UNITIL
WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET
CONCORD, NEW HAMPSHIRE

GENERAL INFORMATION

OWNER
MAP 494Z LOT 44
UNITIL ENERGY SYSTEMS INC.
NATHAN SHERWOOD, P.E.
6 LIBERTY LANE WEST
HAMPTON, NH 03824
603-773-6476

APPLICANT
UNITIL ENERGY SYSTEMS INC.
NATHAN SHERWOOD, P.E.
30 ENERGY WAY
EXETER, NH 03833
603-773-6476

RESOURCE LIST

PLANNING, ZONING & COMMUNITY DEVELOPMENT DEPARTMENT
41 GREEN STREET, 3RD FLOOR
CONCORD, NH 03301
603-225-8595
603-225-8515
MATTHEW WALSH, DEPUTY CITY MANAGER-DEVELOPMENT &
ANNE-MARIE SKINNER, CITY PLANNER

CODE ADMINISTRATION
37 GREEN STREET
CONCORD, NH 03301
603-225-8580
DAVID HALL, CODE ADMINISTRATOR

CITY MANAGER
41 GREEN STREET
CONCORD, NH 03301
603-225-8570
THOMAS J. ASPELL JR., CITY MANAGER

GENERAL SERVICES (PUBLIC WORKS)
311 NORTH STREET
CONCORD, NH 03301
603-230-3929
KEVIN DEMERS, ASSISTANT SUPERINTENDENT

POLICE DEPARTMENT
35 GREEN STREET
CONCORD, NH 03301
603-225-8600
BRADLEY C. OSGOOD, CHIEF OF POLICE

FIRE DEPARTMENT
24 HORSESHOE POND LANE
CONCORD, NH 03301
603-230-3804
PAUL SIROIS, FIRE MARSHALL

ASSOCIATED PROFESSIONALS

LIGHTING DESIGN
EXPOSURE LIGHTING
501 ISLINGTON ST, UNTI 1A
PORTSMOUTH, NH 03801
603-601-8080
KEN SWEENEY, APPLICATIONS ENGINEER

ABUTTERS

TAX MAP 582Z LOT 1
SMOKESTACK REALTY, LLC
345 BAPTIST ROAD
CANTERBURY, NH 03224

TAX MAP 58Z LOT 18
CHERYL GOCHEZ 2006 REV. TRUST
345 BAPTIST ROAD
CANTERBURY, NH 03224

TAX MAP 58Z LOT 17
CLAUDIA HANNON REV. TRUST
C/O ALEXIS B GATTO TRUSTEE
507 SOUTH BLVD, APT B
SALISBURY, MD 21801-5875

TAX MAP 58Z LOT 16
MT NEST, LLC
98 ROBINSON ROAD
HUDSON, NH 03051

TAX MAP 58Z LOT 15
PETER J & CASSANDRA DENONCOURT
268 N STATE STREET
CONCORD, NH 03301

TAX MAP 58Z LOT 14
JULIA & GALEN MARSH JR
272 N STATE STREET
CONCORD, NH 03301

TAX MAP 58Z LOT 13
AYODEJO AKINOLA
274 N STATE STREET
CONCORD, NH 03301-3224

TAX MAP 58Z LOT 12
DARTNELL PROPERTIES, LLC
121 SARAH CIRCLE
LACONIA, NH 03246-3069

TAX MAP 494Z LOT 32
BOSTON & MAINE CORP.
C/O PAN AM RAILWAYS, INC.
1700 IRON HORSE PARK
NORTH BILLERICA, MA 01862-1641

TAX MAP 494Z LOT 43
STATE OF NH
C/O DEPARTMENT OF CORRECTIONS
PO BOX 1806
CONCORD, NH 03302-1806

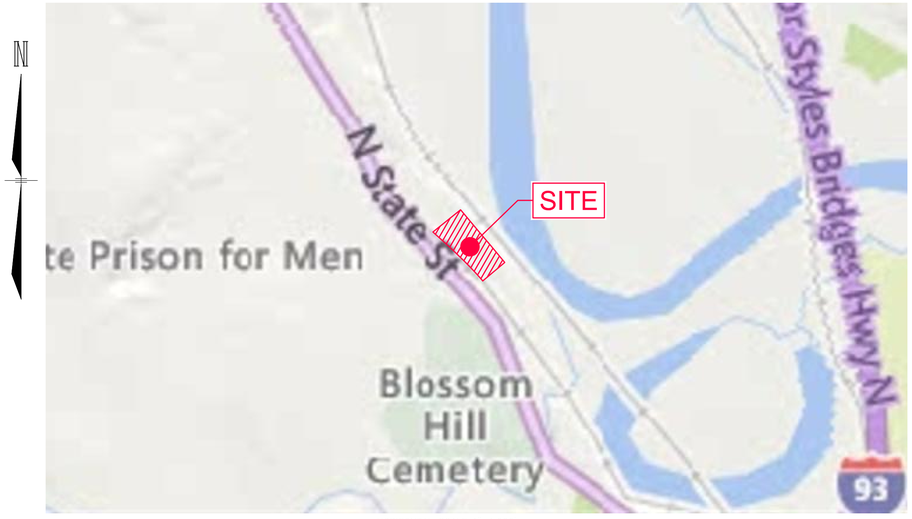
TAX MAP 494Z LOT 42
STATE OF NH
C/O SECRETARY OF STATE
107 N MAIN STREET
CONCORD, NH 03301-4951

TAX MAP 743Z LOT 10-2
NORTHERN RAILROAD
C/O PAN AM RAILWAYS, INC.
1700 IRON HORSE PARK
NORTH BILLERICA, MA 01862

TAX MAP 49Z LOT 3
CITY OF CONCORD
C/O ABUTTS R&R ROW
41 GREEN STREET
CONCORD, NH 03301-4255

TAX MAP 949Z LOT 40
BENJAMIN T CARBONE
42 CHURCHILL DRIVE
HOOKSETT, NH 03106-4702

VICINITY PLAN



HORIZONTAL SCALE 1"=1,000'
1,000 500 0 1,000

INDEX OF SHEETS

SHEET	SHEET TITLE
C-01	COVER SHEET
C-02	NOTES & LEGEND
C-03	NOTES
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C-05	OVERALL SITE LAYOUT PLAN
C-06	SITE LAYOUT PLAN
C-07	GRADING, DRAINAGE & UTILITY PLAN
C-08	STORMWATER MANAGEMENT PLAN
C-09	LANDSCAPING PLAN
T-01	TURNING MOVEMENT PLAN
D-01 TO D-04	DETAILS
REFERENCE PLANS BY ASSOCIATED PROFESSIONALS	
L-01	LIGHTING PLAN

PERMITS/APPROVALS

	NUMBER	APPROVED	EXPIRES
CITY OF CONCORD SITE PLAN APPROVAL			
CITY OF CONCORD CUP ARTICLE 28.2.4 (USE)			
CITY OF CONCORD CUP ARTICLE 28.4.4 (SHORELAND BUFFER)			
NHDES AOT PERMIT			
CITY OF CONCORD DRIVEWAY PERMIT			
NHDES SHORELAND PERMIT			
EPA NPDES ENOI CGP & SWPPP			

WAIVERS

THE FOLLOWING WAIVERS FROM THE CITY OF CONCORD SITE PLAN REVIEW REGULATIONS ARE REQUESTED FROM THE PLANNING BOARD:

1. CITY OF CONCORD STANDARD DETAILS SECTION 3(2)(C)
2. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 15.03(7)
3. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 15.03(8)
4. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 15.03(16)
5. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 15.03(17)
6. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 15.03(18)
7. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 15.03(23)
8. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 15.04(6)
9. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 20.06
10. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 26.02
11. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 26.03
12. CITY OF CONCORD SITE PLAN REGULATIONS SECTION 6.03(2)(c) & 11.05

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

COVER SHEET

UNITIL WEST CONCORD SUBSTATION
1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824
APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: AS NOTED **AUGUST 20, 2025**

APPROVED
UNDER THE PROVISIONS OF R.S.A. 674:35 & R.S.A. 674:36
CITY PLANNING BOARD
CITY OF CONCORD, NEW HAMPSHIRE
In accordance with vote of the board dated:

Approval of this plan is limited to the lots as shown

Chair Clerk

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
9/22/25

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

TFM ©
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

FILE	DR	PL	FB	
96159-01	CK	NG	CADFILE	96159-01 COVER & DETAILS

C-01

LEGEND

PROPOSED		PROPOSED	
	CONCRETE		CONCRETE
	GRAVEL		GRAVEL
	HEAVY DUTY PAVEMENT		HEAVY DUTY PAVEMENT
	CONSTRUCTION ENTRANCE		CONSTRUCTION ENTRANCE
	SNOW STORAGE		SNOW STORAGE
	RIPRAP		RIPRAP
	INLET PROTECTION		INLET PROTECTION
	FLOW ARROW		FLOW ARROW
	DRAIN LINE	D	DRAIN LINE
	DRAINAGE SWALE		DRAINAGE SWALE
	STORMWATER BMP		STORMWATER BMP
	SEWER LINE	S	SEWER LINE
	SEWER FORCE MAIN LINE	FM	SEWER FORCE MAIN LINE
	WATER LINE	W	WATER LINE
	GAS LINE	G	GAS LINE
	OVERHEAD UTILITY LINE	OHE	OVERHEAD UTILITY LINE
	UNDERGROUND UTILITY LINE	UGE	UNDERGROUND UTILITY LINE
	CATCH BASIN		CATCH BASIN
	DRAIN INLET		DRAIN INLET
	OUTLET CONTROL STRUCTURE		OUTLET CONTROL STRUCTURE
	ROOF DRAIN		ROOF DRAIN
	DRAIN CLEANOUT		DRAIN CLEANOUT
	DRAIN MANHOLE		DRAIN MANHOLE
	FARED END SECTION		FARED END SECTION
	SEWER CLEAN OUT		SEWER CLEAN OUT
	SEWER MANHOLE		SEWER MANHOLE
	SEWER VENT		SEWER VENT
	DRAIN/SEWER/WATER PLUG OR CAP		DRAIN/SEWER/WATER PLUG OR CAP
	HYDRANT		HYDRANT
	FIRE DEPARTMENT CONNECTION		FIRE DEPARTMENT CONNECTION
	WATER GATE VALVE		WATER GATE VALVE
	WATER SHUTOFF		WATER SHUTOFF
	THRUST BLOCK		THRUST BLOCK
	WATER METER		WATER METER
	WATER MANHOLE		WATER MANHOLE
	WELL		WELL
	GAS GATE VALVE		GAS GATE VALVE
	GAS SHUT OFF		GAS SHUT OFF
	GAS METER		GAS METER
	TELEPHONE MANHOLE		TELEPHONE MANHOLE
	ELECTRIC MANHOLE		ELECTRIC MANHOLE
	TRAFFIC CONTROL CABINET		TRAFFIC CONTROL CABINET
	ELECTRIC HANDHOLE		ELECTRIC HANDHOLE
	ELECTRIC PULL BOX		ELECTRIC PULL BOX
	ELECTRIC METER		ELECTRIC METER
	FLOOD LIGHT		FLOOD LIGHT
	LIGHT POLE		LIGHT POLE
	UTILITY POLE		UTILITY POLE
	GUY POLE		GUY POLE
T	TRANSFORMER PAD	T	TRANSFORMER PAD
B-#	BORING LOCATION	B-#	BORING LOCATION
TP-#	TEST PIT LOCATION	TP-#	TEST PIT LOCATION
IT-#	INFILTRATION TEST LOCATION	IT-#	INFILTRATION TEST LOCATION
MW-#	MONITORING WELL	MW-#	MONITORING WELL

ABBREVIATIONS

GENERAL

ABAN	ABANDON
AC	ACRES
ADJ	ADJUST
APPROX	APPROXIMATE
BC	BOTTOM OF CURB
BIT	BITUMINOUS
BK/PG	BOOK & PAGE
BLDG	BUILDING
BMP	BEST MANAGEMENT PRACTICE
BS	BOTTOM OF SLOPE
BW	BOTTOM OF WALL
CONC	CONCRETE
COORD	COORDINATE
DIA	DIAMETER
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
EXIST	EXISTING
FFE	FINISHED FLOOR ELEVATION
FND	FOUNDATION
HP	HIGH POINT
INV	INVERT ELEVATION
IT	INFILTRATION TEST
L	LENGTH
LF	LINEAR FEET
LSA	LANDSCAPE AREA
MAX	MAXIMUM
MIN	MINIMUM
N/F	NOW OR FORMERLY
NHFG	NEW HAMPSHIRE FISH & GAME
NTS	NOT TO SCALE
OC	ON CENTER
PAVE	PAVEMENT
PERF	PERFORATED
PROP	PROPOSED
R	RADIUS
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
REM	REMOVE
RET	RETAIN
RIM	RIM ELEVATION
ROW	RIGHT OF WAY
S	SLOPE
SF	SQUARE FEET
SW	SIDEWALK
TBM	TEMPORARY BENCHMARK
TC	TOP OF CURB
TP	TEST PIT
TW	TOP OF WALL
TYP	TYPICAL
UG	UNDERGROUND
WCR	ACCESSIBLE WHEELCHAIR RAMP
W/	WITH

UTILITIES

CB	CATCH BASIN
CIP	CAST IRON PIPE
CMP	CORRUGATED METAL PIPE
CO	CLEANOUT
COND	CONDUIT
DCB	DOUBLE CATCH BASIN
DIP	DUCTILE IRON PIPE
DMH	DRAIN MANHOLE
F&C	FRAME AND COVER
F&G	FRAME AND GRATE
FES	FLARED END SECTION
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	HANDHOLE
HW	HEADWALL
HYD	HYDRANT
LP	LIGHT POLE
OCS	OUTLET CONTROL STRUCTURE
PVC	POLYVINYL CHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN
SMH	SEWER MANHOLE
SOS	SEDIMENT OIL SEPARATOR
TSV	TAPPING SLEEVE, VALVE, AND BOX
UP	UTILITY POLE

GENERAL NOTES

1. THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF A LICENSED PROFESSIONAL ENGINEER. TFMORAN, INC. ASSUMES NO LIABILITY AS A RESULT OF ANY CHANGES OR NON-CONFORMANCE WITH THESE PLANS EXCEPT UPON THE WRITTEN APPROVAL OF THE ENGINEER OF RECORD.
2. THE SITE CONTRACTOR SHALL NOTIFY THE ENGINEER ONE WEEK IN ADVANCE OF CONSTRUCTION OF EACH STORMWATER FACILITY TO COORDINATE REQUIRED INSPECTIONS. THE CONTRACTOR SHALL TAKE PROGRESS PHOTOS DURING CONSTRUCTION OF ALL STORMWATER DRAINAGE COMPONENTS AND SEND TO THE ENGINEER.
3. SEE EXISTING CONDITIONS PLAN FOR THE HORIZONTAL AND VERTICAL DATUM. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION.
4. CONTACT EASEMENT OWNERS PRIOR TO COMMENCING ANY WORK WITHIN EASEMENTS.
5. PRIOR TO COMMENCING ANY SITE WORK, ALL LIMITS OF WORK SHALL BE CLEARLY MARKED IN THE FIELD.
6. SITE WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
7. TFMORAN, INC. ASSUMES NO LIABILITY FOR WORK PERFORMED WITHOUT AN ACCEPTABLE PROGRAM OF TESTING AND INSPECTION AS APPROVED BY THE ENGINEER OF RECORD.
8. PRIOR WRITTEN PERMISSION FROM THE LOCAL PERMITTING AUTHORITY IS REQUIRED IF CLOSURE/OBSTRUCTIONS TO ROADS, STREET, WALKWAYS, AND OTHERS IS DEEMED NECESSARY. CONTRACTOR TO PROVIDE ALTERNATE ROUTES AROUND CLOSURES/OBSTRUCTIONS PER LOCAL/STATE/FEDERAL REGULATIONS.
9. REFER TO ARCHITECTURAL PLANS FOR LAYOUT OF BUILDING FOUNDATIONS AND CONCRETE ELEMENTS WHICH ABUT THE BUILDING SUCH AS STAIRS, SIDEWALKS, LOADING DOCK RAMPS, PADS, AND COMPACTOR PADS. DO NOT USE SITE PLANS FOR LAYOUT OF FOUNDATIONS.
10. IN THE EVENT OF A CONFLICT BETWEEN PLANS, SPECIFICATIONS, AND DETAILS, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATION.
11. IF CONDITIONS AT THE SITE ARE DIFFERENT THAN SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED PRIOR TO PROCEEDING WITH THE AFFECTED WORK.
12. CONTRACTOR'S GENERAL RESPONSIBILITIES:
    - A. BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE, AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS, AND STANDARDS AND CONDITIONS OF ALL PROJECT-SPECIFIC PERMITS AND APPROVALS AS LISTED ON THE COVER SHEET TO THESE PLANS OR OTHERWISE REQUIRED.
    - B. NOTIFY ENGINEER IN WRITING OF ANY DISCREPANCIES IN PROPOSED LAYOUT AND IN EXISTING FEATURES.
    - C. EMPLOY A LICENSED SURVEYOR TO DETERMINE ALL LINES AND GRADES AND LAYOUT OF SITE ELEMENTS AND BUILDINGS.
    - D. THE CONTRACTOR SHALL BE RESPONSIBLE TO BECOME FAMILIAR WITH THE SITE AND ALL SURROUNDING CONDITIONS. NOTIFY ALL APPROPRIATE AUTHORITY OF CONSTRUCTION ACTIVITIES REQUIRING TESTS OR INSPECTIONS IN ADVANCE.
    - E. TAKE APPROPRIATE MEASURES TO MINIMIZE NOISE, DUST, AND DEBRIS. CONSTRUCTION ACTIVITIES SHALL BE CARRIED OUT IN ACCORDANCE WITH THE APPLICABLE MUNICIPAL ORDINANCES AND REGULATIONS OF THE CITY OF CONCORD.
    - F. MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY WORK AT ALL TIMES.
    - G. IN ACCORDANCE WITH RSA 430:53 AND AGR 3800, THE CONTRACTOR SHALL NOT TRANSPORT INVASIVE SPECIES OFF THE PROPERTY, AND SHALL DISPOSE OF INVASIVE SPECIES ON-SITE IN A LEGAL MANNER.
    - H. COORDINATE WITH ALL UTILITY COMPANIES AND CONTACT DIGSAFE (811 OR 888-344-7233) AT LEAST 72 HOURS PRIOR TO ANY EXCAVATION.
    - I. PROTECT NEW AND EXISTING BURIED UTILITIES DURING ALL SITE WORK. DAMAGED UTILITIES SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL COST TO THE OWNER.
    - J. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS, PREPARED BY TFMORAN, INC., DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS, OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HEREON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE US OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
    - K. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED OR COORDINATE DIMENSIONS. IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
    - L. PROVIDE AN AS-BUILT PLAN AT THE COMPLETION OF THE PROJECT AS REQUIRED BY CONCORD REGULATIONS.
    - M. IF ANY DEVIATIONS FROM THE APPROVED PLANS AND SPECIFICATIONS HAVE BEEN MADE, THE SITE CONTRACTOR SHALL PROVIDE AS-BUILT DRAWINGS STAMPED BY A LICENSED SURVEYOR OR QUALIFIED ENGINEER ALONG WITH A LETTER STAMPED BY A QUALIFIED ENGINEER DESCRIBING ALL SUCH DEVIATIONS, AND BEAR ALL COSTS FOR PREPARING AND FILING ANY NEW PERMITS OR PERMIT AMENDMENTS THAT MAY BE REQUIRED.
    - N. THE CONTRACTOR SHALL PROVIDE THE FOLLOWING DOCUMENTATION TO OWNER AND ENGINEER:
        1) ADVANCE WRITTEN NOTICE AT LEAST ONE WEEK PRIOR TO COMMENCING ANY WORK UNDER THE PERMIT AND NOTIFICATION TO AOT VIA THE START OF CONSTRUCTION FORM.
        2) IF ANY UNDERGROUND DETENTION SYSTEMS, INFILTRATION SYSTEMS, OR FILTERING SYSTEMS WERE INSTALLED, FOR EACH SUCH SYSTEM:
            - A) REPRESENTATIVE PHOTOGRAPHS OF THE SYSTEM AFTER COMPLETION BUT PRIOR TO BACKFILLING; AND
            - B) A LETTER SIGNED BY THE ENGINEER WHO OBSERVED THE SYSTEM PRIOR TO BACKFILLING, THAT THE SYSTEM CONFORMS TO THE APPROVED PLANS AND SPECIFICATIONS.
        3) UPON COMPLETION OF CONSTRUCTION, WRITTEN CERTIFICATION THAT:
            - A) ALL WORK HAS BEEN CONSTRUCTED IN ACCORDANCE WITH THE APPROVED PLANS AND SPECIFICATIONS.
            - B) IF ANY DEVIATIONS FROM THE APPROVED PLANS WERE MADE, WRITTEN DESCRIPTIONS AND AS-BUILT DRAWINGS OF ALL SUCH DEVIATIONS, STAMPED BY A QUALIFIED ENGINEER, SHALL BE PROVIDED.

