



Maximum of (10) less than 2 caliper trees in scope

### PAVING MATERIAL AND PATTERN









**SEAT WALLS** 







**GREEN INFRASTRUCTURE** 









### VIEW AT FRONT ELEVATION





# **LEVEL 01 FLOOR PLAN** NOAA HIGH BAY

### **LEVEL 02 FLOOR PLAN**



1. EXISTING CONDITIONS ARE BASED ON A FIELD SURVEY PERFORMED BY DOUCET SURVEY, A SAM COMPANY, DURING JANUARY 2025 USING A TOTAL STATION AND A SURVEY GRADE GPS WITH A DATA COLLECTOR AND AN AUTO LEVEL. TRAVERSE ADJUSTMENT BASED ON LEAST SQUARE ANALYSIS. 2. WETLANDS AND AREAS UNDER THE JURISDICTION OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES, PURSUANT TO NH ADMINISTRATIVE RULES CHAPTER ENV-WT 100-900, WERE DELINEATED BY TIGHE &

BOND ON AUGUST 21, 2024 USING THE FOLLOWING METHODOLOGY AND STANDARDS 2.1. REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTHCENTRAL AND NORTHEAST REGION, (VERSION 2.0) JANUARY 2012, U.S. ARMY CORPS OF ENGINEERS. NEW ENGLAND HYDRIC SOILS TECHNICAL COMMITTEE, 2019 VERSION 4, FIFLD INDICATORS FOR IDENTIFYING HYDRIC SOILS IN NEW ENGLAND. NEW ENGLAND INTERSTATE WATER POLLUTION CONTROL COMMISSION, LOWELL,

2.3. U.S. ARMY CORPS OF ENGINEERS. (2023). 2022 NATIONAL WETLAND PLANT LIST, VERSION 3.6. U.S. ARMY ENGINEER RESEARCH AND DEVELOPMENT CENTER, VICKSBURG, MS. HTTP://WETLAND-PLANTS.USACE.ARMY.MIL/ 2.4. NEW HAMPSHIRE ADMINISTRATIVE RULE CHAPTER ENV-WT 602.23 DEFINITIONS:HIGHEST OBSERVABLE TIDE LINE (HOTL) AND ENV-WT 406, DELINEATION AND CLASSIFICATION OF JURISDICTIONAL AREAS, EFFECTIVE DECEMBER

# 1. IT IS THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE THEMSELVES WITH THE CONDITIONS OF ALL OF THE

2. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE APPROXIMATE AND THE LOCATIONS ARE NOT GUARANTEED BY THE OWNER OR ENGINEER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL UTILITIES, ANTICIPATE CONFLICTS, REPAIR EXISTING UTILITIES, AND RELOCATE EXISTING UTILITIES REQUIRED TO COMPLETE THE WORK AT NO ADDITIONAL COST TO THE OWNER. 3. THE CONTRACTOR SHALL VERIFY LOCATION OF ALL EXISTING UTILITIES. CALL DIG SAFE AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF ANY DEMOLITION/CONSTRUCTION ACTIVITIES. 4. THE ACCURACY AND COMPLETENESS OF SUBSURFACE INFORMATION (E.G., EXISTING UTILITIES) SHOWN ON THESE DRAWINGS IS NOT GUARANTEED AND SOME SUBSURFACE INFORMATION MAY NOT BE SHOWN. DETERMINE THE LOCATIONS AND ELEVATIONS OF ALL SUBSURFACE FEATURES WHICH MAY AFFECT CONSTRUCTION OPERATIONS BY TEST PIT OR OTHER METHODS, AS NECESSARY TO PREVENT DAMAGE TO UTILITIES AND OTHER SUBSURFACE

FEATURES, AND/OR INTERRUPTIONS IN UTILITY SERVICE. PROVIDE DATA COLLECTED THROUGH THESE INVESTIGATIONS TO THE ENGINEER PRIOR TO CONSTRUCTING THE PROPOSED IMPROVEMENTS. 5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY UTILITIES IDENTIFIED DURING CONSTRUCTION THAT ARE NOT SHOWN ON THE DRAWINGS OR THAT DIFFER IN SIZE OR MATERIAL 6. THE CONTRACTOR IS RESPONSIBLE FOR SITE SAFETY; COORDINATION WITH THE OWNER, ALL SUBCONTRACTORS, AND 1. REFER TO SHEET C-501 FOR GENERAL EROSION CONTROL NOTES AND DETAILS WITH OTHER CONTRACTORS WORKING WITHIN THE LIMITS OF WORK, THE MEANS AND METHODS OF CONSTRUCTING

7. THE CONTRACTOR SHALL OBTAIN AND PAY FOR AND COMPLY WITH ADDITIONAL PERMITS, NOTICES AND FEES NECESSARY TO COMPLETE THE WORK AND ARRANGE FOR AND PAY FOR NECESSARY INSPECTIONS AND APPROVALS FROM THE AUTHORITIES HAVING JURISDICTION. 8. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE, AND LOCAL CODES & SPECIFICATIONS.

9. THE CONTRACTOR SHALL COORDINATE ALL WORK WITHIN PUBLIC RIGHT OF WAY WITH THE TOWN OF DURHAM. 10. ALL WORK SHALL CONFORM TO THE UNIVERSITY OF NEW HAMPSHIRE PLANNING, DESIGN, & CONSTRUCTION GUIDELINES, STANDARD SPECIFICATIONS AND WITH THE STATE OF NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION", CURRENT EDITION. 11. THE CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND .PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILTS SHALL BE PREPARED AND CERTIFIED BY A NEW

HAMPSHIRE LICENSED LAND SURVEYOR. 12. BEFORE ANY DEWATERING IS PERFORMED A TEMPORARY DISCHARGE PERMIT FROM THE NHDES IS REQUIRED. 13. THE CONTRACTOR IS RESPONSIBLE FOR ALL NECESSARY TRAFFIC CONTROL/SAFETY DEVICES TO ENSURE SAFE VEHICULAR AND PEDESTRIAN ACCESS THROUGH THE WORK AREA, OR FOR SAFELY IMPLEMENTING DETOURS AROUND THE WORK AREA. PERFORM TRAFFIC CONTROL IN ACCORDANCE WITH THE CONTRACTOR'S APPROVED TRAFFIC CONTROL PLAN. 14. WHEN WORKING IN THE RIGHT OF WAY, THE CONTRACTOR SHALL PROVIDE THE OWNER AND LOCAL

FIRE/POLICE/SCHOOL AUTHORITIES A DETAILED PLAN OF APPROACH INDICATING METHODS OF PROPOSED TRAFFIC ROUTING ON A DAILY BASIS, AND COORDINATION TO ENSURE COMMUNICATION AND COORDINATION BETWEEN THE OWNER, THE CONTRACTOR AND LOCAL FIRE/POLICE/SCHOOL AUTHORITIES THROUGHOUT THE CONSTRUCTION 15. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL PROPERTIES WITHIN THE PROJECT AREA AT ALL TIMES DURING CONSTRUCTION.

16. NOTIFY THE ENGINEER IN WRITING OF ANY CONFLICT, ERROR, AMBIGUITY, OR DISCREPANCY WITH THE PLANS OR BETWEEN THE PLANS AND ANY APPLICABLE LAW, REGULATION, CODE, STANDARD SPECIFICATION, OR MANUFACTURER'S INSTRUCTIONS. 17. TIGHE & BOND ASSUMES NO RESPONSIBILITY FOR ANY ISSUES, LEGAL OR OTHERWISE, RESULTING FROM CHANGES MADE TO THESE DRAWINGS WITHOUT WRITTEN AUTHORIZATION FROM TIGHE & BOND.

### **DEMOLITION NOTES:** 1. EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF ANY CLEARING OR DEMOLITION

2. THE CONTRACTOR IS RESPONSIBLE FOR SUPPORT OF EXISTING UTILITIES AND REPAIR OR REPLACEMENT COSTS OF UTILITIES DAMAGED DURING CONSTRUCTION, WHETHER ABOVE OR BELOW GRADE, REPLACE DAMAGED UTILITIES IMMEDIATELY AT NO ADDITIONAL COST TO THE OWNER AND AT NO COST TO THE PROPERTY OWNER. 3 ANY EXISTING WORK OR PROPERTY DAMAGED OR DISRUPTED BY CONSTRUCTION/ DEMOLITION ACTIVITIES SHALL BE REPLACED OR REPAIRED TO MATCH ORIGINAL EXISTING CONDITIONS BY THE CONTRACTOR AT NO ADDITIONAL COST 4. CONTRACTOR SHALL VERIFY ORIGIN OF ALL DRAINS AND UTILITIES PRIOR TO REMOVAL/TERMINATION TO DETERMINE IF DRAINS OR UTILITY ARE ACTIVE, AND SERVICES ANY ON OR OFF-SITE STRUCTURE TO REMAIN. THE CONTRACTOR

5. ALL MATERIALS SCHEDULED TO BE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL DISPOSE OF ALL MATERIALS OFF-SITE IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS, ORDINANCES AND CODES 6. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ONLY THOSE EXISTING STRUCTURES, CONCRETE PADS, UTILITIES AND PAVEMENT WITHIN THE WORK LIMITS SPECIFICALLY IDENTIFIED TO BE REMOVED. ITEMS TO BE REMOVED

TREES AND LANDSCAPING. 7. REMOVE TREES AND BRUSH AS REQUIRED FOR COMPLETION OF WORK. CONTRACTOR SHALL GRUB AND REMOVE ALL STUMPS WITHIN LIMITS OF WORK AND DISPOSE OF OFF-SITE IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL LAWS AND REGULATIONS 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DEMOLITION AND OFF-SITE DISPOSAL OF MATERIALS REQUIRED TO COMPLETE THE WORK, EXCEPT FOR WORK NOTED TO BE COMPLETED BY OTHERS 9. THE CONTRACTOR SHALL COORDINATE REMOVAL, RELOCATION, DISPOSAL OR SALVAGE OF UTILITIES WITH THE OWNER AND APPROPRIATE UTILITY COMPANY. 10. UTILITIES SHALL BE TERMINATED AT THE MAIN LINE PER UTILITY COMPANY STANDARDS. THE CONTRACTOR SHALL

INCLUDE BUT ARE NOT LIMITED TO: CONCRETE, PAVEMENT, CURBS, LIGHTING, MANHOLES, CATCH BASINS, AND

REMOVE ALL ABANDONED UTILITIES LOCATED WITHIN THE LIMITS OF WORK. 11. SAW CUT AND REMOVE PAVEMENT ONE (1) FOOT OFF PROPOSED EDGE OF PAVEMENT OR EXISTING CURB LINE IN ALL AREAS WHERE PAVEMENT TO BE REMOVED ABUTS EXISTING PAVEMENT OR CONCRETE TO REMAIN. 12. PAVEMENT REMOVAL LIMITS ARE SHOWN FOR CONTRACTOR'S CONVENIENCE. ADDITIONAL PAVEMENT REMOVAL MAY BE REQUIRED DEPENDING ON THE CONTRACTOR'S OPERATION. CONTRACTOR TO VERIFY FULL LIMITS OF PAVEMENT 13. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL UTILITIES TO BE REMOVED AND PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN.

14. THE CONTRACTOR SHALL REMOVE AND SALVAGE EXISTING GRANITE CURB FOR REUSE. 15. THE CONTRACTOR SHALL PHASE DEMOLITION AND CONSTRUCTION AS REQUIRED TO PROVIDE CONTINUOUS SERVICE TO EXISTING BUSINESSES AND HOMES THROUGHOUT THE CONSTRUCTION PERIOD. EXISTING BUSINESS AND HOME SERVICES INCLUDE. BUT ARE NOT LIMITED TO ELECTRICAL, COMMUNICATION, FIRE PROTECTION, DOMESTIC WATER AND SEWER SERVICES. TEMPORARY SERVICES, IF REQUIRED, SHALL COMPLY WITH ALL FEDERAL, STATE, LOCAL AND UTILITY COMPANY STANDARDS. CONTRACTOR SHALL PROVIDE DETAILED CONSTRUCTION SCHEDULE TO OWNER PRIOR TO ANY DEMOLITION/CONSTRUCTION ACTIVITIES AND SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER.

16. THE CONTRACTOR SHALL PROTECT ALL PROPERTY MONUMENTATION THROUGHOUT DEMOLITION AND CONSTRUCTION OPERATIONS. SHOULD ANY MONUMENTATION BE DISTURBED BY THE CONTRACTOR, THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED SURVEYOR TO REPLACE DISTURBED MONUMENTS. 17. THE CONTRACTOR SHALL PAY ALL COSTS NECESSARY FOR TEMPORARY PARTITIONING, BARRICADING, FENCING. SECURITY AND SAFETY DEVICES REQUIRED FOR THE MAINTENANCE OF A CLEAN AND SAFE CONSTRUCTION SITE. 18. BOLD LINETYPES SHOWN WITHIN THE LIMITS OF WORK INDICATE SITE FEATURES TO BE REMOVED, UNLESS SPECIFICALLY IDENTIFIED TO REMAIN.

# 1. PAVEMENT MARKINGS, INCLUDING BUT NOT LIMITED TO; PARKING SPACES, STOP BARS, ADA SYMBOLS, AND CROSS

WALKS, SHALL BE CONSTRUCTED AS SHOWN ON THE DRAWINGS AND DETAILS, AND SHALL MEET THE FOLLOWING • ALL ON-SITE PAVEMENT MARKINGS EXCEPT CENTERLINES, MEDIAN ISLANDS, FOG/SHOULDER LINES, AND LANE LINES SHALL BE CONSTRUCTED USING WHITE TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248 TYPE • ALL ON-SITE CENTERLINES AND MEDIAN ISLANDS SHALL BE CONSTRUCTED USING YELLOW THERMOPLASTIC STRIPING MATERIAL, MEETING THE REQUIREMENTS OF AASHTO M249. • ALL ON-SITE FOG/SHOULDER LINES AND LANE LINES SHALL BE CONSTRUCTED USING WHITE THERMOPLASTIC STRIPING MATERIAL. MEETING THE REQUIREMENTS OF AASHTO M249. • ALL PAVEMENT MARKINGS WITHIN PUBLIC RIGHT OF WAY SHALL CONFORM TO THE TOWN OF DURHAM DEPARTMENT OF PUBLIC WORKS, AND APPLICABLE DEPARTMENT OF TRANSPORTATION (DOT), STANDARD SPECIFICATIONS. 2. ALL PAVEMENT MARKINGS AND SIGNS SHALL CONFORM TO THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION. "STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS" CURRENT EDITION, AND THE REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT (ADA), THE ARCHITECTURAL BARRIERS ACT (ABA)

3. THE CONTRACTOR SHALL EMPLOY A NEW HAMPSHIRE LICENSED LAND SURVEYOR TO DETERMINE ALL LINES AND 4. CLEAN AND COAT VERTICAL FACE OF EXISTING PAVEMENT AT SAW CUT LINE WITH RS-1 EMULSION IMMEDIATELY PRIOR TO PLACING NEW BITUMINOUS CONCRETE. 5. THE CONTRACTOR TO PROVIDE BACKFILL AND COMPACTION AT CURB LINE AFTER CONCRETE FORMS FOR SIDEWALKS AND PADS HAVE BEEN STRIPPED 6. COORDINATE ALL WORK ADJACENT TO BUILDINGS WITH BUILDING DRAWINGS/CONTRACTOR.

SEE ARCHITECTURAL/BUILDING DRAWINGS FOR ALL CONCRETE PADS & SIDEWALKS ADJACENT TO BUILDING. 8. ALL LIGHT POLE BASES NOT PROTECTED BY A RAISED CURB SHALL BE PAINTED YELLOW. 9. ALL DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED. 10. PROPERTY MANAGER WILL BE RESPONSIBLE FOR TIMELY SNOW REMOVAL FROM ALL PUBLIC WALKS, DRIVES, AND PARKING AREAS ON-SITE. SNOW SHALL BE HAULED OFF-SITE AND LEGALLY DISPOSED OF, WHEN NECESSARY, WHEN

SNOW STORAGE AREAS HAVE REACHED CAPACITY.

### **GRADING AND DRAINAGE NOTES** 1. GENERAL COMPACTION REQUIREMENTS

• BELOW PAVED OR CONCRETE AREAS: 95% • TRENCH BEDDING MATERIAL AND

SAND BLANKET BACKFILL: 95% BELOW LOAM AND SEED AREAS: 90% \* ALL PERCENTAGES OF COMPACTION SHALL BE OF THE MAXIMUM DRY DENSITY AT THE OPTIMUM MOISTURE CONTENT AS DETERMINED AND CONTROLLED IN ACCORDANCE WITH ASTM D-1557, METHOD C FIELD DENSITY TESTS SHALL BE MADE IN ACCORDANCE WITH ASTM D-1556 OR ASTM-2922. ALL STORM DRAINAGE PIPES SHALL BE HIGH DENSITY POLYETHYLENE (HANCOR HI-Q, ADS N-12 OR EQUAL), UNLESS

OTHERWISE SPECIFIED. SEE UTILITY PLAN FOR ALL SITE UTILITY INFORMATION. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE. THE CONTRACTOR SHALL PROVIDE A FINISH PAVEMENT SURFACE AND LAWN AREAS FREE OF LOW SPOTS AND PONDING AREAS. CRITICAL AREAS INCLUDE BUILDING ENTRANCES, EXITS, RAMPS AND LOADING DOCK AREAS

ADJACENT TO THE BUILDING PROVIDE SITE GRADING AT ACCESSIBLE SIDEWALK RAMPS, SIDEWALKS, AND BUILDING ENTRANCES THAT IS CONSISTENT WITH THE RELEVANT ACCESS REQUIREMENTS OF THE ARCHITECTURAL BARRIERS ACT (ABA). THE AMERICANS WITH DISABILITIES ACT (ADA), AND MA ARCHITECTURAL ACCESS BOARD REOUIREMENTS (AAB), SMALL CHANGES IN GRADE OVER RELATIVELY SHORT DISTANCES (E.G. AT PARKING SPACES, ACCESSIBLE ROUTES, AND RAMPS) MIGHT NOT BE CLEARLY DEPICTED WITHIN THE CONTOUR INTERVAL SHOWN. COMPLY WITH THE CRITERIA IN THESE STANDARDS, SELECT MAXIMUM SLOPE CRITERIA ARE REPRODUCED BELOW: • ACCESSIBLE PARKING STALLS AND PASSENGER LOADING ZONES (IN ANY DIRECTION) SHALL BE < 2.0% • LONGITUDINAL SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 5.0% • CROSS SLOPE ALONG ACCESSIBLE ROUTES SHALL BE < 2.0%

THE CONTRACTOR SHALL THOROUGHLY CLEAN ALL CATCH BASINS AND DRAIN LINES, WITHIN THE LIMIT OF WORK, OF SEDIMENT IMMEDIATELY UPON COMPLETION OF CONSTRUCTION. ALL MATERIALS AND CONSTRUCTION SHALL CONFORM WITH APPLICABLE FEDERAL, STATE AND LOCAL CODES. ALL DISTURBED AREAS NOT TO BE PAVED OR OTHERWISE TREATED SHALL RECEIVE 6" LOAM, SEED FERTILIZER AND

10. ALL PROPOSED CATCH BASINS SHALL BE EQUIPPED WITH OIL/GAS SEPARATOR HOODS AND 4' SUMPS. 11. THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING DRAIN LINES AND STRUCTURES AT PROPOSED DRAINAGE CONNECTION LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.

