SOUTHERN MAINE COMMUNITY COLLEGE
HORTICULTURE GREENHOUSE

MIDCOAST CAMPUS, BRUNSWICK, MAINE BGS PROJECT #3674

CONSTRUCTION DRAWINGS OCTOBER 2024

ARCADIA DESIGNWORKS

SOUTH
199 prospect street, suite A
portland, maine 04101

NORTH
26 balsam drive
Millinocket, maine 04462

PH: 207.347.5252
arcadiadesignworks.com

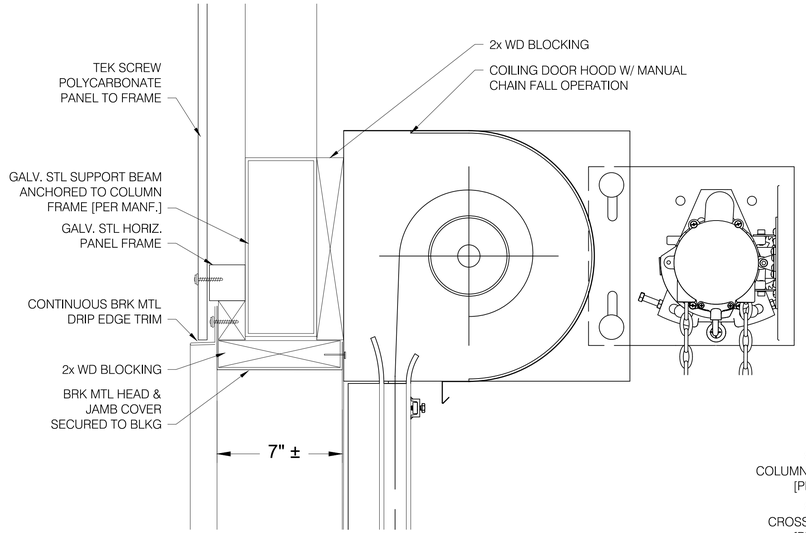
LINCOLN/HANEY ENGINEERING EST. 1984

SITELINES Civil Engineers • Land Surveyors

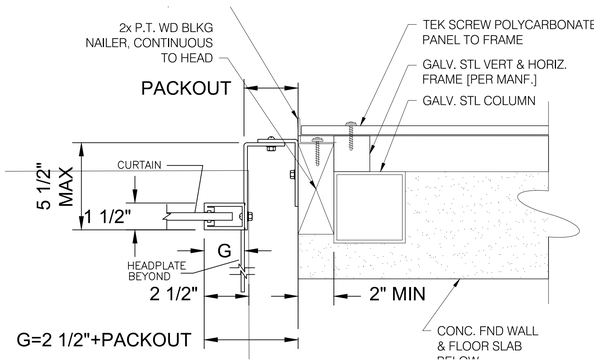
BENNETT ENGINEERING MECHANICAL • ELECTRICAL

SUMMIT GEOENGINEERING SERVICES

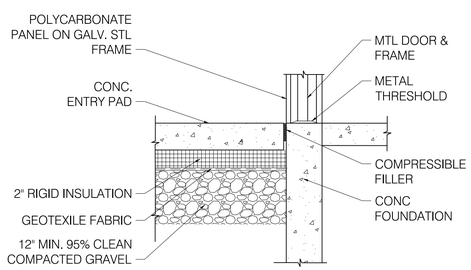
LIST OF DRAWINGS



31 OVERHEAD DOOR HEAD DETAIL
3"=1'-0"



21 OVERHEAD DOOR JAMB DETAIL
3"=1'-0"

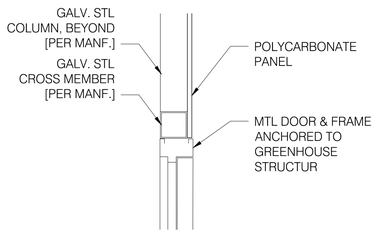


10 DOOR TRANSITION DETAIL
3/4"=1'-0"

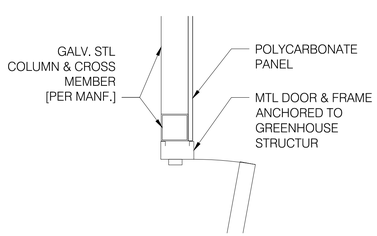
GENERAL NOTES

GENERAL CONTRACTOR TO:

01. FIELD VERIFY ALL DIMENSIONS AND NOTIFY ARCHITECT OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK.
02. MAINTAIN STRUCTURAL INTEGRITY AND WEATHER TIGHTNESS DURING CONSTRUCTION.
03. COORDINATE ALL TRADES, SCHEDULING OF WORK, AND INSPECTIONS.
04. ABIDE BY BUILDING AND LIFE SAFETY CODES ADOPTED BY AUTHORITY HAVING JURISDICTION (AHJ) AND OSHA STANDARDS.
05. MAINTAIN A CLEAN BUILDING SITE BOTH INSIDE AND OUTSIDE.
06. ALL MASONRY DIMENSIONS ARE NOMINAL AND ARE TO FACE OF MASONRY OR STRUCTURAL FRAME UNLESS OTHERWISE NOTED.
07. ALL DOORS & FRAMES SHALL BE INSTALLED A MINIMUM OF 3 INCHES OFF WALL EXCEPT WHERE NOTED OR DIMENSIONED OTHERWISE.
08. BEFORE PENETRATING OR OTHERWISE MODIFYING JOISTS, BEAMS, OR OTHER STRUCTURAL MEMBERS, CONSULT WITH ARCHITECT AND ENGINEERS ON MAXIMUM SIZE AND LOCATION.
09. VERIFY SIZE AND LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND NOTIFY ALL DISCREPANCIES TO THE ARCHITECT AND CIVIL ENGINEER BEFORE PROCEEDING WITH THE WORK.
10. PROVIDE , COORDINATE AND INSTALL SOLID WOOD BLOCKING IN WALLS FOR SHELVING AND EQUIPMENT.
11. PRESSURE-TREATED LUMBER TO BE USED AT ALL LOCATIONS OR AREAS EXPOSED TO CONTINUOUS MOISTURE.
12. FOAM INSULATE ALL EXTERIOR DOORS FRAMES AND THRESHOLDS.
13. ALL INTERIOR PARTITIONS EXTEND UP TO THE UNDERSIDE OF ROOF DECK UNLESS OTHERWISE NOTED.

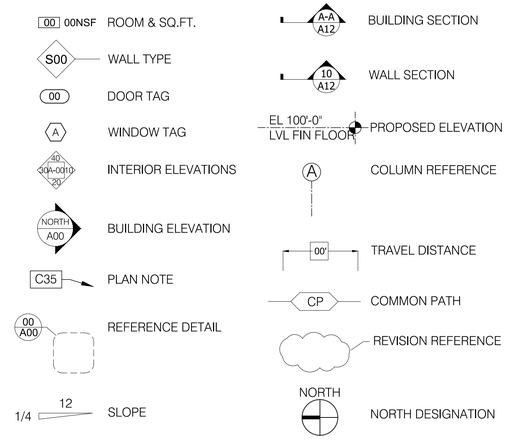


30 DOOR HEAD DETAIL
1-1/2"=1'-0"



20 DOOR JAMB DETAIL
1-1/2"=1'-0"

ARCHITECTURAL SYMBOLS



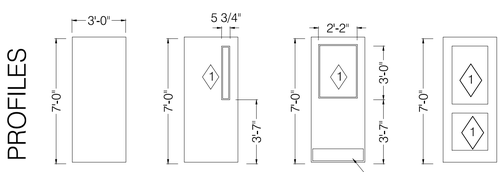
ARCHITECTURAL ABBREVIATIONS

ABV	ABOVE
AFF	ABOVE FINISHED FLOOR
AP	ACCESS PANEL
ACT	ACOUSTICAL TILE
ADD'L	ADDITIONAL
ADJ	ADJUSTABLE
A/C	AIR CONDITIONING
ALUM	ALUMINUM
ALT	ALTERNATE
AVG	AVERAGE
BM	BEAM
BLK	BLOCK
BLKG	BLOCKING
BD	BOARD
BS	BOTH SIDES
BOT	BOTTOM
BRK	BREAK
BLDG	BUILDING
CLG	CEILING
CL	CENTERLINE
CT	CERAMIC TILE
CLR	CLEAR
CLO	CLOSET
COL	COLUMN
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CONT	CONTINUOUS
CONTR	CONTRACTOR
CJ	CONTROL JOINT
CV	COVE
DTL	DETAIL
DIA	DIAMETER
DISP	DISPENSER
DR	DOOR
DO	DOOR OPENING
D'BL	DOUBLE
DWG	DRAWING
EA	EACH
EW	EACH WAY
ELEC	ELECTRIC
EL	ELEVATION
ELEV	ELEVATION
EQ	EQUAL
EXIST	EXISTING
EXISTG	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FG	FIBERGLASS
FE	FIRE EXTINGUISHER
FIN	FINISH
FIXT	FIXTURE
FLR	FLOOR
FD	FLOOR DRAIN
FND	FOUNDATION
FRT	FRONT
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GRND	GROUND
GSF	GROSS SQUARE FEET
GYP	GYPSUM
GWB	GYPSUM WALLBOARD
H/C	HANDICAPPED
HRDWR	HARDWARE
HI DENS	HIGH DENSITY
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HB	HOSE BIB
HR	HOUR
IN	INCH
INCL	INCLUDED
INFO	INFORMATION
INSUL	INSULATION
MANF	MANUFACTURER
MO	MASONRY OPENING
MAX	MAXIMUM
MECH	MECHANICAL
MTL	METAL
MIN	MINIMUM
MISC	MISCELLANEOUS
M.R.	MOISTURE RESISTANT
MNTD	MOUNTED
NSF	NET SQUARE FEET
NA	NOT APPLICABLE
OC	ON CENTER
OPNG	OPENING
OPP	OPPOSITE
PTD	PAINTED
PNL	PANEL
PERF	PERFORATED
PLAM	PLASTIC LAMINATE
PLMBG	PLUMBING
PLYWD	PLYWOOD
PT	PRESSURE TREATED
QTY	QUANTITY
RECOM	RECOMMENDATION
REF	REFERENCE
REINF	REINFORCMENT
RT	RESILIENT TILE
REQ'D	REQUIRED
RM	ROOM
RO	ROUGH OPENING
SAN	SANITARY
SCH	SCHEDULET
SHT	SHEET
SIM	SIMILAR
STC	SOUND TRANSIMISSION
SPEC	SPECIFICATION
STND	STAINED
SS	STAINLESS STEEL
STD	STANDARD
STL	STEEL
STO	STORAGE
STRUCT	STRUCTURAL
SYS	SYSTEM
TEL	TELEPHONE
T/D	TELEPHONE & DATA
TEMP	TEMPERATURE
THK	THICK
T.P.	TOILET PAPER
T&G	TONGUE & GROOVE
TYP	TYPICAL
UL	UNDERWRITERS LABORATORY
VCT	VINYL COMPOSITE TILE
VERT	VERTICAL
VEST	VESTIBULE
WR	WALL RECEPTACLE
WIN	WINDOW
W/	WITH
WD	WOOD
WP	WATERPROOFING

DOOR SCHEDULE

DOOR TAG	ROOM NAME	SIZE	DOOR PROFILE	MTRL	FRAME PROFILE	MTRL	HARDWARE SET	REMARKS
10A	ENTRY	3' x 7'	DG	ALUM	3	ANOD. ALUM	A	LOCKABLE, LEVER, CLOSER, WITH SIDELITE, WEATHERSTRIP
10B	OVERHEAD DR.	8' x 10'	COILING	STL PTD	-	STL PTD	-	MANUAL OPERATION, METAL COILING, VISION PORTS
10C	CONTAINER PRODUCTION	(2) 3' x 7'	HG	ALUM	2	ANOD. ALUM	B	PASSAGE, LEVER, CLOSER & KICKPLATE (BOTH SIDES)
10D	CONTAINER PRODUCTION	3' x 7'	NL	ALUM	1	ANOD. ALUM	A	LOCKABLE, LEVER, CLOSER, WEATHERSTRIP
11A	HYDROPONICS	3' x 7'	NL	ALUM	1	ANOD. ALUM	A	LOCKABLE, LEVER, CLOSER, WEATHERSTRIP
11B	HYDROPONICS	3' x 7'	HG	ALUM	1	ANOD. ALUM	C	PASSAGE, LEVER, CLOSER, KICKPLATE (BOTH SIDES)
11C	HYDROPONICS	3' x 7'	NL	ALUM	1	ANOD. ALUM	A	LOCKABLE, LEVER, CLOSER, WEATHERSTRIP

DOORS



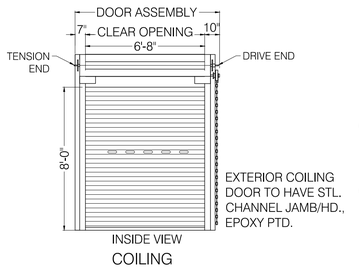
HARDWARE SETS:

A KEYED CYLINDER
B&C PASSAGE

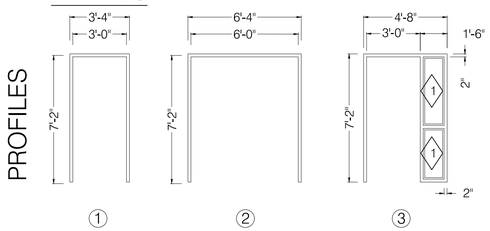
GLAZING TYPE:

1 CLEAR TEMPERED FLOAT GLASS

ALL DOORS W/ CONTINUOUS HINGES, LEVER W/ RETURN HANDLES & OVERHEAD DOOR STOPS. EXTERIOR DOORS WITH CLOSERS, THRESHOLDS & WEATHER TRIM INTERIOR DOORS WITH SWING LIMITERS, & KICKPLATES BOTH SIDES



FRAMES



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HORTICULTURE GREENHOUSE
MIDCOAST CAMPUS, BRUNSWICK, MAINE

CONSTRUCTION DRAWINGS

REVISIONS:

LICENSED ARCHITECT PATRIC J. SANTERRE AR 2476 STATE OF MAINE

6' 4' 2' 0 4' 8'
BAR SCALE 1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

DOOR SCHEDULE, DETAILS & STANDARDS

ADAR202319 - OCT 2024

A01

Building & Life Safety Code Review
2-Bay Greenhouse - Southern Maine Community College
Midcoast Campus, Admiral Fitch Drive, Brunswick, Maine

Zoning Information: Subject property conforming to requirements of applicable local jurisdiction and the Midcoast Regional Redevelopment Authority.
Zoning District: GM-7
Lot Area: Plan & Lot 000 0.00 Acres
Signage: Permitted separately.

2015 Maine Uniform Building and Energy Code (MUBEC)
2018 Life Safety Code- NFPA 101
Americans with Disabilities Act, ADA, 1990 / Amended 2008. 2010 ADA Standards for Accessible Design

Project Description: Educational/Agriculture
Building Construction Type: Unprotected Metal Frame and Polycarbonate Panel: V-000.
New Construction - Pre-engineered and manufactured greenhouse structure.
No Automatic Sprinkler or Fire Alarm System

The 2-bay greenhouse is a manufactured building installed on a site-constructed concrete foundation and slab for teaching horticulture.

Occupancy: 100 sq.ft. per occupant NFPA and 300 sq.ft. per occupant IBC.

No.	ROOM	SIZE (NSF)	NFPA	IBC *	
10	CONTAINER PRODUCTION	2,800			
11	HYDROPONICS	2,800			
		5,600			
*	TOTAL PLANT BENCH/TABLE AREA	(1,764)			
		3,836	/100 = 39	/300 = 13	39 TOTAL OCCUPANTS

NFPA 101
Chapter 4 - General: Number of Means of Egress - Each room has multiple exit doors on-grade.
Chapter 6 - Classification of Occupancy: Industrial NFPA and Agriculture IBC - Bays and potting areas for growing plants.
Chapter 7 - Means of Egress
Minimum door leaf width. Doors 3'-0" wide with no doors encroaching upon means of egress.
Horizontal Exits and Exit Passageways - Comply
Exit access from rooms or spaces shall be permitted to be through adjoining or intervening rooms or areas provided that such rooms are accessory to the area served. [Rooms comply.]
7.6 Measurement of Travel Distance to Exits
Table A.7.6 Common path (CP), dead end (DE), and travel distance (TD) limits.
Industrial - CP 100 ft [Complies] DE 50ft [None Exist] TD 200 [Actual 14 ft Longest]
Discharge Through Areas on Level of Exit Discharge. Complies
Illumination - Emergency lighting to comply with overhead fixtures with central battery backup.
Marking of Means of Egress - Exits properly labeled with illuminated signage.
Chapter 8 - Features of Fire Protection
8.2 Construction and Compartmentation
Table A.8.2.1.2 Fire Resistance Rating - Type V(000). Concrete, galvanized steel framing and polycarbonate walls and roof panels
Chapter 9 - Fire Protection Equipment: Emergency lighting, exits properly labeled and fire extinguishers at multiple locations.
Chapter 10 - Interior Finish, Contents, and Furnishings: Wall polycarbonate and floor concrete finishes comply.

INTERNATIONAL BUILDING CODE 2015
Chapter 3 - Use and Occupancy Classification - Group U - Agriculture.
Chapter 4 - Special Detailed Requirements Based on Use and Occupancy - No hazardous storage.
Chapter 5 - General Building Heights and Areas - Allowable building height 40 feet. Actual building height 22 feet.
Chapter 6 - Types of Construction - Table 601 - Primary structural frame Type VB.
Chapter 7 - Fire and Smoke Protection Features - Adjacent buildings are greater than 30 feet from new building.
Chapter 8 - Interior Finishes - Exposed concrete floor and polycarbonate wall panels typical to greenhouse construction.
Chapter 9 - Building does not have a sprinkler system. The building is area is 5,600 GSF. Occupant load is less than 500 Occupants and entire building on grade with each room having multiple exit doors.
Fire extinguishers to be provided at specific locations.
Chapter 10 - Means of Egress
Section 1003 General Means of Egress - Ceiling Heights shall be greater than 7'-6". No projections shall encroach upon clear means of egress beyond the 4-1/2". Floor surfaces shall be slip-resistant and no elevation changes or slope surfaces exist beyond thresholds.
Section 1004 Occupant Load - Agricultural occupancy as noted in above matrix.
Section 1005 Egress Width - All means of egress widths greater than 36".
Section 1008 - Proper illumination will be provided.
Section 1016 Exit Access - Egress from adjoining rooms are accessory to one another.
Section 1017 Exit Access Travel Distance - Travel distance is less than 200 feet.
Section 1018 Corridors - There are established corridors or dead end corridors.
Section 1021 Number of Exits and Continuity - All rooms are on ground level with exit doors to the outside.
Section 1027 Exit Discharge - All exits discharge directly to the exterior on grade.

11 CODE REVIEW

LIFE SAFETY EQUIPMENT LEGEND

W - WALL MOUNTED SMOKE DETECTOR

EXIT - WALL MNTD

B -WALL MOUNTED LIGHT W/ BATTERY FOR EMERGENCY LIGHTING

FE - FIRE EXTINGUISHER

NOTES:
1. WALL MOUNTED ,LIGHT FIXTURES TO HAVE BATTERY BACKUP FOR EMERGENCY LIGHTING PROVIDING THE MINIMUM REQUIRED FOOTCANDLES AND LUMENS AT THE EXITS AND DOORS.

2. CLASS K FIRE EXTINGUISHERS TO BE INSTALLED AT PRIMARY EXITS.

3. COORDINATE EMERGENCY LIGHTING WITH ELECTRICAL CONTRACTOR. LIFE SAFETY EQUIPMENT TO FOLLOW NFPA & NEC GUIDELINES. MOUNTING HEIGHT PER CODE. PROVIDE BLOCKING IN WALLS FOR ALL EQUIPMENT.

4. ALL HARDSCAPE ASPHALT AND CONCRETE WALKWAYS TO BE LESS THAN 1:20 SLOPE WITH THRESHOLDS AT THE DOORS NO GREATER THAN 1/2" HEIGHT. SIGNAGE TO EACH DOOR TO BE MOUNTED NO HIGHER THAN 42 INCHES AND INCLUDE BRAILLE LETTERING.

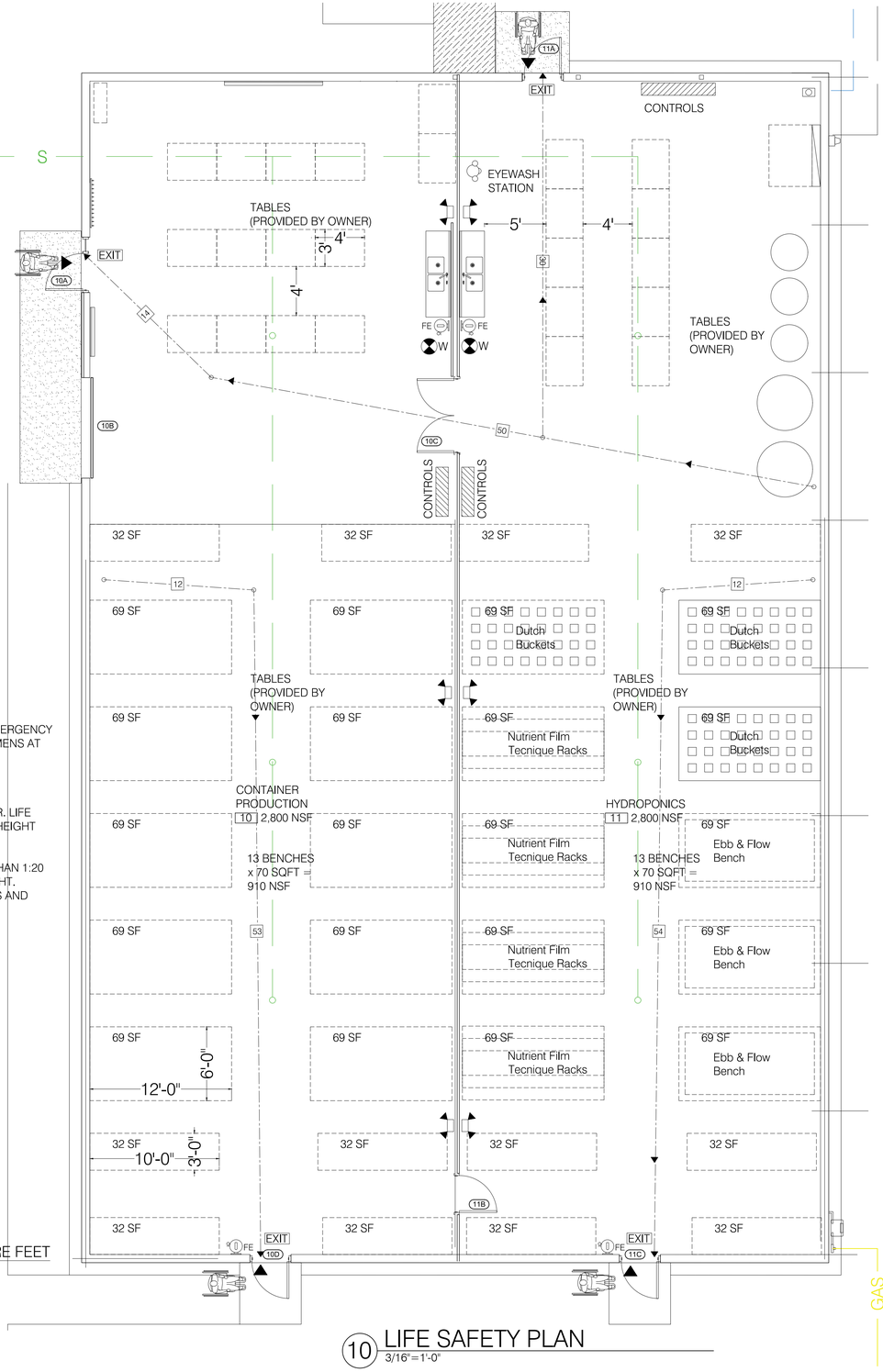
CP - COMMON PATH

07 - TRAVEL DISTANCE

WHEELCHAIR ACCESSIBLE

GROW BENCHES

SIZE [FT]	SQ.FT.	QUANTITY	TOTAL SQUARE FEET
3 x 10.5	31.5	12	384
6 x 11.5	69	20	1,380
			1,764



10 LIFE SAFETY PLAN
3/16"=1'-0"

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AR 2476
STATE OF MAINE

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BAR SCALE
1/4" = 1'-0"
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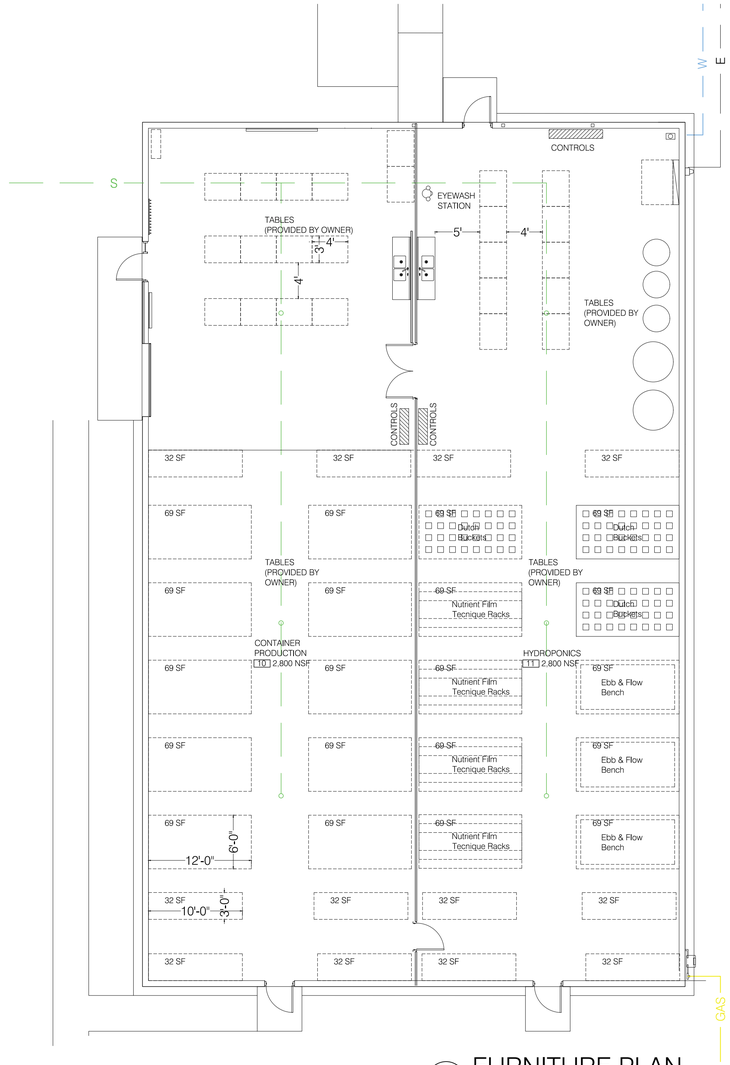
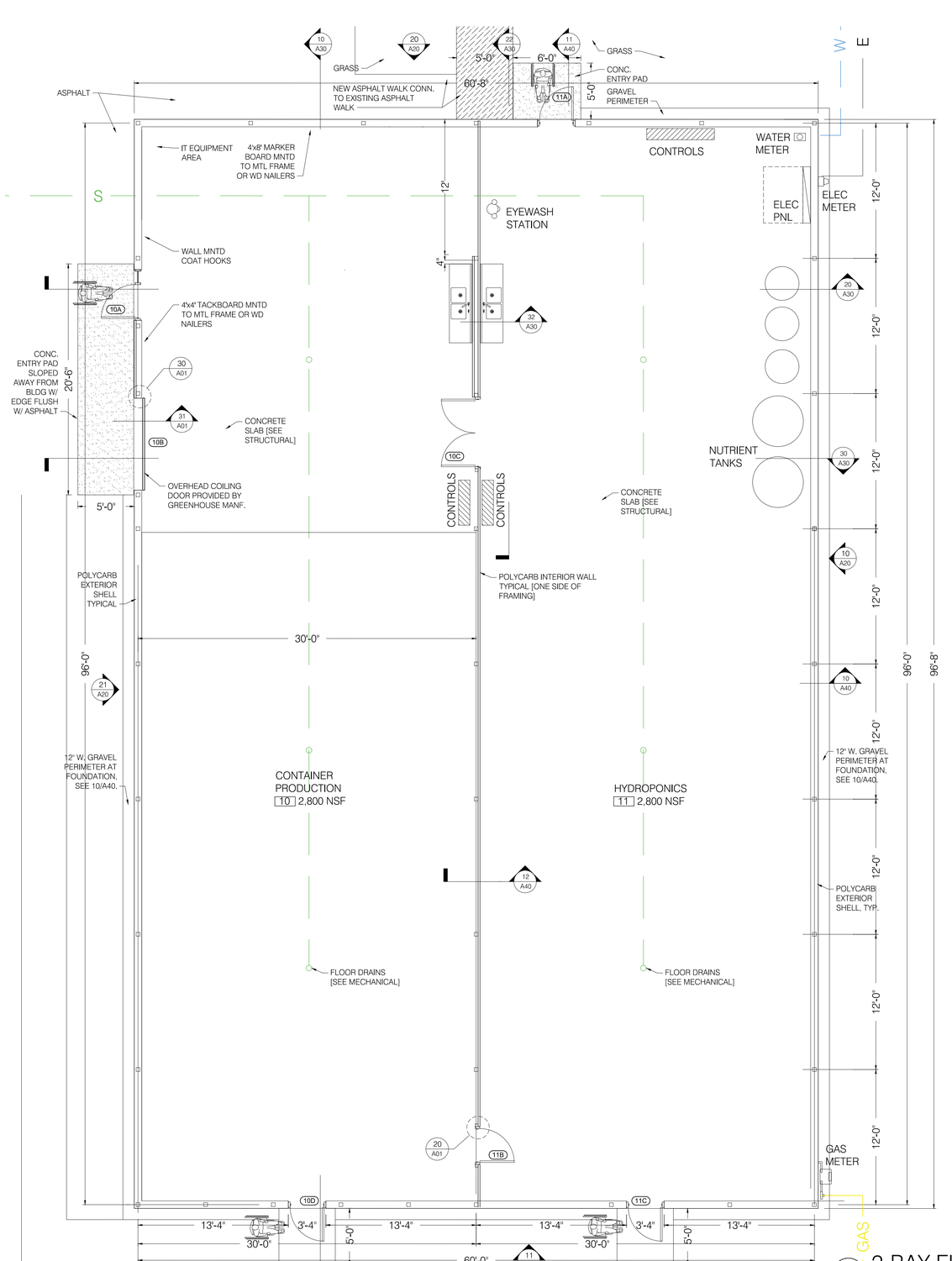
LIFE SAFETY PLAN & CODE REVIEW

ADAR202319 - OCT 2024

A02



11 FURNITURE PLAN
1/8" = 1'-0"



10 2-BAY FLOOR PLAN
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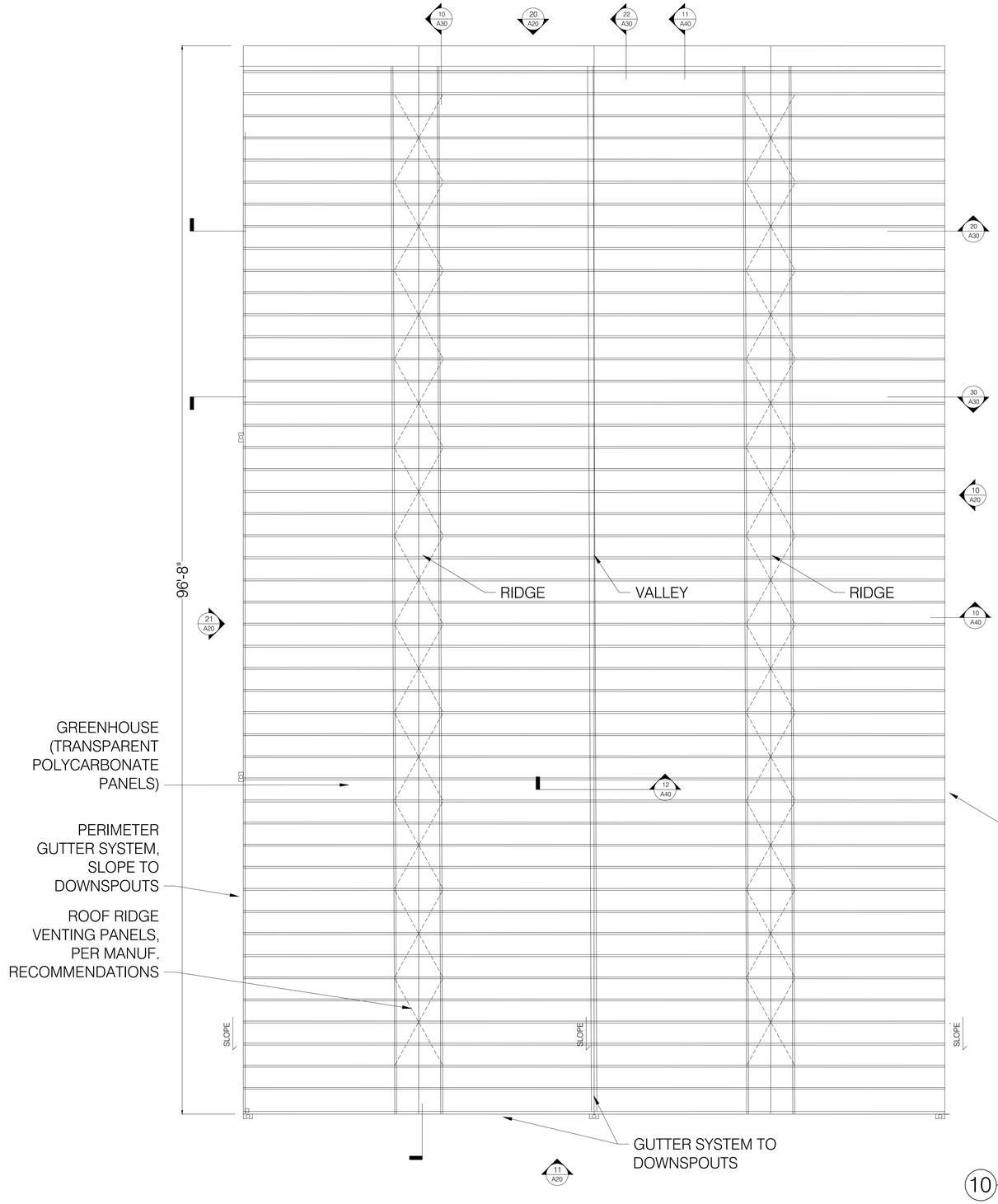
GROUND LEVEL & FURNITURE PLANS

