

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION



GOULDSBORO

HANCOCK COUNTY

ROUTE 186

STATE PROJECT NO. 17542.00

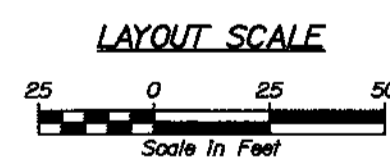
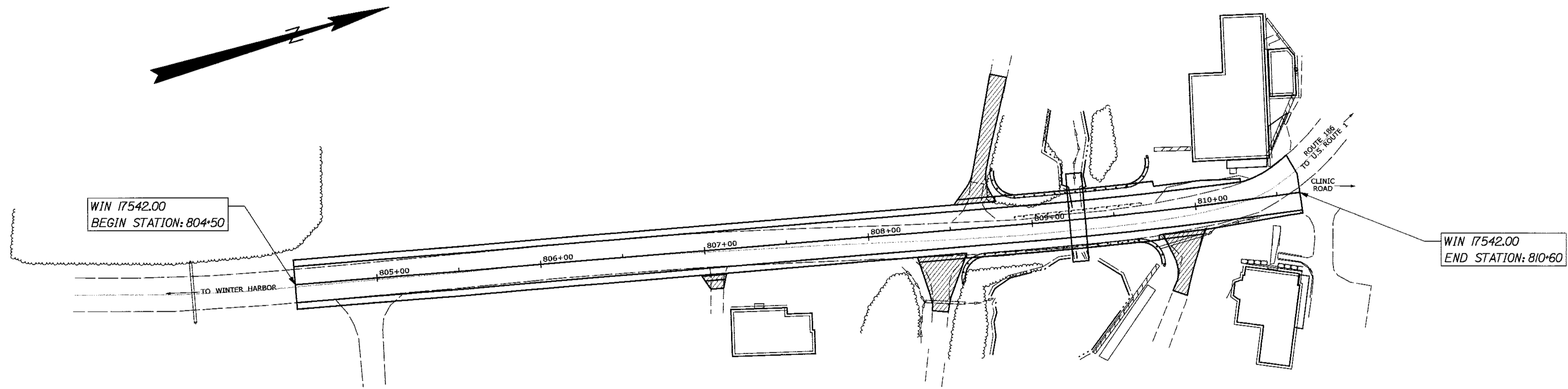
PROJECT LENGTH : 0.12 MILES

PLAN LEGEND

Town, County, State	Centerline-Existing	_____
Property Lines	Centerline-Proposed	_____
R/W Lines-Existing	Travelway-Existing	_____
R/W Lines-Proposed	Travelway-Proposed	_____
Culvert-Existing	Railroad	_____
Culvert Proposed	Catch Basins	Existing <input type="checkbox"/> Proposed <input type="checkbox"/>
Curbing Existing	Manholes	Existing <input type="checkbox"/> Proposed <input type="checkbox"/>
Type 1	Proposed Underdrain	_____
Type 3	Proposed Ditch	_____
Type 5	Existing Ditch	_____
Outline of Bodies of Water	Utility Poles	Existing <input type="checkbox"/> Proposed <input type="checkbox"/>
Ledge	Fire Hydrants	Existing <input type="checkbox"/> Proposed <input type="checkbox"/>
Buildings	Existing Water Line	_____
Trees <input type="checkbox"/> Conifer <input type="checkbox"/> Deciduous	Existing San. Sewer	_____
Tree Line	Existing San. Sewer Manhole	_____
Clearing Limit Line	Guardrail-Existing	_____
	Guardrail-Proposed	_____
	Guardrail-Cable, Other	_____

INDEX OF SHEETS

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Title Sheet	1
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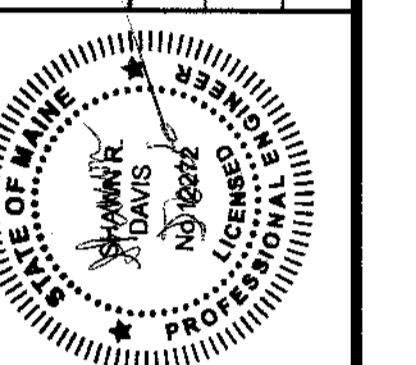


TRAFFIC DATA

Current (2012) AADT	1600
Future (2024) AADT	1790
DHV - % of AADT	11%
Design Hour Volume	197
% Heavy Trucks (AADT)	12%
% Heavy Trucks (DHV)	7%
Directional Distribution (DHV)	54%
18 kip Equivalent P 2.0	68
18 kip Equivalent P 2.5	65
Design Speed (mph)	45
Functional Class:	RURAL HIGHWAY

PROJECT LOCATION:	Culvert Replacement: Located 0.05 of a mile south of Clinic Road.
PROGRAM AREA:	Highway Program
SCOPE OF WORK:	Strut Replacement

STATE OF MAINE DEPARTMENT OF TRANSPORTATION	DATE 6/21/12
APPROVED	DATE 6-11-12
COMMISSIONER	
CHIEF ENGINEER	



SHAWN DAVIS	
SIGNATURE	12372
P.E. NUMBER	6/18/12
DATE	

PROGRAM	SHAWN DAVIS
PROJECT MANAGER	ROB CHESTER
DESIGNER	
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

PROJECT INFORMATION	PROGRAM	SHAWN DAVIS
	PROJECT MANAGER	ROB CHESTER
	DESIGNER	
	CONSULTANT	
	PROJECT RESIDENT	
	CONTRACTOR	
	PROJECT COMPLETION DATE	

GOULDSBORO ROUTE 186 TITLE SHEET
SHEET NUMBER 1
OF 13

WIN 17542.00 017542.00

Date: 6/15/2012

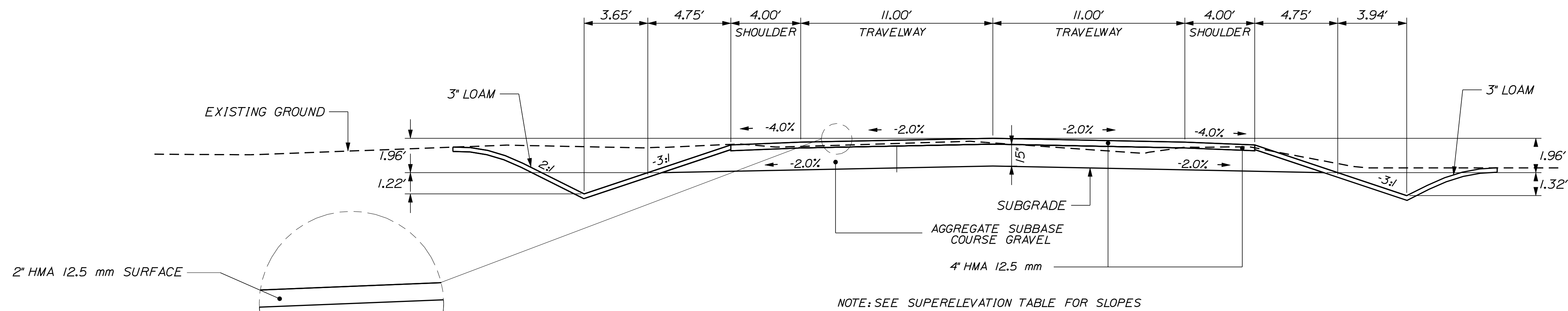
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Division: HIGHWAY

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 Division: HIGHWAY
 Username: robert.chester
 Date: 6/14/2012

CONSTRUCTION



NOTE:

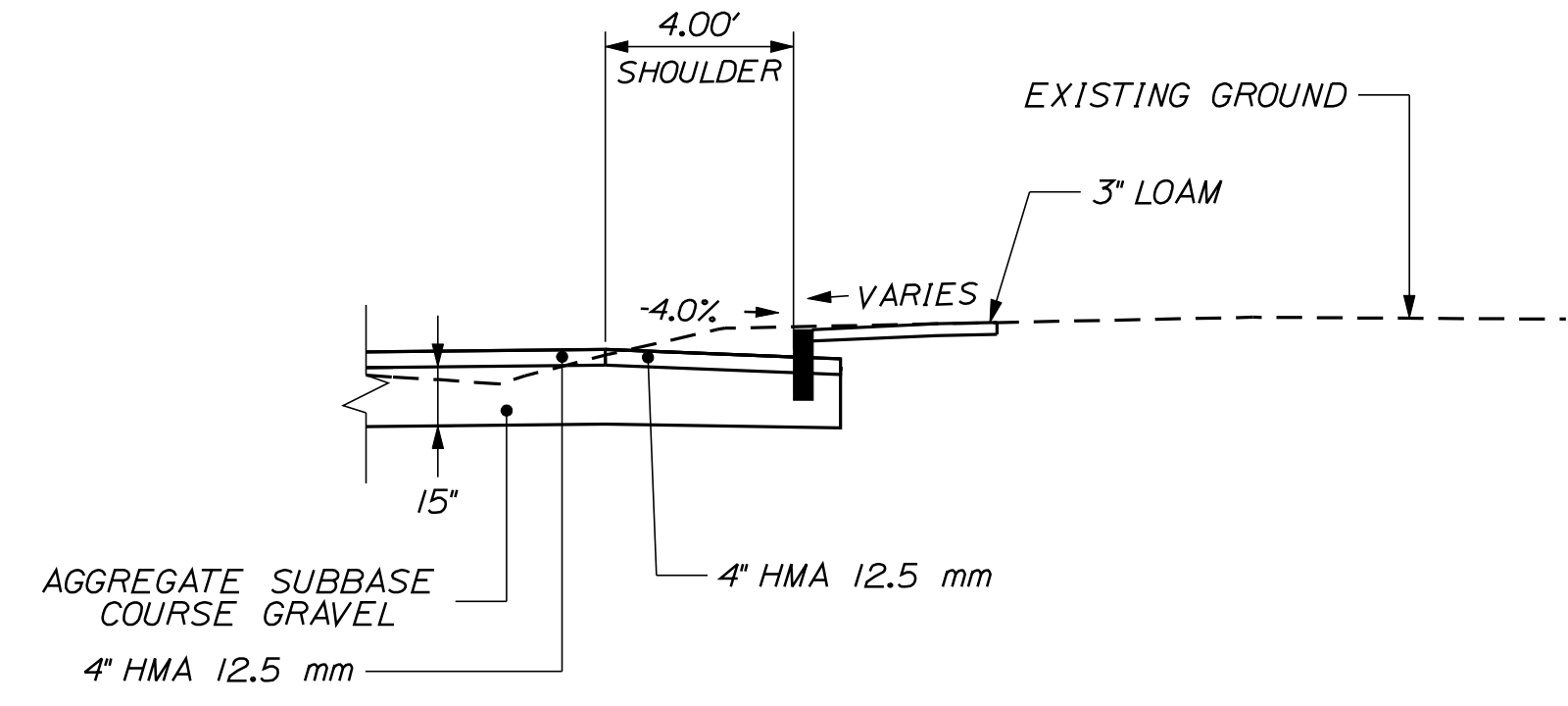
1. THE PAVEMENT, BASE AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.
2. WHEN SUPERELEVATION EXCEEDS THE SLOPE OF THE LOW SIDE SHOULDER, THE LOW SIDE SHOULDER SHALL HAVE THE SAME SLOPE AS THE TRAVELWAY.
3. CROWNS FOR BOTH NORMAL AND SUPERELEVATION SECTIONS FOR ALL COURSES OF SUBBASE AND PAVEMENT SHALL BE STRAIGHT.
4. THE GRAVEL QUANTITY CALCULATION IS BASED ON A 3" LOAM OR DIRTY BORROW DEPTH. THE ACTUAL DEPTH MAY VARY. SEE THE GENERAL NOTES.
5. THE ALGEBRAIC DIFFERENCE BETWEEN THE SHOULDER AND TRAVELWAY CROSS SLOPES "ROLLOVER" SHALL NOT EXCEED 8%.
6. THE STATIONING SHOWN UNDER EACH TYPICAL IS APPROXIMATE.
7. WHEN PAVEMENT EXTENDS LESS THAN 3 FT. FROM THE FACE OF GUARDRAIL, 7 FT. MINIMUM GUARDRAIL POSTS ARE REQUIRED. HOWEVER, 6 FT. GUARDRAIL POSTS SHALL BE USED AT THE IMMEDIATE LOCATION OF THE PRECAST STRUCTURE TO AVOID OBSTRUCTION WITH THE STRUCTURE.

AGGREGATE SUBBASE COURSE GRAVEL		
LEFT SHOULDER 17.93 CY/100 LF	11 FT. TRAVEL LANES 50.93 CY/100 LF	RIGHT SHOULDER 17.93 CY/100 LF
STATION TO STATION 804*50 TO 808*87 LT.	STATION TO STATION 804*50 TO 810*60	STATION TO STATION 804*50 TO 807*09 RT.
809*56 TO 810*60 LT.		807*77 TO 808*66 RT.
		809*60 TO 810*00 RT.

SUPERELEVATION TABLE

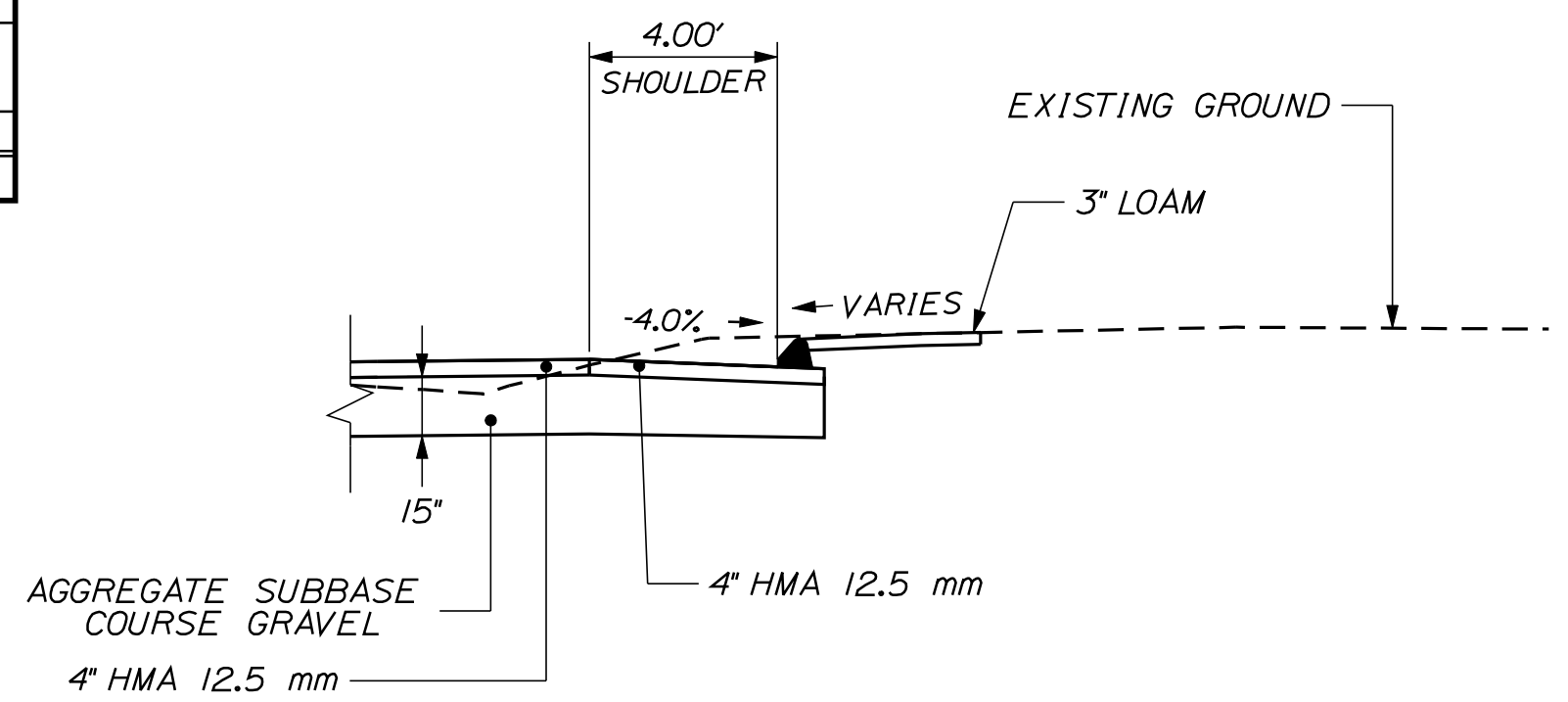
LT. SHOULDER	LT TRAVELWAY	STATION	RT TRAVELWAY	RT. SHOULDER
-4.0%	-3.7%	804*50	2.6%	-4.0%
-4.0%	-2.6%	805*00	1.1%	-4.0%
-4.0%	-2.0%	805*50	-0.5%	-4.0%
-4.0%	-2.0%	806*00	-2.0%	-4.0%
-4.0%	-2.0%	806*50	-2.0%	-4.0%
-4.0%	-2.0%	807*00	-2.0%	-4.0%
-4.0%	-2.0%	807*50	-2.0%	-4.0%
-4.0%	-2.0%	808*00	-2.0%	-4.0%
-4.0%	-2.0%	808*50	-0.5%	-4.0%
-4.0%	-3.0%	809*00	1.0%	-4.0%
-4.0%	-3.0%	809*50	1.0%	-4.0%
-4.0%	-3.0%	810*00	-0.3%	-4.0%
-8.5%	-3.0%	810*50	-1.7%	-4.0%
-4.9%	-3.0%	810*60	-1.7%	-4.0%

