STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

KENNEBUNK, ARUNDEL, AND BIDDEFORD
YORK COUNTY

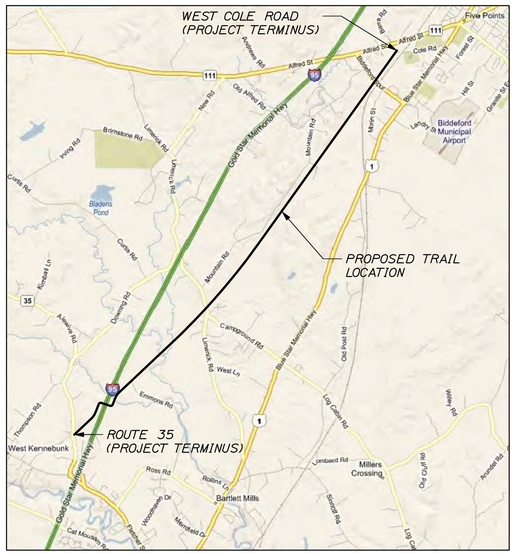
STP-1334(100)S

EASTERN TRAIL:
MULTI-USE RECREATIONAL
TRAIL DEVELOPMENT

PROJECT LENGTH : 6.1 mi.

A GRADING, BASE, SURFACE, TRAIL AND BRIDGE PROJECT

REVISED PLANS
MARCH 1, 2010



LOCATION MAP

1 0 1 2

Scale in Miles

LAYOUT PLAN

1500 0 1500 3000

Scale in Feet

INDEX OF SHEETS

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

APPROVED | DATE

COMMISSIONER:

CHIEF ENGINEER:

PROJECT INFORMATION

		SIGNATURE	P.E. NUMBER	DATE
PROGRAM	MULTIMODAL			
PROJECT MANAGER	JOEL KITTREDGE			
DESIGNER	HNTB			
CONSULTANT	HNTB			
PROJECT RESIDENT				
CONTRACTOR				
PROJECT COMPLETION DATE				

EASTERN TRAIL
KENNEBUNK TO BIDDEFORD

TITLE SHEET

SHEET NUMBER

1

OF --

Filename: ...\CAD\001_Title-2.dgn Division: HIGHWAY Username: chavu Date:3/23/2010

Date:8/18/2009

GENERAL NOTES

1. THE MULTI-USE TRAIL IS INTENDED TO BE BUILT ON TOP OF THE EXISTING RAILROAD EMBANKMENT. HORIZONTAL TRAIL ALIGNMENT IS APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD TO FIT OVER CULVERTS AND BETWEEN LEDGE CUTS AND TO REDUCE CLEARING AND EARTHWORK REQUIREMENTS. ALL ADJUSTMENTS SHALL BE COORDINATED AND APPROVED BY THE RESIDENT IN ADVANCE OF THE WORK.

2. ALL WORK TO BE DONE UNDER THIS CONTRACT SHALL BE GOVERNED BY THE "STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS", REVISION OF DECEMBER 2002, UPDATED AUGUST 2008 AND "STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS", REVISION OF DECEMBER 2002, UPDATED FEBRUARY 2009, EXCEPT AS MODIFIED BY THE CONTRACT DOCUMENTS.

3. ALL TREES, BRUSH, VEGETATION, STUMPS, AND OTHER ITEMS SHALL BE REMOVED FROM THE AREA. ALL DEBRIS SHALL BE REMOVED AND DISPOSED OF IN ACCORDANCE WITH STATE AND LOCAL REGULATIONS AND CODES.

4. ITEM 203.20 SHALL INCLUDE THE REMOVAL OF EXISTING VEGETATION, TOPSOIL, ROAD SURFACE, MUCK AND OTHER MATERIALS ENCOUNTERED. MUCK SHALL BE EXCAVATED TO THE DEPTHS SHOWN ON THE PLANS AND DISPOSED AS DIRECTED BY THE RESIDENT.

5. INFORMATION REGARDING THE LOCATION OF EXISTING UTILITIES HAS BEEN BASED UPON AVAILABLE INFORMATION AND MAY BE INCOMPLETE, AND WHERE SHOWN SHOULD BE CONSIDERED APPROXIMATE. THE LOCATION OF ALL EXISTING UTILITIES SHOULD BE CONFIRMED PRIOR TO BEGINNING CONSTRUCTION. PRIOR TO ANY DIGGING CONTRACTOR SHALL CONTACT "DIG SAFE" AT 1-800-344-7233 TO DETERMINE LOCATIONS OF EXISTING UNDERGROUND UTILITIES. ALL UTILITY LOCATIONS THAT DO NOT MATCH THE VERTICAL OR HORIZONTAL CONTROL SHOWN ON THE PLANS SHALL IMMEDIATELY BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION.

6. GRANITE STATE GAS TRANSMISSION CO. MAINTAINS AND OPERATES A HIGH PRESSURE NATURAL GAS TRANSMISSION LINE ALONG THE FULL LENGTH OF THE PROPOSED TRAIL CORRIDOR. THE CONTRACTOR IS ADVISED THAT THE RESTRICTIONS OUTLINED IN SPECIAL PROVISION 104 WILL APPLY TO ALL WORK COMPLETED WITHIN THE TRANSMISSION CORRIDOR.

7. ALL UTILITY FACILITIES SHALL BE ADJUSTED BY THE RESPECTIVE UTILITIES UNLESS OTHERWISE NOTED. COORDINATION SHALL BE BY THE DEPARTMENT.

8. THE UTILITIES INVOLVED IN THIS CONTRACT ARE AS FOLLOWS:
   - KENNEBUNK SEWER DISTRICT
   - CITY OF BIDDEFORD
   - KENNEBUNK LIGHT AND POWER DISTRICT
   - CENTRAL MAINE POWER COMPANY
   - KENNEBUNK, KENNEBUNKPORT, AND WELLS WATER DISTRICT
   - VERIZON/FAIRPOINT COMMUNICATIONS
   - GRANITE STATE GAS TRANSMISSION CO.
   - NORTHERN UTILITIES

9. UNLESS DIRECTED BY THE RESIDENT, ALL DISTURBED AREAS SHALL RECEIVE A MINIMUM OF 2" LOAM AND BE SEEDED WITH METHOD #1. MULCH SHALL BE APPLIED IN AREAS SEEDED.

10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION LAYOUT AND STAGING.

11. PLACE A 2 FT WIDE STRIP OF TEMPORARY EROSION CONTROL BLANKET ALONG THE TOP OF ALL RIPRAP SLOPES.

12. DO NOT EXCAVATE FOR AGGREGATE SUBBASE COURSE WHERE EXISTING MATERIAL IS SUITABLE AS DETERMINED BY THE ENGINEER.

13. BASED ON THE SCOPE OF WORK AND CURRENT CONDITION OF THE PROJECT PROPERTY, NO PETROLEUM OR HAZARDOUS WASTE IS EXPECTED TO BE ENCOUNTERED. HOWEVER, DURING THE DURATION OF THE PROJECT, THE CONTRACTOR IS RESPONSIBLE FOR THE PROPER DISPOSAL OF ANY RAILROAD TIES ENCOUNTERED THAT CAN NOT BE REUSED ON SITE. THE CONTRACTOR IS RESPONSIBLE TO HAVE THE UNUSED TIES DISPOSED OF AS DEMOLITION WASTE AT A LANDFILL APPROVED TO ACCEPT DEMOLITION WASTE/DEBRIS. IF THE CONTRACTOR ENCOUNTERS ANY OTHER POTENTIAL DEMOLITION DEBRIS AND IS NOT SURE OF HOW TO DISPOSE, THE CONTRACTOR SHALL NOTIFY THE RESIDENT. THE RESIDENT SHALL CONTACT THE HYDROGEOLOGIST IN MDOT'S ENVIRONMENTAL OFFICE AT 207-624-3103 FOR CLARIFICATION. THE CONTRACTOR SHALL ALSO REMAIN ALERT FOR EVIDENCE OF PETROLEUM AND HAZARDOUS WASTE/MATERIALS CONTAMINATION. IN PARTICULAR ANY EVIDENCE OF COAL ASH. IF THE CONTRACTOR ENCOUNTERS EVIDENCE OF SOIL OR GROUNDWATER CONTAMINATION, THE CONTRACTOR SHALL SECURE THE EXCAVATION, STOP WORK IN THE CONTAMINATED AREA, AND IMMEDIATELY NOTIFY THE RESIDENT. THE RESIDENT SHALL CONTACT THE HYDROGEOLOGIST IN MAINEDOT'S ENVIRONMENTAL OFFICE AT 207-624-3100 AND THE MAINE DEPARTMENT OF ENVIRONMENTAL PROTECTION AT 800-482-0777. WORK MAY ONLY CONTINUE WITH AUTHORIZATION FROM THE RESIDENT.

14. BOLLARDS AND POSTS FOR SIGNS, TIMBER GUARDRAIL AND CEDAR RAIL FENCE MUST BE A MINIMUM OF 1 FOOT FROM GAS LINE. IF WITHIN 3 FEET OF GAS LINE, THE CONTRACTOR SHALL COORDINATE THEIR INSTALLATION WITH THE GAS COMPANY'S REPRESENTATIVE.

15. CONTRACTOR SHALL INSTALL TWO TRAIL KIOSKS AT LOCATIONS DETERMINED BY THE RESIDENT.

16. CLEARING SHALL BE MINIMIZED. HOWEVER, AT SIGNIFICANT EMBANKMENT SECTIONS CLEARING SHALL BE 5' FROM TOE OF SLOPE, EXCEPT WHERE OTHERWISE NOTED.

17. WHERE PROPERTY LINE BEARINGS AND DISTANCES ARE NOT SHOWN, RIGHT-OF-WAY INFORMATION HAS BEEN APPROXIMATED BASED ON AVAILABLE RAILROAD VALUATION PLANS.

18. FOR EASEMENT DESCRIPTIONS REFER TO RIGHT OF WAY MAP.

19. THE LOCATION AND EXTENT OF CEDAR RAIL FENCE IS SHOWN FOR ESTIMATING PURPOSES. THE FINAL LOCATION AND QUANTITY OF FENCING SHALL BE DETERMINED BY THE RESIDENT.

20. BOULDERS SHALL BE PLACED AT INTERSECTING PATHS TO PREVENT VEHICULAR ACCESS TO EASTERN TRAIL. LOCATIONS SHALL BE AS SHOWN ON PLANS OR AS DIRECTED BY THE RESIDENT.

21. REMOVAL AND DISPOSAL OF GATES AND FENCE SHALL BE INCIDENTAL TO SECTION 607.

22. REMOVAL AND DISPOSAL OF CULVERTS SHOWN ON THE PLANS SHALL BE INCIDENTAL TO SECTION 603. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED, OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.

23. BOLLARDS, CEDAR RAIL FENCE, AND TIMBER GUARDRAIL SHALL BE INSTALLED AT LEAST 10 FEET FROM THE EDGE OF ROADWAY.

24. EXISTING CULVERTS TO REMAIN SHALL BE CLEANED AS DIRECTED BY THE RESIDENT. PAYMENT WILL BE MADE UNDER ITEM 631.32 CULVERT CLEANER (INCLUDING OPERATOR).

25. ALL WASTE MATERIAL NOT USED ON THE PROJECT SHALL BE DISPOSED OF OFF THE PROJECT IN WASTE AREAS APPROVED BY THE RESIDENT.

26. INLETS AND OUTLETS OF ALL PROPOSED CULVERTS SHALL BE RIPRAPPED IN ACCORDANCE WITH MAINE STANDARD DETAILS UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.

27. ANY DAMAGE TO THE SLOPES CAUSED BY THE CONTRACTOR'S EQUIPMENT, PERSONNEL, OR OPERATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE TO THE SATISFACTION OF THE RESIDENT.

28. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT BEING PAID FOR UNDER THE EQUIPMENT RENTAL ITEMS.

29. "UNDETERMINED LOCATIONS" SHALL BE DETERMINED BY THE RESIDENT.

30. ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION'S BEST MANAGEMENT PRACTICES FOR EROSION & SEDIMENTATION CONTROL, FEBRUARY, 2008.

31. SUBSURFACE SOILS INFORMATION IS PROVIDED IN THE FOLLOWING REPORTS PREPARED BY SEBAGO TECHNICS:

"REPORT ON SUBSURFACE AND FOUNDATION INVESTIGATION:
PROPOSED EASTERN TRAIL, KENNEBUNK RIVER, ROUTE 35
AND LIMERICK ROAD CROSSING KENNEBUNK AND ARUNDEL, MAINE"

"REPORT ON SUBSURFACE AND FOUNDATION INVESTIGATION:
PROPOSED EASTERN TRAIL MAINE TURNPIKE CROSSING
KENNEBUNK, MAINE"

32. SURVEY TIE POINTS ARE PROVIDED ON SHEETS 29 (ROUTE 35), 51 (LIMERICK ROAD), AND 59 (WEST COLE ROAD).

33. PROPOSED LOCATIONS FOR EROSION AND SEDIMENTATION CONTROL DEVICES HAVE BEEN DEVELOPED FOR PORTIONS OF THE TRAIL LOCATED WITHIN THE KENNEBUNK TOWN LIMITS AS A REQUIREMENT OF SITE PLAN APPROVAL. THE CONTRACTOR SHALL REVIEW AND MODIFY THE LOCATIONS OF THESE DEVICES AS NEEDS WARRANT. THE CONTRACTOR SHALL DEVELOP AND IMPLEMENT EROSION AND SEDIMENTATION CONTROL DEVICES FOR THE REMAINDER OF THE CORRIDOR IN ACCORDANCE WITH MAINE DEPARTMENT OF ENVIRONMENTAL BEST MANAGEMENT PRACTICES AND SHEET 12 OF THIS PLAN SET. PAYMENT FOR DEVELOPING, INSTALLING, AND MAINTAINING EROSION AND SEDIMENTATION CONTROL DEVICES SHALL BE PAID UNDER ITEM 656.75 "TEMPORARY SOIL EROSION AND WATER POLLUTION CONTROL".

34. AT THE EXISTING PRECOURT STREET OVERPASS THE CONTRACTOR SHALL INSTALL A BRIDGE DRAIN EXTENSION TO DIVERT BRIDGE RUNOFF AWAY FROM THE TRAIL SURFACE IN ACCORDANCE WITH SPECIAL PROVISION 502.

35. WHERE TYPICAL SECTION CALL-OUTS ARE DESIGNATED ON THE TRAIL PLANS THE LIMITS SHALL BE CONSIDERED APPROXIMATE. THE LIMIT AND TYPE OF TYPICAL SECTION TO BE USED MAY BE CHANGED BASED ON EXISTING CONDITIONS AS DIRECTED BY THE RESIDENT.

36. THE CONTRACTOR MAY UTILIZE EMBANKMENT SURCHARGE MATERIAL FOR CONSTRUCTION OF THE TRAIL BETWEEN ROUTE 35 AND THE TURNPIKE ONCE THE SURCHARGE PERIOD IS COMPLETE. IF ELECTED, THE CONTRACTOR SHALL USE SURCHARGE MATERIALS APPROPRIATE FOR TRAIL CONSTRUCTION. WHERE SURCHARGE MATERIAL WILL NOT BE USED FOR TRAIL CONSTRUCTION COMMON BORROW MAY BE USED.

37. CONTRACTOR SHALL NOTE THAT RESERVE LIMITS HAVE BEEN PLACED ON THE FOLLOWING LOCATIONS:

STA. 455+40, LT., CULVERT EXTENSION
STA. 460+50, LT., CULVERT EXTENSION
STA. 461+00 TO STA. 461+50, TRAIL CONSTRUCTION
STA. 465+00 TO STA. 465+25, TRAIL CONSTRUCTION
STA. 470+50, LT., CULVERT EXTENSION

NO WORK SHALL OCCUR AT THESE LOCATIONS BEFORE MARCH 1, 2010 OR UNTIL REVISED ENVIRONMENTAL PERMITS ARE RECEIVED, AS APPROVED BY THE RESIDENT. CONTRACTOR SHALL NOTE OTHER WORK RESTRICTIONS MAY EXIST AS NOTED IN THE SPECIFICATIONS (DATE RESTRICTIONS RELATING TO GAS COMPANY) OR AS NOTED IN THE ENVIRONMENTAL PERMITS (IN-STREAM WORK WINDOWS). COORDINATE ALL WORK WITH THE RESIDENT.

ESTIMATED QUANTITIES

	ITEM NO.	DESCRIPTION	QTY	UNIT
†	201.11	CLEARING	3	AC
	201.12	SELECTIVE CLEARING AND THINNING	4	AC
†	202.12	REMOVING EXISTING STRUCTURAL CONCRETE	4	CY
†	203.20	COMMON EXCAVATION	4250	CY
†	203.24	COMMON BORROW	17200	CY
†	206.082	STRUCTURAL EARTH EXCAVATION - MAJOR STRUCTURES, PLAN QUANTITY	30	CY
	209.29	PREFABRICATED VERTICAL DRAINS	87600	LF
†	304.09	AGGREGATE BASE COURSE - CRUSHED, TYPE B	11500	CY
†	304.1	AGGREGATE SUBBASE COURSE - GRAVEL, TYPE D	2530	CY
	403.209	HOT MIX ASPHALT, 9.5mm NOMINAL MAXIMUM SIZE (SIDEWALKS, DRIVES, ISLANDS	18	TON
†	403.210	HOT MIX ASPHALT, 9.5 mm NOMINAL MAXIMUM SIZE	88	TON
†	411.13	STONE DUST SURFACE COURSE	6600	TON
†	502.219	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS (21 CY)	1	LS
†	502.327	STRUCTURAL CONCRETE BOX CULVERT EXTENSION	1	LS
	502.6	PORTLAND CEMENT MORTAR	10	CF
	502.71	BRIDGE DRAIN EXTENSION	1	EA
	530.01	PREFABRICATED STEEL TRUSS BRIDGE, IN PLACE	1	LS
	603.175	18 INCH RCP CLASS III	160	LF
†	603.179	18 INCH CULVERT PIPE OPTION III	24	LF
†	603.199	24 INCH CULVERT PIPE OPTION III	140	LF
†	603.219	36 INCH CULVERT PIPE OPTION III	8	LF
†	603.4105	CONCRETE PIPE COLLAR	2	EA
	603.471	60" RCP CLASS V	112	LF
†	606.611	TIMBER GUARDRAIL	530	LF
†	607.163	CHAIN LINK FENCE - 4 FT - PVC COATED, BLACK	1050	LF
†	607.22	CEDAR RAIL FENCE	7250	LF
	607.294	BARRIER BOULDERS	61	EA
†	607.35	BRACING ASSEMBLY CHAIN LINK FENCE - PVC COATED	12	EA
†	608.26	CURB RAMP DETECTABLE WARNING FIELD	210	SF
†	610.08	PLAIN RIPRAP	640	CY
	610.21	RIVER STONES	40	CY
	610.212	STREAM STONE	10	CY
	613.319	EROSION CONTROL BLANKET	3970	SY
†	615.07	LOAM	2050	CY
†	618.13	SEEDING METHOD NUMBER 1	340	UNIT
	618.143	SPECIAL SEED MIX: WETLAND SEED	8	UNIT
†	618.15	TEMPORARY SEEDING	84	UNIT
†	619.12	MULCH	340	UNIT
	619.1401	EROSION CONTROL MIX	50	CY
†	620.58	EROSION CONTROL GEOTEXTILE	1635	SY
	620.6	SEPARATION GEOTEXTILE	1400	SY
	621.037	EVERGREEN TREE (5'-6')	21	EA
	621.546	DECIDUOUS SHRUBS (2' – 3') GROUP A	700	EA
	621.8	ESTABLISHMENT PERIOD	1	LS
	627.75	WHITE OR YELLOW PAVEMENT AND CURB MARKING	1300	SF
*	629.05	HAND LABOR, STRAIGHT TIME	120	HR
*	631.12	ALL-PURPOSE EXCAVATOR (INCLUDING OPERATOR)	50	HR
*	631.133	SKID-STEER (INCLUDING OPERATOR)	20	HR
*	631.14	GRADER (INCLUDING OPERATOR)	20	HR
*	631.171	TRUCK-SMALL (INCLUDING OPERATOR)	30	HR
*	631.18	CHAIN SAW RENTAL (INCLUDING OPERATOR)	10	HR
*	631.32	CULVERT CLEANER (INCLUDING OPERATORS)	20	HR
*	631.36	FOREMAN	40	HR
	635.31	PREFABRICATED CONCRETE BLOCK GRAVITY WALL	2250	SF
†	639.18	FIELD OFFICE, TYPE A	1	EA
	641.89	KIOSK	2	EA
	645.103	DEMOUNT GUIDE SIGN	1	EA
	645.113	REINSTALL GUIDE SIGN	1	EA
†	645.271	REGULATORY, WARNING, CONFIRMATION AND ROUTE ASSEMBLY SIGN, TYPE I	550	SF
	646.091	SETTLEMENT PLATFORMS	1	LS
	652.33	DRUM	140	EA
*	652.34	CONE	20	EA
	652.35	CONSTRUCTION SIGNS	780	SF
	652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES	1	LS
*	652.38	FLAGGERS	40	HR
	652.362	MAINTENANCE OF TRAFFIC CONTROL DEVICES (MAINE TURNPIKE AUTHORITY)	1	LS
	656.75	TEMP. SOIL EROSION AND WATER POLLUTION CONTROL	1	LS
	659.10	MOBILIZATION	1	LS
	841.48	BOLLARDS	4	EA
†	841.49	BOLLARDS - COLLAPSIBLE	30	EA

† = REVISED QUANTITIES
* = UNDETERMINED LOCATION

REVISED QUANTITIES - AS NOTED

LEGEND

EXISTING FEATURES

- GAS LINE
- SEWER LINE
- TREELINE
- EDGE OF PAVEMENT
- EDGE OF STREAM/WATER
- EXPOSED LEDGE
- ROW FENCE
- PROPERTY LINE
- ROW LINE
- WETLANDS
- DITCH LINE
- RIPRAP
- UTILITY POLE
- B-5 BORING

PROPOSED FEATURES

- DITCH LINE
- LIMIT OF CUT SLOPE
- LIMIT OF FILL SLOPE
- SILT FENCE OR SEDIMENT BARRIER
- RIPRAP PIPE OUTLET OR STONE DITCH PROTECTION
- RIPRAP SLOPE PROTECTION
- 4' PVC COATED CHAIN LINK FENCE
- CEDAR RAIL FENCE
- TIMBER GUARDRAIL
- BARRIER BOULDERS
- SIGN
- (X) SIGN NUMBER - SEE SIGNING DETAILS FOR DESCRIPTIONS

Filename: 002_GeneralNotes.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	LEM	06/09
DRAWN	MPC	06/09
CHECKED	DOE	06/09
REVISIONS 1	QTY. AND NOTES	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

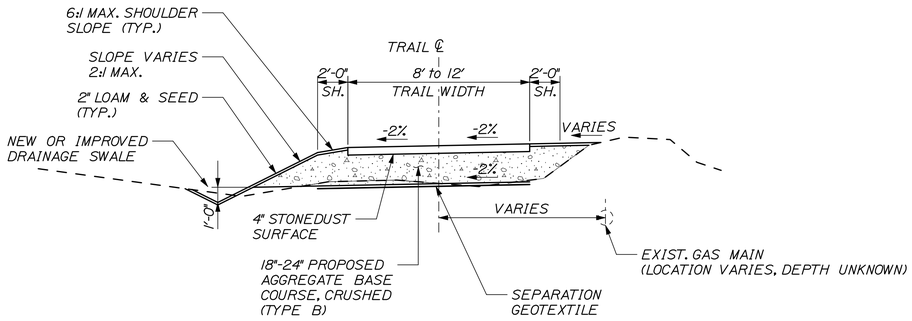
P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

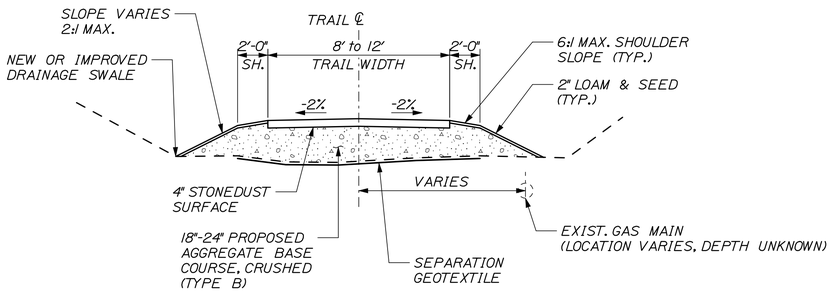
GENERAL NOTES, QUANTITIES AND LEGEND

SHEET NUMBER
2
OF 69



TYPICAL SECTION D

N.T.S



TYPICAL SECTION C

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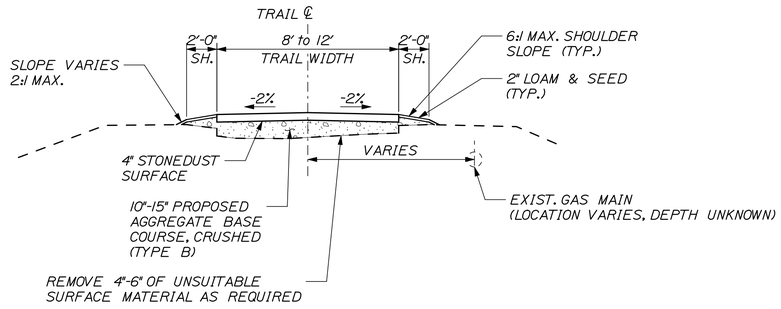
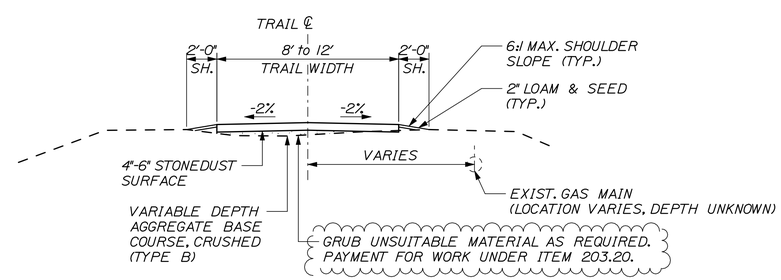


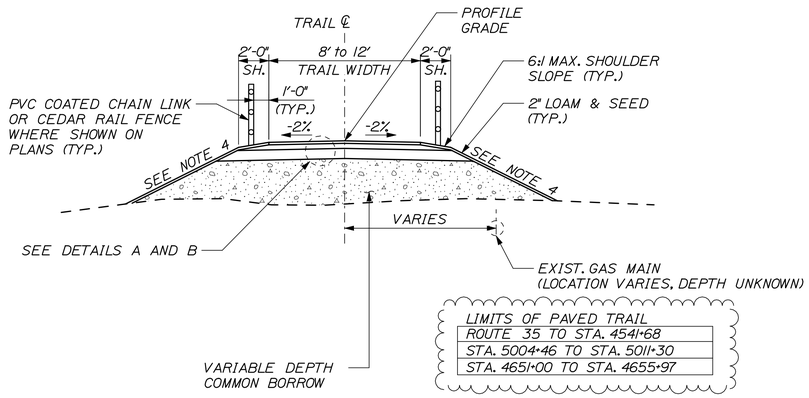
TYPICAL SECTION B

N.T.S



TYPICAL SECTION A

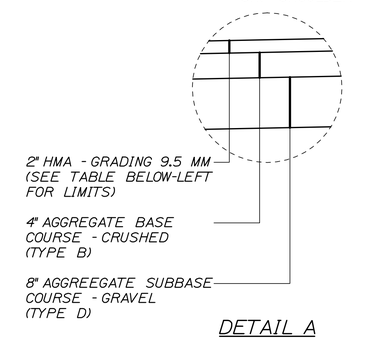
N.T.S



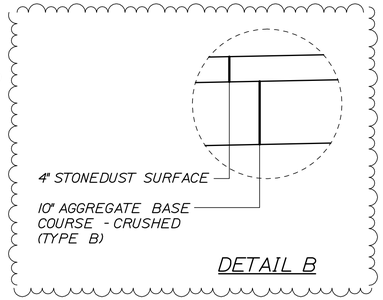
LIMITS OF PAVED TRAIL
ROUTE 35 TO STA. 4541+68
STA. 5004+46 TO STA. 5011+30
STA. 4651+00 TO STA. 4655+97

TYPICAL BRIDGE AND ROADWAY APPROACH EMBANKMENTS

ABBREVIATIONS
SH. = SHOULDER



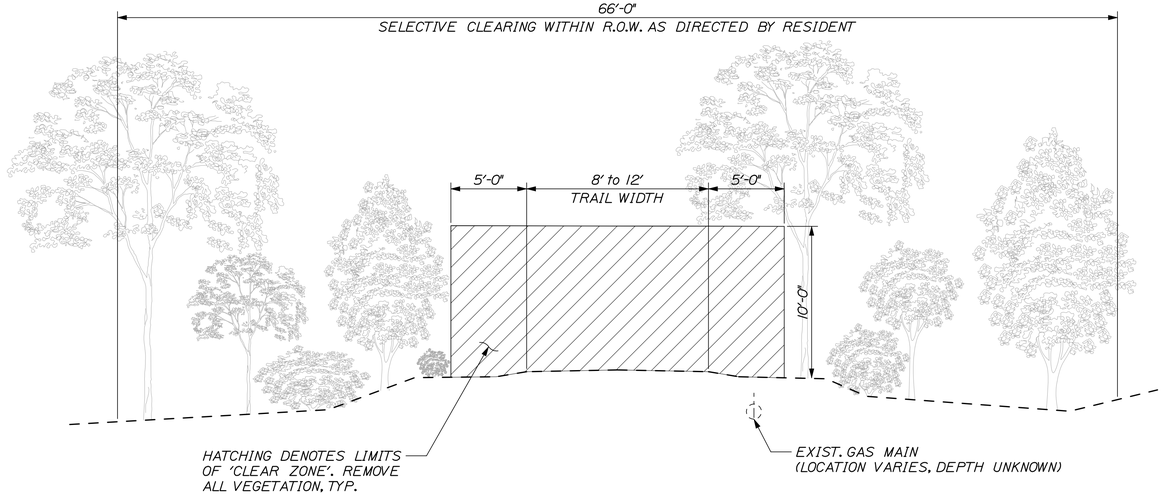
DETAIL A



DETAIL B

NOTES

1. EROSION CONTROL BLANKET SHALL BE INSTALLED ON THE SIDESLOPES OF THE TEMPORARY PRELOAD EMBANKMENTS FOR THE TURNPIKE BRIDGE AND IN SWALES WITH A SLOPE BETWEEN 2 AND 6%.
2. SHOULDERS SHALL BE LOAMED AND SEEDED AFTER PLACEMENT OF THE TRAIL SURFACE.
3. FOR SWALE INVERT ELEVATIONS SEE PROFILE DRAWINGS AND ELEVATION TABLES SHOWN ON PLANS.
4. FOR SIDE SLOPES AT BRIDGE AND ROADWAY APPROACHES SEE CROSS SECTIONS AND GRADING LIMITS SHOWN ON PLANS. OTHERWISE SLOPES ARE 2:1 WHEN HEIGHT OF EMBANKMENT > 5' AND 3:1 WHEN HEIGHT OF EMBANKMENT IS < 5'.
5. FOR TYPICAL SECTIONS C AND D SEPARATION EROSION CONTROL GEOTEXTILE FABRIC SHALL BE USED IN AREAS WHERE TRAIL PASSES THROUGH WET AREAS TO AVOID THE NEED FOR MUCK EXCAVATION. FINAL DETERMINATION OF PLACEMENT LOCATIONS WILL BE DETERMINED BY THE RESIDENT.
6. EXISTING UNSUITABLE MATERIAL SHALL BE REMOVED PRIOR TO TRAIL CONSTRUCTION. PAYMENT FOR WORK SHALL BE UNDER ITEM 203.20.



TYPICAL CLEARING LIMITS DETAIL

N.T.S

NOTES:
1. CONTRACTOR IS RESPONSIBLE FOR LIMBING UP OVERHANGING VEGETATION TO THE HEIGHT INDICATED ON THE DETAIL. PAYMENT SHALL BE UNDER ITEM SELECTIVE CLEARING AND THINNING.

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

BY	DATE
DESIGNED LEM	06/09
DRAWN MPC	06/09
CHECKED DOE	06/09
REVISIONS 1 NOTES AND TYP.	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

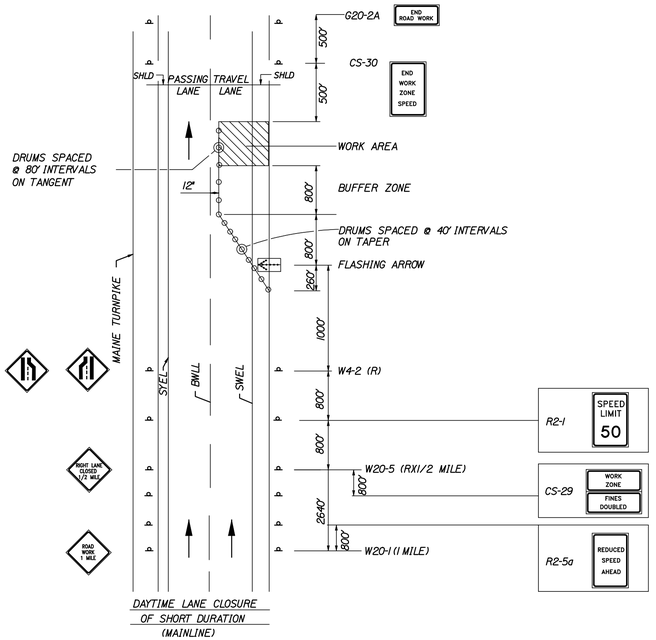
TYPICAL SECTIONS

SHEET NUMBER
3
OF 69

Date:8/18/2009

Filename: 003_typ01.dgn

Date:8/17/2009



DAYTIME LANE CLOSURE
OF SHORT DURATION
(MAINLINE)

SINGLE LANE CLOSURE SIGNS ON EASELS

SINGLE LANE CLOSURE NOTES:

1. W4-2 SHALL BE THE LATEST VERSION PER MUTCD IF SIGNS ARE NEW.

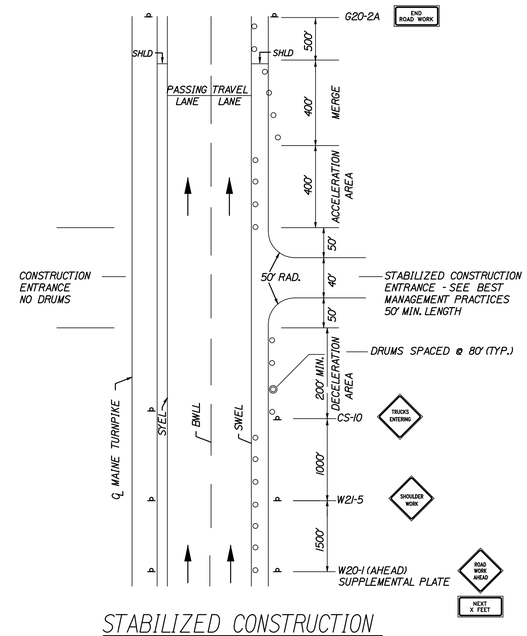
2. PASSING LANE CLOSURES ARE SIMILAR TO TRAVEL LANE CLOSURES EXCEPT THAT SIGNS W20-5 AND W4-2 ARE FOR LEFT LANE CLOSURES.

3. CS-29 IS A COMBINATION OF (1) CS-31 AND (1) CS-15 ON 1 EASEL.

GENERAL NOTES:

1. FOR SIGN DETAILS, SEE MAINTENANCE OF TRAFFIC SIGN SUMMARY SHEETS.

2. "TRUCKS ENTERING" SIGN SHALL ALSO BE USED AT LOCATIONS WHERE TRUCKS ENTER THE WORK ZONE FROM THE TRAVEL LANE.

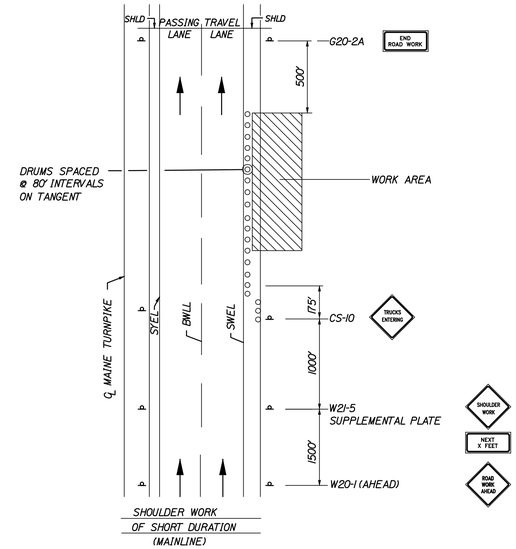


STABILIZED CONSTRUCTION ENTRANCE

1. SIGN G20-2A IS NOT REQUIRED IF ENTRANCE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.

DAYTIME LANE CLOSURE
OF SHORT DURATION
(MAINLINE)

SINGLE LANE CLOSURE - POST MOUNTED SIGN SETUP



SHOULDER WORK
OF SHORT DURATION
(MAINLINE)

SHOULDER WORK

1. THE W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.

ABBREVIATIONS FOR ALL M.O.T. PLANS

BWLL = BROKEN WHITE LANE LINE
SWEL = SOLID WHITE EDGE LINE
SYEL = SOLID YELLOW EDGE LINE
TBWLL - TEMPORARY BROKEN WHITE LANE LINE
TSWEL = TEMPORARY SOLID WHITE EDGE LINE
TSYEL = TEMPORARY SOLID YELLOW EDGE LINE

GENERAL MAINTENANCE OF TRAFFIC NOTES:

1. ALL WORK TO CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY AND BRIDGES, EXCEPT AS MODIFIED BY THE MAINE TURNPIKE AUTHORITY'S GENERAL AND SPECIAL PROVISIONS.

2. ALL PAVEMENT STRIPING & SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", U.S.D.O.T., F.H.W.A., LATEST EDITION.

3. THESE PLANS SHOW THE GENERAL CONDITION FOR TURNPIKE MAINLINE TRAFFIC CONTROL. DURING CONSTRUCTION, SLIGHT MODIFICATIONS IN CONSTRUCTION PROCEDURE MAY OCCUR AND MAY REQUIRE SOME MINOR ADJUSTMENTS TO BE MADE IN THE FIELD. ALL PROCEDURES MUST BE APPROVED BY THE AUTHORITY'S AUTHORIZED REPRESENTATIVE.

4. SEE ATTACHED MAINTENANCE OF TRAFFIC CONTROL PLANS FOR DETAILS ON LANE CLOSURES FOR NORTHBOUND TRAFFIC. SOUTHBOUND CLOSURES WILL BE DONE PER THE DETAILS ON THIS SHEET.

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	RWH	06/09
DRAWN	MPC	06/09
CHECKED	LZD	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE
MAINE TURNPIKE
MAINTENANCE OF TRAFFIC DETAILS

SHEET NUMBER
4
OF 69

Filename: 004_MOTDetails&GN.dgn

Date:8/17/2009

Filename: 005_MOTPlan.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	LZD	11/08
DRAWN	MPC	11/08
CHECKED	DOE	11/08
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

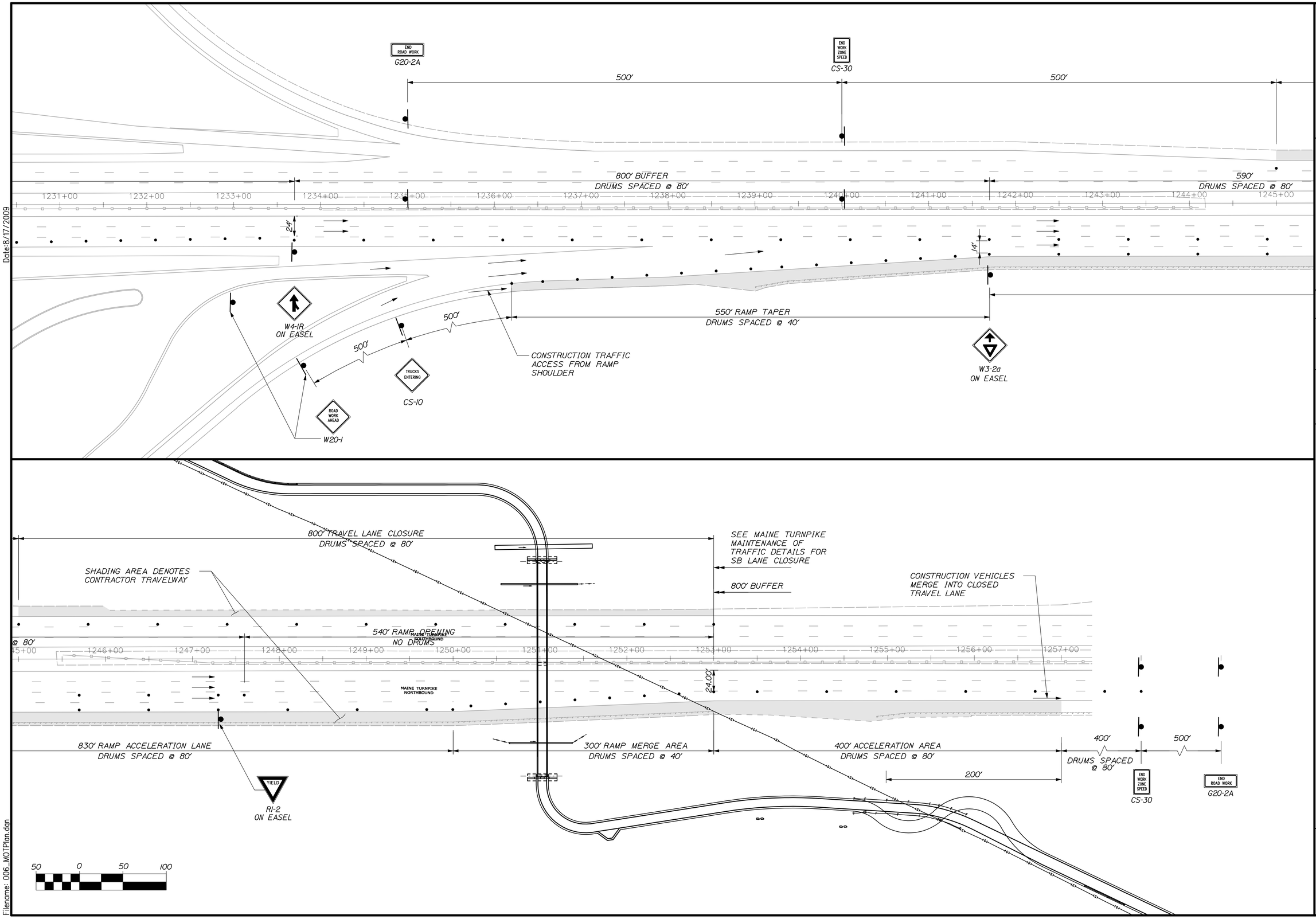
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

MAINE TURNPIKE - TRAFFIC MAINTENANCE I

SHEET NUMBER

5

OF 69



Date:8/17/2009

Filename: 006_MOTPlan.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	LZD	11/08
DRAWN	MPC	11/08
CHECKED	DOE	11/08
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

MAINE TURNPIKE - TRAFFIC MAINTENANCE II

SHEET NUMBER
6
OF 69

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND BORDER	BORDER RADIUS	AREA IN SQUARE FEET	NOTES
CS-10	48"	48"	TRUCKS ENTERING	7" 7"	6"		1	ORANGE	BLACK		16.00 (16.00)	
CS-31	48"	24"	WORK ZONE / FINES DOUBLED	6" 6"	4.5"		8	ORANGE			8.00 (64.00)	
CS-15	48"	24"		6" 6"	4.5"		4	WHITE			8.00 (32.00)	
CS-30	36"	48"	END WORK ZONE SPEED	6" 6" 6" 6"	4.5" 4.5" 4.5"		4	WHITE			12.00 (48.00)	
G20-2A	48"	24"	END ROAD WORK	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2000			4	ORANGE	BLACK		8.00 (32.00)	
R1-2	36"	36" 36"	YIELD				1	SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2000			4.00 (4.00)	
R2-1	48"	60"	SPEED LIMIT 50				4				20.00 (80.00)	
R2-5a	48"	60"	REDUCED SPEED AHEAD				4				20.00 (80.00)	
W3-2a	48"	48"					1	ORANGE	BLACK		16.00 (16.00)	
W4-1R	48"	48"					1				16.00 (16.00)	
W4-2R	48"	48"					4				16.00 (64.00)	

IDENTIFICATION NUMBER	SIZE OF SIGN WIDTH	SIZE OF SIGN HEIGHT	TEXT	TEXT DIMENSIONS (INCHES) LETTER HEIGHT	TEXT DIMENSIONS (INCHES) VERTICAL SPACING	TEXT DIMENSIONS (INCHES) ARROW RTE. MKR.	NUMBER OF SIGNS REQUIRED	COLOR BACKGROUND	COLOR LEGEND BORDER	BORDER RADIUS	AREA IN SQUARE FEET	NOTES
W20-1 (AHEAD)	48"	48"	ROAD WORK XXX	TEXT DIMENSIONS SHALL CONFORM TO "STANDARD HIGHWAY SIGNS" - 2000			2	ORANGE	BLACK		16.00 (32.00)	
(1 MILE)							4				16.00 (64.00)	
W20-5R (1/2 MILE)	48"	48"	RIGHT LANE CLOSED XXX				4				16.00 (64.00)	
W21-5	48"	48"	SHOULDER WORK				4				16.00 (64.00)	

Date:8/17/2009

Filename: 007_SignSummary1.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	RWH	06/09
DRAWN	MPC	06/09
CHECKED	LZD	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

MAINE TURNPIKE - SIGN SUMMARY

SHEET NUMBER
7
OF 69

Date:5/19/2009

Filename: ...\CAD\008_BoringLogs.dgn

SEBAGO TECHNICS, INC. — TEST BORING REPORT — BORING NO. B1 — Page 1 of 3

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08428
LOCATION	MAINE TURNPIKE CROSSING @ KENNEBUNK REST AREA	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC	DATE STARTED	8/28/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/28/2008

Elevation ft. Datum — Boring Location See Plan **STA. 1252+50, 98' LT.**

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47 — ☐ Truck ☐ ATV ☑ Track ☐ Skid ☐ Tripod ☑ Geoprobe ☐ Air Track ☐ Cat-Head ☑ Winch ☐ Roller Bit ☑ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic — Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None — Casing Advance: Type Method Depth HSA/SPIN/30.0

Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	1/12", 1/12"	S1 / 6	0.0–2.0		2.0	SM	Loose gray brown silty SAND (SM), mps = 0.02 in., dry, roots, piece of wood in tip of spoon -TOPSOIL-				10	60	30				
5	2, 6, 5, 5	S2 / 24	5.0–7.0			SP	Loose, brown poorly-graded SAND (SP), mps= 0.05 in., wet -MARINE DEPOSIT-				40	55	5				
					6.0 / 6.5	CL	Stiff, gray brown mottled lean CLAY (CL), damp						100	N	M	M	
						CL	Stiff, gray lean CLAY (CL), damp						100	N	M	M	
10	WOH, WOH, WOH, WOH	S3 / 24	10.0–12.0			CL	Medium stiff, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
							-MARINE DEPOSIT-										
15	WOR, WOR, WOH, WOH	S4 / 24	FV1, 15.0–17.0			CL	Field Vane 1 @ 16.0 feet, torque = 15/3 foot pounds, Su = 560psf; Medium stiff, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
20	WOH, WOH, WOH, WOH	S5 / 24	20.0–22.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
25	WOR, WOR, WOR, WOH	S6 / 24	FV2, 25.0–27.0			CL	Field Vane 2 @ 26.0 feet, torque = 8/2 foot pounds, Su = 300 psf; Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
							-MARINE DEPOSIT-										

Water Level Data

Date	Time	Elapsed Time (hr.)	Bottom of Casing	Bottom of Hole	Water
8/28/2008	900		16.0	10.0	3.8
8/28/2008	1300		Cased		4.2

Sample ID: O Open End Rod; T Thin Wall Tube; U Undisturbed Sample; S Split Spoon Sample; G Geoprobe

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Summary: Overburden (Linear ft.) 109.0; Rock Cored (Linear ft.) --; Number of Samples 7 S; BORING NO. B1

Field Tests: Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC. — TEST BORING REPORT — BORING NO. B1 — Page 2 of 3

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	% Fines	Dilatancy	Toughness	Plasticity
30	WOR, WOR, WOR, WOH	S7 / 24	30.0–32.0		CL	Soft, gray lean CLAY (CL), wet, black streaks -MARINE DEPOSIT-	100	N	M	M
						Begin rod probe using hydraulic push at 32.0 feet below ground surface				
35–70						-MARINE DEPOSIT-				

NOTES: — FILE NO. 08428 — BORING NO. B1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC. — TEST BORING REPORT — BORING NO. B1 — Page 3 of 3

Depth (ft.)	Sampler Blows per 6 in.	Stratum Change (ft.)	Visual-Manual Identification & Description
70–80			-MARINE DEPOSIT-
		82.2	Pushed rods to 82.2 feet. Encountered significant resistance.
	20, 17, 19, 17, 19, 17, 12, 19, 19, 25, 16, 12, 28, 21, 21, 25, 17, 16, 16, 16, 15, 17, 27, 19, 32, 35, 45, 25/0.0		Drove rods with 300-pound hammmer falling 16 inches. -LIKELY GLACIAL TILL-
		109.0	Bottom of Boring at 109.0 feet below ground surface. Refusal to Rod Probe.

NOTES: — FILE NO. 08428 — BORING NO. B1

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC. — TEST BORING REPORT — BORING NO. B2 — Page 1 of 3

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08428
LOCATION	MAINE TURNPIKE CROSSING @ KENNEBUNK REST AREA	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC	DATE STARTED	8/27/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/28/2008

Elevation ft. Datum — Boring Location See Plan **STA. 1252+50, 98' RT.**

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47 — ☐ Truck ☐ ATV ☑ Track ☐ Skid ☐ Tripod ☐ Geoprobe ☐ Air Track ☐ Cat-Head ☑ Winch ☐ Roller Bit ☑ Cutting Head

Hammer Type: ☑ Safety ☐ Doughnut ☐ Automatic — Drilling Mud: ☐ Bentonite ☐ Polymer ☑ None — Casing Advance: Type Method Depth HSA/SPIN/30.0

Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	1, 2, 4, 8	S1 / 18	0.0–2.0		1.0	ML	Loose, dark brown sandy SILT (ML), dry, roots -TOPSOIL-					40	60				
						SM	Loose, dark brown silty SAND (SM), mps = 0.02 in., damp				20	60	20				
							-MARINE DEPOSIT-										
5	2, 3, 3, 3	S2 / 24	5.0–7.0		5.5	SP-SM	Loose, dark brown poorly-graded SAND with silt (SP-SM), mps = 0.05 in.				30	60	10				
						CL	Stiff, gray brown lean CLAY (CL), moist, occasional sand parting					10	90	N	M	M	
10	1/24 in.	S3 / 24	10.0–12.0			CL	Soft, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
							-MARINE DEPOSIT-										
15	WOR, WOR, WOH, WOH	S4 / 24	FV1, 15.0–17.0			CL	Field Vane 1 @ 16.0 feet, torque = 7/0, Su = 260 psf; Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
20	WOR, WOR, WOR, WOH	S5 / 24	20.0–22.0			CL	Soft, gray lean CLAY (CL), wet, black streaks						100	N	M	M	
25	WOR, WOR, WOH, WOH	S6 / 24	FV2, 25.0–27.0			CL	Field Vane 2 @ 26.0 feet, torque = 9/3 foot pounds, Su = 330 psf; Soft, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
							-MARINE DEPOSIT-										

Water Level Data

Date	Time	Elapsed Time (hr.)	Bottom of Casing	Bottom of Hole	Water
8/27/2008	1245		5.0	5.0	2.6
8/28/2008	800		Cased	5.0	3.3

Sample ID: O Open End Rod; T Thin Wall Tube; U Undisturbed Sample; S Split Spoon Sample; G Geoprobe

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Summary: Overburden (Linear ft.) 97.0; Rock Cored (Linear ft.) --; Number of Samples 7 S; BORING NO. B2

Field Tests: Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC. — TEST BORING REPORT — BORING NO. B2 — Page 2 of 3

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	USCS Symbol	Visual-Manual Identification & Description
30	WOR, WOR, WOR, WOH	S7 / 24	30.0–32.0	CL	Soft, gray lean CLAY (CL), wet, black streaks -MARINE DEPOSIT-
					Begin rod probe using hydraulic push at 32.0 feet below ground surface
35–70					-MARINE DEPOSIT-

NOTES: — FILE NO. 08428 — BORING NO. B2

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

SEBAGO TECHNICS, INC. — TEST BORING REPORT — BORING NO. B2 — Page 3 of 3

Depth (ft.)	Sampler Blows per 6 in.	Stratum Change (ft.)	Visual-Manual Identification & Description
70–85			-MARINE DEPOSIT-
		86.4	Pushed rods to 86.4 feet. Encountered significant resistance.
	11, 7, 21, 29, 31, 34, 27, 30, 30, 24, 22		Drove rods with 300-pound hammmer falling 16 inches. -LIKELY GLACIAL TILL-
			Bottom of Boring at 97.0 feet below ground surface. No Refusal

NOTES: — FILE NO. 08428 — BORING NO. B2

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

NOTE:
FOR BORING LOCATIONS, SEE SHEETS 16, 17, 20, 21 AND 22.

