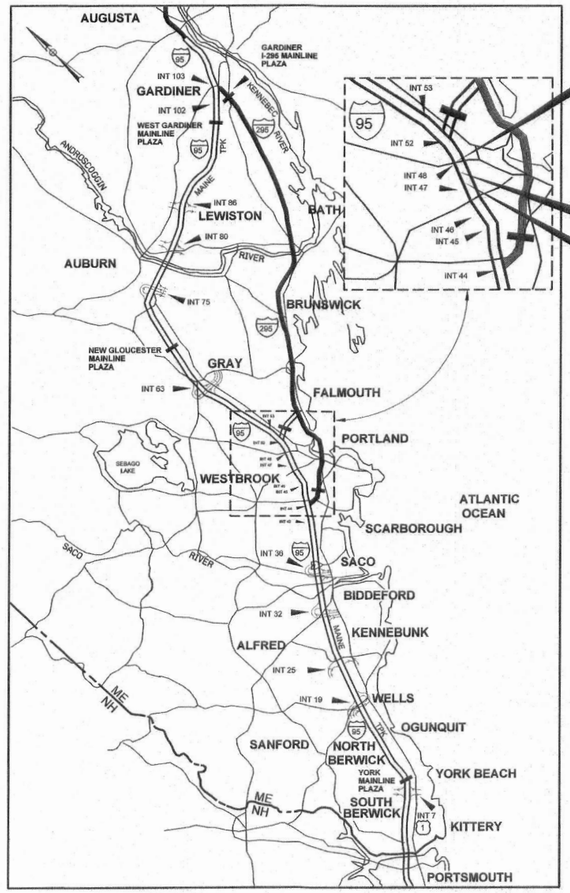


LOCATION MAP

CONTRACT 2021.02
WATER MAIN REPLACEMENT
MM 48.5

CONTRACT 2021.02
UTILITY VAULT EXTENSIONS
MM 47.1 AND 47.6

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MAINE TURNPIKE AUTHORITY

DANIEL E. WATHEN, CHAIR
ROBERT D. STONE, VICE CHAIR
MICHAEL J. CIANCHETTE, MEMBER
ANN R. ROBINSON, MEMBER
THOMAS J. ZUKE, MEMBER
JANE LINCOLN, MEMBER
BRUCE VAN NOTE, MEMBER EX-OFFICIO

S. PETER MILLS, EXECUTIVE DIRECTOR

INDEX OF SHEETS

CONTRACT: 2021.02
WATER LINE AND UTILITY VAULTS
MM 47.1, MM 47.6 AND MM 48.5

APPROVED:
MAINE TURNPIKE AUTHORITY

PETER S. MERFELD, P.E. - CHIEF OPERATIONS OFFICER — DATE 5/18/21

STEPHEN R. TAINTOR, P.E. - DIRECTOR OF ENGINEERING & BUILDING MAINTENANCE — DATE 5/19/21

HNTB

TIM R. COTE, P.E.
VICE PRESIDENT

STATE OF MAINE
TIMOTHY R. COTE
No. 10871
LICENSED PROFESSIONAL ENGINEER

DATE 5/24/2021

CONTRACT: 2021.02

Date:5/17/2021

Filename: 001_MTATitle.dgn

Date:5/24/2021

GENERAL NOTES:

1. ALL DETAILS SHALL BE IN CONFORMANCE WITH MAINE DEPARTMENT OF TRANSPORTATION (MAINEDOT) STANDARD DETAILS HIGHWAYS AND BRIDGES LATEST REVISION AND MAINEDOT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL LATEST REVISION, UNLESS OTHERWISE INCLUDED IN THESE PLANS.
2. THE CONTRACTOR SHALL SUBMIT THE PROPOSED STAGING AREA(S) AND FIELD TRAILER LOCATION TO THE RESIDENT FOR APPROVAL PRIOR TO STARTING WORK.
3. RIGHT OF WAY AND PROPERTY LINES ARE SHOWN FOR INFORMATIONAL PURPOSES ONLY.
4. GEOTECHNICAL INFORMATION EITHER FURNISHED OR REFERENCED IN THIS PLAN SET IS FOR THE BIDDER'S AND CONTRACTOR'S USE. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR THE INTERPRETATIONS WILL BE REPRESENTATIVE OF ACTUAL SUBSURFACE CONDITIONS AT THE TIME OF CONSTRUCTION. THE AUTHORITY SHALL NOT BE RESPONSIBLE FOR THE BIDDER'S AND CONTRACTOR'S INTERPRETATIONS OF, OR CONCLUSIONS DRAWN FROM, THE GEOTECHNICAL INFORMATION.
5. THE GEOTECHNICAL DESIGN REPORT, INCLUDING TEST BORING LOGS TITLED PORTLAND AREA WIDENING & SAFETY IMPROVEMENTS, MAINE TURNPIKE, GEOTECHNICAL DESIGN REPORT MAY BE ACCESSED AT THE MAINE TURNPIKE AUTHORITY WEB ADDRESS: WWW.MAINETURNPIKE.COM/PROJECTS/CONSTRUCTION-CONTRACTS.
6. TREE CLEARING IS NOT ALLOWED FROM JUNE 1 TO JULY 31.
7. CONTRACTOR SHALL PROVIDE MTA WITH AS-CONSTRUCTED PLANS IN PDF AND MICROSTATION FORMATS. THE PLANS SHALL NOTE ALL CHANGES TO, BUT NOT LIMITED TO: THE WATERLINE CASING AND VAULTS

EARTHWORK AND PAVEMENT NOTES:

1. EXCAVATIONS ACCOMPLISHED AS PART OF THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH OSHA SUBPART P, EXCAVATIONS, OF 29 CFR PART 1926.650-652 AND APPENDICES.
2. REMOVAL OF PAVEMENT FOR WATER MAIN REPLACEMENT AT EXIT 48 SHALL NOT BE ALLOWED.
3. REMOVAL OF PAVEMENT FOR UTILITY VAULT EXTENSIONS AS SHOWN ON THE PLANS IS ALLOWED. EXISTING PAVEMENT THICKNESS IS ESTIMATED AT 10 INCHES.
4. CLEARING LIMITS SHALL BE 10' BEYOND AND PARALLEL TO THE CONSTRUCTION SLOPE LINES OR AS SHOWN ON THE PLANS UNLESS OTHERWISE AUTHORIZED BY THE RESIDENT. THE ACTUAL CLEARING LINES SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AND SHALL BE APPROVED BY THE RESIDENT PRIOR TO ANY CLEARING TAKING PLACE. CLEARING SHALL BE INCIDENTAL TO THE CONTRACT.

UTILITY NOTES:

1. EXISTING UTILITIES ON THESE PLANS WERE COMPILED FROM FIELD SURVEY AND VARIOUS OTHER SOURCES. LOCATIONS ARE NOT GUARANTEED TO BE ACCURATE NOR IS IT GUARANTEED THAT ALL UTILITIES ARE SHOWN. NO SEPARATE OR ADDITIONAL COMPENSATION WILL BE ALLOWED TO THE CONTRACTOR DUE TO ANY VARIANCE BETWEEN THE DATA SHOWN ON THE PLANS AND THE ACTUAL FIELD CONDITIONS ENCOUNTERED. NO WORK SHALL BE STARTED UNTIL THE OWNERS OF THE VARIOUS UTILITIES ARE NOTIFIED BY THE CONTRACTOR OF THE PROPOSED CONSTRUCTION. THE CONTRACTOR IS ALSO REQUIRED TO CALL DIG SAFE AT 1-888-344-7233 AT LEAST 72 HOURS PRIOR TO THE START OF THE WORK.
2. THE UTILITIES INVOLVED IN THIS CONTRACT ARE:

   CENTRAL MAINE POWER
   MAINE TURNPIKE AUTHORITY LIGHTING
   PORTLAND PIPELINE
   PORTLAND WATER DISTRICT

3. THE CONTRACTOR SHALL NOTIFY THE RESIDENT 10 DAYS PRIOR TO CONSTRUCTION SO THE RESIDENT CAN ARRANGE FOR MAINE TURNPIKE UNDERGROUND UTILITY LOCATION. ALL EXCAVATION LOCATIONS SHALL BE MARKED AT THE NOTIFICATION TIME. EXCAVATION WILL NOT BE PERMITTED UNTIL THE AUTHORITY HAS LOCATED AND MARKED THEIR UNDERGROUND UTILITIES, OR NOTIFIED THE RESIDENT THERE ARE NO UNDERGROUND UTILITIES IN THE MARKED AREAS. THE AUTHORITY HAS PROGRAMMED TWO FIELD VISITS FOR MAINE TURNPIKE UTILITY COORDINATION ON THIS PROJECT. SHOULD THE CONTRACTOR NEED ADDITIONAL EXCAVATION LOCATIONS MARKED, OR SHOULD THE CONTRACTOR FAIL TO MAINTAIN THE AUTHORITY'S PREVIOUSLY ESTABLISHED DIG SAFE MARKS, THE AUTHORITY SHALL DEDUCT ADDED MARKING COSTS FROM THE CONTRACTOR'S PAYMENTS. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING THE UTILITY LOCATIONS.

LIGHTING NOTES:

1. LOCATION OF ELECTRICAL CONDUIT IS SCHEMATIC ONLY.
2. EXISTING ELECTRICAL SERVICE TO RAMP LIGHTING SHALL BE MAINTAINED SUCH THAT ALL LIGHTING IS IN CONTINUOUS SERVICE.

GUARDRAIL NOTES:

1. AT THE END OF EACH WORK DAY, THE CONTRACTOR IS REQUIRED TO HAVE AN APPROVED CRASHWORTHY END TREATMENT ON ALL GUARDRAIL ITEMS, UNLESS NOTED OTHERWISE.
2. CONNECTIONS FOR PROPOSED GUARDRAIL TO EXISTING GUARDRAIL SHALL BE INCIDENTAL TO THE PROPOSED GUARDRAIL ITEMS, UNLESS OTHERWISE NOTED.
3. ALL GUARDRAIL SHALL BE INSTALLED IN A MANNER TO AVOID DRAINAGE STRUCTURES AND ELECTRICAL CONDUITS.
4. HOLES CREATED BY GUARDRAIL REMOVAL WILL BE FILLED AND COMPACTED WITH APPROVED MATERIALS AS DIRECTED BY THE RESIDENT. PAYMENT TO BE INCIDENTAL TO THE GUARDRAIL ITEMS.

DRAINAGE NOTES:

1. INLETS AND OUTLETS OF ALL CULVERTS SHALL BE RIPRAPPED UNLESS OTHERWISE NOTED ON THE PLANS OR DIRECTED BY THE RESIDENT.
2. IF FOUNDATION MATERIAL IS REQUIRED UNDER CULVERTS, IT SHALL MEET THE REQUIREMENTS FOR GRANULAR BORROW - UNDERWATER BACKFILL.
3. ALL DITCH ELEVATIONS AND OFFSETS SHOWN ON THE CROSS SECTIONS ARE FOR THE FINISHED DITCH FLOW LINE.
4. THE CONTRACTOR SHALL MAINTAIN EXISTING DRAINAGE DURING CONSTRUCTION AS NEEDED FOR TEMPORARY USE, PRIOR TO PROPOSED DRAINAGE SYSTEMS BEING FUNCTIONAL AS IDENTIFIED ON PLANS.

EROSION CONTROL NOTES:

1. THE ANTICIPATED EROSION CONTROL DEVICES ARE SHOWN ON THE PLANS. THE CONTRACTOR SHALL PROPOSE ACTUAL TYPE AND LOCATION OF DEVICES FOR APPROVAL BY THE RESIDENT. ADDITIONAL MEASURES MAY BE PROPOSED BY THE CONTRACTOR DUE TO SITE OR WEATHER CONDITIONS. THE RESIDENT MAY DIRECT THE CONTRACTOR TO IMPLEMENT ADDITIONAL MEASURES. ANY ADDITIONAL MEASURES APPROVED BY THE RESIDENT WILL BE MEASURED FOR PAYMENT UNDER THE APPROPRIATE BID ITEMS.
2. EROSION CONTROL DEVICES USED AT EXIT 48 WATERLINE REPLACEMENT SHALL NOT BE MEASURED FOR PAYMENT AND SHALL BE CONSIDERED INCIDENTAL TO THE WATERLINE PAY ITEMS.
3. 4" LOAM HAS BEEN ESTIMATED FOR 100% OF THE DISTURBED SLOPE AREA UNLESS OTHERWISE SPECIFIED ON THE PLANS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS DESIGNATED BY THE RESIDENT.
4. ALL NON-ROCK SLOPES SHALL BE SEEDED WITH SEEDING METHOD NO. 2.
5. MULCH SHALL BE APPLIED IN SEEDED AREAS, EXCEPT WHERE EROSION CONTROL BLANKET IS SPECIFIED.
6. ALL TEMPORARY AND PERMANENT EROSION CONTROL DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MAINE DEPARTMENT OF TRANSPORTATION BEST MANAGEMENT PRACTICES.
7. TEMPORARY EROSION CONTROL BLANKET, ITEM 613.319 SHALL BE INSTALLED IN ALL DITCHES AND 2:1 SLOPES FROM TOP TO TOE OF SLOPE. LOAM AND SEED SHALL BE PLACED PRIOR TO THE INSTALLATION OF THE EROSION CONTROL BLANKET. LIMITS OF THE EROSION CONTROL BLANKET IN DITCHES SHALL BE 6' WIDE OR AS DESIGNATED BY THE RESIDENT.
8. TEMPORARY STABILIZATION WITH MULCH OR OTHER NON-ERODABLE COVER IS REQUIRED ON ALL EXPOSED SOILS THAT WILL NOT BE WORKED FOR MORE THAN 7 DAYS. AREAS WITHIN 75 FEET OF A WETLAND OR WATERBODY SHALL BE STABILIZED WITHIN 48 HOURS OF THE INITIAL DISTURBANCE OF THE SOIL OR PRIOR TO ANY STORM EVENT, WHICHEVER COMES FIRST. THE CONTRACTOR IS RESPONSIBLE FOR APPLYING TEMPORARY MULCH AS NECESSARY, IN ACCORDANCE WITH THE LATEST EDITION OF THE BMP'S, TO MINIMIZE SOIL EROSION PRIOR TO THE APPLICATION OF THE FINAL SLOPE TREATMENT.
9. TEMPORARY SEED SHALL BE APPLIED TO ALL DISTURBED AREAS THAT WILL NOT BE COMPLETED WITHIN 30 DAYS.
10. A DOUBLE ROW OF SILT FENCE PROTECTION SHALL BE INSTALLED AT ALL STREAM LOCATIONS AND OPEN WATER WETLANDS AS SHOWN ON THE PLANS, OR AS DIRECTED BY RESIDENT. AN ADDITIONAL QUATITY IS INCLUDED FOR LOCATIONS NOT SPECIFICALLY SHOWN.
11. STABILIZED CONSTRUCTION ENTRANCES MUST BE USED AND MAINTAINED. NO TRACKING OF SOIL ON THE MAINE TURNPIKE OR LOCAL ROADS WILL BE ALLOWED.

ESTIMATED QUANTITIES

ITEM NO	DESCRIPTION	WATER MAIN	UTILITY VAULTS	TOTAL QUANTITY	UNIT
202.12	REMOVE EXISTING STRUCTURAL CONCRETE		30	30	CY
203.20	COMMON EXCAVATION	70	910	980	CY
203.25	GRANULAR BORROW	100	180	280	CY
304.14	AGGREGATE BASE COURSE - TYPE A	150	700	850	CY
403.213	HOT MIX ASPHALT, 12.50 MM NOMINAL MAXIMUM SIZE (BASE AND INTERMEDIATE BASE COURSE)		80	80	TON
409.15	BITUMINOUS TACK COAT RS1 OR RS1H - APPLIED		15	15	GAL
419.30	SAWING BITUMINOUS PAVEMENT		450	450	LF
501.231	DYNAMIC LOAD TEST		2	2	EA
501.40	STEEL H-BEAM PILES, 53 LB/FT, DELIVERED		865	865	LF
501.401	STEEL H-BEAM PILES, 53 LB/FT, IN PLACE		865	865	LF
501.90	PILE TIPS		10	10	EA
501.91	PILE SPLICES		10	10	EA
501.92	PILE DRIVING EQUIPMENT MOBILIZATION		1	1	LS
511.091	TEMPORARY EARTH SUPPORT SYSTEMS		1	1	LS
514.06	CURING BOX FOR CONCRETE CYLINDERS		1	1	EA
526.306	TEMPORARY CONCRETE BARRIER, TYPE 1 - SUPPLIED BY AUTHORITY (1,760 LF)		1	1	LS
527.341	WORK ZONE CRASH CUSHIONS - TL-3		5	5	UNIT
603.195	24 INCH REINFORCED CONCRETE PIPE - CLASS III	20		20	LF
603.28	CONCRETE COLLAR		1	1	EA
603.281	CONCRETE COLLAR FOR WATERMAIN	1		1	EA
603.7424	REMOVE AND RELAY 24 INCH CONCRETE PIPE		54	54	LF
604.1581	UTILITY VAULT EXTENSION - STA 2360+02.55 NB		1	1	LS
604.1582	UTILITY VAULT EXTENSION - STA 2340+52.81 NB		1	1	LS
604.1583	UTILITY VAULT EXTENSION - STA 2340+52.81 SB		1	1	LS
606.366	GUARDRAIL, REMOVED AND RESET, TYPE 3C		540	540	LF
610.08	PLAIN RIPRAP		11	11	CY
610.18	STONE DITCH PROTECTION		5	5	CY
613.319	EROSION CONTROL BLANKET		200	200	SY
615.07	LOAM		170	170	CY
618.14	SEEDING METHOD NUMBER 2		15	15	UNIT
619.1201	MULCH - PLAN QUANTITY		15	15	UNIT
619.1202	TEMPORARY MULCH		1	1	LS
620.58	EROSION CONTROL GEOTEXTILE		54	54	SY
627.712	WHITE OR YELLOW PAVEMENT MARKING LINE		300	300	LF
627.73	TEMPORARY 6 INCH PAVEMENT MARKING TAPE		600	600	LF
629.05	HAND LABOR, STRAIGHT TIME	10	5	15	HR
631.12	ALL PURPOSE EXCAVATOR (INCLUDING OPERATOR)	10	5	15	HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	10	5	15	HR
631.22	FRONT END LOADER (INCLUDING OPERATOR)	10	5	15	HR
631.36	FOREMAN	10	5	15	HR
652.30	FLASHING ARROW		1	1	EA
652.312	TYPE III BARRICADES		2	2	EA
652.33	DRUM		110	110	EA
652.35	CONSTRUCTION SIGNS		660	660	SF
652.361	MAINTENANCE OF TRAFFIC CONTROL DEVICES		1	1	LS
652.41	PORTABLE-CHANGEABLE MESSAGE SIGN		2	2	EA
652.45	TRUCK MOUNTED ATTENUATOR		15	15	CD
656.50	BAILED HAY, IN PLACE		15	15	EA
656.632	30 INCH TEMPORARY SILT FENCE		900	900	LF
659.10	MOBILIZATION (UTILITY VAULTS)		1	1	LS
659.11	MOBILIZATION (WATERLINE)	1		1	LS
822.3405	8" CLASS 52 DI PIPE PUSH ON JOINT	10		10	LF
822.3605	12" CLASS 52 DI PIPE PUSH ON JOINT	160		160	LF
823.311	12" GATE VALVE	2		2	EA
823.333	1" AIR RELEASE VALVE	2		2	EA
825.60	12" DR 11 HDPE PIPE	390		390	LF
827.303	UNSUITABLE MATERIAL BELOW TRENCH GRADE	50		50	CY
845.211	STONE PIPE SUPPORT IN CASING - NB, SB, & SB ON RAMP	1		1	LS
845.212	STONE PIPE SUPPORT IN CASING - NB OFF RAMP	1		1	LS

Filename: PAW2_GeneralNotes.dgn

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

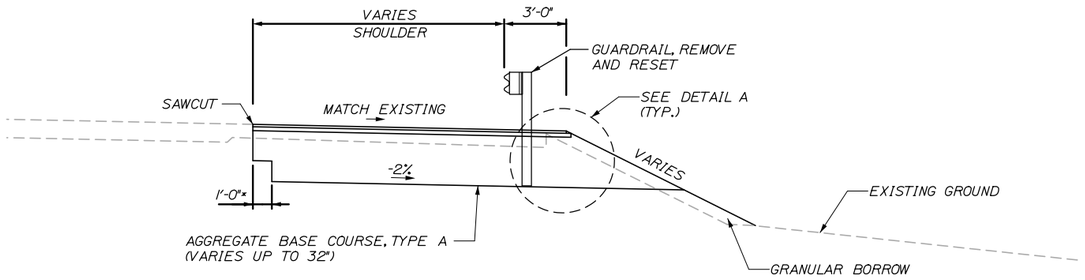
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

ESTIMATE OF QUANTITIES AND GENERAL NOTES

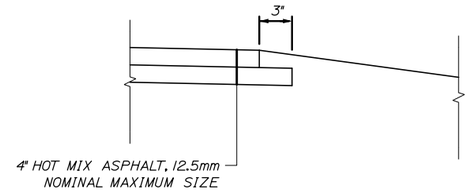
SHEET NUMBER: GN-01

CONTRACT: 2021.02

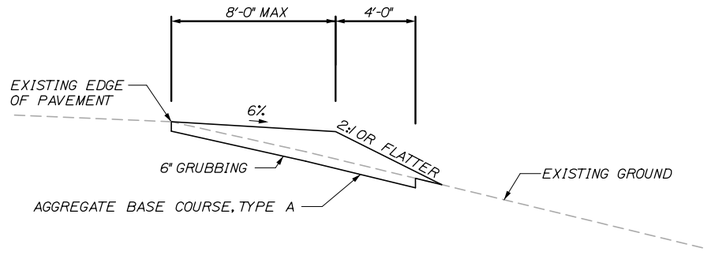


* NOTE:
A 1' STEP IS REQUIRED FOR AGGREGATE THICKNESS GREATER THAN 19" OR AS DIRECTED BY THE RESIDENT.