FULL CONSTRUCTION
NORMAL



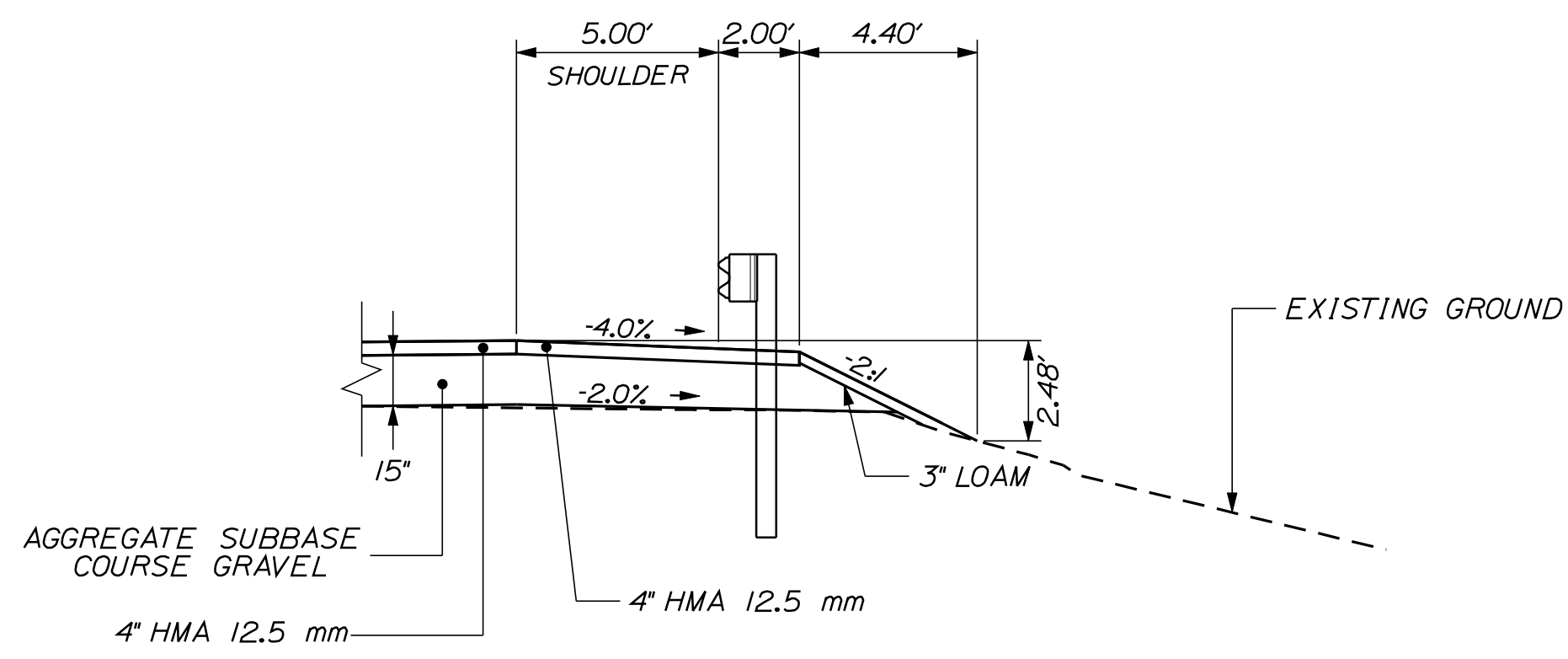
VERTICAL CURB TYPE 1

AGGREGATE SUBBASE COURSE GRAVEL
SHOULDER 11.02 CY/50 LF
STATION TO STATION 807*09 TO 807*77 RT



CURB TYPE 3

AGGREGATE SUBBASE COURSE GRAVEL
SHOULDER 11.02 CY/50 LF
STATION TO STATION 810*00 TO 810*60 RT



GUARDRAIL TYPE 3C

AGGREGATE SUBBASE COURSE GRAVEL
SHOULDER 17.91 CY/50 LF
STATION TO STATION 808*66 TO 809*60 RT 808*87 TO 809*56 LT

STATE OF MAINE
 DEPARTMENT OF TRANSPORTATION
 PRELIMINARY PLANS
 WIN 17542.00
 HIGHWAY PLANS

PROJ. MANAGER	DATE	BY	SIGNATURE	P.E. NUMBER	DATE
S. DAVIS		R. CHESTER			
CHECKED-REVIEWED					
DESIGN DETAILED					
DESIGN DETAILED					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

GOULDSBORO
 ROUTE 186
 TYPICAL SECTIONS

SHEET NUMBER
 2
 OF 13

NOT TO SCALE

BOX CULVERT DETAILS

PRECAST CONCRETE BOX NOTES:

1. THE HEADWALL SHALL BE PRECAST AND IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DESIGN THE REINFORCEMENT (REFERENCE STANDARD SPECS. SECTION 712.061 - STRUCTURAL PRECAST CONCRETE UNITS). WALL THICKNESS AND OTHER MANUFACTURING SPECS. FOR THE BOX CULVERT ARE TO BE DETERMINED BY THE CONTRACTOR OR MANUFACTURER IN ACCORDANCE WITH THE AASHTO STANDARD SPECS. FOR RESISTANCE FACTOR DESIGN (LRFD) METHOD. PLEASE REFER TO SP SECTION 534, PRECAST STRUCTURAL CONCRETE AND MANUFACTURER'S SPECS FOR INSTRUCTION ON CONSTRUCTION, HANDLING, AND ASSEMBLY OF THE PRECAST UNITS.

2. NO DETOURS SHALL BE ALLOWED ON THIS PROJECT. AT MINIMUM, ALTERNATING ONE WAY TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. MEASURES NECESSARY TO ACCOMPLISH THIS TASK SHALL BE INCIDENTAL TO THE 534 ITEM.

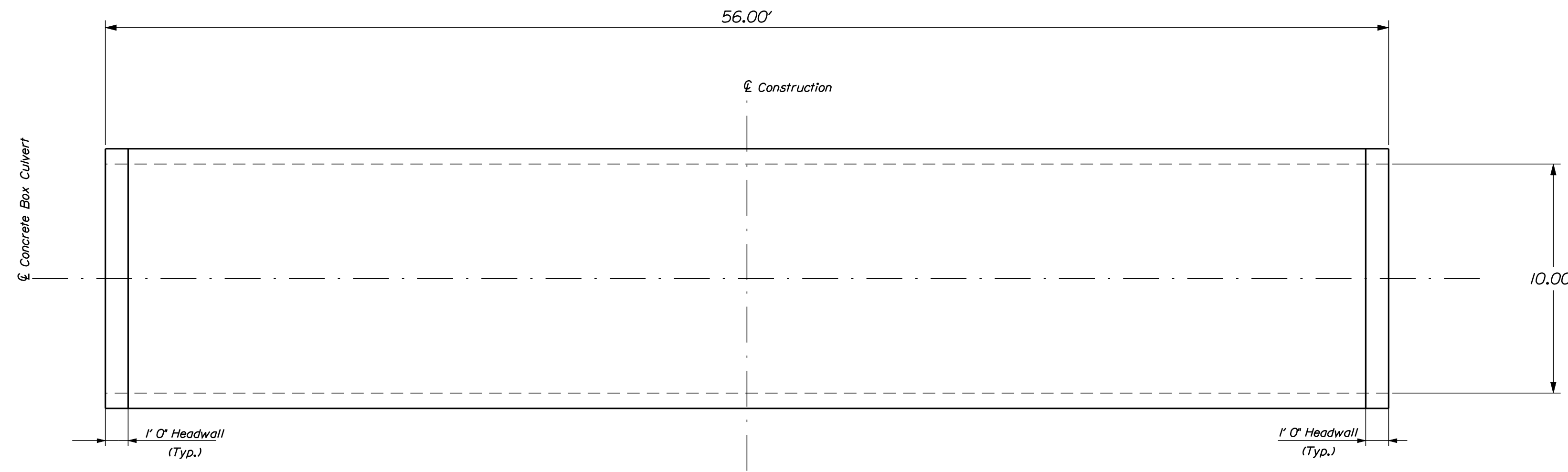
3. INSTALL STANDARD MEMBRANE WATERPROOFING OVER THE TOP AND TO 12 INCHES DOWN THE EXTERIOR SIDES OF THE PRECAST UNITS.