GRADING & DRAINAGE NOTES

1. THE CONTRACTOR SHALL ENSURE THAT ALL WORK INCLUDING INSPECTIONS AND TESTS IS PERFORMED IN ACCORDANCE WITH THE REQUIREMENTS OF NHDES ENV-WQ 1500 AS APPLICABLE.
2. THE CONTRACTOR SHALL PREPARE, MAINTAIN, AND EXECUTE A S.W.P.P.P. IN ACCORDANCE WITH EPA REGULATIONS AND THE CONSTRUCTION GENERAL PERMIT.
3. THE CONTRACTOR SHALL COORDINATE WITH THE OWNER TO SUBMIT AN eNOI AT LEAST 14 DAYS IN ADVANCE OF ANY EARTHWORK ACTIVITIES AT THE SITE.
4. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CHECK THE ACCURACY OF THE TOPOGRAPHY AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO ANY EARTHWORK BEING PERFORMED ON THE SITE. NO CLAIM FOR EXTRA WORK WILL BE CONSIDERED FOR PAYMENT AFTER EARTHWORK HAS COMMENCED.
5. THE CONTRACTOR SHALL REFER TO THE GEOTECHNICAL REPORT FOR INFORMATION ABOUT SOIL AND GROUNDWATER CONDITIONS. THE CONTRACTOR SHALL FOLLOW THE GEOTECHNICAL ENGINEER'S RECOMMENDED METHODS TO ADDRESS ANY SOIL AND GROUNDWATER ISSUES THAT ARE FOUND ON SITE, INCLUDING AND NOT LIMITED TO DEWATERING METHODS, PERIMETER DRAINS AND TIE INTO STORMWATER MANAGEMENT SYSTEM, ETC.
6. COORDINATE WITH GEOTECHNICAL/STRUCTURAL PLANS FOR SITE PREPARATION AND OTHER BUILDING INFORMATION.
7. COORDINATE WITH ARCHITECTURAL PLANS FOR DETAILED LAYOUT AND GRADING AT BUILDING, AND SIZE AND LOCATION OF ALL BUILDING SERVICES, FOOTING DRAINS, AND ROOF DRAIN INFORMATION.
8. LIMITS OF WORK ARE SHOWN AS APPROXIMATE. THE CONTRACTOR SHALL COORDINATE ALL WORK TO PROVIDE SMOOTH TRANSITIONS. THIS INCLUDES GRADING, PAVEMENT, CURBING, SIDEWALKS, AND ALIGNMENTS.
9. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCE, RAMPS, AND LOADING AREAS.
10. THE SITE SHALL BE GRADED SO ALL FINISHED PAVEMENT HAS POSITIVE DRAINAGE AND SHALL NOT POND WATER.
11. ALL ELEVATIONS SHOWN AT CURB ARE TO THE BOTTOM OF CURB UNLESS OTHERWISE NOTED. CURBS HAVE A 6" REVEAL UNLESS OTHERWISE NOTED.
12. ALL SIDEWALK AND OTHER CURB REVEALS SHALL BE 6" WITH A TOLERANCE OF PLUS OR MINUS 3/8". WHERE SIDEWALK IS TO BE FLUSH, THE PAVEMENT REVEAL SHALL BE WITHIN 1/4".
13. THE FINISHED GRADE AT BOTTOM OF ALL ACCESSIBLE RAMPS SHALL BE FLUSH WITH PAVEMENT WITH A TOLERANCE OF PLUS OR MINUS 1/4".
14. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE PRIOR TO INSTALLATION OF FINISHED PAVEMENT.
15. ROAD AND DRAINAGE CONSTRUCTION SHALL CONFORM TO THE TYPICAL SECTIONS AND DETAILS SHOWN ON THE PLANS AND SHALL MEET LOCAL STANDARDS AND THE REQUIREMENTS OF THE LATEST NHDOT STANDARD SPECIFICATIONS FOR ROADS AND BRIDGE CONSTRUCTION AND THE NHDOT STANDARD STRUCTURE DRAWINGS UNLESS OTHERWISE NOTED.
16. STORMWATER DRAINAGE SYSTEM SHALL BE CONSTRUCTED TO LINE AND GRADE AS SHOWN ON THE PLANS. CONSTRUCTION METHODS SHALL CONFORM TO NHDOT STANDARD SPECIFICATIONS, SECTION 603. CATCH BASINS AND DRAIN MANHOLES SHALL CONFORM TO SECTION 604. ALL CATCH BASIN GRATES SHALL BE TYPE B AND CONFORM TO NHDOT STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED.
17. NO FILL SHALL BE PLACED IN ANY WETLAND AREA WITHOUT A WETLANDS PERMIT.
18. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
19. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED, FERTILIZER, AND MULCH.
20. DENSITY REQUIREMENTS:

MINIMUM DENSITY*	LOCATION
95%*	BELOW PAVED OR CONCRETE AREAS
95%**	TRENCH BEDDING MATERIAL AND SAND BLANKET BACKFILL
90%**	BELOW LOAM AND SEED AREAS

ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT.
* ASTM D-1557
** ASTM D-698.

UTILITY NOTES

1. LENGTH OF PIPE IS FOR CONVENIENCE ONLY. ACTUAL PIPE LENGTH SHALL BE DETERMINED IN THE FIELD.
2. ALL PROPOSED UTILITY WORK, INCLUDING MATERIAL, INSTALLATION, TERMINATION, EXCAVATION, BEDDING, BACKFILL, COMPACTION, TESTING, CONNECTIONS, AND CONSTRUCTION SHALL BE COORDINATED WITH AND COMPLETED IN ACCORDANCE WITH THE APPROPRIATE REQUIREMENTS, CODES, AND STANDARDS OF ALL CORRESPONDING UTILITY ENTITIES AND SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES, SHOWN OR NOT SHOWN ON THESE PLANS, PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT "DIGSAFE" (811) AT LEAST 72 HOURS BEFORE DIGGING.
4. COORDINATE ALL WORK ADJACENT TO PROPOSED BUILDINGS WITH ARCHITECTURAL BUILDING DRAWINGS. CONFIRM UTILITY PENETRATIONS AND INVERT ELEVATIONS ARE COORDINATED PRIOR TO INSTALLATION.
5. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
6. THE EXACT LOCATION OF NEW UTILITY CONNECTIONS SHALL BE DETERMINED BY THE CONTRACTOR IN COORDINATION WITH UTILITY COMPANY, COUNTY AGENCY, AND/OR PRIVATE UTILITY COMPANY.
7. THE CONTRACTOR SHALL PROVIDE AND INSTALL ALL MANHOLES, BOXES, FITTINGS, CONNECTORS, COVER PLATES, AND OTHER MISCELLANEOUS ITEMS NOT NECESSARILY DETAILED ON THESE DRAWINGS TO RENDER THE UTILITY INSTALLATION COMPLETE AND OPERATIONAL.
8. ALL UTILITY COMPANIES REQUIRE INDIVIDUAL CONDUITS. CONTRACTOR TO COORDINATE WITH TELEPHONE, CABLE, AND ELECTRIC COMPANIES REGARDING NUMBER, SIZE, AND TYPE OF CONDUITS REQUIRED PRIOR TO INSTALLATION OF ANY CONDUIT.
9. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONDUIT AND WIRING TO ALL SIGNS AND LIGHTS. CONDUIT TO BE A MINIMUM OF 24" BELOW FINISH GRADE.
10. ALL PROPOSED UTILITIES SHALL BE UNDERGROUND. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES.
11. THE CONTRACTOR SHALL ARRANGE AND PAY FOR ALL INSPECTIONS, TESTING, AND RELATED SERVICES AND SUBMIT COPIES OF ACCEPTANCE TO THE OWNER, UNLESS OTHERWISE INDICATED.
12. PROVIDE PERMANENT PAVEMENT REPAIR FOR ALL UTILITY TRENCHES IN EXISTING ROAD OR PAVEMENT TO REMAIN. SAW CUT TRENCH, PAVEMENT, AND GRANULAR BASE THICKNESS TO MATCH EXISTING PAVEMENT. OBTAIN ALL PERMITS REQUIRED FOR TRENCHING.
13. UNLESS OTHERWISE SPECIFIED, ALL UNDERGROUND STRUCTURES, PIPES, CHAMBERS, ETC. SHALL BE COVERED WITH A MINIMUM OF 18" OF COMPACTED SOIL BEFORE EXPOSURE TO VEHICLE LOADS.
14. THE PROPERTY WILL BE SERVICED BY THE FOLLOWING:

DRAINAGE	PRIVATE
SEWER	MUNICIPAL
WATER	MUNICIPAL
GAS	N/A
ELECTRIC	UNITIL
TELECOMM	CONSOLIDATED COMMUNICATIONS

17. ALL UTILITIES SHALL BE INSTALLED UNDERGROUND IN ACCORDANCE WITH SECTION 25.02(1) OF THE SITE PLAN REGULATIONS.
18. THE CONTRACTOR SHALL OBTAIN UTILITY CONNECTION PERMITS FROM THE ENGINEERING SERVICES DIVISION FOR THE PROPOSED WATER SERVICE, SEWER SERVICE, AND STORM DRAIN CONNECTION(S), IF APPLICABLE. INDIVIDUAL PERMITS WILL BE REQUIRED FOR EACH CONNECTION.
19. FINAL OVERHEAD ELECTRIC DESIGN BY UNITIL SHALL ACCOMMODATE THE SAFE PASSAGE OF THE CONCORD FIRE DEPARTMENT LADDER TRUCK.

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
9/22/25

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

NOTES & LEGEND

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824
APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: NOT TO SCALE **AUGUST 20, 2025**

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

FILE	DR	JB	FB		
96159-01	CK	NG	CADFILE	96159-01 COVER & DETAILS	C-02

CONSTRUCTION SEQUENCE NOTES

1. INSTALL STABILIZED CONSTRUCTION ENTRANCE.
2. CUT AND CLEAR TREES WITHIN AREA OF DISTURBANCE UNLESS OTHERWISE NOTED.
3. CONSTRUCT TEMPORARY AND PERMANENT EROSION CONTROL FACILITIES PRIOR TO ANY EARTH MOVING OPERATION.
4. ROUGH GRADE SITE OR PHASED WORK AREA. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING. ALL DISTURBED AREAS SHALL BE STABILIZED NO LATER THAN 72 HOURS AFTER CONSTRUCTION ACTIVITY CEASES. IF EARTHWORK TEMPORARILY CEASES ON A PORTION OF OR THE ENTIRE SITE, AND WILL NOT RESUME WITHIN 21 DAYS, THE AREA SHALL BE STABILIZED.

   AN AREA SHALL BE CONSIDERED STABILIZED IF:
   A) BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED;
   B) A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;
   C) A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH STONE OR RIPRAP HAS BEEN INSTALLED, OR
   D) EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
7. CONSTRUCT CULVERTS, DETENTION BASINS AND TREATMENT SWALES. PLACE HEADWALLS, RIP-RAP AND OTHER DRAINAGE FACILITIES ACCORDING TO PLAN. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS/BASINS PRIOR TO DIRECTING FLOW TO THEM.
8. INSTALL ALL UNDERGROUND UTILITIES.
9. CONSTRUCT SUBSTATION YARD AND CONTROL HOUSE.
10. CONSTRUCT PARKING AND FINISH GRADE SITE ACCORDING TO PLAN. ALL SLOPES SHALL BE STABILIZED IMMEDIATELY AFTER GRADING.
11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENTATION CONTROL MEASURES PERIODICALLY AND IMMEDIATELY AFTER STORM EVENTS.
12. COMPLETE PERMANENT SEEDING AND LANDSCAPING.
13. REMOVE TEMPORARY EROSION CONTROL MEASURES ONCE ALL AREAS ARE STABILIZED WITH A SUITABLE STAND OF GRASS, PAVEMENT OR COMPACTED GRAVELS.

* REFER TO THE STORM WATER MANAGEMENT PLAN FOR EROSION CONTROL MEASURES AND SPECIFIC INFORMATION.

GENERAL NOTES

1. ALL IN PAVEMENT MANHOLES SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
2. WHERE DEPTH OF COVER IS LESS THAN 3 FEET CLASS V REINFORCED CONCRETE PIPE SHALL BE USED.
3. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES OWNING UTILITIES, EITHER OVERHEAD OR UNDERGROUND, WITHIN THE CONSTRUCTION AREA AND SHALL COORDINATE AS NECESSARY WITH THE UTILITY COMPANIES OF SAID UTILITIES. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
5. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
6. EROSION CONTROL SYSTEMS SHALL BE INSTALLED AND MAINTAINED FOR THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES STANDARDS. THESE DETAILS SERVE AS A GUIDE ONLY.
7. REFER TO THE TOWN STANDARD DETAILS, LATEST REVISION, FOR ADDITIONAL INFORMATION AND CRITERIA.
8. THE CONTRACTOR SHALL STABILIZE ALL DITCHES, SWALES, AND PONDS PRIOR TO DIRECTING FLOW TO THEM.
9. THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED 5 ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.

WINTER CONSTRUCTION

IN ADDITION TO THE OTHER NOTES CONTAINED ON THIS PLAN, THE FOLLOWING MUST BE IMPLEMENTED:

1. WINTER EXCAVATION AND EARTHWORK SHALL BE COMPLETED AS SUCH THAT NO MORE THAN 1 ACRE OF THE SITE IS WITHOUT STABILIZATION AT ANY ONE TIME.
2. AN AREA WITHIN 100 FEET OF A PROTECTED NATURAL RESOURCE MUST BE PROTECTED WITH A DOUBLE ROW OF SEDIMENT BARRIER.
3. TEMPORARY MULCH MUST BE APPLIED WITHIN 7 DAYS OF SOIL EXPOSURE OR PRIOR TO ANY STORM EVENT, BUT AFTER EVERY WORKDAY IN AREAS WITHIN 100 FEET FROM A PROTECTED NATURAL RESOURCE.
4. AREAS THAT HAVE BEEN BROUGHT TO FINAL GRADE MUST BE PERMANENTLY MULCHED THE SAME DAY.
5. IN THE EVENT OF A SNOWFALL GREATER THAN 1 INCH (FRESH OR CUMULATIVE), THE SNOW SHALL BE REMOVED FROM THE AREAS DUE TO BE SEEDED AND MULCHED.
6. LOAM SHALL BE FREE OF FROZEN CLUMPS BEFORE IT IS APPLIED.
7. A DITCH THAT WILL BE CONSTRUCTED DURING THE WINTER MUST BE STABILIZED WITH RIPRAP.

OVERWINTER STABILIZATION

1. PERMANENT STABILIZATION CONSISTS OF AT LEAST 85% VEGETATION, PAVEMENT/GRAVEL BASE OR RIPRAP.
2. ALL PROPOSED VEGETATED AREAS THAT DO NO EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED BY SEEDING AND INSTALLING EROSION CONTROL BLANKETS ON SLOPES GREATER THAN 3:1, AND SEEDING AND PLACING 3 TO 4 TONS OF MULCH PER ACRE, SECURED WITH ANCHORED NETTING, ELSEWHERE. THE INSTALLATION OF EROSION CONTROL BLANKETS OR MULCH AND NETTING SHALL NOT OCCUR OVER ACCUMULATED SNOW OR ON FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
3. ALL DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85 PERCENT VEGETATIVE GROWTH BY OCTOBER 15, OR WHICH ARE DISTURBED AFTER OCTOBER 15, SHALL BE STABILIZED TEMPORARILY WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.
4. AFTER NOVEMBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OR 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3.
5. DO NOT EXPOSE SLOPES OR LEAVE SLOPES EXPOSED OVER THE WINTER OR FOR ANY OTHER EXTENDED TIME OF WORK SUSPENSION UNLESS FULLY PROTECTED WITH MULCH.
6. APPLY HAY MULCH AT TWICE THE STANDARD RATE (150 LBS. PER 1,000 SF). THE MULCH MUST BE THICK ENOUGH SUCH THAT THE GROUND SURFACE WILL NOT BE VISIBLE AND MUST BE ANCHORED.
7. USE MULCH AND MULCH NETTING OR AN EROSION CONTROL MULCH BLANKET OR MIX FOR ALL SLOPES GREATER THAN 8% OR OTHER AREAS EXPOSED TO DIRECT WIND.
8. INSTALL AN EROSION CONTROL BLANKET IN ALL DRAINAGE WAYS (BOTTOM AND SIDES) WITH A SLOPE GREATER THAN 3%.
9. SEE THE VEGETATION MEASURES FOR MORE INFORMATION ON SEEDING DATES AND TYPES.

EROSION CONTROL NOTES

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED:

1. INSTALLATION OF SILTATION FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE COMPLETED PRIOR TO THE START OF SITE WORK IN ANY GIVEN AREA. PREFABRICATED SILTATION FENCES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
2. SILTATION FENCES AND OTHER EROSION CONTROL MEASURES SHALL BE KEPT CLEAN DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A VEGETATIVE COVER OF GREATER THAN 85%. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER EVERY RAINFALL.
3. EXISTING VEGETATION IS TO REMAIN UNDISTURBED WHEREVER POSSIBLE.
4. THE AREA OF LAND EXPOSED AND THE TIME OF EXPOSURE SHALL BE MINIMIZED. ALL DISTURBED AREAS SHALL BE STABILIZED WITHIN 72 HOURS AFTER FINAL GRADING.
5. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM. ACCEPTABLE SEED MIXES ARE AS FOLLOWS:

   TYPICAL LAWN MIX (MIN. 200 LBS/ACRE):
   33% CREEPING RED FESCUE (MIN. 66 LBS/ACRE)
   42% PERENNIAL RYEGRASS (MIN. 84 LBS/ACRE)
   21% KENTUCKY BLUEGRASS (MIN. 42 LBS/ACRE)
   4% REDTOP (MIN. 8 LBS/ACRE)

   TEMPORARY LAWN MIX: (MIN. 47 LBS/ACRE)
   100% ANNUAL RYE

   WILDFLOWER SLOPE (NHDOT TYPE 45) MIX 3:1 OR GREATER SLOPES (MIN. 160 LBS/ACRE):
   38% CREEPING RED FESCUE (MIN. 60 LBS/ACRE)
   32% PERENNIAL RYEGRASS (MIN. 51 LBS/ACRE)
   5% REDTOP (MIN. 8 LBS/ACRE)
   5% ALSIKE CLOVER (MIN. 8 LBS/ACRE)
   5% BIRDSFOOT TREFOIL (MIN. 8 LBS/ACRE)
   3% LANCE-LEAF COREOPSIS (MIN. 3 LBS/ACRE)
   3% OXEYE DAISY (MIN. 3 LBS/ACRE)
   3% BUTTERFLY WEED (MIN. 3 LBS/ACRE)
   3% BLACKEYED SUSAN (MIN. 3 LBS/ACRE)
   3% WILD LUPINE (MIN. 3 LBS/ACRE)

   GENERAL SLOPE (NHDOT TYPE 44) MIX 3:1 OR GREATER SLOPES (MIN. 160 LBS/ACRE):
   44% CREEPING RED FESCUE (MIN. 70 LBS/ACRE)
   38% PERENNIAL RYEGRASS (MIN. 60 LBS/ACRE)
   6% REDTOP (MIN. 10 LBS/ACRE)
   6% ALSIKE CLOVER (MIN. 10 LBS/ACRE)
   6% BIRDSFOOT TREFOIL (MIN. 10 LBS/ACRE)

   A. PLACING LOAM ON SITE
      a. ALL SUBGRADE ELEVATIONS SHOULD BE UNIFORMLY GRADED TO RECEIVE LOAM AND SHALL BE INSPECTED AND APPROVED BY THE GENERAL CONTRACTOR PRIOR TO PLACEMENT OF LOAM.
   a. PLACE LOAM TO FORM A MINIMUM DEPTH OF 4" WHEN ROLLED, UNLESS OTHERWISE INDICATED.
   b. ALL DEPRESSIONS EXPOSED DURING THE ROLLING SHALL BE FILLED WITH ADDITIONAL LOAM.

