



**2023 ROADWAY IMPROVEMENT PROJECT  
Duston Road Reconstruction  
SALEM, NH**

**ADDENDUM No. 1**

**January 23, 2023**

This Addendum forms part of the Bidding and Contract Documents and modifies the Drawings and Contract and Specifications for the 2023 Roadway Improvement Project – Duston Road. The items set forth herein, whether of omission, addition, substitution or clarification, are all to be included in and shall form part of the proposed work and Bids submitted to the Town of Salem, New Hampshire. Inclusion of this Addendum shall be acknowledged by inserting its number in the space provided in the Bid Proposal form (Section 00301A). Failure to acknowledge any and all addenda in the above specified Bid Proposal form may be cause for rejection of the bid by the Owner on the grounds that it is not responsive.

**ADDEDNDUM No. 1**

Bidders are advised the following clarifications and changes are hereby incorporated into the CONTRACT DOCUMENTS AND SPECIFICATIONS:

1. **Bid Opening Date** – is hereby revised to **February 2, 2023 at 11:00 AM**

**The bid opening date has been revised to permit perspective bidders additional time to coordinate quotes from subcontractors and vendors due to corrections on the bid sheets.**

2. **Insert** the attached Contract Drawings in the CONTRACT DOCUMENTS AND SPECIFICATIONS and **Discard** the original version of the Contract Drawings.

**The revised Contract Drawings provide minor additions and clarifications on items. Each item is clouded and noted as revision No.1. There is also a minor profile adjustment. For convenience the entire plan set is being reissued.**

3. **Insert** the attached Section 00301A (Bid) in the CONTRACT DOCUMENTS AND SPECIFICATIONS and **Discard** the original version of Section 00301A.

**The revised document provides for inclusion of missing items inadvertently omitted. The revision further adjusts quantity and units for several items.**



4. **Insert** the attached Quantity Breakdown by Street and Roadway Quantity Summary in the CONTRACT DOCUMENTS AND SPECIFICATIONS and **Discard** the original versions located in Appendix B.

**The revised documents provide for inclusion of missing items inadvertently omitted. The revision further adjusts the quantity for several items.**

5. **NHDOT Special** Attention references to Asphalt Cement Adjustment are hereby deleted from the Table of Contents and Notice to Special Attentions. This Contract provides for Asphalt Cement Adjustment through Special Provision item number 1010.2.

6. **Insert** the attached Special Provision – 572.99 Stone Wall reset in the CONTRACT DOCUMENTS AND SPECIFICATIONS.

**The attached document was inadvertently omitted from the Contract Documents. It defines scope and payment for a stone wall to be reset on London Road.**

7. **Insert** the attached Special Provision – 651 Trees and Shrubs in the CONTRACT DOCUMENTS AND SPECIFICATIONS.

**The attached document was inadvertently omitted from the Contract Documents. It defines scope and payment for trees and shrubs shown on London Road.**

8. **Insert** the attached NHDOT Special Attentions into the CONTRACT DOCUMENTS AND SPECIFICATIONS.

**The attached documents were inadvertently omitted from the Contract Documents. Special Attentions include 2010 Notice for Supplemental Specifications, 2010 Notice for Errata Sheet, and Qualified Product List.**

9. See attached Pre-Bid meeting agenda from January 11, 2023, prebid meeting.

**Pre-Bid Questions/Answers:**

1. Item 410.22 Tack Coat is listed by the SY will it be changed to Gallon or Item deleted (Subsidiary to the Paving Items?) as it is not on the other projects?

**This item hereby deleted. It is subsidiary to paving items.**

2. There is no Item for Remove and Reset Fire Hydrant.

**The revised bid sheets add an item for remove and reset hydrant.**

3. No Item for Item 508 Granular backfill. Referenced on sheet 6 note #1 for replacement for ledge removal.

**A clarification note has been added to the typical section on Sheet 6. Where excess reclaim is available at the project site it will be used and paid as embankment (Item 203.6). Where excess reclaim is not available the Contractor will utilize crushed stone fine (Item 304.4).**

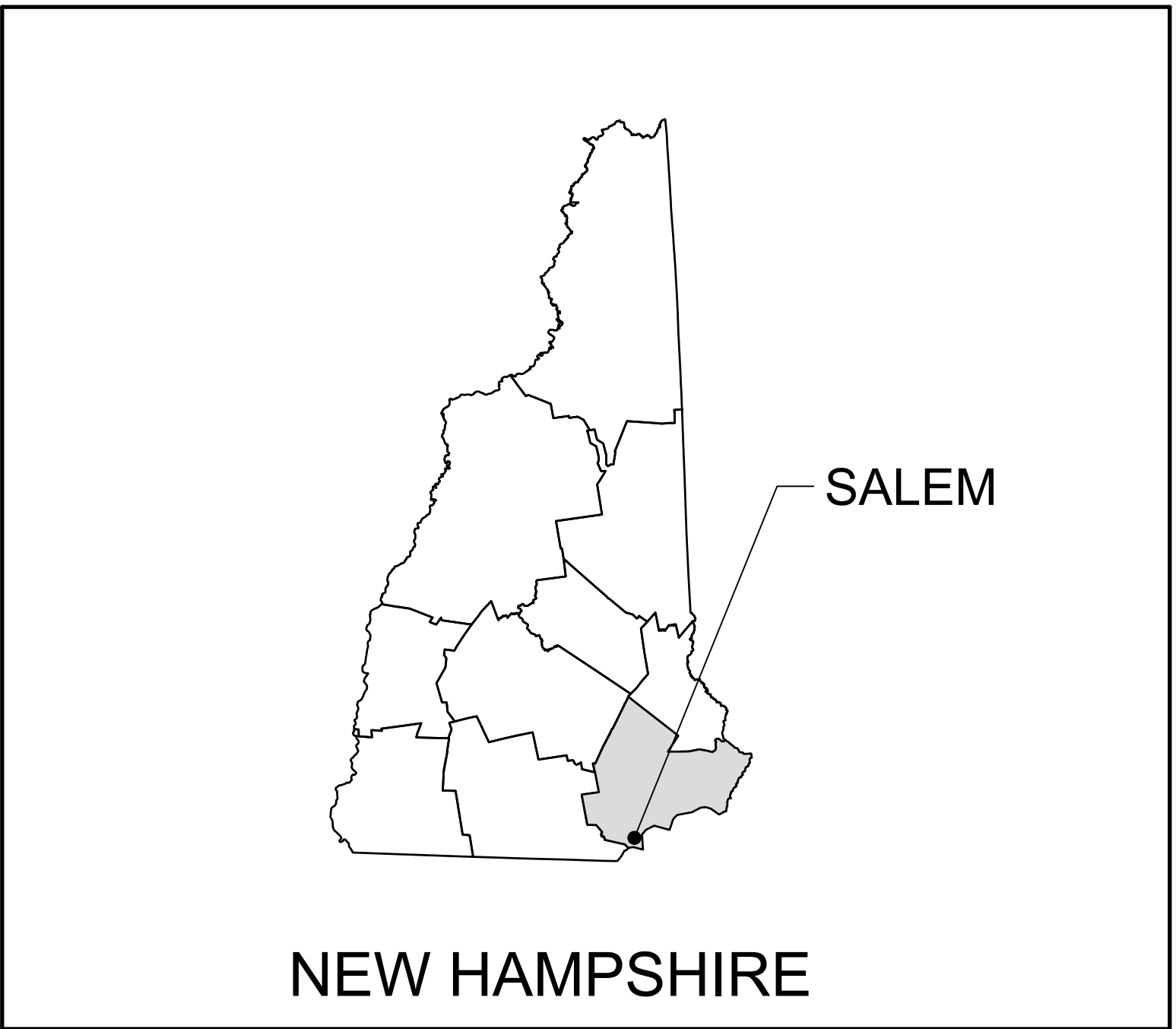
4. No Item for shoulder gravel on the Road (Item 304.32 Shoulder Gravel). Note #2 on Sheet 6 states reclaim level with Binder, does NOT mention shoulder gravel and typical only show loam to EOP.

**The typical detail shows loam to the EOP on top of the binder flush reclaim which is correct. The contract provides for loam and seed to the edge of pavement in non-curbed sections of road. Note #2 has been modified to change the intent. In areas that are not front lawn areas or curbed then a 2-foot gravel shoulder shall be provided. It is the intent of the plan to utilize the reclaim windrow to backup the edge of pavement after the binder pavement is placed. The operation will be subsidiary to the reclaim and grading operations. If there is not sufficient windrow available, then excess reclaim shall be utilized and paid as embankment (Item 203.6). If there is not sufficient excess reclaim available, then the contractor shall place crushed stone fine (Item 304.4).**

**\*\*END OF ADDENDUM NO. 1\*\***

# TOWN OF SALEM

## 2023 ROADWAY IMPROVEMENT PROJECT

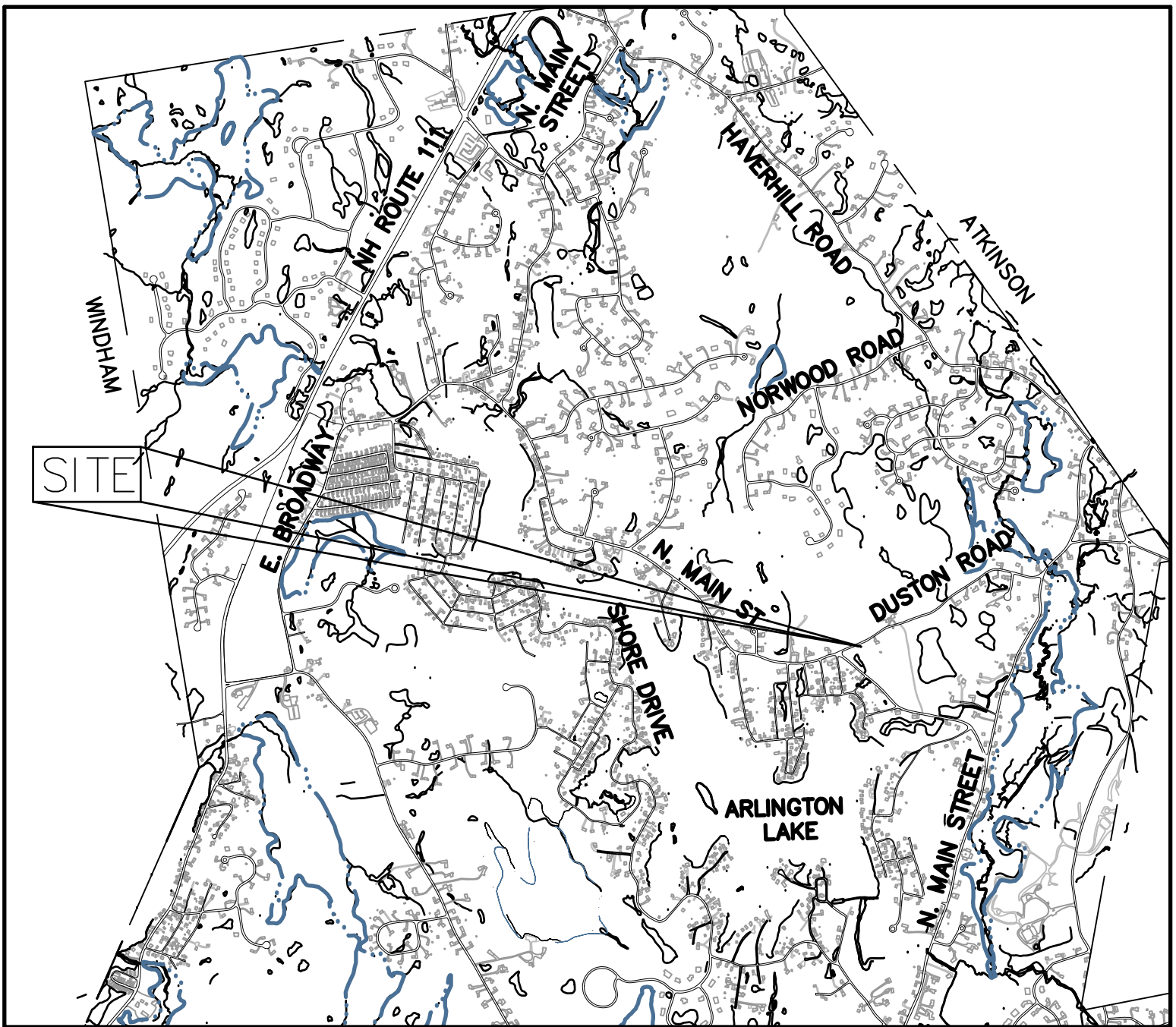


NEW HAMPSHIRE

LOCATION MAP

### BID DOCUMENTS DECEMBER 2022

DUSTON ROAD, SALEM NH  
ROCKINGHAM COUNTY  
SALEM, NEW HAMPSHIRE



VICINITY MAP

PREPARED FOR:

TOWN OF SALEM  
33 GEREMONTY DRIVE  
NEW HAMPSHIRE  
(603)890-2033

[HTTPS://WWW.TOWNOFSALEMNH.ORG](https://www.townofsalemn nh.org)



THE LOCATION OF ANY UTILITY INFORMATION SHOWN ON THIS PLAN IS APPROXIMATE. THE TOWN OF SALEM, NH MAKES NO CLAIM TO THE ACCURACY OR COMPLETENESS OF UTILITIES SHOWN. 72 HOURS PRIOR TO ANY EXCAVATION ON SITE. THE CONTRACTOR SHALL CONTACT DIG SAFE AT 1-888-DIG-SAFE.

PREPARED BY:



**McFarland Johnson**

53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

MJ PROJECT NO.: 18900.03

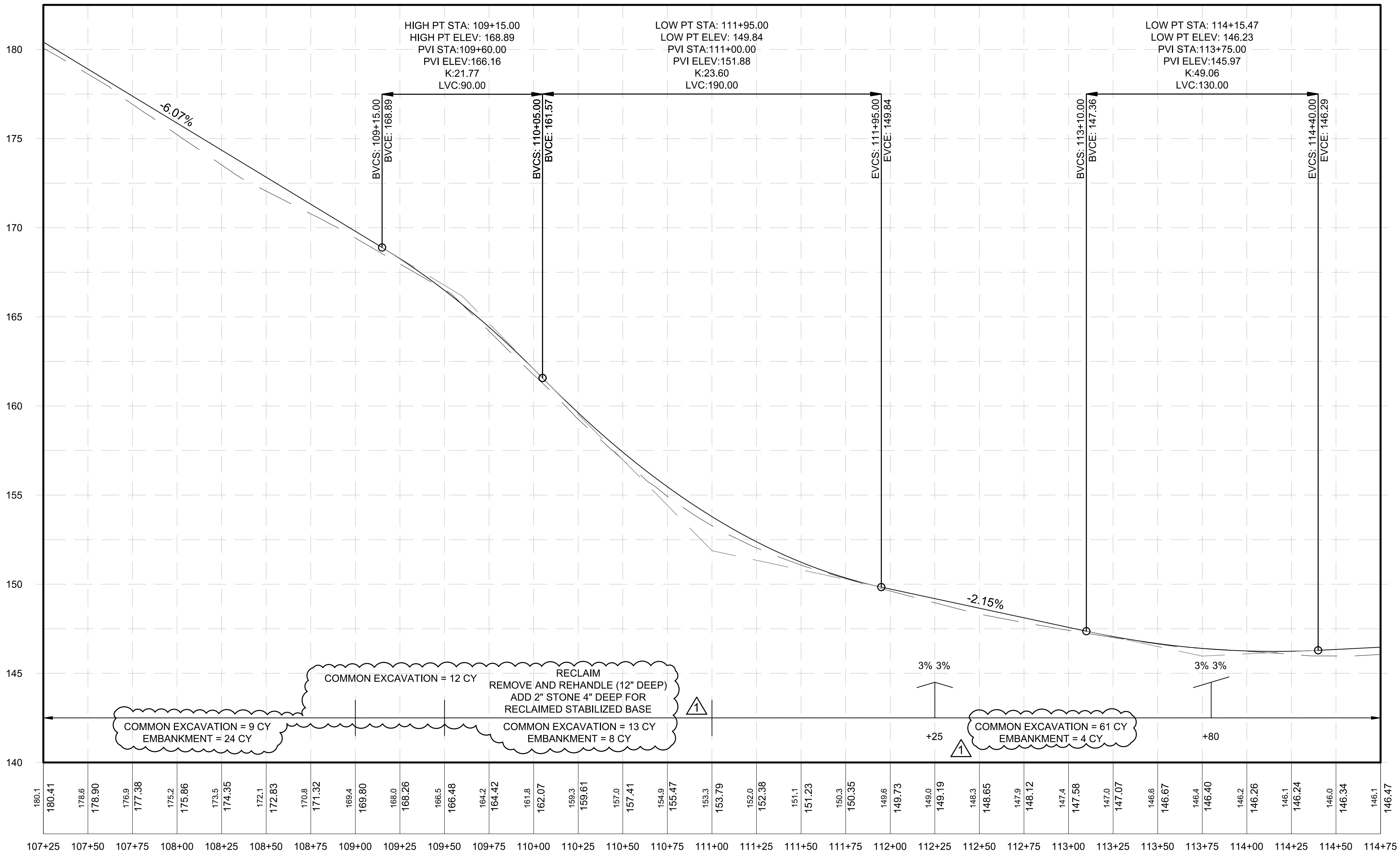
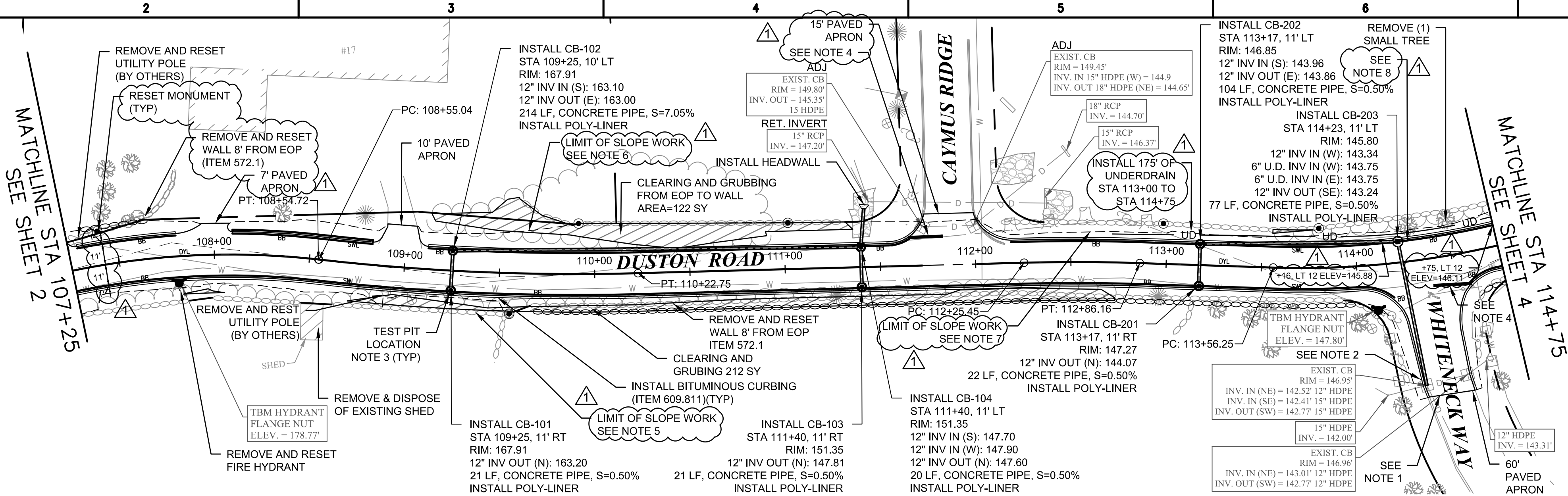
SHEET LIST TABLE	
SHEET NUMBER	SHEET TITLE
1	COVER
2-5	DUSTON PLAN AND PROFILE
6-12	CIVIL DETAILS
13-28	DUSTON CROSS SECTIONS

IT IS A VIOLATION OF THE LAW FOR ANY PERSON, UNLESS ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR, TO ALTER AN ITEM IN ANY WAY. IF AN ITEM BEARING THE STAMP OF A LICENSED PROFESSIONAL IS ALTERED, THE ALTERING ENGINEER, ARCHITECT, LANDSCAPE ARCHITECT, OR LAND SURVEYOR SHALL STAMP THE DOCUMENT AND INCLUDE THE NOTATION "ALTERED BY" FOLLOWED BY THEIR SIGNATURE, THE DATE OF SUCH ALTERATION, AND A SPECIFIC DESCRIPTION OF THE ALTERATION.

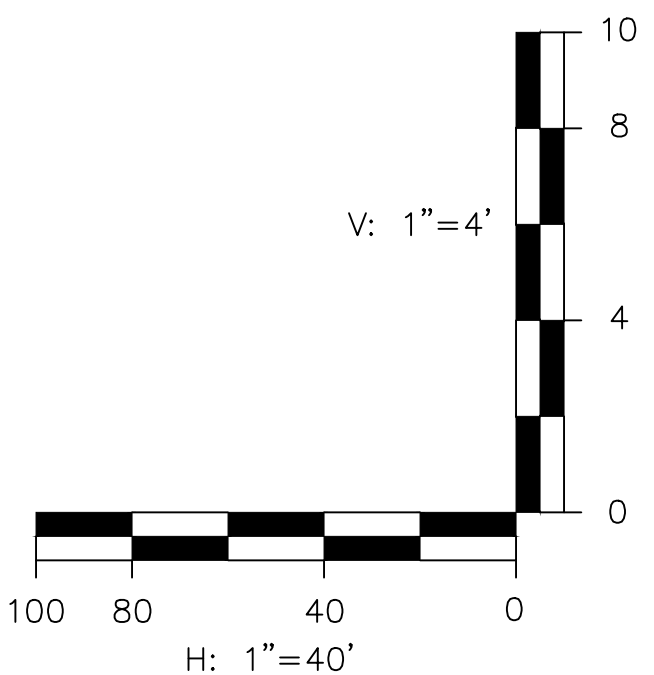








- NOTES
- CONSTRUCT TIE IN ON WHITENECK WAY WITH 12" RECLAIM.
  - CORE EXISTING STRUCTURE FOR 12" RCP FROM CB-203 INV=142.86'.
  - VERIFY ELEVATION AND LOCATION OF EXISTING WATER MAIN AT ALL PROPOSED PIPE CROSSINGS AND PROFILE CUT LOCATIONS.
  - RETAIN STREET NAME SIGN, STOP SIGN AND INSTALL 18" STOP BAR.
  - SLOPE WORK FROM STA 107+25 TO STA 114+75 RT
    - COMMON EXCAVATION = 5 CY
    - EMBANKMENT = 17 CY
  - SLOPE WORK FROM STA 107+25 TO STA 112+50 LT
    - COMMON EXCAVATION = 3 CY
    - EMBANKMENT = 35 CY
  - SLOPE WORK FROM STA 112+50 TO STA 114+75 LT
    - EMBANKMENT = 10 CY
  - GRADING INTENT: ADJUST CURBLINE LOW POINT TO STA. 114+23, LT TO AVOID DRAIN LINE CONFLICT WITH UTILITY POLE AT STA. 114+17, RT.



BID DOCUMENTS

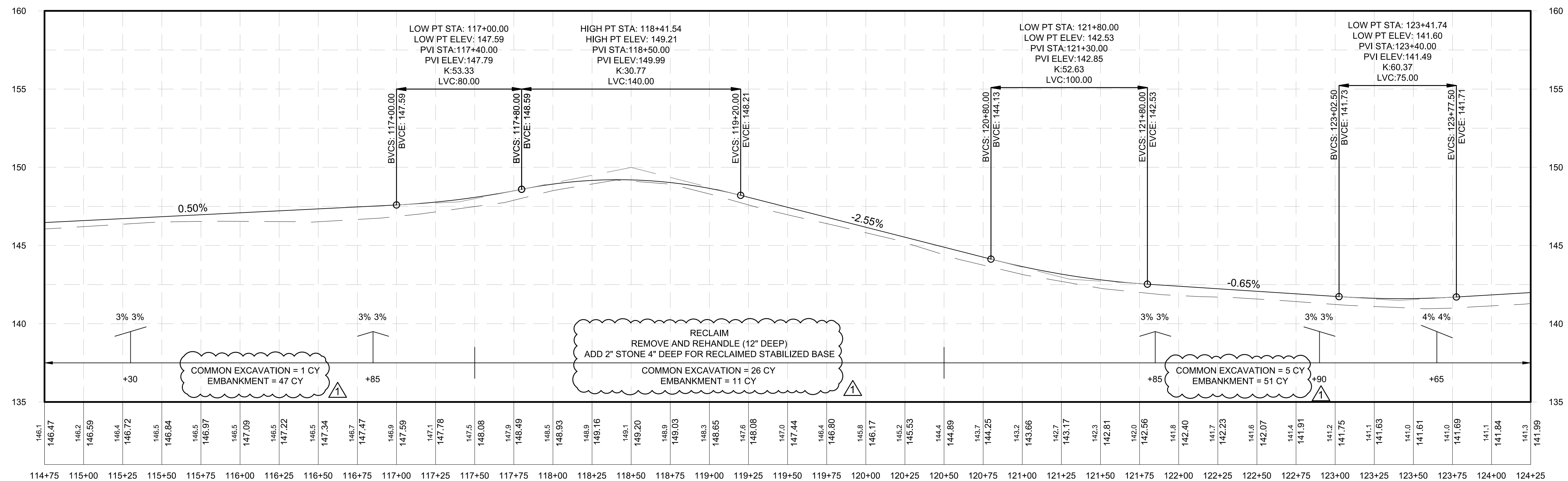
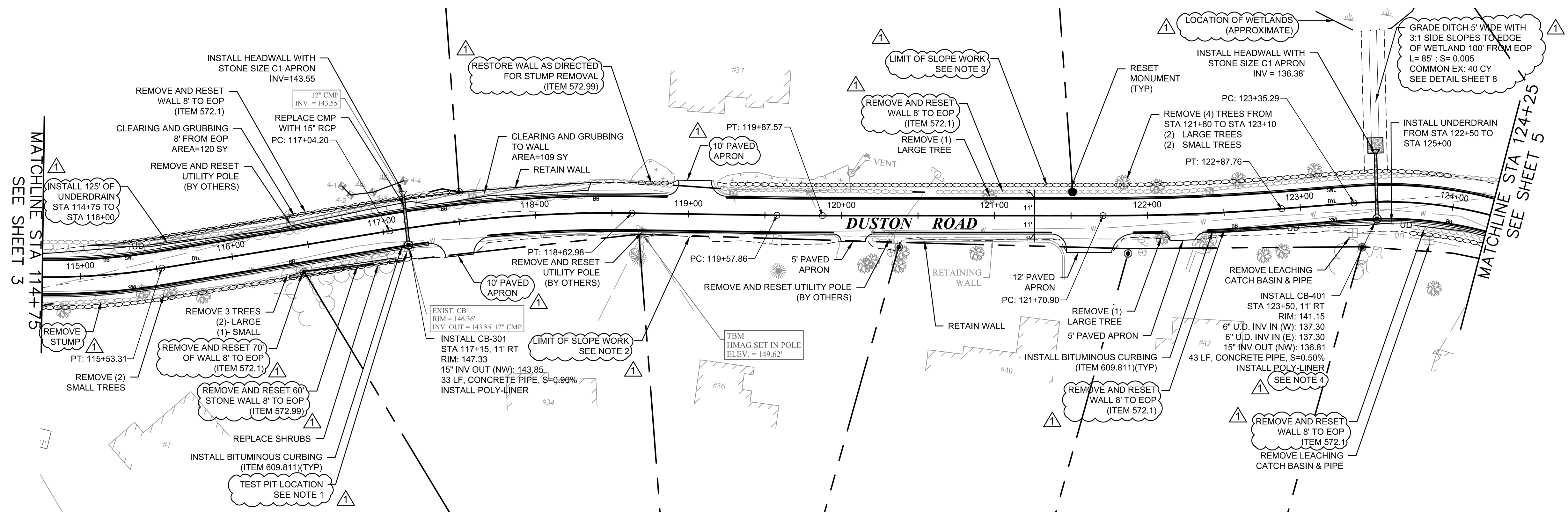
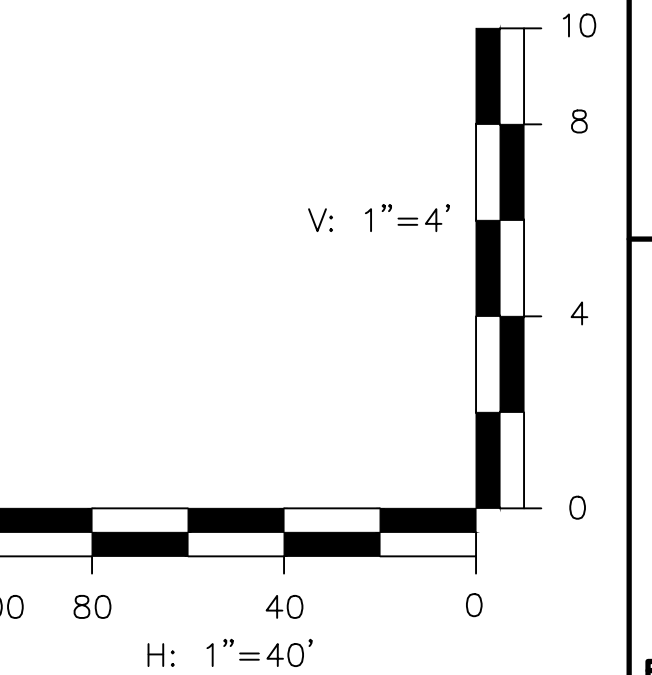


REV	DATE	DESCRIPTION	FPS	BY
1	1/23/23	ADDENDUM 1		

**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

<b>TOWN OF SALEM</b> <b>SALEM, NEW HAMPSHIRE</b> <b>2023 ROADWAY IMPROVEMENT</b> <b>PROJECT DUSTON ROAD</b> <b>DUSTON ROAD PLAN AND PROFILE</b> <b>STA 107+25 TO STA 114+75</b>		
SCALE: 1"=40'	DESIGN: FPS	3 3 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	




$$r: 1''=4'$$



- NOTES

  1. VERIFY ELEVATION AND LOCATION OF EXISTING WATER MAIN AT ALL PROPOSED PIPE CROSSINGS AND PROFILE CUT LOCATIONS.
  2. SLOPE WORK FROM STA 114+75 TO STA 124+25 RT
    - EMBANKMENT = 51 CY
  3. SLOPE WORK FROM STA 114+75 TO STA 124+25 LT
    - EMBANKMENT = 150 CY
  4. DUE TO SUPERELEVATION TRANSITION CB-401 IS NOT LOCATED AT PROFILE LOW POINT. SUPERELEVATED LOW POINT IS AT STA. 123+50, RT 12.

## BID DOCUMENTS



1/	1/23/23	ADDENDUM 1	FPS
REV	DATE	DESCRIPTION	BY



# McFarland Johnson

53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

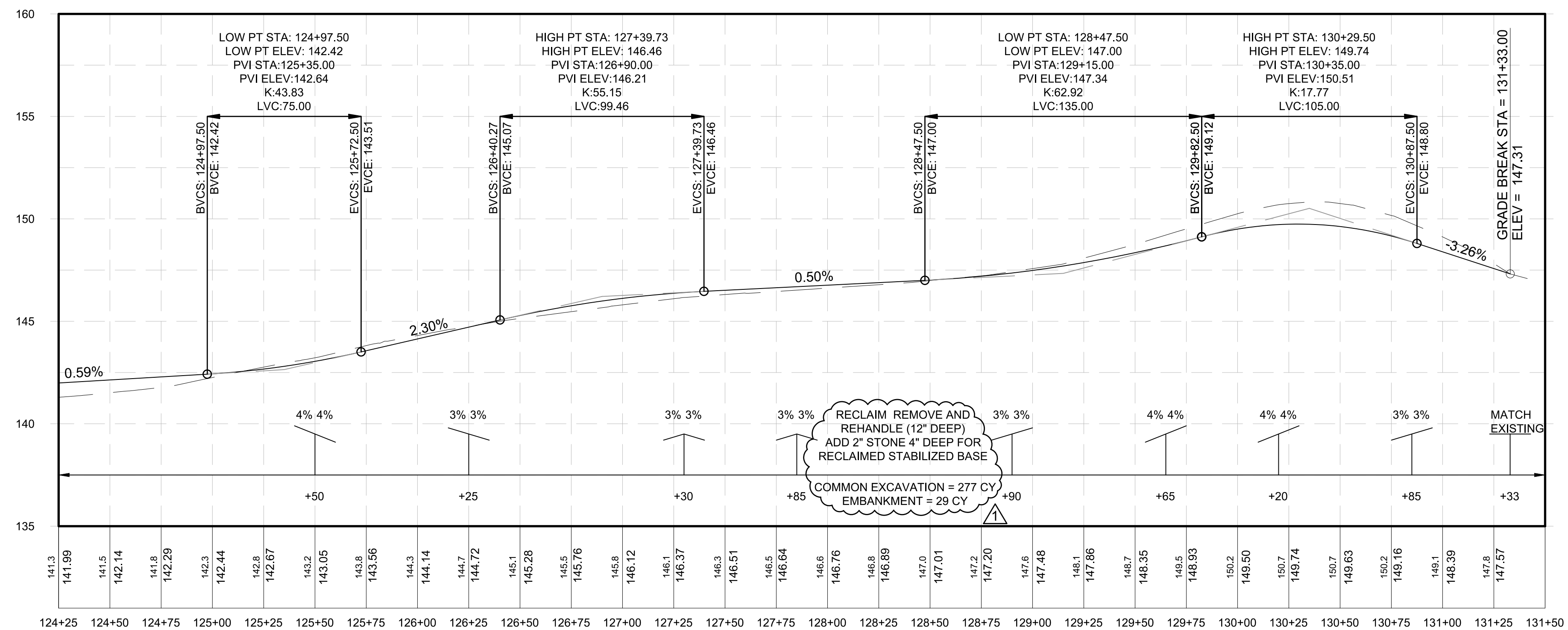
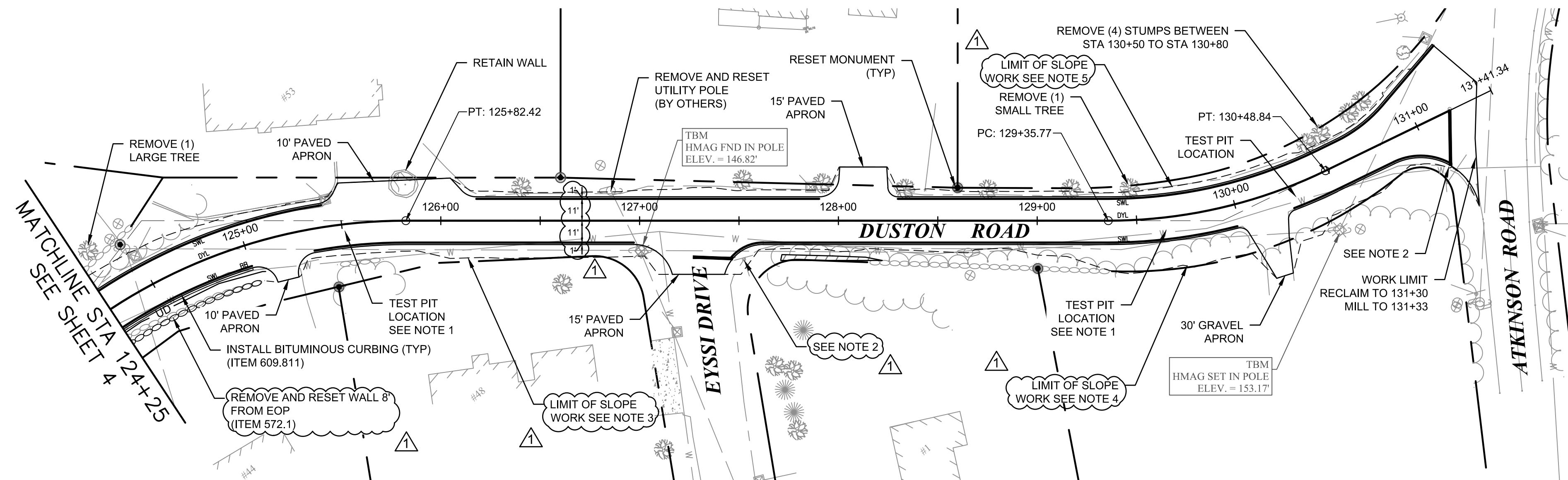
**TOWN OF SALEM**  
**SALEM, NEW HAMPSHIRE**  
**2023 ROADWAY IMPROVEMENT**  
**PROJECT DUSTON ROAD**

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**DUSTON ROAD PLAN AND PROFILE**  
**STA 114+75 TO STA 124+25**

SCALE: 1"=40'	DESIGN: FPS	<div style="text-align: center;"> <b>4</b> </div> <div style="text-align: center;"> 4 OF 28 </div>
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	






1. NOTES

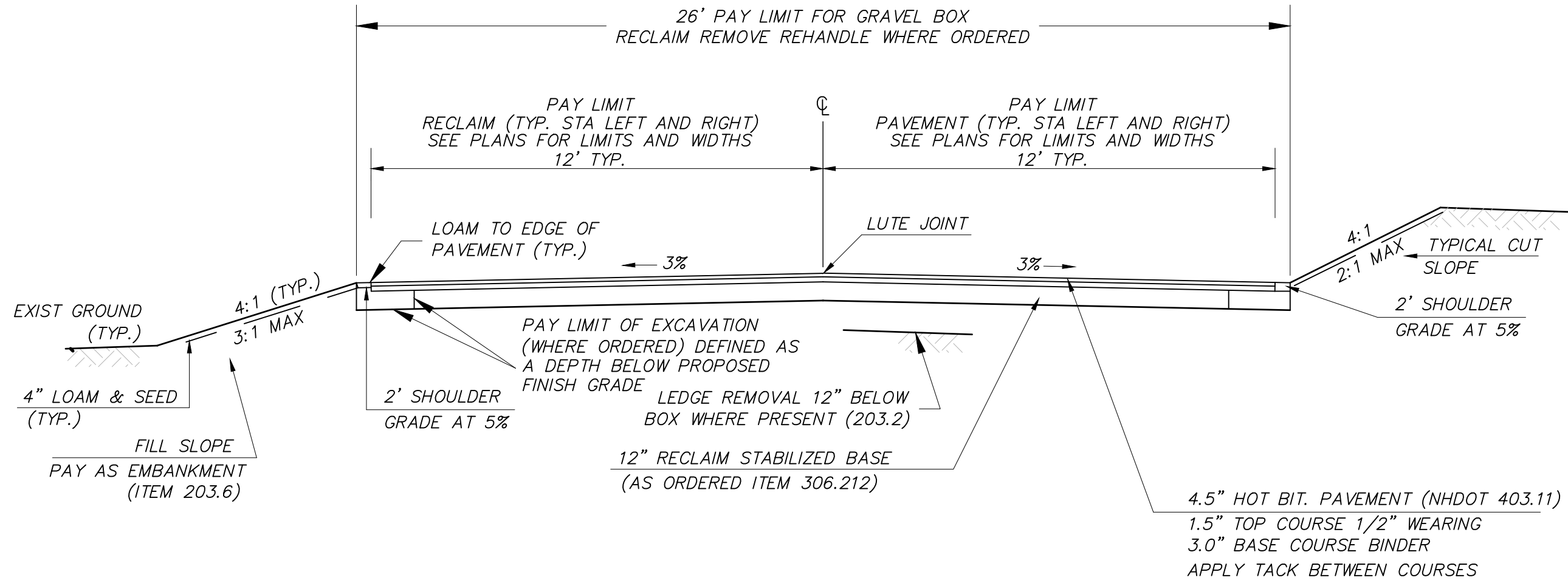
  1. VERIFY ELEVATION AND LOCATION OF EXISTING WATER MAIN AT ALL PROPOSED PIPE CROSSINGS AND PROFILE CUT LOCATIONS.
  2. RETAIN STREET NAME SIGN, STOP SIGN AND INSTALL 18" STOP BAR.
  3. SLOPE WORK FROM STA 124+25 TO STA 127+25 RT
    - COMMON EXCAVATION = 3 CY
    - EMBANKMENT = 7 CY
  4. SLOPE WORK FROM STA 127+25 TO STA 131+33 RT
    - COMMON EXCAVATION = 33 CY
    - EMBANKMENT = 1 CY
  5. SLOPE WORK FROM STA 124+25 TO STA 131+33 LT
    - COMMON EXCAVATION = 11 CY
    - EMBANKMENT = 17 CY

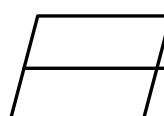
## BID DOCUMENTS

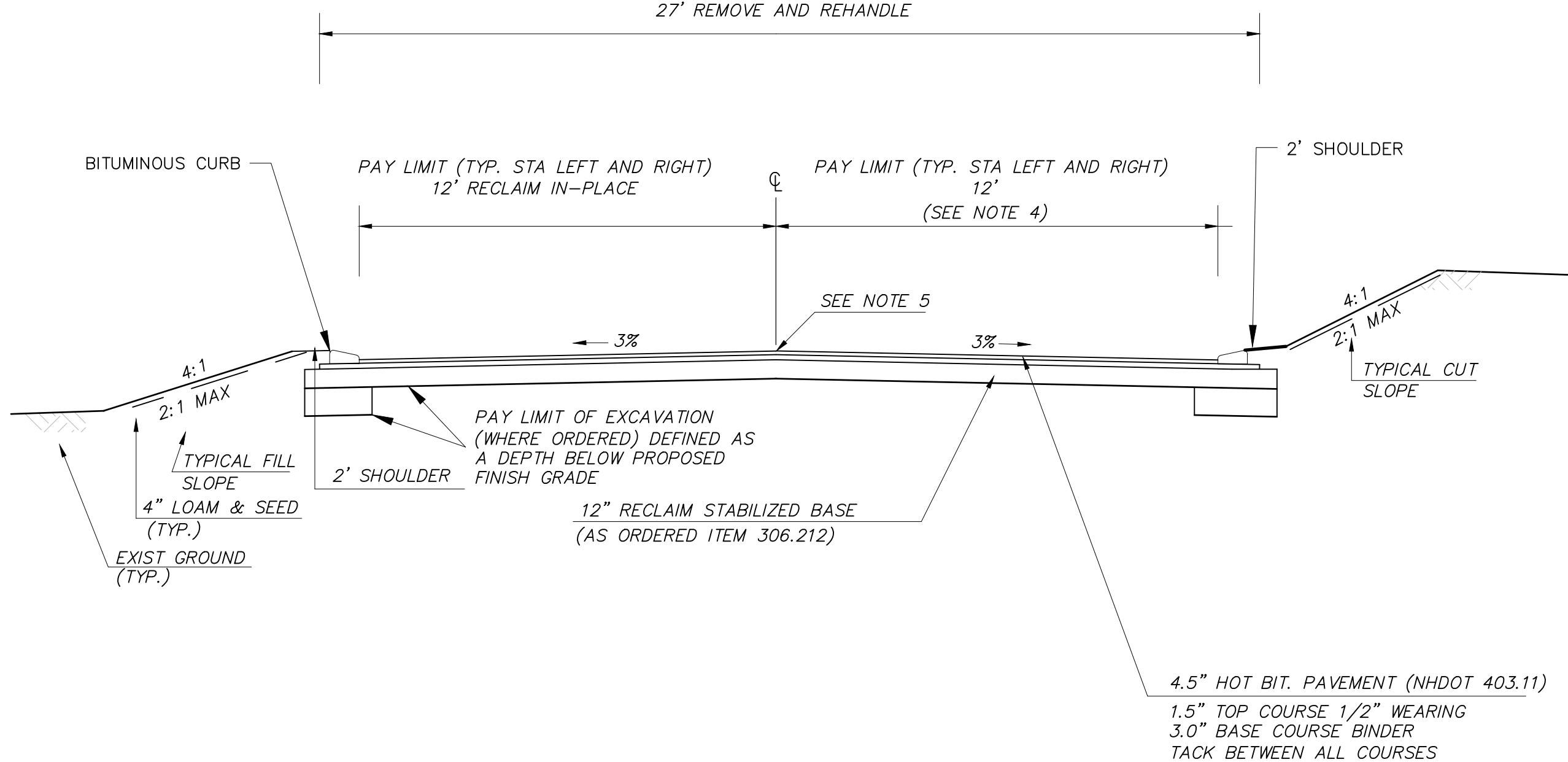


				<b>TOWN OF SALEM</b> <b>SALEM, NEW HAMPSHIRE</b> <b>2023 ROADWAY IMPROVEMENT</b> <b>PROJECT DUSTON ROAD</b>			
				<b>DUSTON ROAD PLAN AND PROFILE</b> <b>STA 124+25 TO STA 131+33</b>			
 <b>McFarland Johnson</b> 53 REGIONAL DRIVE CONCORD, NEW HAMPSHIRE 03301				SCALE: 1"=40' DRAWN: FPS CHECKED: MKM		DESIGN: FPS PROJECT: 18900.02 DATE: DECEMBER 2022	
						<b>5</b> 5 OF 28	

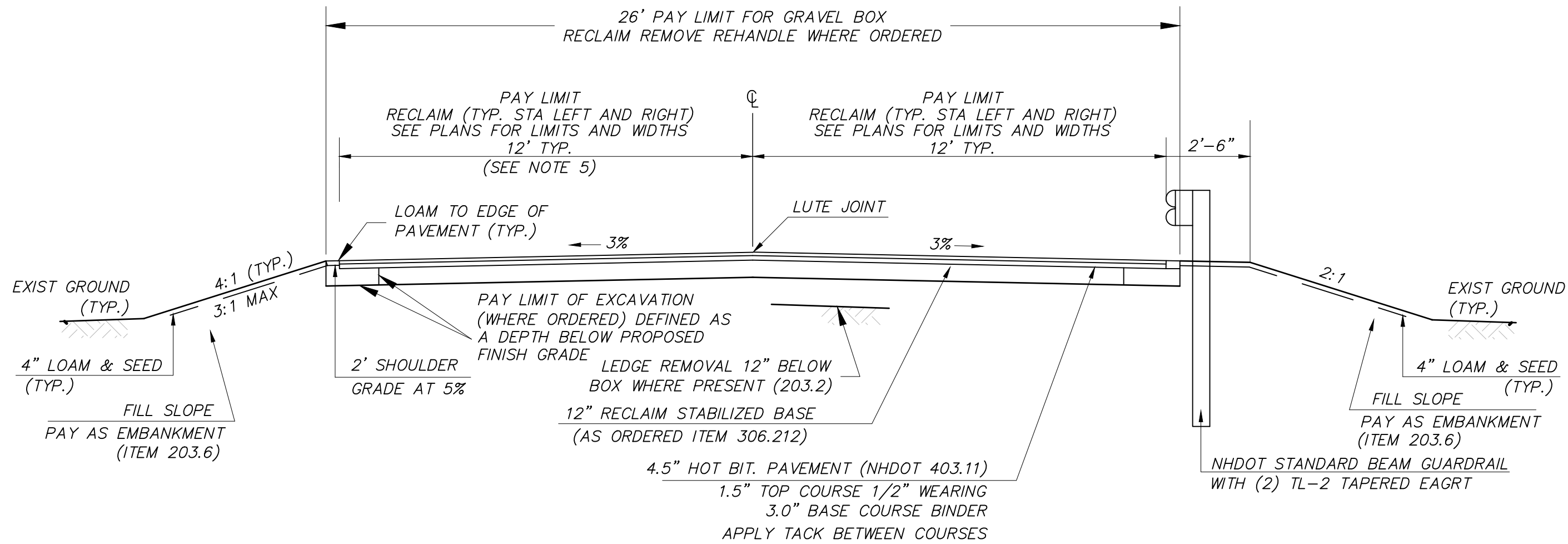


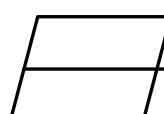


 **Duston Road Typical Roadway Section**  
STA 100+00 TO 101+25  
STA 119+00 TO 122+50  
STA 125+00 TO 131+33  
NO SCALE



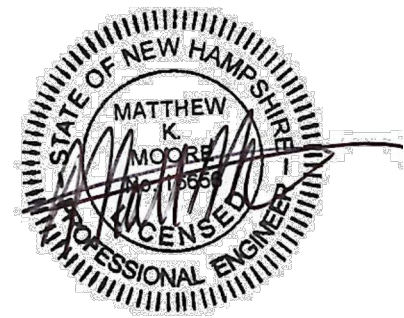
 **Duston Road Typical Curbed Roadway Section**  
STA 103+00 TO 119+00  
STA 122+50 TO 125+00  
NO SCALE



 **Duston Road Typical Roadway Section**  
STA 101+25 TO 103+00  
NO SCALE

- NOTES:
1. STRUCTURAL FILL (ITEM 508) SHALL BE REPLACED WITH RECLAIM WHEN AVAILABLE AND PAID AS 203.6, REPLACED WITH AND PAID AS CRUSHED STONE (FINE) 304.4 WHEN RECLAIM IS NOT AVAILABLE, AND COMPACTED IN AREAS OF LEDGE REMOVAL BELOW THE GRAVEL BOX.
  2. RECLAIM FOR SHOULDER GRAVEL: IT IS THE INTENT OF THIS PLAN TO UTILIZE THE WINDROW FROM FINE GRADE OPERATIONS FOR SHOULDER GRADING. IT SHALL BE INCIDENTAL TO FINE GRADING AND RECLAIM ACTIVITIES. AT FRONT LAWN AREAS THE WIND ROAD SHALL BE GRADED FLUSH TO BINDER. IN AREAS WITHOUT CURB AND NON-FRONT LAWNS THE WINDROW SHALL BE GRADED FLUSH TO FINISH PAVEMENT. WHERE THE RECLAIM WINDROW IS INSUFFICIENT AND ADDITIONAL MATERIAL IS NEEDED IT SHALL BE PAID AS ITEM 203.6 WHERE EXCESS PROJECT RECLAIM IS USED. USE CRUSHED STONE FINE (ITEM 304.4) IF SUFFICIENT EXCESS RECLAIM IS NOT AVAILABLE.
  3. ALL SEAMS AND JOINTS SHALL BE RAKED AND LUTED PRIOR TO COMPACTION AND ROLLING.
  4. SECTION TO BE MODIFIED AS APPROPRIATE TO PROVIDE FOR BITUMINOUS BERM WHERE SHOWN ON PLANS. SEE BITUMINOUS BERM DETAIL FOR CONSTRUCTION.

BID DOCUMENTS



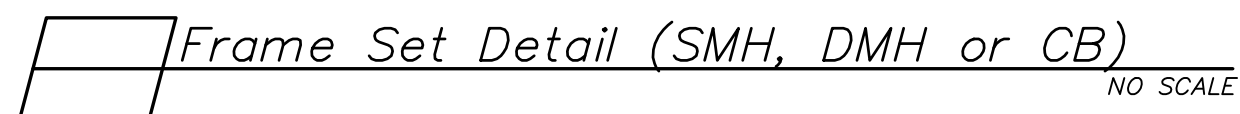
 **McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

TOWN OF SALEM			
SALEM, NEW HAMPSHIRE			
2023 ROADWAY IMPROVEMENT			
PROJECT DUSTON ROAD			
CIVIL DETAILS (SHEET 1 OF 7)			
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CHECKED:	MKM	DATE:	DECEMBER 2022

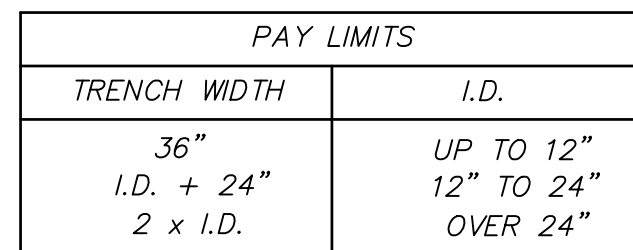
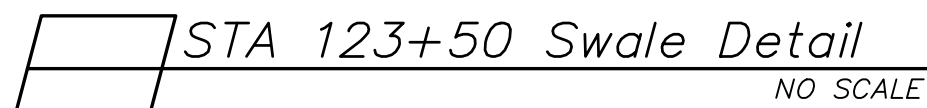
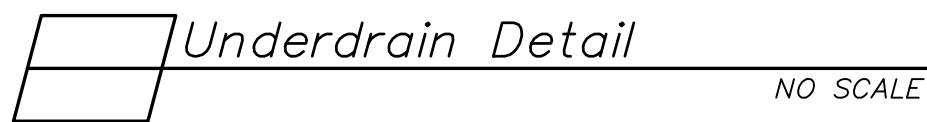


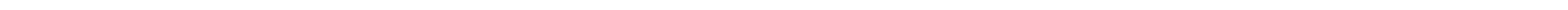




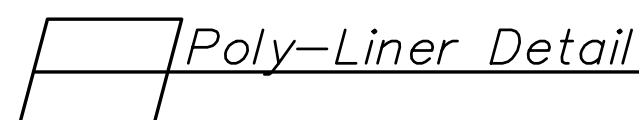


1. ALL STANDARD CATCH BASINS SHALL BE OUTFITTED WITH A POLYETHYLENE LINER DOWNSPOUT. EXCEPTIONS MAY APPLY. REFER TO SPECIFIC STRUCTURE TYPE AND CORRESPONDING CONSTRUCTION DETAILS (I.E. DOUBLE GRATE CB, "C-TOP" CB, DROP INLET, ETC.).
2. PLACE MORTAR TO 4" BELOW THE TOP OF GRATE ELEVATION (SUBSIDIARY TO STRUCTURE ITEM).
3. BRICK MORTAR: COMPLETELY FILL AND TROWEL ANNULAR SPACE BETWEEN ALL BRICKS. MORTAR BED BETWEEN BRICK SHALL BE  $\frac{3}{4}$ " TO  $\frac{3}{4}$ " THICK. FACE JOINTS SHALL AVERAGE  $\frac{1}{4}$ " BUT NOT BE LESS THAN  $\frac{1}{8}$ ".
4. DO NOT PLASTER OR MORTAR OVER BRICK WORK. ALL JOINTS SHALL BE CLEAN AND PROPERLY POINTED.
5. BRICK SHALL BE AASHTO M91 GRADE SS SEWER BRICK WITH 3%-4% MAX ABSORPTION DURING THE 5-HOUR BOIL TEST. CONCRETE GRADE RINGS SHALL NOT BE ALLOWED.
6. DMH & SEWER FRAME AND COVER SHALL BE NEENAH MODEL #R-1743. DMH SHALL READ "DRAIN". SMH SHALL READ "SEWER". CB FRAME AND GRATE SHALL BE NEENAH MODEL #R-3570. DOUBLE GRATES SHALL BE EJ MODEL #0MA552000066.
7. ALL CATCH BASIN FRAMES (SINGLE AND DOUBLE) INSTALLED AT GRANITE CURBING LOCATIONS SHALL BE 3-FLANGED. ALL CATCH BASIN FRAMES (SINGLE AND DOUBLE) INSTALLED WITH NO CURBING SHALL BE 4-FLANGED.



 Typical Drain Trench Detail

NO SCALE



1. ALL CATCH BASINS SHALL BE OUTFITTED WITH A POLYETHYLENE LINER DOWNSPOUT.
2. POLYETHYLENE LINER SHALL BE FABRICATED AT THE SHOP. DOWNSPOUT SHALL BE EXTRUSION FILLET WELDED TO THE POLYETHYLENE SHEET.
3. PLACE A CONTINUOUS BEAD OF AN APPROVED BONDING ADHESIVE SEALANT BETWEEN FRAME AND POLYETHYLENE SHEET AND AT THE INSIDE JOINT AFTER ASSEMBLY IS COMPLETE.
4. PLACE CLASS AA CONCRETE TO 2" BELOW THE TOP OF GRATE ELEVATION (SUBSIDIARY TO DRAINAGE STRUCTURE).
5. TRIM POLYETHYLENE BEYOND THE OUTSIDE EDGE OF BRICK TO PROVIDE A MORTAR CONNECTION BETWEEN THE FRAME AND BRICK. ALTERNATE TRIMMING METHODS MAY/SHALL BE REQUIRED BY THE OWNER WHEN USED WITH CURBING AND GUTTER INLETS.
6. THE CENTER OF THE GRATE & FRAME MAY BE SHIFTED A MAXIMUM OF 1" FROM THE CENTER OF THE DOWNSPOUT IN ANY DIRECTION.
7. BRICK MORTAR: COMPLETELY FILL AND TROWEL ANNULAR SPACE BETWEEN ALL BRICKS. MORTAR BED BETWEEN BRICK SHALL BE  $\frac{1}{2}$ " TO  $\frac{1}{2}$ " THICK. FACE JOINTS SHALL NOT BE LESS THAN  $\frac{1}{8}$ ".
8. BRICK SHALL BE AASHTO M91 GRADE SS SEWER BRICK WITH 3%-4% MAX ABSORPTION DURING THE 5-HOUR BOUL TEST.



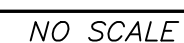
- NOTE:**
1. IF SITE CONDITIONS DO NOT ALLOW FOR SETTING CATCH BASINS AS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER PRIOR TO SETTING STRUCTURE.
  2. CONTRACTOR SHALL VERIFY ALL STRUCTURE LOCATIONS PRIOR TO LAYING PIPE
  3. ALL CB RIMS (SINGLE AND DOUBLE) AGAINST GRANITE CURBING SHALL BE 3-FLANGED. ALL CB RIMS NOT AGAINST GRANITE CURBING SHALL BE 4-FLANGED.
  4. CATCH BASIN GRATES SHALL BE ROTATED SUCH THAT HOLES IN GRATE ARE PARALLEL TO GUTTER ON LONG SIDE.



Technical drawing of a cross-section of a 1 1/2 inch wide, 1 9/16 inch high, and 3 1/8 inch long extruded profile. The profile has a flat top and sloped sides. A dimension line indicates a thickness of .164 inches.

45° CUT  
OPTIONAL

9. EXISTING SIGN REMOVAL SHALL BE CONSIDERED INCIDENTAL.



IF MAILBOX IS SET PLACE  
6" GRAVEL ON ALL SIDES  
AND BOTTOM COMPACTED.