4. COFFERDAMS ARE TO BE PLACED AT BOTH THE DOWNSTREAM AND UPSTREAM ENDS OF THE PRECAST STRUCTURE TO ALLOW WATER TO BE PUMPED AND REMOVED FROM THE WORKING AREA.

5. THE CONTRACTOR SHALL CONSTRUCT A FIELDSTONE RETAINING WALL AT BOTH THE INLET AND OUTLET ENDS OF THE STRUCTURE USING EXISTING MATERIAL. THE RETAINING WALLS SHALL SURROUND THE STRUCTURE OPENINGS AT A 1:6 SLOPE. PLEASE REFER TO SP SECTION 525 - FIELDSTONE RETAINING WALL. 1.5' DEPTH RIPRAP APRONS ARE TO BE PLACED AT BOTH THE INLET AND OUTLET ENDS OF THE STRUCTURE. TWO RIPRAP BERMS SHALL BE PLACED AT THE OUTLET END FOR ADDED SLOPE EROSION PREVENTION DUE TO THE REMOVAL OF THE EXISTING DAM AT THE INLET END. THE DAM REMOVAL AND SUBSEQUENT DRAINING OF AN ADJACENT SMALL POND WILL EXPOSE AN AREA OF SILT WHICH SHALL BE MULCHED AND SEEDED WITH METHOD 3 SEED.

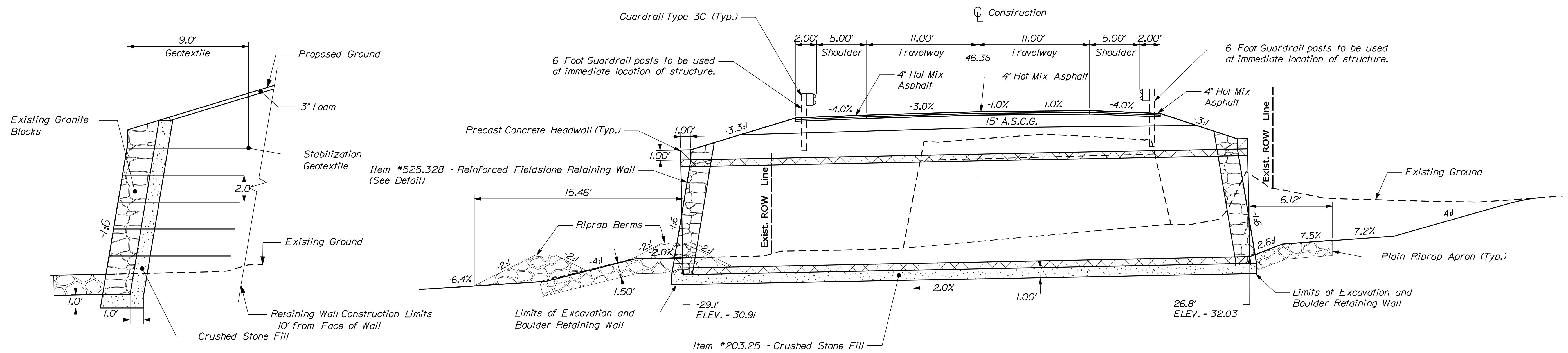
6. ONCE THE STRUCTURES ARE INSTALLED AND BACKFILLED UP TO TOP OF SUBGRADE, ITEM *403.213 - 12.5MM HMA BASE AND ITEM *403.208 12.5MM HMA SURFACE WILL BE USED TO PAVE THE RESULTING TRENCH BACK IN.

7. GUARDRAIL TREATMENT OVER BURIED STRUCTURES, 606(24) PAYMENT SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL PAY ITEMS.



CONCRETE BOX CULVERT PLAN VIEW

STA. 809+24.00



REINFORCED FIELDSTONE RETAINING WALL DETAIL

(Wall Widths and Locations Shown on Plan)

TYPICAL BOX CULVERT SECTION

INSTALL 10' RISE BY 10' SPAN BY 56' LONG CONCRETE BOX CULVERT

STATE OF MAINE
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PIN 17542.00
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S. DAVIS		R. CHESTER				
DESIGN DETAILED						
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REVISIONS 1						
REVISIONS 2						
REVISIONS 3						
REVISIONS 4						
FIELD CHANGES						

GOULDSBORO
ROUTE 186
TYPICAL SECTIONS

SHEET NUMBER

3

OF 13

NOT TO SCALE

Date: 6/15/2012

Username: robert.chester

Division: HIGHWAY
Division: HIGHWAY
Division: HIGHWAY

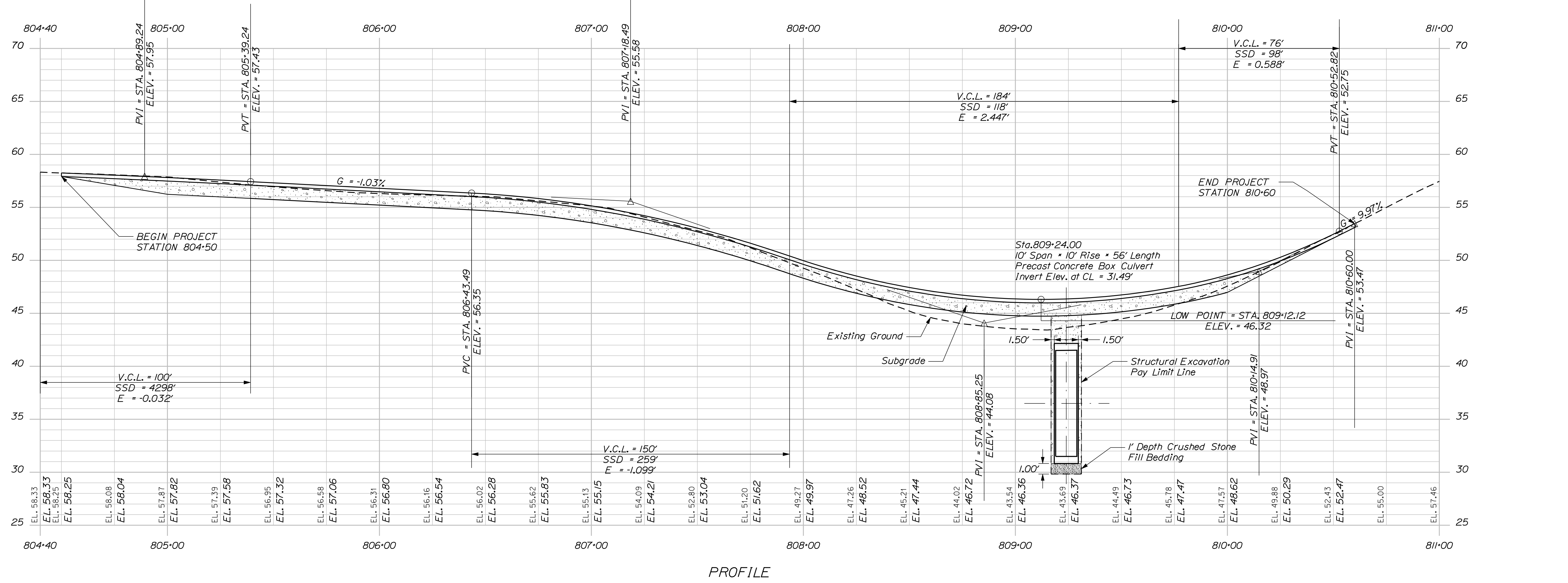
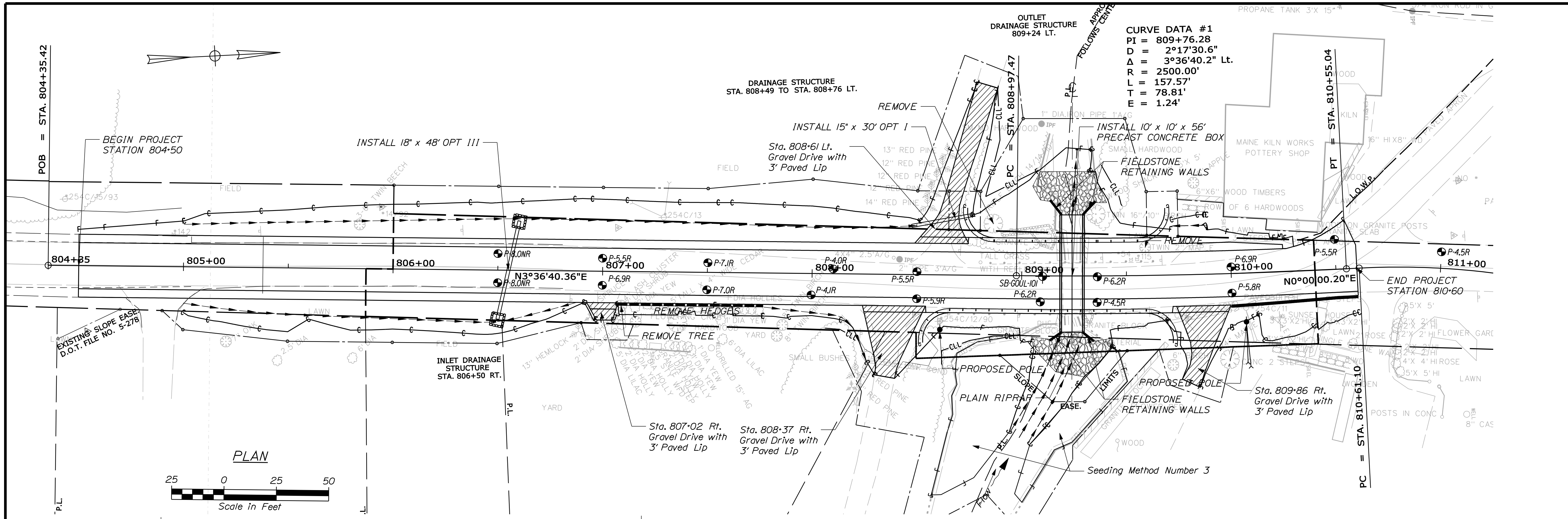
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STATE OF MAINE
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DESIGN-DETAILED	DATE
S. DAVIS	
R. CHESTER	