Sebago Technics
Engineering Expertise You Can Build On
One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

STATE OF MAINE ★ KENNETH L. RECKER No. 5435 LICENSED ★ PROFESSIONAL ENGINEER

SIGNATURE
P.E. NUMBER 5435
DATE 5/19/09

	BY	DATE
DESIGNED	KLR	06/09
DRAWN	TRC	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

BORING LOGS

Date:5/19/2009

TEST BORING REPORT — BORING NO. B3 (Page 1 of 3)

SEBAGO TECHNICS, INC.

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC	DATE STARTED	8/25/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/25/2008

Elevation: ft. Datum: — Boring Location: See Plan **STA. 4653+39, 27' RT.**

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47; Track; Winch; Cutting Head. Hammer Type: Safety. Drilling Mud: None. Casing Advance (Type Method Depth): HSA/SPIN/20.0. Drilling Notes:

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	% Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	4, 4, 4, 2	S1 / 14	0.0–2.0		1.5	SW	Loose, brown well-graded SAND with gravel (SW), mps = 1.0 in., damp -FILL-	5	10	10	30	40	5				
						CL	Stiff, gray brown mottled lean CLAY (CL), damp -MARINE DEPOSIT-					10	90	N	M	M	
5	2, 2, 2, 2	S2 / 24	5.0–7.0			CL	Stiff, gray brown mottled lean CLAY (CL), damp occasional sand partings -MARINE DEPOSIT-					10	90	N	M	M	
10	WOH, WOH, 1, 3	S3 / 20	FV1; 12.0		11.5	CL	Field Vane 1 @ 11.0 feet, torque = 44/3 foot pounds, Su = 1,630 psf. Stiff, gray brown mottled lean CLAY (CL), wet, frequent sand partings					10	90	N	M	M	
						SM	Loose, gray brown silty SAND (SM), mps = 0.05 in., wet -GLACIAL TILL-				10	50	40				
15	2, 8, 9, 11	S4 / 24	15.0–17.0			SM	Medium dense, gray brown silty SAND with gravel (SM), mps = 1.0 in., wet	5	10	10	25	30	20				
20	18, 33, 35, 42	S5 / 18	20.0–22.0			SM	Very dense, gray silty SAND with gravel (SM), mps = 1.2 in., wet -GLACIAL TILL-	10	10	10	20	20	30				
22							Bottom of Boring at 22.0 feet below ground surface. No Refusal										

Water Level Data (Depth in feet to:)

Date	Time	Elapsed Time (hr.)	Bottom of Casing	Bottom of Hole	Water
8/25/2008	1245		15.0	17.0	5.2
8/25/2008	1400		--	--	5.0

Sample ID: O Open End Rod; T Thin Wall Tube; U Undisturbed Sample; S Split Spoon Sample; G Geoprobe

Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal

Summary: Overburden (Linear ft.) 22.0; Rock Cored (Linear ft.) --; Number of Samples 5 S. BORING NO. B3

Field Tests: Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

TEST BORING REPORT — BORING NO. B4 (Page 1 of 2)

SEBAGO TECHNICS, INC.

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/25/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/25/2008

Elevation: ft. Datum: — Boring Location: East Side of Kennebunk River **STA. 4613+99, 9' RT.**

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47; Track; Winch. Hammer Type: Safety. Drilling Mud: None. Casing Advance (Type Method Depth): HSA/SPIN/35.0. Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	% Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	1, 4, 4, 4	S1 / 16	0.0–2.0			SW	Loose, brown to dark brown well-graded SAND (SW), mps = 0.2 in., dry -FILL-			10	40	45	5				
5	1, WOH, WOH, 1	S2 / 24	5.0–7.0		5.5	SP-SM	Loose, dark brown poorly-graded SAND with silt (SP-SM), mps = 0.05 in.				30	60	10				
						ML	Loose, gray brown sandy SILT (ML), mps = 0.02 in., damp -FLUVIAL DEPOSIT-					30	70	S	L	N	
10	3, 3, 2, 2	S3 / 15	10.0–12.0		10.0	SM	Loose, gray silty SAND (SM), mps = 0.02 in., wet, 4 in. piece of wood @ 11.5 feet -FLUVIAL DEPOSIT-				10	60	30				
15	WOH, WOH, WOH, 1	S4 / 24	15.0–17.0		15.5	SM	Loose, gray silty SAND (SM), mps = 0.02 in., wet					60	40				
						CL	Medium stiff, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	
20	WOR, WOH, WOH, WOH	S5 / 24	FV1; 20.0–22.0			CL	Field Vane 1 @ 21.0 feet, torque = 15/4 foot pounds, Su = 560 psf. Medium stiff, gray lean CLAY (CL), wet, drop stone in tip of spoon						100	N	M	M	
25	WOR, WOR, WOH, WOH	S6 / 24	25.0–27.0			CL	Medium stiff, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	

Water Level Data (Depth in feet to:)

Date	Time	Elapsed Time (hr.)	Bottom of Casing	Bottom of Hole	Water
8/25/2008	1310		10.0	12.0	9.2
8/25/2008	1750		Caved	7.0	Dry

Summary: Overburden (Linear ft.) 62.0; Rock Cored (Linear ft.) --; Number of Samples 8 S. BORING NO. B4

Sample ID: O Open End Rod; T Thin Wall Tube; U Undisturbed Sample; S Split Spoon Sample; G Geoprobe. Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal. Field Tests: Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High
*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.
NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

TEST BORING REPORT — BORING NO. B4 (Page 2 of 2)

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	% Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines	Dilatancy	Toughness	Plasticity	Strength
30	WOR, WOR, WOH, WOH	S7 / 24	FV2; 30.0–32.0			CL	Field Vane 2 @ 31.0 feet, torque = 16/5 foot pounds, Su = 590 psf. Medium stiff, gray lean CLAY (CL), wet, occasional black streaks -MARINE DEPOSIT-						100	N	M	M	
35	WOH, WOH, 1, 1	S8 / 24	35.0–37.0			CL	Medium stiff, gray lean CLAY (CL), wet, occasional black streaks and drop stones						100	N	M	M	
37							Begin rod probe using hydraulic push at 37.0 feet below ground surface -MARINE DEPOSIT-										
60	5/0.2, 25/0.0				61.8		Pushed rods to 61.8 feet. Encountered significant resistance.										
					62.0		Drove rods with 300-pound hammer falling 16 inches.										
62							Bottom of Boring at 62.0 feet below ground surface. Refusal to Rod Probe										

NOTES: — FILE NO. 08159 — BORING NO. B4

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.
NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

TEST BORING REPORT — BORING NO. B5 (Page 1 of 1)

SEBAGO TECHNICS, INC.

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC.	DATE STARTED	8/26/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/26/2008

Elevation: ft. Datum: — Boring Location: See Plan **STA. 4539+97, 5' LT.**

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47; Track; Winch; Cutting Head. Hammer Type: Safety. Drilling Mud: None. Casing Advance (Type Method Depth): HSA/SPIN/23.5. Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	% Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	5, 7, 6, 5	S1 / 14	0.0–2.0		3.0	SW	Medium dense, brown well-graded SAND with gravel (SW), mps = 1.0 in., dry, pieces of crushed stone -FILL-	10	10	10	30	35	5				
							-MARINE DEPOSIT-										
5	7, 16, 23, 26	S2 / 22	5.0–7.0		5.5	CL	Stiff, gray brown mottled lean CLAY (CL), wet					10	90	N	M	M	
					9.0	SP	Dense, brown poorly-graded SAND (SP), mps = 0.05 in., wet -MARINE DEPOSIT-				40	55	5				
10	WOR, WOR, 1, 1	S3 / 24	10.0–12.0			CL	Medium stiff, gray lean CLAY (CL), wet -MARINE DEPOSIT-						100	N	M	M	
15	2, 1, WOH, 1	S4 / 24	15.0–17.0			CL	Medium stiff, gray lean CLAY (CL), wet, silty sand lense @ 15.0 - 15.4 ft.					10	90	N	M	M	
20	WOR, WOR, WOH, 1	S5	FV1; 20.0–22.0			CL	Field Vane 1 @ 21.0 feet, torque = 15/0 foot pounds, Su = 560 psf. Medium stiff, gray lean CLAY (CL), wet, occasional silty sand lenses -MARINE DEPOSIT-					10	90	N	M	M	
												60	30				
					23.0–23.5		-GLACIAL TILL or WEATHERED BEDROCK-										
23.5							Bottom of Boring at 23.5 feet below ground surface. Split Spoon Refusal										

Water Level Data (Depth in feet to:)

Date	Time	Elapsed Time (hr.)	Bottom of Casing	Bottom of Hole	Water
8/26/2008	845		10.0	12.0	3.0
8/26/2008	1000		Caved	4.2	3.0

Summary: Overburden (Linear ft.) 23.5; Rock Cored (Linear ft.) --; Number of Samples 5 S. BORING NO. B5

Sample ID: O Open End Rod; T Thin Wall Tube; U Undisturbed Sample; S Split Spoon Sample; G Geoprobe. Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal. Field Tests: Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High
*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.
NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

TEST BORING REPORT — BORING NO. B6 (Page 1 of 3)

SEBAGO TECHNICS, INC.

PROJECT	EASTERN TRAIL PROJECT - MAINE TURNPIKE SECTION	STI JOB NO.	08159
LOCATION	LIMERICK ROAD, ARUNDEL TO ROUTE 35, KENNEBUNK, MAINE	PROJECT MGR.	K RECKER
CLIENT	HNTB CORPORATION	FIELD REP.	K RECKER
CONTRACTOR	MAINE TEST BORINGS, INC	DATE STARTED	8/27/2008
DRILLER	T. SCHAEFER	DATE FINISHED	8/27/2008

Elevation: ft. Datum: — Boring Location: West Side of Kennebunk River **STA. 4612+47, 11' RT.**

Item	Casing	Sampler	Core Barrel
Type	HSA	SS	
Inside Diameter (in.)	2.5	1.375	
Hammer Weight (lb.)		140	
Hammer Fall (in.)		30	

Rig Make & Model: Mobile B47; Track; Winch; Cutting Head. Hammer Type: Safety. Drilling Mud: None. Casing Advance (Type Method Depth): HSA/SPIN/32.0. Drilling Notes: 2 in. x 7 in. Field Vane

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	% Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines	Dilatancy	Toughness	Plasticity	Strength
0	5, 5, 4, 4	S1 / Auger	0.0–2.0		1.0	SM	Loose, dark brown silty SAND with gravel (SM), mps = 1.3 in., dry -FILL-	10	10	10	25	25	20				
					5.0	ML	Loose, dark brown SILT with gravel (ML), mps = 1.0 in., dry -FILL-	5	10	5	10	20	50	S	L	N	
5	2, 2, 4, 4	S2 / 12	5.0–7.0			CL	Stiff, gray brown mottled lean CLAY (CL), damp -MARINE DEPOSIT-					5	95	N	M	M	
10	4, 4, 4, 4	S3 / 24	10.0–12.0		14.0	CL	Stiff, gray brown mottled lean CLAY (CL), damp, occasional sand partings					10	90	N	M	M	
15	WOH, WOH, WOH, 1	S4 / 24	15.0–17.0			CL	Medium stiff, gray lean CLAY (CL), damp, occasional black streaks						100	N	M	M	
20	WOH, WOH, WOH, WOH	S5 / 24	FV1; 20.0–22.0			CL	Field Vane 1 @ 21.0 feet, torque = 12/3 foot pounds, Su = 440 psf. Soft gray lean CLAY (CL), moist, occasional black streaks -MARINE DEPOSIT-						100	N	M	M	
25	WOH, WOH, WOH, WOH	S6 / 24	25.0–27.0			CL	Soft, gray lean CLAY (CL), wet, occasional black streaks						100	N	M	M	

Water Level Data (Depth in feet to:)

Date	Time	Elapsed Time (hr.)	Bottom of Casing	Bottom of Hole	Water
8/27/2008	1130		Caved	15.0	Dry

Summary: Overburden (Linear ft.) 71.0; Rock Cored (Linear ft.) --; Number of Samples 7 S. BORING NO. B6

Sample ID: O Open End Rod; T Thin Wall Tube; U Undisturbed Sample; S Split Spoon Sample; G Geoprobe. Well Diagram: Riser Pipe; Screen; Filter Sand; Cuttings; Grout; Concrete; Bentonite Seal. Field Tests: Dilatancy: R - Rapid S - Slow N - None; Toughness: L - Low M - Medium H - High; Plasticity: N - Nonplastic L - Low M - Medium H - High; Dry Strength: N - None L - Low M - Meduim H - High V - Very High
*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.
NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Sebago Technics, Inc.

TEST BORING REPORT — BORING NO. B6 (Page 2 of 3)

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description	% Coarse Gravel	% Fine Gravel	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines	Dilatancy	Toughness	Plasticity	Strength
30	WOR, WOR, WOH, WOH	S7 / 24	FV2; 30.0–32.0			CL	Field Vane 2 @ 31.0 feet, torque = 12/4, Su = 440 psf. Soft, gray lean CLAY (CL), wet, black streaks -MARINE DEPOSIT-						100	N	M	M	
32							Begin rod probe using hydraulic push at 32.0 feet below ground surface -MARINE DEPOSIT-										
63.5	9, 12, 18, 14, 18, 34, 42				63.5		Pushed rods to 63.5 feet. Encountered significant resistance. Drove rods with 300-pound hammer falling 16 inches. -LIKELY GLACIAL TILL-										

NOTES: — FILE NO. 08159 — BORING NO. B6

TEST BORING REPORT — BORING NO. B6 (Page 3 of 3)

Depth (ft.)	Sampler Blows per 6 in.	Sample No. & Recovery (in.)	Sample Depth (ft.)	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description
70	55						-LIKELY GLACIAL TILL-
71							Bottom of Boring at 71.0 feet below ground surface. No Refusal

NOTES: — FILE NO. 08159 — BORING NO. B6

NOTE: FOR BORING LOCATIONS, SEE SHEETS 16, 17, 20, 21 AND 22.

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE
BORING LOGS

	BY	DATE
DESIGNED	KLR	06/09
DRAWN	TRC	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE — P.E. NUMBER 5435 — DATE 5/19/09

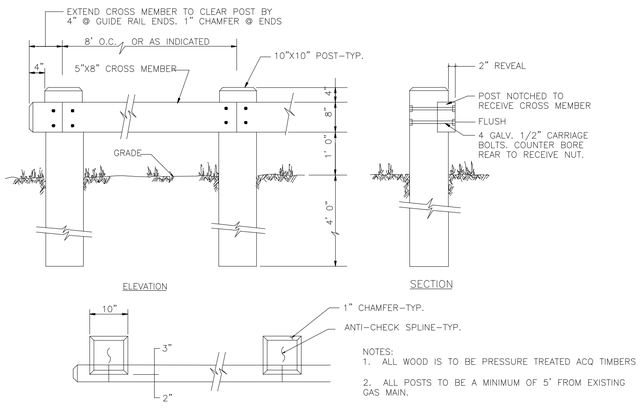
STATE OF MAINE — KENNETH L. RECKER — No. 5435 — LICENSED PROFESSIONAL ENGINEER

Sebago Technics
Engineering Expertise You Can Build On
One Chabot Street
Westbrook, Me 04098-1339
Tel (207) 856-0277

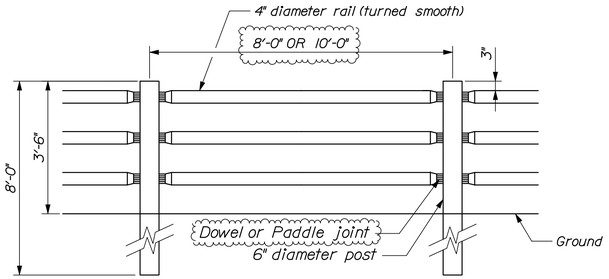
SHEET NUMBER 9 OF 69

Filename: ...\CAD\009_BoringLogs2.dgn

Date:8/18/2009



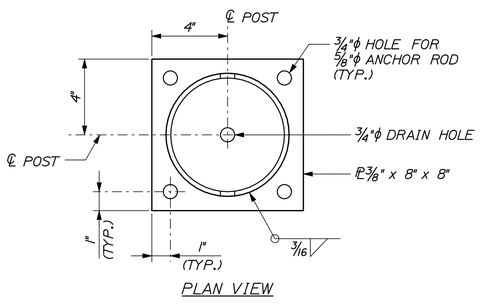
TIMBER GUARDRAIL
N.T.S.



CEDAR RAIL FENCE
N.T.S.

NOTES:

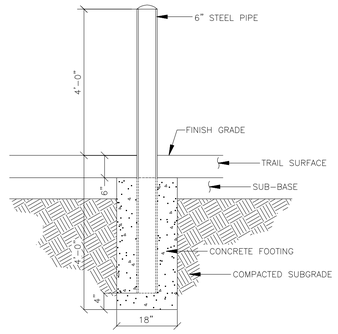
1. FENCE SHALL BE INSTALLED IN THE SHOULDER WHERE NOTED ON PLANS OR WHERE DIRECTED BY THE RESIDENT. USE OF FENCE IS INTENDED FOR PROTECTION OF SLOPES 2:1 OR GREATER AND HIGHER 5' IN HEIGHT AND TO RESTRICT ACCESS WHERE NECESSARY.
2. ALL WOOD IS TO BE WHITE CEDAR.



CEDAR RAIL FENCE POST ANCHORAGE DETAIL
N.T.S.

CEDAR RAIL FENCE POST ANCHORAGE NOTES:

1. ANCHORAGES FOR CEDAR RAIL FENCE SHALL BE USED WHERE EXISTING CONCRETE OR GRANITE CULVERTS LIMIT RAIL POST EMBEDMENT TO THREE FEET OR LESS.
2. STEEL PLATE SHALL CONFORM TO ASTM A36, STEEL PIPE SHALL CONFORM TO ASTM A500, CLASS B.
3. BOLTS FOR SECURING RAILING POSTS TO ANCHORAGE SHALL BE 5/8" DIAMETER CONFORMING TO ASTM A307 OR ASME B18.2.1, GRADE 5. ANCHOR RODS SHALL CONFORM TO ASTM F1554, GRADE 55.
4. ALL ASSEMBLIES AND HARDWARE SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 AND ASTM A123 AS APPLICABLE.
5. ANCHOR RODS SHALL BE DRILLED AND GROUTED INTO THE EXISTING CONCRETE USING A MATERIAL LISTED ON THE MAINEDOT QUALIFIED PRODUCTS LIST OF EPOXY ANCHORING MATERIALS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP THE FULL YIELD STRENGTH OF THE ROD.
6. ANCHORAGES SHALL BE SHIMMED AS NEEDED TO ALLOW THE RAILING POST TO BE INSTALLED PLUMB.
7. THE FABRICATION AND INSTALLATION OF ANCHORAGES, DRILLING AND GROUTING ANCHOR RODS, SHIMMING, AND INSTALLING FENCE POSTS SHALL BE INCIDENTAL TO THE CEDAR RAIL FENCE PAY ITEM.

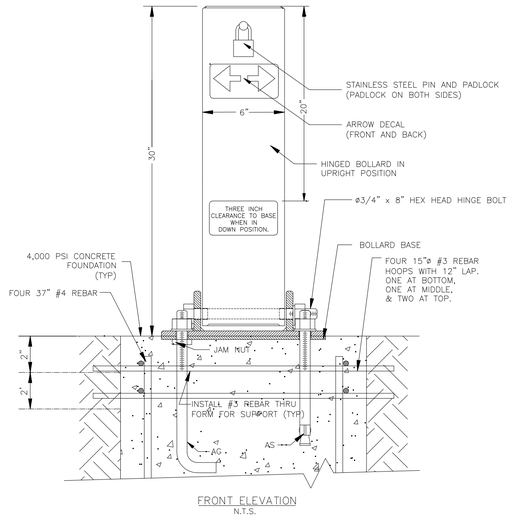


FIXED STEEL BOLLARD
N.T.S.

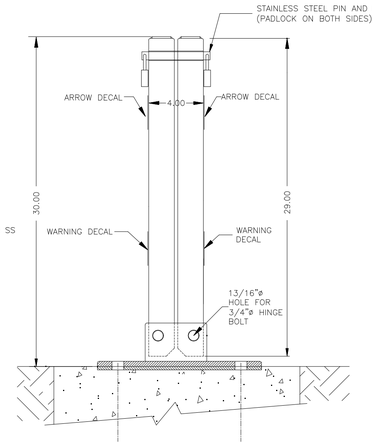
NOTE:
FIXED STEEL BOLLARD
INSTALL PER MANUFACTURERS SPECIFICATIONS

TRAFFIC GUARD, LLC
P.O. BOX 201
GENEVA, IL 60134
PHONE: 877-727-7347
FAX: 630-365-1947
WEBSITE: www.trafficguard.net

OR EQUAL



FRONT ELEVATION
N.T.S.



SIDE ELEVATION
N.T.S.

NOTE:

DOUBLE HINGED COLLAPSIBLE BOLLARDS AS MANUFACTURED BY:

TRAFFIC GUARD LLC
P.O. BOX 201
GENEVA, IL. 60134
PHONE: 877-727-7347
FAX: 630-365-1947
WEBSITE: www.trafficguard.net

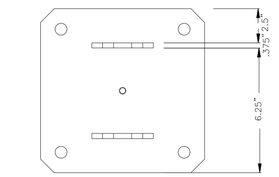
MODEL #DHB

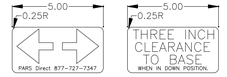
CHOICE OF ANCHORAGE SYSTEMS:

"AS" - 3/4"ø X 10" EXPANSION ANCHOR ASTM SS316 HILTI KWIK BOLT II CATALOG #00045490 WITH HEX HEAD NUT AND TYPE "A" FLAT WASHER. INSTALL PER SPECIFICATION AND AS NOTED.

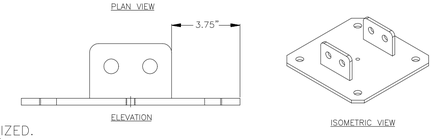
"AG" - 3/4"ø X 12" ASTM A36 L-HOOK ANCHOR BOLT WITH HEX HEAD NUT AND TYPE "A" FLAT WASHER. ALL H. D. GALVANIZED. INSTALL PER SPECIFICATION AND AS NOTED.

OR APPROVED EQUAL



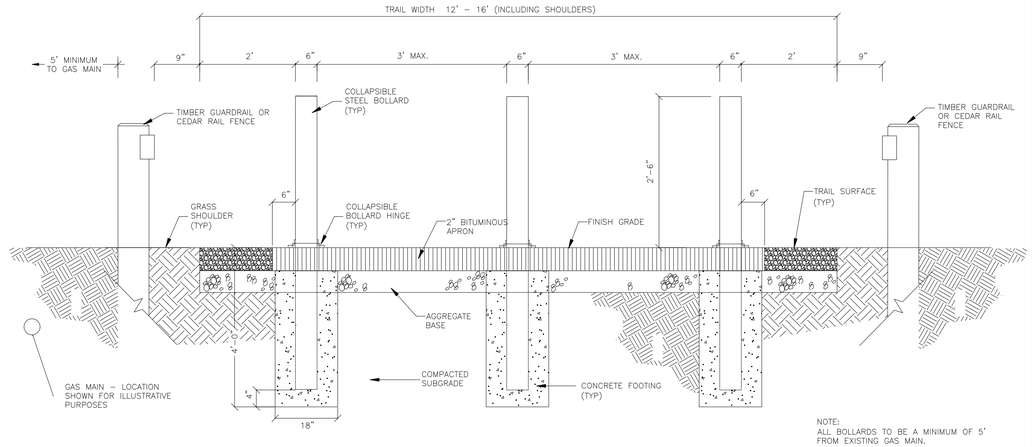


ARROW AND WARNING DECALS
N.T.S.



BASE
N.T.S.

COLLAPSIBLE BOLLARD DETAIL
N.T.S.



COLLAPSIBLE BOLLARDS
N.T.S.

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

BY	DATE
LEM	06/09
MPC	06/09
DOE	06/09
CEDAR FENCE DTL.	08/09

SIGNATURE

P.E. NUMBER 6452

DATE

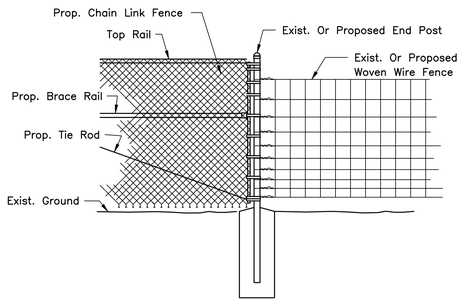
DESIGNED
DRAWN
CHECKED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
REVISIONS 5
REVISIONS 6

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

DETAILS

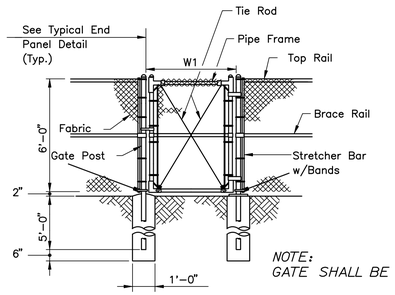
SHEET NUMBER
10
OF 69

Filename: 010_Details 1 - Bollards-Timber Fence.dgn



METHOD OF ATTACHING CHAIN LINK FENCE TO WOVEN WIRE FENCE

N.T.S.

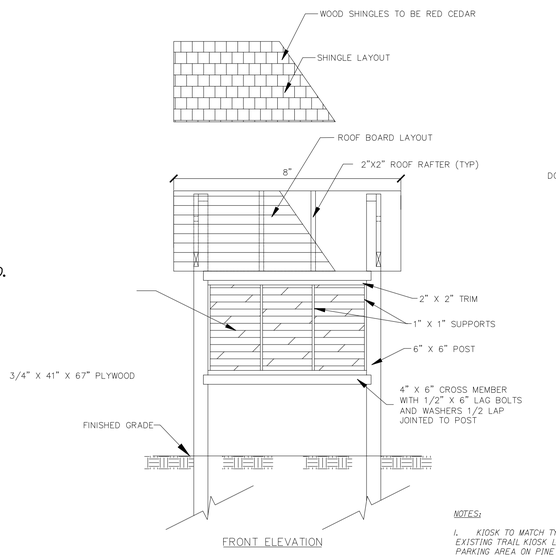


NOTE:
GATE SHALL BE PVC COATED.

SINGLE GATE

N.T.S.

Gate Width		Gate Post
W1	W2	O.D.
to 6'	to 12'	3 "
6' to 12'	12' to 24'	4 "
12' to 18'	24' to 36'	6 "

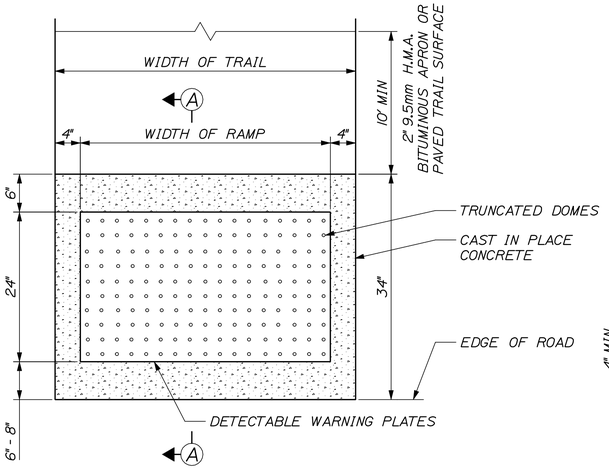


TRAIL KIOSK DETAILS

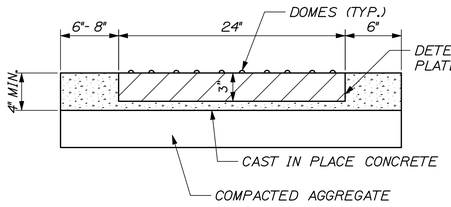
N.T.S.

NOTES:

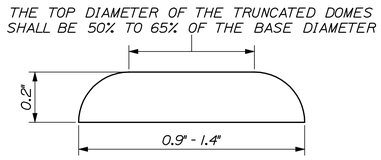
1. KIOSK TO MATCH TYPE, COLOR, SIZE, AND STYLE OF EXISTING TRAIL KIOSK LOCATED AT THE EASTERN TRAIL PARKING AREA ON PINE POINT ROAD IN SCARBOROUGH.
2. ACRYLIC GLASS COVERING TO BE AFFIXED WITH TAMPER PROOF HARDWARE.
3. ALL WOOD IS TO BE SOUTHERN YELLOW PINE NO.1 S4S (SURFACED FOUR SIDES) PRESSURE TREATED ACQ TIMBERS UNLESS OTHERWISE NOTED.
4. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR APPROVAL BY PROJECT MANAGER.



PLAN VIEW OF
DETECTABLE WARNING AND WELL



SECTION A-A



ELEVATION VIEW OF
TRUNCATED DOME

NOTE:
1. ALL DETECTABLE WARNING AREAS SHALL START 6" FROM THE FLOW LINE OF THE CURB AND BE 24" IN DEPTH AND COVER THE COMPLETE WIDTH OF THE TRAIL.

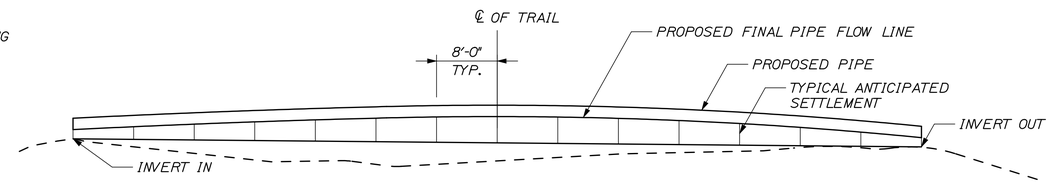
2. DETECTABLE WARNINGS REQUIRED AT STREET CROSSINGS.

3. SEE SPECIAL PROVISION 608, CURB RAMP DETECTABLE WARNING FIELD FOR CONSTRUCTION REQUIREMENTS.

4. DOMES SHALL BE EQUALLY SPACED IN BOTH DIRECTIONS 1.6" TO 2.4".

DETECTABLE WARNING FIELD DETAILS

N.T.S.



NOTES:

1. SEE SPECIAL PROVISION SECTION 603 FOR ADDITIONAL CAMBERED PIPE PLACEMENT REQUIREMENTS.
2. CULVERT SHALL BE EMBEDDED INTO THE EXISTING STREAM BED APPROXIMATELY ONE FOOT.
3. THE PROPOSED CULVERT SHALL HAVE THE EMBEDDED PORTION FILLED WITH GRAVEL AND STONE AS DIRECTED BY THE RESIDENT. PAYMENT SHALL BE ON A TIME AND MATERIALS BASIS IN ACCORDANCE WITH SPECIAL PROVISION 5I3.

OFFSET	SIDE	ANTICIPATED SETTLEMENT
56'	LT	1.0"
48'	LT	2.5"
40'	LT	5.2"
32'	LT	9.0"
24'	LT	11.9"
16'	LT	13.8"
8'	LT	14.7"
0'	℄	15.0"
8'	RT	14.7"
16'	RT	13.8"
24'	RT	11.9"
32'	RT	9.0"
40'	RT	5.2"
48'	RT	2.5"
56'	RT	1.0"

60" DIAMETER CULVERT: CAMBERED PIPE PLACEMENT

N.T.S.

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	LEM	06/09
DRAWN	MPC	06/09
CHECKED	DOE	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

DETAILS

SHEET NUMBER
11
OF 69

Date:8/17/2009

Filename: 011_Details 2 - TrailKiosk - DetailSheet.dgn

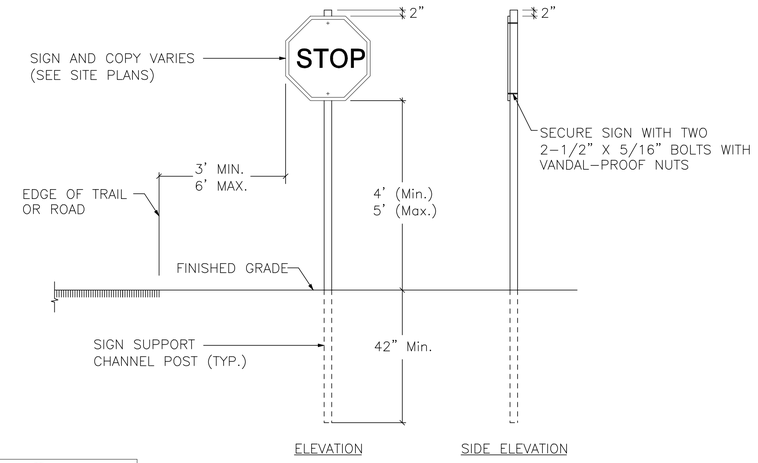
REGULATORY SIGNS

SIGN DESIGNATION		(A)	(F)
SIGN NUMBER		R1-1	R5-3
LEGEND			
COLOR	BACKGROUND	RED	WHITE
	COPY	WHITE	BLACK
SIGN DIMENSION	WIDTH, INCHES	18	24
	HEIGHT, INCHES	18	24
AREA		2.25	4

NOTES:
1. ALL SIGNS SHALL BE TYPE I. REFER TO SECTION 645 FOR NUMBER AND TYPE.

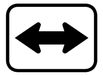
2. THE ORDER SHALL BE AS NOTED ON THE PLANS.

3. SIGN POSTS WITHIN 10' OF A LOCAL ROAD SHALL BE COMPLIANT WITH BREAKAWAY STANDARDS.



TRAIL SIGN
N.T.S.

GUIDE SIGNS

SIGN DESIGNATION		(B)	(C)	(H)	(I)	(J)	(S)	(T)
SIGN NUMBER		D11-1	M7-1R	M4-12	M4-11	M7-2	M7-1L	M7-5
LEGEND								
COLOR	BACKGROUND	TO BE SUPPLIED BY ETMD	GREEN	GREEN	GREEN	GREEN	GREEN	GREEN
	COPY		WHITE	WHITE	WHITE	WHITE	WHITE	WHITE
SIGN DIMENSION	WIDTH, INCHES		12	24	24	12	12	12
	HEIGHT, INCHES		9	6	6	9	9	9
AREA			0.75	1	1	0.75	0.75	0.75

WARNING SIGNS

SIGN DESIGNATION		(D)	(E)	(G)	(K)	(L)	(M)	(N)	(O)	(P)	(Q)
SIGN NUMBER		W11-1	W16-7pL	W16-2a(M)	W7-5	W11-2	W1-2R	W1-2L	W1-1R	W1-1L	W1-3R
LEGEND											
COLOR	BACKGROUND	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW	YELLOW
	COPY	BLACK	BLACK	WHITE	BLACK	BLACK	BLACK	BLACK	BLACK	BLACK	BLACK
SIGN DIMENSION	WIDTH, INCHES	30	24	24	18	30	18	18	18	18	18
	HEIGHT, INCHES	30	12	12	18	30	18	18	18	18	18
AREA		6.25	2	2	2.25	6.25	2.25	2.25	2.25	2.25	2.25

SIGN DESIGNATION		(R)	(U)	(W)	(X)
SIGN NUMBER		W1-3L	W5-4a	W2-1	W2-4
LEGEND					
COLOR	BACKGROUND	YELLOW	YELLOW	YELLOW	YELLOW
	COPY	BLACK	BLACK	BLACK	BLACK
SIGN DIMENSION	WIDTH, INCHES	18	18	18	18
	HEIGHT, INCHES	18	18	18	18
AREA		2.25	2.25	2.25	2.25

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	DATE	BY
DESIGNED	06/09	AZ
DRAWN	06/09	MPC
CHECKED	06/09	LEM
REVISIONS 1	08/09	SIGNS ADDED
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE
P.E. NUMBER 6452
DATE

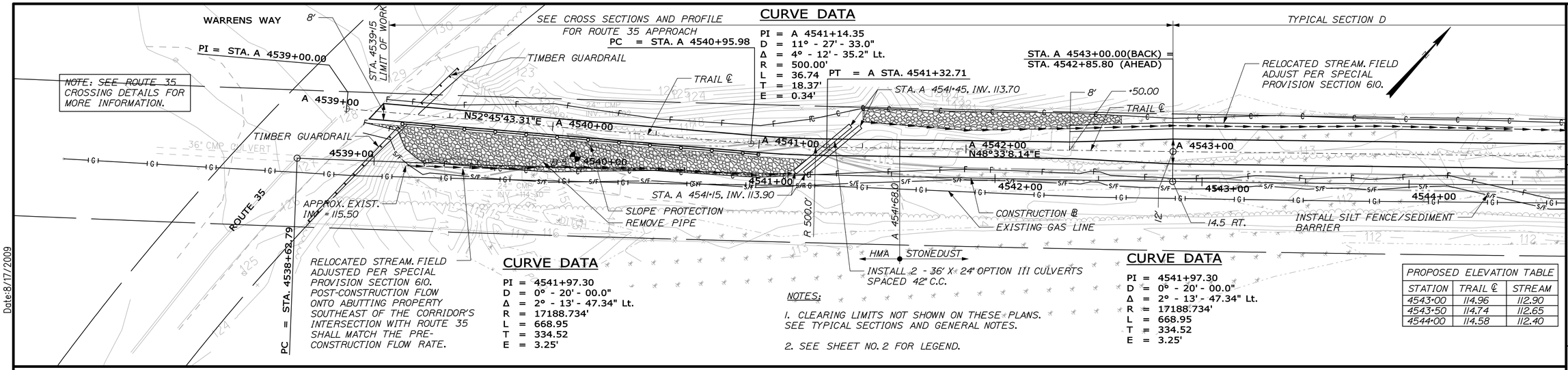
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

SIGNING DETAILS

SHEET NUMBER
12
OF 69

Date:8/17/2009

Filename: 012_TrailSign Summary Table.dgn



RELOCATED STREAM. FIELD ADJUSTED PER SPECIAL PROVISION SECTION 610. POST-CONSTRUCTION FLOW ONTO ABUTTING PROPERTY SOUTHEAST OF THE CORRIDOR'S INTERSECTION WITH ROUTE 35 SHALL MATCH THE PRE-CONSTRUCTION FLOW RATE.

CURVE DATA

PI = 4541+97.30
D = 0° - 20' - 00.0"
Δ = 2° - 13' - 47.34" Lt.
R = 17188.734'
L = 668.95
T = 334.52
E = 3.25'

CURVE DATA

PI = A 4541+14.35
D = 11° - 27' - 33.0"
Δ = 4° - 12' - 35.2" Lt.
R = 500.00'
L = 36.74
T = 18.37'
E = 0.34'
PT = A STA. 4541+32.71

CURVE DATA

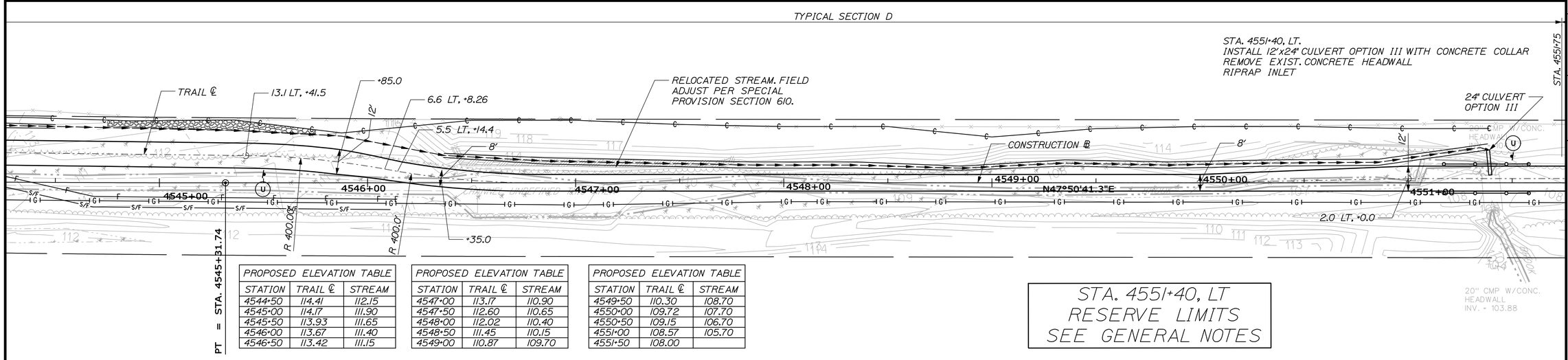
PI = 4541+97.30
D = 0° - 20' - 00.0"
Δ = 2° - 13' - 47.34" Lt.
R = 17188.734'
L = 668.95
T = 334.52
E = 3.25'

NOTES:

1. CLEARING LIMITS NOT SHOWN ON THESE PLANS. SEE TYPICAL SECTIONS AND GENERAL NOTES.

2. SEE SHEET NO. 2 FOR LEGEND.

PROPOSED ELEVATION TABLE		
STATION	TRAIL ℄	STREAM
4543+00	114.96	112.90
4543+50	114.74	112.65
4544+00	114.58	112.40

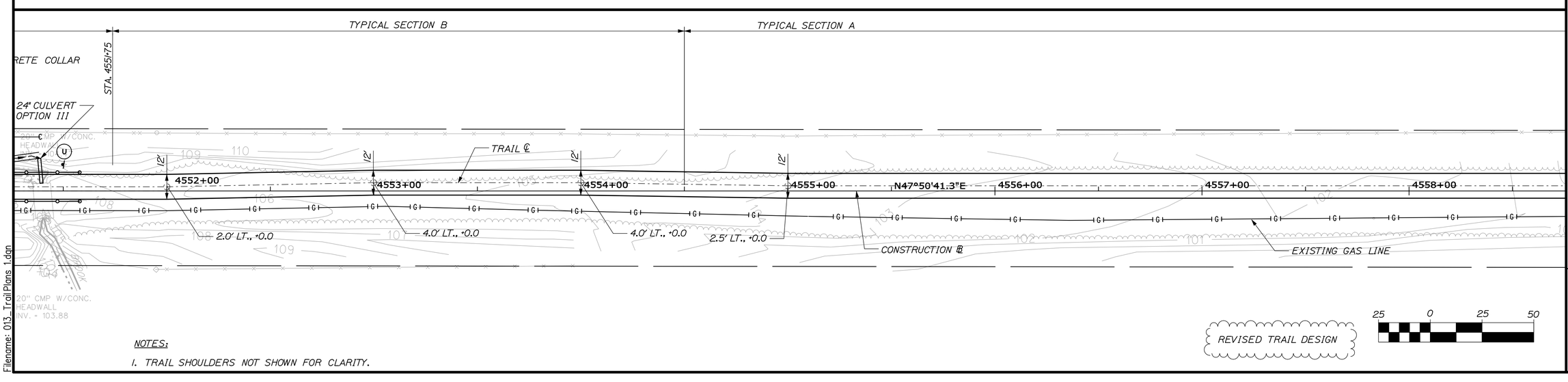


PROPOSED ELEVATION TABLE		
STATION	TRAIL ℄	STREAM
4544+50	114.41	112.15
4545+00	114.17	111.90
4545+50	113.93	111.65
4546+00	113.67	111.40
4546+50	113.42	111.15

PROPOSED ELEVATION TABLE		
STATION	TRAIL ℄	STREAM
4547+00	113.17	110.90
4547+50	112.60	110.65
4548+00	112.02	110.40
4548+50	111.45	110.15
4549+00	110.87	109.70

PROPOSED ELEVATION TABLE		
STATION	TRAIL ℄	STREAM
4549+50	110.30	108.70
4550+00	109.72	107.70
4550+50	109.15	106.70
4551+00	108.57	105.70
4551+50	108.00	

STA. 4551+40, LT
RESERVE LIMITS
SEE GENERAL NOTES



NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	DATE	BY
DESIGNED	06/09	AZ
DRAWN	06/09	MPC
CHECKED	06/09	LEM
REVISIONS 1	08/09	REV. TRAL
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
13
OF 69

Date:8/17/2009

Filename: 013_Trail Plans 1.dgn

TYPICAL SECTION A

BRIDGE AND BRIDGE APPROACH SECTION (TO STA. 4561+00)

CURVE DATA

PI = 5002+10.75
D = 38° - 11' - 49.9"
Δ = 25° - 32' - 15.9" Lt.
R = 150.00'
L = 66.86'
T = 33.99'
E = 3.80'

STA. 4561+00

STA. 5001+76.75

APPROXIMATE RIGHT OF WAY LINE

CEDAR RAIL FENCE

TRAIL ℄

12'

PC

4559+00

4560+00

4561+00

5002+00

5003+00

5004+00

CROSSED AREA NO TRAVELLED WAY

CONSTRUCTION ℄

2.5 LT.

STA. 4561+64.47 (BACK) =
STA. 5001+76.75 (AHEAD)

STA. 5002+50 Rt. LT.
END OF CEDAR FENCE

PC = STA. 5004+

INSTALL 112' X 60" R.C.P. CLASS V
INV. IN = 81.44
INV. OUT = 80.35
(SEE CAMBER DETAILS)

INSTALLATION OF
CHAIN LINK FENCE
(BY OTHERS) (TYP.)

APPROX.
TURNPIKE ROW
REMOVE WOVEN
WIRE FENCE

PT = STA. 5002+43.61

INSTALL 88' X
18" R.C.P. CLASS III
INV. IN = 82.86
INV. OUT = 81.65

GAS LINE APPROX.
NOT SURVEYED

FUTURE MAINE TURNPIKE
BRIDGE (BY OTHERS)

NOTE: SEE TURNPIKE
CROSSING DETAILS FOR MORE
INFORMATION INCLUDING LIMITS
OF PRELOAD EMBANKMENT

PI = STA. 1249+19

MAINE TURNPIKE
SOUTHBOUND

1250+00

Date:8/27/2009

HMA

STONEDUST (BY OTHERS)

5004+00

5005+00

TRAIL ℄

PC = STA. 5004+57.19

PT = STA. 5005+75.00

4' PVC COATED
CHAIN LINK FENCE

B-1

CURVE DATA

PI = 5005+32.19
D = 76° - 23' - 39.7"
Δ = 90° - 00' - 00.0" Rt.
R = 75.00'
L = 117.81'
T = 75.00'
E = 31.07'

INSTALL 112' X 60" R.C.P. CLASS V
INV. IN = 81.44
INV. OUT = 80.35
(SEE CAMBER DETAILS)

INSTALLATION OF
CHAIN LINK FENCE
(BY OTHERS) (TYP.)

APPROX.
TURNPIKE ROW
REMOVE WOVEN
WIRE FENCE

INSTALL 88' X
18" R.C.P. CLASS III
INV. IN = 82.86
INV. OUT = 81.65

GAS LINE APPROX.
NOT SURVEYED

FUTURE MAINE TURNPIKE
BRIDGE (BY OTHERS)

MAINE TURNPIKE

1252+00

1253+00

1251+00

MAINE TURNPIKE ℄ STA. 1251+00 =
TRAIL ℄ STA. 5007+01.30

5006+00

5007+00

NOTE: SEE TURNPIKE
CROSSING DETAILS FOR
MORE INFORMATION.

PI = STA. 1249+19.38

MAINE TURNPIKE
SOUTHBOUND

1250+00

1249+00

MAINE TURNPIKE
NORTHBOUND

B-2

REMOVE EXIST.
WOVEN WIRE ROW FENCE

INSTALL 72' X
18" R.C.P. CLASS III
INV. IN = 81.40
INV. OUT = 81.10

CURVE DATA

PI = 5008+98.98
D = 114° - 35' - 29.6"
Δ = 98° - 49' - 18.9" Lt.
R = 50.00'
L = 86.24'
T = 58.36'
E = 26.85'

PT = STA. 5009+26.86

5008+00

PC= STA. 5008+40.62

5009+00

4' PVC COATED CHAIN LINK
FENCE (BY OTHERS) (TYP.)

APPROX.
TURNPIKE ROW

TRAIL ℄ SHALL CROSS OVER GAS LINE
AT A MINIMUM ANGLE OF 45°

R = 50.00'

STA. 5013+58.43 (BACK)=
STA. 4570+91.92 (AHEAD)

5013+00

PC = STA. 5013+58.43

5012+00

HMA
(BY OTHERS)

STONEDUST

5011+00

5010+00

TRAIL ℄

CURVE DATA

PI = 5013+30.15
D = 38° - 11' - 49.9"
Δ = 21° - 52' - 18.9" Rt.
R = 150.00'
L = 57.26'
T = 28.98'
E = 2.77'

PT = STA. 5013+01.17

CURVE DATA

PI = 5011+35.87
D = 11° - 27' - 33.0"
Δ = 12° - 29' - 15.8" Rt.
R = 500.00'
L = 108.98'
T = 54.70'
E = 2.98'

PT = STA. 5011+90.14

PC = STA. 5010+81.17

2 REVISED TRAIL GEOMETRY AT CROSSING OF GAS LINE AT STA. 5012+98

1 REVISED TRAIL DESIGN

25 0 25 50

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

Filename: 014_TrailPlans_2.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

BY	DATE
DESIGNED AZ	06/09
DRAWN MPC	06/09
CHECKED LEM	06/09
REVISIONS 1 REV. TRAL	08/09
REVISIONS 2 REV. TRAL	08/27/09
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
14
OF 69

TYPICAL SECTION A

BRIDGE AND BRIDGE APPROACH SECTION (TO STA. 457+00)

STA. 5013+58.43 (BACK) =
STA. 4570+91.92 (AHEAD)

STA. 457+00

R = 50.00'

10'

S/F

6.4' LT., -93.8

5.0 LT., -95.0

12'

5013+00

4571+00

4572+00

4573+00

N47°50'41.3"E

4574+00

4575+00

4576+00

4577+00

TRAIL ℄

CONSTRUCTION ℄

EXISTING GAS LINE

10' ARCH CULVERT
INV. = UNK

PC = STA. 5013+01.17

PT = STA. 5013+58.43

CURVE DATA

PI = 5013+16.73
D = 38° - 11' - 49.9"
Δ = 21° - 52' - 18.9" Rt.
R = 150.00'
L = 57.26'
T = 28.98'
E = 2.77'

Δ
49.9"
18.9" Rt.

TYPICAL SECTION A

4578+00

4579+00

4580+00

4581+00

N47°50'41.3"E

4582+00

4583+00

4584+00

TRAIL ℄

CONSTRUCTION ℄

TYPICAL SECTION A

NOTE: SEE EMMONS RD CROSSING DETAILS FOR MORE INFORMATION.