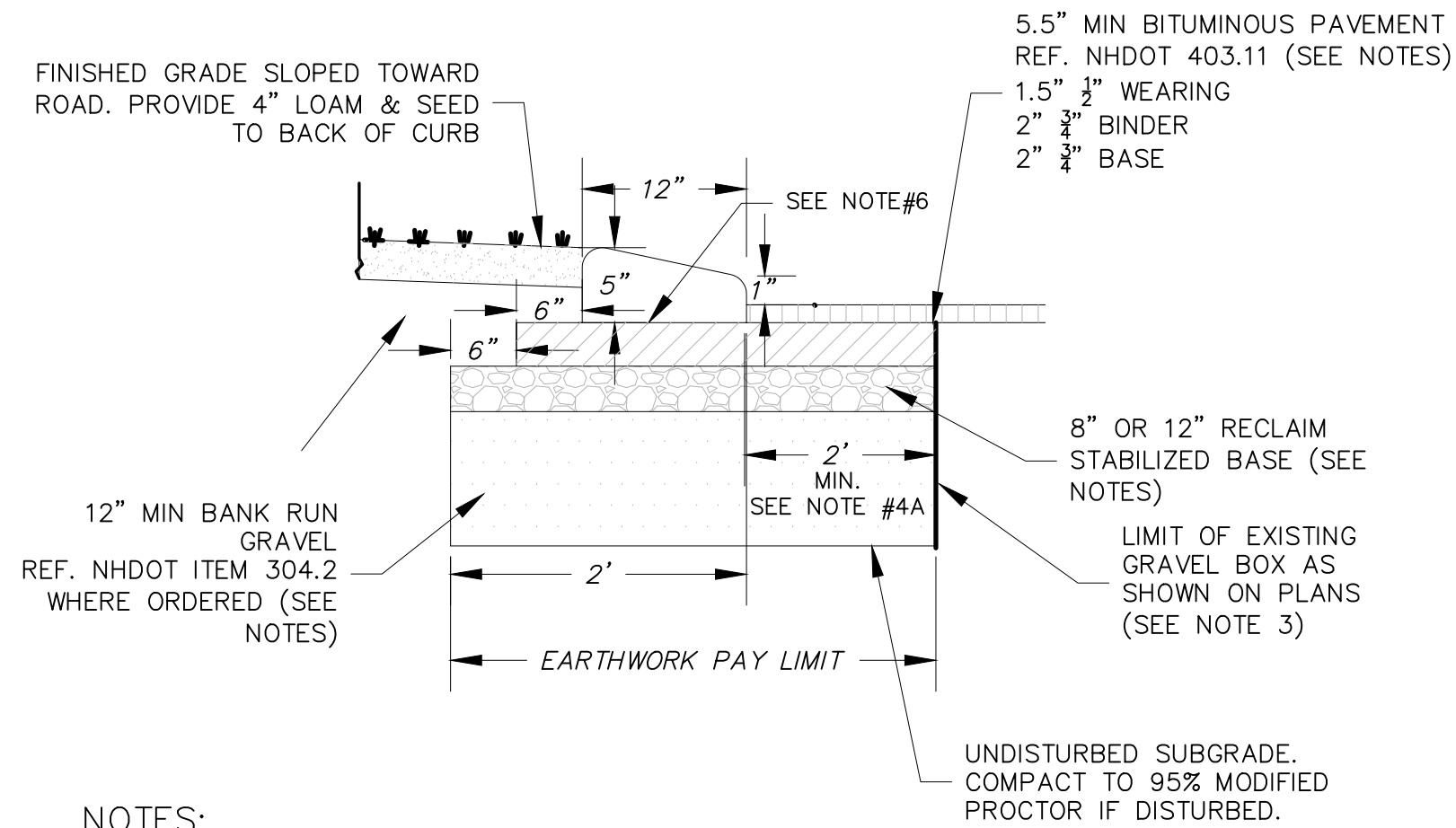
EXISTING MAILBOX POST  
SET OR DRIVEN BASED ON  
TYPE OF POST. DEPTH  
VARIES.

NO SCALE

9

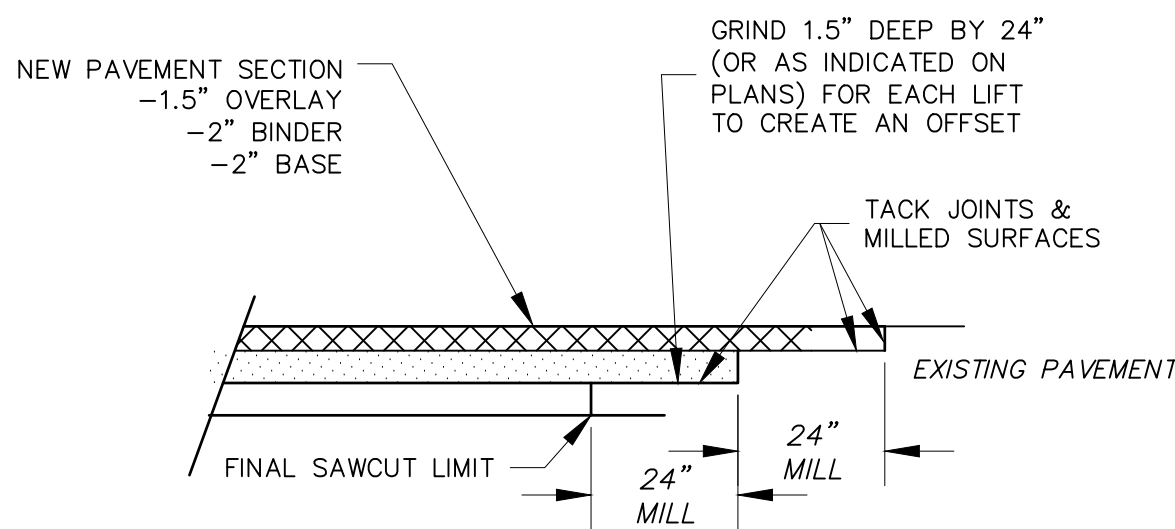
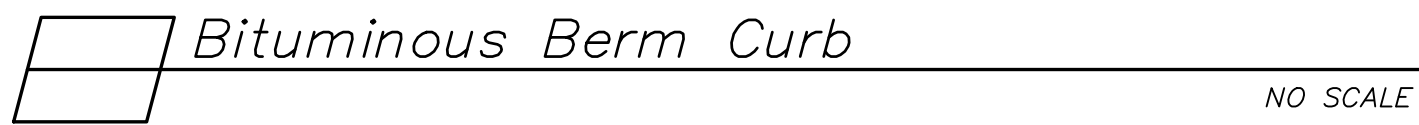


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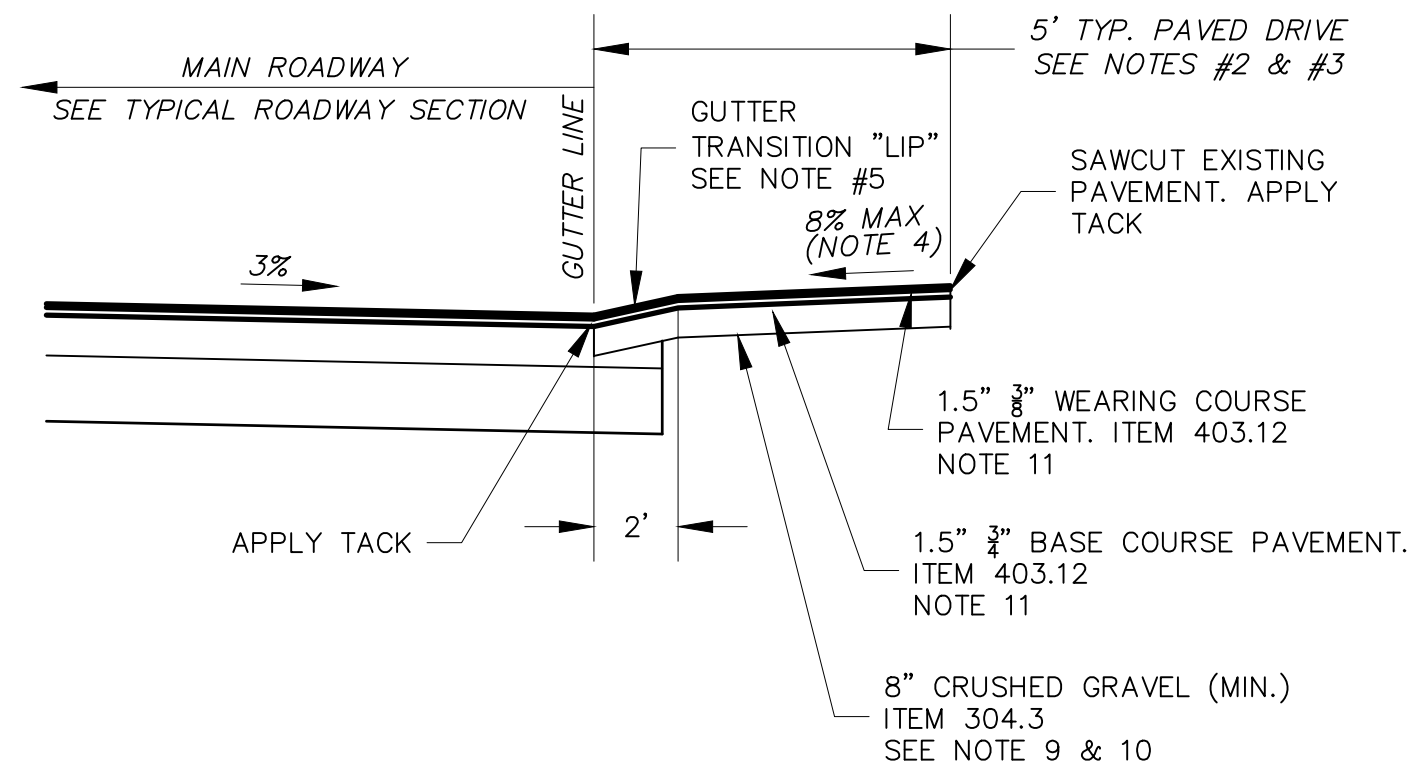
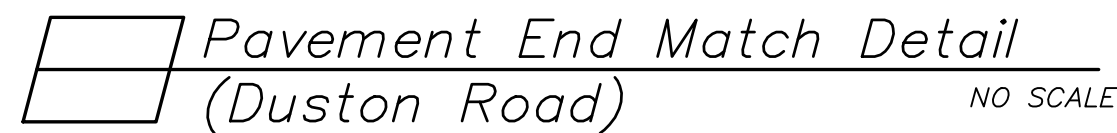
NOTES:

- REFERENCE NHDOT MATERIAL SPECIFICATIONS. ALL MATERIALS SHALL CONFORM TO APPLICABLE NHDOT MATERIAL SPECIFICATIONS.
- ALL GRAVELS TO BE COMPACTED TO 95% MODIFIED PROCTOR.
- WHERE NECESSARY TO WIDEN THE GRAVEL BOX FOR BITUMINOUS CURB THE GRAVEL DEPTHS SHALL BE MINIMUM SPECIFIED OR MATCH THE EXISTING, WHICHEVER IS GREATER TO PAY LIMITS.
- EXISTING WORK: EARTHWORK PAY LIMIT FOR BOX WIDENING SHALL BEGIN AT THE LIMIT OF THE EXISTING GRAVEL BOX. NOTE THAT IF SUITABLE GRAVELS EXIST THEN WIDENING SHALL NOT APPLY.
- CUT LINE SHALL NOT BE CLOSER THAN 2 FEET FROM FACE OF BERM.
- CURB TO BE PAID PER UNIT LENGTH COMPLETE IN PLACE. PAVEMENT, ROAD BED GRAVELS AND CUT/FILLS SHALL BE PAID UNDER RESPECTIVE ITEM NUMBERS.
- BINDER SHALL BE TACK COATED BELOW BERM. TACK IS A SUBSIDIARY ITEM TO THE BERM.



NOTES:

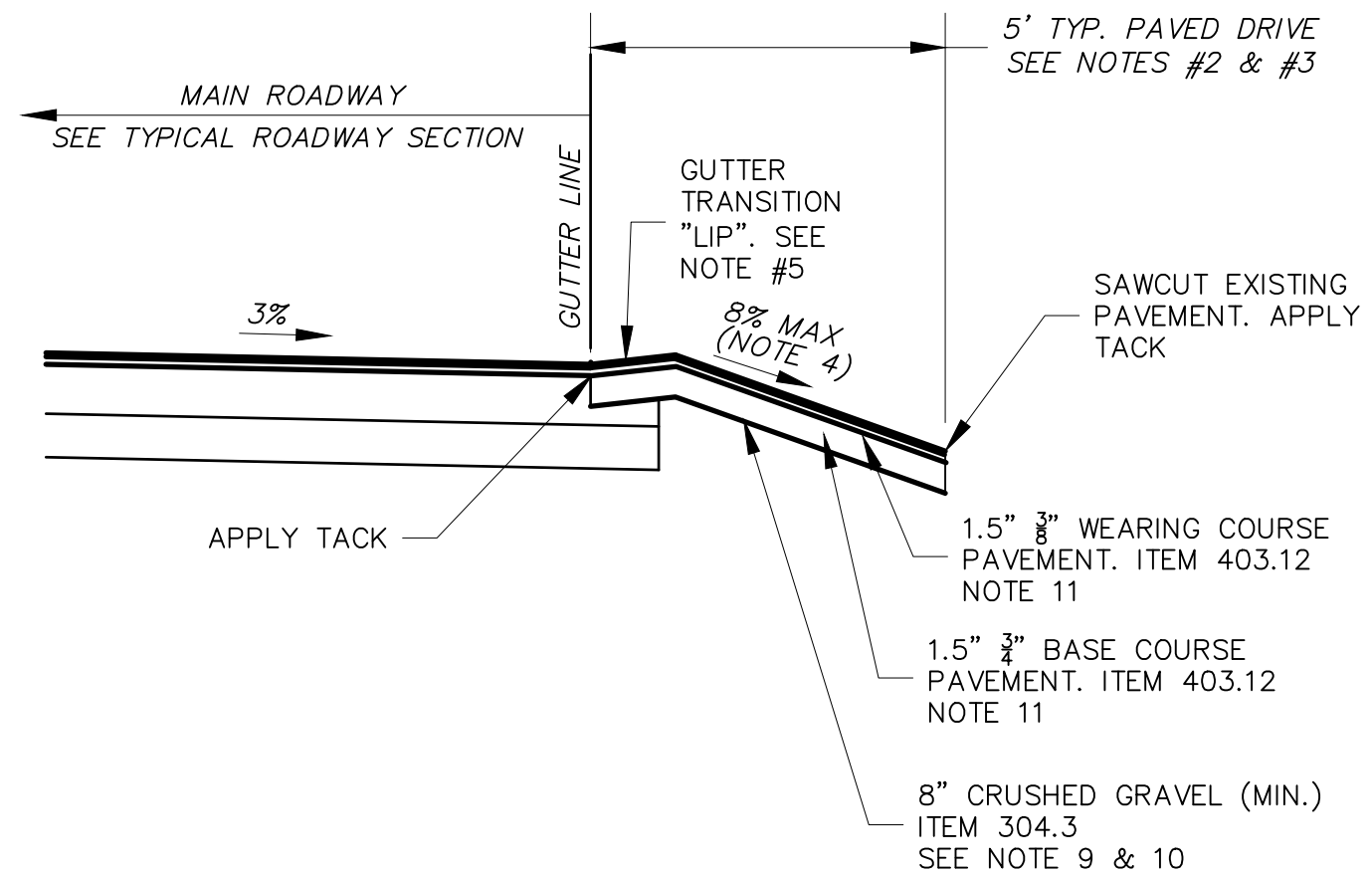
- PAVEMENT END MATCH SHALL BE APPLIED AT WORK LIMITS WHERE NEW PAVEMENT MEETS AN EXISTING ROADWAY PAVEMENT SECTION.
- EACH LIFT OF PAVEMENT SHALL BE OFFSET 24" OR AS SHOWN ON THE PLANS.
- FIELD CONDITIONS OF EXISTING PAVEMENT THICKNESS MAY CAUSE MODIFICATIONS TO THIS DETAIL. COORDINATE DIFFERING FIELD CONDITIONS WITH THE ENGINEER.



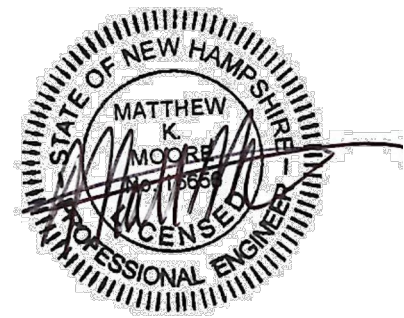
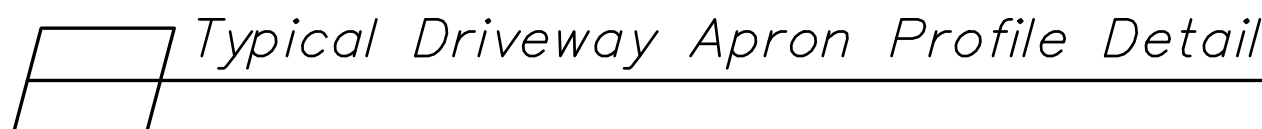
DRIVEWAY APRON ABOVE ROAD GRADE

NOTES:

- REFERENCE PROJECT SPECIFICATIONS FOR MEASUREMENT AND PAYMENT.
- UNLESS OTHERWISE NOTED HORIZONTAL DIMENSION FOR DRIVEWAYS SHALL BE GOVERNED BY MAXIMUM SLOPE REQUIREMENTS AND AS DIRECTED BY THE ENGINEER. ANY DIMENSION GREATER THAN 5- FEET SHALL BE COORDINATED WITH THE ENGINEER FIRST. ANY AREA NOT PRE-APPROVED BY THE ENGINEER SHALL NOT BE PAID.
- UNLESS OTHERWISE NOTED TOTAL HORIZONTAL DIMENSION OF GRAVEL DRIVE APRONS SHALL BE 5- FEET WITH A MAXIMUM OF 3- FEET BEING PAVED. THE REMAINING DISTANCE SHALL BE CRUSHED GRAVEL.
- 3A. COMMERCIAL DRIVE APRONS S SHALL BE 10- FEET UNLESS OTHERWISE NOTED ON THE PLANS.
- MAXIMUM 8% SLOPE FOR DRIVEWAY APRONS MAY BE MODIFIED ONLY AS DIRECTED BY THE ENGINEER BASED ON FIELD CONDITIONS.
- GUTTER TRANSITION ("LIP"): ALL DRIVEWAYS SHALL RECEIVE A GUTTER TRANSITION WITH AN INCLINE OF 1-2 INCHES IN 2- FEET FROM THE EDGE OF PAVEMENT. NO ADDITIONAL COMPENSATION SHALL BE GRANTED FOR TRANSITIONS. ELEVATION OF LIPS SHALL BE AS DIRECTED BASED ON FIELD CONDITIONS.
- TACK COAT SHALL BE APPLIED TO THE JOINTS AND BETWEEN PAVEMENT COURSES AND AS DIRECTED AND SHALL BE SUBSIDIARY TO UNIT ITEM COST.
- GRAVELS SHALL BE COMPACTED TO 95% MODIFIED PROCTOR.
- SUB-BASE SHALL BE COMPACTED AS NEEDED AND/OR AS DIRECTED.
- WHERE RECLAIM IS PERMITTED IN-LIEU OF 304.3 EXCESS RECLAIM OR RECLAIM PROVIDED BY OWNER SHALL BE PAID AS 203.6. HAULING AND HANDLING SHALL BE INCIDENTAL.
- WHERE EXISTING GRAVELS ARE DETERMINED TO BE SUITABLE IN PLACE BY THE ENGINEER THEN NO EXCAVATION OR GRAVEL REPLACEMENT SHALL OCCUR. APRON PREP SHALL BE INCIDENTAL. ADDITIONAL GRAVEL SHIM TO MEET ROAD GRADES SHALL BE PAID UNDER 304.3 OR 203.6.
- WHERE A PAVER IS USED TO PAVE DRIVEWAYS THE PAVEMENT SHALL BE PAID AS 403.11 (MACHINE METHOD)
- REMOVAL OF LEDGE, IF ENCOUNTERED, SHALL EXTEND TO BOTTOM OF GRAVEL ONLY. DO NOT OVEREXCAVATE.
- EACH LIFT OF DRIVE APRONS TO BE PLACED WITHIN 7 DAYS OF EACH LIFT OF ROADWAY PAVEMENT.



DRIVEWAY APRON BELOW ROAD GRADE



REV	DATE	DESCRIPTION	BY

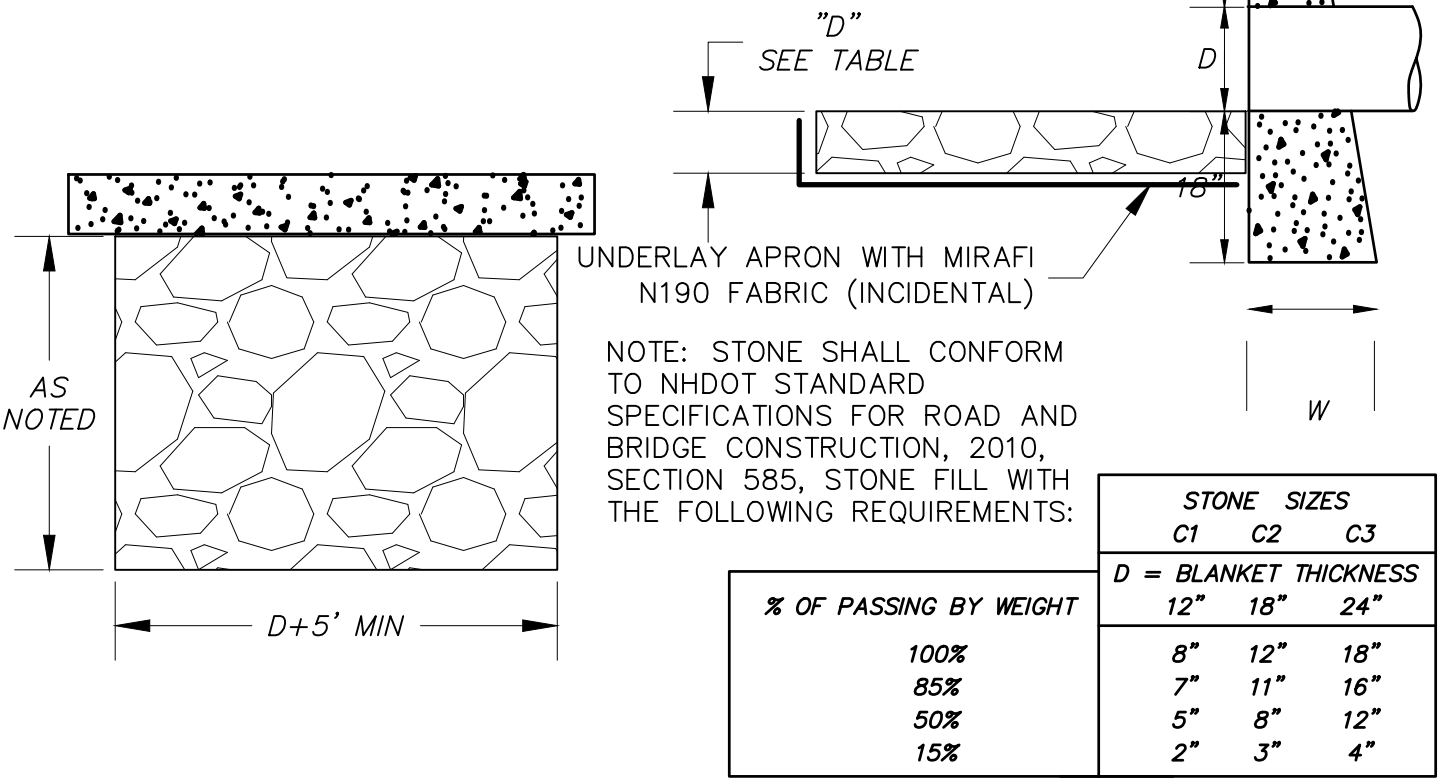
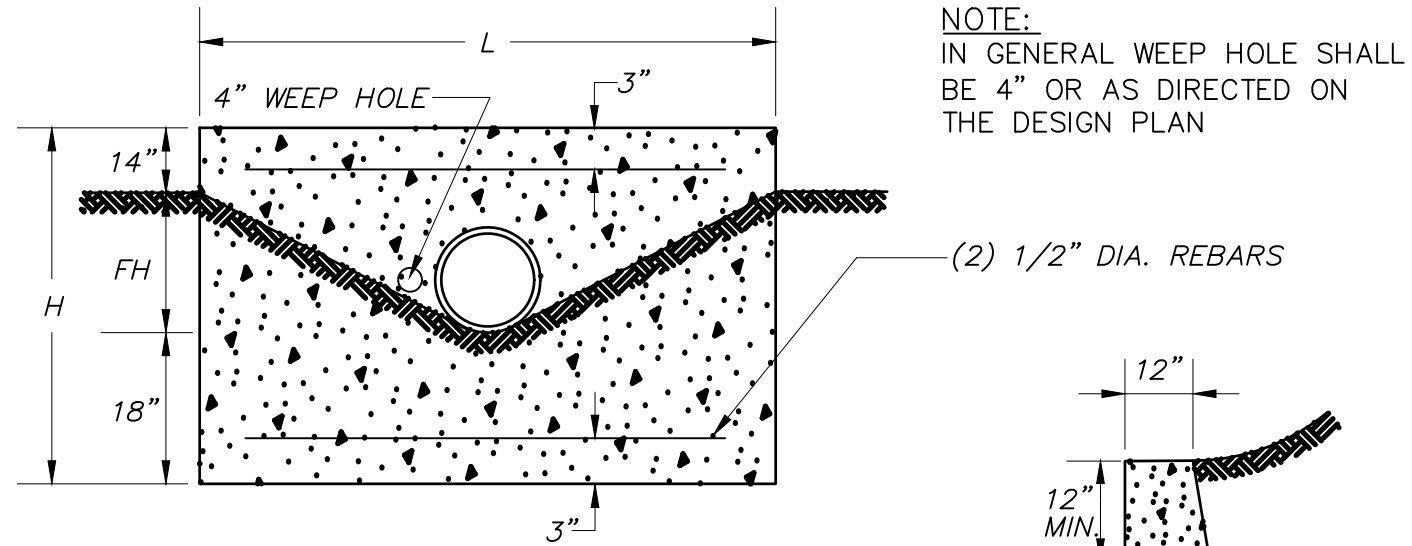
**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

**TOWN OF SALEM**  
**SALEM, NEW HAMPSHIRE**  
**2023 ROADWAY IMPROVEMENT**  
**PROJECT DUSTON ROAD**  
**CIVIL DETAILS (SHEET 5 OF 7)**

SCALE: 1"=40'	DESIGN: FPS	10 10 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

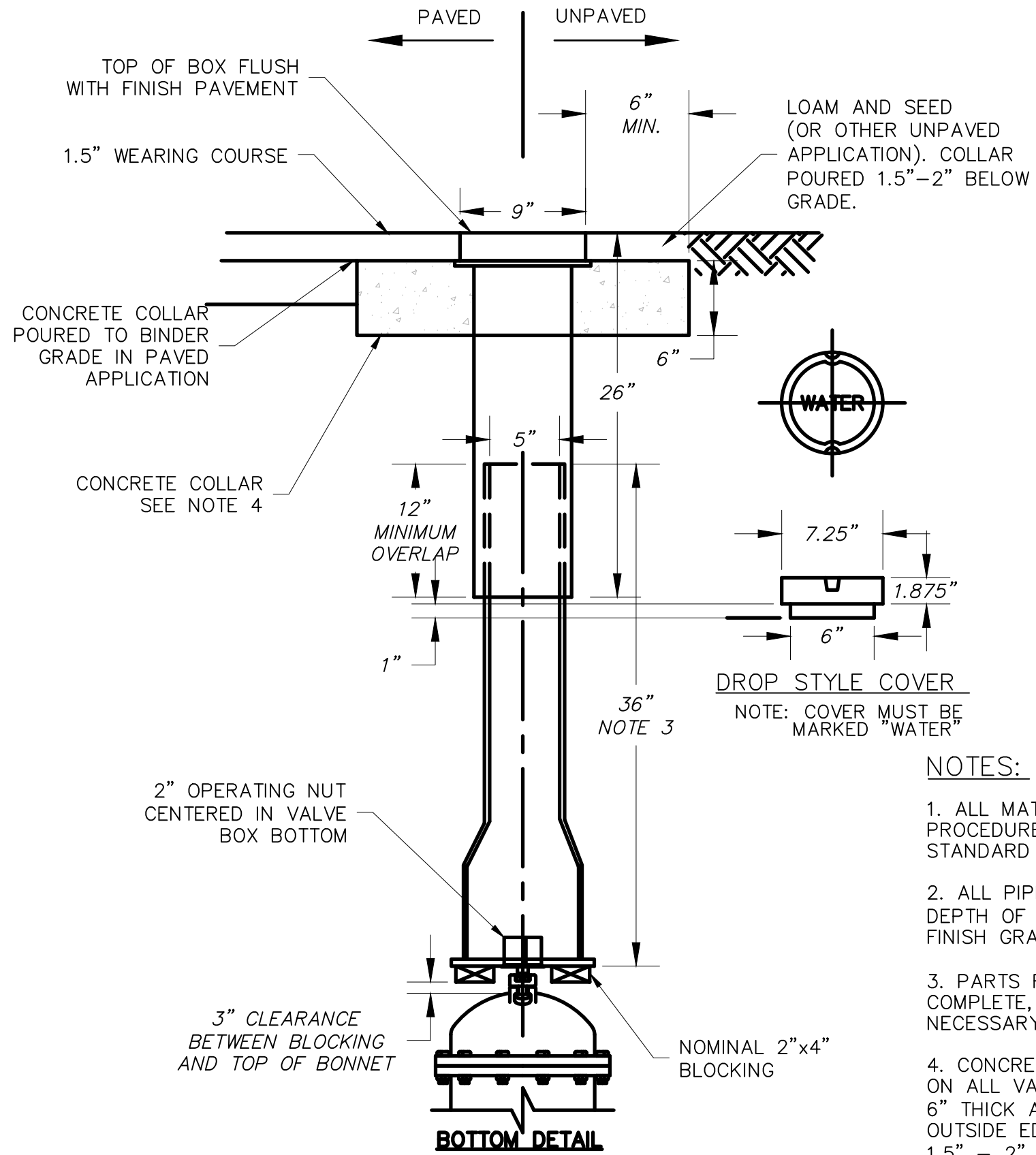
BID DOCUMENTS

D	MAS.PER STD.HDR. CU.YD.	STEEL PER STD. HDR.LB.	LENGTH OF BARS	L	H	FH	W
12	0.61	9	3'-2"	3'-6"	3'-6"	0'-10"	1'-10.5"
15	0.85	11	3'-10"	4'-6"	3'-9"	1'-1"	1'-11.25"
18	1.13	14	5-2	5-6	4-0	1-4	2-0
24	1.78	20	7-2	7-6	4-6	1-10	2-1.5
36	3.53	31	11-2	11-6	5-6	2-10	2-4.5



NOTE: ALL STONE TO BE SIZE "C1" EXCEPT WHERE NOTED.

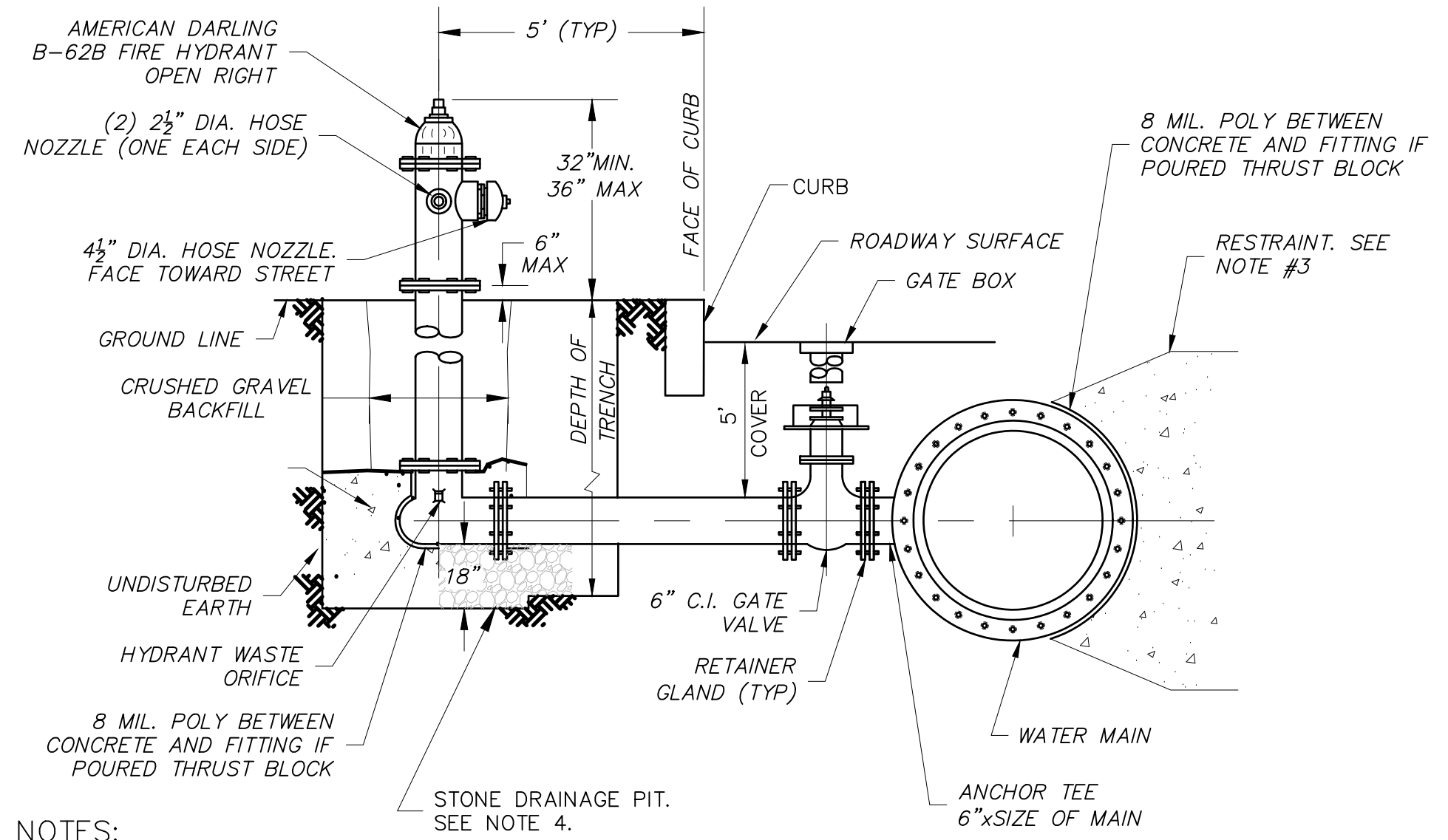
Typical Headwall & Stone Apron Detail  
NO SCALE



#### NOTES:

1. ALL MATERIALS AND INSTALLATION PROCEDURES WILL CONFORM TO SALEM STANDARD SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTH OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. PARTS FOR STANDARD 5" VALVE BOX COMPLETE, LONGER PARTS AVAILABLE IF NECESSARY.
4. CONCRETE COLLARS SHALL BE POURED ON ALL VALVE BOXES. COLLAR SHALL BE 6" THICK AND 6" MIN BEYOND THE OUTSIDE EDGE. COLLARS SHALL BE SET 1.5" - 2" BELOW GRADE

Typical Gate Box Installation  
NO SCALE



#### NOTES:

1. ALL MATERIAL AND INSTALLATION PROCEDURES WILL CONFORM TO TOWN OF SALEM TECHNICAL SPECIFICATIONS.
2. ALL PIPE SHOULD HAVE A MINIMUM DEPTHS OF 5' FROM TOP OF PIPE TO FINISH GRADE.
3. PROVIDE MIN 2'x2'x4' PRECAST OR POURED CONCRETE THRUST BLOCK AGAINST UNDISTURBED EARTH - SIZE TO BE BASED ON SIZE OF FITTING AND PRESSURE IN WATER MAIN. WHERE PRECAST BLOCKS ARE USED ADDITIONAL CONCRETE MUST STILL BE POURED AT THE FITTING (MIN 2 80LB BAGS) TO PROVIDE AN EVEN BEARING SURFACE OVER THE ENTIRE CONTACT AREA. USE 8 MIL POLY BETWEEN POURED CONCRETE AND FITTINGS. ROCKS SHALL NOT BE USED AS THRUST BLOCKS.
4. 6 CUBIC FEET MIN. OF 3/4" CRUSHED STONE TO BE PLACED AROUND BASE OF HYDRANT TO 12" OVER DRAIN PORT. COVER WITH FABRIC. DEPTH OF PIT SHALL BE DICTATED BY THE PERVIOUSNESS OF SURROUNDING SOIL. SEE SPECIFICATIONS.
5. ALL JOINTS SHALL BE RESTAINED.
6. HYDRANT BRANCH PIPE SHALL BE A SINGLE PIECE WITH NO JOINTS UNLESS SPECIFICALLY AUTHORIZED BY THE SALEM UTILITIES DIVISION. SERVICE STUBS GREATER THAN 18- FEET SHALL HAVE RESTRAINED JOINTS.

Typical Hydrant Installation  
NO SCALE

BID DOCUMENTS



**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

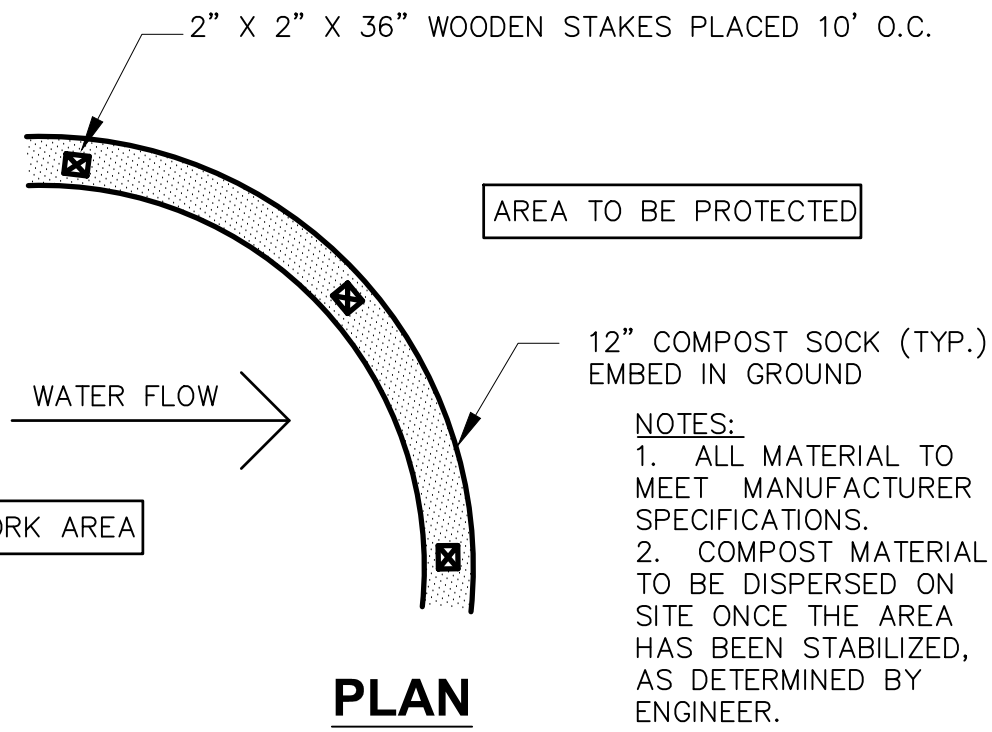
**TOWN OF SALEM**  
**SALEM, NEW HAMPSHIRE**  
**2023 ROADWAY IMPROVEMENT**  
**PROJECT DUSTON ROAD**  
**CIVIL DETAILS (SHEET 6 OF 7)**

SCALE: 1"=40'  
DESIGN: FPS  
DRAWN: FPS  
PROJECT: 18900.02  
CHECKED: MKM  
DATE: DECEMBER 2022

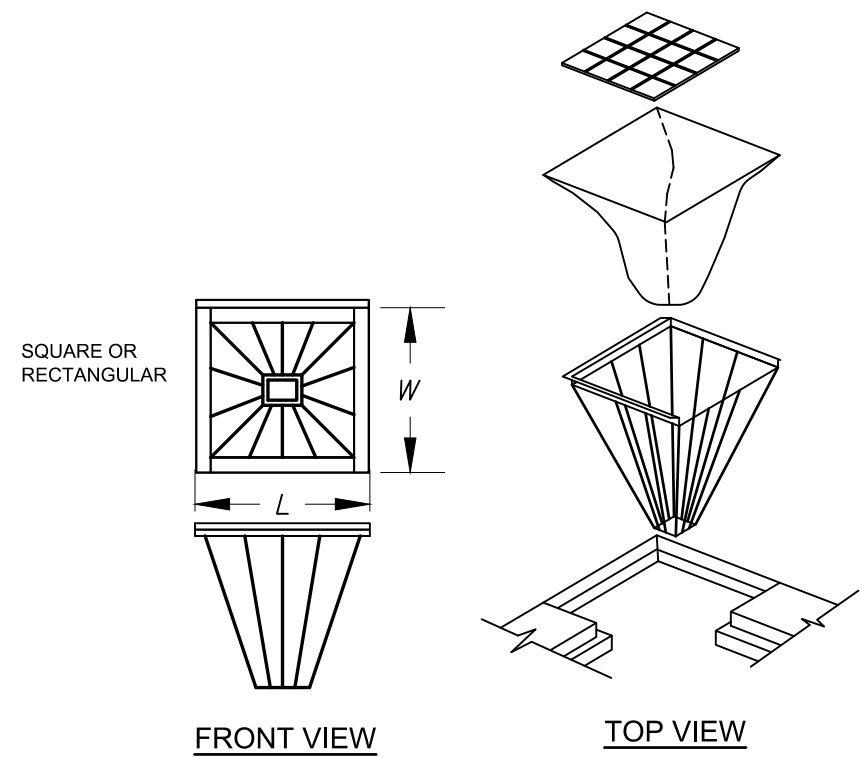


GENERAL NOTES:

1. CONSTRUCTION BASELINE: ELECTRONIC AUTOCAD DRAWINGS ARE AVAILABLE FOR CONSTRUCTION PURPOSES. THE CONTRACTOR SHALL LAY OUT BASE LINE TO BE APPROVED BY THE OWNER PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. MINOR ADJUSTMENTS IN ALIGNMENT MAY BE NECESSARY BASED ON FIELD CONDITIONS IN AN EFFORT TO CREATE A "BEST FIT" ROADWAY AND MINIMIZE ADJACENT IMPACTS.
2. EXISTING CONDITIONS INFORMATION DEPICTED HEREON IS A COMPOSITE BASED ON RECORD PLANS AND TOPOGRAPHIC SURVEY. TOPOGRAPHIC FIELD SURVEY CONDUCTED BY S&H LAND SERVICES MAY 2022.
3. THE CONTRACTOR SHALL BID AND PERFORM THE WORK IN ACCORDANCE WITH ALL LOCAL, STATE AND NATIONAL CODES, SPECIFICATIONS, REGULATIONS, AND STANDARDS.
4. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO FAMILIARIZE HIMSELF WITH THE SITE AND EXISTING AND PROPOSED CONDITIONS SURROUNDING IT. IF ANY ERROR OR OMISSION IN THESE PLANS IS DISCOVERED BY THE CONTRACTOR, THE CONTRACTOR SHALL CONTACT THE ENGINEER AND OWNER IMMEDIATELY IN WRITING FOR DIRECTION ON HOW TO PROCEED. THE CONTRACTOR SHALL DISCONTINUE WORK IN THE AFFECTED PROJECT AREA UNTIL DIRECTION HAS BEEN PROVIDED BY THE TOWN OF SALEM ON CORRECTIVE ACTION.
5. WRITTEN DIMENSIONS HAVE PRECEDENCE OVER SCALED DIMENSIONS. THE CONTRACTOR SHALL USE CAUTION WHEN SCALING REPRODUCED PLANS, IN CASE OF CONFLICT BETWEEN THIS PLAN SET AND ANY OTHER DRAWING AND/OR SPECIFICATION, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY FOR CLARIFICATIONS.
6. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS AND METHODS OF CONSTRUCTION AND FOR CONDITIONS AT THE SITE. THESE PLANS DO NOT EXTEND TO OR INCLUDE SYSTEMS PERTAINING TO THE SAFETY OF THE CONSTRUCTION CONTRACTOR OR THEIR EMPLOYEES, AGENTS OR REPRESENTATIVES IN THE PERFORMANCE OF THE WORK. THE SEAL OF THE SURVEYOR OR ENGINEER HERON DOES NOT EXTEND TO ANY SUCH SAFETY SYSTEMS THAT MAY NOW OR HEREAFTER BE INCORPORATED INTO THESE PLANS. THE CONSTRUCTION CONTRACTOR SHALL PREPARE OR OBTAIN THE APPROPRIATE SAFETY SYSTEMS WHICH MAY BE REQUIRED BY THE U.S. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) AND/OR LOCAL REGULATIONS.
7. THE CONTRACTOR SHALL SUBMIT HIS/HER PROPOSED CONSTRUCTION SCHEDULE TO THE SALEM ENGINEERING DEPARTMENT FOR REVIEW AND APPROVAL IN ACCORDANCE TO BID SPECIFICATION DOCUMENTS PRIOR TO CONSTRUCTION. NO WORK SHALL BE CONDUCTED WITHOUT AN APPROVED SCHEDULE.
8. THE CONTRACTOR SHALL ADVISE THE APPROPRIATE AUTHORITY OF HIS INTENT OF THE START OF WORK IN ACCORDANCE TO THE BID SPECIFICATION DOCUMENTS.
9. ALL WORK SHALL BE CONSTRUCTED FROM A COMPLETE SET OF PLANS, NOT ALL FEATURES ARE DETAILED ON EVERY PLAN. THE ENGINEER IS TO BE NOTIFIED OF ANY CONFLICT WITHIN THIS PLAN SET.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND DETERMINING THE LOCATION, SIZE AND ELEVATION OF ALL EXISTING UTILITIES SHOWN ON THESE PLANS PRIOR TO THE START OF ANY CONSTRUCTION. THE ENGINEER SHALL BE NOTIFIED IN WRITING OF ANY UTILITIES FOUND INTERFERING WITH THE PROPOSED CONSTRUCTION AND APPROPRIATE REMEDIAL ACTION BE AGREED TO BY THE ENGINEER BEFORE PROCEEDING WITH THE WORK. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT NEW HAMPSHIRE DIG SAFE, AT 1-888-DIG-SAFE, AT LEAST 72 HOURS BEFORE DIGGING.
11. THE LOCATION OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE. THE EXACT LOCATION SHOULD BE ESTABLISHED IN THE FIELD BY THE UTILITY COMPANY PRIOR TO ANY EXCAVATION OR POST DRIVING. THE PROTECTION OR RELOCATION OF UTILITIES IS ULTIMATELY THE RESPONSIBILITY OF THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGE TO UTILITIES AND FACILITIES PUBLIC OR PRIVATE.
12. THE CONTRACTOR SHALL COORDINATE UTILITY WORK, MATERIALS, AND INSTALLATION SPECIFICATIONS WITH THE INDIVIDUAL UTILITY AGENCIES/COMPANIES, AND ARRANGE FOR ALL INSPECTIONS.
13. ALL WORK SHALL CONFORM TO TOWN OF SALEM STANDARD SPECIFICATIONS AND SHALL BE SUBJECT TO FINAL INSPECTION BY THE SALEM ENGINEERING DIVISION.
14. THE CONTRACTOR SHALL MAINTAIN EMERGENCY ACCESS TO ALL AREAS AFFECTED BY HIS WORK AT ALL TIMES. THE CONTRACTOR MUST CONTACT THE SALEM FIRE AND POLICE DEPARTMENTS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ALL SIGNAGE, BARRICADES, POLICE DETAILS AS REQUIRED FOR TRAFFIC CONTROL AND COORDINATION WITH OTHER CONSTRUCTION OPERATIONS ON ADJACENT STREETS.
15. ALL PERMANENT CONSTRUCTION WARNING SIGNS MUST BE ERECTED PRIOR TO BEGINNING CONSTRUCTION. ALL CONSTRUCTION SIGNAGE DESIGN, PLACEMENT, AND METHOD (PERMANENT OR TEMPORARY) SHALL MEET THE CURRENT EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
16. ALL EXCAVATIONS SHALL BE THOROUGHLY SECURED ON A DAILY BASIS BY THE CONTRACTOR AT THE COMPLETION OF CONSTRUCTION OPERATIONS IN THE IMMEDIATE AREA.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL DEVICES AS SHOWN IN THE PLANS THROUGHOUT THE DURATION OF THE PROJECT IN ACCORDANCE WITH APPLICABLE NHDES AND TOWN OF SALEM STANDARDS AND SPECIFICATIONS. THE DETAILS PROVIDED SERVE AS A GUIDE ONLY. ALL EROSION CONTROL SHALL BE MAINTAINED AND/OR REPLACED IF DAMAGED. EROSION CONTROL PRACTICES SHOWN HEREIN SHALL BE CONSIDERED A MINIMUM STANDARD. THE CONTRACTOR SHALL IMPLEMENT ANY EROSION CONTROL MEASURE DEEMED NECESSARY AND APPROPRIATE AS FIELD CONDITIONS DICTATE OR AS DIRECTED. BY MENTION, THE "STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN NEW HAMPSHIRE" IS HEREBY INCORPORATED INTO THE DESIGN PLANS.
18. VERIFY TBM ELEVATIONS PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL RETAIN ALL RESPONSIBILITY FOR ERRORS AND REMEDIAL WORK NECESSARY AS A RESULT BENCHMARK ERRORS.
19. ALL ELEVATIONS AND LOCATIONS OF DRAINAGE STRUCTURES SHALL BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO UTILIZATION OF THE DESIGN ELEVATIONS SHOWN ON THE PLAN.
20. ALL MATERIAL MUST MEET OR EXCEED SPECIFICATIONS.
21. ALL NEW MANHOLES IN PAVEMENT SHALL HAVE RIMS SET TO FINISH GRADE REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN. ALL NEW CATCH BASINS IN PAVEMENT SHALL HAVE RIMS SET  $\frac{1}{2}$ " BELOW FINISH REGARDLESS OF ANY ELEVATIONS OTHERWISE SHOWN.
22. ALL EXISTING MANHOLES, WATER GATE RISERS, GAS GATE RISERS, AND OTHER STRUCTURES LOCATED WITHIN THE LIMITS OF THE PROJECT SHALL BE ADJUSTED TO FINISHED GRADE BY THE CONTRACTOR UNLESS INDICATED OTHERWISE BY THESE PLANS. EXISTING CATCH BASINS SHALL BE ADJUSTED  $\frac{1}{2}$ " BELOW FINISH GRADE.
23. ALL CATCH BASINS SHALL BE TYPE B UNLESS OTHERWISE NOTED OR DIRECTED BY THE ENGINEER.
24. **CATCH BASIN POLYETHYLENE LINERS** : POLY-LINERS (ITEM 604.0007) SHALL BE INSTALLED ON ALL CATCH BASINS (NEW AND EXISTING) WITHIN THE PROJECT.
25. IN GENERAL ALL DRIVEWAYS SHALL RECEIVE GUTTER LINE TRANSITIONS OF 1 - 2 INCHES FOR 2- FEET AT THE EDGE OF PAVEMENT OR AS DIRECTED BY THE ENGINEER. ALL WORK AND MATERIAL TO CONSTRUCT GUTTER TRANSITIONS SHALL BE SUBSIDIARY TO THE DRIVEWAY APRON UNIT ITEMS.
26. THE SUBGRADE SHALL BE SCARIFIED TO ASSURE THAT ALL BOULDERS AND COBBLES OVER 6 INCHES ARE REMOVED.
27. NO EXISTING MONUMENTS, BOUNDS, OR BENCHMARKS SHALL BE DISTURBED WITHOUT FIRST MAKING PROVISIONS FOR RELOCATION AND REPLACEMENT.
28. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF TRAFFIC DURING CONSTRUCTION AND UNTIL SUCH TIME AS ALL IMPROVEMENTS HAVE BEEN APPROVED BY THE TOWN OF SALEM. ALL MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE STANDARDS SET FORTH IN THE LATEST EDITION OF THE "FEDERAL HIGHWAY ADMINISTRATION, MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR THE STREETS AND HIGHWAYS". ALL TEMPORARY SIGNING, PAVEMENT MARKINGS AND OTHER TRAFFIC CONTROL DEVICES IN ACCORDANCE WITH THE ABOVE, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
29. THE CONTRACTOR SHALL ENSURE THAT POSTAL SERVICE IS UNINTERRUPTED FOR THE DURATION OF THE PROJECT. CONTRACTOR SHALL COORDINATE WITH USPS FOR ANY ADDITIONAL REQUIREMENTS.
30. **MAILBOX NOTE**: NOT ALL MAILBOXES WILL BE RELOCATED. MAILBOXES THAT DO NOT MEET MINIMUM DISTANCES SHALL BE RESET OR AS DIRECTED BY THE ENGINEER.
31. **TREE REMOVAL**: COORDINATE TREE REMOVAL WITH THE ENGINEER PRIOR TO THE START OF WORK.
32. **GRUBBING NOTE**: IN GENERAL, GRUBBING THE SHOULDERS AS SHOWN ON THE PLAN SHALL BE INCLUSIVE OF SMALL TREE REMOVAL. NOT ALL SHOULDER WORK SHALL BE CONSIDERED GRUB. ONLY THOSE AREAS SPECIFICALLY IDENTIFIED AS GRUB SHALL BE PAID.



Compost Sock Detail



Silt Sack Inlet Filter Basket

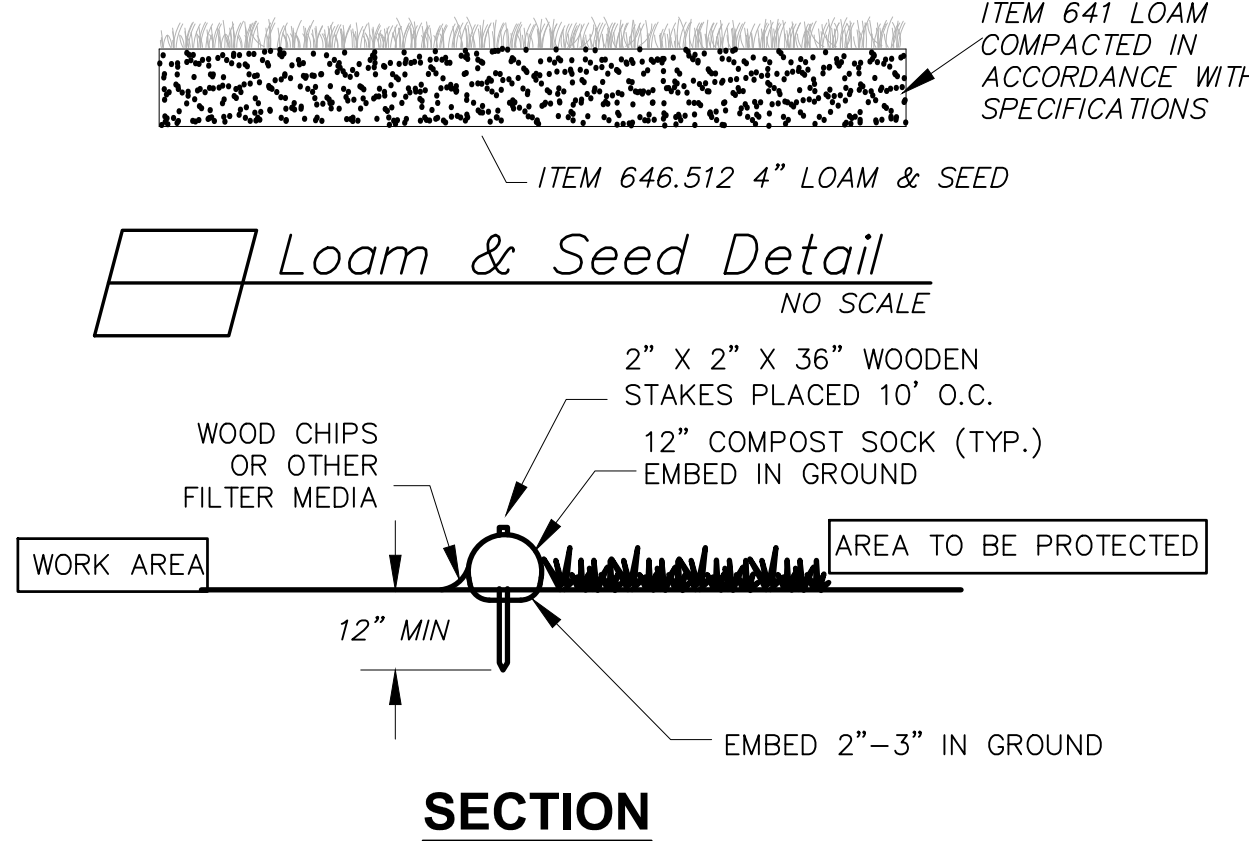
CONSTRUCTION SPECIFICATIONS:

1. THE GEOTEXTILE FABRIC SHALL MEET THE DESIGN CRITERIA FOR SILT FENCES.
2. THE FABRIC SHALL BE EMBEDDED A MINIMUM OF 10 INCHES INTO THE GROUND AND THE SOIL COMPACTED OVER THE EMBEDDED FABRIC.
3. WOVEN WIRE FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIE OR STAPLES WHERE NOTED OR AS DIRECTED BY DESIGN ENGINEER.
4. FILTER CLOTH SHALL BE FASTENED SECURELY TO THE WOVEN WIRE FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP, MIDSECTION AND BOTTOM.
5. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6 INCHES, FOLDED AND STAPLED.
6. FENCE POSTS SHALL BE A MINIMUM OF 36 INCHES LONG AND DRIVEN A MINIMUM OF 10 INCHES INTO THE GROUND. WOOD POSTS SHALL BE OF SOUND QUALITY HARDWOOD AND SHALL HAVE A MINIMUM CROSS SECTIONAL AREA OF 3.0 SQUARE INCHES.
7. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.

MAINTENANCE:

1. SILT FENCES SHALL BE INSPECTED IMMEDIATELY AFTER EACH RAINFALL AND AT LEAST DAILY DURING PROLONGED RAINFALL. ANY REPAIRS THAT ARE REQUIRED SHALL BE MADE IMMEDIATELY.
2. IF THE FABRIC ON A SILT FENCE SHOULD DECOMPOSE OR BECOME INEFFECTIVE DURING THE EXPECTED LIFE OF THE FENCE, THE FABRIC SHALL BE REPLACED PROMPTLY.
3. SEDIMENT DEPOSITS SHOULD BE INSPECTED AFTER EVERY STORM EVENT. THE DEPOSITS SHOULD BE REMOVED WHEN THEY REACH APPROXIMATELY ONE-HALF THE HEIGHT OF THE BARRIER.
4. SEDIMENT DEPOSITS THAT ARE REMOVED OR LEFT IN PLACE AFTER THE FABRIC HAS BEEN REMOVED SHALL BE GRADED TO CONFORM WITH THE EXISTING TOPOGRAPHY AND VEGETATED.

