

CONSTRUCTION SEQUENCE:

- 1. WETLAND BOUNDARIES TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION.
- 2. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL PROVIDED, AS NECESSARY, AND CONSISTENT WITH THE NHDES MARCH 2019 BMP MANUAL FOR UTILITY MAINTENANCE.
- 3. WETLAND IMPACTS ASSOCIATED WITH WETLAND CROSSINGS ARE REQUIRED FOR ACCESS BETWEEN STRUCTURES WITHIN THE RIGHT OF WAY.
- 4. ADEQUATE PRECAUTION SHALL BE EXERCISED TO AVOID SPILLAGE OF FUEL OILS, CHEMICALS, OR SIMILAR SUBSTANCES; NO FUELS, LUBRICANTS, CHEMICALS OR SIMILAR SUBSTANCES SHALL BE STORED BENEATH TREES OR IN THE VICINITY OF ANY WETLANDS, RIVER, STREAM OR OTHER BODY OF WATER; OR IN THE VICINITY OF NATURAL OR MAN-MADE CHANNELS LEADING THERETO. NO POWER EQUIPMENT SHALL BE STORED, MAINTAINED, OR FUELED IN ANY AREA ADJACENT TO A WETLAND, RIVER, STREAM OR OTHER BODY OF WATER.
- 5. REMOVE COMPLETELY ALL CONTAMINATION FROM ANY SPILLAGE OF CHEMICALS OR PETROLEUM PRODUCT WITH COMPLETE REHABILITATION OF THE AFFECTED AREA.
- 6. ACCESS ROUTES HAVE BEEN SELECTED TO PREVENT DEGRADATION OF THE RIGHT-OF-WAY AND MINIMIZE ENVIRONMENTAL IMPACT. OPERATIONS SHALL BE CONFINED TO THE SPECIFIED ACCESS ROUTES WITHIN THE PROPOSED WETLAND IMPACT AREA. ACCESS ROUTES SHALL NOT EXCEED A 16 FOOT-WIDTH.
- 7. IMPACT TO VEGETATION WITHIN WETLANDS WILL BE LIMITED TO THE EXTENT NECESSARY TO PLACE THE SWAMP MATS WHERE REQUIRED
- 8. LOW GROWING VARIETIES OF VEGETATION ADJACENT TO WETLANDS SHALL BE PRESERVED TO THE EXTENT POSSIBLE. STUMPS AND ROCKS SHALL NOT BE REMOVED, AND THERE SHALL BE NO EXCAVATIONS, FILLS OR GRADING DONE ADJACENT TO WETLANDS, UNLESS MINOR EXCAVATIONS IS NEEDED FOR ACCESS.
- 9. TIMBER MATS AND PERIMETER CONTROLS WILL BE USED ALONG ACCESS ROUTES AND WORK PADS WITHIN WETLAND AREAS. THESE MATS ARE CONSTRUCTED OF HEAVY TIMBERS OR COMPOSITE MATERIAL, BOLTED TOGETHER, AND ARE PLACED END-TO-END IN THE WETLAND TO SUPPORT HEAVY EQUIPMENT. ALL SWAMP MATS SHALL BE PLACED AND REMOVED SO AS NOT TO CAUSE ANY RUTS, CHANNELS OR DEPRESSIONS, OR OTHERWISE CAUSE ANY UNDUE DISTURBANCE TO WETLANDS.
- 10. IF TIMBER MAT BMP IS NOT SUFFICIENT DUE TO HIGH WATER, ADDITIONAL BMP'S MAY INCLUDE THE PLACEMENT OF GEOTEXTILE FABRIC, 3"-4" STONE, AND GRAVEL TO PROVIDE A SUITABLE ROAD BED. A TEMPORARY CULVERT MAY BE REQUIRED IN AREAS OF HIGH FLOW TO MAINTAIN HYDROLOGIC CONNECTIVITY. ALL MATERIAL WILL BE REMOVED FROM JURISDICTIONAL AREAS AFTER CONSTRUCTION COMPLETION.
- 11. NO MATERIAL SHALL BE PLACED IN ANY LOCATION OR IN ANY MANNER SO AS TO IMPAIR SURFACE WATER FLOW INTO, THROUGH OR OUT OF ANY WETLAND AREA. NO INSTALLATION SHALL CREATE AN IMPOUNDMENT THAT WILL IMPEDE THE FLOW OF WATER OR CAUSE FLOODING.
- 12. NO MATERIAL SHALL BE TAKEN FROM THE WETLANDS AREA EXCEPT THAT WHICH MUST NECESSARILY BE REMOVED FOR THE STRUCTURE OR FOUNDATION PLACEMENT OR STABILIZATION. ALL EXCESS MATERIAL TAKEN FROM THE WETLAND WILL BE REMOVED FROM THE SITE.
- 13. ANY PROPOSED SUPPORT FILLS SHALL BE CLEAN GRAVEL AND STONE, FREE OF WASTE METAL PRODUCTS, ORGANIC MATERIALS AND SIMILAR DEBRIS AND SHALL NOT EXCEED THE AMOUNT PERMITTED. THIS ALLOWABLE FILL IS THE ONLY FILL THAT MAY REMAIN IN THE WETLAND AFTER CONSTRUCTION. ALL CUT AND FILLS SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 14. INSTALL NEW POLES IN THE LOCATIONS DESIGNATED ON THE PERMITTING PLANS.
- 15. CABLE INSTALLATION WILL BE PERFORMED IN A MANNER SO AS TO AVOID, OR LIMIT TO THE MAXIMUM EXTENT POSSIBLE, TRAVERSING WETLANDS WITH HEAVY EQUIPMENT. IN SOME CASES, A HELICOPTER MAY BE USED DURING THE INSTALLATION TO MINIMIZE IMPACTS.
- 16. REMOVAL OF THE OLD POLE WILL OCCUR ONCE THE CABLE HAS BEEN INSTALLED ON THE NEW STRUCTURE. THE OLD STRUCTURES WILL BE REMOVED FROM THE SITE. POLES WILL BE CUT AT THE GROUND SURFACE. FOOTINGS WILL BE ABANDONED IN PLACE TO MINIMIZE IMPACTS.
- 17. ALL TIMBER MATS, MATERIAL, AND DEBRIS WILL BE REMOVED FROM THE WORK AREA UPON THE COMPLETION OF CONSTRUCTION.
- 18. UPLAND DISTURBED AREAS SHALL BE RESTORED AND STABILIZED UPON COMPLETION OF CONSTRUCTION. WORK PAD RESTORATION SHOULD INCLUDE REDUCING THE WORK PAD TO A 30 BY 60 FOOT AREA, AND REDUCING SLOPES TO A MAXIMUM OF 25%. STOCKPILED MATERIAL SHOULD BE SPREAD TO REDUCE ANY UNNECESSARY SLOPES. GRAVEL WORK PADS AND SLOPES SHOULD BE SCARIFIED TO A MINIMUM OF 3" BEFORE SPREADING TOPSOIL/LOAM.
- 19. ALL TEMPORARY WETLAND IMPACTS WILL BE RE-GRADED TO ORIGINAL CONTOURS FOLLOWING CONSTRUCTION. NEW ENGLAND EROSION CONTROL/RESTORATION MIX, AVAILABLE THROUGH NEW ENGLAND WETLAND PLANTS, INC., 820 WEST STREET, AMHERST, MA 01002, 413-548-8000, OR EQUIVALENT SEED MIX SHALL BE APPLIED IN WETLAND AREAS THAT ARE NOT INUNDATED, AS NECESSARY.
- 20. MULCH USED FOR STABLIZATION SHALL CONSIST OF SEEDLESS STRAW.
- 21. SEDIMENT AND EROSION CONTROL MEASURES WILL BE EVALUATED AND REMOVED IF NECESSARY UPON THE COMPLETION OF CONSTRUCTION.
- 22. COMMERCIAL LOAM WILL NOT BE USED AS PART OF RESTORATION. ONLY IN-SITU TOPSOIL WILL BE USED TO RESTORE DISTURBED AREAS.
- 23. WHERE OPTIMAL TURTLE BREEDING AREAS OVERLAP WITH DISTURBANCE (AS DETERMINED BY AN ENVIRONMENTAL MONITOR), MINERAL SOILS WILL BE SCARIFIED TO ALLEVIATE COMPACTION AND BECOME MORE SUITED FOR TURTLE BREEDING.
- 24. NATURALLY VEGETATED LOCAL WETLAND BUFFER AREAS OUTSIDE OF EXISTING TRAILS MUST BE RESTORED UPON COMPLETION

## WINTER CONSTRUCTION NOTES

- 1. PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED. STABILIZATION METHODS SHALL INCLUDE SEEDING AND MULCH, AND INSTALLATION OF 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 FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- 2. DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE TEMPORARILY STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

3. AFTER NOVEMBER 15TH, 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 (NHDOT 304.3).

OWNER: EVERSOURCE ENERGY 13 LEGENDS DRIVE

- 1. BASE PLAN PROVIDED BY EVERSOURCE ENERGY. EVERSOURCE ENERGY PROVIDED THE WETLAND DATA. EVERSOURCE ENERGY PROVIDED THE UTILITY DESIGN.
- 2. JURISDICTIONAL WETLANDS WERE DELINEATED BY NORMANDEAU IN 2016, IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPS OF ENGINEERS' "WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1," AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION," JANUARY 2012. WETLANDS WILL BE REVIEWED BY GZA GEOENVIRONMENTAL, INC. PRIOR TO START
- 3. NORMANDEAU EVALUATED WETLANDS AS POTENTIAL VERNAL POOLS IN 2016 IN ACCORDANCE WITH "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE," 1997, NEW HAMPSHIRE FISH AND GAME DEPARTMENT, NONGAME AND ENDANGERED WILDLIFE PROGRAM.
- 4. NORMANDEAU COMPLETED WETLANDS FUNCTION AND VALUES ASSESSMENT IN 2016 IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999.
- 5. SITE PLAN IS FOR PERMITTING PURPOSES ONLY AND DOES NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
- 6. THE PROJECT WILL BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
- 7. IN ACCORANCE WITH ENV-WQ 1505.02, 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. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

   A MINIMUM 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED

   A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL HAS BEEN INSTALLED
- 8. IN THE EVENT THAT A RARE OR THREATENED SPECIES IS OBSERVED, THE NEW HAMPSHIRE FISH AND GAME AND NEW HAMPSHIRE NATURAL HERITAGE BUREAU WILL BE NOTIFIED. TURTLE NESTING SEASON EXTENDS FROM LATE MAY THROUGH THE BEGINNING OF JULY, IF WOOD, BLANDING'S OR SPOTTED TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, CONTACT MELISSA DOPERALSKI AT 603-271-1735 OR JOSH MEGYESY AT 603-271-1725 FOR FURTHER INSTRUCTIONS. OBSERVATIONS OF NORTHERN BLACK RACER SNAKES SEEN IN ANY AREA FROM THE END OF SEPTEMBER THROUGH THE MONTH OF APRIL MUST BE IMMEDIATELY REPORTED TO THE NHFG DEPARTMENT (BRENDAN CLIFFORD AT 603-271-0463 OR MELISSA DOPERALSKI AT 603-271-1738). IF NORTHERN BLACK RACER IS FOUND IN A WORK AREA FROM NOVEMBER THROUGH THE MONTH OF APRIL, WORK SHALL IMMEDIATELY CEASE AND THE OBSERVATION MUST BE REPORTED TO THE NHFG (BRENDAN CLIFFORD OR MELISSA DOPERALSKI).

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

- 1. INSTALLATION OF EROSION CONTROL GRINDINGS AND/OR SILT FENCES SHALL BE COMPLETE PRIOR TO THE START OF WORK IN ANY GIVEN AREA. EROSION CONTROLS SHALL BE USED DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A HEALTHY STAND OF VEGETATION COVER. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER .25" OR GREATER RAINFALL EVENTS.
- 2. AS REQUIRED, CONSTRUCT TEMPORARY BERMS, SILTATION FENCES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION & SEDIMENTATION OF WETLANDS.
- 3. THE WORK AREA SHALL BE GRADED AND OTHERWISE SHAPED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE LIMITS OF THE WORK AREA. EROSION CONTROL GRINDINGS WILL BE NECESSARY TO
- 4. ANY STRIPPED TOPSOIL SHALL BE STOCKPILED, WITHOUT COMPACTION, AND STABILIZED WITH BMPS.
- 5. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE 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, PLANT ANNUAL RYEGRASS PRIOR TO OCTOBER 15TH.
- 6. EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
- 7. EROSION CONTROL MATTING, IF REQUIRED, WILL CONSIST OF JUTE MATTING. MATTING WITH WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD WILL BE AVOIDED TO LIMIT UNINTENTIONAL MORTALITY TO SNAKES.

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#### 326 AND 380 TRANSMISSION LINE STRUCTURE REPLACEMENT & OPGW PROJECT

MERRIMACK, LITCHFIELD, LONDONDERRY, HUDSON, AND PELHAM NEW HAMPSHIRE





**EVERS=URCE ENERGY** CHECKED BY: DMZ SHEET

REVIEWED BY: TLT LEW DESIGNED BY: MJD DRAWN BY: MJD SCALE: ROJECT NO 03/04/2022 04.0190999.70

**S1** 

## Best Management Practices (BMP's) for Straw wattles

#### Definition and purpose:

Straw wattles are burlap rolls filled with straw that trap sediment and interrupt water flow by reducing slope lengths.

#### Applications:

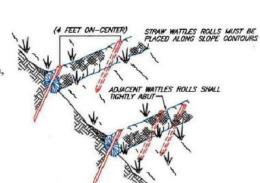
- \* Along erodible or unstablizied slopes
- \* Spread overland waterflow
- \* Trap sediment
- \* Around storm drain inlets to slow water and settle out sediment
- \* Overlap ends approximately 6 inches

#### Installation:

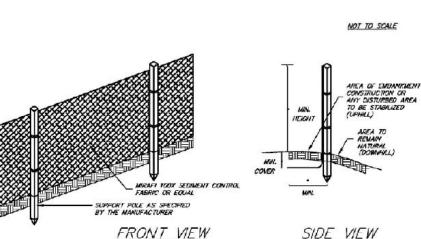
Straw wattles are installed parallel to slope contours and perpendicular to sheet flow.

Spacing\* - Dependent on slope length, soil steepness and soil type (general range 10 - 25').

Trenching - 2"-5" inch trench Stacking - at each end and four foot on center (i.e. 25 foot wattle uses 6 stacks)







## NOTES (SILT FENCE)

NOTES (SILT PERVICE)

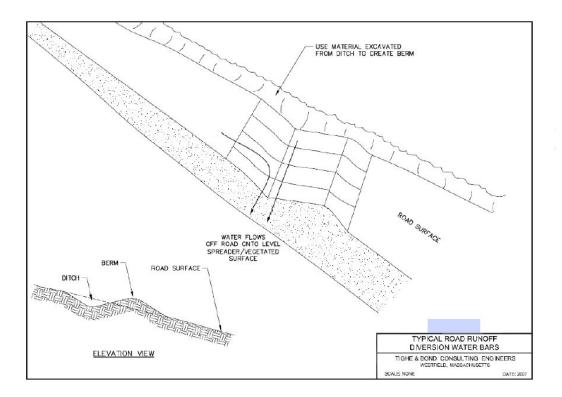
1. THE HEIGHT OF THE BARRIER SHALL NOT EXEED 36 INCHES.

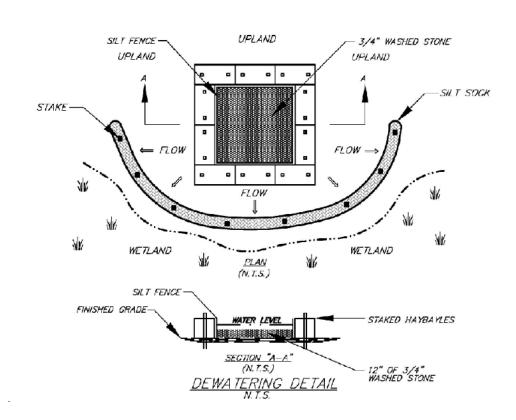
2. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6—INCH OVERLAP, AND SECURELY SEALED. SEE MANUFACTURER'S RECOMMENDATIONS.

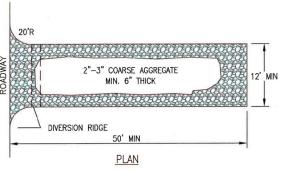
3 POSTS SHALL BE PLACED AT A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN
SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS MANUFACTURER RECOMMENDS.

4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE

- OF POSTS AND UPSLOPE OF THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS
- 5. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND A MINIMUM OF 8 INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED
- 6. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC. 7. FABRIC BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED. 8. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST ONCE
- DAILY DURING PROLONGED RAINFALL AND ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. 9. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. 10. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE—HALF THE HEIGHT OF THE BARRIER.
- 11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.







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

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

## **CONSTRUCTION ENTRANCE**

NOT TO SCALE

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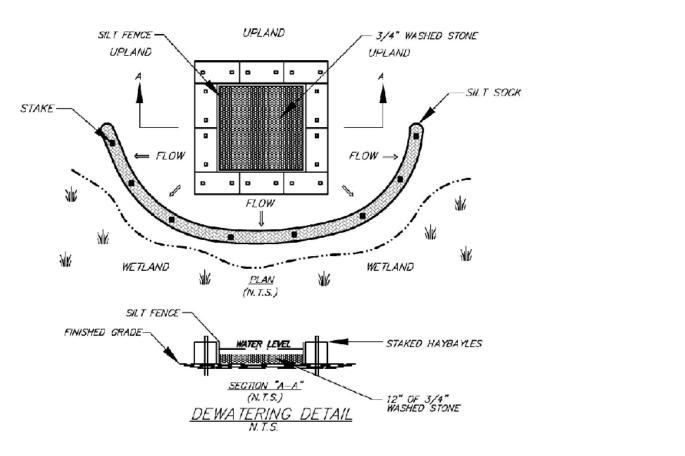
## 326 AND 380 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT MERRIMACK, LITCHFIELD, LONDONDERRY, HUDSON, AND PELHAM

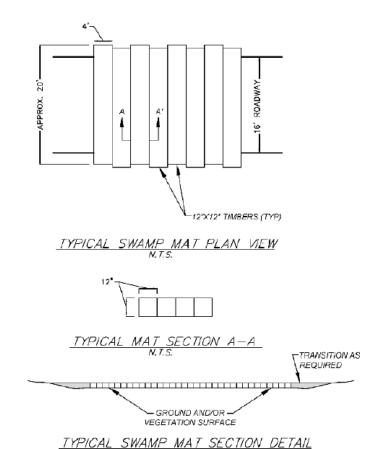
# NEW HAMPSHIRE BMP DETAILS

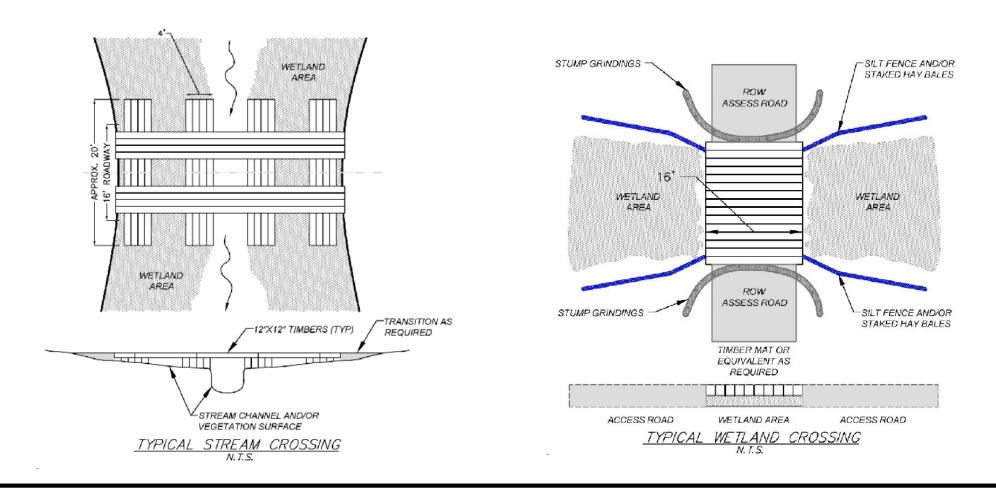


**S2** 

DESIGNED BY: MJD DRAWN BY: MJD SCALE: 04.0190999.70 03/04/2022







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## 326 AND 380 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT MERRIMACK, LITCHFIELD, LONDONDERRY, HUDSON, AND PELHAM

NEW HAMPSHIRE

## BMP DETAILS

PREPARED BY:			PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			EVERS=URCE ENERGY	
PROJ MGR:	LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET
DESIGNED BY:	MJD	DRAWN BY: MJD	SCALE:	1
DATE: 03/04/2	2022	PROJECT NO. 04.0190999.70	REVISION NO.	S3