TRANSITION SHOULDERS TO ROAD TO MAINTAIN TRAIL CROSSING

4585+00

4586+00

4587+00

N47°50'41.3"E

4588+00

4589+00

4590+00

4591+00

TRAIL ℄

5.0 LT. -50.0

7.1 LT. -50.0

6.0 LT. -50.0

CONSTRUCTION ℄

EXIST. GATE TO REMAIN

EMMONS ROAD
(NON-MAINTAINED PORTION)

STANDING WATER

48" RCP W/STONE HEADWALL
INV. = 68.74

8" RCP W/STONE HEADWALL
INV. = 68.62

2 REVISED TRAIL GEOMETRY AT CROSSING OF GAS LINE AT STA. 5012+98

1 REVISED TRAIL DESIGN

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

25 0 25 50

Date: 8/27/2009

Filename: 015_Trail Plans 3.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2	REV. TRAIL	08/27/09
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

6452
P.E. NUMBER

DATE

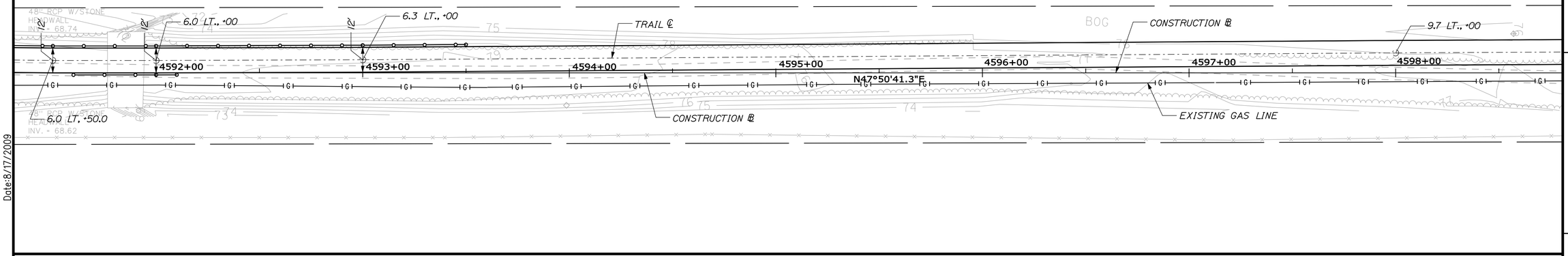
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
15
OF 69

Date:8/17/2009

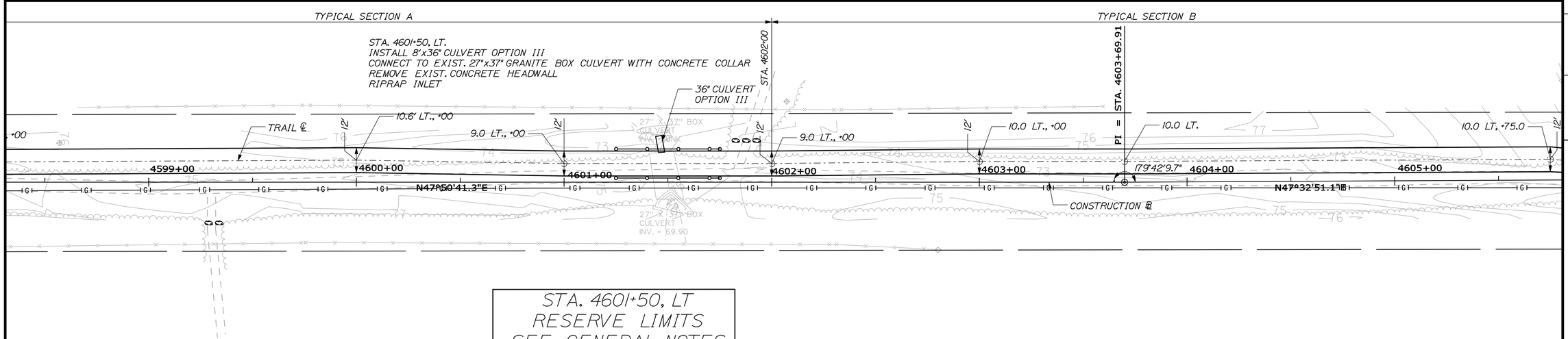
TYPICAL SECTION A



TYPICAL SECTION A

TYPICAL SECTION B

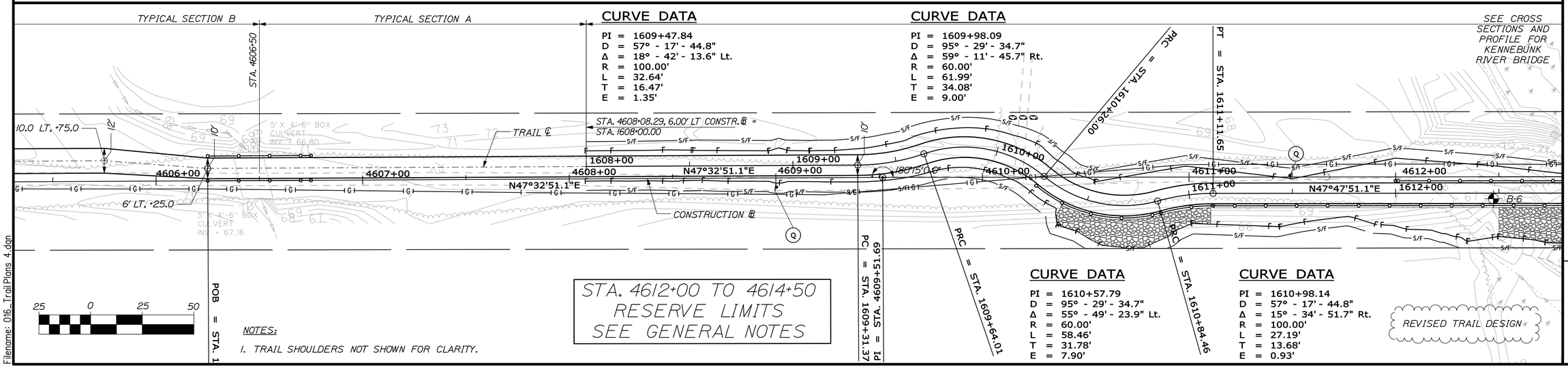
STA. 4601+50, LT.
INSTALL 8'x36" CULVERT OPTION III
CONNECT TO EXIST. 27"x37" GRANITE BOX CULVERT WITH CONCRETE COLLAR
REMOVE EXIST. CONCRETE HEADWALL
RIPRAP INLET



STA. 4601+50, LT
RESERVE LIMITS
SEE GENERAL NOTES

TYPICAL SECTION B

TYPICAL SECTION A



CURVE DATA

PI = 1609+47.84
D = 57° - 17' - 44.8"
Δ = 18° - 42' - 13.6" Lt.
R = 100.00'
L = 32.64'
T = 16.47'
E = 1.35'

CURVE DATA

PI = 1609+98.09
D = 95° - 29' - 34.7"
Δ = 59° - 11' - 45.7" Rt.
R = 60.00'
L = 61.99'
T = 34.08'
E = 9.00'

CURVE DATA

PI = 1610+57.79
D = 95° - 29' - 34.7"
Δ = 55° - 49' - 23.9" Lt.
R = 60.00'
L = 58.46'
T = 31.78'
E = 7.90'

CURVE DATA

PI = 1610+98.14
D = 57° - 17' - 44.8"
Δ = 15° - 34' - 51.7" Rt.
R = 100.00'
L = 27.19'
T = 13.68'
E = 0.93'

REVISED TRAIL DESIGN

STA. 4612+00 TO 4614+50
RESERVE LIMITS
SEE GENERAL NOTES

25 0 25 50

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

Filename: 016_Trail Plans 4.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	SIGNATURE	P.E. NUMBER	DATE
		6452	

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
16
OF 69

SEE CROSS SECTIONS AND PROFILE FOR KENNEBUNK RIVER BRIDGE

PROPOSED KENNEBUNK RIVER BRIDGE

KENNEBUNK ARUNDEL

KENNEBUNK RIVER

B-6

SLOPE PROTECTION

ARUNDEL KENNEBUNK

SLOPE PROTECTION

NOTE: SEE KENNEBUNK RIVER BRIDGE PLANS FOR MORE INFORMATION.

CURVE DATA
PI = 1614+59.58
D = 95° - 29' - 34.7"
Δ = 38° - 54' - 00.7" Lt.
R = 60.00'
L = 40.74'
T = 21.19'
E = 3.63'

CURVE DATA
PI = 1615+14.51
D = 95° - 29' - 34.7"
Δ = 61° - 03' - 13.8" Rt.
R = 60.00'
L = 63.94'
T = 35.38'
E = 9.65'

INSTALL SILT FENCE/ SEDIMENT BARRIER

PROP. RETAINING WALL (SEE SPECIAL DETAILS)

PRC = STA. 1615+43.00

PRC = STA. 1614+79.13

PT = STA. 1615+82.11

PT = STA. 1614+38.39

STA. 1616+42.35, 7.16' LT CONSTR.℄ = STA. 1616+50.00

7.0 LT.

CONSTRUCTION ℄

TYPICAL SECTION A

CONSTRUCT PREFABRICATED BLOCK GRAVITY WALL
STA. 1614+80.92, 9.42' LT TO STA. 1615+76.20, 9.42' LT

CHAIN LINK FENCE, 4FT PVC COATED
STA. 1614+65.00, 6.00' LT TO STA. 1617+50.00, 6.00' LT

TRAIL ℄

9.0 LT., +00

180°20'0.0"

N47°34'47.1"E

N47°47'51.1"E

N48°7'51.1"E

EXISTING GAS LINE

CURVE DATA
PI = 1615+62.84
D = 57° - 17' - 44.8"
Δ = 22° - 22' - 17.0" Lt.
R = 100.00'
L = 39.05'
T = 19.77'
E = 1.94'

PI = STA. 4617+51.69

STA. 4612+00 TO 4614+50
RESERVE LIMITS
SEE GENERAL NOTES

TYPICAL SECTION A

TRAIL ℄

9.0 LT, +75.0

6.0 LT, +75.0

6.0 LT, +25.0

CONSTRUCTION ℄

12'W X 13'H CONCRETE SLAB BRIDGE

DUCK BROOK

12.0 LT., +00

+88.69

PI = STA. 4624+88.69

179°42'50.3"

TYPICAL SECTION A

TRAIL ℄

PC = STA. 4627+71.67

17.0 LT., +00

CONSTRUCTION ℄

CURVE DATA
PI = 4656+06.59
D = 0° - 12' - 00.0"
Δ = 11° - 18' - 10.5" Lt.
R = 28647.89'
L = 5651.46'
T = 2834.93'
E = 139.93'

NOTES:
1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

Date: 8/17/2009

Filename: 017_Trail Plans 5.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE
P.E. NUMBER 6452
DATE

BY	DATE
DESIGNED AZ	06/09
DRAWN MPC	06/09
CHECKED LEM	06/09
REVISIONS 1 REV. TRAL	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
17
OF 69

TYPICAL SECTION A

7.0 LT., •00

7.0 LT., •00

TRAIL ℄

6.0 LT., •00

4634+00 4635+00 4636+00 4637+00 4638+00 4639+00 4640+00

CONSTRUCTION ℄

EXISTING GAS LINE

TYPICAL SECTION A

TRAIL ℄

6.0 LT., •00

5.0 LT., •00

4641+00 4642+00 4643+00 4644+00 4645+00 4646+00 4647+00

CONSTRUCTION ℄

REVISED TRAIL DESIGN

TYPICAL SECTION A

CHAIN LINK FENCE, 4FT PVC COATED

STA. A 4652•50, 6.00' RT TO STA. A 4654•12, 6.00' RT
STA. A 4653•40, 6.00' LT TO STA. A 4654•24, 6.00' LT

CONSTRUCT PREFABRICATED BLOCK GRAVITY WALL

STA. A 4652•54.42, 9.42' RT TO STA. A 4654•06.25, 9.42' RT
STA. A 4653•50.00, 9.42' LT TO STA. A 4654•23.03, 9.42' LT

STA. 4650•75

STONE DUST H.M.A.

TRAIL ℄

5.0 LT., •00

4648+00 4649+00 A 4650+00 4650+00 4651+00 A 4651+00

CONSTRUCTION ℄

STA. 4651•00.00, 5.0' LT CONST. ℄ =
STA. A 4651•00.00 TRAIL ℄

CURVE DATA

PI = A 4651+99.11
D = 38° - 11' - 49.9"
Δ = 14° - 07' - 51.9" Lt.
R = 150.00'
L = 37.00'
T = 18.59'
E = 1.15'

SEE CROSS SECTIONS AND PROFILE FOR LIMERICK ROAD APPROACH

PROPOSED RETAINING WALL #2 (SEE SPECIAL DETAILS)

INSTALL 32' X 18" OPTION III CULVERT
INV IN = 87.75
INV OUT = 86.00

INSTALL 56' X 24" OPTION III CULVERT
INV IN = 83.50
INV OUT = 82.75

A 4652+00 A 4653+00 4652+00 A 4653+00 4653+00 A 4654+00 4654+00 N42°59'40"E A 4654+38

PROPOSED RETAINING WALL #1 (SEE SPECIAL DETAILS)

REMOVE GATE

B-3

PCC = STA. A 4651+80.52

PRC = STA. A 4652+17.51

PT = STA. A 4652+54.42

PI = STA. A 4654+38.38

PI = ST.

STA. 4654•50

LIMERICK ROAD

LIMERICK ROAD

NOTE: SEE LIMERICK RD CROSSING DETAILS FOR MORE INFORMATION.

STA. 4651+00 TO 4654+25
RESERVE LIMITS
SEE GENERAL NOTES

CURVE DATA

PI = 4656+06.59
D = 0° - 12' - 00.0"
Δ = 11° - 18' - 10.5" Lt.
R = 28647.89'
L = 5651.46'
T = 2834.93'
E = 139.93'

CURVE DATA

PI = A 4642+90.68
D = 0° - 12' - 00.1"
Δ = 3° - 33' - 40.1" Lt.
R = 28642.89'
L = 1780.26'
T = 890.42'
E = 13.84'

CURVE DATA

PI = A 4652+36.06
D = 38° - 11' - 49.9"
Δ = 14° - 05' - 55.0" Rt.
R = 150.00'
L = 36.91'
T = 18.55'
E = 1.14'

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

25 0 25 50

Date: 8/17/2009

Filename: 018_TrailPlans 6.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	DATE
DESIGNED	06/09
DRAWN	06/09
CHECKED	06/09
REVISIONS 1	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

BY: AZ MPC LEM REV. TRAIL

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
18
OF 69

SEE CROSS SECTIONS AND PROFILE
FOR LIMERICK ROAD APPROACH - FIELD VERIFY GAS LINE LOCATION IN THIS AREA

STA. 4654+50

LIMERICK ROAD

REMOVE GATE

STA. A 4656+50, INV. 88.85
HMA
STONEDUST

A 4655+97.0

SLOPE PROTECTION

PI = STA. 4657+25.00

TYPICAL SECTION C

STA. 4658+00 TO STA. 4659+00
POSSIBLE 1.5:1 FRONT AND BACK SLOPES
SLOPE PROTECTION

3.0 LT. +50

TRAIL ℄

A 4654+38

A 4655+00

N47°2'18.28"E

A 4656+00

N42°4'15.65"E

A4657+00

4655+00

4656+00

4657+00

4658+00

4659+00

4660+00

4661+00

PI = STA. A 4656+24.91

3.2 LT. +00.0

10'

INSTALL 24" X 18" OPTION III CULVERT

STA. A 4656+50, INV. 88.65

STA. 4657+25.00 (BACK) =
STA. 4657+24.93 (AHEAD)

CONSTRUCTION ℄

EXISTING GAS LINE

PI = STA. A 4654+48.74

PI = STA. A 4654+38.38

NOTE: SEE LIMERICK RD. CROSSING DETAILS FOR MORE INFORMATION.

PROPOSED ELEVATION TABLE

STATION	CENTERLINE OF TRAIL ELEV.	BOTTOM OF DRAINAGE SWALE
4657+50.00	92.01	N/A
4658+00.00	92.42	90.75
4658+50.00	92.83	91.00
4659+00.00	93.24	92.19

PROPOSED ELEVATION TABLE

STATION	CENTERLINE OF TRAIL ELEV.	BOTTOM OF DRAINAGE SWALE
4659+50.00	93.65	92.44
4660+00.00	94.06	92.69
4660+50.00	94.47	93.15
4661+00.00	94.87	93.48

TYPICAL SECTION C

TYPICAL SECTION A

STA. 4665+00

SLOPE PROTECTION

3.0 LT. +50

2.0 LT. +75.0

TRAIL ℄

1.6' LT. +50.0

1.0' LT. +50.0

1.0' LT., +50.0

2.0' LT., +50.0

4662+00

4663+00

4664+00

4665+00

4666+00

4667+00

4668+00

10'

12'

SLOPE PROTECTION

CONSTRUCTION ℄

3' X 5'-4" DOUBLE
BOX CULVERT
INV. - UNK

PROPOSED ELEVATION TABLE

STATION	CENTERLINE OF TRAIL ELEV.	BOTTOM OF DRAINAGE SWALE
4662+00.00	95.69	94.78
4662+50.00	95.97	95.05
4663+00.00	95.79	94.77
4663+50.00	95.28	94.53

TYPICAL SECTION A

2.0' LT., +00

3.0 LT., +00

TRAIL ℄

3.0 LT. +0.0

4669+00

4670+00

4671+00

4672+00

4673+00

4674+00

4675+00

12"

CONSTRUCTION ℄

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

CURVE DATA

PI = 4656+06.59
D = 0° - 12' - 00.0"
Δ = 11° - 18' - 10.5" Lt.
R = 28647.89'
L = 5651.46'
T = 2834.93'
E = 139.93'

REVISED TRAIL DESIGN

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

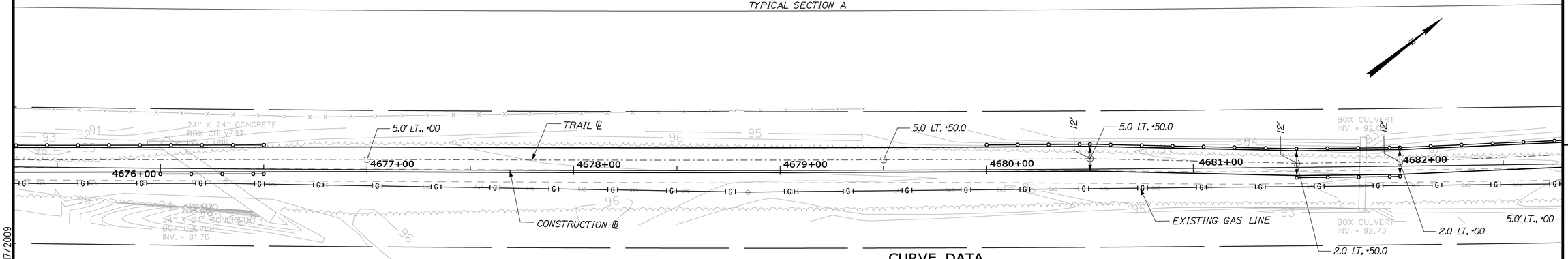
TRAIL PLANS

SHEET NUMBER
19
OF 69

Date:8/17/2009

Filename: 019_Trail Plans 7.dgn

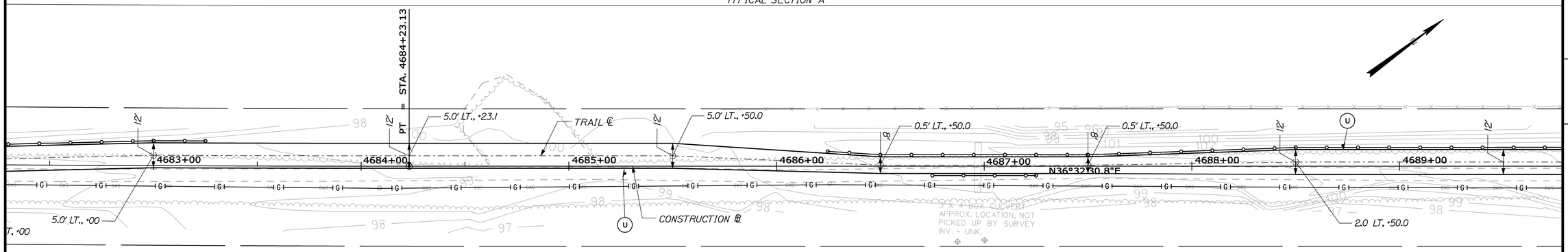
TYPICAL SECTION A



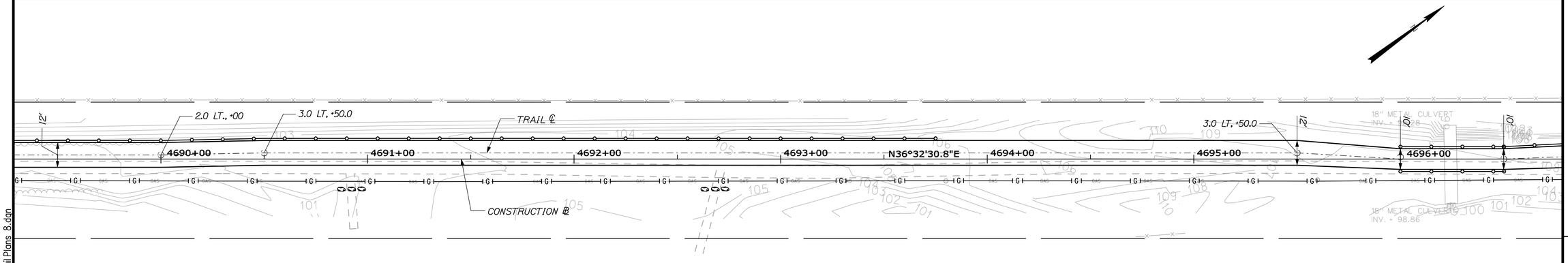
CURVE DATA

PI = 4656+06.59
D = 0° - 12' - 00.0"
Δ = 11° - 18' - 10.5" Lt.
R = 28647.89'
L = 5651.46'
T = 2834.93'
E = 139.93'

TYPICAL SECTION A



TYPICAL SECTION A



NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	DATE	BY
DESIGNED	06/09	AZ
DRAWN	06/09	MPC
CHECKED	06/09	LEM
REVISIONS 1	08/09	REV. TRAIL
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

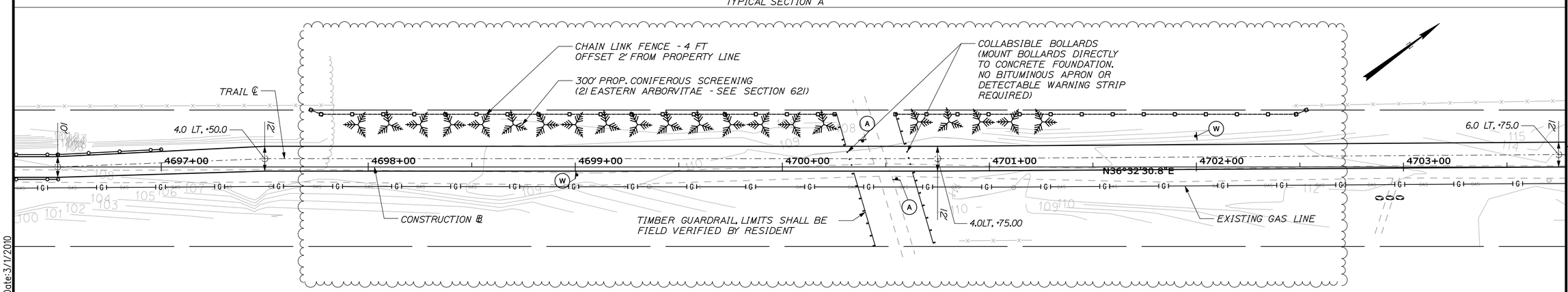
TRAIL PLANS

SHEET NUMBER
20
OF 69

Date: 8/17/2009

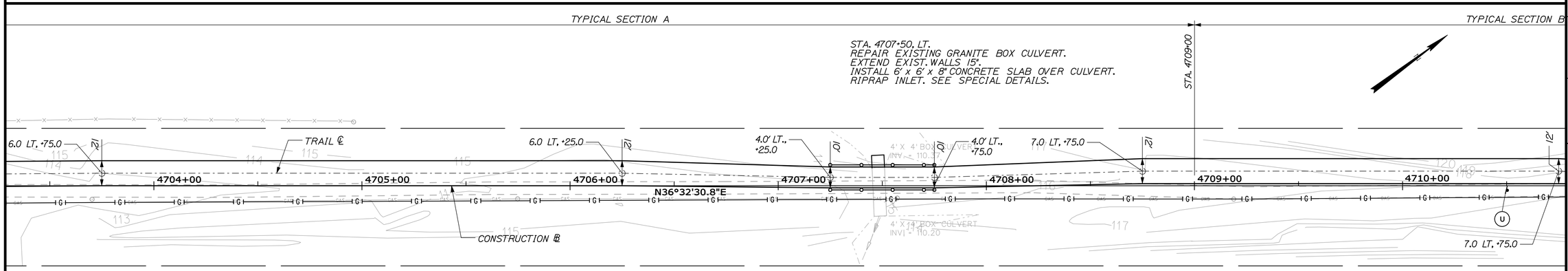
Filename: 020_TrailPlans_8.dgn

TYPICAL SECTION A



TYPICAL SECTION A

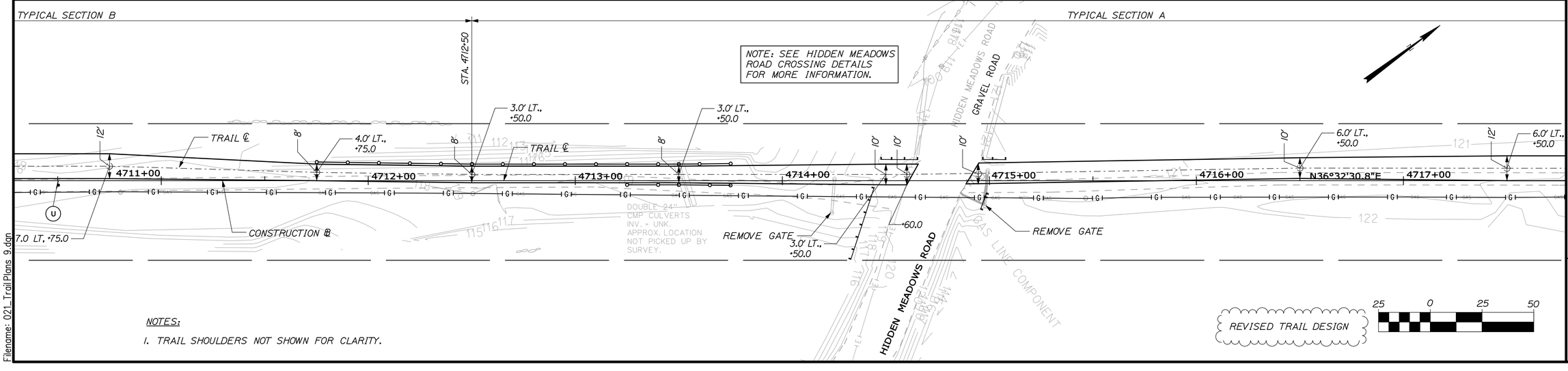
TYPICAL SECTION B



STA. 4707+50, LT.
RESERVE LIMITS
SEE GENERAL NOTES

TYPICAL SECTION B

TYPICAL SECTION A



NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

Date:3/1/2010

Filename: 021_Trail Plans 9.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2	REV. TRAIL	03/10
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

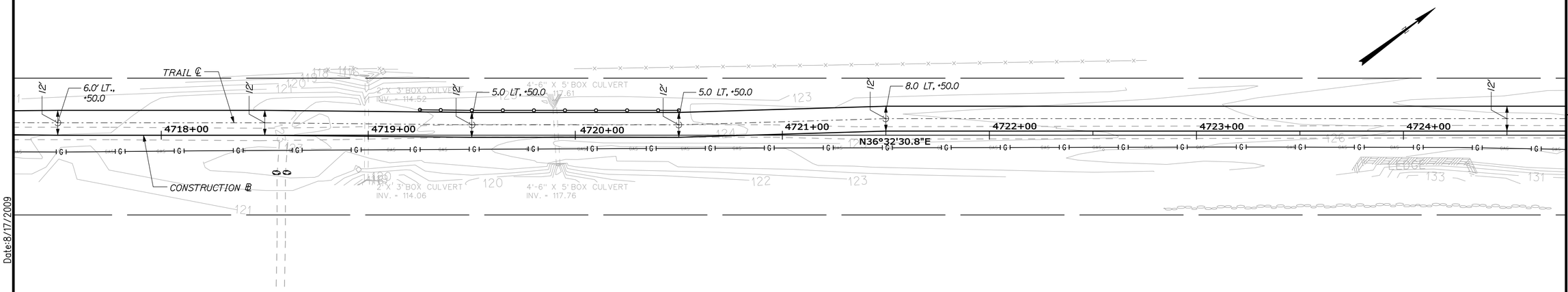
DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

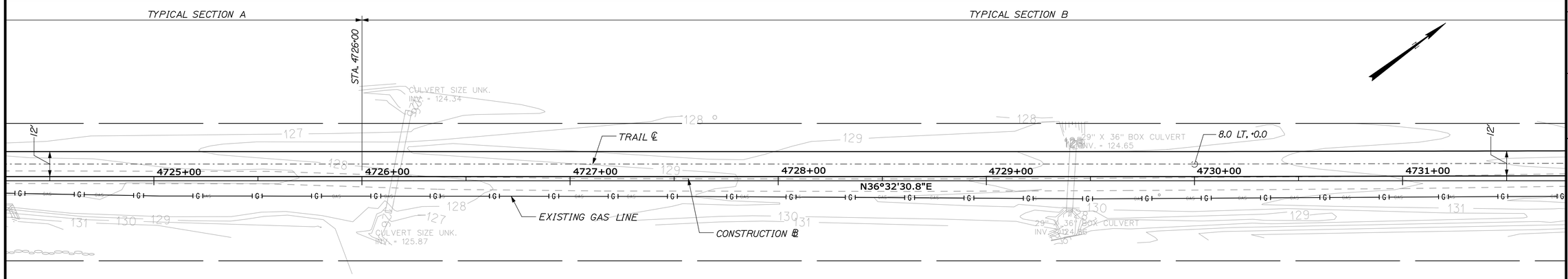
TRAIL PLANS

SHEET NUMBER
21
OF 69

TYPICAL SECTION A

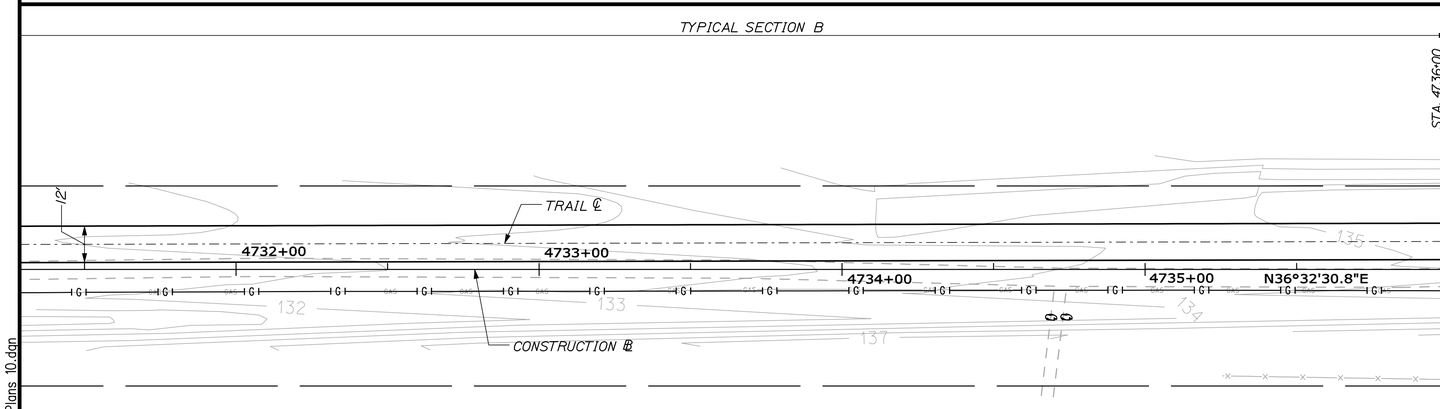


TYPICAL SECTION A

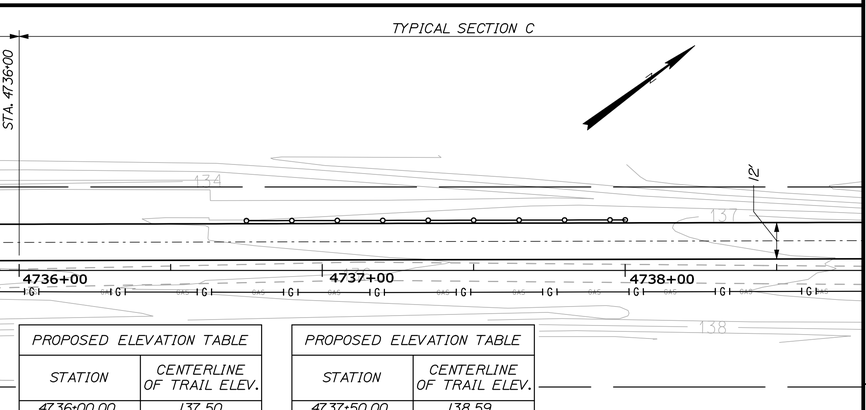


TYPICAL SECTION B

TYPICAL SECTION B



TYPICAL SECTION C



PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4736•00.00	137.50
4736•25.00	137.64
4736•50.00	138.34
4736•75.00	138.44
4737•00.00	138.47
4737•25.00	138.50

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4737•50.00	138.59
4737•75.00	138.78
4738•00.00	139.05
4738•25.00	138.99
4738•50.00	139.09
4738•75.00	139.52

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

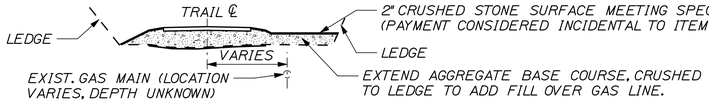
SHEET NUMBER
22
OF 69

Date:8/17/2009

Filename: 022_Trail Plans 10.dgn

TYPICAL SECTION C

TYPICAL SECTION C

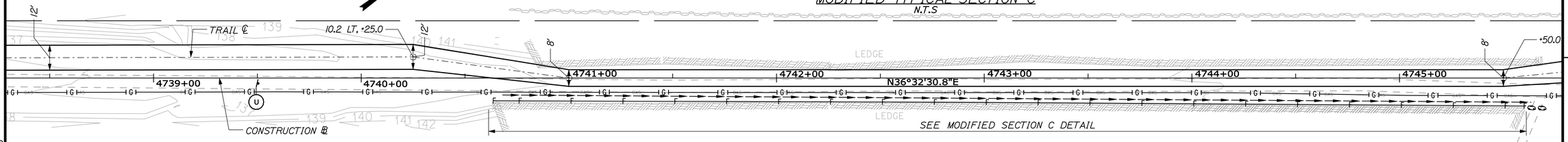


2" CRUSHED STONE SURFACE MEETING SPECIFICATION 703.12 (PAYMENT CONSIDERED INCIDENTAL TO ITEM 411.13)

EXTEND AGGREGATE BASE COURSE, CRUSHED TO LEDGE TO ADD FILL OVER GAS LINE.

MODIFIED TYPICAL SECTION C

N.T.S



PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4739•00.00	139.72
4739•25.00	139.89
4739•50.00	139.95
4739•75.00	139.83

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4740•00.00	139.94
4740•25.00	140.45
4740•50.00	140.68
4740•75.00	140.71

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4741•00.00	140.83
4741•25.00	140.80
4741•50.00	140.77
4741•75.00	140.74

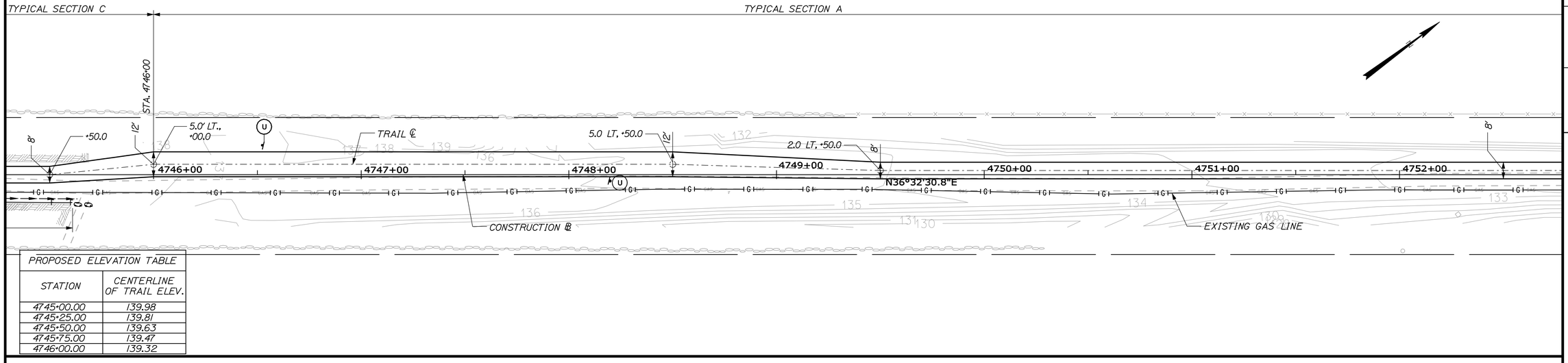
PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4742•00.00	140.70
4742•25.00	140.67
4742•50.00	140.64
4742•75.00	140.61

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4743•00.00	140.57
4743•25.00	140.54
4743•50.00	140.51
4743•75.00	140.50

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4744•00.00	140.48
4744•25.00	140.42
4744•50.00	140.33
4744•75.00	140.16

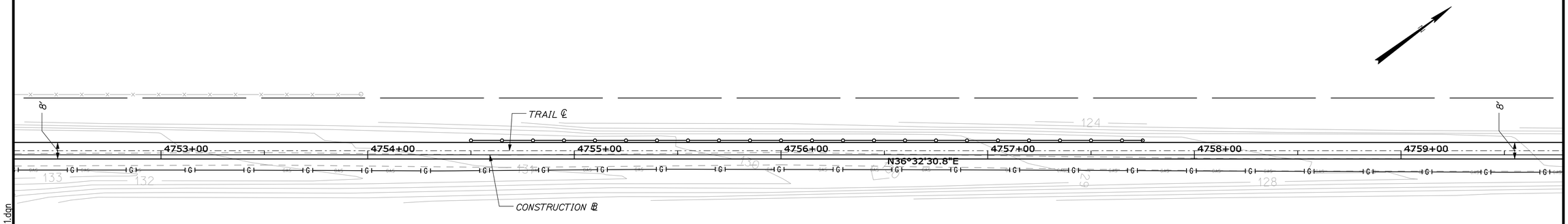
TYPICAL SECTION C

TYPICAL SECTION A



PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4745•00.00	139.98
4745•25.00	139.81
4745•50.00	139.63
4745•75.00	139.47
4746•00.00	139.32

TYPICAL SECTION A



NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT MULTI-USE TRAIL CONSTRUCTION

KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER

23

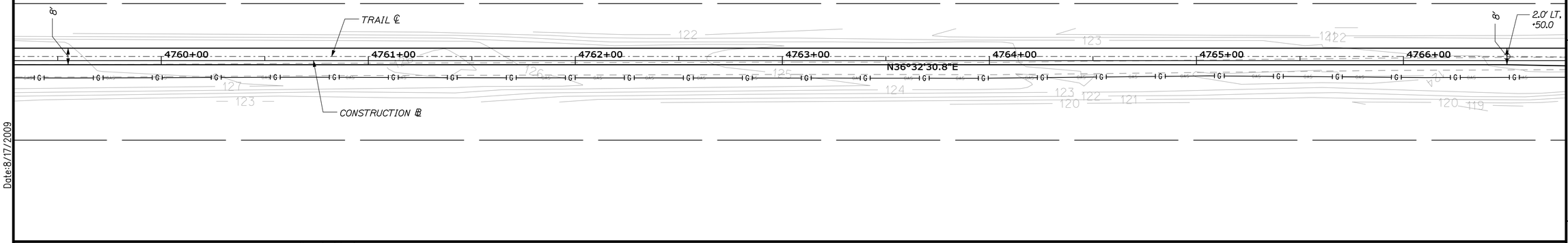
OF 69

Date: 8/17/2009

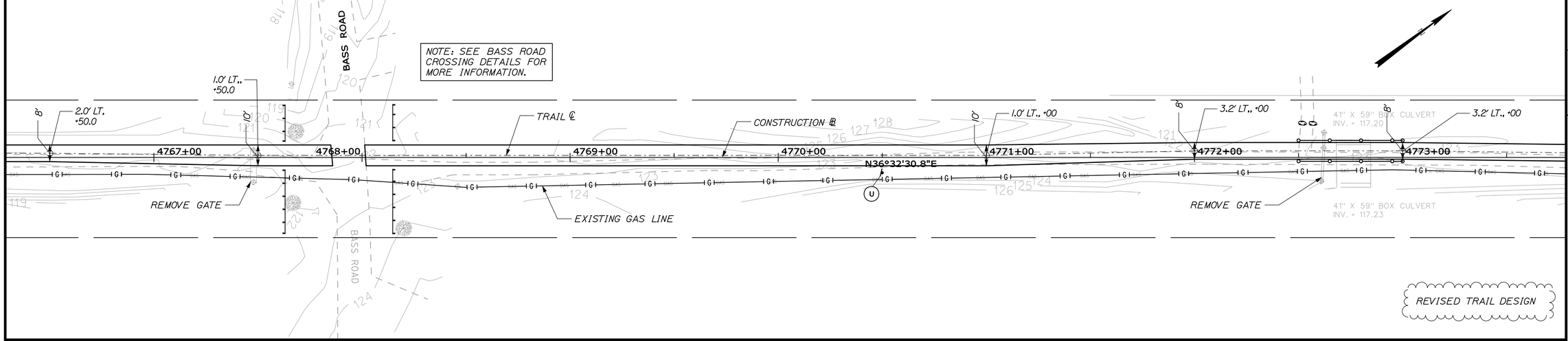
Filename: 023_Trail Plans 11.dgn

Date: 8/17/2009

TYPICAL SECTION A

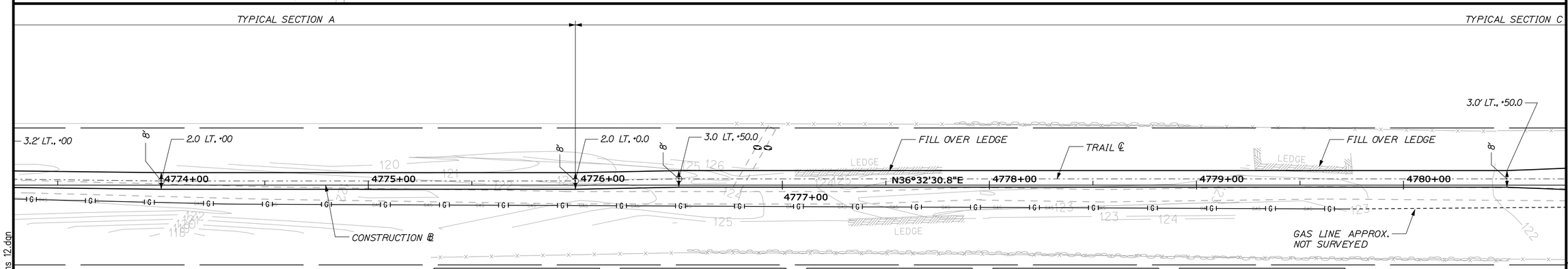


TYPICAL SECTION A



TYPICAL SECTION A

TYPICAL SECTION C



NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4776+00.00	123.45
4776+25.00	125.48
4776+50.00	125.61
4776+75.00	126.58

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4777+00.00	127.12
4777+25.00	126.85
4777+50.00	126.29
4777+75.00	125.91

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4778+00.00	125.70
4778+25.00	125.53
4778+50.00	125.52
4778+75.00	125.50

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4779+00.00	125.62
4779+25.00	125.71
4779+50.00	125.64
4779+75.00	125.52

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4780+00.00	125.22
4780+25.00	124.80
4780+50.00	124.36
4780+75.00	124.11

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

BY	DATE
DESIGNED AZ	06/09
DRAWN MPC	06/09
CHECKED LEM	06/09
REVISIONS 1 REV. TRAL	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
24
OF 69

Filename: 024_Trail Plans 12.dgn

TYPICAL SECTION C

TYPICAL SECTION A

STA. 4782+50

3.0' LT., +50.0

8'

12'

4781+00

4782+00

4783+00

TRAIL ℄

3.0 LT., +25.0

4784+00

N36°32'30.8"E

4785+00

4786+00

12'

3.0' LT, +50

11'

3.5' LT.

11'

4787+00

GAS LINE APPROX.
NOT SURVEYED

CONSTRUCTION ℄

EXISTING GAS LINE

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4781+00.00	123.87
4781+25.00	123.67
4781+50.00	123.28
4781+75.00	123.00

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4782+00.00	122.39
4782+25.00	122.50
4782+50.00	122.59

TYPICAL SECTION A

TYPICAL SECTION C

ARUNDEL
BIDDEFORD

STA. 4794+00

3.0' LT, +00

42" X 8' BOX CULVERT
INV. = 115.22

11'

12'

4788+00

4789+00

TRAIL ℄

4790+00

4791+00

N36°32'30.8"E

4792+00

3.0' LT., +00

6.0 LT., +00

4793+00

4794+00

42" X 8' BOX CULVERT
INV. = 114.27

CONSTRUCTION ℄

24" X 45" BOX CULVERT
APPROX. LOCATION, NOT
PICKED UP BY SURVEY
INV. = UNK.

APPROX.
TOWN LINE

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4794+00.00	113.11
4794+25.00	115.04
4794+50.00	114.41
4794+75.00	114.49

TYPICAL SECTION C

TYPICAL SECTION C

TYPICAL SECTION B

STA. 4799+00

TRAIL ℄

4795+00

4796+00

4797+00

4798+00

N36°32'30.8"E

4799+00

4800+00

4801+00

CONSTRUCTION ℄

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4794+00.00	113.11
4794+25.00	115.04
4794+50.00	114.41
4794+75.00	114.49

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4795+00.00	114.45
4795+25.00	114.36
4795+50.00	114.44
4795+75.00	114.46

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4796+00.00	114.48
4796+25.00	114.49
4796+50.00	114.32
4796+75.00	113.53

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4797+00.00	113.87
4797+25.00	114.07
4797+50.00	114.02
4797+75.00	113.73

PROPOSED ELEVATION TABLE	
STATION	CENTERLINE OF TRAIL ELEV.
4798+00.00	113.35
4798+25.00	113.12
4798+50.00	112.83
4798+75.00	112.61
4799+00.00	112.35

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
25
OF 69

Date:8/17/2009

Filename: 025_Trail Plans 13.dgn

TYPICAL SECTION B

TYPICAL SECTION A

STA. 4804+00

TRAIL ℄

CONSTRUCTION ℄

4802+00 4803+00 4804+00 4805+00 4806+00 4807+00 4808+00

12'

10'

6.0' LT., •0.0

2.0' LT., •00

2.0' LT., •75.0

1.0' LT., •75.0

N36°32'30.8"E

4' X 6' DOUBLE BOX CULVERT INV. = UNK.

EXISTING GAS LINE

TYPICAL SECTION A

1.0' LT., •00.0

3.0' LT., •0.0

3.0 LT., •0.0

TRAIL ℄

3.0 LT., •50.0

4809+00 4810+00 4811+00 4812+00 N36°32'30.8"E 4813+00 4814+00 4815+00

CONSTRUCTION ℄

TYPICAL SECTION A

4.0' LT., •50.0

TRAIL ℄

2.7' LT., •00

2.9' LT, •00

2.0' LT., •0.0

8'

1.0' LT., •00

4816+00 4817+00 4818+00 4819+00 4820+00 4821+00 4822+00

N36°32'30.8"E

CONSTRUCTION ℄

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

Date:8/17/2009

Filename: 026_TrailPlans 14.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	SIGNATURE	P.E. NUMBER	DATE
		6452	

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAL	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

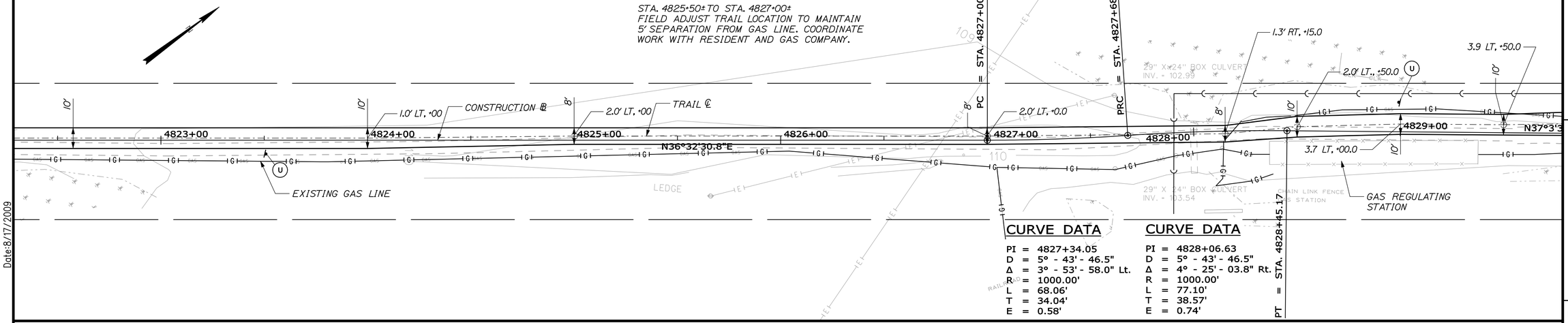
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
26
OF 69

TYPICAL SECTION A

STA. 4825+50± TO STA. 4827+00±
FIELD ADJUST TRAIL LOCATION TO MAINTAIN
5' SEPARATION FROM GAS LINE. COORDINATE
WORK WITH RESIDENT AND GAS COMPANY.



CURVE DATA

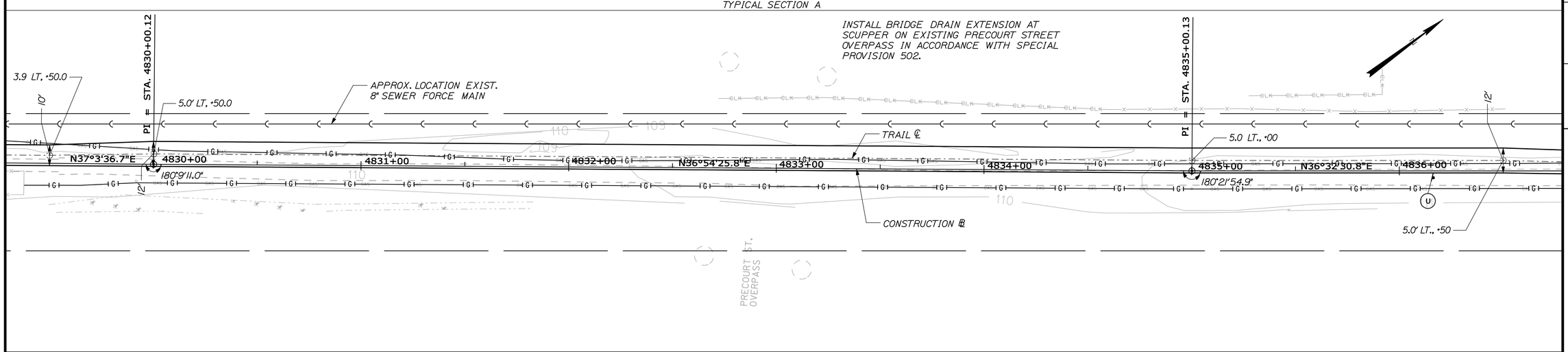
PI = 4827+34.05
D = 5° - 43' - 46.5"
Δ = 3° - 53' - 58.0" Lt.
R = 1000.00'
L = 68.06'
T = 34.04'
E = 0.58'

CURVE DATA

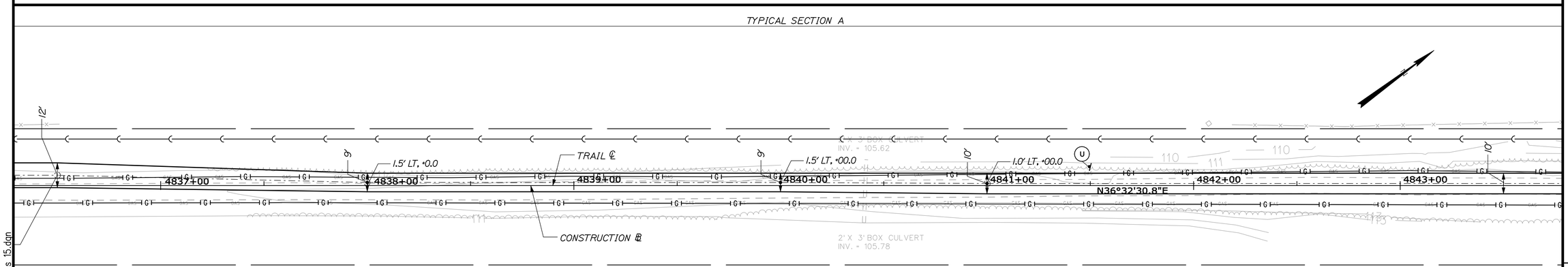
PI = 4828+06.63
D = 5° - 43' - 46.5"
Δ = 4° - 25' - 03.8" Rt.
R = 1000.00'
L = 77.10'
T = 38.57'
E = 0.74'

TYPICAL SECTION A

INSTALL BRIDGE DRAIN EXTENSION AT
SCUPPER ON EXISTING PRECOURT STREET
OVERPASS IN ACCORDANCE WITH SPECIAL
PROVISION 502.