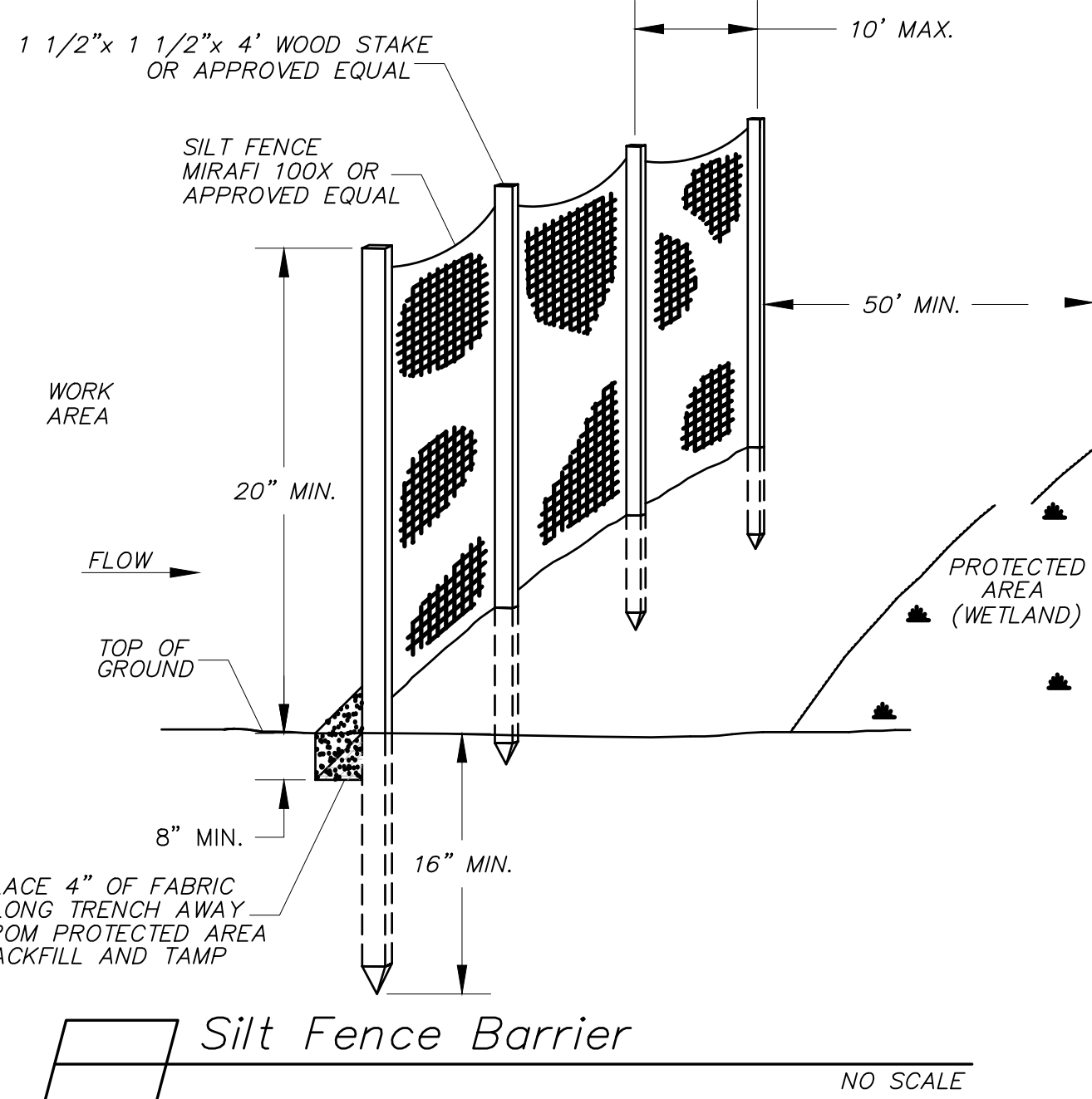
BID DOCUMENTS



SECTION

FILTER BASKET NOTES:

1. INLET BASKETS SHALL BE USED ON ALL CATCH BASINS DURING CONSTRUCTION. INLET BASKETS SHALL BE "METAL-ERA" OR APPROVED EQUAL.
2. FILTER FABRIC SHALL BE PUSHED DOWN AND FORMED TO THE SHAPE OF THE BASKET. THE SHEET OF FABRIC SHALL BE LARGE ENOUGH TO BE SUPPORTED BY THE BASKET FRAME WHEN HOLDING SEDIMENT AND EXTEND AT LEAST 6 INCHES PAST THE FRAME. THE INLET GRATE SHALL BE PLACED OVER THE BASKET/FRAME AND WILL SERVE AS THE FABRIC ANCHOR.
3. THE FILTER FABRIC SHALL BE A GEO-TEXTILE FABRIC: POLYESTER, POLYPROPYLENE, STABILIZED NYLON, POLYETHYLENE OR POLYVINYL CHLORIDE MEETING THE FOLLOWING SPECIFICATIONS:  
GRAB STRENGTH: 45 lb. MINIMUM IN ANY PRINCIPAL DIRECTION (ASTM D1682).  
MULLEN BURST STRENGTH: MINIMUM 60 psi (ASTM D774).
4. THE FABRIC SHALL HAVE AN OPENING NO GREATER THAN A NUMBER 20 U.S. STANDARD SIEVE AND MINIMUM PERMEABILITY OF 120 gpm/sq. ft.
5. THE INLET BASKET SHALL BE INSPECTED WITHIN 24 HOURS AFTER EACH RAINFALL OR DAILY DURING EXTENDED PERIODS OF PRECIPITATION. REPAIRS SHALL BE MADE IMMEDIATELY, AS NECESSARY, TO PREVENT PARTICLES FROM ENTERING THE DRAINAGE PIPING SYSTEM AND/OR CAUSING SURFACE FLOODING.
6. INLET BASKET SHALL BE MAINTAINED IN PLACE UNTIL ALL PAVING IS COMPLETED AND ALL UNPAVED AREAS HAVE BEEN STABILIZED WITH VEGETATION.



Silt Fence Barrier

EROSION CONTROL:

DURING CONSTRUCTION AND THEREAFTER, EROSION CONTROL MEASURES ARE TO BE IMPLEMENTED AS NOTED. ALL EROSION CONTROL MEASURES SHOWN, DESCRIBED AND NOTED SHALL BE CONSIDERED A MINIMUM STANDARD. THE CONTRACTOR SHALL IMPLEMENT ALL NECESSARY EROSION CONTROL PRACTICES AS NEEDED, AS FIELD CONDITIONS DICTATE, OR AS ORDERED TO MAINTAIN PROPER EROSION PROTECTION.

1. EXISTING VEGETATION SHALL BE LEFT UNDISTURBED WHEREVER POSSIBLE.
2. TEMPORARY EROSION CONTROL MEASURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH PROJECT PLANS.
3. ALL TEMPORARY EROSION CONTROL MEASURES USED SHALL BE KEPT CLEAN AND REMOVED ONCE VEGETATIVE COVER HAS BEEN FULLY ESTABLISHED. INSPECT WEEKLY AND WITHIN 24 HOURS AFTER 0.5" OF RAINFALL OR MORE.
4. THE CONTRACTOR SHALL MAINTAIN RESPONSIBILITY OF ALL EROSION CONTROL, TURF ESTABLISHMENT MEASURES, AND LANDSCAPE THROUGHOUT CONSTRUCTION AND AFTER PROJECT COMPLETION UNTIL SUCH TIME AS VEGETATIVE COVER HAS BEEN FULLY ESTABLISHED.
5. INSTALLATION OF HAY BALE BARRIERS AND SILTATION FENCES SHALL BE COMPLETED PRIOR TO THE START OF SITE WORK ANY GIVEN AREA. PREFABRICATED SILTATION FENCES SHALL BE INSTALLED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS.
6. ALL DISTURBED AREAS SHALL HAVE A MINIMUM OF 4" OF LOAM INSTALLED WITH NOT LESS THAN INDICATED SEED MIX PER 1,000 SQ. FT. GROUND COVER WILL BE ESTABLISHED BY HYDRO SEEDING. SEED MIXTURE SHALL BE:  

PERMANENT (PARK SEED MIX)	1.15 LBS.
PERENNIAL RYEGRASS	0.92 LBS.
CREeping RED FESCUE -	0.57 LBS.
KENTUCKY BLUEGRASS -	0.11 LBS.
RED TOP -	2.74 LBS/1000 S.F.
PERMANENT (OTHER THAN LAWN AREAS)	0.69 LBS.
PERENNIAL RYEGRASS -	0.80 LBS.
CREeping RED FESCUE -	0.11 LBS.
BIRDFOOT TREFOIL -	0.11 LBS.
RED TOP -	0.11 LBS.
ALSIKE CLOVER -	1.82 LBS/1000 S.F.
TEMPORARY	
ANNUAL RYEGRASS -	1.1 LBS./1000 S.F.

USE ABOVE SEED MIXES UNLESS OTHERWISE SPECIFIED.

7. LIME AND FERTILIZER OF PROPER PROPORTIONS SHALL BE INCORPORATED INTO THE SOIL PRIOR TO SEEDING IN ACCORD WITH NHDOT ITEMS 642 & 643. SEEDING PRACTICES SHALL COMPLY WITH LOCAL USDA SOIL CONSERVATION SERVICES RECOMMENDATION.
8. HAY MULCH OR JUTE MATTING SHALL BE USED WHERE INDICATED ON THE PLANS. A MINIMUM OF 1.5 TONS OF MULCH ACRE SHALL BE APPLIED. MULCH SHALL BE ANCHORED IN PLACE WHERE NECESSARY. JUTE MATTING SHALL BE LAID THE DIRECTION OF RUNOFF FLOW AND APPLIED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
9. PERMANENT OR TEMPORARY COVER MUST BE IN PLACE BEFORE THE GROWING SEASON ENDS. WHEN SEEDING AREAS ARE MULCHED, PLANTINGS MAY BE MADE FROM EARLY SPRING TO EARLY OCTOBER. WHEN SEEDING 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.
10. IN THE EVENT THAT, DURING CONSTRUCTION OF ANY PORTION OF THIS PROJECT, A WINTER SHUTDOWN IS NECESSARY, CONTRACTOR SHALL STABILIZE ALL INCOMPLETE WORK AND PROVIDE FOR SUITABLE METHODS OF DIVERTING RUNOFF IN ORDER TO ELIMINATE SHEET FLOW ACROSS FROZEN SURFACES.
11. AN AREA SHALL BE CONSIDERED STABLE IF ONE OF THE FOLLOWING HAS OCCURRED:  
A. BASE COURSE GRAVELS ARE INSTALLED IN AREAS TO BE PAVED;  
B. A MINIMUM OF 85% VEGETATED GROWTH HAS BEEN ESTABLISHED;  
C. A MINIMUM OF 3" OF NON-EROSIVE MATERIAL SUCH AS STONE OR RIP RAP HAS BEEN INSTALLED; OR  
D. EROSION CONTROL BLANKETS HAVE BEEN PROPERLY INSTALLED.
12. DUST SHALL BE CONTROLLED BY THE USE OF WATER AS NECESSARY THROUGHOUT THE CONSTRUCTION PERIOD. WATER SUBSIDIARY.
13. SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH JUTE MATTING WHEN AND IF FIELD CONDITIONS WARRANT, OR IF ORDERED. JUTE MATTING INSTALLED TO CONFORM WITH THE RECOMMENDED BEST MANAGEMENT PRACTICE OUTLINED IN "STORMWATER MANAGEMENT AND EROSION AND SEDIMENT CONTROL HANDBOOK FOR URBAN AND DEVELOPING AREAS IN HAMPSHIRE".
14. USE OF STONE TO STABILIZE A TRENCH, ROAD OR DITCH (SWALE) SHALL BE CONSIDERED SUBSIDIARY TO MAINTENANCE TRAFFIC (ITEM 619.1) REGARDLESS OF WHETHER ITS USE IS DIRECTED.

CONSTRUCTION SEQUENCE:

CONSTRUCTION SEQUENCE NOTES ARE PROVIDED AS A GENERAL GUIDELINE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DEVELOPING AND SUBMITTING A DETAILED CONSTRUCTION SEQUENCE PRIOR TO THE START OF CONSTRUCTION.

1. INSTALL CONSTRUCTION SIGNS.
2. INSTALL EROSION CONTROL MEASURES. INSPECT AND MAINTAIN EROSION CONTROL MEASURES ON A DAILY BASIS. IMPLEMENT NECESSARY MEASURES PER NHDES BEST MANAGEMENT PRACTICES TO MAINTAIN A STABLE WORK AREA.
3. ESTABLISH HORIZONTAL ALIGNMENT LAYOUT AND VERTICAL CONTROL. VERIFY BENCH MARKS AND EXISTING ELEVATION.
4. REMOVE TREES AND STUMP. DISPOSE OF DEBRIS. IF TOPSOIL IS STRIPPED THEN IT SHALL BE STOCKPILED AND STABILIZED.
5. CONDUCT TEST PITTING OPERATIONS.
6. INSTALL PROPOSED DRAINAGE CATCH BASINS, CULVERTS, ETC.
7. COMMENCE PAVEMENT RECLAMATION ACTIVITIES.
8. COMMENCE GRADING ACTIVITIES TO ACHIEVE PROPER SUBBASE ELEVATIONS.
9. PLACE, COMPACT, AND FINE GRADE RECLAIMED GRAVEL/ PAVEMENT MATERIALS.
10. INSTALL CURBING AS SHOWN OR IF SHOWN ON DESIGN PLANS.
11. REPLANT DISTURBED LANDSCAPE AREAS.
12. PLACE LOAM, SEED, AND MULCH AS SHOWN AND AS NECESSARY TO STABILIZE AND VEGETATE DISTURBED AREAS. TEMPORARY EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL THE SITE IS FULLY STABILIZED.
13. INSTALL SIGNS WHERE SHOWN.
14. PLACE PAVEMENT WEARING COURSE.
15. CLEAN ROADWAY AND DRAIN STRUCTURES.
16. PLACE PAVEMENT MARKINGS.
17. DUST SHALL BE CONTROLLED THROUGHOUT CONSTRUCTION WITH ADEQUATE USE OF WATER AND OTHER MEANS NEEDED TO AVOID A PUBLIC NUISANCE.

TOWN OF SALEM  
SALEM, NEW HAMPSHIRE  
2023 ROADWAY IMPROVEMENT  
PROJECT DUSTON ROAD  
CIVIL DETAILS (SHEET 7 OF 7)

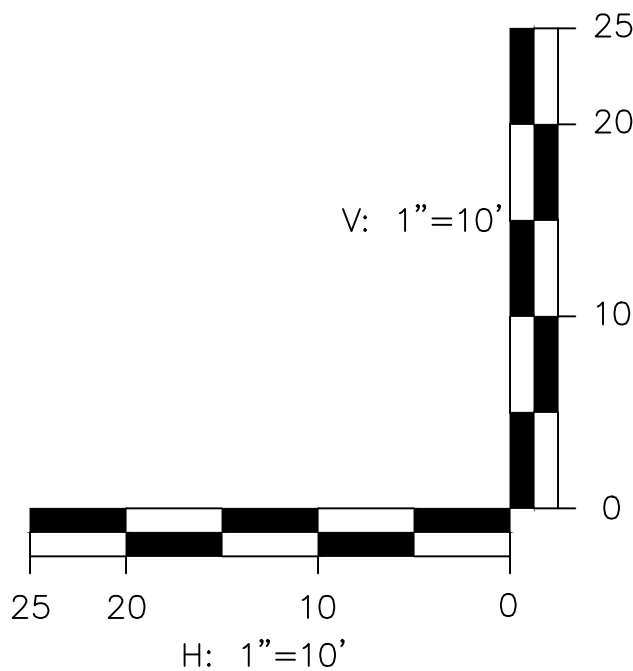
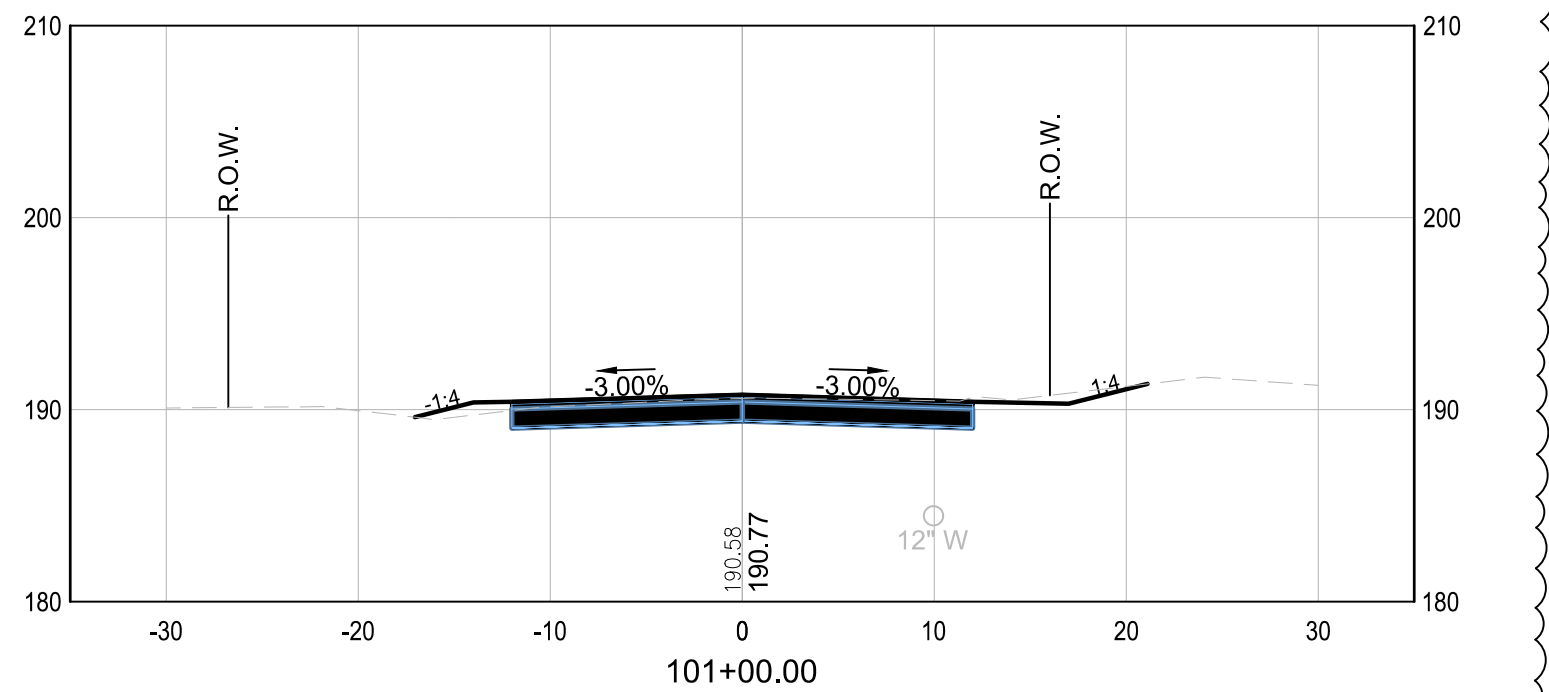
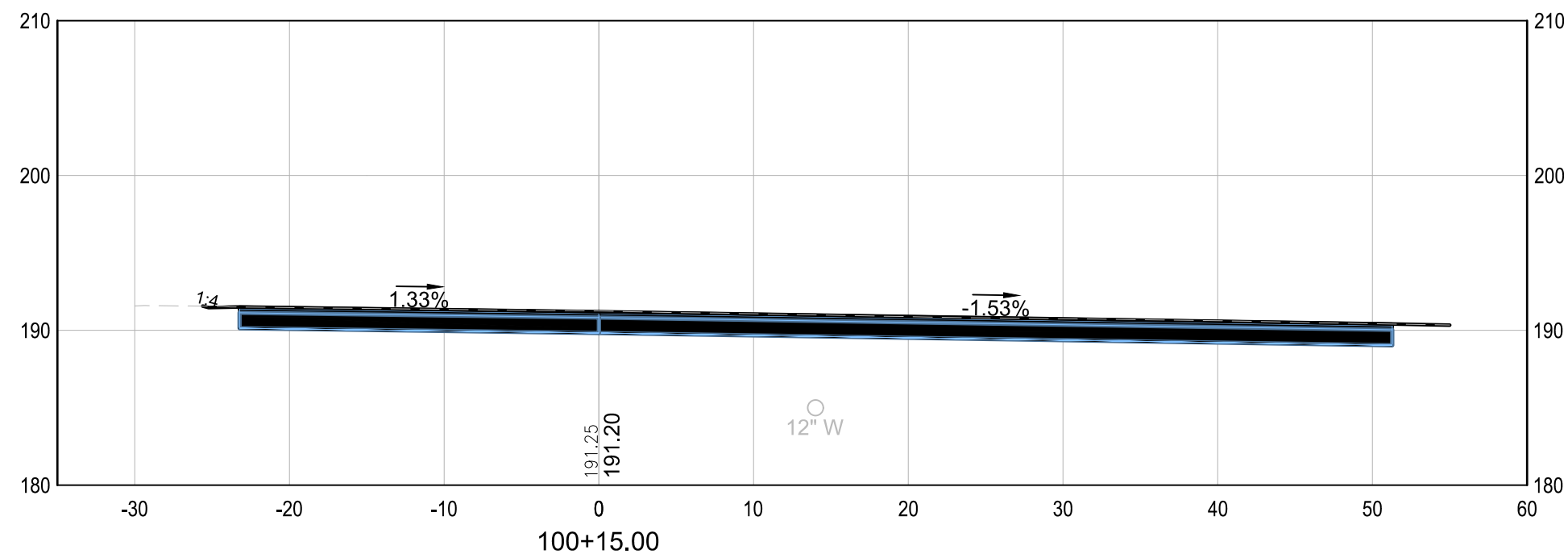
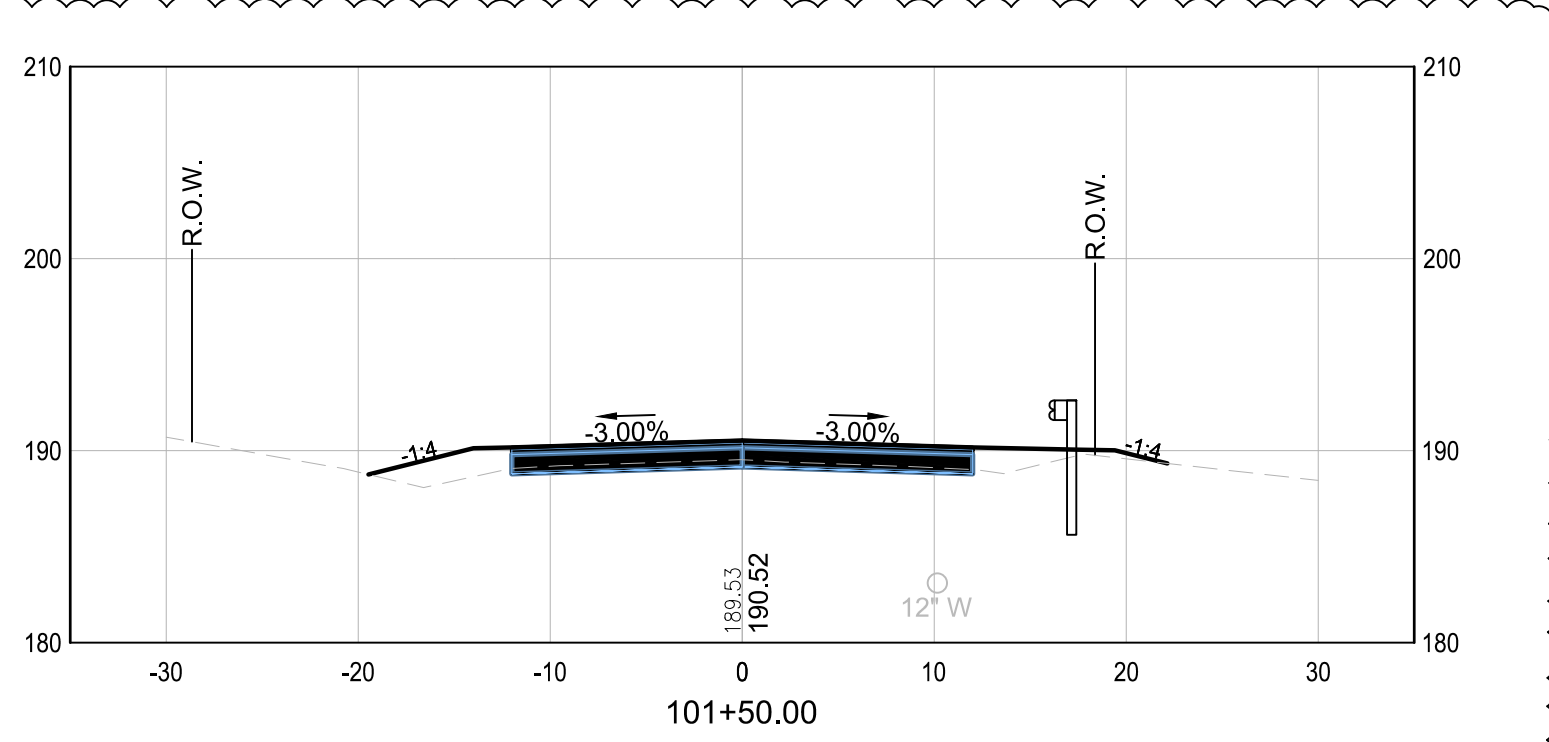
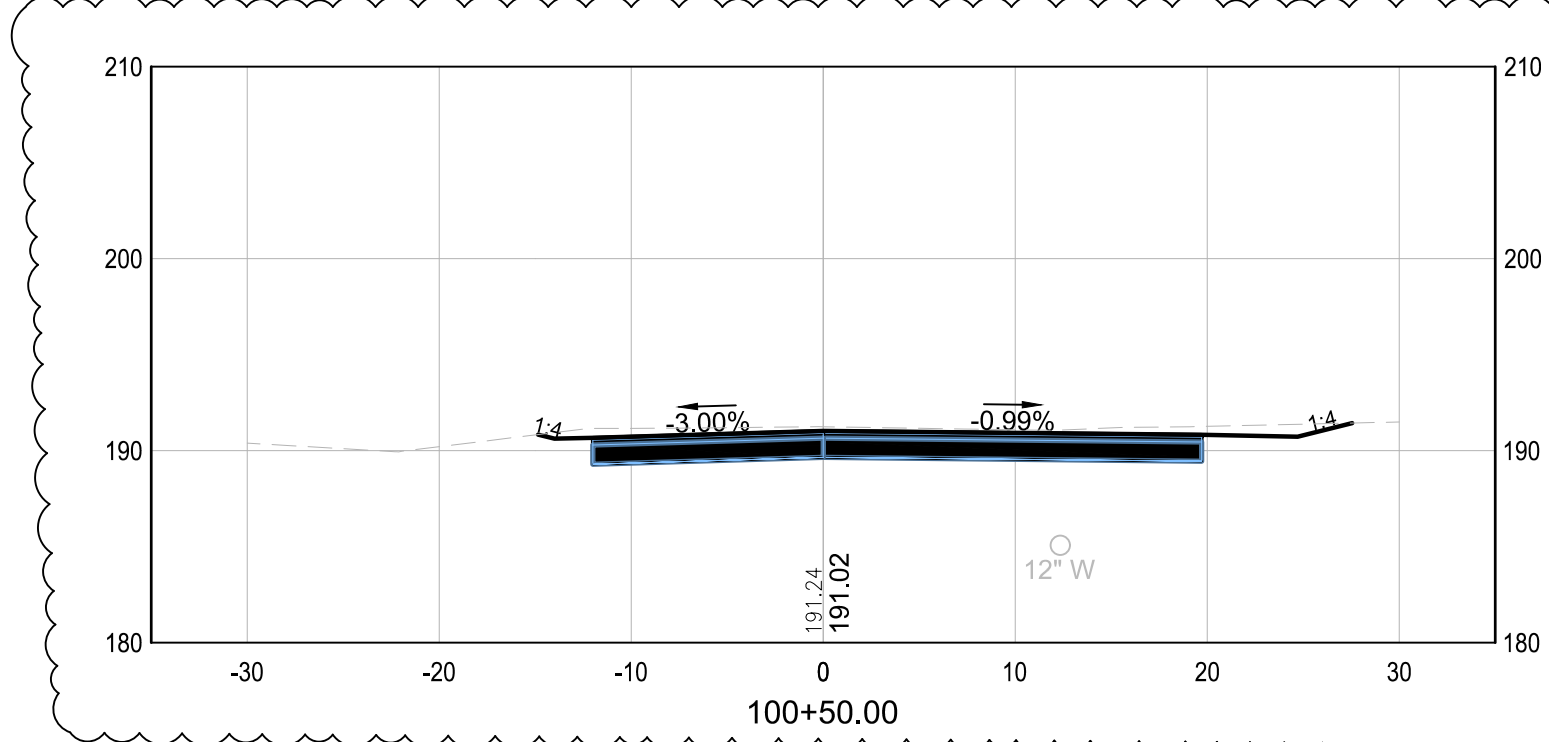
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DRAWN:	FPS	PROJECT:	18900.02	
CHECKED:	MKM	DATE:	DECEMBER 2022	



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53 REGIONAL DRIVE  
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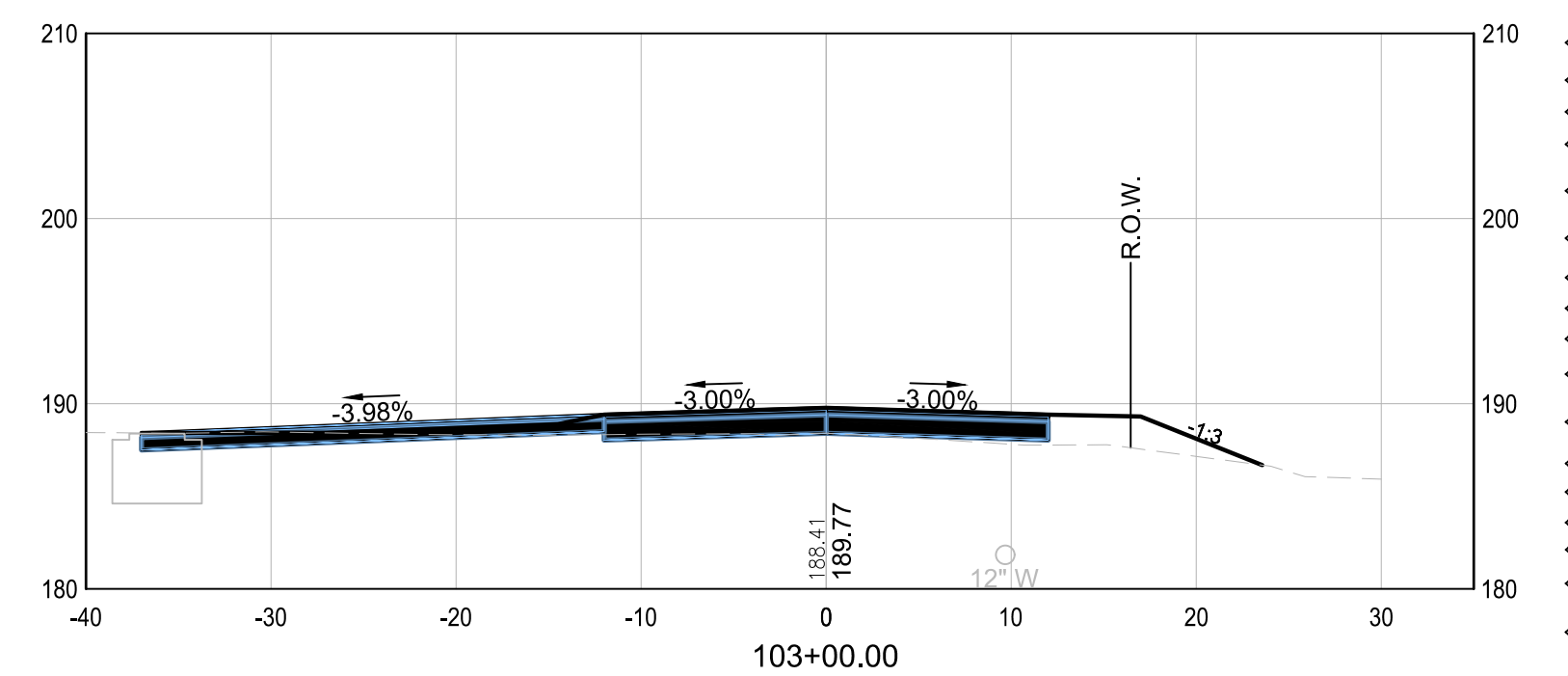
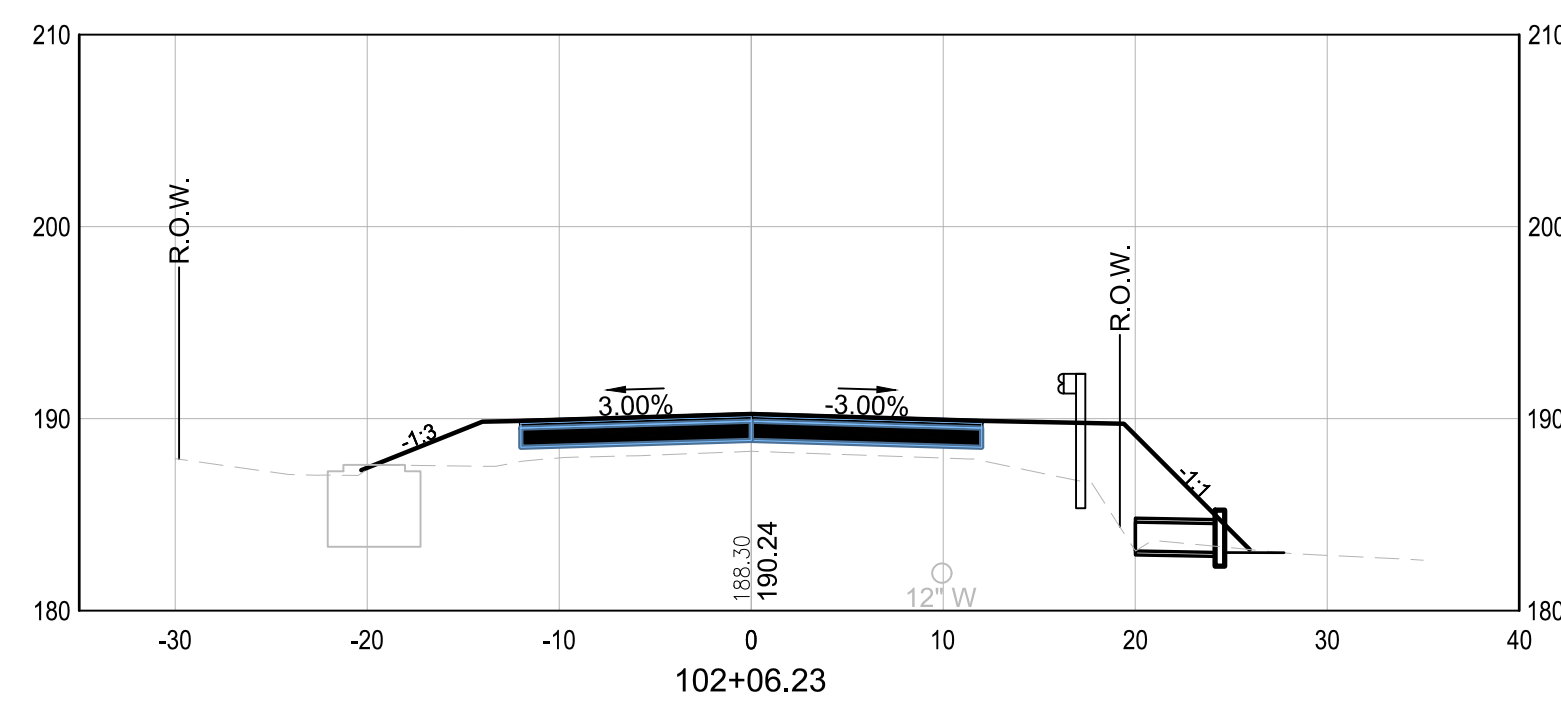
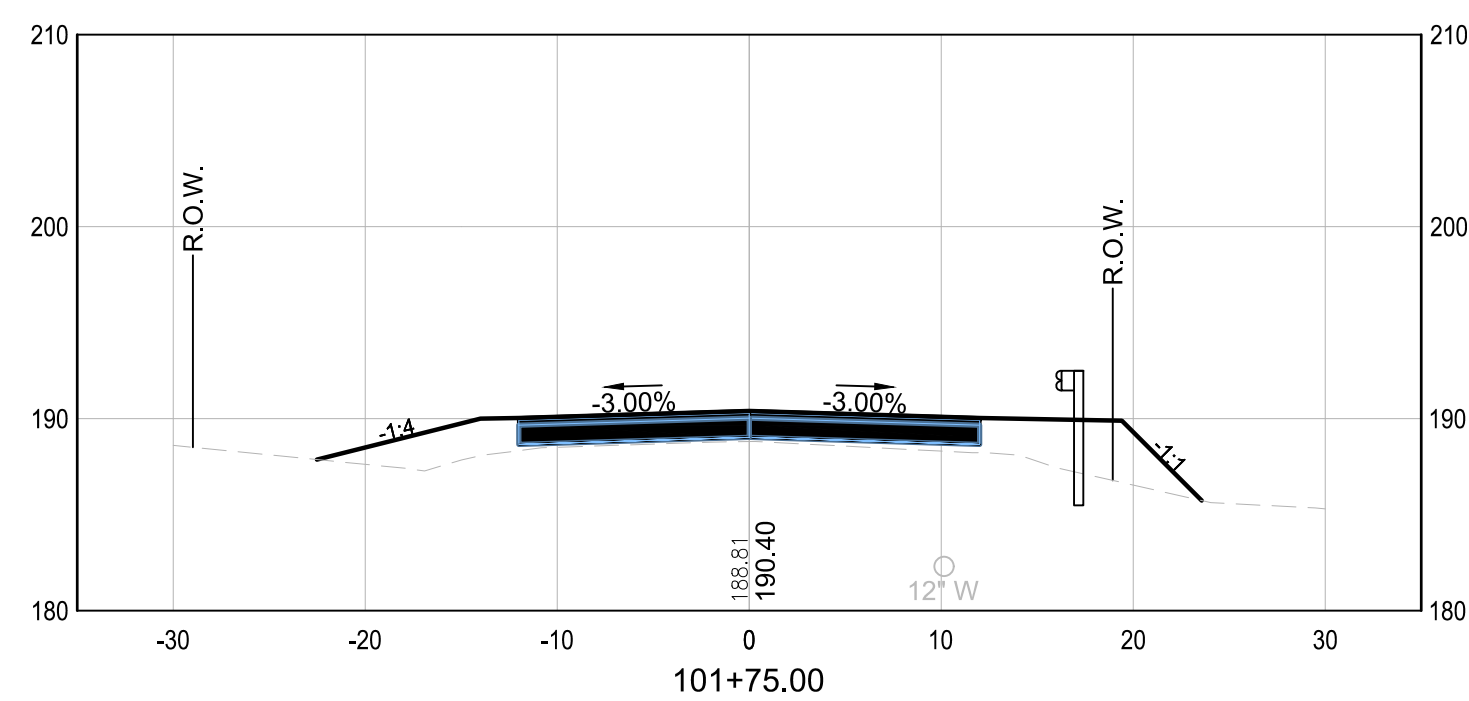
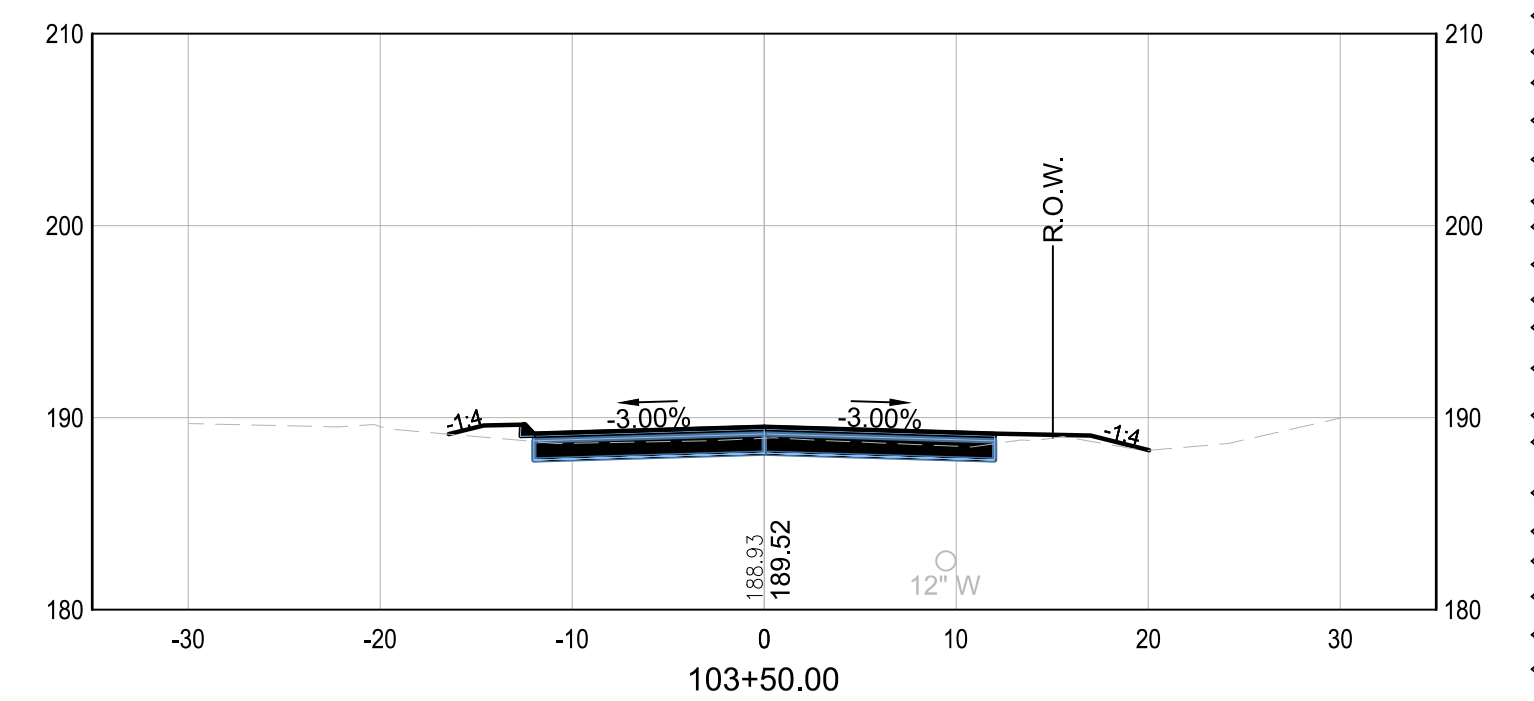
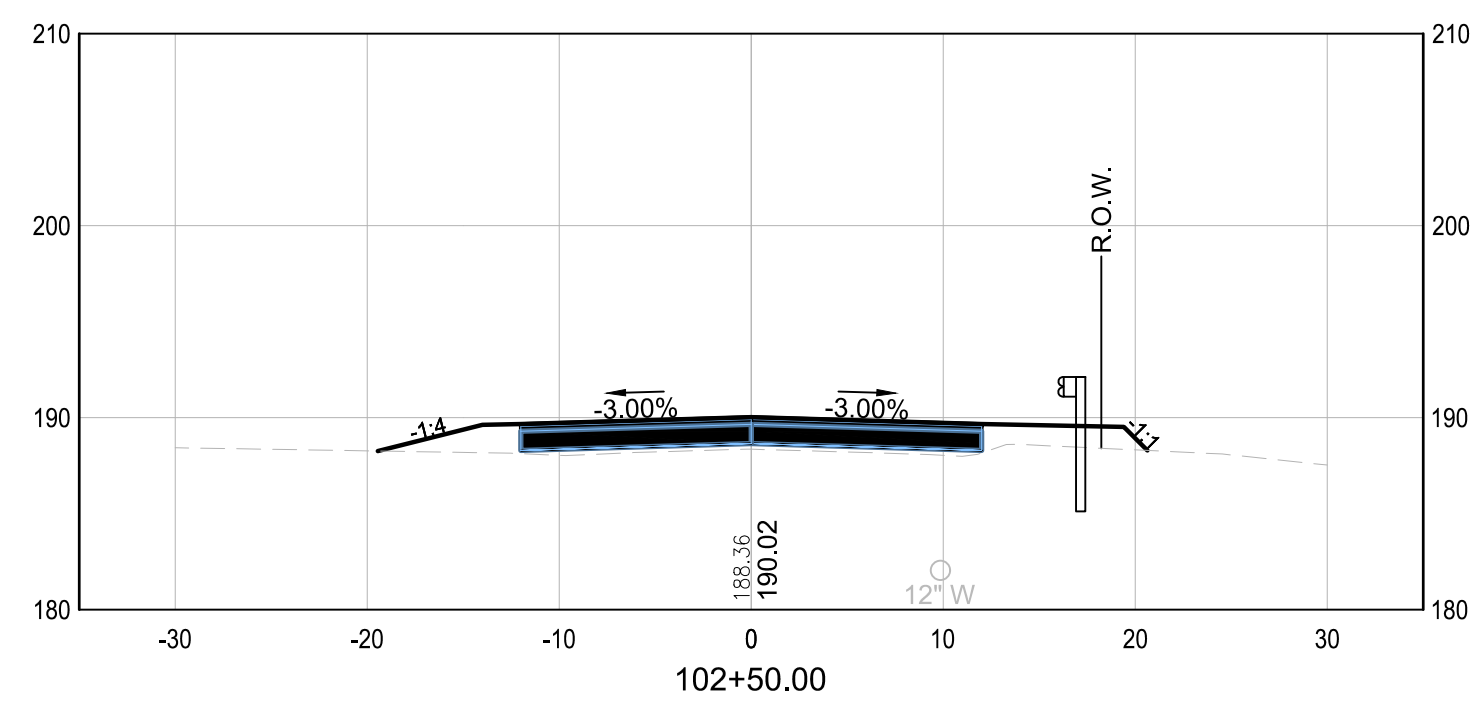
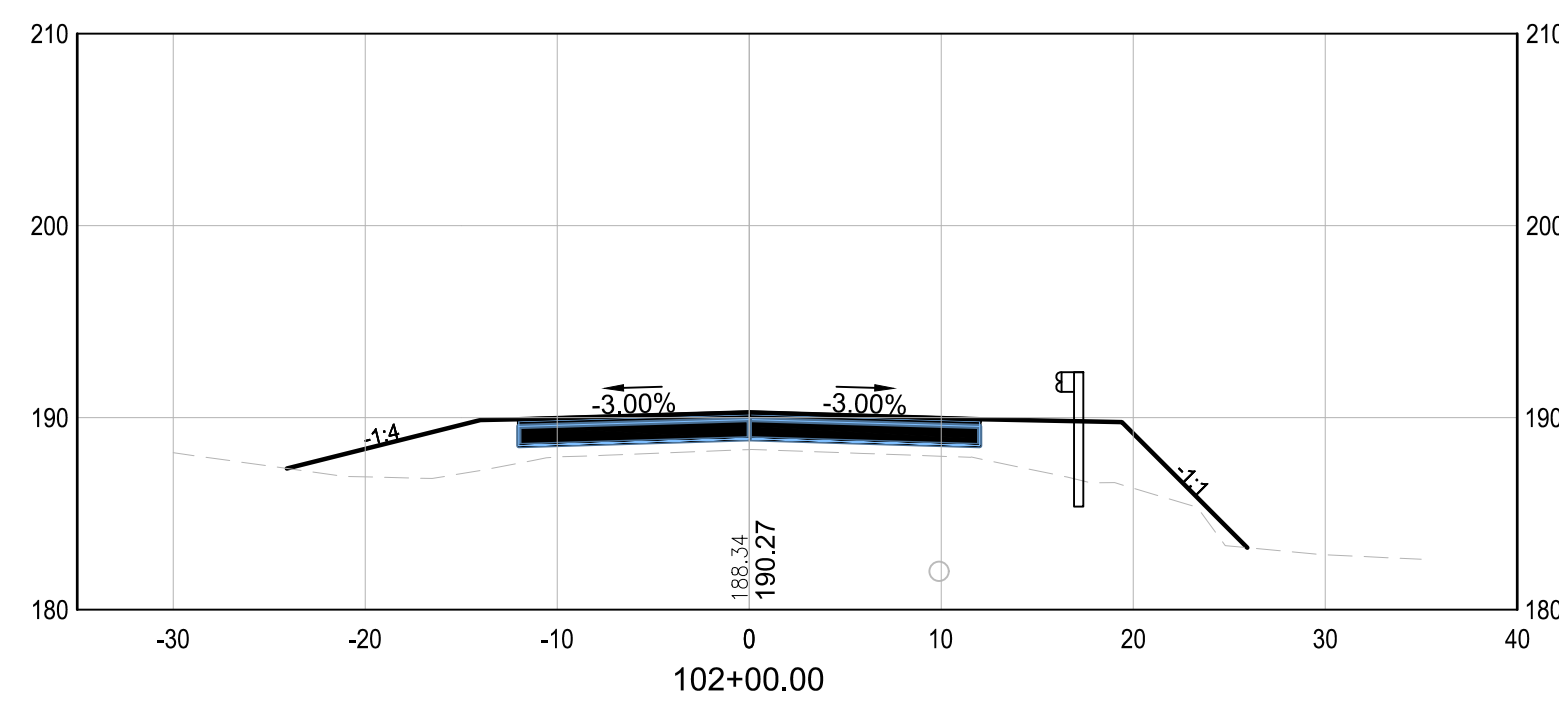


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REV	DATE	DESCRIPTION	BY
1	1/23/23	ADDENDUM 1	FPS

TOWN OF SALEM SALEM, NEW HAMPSHIRE 2023 ROADWAY IMPROVEMENT PROJECT DUSTON ROAD DUSTON ROAD CROSS SECTIONS STA 101+25 TO STA 101+50		
SCALE: AS SHOWN	DESIGN: FPS	13 13 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	





H:  $1'' = 10'$


## BID DOCUMENTS



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CONCORD, NEW HAMPSHIRE 03301

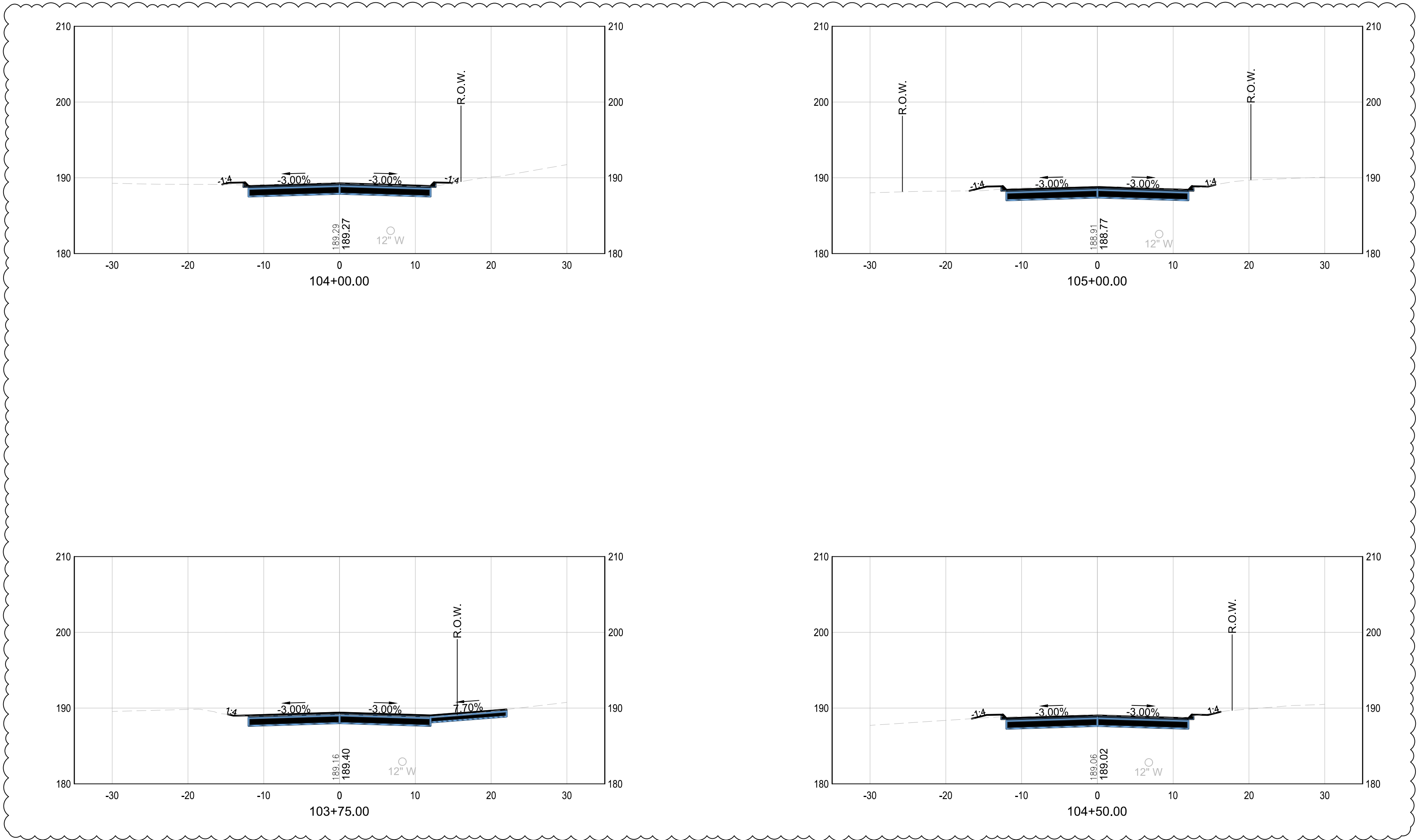
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REV	DATE	DESCRIPTION	BY



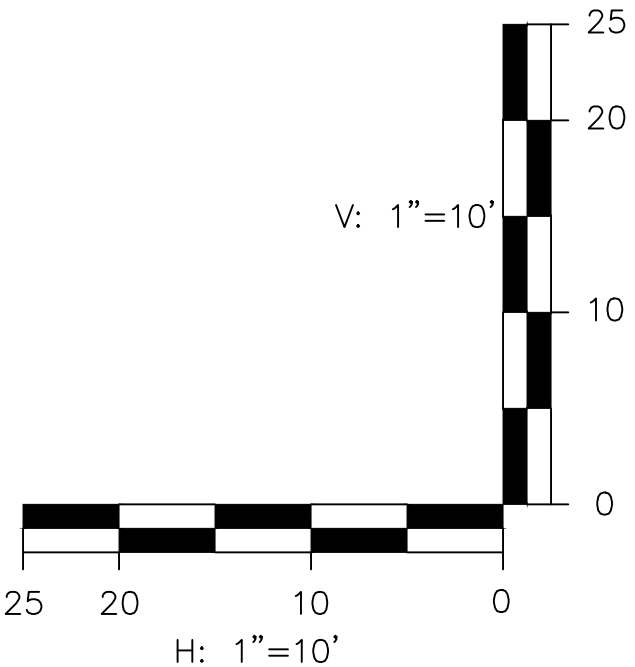
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CONCORD, NEW HAMPSHIRE 03301

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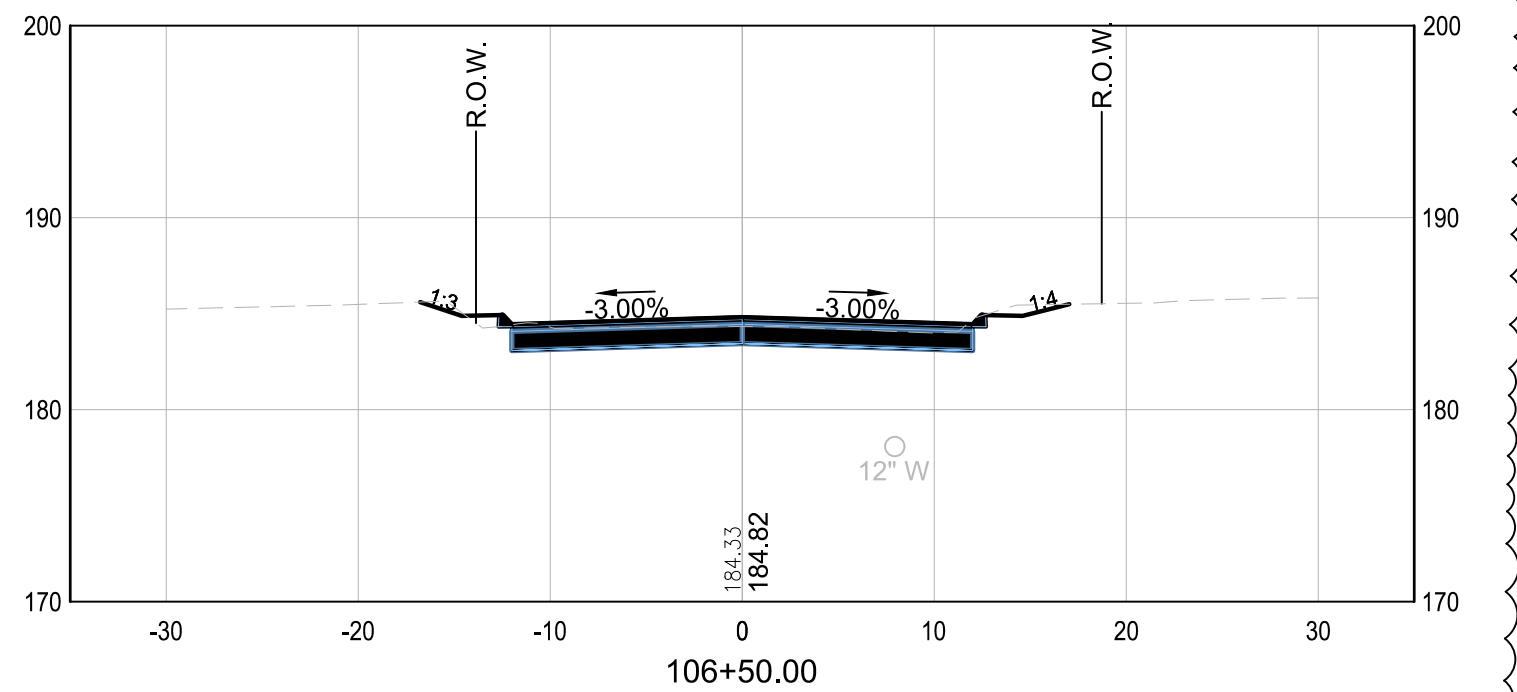
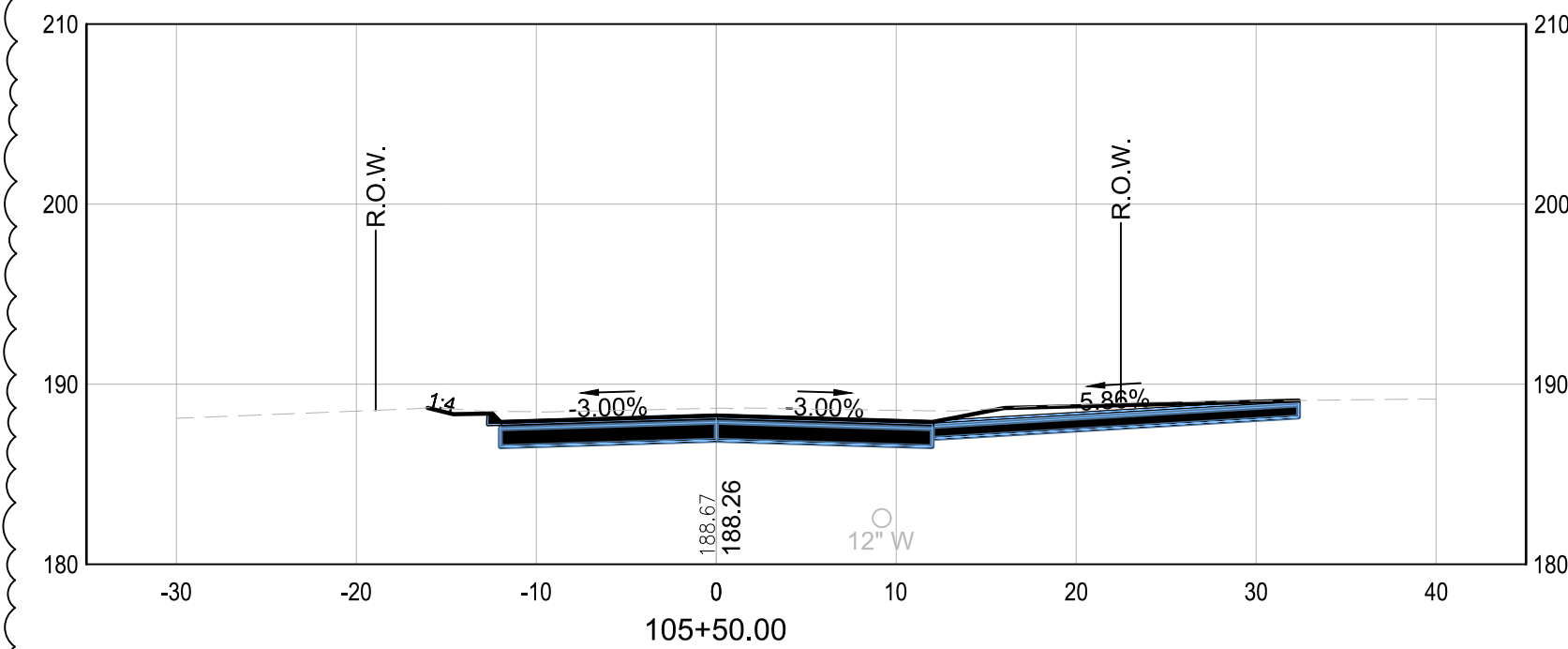
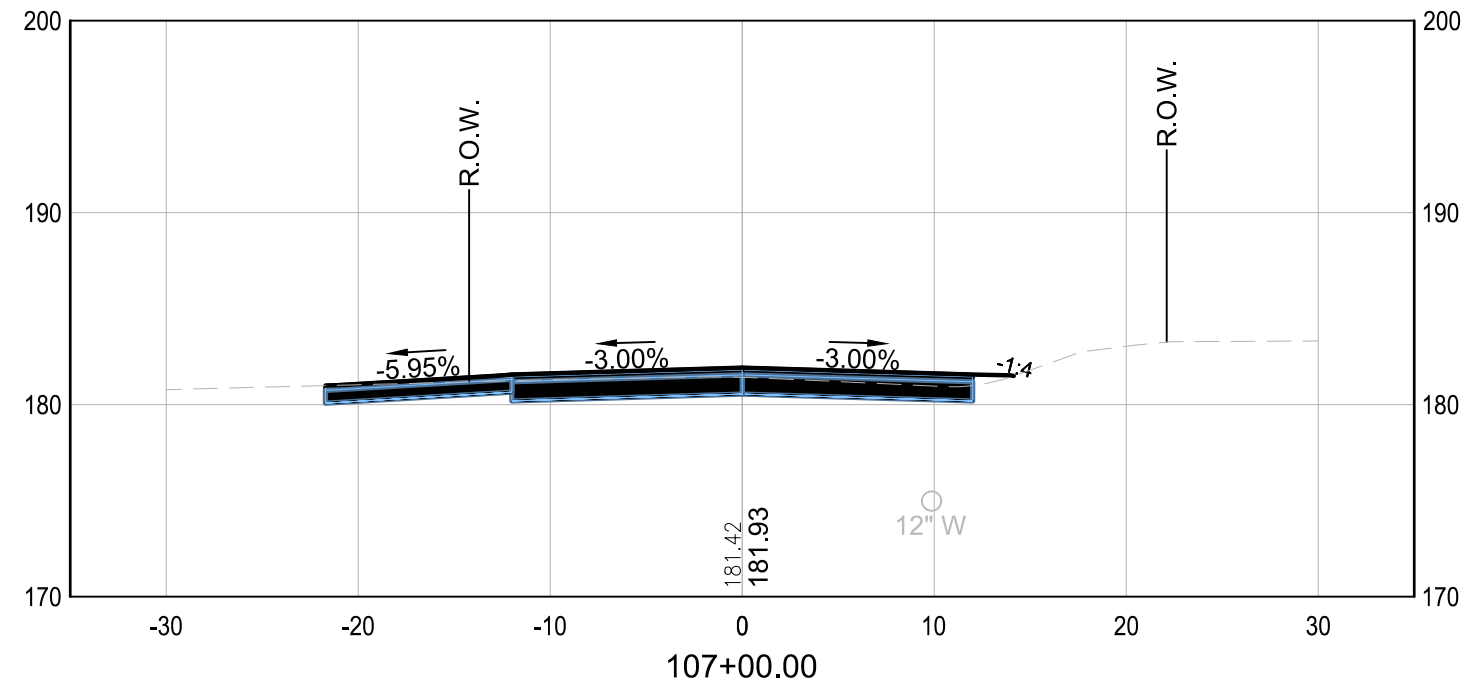
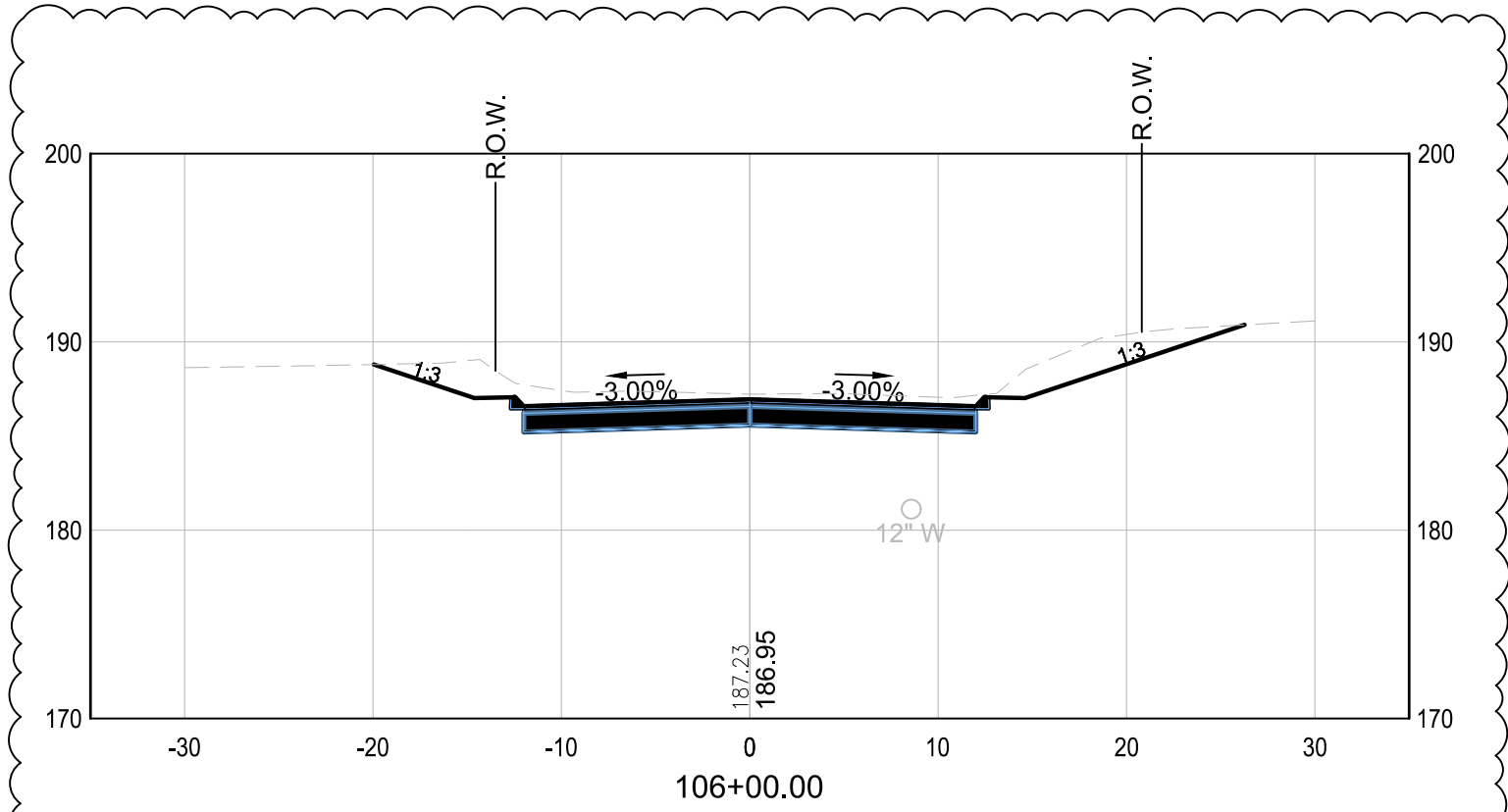