   B. SEED BED PREPARATION
      AFTER FINISH GRADING AND JUST BEFORE SEEDING, THE AREAS TO BE SEEDED SHALL BE LOOSENED TO PROVIDE A ROUGH, FIRM BUT FINELY PULVERIZED SEEDBED. THE INTENT IS A TEXTURE CAPABLE OF RETAINING WATER, SEED AND FERTILIZER WHILE REMAINING STABLE AND ALLOWING SEED TIME TO GERMINATE. SEED SHALL BE APPLIED TO THE CONDITIONED SEEDBED NOT MORE THAN 48 HOURS AFTER THE SEEDBED HAS BEEN PREPARED.
6. LIME AND FERTILIZER SHALL BE INCORPORATED INTO THE SOIL PRIOR TO OR AT THE TIME OF AT THE TIME OF SEEDING. A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS. PER ACRE OF 10-20-20 FERTILIZER SHALL BE APPLIED. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATIONS.
7. HAY MULCH OR JUTE MATTING SHALL BE USED WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH PER ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. JUTE MATTING SHALL BE LAID IN THE DIRECTION OF RUNOFF FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
8. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDED AREAS AREA NOT MULCHED, PLANTINGS SHOULD BE MADE FROM EARLY SPRING TO MAY 20 OR FROM AUGUST 15 TO SEPTEMBER 15. NO DISTURBED AREA SHALL BE LEFT EXPOSED DURING WINTER MONTHS.
9. WATER SHALL BE USED FOR DUST CONTROL IN APPROPRIATE AREAS.

STOCKPILE NOTES

1. LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CONCENTRATED FLOWS OF STORMWATER, DRAINAGE COURSES AND INLETS.
2. PROTECT ALL STOCKPILES FROM STORMWATER RUN-ON USING TEMPORARY PERIMETER MEASURES SUCH AS DIVERSIONS, BERMS, SANDBAGS OR OTHER APPROVED PRACTICES.
3. STOCKPILES SHOULD BE SURROUNDED BY SEDIMENT BARRIERS, SUCH AS SILT FENCE OR SILT SOCK, TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.
4. IMPLEMENT WIND EROSION CONTROL PRACTICES AS APPROPRIATE ON ALL STOCKPILED MATERIAL.
5. PLACE BAGGED MATERIALS ON PALLETS AND UNDER COVER.
6. INACTIVE STOCKPILES
   a. INACTIVE SOIL STOCKPILES sHOULD BE COVERED WITH ANCHORED TARPS OR PROTECTED WITH SOIL STABILIZATION MEASURES (TEMPORARY SEED AND MULCH OR OTHER TEMPORARY PRACTICE) AND TEMPORARY PERIMETER SEDIMENT BARRIERS AT ALL TIMES.
   b. INACTIVE STOCKPILES OF CONCRETE RUBBLE, ASPHALT CONCRETE RUBBLE, AGGREGATE MATERIALS AND OTHER SIMILAR MATERIALS SHOULD BE PROTECTED WITH TEMPORARY SEDIMENT PERIMETER BARRIERS AT ALL TIMES. IF THE MATERIALS ARE A SOURCE OF DUST, THEY SHOULD ALSO BE COVERED.
7. ACTIVE STOCKPILES
   a. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY LINEAR SEDIMENT BARRIERS PRIOR TO THE ONSET OF PRECIPITATION. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO ACCOMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY.
   b. WHEN A STORM EVENT IS PREDICTED, STOCKPILES SHOULD BE PROTECTED WITH AN ANCHORED PROTECTIVE COVERING.

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

NOTES

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824
APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

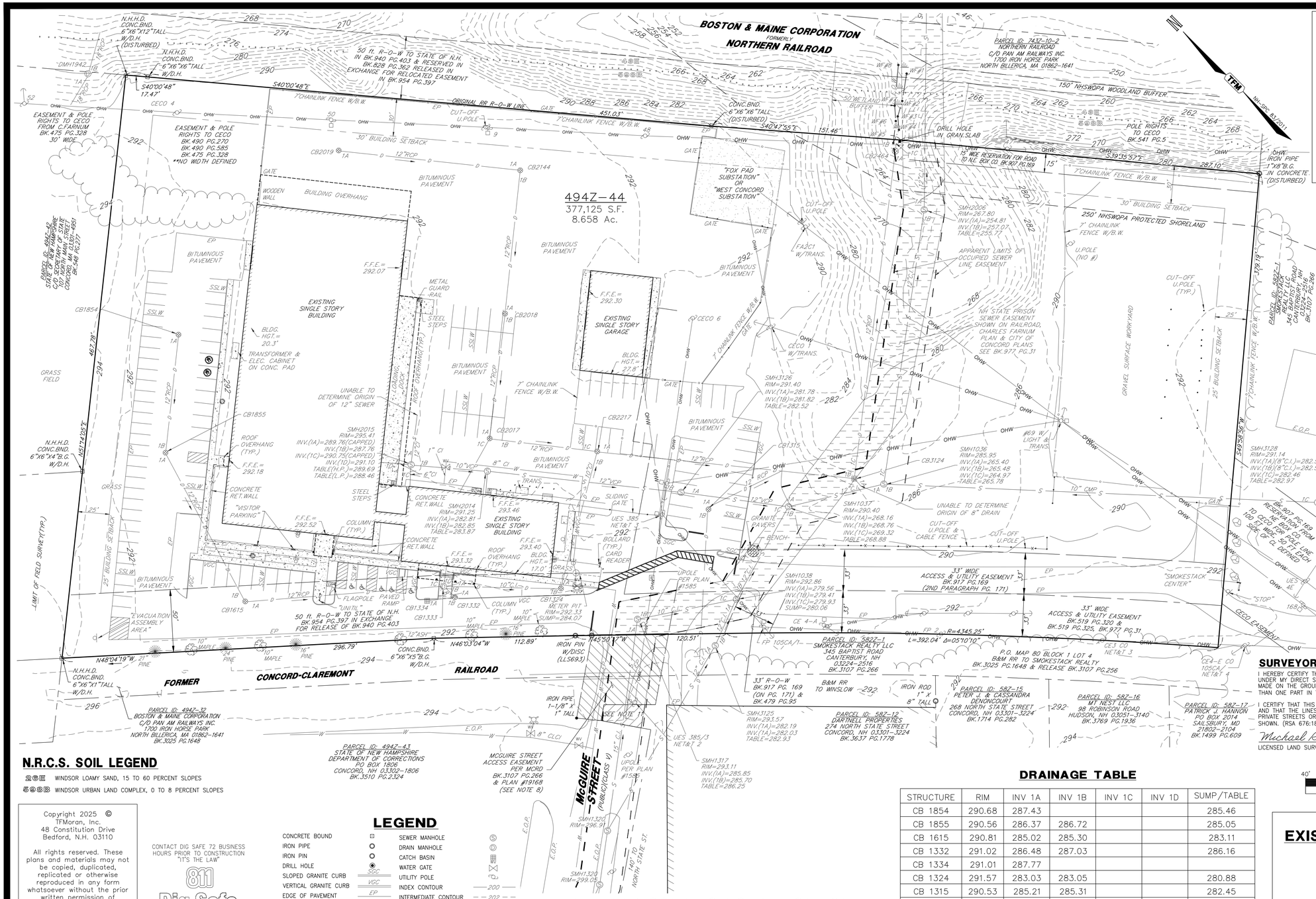
SCALE: **AUGUST 20, 2025**

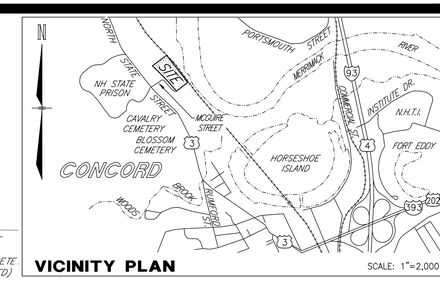
STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
8/20/25

REV	DATE	DESCRIPTION	DR	CK

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

FILE	96159-01	DR		FB		C-03
		CK		CADFILE	96159-01 COVER & DETAILS	





VICINITY PLAN SCALE: 1"=2,000'±

NOTES

1. OWNER OF RECORD OF MAP 494Z LOT 44:
   UNITIL ENERGY SYSTEMS, INC.
   6 LIBERTY LANE WEST
   HAMPTON, NH 03842-1704
   DEED REFERENCE: BK. 907 PG. 169
   AREA: 377,125 S.F. OR 8.658 ACRES
2. 4942-44 INDICATES TAX MAP AND LOT NUMBER.
3. THE PURPOSE OF THIS PLAN IS TO SHOW THE EXISTING CONDITIONS PRESENT ON TAX MAP 494Z, LOT 44, LOCATED AT 1-7 MCGUIRE STREET IN CONCORD, NH, AS SHOWN HEREON, AND NO OTHER PURPOSE.
4. CURRENT ZONING: INDUSTRIAL (IN)
   MINIMUM LOT SIZE: 40,000 S.F. (TOTAL LOT AREA); 20,000 S.F. (BUILDABLE LAND)
   MINIMUM LOT FRONTAGE: 200 FEET
   MINIMUM BUILDING SETBACKS: 50' FRONT, 30' REAR; 25' SIDE
   MAXIMUM LOT COVERAGE: 85 PERCENT
   MAXIMUM BUILDING HEIGHT: 45 FEET
5. EXAMINATION OF THE FLOOD INSURANCE RATE MAP FOR MERRIMACK COUNTY, NEW HAMPSHIRE (ALL JURISDICTIONS), MAP NUMBER: 33013C0531E, EFFECTIVE DATE: APRIL 19, 2010, INDICATES THAT THE SUBJECT PARCEL IS NOT LOCATED WITHIN A FLOOD HAZARD AREA.
6. HORIZONTAL DATUM: NH SPC 83/2011. VERTICAL DATUM: NAVD88. BENCHMARKS SET: AS NOTED
7. EASEMENTS, RIGHTS, AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH PERFORMED AT THE MERRIMACK COUNTY REGISTRY OF DEEDS. OTHER RIGHTS, EASEMENTS, OR RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF SUBJECT PARCEL MAY DETERMINE.
8. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. TFMORAN INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG-SAFE AT 811.
9. THERE HAVE BEEN MANY CONVEYANCES REGARDING THE STRIP OF LAND KNOWN AS MCGUIRE STREET. THE ACCESS WAS ORIGINALLY MENTIONED IN THE DEED FROM THE FARNUM'S TO THE STATE OF N.H. FOR THE STATE PRISON SEWER. THE ORIGINAL ACCESS APPEARS TO HAVE BEEN LOCATED ABOUT 40 FEET SOUTHERLY OF THE CURRENT LOCATION OF MCGUIRE STREET AND HAS BEEN GRANTED AND RESERVED AND REGRANTED REPEATEDLY. SEE BK. 828 PG.362, TRACT 2, BK.940 PG.403, BK.519 PG.320, BK.519 PG.325, BK.450 PG.398, BK.521 PG.481, ACCESS AND UTILITIES.
10. THE ORIGINAL GRANTED\LEASED WIDTH TO THE STATE OF NH FOR THE SEWER LINE WAS 66', THIS WAS RELEASED PER BK.977 PG.31 AND DEFINES THE WIDTH AS 33'. SEE ALSO BK.519 PG.318, BK.519 PG.323 & BK.715 PG.199, BK.521 PG.109, BK.521 PG.110, BK.479 PG.95, BK.907 PG. 169 (PARAGRAPH 2 ON PG. 172., THE STATE OF N.H. RELEASED ALL RIGHTS TO THE CITY OF CONCORD IN THE SEWER LINES FOR THE PRISON, WHICH MAY HAVE BEEN RECONSTRUCTED AND OR RELOCATED SINCE THE ORIGINAL GRANT IN 1891 BY FARNUM TO THE STATE OF N.H.
11. RIGHT TO PASS & REPASS, & OPERATE & MAINTAIN UTILITIES BOTH PUBLIC AND PRIVATE. SEE DEEDS: BK.519 PG.318, BK. 519 PG.320, BK. 519 PG.325 & BK.412 PG.22

REFERENCE PLANS

BOSTON & MAINE RAILROAD VALUATION SHEETS
V32.1-02, V32.1-03, V32.1-04, V33.1-02, V33.1-03, V33.1-04

MERRIMACK COUNTY REGISTRY OF DEEDS PLANS:

PLAN NO. 15355	PLAN NO. 357	PLAN NO. 597
PLAN NO. 635	PLAN NO. 865	PLAN NO. 1531
PLAN NO. 1585	PLAN NO. 1692	PLAN NO. 1884
PLAN NO. 1947	PLAN NO. 2122	PLAN NO. 18685
PLAN NO. 19169		

SURVEYOR'S CERTIFICATION

I HEREBY CERTIFY THAT THIS SURVEY AND PLAT WERE PREPARED BY ME OR THOSE UNDER MY DIRECT SUPERVISION AND IS THE RESULT OF AN ACTUAL FIELD SURVEY MADE ON THE GROUND AND HAS AN ERROR OF CLOSURE OF GREATER ACCURACY THAN ONE PART IN TEN THOUSAND (1:10,000).

I CERTIFY THAT THIS SURVEY PLAT IS NOT A SUBDIVISION PURSUANT TO THIS TITLE AND THAT THE LINES OF STREETS AND WAYS SHOWN ARE THOSE OF PUBLIC OR PRIVATE STREETS OR WAYS ALREADY ESTABLISHED AND THAT NO NEW WAYS ARE SHOWN. (RSA 676:18-III)

Michael R Dahlberg 06-13-2025
LICENSED LAND SURVEYOR DATE

STATE OF NEW HAMPSHIRE · LICENSED LAND SURVEYOR · No. 714 · MICHAEL R DAHLBERG · SIGNATURE
06-13-2025

N.R.C.S. SOIL LEGEND

26E WINDSOR LOAMY SAND, 15 TO 60 PERCENT SLOPES
308B WINDSOR URBAN LAND COMPLEX, 0 TO 8 PERCENT SLOPES

LEGEND

CONCRETE BOUND		SEWER MANHOLE	S
IRON PIPE		DRAIN MANHOLE	D
IRON PIN		CATCH BASIN	
DRILL HOLE		WATER GATE	
SLOPED GRANITE CURB	SGC	UTILITY POLE	
VERTICAL GRANITE CURB	VGC	INDEX CONTOUR	200
EDGE OF PAVEMENT	EP	INTERMEDIATE CONTOUR	202
EDGE OF GRAVEL		EDGE OF WETLAND	WF#1
SINGLE SOLID WHITE LINE	SSLW	N.S.C.S. SOILS BOUNDARY	26E
RETAINING WALL		EDGE OF WATER	
WIRE FENCE		TREELINE	
CHAIN LINK FENCE		TREES	
SIGN		SEWER LINE	S
GAS VALVE	GV	WATER LINE	W
LIGHT POLE		DRAIN LINE	D
HYDRANT		GAS LINE	G
GUY ANCHOR		OVERHEAD UTILITIES	
ELECTRIC METER		BOLLARD	

WETLAND SCIENTIST CERTIFICATION:

JURISDICTIONAL WETLANDS SHOWN ON THIS PLAN WERE DELINEATED BY JAMES FOUGERE CWS #161. THE WETLANDS WERE DELINEATED ACCORDING TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2, JANUARY 2012. DOMINANT HYDRIC SOILS WITHIN THE WETLAND(S) WERE IDENTIFIED USING "FIELD INDICATORS OF HYDRIC SOILS OF THE UNITED STATES" A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, NRCS, VERSION 8.1, 2017. DOMINANCE OF HYDROPHYTIC VEGETATION WAS DETERMINED USING THE USACE NATIONAL WETLAND PLANT LIST, NWPL 2016 VERSION 3.3 HTTP://WETLAND_PLANTS.USACE.ARMY.MIL.

STATE OF NEW HAMPSHIRE · JAMES R FOUGERE · No. 161 · CERTIFIED WETLAND SCIENTIST
6/13/25

DRAINAGE TABLE

STRUCTURE	RIM	INV 1A	INV 1B	INV 1C	INV 1D	SUMP/TABLE
CB 1854	290.68	287.43				285.46
CB 1855	290.56	286.37	286.72			285.05
CB 1615	290.81	285.02	285.30			283.11
CB 1332	291.02	286.48	287.03			286.16
CB 1334	291.01	287.77				
CB 1324	291.57	283.03	283.05			280.88
CB 1315	290.53	285.21	285.31			282.45
CB 2019	290.41	287.33				285.34
CB 2144	290.95	286.24	285.93			283.95
CB 2018	291.00	285.19	284.96			282.91
CB 2017	291.01	284.17	283.79	283.96		281.47
CB 2217	291.07	280.14	281.24	280.97		278.20
CB 2464	257.07	252.99				
CB 3124	286.18	271.78	270.80	270.79		271.56
DMH 1333	291.27	283.33	285.20	284.37	283.88	281.74
DMH 1942	280.06	276.29	266.44			265.91

Graphic Scale
40' 20' 0' 40' 80' 120' 160'
1" = 40'

TAX MAP 494Z LOT 44

EXISTING CONDITIONS SURVEY PLAN

1 - 7 MCGUIRE STREET
CONCORD, NEW HAMPSHIRE

OWNED BY & PREPARED FOR:

UNITIL ENERGY SYSTEMS, INC.

SCALE: 1" = 40' **APRIL 22, 2025**

CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION "IT'S THE LAW"
811 Dig Safe MA·ME·NH·RI·VT

REV.	DATE	DESCRIPTION	DR	CK
1	9-10-25	CORRECT CERTAIN ITEMS IN NOTE 10, ADD SEWER EASEMENT BOOK AND PAGE REFERENCE	MRD	MRD

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FILE	96159.00	DR	LR	FB	2202	SHEET 1 OF 1
		CK	MRD	CADFILE	96159.00 Survey	

Sep 10, 2025 - 12:18pm
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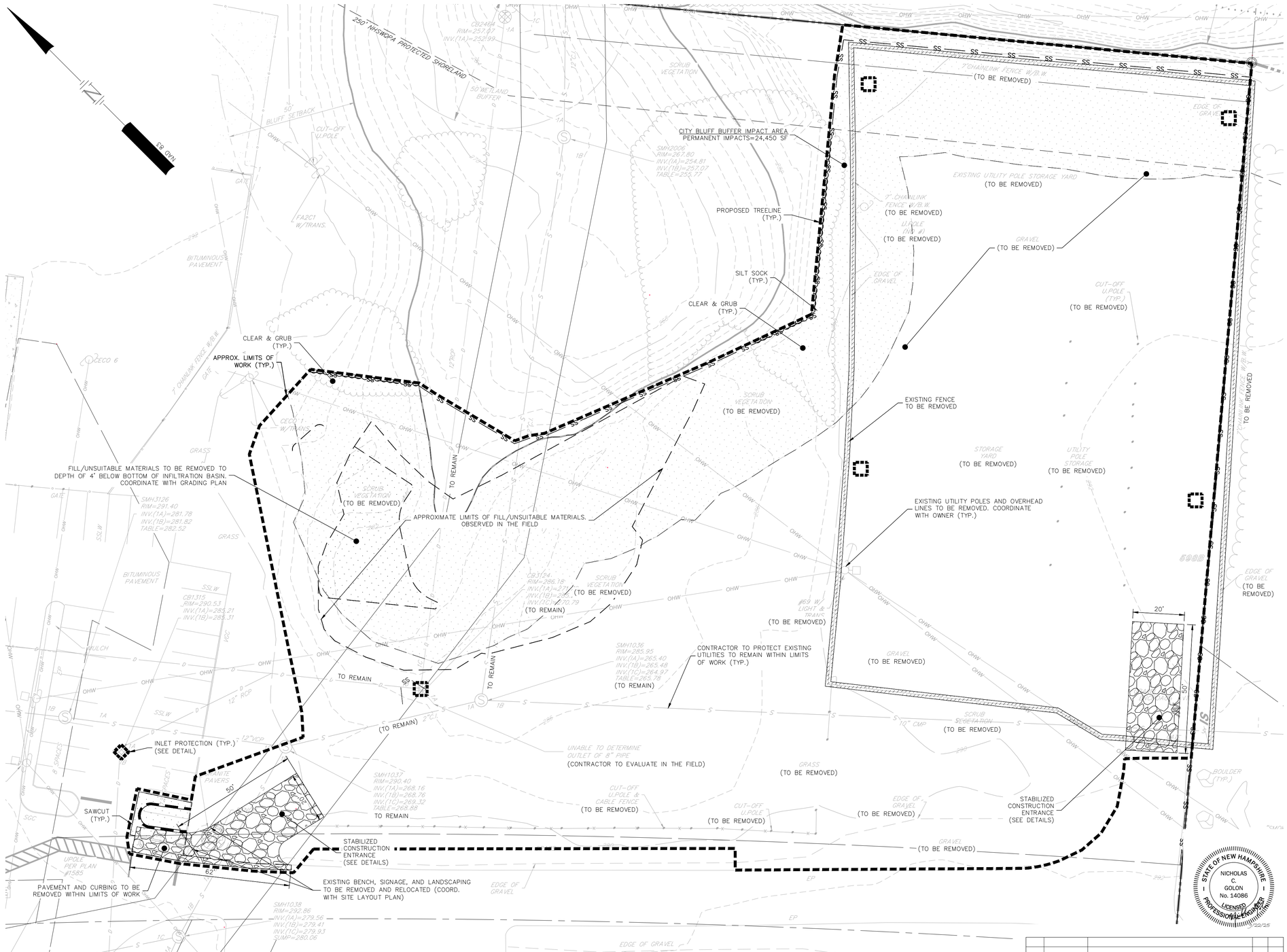

SITE PREPARATION NOTES

1. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES.
2. THE CONTRACTOR SHALL VERIFY ALL SURVEY INFORMATION IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE ENGINEER.
3. EXISTING UTILITY SERVICES TO BE DISCONTINUED ARE TO BE CAPPED AS REQUIRED BY THE RESPECTIVE UTILITY COMPANIES.
4. ALL DEMOLITION AND CONSTRUCTION DEBRIS SHALL BE REMOVED FROM SITE AND DISPOSED OF IN ACCORDANCE WITH LOCAL AND STATE REGULATIONS.
5. CONTRACTOR TO LIMIT AREA OF DISTURBANCE TO GREATEST EXTENT POSSIBLE.
6. CONTRACTOR TO INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO SITE WORK.
7. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE CITY OF CONCORD'S CONSTRUCTION STANDARDS AND DETAILS (LATEST ADDITION), AND THE CITY STANDARDS SHALL TAKE PRECEDENCE IN CASE OF ANY DETAILS OR PLANS IN CONFLICT.
8. THE CONTRACTOR SHALL REQUEST A PRECONSTRUCTION MEETING WITH ENGINEERING SERVICES TO DISCUSS SITE INSPECTIONS, SCHEDULES, SPECIAL CONDITIONS, ETC.