TYPICAL SECTION A



NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

REVISED TRAIL DESIGN

25 0 25 50

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAL	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

SHEET NUMBER
27
OF 69

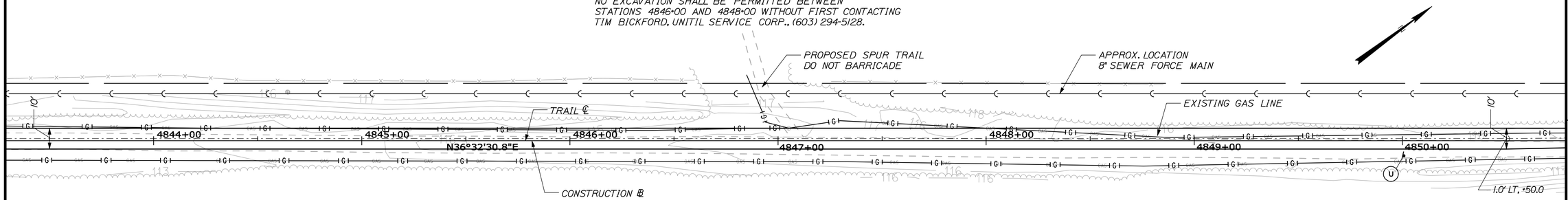
Date: 8/17/2009

Filename: 027_Trail Plans 15.dgn

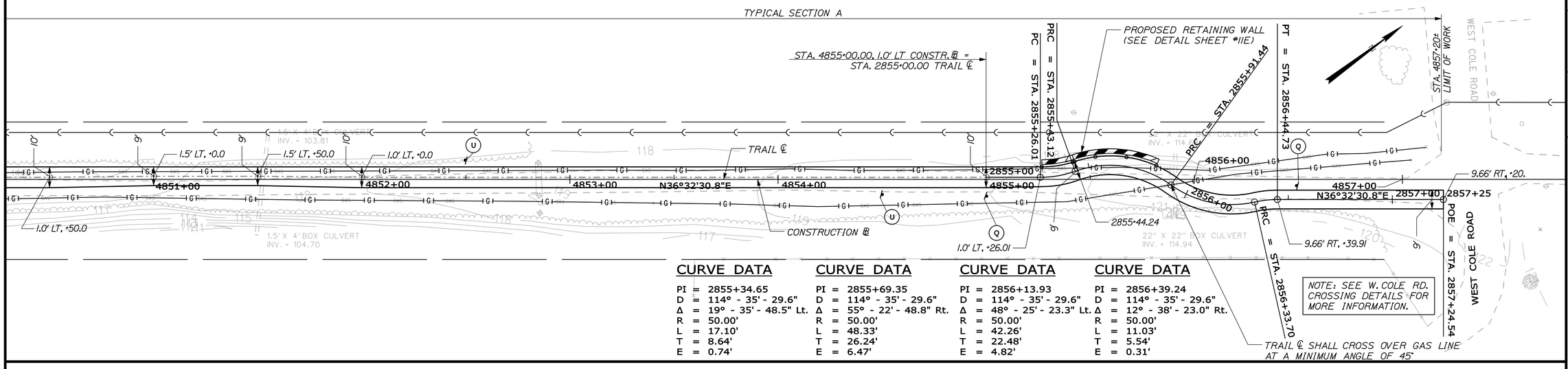
Date: 1/14/2010

TYPICAL SECTION A

NO EXCAVATION SHALL BE PERMITTED BETWEEN STATIONS 4846+00 AND 4848+00 WITHOUT FIRST CONTACTING TIM BICKFORD, UNITIL SERVICE CORP., (603) 294-5128.



TYPICAL SECTION A



NOTE: SEE W. COLE RD. CROSSING DETAILS FOR MORE INFORMATION.

CURVE DATA

PI = 2855+34.65
D = 114° - 35' - 29.6"
Δ = 19° - 35' - 48.5" Lt.
R = 50.00'
L = 17.10'
T = 8.64'
E = 0.74'

CURVE DATA

PI = 2855+69.35
D = 114° - 35' - 29.6"
Δ = 55° - 22' - 48.8" Rt.
R = 50.00'
L = 48.33'
T = 26.24'
E = 6.47'

CURVE DATA

PI = 2856+13.93
D = 114° - 35' - 29.6"
Δ = 48° - 25' - 23.3" Lt.
R = 50.00'
L = 42.26'
T = 22.48'
E = 4.82'

CURVE DATA

PI = 2856+39.24
D = 114° - 35' - 29.6"
Δ = 12° - 38' - 23.0" Rt.
R = 50.00'
L = 11.03'
T = 5.54'
E = 0.31'

NOTES:

1. TRAIL SHOULDERS NOT SHOWN FOR CLARITY.

3 REVISED RETAINING WALL NOTE ADDED CURVE DATA FOR TRAIL ℄

2 REVISED TRAIL GEOMETRY AT CROSSING OF GAS LINE AT STA. 4855+85

1 REVISED TRAIL DESIGN

25 0 25 50

Filename: 028_TrailPlans 16.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. TRAIL	08/09
REVISIONS 2	REV. TRAIL	08/27/09
REVISIONS 3	REV. TRAIL NOTES	01/10
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

6452
P.E. NUMBER

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TRAIL PLANS

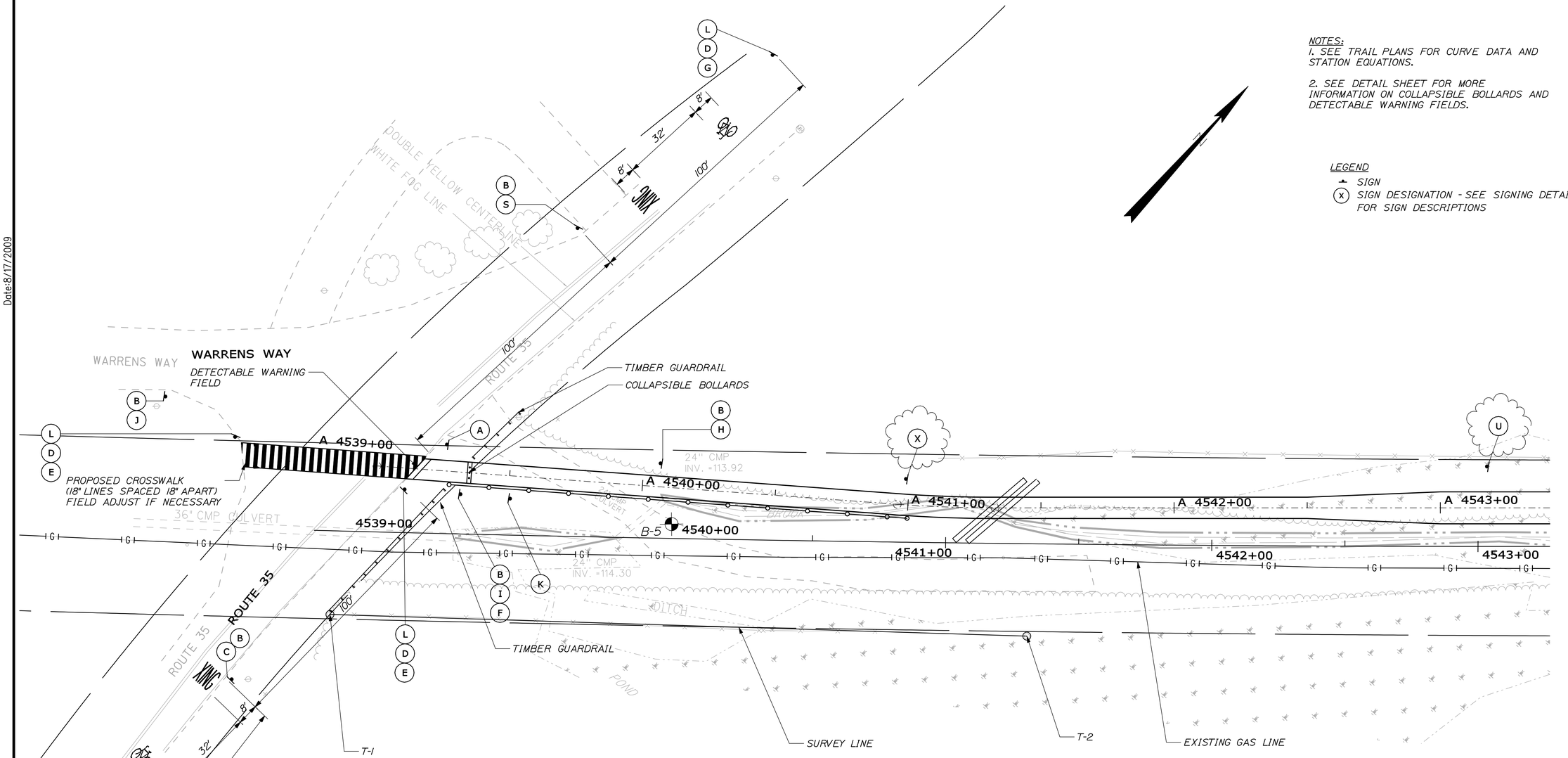
SHEET NUMBER
28
OF 69

Date:8/17/2009

NOTES:
1. SEE TRAIL PLANS FOR CURVE DATA AND STATION EQUATIONS.

2. SEE DETAIL SHEET FOR MORE INFORMATION ON COLLAPSIBLE BOLLARDS AND DETECTABLE WARNING FIELDS.

LEGEND
- SIGN
- (X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS



SURVEY ALIGNMENT DATA

NO.	STATION	OFFSET	BASELINE	NORTH COORD.	EAST COORD.	REMARKS
T-1	4538+69.524	31.430 RT.	CONSTRUCTION ℄	210971.9513	934,159.3934	PROPERTY PIN
T-2	4541+30.886	34.686 RT.	CONSTRUCTION ℄	211139.1316	934,360.9704	PROPERTY PIN

NOTE:
TRAIL SHOULDERS NOT SHOWN FOR CLARITY

20 0 20 40

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

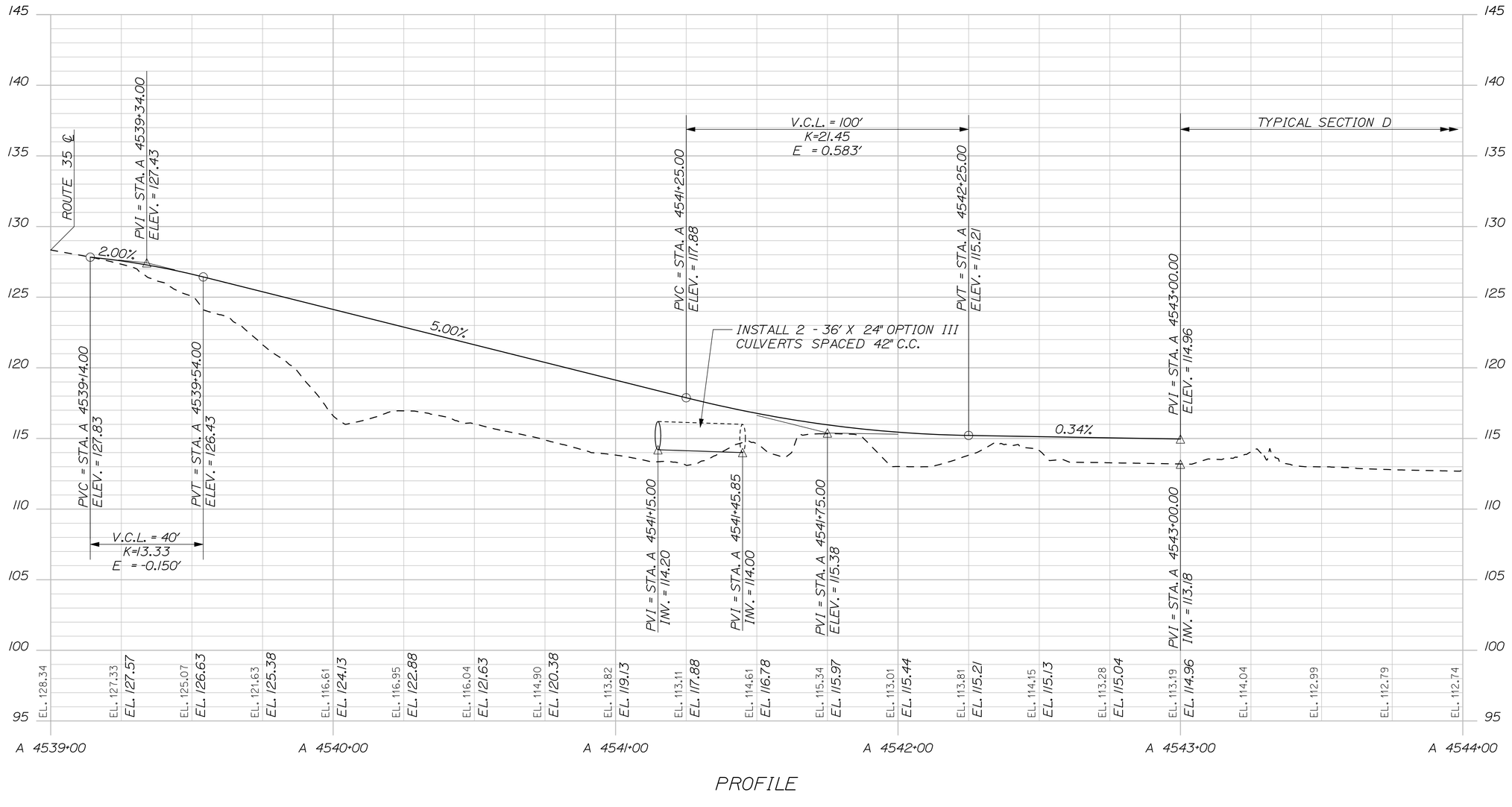
	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. SIGNING	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

ROUTE 35 CROSSING PLAN

SHEET NUMBER
29
OF 69

Filename: 029_Route 35 road crossing plan.dgn



PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

Date:8/17/2009

Filename: 030_Route 35 road crossing profile.dgn

HNTB

2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

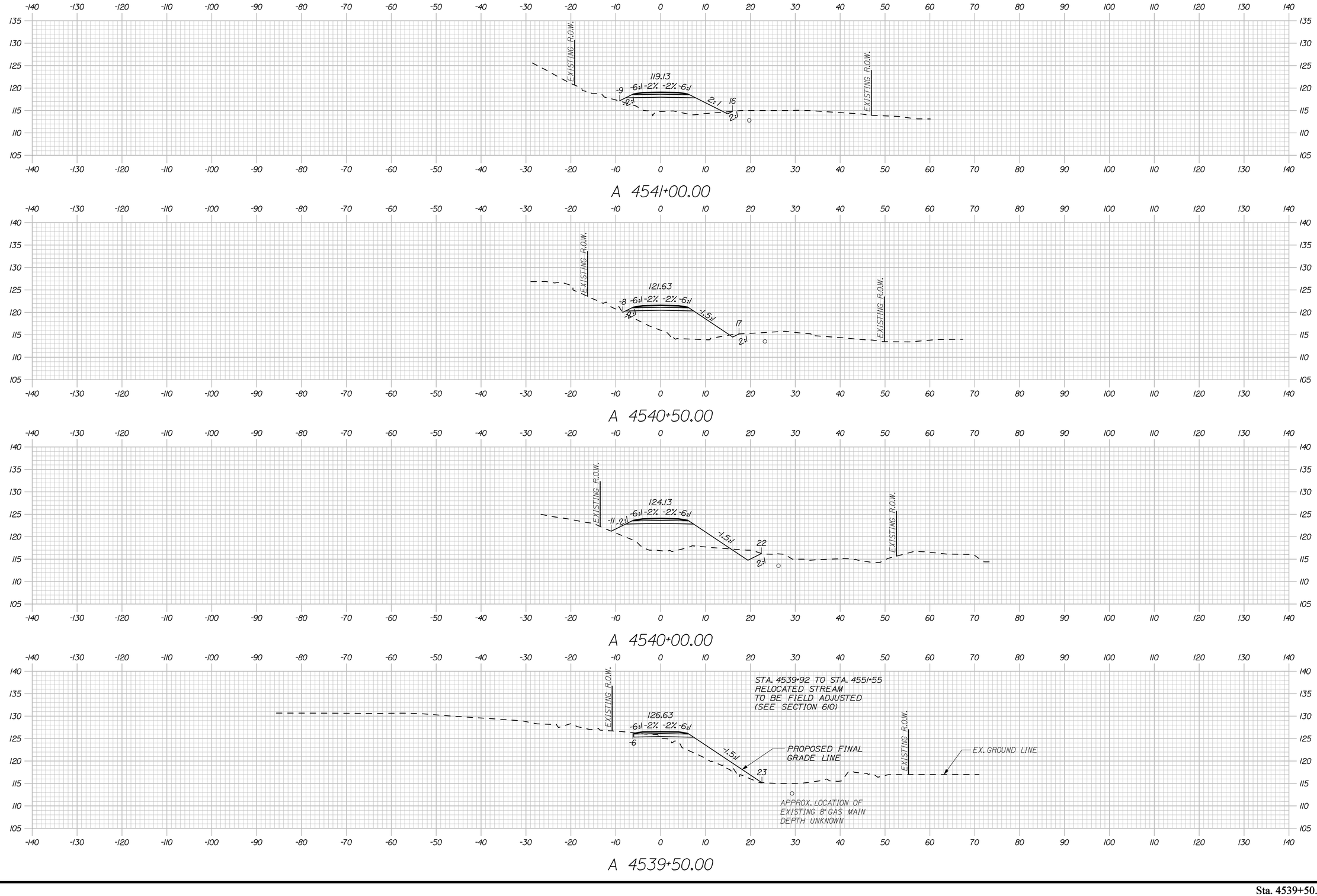
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

ROUTE 35 CROSSING PROFILE

SHEET NUMBER

30

OF 69



Filename: 031_Route 35-road crossing cross sections.dgn Username: mcundiff Date:8/17/2009

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

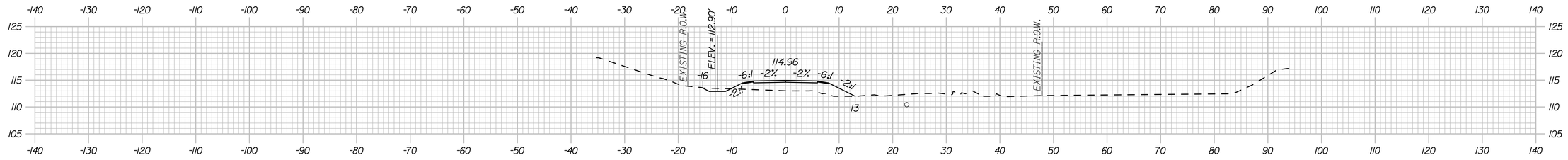
	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

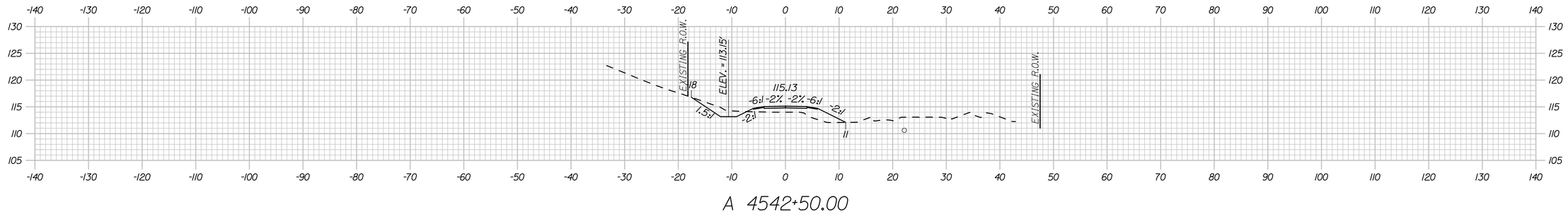
ROUTE 35 CROSSING CROSS SECTIONS

SHEET NUMBER
31
OF 69

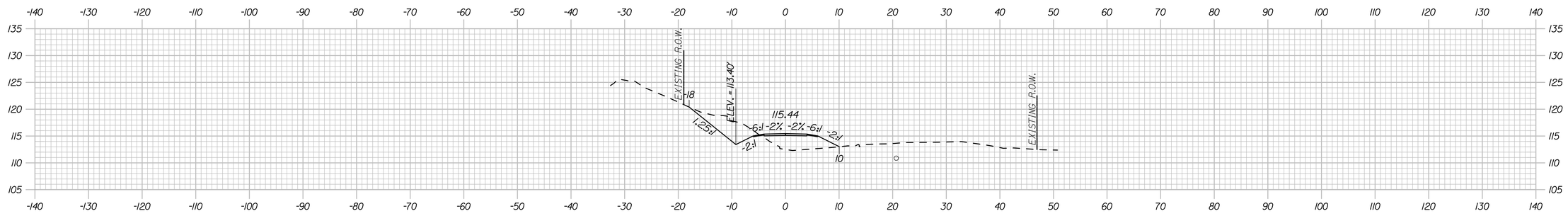
Sta. 4539+50.00 to Sta. 4540+50.00



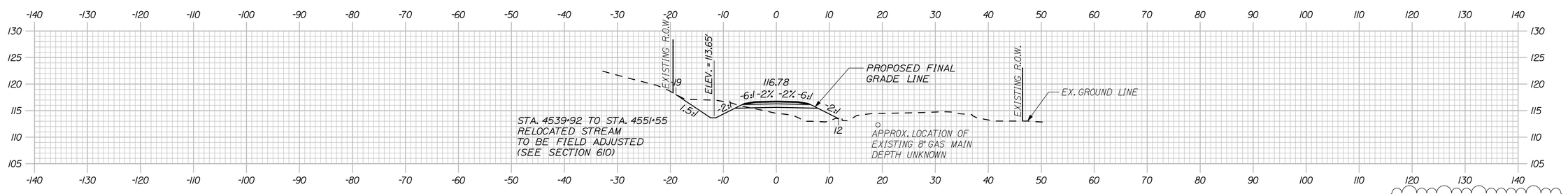
A 4543+00.00



A 4542+50.00



A 4542+00.00



A 4541+50.00

REVISED STREAM RELOCATION

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	DOE	06/09
REVISIONS 1	RELOC. STREAM	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

ROUTE 35 CROSSING CROSS SECTIONS

SHEET NUMBER
32
OF 69

Sta. 4541+50.00 to Sta. 4543+00.00

Filename: 032_Route 35-road crossing cross sections.dgn Username: mcundiff Date:8/17/2009

LEGEND

SIGN

(X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS

SURCHARGE LIMITS

PROPOSED RIGHT OF WAY LINE

B-I

5005+00

5004+00

N22°18'25.5"E

RELOCATE GUIDE SIGN (SEE NOTE)

5003+00

APPROXIMATE RIGHT OF WAY LINE

5002+00

5006+00

N67°41'34.5"E

EXISTING GAS LINE

1252+

FUTURE MAINE TURNPIKE BRIDGE (BY OTHERS)

1251+00

5007+00

380.623'

N22°18'25.5"E

MAINE TURNPIKE SOUTHBOUND

1250+00

1249+00

MAINE TURNPIKE NORTHBOUND

5008+00

APPROXIMATE RIGHT OF WAY LINE

RIP RAP

TREES

DITCH

BROOK

20 0 20 40

NOTES:

1. THE EXISTING TURNPIKE GUIDE SIGN AT STA. 1251+40 LEFT SHALL BE RELOCATED TO APPROXIMATELY STA. 1251+70 LEFT AT THE SAME OFFSET. EXACT LOCATION SHALL BE DETERMINED IN THE FIELD BY A MAINE TURNPIKE AUTHORITY REPRESENTATIVE. PAYMENT FOR DEMOUNTING SIGN AND POSTS AND REMOVING FOUNDATIONS SHALL BE PAID FOR UNDER ITEM 645.103. PAYMENT FOR INSTALLATION OF SIGN, FOUNDATIONS, AND ALL NECESSARY COMPONENTS SHALL BE PAID FOR UNDER ITEM 645.113. INSTALLATION INCLUDING HEIGHT AND OFFSET REQUIREMENTS SHALL BE IN ACCORDANCE WITH THE STANDARD DETAILS AND SPECIFICATIONS. SIGN SUPPORTS SHALL INCLUDE BREAKWAY DEVICES. MODIFICATION TO OR REPLACEMENT OF THE POSTS MAY BE NECESSARY. NEW FOUNDATIONS MAY BE NECESSARY. CONTRACTOR SHALL SUBMIT A CROSS SECTION OF THE EXISTING GROUND AND ROADWAY WITH PROPOSED SIGN OFFSET AND HEIGHT INFORMATION FOR TURNPIKE REVIEW AND APPROVAL PRIOR TO THE COMMENCEMENT OF THE WORK. RELOCATED SIGN SHALL BE REMOVED FROM SERVICE FOR NO MORE THAN 2 DAYS.

2. THE FOLLOWING WORK AT THE MAINE TURNPIKE CROSSING IS NOT INCLUDED IN THIS CONTRACT: FINAL LOAM AND SEEDING WITHIN THE MAINE TURNPIKE RIGHT-OF-WAY, PAVING (THIS CONTRACT DOES INCLUDE PLACEMENT OF TRAIL SUBBASE MATERIAL), INSTALLATION OF CHAIN LINK FENCE AND GATES, AND CONSTRUCTION OF THE MAINE TURNPIKE BRIDGE.

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING PLAN I

SHEET NUMBER

33

OF 69

Date: 8/17/2009

Filename: 033_Turnpike bridge approach plan 1.dgn

Date:8/17/2009

B-1

MAINE TURNPIKE

1253+00

APPROXIMATE RIGHT OF WAY LINE

1252+00

EXISTING GAS LINE

1251+00

APPROXIMATE RIGHT OF WAY LINE

5007+00

B-2

5008+00

5009+00

5010+00

N13°29'6.6"E

5011+00

5012+00

N25°58'22.4"E

5013+00

4571+00

REMOVED SIGN

DENSE TREES

DITCH

EXTEND 4' PVC COATED CHAIN LINK FENCE 10' BEYOND PROPERY LINE

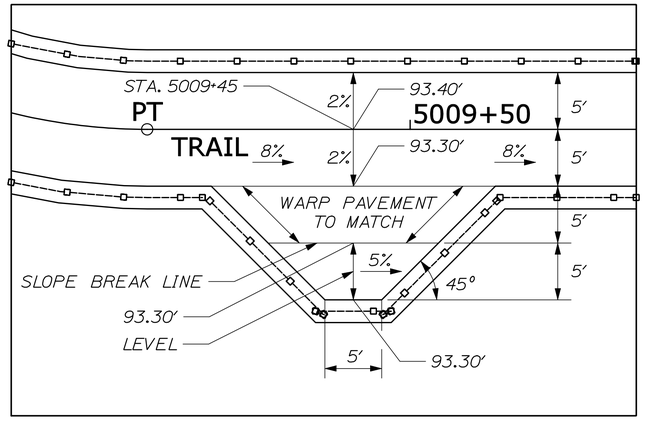
REST AREA (SEE DETAIL)

PROPOSED RIGHT OF WAY LINE

SURCHARGE LIMITS

NOTE:
TRAIL SHOULDERS NOT SHOWN FOR CLARITY

LEGEND
- SIGN
- (X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS



REST AREA DETAIL
N.T.S.

20 0 20 40

Filename: 034_Turnpike bridge approach plan 2.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5555

SIGNATURE
P.E. NUMBER 6452
DATE

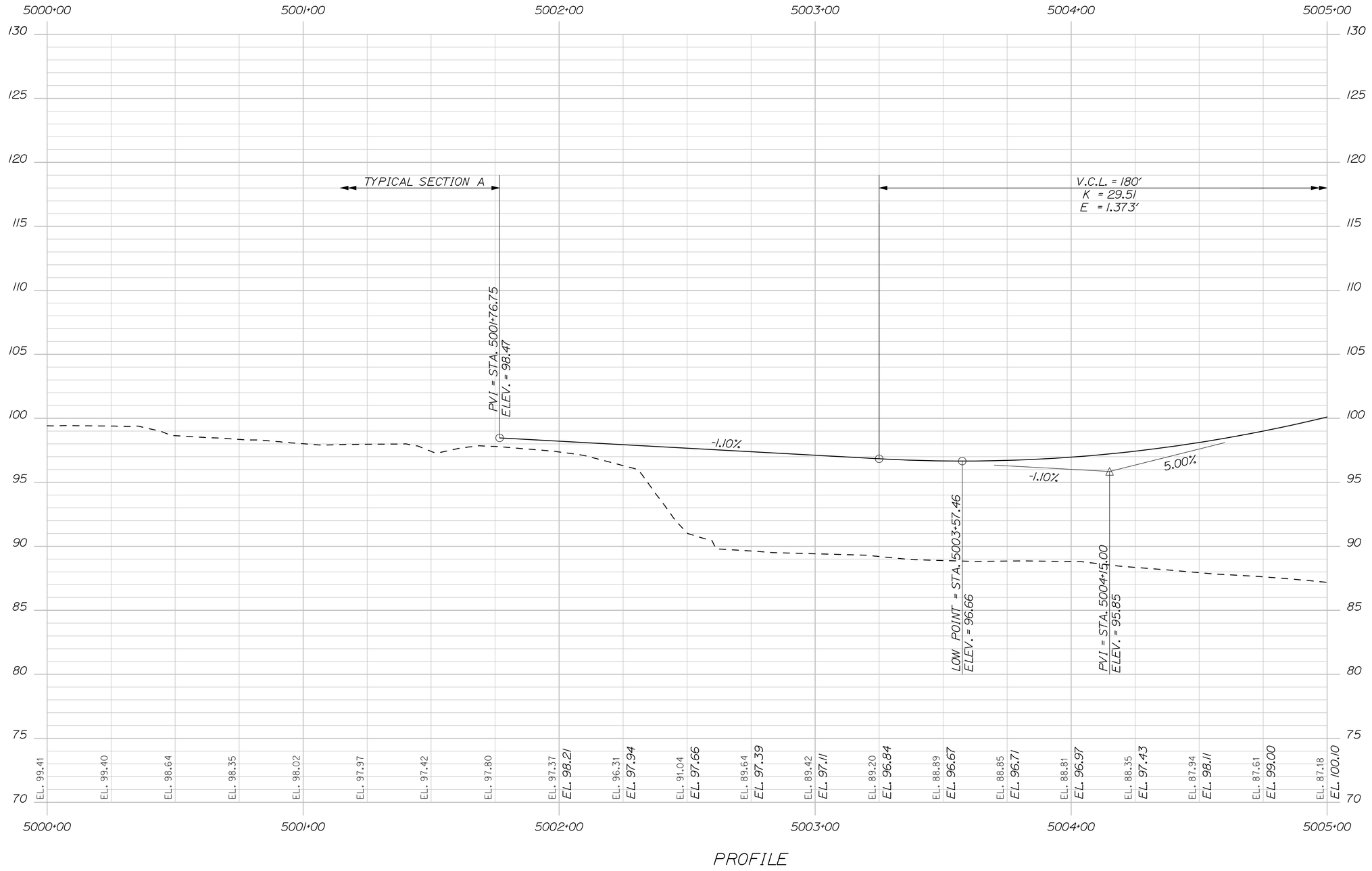
	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	TRAIL LAYOUT	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING PLAN II

SHEET NUMBER
34
OF 69

Date:8/17/2009



PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

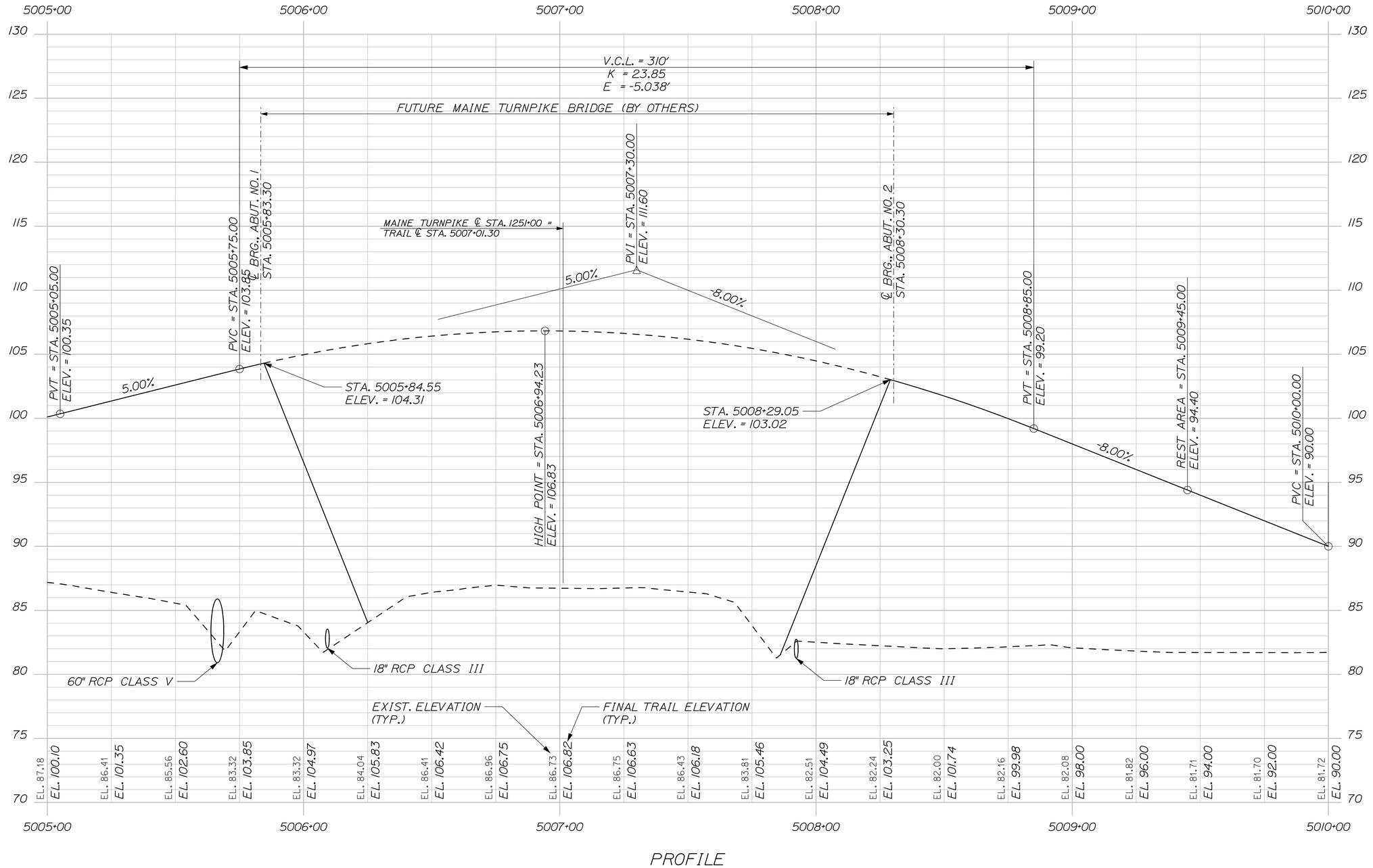
TURNPIKE CROSSING PROFILE I

SHEET NUMBER

35

OF 69

Filename: 035_Turnpike bridge approach profile 1.dgn



PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

Date:8/17/2009

Filename: 036_Turnpike bridge approach profile 2.dgn

HNTB

2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

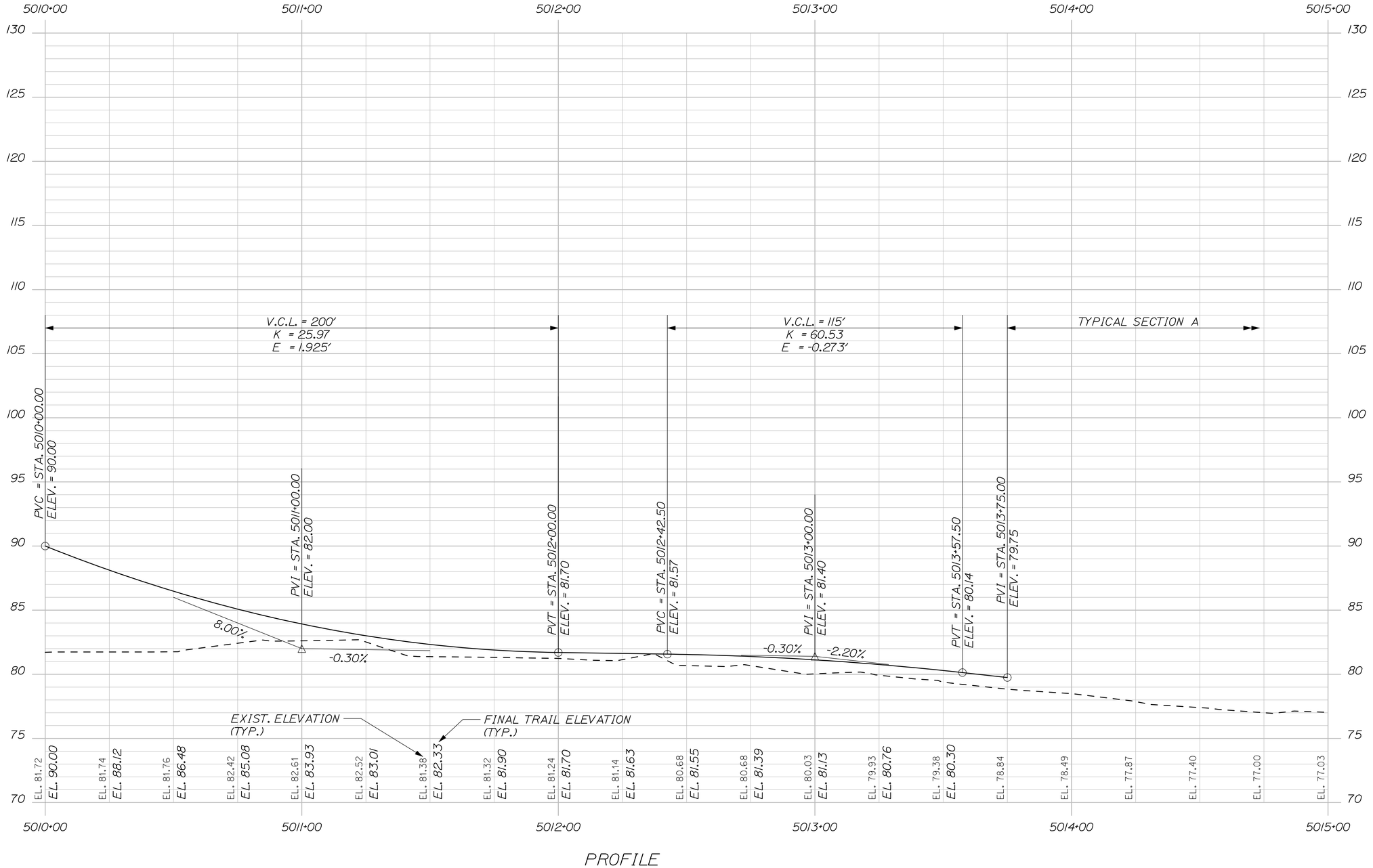
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING PROFILE II

SHEET NUMBER

36

OF 69



PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

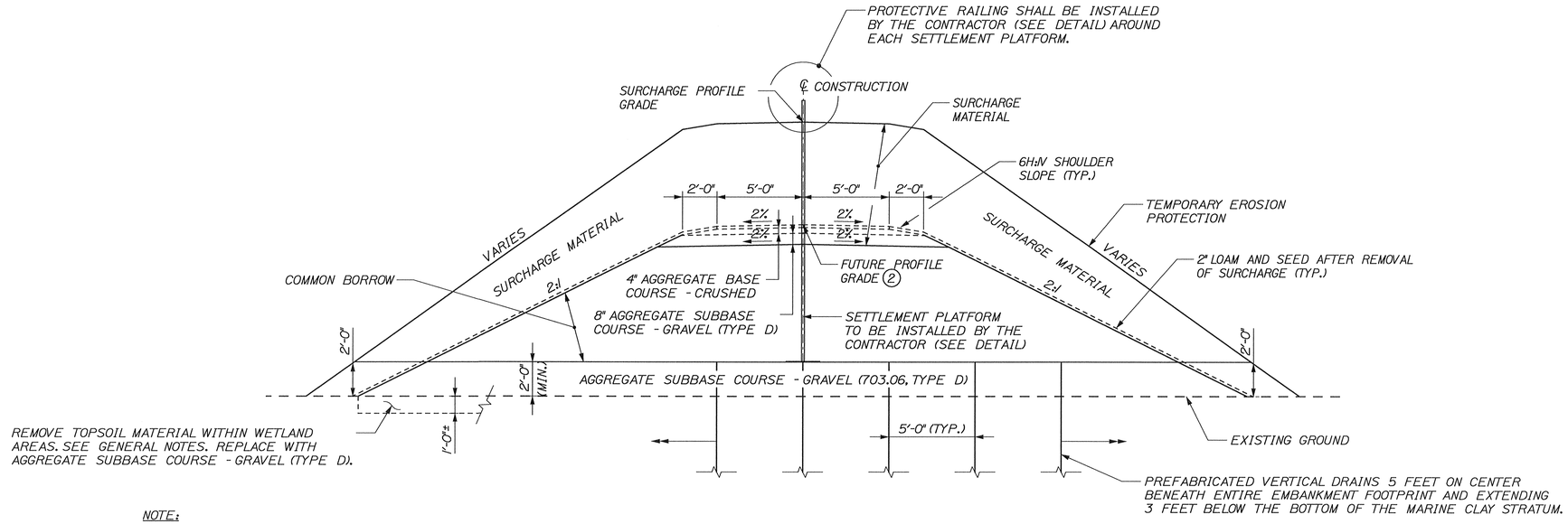
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING PROFILE III

SHEET NUMBER
37
OF 69

Date:8/17/2009

Filename: 037_Turnpike bridge approach profile 3.dgn



NOTE:
PREFABRICATED VERTICAL DRAINS SHALL BE INSTALLED IN ACCORDANCE WITH SPECIAL PROVISION SECTION 209.

PRELOAD TYPICAL APPROACH EMBANKMENT (EMBANKMENTS #1 & #2)

N.T.S.

Date:5/19/2009

Filename: 038_preload typical section.dgn

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Westbrook, Maine 04092-1339
Tel (207) 856-0277

STATE OF MAINE * KENNETH L. RECKER No. 5435 * LICENSED PROFESSIONAL ENGINEER

SIGNATURE

P.E. NUMBER 5435

DATE 5/19/09

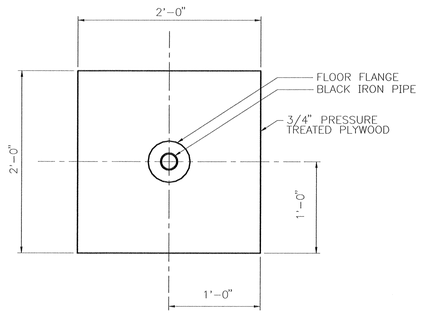
	BY	DATE
DESIGNED	KLR	06/09
DRAWN	TRC	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

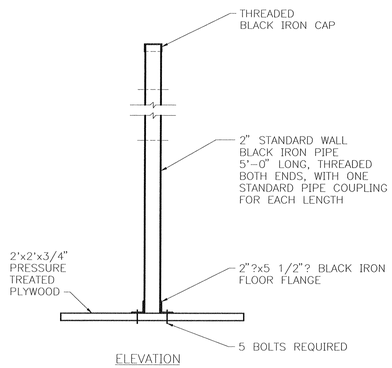
PRELOAD TYPICAL SECTION

SHEET NUMBER
38
OF 69

Date:5/19/2009



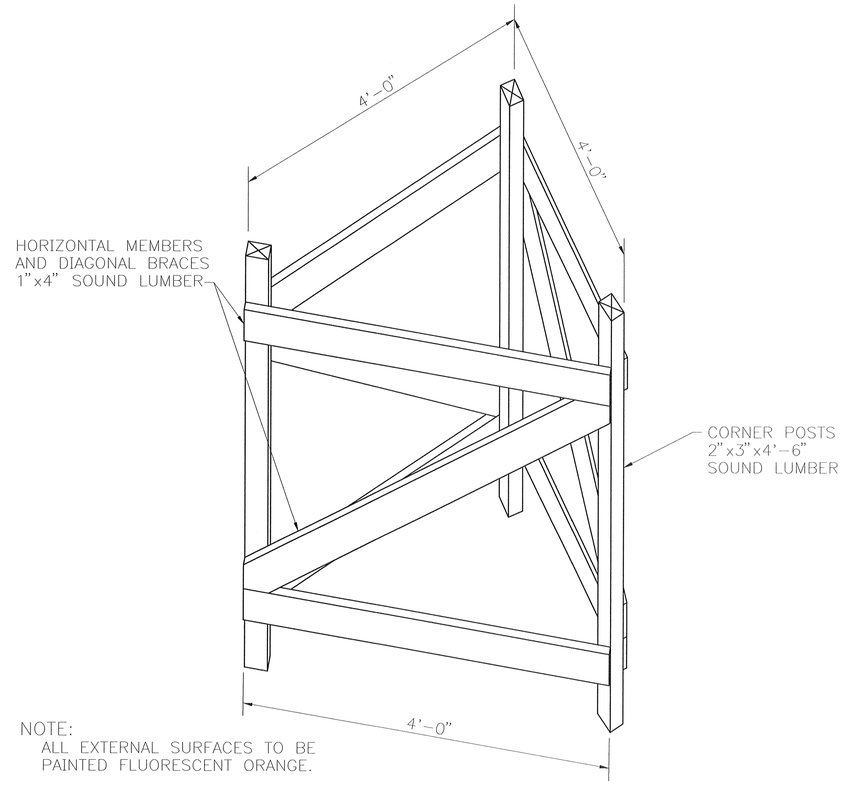
PLAN



ELEVATION

SETTLEMENT PLATFORM DETAIL

1 1/2"=1'-0"



NOTE:
ALL EXTERNAL SURFACES TO BE PAINTED FLUORESCENT ORANGE.

PROTECTIVE RAILING DETAIL
FOR SETTLEMENT PLATFORMS
NOT TO SCALE

NOTE:

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING SETTLEMENT PLATFORMS IN ACCORDANCE WITH THE SPECIAL PROVISION SECTIONS 646, SETTLEMENT PLATFORMS (GEOTECHNICAL).

039_SETTLEMENT PLATFORM.dgn

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Tel (207) 856-0277

STATE OF MAINE
KENNETH L RECKER
No. 5435
REGISTERED PROFESSIONAL ENGINEER

	BY	DATE
DESIGNED	KLR	06/09
DRAWN	AZ	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

Kenneth L Recker
SIGNATURE

5435
P.E. NUMBER

5/19/09
DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

SETTLEMENT PLATFORM DETAILS

SHEET NUMBER
39
OF 69

KEY:

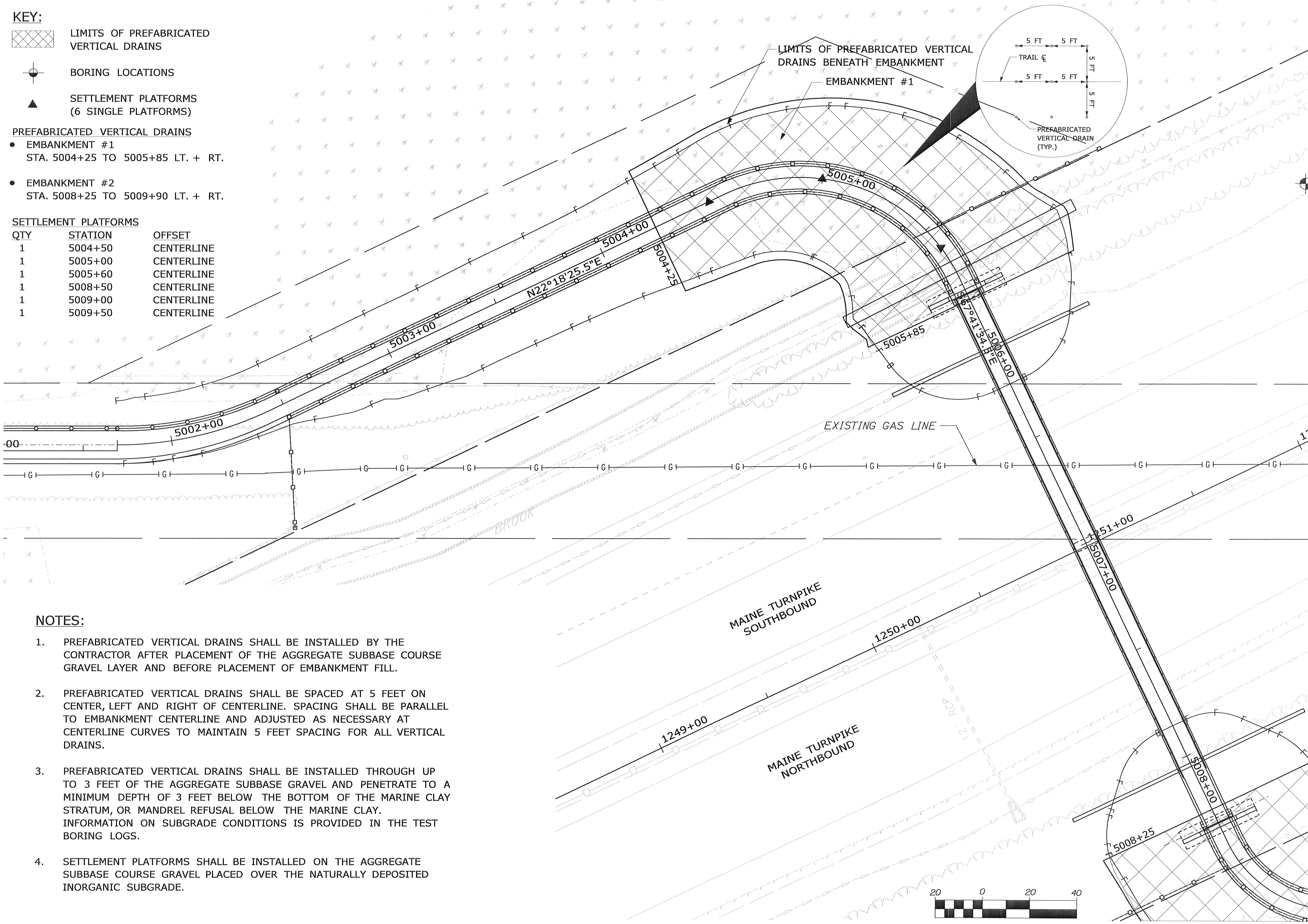
- (crosshatch) LIMITS OF PREFABRICATED VERTICAL DRAINS
- (boring symbol) BORING LOCATIONS
- ▲ SETTLEMENT PLATFORMS (6 SINGLE PLATFORMS)

PREFABRICATED VERTICAL DRAINS

- EMBANKMENT #1
  STA. 5004+25 TO 5005+85 LT. + RT.
- EMBANKMENT #2
  STA. 5008+25 TO 5009+90 LT. + RT.

