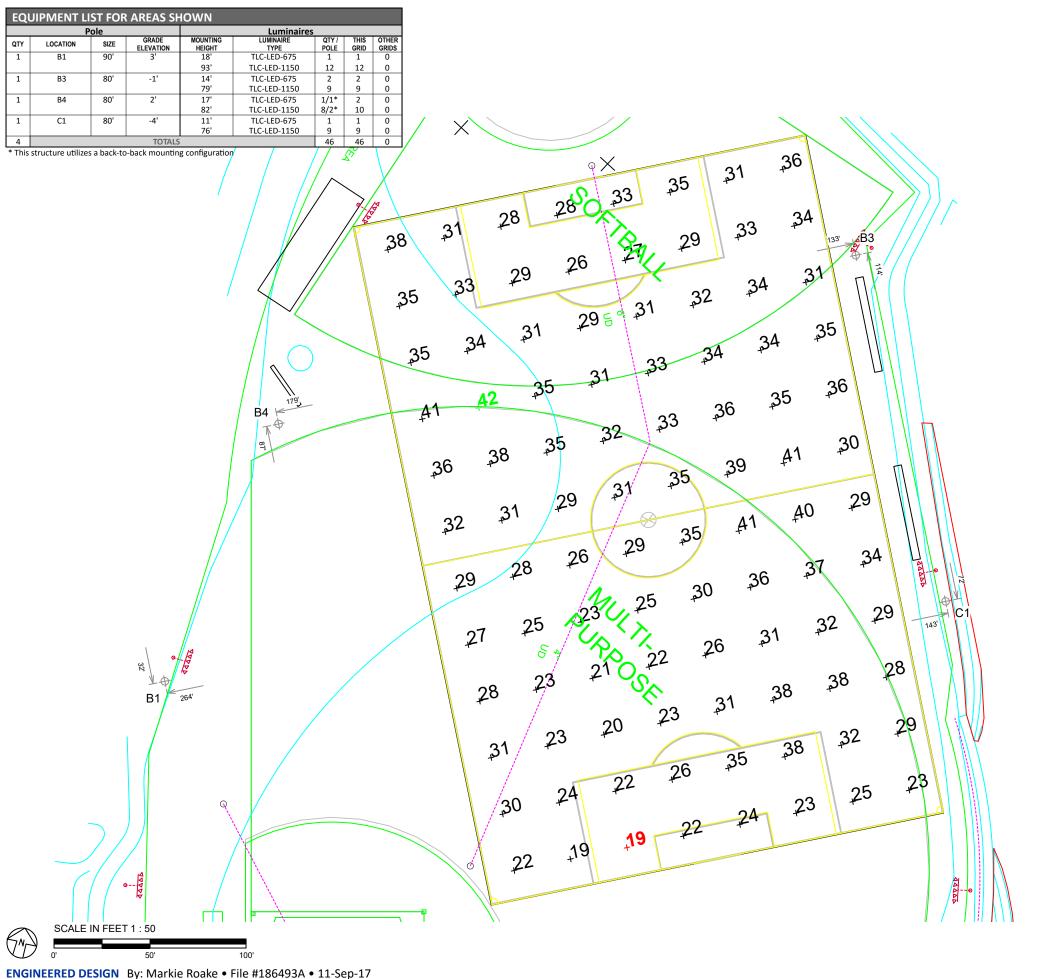
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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**ILLUMINATION SUMMARY** 



Pole location(s)  $\oplus$  dimensions are relative to 0,0 reference point(s)  $\otimes$ 

#### **Central Maine Community College Athletic Fields** Auburn,ME

<b>GRID SUMMARY</b>				
Name:	Soccer			
Size:	360' x 240'			
Spacing:	30.0' x 30.0'			
Height:	3.0' above grade			
ILLUMINATION S				
MAINTAINED HORIZONTA		5		
	Entire Grid			
Guaranteed Average:	30			
Scan Average:	30.69			
Maximum:	42			
Minimum:	19			
Avg / Min:	1.62			
Guaranteed Max / Min:	3			
Max / Min:	2.20			
UG (adjacent pts):	1.66			
CU:	0.51			
No. of Points:	96			
LUMINAIRE INFORMATIC	N			
Color / CRI:	5700K - 75 CF	RI		
Luminaire Output:	121,000 / 48,	000 lumens		
No. of Luminaires:	46			
Total Load:	50.05 kW			
		Lum	en Maintenance	
Luminaire Type	L90 hrs	L80 hrs	L70 hrs	
TLC-LED-1150	>51,000	>51,000	>51,000	
TLC-LED-675				
Reported per TM-21-11.	See luminaire da	tasheet for deta	ils.	

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

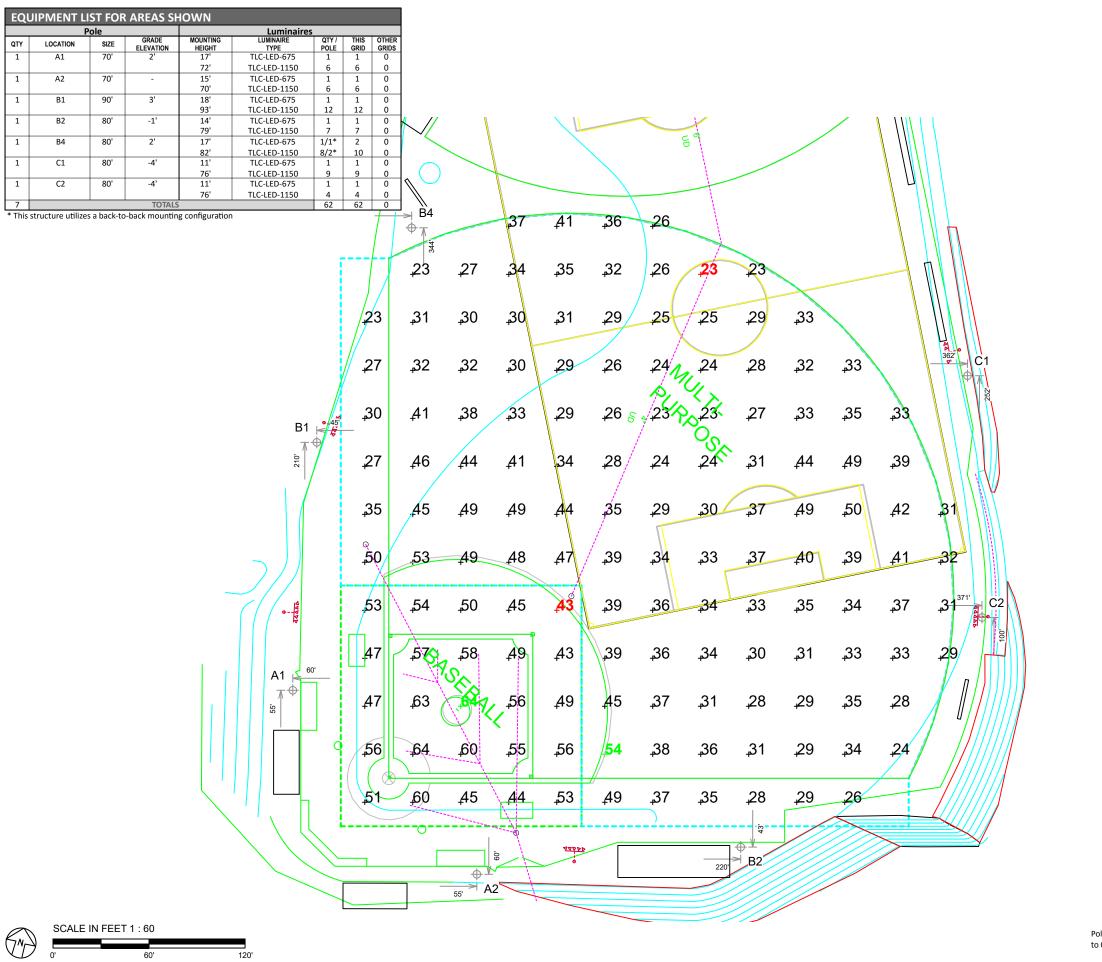
Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.



