

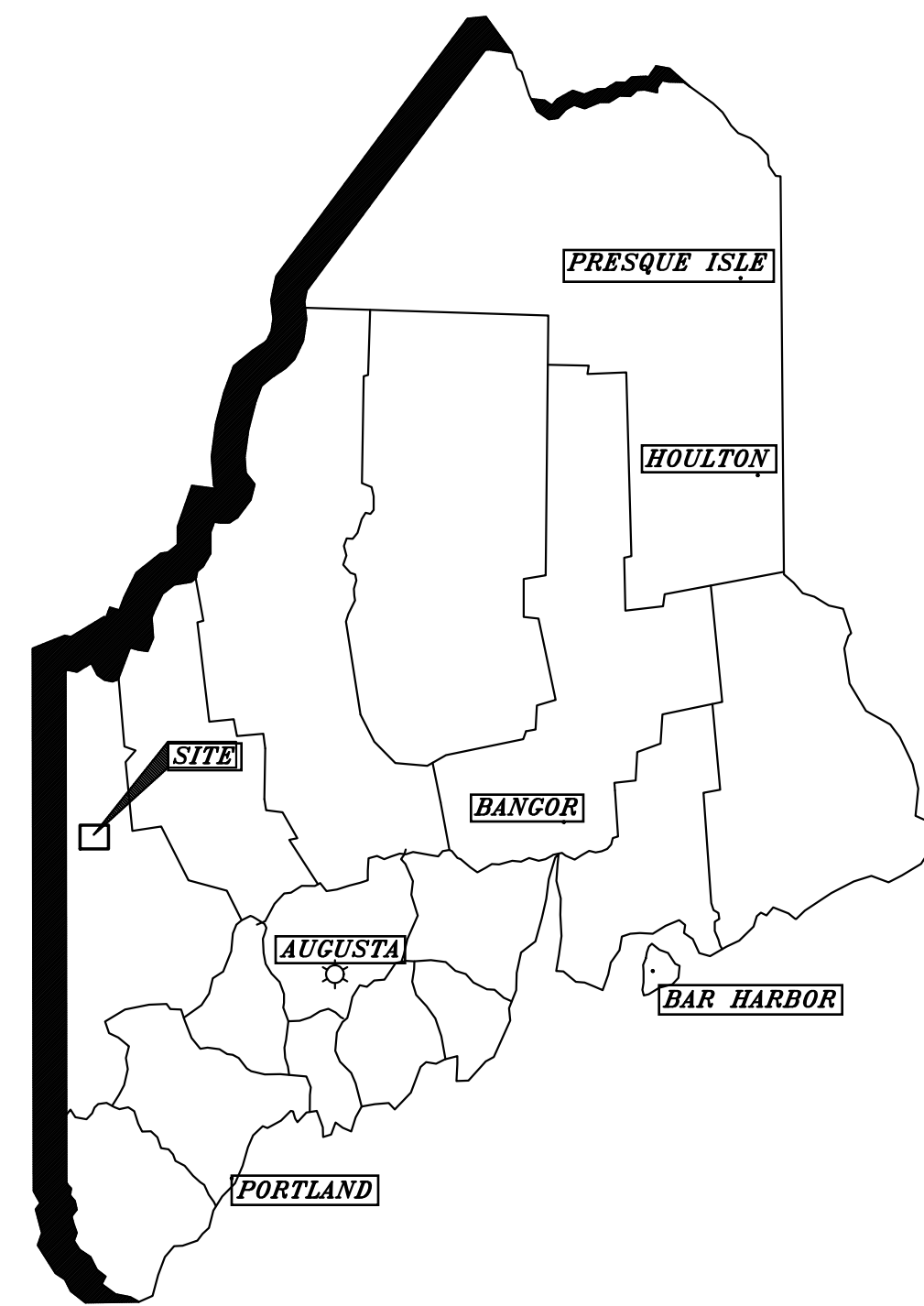
MAINE DEP PERMIT SET
TWIN ENERGY LLC

RUMFORD, MAINE

PREPARED FOR TWIN ENERGY LLC.

381.20.01

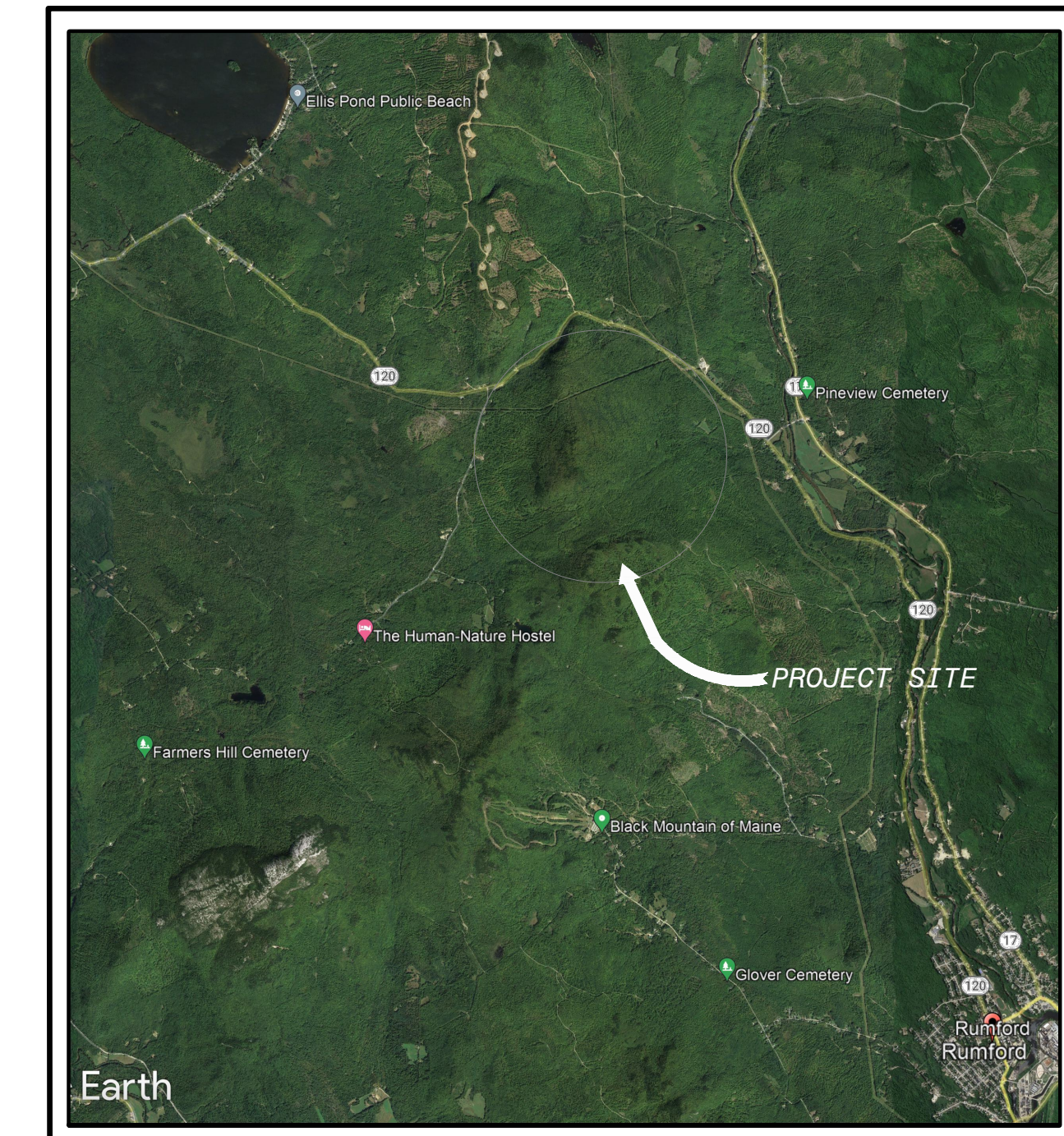
NOVEMBER 3, 2023



LOCUS MAP

SHEET INDEX

SHEET NO.	DESCRIPTION
	COVER
1	SITE INDEX
2 - 6	DETAILS
7 - 11	SITE GRADING PLAN
12	OVERHEAD TRANSMISSION LINE AND SCADA BUILDING PLAN
13	EROSION AND SEDIMENTATION CONTROL PLAN
14	EROSION AND SEDIMENTATION CONTROL PLAN AND NOTES
15 - 16	PRE-DEVELOPMENT DRAINAGE PLAN
17 - 18	POST-DEVELOPMENT DRAINAGE PLAN

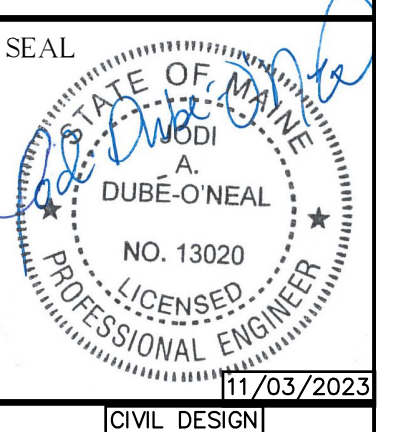


VICINITY MAP

DESIGN TEAM:



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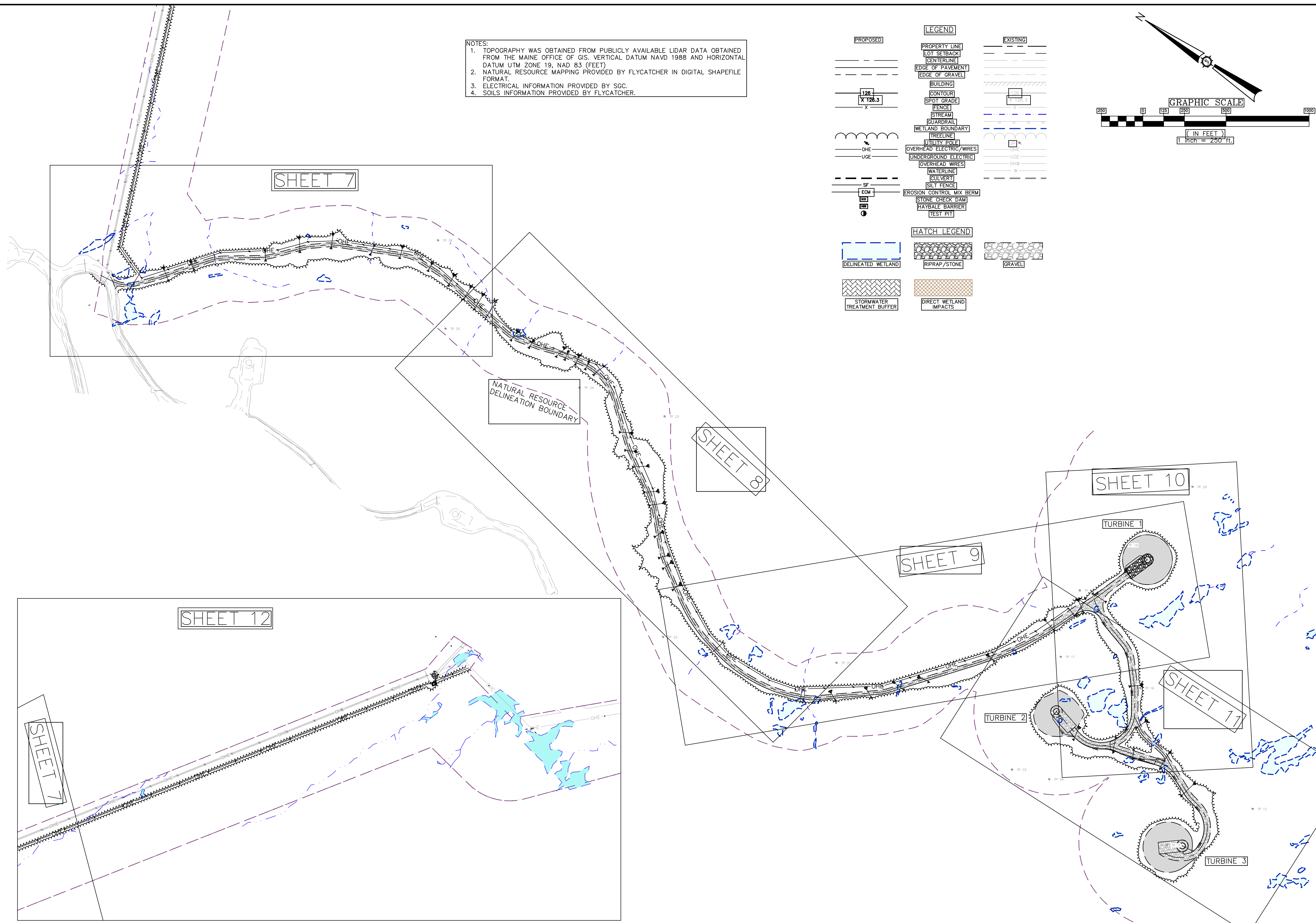
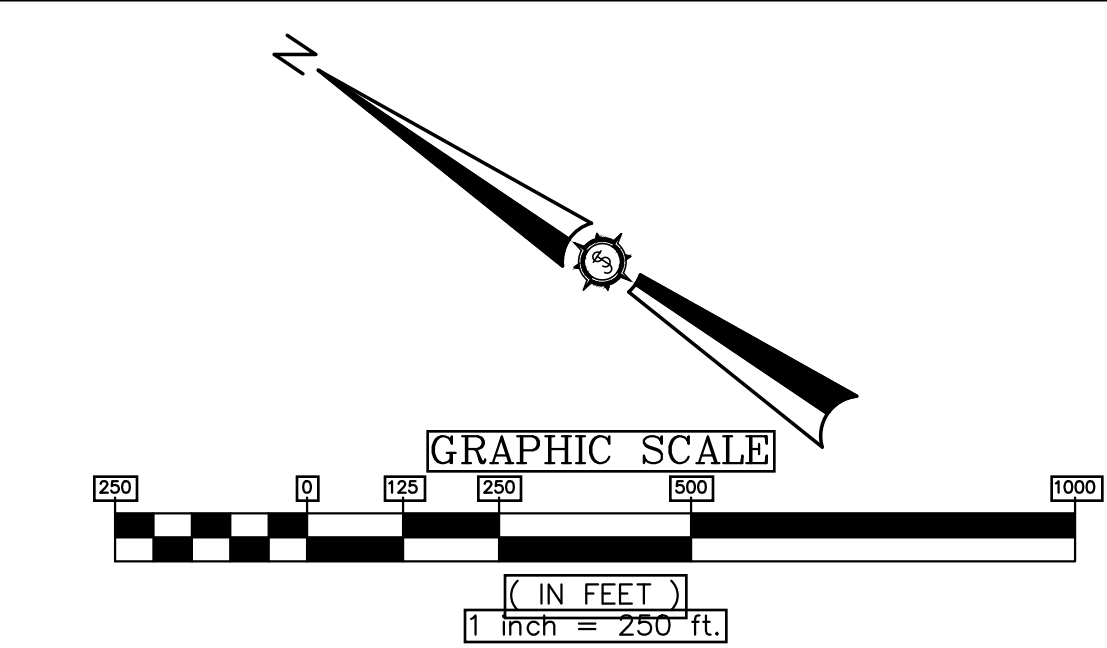
NOTES:
 1. TOPOGRAPHY WAS OBTAINED FROM PUBLICLY AVAILABLE LIDAR DATA OBTAINED FROM THE MAINE OFFICE OF GIS. VERTICAL DATUM NAVD 1988 AND HORIZONTAL DATUM UTM ZONE 19, NAD 83 (FEET)
 2. NATURAL RESOURCE MAPPING PROVIDED BY FLYCATCHER IN DIGITAL SHAPEFILE FORMAT.
 3. ELECTRICAL INFORMATION PROVIDED BY SGC.
 4. SOILS INFORMATION PROVIDED BY FLYCATCHER.

LEGEND

PROPOSED	PROPERTY LINE	EXISTING
---	LOT SETBACK	---
---	CENTERLINE	---
---	EDGE OF PAVEMENT	---
---	EDGE OF GRAVEL	---
---	BUILDING	---
---	CONTOUR	---
---	SPOT GRADE	---
---	FENCE	---
---	STREAM	---
---	GUARDRAIL	---
---	WETLAND BOUNDARY	---
---	TREELINE	---
---	UTILITY POLE	---
---	OVERHEAD ELECTRIC/WIRES	---
---	UNDERGROUND ELECTRIC	---
---	OVERHEAD WIRES	---
---	WATERLINE	---
---	CULVERT	---
---	SILT FENCE	---
---	EROSION CONTROL MIX BERM	---
---	STONE CHECK DAM	---
---	HAYBALE BARRIER	---
---	TEST PIT	---

HATCH LEGEND

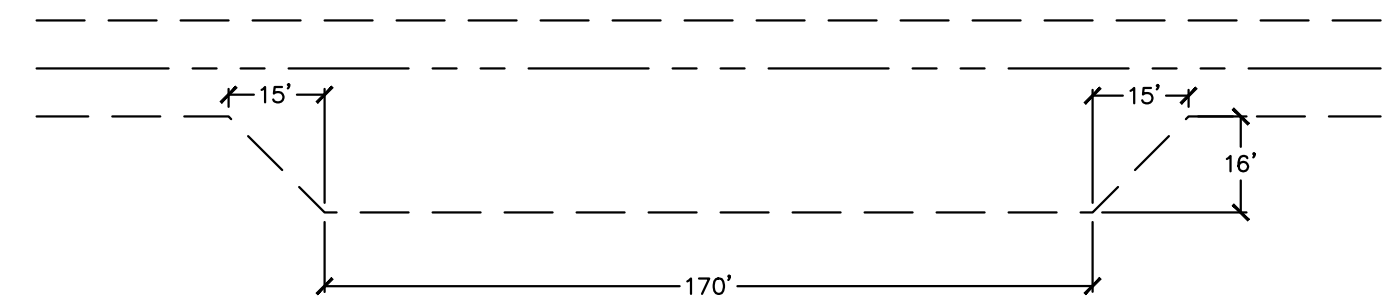
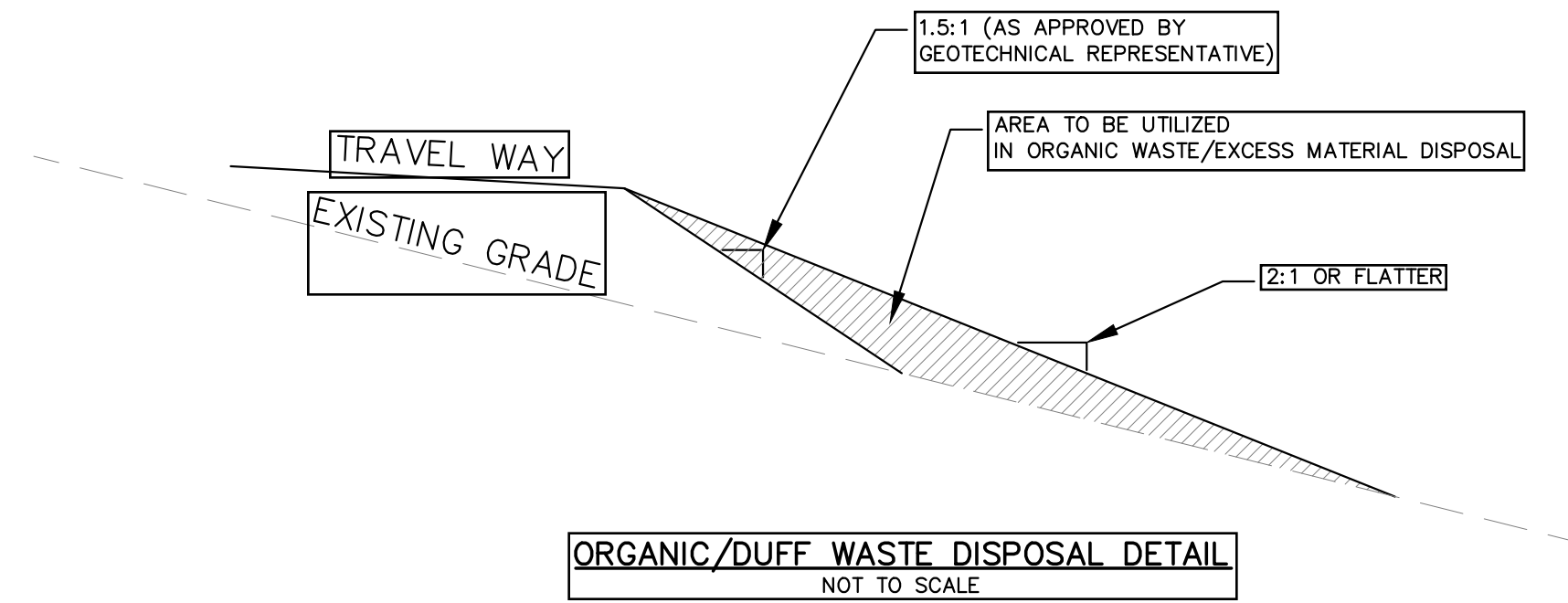
[Hatch Pattern]	DELINEATED WETLAND	[Hatch Pattern]	RIPRAP/STONE	[Hatch Pattern]	GRAVEL
[Hatch Pattern]	STORMWATER TREATMENT BUFFER	[Hatch Pattern]	DIRECT WETLAND IMPACTS		



TWIN ENERGY LLC	Designed By JAO	Drawn By SAW	Checked BCH
RUMFORD, MAINE Project Location RUMFORD, MAINE	Date 11/03/2023	Scale AS SHOWN	Approved JAO
SITE INDEX			
381.20.01	sewall The evolution of expertise www.sewall.com	ENGINEERING SURVEYING 1 800 648 4202	
77 EXCHANGE ST SUITE 401 BANGOR, ME	PERMIT		
Sheet No. 1			

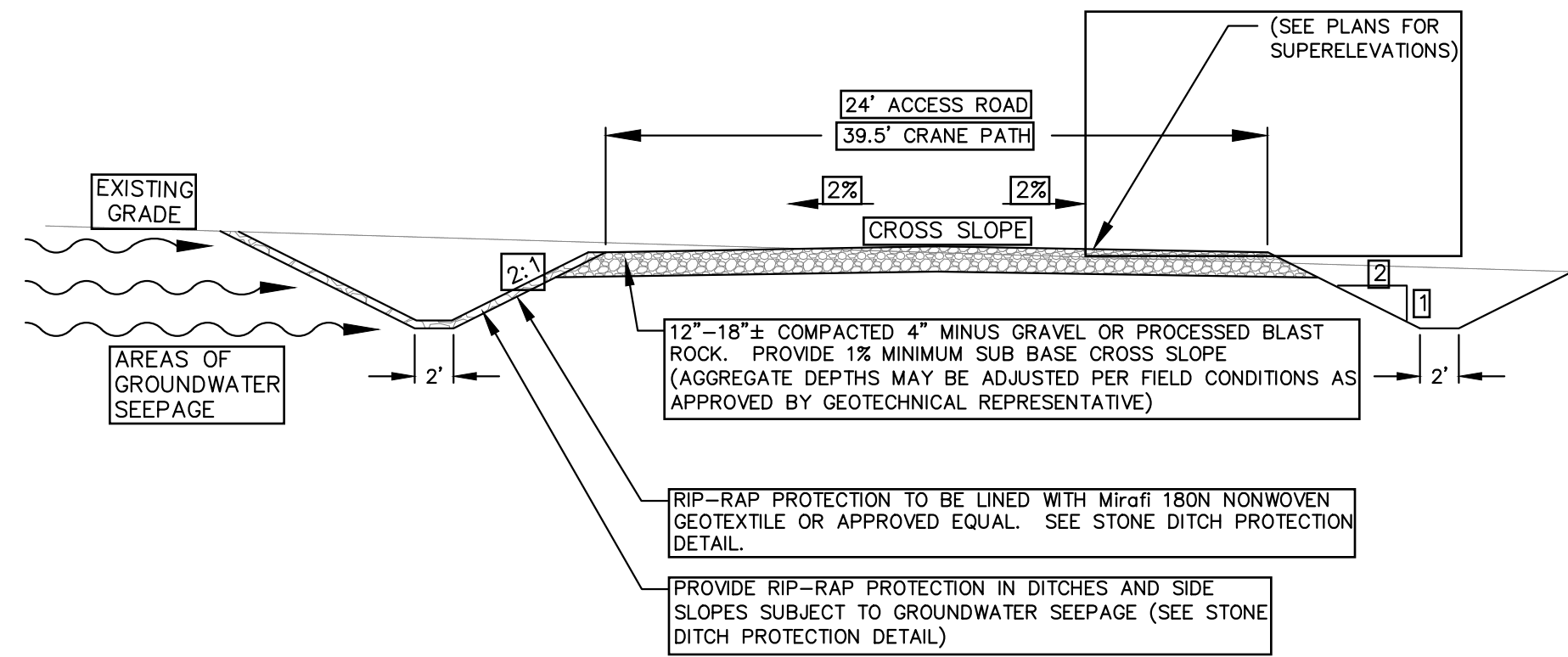
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NOTE:
DISPOSAL AREA LOCATIONS TO BE APPROVED BY ENGINEER.

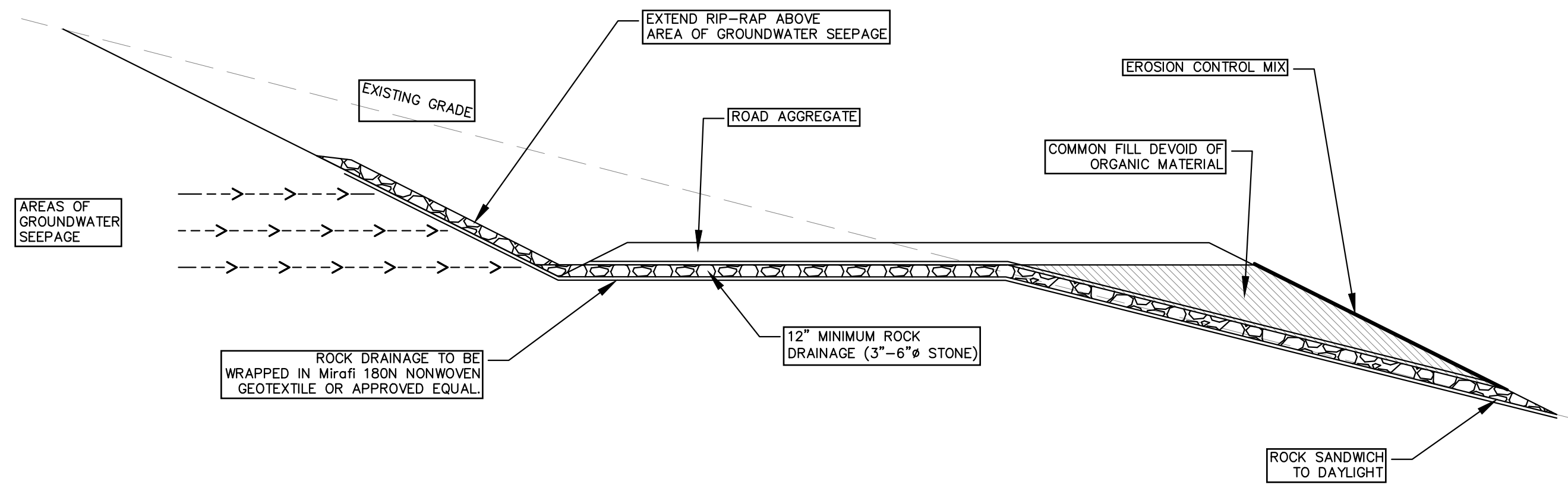


NOTES:
1. TURNOUT LOCATIONS ALONG EXISTING ROADS SHALL BE DETERMINED DURING CONSTRUCTION AND SHALL AVOID IMPACTS TO PROTECTED NATURAL RESOURCES.
2. ALL ROAD TURNOUTS WILL BE ALLOWED TO REVEGETATE ONCE CONSTRUCTION IS COMPLETE.