SIGNATURE	P.E. NUMBER	DATE

GOULDSBORO
 ROUTE 186
 PLANS

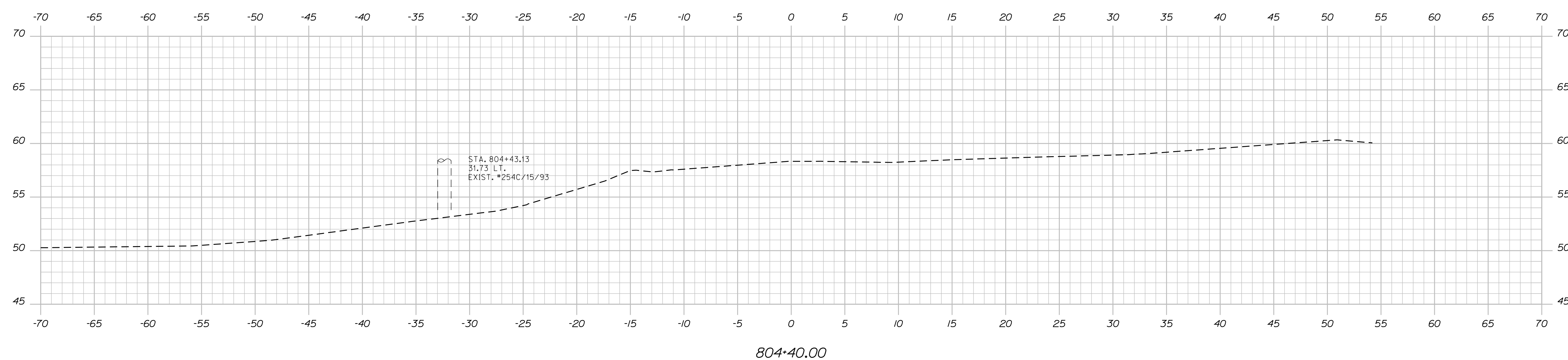
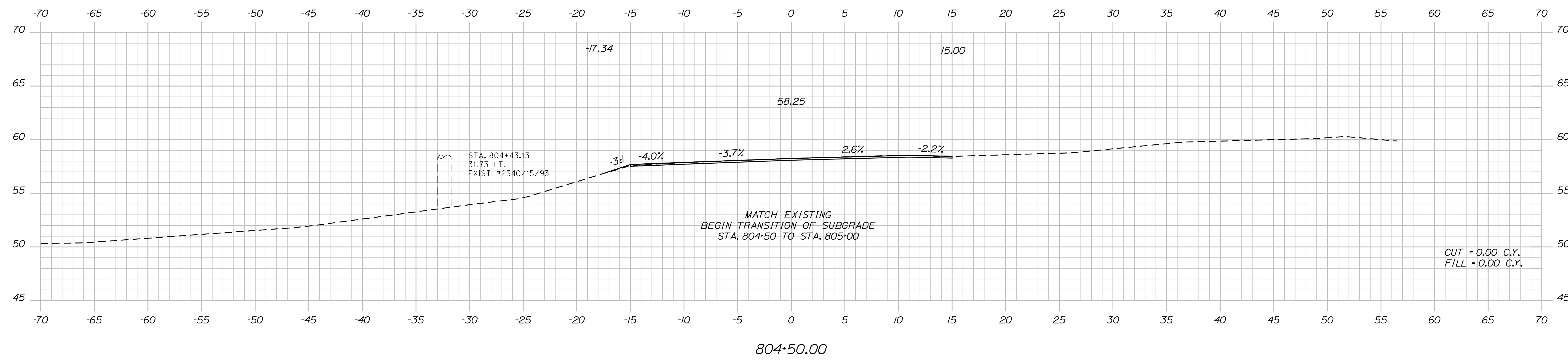
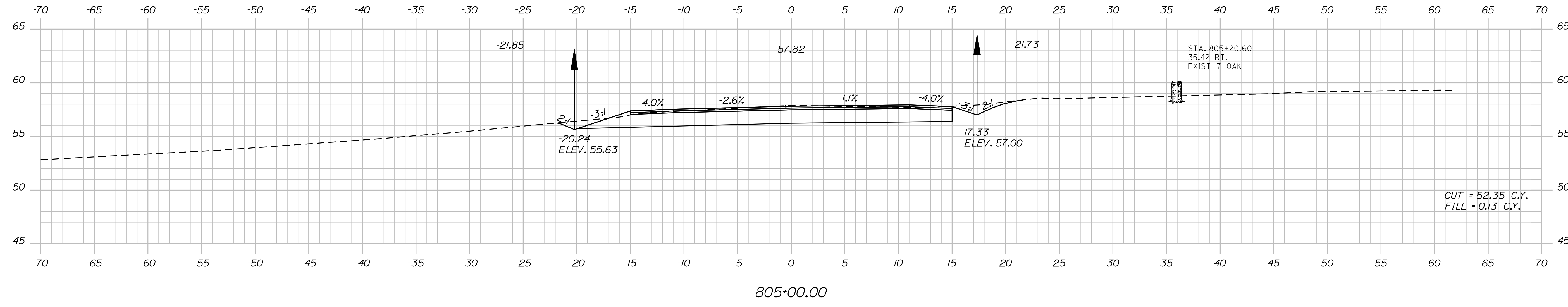
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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
PRELIMINARY PLANS
PIN 17542.00
HIGHWAY PLANS