### **GENERAL EROSION CONTROL NOTES:**

1. COORDINATE ALL UTILITY WORK WITH APPROPRIATE UTILITY COMPANY NATURAL GAS - UNITIL

• WATER - TOWN OF DURHAM SEWER - TOWN OF DURHAM

• COMMUNICATIONS - CONSOLIDATED COMMUNICATIONS • FLECTRIC - UNIVERSITY OF NEW HAMPSHIRE & EVERSOURCE SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR PROPOSED GRADING AND EROSION CONTROL MEASURES. ALL WATER MAIN INSTALLATIONS SHALL BE CLASS 52, CEMENT LINED DUCTILE IRON PIPE. ALL WATER MAIN INSTALLATIONS SHALL BE PRESSURE TESTED AND CHLORINATED AFTER CONSTRUCTION PRIOR TO ACTIVATING THE SYSTEM. CONTRACTOR SHALL COORDINATE CHLORINATION AND TESTING WITH THE TOWN OF

DURHAM WATER DEPARTMENT ALL BELOW GRADE WATER VALVES AND FITTINGS SHALL HAVE MECHANICAL JOINT (MJ) ENDS. RESTRAIN ALL WATER VALVES AND FITTINGS JOINTS WITH RETAINER GLANDS, OR AS REQUIRED BY THE TOWN OF DURHAM WATER DEPARTMENT STANDARDS. CONNECTION TO EXISTING WATER MAIN SHALL BE CONSTRUCTED TO THE TOWN OF DURHAM WATER DEPARTMENT STANDARDS. HYDRANTS, GATE VALVES, FITTINGS, ETC. SHALL MEET THE REQUIREMENTS OF THE TOWN OF DURHAM FIRE AND/OR WATER DEPARTMENT

ALL SEWER PIPE SHALL BE PVC SDR 35 UNLESS OTHERWISE STATED. THE CONTRACTOR SHALL MAINTAIN UTILITY SERVICES TO ABUTTING PROPERTIES THROUGHOUT CONSTRUCTION. 10. EXISTING UTILITIES TO BE REMOVED SHALL BE CAPPED AT THE MAIN AND MEET THE DEPARTMENT OF PUBLIC WORKS STANDARDS FOR CAPPING OF WATER AND SEWER SERVICES. 11. ALL ELECTRICAL MATERIAL WORKMANSHIP SHALL CONFORM TO THE NATIONAL ELECTRIC CODE, CURRENT EDITION, AND ALL APPLICABLE STATE AND LOCAL CODES. 12. THE EXACT LOCATION OF NEW UTILITY SERVICES AND CONNECTIONS SHALL BE COORDINATED WITH THE BUILDING DRAWINGS AND THE APPLICABLE UTILITY COMPANIES 13. ADJUST ALL MANHOLES, CATCH BASINS, CURB BOXES, ETC. WITHIN LIMITS OF WORK TO FINISH GRADE. 14. ALL UNDERGROUND CONDUITS SHALL HAVE NYLON PULL ROPES TO FACILITATE PULLING CABLES. . THE CONTRACTOR SHALL OBTAIN, PAY FOR, AND COMPLY WITH ALL REQUIRED PERMITS, ARRANGE FOR ALL

INSPECTIONS, AND SUBMIT COPIES OF ACCEPTANCE CERTIFICATES TO THE OWNER PRIOR TO THE COMPLETION OF THIS PROJECT. 16. 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 INSTALLATION OF UTILITIES COMPLETE AND OPERATIONAL .7. THE CONTRACTOR SHALL PROVIDE EXCAVATION, BEDDING, BACKFILL AND COMPACTION FOR NATURAL GAS SERVICES. 18. A 10-FOOT MINIMUM FDGE TO FDGE HORIZONTAL SEPARATION SHALL BE PROVIDED BETWEEN ALL WATER AND

SANITARY SEWER LINES. AN 18-INCH MINIMUM OUTSIDE TO OUTSIDE VERTICAL SEPARATION SHALL BE PROVIDED AT ALL WATER/SANITARY SEWER CROSSINGS. 19. SAW CUT AND REMOVE PAVEMENT AND CONSTRUCT PAVEMENT TRENCH PATCH FOR ALL PROPOSED UTILITIES LOCATED IN EXISTING PAVEMENT AREAS TO REMAIN. 20. COORDINATE TESTING OF SEWER CONSTRUCTION WITH THE TOWN OF DURHAM, SEWER DEPARTMENT. 1. ALL SEWER PIPE WITH LESS THAN 6' OF COVER IN PAVED AREAS OR LESS THAT 4' OF COVER IN UNPAVED AREA SHALL BE INSULATED

22. CONTRACTOR SHALL COORDINATE ALL ELECTRIC WORK INCLUDING BUT NOT LIMITED TO: CONDUIT CONSTRUCTION, MANHOLE CONSTRUCTION, UTILITY POLE CONSTRUCTION, OVERHEAD WIRE RELOCATION, AND TRANSFORMER CONSTRUCTION WITH POWER COMPANY 23. THE CONTRACTOR SHALL PHASE UTILITY CONSTRUCTION, PARTICULARLY WATER MAIN AND GAS MAIN CONSTRUCTION AS TO MAINTAIN CONTINUOUS SERVICE TO ABUTTING PROPERTIES. CONTRACTOR SHALL COORDINATE TEMPORARY SERVICES TO ABUTTERS WITH THE UTILITY COMPANY AND AFFECTED ABUTTER. 24. SITE LIGHTING SPECIFICATIONS, CONDUIT LAYOUT AND CIRCUITRY FOR PROPOSED SITE LIGHTING AND SIGN

ILLUMINATION SHALL BE PROVIDED BY THE PROJECT ELECTRICAL ENGINEER. 25. THE CONTRACTOR SHALL CONSTRUCT ALL UTILITIES AND DRAINS TO WITHIN 10' OF THE FOUNDATION WALLS AND CONNECT THESE TO SERVICE STUBS FROM THE BUILDING. 6. FINAL LOCATION OF ALL WATER METER AND VALVE SHALL BE COORDINATED WITH THE TOWN OF DURHAM WATER DEPARTMENT PRIOR TO CONSTRUCTION. 27. THE CONTRACTOR SHALL VERIFY INVERTS OF EXISTING SEWER LINES AND STRUCTURES AT PROPOSED SEWER

"TOPOGRAPHIC PLAN FOR TIGHE & BOND OF NOAA BUILDING WEST EDGE LOT UNIVERSITY OF NEW HAMPSHIRE

CONNECTION LOCATIONS PRIOR TO CONSTRUCTION AND IMMEDIATELY NOTIFY ENGINEER OF ANY DISCREPANCIES.

DURHAM, NH," PREPARED BY DOUCET SURVEY, INC., DATED AUGUST FEBRUARY 28, 2025.

AS-BUILT REQUIREMENTS 1. CONTRACTOR TO SUBMIT AS-BUILT PLANS IN DIGITAL FORMAT (.DWG AND. PDF FILES) ON DISK TO THE OWNER AND ENGINEER UPON COMPLETION OF THE PROJECT. AS-BUILT PLANS SHALL BE PREPARED AND CERTIFIED BY A NEW HAMPSHIRE LAND SURVEYOR AND SHALL INCLUDE A FULL TOPOGRAPHY SURVEY WITHIN THE LIMITS OF WORK INCLUDING BUT NOT LIMITED TO SITE TOPOGRAPHY, SITE FEATURES (BUILDINGS, ROADS, CURBS, SIDEWALKS, ETC.), STORM DRAINAGE, AND SURFACE AND SUBSURFACE

RARE AND ENDANGERED SPECIES AMERICAN BROOK LAMPREY (STATE ENDANGERED), EASTERN MEADOWLARK (STATE THREATENED), AND GRASSHOPPER SPARROW (STATE THREATENED) OCCUR WITHIN THE VICINITY OF THE PROJECT AREA, HOWEVER UPON REVIEW, NHFG HAS DETERMINED THAT THERE ARE LIKELY MINIMAL IMPACTS TO THESE SPECIES WITH THE ACTIVITIES ASSOCIATED WITH THIS PROJECT. SPOTTED TURTLE (STATE THREATENED) ALSO OCCUR WITHIN THE VICINITY OF THE PROJECT AREA AND MAY BE IMPACTED BY WITH ACTIVITIES ASSOCIATED WITH THIS PROJECT. ALL OPERATORS AND PERSONNEL WORKING ON OR ENTERING THE SITE SHALL BE MADE AWARE OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED FLYERS (SEE ATTACHED) THAT HELP TO IDENTIFY THESE SPECIES, ALONG WITH NHFG CONTACT

1.1. CONTACT NHFG WILDLIFE DIVISION (603-271-2461) OR NHFG WILDLIFE BIOLOGIST JOSH MEGYESY TURTLES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON (MAY 15TH-JULY 15TH). TURTLE NESTS ARE PROTECTED BY NH LAWS (RSA 212-B:4, FIS 1401.03). IF A NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT JOSH MEGYESY AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. SEE SPECIES FLYERS AND NHFG CONTACT INFORMATION ABOVE.

2.1. THE NEST OR SUSPECTED NEST SHALL BE MARKED (SURROUNDING ROPED OFF OR CONE BUFFER DEPLOYED) AND AVOIDED; THIS SHALL BE COMMUNICATED TOO AL PERSONNEL ONSITE. 2.2. SITE ACTIVITIES SHALL NOT OCCUR IN THE AREA SURROUNDING THE NEST OR SUSPECTED NEST UNTIL FURTHER GUIDANCE IS PROVIDED BY NHEG. ALL MANUFACTURED EROSION AND SEDIMENT CONTROL PRODUCTS, WITH THE EXCEPTION OF TURF REINFORCEMENT MATS, UTILIZED FOR, BUT NOT LIMITED TO, SLOPE PROTECTION, RUNOFF DIVERSION, SLOPE INTERRUPTION, PERIMETER CONTROL, INLET PROTECTION, CHECK DAMS, AND SEDIMENT TRAPS SHALL NOT CONTAIN PLASTIC, OR

MULTIFILAMENT OR MONOFILAMENT POLYPROPYLENE NETTING OR MESH WITH AN OPENING SIZE OF GREATER THAN

ALL OBSERVATIONS OF THREATENED OR ENDANGERED SPECIES ON THE PROJECT SITE SHALL BE REPORTED IMMEDIATELY TO THE NHFG NONGAME AND ENDANGERED WILDLIFE ENVIRONMENTAL REVIEW PROGRAM BY PHONE AT 603-271-2461 AND BY FMAIL AT NHFGREVIEW@WILDLIFE.NH.GOV. WITH THE EMAIL SUBJECT LINE CONTAINING THE NHB DATACHECK TOOL RESULTS LETTER ASSIGNED NUMBER, THE PROJECT NAME, AND THE TERM WILDLIFE SPECIES OBSERVATION. PHOTOGRAPHS OF THE OBSERVED SPECIES AND NEARBY ELEMENTS OF HABITAT OR AREAS OF LAND DISTURBANCE SHALL BE PROVIDED TO NHFG IN DIGITAL FORMAT AT THE ABOVE EMAIL ADDRESS FOR VERIFICATION,

AS FFASIBLE

IN THE EVENT A THREATENED OR ENDANGERED SPECIES IS OBSERVED ON THE PROJECT SITE DURING THE TERM OF THE PERMIT, THE SPECIES SHALL NOT BE DISTURBED, HANDLED, OR HARMED IN ANY WAY PRIOR TO CONSULTATION WITH NHFG AND IMPLEMENTATION OF CORRECTIVE ACTIONS RECOMMENDED BY NHFG. 6. NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT



# STATE ENDANGERED



Report Sightings: Contact the Inland Fisheries Division at (603) 271 - 2501. Observations can be sent to NHFGreview@wildlife.nh.gov. Photographs and exact locations are strongly encouraged.



Small, eel-like fish three to six inches. Disc shaped mouth with small teeth arranged in pairs. Unpigmented area behind nostril that's twice the size of the nostril itself.

Often confused with a juvenile Sea Lamprey. Found in the Oyster River watershed in streams and rivers with cool temperatures. Often found in meandering rivers through open wetlands. Adults build small nests and spawn around April and May. luveniles found year-round buried in



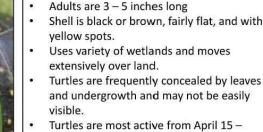
DO NOT DISTURB OR HANDLE WILDLIFE UNLESS AUTHORIZED BY NH FISH AND GAME





Report Sightings: Contact Wildlife Biologist Josh Megyesy at (603) 271 – 1125 or the Wildlife Division at (603) 271 - 2461. Observation reports can be sent to RAARP@wildlife.nh.gov. Photographs and exact locations are strongly encouraged.





During nesting season (May 15 – July 15)

October 15.

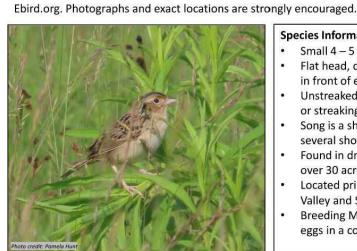




This species is protected under RSA 212-A and Fis 1000. Thank you for reporting any observations. PLEASE DO NOT DISTURB OR HANDLE WILDLIFE



Report Sightings: For environmental review projects, contact the Wildlife Division at (603) 271 -2461 or as otherwise noted in permit documents. For non-urgent reports, submit observations to



Small 4 – 5 inches long, 8-inch wingspan. Flat head, deep bill, and orange-yellow spot





This species is protected under RSA 209:8, RSA 209:10, and Fis 1000. DO NOT DISTURB OR HANDLE WILDLIFE UNLESS AUTHORIZED BY NH FISH AND GAME



Report Sightings: For environmental review projects, contact the Wildlife Division at (603) 271 -2461 or as otherwise noted in permit documents. For non-urgent reports, submit observations to



Mottled brown back with a bright yellow throat and breast. Black "V" on chest, white outer tail feathers Found in large grasslands, such as hayfields and airports. Most nesting is in the Connecticut and Merrimack valleys and near seacoast. Nesting between May and August. 2 - 7 eggs per nest, white with brown spots.

May nest more than once in a season.

9 - 10 inches long with 14 - 16 inch

wingspan, similar size as American Robin.





This species is protected under RSA 209:8, RSA 209:10, and Fis 1000. DO NOT DISTURB OR HANDLE WILDLIFE UNLESS AUTHORIZED BY NH FISH AND GAME

# **PROPOSED FEATURES**

	LIMITS OF ARCHAEOLOGICAL S
<del></del>	PROPOSED SILT SOCK
	EXISTING PAVEMENT TO BE RE
	PROPOSED STANDARD DUTY P.
	PROPOSED HEAVY DUTY PAVEN
	PROPOSED CONCRETE
	PROPOSED EXPOSED AGGREGA
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PE&C—PE&C—PE&C	PROPOSED ELECTRIC CONDUIT
PEPE	PROPOSED LIGHTING CONDUIT
PWPW	PROPOSED WATER LINE
PSPS	PROPOSED SEWER LINE
0	PROPOSED CATCH BASIN
<b>@</b>	PROPOSED DRAIN MANHOLE
Ø	PROPOSED FLARED END SECTI
<b>@</b>	PROPOSED SEWER MANHOLE
<b>T</b>	PROPOSED THRUST BLOCK
Ŏ	PROPOSED INLET PROTECTION
W/	WITH
TYP.	TYPICAL
VGC	VERTICAL GRANITE CURB
SGC	SLOPED GRANITE CURB
SSWL	STRIPED SOLID WHITE LINE
DSYL	DOUBLE SOLID YELLOW LINE
ADA	AMERICANS WITH DISABILITIE
@	AT
SF	SQUARE FEET
LF	LINEAR FEET
HDPE	HIGH DENSITY POLYETHYLENE
PVC	POLYVINYL CHLORIDE
D.I.	DUCTILE IRON
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LIMITS OF ARCHAEOLOGICAL SITE ED SILT SOCK

