

# STATE OF MAINE DEPARTMENT OF TRANSPORTATION



### SPECIFICATIONS

Design: Load and Resistance Factor Design per AASHTO LRFD Bridge Design Specifications, Tenth Edition 2024.

### DESIGN LOADING

Live Load..... HL - 93 Modified for Strength I

### TRAFFIC DATA

Current (2021) AADT.....	330
Future (2041) AADT.....	360
DHV - % of AADT.....	13%
Design Hour Volume.....	47
Heavy Trucks (% of AADT).....	13%
Heavy Trucks (% of DHV).....	13%
Directional Distribution (% of DHV).....	58%
18 kip Equivalent P 2.0.....	13
18 kip Equivalent P 2.5.....	12
Design Speed (mph).....	25

### HYDROLOGIC DATA

Drainage Area.....	49.4 sq mi
Design Discharge (Q50).....	716 cfs
Check Discharge (Q100).....	786 cfs
Headwater Elevation (Q1.1).....	60.3 ft
Headwater Elevation (Q25).....	62.9 ft
Headwater Elevation (Q50).....	63.2 ft
Headwater Elevation (Q100).....	63.5 ft
Discharge Velocity (Q1.1).....	3.7 fps
Discharge Velocity (Q50).....	7.4 fps
Discharge Velocity (Q100).....	7.5 fps

### MATERIALS

Concrete:	
Precast.....	Class "P"
Deck and Curbs.....	Class "A1"
All Other.....	Class "A"
Reinforcing:	
Plain Reinforcing Steel.....	ASTM A615, Grade 60
Glass Fiber Reinforcing Polymer (GFRP).....	ASTM D7957
Low-Carbon Chromium Steel.....	ASTM A1035, Type CS, Grade 100
Prestressing Strands.....	AASHTO M 203 (ASTM A416), Grade 270, Low Relaxation

### BASIC DESIGN STRESSES

Concrete:	
Class "A".....	f'c = 4,000 psi
Class "A1".....	f'c = 4,000 psi
Class "P".....	f'c = 8,000 psi
	f'ci = 6,500 psi
Reinforcing:	
Plain Reinforcing Steel.....	f y = 60,000 psi
Glass Fiber Reinforced Polymer	
Minimum Tensile Strength.....	f fu = 100,000 psi
Minimum Elastic Modulus.....	E f = 8,700,000 psi
Minimum Nominal Design Tensile Strain.....	ε fu = 1.1%
Low-Carbon Chromium Steel.....	f y = 100,000 psi
Prestressing Strand.....	F μ = 270,000 psi

### LIST OF DRAWINGS

Title Sheet.....	1
Estimated Quantities & General Construction Notes.....	2
General Plan.....	3
Profile.....	4
Boring & Instrumentation Location Plan.....	5
Interpretive Subsurface Profile.....	6
Boring Logs.....	7
Cross Sections.....	8-12
Abutment No. 1.....	13-17
Abutment No. 2.....	18-23
Abutment Details.....	24
Beam Details.....	25-26
Superstructure Plan.....	27
Superstructure Reinforcing.....	28
End Diaphragm Reinforcing.....	29
Reinforcing Schedule.....	30
Detour Plan.....	31
Right of Way Plan.....	32

## EAST MACHIAS WASHINGTON COUNTY CHASE MILLS BRIDGE OVER GARDNER LAKE OUTLET CHASES MILL ROAD FEDERAL AID PROJECT NO. 2552900 PROJECT LENGTH 0.047 mi. BRIDGE NO. 5465

### UTILITIES

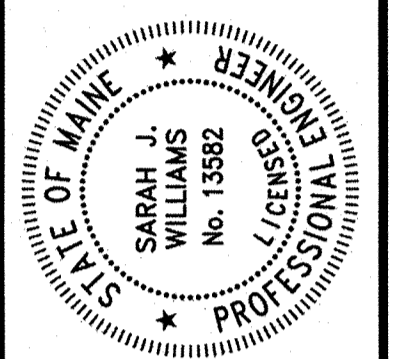
Versant Power  
Charter Communications  
Consolidated Communications (Fidium Fiber)  
Axion Technologies

### MAINTENANCE OF TRAFFIC

Bridge will be closed during construction with traffic detoured.

<u>PROJECT LOCATION</u>	Chase Mills Bridge (#5465) over Gardner Lake Outlet. Located 0.03 of a mile north of Lakeside Road Latitude: 44°45'22.0" N, Longitude: 67°21'37.9" W
<u>PROGRAM AREA</u>	Bridge
<u>OUTLINE OF WORK</u>	Bridge Replacement and Associated Approach Work

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	APPROVED	DATE
ACTING COMMISSIONER:		12-15-25
CHIEF ENGINEER:		12-12-25



Sarah J. Williams	SIGNATURE	P.E. NUMBER	DATE
13582	13582	12/10/25	

PROJECT INFORMATION	PROGRAM	PROJECT MANAGER	DESIGNER	CONSULTANT	PROJECT RESIDENT	CONTRACTOR	PROJECT COMPLETION DATE
BRIDGE PROGRAM	MICHAEL WIGHT, PE	SARAH WILLIAMS, PE	STANTEC				

WIN 025529.00

**EAST MACHIAS  
CHASES MILL ROAD**

**TITLE SHEET**

SHEET NUMBER
1
OF 32



DATE: 12/10/2025 USERNAME: PHARRIMAN

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QTY	UNIT
202.19	REMOVING EXISTING BRIDGE	(210 CY)	1 LS
202.202	REMOVING PAVEMENT SURFACE		120 SY
203.20	COMMON EXCAVATION		770 CY
203.25	GRANULAR BORROW		266 CY
206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY		630 CY
206.092	STRUCTURAL ROCK EXCAVATION - MAJOR STRUCTURES		30 CY
304.10	AGGREGATE SUBBASE COURSE - GRAVEL		600 CY
403.208	HOT MIX ASPHALT - 12.5 MM		89 T
403.209	HOT MIX ASPHALT - 9.5 MM (SIDEWALKS, DRIVES, & INCIDENTALS)		5 T
403.213	HOT MIX ASPHALT - 12.5 MM (BASE AND INTERMEDIATE COURSE)		140 T
409.15	BITUMINOUS TACK COAT, APPLIED		63 G
502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	(107 CY)	1 LS
502.22	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (PLACED UNDER WATER)		84 CY
502.261	STRUCTURAL CONCRETE ROADWAY & SIDEWALK SLAB ON CONCRETE BRIDGES	(53 CY)	1 LS
502.291	SAW CUT GROOVING	(1348 SF)	1 LS
502.31	STRUCTURAL CONCRETE APPROACH SLAB	(21 CY)	1 LS
502.49	STRUCTURAL CONCRETE CURBS AND SIDEWALKS	(5 CY)	1 LS
503.12	REINFORCING STEEL, FABRICATED & DELIVERED		14900 LB
503.13	REINFORCING STEEL, PLACING		14900 LB
503.19	LOW-CARBON CHROMIUM REINFORCEMENT, FABRICATED & DELIVERED		3100 LB
503.20	LOW-CARBON CHROMIUM REINFORCEMENT, PLACING		3100 LB
507.0821	STEEL BRIDGE RAILING, 3 BAR	(76 LF)	1 LS
511.07	COFFERDAM: ABUTMENT NO. 1		1 LS
511.07	COFFERDAM: ABUTMENT NO. 2		1 LS
512.081	FRENCH DRAINS	(108 LF)	1 LS
515.21	PROTECTIVE COATING FOR CONCRETE SURFACES	(330 SY)	1 LS
524.301	TEMPORARY STRUCTURAL SUPPORT - DAM AND FISHWAY		1 LS
526.301	PORTABLE CONCRETE BARRIER, TYPE I	(120 LF)	1 LS
526.34	PERMANENT CONCRETE TRANSITION BARRIER		4 EA
530.30	GFRP, REINFORCEMENT BARS, FABRICATED & DELIVERED		8000 LF
530.31	GFRP, REINFORCEMENT BARS, PLACING		8000 LF
535.622	PRESTRESSED STRUCTURAL CONCRETE NEXT BEAM	(44 CY)	1 LS
606.1301	31" W-BEAM GUARDRAIL - MID-WAY SPLICE - SINGLE FACED		262.5 LF
606.1304	31" W-BEAM GUARDRAIL - MID-WAY SPLICE, OVER 15' RADIUS		75 LF
606.1305	31" W-BEAM GUARDRAIL - MID-WAY SPLICE FLARED TERMINAL		1 EA
606.1721	BRIDGE TRANSITION - TYPE 1		4 EA
606.265	TERMINAL END- SINGLE RAIL- GALVANIZED STEEL		3 EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER		8 EA
610.08	PLAIN RIPRAP		150 CY
610.18	STONE DITCH PROTECTION		5 CY
610.213	VOID-FILLED RIPRAP		90 CY
613.319	EROSION CONTROL BLANKET		86 SY
615.07	LOAM		22 CY
618.13	SEEDING METHOD NUMBER 1		1 UN
618.14	SEEDING METHOD NUMBER 2		3 UN
619.12	MULCH		4 UN
619.14	EROSION CONTROL MIX		43 CY
620.58	EROSION CONTROL GEOTEXTILE		350 SY
627.733	4" WHITE OR YELLOW PAINTED PAVEMENT MARKING LINE		1050 LF
629.05	HAND LABOR, STRAIGHT TIME		40 HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)		10 HR
631.14	GRADER (INCLUDING OPERATOR)		10 HR
631.15	ROLLER, EARTH AND BASE COURSE (INCLUDING OPERATOR)		10 HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)		10 HR
639.19	FIELD OFFICE, TYPE B		1 EA
652.312	TYPE III BARRICADES		6 EA
652.33	DRUM		25 EA
652.34	CONE		50 EA
652.35	CONSTRUCTION SIGNS		380 SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES		1 LS
652.38	FLAGGERS		420 HR
656.75	TEMPORARY SOIL EROSION & WATER POLLUTION CONTROL		1 LS
659.10	MOBILIZATION		1 LS

**GENERAL CONSTRUCTION NOTES**

- For easements, construction limits, and right of way lines, refer to the Right of Way Map.
- The clearing limits as shown on the plans are approximate. The exact limits will be established in the field by the Resident. Payment for clearing will be considered incidental to Contract items.
- All utility facilities shall be adjusted by the respective utilities unless otherwise noted.
- Existing signs within the Project limits shall be removed and reset as directed by the Resident. Payment for removal and reinstallation of existing signs will be considered incidental to the Contract. No separate payment will be made.
- Do not excavate for Aggregate Subbase Course where existing material is suitable as determined by the Resident.
- In areas where the Resident directs the Contractor not to excavate to the subgrade line shown on the plans, payment for removing existing pavement, grubbing, shaping, ditching, and compacting the existing subbase and layers of new subbase 6 inches or less thick will be made under appropriate equipment rental items.
- All embankment material, except as otherwise shown, placed below EL 63.20 shall be Granular Borrow meeting the requirements of Standard Specification Subsection 703.19, Granular Borrow, for Material for Underwater Backfill with the additional requirement that the maximum particle size be limited to 4 inches.
- Place Void-Filled Riprap at and below EL. 60.00, unless noted otherwise, see Special Provision 610.
- Loam shall be placed to be a nominal depth of 4 inches in lawn areas and 2 inches in all other areas unless otherwise noted or directed.
- Unless otherwise noted, Seeding Method No. 1 shall be utilized on all lawns and developed areas; Seeding Method No. 2 shall be utilized on all other areas.
- Erosion Control Mix may be substituted in those areas normally receiving loam and seed as directed by the Resident. Placement shall be in accordance with Standard Specifications Section 619, Mulch. Payment will be made under Pay Item 619.14, Erosion Control Mix.
- Place a 24 inch wide strip of Erosion Control Blanket on the sideslopes along the top of the riprap and behind the wingwalls.
- A MASH compliant guardrail end treatment shall be installed concurrently with the placement of each section of beam guardrail.
- Where it is apparent that runoff will cause continual erosion, Erosion Control Blanket, seeded gutters, riprap downspouts, and other gutters lined with Stone Ditch Protection shall be constructed after paving and shoulder work is completed. Payment will be made under the appropriate Contract items.
- Protective Coating for Concrete Surfaces shall be applied to the following areas:  
  - All exposed surfaces of concrete curbs, Fascias down to the drip notch,
  - All exposed surfaces of concrete transition barriers,
  - Concrete wearing surfaces,
  - Top of abutment backwalls and wingwalls, and
  - Top one foot below the ground on vertical walls against earth.
- Project information referred to below may be accessed at the following MaineDOT web address:  
<https://www.maine.gov/dot/doing-business/bid-opportunities>
- The existing bridge plans may be accessed at the MaineDOT web address. The plans are reproductions of the original drawings as prepared for the construction of the bridge. It is very unlikely that the plans will show any construction field changes or any alterations which may have been made to the bridge during its life span.
- Reports on hydrology and/or hydraulics applicable to the bridge site may be accessed at the MaineDOT web address. The reports are based on MaineDOT's interpretation of the information obtained for the subject site. No assurance is given that the information or the conclusions of the report will be representative of actual conditions at the time of construction.
- The project geotechnical report Geotechnical Design Report Chase Mills Bridge No. 5465 Over Gardner Lake Outlet, October 2025 may be accessed at the MaineDOT web address.

- Geotechnical information furnished or referred to in this plan set is for the use of the Bidders and the Contractor. No assurance is given that the information or interpretations will be representative of actual subsurface conditions at the construction site. MaineDOT will not be responsible for the Bidders' or Contractor's interpretations of, or conclusions drawn from, the geotechnical information. The boring logs contained in the plan set present factual and interpretive subsurface information collected at discrete locations. Data provided may not be representative of the subsurface conditions between the boring locations
- Quantities included for pay items measured and paid for by Lump Sum are estimated quantities and are provided by MaineDOT for informational purposes only. Lump Sum pay items will be paid for at the Contract Bid amount, with no addition or reduction in payment to the Contractor if the actual final quantities are different from the MaineDOT provided estimated quantities, except as follows:
  - If a Lump Sum pay item is eliminated, the requirements of Standard Specifications Section 109.2, Elimination of Items, will take precedence.
  - If other Contract Documents specifically allow a change in payment for a Lump Sum pay item, those requirements will be followed.
  - If a design change results in changes to estimated quantities for Lump Sum pay items, price adjustments will be made in accordance with Standard Specifications Section 109.7, Equitable Adjustments to Compensation and Time.
- Residential paved entrances shall be constructed with 2 inches of hot mix asphalt and 12 inches of aggregate subbase course gravel.
- Gravel entrances shall be constructed with 14 inches of aggregate subbase course gravel or 11 inches of aggregate subbase course gravel and 3 inches of untreated aggregate surface course unless otherwise noted in the Plans or directed by the Resident.
- Payment for removal and relocation of boulders as indicated in the plans shall be considered incidental to the related contract items.
- If existing bedrock material exists within the limits of riprap slopes shown on the plans, the contractor shall not remove the existing bedrock material to install riprap.
- A 3-foot paved lip shall be placed at all unpaved entrances unless otherwise noted in the Plans or directed by the Resident.
- Payment for excavation of existing embankment material located between the existing abutments and the new abutments and outside of the structural earth excavation limits shall be incidental to the bridge demolition.
- The existing fishway and dam are to remain. The extents are unknown. Payment for support of the dam and fishway during construction will be made under Pay Item 524.301 Temporary Structural Support - Dam and Fishway.

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900

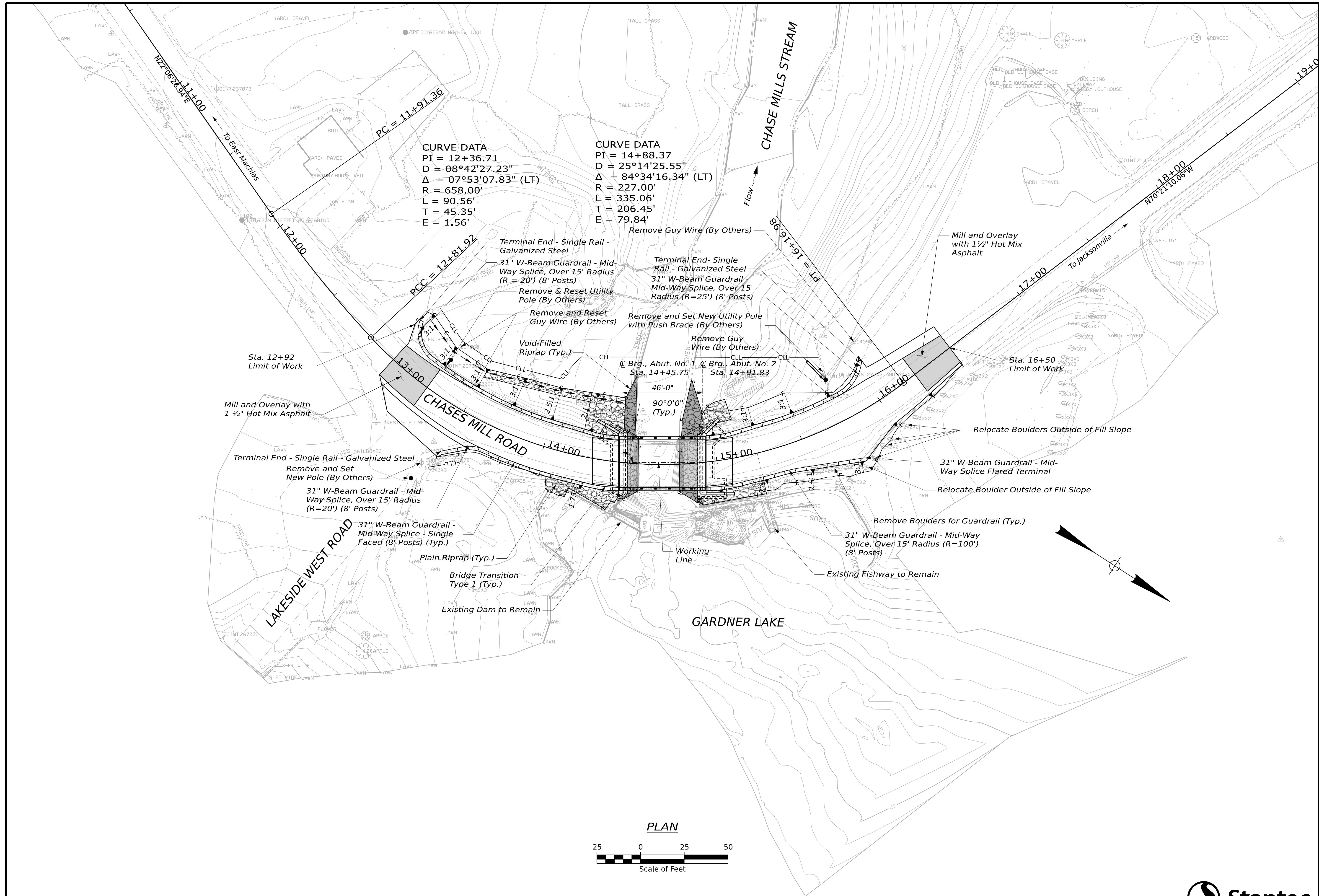
WIN 025529.00

PROJ. MANAGER	DATE	BY	DATE
CHECKED-REVIEWED	DEC 2025	ALW	DEC 2025
DESIGNED-DETAILED		SAW/PLP	
DESIGNED-DETAILED02			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

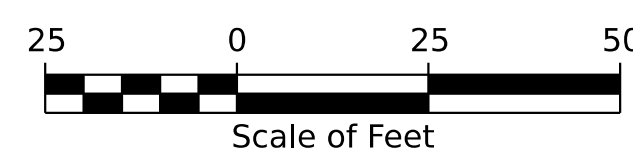
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ESTIMATED QUANTITIES AND GENERAL  
CONSTRUCTION NOTES

SHEET NUMBER  
2  
OF 32





PLAN



STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900

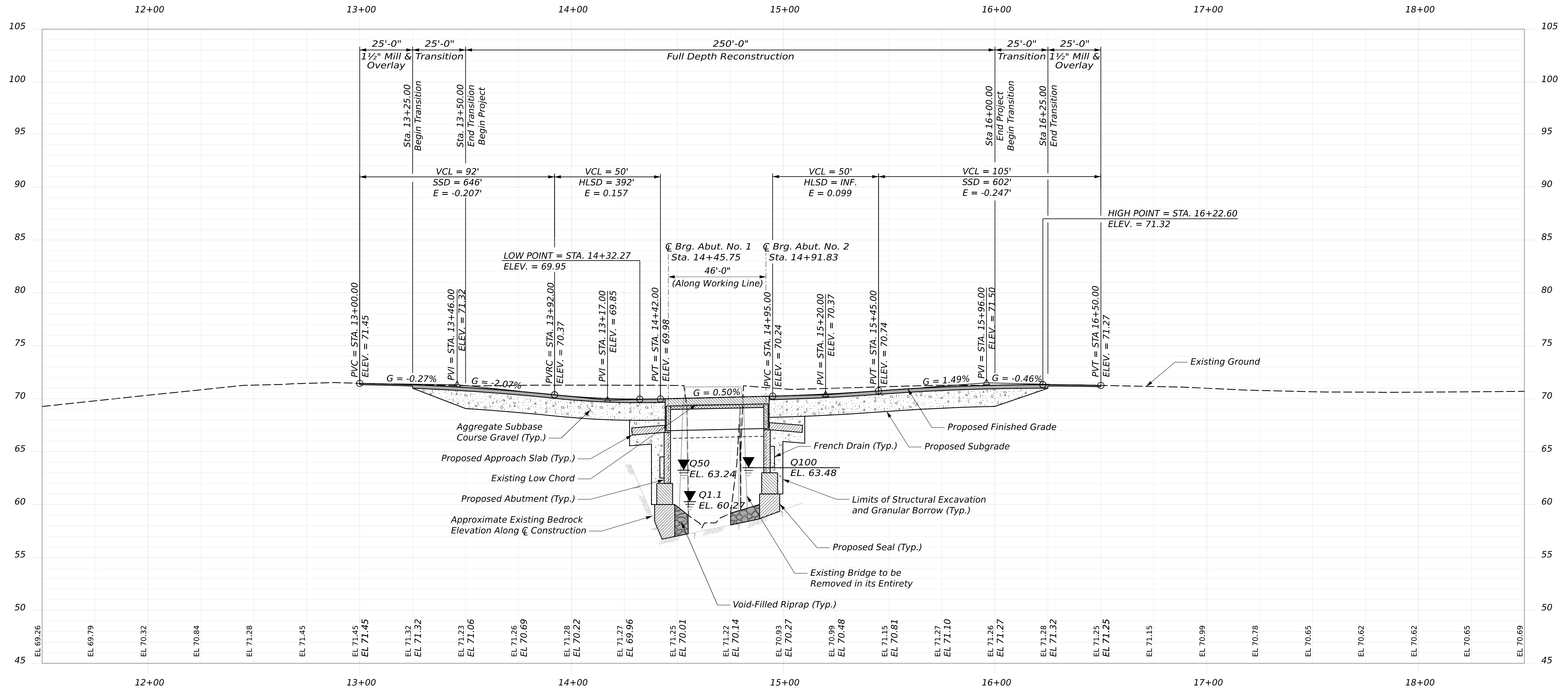
WIN 025529.00

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	ALW	DEC 2025			
CHECKED-REVIEWED		SAW/PLP				
DESIGN-DETAILED02						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
**GENERAL PLAN**

SHEET NUMBER  
**3**  
OF 32





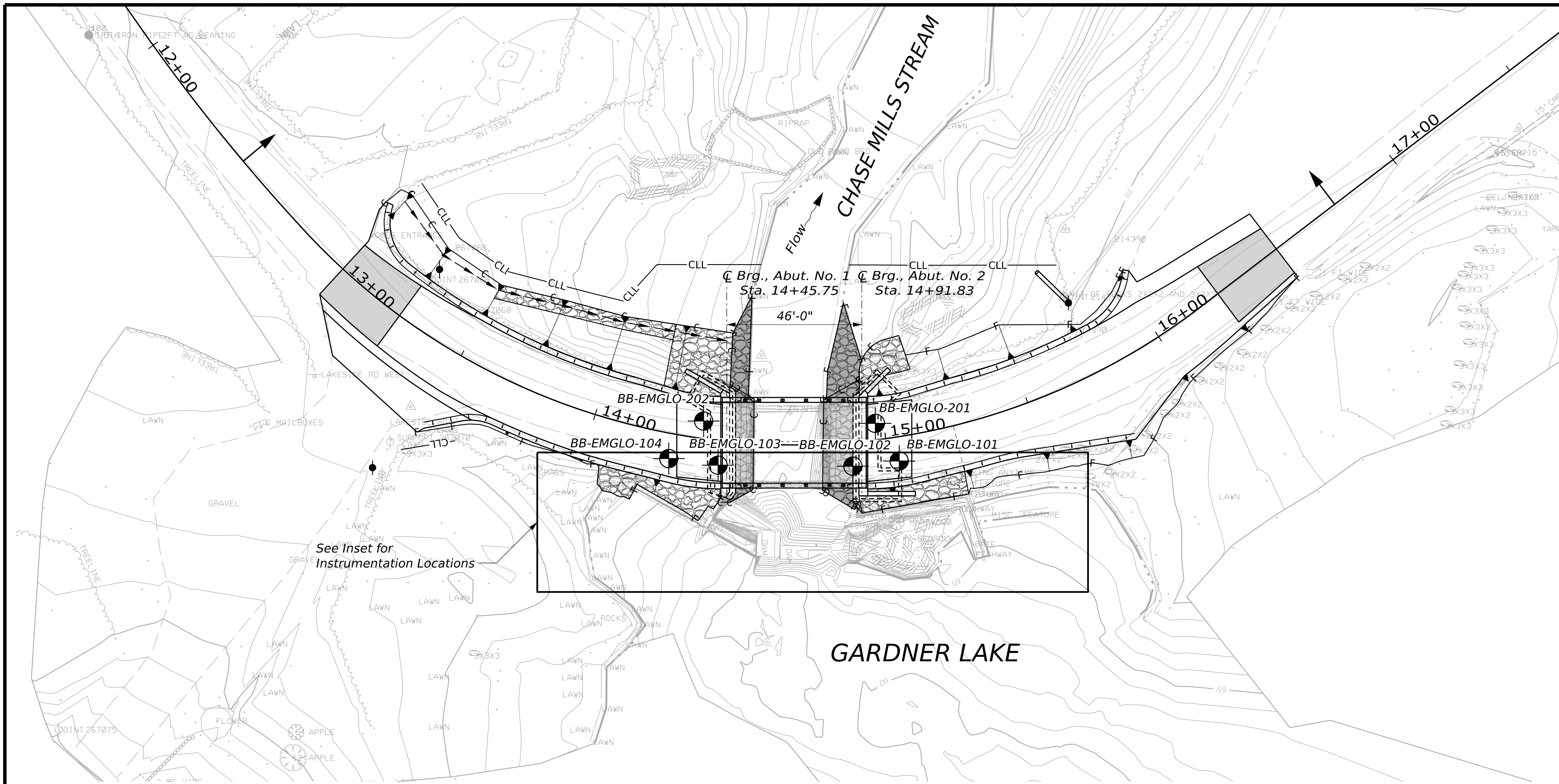
**PROFILE**  
 Scale of Feet

PROJ. MANAGER	DATE
DESIGN-DETAILED	DEC 2025
CHECKED-REVIEWED	DEC 2025
DESIGN-DETAILED02	
DESIGN-DETAILED03	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

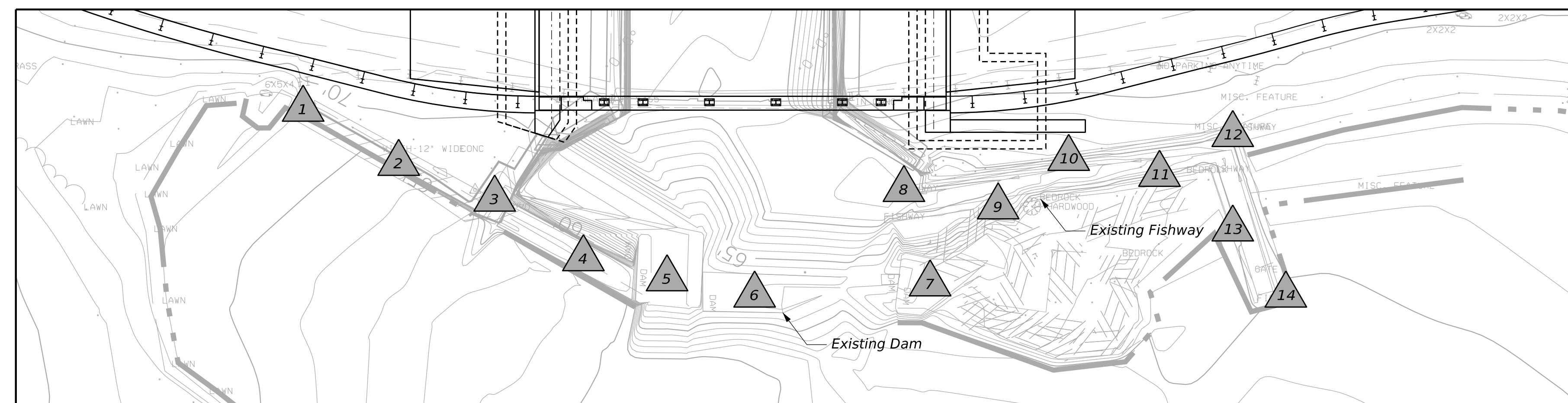
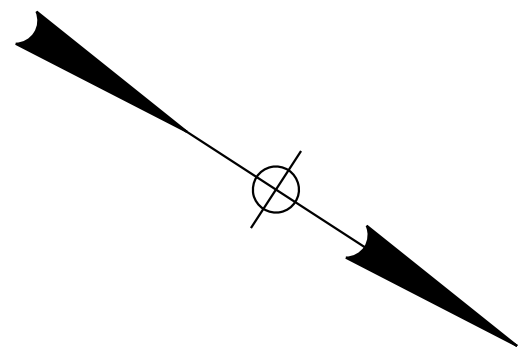
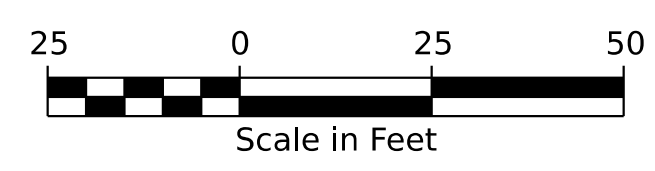
BY	SIGNATURE
PH/ABJ	
SAW/R/P	

CHASE MILLS BRIDGE NO. 5465  
 CROSSING GARDNER LAKE OUTLET  
 WASHINGTON COUNTY

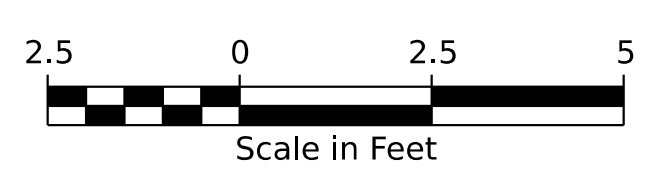




**BORING LOCATION PLAN**



**INSTRUMENTATION LOCATION PLAN**



**NOTES:**

- Existing site and topographic information and project stationing were taken from electronic files provided by Stantec on June 19, 2025.
- As-drilled locations of test borings were determined in the field by Maine DOT using GPS survey equipment.
- Elevations are in feet and reference the North American Vertical Datum of 1988 (NAVD 88).
- The Contractor shall be aware that deformation monitoring points and seismographs (collectively referred to as instrumentation) will be installed by the Department to monitor adjacent structures at the approximate locations shown on this sheet. The Contractor shall cooperate with the Department at all times so instrumentation can be accessed to survey and collect data. If the Contractor damages the instrumentation at any point during construction, they shall be promptly replaced by the Contractor, to the satisfaction of and at no additional cost to the Department.
- Proposed bridge construction and existing bridge demolition shall be completed in accordance with the requirements of Special Provision Section 639, Engineering Facilities (Geotechnical Instrumentation).
- Blasting for any reason shall be prohibited.
- Excavation below the bottom and within the zone of influence (ZOI) of the fishway and dam shall be prohibited unless temporary structural support is provided in accordance with the requirements of Special Provision Section 524, Temporary Structural Supports (Dam and Fishway Support). The ZOI is defined as the area below the fishway and dam and below imaginary lines that extend 1 ft laterally beyond the outer bottom edges and down on a 1 horizontal to 1 vertical (1H:1V) slope.
- Grubbing and excavation within 5 feet of the fishway and dam shall be done by hand. If placement and compaction of fill soils is required in these areas, the means and methods used shall be reviewed and approved by the Resident and it shall be achieved by means of light self-propelled vibratory plate compactors or similar equipment approved by the Resident.
- No equipment, material stockpiles, or other items capable of inducing surcharge loads onto the fishway and dam (as judged by the Resident) shall be located at any time within 15 ft of the fishway and dam.
- The Contractor shall provide adequate drainage during construction to direct surface water away from the fishway and dam.