SETTLEMENT PLATFORMS

QTY	STATION	OFFSET
1	5004+50	CENTERLINE
1	5005+00	CENTERLINE
1	5005+60	CENTERLINE
1	5008+50	CENTERLINE
1	5009+00	CENTERLINE
1	5009+50	CENTERLINE



NOTES:

1. PREFABRICATED VERTICAL DRAINS SHALL BE INSTALLED BY THE CONTRACTOR AFTER PLACEMENT OF THE AGGREGATE SUBBASE COURSE GRAVEL LAYER AND BEFORE PLACEMENT OF EMBANKMENT FILL.

2. PREFABRICATED VERTICAL DRAINS SHALL BE SPACED AT 5 FEET ON CENTER, LEFT AND RIGHT OF CENTERLINE. SPACING SHALL BE PARALLEL TO EMBANKMENT CENTERLINE AND ADJUSTED AS NECESSARY AT CENTERLINE CURVES TO MAINTAIN 5 FEET SPACING FOR ALL VERTICAL DRAINS.

3. PREFABRICATED VERTICAL DRAINS SHALL BE INSTALLED THROUGH UP TO 3 FEET OF THE AGGREGATE SUBBASE GRAVEL AND PENETRATE TO A MINIMUM DEPTH OF 3 FEET BELOW THE BOTTOM OF THE MARINE CLAY STRATUM, OR MANDREL REFUSAL BELOW THE MARINE CLAY. INFORMATION ON SUBGRADE CONDITIONS IS PROVIDED IN THE TEST BORING LOGS.

4. SETTLEMENT PLATFORMS SHALL BE INSTALLED ON THE AGGREGATE SUBBASE COURSE GRAVEL PLACED OVER THE NATURALLY DEPOSITED INORGANIC SUBGRADE.

Date:5/19/2009

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STATE OF MAINE * KENNETH L. RECKER No. 5435 LICENSED PROFESSIONAL ENGINEER

SIGNATURE

P.E. NUMBER 5435

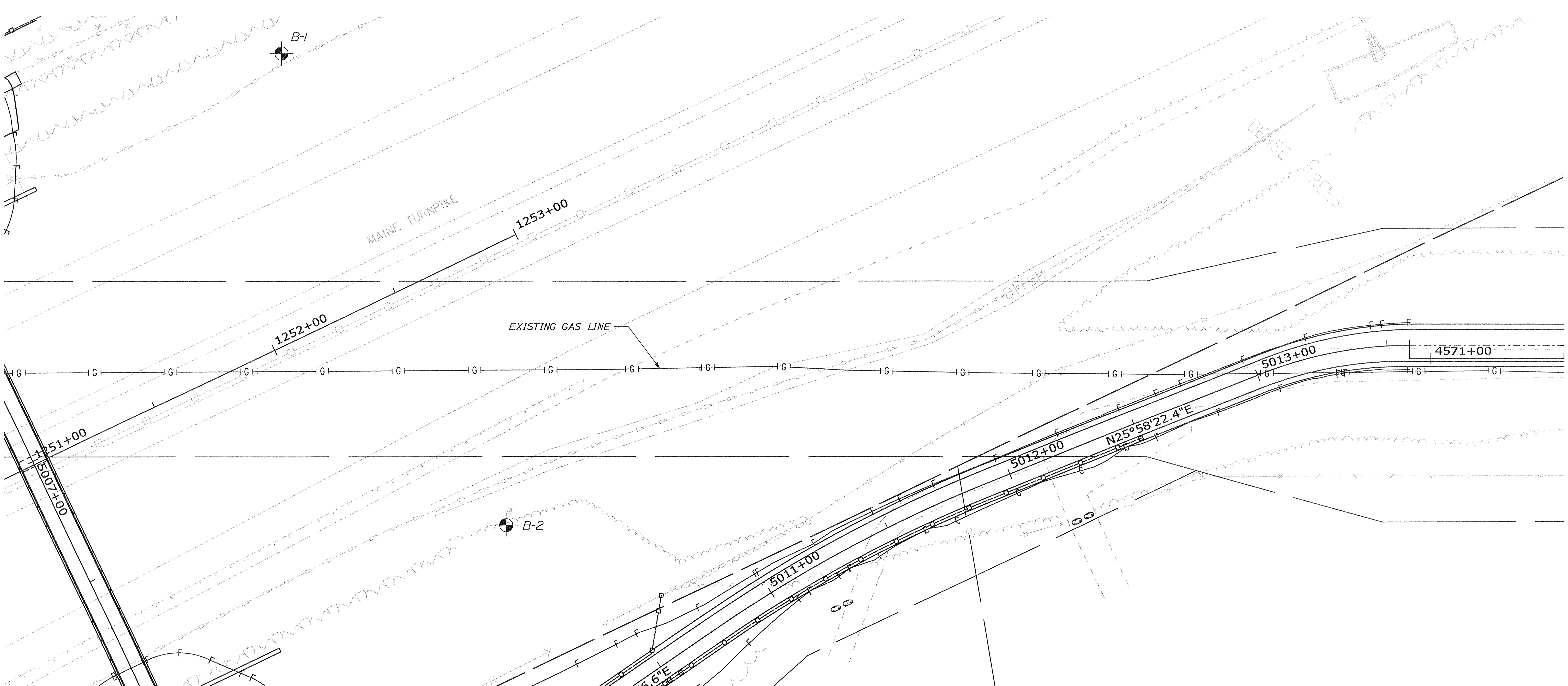
DATE 5/19/09

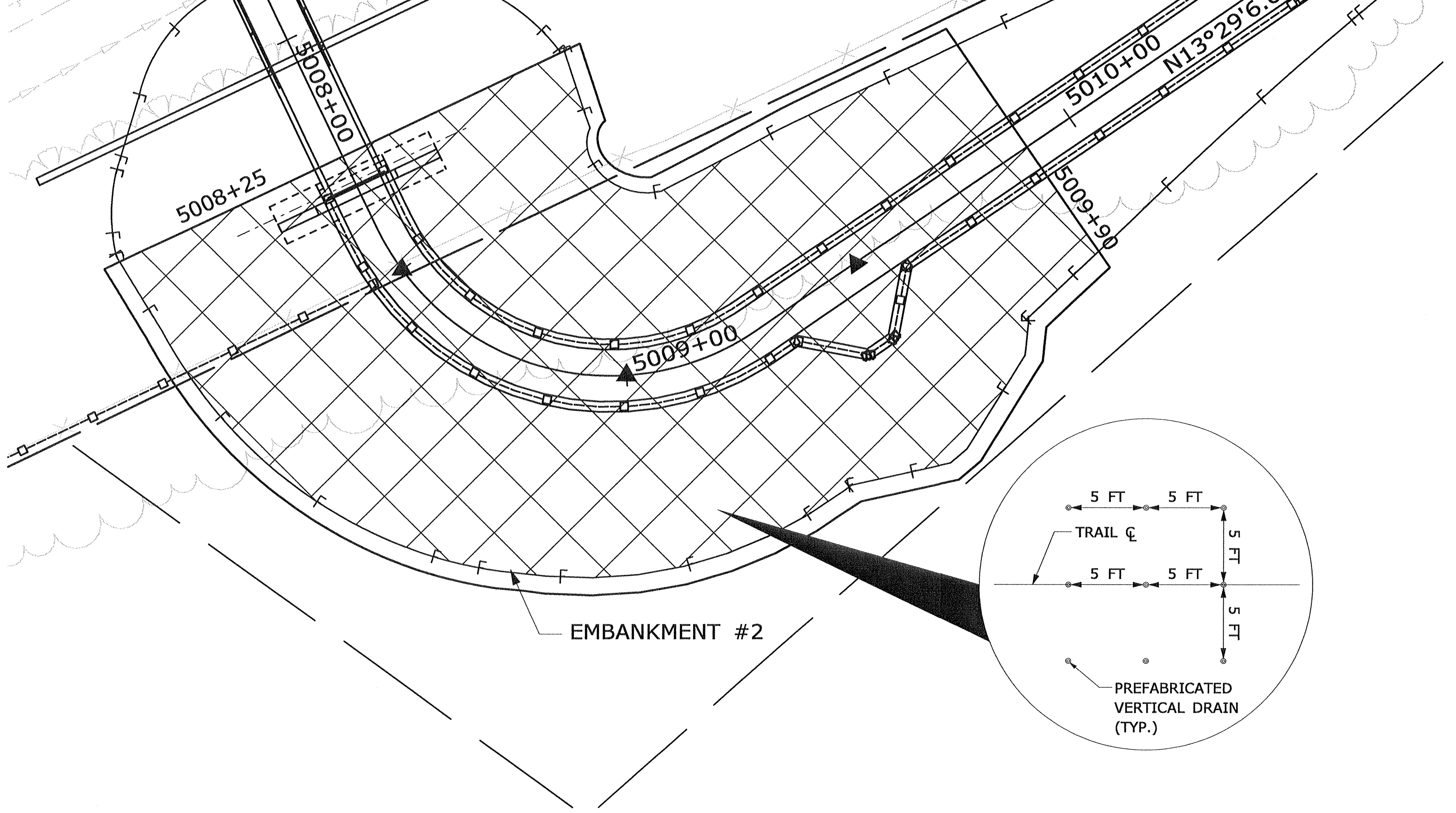
	BY	DATE
DESIGNED	KLR	06/09
DRAWN	AZ	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

SURCHARGE PLAN - EMBANKMENT 1

Date:5/19/2009





NOTES:

1. PREFABRICATED VERTICAL DRAINS SHALL BE INSTALLED BY THE CONTRACTOR AFTER PLACEMENT OF THE AGGREGATE SUBBASE COURSE GRAVEL LAYER AND BEFORE PLACEMENT OF EMBANKMENT FILL.

2. PREFABRICATED VERTICAL DRAINS SHALL BE SPACED AT 5 FEET ON CENTER, LEFT AND RIGHT OF CENTERLINE. SPACING SHALL BE PARALLEL TO EMBANKMENT CENTERLINE AND ADJUSTED AS NECESSARY AT CENTERLINE CURVES TO MAINTAIN 5 FEET SPACING FOR ALL VERTICAL DRAINS.

3. PREFABRICATED VERTICAL DRAINS SHALL BE INSTALLED THROUGH UP TO 3 FEET OF THE AGGREGATE SUBBASE GRAVEL AND PENETRATE TO A MINIMUM DEPTH OF 3 FEET BELOW THE BOTTOM OF THE MARINE CLAY STRATUM, OR MANDREL REFUSAL BELOW THE MARINE CLAY. INFORMATION ON SUBGRADE CONDITIONS IS PROVIDED IN THE TEST BORING LOGS.

4. SETTLEMENT PLATFORMS SHALL BE INSTALLED ON THE AGGREGATE SUBBASE COURSE GRAVEL PLACED OVER THE NATURALLY DEPOSITED INORGANIC SUBGRADE.

KEY:

- LIMITS OF PREFABRICATED VERTICAL DRAINS
- BORING LOCATIONS
- ▲ SETTLEMENT PLATFORMS (6 SINGLE PLATFORMS)

PREFABRICATED VERTICAL DRAINS

- EMBANKMENT #1
  STA. 5004+25 TO 5005+85 LT. + RT.
- EMBANKMENT #2
  STA. 5008+25 TO 5009+90 LT. + RT.

SETTLEMENT PLATFORMS

QTY	STATION	OFFSET
1	5004+50	CENTERLINE
1	5005+00	CENTERLINE
1	5005+60	CENTERLINE
1	5008+50	CENTERLINE
1	5009+00	CENTERLINE
1	5009+50	CENTERLINE

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Westbrook, Me 04098-1339
Tel (207) 856-0277

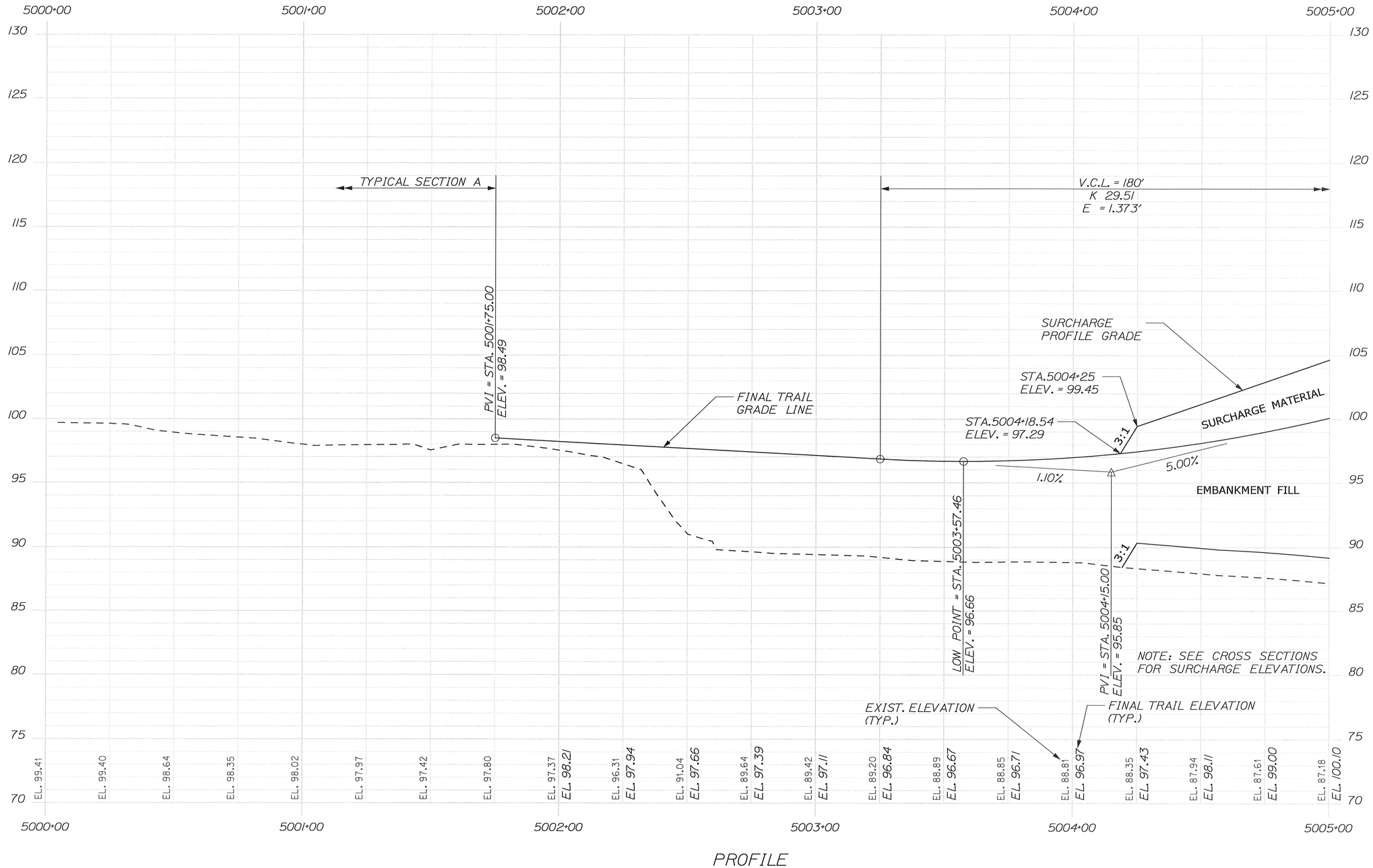
STATE OF MAINE
KENNETH L. RECKER
No. 5435
LICENSED PROFESSIONAL ENGINEER

SIGNATURE
P.E. NUMBER 5435
DATE 5/19/09

	BY	DATE
DESIGNED	KLR	06/09
DRAWN	AZ	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

SURCHARGE PLAN - EMBANKMENT 2



PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

Date:5/19/2009

Filename: 042_TP-x-sing-PRELOAD_profile1-3-20_scale.dgn

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Westbrook, Maine 04092-1339
Tel (207) 856-0277

STATE OF MAINE * KENNETH RECKER No. 5435 * REGISTERED PROFESSIONAL ENGINEER

P.E. NUMBER 5435

SIGNATURE

5/19/09

DATE

	BY	DATE
DESIGNED	KLR	06/09
DRAWN	AZ	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

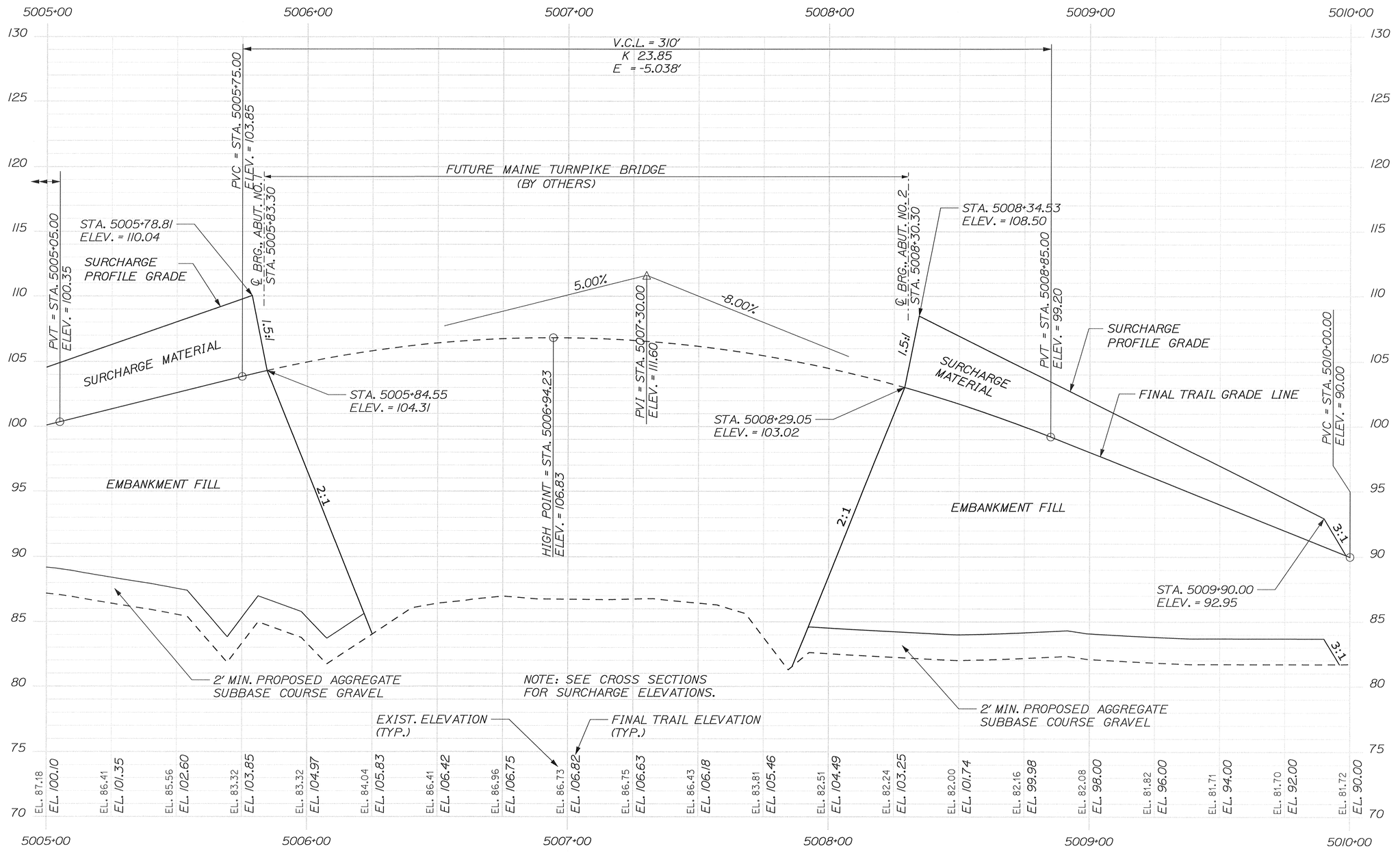
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

SURCHARGE PROFILE

SHEET NUMBER

42

OF 69



PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

Date:5/19/2009

Filename: 043_TP-x-sing-PRELOAD profile1-3-20 scale.dgn

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Westbrook, Maine 04092-1339
tel (207) 856-0277

STATE OF MAINE
KENNETH L. RECKER
No. 5435
LICENSED PROFESSIONAL ENGINEER

	BY	DATE
DESIGNED	KLR	06/09
DRAWN	AZ	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

5435
P.E. NUMBER

5/19/09
DATE

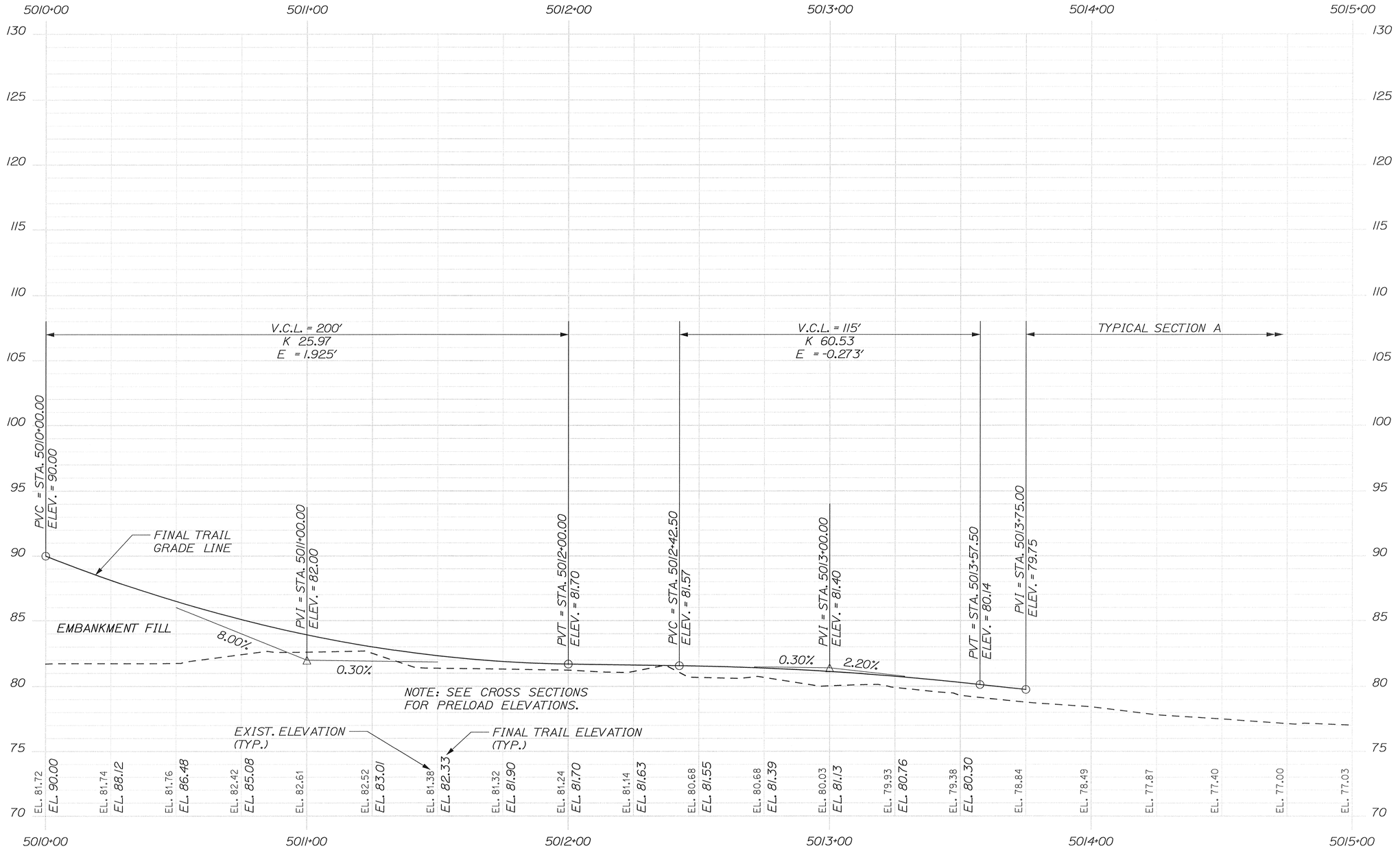
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

SURCHARGE PROFILE

SHEET NUMBER

43

OF 69



PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

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tel (207) 856-0277

STATE OF MAINE * KENNETH L. RECKER No. 5435 * REGISTERED PROFESSIONAL ENGINEER

5435
P.E. NUMBER

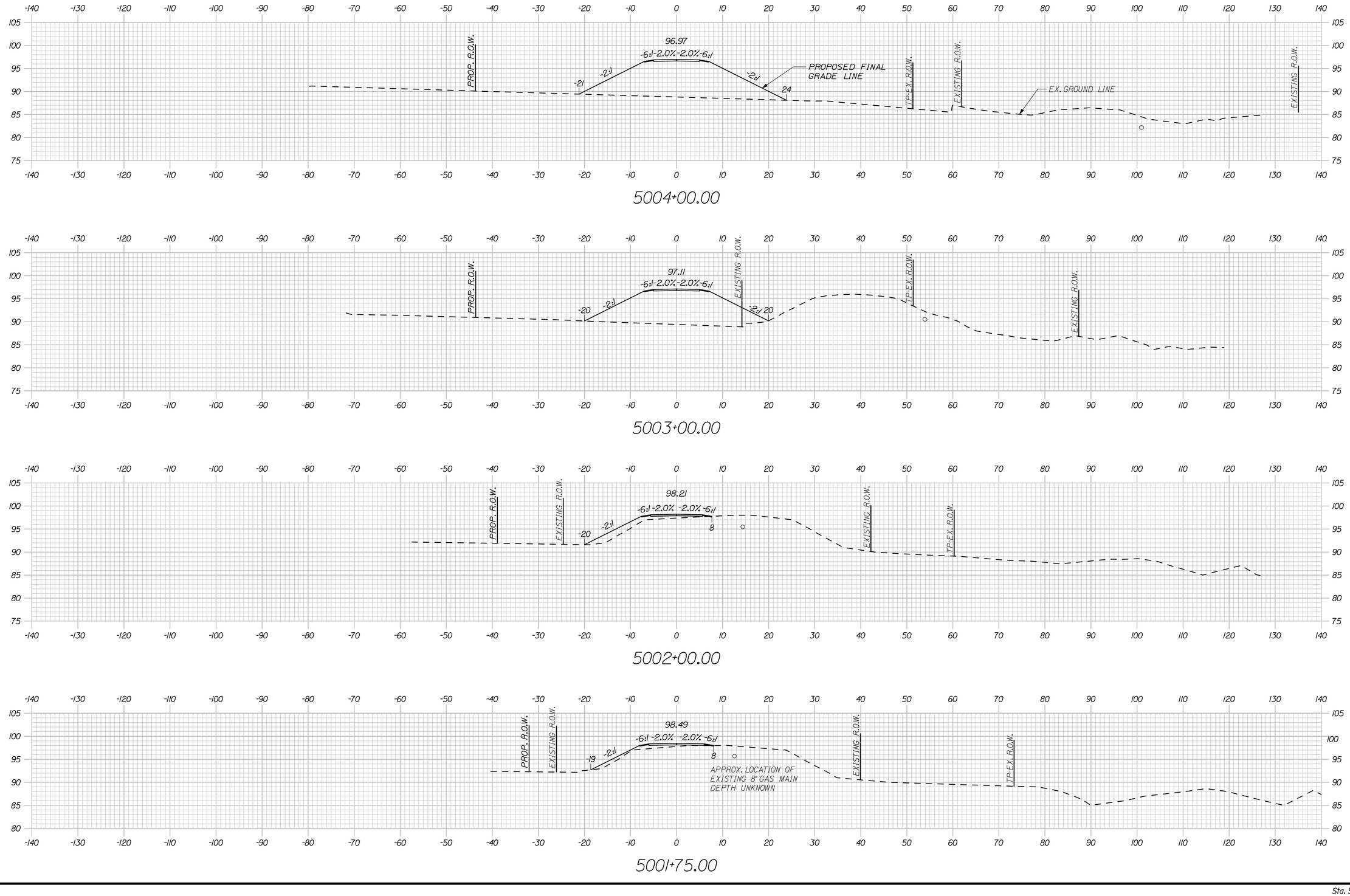
5/19/09
DATE

	BY	DATE
DESIGNED	KLR	06/09
DRAWN	AZ	06/09
CHECKED	KLR	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

SURCHARGE PROFILE

SHEET NUMBER
44
OF 69



Filename: 045_Turnpike bridge approach cross sections.dgn Username: mcundiff Date:8/17/2009

Sta. 5001+76.75 to Sta. 5004+00.00

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

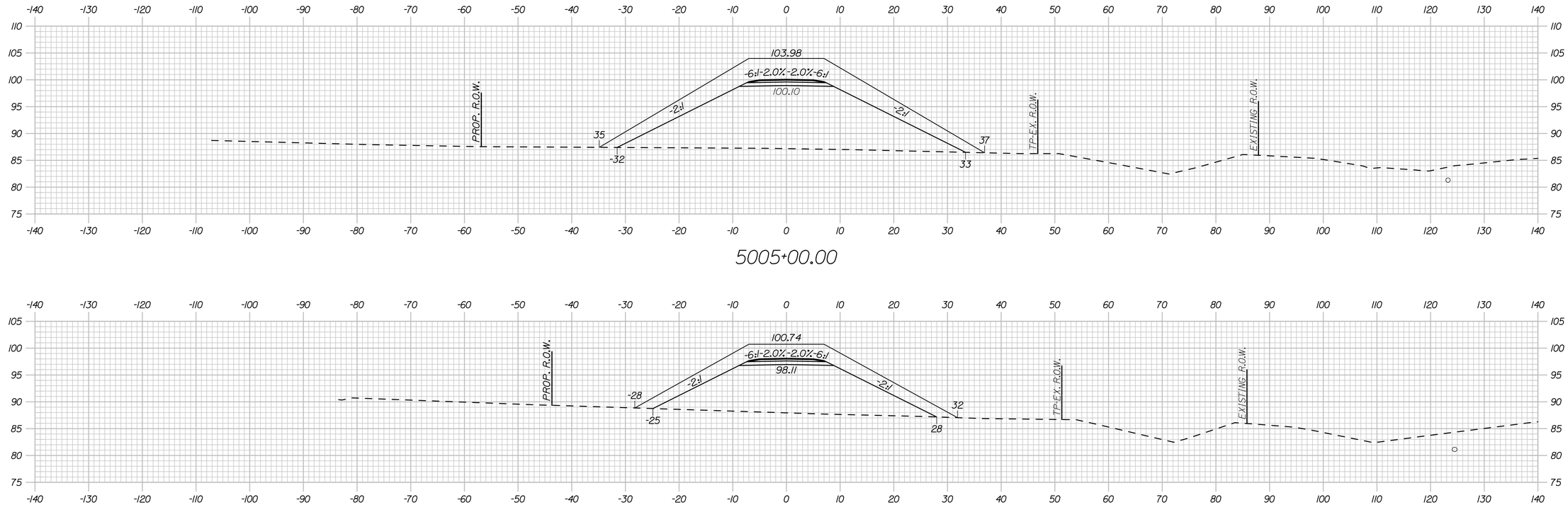
P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING CROSS SECTIONS

SHEET NUMBER
45
OF 69



5005+00.00

5004+50.00

5004+25.00

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

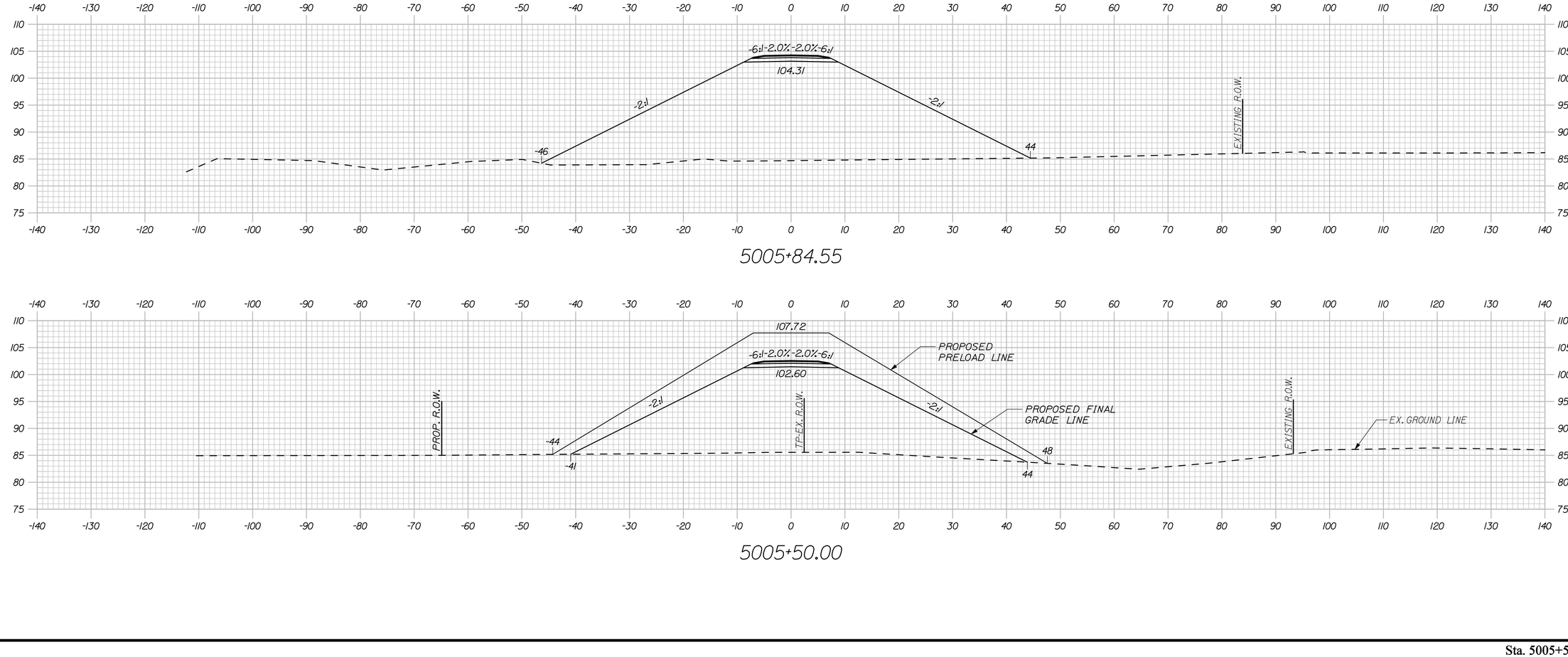
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING CROSS SECTIONS

SHEET NUMBER
46
OF 69

Sta. 5004+25.00 to Sta. 5005+00.00

Filename: 046_Turnpike bridge approach cross sections.dgn Username: mcundiff Date:8/17/2009



5005+84.55

5005+50.00

Sta. 5005+50.00 to Sta. 5005+85.00

Filename: 047_Turnpike bridge approach cross sections.dgn Username: mcundiff Date:8/17/2009

HNTB

2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

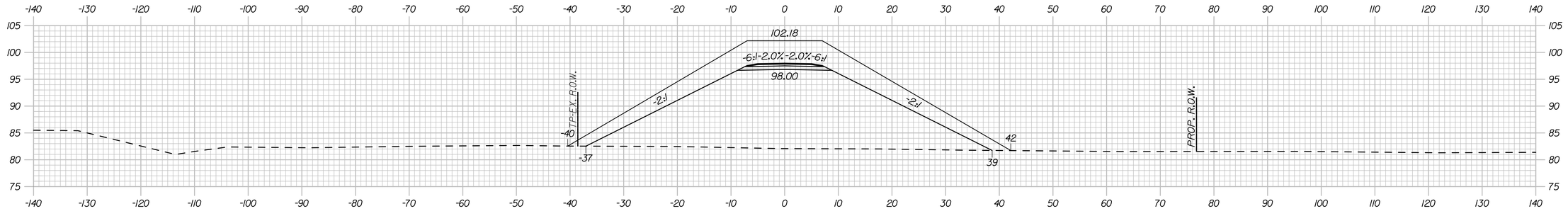
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING CROSS SECTIONS

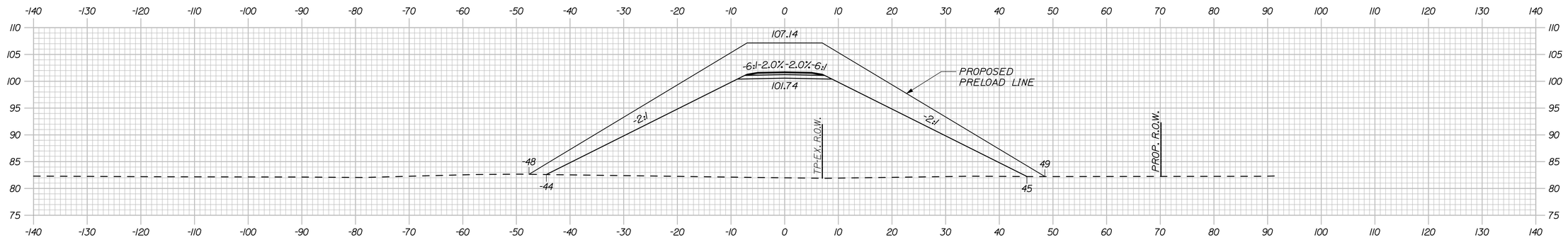
SHEET NUMBER

47

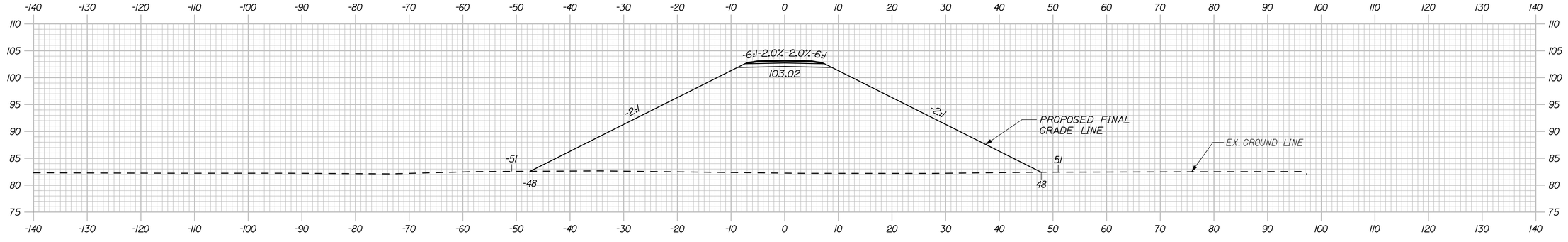
OF 69



5009+00.00



5008+50.00



5008+29.05

Sta. 5008+25.00 to Sta. 5009+00.00

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

BY	DATE
AZ	06/09
MPC	06/09
LEM	06/09

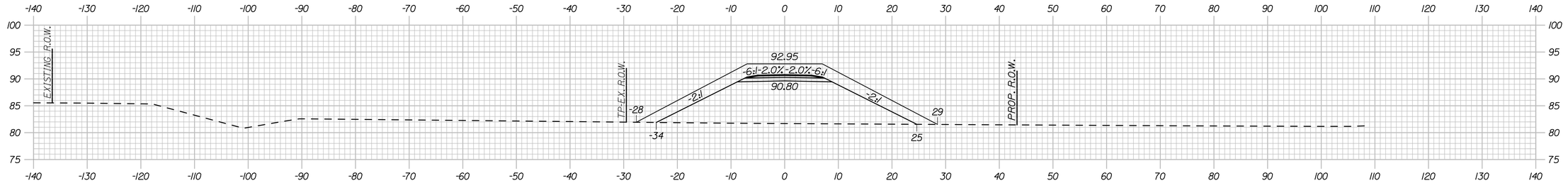
DESIGNED
DRAWN
CHECKED
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
REVISIONS 5
REVISIONS 6

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

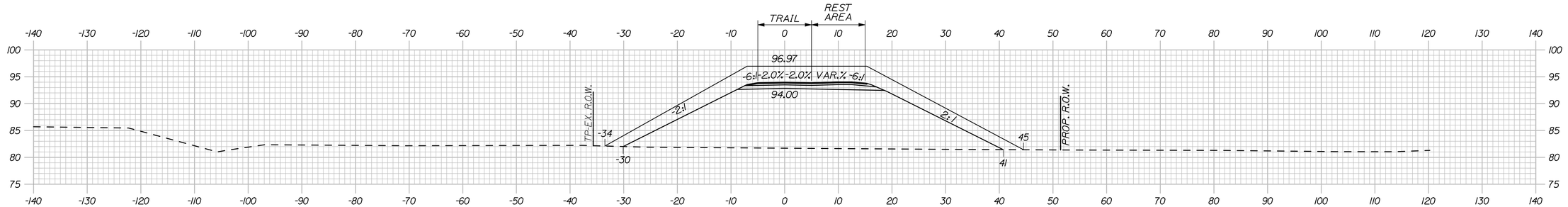
TURNPIKE CROSSING CROSS SECTIONS

SHEET NUMBER
48
OF 69

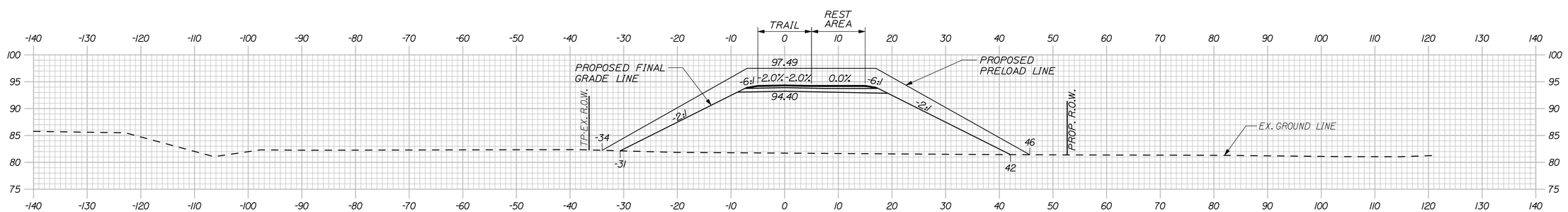
Filename: 048_Turnpike bridge approach cross sections.dgn Username: mcundiff Date:8/17/2009



5009+90.00



5009+50.00



5009+45.00

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

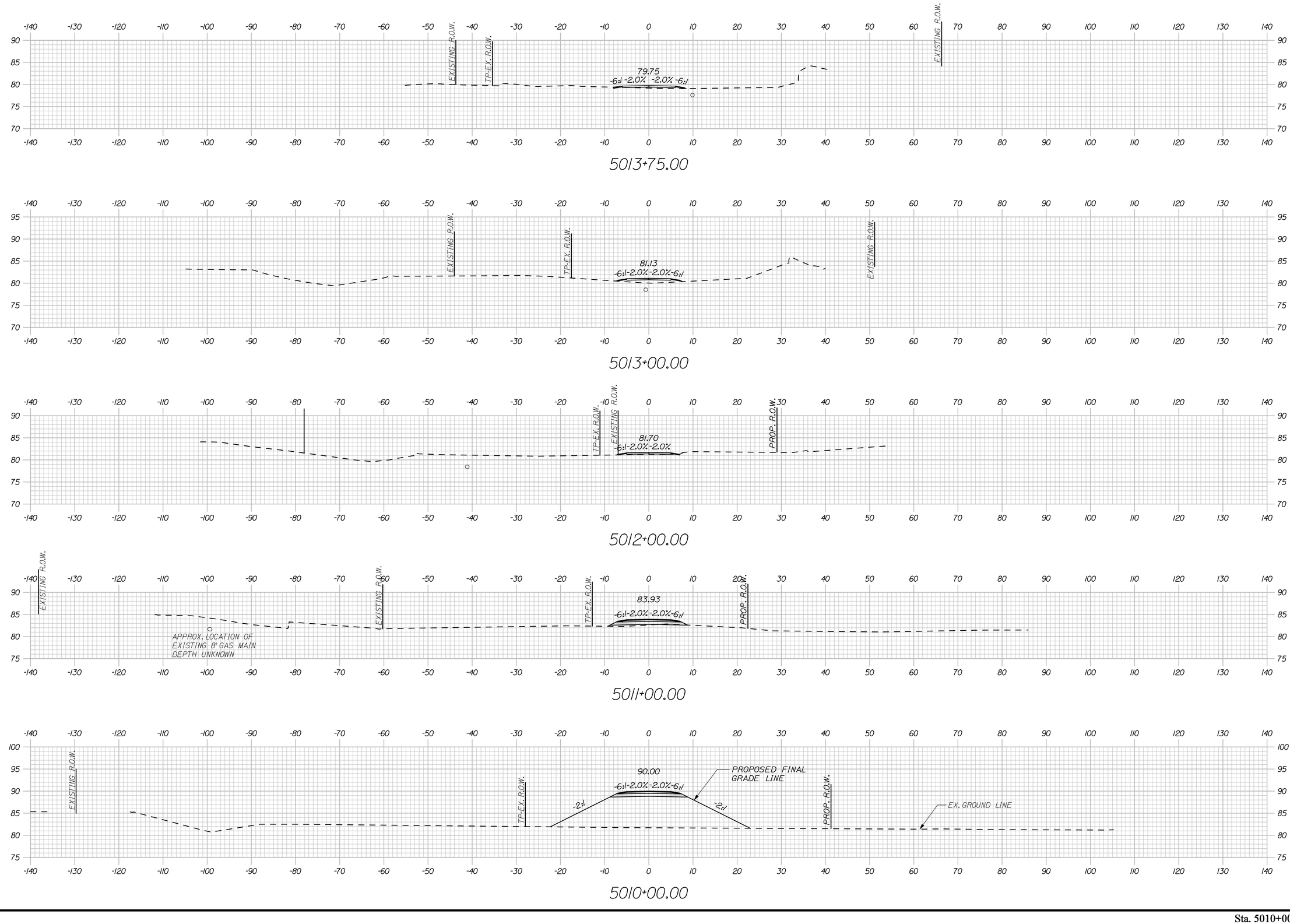
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING CROSS SECTIONS

SHEET NUMBER
49
OF 69

Sta. 5009+45.00 to Sta. 5009+90.00

Filename: 049_Turnpike bridge approach cross sections.dgn Username: mcundiff Date:8/17/2009



Filename: 050_Turnpike bridge approach cross sections.dgn Username: mcundiff Date:8/17/2009

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

TURNPIKE CROSSING CROSS SECTIONS

SHEET NUMBER
50
OF 69

Sta. 5010+00.00 to Sta. 5013+58.42

Date:8/17/2009

STA. 4651+00.00, 5.0' LT CONST.℄ =
STA. A 4651+00.00 TRAIL ℄

SIGNS REMOVED

COLLAPSIBLE BOLLARDS

DETECTABLE WARNING FIELD

TRAIL ℄

A 4651+00

A 4652+00

4651+00

4652+00

A 4653+00

4653+00

A 4654+00

4654+00

CONSTRUCTION ℄

B-3

LIMERICK ROAD

100'

8"

32'

8"

PROPOSED CROSSWALK
(18" WHITE LINES SPACED 18" APART)

DETECTABLE WARNING FIELD

REMOVE GATE

T-4

COLLAPSIBLE BOLLARDS

TRAIL ℄

A 4655+00

4655+00

A 4656+00

4656+00

EXISTING GAS LINE

SURVEY LINE

TIMBER GUARDRAIL

T-3

LIMERICK ROAD

8"

32'

8"

REVISED TRAIL LOCATION
REVISED SIGNING

NOTE:
TRAIL SHOULDERS NOT SHOWN FOR CLARITY

NOTES:
1. SEE TRAIL PLANS FOR CURVE DATA AND STATION EQUATIONS.