APPROXIMATE LIMIT OF WORK

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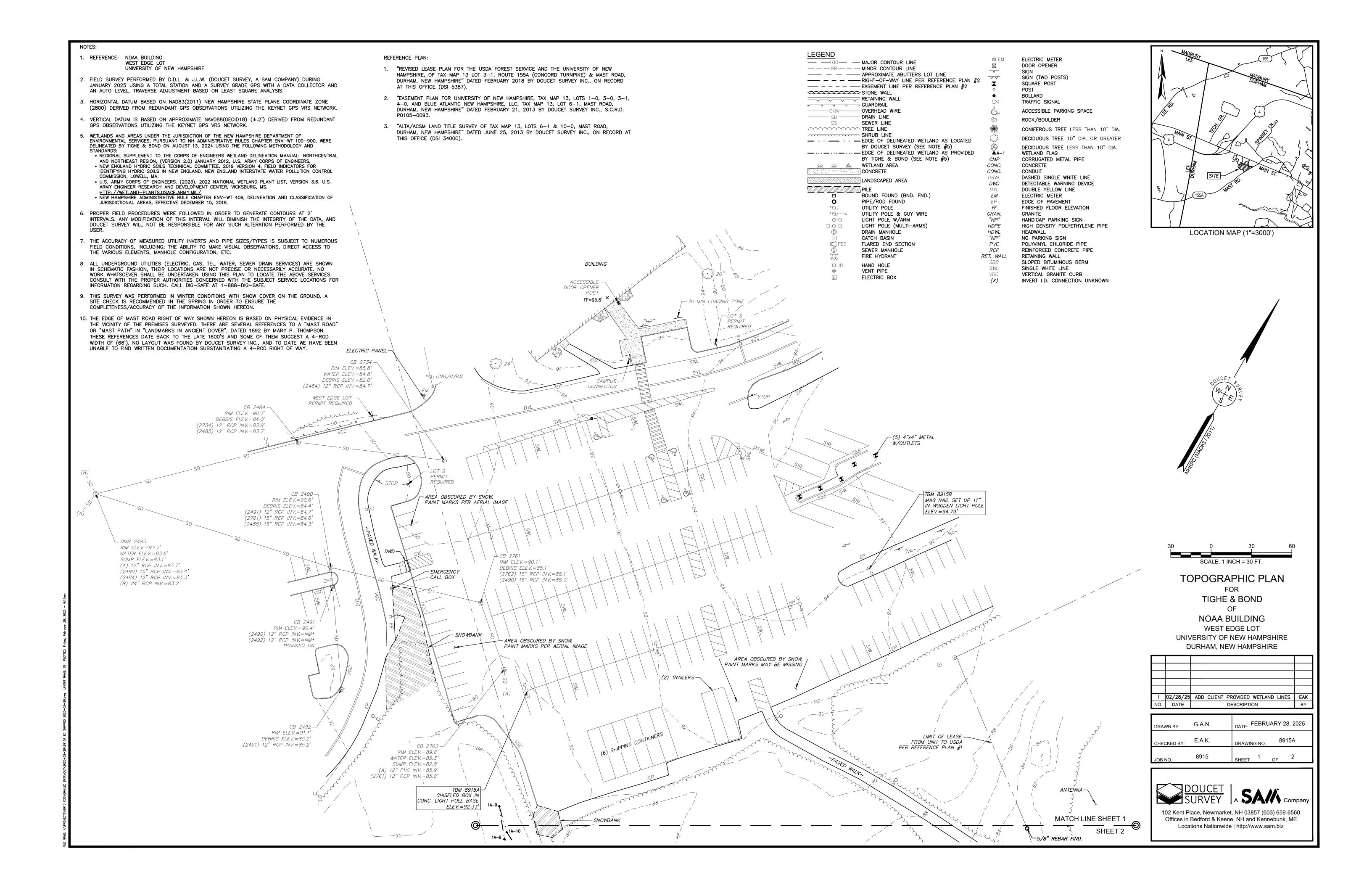
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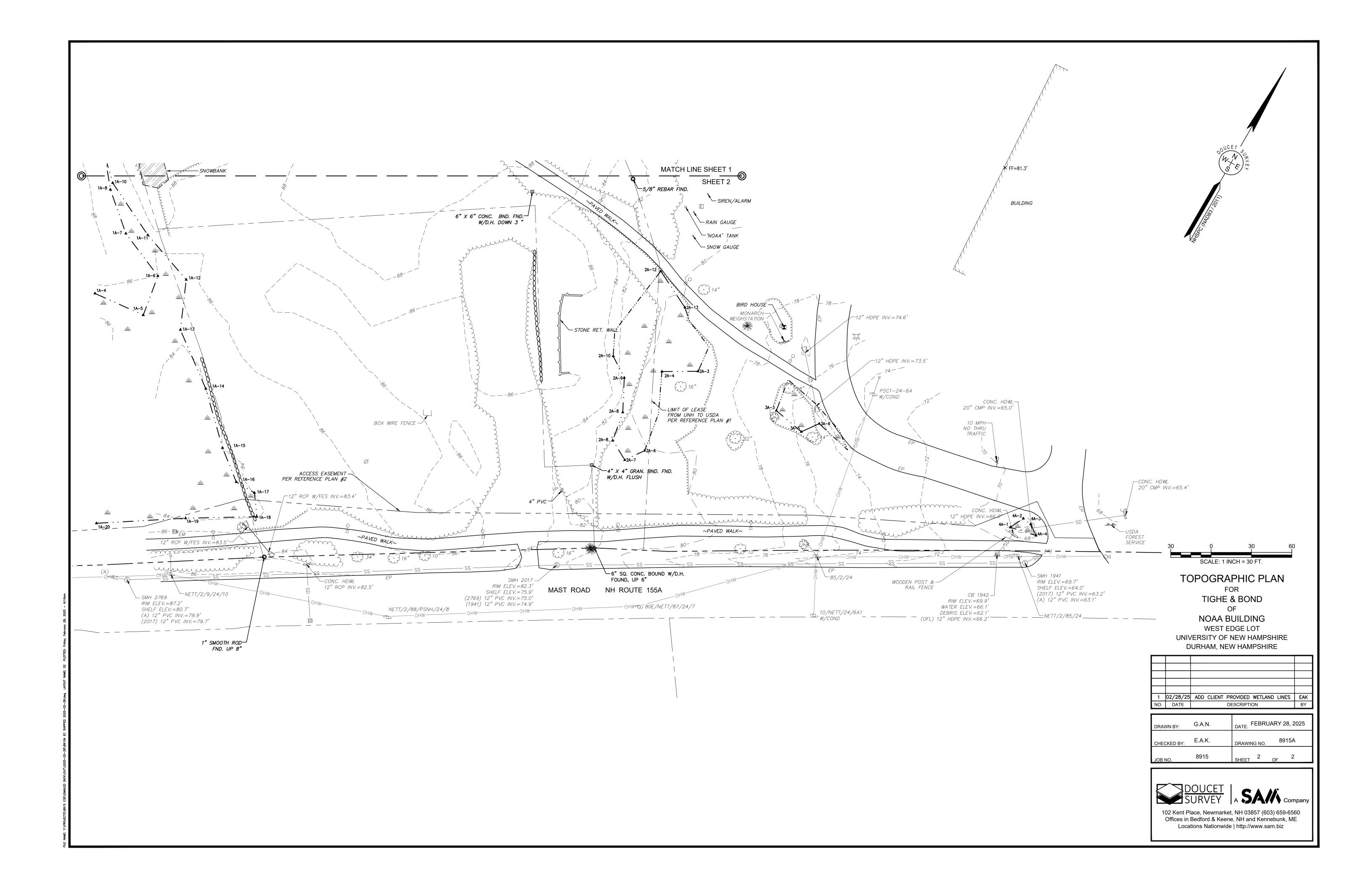
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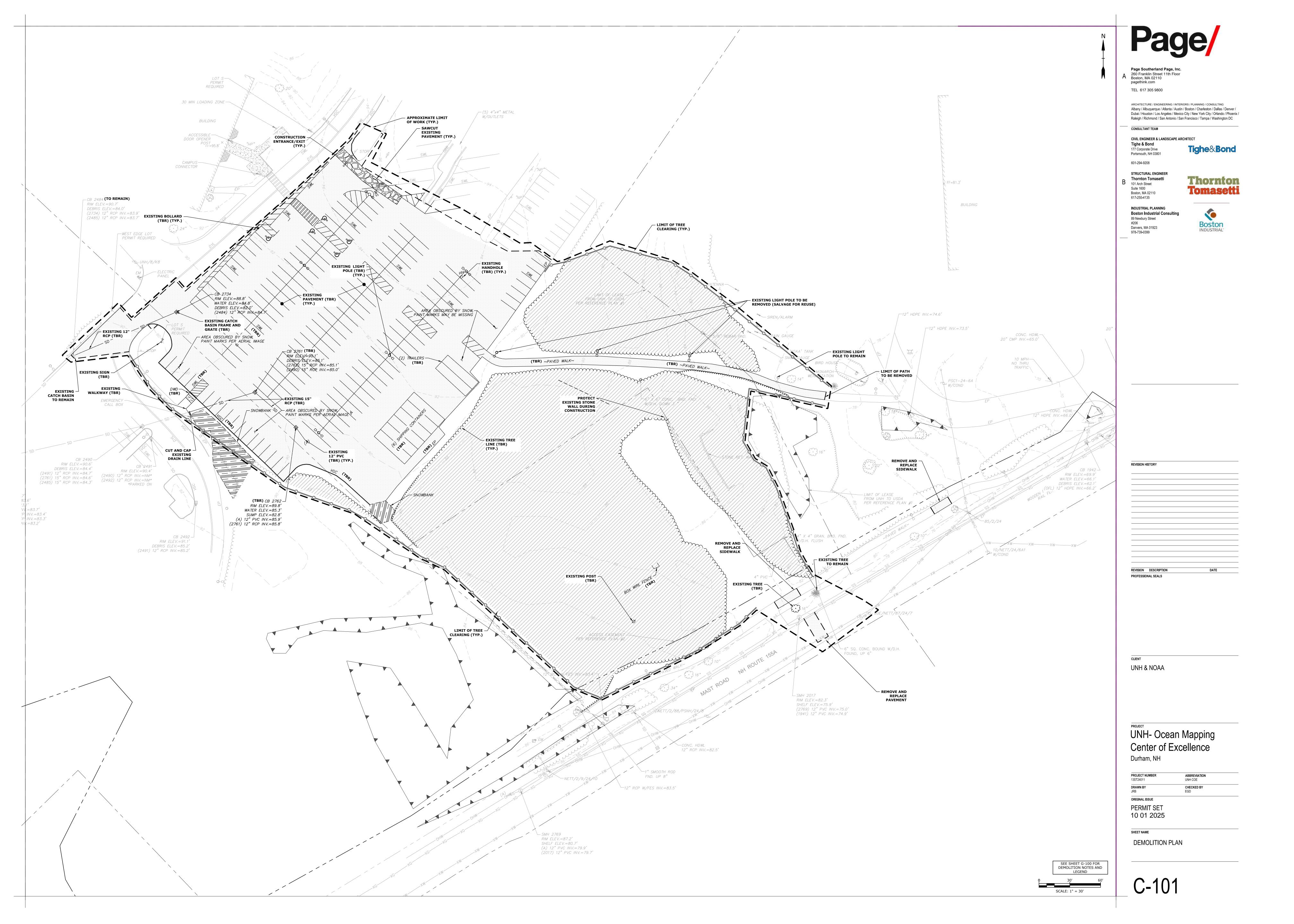
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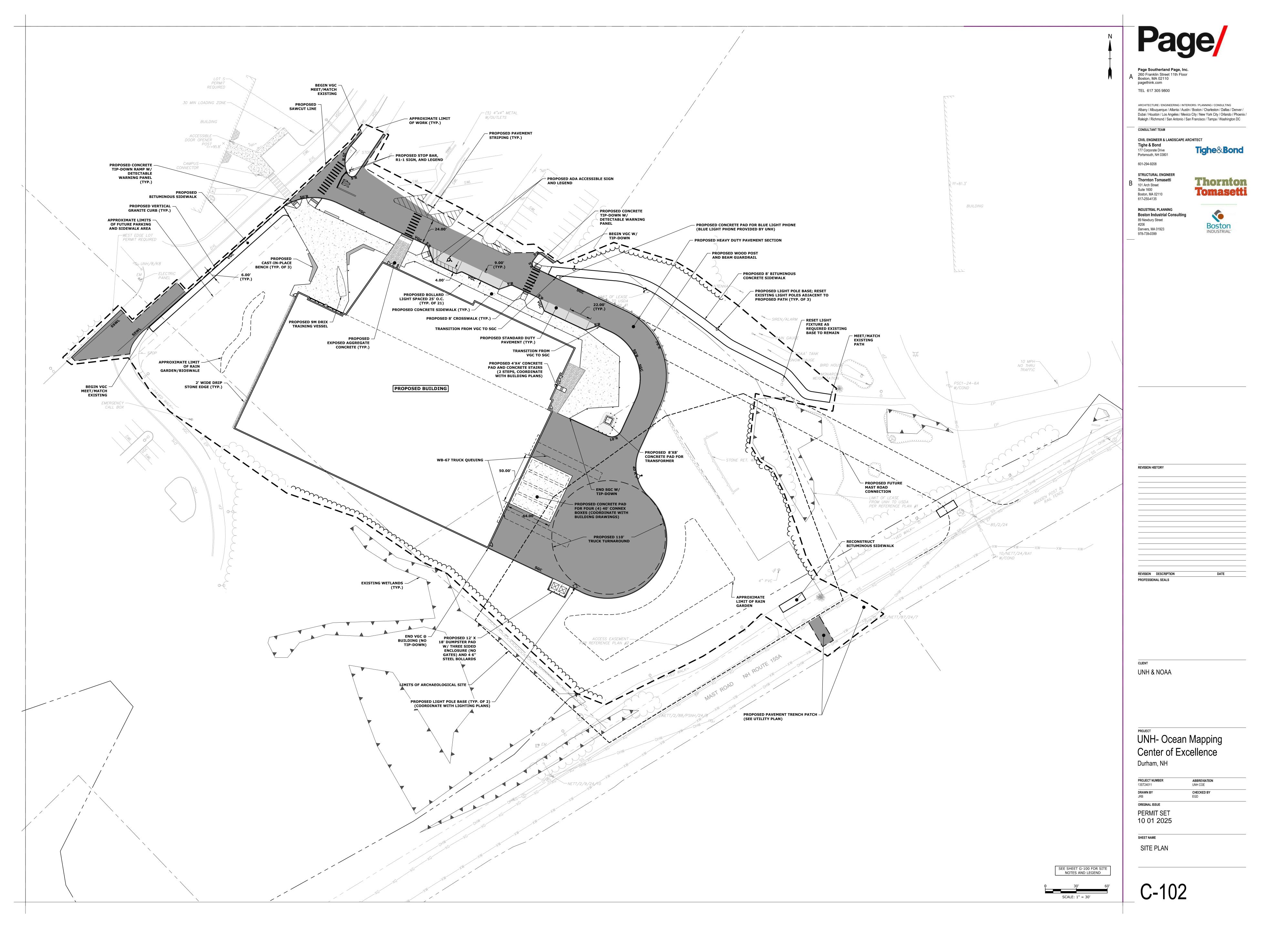
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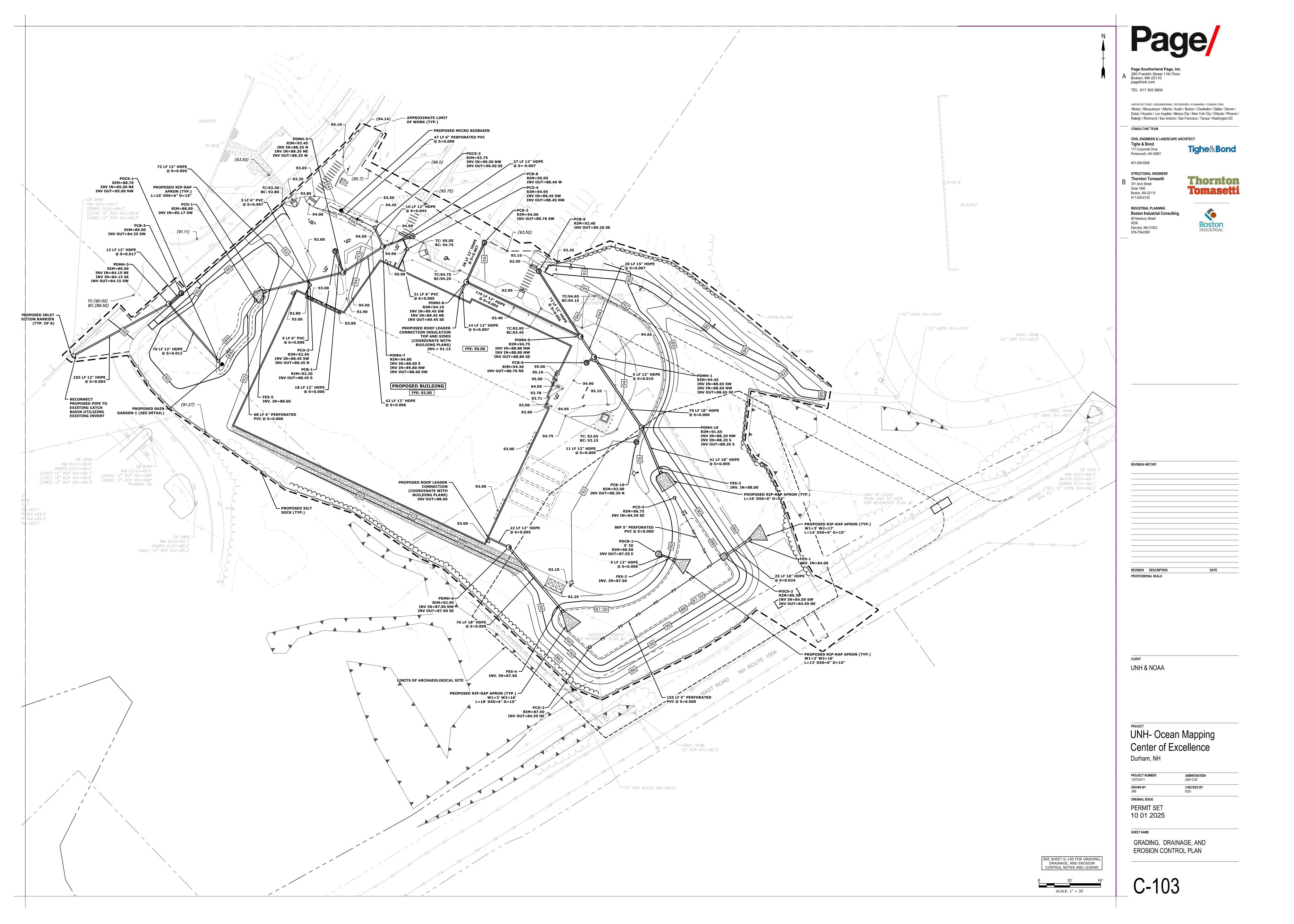
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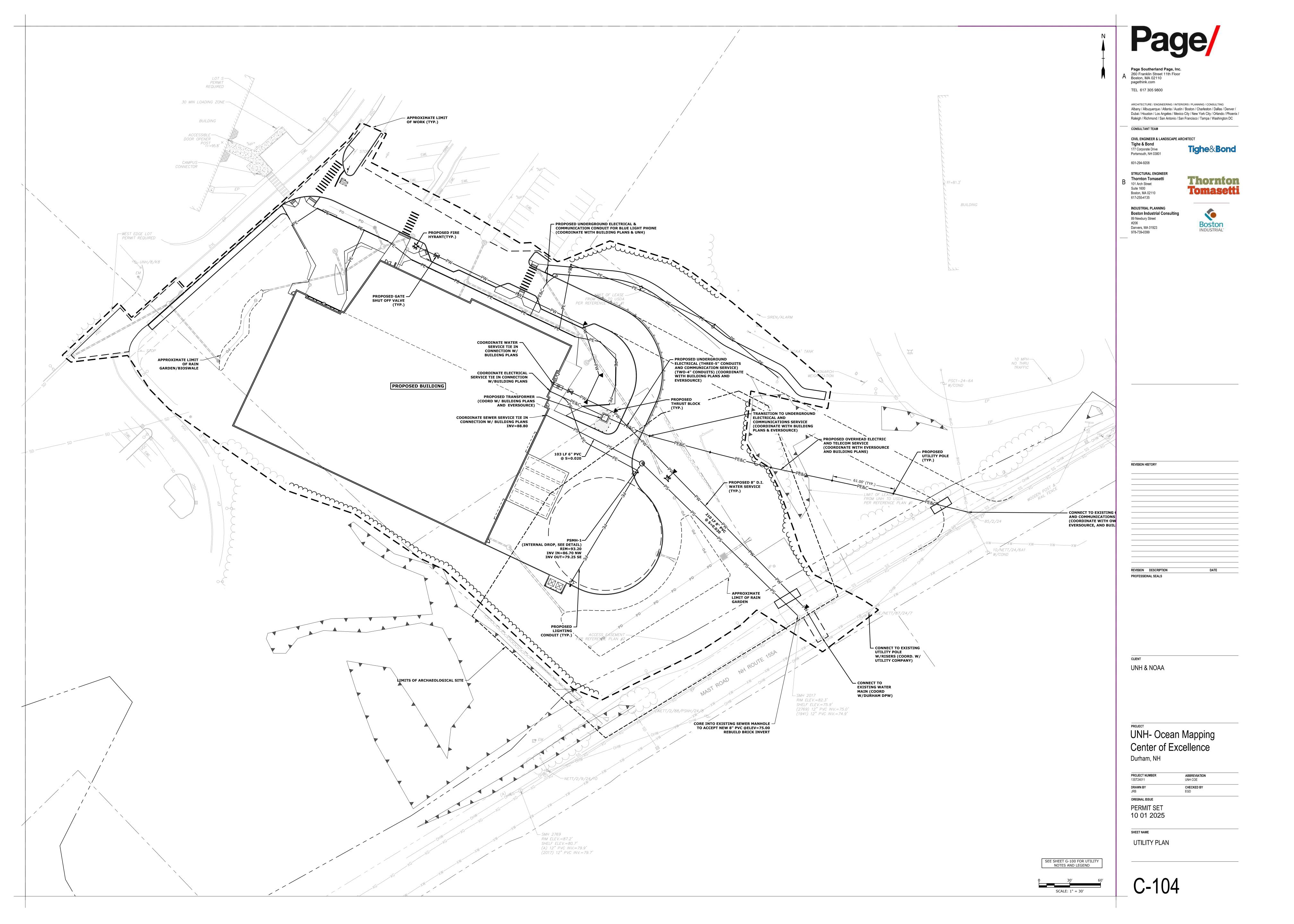












PROJECT OWNER: UNIVERSITY OF NEW HAMPSHIRE 145 MAIN STREET

DURHAM, NH 03824 PROJECT NAME: UNH NOAA CENTER OF EXCELLENCE AND UNH HIGH BAY PROJECT ADDRESS: WEST EDGE DRIVE DURHAM, NH 03824

PROJECT MAP / LOT: MAP 210 / LOT 14 PROJECT LATITUDE: 43° 08' 30"N PROJECT LONGITUDE: 70° 57' 09"W

THE PROJECT CONSISTS OF A NEW OCEAN MAPPING CENTER FOR EXCELLENCE AT THE UNIVERSITY OF NEW HAMPSHIRE. THE PROJECT WILL ALSO INCLUDE AN INNOVATION HIGH BAY FOR INDUSTRY PARTNERS.

DISTURBED AREA THE TOTAL AREA TO BE DISTURBED IS APPROXIMATELY 4.5 ACRES.

### SOIL CHARACTERISTICS

BASED ON THE USCS SITE SPECIFIC SOIL SURVEY CONDUCTED BY MIKE CUOMO, ON AUGUST 4, 2025 THE SOILS ON SITE CONSIST OF WOODBRIDGE, BOXFORD AND DEERFIELD SOILS WHICH ARE MODERATELY WELL DRAINED SOILS WITH HYDROLOGIC SOIL GROUP RATINGS OF B & C.

NAME OF RECEIVING WATERS THE STORMWATER RUNOFF FROM THE SITE WILL BE DISCHARGED VIA OVERLAND FLOW TO AN

# UNNAMED WETLAND AND ULTIMATELY FLOWS TO THE OYSTER RIVER WATER BODY.

- CONSTRUCTION SEQUENCE PLAN OF MAJOR ACTIVITIES: CONSTRUCT TEMPORARY AND PERMANENT SEDIMENT, EROSION AND DETENTION CONTROL FACILITIES. EROSION, SEDIMENT AND DETENTION MEASURES SHALL BE INSTALLED PRIOR TO STOCKPILES
- ANY EARTH MOVING OPERATIONS THAT WILL INFLUENCE STORMWATER RUNOFF SUCH AS: DISPOSAL OF SEDIMENT SPOIL, STUMP AND OTHER SOLID WASTE CONTROL OF DUST
- CONSTRUCTION PARKING AREAS INSTALLATION OF UTILITIES AND BUILDING CONSTRUCTION
- NEARNESS OF CONSTRUCTION SITE TO RECEIVING WATERS
- CONSTRUCTION DURING LATE WINTER AND EARLY SPRING 2. CUT AND CLEAR TREES. GRUBBING SHALL NOT OCCUR UNTIL AFTER THE INSTALLATION OF 4. PROTECT ALL STOCKPILES FROM STORMWATER RUN-OFF USING TEMPORARY EROSION
- 3. ALL PERMANENT DITCHES, SWALES, DETENTION, RETENTION AND SEDIMENTATION BASINS TO BE STABILIZED USING THE VEGETATIVE AND NON-STRUCTURAL BMPS PRIOR TO DIRECTING RUNOFF TO THEM. CLEAR AND DISPOSE OF DEBRIS.
- 5. CONSTRUCT TEMPORARY CULVERTS AND DIVERSION CHANNELS AS REQUIRED.
- 6. GRADE IN GRAVEL ROADWAYS AND PARKING AREAS ALL ROADS AND PARKING AREA SHALL BE STABILIZED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 7. BEGIN PERMANENT AND TEMPORARY SEEDING AND MULCHING. ALL CUT AND FILL SLOPES SHALL BE SEEDED AND MULCHED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 8. DAILY, OR AS REQUIRED, CONSTRUCT TEMPORARY BERMS, DRAINS, DITCHES, PERIMETER EROSION CONTROL MEASURES, SEDIMENT TRAPS, ETC., MULCH AND SEED AS REQUIRED.
- 9. SEDIMENT TRAPS AND/OR BASINS SHALL BE USED AS NECESSARY TO CONTAIN RUNOFF UNTIL SOILS ARE STABILIZED. 10. FINISH PAVING ALL ROADWAYS AND PARKING LOTS.
- 11. INSPECT AND MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES.
- 12. COMPLETE PERMANENT SEEDING AND LANDSCAPING 13. REMOVE TRAPPED SEDIMENTS FROM COLLECTOR DEVICES AS APPROPRIATE AND THEN REMOVE TEMPORARY EROSION CONTROL MEASURES.

- THE CONSTRUCTION SEQUENCE MUST LIMIT THE DURATION AND AREA OF DISTURBANCE, AT
  - THE SMALLEST PRACTICAL AREA SHALL BE DISTURBED DURING CONSTRUCTION, BUT IN NO CASE SHALL EXCEED FIVE (5) ACRES AT ANY ONE TIME BEFORE DISTURBED AREAS ARE STABILIZED.
- 2. THE PROJECT IS TO BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES. LOT DISTURBANCE, OTHER THAN THAT SHOWN ON THE APPROVED PLANS, SHALL NOT COMMENCE UNTIL AFTER THE ROADWAY HAS THE BASE COURSE TO DESIGN ELEVATION AND THE ASSOCIATED DRAINAGE IS COMPLETE AND STABLE. - THIS NOTE IS APPLICABLE TO

### **EROSION CONTROL NOTES:**

ALL EROSION CONTROL MEASURES AND PRACTICES SHALL CONFORM TO THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3: EROSION AND SEDIMENT CONTROLS DURING CONSTRUCTION" PREPARED BY THE NHDES.

SINGLE/DUPLEX FAMILY SUBDIVISIONS, WHEN LOT DEVELOPMENT IS NOT PART OF THE

- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR ALL EROSION AND SEDIMENT CONTROL MEASURES FOR APPROVAL.
- AS THE FIRST ORDER OF WORK, PRIOR TO ANY EARTH DISTURBANCE, THE CONTRACTOR SHALL INSTALL ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BUT NOT LIMITED TO; INLET PROTECTION BARRIERS, SILT SOCKS, SILT FENCES, MULCH
- BERMS, AND STABILIZED CONSTRUCTION EXITS AS SHOWN ON THE DRAWINGS, AND AS REQUIRED BY ALL STATE AND LOCAL PERMITS AND APPROVALS. 4. INLET PROTECTION BARRIERS SHALL BE INSTALLED AT ALL EXISTING AND PROPOSED CATCH BASINS/CURB INLETS AND YARD DRAINS WITHIN THE LIMITS OF WORK AS WELL AS ANY CATCH BASINS/CURB INLETS AND YARD DRAINS THAT RECEIVE RUNOFF FROM ANY
- CONSTRUCTION ACTIVITIES. THESE MEASURES SHALL BE FULLY MAINTAINED FOR THE DURATION OF THE PROJECT 5. PERIMETER CONTROLS INCLUDING SILT FENCES, MULCH BERM, SILT SOCK, AND/OR HAY BALE
- BARRIERS SHALL BE MAINTAINED FOR THE DURATION OF THE PROJECT UNTIL ALL NON-PAVED
- CONTRACTOR SHALL INSTALL EROSION CONTROL BLANKETS ON ALL STEEP SLOPE AREA (3:1
- 7. DURING CONSTRUCTION THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLING DUST AND WIND EROSION THROUGHOUT THE CONSTRUCTION PERIOD. DUST CONTROL MEASURES INCLUDE, BUT NOT LIMITED TO; MOISTEN EXPOSED SOIL SURFACES PERIODICALLY WITH ADEQUATE WATER TO CONTROL DUST, MECHANICAL SWEEPERS ON PAVED SURFACES, AND COVERING SURFACES WITH CRUSHED STONE OR COARSE GRAVEL
- THE CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES CLUDING, BUT NOT LIMITED TO, INLET PROTECTION BARRIERS, PERIMETER SEDIMENT CONTROLS, AND STEEP SLOPE EROSION CONTROL BLANKETS INSPECTED BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE ADJUSTED, REPAIRED, <u>DIFIED, OR ADDITIONAL MEASURES INSTALLED AS NECESSARY TO ADDRESS EVOLVING</u>
- 9. SEDIMENT CONTROL FILTER MEASURES SHALL BE REPLACED WHEN SEDIMENT REACHES 1/3 THE HEIGHT OF THE FILTER.
- 10. THE CONTRACTOR SHALL REMOVE AND PROPERLY DISPOSE OF ALL TEMPORARY EROSION CONTROL DEVICES UPON COMPLETION OF CONSTRUCTION.
- 11. ALL DISTURBED AREAS NOT OTHERWISE BEING TREATED SHALL RECEIVE 6" LOAM, SEED AND 3. CONTRACTOR SHALL LOCATE WASHOUT AREAS AT LEAST 150 FEET AWAY FROM STORM

# EROSION CONTROL OBSERVATIONS AND MAINTENANCE PRACTICES

- THIS PROJECT EXCEEDS ONE (1) ACRE OF DISTURBANCE AND THUS REQUIRES A STORM WATER POLLUTION PREVENTION PLAN (SWPPP). THE SWPPP SHALL BE PREPARED BY TIGHE & ALLOWABLE NON-STORMWATER DISCHARGES: BOND. THE CONTRACTOR SHALL BE FAMILIAR WITH THE SWPPP AND KEEP AN UPDATED COPY OF THE SWPPP ONSITE AT ALL TIMES.
- 2. THE FOLLOWING REPRESENTS THE GENERAL OBSERVATION AND REPORTING PRACTICES THAT SHALL BE FOLLOWED AS PART OF A SWPPP:
- A. OBSERVATIONS OF THE PROJECT FOR COMPLIANCE WITH THE SWPPP SHALL BE MADE BY A QUALIFIED PERSON AT LEAST ONCE A WEEK OR WITHIN 24 HOURS AFTER A RAIN EVENT OF 0.25 INCHES OR GREATER;
- B. AN OBSERVATION REPORT SHALL BE MADE AFTER EACH OBSERVATION AND DISTRIBUTED TO THE ENGINEER, THE OWNER, AND THE CONTRACTOR;
- C. A REPRESENTATIVE OF THE SITE CONTRACTOR, SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIR ACTIVITIES
- D. IF A REPAIR IS NECESSARY, IT SHALL BE INITIATED WITHIN 24 HOURS OF REPORT