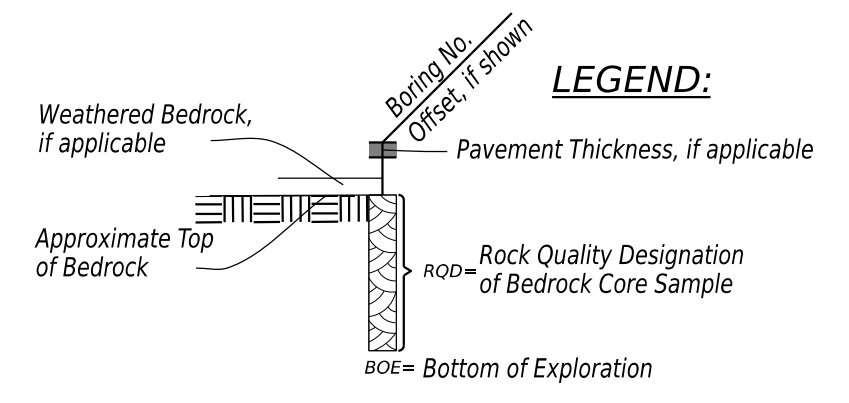
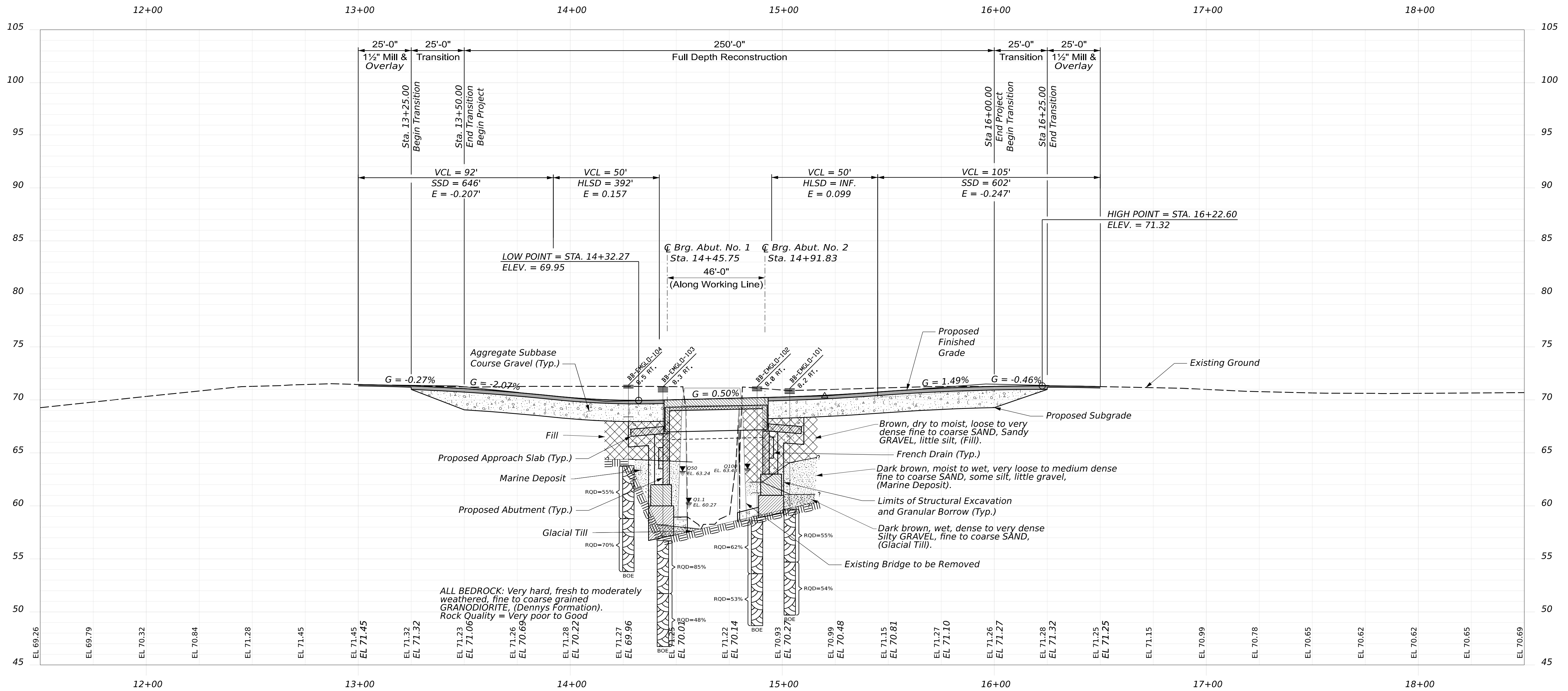
**LEGEND:**

- BB-EMGLO-101 Designation and as-drilled location of preliminary phase test boring drilled by New England Boring Contractors and monitored by Haley & Aldrich, Inc. in August 2023.
- BB-EMGLO-201 Designation and as-drilled location of preliminary phase test boring drilled by New England Boring Contractors and monitored by Haley & Aldrich, Inc. in June 2025.
- Location and orientation of interpretive subsurface profile
- Designation and approximate location of deformation monitoring point

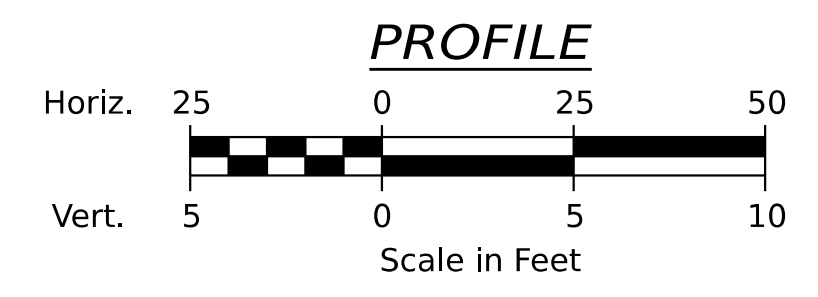
Username: pharriman Date: 12/2/2025

STATE OF MAINE DEPARTMENT OF TRANSPORTATION		Federal Project No. 2552900		WIN 025529.00	
		Signature: <i>Bryan C. Steiner</i> P.E. NUMBER: 12008 DATE: 12/2/25			
CHASE MILLS BRIDGE NO. 5465 CROSSING GARDNER LAKE OUTLET WASHINGTON COUNTY		<b>BORING &amp; INSTRUMENTATION LOCATION PLAN</b>			
SHEET NUMBER		<span style="font-size: 2em; font-weight: bold;">5</span> OF 32			





- NOTE:**
- This generalized interpretive subsurface profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil transitions may vary and are probably more erratic. For more information refer to the exploration logs.
  - This generalized subsurface profile was developed using the borings drilled in the westbound lane of Chases Mill Road (i.e., -100 series borings).
  - Elevations are in feet and reference the North American Vertical Datum of 1988 (NAVD 88).
  - Test borings were monitored in the field by Haley & Aldrich, Inc.



*Bryan C. Steinert*  
SIGNATURE  
12008  
P.E. NUMBER  
11/28/2025  
DATE

PROJ. MANAGER	DATE	BY	M. WIGHT	REVISIONS
E. HUNSTEIN <td>JUNE 2025 <td>E. HUNSTEIN <td>E. HUNSTEIN <td>1</td> </td></td></td>	JUNE 2025 <td>E. HUNSTEIN <td>E. HUNSTEIN <td>1</td> </td></td>	E. HUNSTEIN <td>E. HUNSTEIN <td>1</td> </td>	E. HUNSTEIN <td>1</td>	1
B. STERNERT <td>OCT 2025 <td>B. STERNERT <td>B. STERNERT <td>2</td> </td></td></td>	OCT 2025 <td>B. STERNERT <td>B. STERNERT <td>2</td> </td></td>	B. STERNERT <td>B. STERNERT <td>2</td> </td>	B. STERNERT <td>2</td>	2
				3
				4
				FIELD CHANGES

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
INTERPRETIVE SUBSURFACE  
PROFILE

SHEET NUMBER

6

OF 32



Maine Department of Transportation		Project: Chase Mills Bridge #5465 over Gardner Lake Outlet		Boring No.: <u>BB-EMGLO-104</u>																																																																																									
Soil/Rock Exploration Log		Location: Chases Mill Road, East Machias, Maine		US CUSTOMARY UNITS																																																																																									
Driller: New England Boring Contractors	Elevation (ft.): 71.0	Auger ID/OD: -																																																																																											
Operator: G. McDougall	Datum: NAVD 88	Sampler: 24" Standard Split Spoon																																																																																											
Logged By: J. Janga	Rig Type: Mobile B-53 Truck	Hammer W/Fall: SS-1400/30"/HW-1400/30"																																																																																											
Date Start/Finish: 06/12-2022	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2.0 in. ID																																																																																											
Boring Location: Sta. 14+27.4, 8.5 ft. R.L.	Casing ID/OD: HW-4.0 in. ID	Water Level*: 2.3 ft.																																																																																											
Hammer Efficiency Factor: 0.922	Hammer Type: Automatic	Rope & Cable(s): Hydraulic																																																																																											
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt	R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOP = Weight of Rods or Casing WOPF = Weight of One Person	S <sub>u</sub> = Peak/Retained Field Vane Undrained Shear Strength (psf) S <sub>uL</sub> = Lab Vane Undrained Shear Strength (psf) q <sub>u</sub> = Unconfined Compressive Strength (ksf) N <sub>60</sub> = Blow Count H <sub>25</sub> = Plastic Limit H <sub>50</sub> = Plasticity Index N <sub>60</sub> = Hammer Efficiency Factor(%) N <sub>60</sub> = Unrecorded C = Consolidation Test	T <sub>200</sub> = Pocket Torque Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test	Laboratory Testing Results/AASHTO and Unified Class																																																																																									
<table border="1"> <thead> <tr> <th>Depth (ft.)</th> <th>Sample No.</th> <th>Pen./Rec. (ft.)</th> <th>Sample Depth (ft.)</th> <th>Blows (6 in.) Shear Strength (psf) or RQD (%)</th> <th>Nonrecorded</th> <th>N<sub>60</sub></th> <th>Coring</th> <th>Blows</th> <th>Elevation (ft.)</th> <th>Graphic Log</th> <th>Visual Description and Remarks</th> <th>Laboratory Testing Results/AASHTO and Unified Class</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BITUMINOUS CONCRETE-</td> <td></td> </tr> <tr> <td>1</td> <td>1D</td> <td>24/17</td> <td>1.0 - 3.0</td> <td>13-13-10-5</td> <td>23</td> <td>35</td> <td></td> <td></td> <td>71.1</td> <td></td> <td>Brown, dry, dense, Gravelly fine to coarse SAND, trace silt, well graded, (Fill).</td> <td>G#690522 A-1-a, SW-SM</td> </tr> <tr> <td>2</td> <td>2D</td> <td>24/8</td> <td>3.0 - 5.0</td> <td>3-2-3-3</td> <td>5</td> <td>8</td> <td></td> <td></td> <td>68.9</td> <td></td> <td>Brown, moist, loose, fine to medium SAND, some silt, little coarse sand, trace fine gravel, moderately bonded, poorly-graded, (Fill).</td> <td>G#690523 A-2-4, SM</td> </tr> <tr> <td>3</td> <td>3D</td> <td>18/9</td> <td>5.0 - 6.5</td> <td>1-1-14(6")</td> <td>15</td> <td>23</td> <td></td> <td></td> <td>64.4</td> <td></td> <td>Dark brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, trace fine gravel, moderately bonded, poorly-graded, organic silt pocket, (Fill).</td> <td>G#690523 A-2-4, SM</td> </tr> <tr> <td>4</td> <td>R1</td> <td>60/58</td> <td>7.6 - 12.6</td> <td>RQD = 55%</td> <td></td> <td></td> <td></td> <td></td> <td>64.4</td> <td></td> <td>Top of Bedrock El. at 64.4. R1: Very hard, slightly to moderately weathered, grey, medium to coarse-grained Gneissic GRANODIORITE. Joints dipping at low and high angles. Secondary vertical angle, very close to close, rough, planar, tight to open. DENNY'S FORMATION Rock Quality = Fair Recovery = 7% R1 Core Times (min:sec) 7:6-8.6 (4:10) 8:6-9.6 (3:15) 9:6-10.6 (1:30) 10:6-11.6 (1:00) 11:6-12.6 (2:30) R2: Similar to R1, except slightly weathered. DENNY'S FORMATION Rock Quality = Fair Recovery = 100% R2 Core Times (min:sec) 12:6-13.6 (2:00) 13:6-14.6 (1:30) 14:6-15.6 (1:30) 15:6-16.6 (1:30) 16:6-17.6 (3:00)</td> <td>qp=34,926 psf (9.7-10.9) qp=30,814 psf (16.8-17.2)</td> </tr> <tr> <td>17.6</td> <td colspan="12">Bottom of Exploration at 17.6 feet below ground surface.</td> </tr> </tbody> </table>	Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class	0											BITUMINOUS CONCRETE-		1	1D	24/17	1.0 - 3.0	13-13-10-5	23	35			71.1		Brown, dry, dense, Gravelly fine to coarse SAND, trace silt, well graded, (Fill).	G#690522 A-1-a, SW-SM	2	2D	24/8	3.0 - 5.0	3-2-3-3	5	8			68.9		Brown, moist, loose, fine to medium SAND, some silt, little coarse sand, trace fine gravel, moderately bonded, poorly-graded, (Fill).	G#690523 A-2-4, SM	3	3D	18/9	5.0 - 6.5	1-1-14(6")	15	23			64.4		Dark brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, trace fine gravel, moderately bonded, poorly-graded, organic silt pocket, (Fill).	G#690523 A-2-4, SM	4	R1	60/58	7.6 - 12.6	RQD = 55%					64.4		Top of Bedrock El. at 64.4. R1: Very hard, slightly to moderately weathered, grey, medium to coarse-grained Gneissic GRANODIORITE. Joints dipping at low and high angles. Secondary vertical angle, very close to close, rough, planar, tight to open. DENNY'S FORMATION Rock Quality = Fair Recovery = 7% R1 Core Times (min:sec) 7:6-8.6 (4:10) 8:6-9.6 (3:15) 9:6-10.6 (1:30) 10:6-11.6 (1:00) 11:6-12.6 (2:30) R2: Similar to R1, except slightly weathered. DENNY'S FORMATION Rock Quality = Fair Recovery = 100% R2 Core Times (min:sec) 12:6-13.6 (2:00) 13:6-14.6 (1:30) 14:6-15.6 (1:30) 15:6-16.6 (1:30) 16:6-17.6 (3:00)	qp=34,926 psf (9.7-10.9) qp=30,814 psf (16.8-17.2)	17.6	Bottom of Exploration at 17.6 feet below ground surface.												Remarks: 1. psi = pounds per square inch	
Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class																																																																																	
0											BITUMINOUS CONCRETE-																																																																																		
1	1D	24/17	1.0 - 3.0	13-13-10-5	23	35			71.1		Brown, dry, dense, Gravelly fine to coarse SAND, trace silt, well graded, (Fill).	G#690522 A-1-a, SW-SM																																																																																	
2	2D	24/8	3.0 - 5.0	3-2-3-3	5	8			68.9		Brown, moist, loose, fine to medium SAND, some silt, little coarse sand, trace fine gravel, moderately bonded, poorly-graded, (Fill).	G#690523 A-2-4, SM																																																																																	
3	3D	18/9	5.0 - 6.5	1-1-14(6")	15	23			64.4		Dark brown, moist, medium dense, fine to medium SAND, some silt, little coarse sand, trace fine gravel, moderately bonded, poorly-graded, organic silt pocket, (Fill).	G#690523 A-2-4, SM																																																																																	
4	R1	60/58	7.6 - 12.6	RQD = 55%					64.4		Top of Bedrock El. at 64.4. R1: Very hard, slightly to moderately weathered, grey, medium to coarse-grained Gneissic GRANODIORITE. Joints dipping at low and high angles. Secondary vertical angle, very close to close, rough, planar, tight to open. DENNY'S FORMATION Rock Quality = Fair Recovery = 7% R1 Core Times (min:sec) 7:6-8.6 (4:10) 8:6-9.6 (3:15) 9:6-10.6 (1:30) 10:6-11.6 (1:00) 11:6-12.6 (2:30) R2: Similar to R1, except slightly weathered. DENNY'S FORMATION Rock Quality = Fair Recovery = 100% R2 Core Times (min:sec) 12:6-13.6 (2:00) 13:6-14.6 (1:30) 14:6-15.6 (1:30) 15:6-16.6 (1:30) 16:6-17.6 (3:00)	qp=34,926 psf (9.7-10.9) qp=30,814 psf (16.8-17.2)																																																																																	
17.6	Bottom of Exploration at 17.6 feet below ground surface.																																																																																												
Stratification lines represent approximate boundaries between soil types; transitions may be gradual. *Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.																																																																																													

Maine Department of Transportation		Project: Chase Mills Bridge #5465 over Gardner Lake Outlet		Boring No.: <u>BB-EMGLO-103</u>																																																																																																																																
Soil/Rock Exploration Log		Location: Chases Mill Road, East Machias, Maine		US CUSTOMARY UNITS																																																																																																																																
Driller: New England Boring Contractors	Elevation (ft.): 71.2	Auger ID/OD: -																																																																																																																																		
Operator: G. McDougall	Datum: NAVD 88	Sampler: 24" Standard Split Spoon																																																																																																																																		
Logged By: J. Janga	Rig Type: Mobile B-53 Truck	Hammer W/Fall: SS-1400/30"/HW-1400/30"																																																																																																																																		
Date Start/Finish: 09/48-2022	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2.0 in. ID																																																																																																																																		
Boring Location: Sta. 14+43.7, 8.3 ft. R.L.	Casing ID/OD: HW-4.0 in. ID	Water Level*: 8.8 ft.																																																																																																																																		
Hammer Efficiency Factor: 0.922	Hammer Type: Automatic	Rope & Cable(s): Hydraulic																																																																																																																																		
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt	R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOP = Weight of Rods or Casing WOPF = Weight of One Person	S <sub>u</sub> = Peak/Retained Field Vane Undrained Shear Strength (psf) S <sub>uL</sub> = Lab Vane Undrained Shear Strength (psf) q <sub>u</sub> = Unconfined Compressive Strength (ksf) N <sub>60</sub> = Blow Count H <sub>25</sub> = Plastic Limit H <sub>50</sub> = Plasticity Index N <sub>60</sub> = Hammer Efficiency Factor(%) N <sub>60</sub> = Unrecorded C = Consolidation Test	T <sub>200</sub> = Pocket Torque Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test	Laboratory Testing Results/AASHTO and Unified Class																																																																																																																																
<table border="1"> <thead> <tr> <th>Depth (ft.)</th> <th>Sample No.</th> <th>Pen./Rec. (ft.)</th> <th>Sample Depth (ft.)</th> <th>Blows (6 in.) Shear Strength (psf) or RQD (%)</th> <th>Nonrecorded</th> <th>N<sub>60</sub></th> <th>Coring</th> <th>Blows</th> <th>Elevation (ft.)</th> <th>Graphic Log</th> <th>Visual Description and Remarks</th> <th>Laboratory Testing Results/AASHTO and Unified Class</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BITUMINOUS CONCRETE-</td> <td></td> </tr> <tr> <td>1</td> <td>1D</td> <td>24/9</td> <td>1.0 - 3.0</td> <td>13-13-11-14</td> <td>24</td> <td>37</td> <td></td> <td></td> <td>70.3</td> <td></td> <td>Brown, dry, dense, Sandy fine GRAVEL, trace silt, poorly-graded, (Fill).</td> <td>G#690519 A-1-a, GP-GM</td> </tr> <tr> <td>2</td> <td>2D</td> <td>24/4</td> <td>5.0 - 7.0</td> <td>2-2-2-3</td> <td>4</td> <td>6</td> <td></td> <td></td> <td>66.2</td> <td></td> <td>Dark brown, dry, loose, fine to medium SAND, some fine gravel, little coarse sand, little silt, poorly-graded, (Fill).</td> <td>G#690520 A-1-b, SM</td> </tr> <tr> <td>3</td> <td>3D</td> <td>24/5</td> <td>7.0 - 9.0</td> <td>2-1-1-1</td> <td>2</td> <td>3</td> <td></td> <td></td> <td>64.3</td> <td></td> <td>Dark brown, wet, very loose, fine to medium SAND, some silt, trace coarse sand and fine gravel, poorly-graded, slight organic odor, (Marine Deposit).</td> <td>G#690521 A-2-4, SM</td> </tr> <tr> <td>9</td> <td>MD</td> <td>24/0</td> <td>9.0 - 11.0</td> <td>WOH24"</td> <td>-</td> <td>-</td> <td></td> <td></td> <td>9</td> <td></td> <td></td> <td></td> </tr> <tr> <td>10</td> <td>5D</td> <td>13/7</td> <td>13.0 - 14.1</td> <td>25-17-9(1")</td> <td>26</td> <td>40</td> <td></td> <td></td> <td>13.0</td> <td></td> <td>Dark brown-grey, wet, dense, Silty fine to coarse GRAVEL, trace fine to coarse sand, trace wood, moderately bonded, (Glacial Till).</td> <td></td> </tr> <tr> <td>14.1</td> <td>R1</td> <td>60/58</td> <td>14.5 - 19.5</td> <td>RQD = 85%</td> <td></td> <td></td> <td></td> <td></td> <td>14.1</td> <td></td> <td>Top of Bedrock El. at 57.1 R1: Very hard, fresh to slightly weathered, grey and white, medium to coarse-grained GRANODIORITE. Joints dipping at high and low angles, wide spacing, rough, planar, tight to open, weakly foliated. DENNY'S FORMATION Rock Mass Quality = Good Recovery = 97% R1 Core Times (min:sec) 14:5-15.5 (3:15) 15:5-16.5 (2:30) 16:5-17.5 (3:20) 17:5-18.5 (2:15) 18:5-19.5 (2:00) R2: Similar to R1, except joint spacing very close to close. Note: Quartz vein (2-in. thick) at approximately 22.6 ft. and quartz vein from approximately 23.3 to 23.6 ft. DENNY'S FORMATION Rock Mass Quality = Poor Recovery = 92% R2 Core Times (min:sec) 19:5-20.5 (2:30) 20:5-21.5 (3:00) 21:5-22.5 (4:00) 22:5-23.5 (4:20)</td> <td>qp=29,799 psf (18.8-19.2) qp=32,953 psf (21.2-21.5)</td> </tr> <tr> <td>24.5</td> <td>R2</td> <td>60/55</td> <td>19.5 - 24.5</td> <td>RQD = 48%</td> <td></td> <td></td> <td></td> <td></td> <td>24.5</td> <td></td> <td></td> <td></td> </tr> <tr> <td>24.5</td> <td colspan="12">Bottom of Exploration at 24.5 feet below ground surface.</td> </tr> </tbody> </table>	Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class	0											BITUMINOUS CONCRETE-		1	1D	24/9	1.0 - 3.0	13-13-11-14	24	37			70.3		Brown, dry, dense, Sandy fine GRAVEL, trace silt, poorly-graded, (Fill).	G#690519 A-1-a, GP-GM	2	2D	24/4	5.0 - 7.0	2-2-2-3	4	6			66.2		Dark brown, dry, loose, fine to medium SAND, some fine gravel, little coarse sand, little silt, poorly-graded, (Fill).	G#690520 A-1-b, SM	3	3D	24/5	7.0 - 9.0	2-1-1-1	2	3			64.3		Dark brown, wet, very loose, fine to medium SAND, some silt, trace coarse sand and fine gravel, poorly-graded, slight organic odor, (Marine Deposit).	G#690521 A-2-4, SM	9	MD	24/0	9.0 - 11.0	WOH24"	-	-			9				10	5D	13/7	13.0 - 14.1	25-17-9(1")	26	40			13.0		Dark brown-grey, wet, dense, Silty fine to coarse GRAVEL, trace fine to coarse sand, trace wood, moderately bonded, (Glacial Till).		14.1	R1	60/58	14.5 - 19.5	RQD = 85%					14.1		Top of Bedrock El. at 57.1 R1: Very hard, fresh to slightly weathered, grey and white, medium to coarse-grained GRANODIORITE. Joints dipping at high and low angles, wide spacing, rough, planar, tight to open, weakly foliated. DENNY'S FORMATION Rock Mass Quality = Good Recovery = 97% R1 Core Times (min:sec) 14:5-15.5 (3:15) 15:5-16.5 (2:30) 16:5-17.5 (3:20) 17:5-18.5 (2:15) 18:5-19.5 (2:00) R2: Similar to R1, except joint spacing very close to close. Note: Quartz vein (2-in. thick) at approximately 22.6 ft. and quartz vein from approximately 23.3 to 23.6 ft. DENNY'S FORMATION Rock Mass Quality = Poor Recovery = 92% R2 Core Times (min:sec) 19:5-20.5 (2:30) 20:5-21.5 (3:00) 21:5-22.5 (4:00) 22:5-23.5 (4:20)	qp=29,799 psf (18.8-19.2) qp=32,953 psf (21.2-21.5)	24.5	R2	60/55	19.5 - 24.5	RQD = 48%					24.5				24.5	Bottom of Exploration at 24.5 feet below ground surface.												Remarks: 1. psi = pounds per square inch	
Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class																																																																																																																								
0											BITUMINOUS CONCRETE-																																																																																																																									
1	1D	24/9	1.0 - 3.0	13-13-11-14	24	37			70.3		Brown, dry, dense, Sandy fine GRAVEL, trace silt, poorly-graded, (Fill).	G#690519 A-1-a, GP-GM																																																																																																																								
2	2D	24/4	5.0 - 7.0	2-2-2-3	4	6			66.2		Dark brown, dry, loose, fine to medium SAND, some fine gravel, little coarse sand, little silt, poorly-graded, (Fill).	G#690520 A-1-b, SM																																																																																																																								
3	3D	24/5	7.0 - 9.0	2-1-1-1	2	3			64.3		Dark brown, wet, very loose, fine to medium SAND, some silt, trace coarse sand and fine gravel, poorly-graded, slight organic odor, (Marine Deposit).	G#690521 A-2-4, SM																																																																																																																								
9	MD	24/0	9.0 - 11.0	WOH24"	-	-			9																																																																																																																											
10	5D	13/7	13.0 - 14.1	25-17-9(1")	26	40			13.0		Dark brown-grey, wet, dense, Silty fine to coarse GRAVEL, trace fine to coarse sand, trace wood, moderately bonded, (Glacial Till).																																																																																																																									
14.1	R1	60/58	14.5 - 19.5	RQD = 85%					14.1		Top of Bedrock El. at 57.1 R1: Very hard, fresh to slightly weathered, grey and white, medium to coarse-grained GRANODIORITE. Joints dipping at high and low angles, wide spacing, rough, planar, tight to open, weakly foliated. DENNY'S FORMATION Rock Mass Quality = Good Recovery = 97% R1 Core Times (min:sec) 14:5-15.5 (3:15) 15:5-16.5 (2:30) 16:5-17.5 (3:20) 17:5-18.5 (2:15) 18:5-19.5 (2:00) R2: Similar to R1, except joint spacing very close to close. Note: Quartz vein (2-in. thick) at approximately 22.6 ft. and quartz vein from approximately 23.3 to 23.6 ft. DENNY'S FORMATION Rock Mass Quality = Poor Recovery = 92% R2 Core Times (min:sec) 19:5-20.5 (2:30) 20:5-21.5 (3:00) 21:5-22.5 (4:00) 22:5-23.5 (4:20)	qp=29,799 psf (18.8-19.2) qp=32,953 psf (21.2-21.5)																																																																																																																								
24.5	R2	60/55	19.5 - 24.5	RQD = 48%					24.5																																																																																																																											
24.5	Bottom of Exploration at 24.5 feet below ground surface.																																																																																																																																			
Stratification lines represent approximate boundaries between soil types; transitions may be gradual. *Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.																																																																																																																																				

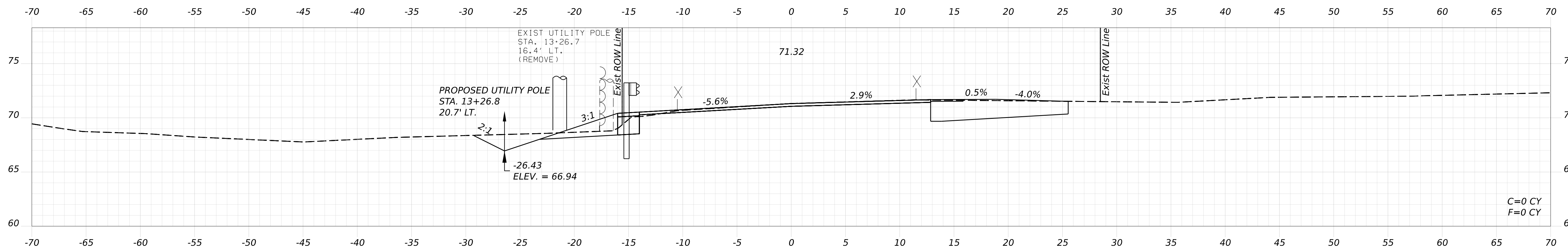
Maine Department of Transportation		Project: Chase Mills Bridge #5465 over Gardner Lake Outlet		Boring No.: <u>BB-EMGLO-201</u>																																																																																																																																													
Soil/Rock Exploration Log		Location: Chases Mill Road, East Machias, Maine		US CUSTOMARY UNITS																																																																																																																																													
Driller: New England Boring Contractors	Elevation (ft.): 70.9	Auger ID/OD: -																																																																																																																																															
Operator: G. McDougall	Datum: NAVD 88	Sampler: 24" Standard Split Spoon																																																																																																																																															
Logged By: E. Hunstin	Rig Type: Mobile B-53 Truck	Hammer W/Fall: SS-1400/30"/HW-1400/30"																																																																																																																																															
Date Start/Finish: 6/22/2025-4/2/2025	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2.0 in. ID																																																																																																																																															
Boring Location: Sta. 14+97.0, 5.6 ft. R.L.	Casing ID/OD: HW-4.0 in. ID	Water Level*: 9.3 ft.																																																																																																																																															
Hammer Efficiency Factor: 0.812	Hammer Type: Automatic	Rope & Cable(s): Hydraulic																																																																																																																																															
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt	R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOP = Weight of Rods or Casing WOPF = Weight of One Person	S <sub>u</sub> = Peak/Retained Field Vane Undrained Shear Strength (psf) S <sub>uL</sub> = Lab Vane Undrained Shear Strength (psf) q <sub>u</sub> = Unconfined Compressive Strength (ksf) N <sub>60</sub> = Blow Count H <sub>25</sub> = Plastic Limit H <sub>50</sub> = Plasticity Index N <sub>60</sub> = Hammer Efficiency Factor(%) N <sub>60</sub> = Unrecorded C = Consolidation Test	T <sub>200</sub> = Pocket Torque Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test	Laboratory Testing Results/AASHTO and Unified Class																																																																																																																																													
<table border="1"> <thead> <tr> <th>Depth (ft.)</th> <th>Sample No.</th> <th>Pen./Rec. (ft.)</th> <th>Sample Depth (ft.)</th> <th>Blows (6 in.) Shear Strength (psf) or RQD (%)</th> <th>Nonrecorded</th> <th>N<sub>60</sub></th> <th>Coring</th> <th>Blows</th> <th>Elevation (ft.)</th> <th>Graphic Log</th> <th>Visual Description and Remarks</th> <th>Laboratory Testing Results/AASHTO and Unified Class</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BITUMINOUS CONCRETE</td> <td></td> </tr> <tr> <td>1</td> <td>1D</td> <td>24/5</td> <td>1.0 - 3.0</td> <td>18/23/19/20</td> <td>42</td> <td>57</td> <td></td> <td></td> <td>70.0</td> <td></td> <td>Grey-brown, dry, very dense, fine to coarse SAND, some fine to coarse gravel, little silt, (Fill).</td> <td></td> </tr> <tr> <td>2</td> <td>2D</td> <td>24/12</td> <td>3.0 - 5.0</td> <td>11/6/5/7</td> <td>11</td> <td>15</td> <td></td> <td></td> <td>65.9</td> <td></td> <td>Brown, dry to moist, medium dense, fine SAND, little silt, little fine gravel, little medium to coarse sand, (Fill).</td> <td></td> </tr> <tr> <td>3</td> <td>3D</td> <td>24/6</td> <td>5.0 - 7.0</td> <td>7/10/6/4</td> <td>16</td> <td>22</td> <td></td> <td></td> <td>65.9</td> <td></td> <td>Grey-brown and black, wet, medium dense, fine to coarse SAND, trace silt, trace fine gravel, bottom 1 in. contains more silt, gravel in shoe, (Marine Deposit).</td> <td></td> </tr> <tr> <td>4</td> <td>4D</td> <td>24/8</td> <td>7.0 - 9.0</td> <td>6/7/7/8</td> <td>14</td> <td>19</td> <td></td> <td></td> <td>65.9</td> <td></td> <td>Grey-brown and black, wet, loose, fine to medium SAND, (Marine Deposit).</td> <td></td> </tr> <tr> <td>5</td> <td>5D</td> <td>24/2</td> <td>9.0 - 11.0</td> <td>8/3/2/2</td> <td>5</td> <td>7</td> <td></td> <td></td> <td>65.9</td> <td></td> <td>Grey-brown and black, wet, loose, fine to medium SAND, (Marine Deposit).</td> <td></td> </tr> <tr> <td>6</td> <td>6D</td> <td>24/6</td> <td>11.0 - 13.0</td> <td>1/3/2/2</td> <td>5</td> <td>7</td> <td></td> <td></td> <td>65.9</td> <td></td> <td>Grey-brown and black, wet, loose, fine SAND, trace medium sand, trace silt, wood in shoe of spoon, (Marine Deposit).</td> <td></td> </tr> <tr> <td>7</td> <td>7D</td> <td>2/2</td> <td>13.0 - 13.2</td> <td>50(2")</td> <td></td> <td></td> <td></td> <td></td> <td>65.9</td> <td></td> <td>Grey-brown and black, wet, very dense, fine SAND, trace silt, wood in shoe of spoon, (Marine Deposit).</td> <td></td> </tr> <tr> <td>13.6</td> <td>R1</td> <td>48/48</td> <td>14.0 - 18.0</td> <td>RQD = 10%</td> <td></td> <td></td> <td></td> <td></td> <td>13.6</td> <td></td> <td>Top of Bedrock at Eley 57.3 R1: Grey and white, fine to coarse GRAVIOLOPORITE, very hard, fresh to slightly weathered. Joints dipping horizontal to low angle, close, mostly rough, fresh to discolored, mostly open, minor silt infilling, infrequent quartz intrusions. DENNY'S FORMATION Rock Quality = Very Poor Recovery = 100% R1 Core Times (min:sec) 14:0-15.0 (3:08) 15:0-16.0 (3:08) 16:0-17.0 (2:56) 17:0-18.0 (3:41) R2: Grey, white, purple, fine to coarse grained GRANODIORITE, very hard, fresh to slightly weathered. Joints dipping horizontal to low angle, close, mostly rough, mostly open, no infilling, frequent quartz intrusions. DENNY'S FORMATION Rock Quality = Poor Recovery = 100% R2 Core Times (min:sec) 18:0-19.0 (2:59) 19:0-20.0 (2:52) 20:0-21.0 (3:16) 21:0-22.0 (3:24)</td> <td></td> </tr> <tr> <td>22.0</td> <td colspan="12">Bottom of Exploration at 22.0 feet below ground surface.</td> </tr> </tbody> </table>	Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class	0											BITUMINOUS CONCRETE		1	1D	24/5	1.0 - 3.0	18/23/19/20	42	57			70.0		Grey-brown, dry, very dense, fine to coarse SAND, some fine to coarse gravel, little silt, (Fill).		2	2D	24/12	3.0 - 5.0	11/6/5/7	11	15			65.9		Brown, dry to moist, medium dense, fine SAND, little silt, little fine gravel, little medium to coarse sand, (Fill).		3	3D	24/6	5.0 - 7.0	7/10/6/4	16	22			65.9		Grey-brown and black, wet, medium dense, fine to coarse SAND, trace silt, trace fine gravel, bottom 1 in. contains more silt, gravel in shoe, (Marine Deposit).		4	4D	24/8	7.0 - 9.0	6/7/7/8	14	19			65.9		Grey-brown and black, wet, loose, fine to medium SAND, (Marine Deposit).		5	5D	24/2	9.0 - 11.0	8/3/2/2	5	7			65.9		Grey-brown and black, wet, loose, fine to medium SAND, (Marine Deposit).		6	6D	24/6	11.0 - 13.0	1/3/2/2	5	7			65.9		Grey-brown and black, wet, loose, fine SAND, trace medium sand, trace silt, wood in shoe of spoon, (Marine Deposit).		7	7D	2/2	13.0 - 13.2	50(2")					65.9		Grey-brown and black, wet, very dense, fine SAND, trace silt, wood in shoe of spoon, (Marine Deposit).		13.6	R1	48/48	14.0 - 18.0	RQD = 10%					13.6		Top of Bedrock at Eley 57.3 R1: Grey and white, fine to coarse GRAVIOLOPORITE, very hard, fresh to slightly weathered. Joints dipping horizontal to low angle, close, mostly rough, fresh to discolored, mostly open, minor silt infilling, infrequent quartz intrusions. DENNY'S FORMATION Rock Quality = Very Poor Recovery = 100% R1 Core Times (min:sec) 14:0-15.0 (3:08) 15:0-16.0 (3:08) 16:0-17.0 (2:56) 17:0-18.0 (3:41) R2: Grey, white, purple, fine to coarse grained GRANODIORITE, very hard, fresh to slightly weathered. Joints dipping horizontal to low angle, close, mostly rough, mostly open, no infilling, frequent quartz intrusions. DENNY'S FORMATION Rock Quality = Poor Recovery = 100% R2 Core Times (min:sec) 18:0-19.0 (2:59) 19:0-20.0 (2:52) 20:0-21.0 (3:16) 21:0-22.0 (3:24)		22.0	Bottom of Exploration at 22.0 feet below ground surface.												Remarks: 1. psi = pounds per square inch	
Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class																																																																																																																																					
0											BITUMINOUS CONCRETE																																																																																																																																						
1	1D	24/5	1.0 - 3.0	18/23/19/20	42	57			70.0		Grey-brown, dry, very dense, fine to coarse SAND, some fine to coarse gravel, little silt, (Fill).																																																																																																																																						
2	2D	24/12	3.0 - 5.0	11/6/5/7	11	15			65.9		Brown, dry to moist, medium dense, fine SAND, little silt, little fine gravel, little medium to coarse sand, (Fill).																																																																																																																																						
3	3D	24/6	5.0 - 7.0	7/10/6/4	16	22			65.9		Grey-brown and black, wet, medium dense, fine to coarse SAND, trace silt, trace fine gravel, bottom 1 in. contains more silt, gravel in shoe, (Marine Deposit).																																																																																																																																						
4	4D	24/8	7.0 - 9.0	6/7/7/8	14	19			65.9		Grey-brown and black, wet, loose, fine to medium SAND, (Marine Deposit).																																																																																																																																						
5	5D	24/2	9.0 - 11.0	8/3/2/2	5	7			65.9		Grey-brown and black, wet, loose, fine to medium SAND, (Marine Deposit).																																																																																																																																						
6	6D	24/6	11.0 - 13.0	1/3/2/2	5	7			65.9		Grey-brown and black, wet, loose, fine SAND, trace medium sand, trace silt, wood in shoe of spoon, (Marine Deposit).																																																																																																																																						
7	7D	2/2	13.0 - 13.2	50(2")					65.9		Grey-brown and black, wet, very dense, fine SAND, trace silt, wood in shoe of spoon, (Marine Deposit).																																																																																																																																						
13.6	R1	48/48	14.0 - 18.0	RQD = 10%					13.6		Top of Bedrock at Eley 57.3 R1: Grey and white, fine to coarse GRAVIOLOPORITE, very hard, fresh to slightly weathered. Joints dipping horizontal to low angle, close, mostly rough, fresh to discolored, mostly open, minor silt infilling, infrequent quartz intrusions. DENNY'S FORMATION Rock Quality = Very Poor Recovery = 100% R1 Core Times (min:sec) 14:0-15.0 (3:08) 15:0-16.0 (3:08) 16:0-17.0 (2:56) 17:0-18.0 (3:41) R2: Grey, white, purple, fine to coarse grained GRANODIORITE, very hard, fresh to slightly weathered. Joints dipping horizontal to low angle, close, mostly rough, mostly open, no infilling, frequent quartz intrusions. DENNY'S FORMATION Rock Quality = Poor Recovery = 100% R2 Core Times (min:sec) 18:0-19.0 (2:59) 19:0-20.0 (2:52) 20:0-21.0 (3:16) 21:0-22.0 (3:24)																																																																																																																																						
22.0	Bottom of Exploration at 22.0 feet below ground surface.																																																																																																																																																
Stratification lines represent approximate boundaries between soil types; transitions may be gradual. *Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.																																																																																																																																																	

