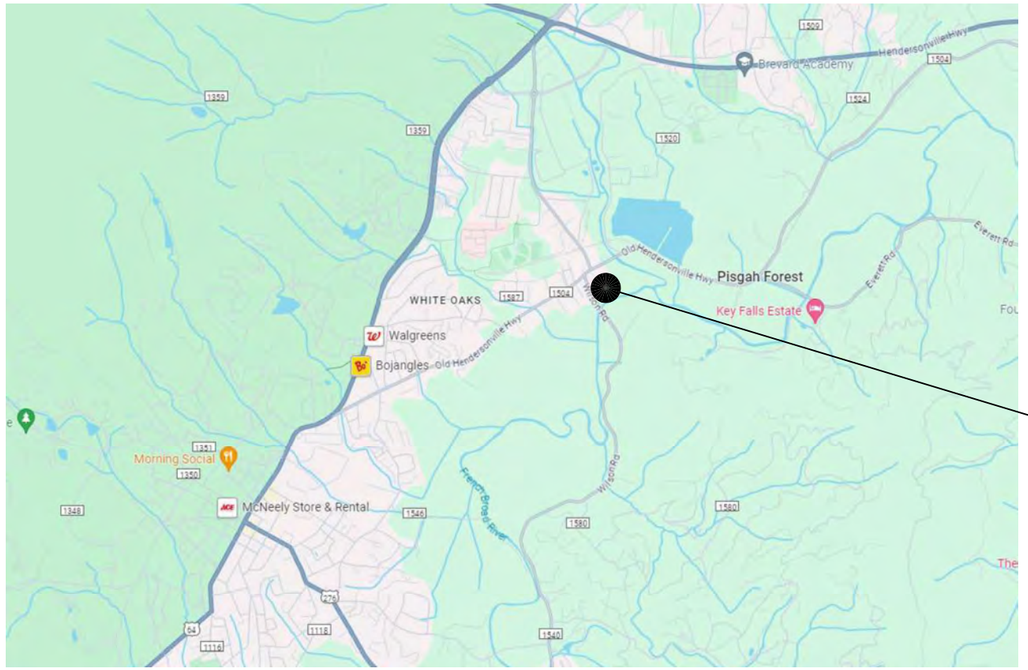
FINAL FOR CONSTRUCTION

CONSTRUCTION PLANS
BOAT RAMP REPLACEMENT
PISGAH FOREST, NORTH CAROLINA

FRENCH BROAD
RIVER BASIN



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VICINITY MAP
NTS

LIST OF SHEETS

1. TITLE
2. NOTES & CONSTRUCTION SEQUENCE
3. PLAN
4-5. DETAILS

PREPARED FOR:

mountaintrue.
Protecting the Places We Share.

29 N. MARKET STREET, SUITE 610
ASHEVILLE, NC 28801
828.258.8737

						APP.	REVISIONS
						DATE	
A	B	C				DESCRIPTION	

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 22209 ANDREW DAVID BICK

HEADWATERS ENGINEERING
headwaters-eng.com
NCBELS Lic. No. C-4500

BOAT RAMP REPLACEMENT
WILSON ROAD
PISGAH FOREST, NC

DATE: SEPT. 2024
SCALE: AS SHOWN

TITLE

FINAL FOR CONSTRUCTION

CONSTRUCTION SEQUENCE:

GENERAL NOTES

1. WORK WILL TAKE PLACE UNDER EXISTING USACE PERMIT SAW-2024-01577 AND NC DWR GC4261.
2. ALL EQUIPMENT AND MATERIALS NECESSARY TO COMPLETE THE PROJECT SHALL BE MOBILIZED TO THE SITE BEFORE WORK BEGINS.
3. NO GRADING ACTIVITIES ARE TO TAKE PLACE DURING WET WEATHER OR PERIODS OF PREDICTED WET WEATHER.
4. CLEAN ALL EQUIPMENT PRIOR TO MOBILIZATION AND MAINTAIN IT TO BE FREE OF LEAKS.
5. FUELING SHALL BE PERFORMED IN A CONTAINED AREA AT LEAST 100 FEET FROM FLOWING WATER.
6. PROTECT ALL SITE FEATURES AND VEGETATION NOT MARKED FOR REMOVAL.
7. TAKE MEASURES TO PROTECT THE PUBLIC AT ALL TIMES.
8. WORK SHALL BE STAGED SUCH THAT NO MORE GROUND IS DISTURBED THAN CAN BE STABILIZED AT THE END OF THAT WORK DAY.
9. CONCRETE POURS SHALL BE STAGED SUCH THAT PROPER FINISHING CAN BE ACCOMPLISHED GIVEN WEATHER CONDITIONS, NOT ALLOWING CONCRETE TO SUDDENLY SET.
10. PLACE SILT FENCE ON LIVE RIVER SIDE OF ALL TEMPORARY STOCKPILES. REMOVE ACCUMULATED SEDIMENT BEFORE 50% OF SILT FENCE CAPACITY IS REACHED.
11. EXCESS EXCAVATED MATERIAL MUST BE DISPOSED OFF-SITE IN A PERMITTED WASTE SITE.
12. STABILIZE DISTURBED AREAS WITH SEED, MULCH (AND MATTING IF APPLICABLE) WITHIN 24 HOURS OF REACHING FINAL GRADES.

PRECAST "PUSH-SLAB" AND CAST-IN-PLACE RAMP CONSTRUCTION

13. DEMOLISH EXISTING CONCRETE RAMP AND DISPOSE OF RUBBLE OFF-SITE.
14. GRADE SIDE SLOPES AND RAMP PROFILE. STABILIZE SLOPES WITH SEED, MULCH AND MATTING. DISPOSE OF CUT SOILS OFF-SITE.
15. PLACE AND COMPACT AGGREGATE BASE COURSE AND LAYER OF WASHED STONE OVER THE BOTTOM 60' OF THE RAMP TO PROMOTE PUSH SLAB SLIDING.
16. FORM PUSH SLAB SECTION OF RAMP, TIE REBAR AND POUR CONCRETE AT LEAST 2' ABOVE THE RIVER WATER LEVEL. TAKE MEASURES TO PREVENT A RELEASE OF FRESH CONCRETE TO THE RIVER.
17. LEAVE PROJECTIONS OF LONGITUDINAL BARS EXTENDING UPHILL AND CREATE V-GROOVE FINISH ON THE PUSH SLAB RAMP PER THE DETAILS.
18. ALLOW PUSH SLAB TO CURE FOR AT LEAST 14 DAYS PRIOR TO PUSHING INTO PLACE. PUSH PRECAST PUSH SLAB INTO PLACE. PLACE STONE AND BOULDERS AT END OF RAMP AS DIRECTED.
19. PLACE AND COMPACT ANY REMAINING AGGREGATE BASE COURSE.
20. FORM CAST-IN-PLACE PORTION OF RAMP, TIE REBAR AND POUR CONCRETE. CREATE V-GROOVE FINISH PER THE DETAILS.

PARKING / SIDEWALK CONSTRUCTION

21. FORM AND PLACE ACCESSIBLE PARKING SPACE AND SIDEWALK PER THE PLAN AND DETAILS.
22. INSTALL BARRIER AT THE TOP OF RAMP AND AROUND PARKING / SIDEWALK TO PREVENT ACCESS FOR AT LEAST SEVEN DAYS AFTER CONCRETE POUR.