ADAR202319 - OCT 2024

A10



10 ROOF PLAN
3/16"=1'-0"

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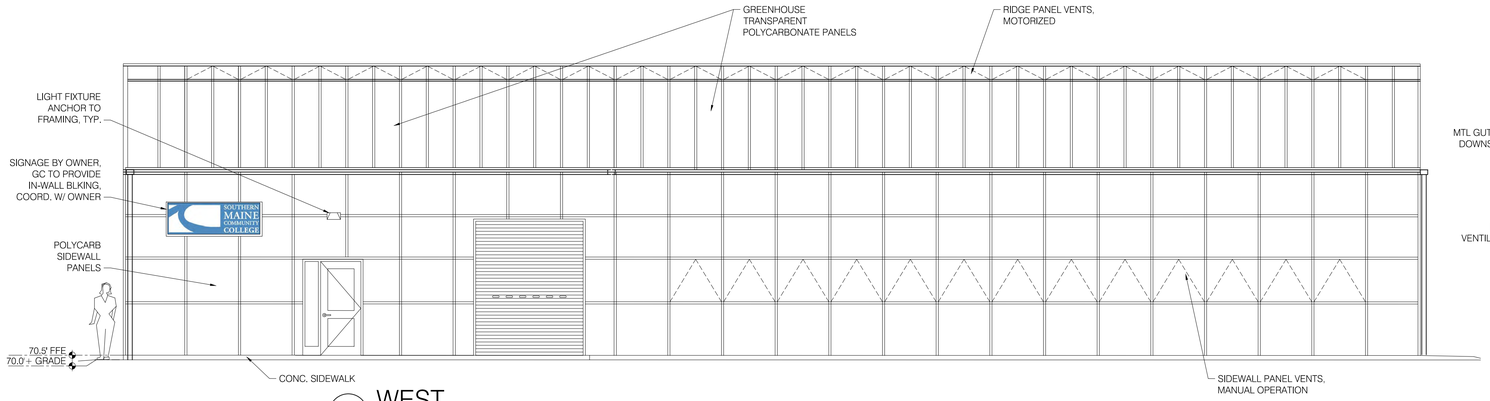
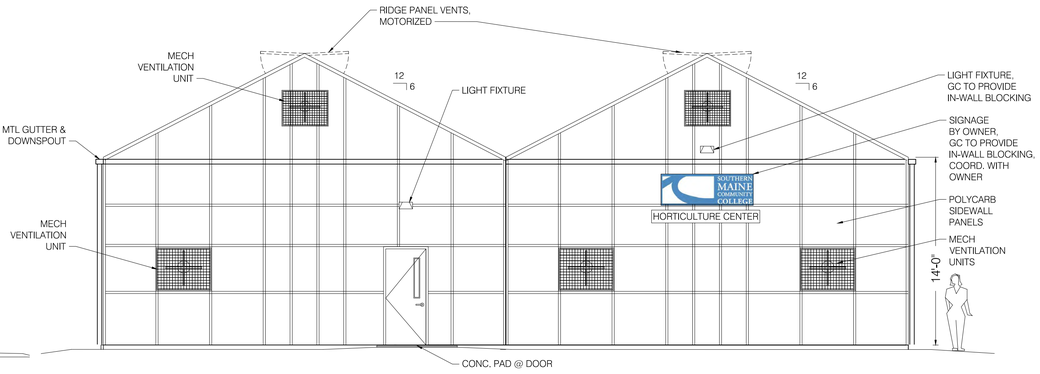
ROOF PLAN

ADAR202319 - OCT 2024

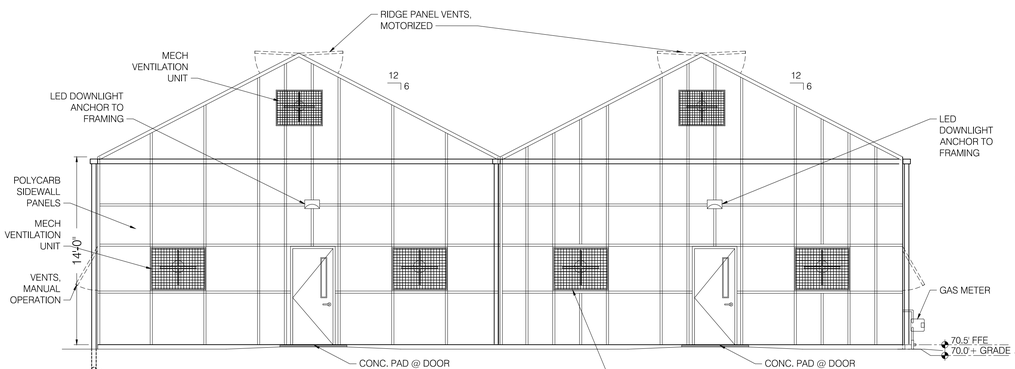
A11



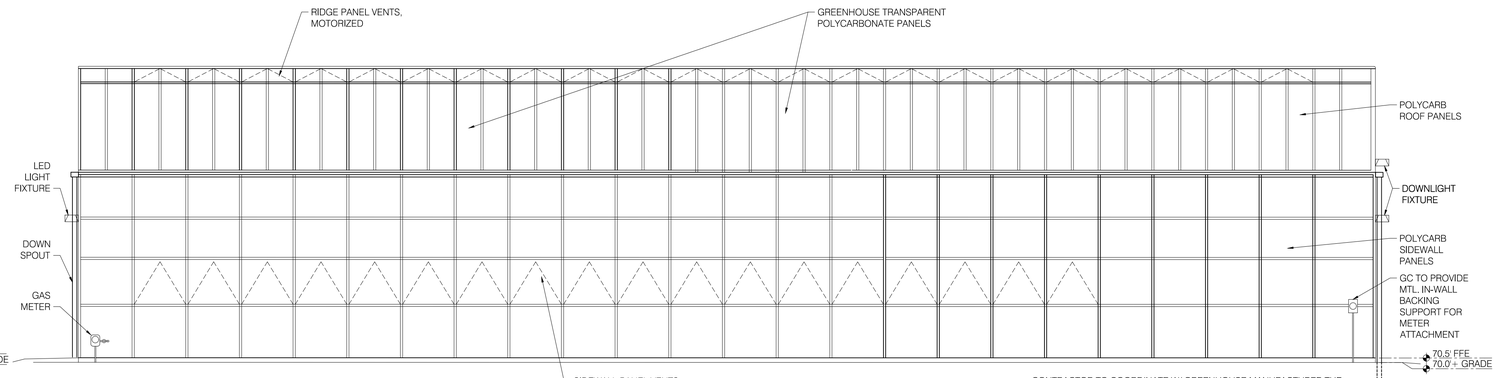
21 WEST
3/16"=1'-0"



20 NORTH
3/16"=1'-0"



11 SOUTH
3/16"=1'-0"



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EXTERIOR ELEVATIONS

ADAR202319 - OCT 2024

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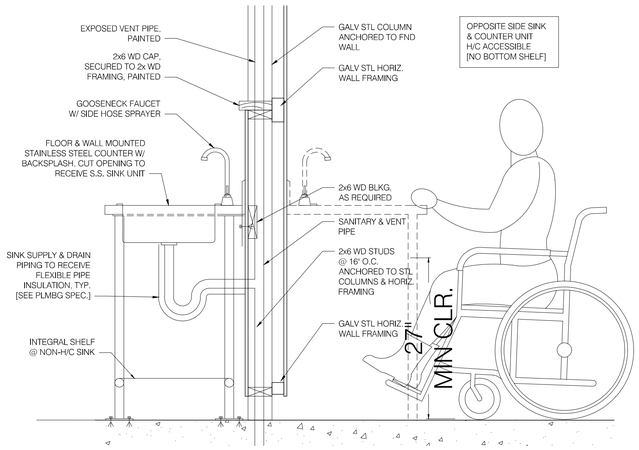

32 SINK/COUNTER DETAIL
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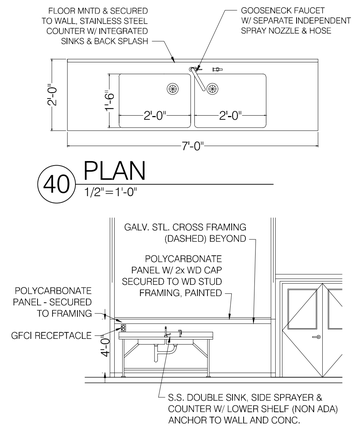
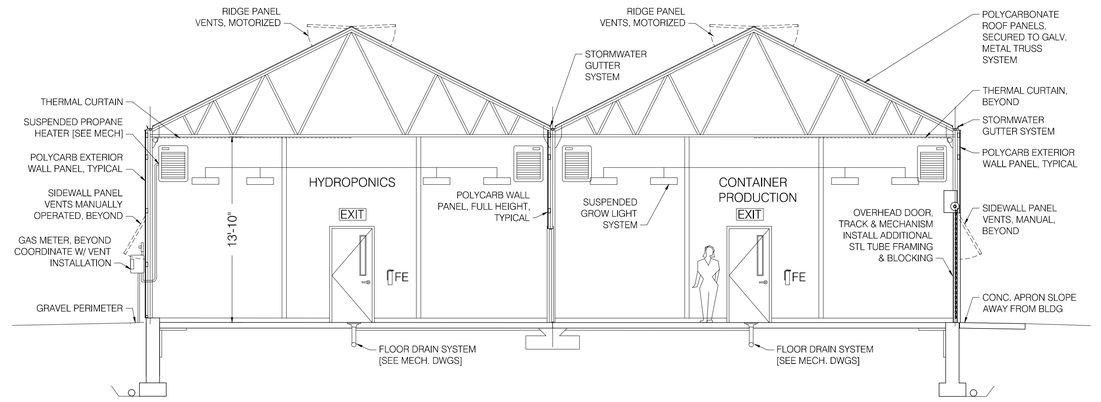
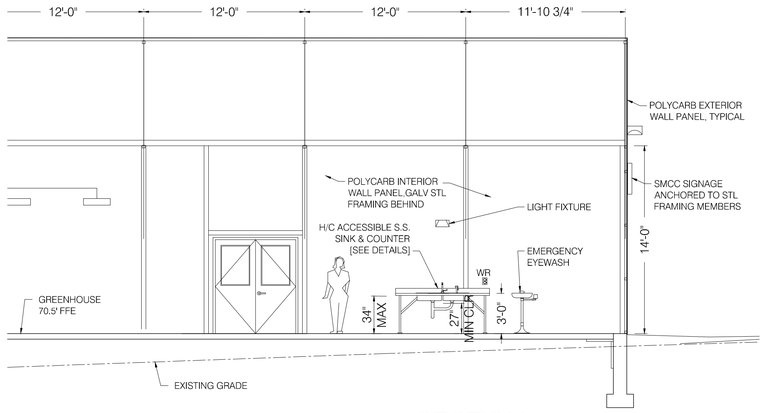


40 PLAN
1/2"=1'-0"

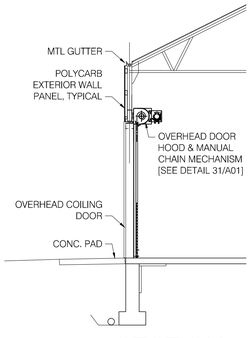
31 SECTION
3/16"=1'-0" LOOKING EAST



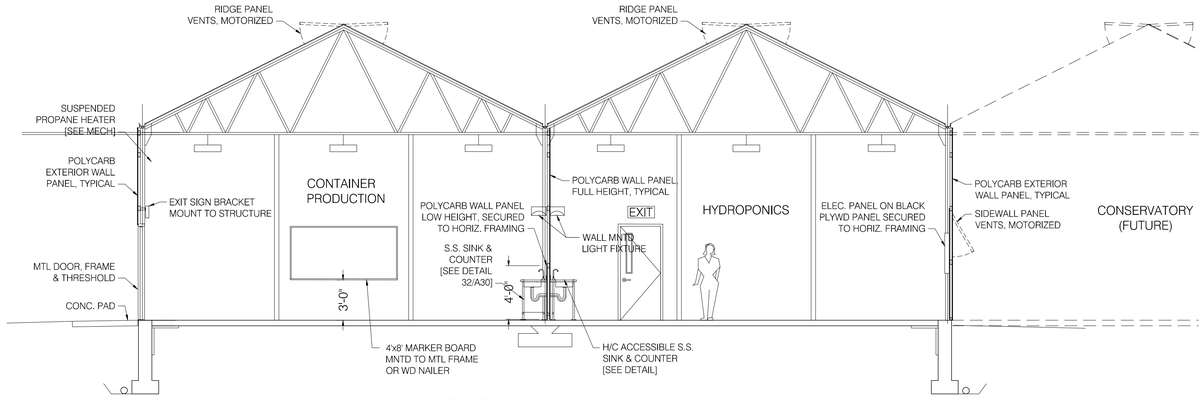
30 SECTION
3/16"=1'-0" LOOKING SOUTH



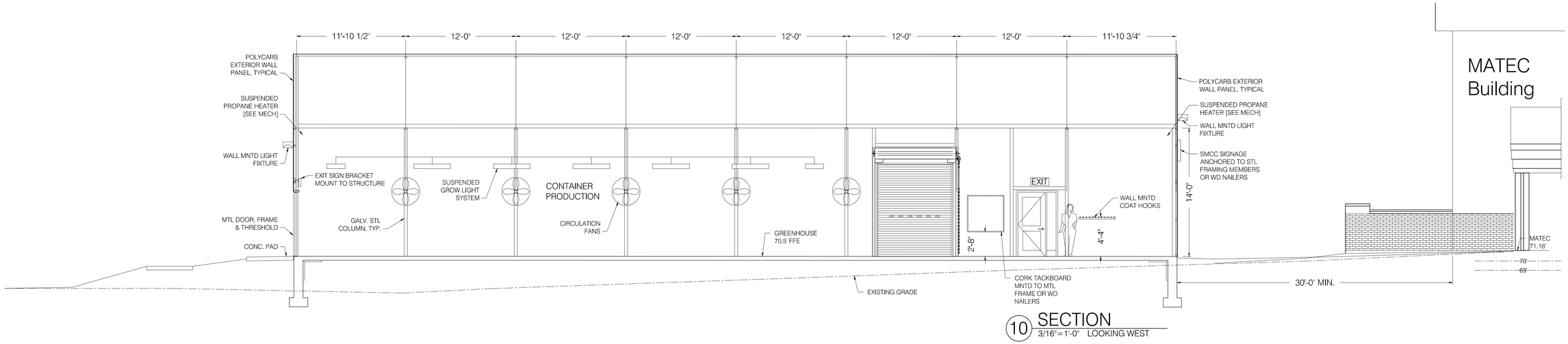
22 SECTION
3/16"=1'-0" LOOKING WEST



21 SECTION
3/16"=1'-0" LOOKING NORTH



20 SECTION
3/16"=1'-0" LOOKING NORTH



10 SECTION
3/16"=1'-0" LOOKING WEST

ARCADIA DESIGNWORKS
SOUTH
199 prospect street, suite A
portland, maine 04101
NORTH
22 balsam drive
Millinocket, maine 04462
PH: 207.347.5252 & 207.749.9306
arcadiadesignworks.com

LINCOLN/HANEY ENGINEERING EST. 1984
SITELINES Civil Engineers • Land Surveyors
BENNETT ENGINEERING MECHANICAL • ELECTRICAL
SUMMIT GEOENGINEERING SERVICES

SOUTHERN MAINE COMMUNITY COLLEGE

HORTICULTURE GREENHOUSE
MIDCOAST CAMPUS, BRUNSWICK, MAINE

CONSTRUCTION DRAWINGS

REVISIONS:

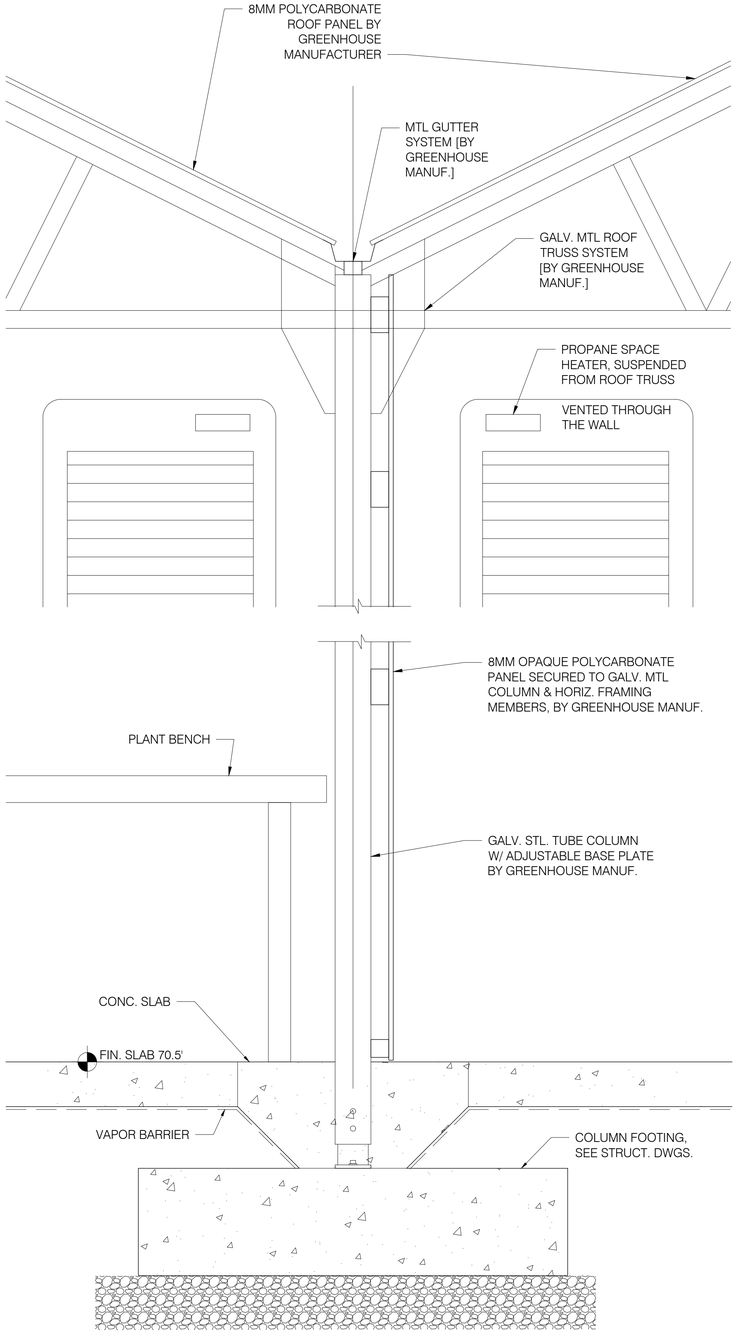
LICENSED ARCHITECT PATRIC J. SANTERRE AR 2476 STATE OF MAINE

6' 4' 2' 0 4' 8'
BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

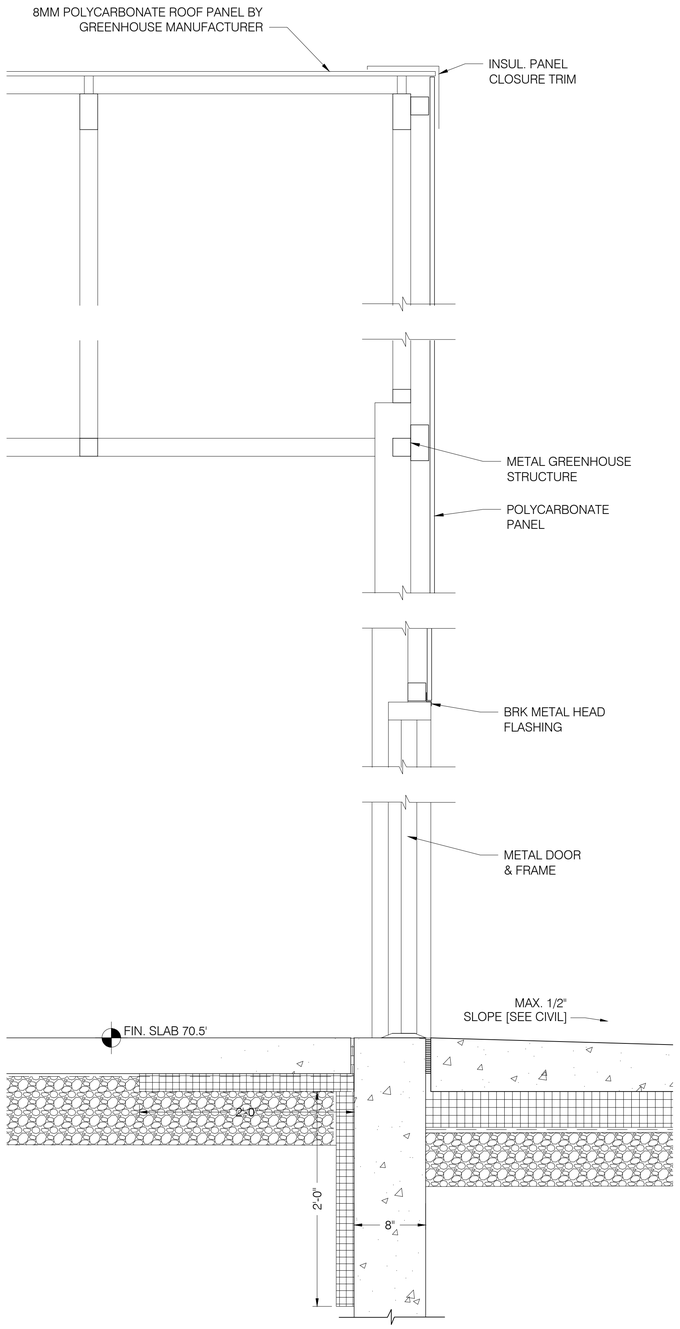
BUILDING SECTIONS & DETAILS

ADAR202319 - OCT 2024

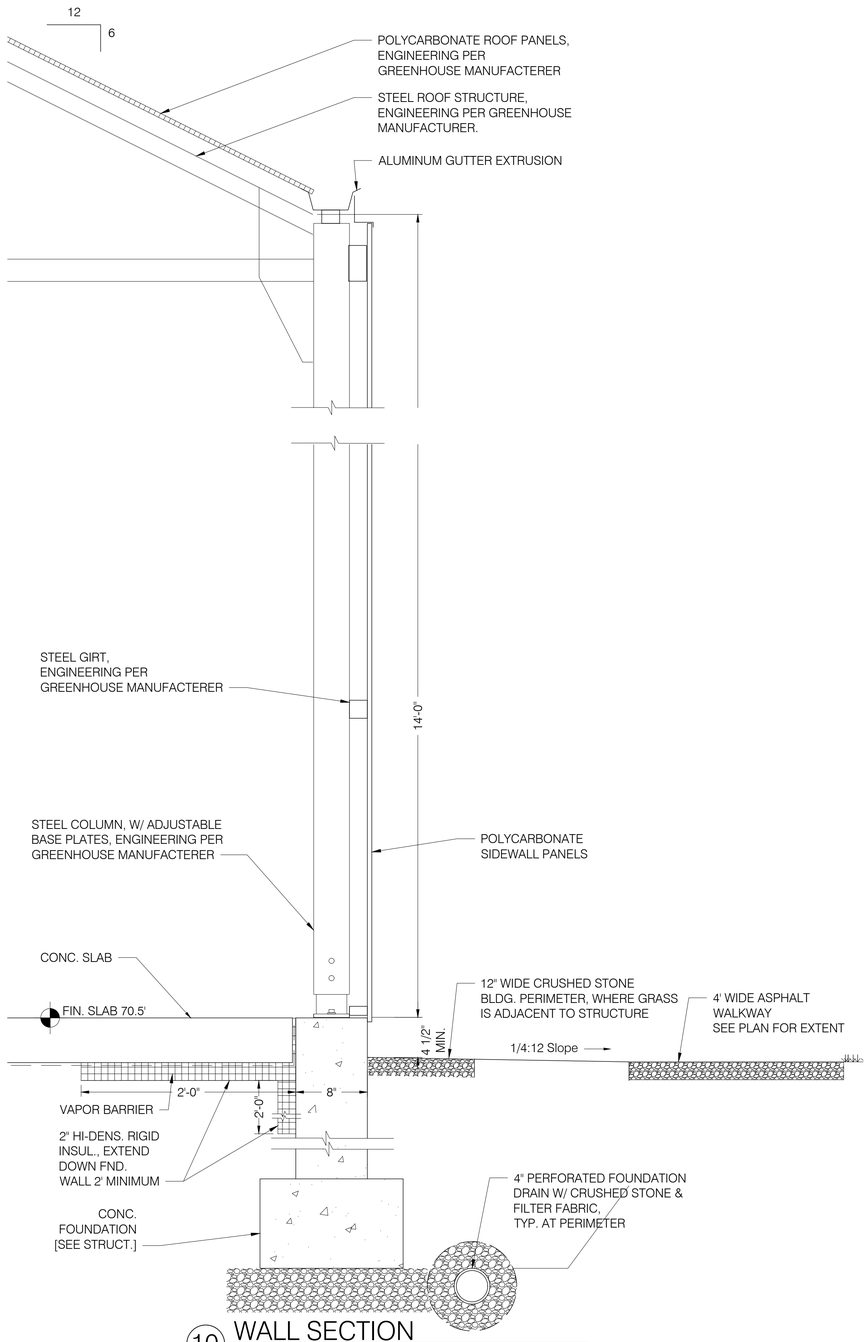
A30



12 WALL SECTION
1-1/2"=1'-0" ROOF VALLEY & INTERIOR WALL



11 WALL SECTION
1-1/2"=1'-0" EXTERIOR WALL END WALL



10 WALL SECTION
1-1/2"=1'-0" TYPICAL AT GREENHOUSE EXTERIOR

ARCADIA DESIGNWORKS
SOUTH
199 prospect street, suite A
portland, maine 04101
NORTH
22 balsam drive
Millinocket, maine 04462
PH: 207.347.5252 & 207.749.9306
arcadiadesignworks.com

LINCOLN/HANEY ENGINEERING EST. 1985
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SOUTHERN MAINE COMMUNITY COLLEGE

HORTICULTURE GREENHOUSE
MIDCOAST CAMPUS, BRUNSWICK, MAINE

CONSTRUCTION DRAWINGS

REVISIONS:

LICENSED ARCHITECT PATRIC J. SANTERRE AR 2476 STATE OF MAINE

3' 2' 1' 0 2' 4'
BAR SCALE
1/2" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

WALL SECTIONS

ADAR202319 - OCT 2024

A40

GENERAL NOTES:

1. DRAWINGS ARE BASED ON BOUNDARY AND TOPOGRAPHIC SURVEY INFORMATION FROM MULTIPLE SOURCES BY SITELINES, PA.

2. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR THE ELEVATION OF THE EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THIS INFORMATION HAS NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVES AND IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AND DIG SAFE (1-800-DIG-SAFE) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IN AREAS OF POTENTIAL CONFLICTS TEST PITS SHALL BE REQUIRED TO VERIFY EXISTING UTILITY LOCATION. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH THE PROPOSED IMPROVEMENTS SHOWN ON THE PLANS.

3. RIM ELEVATIONS OF PROPOSED SANITARY SEWER MANHOLES AND ASSOCIATED STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE GRADING PLANS. ADJUST ALL OTHER RIM ELEVATIONS OF MANHOLES, WATER GATES, GAS GATES AND OTHER UTILITIES TO FINISH GRADE WITHIN LIMITS OF WORK.

4. THE LOCATION, SIZE, DEPTH, AND SPECIFICATIONS FOR CONSTRUCTION OF PROPOSED PRIVATE UTILITY SERVICES SHALL BE INSTALLED ACCORDING TO THE REQUIREMENTS PROVIDED BY, AND APPROVED BY THE RESPECTIVE UTILITY COMPANY (GAS, TELEPHONE, ELECTRIC, CABLE AND FIRE ALARM). FINAL DESIGN LOADS AND LOCATIONS TO BE COORDINATED WITH CONSTRUCTION MANAGER AND ARCHITECT.

5. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION, SIZE, INVERTS AND TYPES OF EXISTING PIPES AT ALL PROPOSED POINTS OF CONNECTION PRIOR TO ORDERING MATERIALS. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATIONS, ELEVATION, AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED IN WRITING TO THE CONSTRUCTION MANAGER REPRESENTATIVE FOR THE RESOLUTION OF THE CONFLICT.

6. THE CONTRACTOR SHALL VERIFY ALL CRITICAL DIMENSIONS AND GRADES BEFORE WORK BEGINS. CONTRACTOR SHALL CONFIRM LOCATION AND DEPTH ALL UTILITY LINE CROSSINGS WITH TEST PITS PRIOR TO BEGINNING WORK. CONFLICTS SHALL BE REPORTED IN WRITING TO CONSTRUCTION MANAGER FOR RESOLUTION OF THE CONFLICT.

7. ALL AREAS OUTSIDE THE LIMIT OF WORK THAT ARE DISTURBED SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTOR'S EXPENSE. ALL AREAS DISTURBED DURING CONSTRUCTION NOT COVERED WITH BUILDINGS, STRUCTURES, OR PAVEMENT SHALL RECEIVE 4 INCHES OF LOAM AND SEED.

8. THE CONTRACTOR SHALL MAKE ALL ARRANGEMENTS AND SHALL BE RESPONSIBLE FOR PAYING ANY FEES FOR ANY POLE RELOCATION AND FOR THE ALTERATION OR ADJUSTMENT OF GAS, ELECTRIC, TELEPHONE, CABLE, FIRE ALARM AND ANY OTHER PRIVATE UTILITIES BY THE UTILITY COMPANIES.

9. UPON AWARD OF CONTRACT, CONTRACTOR SHALL MAKE ALL NECESSARY CONSTRUCTION NOTIFICATIONS AND APPLY FOR AND OBTAIN ALL NECESSARY PERMITS, PAY ALL FEES AND POST ALL BONDS ASSOCIATED WITH THE WORK INDICATED ON THE DRAWINGS AND AS SPECIFIED.

10. ALL PROPERTY MONUMENTATION DISTURBED DURING CONSTRUCTION SHALL BE RESET TO THEIR ORIGINAL LOCATION BY A MAINE REGISTERED LICENSED PROFESSIONAL LAND SURVEYOR (PLS) AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL PREPARE AN AS-BUILT PLAN SURVEY SHOWING LOCATIONS OF ALL SURFACE FEATURES AND SUBSURFACE UTILITY SYSTEMS INCLUDING THE LOCATION TYPE, SIZE AND INVERTS.

11. THE CONTRACTOR SHALL INSTALL ALL EROSION CONTROL MEASURES PRIOR TO EARTHWORK OPERATION AND MAINTAIN ALL EROSION CONTROL MEASURES AND SEEDED EMBANKMENTS DURING CONSTRUCTION. EROSION CONTROL SHALL BE REMOVED ONLY UPON THE ESTABLISHMENT OF ALL LANDSCAPED AREAS. ALL WORK SHALL BE IN COMPLIANCE WITH THE ENVIRONMENTAL QUALITY HANDBOOK FOR EROSION AND SEDIMENT CONTROL, LATEST EDITION, AS ADOPTED BY THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

12. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY. ALL CONSTRUCTION ACTIVITY SHALL BE IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.

13. ALL MATERIALS AND CONSTRUCTION METHODS USED WITHIN THE PUBLIC RIGHT-OF-WAY SHALL CONFORM TO ALL LOCAL MUNICIPAL STANDARDS AND MAINE DEPARTMENT OF TRANSPORTATION SPECIFICATIONS.

14. THE CONTRACTOR IS REQUIRED TO CONTROL DUST DURING CONSTRUCTION. EXPOSED SOIL AREAS SHALL BE SPRAYED WITH WATER AS NEEDED TO CONTROL DUST EMISSIONS. COVER EXPOSED SOIL AREAS AS QUICKLY AS PRACTICAL TO PREVENT WINDS FROM GENERATING DUST.

15. ALL HANDICAP ACCESSIBLE PARKING SPACES, RAMPS AND SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).

16. ALL SITE SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.

17. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY. NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING.

18. ALL MATERIALS SHALL BE NEW AND PROVIDED BY THE CONTRACTOR.

19. CONTRACTOR SHALL PROVIDE NOTIFICATION TO THE NAVY COORDINATOR PRIOR TO START OF CONSTRUCTION.

LAYOUT NOTES:

1. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB OR FOUNDATION.

2. OFFSETS TO CATCH BASINS AND MANHOLES ARE TO THE CENTER OF THE FRAME.

3. PIPE LENGTH EQUALS THE CENTER TO CENTER DISTANCES BETWEEN CATCH BASINS AND/OR MANHOLES MINUS ONE HALF THE DIAMETER OF EACH CATCH BASIN OR MANHOLE.