Maine Department of Transportation		Project: Chase Mills Bridge #5465 over Gardner Lake Outlet		Boring No.: <u>BB-EMGLO-202</u>																																																																																																																			
Soil/Rock Exploration Log		Location: Chases Mill Road, East Machias, Maine		US CUSTOMARY UNITS																																																																																																																			
Driller: New England Boring Contractors	Elevation (ft.): 71.0	Auger ID/OD: -																																																																																																																					
Operator: G. McDougall	Datum: NAVD 88	Sampler: 24" Standard Split Spoon																																																																																																																					
Logged By: E. Hunstin	Rig Type: Mobile B-53 Truck	Hammer W/Fall: SS-1400/30"/HW-1400/30"																																																																																																																					
Date Start/Finish: 6/22/2025-4/2/2025	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2.0 in. ID																																																																																																																					
Boring Location: Sta. 14+37.1, 6.0 ft. R.L.	Casing ID/OD: HW-4.0 in. ID	Water Level*: 10.0 ft.																																																																																																																					
Hammer Efficiency Factor: 0.812	Hammer Type: Automatic	Rope & Cable(s): Hydraulic																																																																																																																					
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt	R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOP = Weight of Rods or Casing WOPF = Weight of One Person	S <sub>u</sub> = Peak/Retained Field Vane Undrained Shear Strength (psf) S <sub>uL</sub> = Lab Vane Undrained Shear Strength (psf) q <sub>u</sub> = Unconfined Compressive Strength (ksf) N <sub>60</sub> = Blow Count H <sub>25</sub> = Plastic Limit H <sub>50</sub> = Plasticity Index N <sub>60</sub> = Hammer Efficiency Factor(%) N <sub>60</sub> = Unrecorded C = Consolidation Test	T <sub>200</sub> = Pocket Torque Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test	Laboratory Testing Results/AASHTO and Unified Class																																																																																																																			
<table border="1"> <thead> <tr> <th>Depth (ft.)</th> <th>Sample No.</th> <th>Pen./Rec. (ft.)</th> <th>Sample Depth (ft.)</th> <th>Blows (6 in.) Shear Strength (psf) or RQD (%)</th> <th>Nonrecorded</th> <th>N<sub>60</sub></th> <th>Coring</th> <th>Blows</th> <th>Elevation (ft.)</th> <th>Graphic Log</th> <th>Visual Description and Remarks</th> <th>Laboratory Testing Results/AASHTO and Unified Class</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BITUMINOUS CONCRETE</td> <td></td> </tr> <tr> <td>1</td> <td>1D</td> <td>24/8</td> <td>1.0 - 3.0</td> <td>29/16/9/8</td> <td>25</td> <td>34</td> <td></td> <td></td> <td>70.0</td> <td></td> <td>Brown-grey, dry, dense, fine to coarse SAND, little fine to coarse gravel, trace silt, asphalt pieces throughout, well graded, (Fill).</td> <td></td> </tr> <tr> <td>2</td> <td>2D</td> <td>24/6</td> <td>3.0 - 5.0</td> <td>6/8/7/7</td> <td>15</td> <td>20</td> <td></td> <td></td> <td>65.5</td> <td></td> <td>Brown, dry, medium dense, medium SAND, some fine gravel, little silt, (Fill).</td> <td></td> </tr> <tr> <td>3</td> <td>3D</td> <td>24/1</td> <td>5.5 - 7.5</td> <td>2/1/WOH/WOH</td> <td></td> <td></td> <td></td> <td></td> <td>65.5</td> <td></td> <td>Brown, wet, very loose, fine to coarse SAND, little fine gravel, little silt, well graded, (Marine Deposit).</td> <td></td> </tr> <tr> <td>4</td> <td>4D</td> <td>18/6</td> <td>7.5 - 9.0</td> <td>1/WOH/WOH</td> <td></td> <td></td> <td></td> <td></td> <td>62.0</td> <td></td> <td>Grey-brown, wet, very loose, fine SAND, some silt, little fine coarse gravel, trace medium to coarse sand, trace wood, (Marine Deposit).</td> <td></td> </tr> <tr> <td>9.0</td> <td>5D</td> <td>4/4</td> <td>9.0 - 9.3</td> <td>50(4")</td> <td></td> <td></td> <td></td> <td></td> <td>9.0</td> <td></td> <td>Brown, wet, very dense, coarse GRAVEL, some fine to coarse sand, trace fine gravel, trace silt, (Glacial Till).</td> <td></td> </tr> <tr> <td>9.4</td> <td>R1</td> <td>55/54</td> <td>10.0 - 14.6</td> <td>RQD = 69%</td> <td></td> <td></td> <td></td> <td></td> <td>9.4</td> <td></td> <td>Top of Bedrock at Eley 61.6 Note: Advanced roller cone to 10.0 ft. R1: Grey and white, fine to coarse grained GRANODIORITE, very hard, fresh to slightly weathered. Joints dipping at moderate to high angles, close to moderate, rough, fresh to discolored, mostly open, no infilling. DENNY'S FORMATION Rock Quality = Fair Recovery = 98% R1 Core Times (min:sec) 10:0-11.0 (2:33) 11:0-12.0 (2:25) 12:0-13.0 (2:07) 13:0-14.0 (2:15) 14:0-15.0 (2:27)</td> <td></td> </tr> <tr> <td>14.6</td> <td colspan="12">Bottom of Exploration at 14.6 feet below ground surface.</td> </tr> </tbody> </table>	Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class	0											BITUMINOUS CONCRETE		1	1D	24/8	1.0 - 3.0	29/16/9/8	25	34			70.0		Brown-grey, dry, dense, fine to coarse SAND, little fine to coarse gravel, trace silt, asphalt pieces throughout, well graded, (Fill).		2	2D	24/6	3.0 - 5.0	6/8/7/7	15	20			65.5		Brown, dry, medium dense, medium SAND, some fine gravel, little silt, (Fill).		3	3D	24/1	5.5 - 7.5	2/1/WOH/WOH					65.5		Brown, wet, very loose, fine to coarse SAND, little fine gravel, little silt, well graded, (Marine Deposit).		4	4D	18/6	7.5 - 9.0	1/WOH/WOH					62.0		Grey-brown, wet, very loose, fine SAND, some silt, little fine coarse gravel, trace medium to coarse sand, trace wood, (Marine Deposit).		9.0	5D	4/4	9.0 - 9.3	50(4")					9.0		Brown, wet, very dense, coarse GRAVEL, some fine to coarse sand, trace fine gravel, trace silt, (Glacial Till).		9.4	R1	55/54	10.0 - 14.6	RQD = 69%					9.4		Top of Bedrock at Eley 61.6 Note: Advanced roller cone to 10.0 ft. R1: Grey and white, fine to coarse grained GRANODIORITE, very hard, fresh to slightly weathered. Joints dipping at moderate to high angles, close to moderate, rough, fresh to discolored, mostly open, no infilling. DENNY'S FORMATION Rock Quality = Fair Recovery = 98% R1 Core Times (min:sec) 10:0-11.0 (2:33) 11:0-12.0 (2:25) 12:0-13.0 (2:07) 13:0-14.0 (2:15) 14:0-15.0 (2:27)		14.6	Bottom of Exploration at 14.6 feet below ground surface.												Remarks: 1. psi = pounds per square inch	
Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class																																																																																																											
0											BITUMINOUS CONCRETE																																																																																																												
1	1D	24/8	1.0 - 3.0	29/16/9/8	25	34			70.0		Brown-grey, dry, dense, fine to coarse SAND, little fine to coarse gravel, trace silt, asphalt pieces throughout, well graded, (Fill).																																																																																																												
2	2D	24/6	3.0 - 5.0	6/8/7/7	15	20			65.5		Brown, dry, medium dense, medium SAND, some fine gravel, little silt, (Fill).																																																																																																												
3	3D	24/1	5.5 - 7.5	2/1/WOH/WOH					65.5		Brown, wet, very loose, fine to coarse SAND, little fine gravel, little silt, well graded, (Marine Deposit).																																																																																																												
4	4D	18/6	7.5 - 9.0	1/WOH/WOH					62.0		Grey-brown, wet, very loose, fine SAND, some silt, little fine coarse gravel, trace medium to coarse sand, trace wood, (Marine Deposit).																																																																																																												
9.0	5D	4/4	9.0 - 9.3	50(4")					9.0		Brown, wet, very dense, coarse GRAVEL, some fine to coarse sand, trace fine gravel, trace silt, (Glacial Till).																																																																																																												
9.4	R1	55/54	10.0 - 14.6	RQD = 69%					9.4		Top of Bedrock at Eley 61.6 Note: Advanced roller cone to 10.0 ft. R1: Grey and white, fine to coarse grained GRANODIORITE, very hard, fresh to slightly weathered. Joints dipping at moderate to high angles, close to moderate, rough, fresh to discolored, mostly open, no infilling. DENNY'S FORMATION Rock Quality = Fair Recovery = 98% R1 Core Times (min:sec) 10:0-11.0 (2:33) 11:0-12.0 (2:25) 12:0-13.0 (2:07) 13:0-14.0 (2:15) 14:0-15.0 (2:27)																																																																																																												
14.6	Bottom of Exploration at 14.6 feet below ground surface.																																																																																																																						
Stratification lines represent approximate boundaries between soil types; transitions may be gradual. *Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.																																																																																																																							

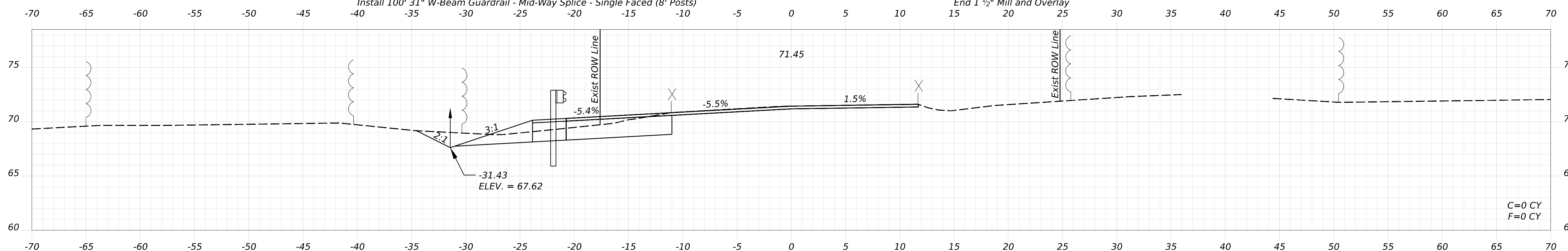
Maine Department of Transportation		Project: Chase Mills Bridge #5465 over Gardner Lake Outlet		Boring No.: <u>BB-EMGLO-102</u>																																																																				
Soil/Rock Exploration Log		Location: Chases Mill Road, East Machias, Maine		US CUSTOMARY UNITS																																																																				
Driller: New England Boring Contractors	Elevation (ft.): 71.2	Auger ID/OD: -																																																																						
Operator: G. McDougall	Datum: NAVD 88	Sampler: 24" Standard Split Spoon																																																																						
Logged By: J. Janga	Rig Type: Mobile B-53 Truck	Hammer W/Fall: SS-1400/30"/HW-1400/30"																																																																						
Date Start/Finish: 09/47-2022	Drilling Method: Cased Wash Boring	Core Barrel: NQ-2.0 in. ID																																																																						
Boring Location: Sta. 14+88.1, 8.0 ft. R.L.	Casing ID/OD: HW-4.0 in. ID	Water Level*: 10.3 ft.																																																																						
Hammer Efficiency Factor: 0.922	Hammer Type: Automatic	Rope & Cable(s): Hydraulic																																																																						
Definitions: D = Split Spoon Sample MD = Unsuccessful Split Spoon Sample Attempt U = Thin Wall Tube Sample MU = Unsuccessful Thin Wall Tube Sample Attempt V = Field Vane Shear Test, PP = Pocket Penetrometer MV = Unsuccessful Field Vane Shear Test Attempt	R = Rock Core Sample SSA = Solid Stem Auger HSA = Hollow Stem Auger RC = Roller Cone WOH = Weight of 140lb. Hammer WOP = Weight of Rods or Casing WOPF = Weight of One Person	S <sub>u</sub> = Peak/Retained Field Vane Undrained Shear Strength (psf) S <sub>uL</sub> = Lab Vane Undrained Shear Strength (psf) q <sub>u</sub> = Unconfined Compressive Strength (ksf) N <sub>60</sub> = Blow Count H <sub>25</sub> = Plastic Limit H <sub>50</sub> = Plasticity Index N <sub>60</sub> = Hammer Efficiency Factor(%) N <sub>60</sub> = Unrecorded C = Consolidation Test	T <sub>200</sub> = Pocket Torque Shear Strength (psf) WC = Water Content, percent LL = Liquid Limit PL = Plastic Limit PI = Plasticity Index G = Grain Size Analysis C = Consolidation Test	Laboratory Testing Results/AASHTO and Unified Class																																																																				
<table border="1"> <thead> <tr> <th>Depth (ft.)</th> <th>Sample No.</th> <th>Pen./Rec. (ft.)</th> <th>Sample Depth (ft.)</th> <th>Blows (6 in.) Shear Strength (psf) or RQD (%)</th> <th>Nonrecorded</th> <th>N<sub>60</sub></th> <th>Coring</th> <th>Blows</th> <th>Elevation (ft.)</th> <th>Graphic Log</th> <th>Visual Description and Remarks</th> <th>Laboratory Testing Results/AASHTO and Unified Class</th> </tr> </thead> <tbody> <tr> <td>0</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>BITUMINOUS CONCRETE-</td> <td></td> </tr> <tr> <td>1</td> <td>1D</td> <td>24/11</td> <td>1.0 - 3.0</td> <td>16-6-6-10</td> <td>12</td> <td>18</td> <td></td> <td></td> <td>70.8</td> <td></td> <td>Brown, dry, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, poorly-graded, (Fill).</td> <td>G#690517 A-1-a, SP-SM</td> </tr> <tr> <td>2</td> <td>2D</td> <td>24/7</td> <td>3.0 - 5.0</td> <td>2-7-6-7</td> <td>13</td> <td>20</td> <td></td> <td></td> <td>66.2</td> <td></td> <td>Brown, dry, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, poorly-graded, (Fill).</td> <td>G#690517 A-1-a, SP-SM</td> </tr> <tr> <td>3</td> <td>3D</td> <td>24/9</td> <td>5.0 - 7.0</td> <td>9-6-8-8</td> <td>14</td> <td>22</td> <td></td> <td></td> <td>64.3</td> <td></td> <td>Brown, wet, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, slightly bonded, poorly-graded, (Fill).</td> <td>G#690518 A-1-b, SP-SM</td> </tr> <tr> <td>4</td> <td>4D</td> <td>24/7</td> <td>7.0 - 9.0</td> <td>7-8-11-13</td> <td>19</td> <td>29</td></tr></tbody></table>	Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class	0											BITUMINOUS CONCRETE-		1	1D	24/11	1.0 - 3.0	16-6-6-10	12	18			70.8		Brown, dry, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, poorly-graded, (Fill).	G#690517 A-1-a, SP-SM	2	2D	24/7	3.0 - 5.0	2-7-6-7	13	20			66.2		Brown, dry, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, poorly-graded, (Fill).	G#690517 A-1-a, SP-SM	3	3D	24/9	5.0 - 7.0	9-6-8-8	14	22			64.3		Brown, wet, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, slightly bonded, poorly-graded, (Fill).	G#690518 A-1-b, SP-SM	4	4D	24/7	7.0 - 9.0	7-8-11-13	19	29
Depth (ft.)	Sample No.	Pen./Rec. (ft.)	Sample Depth (ft.)	Blows (6 in.) Shear Strength (psf) or RQD (%)	Nonrecorded	N <sub>60</sub>	Coring	Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/AASHTO and Unified Class																																																												
0											BITUMINOUS CONCRETE-																																																													
1	1D	24/11	1.0 - 3.0	16-6-6-10	12	18			70.8		Brown, dry, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, poorly-graded, (Fill).	G#690517 A-1-a, SP-SM																																																												
2	2D	24/7	3.0 - 5.0	2-7-6-7	13	20			66.2		Brown, dry, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, poorly-graded, (Fill).	G#690517 A-1-a, SP-SM																																																												
3	3D	24/9	5.0 - 7.0	9-6-8-8	14	22			64.3		Brown, wet, medium dense, medium SAND, some fine gravel, little fine and coarse sand, trace coarse gravel, trace silt, slightly bonded, poorly-graded, (Fill).	G#690518 A-1-b, SP-SM																																																												
4	4D	24/7	7.0 - 9.0	7-8-11-13	19	29																																																																		

Date: 12/2/2025

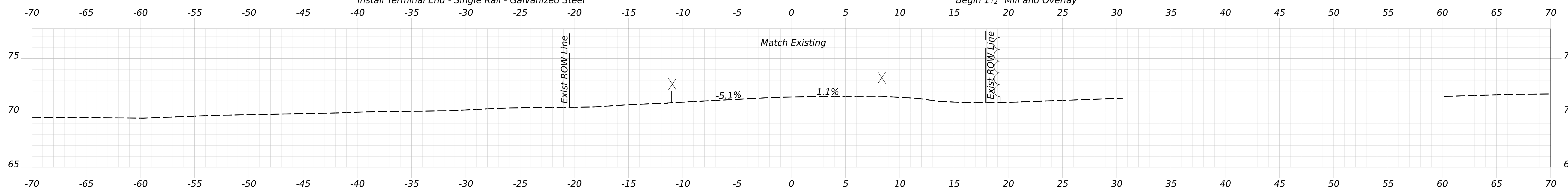
Username: pharriman



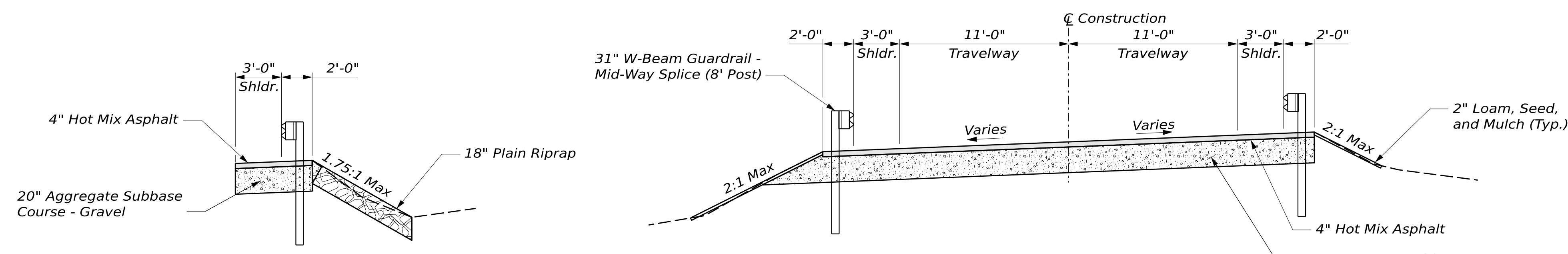
13+25.00  
 Sta. 13+17.06, 14.00' Lt. to Sta. 14+23.53, 13.24' Lt.  
 Install 100' 31" W-Beam Guardrail - Mid-Way Splice - Single Faced (8' Posts)  
 Sta. 13+25  
 Begin Transition  
 End 1 1/2" Mill and Overlay



13+00.00  
 Sta. 12+95.50, 26.78' Lt. to Sta. 13+17.06, 14.00' Lt.  
 Install 25' 31" W-Beam Guardrail - Mid-Way Splice, Over 15' Radius (R = 20') (8' Posts)  
 Sta. 13+00  
 Limit of Work  
 Begin 1 1/2" Mill and Overlay



12+75.00



**SHOULDER WITH RIPRAP**  
 Sta. 14+06 RT to Bridge  
 Sta. 14+19 LT to Bridge  
 Bridge to Sta. 15+23 RT

**FULL DEPTH CONSTRUCTION**  
 Sta. 13+25.00 to Bridge  
 Bridge to Sta. 16+25.00

STATE OF MAINE  
 DEPARTMENT OF TRANSPORTATION  
 Federal Project No. 2552900  
 WIN 025529.00

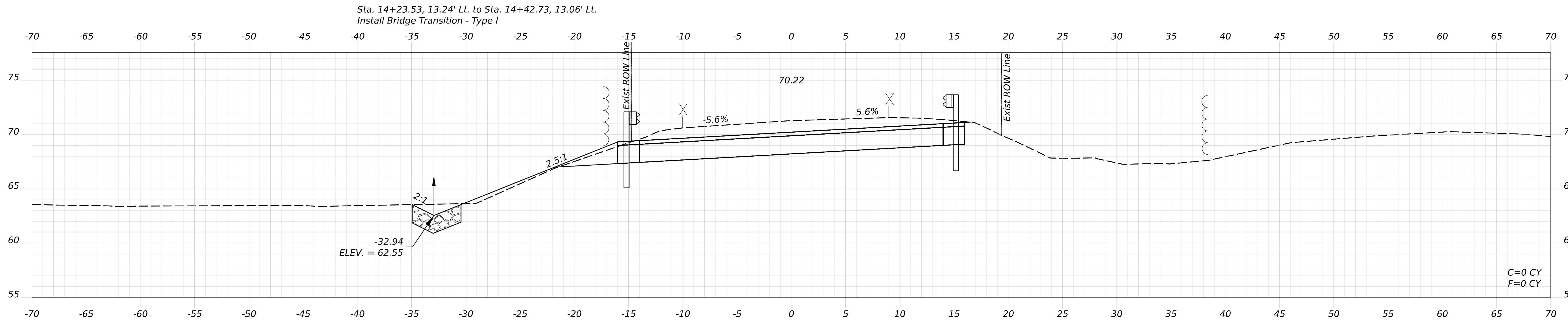
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PBH/ABJ	DEC 2025			
CHECKED-REVIEWED		SAW/R/P				
DESIGN-DETAILED02						
DESIGN-DETAILED03						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PBH/ABJ	DEC 2025			
CHECKED-REVIEWED		SAW/R/P				
DESIGN-DETAILED02						
DESIGN-DETAILED03						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

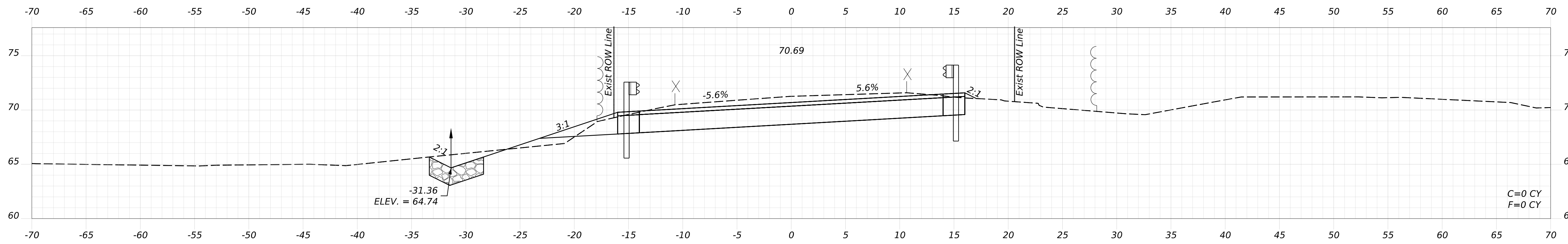
CHASE MILLS BRIDGE NO. 5465  
 CROSSING GARDNER LAKE OUTLET  
 WASHINGTON COUNTY  
 CROSS SECTIONS

SHEET NUMBER  
 8  
 OF 32





14+00.00



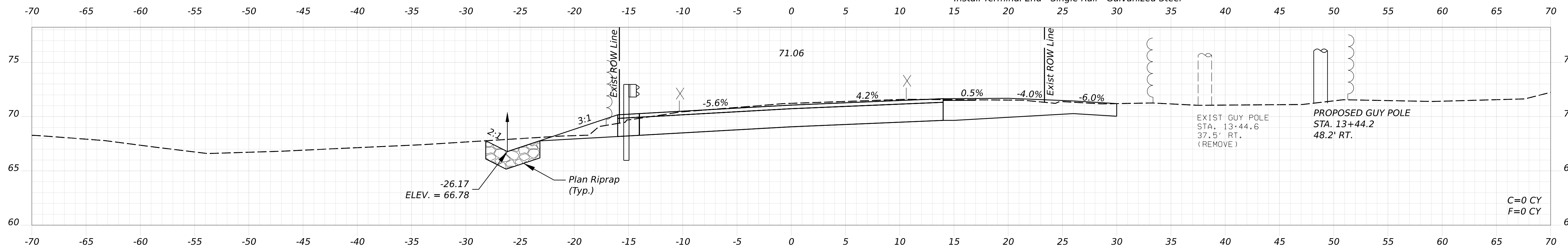
13+75.00

Sta. 13+69.80, 14.00' Rt. to Sta. 14+28.65, 14.57' Rt.  
Install 62.5' 31" W-Beam Guardrail - Mid-Way Splice, Single Faced (8' Posts)

Sta. 13+58.96, 18.06' Rt. to Sta. 13+69.80, 14.00' Rt.  
Install 12.5' 31" W-Beam Guardrail - Mid-Way Splice, Over 15' Radius (R=20') (8' Posts)

Sta. 13+50.19, 26.04' Rt. to Sta. 13+58.96, 18.06' Rt.  
Install 12.5' 31" W-Beam Guardrail - Mid-Way Splice - Single Faced (8' Posts)

Sta. 13+50.19, 26.04' Rt.  
Install Terminal End - Single Rail - Galvanized Steel



13+50.00

Sta. 13+50  
End Transition  
Begin Full Depth Construction  
Begin Project

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
CHECKED-REVIEWED	DEC 2025	PHH/ABJ	DEC 2025			
DESIGN-REVIEWED		SAW/R/P				
DESIGN-DETAILS						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
CROSS SECTIONS

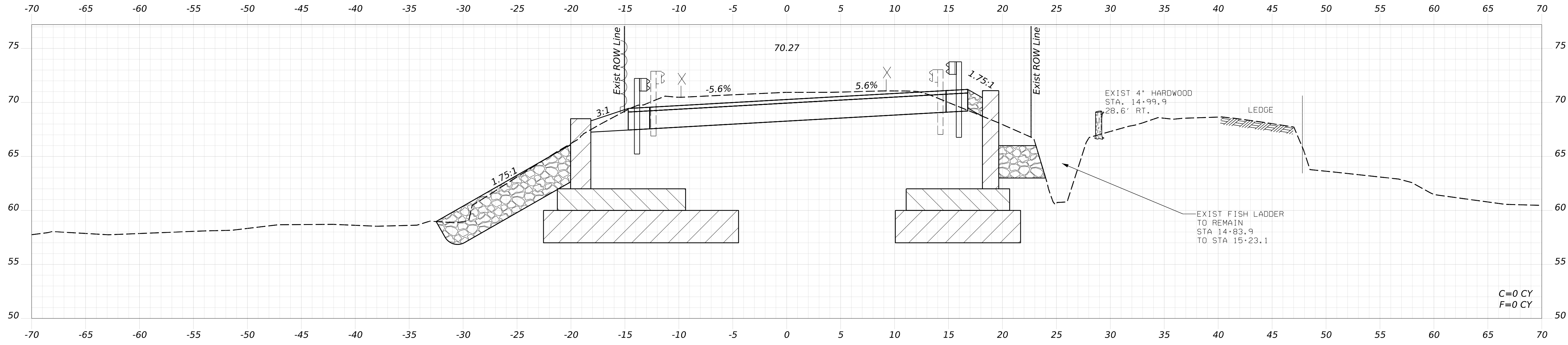


Sta. 15+14.05, 13.24' Lt. to Sta. 15+80.61, 14.00' Rt.  
Install 62.5' 31" W-Beam Guardrail - Mid-Way Splice - Single Faced (8' Posts)

Sta. 15+08.93, 14.57' Rt. to Sta. 15+32.44, 14.00' Rt.  
Install 25' 31" W-Beam Guardrail - Mid-Way Splice - Single Faced (8' Posts)

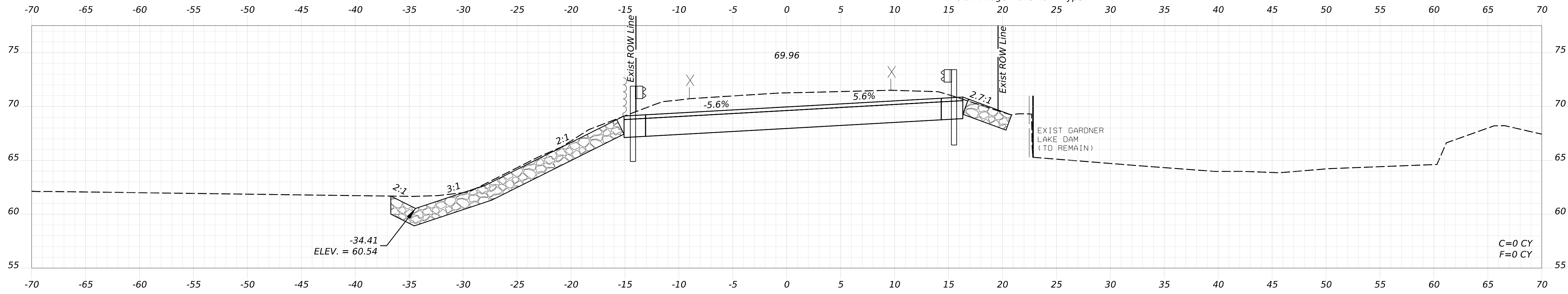
Sta. 14+94.85, 13.09' Lt. to Sta. 15+14.05, 13.24' Lt.  
Install Bridge Transition - Type I

Sta. 14+91.88, 14.25' Rt. to Sta. 15+08.93, 14.57' Rt.  
Install Bridge Transition - Type I



15+00.00

Sta. 14+28.65, 14.57' Rt. to Sta. 14+45.70, 14.25' Rt.  
Install Bridge Transition - Type I



14+25.00

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PHH/ABJ	DEC 2025			
CHECKED-REVIEWED		SAW/RJP				
DESIGN-DETAILED02						
DESIGN-DETAILED03						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

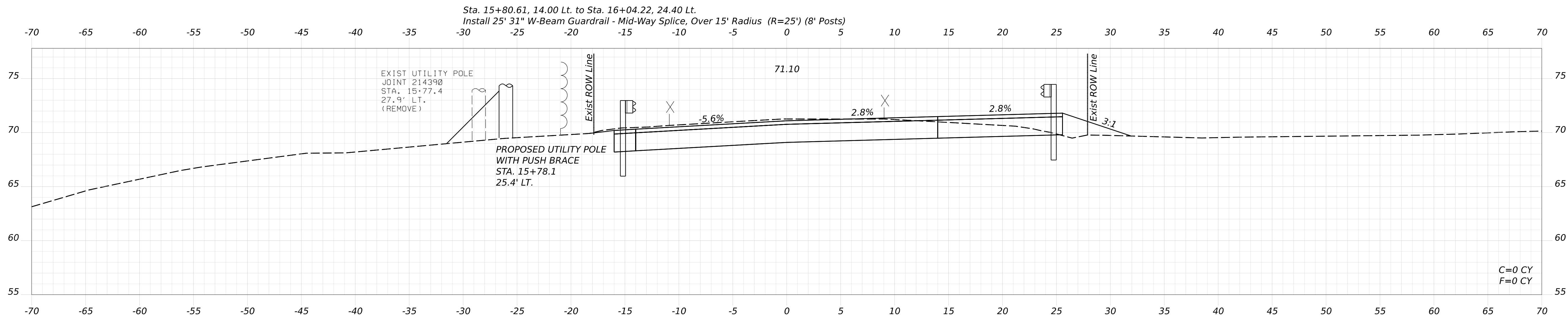
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
CROSS SECTIONS

