

Town of Medway — Tanker 1

feet

Width : 8.58
Track : 8.00
Lock to Lock Time : 6.0
Steering Angle : 40.1

08/01/24	NOI REVISIONS	2
10/04/23	NOI COMMENT REVISIONS	1
Date	Description	No.

Revisions



LANGAN

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Project

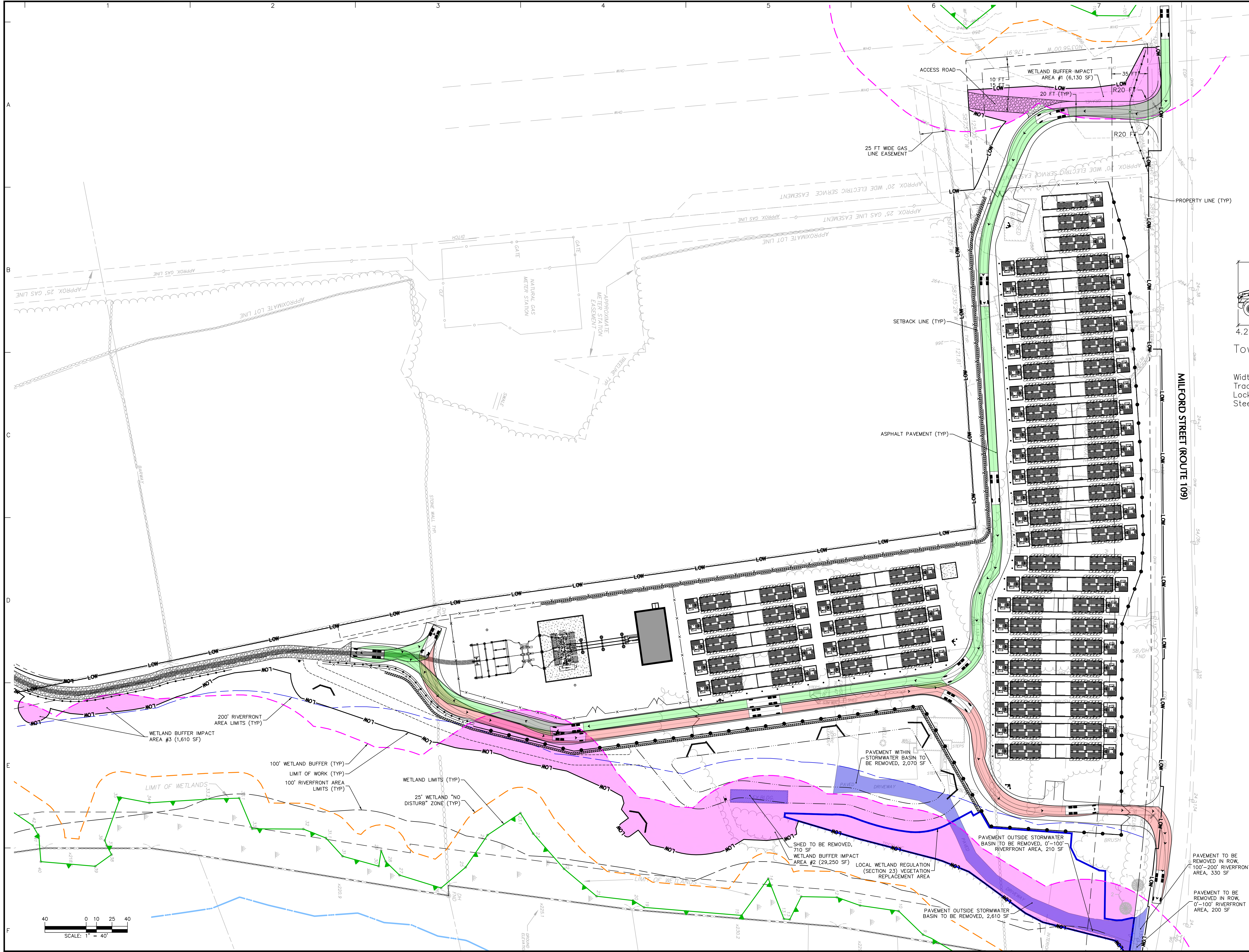
**MEDWAY BATTERY
ENERGY STORAGE
SYSTEM**

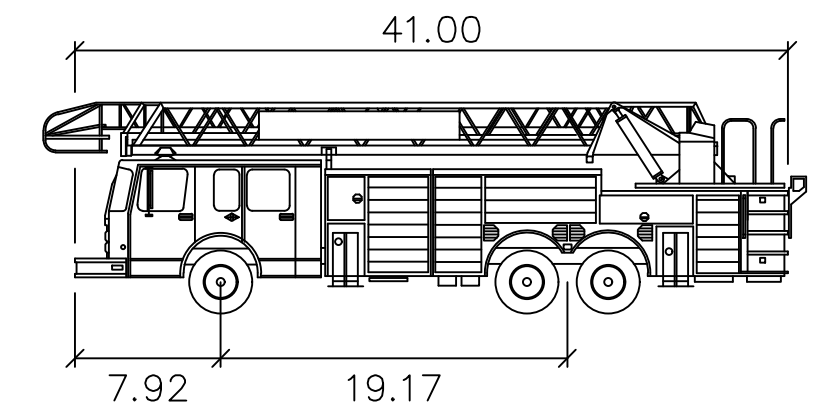
NORFOLK COUNTY MEDWAY MASSACHUSETTS

Drawing Title

**TANKER TRUCK
TURNING
MOVEMENT PLAN**

Project No.	Drawing No.
151033401	TM101
Date	
08/24/2023	
Drawn By	
JSP	
Checked By	
FH	





Town of Medway – Ladder

Width	: 8.33
Track	: 8.15
Lock to Lock Time	: 6.0
Steering Angle	: 39.5

08/01/24	NOI REVISIONS	2
10/04/23	NOI COMMENT REVISIONS	1
Date	Description	No.