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**ILLUMINATION SUMMARY** 



ENGINEERED DESIGN By: Markie Roake • File #186493A • 11-Sep-17

to 0,0 reference point(s)  $\otimes$ 

#### **Central Maine Community College Athletic Fields** Auburn,ME

GRID SUMMARY						
Name:	Baseball					
Size:	325'/400'/32	325'/400'/325' - basepath 90'				
Spacing:	30.0' x 30.0'					
Height:	3.0' above gra	ade				
ILLUMINATION S						
MAINTAINED HORIZONTA		-				
	Infield	Outfield				
Guaranteed Average:	50	30				
Scan Average:	52.97	34.14				
Maximum:	64	54				
Minimum:	43 23					
Avg / Min:	1.24 1.48					
Guaranteed Max / Min:	2	2.5				
Max / Min:	1.51	2.33				
		1.69				
UG (adjacent pts):	1.34	1.09				
CU:	0.70					
		1.69				
CU:	0.70					
CU: No. of Points:	0.70 25	119				
CU: No. of Points: LUMINAIRE INFORMATIC	0.70 25 N 5700K - 75 CF	119				
CU: No. of Points: LUMINAIRE INFORMATIC Color / CRI:	0.70 25 N 5700K - 75 CF 121,000 / 48,	119				
CU: No. of Points: LUMINAIRE INFORMATIC Color / CRI: Luminaire Output:	0.70 25 N 5700K - 75 CF 121,000 / 48,	119				
CU: No. of Points: LUMINAIRE INFORMATIC Color / CRI: Luminaire Output: No. of Luminaires:	0.70 25 N 5700K - 75 CF 121,000 / 48, <b>62</b>	119 RI 000 lumens	en Maintenance			
CU: No. of Points: LUMINAIRE INFORMATIC Color / CRI: Luminaire Output: No. of Luminaires:	0.70 25 N 5700K - 75 CF 121,000 / 48, <b>62</b>	119 RI 000 lumens	en Maintenance L70 hrs			
CU: No. of Points: LUMINAIRE INFORMATIC Color / CRI: Luminaire Output: No. of Luminaires: Total Load:	0.70 25 N 5700K - 75 CF 121,000 / 48, <b>62</b> 67.5 kW	119 RI 000 lumens Lum				
CU: No. of Points: LUMINAIRE INFORMATIC Color / CRI: Luminaire Output: No. of Luminaires: Total Load: Luminaire Type	0.70 25 N 5700K - 75 CF 121,000 / 48, <b>62</b> 67.5 kW	119 RI 000 lumens Lum	L70 hrs			

Guaranteed Performance: The ILLUMINATION described above is guaranteed per your Musco Warranty document and includes a 0.95 dirt depreciation factor.

Field Measurements: Individual field measurements may vary from computer-calculated predictions and should be taken in accordance with IESNA RP-6-15.

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

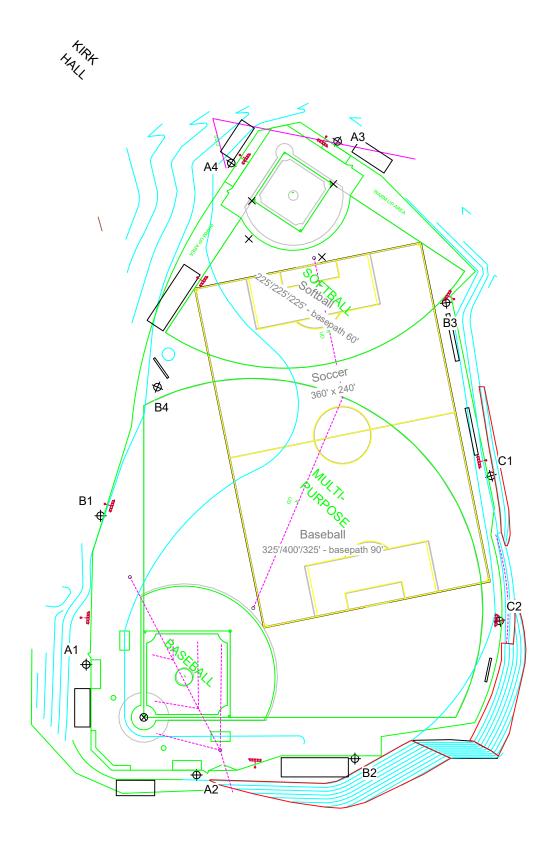
Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

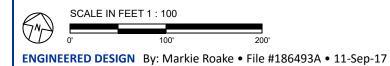


Pole location(s)  $\oplus$  dimensions are relative

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**ILLUMINATION SUMMARY** 





Pole location(s)  $\Phi$  dimensions are relative to 0,0 reference point(s)  $\otimes$ 

#### **Central Maine Community College Athletic Fields** Auburn,ME

### EQUIPMENT LAYOUT

- INCLUDES: · Baseball
- · Soccer
- · Softball

Electrical System Requirements: Refer to Amperage Draw Chart and/or the "Musco Control System Summary" for electrical sizing.

Installation Requirements: Results assume ± 3% nominal voltage at line side of the driver and structures located within 3 feet (1m) of design locations.

EQUIPMENT LIST FOR AREAS SHOWN								
	Pole				Luminaires			
QTY	LOCATION	SIZE	GRADE ELEVATION	Mounting Height	LUMINAIRE TYPE	QTY / POLE		
1	A1	70'	2'	17'	TLC-LED-675	1		
				72'	TLC-LED-1150	6		
1	A2	70'	-	15'	TLC-LED-675	1		
				70'	TLC-LED-1150	6		
1	A3	60'	-	15'	TLC-LED-675	1		
				60'	TLC-LED-1150	3		
1	A4	60'	1'	16'	TLC-LED-675	1		
				61'	TLC-LED-1150	3		
1	B1	90'	3'	18'	TLC-LED-675	1		
				93'	TLC-LED-1150	12		
1	B2	80'	-1'	14'	TLC-LED-675	1		
				79'	TLC-LED-1150	7		
1	B3	80'	-1'	14'	TLC-LED-675	2		
				79'	TLC-LED-1150	9		
1	B4	80'	2'	17'	TLC-LED-675	1/1*		
				82'	TLC-LED-1150	8/2*		
1	C1	80'	-4'	11'	TLC-LED-675	1		
				76'	TLC-LED-1150	9		
1	C2	80'	-4'	11'	TLC-LED-675	1		
				76'	TLC-LED-1150	4		
10			TOTAL	S		81		
* Thi	s structure ut	ilizes a	back-to-bacl	k mounting o	configuration			