4. BOUNDARY INFORMATION ON LAYOUT PLAN IS FOR REFERENCE ONLY, REFER TO CERTIFIED BOUNDARY PLANS FOR BOUNDARY INFORMATION.

GRADING AND DRAINAGE NOTES:

1. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS SECTION 603. PIPE CULVERTS AND STORM DRAINS, LATEST REVISION WITH THE EXCEPTION THAT THE ONLY ACCEPTABLE TYPES OF PIPE ARE AS FOLLOWS:

   POLYVINYL CHLORIDE PIPE (PVC) SDR 35
   SMOOTH BORE POLYETHYLENE PIPE – HDPE N-12 ADS OR SDR 35

2. TOPSOIL STRIPPED IN AREAS OF CONSTRUCTION THAT IS SUITABLE FOR REUSE AS LOAM SHALL BE STOCKPILED ON SITE AT A LOCATION TO BE DESIGNATED BY OWNER. UNSUITABLE SOIL SHALL BE SEPARATED, REMOVED AND DISPOSED OF AT AN APPROVED DISPOSAL LOCATION OFF SITE.

3. THE CONTRACTOR SHALL ANTICIPATE THAT GROUNDWATER WILL BE ENCOUNTERED DURING CONSTRUCTION AND SHALL INCLUDE SUFFICIENT COSTS WITHIN THEIR BID TO PROVIDE DEWATERING AS NECESSARY. NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR FOR DEWATERING.

PERMITTING REQUIREMENTS:

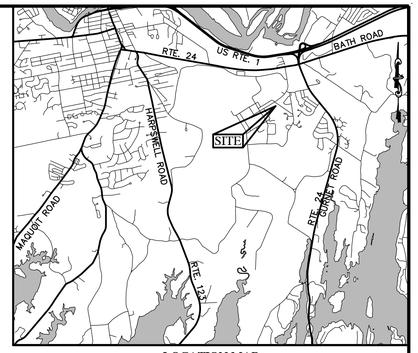
AGENCY:	*PERMIT:*	*STATUS:*
TOWN OF BRUNSWICK	MINOR DEVELOPMENT REVIEW BUILDING	APPROVED 09/11/24 (BY CONTRACTOR)

CALL DIG SAFE UTILITY LOCATION
1-888-344-7233
STATE LAW REQUIRES ADVANCE NOTICE OF AT LEAST 3 BUSINESS DAYS BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND UTILITIES

SMCC GREENHOUSE BUILDING

29 SEWALL STREET
BRUNSWICK, MAINE

PREPARED FOR:
SOUTHERN MAINE COMMUNITY COLLEGE



LOCATION MAP
NOT TO SCALE

TOWN/UTILITY CONTACTS

CODE ENFORCEMENT
MIKE PINDELL
TOWN OF BRUNSWICK
85 UNION STREET
BRUNSWICK, MAINE 04011
207-725-6650

ELECTRIC SERVICE
CENTRAL MAINE POWER
280 BATH ROAD
BRUNSWICK, MAINE 04011
207-721-8054

TELEPHONE SERVICE
FAIRPOINT
BATH ROAD (P.O. BOX 360)
BRUNSWICK, MAINE 04011
207-442-8018

CABLE SERVICE
COMCAST CONSTRUCTION OFFICE
336 BATH ROAD
BRUNSWICK, MAINE, 04011
207-729-6660

TOWN ENGINEER
TREY CREWS, P.E.
85 UNION STREET
BRUNSWICK, MAINE 04011
207-725-6659

WATER SERVICE
BRUNSWICK-TOPSHAM WATER DISTRICT
CRAIG DOUGLAS, P.E., GENERAL MANAGER
BOX 580
BRUNSWICK, MAINE 04011
PHONE:207-729-9956

SANITARY SEWER
BRUNSWICK SEWER DISTRICT
ROBERT PONTAU, GENERAL MANAGER
10 PINE TREE ROAD
BRUNSWICK, MAINE 04011
PHONE: 207-729-0148

PUBLIC WORKS DEPARTMENT
RYAN LEIGHTON, PUBLIC WORKS DIRECTOR
9 INDUSTRY ROAD
BRUNSWICK, MAINE 04011
207-725-6654

BRUNSWICK FIRE DEPARTMENT
KENNETH BRILLANT, FIRE CHIEF
119 PLEASANT STREET
BRUNSWICK, MAINE 04011
207-725-5541

TOWN ARBORIST
DENNIS WILSON
22 NEPTUNE DRIVE
BRUNSWICK, MAINE 04011
207-725-6656

PROJECT TEAM

CIVIL ENGINEER
SITELINES P.A.
ATTN: JOSEPH J. MARDEN P.E.
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207-725-1200
WWW.SITELINESPA.COM

SURVEYOR
SITELINES P.A.
ATTN: KEVIN CLARK, PLS
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207-725-1200
WWW.SITELINESPA.COM

GEOTECHNICAL
SUMMIT GEOENGINEERING SERVICES
ATTN: CRAIG COOLIDGE, P.E.
173 PLEASANT STREET
ROCKLAND, MAINE 04841
PHONE: 207-318-7761

ARCHITECTURE
ARCADIA DESIGNWORKS
199 PROSPECT STREET, SUITE A
PORTLAND, ME 04101
PHONE: 207-347-5252

LEGEND

EXISTING		PROPOSED
●	IRON MARKER FOUND 5/8" REBAR TOPPED WITH AN ALUMINUM I.D. CAP	○
D	MANHOLE/CATCH BASIN	◉
S	SEWER MANHOLE	Ⓢ
HYD	FIRE HYDRANT	✱
WG	WATER GATE VALVE	WG
SO	WATER SHUT-OFF	SO
○	BLOW-OFF/CLEAN-OUT	○
CMP #13	UTILITY POLE	●
OHE (OVERHEAD UTILITY LINE)	UTILITY LINE	UGE (OVERHEAD UTILITY LINE)
	PROPERTY LINE	
	EASEMENTS	
	SETBACK/BUFFER	
	STREAM	
	CURB	
	EDGE OF PAVEMENT	
	BUILDING	
12"SD	STORM DRAIN(SEE PLAN FOR SIZE)	12"SD
6"S	SEWER LINE(SEE PLAN FOR SIZE)	6"S
8"W	WATER LINE(SEE PLAN FOR SIZE)	8"W
	UNDERDRAIN(SEE PLAN FOR SIZE)	
	SLOPE ARROW	-1.5%
-100-	CONTOURS	100
	TREE LINE	
	SEDIMENT BARRIER	SB
	RIPRAP	
	PROPOSED PAVEMENT	
	SPOT GRADE	T100.50 B100.00
	CONCRETE	

SHEET INDEX

ISSUED FOR:
BIDDING

STATE OF MAINE
JOSEPH J. MARDEN
12828
LICENSED
PROFESSIONAL ENGINEER
10-18-24

2.	10-18-24	ISSUED FOR BIDDING — JJM
1.	09-04-24	SUBMITTED TO TOWN FOR MINOR STAFF REVIEW — JJM

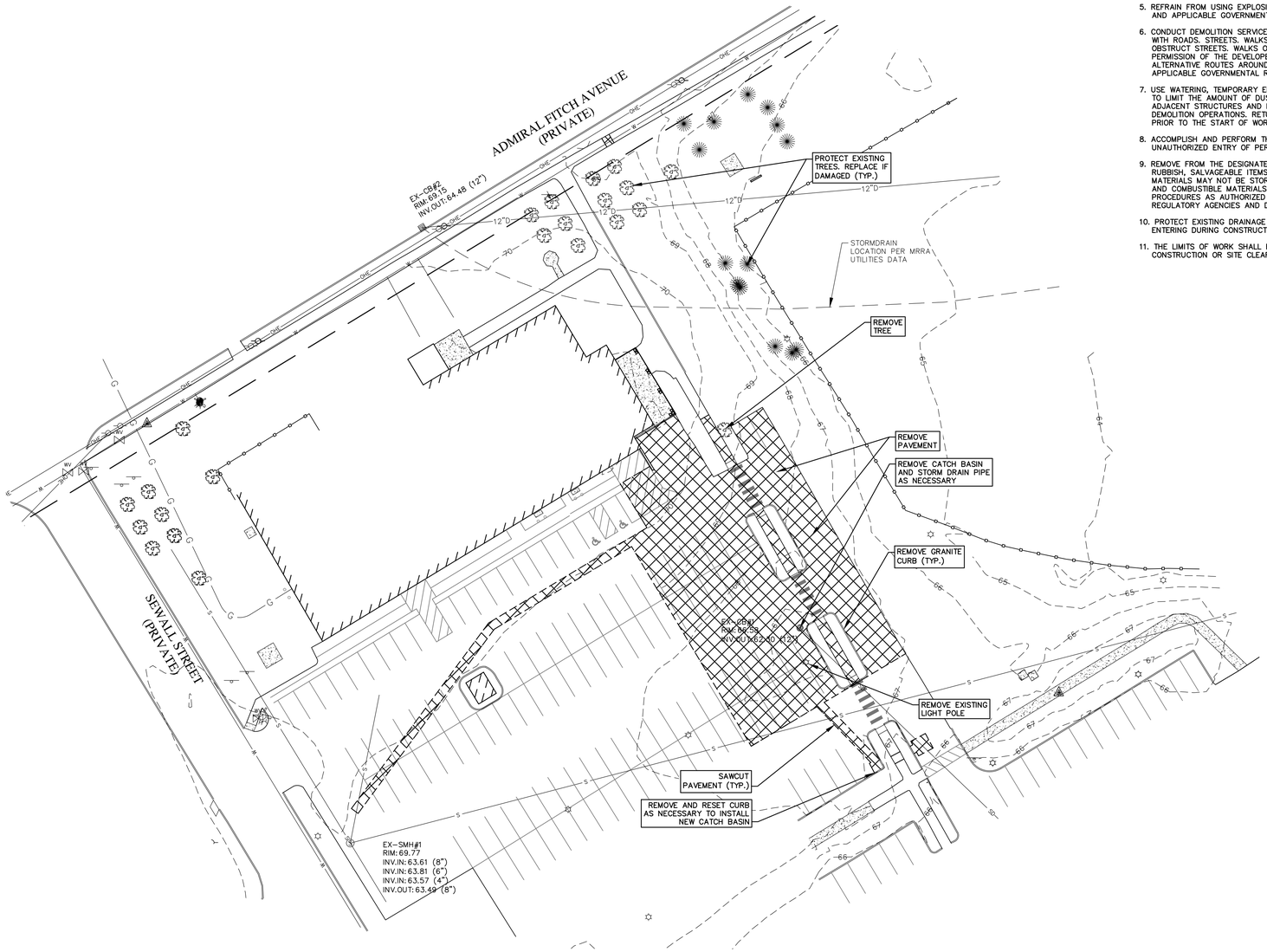
TITLE: COVER SHEET

PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

PREPARED FOR:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS ▪ PLANNERS ▪ LAND SURVEYORS

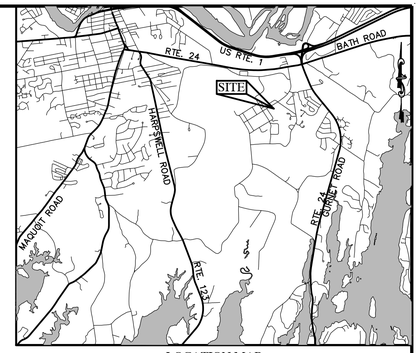
FIELD WK: CH	SCALE: NTS	SHEET: C1
DRN BY: JJM	JOB #: 4893	
CH'D BY: JJM	MAP/LOT: 40/151	
DATE: 03-14-24	FILE: 4893-COV-DET	



DEMOLITION NOTES:

1. ALL DEMOLITION ACTIVITIES ARE TO BE PERFORMED IN STRICT ADHERENCE TO ALL FEDERAL, STATE AND LOCAL REGULATIONS. CONTRACTOR TO INSTALL EROSION CONTROL DEVICES IN ACCORDANCE WITH GRADING & DRAINAGE PLAN PRIOR TO BEGINNING DEMOLITION ACTIVITIES.
2. DEMOLISH CONCRETE IN ALL SECTIONS.
3. BREAK UP CONCRETE SLABS–ON–GRADE UNLESS OTHERWISE DIRECTED BY THE CONSTRUCTION MANAGER.
4. CONDUCT ALL DEMOLITION OPERATIONS IN A MANNER THAT WILL PREVENT INJURY, DAMAGE TO STRUCTURES, ADJACENT BUILDINGS AND ALL PERSONS.
5. REFRAIN FROM USING EXPLOSIVES WITHOUT PRIOR WRITTEN CONSENT OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES.
6. CONDUCT DEMOLITION SERVICES IN SUCH A MANNER TO INSURE MINIMUM INTERFERENCE WITH ROADS, STREETS, WALKS AND OTHER ADJACENT FACILITIES. DO NOT CLOSE OR OBSTRUCT STREETS, WALKS OR OTHER OCCUPIED FACILITIES WITHOUT PRIOR WRITTEN PERMISSION OF THE DEVELOPER AND APPLICABLE GOVERNMENTAL AUTHORITIES. PROVIDE ALTERNATIVE ROUTES AROUND CLOSED OR OBSTRUCTED TRAFFIC WAYS IF REQUIRED BY APPLICABLE GOVERNMENTAL REGULATIONS.
7. USE WATERING, TEMPORARY ENCLOSURES AND OTHER SUITABLE METHODS, AS NECESSARY, TO LIMIT THE AMOUNT OF DUST AND DIRT RISING AND SCATTERING IN THE AIR. CLEAN ADJACENT STRUCTURES AND IMPROVEMENTS OF ALL DUST AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ALL ADJACENT AREAS TO THE CONDITIONS EXISTING PRIOR TO THE START OF WORK.
8. ACCOMPLISH AND PERFORM THE DEMOLITION IN SUCH A MANNER AS TO PREVENT THE UNAUTHORIZED ENTRY OF PERSONS AT ANY TIME.
9. REMOVE FROM THE DESIGNATED SITE, AT THE EARLIEST POSSIBLE TIME, ALL DEBRIS RUBBISH, SALVAGEABLE ITEMS, HAZARDOUS AND COMBUSTIBLE SERVICES. REMOVED MATERIALS MAY NOT BE STORED, SOLD OR BURNED ON SITE. REMOVAL OF HAZARDOUS AND COMBUSTIBLE MATERIALS SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THE PROCEDURES AS AUTHORIZED BY THE FIRE DEPARTMENT OR OTHER APPROPRIATE REGULATORY AGENCIES AND DEPARTMENTS.
10. PROTECT EXISTING DRAINAGE SYSTEM(S) AS NECESSARY TO PREVENT SEDIMENT FROM ENTERING DURING CONSTRUCTION. SEE DETAIL SHEETS FOR EROSION CONTROL DEVICES.
11. THE LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD PRIOR TO THE START OF CONSTRUCTION OR SITE CLEARING.

GRID



LOCATION MAP
NOT TO SCALE

NOTES:

THIS PLAN DEPICTS CONDITIONS FOUND AND SURVEYED BY SITELINES PA AS OF MARCH 2024. SUPPORTING DATA IS FROM THE INFORMATION BELOW.

1. TITLE REFERENCE FOR SURVEYED PARCEL:

   BK 28821, PG 185

2. PLAN REFERENCE(S):

   a. "FINAL SUBDIVISION PLAN, BRUNSWICK LANDING SUBDIVISION – PHASE 1, BRUNSWICK LANDING, BRUNSWICK, CUMBERLAND COUNTY, MAINE" REVISED 3/11/2013; RECORDED IN PLAN BOOK 213 PAGES 79 THROUGH 85
   b. "AMENDMENT OF SUBDIVISION PLAN, BRUNSWICK LANDING SUBDIVISION – PHASE 1, BRUNSWICK LANDING, BRUNSWICK, CUMBERLAND COUNTY, MAINE" REVISED 06/11/2014, RECORDED IN PLAN BOOK 214 PAGES 247 THROUGH 253.

3. AREA INFORMATION:

   3.8± ACRES

4. TAX MAP REFERENCE:

   TAX MAP 40, LOT 151.

5. BASIS OF BEARINGS:

   BEARINGS ARE PER PLAN REFERENCE "A".

6. UTILITY INFORMATION:

   THERE MAY BE UNDERGROUND CONDUIT, WIRES, CABLES AND/OR STRUCTURES NOT SHOWN ON THIS PLAN. THE LOCATIONS SHOWN ARE BASED ON SURFACE FEATURES VISIBLE AT THE TIME OF SURVEY AND POSSIBLY FROM INFORMATION PROVIDED BY THE OWNER, MUNICIPAL GIS DATA, AND/OR UTILITY COMPANIES. NO EXCAVATIONS WERE MADE DURING THE COURSE OF THE SURVEY TO VERIFY OR LOCATE ANY UNDERGROUND STRUCTURES. IT IS THE RESPONSIBILITY OF THE OWNER/CONTRACTOR TO VERIFY THE LOCATION OF ANY UNDERGROUND UTILITIES PRIOR TO EXCAVATING BY CONTACTING THE APPROPRIATE UTILITY COMPANY. STATE LAW REQUIRES DIG–SAFE BE CONTACTED PRIOR TO EXCAVATION.

2.	10–18–24	ISSUED FOR BIDDING	JJM
1.	09–04–24	SUBMITTED TO TOWN FOR MINOR STAFF REVIEW	JJM

TITLE:
EXISTING CONDITIONS AND DEMOLITION PLAN

PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

PREPARED FOR:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

PROGRESS PRINT
THIS PLAN IS ISSUED FOR REVIEW AND INFORMATION PURPOSES ONLY. THIS PLAN IS SUBJECT TO CHANGE AND IS NOT FOR PRICING OR CONSTRUCTION. PRICING BASED ON THIS PLAN IS NOT BINDING UNLESS SIGNED BY BOTH CONTRACTOR AND OWNER.

CALL DIG SAFE UTILITY LOCATION
1-888-344-7233
STATE LAW REQUIRES ADVANCE NOTICE OF AT LEAST 3 BUSINESS DAYS BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND UTILITIES

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

ISSUED FOR:
BIDDING

STATE OF MAINE
JOSEPH J. MARDEN
12828
LICENSED PROFESSIONAL ENGINEER
10–18–24

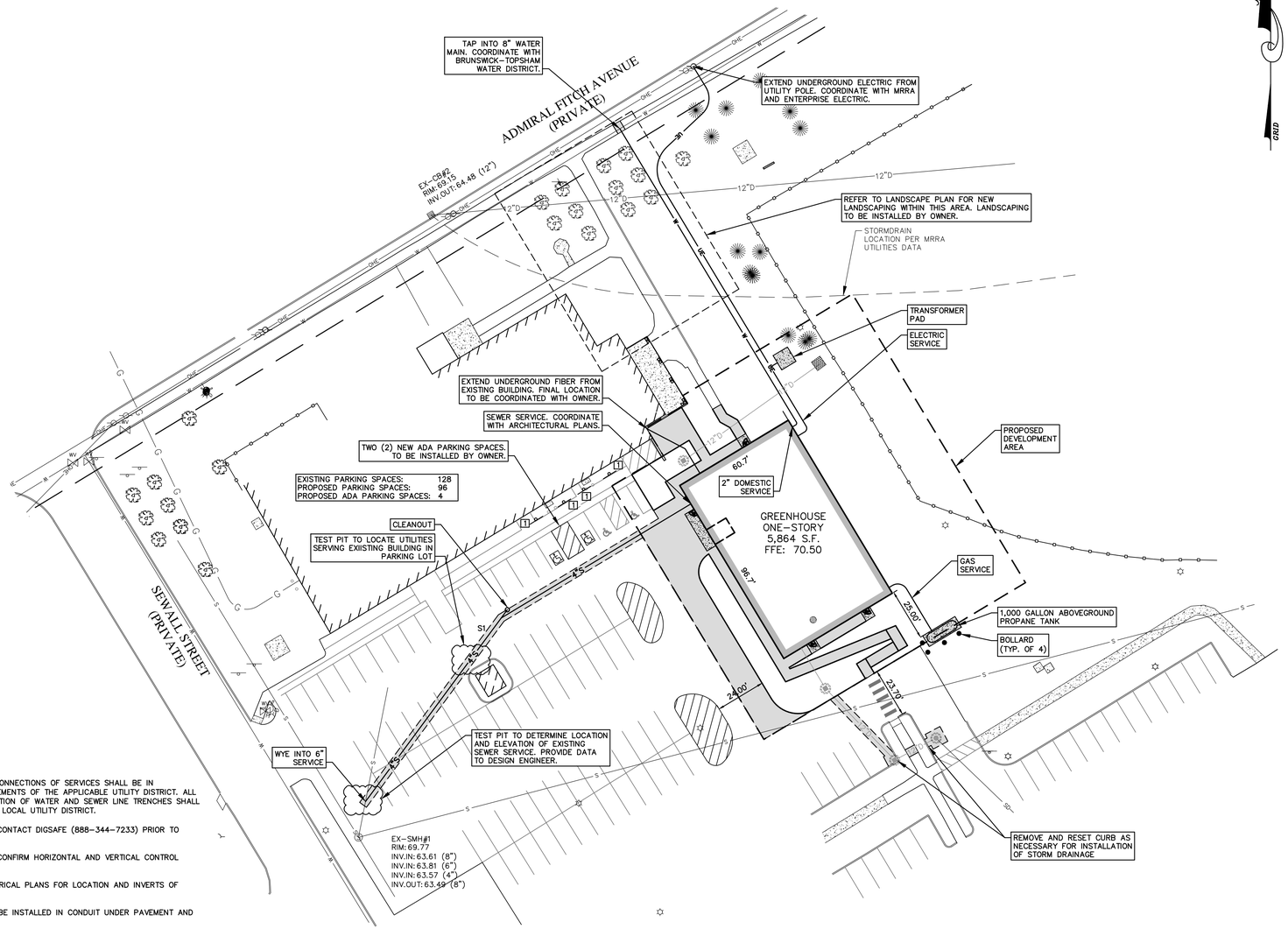
SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS ▪ PLANNERS ▪ LAND SURVEYORS

FIELD WK: CH	SCALE: 1"=30'
DRN BY: JJM	JOB #: 4893
CH'D BY: JJM	MAP/LOT: 40/151
DATE: 03-14-24	FILE: 4893-SITE

SHEET: C2

SIGN LEGEND:

RESERVED PARKING — VAN ACCESSIBLE
R7-8 (12"x18")
R7-8A (12"x6")
[1]



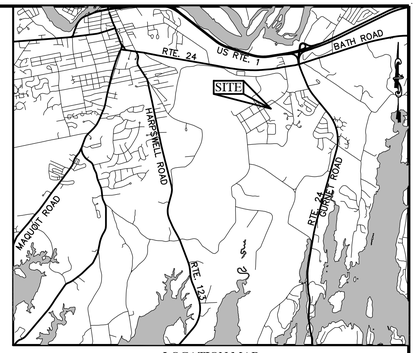
GRID

LAYOUT NOTES:

1. ALL DIMENSIONING, UNLESS NOTED OTHERWISE, IS TO THE FACE OF CURB OR FOUNDATION.
2. BOUNDARY INFORMATION ON LAYOUT PLAN IS FOR REFERENCE ONLY, REFER TO CERTIFIED BOUNDARY PLANS FOR BOUNDARY INFORMATION.
3. ALL HANDICAP ACCESSIBLE PARKING SPACES, RAMPS AND SIDEWALKS SHALL BE CONSTRUCTED IN CONFORMANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA).
4. ALL SITE SIGNAGE AND PAVEMENT MARKINGS SHALL CONFORM TO THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. (MUTCD)
5. BUILDING FOUNDATION SHOWN IS NOT FOR FOUNDATION LAYOUT. COORDINATE SITE WORK WITH ARCHITECTURAL DRAWINGS INCLUDING BUILDING FEATURES AND FOUNDATION PLAN.
6. REFER TO SHEET C4 FOR GRADING AND DRAINAGE INFORMATION.
7. REFER TO SHEET L1 FOR LIGHTING INFORMATION.

SEWER STRUCTURE DATA:

S1: 4" PVC L=215' S=0.0080 MIN.



LOCATION MAP
NOT TO SCALE

GENERAL NOTES:

1. TITLE REFERENCE FOR SURVEYED PARCEL:

   BK 28821, PG 185

2. PLAN REFERENCE(S):

   a. "FINAL SUBDIVISION PLAN, BRUNSWICK LANDING SUBDIVISION – PHASE 1, BRUNSWICK LANDING, BRUNSWICK, CUMBERLAND COUNTY, MAINE" REVISED 3/11/2013; RECORDED IN PLAN BOOK 213 PAGES 79 THROUGH 85
   b. "AMENDMENT OF SUBDIVISION PLAN, BRUNSWICK LANDING SUBDIVISION – PHASE 1, BRUNSWICK LANDING, BRUNSWICK, CUMBERLAND COUNTY, MAINE" REVISED 08/11/2014, RECORDED IN PLAN BOOK 214 PAGES 247 THROUGH 253.

3. AREA INFORMATION:

   LOT AREA: 3.8± ACRES

4. TAX MAP REFERENCE:

   TAX MAP 40, LOT 151

5. BASIS OF BEARINGS:

   BEARINGS ARE PER PLAN REFERENCE "A".

6. ELEVATION DATUM:

   REFER TO BENCHMARKS SHOWN ON SHEET C2.

7. FLOOD ZONE INFORMATION:

   PARCEL IS LOCATED WITHIN ZONE C (AREAS OF MINIMAL FLOODING) OF THE FLOOD INSURANCE RATE MAPS FOR CUMBERLAND COUNTY, MAINE. THE PROJECT IS LOCATED ON PANEL 15 OF 35 (COMMUNITY PANEL 23004200015B, EFF. DATE JANUARY 3, 1986)

8. IMPERVIOUS AREA*.

EXISTING:	11,424 S.F.
PROPOSED:	9,684 S.F.
NET:	−1,741 S.F.

*WITHIN PROPOSED DEVELOPMENT AREA

UTILITY NOTES:

1. INFORMATION REGARDING THE LOCATION OF EXISTING UNDERGROUND UTILITIES IS A COMPILATION OF THAT FOUND IN THE FIELD AND THAT SHOWN ON A PREVIOUS PLANS, AND SHALL NOT BE CONSIDERED AN AS-BUILT PLAN. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD VERIFYING UTILITY LOCATIONS PRIOR TO COMMENCING WORK. NOTIFY ENGINEER OF ANY DISCREPANCY BETWEEN UTILITIES AS SHOWN AND AS FOUND. CONTRACTOR SHALL NOTIFY DIG-SAFE (1-888-344-7233) PRIOR TO EXCAVATION.

GROWTH-MIXED USE 7 ZONING DISTRICT (GM7)	
ZONING STANDARD	REQUIRED (GM7)
MIN. LOT SIZE:	7,000 S.F.
MIN. LOT WIDTH:	N/A
YARD DEPTH:	
FRONT:	0'
REAR:	0'
SIDE:	0'
MIN. HEIGHT	24'
MAX. HEIGHT:	40'
MAX. FOOTPRINT:	NONE
MAX. IMPERVIOUS SURFACE COVERAGE:	100%

UTILITY NOTES:

1. ALL TERMINATIONS AND CONNECTIONS OF SERVICES SHALL BE IN COMPLIANCE WITH REQUIREMENTS OF THE APPLICABLE UTILITY DISTRICT. ALL BACKFILLING AND COMPACTION OF WATER AND SEWER LINE TRENCHES SHALL BE AS APPROVED BY THE LOCAL UTILITY DISTRICT.
2. THE CONTRACTOR SHALL CONTACT DIGSAFE (888-344-7233) PRIOR TO COMMENCING EXCAVATION.
3. THE CONTRACTOR SHALL CONFIRM HORIZONTAL AND VERTICAL CONTROL BEFORE BEGINNING WORK.
4. SEE PLUMBING AND ELECTRICAL PLANS FOR LOCATION AND INVERTS OF SLEEVES IN FOUNDATIONS.
5. ELECTRIC SERVICE SHALL BE INSTALLED IN CONDUIT UNDER PAVEMENT AND CONCRETE.
6. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL SEWER, WATER, ELECTRICAL, AND SANITARY CONDUIT, MANHOLES, TRANSFORMERS, AND FITTINGS FOR APPROVAL.
7. CONTRACTOR SHALL VERIFY LOCATION OF EXISTING UTILITIES PRIOR TO CONSTRUCTION.
8. SANITARY SEWER PIPE AND FITTINGS SHALL BE SDR-35 PVC.
9. INSTALL 2" RIGID STYROFOAM INSULATION OVER SANITARY SEWER IN AREAS WHERE THERE IS LESS THAN 4' OF COVER.
10. CONNECTIONS AT MANHOLES/CATCH BASINS SHALL HAVE A FLEXIBLE BOOT CAST ONTO THE BARREL AND SECURED WITH STAINLESS STEEL BANDS.
11. SEE SHEET C4 FOR GRADING, DRAINAGE, STORM DRAIN DATA & EROSION CONTROL MEASURES.
12. BUILDING FOOTPRINT SHOWN IS NOT FOR FOUNDATION LAYOUT. REFER TO STRUCTURAL/ARCHITECTURAL DRAWINGS.
13. ALL DOMESTIC WATER SERVICES ON THE BUILDING SIDE OF THE CONTROL VALVE SHALL BE EITHER 2" TYPE K COPPER OR 2" CTS PE RATED AT 200 PSI. IF THE PE IS USED, AN 8 GAUGE WIRE SHALL BE ATTACHED TO THE PIPE WITH ONE END BROUGHT ALONGSIDE THE CURB BOX FOR LOCATING PURPOSES.
14. ANY CURB BOXES LOCATED WITHIN PAVEMENT SHALL BE INSTALLED INSIDE A GATE BOX TOP.
15. ALL MATERIALS SHOWN SHALL BE NEW AND FURNISHED BY CONTRACTOR AS PART OF CONTRACT WORK. ONLY ITEMS SPECIFICALLY IDENTIFIED TO BE SALVAGED MAY BE RE-USED WITHOUT PRIOR WRITTEN PERMISSION.

2.	10-18-24 ISSUED FOR BIDDING	JJM
1.	09-04-24 SUBMITTED TO TOWN FOR MINOR STAFF REVIEW	JJM

TITLE:
SITE LAYOUT PLAN

PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

PREPARED FOR:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

PROGRESS PRINT
THIS PLAN IS ISSUED FOR REVIEW AND INFORMATION PURPOSES ONLY. THIS PLAN IS SUBJECT TO CHANGE AND IS NOT FOR PRICING OR CONSTRUCTION. PRICING BASED ON THIS PLAN IS NOT BINDING UNLESS SIGNED BY BOTH CONTRACTOR AND OWNER.

CALL DIG SAFE UTILITY LOCATION
1-888-344-7233
STATE LAW REQUIRES ADVANCE NOTICE OF AT LEAST 3 BUSINESS DAYS BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND UTILITIES

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

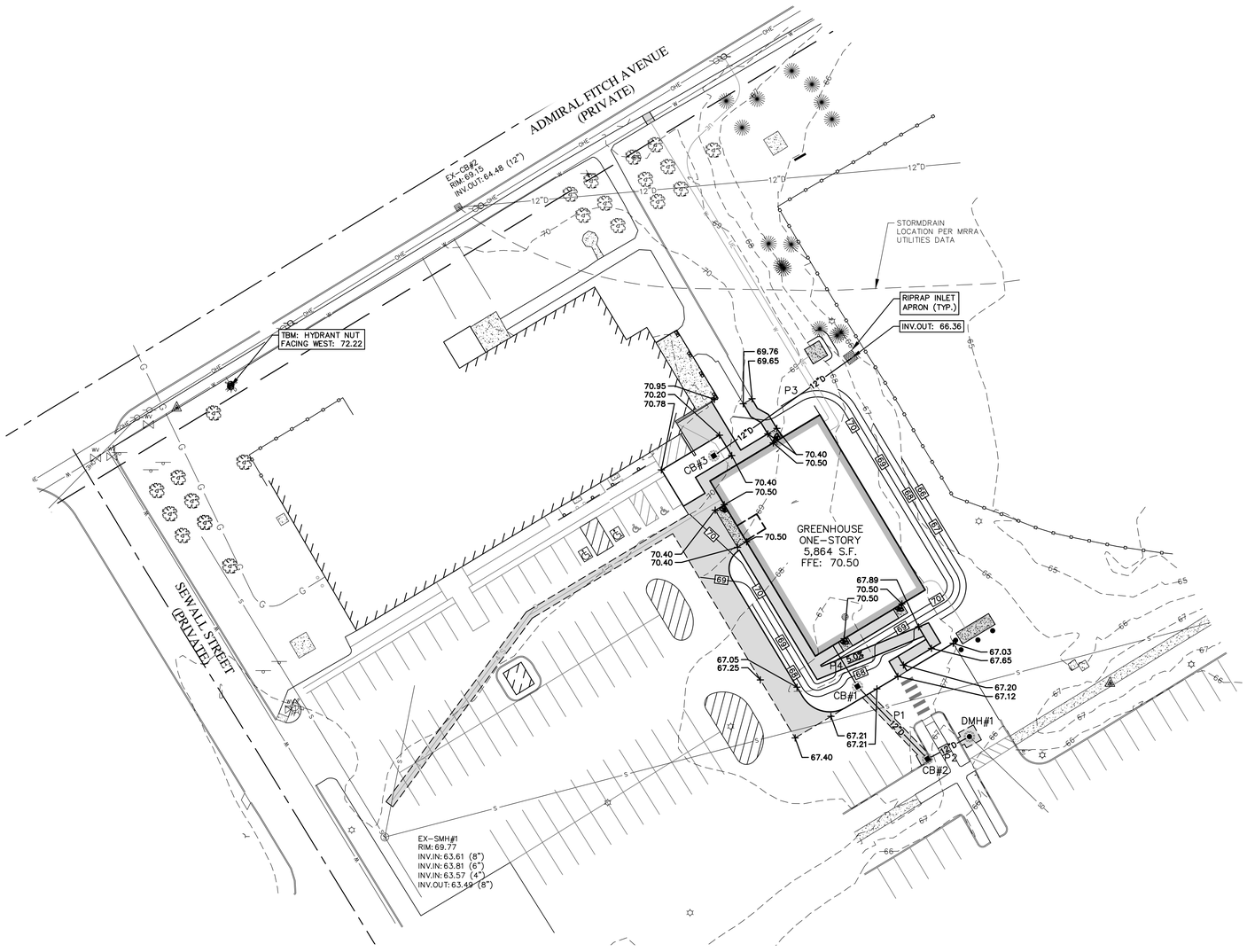
ISSUED FOR:
BIDDING

STATE OF MAINE — JOSEPH J. MARDEN — 12828 — LICENSED PROFESSIONAL ENGINEER
10-18-24

SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS ▪ PLANNERS ▪ LAND SURVEYORS

FIELD WK: CH	SCALE: 1=30"	SHEET: C3
DRN BY: JJM	JOB #: 4893	
CH'D BY: JJM	MAP/LOT: 40/151	
DATE: 03-14-24	FILE: 4893-SITE	

X:\LAND PROJECTS\4893 SMCC GREENHOUSE\DWG\4893-SITE.DWG, CS-SITEAUTIL, 10/18/2024 9:57:27 AM, JOE



GRADING AND DRAINAGE NOTES:

1. THE CONTRACTOR SHALL PHASE GRADING EFFORTS SUCH THAT TOTAL SITE DISTURBANCE IS MINIMIZED. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO GRADING EFFORTS OR WITHOUT DELAY UPON THEIR COMPLETION, DEPENDENT UPON THE SITUATION.