SOIL LEGEND (PER USDA NRCS WEB SOIL SURVEY)

SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP	DRAINAGE CLASS
43E	WINDSOR LOAMY SAND, 15–60% SLOPES	A	EXCESSIVELY
598B	WINDSOR–URBAN LAND COMPLEX, 0–8% SLOPES	A	EXCESSIVELY

CITY BLUFF BUFFER IMPACT NOTES

CITY OF CONCORD BLUFF BUFFER IMPACTS = 24,450 SF

HORIZONTAL SCALE 1"=20'
20 10 0 20

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

SITE PREPARATION & DEMOLITION PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: 1"=20' **AUGUST 20, 2025**

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
9/22/25

DIG SAFE
CALL BEFORE YOU DIG
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Fax (603) 472-9747
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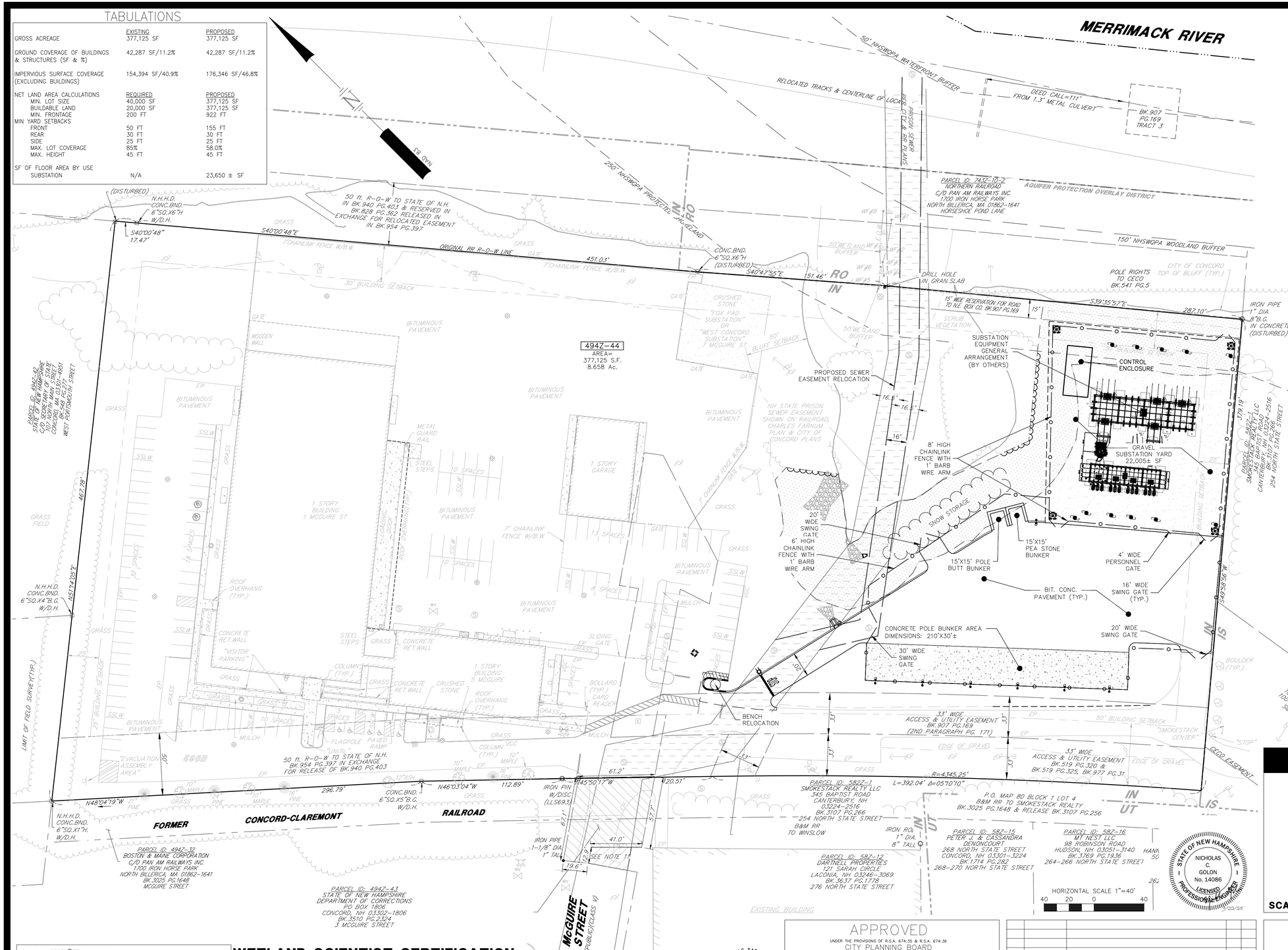
TABULATIONS

	EXISTING	PROPOSED
GROSS ACREAGE	377,125 SF	377,125 SF
GROUND COVERAGE OF BUILDINGS & STRUCTURES (SF & %)	42,287 SF/11.2%	42,287 SF/11.2%
IMPERVIOUS SURFACE COVERAGE (EXCLUDING BUILDINGS)	154,394 SF/40.9%	176,346 SF/46.8%
NET LAND AREA CALCULATIONS	REQUIRED	PROPOSED
MIN. LOT SIZE	40,000 SF	377,125 SF
BUILDABLE LAND	20,000 SF	377,125 SF
MIN. FRONTAGE	200 FT	922 FT
MIN YARD SETBACKS		
FRONT	50 FT	155 FT
REAR	30 FT	30 FT
SIDE	25 FT	25 FT
MAX. LOT COVERAGE	85%	58.0%
MAX. HEIGHT	45 FT	45 FT
SF OF FLOOR AREA BY USE		
SUBSTATION	N/A	23,650 ± SF



NOTES

1. SEE NOTES ON SHEET C-02.
2. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS NOTED OTHERWISE.
3. LIGHTING, SIGNAGE, LANDSCAPING, AND SCREENING SHALL MEET THE REQUIREMENTS OF THE CONCORD ZONING ORDINANCE AND SITE PLAN REGULATIONS.
4. SNOW SHALL NOT BE STOCKPILED IN STORMWATER BMP'S, WETLAND BUFFERS, OR WETLANDS. SEE SNOW STORAGE LOCATIONS. IN THE EVENT THAT THE SNOW STORAGE AREAS PROVIDED ON THE SITE ARE COMPLETELY UTILIZED, EXCESS SNOW SHALL BE TRANSPORTED OFF SITE FOR DISPOSAL IN ACCORDANCE WITH NHDES REGULATION. IF SNOW IS STORED WITHIN PARKING AREA, KEEP CATCH BASINS CLEAR.
5. OWNER OF RECORD OF MAP 494Z LOT 44: UNITIL ENERGY SERVICES INC., 6 LIBERTY LANE WEST, HAMPTON, NH 03842-1704
   DEED REFERNCE TO PARCEL IS BK 907 PG 169
   AREA OF PARCEL = 8.66± ACRES

   ZONED: INDUSTRIAL DISTRICT (IN)
   EXISTING USE: ELECTRIC SUBSTATION (ESSENTIAL PUBLIC UTILITIES AND APPURTENANCES)
   PROP. USE: ELECTRIC SUBSTATION (ESSENTIAL PUBLIC UTILITIES AND APPURTENANCES)
6. THE PURPOSE OF THIS PLAN IS TO SHOW THE PROPOSED CONSTRUCTION FOR THE WEST CONCORD SUBSTATION REPLACEMENT.
7. DIMENSIONAL REQUIREMENTS (CURRENT ZONING)

	REQUIRED:	PROVIDED:
MINIMUM LOT DIMENSIONS:		
LOT AREA	40,000 SF	377,125 ± SF
LOT FRONTAGE	200 SF	922 FT
MINIMUM SETBACKS/BUFFER:		
BUILDING FRONT	50 FT	155 FT
BUILDING SIDE	25 FT	25 FT
BUILDING REAR	30 FT	30 FT
MAXIMUM LOT COVERAGE	85%	58%

8. PARKING CALCULATIONS
   REQUIRED: TABLE 27-8-2(E) UNMANNED UTILITY EQUIPMENT STRUCTURE 2 SP/STRUCT.
   EXISTING: 130 SPACES
   PROPOSED: PARKING FOR UNITIL SERVICE TECHNICIANS IS PROVIDED INSIDE THE YARD AND/OR WITHIN THE EXISTING FACILITY SPACES.
9. EASEMENTS, RIGHTS, AND RESTRICTIONS SHOWN OR IDENTIFIED ARE THOSE WHICH WERE FOUND DURING RESEARCH PERFORMED AT THE MERRIMACK COUNTY REGISTRY OF DEEDS. OTHER RIGHTS, EASEMENTS, OR RESTRICTIONS MAY EXIST WHICH A TITLE EXAMINATION OF SUBJECT PARCEL MAY DETERMINE.
10. THE LOCATION OF ANY UNDERGROUND UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. TFMORAN INC. MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UNDERGROUND UTILITIES SHOWN. PRIOR TO ANY EXCAVATION ON SITE THE CONTRACTOR SHALL CONTACT DIG-SAFE AT 811.
11. THERE HAVE BEEN MANY CONVEYANCES REGARDING THE STRIP OF LAND KNOWN AS MCGUIRE STREET. THE ACCESS WAS ORIGINALLY MENTIONED IN THE DEED FROM THE FARNUM'S TO THE STATE OF N.H. FOR THE STATE PRISON SEWER. THE ORIGINAL ACCESS APPEARS TO HAVE BEEN LOCATED ABOUT 40 FEET SOUTHERLY OF THE CURRENT LOCATION OF MCGUIRE STREET AND HAS BEEN GRANTED AND RESERVED AND REGRANTED REPEATEDLY. SEE BK. 828 PG.362, TRACT 2, BK.940 PG.403, BK.519 PG.320, BK.519 PG.325, BK.450 PG.398, BK.521 PG.481, ACCESS AND UTILITIES.
12. THE ORIGINAL GRANTED\LEASED WIDTH TO THE STATE OF NH FOR THE SEWER LINE WAS 66', THIS WAS RELEASED PER BK.977 PG.31 AND DEFINES THE WIDTH AS 33'. SEE ALSO BK.519 PG.318, BK.519 PG.323 & BK.715 PG.199, BK.521 PG.109, BK.521 PG.110, BK.479 PG.95, BK.907 PG. 169 (PARAGRAPH 2 ON PG. 172., THE STATE OF N.H. RELEASED ALL RIGHTS TO THE CITY OF CONCORD IN THE SEWER LINES FOR THE PRISON, WHICH MAY HAVE BEEN RECONSTRUCTED AND OR RELOCATED SINCE THE ORIGINAL GRANT IN 1891 BY FARNUM TO THE STATE OF N.H.
13. RIGHT TO PASS & REPASS, & OPERATE & MAINTAIN UTILITIES BOTH PUBLIC AND PRIVATE. SEE DEEDS: BK.519 PG.318, BK.519 PG.320, BK.519 PG.325 & BK.412 PG.22
14. EXAMINATION OF THE FLOOD INSURANCE RATE MAP FOR MERRIMACK COUNTY, NEW HAMPSHIRE (ALL JURISDICTIONS), MAP NUMBER: 33013C0531E, EFFECTIVE DATE: APRIL 19, 2010, INDICATES THAT THE SUBJECT PARCEL IS NOT LOCATED WITHIN A FLOOD HAZARD AREA OR THE CITY OF CONCORD FLOOD HAZARD (FH) OVERLAY DISTRICT.
15. THERE IS NO PROPOSED SIGNAGE.
16. THERE ARE NO PROPOSED SOLID WASTE FACILITIES.
17. EXISTING AND PROPOSED STORAGE AREAS SHALL BE USED TO FACILITATE UNITIL AS AN ESSENTIAL PUBLIC UTILITY PROVIDER. MATERIALS AND STORAGE LOCATIONS WITHIN THE SECURE FENCING SHALL BE ALLOCATED AS NECESSARY TO SUPPORT ELECTRICAL INFRASTRUCTURE NEEDS.

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

OVERALL SITE LAYOUT PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: 1"=40' **AUGUST 20, 2025**

STATE OF NEW HAMPSHIRE — NICHOLAS C. GOLON No. 14086 — LICENSED PROFESSIONAL ENGINEER — 8/22/25

WETLAND SCIENTIST CERTIFICATION

JURISDICTIONAL WETLANDS SHOWN ON THIS PLAN WERE DELINEATED BY JAMES FOUGERE CWS #161. THE WETLANDS WERE DELINEATED ON JULY 24, 2023 ACCORDING TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL (1987) AND THE REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, VERSION 2, JANUARY 2012. DOMINANT HYDRIC SOILS WITHIN THE WETLAND(S) WERE IDENTIFIED USING "FIELD INDICATORS OF HYDRIC SOILS OF THE UNITIED STATES" A GUIDE FOR IDENTIFYING AND DELINEATING HYDRIC SOILS, NRCS, VERSION 8.1, 2017. DOMINANCE OF HYDROPHYTIC VEGETATION WAS DETERMINED USING THE USACE NATIONAL WETLAND PLANT LIST, NWPL 2016 VERSION 3.3 HTTP://WETLAND_PLANTS.USACE.ARMY.MIL.

DIG SAFE — CALL BEFORE YOU DIG — CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

APPROVED
UNDER THE PROVISIONS OF R.S.A. 674:35 & R.S.A. 674:36
CITY PLANNING BOARD
CITY OF CONCORD, NEW HAMPSHIRE
In accordance with vote of the board dated:

Approval of this plan is limited to the lots as shown

Chair Clerk

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

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Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

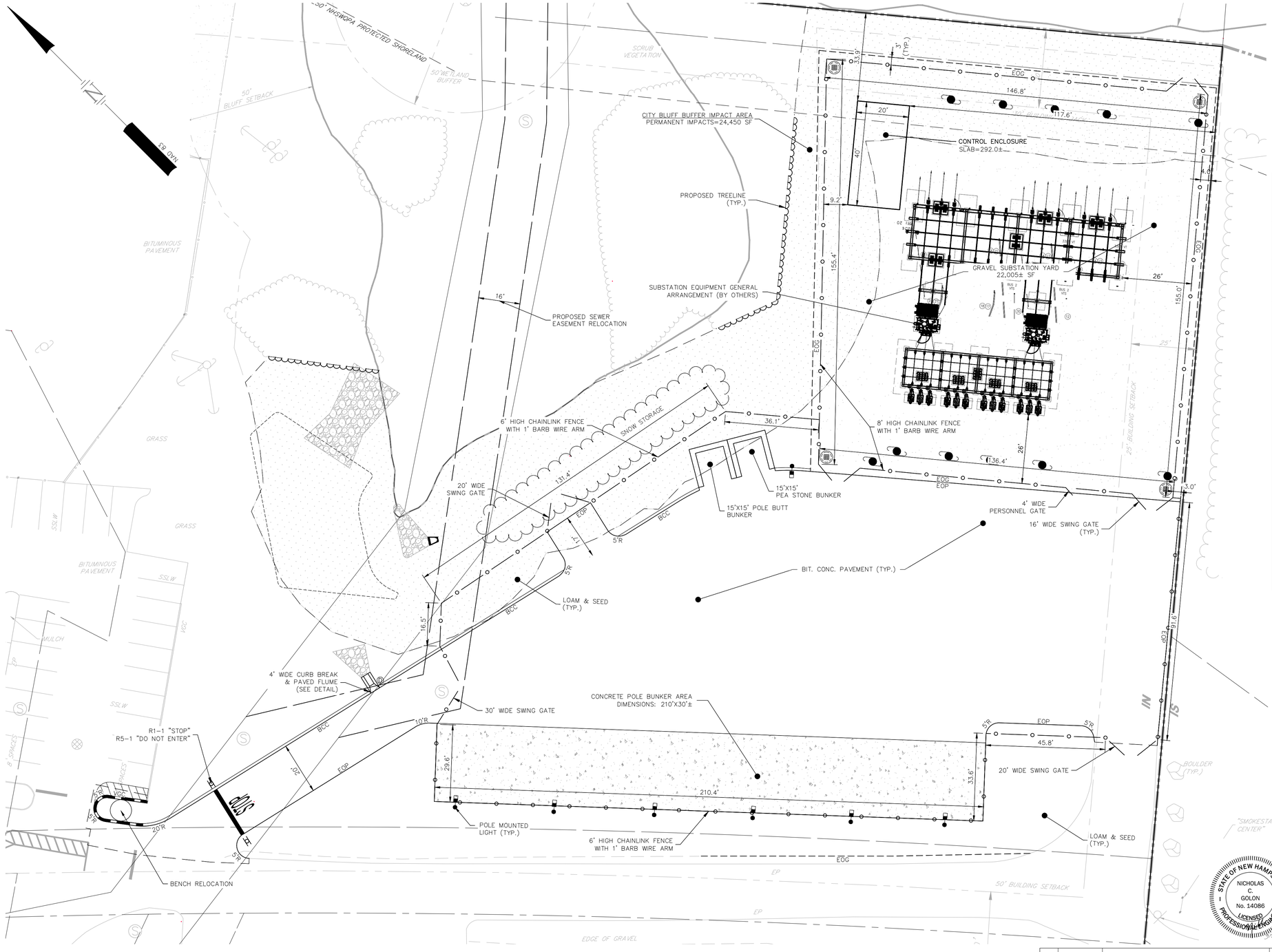
FILE	DR	JB	FB		
96159-01	CK	NG	CADFILE	96159-01 DESIGN_LAYOUT	C-05

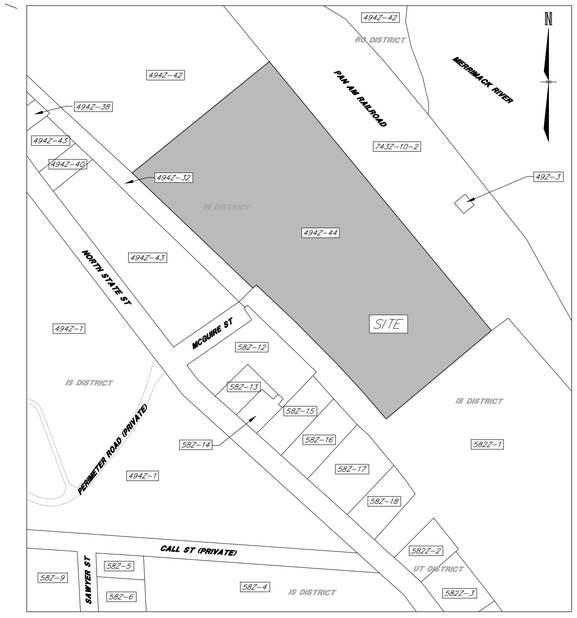
NOTES

1. SEE SHEET C-04 FOR SITE PLAN NOTES.

CITY BLUFF BUFFER IMPACT NOTES

CITY OF CONCORD BLUFF BUFFER IMPACTS = 24,450 SF





LOCATION PLAN

HORIZONTAL SCALE 1"=400'
400 200 0 400

HORIZONTAL SCALE 1"=20'
20 10 0 20

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

SITE LAYOUT PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR

UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT

UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: AS NOTED **AUGUST 20, 2025**