PROJ. MANAGER	DATE	BY	SIGNATURE
S. DAVIS		R. CHESTER	

DESIGN-DETAILED	CHECKED-REVIEWED	DESIGN-DETAILED	DESIGN-DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES

GOULDSBORO
ROUTE 186
CROSS SECTIONS

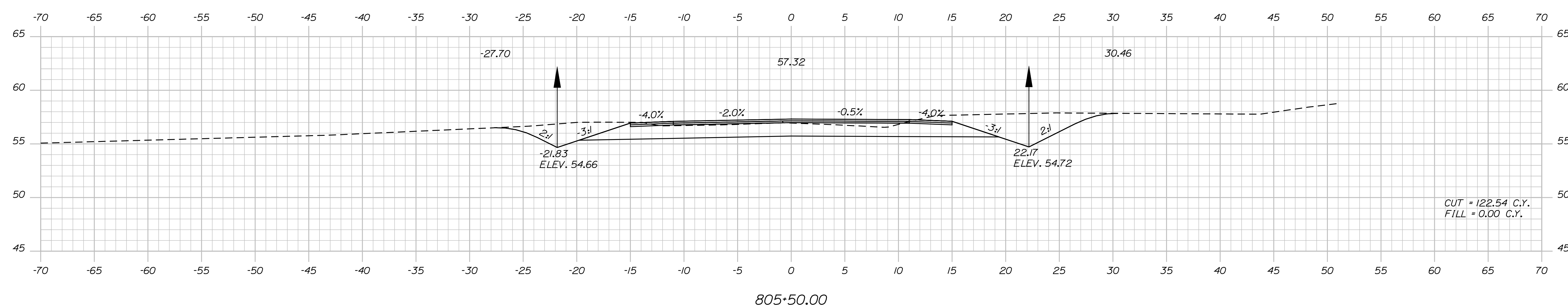
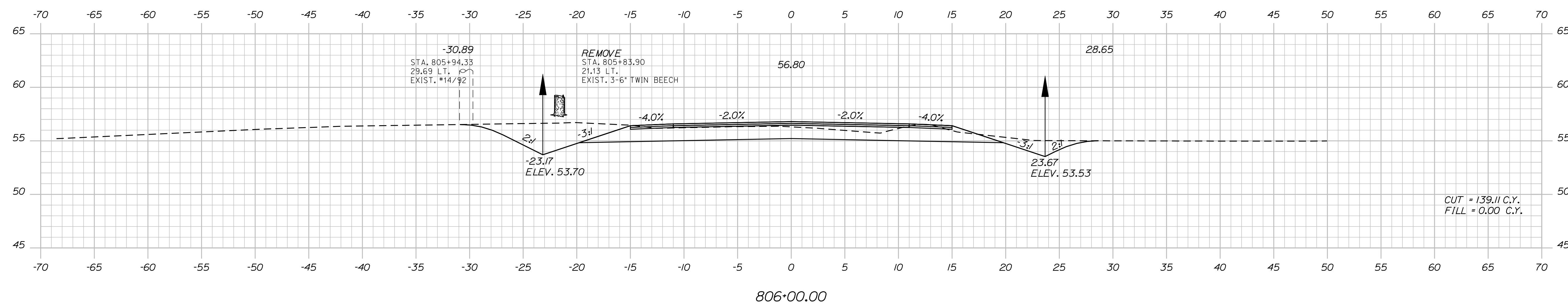
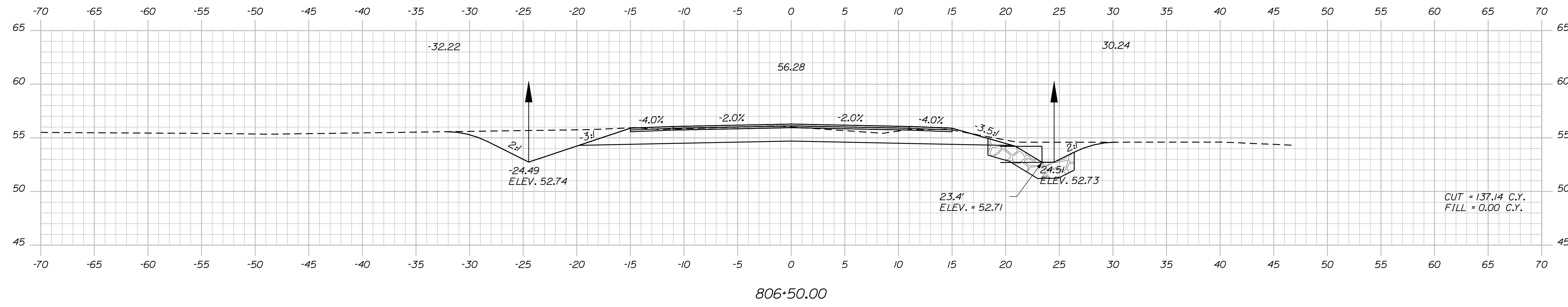
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OF 13

Date: 6/14/2012

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STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
PRELIMINARY PLANS
PIN 17542.00
HIGHWAY PLANS

DESIGN DETAILED	CHECKED/REVIEWED	DESIGN DETAILED	REVISIONS 1	REVISIONS 2	REVISIONS 3	REVISIONS 4	FIELD CHANGES
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PROJ. MANAGER	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
S. DAVIS					

GOULDSBORO
ROUTE 186
CROSS SECTIONS

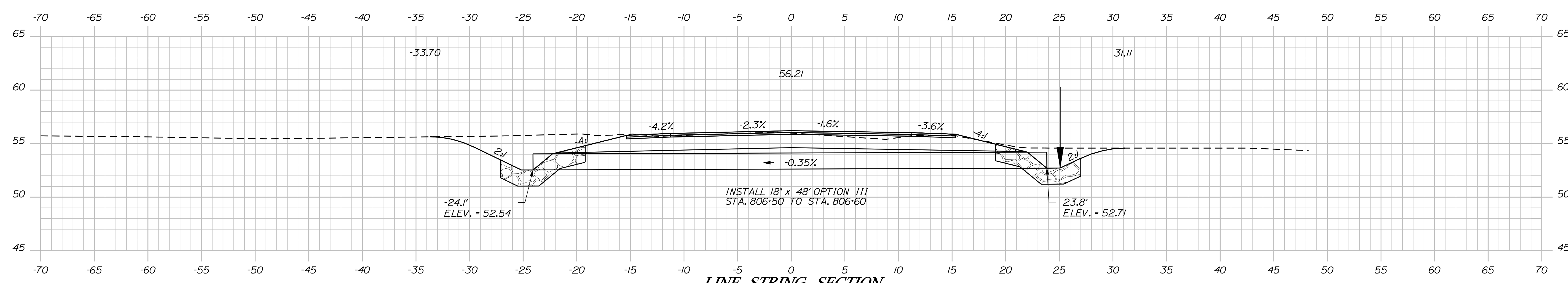
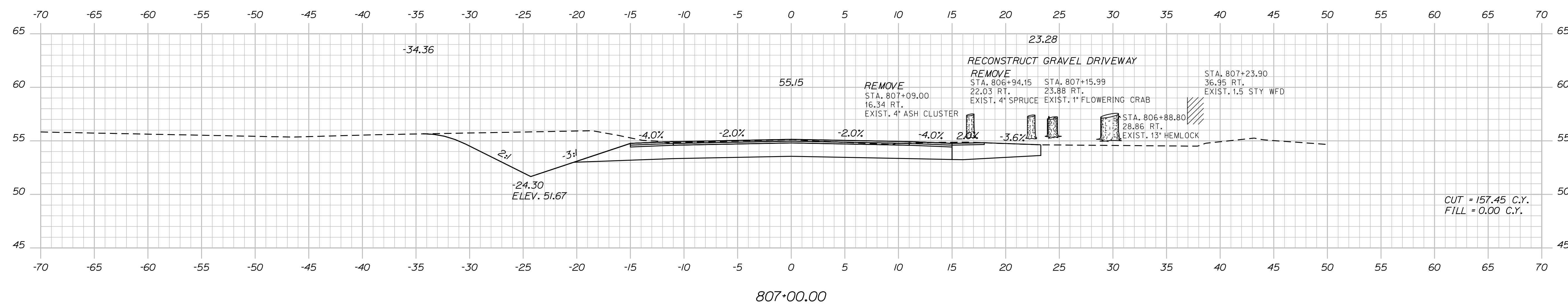
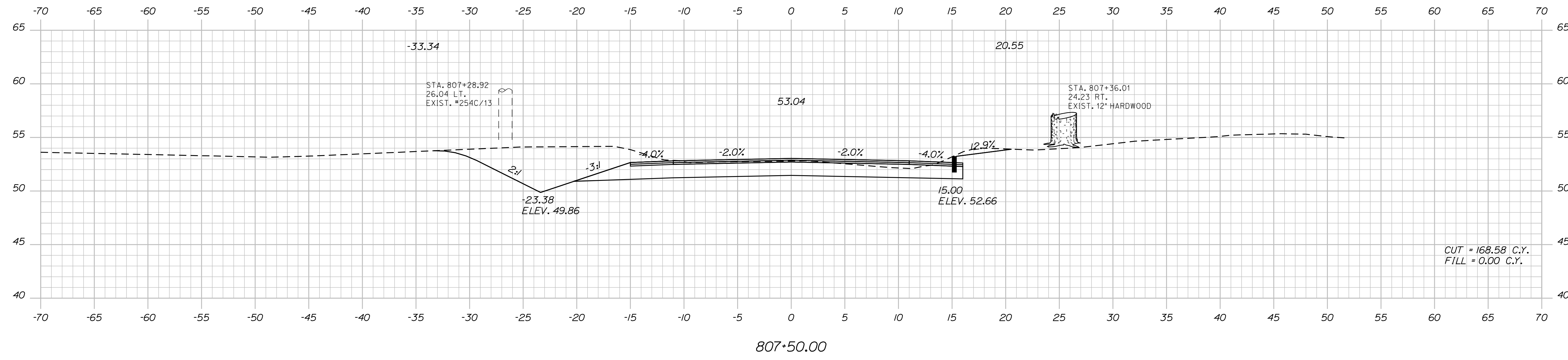
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OF 13