2. ALL FILL SLOPES SHALL BE A MINIMUM OF 3:1 HORIZONTAL TO VERTICAL UNLESS OTHERWISE NOTED OR DIRECTED.

3. THE LIMITS OF DISTURBANCE SHALL GENERALLY BE THE MINIMAL EXTENT NECESSARY ONLY TO PERFORM THE GRADING EFFORTS SHOWN ON THE DRAWINGS. SPECIAL CARE SHALL BE TAKEN TO AVOID DISTURBANCE OF OBJECTS AND AREAS NOT SPECIFICALLY IDENTIFIED FOR MODIFICATION OR REMOVAL.

4. ALL DISTURBED AREAS SHALL BE LOAMED AND SEEDED IN ACCORDANCE WITH THE DRAWINGS, UNLESS INTENDED FOR OTHER SURFACE COVER.

5. STORM DRAINS SHALL BE CONSTRUCTED CONCURRENTLY WITH GRADING EFFORTS TO PROVIDE ADEQUATE CONVEYANCE FOR ANY SITE RUNOFF CONDITIONS.

6. WHERE FINAL GRADING HAS BEEN COMPLETED, SURFACE RESTORATION FOR DISTURBED AREAS WILL BE COMPLETED AS SOON AS PRACTICABLE. FOR VEGETATIVE AREAS, VEGETATION WILL BE PROGRESSIVELY ESTABLISHED.

7. UNLESS OTHERWISE NOTED, ALL STORM DRAIN PIPE SHALL BE IN ACCORDANCE WITH MDOT SPECIFICATIONS SECTION 603. PIPE CULVERTS AND STORM DRAINS, LATEST REVISION WITH ACCEPTABLE TYPES OF PIPE ARE AS FOLLOWS:
   SMOOTH BORE POLYETHYLENE PIPE – HDPE N-12 ADS

8. BENCHMARK INFORMATION: SEE PLAN

9. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OF ALL DRAINAGE STRUCTURES AND PIPING PRIOR TO ORDERING.

10. RIM ELEVATIONS OF PROPOSED DRAINAGE STRUCTURES ARE APPROXIMATE. FINAL ELEVATIONS ARE TO BE SET FLUSH AND CONSISTENT WITH THE GRADING PLANS.

11. TRANSITIONS BETWEEN SLOPES ARE TO BE GENERALLY GRADUAL AND RESULT IN A SMOOTH, ROUNDED APPEARANCE.

DRAINAGE STRUCTURE DATA:

CB#1 (BEEHIVE GRATE)
RIM: 66.75
INV.IN: 63.25 (4" FROM FOUNDATION DRAIN)
INV.OUT: TBD (12" TO CB#2)

CB#2
RIM: 66.75
INV.IN: TBD (12" FROM CB#1)
INV.OUT: TBD (12" TO DMH#1)

CB#3 (F-TYPE)(BEEHIVE GRATE)
RIM: 69.75
INV.OUT: 66.75 (12" TO OUTFALL)

DMH#1
RIM: 66.29
INV.IN: TBD (12" FROM CB#2)
INV.OUT: TBD (12" TO EXIST)

P1: 12" HDPE L=44' S=0.0050
P2: 12" HDPE L=19' S=0.0050
P3: 12" HDPE L=78' S=0.0050
P4: 4" PVC L=21' S=0.0050 MIN.

2.	10-18-24 ISSUED FOR BIDDING	JJM
1.	09-04-24 SUBMITTED TO TOWN FOR MINOR STAFF REVIEW	JJM

TITLE:
GRADING AND DRAINAGE PLAN

PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

PREPARED FOR:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

PROGRESS PRINT
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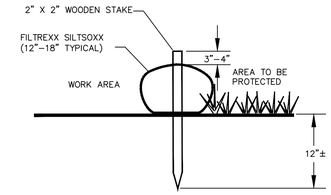
GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

ISSUED FOR:
BIDDING

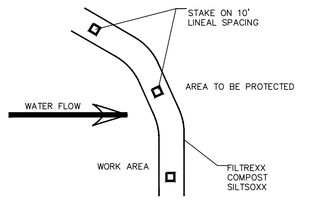
STATE OF MAINE
JOSEPH J. MARDEN
12828
LICENSED PROFESSIONAL ENGINEER
10-18-24

SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS • PLANNERS • LAND SURVEYORS

FIELD WK: CH	SCALE: 1"=40'	SHEET: C4
DRN BY: JJM	JOB #: 4893	
CH'D BY: JJM	MAP/LOT: 40/151	
DATE: 03-14-24	FILE: 4893-SITE	



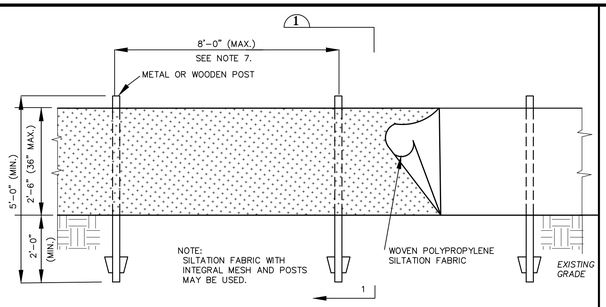
SECTION



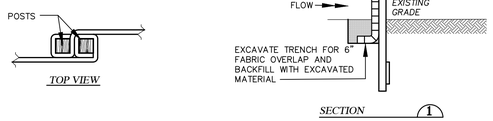
PLAN

NOTES:
1. ALL MATERIALS TO MEET FILTREXX SPECIFICATIONS
2. SILTSOXX COMPOST/SOIL/ROCK/SEED FILL TO MEET APPLICATION REQUIREMENTS
3. SILTSOXX DEPICTED IS FOR MINIMUM SLOPES. GREATER SLOPES MAY REQUIRE LARGER SOCKS PER THE ENGINEER.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE, AS DETERMINED BY ENGINEER.

A *FILTREXX SILTSOXX DETAIL "SEDIMENT BARRIER OPTION"*
N.T.S.

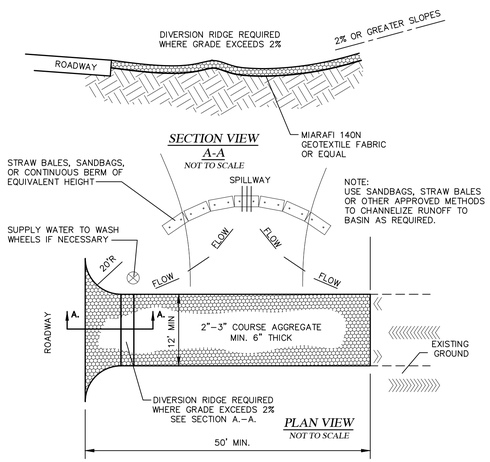


ELEVATION



INSTALLATION:
1. EXCAVATE A 6" X 6" TRENCH ALONG THE LINE OF PLACEMENT FOR THE FILTER BARRIER.
2. UNROLL A SECTION AT A TIME AND POSITION THE POSTS AGAINST THE BACK (DOWNSTREAM) WALL OF THE TRENCH.
3. DRIVE POSTS INTO THE GROUND UNTIL APPROXIMATELY 2" OF FABRIC IS LYING ON THE TRENCH BOTTOM.
4. LAY THE TOE–IN FLAP OF FABRIC ONTO THE UNDISTURBED BOTTOM OF THE TRENCH. BACK FILL THE TRENCH AND TAMP THE SOIL.
5. JOIN SECTION AS SHOWN IN TOP VIEW.
6. BARRIER SHALL BE MIRAFI SILT FENCE (100X) OR APPROVED EQUIVALENT.
7. A STONE "FILLET" MAY BE USED FOR ANCHORING FABRIC IF IT CANNOT BE KEYED IN.

B *SILT FENCE DETAIL "SEDIMENT BARRIER OPTION"*
N.T.S.



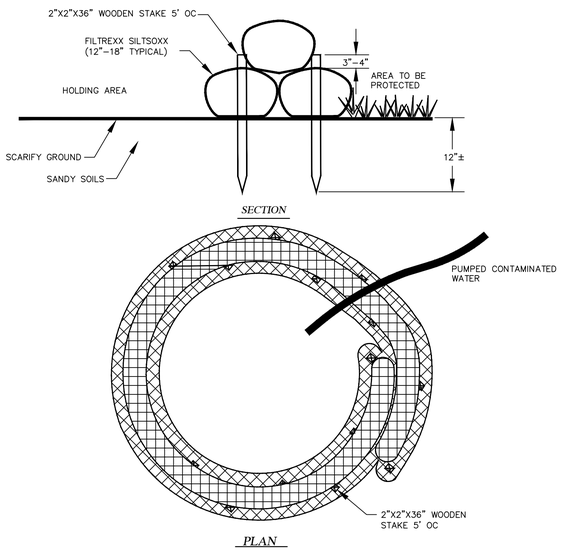
NOTE:
1. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT–OF–WAYS. THIS MAY REQUIRE TOP DRESSING, REPAIR, AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT.

2. WHEN NECESSARY, WHEELS SHALL BE CLEANED PRIOR TO ENTRANCE ONTO PUBLIC RIGHT–OF–WAYS.

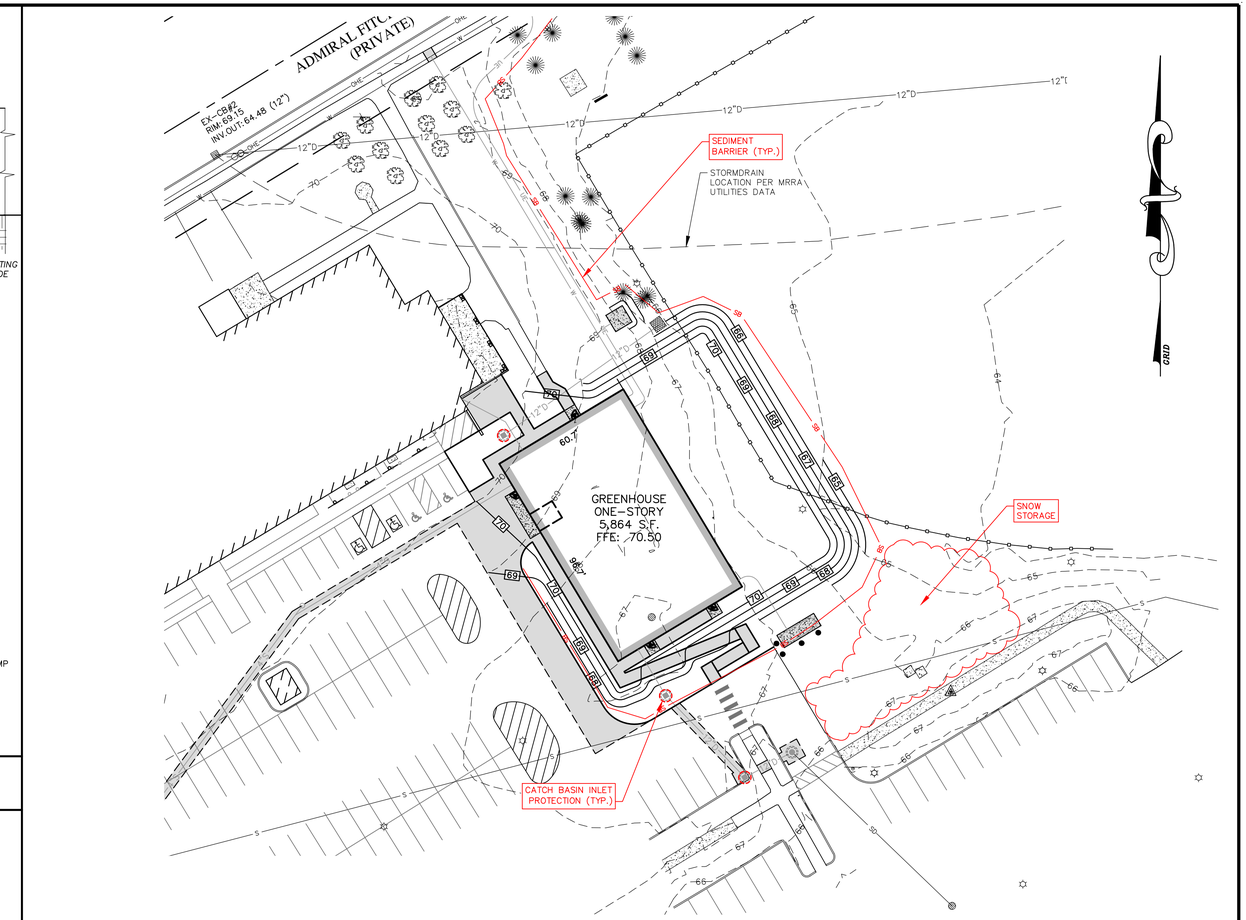
3. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH CRUSHED STONE THAT DRAINS INTO AN APPROVED SEDIMENT TRAP OR BASIN.

4. TRACKED MUD OR SEDIMENT SHALL BE REMOVED PRIOR TO THE NEXT STORM EVENT. "REMOVED" SHALL MEAN VACUUM SWEEPING. MECHANICAL BROOM/SWEEPING SEDIMENT INTO DITCHES OR STRUCTURES IS NOT ACCEPTABLE.

C *STABILIZED CONSTRUCTION ENTRANCE*
N.T.S.



D *SEDIMENT TRAP DETAIL*
N.T.S.



GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

LEGEND
- CATCH BASIN INLET PROTECTION
- SB — SEDIMENT BARRIER
- SNOW STORAGE AREA

EROSION & SEDIMENT CONTROL (ESC) NOTES:
1. THE CONTRACTOR SHALL UTILIZE THE CONSTRUCTION ENTRANCE FOR ENTERING AND EXITING THE PROPERTY

2. ESC BMPS SHALL BE INSTALLED PRIOR TO START OF WORK.

3. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PROTECT DISTURBED AREAS AND REVIEW BMPS PRIOR TO FORECAST PRECIPITATION OF MORE THAN 0.5 INCHES.

4. CONTRACTOR TO SWEEP EXISTING PAVED ACCESS AS NEEDED TO REMOVE TRACKED SOILS.

5. CONTRACTOR SHALL KEEP THE WRITTEN STORMWATER MANAGEMENT INSPECTION AND MAINTENANCE PLAN ON SITE.

6. ALL RUNOFF FROM DISTURBED AREAS SHALL BE DIRECTED TO A FILTERING DEVICE DESIGNATED TO LIMIT DISCHARGE TURBIDITY. THE FILTERING DEVICE MAY BE BUT IS NOT LIMITED TO SAND FILTERS, EROSION CONTROL MIX, STRAW WA TILES, FLOCCULATION CHEMICALS, DIRT GLUE AND SILT FENCE.

7. STOCKPILES TO BE TEMPORARILY SEEDED AND MULCHED OR COVERED WITH POLY SHEETING AS REQUIRED BY THE PROJECT SPECIFICATIONS.

8. THE CONTRACTOR SHALL TREAT DISTURBED AREAS, BUILDING AREAS, AND CONSTRUCTION HAUL PATHS WITH DUST CONTROL BMPS TO LIMIT ALL FUGITIVE DUST PER THE PROJECT SPECIFICATIONS.

9. THE EROSION AND SEDIMENT CONTROL MEASURES DEPICTED ON THIS PLAN ARE CONSIDERED TO BE THE MINIMUM REQUIREMENTS. THE CONTRACTOR IS RESPONSIBLE TO MANAGE, INSPECT AND PROTECT THE SITE USING MEDEP BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AS REQUIRED BY THE PROJECT SPECIFICATIONS AND THE EROSION AND SEDIMENT CONTROL REPORT. THIS MAY REQUIRE ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NOT DEPICTED ON THIS PLAN WHICH ARE CONSIDERED INCIDENTAL TO THE CONTRACT AND WILL BE IMPLEMENTED AT NO ADDITIONAL COST TO THE OWNER.

10. ALL CATCH BASIN INLETS WITH TRIBUTARY AREA WITH PAVEMENT COVER SHALL HAVE AN OIL ABSORBENT BOOM INSTALLED PRIOR TO THE PLACEMENT OF ANY BINDER PAVEMENT.

11. SEE ADDITIONAL NOTES ON SHEET C7, EROSION CONTROL NOTES.

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ISSUED FOR:
BIDDING

STATE OF MAINE
JOSEPH J. MARDEN
12828
LICENSED PROFESSIONAL ENGINEER
10–18–24

2.	10–18–24	ISSUED FOR BIDDING — JJM
1.	09–04–24	SUBMITTED TO TOWN FOR MINOR STAFF REVIEW — JJM

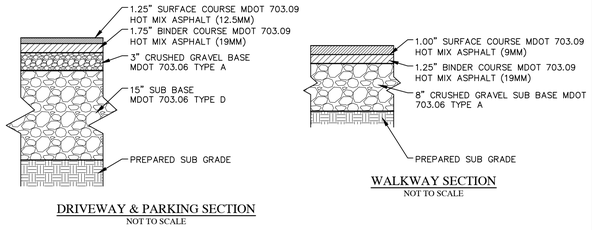
TITLE:
EROSION CONTROL PLAN

PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

PREPARED FOR:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

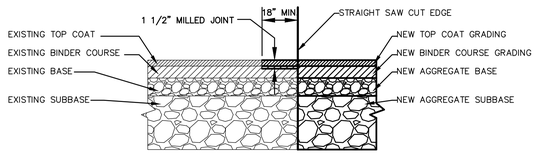
SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS ▪ PLANNERS ▪ LAND SURVEYORS

FIELD WK: CH	SCALE: 1"=30'	SHEET: C5
DRN BY: JJM	JOB #: 4893	
CH'D BY: JJM	MAP/LOT: 40/151	
DATE: 03-14-24	FILE: 4893-SITE	



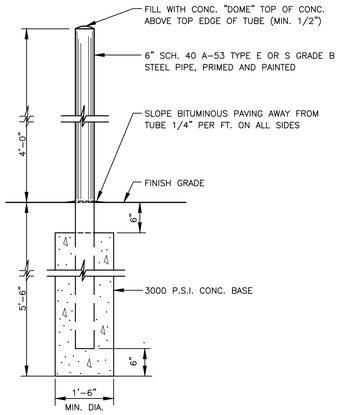
DRIVEWAY & PARKING SECTION
NOT TO SCALE

WALKWAY SECTION
NOT TO SCALE

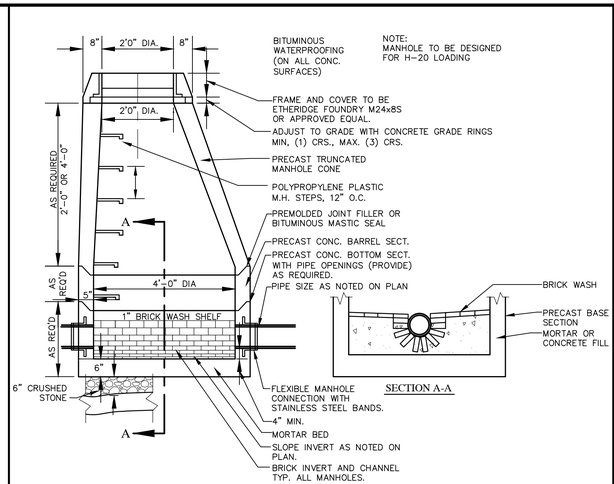


PAVEMENT SAW CUT SECTION "FULL DEPTH RECONSTRUCTION"
NOT TO SCALE

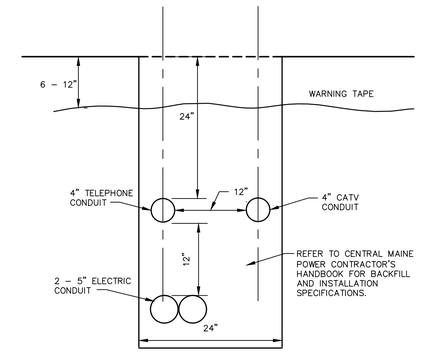
A PAVEMENT SECTIONS
N.T.S.



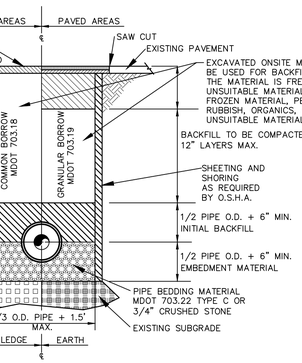
B TYPICAL BOLLARD DETAIL
N.T.S.



C SANITARY SEWER DETAIL
N.T.S.

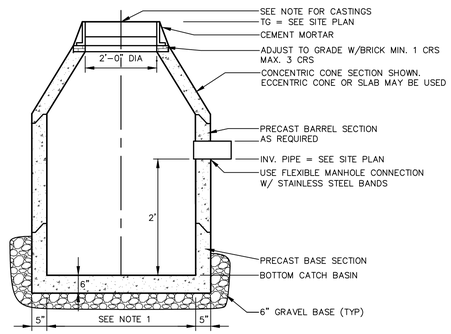


D UTILITY TRENCH
N.T.S.



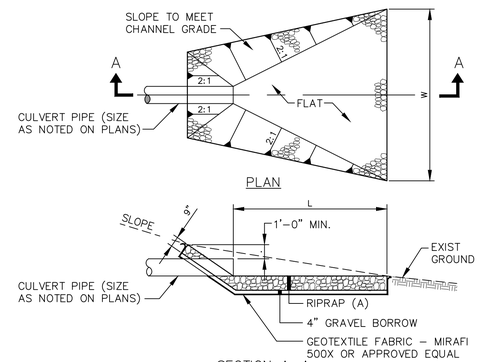
NOTES:
1. REFER TO LATEST MDOT SPECIFICATIONS FOR BEDDING AND BACKFILL REQUIREMENTS.

E TYPICAL PIPE TRENCH DETAIL
N.T.S.



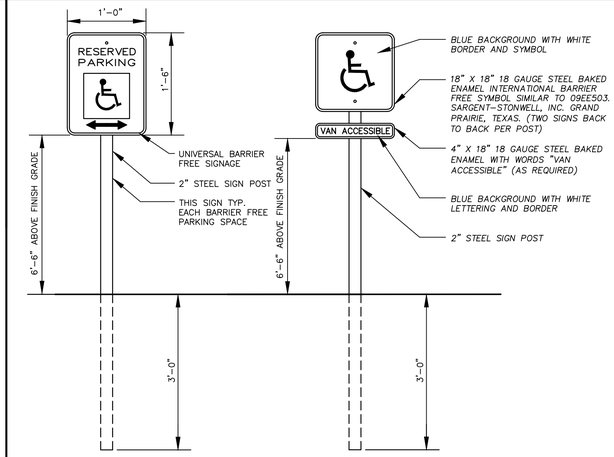
NOTES:
1. 4'-0" I.D. TYPICAL. SOME STRUCTURES MAY REQUIRE LARGER I.D. PROVIDE SHOP DRAWINGS.
2. DRAINAGE STRUCTURES TO BE DESIGNED FOR H-20 LOADING.
3. PIPE SIZES AND INVERTS AS NOTED ON PLANS.
4. CATCH BASIN FRAME AND GRATE TO BE LABARON FOUNDARY MODEL LF-244-S GRATE OR APPROVED EQUAL.

F CATCH BASIN OR DRAINAGE MANHOLE
N.T.S.



OUTLET	DIA.	SLOPE	D50	A	W	L
12" CULVERT	12"	.01	5"	10"	4'	6'

G RIPRAP INLET/OUTLET PROTECTION
N.T.S.



H BARRIER FREE PARKING SIGN DETAIL
N.T.S.

I NOT USED
N.T.S.

J NOT USED
N.T.S.

K NOT USED
N.T.S.

PROGRESS PRINT
THIS PLAN IS ISSUED FOR REVIEW AND INFORMATION PURPOSES ONLY. THIS PLAN IS SUBJECT TO CHANGE AND IS NOT FOR PRICING OR CONSTRUCTION. PRICING BASED ON THIS PLAN IS NOT BINDING UNLESS SIGNED BY BOTH CONTRACTOR AND OWNER.

ISSUED FOR:
BIDDING

2.	10-18-24 ISSUED FOR BIDDING	JJM
1.	09-04-24 SUBMITTED TO TOWN FOR MINOR STAFF REVIEW	JJM

TITLE:
SITE DEVELOPMENT DETAILS

PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

OWNER:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

STATE OF MAINE
JOSEPH J. MARDEN
12828
LICENSED
PROFESSIONAL ENGINEER
10-18-24

SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS ▪ PLANNERS ▪ LAND SURVEYORS

FIELD WK: CH	SCALE: NTS	SHEET: C6
DRN BY: JJM	JOB #: 4893	
CH'D BY: JJM	MAP/LOT: 40/151	
DATE: 03-14-24	FILE: 4893-COV-DET	

EROSION AND SEDIMENTATION NOTES:

1. CONTRACTOR SHALL FOLLOW BEST MANAGEMENT PRACTICES OF THE CUMBERLAND COUNTY SOIL CONSERVATION SERVICE AND THE MAINE DEP BEST MANAGEMENT PRACTICES HANDBOOK.

GENERAL EROSION AND SEDIMENTATION CONTROL PRACTICES:

EROSION/SEDIMENT CONTROL DEVICES:

THE FOLLOWING EROSION SEDIMENTATION CONTROL DEVICES ARE PROPOSED FOR CONSTRUCTION ON THIS PROJECT. INSTALL THESE DEVICES AS INDICATED ON THE PLANS.

1 SEDIMENT BARRIER: SILT SOXX OR APPROVED EQUAL WILL BE INSTALLED ALONG THE DOWN GRADING EDGES OF DISTURBED AREAS TO TRAP RUNOFF BORNE SEDIMENTS UNTIL THE SITE IS STABILIZED. IN AREAS WHERE STORMWATER DISCHARGES THE SEDIMENT BARRIER WILL BE REINFORCED WITH HAY BALES TO HELP MAINTAIN THE INTEGRITY OF THE SEDIMENT BARRIER AND TO PROVIDE ADDITIONAL TREATMENT.

2. RIPRAP: PROVIDE RIPRAP IN AREAS WHERE CULVERTS DISCHARGE OR AS SHOWN ON THE PLANS.

3. LOAM, SEED, & MULCH: ALL DISTURBED AREAS, WHICH ARE NOT OTHERWISE TREATED, SHALL RECEIVE PERMANENT SEEDING AND MULCH TO STABILIZE THE DISTURBED AREAS. THE DISTURBED AREAS WILL BE REVEGETATED WITHIN 5 DAYS OF FINAL GRADING. SEEDING REQUIREMENTS ARE PROVIDED AT THE END OF THIS SPECIFICATION.

4. STRAW AND HAY MULCH: USED TO COVER DENUDED AREAS UNTIL PERMANENT SEED OR EROSION CONTROL MEASURES ARE IN PLACE. MULCH BY ITSELF CAN BE USED ON SLOPES LESS THAN 15% IN SUMMER AND 8% IN WINTER. JUTE MESH IS TO BE USED OVER MULCH ONLY.

5. IN LIEU OF MULCH, USE EROSION CONTROL BLANKET (EQUAL TO NORTH AMERICAN GREEN SC150) TO STABILIZE AREAS OF CONCENTRATED FLOW AND DRAINAGE WAYS.

TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES:

PROVIDE THE FOLLOWING TEMPORARY EROSION/SEDIMENTATION CONTROL MEASURES DURING CONSTRUCTION OF THE DEVELOPMENT:

1. SEDIMENT BARRIER ALONG THE DOWNGRADIENT SIDE OF THE PARKING AREAS AND OF ALL FILL SECTIONS. THE SEDIMENT BARRIER WILL REMAIN IN PLACE UNTIL THE SITE IS 85% REVEGETATED.

2. HAY BALES PLACED AT KEY LOCATIONS TO SUPPLEMENT THE SEDIMENT BARRIER.

3. PROTECT TEMPORARY STOCKPILES OF STUMPS, GRUBBINGS, OR COMMON EXCAVATION AS FOLLOWS:
   A. SOIL STOCKPILE SIDE SLOPES SHALL NOT EXCEED 2:1.
   B. AVOID PLACING TEMPORARY STOCKPILES IN AREAS WITH SLOPES OVER 10 PERCENT, OR NEAR DRAINAGE SWALES. SEE ITEM 3 IN CONSTRUCTION PHASE NOTES BELOW.
   C. STABILIZE STOCKPILES WITHIN 7 DAYS BY TEMPORARILY SEEDING WITH A HYDROSEED METHOD CONTAINING AN EMULSIFIED MULCH TACKIFIER OR BY COVERING THE STOCKPILE WITH MULCH.
   D. SURROUND STOCKPILE SOIL WITH SEDIMENT BARRIER AT BASE OF PILE.

4. ALL DENUDED AREAS WHICH HAVE BEEN ROUGH GRADED AND ARE NOT LOCATED WITHIN THE BUILDING PAD, OR PARKING AND DRIVEWAY SUBBASE AREA SHALL RECEIVE MULCH WITHIN 30 DAYS OF INITIAL DISTURBANCE OF SOIL OR WITHIN 7 DAYS AFTER COMPLETING THE ROUGH GRADING OPERATIONS. IN THE EVENT THE CONTRACTOR COMPLETES FINAL GRADING AND INSTALLATION OF LOAM AND SOD WITHIN THE TIME PERIODS PRESENTED ABOVE, INSTALLATION OF MULCH AND NETTING, WHERE APPLICABLE, IS NOT REQUIRED.

5. EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 10 ACRES OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

2. IF WORK IS CONDUCTED BETWEEN OCTOBER 15 AND APRIL 15, ALL DENUDED AREAS ARE TO BE COVERED WITH HAY MULCH, APPLIED AT TWICE THE NORMAL APPLICATION RATE, AND ANCHORED WITH FABRIC NETTING. THE PERIOD BETWEEN FINAL GRADING AND MULCHING SHALL BE REDUCED TO A 15 DAY MAXIMUM.

3. TEMPORARY EROSION CONTROL MEASURES SHALL BE REMOVED ONCE THE SITE HAS BEEN STABILIZED OR IN AREAS WHERE PERMANENT EROSION CONTROL MEASURES HAVE BEEN INSTALLED.

4. WHENEVER PRACTICABLE, NO DISTURBANCE ACTIVITIES SHOULD TAKE PLACE WITHIN 50 FEET OF ANY WETLAND. IF DISTURBANCE ACTIVITIES TAKE PLACE BETWEEN 30 FEET AND 50 FEET OF ANY WETLAND, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE WETLAND, PERIMETER EROSION CONTROLS MUST BE DOUBLED. IF DISTURBANCE ACTIVITIES TAKE PLACE LESS THAN 30 FEET FROM ANY PROTECTED NATURAL RESOURCE, AND STORMWATER DISCHARGES THROUGH THE DISTURBED AREAS TOWARD THE PROTECTED NATURAL RESOURCE, PERIMETER EROSION CONTROLS MUST BE DOUBLED AND DISTURBED AREAS MUST BE TEMPORARILY OR PERMANENTLY STABILIZED WITHIN 7 DAYS.

5. AREAS WITHIN 75 FT OF A WETLAND WILL BE STABILIZED WITHIN 48 HOURS OF INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST.

9. ALL AREAS WITHIN 75 FEET OF A WETLAND MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIERS DURING WINTER CONSTRUCTION (NOVEMBER 1 THROUGH APRIL 15).