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
9/22/25

DIG SAFE
811 OR 800-344-7233
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

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Landscape Architects
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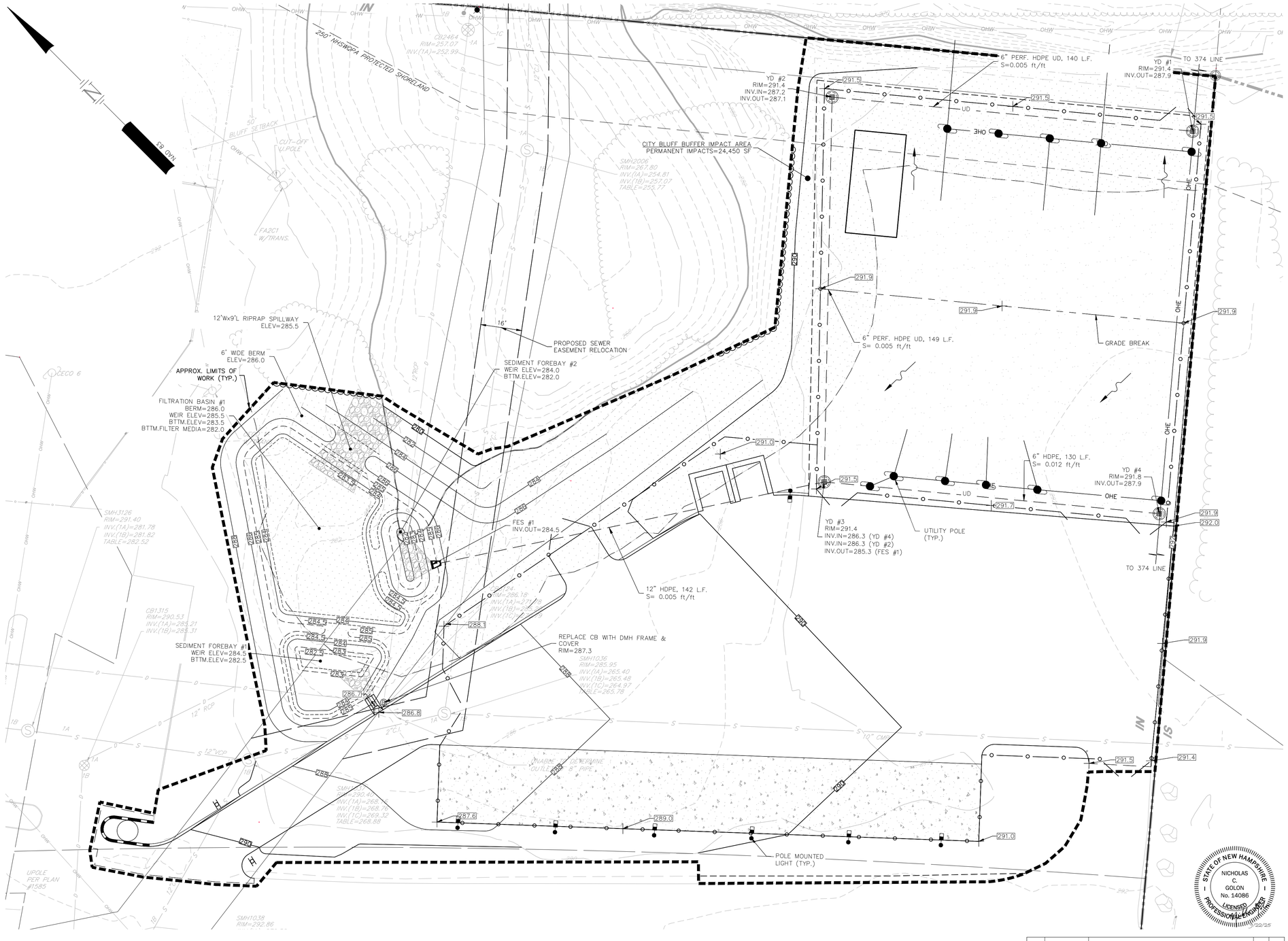

NOTES

1. SEE GRADING NOTES ON SHEET C-02.
2. SEE UTILITY NOTES ON SHEET C-02.

HORIZONTAL SCALE 1"=20'
20 10 0 20

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

GRADING, DRAINAGE & UTILITY PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824
APPLICANT
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30 ENERGY WAY, EXETER, NH 03833

SCALE: 1"=20' **AUGUST 20, 2025**

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON No. 14086
LICENSED PROFESSIONAL ENGINEER
9/22/25

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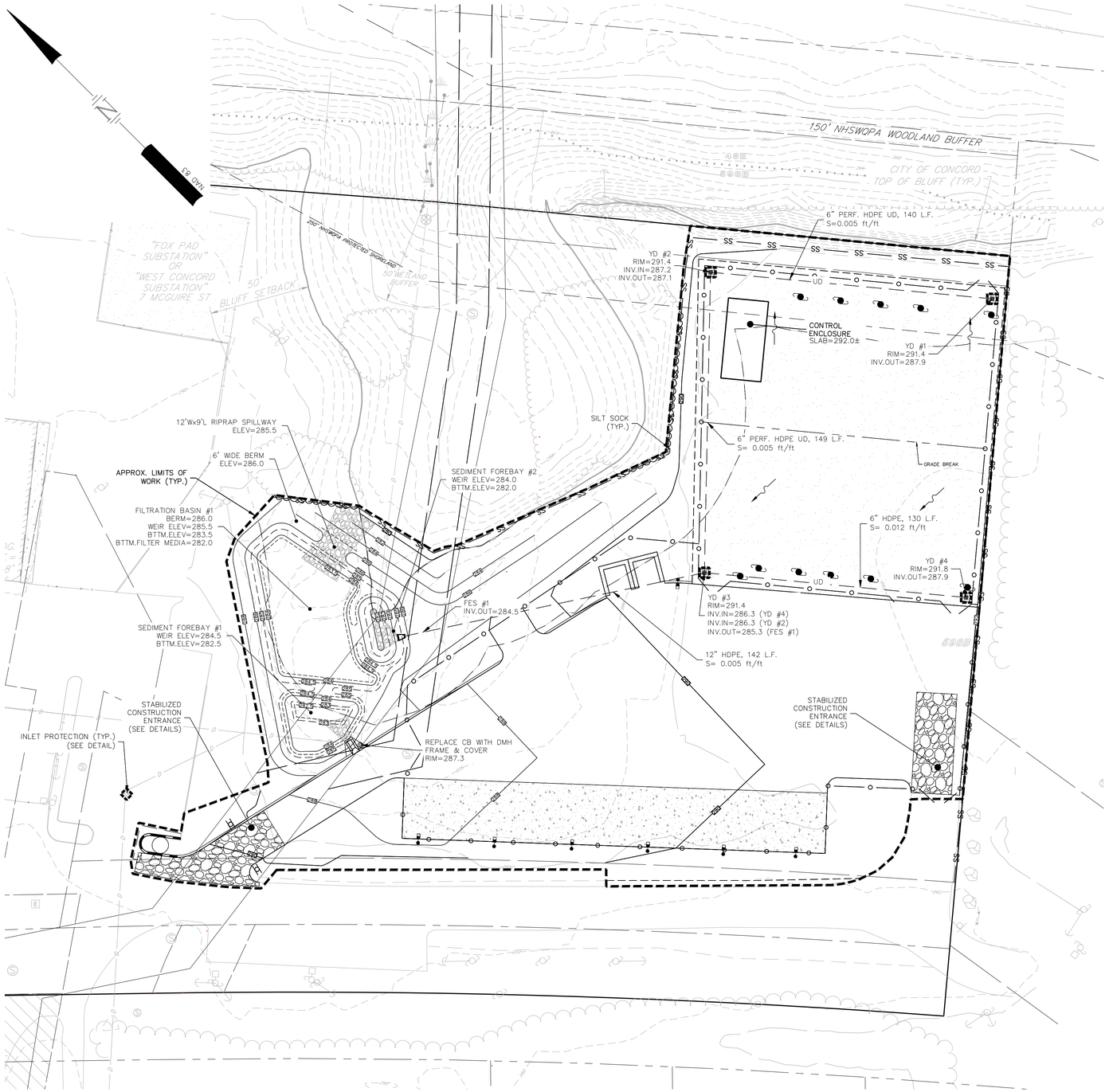

NOTES

1. IT IS BEING PROPOSED TO RELOCATE THE EXISTING UNITIL WEST CONCORD SUBSTATION.
2. TOTAL SITE AREA: 8.66± AC
   TOTAL AREA OF DISTURBANCE: 2.03± AC
3. SOILS SHOWN ARE FROM THE SOIL SURVEY OF MERRIMACK COUNTY, NH, EASTERN PART, PREPARED BY USDA–SOIL CONSERVATION SERVICES.
   598B WINDSOR–URBAN LAND COMPLEX 0–8%, HSG B
4. STORM WATER DRAINAGE SYSTEM IS SHOWN ON THE PLAN. SEE GRADING & DRAINAGE PLAN FOR RIM, INVERT, PIPE LENGTH, AND SLOPE INFORMATION.
   POST–CONSTRUCTION RUNOFF COEFFICIENT: C=0.86
   IMPERVIOUS SURFACE AREA: 0.72± AC
5. STABILIZATION PRACTICES FOR EROSION AND SEDIMENTATION CONTROLS:

   TEMPORARY STABILIZATION – TOPSOIL STOCKPILES AND DISTURBED AREAS OF THE CONSTRUCTION SITE THAT WILL NOT BE REDISTURBED FOR 14 DAYS OR MORE MUST BE STABILIZED BY THE 14TH DAY AFTER THE LAST DISTURBANCE. THE TEMPORARY SEED SHALL BE ANNUAL RYE APPLIED AT THE RATE OF 1.1 LBS PER 1,000 SF. PRIOR TO SEEDING, A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE OF 10–20–20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY. AREAS OF THE SITE THAT WILL BE PAVED WILL BE TEMPORARILY STABILIZED BY APPLYING GEOTEXTILES AND A STONE SUB–BASE UNTIL BITUMINOUS PAVEMENT CAN BE APPLIED. CALCIUM CHLORIDE SHALL BE USED FOR DUST CONTROL IF NEEDED.

   PERMANENT STABILIZATION – DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITIES PERMANENTLY CEASES SHALL BE STABILIZED WITH PERMANENT SEED NO LATER THAN 3 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY. THE PERMANENT SEED MIX SHALL CONSIST OF 0.45 LBS/1,000 SF TALL FESCUE, 0.20 LBS/1,000 SF CREEPING RED FESCUE, AND 0.20 LBS/1,000 SF BIRDSFOOT TREFOIL. PRIOR TO SEEDING, A MINIMUM OF 2 TONS PER ACRE OF AGRICULTURAL LIMESTONE AND 500 LBS PER ACRE IF 10–20–20 FERTILIZER SHALL BE APPLIED. AFTER SEEDING, EACH AREA SHALL BE MULCHED WITH 1.5 TONS PER ACRE OF HAY MULCH. MULCH TO BE ANCHORED IN PLACE WHERE NECESSARY.
6. STRUCTURAL PRACTICES FOR EROSION AND SEDIMENTATION CONTROL

   SILT SOCK – WILL BE CONSTRUCTED AROUND THE PERIMETER OF THE DISTURBED AREAS AND WILL DELINEATE THE LIMITS OF WORK FOR THE PROPOSED CONSTRUCTION. THE SILT SOCK WILL BE INSTALLED BY OTHERS. POSTS SHALL BE USED WITH AT LEAST 6" OF THE POST BURIED BELOW THE GROUND SURFACE TO PREVENT THE SILT SOCK FROM FORMING GAPS NEAR THE GROUND SURFACE. RUNOFF WILL FLOW THROUGH THE OPENINGS IN THE SILT SOCK WHILE RETAINING THE SEDIMENT WITHIN THE CONSTRUCTION AREA.

   STABILIZED CONSTRUCTION ENTRANCE – WILL BE INSTALLED IN ACCORDANCE WITH THE DETAIL AT THE ENTRANCE TO THE CONSTRUCTION SITE TO HELP REDUCE VEHICLE TRACKING OF SEDIMENTS OFF THE SITE. THE STABILIZED ENTRANCE WILL BE 20'–WIDE AND FLARE AT THE ENTRANCE TO THE PAVED ROAD AND HAVE A DEPTH OF 12" OF STONE. THE STABILIZED ENTRANCE SHALL BE MAINTAINED UNTIL THE REMAINDER OF THE CONSTRUCTION SITE HAS BEEN FULLY STABILIZED. THE PAVED STREET ADJACENT TO THE SITE SHALL BE SWEPT ON A WEEKLY BASIS TO REMOVE EXCESS MUD AND DIRT FROM BEING TRACKED FROM THE SITE. TRUCKS HAULING MATERIAL TO AND/OR FROM THE SITE SHALL BE COVERED WITH A TARPAULIN.

   CATCH BASINS – WILL BE CLEANED ON AN ANNUAL BASIS TO REMOVE ALL SEDIMENTS FROM THE CATCH BASIN SUMPS.

   CATCH BASIN PROTECTION – WILL BE INSTALLED AT ALL CATCH BASINS WITHIN THE CONSTRUCTION AREA. FILTER FABRIC WILL BE INSTALLED AROUND THE GRATES OF CATCH BASINS THAT ARE LOCATED IN THE TRAVEL WAY AND STONE/FILTER FABRIC PROTECTION WILL BE INSTALLED AT THE CATCH BASINS FOUND WITHIN THE PARKING AREA AND GRASS.

   BLANKET SLOPE PROTECTION – SHALL BE INSTALLED ON ALL 2:1 SLOPES OR STEEPER ON SITE. ANCHOR THE TOP OF THE BLANKET BY ANCHORING THE BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING. ROLL THE BLANKET IN THE DIRECTION OF STORM WATER FLOW. WHERE 2 OR MORE STRIPS OF BLANKET ARE REQUIRED, A MINIMUM OF 4" OF OVERLAP SHALL BE PROVIDED.

   STONE CHECK DAMS – WILL BE INSTALLED IN EXISTING AND PROPOSED GRASS SWALES TO REDUCE THE VELOCITY OF CONCENTRATED STORM WATER FLOWS AND PREVENT EROSION OF THE SWALE.
7. STORM WATER MANAGEMENT

   STORMWATER DRAINAGE FOR THE SUBSTATION AREA WILL BE COLLECTED BY AN OPEN AND CLOSED DRAINAGE SYSTEM. WHEN CONSTRUCTION IS COMPLETE, THE MAJORITY OF THE SITE WILL DRAIN INTO A FILTRATION BASIN.
8. ALL CONSTRUCTION DEBRIS AND WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURE DUMPSTERS OR APPROVED ENCLOSURE AND REMOVED FROM THE SITE ON A WEEKLY BASIS. NO CONSTRUCTION WASTE SHALL BE BURIED ON SITE. PORTABLE TOILET SANITARY WASTE FACILITIES WILL BE PROVIDED DURING CONSTRUCTION AND MAINTAINED/DISPOSED OF ON A REGULAR BASIS IN ACCORDANCE WITH TOWN AND STATE REGULATIONS.
9. A LIST OF CONSTRUCTION ITEMS AND OTHER PRODUCTS USED ON THIS PROJECT SHALL BE KEPT ON RECORD WITH THIS PLAN ONSITE. ALL CHEMICALS, PETROLEUM PRODUCTS AND OTHER MATERIALS USED DURING CONSTRUCTION SHALL BE STORED IN A SECURE AREA, AND PRECAUTIONS USED TO PREVENT POTENTIAL SOURCES OF CONTAMINATION OR POLLUTION. ANY SPILL OF THESE TYPES OF SUBSTANCES SHALL BE CLEANED UP AND DISPOSED OF IN A LEGAL MANNER AS SPECIFIED BY STATE REGULATIONS AND THE MANUFACTURER. ANY SPILL IN AMOUNTS EQUAL TO OR EXCEEDING REPORTABLE QUANTITY AS DEFINED BY THE EPA SHALL TAKE THE FOLLOWING STEPS:
   - NOTIFY THE NATIONAL RESPONSE CENTER IMMEDIATELY AT (888) 424–8802; IN WASHINGTON, D.C., CALL (202) 426–2675.
   - WITHIN 14 DAYS, SUBMIT A WRITTEN DESCRIPTION OF THE RELEASE TO THE EPA REGIONAL OFFICE PROVIDING THE DATE AND CIRCUMSTANCES OF THE RELEASE AND THE STEPS TO BE TAKEN TO PREVENT ANOTHER RELEASE.
   - MODIFY THE POLLUTION PREVENTION PLAN TO INCLUDE THE INFORMATION LISTED ABOVE.

   GOOD HOUSEKEEPING:
   THE FOLLOWING GOOD HOUSEKEEPING PRACTICES WILL BE FOLLOWED ONSITE DURING THE CONSTRUCTION PROJECT.
   - AN EFFORT WILL BE MADE TO STORE ONLY ENOUGH PRODUCT REQUIRED TO DO THE JOB;
   - ALL MATERIALS STORED ONSITE WILL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR APPROPRIATE CONTAINERS AND, IF POSSIBLE, UNDER A ROOF OR OTHER ENCLOSURE;
   - PRODUCTS WILL BE KEPT IN THEIR ORIGINAL CONTAINERS WITH THE ORIGINAL MANUFACTURER'S LABEL;
   - SUBSTANCES WILL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
   - WHENEVER POSSIBLE, ALL OF A PRODUCT WILL BE USED UP BEFORE DISPOSING OF THE CONTAINER;
   - MANUFACTURERS' RECOMMENDATIONS FOR PROPER USE AND DISPOSAL WILL BE FOLLOWED;
   - TRASH DUMPSTERS SHALL BE GASKETED OR HAVE A SECURE WATERTIGHT LID AND BE PLACED AWAY FROM STORMWATER CONVEYANCES AND DRAINS.
   - THE SITE SUPERINTENDENT WILL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS ONSITE.

   HAZARDOUS PRODUCTS:
   THESE PRACTICES ARE USED TO REDUCE THE RISKS ASSOCIATED WITH HAZARDOUS MATERIALS:
   - PRODUCTS WILL BE KEPT IN ORIGINAL CONTAINERS UNLESS THEY ARE NOT RESEALABLE;
   - ORIGINAL LABELS AND MATERIAL SAFETY DATA WILL BE RETAINED; THEY CONTAIN IMPORTANT PRODUCT INFORMATION;
   - IF SURPLUS PRODUCT MUST BE DISPOSED OF, MANUFACTURER'S OR LOCAL AND STATE RECOMMENDED METHODS FOR PROPER DISPOSAL WILL BE FOLLOWED.

   PRODUCT SPECIFIC PRACTICES:
   THE FOLLOWING PRODUCT SPECIFIC PRACTICES WILL BE FOLLOWED ON SITE:

   PETROLEUM PRODUCTS:
   ALL ONSITE VEHICLES WILL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTATIVE MAINTENANCE TO REDUCE THE CHANCE OF LEAKAGE. PETROLEUM PRODUCTS WILL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT SUBSTANCES USED ONSITE WILL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.

   FERTILIZERS:
   FERTILIZERS USED WILL BE APPLIED ONLY IN THE MINIMUM AMOUNTS RECOMMENDED BY THE MANUFACTURER. ONCE APPLIED, FERTILIZER WILL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE TO STORM WATER. STORAGE WILL BE IN A COVERED SHED. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER WILL BE TRANSFERRED TO A SEALABLE PLASTIC BIN TO AVOID SPILLS.

   PAINTS:
   ALL CONTAINERS WILL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED FOR USE. EXCESS PAINT WILL NOT BE DISCHARGED TO THE STORM SEWER BUT WILL BE PROPERLY DISPOSED OF ACCORDING TO MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS.