2. SEE DETAIL SHEET FOR MORE INFORMATION ON COLLAPSIBLE BOLLARDS AND DETECTABLE WARNING FIELDS.

LEGEND
- SIGN
- (X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS

SURVEY ALIGNMENT DATA

NO.	STATION	OFFSET	BASELINE	NORTH COORD.	EAST COORD.	REMARKS
T-3	4654+46.709	37.999 RT.	CONSTRUCTION ℄	2188206269	942671.5204	PROPERTY MON.
T-4	4654+94.959	28.429 LT.	CONSTRUCTION ℄	2189010692	942655.0717	PROPERTY PIN

20 0 20 40

Filename: 051_Limerick Road crossing plan.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

BY	DATE
DESIGNED AZ	06/09
DRAWN MPC	06/09
CHECKED LEM	06/09
REVISIONS 1 TRAIL/SIGNING	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

SIGNATURE

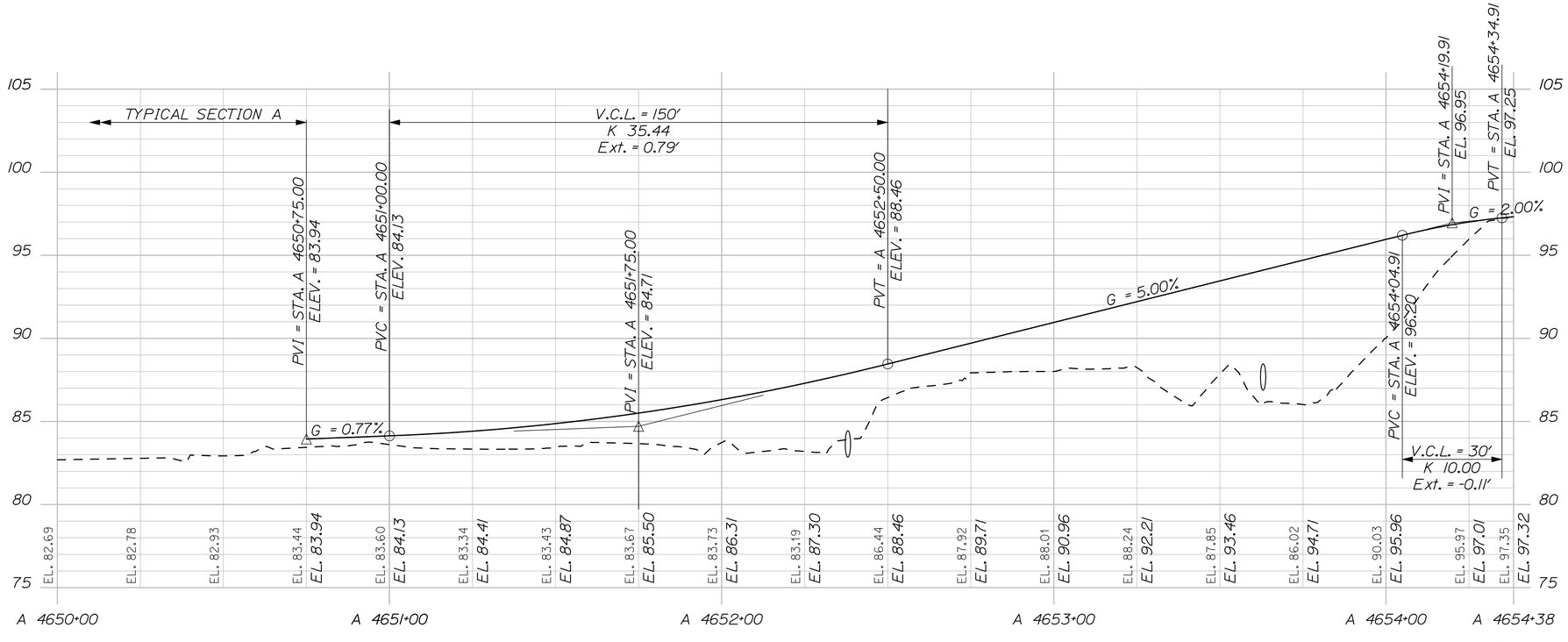
P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

LIMERICK ROAD CROSSING PLAN

SHEET NUMBER
51
OF 69



Date:8/17/2009

Filename: 052_Limerick Road crossing profile.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. PROFILE	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

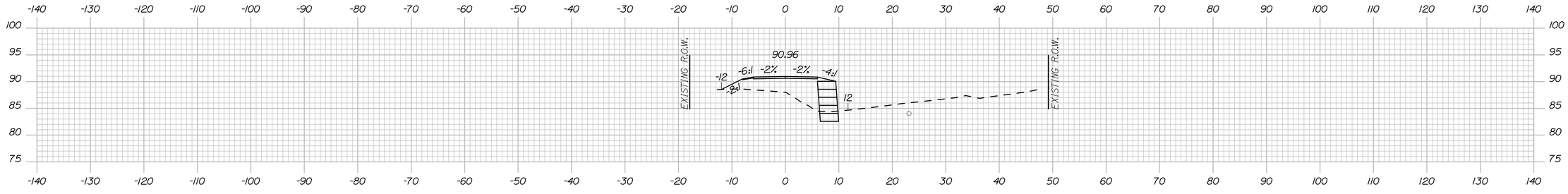
P.E. NUMBER 6452

DATE

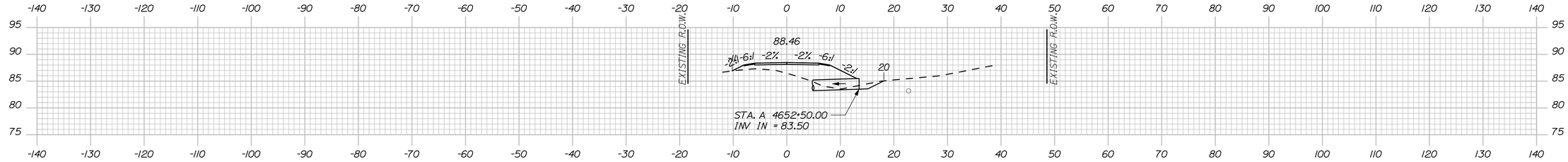
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

LIMERICK ROAD CROSSING PROFILE

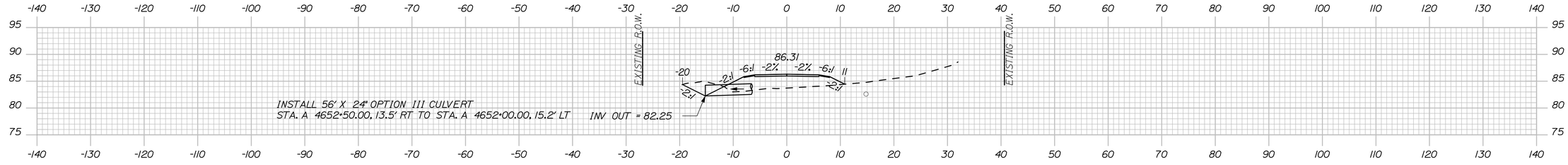
SHEET NUMBER
52
OF 69



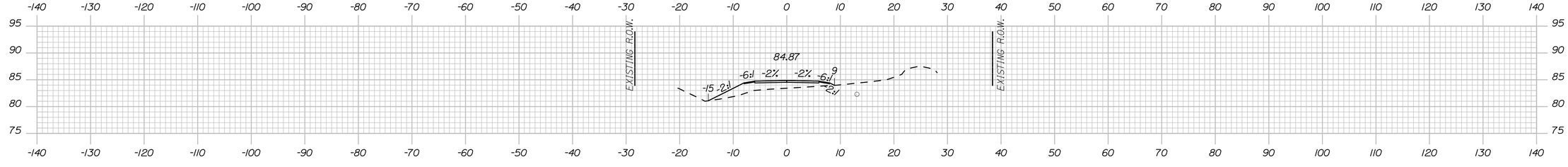
A 4653+00.00



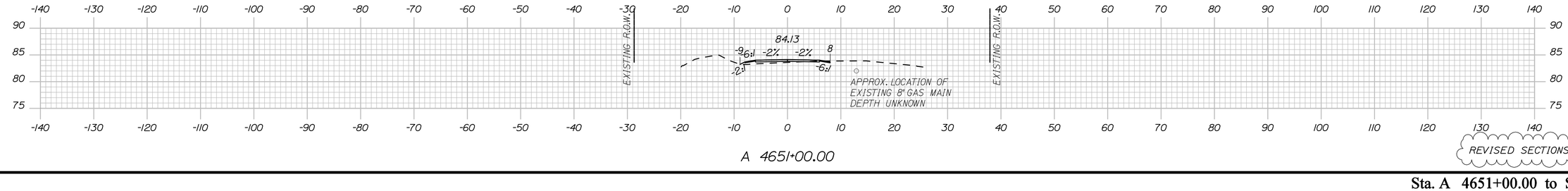
A 4652+50.00



A 4652+00.00



A 4651+50.00



A 4651+00.00

REVISED SECTIONS

Sta. A 4651+00.00 to Sta. A 4653+00.00

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

BY	DATE
DESIGNED AZ	06/09
DRAWN MPC	06/09
CHECKED LEM	06/09
REVISIONS 1 REV. ALIGNMENT	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

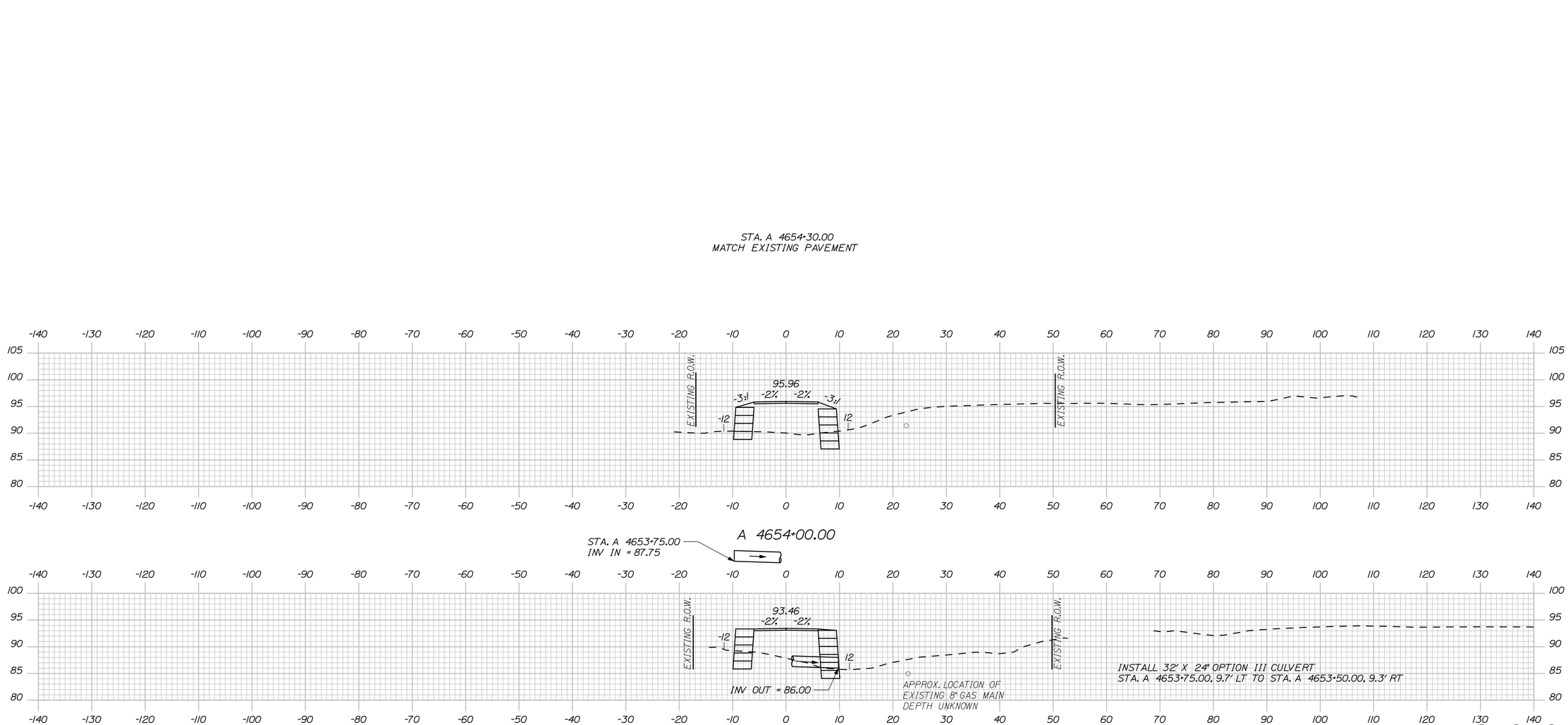
LIMERICK ROAD CROSSING CROSS SECTIONS

SHEET NUMBER
53
OF 69

STA. A 4654+30.00
MATCH EXISTING PAVEMENT

A 4654+00.00

STA. A 4653+75.00
INV IN = 87.75



A 4653+50.00

REVISED SECTIONS

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. ALIGNMENT	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

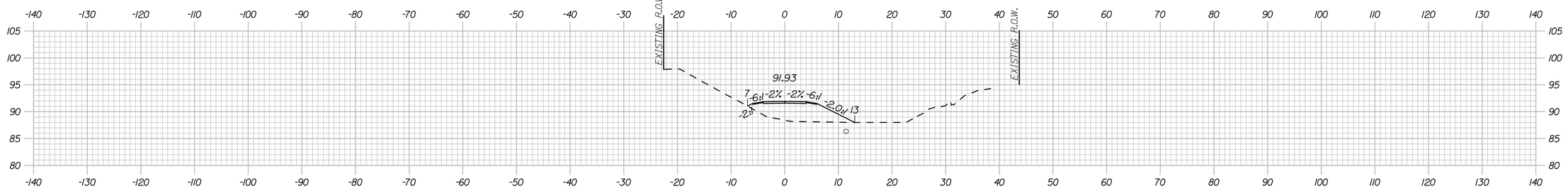
HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

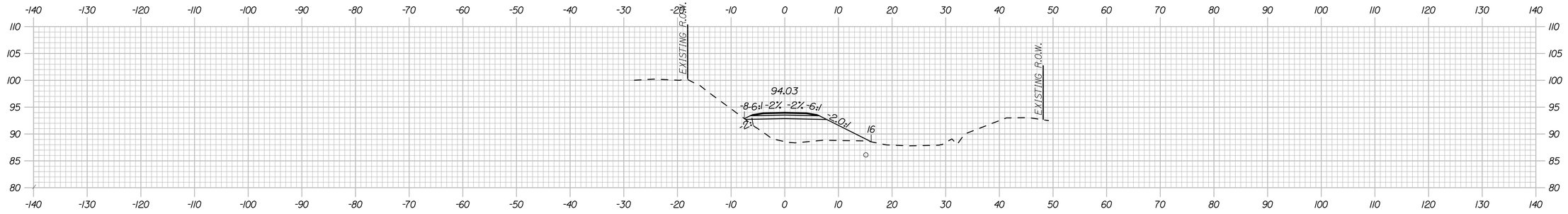
LIMERICK ROAD CROSSING CROSS SECTIONS

SHEET NUMBER
54
OF 69

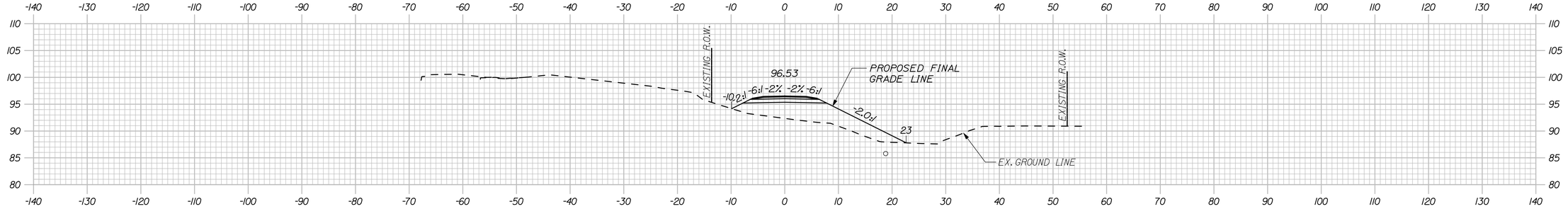
Sta. A 4653+50.00 to Sta. A 4654+00.00



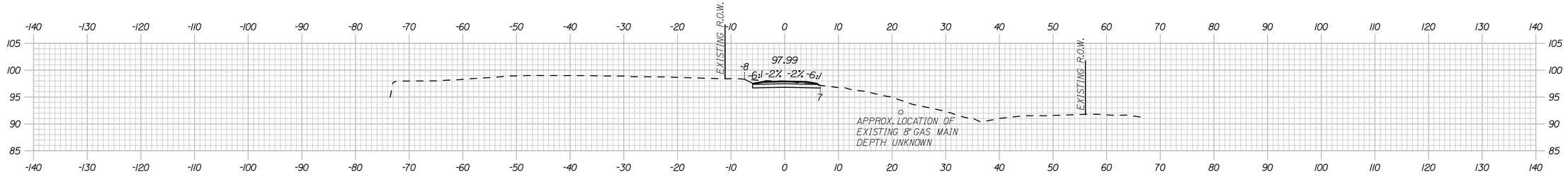
A 4656+00.00



A 4655+50.00



A 4655+00.00



A 4654+62

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

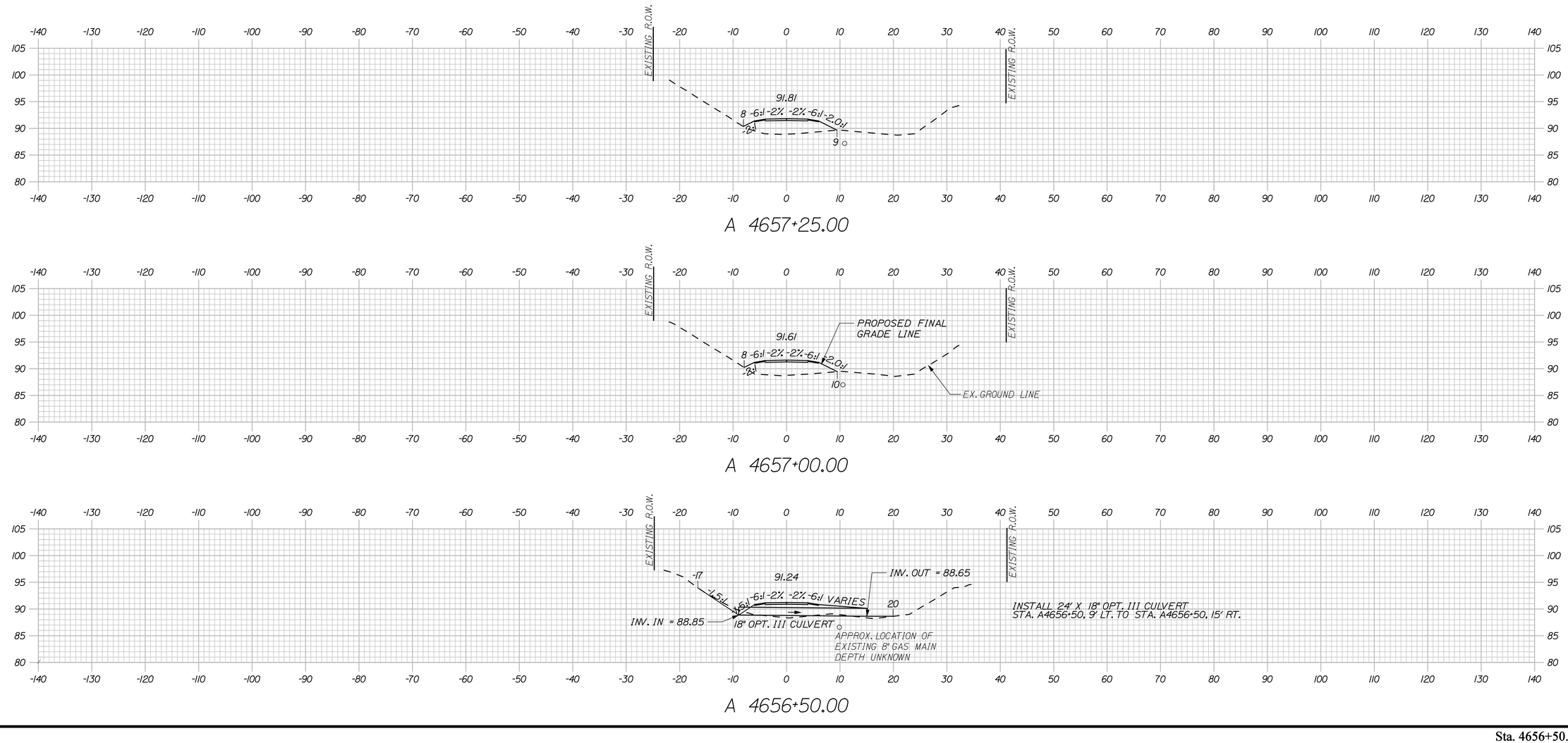
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

LIMERICK ROAD CROSSING CROSS SECTIONS

SHEET NUMBER
55
OF 69

Sta. 4654+61.81 to Sta. 4656+00.00

Filename: 055_Limerick Road crossing cross sections.dgn Design: BRIDGE Username: mcundiff Date:8/17/2009



Filename: 056_Limerick Road crossing cross sections.dgn Division BRIDGE Username: mcundiff Date:8/17/2009

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	DRAINAGE	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

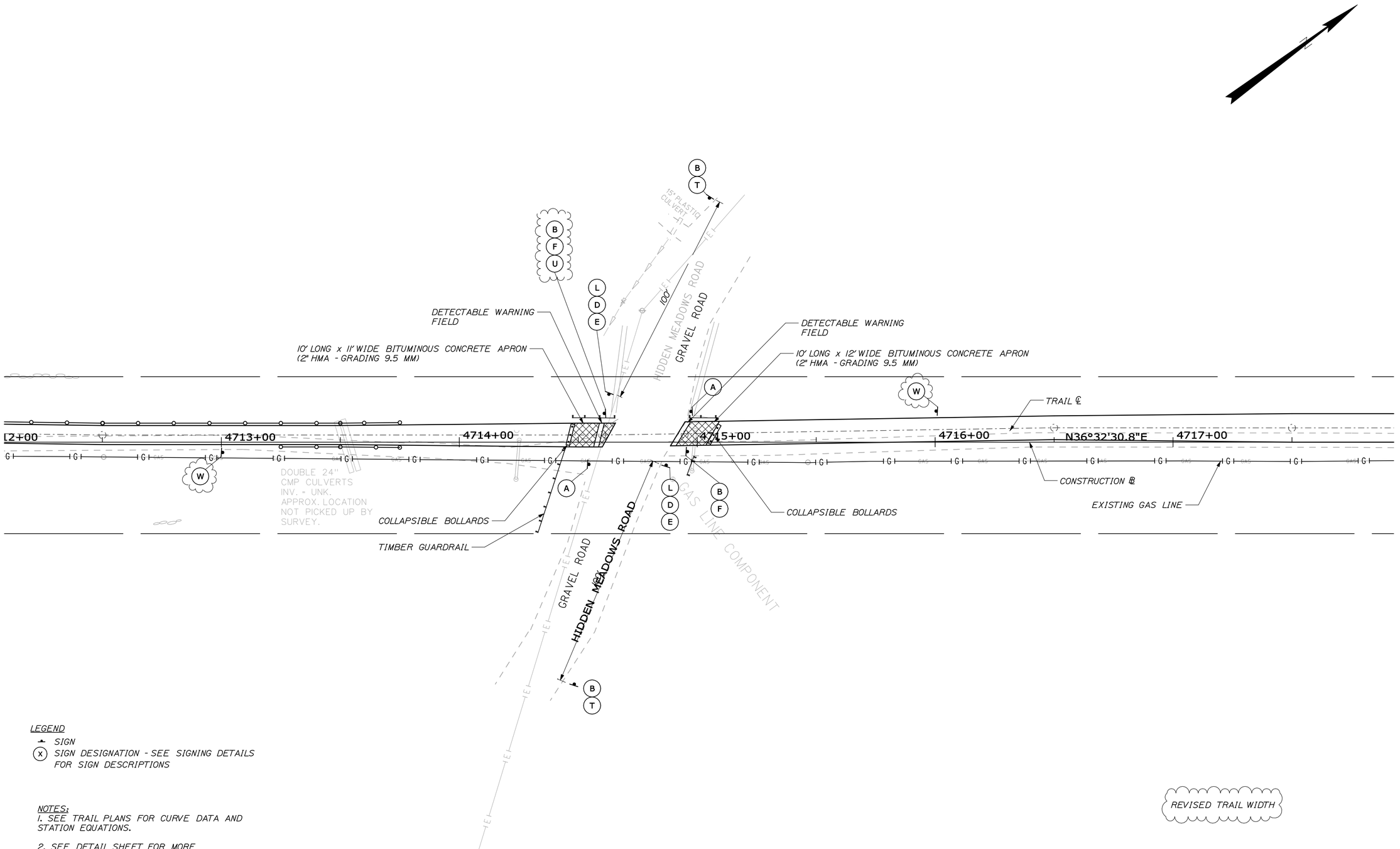
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

LIMERICK ROAD CROSSING CROSS SECTIONS

SHEET NUMBER
56
OF 69

Sta. 4656+50.00 to Sta. 4657+25.00

Date:8/17/2009



LEGEND

- SIGN
- (X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS

NOTES:

1. SEE TRAIL PLANS FOR CURVE DATA AND STATION EQUATIONS.
2. SEE DETAIL SHEET FOR MORE INFORMATION ON COLLAPSIBLE BOLLARDS AND DETECTABLE WARNING FIELDS.

NOTE:
TRAIL SHOULDERS NOT SHOWN FOR CLARITY

20 0 20 40

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	TRAIL ALIGNMENT	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

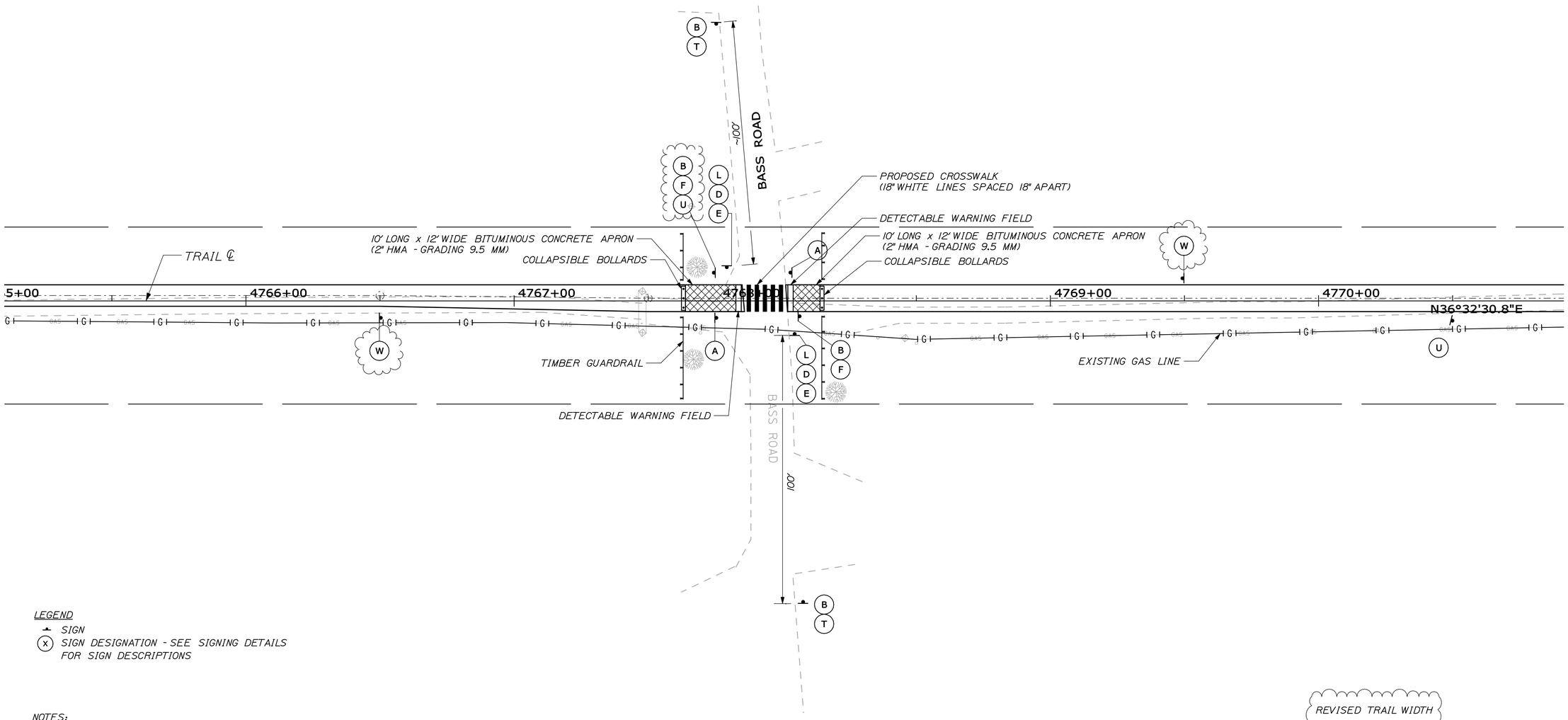
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

HIDDEN MEADOWS ROAD CROSSING PLAN

SHEET NUMBER
57
OF 69

Filename: 057_HIDDENMEADOWSROAD.DGN

Date:8/17/2009



LEGEND

- SIGN
- (X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS

NOTES:

1. SEE TRAIL PLANS FOR CURVE DATA AND STATION EQUATIONS.
2. SEE DETAIL SHEET FOR MORE INFORMATION ON COLLAPSIBLE BOLLARDS AND DETECTABLE WARNING FIELDS.

REVISED TRAIL WIDTH

NOTE:
TRAIL SHOULDERS NOT SHOWN FOR CLARITY

20 0 20 40

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	TRAIL ALIGNMENT	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

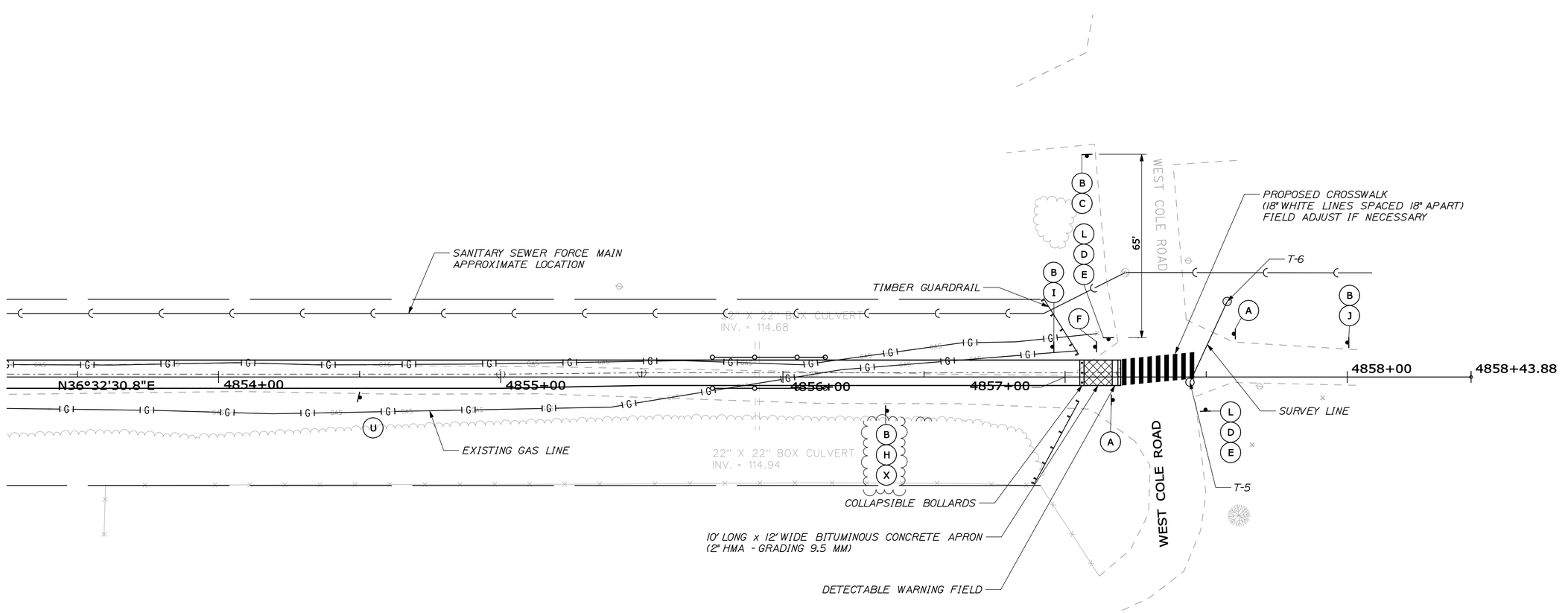
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

BASS ROAD CROSSING PLAN

SHEET NUMBER
58
OF 69

Filename: 058_Bass Road plan crossing plan.dgn

Date:8/17/2009



LEGEND

- SIGN
- (X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS

NOTES:
1. SEE TRAIL PLANS FOR CURVE DATA AND STATION EQUATIONS.

2. SEE DETAIL SHEET FOR MORE INFORMATION ON COLLAPSIBLE BOLLARDS AND DETECTABLE WARNING FIELDS.

SURVEY ALIGNMENT DATA

NO.	STATION	OFFSET	BASELINE	NORTH COORD.	EAST COORD.	REMARKS
T-3	4857+44.260	1.820 RT.	CONSTRUCTION ℄	235056.3274	954851.1926	PK NAIL IN PAV.
T-4	4857+57.437	26.771 LT.	CONSTRUCTION ℄	235083.9374	954836.0681	PROPERTY PIN

REVISED TRAIL WIDTH

NOTE:
TRAIL SHOULDERS NOT SHOWN FOR CLARITY

20 0 20 40

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

BY	DATE
DESIGNED AZ	06/09
DRAWN MPC	06/09
CHECKED LEM	06/09
REVISIONS 1 TRAIL ALIGNMENT	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

SIGNATURE

P.E. NUMBER 6452

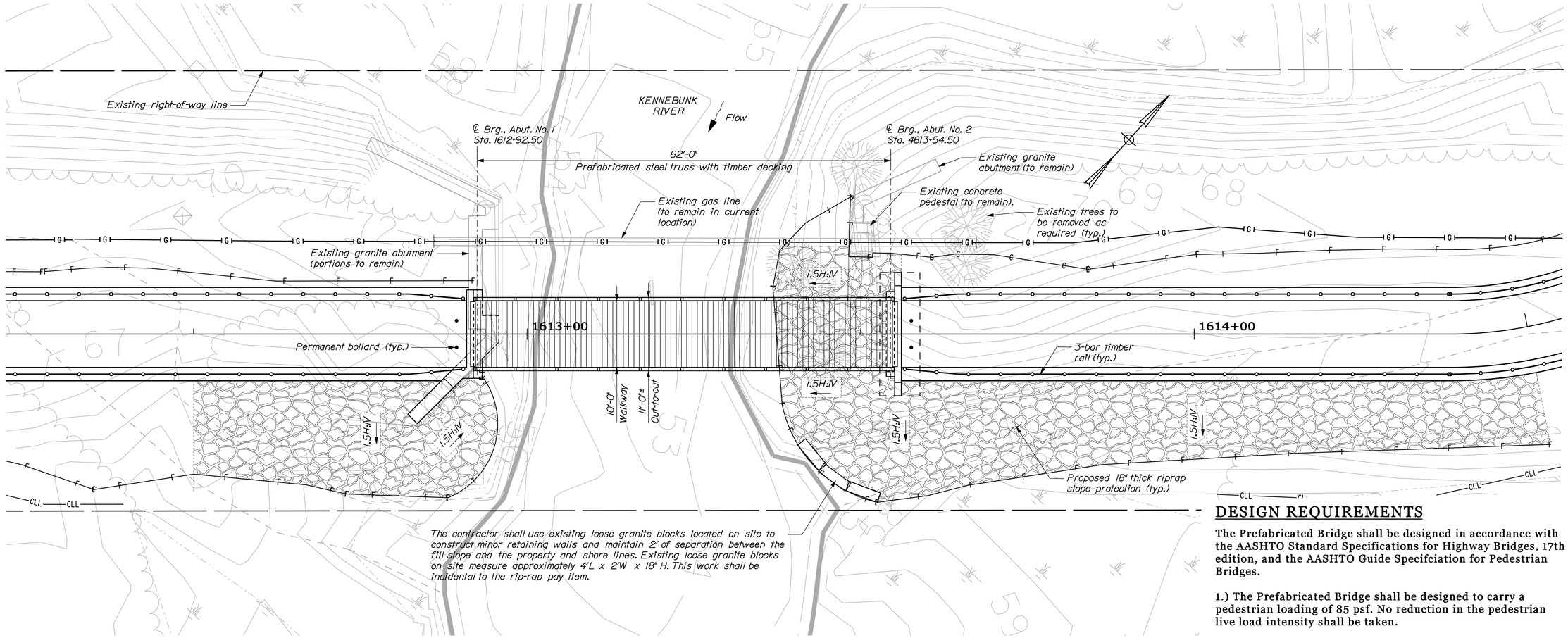
DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

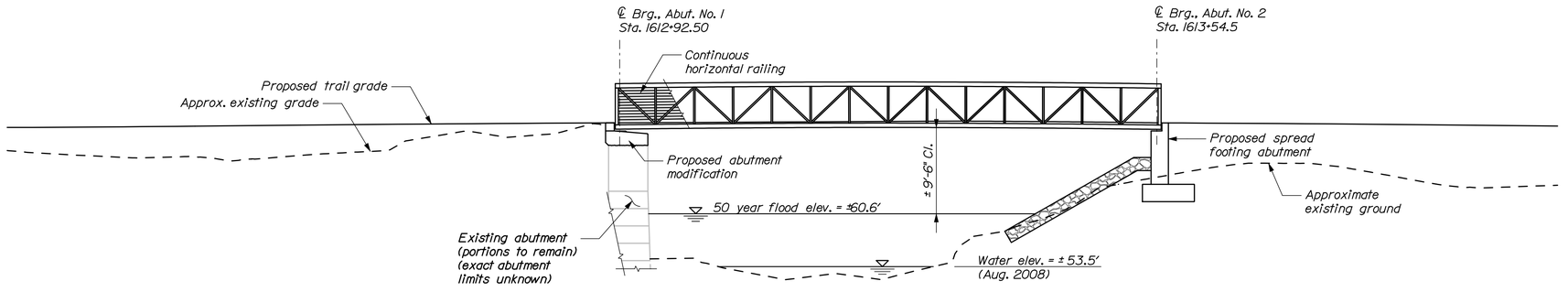
WEST COLE ROAD CROSSING PLAN

SHEET NUMBER
59
OF 69

Filename: 059_West Cole Road crossing plan.dgn



PLAN
1/8" = 1'-0"



PROFILE
1/8" = 1'-0"

NOTES:

1. Final dimensions of prefabricated bridge may vary from those shown on the plans. The Contractor shall coordinate all bridge dimensions with the bridge fabricator.
2. Warp trail surface to match proposed bridge surface.
3. Existing gas line to remain (not shown in profile view). See utility specification for additional information.

REVISED TRAIL LOCATION
REVISED BRIDGE DESIGN

DESIGN REQUIREMENTS

The Prefabricated Bridge shall be designed in accordance with the AASHTO Standard Specifications for Highway Bridges, 17th edition, and the AASHTO Guide Specifciation for Pedestrian Bridges.

1.) The Prefabricated Bridge shall be designed to carry a pedestrian loading of 85 psf. No reduction in the pedestrian live load intensity shall be taken.

2.) The construction, handling, and assembly of the prefabricated Bridge shall be in accordance with Special Provision Sections 104 and 504, and with the manufacturer's specifications, as applicable.

DESIGN LOADING

Live Load	85 p.s.f. (pedestrian only)

HYDROLOGIC DATA

Drainage Area	26.8 sq mi
Design Discharge (Q50)	1,131 cfs
Check Discharge (Q100)	1,288 cfs
Headwater Elevation (Q50)	60.6 ft
Headwater Elevation (Q100)	60.9 ft
Discharge Velocity (Q50)	5 fps
Discharge Velocity (Q100)	6 fps

MATERIALS

Concrete (Unless noted otherwise)	Class "A"
Reinforcing Steel:	ASTM A615/A615M, Grade 60
Structural Steel:	ASTM A709/A709M, Grade 50W

BASIC DESIGN STRESSES

Concrete:	f'c = 4,350 psi
Reinforcing Steel:	60,000 psi
Structural Steel:	50,000 psi

UTILITIES

Granite State Gas (high pressure gas transmission line)

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE
P.E. NUMBER 6452
DATE

	BY	DATE
DESIGNED	TRC	06/09
DRAWN	TRC	06/09
CHECKED	JDW	06/09
REVISIONS 1	TRAIL & BRIDGE	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER PLAN & PROFILE

SHEET NUMBER
60
OF 69

Date: 8/17/2009
Filename: 060_KennRiverPlanProfile.dgn

Date:8/17/2009

PREFABRICATED BRIDGE NOTES:

1. THE PREFABRICATED BRIDGE SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES, 17TH EDITION BY EITHER WORKING STRESS DESIGN OR LOAD FACTOR DESIGN METHOD, AND IN ACCORDANCE WITH THE AASHTO GUIDE SPECIFICATION FOR PEDESTRIAN BRIDGES.

2. THE CONSTRUCTION, HANDLING, AND ASSEMBLY OF THE PREFABRICATED BRIDGE SHALL BE IN ACCORDANCE WITH SPECIAL PROVISION SECTIONS 104 AND 504, AND WITH THE MANUFACTURERS SPECIFICATIONS, AS APPLICABLE.

3. THE BRIDGE DESIGN LOADING SHALL INCLUDE A UNIFORM PEDESTRIAN LOAD OF 85 PSF. NO REDUCTIONS IN LOAD INTENSITY SHALL BE TAKEN.

4. GRANULAR BORROW SHALL MEET THE REQUIREMENTS OF SUBSECTION 703.19, MATERIAL FOR EMBANKMENT CONSTRUCTION.

5. TIMBER SAFETY RAIL ON THE APPROACHES WILL TERMINATE NEAR THE BACK FACE OF THE BACKWALL. THE BRIDGE SAFETY RAIL SHALL EXTEND BEYOND THE ENDS OF THE BRIDGE AND PROJECT OVER THE BACKWALL AS NEEDED TO ENSURE A GAP NO LARGER THAN 4" EXISTS BETWEEN THE TIMBER SAFETY RAIL AND END BRIDGE RAIL. AT THE CONTRACTORS OPTION, ALTERNATE MEANS OF ACHIEVING THIS RESULT MAY BE SUBMITTED FOR APPROVAL.

6. DESIGN AND DETAILING OF BRIDGE BEARINGS, ANCHORAGES, AND SLIDING PLATE EXPANSION JOINTS SHALL BE COMPLETED BY THE BRIDGE FABRICATOR.

GENERAL CONSTRUCTION NOTES

1. THE EXISTING HIGH PRESSURE GAS LINE SHALL REMAIN IN ITS CURRENT LOCATION FOR THE DURATION OF CONSTRUCTION. THE CONTRACTOR SHALL EXERCISE EXTREME CARE TO WHEN WORKING NEAR THE LINE. THE RESIDENT OR THE GAS LINE UTILITY'S REPRESENTATIVE SHALL HAVE THE RIGHT TO STOP WORK IMMEDIATELY IF THE GAS PIPELINE OR THE SAFETY OF THE PUBLIC ARE OR MIGHT BE NEGATIVELY IMPACTED. SEE SPECIAL PROVISION SECTION 104 FOR ADDITIONAL REQUIREMENTS.

2. PLACE A TWO FOOT WIDE STRIP OF TEMPORARY EROSION CONTROL BLANKET ALONG THE TOP OF THE RIPRAP.

3. ALL EXCAVATED MATERIAL, EXCEPT WETLAND GRUBBINGS, SHALL BE USED AS COMMON BORROW.

4. ALL EMBANKMENT MATERIAL, EXCEPT AS OTHERWISE SHOWN, SHALL BE COMMON BORROW.

5. PLACE LOAM, 2 INCHES DEEP, ON SIDE SLOPES BETWEEN LIMITS OF WORK.

6. THE CONTRACTOR SHALL RE-POINT THE MORTARED JOINTS ON THE EXISTING ABUTMENTS AS DIRECTED BY THE RESIDENT. THIS WORK SHALL BE COMPLETED ON A TIME AND MATERIALS BASIS AND SHALL BE PAID UNDER ITEM 502.60 "PORTLAND CEMENT MORTAR" AND ITEM 629.05 "HAND LABOR, STRAIGHT TIME".

7. PLANS FOR THE EXISTING BRIDGE ABUTMENTS ARE NOT AVAILABLE.

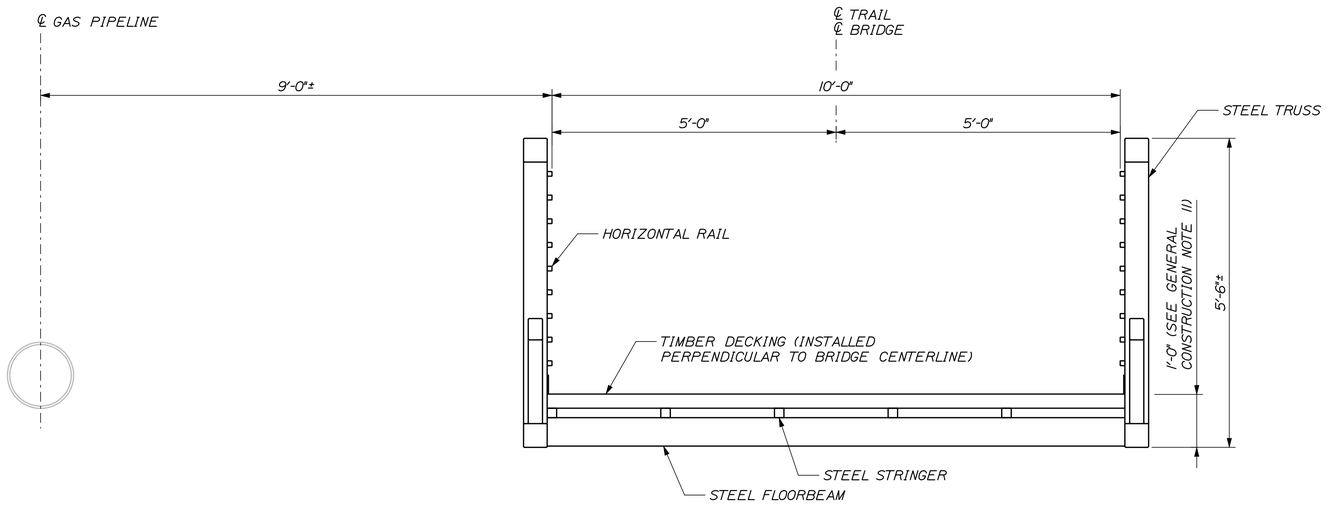
8. ABUTMENT DESIGN IS BASED ON 12 " FROM THE TOP OF DECK TO THE BEARING SEAT. ADJUSTMENTS SHALL BE MADE TO THE BEARING SEAT ELEVATIONS TO ACCOMMODATE THE SUPERSTRUCTURE IF ACTUAL DIMENSIONS VARY. ADJUSTMENTS OF MORE THAN SIX INCHES REQUIRE APPROVAL BY THE ENGINEER.

9. DIMENSIONS PROVIDED FOR THE EXISTING ABUTMENTS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION AND BRIDGE FABRICATION.

10. AT THE CONTRACTORS OPTION ABUTMENT #2 MAY BE CONSTRUCTED FROM COMPONENTS PRECAST OFF SITE. IF THE OPTION TO UTILIZE PRECAST COMPONENTS IS EXERCISED THE CONTRACTOR SHALL SUBMIT DESIGN COMPUTATIONS AND DETAILS FOR THE PROPOSED WORK TO THE RESIDENT FOR APPROVAL. THE CALCULATIONS AND DETAILS SHALL BE STAMPED BY A PROFESSIONAL ENGINEER LICENSED IN THE STATE OF MAINE. THE PRECAST FOUNDATION SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO SPECIFICATIONS AND THE "GUIDELINES FOR ACCELERATED BRIDGE CONSTRUCTION, USING PRECAST/PRESTRESSED CONCRETE COMPONENTS" PUBLISHED BY THE PCI NORTHEAST BRIDGE TECHNICAL COMMITTEE. NO ADDITIONAL PAYMENT WILL BE MADE FOR THE USE OF PRECAST COMPONENTS.

11. ALL DIMENSIONS MARKED ± ARE APPROXIMATE OR SUBJECT TO CHANGE BASED ON THE FABRICATORS BRIDGE DESIGN. THE CONTRACTOR SHALL PLAN AND COORDINATE HIS WORK ACCORDINGLY.

12. FABRICATION, DELIVERY, AND PLACEMENT OF REINFORCING STEEL SHALL BE INCIDENTAL TO ITEM 502.219 "STRUCTURAL CONCRETE ABUTMENTS AND RETAINING WALLS".