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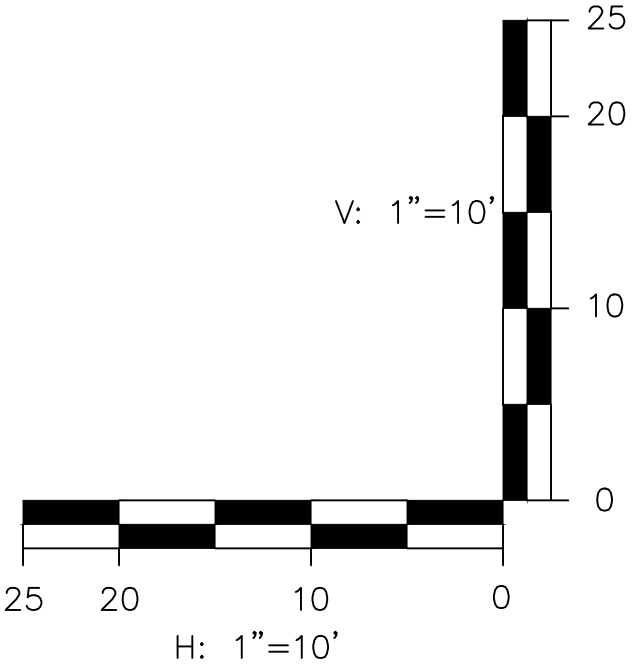
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1	1/23/23	ADDENDUM 1	FPS

<b>TOWN OF SALEM</b> <b>SALEM, NEW HAMPSHIRE</b> <b>2023 ROADWAY IMPROVEMENT</b> <b>PROJECT DUSTON ROAD</b>		
<b>DUSTON ROAD CROSS SECTION</b> <b>STA 104+00 TO STA 105+50</b>		
SCALE: AS SHOWN	DESIGN: FPS	<b>15</b> 15 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

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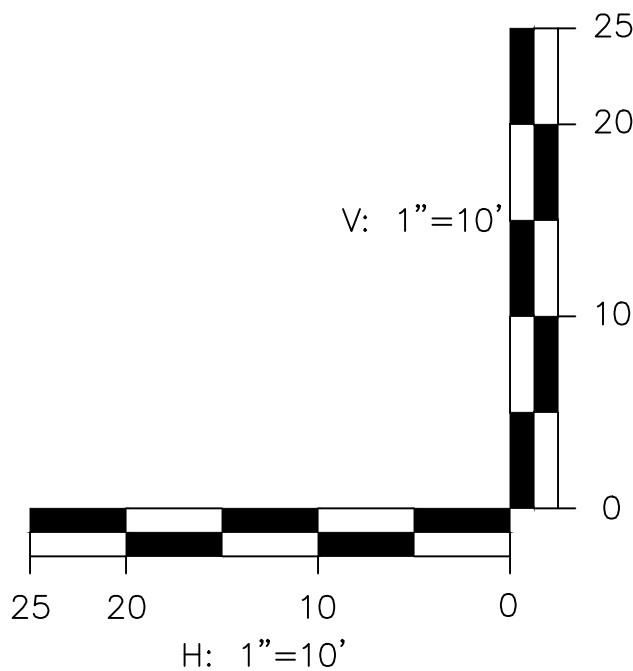
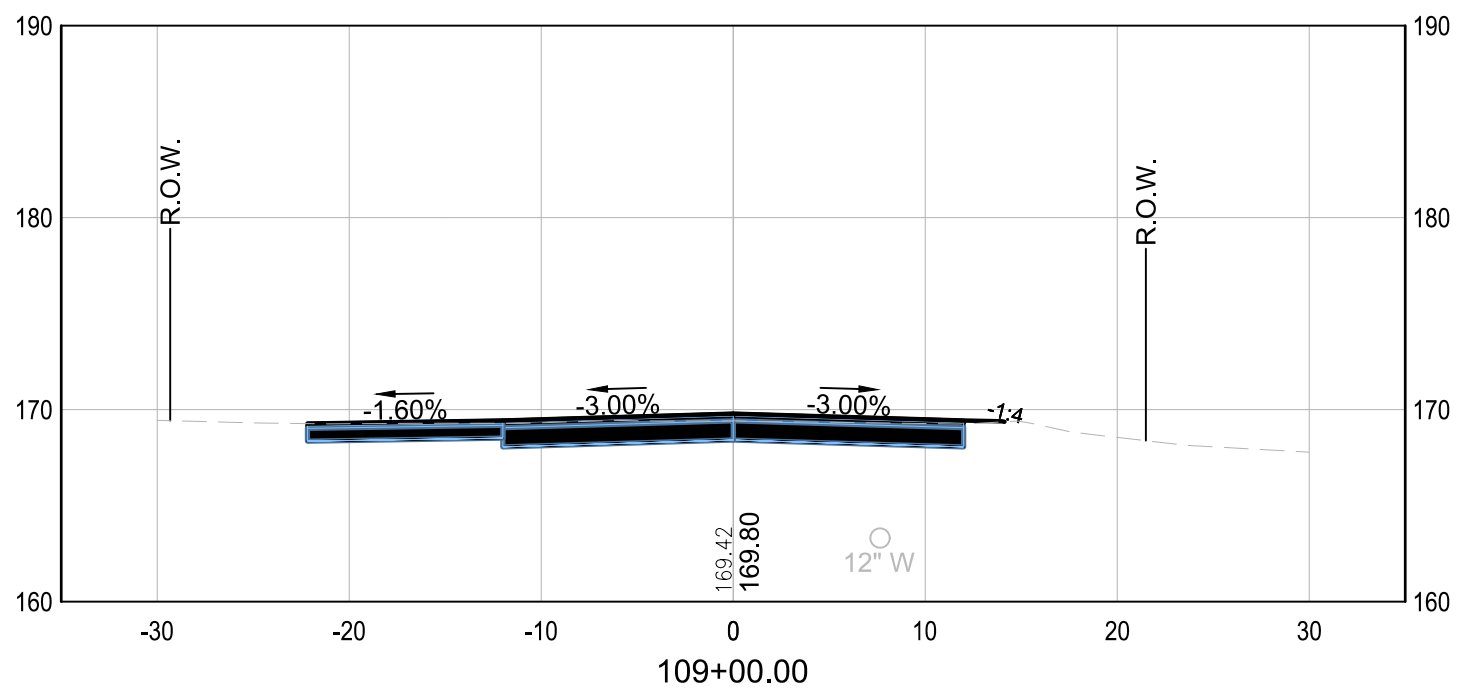
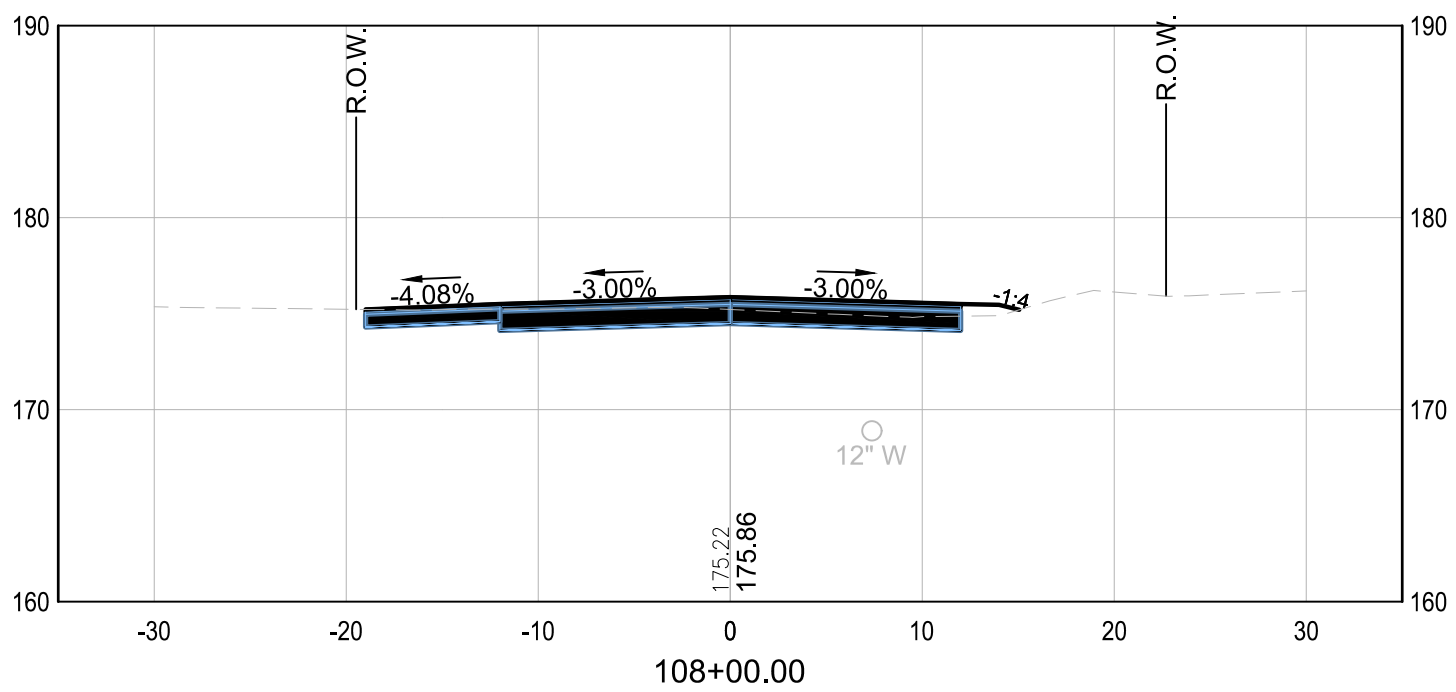
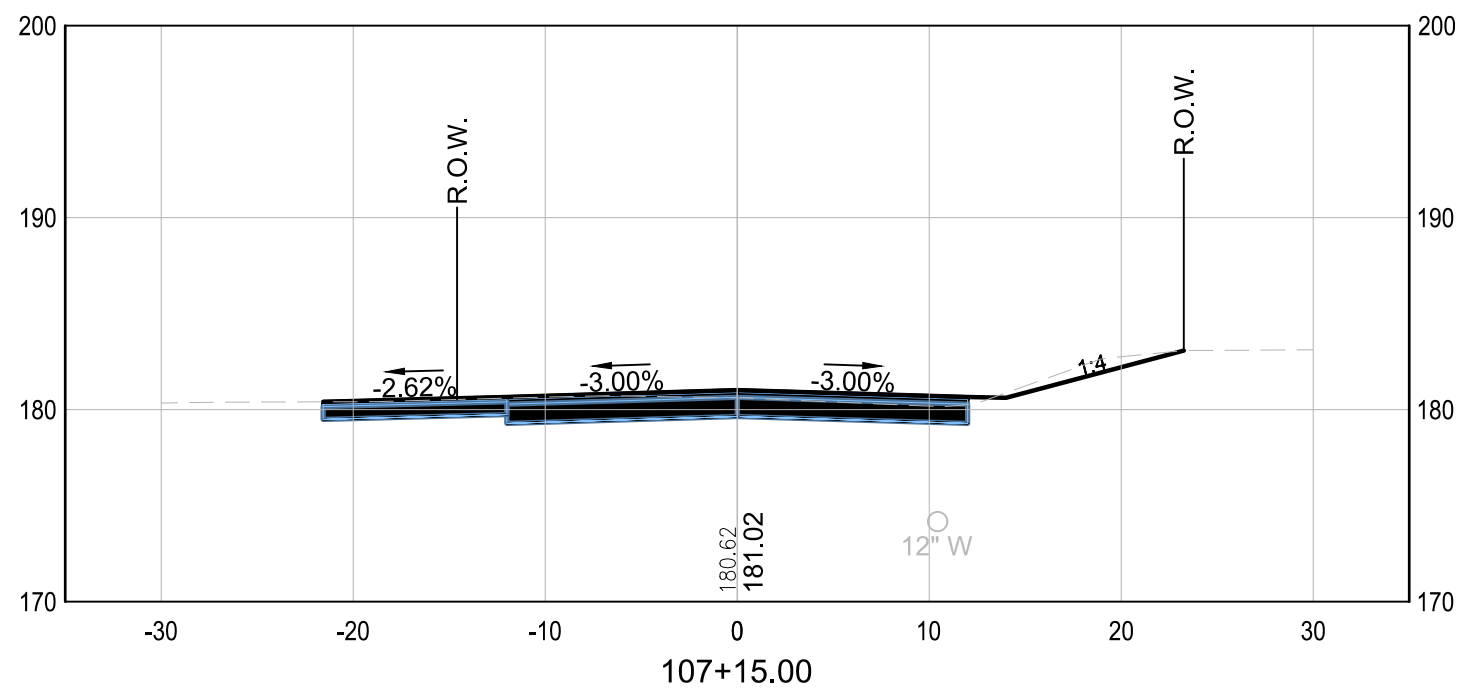
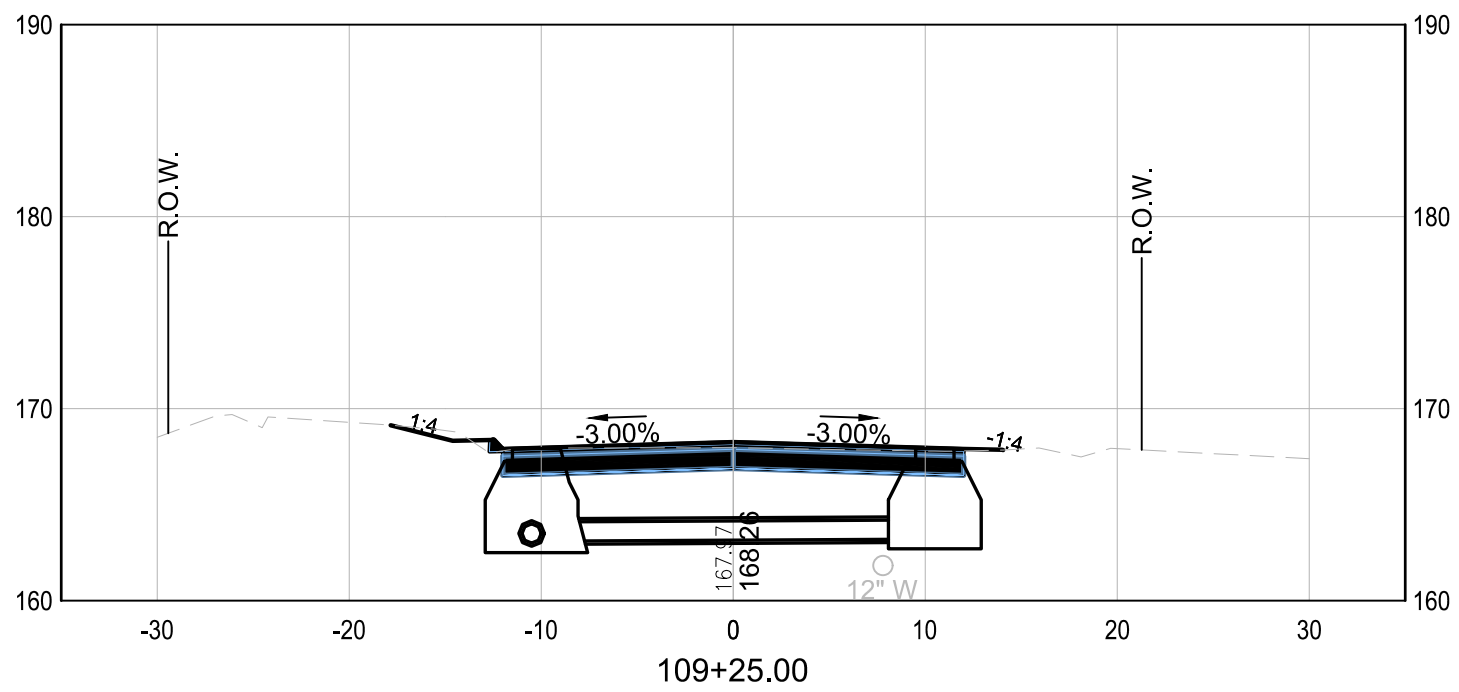
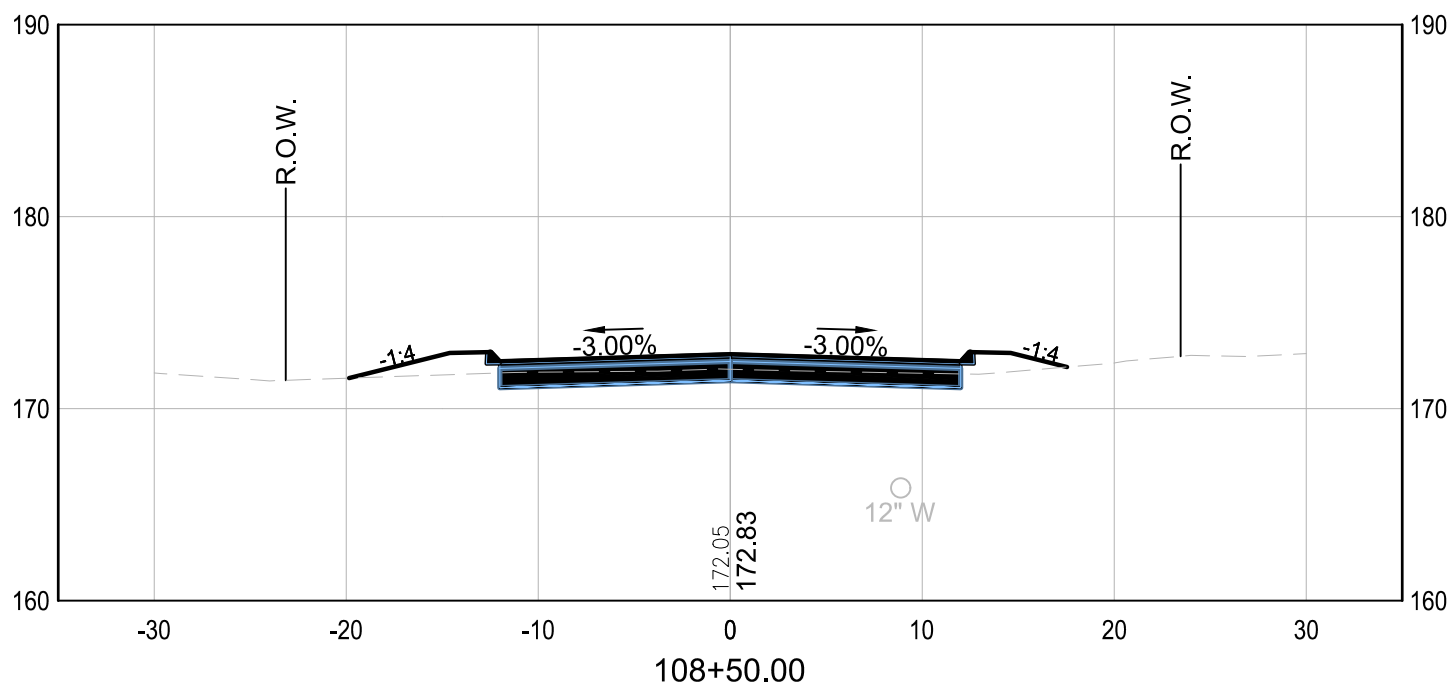
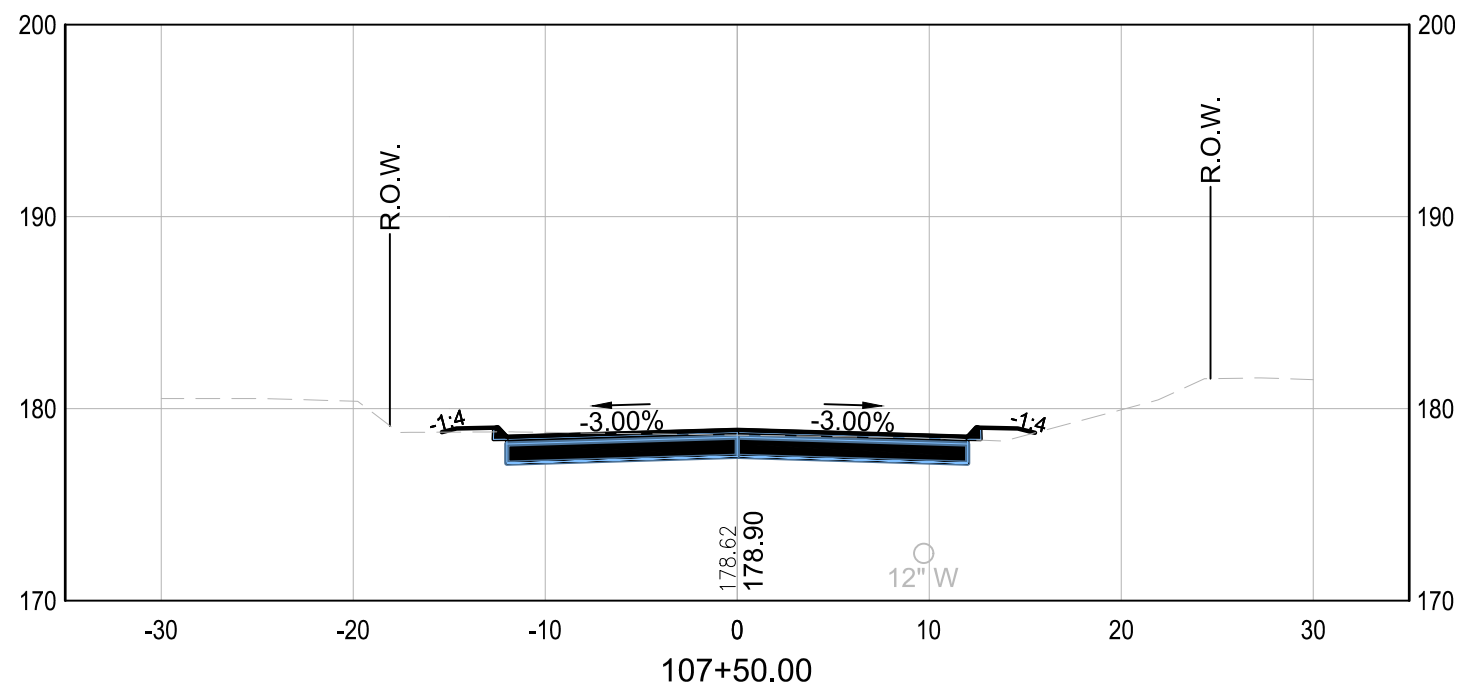


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53 REGIONAL DRIVE  
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REV	DATE	DESCRIPTION	BY
1	1/23/23	ADDENDUM 1	FPS

TOWN OF SALEM SALEM, NEW HAMPSHIRE 2023 ROADWAY IMPROVEMENT PROJECT DUSTON ROAD DUSTON ROAD CROSS SECTION STA 106+00 TO STA 108+00		
SCALE: AS SHOWN	DESIGN: FPS	16 16 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

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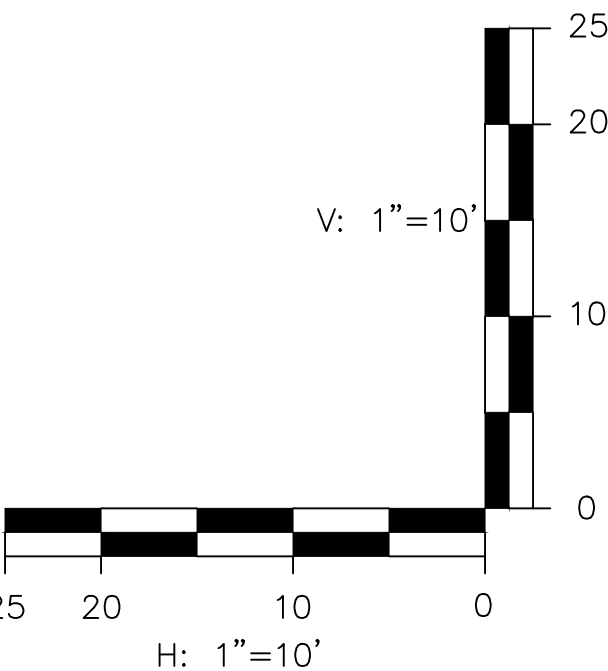
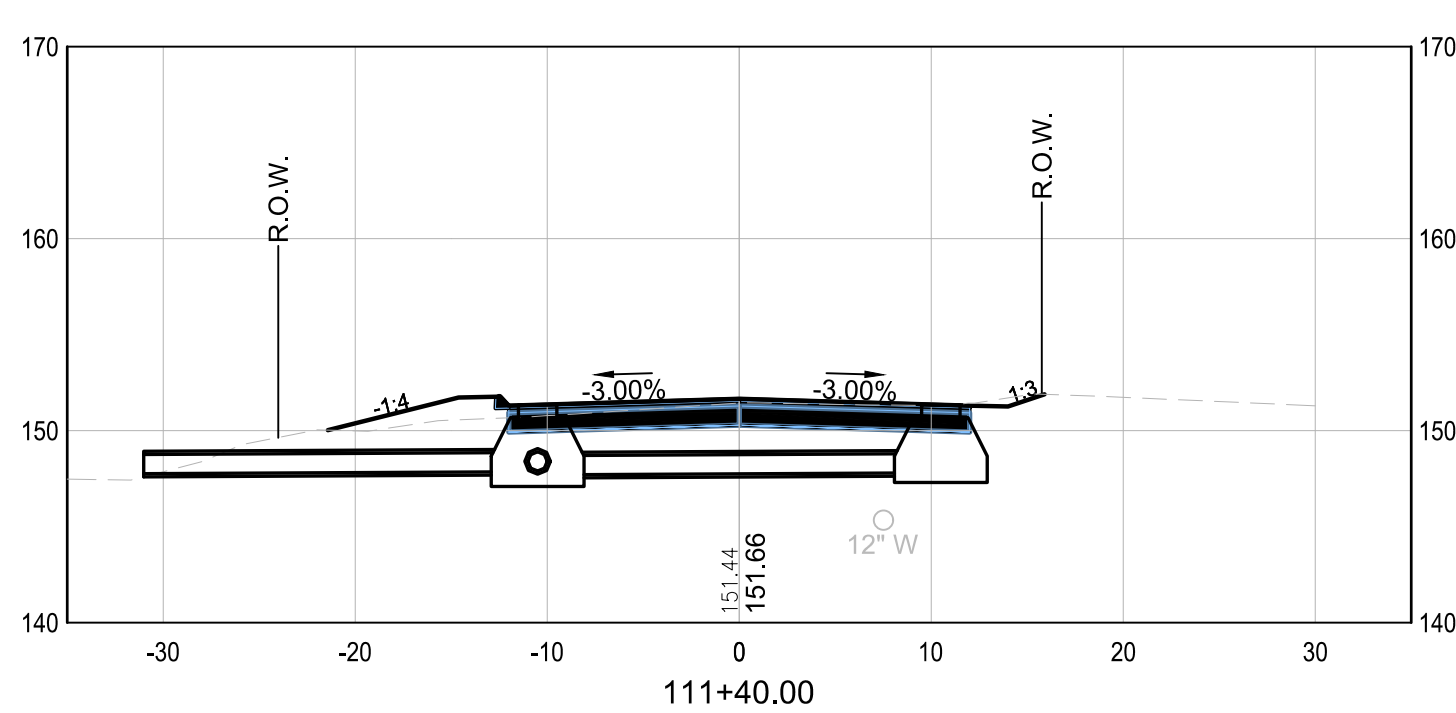
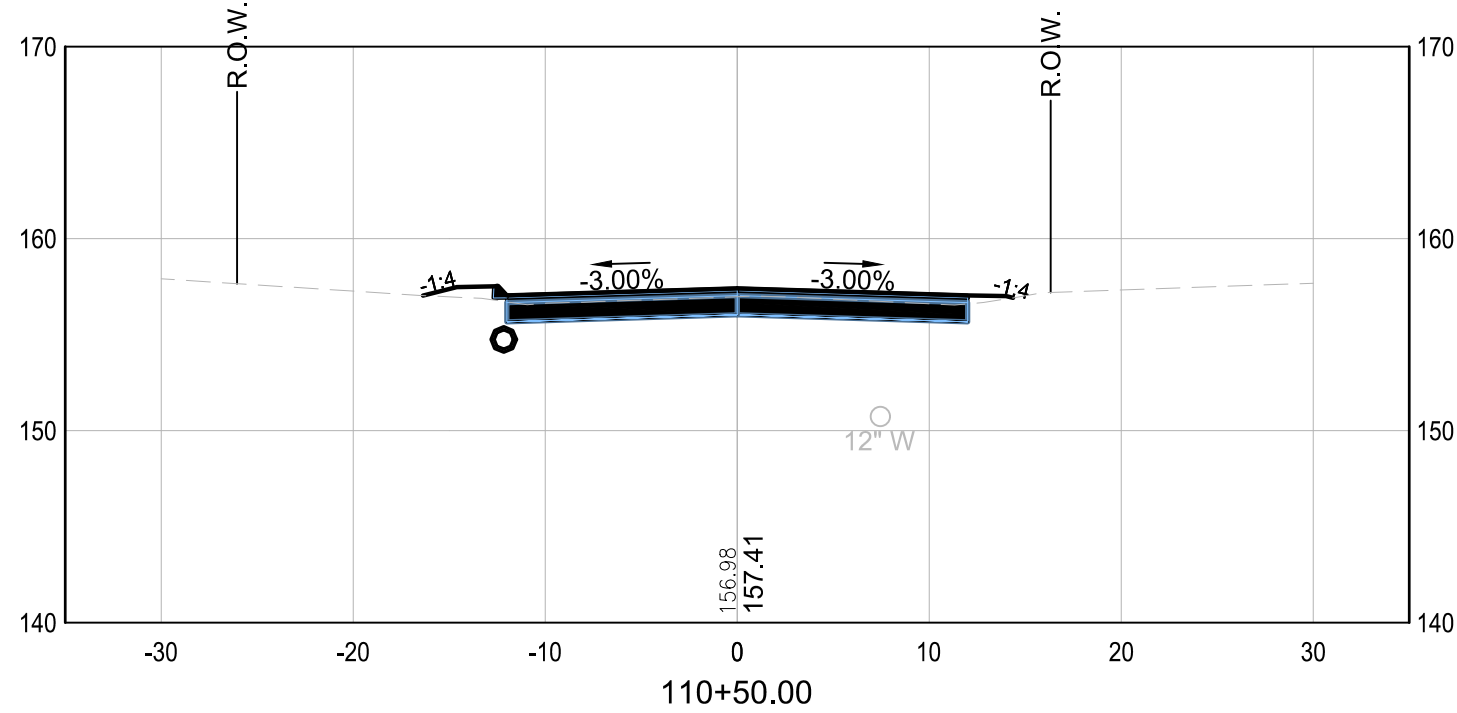
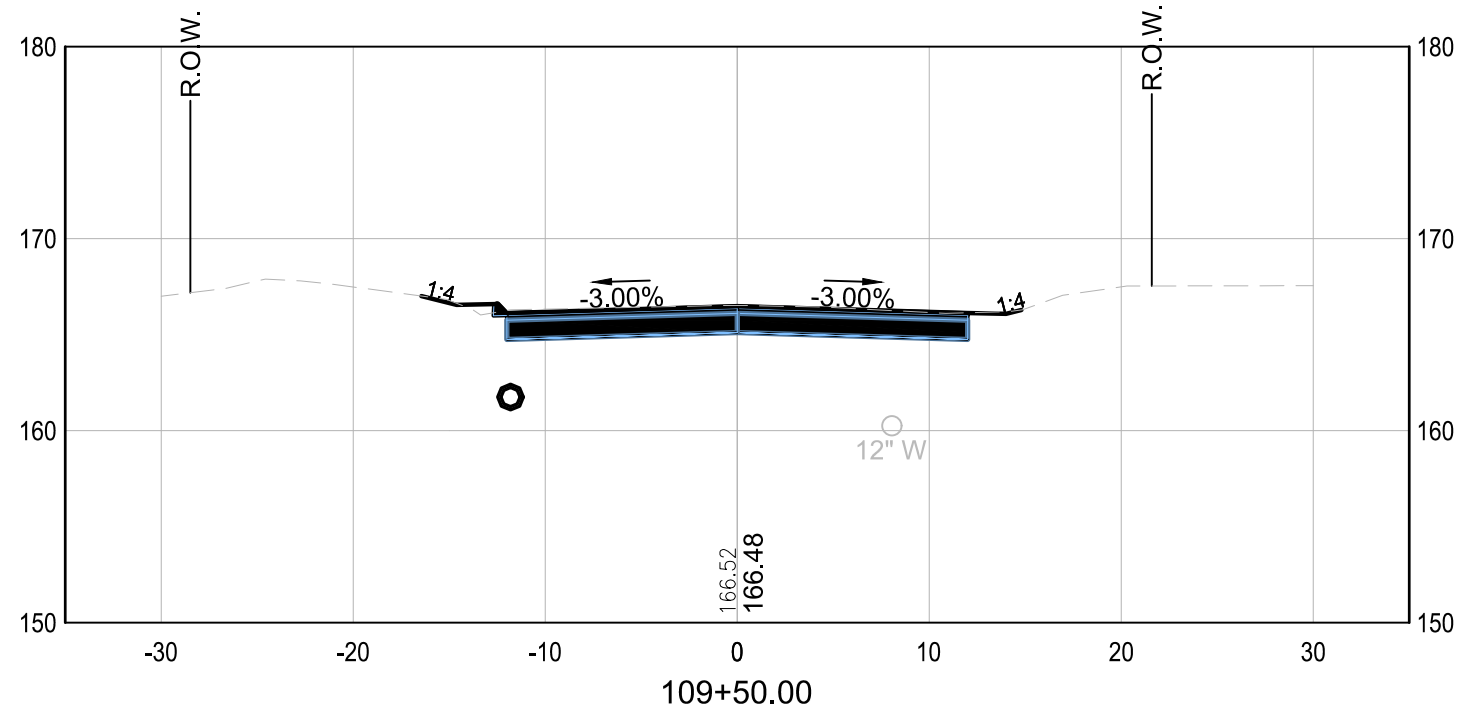
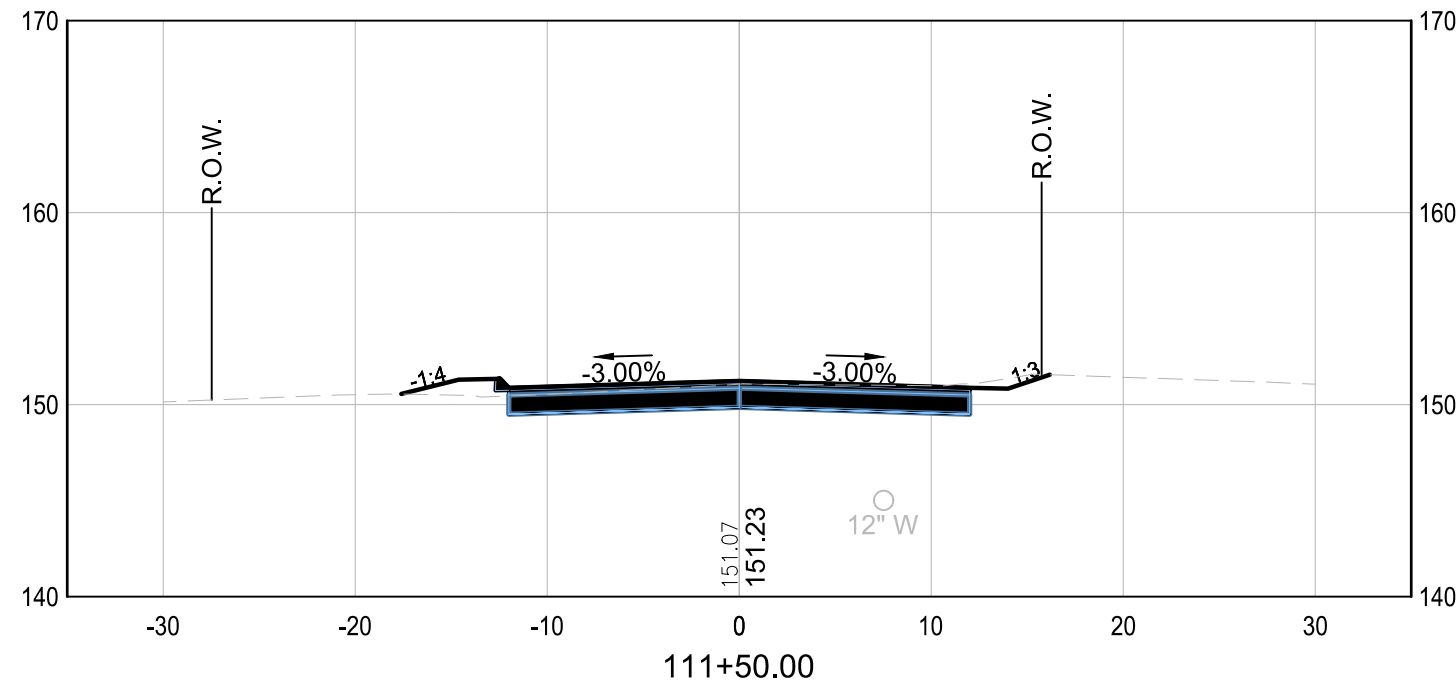
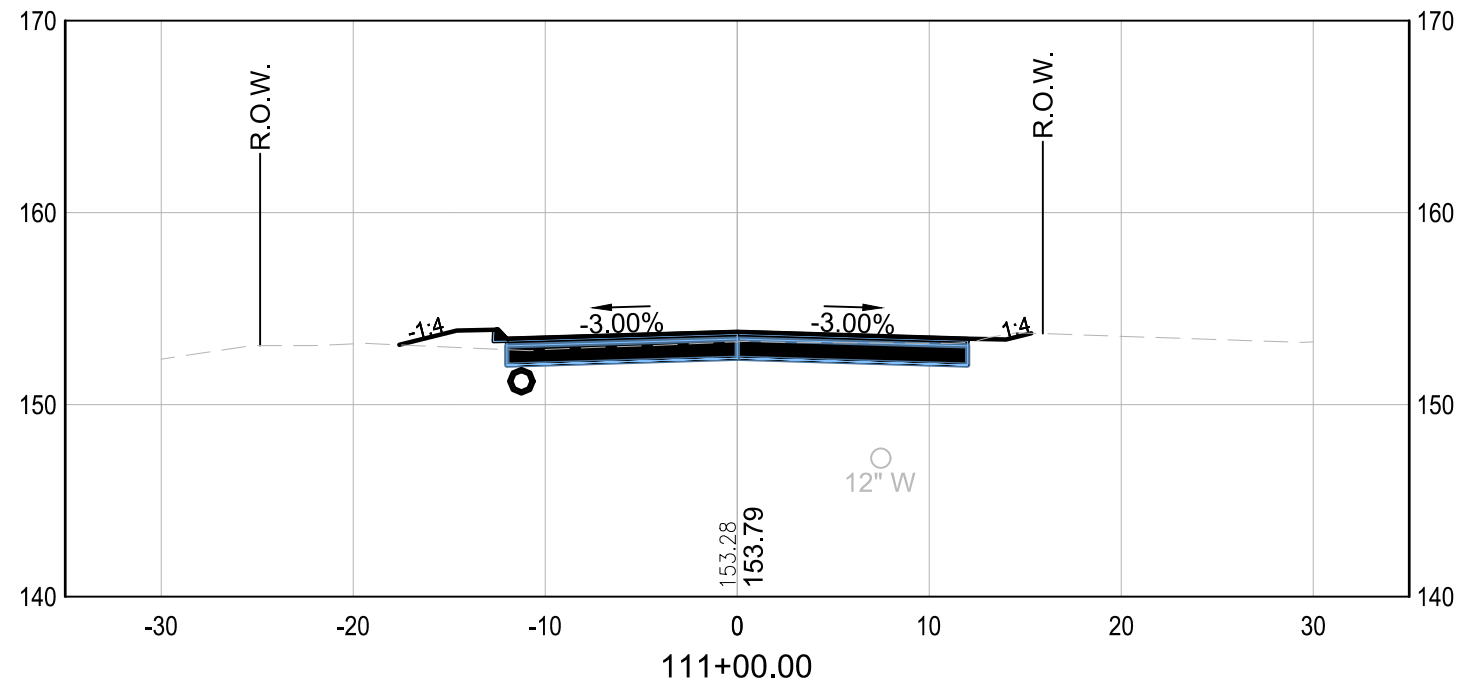
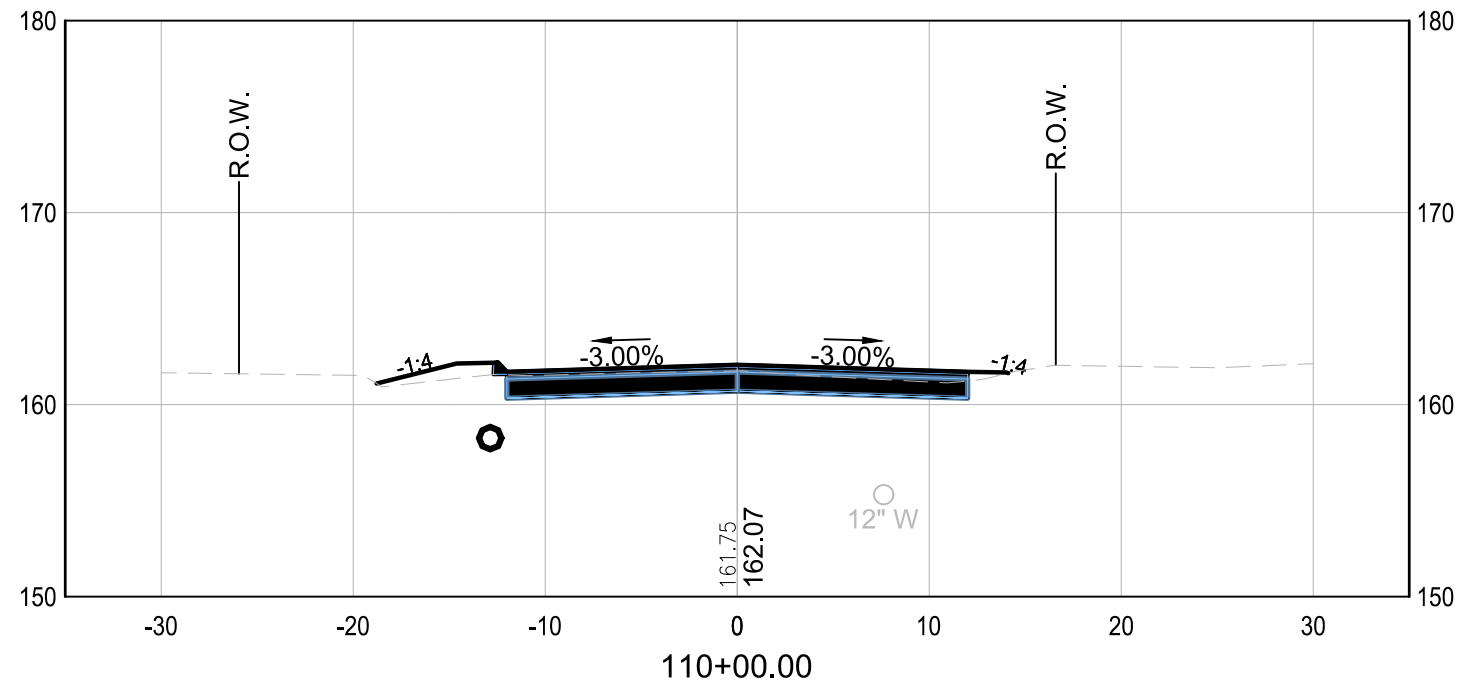
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REV	DATE	DESCRIPTION	BY

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SCALE: AS SHOWN	DESIGN: FPS	17 17 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	