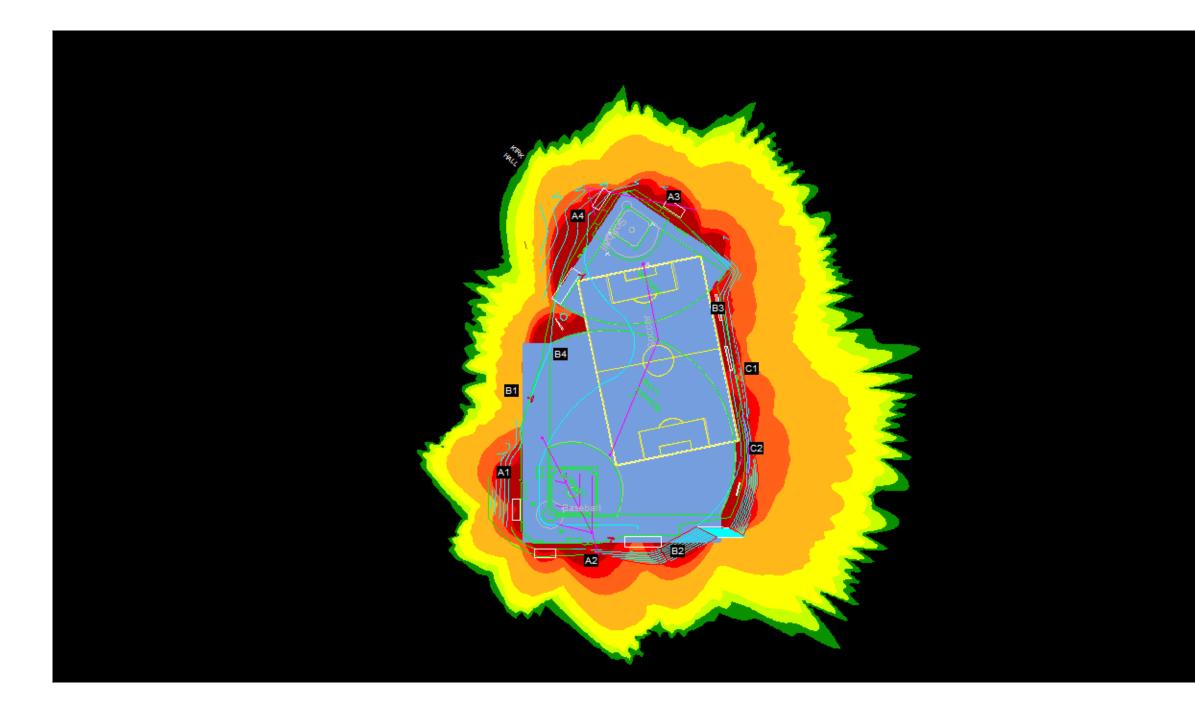
١g nfigu

SINGLE LUMINAIRE AMPERAGE DRAW CHART							
Ballast Specifications (.90 min power factor)	Line Amperage Per Luminaire (max draw)						
Single Phase Voltage	208 (60)	220 (60)	240 (60)	277 (60)	347 (60)	380 (60)	480 (60)
TLC-LED-1150	7.0	6.6	6.1	5.2	4.2	3.8	3.0
Other	-	-	-	-	-	-	-



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**EQUIPMENT LAYOUT** 



Candelas:						
	,000 100,0	000 50,000	5,000	1,00	00 500	

# Central Maine Community College Athletic Fields Auburn, ME

## GLARE IMPACT

Summary

Map indicates the maximum candela an observer would see when facing the brightest light source from any direction.

A well-designed lighting system controls light to provide maximum useful on-field illumination with minimal destructive off-site glare.

### GLARE

Candela Levels

# High Glare: 150,000 or more candela

Should only occur on or very near the lit area where the light source is in direct view. Care must be taken to minimize high glare zones.

Significant Glare: 25,000 to 75,000 candela Equivalent to high beam headlights of a car.

**Minimal to No Glare: 500 or less candela** Equivalent to 100W incandescent light bulb.



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**ENVIRONMENTAL GLARE IMPACT** 

# REPORT

# 16-0926

September 8, 2016

# Explorations and Geotechnical Engineering Services

Proposed Athletic Field Improvements CMCC Campus Auburn, Maine

# **Prepared For:**

Central Maine Community College Attention: Pamela J. Remieres-Morin Dean of Finance and General Services 1250 Turner Street Auburn, ME 04210

# Prepared By:

S. W. Cole Engineering, Inc. 286 Portland Road Gray, ME 04039 207-657-2866



# • Geotechnical Engineering

- Construction Materials Testing and Special Inspections
- GeoEnvironmental Services
- Test Boring Explorations

# www.swcole.com

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Attachment A	Limitations
Sheet 1	Exploration Location Plan
Sheets 2 - 10	Exploration Logs
Sheet 11	Key to Notes and Symbols
Sheets 12 - 14	Laboratory Test Results

## www.swcole.com



16-0926

September 8, 2016

Central Maine Community College Attention: Pamela J. Remieres-Morin Dean of Finance and General Services 1250 Turner Street Auburn, ME 04210

Subject: Explorations and Geotechnical Engineering Services Proposed Athletic Field Improvements CMCC Campus Auburn, Maine

Dear Pamela:

In accordance with our Proposal, dated August 15, 2016, we have performed subsurface explorations for the subject project. This report summarizes our findings and geotechnical recommendations and its contents are subject to the limitations set forth in Attachment A.

# **1.0 INTRODUCTION**

# 1.1 Scope and Purpose

The purpose of our services was to obtain subsurface information and soil infiltration rates at the site for use in site and stormwater management design by Sebago Technics Inc. (STI, project civil engineer). Our scope of services included test boring explorations, field infiltration testing, soils laboratory testing, a geotechnical assessment of the subsurface findings and preparation of this report.

# **1.2 Proposed Construction**

Based on the information provided, we understand the existing natural turf athletic field on the CMCC Campus in Auburn, Maine will be expanded and improved with a synthetic turf field. Conceptual grading and drainage plans call for re-grading of the site and infiltration of stormwater runoff. We understand re-grading may require cuts and fills approaching 4

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feet. Details regarding infiltration areas are not yet available. Proposed and existing site features are shown on the "Exploration Location Plan" attached as Sheet 1.

# 2.0 EXPLORATION AND TESTING

# 2.1 Explorations

Nine test borings (B-101 through B-109) were made at the site on August 26, 2016 by S. W. Cole Explorations, LLC, a subsidiary of S. W. Cole Engineering, Inc. (S.W.COLE). The exploration locations were selected and established in the field by S.W.COLE based on measurements from existing site features. The approximate exploration locations are shown on the "Exploration Location Plan" attached as Sheet 1. Logs of the explorations are attached as Sheets 2 through 10. A key to the notes and symbols used on the logs is attached as Sheet 11.

# 2.2 Testing

The explorations were made using a combination of solid-stem auger and cased wash boring drilling methods. The soils were sampled at 2 to 5 foot intervals using a split spoon sampler and Standard Penetration Test (SPT) methods. Pocket Penetrometer Tests (PPT) were performed on split spoon samples where stiffer clays were encountered. SPT blow counts and PPT results are noted on the logs.

Falling head permeability tests were performed in test borings B-102, B-107 and B-109 to measure in-situ infiltration rates. The test depth and infiltration rate are noted on these logs.

Soil samples obtained from the explorations were returned to our laboratory for classification and testing. The results of two gradation tests and one hydrometer test are attached as Sheets 12, 13 and 14.