TYPICAL SECTION



DETAIL A
N.T.S.



TEMPORARY GRAVEL SHOULDER WIDENING
FOR CONTRACTOR ACCESS

TEMPORARY GRAVEL SHOULDER NOTES:

1. CONTRACTOR MAY CONSTRUCT A TEMPORARY GRAVEL PAD UP TO 8' WIDE FLUSH WITH PAVEMENT, UP TO 150' LONG FROM VAULT, AND SLOPED AWAY FROM PAVEMENT AT 6% FOR CONTRACTOR ACCESS.
2. EXISTING SIDESLOPE SHALL BE GRUBBED TO 6 INCHES DEEP BY WIDTH OF GRAVEL PAD PLUS 4 FEET.
3. FOLLOWING CONSTRUCTION THE SIDE SLOPE SHALL BE GRADED TO 3:1 OR FLATTER, OR AS DIRECTED BY THE RESIDENT.
4. CONTRACTOR WILL BE PAID FOR COMMON EXCAVATION AND AGGREGATE BASE COURSE - TYPE A BASED ON ACTUAL QUANTITY COMPLETED. PAYMENT FOR FINAL SIDE SLOPE GRADING WILL BE INCIDENTAL TO THE CONTRACT.

Date:5/24/2021

Filename: PAW2_UtilityVaultTypicals.dgn

Scale: NOT TO SCALE			
No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

TYPICAL SECTIONS

SHEET NUMBER: TYP-01

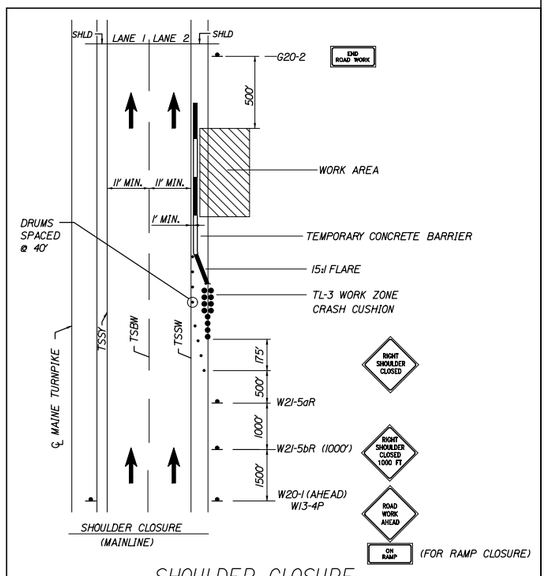
CONTRACT: 2021.02

GENERAL MAINTENANCE OF TRAFFIC NOTES

1. ALL WORK TO CONFORM TO MAINE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, EXCEPT AS MODIFIED BY THE MAINE TURNPIKE AUTHORITY'S SUPPLEMENTAL 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 AND RAMP 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 RESIDENT.
4. THE CONTRACTOR SHALL REMOVE ALL PAVEMENT MARKINGS THAT CONFLICT WITH PROPOSED PAVEMENT MARKINGS IN ACCORDANCE WITH THE SPECIFICATIONS AND MUTCD. PAYMENT SHALL BE INCIDENTAL TO THE CONTRACT.
5. TEMPORARY PAVEMENT MARKINGS SHALL BE TEMPORARY PAVEMENT MARKING TAPE, UNLESS OTHERWISE NOTED. PAYMENT FOR MARKINGS SHALL BE UNDER ITEM 627.73 - TEMPORARY 6 INCH PAVEMENT MARKING TAPE.
6. EXPOSED BARRIER ENDS SHALL BE PROTECTED BY A WORK ZONE CRASH CUSHION. PAYMENT WILL BE UNDER ITEM 527.341 - WORK ZONE CRASH CUSHION - TL-3.
7. TAPER RATE FOR TEMPORARY CONCRETE BARRIER SHALL BE A MINIMUM OF 8:1 UNLESS MORE SPACE IS AVAILABLE. THEN THE BARRIER SHALL BE TAPERED AT 15:1 OR 100', WHICHEVER IS LONGEST. THE TAPERED BARRIER LENGTH IS DEPENDENT ON THE LOCATION OF THE BARRIER RELATIVE TO THE MAINE TURNPIKE SHOULDERS OR LANES. THE BARRIER SHALL TERMINATE AT A LOCATION WHERE A CRASH CUSHION CAN BE INSTALLED A MINIMUM OF 3 FEET FROM THE TRAVEL LANE.
8. ALL TEMPORARY CONCRETE BARRIER SHALL HAVE DRAINAGE SLOTS TO ALLOW FLOW OF WATER. TEMPORARY CONCRETE BARRIER, SET AT LOW POINTS, SHALL BE SET ON BLOCKING PER SPECIAL PROVISIONS.
9. ALL TEMPORARY WORK ZONE DEVICES SHALL BE MASH 2016 COMPLIANT UNLESS SUCH DEVICE(S) CAN BE SHOWN TO BE MASH 2009 OR NCHRP-350 COMPLIANT AND ARE STILL WITHIN THEIR NORMAL SERVICE LIFE AS DETERMINED BY THE RESIDENT.
10. CONTRACTOR SHALL SUBMIT PHASING SEQUENCE LAYOUTS AND WORK ELEMENTS FOR EACH CONSTRUCTION LOCATION, INCLUDING LANE AND SHOULDER WIDTH AND SAWCUT LOCATIONS FOR APPROVAL PRIOR TO CONSTRUCTION. SAWCUTS SHALL BE AT THE EDGE OR MIDDLE OF LANE UNLESS OTHERWISE APPROVED.
11. ALL PROPOSED CONSTRUCTION SIGNS SHALL BE PLACED ON BOTH SIDES OF THE ROAD WITH THE EXCEPTION OF ON RAMP SIGNS AND AS SHOWN ON THE PLANS.
12. NO SIGNS ON EASELS SHALL BE PLACED ON 4 FEET SHOULDERS WITH GUARDRAIL. SIGNS REQUIRED AT THESE LOCATIONS SHALL BE PLACED ON TALLER EASELS ON THE MEDIAN SIDE OF THE GUARDRAIL.
13. ALL MOT SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE CONFIRMED BY THE RESIDENT.
14. CONTRACTOR TO COORDINATE WITH ADJACENT CONTRACTS RESIDENT ENGINEERS TO AVOID HAVING OVERLAPPING CONSTRUCTION SIGNS.
15. ALL PERMANENTLY MOUNTED CONSTRUCTION SIGNS SHALL BE 7 FEET ABOVE PAVEMENT GRADE. REGULATORY SIGNS THAT ARE SET UP FOR TEMPORARY LANE CLOSURES MUST BE 5 FEET ABOVE PAVEMENT GRADE.
16. VARIABLE MESSAGE SIGN DISPLAY SHALL BE AS DIRECTED BY RESIDENT AND SHALL BE SETUP A MINIMUM OF 10 DAYS PRIOR TO SCHEDULED CLOSURE

ABBREVIATIONS FOR ALL MOT PLANS

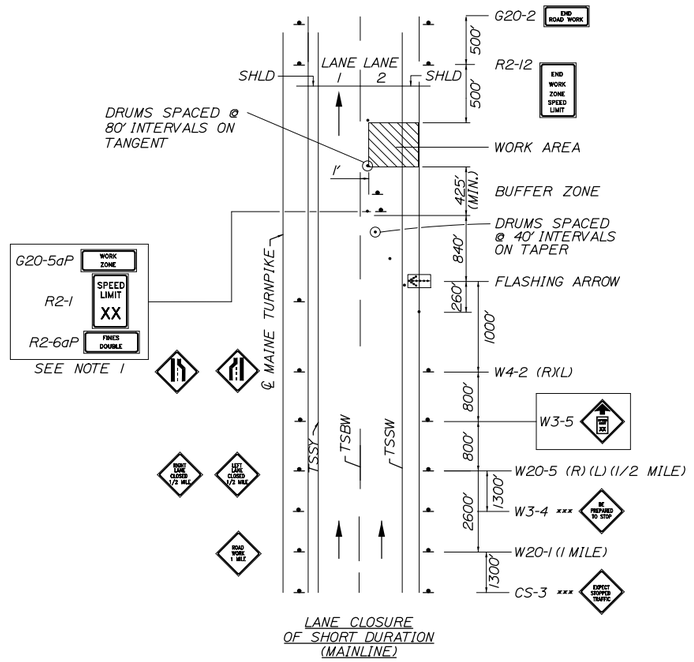
TSSW - 6" TEMPORARY SINGLE SOLID WHITE LINE
TSBW - 6" TEMPORARY SINGLE BROKEN WHITE LINE
TSDW - 6" TEMPORARY SINGLE DASHED WHITE LINE
TSSY - 6" TEMPORARY SINGLE SOLID YELLOW LINE



SHOULDER CLOSURE

NOTES:

1. THE W20-1 AND G20-2 SIGNS ARE NOT REQUIRED IF THE SHOULDER CLOSURE IS WITHIN A PREVIOUSLY ESTABLISHED WORK ZONE.
2. MULTIPLE SHOULDER CLOSURES WITHIN THE SAME WORK ZONE MUST BE SUBMITTED FOR REVIEW AND APPROVAL BY MTA.



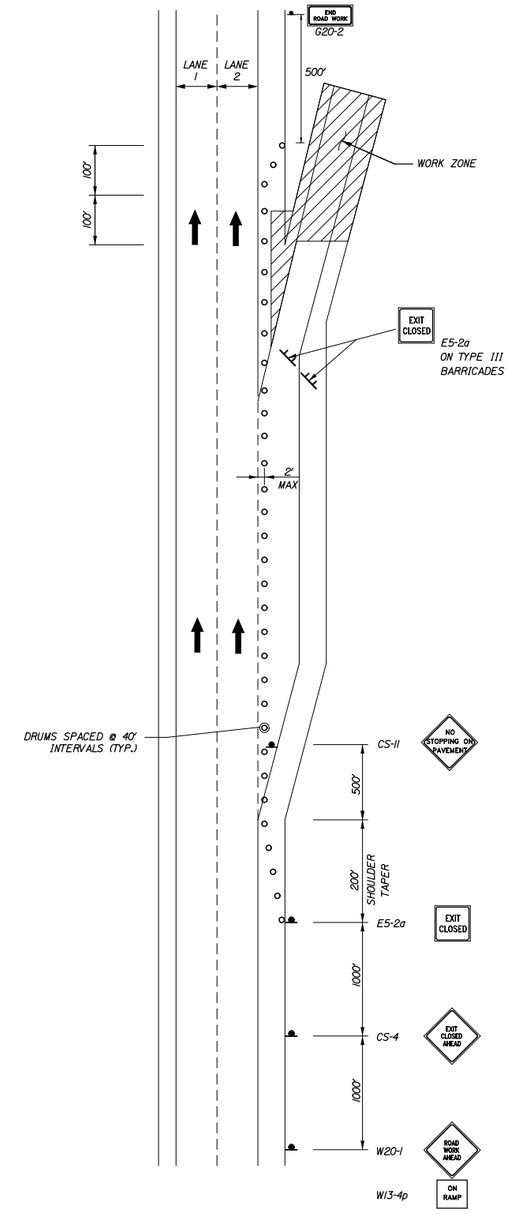
LANE CLOSURE OF SHORT DURATION (MAINLINE)

SINGLE LANE CLOSURE - SIGNS ON EASELS

*** TO BE USED DURING STOPPAGES OF TRAFFIC

NOTE:

1. FOR EASEL SET UP ONLY. THIS SIGN IS NOT BRACKETED. ONE SIGN ASSEMBLY IS PLACED AT THE END OF THE TAPER .



OFF RAMP CLOSURE

Date:5/24/2021

Filename: PAW2_DETAILS_MOT-03

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

MAINTENANCE OF TRAFFIC
GENERAL NOTES AND DETAILS

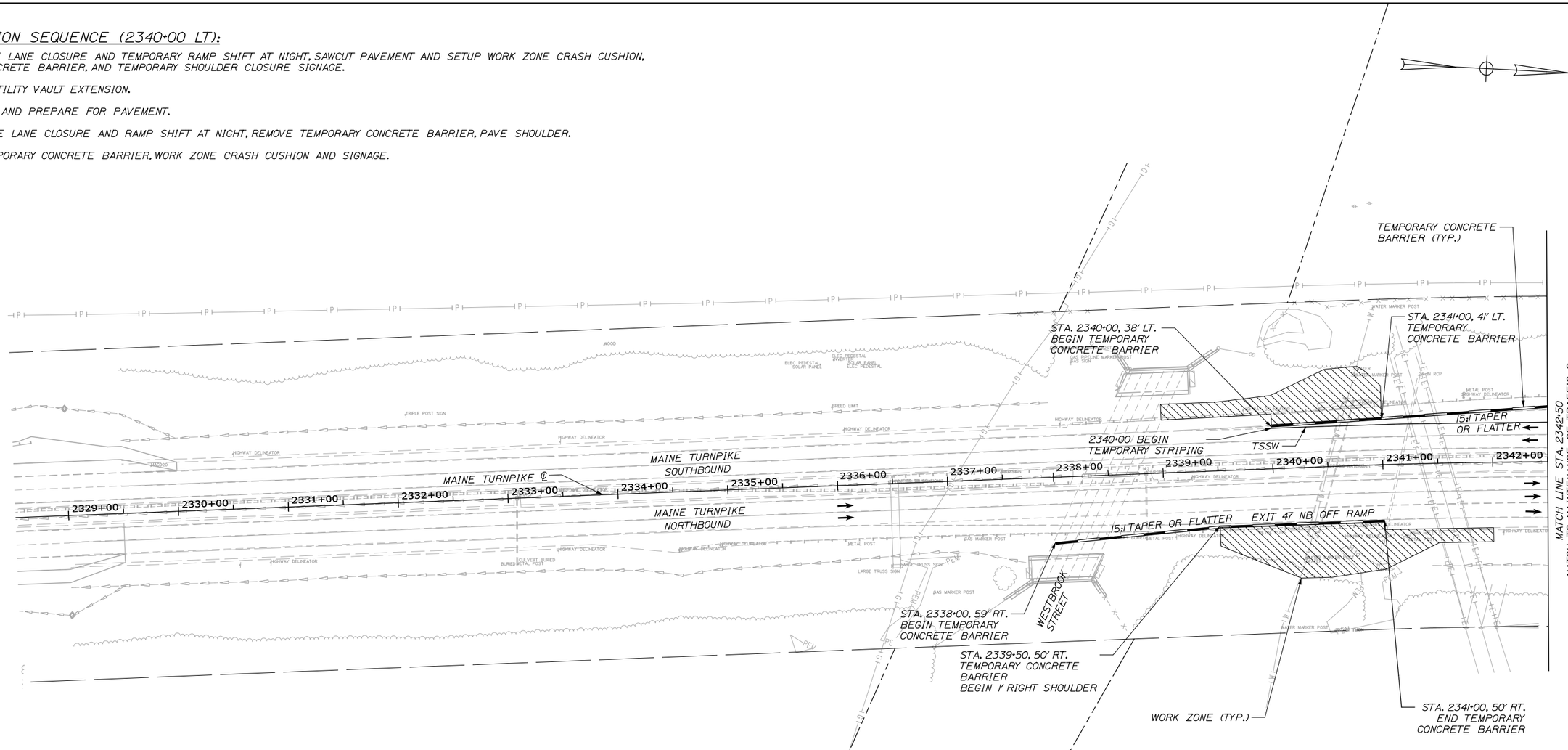
SHEET NUMBER: MOT-01

CONTRACT: 2021.02

Date:5/24/2021

CONSTRUCTION SEQUENCE (2340+00 LT):

1. SETUP SINGLE LANE CLOSURE AND TEMPORARY RAMP SHIFT AT NIGHT, SAWCUT PAVEMENT AND SETUP WORK ZONE CRASH CUSHION, TEMPORARY CONCRETE BARRIER, AND TEMPORARY SHOULDER CLOSURE SIGNAGE.
2. CONSTRUCT UTILITY VAULT EXTENSION.
3. FINE GRADE AND PREPARE FOR PAVEMENT.
4. SETUP SINGLE LANE CLOSURE AND RAMP SHIFT AT NIGHT, REMOVE TEMPORARY CONCRETE BARRIER, PAVE SHOULDER.
5. REMOVE TEMPORARY CONCRETE BARRIER, WORK ZONE CRASH CUSHION AND SIGNAGE.



CONSTRUCTION SEQUENCE (2340+00 RT):

1. SETUP SINGLE LANE CLOSURE AND TEMPORARY RAMP SHIFT AT NIGHT, SAWCUT PAVEMENT, REMOVE GUARDRAIL, SETUP TEMPORARY SHOULDER CLOSURE SIGNAGE, AND TEMPORARY CONCRETE BARRIER.
2. CONSTRUCT UTILITY VAULT EXTENSION.
3. FINE GRADE AND PREPARE FOR PAVEMENT.
4. SETUP SINGLE LANE CLOSURE AND RAMP SHIFT AT NIGHT, REMOVE TEMPORARY CONCRETE BARRIER, PAVE SHOULDER.