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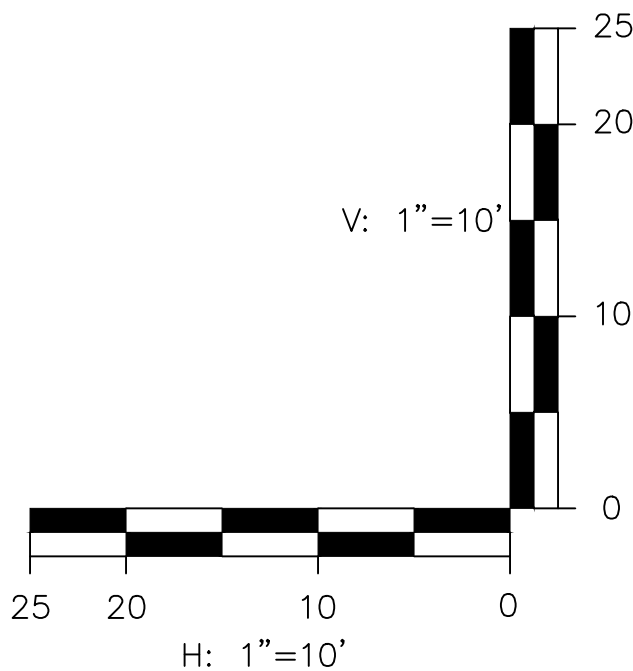
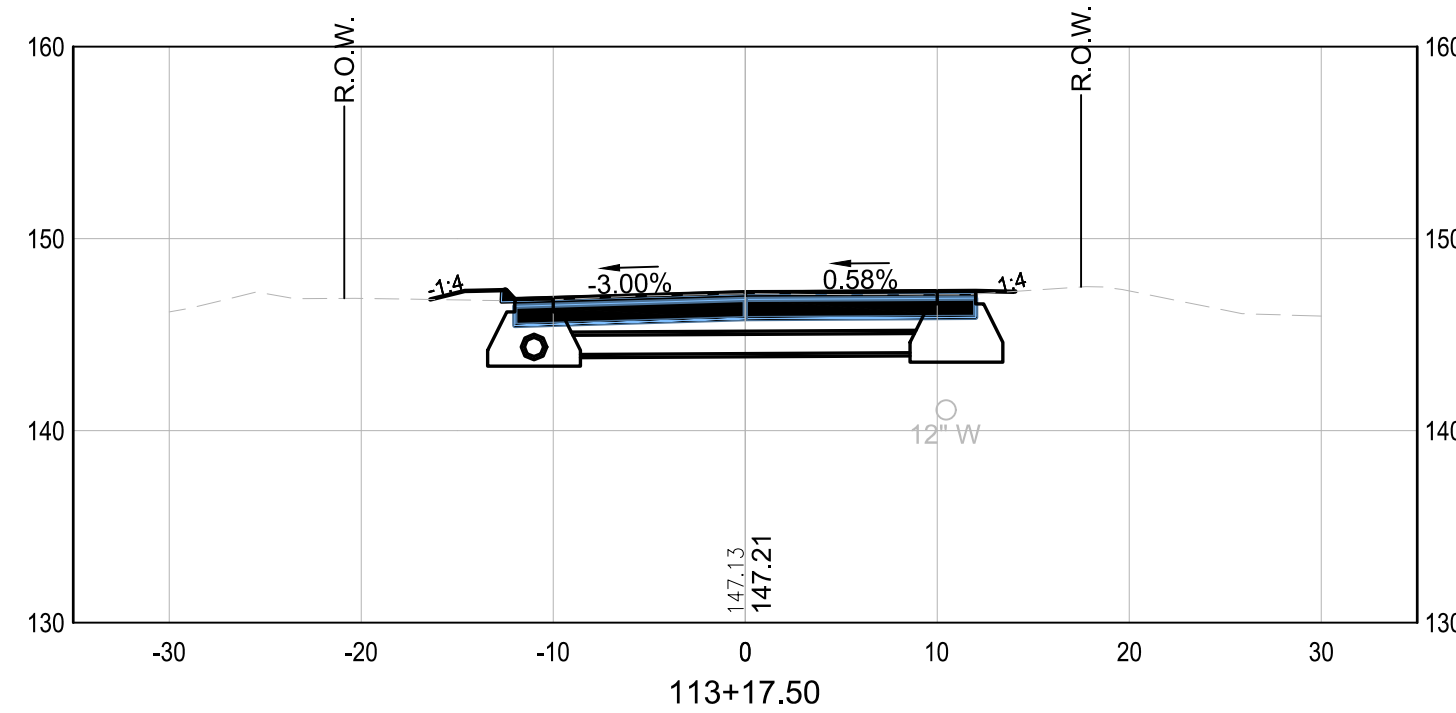
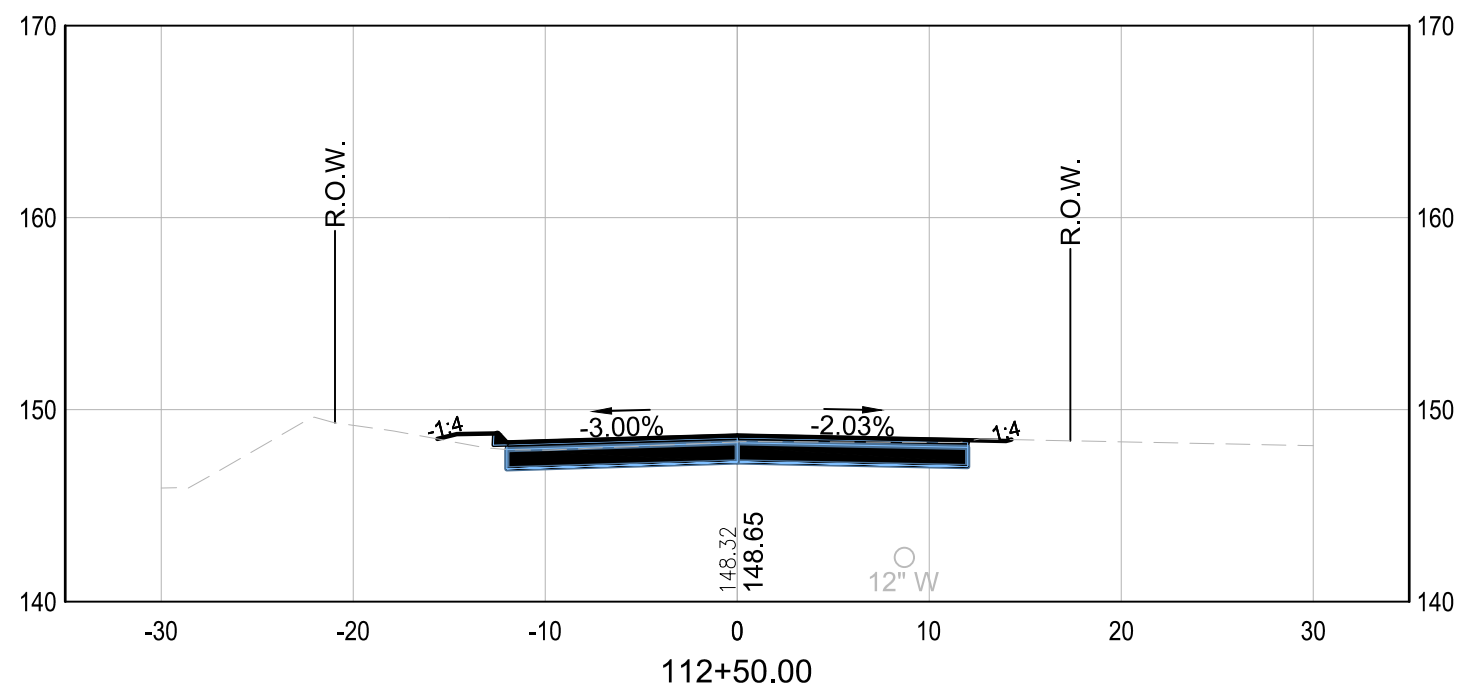
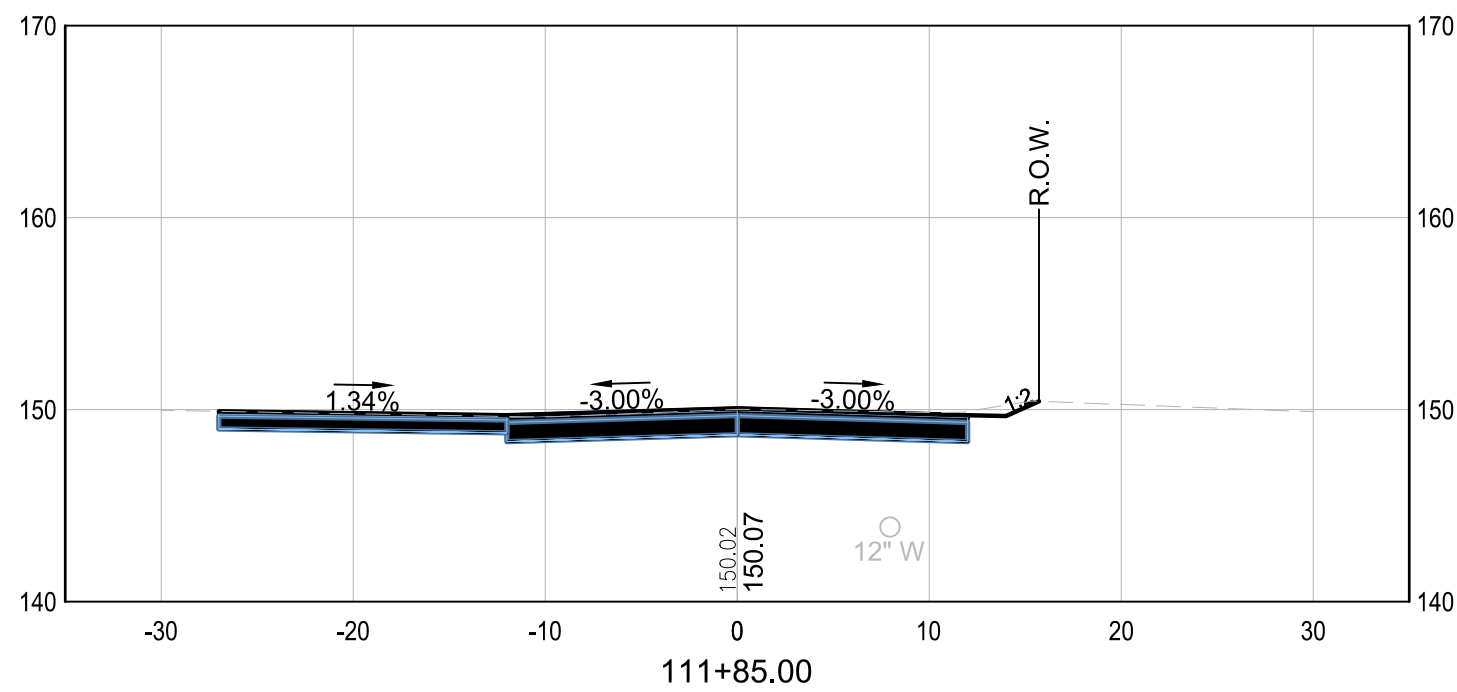
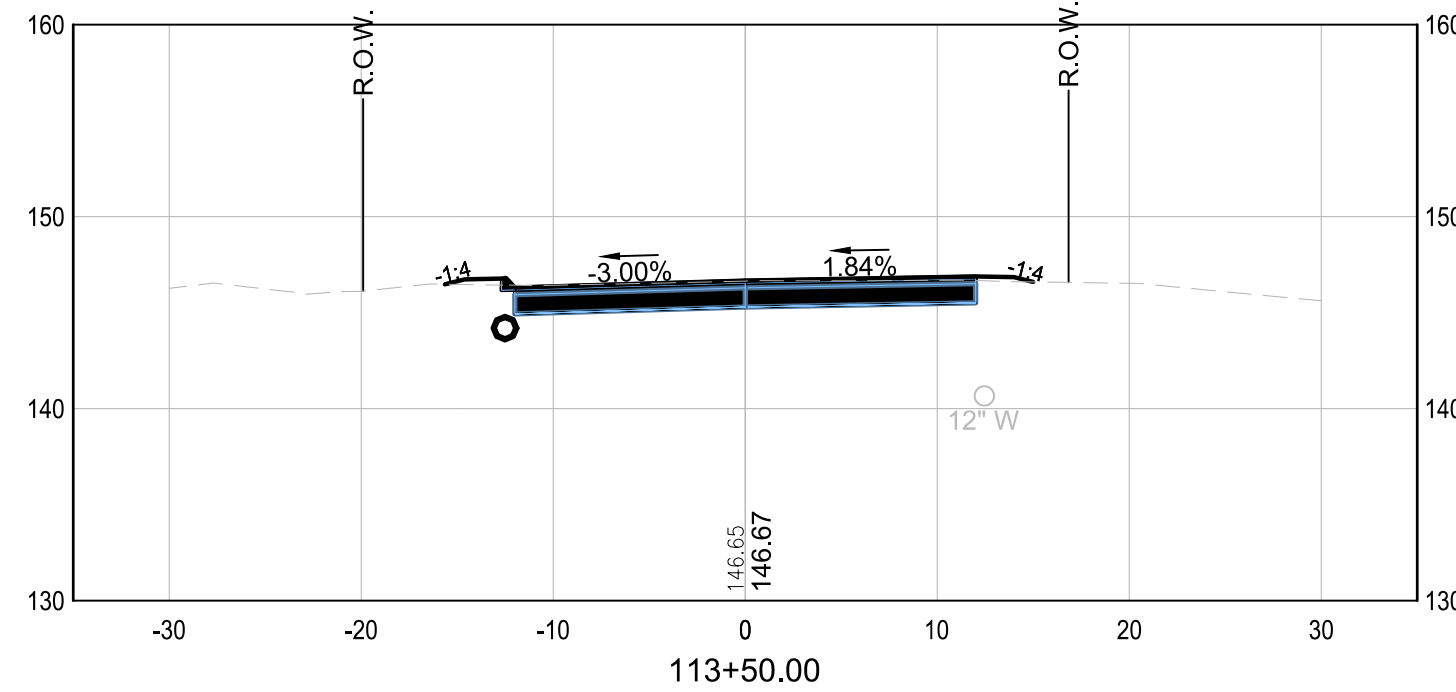
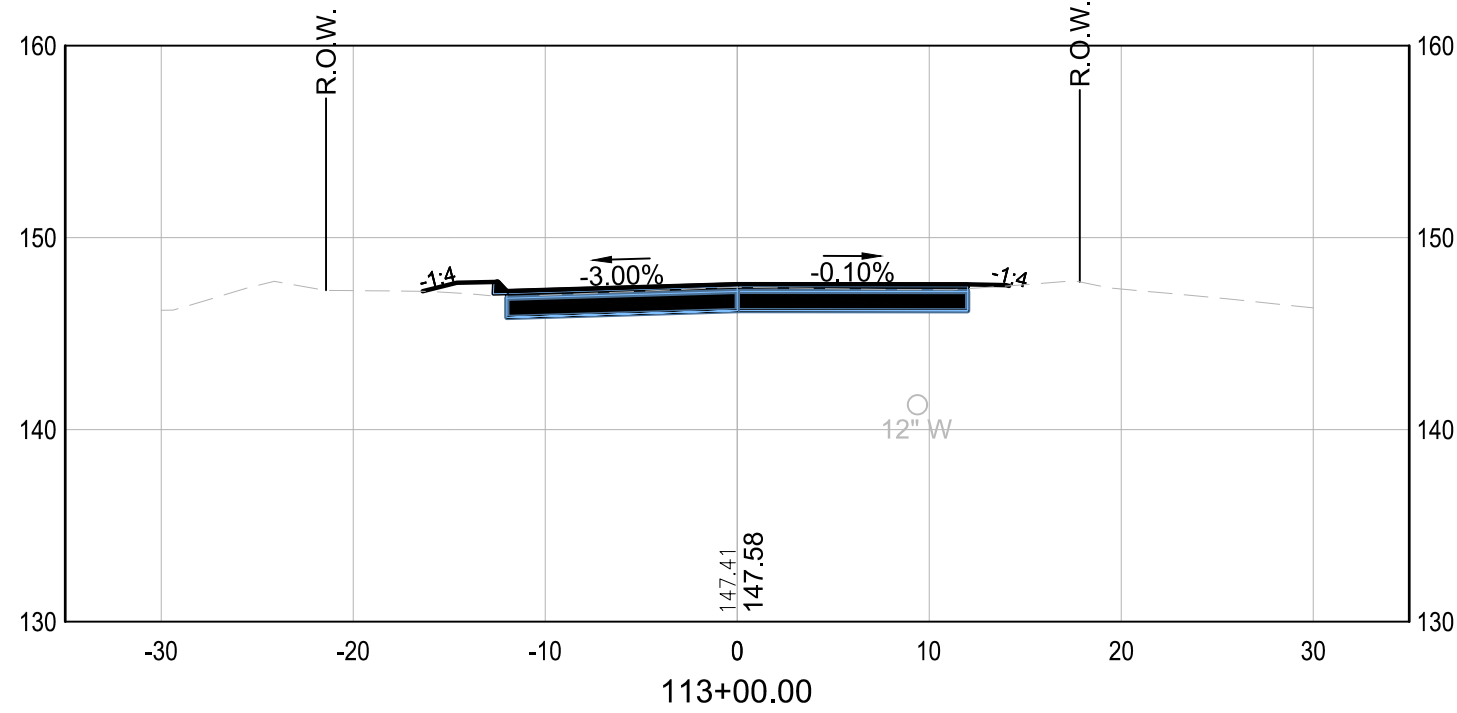
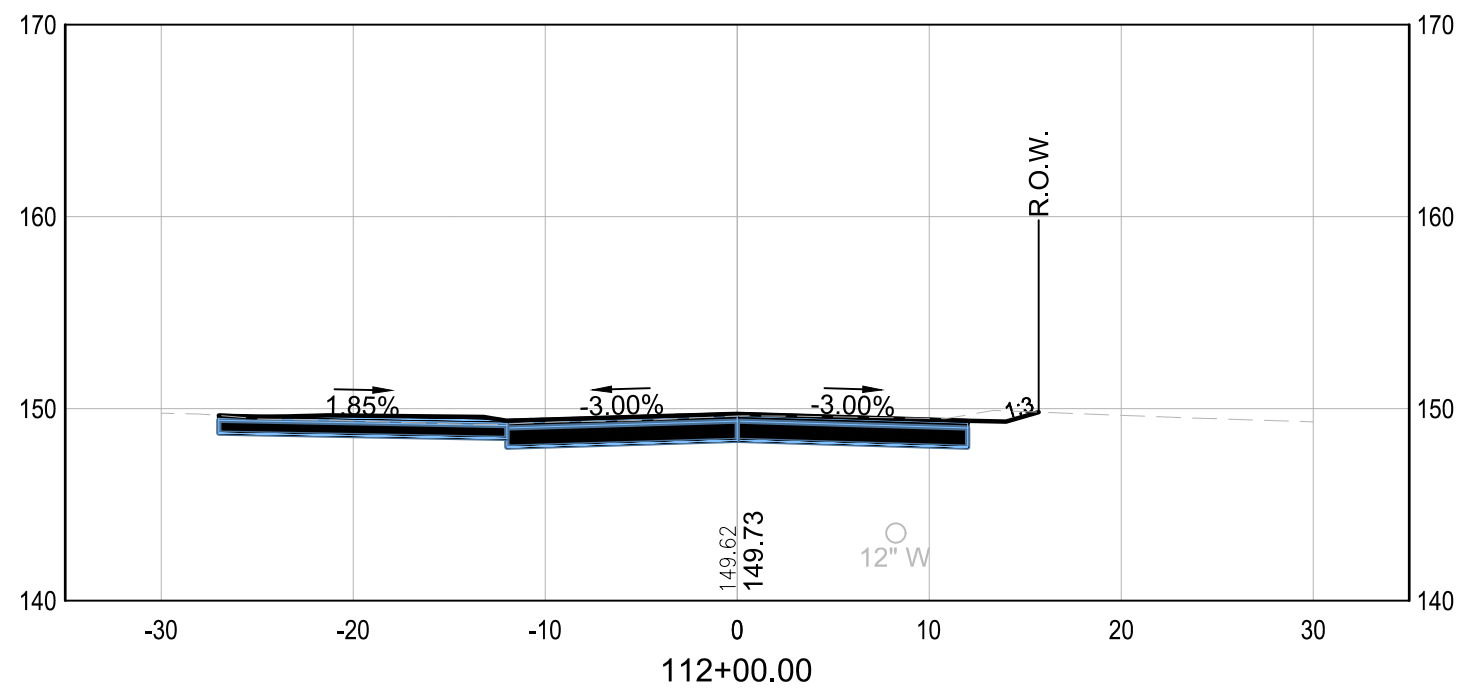


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REV	DATE	DESCRIPTION	BY

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SCALE: AS SHOWN	DESIGN: FPS	18 18 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

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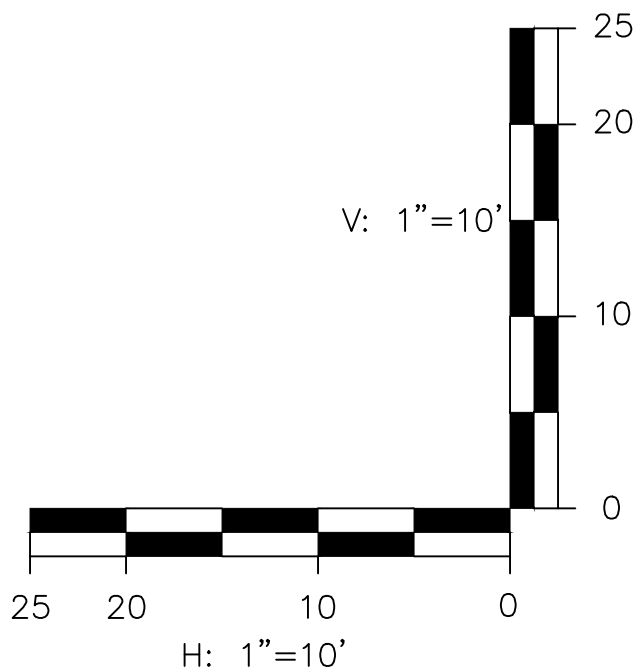
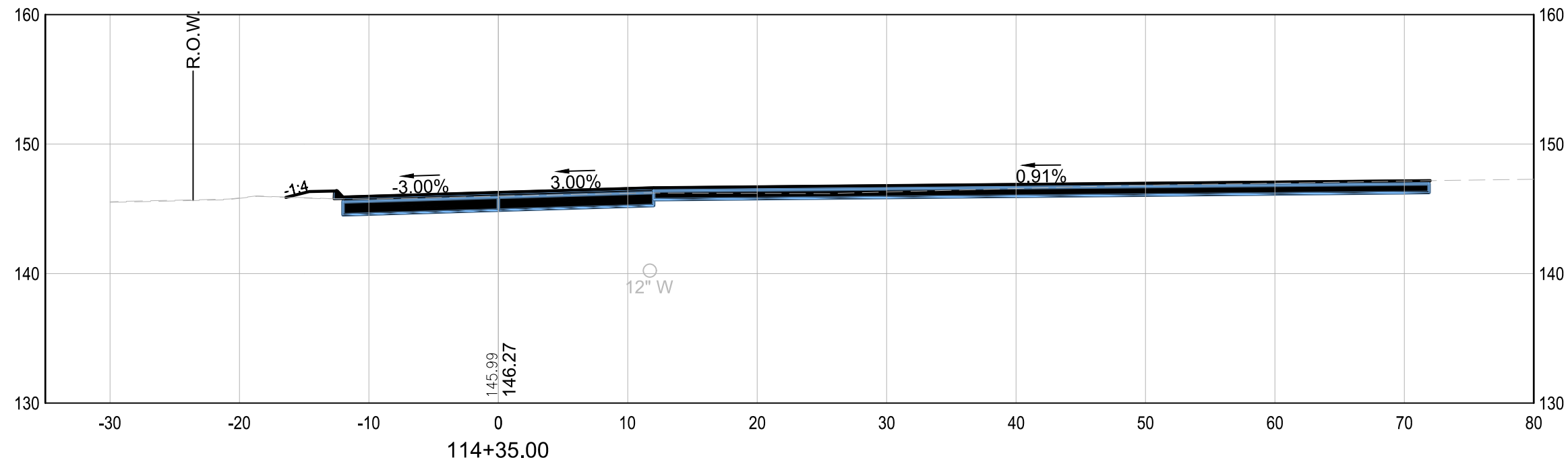
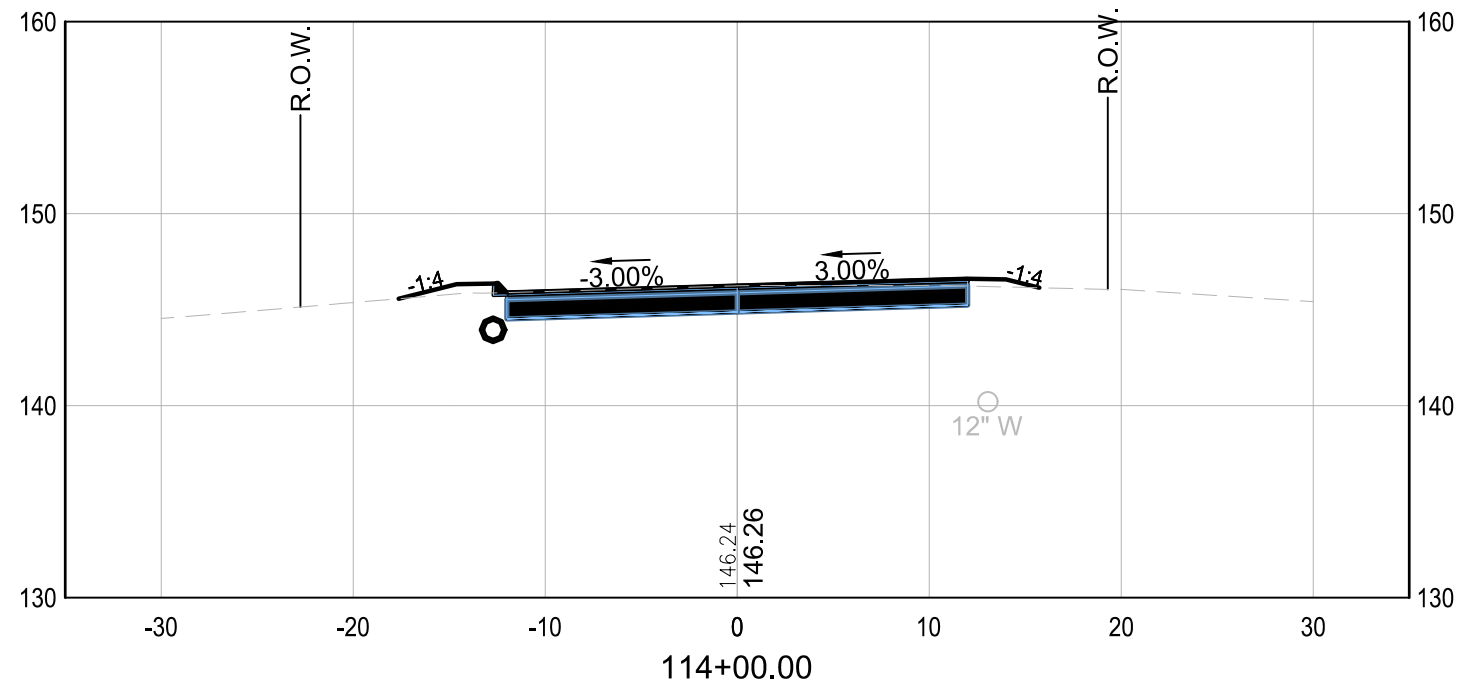
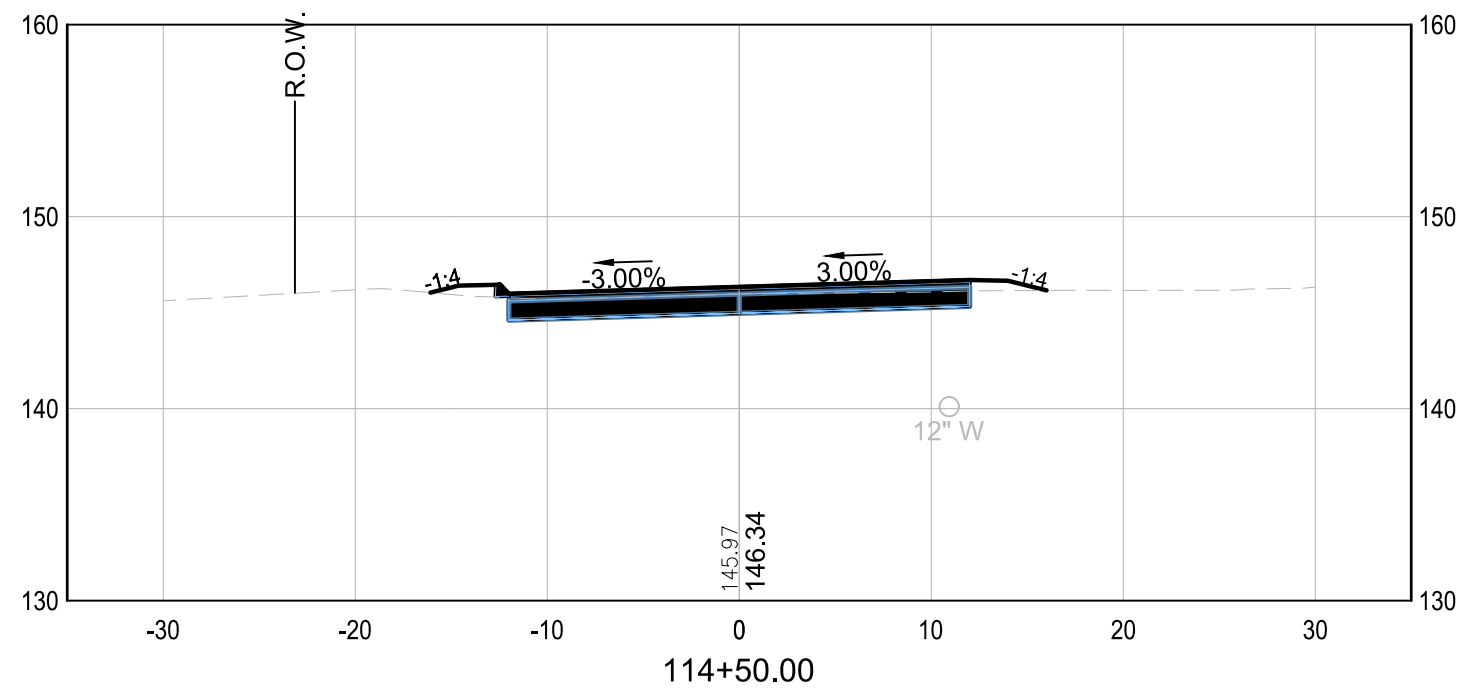
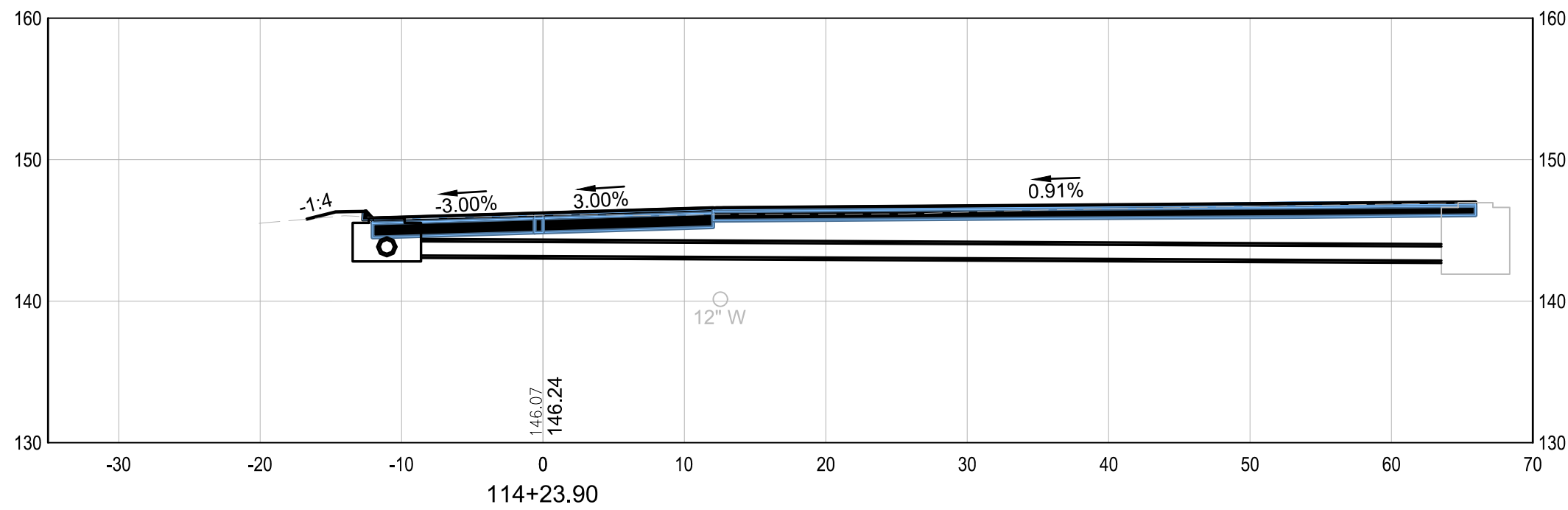


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CONCORD, NEW HAMPSHIRE 03301

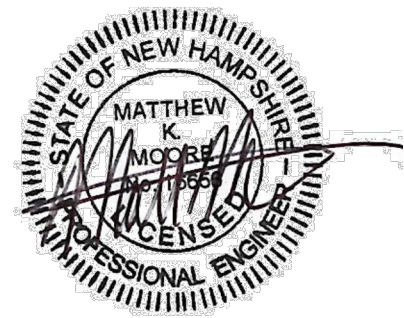
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SCALE: AS SHOWN	DESIGN: FPS	19 19 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

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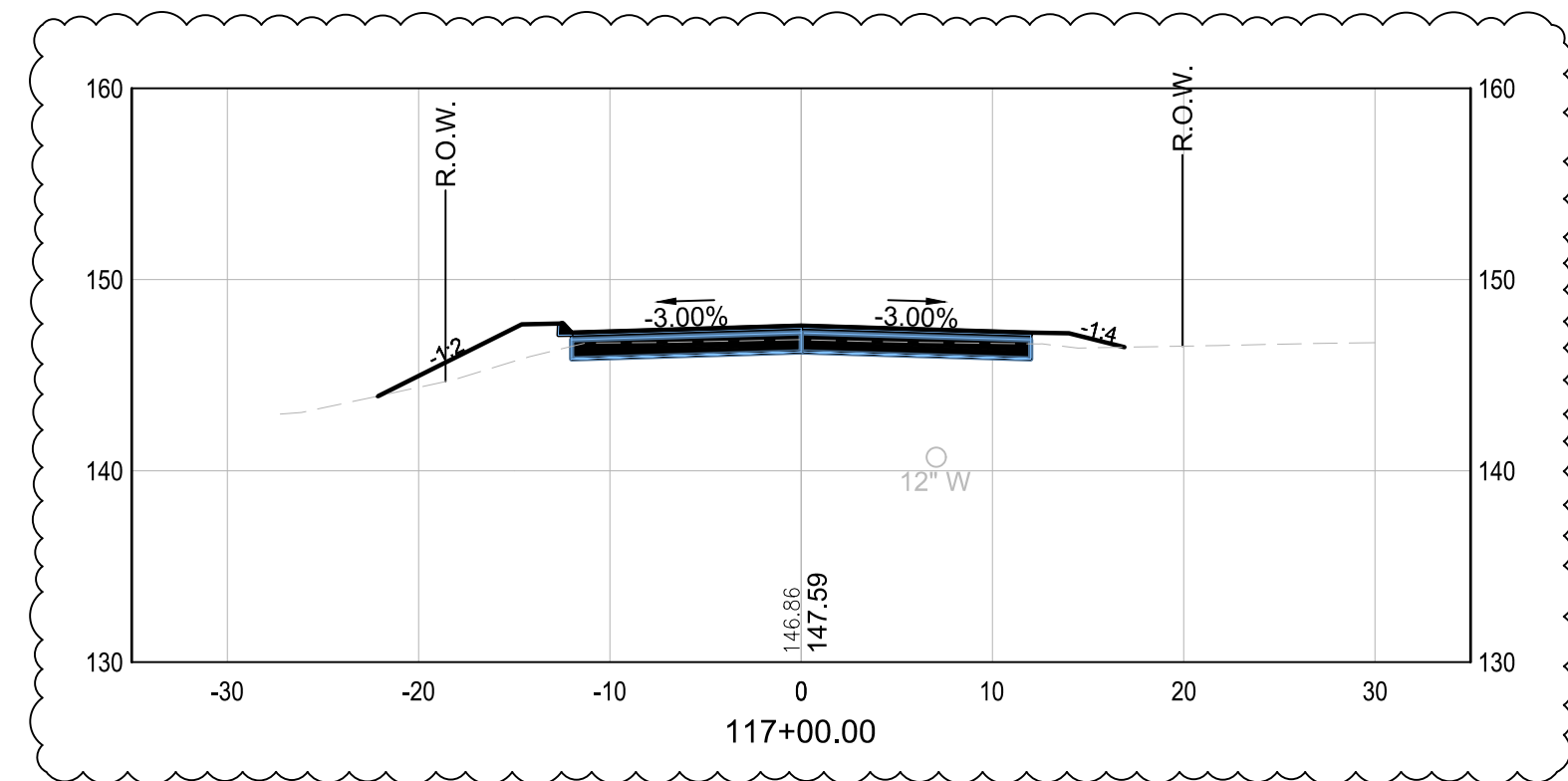
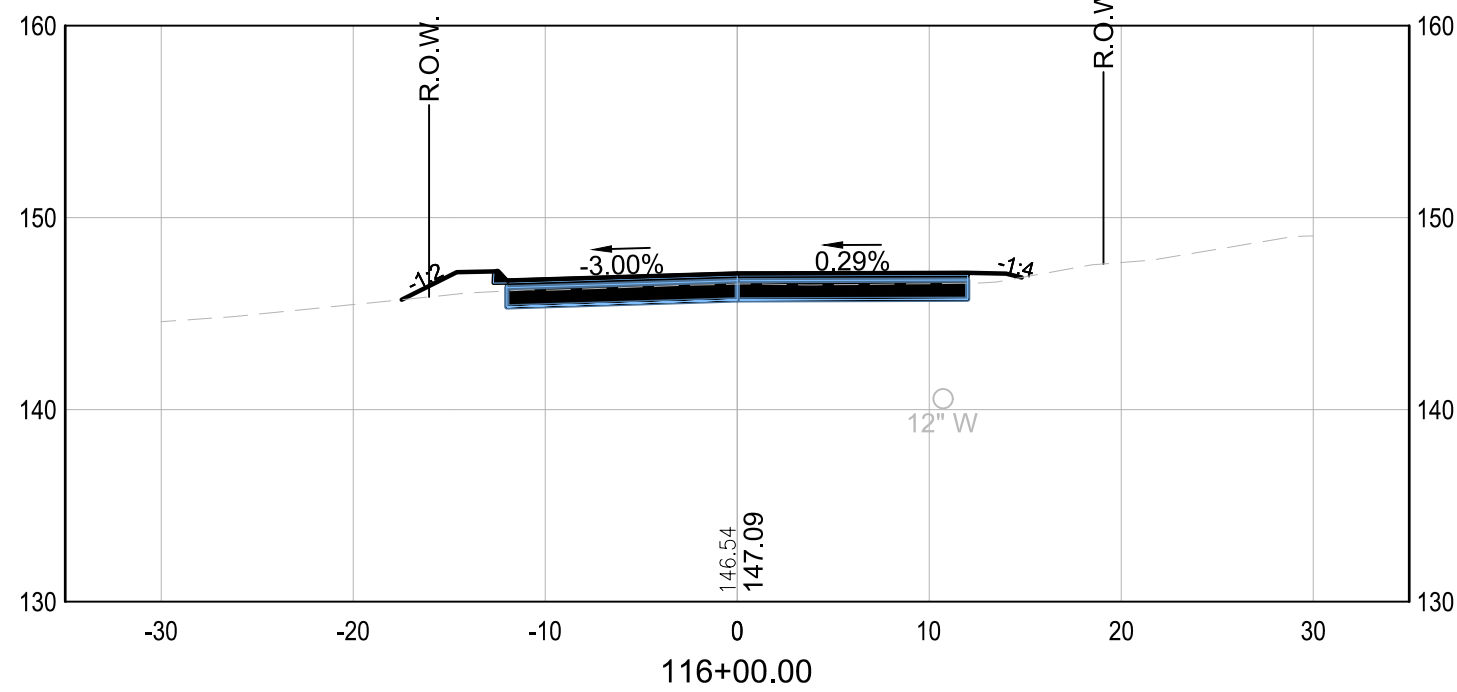
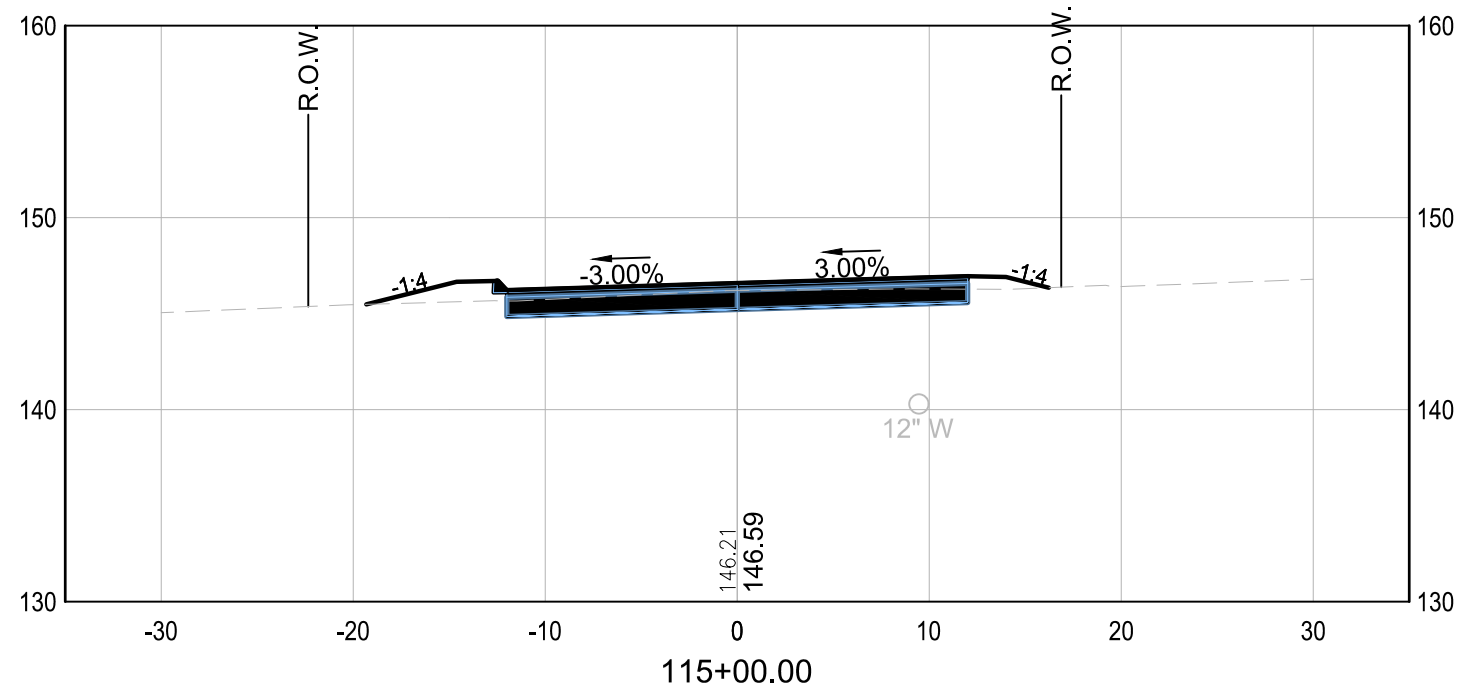
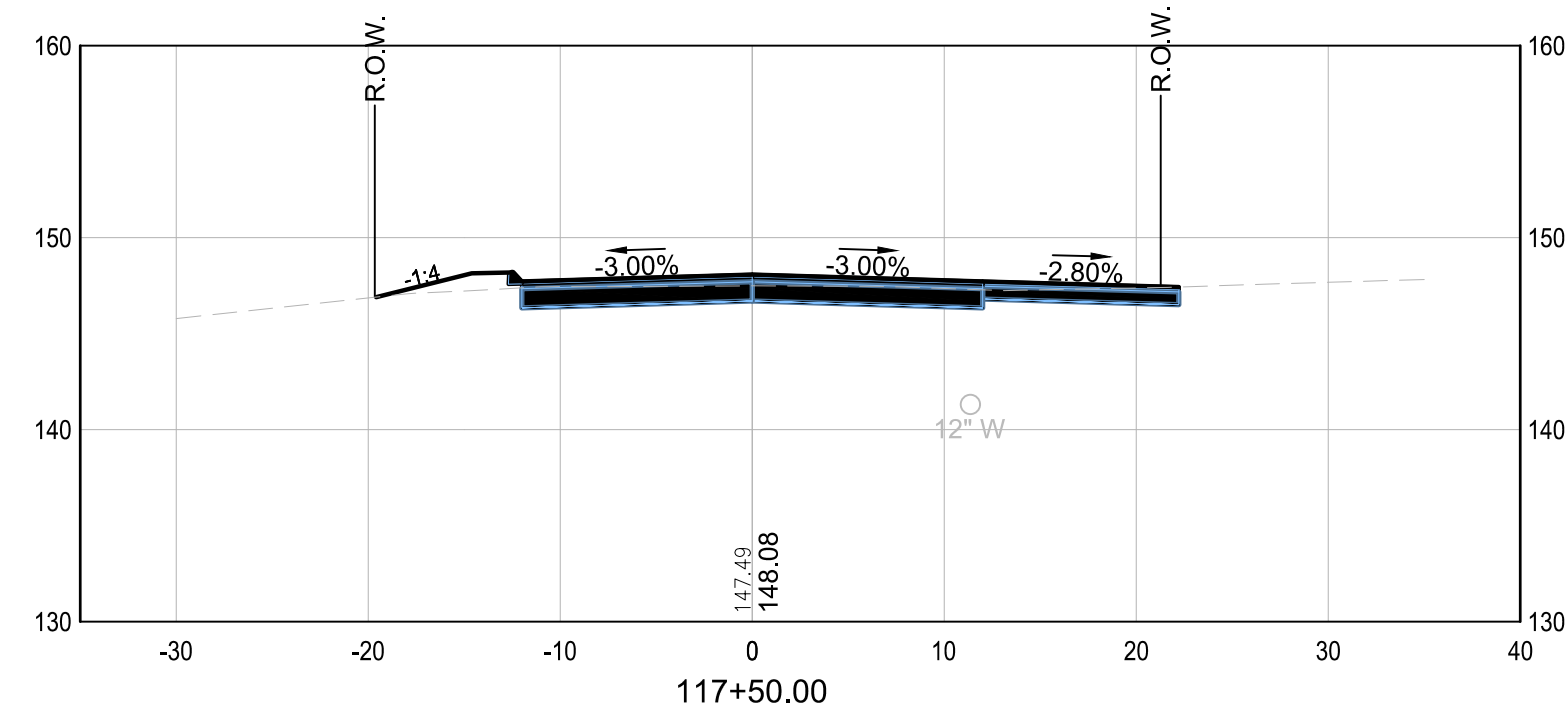
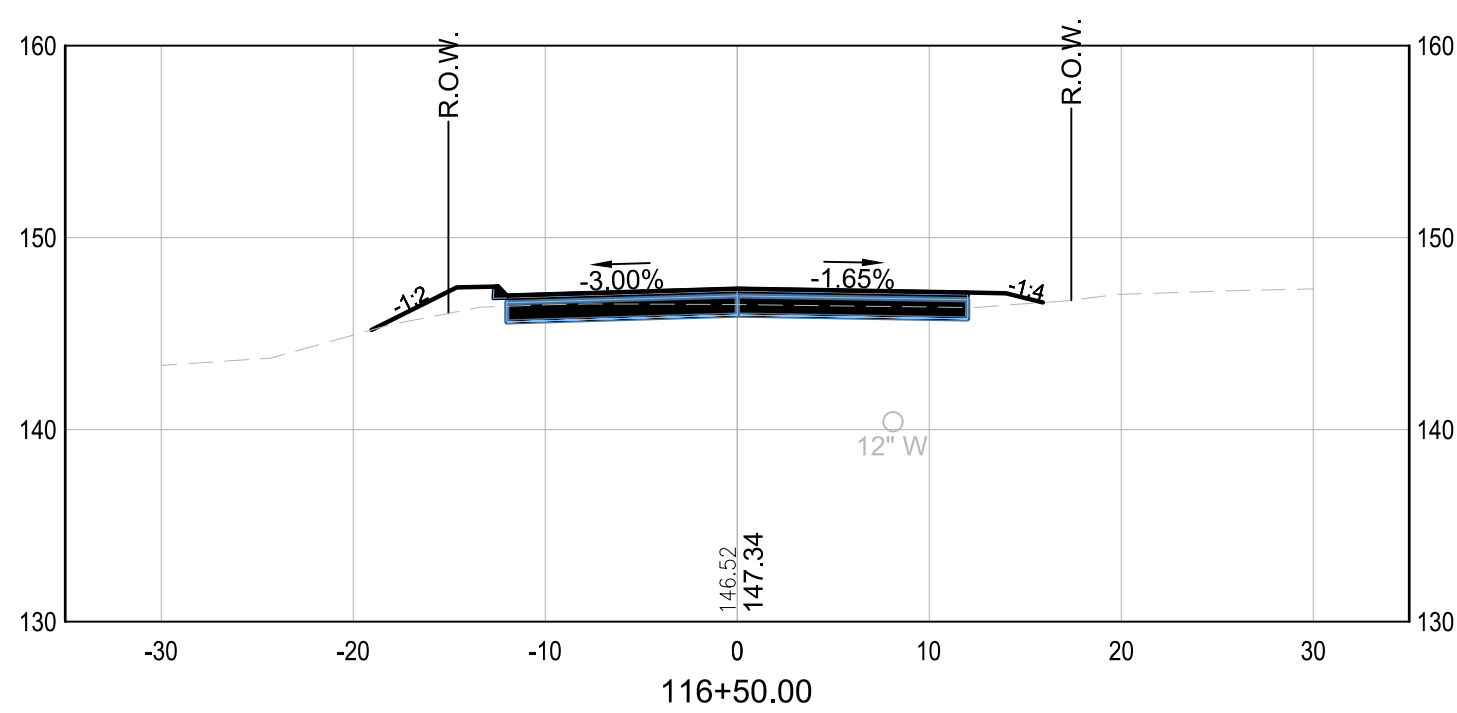
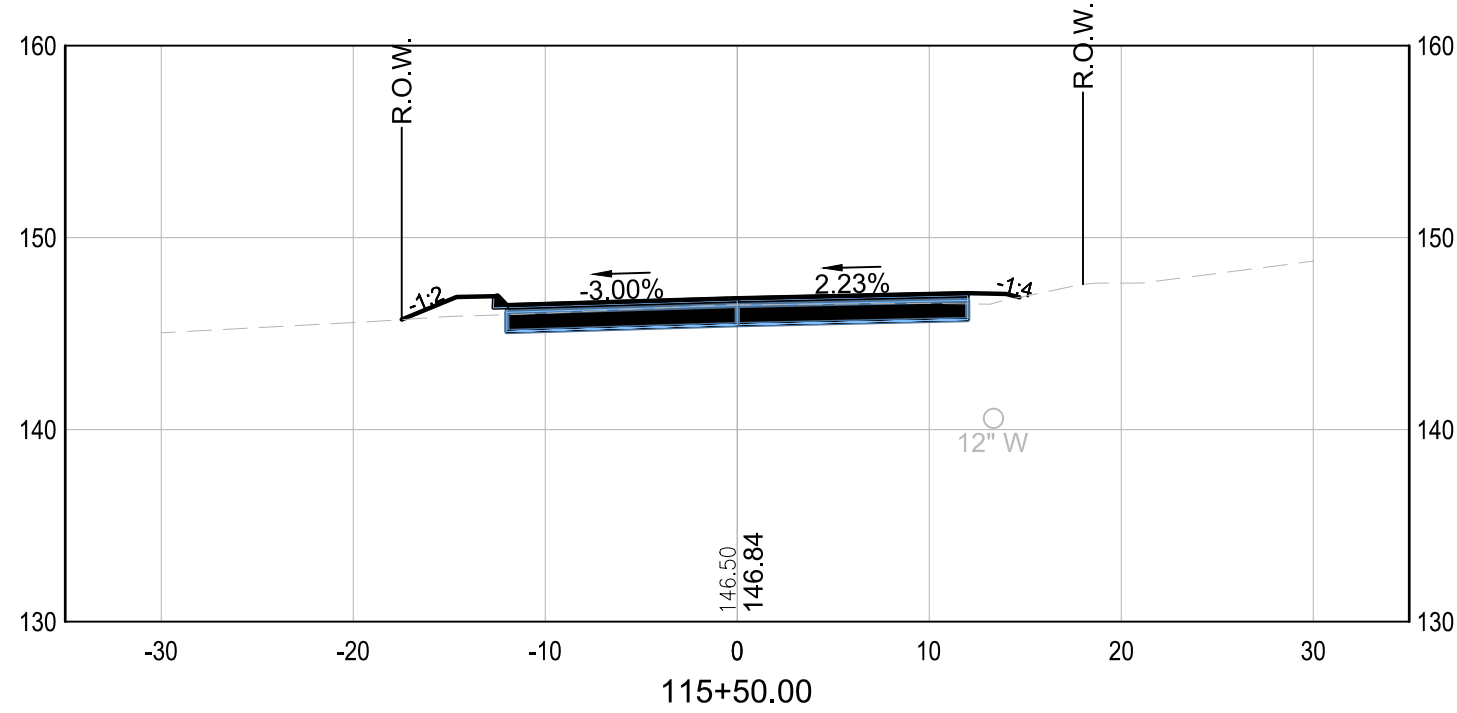


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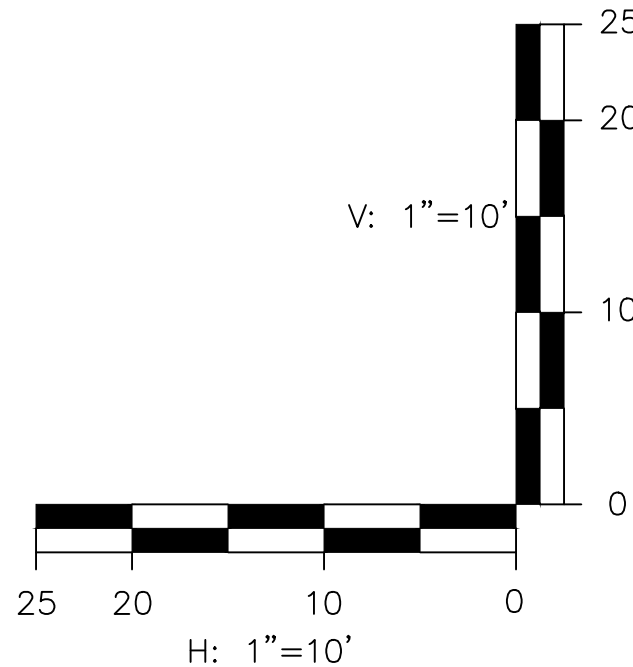
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DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

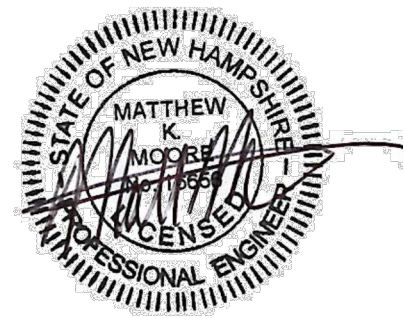
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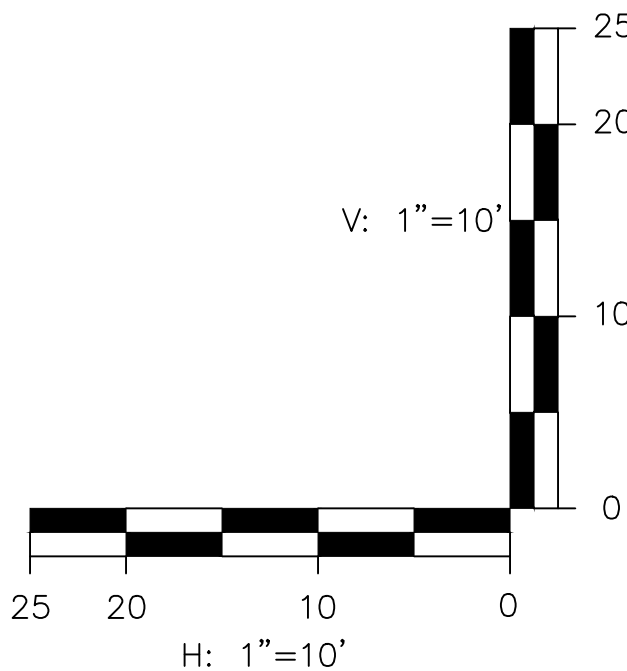
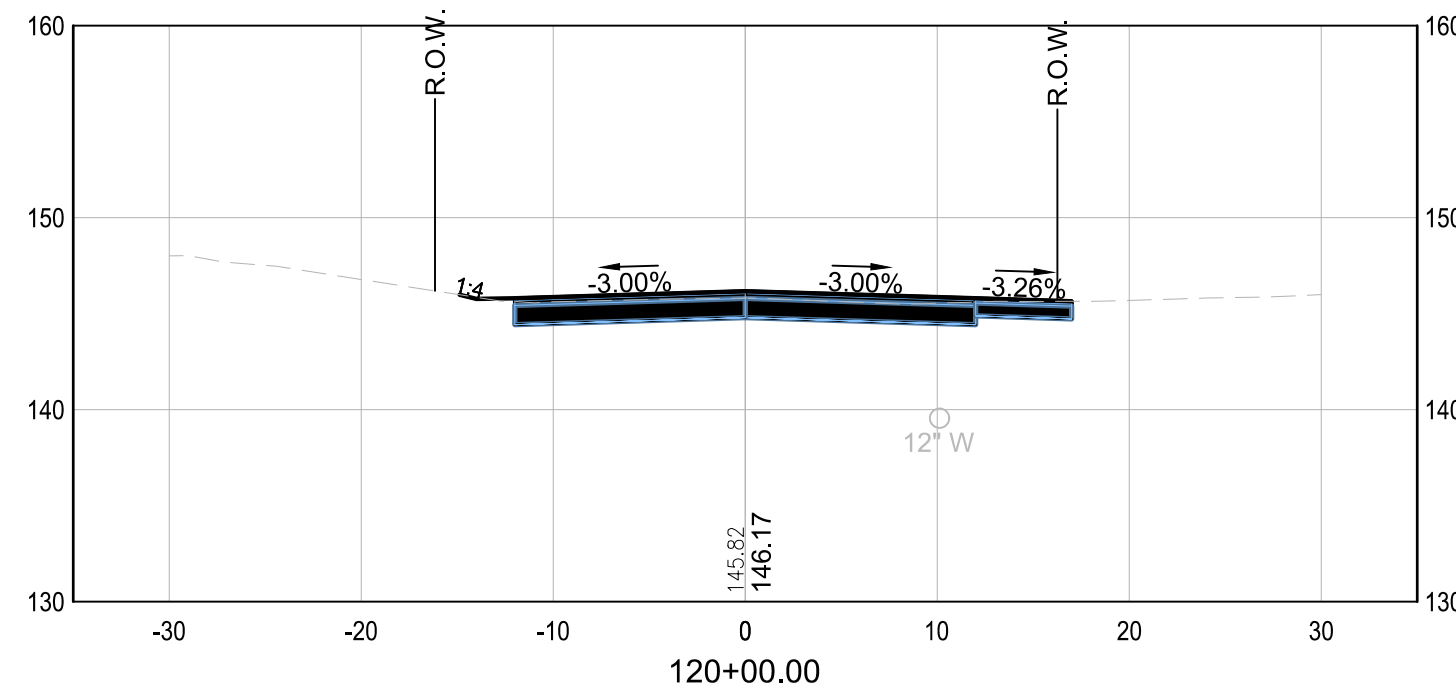
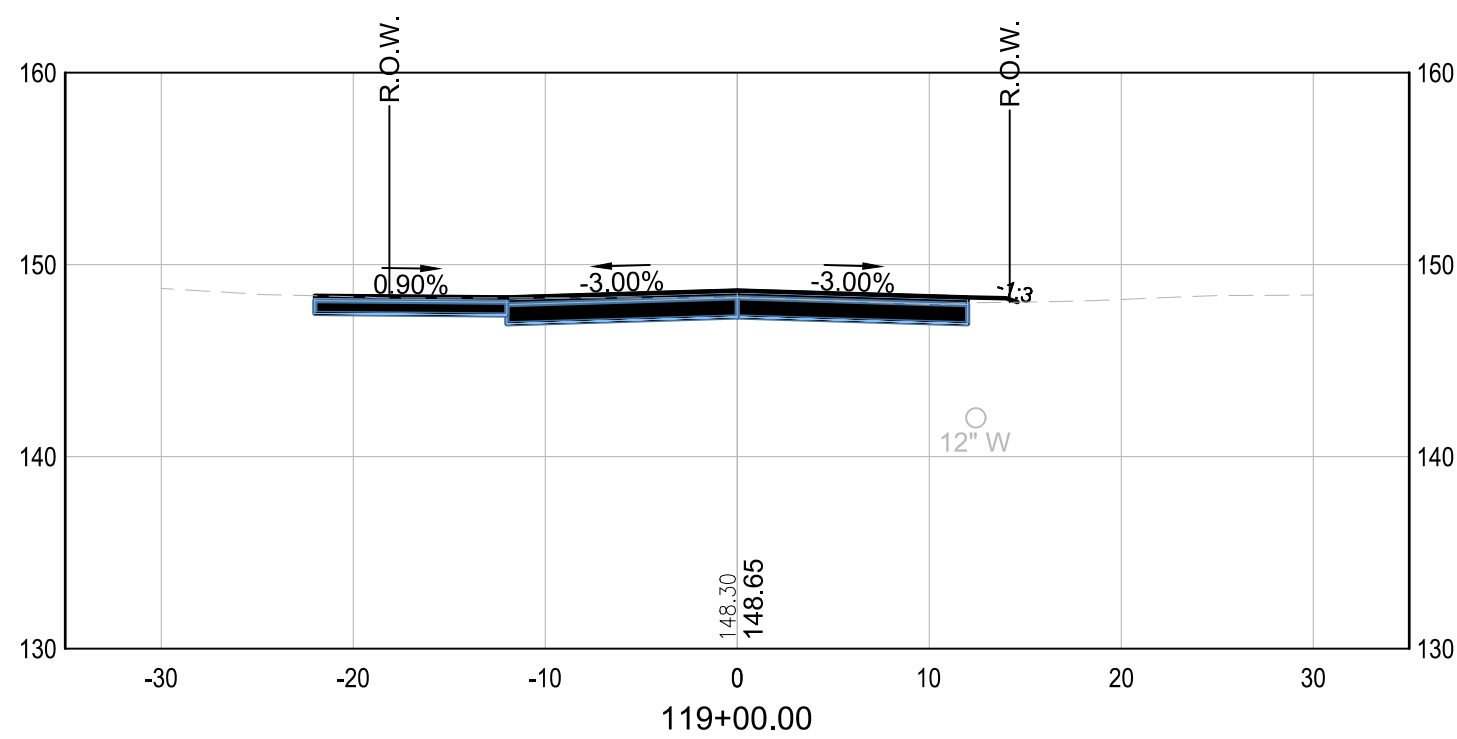
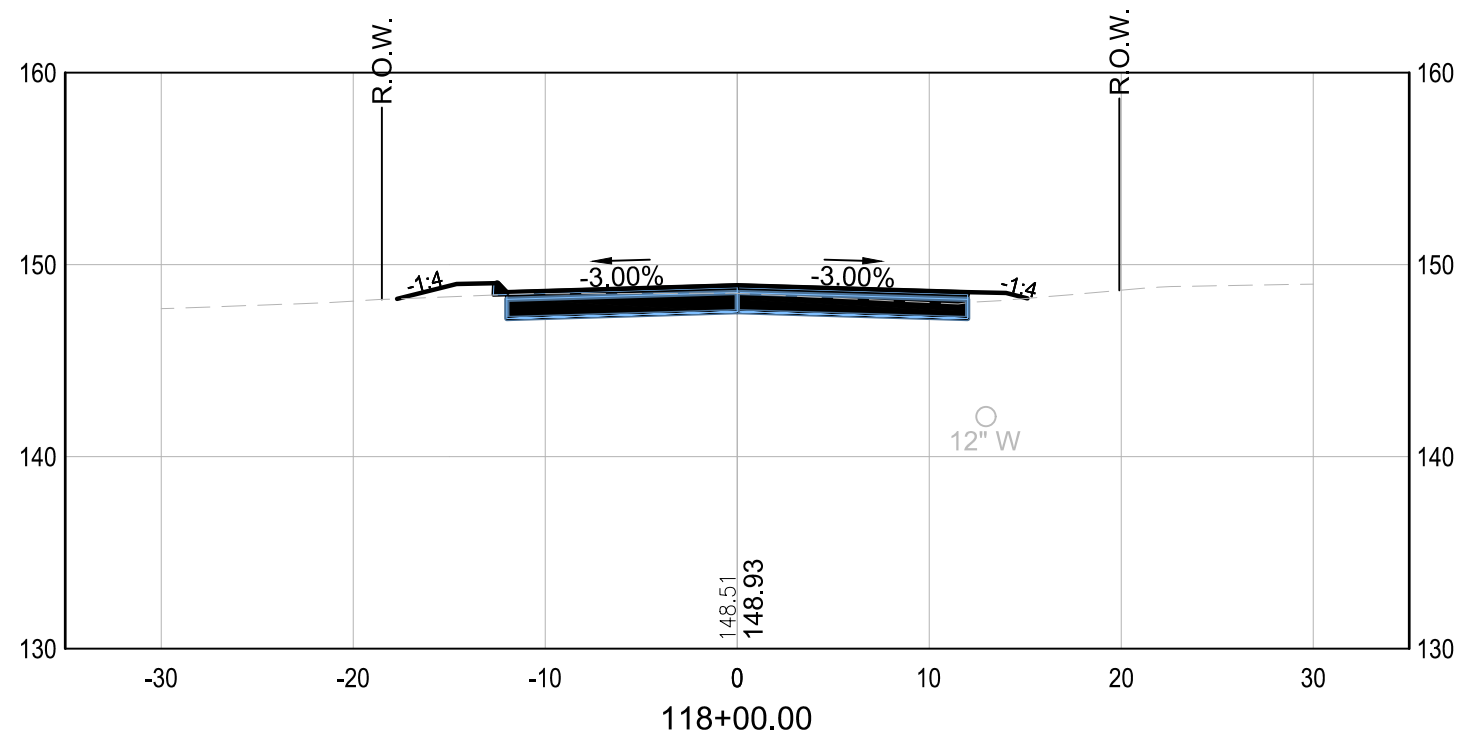
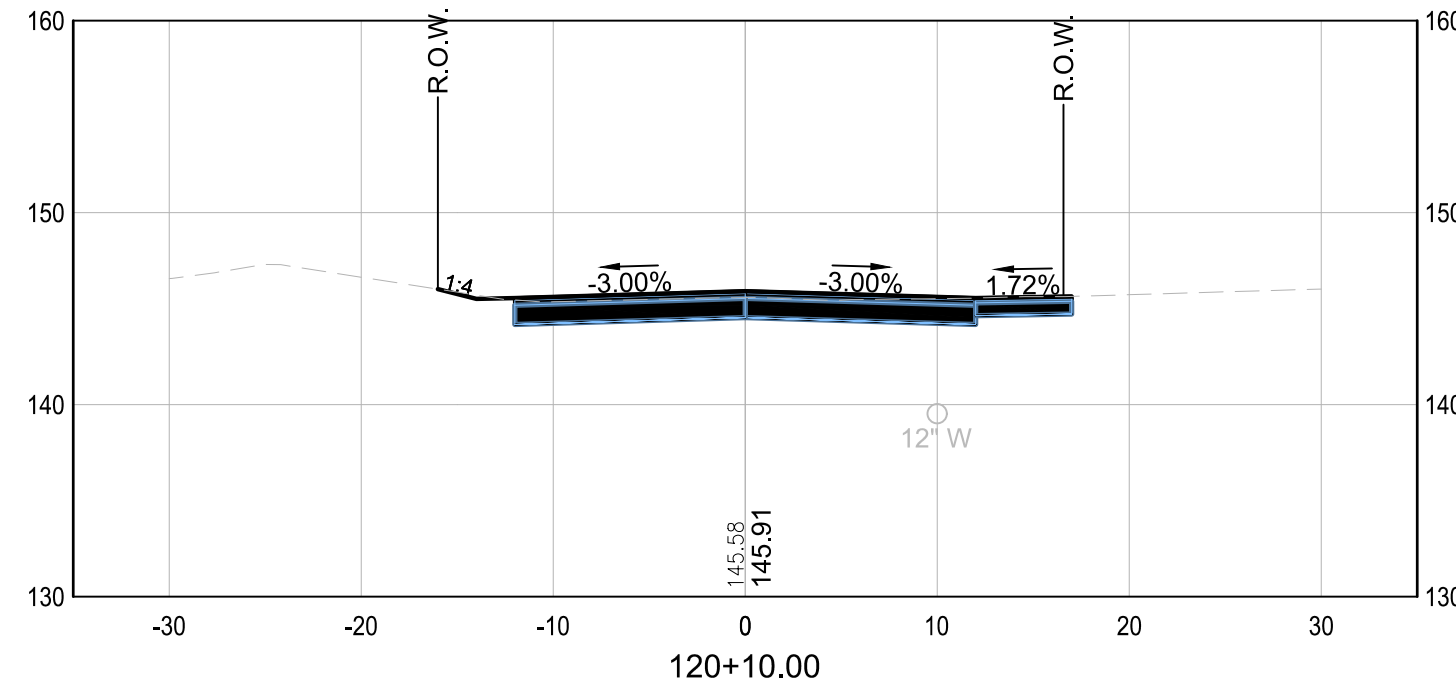
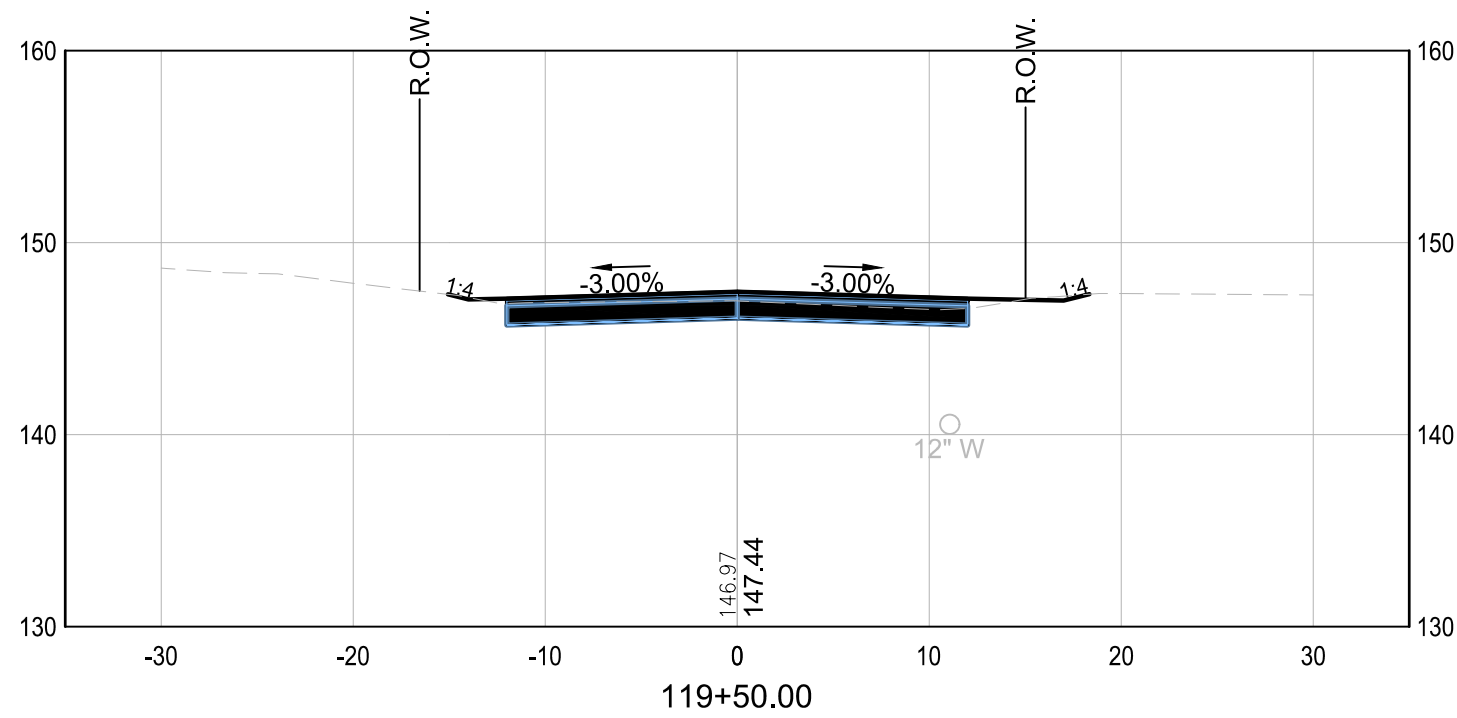
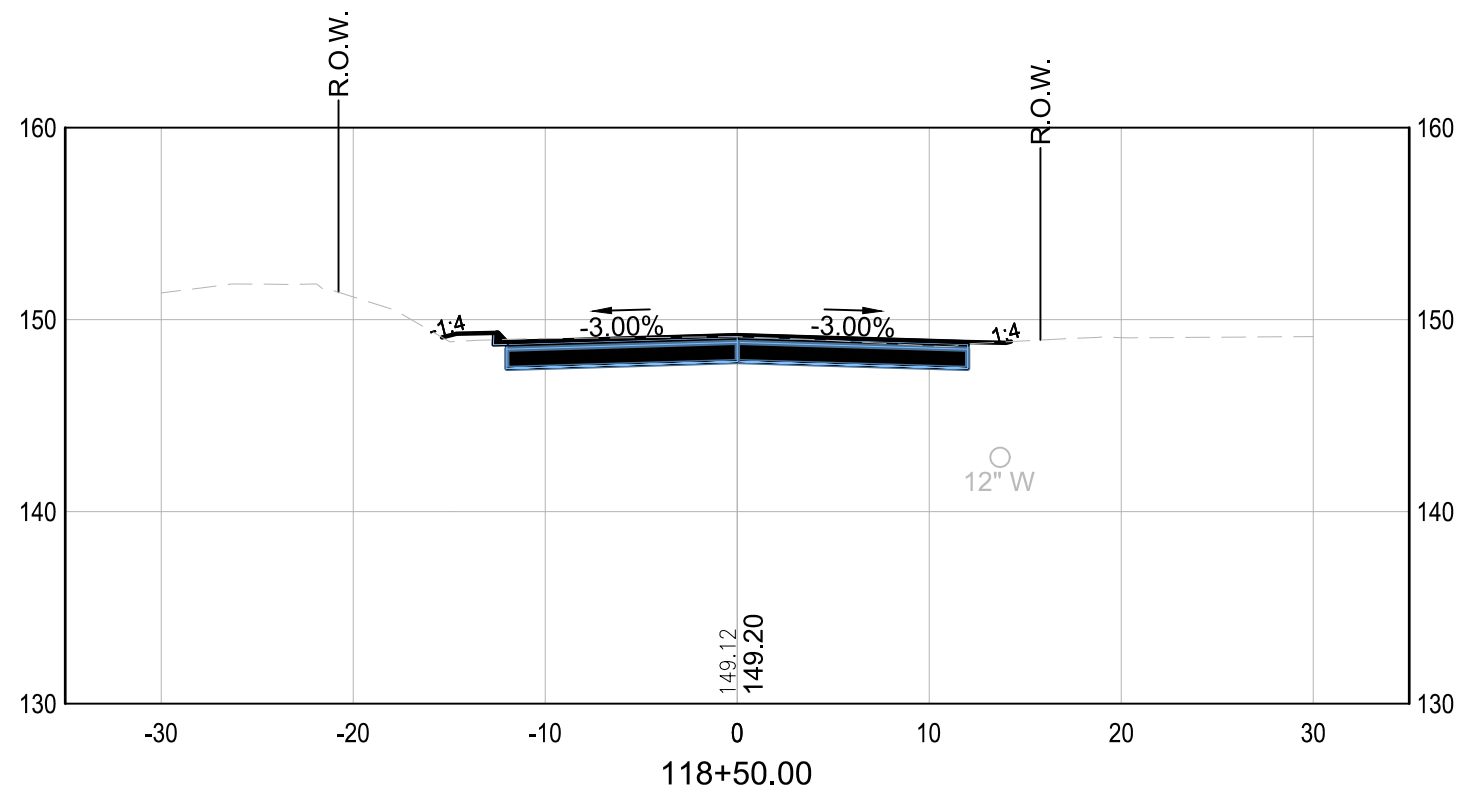
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1	1/20/23	ADDENDUM 1		