10. TEMPORARY SEDIMENT BASINS MAY BE INSTALLED DOWNGRADIENT OF THE DISTURBED AREAS. THESE BASINS MUST BE DESIGNED TO PROVIDE STORAGE FOR EITHER THE CALCULATED RUNOFF FROM A 2-YEAR, 24-HOUR STORM OR PROVIDE FOR 3,600 CUBIC FEET OF CAPACITY PER ACRE DRAINING TO THE BASIN. OUTLET STRUCTURES MUST DISCHARGE WATER FROM THE SURFACE OF THE BASIN WHENEVER POSSIBLE. EROSION CONTROLS AND VELOCITY DISSIPATION DEVICES MUST BE USED IF THE DISCHARGING WATERS ARE LIKELY TO CREATE EROSION. ACCUMULATED SEDIMENT MUST BE REMOVED AS NEEDED FROM THE BASIN TO MAINTAIN AT LEAST ½ OF THE DESIGN CAPACITY OF THE BASIN.

PERMANENT EROSION CONTROL MEASURES:

THE FOLLOWING PERMANENT CONTROL MEASURES ARE REQUIRED BY THIS EROSION/SEDIMENTATION CONTROL PLAN:

1. ALL AREAS DISTURBED DURING CONSTRUCTION, BUT NOT SUBJECT TO OTHER RESTORATION (PAVING, RIPRAP, ETC.), WILL BE LOAMED, LIMED, FERTILIZED AND SEEDED. NATIVE TOPSOIL SHALL BE STOCKPILED AND REUSED FOR FINAL RESTORATION WHEN IT IS OF SUFFICIENT QUALITY.

2. SLOPES GREATER THAN 2:1 WILL RECEIVE RIPRAP. (NONE ANTICIPATED)

POST-CONSTRUCTION REVEGETATION:

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION AS SOON AS AN AREA IS READY TO UNDERGO FINAL GRADING.

1. A MINIMUM OF 6" OF LOAM WILL BE SPREAD OVER DISTURBED AREAS AND GRADED TO A UNIFORM DEPTH AND NATURAL APPEARANCE, OR STONE WILL BE PLACED ON SLOPES TO STABILIZE SURFACES.

2. IF FINAL GRADING IS REACHED DURING THE NORMAL GROWING SEASON (4/15 TO 9/15), PERMANENT SEEDING WILL BE DONE AS SPECIFIED BELOW. PRIOR TO SEEDING, LIMESTONE SHALL BE APPLIED AT A RATE OF 138 LBS/1000 SQ. FT. AND 10:20:20 FERTILIZER AT A RATE OF 18.4 LBS/1000 SQ.FT WILL BE APPLIED. BROADCAST SEEDING AT THE FOLLOWING RATES:

LAWNS SHALL BE: ALLEN, STERLING & LATHROP 'TUFFTURF', 70% DIAMOND TALL FESCUE, 20% PLEASURE OLUS PERENNIAL RYEGRASS, 10% BARON KENTUCKY BLUEGRASS. SEEDING RATE SHALL BE 7-LBS./1,000 SQ. FT.

3. AN AREA SHALL BE MULCHED IMMEDIATELY AFTER IS HAS BEEN SEEDED. MULCHING SHALL CONSIST OF HAY MULCH, HYDRO-MULCH, JUTE NET OVER MULCH, PRE-MANUFACTURED EROSION MATS OR ANY SUITABLE SUBSTITUTE DEEMED ACCEPTABLE BY THE DESIGNER.
   A. HAY MULCH SHALL BE APPLIED AT THE RATE OF 2 TONS PER ACRE. HAY MULCH SHALL BE SECURED BY EITHER: (NOTE: SOIL SHALL NOT BE VISIBLE)
   I. BEING DRIVEN OVER BY TRACKED CONSTRUCTION EQUIPMENT ON GRADES OF 5% AND LESS.
   II. BLANKETED BY TACKED PHOTODEGRADABLE/BIODEGRADABLE NETTING, OR WITH SPRAY, ON GRADES GREATER THAN 5%.
   III. SEE NOTE 6, GENERAL NOTES, AND NOTE 8, WINTER CONSTRUCTION.
   B. HYDRO-MULCH SHALL CONSIST OF A MIXTURE OF EITHER ASPHALT, WOOD FIBER OR PAPER FIBER AND WATER SPRAYED OVER A SEEDED AREA. HYDRO-MULCH SHALL NOT BE USED BETWEEN 9/15 AND 4/15.

4. CONSTRUCTION SHALL BE PLANNED TO ELIMINATE THE NEED FOR SEEDING BETWEEN SEPTEMBER 15 AND APRIL 15. SHOULD SEEDING BE NECESSARY BETWEEN SEPTEMBER 15 AND APRIL 15 THE FOLLOWING PROCEDURE SHALL BE FOLLOWED. ALSO REFER TO NOTE 9 OF WINTER CONSTRUCTION.
   A. ONLY UNFROZEN LOAM SHALL BE USED.
   B. LOAMING, SEEDING AND MULCHING WILL NOT BE DONE OVER SNOW OR ICE COVER. IF SNOW EXISTS, IT MUST BE REMOVED PRIOR TO PLACEMENT OF SEED.
   C. WHERE PERMANENT SEEDING IS NECESSARY, ANNUAL WINTER RYE (1.2 LBS/1000 SQ.FT) SHALL BE ADDED TO THE PREVIOUSLY NOTED AREAS.
   D. WHERE TEMPORARY SEEDING IS REQUIRED, ANNUAL WINTER RYE (2.6 LBS/1000 SQ. FT.) SHALL BE SOWN INSTEAD OF THE PREVIOUSLY NOTED SEEDING RATE.
   E. FERTILIZING, SEEDING AND MULCHING SHALL BE APPLIED TO LOAM THE DAY THE LOAM IS SPREAD BY MACHINERY.
   F. ALTERNATIVE HAY MULCH SHALL BE SECURED WITH PHOTODEGRADABLE/BIODEGRADABLE NETTING. TRACKING BY MACHINERY ALONE WILL NOT SUFFICE.

5. FOLLOWING FINAL SEEDING, THE SITE WILL BE INSPECTED EVERY 15 DAYS UNTIL 90% COVER HAS BEEN ESTABLISHED. RESEEDING WILL BE CARRIED OUT BY THE CONTRACTOR WITHIN 10 DAYS OF NOTIFICATION BY THE ENGINEER THAT THE EXISTING CATCH IS INADEQUATE.

MONITORING SCHEDULE:

THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING, MONITORING, MAINTAINING, REPAIRING, REPLACING AND REMOVING ALL OF THE EROSION AND SEDIMENTATION CONTROLS OR APPOINTING A QUALIFIED SUBCONTRACTOR TO DO SO. MAINTENANCE MEASURES WILL BE APPLIED AS NEEDED DURING THE ENTIRE CONSTRUCTION CYCLE. AFTER EACH RAINFALL, A VISUAL INSPECTION WILL BE MADE OF ALL EROSION AND SEDIMENTATION CONTROLS AS FOLLOWS:

1. HAY BALE BARRIERS, SEDIMENT BARRIER, AND STONE CHECK DAMS SHALL BE INSPECTED AND REPAIRED ONCE A WEEK OR IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL. SEDIMENT TRAPPED BEHIND THESE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6" AND REDISTRIBUTED TO AREAS UNDERGOING FINAL GRADING. SHOULD THE HAY BALE BARRIERS PROVE TO BE INEFFECTIVE, THE CONTRACTOR SHALL INSTALL SEDIMENT BARRIER BEHIND THE HAY BALES.

2. VISUALLY INSPECT RIPRAP ONCE A WEEK OR AFTER EACH SIGNIFICANT RAINFALL AND REPAIR AS NEEDED. REMOVE SEDIMENT TRAPPED BEHIND THESE DEVICES ONCE IT ATTAINS A DEPTH EQUAL TO 1/2 THE HEIGHT OF THE DAM OR RISER. DISTRIBUTE REMOVED SEDIMENT OFF-SITE OR TO AN AREA UNDERGOING FINAL GRADING.

3. REVEGETATION OF DISTURBED AREAS WITHIN 25' OF DRAINAGE-COURSE/STREAM WILL BE SEEDED WITH THE "MEADOW AREA MIX" AND INSPECTED ON A WEEKLY BASIS OR AFTER EACH SIGNIFICANT RAINFALL AND RESEEDED AS NEEDED. EXPOSED AREAS WILL BE RESEEDED AS NEEDED UNTIL THE AREA HAS OBTAINED 100% GROWTH RATE. PROVIDE PERMANENT RIPRAP FOR SLOPES IN EXCESS OF 3:1 AND WITHIN 25' OF DRAINAGE COURSE.

HOUSEKEEPING:

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 MUST DEVELOP, AND IMPLEMENT AS NECESSARY, APPROPRIATE SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLANNING MEASURES.

NOTE: ANY SPILL OR RELEASE OF TOXIC OR HAZARDOUS SUBSTANCES MUST BE REPORTED TO THE DEPARTMENT. FOR OIL SPILLS, CALL 1-800-482-0777 WHICH IS AVAILABLE 24 HOURS A DAY. FOR SPILLS OF TOXIC OR HAZARDOUS MATERIAL, CALL 1-800-452-4664 WHICH IS AVAILABLE 24 HOURS A DAY. FOR MORE INFORMATION, VISIT THE DEPARTMENT'S WEBSITE AT : HTTP://WWW.MAINE.GOV/DEP/SPILLS/EMERGSPILLRESP/

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.

NOTE: LACK OF APPROPRIATE POLLUTANT REMOVAL BEST MANAGEMENT PRACTICES (BMPS) MAY RESULT IN VIOLATIONS OF THE GROUNDWATER QUALITY STANDARD ESTABLISHED BY 38 M.R.S.A. §465-C(1).

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) SHALL BE INSTALLED AT THE END OF THE EXIST PAVED ACCESS TO THE SITE 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. 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. NO EXCAVATION DEWATERING IS ANTICIPATED FOR THIS PROJECT. SHOULD IT BE NECESSARY, 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. A DEWATERING DISCHARGE PLAN SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR APPROVAL.

AUTHORIZED NON-STORMWATER DISCHARGES. IDENTIFY AND PREVENT CONTAMINATION BY NON-STORMWATER DISCHARGES. WHERE ALLOWED NON-STORMWATER DISCHARGES ARE NECESSARY, 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 ARE:

(a) DISCHARGES FROM FIREFIGHTING ACTIVITY;
(b) FIRE HYDRANT FLUSHINGS;
(c) VEHICLE WASHWATER IF DETERGENTS ARE NOT USED AND WASHING IS LIMITED TO THE EXTERIOR OF VEHICLES (ENGINE, UNDERCARRIAGE AND TRANSMISSION WASHING IS PROHIBITED);
(d) DUST CONTROL RUNOFF IN ACCORDANCE WITH PERMIT CONDITIONS AND APPENDIX (C)(3);
(e) ROUTINE EXTERNAL BUILDING WASHDOWN, NOT INCLUDING SURFACE PAINT REMOVAL, THAT DOES NOT INVOLVE DETERGENTS;
(f) PAVEMENT WASHWATER (WHERE SPILLS/LEAKS OF TOXIC OR HAZARDOUS MATERIALS HAVE NOT OCCURRED, UNLESS ALL SPILLED MATERIAL HAD BEEN REMOVED) IF DETERGENTS ARE NOT USED;
(g) UNCONTAMINATED AIR CONDITIONING OR COMPRESSOR CONDENSATE;
(h) UNCONTAMINATED GROUNDWATER OR SPRING WATER;
(i) FOUNDATION OR FOOTER DRAIN-WATER WHERE FLOWS ARE NOT CONTAMINATED;
(j) UNCONTAMINATED EXCAVATION DEWATERING (SEE REQUIREMENTS IN APPENDIX C(5));
(k) POTABLE WATER SOURCES INCLUDING WATERLINE FLUSHINGS; AND
(l) LANDSCAPE IRRIGATION.

UNAUTHORIZED NON-STORMWATER DISCHARGES. THE MDEP APPROVAL UNDER CHAPTER 500 DOES NOT AUTHORIZE A DISCHARGE THAT IS MIXED WITH A SOURCE OF NON-STORMWATER, OTHER THAN THOSE DISCHARGES IN COMPLIANCE WITH THE AUTHORIZED NON-STORMWATER DISCHARGES INDICATED ABOVE. SPECIFICALLY, THE DEPARTMENT'S APPROVAL DOES NOT AUTHORIZE DISCHARGES OF THE FOLLOWING:

(a) WASTEWATER FROM THE WASHOUT OR CLEANOUT OF CONCRETE, STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS OR OTHER CONSTRUCTION MATERIALS;
(b) FUELS, OILS OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE;
(c) SOAPS, SOLVENTS, OR DETERGENTS USED IN VEHICLE AND EQUIPMENT WASHING; AND
(d) TOXIC OR HAZARDOUS SUBSTANCES FROM A SPILL OR OTHER RELEASE.

CONSTRUCTION PHASE:

THE FOLLOWING GENERAL PRACTICES WILL BE USED TO PREVENT EROSION DURING CONSTRUCTION OF THIS PROJECT.

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND MAINTAIN UNTIL SITE IS PAVED.

2. ONLY THOSE AREAS NECESSARY FOR CONSTRUCTION WILL BE DISTURBED.

3. PRIOR TO THE START OF CONSTRUCTION, SEDIMENT BARRIER WILL BE INSTALLED ACROSS THE SLOPE(S), ON THE CONTOUR, AT OR JUST BELOW THE LIMITS OF CLEARING OR GRUBBING, AND/OR JUST ABOVE ANY ADJACENT TRAVELLED WAY TO PROTECT IT FROM CONSTRUCTION-RELATED EROSION.

4. CLEAR AND GRUB WORK SITE AS NEEDED TO EXECUTE PLANS USING CAUTION NOT TO OVER EXPOSE THE SITE.

5. STORMWATER MANAGEMENT SYSTEM WILL BE INSTALLED PRIOR TO CONSTRUCTION OF SITE ELEMENTS THAT DISCHARGE TO THESE SYSTEMS. CATCH BASIN INLET PROTECTION SHALL BE INSTALLED IN ALL NEW AND EXISTING CATCH BASINS THAT WILL RECEIVE RUNOFF FROM THE PROJECT. NO STORMWATER SHOULD BE DIRECTED TO THE WET POND UNTIL THE SITE IS COMPLETELY STABILIZED.

6. DISTURBED AREAS WILL BE PERMANENTLY STABILIZED WITHIN 15 DAYS OF FINAL GRADING, OR TEMPORARILY STABILIZED WITHIN 30 DAYS OF THE INITIAL DISTURBANCES OF SOILS. DISTURBED AREAS WILL BE STABILIZED BEFORE STORMS. LOAM WILL BE SAVED FOR LATER USE WHERE POSSIBLE. EXCESS SOIL MATERIALS WILL BE USED AS FILL OR REMOVED FROM SITE TO AN APPROVED LOCATION.

7. AT A MINIMUM, THE EROSION CONTROL MEASURES SHALL BE REVIEWED AND REPAIRED ONCE A WEEK OR IMMEDIATELY FOLLOWING ANY SIGNIFICANT RAINFALL OR SNOWMELT. SEDIMENT TRAPPED BEHIND THESE BARRIERS SHALL BE EXCAVATED WHEN IT REACHES A DEPTH OF 6 INCHES AND BE DISCARDED ON THE SITE. ALL EROSION CONTROL MEASURES SHALL BE INSTALLED AS INDICATED ON THE DRAWINGS.

8. LOAM, LIME, FERTILIZE, SEED, AND MULCH LANDSCAPED AND OTHER DISTURBED AREAS.

9. ONCE THE SITE IS STABILIZED AND A 90% CATCH OF VEGETATION HAS BEEN OBTAINED, REMOVE ALL TEMPORARY EROSION CONTROL MEASURES.

10. TOUCH UP LOAM AND SEED.

NOTE: ALL DENUDED AREAS NOT SUBJECT TO FINAL PAVING, RIPRAP OR GRAVEL SHALL BE REVEGETATED.

EROSION CONTROL DURING WINTER CONSTRUCTION:

1. WINTER CONSTRUCTION PERIOD: NOVEMBER 1 THROUGH APRIL 15.

2. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.

3. EXPOSED AREA SHALL BE LIMITED TO THOSE AREAS TO BE MULCHED IN ONE DAY PRIOR TO ANY SNOW EVENT. AT THE END OF EACH WORK WEEK NO AREAS MAY BE LEFT UNSTABILIZED OVER THE WEEKEND.

4. CONTINUATION OF EARTHWORK OPERATIONS ON ADDITIONAL AREAS SHALL NOT BEGIN UNTIL THE EXPOSED SOIL SURFACE ON THE AREA BEING WORKED HAS BEEN STABILIZED, SUCH THAT NO LARGER AREA OF THE SITE IS WITHOUT EROSION CONTROL PROTECTION AS LISTED IN ITEM 2 ABOVE.

5. AN AREA SHALL BE CONSIDERED TO HAVE BEEN STABILIZED WHEN EXPOSED SURFACES HAVE BEEN EITHER MULCHED WITH STRAW OR HAY AT A RATE OF 150 LB. PER 1000 S.F. (WITH OR WITHOUT SEEDING) OR DORMANT SEEDED, MULCHED AND ANCHORED SUCH THAT SOIL SURFACE IS NOT VISIBLE THROUGH THE MULCH. NOTE: AN AREA IS ALSO CONSIDERED STABLE IF SODDED, COVERED WITH GRAVEL (PARKING LOTS) OR STRUCTURAL SAND.

6. BETWEEN THE DATES OF OCTOBER 15 AND APRIL 1, LOAM OR SEED WILL NOT BE REQUIRED. DURING PERIODS OF ABOVE FREEZING TEMPERATURES THE SLOPES SHALL BE FINE GRADED AND EITHER PROTECTED WITH MULCH OR TEMPORARILY SEEDED AND MULCHED UNTIL SUCH TIME AS THE FINAL TREATMENT CAN BE APPLIED. IF THE DATE IS AFTER NOVEMBER 1 AND IF THE EXPOSED AREA HAS BEEN LOAMED, FINAL GRADED WITH A UNIFORM SURFACE, THEN THE AREA MAY BE DORMANT SEEDED AT A RATE OF 3 TIMES HIGHER THAN SPECIFIED FOR PERMANENT SEED AND THEN MULCHED. IF CONSTRUCTION CONTINUES DURING FREEZING WEATHER, ALL EXPOSED AREAS SHALL BE CONTINUOUSLY GRADED BEFORE FREEZING AND THE SURFACE TEMPORARILY PROTECTED FROM EROSION BY THE APPLICATION OF MULCH. SLOPES SHALL NOT BE LEFT UNEXPOSED OVER THE WINTER OR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS TREATED IN THE ABOVE MANNER. UNTIL SUCH TIME AS WEATHER CONDITIONS ALLOW, DITCHES TO BE FINISHED WITH THE PERMANENT SURFACE TREATMENT, EROSION SHALL BE CONTROLLED BY THE INSTALLATION OF BALES OF HAY, SEDIMENT BARRIER OR STONE CHECK DAMS IN ACCORDANCE WITH THE STANDARD DETAILS SHOWN ON THE DESIGN DRAWINGS. NOTE: DORMANT SEEDING SHOULD NOT BE ATTEMPTED UNLESS SOIL TEMPERATURE REMAINS BELOW 50 DEGREES AND DAY TIME TEMPERATURES REMAIN IN THE 30'S.

7. MULCH NETTING SHALL BE USED TO ANCHOR MULCH IN ALL DRAINAGE WAYS, SLOPES GREATER THAN 3% FOR SLOPES EXPOSED TO DIRECT WINDS AND FOR ALL OTHER SLOPES GREATER THAN 8%. VEGETATED DRAINAGE SWALES SHALL BE LINED WITH STRAW-COCONUT EROSION CONTROL BLANKET (NORTH AMERICAN GREEN SC150 OR APPROVED EQUAL).

8. BETWEEN THE DATES OF OCTOBER 15 TO NOVEMBER 1, WINTER RYE IS RECOMMENDED FOR STABILIZATION. AFTER NOVEMBER 1, WINTER RYE IS NOT EFFECTIVE. AROUND NOVEMBER 15 OR LATER, ONCE TEMPERATURES OF THE AIR AND SOIL PERMIT, DORMANT SEEDING IS EFFECTIVE.

9. IN THE EVENT OF SNOWFALL (FRESH OR CUMULATIVE) GREATER THAN 1 INCH DURING WINTER CONSTRUCTION PERIOD ALL SNOW SHALL BE REMOVED FROM THE AREAS OF SEEDING AND MULCHING PRIOR TO PLACEMENT.

SITE INSPECTION AND MAINTENANCE:

1. WEEKLY INSPECTIONS, AS WELL AS ROUTINE INSPECTIONS FOLLOWING EACH RAINFALL, SNOWSTORM, OR THAWING, SHALL BE CONDUCTED BY THE GENERAL CONTRACTOR OF ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES UNTIL FINAL ACCEPTANCE OF THE PROJECT (90% GRASS CATCH). RAINFALL OF 0.5 INCHES OR MORE IN 24 CONSECUTIVE HOURS SHALL TRIGGER AN INSPECTION. SNOWFALL OF 2 INCHES OR MORE SHALL TRIGGER AN INSPECTION. CORRECTIVE ACTION SHALL BE STARTED BY THE END OF THE NEXT WORK DAY AND COMPLETED WITHIN SEVEN (7) DAYS OR BEFORE THE NEXT STORM EVENT AS NOTED ABOVE. INSPECTIONS SHALL BE PERFORMED BY SOMEONE WITH KNOWLEDGE OF EROSION AND STORMWATER CONTROL INCLUDING THE STANDARDS AND CONDITIONS IN THE PERMIT ISSUED FOR THE PROJECT. THE SCOPE OF CONSTRUCTION INSPECTIONS INCLUDES DISTURBED AREAS AND IMPERVIOUS AREAS, MATERIAL STORAGE AREAS, AND VEHICLE ACCESS POINTS IN ADDITION TO ESC MEASURES. NECESSARY REPAIRS SHALL BE MADE TO CORRECT UNDERMINING OR DETERIORATION. FINAL ACCEPTANCE SHALL INCLUDE A SITE INSPECTION TO VERIFY THE STABILITY OF ALL DISTURBED AREAS AND SLOPES. UNTIL FINAL INSPECTION, ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL IMMEDIATELY BE CLEANED, AND REPAIRED BY THE GENERAL CONTRACTOR AS REQUIRED. DISPOSAL OF ALL TEMPORARY EROSION AND CONTROL DEVICES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. RECORDS OF INSPECTIONS SHALL BE KEPT FOR THREE (3) YEARS.

IT IS RECOMMENDED THAT THE OWNER HIRE THE SERVICES OF THE DESIGN ENGINEER TO PROVIDE COMPLIANCE INSPECTIONS (DURING ACTIVE CONSTRUCTION) RELATIVE TO IMPLEMENTATION OF THE STORMWATER AND EROSION CONTROL PLANS. SUCH INSPECTIONS SHOULD BE LIMITED TO ONCE A WEEK OR AS NECESSARY AND BE REPORTABLE TO THE OWNER, MUNICIPALITY, AND DEP.

DURING WINTER CONSTRUCTION, THE EROSION CONTROL MEASURES SHALL BE INSPECTED AFTER EACH RAINFALL, SNOWSTORM, OR THAWING, AND A MINIMUM OF ONCE PER WEEK.

2. SHORT-TERM SEDIMENTATION MAINTENANCE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CLEAN OUT ALL SWALES AND STRUCTURES PRIOR TO TURNING PROJECT OVER.

3. LONG-TERM PROVISIONS FOR PERMANENT MAINTENANCE OF ALL EROSION AND SEDIMENTATION CONTROL DEVICES AFTER ACCEPTANCE OF THE PROJECT SHALL BE THE RESPONSIBILITY OF THE OWNER.

2. 10-18-24 ISSUED FOR BIDDING JJM
1. 09-04-24 SUBMITTED TO TOWN FOR MINOR STAFF REVIEW JJM

PROGRESS PRINT
THIS PLAN IS ISSUED FOR REVIEW AND INFORMATION PURPOSES ONLY. THIS PLAN IS SUBJECT TO CHANGE AND IS NOT FOR PRICING OR CONSTRUCTION. PRICING BASED ON THIS PLAN IS NOT BINDING UNLESS SIGNED BY BOTH CONTRACTOR AND OWNER.

ISSUED FOR:
BIDDING

TITLE:
EROSION CONTROL DETAILS
AND NOTES

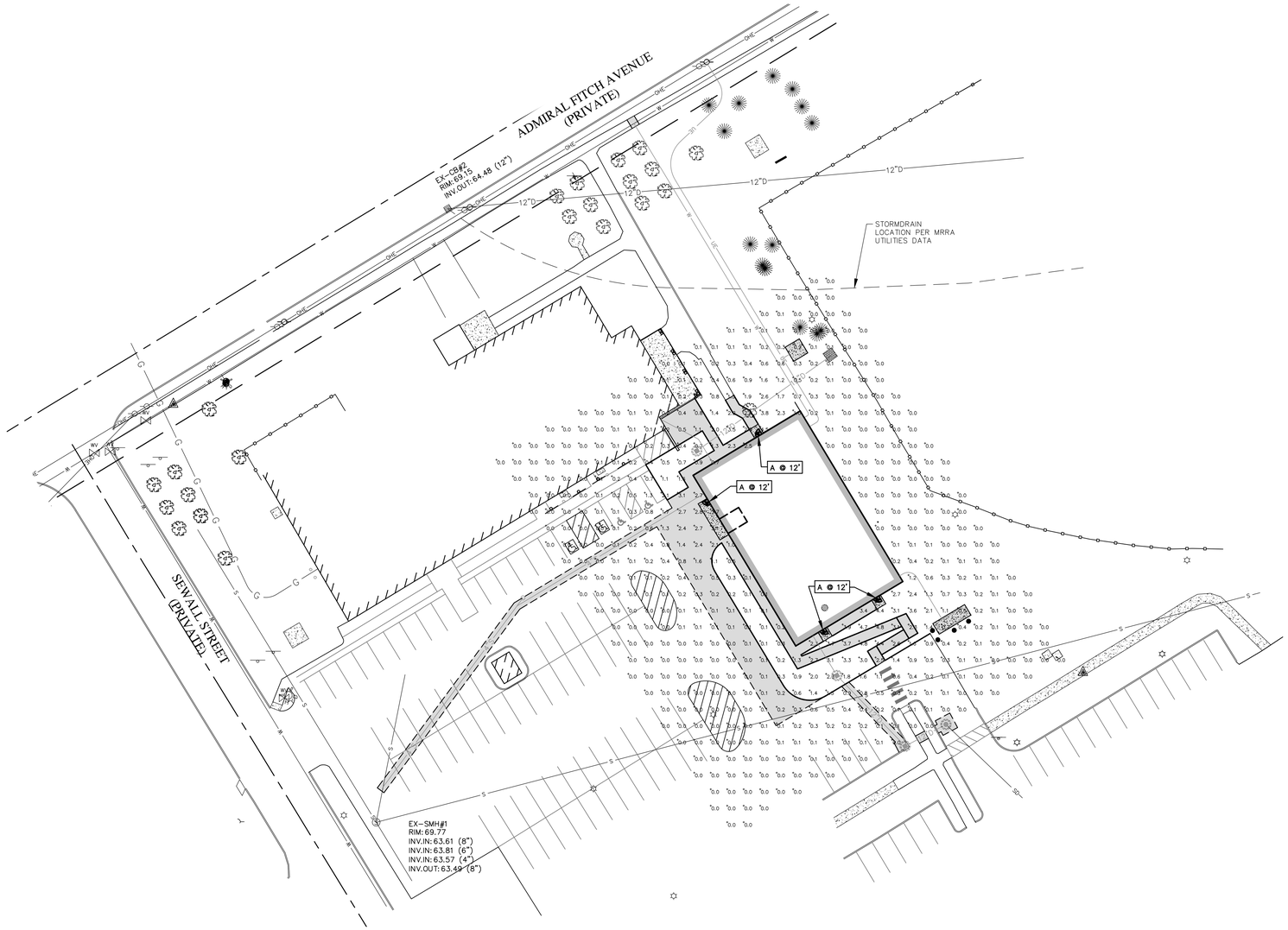
PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

OWNER:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

STATE OF MAINE
JOSEPH
J.
MARDEN
12828
LICENSED
PROFESSIONAL ENGINEER
10-18-24

SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS ▪ PLANNERS ▪ LAND SURVEYORS

FIELD WK: CH	SCALE: NTS	SHEET: C7
DRN BY: JJM	JOB #: 4893	
CH'D BY: JJM	MAP/LOT: 40/151	
DATE: 03-14-24	FILE: 4893-COV-DET	



Schedule								
Symbol	Label	QTY	Catalog Number	Description	Lamp	Number Lamps	Lumens per Lamp	LLF	Wattage
	A	4	LMC-30LU-3K-4	LAREDO LMC, 30 LED, 3000K, TYPE 4, 700mA	30- NICHIA 3K LEDS	1	4534.53	0.9	70

NOTES:
1. EXACT MOUNTING DETAILS TO BE DETERMINED AT JOBSITE BY OTHERS.
2. CALCULATIONS DO NOT SHOW THE EFFECT OF SHADOWING CAUSED BY BUILDINGS AND OBJECTS WITHIN THE CALCULATED SPACE OR IN THE SITE AREA.
3. READINGS SHOWN ARE INITIAL HORIZONTAL FOOTCANDLES ON A FLAT SITE WITHOUT REFLECTIONS OR OBSTRUCTIONS UNLESS OTHERWISE INDICATED.
4. THIS LAYOUT DRAWING MUST BE COORDINATED WITH THE SITE LOCATION FOR CORRECT FIXTURE ORIENTATION.
5. DOCUMENTS PRINTED OR PLOTTED FROM ELECTRONIC FILES MAY APPEAR AT OTHER THAN THE DESIRED OR ASSUMED GRAPHIC SCALES. IT IS THE RESPONSIBILITY OF THE RECIPIENT TO VERIFY THAT THE PRINTED OR PLOTTED-TO-SCALE DRAWING IS PRINTED TO SCALE.

PROGRESS PRINT
THIS PLAN IS ISSUED FOR REVIEW AND INFORMATION PURPOSES ONLY. THIS PLAN IS SUBJECT TO CHANGE AND IS NOT FOR PRICING OR CONSTRUCTION. PRICING BASED ON THIS PLAN IS NOT BINDING UNLESS SIGNED BY BOTH CONTRACTOR AND OWNER.

CALL DIG SAFE UTILITY LOCATION
1-888-344-7233
STATE LAW REQUIRES ADVANCE NOTICE OF AT LEAST 3 BUSINESS DAYS BEFORE YOU DIG, GRADE OR EXCAVATE FOR THE MARKING OF UNDERGROUND UTILITIES

GRAPHIC SCALE
30 0 15 30 60
(IN FEET)
1 inch = 30 ft.