TYPICAL ROAD TURNOUT DETAIL
NOT TO SCALE

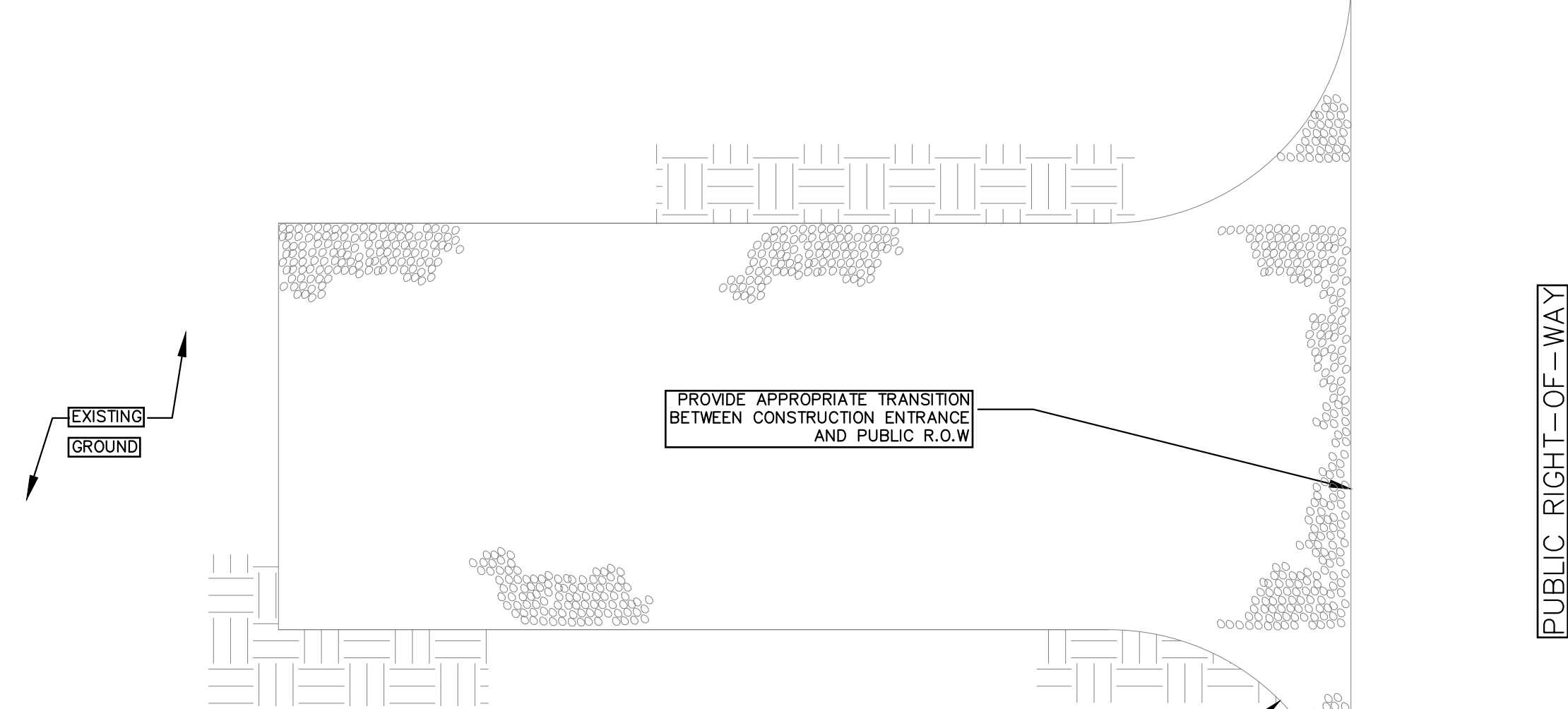
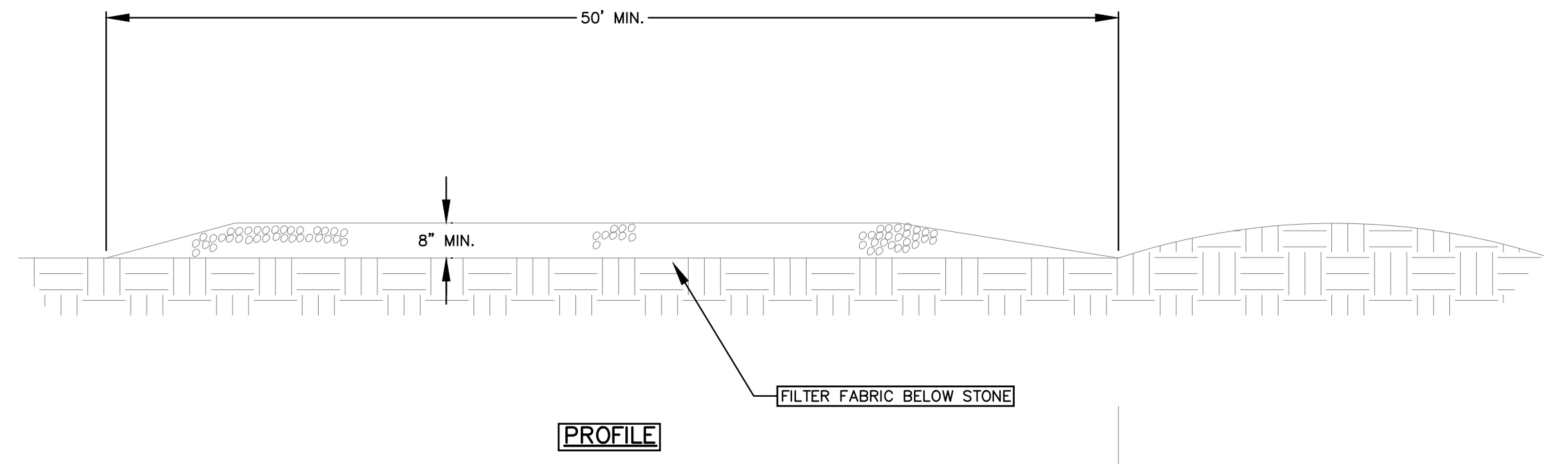


TYPICAL ROAD DETAIL IN CUT SECTION
NOT TO SCALE



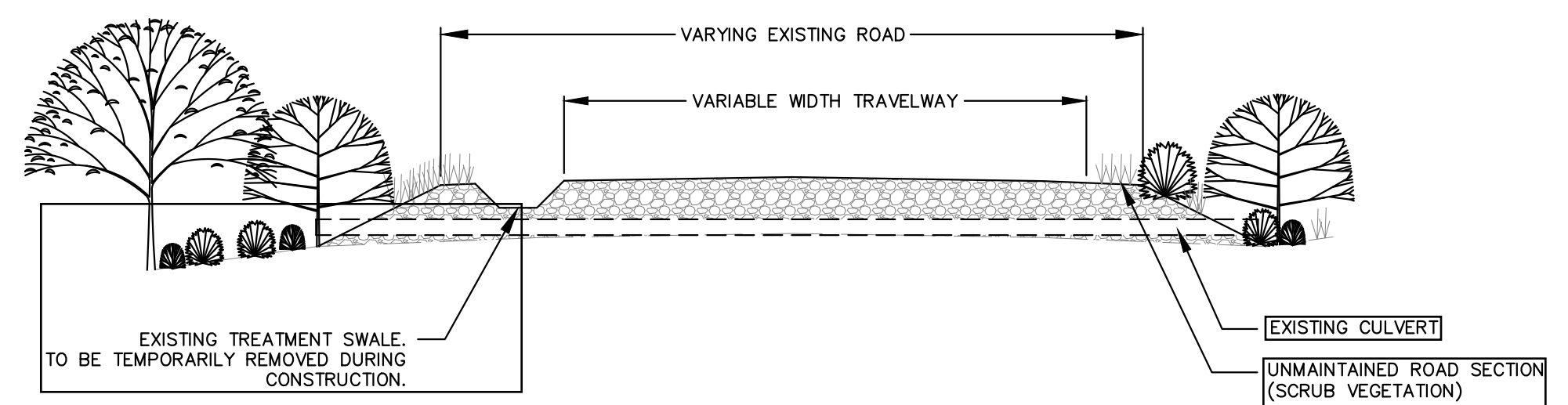
NOTE:
1. ROCK SANDWICHES SHALL BE CONSTRUCTED WITH RELIEF CULVERTS INSTALLED PERIODICALLY. INVERT OF RELIEF CULVERT SHALL BE A MINIMUM OF 6" ABOVE THE ROCK DRAINAGE LAYER. ADJUST INLET INVERT AND ROCK SANDWICH ELEVATION AS REQUIRED TO MAINTAIN APPROPRIATE COVER OVER CULVERT.
2. ROCK SANDWICH TYPICALLY UTILIZED IN ROADWAYS TRAVERSING AREAS WITH SHALLOW GROUNDWATER.
3. CONTRACTOR SHALL RESTORE ROCK SANDWICH IF DISTURBED BY UNDERGROUND ELECTRICAL INSTALLATION.

TYPICAL ROCK SANDWICH DETAIL
NOT TO SCALE



NOTES:
1. APPROXIMATE STONE SIZE - 2"-3" CRUSHED STONE.
2. LENGTH - AS SHOWN ON GRADING PLAN, MIN. 50 FEET.
3. THICKNESS - APPROXIMATELY EIGHT (8) INCHES (MINIMUM)
4. WIDTH - NOT LESS THAN FULL WIDTH OF ALL POINTS OF INGRESS OR EGRESS.
5. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHT-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED, OR TRACKED ONTO PUBLIC RIGHT-OF-WAY MUST BE REMOVED IMMEDIATELY.

STABILIZED CONSTRUCTION ENTRANCE
NOT TO SCALE

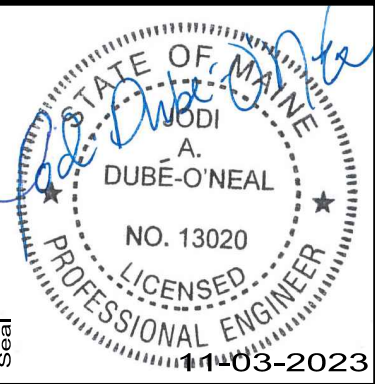


NOTES:
1. CONTRACTOR SHALL REMOVE EXISTING VEGETATION WITHIN ROAD FOOTPRINT (INCLUDING DRAINAGE DITCHES AND STORMWATER TREATMENT SWALES).
2. CONTRACTOR SHALL NOT IMPACT PROTECTED NATURAL RESOURCES UNLESS OTHERWISE PERMITTED.
3. BARK MULCH BERMS OR SILT FENCE OR INLET PROTECTION SHALL BE USED DOWNSTREAM OF ANY MAINTENANCE WORK ALONG ACCESS ROADS AS NEEDED; SEE TYPICAL DETAIL.
4. ONCE CONSTRUCTION IS COMPLETE, THE TEMPORARY CONSTRUCTION MEASURES NEED TO BE RESTORED TO EXISTING CONDITIONS (INCLUDING DRAINAGE DITCHES, ROAD WIDTHS, AND STORMWATER TREATMENT SWALES).
* ADDITIONAL CLEARING FOR COMPONENT TRANSPORT MAY BE NECESSARY IN ISOLATED LOCATIONS. THIS CLEARING WILL NOT IMPACT PROTECTED RESOURCES UNLESS OTHERWISE DEPICTED.

EXISTING ROAD RECONSTRUCTION
NOT TO SCALE

Drawn By	SAW
Checked	BCH
Designated By	JAO
Date	11/03/2023
Scale	AS SHOWN
Project Location	RUMFORD, MAINE
Project Name	TWIN ENERGY LLC
Drawn By	JAO
Checked	JAO

Project No.	381.20.01
Engineer	77 EXCHANGE ST SUITE 401 BANGOR, ME www.sewall.com
Project Name	TWIN ENERGY LLC
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Project Name	TWIN ENERGY LLC
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Checked	BCH



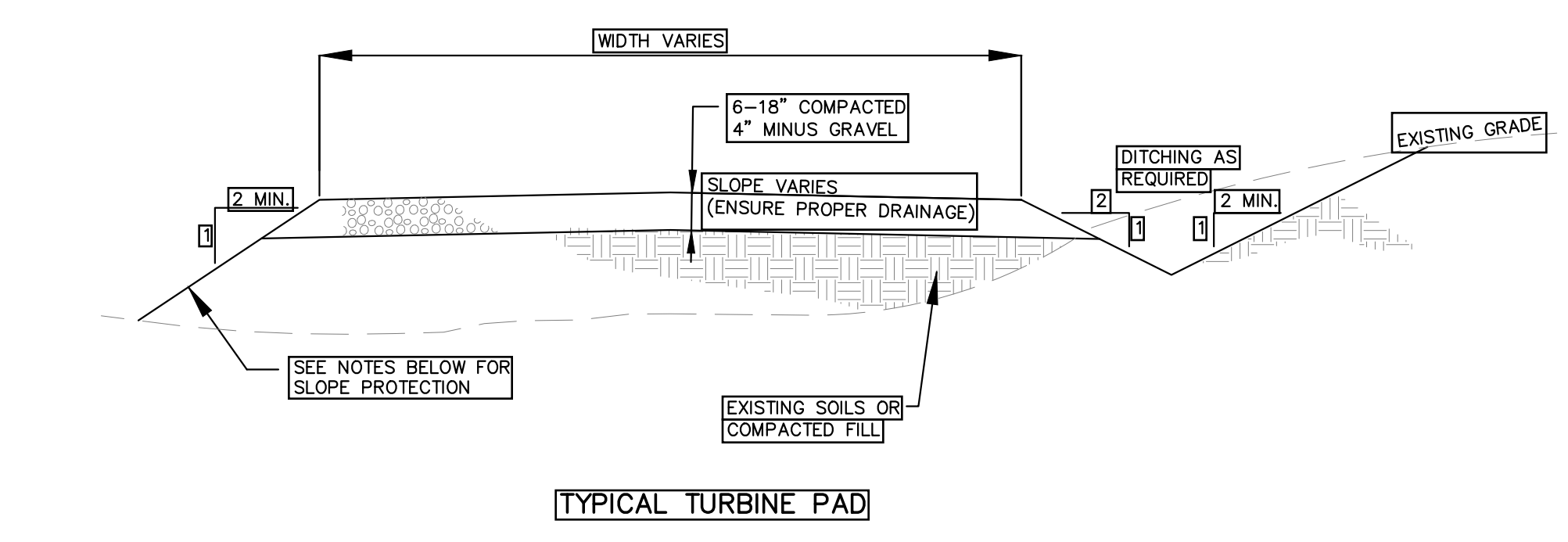
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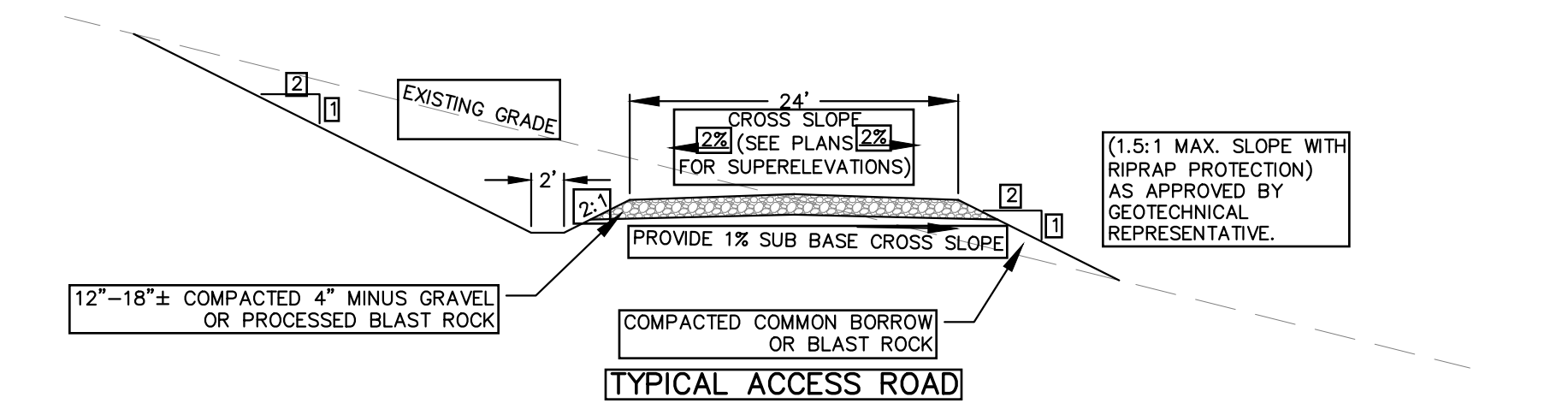
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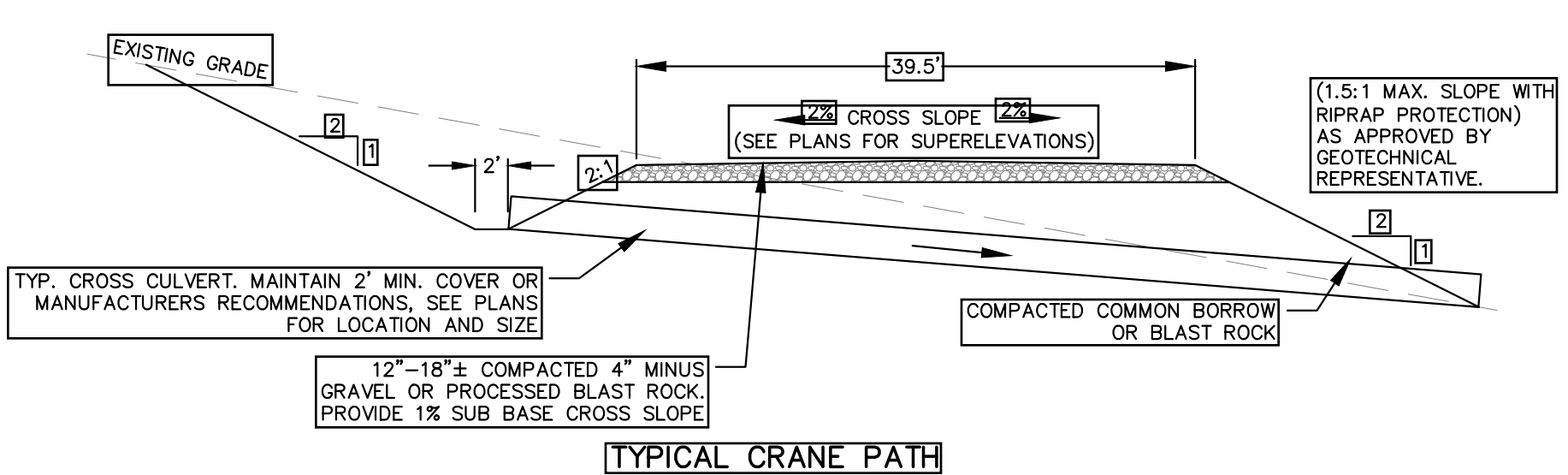
NOTE:
 1. DEPTH AND TYPE OF GRAVEL TO BE DETERMINED BASED ON SUBGRADE CONDITIONS AND AS APPROVED BY GEOTECHNICAL REPRESENTATIVE.
 2. SLOPES COMPOSED OF STONES 4" OR GREATER SHALL NOT BE COVERED WITH CAST ON LOAM & SEED.



TYPICAL TURBINE PAD



TYPICAL ACCESS ROAD



TYPICAL CRANE PATH

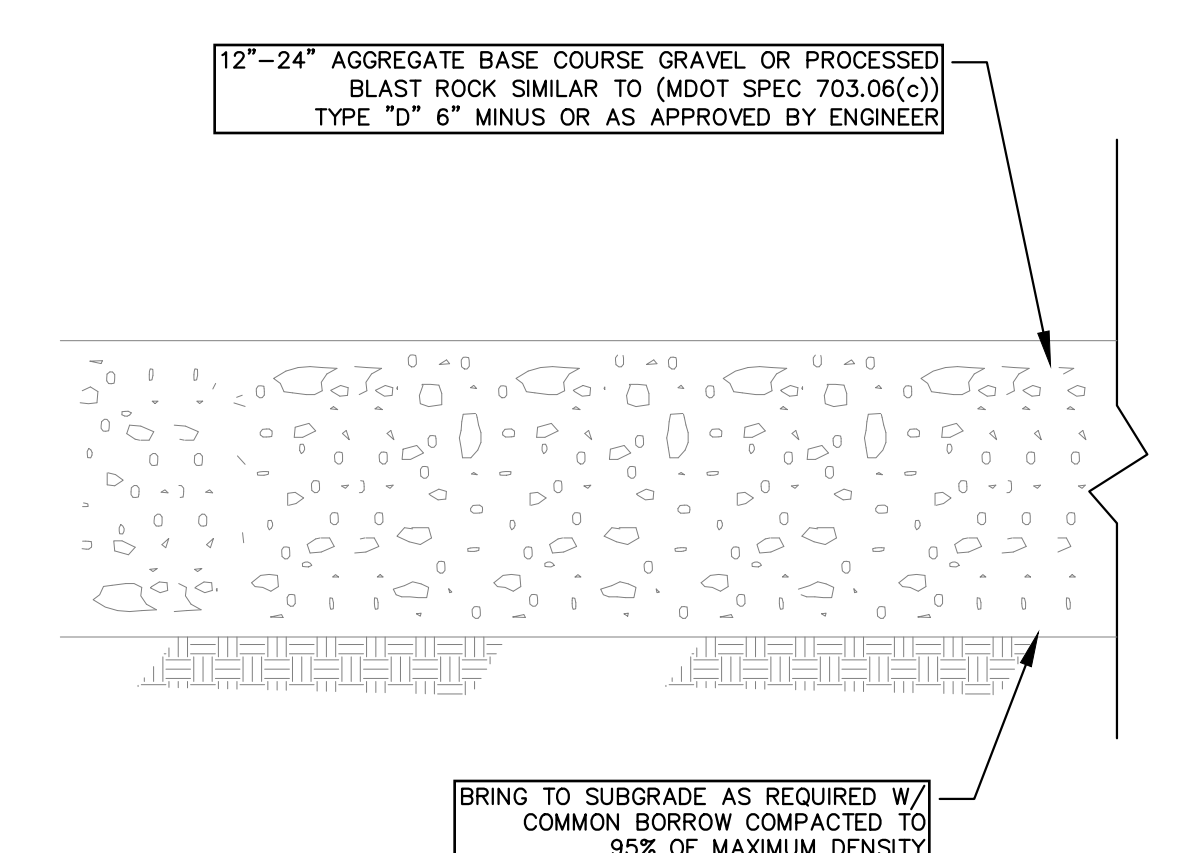
NOTES:
 1. DITCHES SHALL BE CONSTRUCTED TO AVOID GROUND WATER TABLE WHEN POSSIBLE. DITCH DEPTH SHALL BE 24" MEASURED FROM ROADWAY, EXCEPT AT CROSS CULVERTS OR AS APPROVED BY THE ENGINEER. DITCHES SHALL BE STONE LINED WHEN THE LONGITUDINAL SLOPES OF THE DITCH EXCEEDS 8%.
 2. ACTUAL AGGREGATE MATERIALS AND DEPTH SHALL BE DETERMINED IN THE FIELD BASED ON ACTUAL SITE CONDITIONS AND PROJECT REQUIREMENTS TO ADEQUATELY SUPPORT CONSTRUCTION EQUIPMENT.

FILL AREAS:
 1. EXISTING GROUND SHALL BE GRUBBED WITHIN FOOTPRINT OF ROAD IN FILL SECTIONS. HOWEVER, WHEN EMBANKMENT FILL DEPTH EXCEEDS 5', MEASURED VERTICALLY, ALL VEGETATION SHALL BE CUT AND REMOVED BUT GRUBBING IS NOT REQUIRED.
 2. STABILIZE FILL SLOPES WITH BLAST ROCK, EROSION CONTROL MIX, OR LOAM AND SEED. ALL SLOPES STEEPER THAN 3:1 SHALL BE PROTECTED WITH EROSION CONTROL MIX, EROSION CONTROL MESH, OR BLAST ROCK/RIPRAP. SLOPES STEEPER THAN 2:1 SHALL BE PROTECTED WITH RIPRAP OR SUITABLE BLAST ROCK.
 3. BENCH EXISTING GROUND AS NECESSARY TO STABILIZE EXTENSION.

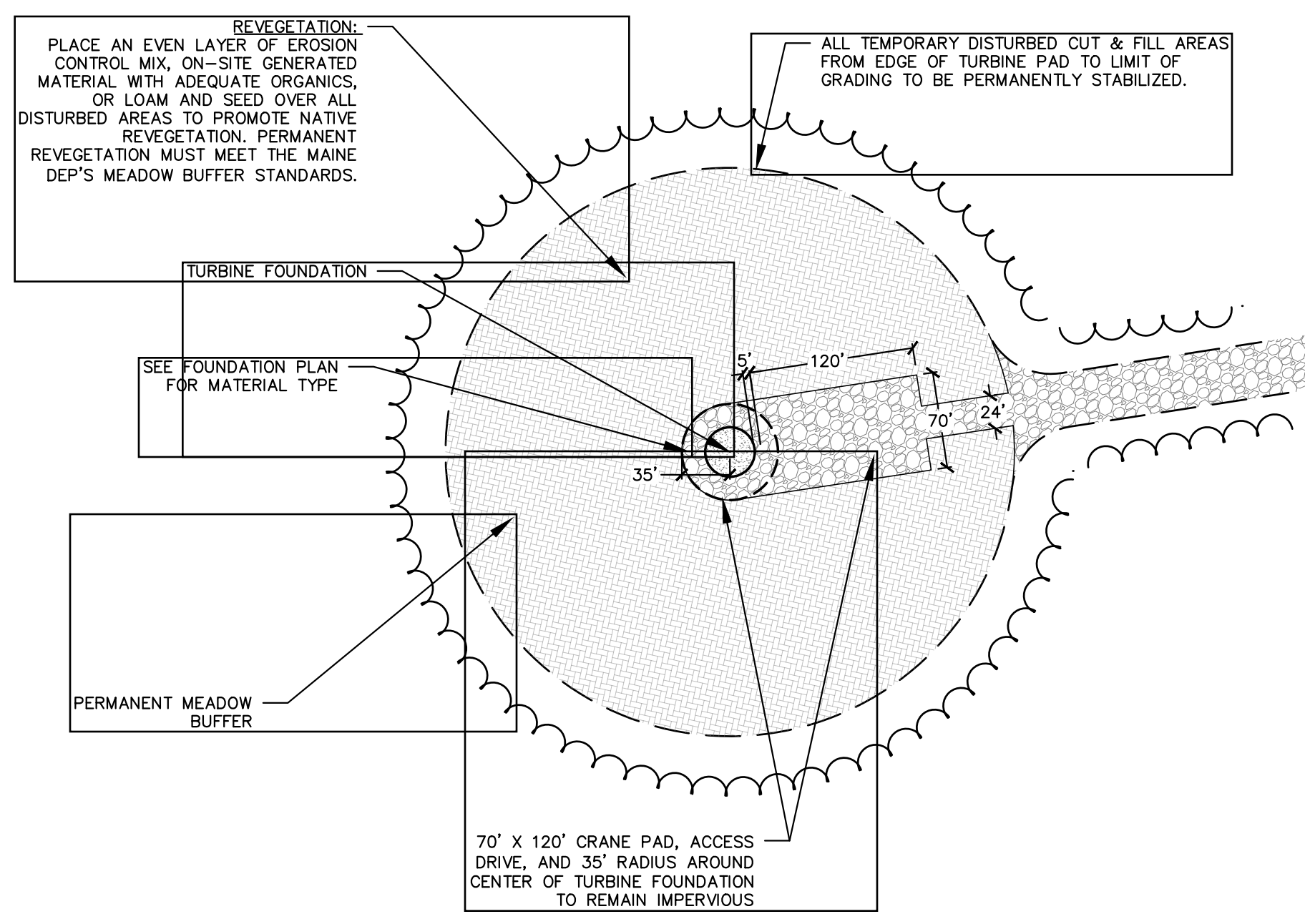
CUT AREAS:
 1. 1:4 CUT FACES ARE PERMITTED IN AREAS OF ROCK EXCAVATION ONLY AS APPROVED BY ENGINEER.
 2. ALL NON ROCK-FACE SLOPES STEEPER THAN 3:1 SHALL BE PROTECTED WITH EROSION CONTROL MIX, EROSION CONTROL MESH, OR BLAST ROCK. SLOPES STEEPER THAN 2:1 SHALL BE PROTECTED WITH BLAST ROCK OR RIP RAP.

TYPICAL TURBINE PAD AND ROAD DETAILS
 NOT TO SCALE

NOTE:
 1. COMPACT GRAVEL BASE COURSE TO 95% OF MAXIMUM DENSITY USING HEAVY ROLLER COMPACTION
 2. ALL CRANE PADS SHALL BE CONSTRUCTED WITH NO CROSS SLOPE IN ANY DIRECTION.
 3. CRANE PADS SHALL BE 70'X120' (MINIMUM). EXACT LOCATION SHALL BE DETERMINED IN THE FIELD BY GENERAL CONTRACTOR.
 4. ACTUAL AGGREGATE MATERIALS AND DEPTH SHALL BE DETERMINED IN THE FIELD BASED ON ACTUAL SITE CONDITIONS AND REQUIREMENTS, AS APPROVED BY GEOTECHNICAL REPRESENTATIVE.

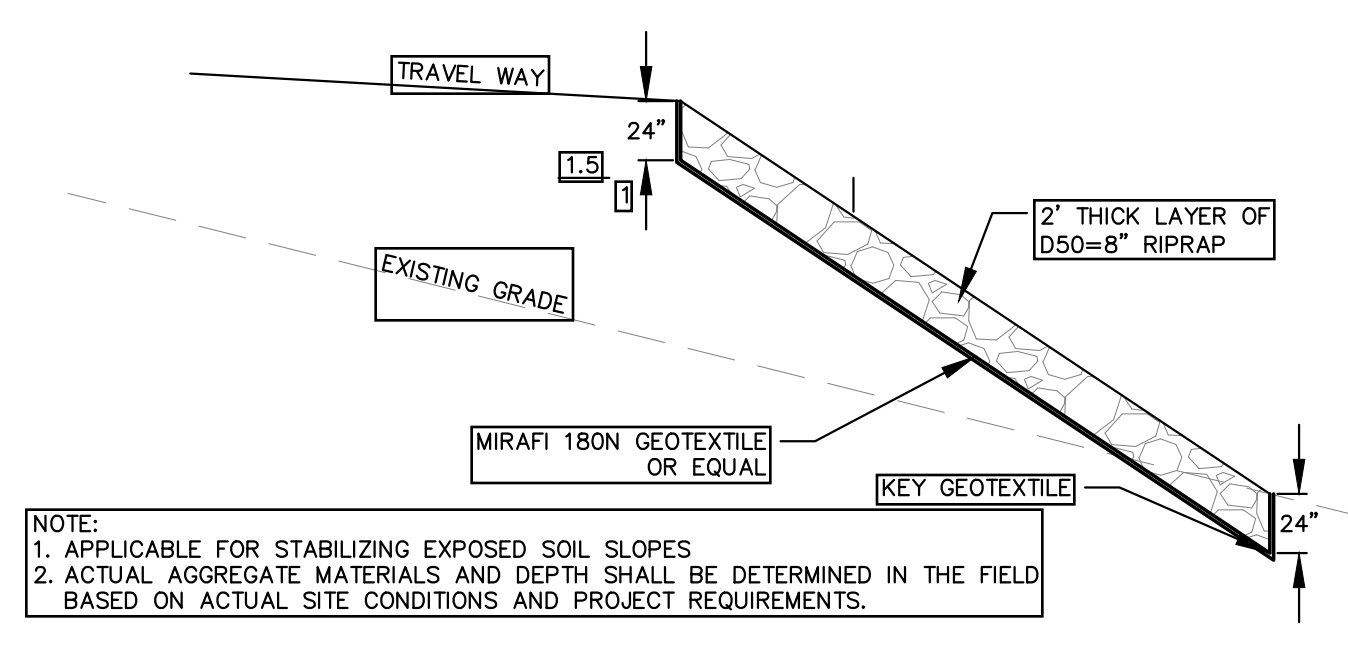


TYPICAL GRAVEL CRANE PAD SECTION
 NOT TO SCALE



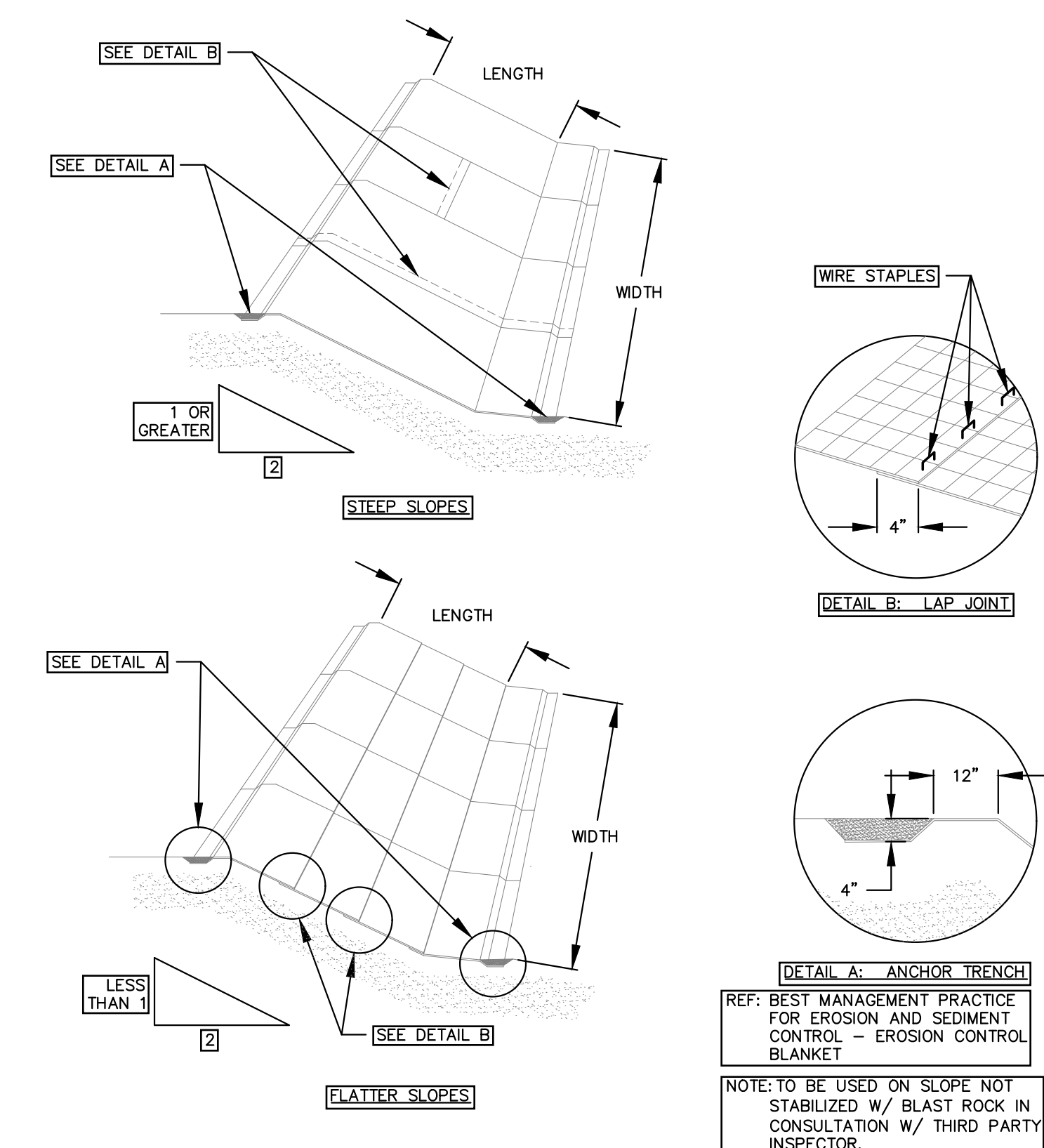
NOTES:
 1. CRANE ASSEMBLY AREAS SHALL ALSO BE ALLOWED TO REVEGETATE IN SIMILAR MANNER.
 2. TURBINE PADS AND CRANE ASSEMBLY AREAS CONSTRUCTED ON EXISTING ROADWAYS SHALL NOT BE REVEGETATED WITHIN THE FOOTPRINT OF THE EXISTING ROAD. ALIGNMENT MODIFICATIONS MAY BE NECESSARY FOR VEHICULAR ACCESS.
 3. THE AREA OF EXISTING ROADS WHICH BISECT PROPOSED TURBINE PADS WILL NOT BE REVEGETATED.