#### **NOTES**

- 1. BLANDING'S TURTLE (STATE ENDANGERED), SPOTTED TURTLE (STATE THREATENED), AND EASTERN HOGNOSE SNAKE (STATE ENDANGERED) OCCUR WITHIN THE VICINITY OF THE PROJECT SITE. SITE OPERATORS SHALL BE INFORMED OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED A FLYER THAT HELPS TO IDENTIFY THESE SPECIES ALONG WITH NHFGCONTACT INFORMATION. SEE PLAN SHEET 4-7.
- 2. VERNAL POOLS AND POTENTIAL VERNAL POOLS SHALL BE FLAGGED PRIOR TO WORK AND ALL IMPACTS TO VERNAL POOLS AND POTENTIAL VERNAL POOLS SHALL BE AVOIDED.
- 3. SIGHTINGS OF EASTERN BOX SHALL BE REPORTED IMMEDIATELY TO NHFG WILDLIFE BIOLOGISTS MELISSA WINTERS (ALL HOURS,603-479-1129). IMMEDIATE REPORTING OF OBSERVATIONS IS CRITICAL AS NHFG BIOLOGISTS WILL NEED TO COLLECT DATA ON THE INDIVIDUAL.
- 4. TURTLES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON (MAY 15TH JUNE 30TH). ALL TURTLE SPECIES NESTS ARE PROTECTED BY NH LAWS. IF A NEST IS OBSERVED OR SUSPECTED, CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION.
- 5. ALL OBSERVATIONS OF EASTERN HOGNOSE SNAKE SEEN AT ANY TIME SHALL BE IMMEDIATELY REPORTED TO THE NHFG DEPARTMENT (MELISSA WINTERS (603-479-1129 CELL) OR JOSH MEGYESY (978-578-0802 CELL)) FOR FURTHER INSTRUCTIONS. PLEASE ATTEMPT TO PHOTOGRAPH THIS SPECIES TO SEND TO US FOR VERIFICATION.
- 6. PRIOR TO DAILY CONSTRUCTION ACTIVITIES, TIMBER MATTING SHALL BE SWEPT FOR SNAKES AND TURTLES.
- 7. ANY RARE SPECIES THAT ARE OBSERVED IN WORK AREAS AND ARE IN IMMEDIATE DANGER SHALL BE MOVED AWAY FROM IMPACT AREA IN THE DIRECTION THE ANIMAL WAS MOVING. ANY HANDLING OF RARE SPECIES SHALL BE REPORTED TO NHFG IMMEDIATELY.
- 8. 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 1/8 INCHES;
- 9. 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 EMAIL 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;
- 10. 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 FEASIBLE;
- 11. 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, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04;

  SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE AND IF IN DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED
  - IMMEDIATELY IF THIS ACTION OCCURS.
- 12. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.
- 13. NESTING AREAS MAY INCLUDE WORK PADS AND ACCESS ROADS THAT ARE NOT HARD PACK GRAVEL AND OTHER SANDY/GRAVEL WORK AREAS. ALL TURTLE SPECIES NESTS AND NORTHERN BLACK RACER NESTS ARE PROTECTED BY NH LAWS. BE AWARE OF THE POTENTIAL TO ENCOUNTER NESTING WILDLIFE IN THESE AREAS.
- IF A TURTLE OR SNAKE NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION.
- 15. OBSERVATIONS OF NORTHERN BLACK RACERS IN THE MONTHS OF APRIL-MAY AND SEPTEMBER-OCTOBER MAY INDICATE THE POTENTIAL FOR A DEN SITE ON OR NEAR THE PROJECT SITE.
  OBSERVATIONS OF THIS SPECIES DURING THIS TIMEFRAME SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE
  ENVIRONMENTAL REVIEW PROGRAM. PLEASE CONTACT MELISSA WINTERS (603-479-1129) OR BRENDAN CLIFFORD (603-944-0885). OBSERVATIONS OF THIS SPECIES OUTSIDE OF THIS TIMEFRAME CAN
  FOLLOW GENERAL REPORTING GUIDANCE. PLEASE INCLUDE PHOTOGRAPH WITH TEXT IF FEASIBLE.
- 16. NO WORK SHALL OCCUR IN THE LONDONDERRY PROJECT SITES WEST OF MAMMOTH ROAD AND NORTH OF ELWOOD ROAD UNTIL AFTER OCTOBER 15TH 2022. NHFG SHALL BE CONTACTED PRIOR TO THE START OF WORK IN THESE SECTIONS SO THAT COORDINATION CAN OCCUR TO MINIMIZE POTENTIAL IMPACTS TO RARE TURTLES.
- 17. ALL WORK ACTIVITIES SHALL BE RESTRICTED TO THE DEFINED ROADS, CONSTRUCTION AREAS, AND STAGING AREAS, WITH NO EQUIPMENT OR MATERIALS STAGED OR STORED OUTSIDE
- 18. ALL DEFINED ROADS, CONSTRUCTION AREAS, AND STAGING AREAS SHALL BE KEPT CLEARED OF PLANT SUCCESSION AND PIONEER VEGETATION TO PREVENT TURTLES FROM SEEKING REFUGE AND POTENTIALLY BEING CRUSHED IF HIDDEN.
- 19. EASTERN BOX TURTLES ARE KNOWN TO NEST IN THE VICINITY OF THE PROJECT. NO WORK SHALL OCCUR IN THE HUDSON PROJECT SITES UNTIL AFTER OCTOBER 15TH 2022 EXCEPT FOR SECTIONS OF LINE NORTH OF KIENIA RD (STRUCTURES 74-81 ON MAP SHEETS 6, 7, AND 8 DATED MARCH 2022). NHFG SHALL BE CONTACTED PRIOR TO THE START OF WORK IN HUDSON SO THAT COORDINATION CAN OCCUR TO MINIMIZE POTENTIAL IMPACTS TO EASTERN BOX TURTLES.
- 20. A BIOLOGIST WITH EXPERIENCE WITH TURTLES (ID AND MONITORING) SHALL BE ONSITE AT ALL TIMES DURING PROJECT ACTIVITIES WHEN ACTIVITIES ARE OCCURRING WITHIN THE WORK AREAS IN HUDSON EXCEPT FOR SECTIONS OF LINE NORTH OF KIENIA RD (STRUCTURES 74-81 ON MAP SHEETS 6, 7, AND 8 DATED MARCH 2022).
- 21. SWEEPS OF LAYDOWN AREAS/FENCING AND WORK EQUIPMENT SHALL BE CONDUCTED IN THE MORNING PRIOR TO WORK AND DURING THE DAY WHEN/IF EQUIPMENT IS LEFT SITTING IN AN AREA.
- 22. AREAS OF DISTURBANCE SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. EQUIPMENT PARKING AREAS, LAYDOWN AREAS AND ACCESS SHALL BE CLEARLY DEFINED AND EQUIPMENT/TRUCKS SHALL BE RESTRICTED TO THESE AREAS.
- 23. IF TURTLE TRACKS ARE OBSERVED, A POTENTIAL NEST LOCATED, PREDATED NEST OR A TURTLE IS FOUND TO BE OR SUSPECTED OF NESTING WITHIN THE PROJECT AREA, CONTACT NHFG IMMEDIATELY.
- 24. AT LEAST ONE QUALIFIED BIOLOGICAL MONITOR SHALL BE ON-SITE AT ALL TIMES IN ALL WORK AREAS WEST OF MAMMOTH ROAD AND NORTH OF ELWOOD ROAD. A QUALIFIED BIOLOGICAL MONITOR SHALL BE SOMEONE WITH TRAINING AND EXPERIENCE IN TURTLE AND REPTILE IDENTIFICATION AND HANDLING TECHNIQUES AND SHALL OPERATE UNDER THE GUIDANCE OF A QUALIFIED HERPETOLOGIST. A QUALIFIED HERPETOLOGIST SHALL BE A WILDLIFE BIOLOGIST WELL VERSED ON AND WITH EXTENSIVE EXPERIENCE IN TURTLE IDENTIFICATION, LIFE HISTORY, HABITAT PREFERENCE, HANDLING, AND DOCUMENTATION, I.E. ACTIVITY, SEXING, AGING, ETC.

  THE QUALIFIED HERPETOLOGIST SHALL BE RESPONSIBLE FOR:

  155 AGENTLY AND RESPONSIBLE FOR:

  156 AGENTLY AND RESPONSIBLE FOR:

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- SEARCHING FOR, IDENTIFYING, DOCUMENTING, REPORTING AND RELOCATING ANY STATE-LISTED HERPETOFAUNA WITHIN THE WORK AREAS IMMEDIATELY PRIOR TO THE PLACEMENT OF GRAVEL AND/OR MATTING.
- AND/OR MAI TING.

  INSTRUCTING AND GUIDING BIOLOGICAL MONITOR ON MATTERS PERTAINING TO HERPETOFAUNA.

  ENSURING PROPER DOCUMENTATION AND HANDLING TECHNIQUES ARE ABIDED TO BY THE CONSTRUCTION PERSONNEL AND THE BIOLOGICAL MONITOR.

  AT THE END OF THE PROJECT, THE QUALIFIED HERPETOLOGIST SHALL PROVIDE EVERSOURCE LICENSING AND PERMITTING STAFF A REPORT, WHICH INCLUDES A SUMMARY OF OBSERVATIONS, REPORTING LOGS DOCUMENTING ANY DOCUMENTED STAFF-LISTED SPECIES, AND MAPPING AND .SHP FILES SHOWING THE LOCATION OF ANY OBSERVED STATE-LISTED SPECIES. THE REPORT SHALL BE REVIEWED AND PROVIDED TO NH F&G FOR THEIR RECORDS.

  THE BIOLOGICAL MONITOR SHALL:

  THE BIOLOGICAL MONITOR SHALL:

  THE BIOLOGICAL MONITOR SHALL:
- THE BIOLOGICAL MONITOR SHALL:

  INSPECT ALL WORK AREAS DAILY FOR S&E CONTROLS, THE PRESENCE OF STATE-LISTED SPECIES, TO ENSURE COMPLIANCE WITH ENVIRONMENTAL REGULATIONS AND PERMIT CONDITIONS.

  MAINTAIN REGULAR CONTACT WITH THE PROJECT'S QUALIFIED HERPETOLOGIST ON ALL MATTERS PERTAINING TO HERPETOFAUNA PROTECTION AND SURVEYS.

  SERVE AS THE PRIMARY CONTACT BETWEEN THE CONTRACTOR AND EL&P STAFF.

  REPORT OBSERVATIONS OF STATE-LISTED SPECIES IMMEDIATELY TO EL&P STAFF WHO SHALL IN TURN REPORT THOSE OBSERVATIONS TO NHF&G.

  ODCUMENT FIELD ACTIVITIES AND OBSERVATIONS DAILY.

- 25. MINIMIZE WORK PAD AREAS, INCLUDING MATTING, TO THE GREATEST EXTENT POSSIBLE, ESPECIALLY IN WETLANDS AND OTHER SENSITIVE AREAS. RESTORE WORK PADS USING TOPSOIL STOCKPILED DURING INITIAL GRADING TO AN APPROXIMATELY 30-FOOT BY 60-FOOT OR SMALLER AREA AT THE BASE OF THE STRUCTURE TO ALLOW FOR FUTURE MAINTENANCE. STABILIZE EXPOSED SOILS WITH SEED

#### SPOTTED TURTLE (CLEMMYS GUTTATA)

STATE THREATENED



#### SPOTTED TURTLE IDENTIFICATION

1.SMALL, MOSTLY AQUATIC WITH BLACK OR DARK BROWN WITH YELLOW SPOTS. 2. FAIRLY FLAT SHELL COMPARED TO BLANDING'S TURTLE. 3. SPOTS VARY IN COLOR AND NUMBER.

#### **BLANDING'S TURTLE (EMYDOIDEA BLANDINGII)**

STATE ENDANGERED



## **BLANDING'S TURTLE IDENTIFICATION**

1. LARGE, DARK/BLACK DOMED SHELL WITH LIGHTER SPECKLES.
2. DISTINCT YELLOW THROAT/CHIN.
3. AQUATIC BUT OFTEN MOVES ON LAND.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (6ZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLLEY FOR THE USE BY SZC CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR US AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA, AN' TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTE EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

## 380 & 326 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT

PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

## WILDLIFE NOTES

PREPARED BY GZA GeoEnvironmental, Inc. **EVERSURCE Engineers and Scientists** www.gza.com **ENERGY** REVIEWED BY: TLT CHECKED BY: DMZ LFW SHEET

DESIGNED BY: MJD SCALF. DRAWN BY: MJD ROJECT NO 07/19/2022 04.0190999.70



## NORTHERN BLACK RACER IDENTIFICATION

- 1. SOLID BLACK WITH A WHITE THROAT. 2. SLENDER WITH GLOSSY SCLAES. 3. 3-6 FT. LONG. 4. HATCHLINGS ARE VERY SMALL AND PATTERNED.



## **EASTERN HOGNOSE SNAKE (HETERODON PLATIRHINOS)**

STATE ENDANGERED



## **EASTERN HOGNOSE SNAKE IDENTIFICATION**

- 1. BLACK, GRAY OR PATTERNED APPEARANCE. 2. UPTURNED SNOUT. 3. 2-3 FT. LONG 4. MAY SPREAD NECK OUT OR HISS.



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## 380& 326 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT

PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

# WILDLIFE NOTES (CONT.)

GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

**EVERSURCE ENERGY** 

**S5** 

CHECKED BY: DMZ SHEET LEW REVIEWED BY: TLT DESIGNED BY: MJD DRAWN BY: MJD SCALE: PROJECT NO. 07/19/2022 04.0190999.70

\*ALL PHOTOS AND IDENTIFICATION INFORMATION COURTESY OF NEW HAMPSHIRE FISH AND GAME DEPARTMENT.







## WOOD TURTLE IDENTIFICATION

1. NECK AND FORELIMBS ARE ORANGE.
2. CHARACTERIZED BY ITS HIGHLY SCULPTED SHELL WITH EACH LARGE SCUTE TAKING ON AN IRREGULAR PYRAMIDAL SHAPE.
3. ADULTS CAN BE 5-8 INCHES LONG.

## **EASTERN BOX TURTLE (TERRAPENE CAROLINA CAROLINA)**

STATE ENDANGERED





#### **EASTERN BOX TURTLE IDENTIFICATION**

1. A SMALL 4.5-7 INCH TURTLE WITH A HIGHLY DOMED SHELL AND VARIABLE PATTERNING. 2. COLOR PATTERNS OF THE CARAPACE TYPICALLY CONSIST OF IRREGULAR YELLOW OR ORANGE MARKINGS OVER A BROWN OR BLACK BASE.. 3. THE SKIN IS UNIFORMLY DARK WITH YELLOW OR ORANGE MARKINGS.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT. THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOGN/URONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZAS CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OF FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA, ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN STATEMENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT TANY RISK OR LIABILITY OF USER'S CHIENT.

## 380 & 326 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT

PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

# WILDLIFE NOTES (CONT.)

**ENERGY** 

**S6** 



REVIEWED BY: TLT DESIGNED BY: MJD DRAWN BY: MJD SCALE: ROJECT NO.

CHECKED BY: DMZ SHEET 07/19/2022 04.0190999.70





## JEFFERSON/BLUE-SPOTTED SALAMANDER COMPLEX IDENTIFICATION

1. DARK-BODIED SALAMANDER
2. APPROXIMATELY 3.5-5 INCHES LONG
3. SPECKLED WITH BLUE OR WHITE FLECKS AND SPOTS ACROSS BACK, SIDES, AND TAIL

## SMOOTH GREEN SNAKE (LIOCHLOROPHIS VERNALIS)

SPECIES OF SPECIAL CONCERN





## SMOOTH GREEN SNAKE IDENTIFICATION

1. A THIN, SLENDER BRIGHT-GREEN SNAKE MEASURING 10-20 INCHES 2. THE UNDERSIDE IS WHILE OR PALE YELLOW

\*ALL PHOTOS AND IDENTIFICATION INFORMATION COURTESY OF NEW HAMPSHIRE FISH AND GAME DEPARTMENT.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR THE USE BY GZA'S CLIENT OR THE CLIENTS DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA, ANY TRANSFER, REUSE, OR MODIFICATION TO THE PRIOR WRITTEN CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT TANY RISK OR LUBBLITY TO GZA.

## 380 & 326 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT

PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

# WILDLIFE NOTES (CONT.)

PREPARED BY:

PREPARED BY:

PREPARED FOR:

EVERSURCE
ENERGY

PROJ MGR: LEW REVIEWED BY: TLT CHECKED BY: DMZ SHEET

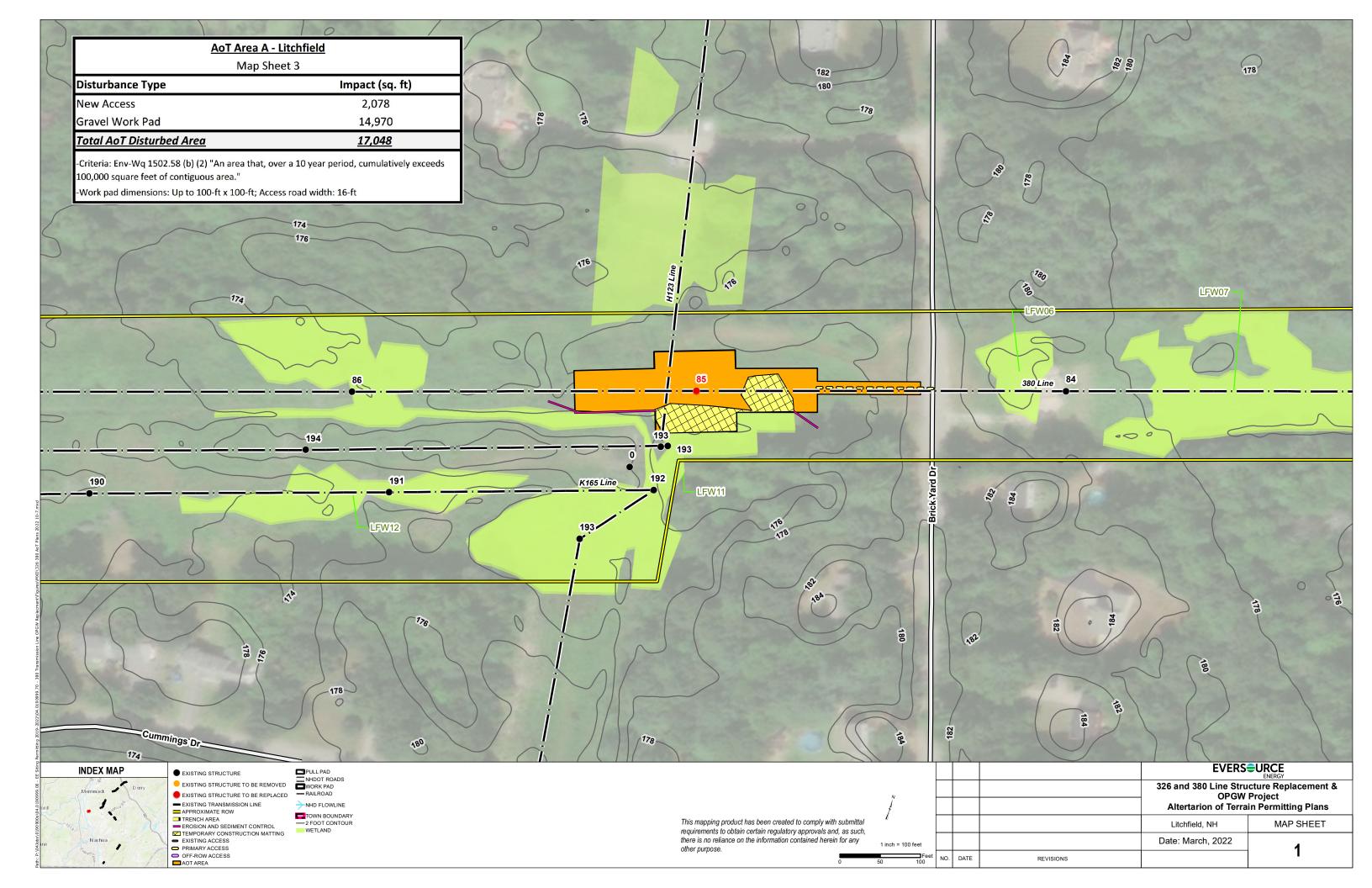
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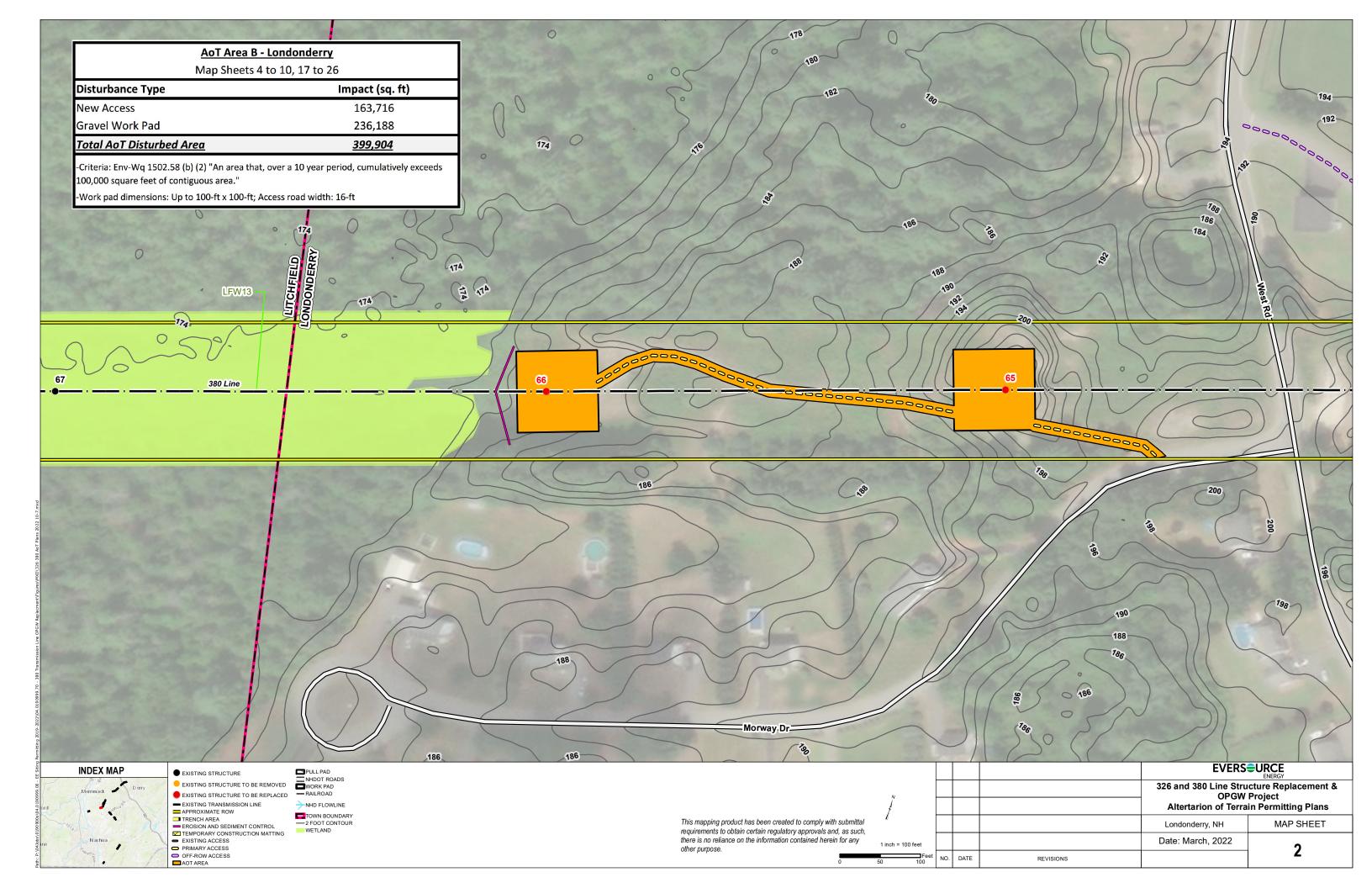
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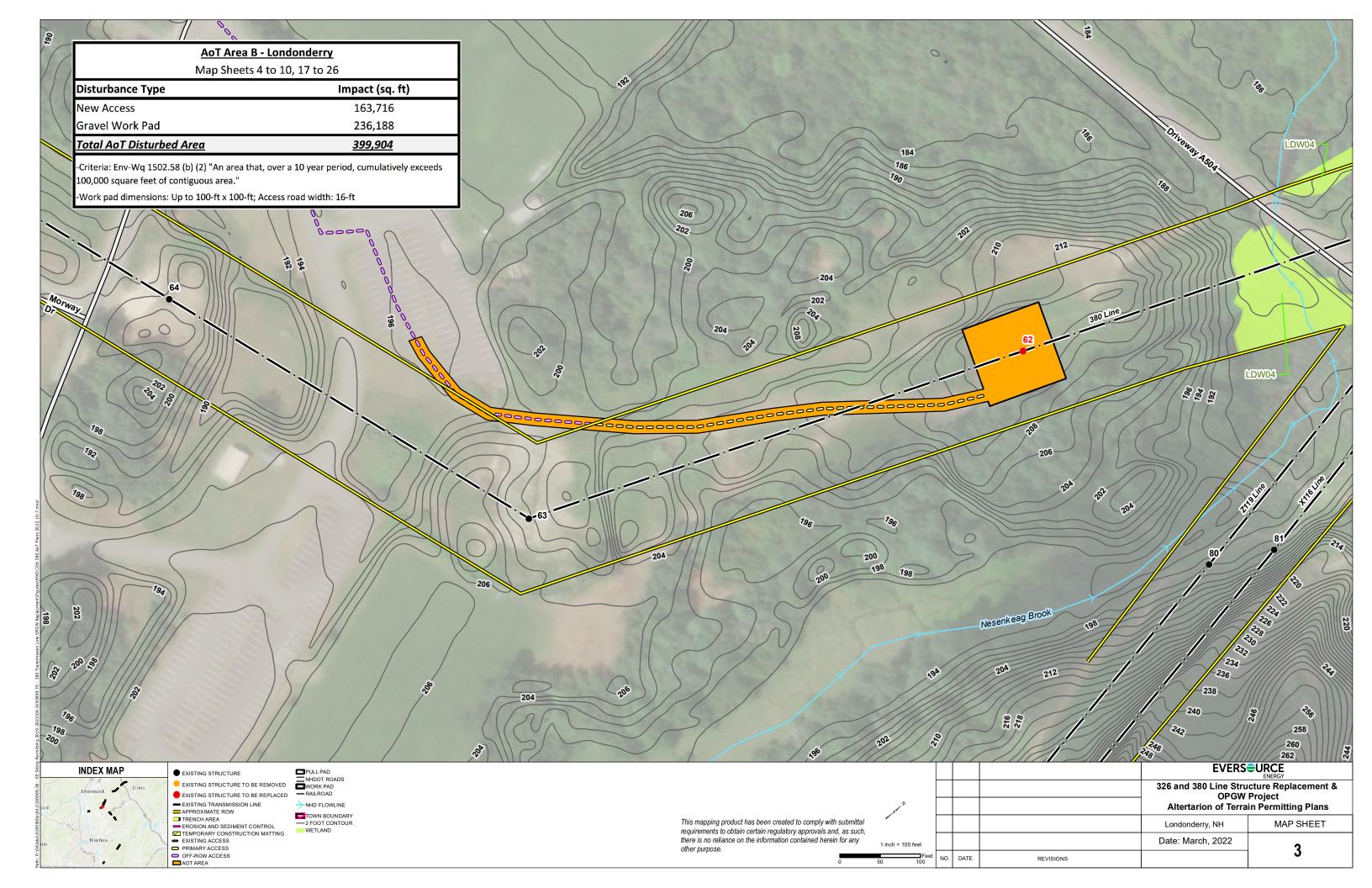
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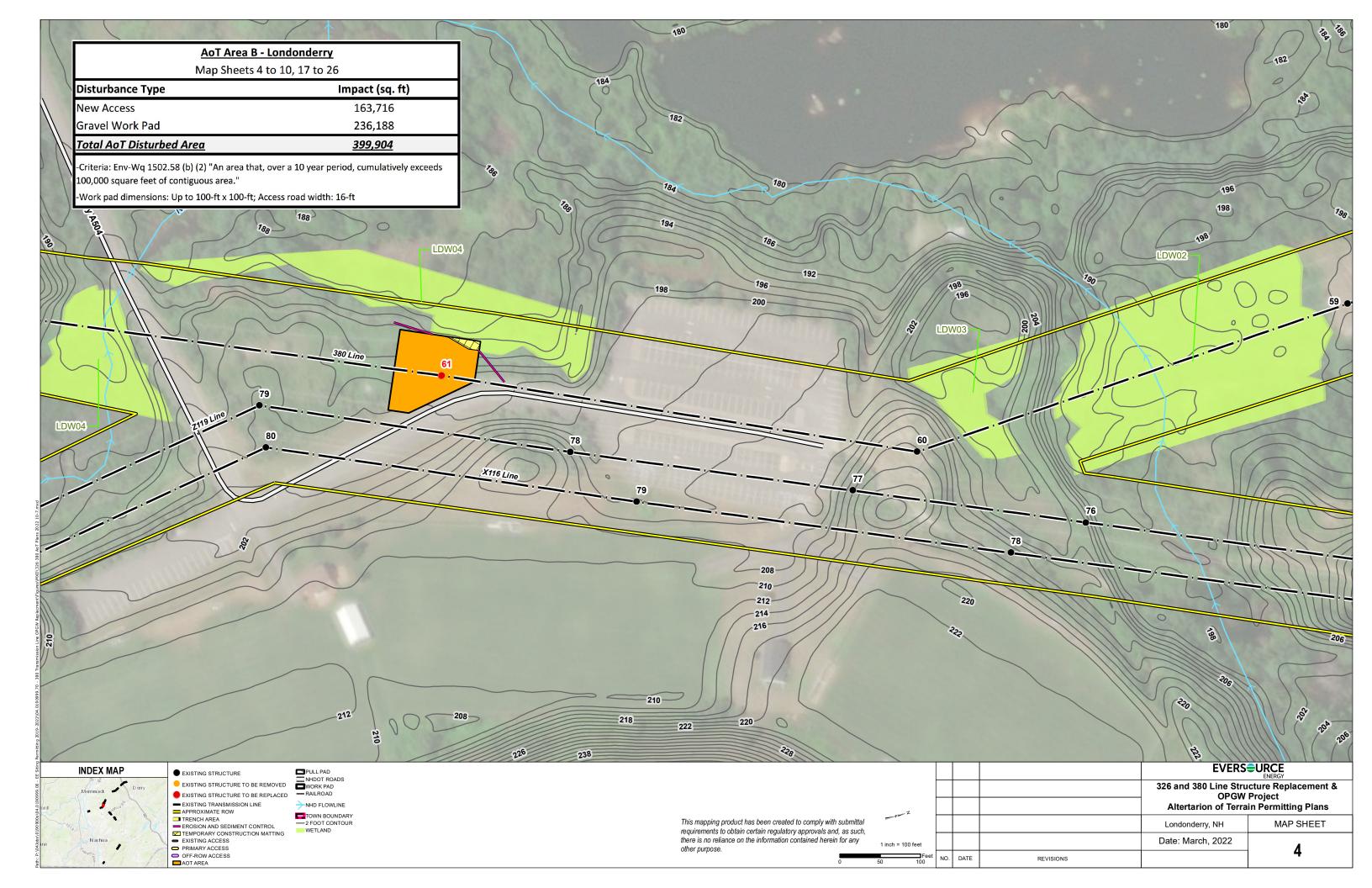
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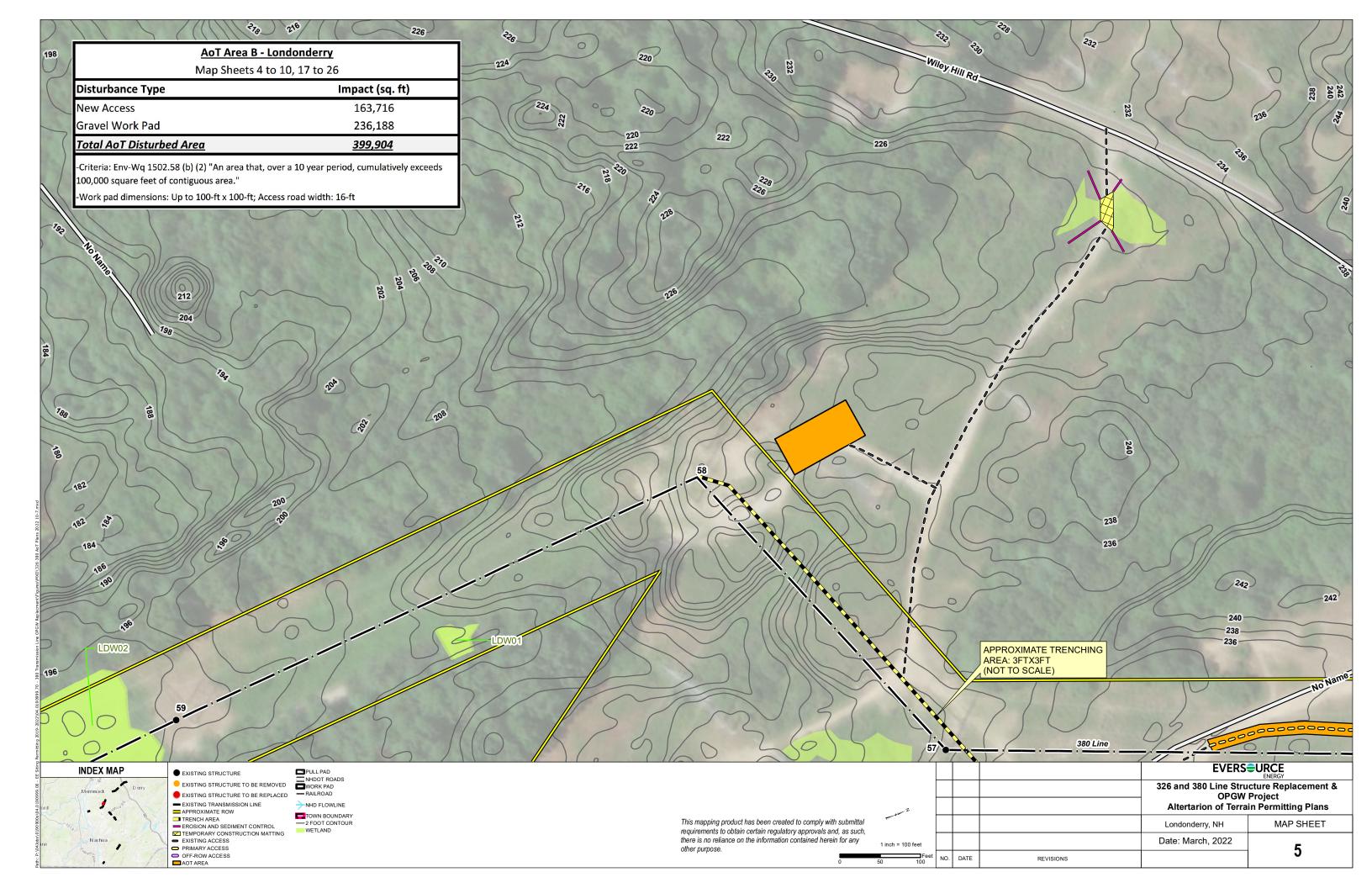
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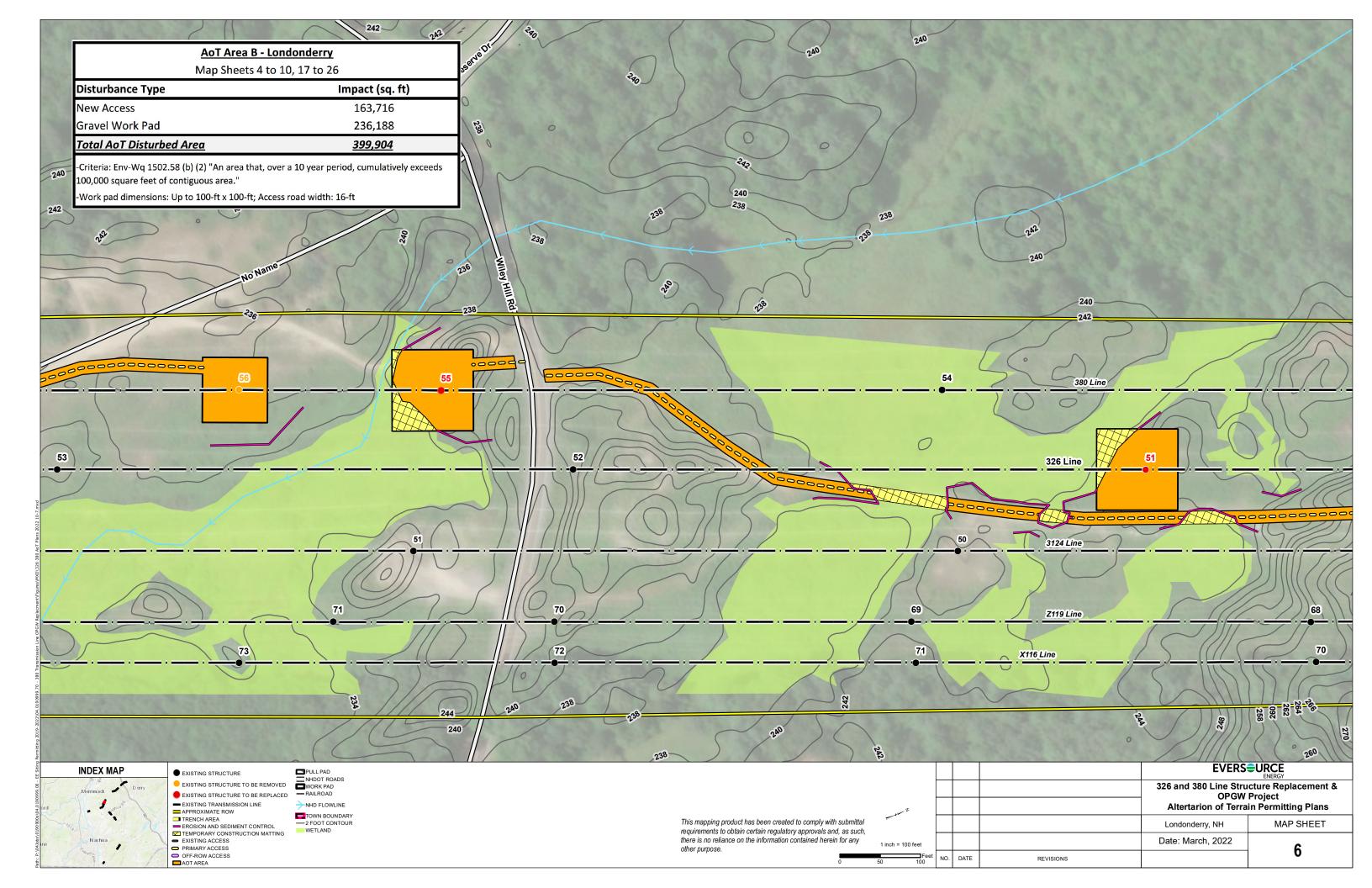