Date: 6/14/2012

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Division: HIGHWAY

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LINE STRING SECTION
806+55.04

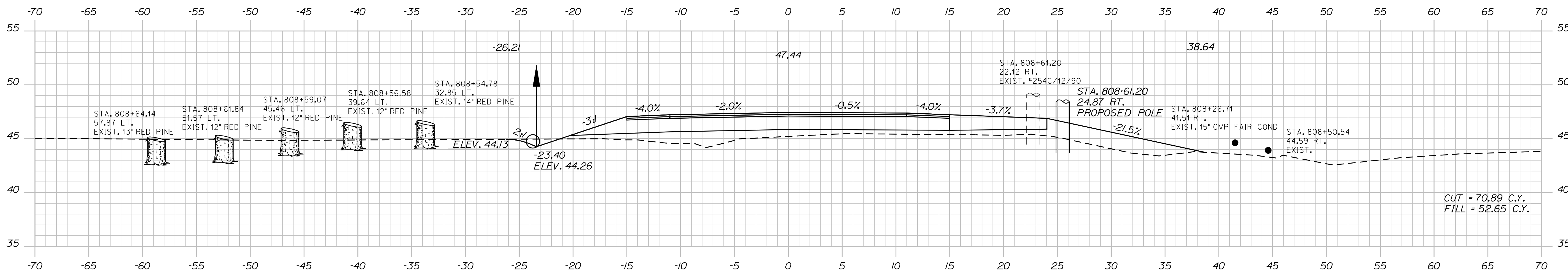
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PIN		17542.00	
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DESIGN-DETAILED	R. CHESTER	DESIGN-REVIEWED	
DESIGN-DETAILED		DESIGN-REVIEWED	
REVISIONS 1		REVISIONS 2	
REVISIONS 2		REVISIONS 3	
REVISIONS 3		REVISIONS 4	
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OF 13			

Date: 6/14/2012

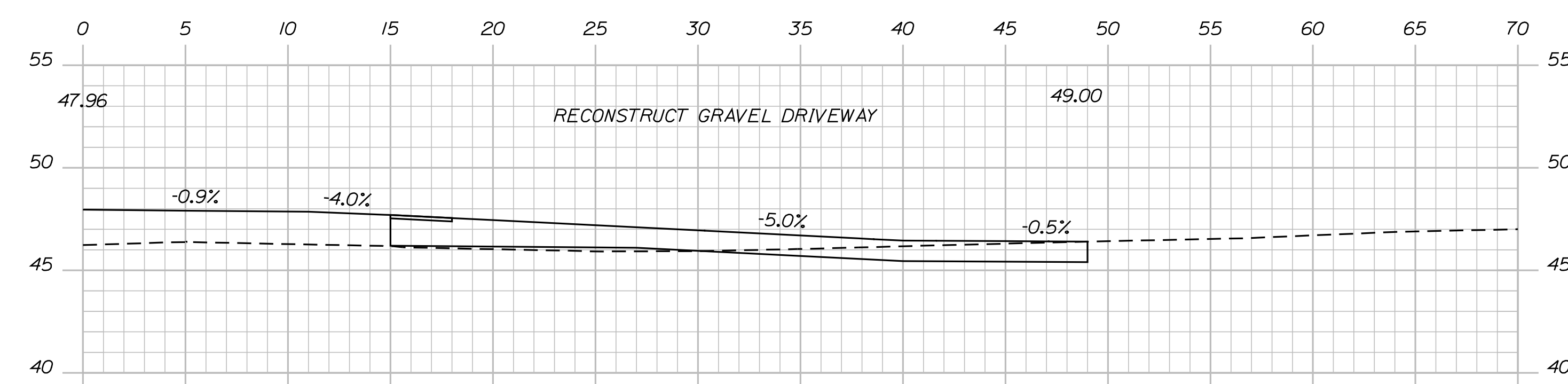
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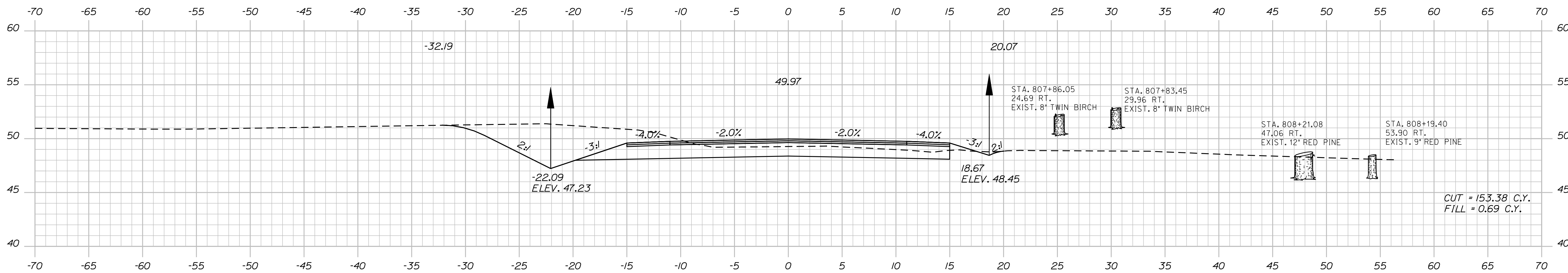
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808+50.00