# 3.0 SUBSURFACE CONDITIONS

# 3.1 Soil and Bedrock

Below a surficial layer of forest duff or topsoil, the test borings encountered a soil profile generally consisting of layered sand and clay. Bedrock was not encountered within the



depth explored at the exploration locations. Not all the strata were encountered at each exploration; refer to the attached logs for more detailed subsurface information.

# 3.2 Groundwater

The soils encountered at the test borings were moist from the ground surface. Wet to saturated soils were encountered in borings B-102, B-103, B-108 and B-109 at depths varying from 4 to 10 feet. Groundwater likely becomes perched on the relatively impervious silty clay layers encountered in the test borings. Long term groundwater information is not available. It should be anticipated that groundwater levels will fluctuate, particularly in response to periods of snowmelt and precipitation, as well as changes in site use.

# 3.3 Frost

The design Air Freezing Index for the Auburn, Maine area is about 1,401-Fahrenheit degree-days, which corresponds to a frost penetration depth on the order of 4.5 feet.

# 4.0 EVALUATION AND RECOMMENDATIONS

In our opinion, the proposed construction appears feasible from a geotechnical standpoint. We offer the following comments:

# 4.1 Earthwork Considerations

We recommend installation of erosion control measures prior to beginning earthwork. All organics, roots and stumps must be removed from areas of proposed construction and beneath fill areas prior to installing new compacted fills, foundations, slabs and pavements. Similarly, we recommend removal of existing foundations and utilities from beneath areas of proposed construction and compacted fills.

Based on the subsurface findings and our understanding of the proposed construction, we anticipate site grading will predominately be performed using on-site materials with imported materials for base drainage layers under the synthetic field. The on-site silty clays and silty sands are moisture sensitive and frost susceptible and best reused during drier, non-freezing conditions in Spring, Summer and Fall.

<u>Placement and Compaction</u>: Fill should be placed in horizontal lifts and compacted such that the desired density is achieved throughout the lift thickness with 3 to 5 passes



of the compaction equipment. Loose lift thicknesses should not exceed 12 inches and is dependent of compaction equipment and material type. We recommend fill be compacted to at least 92 percent of its maximum dry density as determined by ASTM D-1557 (Modified Proctor). Crushed Stone, if used, should be compacted with a vibratory plate compactor having a static weight of at least 500 pounds.

# 4.2 Underdrain & Infiltration Considerations

Based on the subsurface findings and our understanding of the proposed construction, we recommend a perimeter underdrain on the upslope side of the baseball and multiuse fields. The underdrains will help to intercept groundwater that may be encountered upslope as well as help to mitigate frost action.

We recommend the cut slope for the baseball field backstop area be covered with a drainage blanket of underdrain sand to help mitigate groundwater that may break-out in the slope. The drainage blanket should be drained to the recommended perimeter underdrains.

The native sands are pervious in undisturbed and remolded states, while the silty clays are relatively impervious. A field permeability test was attempted at B-107 however, the underlying sands accepted about 100 gallons of water without reaching a saturated status. Based on field permeability testing, we recommend the infiltration system consider a saturated infiltration rate of  $3.1 \times 10^{-5}$  cm/sec (0.044 in/hour) in the native sands at B-109 and B-107. At B-102, we recommend an infiltration rate of  $4.0 \times 10^{-8}$  cm/sec (0.0001 in/hour) in the native silty clays.

# **4.3 Weather Considerations**

We recommend earthwork activities occur during drier, non-freezing weather conditions of Spring, Summer and Fall. Earthwork activity should be limited during wet weather and the site soils may require drying before construction activities may continue. Earthwork and grading activities during freezing weather should not be undertaken. The contractor should anticipate the need for water to temper fill in order to facilitate compaction during dry weather. During cold weather, fill surfaces and soil stockpiles must be protected from freezing.



# 4.4 Design Review and Construction Testing

S.W.COLE should be retained to review construction documents to determine that our earthwork recommendations have been properly interpreted and implemented.

A soils testing program should also be implemented during construction to observe compliance with the design concepts, plans, and specifications. S.W.COLE is available to observe earthwork activities as well as provide field and laboratory testing of soil and concrete materials during construction.

# 5.0 CLOSURE

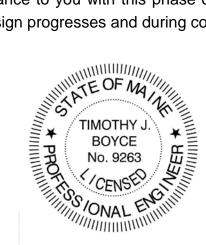
It has been a pleasure to be of assistance to you with this phase of your project. We look forward to working with you as design progresses and during construction.

Sincerely,

S. W. Cole Engineering, Inc.

Timothy J. Boyce, P.E. Senior Geotechnical Engineer

MAS:tjb



# Attachment A Limitations

This report has been prepared for the exclusive use of Central Maine Community College (CMCC) for specific application to the proposed Athletic Field Improvements at the CMCC Campus in Auburn, Maine. S. W. Cole Engineering, Inc. (S.W.COLE) has endeavored to conduct our services in accordance with generally accepted soil and foundation engineering practices. No warranty, expressed or implied, is made.

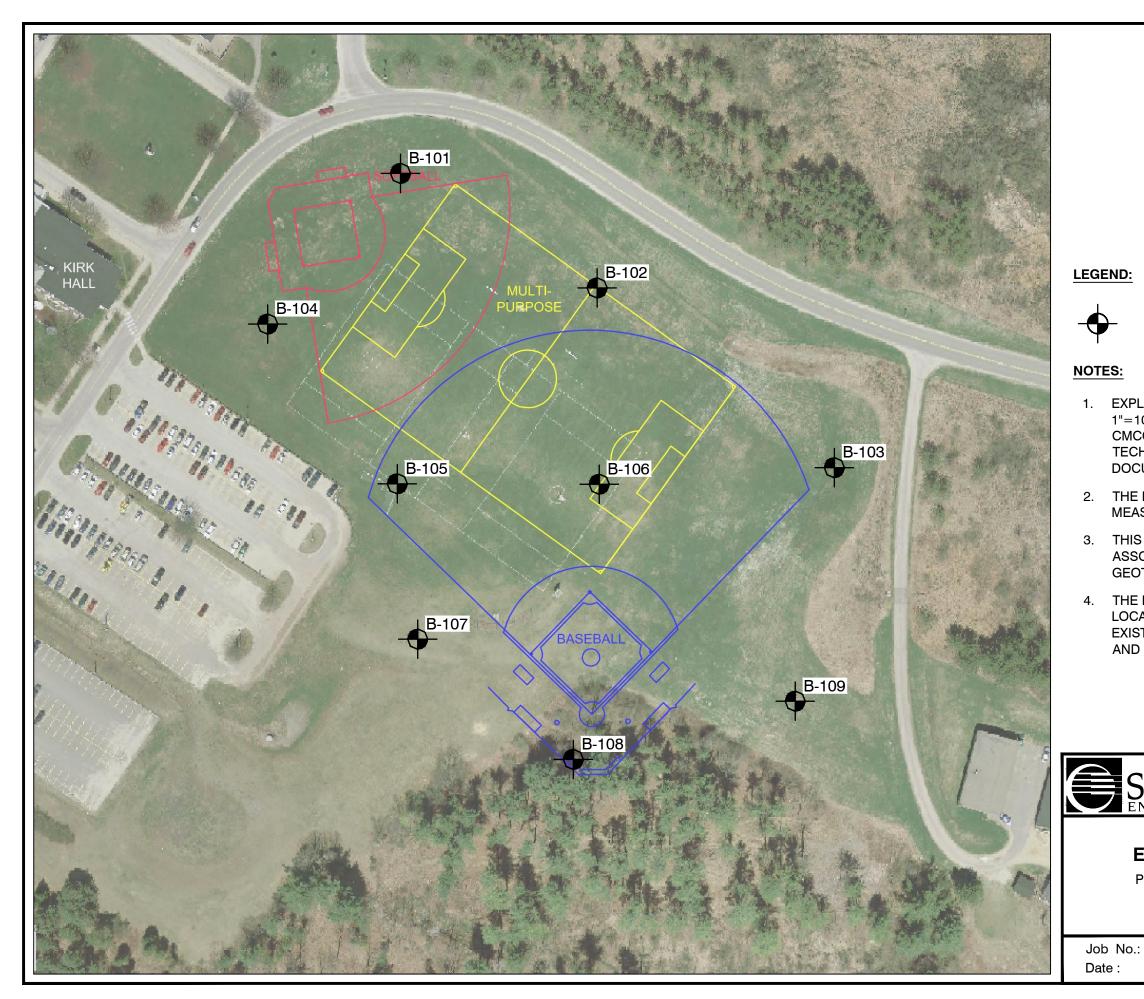
The soil profiles described in the report are intended to convey general trends in subsurface conditions. The boundaries between strata are approximate and are based upon interpretation of exploration data and samples.