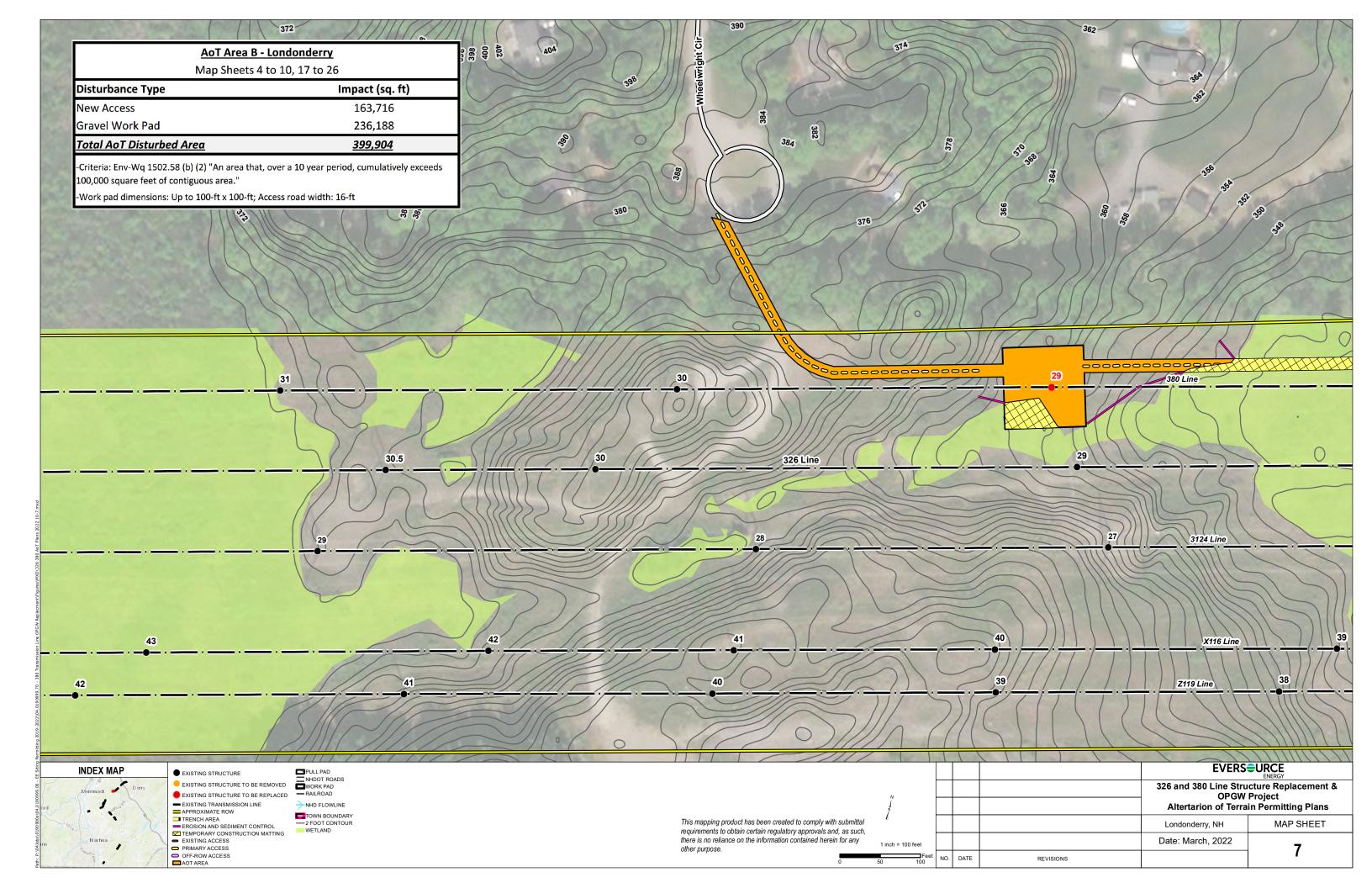


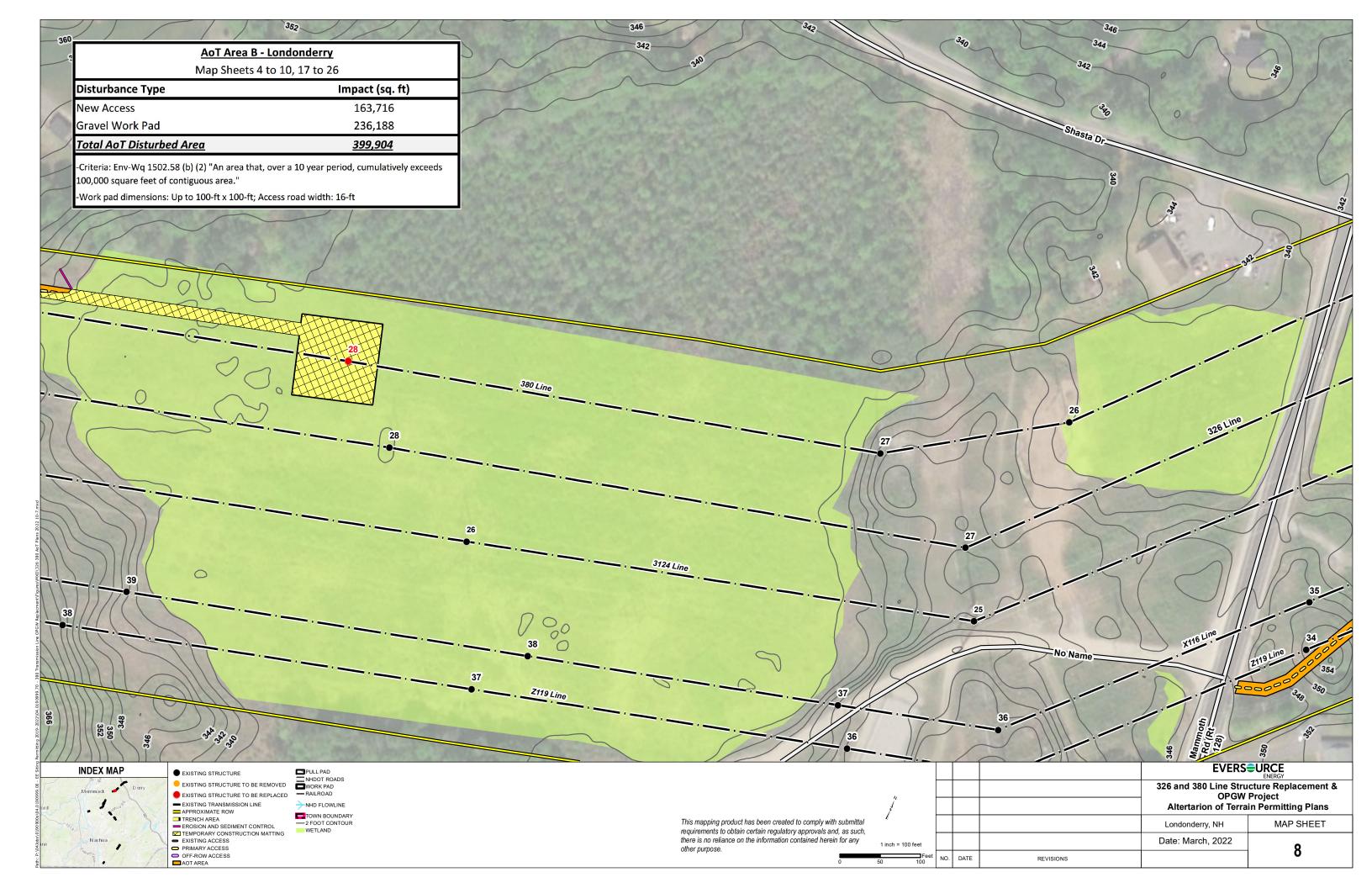


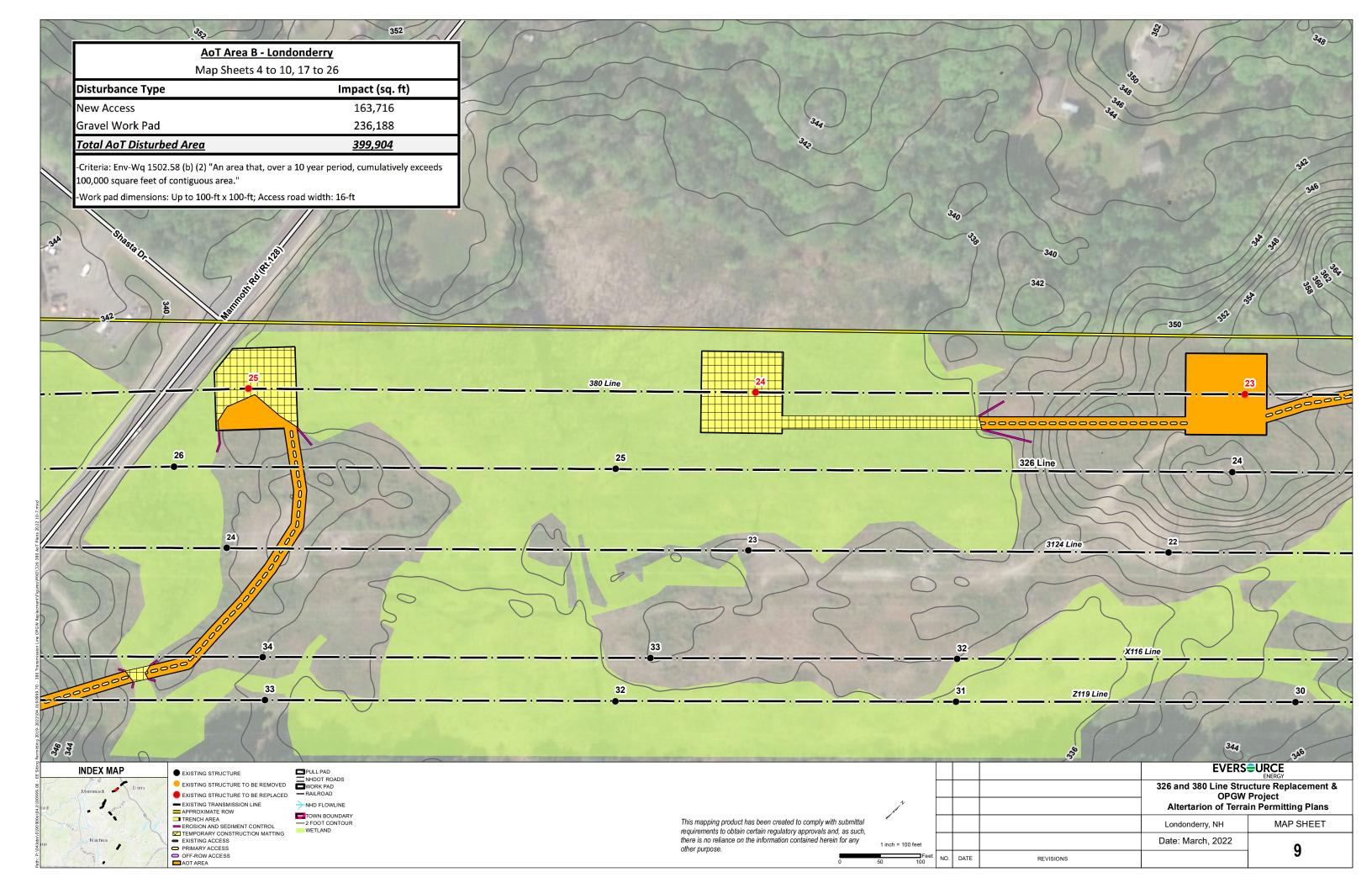


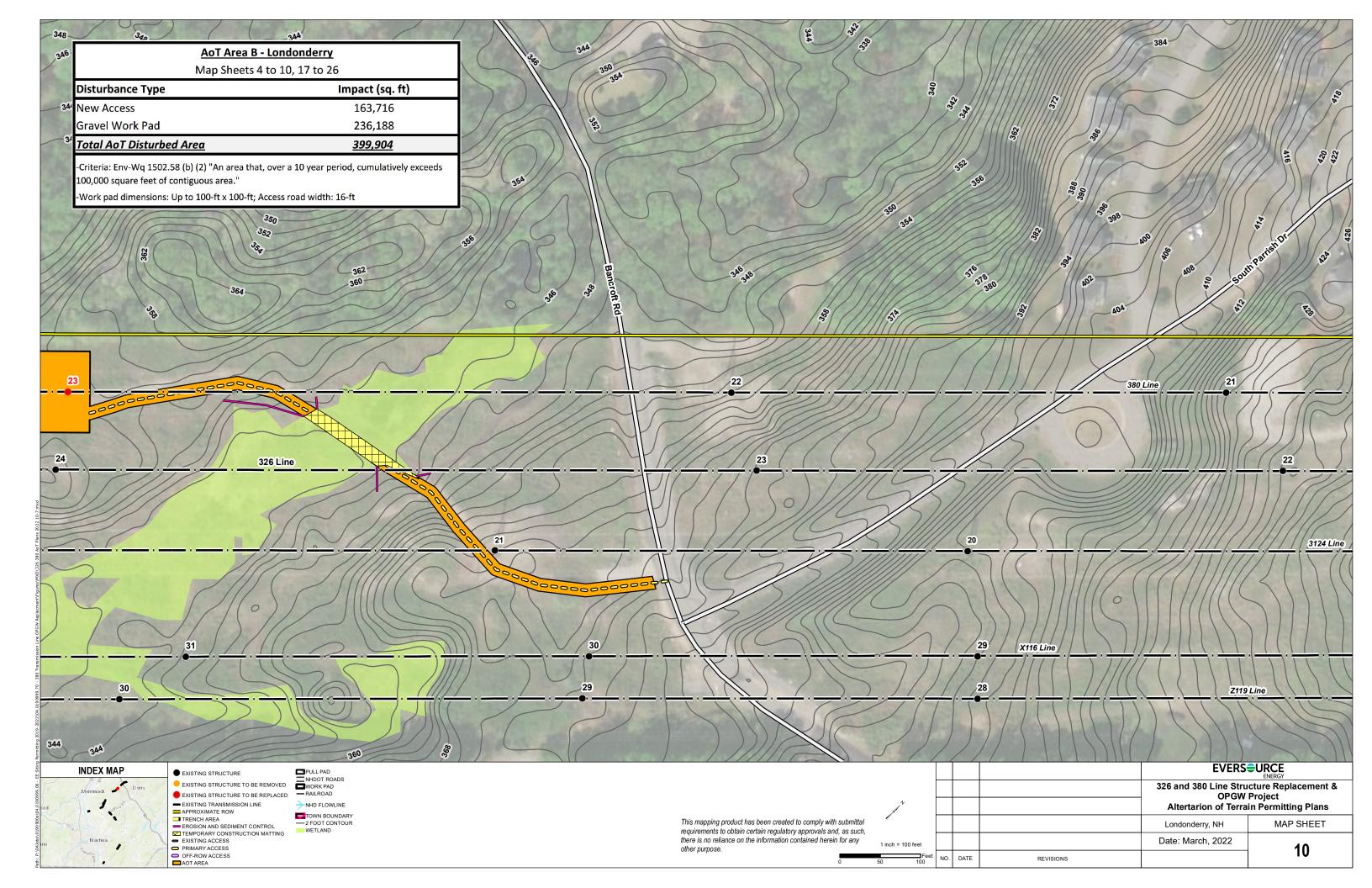


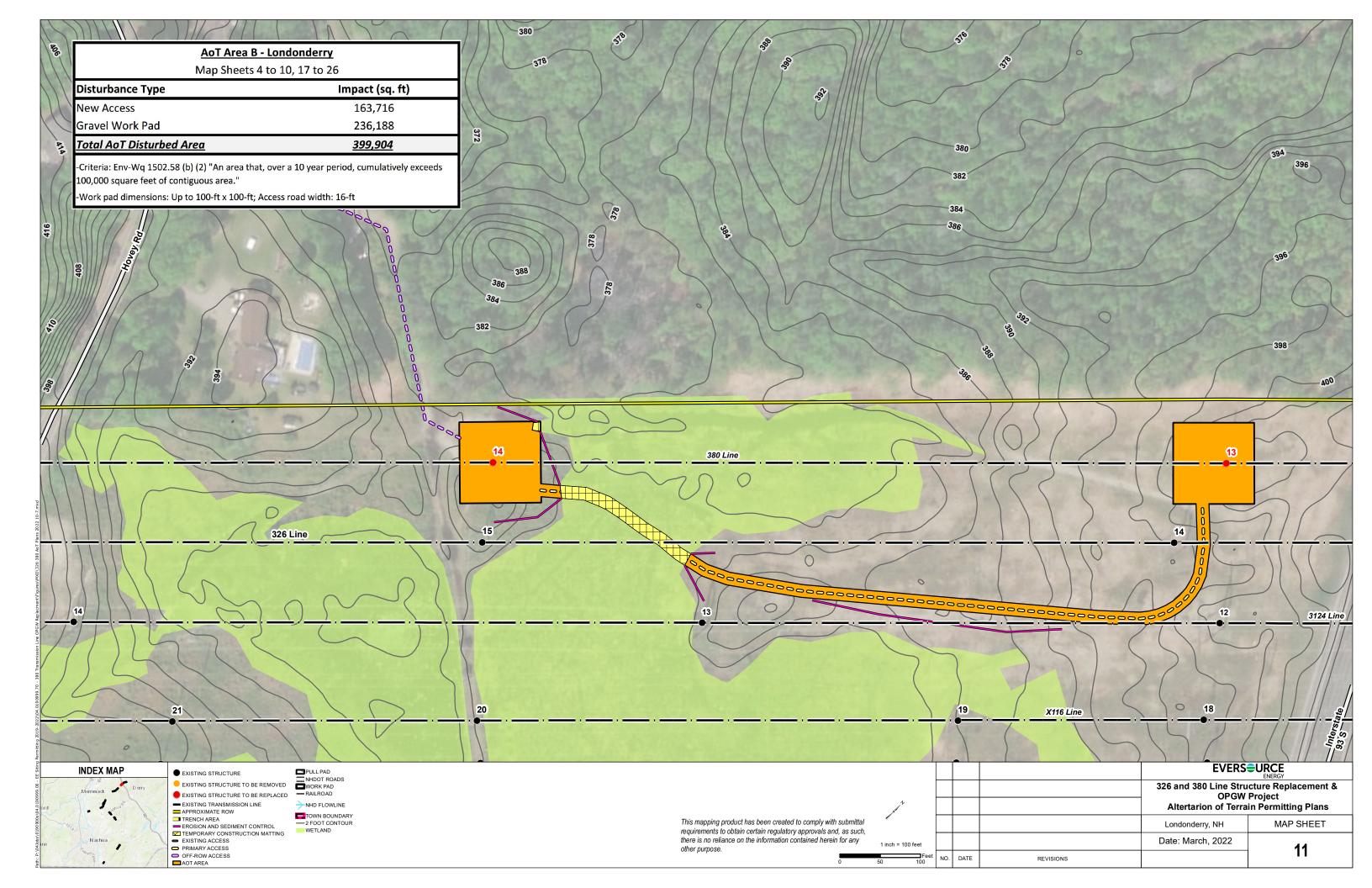


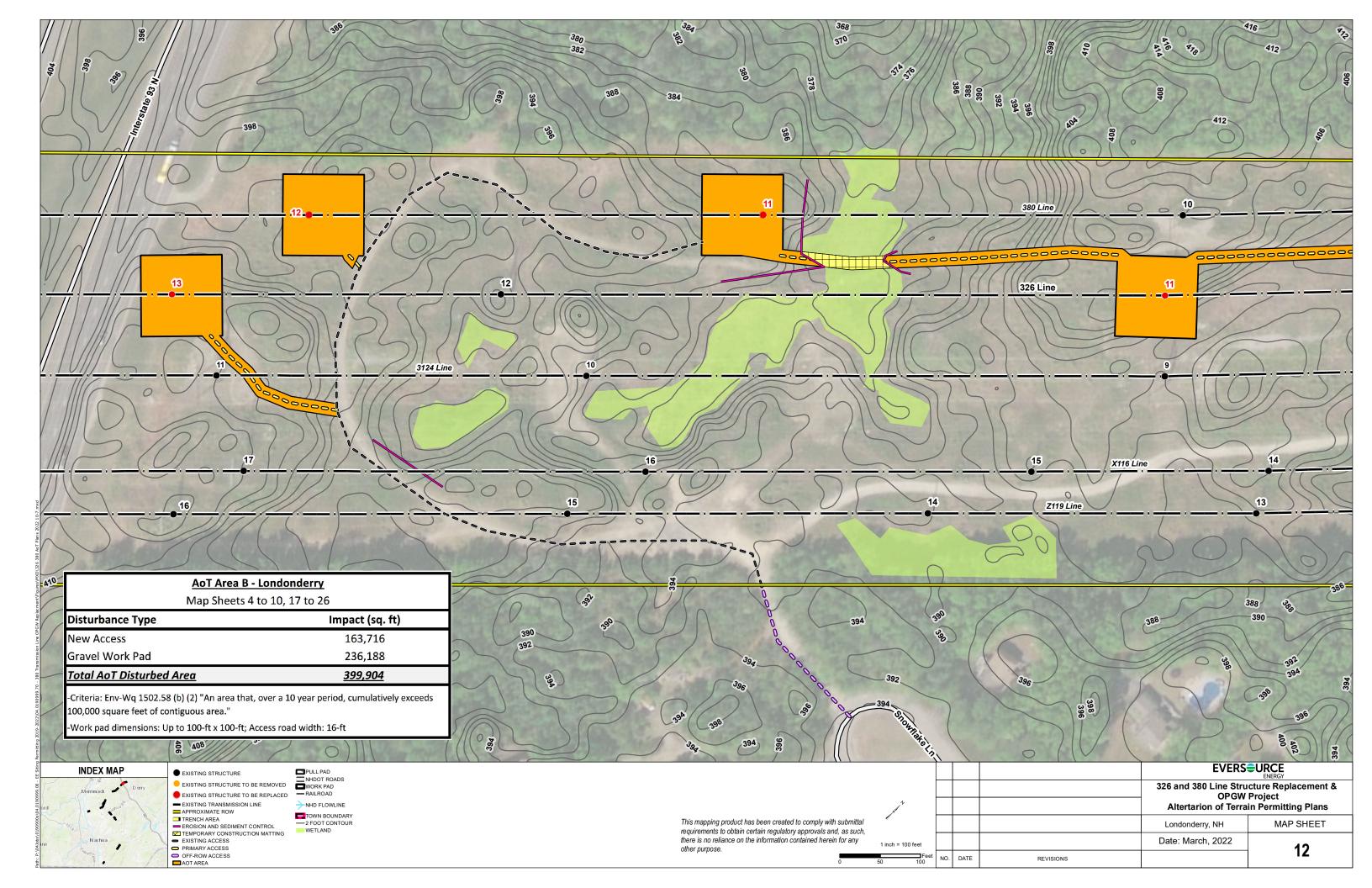