PREFABRICATED BRIDGE SECTION
3/4" = 1'-0"

REVISED NOTES
REVISED BRIDGE SECTION

HNTB
340 COUNTY ROAD, SUITE 6-C
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE
P.E. NUMBER 6452
DATE

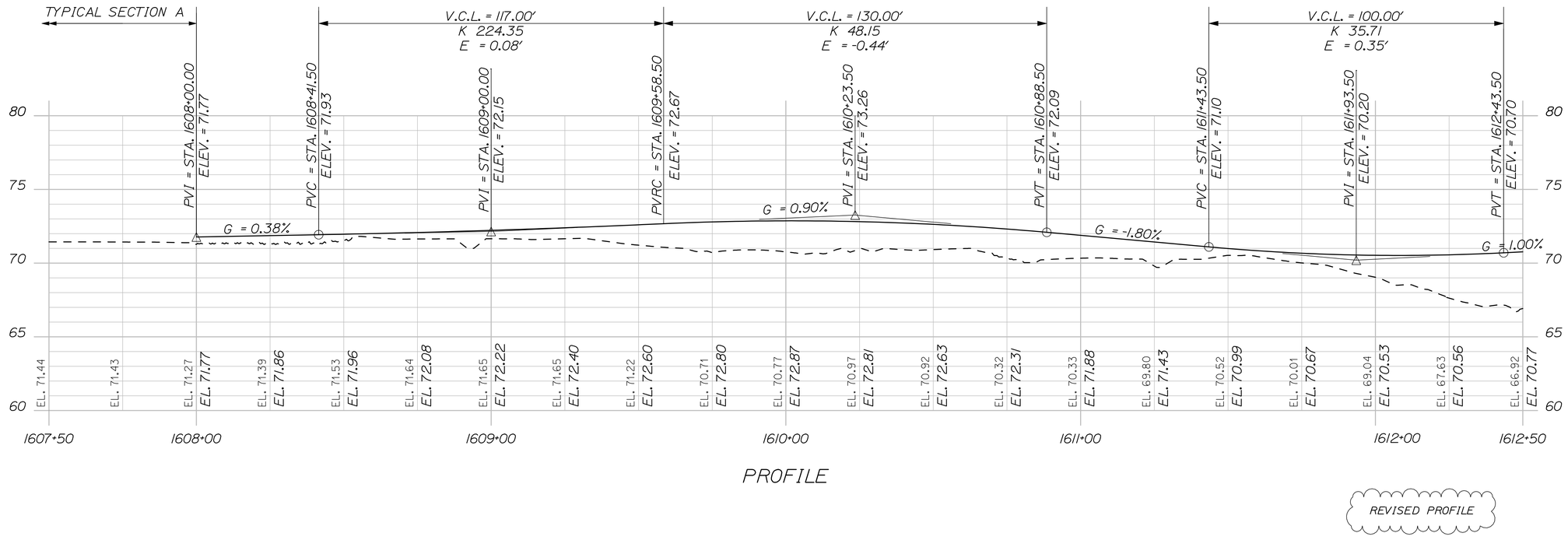
	BY	DATE
DESIGNED	TRC	06/09
DRAWN	MPC	06/09
CHECKED	JDW	06/09
REVISIONS 1	NOTES & BRIDGE	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

GENERAL NOTES AND DETAILS

SHEET NUMBER
61
OF 69

Filename: 061_Kenn River Gen Notes.dgn



PROFILE

REVISED PROFILE

APPROXIMATE EXISTING GROUND

FINAL VERTICAL ALIGNMENT

HORIZ.: 20 0 20 40

VERT.: 4 0 4 8

Date:8/17/2009

Filename: 062_Kenebunk River approach profile 1.dgn

HNTB

2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. PROFILE	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

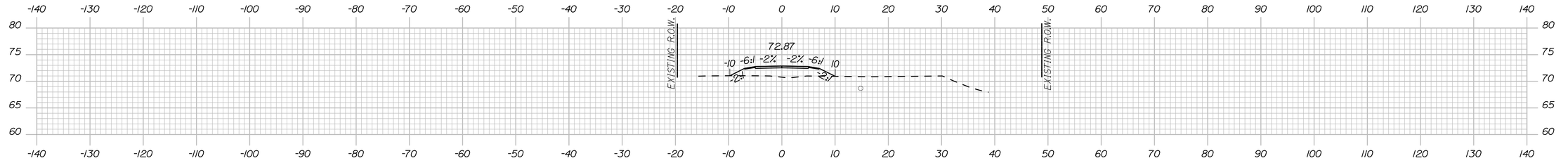
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER BRIDGE PROFILE

SHEET NUMBER

62

OF 69



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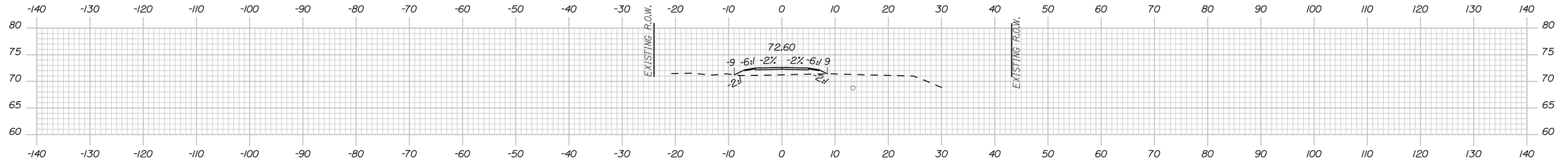

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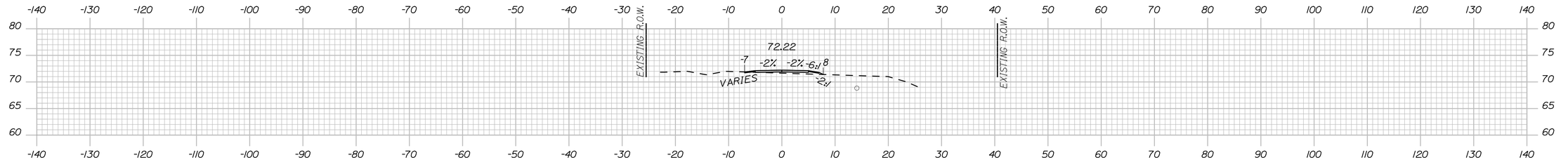

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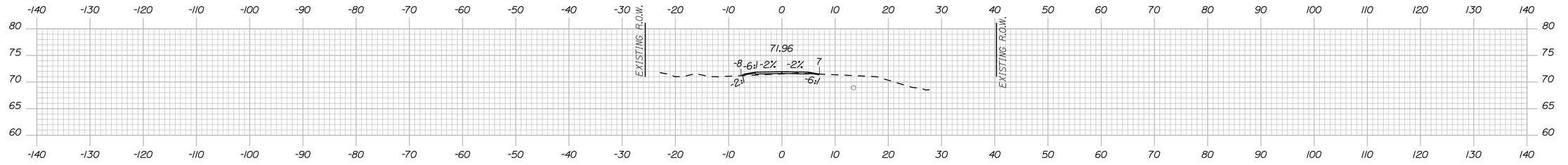

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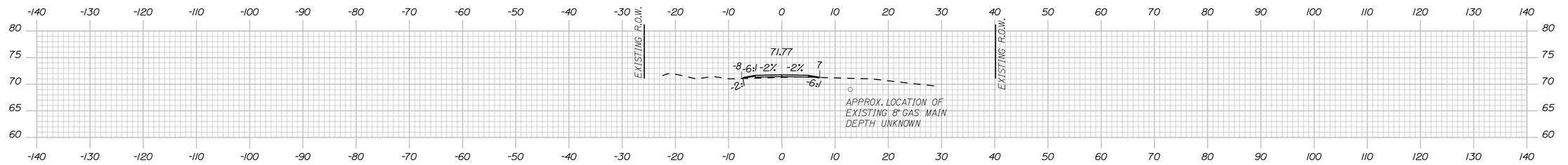


1608+00.00

REVISED SECTIONS

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. SECTIONS	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

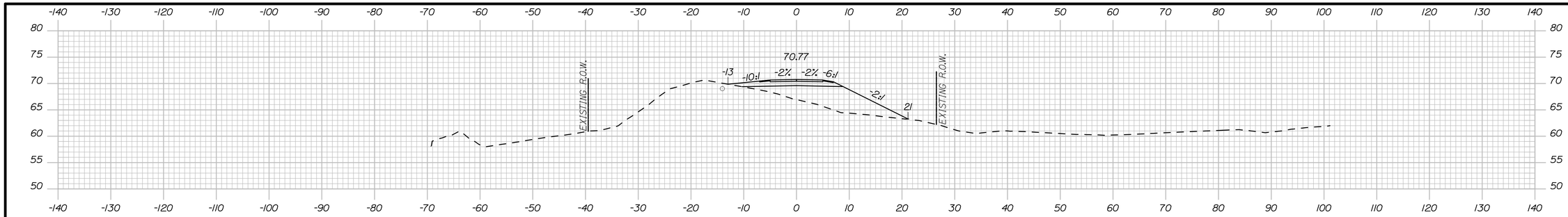
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER APPROACH CROSS SECTIONS

SHEET NUMBER
63
OF 69

Sta. 1608+00.00 to Sta. 1610+00.00

Filename: 063_KennebunkRiver XSec_1.dgn Division: BRIDGE Username: mcundiff Date:8/17/2009



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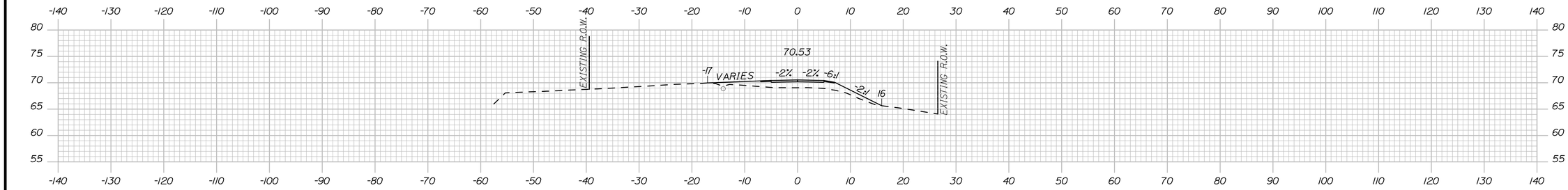
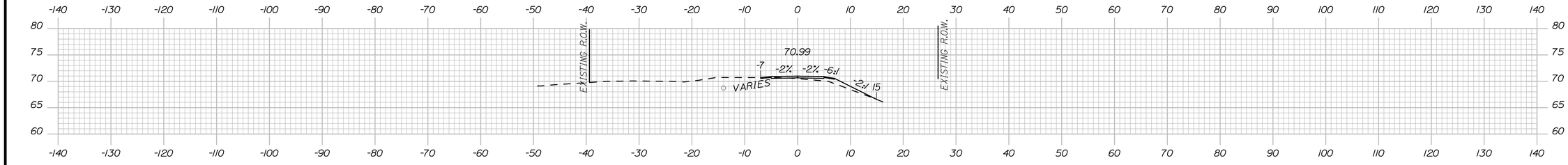


1612+00.00



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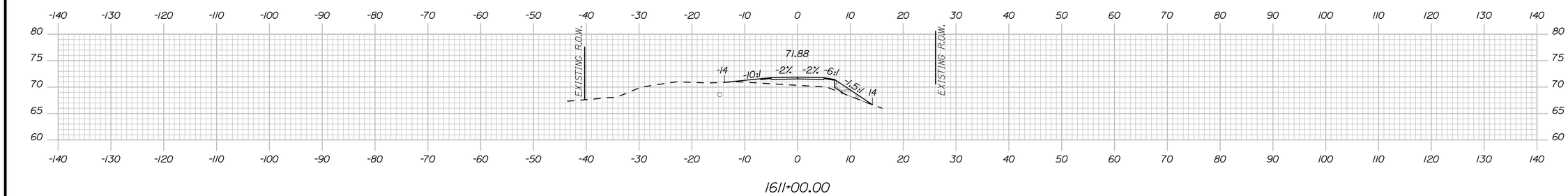
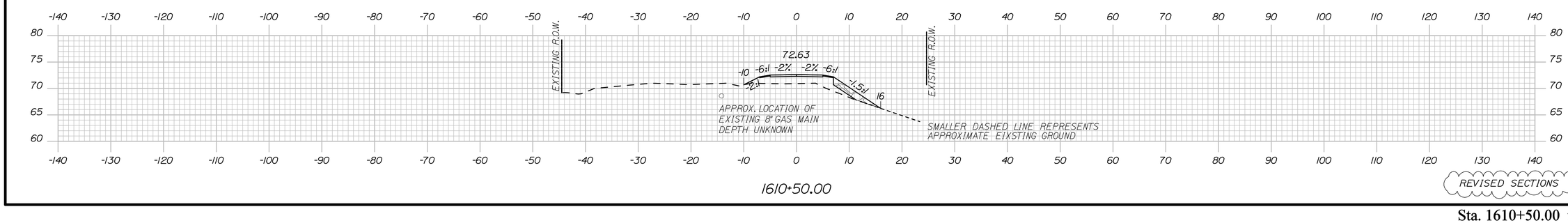


1611+00.00



1610+50.00

REVISED SECTIONS

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. SECTIONS	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

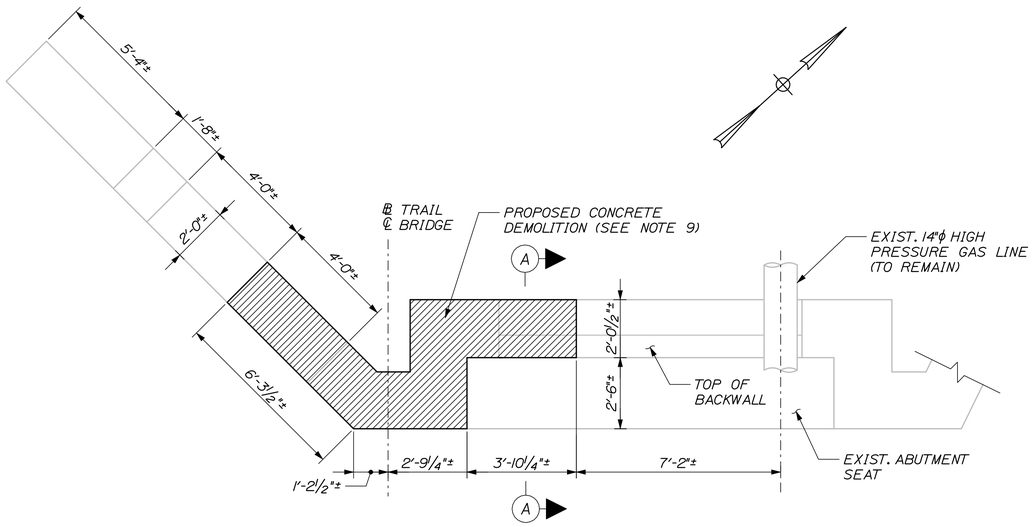
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER APPROACH CROSS SECTIONS

SHEET NUMBER
64
OF 69

Sta. 1610+50.00 to Sta. 1612+50.00

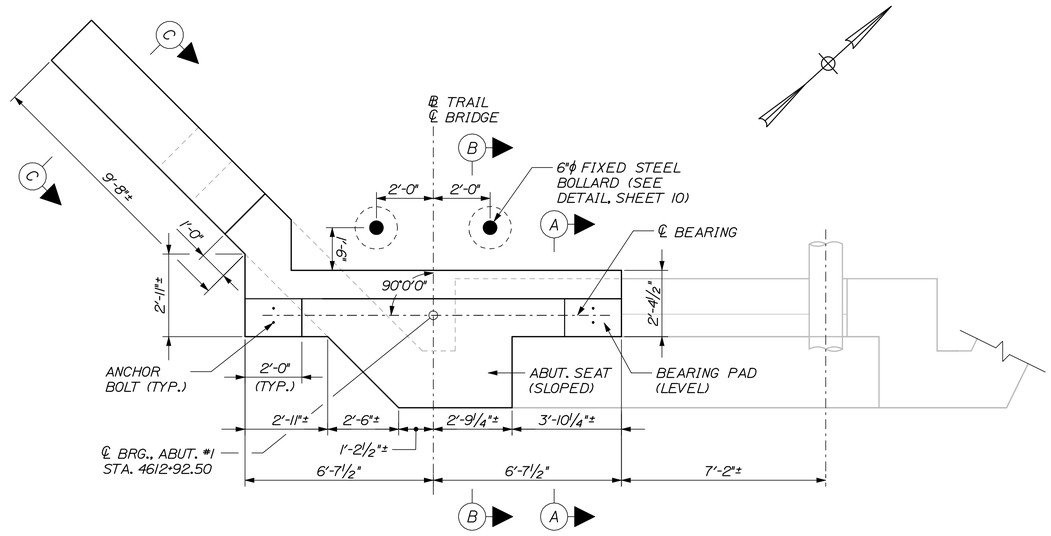
Filename: 064_KennebunkRiver XSec_2.dgn Username: mcundiff
Division: BRIDGE Date:8/17/2009



ABUTMENT NO. 1 - PLAN

(DEMOLITION)

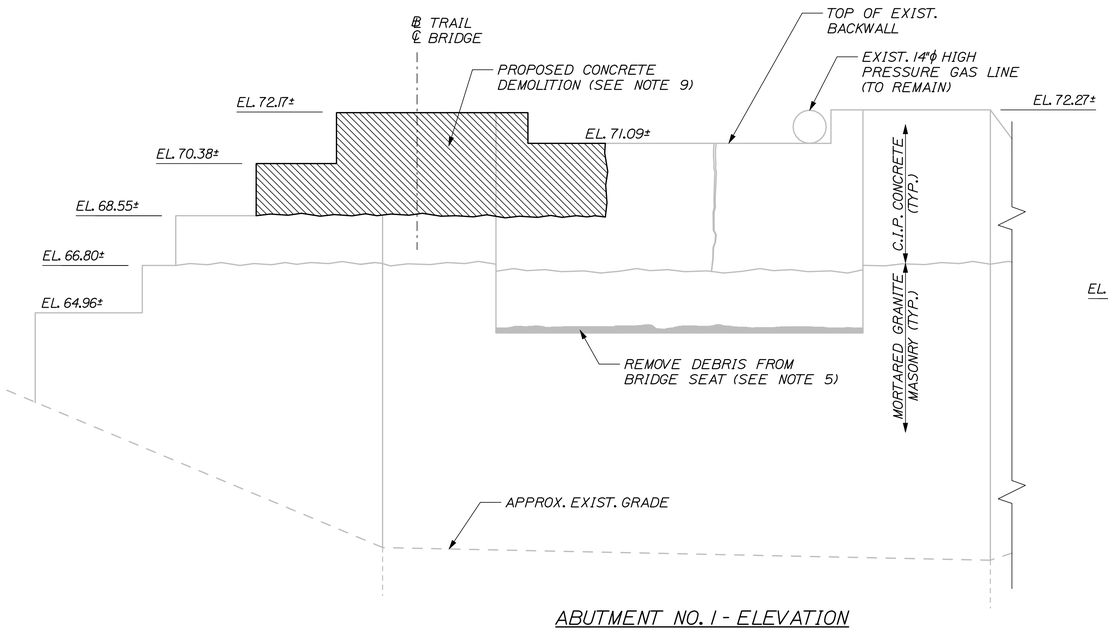
⅜" = 1'-0"



ABUTMENT NO. 1 - PLAN

(PROPOSED MODIFICATIONS)

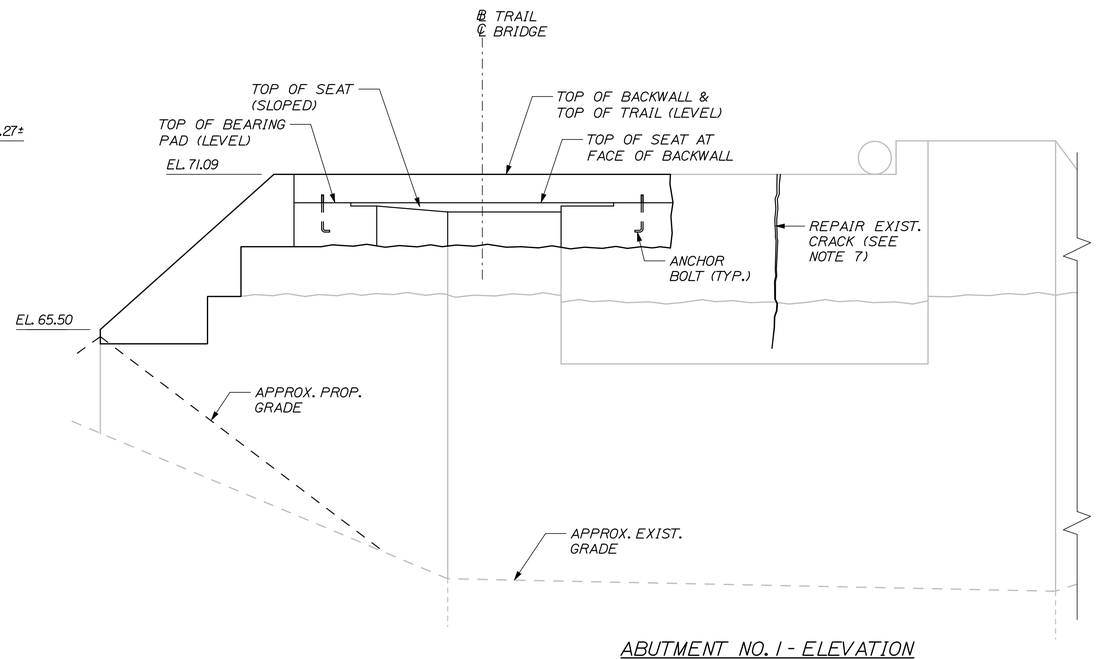
⅜" = 1'-0"



ABUTMENT NO. 1 - ELEVATION

(DEMOLITION)

⅜" = 1'-0"



ABUTMENT NO. 1 - ELEVATION

(PROPOSED MODIFICATIONS)

⅜" = 1'-0"

REVISED ABUTMENT DESIGN

NOTE: FOR NOTES AND SECTIONS A, B, & C SEE SHEET 65A.

HNTB
340 COUNTY ROAD, SUITE 6-C
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	TRC	06/09
DRAWN	MPC	06/09
CHECKED	JDW	06/09
REVISIONS 1	ABUT. DESIGN	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

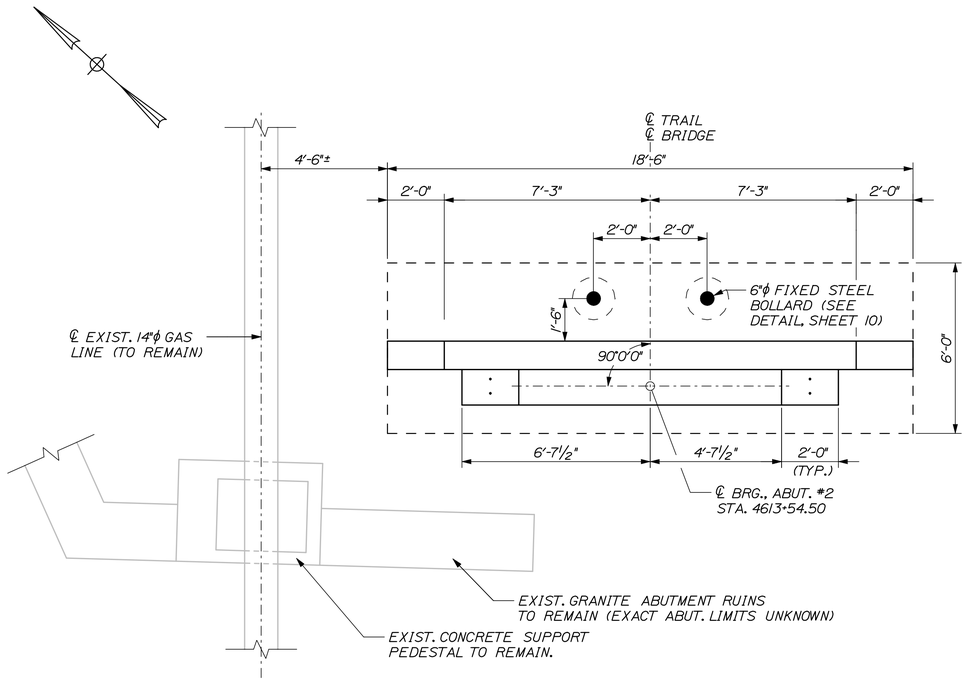
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER - ABUTMENT NO. 1

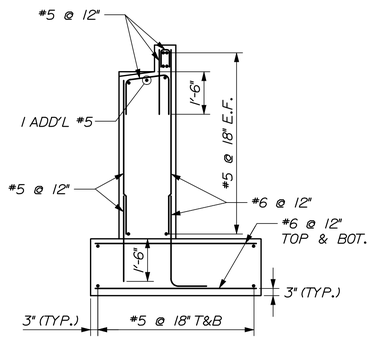
SHEET NUMBER
65
OF 69

Date:8/17/2009

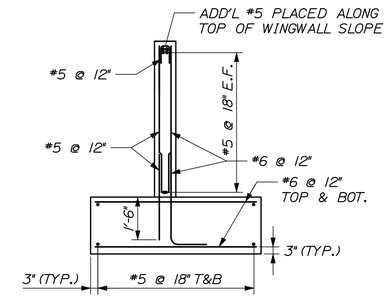
Filename: 065_Kenn River Abut1.dgn



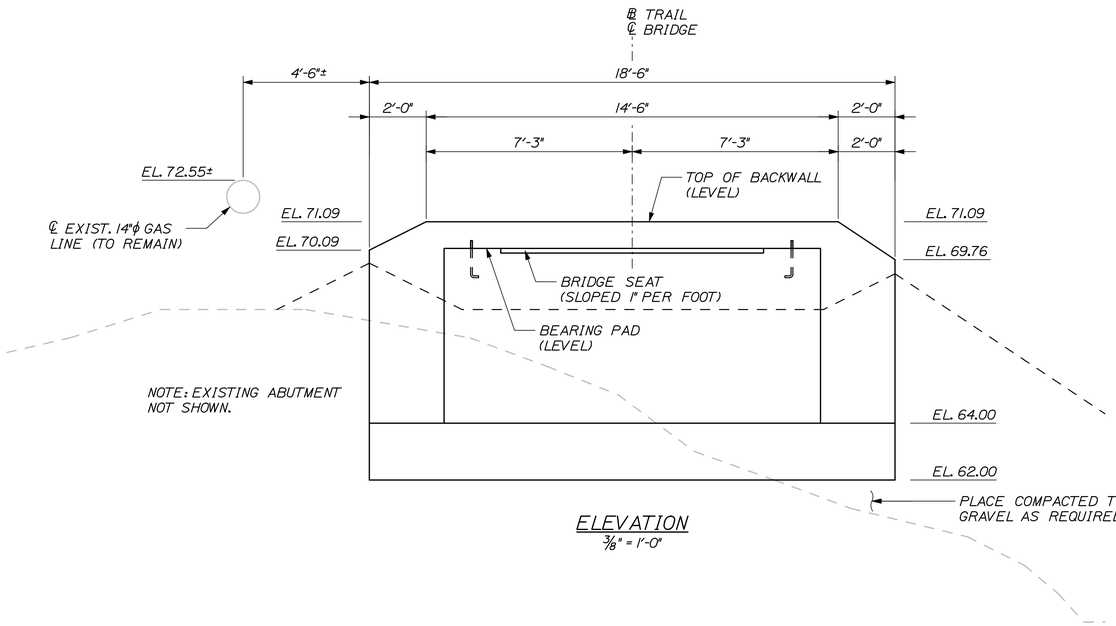
PLAN
3/8" = 1'-0"



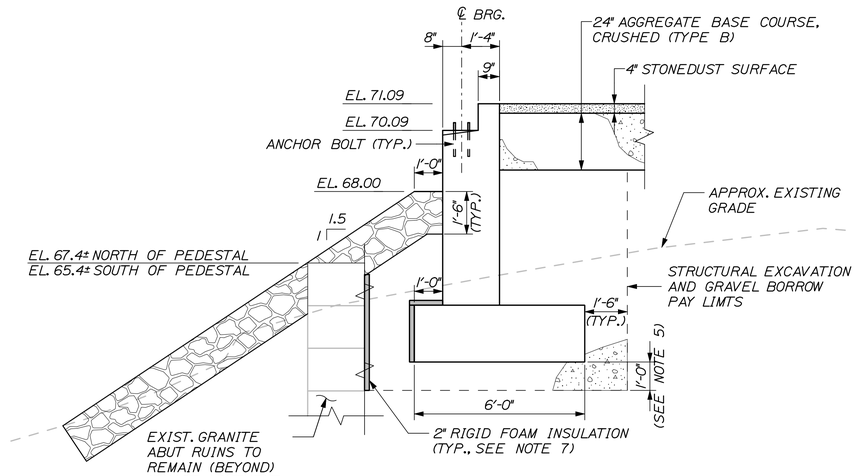
TYPICAL ABUTMENT REINFORCING
3/8" = 1'-0"



TYPICAL WINGWALL REINFORCING
3/8" = 1'-0"



ELEVATION
3/8" = 1'-0"



TYPICAL ABUTMENT SECTION
3/8" = 1'-0"

REVISED ABUTMENT DESIGN

NOTES:

1. ALL CONCRETE SHALL BE CLASS A, AND SHALL BE PAID UNDER ITEM 502.219 "STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS". THE ABUTMENT SEAT, BEARING PADS, WINGWALLS, AND BACKWALLS SHALL BE CAST MONOLITHICALLY.

2. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED ¾".

3. ALL REINFORCING STEEL SHALL BE BLACK BAR AND HAVE A MINIMUM COVER OF 2" UNLESS OTHERWISE NOTED. FABRICATION, DELIVERY, AND PLACEMENT OF REINFORCING STEEL SHALL BE INCIDENTAL TO ITEM 502.219 "STRUCTURAL CONCRETE ABUTMENTS AND RETAINING WALLS".

4. THE LIMITS OF EXISTING GRANITE ABUTMENT ARE UNKNOWN. IF INTERFERENCE BETWEEN THE EXISTING AND PROPOSED ABUTMENT IS ENCOUNTERED DURING EXCAVATION, THE RESIDENT MAY DIRECT THAT PORTIONS OF THE GRANITE MASONRY ABUTMENT FOOTING BE REMOVED. REMOVAL SHALL BE INCIDENTAL TO ITEM 206.082.

5. STRUCTURAL EXCAVATION BELOW ELEVATION 62.0 WILL NOT BE REQUIRED IF THE EXISTING MATERIAL IS GRANULAR AND DEEMED SUITABLE FOR USE BY THE RESIDENT.

6. ALL REINFORCING STEEL BAR BENDS SHALL BE IN CONFORMANCE WITH THE LATEST REVISION OF ACI STANDARD 318. MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:
   - #5 BARS: 2'-3" MIN.
   - #6 BARS: 2'-7" MIN.

7. WHERE SPECIFIED, RIGID FOAM INSULATION SHALL RUN ALONG THE FULL LENGTH OF THE PROPOSED ABUTMENT.

8. MAXIMUM UNFACTORED TOE PRESSURE = 2,740 PSF (GROUP IV LOADING). MAXIMUM ALLOWABLE BEARING PRESSURE (AVERAGE) = 3,000 PSF, MAXIMUM ALLOWABLE TOE PRESSURE = 4,000 PSF.

HNTB
340 COUNTY ROAD, SUITE 6-C
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE
P.E. NUMBER 6452
DATE

	BY	DATE
DESIGNED	TRC	06/09
DRAWN	MPC	06/09
CHECKED	JDW	06/09
REVISIONS 1	ABUT. DESIGN	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE
KENNEBUNK RIVER - ABUTMENT NO. 2

SHEET NUMBER
66
OF 69

Date: 8/17/2009
Filename: 066_Kenn River Abut2.dgn

MAINE 2000 (WEST)

MARION & RICHARD ANGERS
KENNEBUNK ASSESSOR'S MAP 30, LOT 95 (PORTION OF)
EASEMENT RIGHTS = 2,154 SF (0.05 ACRES)

TOTAL PARCEL = 18.00 (PER ASSESSOR'S DATA)

MAINE SCHOOL ADMINISTRATIVE DISTRICT 71
KENNEBUNK ASSESSOR'S MAP 29, LOT 10 (PORTION OF)
EASEMENT RIGHTS = 27,387 SF (0.63 ACRES)

TOTAL PARCEL = 36.75 (PER ASSESSOR'S DATA)

N/F
MSAD 71
YCRD 10122/74

N/F
ANGERS
YCRD 15012/437

N/F
UNITIL

N/F
JOANN J. LANK
LIVING TRUST
YCRD 13849/331

27,387 SF
(.63 ACRES)

2,154 SF
(.05 ACRES)

24,536 SF
(.56 ACRES)

BASE LINE
EASTERN TRAIL
MEDIAN
MAINE TURNPIKE
TRAIL BASE LINE

1254+00
1253+00
1252+00
1251+00
1250+00
1249+00

TP 5002+00
TP 5003+00
TP 5004+00
TP 5005+00
TP 5006+00
TP 5007+00
TP 5008+00
TP 5009+00
TP 5010+00
TP 5011+00
TP 5012+00
TP 5013+00

N69°13'27"E
130.00'
78.81'
+62.86'
233.26'
S22°16'24"W
N22°16'24"E
343.30'
+75.73'
50.35'
220.32'
S47°49'01"W
+44.41
77.84'
390.00
N22°16'24"E
232.09
S01°59'04"W
145.00
S75°43'09"W
+74.47'
75.72
S22°16'24"W
+99.09
42.62'
N47°49'01"E
25.38'
91.30'
S22°16'24"W
+65.28
24.80'
65.39
N47°49'01"E
N63°09'16"E
19.56'
N22°16'24"E
5.86'

¾" REBAR
TO BE SET

¾" REBAR
TO BE SET

SIGN

JOANN J. LANK LIVING TRUST
KENNEBUNK ASSESSOR'S MAP 30, LOT 108 (PORTION OF)
EASEMENT RIGHTS = 24,536 SF (0.56 ACRES)

TOTAL PARCEL = 35.00 (PER ASSESSOR'S DATA)

30 0 30 60 90
SCALE: 1" = 30 FEET

NOTES:

EASEMENT DEEDS RECORDED IN THE YORK COUNTY REGISTRY OF DEEDS ON JUNE 2, 2009, TO EASTERN TRAIL ALLIANCE:

1. FROM MARION AND RICHARD ANGERS, BOOK 15645, PAGE 532, DATED MAY 29, 2009.
2. FROM JOANN J. LANK LIVING TRUST, BOOK 15645, PAGE 534, DATED JUNE 1, 2009.
3. FROM MAINE SCHOOL ADMIN. DISTRICT, BOOK 15645, PAGE 536, DATED JUNE 1, 2009.

MAINE COORDINATE SYSTEM OF 2000, WEST ZONE

HNTB
340 COUNTY ROAD, SUITE 6-C
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	PPD	06/09
DRAWN	PPD	06/09
CHECKED	PPD	06/09
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

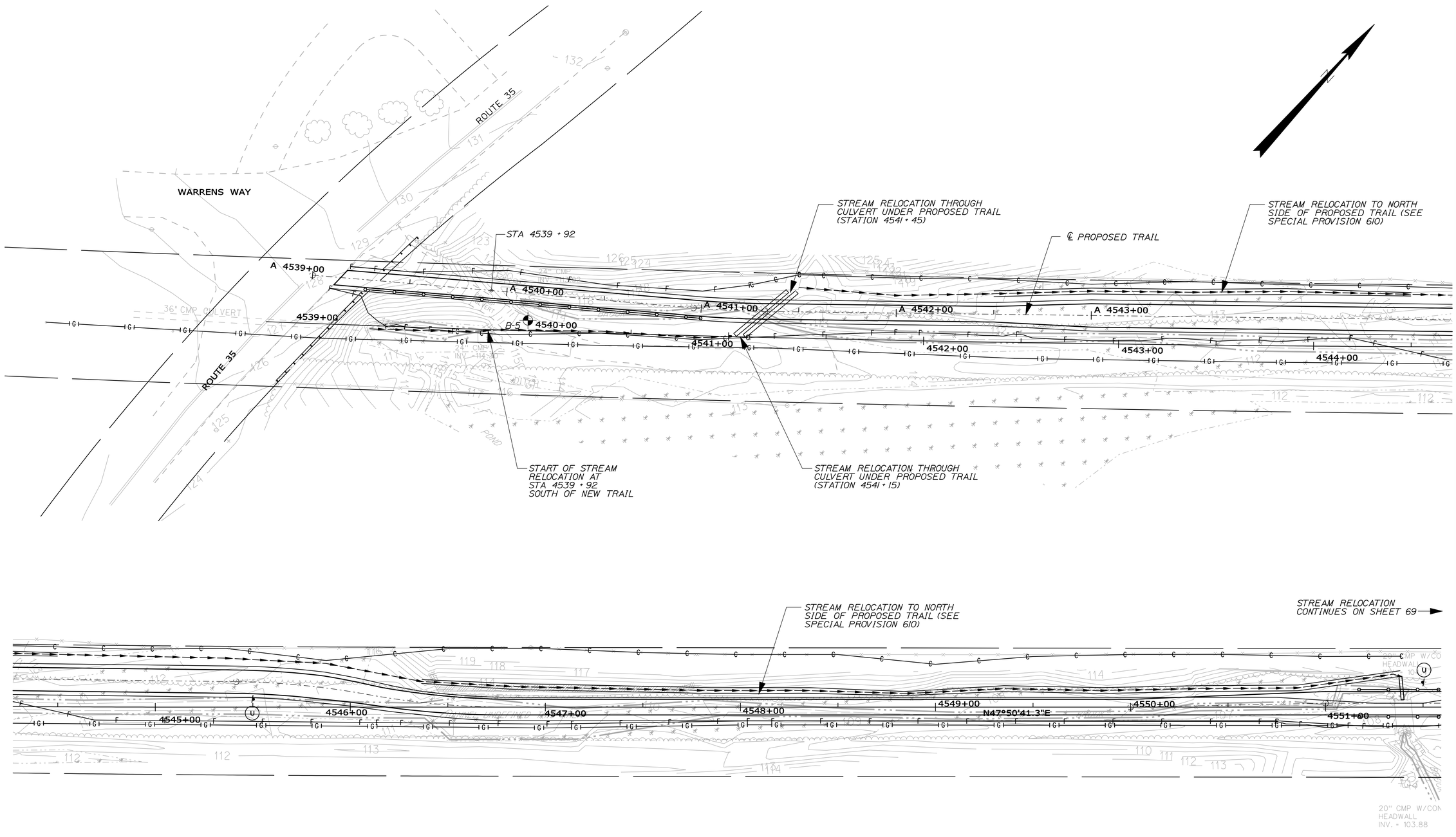
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

PROPERTY AND RIGHT-OF-WAY PLAN

SHEET NUMBER
67
OF 69

M:\JOBS\47578 - EASTERN TRAIL\002 - FINAL DESIGN\CAD\ROW\FINAL\FINAL ETMD ROW 6-04-09.DWG 05/22/09 12:27

Date:8/17/2009



NOTES

1. REFER TO SPECIAL PROVISION 610 FOR STREAM RELOCATION AND RESTORATION WORK.
2. STREAM BOULDERS SHALL BE PLACED RANDOMLY WITHIN THE STREAM CHANNEL AND ON BANKS AS DIRECTED BY THE RESIDENT (SEE SPECIAL SPECIFICATION 610).
3. POST-CONSTRUCTION FLOW ONTO ABUTTING PROPERTY SOUTHEAST OF THE CORRIDOR'S INTERSECTION WITH ROUTE 35 SHALL MATCH THE PRE-CONSTRUCTION FLOW RATE.

STREAM RELOCATION PLAN

REVISED STREAM RELOCATION

25 0 25 50

Filename: 068_Stream plan.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	KLS	05/09
DRAWN	KJH	05/09
CHECKED	KLS	05/09
REVISIONS 1	RELOC. STREAM	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

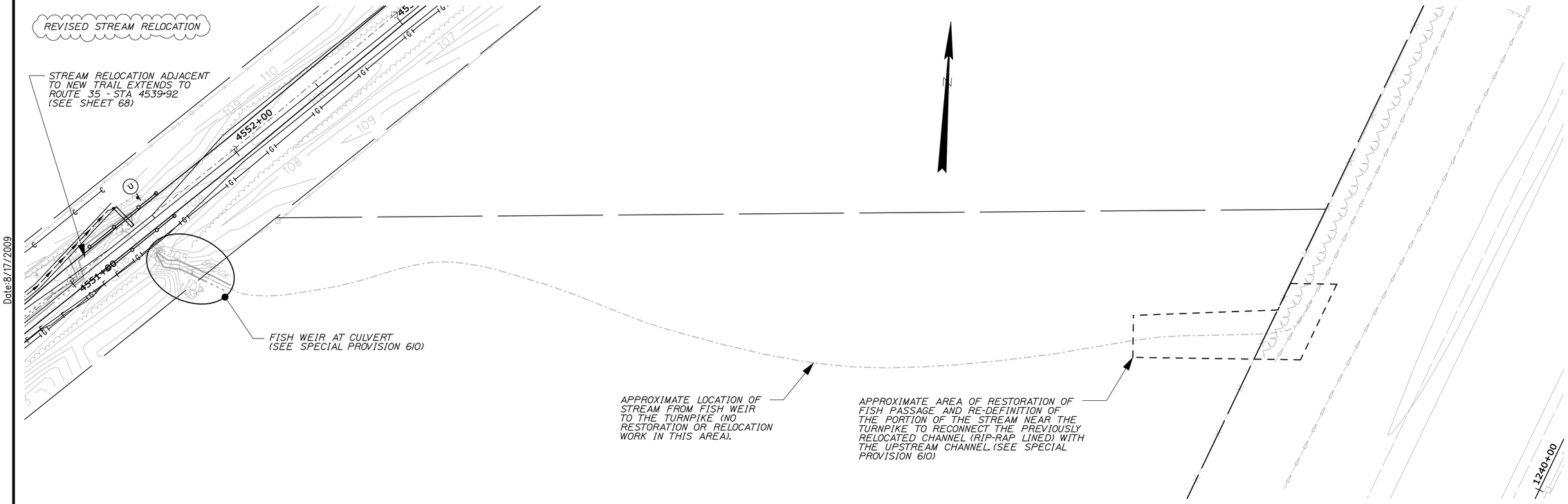
P.E. NUMBER 6452

DATE

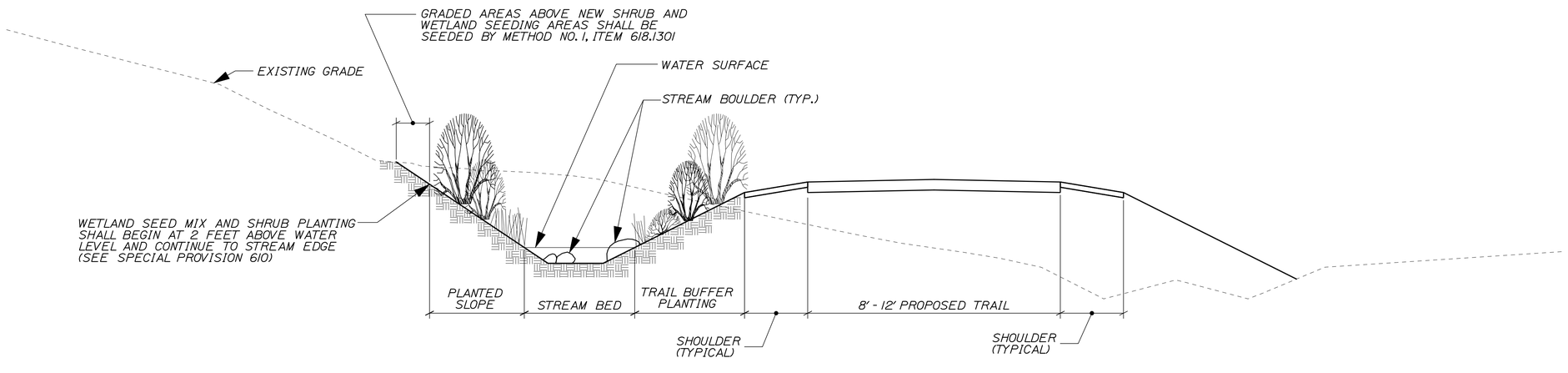
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

STREAM RELOCATION PLAN 1

SHEET NUMBER
68
OF 69



STREAM RELOCATION & RESTORATION PLAN



STREAM RELOCATION TYPICAL SECTION

25 0 25 50

Date: 8/17/2009

Filename: 069_Stream_plan.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	K.L.S	05/09
DRAWN	K.J.H	05/09
CHECKED	K.L.S	05/09
REVISIONS 1	RELOC. STREAM	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

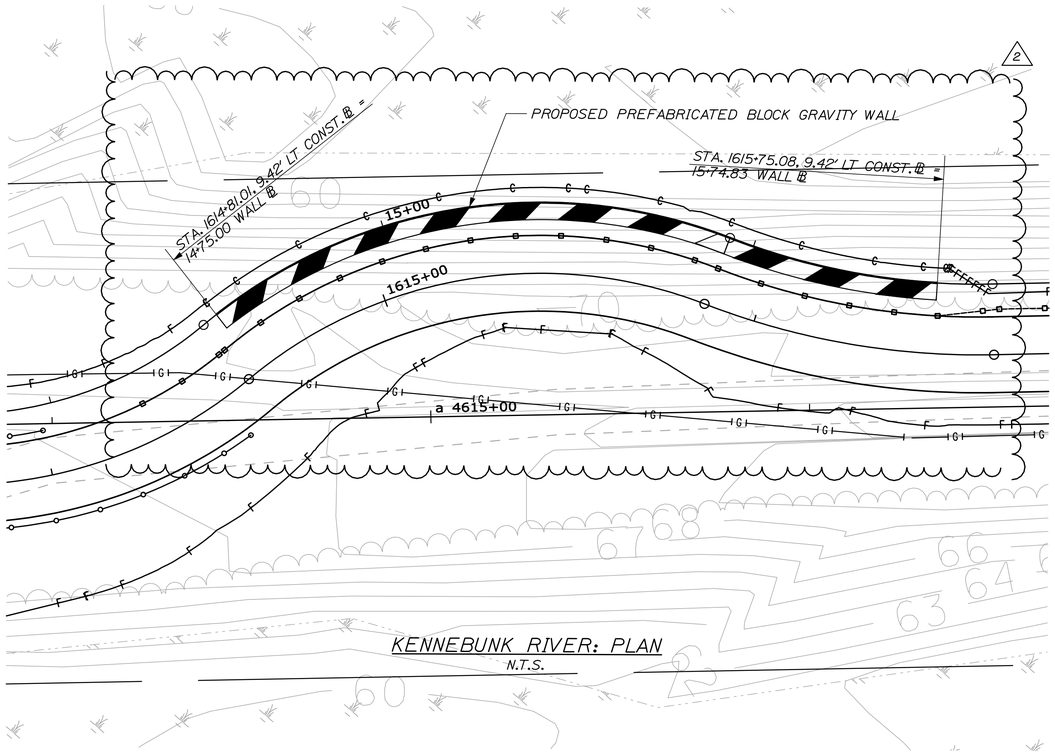
P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

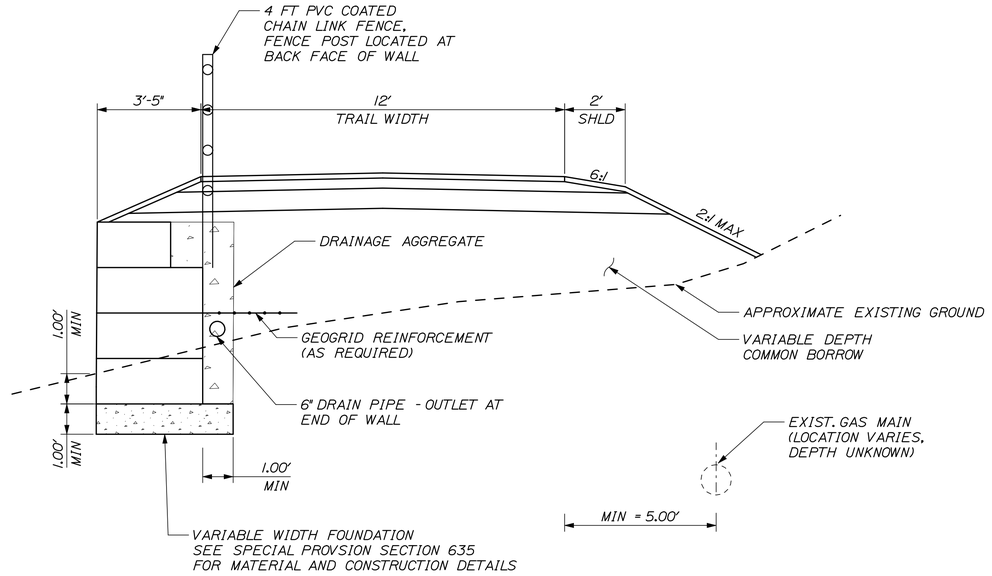
STREAM RELOCATION PLAN 2

SHEET NUMBER
69
OF 69



KENNEBUNK RIVER: PLAN

N.T.S.

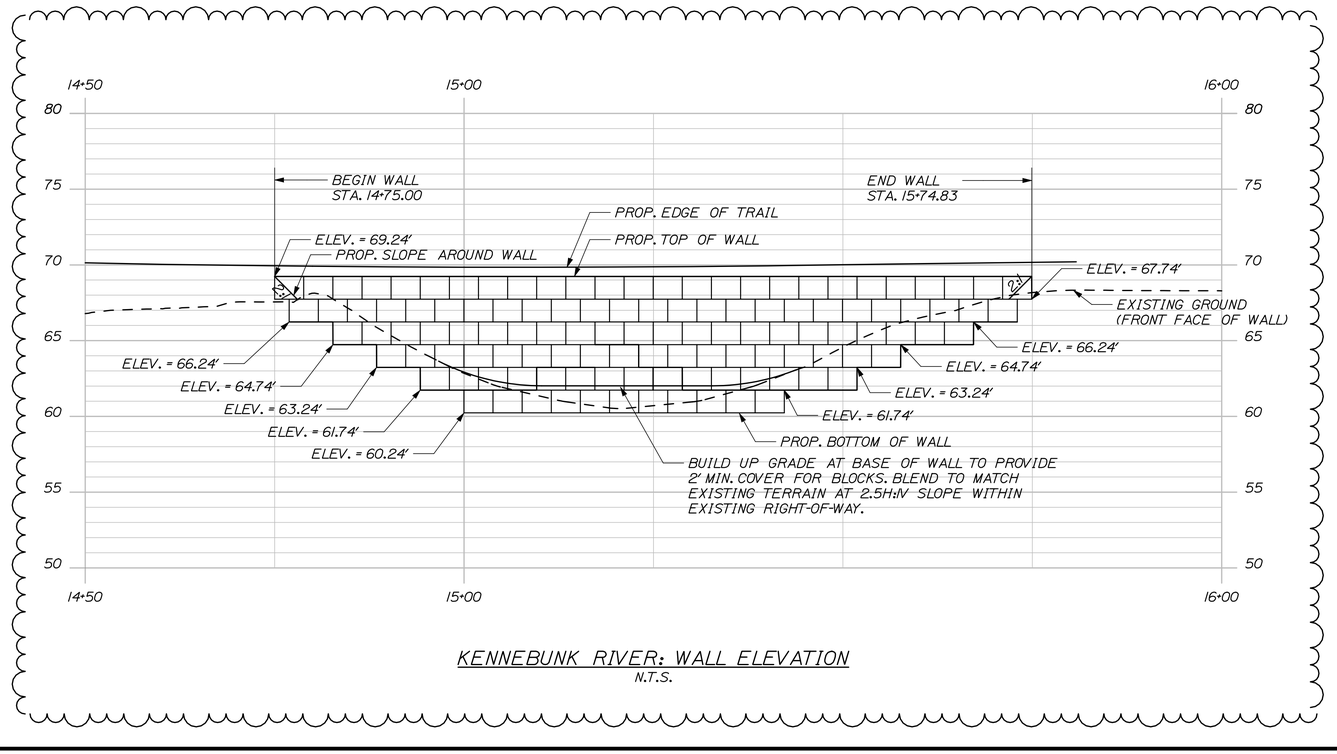


KENNEBUNK RIVER APPROACH WALL TYPICAL SECTION

N.T.S

NOTE:

1. SEE PLAN AND ELEVATION FOR LOCATION AND HEIGHT OF PROPOSED RETAINING WALLS.
2. 1'-6" HIGH X 46⅛" LONG X 41" WIDE BLOCK USED FOR LAYOUT PURPOSES.



KENNEBUNK RIVER: WALL ELEVATION

N.T.S.

1. THE CONTRACTOR SHALL PROVIDE A PRECAST CONCRETE BLOCK GRAVITY WALL OR A PRECAST AGGREGATE-FILLED CONCRETE BLOCK GRAVITY WALL IN ACCORDANCE WITH SPECIAL PROVISION 635 FOR THE RELEVANT WALL SYSTEM. PRECAST CONCRETE BLOCK GRAVITY WALLS SHALL BE DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER AND THE DESIGN SHALL BE SUBMITTED TO THE RESIDENT FOR REVIEW. PLAN DETAILS ARE SHOWN FOR ESTIMATING PURPOSES ONLY.
2. THE PRECAST BLOCKS UNITS SHALL BE "REDI-ROCK" AS PRODUCED BY A LICENSED MANUFACTURER OF "REDI-ROCK" WALL SYSTEMS, OR "STONESTRONG" AS PRODUCED BY A LICENSED MANUFACTURER OF "STONESTRONG SYSTEMS OR APPROVED EQUAL.
3. BACKFILL AND FOUNDATION SOIL PARAMETERS FOR USE IN THE SUBMITTED DESIGN SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR THIS WALL.
4. THE PRECAST CONCRETE BLOCK GRAVITY WALL SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, WITH 2008 INTERIMS.
5. THE APPLIED FACTORED BEARING PRESSURE FOR PRECAST CONCRETE BLOCK GRAVITY WALL SHALL NOT EXCEED 7.4 KSF FOR A REINFORCED WALL OR 3.6 KSF FOR AN UNREINFORCED WALL, FOR THE STRENGTH LIMIT STATE.
6. ALL BLOCKS AT THE ENDS OF THE WALL(S) MUST BE FINISHED ON THREE SIDES: THE FRONT, THE TOP AND THE EXPOSED END. BLOCKS WITH EXPOSED SURFACES AT THE ENDS AND TOP OF THE WALL MUST BE MANUFACTURED FOR THIS PURPOSE AND MUST BE FINISHED TO MATCH THE FACE OF THE BLOCKS
7. PIPED DRAINAGE SHALL BE INCLUDED IN THE DESIGN OF THE WALLS. WALL DRAINAGE WILL BE INCIDENTAL TO CONSTRUCTION OF THE WALL.
8. A MINIMUM EMBEDMENT DEPTH OF 1 FOOT IS REQUIRED IN THE DESIGN AND CONSTRUCTION OF THE PRECAST CONCRETE BLOCK GRAVITY WALL.
9. THE FACE QUANTITY OF PRECAST CONCRETE BLOCK WALL WILL BE APPROVED BY THE PROJECT ENGINEER.

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	RWH	08/09
DRAWN	MPC	08/09
CHECKED	DGE	08/09
REVISIONS 1	SHEET ADDED	08/09
REVISIONS 2	DETAILS REVISED	02/10
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

RETAINING WALL DETAILS

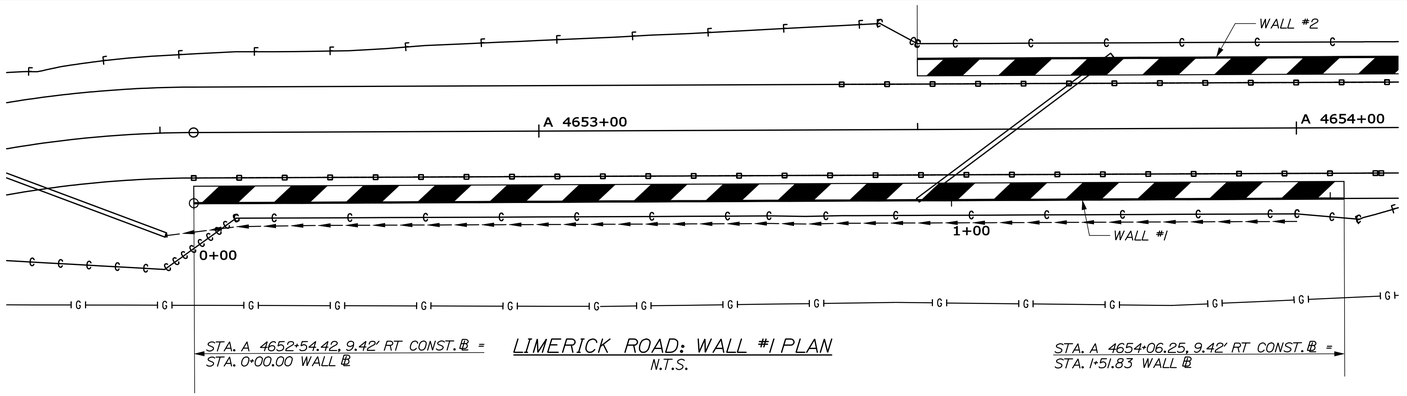
SHEET NUMBER

11A

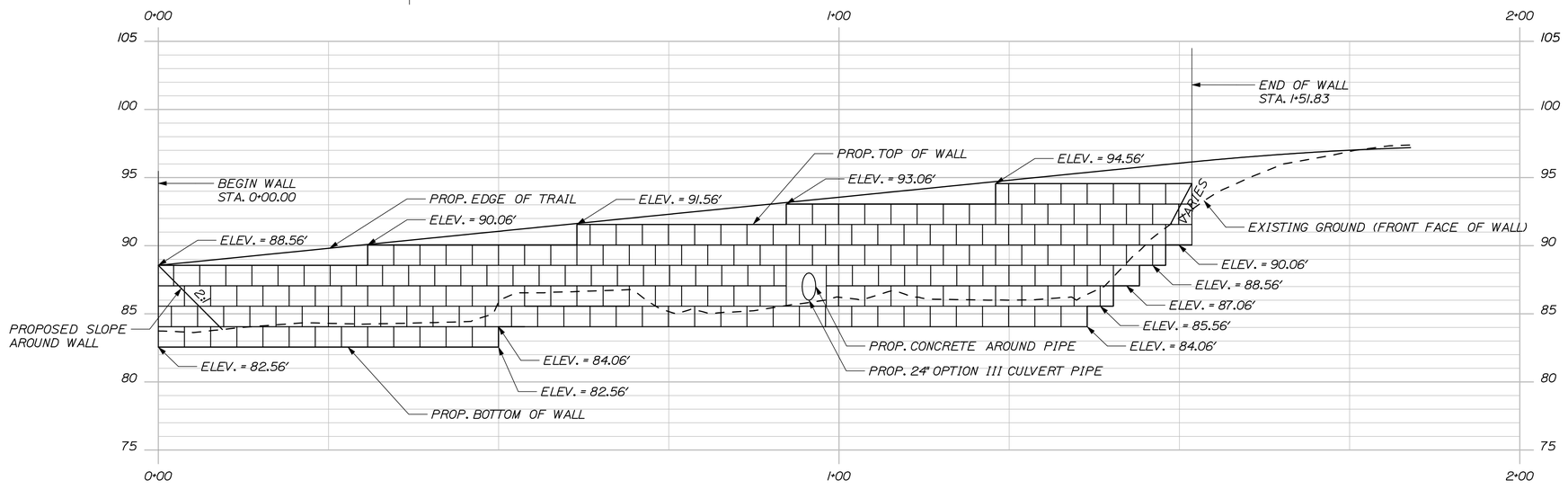
OF 69

Date: 2/16/2010

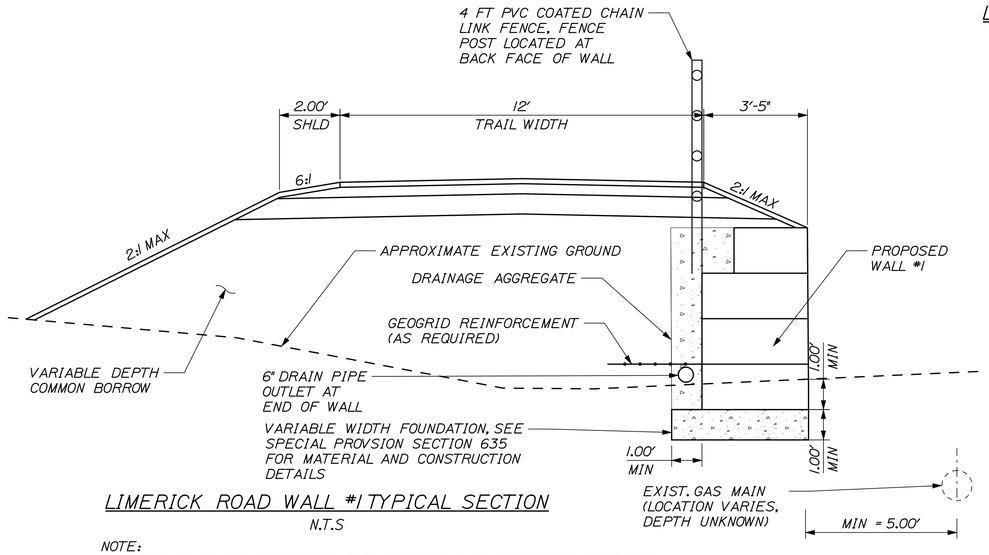
Filename: 11A_RetainingWalls 1.dgn



LIMERICK ROAD: WALL #1 PLAN
N.T.S.