CONSTRUCTION STORMWATER INSPECTIONS:

1. THE CONTRACTOR IS RESPONSIBLE FOR KEEPING DAILY RECORDS OF RAINFALL EVENTS IN AN ON-SITE PERMIT BOX.
2. EROSION AND SEDIMENT CONTROL PRACTICES MUST BE INSPECTED AT LEAST ONCE PER 7 CALENDAR DAYS AND WITHIN 24 HOURS OF ALL RAINFALL EVENTS GREATER THAN 0.5"/24 HR PERIOD.
3. NECESSARY MAINTENANCE OR REPAIRS MUST BE COMPLETED IMMEDIATELY UPON IDENTIFICATION OF THE PROBLEM.
4. EROSION AND SEDIMENT CONTROL CONTACTS DURING CONSTRUCTION: _____; ANDREW BICK, HEADWATERS ENG. 828.606.0306

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NOTES & SEQUENCE

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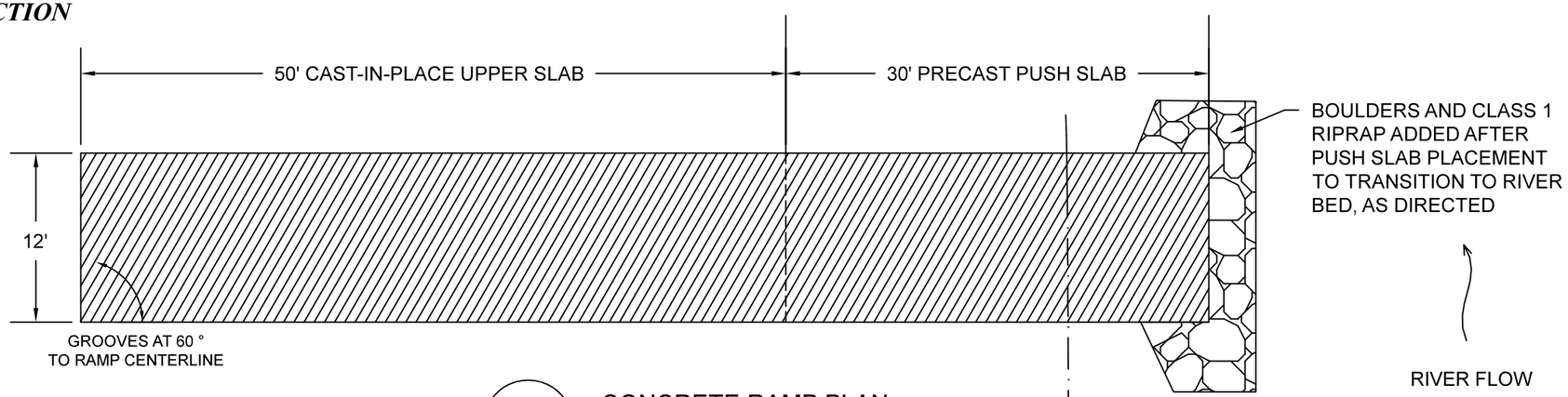
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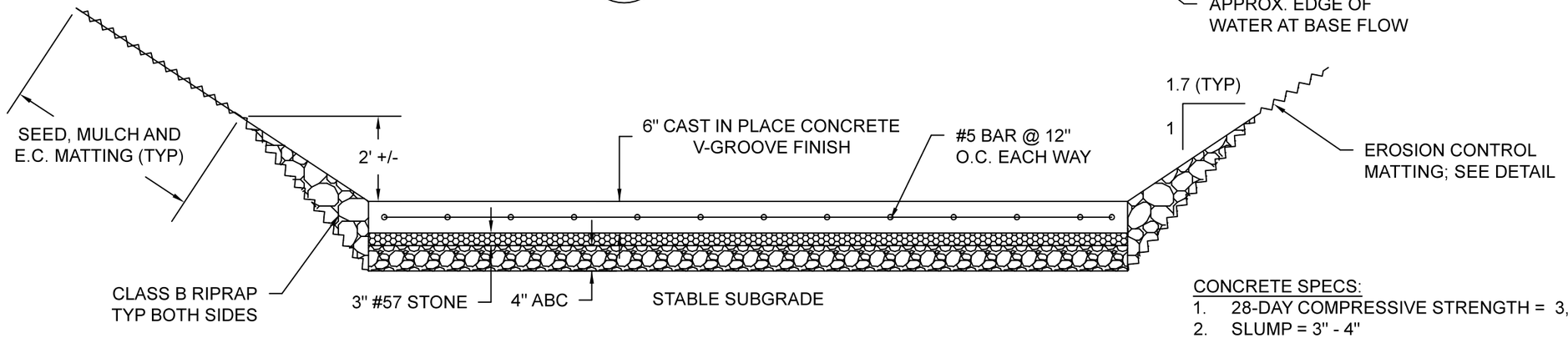
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SITE PLAN