TYPICAL TURBINE PAD STABILIZATION DETAIL
 NOT TO SCALE

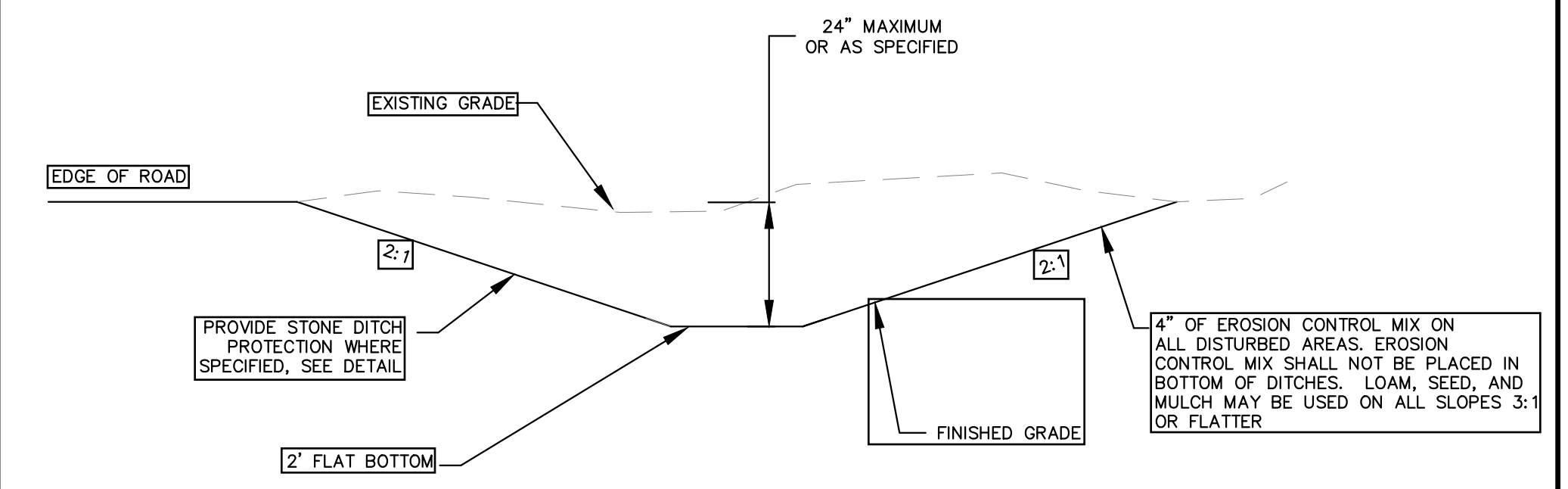


NOTE:
 1. APPLICABLE FOR STABILIZING EXPOSED SOIL SLOPES
 2. ACTUAL AGGREGATE MATERIALS AND DEPTH SHALL BE DETERMINED IN THE FIELD BASED ON ACTUAL SITE CONDITIONS AND PROJECT REQUIREMENTS.

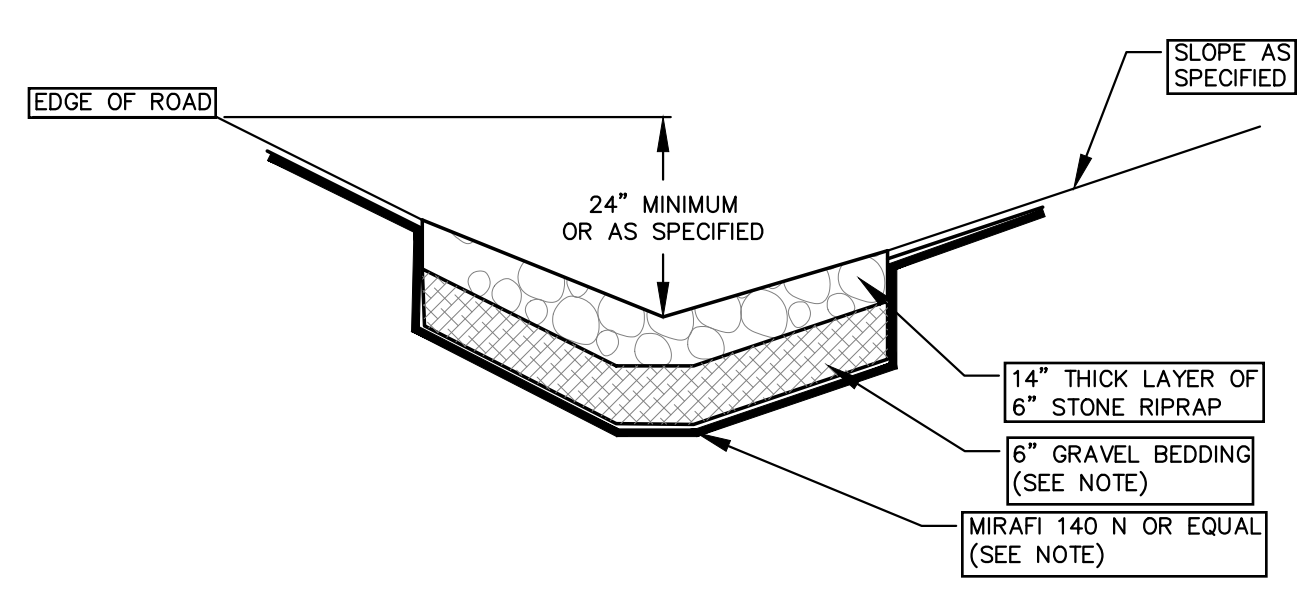
RIPRAP SLOPE PROTECTION DETAIL
 NOT TO SCALE



SLOPE APPLICATION-FOR EROSION CONTROL MESH
 NOT TO SCALE

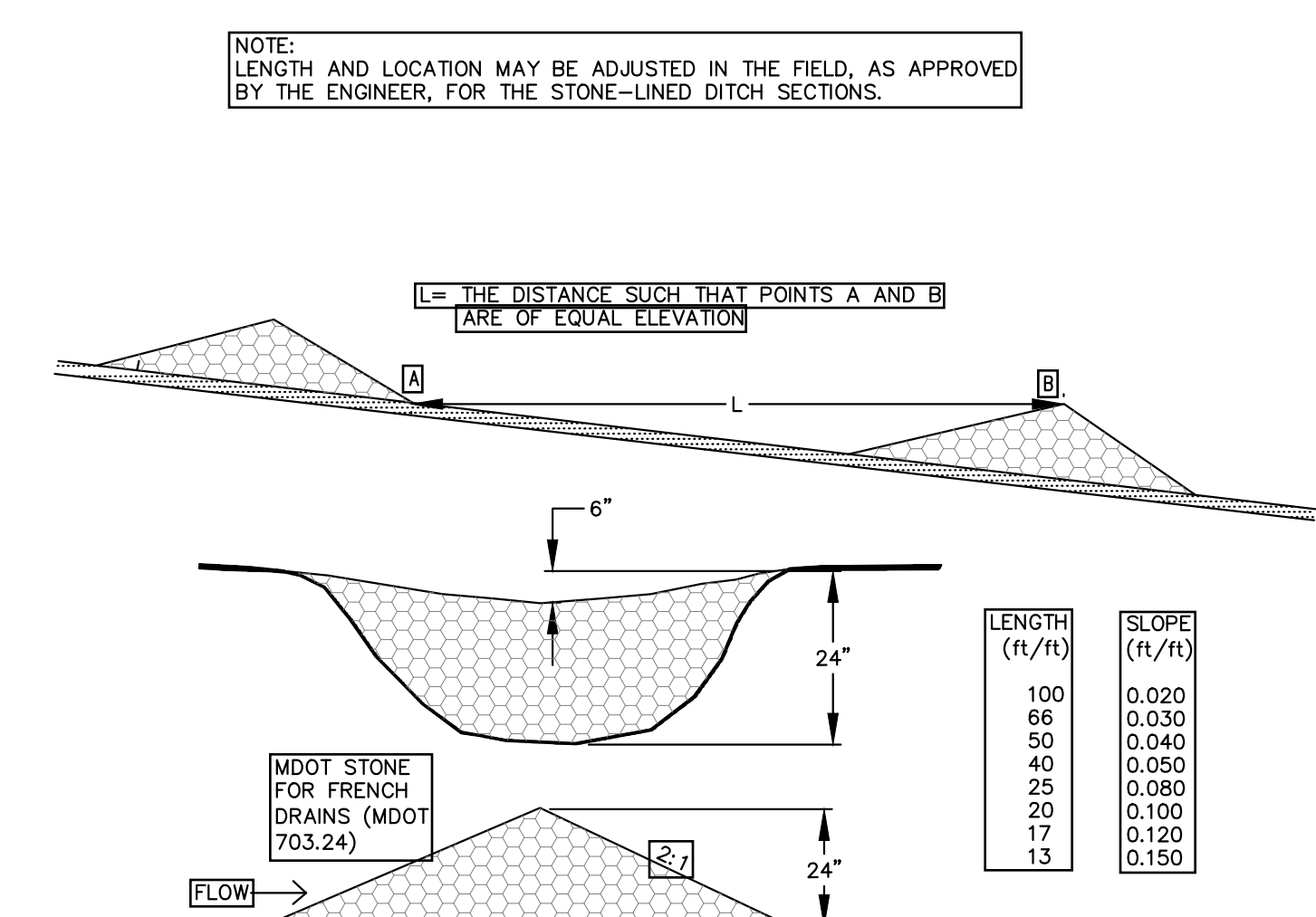


TYPICAL DITCH CROSS SECTION
 NOT TO SCALE



NOTE:
 1. STONE DITCH PROTECTION SHALL BE USED ON ALL DITCHES EXCEEDING 8% GRADE AND ALL DITCHES DOWN STREAM OF THESE GRADES TO THE NEAREST CULVERT, DITCH TURNOUT OR LEVEL SPREADER.
 2. 6" GRAVEL BEDDING MAY BE ELIMINATED IF MIRAFIX 180N GEOTEXTILE OR EQUAL IS UTILIZED, STONE WEIGHT IS LESS THAN 230 LBS., AND DROP HEIGHT IS LESS THAN 3 FEET.
 3. GEOTEXTILE MAY BE ELIMINATED AS DETERMINED BY ENGINEER IF BASE OF DITCH IS CONSTRUCTED FROM BLAST ROCK.
 4. ALL DITCHES EXPERIENCING GROUNDWATER FLOW SHALL HAVE STONE PROTECTION.
 5. EXTEND STONE DITCH PROTECTION ON FORESLOPE AND BACKSLOPES ABOVE GROUNDWATER SEEPAGE LIMIT.

TYPICAL STONE DITCH PROTECTION DETAIL
 NOT TO SCALE



STONE CHECK DAM DETAILS
 NOT TO SCALE

Drawn By	SAW
Checked	BCH
Designated By	JAO
Date	11/03/2023
Scale	AS SHOWN
Project Location	RUMFORD, MAINE
Project Name	TWIN ENERGY LLC

TWIN ENERGY LLC
 RUMFORD, MAINE
 Project Location
RUMFORD, MAINE
 AS SHOWN
 Drawing Description
DETAILS

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 LICENSED PROFESSIONAL ENGINEER
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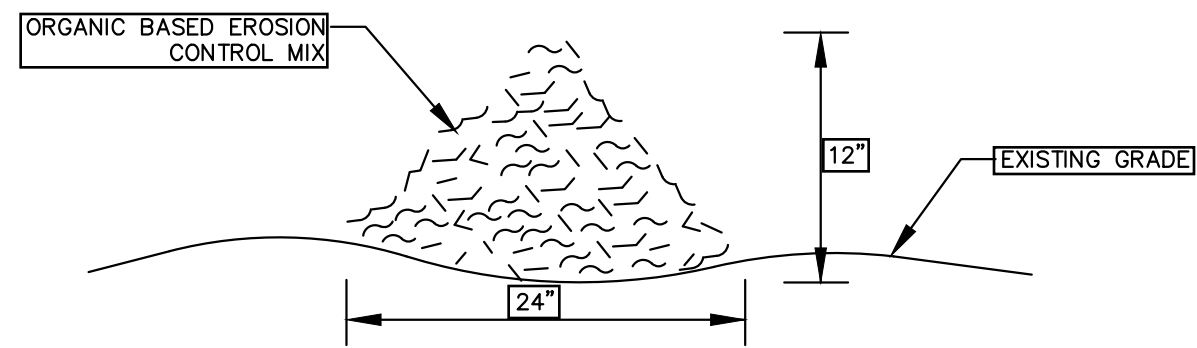
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Sheet No. **4**

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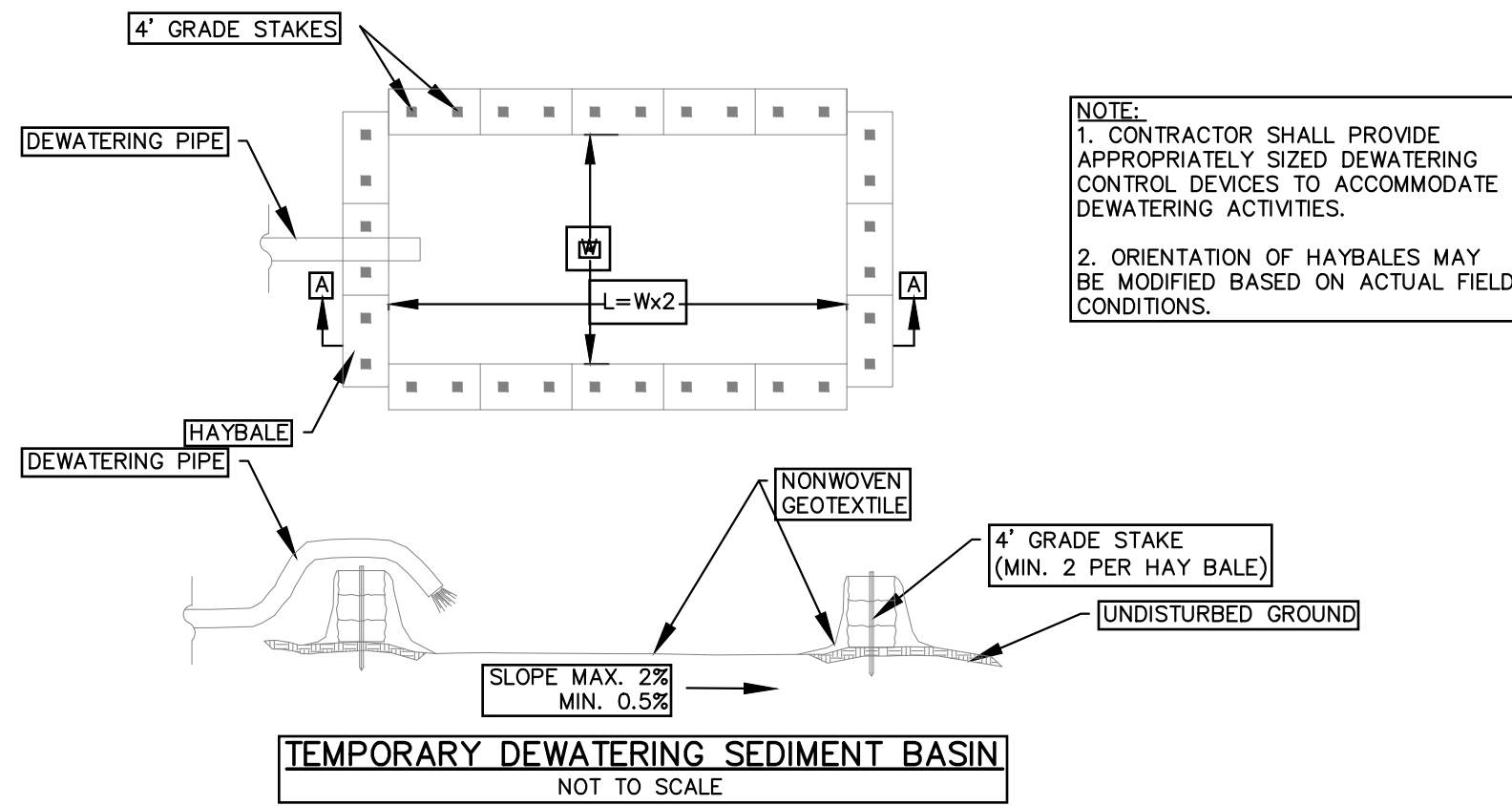
EROSION CONTROL MIX
 EROSION CONTROL MIX (ECM) SHALL CONTAIN A WELL-GRADED MIXTURE OF PARTICLE SIZES AND MAY CONTAIN ROCKS LESS THAN 4" IN DIAMETER. EROSION CONTROL MIX SHOULD BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH SUCH AS FLY ASH OR YARD SCRAPING. LARGE PORTIONS OF SILTS, CLAYS OR FINE SANDS ARE NOT ACCEPTABLE IN THE MIX. THE MIX COMPOSITION SHOULD MEET THE FOLLOWING STANDARDS:
 • THE ORGANIC MATTER CONTENT SHOULD BE BETWEEN 80% AND 100% DRY WEIGHT BASIS.
 • PARTICLE SIZE BY WEIGHT SHOULD BE 100% PASSING A 6" SCREEN AND 70% TO 85% PASSING A 0.75" SCREEN.
 • THE ORGANIC PORTION NEEDS TO BE FIBROUS AND ELONGATED.
 • SOLUBLE SALTS CONTENT SHALL BE <4.0 mmhos/cm.
 • THE PH SHOULD BE BETWEEN 5.0 AND 8.0.



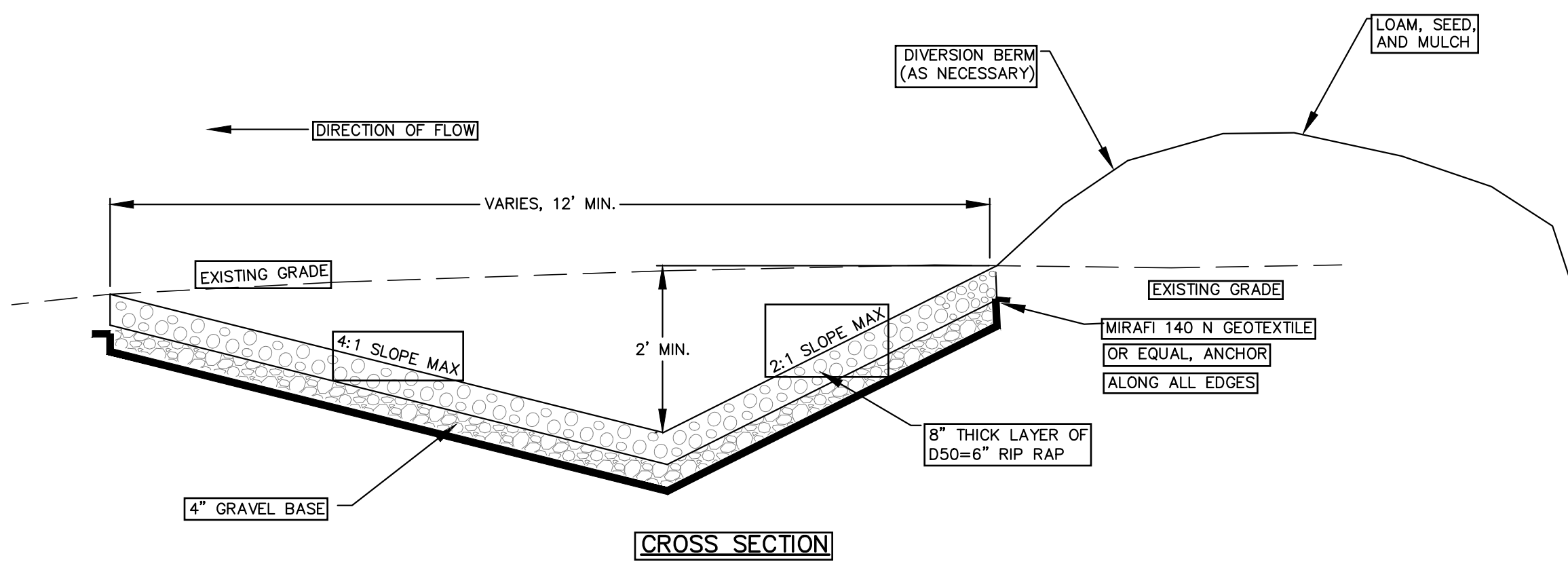
COMPOSITION
 EROSION CONTROL MIX SHALL BE MANUFACTURED ON OR OFF THE PROJECT SITE SUCH THAT ITS COMPOSITION IS IN ACCORDANCE WITH THE MDEP MAINE EROSION AND SEDIMENT CONTROL BMP MANUAL, LATEST VERSION. IT MUST CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION, AND MAY INCLUDE: SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR ACCEPTABLE MANUFACTURED PRODUCTS, WOOD AND BARK CHIPS, GROUND CONSTRUCTION DEBRIS OR REPROCESSED WOOD PRODUCTS WILL NOT BE ACCEPTABLE AS THE ORGANIC COMPONENT OF THE MIX.

INSTALLATION:
 1. THE BARRIER MUST BE PLACED ACROSS THE SLOPE, ALONG THE CONTOUR.
 2. EXISTING GROUND SHALL BE PREPARED SUCH THAT THE BARRIER MAY LIE NEARLY FLAT ALONG THE GROUND TO AVOID THE CREATION OF VOIDS AND BRIDGES IN ORDER TO MINIMIZE THE POTENTIAL OF WASH OUTS UNDER THE BARRIER.
 3. THE BARRIER SHALL BE A MINIMUM OF 1 FOOT HIGH (AS MEASURED ON THE UPHILL SIDE) AND 2 FEET WIDE FOR SLOPES LESS THAN 5% IN GRADE AND SHALL BE WIDER TO ACCOMMODATE THE ADDITIONAL RUNOFF.
 4. EROSION CONTROL MIX MAY BE INSTALLED WHERE SILT FENCE IS ILLUSTRATED ON THE DESIGN PLANS IN AREAS EXCEPT IN, BUT NOT LIMITED TO, THE FOLLOWING AREAS: WETLAND AREAS, AT POINTS OF CONCENTRATED FLOW, BELOW CULVERT OUTLET APRONS, AROUND CATCH BASINS AND CLOSED STORM SYSTEMS AND AT THE BOTTOM OF STEEP SLOPES THAT ARE MORE THAN 50 FEET FROM TOP TO BOTTOM.

EROSION CONTROL MIX BERM
 NOT TO SCALE



TEMPORARY DEWATERING SEDIMENT BASIN
 NOT TO SCALE

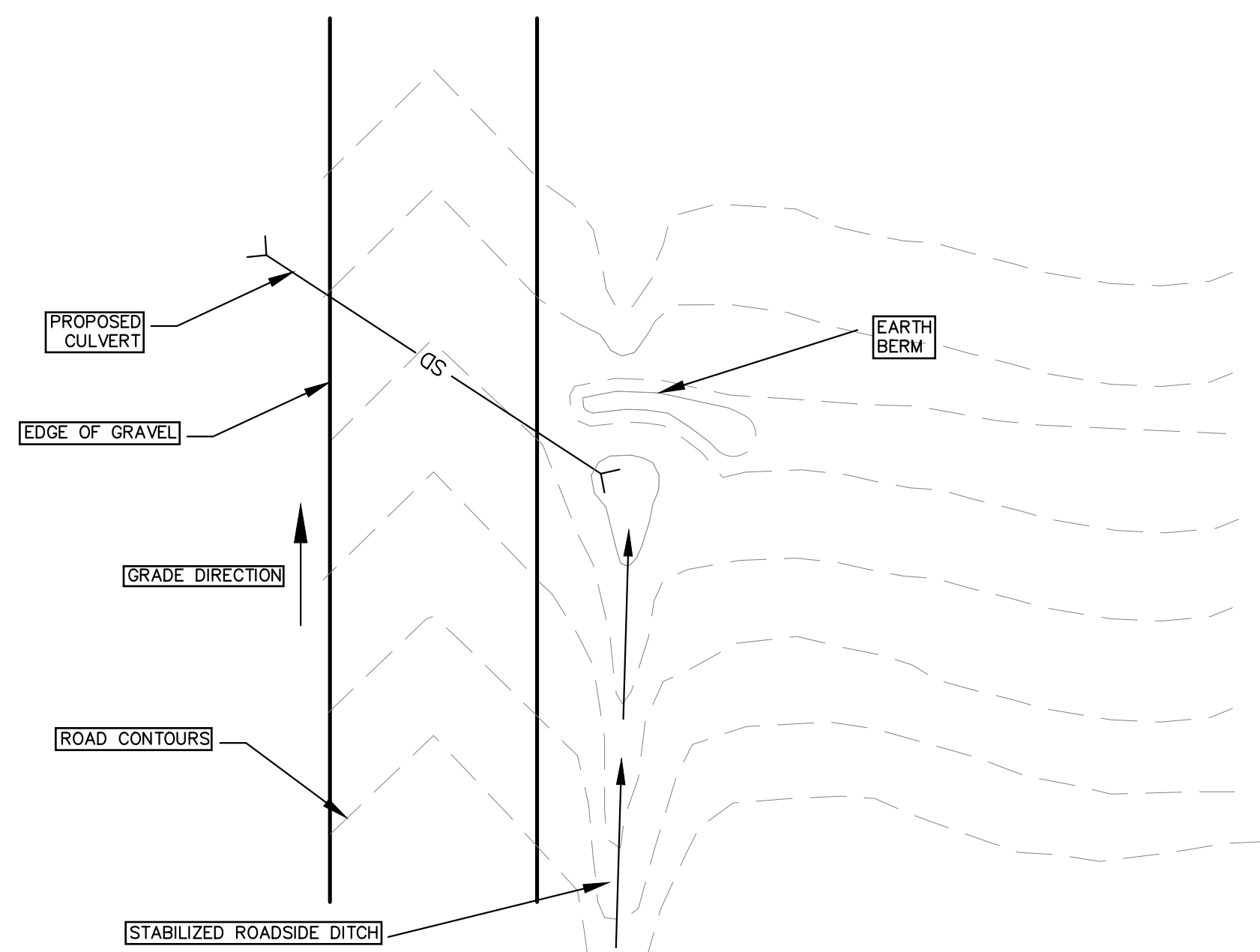


LEVEL SPREADER NOTES

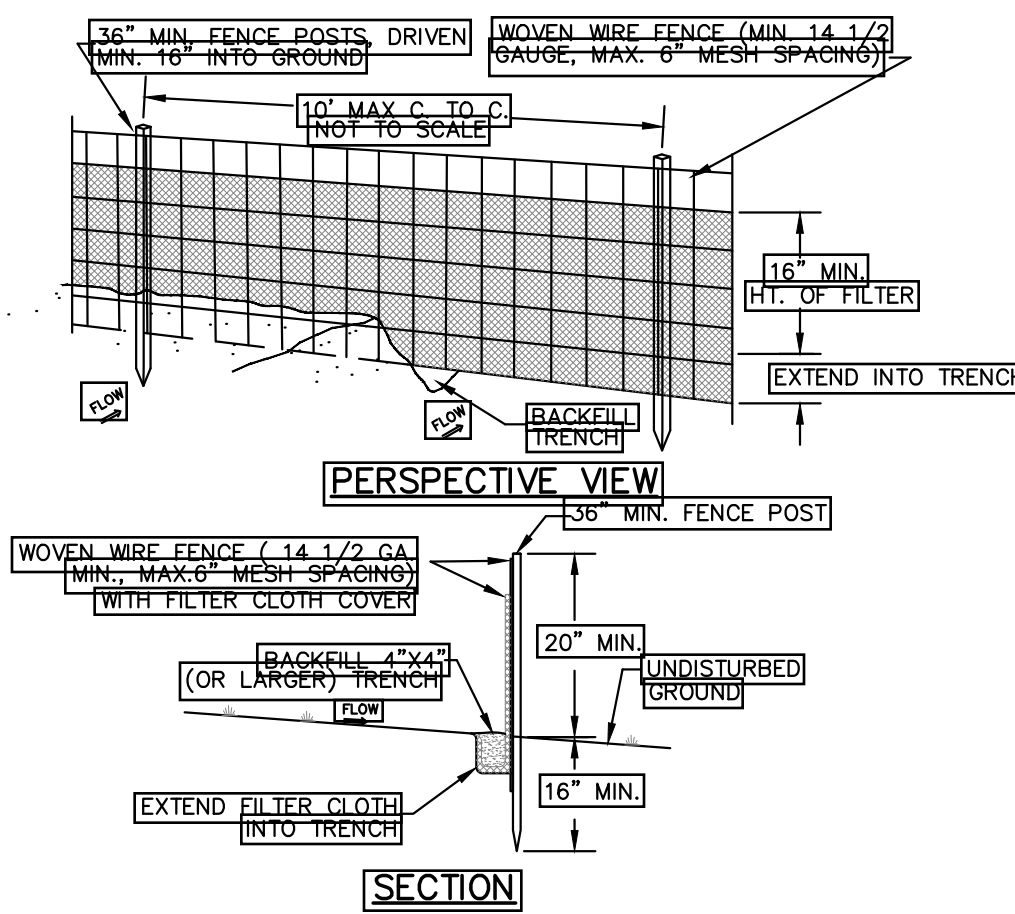
1. ALL LEVEL SPREADERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MAINE EROSION AND SEDIMENTATION CONTROL HANDBOOK FOR CONSTRUCTION.
2. ALL LEVEL SPREADERS SHALL BE CONSTRUCTED IN A CUT SECTION, I.E. THERE SHALL BE NO EARTH FILL ALONG DOWNSTREAM EDGE.
3. ALL LEVEL SPREADERS SHALL BE ALIGNED PARALLEL TO THE EXISTING CONTOURS.
4. THE ENTRANCE DITCH TO THE LEVEL SPREADER SHALL HAVE A MAXIMUM GRADE OF 1.0% FOR AT LEAST 50 FEET IMMEDIATELY PRIOR TO ENTERING THE SPREADER.
5. THE LEVEL SPREADER SHALL HAVE A LONGITUDINAL GRADE OF 0.0%.
6. LEVEL SPREADERS SHOWN ON THE PLANS ARE SYMBOLIC. LOCATION AND ORIENTATION OF LEVEL SPREADERS SHALL BE FIELD DETERMINED BASED ON ACTUAL SITE CONDITIONS.