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53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

<b>TOWN OF SALEM</b> <b>SALEM, NEW HAMPSHIRE</b> <b>2023 ROADWAY IMPROVEMENT</b> <b>PROJECT DUSTON ROAD</b>		
<b>DUSTON ROAD CROSS SECTION</b> <b>STA 115+50 TO STA 118+00</b>		
SCALE: AS SHOWN	DESIGN: FPS	<b>21</b> 21 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	



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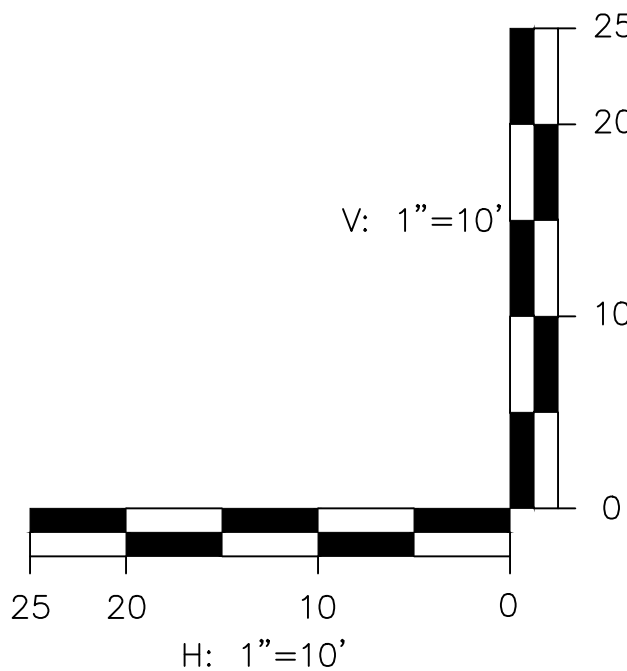
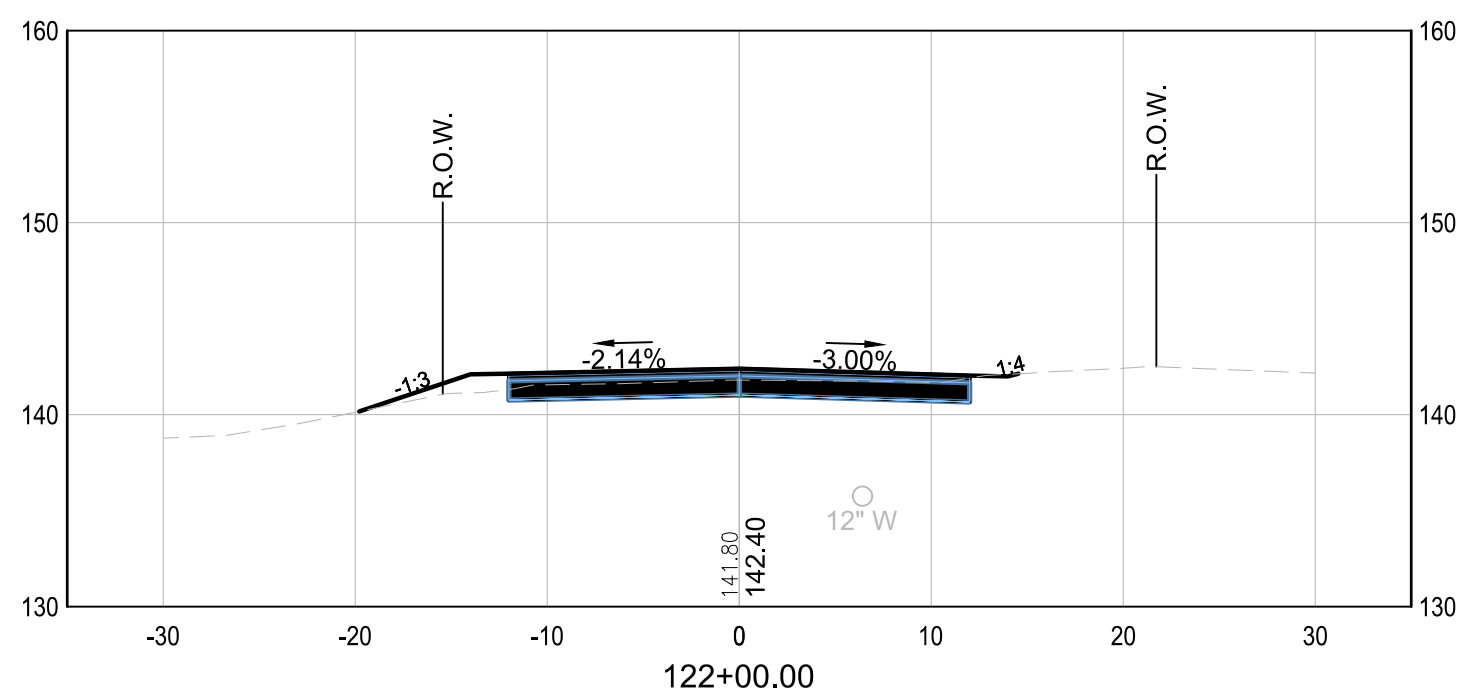
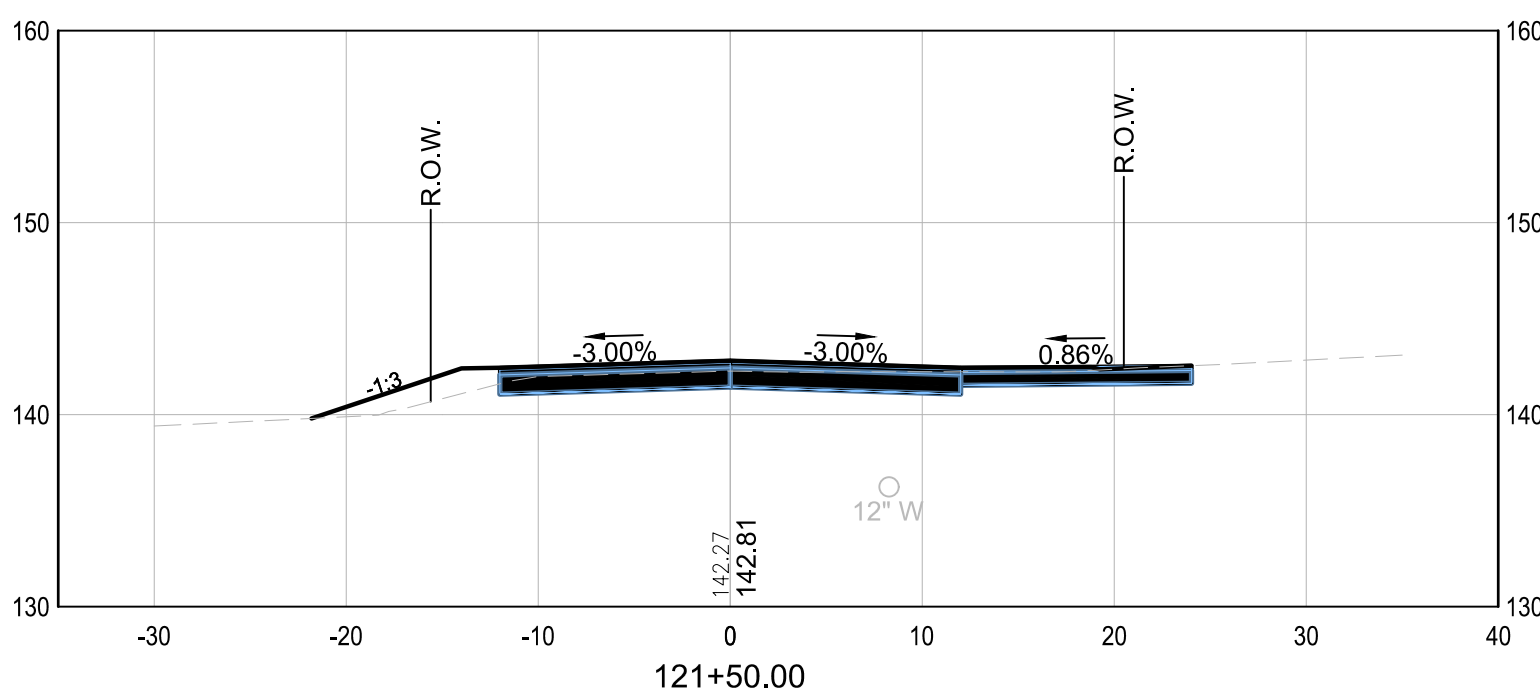
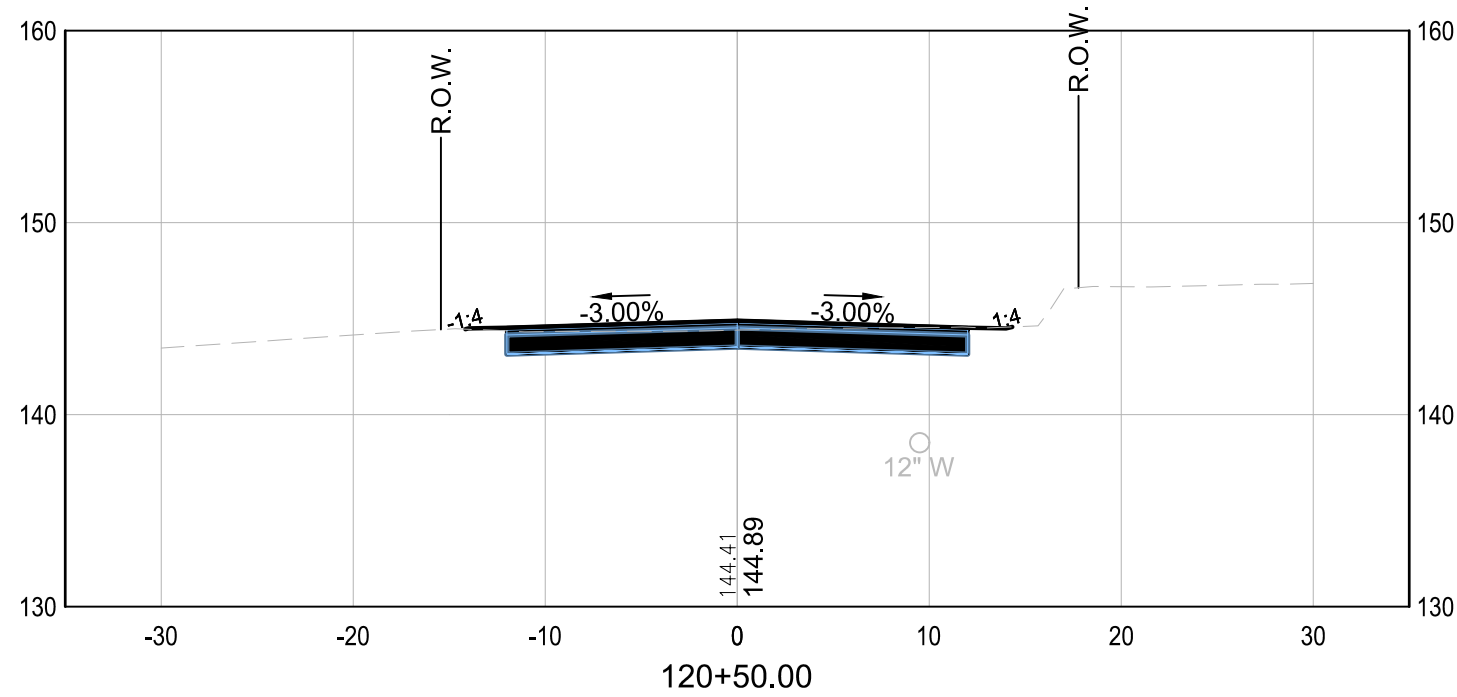
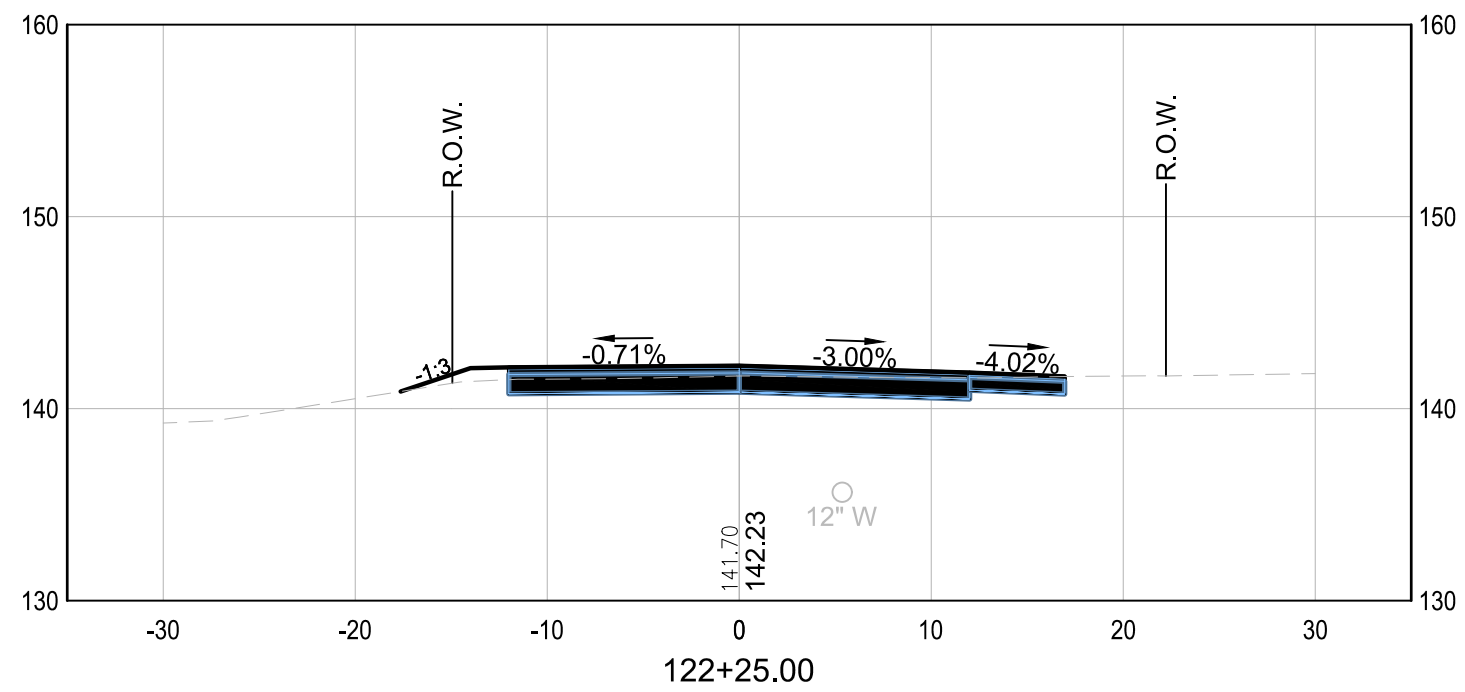
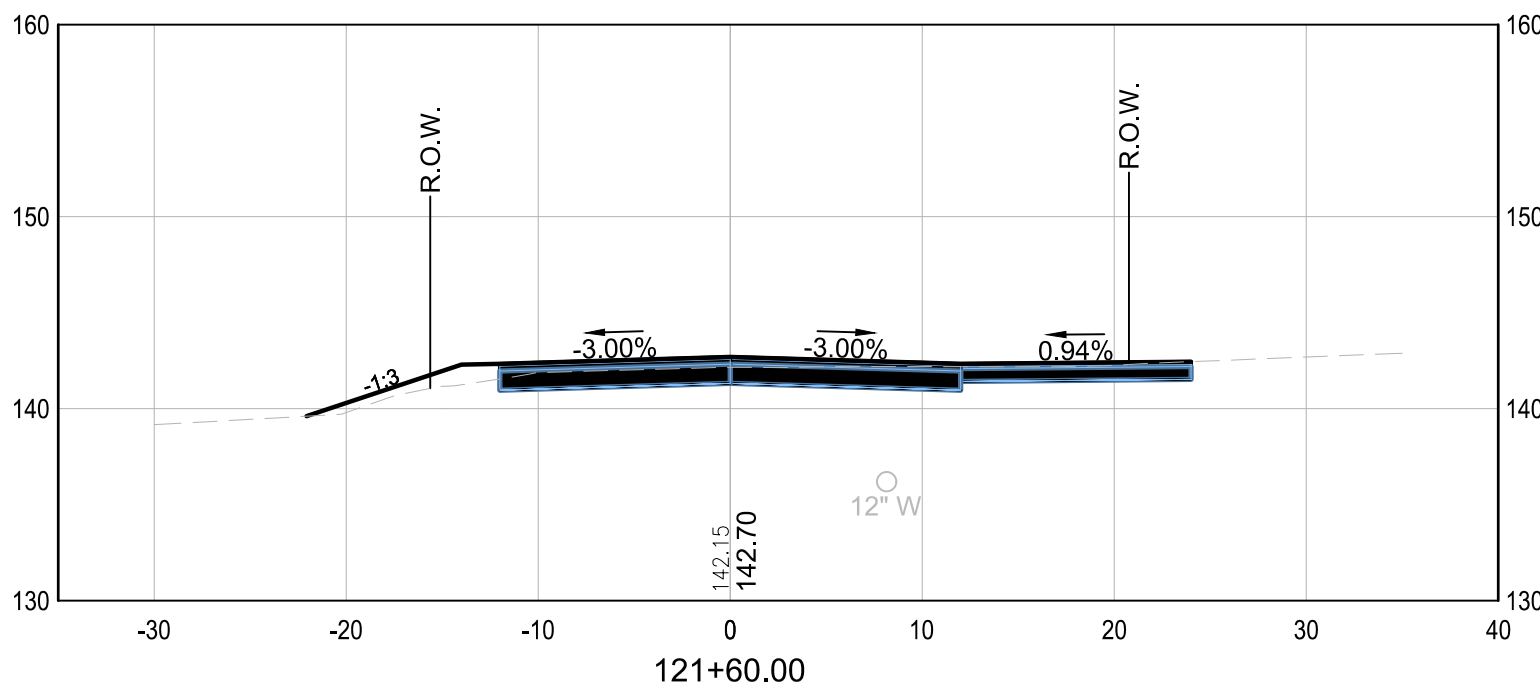
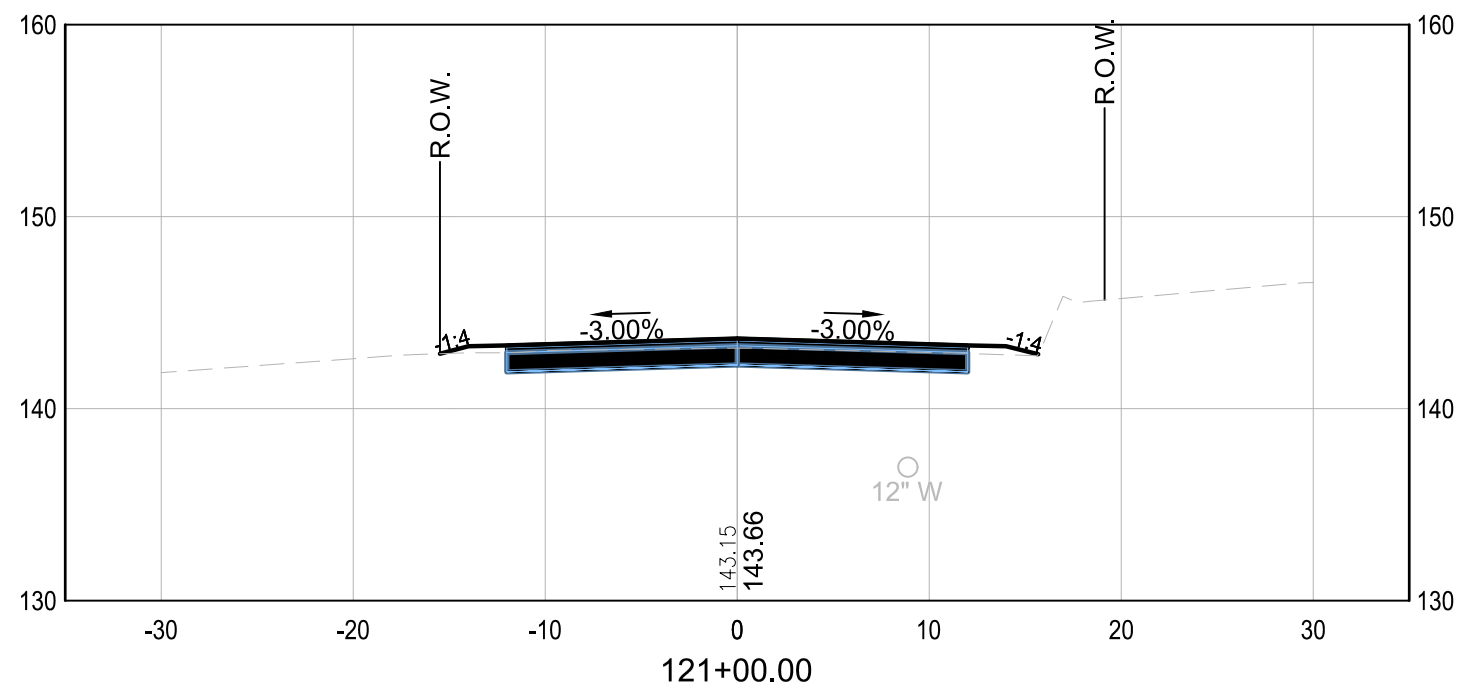


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53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

REV	DATE	DESCRIPTION	BY

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CHECKED: MKM	DATE: DECEMBER 2022	

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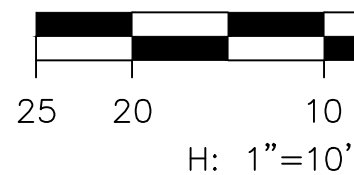
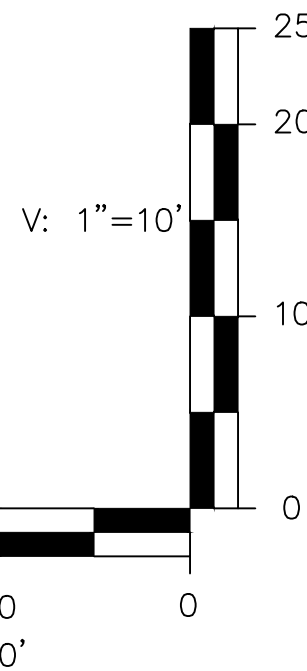
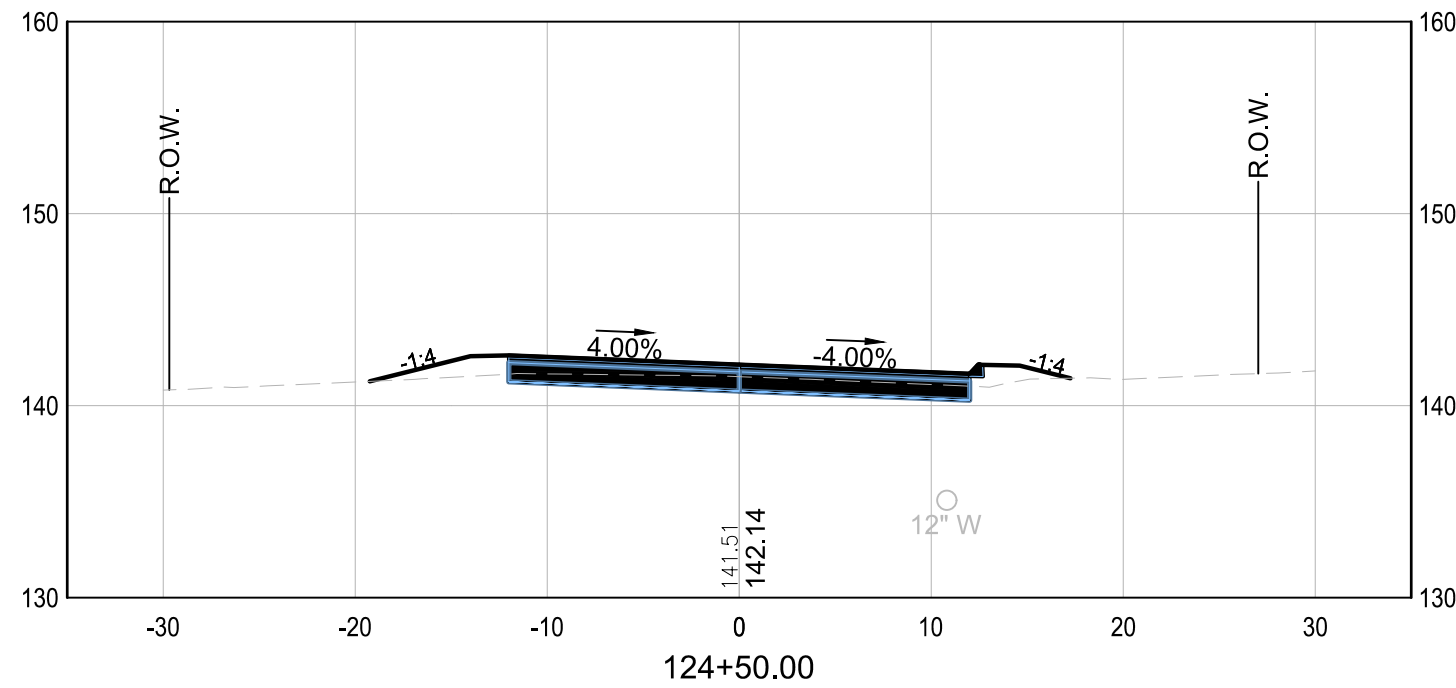
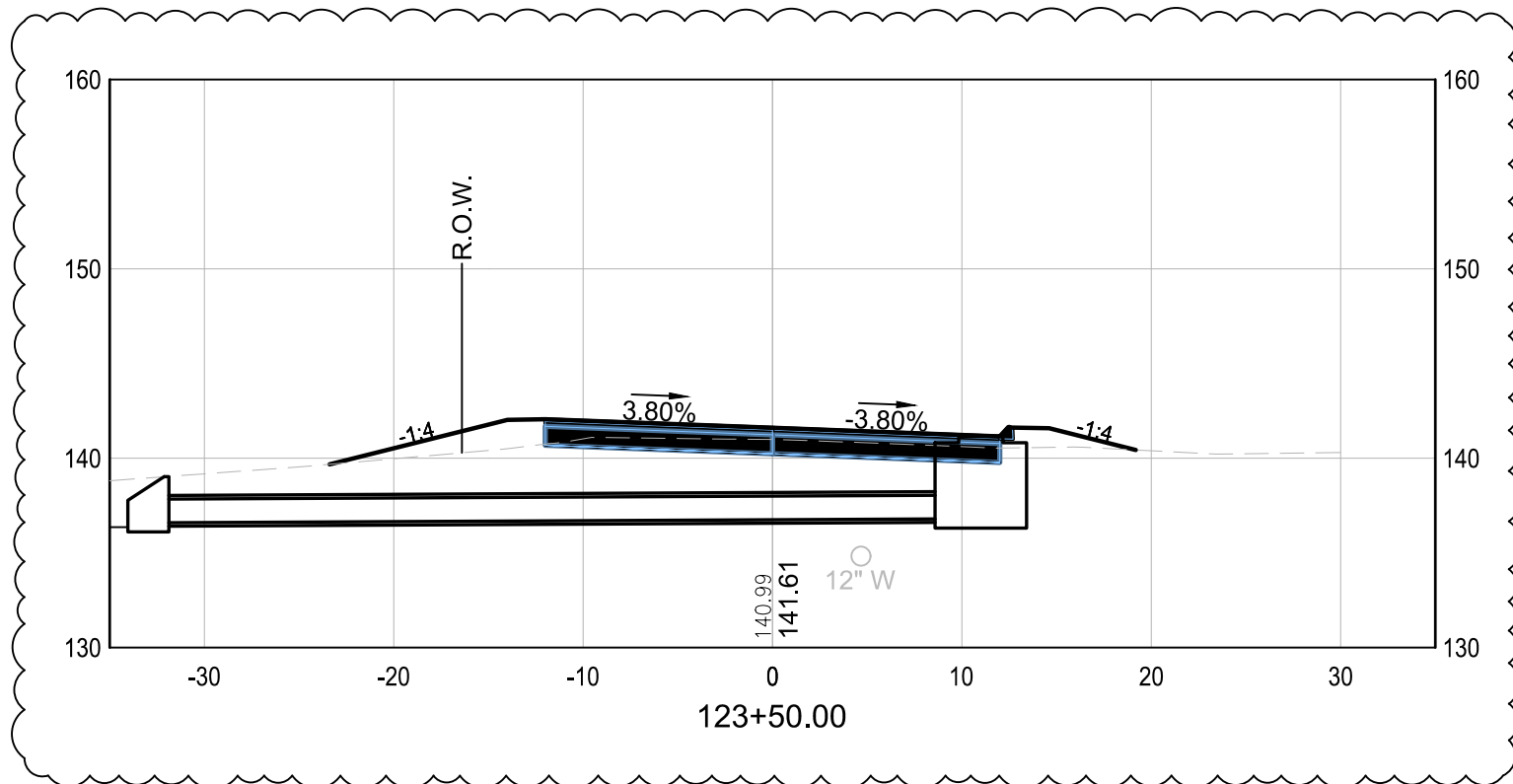
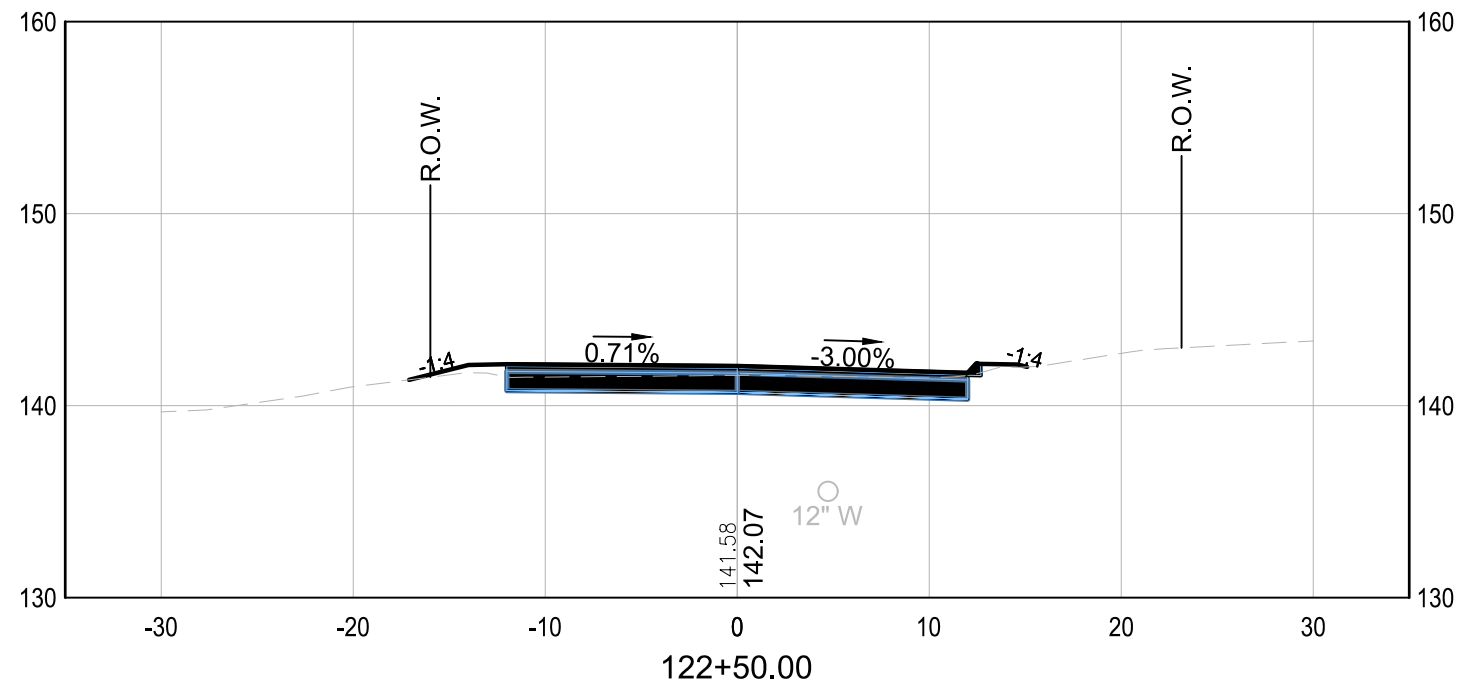
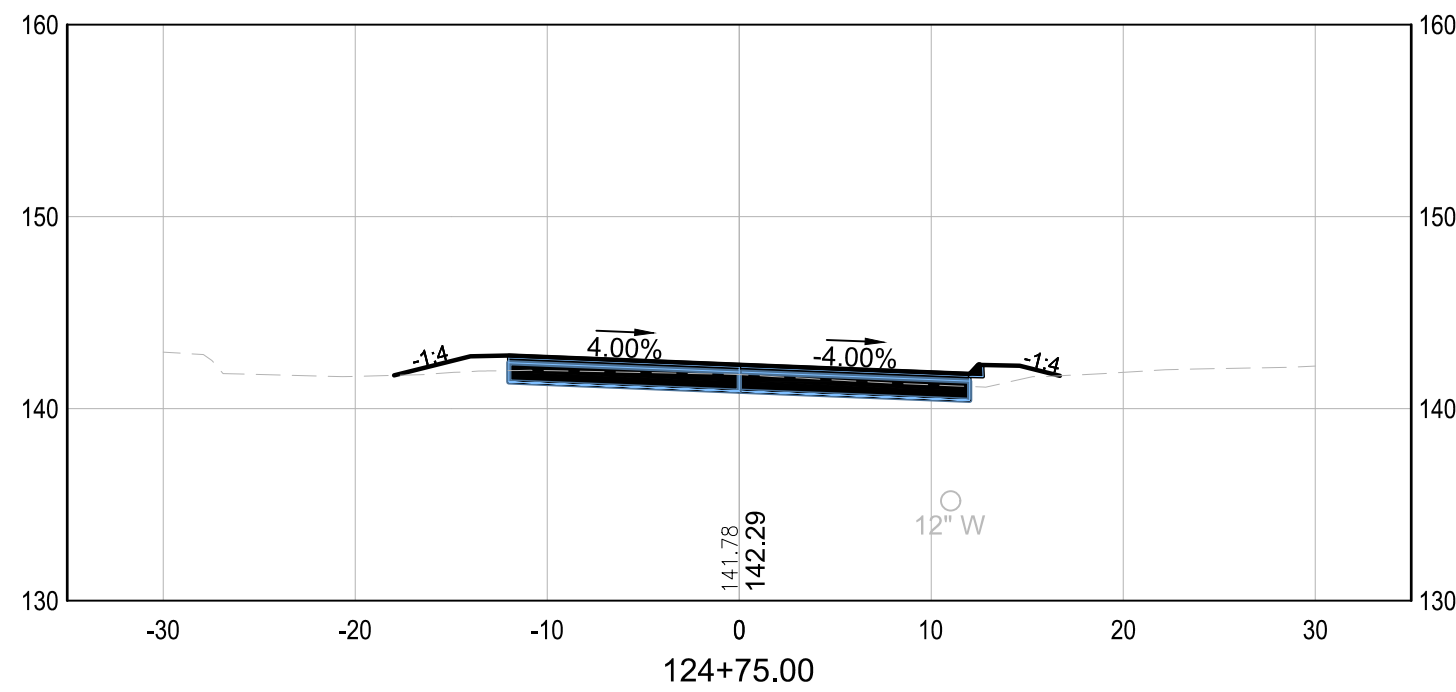
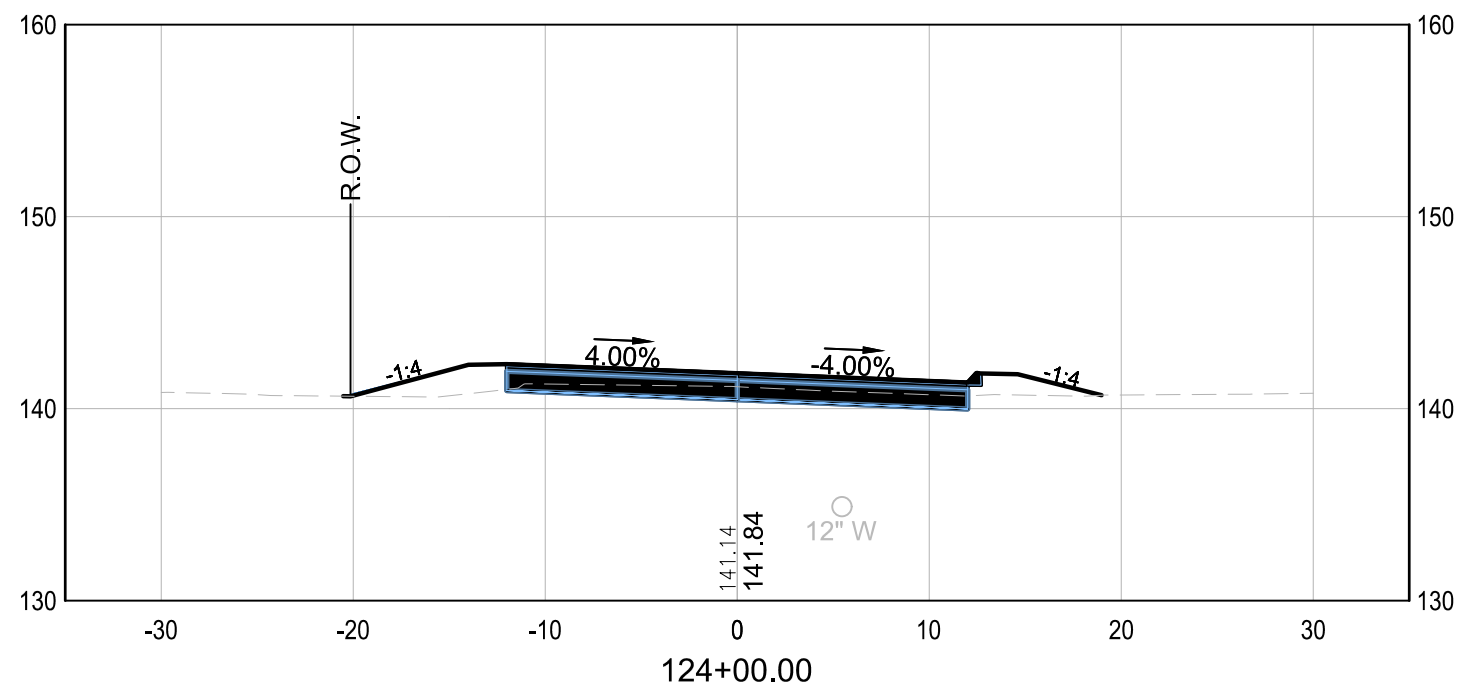
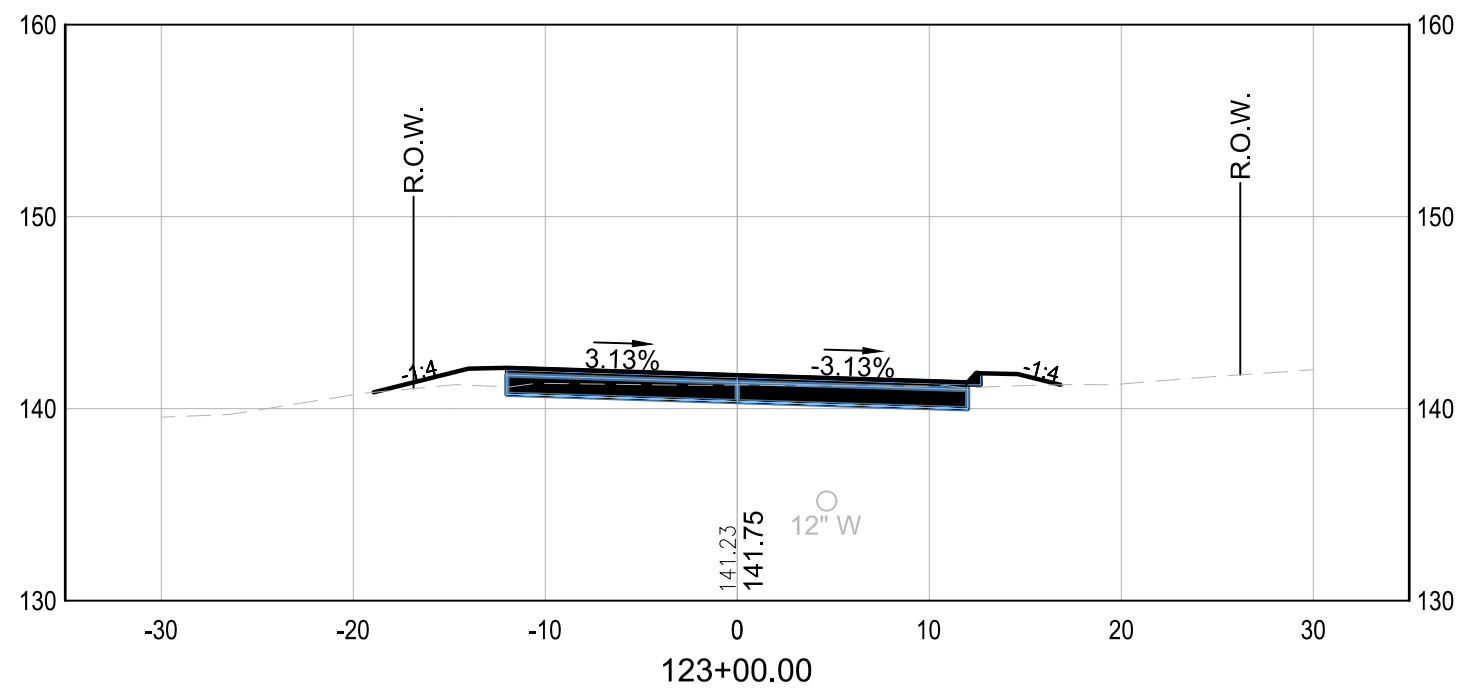
**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

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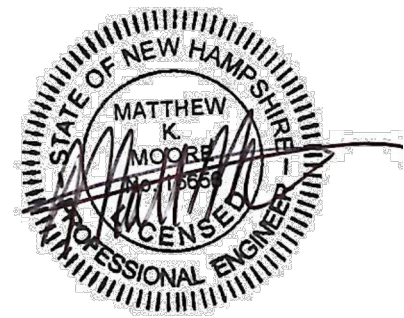
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DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	



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BID DOCUMENTS

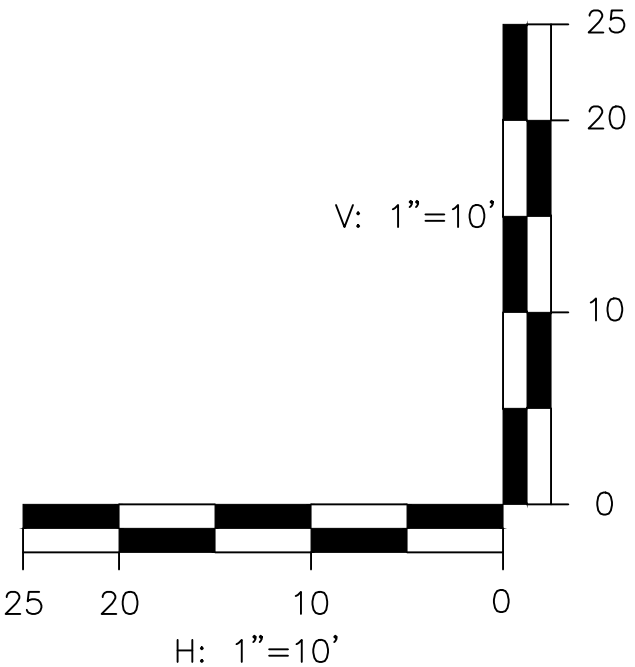
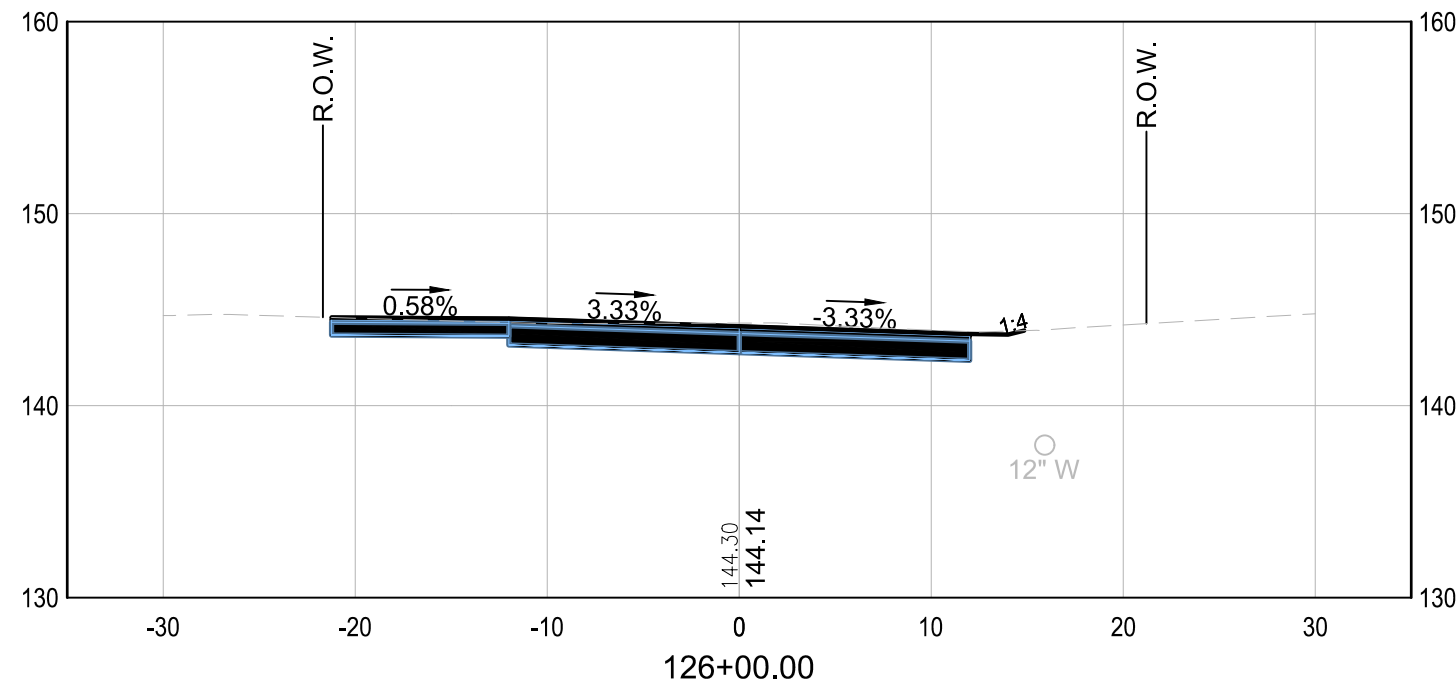
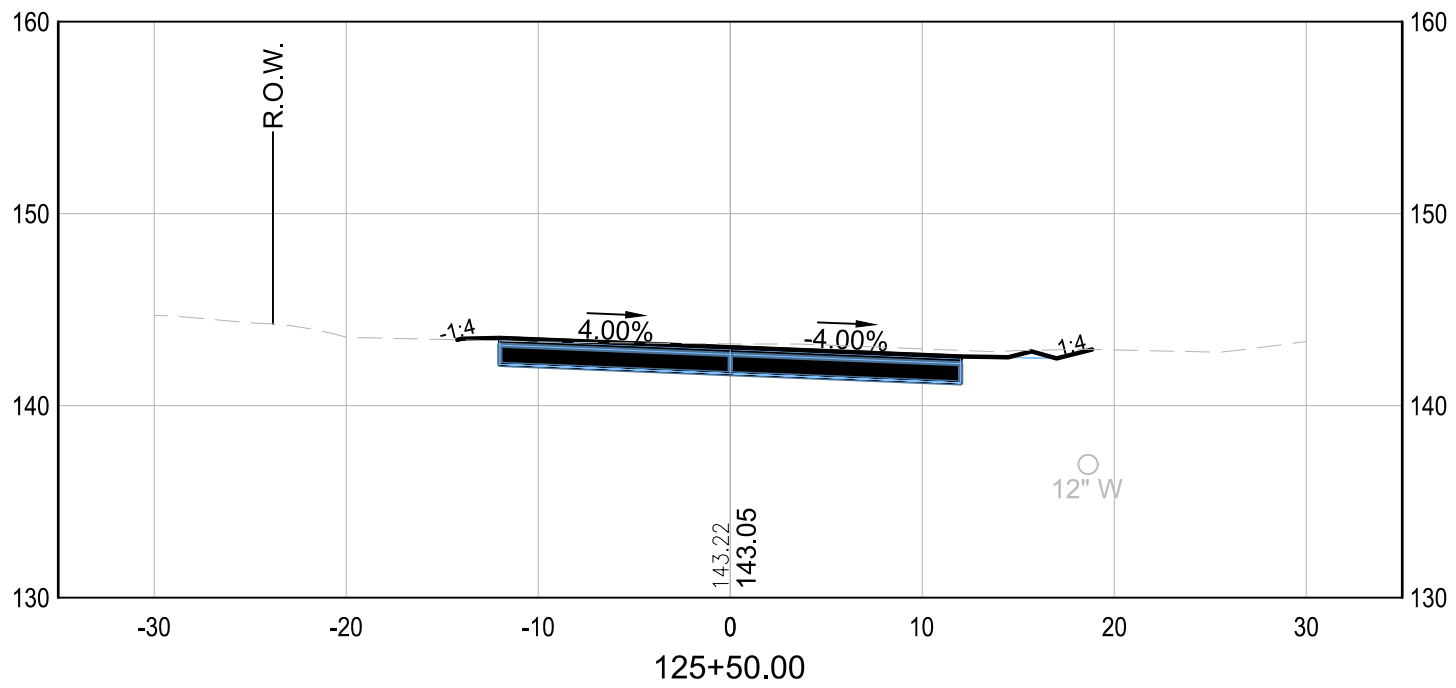
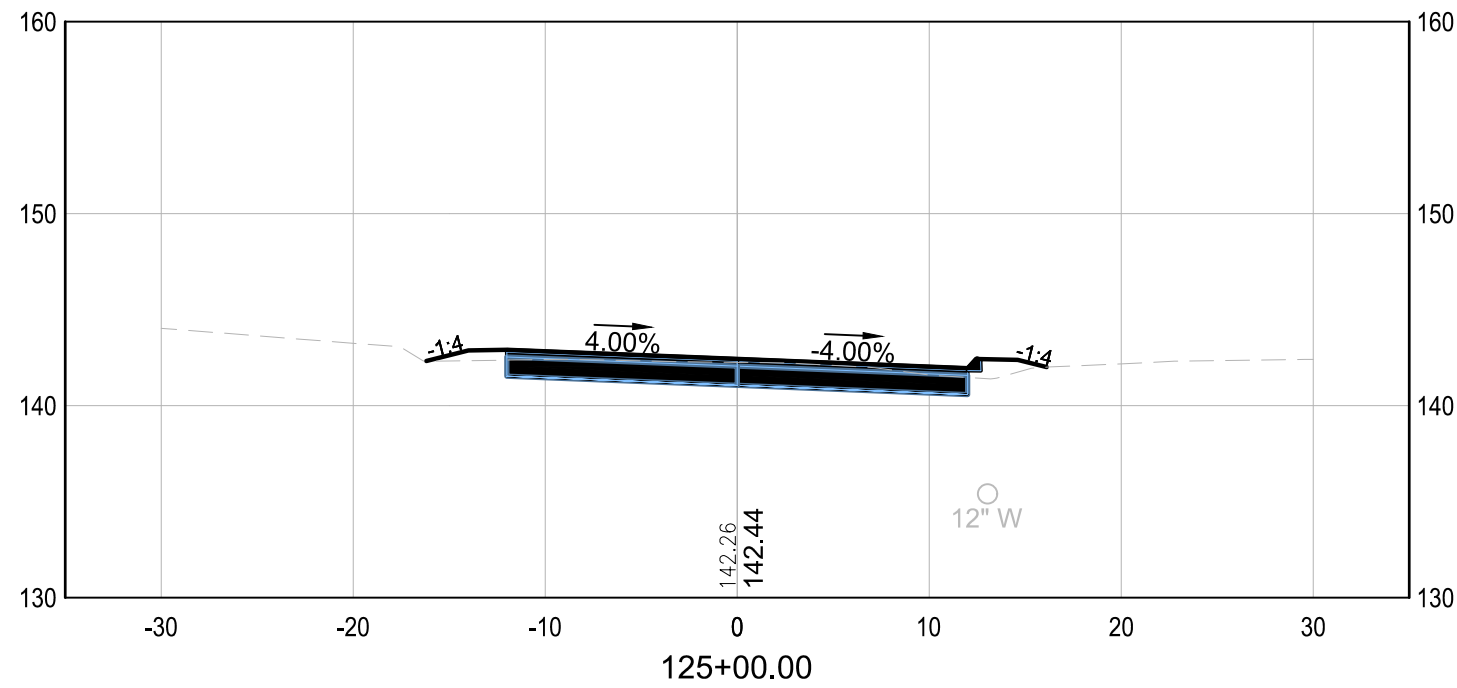
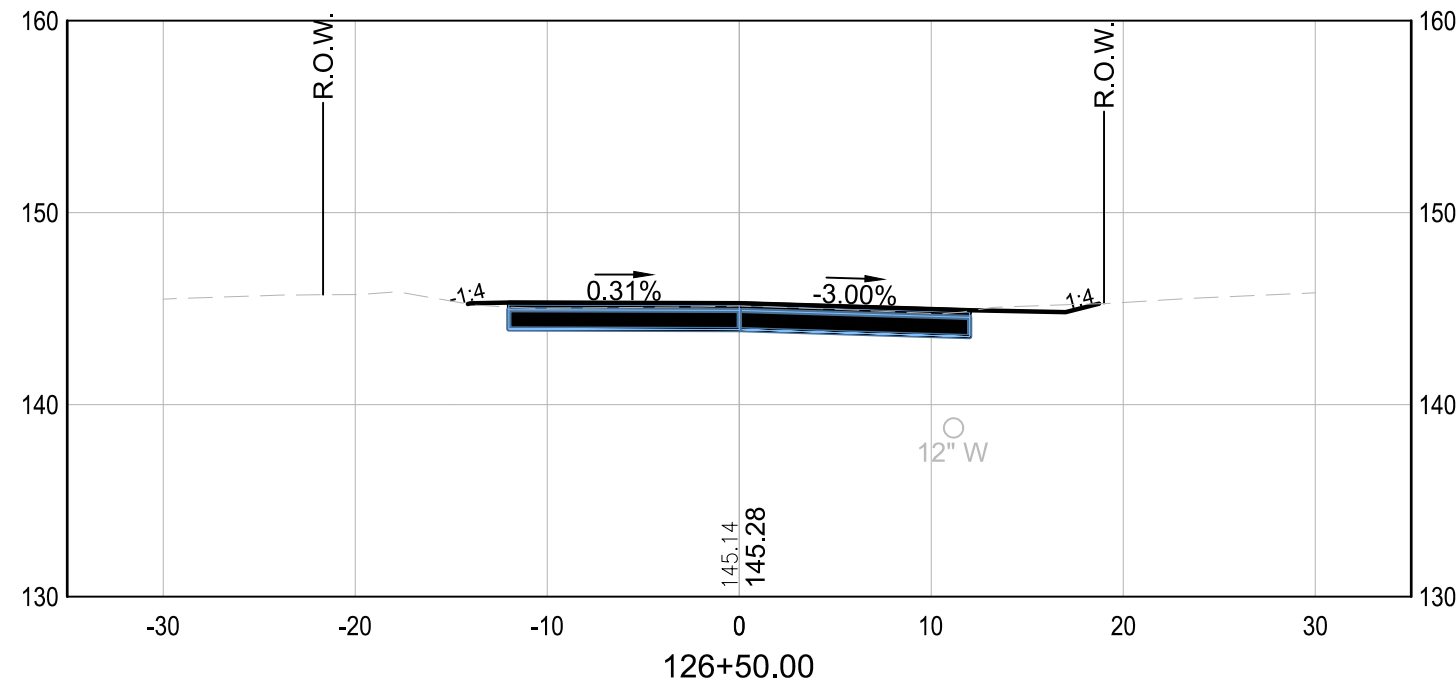
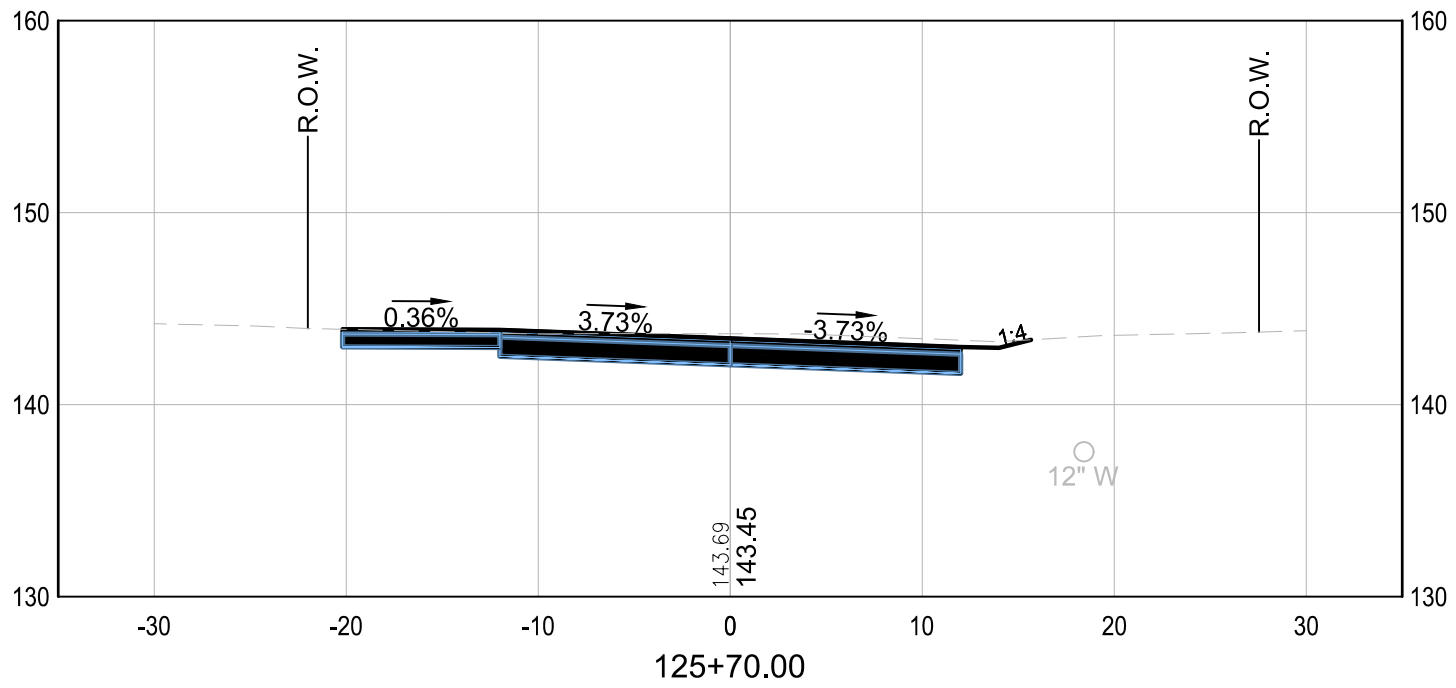
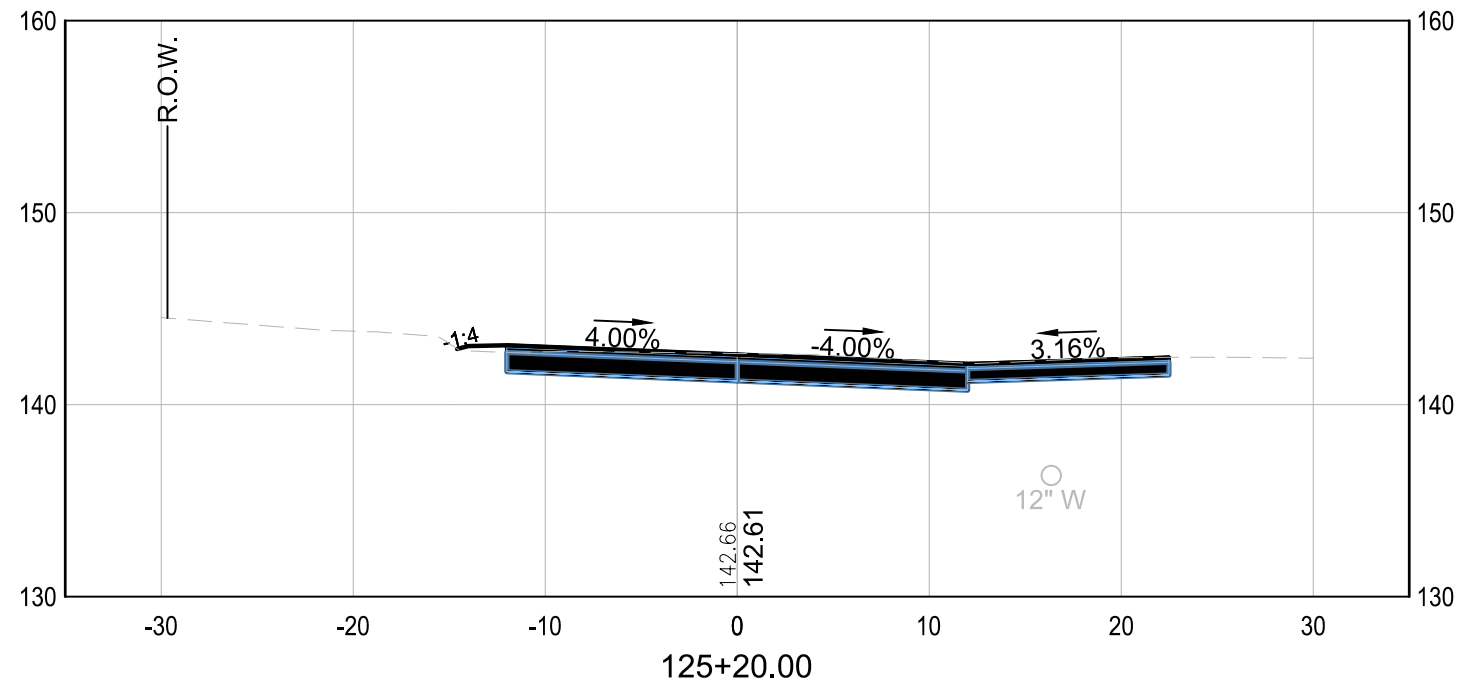