SHEET NUMBER

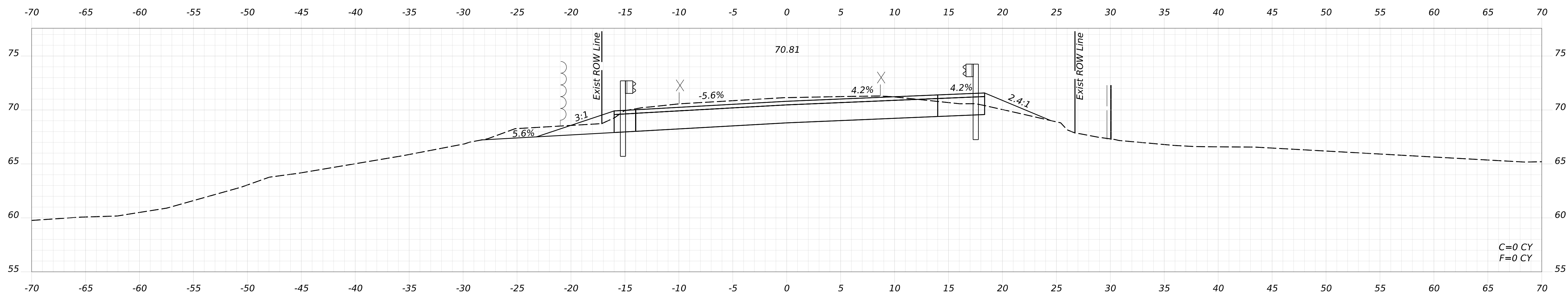
10

OF 32

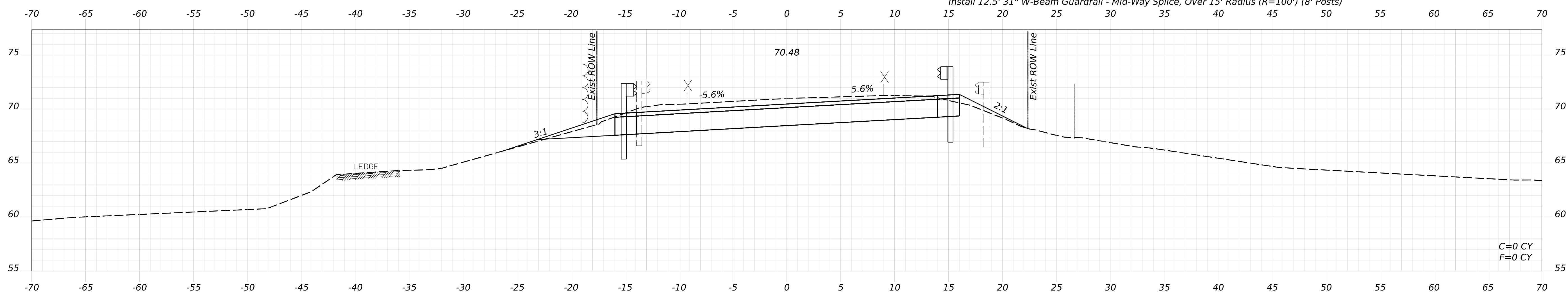




15+75.00



15+50.00



15+25.00

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

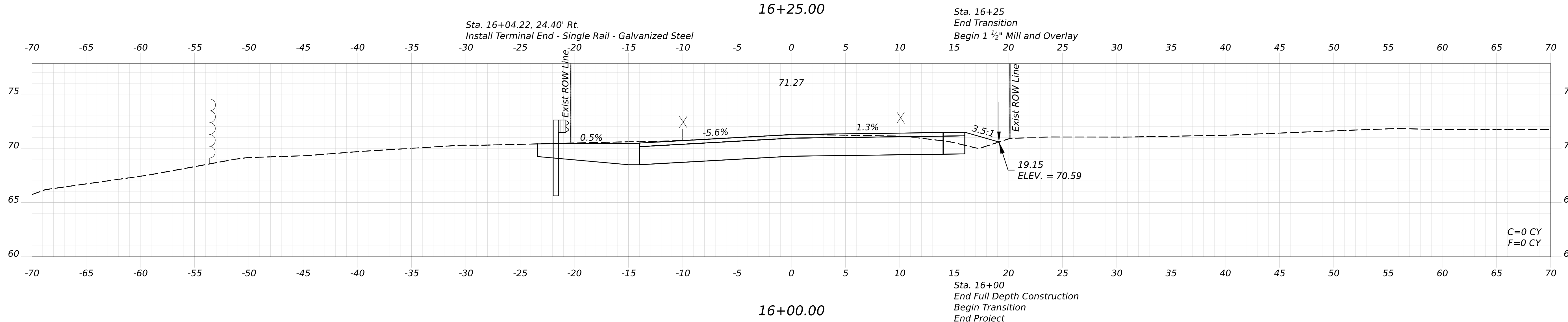
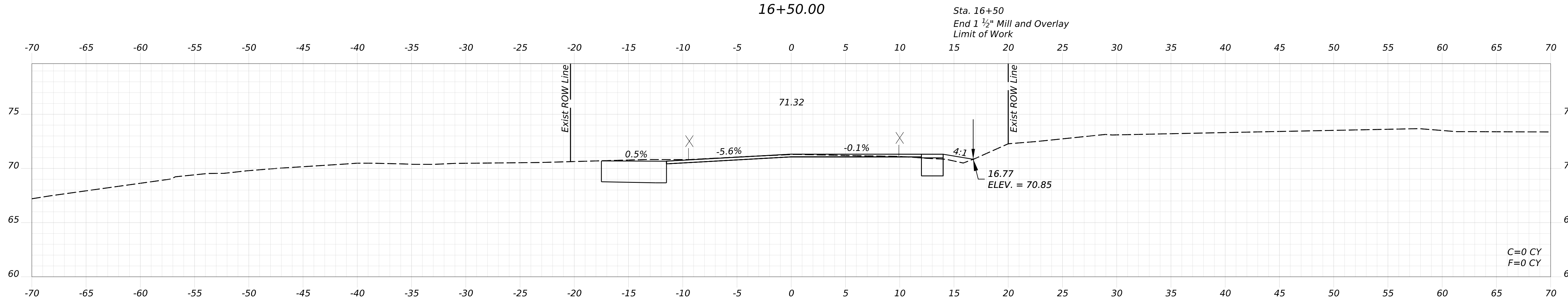
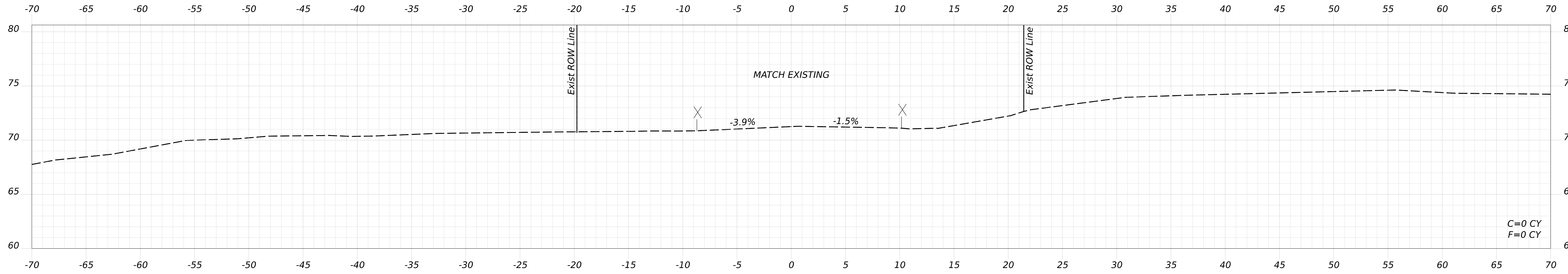
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PBH/ABJ	DEC 2025			
CHECKED-REVIEWED		SAW/R/P				
DESIGN-DETAILED02						
DESIGN-DETAILED03						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PBH/ABJ	DEC 2025			
CHECKED-REVIEWED		SAW/R/P				
DESIGN-DETAILED02						
DESIGN-DETAILED03						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
CROSS SECTIONS

SHEET NUMBER  
**11**  
OF 32



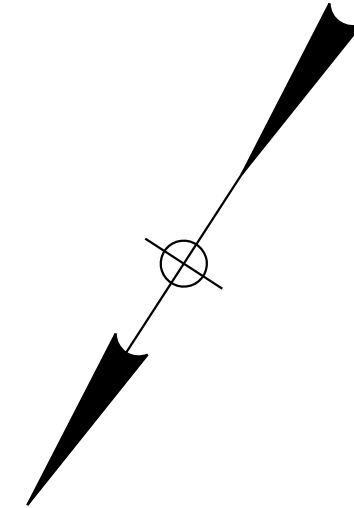


PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PBH/ABJ	DEC 2025			
CHECKED-REVIEWED		SAW/R/P				
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

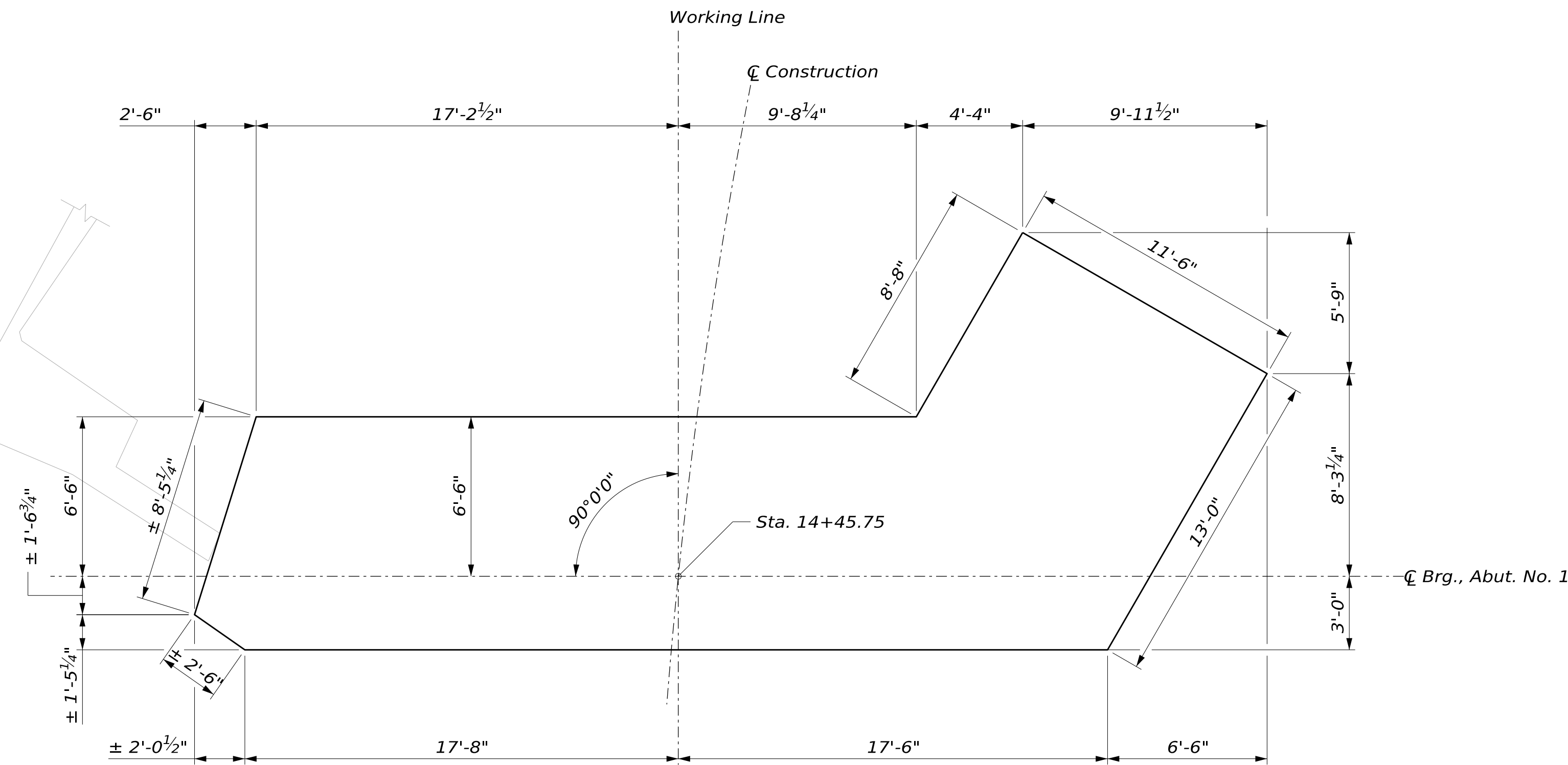
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PBH/ABJ	DEC 2025			
CHECKED-REVIEWED		SAW/R/P				
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
**CROSS SECTIONS**





Existing Dam To Remain,  
See Note 8



ABUTMENT NO. 1 SEAL PLAN

**SEAL COFFERDAM NOTES**

1. When sheet piling is used for seal cofferdams, appropriate rolled corners shall be used, and the inside face of the sheet piling shall be at or outside of the seal concrete dimensions shown.
2. The seal concrete placement dimensions shown represent the minimum seal size necessary to meet design requirements and are not based on the use of any particular sheet pile section.
3. The horizontal pay limit for seal concrete will be to the dimensions shown on the plans. No additional payment will be made for concrete placed outside these limits.
4. The depth of the seal is set for a maximum water surface elevation of EL. 63.10. If the water elevation at the time of construction is higher, the depth of the seal shall be adjusted.
5. Seal concrete shall be placed on bedrock cleaned of weathered rock, loose fractured bedrock, boulders and soil. Where the bedrock surface slope exceeds 4H:1V, the bedrock surface shall be benched in level steps or made completely level. The Resident shall approve the bedrock subgrade prior to the placement of the seal concrete.
6. Where the bedrock protrudes above the bottom of the footing, the footing may be raised and vertical reinforcing may be cut in the field with the approval of the Resident. The minimum footing elevations are shown on the Plans and shall not be lowered without prior approval of the Engineer of Record. Payment for adjusting the footing elevations and reinforcing steel will be considered incidental to related Contract items. No separate payment will be made.
7. At the option of the Resident, bedrock which protrudes above a horizontal plane 12 inches below the proposed bottom of footing elevation may be removed. Payment for bedrock removal shall be made under Item No. 206.092, Structural Rock Excavation - Major Structures.
8. The extents of the existing dam structure are unknown. The dimensions of the adjacent seal, footing, and stem may be adjusted with the approval of the Resident.
9. Seal concrete shall be Class "A".

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

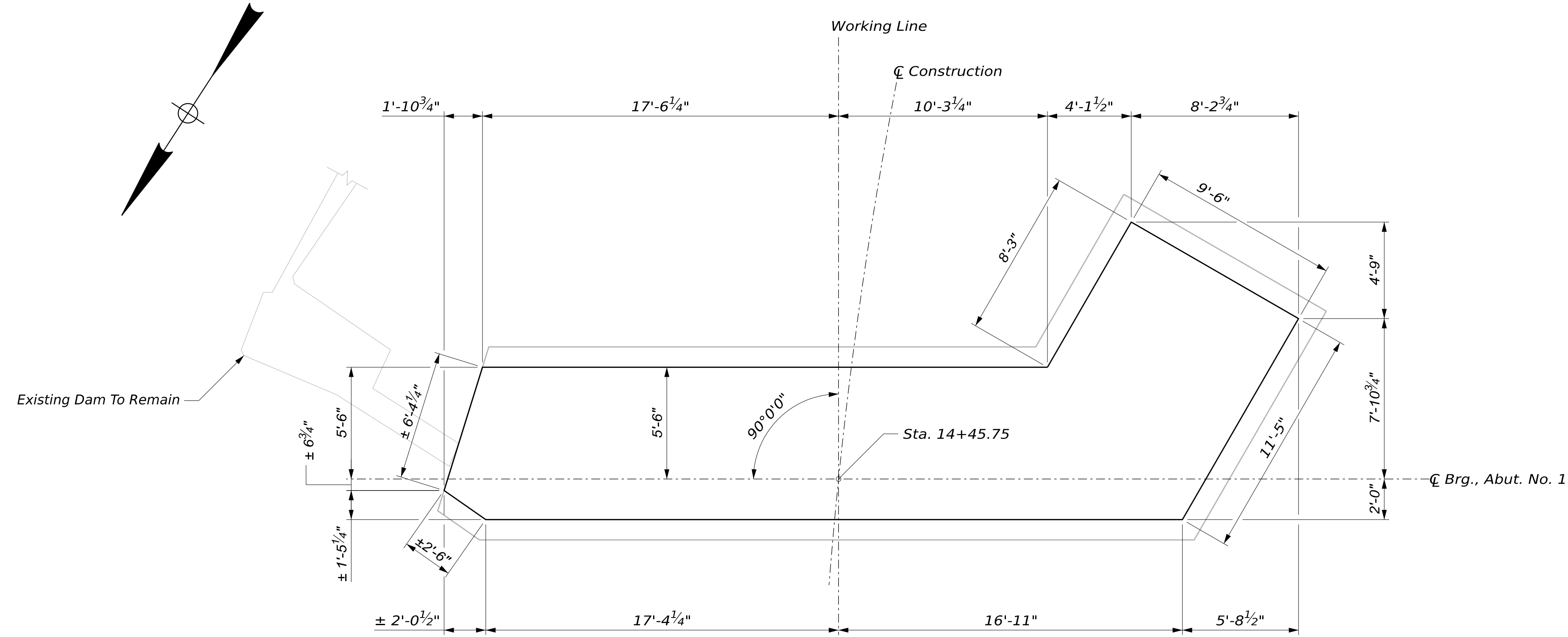
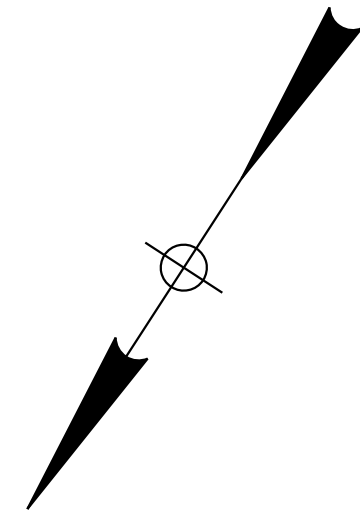
DATE: DEC 2025  
SIGNATURE: \_\_\_\_\_  
P.E. NUMBER: \_\_\_\_\_  
DATE: \_\_\_\_\_

PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	PEH	PEH	DEC 2025
CHECKED-REVIEWED	KLW	SLW	DEC 2025
DESIGN-DETAILED02			
DESIGN-DETAILED03			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

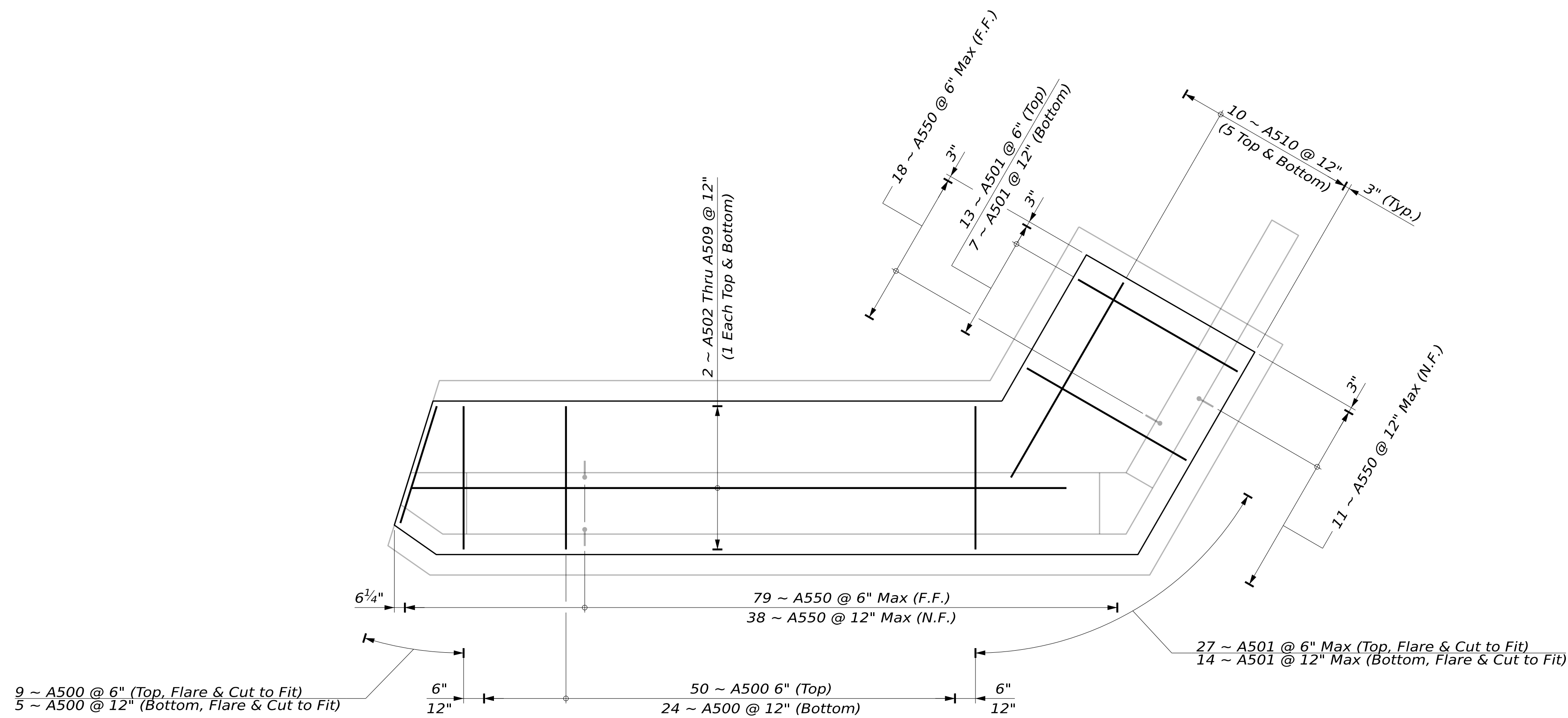
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ABUTMENT NO. 1  
SEAL PLAN

SHEET NUMBER  
**13**  
OF 32





ABUTMENT NO. 1 FOOTING PLAN



ABUTMENT NO. 1 FOOTING REINFORCING PLAN

**ABUTMENT NOTES**

1. The maximum factored applied footing pressure is 12.6 ksf at the Strength I Limit State.
2. Abutments, wingwalls, and their footings shall be backfilled with Granular Borrow. Pay limits will be the structural excavation limits in cut areas and a vertical plane located 10 feet behind the walls in fill areas.
3. Reinforcing steel shall have a minimum concrete cover of 2 inches in the walls and 3 inches in the footings unless otherwise noted.
4. Place 4-in. diameter drains in the breastwall and wingwalls at 10-ft maximum spacing. The exact location will be determined by the Resident.
5. Place the parapet portions of the wingwalls after erection of the precast units.
6. Cover joints where waterstops are not required in accordance with Standard Details Section 502.

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

PROJ. MANAGER  
DESIGN-DETAILED  
CHECKED-REVIEWED  
DESIGN-DETAILED02  
DESIGN-DETAILED03  
REVISIONS 1  
REVISIONS 2  
REVISIONS 3  
REVISIONS 4  
FIELD CHANGES

BY  
PBH  
SLW

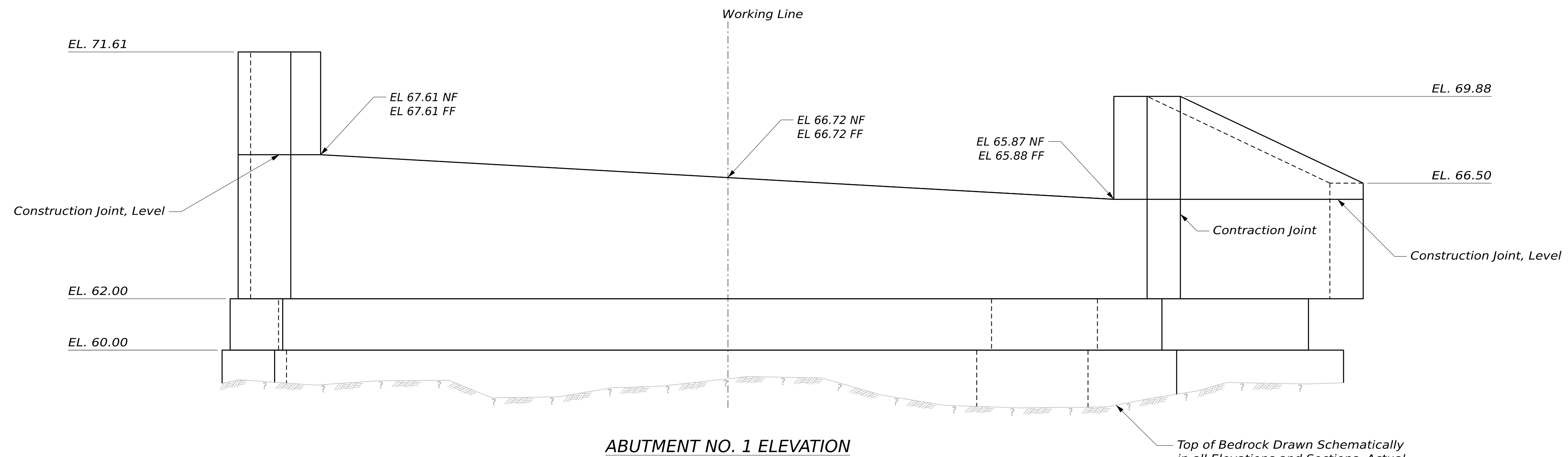
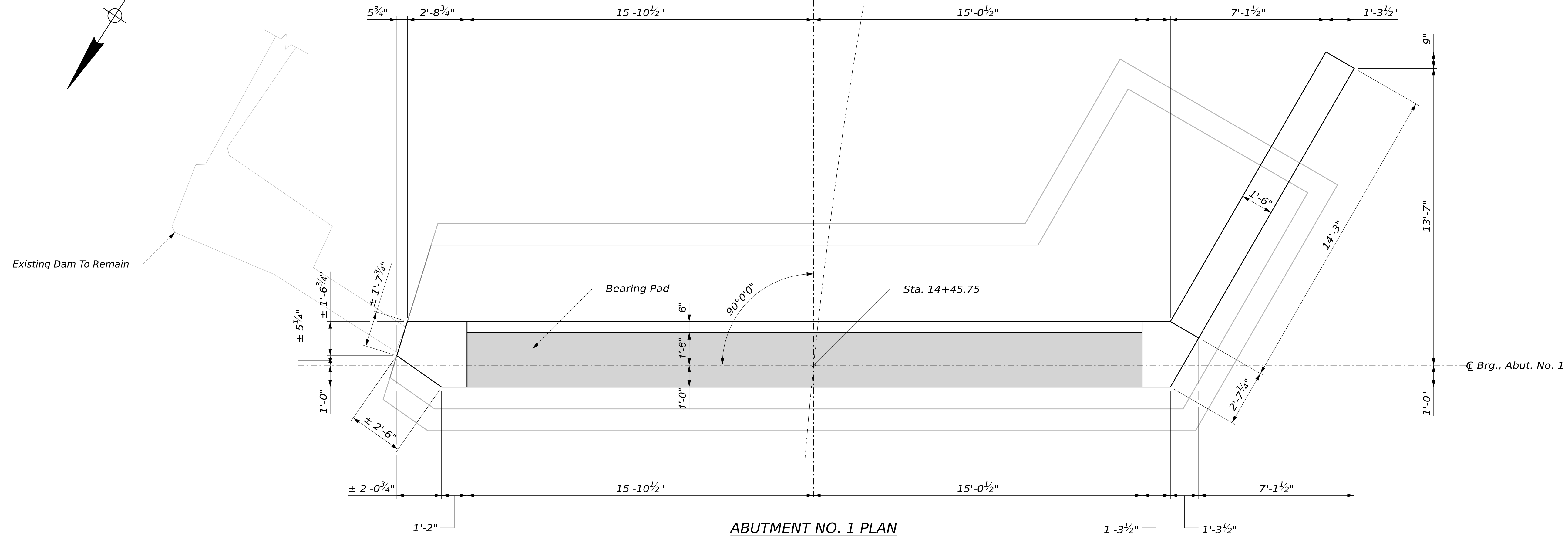
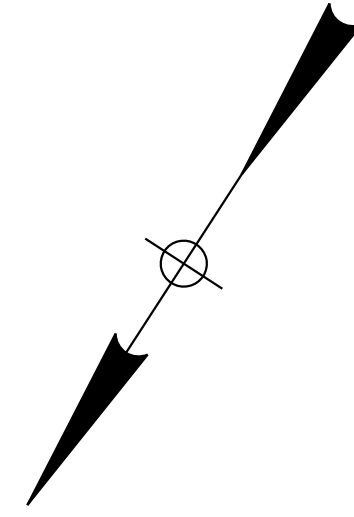
DATE  
DEC 2025  
DEC 2025

SIGNATURE  
P.E. NUMBER  
DATE

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ABUTMENT NO. 1  
FOOTING PLAN

SHEET NUMBER  
**14**  
OF 32





STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

PROJ. MANAGER	DATE
DESIGN-DETAILED	DEC 2025
CHECKED-REVIEWED	DEC 2025
DESIGN-DETAILED 2	
DESIGN-DETAILED 3	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

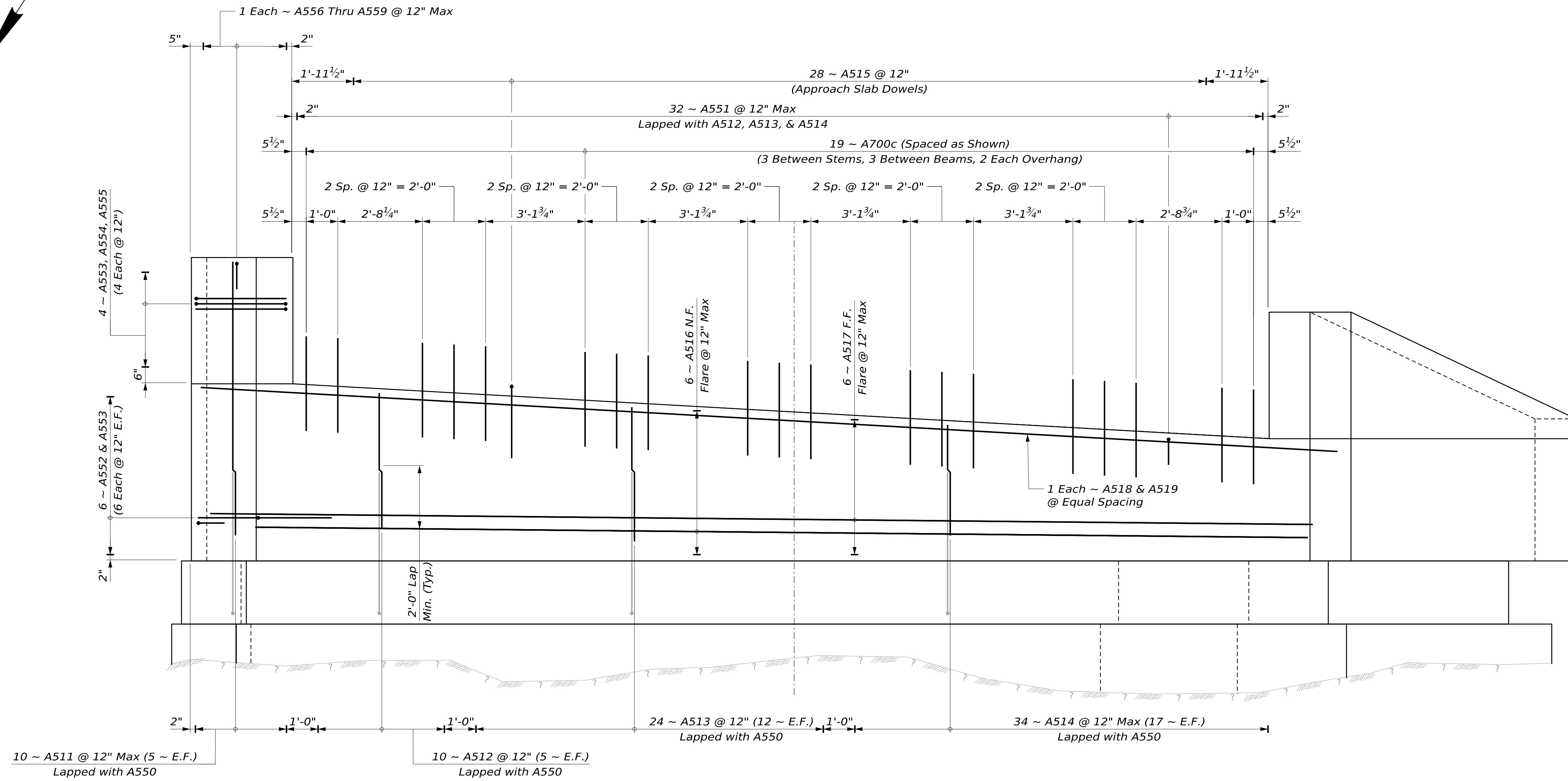
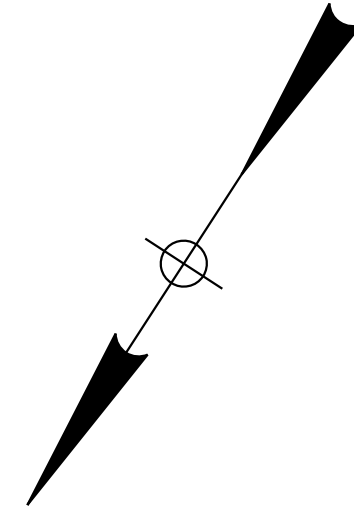
BY	SIGNATURE
PBH	
SLW	
M. WIGHT	P.E. NUMBER
DATE	DATE

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
**ABUTMENT NO. 1  
PLAN AND ELEVATION**

SHEET NUMBER  
**15**  
OF 32



Username: pharriman Date: 12/2/2025



ABUTMENT NO. 1 REINFORCING ELEVATION

Date: 12/2/2025

Username: pharriman

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PHH	DEC 2025			
CHECKED-REVIEWED		SLW				
DESIGN-DETAILED 2						
DESIGN-DETAILED 3						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

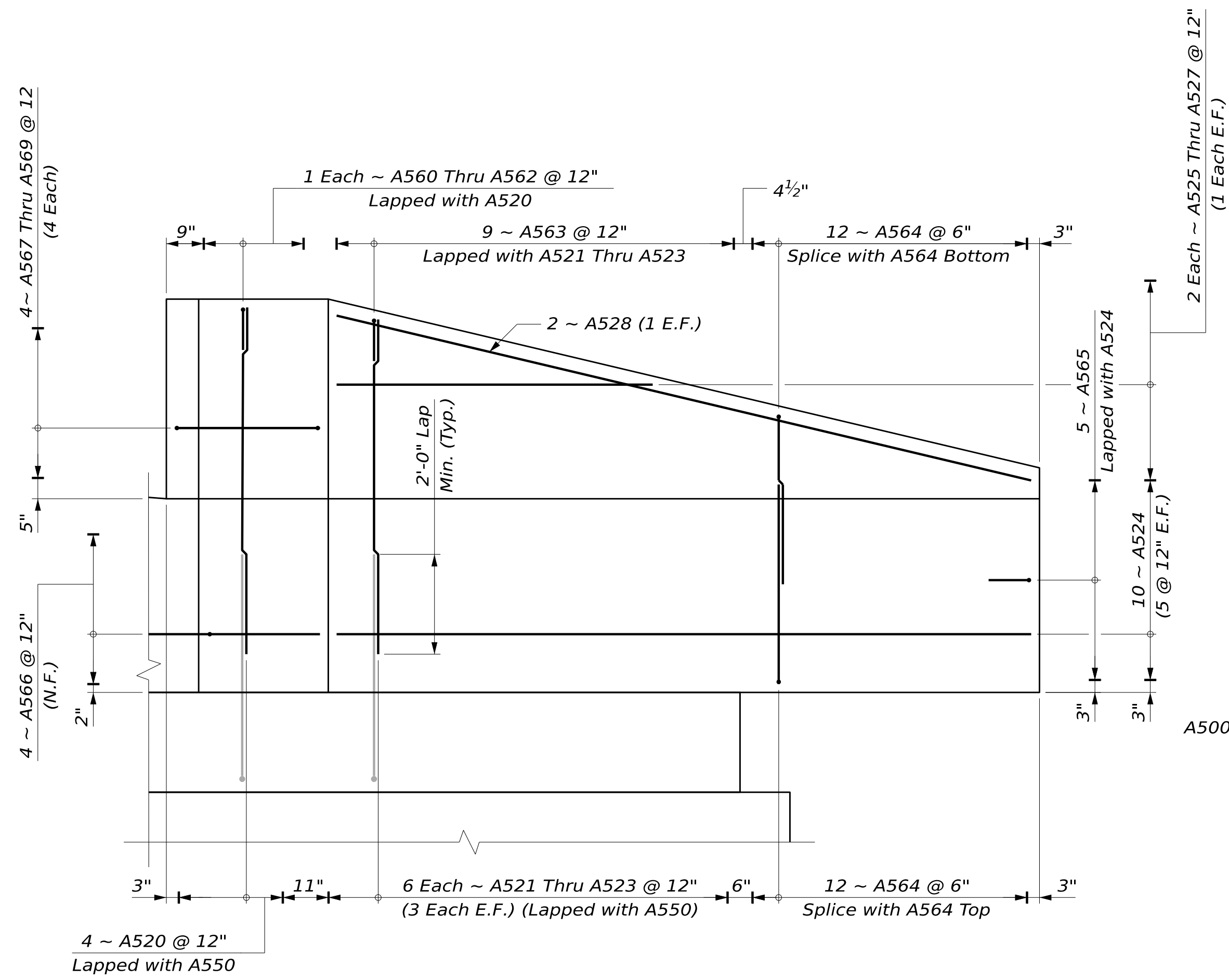
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ABUTMENT NO. 1  
REINFORCING ELEVATION