ISSUED FOR:
BIDDING

STATE OF MAINE
JOSEPH J. MARDEN
12828
LICENSED PROFESSIONAL ENGINEER
10-18-24

2.	10-18-24	ISSUED FOR BIDDING	JJM
1.	09-04-24	SUBMITTED TO TOWN FOR MINOR STAFF REVIEW	JJM

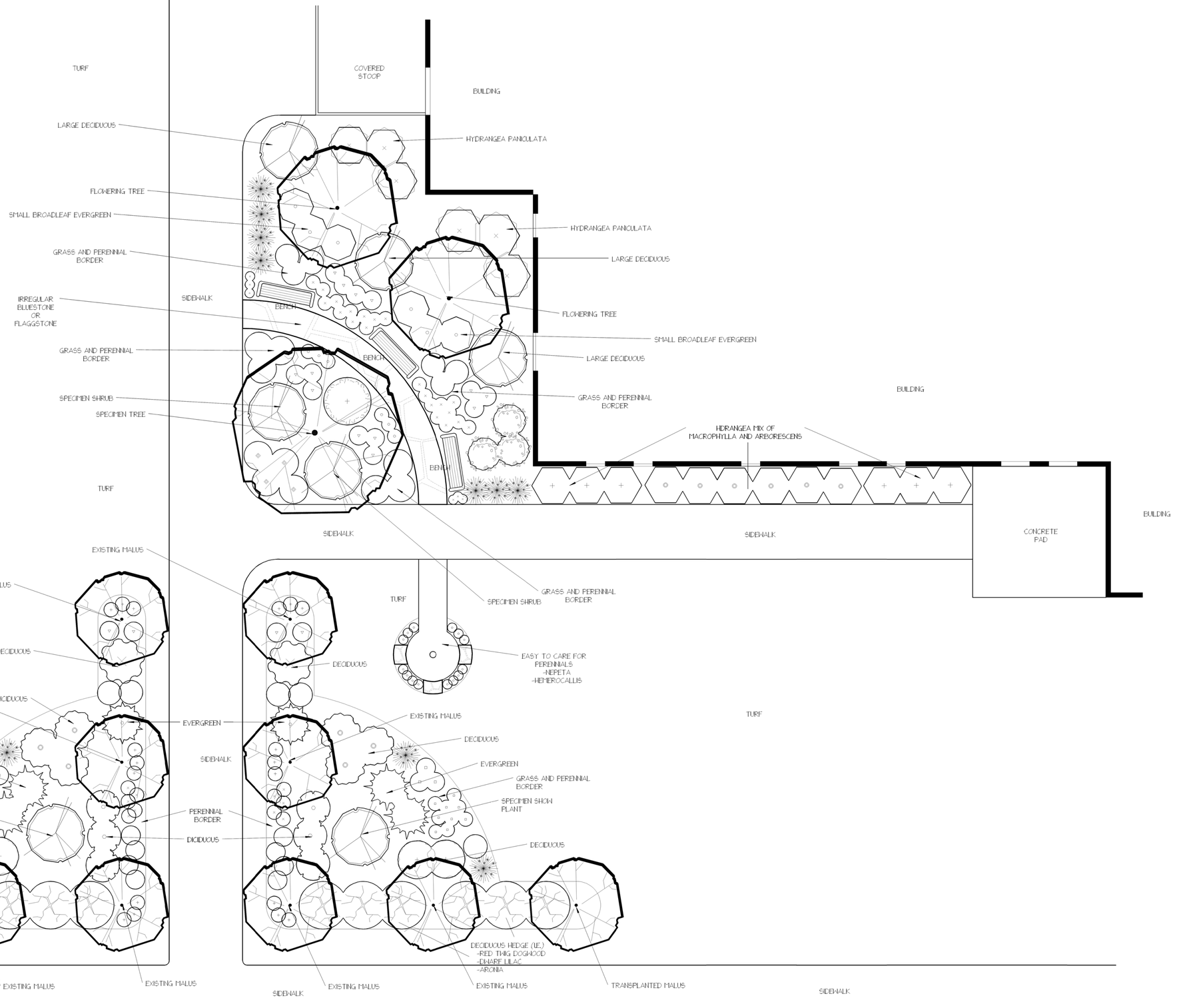
TITLE:
LIGHTING PLAN

PROJECT:
SMCC GREENHOUSE BUILDING
29 SEWALL STREET, BRUNSWICK, ME 04011

PREPARED FOR:
SOUTHERN MAINE COMMUNITY COLLEGE
29 SEWALL ST, BRUNSWICK, ME 04011

SITELINES
119 PURINTON ROAD, SUITE A
BRUNSWICK, MAINE 04011
207.725.1200
CIVIL ENGINEERS ▪ PLANNERS ▪ LAND SURVEYORS

FIELD WK: CH	SCALE: 1"=30'	SHEET: L1
DRN BY: JJM	JOB #: 4893	
CH'D BY: JJM	MAP/LOT: 40/151	
DATE: 03-14-24	FILE: 4893-SITE	



MELNA
Maine Landscape & Nursery Association

NORTH

Chad A. Skillin
ChadSkillin@Skillins.com
(207)321-8803 (C)
(207)781-3860 (W)

SMCC NEW HORTICULTURE GARDENS

Admiral Fitch Ave. Brunswick, ME 04011

SCALE 1" = 5'

DATE 8/27/2024

DRAWING # 1

L2

DESIGN NOTES

1. THE SMCC HORTICULTURE GREENHOUSE IS DESIGNED TO COMPLY WITH THE 2015 EDITION OF "THE INTERNATIONAL BUILDING CODE" AND THE 2010 EDITION OF THE AMERICAN SOCIETY OF CIVIL ENGINEERS "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES", ASCE 7-10.
2. FLOOR LIVE LOAD - 150 PSF
3. ROOF FRAMING IS DESIGNED FOR LOADS AS FOLLOWS:
   A. GROUND SNOW LOAD Pg = 50 PSF.
   B. FLAT ROOF SNOW LOAD Pf = 35 PSF
   C. SNOW EXPOSURE FACTOR Ce = 1.0.
   D. SNOW IMPORTANCE FACTOR I = 1.0.
   E. THERMAL FACTOR Ct = 1.0
4. DESIGN FOR WIND IS IN ACCORDANCE WITH LOADING AS FOLLOWS:
   A. ULTIMATE DESIGN WIND SPEED Vult = 116 MPH.
   B. NOMINAL DESIGN WIND SPEED Vasd = 90 MPH
   C. RISK CATEGORY II.
   D. WIND EXPOSURE - EXPOSURE B.
   E. INTERNAL PRESSURE COEFFICIENT Gcpi = 0.18.
5. SEISMIC DESIGN
   A. SEISMIC IMPORTANCE FACTOR I = 1.0
   B. RISK CATEGORY = II.
   C. MAPPED SPECTRAL RESPONSE ACCELERATION Ss = .229
   D. MAPPED SPECTRAL RESPONSE ACCELERATION S1 = .077
   E. SITE CLASS = E.
   F. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER Sds = 0.381
   G. DESIGN SPECTRAL RESPONSE ACCELERATION PARAMETER Sd1 =0.18
   H. SEISMIC DESIGN CATEGORY = C.
   I. BASIC SEISMIC FORCE RESISTING SYSTEM = STEEL SYSTEM NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE.
   J. DESIGN BASE SHEAR: V = 14.15 KIPS.
   K. SEISMIC RESPONSE COEFFICIENT Cs = 0.127.
   L. RESPONSE MODIFICATION FACTOR R = 3.0.
   M. ANALYSIS PROCEDURE = EQUIVALENT LATERAL FORCE ANALYSIS.

FOUNDATION EARTHWORK NOTES

1. FOUNDATIONS ARE DESIGNED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT FOR THE HORTICULTURE GREENHOUSE AT SMCC MIDCOAST CAMPUS, BRUNSWICK, MAINE, PREPARED BY SUMMIT GEOENGINEERING SERVICES ON JULY 3, 2024. THE CONTRACTOR SHALL OBTAIN A COPY OF THE REPORT AND COMPLY WITH THE RECOMMENDATIONS THEREIN.
2. THESE NOTES ARE PROVIDED TO SPECIFY EARTHWORK REQUIREMENTS INCIDENTAL TO BUILDING CONSTRUCTION. REFER TO CIVIL/SITE DOCUMENTS FOR REQUIREMENTS FOR SITEWORK FEATURES OUTSIDE OF THE BUILDING.
3. PREPARATIONS FOR THE SITE SHALL INCLUDE PRELOADING IN ACCORDANCE WITH SPECIFICATIONS BY SUMMIT GEOENVIRONMENTAL SERVICES. IMPLEMENTATION OF THE NOTES SPECIFIED BELOW SHALL FOLLOW SUCCESSFUL COMPLETION OF PRELOADING WITH APPROVAL BY SUMMIT GEOENVIRONMENTAL SERVICES TO PROCEED WITH FOUNDATION CONSTRUCTION.
4. FOUNDATIONS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 3000 PSF.
5. EXCAVATE PRELOAD FILL TO SPECIFIED FOOTING GRADES. FINISH EXCAVATION WITH A SMOOTH BUCKET TO AVOID DISTURBING IN-PLACE MATERIAL. COMPLY WITH OSHA REQUIREMENTS FOR SIDE SLOPES PER 29CRF-1926.650, 1926.651, AND 1926.652 IN SUBPART P. AT PERIMETER FOOTINGS, OVEREXCAVATE 12 INCHES TO PERMIT INSTALLATION OF A 12" LAYER OF CRUSHED STONE BENEATH FOOTINGS, IN THE EVENT OF ACCIDENTAL OVEREXCAVATION OR IF FOOTING GRADES BECOME DISTURBED, REMOVE LOOSE MATERIAL AND PLACE STRUCTURAL FILL TO FOOTING GRADES. COMPACT STRUCTURAL FILL TO 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D1557.
   A. FOOTING SUBGRADES SHALL BE INSPECTED BY SUMMIT GEOENVIRONMENTAL SERVICES PRIOR TO CONSTRUCTING FORMS.
   B. EXERCISE CARE TO AVOID DISTURBING FOOTING SUBGRADES DURING FORM CONSTRUCTION AND CONCRETE PLACEMENT. REMOVE ANY DISTURBED BEARING MATERIAL AND REPLACE WITH COMPACTED STRUCTURAL FILL.
   C. EXCAVATION FOR FOOTINGS SHALL EXTEND LATERALLY A MINIMUM OF 24 INCHES FROM THE FACES OF THE FOOTINGS.
6. FOOTINGS AT EXTERIOR WALLS SHALL HAVE A MINIMUM SOIL COVER FOR FROST PROTECTION OF 4'-0".
7. AT PERIMETER FOOTINGS, INSTALL A FILTER FABRIC MIRAFI FW404 OR EQUAL, AND 12 INCHES OF CRUSHED STONE SURROUNDED BY THE FILTER FABRIC. PERIMETER FOOTINGS SHALL BEAR DIRECTLY ON 12 INCHES OF CRUSHED STONE, WRAPPED WITH FILTER FABRIC.
8. AT INTERIOR FOOTINGS, RECOMPACT EXISTING STRUCTURAL FILL PLACED FOR THE PRELOAD. FOOTINGS SHALL BEAR DIRECTLY ON RECOMPACTED STRUCTURAL FILL.
9. SOILS ARE FROST SUSCEPTIBLE. PROTECT SUBGRADES FROM FREEZING. THE USE OF HEAT BLANKETS OR SIMILAR PROTECTION METHODS MAY BE REQUIRED. IF SOILS BECOME FROZEN, REMOVE TO DEPTH REQUIRED TO ATTAIN UNFROZEN MATERIAL.
10. DEWATER TO 12" BELOW FOOTING SUBGRADES. DO NOT PLACE CONCRETE OR BACKFILL OVER STANDING WATER OR FROZEN SOILS. REMOVE ANY SOFT OR YIELDING SOILS.
    A. THE CONTRACTOR SHALL MAINTAIN EXPOSED SUBGRADES PROPERLY DRAINED AND FREE OF PONDED WATER.
    B. MINIMIZE MACHINE AND FOOT TRAFFIC OVER SUBGRADES TO AVOID DISTURBANCE.
11. PLACEMENT OF FILL MATERIALS SHALL OCCUR IN DRY CONDITIONS WITH TEMPERATURES ABOVE FREEZING. PROTECT THE EXCAVATION FROM WATER ACCUMULATION, FREEZING, AND EXCESSIVE EQUIPMENT AND PERSONNEL TRAFFIC. BACKFILL AND CONCRETE PLACEMENTS SHALL PROCEED WITHOUT DELAYS.
    A. PROTECT SUBGRADES FROM FREEZING. PROTECTION MEASURES SHALL INCLUDE THE USE OF HEAT BLANKETS OR OVERFILLING TO ALLOW REMOVAL OF THE TOP 6" DIRECTLY BEFORE FOOTING OR SLAB PLACEMENT.
    B. DURING FREEZING WEATHER, BACKFILL FOOTINGS IMMEDIATELY AFTER FORM REMOVAL. INSTALL TEMPORARY PROTECTION OF FOOTING BEARINGS AS REQUIRED TO PREVENT FREEZING WHILE FORMS ARE IN PLACE.
12. PROVIDE A CONTINUOUS FOUNDATION DRAIN ADJACENT TO FOOTINGS. FOUNDATION DRAIN SHALL CONSIST OF 4" DIAMETER, SDR 35, PERFORATED PIPE WITH A MINIMUM OF 6" OF CRUSHED STONE AND WRAPPED WITH A FILTER FABRIC, MIRAFI FW404 OR EQUAL. LOCATE AT THE BOTTOM OF FOOTING UNLESS OTHERWISE INDICATED. SLOPE AT 1/16A PER FOOT TO OUTLET. INSTALL PERFORATED PIPE WITH PERFORATIONS DIRECTED DOWN. USE SOLID (UNPERFORATED) PIPE BETWEEN THE BUILDING AND OUTLET.
13. BACKFILL BOTH SIDES OF FOUNDATION WALLS WITH FOUNDATION BACKFILL. ALL OTHER FILL MATERIALS PLACED WITHIN THE BUILDING SHALL BE STRUCTURAL FILL. ALL FILL SHALL BE COMPACTED TO WITHIN 95% OF THE MAXIMUM DRY DENSITY IN ACCORDANCE WITH ASTM D1557.
14. STRUCTURAL FILL SHALL CONSIST OF WELL-GRADED GRANULAR MATERIAL WITH A MAXIMUM PARTICLE SIZE OF 6". THE PORTION PASSING THE 3" SIEVE SHALL COMPLY WITH THE FOLLOWING GRADATION:

SEIVE SIZE	PERCENT PASSING BY WEIGHT
¼ INCH	0-70
NO. 200	0-10

   A. PLACE STRUCTURAL FILL IN 6 TO 12 INCH LIFTS, LOOSE MEASUREMENT. COMPACT TO 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D1557.
   B. MATERIAL SHALL COMPLY WITH MDOT SPECIFICATION 703.20, GRAVEL BORROW (2020).
15. FOUNDATION BACKFILL SHALL HAVE A MAXIMUM PARTICLE SIZE OF 6". THE PORTION PASSING THE 3" SIEVE SHALL COMPLY WITH THE FOLLOWING GRADATION:

SEIVE SIZE	PERCENT PASSING BY WEIGHT
¼ INCH	25 TO 100
NO. 40	0 TO 50
NO. 200	0 TO 7

   A. PLACE FOUNDATION BACKFILL IN 12 INCH LIFTS (MAXIMUM), LOOSE MEASUREMENT. COMPACT TO 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D1557.
   B. FOUNDATION BACKFILL SHALL COMPLY WITH MDOT SPECIFICATION 703.06, TYPE E (2020).
16. CRUSHED STONE SHALL MEET THE FOLLOWING GRADATION:

SEIVE SIZE	PERCENT PASSING BY WEIGHT
1 INCH	100
¾ INCH	90 TO 100
½ INCH	20 TO 55
⅜" INCH	0 TO 15
NO. 4	0 TO 5

   A. TAMP CRUSHED STONE TO LOCK THE STONE STRUCTURE.
   B. MATERIAL SHALL COMPLY WITH MDOT SPECIFICATION 703.13, CRUSHED STONE, ¾ INCH (2014).
17. INASMUCH AS POSSIBLE, BACKFILL BOTH SIDES OF FOUNDATION WALLS SIMULTANEOUSLY.
18. UNDER-SLAB MATERIALS - AT INTERIOR FLOOR SLABS, REMOVE EXISTING PRELOAD FILL MATERIALS TO BOTTOM OF SLAB ELEVATIONS. NOTE THAT THE FLOOR IS SLOPED. SUBGRADES SHALL ALSO BE SLOPED TO PROVIDE CONCRETE OF UNIFORM THICKNESS UNLESS OTHERWISE NOTED. GRADE THE SLAB BEARING SURFACE TO A TOLERANCE OF PLUS 3/8 INCH AND MINIMUM 1 INCH. ANY ADDITIONAL FILL REQUIRED SHALL BE STRUCTURAL FILL. RECOMPACT SLAB SUBGRADE TO ATTAIN 95% OF THE MAXIMUM DRY DENSITY AS DEFINED BY ASTM D1557. PROTECT SUBGRADE SURFACE FROM DISTURBANCE BETWEEN RECOMPACTION AND CONCRETE SLAB PLACEMENT.

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS IN ACI 318-14, ACI 301-05 & ACI 117-10.
2. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTHS AS FOLLOWS:
   A. FOUNDATIONS: 4500 PSI
   B. INTERIOR SLABS: 4000 PSI
3. ALL CONCRETE EXPOSED TO FREEZE-THAW CYCLES IN SERVICE SHALL BE AIR ENTRAINED FOR EXPOSURE CLASS F2 PER ACI 318.
4. NO CONCRETE SHALL BE PLACED ON OR IN WATER OR ON FROZEN GROUND.
5. DURING COLD WEATHER, CONCRETING PROCEDURES SHALL CONFORM TO ACI 306, COLD WEATHER CONCRETE PRACTICES. MAINTAIN CONCRETE TEMPERATURE ABOVE 50 DEGREES F FOR 7 DAYS AFTER PLACEMENT.
6. DURING HOT WEATHER, CONCRETING PROCEDURES SHALL CONFORM TO ACI 305, HOT WEATHER CONCRETE PRACTICES.
7. ALL REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60.
8. REINFORCEMENT SHALL HAVE THE FOLLOWING MINIMUM CONCRETE COVER:
   A. CONCRETE DEPOSITED ON THE GROUND 3"
   B. CONCRETE EXPOSED TO THE GROUND OR WEATHER 2"
   C. CONCRETE NOT EXPOSED TO THE GROUND OR WEATHER 1"
9. ALL REINFORCEMENT SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH THE "ACI MANUAL OF STANDARD PRACTICE" (ACI-315).
10. ALL LAP SPLICES SHALL BE CONSIDERED CLASS B TENSION LAP SPLICES PER ACI 318 UNLESS OTHERWISE NOTED.
11. INSTALL ANCHOR RODS SPECIFIED BY THE GREENHOUSE DESIGNER. COORDINATE PLACEMENT TOLERANCE WITH BASE PLATE DETAILS.
12. REINFORCEMENT SHALL BE LOCATED AT MID-DEPTH OF CONCRETE SLABS UNLESS OTHERWISE NOTED. SUPPORT WELDED WIRE FABRIC ON CHAIRS OR OTHER SUITABLE SUPPORTS AT A MAXIMUM SPACING OF 3 FEET ON CENTER. THE USE OF LIFTING HOOKS TO SET SLAB REINFORCEMENT IN POSITION IS PROHIBITED.
13. CHAMFER ALL EXPOSED CONCRETE EDGES 3/4".
14. COORDINATE CONCRETE WORK WITH OTHER TRADES. PROVIDE BOND-OUTS FOR WALL PENETRATIONS AND INFILL AFTER INSTALLATION. STEP DOWN FOOTINGS SUCH THAT PIPING DOES NOT PASS THROUGH FOOTINGS AND DOES NOT UNDERMINE FOOTINGS. STEP FOOTINGS BACK TO SPECIFIED DEPTHS AT EACH SIDE OF PENETRATION.
15. CONCRETE MIXTURES SHALL BE COMPRISED OF THE FOLLOWING MATERIALS;
   A. CEMENT: PORTLAND CEMENT, ASTM C150, TYPE I, TYPE II, OR TYPE I/II. ONE OF THE FOLLOWING SUPPLEMENTARY CEMENTITIOUS MATERIALS (SCM) MAY BE SUBSTITUTED FOR A PORTION OF THE CEMENT IN THE MIX, SUBJECT TO THE LIMITATIONS IDENTIFIED BELOW.
      (1). FLY ASH: ASTM C 618, CLASS C OR F, 25% MAXIMUM.
      (2). GROUND GRANULATED BLAST-FURNACE SLAG: ASTM C989, GRADE 100 OR 120, 50% MAXIMUM.
   B. AGGREGATES: NORMAL WEIGHT, UNIFORMLY GRADED, CONFORMING TO ASTM C33.
      (1). PROVIDE CLASS 3S COARSE AGGREGATE, COMPLYING WITH SIZE LIMITS IN ACI 301. BLENDED GRADATIONS OF COARSE AGGREGATE SHALL HAVE A BLEND THAT COMPLIES WITH AN AGGREGATE GRADATION SPECIFIED IN ASTM C33.
   C. WATER: POTABLE AND COMPLYING WITH ASTM C94.
   D. ADMIXTURES: ADMIXTURES CERTIFIED BY MANUFACTURER TO CONTAIN NOT MORE THAN 0.1 PERCENT WATER-SOLUBLE CHLORIDE IONS BY MASS OF CEMENTITIOUS MATERIAL AND TO BE COMPATIBLE WITH OTHER ADMIXTURES AND CEMENTITIOUS MATERIALS. DO NOT USE ADMIXTURES CONTAINING CALCIUM CHLORIDE.
      (1). AIR-ENTRAINING ADMIXTURE: ASTM C260.
      (2). WATER REDUCING ADMIXTURE (OPTIONAL): ASTM C494, TYPE A.
      (3). HIGH-RANGE WATER-REDUCING ADMIXTURE (OPTIONAL): ASTM C494, TYPE F.
16. MEASURE, BATCH, MIX, AND DELIVER CONCRETE ACCORDING TO ASTM C94 AND ASTM C1116, AND FURNISH BATCH TICKET INFORMATION. CLEARLY INDICATE ON THE BATCH TICKET THE TIME THE CEMENT IS ADDED TO THE MIX.
   A. WHEN AIR TEMPERATURE IS BETWEEN 85 AND 90 DEG F (30 AND 32 DEG C), REDUCE MIXING AND DELIVERY TIME FROM 1-1/2 HOURS TO 75 MINUTES; WHEN AIR TEMPERATURE IS ABOVE 90 DEG F (32 DEG C), REDUCE MIXING AND DELIVERY TIME TO 60 MINUTES.
   B. MIXING TIME WILL BE MEASURED FROM THE TIME THE CEMENT IS ADDED TO THE MIX.
17. CONSTRUCT CONTROL AND CONSTRUCTION JOINTS IN WALLS AND SLABS AS INDICATED. CONTROL AND CONSTRUCTION JOINTS MAY BE USED INTERCHANGEABLY. WHERE SLABS VARY IN THICKNESS, ADJUST THE DEPTH OF SAW-CUT CONTROL JOINTS TO MAINTAIN THE JOINT DEPTH AT A MINIMUM OF ¼ OF THE MEMBER THICKNESS. WHERE SLAB JOINTS ARE CREATED BY SAW-CUTS, JOINTS SHALL BE CUT WITHIN 12 HOURS OF CONCRETE PLACEMENT.
18. CONSOLIDATE CONCRETE WITH A MECHANICAL VIBRATOR USING EQUIPMENT AND PROCEDURES SPECIFIED IN ACI 309R. DO NOT UTILIZE VIBRATORS TO TRANSPORT CONCRETE WITHIN FORMS.
19. ALL INTERIOR FLOORS SHALL RECEIVE A TROWEL FINISH. PROVIDE FLOOR SURFACES INDICATED TO BE LEVEL ON PLAN WITHIN THE FOLLOWING TOLERANCES PER ASTM E1155:
   A. FLOOR FLATNESS (FF): SPECIFIED OVERALL VALUE = 35, MINIMUM LOCAL VALUE = 24.
   B. FLOOR LEVELNESS (FL): SPECIFIED OVERALL VALUE = 25, MINIMUM LOCAL VALUE = 18.
20. AT SLOPED FLOOR SURFACES, SLAB SURFACE SHALL BE SLOPED UNIFORMLY BETWEEN DEFINED LOW AND HIGH POINTS WITH THE MAXIMUM DEVIATION OF ¼ INCH IN 10 FEET.
21. MAINTAIN CONCRETE CONTINUOUSLY MOIST FOR 7 DAYS AFTER PLACEMENT. ACCEPTABLE CURING METHODS INCLUDE:
   A. LEAVING FORMS ON FORMED SURFACES.
   B. COATING SURFACES WITH AN APPROVED CURING COMPOUND. DO NOT USE CURING COMPOUND WHERE ITS PRESENCE WILL INTERFERE WITH SUCCESSIVE SURFACE TREATMENTS.
   C. COVERING WITH MOISTURE-RETAINING COVER COMPLYING WITH ASTM C171.
   D. COVERING WITH ABSORPTIVE COVER, BURLAP CLOTH MADE FROM JUTE OR KENAF, WEIGHING APPROXIMATELY 9 OZ PER SQ YD, COMPLYING WITH AASHTO M182, CLASS 2. MAINTAIN ABSORPTIVE COVER WET THROUGHOUT CURING PERIOD.
   E. OTHER CURING METHODS MAY BE ACCEPTABLE SUBJECT TO APPROVAL.

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Millinocket, maine 04462
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LINCOLN/HANEY ENGINEERING EST. 1984
SITELINES Civil Engineers • Land Surveyors
BENNETT ENGINEERING MECHANICAL • ELECTRICAL
SUMMIT GEOENGINEERING SERVICES

SOUTHERN MAINE COMMUNITY COLLEGE

SMCC - MIDCOAST GREENHOUSE FACILITY
BRUNSWICK, MAINE

ISSUED FOR CONSTRUCTION 9-3-2024

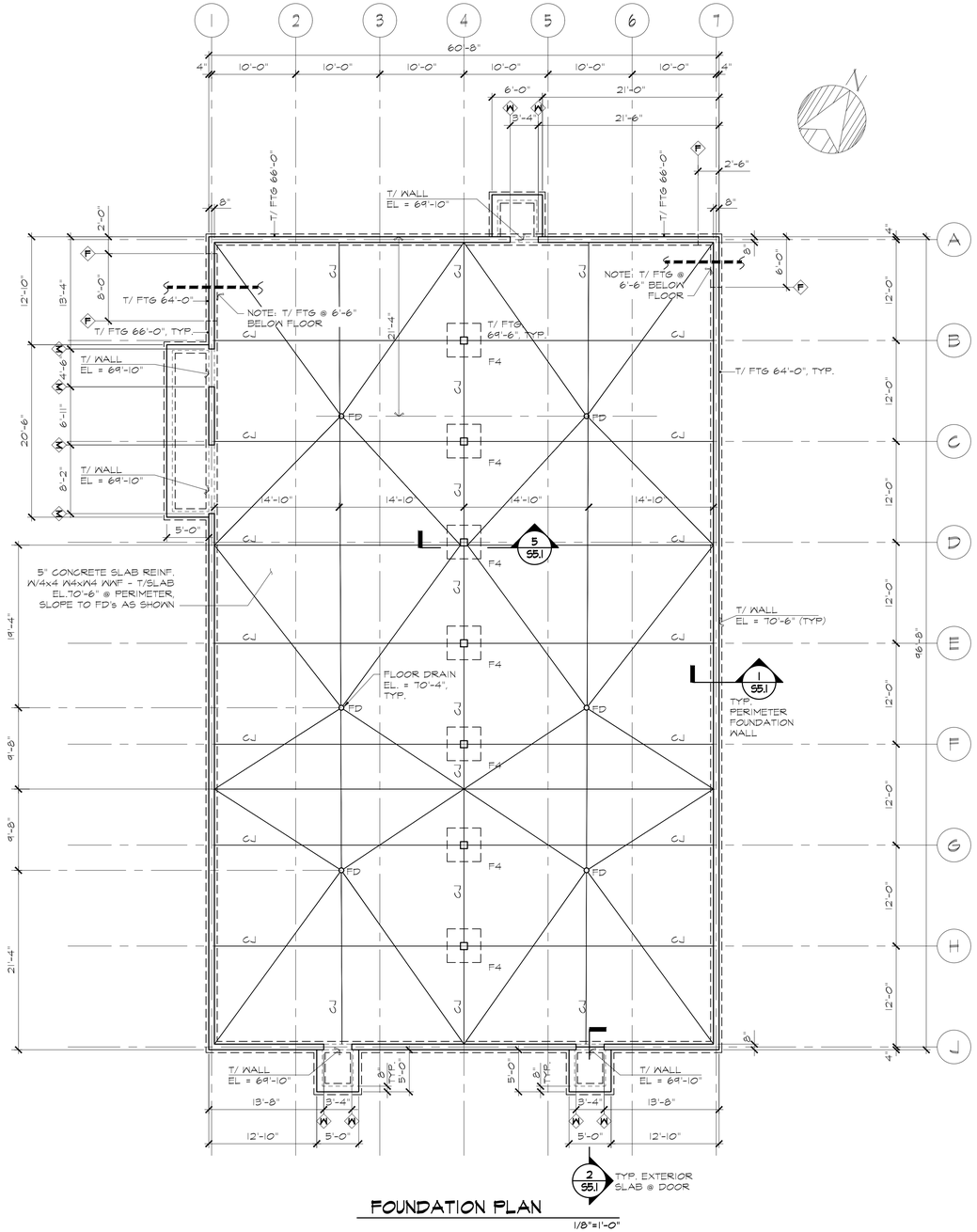
REVISIONS:

STATE OF MAINE — MICHAEL ALAN CUNNINGHAM — 23519 — LICENSED PROFESSIONAL ENGINEER

6' 4' 2' 0 4' 8'
BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

STRUCTURAL NOTES

ADAR202303 - OCTOBER 2024 S0.1



FOUNDATION PLAN

1/8"=1'-0"

SHEET NOTES:

1. SEE SHEET S0.1 FOR GENERAL STRUCTURAL NOTES.
2. TOP OF FOOTING ELEVATION = 66'-0" EXCEPT AS OTHERWISE NOTED.
3. C.J. DESIGNATES SLAB CONTROL JOINT OR CONSTRUCTION JOINT CONTRACTOR'S OPTION; CONSTR. JT. DESIGNATES REQUIRED CONSTRUCTION JOINT.
4. COORDINATEUTILITY PIPE ENTRANCES W/ PLUMBING & CIVIL DRAWINGS. STEP FOOTINGS AS REQUIRED FOR PIPING TO PASS THROUGH FOUNDATION WALLS W/ A MINIMUM CLEARANCE OF 6" ABOVE THE TOP OF THE FOOTING. SEE DETAIL 10/S5.1.
5. REFER TO GREENHOUSE DRAWINGS FOR ANCHOR ROD SIZES AND LAYOUT. INSTALL IN ACCORDANCE WITH THE BUILDING DESIGNERS SPECIFICATIONS.

LEGEND:

(F)	STEP IN TOP OF FOOTING
(W)	STEP IN TOP OF FOUNDATION WALL
T/SLAB	TOP OF SLAB ELEVATION
T/WALL	TOP OF WALL ELEVATION
T/FTG	TOP OF FOOTING ELEVATION
FD	FLOOR DRAIN. REFER TO PLUMBING DRAWINGS FOR REQUIRED DETAILS

ARCADIA DESIGNWORKS
SOUTH
199 prospect street, suite A
portland, maine 04101
NORTH
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LINCOLN/HANEY ENGINEERING EST. 1984
SITELINES Civil Engineers • Land Surveyors
BENNETT ENGINEERING MECHANICAL • ELECTRICAL
SUMMIT GEOENGINEERING SERVICES

SOUTHERN MAINE COMMUNITY COLLEGE

SMCC - MIDCOAST GREENHOUSE FACILITY

BRUNSWICK, MAINE

ISSUED FOR CONSTRUCTION 9-3-2024

REVISIONS:

STATE OF MAINE
MICHAEL ALAN CUNNINGHAM
LICENSED PROFESSIONAL ENGINEER

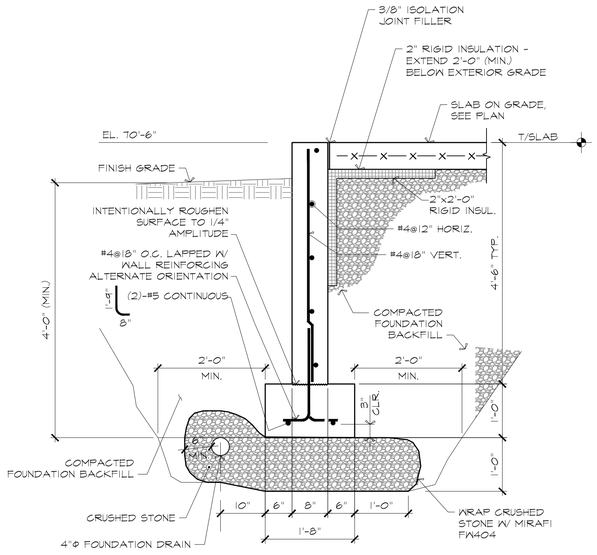
6' 4' 2' 0 4' 8'

BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

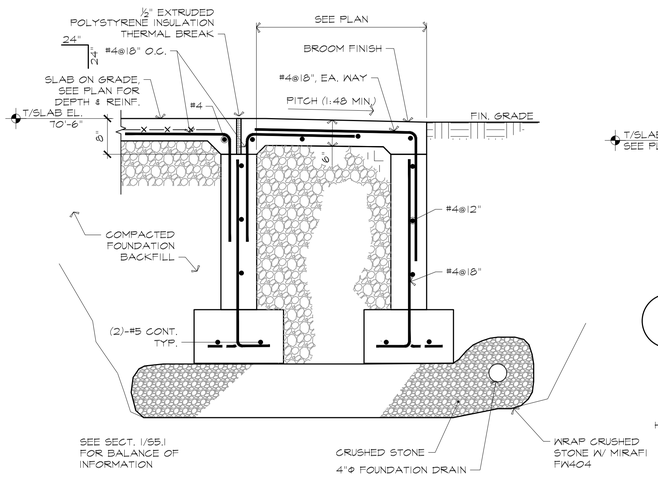
FOUNDATION PLAN

ADAR202303 - OCTOBER 2024

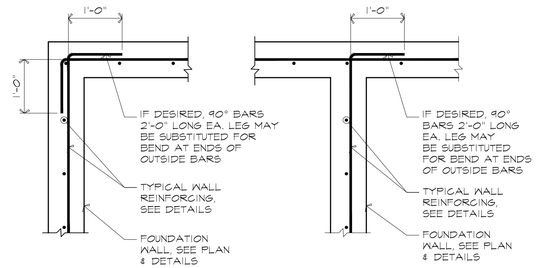
S1.1



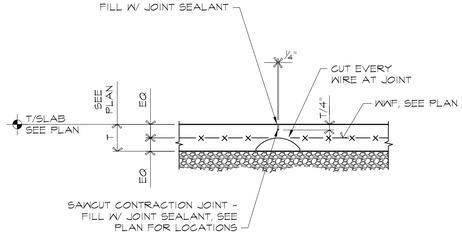
1 TYPICAL PERIMETER FOUNDATION WALL
3/4"=1'-0"



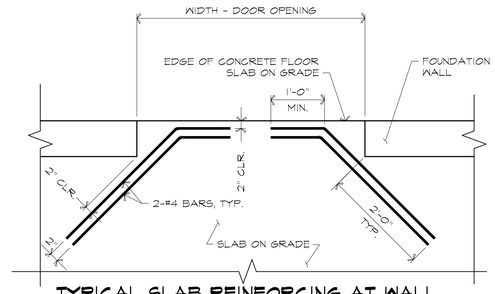
2 TYPICAL EXTERIOR SLAB @ DOOR
3/4"=1'-0"



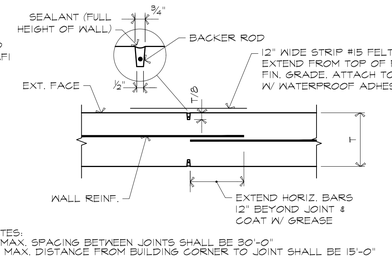
6 TYPICAL FOUNDATION WALL CORNER AND INTERSECTING WALL REINFORCEMENT
3/4"=1'-0"