- AN AREA SHALL BE CONSIDERED STABLE WHEN ONE OF THE FOLLOWING HAS OCCURRED: A. BASE COURSE GRAVELS HAVE BEEN INSTALLED IN AREAS TO BE PAVED; a. IN AREAS TO BE PAVED, "STABLE" MEANS THAT BASE COURSE GRAVELS MEETING THE REQUIREMENTS OF NHDOT STANDARD FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION, ITEM 304.2 HAVE BEEN INSTALLED
- B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED; C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIPRAP HAS BEEN
- D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED. 2. WINTER STABILIZATION PRACTICES:
- A. ALL PROPOSED VEGETATED AREAS THAT DO NOT 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 3. SANITARY WASTE: 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;
- B. 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;
- C. AFTER OCTOBER 15, INCOMPLETE ROAD OR PARKING SURFACES, WHERE WORK HAS STOPPED FOR THE WINTER SEASON, SHALL BE PROTECTED WITH A MINIMUM OF 3 INCHES OF CRUSHED GRAVEL PER NHDOT ITEM 304.3, OR IF CONSTRUCTION IS TO CONTINUE THROUGH THE WINTER SEASON BE CLEARED OF ANY ACCUMULATED SNOW AFTER EACH STORM EVENT:

- STABILIZATION SHALL BE INITIATED ON ALL LOAM STOCKPILES, AND DISTURBED AREAS, WHERE CONSTRUCTION ACTIVITY SHALL NOT OCCUR FOR MORE THAN TWENTY-ONE (21) CALENDAR DAYS BY THE FOURTEENTH (14TH) DAY AFTER CONSTRUCTION ACTIVITY HAS PERMANENTLY OR TEMPORARILY CEASED IN THAT AREA. STABILIZATION MEASURES TO BE USED INCLUDE: A. TEMPORARY SEEDING:
- B. MULCHING. 4. ALL AREAS SHALL BE STABILIZED WITHIN 45 DAYS OF INITIAL DISTURBANCE 5. WHEN CONSTRUCTION ACTIVITY PERMANENTLY OR TEMPORARILY CEASES WITHIN 100 FEET OF NEARBY SURFACE WATERS OR DELINEATED WETLANDS, THE AREA SHALL BE STABILIZED WITHIN SEVEN (7) DAYS OR PRIOR TO A RAIN EVENT. ONCE CONSTRUCTION ACTIVITY CEASES PERMANENTLY IN AN THESE AREAS, SILT FENCES, MULCH BERMS, HAY BALE BARRIERS AND ANY EARTH/DIKES SHALL BE REMOVED ONCE PERMANENT MEASURES ARE
- 6. DURING CONSTRUCTION, RUNOFF WILL BE DIVERTED AROUND THE SITE WITH EARTH DIKES, PIPING OR STABILIZED CHANNELS WHERE POSSIBLE. SHEET RUNOFF FROM THE SITE WILL BE FILTERED THROUGH SILT FENCES, MULCH BERMS, HAY BALE BARRIERS, OR SILT SOCKS. ALL STORM DRAIN BASIN INLETS SHALL BE PROVIDED WITH FLARED END SECTIONS AND TRASH RACKS. THE SITE SHALL BE STABILIZED FOR THE WINTER BY OCTOBER 15.

THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTROL DUST THROUGHOUT THE

- CONSTRUCTION PERIOD. 2. DUST CONTROL METHODS SHALL INCLUDE, BUT BE NOT LIMITED TO SPRINKLING WATER ON EXPOSED AREAS, COVERING LOADED DUMP TRUCKS LEAVING THE SITE, AND TEMPORARY
- 3. DUST CONTROL MEASURES SHALL BE UTILIZED SO AS TO PREVENT THE MIGRATION OF DUST FROM THE SITE TO ABUTTING AREAS.

- LOCATE STOCKPILES A MINIMUM OF 50 FEET AWAY FROM CATCH BASINS, SWALES, AND
- 2. ALL STOCKPILES SHOULD BE SURROUNDED WITH TEMPORARY EROSION CONTROL MEASURES PRIOR TO THE ONSET OF PRECIPITATION. 3. PERIMETER BARRIERS SHOULD BE MAINTAINED AT ALL TIMES, AND ADJUSTED AS NEEDED TO
- ACCOMMODATE THE DELIVERY AND REMOVAL OF MATERIALS FROM THE STOCKPILE. THE INTEGRITY OF THE BARRIER SHOULD BE INSPECTED AT THE END OF EACH WORKING DAY
- CONTROL MEASURES SUCH AS BERMS, SILT SOCK, OR OTHER APPROVED PRACTICE TO PREVENT MIGRATION OF MATERIAL BEYOND THE IMMEDIATE CONFINES OF THE STOCKPILES.

### . THE CONTRACTOR SHALL CONSTRUCT STABILIZED CONSTRUCTION ENTRANCE(S) PRIOR TO ANY EXCAVATION ACTIVITIES.

### TEMPORARY GRASS COVER: A. SEEDBED PREPARATION

- a. APPLY FERTILIZER AT THE RATE OF 600 POUNDS PER ACRE OF 10-10-10. APPLY LIMESTONE (EQUIVALENT TO 50 PERCENT CALCIUM PLUS MAGNESIUM OXIDE) AT A RATE OF THREE (3) TONS PER ACRE;
- a. UTILIZE ANNUAL RYE GRASS AT A RATE OF 40 LBS/ACRE;
- b. WHERE THE SOIL HAS BEEN COMPACTED BY CONSTRUCTION OPERATIONS, LOOSEN SOIL TO A DEPTH OF TWO (2) INCHES BEFORE APPLYING FERTILIZER, LIME AND
- c. APPLY SEED UNIFORMLY BY HAND, CYCLONE SEEDER, OR HYDROSEEDER (SLURRY INCLUDING SEED AND FERTILIZER). HYDROSEEDINGS, WHICH INCLUDE MULCH, MAY BE LEFT ON SOIL SURFACE. SEEDING RATES MUST BE INCREASED 10% WHEN HYDROSEEDING;
- C. MAINTENANCE: TEMPORARY SEEDING SHALL BE PERIODICALLY INSPECTED. AT A MINIMUM, 95% OF THE SOIL SURFACE SHOULD BE COVERED BY VEGETATION. IF ANY EVIDENCE OF EROSION OR SEDIMENTATION IS APPARENT, REPAIRS SHALL BE MADE AND OTHER TEMPORARY MEASURES USED IN THE INTERIM (MULCH, FILTER BARRIERS, CHECK DAMS, ETC.).
- PERMANENT MEASURES AND PLANTINGS: A. LIMESTONE SHALL BE THOROUGHLY INCORPORATED INTO THE LOAM LAYER AT A RATE OF
- THREE (3) TONS PER ACRE IN ORDER TO PROVIDE A PH VALUE OF 5.5 TO 6.5; B. FERTILIZER SHALL BE SPREAD ON THE TOP LAYER OF LOAM AND WORKED INTO THE SURFACE. FERTILIZER APPLICATION RATE SHALL BE 800 POUNDS PER ACRE OF 10-20-20
- C. SOIL CONDITIONERS AND FERTILIZER SHALL BE APPLIED AT THE RECOMMENDED RATES AND SHALL BE THOROUGHLY WORKED INTO THE LOAM. LOAM SHALL BE RAKED UNTIL THE SURFACE IS FINELY PULVERIZED, SMOOTH AND EVEN, AND THEN COMPACTED TO AN EVEN SURFACE CONFORMING TO THE REQUIRED LINES AND GRADES WITH APPROVED
- ROLLERS WEIGHING BETWEEN 4-1/2 POUNDS AND 5-1/2 POUNDS PER INCH OF WIDTH, D. SEED SHALL BE SOWN AT THE RATE SHOWN BELOW. SOWING SHALL BE DONE ON A CALM, DRY DAY, PREFERABLY BY MACHINE, BUT IF BY HAND, ONLY BY EXPERIENCED WORKMEN. IMMEDIATELY BEFORE SEEDING, THE SOIL SHALL BE LIGHTLY RAKED. ONE HALF THE SEED SHALL BE SOWN IN ONE DIRECTION AND THE OTHER HALF AT RIGHT ANGLES TO THE ORIGINAL DIRECTION. IT SHALL BE LIGHTLY RAKED INTO THE SOIL TO A DEPTH NOT OVER 1/4 INCH AND ROLLED WITH A HAND ROLLER WEIGHING NOT OVER 100 POUNDS PER LINEAR FOOT OF WIDTH;
- HAY MULCH SHALL BE APPLIED IMMEDIATELY AFTER SEEDING AS INDICATED ABOVE; F. THE SURFACE SHALL BE WATERED AND KEPT MOIST WITH A FINE SPRAY AS REQUIRED, WITHOUT WASHING AWAY THE SOIL, UNTIL THE GRASS IS WELL ESTABLISHED. ANY AREAS WHICH ARE NOT SATISFACTORILY COVERED WITH GRASS SHALL BE RESEEDED, AND ALL NOXIOUS WEEDS REMOVED;
- G. THE CONTRACTOR SHALL PROTECT AND MAINTAIN THE SEEDED AREAS UNTIL ACCEPTED; H. A GRASS SEED MIXTURE CONTAINING THE FOLLOWING SEED REQUIREMENTS SHALL BE APPLIED AT THE INDICATED RATE:
  - APPLICATION RATE CREEPING RED FESCUE 20 LBS/ACRE TALL FESCUE 20 LBS/ACRE 2 LBS/ACRE
- IN NO CASE SHALL THE WEED CONTENT EXCEED ONE (1) PERCENT BY WEIGHT. ALL SEED SHALL COMPLY WITH STATE AND FEDERAL SEED LAWS. SEEDING SHALL BE DONE NO LATER THAN SEPTEMBER 15. IN NO CASE SHALL SEEDING TAKE PLACE OVER SNOW. 3. DORMANT SEEDING (SEPTEMBER 15 TO FIRST SNOWFALL) A. FOLLOW PERMANENT MEASURES SLOPE, LIME, FERTILIZER AND GRADING
- REQUIREMENTS. APPLY SEED MIXTURE AT TWICE THE INDICATED RATE. APPLY MULCH AS INDICATED FOR PERMANENT MEASURES.

# THE CONCRETE DELIVERY TRUCKS SHALL, WHENEVER POSSIBLE, USE WASHOUT FACILITIES

- AT THEIR OWN PLANT OR DISPATCH FACILITY; 2. IF IT IS NECESSARY, SITE CONTRACTOR SHALL DESIGNATE SPECIFIC WASHOUT AREAS AND DESIGN FACILITIES TO HANDLE ANTICIPATED WASHOUT WATER;
- DRAINS, SWALES AND SURFACE WATERS OR DELINEATED WETLANDS;
- 4. INSPECT WASHOUT FACILITIES DAILY TO DETECT LEAKS OR TEARS AND TO IDENTIFY WHEN
- MATERIALS NEED TO BE REMOVED.

# THE FOLLOWING ARE THE ONLY STORMWATER DISCHARGES ALLOWED. ALL OTHER

- NON-STORMWATER DISCHARGES ARE PROHIBITED ON SITE: A. FIRE-FIGHTING ACTIVITIES;
- 3. FIRE HYDRANT FLUSHING;
- C. WATERS USED TO WASH VEHICLES WHERE DETERGENTS ARE NOT USED; D. WATER USED TO CONTROL DUST;
- POTABLE WATER INCLUDING UNCONTAMINATED WATER LINE FLUSHING;
- ROUTINE EXTERNAL BUILDING WASH DOWN WHERE DETERGENTS ARE NOT USED; G. PAVEMENT WASH WATERS WHERE DETERGENTS ARE NOT USED;
- H. UNCONTAMINATED AIR CONDITIONING/COMPRESSOR CONDENSATION; UNCONTAMINATED GROUND WATER OR SPRING WATER;
- FOUNDATION OR FOOTING DRAINS WHICH ARE UNCONTAMINATED;
- K. UNCONTAMINATED EXCAVATION DEWATERING; L. LANDSCAPE IRRIGATION.

# **WASTE DISPOSAL**

- A. ALL WASTE MATERIALS SHALL BE COLLECTED AND STORED IN SECURELY LIDDED RECEPTACLES. ALL TRASH AND CONSTRUCTION DEBRIS FROM THE SITE SHALL BE DEPOSITED IN A DUMPSTER;
- B. NO CONSTRUCTION WASTE MATERIALS SHALL BE BURIED ON SITE; C. ALL PERSONNEL SHALL BE INSTRUCTED REGARDING THE CORRECT PROCEDURE FOR WASTE DISPOSAL BY THE SUPERINTENDENT. 2. HAZARDOUS WASTE:
- A. ALL HAZARDOUS WASTE MATERIALS SHALL BE DISPOSED OF IN THE MANNER SPECIFIED BY LOCAL OR STATE REGULATION OR BY THE MANUFACTURER: B. SITE PERSONNEL SHALL BE INSTRUCTED IN THESE PRACTICES BY THE SUPERINTENDENT.
- A. ALL SANITARY WASTE SHALL BE COLLECTED FROM THE PORTABLE UNITS A MINIMUM OF ONCE PER WEEK BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR.
- CONTRACTOR SHALL BE FAMILIAR WITH SPILL PREVENTION MEASURES REQUIRED BY ALL LOCAL, STATE AND FEDERAL REGULATIONS, AT A MINIMUM, CONTRACTOR SHALL FOLLOW THE BEST MANAGEMENT SPILL PREVENTION PRACTICES OUTLINED BELOW. 2. THE FOLLOWING ARE THE MATERIAL MANAGEMENT PRACTICES THAT SHALL BE USED TO
- REDUCE THE RISK OF SPILLS OR OTHER ACCIDENTAL EXPOSURE OF MATERIALS AND SUBSTANCES DURING CONSTRUCTION TO STORMWATER RUNOFF: A. GOOD HOUSEKEEPING - THE FOLLOWING GOOD HOUSEKEEPING PRACTICE SHALL BE FOLLOWED ON SITE DURING CONSTRUCTION:

- a. ONLY SUFFICIENT AMOUNTS OF PRODUCTS TO DO THE JOB SHALL BE STORED ON
- b. ALL REGULATED MATERIALS STORED ON SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER IN THEIR PROPER (ORIGINAL IF POSSIBLE) CONTAINERS AND, IF POSSIBLE,
- UNDER A ROOF OR OTHER ENCLOSURE, ON AN IMPERVIOUS SURFACE; c. MANUFACTURER'S RECOMMENDATIONS FOR PROPER USE AND DISPOSAL SHALL BE
- d. THE SITE SUPERINTENDENT SHALL INSPECT DAILY TO ENSURE PROPER USE AND DISPOSAL OF MATERIALS;
- e. SUBSTANCES SHALL NOT BE MIXED WITH ONE ANOTHER UNLESS RECOMMENDED BY THE MANUFACTURER;
- f. WHENEVER POSSIBLE ALL OF A PRODUCT SHALL BE USED UP BEFORE DISPOSING OF THE CONTAINER.
- g. THE TRAINING OF ON-SITE EMPLOYEES AND THE ON-SITE POSTING OF RELEASE RESPONSE INFORMATION DESCRIBING WHAT TO DO IN THE EVENT OF A SPILL OF
- REGULATED SUBSTANCES. HAZARDOUS PRODUCTS - THE FOLLOWING PRACTICES SHALL BE USED TO REDUCE THE
- RISKS ASSOCIATED WITH HAZARDOUS MATERIALS: a. PRODUCTS SHALL BE KEPT IN THEIR ORIGINAL CONTAINERS UNLESS THEY ARE NOT
- b. ORIGINAL LABELS AND MATERIAL SAFETY DATA SHALL BE RETAINED FOR IMPORTANT PRODUCT INFORMATION; c. SURPLUS PRODUCT THAT MUST BE DISPOSED OF SHALL BE DISCARDED ACCORDING
- TO THE MANUFACTURER'S RECOMMENDED METHODS OF DISPOSAL. PRODUCT SPECIFIC PRACTICES - THE FOLLOWING PRODUCT SPECIFIC PRACTICES SHALL BE FOLLOWED ON SITE:

SECURE FUEL STORAGE AREAS AGAINST UNAUTHORIZED ENTRY;

SUBSTANCES CLOSED AND SEALED

- a. PETROLEUM PRODUCTS: ALL ON SITE VEHICLES SHALL BE MONITORED FOR LEAKS AND RECEIVE REGULAR PREVENTIVE MAINTENANCE TO REDUCE LEAKAGE;
- PETROLEUM PRODUCTS SHALL BE STORED IN TIGHTLY SEALED CONTAINERS WHICH ARE CLEARLY LABELED. ANY ASPHALT BASED SUBSTANCES USED ON SITE SHALL BE APPLIED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
- INSPECT FUEL STORAGE AREAS WEEKLY; WHEREVER POSSIBLE, KEEP REGULATED CONTAINERS THAT ARE STORED OUTSIDE MORE THAN 50 FEET FROM SURFACE WATER AND STORM DRAINS, 75 FEET FROM
- PRIVATE WELLS, AND 400 FEET FROM PUBLIC WELLS; COVER REGULATED CONTAINERS IN OUTSIDE STORAGE AREAS; SECONDARY CONTAINMENT IS REQUIRED FOR CONTAINERS CONTAINING
- REGULATED SUBSTANCES STORED OUTSIDE, EXCEPT FOR ON PREMISE USE HEATING FUEL TANKS, OR ABOVEGROUND OR UNDERGROUND STORAGE TANKS OTHERWISE REGULATED.
- THE FUEL HANDLING REQUIREMENTS SHALL INCLUDE: (1) EXCEPT WHEN IN USE, KEEP CONTAINERS CONTAINING REGULATED
- (2) PLACE DRIP PANS UNDER SPIGOTS, VALVES, AND PUMPS; (3) HAVE SPILL CONTROL AND CONTAINMENT EQUIPMENT READILY AVAILABLE IN ALL WORK AREAS;
- (4) USE FUNNELS AND DRIP PANS WHEN TRANSFERRING REGULATED SUBSTANCES; (5) PERFORM TRANSFERS OF REGULATED SUBSTANCES OVER AN IMPERVIOUS SURFACE. • FUELING AND MAINTENANCE OF EXCAVATION, EARTHMOVING AND OTHER
- CONSTRUCTION RELATED EQUIPMENT SHALL COMPLY WITH THE REGULATIONS OF THE NEW HAMPSHIRE DEPARTMENT OF ENVIRONMENTAL SERVICES THESE REQUIREMENTS ARE SUMMARIZED IN WD-DWGB-22-6 BEST MANAGEMENT PRACTICES FOR FUELING AND MAINTENANCE OF EXCAVATION AND EARTHMOVING EQUIPMENT, OR ITS SUCCESSOR DOCUMENT.
- https://www.des.nh.gov/sites/g/files/ehbemt341/files/documents/2020-01/dwgb-22-6.pdf b. FERTILIZERS:
- FERTILIZERS USED SHALL BE APPLIED ONLY IN THE MINIMUM AMOUNTS DIRECTED BY THE SPECIFICATIONS; ONCE APPLIED FERTILIZER SHALL BE WORKED INTO THE SOIL TO LIMIT EXPOSURE
- TO STORMWATER; • STORAGE SHALL BE IN A COVERED SHED OR ENCLOSED TRAILERS. THE CONTENTS OF ANY PARTIALLY USED BAGS OF FERTILIZER SHALL BE TRANSFERRED TO A
- SEALABLE PLASTIC BIN TO AVOID SPILLS. PAINTS: ALL CONTAINERS SHALL BE TIGHTLY SEALED AND STORED WHEN NOT REQUIRED
- FOR USE; EXCESS PAINT SHALL NOT BE DISCHARGED TO THE STORM SEWER SYSTEM; EXCESS PAINT SHALL BE DISPOSED OF PROPERLY ACCORDING TO
- MANUFACTURER'S INSTRUCTIONS OR STATE AND LOCAL REGULATIONS. D. SPILL CONTROL PRACTICES - IN ADDITION TO GOOD HOUSEKEEPING AND MATERIAL MANAGEMENT PRACTICES DISCUSSED IN THE PREVIOUS SECTION, THE FOLLOWING PRACTICES SHALL BE FOLLOWED FOR SPILL PREVENTION AND CLEANUP:
- MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE CLEARLY POSTED AND SITE PERSONNEL SHALL BE MADE AWARE OF THE PROCEDURES AND THE LOCATION OF THE INFORMATION AND CLEANUP SUPPLIES; b. MATERIALS AND EQUIPMENT NECESSARY FOR SPILL CLEANUP SHALL BE KEPT IN THE MATERIAL STORAGE AREA ON SITE. EQUIPMENT AND MATERIALS SHALL INCLUDE BUT NOT BE LIMITED TO BROOMS, DUSTPANS, MOPS, RAGS, GLOVES, GOGGLES, KITTY
- LITTER, SAND, SAWDUST AND PLASTIC OR METAL TRASH CONTAINERS SPECIFICALLY FOR THIS PURPOSE; ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY; d. THE SPILL AREA SHALL BE KEPT WELL VENTILATED AND PERSONNEL SHALL WEAR APPROPRIATE PROTECTIVE CLOTHING TO PREVENT INJURY FROM CONTACT WITH A
- HAZARDOUS SUBSTANCE: e. SPILLS OF TOXIC OR HAZARDOUS MATERIAL SHALL BE REPORTED TO THE APPROPRIATE LOCAL, STATE OR FEDERAL AGENCIES AS REQUIRED; THE SITE SUPERINTENDENT RESPONSIBLE FOR DAY-TO-DAY SITE OPERATIONS SHALL
- BE THE SPILL PREVENTION AND CLEANUP COORDINATOR. VEHICLE FUELING AND MAINTENANCE PRACTICE: a. CONTRACTOR SHALL MAKE AN EFFORT TO PERFORM EQUIPMENT/VEHICLE FUELING
- AND MAINTENANCE AT AN OFF-SITE FACILITY; b. CONTRACTOR SHALL PROVIDE AN ON-SITE FUELING AND MAINTENANCE AREA THAT IS CLEAN AND DRY; c. IF POSSIBLE THE CONTRACTOR SHALL KEEP AREA COVERED;
- d. CONTRACTOR SHALL KEEP A SPILL KIT AT THE FUELING AND MAINTENANCE AREA; e. CONTRACTOR SHALL REGULARLY INSPECT VEHICLES FOR LEAKS AND DAMAGE; f. CONTRACTOR SHALL USE DRIP PANS, DRIP CLOTHS, OR ABSORBENT PADS WHEN REPLACING SPENT FLUID.