SHEET NUMBER

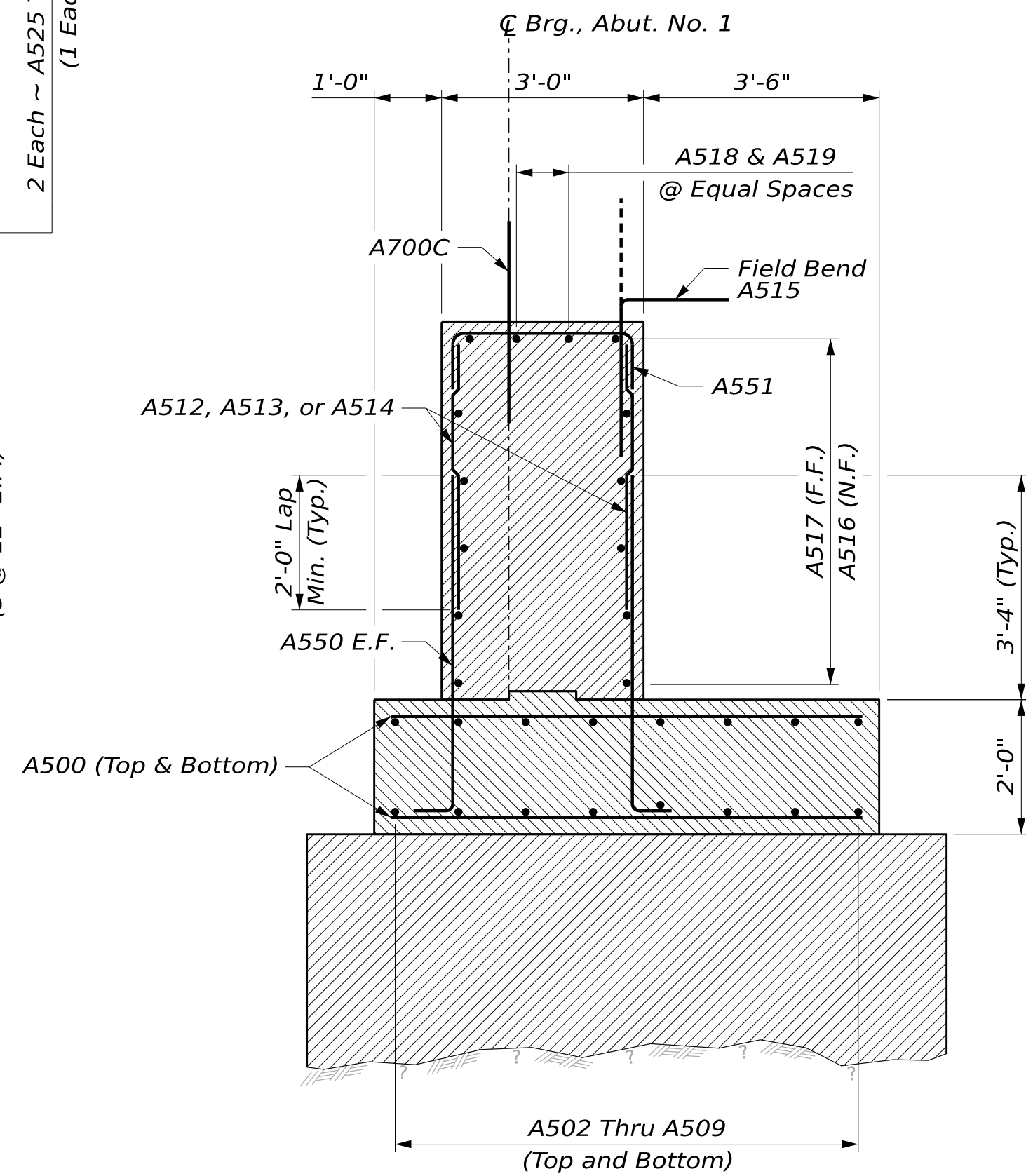
16

OF 32

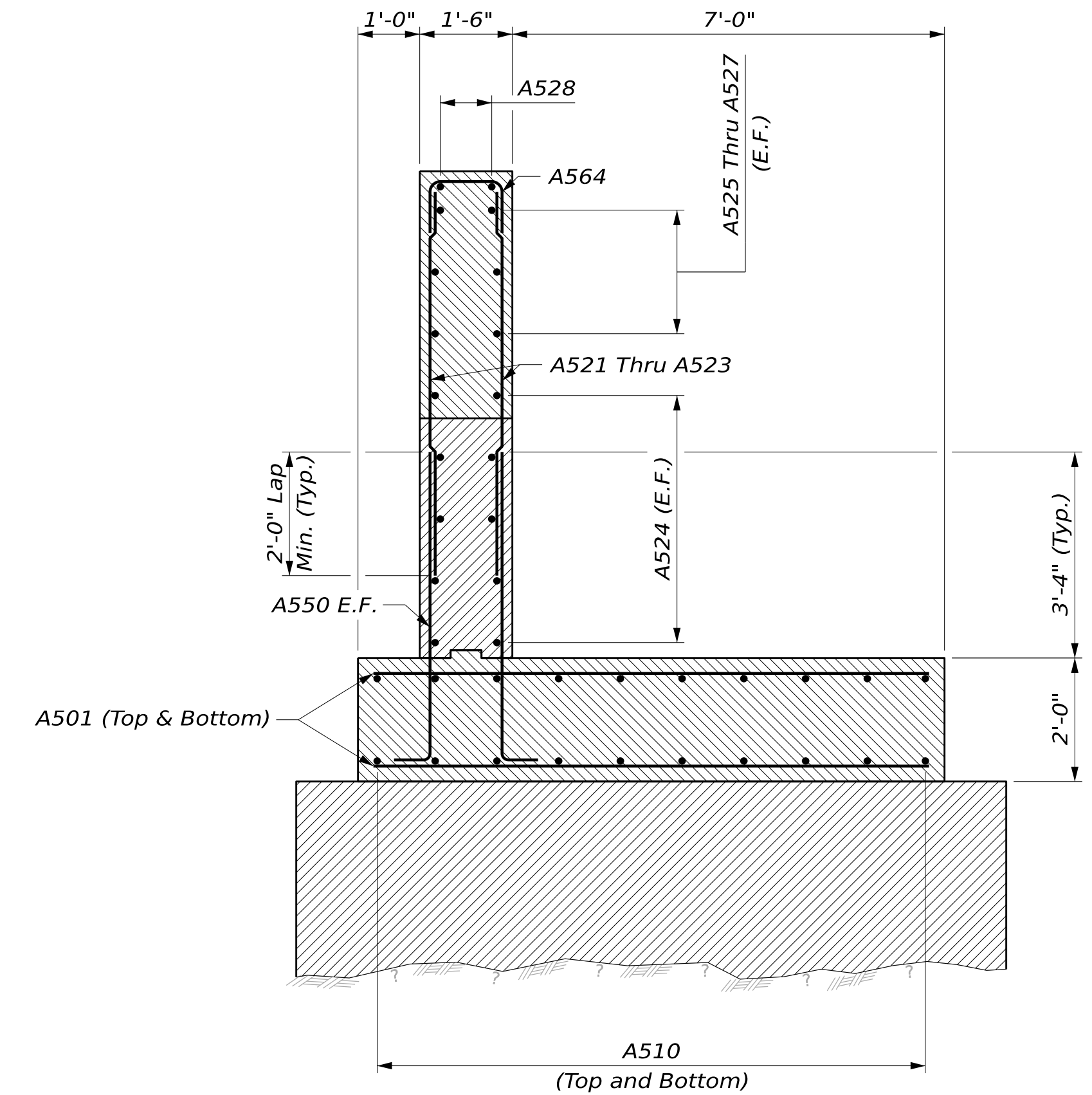




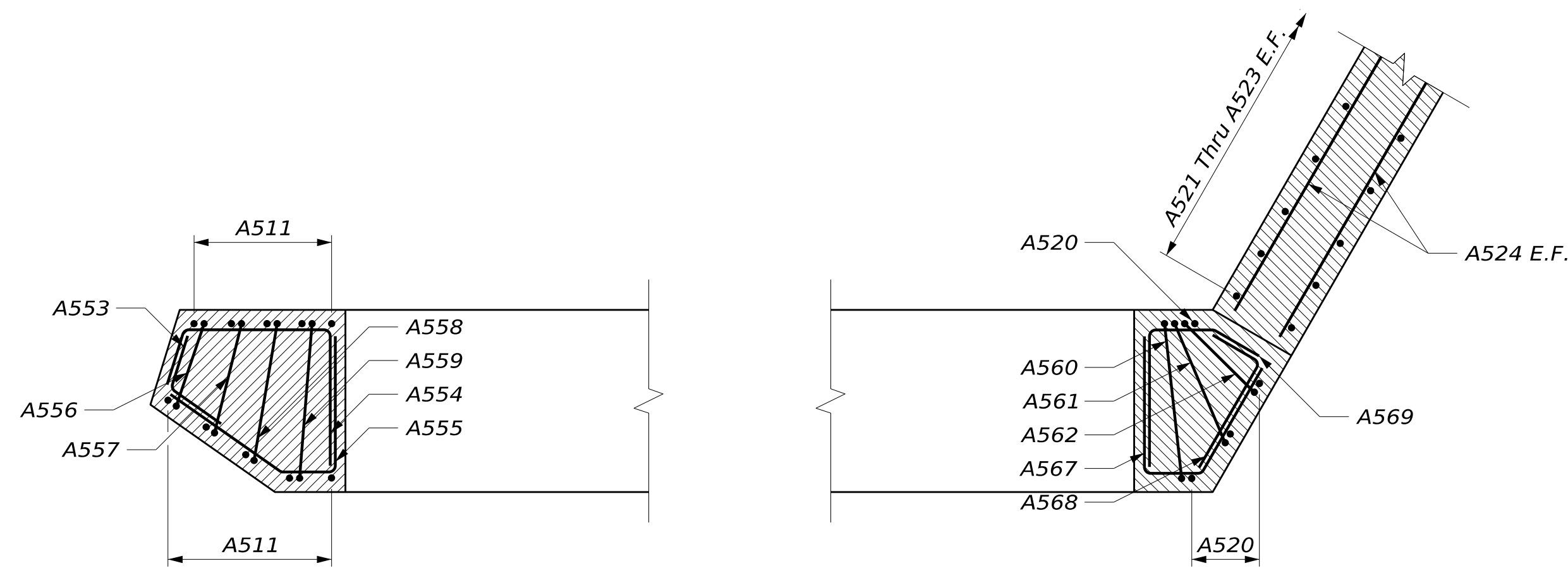
**SOUTH WINGWALL REINFORCING ELEVATION**



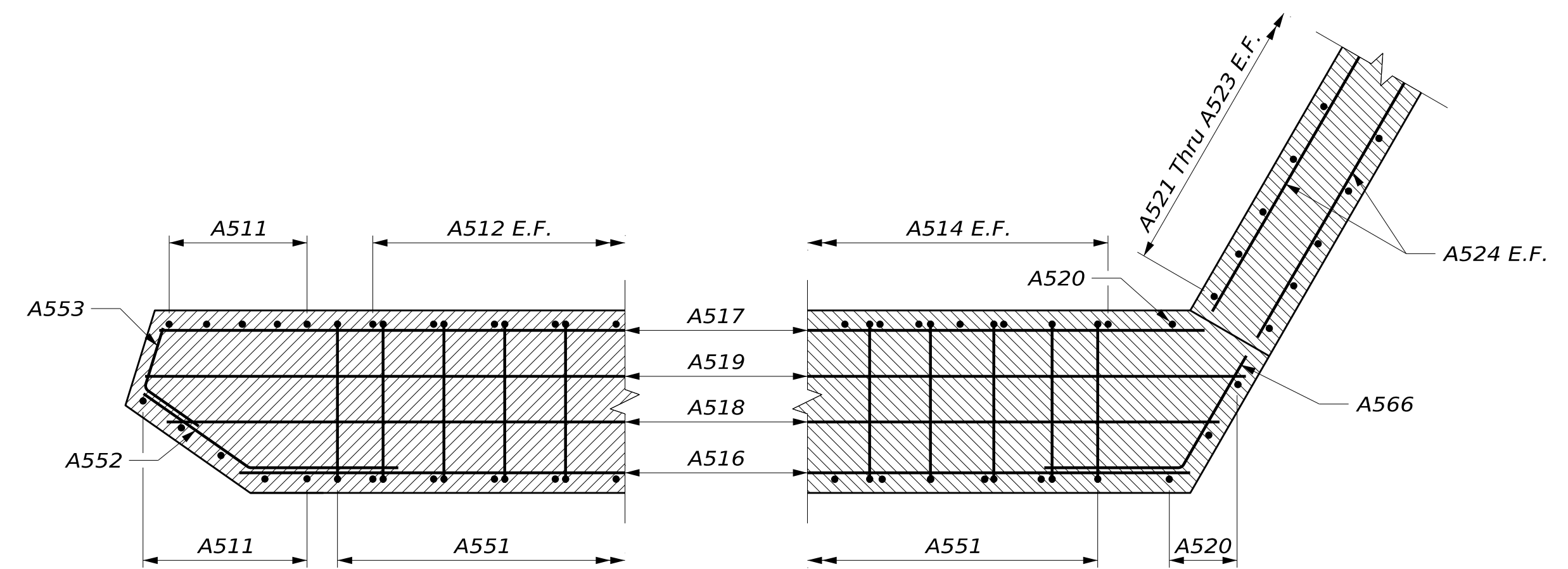
**ABUTMENT NO. 1 SECTION**



**SOUTH WINGWALL SECTION**

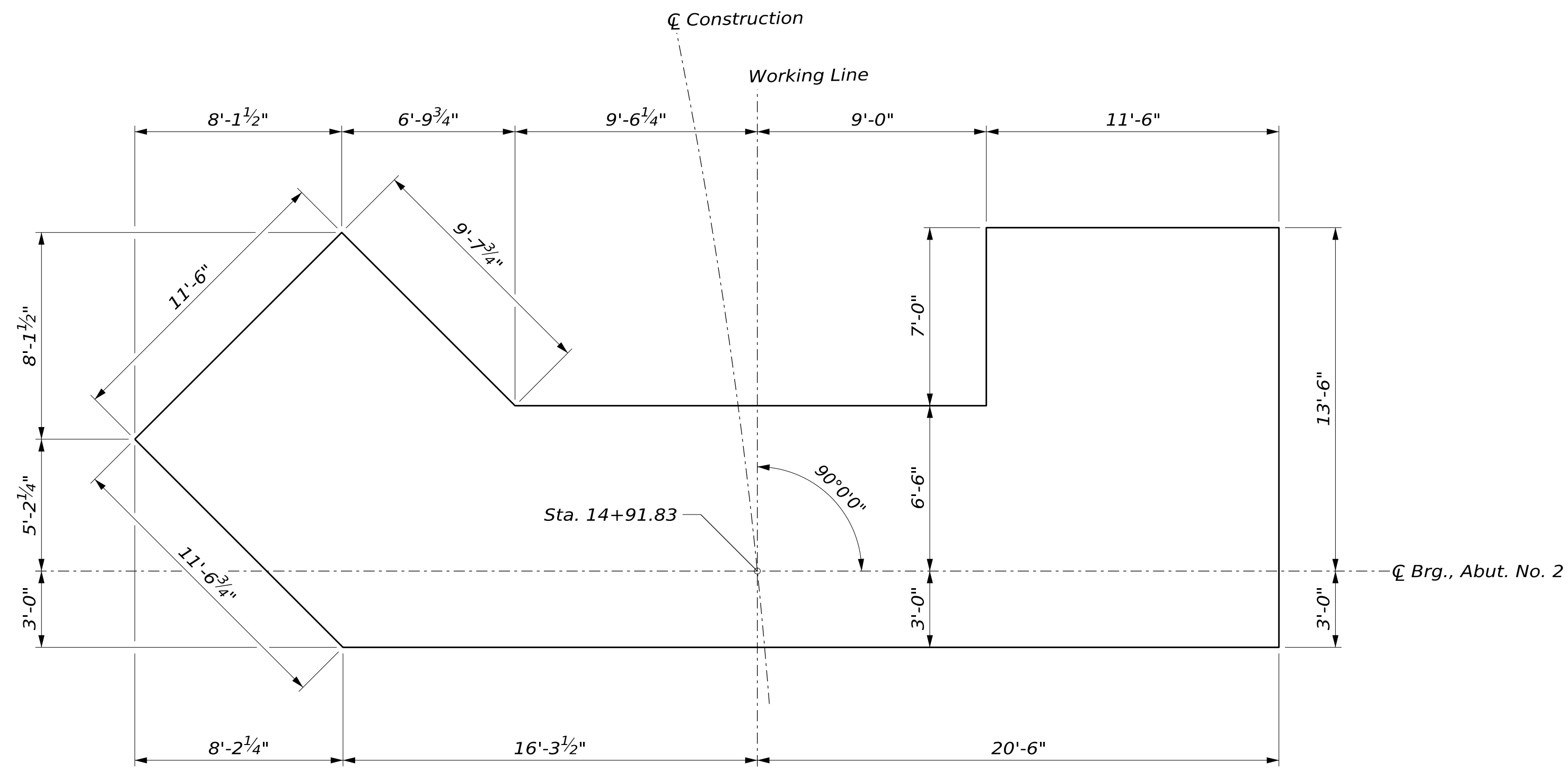
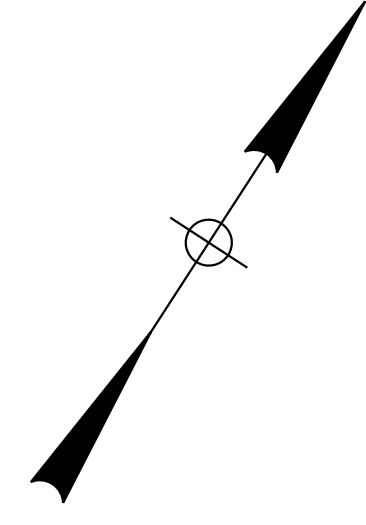


**CORNER REINFORCING ABOVE BEAM SEAT**



**CORNER REINFORCING BELOW BEAM SEAT**

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE
DESIGN-DETAILED	DEC 2025	PHH	DEC 2025	
CHECKED-REVIEWED		SLW		
DESIGN-DETAILED				
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				



ABUTMENT NO. 2 SEAL PLAN

Username: pharriman Date: 12/2/2025

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

SIGNATURE  
P.E. NUMBER  
DATE

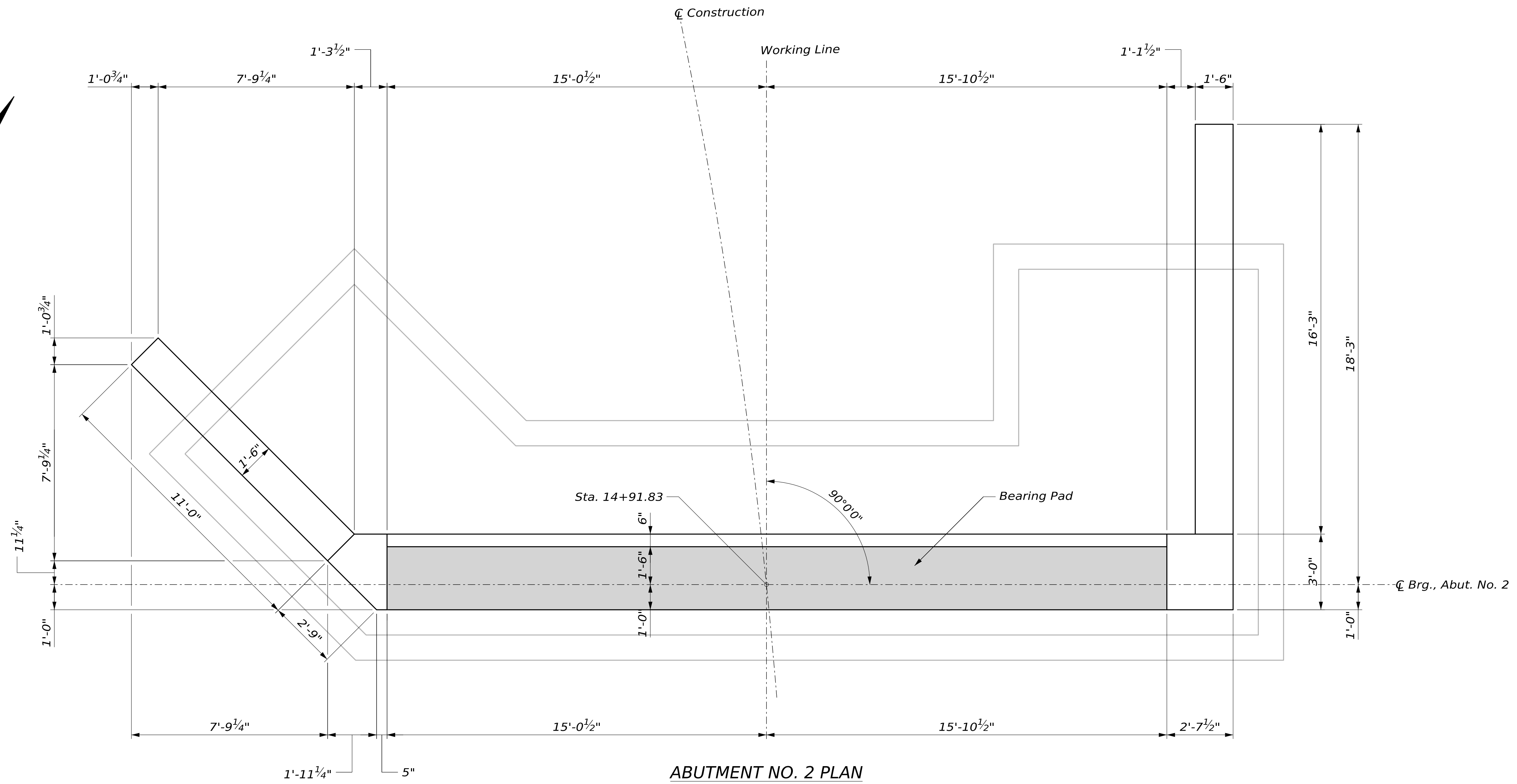
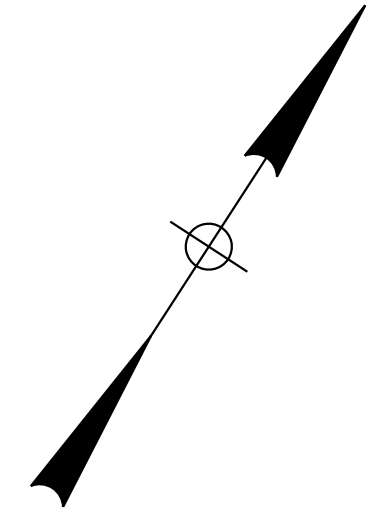
PROJ. MANAGER	M. WIGHT	BY	DATE
DESIGN-DETAILED	PEH	PEH	DEC 2025
CHECKED-REVIEWED	KLW	SLW	DEC 2025
DESIGN-DETAILED 02			
DESIGN-DETAILED 03			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ABUTMENT NO. 2  
SEAL PLAN

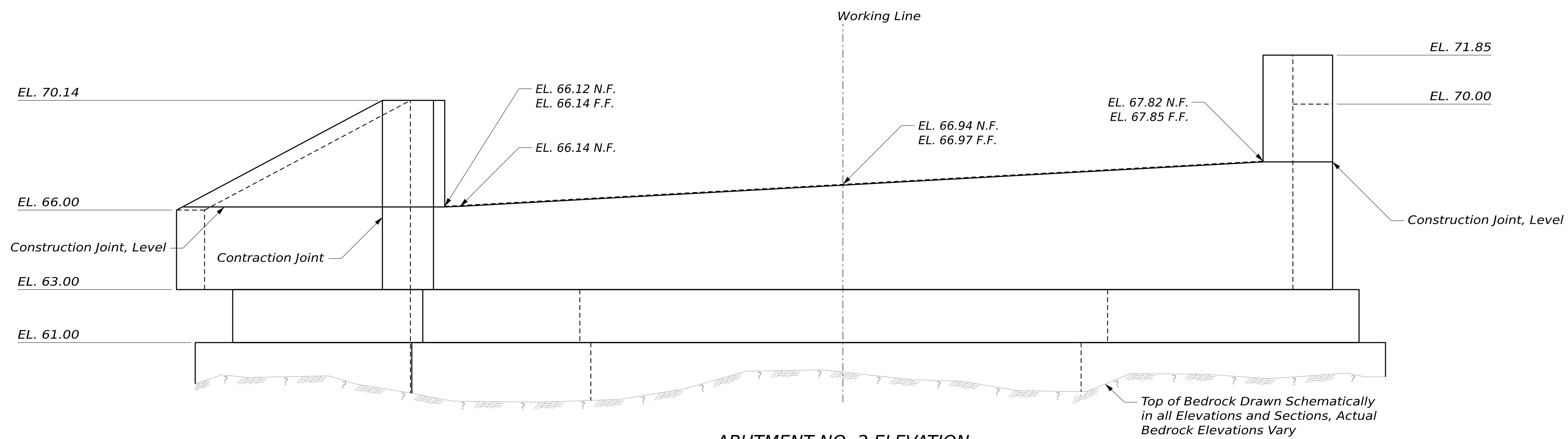
SHEET NUMBER  
**18**  
OF 32







ABUTMENT NO. 2 PLAN



ABUTMENT NO. 2 ELEVATION

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

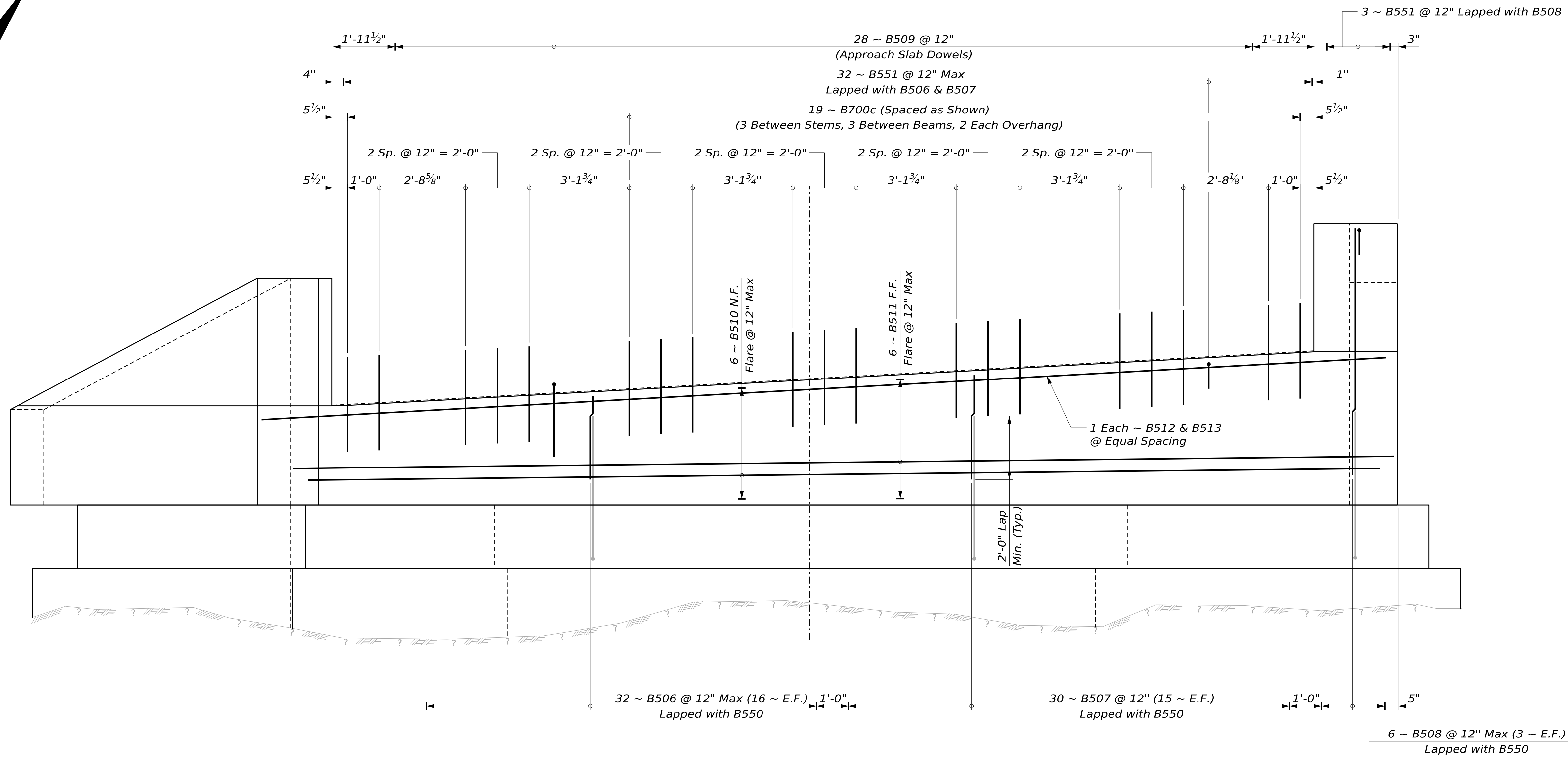
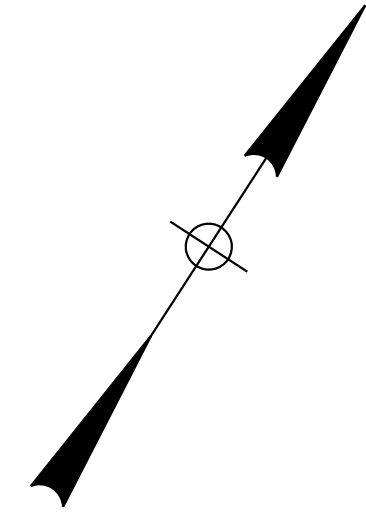
PROJ. MANAGER	DATE
DESIGN-DETAILED	DEC 2025
CHECKED-REVIEWED	DEC 2025
DESIGN-DETAILED02	
DESIGN-DETAILED03	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

BY	SIGNATURE
DATE	P.E. NUMBER
	DATE

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ABUTMENT NO. 2  
PLAN AND ELEVATION

SHEET NUMBER  
**20**  
OF 32





**ABUTMENT NO. 2 REINFORCING ELEVATION**

Date: 12/2/2025

Username: pharriman

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

PROJ. MANAGER  
DESIGN-DETAILED  
CHECKED-REVIEWED  
DESIGN-DETAILED02  
DESIGN-DETAILED03  
REVISIONS 1  
REVISIONS 2  
REVISIONS 3  
REVISIONS 4  
FIELD CHANGES

DATE	BY	M. WIGHT	DATE
DEC 2025	PHH	PHH	DEC 2025
DEC 2025	SLW	SLW	

SIGNATURE  
P.E. NUMBER  
DATE

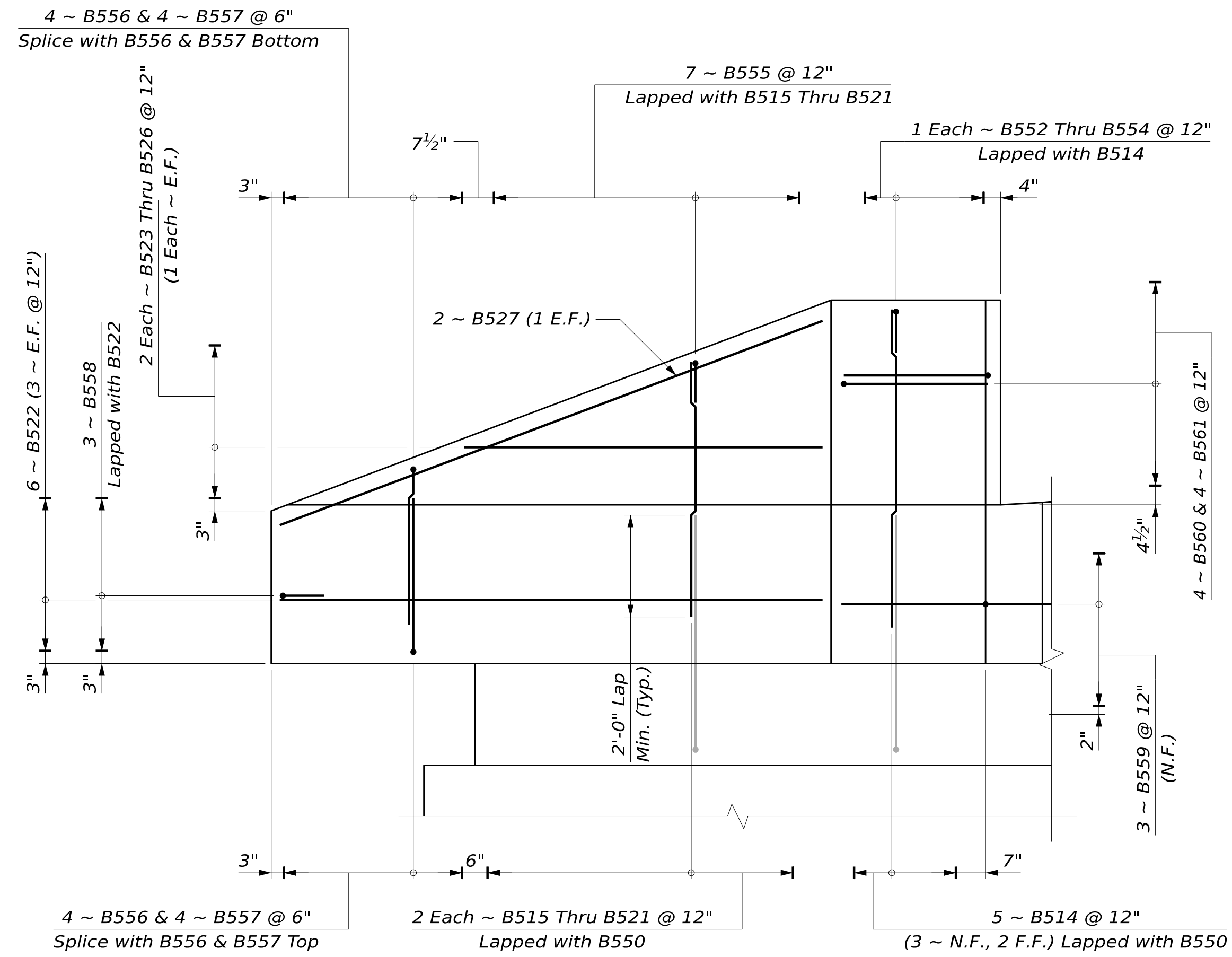
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
**ABUTMENT NO. 2  
REINFORCING ELEVATION**

SHEET NUMBER

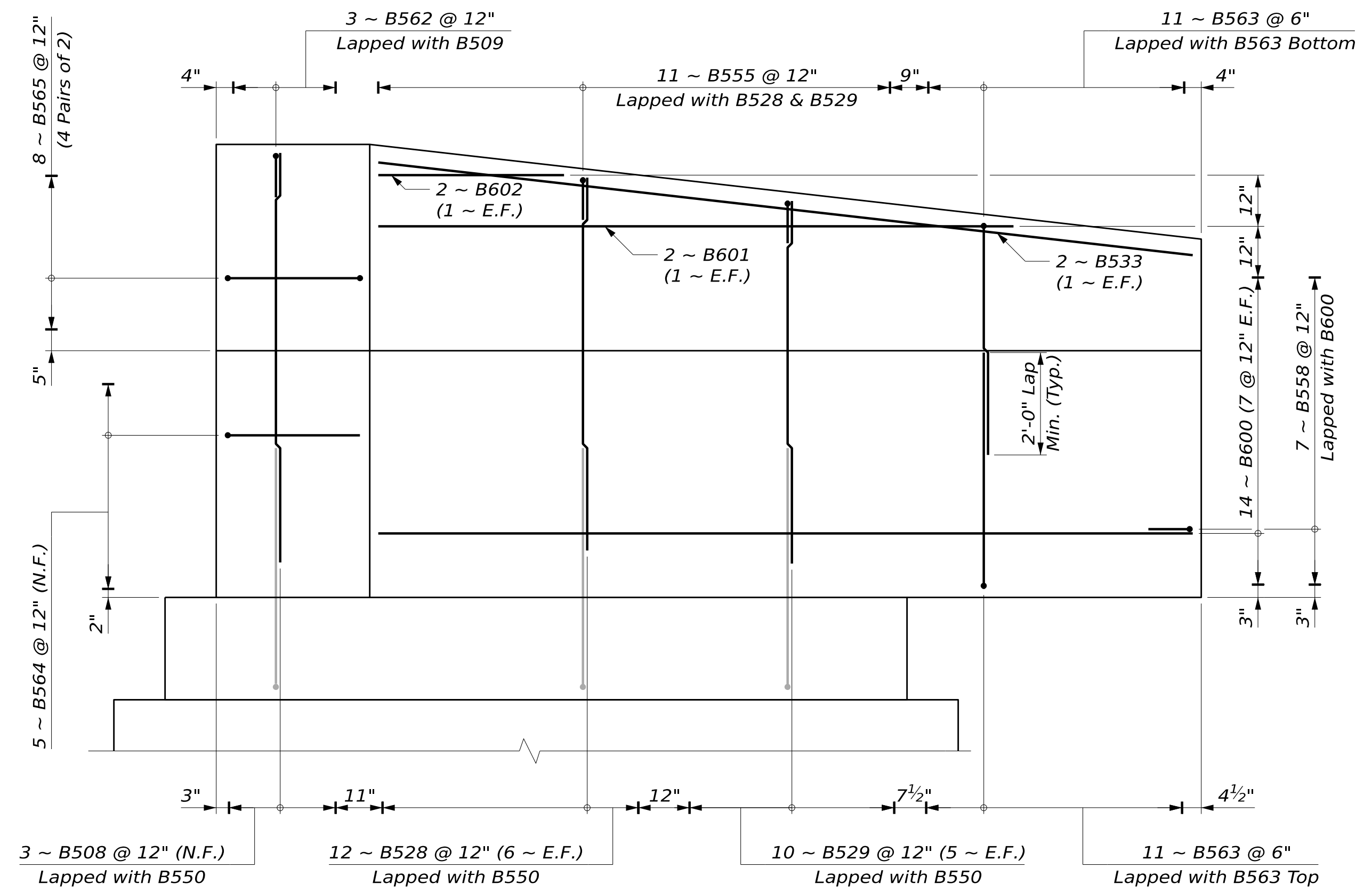
21

OF 32





WEST WINGWALL REINFORCING ELEVATION



NORTH WINGWALL REINFORCING ELEVATION

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PHH	DEC 2025			
CHECKED-REVIEWED		ELW				
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