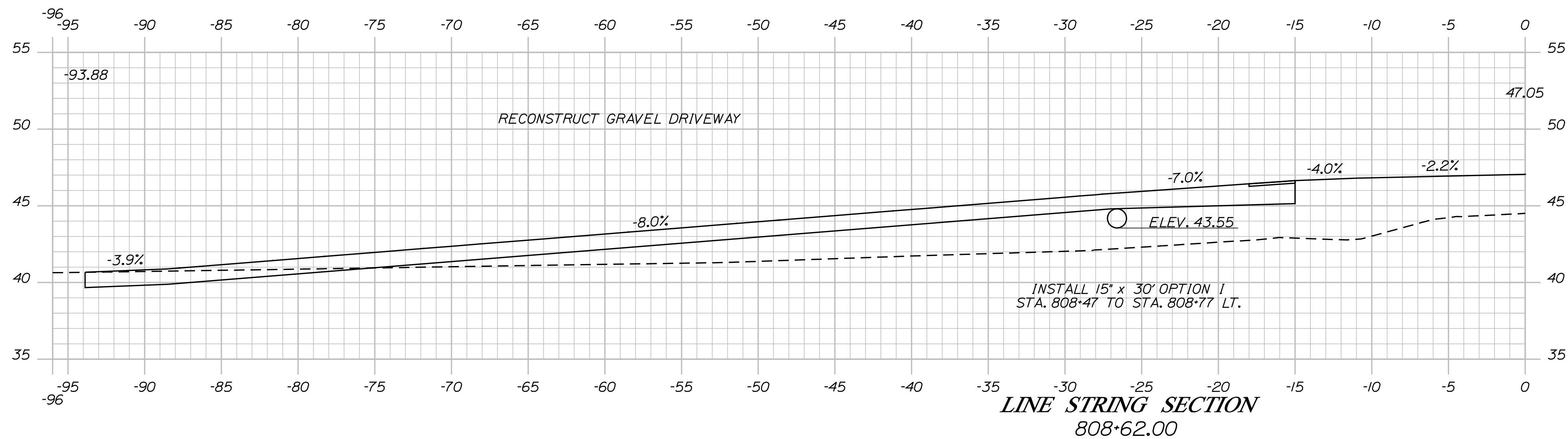
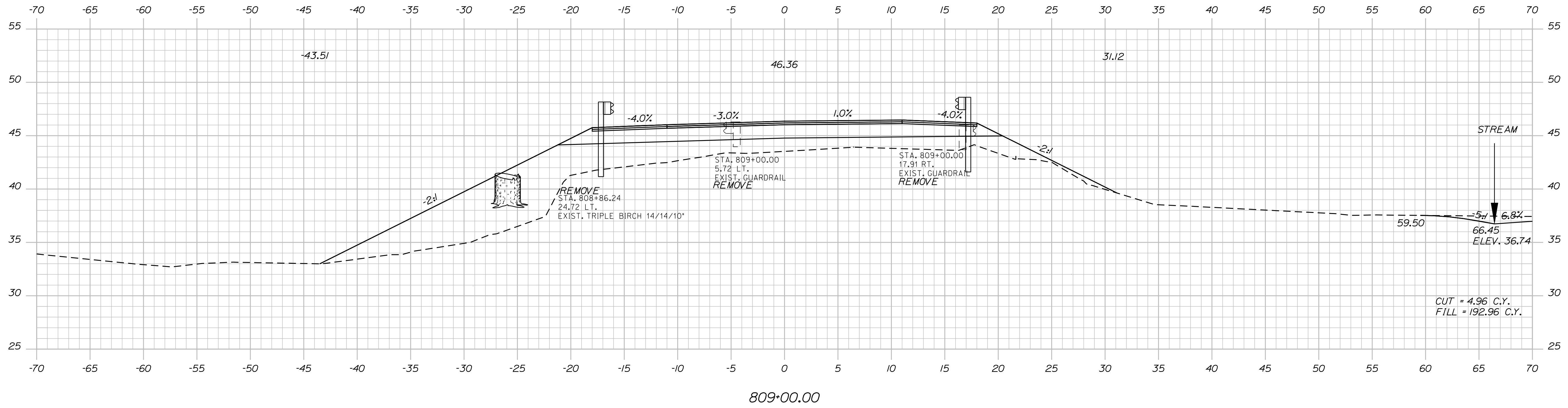
LINE STRING SECTION
808+37.00



808+00.00

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S. DAVIS	R. CHESTER				
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GOULDSBORO
ROUTE 186
CROSS SECTIONS



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ROUTE 186
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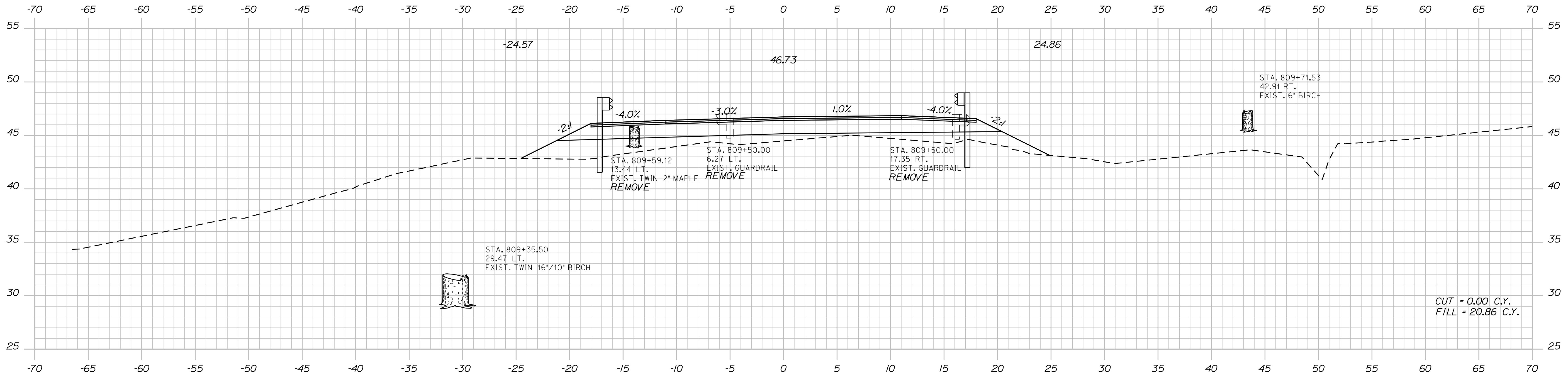
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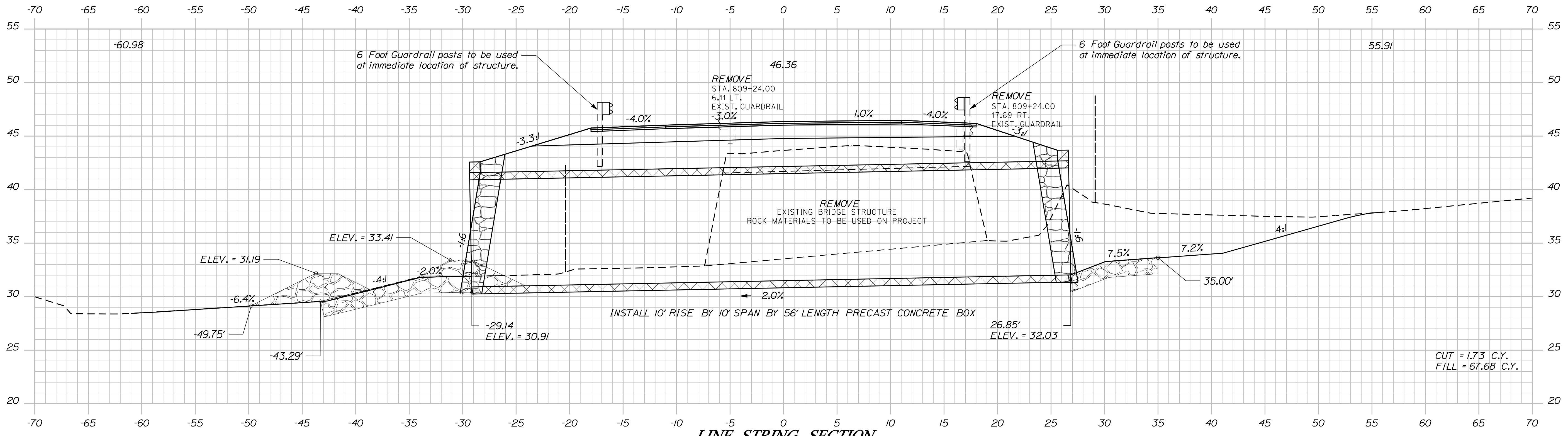
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809+50.00

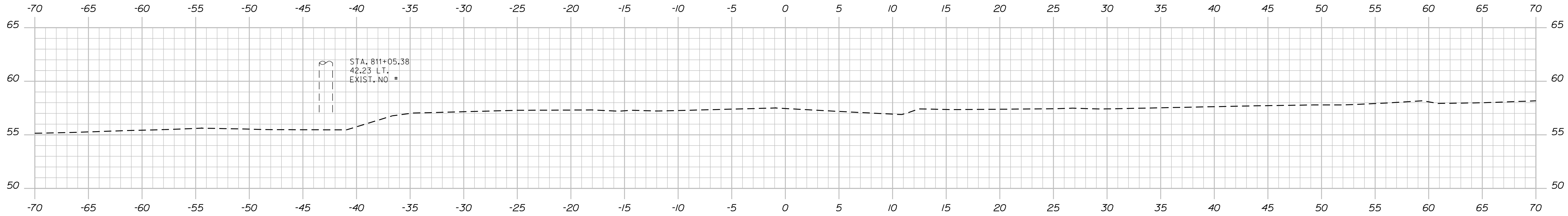


LINE STRING SECTION
809+24.00

PROJ. MANAGER	DATE	BY	SIGNATURE
S. DAVIS		R. CHESTER	
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GOULDSBORO
ROUTE 186
CROSS SECTIONS

SHEET NUMBER
10
OF 13



811+00.00

Sta. 811+00.00 to Sta. 811+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PRELIMINARY PLANS

PIN
17542.00

HIGHWAY PLANS

DATE

R. CHESTER

DESIGN DETAILED

CHECKED/REVIEWED

DESIGN DETAILED

DESIGN DETAILED

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PROJ. MANAGER
S. DAVIS
GOULDSBORO
ROUTE 186

CROSS SECTIONS

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12

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