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CONCORD, NEW HAMPSHIRE 03301

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SCALE: AS SHOWN	DESIGN: FPS	24 24 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

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**BID DOCUMENTS**



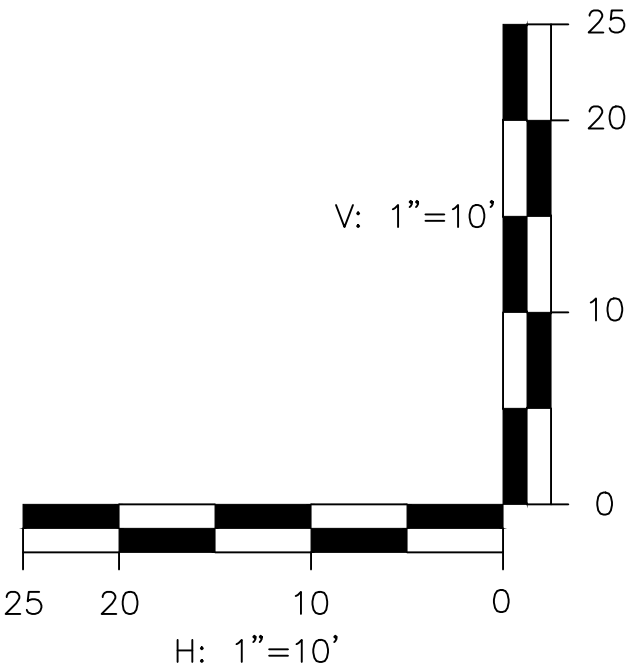
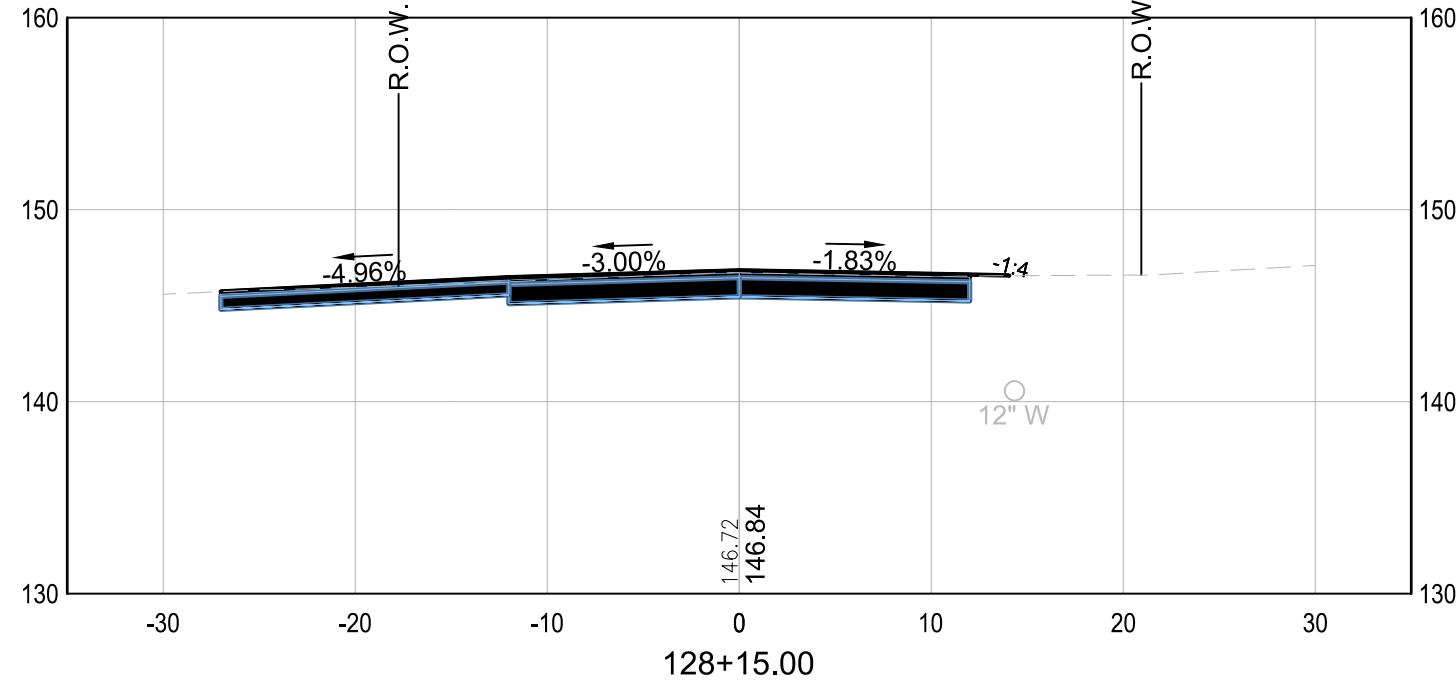
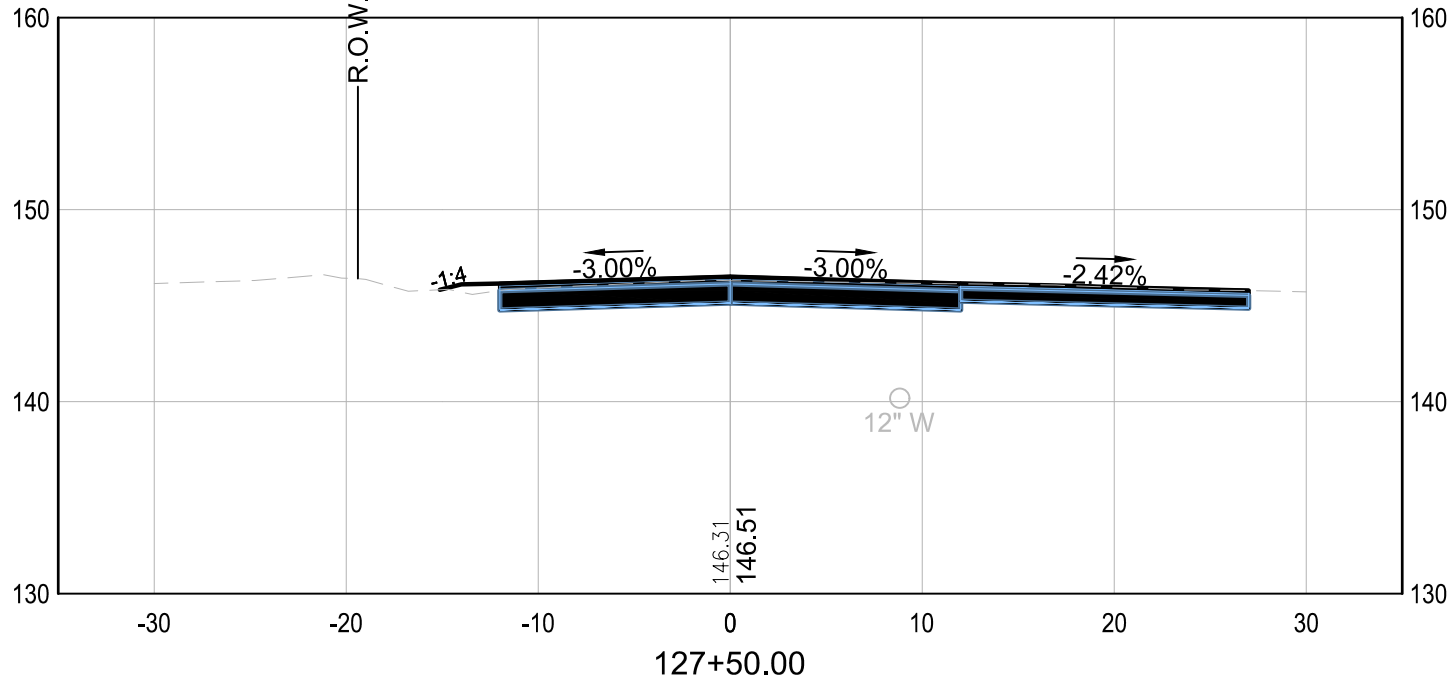
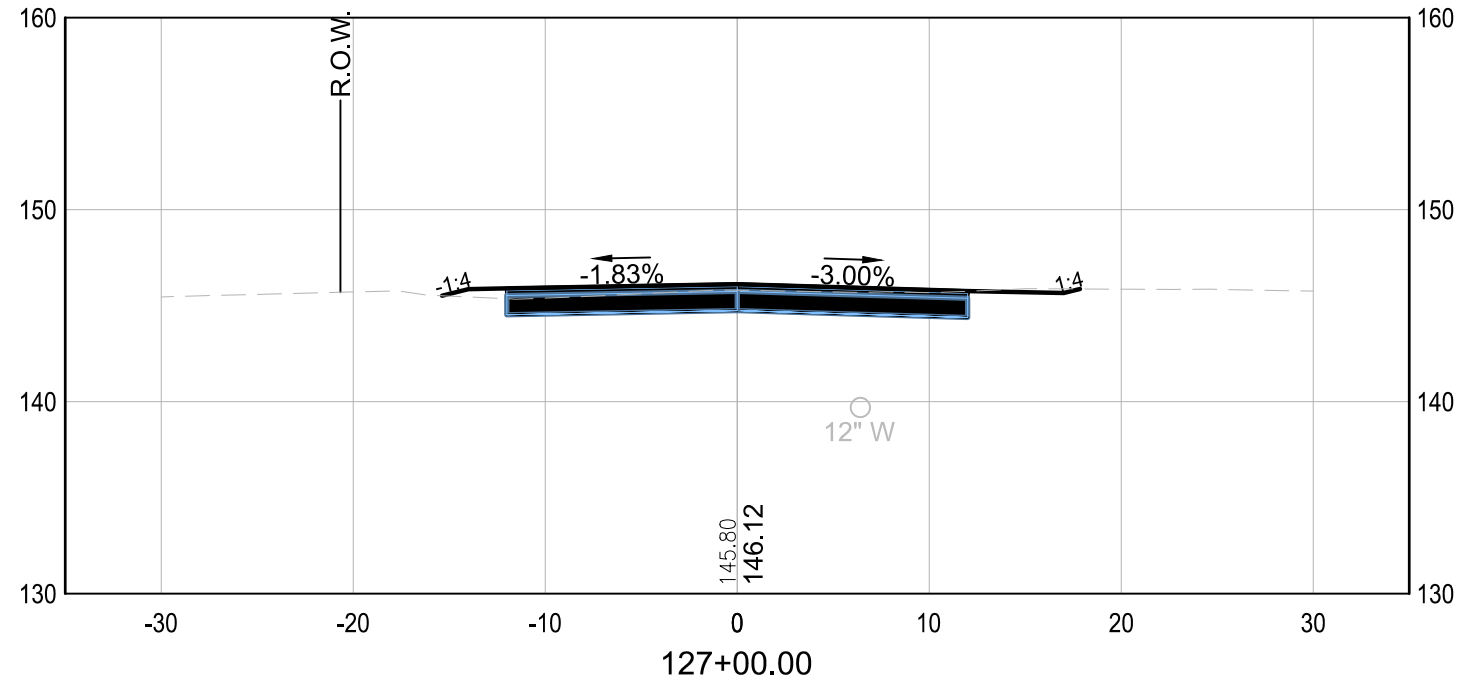
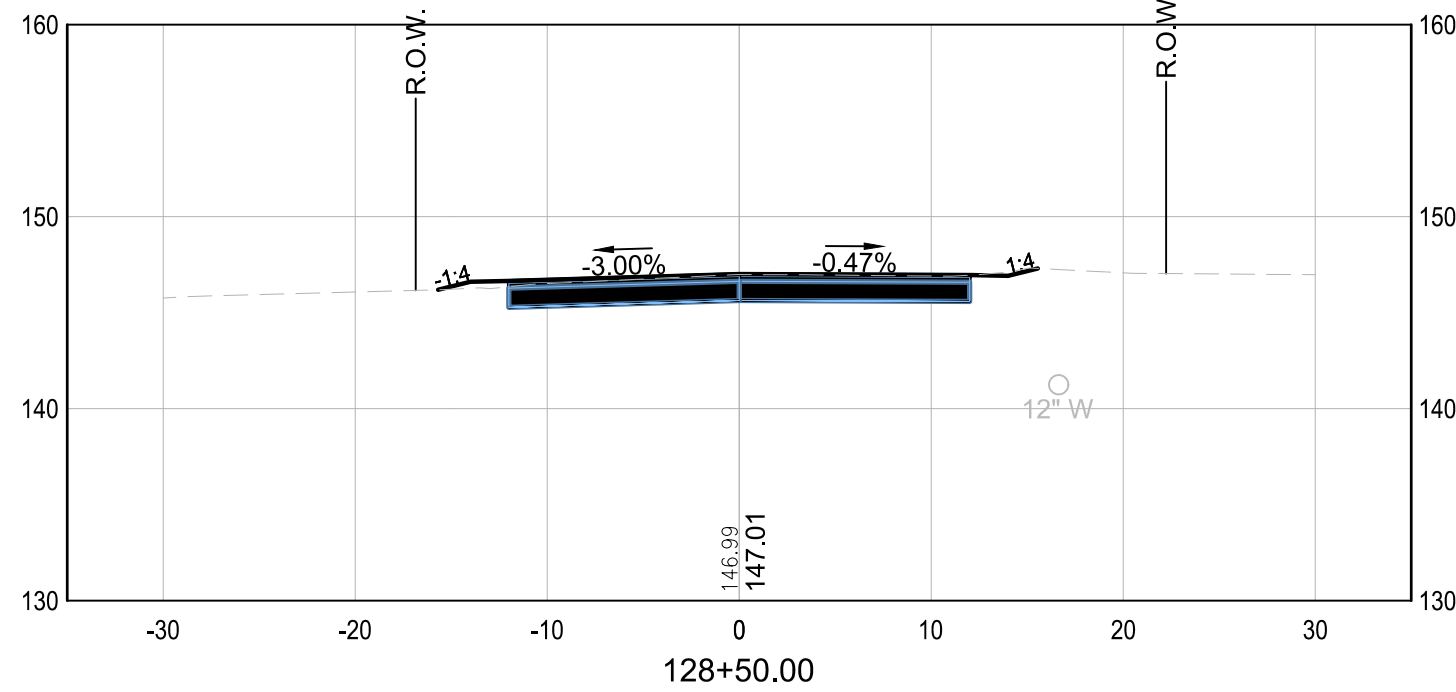
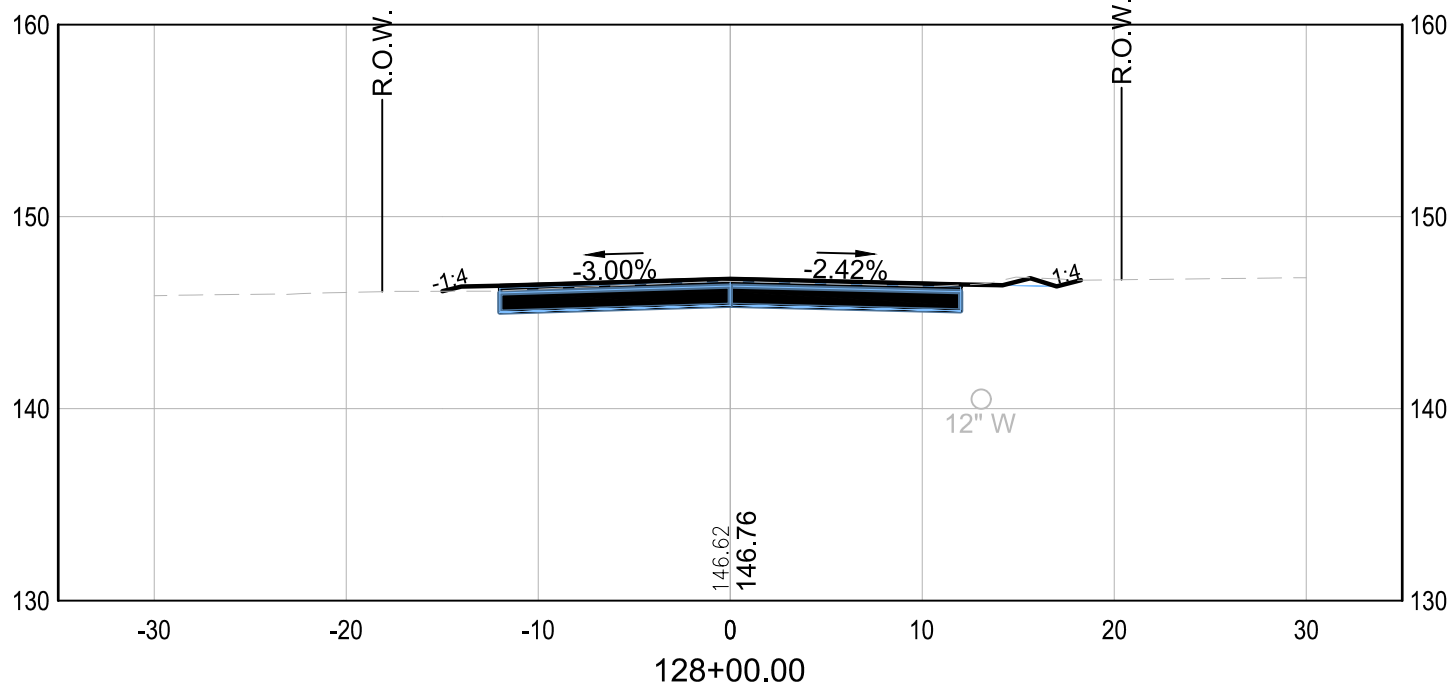
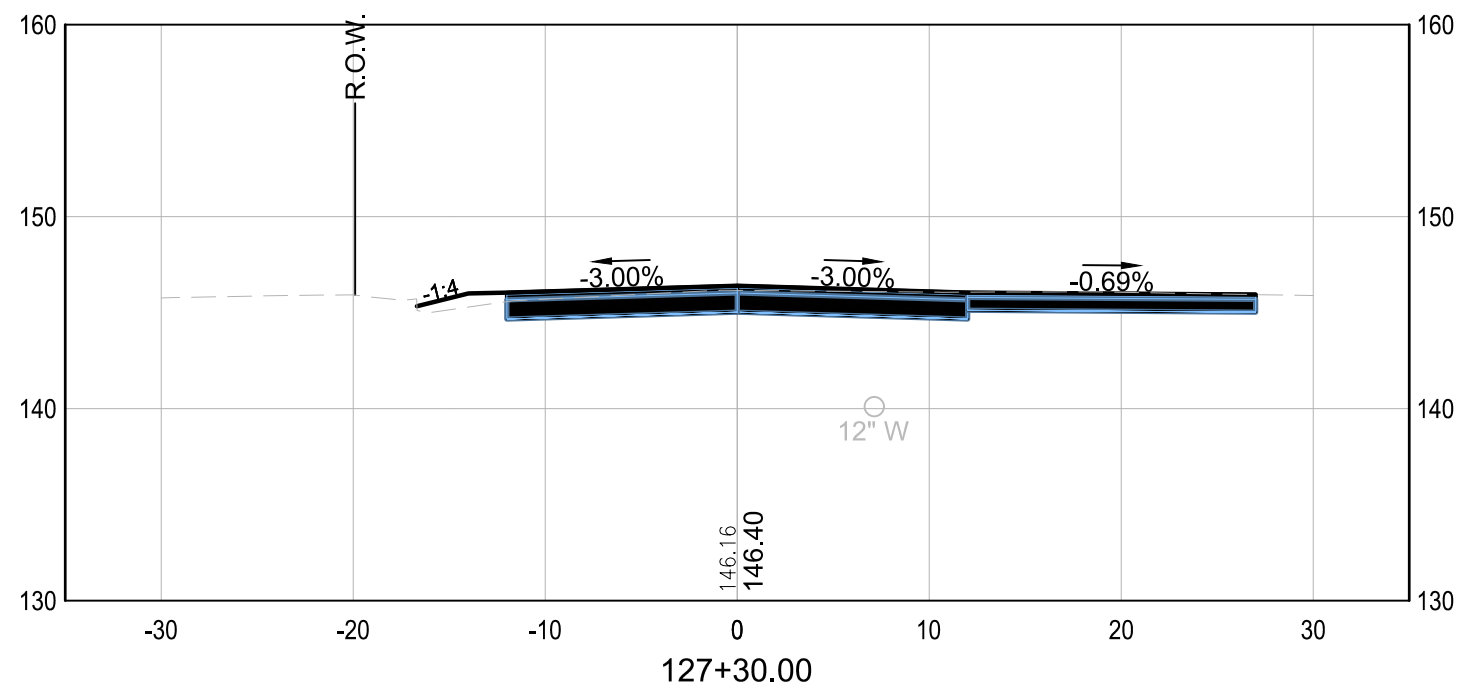
**McFarland Johnson**  
53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

REV	DATE	DESCRIPTION	BY

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SCALE: AS SHOWN	DESIGN: FPS	<b>25</b> 25 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	



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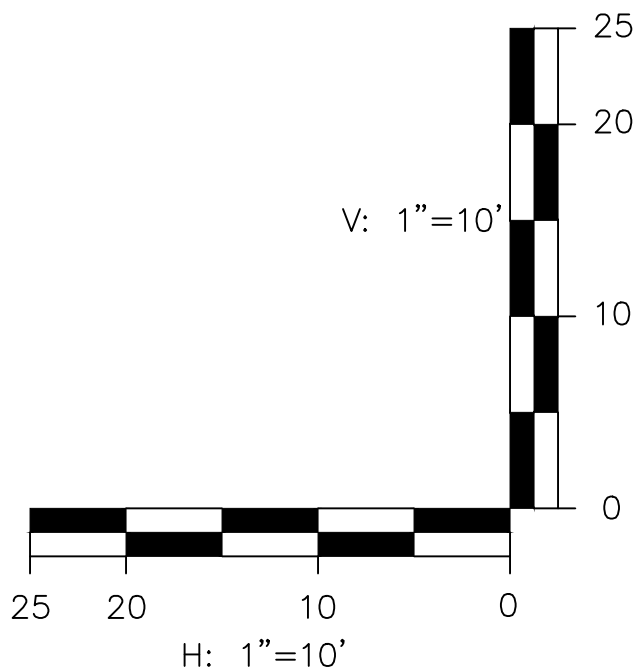
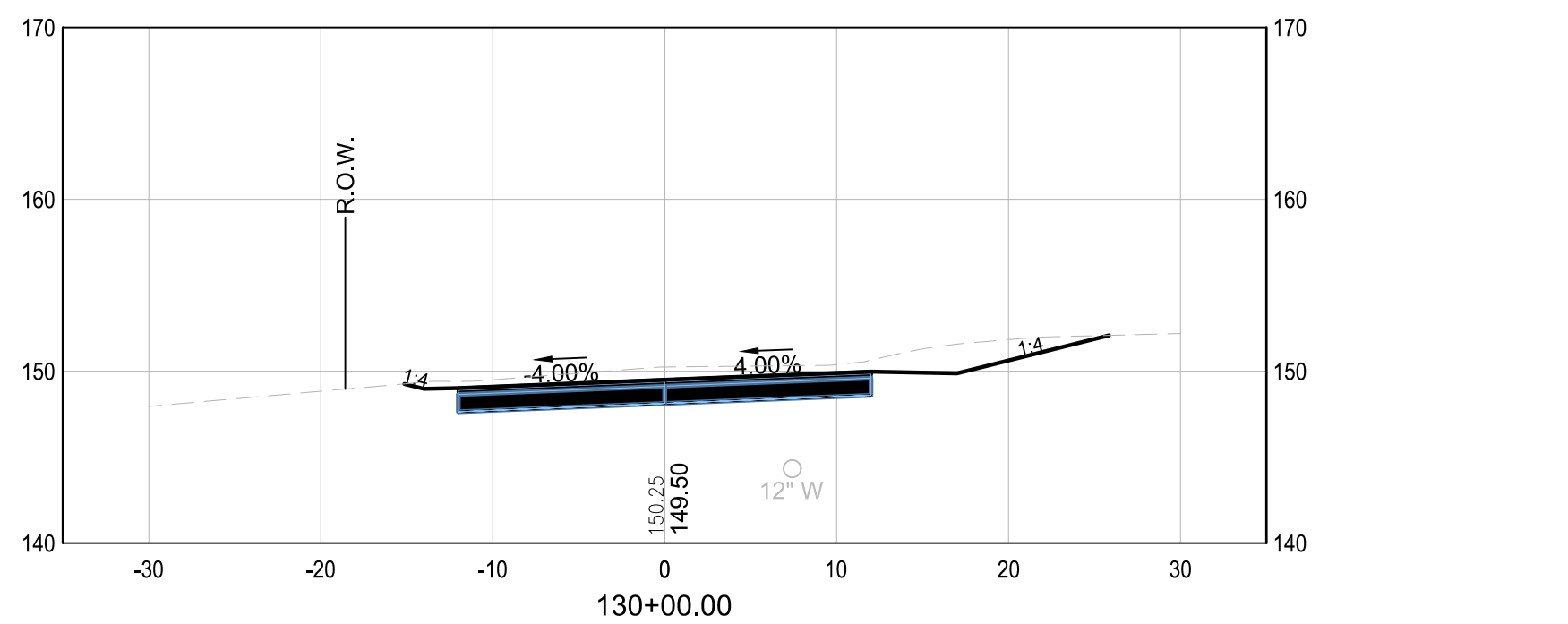
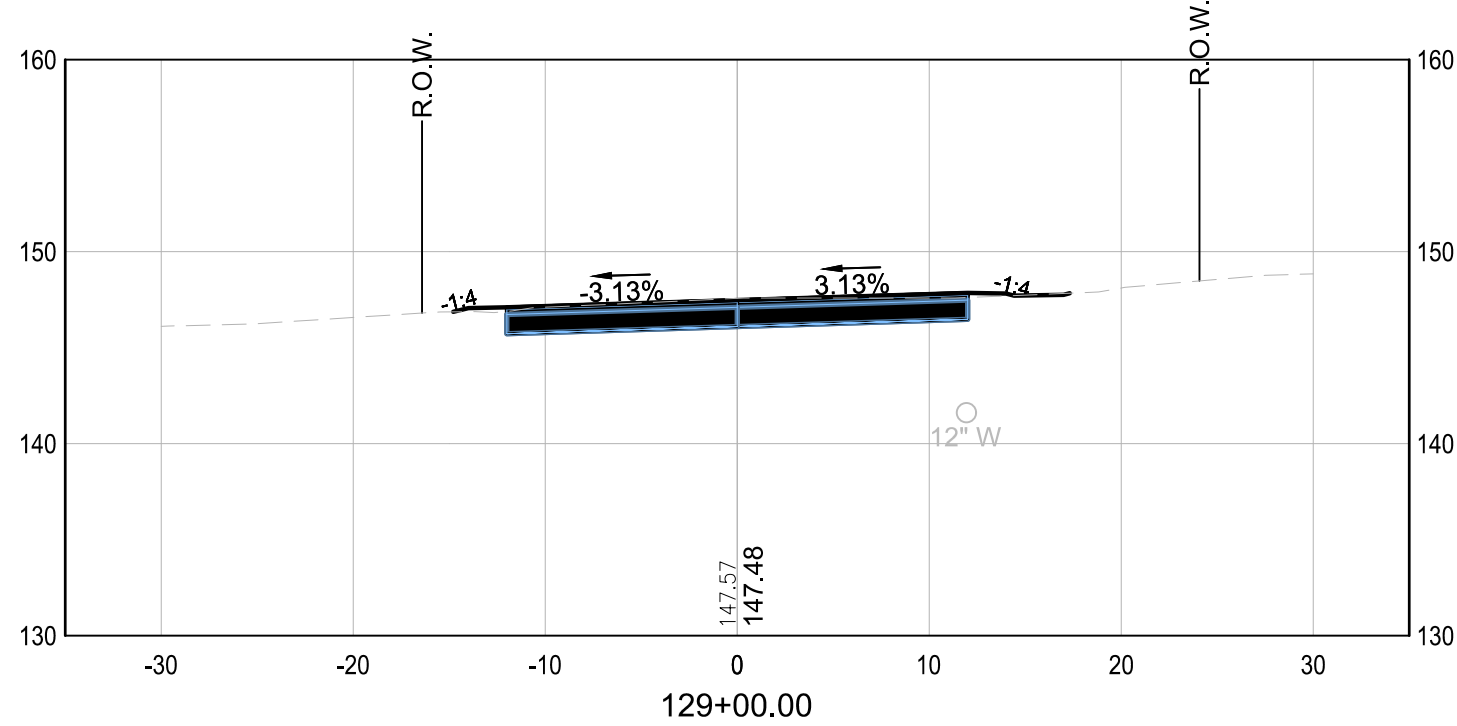
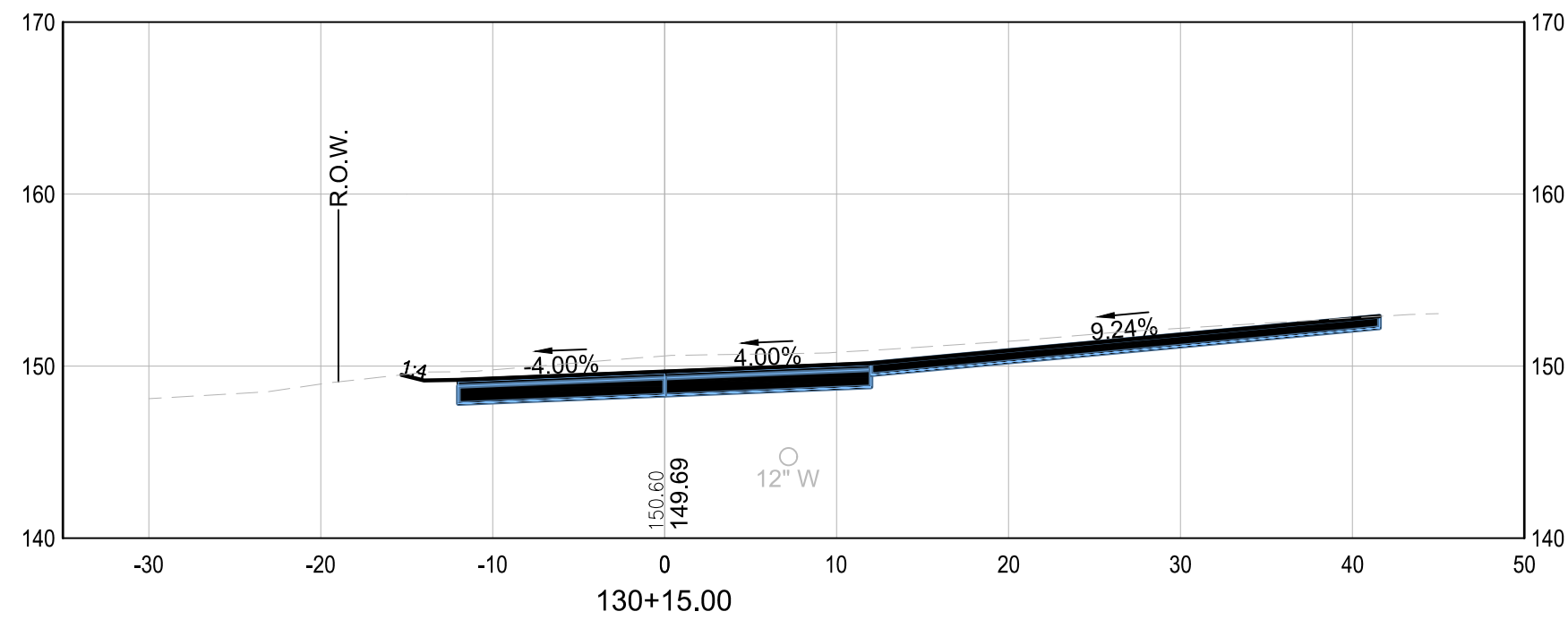
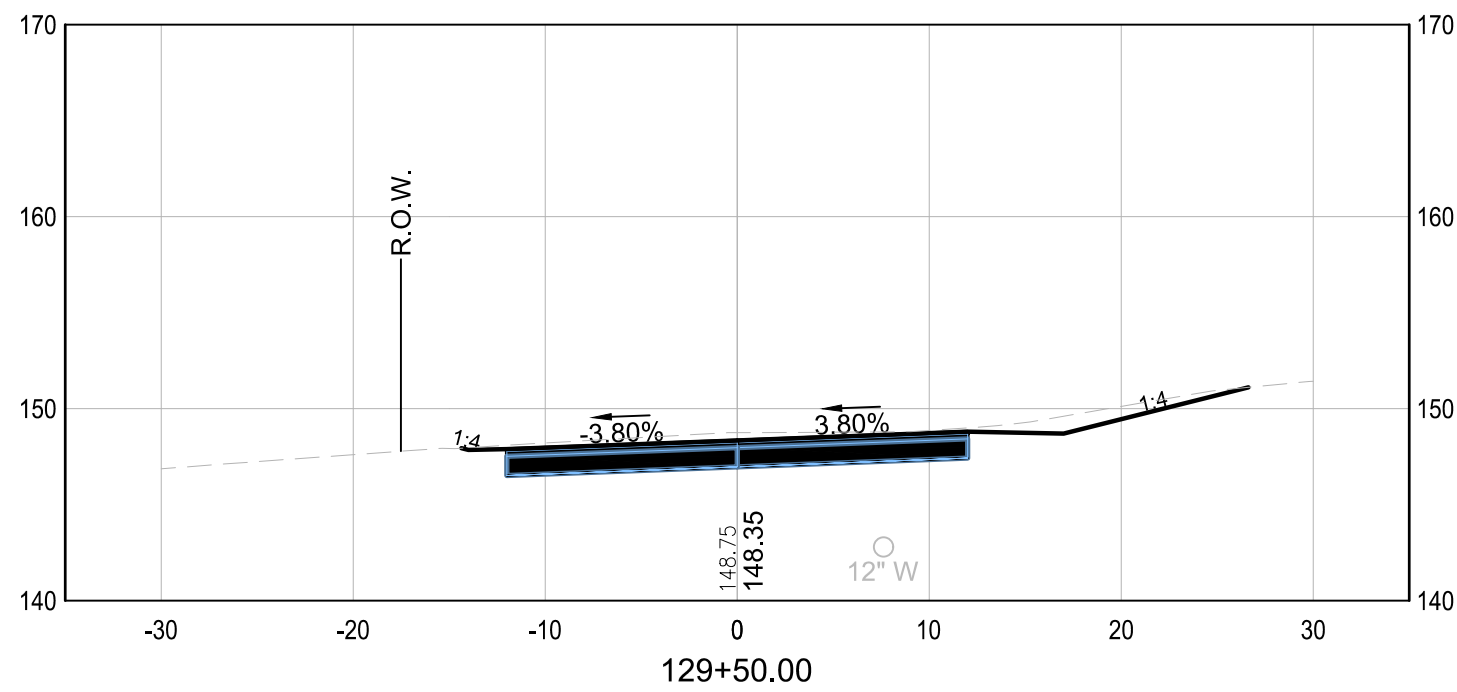


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53 REGIONAL DRIVE  
CONCORD, NEW HAMPSHIRE 03301

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DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

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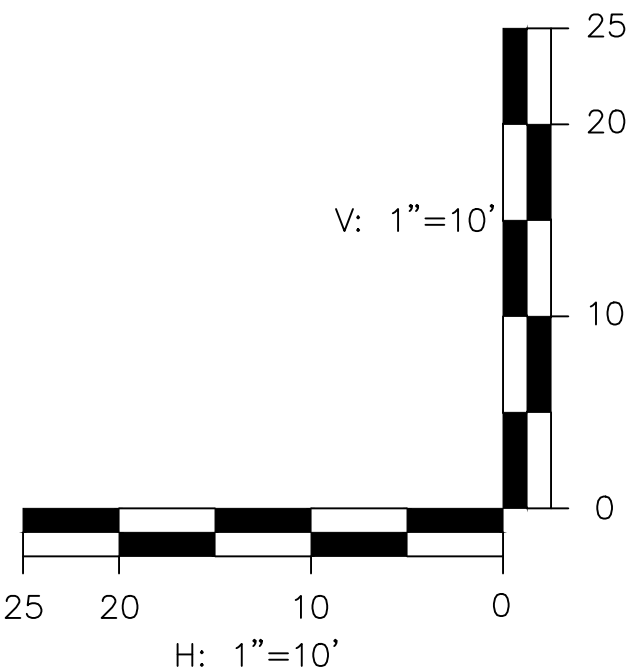
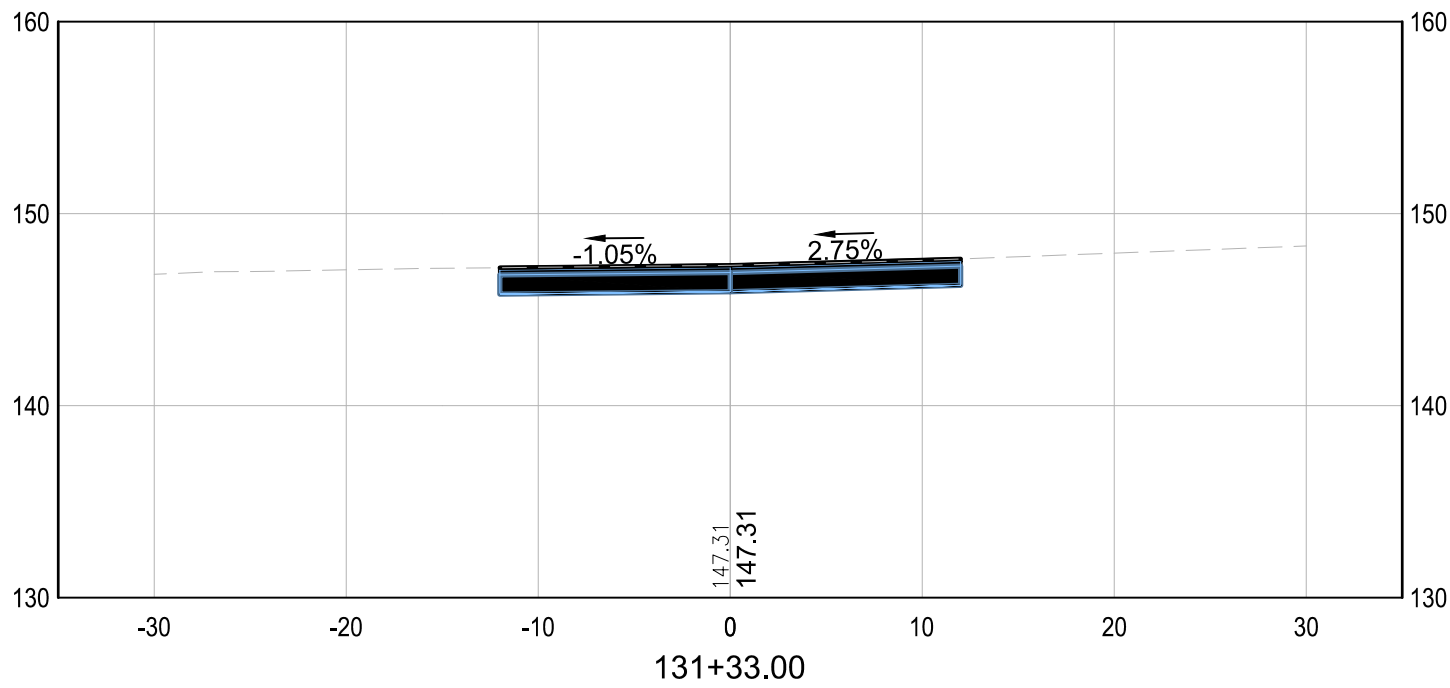
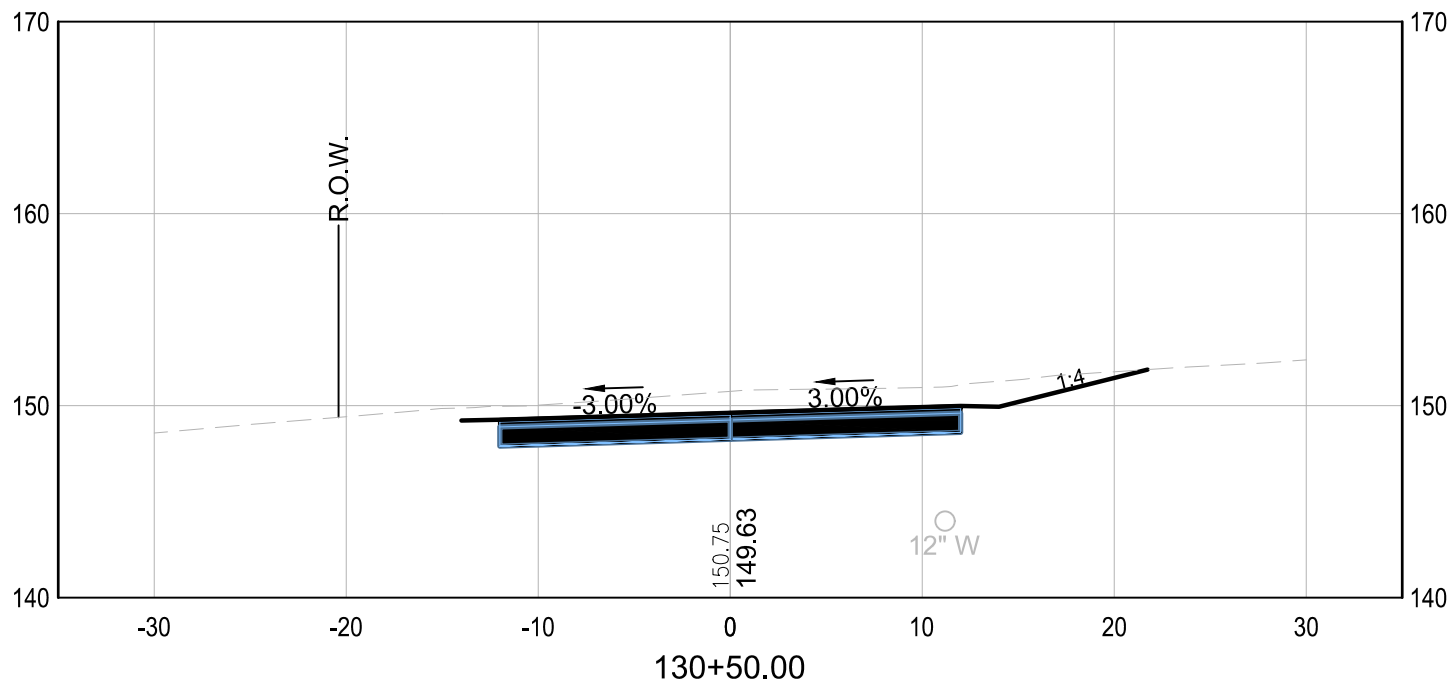
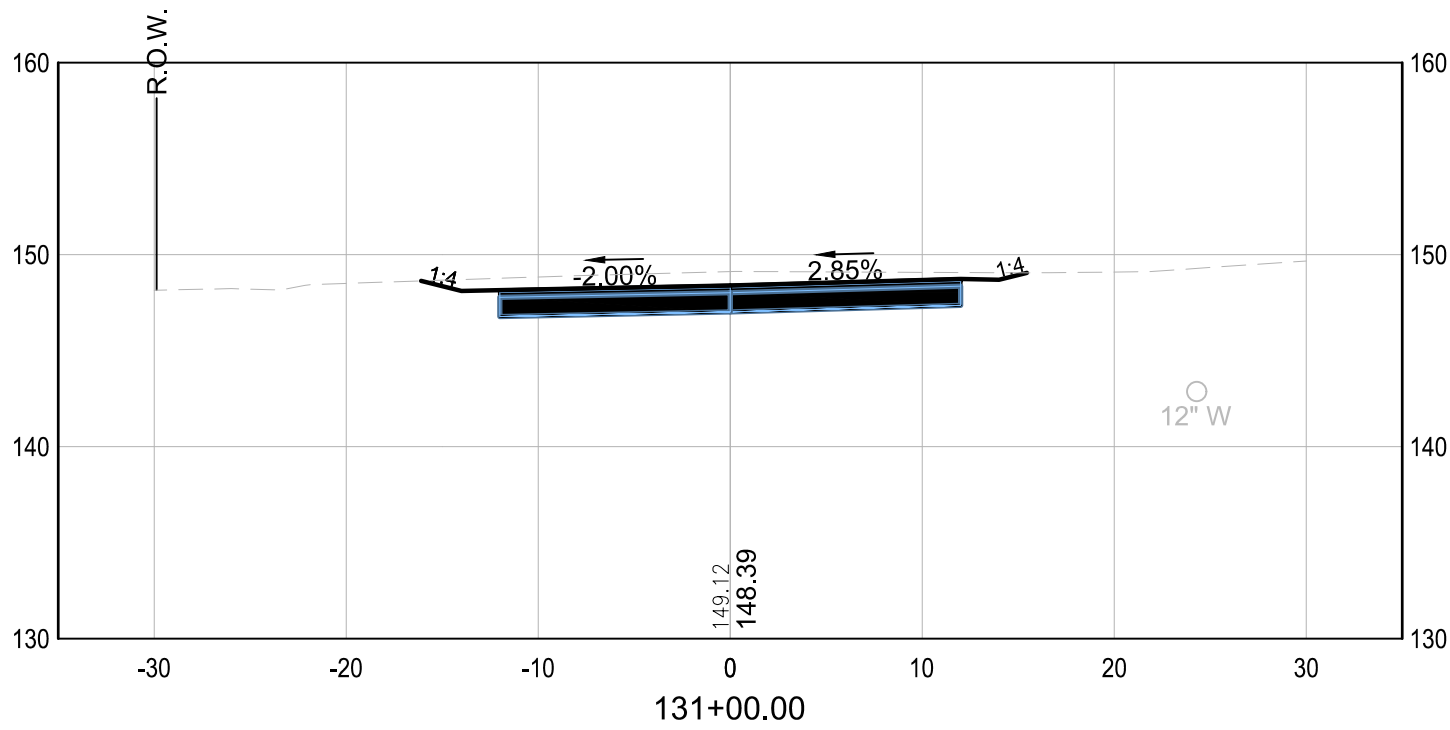
**McFarland Johnson**  
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CONCORD, NEW HAMPSHIRE 03301

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CHECKED: MKM	DATE: DECEMBER 2022	



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CONCORD, NEW HAMPSHIRE 03301

REV	DATE	DESCRIPTION	BY

TOWN OF SALEM SALEM, NEW HAMPSHIRE 2023 ROADWAY IMPROVEMENT PROJECT DUSTON ROAD DUSTON ROAD CROSS SECTION STA 131+00 TO STA 131+33		
SCALE: AS SHOWN	DESIGN: FPS	28 28 OF 28
DRAWN: FPS	PROJECT: 18900.02	
CHECKED: MKM	DATE: DECEMBER 2022	

## SECTION 00301A

### BID

To the Town of Salem, New Hampshire, herein called the Owner, acting by and through its Engineering Department, for the 2023 Roadway Improvement Project – Duston Road.

The Undersigned, as bidder, herein referred to as singular and masculine, declares as follows:

- (1) The only parties interested in this BID as Principals are named herein.
- (2) This BID is made without collusion with any other person, firm, or corporation.
- (3) No officer, agent, or employee of the Owner is directly or indirectly interested in this BID.
- (4) He has carefully examined the site and adjacent areas of the proposed Work and fully informed and satisfied himself as to the conditions and restraints existing, the character and requirements of the proposed Work, the difficulties attendant upon its execution given said conditions and restraints, and the accuracy of all estimated quantities stated in this BID, and he has carefully read and examined the Contract Documents therein referred to and knows and understands the terms and provisions thereof;
- (5) He understands that information relative to subsurface and other conditions, natural phenomena, existing pipes, foundations, and other structures (surface and/or subsurface) has been furnished only for his information and convenience without any warranty or guarantee, expressed or implied, that the subsurface and/or other conditions, natural phenomena, existing pipes, foundations, and other structures (surface and/or subsurface) actually encountered will be the same as those shown in the Contract Documents and he agrees that he shall not use or be entitled to use any such information made available to him through the Contract Documents or otherwise or obtained by him in his own examination of the site, as a basis of or ground for any claim against the Owner or the Engineer arising from or by reason of any variance which may exist between the aforesaid information made available to or acquired by him and the subsurface and/or other conditions, natural phenomena, existing pipes, foundations, and other structures (surface and/or subsurface) actually encountered during the

BID

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construction work, and he has made due allowance therefore in this BID;

- (6) He understands that protection of public or private property is the Contractor's responsibility and any damage, whether in or out of the work limit, to any public or private property, facility, structure or utility resulting from any action of his in the prosecution of work shall be his sole burden to correct to the fullest satisfaction of the owner of such public or private property, facility, structure or utility. He understands that no additional compensation of any kind is warranted or will be granted for any damage to any public or private property, facility, structure, or utility damaged as a result of his prosecution of any work.
- (7) he understands that the quantities of work tabulated in this BID or indicated in the Contract Documents are only approximate and are subject to increase or decrease as deemed necessary by the Engineer.
- (8) he agrees that, if this BID is accepted he will contract with the Owner, as provided in the copy of the Contract Documents deposited in the office of the Engineer, this BID form being part of said Contract Documents, and that he will perform all the work and furnish all the materials and equipment, and provide all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other things required by the Contract Documents in the manner and within the time therein prescribed and according to the requirements of the Engineer as therein set forth, and that he will take in full payment therefore the lump sum or unit price applicable to each item of the Work as stated in the schedule below.

Note: Bidders must submit a completed Statement of Bidders Qualifications with the Bid. Failure to submit a completed Statement of Bidders Qualifications may be deemed by the Owner as a non-responsive Bid. Refer to Section 00420.

Note: Bidders must bid on each item. All entries in the entire BID must be made clearly and in ink. In case of discrepancy between prices in writing and in figures, the writing shall govern. In case of discrepancy between the product obtained by multiplying the estimated quantity by the unit price, and the extended amount, the product obtained shall govern. In case of discrepancy between total of extended amounts and total amount of bid stated, total of items shall govern. Use the pages in this document when submitting proposal and submit contract documents intact.

This BID includes Addenda number(s) \_\_\_\_\_ (To be filled in by Bidder if Addenda are issued.)