Filename: PAW2_HP_Plan_MOT_01.dgn

Scale: 50 0 50 100 Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

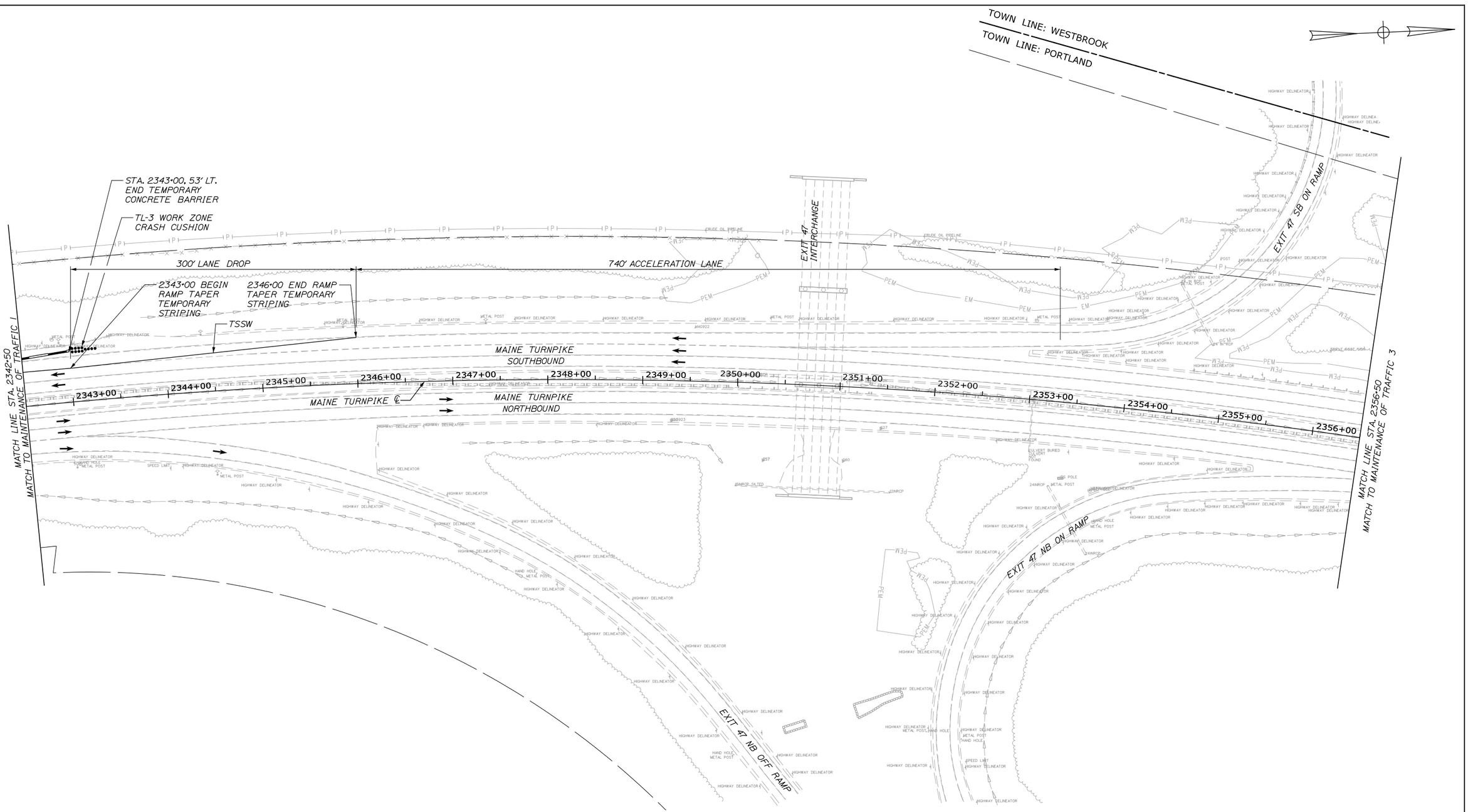
WATER LINE AND UTILITY VAULTS

MAINTENANCE OF TRAFFIC (1 OF 5)

SHEET NUMBER: MOT-02

CONTRACT: 2021.02

Date:5/24/2021



Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
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Drawn	EDD	04/21	In Charge of	TRC	04/21

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WATER LINE AND UTILITY VAULTS

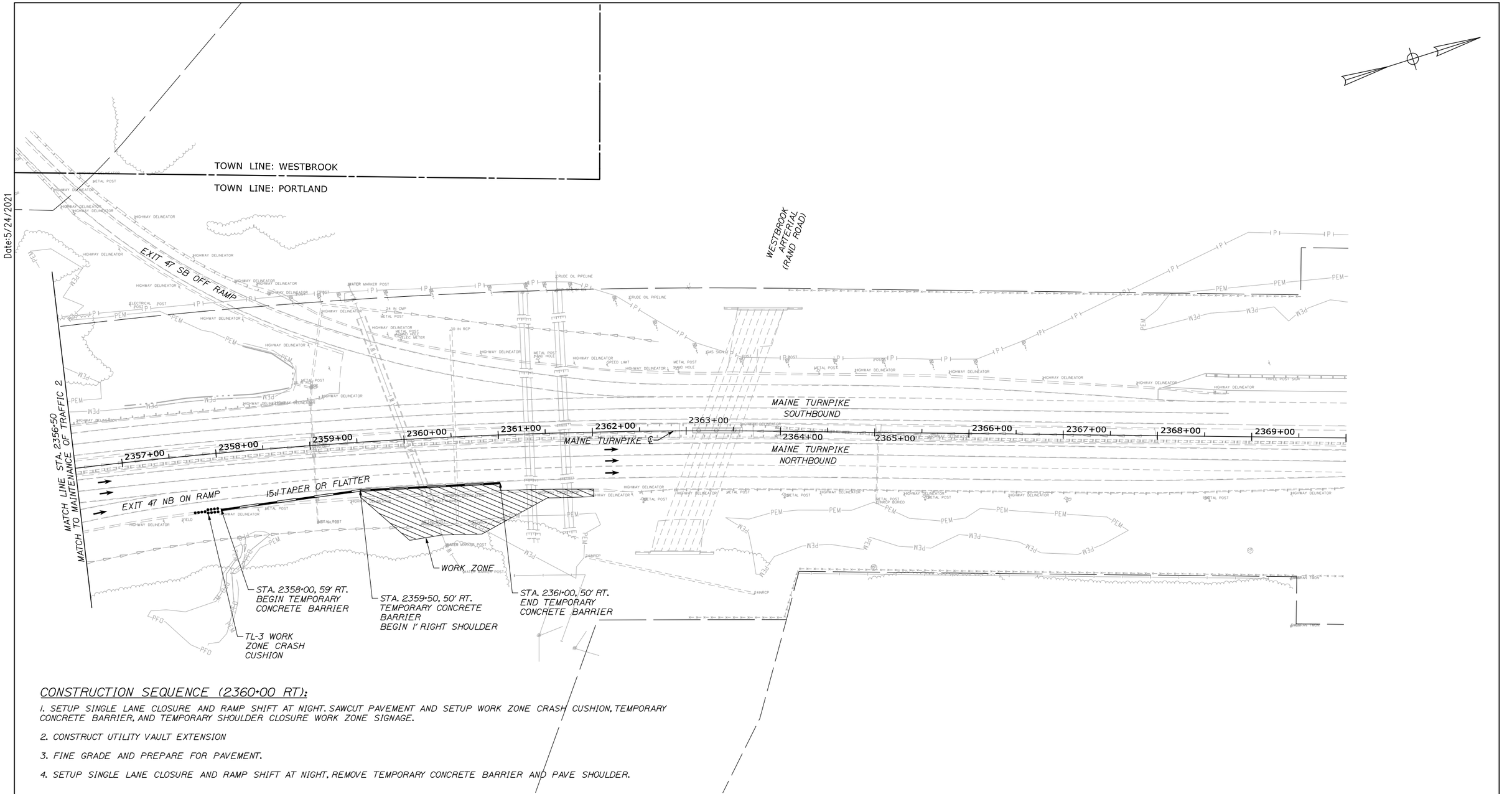
MAINTENANCE OF TRAFFIC (2 OF 5)

SHEET NUMBER: MOT-03

CONTRACT: 2021.02

6 OF 36

Filename: PAW2_HP_Plan_MOT_02.dgn



CONSTRUCTION SEQUENCE (2360+00 RT):

1. SETUP SINGLE LANE CLOSURE AND RAMP SHIFT AT NIGHT. SAWCUT PAVEMENT AND SETUP WORK ZONE CRASH CUSHION, TEMPORARY CONCRETE BARRIER, AND TEMPORARY SHOULDER CLOSURE WORK ZONE SIGNAGE.

2. CONSTRUCT UTILITY VAULT EXTENSION

3. FINE GRADE AND PREPARE FOR PAVEMENT.

4. SETUP SINGLE LANE CLOSURE AND RAMP SHIFT AT NIGHT, REMOVE TEMPORARY CONCRETE BARRIER AND PAVE SHOULDER.

Date:5/24/2021

Filename: PAW2_HP_Plan_MOT_03.dgn

Scale: 50 0 50 100 Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

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MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

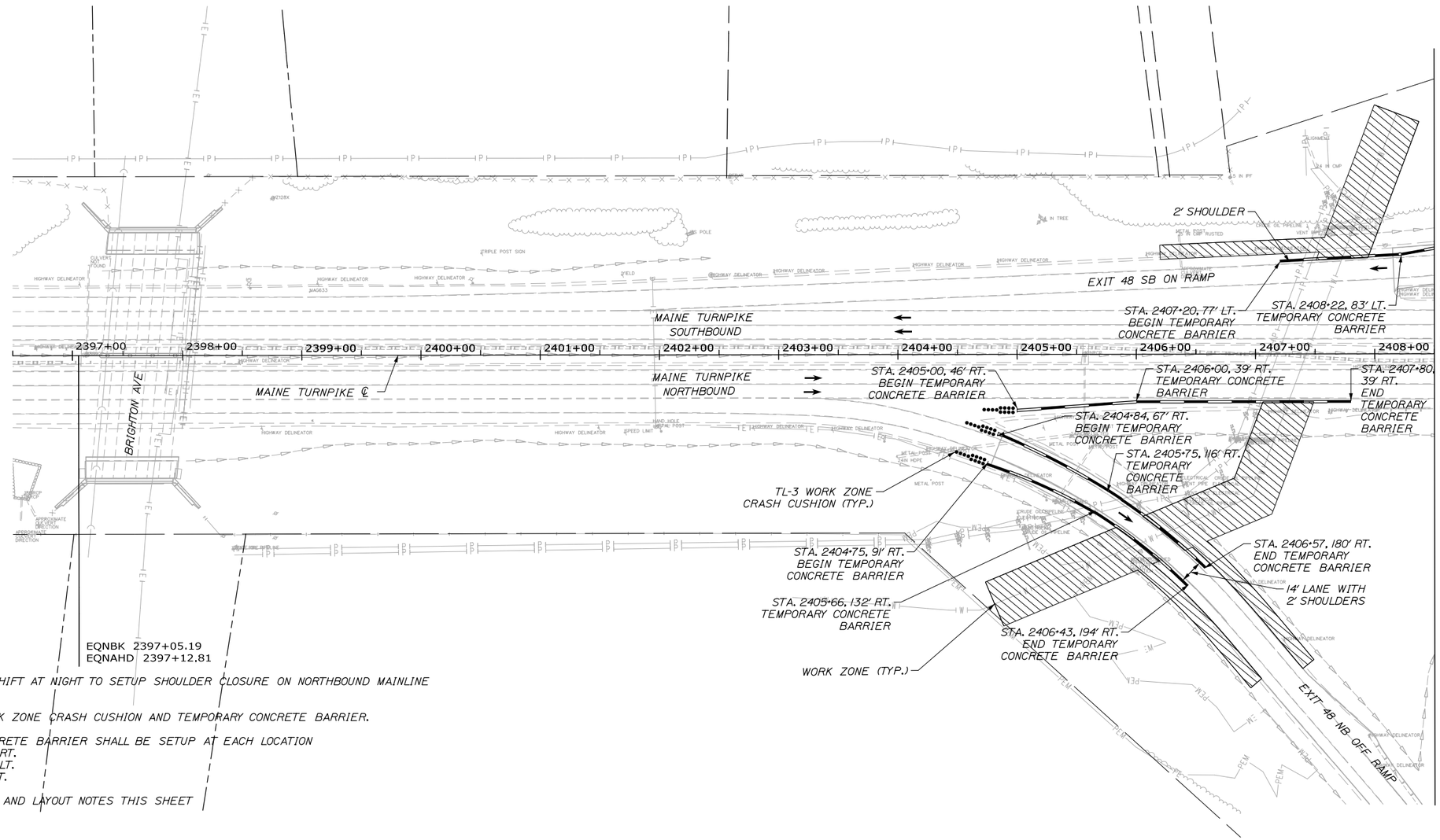
WATER LINE AND UTILITY VAULTS

MAINTENANCE OF TRAFFIC (3 OF 5)

SHEET NUMBER: MOT-04

CONTRACT: 2021.02

Date:5/24/2021



CONSTRUCTION SEQUENCE:

1. SETUP SINGLE LANE CLOSURE AND RAMP SHIFT AT NIGHT TO SETUP SHOULDER CLOSURE ON NORTHBOUND MAINLINE (STA. 2405+00 TO 2408+00 RT.)

2. SETUP 1 NIGHT RAMP CLOSURE TO SET WORK ZONE CRASH CUSHION AND TEMPORARY CONCRETE BARRIER.

3. SHOULDER CLOSURE WITH TEMPORARY CONCRETE BARRIER SHALL BE SETUP AT EACH LOCATION
   - -NORTHBOUND OFF RAMP STA. 145+00 RT.
   - -NORTHBOUND OFF RAMP STA. 145+00 LT.
   - -SOUTHBOUND ON RAMP STA. 125+00 LT.

4. SEE SHOULDER CLOSURE STANDARD DETAIL AND LAYOUT NOTES THIS SHEET

5. MINIMUM RAMP WIDTH SHALL BE 18 FEET.

6. A REQUEST FOR SHOULDER CLOSURES ON BOTH SIDES OF RAMP INCLUDING LAYOUT DETAILS AND DURATION OF SETUP, SHALL BE SUBMITTED TO MTA FOR REVIEW AND APPROVAL.

7. SETUP 1 NIGHT RAMP CLOSURE AND/OR 1 NIGHT SINGLE LANE CLOSURE AND RAMP SHIFT TO REMOVE WORK ZONE CRASH CUSHION AND TEMPORARY CONCRETE BARRIER.

Scale: 50 0 50 100 Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

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THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

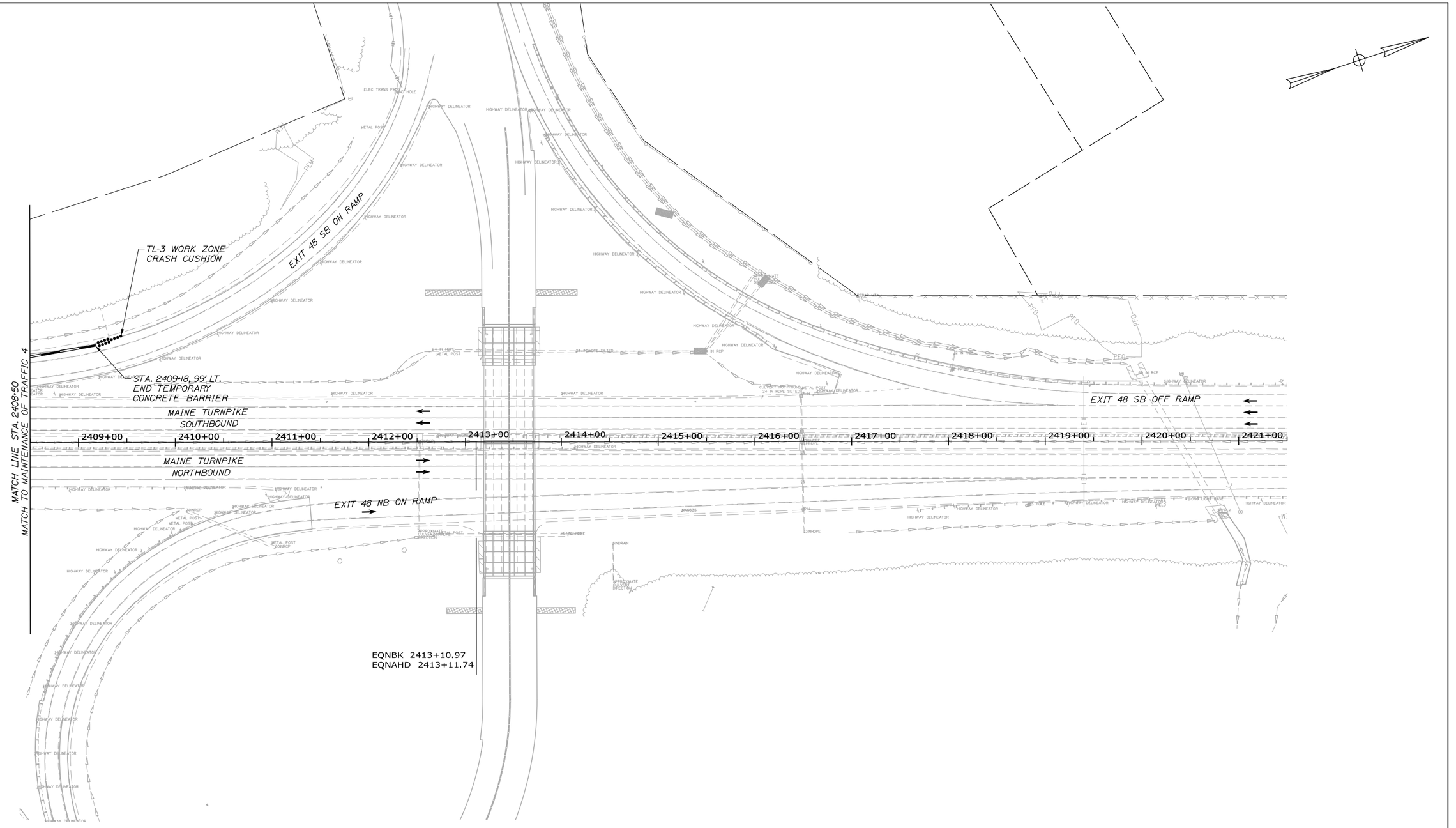
MAINTENANCE OF TRAFFIC (4 OF 5)

SHEET NUMBER: MOT-05

CONTRACT: 2021.02

Filename: PAW2_HP_Plan_MOT_04.dgn

Date:5/24/2021



Filename: PAW2_HP_Plan_MOT_05.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

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MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

MAINTENANCE OF TRAFFIC (5 OF 5)

SHEET NUMBER: MOT-06

CONTRACT: 2021.02

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 (TOTAL)
E5-2a	48"	48"	EXIT CLOSED	TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS OR AS SUPERSEDED BY 2012 SUPPLEMENT"			3	ORANGE	COLORS AND BORDER RADIUS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS OR AS SUPERSEDED BY 2012 SUPPLEMENT"		16.00 (48)
G20-2	48"	24"	END ROAD WORK				4	ORANGE			8.00 (32)
G20-5aP	48"	24"	WORK ZONE				1	↓			8.00 (8)
RI-2	48"	48"	YIELD				1	WHITE			6.93 (6.93)
R2-1 (50)	48"	60"	SPEED LIMIT 50				1	↓			20.00 (20)
R2-6aP	48"	24"	FINES DOUBLED				1				8.00 (8)
R2-12	48"	60"	END WORK ZONE SPEED LIMIT				2	↓			20.00 (40)
W3-2	48"	48"					1	ORANGE			16.00 (16)
W3-5 (50)	48"	48"	SPEED LIMIT 50				2	↓			16.00 (32)
W4-1	48"	48"					1				16.00 (16)
W4-2R	48"	48"					2	↓			16.00 (32)
W4-5P	30"	24"	NO MERGE AREA	↓	↓	↓	1	↓	↓	↓	5.00 (5)

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 (TOTAL)
WI3-4P	36"	36"	ON RAMP	TEXT DIMENSIONS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS OR AS SUPERSEDED BY 2012 SUPPLEMENT"			8	ORANGE	COLORS AND BORDER RADIUS SHALL CONFORM TO "2004 EDITION - STANDARD HIGHWAY SIGNS OR AS SUPERSEDED BY 2012 SUPPLEMENT"		9.00 (72)
W20-1 (AHEAD) (1 MILE)	48"	48"	ROAD WORK XXX				8 2				16.00 (128) 16.00 (32)
W20-5R (1/2 MILE) (AHEAD)	48"	48"	RIGHT LANE CLOSED 1/2 MILE				1 2				16.00 (16) 16.00 (32)
W21-5aR	48"	48"	RIGHT SHOULDER CLOSED				4				16.00 (64)
W21-5bR	48"	48"	RIGHT SHOULDER CLOSED 1000 FT				4				16.00 (64)
CS-4	48"	48"	EXIT CLOSED AHEAD	6" C 6" C 6" C	4" 4"		1				16.00 (16)
CS-11	48"	48"	NO STOPPING ON PAVEMENT	6" C 6" C 6" C	4" 4"		1				16.00 (16)