Revisions



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Project

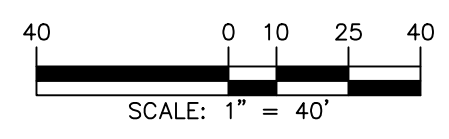
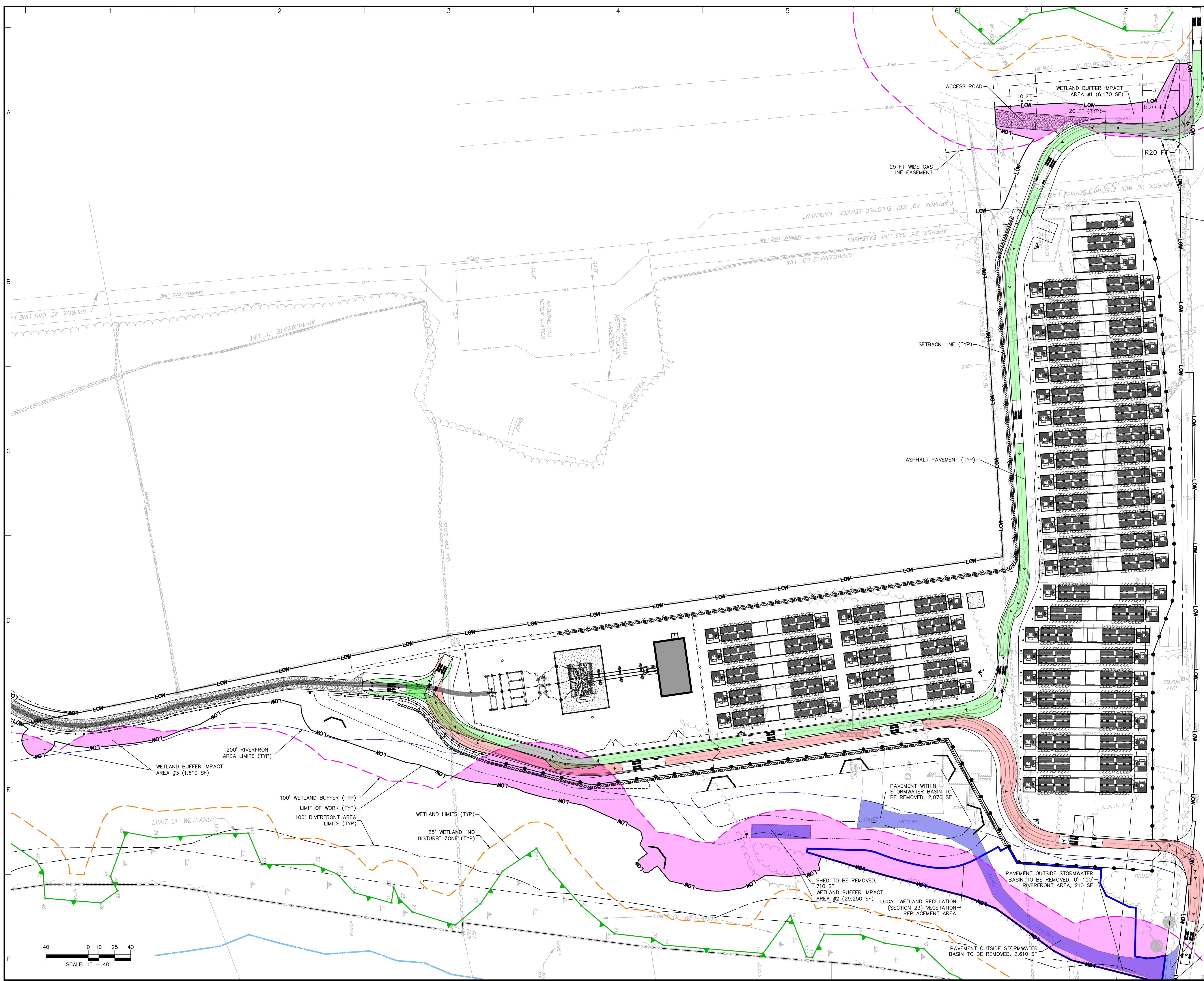
**MEDWAY BATTERY
ENERGY STORAGE
SYSTEM**

NORFOLK COUNTY MEDWAY MASSACHUSETTS

Drawing Title

**LADDER TRUCK
TURNING
MOVEMENT PLAN**

Project No.	151033401	Drawing No.	TM102
Date	08/24/2023		
Drawn By	JSP		
Checked By	FH		