FINAL FOR CONSTRUCTION

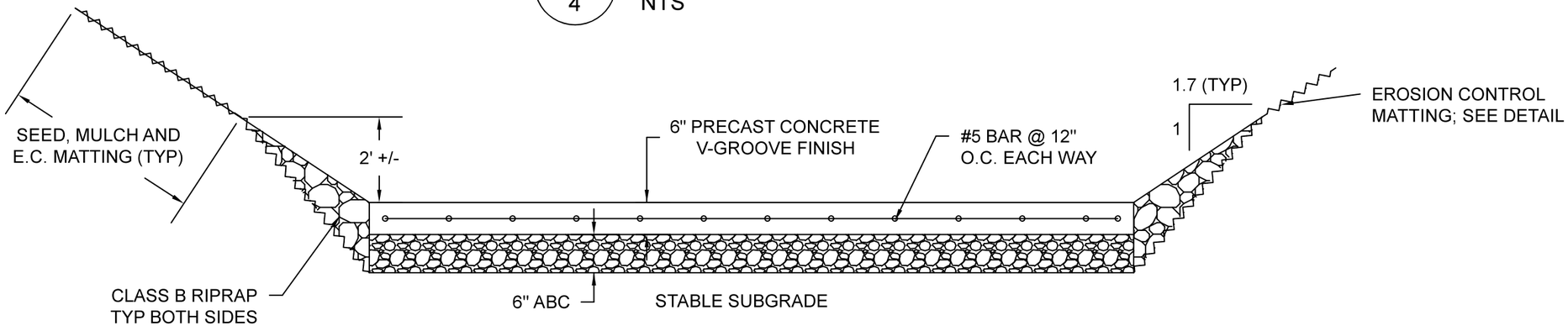


1/4 CONCRETE RAMP PLAN
NTS



CONCRETE SPECS:
1. 28-DAY COMPRESSIVE STRENGTH = 3,000 PSI.
2. SLUMP = 3" - 4"
3. 4% - 6% AIR ENTRAINMENT

2/4 LOWER PUSH SLAB
NTS



3/4 UPPER CAST-IN-PLACE SLAB
NTS

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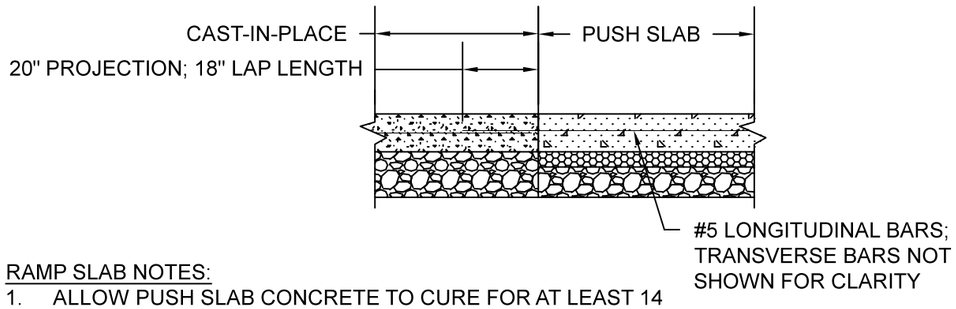
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RAMP DETAILS