TYPICAL LEVEL SPREADER
 NOT TO SCALE

- NOTES**
1. CONTRACTOR SHALL CONSTRUCT BERM AT EACH CULVERT INLET TO DIRECT DITCH FLOW INTO CULVERT.
 2. CONTRACTOR SHALL LOWER INVERT ELEVATION AS APPROPRIATE TO MAINTAIN COVER BETWEEN CROSS CULVERTS, ROADWAY, AND DITCH ON OPPOSITE SIDE OF ROAD.
 3. VERIFY COVER REQUIREMENTS WITH PIPE MANUFACTURER.



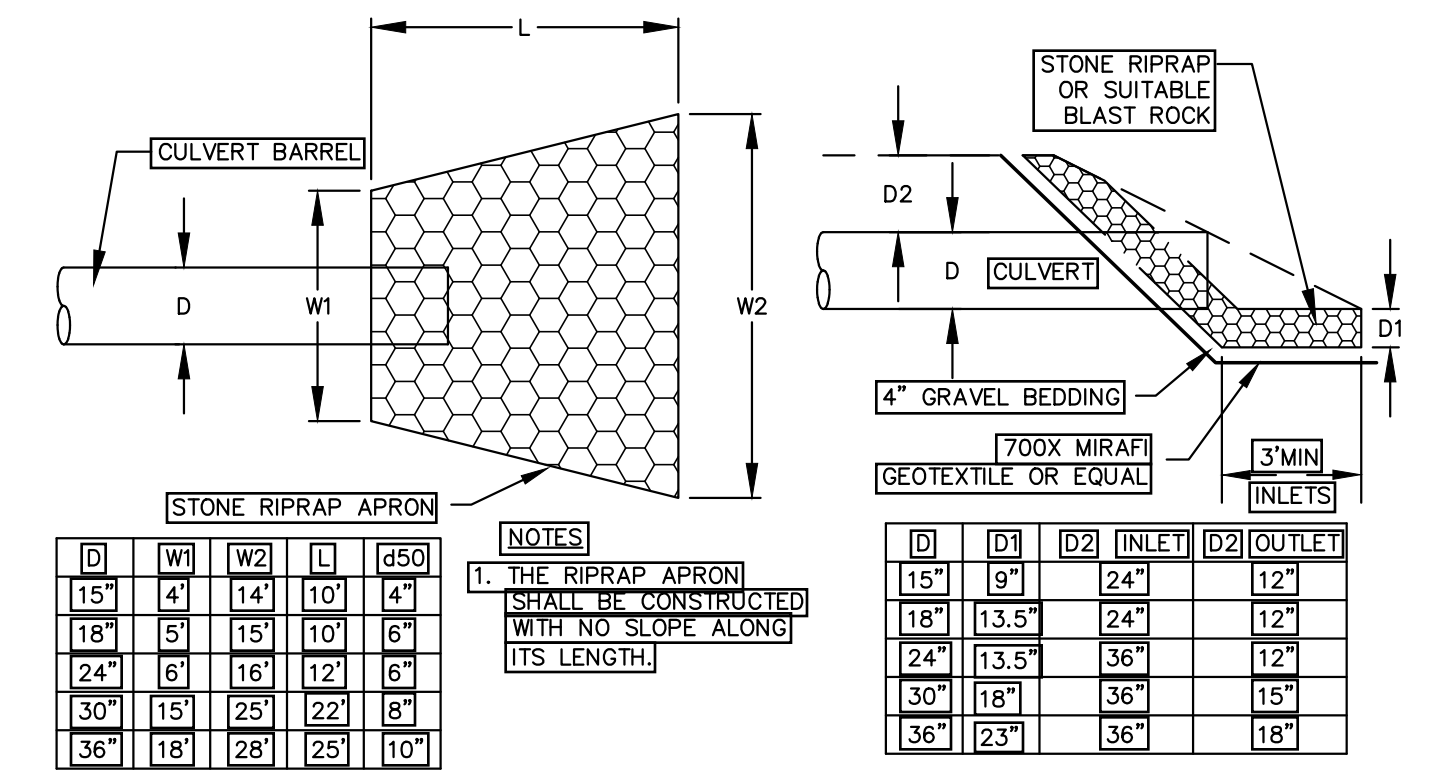
BERMED CULVERT INLET DETAIL
 NOT TO SCALE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

- NOTE:**
 THE CONTRACTOR HAS THE OPTION TO NOT USE WOVEN WIRE MESH IF STAKE SPACERS ARE REDUCED TO 6' O.C.
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
 2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP OF MID SECTION.
 3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVER-LAPPED BY SIX INCHES AND FOLDED.
 4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
 5. SILT FENCE SHOWN ON THE PLANS IS SYMBOLIC. ALL SILT FENCE SHALL BE INSTALLED ALONG THE CONTOUR WITH EXACT LOCATION/ORIENTATION TO BE FIELD DETERMINED BASED ON ACTUAL SITE CONDITIONS.
 6. NO MORE THAN 1/4 ACRE OF DRAINAGE AREA FOR EACH 100 FEET OF FENCING.
 7. POSTS: STEEL EITHER 1" OR U TYPE OR 2" HARDWOOD.
 8. FENCE: WOVEN WIRE, 14 GA. 6" MAX. MESH OPENING.
 9. FILTER CLOTH: FILTER X, MARAFI 100X, STABI- LINKA T140N OR APPROVED EQUAL.
 10. PREFABRICATED UNIT: GEOFAB, ENVIROFENCE, OR APPROVED EQUAL.

SILT FENCE DETAIL
 NOT TO SCALE

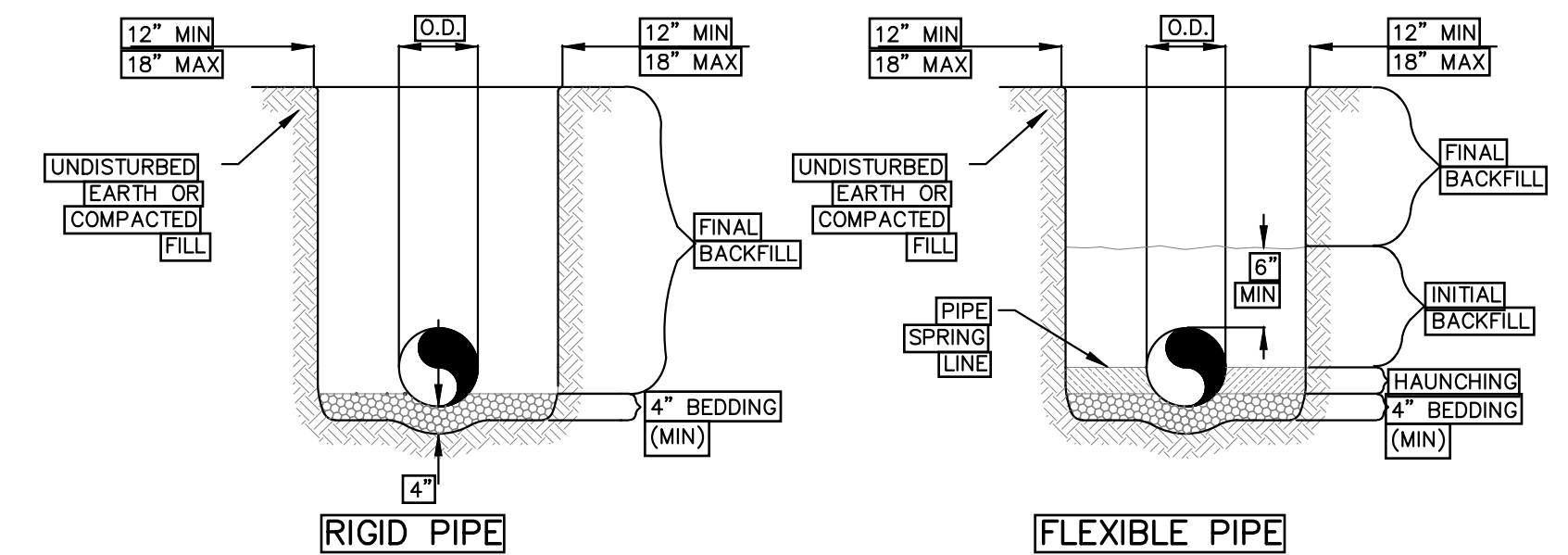


NOTES
 1. THE RIPRAP APRON SHALL BE CONSTRUCTED WITH NO SLOPE ALONG ITS LENGTH.

NOTES
 APRONS SHALL BE CONSTRUCTED ON ALL CULVERT INLETS/OUTLETS UNLESS APPROVED BY ENGINEER.

CULVERT INLET DETAIL
 PLAN VIEW
 NOT TO SCALE

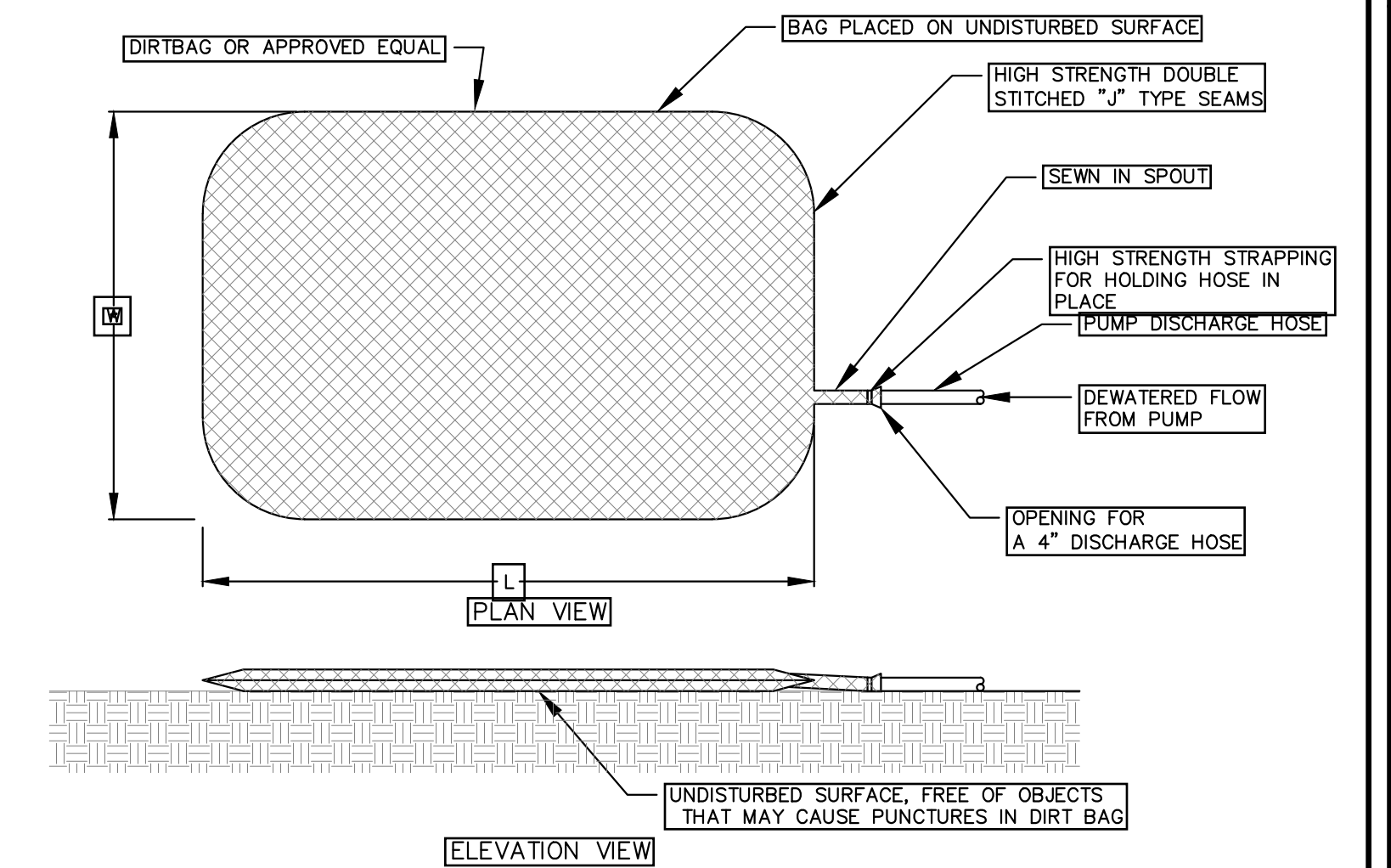
CULVERT INLET/OUTLET DETAIL
 SECTION VIEW
 NOT TO SCALE



GENERAL NOTES
 *AASHTO SOIL CLASSIFICATIONS USED

1. BEDDING SHALL BE CLASS I-A WORKED BY HAND. IF GROUNDWATER IS ANTICIPATED, THEN BEDDING SHALL BE CLASS I-B COMPACTED TO 85% STANDARD PROCTOR. (SEE SPECIFICATIONS FOR GRADATION).
2. HAUNCHING SHALL BE WORKED AROUND THE PIPE BY HAND TO ELIMINATE VOIDS AND SHALL BE CLASS I-A OR CLASS I-B OR CLASS II COMPACTED TO 85% PROCTOR.
3. INITIAL BACKFILL SHALL BE CLASS I-A WORKED BY HAND, OR CLASS I-B OR CLASS II COMPACTED TO 85% STANDARD PROCTOR.
4. FINAL BACKFILL SHALL BE CLASS I, II, OR III COMPACTED AS NOTED IN NOTES 3. FINAL COVER OVER PIPE SHALL BE MIN. 24"
5. ALL MATERIALS ARE CLASSIFIED IN ACCORDANCE WITH ASTM D 2321-LATEST EDITION.
6. ALL MATERIALS SHALL BE INSTALLED IN MAXIMUM 8" LOOSE LIFTS IN ACCORDANCE WITH ASTM D 698. CLASS III AND IV-A MATERIALS SHALL BE COMPACTED NEAR OPTIMUM MOISTURE CONTENT.
7. FILL SALVAGED FROM EXCAVATION SHALL BE FREE OF DEBRIS, ORGANICS AND ROCKS LARGER THAN 3".
8. ALL TRENCH EXCAVATIONS SHALL BE SLOPED, SHORED, SHEETED, BRACED, OR OTHERWISE SUPPORTED IN COMPLIANCE WITH OSHA REGULATIONS AND LOCAL ORDINANCES (SEE SPECIFICATIONS).
9. ACTUAL MATERIALS USED AND DEPTH OF COVER OVER PIPE SHALL BE FIELD DETERMINED BASED ON ACTUAL SITE CONDITIONS AND PROJECT REQUIREMENTS.

STORM DRAIN TRENCH AND BEDDING
 NOT TO SCALE



- NOTES:**
1. CONTRACTOR SHALL PROVIDE APPROPRIATE SIZED DEWATERING CONTROL DEVICES TO ACCOMMODATE DEWATERING ACTIVITIES BASED ON MANUFACTURER'S RECOMMENDATIONS AND ANTICIPATED FLOW RATES.
 2. SEDIMENT CONTROL DEVICES SHALL BE REPLACED WHEN FULL. SEDIMENT CAN BE DISPOSED OF IN NON STRUCTURAL FILL AREAS OUTSIDE OF RESOURCE PROTECTION ZONES.

DIRT BAG DETAIL
 NOT TO SCALE

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Date	11/03/2023
Scale	AS SHOWN
Project Location	RUMFORD, MAINE
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Approved	JAO

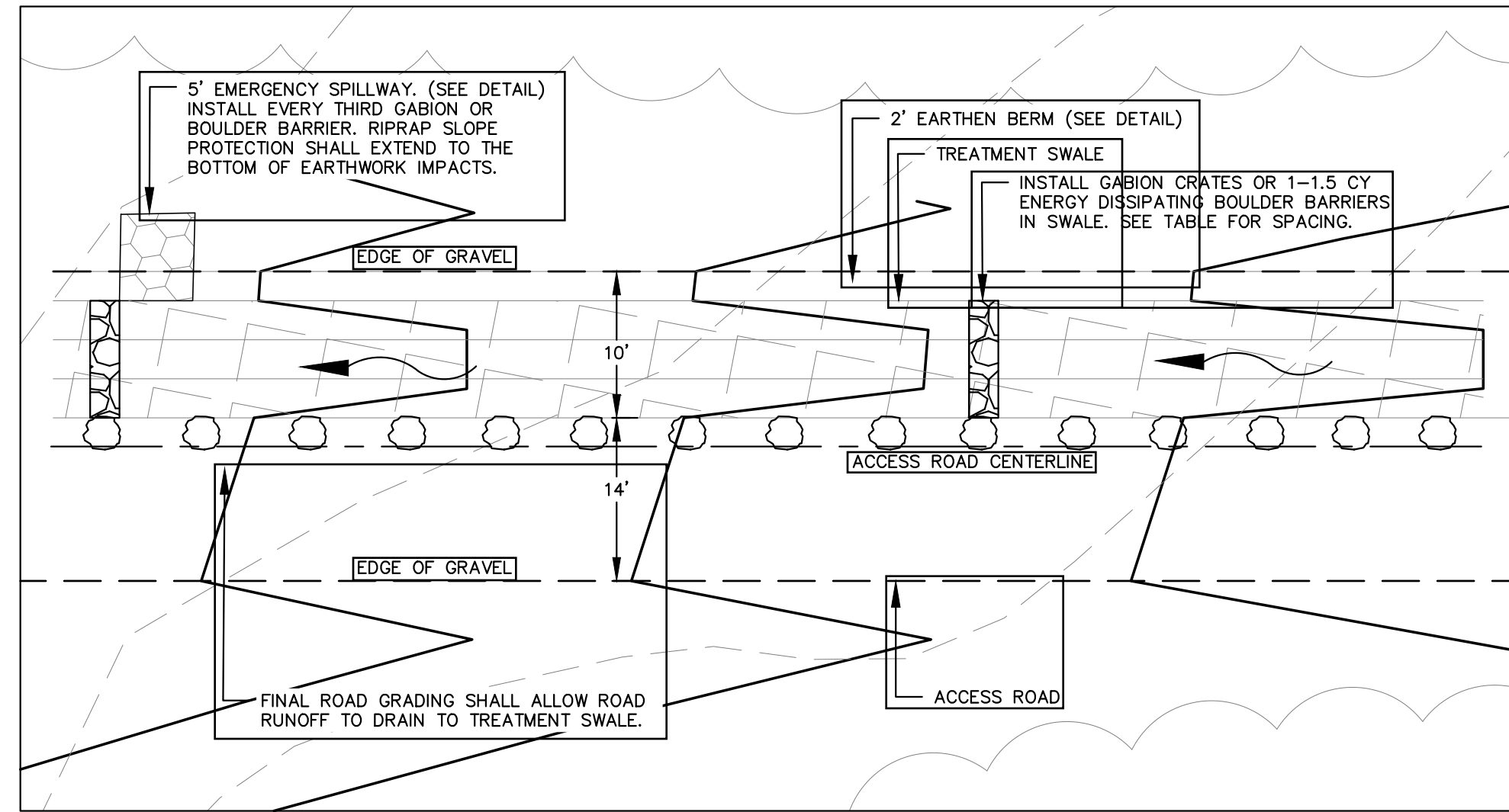
Drawn By	SAW
Designed By	JAO
Date	11/03/2023
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TWIN ENERGY LLC
 RUMFORD, MAINE
 Project Location
RUMFORD, MAINE
 Drawing Description
DETAILS

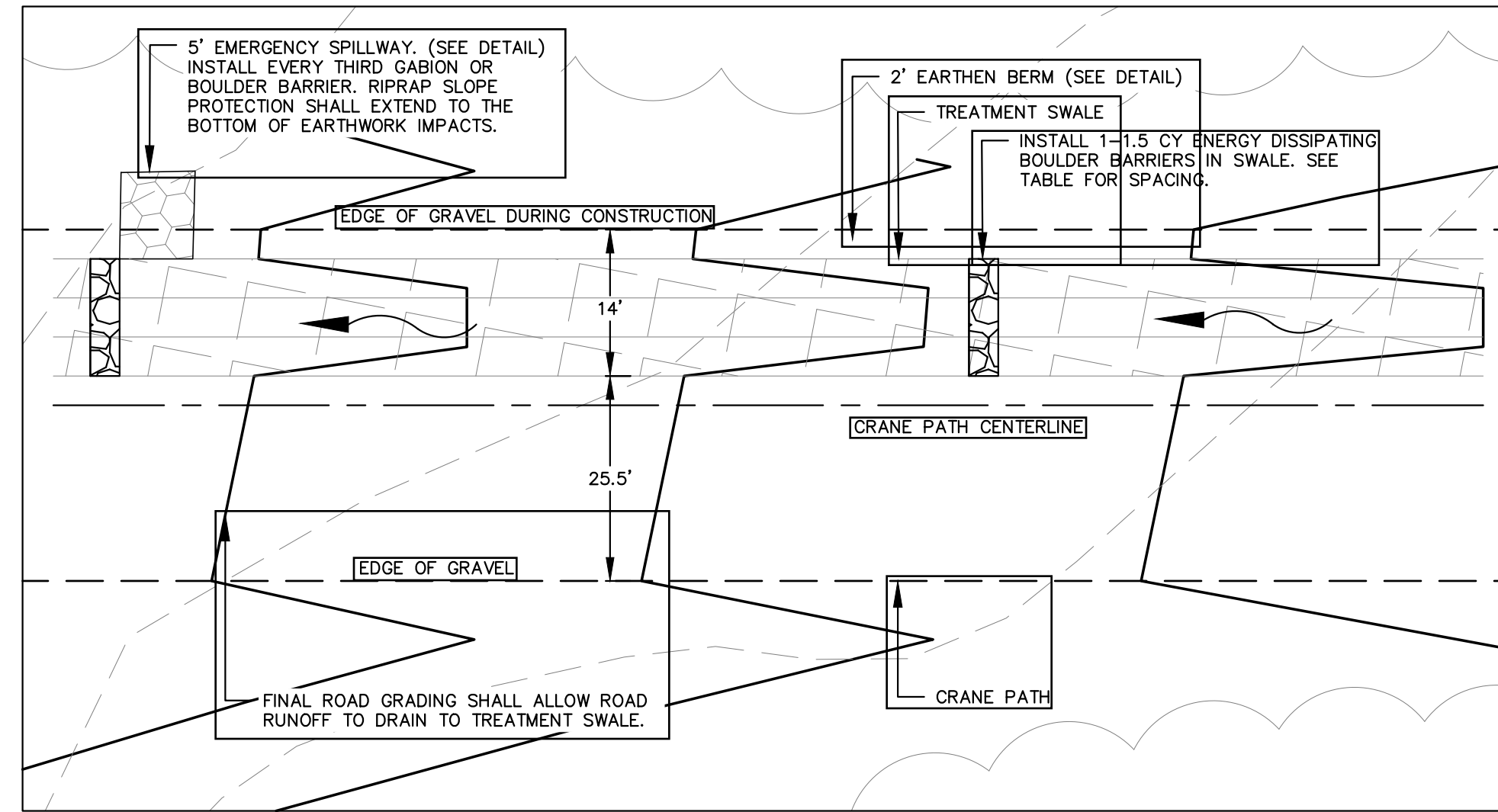
STATE OF MAINE
 DUBÉ-ONEAL
 NO. 13020
 LICENSED PROFESSIONAL ENGINEER
 11-03-2023

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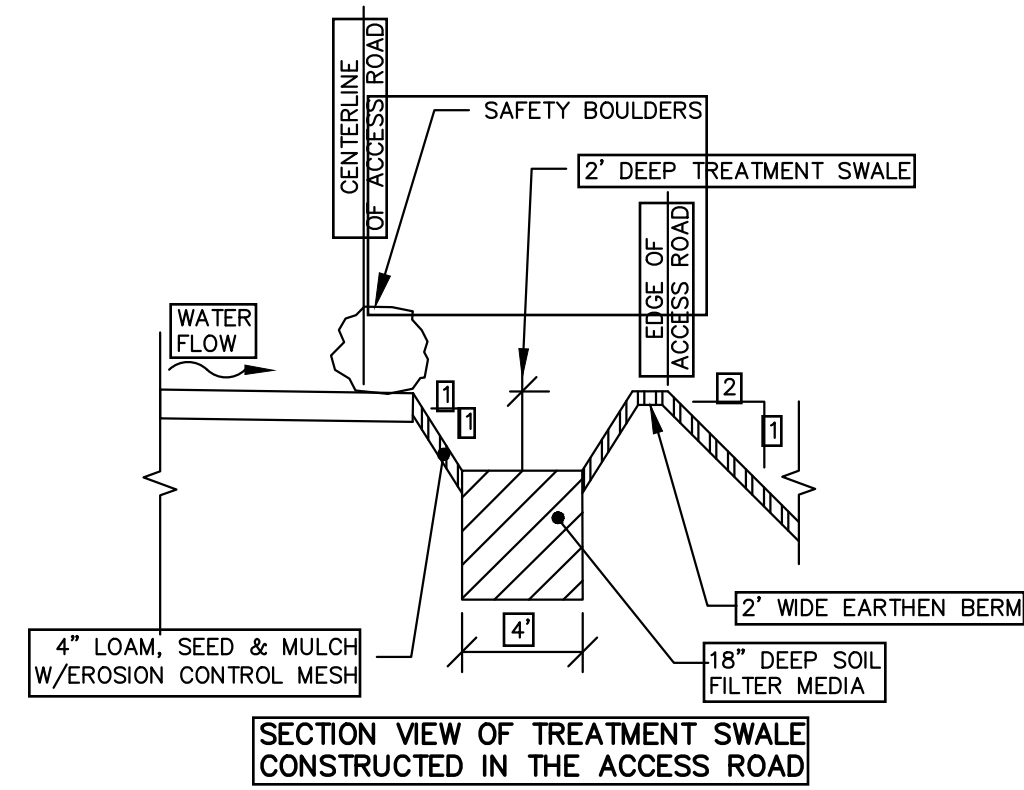
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5



PLAN VIEW OF TREATMENT SWALE CONSTRUCTED WITHIN THE ACCESS ROAD



PLAN VIEW OF TREATMENT SWALE CONSTRUCTED WITHIN THE CRANE PATH



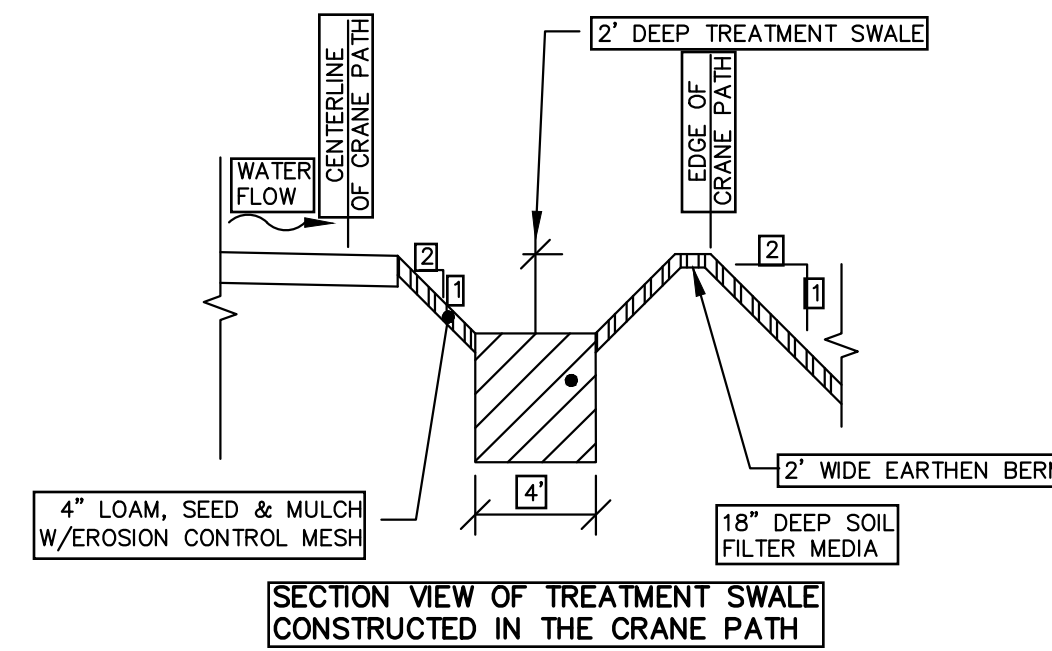
SECTION VIEW OF TREATMENT SWALE CONSTRUCTED IN THE ACCESS ROAD

NOTE:
1:1 SWALE SIDESLOPES SHALL BE STABILIZED AS APPROVED BY GEOTECHNICAL REPRESENTATIVE BASED UPON FIELD CONDITIONS.