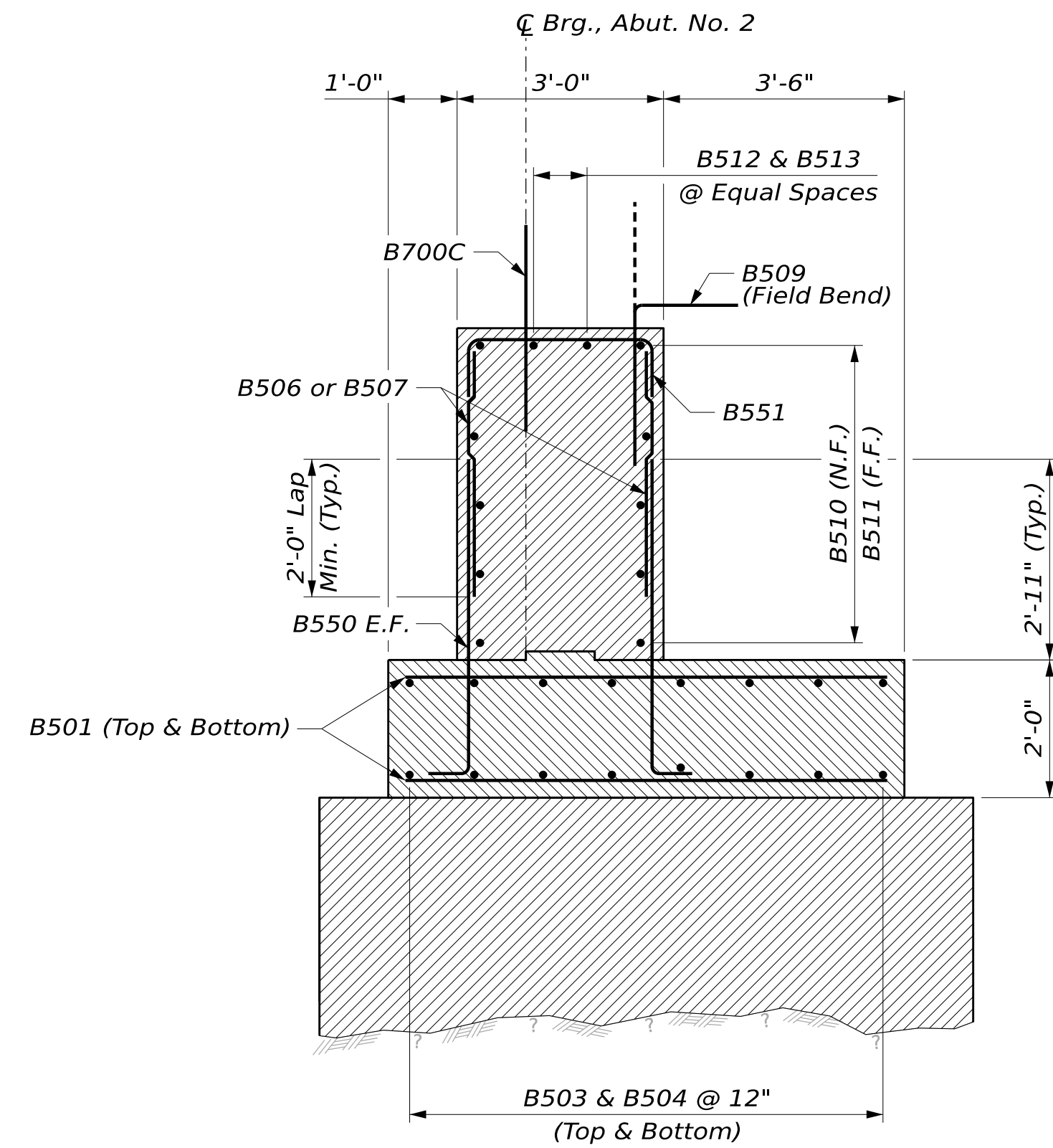
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ABUTMENT NO. 2  
WINGWALL REINFORCING

SHEET NUMBER

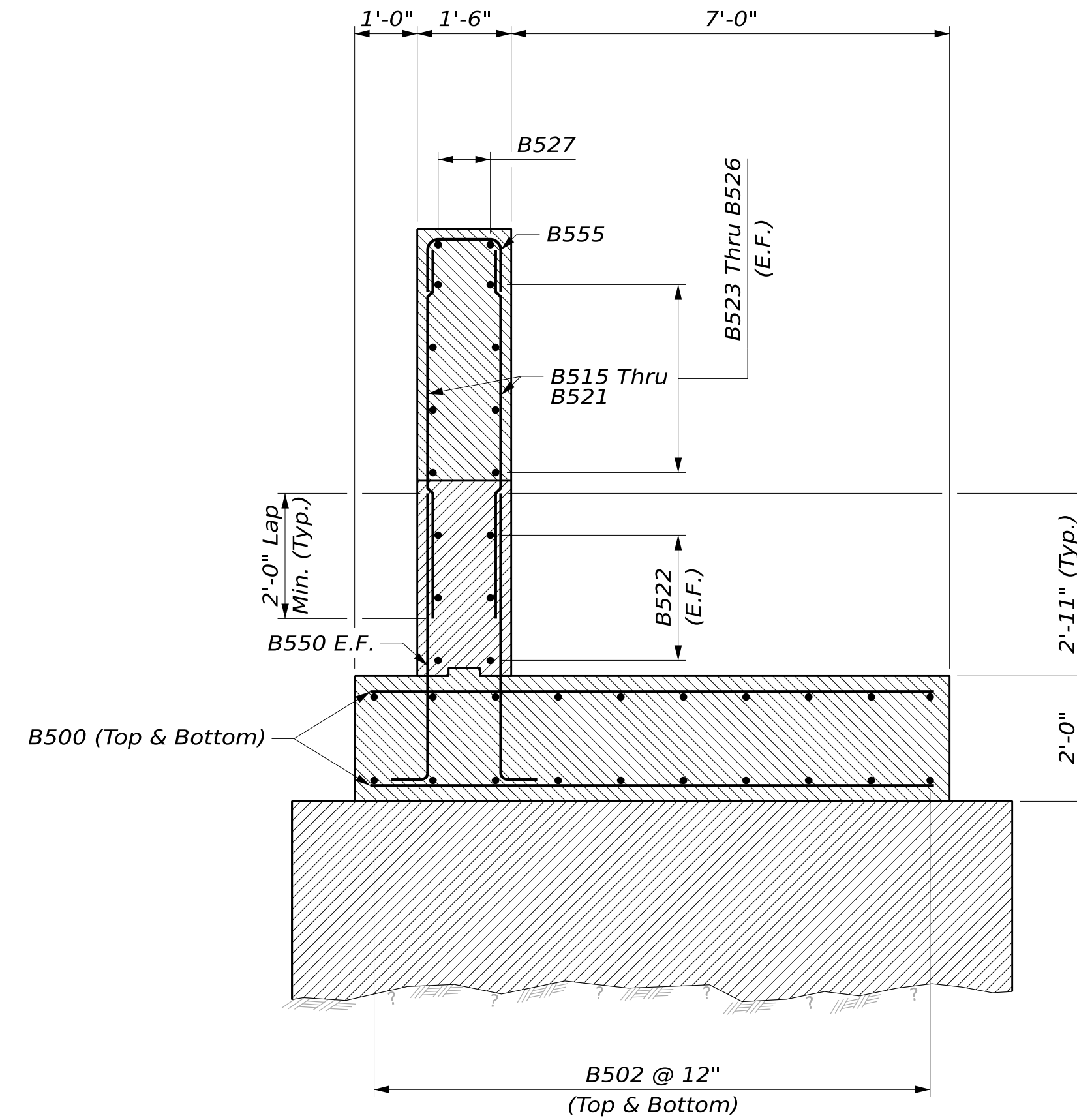
22

OF 32

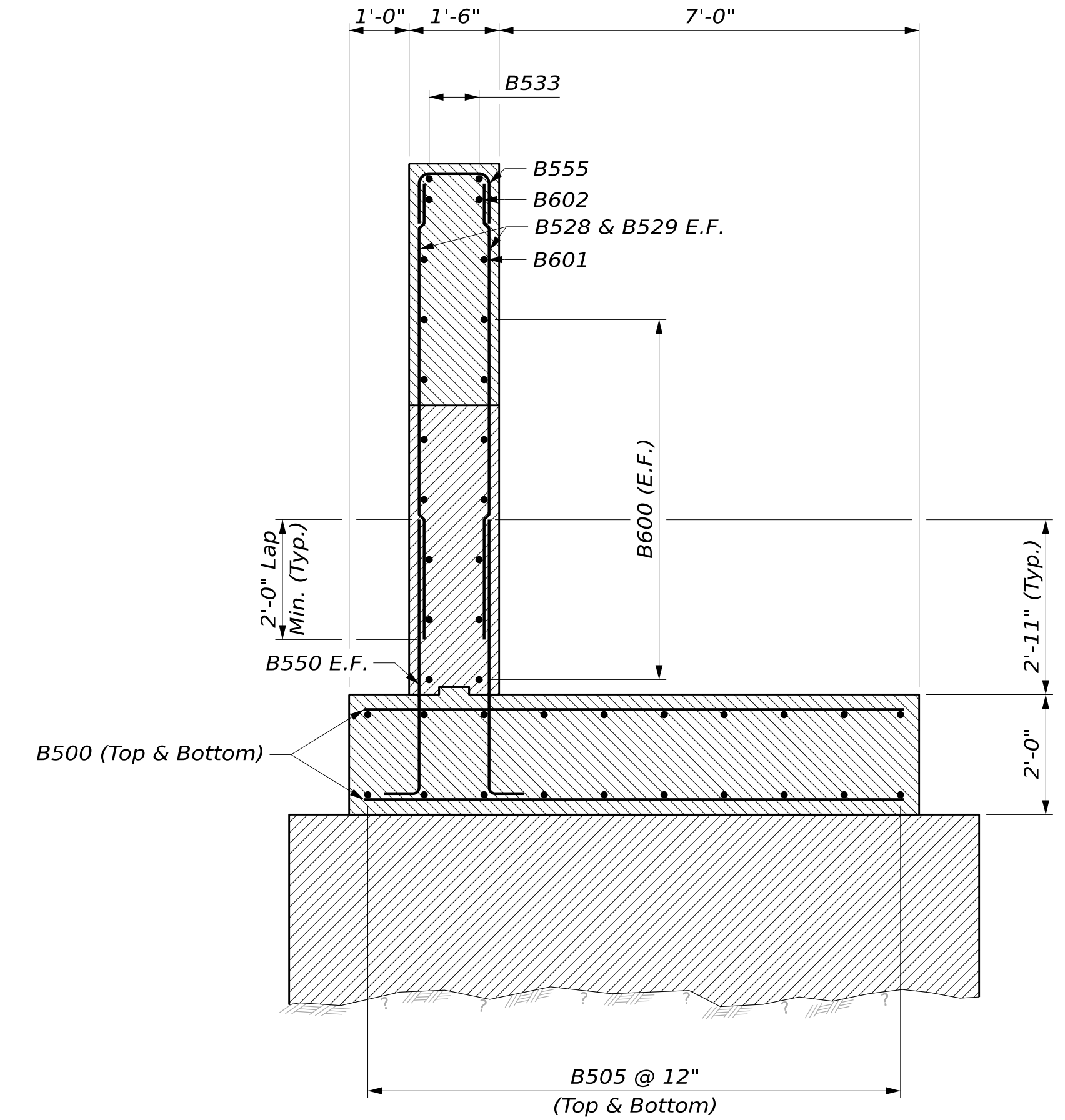




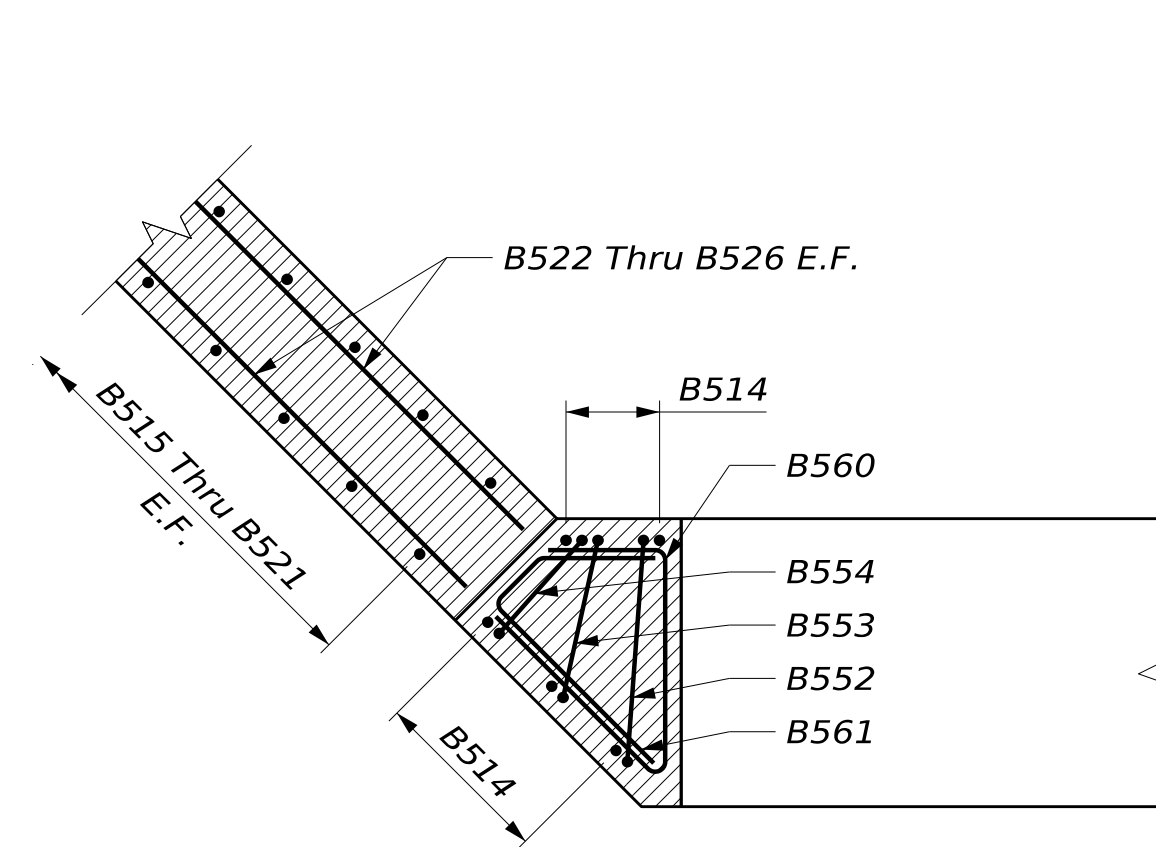
ABUTMENT NO. 2 SECTION



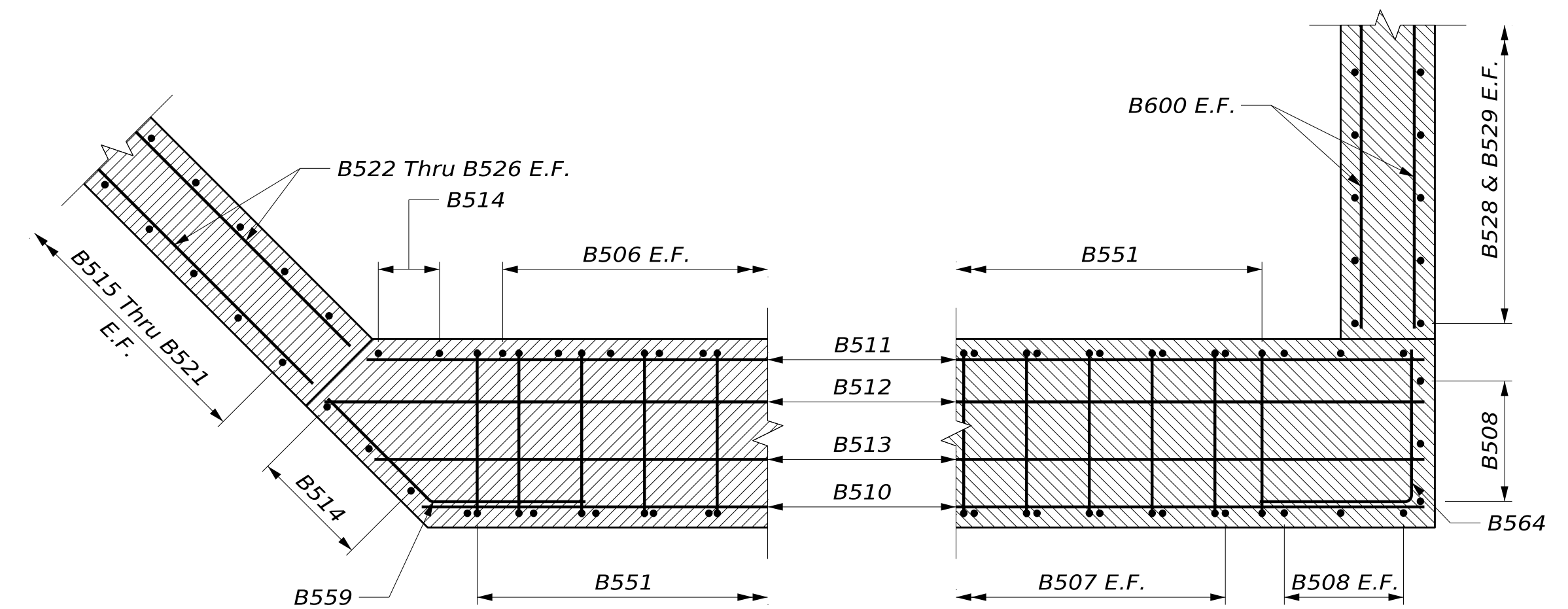
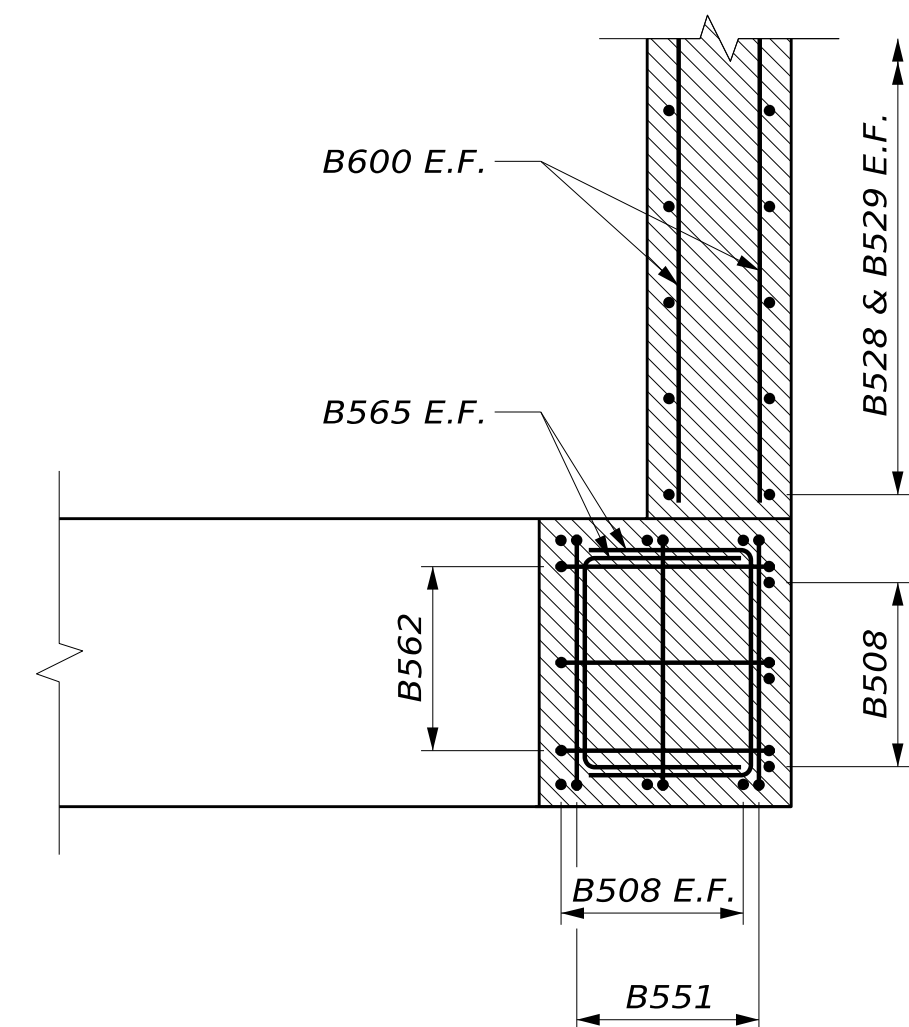
WEST WINGWALL SECTION



NORTH WINGWALL SECTION



CORNER REINFORCING ABOVE BEAM SEAT

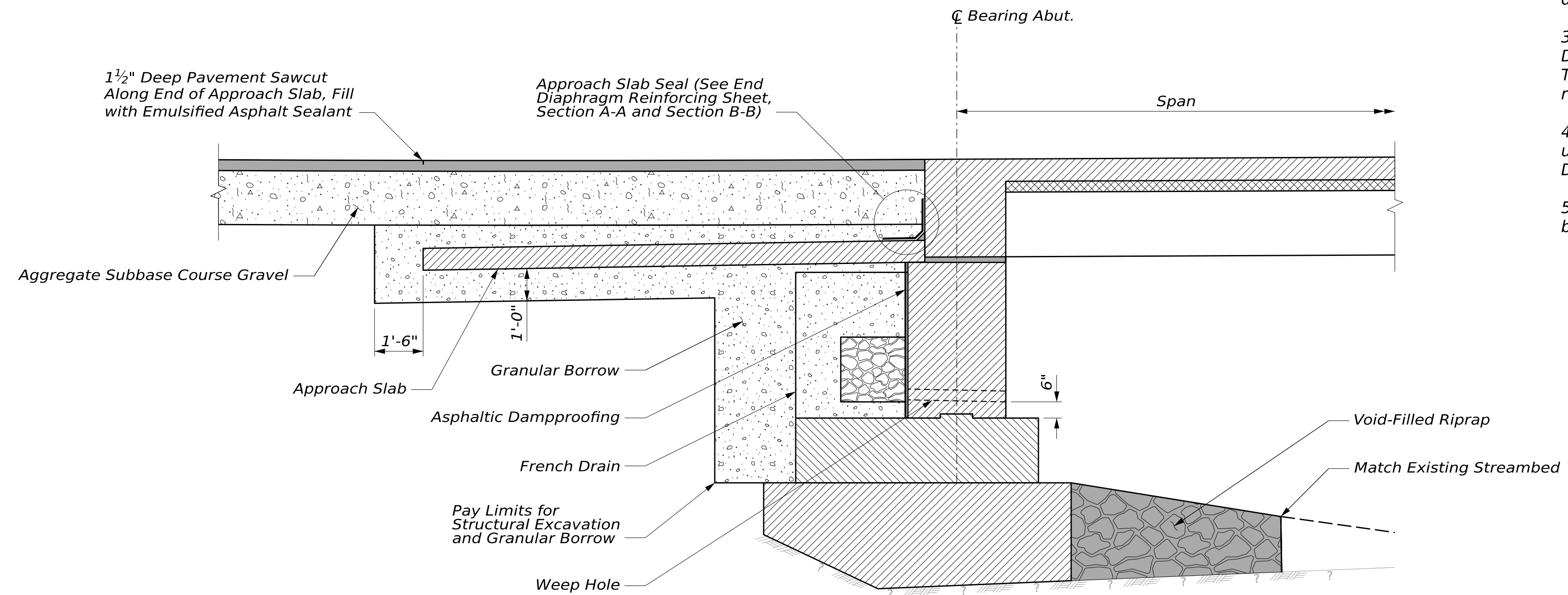
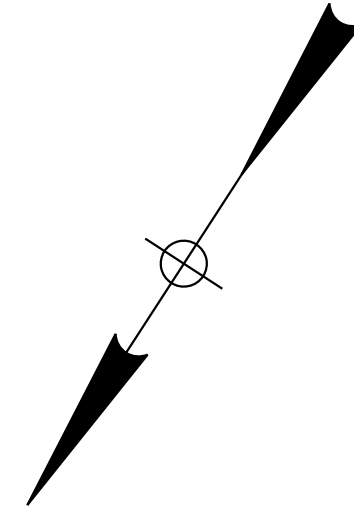


CORNER REINFORCING BELOW BEAM SEAT

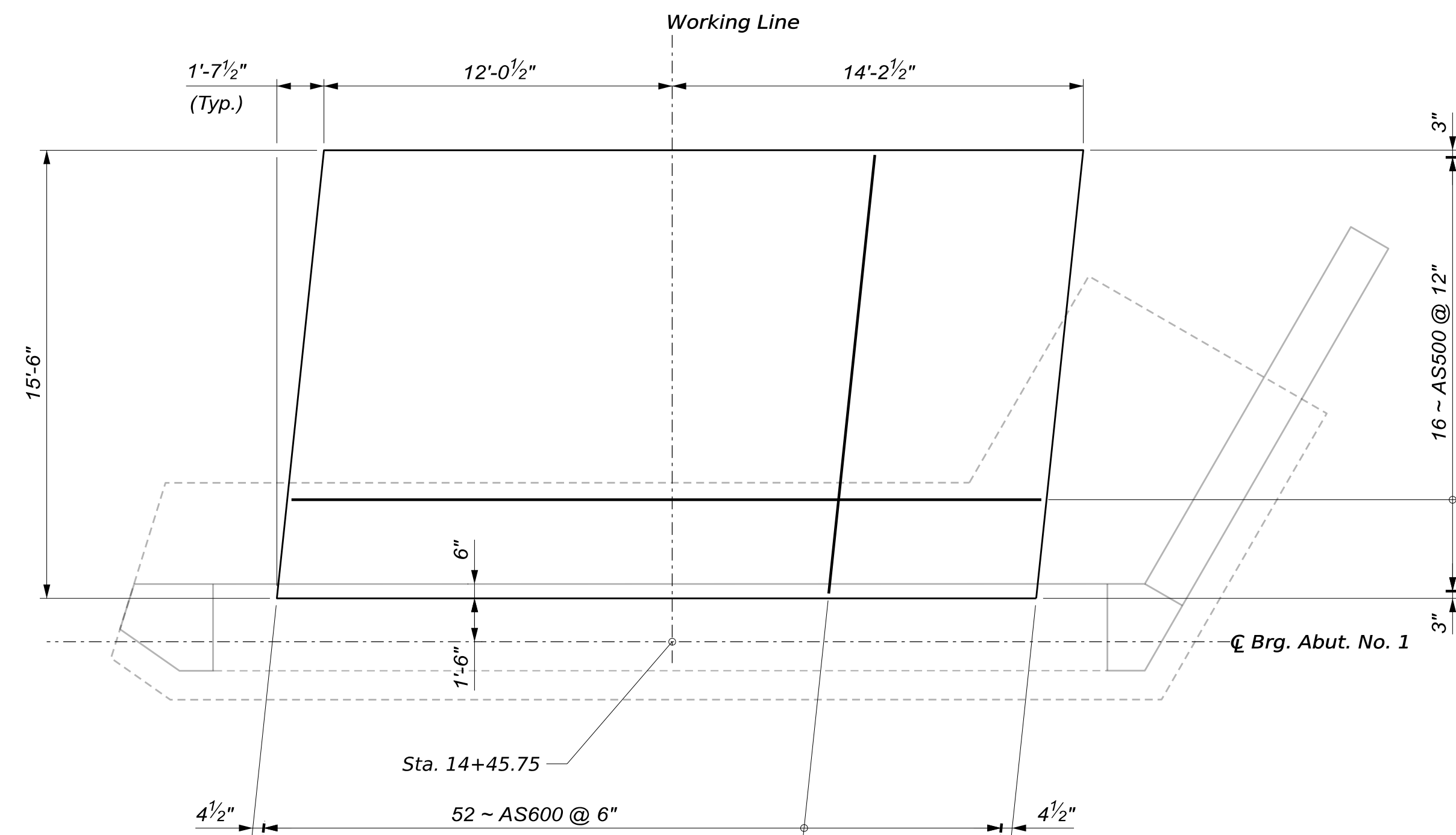
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PEH	DEC 2025			
CHECKED-REVIEWED	DEC 2025	SAW				
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
ABUTMENT NO. 2 SECTIONS





**ABUTMENT BACKFILL DETAIL**



**APPROACH SLAB**

(Abut. No. 1 Shown, Abut. No. 2 Opposite Hand)

**NOTES:**

1. Transverse sawcuts in the pavement at the ends of the approach slabs shall be sealed with emulsified asphalt sealing compound conforming to Specification 702.12. The sawcut and emulsified sealing will not be paid for directly, but shall be considered incidental to related Contract Items.
2. Payment for mortared chamfer at approach slabs will not be made directly and shall be considered incidental to related Contract Items.
3. Asphalt Dampproofing shall meet the requirements of either ASTM D449 Type II, ASTM D1227 Type II-Class I, or ASTM D1227 Type III-Class I. The product shall be applied in accordance with the manufacturer's recommendations.
4. Asphalt Dampproofing shall be applied to the backside of the wingwalls up to 1 foot below grade, in addition to the locations shown on End Diaphragm Reinforcing Sheet Section A-A & Section B-B.
5. Payment for Asphalt Dampproofing will not be made directly and shall be considered incidental to related Contract Items.