Date:5/24/2021

Filename: PAW2_MOT_SignSummary 1

Scale: NOT TO SCALE

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

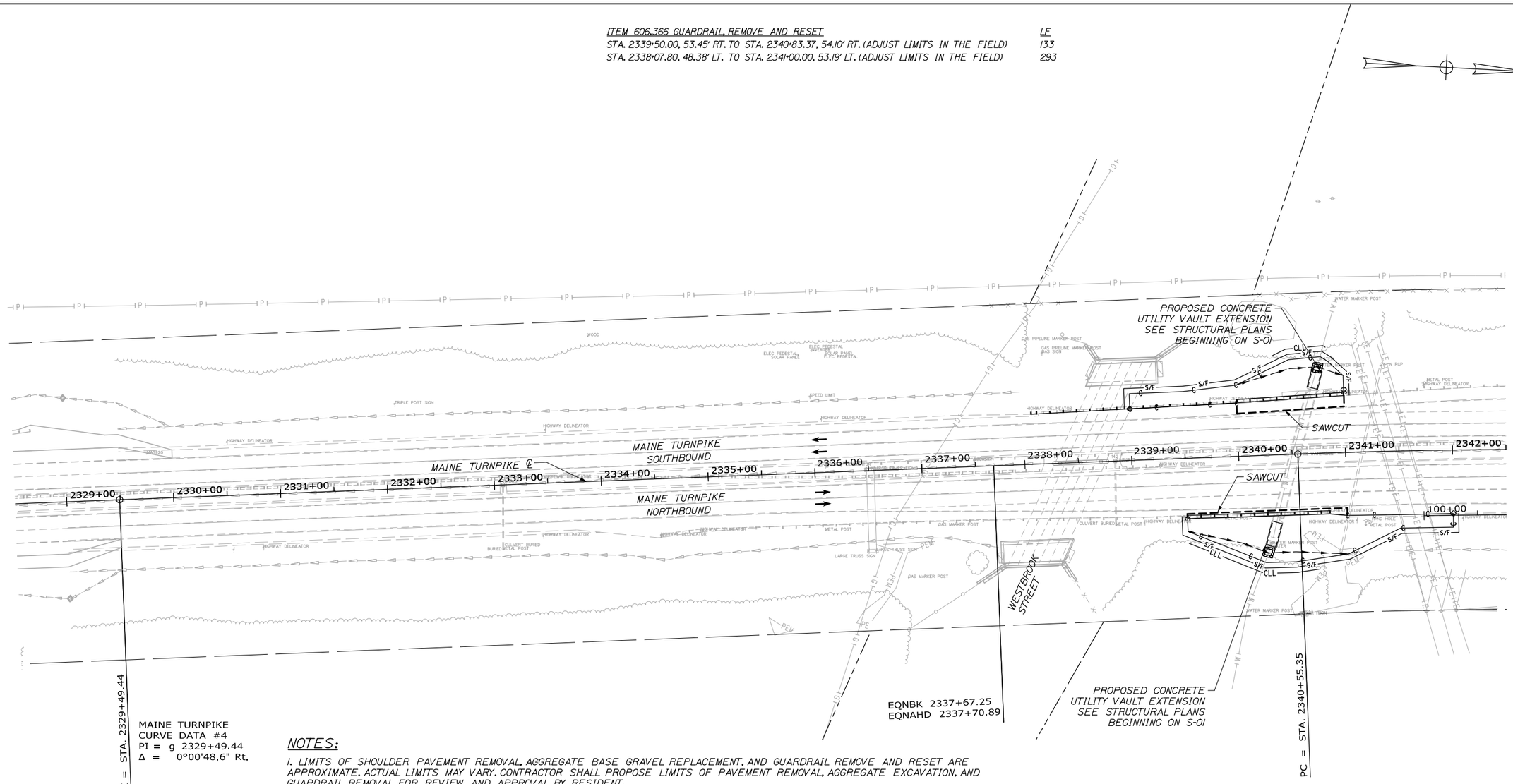
MAINTENANCE OF TRAFFIC SIGN SUMMARY

SHEET NUMBER: MOT-07

CONTRACT: 2021.02

Date:5/24/2021

ITEM 606.366 GUARDRAIL, REMOVE AND RESET	LF
STA. 2339+50.00, 53.45' RT. TO STA. 2340+83.37, 54.10' RT. (ADJUST LIMITS IN THE FIELD)	133
STA. 2338+07.80, 48.38' LT. TO STA. 2341+00.00, 53.19' LT. (ADJUST LIMITS IN THE FIELD)	293



NOTES:

1. LIMITS OF SHOULDER PAVEMENT REMOVAL, AGGREGATE BASE GRAVEL REPLACEMENT, AND GUARDRAIL REMOVE AND RESET ARE APPROXIMATE. ACTUAL LIMITS MAY VARY. CONTRACTOR SHALL PROPOSE LIMITS OF PAVEMENT REMOVAL, AGGREGATE EXCAVATION, AND GUARDRAIL REMOVAL FOR REVIEW AND APPROVAL BY RESIDENT.

2. PAYMENT FOR ALL ITEMS SHALL BE BASED ON ACUAL WORK. COMPLETED, MEASURED, AND ACCEPTED.

3. STA. 2340+00 RT. SAWCUT ALONG EDGE OF RAMP STRIPING, APPROX. 51' OFFSET. TEMPORARY EARTH SUPPORT MAY BE REQUIRED.

4. STA. 2340+00 LT. SAWCUT ALONG EDGE OF RAMP STRIPING OFFSET VARIES. TEMPORARY EARTH SUPPORT MAY BE REQUIRED.

5. REPLACE PAVEMENT WITH 4" H.M.A. REPLACE MINIMUM 8½" AGGREGATE BASE COURSE - TYPE A BENEATH ALL REMOVED PAVEMENT. REPLACE ALL EXCAVATED MATERIAL WITHIN 36" OF PAVED SURFACE WITH TYPE A GRAVEL. TYPE A GRAVEL SHALL BE DAYLIGHTED.

6. THE PAVEMENT BASE DEPTHS AND CROSS SLOPES AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.

7. BITUMINOUS TACK COAT IS REQUIRED BETWEEN ALL LIFTS OF PAVEMENT, OR AS DIRECTED BY RESIDENT. BITUMINOUS TACK COAT IS REQUIRED ON ALL EXISTING PAVED OR MILLED SURFACES PRIOR TO PLACING PROPOSED PAVEMENT.

8. ALL DISTURBED SIDESLOPE AREAS SHALL BE TREATED WITH 4" LOAM, SEED, AND MULCH.

Filename: PAW2_HP_Plan_04.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

HIGHWAY PLAN (1 OF 2)

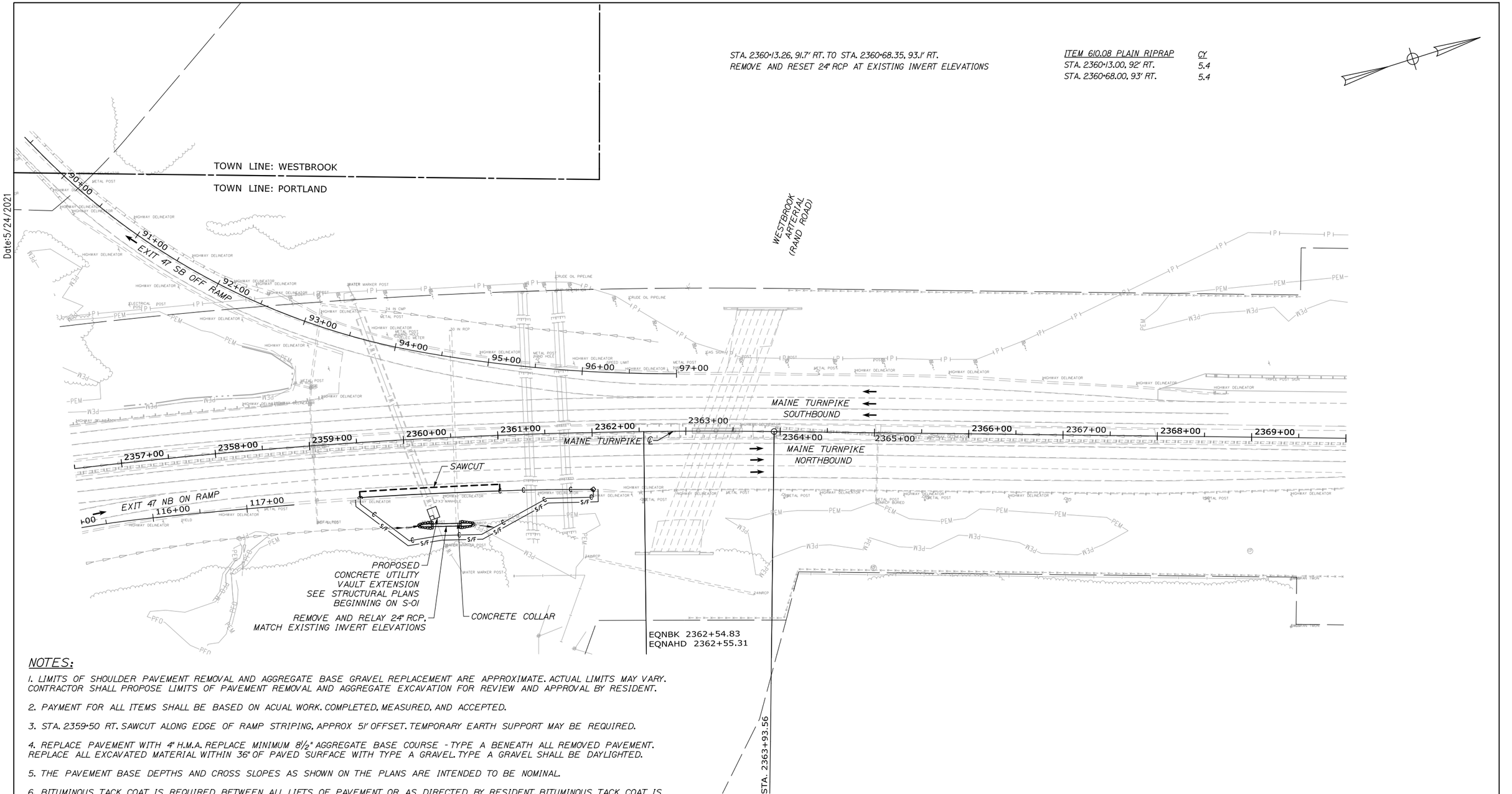
SHEET NUMBER: HP-01

CONTRACT: 2021.02

Date:5/24/2021

STA. 2360+13.26, 91.7' RT. TO STA. 2360+68.35, 93.1' RT.
REMOVE AND RESET 24" RCP AT EXISTING INVERT ELEVATIONS

ITEM 610.08 PLAIN RIPRAP	CY
STA. 2360+13.00, 92' RT.	5.4
STA. 2360+68.00, 93' RT.	5.4



NOTES:

1. LIMITS OF SHOULDER PAVEMENT REMOVAL AND AGGREGATE BASE GRAVEL REPLACEMENT ARE APPROXIMATE. ACTUAL LIMITS MAY VARY. CONTRACTOR SHALL PROPOSE LIMITS OF PAVEMENT REMOVAL AND AGGREGATE EXCAVATION FOR REVIEW AND APPROVAL BY RESIDENT.

2. PAYMENT FOR ALL ITEMS SHALL BE BASED ON ACUAL WORK. COMPLETED. MEASURED. AND ACCEPTED.

3. STA. 2359+50 RT. SAWCUT ALONG EDGE OF RAMP STRIPING. APPROX 5' OFFSET. TEMPORARY EARTH SUPPORT MAY BE REQUIRED.

4. REPLACE PAVEMENT WITH 4" H.M.A. REPLACE MINIMUM 8½" AGGREGATE BASE COURSE - TYPE A BENEATH ALL REMOVED PAVEMENT. REPLACE ALL EXCAVATED MATERIAL WITHIN 36" OF PAVED SURFACE WITH TYPE A GRAVEL. TYPE A GRAVEL SHALL BE DAYLIGHTED.

5. THE PAVEMENT BASE DEPTHS AND CROSS SLOPES AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.

6. BITUMINOUS TACK COAT IS REQUIRED BETWEEN ALL LIFTS OF PAVEMENT. OR AS DIRECTED BY RESIDENT. BITUMINOUS TACK COAT IS REQUIRED ON ALL EXISTING PAVED OR MILLED SURFACES PRIOR TO PLACING PROPOSED PAVEMENT.

7. ALL DISTURBED SIDESLOPE AREAS SHALL BE TREATED WITH 4" LOAM. SEED. AND MULCH.

8. DITCH DRAINAGE SHALL BE MAINTAINED DURING CONSTRUCTION.

9. PAYMENT FOR CULVERT CONNECTION TO EXISTING PIPE SHALL BE MADE UNDER 603.28 CONCRETE COLLAR

Filename: PAW2_HP_Plan_06.dgn

Scale: 50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

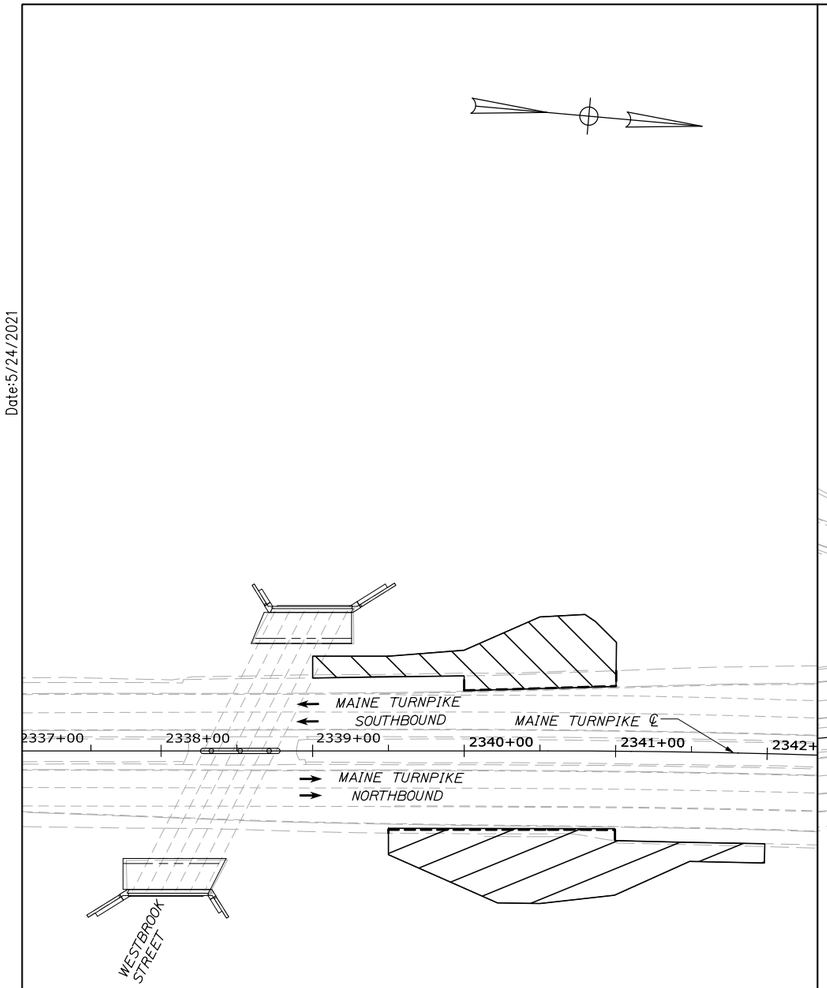
WATER LINE AND UTILITY VAULTS

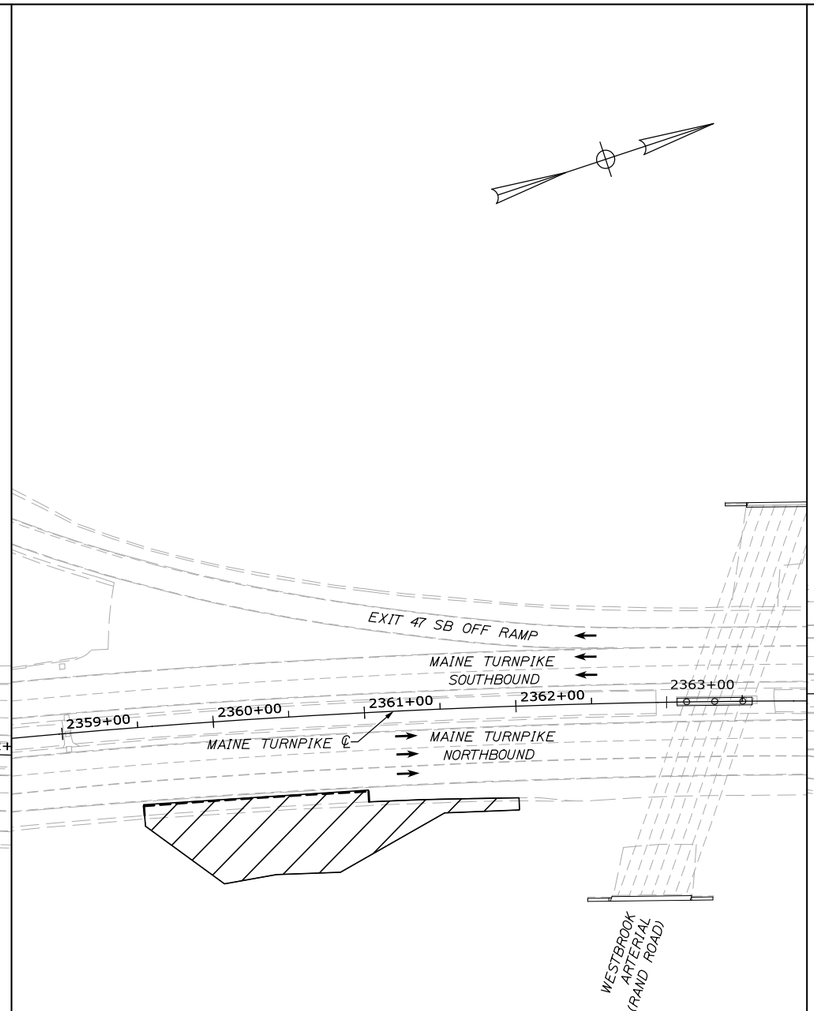
HIGHWAY PLAN (2 OF 2)

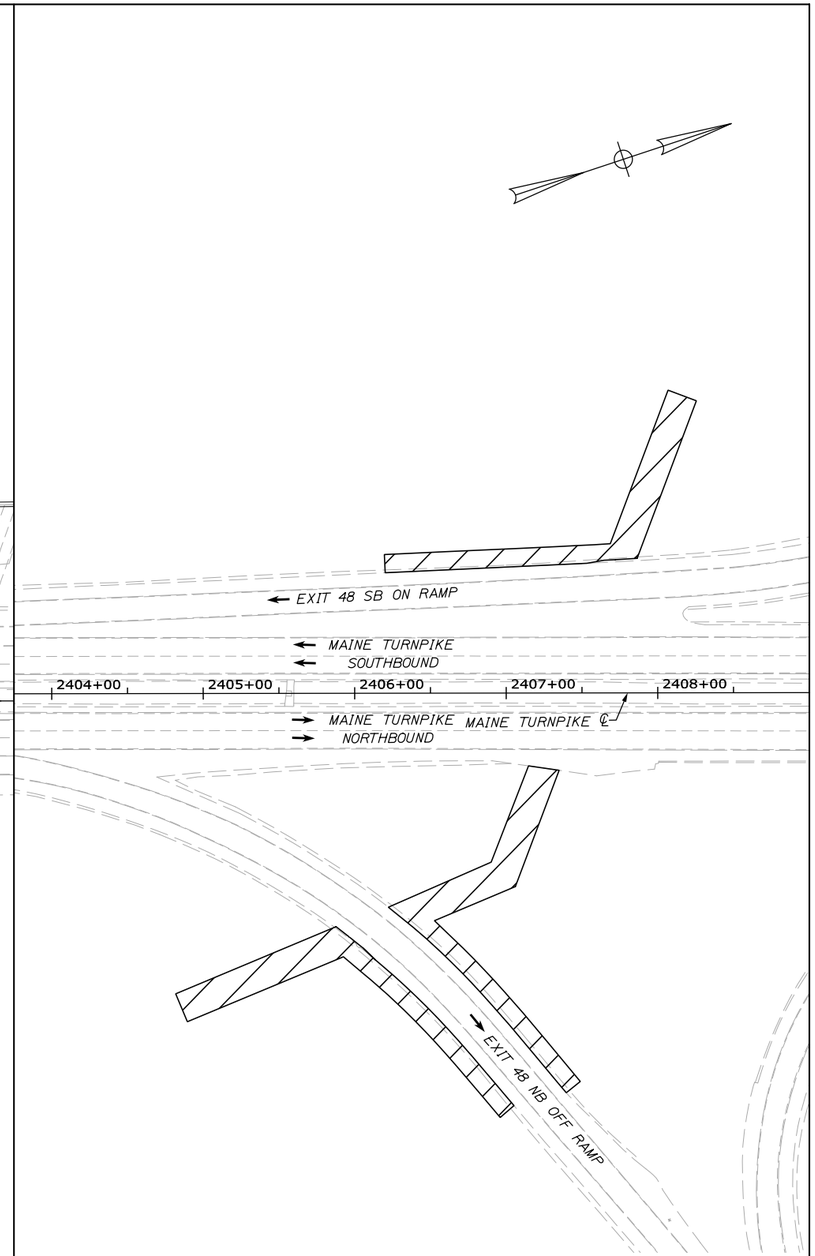
SHEET NUMBER: HP-02

CONTRACT: 2021.02

Date:5/24/2021







LEGEND

THIS CONTRACT LIMIT OF DISTURBANCE (0.8 ACRES)

NOTES:

1. EROSION AND SEDIMENTATION CONTROL DEVICES REQUIRED FOR THE CONTRACTOR'S ACCESS LOCATIONS AND STORAGE AREAS WILL NOT BE MEASURED FOR PAYMENT.