LIMERICK ROAD: WALL #1 ELEVATION
N.T.S.



LIMERICK ROAD WALL #1 TYPICAL SECTION
N.T.S

NOTE:
1. SEE PLAN AND ELEVATION FOR LOCATION AND HEIGHT OF PROPOSED RETAINING WALLS.
2. 1'-6" HIGH X 46/8" LONG X 41" WIDE BLOCK USED FOR LAYOUT PURPOSES.

PRECAST CONCRETE BLOCK GRAVITY WALL

1. CONCRETE AROUND PIPE SHALL BE PROVIDED FOR THE PROPOSED 24" OPTION III CULVERT SHOWN ON THE PLANS. THE CONCRETE AREA SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS PREPARED IN ACCORDANCE WITH SPECIAL PROVISION 635 OF THE CONTRACT DOCUMENTS.
2. ALL MATERIAL NECESSARY FOR THE CONSTRUCTION OF THE CONCRETE AROUND PIPE AREA AND WORK ASSOCIATED WITH THE COMPLETION THEREOF SHALL BE CONSIDERED INCIDENTAL TO ITEM 635.31 PREFABRICATED CONCRETE BLOCK GRAVITY WALL. NO SEPARATE PAY ITEM SHALL BE MADE.
3. DIMENSIONS OF THE CONCRETE AREA SHALL BE VERIFIED BY THE CONTRACTOR AND SHALL BE ADEQUATE FOR THE PROPOSED 24" OPTION III CULVERT.
4. SEE SHEET 11A FOR ADDITIONAL WALL NOTES.

Date:8/17/2009

Filename: 11B_RetainingWalls 2.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	DATE	BY
DESIGNED	08/09	RWH
DRAWN	08/09	MPC
CHECKED	08/09	DOE
REVISIONS 1	08/09	SHEET ADDED
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

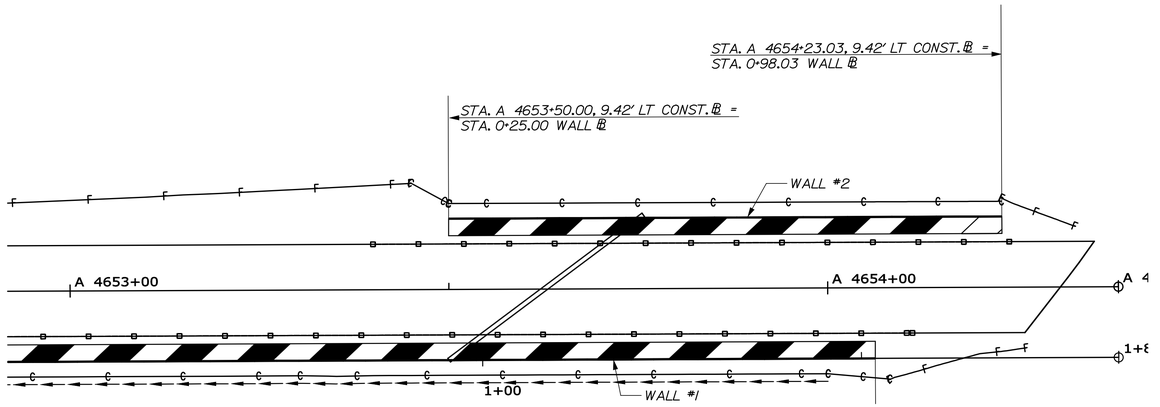
P.E. NUMBER 6452

DATE

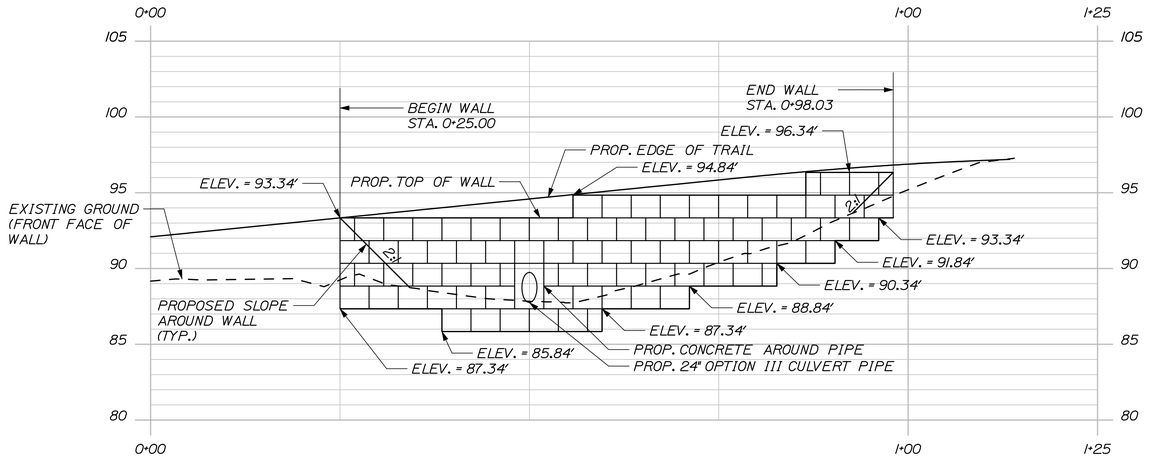
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

RETAINING WALL DETAILS

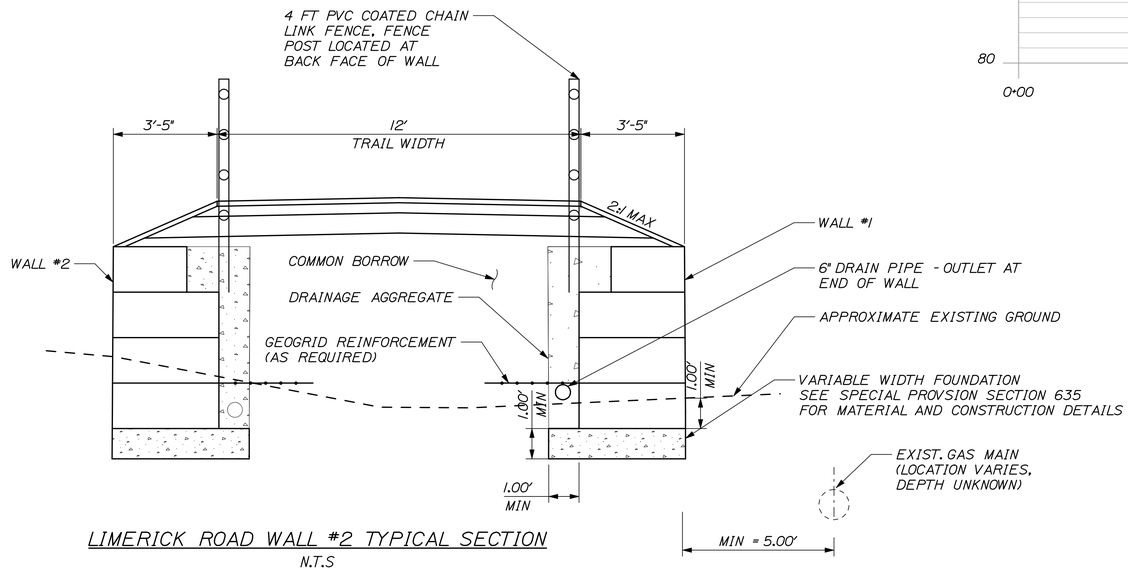
SHEET NUMBER
11B
OF 69



LIMERICK ROAD: WALL #2 PLAN
N.T.S.



LIMERICK ROAD: WALL#2 ELEVATION
N.T.S.



LIMERICK ROAD WALL #2 TYPICAL SECTION
N.T.S

NOTE:
1. SEE PLAN AND ELEVATION FOR LOCATION AND HEIGHT OF PROPOSED RETAINING WALLS.
2. 1'-6" HIGH X 46 1/8" LONG X 41" WIDE BLOCK USED FOR LAYOUT PURPOSES.

PRECAST CONCRETE BLOCK GRAVITY WALL

1. CONCRETE AROUND PIPE SHALL BE PROVIDED FOR THE PROPOSED 24" OPTION III CULVERT SHOWN ON THE PLANS. THE CONCRETE AREA SHALL BE CLEARLY SHOWN ON THE SHOP DRAWINGS PREPARED IN ACCORDANCE WITH SPECIAL PROVISION 635 OF THE CONTRACT DOCUMENTS.
2. ALL MATERIAL NECESSARY FOR THE CONSTRUCTION OF THE CONCRETE AROUND PIPE AREA AND WORK ASSOCIATED WITH THE COMPLETION THEREOF SHALL BE CONSIDERED INCIDENTAL TO ITEM 635.31 PREFABRICATED CONCRETE BLOCK GRAVITY WALL. NO SEPARATE PAY ITEM SHALL BE MADE.
3. DIMENSIONS OF THE CONCRETE AREA SHALL BE VERIFIED BY THE CONTRACTOR AND SHALL BE ADEQUATE FOR THE PROPOSED 24" OPTION III CULVERT.
4. SEE SHEET IIA FOR ADDITIONAL WALL NOTES.

Date:8/17/2009

Filename: 11C_RetainingWalls 3.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	DATE	BY
DESIGNED	08/09	RWH
DRAWN	08/09	MPC
CHECKED	08/09	DGE
REVISIONS 1	08/09	SHEET ADDED
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

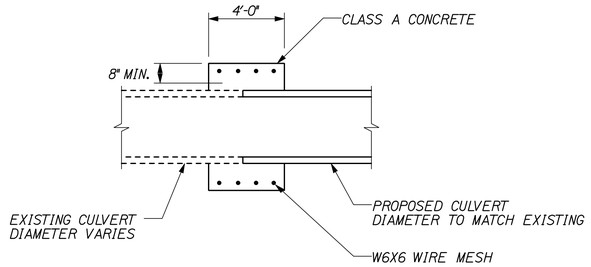
P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

RETAINING WALL DETAILS

SHEET NUMBER
11C
OF 69

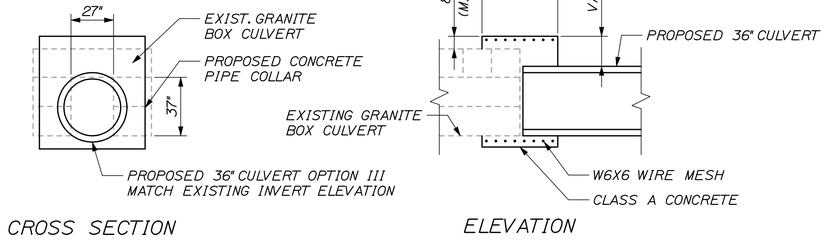


CONCRETE PIPE COLLAR DETAIL #1

STA. 455I+40, LT.

NOTES:
1. SEE SPECIAL PROVISION, SECTION 603, CONCRETE PIPE COLLAR FOR CONSTRUCTION REQUIREMENTS.

2. CONCRETE PIPE COLLARS REQUIRED FOR ALL DRAINAGE PIPE EXTENSIONS.

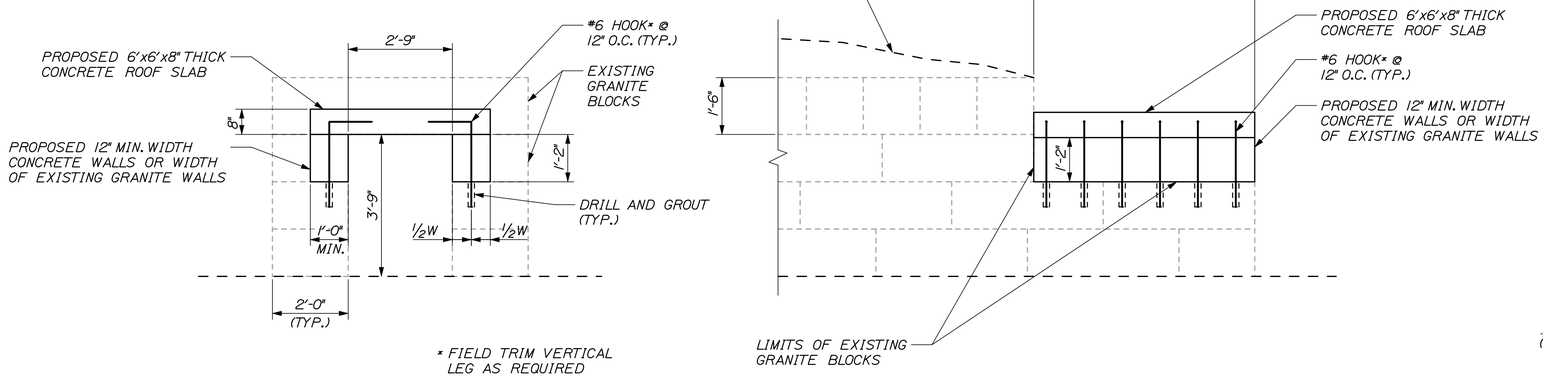


CONCRETE PIPE COLLAR DETAIL #2

STA. 4601+50, LT.

NOTES:
1. SEE SPECIAL PROVISION, SECTION 603, CONCRETE PIPE COLLAR FOR CONSTRUCTION REQUIREMENTS.

2. CONCRETE PIPE COLLARS REQUIRED FOR ALL DRAINAGE PIPE EXTENSIONS.



BOX CULVERT EXTENSION DETAIL

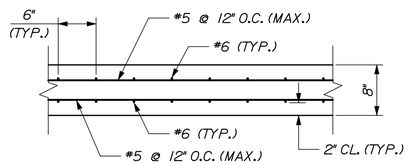
STA. 4707+50, LT.

NOTES:
1. SEE SPECIAL PROVISION, SECTION 502, STRUCTURAL CONCRETE BOX CULVERT FOR CONSTRUCTION REQUIREMENTS.

2. ALL WORK ASSOCIATED WITH BOX CULVERT EXTENSION AT STA. 4707+50, LT. SHALL BE PAID FOR UNDER ITEM 502.327.

3. CONCRETE SHALL BE CLASS A.

4. REINFORCING STEEL SHALL MEET THE REQUIREMENTS OF STANDARD SPECIFICATION 503, REINFORCING STEEL.



PROPOSED ROOF SLAB SECTION

(CUT ALONG CULVERT ℄)

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	DATE
DESIGNED	08/09
DRAWN	08/09
CHECKED	08/09
REVISIONS 1	08/09
REVISIONS 2	
REVISIONS 3	
REVISIONS 4	
REVISIONS 5	
REVISIONS 6	

BY: DOE, MPC, TRC, SHEET ADDED

SIGNATURE

P.E. NUMBER 6452

DATE

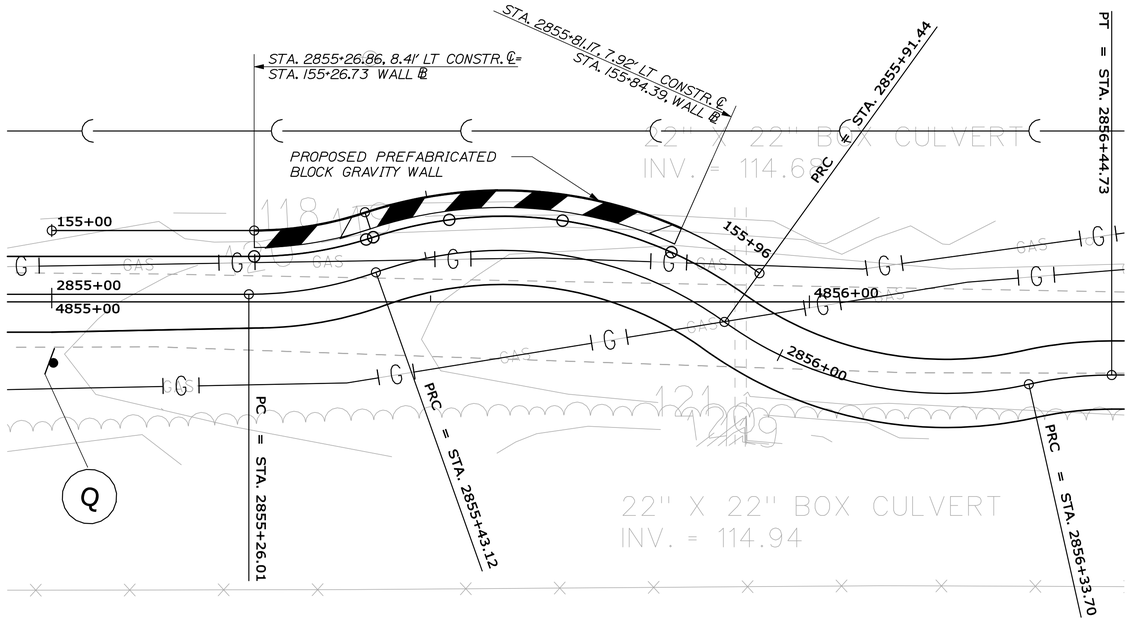
EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

CULVERT EXTENSION DETAILS

SHEET NUMBER
11D
OF 69

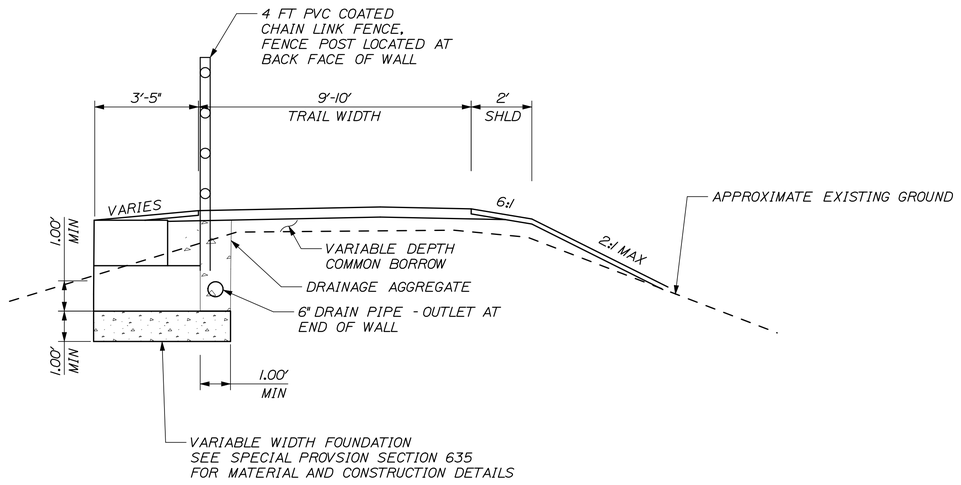
Date:8/17/2009

Filename: 11D_Spec-Details.dgn



WEST COLE ROAD APPROACH: PLAN

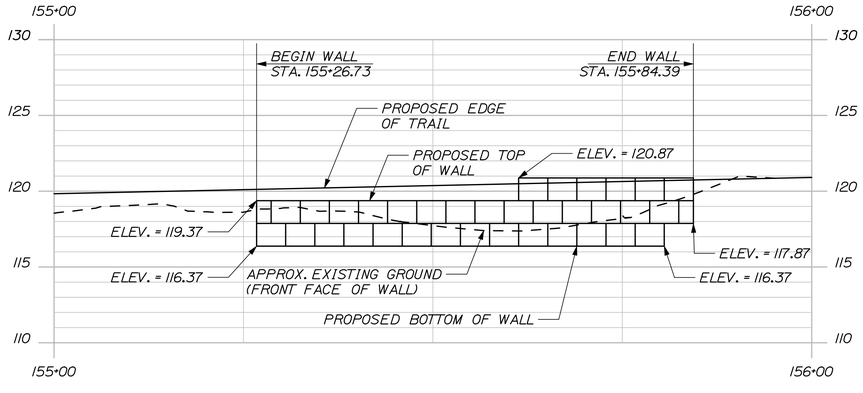
N.T.S.



WEST COLE ROAD APPROACH: WALL TYPICAL SECTION

N.T.S

NOTE:
1. SEE PLAN AND ELEVATION FOR LOCATION AND HEIGHT OF PROPOSED RETAINING WALLS.
2. 1'-6" HIGH X 46 1/8" LONG X 41" WIDE BLOCK USED FOR LAYOUT PURPOSES.



WEST COLE ROAD APPROACH: WALL ELEVATION

N.T.S.

PRECAST CONCRETE BLOCK GRAVITY WALL

1. THE CONTRACTOR SHALL PROVIDE A PRECAST CONCRETE BLOCK GRAVITY WALL OR A PRECAST AGGREGATE-FILLED CONCRETE BLOCK GRAVITY WALL IN ACCORDANCE WITH SPECIAL PROVISION 635 FOR THE RELEVANT WALL SYSTEM. PRECAST CONCRETE BLOCK GRAVITY WALLS SHALL BE DESIGNED AND STAMPED BY A LICENSED PROFESSIONAL ENGINEER AND THE DESIGN SHALL BE SUBMITTED TO THE RESIDENT FOR REVIEW. PLAN DETAILS ARE SHOWN FOR ESTIMATING PURPOSES ONLY.
2. THE PRECAST BLOCKS UNITS SHALL BE "REDI-ROCK" AS PRODUCED BY A LICENSED MANUFACTURER OF "REDI-ROCK" WALL SYSTEMS, OR "STONESTRONG" AS PRODUCED BY A LICENSED MANUFACTURER OF "STONESTRONG SYSTEMS OR APPROVED EQUAL.
3. BACKFILL AND FOUNDATION SOIL PARAMETERS FOR USE IN THE SUBMITTED DESIGN SHALL BE IN ACCORDANCE WITH THE SPECIAL PROVISION FOR THIS WALL.
4. THE PRECAST CONCRETE BLOCK GRAVITY WALL SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 4TH EDITION, WITH 2008 INTERIMS.
5. THE APPLIED FACTORED BEARING PRESSURE FOR PRECAST CONCRETE BLOCK GRAVITY WALL SHALL NOT EXCEED 7.4 KSF FOR A REINFORCED WALL OR 3.6 KSF FOR AN UNREINFORCED WALL, FOR THE STRENGTH LIMIT STATE.
6. ALL BLOCKS AT THE ENDS OF THE WALL(S) MUST BE FINISHED ON THREE SIDES: THE FRONT, THE TOP AND THE EXPOSED END. BLOCKS WITH EXPOSED SURFACES AT THE ENDS AND TOP OF THE WALL MUST BE MANUFACTURED FOR THIS PURPOSE AND MUST BE FINISHED TO MATCH THE FACE OF THE BLOCKS
7. PIPED DRAINAGE SHALL BE INCLUDED IN THE DESIGN OF THE WALLS. WALL DRAINAGE WILL BE INCIDENTAL TO CONSTRUCTION OF THE WALL.
8. A MINIMUM EMBEDMENT DEPTH OF 1 FOOT IS REQUIRED IN THE DESIGN AND CONSTRUCTION OF THE PRECAST CONCRETE BLOCK GRAVITY WALL.
9. THE FACE QUANTITY OF PRECAST CONCRETE BLOCK WALL WILL BE APPROVED BY THE PROJECT ENGINEER.

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	RWH	01/10
DRAWN	RWH	01/10
CHECKED	DCE	01/10
REVISIONS 1	SHEET ADDED	01/10
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

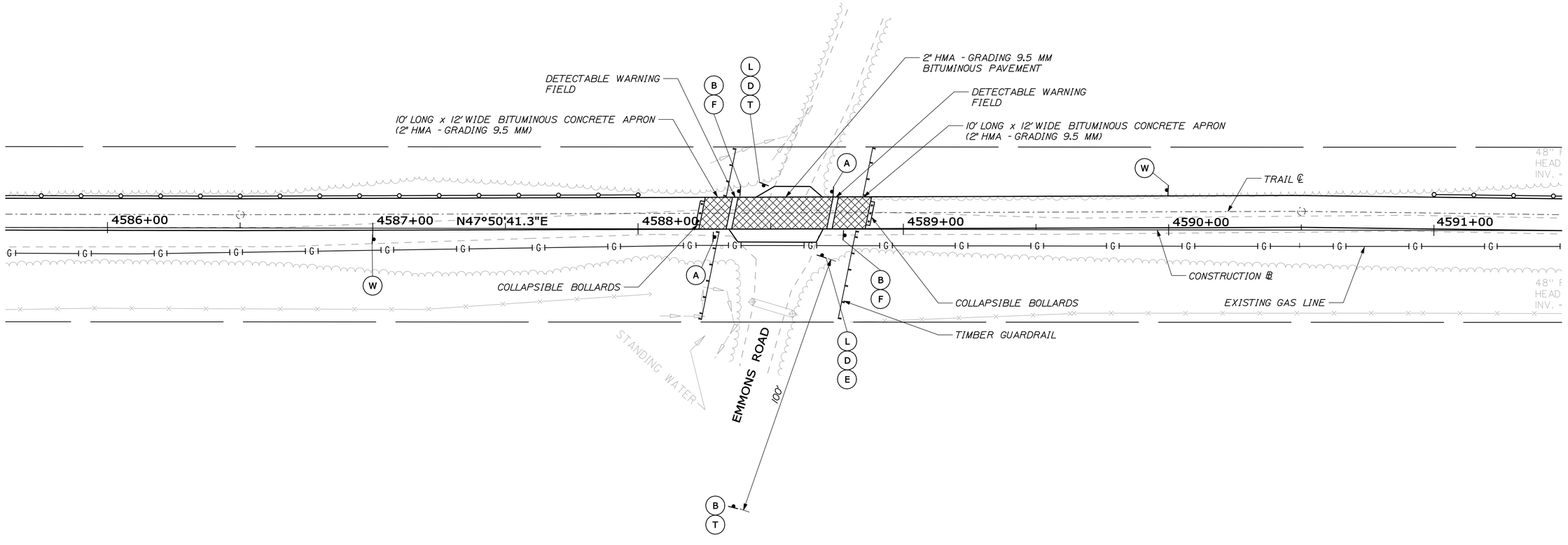
RETAINING WALL DETAILS

SHEET NUMBER
11E
OF 69

Date:1/14/2010

Filename: 11E_RetainingWalls 4.dgn

Date:8/17/2009



LEGEND

- SIGN
- (X) SIGN DESIGNATION - SEE SIGNING DETAILS FOR SIGN DESCRIPTIONS

NOTES:
1. SEE TRAIL PLANS FOR CURVE DATA AND STATION EQUATIONS.

2. SEE DETAIL SHEET FOR MORE INFORMATION ON COLLAPSIBLE BOLLARDS AND DETECTABLE WARNING FIELDS.

NOTE:
TRAIL SHOULDERS NOT SHOWN FOR CLARITY

20 0 20 40

Filename: 50A_EmmonsRoad.dgn

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

SIGNATURE

P.E. NUMBER 6452

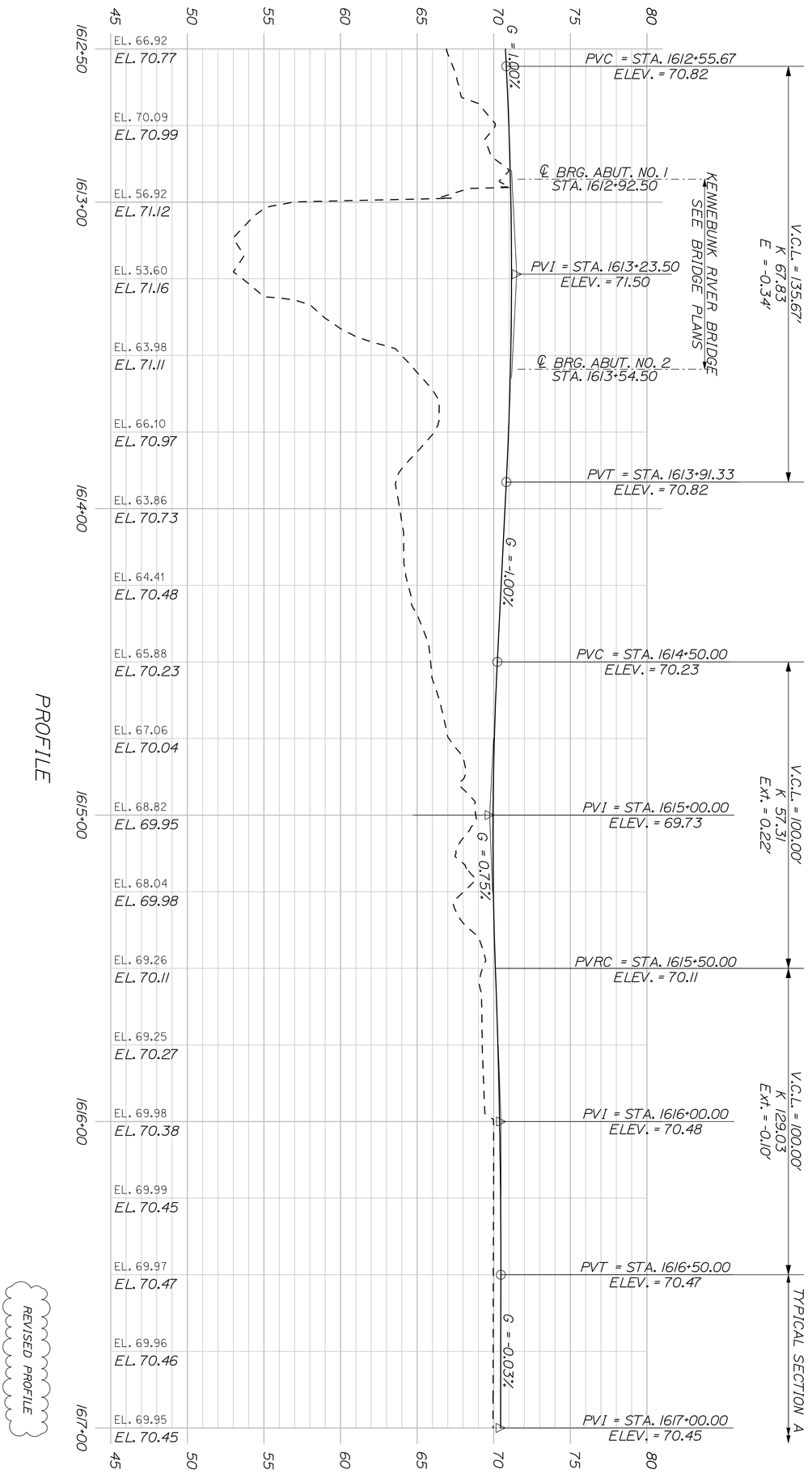
DATE

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	SHEET ADDED	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

EMMONS ROAD CROSSING PLAN

SHEET NUMBER
50A
OF 69



SHEET NUMBER 62A OF 69

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE
KENNEBUNK RIVER BRIDGE PROFILE

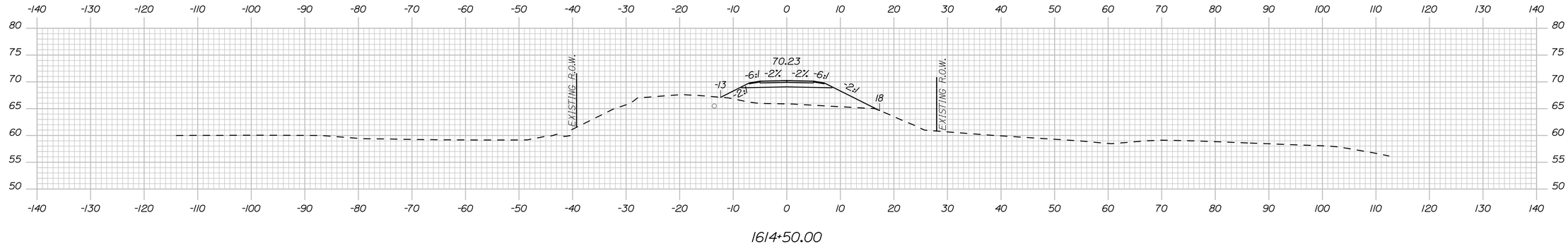
	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. PROFILE	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

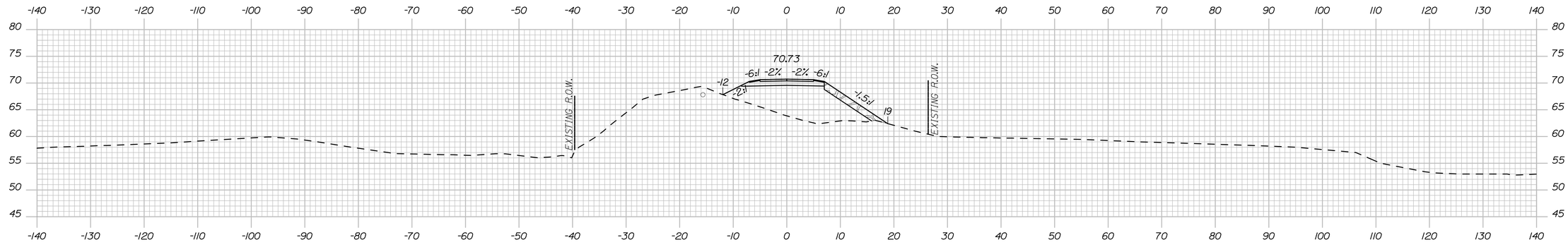
6452
P.E. NUMBER

DATE

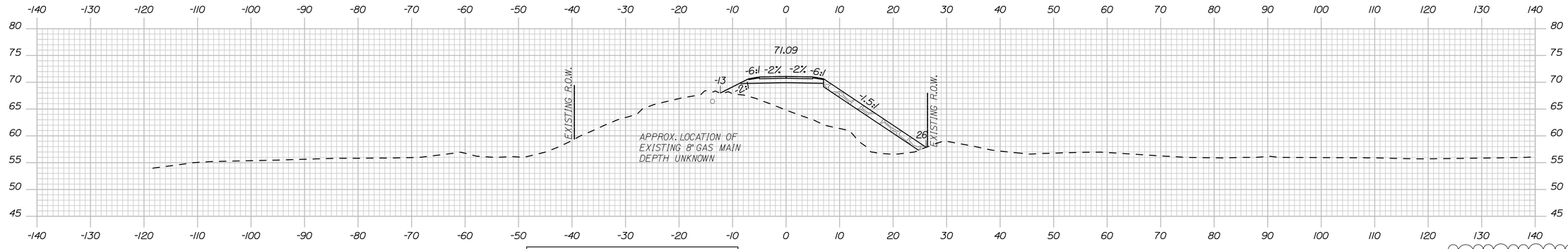
HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155



1614+50.00



1614+00.00



PROPOSED KENNEBUNK RIVER BRIDGE
STA. 1612+92.50 TO STA. 1613+54.50

1613+54.50

REVISED SECTIONS

Filename: 64A_KennebunkRiver XSec_3.dgn Username: mcundiff
Division: BRIDGE Date:8/17/2009

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. SECTIONS	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

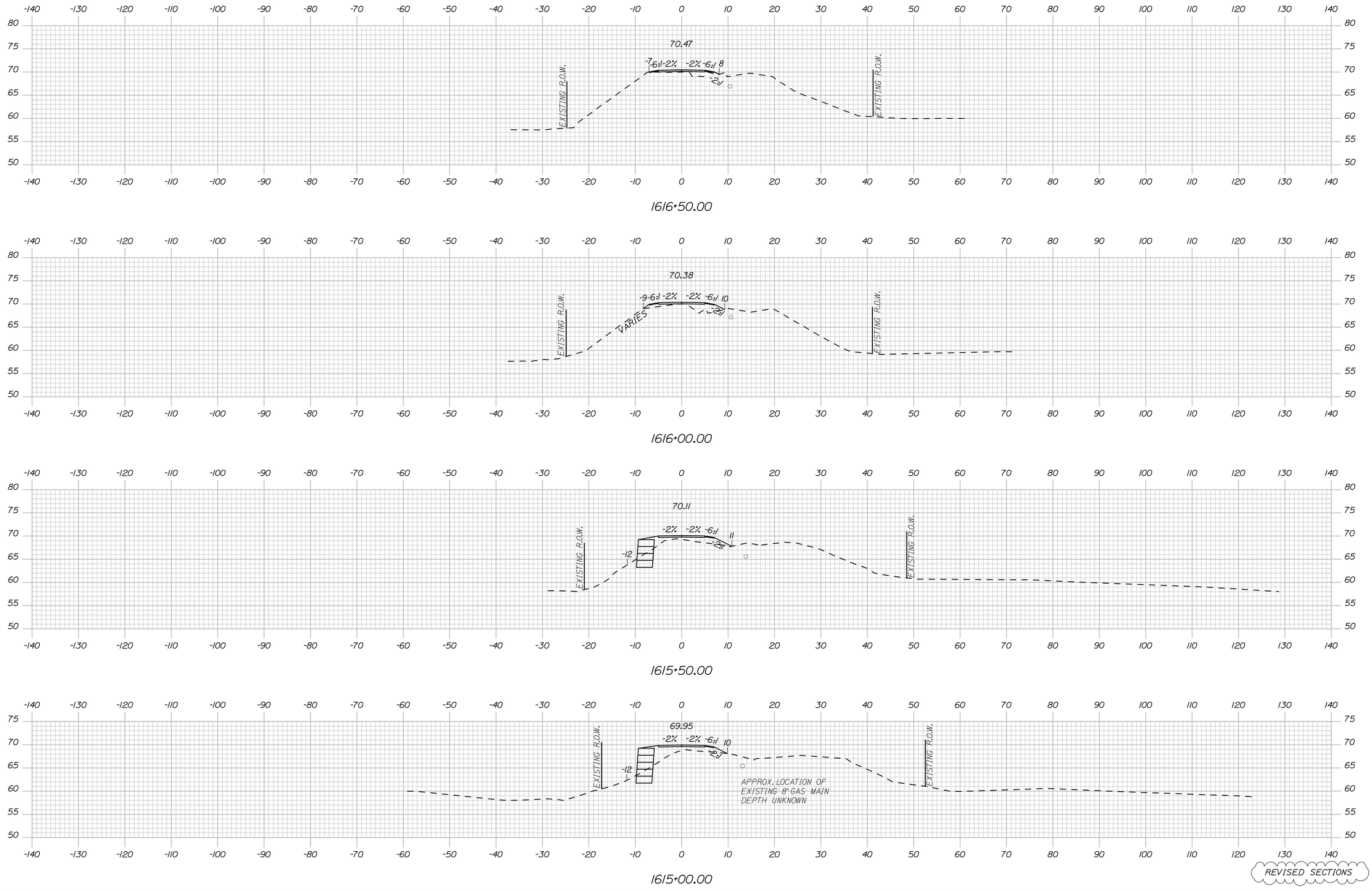
DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER APPROACH CROSS SECTIONS

SHEET NUMBER
64A
OF 69

Sta. 1613+54.50 to Sta. 1614+50.00



Sta. 1615+00.00 to Sta. 1616+50.00

HNTB
2 THOMAS DRIVE
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	AZ	06/09
DRAWN	MPC	06/09
CHECKED	LEM	06/09
REVISIONS 1	REV. SECTIONS	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

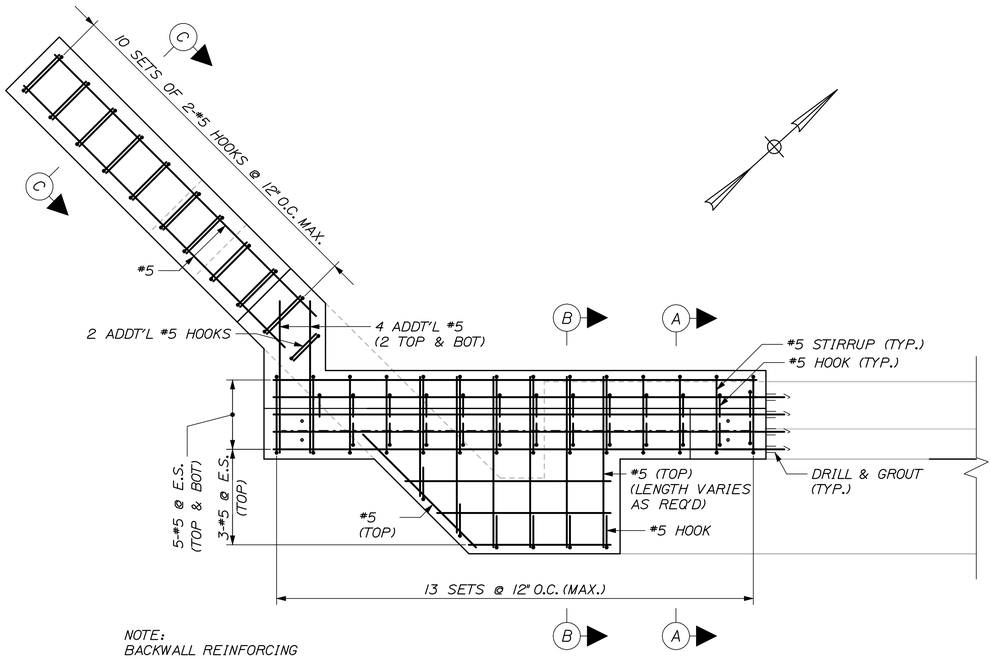
DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER APPROACH CROSS SECTIONS

SHEET NUMBER
64B
OF 69

Filename: 64B_KennebunkRiver XSec_4.dgn Division: BRIDGE Username: mcundiff Date:8/17/2009



NOTE:
BACKWALL REINFORCING
NOT SHOWN.

ABUTMENT NO. 1 - PLAN

(REINFORCING)
1/2" = 1'-0"

NOTES:

1. ALL ELEVATIONS ARE BASED ON FIELD MEASUREMENTS AND SURVEY AND ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ELEVATIONS AND DIMENSIONS AS APPROPRIATE PRIOR TO STARTING WORK.

2. ALL CONCRETE SHALL BE CLASS A, AND SHALL BE PAID UNDER ITEM 502.219, STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS.

3. ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4".

4. WHERE DRILLING AND GROUTING OF REINFORCING STEEL IS SPECIFIED, THE ANCHORING MATERIAL SHALL BE ONE OF THE PRODUCTS LISTED ON THE MAINE DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST OF CHEMICAL ANCHORING MATERIALS. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. EMBEDMENT DEPTH SHALL BE SUFFICIENT TO DEVELOP THE FULL YIELD STRENGTH OF THE BAR. FOR EXISTING CONCRETE, f'c = 3,000 PSI MAY BE ASSUMED. DRILLED AND GROUTED BARS SHALL HAVE 4" COVER.

5. PRIOR TO START OF ABUTMENT MODIFICATIONS, THE EXISTING CONCRETE SURFACES SHALL BE THOROUGHLY CLEANED OF ALL DIRT, DEBRIS, AND FOREIGN MATERIAL BY PRESSURE WASHING OR OTHER METHOD DEEMED SUITABLE BY THE RESIDENT. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO ITEM 502.219, STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS

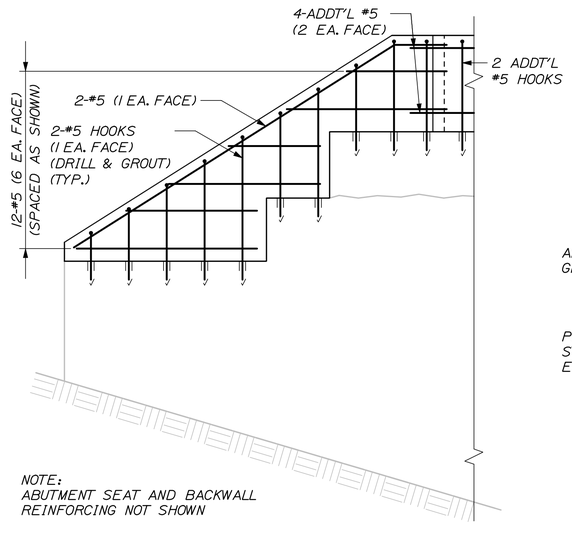
6. ALL EXISTING CONCRETE SURFACES TO RECEIVE NEW CONCRETE SHALL BE COATED WITH AN EPOXY BONDING AGENT LISTED ON THE MAINE DEPARTMENT OF TRANSPORTATION QUALIFIED PRODUCTS LIST.

7. THE CRACK IN THE EXISTING CONCRETE BACKWALL SHALL BE REPAIRED BY THOROUGHLY CLEANING THE CRACK OF ALL DEBRIS AND THEN TIGHTLY PACKING THE SPACE WITH PORTLAND CEMENT MORTAR. THIS WORK SHALL BE COMPLETED ON A TIME AND MATERIALS BASIS AND SHALL BE PAID UNDER ITEM 502.60 "PORTLAND CEMENT MORTAR FOR REPAIR OF GRANITE ABUTMENTS" AND ITEM 629.05 "HAND LABOR, STRAIGHT TIME".

8. ALL REINFORCING STEEL SHALL BE BLACK BAR AND HAVE A MINIMUM COVER OF 2" UNLESS OTHERWISE NOTED. FABRICATION, DELIVERY, AND PLACEMENT OF REINFORCING STEEL SHALL BE INCIDENTAL TO ITEM 502.219 "STRUCTURAL CONCRETE ABUTMENTS AND RETAINING WALLS".

9. ALL DEMOLITION LIMITS SHALL BE SAWCUT A MINIMUM OF 1" DEEP PRIOR TO REMOVAL OF CONCRETE. THE CONTRACTORS METHOD OF CONCRETE DEMOLITION WILL BE SUBJECT TO REVIEW AND APPROVAL BY UNITIL. CONCRETE REMOVAL WILL LIKLEY NEED TO BE COMPLETED WITH HAND HELD CHIPPING HAMMERS.

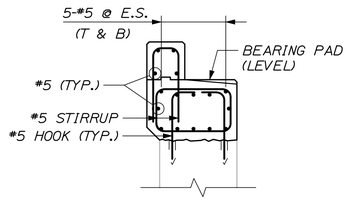
10. ALL REINFORCING STEEL BAR BENDS SHALL BE IN CONFORMANCE WITH THE LATEST REVISION OF ACI STANDARD 318. MINIMUM LAP LENGTHS SHALL BE AS FOLLOWS:
#5 BARS: 2'-3" MIN.



NOTE:
ABUTMENT SEAT AND BACKWALL
REINFORCING NOT SHOWN

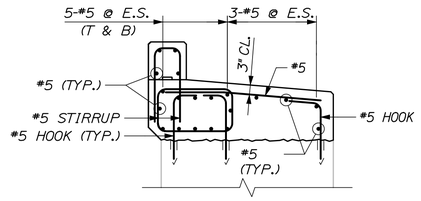
WINGWALL REINFORCING

1/2" = 1'-0"



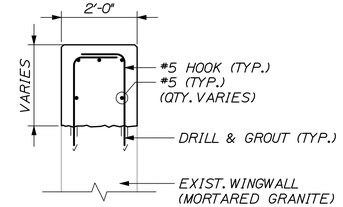
DETAIL A

1/2" = 1'-0"



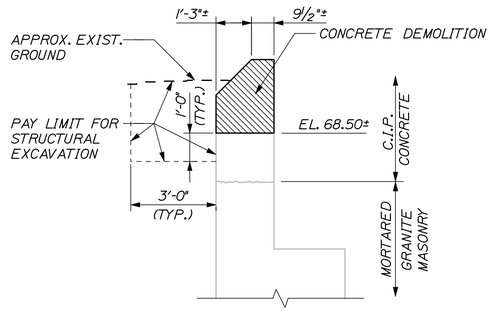
DETAIL B

1/2" = 1'-0"



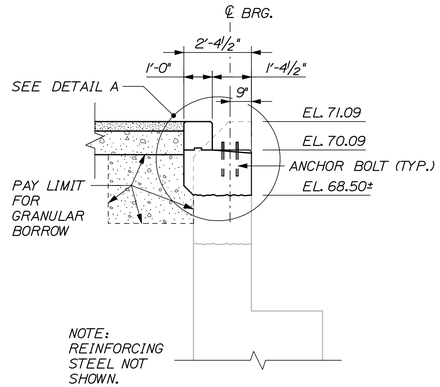
SECTION C-C

1/2" = 1'-0"



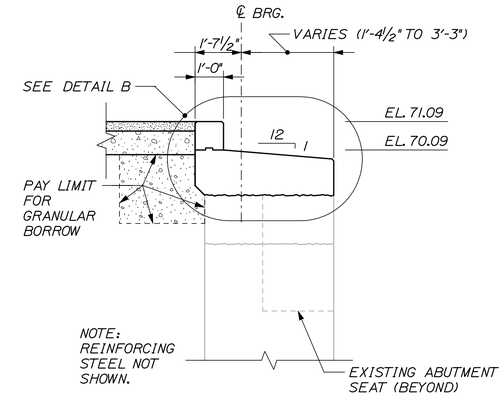
SECTION A-A

(DEMOLITION)
3/8" = 1'-0"



SECTION A-A

(PROPOSED CONSTRUCTION)
3/8" = 1'-0"



SECTION B-B

3/8" = 1'-0"

HNTB
340 COUNTY ROAD, SUITE 6-C
WESTBROOK, ME 04092
(207) 774-5155

	BY	DATE
DESIGNED	TRC	06/09
DRAWN	MPC	06/09
CHECKED	JDW	06/09
REVISIONS 1	SHEET ADDED	08/09
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
REVISIONS 5		
REVISIONS 6		

SIGNATURE

P.E. NUMBER 6452

DATE

EASTERN TRAIL MANAGEMENT DISTRICT
MULTI-USE TRAIL CONSTRUCTION
KENNEBUNK, ARUNDEL AND BIDDEFORD, MAINE

KENNEBUNK RIVER - ABUTMENT NO. 1

SHEET NUMBER
65A
OF 69

Date:8/17/2009

Filename: 65A_Kenn River Abut1 (2).dgn