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PEH	DEC 2025			
CHECKED-REVIEWED	DEC 2025	ELW	DEC 2025			
DESIGN-DETAILED 02						
DESIGN-DETAILED 03						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
**ABUTMENT DETAILS**

SHEET NUMBER

**24**

OF 32



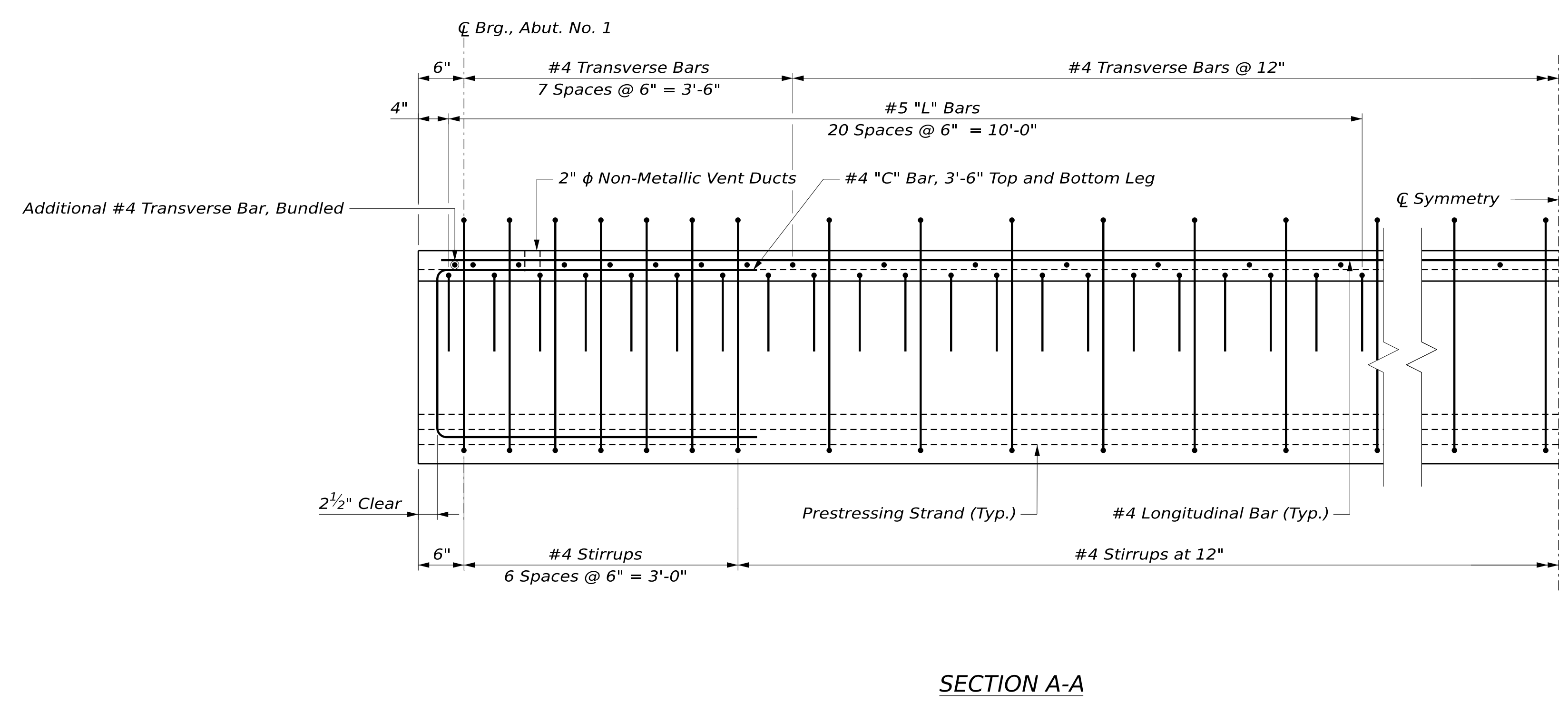
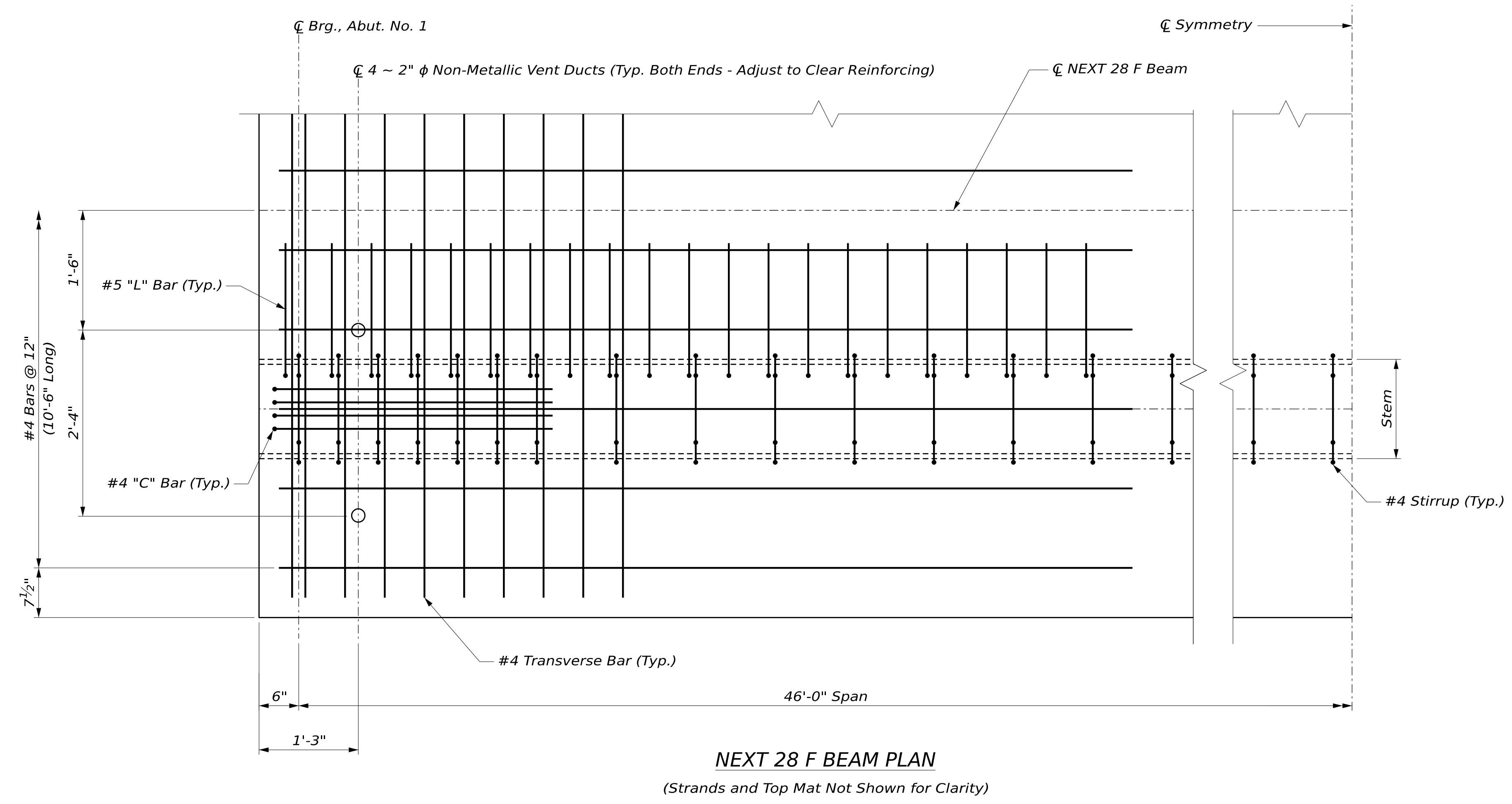
PROJ. MANAGER	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025			
CHECKED-REVIEWED	AA			
DESIGN-DETAILED	SW			
DESIGN-DETAILED	KB			
REVISIONS 1				
REVISIONS 2				
REVISIONS 3				
REVISIONS 4				
FIELD CHANGES				

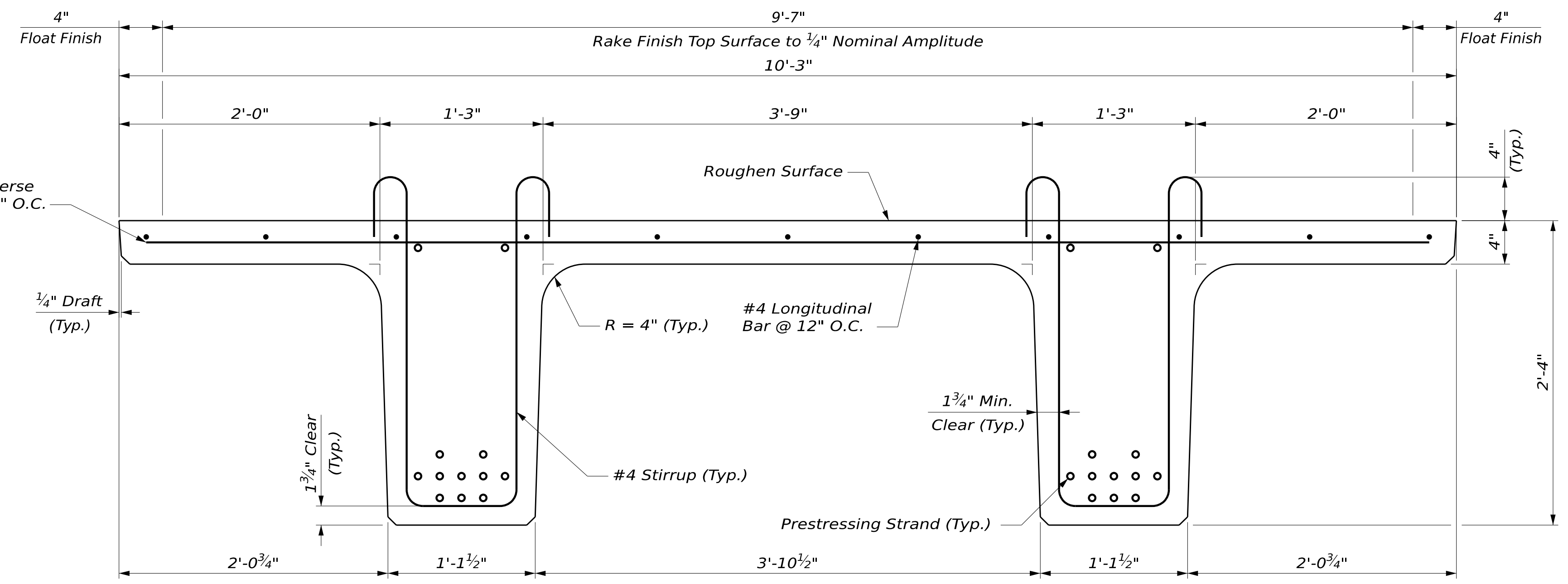
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
PRECAST NEXT BEAM (1 OF 2)

SHEET NUMBER  
**25**  
OF 32

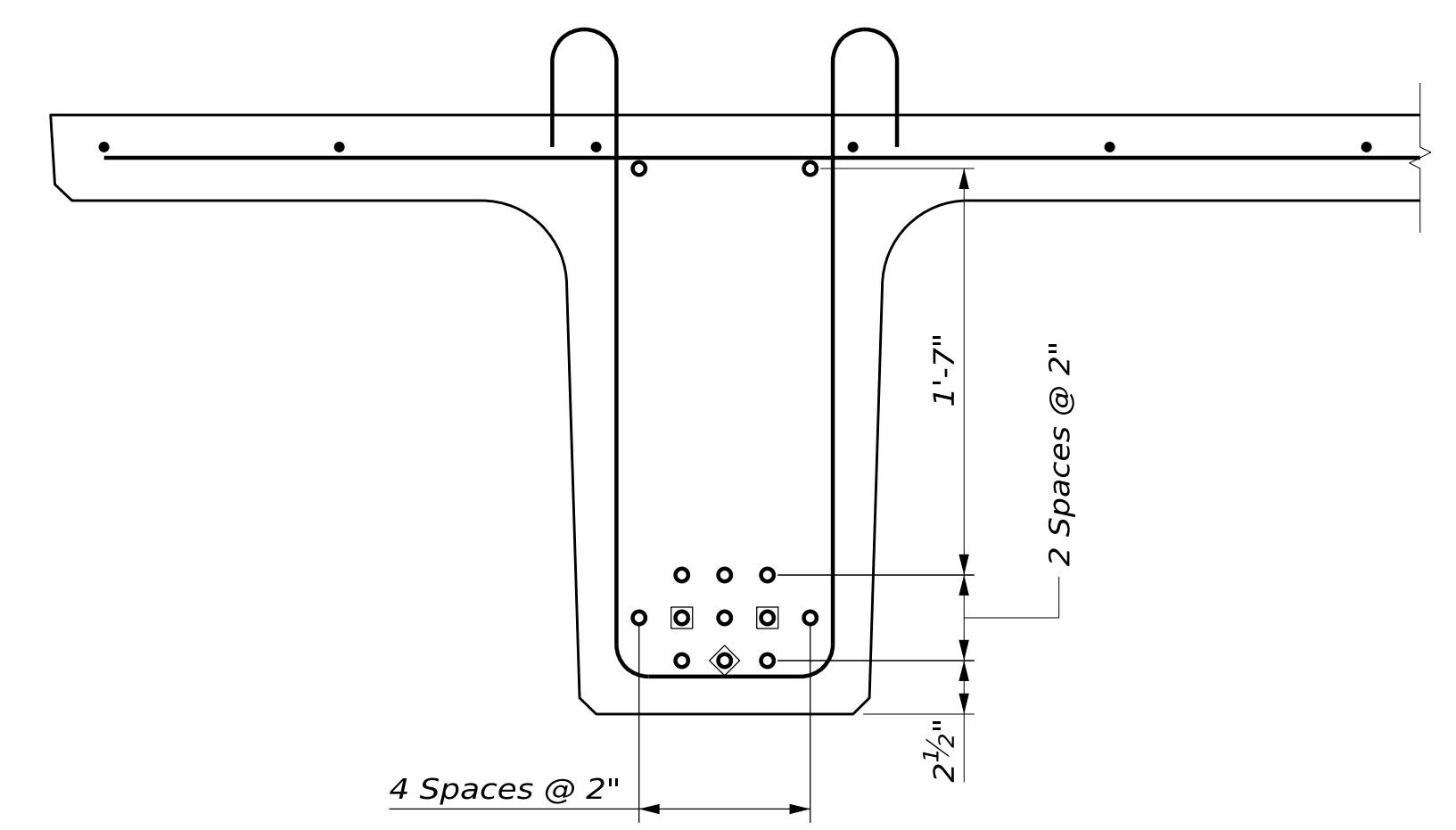
**PRECAST NEXT BEAM NOTES**

- NEXT F Beams are a non-proprietary shape developed by PCI Northeast (PCINE). Standardized section properties and details may be found at <http://www.pci.org/pcine>
- The estimated camber at release is 0.73 inches; the estimated camber at erection is 1.02 inches; and the estimated final camber at completion of the project is 0.49 inches.
- Prestressing strands shall be 0.6 inch diameter. The tensioning force is 44 kips per prestressing strand, including the top strands.
- Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
- Do not drill holes or use powder actuated tools on the prestressed beams without the approval of the Fabrication Engineer.
- Unless otherwise noted, rake the top surface of the upper flange of the prestressed beams to a surface roughness of  $\pm 1/4$  inch, except at locations corresponding to the blocking points. At these locations, finish a flattened area of sufficient size to facilitate taking elevations for setting bottom of slab elevations.
- Neoprene pads shall be either polychloroprene or natural polyisoprene of  $50 \pm 5$  Shore A durometer hardness, and shall conform to the requirements of Division 2, Section 18.2 of AASHTO Standard Specifications for Highway Bridges. Neoprene pads will not be paid for directly but shall be considered incidental to related Contract Items.
- Lifting loops and temporary storage/shipping dunnage shall be a maximum of 2 feet from each beam end.
- Additional strands may be debonded, provided that the latest provisions for debonding in the AASHTO LRFD Bridge Design Specifications (Article 5.9.4.3.3) are followed.





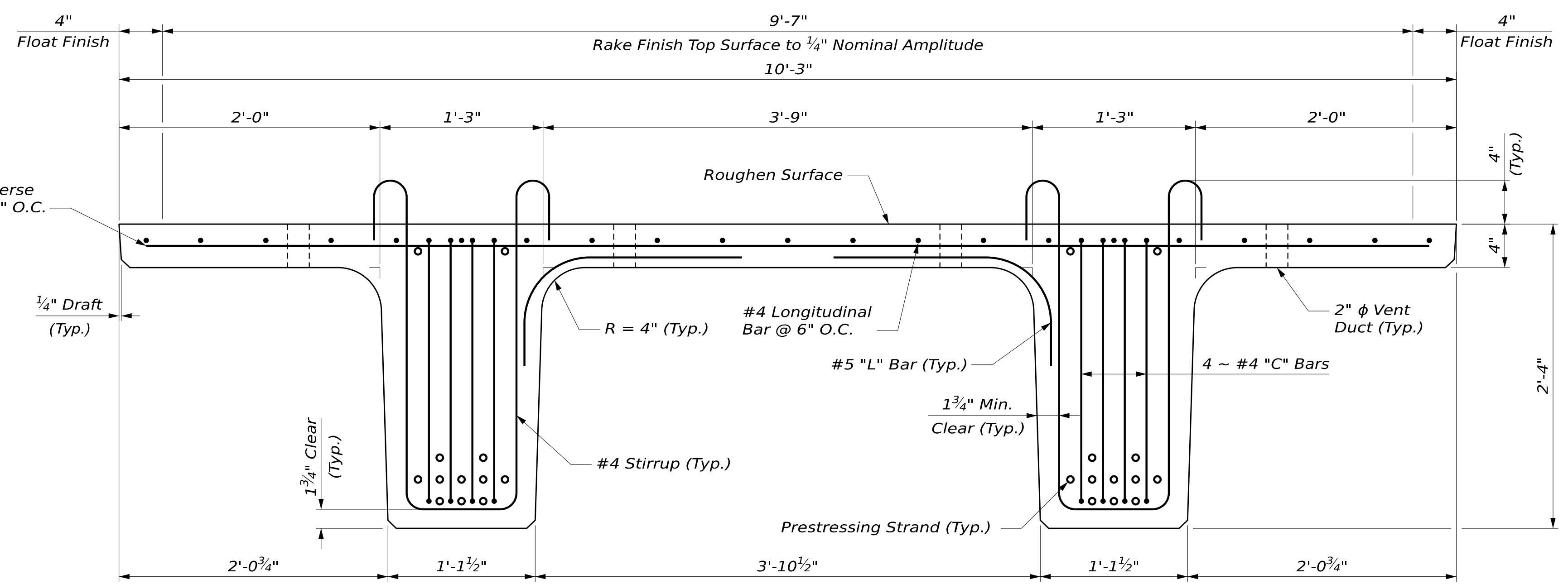
NEXT 28 F BEAM TYPICAL SECTION - MIDSPAN



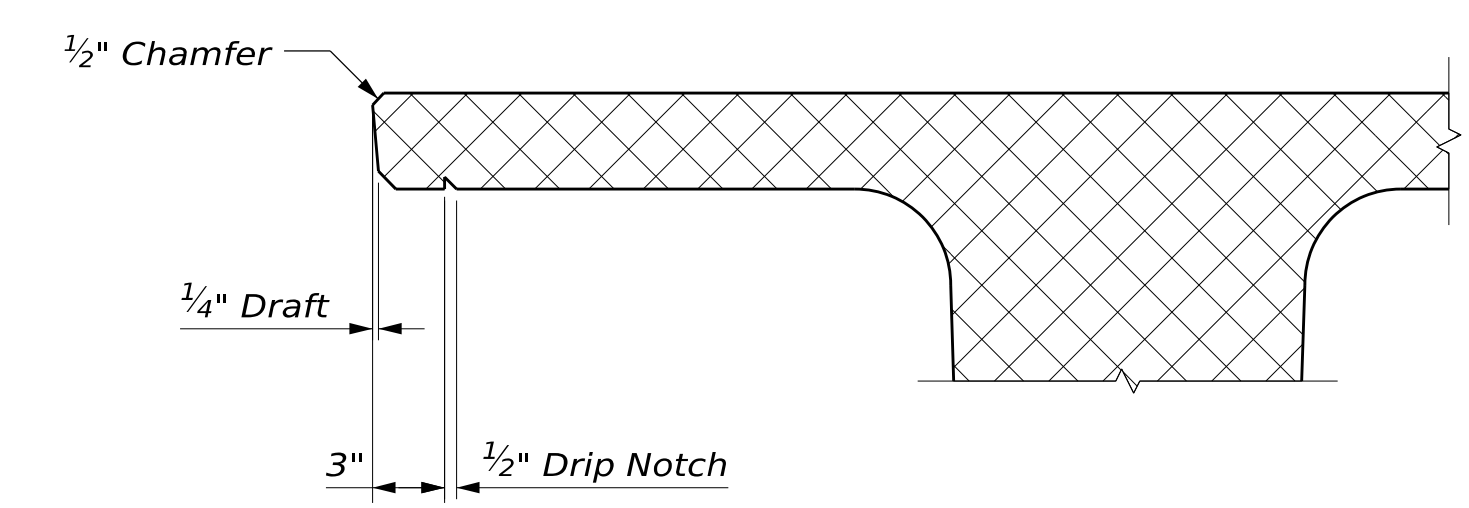
NEXT 28 F BEAM STRAND PATTERN

(Left Stem Shown, Right Stem is Similar Mirrored about Beam Centerline)

- ⊗ Strand Debonded 3ft
- ⊙ Strand Debonded 6ft



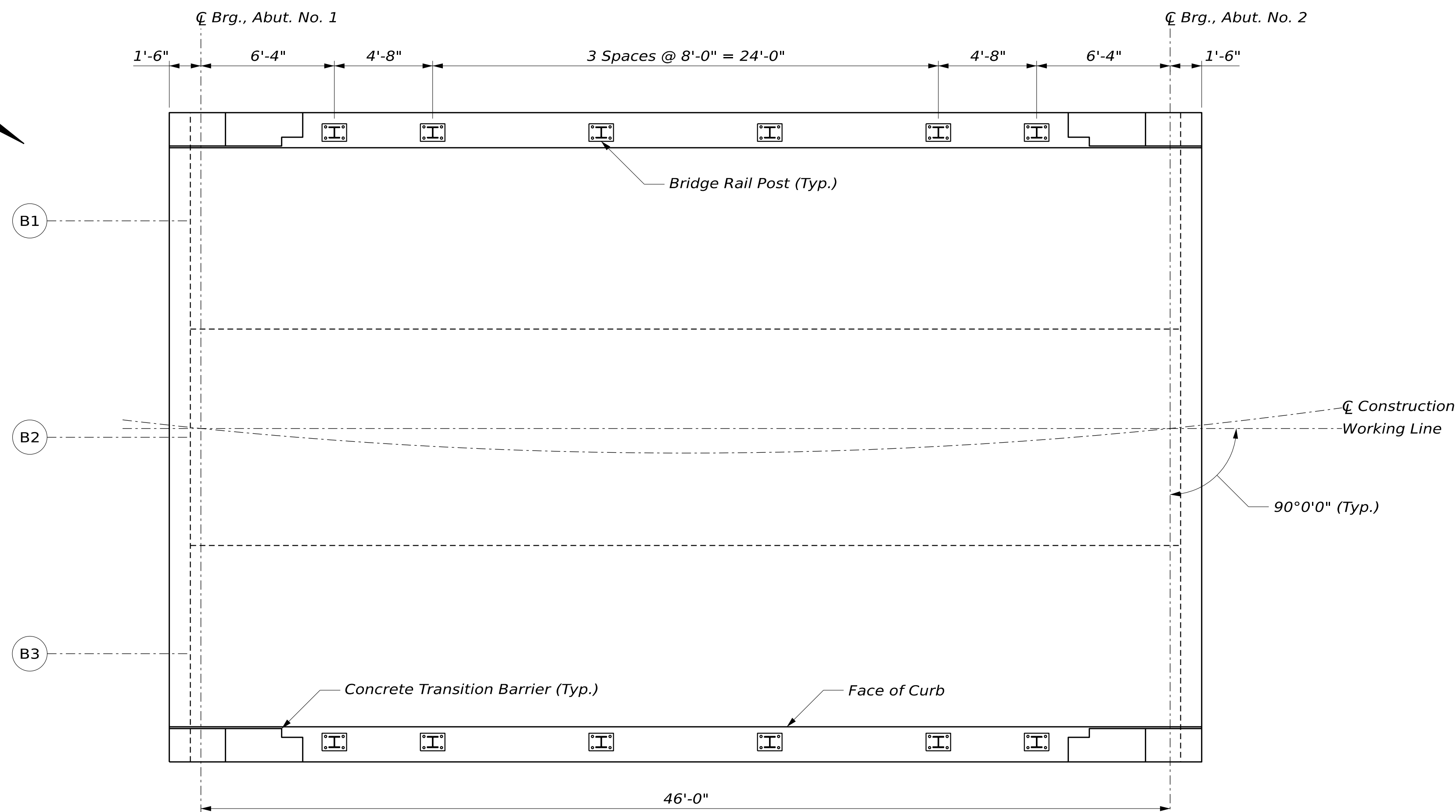
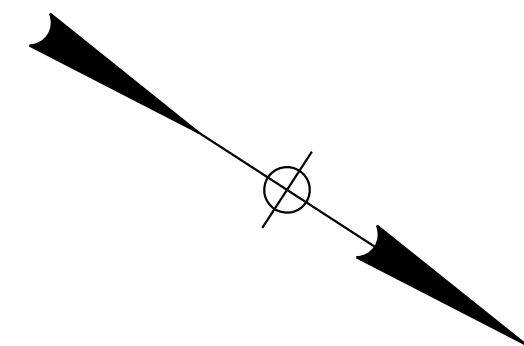
NEXT 28 F BEAM TYPICAL SECTION - AT ENDS



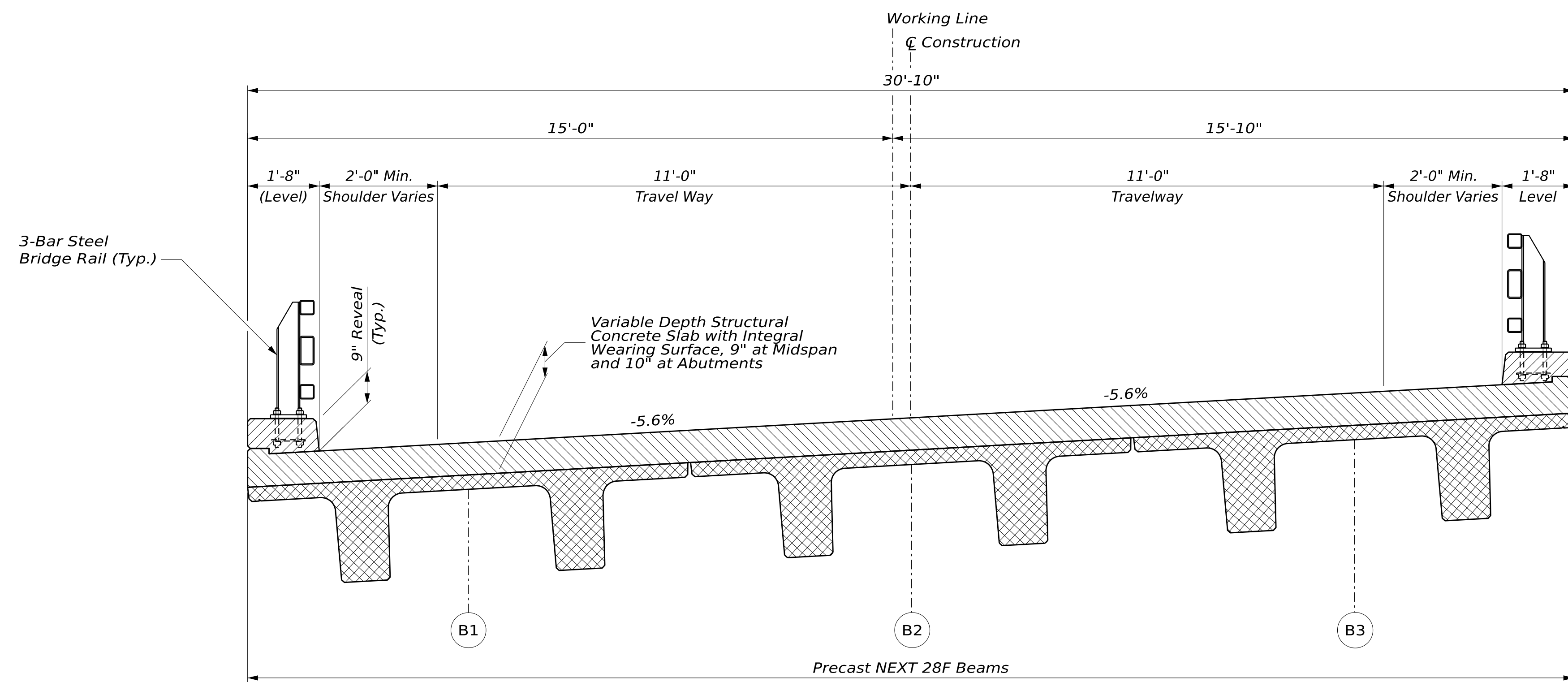
FASCIA OVERHANG DETAIL

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PEH	DEC 2025			
CHECKED-REVIEWED		ELW				
DESIGN-DETAILED						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

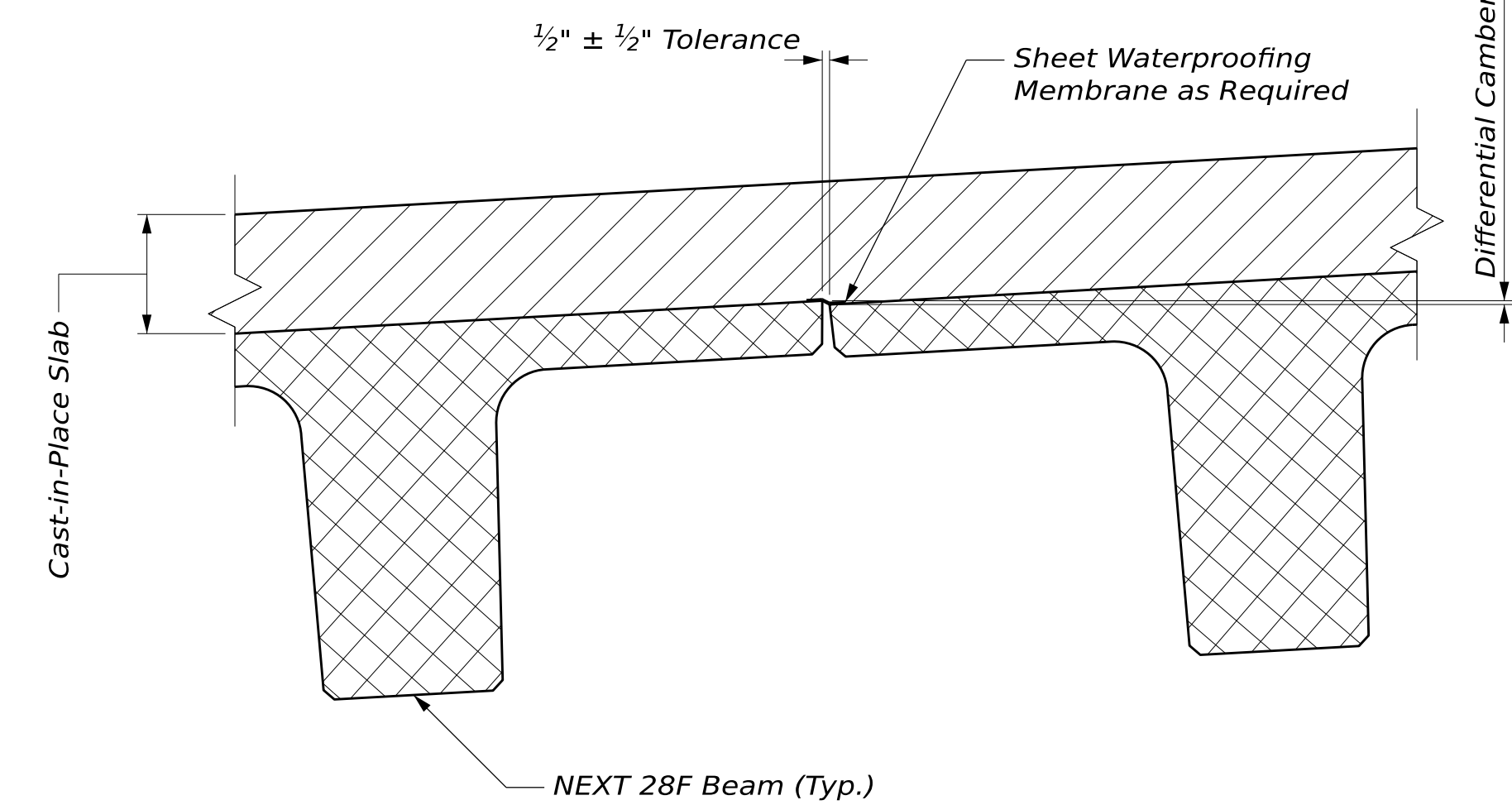




**SUPERSTRUCTURE PLAN**



**TYPICAL SECTION**



**NEXT BEAM GAP FORM DETAIL**

**SUPERSTRUCTURE NOTES**

- The bearing elevation and deck thickness shall be adjusted in accordance with Special Provision Section 535 - Precast, Prestressed Concrete Superstructure (Camber).
- Reinforcing steel shall have a minimum concrete cover of 2 inches unless otherwise noted.
- Form a one inch V-groove on the fascias at the horizontal joint between the curb and slab.
- Payment for End Diaphragm Concrete will be made under Item No. 502.261 Structural Concrete Roadway and Sidewalk Slabs on Concrete Bridges.
- The superstructure slab and end diaphragm concrete shall be placed in one continuous operation and shall be kept plastic until the entire placement has been made.
- Provide 4 additional stirrups in the curbs at each Concrete Transition Barrier location.
- The Contractor shall install Concrete Transition Barrier vertical closed stirrups, as shown in Standard Details Section 526, prior to the placement of the curb.
- Concrete Transition Barrier reinforcing steel shall be Low-Carbon Chromium.
- Payment for Sheet Waterproofing Membrane over joints between adjacent NEXT Beams will not be made directly, but will be considered incidental to related Contract Items. Alternate methods of sealing the gap between flanges may be submitted to the Resident for approval.
- The Saw Cut Grooving shall be in the longitudinal direction.

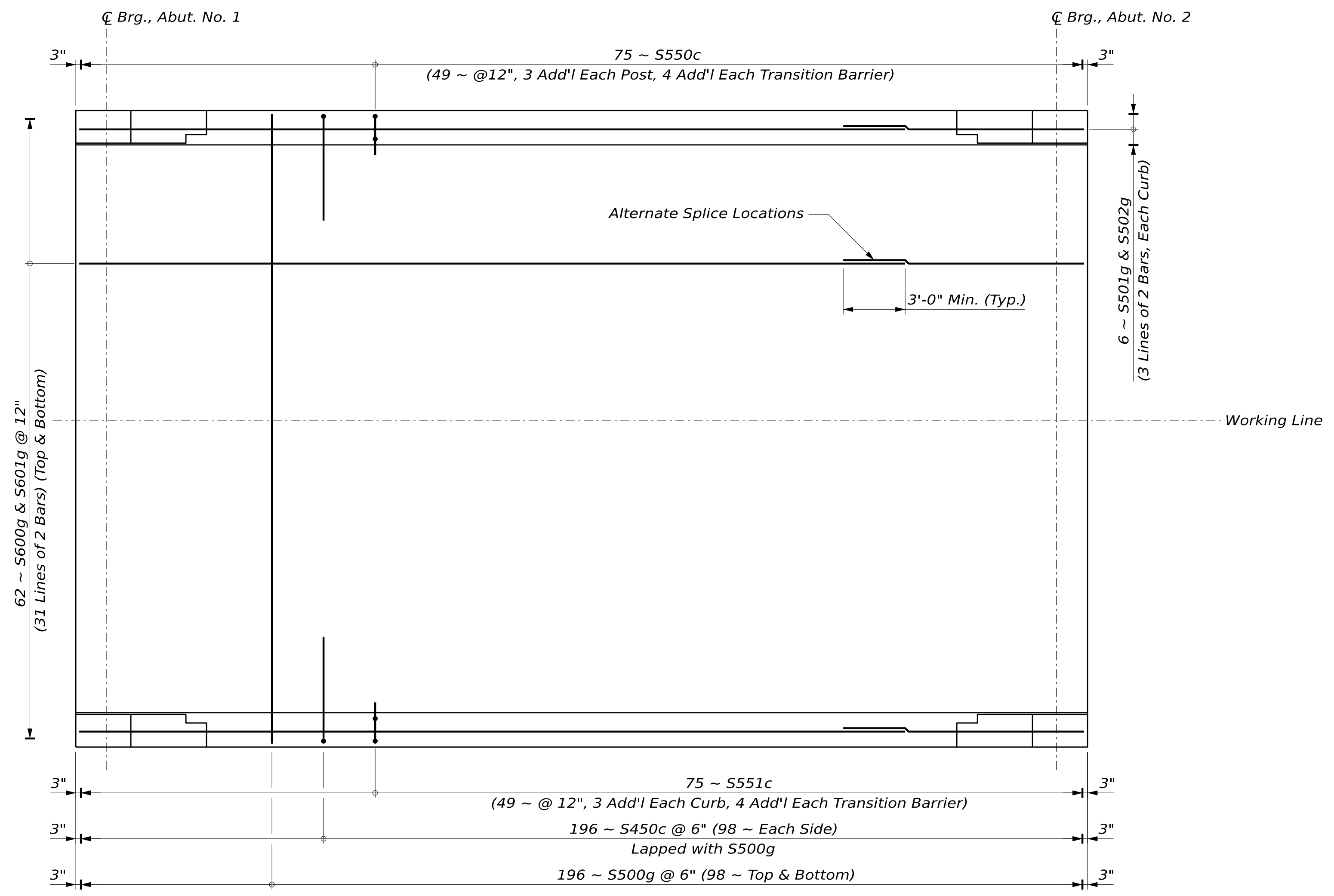
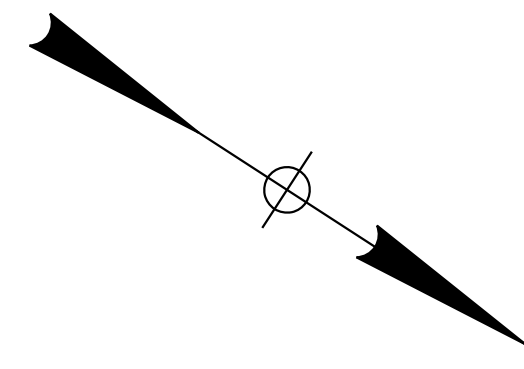
STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
DESIGN-DETAILED	DEC 2025	PEH	DEC 2025			
CHECKED-REVIEWED		SAW				
DESIGN-DETAILED02						
DESIGN-DETAILED03						
REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

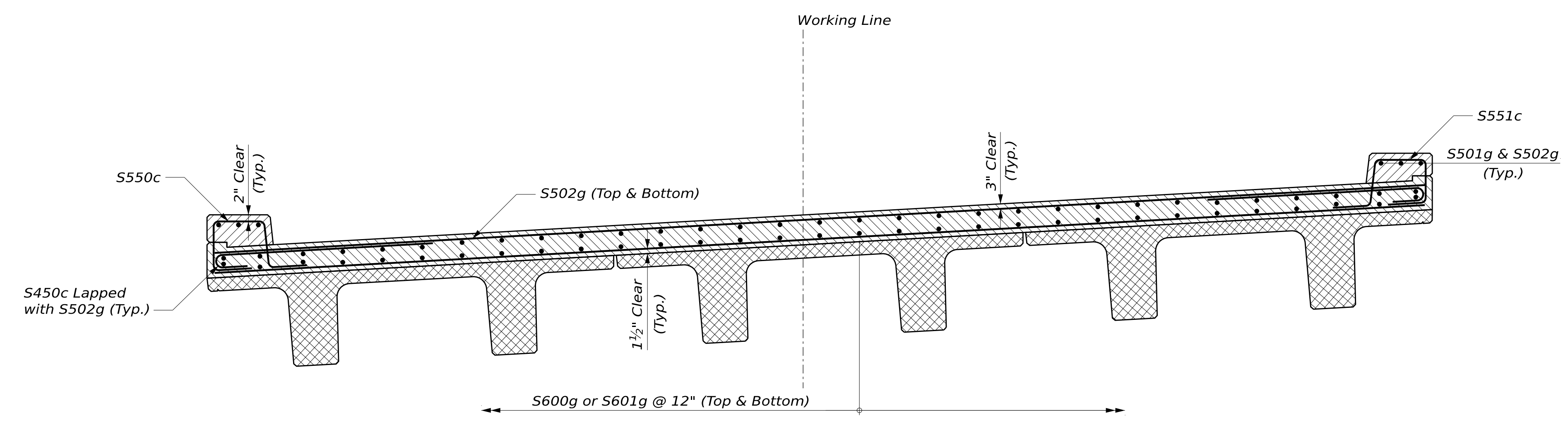
CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
**SUPERSTRUCTURE  
PLAN AND SECTION**