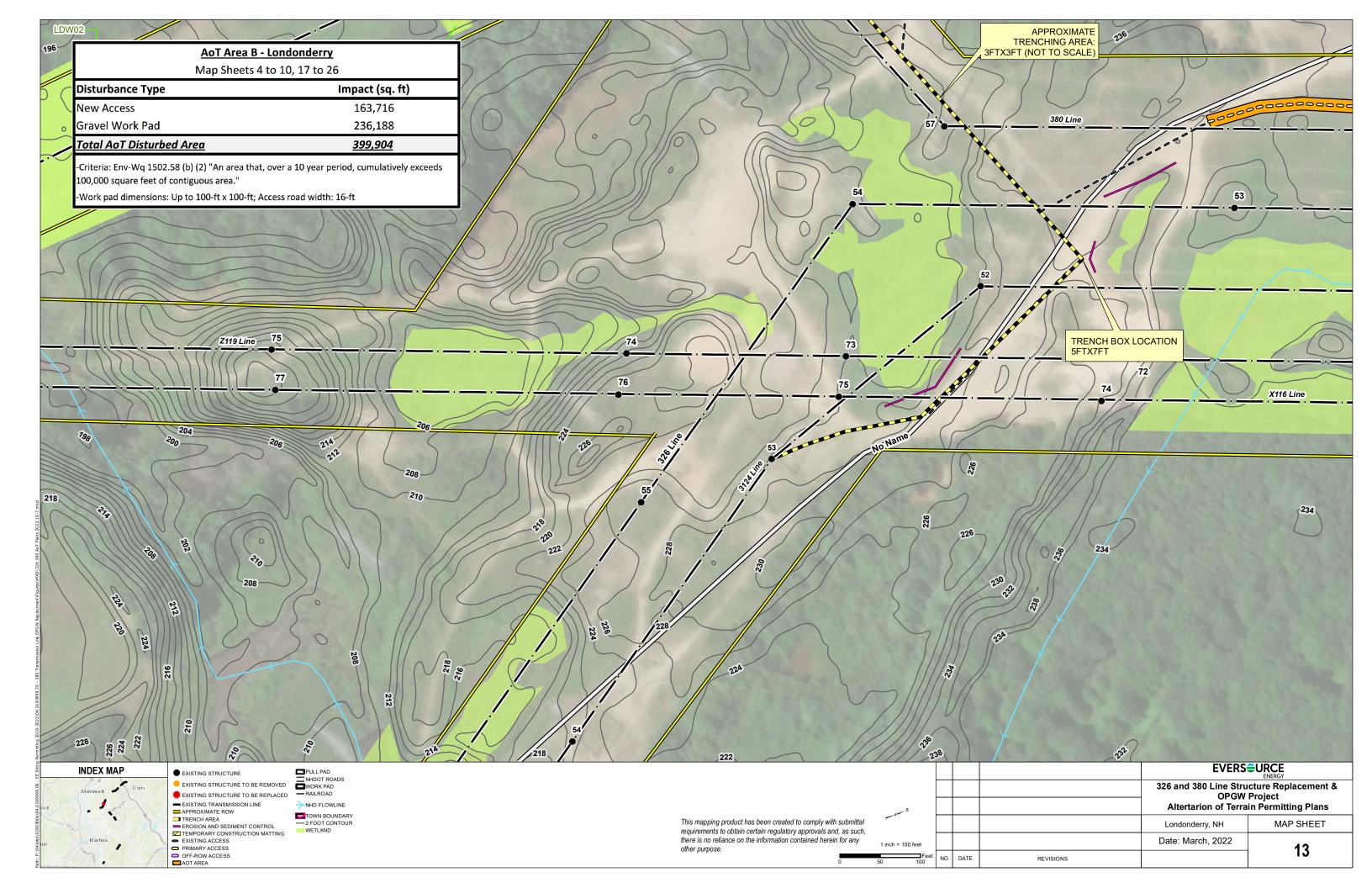


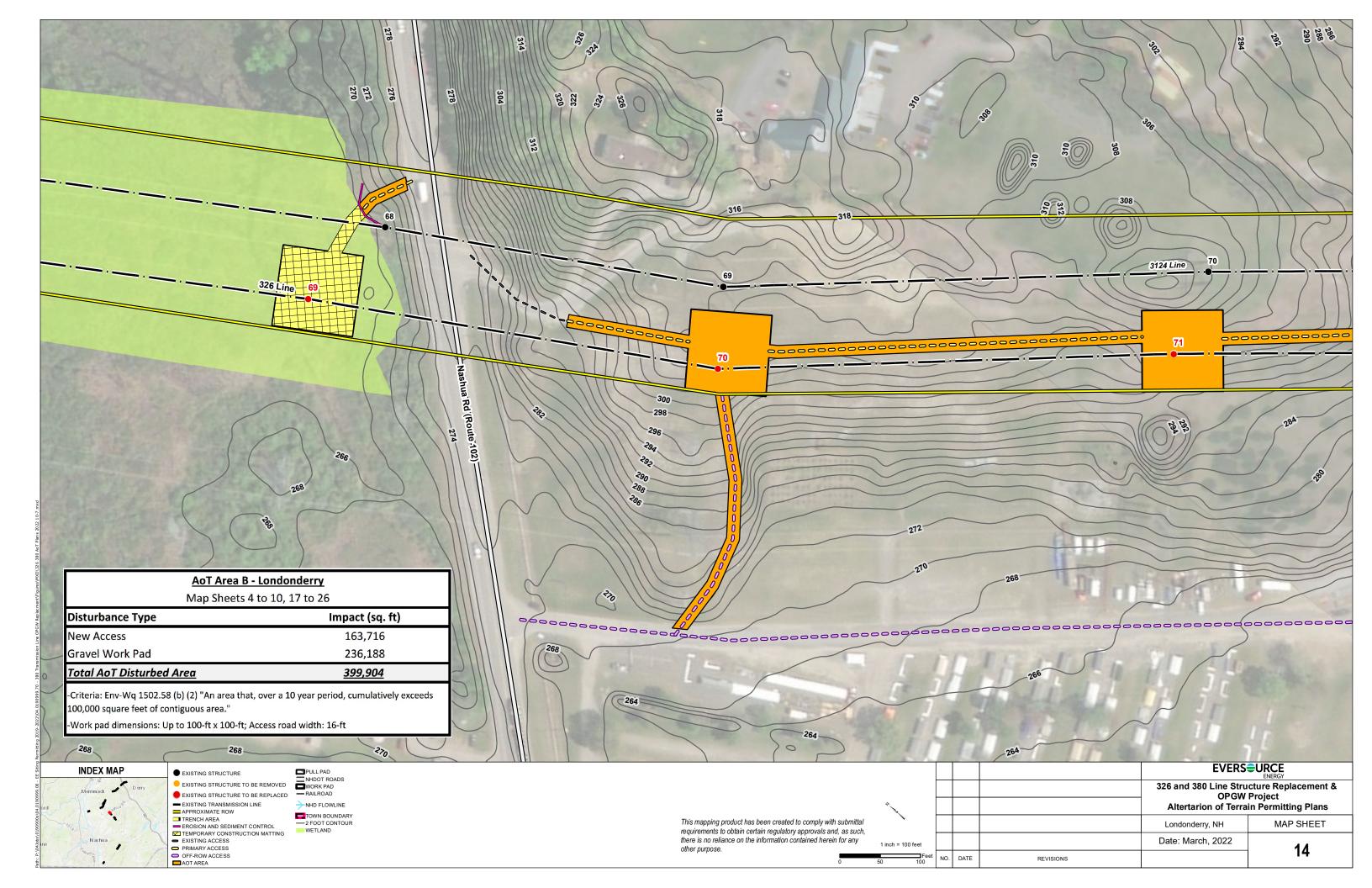


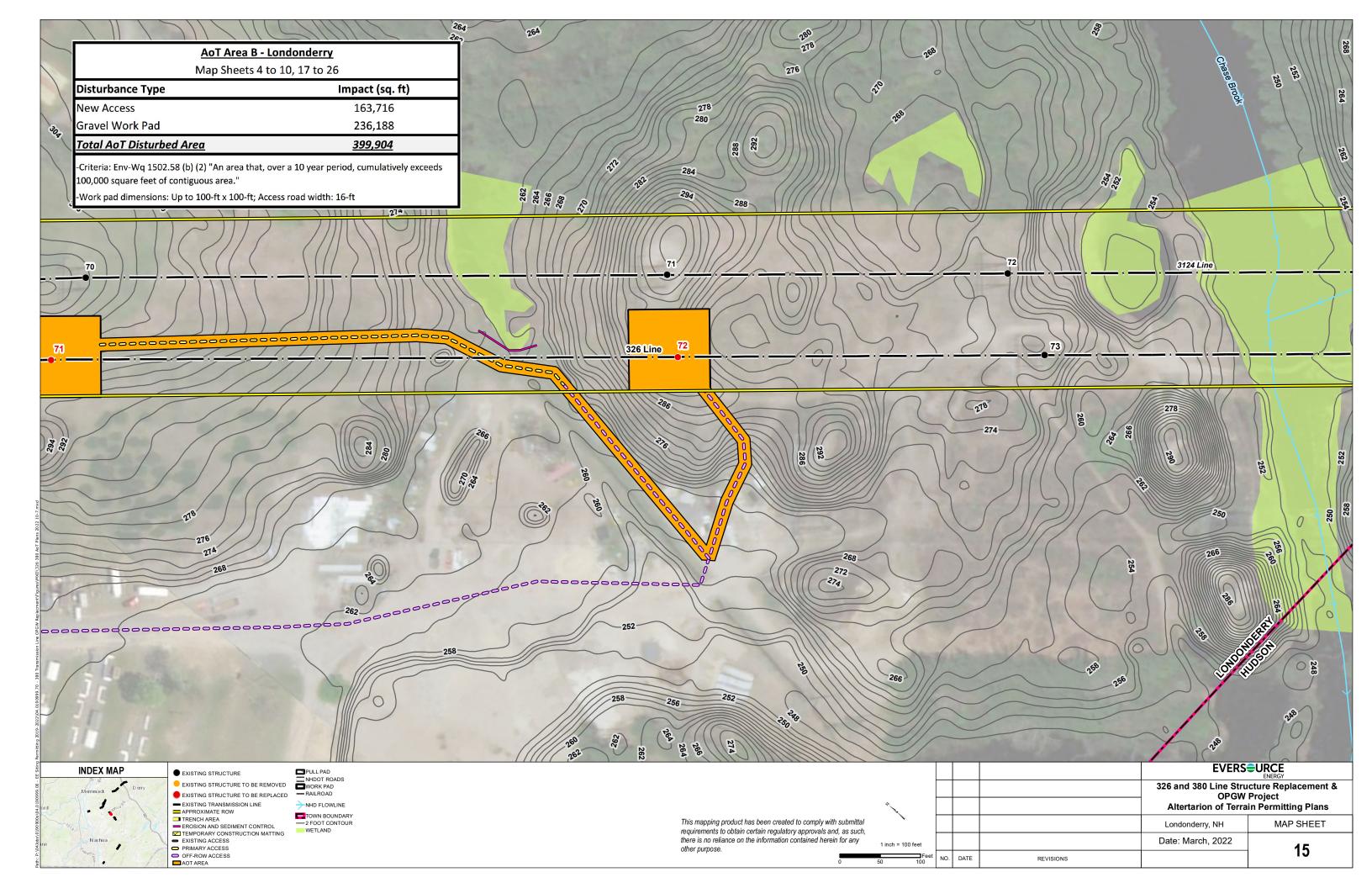


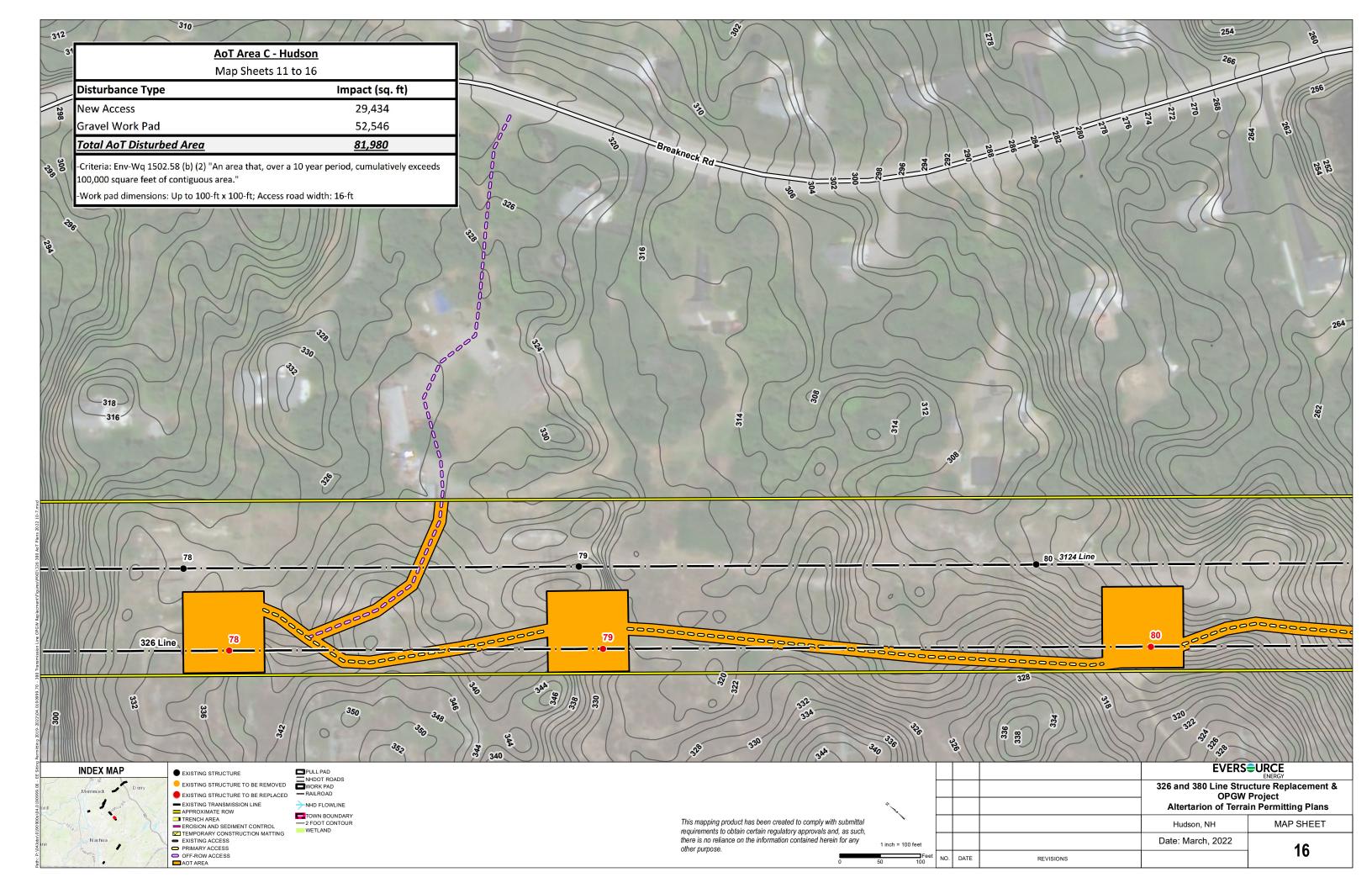


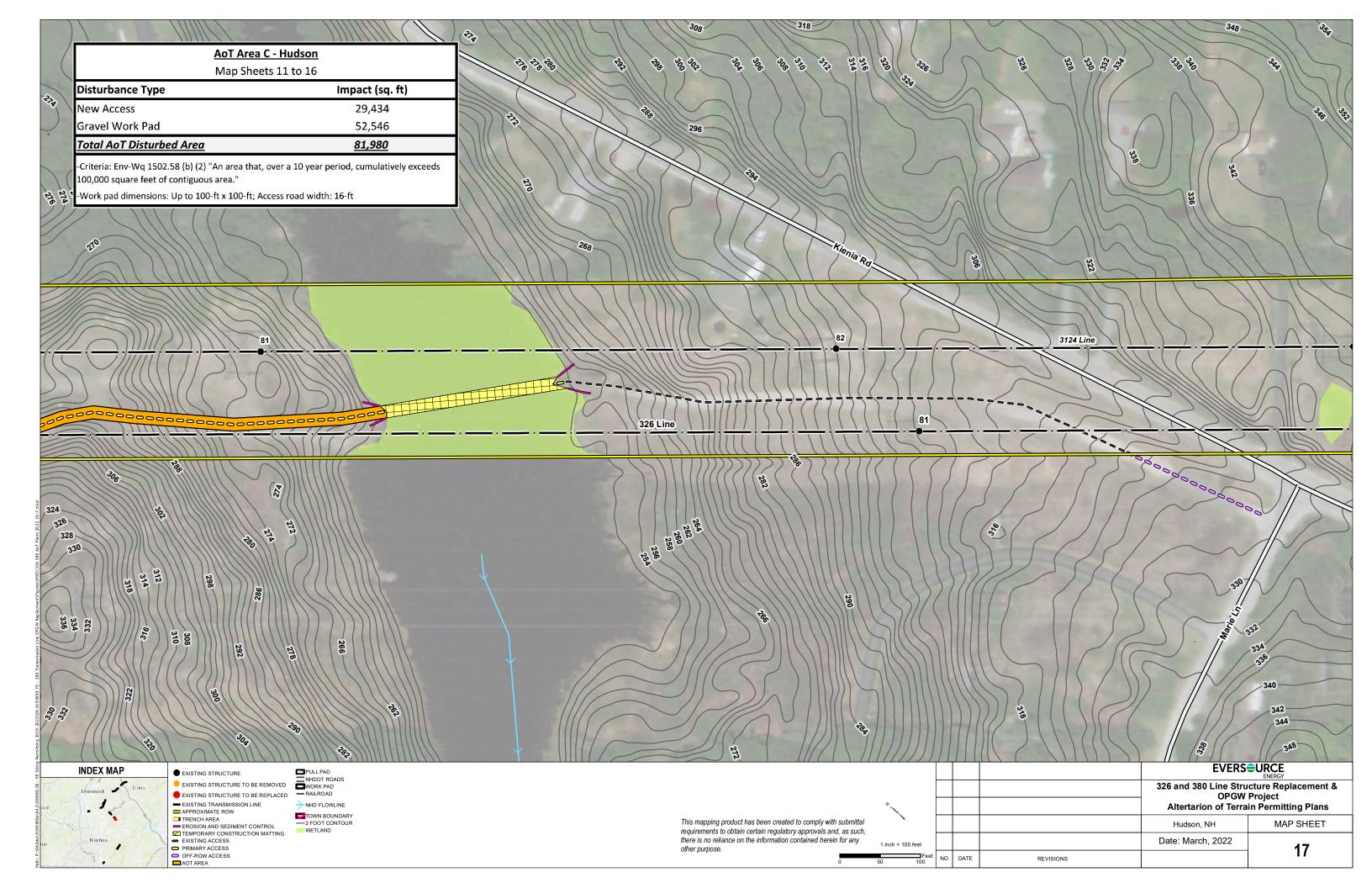


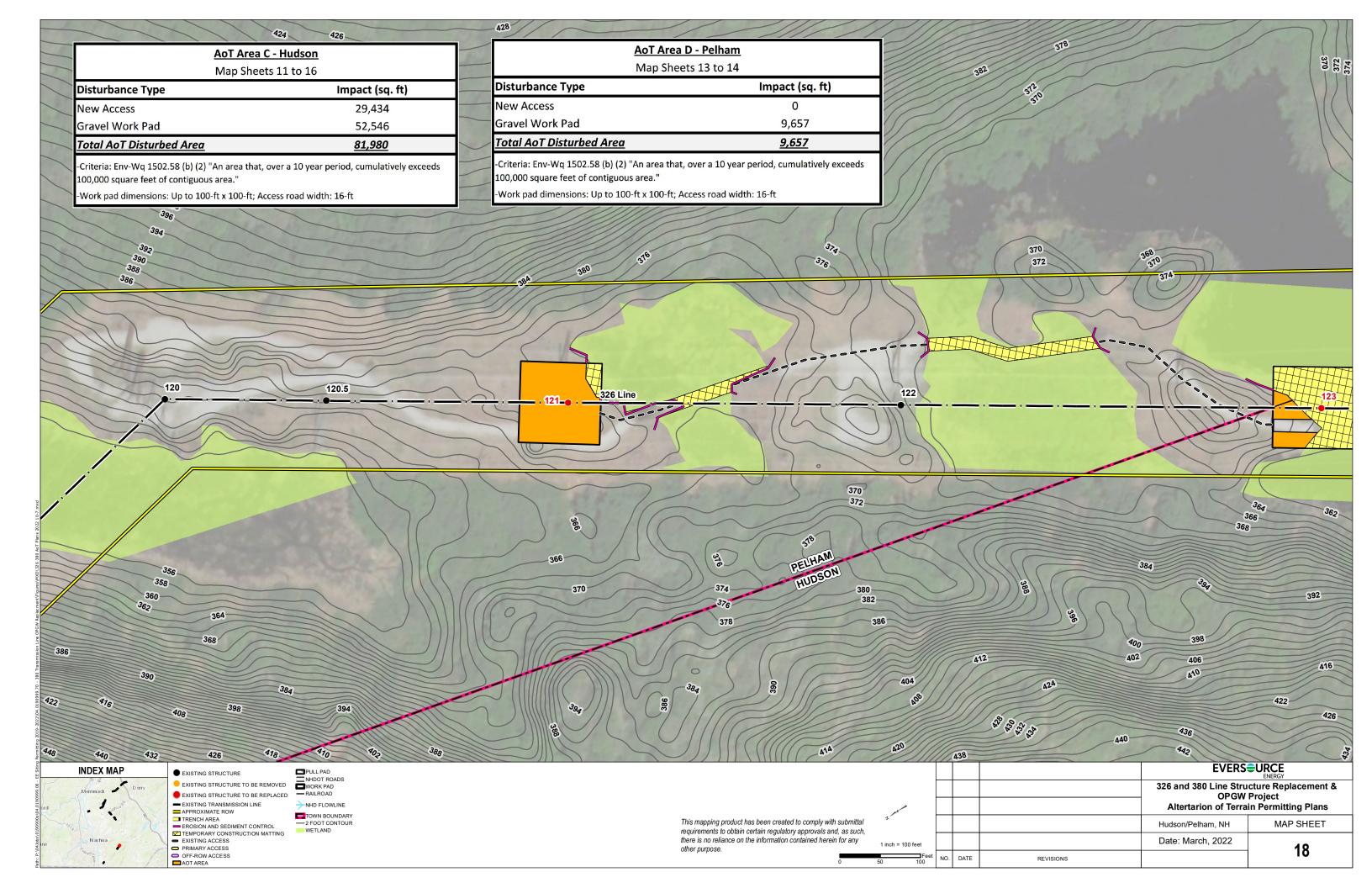