2. SEE SPECIFICATIONS FOR CONTRACTOR'S SUBMITTAL REQUIREMENTS IF ADDING ADDITIONAL LIMITS OF DISTURBANCE TO THE PROJECT ESTIMATED QUANTITIES.

3. AN ADDITIONAL 0.5 ACRE HAS BEEN ESTIMATED FOR CONTRACTOR ACCESS LOCATIONS AND STORAGE AREAS.

Scale:
50 0 50 100
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

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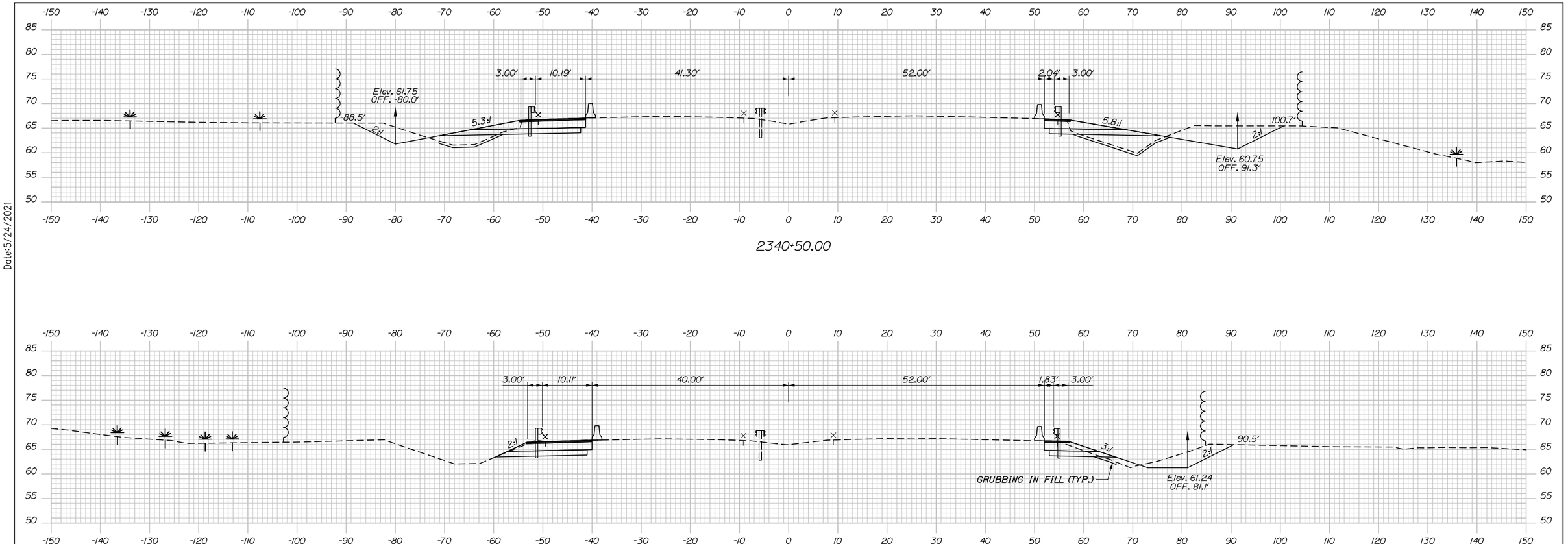
WATER LINE AND UTILITY VAULTS

LIMIT OF DISTURBANCE

SHEET NUMBER: LOD-01

CONTRACT: 2021.02

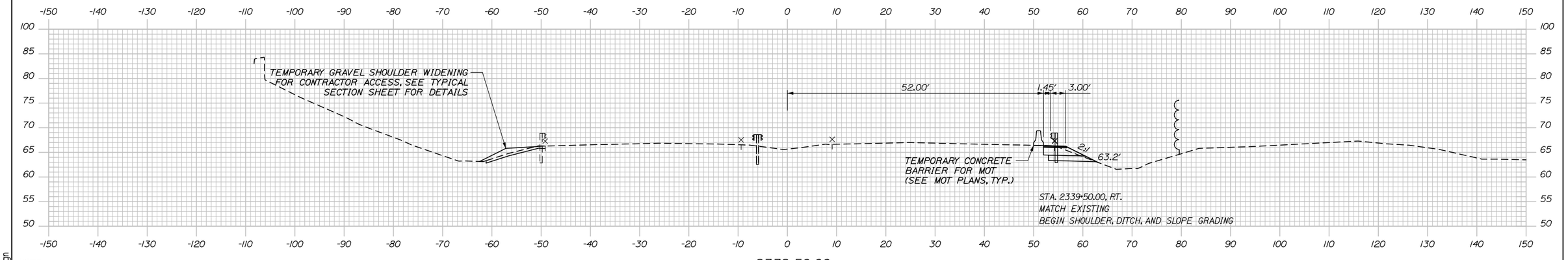
Filename: PAW2_LOD_PLAN_SHEET.dgn



2340+50.00

STA. 2340+00.00, LT.
MATCH EXISTING
BEGIN SHOULDER, DITCH, AND SLOPE GRADING

2340+00.00



STA. 2339+50.00, RT.
MATCH EXISTING
BEGIN SHOULDER, DITCH, AND SLOPE GRADING

2339+50.00

NOTE:
STATION TO STATION WORK LIMITS ARE APPROXIMATE, CONTRACTOR SHALL PROPOSE ACTUAL LIMITS FOR RESIDENT REVIEW AND APPROVAL.

Scale: 10 0 10 20
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

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WATER LINE AND UTILITY VAULTS

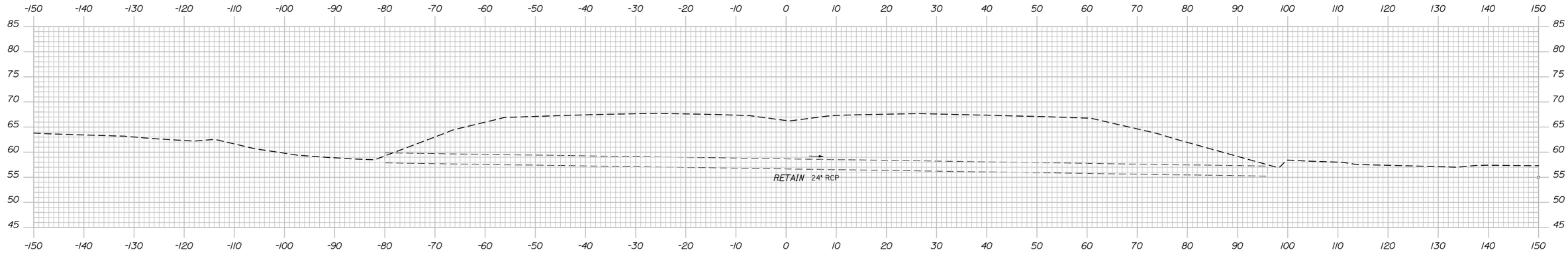
MAINE TURNPIKE CROSS SECTIONS STA. h 2339+50 TO STA. h 2340+50

SHEET NUMBER: XS-01

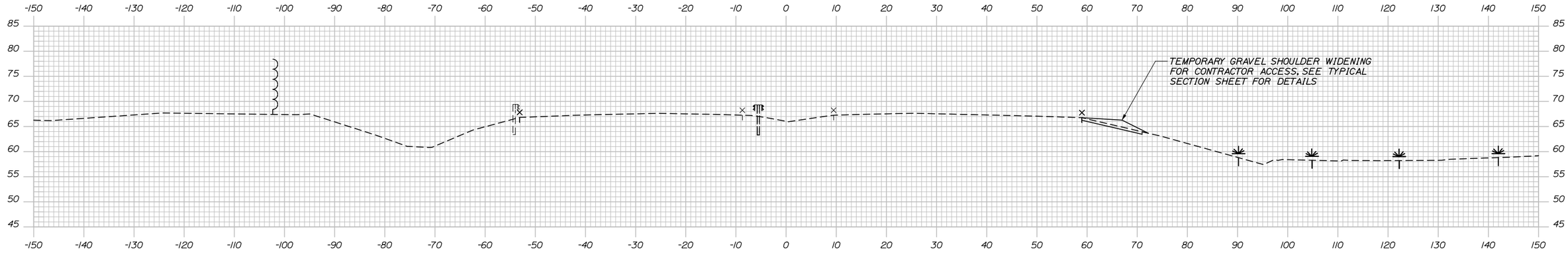
CONTRACT:2021.02

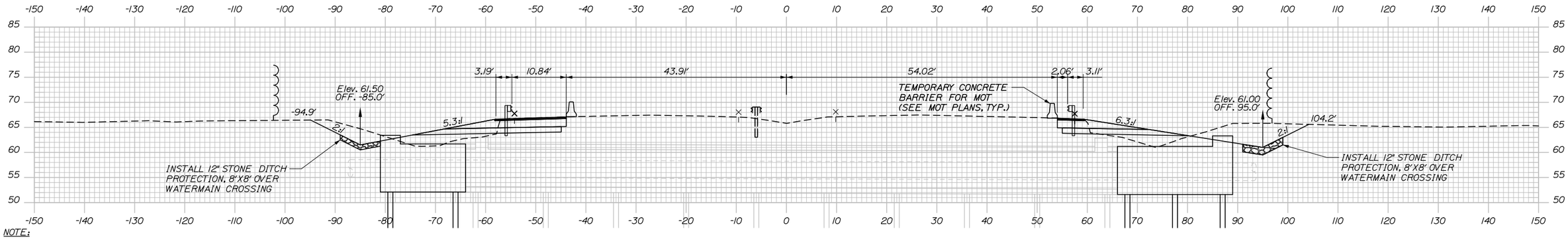
Date:5/24/2021

Filename: PAW2_Cross_Section_01.dgn



2341+15.66 (SKEWED)





2340+50.15 (SKEWED)

NOTE:
STATION TO STATION WORK LIMITS ARE APPROXIMATE. CONTRACTOR SHALL PROPOSE ACTUAL LIMITS FOR RESIDENT REVIEW AND APPROVAL.

Scale: 10 0 10 20
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
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MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

MAINE TURNPIKE CROSS SECTIONS
STA. h 2340+50.15 TO STA. h 2341+15.66

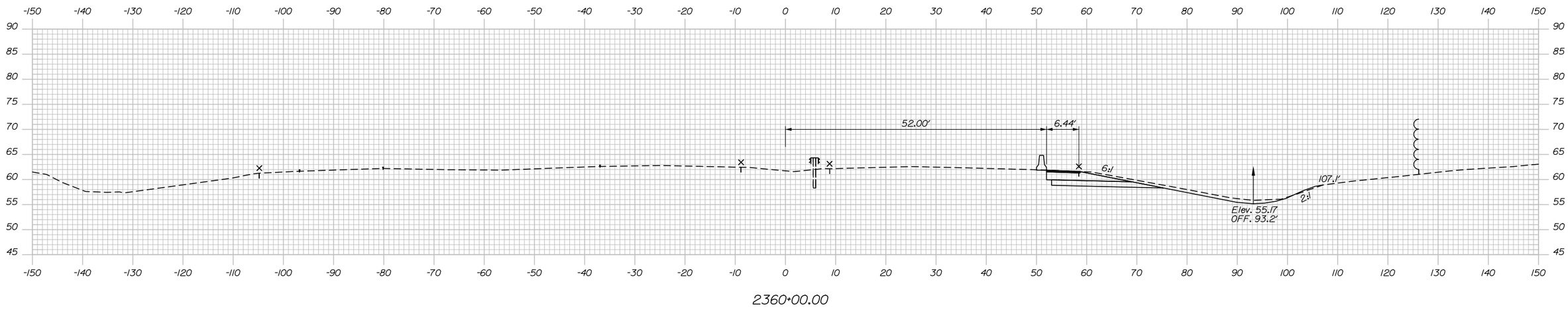
SHEET NUMBER: XS-02

CONTRACT:2021.02

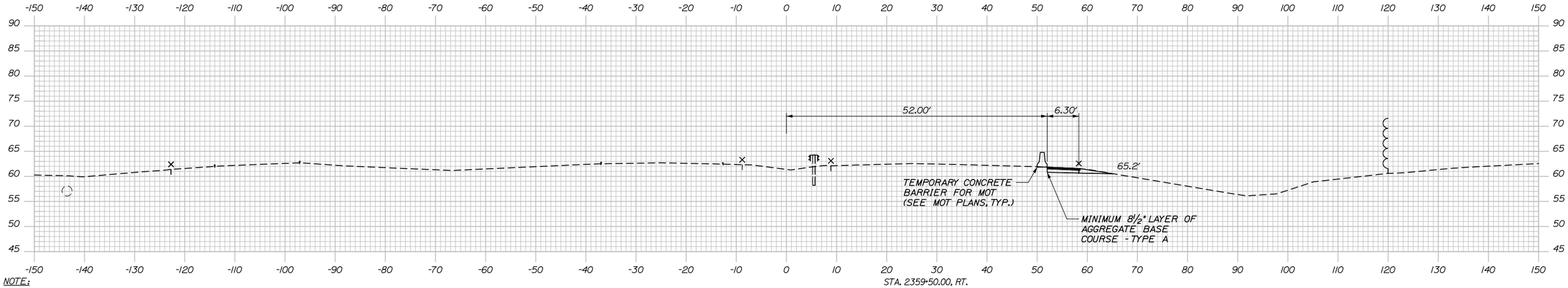
Date:5/24/2021

Filename: PAW2_Cross_Section_01.dgn

Date:5/24/2021



2360+00.00



NOTE:
STATION TO STATION WORK LIMITS ARE APPROXIMATE, CONTRACTOR SHALL PROPOSE ACTUAL LIMITS FOR RESIDENT REVIEW AND APPROVAL.

2359+50.00

STA. 2359+50.00, RT.
MATCH EXISTING
BEGIN SHOULDER, DITCH, AND SLOPE GRADING

Scale: 10 0 10 20
Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

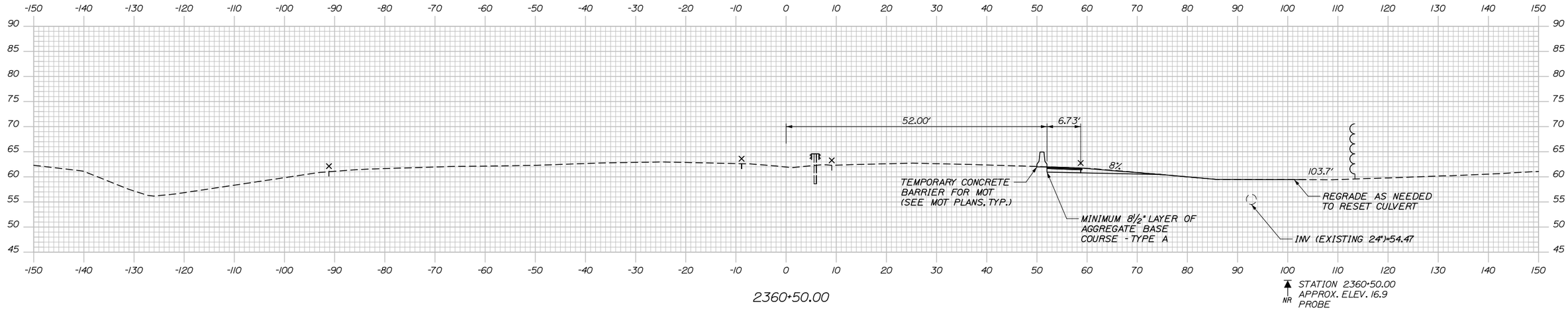
WATER LINE AND UTILITY VAULTS

MAINE TURNPIKE CROSS SECTIONS STA. i 2359+50 TO STA. i 2360+00

SHEET NUMBER: XS-03

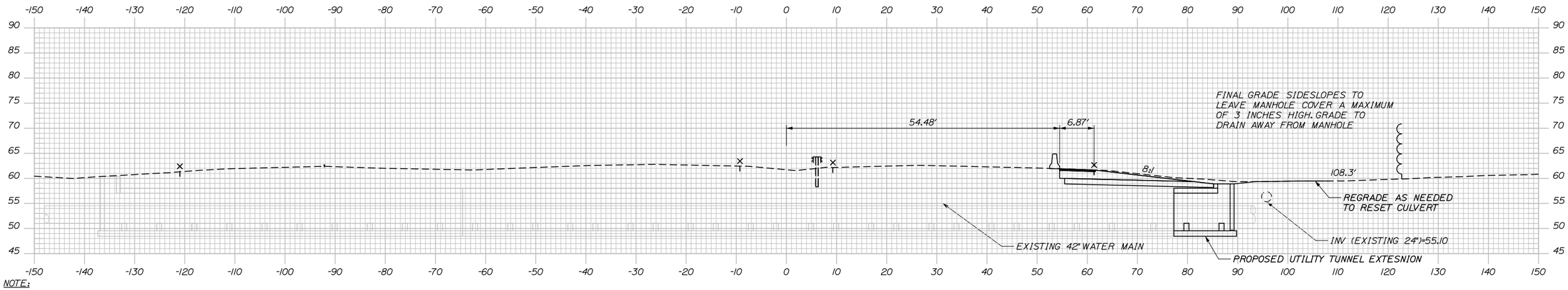
CONTRACT:2021.02

Filename: PAW2_Cross_Section_01.dgn



2360+50.00

EXISTING 24" RCP, TO BE TEMPORARILY REMOVED DURING CONSTRUCTION OF CONCRETE UTILITY VAULT EXTENSION. FLOWS SHALL BE MAINTAINED FOR THE DURATION OF VAULT CONSTRUCTION. UPON COMPLETION OF THE VAULT EXTENSION, THE PIPE SHALL BE RELAYED, INCLUDING CONNECTION TO EXISTING PIPE.



2360+02.55 (SKEWED)

NOTE:
STATION TO STATION WORK LIMITS ARE APPROXIMATE. CONTRACTOR SHALL PROPOSE ACTUAL LIMITS FOR RESIDENT REVIEW AND APPROVAL.