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RAMP SLAB NOTES:

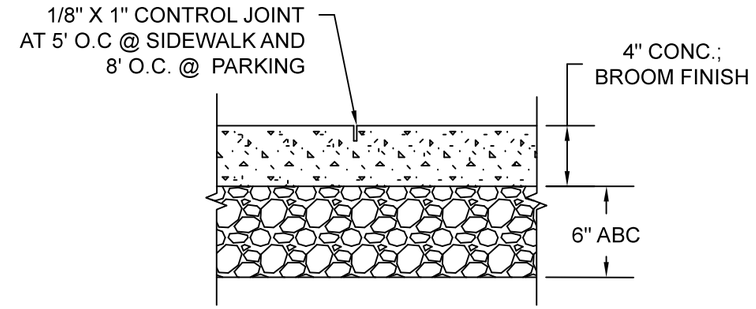
1. ALLOW PUSH SLAB CONCRETE TO CURE FOR AT LEAST 14 DAYS PRIOR TO PUSHING.
2. LEAVE 20" OF LONGITUDINAL BARS PROJECTING UPSLOPE.
3. PLACE WOODEN SHIMS OR BLOCKS BETWEEN PROJECTING BARS WHILE PUSHING SLAB INTO PLACE WITH A BULLDOZER SET SQUARE TO SLAB END.
4. PLACE CAST-IN-PLACE UPPER RAMP SLAB TO ENCASE PROJECTING LONGITUDINAL BARS.

1/5 PUSH SLAB TO CAST-IN-PLACE JOINT
NTS

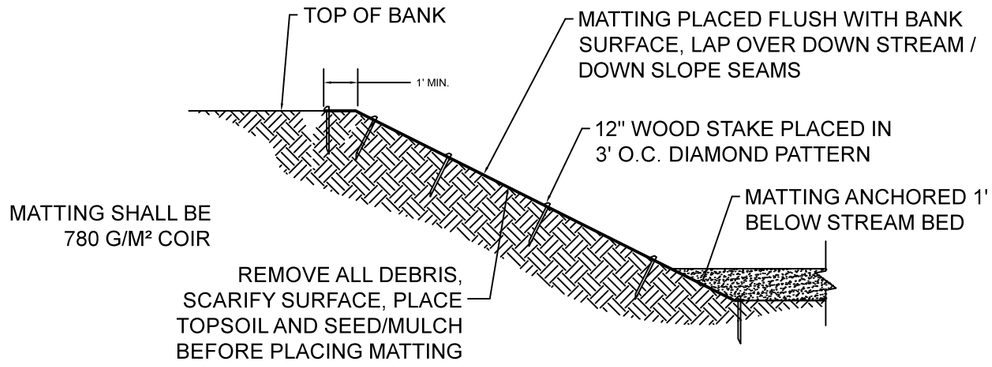
TEMPORARY SEED MIX				
Application Dates	Common Name	Scientific Name	Rate (lb/acre) Applied Separately	Rate (lb/acre) Applied w/ Riparian Mix
August 15 to May 1	Rye Grain	Secale cereale	120	60
May 1 to August 15	Browntop Millet	Panicum ramosum	40	20

RIPARIAN SEED MIX - APPLIED TO STREAM BANKS AND BUFFERS		
Seeding Rate = 20 lb/acre		
Mulching: wheat or oat straw mulch applied at 2 tons/acre		
Common Name	Scientific Name	Percentage
Indiangrass	Sorghastrum nutans	20
Big Bluestem	Andropogon gerardi	20
Virginia Wildrye	Elymus virginicus	20
Soft Rush	Juncus effusus	20
Beaked Panicgrass	Panicum anceps	10
Fox Sedge	Carex vulpinoidea	10

3/5 SEED MIXES



2/5 CONCRETE SIDEWALK & PARKING SECTION
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4/5 EROSION CONTROL MATTING
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