The analyses performed during this investigation and recommendations presented in this report are based in part upon the data obtained from subsurface explorations made at the site. Variations in subsurface conditions may occur between explorations and may not become evident until construction. If variations in subsurface conditions become evident after submission of this report, it will be necessary to evaluate their nature and to review the recommendations of this report.

Observations have been made during exploration work to assess site groundwater levels. Fluctuations in water levels will occur due to variations in rainfall, temperature, and other factors.

S.W.COLE's scope of services has not included the investigation, detection, or prevention of any Biological Pollutants at the project site or in any existing or proposed structure at the site. The term "Biological Pollutants" includes, but is not limited to, molds, fungi, spores, bacteria, and viruses, and the byproducts of any such biological organisms.

Recommendations contained in this report are based substantially upon information provided by others regarding the proposed project. In the event that any changes are made in the design, nature, or location of the proposed project, S.W.COLE should review such changes as they relate to analyses associated with this report. Recommendations contained in this report shall not be considered valid unless the changes are reviewed by S.W.COLE.



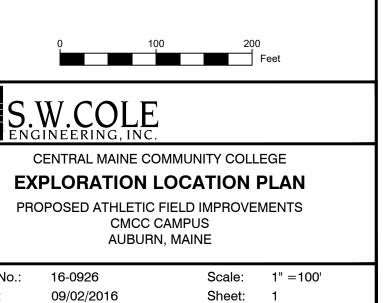
# APPROXIMATE BORING LOCATION

1. EXPLORATION LOCATION PLAN WAS PREPARED FROM A 1"=100' SCALE PLAN OF THE SITE ENTITLED "EXHIBIT OF CMCC ATHLETIC FIELDS," PREPARED BY SEBAGO TECHNIC, INC., AND PROVIDED AS A PORTABLE DOCUMENT FORMAT (PDF) FILE.

2. THE BORINGS WERE LOCATED IN THE FIELD BY TAPED MEASUREMENTS FROM EXISTING SITE FEATURES.

3. THIS PLAN SHOULD BE USED IN CONJUNCTION WITH THE ASSOCIATED S. W. COLE ENGINEERING, INC. GEOTECHNICAL REPORT.

4. THE PURPOSE OF THIS PLAN IS ONLY TO DEPICT THE LOCATION OF THE EXPLORATIONS IN RELATION TO THE EXISTING CONDITIONS AND PROPOSED CONSTRUCTION AND IS NOT TO BE USED FOR CONSTRUCTION.





SSA

SS

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

SIZE I.D. HAMMER WT. HAMMER FALL

30"

140#

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

4 1/2" O.D.

1 3/8"

# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO .:	B-101
SHEET:	1 OF 1
PROJECT NO .:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	

SWC REP.:	

M. ST. PIERRE WATER LEVEL INFORMATION

NO FREE WATER OBSERVED

SAMPLER: CORE BARREL:

CASING:

LOCATION:

DRILLING CO. :

CASING BLOWS	PER NO BEN REC		1PLE		SAMPLER BLOWS PER 6"			PER 6"	DEDTU	STRATA & TEST DATA			
PER FOOT	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24	DEPTH	SIRATA & TEST DATA			
									0.8'	BROWN FINE SANDY SILT, SOME CLAY WITH GRASS & ROOTS (TOPSOIL)			
	1D	24"	19"	2.0'	5	6	8	8		BROWN SANDY SILT, SOME CLAY			
									3.0'	~VERY STIFF~			
	2D	24"	17"	4.0'	6	11	13	15					
										BROWN SILTY FINE SAND WITH FREQUENT FINE SANDY SILT SEAMS			
										~MEDIUM DENSE~			
	3D	24"	24"	7.0'	4	8	9	9					
-													
										BOTTOM OF EXPLORATION AT 7'			
SAMPL	ES			SOIL C		EIED B.	٧·		REMAR	Kč.			
D = SPL		ON			1001								
C = 2" S					DRI	LLER -	VISUAI	LLY		STRATIFICATION LINES REPRESENT THE (2)			
S = 3" S				Х			I VISI			APPROXIMATE BOUNDARY BETWEEN SOIL TYPES			
U = 3.5"	SHELE	BY TUB	E		LAB	ORATO	ORY TE	ST		AND THE TRANSITION MAY BE GRADUAL. BORING NO.: B-101			



HW

SS

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

SIZE I.D. HAMMER WT. HAMMER FALL

30"

140#

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

4"

1 3/8"

# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO.:	B-102
SHEET:	1 OF 1
PROJECT NO.:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	
SWC REP.:	M. ST. PIERRE

SWC REP.:	
00	

WATER LEVEL INFORMATION

SOILS WET BELOW ±7'

SAMPLER: CORE BARREL:

CASING:

LOCATION:

DRILLING CO. :

CASING BLOWS			SAMPLER BLOWS PER 6"					οτρατά ο τεστ σάτα								
PER FOOT	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA						
				0.50.					0.3	BROWN FINE SANDY SILTY WITH GRASS & ROOTS (TOPSOIL)						
							BROWN SILTY FINE SAND									
									3.0'	~LOOSE~						
	2D	24"	24"	4.0'	3	3	5	5		BROWN FINE SANDY SILT OCCASIONAL SILTY CLAY SEAMS						
									4.5'	~LOOSE~						
	3D	24"	24"	6.0'	9	9	11	14		BROWN SILTY CLAY q <sub>p</sub> = 7.5-8 ksf						
										~VERY STIFF~						
	4D	24"	18"	8.0'	4	6	8	10	7.5'	q <sub>p</sub> = 4.5-5 ksf						
										BROWN FINE SAND WITH FREQUENT SILTY CLAY SEAMS						
	5D	24"	20"	10.0'	8	10	10	12		~MEDIUM DENSE~						
	-								-	BOTTOM OF EXPLORATION AT 10'						
										INFILTRATION TEST AT $\pm 6^{\circ}$ k = 4.0 X 10 <sup>-8</sup> cm/sec						
										$R = 4.0 \times 10$ CIT/Sec						
									-							
									-							
									-							
SAMPLI	ES:			SOIL C	LASSI	FIED B	Y:		REMAR	KS: FALLING HEAD PERMEABILITY TEST MADE AT ±6'						
D = SPL		ON		-												
C = 2" S	HELBY	TUBE			DRI	LLER -	VISUA	LLY		STRATIFICATION LINES REPRESENT THE (3)						
S = 3" S	HELBY	TUBE		Х	SOI	L TECH	I VISI	JALLY		APPROXIMATE BOUNDARY BETWEEN SOIL TYPES						
U = 3.5"	SHELE	BY TUE	BE		LAE	ORATO	ORY TE	ST		AND THE TRANSITION MAY BE GRADUAL. BORING NO.: B-102						



SSA

SS

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

SIZE I.D. HAMMER WT. HAMMER FALL

140#

30"

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

4 1/2" O.D.