Scale: 10 0 10 20 — Scale of Feet

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

MAINE TURNPIKE CROSS SECTIONS STA. i 2360+02.55 TO STA. i 2360+50

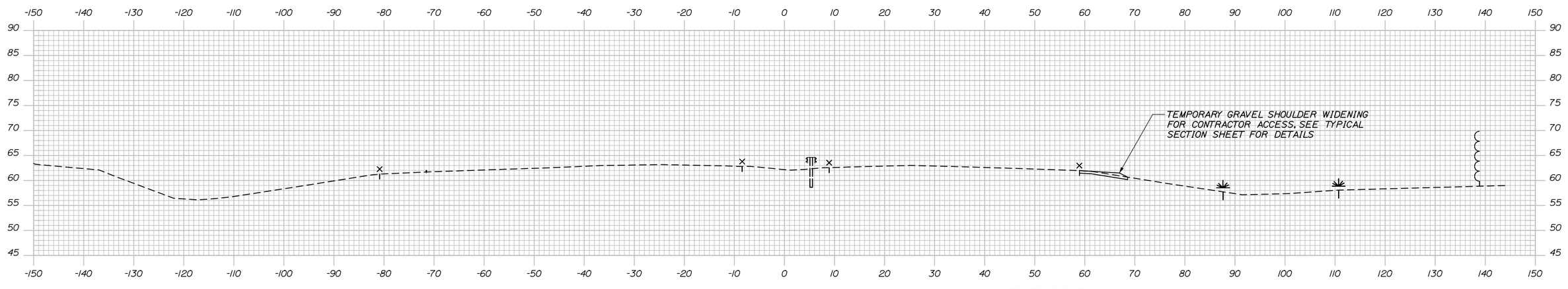
SHEET NUMBER: XS-04

CONTRACT:2021.02

Date:5/24/2021

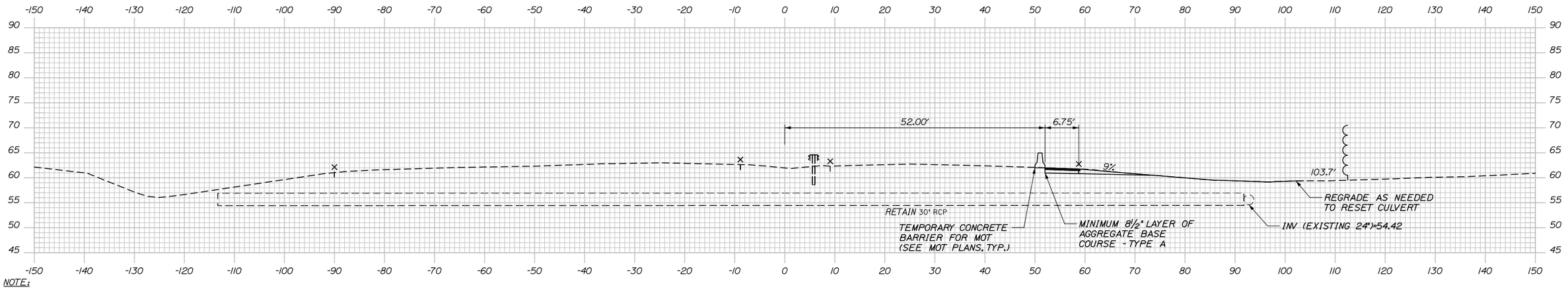
Filename: PAW2_Cross_Section_01.dgn

Date:5/24/2021



2361+00.00

STA. 2361+00.00, RT.
END SHOULDER, DITCH, AND SLOPE GRADING
MATCH EXISTING



2360+53.81 (SKEWED)

NOTE:
STATION TO STATION WORK LIMITS ARE APPROXIMATE. CONTRACTOR SHALL PROPOSE ACTUAL LIMITS FOR RESIDENT REVIEW AND APPROVAL.

Filename: PAW2_Cross_Section_01.dgn

Scale: 10 0 10 20
Scale of Feet

No.	Revision	By	Date

Designed by:

HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	DAM	04/21	Checked	RWH	04/21
Drawn	EDD	04/21	In Charge of	TRC	04/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

MAINE TURNPIKE CROSS SECTIONS STA. i 2360+53.81 TO STA. i 2361+00

SHEET NUMBER: XS-05

CONTRACT:2021.02

Date:5/24/2021

SPECIFICATIONS

DESIGN

AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

CONSTRUCTION

STATE OF MAINE, DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF NOVEMBER 2014.

STATE OF MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS FOR HIGHWAYS AND BRIDGES, NOVEMBER 2014 WITH LATEST REVISIONS.

AASHTO LRFD BRIDGE CONSTRUCTION SPECIFICATIONS, 4TH EDITION.

DESIGN LOADING

LIVE LOAD - HL-93

MATERIALS

CONCRETE

CLASS AAA

REINFORCING STEEL

AASHTO M31, GRADE 60 EPOXY COATED

ANCHOR BOLTS

ASTM F1554, GRADE 55

STRUCTURAL STEEL

STEEL H-PILES, ASTM A572, GRADE 50
ALL OTHER STRUCTURAL STEEL SHALL CONFORM TO ASTM A709, GRADE 50

BASIC DESIGN STRESSES

CONCRETE - CLASS AAA - f'c = 4,500 P.S.I.

REINFORCING STEEL - GRADE 60 fy = 60,000 P.S.I.

STRUCTURAL STEEL - ASTM 572, GRADE 50; fy = 50,000 P.S.I.
- ASTM 709, GRADE 50; fy = 50,000 P.S.I.

GENERAL NOTES:

1. THE PROPOSED ELEVATIONS ARE BASED ON THE NAVD 88 DATUM. SOME AS-BUILT PLANS ARE BASED ON NGVD 29 DATUM.

2. COPIES OF THE AS-BUILT PLANS ARE ON FILE AT THE MAINE TURNPIKE AUTHORITY. THE ACCURACY OF THESE PLANS IS NOT GUARANTEED.

3. REINFORCING STEEL SHALL HAVE A CLEAR COVER OF 2", UNLESS OTHERWISE NOTED.

4. CHAMFER ALL EXPOSED CONCRETE EDGES ¾" UNLESS OTHERWISE NOTED.

5. WHERE DRILLING AND ANCHORING OF REINFORCING STEEL IS SPECIFIED THE CONTRACTOR SHALL USE A MATERIAL LISTED ON THE MAINEDOT PREQUALIFIED LIST OF EPOXY AND RESIN BASED ADHESIVE BONDING SYSTEMS. THE DEPTH OF EMBEDMENT SHALL BE SUFFICIENT TO DEVELOP 125% OF THE YIELD STRENGTH OF THE BAR, BUT SHALL BE NO LESS THAN THE MINIMUM DEPTH OF EMBEDMENT WHEN SPECIFIED.

6. DIMENSIONS WITH RESPECT TO EXISTING STRUCTURES ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE. IF FIELD CONDITIONS VARY BY MORE THAN 1' FROM DIMENSIONS SHOWN ON THE PLANS, THE ENGINEER SHALL BE NOTIFIED.

QUANTITY TABLE

ITEM NO.	DESCRIPTION	UNIT	STRUCTURAL QUANTITY
202.12	REMOVE EXISTING STRUCTURAL CONCRETE	CY	30
501.231	DYNAMIC LOAD TEST	EA	2
501.40	STEEL H-BEAM PILES, 53 LB/FT, DELIVERED	LF	865
501.401	STEEL H-BEAM PILES, 53 LB/FT, IN PLACE	LF	865
501.90	PILE TIPS	EA	10
501.91	PILE SPLICES	EA	10
501.92	PILE DRIVING EQUIPMENT MOBILIZATION	LS	1
511.091	TEMPORARY EARTH SUPPORT SYSTEMS	LS	1
514.06	CURING BOX FOR CONCRETE CYLINDERS	EA	1
604.1581	UTILITY VAULT EXTENSION - STA 2360+02.55 NB	LS	1
604.1582	UTILITY VAULT EXTENSION - STA 2340+52.81 NB	LS	1
604.1583	UTILITY VAULT EXTENSION - STA 2340+52.81 SB	LS	1

INDEX OF DRAWINGS

UTILITY VAULT NOTES:

1. ALL EXISTING DIMENSIONS AND DETAILS ARE TAKEN FROM ORIGINAL DESIGN DRAWINGS AND ARE NOT GUARANTEED. THE CONTRACTOR SHALL DETERMINE AND ESTABLISH ALL DIMENSIONS AND EXISTING DETAILS NECESSARY FOR COMPLETION OF ALL WORK BY FIELD MEASUREMENT AND SURVEY.

2. PAYMENT FOR REMOVAL OF EXISTING CONCRETE AND SAW CUTTING CONCRETE IS INCIDENTAL TO THE RELATED UTILITY VAULT EXTENSION PAY ITEMS. BEFORE REMOVAL OF CONCRETE, THE DEMOLITION LIMIT SHALL BE SAW CUT TO A DEPTH OF 1" MINIMUM. CARE SHALL BE TAKEN NOT TO DAMAGE ANY REINFORCING STEEL THAT IS TO REMAIN.

3. BARS BROKEN DURING REMOVAL OF EXISTING CONCRETE SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE BY DRILLING AND ANCHORING AN EQUIVALENT SIZED BAR.

4. THE CONTRACTOR SHALL DEVELOP A CONSTRUCITON PROCEDURE, TEMPORARY WATER MAIN SUPPORT, AND TEMPORARY SUPPORT SYSTEMS THAT WILL PROTECT, AT ALL TIMES, THE 42" WATER MAINS. EACH WATER MAIN WILL BE REMOVED FROM SERVICE DURING THE WORK BY CLOSING THE VALVES ON EACH SIDE OF THE WORK AREA. SEE SPECIAL PROVISION 604 FOR ADDITIONAL INFORMATION.

5. THE UTILITY VAULTS SHALL FOLLOW THE HORIZONTAL ALIGNMENT OF THE EXISTING WATER MAIN.

6. MANHOLES SHALL BE NEENAH FOUNDRY COMPANY, R-6660-NH SERIES CATALOG NUMBER R-6660-NH, OR APPROVED EQUIVALENT. PAYMENT FOR THE MANHOLES ARE INCIDENTAL TO THE RELATED 604 UTILITY VAULT EXTENSION PAY ITEMS.

7. PREPARATION OF THE EXISTING CONCRETE SHALL PRODUCE A SOUND, CLEAN SURFACE FREE OF BOND INHIBITING MATERIALS. ANY CONCRETE AREAS FOUND TO BE UNSOUND SHALL BE RE-CHIPPED BY THE CONTRACTOR. PAYMENT SHALL BE INCIDENTAL TO THE RELATED UTILITY VAULT EXTENSION PAY ITEMS.

8. APPLY A BONDING AGENT TO THE EXISTING CONCRETE SURFACES PRIOR TO PLACING NEW CONCRETE. THE MANUFACTURER'S INSTRUCTIONS FOR THE SELECTED BONDING AGENT MUST BE FOLLOWED AND APPROVED BY THE ENGINEER. PAYMENT SHALL BE INCIDENTAL TO THE RELATED UTILITY VAULT EXTENSION PAY ITEMS.

9. FOR MANHOLE STEP DETAILS SEE MAINE DEPARTMENT OF TRANSPORTATION STANDARD DETAILS, PAGE 604(03). PAYMENT SHALL BE INCIDENTAL TO THE RELATED UTILITY VAULT EXTENSION PAY ITEMS.

10. FOR DETAILS OF EXISTING CONCRETE RETAINING WALL TO BE DEMOLISHED, SEE AS-BUILT PLANS FOR CONTRACT 2001.01.

11. STRUCTURAL EXCAVATION AND BACKFILL SHALL BE IN ACCORDANCE WITH MAINEDOT STANDARD SPECIFICATION 206 AND INCIDENTAL TO RELATED 604 PAY ITEMS.

LIST OF ABBREVIATIONS

ABUT. - ABUTMENT
ADDL. - ADDITIONAL
ALT. - ALTERNATE
APPROX. - APPROXIMATELY
BOT. - BOTTOM
BRG. - BEARING
CB - CATCH BASIN
CIP - CAST IN PLACE
CL. - CLEAR/CLASS
℄ - CENTERLINE
CONC. - CONCRETE
CONSTR. - CONSTRUCTION
CY - CUBIC YARD
DEMO. - DEMOLITION
DIA. - DIAMETER
EA. - EACH
EB - EASTBOUND
E.F. - EACH FACE
EL - ELEVATION
EQ. - EQUAL
EXIST. - EXISTING
EXP. - EXPANSION
F.F. - FAR FACE
JT. - JOINT
LF - LINEAR FOOT
LT. - LEFT
MAX. - MAXIMUM
MEDOT - MAINE DEPARTMENT OF TRANSPORTATION
MIN. - MINIMUM
MTA - MAINE TURNPIKE AUTHORITY
NB - NORTHBOUND
N.F. - NEAR FACE
N.T.S. - NOT TO SCALE
OC - ON CENTER
OHSS - OVERHEAD SIGN STRUCTURE
OPT - OPTION
PED. - PEDESTAL
PGL - PROFILE GRADE LINE
℄ - PLATE
PROP. - PROPOSED
P.S.I. - POUNDS per SQUARE INCH
RCP - REINFORCED CONCRETE PIPE
RDWY. - ROADWAY
RT. - RIGHT
SHLDR. - SHOULDER
SB - SOUTHBOUND
SF - SQUARE FEET
SP. - SPACES
STA. - STATION
TEMP. - TEMPORARY
T.&B. - TOP & BOTTOM
TPKE. - TURNPIKE
TYP. - TYPICAL
U.O.N. - UNLESS OTHERWISE NOTED
VERT. - VERTICAL
V.I.F. - VERIFY IN FIELD
WB - WESTBOUND
W.P. - WORKING POINT
WW - WINGWALL

Filename: 019_General Notes Rev. 1

Scale: NO SCALE

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

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South Portland, ME 04106
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

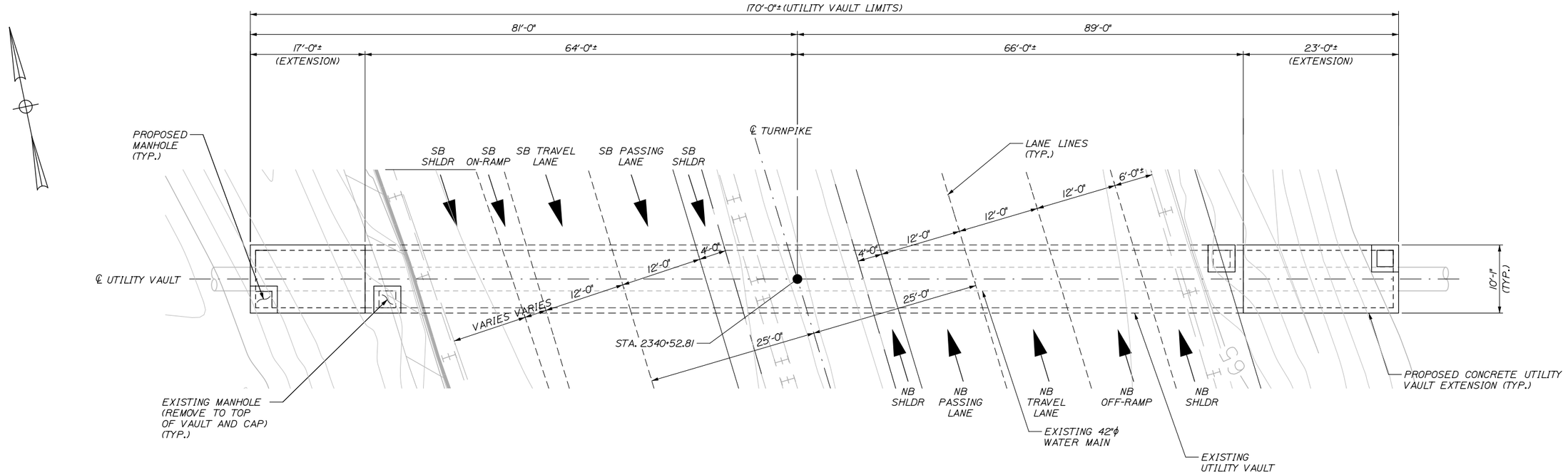
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

STRUCTURAL PLANS GENERAL NOTES

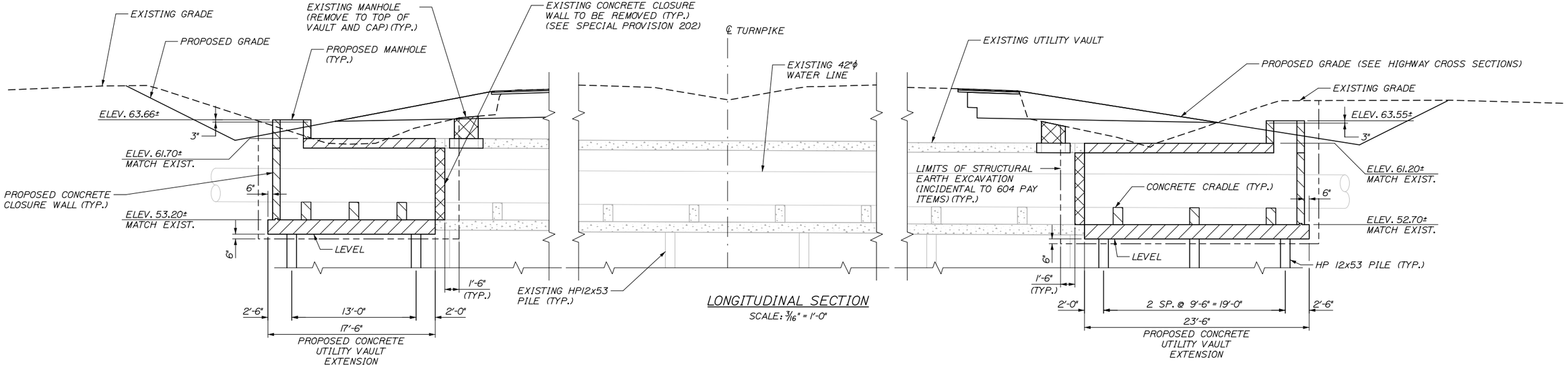
SHEET NUMBER: S-01

CONTRACT:2021.02



PLAN VIEW - UTILITY VAULT

SCALE: 1/8" = 1'-0"



LONGITUDINAL SECTION

SCALE: 3/16" = 1'-0"

NOTE:

FOR UTILITY VAULT NOTES SEE SHEET S-01

Scale: AS NOTED	Designed by: HNTB	HNTB CORPORATION 82 Running Hill Road, Suite 201 South Portland, ME 04106 TEL (207) 774-5155 FAX (207) 228-0909	MAINE TURNPIKE	THE GOLD STAR MEMORIAL HIGHWAY	WATER LINE AND UTILITY VAULTS

No.	Revision	By	Date

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

UTILITY VAULT DETAILS
STA. 2340+52.81

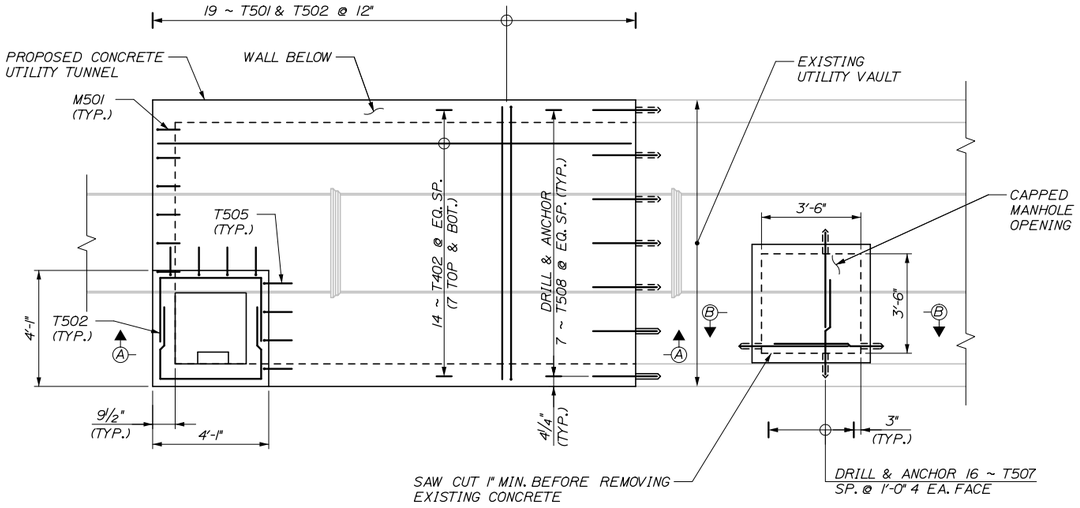
SHEET NUMBER: S-02

CONTRACT:2021.02

20 OF 36

Date:5/24/2021

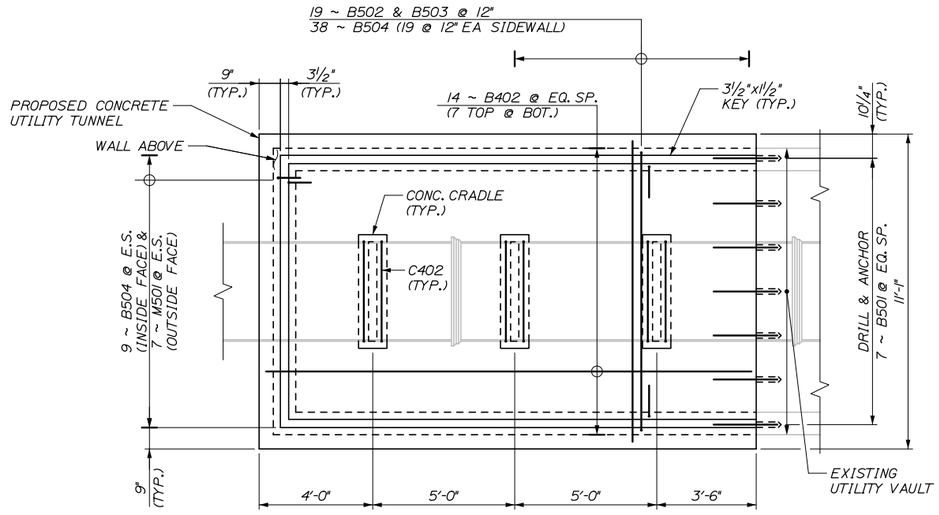
Filename: 020_Utility Vault Details - Tunnel 2 Rev. 1



NOTE:
FIELD CUT BARS AT MANHOLE AS REQUIRED.