ACCESS ROAD WIDTH 24 FEET

GABION OR BOULDER BARRIER SPACING FOR TREATMENT SWALES				
SLOPE %	0-3.9	4-7.9	8-11.9	12-16
FREQUENCY (FT)	135	65	40	30

- FILTER MEDIA
- 50% SAND (MDOT 703.01)
 - 20% SANDY LOAM TO FINE SANDY
 - LOAM (TABLE 7.1.2 BMP CHAPTER 7.1)
 - 30% MATURE COMPOSTED WOODY FIBERS AND FINE SHREDDED BARK, SUPERHUMUS OR EQUIVALENT



SECTION VIEW OF TREATMENT SWALE CONSTRUCTED IN THE CRANE PATH

NOTE:
TREATMENT SWALES LOCATED WITHIN CRANE PATHS SHALL BE CONSTRUCTED AFTER CRANE PATHS HAVE BEEN FULLY UTILIZED DURING CONSTRUCTION.

CRANE PATH WIDTH 39.5 FEET

TREATMENT SWALE DETAIL SECTION VIEW

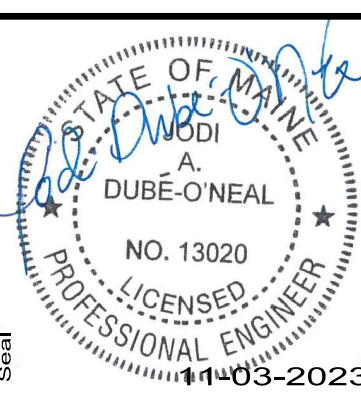
Date	Drawn By	Checked
	JAC	JAC
	SAW	BCH

Project No.	Designated By	Date	Scale
381.20.01	JAC	11/03/2023	AS SHOWN

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RUMFORD, MAINE
Project Location
RUMFORD, MAINE
Drawing Description

DETAILS



Project No. 381.20.01

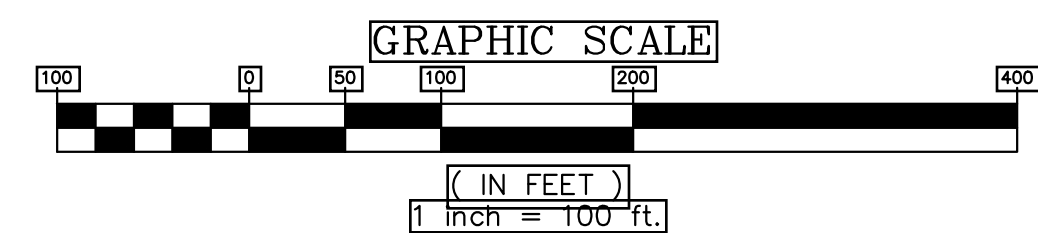
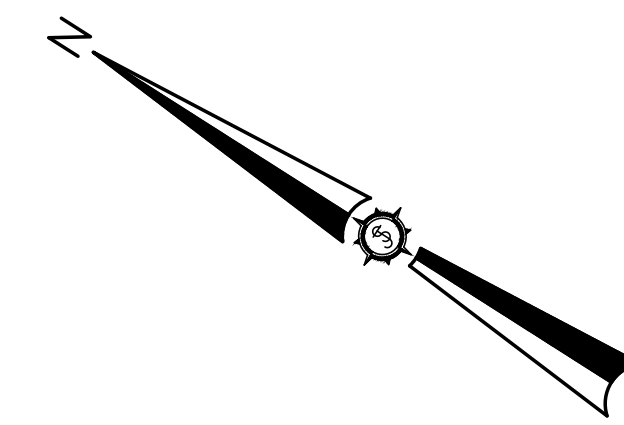
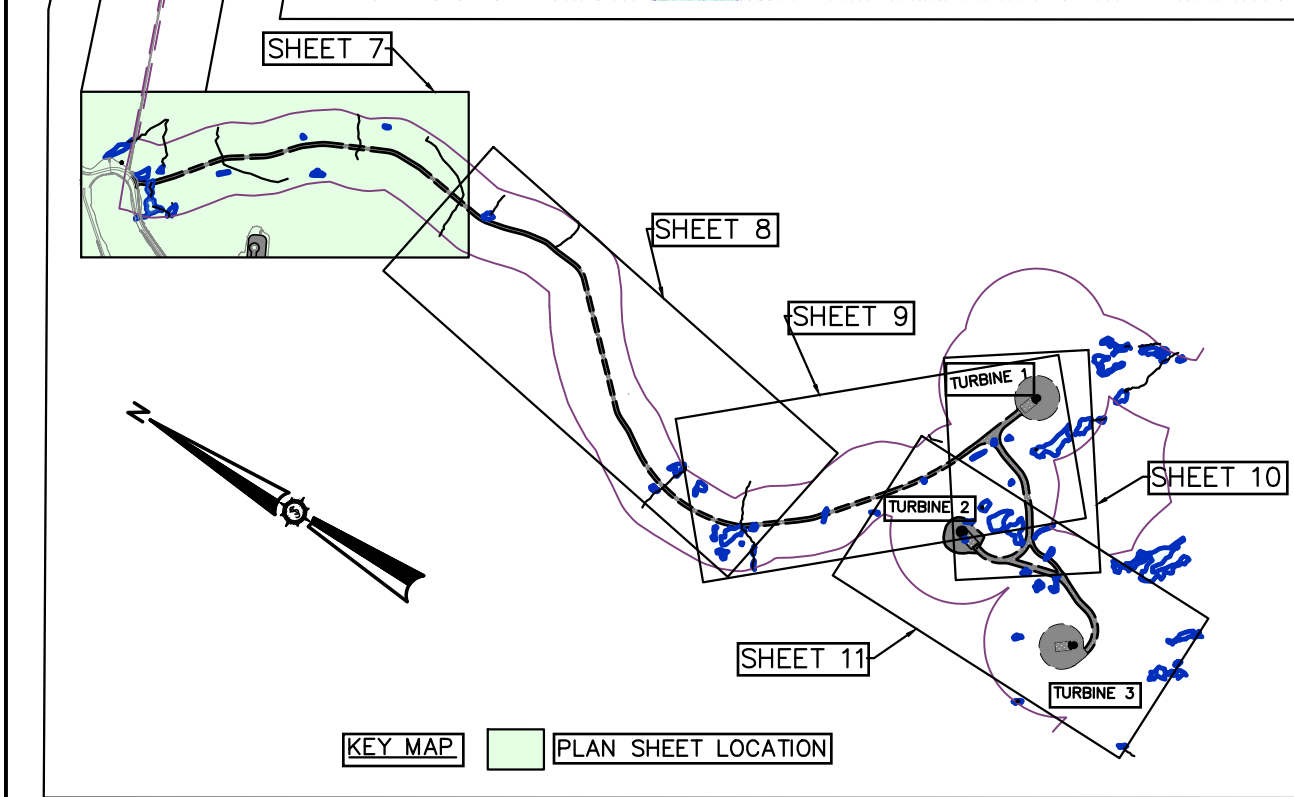
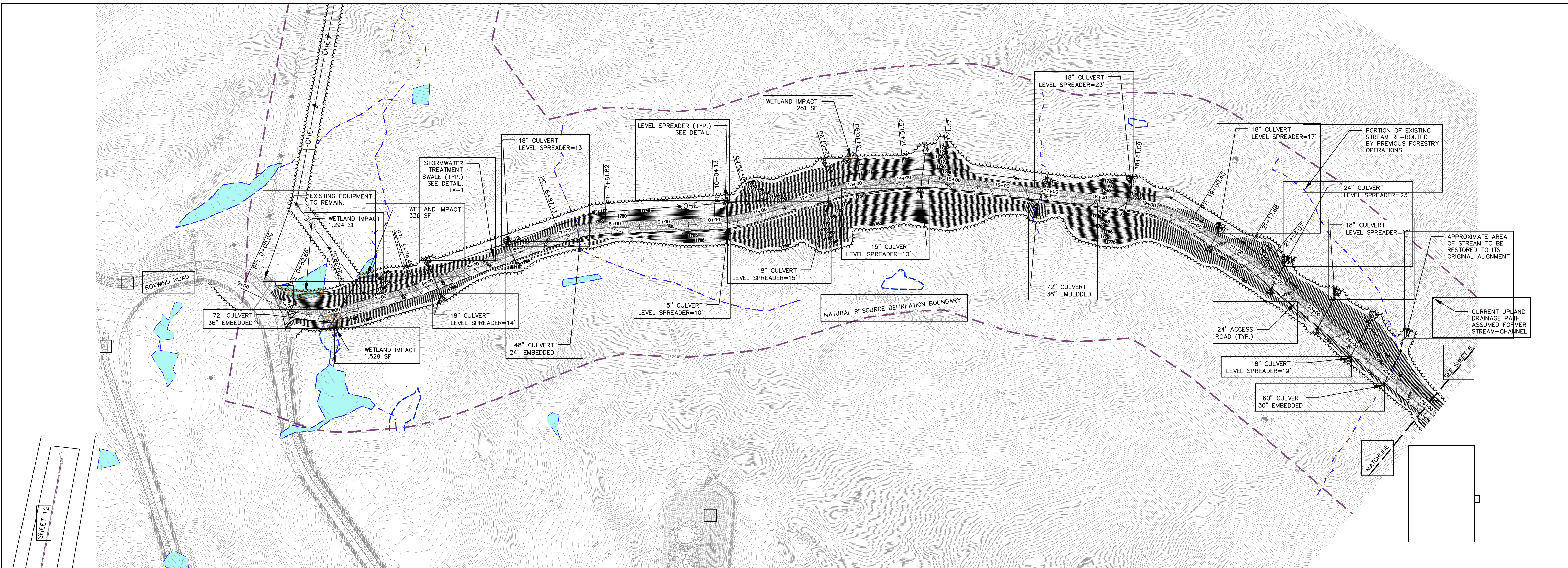
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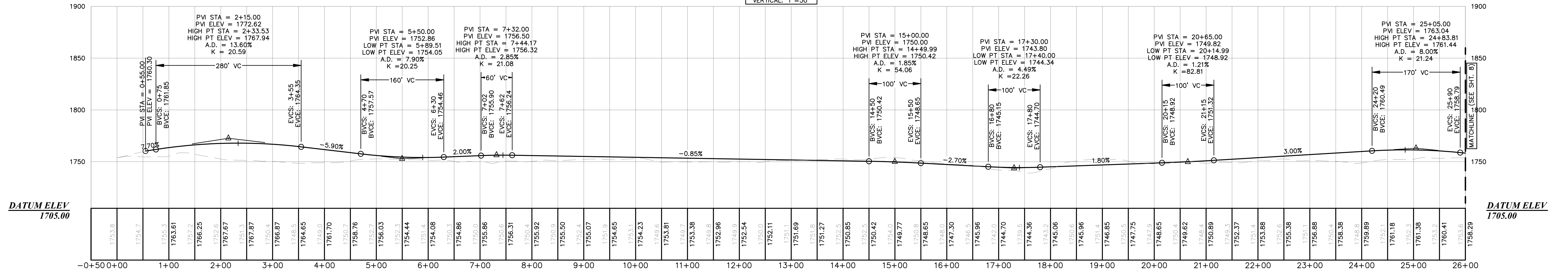
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MAIN ACCESS

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 VERTICAL: 1"=50'

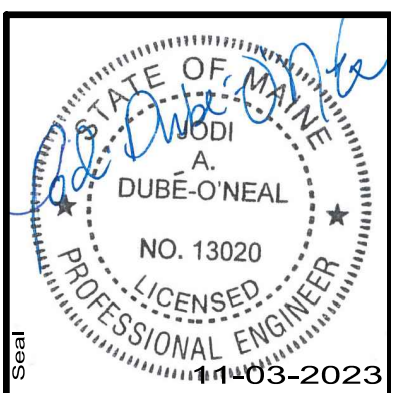


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Drawn By	SAW
Designed By	JAO
Date	11/03/2023
Scale	AS SHOWN
Project Location	RUMFORD, MAINE
Checked	BCH
Approved	JAO
Drawn By Description	
Checked Description	
Approved Description	

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RUMFORD, MAINE
 Project Location
RUMFORD, MAINE
 Drawing Description
**GRADING PLAN
 STA 0+00 TO 26+00**



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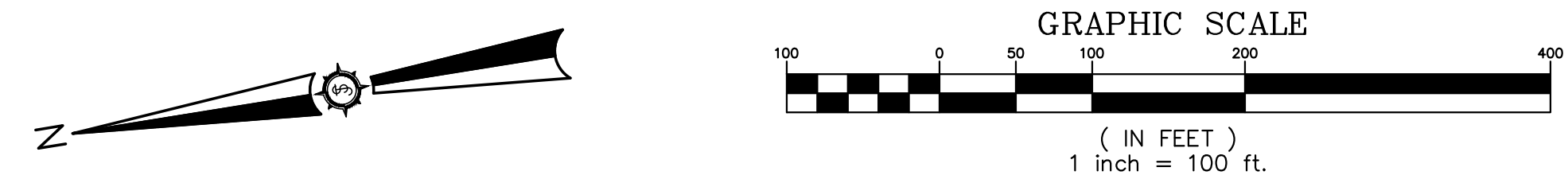
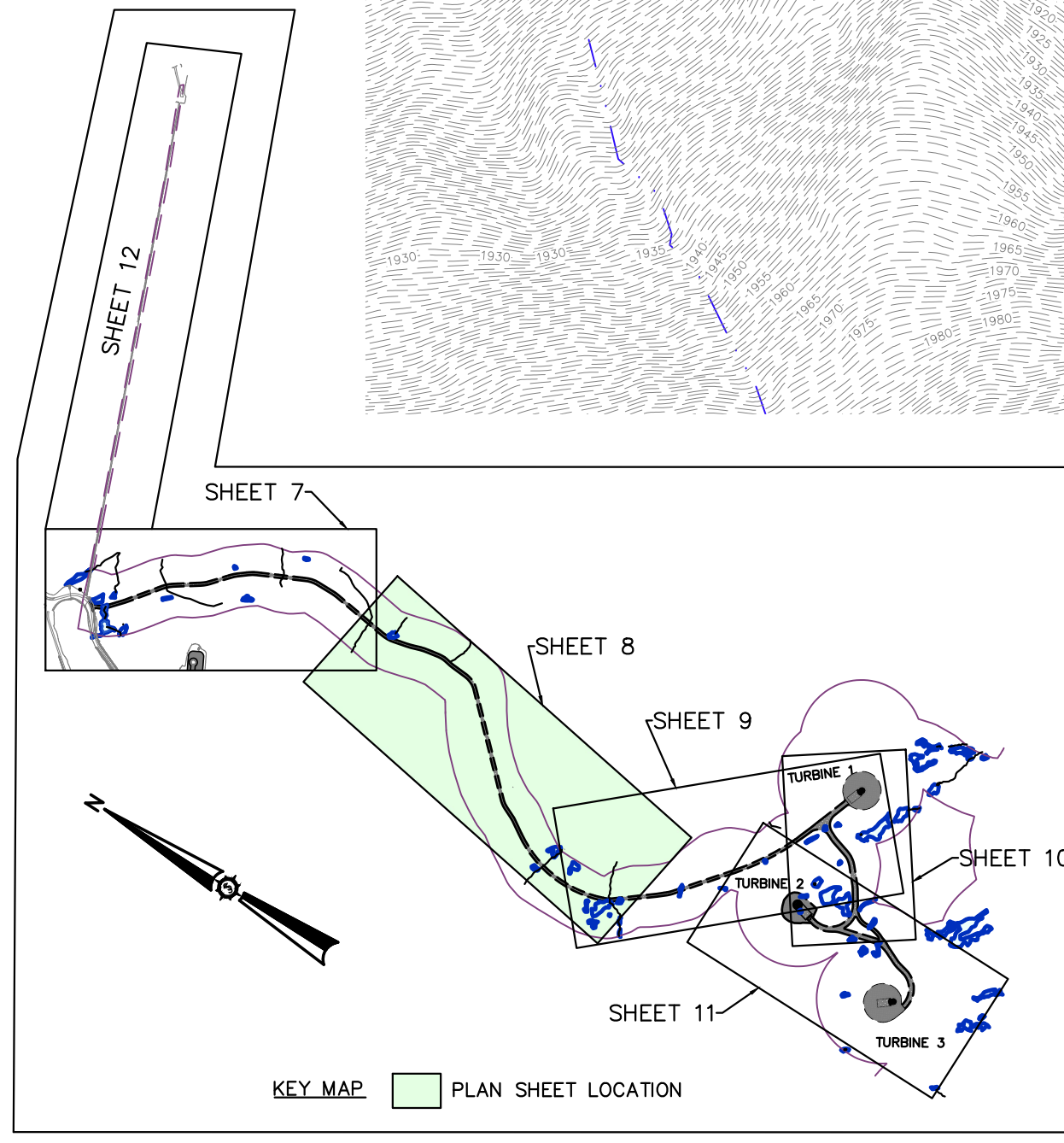
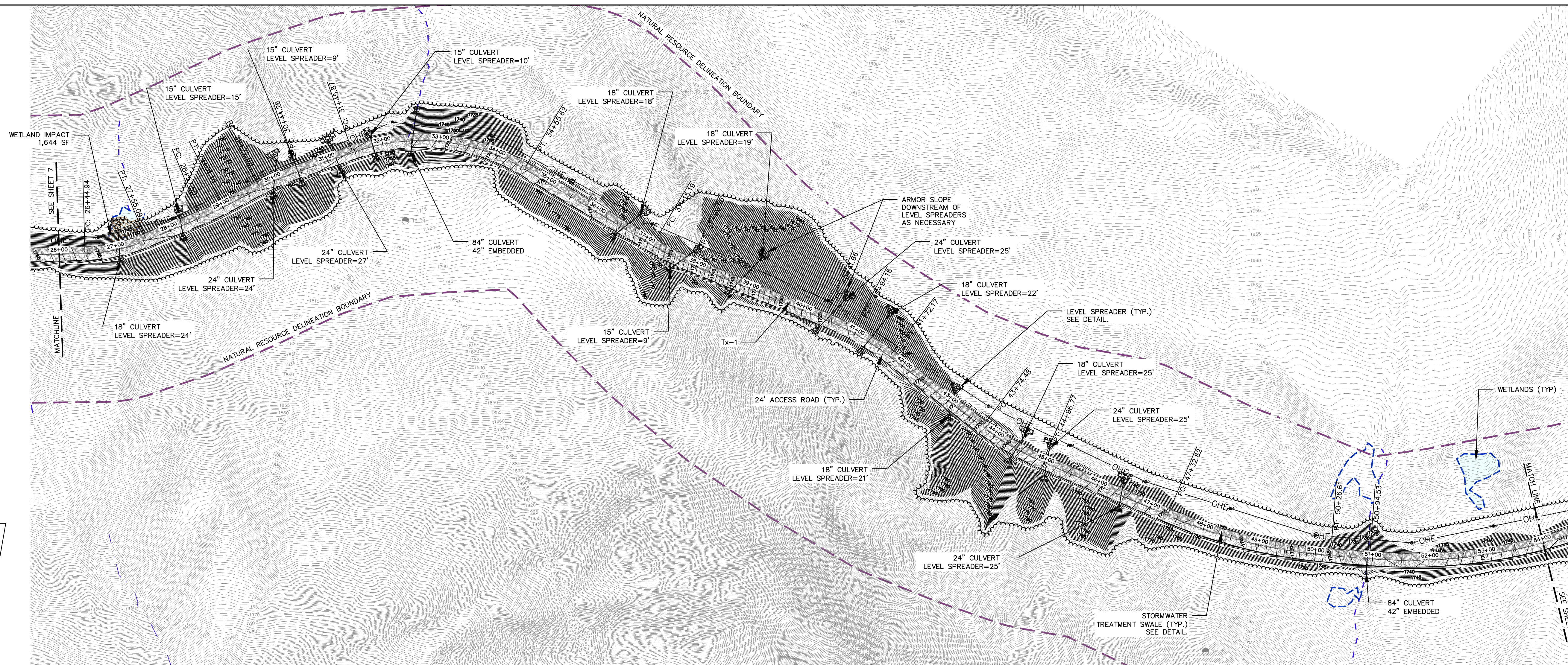
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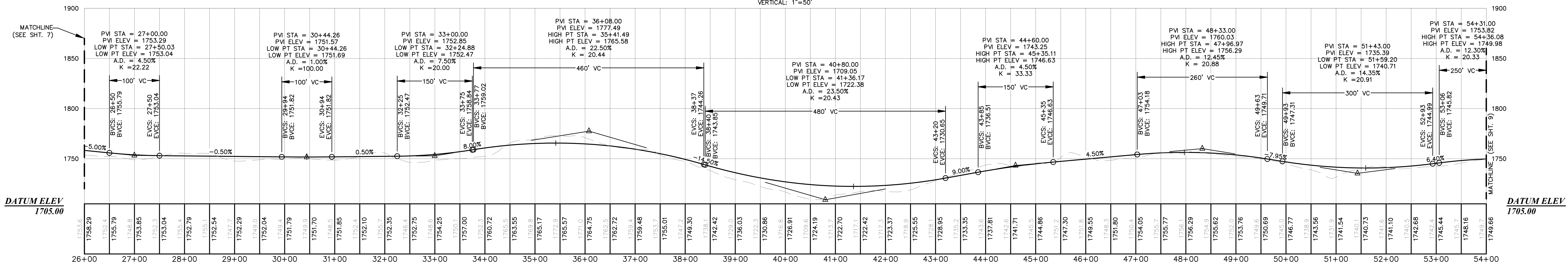
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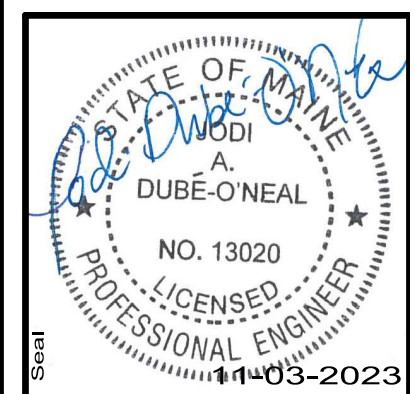
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Date:	
Drawn By:	SAW
Checked:	BOH

Client:	TWIN ENERGY LLC
Project Location:	RUMFORD, MAINE
Scale:	AS SHOWN
Project No.:	11032023
Drawn By:	SAW
Checked:	BOH
Project Description:	GRADING PLAN STA 26+00 TO 54+00