—FILTER FABRIC

AREA OF EMBANKMENT CONSTRUCTION OF

—ANY DISTURBED AREA TO BE STABILIZED

AREA TO REMAIN UNDISTURBED

(DOWNHILL)

EMBEDDED FILTER

EXISTING

SIDE VIEW

SILT FENCE

GRADE

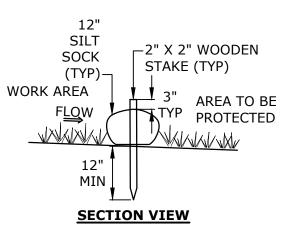
DIRECTION

COMPACTED SOIL

FABRIC

ABOVE EMBEDDED-

# 10' STAKE SPACING AREA TO BE PROTECTED **WORK AREA**

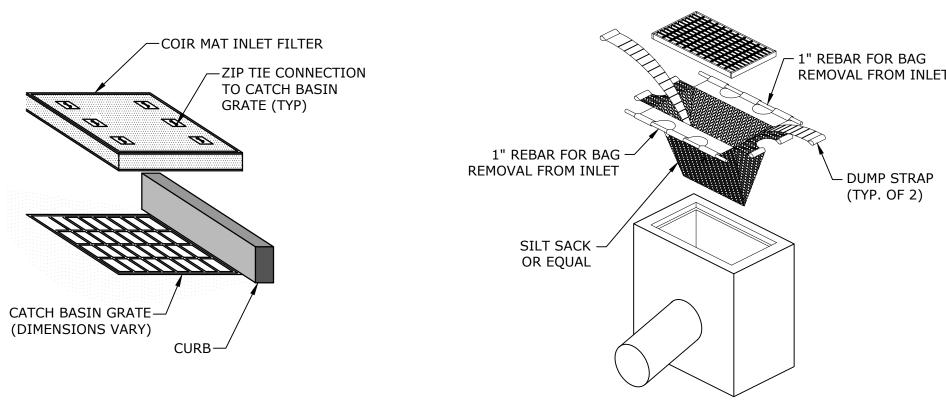


 SILT SOCK SHALL BE SILT SOXX BY FILTREXX OR EQUAL. 2. SILT SOCK SHALL BE FILLED WITH A CERTIFIED COMPOST FILTERMEDIA BY FILTREXX OR

- 3. WHERE TWO SILT SOCKS ARE JOINED, A MINIMUM OF 2 FEET OF OVERLAP SHALL BE
- 4. CONTRACTOR SHALL INSTALL SILT SOCK IN "J-HOOK" OR "SMILE" CONFIGURATION TO LIMIT CONCENTRATION OF STORMWATER RUNOFF AT A SINGLE DISCHARGE POINT AS PER RECOMMENDATIONS IN THE "NEW HAMPSHIRE STORMWATER MANUAL VOLUME 3:
- EROSION AND SEDIMENT CONTROLS DURING CONSTRUCT". 5. SILT SOCKS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

# SILT SOCK

NO SCALE

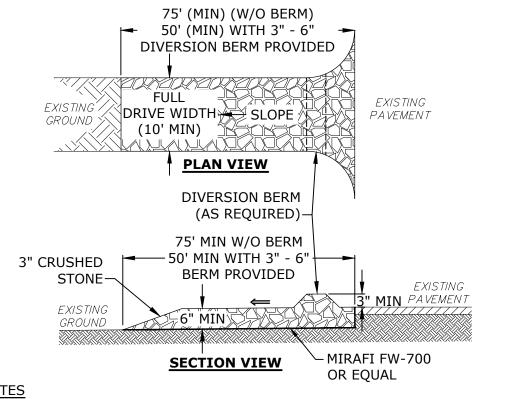


INLET PROTECTION BARRIER SHALL BE SILT SACK BY ACF ENVIRONMENTAL OR APPROVED EOUAL

**INLET PROTECTION** 

NO SCALE

- 2. COIR MAT INLET FILTER SHALL BE USED DURING THE WINTER AND SHALL BE BY BLOCKSOM & CO. OR APPROVED EQAL. 3. INLET PROTECTION BARRIER SHALL BE INSTALLED IN ALL EXISTING AND PROPOSED CATCH BASINS LOCATED WITHIN THE LIMIT OF WORK.
- 4. SILT SACK SHALL BE INSPECTED REGULARLY AND MAINTAIN IN ACCORDANCE WITH MANUFACTURER RECOMMENDATIONS.



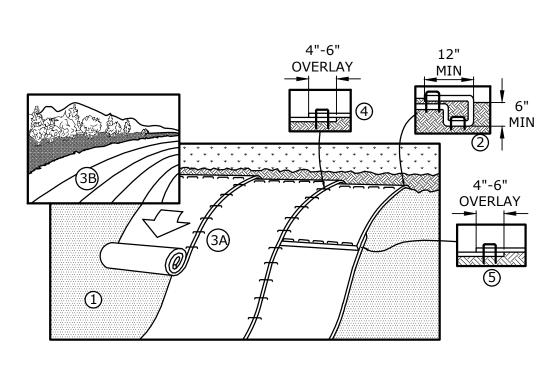
. THE EXIT SHOULD BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF WAY. . WHEN THE CONTROL PAD BECOMES INEFFECTIVE, THE STONE SHOULD BE REMOVED

STABILIZED PRIOR TO RECONSTRUCTING THE EXIT. B. THE CONTRACTOR SHOULD SWEEP THE PAVEMENT AT EXITS WHENEVER SOIL MATERIALS ARE TRACKED ONTO THE ADJACENT PAVEMENT OR TRAVELED WAY. I. WHEN WHEEL WASHING IS REQUIRED, IT SHOULD BE CONDUCTED ON AN AREA

ALONG WITH THE COLLECTED SOIL MATERIAL, RE-GRADED ON SITE, AND

- STABILIZED WITH AGGREGATE, WHICH DRAINS INTO AN APPROVED SEDIMENT-TRAPPING DEVICE. 5. ALL SEDIMENT SHOULD BE PREVENTED FROM ENTERING STORM DRAINS, DITCHES, OR WATERWAYS TO THE GREATEST EXTENT PRACTICAL. NATURAL DRAINAGE THAT CROSSES THE LOCATION OF THE STONE PAD SHOULD BE
- OUTLET PROTECTION. STABILIZED CONSTRUCTION EXIT

INTERCEPTED AND PIPED BENEATH THE PAD, AS NECESSARY, WITH SUITABLE



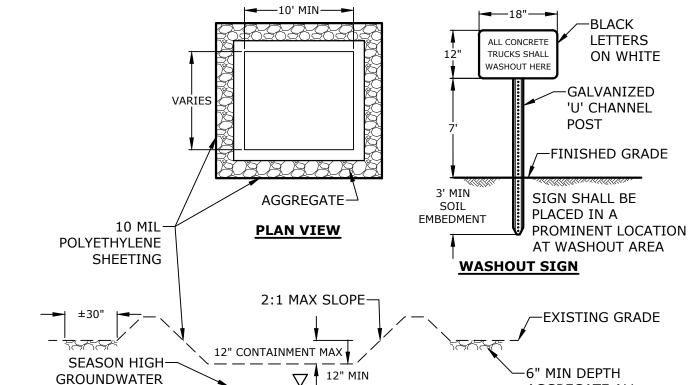
1. EROSION CONTROL BLANKETS SHALL BE INSTALLED ON ALL STEEP SLOPE AREA

PRIOR TO INSTALLATION SLOPE SURFACE SHALL BE FREE OF ROCKS, CLODS,

STICKS, AND GRASS. BLANKETS SHALL HAVE GOOD SOIL CONTACT. . PERMANENT SEEDING SHALL BE PLACED PRIOR TO INSTALLING BLANKETS 4. BLANKETS SHALL BE LOOSELY LAID AND STAKED/STAPLED TO MAINTAIN DIRECT CONTACT WITH THE SOIL. BLANKETS SHALL NOT BE STRETCHED. . EROSION CONTROL BLANKET SHALL BE 'EAST COAST EROSION CONTROL

ECC-2B™ OR EQUAL AND INSTALLED PER MANUFACTURERS RECOMMENDATIONS.

# **EROSION CONTROL BLANKET**



**SIDE VIEW** .. CONTAINMENT SHALL BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.

- 2. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID 3. WASHOUT SHALL BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75%
- 4. WASHOUT AREA(S) SHALL BE INSTALLED IN A LOCATION EASILY ACCESSIBLE BY CONCRETE TRUCKS 5. ONE OR MORE AREAS MAY BE INSTALLED ON THE CONSTRUCTION SITE AND MAY BE RELOCATED AS CONSTRUCTION PROGRESSES. AT LEAST WEEKLY, REMOVE ACCUMULATION OF SAND AND AGGREGATE AND DISPOSE OF PROPERLY.

**CONCRETE WASHOUT AREA** NO SCALE

AGGREGATE ALL

AROUND



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REVISION HISTORY REVISION DESCRIPTION

**UNH & NOAA** 

PROFESSIONAL SEALS

UNH- Ocean Mapping

PROJECT NUMBER ABBREVIATION 13ST24011 UNH COE CHECKED BY **ORIGINAL ISSUE** 

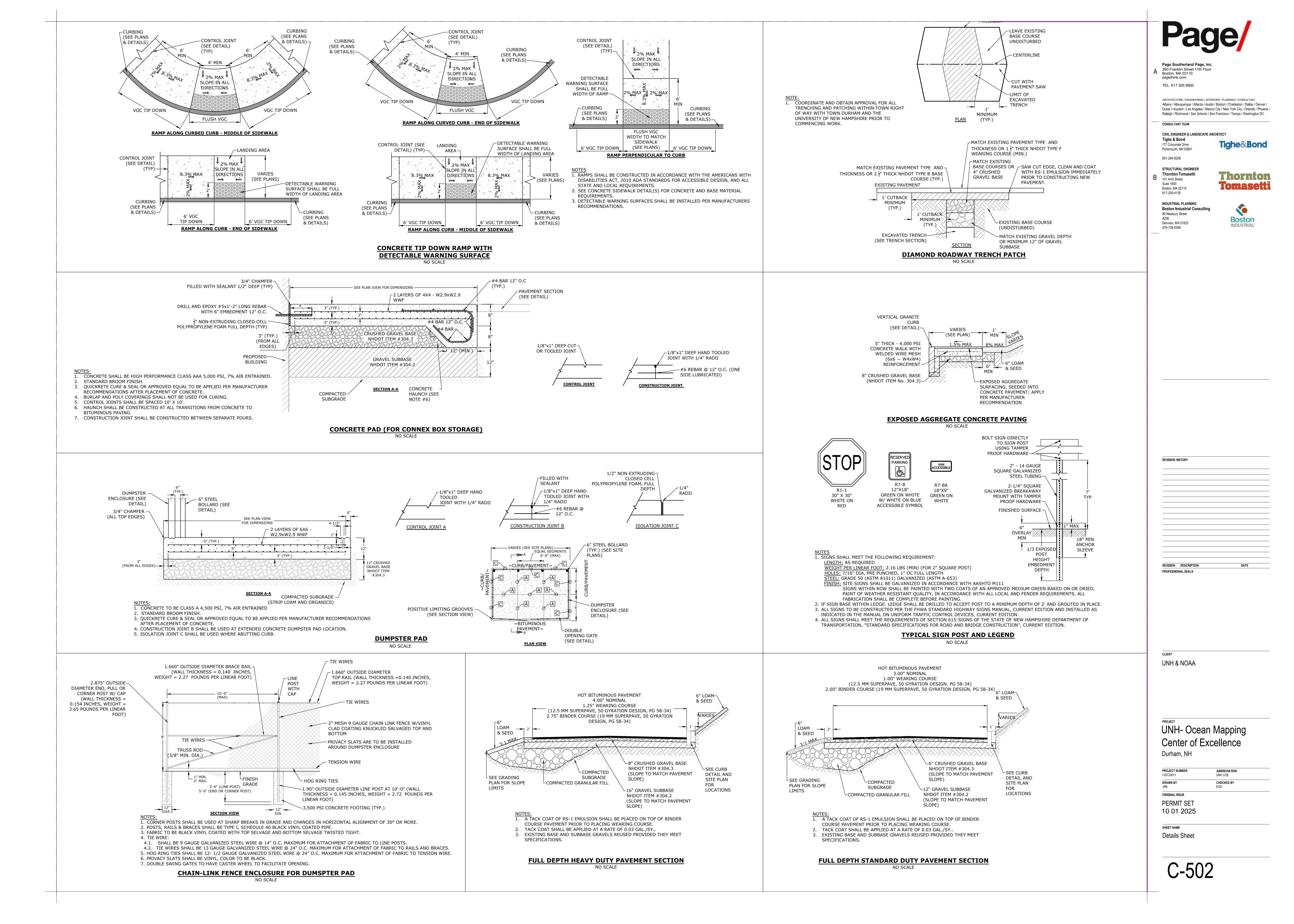
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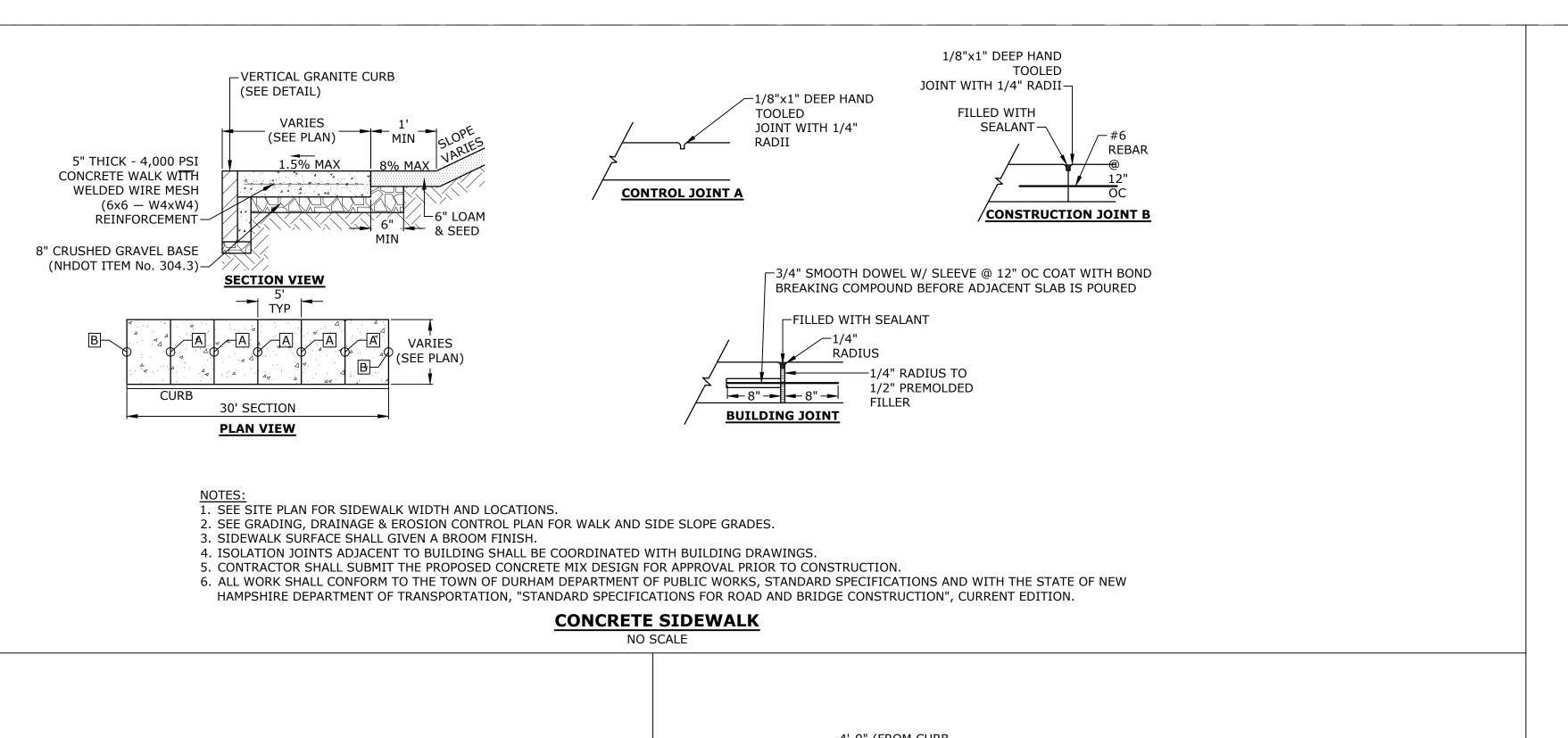
Erosion Control Notes

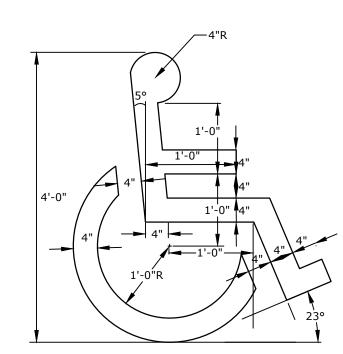
Durham, NH

PERMIT SET

& Details Sheet



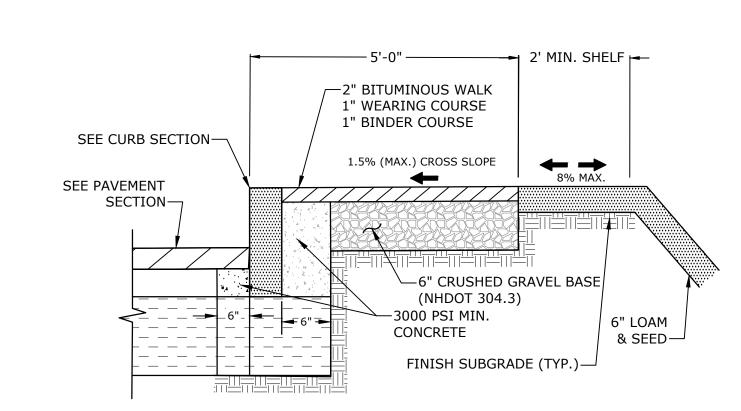




1. SYMBOL SHALL BE CONSTRUCTED IN ALL ACCESSIBLE SPACES USING FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.

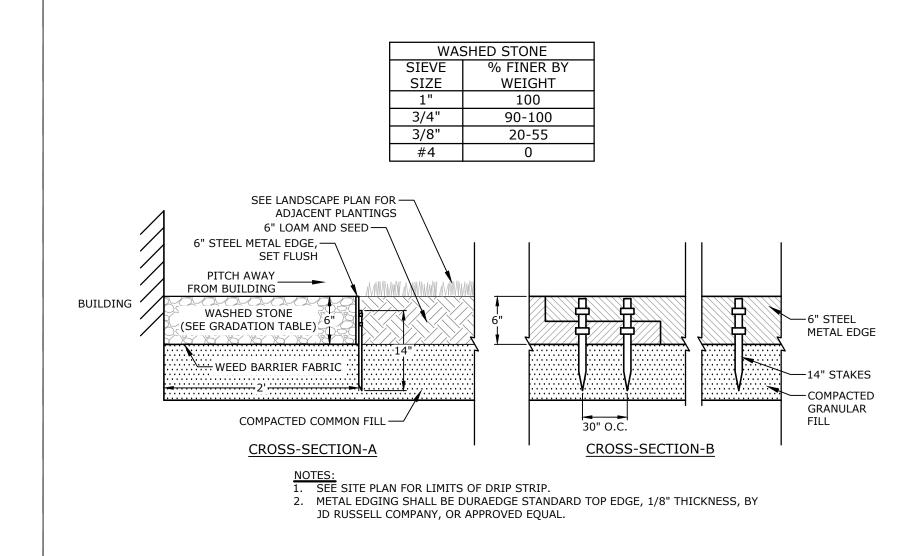
2. SYMBOL SHALL BE CONSTRUCTED TO THE LATEST ADA, STATE AND LOCAL REQUIREMENTS.

### ACCESSIBLE SYMBOL



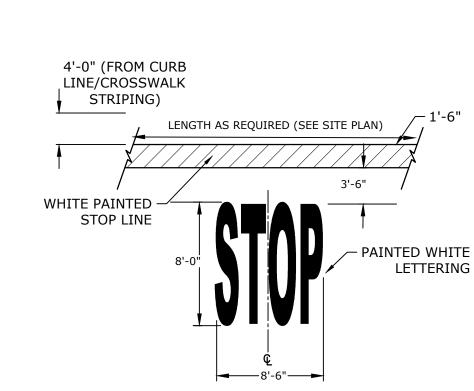
1. SEE SITE PLAN FOR SIDEWALK WIDTH, LOCATIONS AND CURB TYPE. 2. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR WALK AND SIDESLOPE GRADES.