3 TYPICAL SAWCUT CONTRACTION JOINT AT SLAB ON GRADE
3/4"=1'-0"

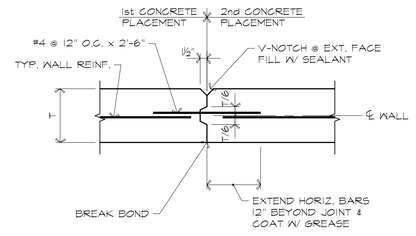


4 TYPICAL SLAB REINFORCING AT WALL OPENING
3/4"=1'-0"

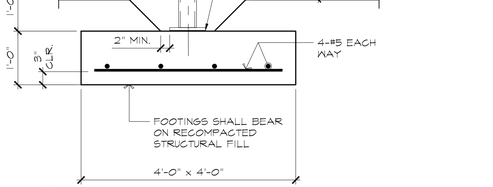


NOTES:
1. MAX. SPACING BETWEEN JOINTS SHALL BE 30'-0"
2. MAX. DISTANCE FROM BUILDING CORNER TO JOINT SHALL BE 15'-0"

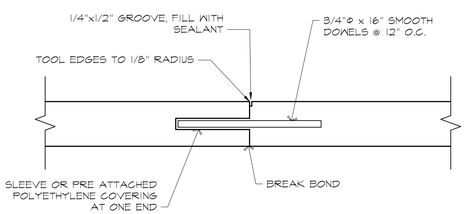
7 TYPICAL CONTROL JOINT IN WALL
3/4"=1'-0"



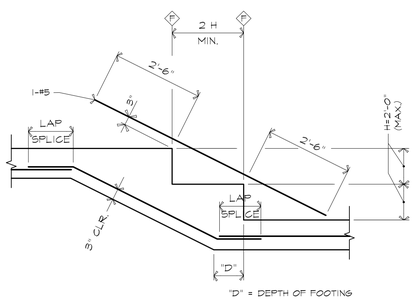
8 TYPICAL CONSTRUCTION JOINT IN WALL
3/4"=1'-0"



5 TYPICAL INTERIOR FOOTING SECTION
3/4"=1'-0"



9 TYPICAL 5" SLAB ON GRADE CONSTRUCTION JOINT
1-1/2"=1'-0"



10 TYPICAL STEPPED FOOTING
NTS

ARCADIA DESIGNWORKS
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199 prospect street, suite A
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REVISIONS:

STATE OF MAINE MICHAEL ALAN CUNNINGHAM 12519 LICENSED PROFESSIONAL ENGINEER

6' 4' 2' 0 4' 8'
BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

SECTIONS & DETAILS

ADAR202303 - OCTOBER 2024 S5.1

GENERAL NOTES

1. NOT ALL SYMBOLS INDICATED IN THE LEGEND APPEAR ON THE DRAWINGS. COORDINATE WORK ACCORDINGLY. COMPLY WITH SPECIFICATIONS AND NOTES BELOW AS APPLICABLE.
2. ALL RECEPTACLES SHALL BE INSTALLED 18" AFF TO CENTERLINE OF BOX UNLESS NOTED OTHERWISE.
3. MOUNT PANELS IN RESIDENTIAL SPACES SO NO CIRCUIT BREAKER HANDLE IS HIGHER THAN 44" AFF.
4. ALL WIRING SHALL BE COPPER UNLESS DESIGNATED AS "AL". UNLESS OTHERWISE NOTED ALL WIRING SHALL BE 2 #12 AWG AND 1 #12 EQUIPMENT GROUNDING CONDUCTOR. HOMERUNS FED FROM A 20A/1P, 120V CIRCUIT IN EXCESS OF 70' SHALL BE #10 AWG.
5. CONNECT BATTERY BACKED EMERGENCY AND EXIT LIGHTING TO NEAREST LIGHTING CIRCUIT AHEAD OF ANY SWITCHING. CONNECT REMOTE HEADS WITH #10 AWG COPPER CONDUCTORS. AC EXIT FIXTURES SHALL BE CONNECTED TO NEAREST EMERGENCY CIRCUIT OR AS INDICATED.
6. TEST ALL EMERGENCY LIGHTING UNITS FOR PROPER OPERATION OF LAMPS AND BATTERIES.
7. SEE MECHANICAL PLAN FOR HVAC UNITS, PUMPS AND FANS CONTROLLED BY THERMOSTATS (PROVIDED BY ATC CONTRACTOR).
8. FUSES AND OVERLOAD UNITS FOR MOTORS SHALL BE SIZED BASED ON ACTUAL MOTOR NAMEPLATE DATA AND IN ACCORDANCE WITH NEC. CIRCUIT BREAKERS FOR MOTORS ARE SUPPLIED AT MAX VALUE PER NEC (2.5 x FLA). SIZE IN THE FIELD IN ACCORDANCE WITH MFGR RECOMMENDATION.
9. ALL WORK SHALL COMPLY WITH NFPA70, NFPA72, NFPA101 & ALL FEDERAL, STATE & LOCAL REGULATIONS.
10. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN FIRE RATING FOR THE SEPARATION.
11. ALL ENCLOSURES, CONDUIT BODIES AND THEIR COVERS CONTAINING FIRE ALARM SYSTEM CONDUCTORS SHALL BE PAINTED RED.
12. AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED WITH ALL FEEDERS AND BRANCH CIRCUITS. SIZE IN ACCORDANCE WITH NFPA 70 ARTICLE 250.
13. COORDINATE INSTALLATION OF VOICE/DATA OUTLETS WITH OWNER, MIS OR COMMUNICATIONS CONTRACTOR.
14. LOCATE DISCONNECTS AT EQUIPMENT AS REQUIRED BY MANUFACTURER. LOCATIONS ON DRAWINGS ARE APPROXIMATE.
15. PROVIDE RISER OR PLENUM RATED CABLES ABOVE SUSPENDED CEILINGS.
16. THE CONTRACTOR SHALL SET ALL ELECTRONIC BREAKERS TO SPECIFIED TRIP SETTINGS BEFORE ENERGIZING EQUIPMENT.
17. PROVIDE EXPANSION FITTINGS FOR ALL UNDERGROUND RACEWAYS ENTERING ENCLOSURES ATTACHED TO FIXED STRUCTURES.
18. OUTDOOR RECEPTACLE COVERS SHALL COMPLY WITH NFPA 70 – ARTICLE 406.9.
19. ALL CONDUCTOR INSULATION FOR BUILDING WIRE SHALL BE THWN/THHN UNLESS NOTED OTHERWISE.
20. PROVIDE LABEL ON SERVICE EQUIPMENT INDICATING AVAILABLE SHORT CIRCUIT CURRENT OBTAIN VALUES FROM ENGINEER.
21. PROVIDE ARC FAULT LABELS PER NFPA 70–ARTICLE 110.24
22. OUTLETS INSTALLED IN FIRE RATED WALLS BACK TO BACK SHALL BE SEPARATED BY 24" MINIMUM OR BE PROTECTED WITH "PUTTY PADS" PER 2009 INTERNATIONAL BUILDING CODE SECTION 713.3.2.
23. PROVIDE AIR VAPRO BARRIER BOXES FOR WIRING DEVICES IN EXTERIOR WALLS AND INTERIOR SOUND CONTROL WALLS BETWEEN RESIDENT ROOMS. INSTALL PER MANUFACTURER'S INSTRUCTIONS. PROVIDE LESSCO MODEL NUMBER: VAPORBOX.
24. MINIMUM WIRE SIZE ON ALL BRANCH CIRCUITS SHALL BE #12.

ABBREVIATIONS

A	AMP	LP	LIGHTING PANELBOARD
AC	ALTERNATING CURRENT, ABOVE COUNTER	LTG	LIGHTING
ADA	AMERICANS WITH DISABILITIES ACT	LSIG	LONG TIME, SHORT TIME, INSTANTANEOUS, GROUND FAULT CIRCUIT BREAKER TRIP FUNCTIONS AS INDICATED
AF	AMP FRAME		
AFCI	ARC FAULT CIRCUIT INTERRUPTER	MCC	MOTOR CONTROL CENTER
AFF	ABOVE FINISHED FLOOR	MCCB	MOLDED CASE CIRCUIT BREAKER
AFG	ABOVE FINISHED GRADE	MCB	MAIN CIRCUIT BREAKER
AIC	AMPERES INTERRUPTING CAPACITY	MDP	MAIN DISTRUBITION PANEL
AL	ALUMINUM	MH	MANHOLE
AT	AMP TRIP	MLO	MAIN LUGS ONLY
ATC	AUTOMATIC TEMPERATURE CONTROL	MTS	MANUAL TRANSFER SWITCH
ATS	AUTOMATIC TRANSFER SWITCH	NC	NORMALLY CLOSED OF NURSE CALL
AWG	AMERICAN WIRE GAUGE	NEC	NATIONAL ELECTRICAL CODE
BLDG	BUILDING	NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
C	CONDUIT	NL	NIGHT LIGHT
CB	CIRCUIT BREAKER	NO	NORMALLY OPEN
CI	CAST IRON	NO.	NUMBER
CKT	CIRCUIT	OL	OVERLOAD
℄	CENTERLINE	P	POLE
CMP	CENTRAL MAINE POWER (ELECTRIC UTILITY)	PA	PUBLIC ADDRESS
CMU	CONCRETE MASONRY UNIT	PB	PUSH BUTTON
CT	CURRENT TRANSFORMER	PF	POWER FACTOR
CONC	CONCRETE	PH	PHASE
CS	CARBON STEEL	PNL	PANEL
CU	COPPER	TP1–2	TELE/POWER POLE – POLE & CIRCUIT NUMBER AS INDICATED
CUH	CABINET UNIT HEATER	PSNH	PUBLIC SERVICE OF NEW HAMPSHIRE (ELECTRIC UTILITY)
DL	DAMP LOCATION	PT	POTENTIAL TRANSFORMER
EC	ELECTRICAL CONTRACTOR	PVC	POLYVINYL CHLORIDE
EF	EXHAUST FAN	RL	ELECTRICAL EQUIPMENT TO BE RELOCATED
ER	EXISTING REMAINS IN PLACE	RM	ELECTRICAL EQUIPMENT TO REMAIN
ERL	EXISTING RELOCATE	RSC	RIGID STEEL CONDUIT
ERM	EXISTING REMOVE	RTU	ROOF TOP UNIT
EUH	ELECTRIC UNIT HEATER	RV	ELECTRICAL EQUIPMENT TO REMOVE
EWH	ELECTRICAL WATER HEATER	RVNR	REDUCED VOLTAGE, NON–REVESING
FACP	FIRE ALARM CONTROL PANEL	SB	SMART BOARD
FAPS	FIRE ALARM PULL STATION	SF	SUPPLY FAN
FRP	FIBER REINFORCED PLASTIC	SLD	SINGLE LINE DIAGRAM
FVNR FWU	FULL VOLTAGE, NON–REVERSING FURNISHED WITH UNIT	SM	MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD DEVICE, MOUNTED AT UNIT
DC	DIRECT CURRENT	SS	SOLID STATE
GFI	GROUND FAULT INTERRUPTER	SWBD–1	SWITCHBOARD NUMBER AS DESIGNATED
GND	GROUND	TC	TIME CLOCK
GUI	GAS UNIT HEATER	TS	TRANSFER SWITCH
HOA	HAND–OFF–AUTOMATIC	T&B	TOP AND BOTTOM
HP	HORSEPOWER	TYP	TYPICAL
HPS	HIGH PRESSURE SODIUM	UG	UNDERGROUND
HZ	HERTZ	V	VOLT
ICB	INSULATED CASE CIRCUIT BREAKER	VA	VOLT–AMPERE
JB	JUNCTION BOX	VFD	VARIABLE FREQUENCY DRIVE
KAIC	THOUSAND AMP INTERRUPTING CAPACITY	W	WATT
KCMIL	THOUSAND CIRCULAR MIL	W/	WITH
KV	THOUSAND VOLTS	WP	WEATHERPROOF
KVA	THOUSAND VOLT–AMPS	XFMR	TRANSFORMER
KW	THOUSAND WATTS (KILOWATT)	XP	EXPLOSION PROOF
LC	LIGHTING CONTACTORS	3PH	THREE PHASE
LCP	LATERAL CONTROL PIT	4W	FOUR WIRE
LED	LIGHT EMITTING DIODE	3W	THREE WIRE

SYMBOL LEGEND

- SURFACE MOUNTED POWER PANEL, SEE PANEL SCHEDULES FOR RATING
- RECESSED MOUNTED POWER PANEL, SEE PANEL SCHEDULES FOR RATING
- (1/4) ELECTRIC MOTOR DRIVEN EQUIPMENT, HP SHOWN
- DW (J) JUNCTION BOX, "H" DENOTES RANGE HOOD, "DS" DENOTES DISPOSAL, "DW" DENOTES DISHWASHER, "HD" DENOTED HAND DRYER
- SM MANUAL MOTOR STARTER SWITCH WITH THERMAL OVERLOAD DEVICE MOUNTED AT UNIT
- DISCONNECT SWITCH, SIZE AND NUMBER OF POLES AS INDICATED ON DRAWING. PROVIDED BY EC UNLESS NOTED OTHERWISE. PROVIDE FUSES WHERE RECOMMENDED BY MANUFACTURER.
- COMBINATION MOTOR STARTER/ DISCONNECT SWITCH WITH AUXILIARY CONTACTS AND HAND–OFF–AUTO SWITCH AND RED RUN LIGHT. PROVIDED AND INSTALLED BY EC UNLESS NOTED OTHERWISE.
- VFD VARIABLE FREQUENCY DRIVE, PROVIDED BY MC, INSTALLED AND WIRED BY EC
- MOD MOTOR OPERATED DAMPER, PROVIDED AND INSTALLED BY MC, WIRED BY EC
- DUPLEX RECEPTACLE, 20A, 125V SPEC GRADE GROUNDING TYPE, TAMPER PROOF AND MATCHING PLATE. MOUNT 18" AFF UNLESS NOTED OTHERWISE.
- SIMPLEX RECEPTACLE, 20A, 125V SPEC GRADE GROUNDING TYPE, TAMPER PROOF AND MATCHING PLATE. MOUNT 18" AFF UNLESS NOTED OTHERWISE.
- QUAD RECEPTACLE, 20A, 125V SPEC GRADE GROUNDING TYPE, TAMPER PROOF AND MATCHING PLATE. MOUNT 18" AFF UNLESS NOTED OTHERWISE.
- DUPLEX RECEPTACLE, 20A, 125V SPEC GRADE GROUNDING TYPE, TAMPER PROOF AND MATCHING PLATE. MOUNT 18" AFF, BOTTOM RECEPTACLE SWITCHED.
- GROUND FAULT DUPLEX RECEPTACLE 20A, 125V, TAMPER PROOF WITH MATCHING PLATE FURNISHED W/ OUTLET. FLUSH MOUNTED 45" AFF EXCEPT AS NOTED.
- REFRIGERATOR DUPLEX RECEPTACLE, 20A, 125V SPEC GRADE GROUNDING TYPE, TAMPER PROOF AND MATCHING PLATE. MOUNT RECEPTACLE AT 48 INCHES ABOVE FINISHED FLOOR.
- CL FLUSH FLOOR MOUNTED DUPLEX RECEPTACLE– 20A, 125V SPEC GRADE GROUNDING TYPE. "CL" DENOTES CEILING MOUNTED
- RANGE OUTLET 50 AMP, 250 VOLT, GROUNDING TYPE FLUSH MOUNTED 18" AFF
- DRYER OUTLET 30 AMP, 250 VOLT, GROUNDING TYPE FLUSH MOUNTED 18" AFF
- RACEWAY & WIRING OR MC CABLE RUN CONCEALED IN WALLS/CEILINGS
- RACEWAY & WIRING RUN EXPOSED
- RACEWAY & WIRING RUN CONCEALED UNDER FLOOR OR BURIED 30" BELOW FINISH GRADE
- *,** HP–XX HOME RUN TO PANEL, WITH PANEL AND CIRCUIT NUMBER

BRANCH CIRCUIT WIRING SHALL CONSIST OF (1)1/2"C–2#12AWG+1#12GND UNLESS OTHER WISE NOTED. (*)ASTERISK DENOTED #10AWG FOR ALL CIRCUITS CONTAINED IN HOME RUN. (**)DOUBLE ASTERISK DENOTES (1)3/4"C–2#8AWG+1#10GND.

PROVIDE EQUIPMENT GROUNDS IN ACCORDANCE WITH NFPA 70, ARTICLE 250.

- TV EMPTY JUNCTION BOX FOR CARD READER BY OTHERS
- DATA JACK – PROVIDE EMPTY JUNCTION BOX. RUN 1" CONDUIT TO ABOVE HUNG CEILING
- TELEPHONE JACK, MOUNT 18"AFF UNLESS NOTED OTHERWISE, PROVIDE EMPTY JUNCTION BOX. RUN 1" CONDUIT TO ABOVE HUNG CEILING
- CL FLUSH FLOOR MOUNTED TELEPHONE/DATA DUAL JACK, RUN TWO CAT 5E CABLES BACK TO TBB. "CL" DENOTES CEILING MOUNTED
- TELEPHONE BACK BOARD
- W WiFi ROUTER, OCE CAT 5E CABLE BACK TO TBB OR IT ROOM. MOUNT ABOVE CEILING, "W" DENOTES WALL MOUNTED AT 72" AFF
- TCP TEMPERATURE CONTROL PANEL, PROVIDED BY MC WIRED BY EC
- PUSHBUTTON FOR ELECTRICALLY OPERATED DOOR, FURN W/DOOR OPERATOR, WIRED BY EC
- DOOR PUSHBUTTON–DOORBELL
- DOOR ELECTRIC STRIKE
- SP CH DOOR CHIME WITH STROBE–ADA COMMUNICATIONS REQUIREMENT
- HC HANDICAP DOOR OPERATOR
- A, D, F LIGHTING FIXTURES, CAPITAL LETTERS DENOTE TYPE PER LIGHTING FIXTURE SCHEDULE. LOWER CASE LETTERS INDICATE SWITCH CONTROL. "ob" INDICATES INBOARD LAMPS CONTROLLED BY OUTBOARD SWITCHED "o" AND "b". DIAGONAL INDICATED NIGHT LIGHT (UNSWITCHED)
- SELF CONTAINED EMERGENCY LIGHT W/2 HEADS DUAL–LITE (LED) MODEL LZ65I–03L, 65 WATTS FOR 90 MINUTES, COLOR BY ARCHITECT
- BATT EMERGENCY LIGHTING BATTERY PACK DUAL–LITE No LM130–12VI–0 SELF–DIAGNOSTIC
- INTERIOR REMOTE HEAD DUAL–LITE (LED) MODEL No CPRD 1203L, COLOR BY ARCHITECT
- EXTERIOR REMOTE HEAD DUAL–LITE (LED) MODEL No OCRD 1203L COLOR BY ARCHITECT
- EXIT LIGHT FIXTURE, UNSWITCHED, DUAL–LITE LX–U–R–W–E OR APPROVED EQUAL

- SECURITY CAMERA LOCATION, COORDINATE AND PROVIDE DUPLEX RECEPTACLE, DATA AND CONDUIT PER MANUFACTURERS RECOMMENDATIONS
- DT PIR (MS) CEILING MOUNTED MOTION SENSOR (WATTSTOPPER OR EQUAL) CORRIDORS: WT–2255 SENSOR & B120E–P POWER PACK. OTHER COMMON SPACES: WT–605 SENSOR & B120E–P POWER PACK. SENSORS AND RELAYS TO CONTROL CIRCUITS IN SPACES INDICATED. DEVICES SHALL PROVIDE FULL COVERAGE IN AREAS INSTALLED. DT INDICATES DUAL TECHNOLOGY PIR INDICATED PASSIVE INFRARED TECHNOLOGY
- (MS) WALL MOUNTED MOTION SENSOR. MOUNT AT 120" AFF UNLESS OTHER WISE NOTED
- S_{MS} WALL MOUNTED SWITCH MOTION SENSOR. MOUNT AT 48" AFF UNLESS OTHER WISE NOTED
- S_3S_4 SaS SINGLE POLE SWITCH, 120V, 20A, SPEC GRADE, GROUNDING TYPE, MOUNT 48" AFF, 3=3–WAY, 4=4–WAY, LOWER CASE LETTER INDICATES FIXTURE OR CONTROLLED LOAD.
- S_{PL} SWITCH WITH PILOT LIGHT, SWITCH SHALL BE PROVIDED W/ ENGRAVED NAMEPLATE IDENTIFYING USE
- S_{RF} REMOTE RANGE HOOD FAN SWITCH, CONNECT TO HOOD FAN THRU HOOD JUNCTION BOX.
- S_{RL} REMOTE RANGE HOOD LIGHT SWITCH, CONNECT TO HOOD LIGHT THRU JUNCTION BOX.
- S_B BURNER SAFETY SWITCH, PROVIDE WITH RED PLATE, MOUNTED 72" AFF
- D_3D_4 DaD SINGLE POLE DIMMER SWITCH, 120V, 20A, SPEC GRADE, GROUNDING TYPE, MOUNT 48" AFF, 3=3–WAY, 4=4–WAY, LOWER CASE LETTER INDICATES FIXTURE OR CONTROLLED LOAD.
- PC PHOTOCELL
- LC LIGHTING CONTACTOR
- TC TIMECLOCK
- IP INTERCOM PANEL IN UNIT
- IC INTERCOM PANEL AT RECEPTION
- SP CEILING MOUNTED SPEAKER
- FACP FIRE ALARM CONTROL PANEL
- FAPS FIRE ALARM REMOTE POWER SUPPLY
- ANN FIRE ALARM ANNUNCIATOR PANEL
- FEM FIRE EXTINGUISHER ELECTRONIC MONITOR–SHALL BE ACCOMPLISHED THROUGH USE OF AN ADDRESSABLE INTERFACE DEVICE AND SHALL PROVIDE INPUT TO THE FACP
- 30 MH CL FIRE ALARM AUDIO/VISUAL, MOUNT 6'–8"AFF, NUMBER DENOTES CANDELA RATING. "MH" DENOTES MINIHORN, "CL" DENOTED CEILING MOUNTED. NO DESIGNATION EQUALS 15cd
- F FIRE ALARM PULL STATION, MOUNT 48"AFF
- VIS FIRE ALARM VISUAL STROBE ONLY, FLUSH MOUNT 6'–8" AFF, NUMBER DENOTES CANDELA RATINGS. "CL" DENOTES CEILING MOUNTED
- SD CO SYSTEM CONNECTED SMOKE / CARBON MONOXIDE DETECTOR, PHOTOELECTRIC TYPE
- 135° HD SYSTEM CONNECTED FIXED TEMPERATURE HEAT DETECTOR
- SD SMOKE DETECTOR, PHOTOELECTRIC TYPE, SYSTEM CONNECTED.
- ER SD SMOKE DETECTOR, PHOTOELECTRIC TYPE, SYSTEM CONNECTED. "ER" DENOTES ELEV RECALL
- SB SD SYSTEM CONNECTED SMOKE DETECTOR, PHOTOELECTRIC TYPE, WITH SOUNDER BASE
- CO CARBON MONOXIDE DETECTOR
- SD DUCT SMOKE DETECTOR & TEST STATION
- KB FIRE ALARM KNOX BOX
- FD/SD FIRE/SMOKE DAMPER, SUPPLIED AND INSTALLED BY MECHANICAL CONTRACTOR. ELECTRICAL CONTRACTOR TO PROVIDE ALL WIRING CONNECTIONS AND FIRE ALARM DUCT SMOKE DETECTORS, ADDRESSABLE MODULES AND PROGRAMMING.
- F SPRINKLER SYSTEM FLOW SWITCH
- T SPRINKLER SYSTEM TAMPER SWITCH

SUPPLIED BY SPRINKLER CONTRACTOR WIRED BY EC, VERIFY LOCATIONS WITH SPRINKLER CONTRACTOR.

- M MAGNETIC DOOR HOLD
- N NURSE CALL BASE STATION
- NC NURSE CALL PULL STATION
- NX NURSE CALL ANNUNCIATOR LIGHT

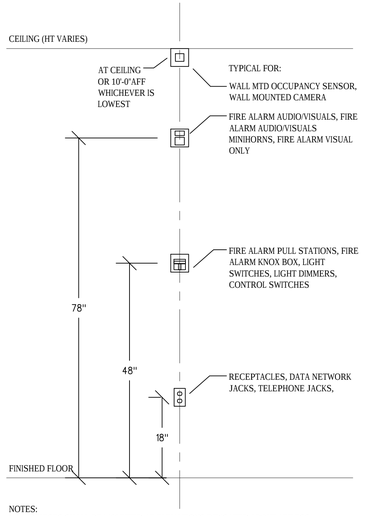
WP DENOTES WEATHERPROOF CONSTRUCTION

RP DENOTES EXISTING ELECTRICAL EQUIPMENT TO BE REPLACED

RM DENOTES EXISTING ELECTRICAL EQUIPMENT TO REMAIN

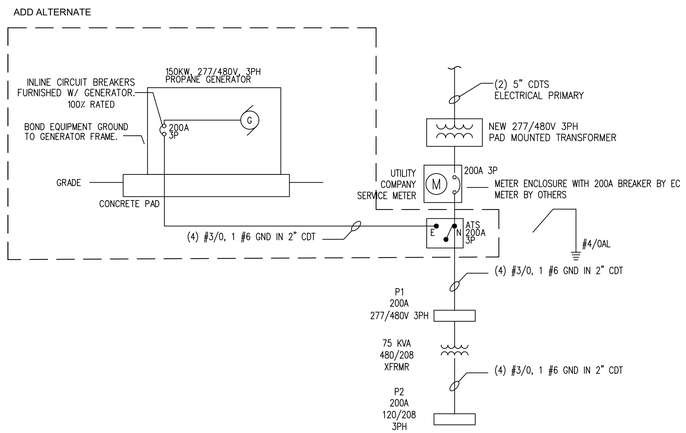
RL DENOTES EXISTING ELECTRICAL EQUIPMENT TO BE RELOCATED

RV DENOTES EXISTING ELECTRICAL EQUIPMENT TO BE REMOVED



NOTES:
1. DEVICES SHALL BE MOUNTED AT ELEVATIONS INDICATED ABOVE UNLESS SPECIFICALLY NOTED OTHERWISE ON PLANS, IN SYMBOLS SCHEDULE OR DIRECTED BY ARCHITECT.
2. WIRING DEVICES (DATA NETWORK JACKS, RECEPTACLES, ETC.) SHOWN SIDE BY SIDE ELECTRICAL PLANS SHALL BE MOUNTED IN A SINGLE BOX AND FACEPLATE.
3. LIGHTING SWITCHES AND DIMMERS SHOWN SIDE BY SIDE ON ELECTRICAL PLANS SHALL BE MOUNTED IN A SINGLE BOX AND FACEPLATE.
4. LOCATIONS OF ELECTRICAL DEVICES AND LIGHTING SWITCHES/DIMMERS ARE SHOWN SCHEMATICALLY ON ELECTRICAL PLANS. ALIGN DEVICES SHOWN ADJACENT TO ONE ANOTHER ON ELECTRICAL PLANS VERTICALLY AS SHOWN ABOVE.
5. MOUNTING HEIGHTS INDICATED ARE TO CENTERLINE OF DEVICE.

1 E0.0 DEVICE ALIGNMENT DETAIL
SCALE: NONE



2 E0.0 ONE-LINE DIAGRAM
SCALE: NONE

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SOUTHERN MAINE COMMUNITY COLLEGE

SMCC - MIDCOAST GREENHOUSE FACILITY
BRUNSWICK, MAINE

DESIGN DEVELOPMENT

REVISIONS:

STATE OF MAINE · STEVEN · MONASON · #8468 · LICENSED · PROFESSIONAL ENGINEER

6' 4' 2' 0 4' 8'
BAR SCALE
1/4" = 1'–0"
CHECK GRAPHIC SCALE BEFORE USING

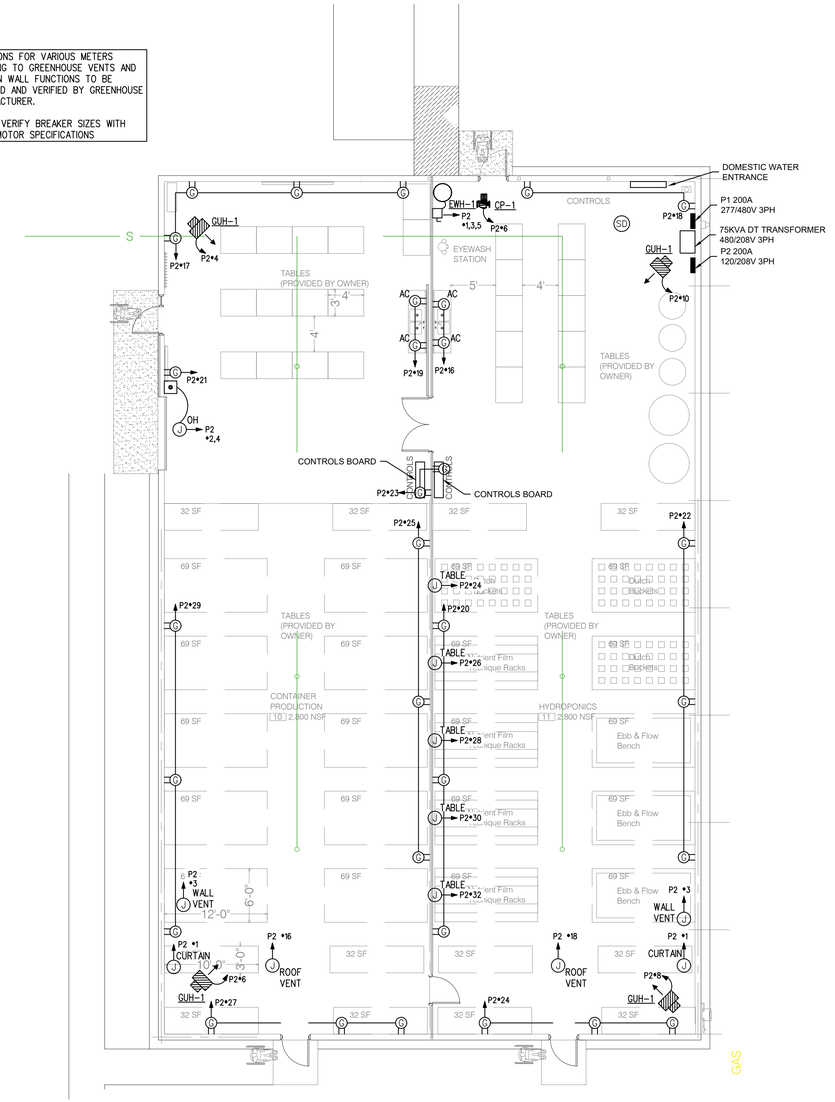
GENERAL NOTES AND DETAILS

E10

ADAR202319 - OCTOBER 21 2024

LOCATIONS FOR VARIOUS METERS RELATING TO GREENHOUSE VENTS AND CURTAIN WALL FUNCTIONS TO BE LOCATED AND VERIFIED BY GREENHOUSE MANUFACTURER.

EC TO VERIFY BREAKER SIZES WITH FINAL MOTOR SPECIFICATIONS



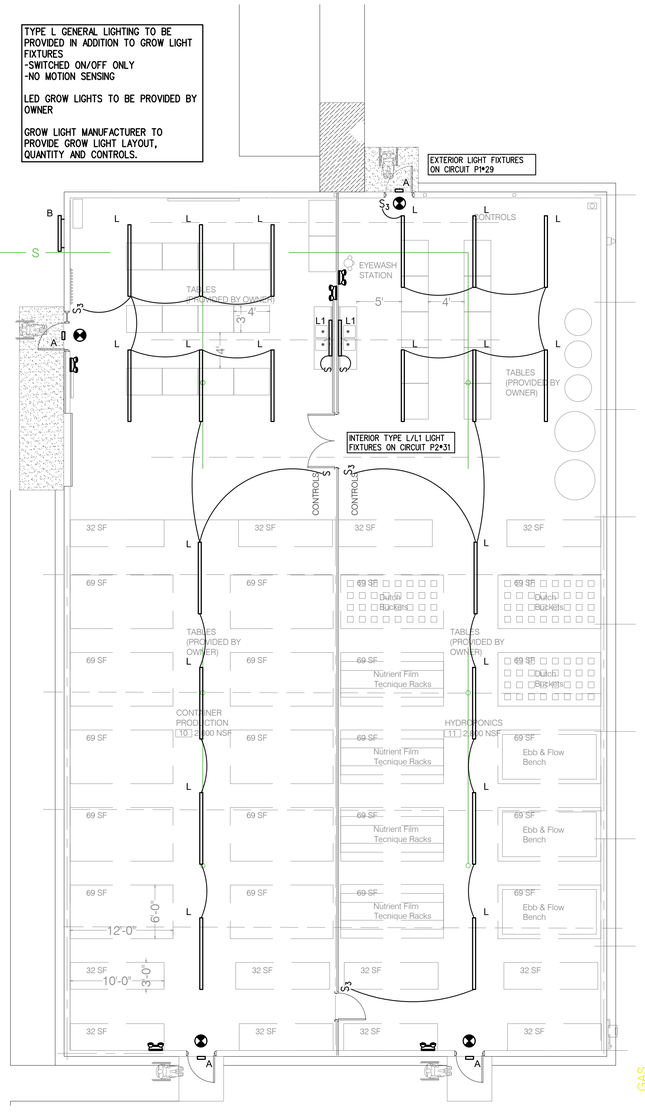
1 E01 ELECTRICAL PLANS

SCALE: NONE

TYPE L GENERAL LIGHTING TO BE PROVIDED IN ADDITION TO GROW LIGHT FIXTURES
-SWITCHED ON/OFF ONLY
-NO MOTION SENSING

LED GROW LIGHTS TO BE PROVIDED BY OWNER

GROW LIGHT MANUFACTURER TO PROVIDE GROW LIGHT LAYOUT, QUANTITY AND CONTROLS.