SITE LIGHTING SCHEDULE

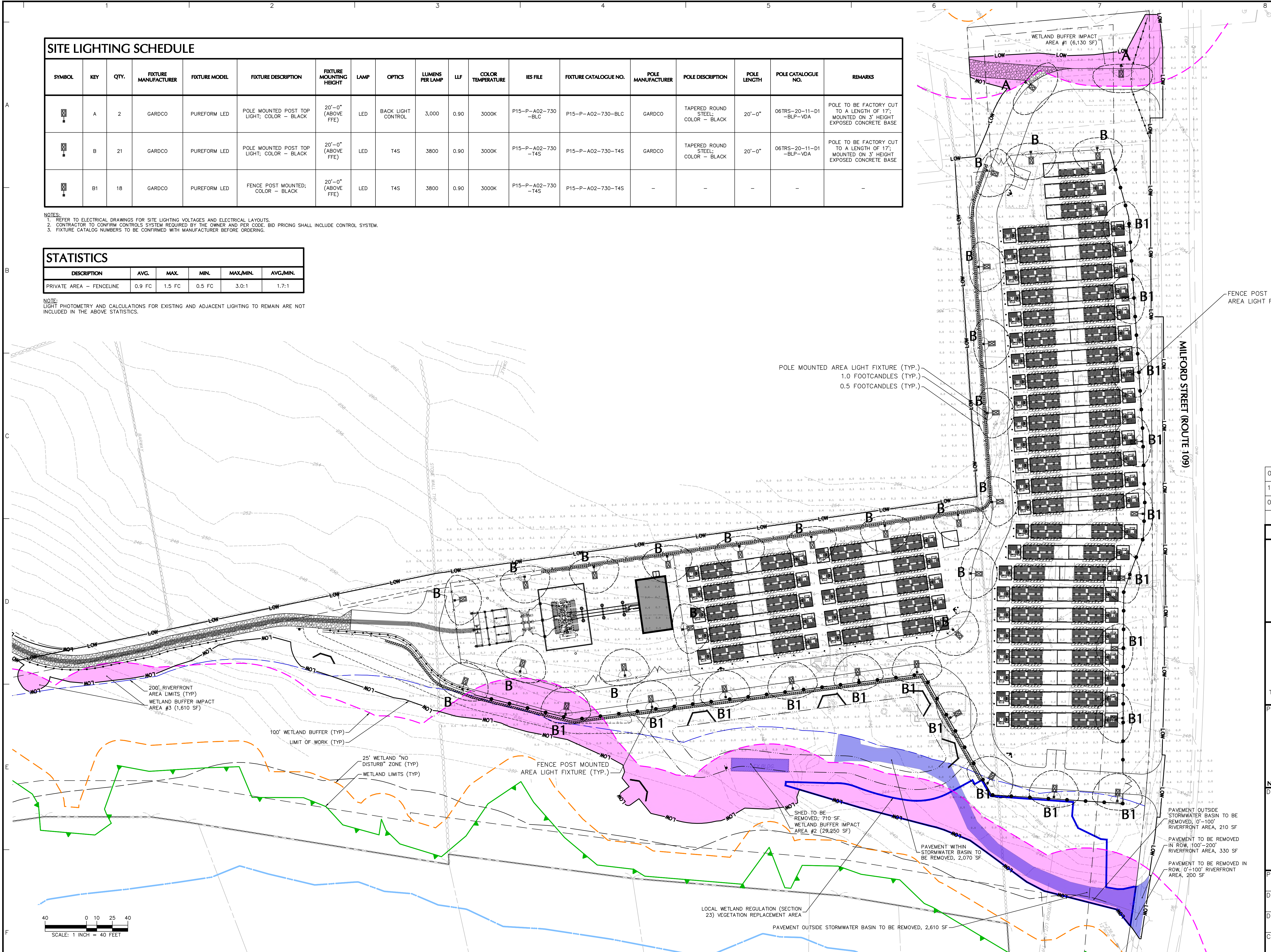
SYMBOL	KEY	QTY.	FIXTURE MANUFACTURER	FIXTURE MODEL	FIXTURE DESCRIPTION	FIXTURE MOUNTING HEIGHT	LAMP	OPTICS	LUMENS PER LAMP	LLF	COLOR TEMPERATURE	IES FILE	FIXTURE CATALOGUE NO.	POLE MANUFACTURER	POLE DESCRIPTION	POLE LENGTH	POLE CATALOGUE NO.	REMARKS
	A	2	GARDCO	PUREFORM LED	POLE MOUNTED POST TOP LIGHT; COLOR - BLACK	20'-0" (ABOVE FFE)	LED	BACK LIGHT CONTROL	3,000	0.90	3000K	P15-P-A02-730-BLC	P15-P-A02-730-BLC	GARDCO	TAPERED ROUND STEEL; COLOR - BLACK	20'-0"	06TRS-20-11-01-BLP-VDA	POLE TO BE FACTORY CUT TO A LENGTH OF 17'; MOUNTED ON 3" HEIGHT EXPOSED CONCRETE BASE
	B	21	GARDCO	PUREFORM LED	POLE MOUNTED POST TOP LIGHT; COLOR - BLACK	20'-0" (ABOVE FFE)	LED	T4S	3800	0.90	3000K	P15-P-A02-730-T4S	P15-P-A02-730-T4S	GARDCO	TAPERED ROUND STEEL; COLOR - BLACK	20'-0"	06TRS-20-11-01-BLP-VDA	POLE TO BE FACTORY CUT TO A LENGTH OF 17'; MOUNTED ON 3" HEIGHT EXPOSED CONCRETE BASE
	B1	18	GARDCO	PUREFORM LED	FENCE POST MOUNTED; COLOR - BLACK	20'-0" (ABOVE FFE)	LED	T4S	3800	0.90	3000K	P15-P-A02-730-T4S	P15-P-A02-730-T4S	-	-	-	-	-

NOTES:
1. REFER TO ELECTRICAL DRAWINGS FOR SITE LIGHTING VOLTAGES AND ELECTRICAL LAYOUTS.
2. CONTRACTOR TO CONFIRM CONTROLS SYSTEM REQUIRED BY THE OWNER AND PER CODE. BID PRICING SHALL INCLUDE CONTROL SYSTEM.
3. FIXTURE CATALOG NUMBERS TO BE CONFIRMED WITH MANUFACTURER BEFORE ORDERING.

STATISTICS

DESCRIPTION	AVG.	MAX.	MIN.	MAX/MIN.	AVG/MIN.
PRIVATE AREA - FENCELINE	0.9 FC	1.5 FC	0.5 FC	3.0:1	1.7:1

NOTE:
LIGHT PHOTOMETRY AND CALCULATIONS FOR EXISTING AND ADJACENT LIGHTING TO REMAIN ARE NOT INCLUDED IN THE ABOVE STATISTICS.



08/01/24	NOI REVISIONS	3
10/04/23	NOI COMMENT REVISIONS	2
08/24/23	NOI COMMENT REVISIONS	1
Date	Description	No.