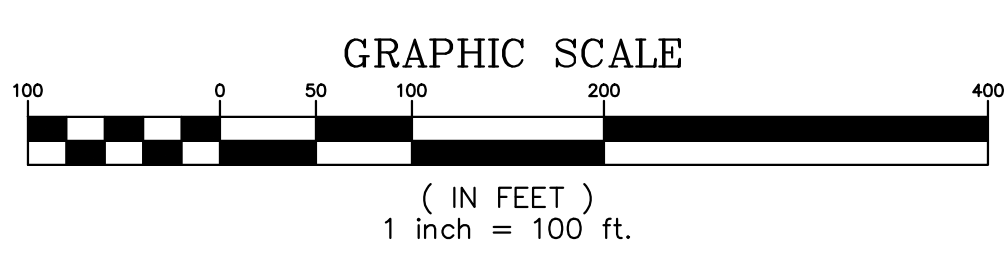
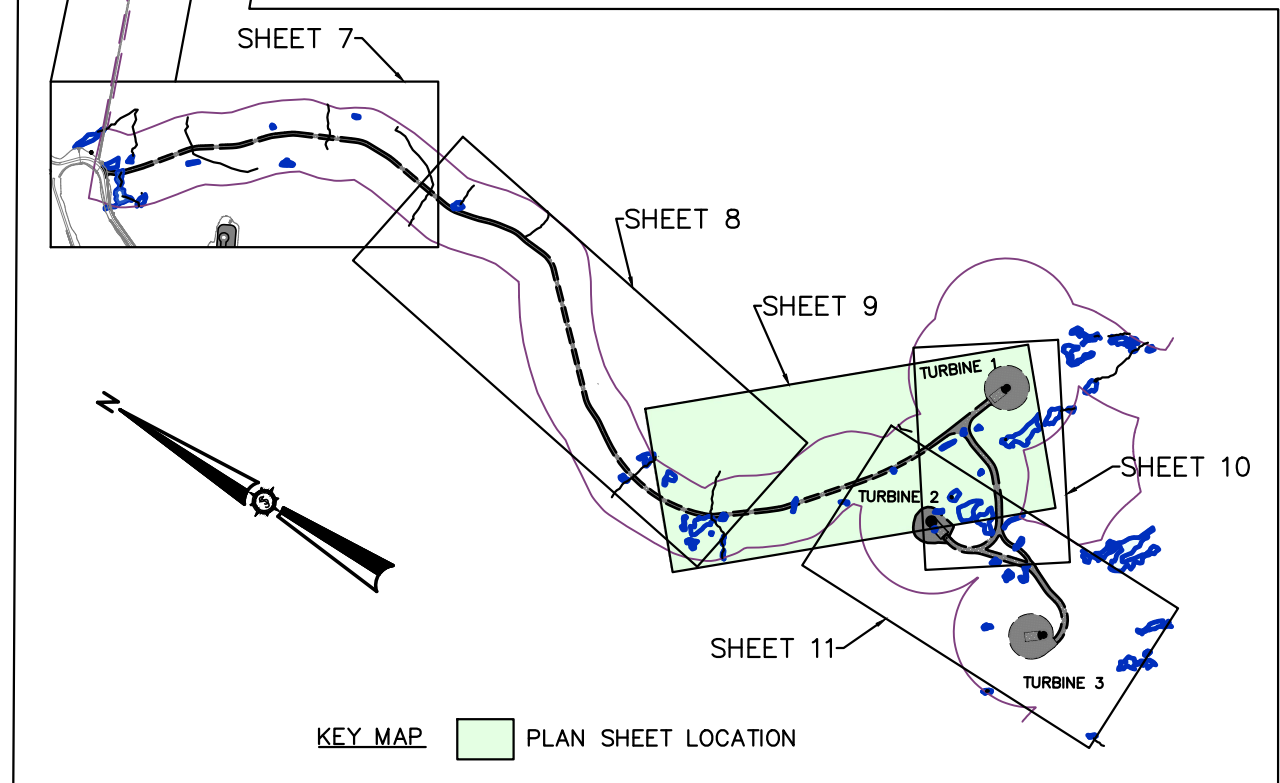
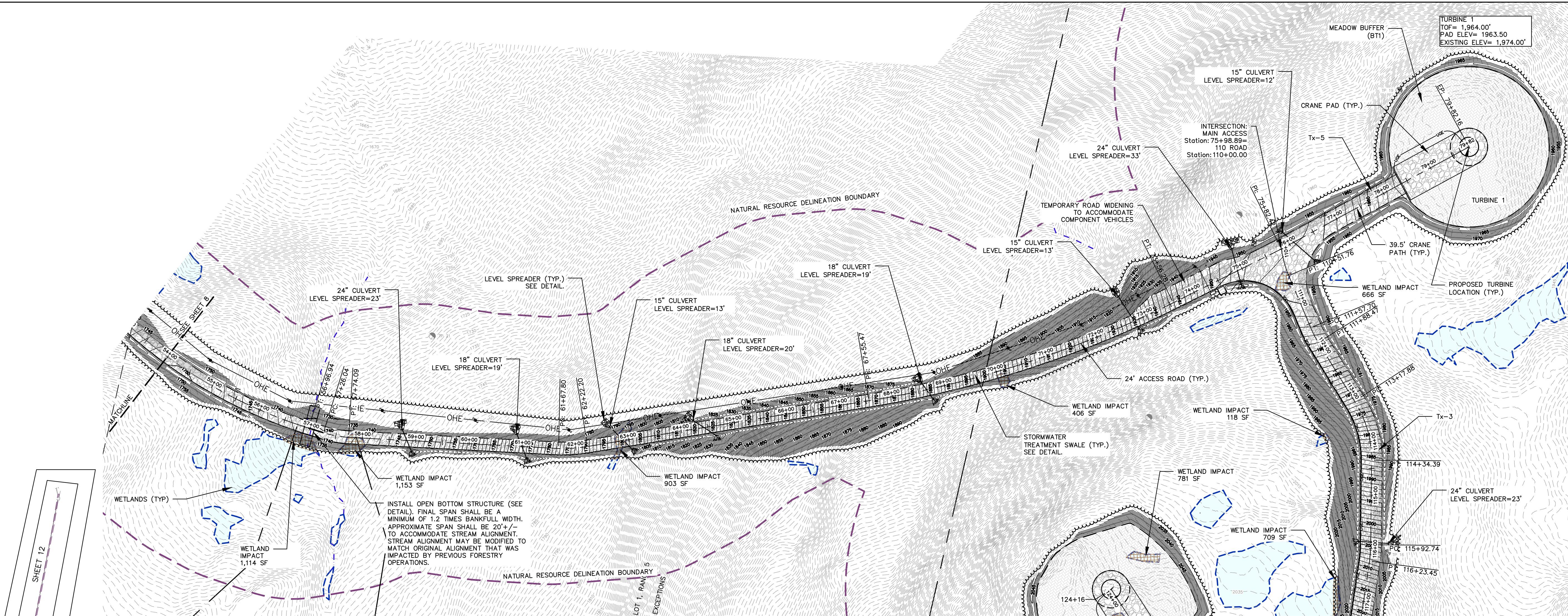
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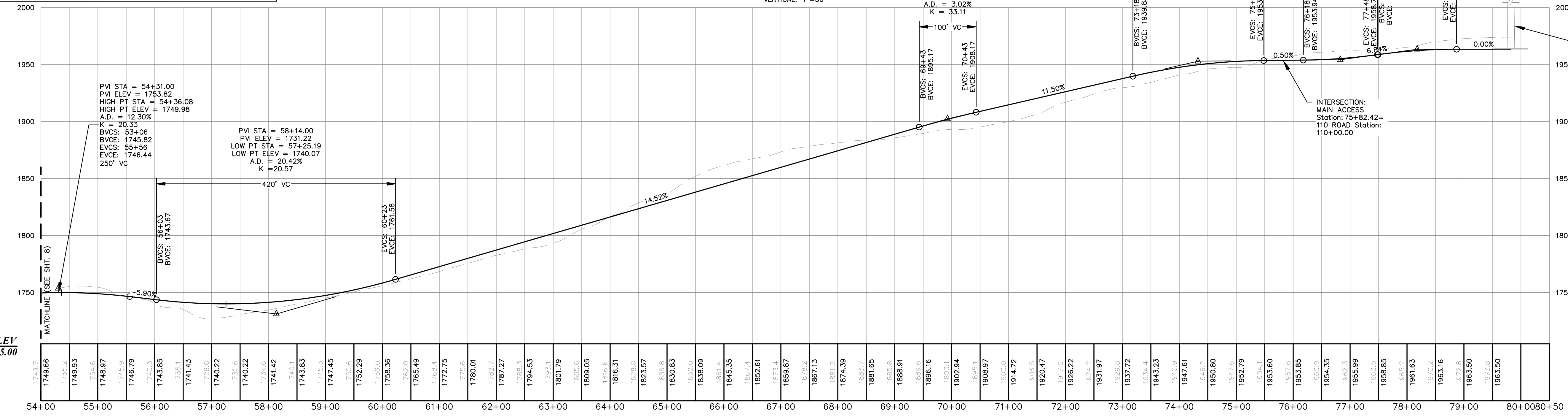
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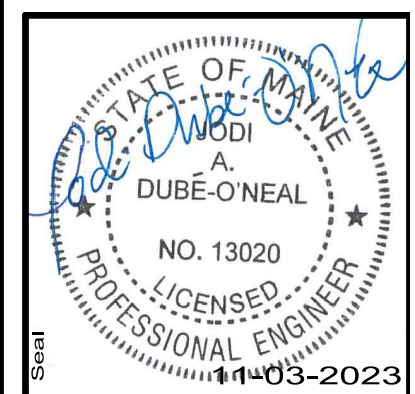
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HORIZONTAL: 1"=100'
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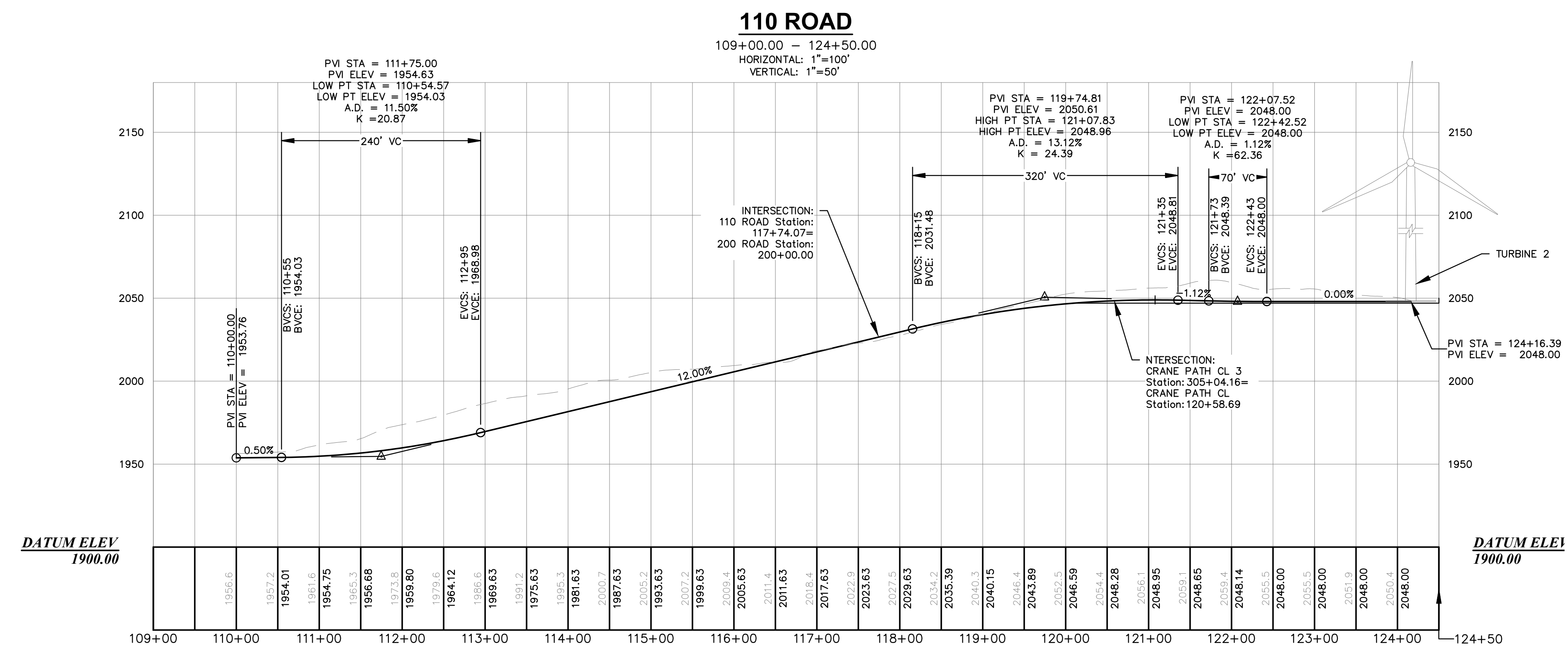
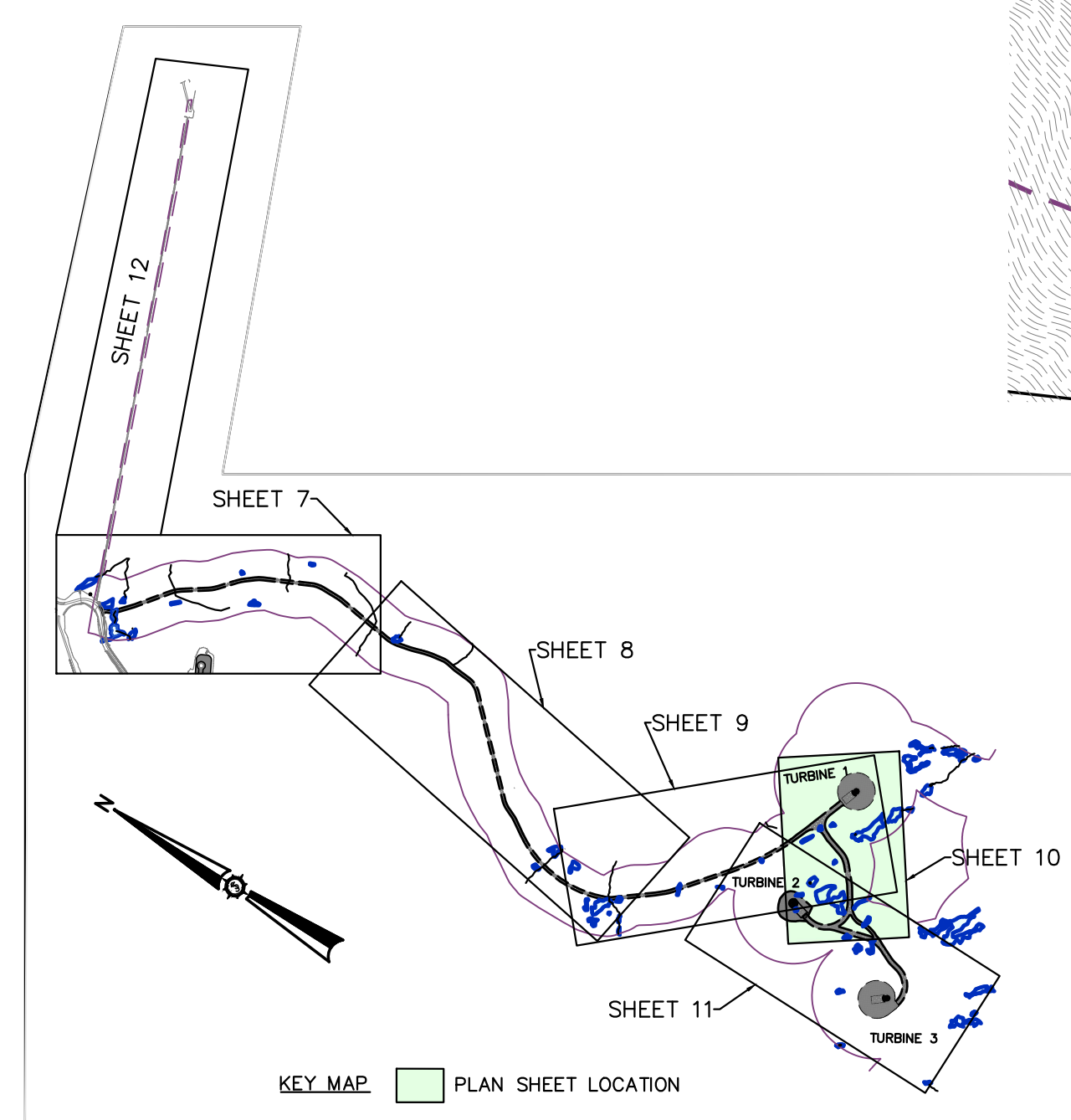
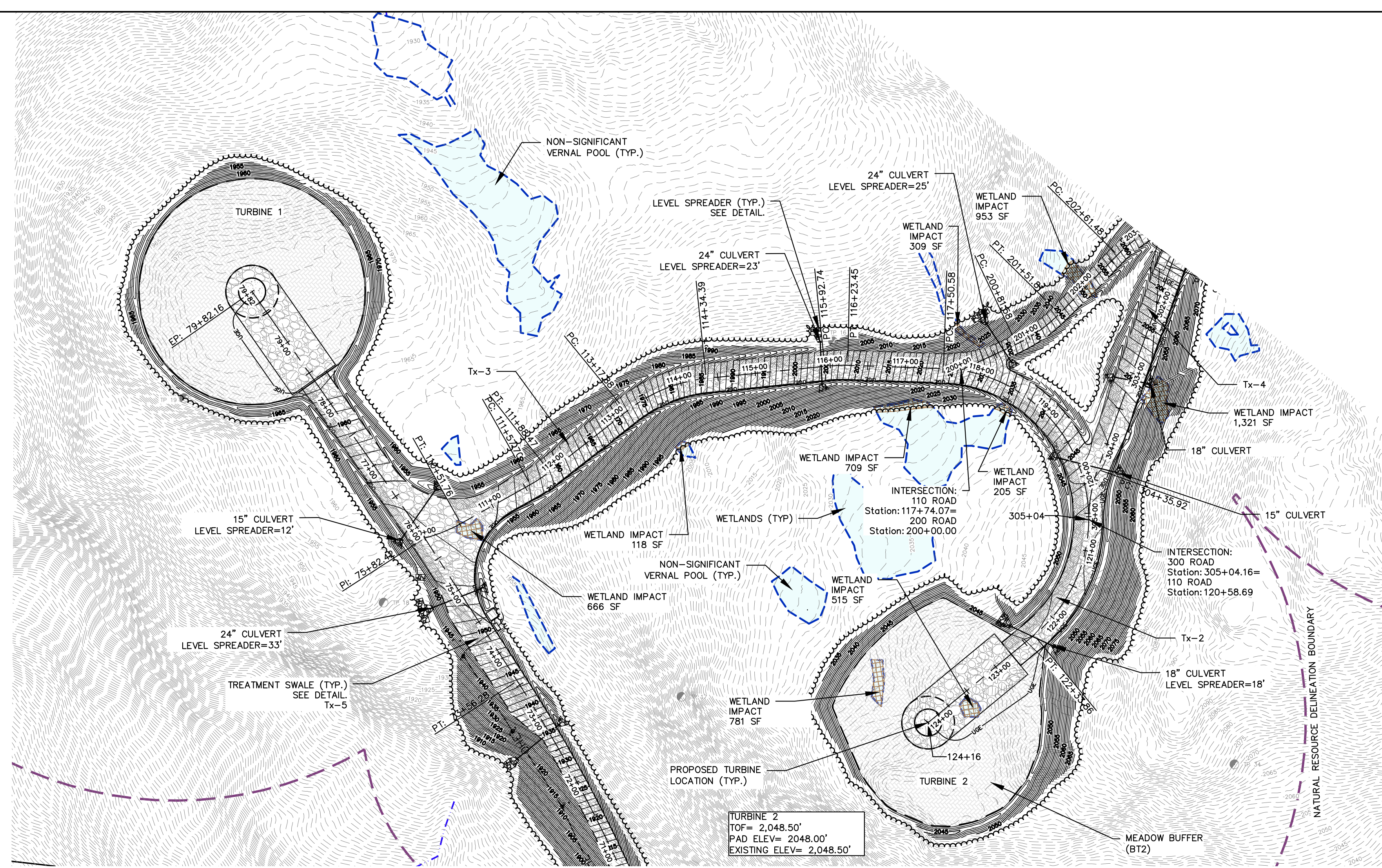
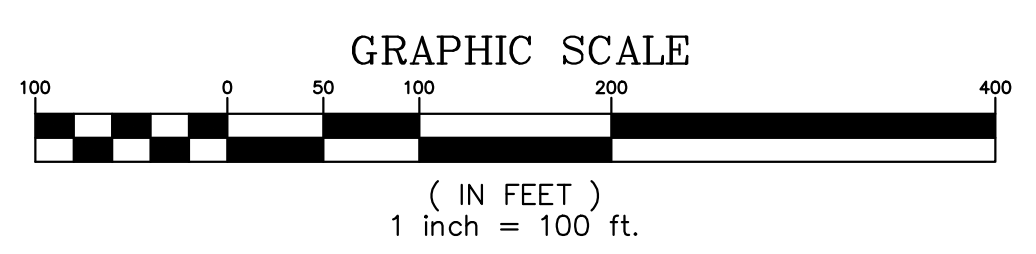
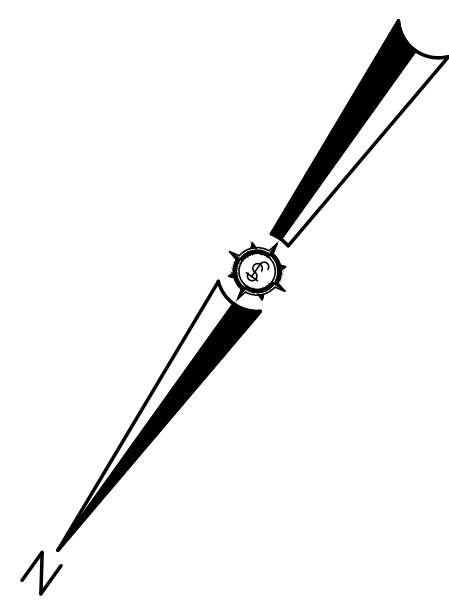
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Project Location	RUMFORD, MAINE
Project No.	381.20.01
Date	11/03/2023

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RUMFORD, MAINE
Project Location
RUMFORD, MAINE
Drawing Description
GRADING PLAN
STA 54+00 TO 80+50



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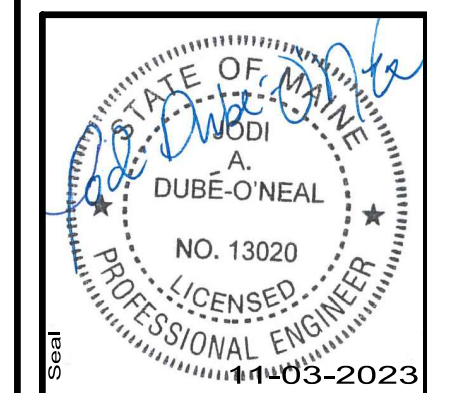


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Designed By	JAO
Date	11/03/2023
Scale	AS SHOWN
Approved	JAO
Checked	BCH

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RUMFORD, MAINE
Project Location
RUMFORD, MAINE

Drawing Description
GRADING PLAN
STA 109+00 TO 124+50



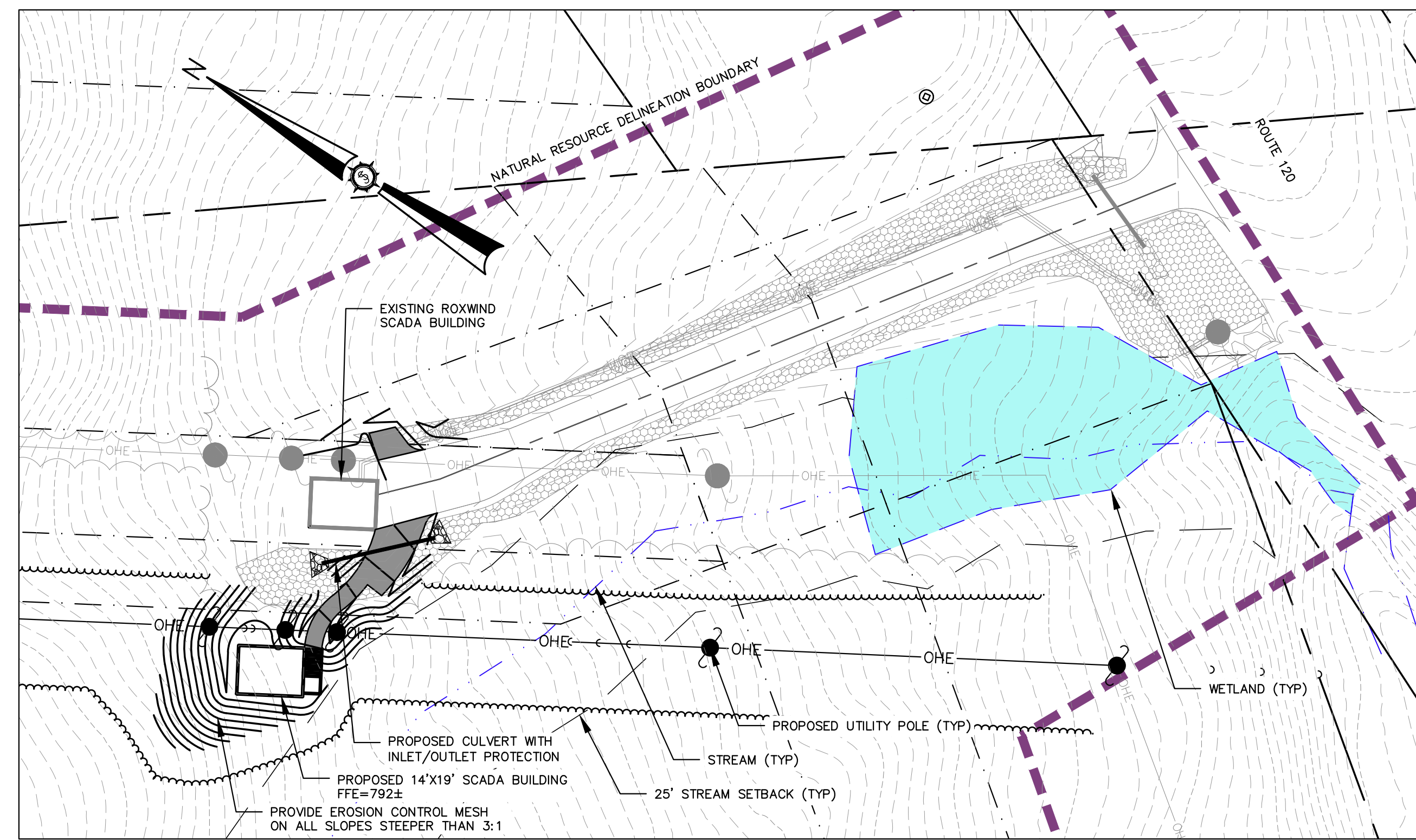
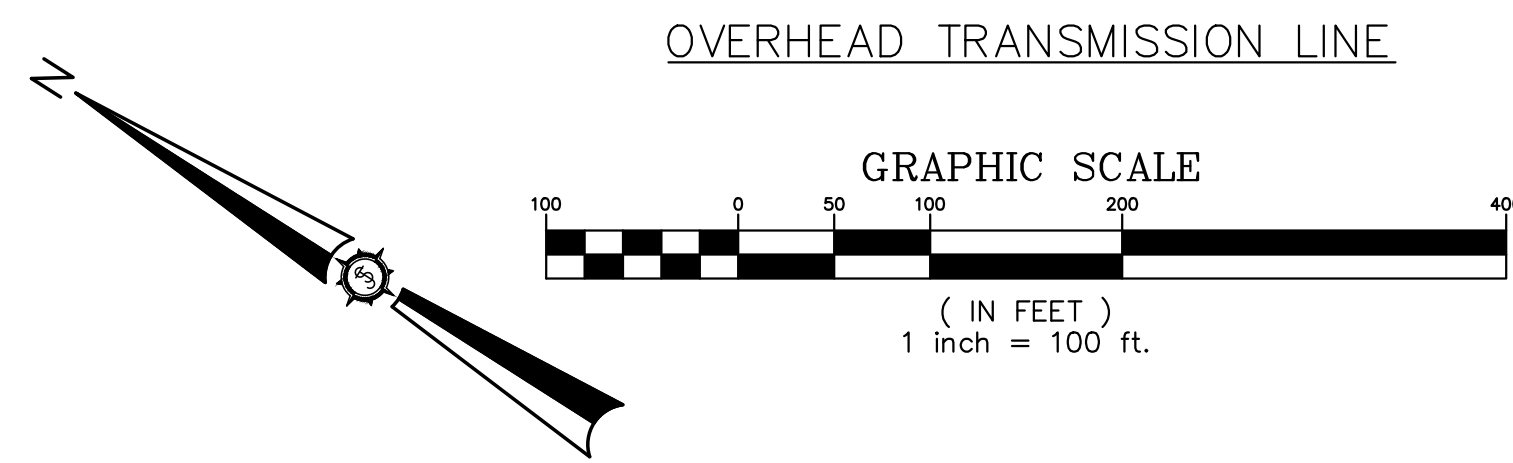
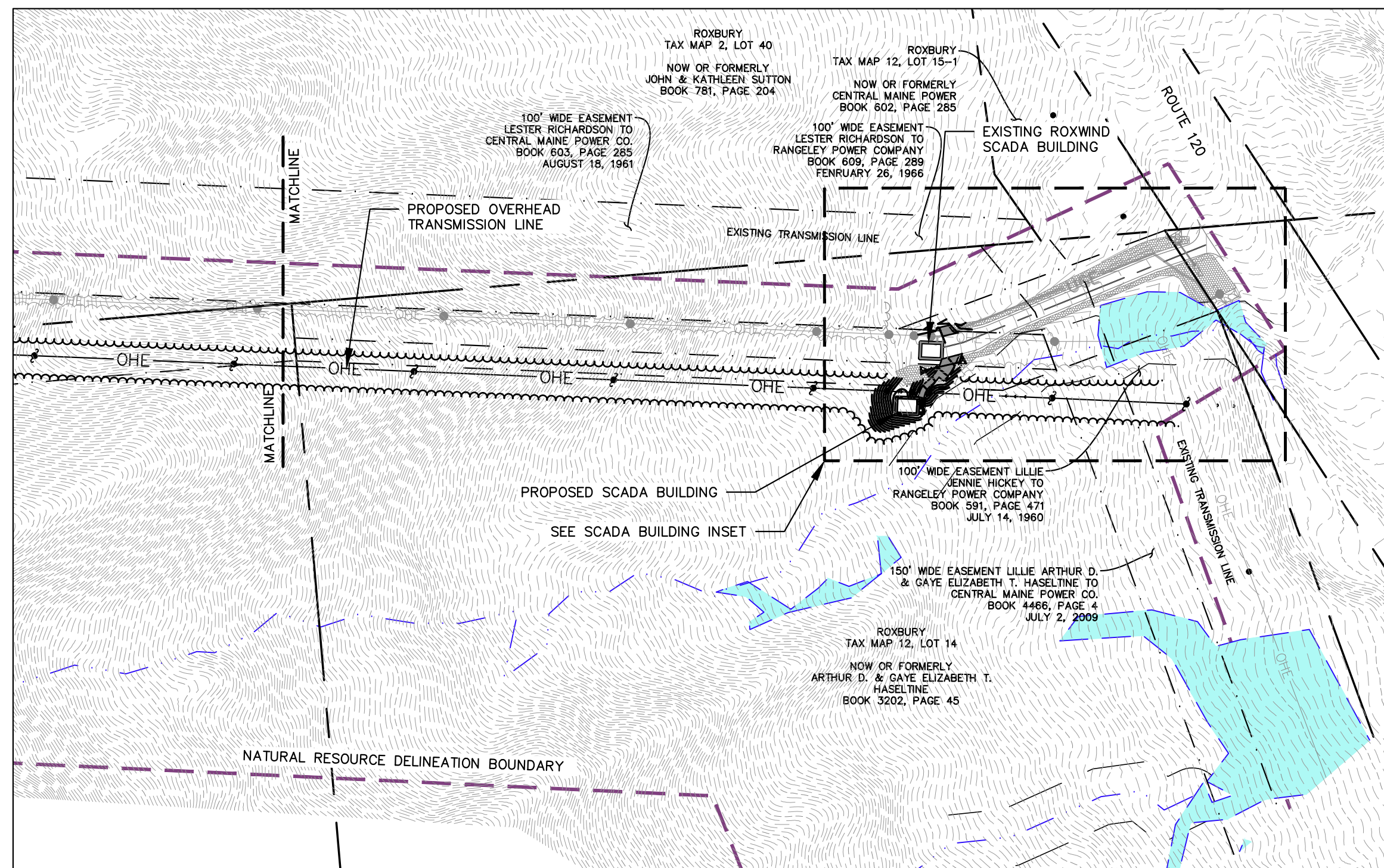
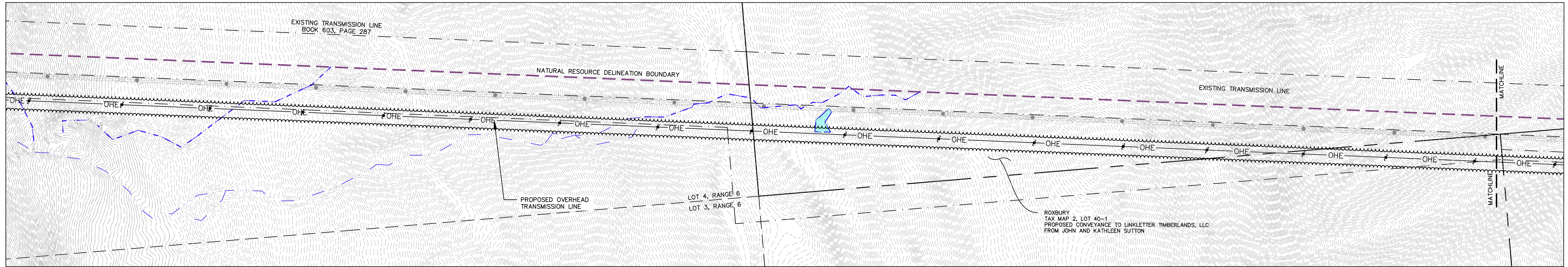
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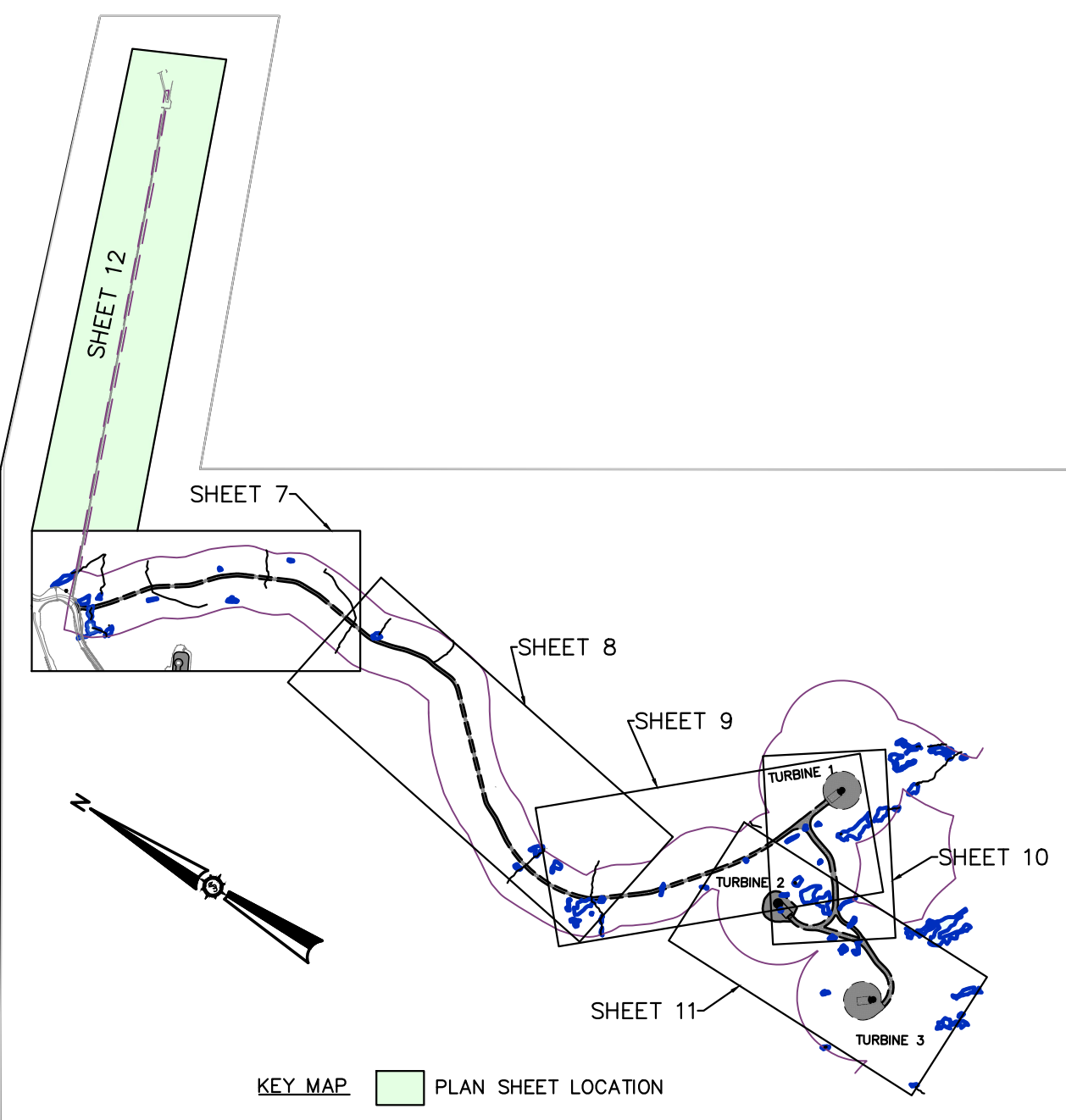
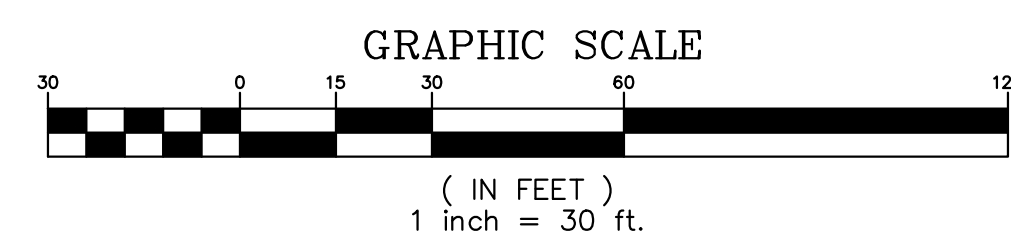
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SCADA BUILDING INSET