   CONCRETE TRUCKS:
   EXCESS CONCRETE SHALL BE USED IN AREAS DESIGNATED BY THE SITE CONTRACTOR. WASH WATER SHALL BE DISPOSED OF USING BEST MANAGEMENT PRACTICES. BUILDING CONTRACTOR IS RESPONSIBLE FOR REMOVAL OF ALL DRUM WASH WATER ASSOCIATED WITH CONCRETE FOR THE BUILDING PAD. SITE CONTRACTOR TO COORDINATE AND PROVIDE BUILDING CONTRACTOR WITH AN AREA FOR DRUM WASH WATER.

   SPILL CONTROL PRACTICES:
   IN ADDITION TO THE GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTIONS OF THIS PLAN, THE FOLLOWING PRACTICES WILL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
   - MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP WILL BE CLEARLY POSTED AND SITE PERSONNEL WILL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES.
   - MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP WILL BE KEPT IN THE MATERIAL STORAGE AREA ONSITE. EQUIPMENT AND MATERIALS WILL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUST PANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY LITTER, SAND, SAWDUST, AND PLASTIC AND METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE.
   - ALL SPILLS WILL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY.
   - THE SPILL AREA WILL BE KEPT WELL VENTILATED AND PERSONNEL WILL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A HAZARDOUS SUBSTANCE.
   - SPILLS OF TOXIC OR HAZARDOUS MATERIAL WILL BE REPORTED TO THE APPROPRIATE STATE OR LOCAL GOVERNMENT AGENCY, REGARDLESS OF SIZE.
   - THE SPILL PREVENTION PLAN WILL BE ADJUSTED TO INCLUDE MEASURES TO PREVENT THIS TYPE OF SPILL FROM REOCCURRING AND HOW TO CLEAN UP THE SPILL IF THERE IS ANOTHER ONE. A DESCRIPTION OF THE SPILL, WHAT CAUSED IT, AND THE CLEANUP MEASURES WILL ALSO BE INCLUDED.
   - THE SITE SUPERINTENDENT RESPONSIBLE FOR THE DAY–TO–DAY SITE OPERATIONS, WILL BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. THEY WILL DESIGNATE AT LEAST THREE OTHER SITE PERSONNEL WHO WILL EACH RECEIVE SPILL PREVENTION AND CLEANUP TRAINING. THESE INDIVIDUALS WILL EACH BECOME RESPONSIBLE FOR A PARTICULAR PHASE OF PREVENTION AND CLEANUP. THE NAMES OF RESPONSIBLE SPILL PERSONNEL WILL BE POSTED IN THE MATERIAL STORAGE AREA AND IN THE OFFICE TRAILER ONSITE.
11. THE CONTRACTOR IS RESPONSIBLE TO MAINTAIN RECORDS OF CONSTRUCTION ACTIVITIES, INCLUDING DATES OF MAJOR GRADING ACTIVITIES, DATES WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY CEASED ON A PORTION OF THE SITE, DATES WHEN WORK IS COMPLETED ON A PORTION OF THE SITE, AND DATES WHEN STABILIZATION MEASURES ARE INITIATED ONSITE.
12. THE CONTRACTOR SHALL PERFORM INSPECTIONS OR HAVE A CONSULTING ENGINEER PERFORM INSPECTIONS EVERY SEVEN (7) DAYS AND WITHIN 24 HOURS AFTER A STORM OF 0.5" OR GREATER. INSPECTIONS REPORTS ARE TO BE KEPT ON FILE AT THE SITE WITH THIS PLAN. MAINTENANCE OR MODIFICATION SHALL BE IMPLEMENTED AND ADDED TO THE PLAN AS RECOMMENDED BY THE QUALIFIED INSPECTOR.

LEGEND

- SS — SILT SOCK
- INLET PROJECTION
- STABILIZED CONSTRUCTION ENTRANCE

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
9/22/25

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

STORMWATER MANAGEMENT PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: 1"=30' **AUGUST 20, 2025**

HORIZONTAL SCALE 1"=30'
30 15 0 30

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

DIG SAFE
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TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
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48 Constitution Drive
Bedford, NH 03110
Phone (603) 472–4488
Fax (603) 472–9747
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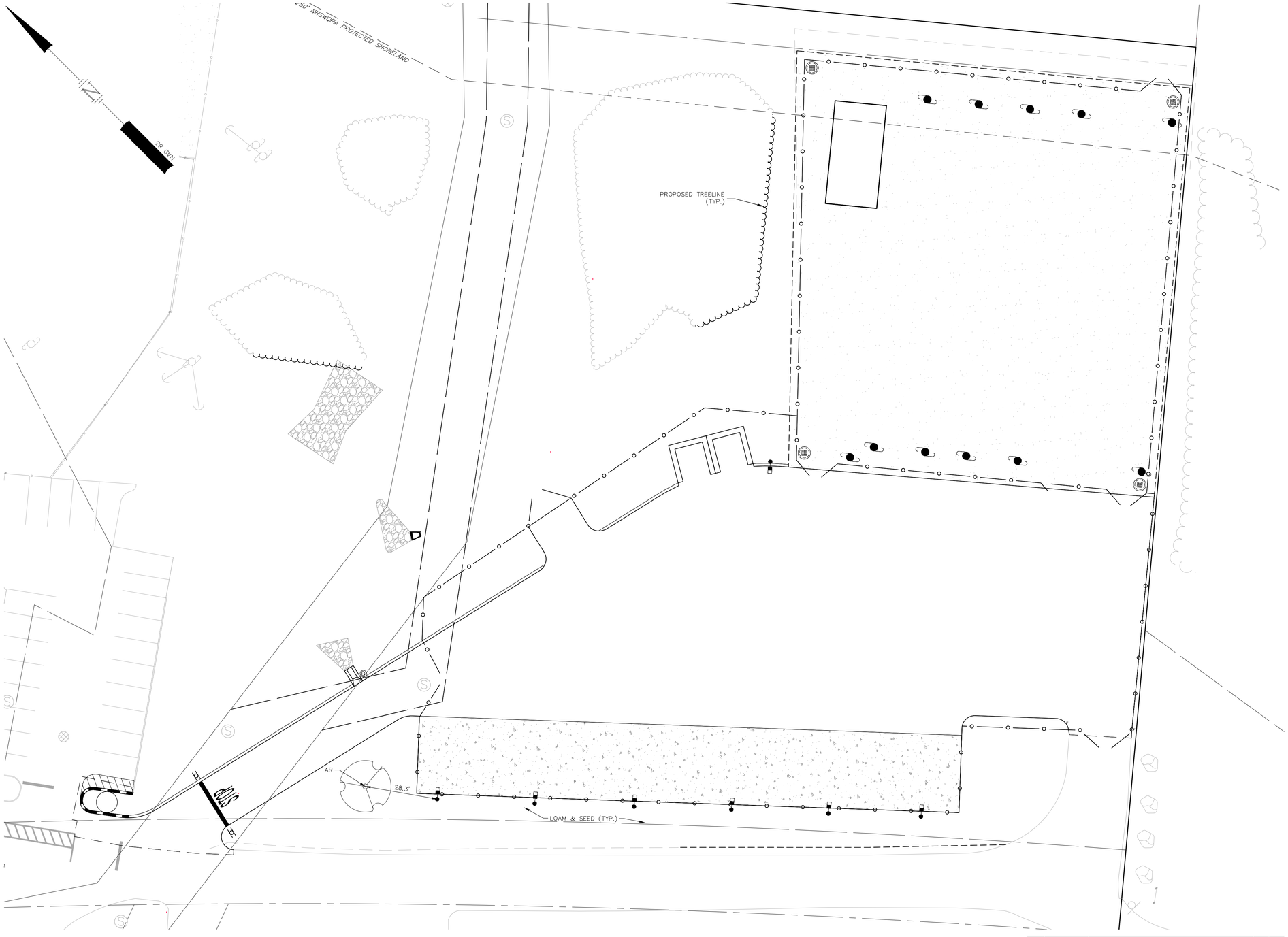
96159–01	CK	NG	CADFILE	96159–01 DESIGN_LAYOUT	C–08



LANDSCAPE LEGEND

SYMBOL	QTY	BOTANICAL NAME COMMON NAME	SIZE	REMARKS
AR	1	ACER RUBRUM RED MAPLE	2.5" TO 3" CAL.	B&B

REQUIREMENTS

SOLID WASTE FACILITY SCREENING (20.06 SITE PLAN REGULATIONS):
WAIVER REQUESTED FOR SCREENING OF OUTSIDE STORAGE AS THE POLE BUNKER AREA IS NOT EASILY VISIBLE BY THE PUBLIC

UNDERGROUND UTILITIES (27.06(5) SITE PLAN REGULATIONS):
NO TREES SHALL BE PLANTED WITHIN 10' OF EXISTING OR PROPOSED UNDERGROUND UTILITY LINES

GROUNDCOVER (27.07(1) SITE PLAN REGULATIONS):
ALL OPEN SPACE AREAS NOT COVERED WITH NATURAL VEGETATION SHALL BE COVERED WITH GRASS OR OTHER VEGETATIVE GROUNDCOVERS, WITH THE EXCEPTION OF PLANTING BEDS WHICH MAY BE MULCHED

UNDESIRABLE GROWTH AND DEBRIS (27.07(10) SITE PLAN REGULATIONS):
EXISTING INVASIVE SPECIES SHALL BE REMOVED FROM THE DEVELOPED AREA. ALL TRASH, CONSTRUCTION MATERIAL AND DEBRIS SHALL BE REMOVED FROM THE AREA OF WORK. DEAD AND DYING TREES WHICH PRESENT A POTENTIAL HAZARD TO EXISTING AND PROPOSED STRUCTURES SHALL BE REMOVED.

PARKING LOT PERIMETER (28-7-10(a) ZONING ORDINANCE):
N/A

INTERIOR GREEN SPACE (28-7-10(b) ZONING ORDINANCE):
N/A

PARKING AREA SHADE TREES (28-7-10(d) ZONING ORDINANCE):
N/A

LANDSCAPE NOTES

(SEE DETAILS FOR ADDITIONAL NOTES)

GENERAL

1. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE RULES, REGULATIONS, LAWS, AND ORDINANCES HAVING JURISDICTION OVER THIS PROJECT SITE.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING ALL UNDERGROUND UTILITIES AND NOTIFY OWNER'S REPRESENTATIVE OF CONFLICTS.
3. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL QUANTITIES SHOWN ON PLANS BEFORE PRICING THE WORK. ANY DIFFERENCE IN QUANTITIES SHALL BE BROUGHT TO THE ATTENTION OF THE LANDSCAPE ARCHITECT FOR CLARIFICATION. LANDSCAPE QUANTITIES SHOWN ON THE PLAN SHALL SUPERCEDE QUANTITIES LISTED IN LANDSCAPE LEGEND.
4. THE CONTRACTOR SHALL CONTACT THE LANDSCAPE ARCHITECT PRIOR TO STARTING WORK AND VERIFY THAT THE PLANS IN THE CONTRACTOR'S POSSESSION ARE THE MOST CURRENT PLANS AVAILABLE AND ARE THE APPROVED PLAN SET FOR USE IN CONSTRUCTION.
5. ALL PLANT MATERIALS INSTALLED SHALL MEET OR EXCEED THE SPECIFICATIONS OF THE AMERICAN NURSERY AND LANDSCAPE ASSOCIATION (ANLA) [FORMERLY THE AMERICAN ASSOCIATION OF NURSERYMEN] IN THE AMERICAN STANDARD FOR NURSERY STOCK (AS AMENDED) [ANSI Z60.1-1996],
6. ALL PLANTS SHALL BE FIRST CLASS AND SHALL BE REPRESENTATIVE OF THEIR NORMAL SPECIES AND/OR VARIETIES. ALL PLANTS MUST HAVE GOOD, HEALTHY, WELL-FORMED UPPER GROWTH AND A LARGE, FIBEROUS, COMPACT ROOT SYSTEM.
7. ALL PLANTS SHALL BE FREE FROM DISEASE AND INSECT PESTS AND SHALL COMPLY WITH ALL APPLICABLE STATE AND FEDERAL LAWS PERTAINING TO PLANT DISEASES AND INFESTATIONS.
8. ALL TREES SHALL BE BALLED AND BURLAPPED (B&B) UNLESS OTHERWISE NOTED OR APPROVED BY LANDSCAPE ARCHITECT.
9. ALL LANDSCAPED AREAS INCLUDING LAWNS SHALL BE PROVIDED WITH UNDERGROUND IRRIGATION. SEE IRRIGATION NOTES.
10. IF APPLICABLE, THE CONTRACTOR SHALL HAVE ALL FALL TRANSPLANTING HAZARD PLANTS DUG IN THE SPRING AND STORED FOR FALL PLANTING.
11. ALL INVASIVE PLANT SPECIES FROM THE "NEW HAMPSHIRE PROHIBITED INVASIVE PLANT SPECIES LIST", TO BE REMOVED SHALL BE DONE SO IN ACCORDANCE WITH THE "INVASIVE SPECIES ACT, HB 1258-FN."

GUARANTEE

1. THE LANDSCAPE CONTRACTOR SHALL GUARANTEE ALL LANDSCAPE WORK FOR A PERIOD OF ONE YEAR, BEGINNING AT THE START OF THE MAINTENANCE PERIOD.

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

LANDSCAPING PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR

UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT

UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: 1"=20' **AUGUST 20, 2025**

DIG SAFE
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

HORIZONTAL SCALE 1"=20'
20 10 0 20

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

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Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists

48 Constitution Drive
Bedford, NH 03110
Phone (603) 472-4488
Fax (603) 472-9747
www.tfmoran.com

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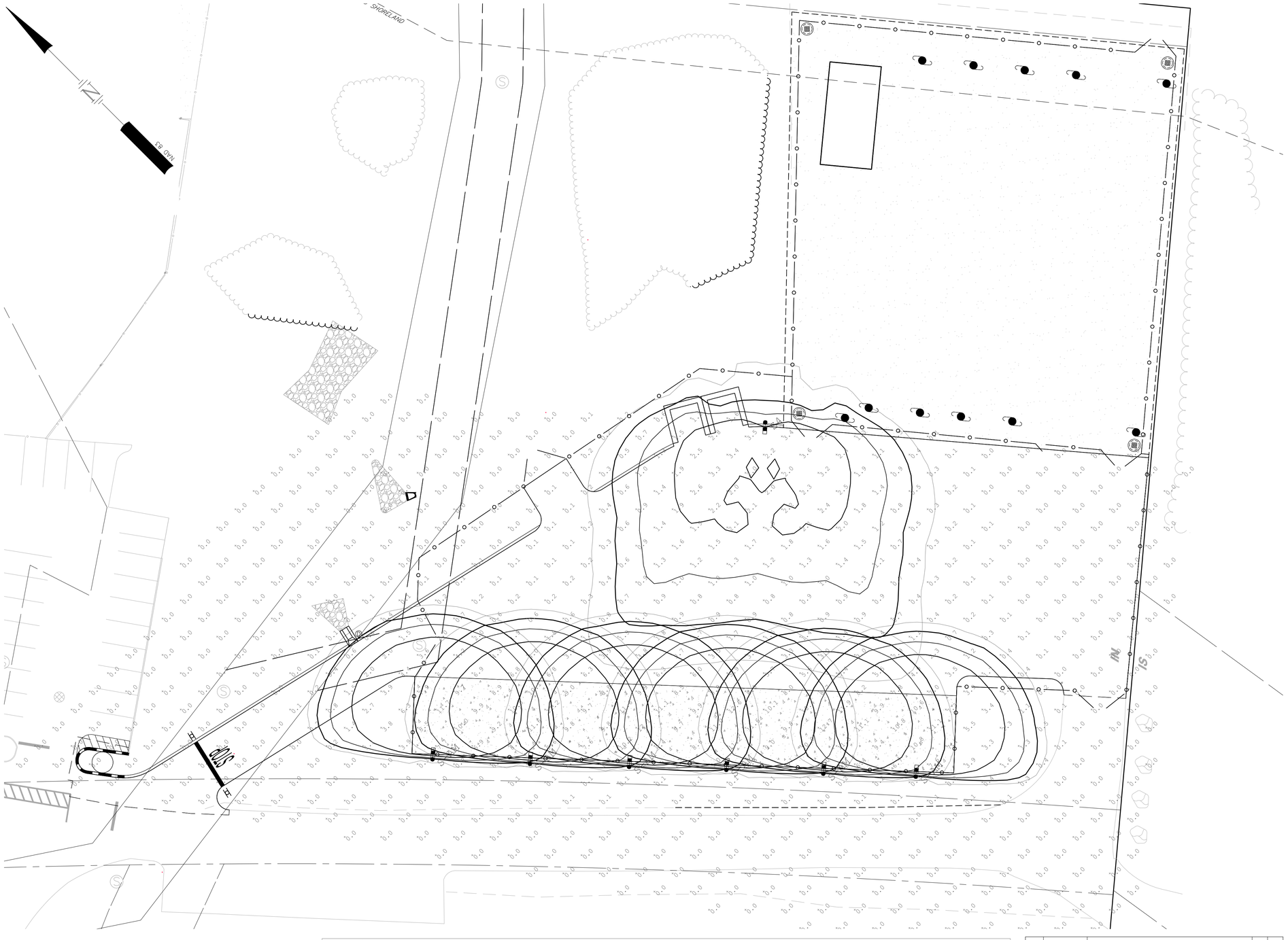

NOTES

1. LIGHTING PLAN PROVIDED BY EXPOSURE INCORPORATED.

POLE DROP YARD
Illuminance (Fc)
Average = 9.32
Maximum = 12.7
Minimum = 3.0
Avg/Min Ratio = 3.11
Max/Min Ratio = 4.23

POLE MOUNTED FIXTURE
V-LOCITY SMALL VALS

STEEL POLE
SQUARE STRAIGHT

HORIZONTAL SCALE 1"=20'
20 10 0 20

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

LIGHTING PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
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6 LIBERTY LANE WEST, HAMPTON, NH 03824
APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: 1"=20' **AUGUST 20, 2025**

Luminaire Schedule						
Symbol	Qty	Label	Arrangement	Description	Tag	[MANUFAC]
⊡	6	S-AM	Single	VALS-21L-AM-UNV-30K8-CXX-SA-ALBMR2LR-IS / 4SQ B3 S11G20 S CXX-AB 4BC	20' POLE ON 2.5' BASE	LSI INDUSTRIES, INC.
⊡	1	S4	Single	VALS-24L-4F-UNV-30K8-CXX-SA-ALBMR2LR / 4SQ B3 S11G20 S CXX AB 4BC	20' POLE ON 2.5' BASE	LSI INDUSTRIES, INC.