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Project

**MEDWAY BATTERY
ENERGY STORAGE
SYSTEM**

NORFOLK COUNTY MEDWAY MASSACHUSETTS
Drawing Title

LIGHTING PLAN

Project No.	Drawing No.
151033401	LL101
Date	06/08/2023
Drawn By	LL/SH
Checked By	MH

LIGHTING NOTES:

GENERAL

- POINT-BY-POINT CALCULATIONS PROVIDED WITHIN HAVE BEEN PREPARED IN ACCORDANCE TO IESNA STANDARDS AND IN CONSIDERATION OF THE VARIABLES WITHIN THESE NOTES AND SITE LIGHTING SCHEDULE. THE VALUES SHOWN ON THE PLANS ARE NOT AN INDICATION OF THE INITIAL LAMP INTENSITIES OF THE LAMPS. THESE VALUES ARE AN APPROXIMATION OF THE MAINTAINED INTENSITIES DELIVERED TO THE GROUND PLANE USING INDUSTRY STANDARD LIGHT LOSS FACTORS (LLF) WHICH COVER LAMP DEGRADATION AND NATURAL BUILDUP / DIRT DEGRADATION ON THE FIXTURE LENS. THE LIGHTING PLAN IS DESIGNED WITH AN INDUSTRY STANDARD LUP IN ACCORDANCE WITH GUIDANCE AS PROVIDED BY IESNA. MINOR VARIATIONS IN TOPOGRAPHY, PHYSICAL OBSTRUCTIONS, AMBIENT OR ADJACENT LIGHT SOURCES AND/OR OTHER POTENTIAL IMPACTS HAVE NOT BEEN INCLUDED IN THESE CALCULATIONS. THEREFORE, AS-BUILT LIGHT INTENSITIES MAY VARY. IN EITHER DIRECTION, FROM WHAT IS EXPLICITLY PORTRAYED WITHIN THESE DRAWINGS. GUARANTEE OF LIGHT LEVELS IS EXPRESSED OR IMPLIED BY THE POINT BY POINT CALCULATIONS SHOWN ON THESE PLANS.
- LIGHT LEVEL, POINT SPACING IS 10 FT. LEFT TO RIGHT AND 10 FT. TOP TO BOTTOM. POINT BY POINT CALCULATIONS ARE BASED ON THE LIGHT LOSS FACTOR AS STATED IN THE LIGHTING SCHEDULE.
- ALL LIGHTING IS TO BE FULL CUT-OFF.

COMPLIANCE

- ALL SITE LIGHTING RELATED WORK AND MATERIALS SHALL COMPLY WITH CITY, COUNTY, AND OTHER APPLICABLE GOVERNING AUTHORITY REQUIREMENTS.
- LIGHTING LAYOUT COMPLIES WITH THE ILLUMINATING ENGINEERING SOCIETY OF NORTH AMERICA (IESNA) SAFETY STANDARDS FOR LIGHT LEVELS.

COORDINATION

- CONTRACTOR TO COORDINATE POWER SOURCE WITH LIGHT FIXTURES TO ENSURE ALL SITE LIGHTING IS OPERATING EFFECTIVELY, EFFICIENTLY AND SAFELY.
- REFER TO ELECTRIFICATION PLAN FOR PROVIDING ADEQUATE POWER FOR SITE LIGHTING.
- CONTRACTOR TO COORDINATE LOCATION OF EASEMENTS, UNDERGROUND UTILITIES AND DRAINAGE BEFORE DRILLING POLE BASES.
- INSTALLATION OF ALL LIGHTING FIXTURES, POLES, FOOTINGS, AND FEEDER CABLE TO BE COORDINATED WITH ALL SITE WORK TRADES TO AVOID CONFLICT WITH FINISHED AND PROPOSED WORK.
- CONTRACTOR TO COORDINATE INSTALLATION OF UNDERGROUND FEEDER CABLE FOR EXTERIOR LIGHTING WITH EXISTING AND PROPOSED UTILITIES, SITE DRAINAGE SYSTEMS, AND PAVING. CONTRACTOR SHALL PROMPTLY NOTIFY THE OWNER'S REPRESENTATIVE SHOULD ANY UTILITIES, NOT SHOWN ON THE PLANS, BE FOUND DURING EXCAVATIONS.

POLES AND FOOTINGS

- PROVIDE A CONCRETE BASE FOR EACH LIGHT POLE AT THE LOCATIONS INDICATED ON THE CONSTRUCTION DRAWINGS AND/OR IN ACCORDANCE WITH PROJECT PLANS AND SPECIFICATIONS RELATING DIRECTLY TO CAST-IN-PLACE CONCRETE. THE USE OF ALTERNATE LIGHTING FOUNDATIONS, SUCH AS PRECAST, MAY CHANGE THE SIZING AND REINFORCEMENT REQUIREMENTS FROM THOSE SHOWN ON THESE PLANS. CONTRACTOR TO SUBMIT SHOP DRAWINGS FOR REVIEW PRIOR TO ORDERING ANY SUBSTITUTED PRODUCTS.
- CONTRACTOR SHALL EXAMINE AND VERIFY THAT SOIL CONDITIONS ARE SUITABLE TO SUPPORT LOADS EXERTED UPON THE FOUNDATIONS DURING EXCAVATION. CONTRACTOR SHALL NOTIFY ENGINEER OF ANY UNSATISFACTORY CONDITIONS.
- POLE FOUNDATIONS SHALL NOT BE POURED IF FREE STANDING WATER IS PRESENT IN EXCAVATED AREA.
- ALL POLES HIGHER THAN 25 FT. SHALL BE EQUIPPED WITH FACTORY INSTALLED VIBRATION DAMPERS.

WALL MOUNTED FIXTURES

- CONTRACTOR TO COORDINATE INSTALLATION OF ALL THE WALL MOUNTED FIXTURES AND ELECTRICAL CONNECTIONS TO SITE STRUCTURE(S) WITH BUILDING MEP, ARCHITECT, AND/OR OWNER.
- INSTALLATION AND ELECTRICAL CONNECTIONS FOR WALL MOUNTED FIXTURES TO BE COORDINATED WITH ARCHITECTURAL, STRUCTURAL, UTILITY AND SITE PLANS AND TO BE IN ACCORDANCE WITH ALL APPLICABLE CODES.

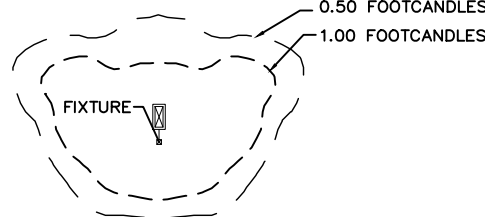
ADJUSTMENT AND INSPECTION

- CONTRACTOR TO OPERATE EACH LUMINAIRE AFTER INSTALLATION AND CONNECTION. INSPECT FOR IMPROPER CONNECTIONS AND OPERATION.
- CONTRACTOR TO ADJUST AND ADJUST ALL LUMINAIRES TO PROVIDE ILLUMINATION LEVELS AND DISTRIBUTION AS INDICATED ON THE CONSTRUCTION DRAWINGS OR AS DIRECTED BY THE LANDSCAPE ARCHITECT AND/OR OWNER.
- CONTRACTOR TO CONFIRM THAT LIGHT FIXTURES, TILT ANGLE AND AIMING MATCH SPECIFICATIONS ON THE PLANS.