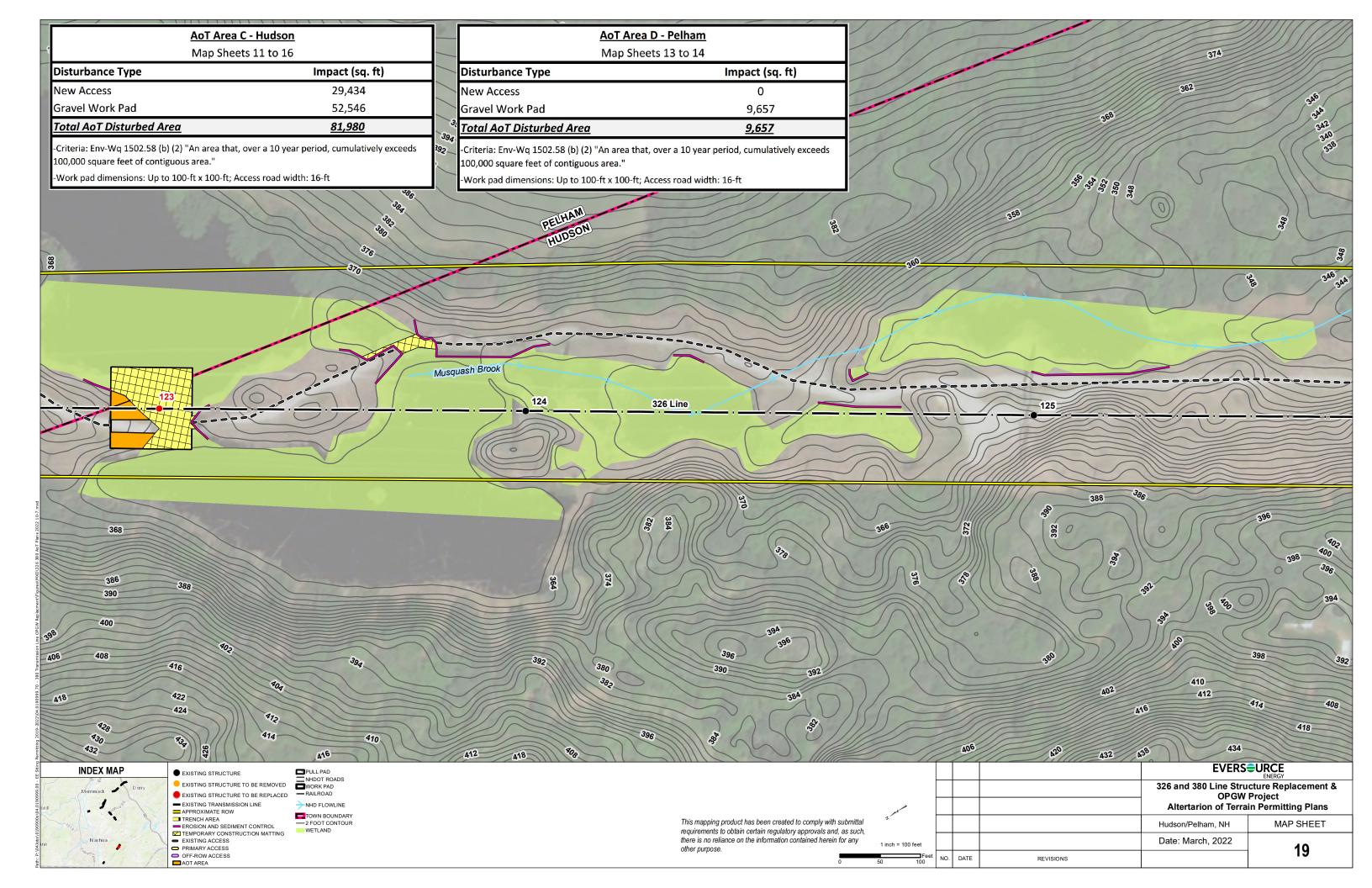


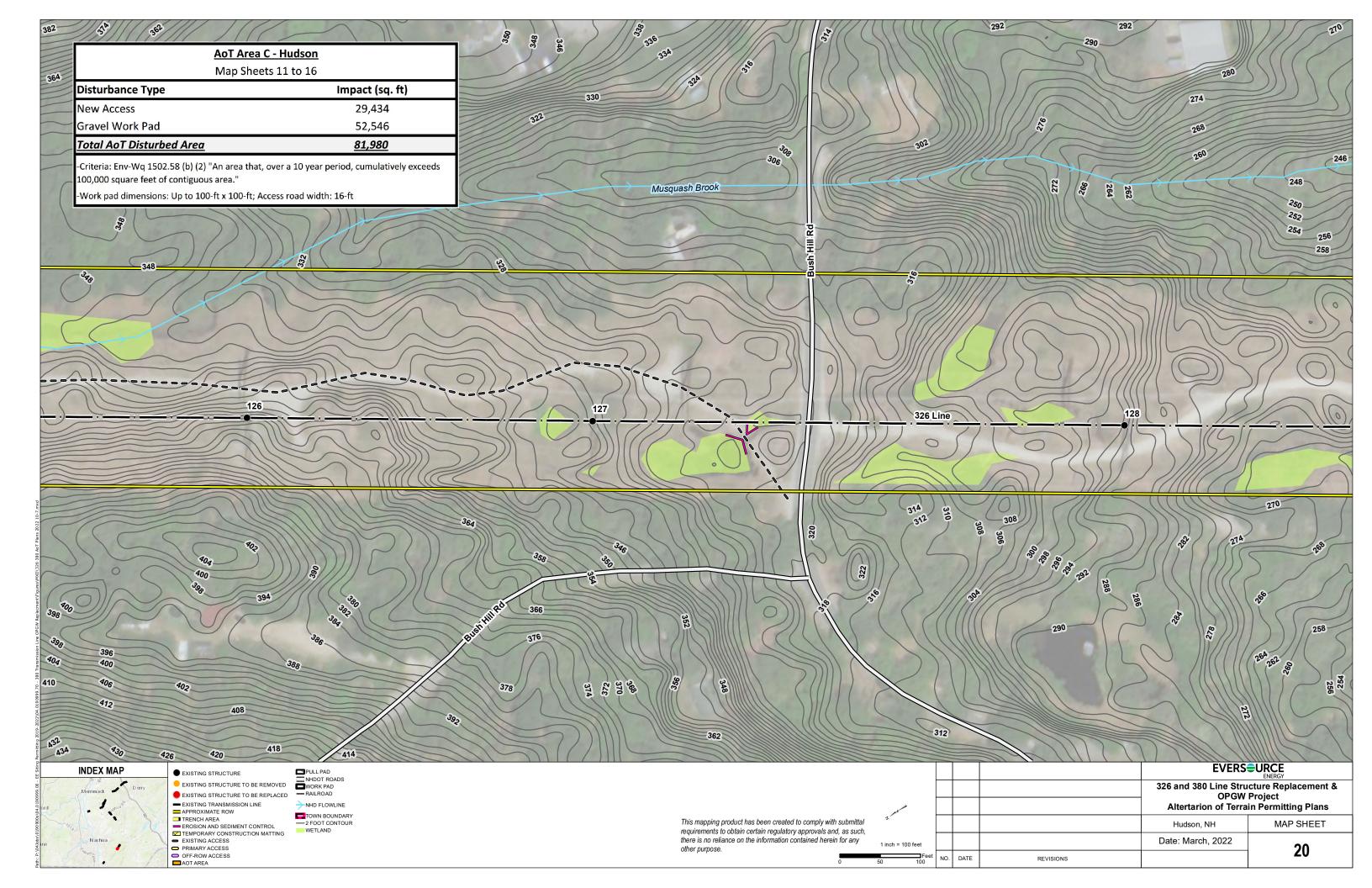


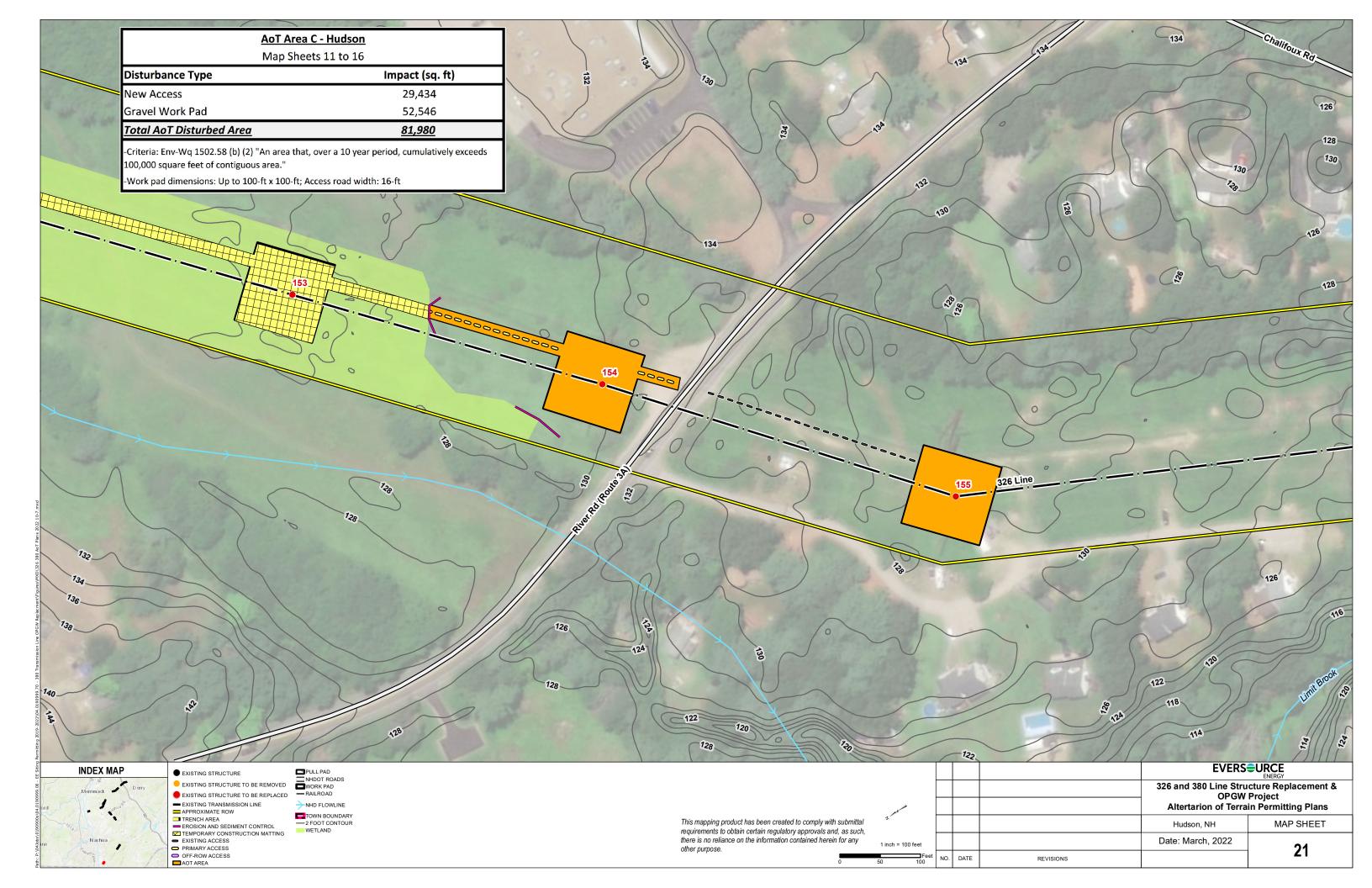


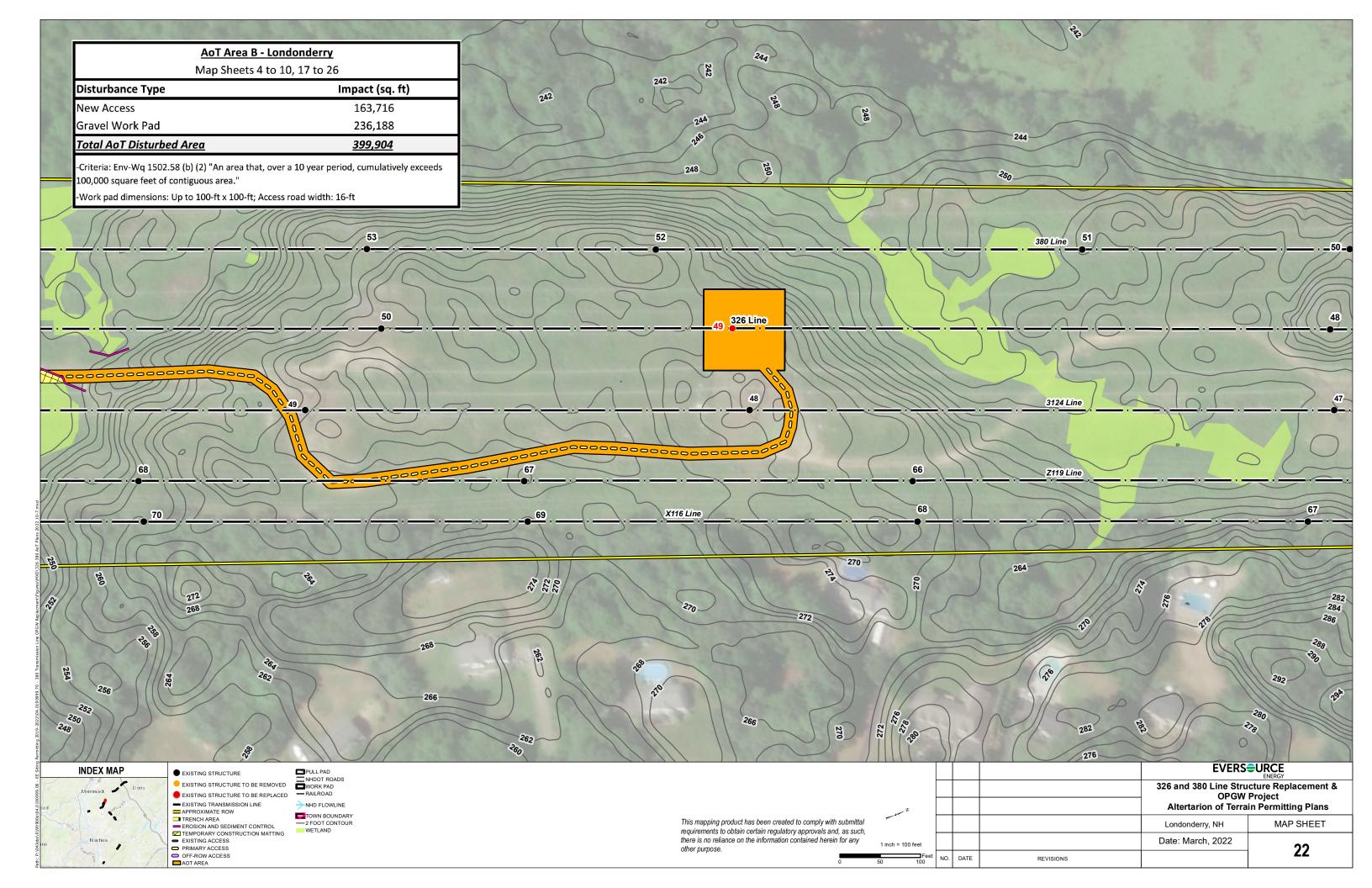


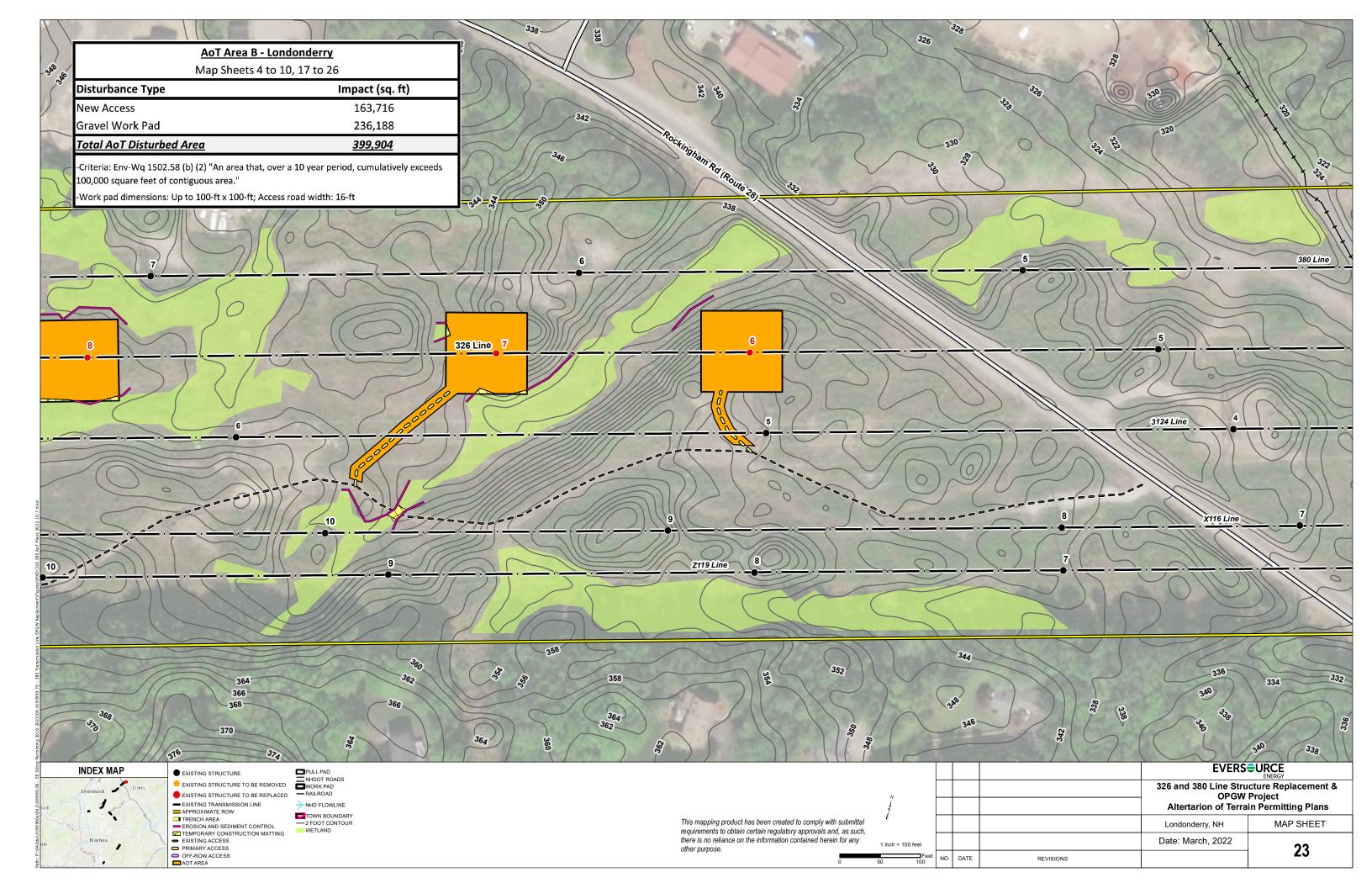












CONSTRUCTION SEQUENCE:

- 1. WETLAND BOUNDARIES TO BE CLEARLY MARKED PRIOR TO THE START OF CONSTRUCTION.
- 2. SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL PROVIDED, AS NECESSARY, AND CONSISTENT WITH THE NHDES MARCH 2019 BMP MANUAL FOR UTILITY MAINTENANCE.
- 3. WETLAND IMPACTS ASSOCIATED WITH WETLAND CROSSINGS ARE REQUIRED FOR ACCESS BETWEEN STRUCTURES WITHIN THE RIGHT OF WAY.
- 4. ADEQUATE PRECAUTION SHALL BE EXERCISED TO AVOID SPILLAGE OF FUEL OILS, CHEMICALS, OR SIMILAR SUBSTANCES; NO FUELS, LUBRICANTS, CHEMICALS OR SIMILAR SUBSTANCES SHALL BE STORED BENEATH TREES OR IN THE VICINITY OF ANY WETLANDS, RIVER, STREAM OR OTHER BODY OF WATER; OR IN THE VICINITY OF NATURAL OR MAN-MADE CHANNELS LEADING THERETO. NO POWER EQUIPMENT SHALL BE STORED, MAINTAINED, OR FUELED IN ANY AREA ADJACENT TO A WETLAND, RIVER, STREAM OR OTHER BODY OF WATER.
- 5. REMOVE COMPLETELY ALL CONTAMINATION FROM ANY SPILLAGE OF CHEMICALS OR PETROLEUM PRODUCT WITH COMPLETE REHABILITATION OF THE AFFECTED AREA.
- 6. ACCESS ROUTES HAVE BEEN SELECTED TO PREVENT DEGRADATION OF THE RIGHT-OF-WAY AND MINIMIZE ENVIRONMENTAL IMPACT. OPERATIONS SHALL BE CONFINED TO THE SPECIFIED ACCESS ROUTES WITHIN THE PROPOSED WETLAND IMPACT AREA. ACCESS ROUTES SHALL NOT EXCEED A 16 FOOT-WIDTH.
- 7. IMPACT TO VEGETATION WITHIN WETLANDS WILL BE LIMITED TO THE EXTENT NECESSARY TO PLACE THE SWAMP MATS WHERE REQUIRED
- 8. LOW GROWING VARIETIES OF VEGETATION ADJACENT TO WETLANDS SHALL BE PRESERVED TO THE EXTENT POSSIBLE. STUMPS AND ROCKS SHALL NOT BE REMOVED, AND THERE SHALL BE NO EXCAVATIONS, FILLS OR GRADING DONE ADJACENT TO WETLANDS, UNLESS MINOR EXCAVATIONS IS NEEDED FOR ACCESS.
- 9. TIMBER MATS AND PERIMETER CONTROLS WILL BE USED ALONG ACCESS ROUTES AND WORK PADS WITHIN WETLAND AREAS. THESE MATS ARE CONSTRUCTED OF HEAVY TIMBERS OR COMPOSITE MATERIAL, BOLTED TOGETHER, AND ARE PLACED END-TO-END IN THE WETLAND TO SUPPORT HEAVY EQUIPMENT. ALL SWAMP MATS SHALL BE PLACED AND REMOVED SO AS NOT TO CAUSE ANY RUTS, CHANNELS OR DEPRESSIONS, OR OTHERWISE CAUSE ANY UNDUE DISTURBANCE TO WETLANDS.
- 10. IF TIMBER MAT BMP IS NOT SUFFICIENT DUE TO HIGH WATER, ADDITIONAL BMP'S MAY INCLUDE THE PLACEMENT OF GEOTEXTILE FABRIC, 3"-4" STONE, AND GRAVEL TO PROVIDE A SUITABLE ROAD BED. A TEMPORARY CULVERT MAY BE REQUIRED IN AREAS OF HIGH FLOW TO MAINTAIN HYDROLOGIC CONNECTIVITY. ALL MATERIAL WILL BE REMOVED FROM JURISDICTIONAL AREAS AFTER CONSTRUCTION COMPLETION.
- 11. NO MATERIAL SHALL BE PLACED IN ANY LOCATION OR IN ANY MANNER SO AS TO IMPAIR SURFACE WATER FLOW INTO, THROUGH OR OUT OF ANY WETLAND AREA. NO INSTALLATION SHALL CREATE AN IMPOUNDMENT THAT WILL IMPEDE THE FLOW OF WATER OR CAUSE FLOODING.
- 12. NO MATERIAL SHALL BE TAKEN FROM THE WETLANDS AREA EXCEPT THAT WHICH MUST NECESSARILY BE REMOVED FOR THE STRUCTURE OR FOUNDATION PLACEMENT OR STABILIZATION. ALL EXCESS MATERIAL TAKEN FROM THE WETLAND WILL BE REMOVED FROM THE SITE.
- 13. ANY PROPOSED SUPPORT FILLS SHALL BE CLEAN GRAVEL AND STONE, FREE OF WASTE METAL PRODUCTS, ORGANIC MATERIALS AND SIMILAR DEBRIS AND SHALL NOT EXCEED THE AMOUNT PERMITTED. THIS ALLOWABLE FILL IS THE ONLY FILL THAT MAY REMAIN IN THE WETLAND AFTER CONSTRUCTION. ALL CUT AND FILLS SLOPES SHALL BE SEEDED/LOAMED WITHIN 72 HOURS OF ACHIEVING FINISHED GRADE.
- 14. INSTALL NEW POLES IN THE LOCATIONS DESIGNATED ON THE PERMITTING PLANS.
- 15. CABLE INSTALLATION WILL BE PERFORMED IN A MANNER SO AS TO AVOID, OR LIMIT TO THE MAXIMUM EXTENT POSSIBLE, TRAVERSING WETLANDS WITH HEAVY EQUIPMENT. IN SOME CASES, A HELICOPTER MAY BE USED DURING THE INSTALLATION TO MINIMIZE IMPACTS.
- 16. REMOVAL OF THE OLD POLE WILL OCCUR ONCE THE CABLE HAS BEEN INSTALLED ON THE NEW STRUCTURE. THE OLD STRUCTURES WILL BE REMOVED FROM THE SITE. POLES WILL BE CUT AT THE GROUND SURFACE. FOOTINGS WILL BE ABANDONED IN PLACE TO MINIMIZE IMPACTS.
- 17. ALL TIMBER MATS, MATERIAL, AND DEBRIS WILL BE REMOVED FROM THE WORK AREA UPON THE COMPLETION OF CONSTRUCTION.
- 18. UPLAND DISTURBED AREAS SHALL BE RESTORED AND STABILIZED UPON COMPLETION OF CONSTRUCTION. WORK PAD RESTORATION SHOULD INCLUDE REDUCING THE WORK PAD TO A 30 BY 60 FOOT AREA, AND REDUCING SLOPES TO A MAXIMUM OF 25%. STOCKPILED MATERIAL SHOULD BE SPREAD TO REDUCE ANY UNNECESSARY SLOPES. GRAVEL WORK PADS AND SLOPES SHOULD BE SCARIFIED TO A MINIMUM OF 3" BEFORE SPREADING TOPSOIL/LOAM.
- 19. ALL TEMPORARY WETLAND IMPACTS WILL BE RE-GRADED TO ORIGINAL CONTOURS FOLLOWING CONSTRUCTION. NEW ENGLAND EROSION CONTROL/RESTORATION MIX, AVAILABLE THROUGH NEW ENGLAND WETLAND PLANTS, INC., 820 WEST STREET, AMHERST, MA 01002, 413-548-8000, OR EQUIVALENT SEED MIX SHALL BE APPLIED IN WETLAND AREAS THAT ARE NOT INUNDATED, AS NECESSARY.
- 20. MULCH USED FOR STABLIZATION SHALL CONSIST OF SEEDLESS STRAW.
- 21. SEDIMENT AND EROSION CONTROL MEASURES WILL BE EVALUATED AND REMOVED IF NECESSARY UPON THE COMPLETION OF CONSTRUCTION.
- 22. COMMERCIAL LOAM WILL NOT BE USED AS PART OF RESTORATION. ONLY IN-SITU TOPSOIL WILL BE USED TO RESTORE DISTURBED AREAS.
- 23. WHERE OPTIMAL TURTLE BREEDING AREAS OVERLAP WITH DISTURBANCE (AS DETERMINED BY AN ENVIRONMENTAL MONITOR), MINERAL SOILS WILL BE SCARIFIED TO ALLEVIATE COMPACTION AND BECOME MORE SUITED FOR TURTLE BREEDING.
- 24. NATURALLY VEGETATED LOCAL WETLAND BUFFER AREAS OUTSIDE OF EXISTING TRAILS MUST BE RESTORED UPON COMPLETION

#### WINTER CONSTRUCTION NOTES

- 1. PROPOSED VEGETATED AREAS WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE STABILIZED. STABILIZATION METHODS SHALL INCLUDE SEEDING AND MULCH, AND INSTALLATION OF 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 FROZEN GROUND AND SHALL BE COMPLETED IN ADVANCE OF THAW OR SPRING MELT EVENTS.
- 2. DITCHES OR SWALES WHICH DO NOT EXHIBIT A MINIMUM OF 85% VEGETATIVE GROWTH BY OCTOBER 15TH, OR WHICH ARE DISTURBED AFTER OCTOBER 15TH, SHALL BE TEMPORARILY STABILIZED WITH STONE OR EROSION CONTROL BLANKETS APPROPRIATE FOR THE DESIGN FLOW CONDITIONS.

3. AFTER NOVEMBER 15TH, 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 (NHDOT 304.3).

OWNER: EVERSOURCE ENERGY 13 LEGENDS DRIVE

- 1. BASE PLAN PROVIDED BY EVERSOURCE ENERGY. EVERSOURCE ENERGY PROVIDED THE WETLAND DATA. EVERSOURCE ENERGY PROVIDED THE UTILITY DESIGN.
- 2. JURISDICTIONAL WETLANDS WERE DELINEATED BY NORMANDEAU IN 2016, IN ACCORDANCE WITH THE 1987 U.S. ARMY CORPS OF ENGINEERS' "WETLANDS DELINEATION MANUAL, TECHNICAL REPORT Y-87-1," AND REGIONAL SUPPLEMENT TO THE CORPS OF ENGINEERS WETLAND DELINEATION MANUAL: NORTH CENTRAL AND NORTHEAST REGION," JANUARY 2012. WETLANDS WILL BE REVIEWED BY GZA GEOENVIRONMENTAL, INC. PRIOR TO START
- 3. NORMANDEAU EVALUATED WETLANDS AS POTENTIAL VERNAL POOLS IN 2016 IN ACCORDANCE WITH "IDENTIFICATION AND DOCUMENTATION OF VERNAL POOLS IN NEW HAMPSHIRE," 1997, NEW HAMPSHIRE FISH AND GAME DEPARTMENT, NONGAME AND ENDANGERED WILDLIFE PROGRAM.
- 4. NORMANDEAU COMPLETED WETLANDS FUNCTION AND VALUES ASSESSMENT IN 2016 IN ACCORDANCE WITH THE ACOE'S "HIGHWAY METHODOLOGY WORKBOOK SUPPLEMENT," SEPTEMBER 1999.
- 5. SITE PLAN IS FOR PERMITTING PURPOSES ONLY AND DOES NOT REPRESENT A PROPERTY BOUNDARY SURVEY.
- 6. THE PROJECT WILL BE MANAGED IN A MANNER THAT MEETS THE REQUIREMENTS AND INTENT OF RSA 430:53 AND CHAPTER AGR 3800 RELATIVE TO INVASIVE SPECIES.
- 7. IN ACCORANCE WITH ENV-WQ 1505.02, 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. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:

   A MINIMUM 85 PERCENT VEGETATED GROWTH HAS BEEN ESTABLISHED

   A MINIMUM OF 3 INCHES OF NON-EROSIVE MATERIAL HAS BEEN INSTALLED
- 8. IN THE EVENT THAT A RARE OR THREATENED SPECIES IS OBSERVED, THE NEW HAMPSHIRE FISH AND GAME AND NEW HAMPSHIRE NATURAL HERITAGE BUREAU WILL BE NOTIFIED. TURTLE NESTING SEASON EXTENDS FROM LATE MAY THROUGH THE BEGINNING OF JULY, IF WOOD, BLANDING'S OR SPOTTED TURTLES ARE FOUND LAYING EGGS IN THE WORK AREA, CONTACT MELISSA DOPERALSKI AT 603-271-1735 OR JOSH MEGYESY AT 603-271-1725 FOR FURTHER INSTRUCTIONS. OBSERVATIONS OF NORTHERN BLACK RACER SNAKES SEEN IN ANY AREA FROM THE END OF SEPTEMBER THROUGH THE MONTH OF APRIL MUST BE IMMEDIATELY REPORTED TO THE NHFG DEPARTMENT (BRENDAN CLIFFORD AT 603-271-0463 OR MELISSA DOPERALSKI AT 603-271-1738). IF NORTHERN BLACK RACER IS FOUND IN A WORK AREA FROM NOVEMBER THROUGH THE MONTH OF APRIL, WORK SHALL IMMEDIATELY CEASE AND THE OBSERVATION MUST BE REPORTED TO THE NHFG (BRENDAN CLIFFORD OR MELISSA DOPERALSKI).

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

- 1. INSTALLATION OF EROSION CONTROL GRINDINGS AND/OR SILT FENCES SHALL BE COMPLETE PRIOR TO THE START OF WORK IN ANY GIVEN AREA. EROSION CONTROLS SHALL BE USED DURING CONSTRUCTION AND REMOVED WHEN ALL SLOPES HAVE A HEALTHY STAND OF VEGETATION COVER. EROSION CONTROL MEASURES SHALL BE INSPECTED ON A WEEKLY BASIS AND AFTER .25" OR GREATER RAINFALL EVENTS.
- 2. AS REQUIRED, CONSTRUCT TEMPORARY BERMS, SILTATION FENCES, SEDIMENT TRAPS, ETC. TO PREVENT EROSION & SEDIMENTATION OF WETLANDS.
- 3. THE WORK AREA SHALL BE GRADED AND OTHERWISE SHAPED IN SUCH A MANNER AS TO MINIMIZE SOIL EROSION, SILTATION OF DRAINAGE CHANNELS, DAMAGE TO EXISTING VEGETATION, AND DAMAGE TO PROPERTY OUTSIDE LIMITS OF THE WORK AREA. EROSION CONTROL GRINDINGS WILL BE NECESSARY TO
- 4. ANY STRIPPED TOPSOIL SHALL BE STOCKPILED, WITHOUT COMPACTION, AND STABILIZED WITH BMPS.
- 5. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDED AREAS ARE 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, PLANT ANNUAL RYEGRASS PRIOR TO OCTOBER 15TH.
- 6. EROSION CONTROLS SHALL BE INSPECTED WEEKLY AND AFTER EVERY HALF-INCH OF RAINFALL.
- 7. EROSION CONTROL MATTING, IF REQUIRED, WILL CONSIST OF JUTE MATTING. MATTING WITH WELDED PLASTIC OR 'BIODEGRADABLE PLASTIC' NETTING OR THREAD WILL BE AVOIDED TO LIMIT UNINTENTIONAL MORTALITY TO SNAKES.

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#### 326 AND 380 TRANSMISSION LINE STRUCTURE REPLACEMENT & OPGW PROJECT

MERRIMACK, LITCHFIELD, LONDONDERRY, HUDSON, AND PELHAM NEW HAMPSHIRE





**EVERSURCE ENERGY** CHECKED BY: DMZ SHEET

REVIEWED BY: TLT LEW DESIGNED BY: MJD DRAWN BY: MJD SCALE: ROJECT NO 03/04/2022 04.0190999.70

**S1** 

#### Best Management Practices (BMP's) for Straw wattles

#### Definition and purpose:

Straw wattles are burlap rolls filled with straw that trap sediment and interrupt water flow by reducing slope lengths.

#### Applications:

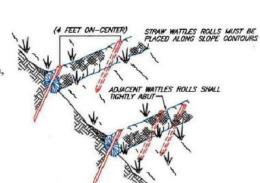
- \* Along erodible or unstablizied slopes
- \* Spread overland waterflow
- \* Trap sediment
- \* Around storm drain inlets to slow water and settle out sediment
- \* Overlap ends approximately 6 inches

#### Installation:

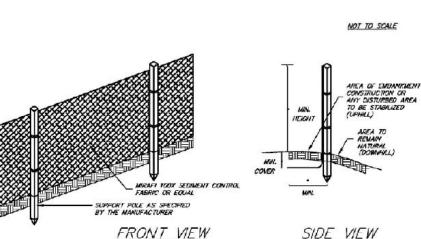
Straw wattles are installed parallel to slope contours and perpendicular to sheet flow.

Spacing\* - Dependent on slope length, soil steepness and soil type (general range 10 - 25').

Trenching - 2"-5" inch trench Stacking - at each end and four foot on center (i.e. 25 foot wattle uses 6 stacks)







#### NOTES (SILT FENCE)

NOTES (SILT PERVICE)

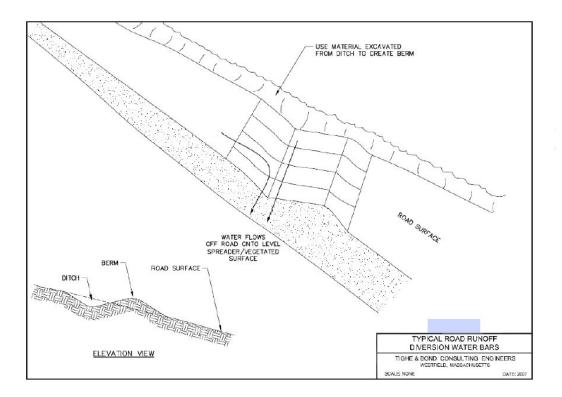
1. THE HEIGHT OF THE BARRIER SHALL NOT EXEED 36 INCHES.

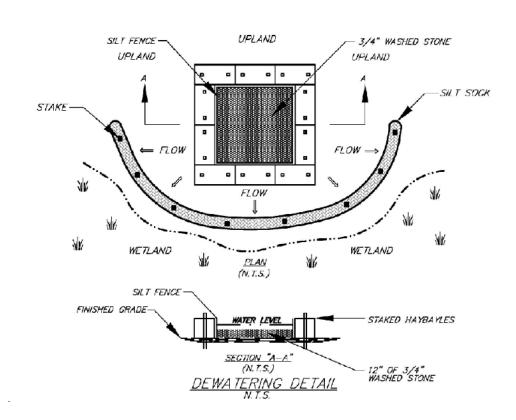
2. WHEN JOINTS ARE NECESSARY, FILTER CLOTH SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST, WITH A MINIMUM 6—INCH OVERLAP, AND SECURELY SEALED. SEE MANUFACTURER'S RECOMMENDATIONS.

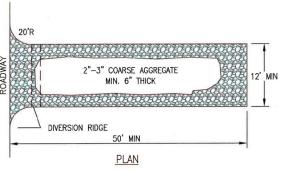
3 POSTS SHALL BE PLACED AT A MAXIMUM OF 10 FEET APART AT THE BARRIER LOCATION AND DRIVEN
SECURELY INTO THE GROUND (MINIMUM OF 12 INCHES). WHEN EXTRA STRENGTH FABRIC IS USED WITHOUT THE WIRE SUPPORT FENCE, POST SPACING SHALL BE AS MANUFACTURER RECOMMENDS.

4. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 6 INCHES WIDE AND 6 INCHES DEEP ALONG THE LINE

- OF POSTS AND UPSLOPE OF THE BARRIER IN ACCORDANCE WITH RECOMMENDATIONS
- 5. THE FABRIC SHALL NOT EXTEND MORE THAN 36 INCHES ABOVE THE ORIGINAL GROUND SURFACE, AND WILL EXTEND A MINIMUM OF 8 INCHES INTO THE TRENCH. FILTER FABRIC SHALL NOT BE STAPLED
- 6. THE TRENCH SHALL BE BACKFILLED AND THE SOIL COMPACTED OVER THE FILTER FABRIC. 7. FABRIC BARRIERS SHALL BE REMOVED WHEN THEY HAVE SERVED THEIR USEFUL PURPOSE, BUT NOT BEFORE THE UPSLOPE AREA HAS BEEN PERMANENTLY STABILIZED. 8. FILTER BARRIERS SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST ONCE
- DAILY DURING PROLONGED RAINFALL AND ANY REQUIRED REPAIRS SHALL BE MADE IMMEDIATELY. 9. SHOULD THE FABRIC DECOMPOSE OR BECOME INEFFECTIVE PRIOR TO THE END OF THE EXPECTED USABLE LIFE AND THE BARRIER STILL BE NECESSARY, THE FABRIC SHALL BE REPLACED PROMPTLY. 10. SEDIMENT DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE—HALF THE HEIGHT OF THE BARRIER.
- 11. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE SILT FENCE OR FILTER BARRIER IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM TO THE EXISTING GRADE, PREPARED AND SEEDED.