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

DIG SAFE
811
CONTACT DIG SAFE 72 BUSINESS HOURS PRIOR TO CONSTRUCTION

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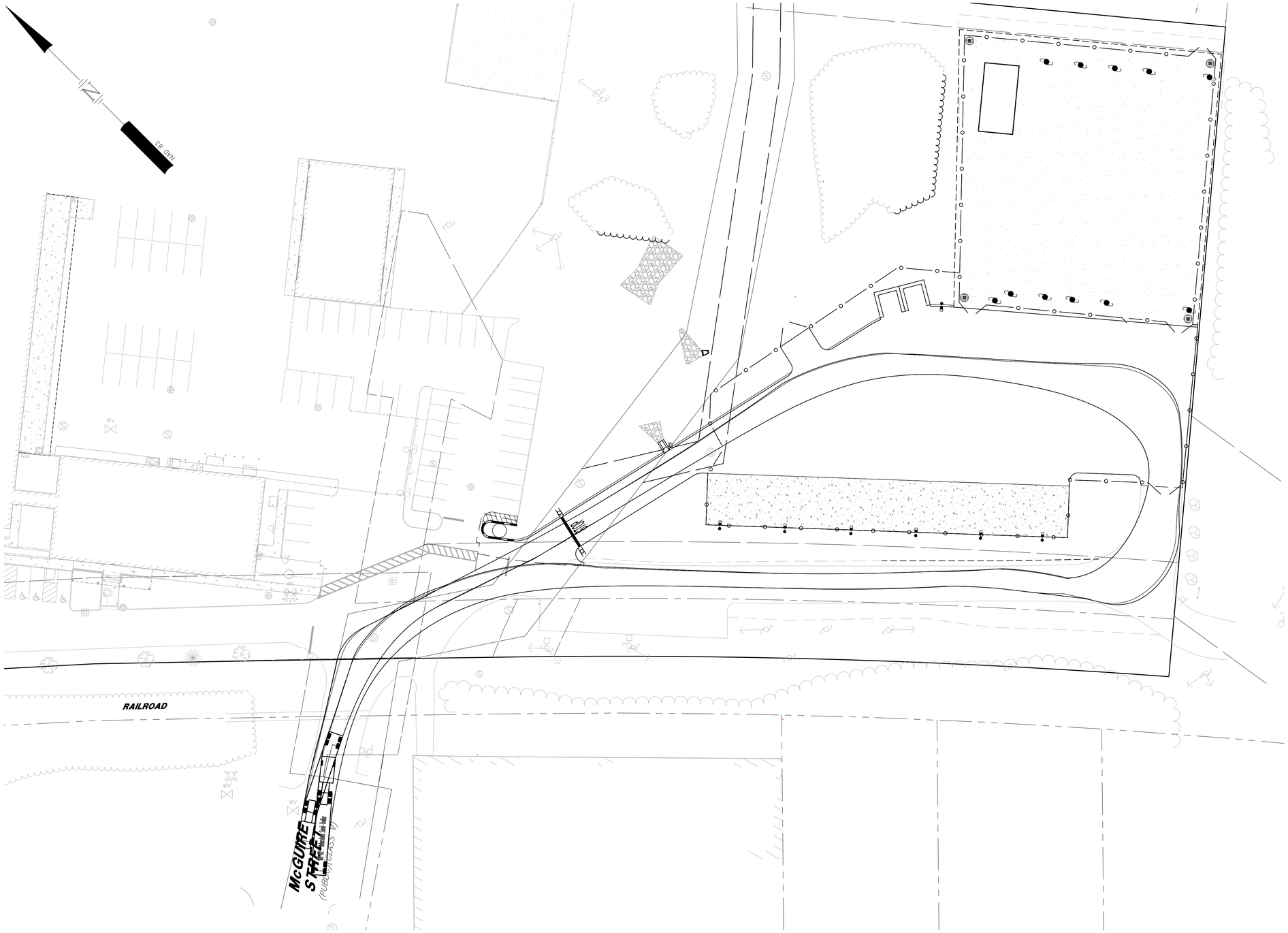

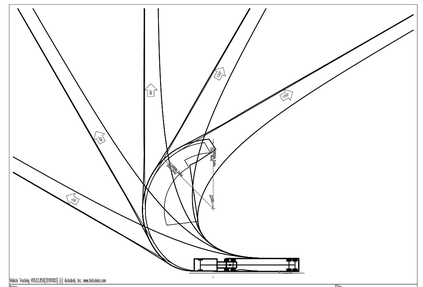

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

TURNING MOVEMENT PLAN

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR

UNITIL ENERGY SYSTEMS, INC.

6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT

UNITIL ENERGY SYSTEMS, INC.

30 ENERGY WAY, EXETER, NH 03833

SCALE: 1"=30' **AUGUST 20, 2025**

DIG SAFE
811 OR 1-888-DIG-SAFE
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REV	DATE	DESCRIPTION	DR	CK
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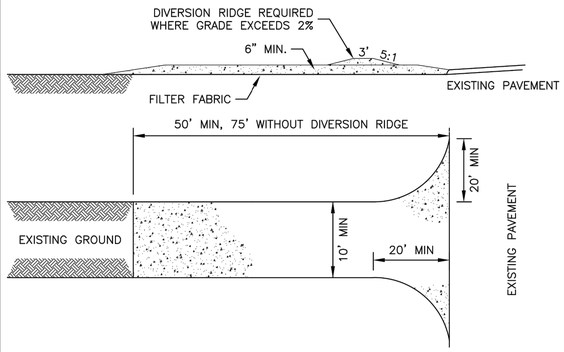

CONSTRUCTION REQUIREMENTS

1. STONE SIZE – 3" COARSE AGGREGATE.
2. THICKNESS – 6" MIN
5. FILTER CLOTH – WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. LENGTH – NOT LESS THAN 50'. EXCEPT ON A SINGLE RESIDENCE LOT WHERE A 30' MIN LENGTH WOULD APPLY.
7. WIDTH – 10' MIN, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
8. SURFACE WATER – ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE.
9. MAINTENANCE – THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS–OF–WAY. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS–OF–WAY MUST BE REMOVED IMMEDIATELY.
10. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
11. PERIODIC INSPECTION AND NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION:	EPSC
–	–	–	CONSTRUCTION ENTRANCE DETAIL	DRAWING NO.	E–1
–	–	–		DATE: 01/08	PAGE: 1
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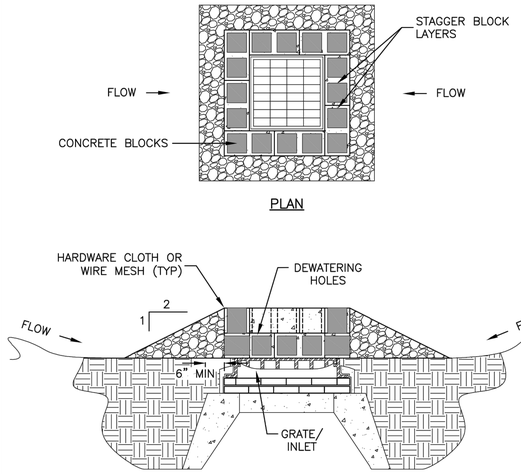

CONSTRUCTION REQUIREMENTS

1. LAY FIRST COURSE OF BLOCK ON ITS SIDE FOR DEWATERING. PLACE BLOCKS AGAINST FRAME FOR SUPPORT.
2. PLACE HARDWARE CLOTH OR WIRE MESH OVER BLOCK OPENINGS TO SUPPORT STONE.
3. PLACE STONE ON A 2:1 OR FLATTER SLOPE UP TO THE TOP OF BLOCK.
4. REMOVE STONE AND BLOCKS, AS DIRECTED, WHEN NO LONGER NEEDED. BEFORE STONE AND BLOCKS ARE REMOVED, STABILIZE ANY SEDIMENT WHICH IS PERMITTED TO STAY IN PLACE WITH VEGETATION.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION:	EPSC
–	–	–	STONE & BLOCK GRATE INLET PROTECTION DETAILS	DRAWING NO.	E–2
–	–	–		DATE: 01/09	PAGE: 1
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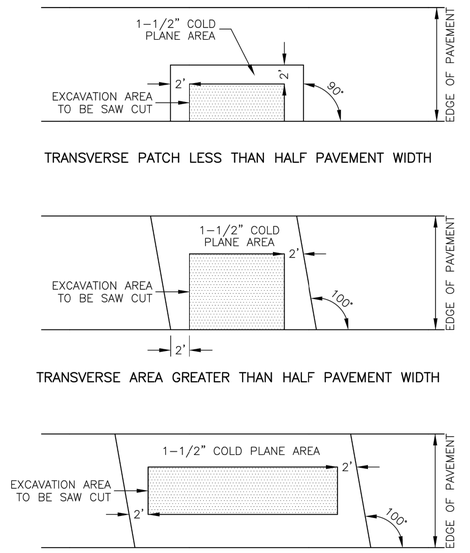

NOTE: WHERE LIMITS OF ADJACENT COLD PLANED AREAS ARE LESS THAN OR EQUAL TO 20', THE AREA BETWEEN SHALL BE COLD PLANED AND RESURFACED

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION:	SITE/STREET
1	DRAWING NO.	11.11	SAWCUT REQUIREMENTS	DRAWING NO.	R–12
2	MULTIPLE	12.15		DATE: 12/08	PAGE: 1
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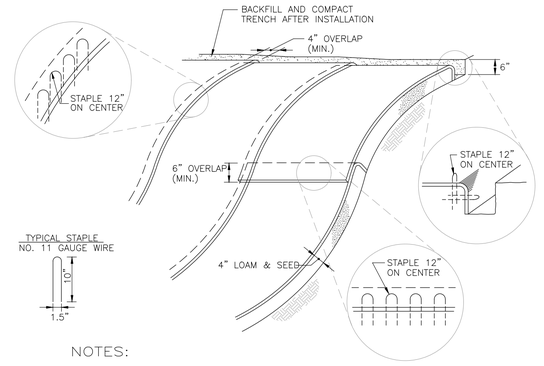
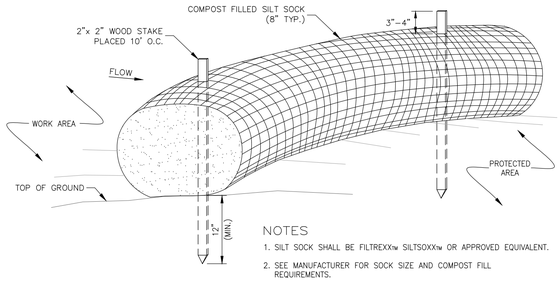


NOTES:

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A 6" DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SWALE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROX. 4 INCH OVERLAP WHERE 2 OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE BLANKET END OVER END WITH 6 INCH (MIN.) OVERLAP AND ANCHOR DOWN SLOPE BLANKET IN A 6 INCH DEEP TRENCH.
5. BLANKET SHALL BE NORTH AMERICAN GREEN SC–150 OR APPROVED EQUAL.

BLANKET SLOPE PROTECTION

EROSION CONTROL FOR SLOPE GREATER THAN 5' IN HEIGHT — NOT TO SCALE

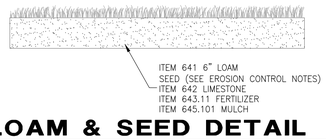


NOTES

1. SILT SOCK SHALL BE FILTREXXsm SILTSOXXsm OR APPROVED EQUIVALENT.
2. SEE MANUFACTURER FOR SOCK SIZE AND COMPOST FILL REQUIREMENTS.
3. SILT SOCK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS, AND REPAIR OR REPLACEMENT SHALL BE PERFORMED AS NEEDED.
4. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE ENGINEER.

SILT SOCK

NOT TO SCALE



LOAM & SEED DETAIL

NOT TO SCALE

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
10/20/25

REV	DATE	DESCRIPTION	DR	CK

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

DETAILS

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824
APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: NOT TO SCALE **AUGUST 20, 2025**

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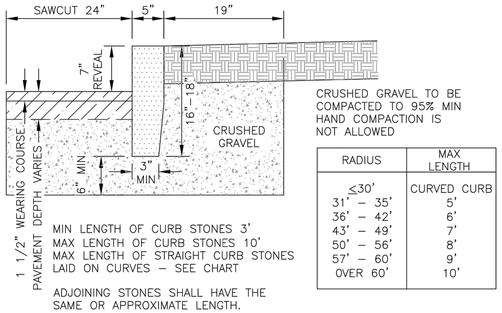
		CK		CADFILE			



CRUSHED GRAVEL TO BE COMPACTED TO 95% MIN HAND COMPACTION IS NOT ALLOWED

RADIUS	MAX LENGTH CURVED CURB
≤30'	5'
31' – 35'	6'
36' – 42'	7'
43' – 49'	8'
50' – 56'	9'
57' – 60'	10'
OVER 60'	

MIN LENGTH OF CURB STONES 3'
MAX LENGTH OF CURB STONES 10'
MAX LENGTH OF STRAIGHT CURB STONES LAID ON CURVES – SEE CHART

ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATE LENGTH.

FINISH SURFACE AND TOLERANCES FOR VERTICAL GRANITE CURB

AREA	FINISH SURFACE	TOLERANCE
TOP	5" WIDE OR AS OTHERWISE SHOWN, SAWN TRUE PLANE.	+⅛" TO +⅛"
	FRONT AND BACK ARRIS LINES PITCHED STRAIGHT AND PARALLEL.	+⅛" TO +⅛"
FRONT FACE	RIGHT ANGLE TO TOP, APPROXIMATELY TRUE PLANE. NO DRILL HOLES SHOWING IN TOP 10"	+1" TO –½"
BACK FACE EXPOSED	PLANE PARALLEL WITH FRONT FACE. STRAIGHT SPLIT TO 1½" BELOW EXPOSED SURFACE. NO LARGER THAN ¼" SEGMENT OF DRILL HOLES SHOWING IN ARRIS LINES.	+1" TO –1"
CONCEALED	BELOW 1½" FROM EXPOSED SURFACE.	+1½" TO –1½"
BOTTOM	APPROXIMATELY PARALLEL TO TOP. MINIMUM WIDTH: 3"	SEE PLANS
ENDS EXPOSED PORTION	SQUARE WITH PLANES OF TOP AND FACE	
JOINTS EXPOSED	OPTIMUM WIDTH: 1"	
CONCEALED	TO BREAK BACK NO MORE THAN 4"	+¾" TO –¾"

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SITE/STREET
1	DRAFTING	12.15	VERTICAL GRANITE CURB	DRAWING NO. C–1
2	SAWCUT	5.19		DATE: 12/08 PAGE: 1
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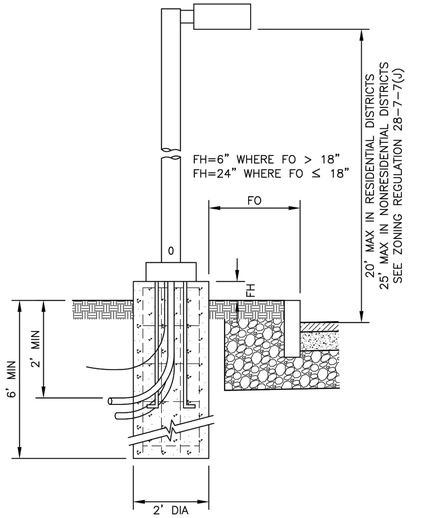
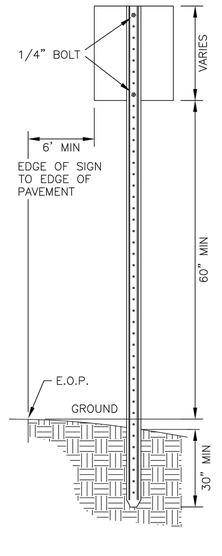
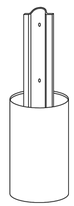


THIS INFORMATION MAY NOT CONTAIN ALL DETAILS REQUIRED FOR CONSTRUCTION. APPROPRIATE MODIFICATION MAY BE REQUIRED TO ENSURE SUITABILITY OF THESE DRAWINGS FOR THE SPECIFIC APPLICATION. IT IS THE USERS RESPONSIBILITY TO ENSURE INSTALLATION OF THE EQUIPMENT/SYSTEM IN ACCORDANCE WITH BUILDING/PROJECT SPECIFICATIONS, APPLICABLE CODES AND STANDARDS.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: ROADWAY
–	–	–	TYPICAL LIGHT POLE AND FOUNDATION	DRAWING NO. M–13
–	–	–		DATE: 01/14 PAGE: 1
–	–	–		
–	–	–		



NOTES:
1. POSTS SHALL BE PLUMB. ANY POST BENT OR OTHERWISE DAMAGED SHALL BE REMOVED AND REPLACED. CUTTING THE DAMAGED PORTION OUT AND SPLICING THE POST TOGETHER IS NOT ACCEPTABLE.
2. WHEN POSTS ARE SET, THE HOLES SHALL BE DUG TO THE PROPER DEPTH. AFTER INSERTING POSTS, THE HOLES SHALL BE BACK FILLED WITH SUITABLE MATERIAL IN LAYERS NOT EXCEEDING 6" DEEP WHEN COMPACTED; CARE BEING TAKEN TO PRESERVE THE ALIGNMENT OF THE POST.
3. WHEN POSTS ARE DRIVEN, A SUITABLE DRIVING CAP SHALL BE USED. AFTER DRIVING, THE TOP OF THE POST SHALL HAVE THE SAME CROSS–SECTIONAL DIMENSION AS THE BODY OF THE POST. BATTERED HEADS WILL NOT BE ACCEPTED.
4. POSTS SHALL NOT BE DRIVEN WITH THE SIGN ATTACHED TO THE POST.
5. SIGNS SHALL BE ERECTED IN CONFORMANCE WITH THE REQUIREMENTS OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES"
6. WHEN SIGN IS IN PLACE, NO PART OF THE POST SHALL EXTEND ABOVE SIGN.

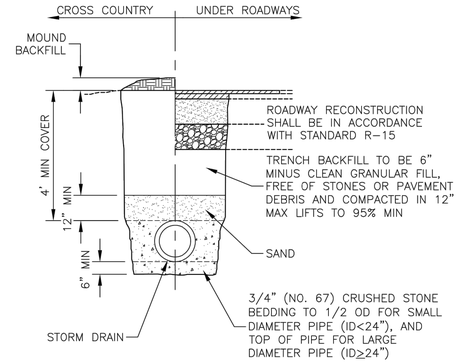


GREEN ENAMEL, 2.5#/FT MINIMUM FLANGED CHANNEL STEEL POST

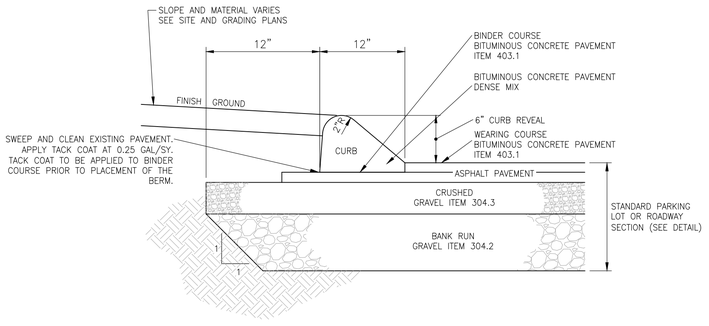
PVC OR STEEL SLEEVE REQUIRED IN PAVED OR CONCRETE LOCATIONS

SLEEVE WILL BE LARGE ENOUGH TO ALLOW FOR REPLACEMENT POST

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: SITE/STREET
1	POST #/FT	8/13	ROAD SIGN POST and SLEEVE – RURAL	DRAWING NO. M–2
–	–	–		DATE: 12/08 PAGE: 1
–	–	–		
–	–	–		

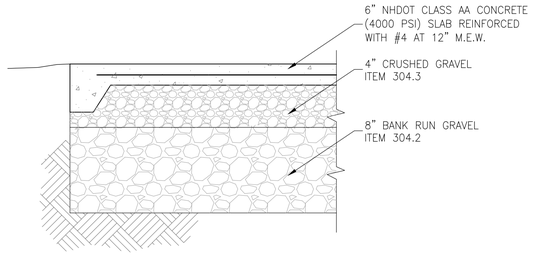


NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: STORM
1	Standard Reference	01.19	STORM DRAIN TRENCH	DRAWING NO. SD–1
–	–	–		DATE: 04/15 PAGE: 1
–	–	–		
–	–	–		



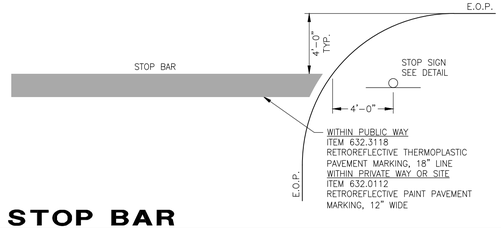
BITUMINOUS CONCRETE CURB

NOT TO SCALE



CONCRETE PAD

NOT TO SCALE



STOP BAR

NOT TO SCALE

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

DETAILS

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR
UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT
UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: NTS **AUGUST 20, 2025**

REV	DATE	DESCRIPTION	DR	CK
1	9/22/25	REVISED PER CITY COMMENTS	JB	NG

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
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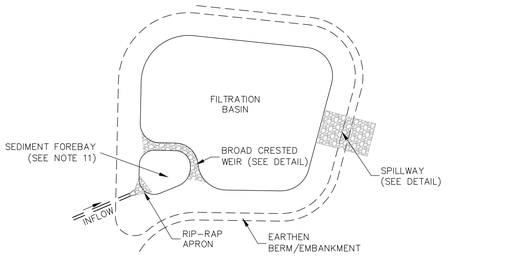
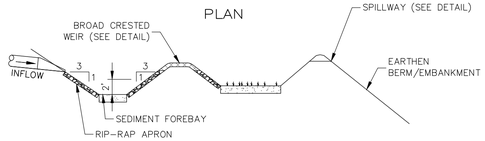
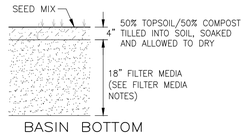
FILE	DR	JB	FB		
96159–01	CK	NG	CADFILE	~~96159–01 COVER & DETAILS~~	D–02



PLAN



PROFILE



BASIN BOTTOM

FILTRATION BASIN NOTES

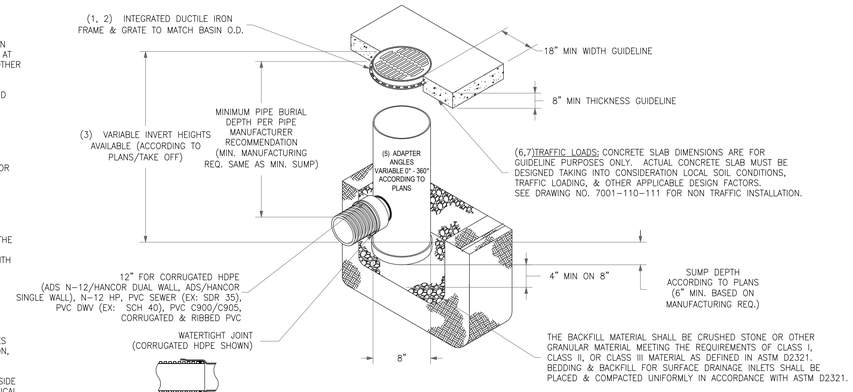
1. THE INSTALLER SHALL NOT ALLOW ANY VEHICULAR OR CONSTRUCTION EQUIPMENT TRAVEL TO OCCUR ACROSS THE PROPOSED BASIN AREA AT ANY TIME EXCEPT DURING EXCAVATION OF TOPSOIL, SUBSOIL AND OTHER MATERIALS NOT SUITABLE FOR BED BOTTOM CONDITIONS.
2. CAUTION SHOULD BE EXERCISED DURING SITE PREPARATION TO AVOID COMPACTION OF THE INFILTRATIVE SURFACE.
3. SEED MIX
   NEW ENGLAND ROADSIDE MATRIX WET MEADOW SEED MIX (MIN. 35 LBS/ACRE)
4. FILTER MEDIA SOIL SAMPLE TO BE PROVIDED TO THE ENGINEER PRIOR TO PLACEMENT. ON SITE MIXING OF MANUFACTURED SOIL MAY BE ACCEPTABLE PENDING ENGINEER APPROVAL.
5. DO NOT DISCHARGE SEDIMENT-LADEN WATERS FROM CONSTRUCTION ACTIVITIES (RUNOFF, WATER FROM EXCAVATIONS) TO THE BASIN.
6. AFTER THE BASIN IS EXCAVATED TO THE FINAL DESIGN ELEVATION, THE FLOOR SHOULD BE DEEPLY TILLED WITH A ROTARY TILLER OR DISC HARROW TO RESTORE INFILTRATION RATES, FOLLOWED BY A PASS WITH A LEVELING DRAG.
7. VEGETATION SHOULD BE ESTABLISHED IMMEDIATELY.
8. DO NOT PLACE FILTRATION SYSTEMS INTO SERVICE UNTIL THE CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED.
9. FILTRATION MEDIA SHALL BE INSTALLED ALONG INTERIOR SIDE SLOPES TO ELEVATION EQUAL TO OUTLET STRUCTURE RIM OR WEIR ELEVATION, WHICHEVER IS LOWER.
10. FILL TO BRING EMBANKMENT AREAS TO GRADE SHALL BE EXISTING SIDE MATERIALS OR IMPORTED MATERIAL CONSISTENT WITH THE GEOTECHNICAL REPORT RECOMMENDATIONS FOR COMMON FILL (SEE NOTE 21 AND 22 ON SHEET C-02).
11. FILTER MEDIA SHALL BE PLACED IN BOTTOM OF SEDIMENT FOREBAY.