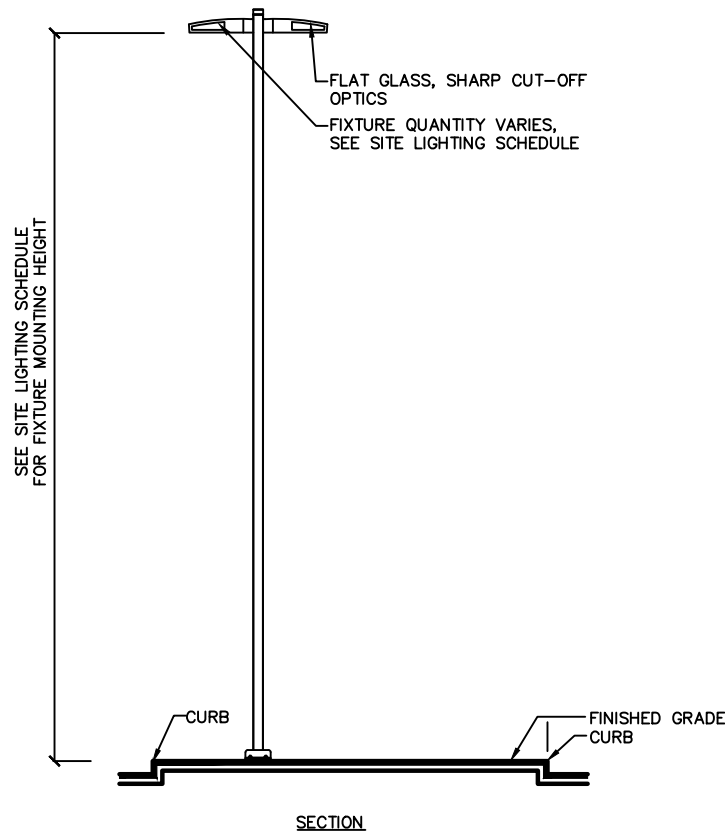
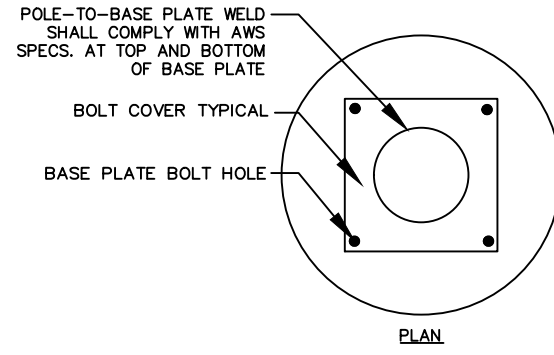
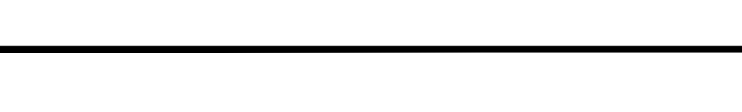
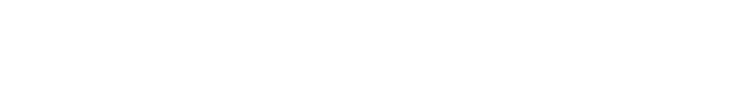
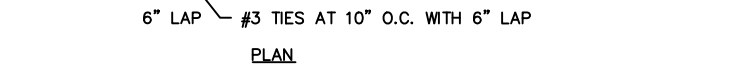
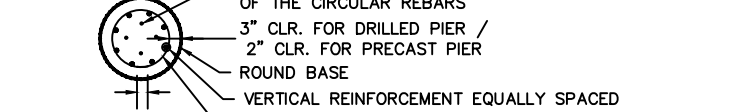
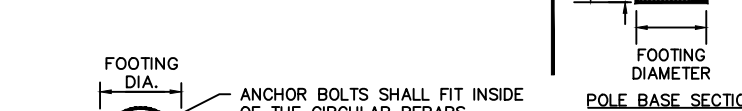
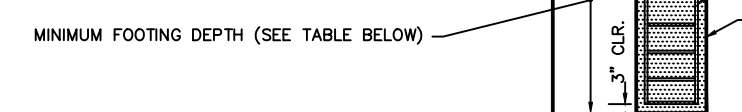
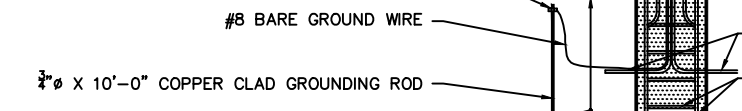
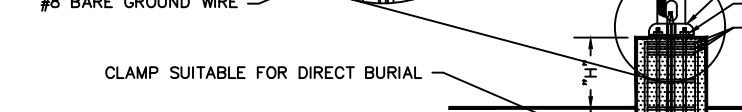
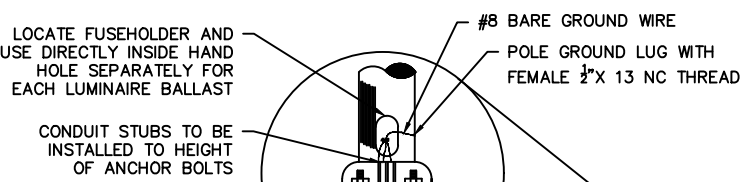
REQUIREMENTS FOR ALTERNATES