2 E01 LIGHTING PLAN

SCALE: NONE

LIGHT FIXTURE SCHEDULE

TYPE	MANUFACTURER AND MODEL NUMBER	LAMP INFO	REMARKS
A	BEACON LIGHTING QSP1-24L-25-3K7-3-277-PSS-SCP	25W/3000K/ 2640 LUMENS	EXTERIOR SURFACE MOUNT WALL PACK FIXTURE.TYPE 3 DISTRIBUTION. ZERO UPLIGHT DARK SKY COMPLIANT. OCCUPANCY SENSOR AND INTEGRAL BATTERY BACKUP. FINISH; PLATINUM SILVER SMOOTH.
B	COOPER LIGHTING SL-4	6W/ft /3000K/ 503 LUMENS	SURFACE MOUNTED LINEAR SIGN LIGHT. EXTRUDED ALUMINUM HOUSING, ACRYLIC SHIELDING. UNIVERSAL VOLTAGE REMOTE DRIVER (TO BE INSTALLED INDOORS). WET LOCATION RATED.
L	COLUMBIA LIGHTING MPS8-30XW-CW-EU + CM48SCF3-KIT	36 2W/3500K/ 5146 LUMENS	SURFACE MOUNT 8' LINEAR UTILITY LIGHT. CODE GAUGE STEEL HOUSING, FROSTED LENS. FOR PENDANT MOUNTED PURCHASE WITH ACCESSORY CM48SCF3-KIT FOR 48" ADJUSTABLE CABLE MOUNTING KIT.
L1	COLUMBIA LIGHTING W3B4-35VW-SFA-ED-U	23W/3500K/ 3171 LUMENS	SURFACE MOUNT ON WALL 4' LINEAR UTILITY LIGHT. EXTRUDED ALUMINUM HOUSING, WITH THERMOPLASTIC ALUMINUM ENDCAPS. FROSTED WRAPPED ACRYLIC LENS. FINISH: WHITE

PANEL P1 277/480V 3PH 4W 225 AMP MCB 65K AIC NEMA TYPE 1 (SURFACE)

CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA	CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA
1	P2 VIA TRANSFORMER	100	3				11996	2							4500
3							9630	4	EW-1-1	20	3	25	0.75	19	4500
5							10532	6							4500
7							4500	8	GROW LIGHTS						4434
9	EWH-1	50	3	25	0.75	19	4500	10	GROW LIGHTS	20	2	15	1.00	16	4434
11							4500	12	GROW LIGHTS						4434
13	GROW LIGHTS	20	2	15	1.00	16	4434	14	GROW LIGHTS	20	2	15	1.00	16	4434
15	GROW LIGHTS	20	2	15	1.00	16	4434	16	GROW LIGHTS	20	2	15	1.00	16	4434
17	GROW LIGHTS	20	2	15	1.00	16	4434	18	GROW LIGHTS						4434
19	GROW LIGHTS	20	2	15	1.00	16	4434	20	GROW LIGHTS						4434
21	GROW LIGHTS	20	2	15	1.00	16	4434	22							4434
23							4434	24	GROW LIGHTS	20	2	15	1.00	16	4434
25	GROW LIGHTS	20	2	15	1.00	16	4434	26							4434
27							4434	28	SPARE	20	1		1.00	-	-
29	EXTERIOR WALL PACKS	20	-	10	1.00	12	2771	30	SPARE	20	1		1.00	-	-
31	SPARE	20	-	-	1.00	-	-	32	SPARE	20	1		1.00	-	-
33	SPARE	20	-	-	1.00	-	-	34	SPARE	20	1		1.00	-	-
35	SPARE	20	-	-	1.00	-	-	36	SPARE	20	1		1.00	-	-
37	SPARE	20	-	-	1.00	-	-	38	SPARE	20	1		1.00	-	-
39	SPARE	20	-	-	1.00	-	-	40	SPARE	20	1		1.00	-	-
41	SPARE	20	-	-	1.00	-	-	42	SPARE	20	1		1.00	-	-

Panel Voltage 480
Total Demand KVA 141.74
Tot Demand Amps 170.49

AT - Amp Trip
P - Poles
A - Amps
CA - Connected Amperes
DF - Demand Factor (" - 1:
DA - Demand Amperes
VA-VoltAmps
M.O - Main Lug Only
MCB - Main Circuit Breaker

PANEL P2 120/208 3PH 4W 225 AMP MCB 65K AIC NEMA TYPE 1 (SURFACE)

CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA	CKT #	LOAD DESCRIPTION	AT	P	CA	DF	DA	VA
1	CURTAIN MOTORS	20	1	8	1.00	8	961	2	CP-1	15	1	1	1.00	1	195
3	WALL VENT MOTORS	20	1	8	1.00	8	961	4	GUH-1 - CONTAINER PROD	20	1	12	1.00	13	1525
5	HYDROPONIC TABLES	20	1	-	1.00	-	961	6	GUH-1 - CONTAINER PROD	20	1	12	1.00	13	1525
7	RECIRC PUMPS **	20	2	9	1.00	8	536	8	GUH-1 - HYDROPONICS	20	1	12	1.00	13	1525
9							536	10	GUH-1 - HYDROPONICS	20	1	12	1.00	13	1525
11	FOG MOTOR	20	1	14	1.00	14	961	12	ROOF VENT MOTORS	20	1	8	1.00	8	961
13	FOG MOTOR	20	1	14	1.00	14	961	14	ROOF VENT MOTORS	20	1	8	1.00	8	961
15	CONTROLLER	20	1	2	1.00	2	240	16	HYDROPONICS RECEPTACLES	20	1	8	1.00	8	961
17	CONTAINER PRODUCTION RECEPTACLES	20	1	8	1.00	8	961	18	HYDROPONICS RECEPTACLES	20	1	8	1.00	8	961
19	CONTAINER PRODUCTION RECEPTACLES	20	1	8	1.00	8	961	20	HYDROPONICS RECEPTACLES	20	1	8	1.00	8	961
21	CONTAINER PRODUCTION DEDICATED CIRCL T	20	1	5	1.00	5	630	22	HYDROPONICS RECEPTACLES	20	1	8	1.00	8	961
23	CONTAINER PRODUCTION DEDICATED CIRCL T	20	1	5	1.00	5	630	24	HYDROPONICS "ABLE-S1	20	1	8	1.00	8	961
25	CONTAINER PRODUCTION RECEPTACLES	20	1	8	1.00	8	961	26	HYDROPONICS "ABLE-S1	20	1	8	1.00	8	961
27	CONTAINER PRODUCTION RECEPTACLES	20	1	8	1.00	8	961	28	HYDROPONICS "ABLE-S1	20	1	8	1.00	8	961
29	CONTAINER PRODUCTION RECEPTACLES	20	1	8	1.00	8	961	30	HYDROPONICS "ABLE-S1	20	1	8	1.00	8	961
31	INTERIOR GENERAL LIGHTING	20	1	6	1.00	8	961	32	HYDROPONICS "ABLE-S1	20	1	8	1.00	8	961
33	SPARE	20	1	-	1.00	-	-	34	SPARE	20	1		1.00	-	-
35	SPARE	20	1	-	1.00	-	-	36	SPARE	20	1		1.00	-	-
37	SPARE	20	1	-	1.00	-	-	38	SPARE	20	1		1.00	-	-
39	SPARE	20	1	-	1.00	-	-	40	SPARE	20	1		1.00	-	-
41	SPARE	20	1	-	1.00	-	-	42	SPARE	20	1		1.00	-	-

Panel Voltage 208
Total Demand KVA 32.16
Tot Demand Amps 89.26

AT - Amp Trip
P - Poles
A - Amps
CA - Connected Amperes
DF - Demand Factor (" - 1:
DA - Demand Amperes
VA-VoltAmps
M.O - Main Lug Only
MCB - Main Circuit Breaker

** VERIFY BREAKER SIZE WITH FINAL SPECIFICATION

ARCADIA DESIGNWORKS
SOUTH
199 prospect street, suite A
portland, maine 04101
NORTH
22 balsam drive
Millinocket, maine 04462
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arcadiadesignworks.com

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(207) 865-9475

SOUTHERN MAINE COMMUNITY COLLEGE

SMCC - MIDCOAST GREENHOUSE FACILITY

BRUNSWICK, MAINE

DESIGN DEVELOPMENT

REVISIONS:

STATE OF MAINE STEVEN A. MONASON #8468 LICENSED PROFESSIONAL ENGINEER

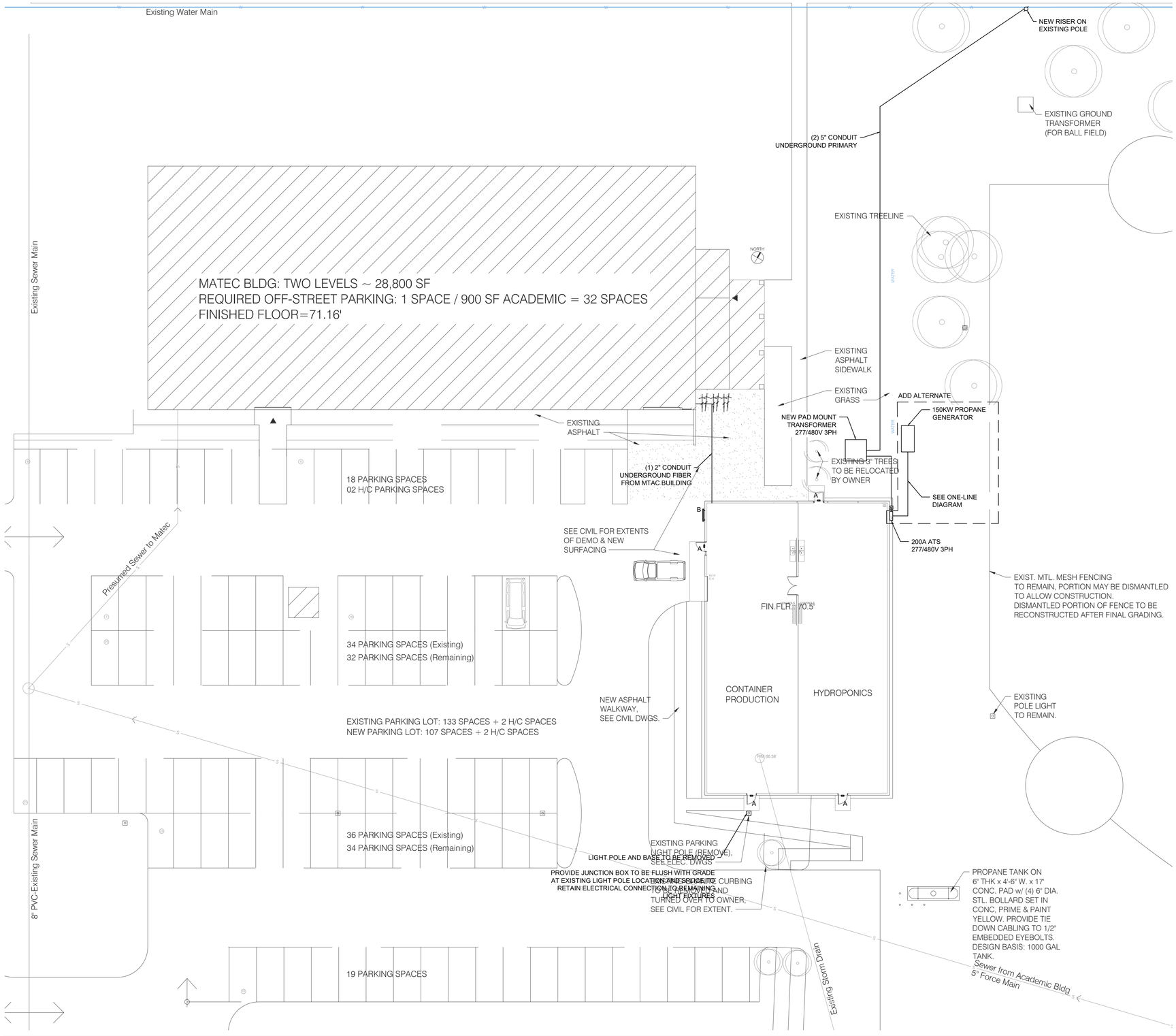
6' 4' 2' 0 4' 8'

BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

ELECTRICAL AND LIGHTING PLANS

ADAR202319 - OCTOBER 21 2024

E11



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LICENSED
PROFESSIONAL ENGINEER

6' 4' 2' 0 4' 8'
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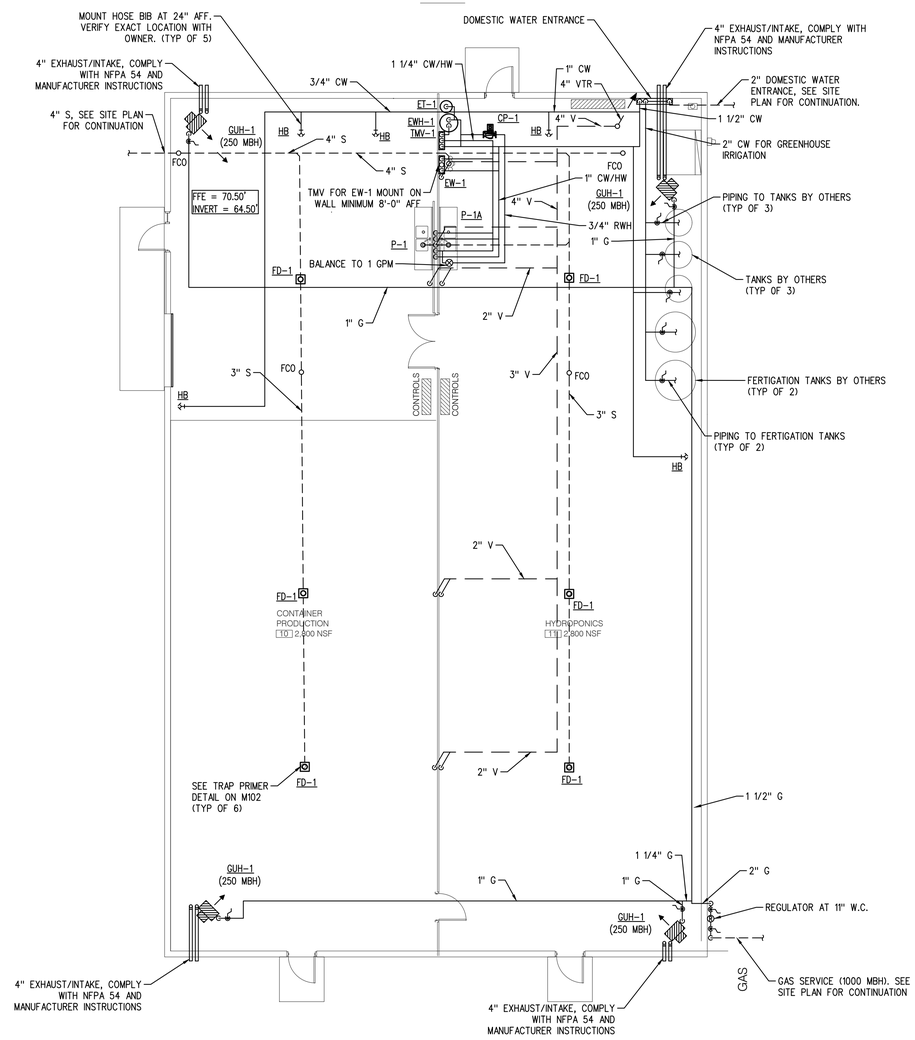
CHECK GRAPHIC SCALE BEFORE USING

ELECTRICAL SITE PLAN

ADAR202319 - OCTOBER 21 2024 E12



1 M101

MECHANICAL PLAN

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

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BRUNSWICK, MAINE

DESIGN DEVELOPMENT

REVISIONS:

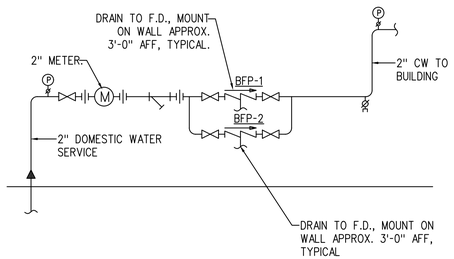
STATE OF MAINE
JUSTIN M. VALLIERE
No. 10548
LICENSED PROFESSIONAL ENGINEER

6' 4' 2' 0 4' 8'
BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

MECHANICAL PLAN

M101

ADAR202319 - OCTOBER 21 2024

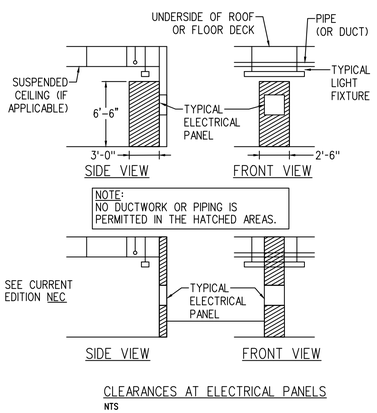


WATER ENTRANCE DETAIL
NTS

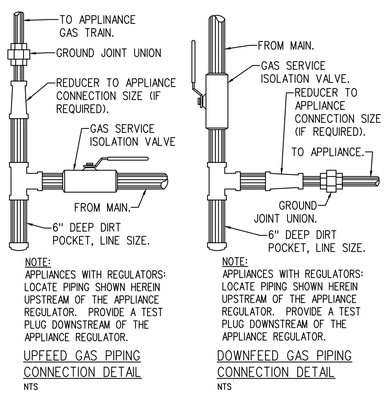
PLUMBING FIXTURE CONNECTION SCHEDULE

TAG	DESCRIPTION	SAN	VENT	CW	HW
P-1	COUNTERTOP PLANT SINK	1-1/2"	1-1/2"	1/2"	1/2"
P-1A	ADA COUNTERTOP PLANT SINK	1-1/2"	1-1/2"	1/2"	1/2"
EW-1	EMERGENCY EYE WASH	-	-	3/4"	3/4"
FD-1	FLOOR DRAIN	3"	2"	-	-
HB	HOSE BIB	-	-	3/4"	-

NOTES:
1. MINIMUM SIZE OF BELOW SLAB SANITARY & VENT PIPING SHALL BE 2".
2. PROVIDE TRAP PRIMERS ON FLOOR DRAINS, CONNECT TO NEAREST FIXTURE.

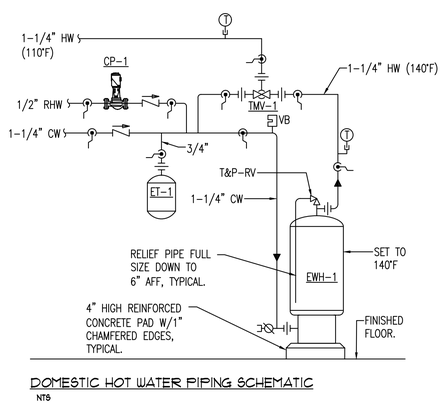


CLEARANCES AT ELECTRICAL PANELS
NTS

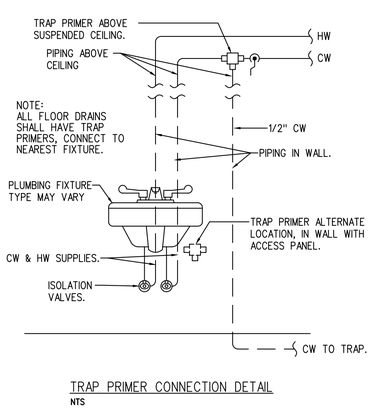


UPFEED GAS PIPING CONNECTION DETAIL
NTS

DOWNFEED GAS PIPING CONNECTION DETAIL
NTS



DOMESTIC HOT WATER PIPING SCHEMATIC
NTS



TRAP PRIMER CONNECTION DETAIL
NTS

MECHANICAL AND PLUMBING SYMBOLS AND ABBREVIATIONS LEGEND

NOTE - USE SYMBOLS AND ABBREVIATIONS AS APPLICABLE FOR THIS MECHANICAL DRAWING SET.
SOME SYMBOLS AND ABBREVIATIONS IN THIS LEGEND MAY NOT APPLY.

SYMBOL	DESCRIPTION
CA	COMPRESSED AIR PIPING (CA)
C	CONDENSATE DRAIN PIPING (C)
CTR	COOLING TOWER RETURN PIPING (CTR)
CTS	COOLING TOWER SUPPLY PIPING (CTS)
CWR	CHILLED WATER RETURN PIPING (CWR)
CWS	CHILLED WATER SUPPLY PIPING (CWS)
FOR	FUEL OIL RETURN PIPING (FOR)
FOS	FUEL OIL SUPPLY PIPING (FOS)
G	GAS PIPING (G)
HWR	HOT WATER RETURN PIPING (HWR)
HWS	HOT WATER SUPPLY PIPING (HWS)
RL	REFRIGERANT LIQUID PIPING (RL)
RG	REFRIGERANT GAS PIPING (RG)
	SANITARY PIPING BELOW FLOOR (SAN)
	SANITARY PIPING ABOVE FLOOR (SAN)
	SANITARY VENT PIPING
RWL	RAINWATER LEADER ABOVE SLAB (RWL)
	COLD WATER PIPING (CW)
	HOT WATER PIPING (HW)
	RECIRCULATED HOT WATER PIPING (RHW)
	PIPE CAP
	DIRECTION OF FLUID FLOW
	ELBOW UP
	ELBOW DOWN
	PIPE TEE UP
	PIPE TEE DOWN
	PIPE REDUCER
	PIPE WITH GUIDE
	PIPE WITH ANCHOR
	BUTTERFLY VALVE
	OS & Y GATE VALVE

SYMBOL	DESCRIPTION
	BACKFLOW PREVENTER (BFP)
	CHECK VALVE
	BALANCING VALVE (ADJUSTABLE)
	AUTOMATIC FLOW CONTROL VALVE
	RELIEF VALVE (RV)
	BALL VALVE
	BALL VALVE
	3/4" BALL VALVE WITH 3/4" HOSE END
	GATE VALVE
	PRESSURE REDUCING VALVE
	FUSIBLE VALVE
	STRAINER W/BLOWDOWN BALL VALVE
	2-WAY CONTROL VALVE
	SOLENOID VALVE
	3-WAY CONTROL VALVE
	3-WAY CONTROL VALVE (TOP VIEW)
	4-WAY CONTROL VALVE (TOP VIEW)
	2 BUTTERFLY VALVES W/SINGLE ACTUATOR
	BUTTERFLY VALVE W/ACTUATOR
	TRIPLE-DUTY VALVE
	UNION
	PIPE FLANGE
	PUMP WITH FLANGES
	BASE MOUNTED PUMP
	CARTRIDGE TYPE INLINE PUMP
	VERTICAL INLINE PUMP
FC	FLEXIBLE PIPE CONNECTION (FC)
	PITCH DOWN
	PETCOCK

SYMBOL	DESCRIPTION
	PRESSURE GAGE WITH GAGE COCK
	THERMOMETER IN WELL
F	WATER FLOW SWITCH
P	PRESSURE SWITCH OR SENSOR
T	EMURSION TEMPERATURE SENSOR
	DUCT MOUNTED SMOKE DETECTOR
R	ROOM TEMPERATURE SENSOR
T S	THERMOSTAT OR SENSOR ON WALL
T G	TSTAT OR SENSOR W/ TAMPERPROOF GUARD
V	MANUAL AIR VENT
2	NOTE TAG (NUMBER)
A 250	AIR DEVICE TAG (LETTER) WITH CFM
101	ROOM NUMBER
	TURNING VANES
	DUCT W/MANUAL DAMPER
	DUCT W/FLEXIBLE CONNECTION (FC)
	LAGGED DUCT
	DUCT W/ACOUSTIC LINING
	DUCT W/SQUARE-TO-ROUND TRANSITION
	FLEXIBLE DUCT
MOD	MOTOR OPERATED DAMPER
	AIRFLOW OUT
	AIRFLOW IN
ϕ	DIAMETER OR FLAT OVAL
	FIRE DAMPER
	ROUND OR FLAT OVAL DUCT DOWN
	ROUND OR FLAT OVAL DUCT UP
	SUPPLY DIFFUSER
	RETURN GRILLE
	STEAM TRAP
	WATER HAMMER ARRESTOR

ABBREVIATION	DESCRIPTION
AAV	AUTOMATIC AIR VENT
AD	ACCESS DOOR
AFF	ABOVE FINISHED FLOOR
AHU-•	AIR HANDLING UNIT TAG
AMS	AIRFLOW MONITORING STATION
AMPS	AMPERES
AP	ACCESS PANEL
APD	AIR PRESSURE DROP
AS-•	AIR SEPARATOR TAG
ATC	AUTOMATIC TEMPERATURE CONTROL
BD-•	BYPASS DAMPER TAG
BFP-•	BACKFLOW PREVENTER TAG
BHP	BRAKE HORSEPOWER
BTUH	BRITISH THERMAL UNITS PER HOUR
CC-•	COOLING COIL TAG
CRD	CEILING RADIATION DAMPER
CFM	CUBIC FEET PER MINUTE
CO	CLEANOUT
CP-•	CIRCULATING PUMP TAG
Cv	VALVE COEFFICIENT
CW	COLD WATER
DB	DRY BULB
dB RE	DECIBELS RELATIVE TO
DC	DOUBLE CHECK
DCA	DOUBLE CHECK ATMOSPHERIC
DEG F	DEGREES FAHRENHEIT
DIA	DIAMETER
DIW	DOWN IN WALL
DN	DOWN
EA	EXHAUST AIR

ABBREVIATION	DESCRIPTION
EAT	ENTERING AIR TEMPERATURE
EDB	ENTERING DRY BULB
EDC-•	ELECTRIC DUCT COIL TAG
EER	ENERGY EFFICIENCY RATIO
EF-•	EXHAUST FAN TAG
EFF	EFFICIENCY
ESP	EXTERNAL STATIC PRESSURE
ET-•	EXPANSION TANK TAG
EWB	ENTERING WET BULB
EWH-•	ELECTRIC WATER HEATER TAG
EWT	ENTERING WATER TEMPERATURE
EXG	EXISTING
EXH	EXHAUST
FC	FLEXIBLE CONNECTION
FCO	FLOOR CLEANOUT
FD	FIRE DAMPER
FD-•	FLOOR DRAIN TAG
FLA	FULL LOAD AMPS
FPHB	FROST PROOF HOSE BIBB
FPM	FEET PER MINUTE
FSD	COMBINATION FIRE & SMOKE DAMPER
FT	FEET
GA.	GAGE
GAL	GALLONS
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HC-•	HEATING COIL TAG
HP	HORSEPOWER
HRV-•	HEAT RECOVERY VENTILATOR TAG
HW	HOT WATER

ABBREVIATION	DESCRIPTION
HWS/R	HOT WATER SUPPLY AND RETURN
I=B=R	INSTITUTE OF BOILER AND RADIATOR MANUFACTURERS
IN.	INCHES
L-•	LOUVER TAG
LAT	LEAVING AIR TEMPERATURE
LB	POUNDS
LWS/R	LOOP WATER SUPPLY/RETURN
LRA	LOCKED ROTOR AMPS
LWCO	LOW WATER CUTOUT
LWT	LEAVING WATER TEMPERATURE
MAX	MAXIMUM
MBH	THOUSANDS OF BTU PER HOUR
MCA	MINIMUM CIRCUIT AMPACITY
MIN	MINIMUM
NC	NOISE CRITERION
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OA	OUTSIDE AIR
OBD	OPPOSED BLADE DAMPER
O.D.	OUTSIDE DIAMETER
OED	OPEN ENDED DUCT
OPD	OVERCURRENT PROTECTIVE DEVICE
P-•	PLUMBING FIXTURE TAG
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAGE
PVC	POLYVINYL CHLORIDE (PIPE)
RA	RETURN AIR
RD	ROOF DRAIN
RHW	RECIRCULATED HOT WATER

ABBREVIATION	DESCRIPTION
RLA	RUNNING LOAD AMPS
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RTU	ROOM TEMPERATURE SENSOR
RV	RELIEF VALVE
RWL	RAINWATER LEADER
SA	SUPPLY AIR
SAN	SANITARY (DRAIN & WASTE)
SD	SMOKE DAMPER
SEER	SEASONAL ENERGY EFFICIENCY RATIO
SF	SUPPLY FAN
SP	STATIC PRESSURE
△T	TEMPERATURE DIFFERENTIAL
TEMP.	TEMPERATURE
TCP	TEMPERATURE CONTROL PANEL
TMV-•	THERMOSTATIC MIXING VALVE TAG
TSP	TOTAL STATIC PRESSURE
TYP	TYPICAL
UH-•	UNIT HEATER TAG
VB	VACUUM BREAKER
VFD	VARIABLE FREQUENCY DRIVE
VTR	VENT THRU ROOF
V/PH/HZ	VOLTS/PHASES/HERTZ
WB	WET BULB
WCO	WALL CLEANOUT
WG	WATER GAGE
WPD	WATER PRESSURE DROP
WTD	WATER TEMPERATURE DROP
W/	WITH

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SOUTHERN MAINE COMMUNITY COLLEGE

SMCC - MIDCOAST GREENHOUSE FACILITY
BRUNSWICK, MAINE

DESIGN DEVELOPMENT

REVISIONS:

STATE OF MAINE — JUSTIN M. VALLIERE — No. 10548 — LICENSED PROFESSIONAL ENGINEER

6' 4' 2' 0 4' 8'
BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

MECHANICAL DETAILS AND LEGEND

M201

ADAR202319 - OCTOBER 21 2024

THERMOSTATIC MIXING VALVE PERFORMANCE SCHEDULE

TAG	FLOW RATE (GPM)	INLET CONNECTION (INCHES)	OUTLET CONNECTION (INCHES)	W.P.D. (PSIG)	SETPOINT (DEG F)	PROVIDE SPARE CARTRIDGE (Y) OR (N)	BASIS OF DESIGN: SYMMONS	
							ARRANGMENT	MODEL
TMV-1	11.0	3/4"	3/4"	10.0	120	-	WALL	7-200

UNIT HEATER PERFORMANCE SCHEDULE

TAG	INPUT (MBH)	OUTPUT (MBH)	EFFICIENCY (%)	AIRFLOW (CFM)	THROW (FEET)	MTG. HT. (FEET)	WEIGHT	FUEL	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN: REZNOR		
									HP	AMPS	V/PH/HZ	SERVICE	ARRANGEMENT	MODEL
GUH-1	250.0	145.3	83.0	4270	27	*	400	PROPANE	3/4	12.7	115/1/60	CONTAINER PRODUCTION	HORIZONTAL	UBXC

ELECTRIC WATER HEATER SCHEDULE

TAG	SERVICE	CAPACITY GALS	RECOVERY GPH @ 100F RISE	WATER TEMPERATURE (F)		ELECTRICAL				BASIS OF DESIGN: A.O. SMITH	
				RISE	SETPOINT (F)	ELEMENTS	KW	POWER	AMPS	MODEL	REMARKS
EWH-1	COMMON	20	37	100	140	1	9.0	208/3/60	25	DSE-20	NOTES: ALL

NOTES:
1. PERFORMANCE IS BASED ON NON-SIMULTANEOUS OPERATION.
2. PROVIDE MANUFACTURERS STANDARD WARRANTY MINIMUM FIVE YEARS.

EXPANSION TANK PERFORMANCE SCHEDULE

TAG	TANK VOLUME (GAL)	ACCEPTANCE VOLUME (GAL)	MAX. WORK'G TEMPERATURE (DEG F)	MAX. WORK'G PRESSURE (PSIG)	DRY WEIGHT (LBS)	BASIS OF DESIGN: TACO		
						MOUNTING	SERVICE	MODEL
ET-1	4.0	2.5	240	125	45	FLOOR MOUNT	EWH-1	CBX15-125

BFP PERFORMANCE SCHEDULE

TAG	SIZE	FLOW RATE (GPM)	W.P.D. (PSI)	MAX. WORK'G TEMPERATURE (DEGREES F)	MAX. WORK'G PRESSURE (PSI)	TESTABLE (Y) OR (N)	BASIS OF DESIGN: WATTS		
							BODY STYLE	SERVICE	MODEL
BFP-1	2"	57	13.0	145	175	Y	RPZ	WATER ENTRANCE	LF909
BFP-2	2"	57	13.0	145	175	Y	RPZ	WATER ENTRANCE	LF909

PUMP PERFORMANCE SCHEDULE

TAG	FLOW RATE (GPM)	HEAD (FT.WG)	RPM	ELECTRICAL REQUIREMENTS			BASIS OF DESIGN: TACO		
				HP	AMPS	V/PH/HZ	SEVICE	ARRANGEMENT	MODEL
CP-1	1.0	25.0	3250	1/8	1.4	115/1/60	DOM HW RECIRC (EWH-1)	CARTRIDGE	IL-009

1. PUMPS SHALL BE STAINLESS STEEL CONSTRUCTION

ARCADIA DESIGNWORKS

SOUTH
199 prospect street, suite A
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(207) 865-9475

SOUTHERN MAINE COMMUNITY COLLEGE

SMCC - MIDCOAST GREENHOUSE FACILITY
BRUNSWICK, MAINE

DESIGN DEVELOPMENT

REVISIONS:

STATE OF MAINE
JUSTIN M VALLIERE
No. 10548
LICENSED
PROFESSIONAL ENGINEER

6' 4' 2' 0 4' 8'

BAR SCALE
1/4" = 1'-0"
CHECK GRAPHIC SCALE BEFORE USING

MECHANICAL SCHEDULES

M202

ADAR202319 - OCTOBER 21 2024