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RUMFORD, MAINE
Project Location
RUMFORD, MAINE
Drawing Description
OVERHEAD TRANSMISSION LINE AND SCADA BUILDING PLAN

STATE OF MAINE
A. DUBÉ-O'NEAL
NO. 13020
LICENSED PROFESSIONAL ENGINEER
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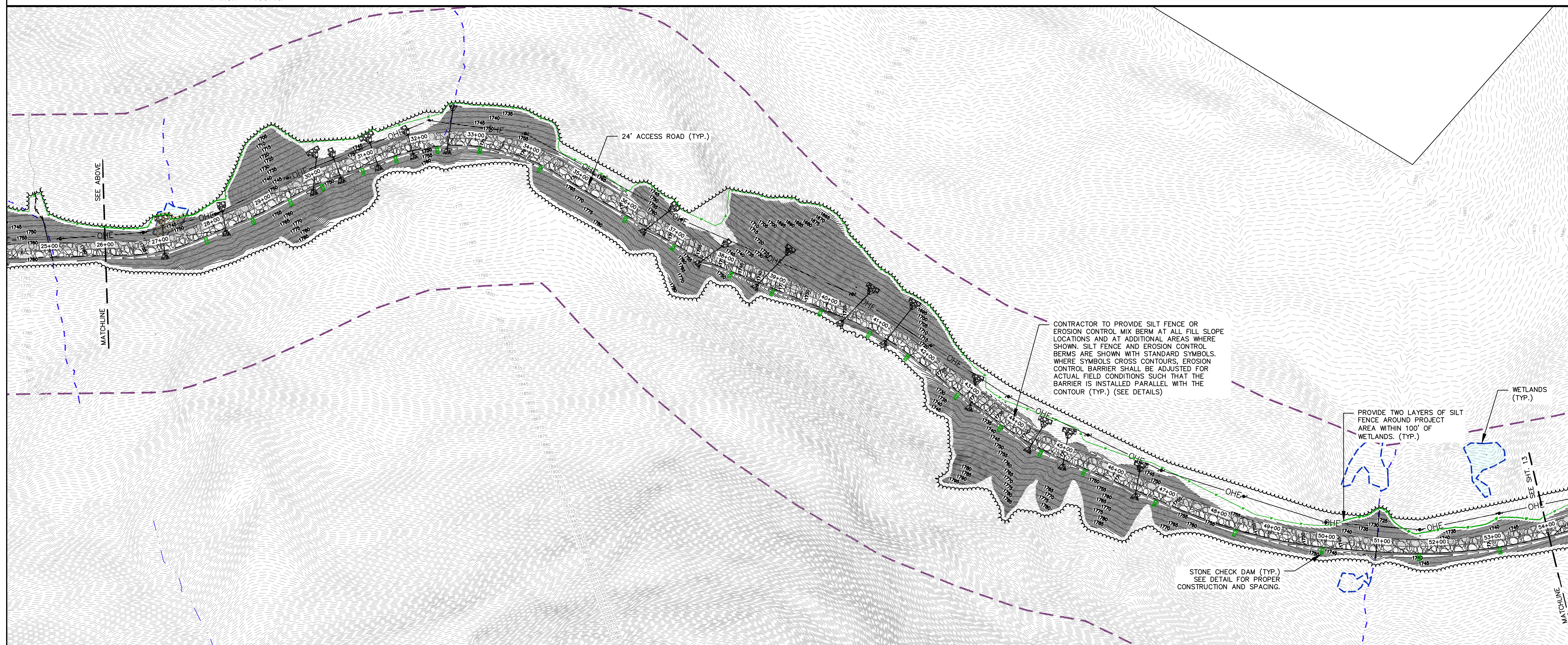
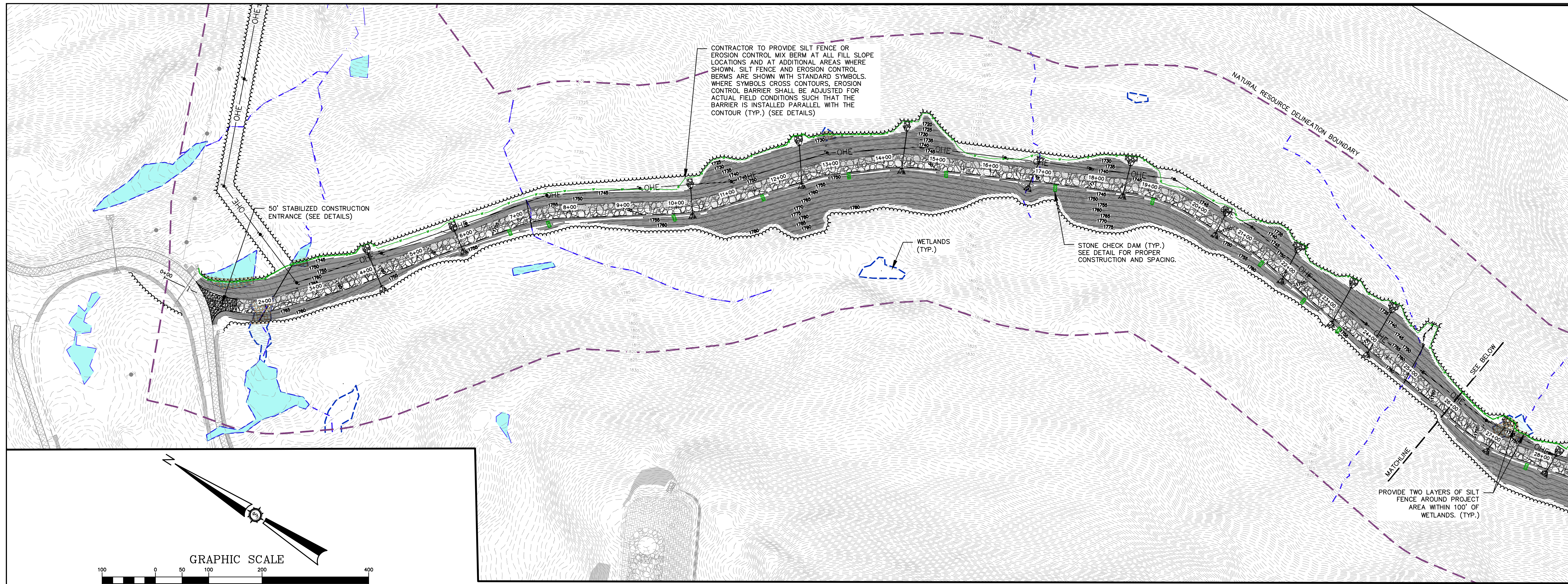
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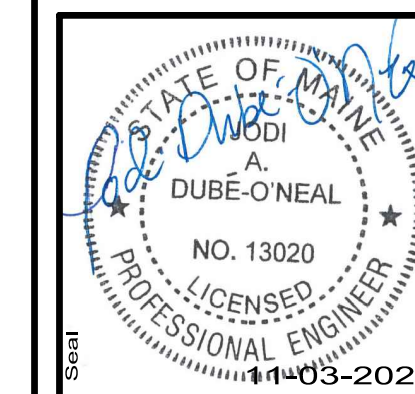
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Approved	JAO
Checked	BCH

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Project Location
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TWIN ENERGY PROJECT:
EROSION AND SEDIMENTATION CONTROL PLAN



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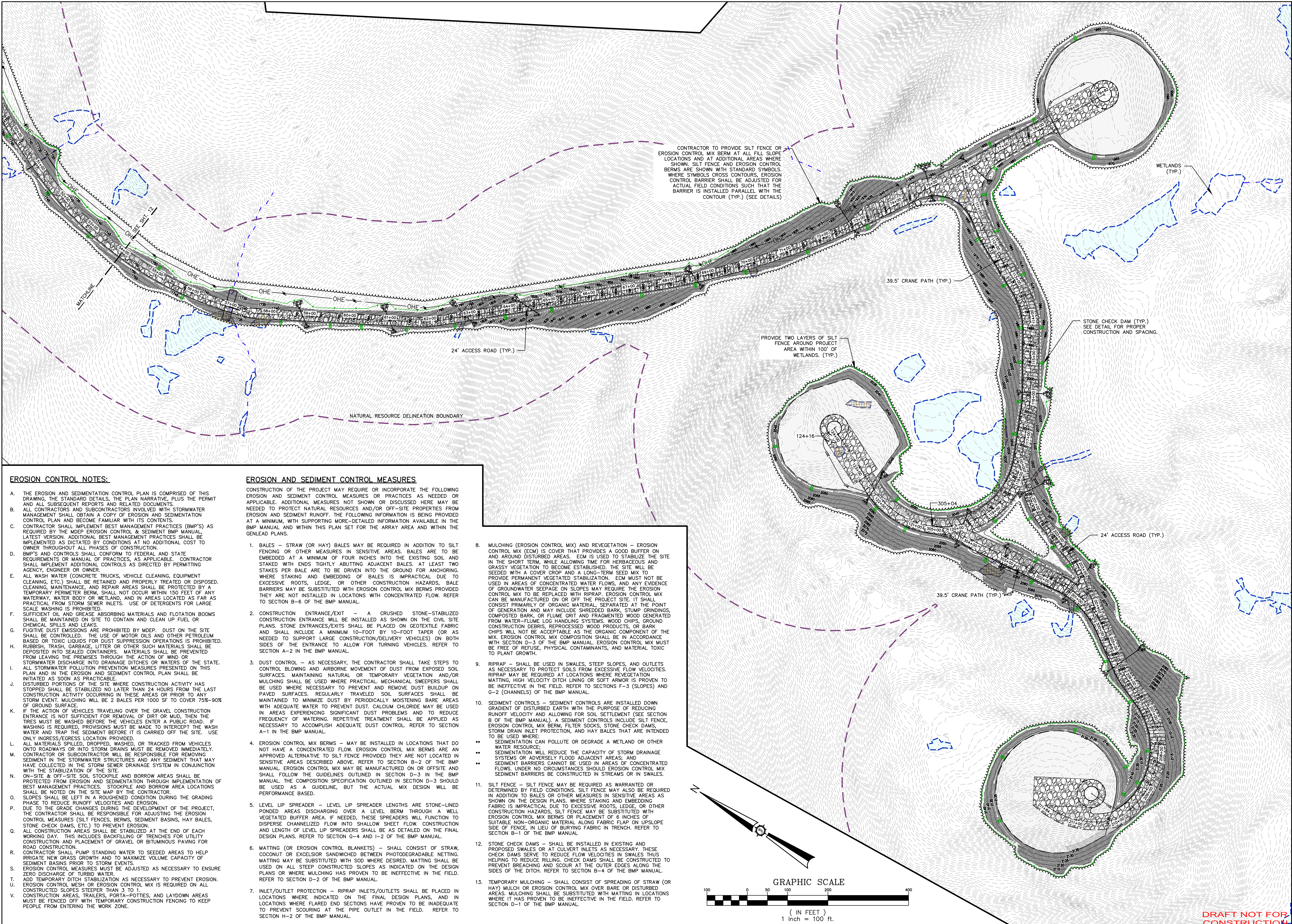
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CONTRACTOR TO PROVIDE SILT FENCE OR EROSION CONTROL MIX BERM AT ALL FILL SLOPE LOCATIONS AND AT ADDITIONAL AREAS WHERE SHOWN. SILT FENCE AND EROSION CONTROL BERMS ARE SHOWN WITH STANDARD SYMBOLS. WHERE SYMBOLS CROSS CONTOURS, EROSION CONTROL BARRIER SHALL BE ADJUSTED FOR ACTUAL FIELD CONDITIONS SUCH THAT THE BARRIER IS INSTALLED PARALLEL WITH THE CONTOUR (TYP.) (SEE DETAILS)

PROVIDE TWO LAYERS OF SILT FENCE AROUND PROJECT AREA WITHIN 100' OF WETLANDS. (TYP.)

STONE CHECK DAM (TYP.) SEE DETAIL FOR PROPER CONSTRUCTION AND SPACING.

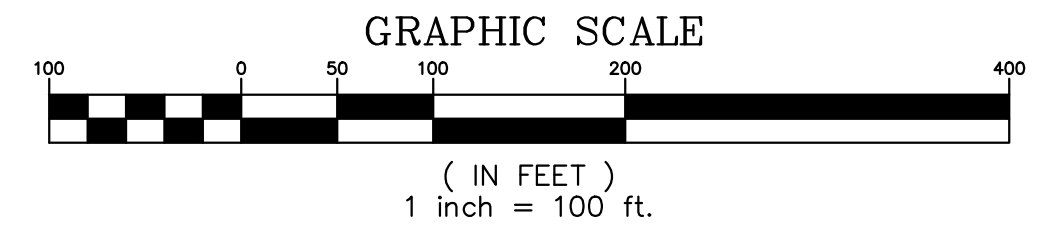
EROSION CONTROL NOTES:

- A. THE EROSION AND SEDIMENTATION CONTROL PLAN IS COMPRISED OF THIS DRAWING, THE STANDARD DETAILS, THE PLAN NARRATIVE, PLUS THE PERMIT AND ALL SUBSEQUENT REPORTS AND RELATED DOCUMENTS.
- B. ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORMWATER MANAGEMENT SHALL OBTAIN A COPY OF EROSION AND SEDIMENTATION CONTROL PLAN AND BECOME FAMILIAR WITH ITS CONTENTS.
- C. CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES (BMP'S) AS REQUIRED BY THE MDEP EROSION CONTROL & SEDIMENT BMP MANUAL, LATEST VERSION. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST TO OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- D. BMP'S AND CONTROLS SHALL CONFORM TO FEDERAL AND STATE REQUIREMENTS OR MANUAL OF PRACTICES, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY, ENGINEER OR OWNER.
- E. ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE RETAINED AND PROPERLY TREATED OR DISPOSED. CLEANING, MAINTENANCE, AND REPAIR AREAS SHALL BE PROTECTED BY A TEMPORARY PERIMETER BERM, SHALL NOT OCCUR WITHIN 150 FEET OF ANY WATERWAY, WATER BODY OR WETLAND, AND IN AREAS LOCATED AS FAR AS PRACTICAL FROM STORM SEWER INLETS. USE OF DETERGENTS FOR LARGE SCALE WASHING IS PROHIBITED.
- F. SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- G. FUGITIVE DUST EMISSIONS ARE PROHIBITED BY MDEP. DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- H. RUBBISH, TRASH, GARBAGE, LITTER OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORMWATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- I. ALL STORMWATER POLLUTION PREVENTION MEASURES PRESENTED ON THIS PLAN AND IN THE EROSION AND SEDIMENT CONTROL PLAN SHALL BE INITIATED AS SOON AS PRACTICABLE.
- J. DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS STOPPED SHALL BE STABILIZED NO LATER THAN 24 HOURS FROM THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS OR PRIOR TO ANY STORM EVENT. MULCHING WILL BE 2 BALES PER 1000 SF TO COVER 75%-90% OF GROUND SURFACE.
- K. IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCE IS NOT SUFFICIENT FOR REMOVAL OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS REQUIRED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE. USE ONLY INGRESS/EGRESS LOCATION PROVIDED.
- L. ALL MATERIALS SPILLED, DROPPED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY. CONTRACTOR OR SUBCONTRACTOR WILL BE RESPONSIBLE FOR REMOVING SEDIMENT IN THE STORMWATER STRUCTURES AND ANY SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEM IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- N. ON-SITE & OFF-SITE SOIL STOCKPILE AND BORROW AREAS SHALL BE PROTECTED FROM EROSION AND SEDIMENTATION THROUGH IMPLEMENTATION OF BEST MANAGEMENT PRACTICES. STOCKPILE AND BORROW AREA LOCATIONS SHALL BE NOTED ON THE SITE MAP BY THE CONTRACTOR.
- O. SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- P. DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES, BERMS, SEDIMENT BASINS, HAY BALES, STONE CHECK DAMS, ETC.) TO PREVENT EROSION.
- Q. ALL CONSTRUCTION AREAS SHALL BE STABILIZED AT THE END OF EACH WORKING DAY. THIS INCLUDES BACKFILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.
- R. CONTRACTOR SHALL PUMP STANDING WATER TO SEEDED AREAS TO HELP IRRIGATE NEW GRASS GROWTH AND TO MAXIMIZE VOLUME CAPACITY OF SEDIMENT BASINS PRIOR TO STORM EVENTS.
- S. EROSION CONTROL MEASURES MUST BE ADJUSTED AS NECESSARY TO ENSURE ZERO DISCHARGE OF TURBID WATER.
- T. ADD TEMPORARY DITCH STABILIZATION AS NECESSARY TO PREVENT EROSION.
- U. EROSION CONTROL MESH OR EROSION CONTROL MIX IS REQUIRED ON ALL CONSTRUCTED SLOPES STEEPER THAN 3 TO 1.
- V. MUST BE FENCED OFF WITH TEMPORARY CONSTRUCTION FENCING TO KEEP PEOPLE FROM ENTERING THE WORK ZONE.

EROSION AND SEDIMENT CONTROL MEASURES

CONSTRUCTION OF THE PROJECT MAY REQUIRE OR INCORPORATE THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES OR PRACTICES AS NEEDED OR APPLICABLE. ADDITIONAL MEASURES NOT SHOWN OR DISCUSSED HERE MAY BE NEEDED TO PROTECT NATURAL RESOURCES AND/OR OFF-SITE PROPERTIES FROM EROSION AND SEDIMENT RUNOFF. THE FOLLOWING INFORMATION IS BEING PROVIDED AT A MINIMUM, WITH SUPPORTING MORE-DETAILED INFORMATION AVAILABLE IN THE BMP MANUAL AND WITHIN THIS PLAN SET FOR THE ARRAY AREA AND WITHIN THE GENERAL PLANS.

1. BALES - STRAW (OR HAY) BALES MAY BE REQUIRED IN ADDITION TO SILT FENCING OR OTHER MEASURES IN SENSITIVE AREAS. BALES ARE TO BE EMBEDDED AT A MINIMUM OF FOUR INCHES INTO THE EXISTING SOIL AND STAKED WITH ENDS TIGHTLY ADJACENT BALES. AT LEAST TWO STAKES PER BALE ARE TO BE DRIVEN INTO THE GROUND FOR ANCHORING. WHERE STAKING AND EMBEDDING OF BALES IS IMPRACTICAL DUE TO EXCESSIVE ROOTS, LEDGE, OR OTHER CONSTRUCTION HAZARDS, BALE BARRIERS MAY BE SUBSTITUTED WITH EROSION CONTROL MIX BERMS PROVIDED THEY ARE NOT INSTALLED IN LOCATIONS WITH CONCENTRATED FLOW. REFER TO SECTION B-6 OF THE BMP MANUAL.
2. CONSTRUCTION ENTRANCE/EXIT - A CRUSHED STONE-STABILIZED CONSTRUCTION ENTRANCE WILL BE INSTALLED AS SHOWN ON THE CIVIL SITE PLANS. STONE ENTRANCES/EXITS SHALL BE PLACED ON GEOTEXTILE FABRIC AND SHALL INCLUDE A MINIMUM 10-FOOT BY 10-FOOT TAPER (OR AS NEEDED TO SUPPORT LARGE CONSTRUCTION/DELIVERY VEHICLES) ON BOTH SIDES OF THE ENTRANCE TO ALLOW FOR TURNING VEHICLES. REFER TO SECTION A-2 IN THE BMP MANUAL.
3. DUST CONTROL - AS NECESSARY, THE CONTRACTOR SHALL TAKE STEPS TO CONTROL BLOWING AND AIRBORNE MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, MAINTAINING NATURAL OR TEMPORARY VEGETATION AND/OR MULCHING SHALL BE USED WHERE PRACTICAL. MECHANICAL SWEEPERS SHALL BE USED WHERE NECESSARY TO PREVENT AND REMOVE DUST BUILDUP ON PAVED SURFACES. REGULARLY TRAVELED SOIL SURFACES SHALL BE MAINTAINED TO MINIMIZE DUST BY PERIODICALLY MOISTENING BARE AREAS WITH ADEQUATE WATER TO PREVENT DUST. CALCIUM CHLORIDE MAY BE USED IN AREAS EXPERIENCING SIGNIFICANT DUST PROBLEMS AND TO REDUCE FREQUENCY OF WATERING. REPETITIVE TREATMENT SHALL BE APPLIED AS NECESSARY TO ACCOMPLISH ADEQUATE DUST CONTROL. REFER TO SECTION A-1 IN THE BMP MANUAL.
4. EROSION CONTROL MIX BERMS - MAY BE INSTALLED IN LOCATIONS THAT DO NOT HAVE A CONCENTRATED FLOW. EROSION CONTROL MIX BERMS ARE AN APPROVED ALTERNATIVE TO SILT FENCE PROVIDED THEY ARE NOT LOCATED IN SENSITIVE AREAS DESCRIBED ABOVE. REFER TO SECTION B-2 OF THE BMP MANUAL. EROSION CONTROL MIX MAY BE MANUFACTURED ON OR OFFSITE AND SHALL FOLLOW THE GUIDELINES OUTLINED IN SECTION D-3 IN THE BMP MANUAL. THE COMPOSITION SPECIFICATION OUTLINED IN SECTION D-3 SHOULD BE USED AS A GUIDELINE, BUT THE ACTUAL MIX DESIGN WILL BE PERFORMANCE BASED.
5. LEVEL LIP SPREADER - LEVEL LIP SPREADER LENGTHS ARE STONE-LINED PONDING AREAS DISCHARGING OVER A LEVEL BERM THROUGH A WELL VEGETATED BUFFER AREA. IF NEEDED, THESE SPREADERS WILL FUNCTION TO DISPERSE CHANNELIZED FLOW INTO SHALLOW SHEET FLOW. CONSTRUCTION AND LENGTH OF LEVEL LIP SPREADERS SHALL BE AS DETAILED ON THE FINAL DESIGN PLANS. REFER TO SECTION G-4 AND I-2 OF THE BMP MANUAL.
6. MATTING (OR EROSION CONTROL BLANKETS) - SHALL CONSIST OF STRAW, COCONUT OR EXCLESIOR SANDWICHED BETWEEN PHOTODEGRADABLE NETTING. MATTING MAY BE SUBSTITUTED WITH SOD WHERE DESIRED. MATTING SHALL BE USED ON ALL STEEP CONSTRUCTED SLOPES AS INDICATED ON THE DESIGN PLANS OR WHERE MULCHING HAS PROVEN TO BE INEFFECTIVE IN THE FIELD. REFER TO SECTION D-2 OF THE BMP MANUAL.
7. INLET/OUTLET PROTECTION - RIPRAP INLETS/OUTLETS SHALL BE PLACED IN LOCATIONS WHERE INDICATED ON THE FINAL DESIGN PLANS, AND IN LOCATIONS WHERE FLARED END SECTIONS HAVE PROVEN TO BE INADEQUATE TO PREVENT SCOURING AT THE PIPE OUTLET IN THE FIELD. REFER TO SECTION H-2 OF THE BMP MANUAL.
8. MULCHING (EROSION CONTROL MIX) AND REVEGETATION - EROSION CONTROL MIX (ECM) IS COVER THAT PROVIDES A GOOD BUFFER ON AND AROUND DISTURBED AREAS. ECM IS USED TO STABILIZE THE SITE IN THE SHORT TERM WHILE ALLOWING TIME FOR HERBACEOUS AND GRASSY VEGETATION TO BECOME ESTABLISHED. THE SITE WILL BE SEEDING WITH A COVER CROP AND A LONG-TERM SEED MIX TO PROVIDE PERMANENT VEGETATED STABILIZATION. ECM MUST NOT BE USED IN AREAS OF CONCENTRATED WATER FLOWS, AND ANY EVIDENCE OF GROUNDWATER SEEPAGE ON SLOPES MAY REQUIRE THE EROSION CONTROL MIX TO BE REPLACED WITH RIPRAP. EROSION CONTROL MIX CAN BE MANUFACTURED ON OR OFF THE PROJECT SITE. IT SHALL CONSIST PRIMARILY OF ORGANIC MATERIAL, SEPARATED AT THE POINT OF GENERATION AND MAY INCLUDE SHREDDED BARK, STUMP GRINDINGS, COMPOSTED BARK, OR FLUME GRIT AND FRAGMENTED WOOD GENERATED FROM WATER-FLUME LOG HANDLING SYSTEMS. WOOD CHIPS, GROUND CONSTRUCTION DEBRIS, REPROCESSED WOOD PRODUCTS, OR BARK CHIPS WILL NOT BE ACCEPTABLE. AS THE ORGANIC COMPONENT OF THE MIX, EROSION CONTROL MIX COMPOSITION SHALL BE IN ACCORDANCE WITH SECTION D-3 OF THE BMP MANUAL. EROSION CONTROL MIX MUST BE FREE OF REFUSE, PHYSICAL CONTAMINANTS, AND MATERIAL TOXIC TO PLANT GROWTH.
9. RIPRAP - SHALL BE USED IN SWALES, STEEP SLOPES, AND OUTLETS AS NECESSARY TO PROTECT SOILS FROM EXCESSIVE FLOW VELOCITIES. RIPRAP MAY BE REQUIRED AT LOCATIONS WHERE REVEGETATION MATTING, HIGH VELOCITY DITCH LINING OR SOFT ARMOR IS PROVEN TO BE INEFFECTIVE IN THE FIELD. REFER TO SECTIONS I-3 (SLOPES) AND G-2 (CHANNELS) OF THE BMP MANUAL.
10. SEDIMENT CONTROLS - SEDIMENT CONTROLS ARE INSTALLED DOWN GRADIENT OF DISTURBED EARTH WITH THE PURPOSE OF REDUCING RUNOFF VELOCITY AND ALLOWING FOR SOIL SETTLEMENT (SEE SECTION B OF THE BMP MANUAL). A SEDIMENT CONTROLS INCLUDE SILT FENCE, EROSION CONTROL MIX BERM, FILTER SOCKS, STONE CHECK DAMS, STORM DRAIN INLET PROTECTION, AND HAY BALES THAT ARE INTENDED TO BE USED WHERE:
 - SEDIMENTATION CAN POLLUTE OR DEGRADE A WETLAND OR OTHER WATER RESOURCE;
 - SEDIMENTATION WILL REDUCE THE CAPACITY OF STORM DRAINAGE SYSTEMS OR ADVERSELY FLOOD ADJACENT AREAS; AND
 - SEDIMENT BARRIERS CANNOT BE USED IN AREAS OF CONCENTRATED FLOWS, UNDER NO CIRCUMSTANCES SHOULD EROSION CONTROL MIX SEDIMENT BARRIERS BE CONSTRUCTED IN STREAMS OR IN SWALES.
11. SILT FENCE - SILT FENCE MAY BE REQUIRED AS WARRANTED OR DETERMINED BY FIELD CONDITIONS. SILT FENCE MAY ALSO BE REQUIRED IN ADDITION TO BALES OR OTHER MEASURES IN SENSITIVE AREAS AS SHOWN ON THE DESIGN PLANS. WHERE STAKING AND EMBEDDING FABRIC IS IMPRACTICAL DUE TO EXCESSIVE ROOTS, LEDGE, OR OTHER CONSTRUCTION HAZARDS, SILT FENCE MAY BE SUBSTITUTED WITH EROSION CONTROL MIX BERMS OR PLACEMENT OF 6 INCHES OF SUITABLE NON-ORGANIC MATERIAL ALONG FABRIC FLAP ON UPSLOPE SIDE OF FENCE, IN LIEU OF BURYING FABRIC IN TRENCH. REFER TO SECTION B-1 OF THE BMP MANUAL.
12. STONE CHECK DAMS - SHALL BE INSTALLED IN EXISTING AND PROPOSED SWALES OR AT CULVERTS AS NECESSARY. THESE CHECK DAMS SERVE TO REDUCE FLOW VELOCITIES IN SWALES THIS HELPING TO REDUCE RILLING. CHECK DAMS SHALL BE CONSTRUCTED TO PREVENT BREACHING AND SCOUR AT THE OUTER EDGES ALONG THE SIDES OF THE DITCH. REFER TO SECTION B-4 OF THE BMP MANUAL.
13. TEMPORARY MULCHING - SHALL CONSIST OF SPREADING OF STRAW (OR HAY) MULCH OR EROSION CONTROL MIX OVER BARE OR DISTURBED AREAS. MULCHING SHALL BE SUBSTITUTED WITH MATTING IN LOCATIONS WHERE IT HAS PROVEN TO BE INEFFECTIVE IN THE FIELD. REFER TO SECTION D-1 OF THE BMP MANUAL.