- ALL LIGHTING SUBSTITUTIONS MUST BE MADE WITHIN 14 DAYS PRIOR TO THE BID DATE TO PROVIDE ADEQUATE TIME FOR REVIEW AND TO ISSUE AN ADDENDUM INCORPORATING THE SUBSTITUTION WITH THE FOLLOWING REQUIREMENTS:
 - ANY SUBSTITUTION TO LIGHTING FIXTURES, POLES, ETC. MUST BE APPROVED BY THE OWNER, ENGINEER AND TENANTS. ANY COST ASSOCIATED WITH REVIEW AND/OR APPROVAL OF THE SUBSTITUTIONS SHALL BE ENTIRELY BORNE BY THE CONTRACTOR.
 - COMPUTER PREPARED PHOTOMETRIC LAYOUT OF THE PROPOSED LIGHTED AREA WHICH INDICATES, BY ISO/CANDLE, THE SYSTEM'S PERFORMANCE.
 - A PHOTOMETRIC REPORT FROM A NATIONAL INDEPENDENT TESTING LABORATORY WITH REPORT NUMBER, DATE, FIXTURE CATALOG NUMBERS, LUMINAIRE AND LAMP SPECIFICATIONS, IES CALCULATIONS, POINT BY POINT FOOT CANDLE PLAN, STATISTIC ZONES SHOWING AVERAGE, MAXIMUM, MINIMUM AND UNIFORMITY RATIOS, SUMMARY SOLID PLOT, AND CATALOGUE CUTS. CATALOGUE CUTS MUST IDENTIFY OPTICS, LAMP TYPE, DISTRIBUTION TYPE, REFLECTOR, LENS, BALLASTS, WATTAGE, VOLTAGE, FINISH HOUSING DESCRIPTION AND ALL OTHER PERTINENT INFORMATION.
 - POLE MANUFACTURER AS/ISO CALCULATIONS INDICATING THE POLE AND ANCHOR BOLTS BEING SUBMITTED ARE CAPABLE OF SUPPORTING THE POLE AND FIXTURE SYSTEMS BEING UTILIZED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
 - THE UNDERWRITERS LABORATORY LISTING AND FILE NUMBER FOR THE SPECIFIC FIXTURE(S) TO BE UTILIZED.
 - A COLOR PHOTOGRAPH THAT CLEARLY SHOWS THE REPLACEMENT FIXTURE POLE MOUNTED, THE FIXTURE'S COLOR, FINISH, AND PHYSICAL CHARACTERISTICS.

PHOTOMETRIC LIGHTING LEGEND:



NOTE: THE PHOTOMETRIC TEMPLATE REPRESENTS LIGHT THROW FOR EACH INDIVIDUAL FIXTURE AND DOES NOT REPRESENT LIGHT COMING FROM OTHER SOURCES.



NOTE:
1. ALL LIGHTS WITH 25' MOUNTING HEIGHT OR GREATER TO RECEIVE FACTORY INSTALLED VIBRATION DAMPERS.

LIGHT FIXTURE AND POLE

- Product types standard with 120V.
- Extended lead times apply. Contact factory for details.
- Mounts to a 4-8" OD round pole with adapter included for square poles.
- Not available with other dimming control options (mutually exclusive).
- Not available with motion sensor.
- BL50 must be specified with a motion sensor lens (L2 or L3).
- Not available with photocontrols.
- Not available in 347 or 480V.
- Available only in 120 or 277V.
- Must specify input voltage.
- All 7 pins in NEMA receptacle are connected to SR driver.
- Not available in 480V. Order photocell separately with TR7.
- Not available with DL6 and FAW dimming control options.
- When ordering SRDR with L2 or L3, controller to be used on socket must be SR compatible (See specifications for more details).

P15_PureForm_area_small_square_precision 04/21 page 1 of 6

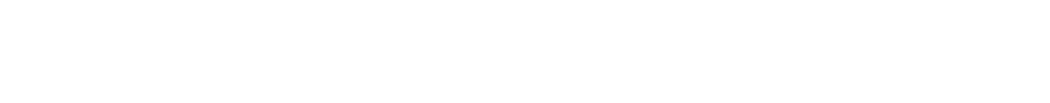
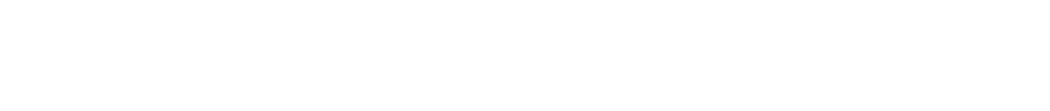
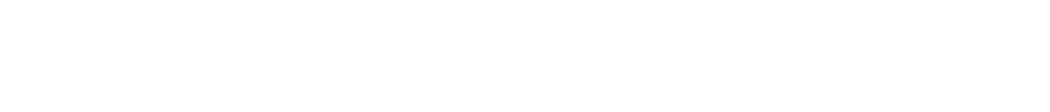
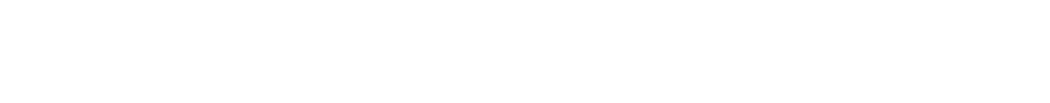
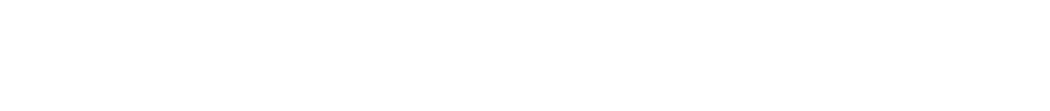
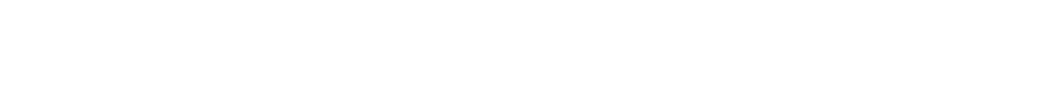
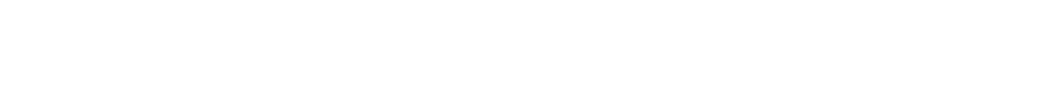
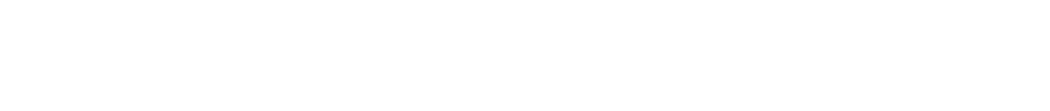
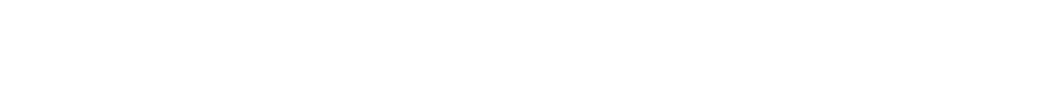
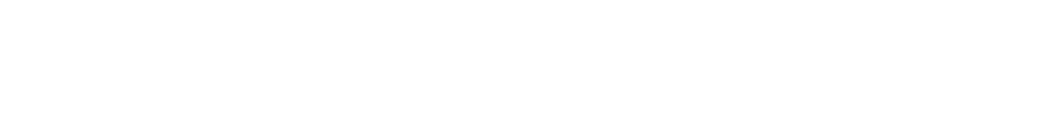
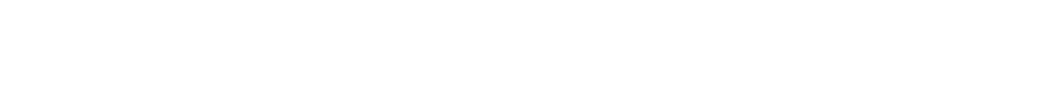
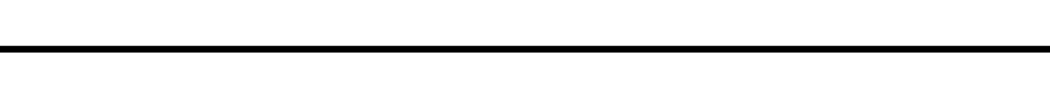