BID  
00301A -2

## **Bid Schedule**

### **2023 Roadway Improvement Project**

#### **Duston Road**

#### **Salem, New Hampshire**

ITEM	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE		EXTENDED TOTAL
				Words	Figures	(Figures)
201.1	CLEARING AND GRUBBING	1400	SY			
201.21	REMOVING SMALL TREES	15	EA			
201.22	REMOVING LARGE TREES	10	EA			
201.4	STUMP REMOVAL	10	EA			
202.2	DEMOLISHING BUILDINGS	1	EA			
202.41	REMOVAL OF EXISTING PIPE 0-24" DIAMETER	44	LF			
202.5	REMOVAL OF CATCH BASINS, DROP INLETS, AND MANHOLES	2	EA			
203.1	COMMON EXCAVATION (WHERE DIRECTED)	690	CY			
203.6	EMBANKMENT IN PLACE	900	CY			
206.19	COMMON STRUCTURE EXCAVATION EXPLORATORY	50	CY			
206.2	ROCK STRUCTURE EXCAVATION	200	CY			
214	FINE GRADING	1	U			



## **Bid Schedule**

### **2023 Roadway Improvement Project**

#### **Duston Road**

#### **Salem, New Hampshire**

ITEM	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE		EXTENDED TOTAL
				Words	Figures	(Figures)
304.4	CRUSHED STONE (FINE GRADATION)(AS DIRECTED)	400	CY			
306.212	RECLAIMED STABILIZED BASE REMOVED & REHANDLED - 12" DEPTH	9300	SY			
306.36	STONE FOR RECLAIMED STABILIZED BASE	1700	TON			
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	2500	TON			
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	150	TON			
417	COLD PLANING BITUMINOUS SURFACES	280	SY			
572.1	RECONSTRUCTING STONE WALL ONE STONE WIDE	2100	LF			
572.99	REMOVE AND RESET STONE AND MORTAR WALL	83	LF			
585.3	STONE FILL, CLASS C	50	CY			
603.00212	12" R.C. PIPE, 2000D	530	LF			
603.00215	15" R.C. PIPE, 2000D	76	LF			
603.00218	18" R.C. PIPE, 2000D	5	LF			

## **Bid Schedule**

### **2023 Roadway Improvement Project**

#### **Duston Road**

#### **Salem, New Hampshire**

ITEM	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE	Figures	EXTENDED TOTAL (Figures)
				Words		
604.0007	POLYETHYLENE LINER	9	EA			
604.124	CATCH BASIN TYPE B, 4-FOOT DIAMETER	9	EA			
604.45	ADJUSTING CATCH BASIN & DROP INLET	5	EA			
604.72	GRATES & FRAMES, TYPE B	5	EA			
605.506	6" PERF. CORR. POLYETHYLENE PIPE UNDERDRAIN	600	LF			
606.1255	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL2)(STEEL POST)	2	EA			
606.18001	31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)	25	LF			
609.811	BITUMINOUS CURB, TYPE B	3200	LF			
611.811	REMOVE & RESET FIRE HYDRANT	3	EA			
611.90001	ADJUSTING WATER GATES AND SHUTOFFS SET BY OTHERS	18	EA			
615.0301	TRAFFIC SIGN, TYPE C	50	SF			
615.034	RELOCATING TRAFFIC SIGN, TYPE C	10	EA			



## **Bid Schedule**

### **2023 Roadway Improvement Project**

#### **Duston Road**

#### **Salem, New Hampshire**

ITEM	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE		EXTENDED TOTAL
				Words	Figures	(Figures)
615.0601	TRAFFIC SIGN, TYPE CC	20	SF			
618.6	UNIFORMED OFFICERS	75000	ALLOW	SEVENTY-FIVE THOUSAND DOLLARS	\$75,000.00	\$75,000.00
619.1	MAINTENANCE OF TRAFFIC	1	U			
622.55	REMOVE & RESET MONUMENT	21	EA			
628.2	SAWED BITUMINOUS PAVEMENT	1000	LF			
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	12300	LF			
632.3118	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 18" LINE	92	LF			
645.441	SEDIMENT FILTER LOGS (COMPOST SOCK)	400	LF			
645.531	SILT FENCE	400	LF			
645.533	INLET FILTER BASKET	16	EA			
645.7	STORM WATER POLLUTION PREVENTION PLAN	1	U			
645.72	MONITORING SWPPP & EROSION & SEDIMENT CONTROLS	20	VISIT			

## **Bid Schedule**

### **2023 Roadway Improvement Project**

#### **Duston Road**

#### **Salem, New Hampshire**

ITEM	DESCRIPTION	EST. QTY.	UNIT	UNIT PRICE		EXTENDED TOTAL
				Words	Figures	(Figures)
646.31	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	7000	SY			
653.003	SHRUB 18" - 24" HEIGHT	10	EA			
670.066	REMOVE & RESET MAILBOX	15	EA			
692	MOBILIZATION	1	U			
900	PRECAST HEADWALLS	4	EA			
1010.2	ASPHALT CEMENT ADJUSTMENT (ALLOWANCE)	15000	ALLOW	FIFTEEN THOUSAND DOLLARS	\$15,000.00	\$15,000.00
TOTAL AMOUNT						

Key to Units: LF = Linear Feet; VF = Vertical Feet; SY = Square Yards; CY = Cubic Yards; LS = Lump Sum; EA = Each, ALLOW - Allowance, U - Unit



The undersigned agrees that extra work, if any, performed in accordance with the Article 10 of the General Conditions of the Contract will be paid for in accordance with Article 11 of the General Conditions of the Contract.

If this BID is accepted by the Owner, the undersigned agrees to complete the entire work provided to be done under the Contract within the time stipulated in the AGREEMENT.

As provided in the INSTRUCTIONS TO BIDDERS, the bidder hereby agrees that he will not withdraw this BID for a period of 90 days after the actual date of the opening of the Bid and that, if the Owner shall accept this BID, the bidder will duly execute and acknowledge the AGREEMENT and furnish, duly executed and acknowledged, the required CONTRACT BONDS within ten (10) days after notification that the AGREEMENT and other Contract Documents are ready for signature.

Should the bidder fail to fulfill any of his agreements as hereinabove set forth, the Owner shall have the right to retain as liquidated damages the amount of the bid security which shall become the Owner's property. If a bid bond was given, it is agreed that the amount thereof shall be paid as liquidated damages to the Owner by the Surety.

The bidder, by submittal of this BID, agrees with the Owner that the amount of the bid security deposited with this BID fairly and reasonably represents the amount of damages the Owner will suffer due to the failure of the bidder to fulfill his agreements as above provided.

The undersigned further certifies under penalties of perjury that this bid is in all respects bona fide, fair, and made without collusion or fraud with any other person. As used in this paragraph the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The attached CERTIFICATE OF NON-COLLUSION must be signed and submitted as part of the Bid Proposal.

(SEAL) \_\_\_\_\_  
(Name of Bidder)

By \_\_\_\_\_  
(Signature and title of authorized representative)

\_\_\_\_\_  
(Telephone)

\_\_\_\_\_  
(Business address)

\_\_\_\_\_  
(Fax Number)

\_\_\_\_\_  
(City and State)

Date \_\_\_\_\_

BID  
00301A -3

The bidder is a corporation incorporated in the State (or Commonwealth) of \_\_\_\_\_ - a partnership - an individual. (Bidder must add and delete as necessary to make this sentence read correctly.)

Note: If the bidder is a corporation, affix corporate seal and give below the names of its president, treasurer, and general manager if any; if a partnership, give full names and residential addresses of all partners; and if an individual, give residential address if different from business address.

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## Bid Quantity Summary Duston Road

**Note:** Quantities herein are provided solely to give the bidder an indication of how work is divided by road. The quantities and locations, however, are not necessarily intended to represent the final amounts to be utilized on each road.

				Location
				Duston Road
SCHEDULE 1A - ROADWAY IMPROVEMENTS		Total Est. Quant.	Unit	
Item	Item Description			
201.1	CLEARING AND GRUBBING	1,400.0	SY	1400.0
201.21	REMOVING SMALL TREES	15.0	EA	15.0
201.22	REMOVING LARGE TREES	10.0	EA	10.0
201.4	STUMP REMOVAL	10.0	EA	10.0
202.2	DEMOLISHING BUILDINGS	1.0	EA	1.0
202.41	REMOVAL OF EXISTING PIPE 0-24" DIAMETER	44.0	LF	44.0
202.5	REMOVAL OF CATCH BASINS, DROP INLETS, AND MANHOLES	2.0	EA	2.0
203.1	COMMON EXCAVATION (WHERE DIRECTED)	690.0	CY	690.0
203.6	EMBANKMENT IN PLACE	900.0	CY	900.0
206.19	COMMON STRUCTURE EXCAVATION EXPLORATORY	50.0	CY	50.0
206.2	ROCK STRUCTURE EXCAVATION	200.0	CY	200.0
214	FINE GRADING	1.0	U	1.0
304.4	CRUSHED STONE (FINE GRADATION)(AS DIRECTED)	400.0	CY	400.0
306.212	RECLAIMED STABILIZED BASE REMOVED & REHANDLED - 12" DEPTH	9,300.0	SY	9300.0
306.36	STONE FOR RECLAIMED STABILIZED BASE	1700	TON	1700.0
403.11	HOT BITUMINOUS PAVEMENT, MACHINE METHOD	2,500.0	TON	2500.0
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	150.0	TON	150.0
417	COLD PLANING BITUMINOUS SURFACES	280.0	SY	280.0
572.1	RECONSTRUCTING STONE WALL ONE STONE WIDE	2,100.0	LF	2100.0
572.99	REMOVE AND RESET STONE AND MORTAR WALL	83.0	LF	83.0
585.3	STONE FILL, CLASS C	50.0	CY	50.0
603.00212	12" R.C. PIPE, 2000D	530.0	LF	530.0
603.00215	15" R.C. PIPE, 2000D	76.0	LF	76.0
603.00218	18" R.C. PIPE, 2000D	5.0	LF	5.0
604.0007	POLYETHYLENE LINER	9.0	EA	9.0
604.124	CATCH BASIN TYPE B, 4-FOOT DIAMETER	9.0	EA	9.0
604.45	ADJUSTING CATCH BASIN & DROP INLET	5.0	EA	5.0
604.72	GRATES & FRAMES, TYPE B	5.0	EA	5.0
605.506	6" PERF. CORR. POLYETHYLENE PIPE UNDERDRAIN	600.0	LF	600.0
606.1255	BEAM GUARDRAIL (TERMINAL UNIT TYPE EAGRT, TL2)(STEEL POST)	2.0	EA	2.0
606.18001	31" W-BEAM GUARDRAIL WITH 8" OFFSET BLOCK (STEEL POST)	25.0	LF	25.0
609.811	BITUMINOUS CURB, TYPE B	3,200.0	LF	3200.0
611.811	REMOVE & RESET FIRE HYDRANT	3.0	EA	3.0
611.90001	ADJUSTING WATER GATES AND SHUTOFFS SET BY OTHERS	18.0	EA	18.0
615.0301	TRAFFIC SIGN, TYPE C	50.0	SF	50.0
615.034	RELOCATING TRAFFIC SIGN, TYPE C	10.0	EA	10.0
615.0601	TRAFFIC SIGN, TYPE CC	20.0	SF	20.0
618.6	UNIFORMED OFFICERS	75,000	ALLOW	75000.0
619.1	MAINTENANCE OF TRAFFIC	1	U	1.0
622.55	REMOVE & RESET MONUMENT	21	EA	21.0
628.2	SAWED BITUMINOUS PAVEMENT	1,000	LF	1000.0
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	12,300	LF	12300.0
632.3118	RETROREFLECT. THERMOPLAS. PAVE. MARKING, 18" LINE	92	LF	92.0
645.441	SEDIMENT FILTER LOGS (COMPOST SOCK)	400	LF	400.0
645.531	SILT FENCE	400	LF	400.0
645.533	INLET FILTER BASKET	16	EA	16.0
645.7	STORM WATER POLLUTION PREVENTION PLAN	1	U	1.0
645.72	MONITORING SWPPP & EROSION & SEDIMENT CONTROLS	20	VISIT	20.0



646.31	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	7000	SY	7000.0
653.003	SHRUB 18" - 24" HEIGHT	10	EA	10.0
670.066	REMOVE & RESET MAILBOX	15	EA	15.0
692	MOBILIZATION	1	U	1.0
900	PRECAST HEADWALLS	4	EA	4.0
1010.2	ASPHALT CEMENT ADJUSTMENT (ALLOWANCE)	15000	ALLOW	15000.0

						Item 306.108	Item 306.208	Item 306.110	Item 306.212	Item 306.112	Item 403.11A	Item 403.11B		
AREA Duston	Station from to		Description	length (ft)	avg. width (ft)	Amnt. (sy)	Amnt. (sy)	Amnt. (sy)	Amnt. (sy)	Amnt. (sy)	Binder amnt.(ton)	Wearing amnt.(ton)	Quantity	Notes
	100+10	131+31	Reclaim	3121	26					9016		1328	797	
Bit. Curb				3200	3						160			
Whiteneck				60	30				200		30	18		
Totals (Duston)						0	0	0	9,216	0	1,518	815		

<b>Totals (Duston)</b>	0	0	0	9,216	0	1,518	815
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[illegible]

<b>Totals ()</b>	0	0	0	0	0	0	0
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[illegible]

<b>Totals ()</b>	0	0	0	0	0	0	0
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<b>TOTALS:</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>9216</b>	<b>0</b>	<b>1518</b>	<b>815</b>
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## **SPECIAL PROVISION**

### **SECTION 572.99 RESET CMU OR FIELD STONE RETAINING WALL**

#### **Description**

- 1.1** The work consists of removing and resetting existing CMU decorative walls of various sizes and lengths as indicated in the contract drawings and as directed by the Engineer.
- 1.2** The work consists of removing and resetting existing field stone decorative walls of various sizes and lengths as indicated in the contract drawings and as directed by the Engineer.
- 1.3** The work consists of constructing field stone walls of various sizes and lengths as indicated in the contract drawings and as directed by the Engineer.
- 1.4** The applicable sections of the NHDOT standard specifications shall apply to the work including but not limited to Section 203 – EXCAVATION AND EMBANKMENT, Section 570 – STONE MASONRY and Section 572 – STONE WALL.

#### **Materials**

- 2.1** The existing materials for each wall reset shall be reused. Where needed, new block, stone, rock of the same size, texture, color, manufacturer as the existing materials shall be supplemented to complete the Work.
- 2.2** Materials for construction of new field stone wall shall be ledge removed from the project site. Where ledge rock is not acceptable for use in construction of walls the contractor shall supply angular rock with flat faces suitable for construction of a decorative wall. In general, round rock shall not be acceptable however; the Contractor may provide a submittal to request use of rounded rock only if the end product meets or exceeds aesthetic expectations of a decorative wall as shown on the detail.
- 2.3** Other necessary materials to complete the work shall conform to applicable sections of NHDOT standard specifications.

#### **Construction Requirements**

- 3.1** Construction requirements shall conform to the applicable construction requirements of the NHDOT Standard Specifications for the type of work required.
- 3.2** CMU wall reset shall meet or exceed the existing field conditions and shall be in general conformance with the detail.
- 3.3** All walls shall be constructed complete in place.

#### **Method of Measurement**

- 4.1** Removing and resetting of CMU or Fieldstone wall under this project shall be measured per linear foot of exposed face for each wall removed and reset.



- 4.2 Construction of fieldstone wall under this project shall be measured per linear foot of exposed face for each wall constructed.
- 4.3 Backfill behind wall, supplemental stone, block, rock and other material necessary for the completion of Work under this item shall not be measured for payment but shall be subsidiary to the Construction.

#### **Basis of Payment**

- 5.1 Payment will be made for removing and resetting CMU or Fieldstone walls required under this contract on a linear foot basis. The price for removing and resetting walls includes all labor, equipment, replacement stone/block, supplemental stone/block, backfill and materials necessary for or incidental to the completion of the Work in accordance with the detail to the satisfaction of the Engineer. Any block damaged by the Contractor shall be replaced at no expense to the Owner.

## **SPECIAL PROVISION**

### **SECTION 651.001 – EVERGREEN TREE – 6' – 8' HEIGHT SECTION 652.002 – DECIDUOUS TREE – 2½" – 3" CALIPER SECTION 653.003 – SHRUB – 18" – 24" HEIGHT**

#### **Description**

- 1.1** The work of this Section consists of staking and guying, planting trees and shrubs, guarantee of plants and related items as indicated on the Project Drawings or specified herein.
- 1.2** The applicable sections of the NHDOT standard specifications shall apply to the work.
- 1.3** The species of tree or shrub will be reviewed with the Town and the property owner at the time of construction.

#### **References and Standards**

The following related terms are used herein and shall mean:

1. ASNS: "American Standard for Nursery Stock," ASNS 260.1, latest edition, published by the American Association of Nurserymen, (AAN).
2. SPN: "Standardized Plant Names," latest edition, by the American Joint Committee on Horticultural Nomenclature.
3. AOAC: Association of Official Agricultural Chemists.
4. Pruning Standards: The "Standards for Pruning Shade Trees" of the National Arborist Association, 174 Route 101, Bedford, NH 03102.

#### **Samples and Submittals**

At least 30 days prior to ordering the below listed materials, submit certified testing results and representative samples to the Engineer for selection. No materials shall be ordered or delivered until required samples, certifications, manufacturer's literature and test results have been reviewed by the Engineer. Delivered materials shall closely match the approved samples.

Fertilizer: Submit one sample packet of planting fertilizer

Antidesiccant: Submit manufacturer's literature.

#### **Examination of Conditions**

All areas to be planted, shall be inspected by the Contractor before starting work and any defect such as incorrect grading shall be reported to the Engineer prior to beginning this work.

The Contractor shall be solely responsible for judging the full extent of work requirements involved, including but not limited to the potential need for storing and maintaining plants temporarily and re-handling plants prior to final installation.

### **Materials**

The Contractor shall furnish all plants shown on the Project Drawings as specified, and in quantities listed. No substitutions will be permitted. All plants shall be nursery grown.

Plants shall be in accordance with the ASNS Standards of the American Association of Nurserymen (AAN) as a minimum requirement for acceptance. All plants shall be typical of their species or variety and have a normal habit of growth. All plants shall be legibly tagged with the proper name. Only plant stock grown within hardiness Zones 1 through 5, as established by the Arnold Arboretum, Jamaica Plain, Massachusetts, will be accepted. The Contractor's suppliers must certify in writing that the stock has actually been grown under Zone 5 or harder conditions. Plants not so certified will not be accepted.

The root system of each plant shall be well provided with fibrous roots. All parts shall be moist and show active green cambium when cut. They shall be sound, healthy, and vigorous, well-branched and densely foliated when in leaf. They shall be free of disease, insect pests, eggs or larvae.

All plants must be moved with the root systems as solid units with balls of earth firmly wrapped with untreated 8 ounce burlap, firmly held in place by a stout cord or wire in containers of a size as specified or of adequate size to allow root development for the plant size as per ASNS requirements. Plants prepared with plastic or other non-biodegradable wrappings will not be accepted. The diameter and depth of the balls of earth on balled and burlapped plants must be sufficient to encompass the fibrous root feeding system necessary for the healthy development of the plant. No plant will be accepted when the ball of earth surrounding its roots has been badly cracked or broken prior to, or during the process of planting or after the burlap, staves, ropes, container or platform required in connection with its transplanting have been removed. The plants and balls shall remain intact during all operation. All balled and burlapped plants that cannot be planted at once must be heeled in by setting in the ground and covering the balls with soil and watering.

The caliper of the trees shall be not less than the minimum size as required by ASNS standards based upon the height of the trees (measured from the crown of the roots to the tip of the top branch) as shown on the Project Drawings. Take caliper measurement for deciduous trees 6 inches above ground level up to and including 4 inch caliper size and 12 inches above ground for larger sizes. Evergreen trees shall be of height designated on Project Drawings with spread in proportion to height, as designated in the ASNS Standards, and shall be well-branched to the ground. The trunk of each tree shall be a single trunk growing from a single un-mutilated crown of roots. No part of the trunk shall be conspicuously crooked as compared with normal trees of the same variety. The trunk shall be free from sunscald, frost cracks, or wounds resulting from abrasions, fire or other causes. No pruning wounds shall be present having a diameter exceeding 2 inches and such wounds must show vigorous scar tissue on all edges. Plants shall not be pruned prior to delivery to the site.

Shrubs shall meet the requirements for spread or height stated on the Project Drawings. The measurements for height shall be taken from the ground level to the average height of



the shrub and not to the longest branch. Single stemmed or thin plants will not be accepted. The side branches must be generous, well-twiggged, and the plant as a whole well-branched to the ground. The plants must be in a moist vigorous condition, free from dead wood, bruises or other root or branch injuries.

Container grown stock shall have been grown in a container long enough for the root system to have developed sufficiently to hold its soil together, firm and whole. No plants shall be loose in the container. No container-grown plants shall be pot bound.

Plants delivered by truck and plants requiring storage on site shall be properly wrapped and covered to prevent wind-drying and desiccation of branches, leaves or buds; plant balls shall be firmly bound, unbroken, reasonably moist to indicate watering prior to delivery and during storage and tree trunks shall be free from fresh scars and damage in handling. No trees with double-leaders or twin-heads will be acceptable without the written approval of the Engineer. No plant material from cold storage will be accepted.

### **Planting Fertilizer**

Fertilizer shall be provided for each plant through the use of slow-release fertilizer packets which are designed and certified by the manufacturer to provide controlled release of fertilizer over a minimum 3 year period. Each packet shall consist of 4 ounces of water soluble fertilizer with a minimum guaranteed analysis of available elements as follows:

16% Nitrogen, 8% Phosphoric Acid and 16% Potash

Bone meal shall be fine ground, steam-cooked, packing house bone with a minimum analysis of 23 percent phosphoric acid and 1.0 percent of nitrogen.

### **Planting Soil Mix**

1. Planting soil mix shall be approved loam which has been pH adjusted according to particular planting applications and improved through the addition of organic matter as directed below. Planting loam shall conform to the following pH levels:
  - a. For ericaceous plants and broad-leaved evergreens requiring an acid soil, planting loam shall have a true pH of 4.5 to 5.5. If it does not, it shall be amended by the Contractor to the proper pH range by mixing with sulphur as specified herein.
  - b. Planting loam for general planting of non-acid loving plants shall have a true pH value of 6.0 to 6.5. If it does not, it shall be amended by the Contractor to the proper pH range by mixing with dolomitic limestone as specified herein.
  - c. The amount of either sulphur or limestone required to adjust the planting loam to the proper pH range (above) shall be approved by the Design Engineer on the basis of soil tests as specified herein. It is not possible to safely add more than two hundred pounds (200 lbs.) of limestone/one thousand (1,000) square feet of loam, incorporated into the soil, or fifty pounds (50 lbs.) of limestone/one thousand (1,000) square feet of loam, surface application, within a single season. Therefore loam shall have a starting pH of no lower than 4.2 for ericaceous

plants and broad-leaved evergreens, and a starting pH of no lower than 5.0 for general planting of non-acid loving plants.

2. Planting soil mix shall consist of pH adjusted loam which has been thoroughly premixed with organic material in the proportions of one (1) part organic matter (leaf compost or other commercial compost) with five (5) parts of approved loam.

### **Antidesiccants**

Antidesiccants shall be emulsions or other materials which will provide a protective film over plant surfaces permeable enough to permit transpiration and specifically manufactured for that purpose. Manufacturer of antidesiccant shall be subject to the Engineer's approval. Antidesiccant shall be delivered in containers of the manufacturer and shall be mixed according to the manufacturer's instructions.

### **Water**

The Contractor shall be responsible to furnish his own supply of water to the site at no extra cost if municipal water is not available at the site at the time of planting. All work injured or damaged due to the lack of water, or due to the use of too much water, shall be the Contractor's responsibility to correct. Water shall be free from impurities injurious to vegetation.

Watering schedule:

First Week: The Contractor shall provide all labor and arrange for all watering necessary for all plantings. In the absence of an adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of at least two inches.

Second and Subsequent Weeks: The Contractor shall water the plantings as required to maintain adequate moisture, in the upper two inches of soil, necessary for the promotion of deep root growth.

Watering shall be done in a manner which will provide uniform coverage, prevent erosion due to application of excessive quantities, and prevent damage to the finished surface by the watering equipment.

### **Chemicals and Insecticides**

Provide chemicals and insecticides as needed for fungus or pest control. All chemicals and insecticides shall be approved by the New Hampshire Department of Environmental Protection for the intended uses and application rates.

### **Guying and Anchoring Materials**

Hose to encase wires shall be two-ply reinforced rubber garden hose not less than one-half inch inside diameter. Color shall be black. The Contractor may choose to substitute 2 inch wide nylon webbing for the rubber hose. The webbing must be at least 4 inches longer than the circumference of the tree and have brass grommet holes at each end for cable attachment.

Cable and Fittings: Cable shall be 13 gauge, 7 strand, and galvanized steel cable. Turnbuckles shall be of zinc-plated steel of size and gauge to provide tensile strength equal to that of the cable. Turnbuckle opening shall be a minimum of 3 inches. Cable clamps shall be malleable compression sleeves of zinc plated copper. Sleeves shall be of double barreled configuration for looped connection and sized to match the steel guy or anchor cable. Warning flags for evergreen tree guy wires shall be yellow plastic surveyor's flagging, 1 inch wide and 24 inches long

Stakes for supporting trees shall be no.1, 2 inch by 2 inch nominal, Spruce or Fir stakes, 10 feet in length. Stakes shall be painted with two coats of brown oil alkyd-based stain, or matching equal.

Anchors for evergreen tree guys shall be no. 2, 2 inch by 2 inch nominal, Fir stakes treated with a clear penetrating wood preservative.

## **Construction Requirements**

### **Guying**

All trees shown on the Project Drawings to be guyed shall be firmly staked, guyed or anchored at the time of planting. Stakes shall be of even height, evenly spaced around the tree, plumb, neat in appearance and shall not injure plant rootball. Guy cables shall be secured to the tree by passing through an approved hose to prevent injury to the trees or securely fastened to an approved nylon webbing using specified compression sleeves.

### **Planting**

Furnishing and planting of plant material includes the digging of the pits and plant beds, provision of soil additives required to adjust for pH requirements of specific plants, furnishing the plants as specified as well as the labor of planting, fertilizing, mulching, guying, and maintenance.

The Contractor shall locate plant material sources and ensure that plants are shipped in timely fashion for installation.

The Contractor shall locate all underground utilities within 10 feet of the proposed planting pits and notify the Engineer of any conflicts prior to digging plant pits.

Location for all trees and shrubs and outlines for groundcover and bulb planting areas shall be staked on the ground by the Contractor for approval by the Engineer before any plant pits or plant beds are dug.

### **Seasons for Planting**

Spring: Deciduous materials - March 21 through May 1

Evergreen materials - April 15 through June 1

Fall: Deciduous materials - Oct. 1 through Dec. 1

Evergreen materials - Aug. 15 through October 15



Certain trees, as shown on the Project Drawings, shall only be planted in the spring. The Contractor shall arrange project schedule as necessary to allow for spring planting of these trees. Substitutions of other plants for the trees specified in order to perform fall planting will not be accepted. The Contractor assumes all responsibility for planting materials at times other than those specified.

### **Planting Guide**

1. Loam fill shall be installed as per requirements of the standard specifications.
2. At least one month prior to the expected planting date, the Contractor shall request that the Engineer provide a representative to select and tag stock to be planted under this Section. The Contractor shall pay for the transportation, subsistence and overnight accommodations, if necessary, for the Engineer's representative during the period of time required to select and tag the plant material. Time spent to locate plant material shall be paid for by the Contractor only if the Engineer is sent to a site where materials were not satisfactory to the Engineer or cannot be located.
3. A representative of the Contractor shall accompany the Engineer on all plant material selection field trips, unless otherwise ordered by the Engineer.
4. All trees and a representative sample of each shrub species shown on the Project Drawings shall be selected by the Engineer at the place of growth prior to digging for conformity to specification requirements as to quality, size, and variety. Such approval shall not impair the right of inspection and rejection upon delivery at the site or during the progress of the work. Cost of replacement of materials rejected by the Engineer at the site shall be borne by the Contractor.
5. All plants for the project shall be individually tagged prior to digging with the Engineer's seals. No plants shall be accepted for delivery to the site without such seals.
6. Tree trunks shall be protected during shipping by a heavy walled cardboard sleeve or other suitable material, then unwrapped for inspection by Engineer after installation.
7. All trees and shrubs shall be planted within 5 working days of arrival on site or shall be rejected by the Engineer. Container grown shrubs stored on site shall be shaded from direct sunlight at all times and shall not be stored on paved surfaces.
8. Plant pits shall be excavated as shown on Project Drawings. Holes for trees and planting mix backfill shall be as indicated on the Project Drawings and at least 1 foot greater in diameter than the ball and 1 foot deeper than the ball. Shrub planting beds shall be excavated 2 feet below proposed finish grade and shall extend a minimum of 1 foot beyond the rootball of shrubs placed at the edge of the planting bed.
9. Loosen the perimeter roots on the rootball of all container-grown shrubs, groundcovers and perennials prior to planting, as directed by the Engineer.
10. All plant roots and earth balls must be damp and thoroughly protected from sun and wind from the beginning of the digging operation, during transportation and at the site until the final planting. Remove container plants from containers prior to planting. Trees and shrubs shall be placed in the center of plant pits, plumb with the crown of their roots

exposed and located above the surrounding finish grade. After completion of planting installations, remove rope, burlap and wire baskets from only the top 1/3 of the root balls. Loam shall be backfilled in layers of not more than 6 inches and each layer watered sufficiently to settle before the next layer is put in place. Enough loam shall be used to bring the surface to finished grade when settled. A saucer shall be formed around each plant at a depth of 6 inches for trees and 4 inches for shrubs.

11. At the time of planting, install fertilizer packets at a depth of 6 to 8 inches equally spaced around the plant as it is being backfilled. Packets shall be placed approximately 3 inches away from the plant roots or plant ball. Packets shall not be cut, ripped or damaged. If it becomes necessary to remove and replace dead or unhealthy plants, any damaged or broken packets shall be replaced with new packets. The application rates for fertilizer packets shall be as follows:

<u>Type of Plant</u>	<u>Rate</u>
Deciduous Shade Trees	One packet for each inch of caliper
Evergreen / Small Flowering Trees	One packet for each 18 inches of height
Shrubs	One packet for each 12 inches of height or spread

12. All plants shall be watered immediately following planting as necessary to thoroughly moisten rootball and plant pit loam and thereafter shall be inspected frequently for watering needs and watered, as required, to provide adequate moisture in the planting pit. The Contractor shall inspect tree pits 24 hours after initial watering to confirm that they are draining properly. If surface water or excessively saturated plant pit soils exist, the Contractor shall immediately notify the Engineer. The Engineer shall recommend remedial measures based upon site conditions which shall be paid for as an extra to the contract.

13. Pruning:

- a. Trees and shrubs shall be pruned following planting in accordance with the American Nurserymen's Association Standards for Class I, fine pruning, to preserve the natural character of the plant, as directed by the Engineer.
- b. Tree pruning as required, shall be undertaken to the full height of affected trees.
- c. All dead wood or suckers and all broken or badly bruised branches shall be removed. Never cut a leader.

14. Antidesiccant shall be applied to all evergreen and other plants in the late fall as directed by the Engineer.

15. All trees shall be firmly guyed or anchored at the time of planting, unless otherwise approved or directed by the Engineer. Cables used for guying shall be secured to the tree by passing through an approved hose or nylon webbing to prevent chafing and injury to the trees. All cable ends at stakes, webbing, deadmen, turnbuckles, hose or anchor connections shall be formed with a looped connection secured with compressed malleable fittings as specified.

## **Plant Maintenance**

The Contractor shall maintain all new plantings as indicated below. Maintenance shall begin immediately after each plant is planted and shall continue for a minimum of one year following the completion of all planting installations, or until the final acceptance of all planting work, whichever is a longer period of time.

Maintenance of new plantings shall consist of keeping the plants in a healthy growing condition and shall include but is not limited to watering, weeding, cultivating, pruning, re-mulching, tightening and repairing of guys, removal of dead material, resetting plants to proper grades or upright position, and maintaining the planting saucer.

1. Plants shall be watered as indicated above.
2. Planting beds shall be kept free of weeds, and mulch shall be maintained at the required depth. Beds and individual pits shall be neat in appearance with clearly defined edges and maintained to the designed layout.
3. Plants that die during the maintenance period shall be removed by the Contractor within one week of notification and replaced during that growing season.
4. Guy wires and anchoring cables shall be tightened and repaired weekly.

Work of pruning, fertilizing, spraying, and similar activities shall be undertaken only by certified arborists and chemical applicators, as pertinent to the work being performed.

During the maintenance period, any decline in the condition of existing trees and new plantings shall require the Contractor to take immediate action to identify potential problems and undertake corrective measures. If required, the Contractor shall engage professional arborists and/or horticulturalists to inspect plant materials and to identify problems and recommend corrective procedures. The Engineer shall be immediately advised of such actions. Inspection and recommendation reports shall be submitted to the Engineer.

## **Clean Up**

Absolutely no debris may be left on the site. Repair any damage to site or structures to restore them to their original condition, as directed, at no cost to the Department.

## **Acceptable Standards**

### **General**

1. The Engineer will review the work upon the request of the Contractor. Request for review shall be received by the Engineer at least ten days before the anticipated date of review.
2. The review dates shall follow the minimum maintenance periods called out for respective work items.
3. Upon acceptance of the work, the Engineer shall issue a written Certificate of Acceptance notice to the Contractor.

## **Planting**

1. At the time of review, if the plant materials and workmanship are acceptable by the Engineer, the date of the review shall establish the end of the maintenance period and the commencement of the required guarantee period for planting work.
2. At the time of review or if, in the Engineer's opinion plant materials and/or workmanship is deficient, acceptance will not be granted, and the Contractor's responsibility for deficiencies are corrected. All dead and unsatisfactory plants shall be removed promptly from the project. Replacement plants shall conform in all respects to the Specifications for the original plants and shall be planted in the same manner.

## **Plant Material Replacements**

All shrubs and trees shall be reviewed by the Engineer two years after acceptance and shall be alive and in satisfactory growth at the end of that time.

Each plant shall show at least 75 percent healthy growth and shall have the natural character of a plant of its species as determined by the Engineer. Plants found to be unacceptable shall be removed promptly from the site and replaced immediately or during the next normal planting season, as permitted by the specifications, until the replaced plants live for two full years. A final replacement review will be made after the replacement plantings have lived through one full year.

All replacements shall be plants of the species, variety and size specified on the Project Drawings. The cost shall be borne by the Contractor, except for possible replacements due to vandalism or neglect on the part of others.

## **Method of Measurement**

- 4.1 Trees and shrubs under this project shall be measured per each tree or shrubs installed.

## **Basis of Payment**

- 5.1 Payment will be made for trees and shrubs required under this contract on an each basis. The price for trees and shrubs shall include each item being installed complete-in-place including all excavation, plants, planting mix, tree stakes, guys, mulch and maintenance which shall include all labor, equipment, materials, tools, incidental work, necessary items, construction methods and guarantee for the completion of the work to the satisfaction of the Engineer.



02/08/16

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SSD: 09/01/10, 10/05/10, 12/01/10, 02/08/11, 03/07/11, 04/21/11, 09/06/11, 10/02/11, 01/15/12, 11/07/12, 12/05/12, 01/10/13, 04/05/13, 09/14/13, 10/16/13, 11/13/13, 02/04/14, 03/11/14, 04/14/14, 07/07/14, 09/09/14, 12/16/14, 01/06/15, 01/16/15, 01/23/15, 02/24/15, 03/06/15, 04/08/15, 05/14/15, 05/21/15, 06/16/15, 09/23/15, 12/14/15, 01/15/16, 01/25/16

## **SPECIAL ATTENTION**

### **THIS PROJECT IS TO BE BID AND CONSTRUCTED UNDER THE 2010 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION**

### **NOTICE OF SUPPLEMENTAL SPECIFICATIONS**

The following table is a list of all of the Supplemental Specifications that have been adopted as additions or revisions to the *Standard Specifications for Road and Bridge Construction*, **August 2010** Edition as of the date of this Proposal. The Bidder is responsible to examine each item to determine its effect, if any, upon the Contract.

**Note:** Due to the limited scope of some projects, not all Supplemental Specifications will be included in all Proposals. All Supplemental Specifications are available on-line: [www.nh.gov/dot/org/projectdevelopment/highwaydesign/specifications/](http://www.nh.gov/dot/org/projectdevelopment/highwaydesign/specifications/).

Section	Description	Revision	Last Revision Date	Current Revision Date
<b><i>DIVISION 100</i></b>				
101	Definitions and Terms	Incorporates Electronic Bidding Terms		04/07/15
102	Bidding Requirements and Conditions	Incorporates Electronic Bidding into the Specifications		04/07/15
104.04	Scope of Work	Clarifies what materials may be re-used or mined		01/23/15
104.07	Railway-Highway Provisions	Changes Railroad Flagging from a Pay Item to a Force Account through DOT		01/14/15
107.01	Laws to be Observed	Bulletin Board Requirements	06/16/15	01/15/16
107.01 (7 <sup>th</sup> ¶)	Legal Relations and Responsibility to Public	Revises wording pertaining to discharge and spillage into water		01/23/15
108.06	Methods and Equipment	Highlights Contractor's responsibility to prevent runoff of polluting materials		01/23/15
108.09	Failure to Complete on Time	Liquidated Damages Chart	10/05/10	04/14/14
109.04	Differing Site Conditions, Changes and Extra Work	Regional Adjustment Factor	09/01/10	1/06/12
109.04.4.4	Equipment and Plant	Rental Equipment Mark-up		11/07/12
109.09	Payments to Subcontractors	Prompt Payment		09/06/11
109.11	Measurement and Payment	Final Pay Quantity		11/07/12
<b><i>DIVISION 200</i></b>				
202	Filling Abandoned Pipes	3.7.1.1 & 5.9 – Requires pumping of flowable fill		09/09/15

203	Blasting	3.1 & 3.2 are reorganized; best management practices incorporated		04/07/15
211	Vibration Monitoring	References to Section 203 are updated; survey requirements are revised		04/07/15
214	Fine Grading	3.1 – Amends the tolerance for specific slopes prior to paving to 0.2%		01/10/13
<b><i>DIVISION 300</i></b>				
304	Shoulder Leveling	2.6 – Specifies the material used for a shoulder leveling product.		04/07/15
304	Aggregate Base Course	3.1.4 – Specifies what recycled materials can be used as an aggregate base course		01/23/15
306	Reclaimed Stabilized Base	3.2 – Specifies what is to be done when stone is included or ordered 2.1.2 – Refers to Table 1E in 703 4.2 – Additional pass not measured 5.2 – Additional pass subsidiary	01/23/15	05/21/15
<b><i>DIVISION 400</i></b>				
401	Recycled Asphalt Shingles; TRB	Amends 1.2 & 2.10 – Disallows use of Recycled Asphalt Shingles in Asphalt Amends 2.4.3 – Amends use of Total Reclaimed Binder (TRB)		10/15/14
401	Recycled Oil in Asphalt	Amends 2.2.1 – Disallows use of used oil in Asphalt Adds 2.2.3.1 – Disallows use of used oil in Asphalt	09/08/14	05/14/15
401	Binder Failure Penalty	Adds 2.2.1.1 – Assesses a penalty for non-compliant asphalt cement.		12/14/15
401	Job Mix-General	2.5.1 - Revises ESAL/Minimum Binder Content Criteria and adds more sizes into Table 1 2.5.1.1 – Specifies that all 25mm base course mixes be designed using 50 gyration.	01/10/13	01/23/15
<del>401</del>	<del>Asphalt Modifiers</del>	<del>2.11 – Adds QC/QA Specifications to High-Strength Mix Quantities over 2,000 Tons</del>		<del>01/10/13</del>
<b>NOTE: THIS SUPPLEMENTAL WAS REPEALED ON 12/14/2015</b>				
401	Asphalt Modifiers/MSCR Test	Amends 2.11 – Removes the use of AASHTO M 332 (MSCR), and improves general clarity of section.	01/23/15	12/14/15
401	Warm Mix Asphalt	2.11.2 – Allows the use of WMA 3.4.11, 3.6.3.1 & 3.10.7.2 – Amends min delivery temperature to 260° F		01/23/15

401	Joints	<p>2.12.1 - Adds Pavement Joint Adhesive Properties</p> <p>3.13.4 – Assures full head of Material for Permanent Transverse Joints</p> <p>3.13.5 - Removes Requirement for Hot Air Lance, Adds Requirements for Melting Kettle, and Allows Echelon Paving In Lieu of Pavement Joint Adhesive, Defines Joint Adhesive for Bridge Base</p> <p>3.13.8 – Defines Echelon paving; Adds Items for Pavement Joint Adhesive for Bridge Base and Echelon Paving</p>	01/10/13	06/16/15
401	Placing	<p>Adds 3.10.4 - Sets limit of maximum compaction at 5 inches.</p> <p>3.10.7.2 – Adds reference to WMA Supplemental</p> <p>3.10.7.4 – Requires the use of WMA during colder months</p>	01/23/15	01/22/16
401	Pavers	<p>Removes 3.11.3 – Performance Requirements to 3.11.1.1 for both QC/QA and Method Work</p> <p>Renames 3.11.1.1.1 – MTV Requirements to 3.11.3 and Assures Ability to Re-mix and Movable Discharge Conveyors for MTVs</p> <p>3.11.1.2 – Specifies use of MTVs for 600 tons of asphalt</p>	12/14/11	01/23/15
401	Roller Train/Density Cores/Density Penalty	<p>3.12.1 – Clarifies the equipment needed for a roller train</p> <p>3.12.2.4 (formerly 3.12.1.4) - Requires Informational Density Cores for Shoulder Overlays and Lessens Density Penalty for Overlays Not Previously Leveled; Specifies 91% as Minimum Compaction Requirement</p> <p>3.12.2.4.1 – Requires less cores on small quantity jobs</p>	04/07/15	02/04/16
401	QC/QA Lot Size	3.17.2.2 – Amends QC/QA Lot Sizes		09/10/15
401	Acceptance Testing - Air Voids	3.17.3.2 - Revises AASHTO reference to ASTM reference, Requires Information Shoulder Cores, Eliminates Upper Limit of Core Thickness, changes Lower Limit to 2.5% Instead of Previous 3.0%	01/10/13	02/04/16
401	Disputed Cores	3.17.3.2.2 – Amends number of cores required in a dispute to be three		01/23/15
401	Pavement Thickness	3.17.3.3 – Clarifies what should and should not be measured for thickness	01/23/15	02/24/15

401	Cross Slope Tolerance	3.17.3.5.1 – Clarifies how Cross Slope measurements will take place 3.17.3.5.2 – Amends cross slope tolerance to be 0.2% 3.17.3.6.3 – Requires Remeasuring and Retesting Requests to be in writing to the Engineer	01/23/15	06/16/15
401/403	Bridge Base Pavement	Delete 401.4.3 & 403.5.3 Amend Pay Item to Remove Final Pay from Bridge Base Pavement		03/27/14
410	Bituminous Surface Treatment	2.1 - Identifies Asphalt Emulsion Grades & Changes last line in table to °C, as well as changes the CRS-1 and CRS-1h temperature values 3.4.1.1 – Updated to require a span of application rates of tack coat 5.3 – Updated reference due to 401.3.10 revision Method of Measurement, Basis of Payment, and Pay Items and Units were revised to include pay item for Asphalt Emulsion for tack Coat 06/16/15 revision moved Asphalt Emulsion for Tack Coat table to Section 702	05/14/15	06/16/15
411	Surface Treatment	2.1.1 – Asphalt binder PG grade will be called for via Special Provision 2.1.2 – Removes Type G mix from use 3.4.4 – Amends minimum delivery temperature to 260° F (except for specified circumstances) 3.4.8 – Specifies 8' paver for Drag Shim	01/23/15	02/24/15
417	Cold Planing Bituminous Surfaces	3.1.1 & 3.1.3 – Specifies acceptable equipment for planing bituminous surfaces		01/23/15
<b><i>DIVISION 500</i></b>				
<del>511</del>	<del>Preparation for Concrete Bridge Deck Repairs</del>	<del>Adds the Application of Anti-corrosion Coating to Uncoated Reinforcing Steel in Patch Areas</del>		<del>01/10/13</del>
<b>NOTE: THIS SUPPLEMENTAL WAS REPEALED ON 05/14/2015</b>				
520	Portland Cement Concrete	3.1.3.2.1(k) – Performance Requirements (QC/QA) – Requires Ceramic or Porcelain Dishes Replaces 2.8 - Identifies bearing strip material and bonding agent Adds 3.6.3.3 – Specs bearing strip Amends 2.3.3.2 – Updates corrosion inhibitors	03/27/14	01/14/15



520	Excess Cover and Grout	2.9 – Removes Concrete Bonding Agent 2.9.1 – removes bridge deck overlays 5.9.5.2 – addresses negative pay adjustment for excess cover over Rail Support Slabs	01/23/15
520	Portland Cement Concrete	Specifies the Surface Resistivity Test as a replacement for Rapid Chloride Penetration Test	01/23/15
520	Portland Cement Concrete	3.11.2 – Revises Concrete Loading Requirements while Curing.	09/10/15
528	Prestressed Concrete Members	Specifies the Surface Resistivity Test as a replacement for the Rapid Chloride Penetration Test	01/23/15
538	Barrier Membrane	3.1.1 & 3.3.1.4 – Adds Requirement of Digital Ambient Temperature, Dew Point, and Infrared Surface Temperature Instruments 3.3.5 – Specifies Laydown Temperature of Pavement Overlays	01/23/13
559	Asphaltic Plug Expansion Joints, Asphaltic Plug Crack Control	New Section	10/16/13
560	Prefabricated Compression Seal Expansion Joint	Replaces Section 560 – Prefabricated Compression Seal Expansion Joint	10/16/13
561	Prefabricated Expansion Joint	Replaces Section 561 – Prefabricated Expansion Joint	10/16/13
563	Bridge Railing	Removes Final Pay (F) Designation from Items	11/07/12
566	Elastomeric Joint Seal	Deletes Section 566	01/23/15
582	Slope Paving	Removes Bed of Sand Requirement	11/25/14
583	Riprap	Updates Riprap Spec; creates new classes, more in line with HEC No. 23.	12/14/15
585	Stone Fill	Amends 1.1 – expands on the intended use of the new stone fill items.	12/14/15
586	Placing Excavated Rock	Deletes Section 586	12/14/15
587	Keyed Stone Fill	Deletes Section 587	12/14/15
591	Structural Plate Pipes, Pipe-Arches, and Arches	3.1.2 – Expands LRFD Bridge Construction Specifications to include assembly and installation of structural plate structures.	01/23/15
593	Geotextile	Amends paragraphs 2.1 and replaces 2.3.2 to present NTPEP audit program and update test methods	03/27/14

***DIVISION 600***

603	Culverts and Storm Drains	Revises 1.1 and 5.1 - Stipulates sawed pavement required for this work shall be subsidiary Adds 3.1.10 – Conformance to 628.3.4 Amends 2.9.1 – PVC Manufacturers' Participation in NTPEP Revises structure of Materials section and adds new requirements for pipe manufacturers. Requires the Engineer to be made aware of any pipe deformation quickly	06/30/14	02/24/15
604	Catch Basins, Drop Inlets and Manholes	Revises 1.1 and 5.1 - Stipulates sawed pavement required for this work shall be subsidiary Adds 3.1.3 – Conformance to 628.3.4		04/14/14
604	<del>Catch Basins, Drop Inlets and Manholes</del>	<del>Adds new pay item 604.0002 – Clean Drainage Structure</del>		05/14/15
<b>NOTE: THIS SUPPLEMENTAL WAS REPEALED ON 12/14/2015</b>				
605	Underdrain	605.2.3 – PVC Manufactures' Participation in NTPEP	12/05/12	06/30/14
606	Guardrail	Updates Retroreflective Sheeting to current AASHTO standards		01/23/15
606	Guardrail	Amends 3.3 to require Contractors to provide detail sheets and installation plans to the Engineer.		01/14/15
608	Detectable Warning Devices	Revises Description, Equipment, and Construction Requirements sections		06/30/14
614	Electrical Conduit	Revises 1.1 and 5.1 - Stipulates sawed pavement required for work shall be subsidiary Adds 3.1.3 – Conformance to 628.3.4		04/14/14
618	Training Requirements for Uniformed Officers and Flaggers	Deletes and Adds revised Description, Equipment, and Construction Requirements sections 2.1 – Specifies blue lights of officers' vehicles having 360° visibility	01/04/12	01/23/15
619	Trailer Mounted Speed Signs	2.1.3 & 2.1.3.1 – Updates Retroreflective Sheeting to current AASHTO standards 3.2.3.1 – Revises how the Contractor gets approval		01/23/15
621/622	621 - Delineators 622 - Markers and Bounds	621 – AASHTO Update & Required Documentation; specifies posts; updates colors 622 – Required Documentation	04/03/14	09/08/14

624	Railroad Protection	Removes Railroad Protection as a Pay Item and updates reference to 104.07		01/14/15
628	Sawed Pavement	Replaces 5.2 and Adds 4.2 - Stipulates sawed pavements requirements Adds 5.3 – When payment is under 628.3		04/14/14
632	Retroreflective Pavement Markings	Adds 2.2.1 – Levels of Arsenic and Lead in Glass Beads Deletes 632.3.2.8.1 & 632.3.2.8.2	03/07/11	11/07/12
644	Grass Seed – Slope Seed (WF) Type 45 Mix	Amends 2.3		10/02/11
645	Erosion Control	3.2.1.2 – Clarifies ambiguous CESSWI language 3.1.7 – Amends Requirement for Permanent Stabilization from 14 Days to 3 Days Amends 4.6.1, 4.6.1.1, and 5.6 regarding SWPPP and SWPPP monitoring measurement and payment	01/24/14	01/23/15
645	Erosion Control	Clarifies language in the spec to be more in line with NPDES		03/06/15
698*	Field Facilities (Field Office Equipment)	Updates Field Offices and Required Equipment by Replacing Section 698	01/15/12	01/06/15
<b><i>DIVISION 700</i></b>				
702	Bituminous Materials	Combines the Anionic tables to include both English and Metric units, adds a Cationic Asphalt Emulsion table which incorporates the information from 410.2.1 – Asphalt Emulsion for Tack Coat		06/16/15
718	Retroreflective Sheeting	Updates for current ASTM Specifications and Removal of Certain Film Requirements	09/04/13	11/06/13

\* Supplemental will not be included if there is no Field Office item in the Contract.

03/21/18

SSD: 03/01/16, 06/10/16, 6/11/16, 06/27/16, 08/03/16, 10/31/16, 11/28/16, 06/19/17, 11/30/17

Page 1 of 3

**SPECIAL ATTENTION****ERRATA SHEET**

The following table is a list of corrections to the 2016 *Standard Specifications for Road and Bridge Construction*, as of the date of this Proposal.

Section	Description	Correction	Date
<b><i>DIVISION 100</i></b>			
104.03	Maintenance of Traffic	Amend 'winter work suspensions' in 104.03 to read 'Winter Suspension'.	06/07/07
<b><i>DIVISION 200</i></b>			
<b><i>DIVISION 300</i></b>			
<b><i>DIVISION 400</i></b>			
<b><i>DIVISION 500</i></b>			
		Insert the following footnotes under Table 520-1A:	
		<sup>1</sup> See 3.1.6 TESTING	
		<sup>2</sup> For mixes containing fly-ash, silica fume, slag, or any other pozzolanic or cementitious material, the water/cement ratio of the concrete mix shall be based on the water cementitious (cement + pozzolanic or cementitious material) ratio of the mix. This water to cementitious ratio shall not exceed those listed in Table 1A. The maximum water/cement ratios listed for Concrete Class B and T are for design purposes only.	
		<sup>3</sup> Deck Overlays.	
520	Classes of Concrete	<sup>4</sup> <u>Maximum</u> 84 day Compressive Strength for Flowable Fill, Excavatable shall not exceed 200 psi.	06/11/16
		<sup>5</sup> These are recommended values that may be used as a starting point for a mix design that has shown ability to meet the requirements. The amount of cement shall be adjusted and fly-ash or ground granulated blast furnace slag shall be used provided the mix design meets the minimum and does not exceed the maximum compressive strength in accordance with 2.11.1.	
		<sup>6</sup> Target values shown are for mix design approval only and are not intended for use as quality control or quality assurance requirements.	



Section	Description	Correction	Date
520	Classes of Concrete – Performance Requirements (QC/QA)	Amend the title of <i>Table 420-1B - Class of Concrete – Performance Requirements (QC/QA)</i> to <i>Table 520-1B - Class of Concrete – Performance Requirements (QC/QA)</i>	11/28/16
528	Shear Key Grout for Butted Beams	Amend 528.2.9.1 to read: <i>Grout for shear keys shall be an approved grout as listed in Section 528A of the Qualified Products List.</i>  Amend 528.2.9.2 to read: <i>For testing, 3 neat 2” cubes shall be molded and cured in accordance with AASHTO T 106 (ASTM C 109). The average compressive strength of the 3 cubes at 7 days shall be a minimum of 6000 psi.</i>	06/10/16
528	Installation of Deck Panels	Replace last sentence of 528.3.22.6.4 to read: <i>If leveling screws are used, they shall be completely removed and the holes filled with grout listed in Section 528A of the Qualified Products List prior to placement of deck concrete.</i>	06/10/16
550	PTFE Surfaces for Bearings	Amend the first sentence of 550.2.10 to read: <i>PTFE for use in expansion bearing assemblies shall be 100 percent virgin (unfilled) <b>polytetrafluoroethylene</b> polymer...</i>	08/03/16
550	Anchor Rods	Amend 550.3.15.4.1 to read: <i>Anchor rods shall be set in one of the following materials:</i> <i>(a) Non-shrinking, non-ferrous, cement-base grout listed in Section 550A of the Qualified Products List. This grout shall be used only when both the temperature of the masonry and the ambient temperature are kept at 40 °F or above until the grout has cured.</i> <i>(b) Sulfur.</i>  Amend the first sentence of 550.3.15.4.2 to read: <i>Non-shrinking, non-ferrous, cement base grout shall be a product as included in Section 550A of the Qualified Products List.</i>	06/10/16
563	Bridge Rail	Amend 4.1 to read: <i>Bridge rail, of the type specified, will be measured by the linear foot to the nearest tenth of a foot.</i>	06/27/16
<b><i>DIVISION 600</i></b>			
606	Handrail	Amend 606.2.8.2 to read: <i>Grout for anchoring the pipe posts shall be High Strength, Impact Resistant, Non-shrink Grout as included in Section 528A of the Qualified Products List.</i>	06/10/16

Section	Description	Correction	Date
606	Temporary Impact Attenuators	Amend in 606.2.10.2 the reference to 2.12.4 to 2.10.4.	11/28/16
	Repair of Hardened Concrete	Amend in 606.3.7.12.A the reference to <i>Fast Set Non-shrink Patching Mortar</i> to <b><i>Rapid-Hardening Patching Material</i></b> .	03/21/18
609	Curbing	Amend the 2 <sup>nd</sup> sentence of 609.2.5 to read: <i>The non-shrink, non-metallic grout shall be a product as included in Section 550A of the Qualified Products List.</i>	06/10/16
609	Curb anchors	Amend 609.3.1.5.1 to read: <i>Curb anchors shall be set and grouted using non-shrink, non-metallic grout as shown on the plans.</i>	06/10/16
621	Delineators	Add the following to the end of 621.3.1.3: <i>Grout shall be as listed in Section 550A of the Qualified Products List or as directed by the Engineer.</i>	06/10/16
632	Pavement Markings	Amend the AASHTO reference in 3.2.3.1 to read: <b><i>AASHTO M248 Type F</i></b>	
<b><i>DIVISION 700</i></b>			
707	Cement Mortar	Amend 2.3 to read: <i>Testing for impurities shall comply with AASHTO T 21. Results that are darker than the standard shall be cause for rejection, except as provided in 2.3.1.</i>	10/31/16
		Amend 2.3.1 to read: <i>Sand for mortar not conforming to 2.3 shall be tested in accordance with AASHTO T 71 and shall meet the requirements of 5.2.3 of AASHTO M 45.</i>	

09/12/16

SSD: 1/7/00, 3/22/00, 6/14/00, 2/8/01, 4/2/01, 1/25/02, 4/1/02, 04/15/03, 04/20/04, 05/06/05, 05/19/06, 09/17/07, 06/12/08, 03/04/09, 08/26/09, 06/28/10, 06/10/11, 04/12/12, 04/18/13, 01/02/14, 10/22/14, 01/16/15, 01/15/16

## **SPECIAL ATTENTION**

### **QUALIFIED PRODUCTS LIST**

The applicable version of the Qualified Products List for this project is **Issue 2016-2**, which is available online at [www.nhdot.com](http://www.nhdot.com) on the *Doing Business with DOT>Contractors* webpage. A link to the Qualified Product List is shown under the *Products and Materials* heading in the *Engineering/Technical Information* section of this webpage.

The Qualified Products List (QPL) is usually revised annually early in the calendar year; however, an interim update may occur prior to the annual update. Superseded versions of the QPL are not posted online.

Products added to a future version of the QPL can be used under this contract upon issuance of the revised QPL. The Contractor shall not use the anticipated addition of a product to the QPL as a basis for use of a product. A product removed from a future version of the QPL can be still used under this contract unless specifically directed by the Department that the removed product shall not be used.

# SALEM MUNICIPAL SERVICES

Roy E. Sorenson - *Director*

[www.townofsalemnh.org](http://www.townofsalemnh.org)



## ENGINEERING DIVISION

33 GEREMONTY DRIVE  
SALEM, NH 03079  
TEL: 603-890-2033 FAX: 603-898-1223

## MEETING AGENDA

Date: January 11, 2023

From: James Danis, Engineering Dept

Subj: 2023 Road Program Pre-Bid Meeting  
Duston Road Reconstruction

### Introductions:

Salem Engineering Dept

- James Danis - Town of Salem, Engineering Dept. - Project Lead
- Gia Facadio - Purchasing Agent
- Matt Moore - McFarland Johnson

### Project Location:

- Intersects with North Main Street and Atkinson Road toward the north end of town.
  - Access from Exit 2 or Exit 3.

### Project descriptions:

- Duston Road
  - 3,200 LF, 24-feet wide-
  - Reclaim/Remove/Rehandle – 12" deep with Stone addition
  - Complete Drainage Replacement – Approx 1,100 LF total (RCP and Underdrain)
  - 4.5" Pavement section with bit curb - Approx ½ road length will be curbed
  - Shoulder work – shoulder work with 1,900 LF of stone walls.
  - Non-Traditional ROW – Varying with.
  - Utilities - Several utility Pole relocations

### Utilities

- Water on road – need to test pit as drain crossings.
- No Sewer or Gas
- Utility Pole relocations – Several utility pole relocations. Old poles very close to new edge of pavement

### Addendums

- Published Friday 1/19/23
- New Bid Sheets and plans
  - missing items, clarifications (gravel, crushed, crushed fine)





#### Bids:

- **BIDS DUE – 1:30 PM, January 26, 2023**
- Instructions to Bidders: **read it**
- Bid
- Qualifications & Subs
- Acknowledgement of Addendum #1 (and any others that may arise)
- Bid Bond – 5% of Contract
- Statement of non-collusion

#### Funding:

- Subject to Town vote in March

#### Required Documents for Winning Bidder

- Contract Award Status (NOA, NTP, Agreement)
- Performance, Payment, & Warrantee Bonds
- Insurance Certificates
- Contract Documents (3 copies)

#### Traffic Control

- Must maintain one open lane during work hours – will not be able to fully close road.
- Police details – scheduling challenges
- Two-way traffic during non-work hours

#### Permit

- NHDES Wetland permit – Minor Dredge and Fill Permit required – Application in process.

#### Construction Schedule

- Substantial Completion: **September 26, 2023**
- Final Completion: **October 26, 2023**
- Weekend/Holiday/night work - Not allowed

#### Submittals

- Shop Drawings
- Certificates of Compliance
- Cut sheets

#### Other Projects

- Neighborhood Road Improvement Project
- Tuscan Village
- Salem Depot Intersection
- Overlay Program