# BITUMINOUS CONCRETE SIDEWALK



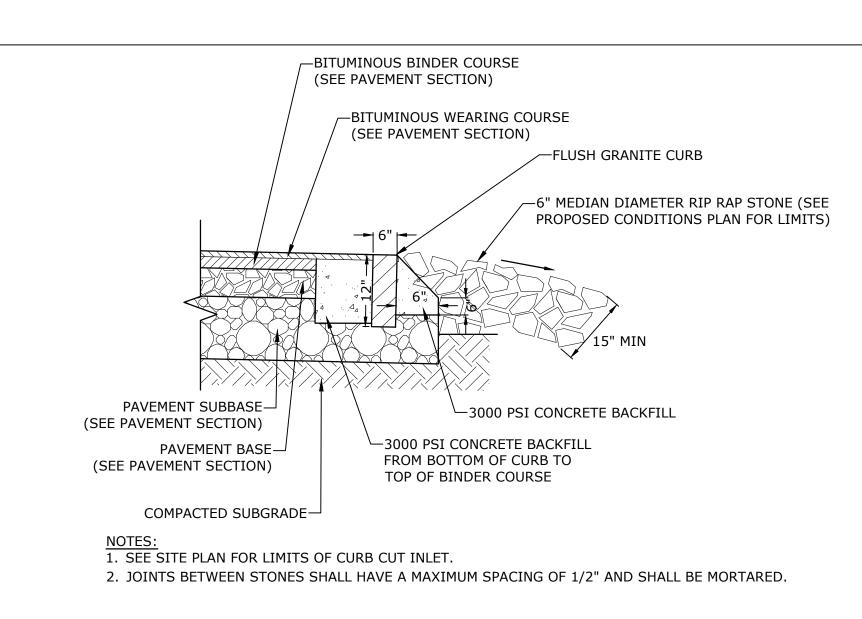
**DRIP STRIP** 

NO SCALE

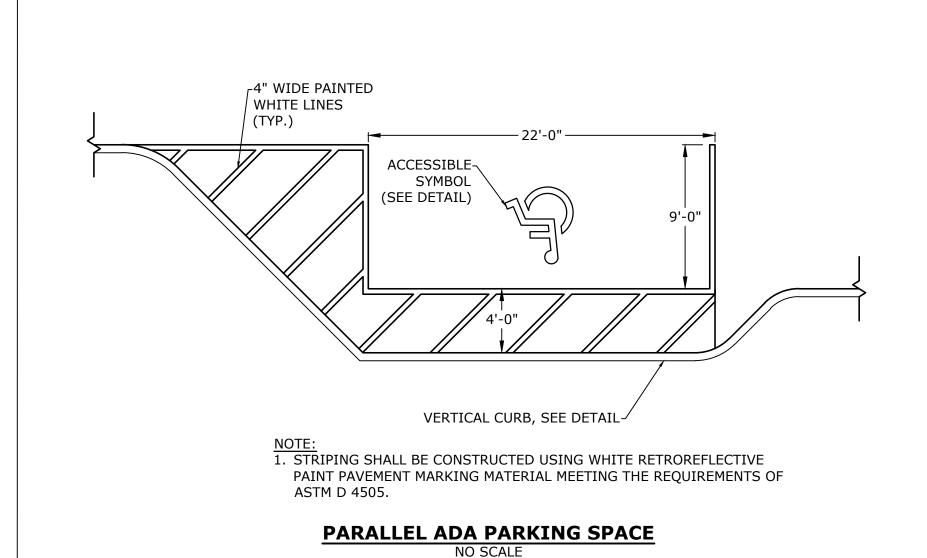


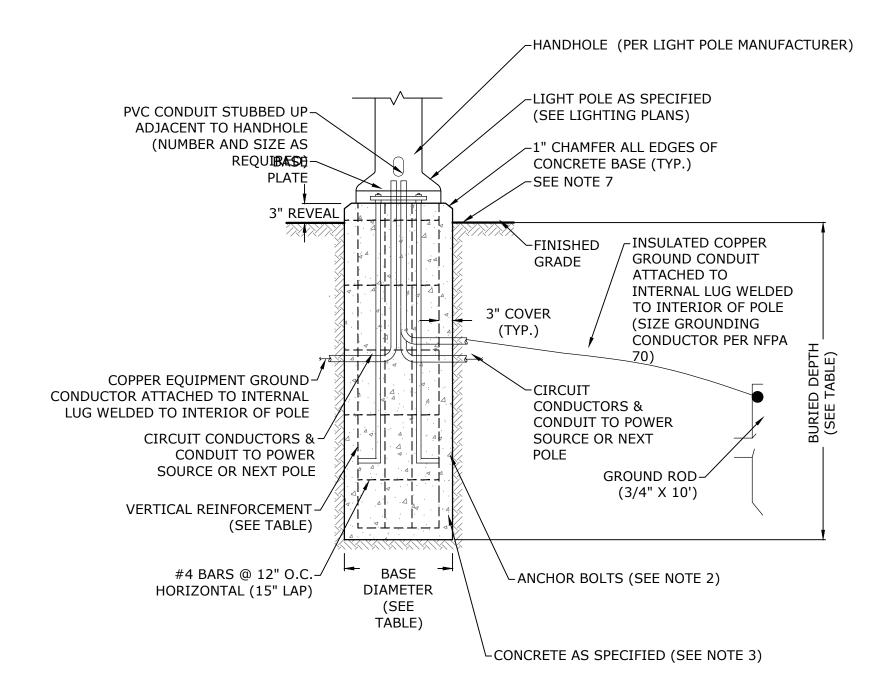
1. PAVEMENT MARKINGS AS SHOWN ON SITE PLAN. 2. PAVEMENT MARKINGS AND STRIPING TO BE CONSTRUCTED USING FAST DRYING TRAFFIC PAINT, MEETING THE REQUIREMENTS OF AASHTO M248-TYPE F. PAINT SHALL BE APPLIED AS SPECIFIED BY MANUFACTURER.

### **STOP BAR & LEGEND** NO SCALE



### **CURB CUT INLET DETAIL** NO SCALE





POLE HEIGHT	DEPTH (BURIED)	BASE DIAMETER	VERTICAL REINFORCEMENT	VERTICAL REINFORCEMENT LENGTH
16'>	72"	18"	6 - #6	5'-9"
16'<	72" (MIN.)	24"	6 - #8	5'-9"
20'+ (SEE NOTE 5)	72" (MIN.)	24" (MIN)	6 - #8	5'-9"

1. ALL LIGHT POLES, LUMINARIES AND WIRE TO BE FURNISHED BY THE CONTRACTOR UNLESS

OTHERWISE DIRECTED. 2. CONTRACTOR SHALL VERIFY BOLT TEMPLATE AND ANCHOR BOLT SIZE WITH POLE

MANUFACTURER PRIOR TO CONSTRUCTION. 3. CONCRETE SHALL BE 4,000 PSI CLASS A, PRE-CAST CONCRETE.

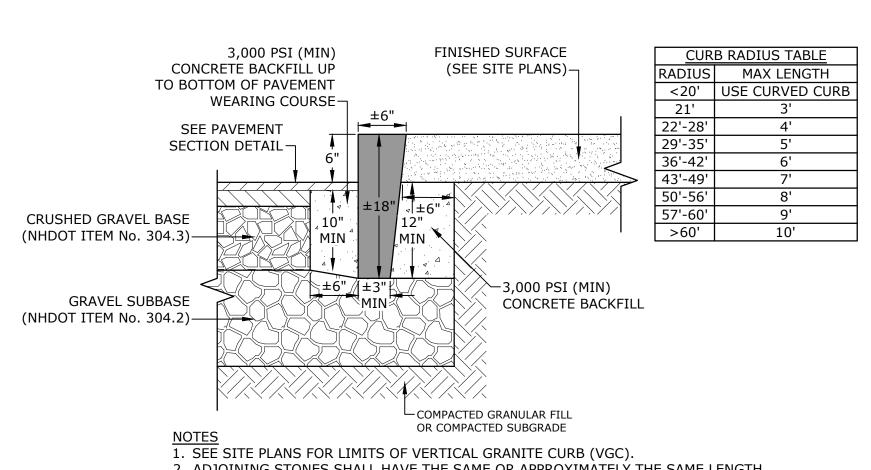
4. REINFORCEMENT SHALL BE ASTM A615, GRADE 60.

5. FOR LIGHT POLES GREATER THAN 20' IN HEIGHT, THE LIGHT POLE BASE SHALL BE DESIGNED AND STAMPED BY A STRUCTURAL ENGINEER LICENSED IN THE STATE OF NEW HAMPSHIRE.

6. PAINT LIGHT POLE BASE SAFETY YELLOW WHERE NOT PROTECTED BY CURB.

### **LIGHT POLE BASE**

NO SCALE



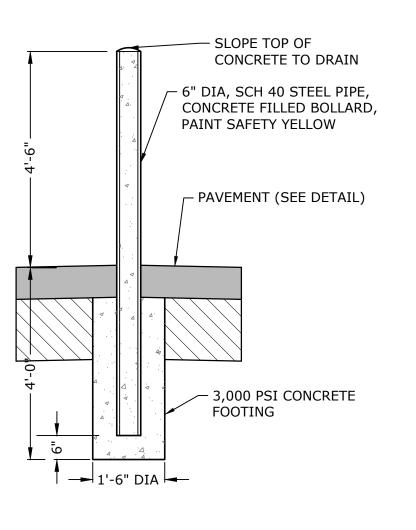
2. ADJOINING STONES SHALL HAVE THE SAME OR APPROXIMATELY THE SAME LENGTH.

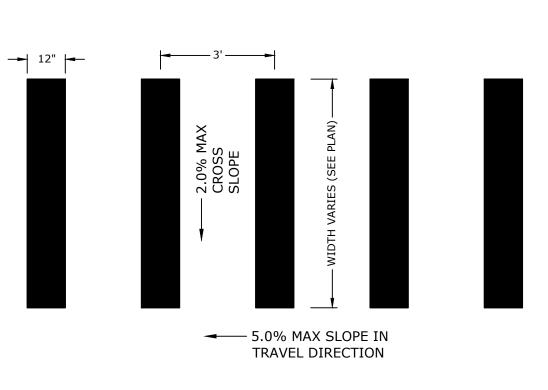
3. MINIMUM LENGTH OF STRAIGHT CURB STONES = 3' 4. MAXIMUM LENGTH OF STRAIGHT CURB STONES = 10'

5. MAXIMUM LENGTH OF STRAIGHT CURB STONES LAID ON CURVES (SEE TABLE).

6. ALL RADII 20 FEET AND SMALLER SHALL BE CONSTRUCTED USING CURVED SECTIONS. 7. JOINTS BETWEEN STONES SHALL HAVE A MAXIMUM SPACING OF 1/2" AND SHALL BE MORTARED. 8. VERTICAL GRANITE CURB WITHIN THE CITY ROW SHALL BE NHDOT SPEC 609.01

**VERTICAL GRANITE CURB (VGC)** 





NOTE:

1. STRIPING SHALL BE CONSTRUCTED USING WHITE RETROREFLECTIVE

1. STRIPING THE DECLIDEMENTS PAINT PAVEMENT MARKING MATERIAL MEETING THE REQUIREMENTS OF ASTM D 4505.

**CROSSWALK STRIPING** 

**6" STEEL BOLLARD** 

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REVISION HISTORY REVISION DESCRIPTION PROFESSIONAL SEALS

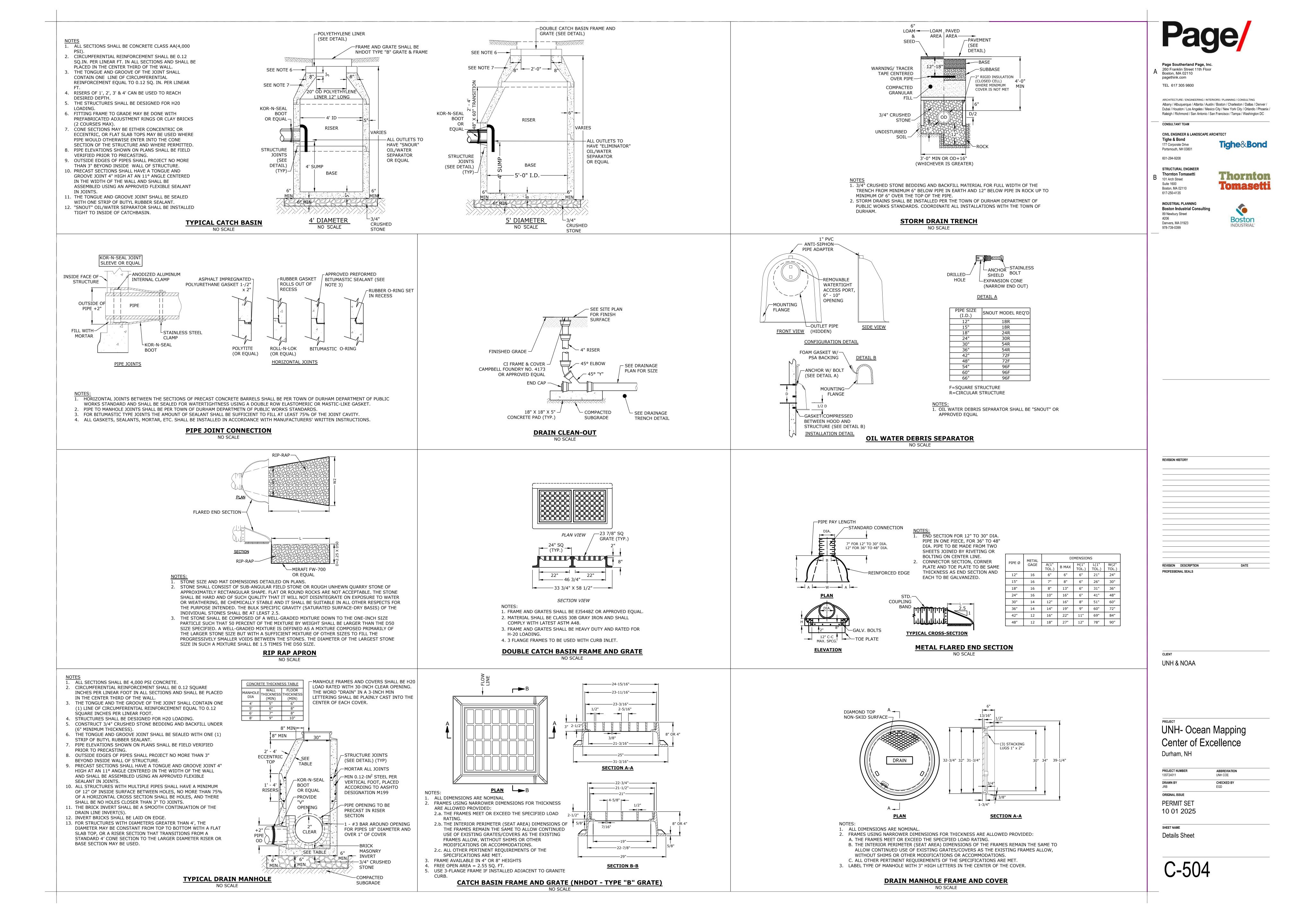
UNH- Ocean Mapping Center of Excellence Durham, NH

**UNH & NOAA** 

PROJECT NUMBER ABBREVIATION 13ST24011 UNH COE CHECKED BY ORIGINAL ISSUE PERMIT SET 10 01 2025

Details Sheet

SHEET NAME

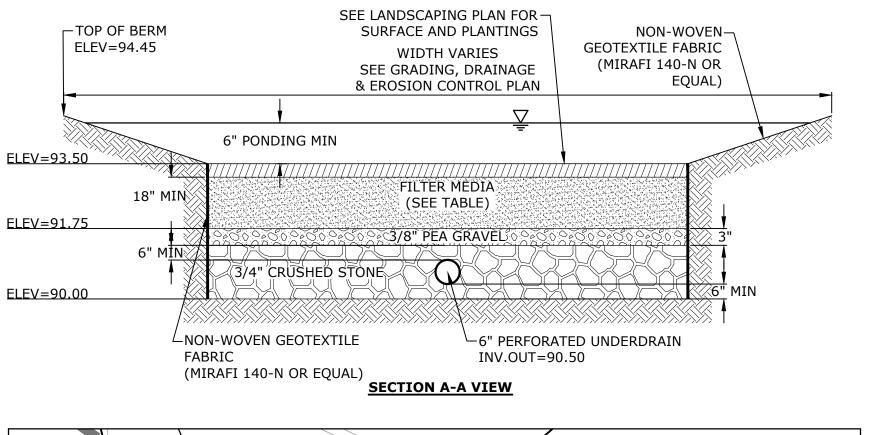


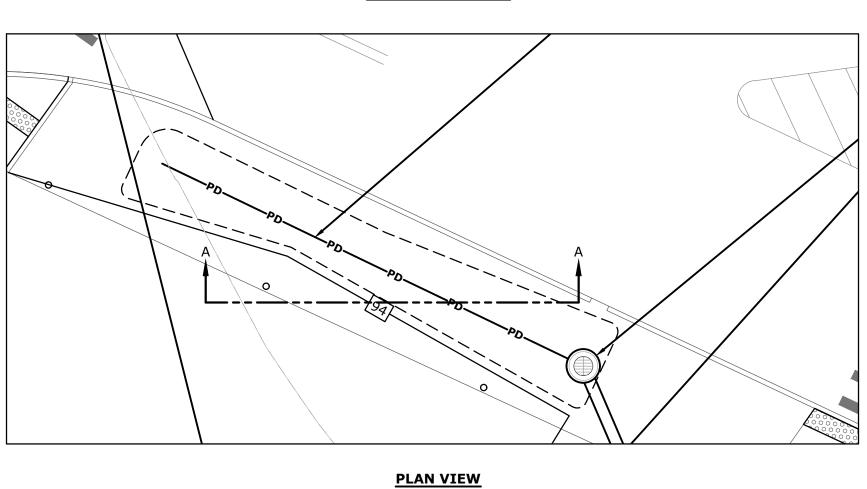
COMPONENT MATERIAL	PERCENT OF MIXTURE	GRADAT	ION OF MATERIAL
	BY VOLUME	SIEVE #	PERCENT PASSING
ASTM C-33 CONCRETE SAND	50-55	SEE	NOTE #5
LOAMY SAND TOPSOIL	20-30	200	15-25
MODERATELY FINE SHREDDED	20-30	200	5 MAX
BARK OR WOOD FIBER MULCH			

MICRO BIO BASIN INSPECTION/MAINTENANCE REQUIREMENTS			
INSPECTION / MAINTENANCE	FREQUENCY	<u>ACTION</u>	
MONITOR TO ENSURE THAT RAIN GARDENS FUNCTION EFFECTIVELY AFTER STORMS	TWO (2) TIMES ANNUALLY AND AFTER ANY RAINFALL EVENT EXCEEDING 2.5" IN A 24-HR PERIOD	TRASH AND DEBRIS TO BE REMOVED ANY REQUIRED MAINTENANCE SHALL BE ADDRESSED	
INSPECT VEGETATION	ANNUALLY	<ul> <li>INSPECT THE CONDITION OF ALL RAIN GARDEN</li> <li>VEGETATION</li> <li>PRUNE BACK OVERGROWTH</li> <li>REPLACE DEAD VEGETATION</li> <li>REMOVE ANY INVASIVE SPECIES</li> </ul>	
INSPECT DRAWDOWN TIME:  • THE SYSTEM SHALL DRAWDOWN WITHIN 48-HOURS FOLLOWING A RAINFALL EVENT.	ANNUALLY	• ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE THE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER	

- 1. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN
- PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED. 2. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT.
- CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN. 3. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND
- ELEVATIONS. 4. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33):

SIEVE SIZE	PERCENT PASSI
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10





	FILTER MEDIA COMPOSITION:			
COMPONENT MATERIAL	PERCENT OF MIXTURE	GRADAT	ION OF MATERIAL	
	BY VOLUME	SIEVE #	PERCENT PASSING	
ASTM C-33 CONCRETE SAND	50-55	SEE I	NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25	
MODERATELY FINE SHREDDED	20-30	200	5 MAX	
BARK OR WOOD FIBER MULCH				

RAIN GARDEN INSPECTION/MAINTENANCE REQUIREMENTS			
INSPECTION / MAINTENANCE	FREQUENCY	<u>ACTION</u>	
MONITOR TO ENSURE THAT RAIN GARDENS FUNCTION EFFECTIVELY AFTER STORMS	TWO (2) TIMES ANNUALLY AND AFTER ANY RAINFALL EVENT EXCEEDING 2.5" IN A 24-HR PERIOD	TRASH AND DEBRIS TO BE REMOVED ANY REQUIRED MAINTENANCE SHALL BE ADDRESSED	
INSPECT VEGETATION	ANNUALLY	<ul> <li>INSPECT THE CONDITION OF ALL RAIN GARDEN VEGETATION</li> <li>PRUNE BACK OVERGROWTH</li> <li>REPLACE DEAD VEGETATION</li> <li>REMOVE ANY INVASIVE SPECIES</li> </ul>	
INSPECT DRAWDOWN TIME:  • THE SYSTEM SHALL DRAWDOWN WITHIN 48-HOURS FOLLOWING A RAINFALL EVENT.	ANNUALLY	• ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE THE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER	

# 1. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED

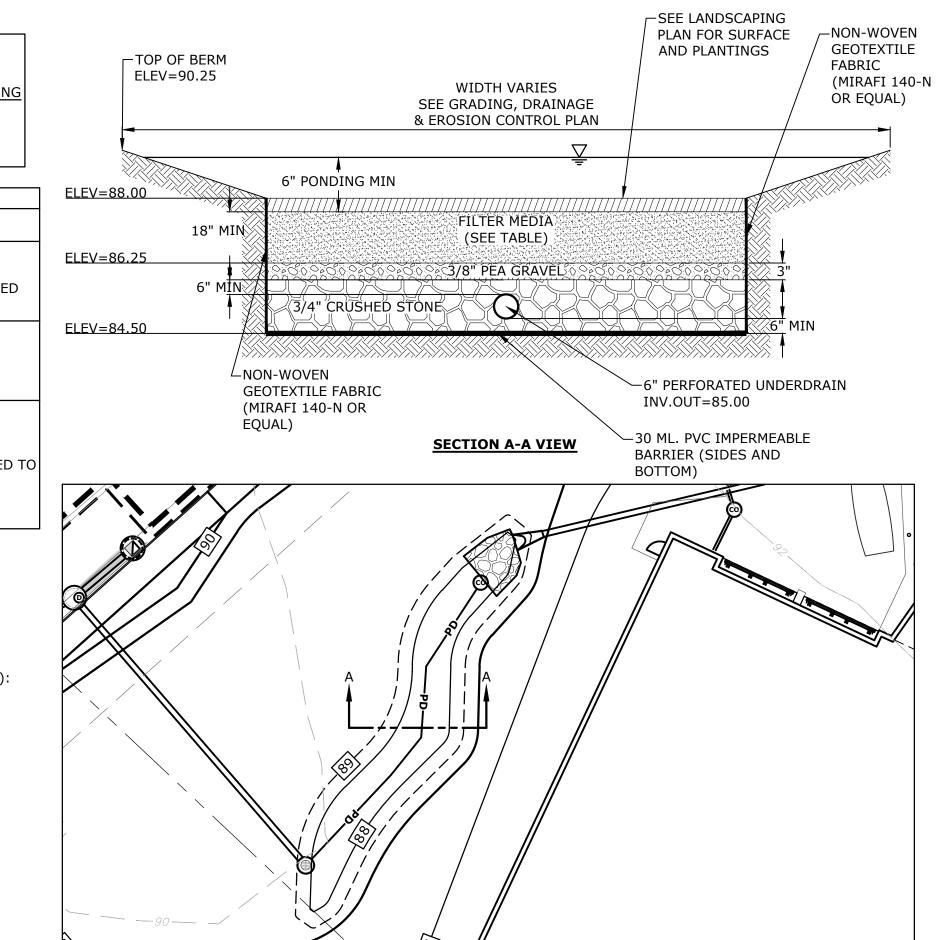
AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED. 2. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.

3. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND

ELEVATIONS. 4. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33):

IEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30

0-10



# **MICRO BIOBASIN**

FILTER MEDIA COMPOSITION:				
COMPONENT MATERIAL	PERCENT OF MIXTURE	GRADAT	ION OF MATERIAL	
	BY VOLUME	SIEVE #	PERCENT PASSING	
ASTM C-33 CONCRETE SAND	50-55	SEE	NOTE #5	
LOAMY SAND TOPSOIL	20-30	200	15-25	
MODERATELY FINE SHREDDED	20-30	200	5 MAX	
BARK OR WOOD FIBER MULCH				

RAI	N GARDEN INSPECTION	ON/MAINTENANCE REQUIREMENTS
INSPECTION / MAINTENANCE	FREQUENCY	<u>ACTION</u>
MONITOR TO ENSURE THAT RAIN GARDENS FUNCTION EFFECTIVELY AFTER STORMS	TWO (2) TIMES ANNUALLY AND AFTER ANY RAINFALL EVENT EXCEEDING 2.5" IN A 24-HR PERIOD	TRASH AND DEBRIS TO BE REMOVED ANY REQUIRED MAINTENANCE SHALL BE ADDRESSED
INSPECT VEGETATION	ANNUALLY	<ul> <li>INSPECT THE CONDITION OF ALL RAIN GARDEN VEGETATION</li> <li>PRUNE BACK OVERGROWTH</li> <li>REPLACE DEAD VEGETATION</li> <li>REMOVE ANY INVASIVE SPECIES</li> </ul>
INSPECT DRAWDOWN TIME:  • THE SYSTEM SHALL DRAWDOWN WITHIN 48-HOURS FOLLOWING A RAINFALL EVENT.		• ASSESS THE CONDITION OF THE FACILITY TO DETERMINE MEASURES REQUIRED TO RESTORE THE FILTRATION FUNCTION, INCLUDING BUT NOT LIMITED TO REMOVAL OF ACCUMULATED SEDIMENTS OR RECONSTRUCTION OF THE FILTER

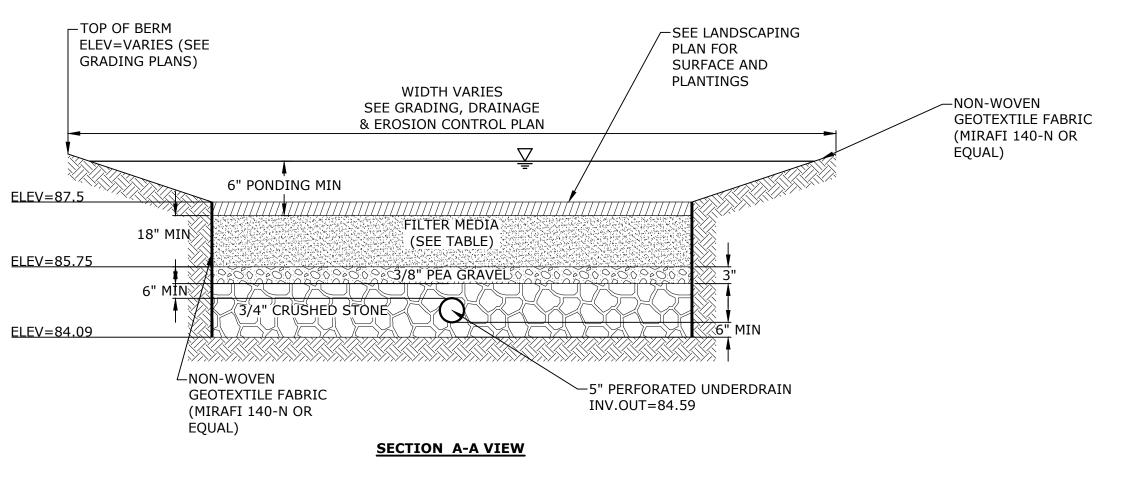
NOTES

1. RAIN GARDENS SHALL NOT BE PLACED INTO SERVICE UNTIL THE PRACTICE HAS BEEN PLANTED AND ITS CONTRIBUTING AREAS HAVE BEEN FULLY STABILIZED 2. DO NOT TRAFFIC EXPOSED SOIL SURFACES WITH CONSTRUCTION EQUIPMENT. CONTRACTOR SHALL KEEP ALL EXCAVATION EQUIPMENT OUTSIDE OF THE LIMIT OF THE RAIN GARDEN.

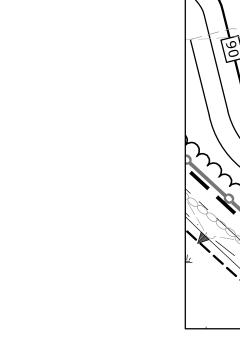
3. SEE GRADING, DRAINAGE & EROSION CONTROL PLAN FOR LOCATIONS, LAYOUTS, AND

ELEVATIONS. 4. THE SAND PORTION OF THE FILTER MEDIA SHALL MEET THE FOLLOWING GRADATION (ASTM C-33):

2 0, 110 1 01112	
SIEVE SIZE	PERCENT PASSING
3/8"	100
#4	95-100
#8	80-100
#16	50-85
#30	25-60
#50	5-30
#100	0-10

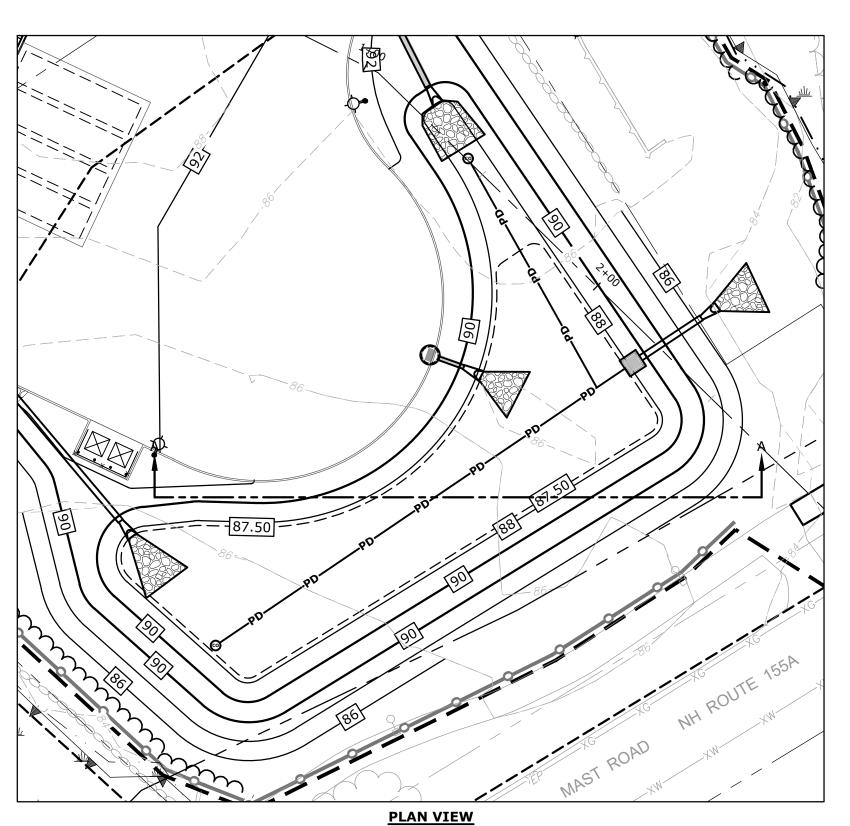


**RAIN GARDEN-2** NO SCALE

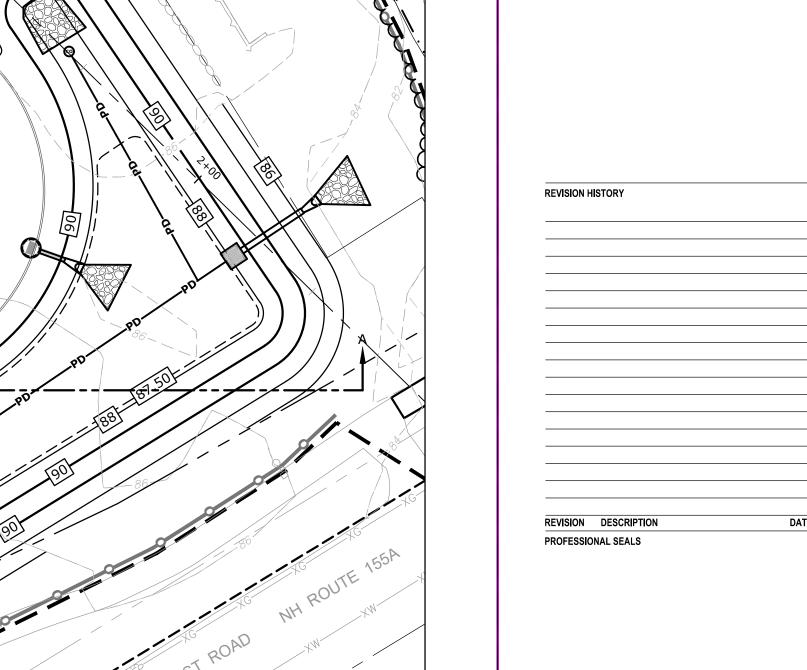


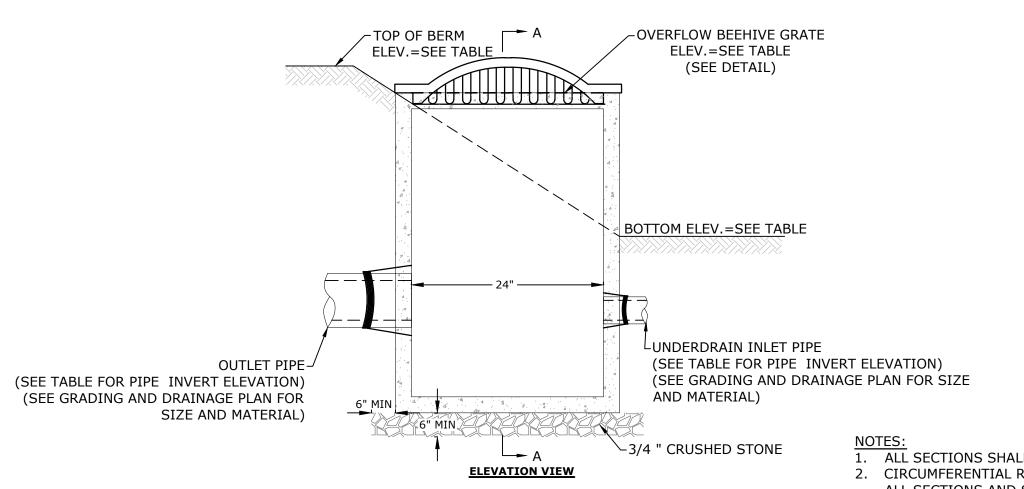
**RAIN GARDEN-1** 

NO SCALE



**PLAN VIEW** 

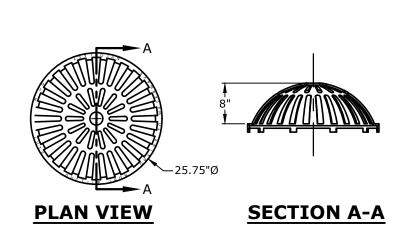




RIM

BERM

UNDERDRAIN OUTLET INVERT POCS-1 90.25 88.70 85.00 (6") 85.00 (12")
POCS-3 94.45 94.20 90.95 (6") 90.95 (12")



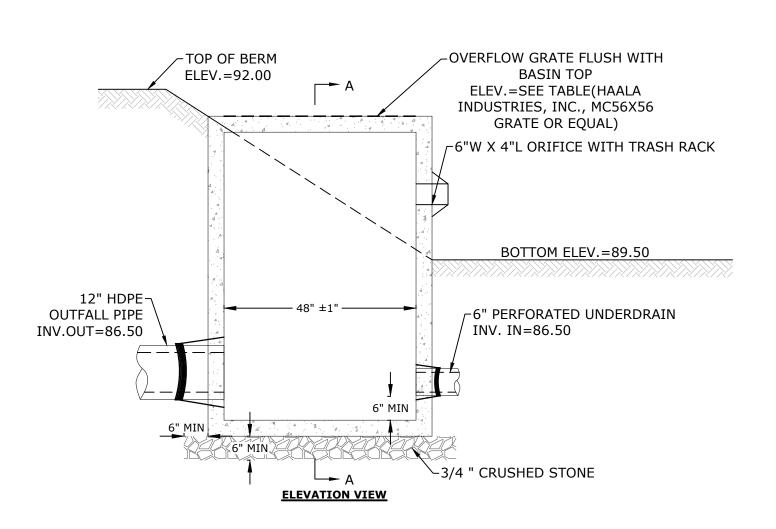
I. ALL SECTIONS SHALL BE 4,000 PSI CONCRETE (TYPE II CEMENT).

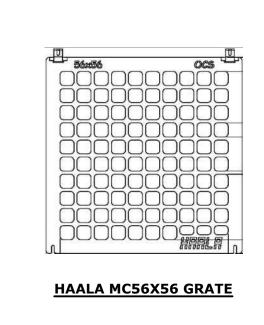
- CIRCUMFERENTIAL REINFORCEMENT SHALL BE 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE THIRD WALL. 3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF
- CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT. 4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING.
- 5. ALL JOINTS ON THE STRUCTURE AND PIPING SHALL BE WATERTIGHT. 6. BEEHIVE GRATE SHALL BE ADS NYLOPLAST, 24 IN DOME GRATE MODEL NUMBER

# **OUTLET CONTROL STRUCTURE 1 & 3**

NO SCALE

2499CGD, OR APPROVED EQUAL.





# ALL SECTIONS SHALL BE 4,000 PSI CONCRETE

- (TYPE II CEMENT). 2. CIRCUMFERENTIAL REINFORCEMENT SHALL BE
- 0.12 SQUARE INCHES PER LINEAR FOOT IN ALL SECTIONS AND SHALL BE PLACED IN THE CENTER OF THE THIRD WALL.
- 3. THE TONGUE OR THE GROOVE OF THE JOINT SHALL CONTAIN ONE LINE OF CIRCUMFERENTIAL REINFORCEMENT EQUAL TO 0.12 SQUARE INCHES PER LINEAR FOOT.
- 4. THE STRUCTURES SHALL BE DESIGNED FOR H20 LOADING. 5. ALL JOINTS ON THE STRUCTURE AND PIPING
- SHALL BE WATERTIGHT. 6. OUTLET STRUCTURE GRATE SHALL BE HAALA INDUSTRIES, INC. MC56X56 TOP MOUNT GRATE
- OR EQUAL. 7. GRATE TO BE SECURED TO CONCRETE STRUCTURE.

**OUTLET CONTROL STRUCTURE-2** NO SCALE

UNH- Ocean Mapping Center of Excellence Durham, NH

**UNH & NOAA** 

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260 Franklin Street 11th Floor

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Portsmouth, NH 03801

STRUCTURAL ENGINEER

Thornton Tomasetti 101 Arch Street Suite 1600 Boston, MA 02110 617-250-4135

INDUSTRIAL PLANNING

89 Newbury Street

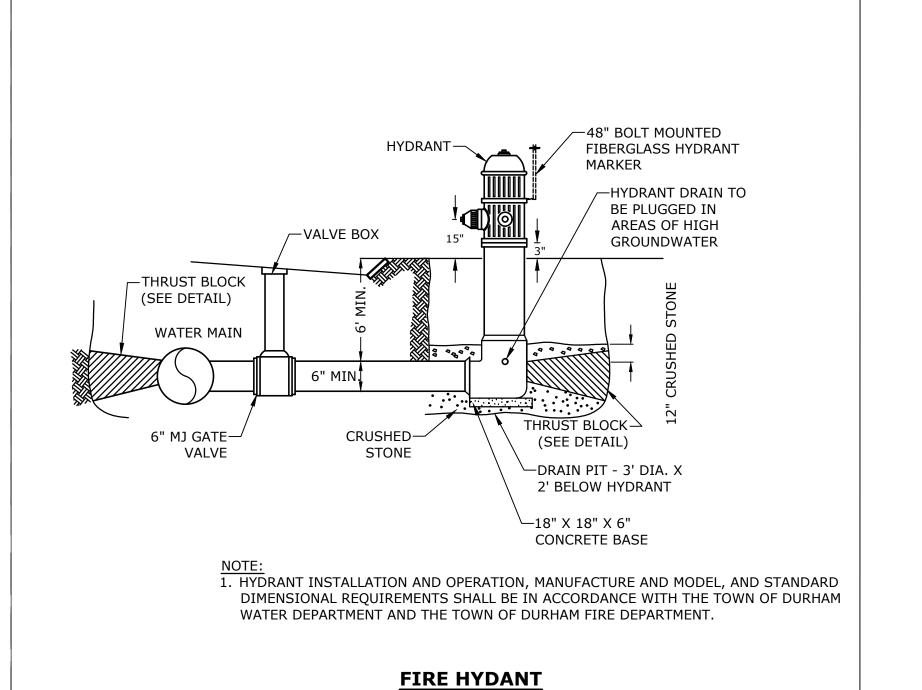
Danvers, MA 01923

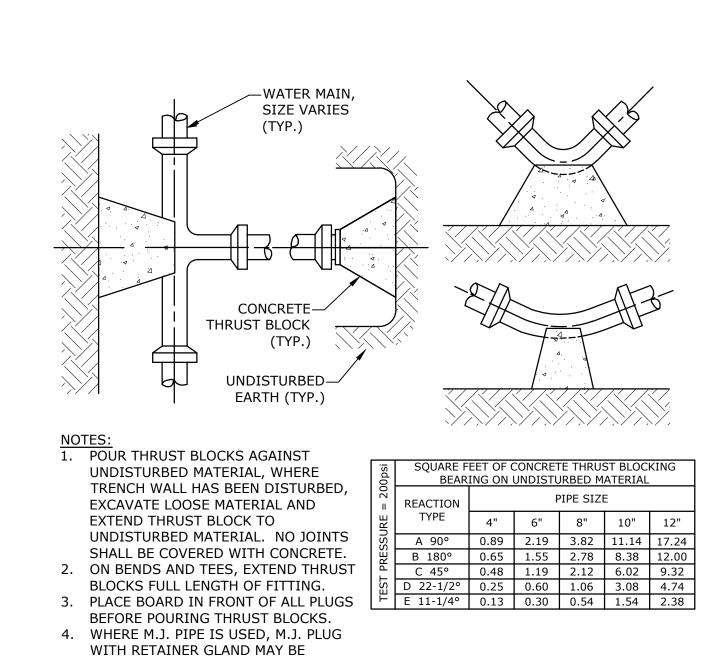
978-739-0399

**Boston Industrial Consulting** 

PROJECT NUMBER	ABBREVIATION	
13ST24011	UNH COE	
DRAWN BY	CHECKED BY	
JRB	EGD	
ORIGINAL ISSUE		
PERMIT SET		
10.04.0005		
10 01 2025		

SHEET NAME Details Sheet

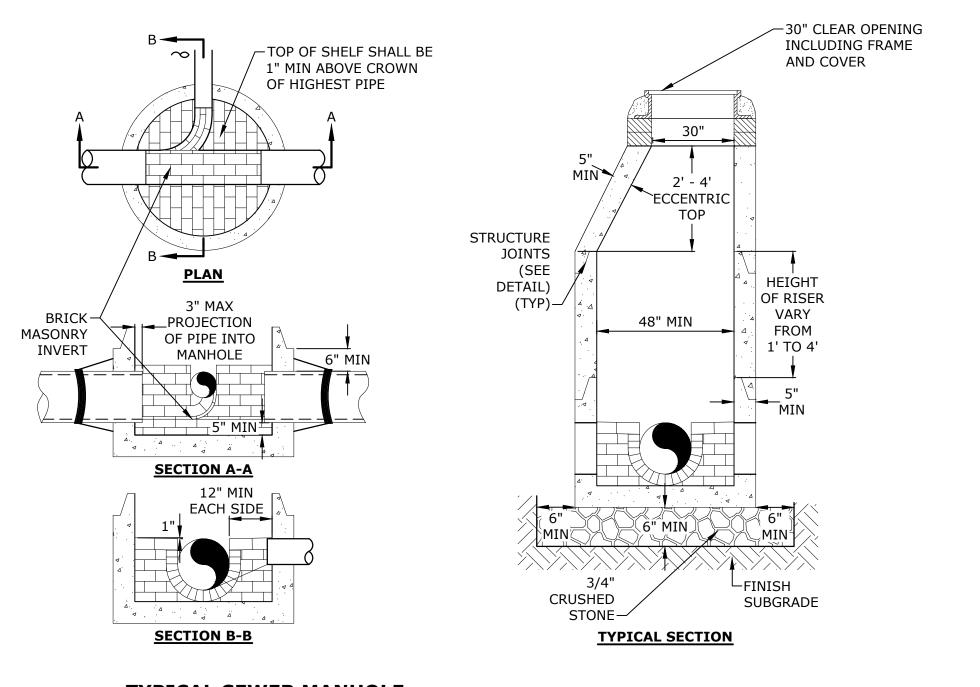




THRUST BLOCKING DETAIL

NO SCALE

SUBSTITUTED FOR END BLOCKINGS.



**TYPICAL SEWER MANHOLE** 

NO SCALE

NOTES

1. INVERT AND SHELF TO BE PLACED

2. CARE SHALL BE TAKEN TO INSURE

CONTINUATION OF THE SEWER

3. INVERT BRICKS SHALL BE LAID ON

WATERPROOF COATING SHALL BE

APPLIED TO ENTIRE EXTERIOR OF

MANHOLE FRAMES AND COVERS

SHALL BE OF HEAVY DUTY DESIGN

HEIGHT) WORD "SEWER" SHALL BE

AND PROVIDE A 30-INCH CLEAR

OPENING, A 3-INCH (MINIMUM

PLAINLY CAST INTO THE CENTER

SEALED FOR WATER TIGHTNESS USING

A DOUBLE ROW OF ELASTOMERIC OR

7. BARREL AND CONE SECTIONS SHALL

BE PRECAST REINFORCED CONCRETE

DESIGNED FOR H20 LOADING, AND

CONFORMING TO ASTM C478-06.

4. TWO (2) COATS OF BITUMINOUS

EDGE.

MANHOLE.