2 FIXTURE TYPE A & B

NTS

3 POLE TYPE A & B

NTS



NON-JURISDICTIONAL ROUTE 109 SCREENING PLANTING SCHEDULE

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREE(S)						
AR	3	ACER RUBRUM	RED MAPLE	2 1/2-3" CAL.	B+B	-
CCA	8	CARPINUS CAROLINIANA	AMERICAN HORNBREAM	2 1/2-3" CAL.	B+B	-
TA	1	TILIA AMERICANA	BASSWOOD	2 1/2-3" CAL.	B+B	-
EVERGREEN TREE(S)						
JV	9	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	8-10'	B+B	-
DECIDUOUS SHRUB(S)						
AAL	24	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	24-30"	CONTAINER	-
HVCW	23	HAMAMELIS VIRGINIANA	COMMON WITCHHAZEL	3-4'	CONTAINER	-
IVE	35	ILEX VERTICILLATA	WINTERBERRY	24-30"	CONTAINER	-
VD	30	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	3-4'	B+B	-
VINE(S)						
PQ	+413	PARTHENOCISSUS QUINQUEFOLIA	VIRGINIA CREEPER	2 1/4" PEAT POT	2 YR.PLANTS	18" O.C.

NOTE: IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.

LOCAL WETLAND REGULATION (SECTION 23) VEGETATION REPLACEMENT AREA

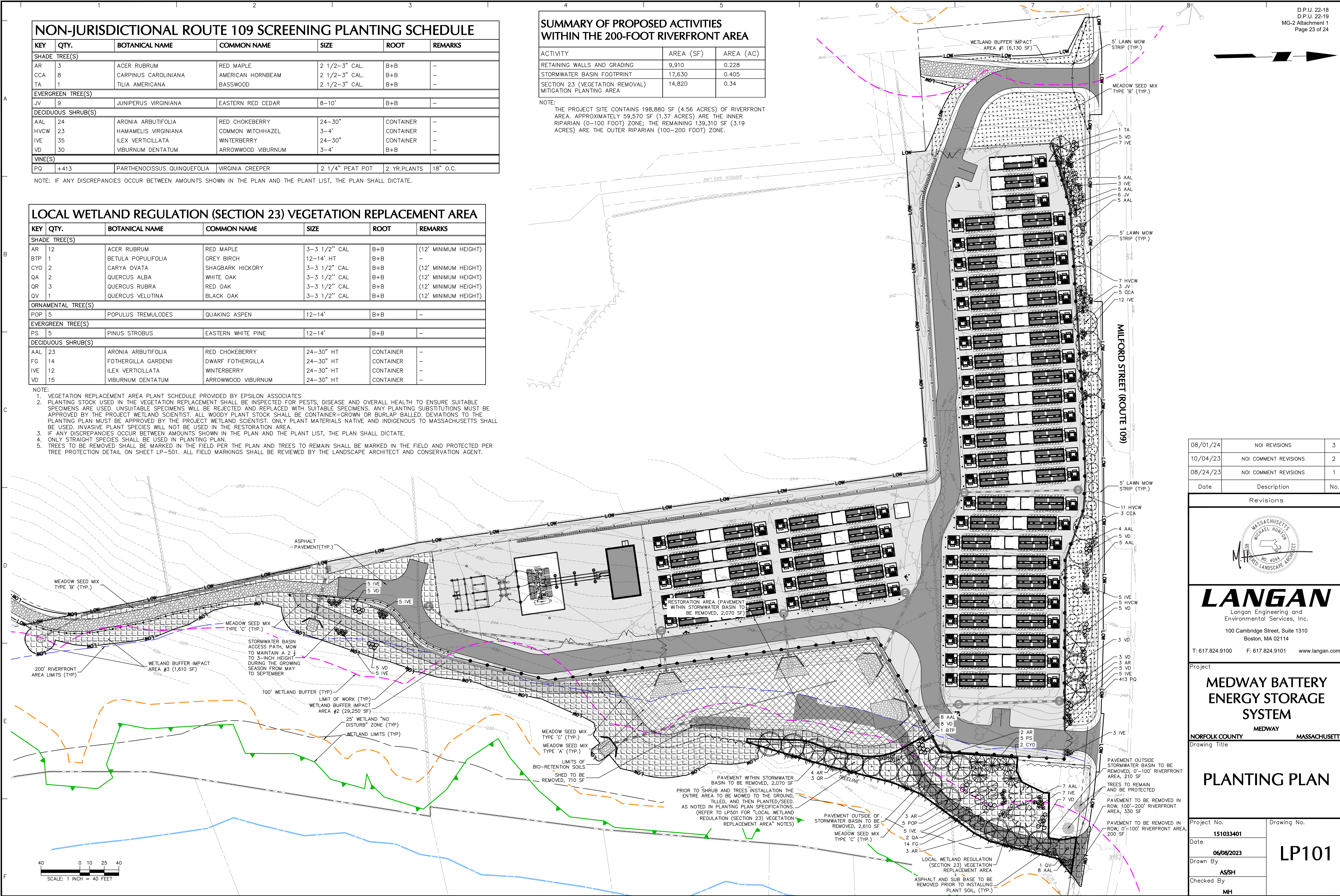
KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREE(S)						
AR	12	ACER RUBRUM	RED MAPLE	3-3 1/2" CAL	B+B	(12' MINIMUM HEIGHT)
BTP	1	BETULA POPULIFOLIA	GREY BIRCH	12-14' HT	B+B	-
CYO	2	CARYA OVATA	SHAGBARK HICKORY	3-3 1/2" CAL	B+B	(12' MINIMUM HEIGHT)
QA	2	QUERCUS ALBA	WHITE OAK	3-3 1/2" CAL	B+B	(12' MINIMUM HEIGHT)
QR	3	QUERCUS RUBRA	RED OAK	3-3 1/2" CAL	B+B	(12' MINIMUM HEIGHT)
QV	1	QUERCUS VELUTINA	BLACK OAK	3-3 1/2" CAL	B+B	(12' MINIMUM HEIGHT)
ORNAMENTAL TREE(S)						
POP	5	POPULUS TREMULODES	QUAKING ASPEN	12-14'	B+B	-
EVERGREEN TREE(S)						
PS	5	PINUS STROBUS	EASTERN WHITE PINE	12-14'	B+B	-
DECIDUOUS SHRUB(S)						
AAL	23	ARONIA ARBUTIFOLIA	RED CHOKEBERRY	24-30" HT	CONTAINER	-
FG	14	FOTHERGILLA GARDENII	DWARF FOTHERGILLA	24-30" HT	CONTAINER	-
IVE	12	ILEX VERTICILLATA	WINTERBERRY	24-30" HT	CONTAINER	-
VD	15	VIBURNUM DENTATUM	ARROWWOOD VIBURNUM	24-30" HT	CONTAINER	-