1 3/8"

# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO.:	B-103
SHEET:	1 OF 1
PROJECT NO.:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	

SWC REP.:	

M. ST. PIERRE WATER LEVEL INFORMATION

SOILS WET BELOW ±6'

SAMPLER:

CASING:

LOCATION:

DRILLING CO. :

CORE BARREL:

CASING BLOWS	BLOWS				SAM	SAMPLER BLOWS PER 6"				οτρατά ο τεστ σάτα						
PER FOOT	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA						
									0.7'	BROWN FINE SANDY SILT WITH GRASS & ROOTS(TOPSOIL)	RASS & ROOTS(TOPSOIL)					
	1D	24"	20"	2.0'	2	6	7	8								
										BROWN SILTY CLAY WITH FINE SAND PARTINGS						
	2D	24"	24"	4.0'	13	15	19	21		$\sim$ HARD $\sim$ q <sub>p</sub> > 9 k	sf					
	<b>0</b> D	0.4"	0.4"	7.01	•	40	40	40			5-7.5 ksf					
	3D	24"	24"	7.0'	8	10	12	12		$\sim$ STIFF~ $q_p = 3.5$	5-4.5 ksf					
										BOTTOM OF EXPLORATION AT 7'						
-																
SAMPL	= Q.			SOIL C			<b>√</b> .	1	REMAR	Kč.						
D = SPL		ON									$\frown$					
C = 2" S					DRI	LLER -	VISUAI	LLY		STRATIFICATION LINES REPRESENT THE	(4)					
S = 3" S	HELBY	TUBE		Х		L TECH				APPROXIMATE BOUNDARY BETWEEN SOIL TYPES	$\smile$					
U = 3.5"	SHELE	BY TUB	E		LAB	ORATO	ORY TE	ST		ND THE TRANSITION MAY BE GRADUAL. BORING NO.: B						



SSA

SS

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

SIZE I.D. HAMMER WT. HAMMER FALL

30"

140#

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

4 1/2" O.D.

1 3/8"

# **BORING LOG**

DRILLER: KEVIN HANSCOM

B-104
1 OF 1
16-0926
8/26/2016
8/26/2016

SWC REP.:

M. ST. PIERRE

WATER LEVEL INFORMATION NO FREE WATER OBSERVED

SAMPLER: CORE BARREL:

CASING:

LOCATION:

DRILLING CO. :

CASING BLOWS	.OWS				SAMPLER BLOWS PER 6"					STRATA & TEST DATA			
PER FOOT	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24	DEPTH	SIRAIA & IESI DATA			
									0.5'	BROWN FINE SANDY SILT WITH GRASS & ROOTS (TOPSOIL)			
	1D	24"	24"	2.0'	2	4	4	5		BROWN SILTY FINE SAND			
	2D	24"	20"	4.0'	6	11	14	14	3.5'	~MEDIUM DENSE~			
					-					BROWN FINE SAND SOME SILT WITH OCCASIONAL FINE SANDY SILT SEAMS			
	3D	24"	24"	7.0'	5	7	9	11					
					10					~MEDIUM DENSE~			
	4D	24"	20"	9.0'	13	14	14	15					
									1				
										BOTTOM OF EXPLORATION AT 9'			
									1				
SAMPL				SOIL C	LASSI	FIED B	Y:		REMAR	KS:			
D = SPL													
C = 2" S				V		LLER -				STRATIFICATION LINES REPRESENT THE (5)			
		Y TUBE X								APPROXIMATE BOUNDARY BETWEEN SOIL TYPES			
U = 3.5" SHELBY TUBE					LAE	SORAT	<b>ΙΕ</b>	51	1	AND THE TRANSITION MAY BE GRADUAL. BORING NO.: B-104			



SSA

SS

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

SIZE I.D. HAMMER WT. HAMMER FALL

30"

140#

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

4 1/2" O.D.

1 3/8"

# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO.:	B-105
SHEET:	1 OF 1
PROJECT NO.:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	

ST. PIERRE

s	W	/C	R	Е	Ρ.	:			Μ			
_							_	_				7

WATER LEVEL INFORMATION NO FREE WATER OBSERVED

SAMPLER: CORE BARREL:

CASING:

LOCATION: DRILLING CO. :

CASING SAMPLE SAMPLER BLOWS PER 6" BLOWS **STRATA & TEST DATA** DEPTH PER DEPTH 6-12 12-18 NO. PEN. REC. 0-6 18-24 FOOT @ BOT BROWN SANDY SILT WITH GRASS & ROOTS (TOPSOIL) 0.7 1D 24" 24" 2.0' 2 2 4 7 ~LOOSE~ 2D 24" 22" BROWN FINE SAND, SOME SILT 4.0' 6 8 9 9 ~MEDIUM DENSE~ 3D 24" 24" 7.0' 5 5 6 7 BOTTOM OF EXPLORATION AT 7' SOIL CLASSIFIED BY: REMARKS: SAMPLES: D = SPLIT SPOON 6 C = 2" SHELBY TUBE DRILLER - VISUALLY STRATIFICATION LINES REPRESENT THE S = 3" SHELBY TUBE Х SOIL TECH. - VISUALLY APPROXIMATE BOUNDARY BETWEEN SOIL TYPES U = 3.5" SHELBY TUBE LABORATORY TEST AND THE TRANSITION MAY BE GRADUAL. BORING NO .: B-105



SSA

SS

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

SIZE I.D. HAMMER WT. HAMMER FALL

30"

140#

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

4 1/2" O.D.

1 3/8"

# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO.:	B-106
SHEET:	1 OF 1
PROJECT NO .:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	

SWC REP.:	M. ST. PIERRE

WATER LEVEL INFORMATION

NO FREE WATER OBSERVED

SAMPLER: CORE BARREL:

CASING:

LOCATION: DRILLING CO. :

CASING SAMPLE SAMPLER BLOWS PER 6" BLOWS **STRATA & TEST DATA** DEPTH PER DEPTH NO. PEN. REC. 0-6 6-12 12-18 18-24 FOOT @ BOT BROWN FINE SANDY SILT WITH GRASS & ROOTS (TOPSOIL) 0.4' 1D 24" 16" 2.0' 2 3 5 5 BROWN FINE SAND, SOME SILT 2D 24" 4 20" 4.0' 3 4 3 ~LOOSE~ 3D 24" 19" 7.0' 2 3 3 5 BOTTOM OF EXPLORATION AT 7' SOIL CLASSIFIED BY: REMARKS: SAMPLES: D = SPLIT SPOON 7 C = 2" SHELBY TUBE DRILLER - VISUALLY STRATIFICATION LINES REPRESENT THE S = 3" SHELBY TUBE Х SOIL TECH. - VISUALLY APPROXIMATE BOUNDARY BETWEEN SOIL TYPES U = 3.5" SHELBY TUBE LABORATORY TEST AND THE TRANSITION MAY BE GRADUAL. BORING NO .: B-106



# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO .:	B-107
SHEET:	1 OF 1
PROJECT NO .:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	
SWC REP.:	M. ST. PIERRE

WATER LEVEL INFORMATION

NO FREE WATER OBSERVED

TYPE	SIZE I.D.	HAMMER WI.H	AMMER FALL
HW	4"		
SS	1 3/8"	140#	30"

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

SAMPLER: CORE BARREL:

CASING:

LOCATION:

DRILLING CO. :

CASING BLOWS SAMPLE		SAMPLER BLOWS PER 6"								
PER FOOT	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA
									0.8'	BROWN FINE SANDY SILT WITH GRASS & ROOTS (TOPSOIL)
	1D	24"	18"	2.0'	3	4	5	4		BROWN FINE SAND, SOME SILT
									3.0'	~LOOSE~
	2D	24"	16"	4.0'	3	3	4	4		
										BROWN FINE SAND, SOME SILT WITH OCCASIONAL SILTY FINE SAND SEAMS
	3D	24"	17"	6.0'	3	3	3	3		
	40	0.4"	45"	0.01	4	0	0	0		~LOOSE~
	4D	24"	15"	8.0'	1	2	3	2		
										BOTTOM OF EXPLORATION AT 8'
										INFILTRATION TEST AT ±6'
										SOILS ACCEPTED ±100 GALLONS WITHOUT SATURATION
SAMDI	=0.	L	L	SOUL C			v.	1	REMAR	KS: FALLING HEAD PERMEABILITY TEST MADE AT ±6'
SAMPLES: SOIL CLASSIFIED BY: D = SPLIT SPOON					IEDB	1.				
C = 2" S					DRI	LLER -	VISUAI	LLY		STRATIFICATION LINES REPRESENT THE (8)
S = 3" S				Х						APPROXIMATE BOUNDARY BETWEEN SOIL TYPES
U = 3.5"						SOIL TECH VISUALLY LABORATORY TEST				AND THE TRANSITION MAY BE GRADUAL. BORING NO.: B-107



SSA

SS

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

SIZE I.D. HAMMER WT. HAMMER FALL

30"

140#

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

4 1/2" O.D.

1 3/8"

# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO .:	B-108
SHEET:	1 OF 1
PROJECT NO .:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	
SWC REP.:	M. ST. PIERRE

SWC RE	P.:

WATER LEVEL INFORMATION SOILS WET BELOW ±10'

SAMPLER:

CASING:

LOCATION:

DRILLING CO. :

CORE BARREL:

CASING BLOWS		SAN	IPLE		SAMF	PLER BL	OWS P	ER 6"	DEDTU	CTDATA & TECT DATA	
PER FOOT	NO.	PEN.	REC.	DEPTH @ BOT	0-6	6-12	12-18	18-24	DEPTH	STRATA & TEST DATA	
									0.5	FOREST DUFF/BROWN FINE SANDY SILT WITH ORGANICS (TOPSOIL)	
	1D	24"	17"	2.0'	2	3	7	7		BROWN SILTY FINE SAND	
									2.5'	~LOOSE TO MEDIUM DENSE~	
	2D	24"	15"	4.0'	4	4	4	5		BROWN FINE SAND, SOME SILT	
									5.0'	~LOOSE~	
										FINE TO MEDIUM SAND, SOME SILT	
	3D	24"	20"	7.0'	6	7	8	10		~MEDIUM DENSE ~	
									7.3'		
	4D	24"	24"	9.0'	8	14	17	16		~HARD~ $q_p > 9.0 \text{ ksf}$	
-										BROWN SILTY CLAY	
										~VERY STIFF~ $q_p = 5.0 \text{ ksf}$	
	5D	24"	16"	12.0'	3	8	19	23	11.4'		
						•			<u></u>		
										BROWN FINE TO MEDIUM SAND SOME SILT	
										~MEDIUM DENSE~	
	6D	24"	17"	17.0'	7	9	9	10			
	00	27	17	17.0	'	5	5	10			
										BOTTOM OF EXPLORATION AT 17'	
-											
SAMPL	SAMPLES: SOIL CLASSIFIED BY:				Y:		REMARK	KS:			
D = SPL		ON		•							
C = 2" S					DRI	LLER -	VISUAI	LY	9	STRATIFICATION LINES REPRESENT THE	
S = 3" S				Х		L TECH				APPROXIMATE BOUNDARY BETWEEN SOIL TYPES	ノ
					LAB	ORATO	ORY TE	ST		AND THE TRANSITION MAY BE GRADUAL. BORING NO.: B-108	
U = 3.5" SHELBY TUBE LABORATORY TEST					Bonno no B-100	,					



HW

SS

# **BORING LOG**

DRILLER: KEVIN HANSCOM

BORING NO.:	B-109
SHEET:	1 OF 1
PROJECT NO.:	16-0926
DATE START:	8/26/2016
DATE FINISH:	8/26/2016
ELEVATION:	
SWC REP.:	M. ST. PIERRE

SWC	REP.	:

WATER LEVEL INFORMATION

BORING NO .:

B-109

SOILS WET BELOW ±4'

SAMPLER:

CASING:

LOCATION:

DRILLING CO. :

CASING SAMPLE SAMPLER BLOWS PER 6" BLOWS **STRATA & TEST DATA** DEPTH PER DEPTH NO. PEN. REC. 0-6 6-12 12-18 18-24 FOOT @ BOT BROWN SILT, SOME FINE SAND, TRACE CLAY WITH GRASS & ROOTS (TOPSOIL) 0.3' 1D 24" 24" 2.0' 3 6 7 7 BROWN MOTTLED SILTY CLAY WITH FINE SAND PARTINGS ~VERY STIFF~ 24" 3.9' 2D 24" 4.0' 9 8 12 11  $q_p = 6.0-6.5 \text{ ksf}$ ~MEDIUM DENSE~ 3D 24" 17" 6.0' 8 8 7 7 4D 24" 16" 8.0' 2 2 3 3 BROWN FINE SAND, SOME SILT WITH FREQUENT FINE SANDY SILT SEAMS 17" 5D 24" 10.0' 5 ~LOOSE~ 4 4 5 BOTTOM OF EXPLORATION AT 10' INFILTRATION TEST AT ±6'  $k = 3.1 \times 10^{-5} \text{ cm/sec}$ SOIL CLASSIFIED BY: REMARKS: FALLING HEAD PERMEABILITY TEST MADE AT ±6' SAMPLES: D = SPLIT SPOON 10 C = 2" SHELBY TUBE DRILLER - VISUALLY STRATIFICATION LINES REPRESENT THE S = 3" SHELBY TUBE Х SOIL TECH. - VISUALLY APPROXIMATE BOUNDARY BETWEEN SOIL TYPES U = 3.5" SHELBY TUBE LABORATORY TEST AND THE TRANSITION MAY BE GRADUAL.

4"	SIZE I.D.	HAMMER WT. HAMMER FALL					
4 6 /0 11 4 4 6 11 0 0 0 11	4"						
1 3/8" 140# 30"	1 3/8"	140#	30"				

PROJECT / CLIENT: CMCC ATHLETIC FIELDS / CENTRAL MAINE COMMUNITY COLLEGE

CMCC CAMPUS, AUBURN, MAINE

S. W. COLE EXPLORATIONS, LLC

CORE BARREL:



• Geotechnical Engineering • Field & Lab Testing • Scientific & Environmental Consulting

# KEY TO NOTES & SYMBOLS Test Boring and Test Pit Explorations

All stratification lines represent the approximate boundary between soil types and the transition may be gradual.