5. FRAMES AND COVERS:

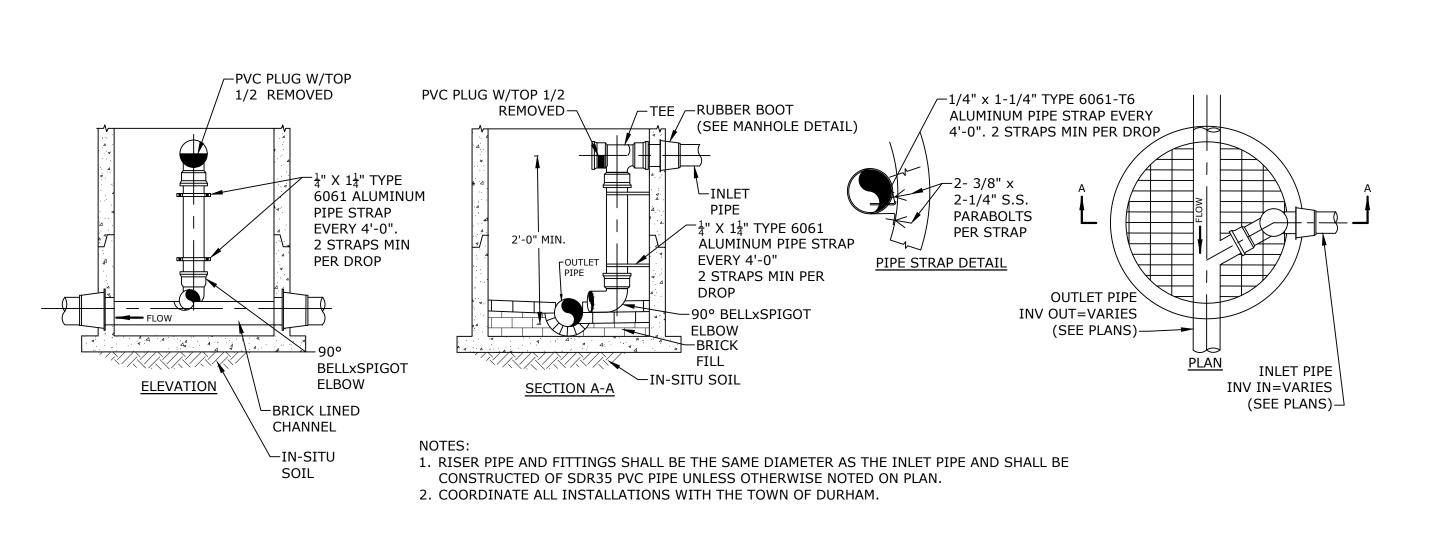
OF EACH COVER.

MASTIC-LIKE SEALANT.

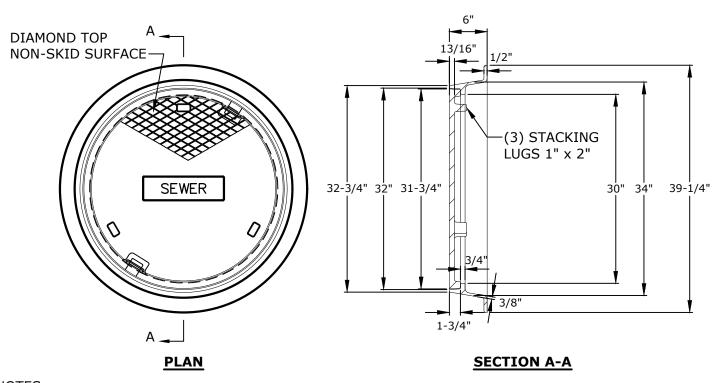
6. HORIZONTAL JOINTS SHALL BE

THAT THE BRICK INVERT IS A SMOOTH

AFTER EACH LEAKAGE TEST.



# **INSIDE DROP MANHOLE**

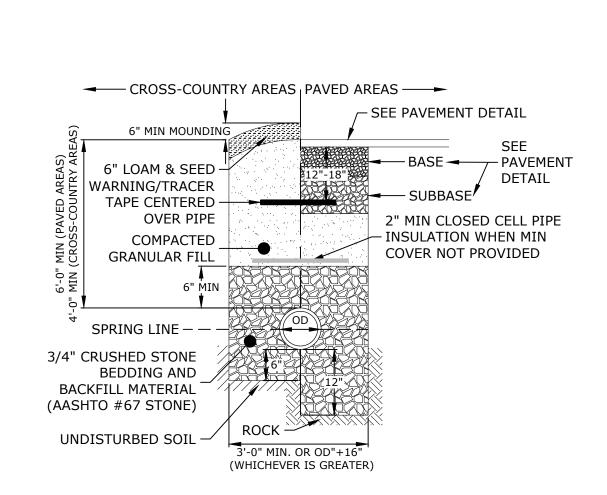


NOTES:

1. ALL DIMENSIONS ARE NOMINAL. . FRAMES USING NARROWER DIMENSIONS FOR THICKNESS ARE ALLOWED PROVIDED: A. THE FRAMES MEET OR EXCEED THE SPECIFIED LOAD RATING. B. THE INTERIOR PERIMETER (SEAT AREA) DIMENSIONS OF THE FRAMES REMAIN THE SAME TO ALLOW CONTINUED USE OF EXISTING GRATES/COVERS AS THE EXISTING FRAMES ALLOW, WITHOUT SHIMS OR OTHER MODIFICATIONS OR ACCOMMODATIONS. C. ALL OTHER PERTINENT REQUIREMENTS OF THE SPECIFICATIONS ARE MET.

**SEWER MANHOLE FRAME AND COVER** 

3. LABEL TYPE OF MANHOLE WITH 3" HIGH LETTERS IN THE CENTER OF THE COVER.

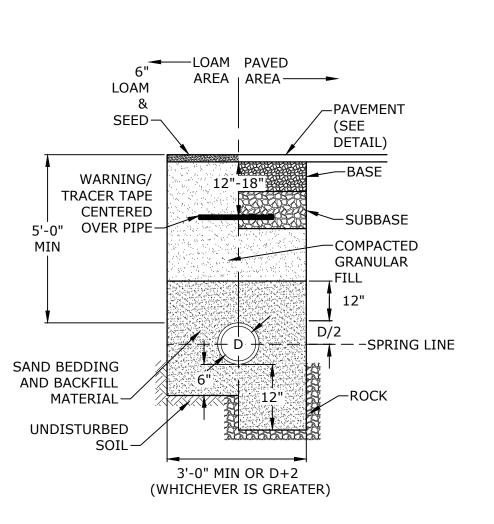


NOTES:

1. 3/4" CRUSHED STONE BEDDING AND BACKFILL MATERIAL FOR FULL

TO SHOW MINIMUM 6" RELOW PIPE IN EARTH AN WIDTH OF THE TRENCH FROM MINIMUM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO MINIMUM OF 6" OVER THE TOP OF THE PIPE. 2. SANITARY SEWER SHALL BE INSTALLED PER THE TOWN OF DURHAM DEPARTMENT OF PUBLIC WORKS STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE TOWN OF DURHAM.

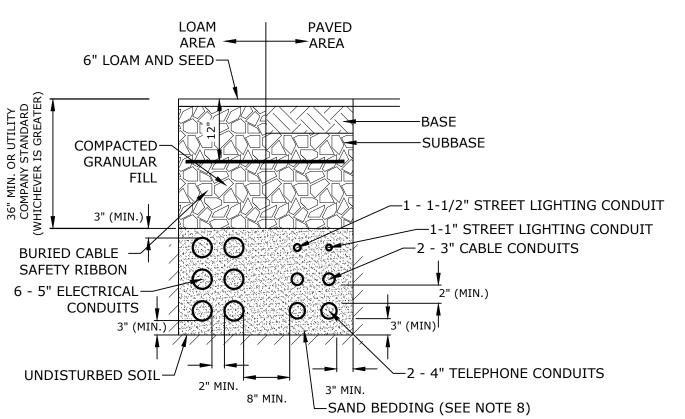
TYPICAL SEWER TRENCH



NOTES

1. SAND BEDDING AND BACKFILL FOR FULL WIDTH OF THE TRENCH FROM 6" BELOW PIPE IN EARTH AND 12" BELOW PIPE IN ROCK UP TO 12" ABOVE TOP OF PIPE. 2. WATER MAIN SHALL BE INSTALLED PER TOWN OF DURHAM STANDARDS. COORDINATE ALL INSTALLATIONS WITH THE TOWN OF DURHAM.

> TYPICAL WATER TRENCH NO SCALE



NOTE:

1. NUMBER, MATERIAL, AND SIZE OF UTILITY CONDUITS TO BE DETERMINED BY LOCAL UTILITY OR AS SHOWN ON ELECTRICAL DRAWINGS. CONTRACTOR TO PROVIDE ONE SPARE CONDUIT FOR EACH UTILITY TO BUILDING. 2. DIMENSIONS SHOWN REPRESENT OWNERS MINIMUM REQUIREMENTS. ACTUAL DIMENSIONS MAY BE GREATER BASED ON UTILITY COMPANY

STANDARDS, BUT SHALL NOT BE LESS THAN THOSE SHOWN. 3. NO CONDUIT RUN SHALL EXCEED 360 DEGREES IN TOTAL BENDS. 4. A SUITABLE PULLING STRING, CAPABLE OF 200 POUNDS OF PULL, MUST BE INSTALLED IN THE CONDUIT BEFORE UTILITY COMPANY IS NOTIFIED TO INSTALL CABLE. THE STRING SHOULD BE BLOWN INTO THE CONDUIT AFTER THE RUN IS ASSEMBLED TO AVOID BONDING THE

5. UTILITY COMPANY MUST BE GIVEN THE OPPORTUNITY TO INSPECT THE CONDUIT PRIOR TO BACKFILL. THE CONTRACTOR IS RESPONSIBLE FOR ALL REPAIRS SHOULD THE UTILITY COMPANY BE UNABLE TO INSTALL ITS CABLE IN A SUITABLE MANNER. 6. ALL CONDUIT INSTALLATIONS MUST CONFORM TO THE CURRENT EDITION OF THE NATIONAL ELECTRIC SAFETY CODE, STATE AND LOCAL

CODES AND ORDINANCES, AND, WHERE APPLICABLE, THE NATIONAL ELECTRIC CODE. 7. ALL 90° SWEEPS WILL BE MADE USING RIGID GALVANIZED STEEL. SWEEPS WITH A 36 TO 48 INCH RADIUS. 8. SAND BEDDING TO BE REPLACED WITH CONCRETE ENCASEMENT WHERE COVER IS LESS THAN 3 FEET, WHEN LOCATED BELOW PAVEMENT, OR WHERE SHOWN ON THE UTILITIES PLAN.

TYPICAL ELECTRICAL AND COMMUNICATION CONDUIT

NO SCALE

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REVISION HISTORY

**UNH & NOAA** 

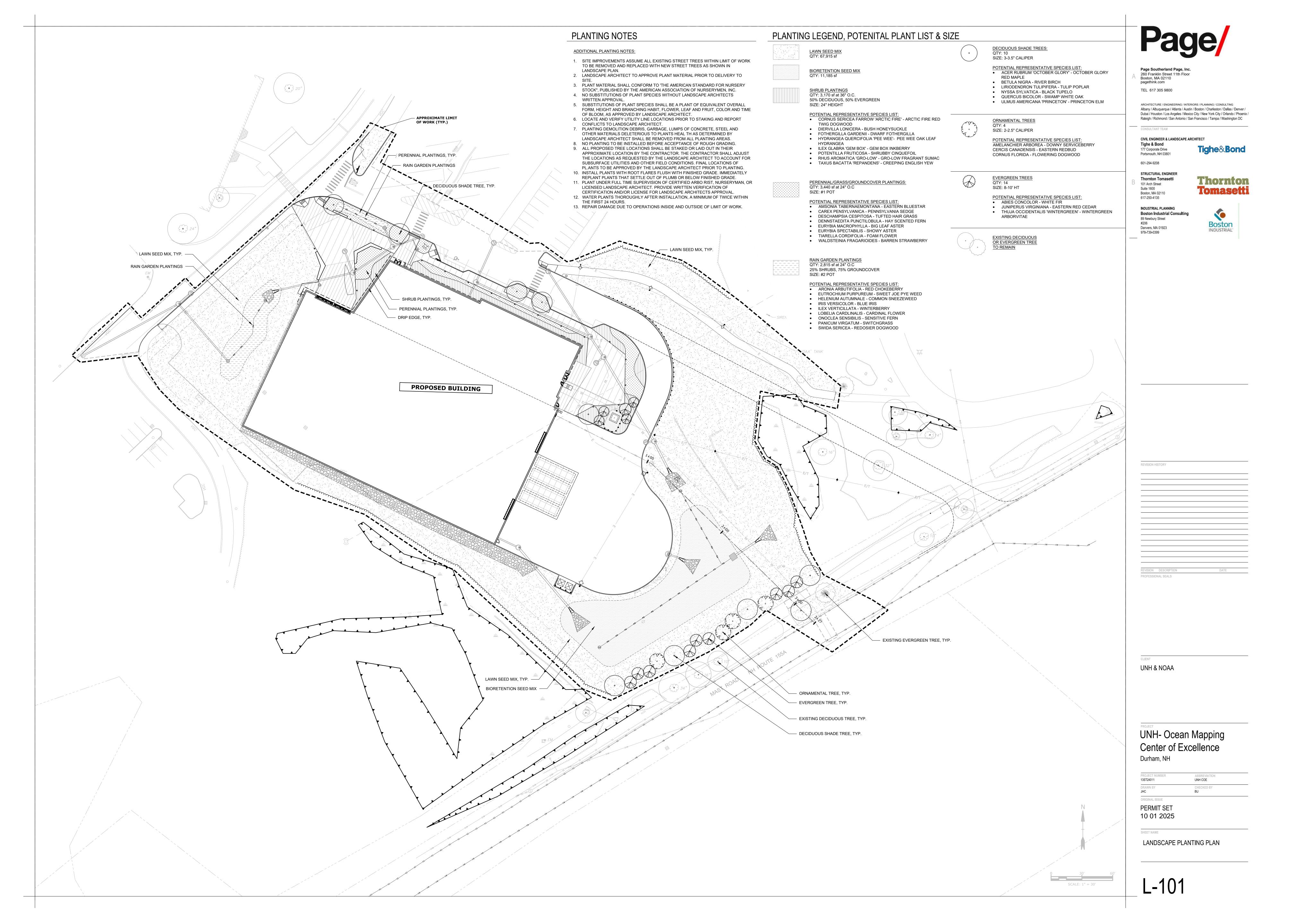
REVISION DESCRIPTION PROFESSIONAL SEALS

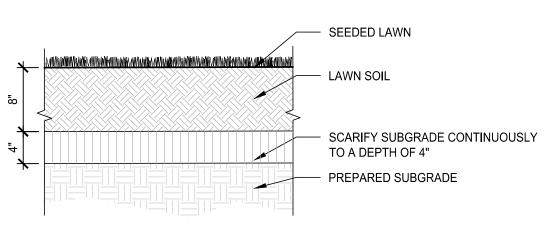
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PROJECT NUMBER ABBREVIATION 13ST24011 UNH COE CHECKED BY ORIGINAL ISSUE PERMIT SET 10 01 2025

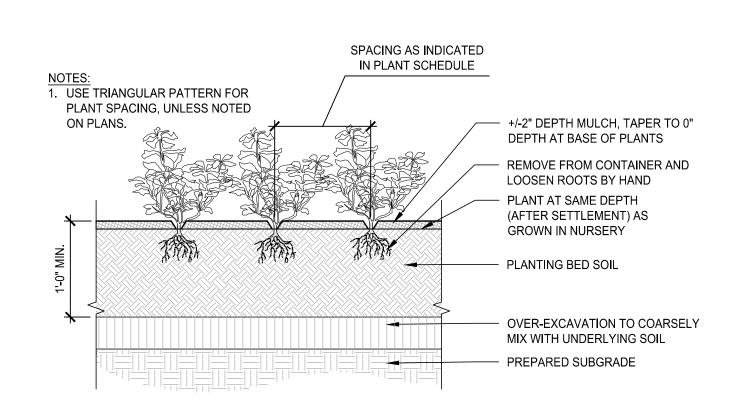
SHEET NAME **Details Sheet** 

Durham, NH

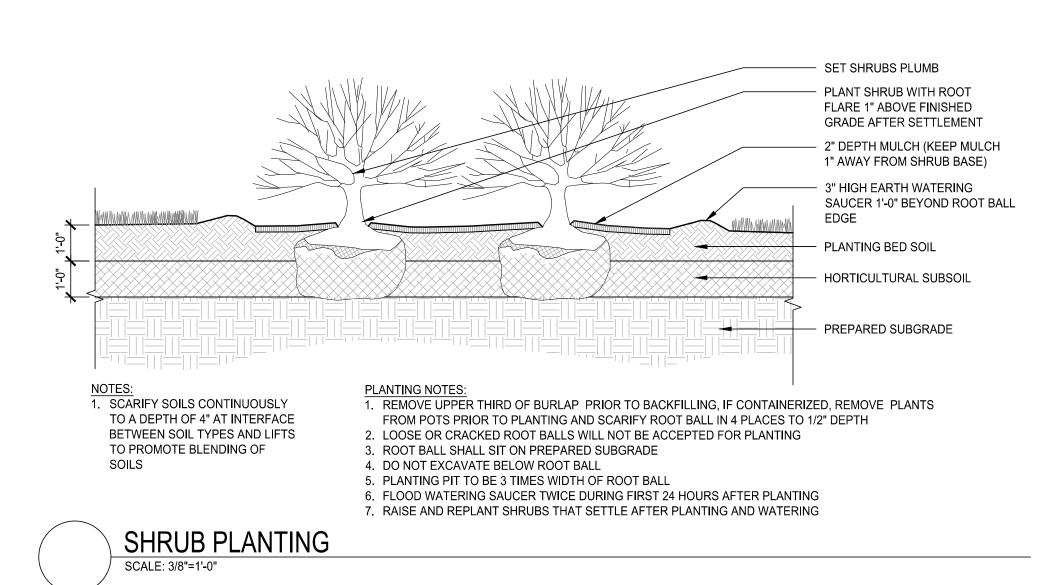


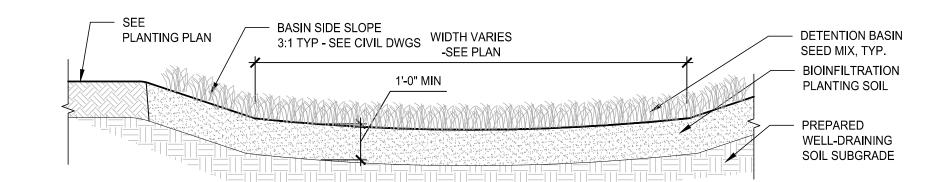


LAWN PLANTING SCALE: 1"=1'-0"

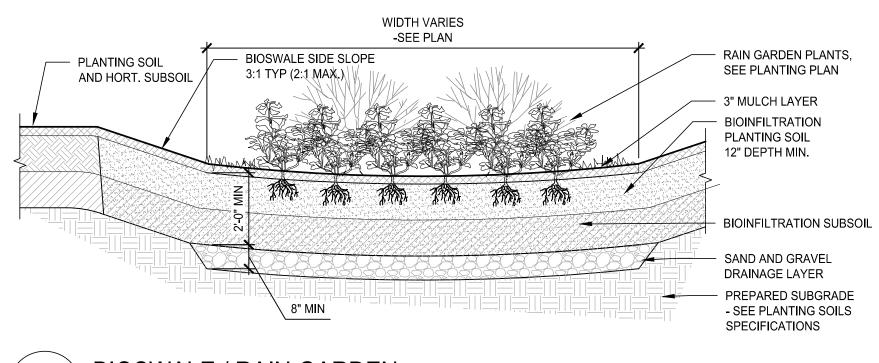


GROUNDCOVER, PERENNIAL AND ANNUAL PLANTING

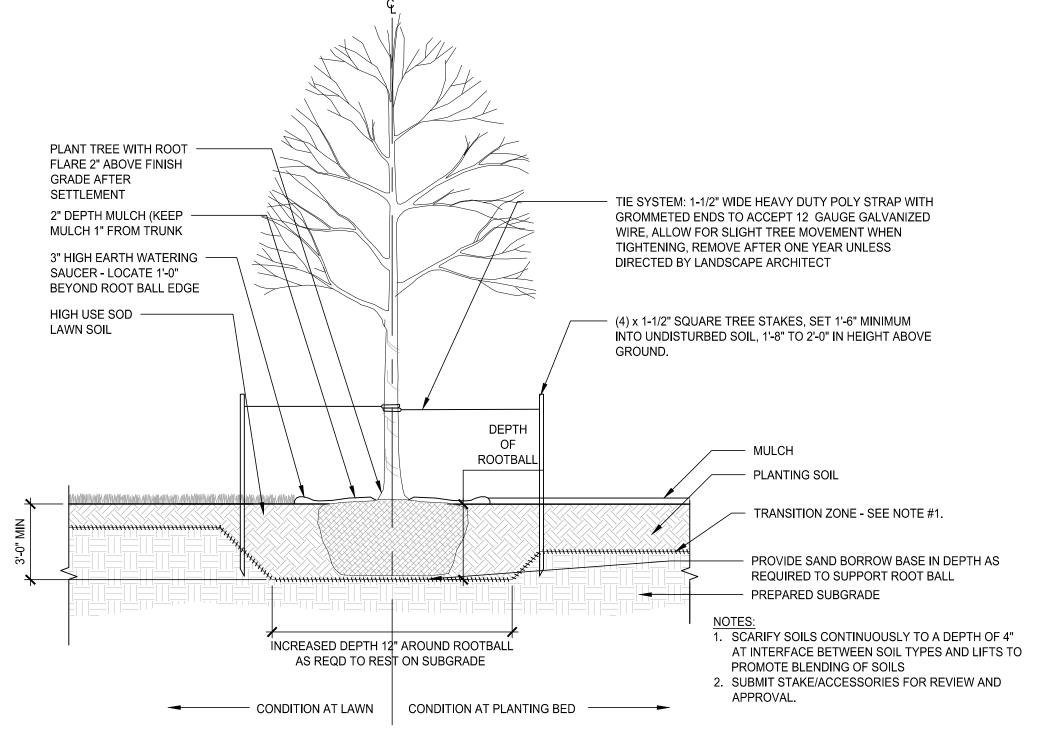




### PLANTING SOILS AT INFILTRATION BASINS - SEEDED SCALE: 3/8"=1'-0"



BIOSWALE / RAIN GARDEN



TREE PLANTING - IN LAWN OR PLANT BED AT GRADE SCALE: 1/4"=1'-0"



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LANDSCAPE PLANTING **DETAILS** 

L-501