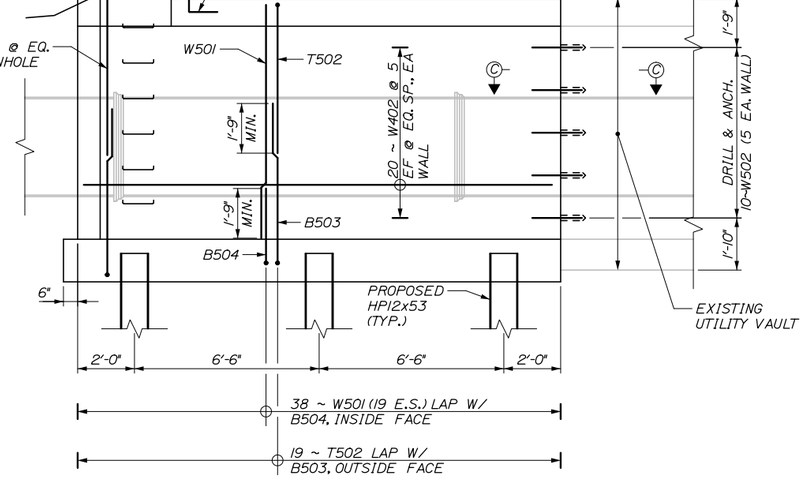
PLAN - WEST EXTENSION

(TOP SLAB REINFORCEMENT SHOWN)
⅜" = 1'-0"



BOTTOM SLAB PLAN - WEST EXTENSION

⅜" = 1'-0"



SECTION A-A - WEST EXTENSION

(NORTH WALL SHOWN, SOUTH WALL SIMILAR)
⅜" = 1'-0"

NOTES:

1. FOR SECTIONS B-B AND C-C, SEE SHEET S-06.

PILE NOTES

1. THE CONTRACTOR SHALL PERFORM AND SUBMIT A WAVE EQUATION ANALYSIS FOR REVIEW AND ACCEPTANCE BY THE RESIDENT. THE MAXIMUM ALLOWABLE DRIVING STRESS IS 0.90 TIMES FY. THE SUBMITTAL ANALYSIS SHALL INCLUDE THE PROPOSED STOPPING CRITERIA BASED ON THE WAVE EQUATION ANALYSIS AND THE PROPOSED DRIVING SYSTEM. THE STOPPING CRITERIA SHALL INCLUDE THE BLOWS PER INCH AND THE NUMBER OF I-IN. INTERVALS AT WHICH PILE INSTALLATION MAY BE TERMINATED. THE COST OF PERFORMING THE WAVE EQUATION ANALYSIS WILL BE CONSIDERED INCIDENTAL TO PAY ITEM 501.92.

2. THE CONTRACTOR SHALL PERFORM 2 DYNAMIC LOAD TEST(S), ONE AT EACH FOUNDATION, TO CONFIRM THE NOMINAL DRIVING RESISTANCE OF THE PILES. THE DYNAMIC TEST SHALL BE PERFORMED ON THE FIRST PRODUCTION PILE DRIVEN AT EACH FOUNDATION.

3. PILES SHALL BE IN ACCORDANCE WITH STANDARD SPECIFICATION 501. ESTIMATED PILE LENGTHS INCLUDE 10 FEET PER PILE AS CONTINGENCY TO THE LENGTH OF THE PILES REQUIRED.

4. ALL PILES SHALL BE EQUIPPED WITH A PILE TIP IN ACCORDANCE WITH STANDARD SPECIFICATION SECTION 501.048, PREFABRICATED PILE TIPS.

5. ELEVATIONS ARE APPROXIMATE AND ARE PROVIDED FOR REFERENCE ONLY.

PILE DATA							
LOCATION	PILE SIZE	NUMBER OF PILES	AXIAL COMPRESSION RESISTANCE (KIPS)		MINIMUM PILE TIP ELEVATION	ESTIMATED PILE TIP ELEVATION	NOMINAL DRIVING RESISTANCE (KIPS)
			NOMINAL	FACTORED			
NORTHBOUND	HP 12x53	6	486	316	-12	-20	600
SOUTHBOUND	HP 12x53	4	535	348	-23	-28	671

Date:5/24/2021

Filename: 021_Utility Vault Details - Tunnel 2 - Details 1

Scale: AS NOTED

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

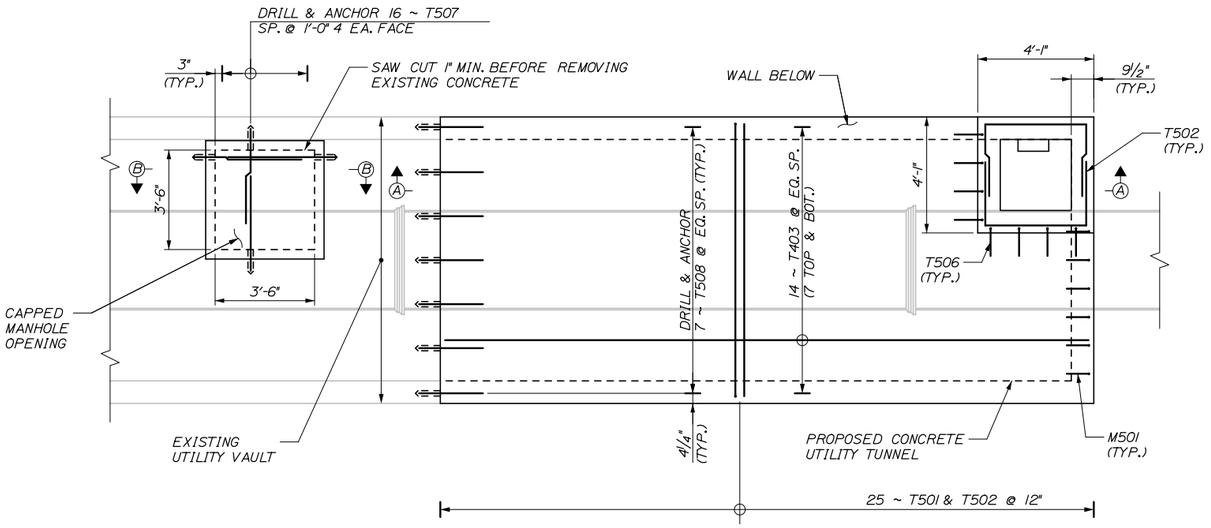
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

UTILITY VAULT DETAILS
STA. 2340+52.81 - DETAILS 1

SHEET NUMBER: S-03

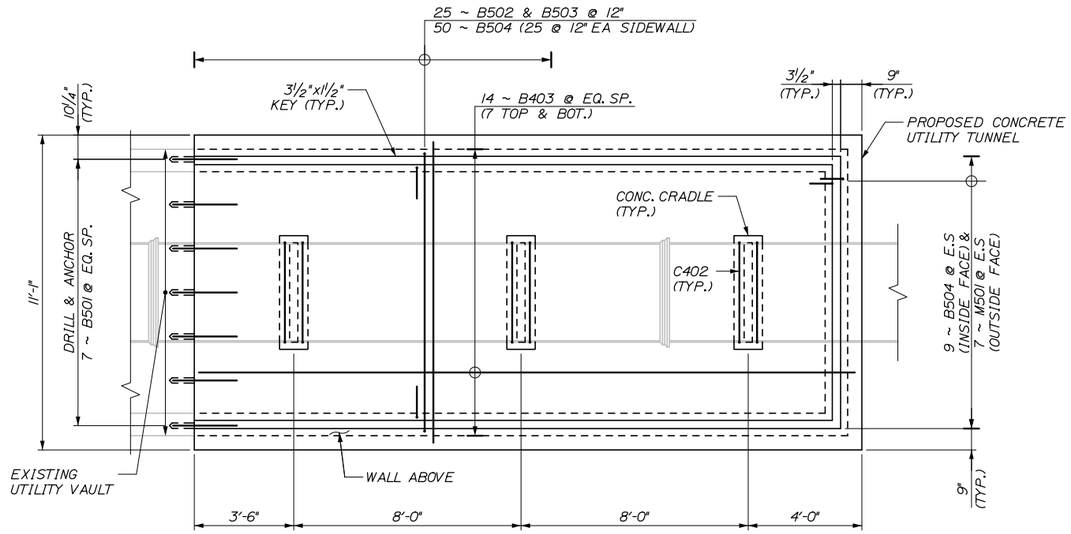
CONTRACT:2021.02



NOTE:
FIELD CUT BARS AT MANHOLE AS REQUIRED.

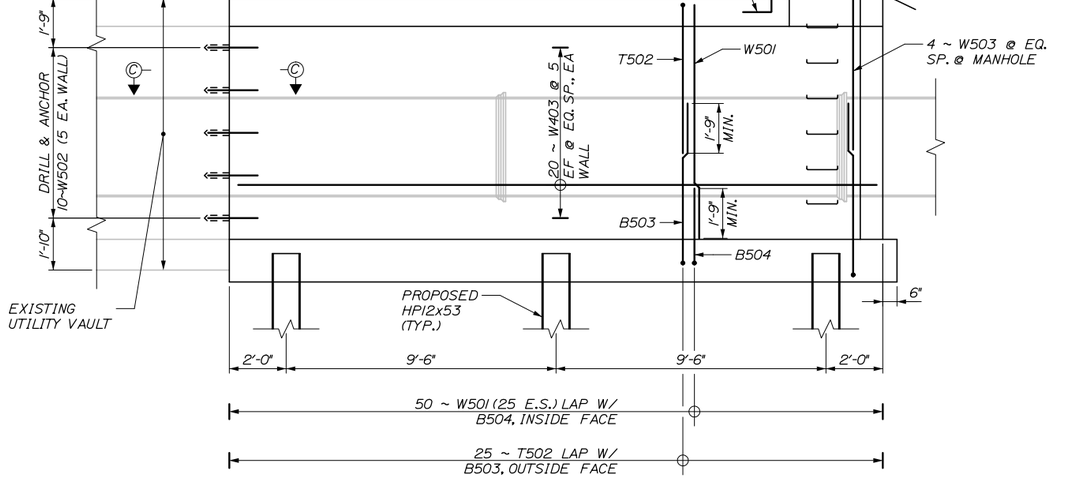
PLAN - EAST EXTENSION

(TOP SLAB REINFORCEMENT SHOWN)
⅜" = 1'-0"



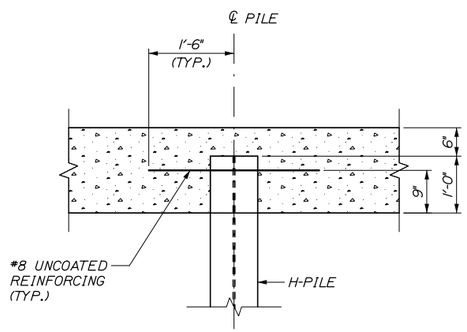
BOTTOM SLAB PLAN - EAST EXTENSION

⅜" = 1'-0"



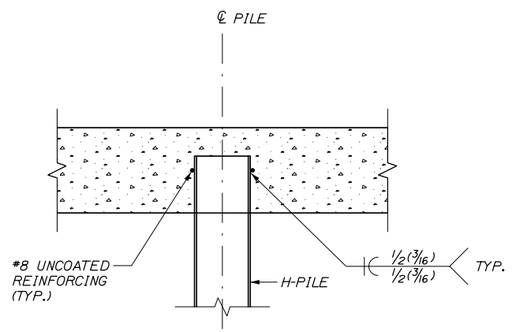
SECTION A-A - EAST EXTENSION

(NORTH WALL SHOWN, SOUTH WALL SIMILAR)
⅜" = 1'-0"



PILE EMBEDMENT DETAIL

NOT TO SCALE



PILE EMBEDMENT SECTION

NOT TO SCALE

NOTES:

1. FOR SECTIONS B-B AND C-C, SEE SHEET S-06.

Date:5/24/2021

Filename: 022_Utility Vault Details - Tunnel 2 - Details II Rev. 1

Scale: AS NOTED

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
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MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

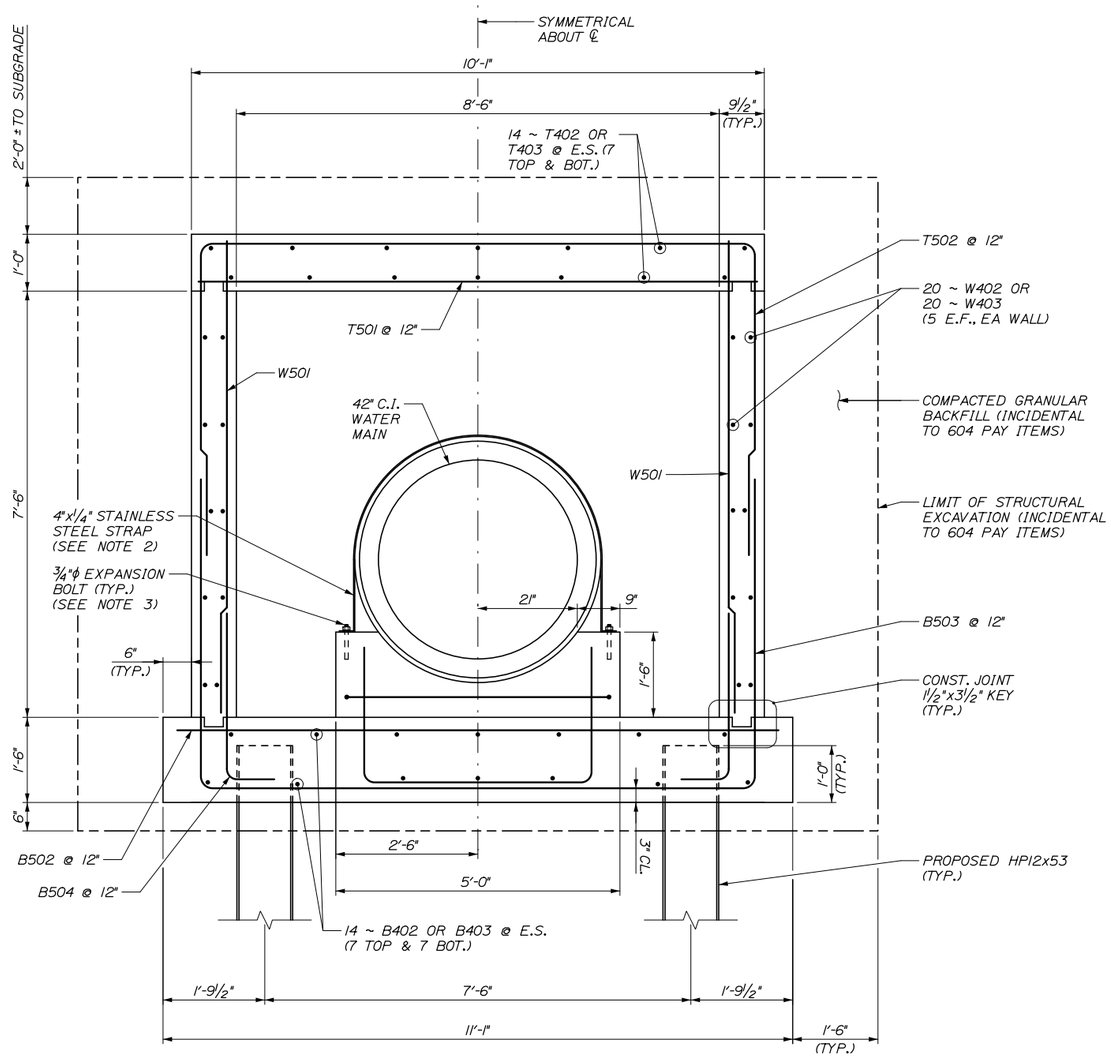
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

UTILITY VAULT DETAILS
STA. 2340+52.81 - DETAILS II

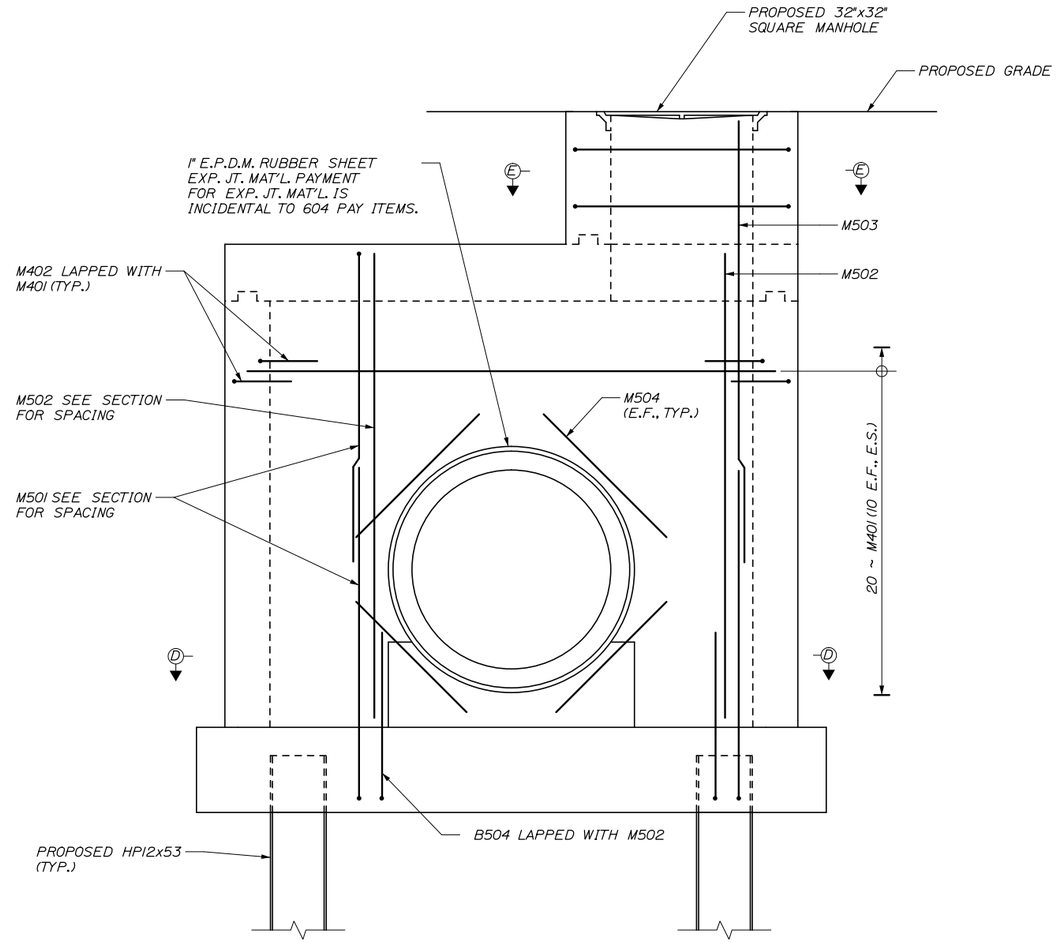
SHEET NUMBER: S-04

CONTRACT:2021.02



TYPICAL SECTION

¾" = 1'-0"



CLOSURE WALL ELEVATION

¾" = 1'-0"

NOTES:

1. FOR SECTIONS D-D AND E-E, SEE SHEET S-06.
2. STAINLESS STEEL STRAP SHALL BE ASTM A666, TYPE 201 AND BE INSTALLED AT 2'-0" O.C. ALONG THE WATERMAIN PIPE.
3. EXPANSION BOLT SHALL BE ¾"ϕ STAINLESS STEEL HILTI QUICK BOLT WITH 6" EMBEDMENT OR APPROVED EQUAL.