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

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

## **CONSTRUCTION ENTRANCE**

NOT TO SCALE

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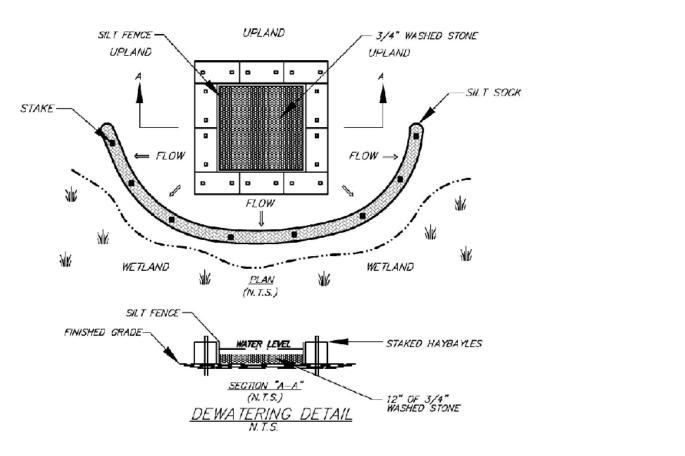
### 326 AND 380 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT MERRIMACK, LITCHFIELD, LONDONDERRY, HUDSON, AND PELHAM

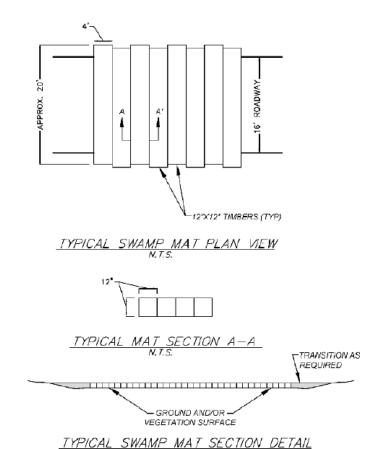
# NEW HAMPSHIRE BMP DETAILS

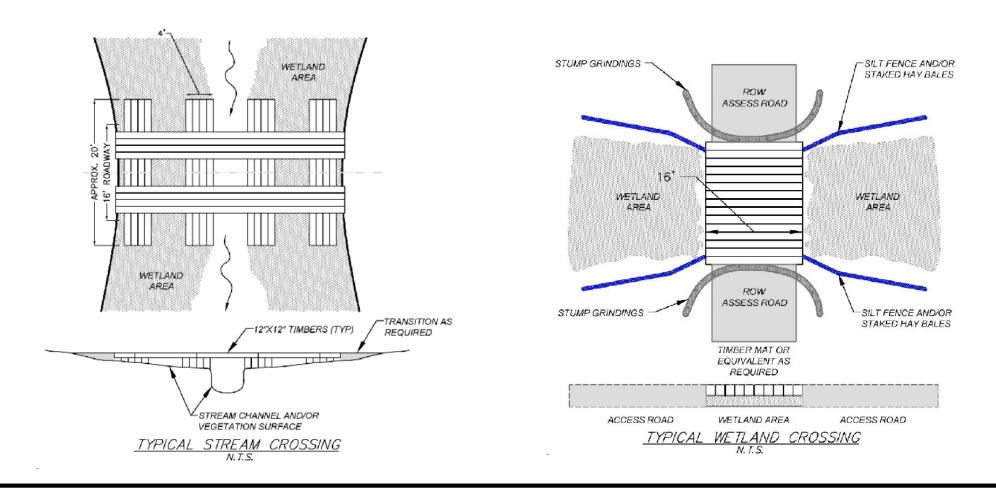


**S2** 

DESIGNED BY: MJD DRAWN BY: MJD SCALE: 04.0190999.70 03/04/2022







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### 326 AND 380 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT MERRIMACK, LITCHFIELD, LONDONDERRY, HUDSON, AND PELHAM

NEW HAMPSHIRE

## BMP DETAILS

PREPARED BY:			PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			EVERS=URCE ENERGY	
PROJ MGR:	LEW	REVIEWED BY: TLT	CHECKED BY: DMZ	SHEET
DESIGNED BY:	MJD	DRAWN BY: MJD	SCALE:	1
DATE: 03/04/2	2022	PROJECT NO. 04.0190999.70	REVISION NO.	S3

#### **NOTES**

1. BLANDING'S TURTLE (STATE ENDANGERED), SPOTTED TURTLE (STATE THREATENED), BLACK RACER (STATE THREATENED), EASTERN BOX TURTLE (STATE ENDANGERED) AND EASTERN HOGNOSE SNAKE (STATE ENDANGERED) OCCUR WITHIN THE VICINITY OF THE PROJECT SITE. SITE OPERATORS SHALL BE INFORMED OF THE POTENTIAL PRESENCE OF THESE SPECIES AND SHALL BE PROVIDED A FLYER THAT HELPS TO IDENTIFY THESE SPECIES ALONG WITH NHFG CONTACT INFORMATION. SEE PLAN SHEET 4-7.

- VERNAL POOLS AND POTENTIAL VERNAL POOLS SHALL BE FLAGGED PRIOR TO WORK AND ALL IMPACTS TO VERNAL POOLS AND POTENTIAL VERNAL POOLS SHALL BE AVOIDED.
- . SIGHTINGS OF EASTERN BOX SHALL BE REPORTED IMMEDIATELY TO NHFG WILDLIFE BIOLOGISTS MELISSA WINTERS (ALL HOURS, 603-479-1129). IMMEDIATE REPORTING OF OBSERVATIONS IS CRITICAL AS NHFG BIOLOGISTS WILL NEED TO COLLECT DATA ON THE INDIVIDUAL.
- 4. TURTLES AND SNAKES MAY BE ATTRACTED TO DISTURBED GROUND DURING NESTING SEASON (MAY 15TH JUNE 30TH). ALL TURTLE SPECIES NESTS ARE PROTECTED BY NH LAWS. IF A NEST IS OBSERVED OR SUSPECTED, CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION.
- 5. ALL OBSERVATIONS OF EASTERN HOGNOSE SNAKE SEEN AT ANY TIME SHALL BE IMMEDIATELY REPORTED TO THE NHFG DEPARTMENT (MELISSA WINTERS (603-479-1129 CELL) OR JOSH MEGYESY (978-578-0802 CELL)) FOR FURTHER INSTRUCTIONS. PLEASE ATTEMPT TO PHOTOGRAPH THIS SPECIES TO SEND TO US FOR VERIFICATION.
- . PRIOR TO DAILY CONSTRUCTION ACTIVITIES, TIMBER MATTING SHALL BE SWEPT FOR SNAKES AND TURTLES.
- 7. 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 1/8 INCHES;
- 8. 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 EMAIL 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 FEASIBLE;
- 10. 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, IF ANY, TO ASSURE THE PROJECT DOES NOT APPRECIABLY JEOPARDIZE THE CONTINUED EXISTENCE OF THREATENED AND ENDANGERED SPECIES AS DEFINED IN FIS 1002.04;
  SITE OPERATORS SHALL BE ALLOWED TO RELOCATE WILDLIFE ENCOUNTERED IF DISCOVERED WITHIN THE ACTIVE WORK ZONE AND IF IN DIRECT HARM FROM PROJECT ACTIVITIES. WILDLIFE SHALL BE RELOCATED IN CLOSE PROXIMITY TO THE CAPTURE LOCATION BUT OUTSIDE OF THE WORK ZONE AND IN THE DIRECTION THE INDIVIDUAL WAS HEADING. NHFG SHALL BE CONTACTED IMMEDIATELY IF THIS ACTION OCCURS.
- I1. THE NHFG, INCLUDING ITS EMPLOYEES AND AUTHORIZED AGENTS, SHALL HAVE ACCESS TO THE PROPERTY DURING THE TERM OF THE PERMIT.
- 12. NESTING AREAS MAY INCLUDE WORK PADS AND ACCESS ROADS THAT ARE NOT HARD PACK GRAVEL AND OTHER SANDY/GRAVEL WORK AREAS. ALL TURTLE SPECIES NESTS AND NORTHERN BLACK RACER NESTS ARE PROTECTED BY NH LAWS. BE AWARE OF THE POTENTIAL TO ENCOUNTER NESTING WILDLIFE IN THESE AREAS.
- 13. IF A TURTLE OR SNAKE NEST IS OBSERVED OR SUSPECTED, OPERATORS SHALL CONTACT MELISSA WINTERS (603-479-1129) OR JOSH MEGYESY (978-578-0802) AT NHFG IMMEDIATELY FOR FURTHER CONSULTATION. TURTLES NESTING OR EXHIBITING NESTING BEHAVIOR SHALL NOT BE MOVED OR IN ANY WAY DISTURBED.
- 14. OBSERVATIONS OF NORTHERN BLACK RACERS IN THE MONTHS OF APRIL-MAY AND SEPTEMBER-OCTOBER MAY INDICATE THE POTENTIAL FOR A DEN SITE ON OR NEAR THE PROJECT SITE.
  OBSERVATIONS OF THIS SPECIES DURING THIS TIMEFRAME SHALL BE REPORTED IMMEDIATELY TO THE NEW HAMPSHIRE FISH AND GAME DEPARTMENT NONGAME AND ENDANGERED WILDLIFE
  ENVIRONMENTAL REVIEW PROGRAM. PLEASE CONTACT MELISSA WINTERS (603-479-1129) OR BRENDAN CLIFFORD (603-944-0885). OBSERVATIONS OF THIS SPECIES OUTSIDE OF THIS TIMEFRAME CAN
  FOLLOW GENERAL REPORTING GUIDANCE. PLEASE INCLUDE PHOTOGRAPH WITH TEXT IF FEASIBLE.
- 15. NO WORK SHALL OCCUR IN THE LONDONDERRY PROJECT SITES WEST OF MAMMOTH ROAD AND NORTH OF ELWOOD ROAD UNTIL AFTER OCTOBER 15TH 2022. NHFG SHALL BE CONTACTED PRIOR TO THE START OF WORK IN THESE SECTIONS SO THAT COORDINATION CAN OCCUR TO MINIMIZE POTENTIAL IMPACTS TO RARE TURTLES.
- 16. ALL WORK ACTIVITIES SHALL BE RESTRICTED TO THE DEFINED ROADS, CONSTRUCTION AREAS, AND STAGING AREAS, WITH NO EQUIPMENT OR MATERIALS STAGED OR STORED OUTSIDE OF THE DEFINED AREAS.
- 17. ALL DEFINED ROADS, CONSTRUCTION AREAS, AND STAGING AREAS SHALL BE KEPT CLEARED OF PLANT SUCCESSION AND PIONEER VEGETATION TO PREVENT TURTLES FROM SEEKING REFUGE AND POTENTIALLY BEING CRUSHED IF HIDDEN.
- 18. EASTERN BOX TURTLES ARE KNOWN TO NEST IN THE VICINITY OF THE PROJECT. NO WORK SHALL OCCUR IN THE HUDSON PROJECT SITES UNTIL AFTER OCTOBER 15TH 2022 EXCEPT FOR SECTIONS OF LINE NORTH OF KIENIA RD (STRUCTURES 74-81 ON MAP SHEETS 6, 7, AND 8 DATED MARCH 2022). NHFG SHALL BE CONTACTED PRIOR TO THE START OF WORK IN HUDSON SO THAT COORDINATION CAN OCCUR TO MINIMIZE POTENTIAL IMPACTS TO EASTERN BOX TURTLES.
- 19. A BIOLOGIST WITH EXPERIENCE WITH TURTLES (ID AND MONITORING) SHALL BE ONSITE AT ALL TIMES DURING PROJECT ACTIVITIES WHEN ACTIVITIES ARE OCCURRING WITHIN THE WORK AREAS IN HUDSON EXCEPT FOR SECTIONS OF LINE NORTH OF KIENIA RD (STRUCTURES 74-81 ON MAP SHEETS 6, 7, AND 8 DATED MARCH 2022).
- 20. SWEEPS OF LAYDOWN AREAS/FENCING AND WORK EQUIPMENT SHALL BE CONDUCTED IN THE MORNING PRIOR TO WORK AND DURING THE DAY WHEN/IF EQUIPMENT IS LEFT SITTING IN AN AREA.
- 21. AREAS OF DISTURBANCE SHALL BE MINIMIZED TO THE EXTENT POSSIBLE. EQUIPMENT PARKING AREAS, LAYDOWN AREAS AND ACCESS SHALL BE CLEARLY DEFINED AND EQUIPMENT/TRUCKS SHALL BE RESTRICTED TO THESE AREAS.
- 22. IF TURTLE TRACKS ARE OBSERVED, A POTENTIAL NEST LOCATED, PREDATED NEST OR A TURTLE IS FOUND TO BE OR SUSPECTED OF NESTING WITHIN THE PROJECT AREA, CONTACT NHFG IMMEDIATELY.
- 23. AT LEAST ONE QUALIFIED BIOLOGICAL MONITOR SHALL BE ON-SITE AT ALL TIMES IN ALL WORK AREAS WEST OF MAMMOTH ROAD AND NORTH OF ELWOOD ROAD. A QUALIFIED BIOLOGICAL MONITOR SHALL BE SOMEONE WITH TRAINING AND EXPERIENCE IN TURTLE AND REPTILE IDENTIFICATION AND HANDLING TECHNIQUES AND SHALL OPERATE UNDER THE GUIDANCE OF A QUALIFIED HERPETOLOGIST. A QUALIFIED HERPETOLOGIST SHALL BE A WILDLIFE BIOLOGIST WELL VERSED ON AND WITH EXTENSIVE EXPERIENCE IN TURTLE IDENTIFICATION, LIFE HISTORY, HABITAT PREFERENCE, HANDLING, AND DOCUMENTATION, LIE. ACTIVITY, SEXING, AGING, ETC.

  THE QUALIFIED HERPETOLOGIST SHALL BE RESPONSIBLE FOR:

  1. SEADELING FOR INTERVINE SHALL BE RESPONSIBLE FOR:
- SEARCHING FOR, IDENTIFYING, DOCUMENTING, REPORTING AND RELOCATING ANY STATE-LISTED HERPETOFAUNA WITHIN THE WORK AREAS IMMEDIATELY PRIOR TO THE PLACEMENT OF GRAVEL
- INSTRUCTING AND GUIDING BIOLOGICAL MONITOR ON MATTERS PERTAINING TO HERPETOFAUNA.
- □INSTRUCTING AND GUIDING BIOLOGICAL MONITOR ON MAITERS PERTAINING TO HERPETOFAUNA.
  □ENSURING PROPER DOCUMENTATION AND HANDLING TECHNIQUES ARE ABIDED TO BY THE CONSTRUCTION PERSONNEL AND THE BIOLOGICAL MONITOR.
  □AT THE END OF THE PROJECT, THE QUALIFIED HERPETOLOGIST SHALL PROVIDE EVERSOURCE LICENSING AND PERMITTING STAFF A REPORT, WHICH INCLUDES A SUMMARY OF OBSERVATIONS, REPORTING LOGS DOCUMENTING ANY DOCUMENTED STATE-LISTED SPECIES, AND MAPPING AND .SHP FILES SHOWING THE LOCATION OF ANY OBSERVED STATE-LISTED SPECIES. THE REPORT SHALL BE REVIEWED AND PROVIDED TO NH F&G FOR THEIR RECORDS.

  THE BIOLOGICAL MONITOR SHALL:
- THE BIOLOGICAL MONITOR SHALL:

  INSPECT ALL WORK AREAS DAILY FOR S&E CONTROLS, THE PRESENCE OF STATE-LISTED SPECIES, TO ENSURE COMPLIANCE WITH ENVIRONMENTAL REGULATIONS AND PERMIT CONDITIONS.

  MAINTAIN REGULAR CONTACT WITH THE PROJECT'S QUALIFIED HERPETOLOGIST ON ALL MATTERS PERTAINING TO HERPETOFAUNA PROTECTION AND SURVEYS.

  SERVE AS THE PRIMARY CONTACT BETWEEN THE CONTRACTOR AND EL&P STAFF.

  REPORT OBSERVATIONS OF STATE-LISTED VALUES DAILY.

  PROCLIMENT FIELD ACTIVITIES AND OBSERVATIONS DAILY.
- DOCUMENT FIELD ACTIVITIES AND OBSERVATIONS DAILY.
- 24. MINIMIZE WORK PAD AREAS, INCLUDING MATTING, TO THE GREATEST EXTENT POSSIBLE, ESPECIALLY IN WETLANDS AND OTHER SENSITIVE AREAS. RESTORE WORK PADS USING TOPSOIL STOCKPILED DURING INITIAL GRADING TO AN APPROXIMATELY 30-FOOT BY 60-FOOT OR SMALLER AREA AT THE BASE OF THE STRUCTURE TO ALLOW FOR FUTURE MAINTENANCE. STABILIZE EXPOSED SOILS WITH SEED AND MULCH AS NECESSARY.

#### SPOTTED TURTLE (CLEMMYS GUTTATA)

STATE THREATENED



SPOTTED TURTLE IDENTIFICATION

1.SMALL, MOSTLY AQUATIC WITH BLACK OR DARK BROWN WITH YELLOW SPOTS.
2. FAIRLY FLAT SHELL COMPARED TO BLANDING'S TURTLE.
3. SPOTS VARY IN COLOR AND NUMBER.

#### **BLANDING'S TURTLE (EMYDOIDEA BLANDINGII)**

STATE ENDANGERED



#### **BLANDING'S TURTLE IDENTIFICATION**

1. LARGE, DARK/BLACK DOMED SHELL WITH LIGHTER SPECKLES.
2. DISTINCT YELLOW THROAT/CHIN.
3. AQUATIC BUT OFTEN MOVES ON LAND.

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## 380 & 326 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT

PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

### WILDLIFE NOTES



**EVERSURCE** \_SHEET

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#### NORTHERN BLACK RACER IDENTIFICATION

- 1. SOLID BLACK WITH A WHITE THROAT. 2. SLENDER WITH GLOSSY SCLAES. 3. 3-6 FT. LONG. 4. HATCHLINGS ARE VERY SMALL AND PATTERNED.



### **EASTERN HOGNOSE SNAKE (HETERODON PLATIRHINOS)**

STATE ENDANGERED



#### **EASTERN HOGNOSE SNAKE IDENTIFICATION**

- 1. BLACK, GRAY OR PATTERNED APPEARANCE. 2. UPTURNED SNOUT. 3. 2-3 FT. LONG 4. MAY SPREAD NECK OUT OR HISS.



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### 380& 326 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT

PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

## WILDLIFE NOTES (CONT.)

GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

**EVERSURCE ENERGY** 

**S5** 

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\*ALL PHOTOS AND IDENTIFICATION INFORMATION COURTESY OF NEW HAMPSHIRE FISH AND GAME DEPARTMENT.







#### WOOD TURTLE IDENTIFICATION

1. NECK AND FORELIMBS ARE ORANGE.
2. CHARACTERIZED BY ITS HIGHLY SCULPTED SHELL WITH EACH LARGE SCUTE TAKING ON AN IRREGULAR PYRAMIDAL SHAPE.
3. ADULTS CAN BE 5-8 INCHES LONG.

#### **EASTERN BOX TURTLE (TERRAPENE CAROLINA CAROLINA)**

STATE ENDANGERED





#### **EASTERN BOX TURTLE IDENTIFICATION**

1. A SMALL 4.5-7 INCH TURTLE WITH A HIGHLY DOMED SHELL AND VARIABLE PATTERNING. 2. COLOR PATTERNS OF THE CARAPACE TYPICALLY CONSIST OF IRREGULAR YELLOW OR ORANGE MARKINGS OVER A BROWN OR BLACK BASE.. 3. THE SKIN IS UNIFORMLY DARK WITH YELLOW OR ORANGE MARKINGS.

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### 380 & 326 TRANSMISSION LINE OPGW AND STRUCTURE REPLACEMENT PROJECT

PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

## WILDLIFE NOTES (CONT.)

**ENERGY** 

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#### JEFFERSON/BLUE-SPOTTED SALAMANDER COMPLEX IDENTIFICATION

1. DARK-BODIED SALAMANDER
2. APPROXIMATELY 3.5-5 INCHES LONG
3. SPECKLED WITH BLUE OR WHITE FLECKS AND SPOTS ACROSS BACK, SIDES, AND TAIL

### SMOOTH GREEN SNAKE (LIOCHLOROPHIS VERNALIS)

SPECIES OF SPECIAL CONCERN





#### SMOOTH GREEN SNAKE IDENTIFICATION

1. A THIN, SLENDER BRIGHT-GREEN SNAKE MEASURING 10-20 INCHES 2. THE UNDERSIDE IS WHILE OR PALE YELLOW

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PELHAM, LITCHFIELD, LONDONDERRY, AND HUDSON NEW HAMPSHIRE

# WILDLIFE NOTES (CONT.)

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