FILTER MEDIA NOTES

1. ASTM C-33 CONCRETE SAND (50%-55% BY VOLUME)
2. LOAMY SAND TOPSOIL WITH 15%-25% FINES PASSING THE NO. 200 SIEVE (20%-30% BY VOLUME).
3. MODERATELY FINE SHREDDED BARK OR WOOD FIBER MULCH WITH LESS THAN 5% PASSING THE NO. 200 SIEVE (20%-30% BY VOLUME)

FILTRATION BASIN

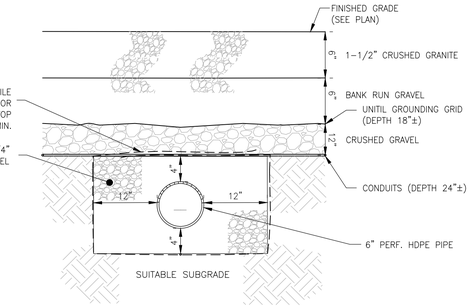
NOT TO SCALE



ADS DRAIN BASIN Nyloplast

IN-LINE DRAIN

NOT TO SCALE



UNDER DRAIN TRENCH

NOT TO SCALE

CONSTRUCTION SPECIFICATIONS

PREPARE BEDDING:

BACKFILL MATERIAL AROUND THE END SECTION MAY BE THE SAME AS THE MATERIAL AROUND THE PIPE, PLACE A FEW INCHES OF BACKFILL MATERIAL IN THE TRENCH OR DITCH WHERE THE END SECTION WILL BE PLACED. COMPACT AND CONTOUR THIS BEDDING MATERIAL TO GENERALLY MATCH THE END SECTION, EXCAVATE AN AREA IN THE BEDDING WHERE TOE TROUGH WILL SEAT SO THAT THE END SECTION WILL BE LEVEL WITH THE BOTTOM OF THE TRENCH OR DITCH IN THE FINISHED INSTALLATION.

PLACE END SECTION OF PIPE:

OPEN THE END SECTION COLLAR AND SEAT IT OVER THE TWO PIPE CONNECTIONS. ONCE THE END SECTION IS POSITIONED, CHECK TO MAKE SURE THAT THE INVERT OF THE END SECTION MATCHES THE INVERT OF THE PIPE AND THAT THE END SECTION IS LEVEL WITH THE TRENCH OR DITCH BOTTOM.

SECURE THE END SECTION:

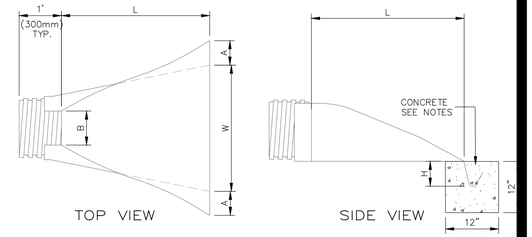
SLIP THE STAINLESS STEEL ROD THROUGH THE PRE-DRILLED HOLES AT THE TOP OF THE COLLAR. THE ROD SHOULD BE BETWEEN THE CROWNS OF THE TWO PIPE CONNECTIONS. PLACE A WASHER ON EITHER END OF THE ROD. PLACE A NUT ON EITHER END OF THE ROD AND TIGHTEN WITH A WRENCH.

SECURE THE TOE TROUGH:

TO PREVENT WASHOUTS FROM HIGH VELOCITY FLOW, IT IS RECOMMENDED THAT THE TROUGH BE SECURED WITH CONCRETE. POUR CONCRETE IN THE TROUGH UP TO THE LEVEL OF THE TRENCH OR DITCH BOTTOM AND ALONG THE ENTIRE LENGTH OF THE TROUGH.

FINISH BACKFILL:

SHOVEL BACKFILL AROUND THE END SECTION IN 6 TO 9 INCH LAYERS EQUALLY ON BOTH SIDES, KNIFING IT TO ELIMINATE VOIDS. TAMP WITH A SMALL-FACED COMPACTOR OR OTHER EQUIPMENT SUITABLE FOR SMALL AREAS. CONTINUE PLACING, KNIFING, AND COMPACTING BACKFILL LAYERS TO THE TOP OF THE END SECTION TO SEAT IT WELL INTO THE BACKFILL.

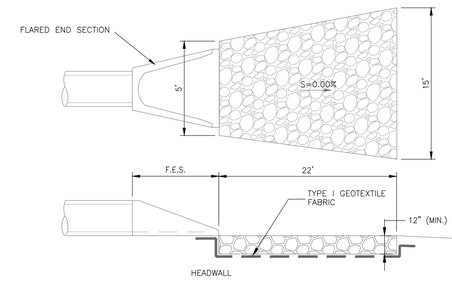


	DIMENSIONS, INCHES (mm)						
PIPE DIAMETER	PART NO.	A, ±1 (25)	B MAX	H, ±1 (25)	L, ±1/2 (13)	W, ±2 (50)
12", 15" (300,375)	1210 NP	6.5 (165)	10 (254)	6.5 (165)	25 (635)	29 (736)
18" (450)	1810 NP	7.5 (190)	15 (380)	6.5 (168)	32 (812)	35 (890)
24" (600)	2410 NP	7.5 (190)	18 (450)	6.5 (165)	36 (900)	45 (1140)
30" (750)	3010 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)
36" (900)	3610 NP	10.5 (266)	NA	7.0 (178)	53 (1346)	68 (1725)

FLARED END SECTION

HIGH DENSITY POLYETHYLENE (HDPE)

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS:

1. THE SUBGRADE FOR THE GEOTEXTILE FABRIC AND RIP-RAP SHALL BE PREPARED TO THE LINES AND GRADES SHOWN ON THE PLANS.
2. THE ROCK USED FOR RIP-RAP SHALL CONFORM TO NHDOT CLASS C STONE. D50 = 6"
3. GEOTEXTILE FABRICS SHALL BE PROTECTED FROM PUNCTURE OR TEARING DURING THE PLACEMENT OF THE ROCK RIP-RAP. DAMAGED AREAS IN THE FABRIC SHALL BE REPAIRED BY PLACING A PIECE OF FABRIC OVER THE DAMAGED AREA OR BY COMPLETE REPLACEMENT OF THE FABRIC. ALL OVERLAPS REQUIRED FOR REPAIRS OR JOINING TWO PIECES OF FABRIC SHALL BE A MINIMUM OF 12 INCHES.
4. STONE FOR THE RIP-RAP MAY BE PLACED BY EQUIPMENT AND SHALL BE CONSTRUCTED TO THE FULL LAYER THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO PREVENT SEGREGATION OF THE STONE SIZES.

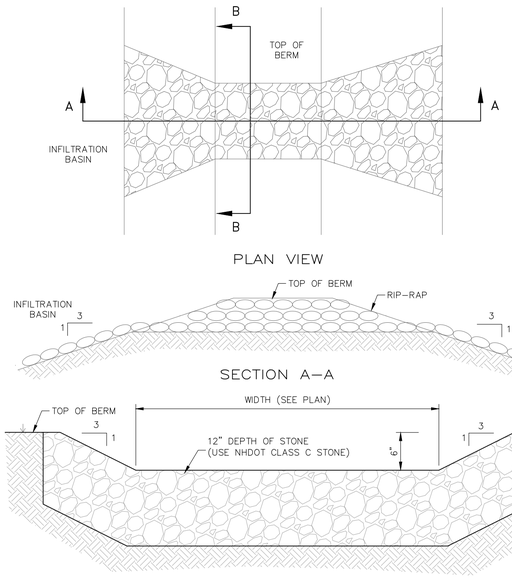
OUTLET APRON

NOT TO SCALE

SPILLWAY	TOP OF BERM EL.	SPILLWAY INV.
FILTRATION BASIN #1	286.0	285.5

SPILLWAY

NOT TO SCALE



BROAD CRESTED WEIR

FROM FOREBAYS

NOT TO SCALE

REV	DATE	DESCRIPTION	DR	CK

STATE OF NEW HAMPSHIRE
NICHOLAS C. GOLON
No. 14086
LICENSED PROFESSIONAL ENGINEER
8/20/25

Unitil

SITE DEVELOPMENT PLANS

TAX MAP 494Z LOT 44

DETAILS

UNITIL WEST CONCORD SUBSTATION

1-7 MCGUIRE STREET, CONCORD, NH 03301

OWNED BY/PREPARED FOR

UNITIL ENERGY SYSTEMS, INC.
6 LIBERTY LANE WEST, HAMPTON, NH 03824

APPLICANT

UNITIL ENERGY SYSTEMS, INC.
30 ENERGY WAY, EXETER, NH 03833

SCALE: NTS **AUGUST 20, 2025**

TFM
Civil Engineers
Structural Engineers
Traffic Engineers
Land Surveyors
Landscape Architects
Scientists
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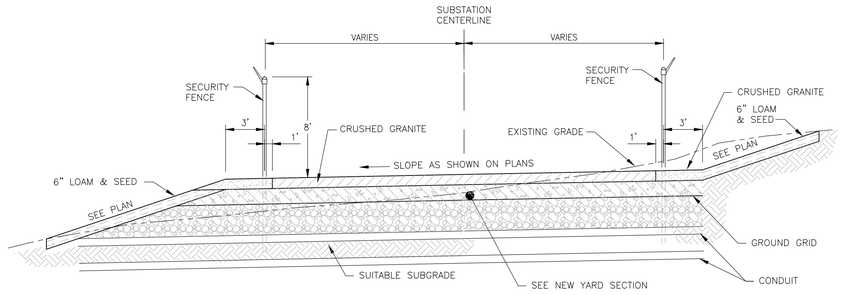
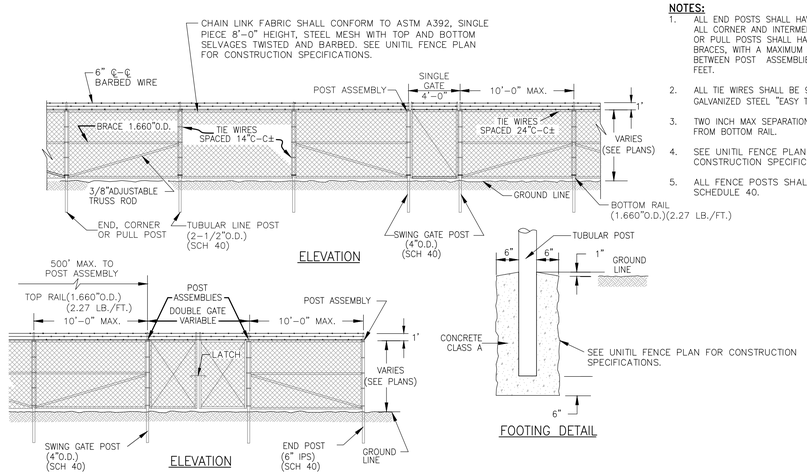
FILE	96159-01	DR		FB		
		CK		CADFILE	96159-01 COVER & DETAILS	D-03



TYPICAL SUBSTATION CROSS SECTION

NOT TO SCALE

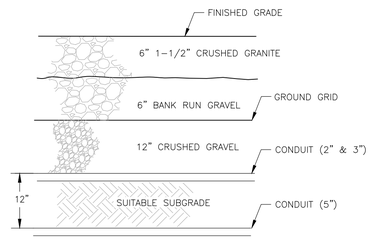


NOTES:

1. ALL END POSTS SHALL HAVE ONE BRACE ALL CORNER AND INTERMEDIATE BRACE OR PULL POSTS SHALL HAVE TWO BRACES, WITH A MAXIMUM SPACING OF BETWEEN POST ASSEMBLIES OF 500 FEET.
2. ALL TIE WIRES SHALL BE 9 GAUGE GALVANIZED STEEL "EASY TWIST TIES".
3. TWO INCH MAX SEPARATION TO GROUND FROM BOTTOM RAIL.
4. SEE UNITIL FENCE PLAN FOR CONSTRUCTION SPECIFICATIONS.
5. ALL FENCE POSTS SHALL BE SCHEDULE 40.

SECURITY FENCE DETAIL

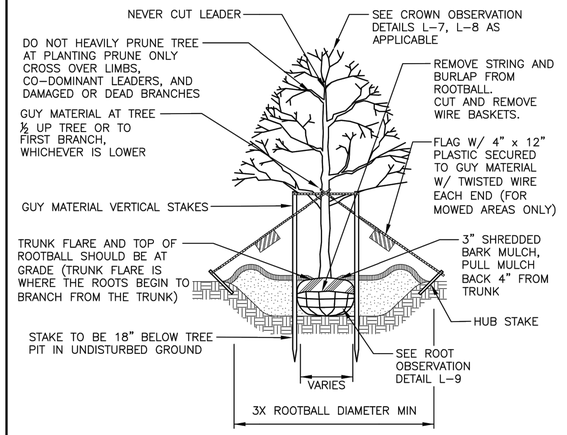
NOT TO SCALE



TYPICAL NEW YARD AREA SECTION

NOTE:

1. FINAL DESIGN IS TO BE COORDINATED WITH THE OWNER.
2. CONTRACTOR TO COORDINATE LOCATION OF GROUNDING GRID WITH UNITIL.
3. SAMPLE OF CRUSHED GRANITE SHALL BE PROVIDED BY CONTRACTOR. UNITIL WILL HAVE SAMPLE TESTED TO VERIFY RESISTANCE MEETS SPECIFICATIONS PRIOR TO DELIVERY & INSTALLATION.

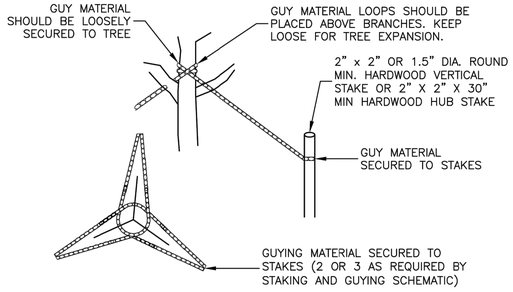


NOTES:

1. GUYING AND STAKING TO BE DETERMINED IN THE FIELD BY THE LANDSCAPE ARCHITECT. LOCAL FIELD CONDITIONS AS WELL AS PLANT CHARACTERISTICS WILL DETERMINE THE NECESSITY OF GUYING AND STAKING.
2. TYPICALLY ONLY TREES WITH A 3" OR GREATER CALIPER NEED TO BE STAKED. TREES WITH LESS THAN A 3" CALIPER NEED TO BE STAKED ONLY AS REQUIRED BY LANDSCAPE ARCHITECT.
3. ONLY WRAP TREE TRUNKS AS REQUIRED BY LANDSCAPE ARCHITECT.
4. TREE SHALL BE SET PLUMB, AFTER SETTLEMENT.
5. LOAM FOR BACKFILLING SHALL BE AMENDED AS REQUIRED BY LANDSCAPE ARCHITECT.
6. CITY TREES PLANTED ON PRIVATE PROPERTY, ADJACENT TO A PUBLIC RIGHT-OF-WAY, NEED TO BE PLANTED A MINIMUM OF 10 FEET FROM THE EDGE OF THE CITY SIDEWALK.
7. ALL NURSERY TAGS, TAPE, AND SIMILAR MATERIALS SHALL BE REMOVED.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: LANDSCAPE
1	NOTES	4.15	DECIDUOUS TREE PLANTING	DRAWING NO. L-1
–	–	–		DATE: 12/08 PAGE: 1
–	–	–		
–	–	–		

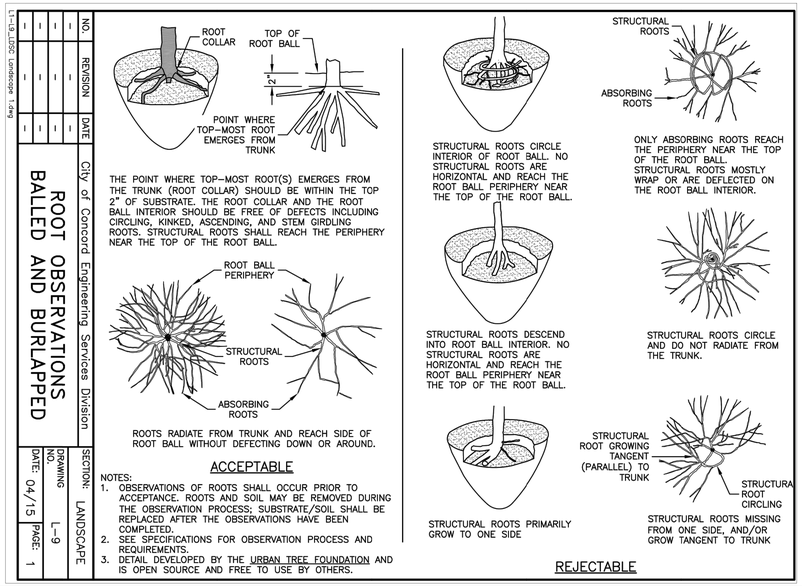
L1-L9_LDSC Landscape



NOTE:
ONLY USE PLASTIC CHAINLOCK (LANDSCAPE QUALITY AND SUITABLE FOR GUYING TREES) OR EQUIVALENT GUYING MATERIAL.

NO.	REVISION	DATE	City of Concord Engineering Services Division	SECTION: LANDSCAPE
–	–	–	DECIDUOUS TREE – GUYING & STAKING	DRAWING NO. L-2
–	–	–		DATE: 12/08 PAGE: 1
–	–	–		
–	–	–		

L1-L9_LDSC Landscape



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STATE OF NEW HAMPSHIRE – NICHOLAS C. GOLON No. 14086 – LICENSED PROFESSIONAL ENGINEER – 9/22/25

SCALE: NOT TO SCALE **AUGUST 20, 2025**

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