**SHEET NUMBER**  
**27**  
OF 32

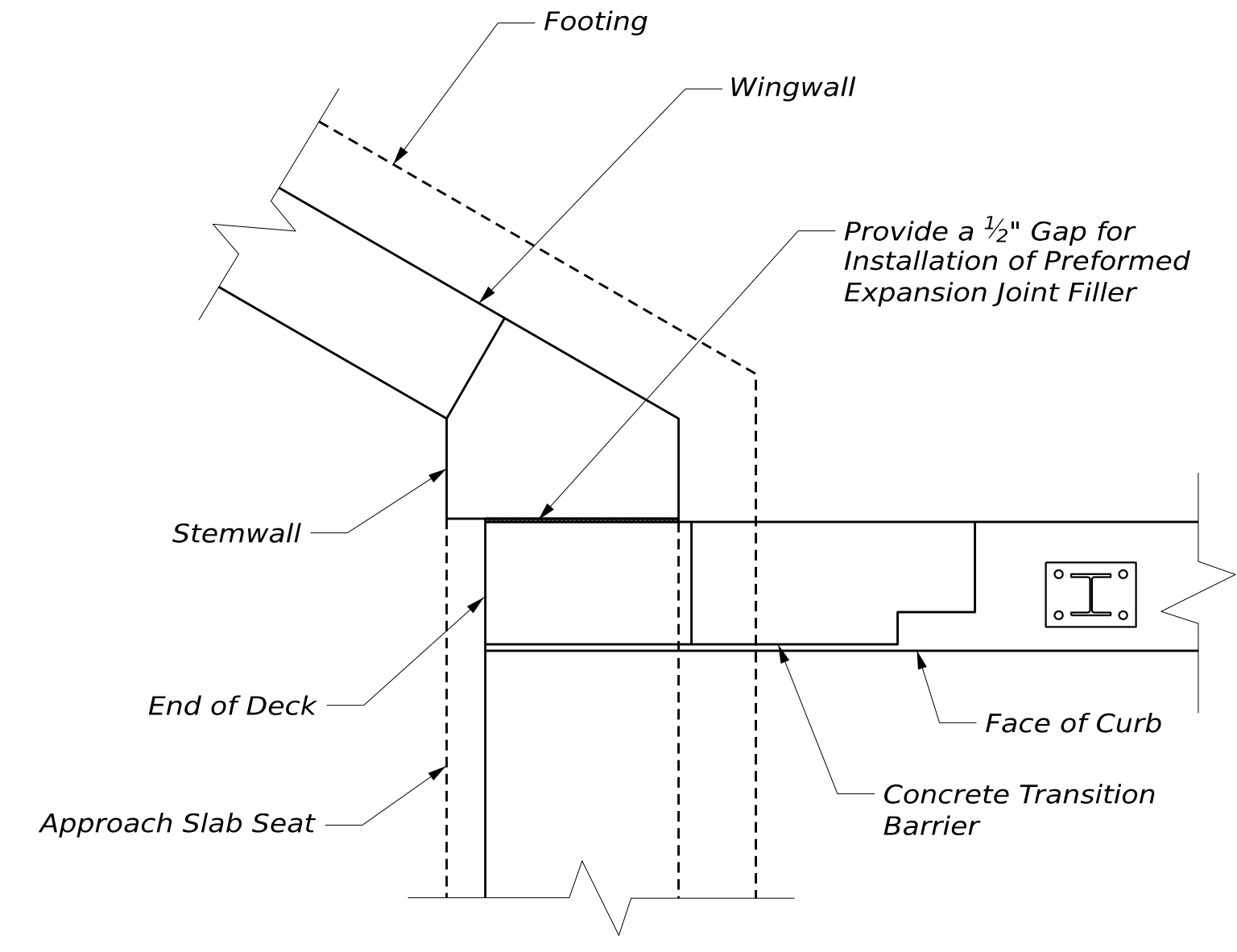




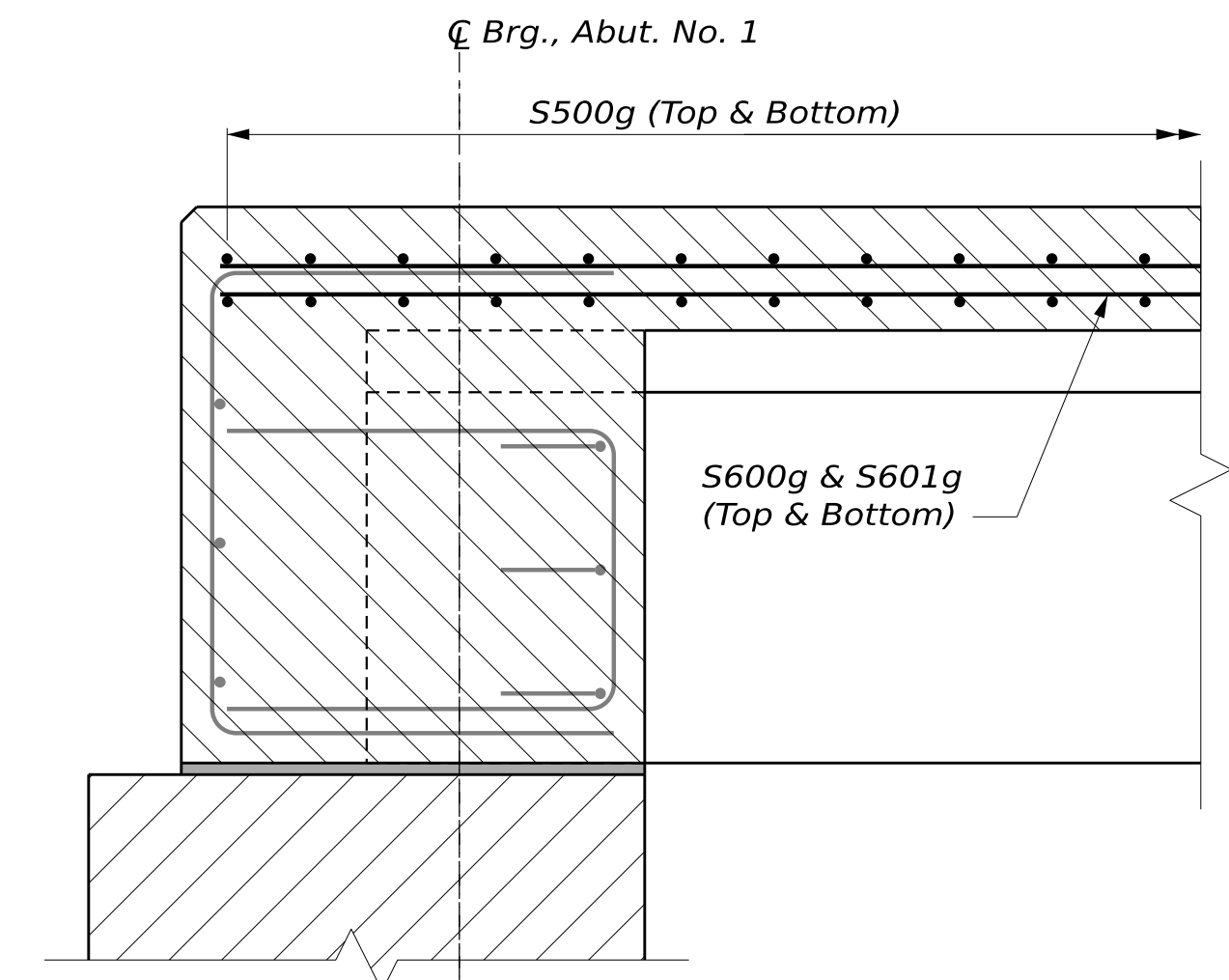
**SUPERSTRUCTURE REINFORCING PLAN**



**TRANSVERSE REINFORCING SECTION**



**PREFORMED EXPANSION JOINT FILLER DETAIL**  
(South Corner Shown, Other Corners Similar)



**PARTIAL LONGITUDINAL SECTION**  
(End Diaphragm Reinforcing Shown Screened for Clarity)  
(Abut. No. 1 Shown, Abut. No. 2 Opposite Hand)

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

PROJ. MANAGER  
DESIGN-DETAILED  
CHECKED-REVIEWED  
DESIGN-DETAILED02  
DESIGN-DETAILED03  
REVISIONS 1  
REVISIONS 2  
REVISIONS 3  
REVISIONS 4  
FIELD CHANGES

DATE  
DEC 2025  
DEC 2025

BY  
AA  
SAW

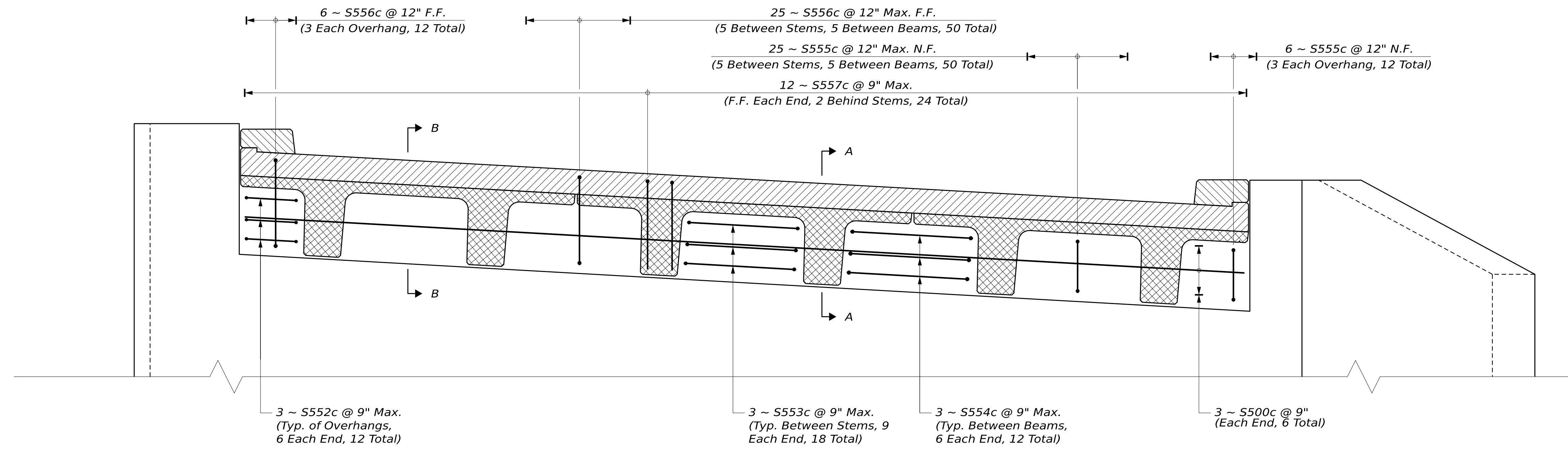
M. WIGHT  
PEH  
KLW

SIGNATURE  
P.E. NUMBER  
DATE

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
SUPERSTRUCTURE  
REINFORCING

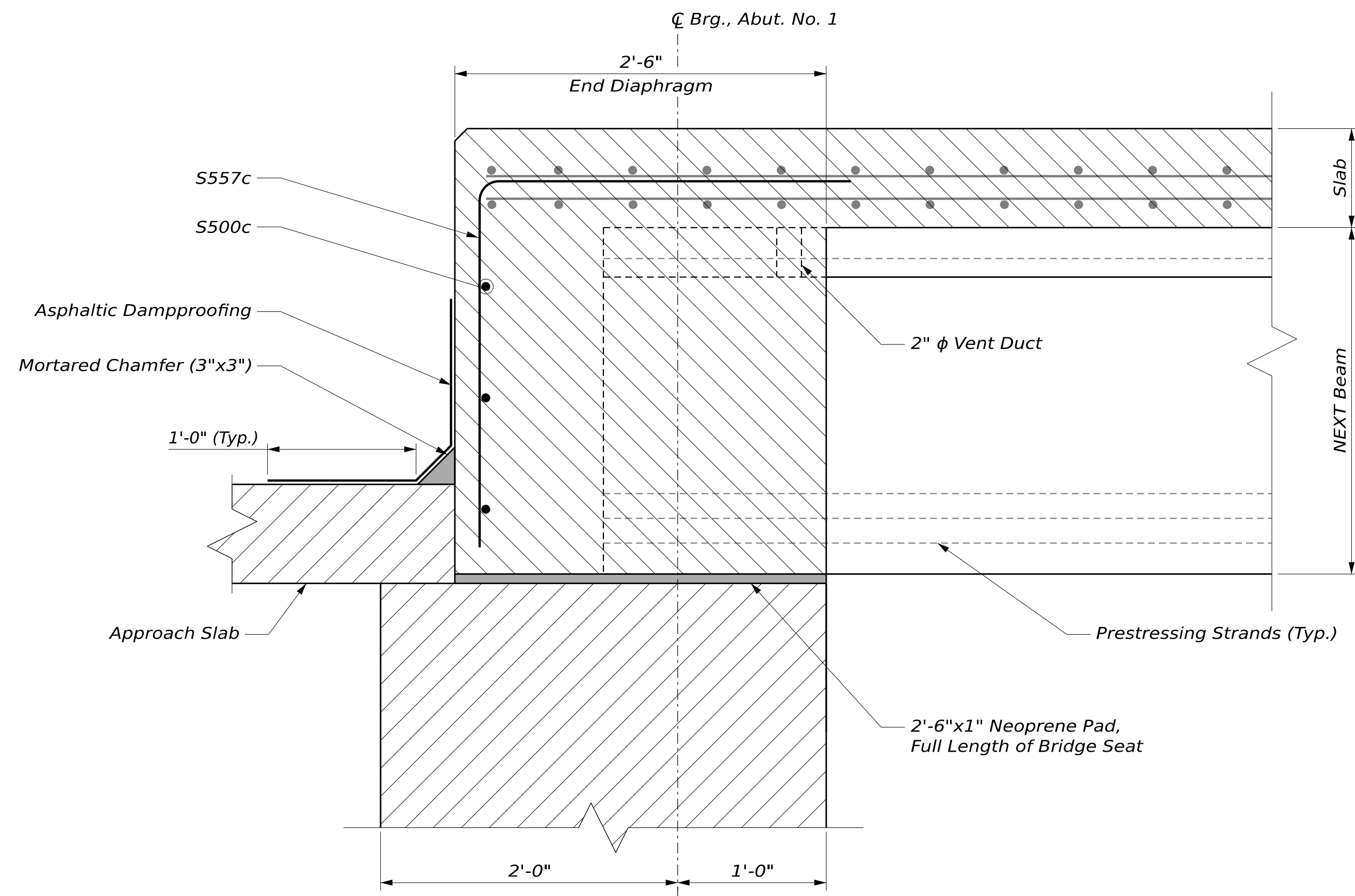
SHEET NUMBER  
**28**  
OF 32





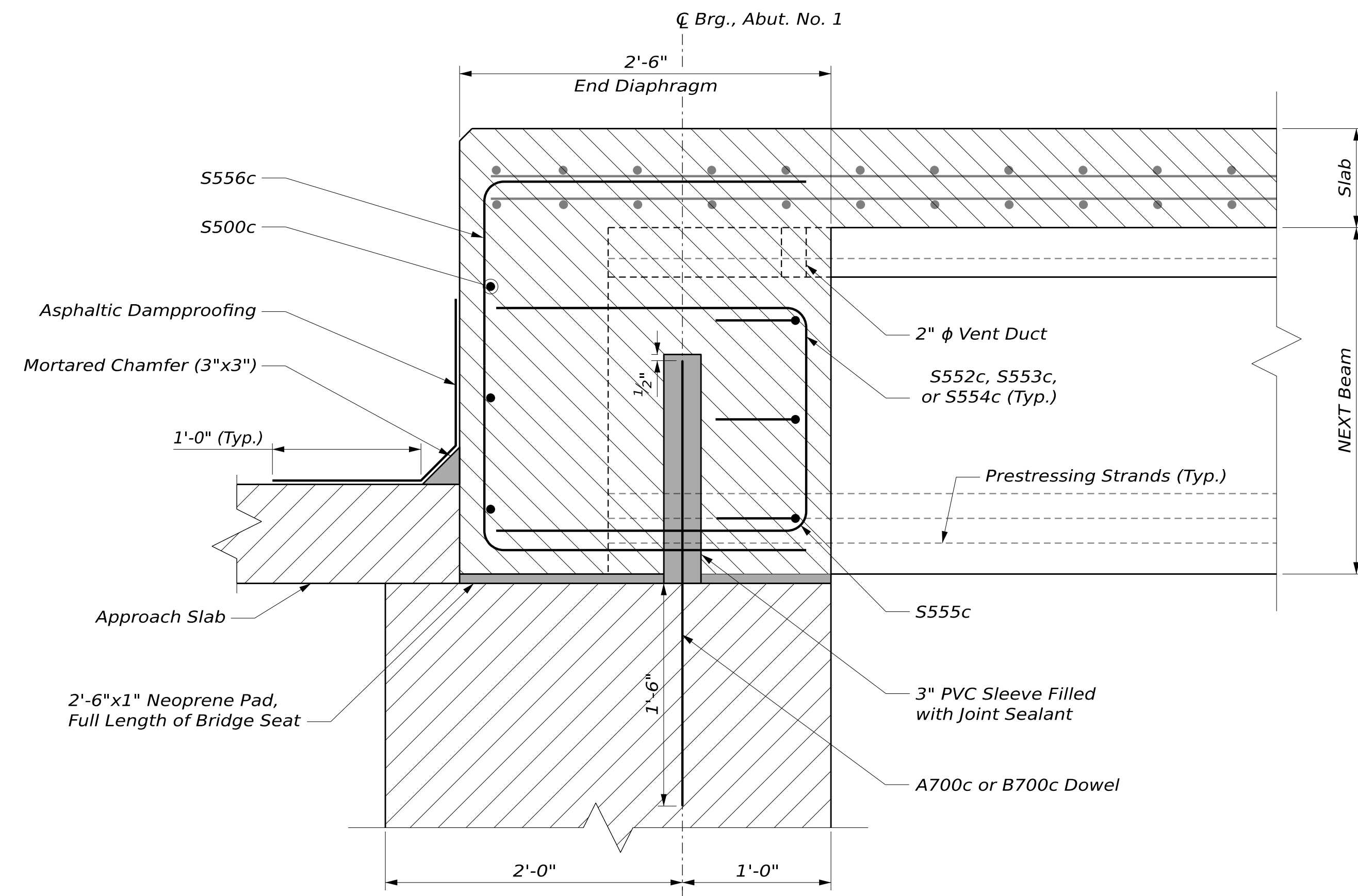
**END DIAPHRAGM REINFORCING SECTION**

(Abutment No. 1 Shown Looking Downstation, Abutment No. 2 Opposite Hand)



**SECTION A-A**

(Abut. No. 1 Shown, Abut. No. 2 Opposite Hand)



**SECTION B-B**

(Abut. No. 1 Shown, Abut. No. 2 Opposite Hand)

STATE OF MAINE  
DEPARTMENT OF TRANSPORTATION  
Federal Project No. 2552900  
WIN 025529.00

DATE	SIGNATURE	P.E. NUMBER	DATE
DEC 2025			
DEC 2025			

PROJ. MANAGER	DATE
DESIGN-DETAILED	DEC 2025
CHECKED-REVIEWED	DEC 2025
DESIGN-DETAILED	
REVISIONS 1	
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
FIELD CHANGES	

CHASE MILLS BRIDGE NO. 5465  
CROSSING GARDNER LAKE OUTLET  
WASHINGTON COUNTY  
**END DIAPHRAM REINFORCING**

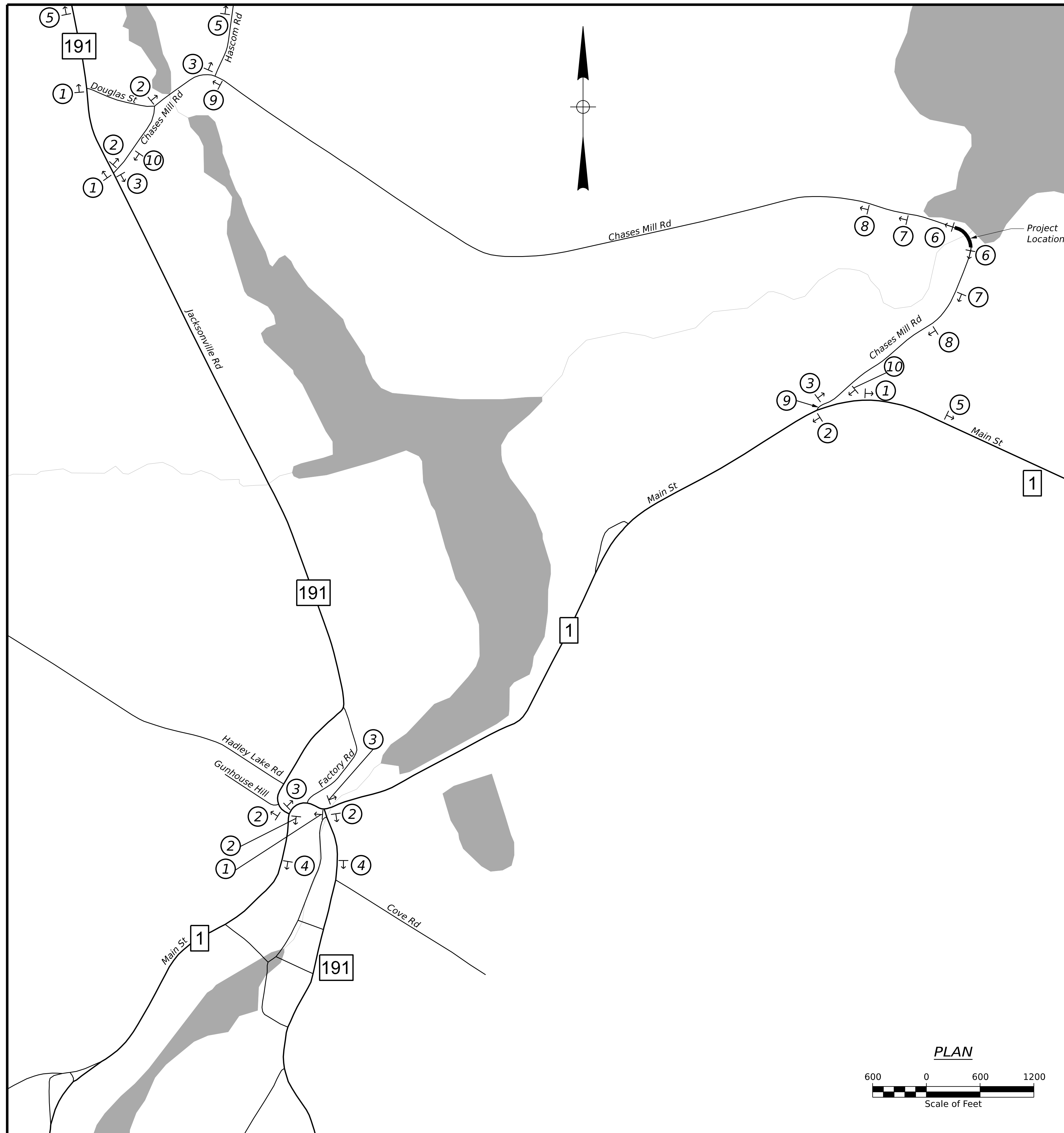
SHEET NUMBER

29

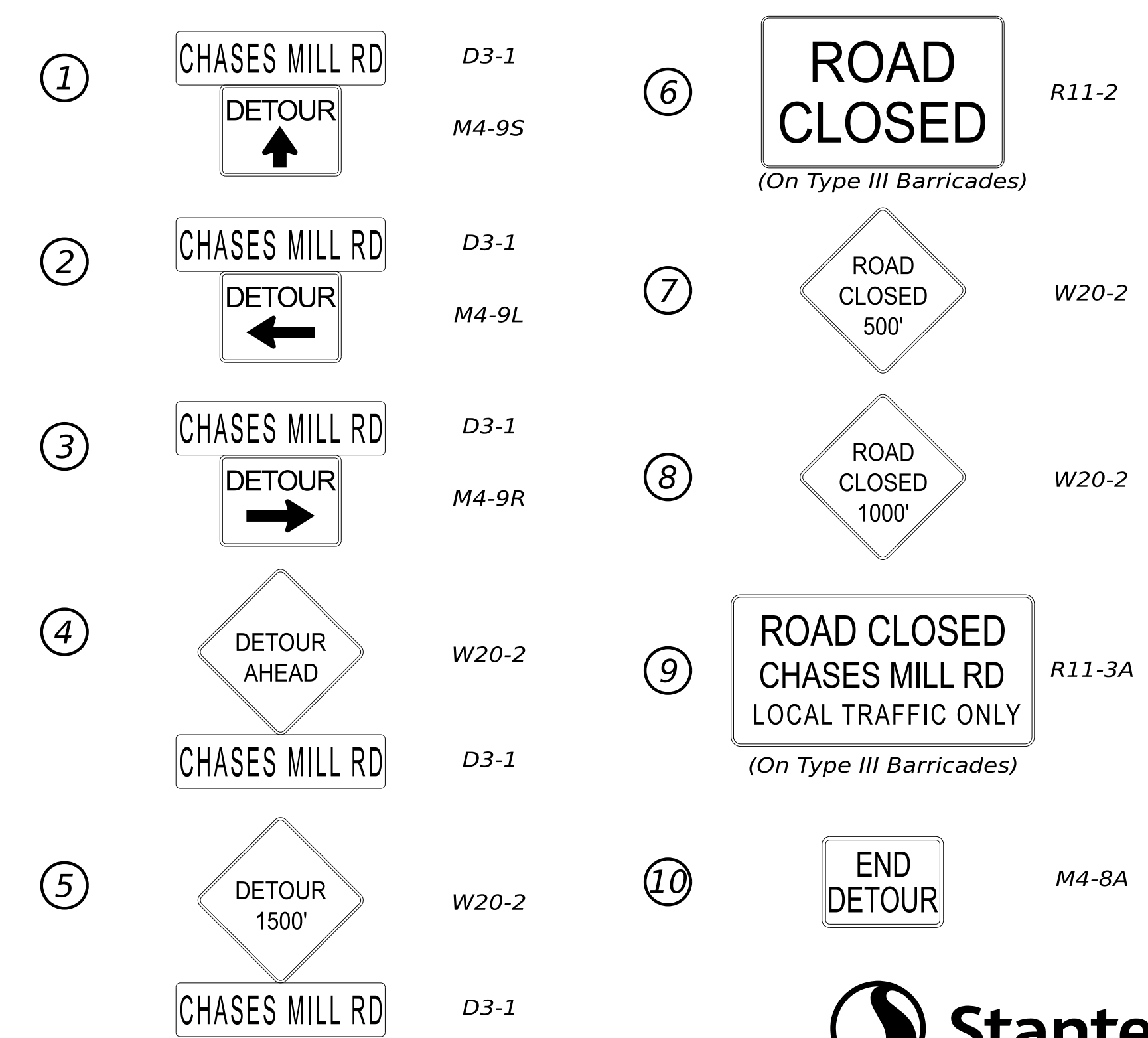
OF 32







Road Closure & Detour Sign Summary			
Text	ID Number	Size	Quantity & Color
CHASES MILL RD	D3-1	24" X 12"	20 - Black on Orange
DETOUR ←	M4-9L	30" X 24"	6 - Black on Orange
DETOUR →	M4-9R	30" X 24"	4 - Black on Orange
DETOUR ↑	M4-9S	30" X 24"	5 - Black on Orange
ROAD CLOSED	R11-2	60" X 30"	2 - Black on White
ROAD CLOSED CHASES MILL RD LOCAL TRAFFIC ONLY	R11-3A	60" X 30"	2 - Black on White
DETOUR XXX'	W20-2	36" X 36"	2 - Black on Orange (AHEAD) 3 - Black on Orange (1500')
ROAD CLOSED XXX'	W20-3	36" X 36"	2 - Black on Orange (500') 2 - Black on Orange (1500')
END DETOUR	M4-8A	30" X 24"	2 - Black on Orange



STATE OF MAINE		DEPARTMENT OF TRANSPORTATION		Federal Project No. 2552900		WIN 025529.00	
PROJ. MANAGER	DATE	BY	DATE	SIGNATURE	P.E. NUMBER	DATE	
DESIGN-DETAILED	DEC 2025	KEJ	DEC 2025				
CHECKED-REVIEWED		PLP					
DESIGN-DETAILED 02							
DESIGN-DETAILED 03							
REVISIONS 1							
REVISIONS 2							
REVISIONS 3							
REVISIONS 4							
FIELD CHANGES							
CHASE MILLS BRIDGE NO. 5465 CROSSING GARDNER LAKE OUTLET WASHINGTON COUNTY				DETOUR PLAN			
SHEET NUMBER				31			
				OF 32			

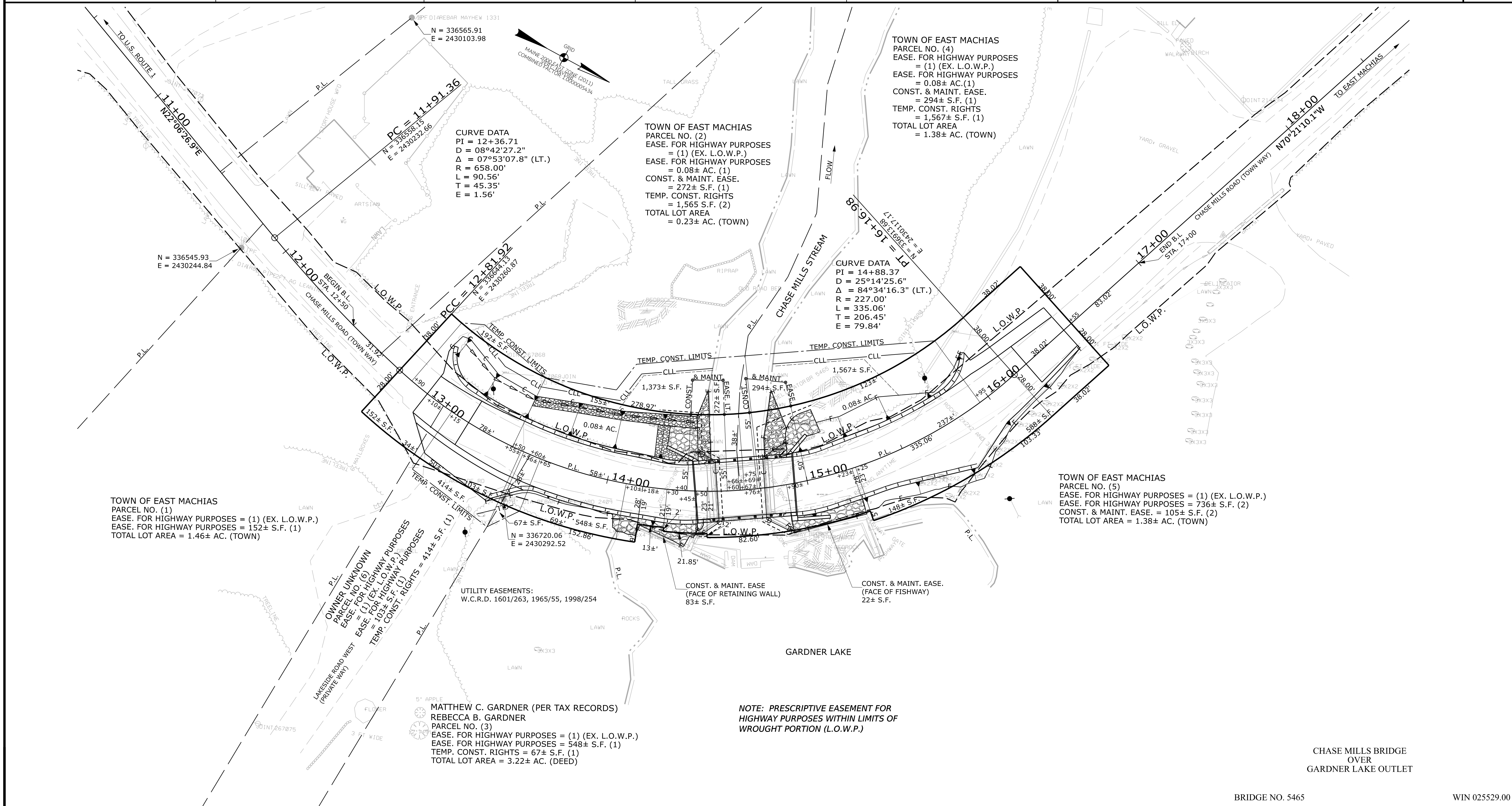
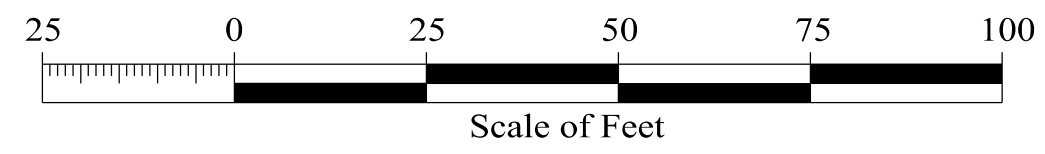


PLAN LEGEND	
Town, County, State _____	New R/W Along Existing R/W _____
Approx. Property Lines _____	Building _____ Clearing Limit Line - CLL- _____
Existing Right of Way _____	Trees Conifer  Deciduous
Limits of Wrought Portion <u>LIMITS OF WROUGHT PORTION</u>	Tree Line  Bush Line
Control Of Access _____	Water Edge _____
New Right of Way _____	Ledge  Rock/Boulder  Flag Pole
New Easement _____	Fence CHAIN LINK  BARB WIRE  STOCKADE
New Temporary Rights <u>TEMP. CONST. LIMITS</u>	Sign  Well  Mailbox
New R/W Within Existing R/W _____	Sanitary Sewer  SA _____
	Com. Line UG  UG COMM _____
	Electric Line  UG POW _____
	Water Line  WL _____
	Underdrain Line  _____
	Gas Line  GAS _____
	Guardrail  _____
	Culvert  _____
	Traveled Way  _____
	Ditch  _____
	Catch Basin  _____
	Manhole  _____
	Sewer Manhole  _____
	Utility Pole  _____
	Fire Hydrant  _____
	Curbing  _____
	Cut Line  Fill Line
	Stonewall  Retaining Wall
	Baseline  10+00 11+00 12+00
	Monument  Traverse Point
	Iron Rod Set  Pipe Found

THIS PLAN WAS PREPARED IN CONNECTION WITH THE DEPARTMENT'S ACQUISITION OF REAL PROPERTY FOR TRANSPORTATION PURPOSES. IT CANNOT BE USED TO ESTABLISH LEGAL BOUNDARIES BETWEEN ADJUTING PROPERTY OWNERS.

STATE OF MAINE  
REGISTRY OF DEEDS

COUNTY OF \_\_\_\_\_  
RECEIVED \_\_\_\_\_, 20\_\_\_\_  
AT \_\_\_\_\_ HRS. \_\_\_\_\_ MINS. \_\_\_\_\_ M.  
AND RECORDED IN \_\_\_\_\_  
PLAN BOOK \_\_\_\_\_, PAGE \_\_\_\_\_  
ATTEST: \_\_\_\_\_ REGISTER



CHECKED	J.D.F.	P.N.S.	B.S.
TECH	C.D.P.	C.D.P.	C.D.P.
ITEM	EXISTING CONDITION PLAN	FINAL RIGHT OF WAY	AREAS
STATE OF MAINE DEPARTMENT OF TRANSPORTATION 16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460 EAST MACHIAS RIGHT OF WAY MAP			

REVISIONS			PLAN FILED IN PLAN BOOK				PAGE COUNTY RECORD				DALE F. DOUGHTY ACTING COMMISSIONER		CHASE MILLS ROAD (TOWN WAY)		SHEET NUMBER	
NO.	DATE	DESCRIPTION	NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE	NO.	DATE	BOOK	PAGE	DATE	EAST MACHIAS		WASHINGTON COUNTY
														FEDERAL AID PROJECT NO. 2552900		32
														D.O.T FILE NO. 15-356		