Drawn By	SAW
Checked By	JAC
Date	11/03/2023
Scale	AS SHOWN
Project Location	RUMFORD, MAINE
Project Name	EROSION AND SEDIMENTATION CONTROL PLAN AND NOTES
Project No.	381.20.01
Sheet No.	14

TWIN ENERGY LLC

381.20.01

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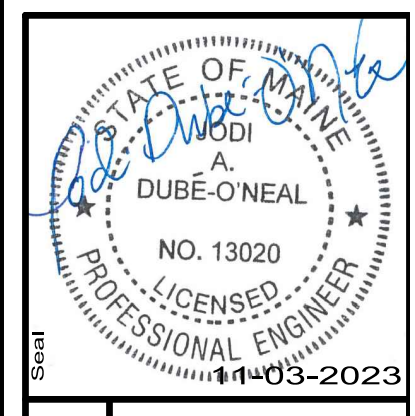
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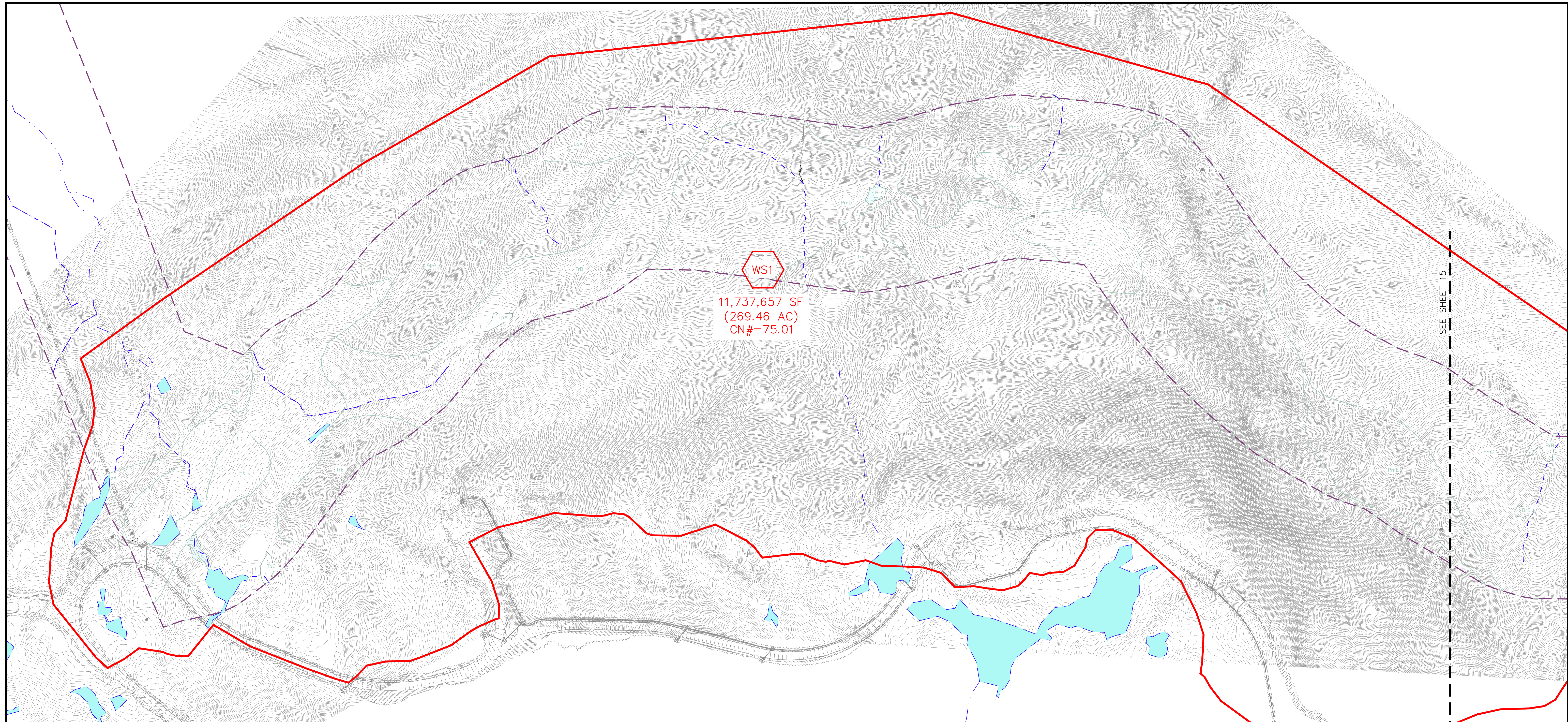
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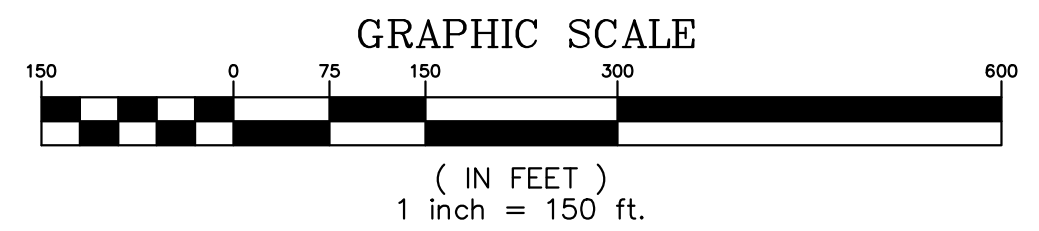
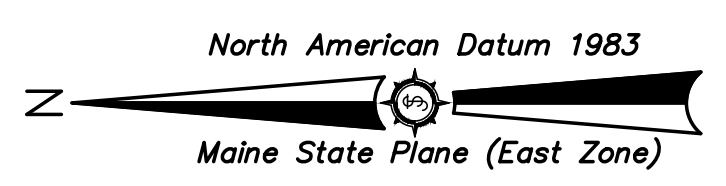
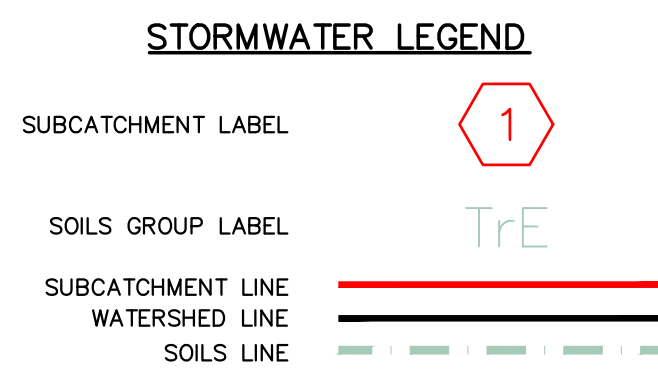
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WS1
 11,737,657 SF
 (269.46 AC)
 CN#=75.01

Classification Code	Soil Classification	Hydrologic Soil Group
AlB	Abram-Lyman-Rock Outcrop complex, 15-35% slopes	B
AlC	Abram-Lyman-Rock Outcrop complex, 8-15% slopes	B
AlD	Abram-Lyman-Rock Outcrop complex, 15-35% slopes	B
AlE	Abram-Lyman-Rock Outcrop complex, >35% slopes	B
ApA	Abram poorly drained, 0-3% slopes	B
AtB	Abram-Tunbridge Complex, 3-8% slopes	C/D
AtD	Abram-Tunbridge Complex, 15-35% slopes	C/D
BrA	Brayton sandy loam, 0-3% slopes	B
BrB	Brayton sandy loam, 3-8% slopes	B
BrE	Brayton sandy loam, 8-15% slopes	B
BrD	Brayton sandy loam, 15-35% slopes	B
BeE	Becket-Tunbridge complex, 8-15% slopes	E
BeD	Becket-Tunbridge complex, 15-35% slopes	E
BeE	Becket-Tunbridge complex, >35% slopes	E
BwE	Becket-Westbury complex, 8-15% slopes	C/D
BwD	Becket-Westbury complex, 15-35% slopes	C/D
EsB	Colonel-Skerry Complex, 3-8% slopes	C/D
EsE	Colonel-Skerry Complex, 8-15% slopes	C/D
EsD	Colonel-Skerry Complex, 15-35% slopes	C/D
Hi	Human Transported Material	N/A
LpA	Lyman sandy loam, poorly drained, 0-3% slopes	B
LpB	Lyman sandy loam, poorly drained, 3-8% slopes	B
LpC	Lyman sandy loam, poorly drained, 8-15% slopes	B
LtB	Lyman-Tunbridge-Rock Outcrop complex, 3-8% slopes	C/D
LtE	Lyman-Tunbridge-Rock Outcrop complex, 8-15% slopes	C/D
LtD	Lyman-Tunbridge-Rock Outcrop complex, 15-35% slopes	C/D
LtE	Lyman-Tunbridge-Rock Outcrop complex, >35% slopes	C/D
LtB	Lyman-Tunbridge-Becket complex, 8-15% slopes	C/D
LtD	Lyman-Tunbridge-Becket complex, 15-35% slopes	C/D
MeB	Monadnock fine sandy loam, 3-8% slopes	B

Classification Code	Soil Classification	Hydrologic Soil Group
MoC	Monadnock fine sandy loam, 8-15% slopes	B
MoD	Monadnock fine sandy loam, 15-35% slopes	B
MoE	Monadnock fine sandy loam, >35% slopes	B
MpA	Monadnock, poorly drained, 0-3% slopes	D
MpB	Monadnock, poorly drained, 3-8% slopes	D
MpD	Monadnock, poorly drained, 15-35% slopes	D
MtA	Monadnock-Tunbridge complex, 0-3% slopes	B/C
MtB	Monadnock-Tunbridge complex, 3-8% slopes	B/C
MtC	Monadnock-Tunbridge complex, 8-15% slopes	B/C
MtD	Monadnock-Tunbridge complex, 15-35% slopes	B/C
NaA	Naskeag sandy loam, 3-8% slopes	D
PbA	Peacham-Brayton complex, 0-3% slopes	D
PbB	Peacham-Brayton complex, 3-8% slopes	D
PmA	Peru-Marlow Complex, 0-3% slopes	C
PmB	Peru-Marlow Complex, 3-8% slopes	C
PmC	Peru-Marlow Complex, 8-15% slopes	C
PmD	Peru-Marlow Complex, 15-35% slopes	C
PmE	Peru-Marlow Complex, 35% slopes	C
ScC	Skerry-Colonel Complex, 8-15% slopes	C/D
ScD	Skerry-Colonel Complex, 15-35% slopes	C/D
TmD	Tunbridge-Monadnock complex, 15-35% slopes	B/C
TmE	Tunbridge-Monadnock complex, >35% slopes	B/C
TpA	Tunbridge, poorly drained, 0-3% slopes	D
TpB	Tunbridge, poorly drained, 3-8% slopes	D
TpC	Tunbridge, poorly drained, 8-15% slopes	D
TpD	Tunbridge, poorly drained, 15-35% slopes	D
TrC	Tunbridge-Lyman-Rock Outcrop complex, 8-15% slopes	C/D
TrD	Tunbridge-Lyman-Rock Outcrop complex, 15-35% slopes	C/D
TrE	Tunbridge-Lyman-Rock Outcrop complex, >35% slopes	C/D

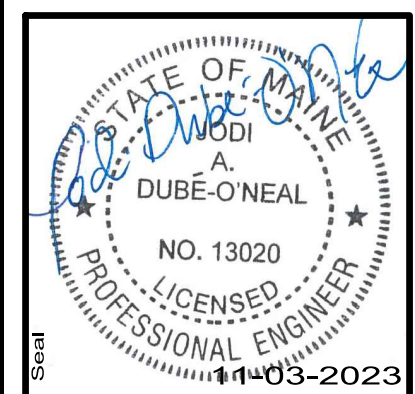


Rev	Date	By	Description

TWIN ENERGY LLC

Designated By: JAO
 Drawn By: SAW
 Date: 11/03/2023
 Scale: AS SHOWN
 Project Location: RUMFORD, MAINE
 Drawing Description: PRE-DEVELOPMENT STORMWATER PLAN

Approved: JAO
 Checked: BCH



381.20.01

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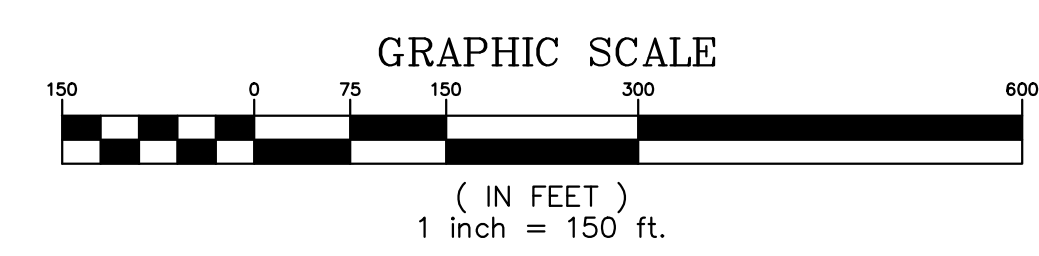
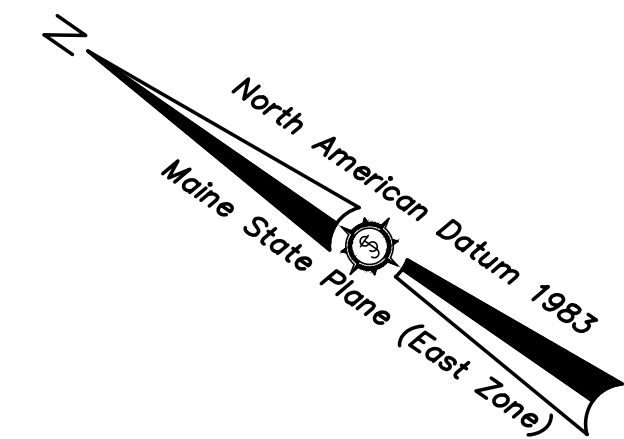
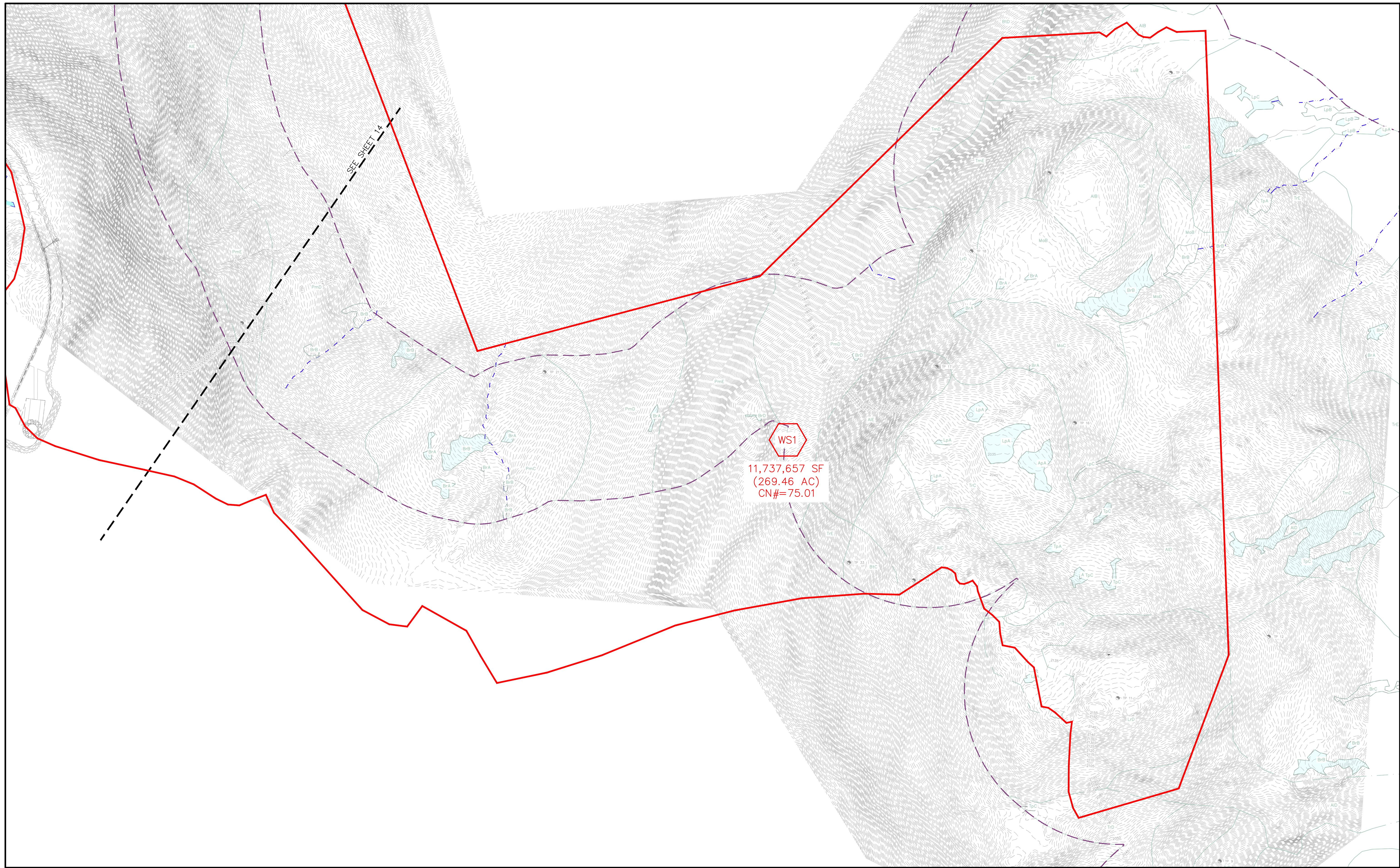
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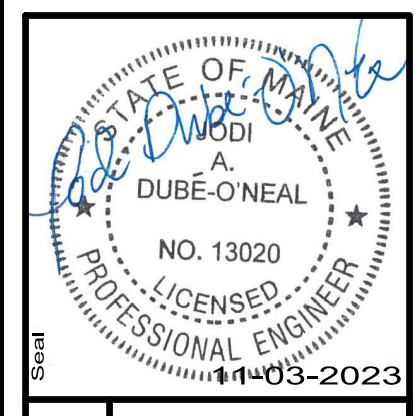
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Drawn By	Checked By
SAW	BCH

TWIN ENERGY LLC	
Designated By	JAO
Drawn By	SAW
Date	11/03/2023
Scale	AS SHOWN
Project Location	RUMFORD, MAINE
Drawing Description	PRE-DEVELOPMENT STORMWATER PLAN
Approved	JAO
Checked	BCH



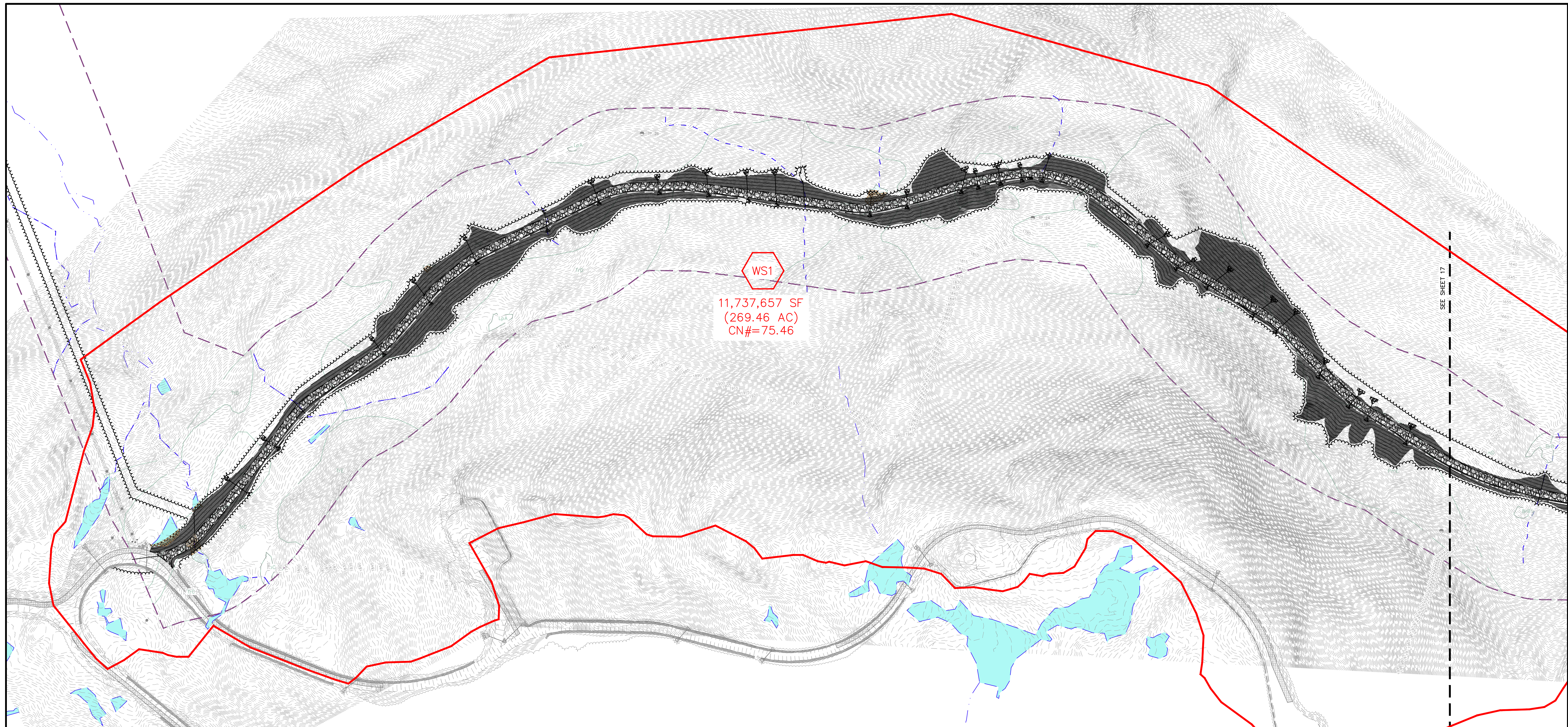
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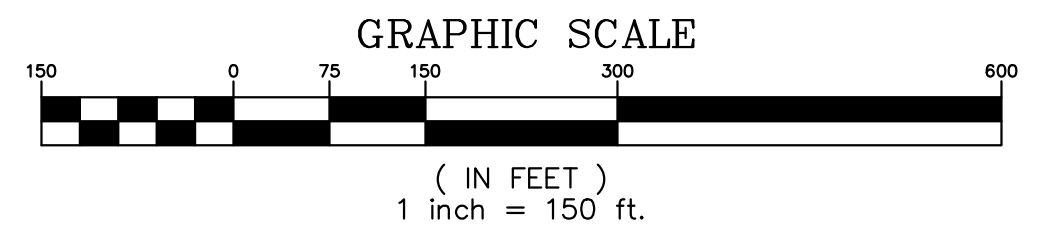
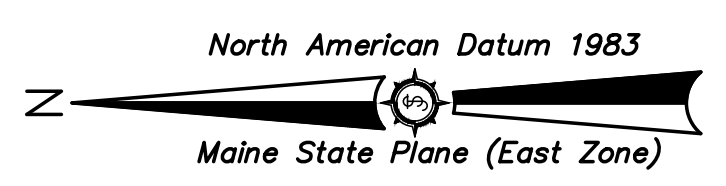
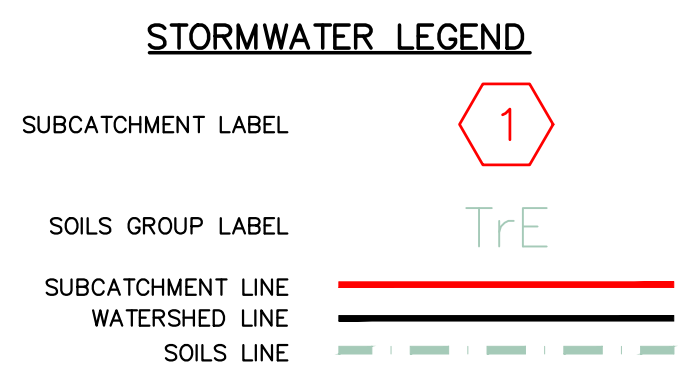
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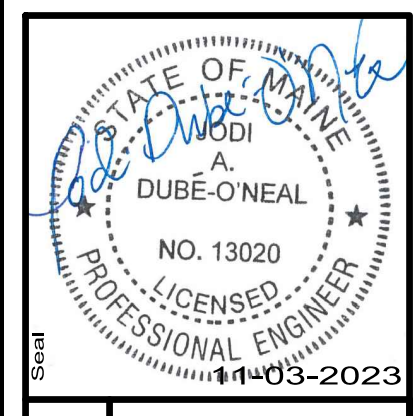
SOIL CLASSIFICATION		
Classification Code	Soil Classification	Hydrologic Soil Group
AlB	Abram-Lyman-Rock Outcrop complex, 15-35% slopes	D
AlC	Abram-Lyman-Rock Outcrop complex, 8-15% slopes	D
AlD	Abram-Lyman-Rock Outcrop complex, 15-35% slopes	D
AlE	Abram-Lyman-Rock Outcrop complex, >35% slopes	D
ApA	Abram poorly drained, 0-3% slopes	D
AtB	Abram-Tunbridge Complex, 3-8% slopes	C/D
AtD	Abram-Tunbridge Complex, 15-35% slopes	C/D
BrA	Brayton sandy loam, 0-3% slopes	D
BrB	Brayton sandy loam, 3-8% slopes	D
BrC	Brayton sandy loam, 8-15% slopes	D
BrD	Brayton sandy loam, 15-35% slopes	D
BtC	Becket-Tunbridge complex, 8-15% slopes	C
BtD	Becket-Tunbridge complex, 15-35% slopes	C
BE	Becket-Tunbridge complex, >35% slopes	C
BwC	Becket-Westbury complex, 8-15% slopes	C/D
BwD	Becket-Westbury complex, 15-35% slopes	C/D
CsB	Colonel-Skerry Complex, 3-8% slopes	C/D
CsC	Colonel-Skerry Complex, 8-15% slopes	C/D
CsD	Colonel-Skerry Complex, 15-35% slopes	C/D
HT	Human Transported Material	N/A
LpA	Lyman sandy loam, poorly drained, 0-3% slopes	D
LpB	Lyman sandy loam, poorly drained, 3-8% slopes	D
LpC	Lyman sandy loam, poorly drained, 8-15% slopes	D
LrB	Lyman-Tunbridge-Rock Outcrop complex, 3-8% slopes	C/D
LrC	Lyman-Tunbridge-Rock Outcrop complex, 8-15% slopes	C/D
LrD	Lyman-Tunbridge-Rock Outcrop complex, 15-35% slopes	C/D
LrE	Lyman-Tunbridge-Rock Outcrop complex, >35% slopes	C/D
LuB	Lyman-Tunbridge-Becket complex, 8-15% slopes	C/D
LuD	Lyman-Tunbridge-Becket complex, 15-35% slopes	C/D
MoB	Monadnock fine sandy loam, 3-8% slopes	B

SOIL CLASSIFICATION		
Classification Code	Soil Classification	Hydrologic Soil Group
MoC	Monadnock fine sandy loam, 8-15% slopes	B
MoD	Monadnock fine sandy loam, 15-35% slopes	B
MoE	Monadnock fine sandy loam, >35% slopes	B
MpA	Monadnock, poorly drained, 0-3% slopes	D
MpB	Monadnock, poorly drained, 3-8% slopes	D
MpD	Monadnock, poorly drained, 15-35% slopes	D
MtA	Monadnock-Tunbridge complex, 0-3% slopes	B/C
MtB	Monadnock-Tunbridge complex, 3-8% slopes	B/C
MtC	Monadnock-Tunbridge complex, 8-15% slopes	B/C
MtD	Monadnock-Tunbridge complex, 15-35% slopes	B/C
NaA	Naskeag sandy loam, 3-8% slopes	D
PbA	Peacham-Brayton complex, 0-3% slopes	D
PbB	Peacham-Brayton complex, 3-8% slopes	D
PmA	Peru-Marlow Complex, 0-3% slopes	C
PmB	Peru-Marlow Complex, 3-8% slopes	C
PmC	Peru-Marlow Complex, 8-15% slopes	C
PmD	Peru-Marlow Complex, 15-35% slopes	C
PmE	Peru-Marlow Complex, 35% slopes	C
ScC	Skerry-Colonel Complex, 8-15% slopes	C/D
ScD	Skerry-Colonel Complex, 15-35% slopes	C/D
TmD	Tunbridge-Monadnock complex, 15-35% slopes	B/C
TmE	Tunbridge-Monadnock complex, >35% slopes	B/C
TpA	Tunbridge, poorly drained, 0-3% slopes	D
TpB	Tunbridge, poorly drained, 3-8% slopes	D
TpC	Tunbridge, poorly drained, 8-15% slopes	D
TpD	Tunbridge, poorly drained, 15-35% slopes	D
TrC	Tunbridge-Lyman-Rock Outcrop complex, 8-15% slopes	C/D
TrD	Tunbridge-Lyman-Rock Outcrop complex, 15-35% slopes	C/D
TrE	Tunbridge-Lyman-Rock Outcrop complex, >35% slopes	C/D



Drawn By	Checked
SAW	BOH

TWIN ENERGY LLC	
Designated By	JAO
Drawn By	SAW
Date	11/03/2023
Scale	AS SHOWN
Project Location	RUMFORD, MAINE
Drawing Description	POST-DEVELOPMENT STORMWATER PLAN
Approved	JAO
Checked	BOH



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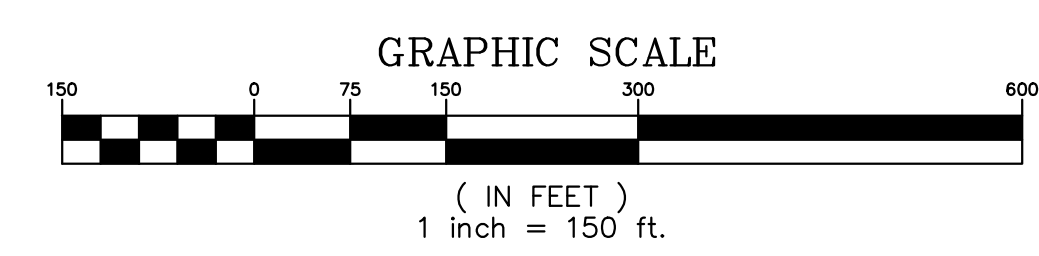
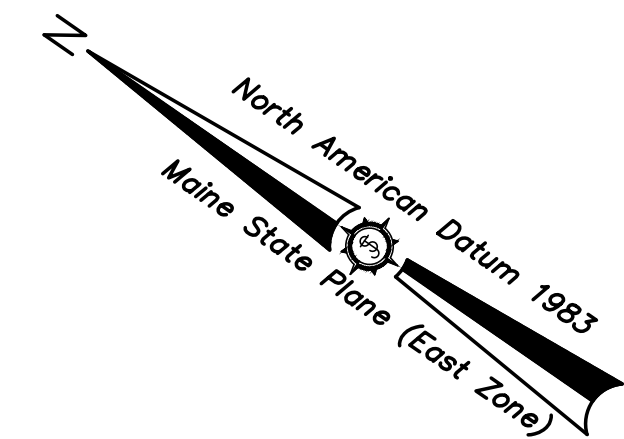
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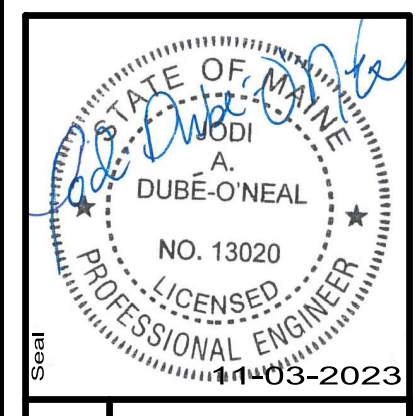
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Drawn By	Checked By
SAW	BCH

TWIN ENERGY LLC	
DESIGNED BY	JAO
DRAWN BY	SAW
DATE	11/03/2023
PROJECT LOCATION	RUMFORD, MAINE
SCALE	AS SHOWN
APPROVED BY	JAO
CHECKED BY	BCH
POST-DEVELOPMENT STORMWATER PLAN	



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