# Key to Symbols Used:

- w water content, percent (dry weight basis)
- qu unconfined compressive strength, kips/sq. ft. laboratory test
- S<sub>v</sub> field vane shear strength, kips/sq. ft.
- L<sub>v</sub> lab vane shear strength, kips/sq. ft.
- q<sub>p</sub> unconfined compressive strength, kips/sq. ft. pocket penetrometer test
- O organic content, percent (dry weight basis)
- W<sub>L</sub> liquid limit Atterberg test
- W<sub>P</sub> plastic limit Atterberg test
- WOH advance by weight of hammer
- WOM advance by weight of man
- WOR advance by weight of rods
- HYD advance by force of hydraulic piston on drill
- RQD Rock Quality Designator an index of the quality of a rock mass.
- $\gamma_T$  total soil weight
- $\gamma_{\rm B}$  buoyant soil weight

### Description of Proportions:

# **Description of Stratified Soils**

		Parting:	0 to 1/16" thickness
Trace:	0 to 5%	Seam:	1/16" to 1/2" thickness
Some:	5 to 12%	Layer:	1/2" to 12" thickness
"Y"	12 to 35%	Varved:	Alternating seams or layers
And	35+%	Occasional:	one or less per foot of thickness
With	Undifferentiated	Frequent:	more than one per foot of thickness

**REFUSAL:** <u>Test Boring Explorations</u> - Refusal depth indicates that depth at which, in the drill foreman's opinion, sufficient resistance to the advance of the casing, auger, probe rod or sampler was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

**REFUSAL:** <u>Test Pit Explorations</u> - Refusal depth indicates that depth at which sufficient resistance to the advance of the backhoe bucket was encountered to render further advance impossible or impracticable by the procedures and equipment being used.

Although refusal may indicate the encountering of the bedrock surface, it may indicate the striking of large cobbles, boulders, very dense or cemented soil, or other buried natural or man-made objects or it may indicate the encountering of a harder zone after penetrating a considerable depth through a weathered or disintegrated zone of the bedrock.



**CMCC** Athletic Fields

Central Maine Community College

Auburn, ME

Existing Clay B-102, 3D 4' to 6'

**Project Name:** 

**Client:** 

**Project Location:** 

Material Source:

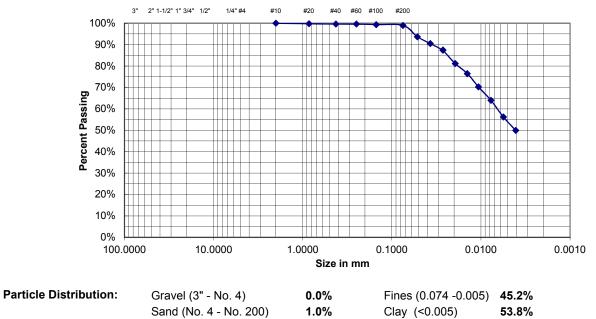
Material Description:

# **Report of Hydrometer**

ASTM D422-63 (07)

Project Number:	16-0926
Lab ID:	10085A
Date Received:	9/1/2016
Date Completed:	9/7/2016
Tested By:	N. Davis

Sieve Analysis			Hydrometer Analysis				
Sieve Size	Standard Designation (mm)	Amount Passing (%)	Specification (name)	Par	ticle Size (mm)	Amount (%	0
3"	76	100		0	0.05177	93	.7
2"	50	100		0	0.03709	90	.5
11⁄2"	38.1	100		0	.02673	87	.4
1"	25	100		0	.02673	87	.4
3/4"	19	100		0	0.01947	81	.2
1⁄2"	12.5	100		0	0.01424	76	.5
1⁄4"	6.3	100		0	.01068	70	.2
No. 4	4.75	100		0	.00774	64	.0
No. 10	2	100		0	.00561	56	.2
No. 20	0.85	100		0	.00408	50	.0
No. 40	0.425	100		0	.00298	42	.1
No. 60	0.25	100		0	.00210	35	.9
No. 100	0.15	99		0	.00126	31	.2
No. 200	0.075	99.0					



Comments	S:				
	555 Eastern Avenue, Augu	sta, ME 04330-6700	• P: (207) 626.00	600 • F: (207) 626.0700	Reviewed By E: infoaugusta@swcole.com
	Geotechnical Engineering	Construction Mate	rials Testing	GeoEnvironmental Servi	ces Ecological Services



**Report of Gradation** 

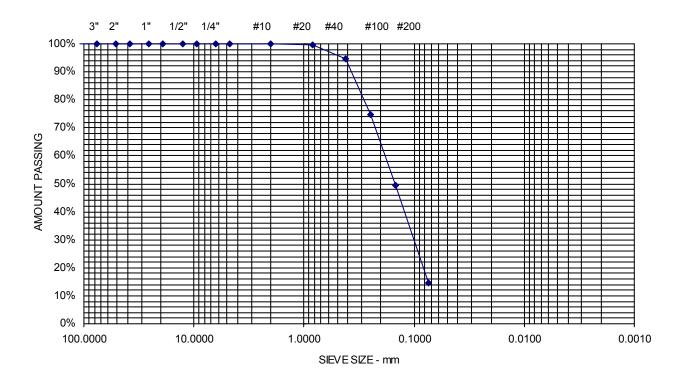
ASTM C-117 & C-136

NEIL DAVIS

Tested By

•	AUBURN ME - CMCC ATHLETIC FIELDS - GEOTECHNICAL ENGINEERING SERVICES	Project Number	16-0926
	CENTRAL MAINE COMMUNITY COLLEGE	Lab ID Date Received	10084A 9/1/2016
Material Source	B-107, 4D 6' TO 8'	Date Completed	9/7/2016

<u>STANDARD</u> DESIGNATION (mm/µm)	<u>SIEVE SIZE</u>	AMOUNT PASSING (%)	1
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
19.5 mm	3/4 1/2"	100	
9.5 mm	3/8"	100	
	3/8 1/4"	100	
6.3 mm			00/ Onevel
4.75 mm	No. 4	100	0% Gravel
2.00 mm	No. 10	100	
850 um	No. 20	100	
425 um	No. 40	95	85.3% Sand
250 um	No. 60	75	
150 um	No. 100	49	
75 um	No. 200	14.7	14.7% Fines





**Report of Gradation** 

ASTM C-117 & C-136

NEIL DAVIS

Tested By

Project Name	AUBURN ME - CMCC ATHLETIC FIELDS - GEOTECHNICAL ENGINEERING SERVICES	Project Number	16-0926
Client	CENTRAL MAINE COMMUNITY COLLEGE	Lab ID Date Received	10083A 9/1/2016
Material Source	B-109. 4D 6' TO 8'	Date Completed	9/7/2016
		Tested Dv	

<u>STANDARD</u> DESIGNATION (mm/µm)	<u>SIEVE SIZE</u>	AMOUNT PASSING (%	1
150 mm	6"	100	
125 mm	5"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	3/4 1/2"	100	
9.5 mm	3/8"	100	
	3/8 1/4"	100	
6.3 mm			
4.75 mm	No. 4	100	0% Gravel
2.00 mm	No. 10	100	
850 um	No. 20	100	
425 um	No. 40	100	31.7% Sand
250 um	No. 60	100	
150 um	No. 100	98	
75 um	No. 200	68.3	68.3% Fines