- NOTE:
- VEGETATION REPLACEMENT AREA PLANT SCHEDULE PROVIDED BY EPSILON ASSOCIATES
 - PLANTING STOCK USED IN THE VEGETATION REPLACEMENT SHALL BE INSPECTED FOR PESTS, DISEASE AND OVERALL HEALTH TO ENSURE SUITABLE SPECIMENS ARE USED. UNSUITABLE SPECIMENS WILL BE REJECTED AND REPLACED WITH SUITABLE SPECIMENS. ANY PLANTING SUBSTITUTIONS MUST BE APPROVED BY THE PROJECT WETLAND SCIENTIST. ALL WOODY PLANT STOCK SHALL BE CONTAINER-GROWN OR BURLAP BALLED. DEVIATIONS TO THE PLANTING PLAN MUST BE APPROVED BY THE PROJECT WETLAND SCIENTIST. ONLY PLANT MATERIALS NATIVE AND INDIGENOUS TO MASSACHUSETTS SHALL BE USED. INVASIVE PLANT SPECIES WILL NOT BE USED IN THE RESTORATION AREA.
 - IF ANY DISCREPANCIES OCCUR BETWEEN AMOUNTS SHOWN IN THE PLAN AND THE PLANT LIST, THE PLAN SHALL DICTATE.
 - ONLY STRAIGHT SPECIES SHALL BE USED IN PLANTING PLAN.
 - TREES TO BE REMOVED SHALL BE MARKED IN THE FIELD PER THE PLAN AND TREES TO REMAIN SHALL BE MARKED IN THE FIELD AND PROTECTED PER TREE PROTECTION DETAIL ON SHEET LP-501. ALL FIELD MARKINGS SHALL BE REVIEWED BY THE LANDSCAPE ARCHITECT AND CONSERVATION AGENT.

SUMMARY OF PROPOSED ACTIVITIES WITHIN THE 200-FOOT RIVERFRONT AREA

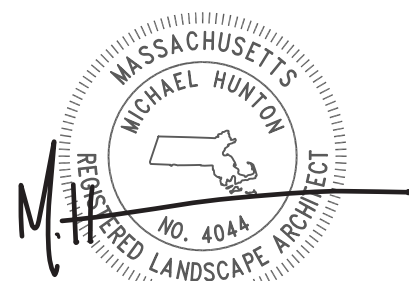
ACTIVITY	AREA (SF)	AREA (AC)
RETAINING WALLS AND GRADING	9,910	0.228
STORMWATER BASIN FOOTPRINT	17,630	0.405
SECTION 23 (VEGETATION REMOVAL) MITIGATION PLANTING AREA	14,820	0.34

NOTE:
THE PROJECT SITE CONTAINS 198,880 SF (4.56 ACRES) OF RIVERFRONT AREA. APPROXIMATELY 59,570 SF (1.37 ACRES) ARE THE INNER RIPARIAN (0-100 FOOT) ZONE; THE REMAINING 139,310 SF (3.19 ACRES) ARE THE OUTER RIPARIAN (100-200 FOOT) ZONE.



08/01/24	NOI REVISIONS	3
10/04/23	NOI COMMENT REVISIONS	2
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Project
MEDWAY BATTERY ENERGY STORAGE SYSTEM
MEDWAY
NORFOLK COUNTY MASSACHUSETTS
Drawing Title

PLANTING PLAN

Project No.	Drawing No.
151033401	LP101
Date	06/08/2023
Drawn By	AS/SH
Checked By	MH