Scale: AS NOTED

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

UTILITY VAULT DETAILS STA. 2340+52.81 - DETAILS III

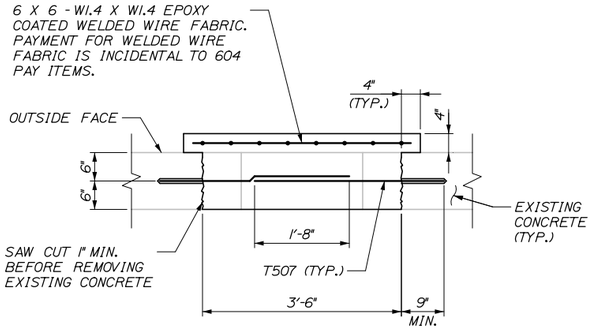
SHEET NUMBER: S-05

CONTRACT: 2021.02

23 OF 36

Date: 5/24/2021

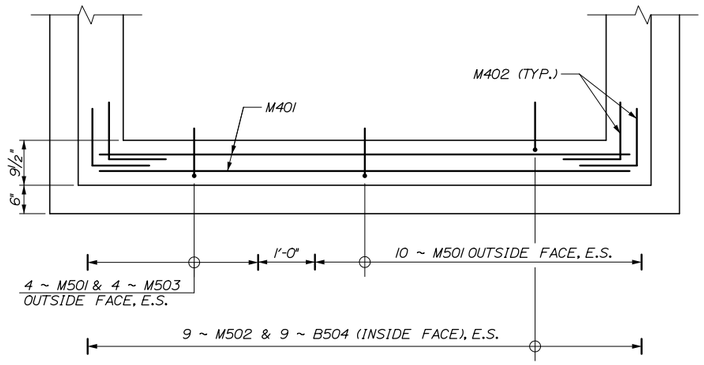
Filename: 023_Utility Vault Details - Tunnel 2 - Details III Rev. 1



SECTION B-B

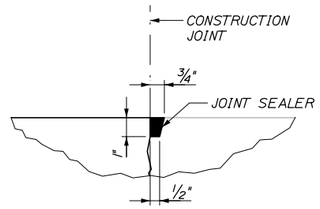
(CAPPED EXISTING MANHOLE OPENING)

3/4" = 1'-0"



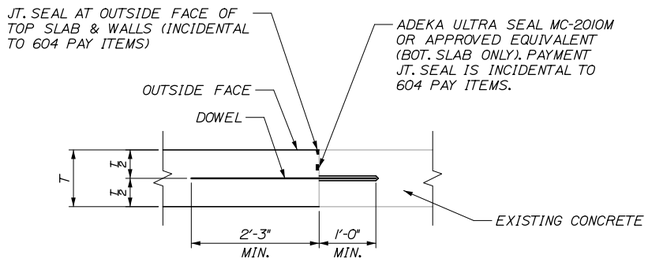
SECTION D-D

3/4" = 1'-0"



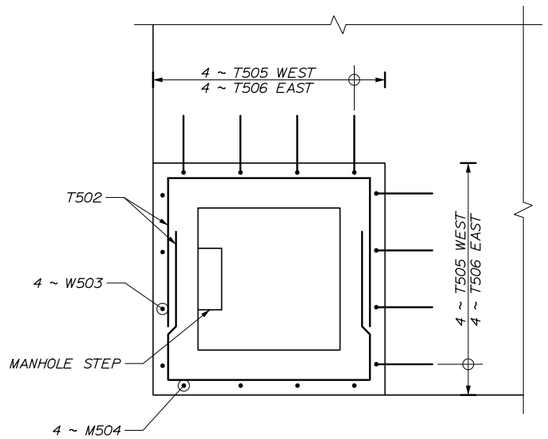
JOINT SEAL DETAIL

3" = 1'-0"



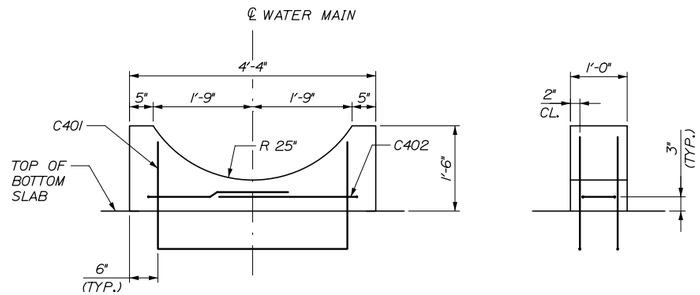
SECTION C-C

3/4" = 1'-0"



SECTION E-E

3/4" = 1'-0"



CRADLE REINFORCEMENT DETAIL

3/4" = 1'-0"

NOTE:

1. CONTRACTOR SHALL VERIFY CRADLE RADIUS MATCHES PIPE RADIUS IN FIELD. IF REQUIRED, RADIUS SHALL BE ADJUSTED SUCH THAT THE PIPE SEATS WITH NO GAPS. ADJUSTMENTS SHALL BE INCIDENTAL TO RELATED 604 PAY ITEMS.

Date:5/24/2021

Filename: 024_Utility Vault Details - Tunnel 2 - Details IV Rev. 1

Scale: AS NOTED

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

UTILITY VAULT DETAILS STA. 2340+52.81 - DETAILS IV

SHEET NUMBER: S-06

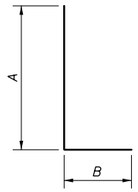
CONTRACT:2021.02

WEST UTILITY VAULT REINFORCING SCHEDULE

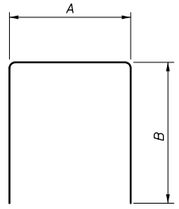
MARK	SIZE	NO.	LENGTH	TYPE	A	B	REMARKS
STA. 2340+52.81							
T402	4	14	16' - 8"	STR			Top Slab: Longitudinal
T501	5	19	9' - 9"	STR			Top Slab: Transverse Bottom
T502	5	19	21' - 11"	129	9'-9"	6'-1"	Top Slab: Transverse Top
T503	5	4	9' - 8"	129	3'-4"	3'-2"	Top Slab: Horizontal Manhole
T505	5	8	5' - 4"	118	3'-4"	2'-0"	Top Slab: Vertical Manhole
T507	5	16	3' - 4"	STR			Top Slab: Existing Manhole Infill
T508	5	7	3' - 6"	STR			Top Slab: Dowel
W402	4	20	16' - 8"	STR			Sidewalls: Longitudinal
W501	5	38	8' - 2"	STR			Sidewalls: Vertical Int. Face
W502	5	10	3' - 6"	STR			Sidewalls: Dowels
W503	5	4	9' - 0"	STR			Sidewalls: Vertical @ Manhole
B402	4	14	17' - 2"	STR			Bottom Slab: Longitudinal
B501	5	7	3' - 6"	STR			Bottom Slab: Dowels
B502	5	19	10' - 9"	STR			Bottom Slab: Transverse Top
B503	5	19	22' - 9"	129	9'-9"	6'-6"	Bottom Slab: Transverse Bottom
B504	5	47	6' - 10"	118	6'-0"	10"	Bottom Slab: Vertical Hook
M401	4	20	9' - 9"	STR			Closure Wall: Horizontal
M402	4	40	4' - 0"	118	2'-0"	2'-0"	Closure Wall: Horizontal Hooks
M501	5	14	6' - 11"	118	6'-1"	10"	Closure Wall: Vertical Ext. Face
M502	5	9	8' - 2"	STR			Closure Wall: Vertical Int. Face
M503	5	4	9' - 0"	STR			Closure Wall: Vertical Manhole Outside Face
M504	5	8	5' - 0"	STR			Closure Wall: Utility Diagonal
C401	4	6	8' - 8"	129	3'-6"	2'-7"	Cradle: Vertical
C402	4	6	6' - 8"	129	8"	3'-0"	Cradle: Horizontal

EAST UTILITY VAULT REINFORCING SCHEDULE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	REMARKS
STA. 2340+52.81							
T403	4	14	22' - 8"	STR			Top Slab: Longitudinal
T501	5	25	9' - 9"	STR			Top Slab: Transverse Bottom
T502	5	25	21' - 11"	129	9'-9"	6'-1"	Top Slab: Transverse Top
T503	5	8	9' - 8"	129	3'-4"	3'-2"	Top Slab: Horizontal Manhole
T506	5	8	5' - 9"	118	3'-4"	2'-5"	Top Slab: Vertical Manhole
T507	5	16	3' - 4"	STR			Top Slab: Existing Manhole Infill
T508	5	7	3' - 6"	STR			Top Slab: Dowel
W403	4	20	22' - 8"	STR			Sidewalls: Longitudinal
W501	5	50	8' - 2"	STR			Sidewalls: Vertical Int. Face
W502	5	10	3' - 6"	STR			Sidewalls: Dowels
W503	5	4	9' - 0"	STR			Sidewalls: Vertical @ Manhole
B403	4	14	23' - 2"	STR			Bottom Slab: Longitudinal
B501	5	7	3' - 6"	STR			Bottom Slab: Dowels
B502	5	25	10' - 9"	STR			Bottom Slab: Transverse Top
B503	5	25	22' - 9"	129	9'-9"	6'-6"	Bottom Slab: Transverse Bottom
B504	5	59	6' - 10"	118	6'-0"	10"	Bottom Slab: Vertical Hook
M401	4	20	9' - 9"	STR			Closure Wall: Horizontal
M402	4	40	4' - 0"	118	2'-0"	2'-0"	Closure Wall: Horizontal Hooks
M501	5	14	6' - 11"	118	6'-1"	10"	Closure Wall: Vertical Ext. Face
M502	5	8	8' - 2"	STR			Closure Wall: Vertical Int. Face
M503	5	4	9' - 0"	STR			Closure Wall: Vertical Manhole Outside Face
M504	5	8	5' - 0"	STR			Closure Wall: Utility Diagonal
C401	4	6	8' - 8"	129	3'-6"	2'-7"	Cradle: Vertical
C402	4	6	6' - 8"	129	8"	3'-0"	Cradle: Horizontal



TYPE 118



TYPE 129

Date:5/24/2021

Filename: 025_Utility Vault Details - Tunnel2 - Reinforcing Shcedule Rev. 1

Scale: NO SCALE

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

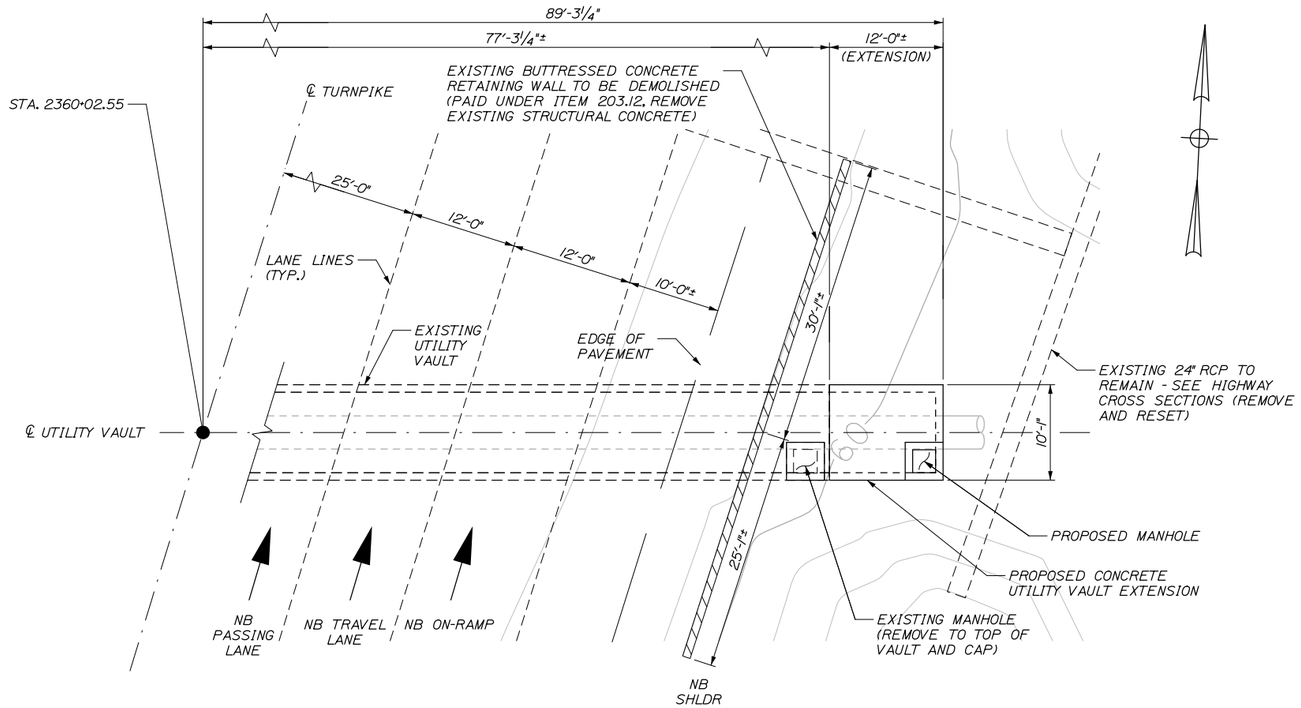
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

UTILITY VAULT DETAILS
STA. 2340+52.81 - REINFORCING SCHEDULE

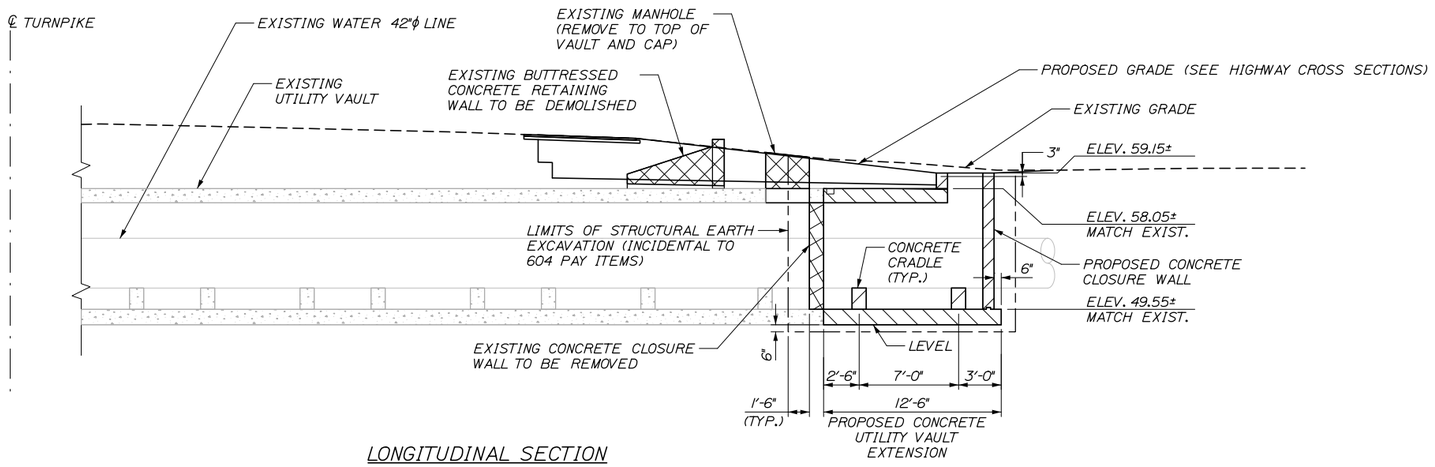
SHEET NUMBER: S-07

CONTRACT:2021.02



PLAN VIEW

SCALE: 1/8" = 1'-0"



LONGITUDINAL SECTION

SCALE: 3/16" = 1'-0"

NOTE:

FOR UTILITY VAULT NOTES SEE SHEET S-01

Date:5/24/2021

Filename: 026_Utility Vault Details - Tunnel Rev. 1

Scale: AS NOTED				Designed by: HNTB					
No.	Revision	By	Date	CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.					
					By	Date		By	Date
				Designed	BRG	03/21	Checked	JDW	03/21
				Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

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THE GOLD STAR MEMORIAL HIGHWAY

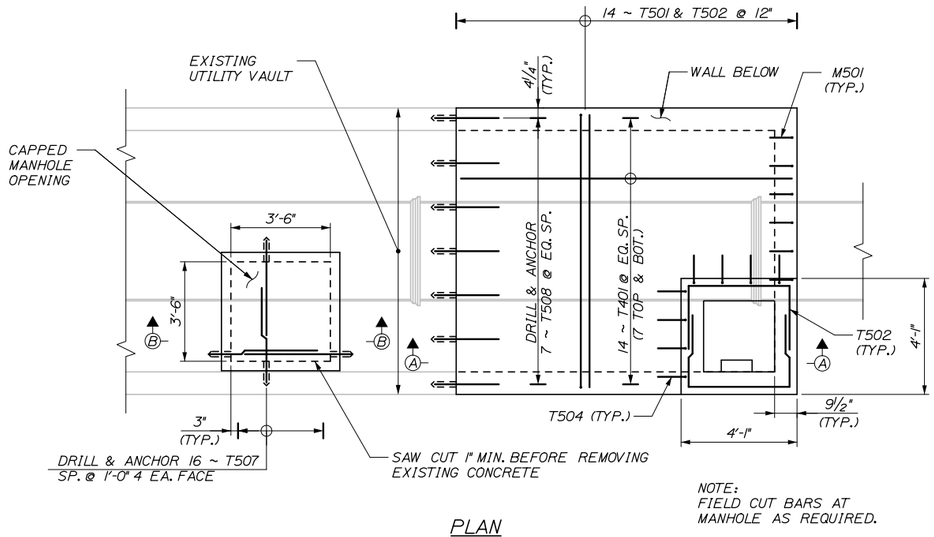
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

UTILITY VAULT DETAILS
STA. 2360+02.55

SHEET NUMBER: S-08

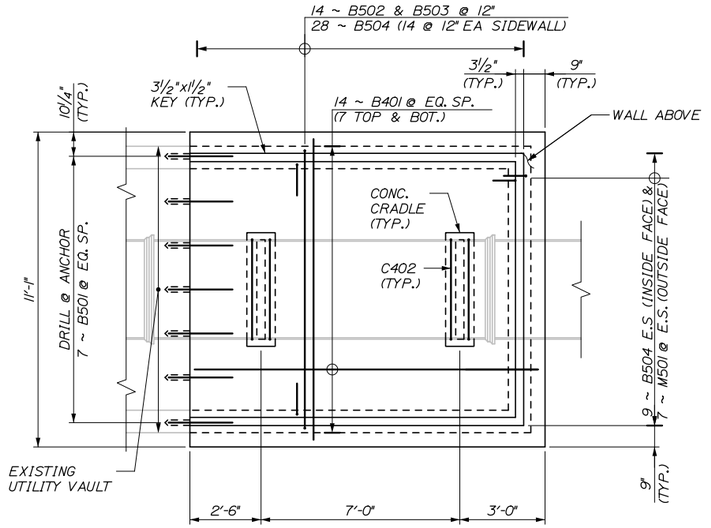
CONTRACT:2021.02



NOTE:
FIELD CUT BARS AT MANHOLE AS REQUIRED.

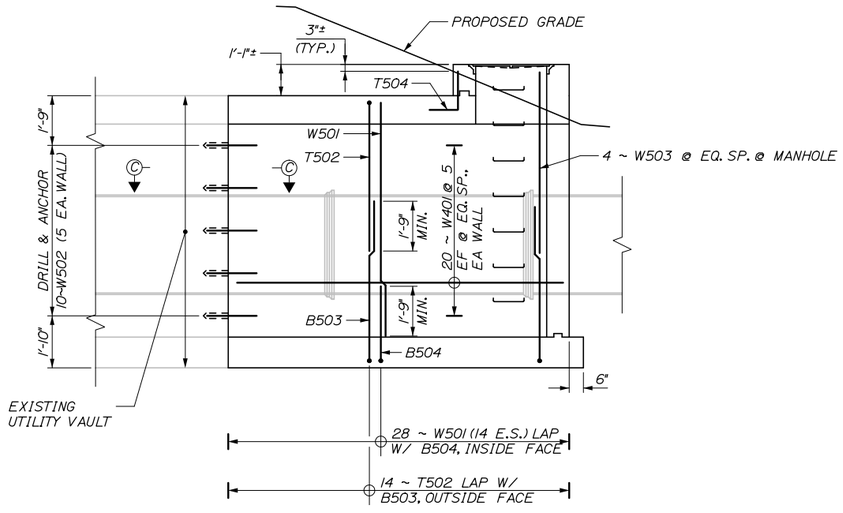
PLAN

(TOP SLAB REINFORCEMENT SHOWN)
⅜" = 1'-0"



BOTTOM SLAB PLAN

⅜" = 1'-0"



SECTION A-A

(NORTH WALL SHOWN, SOUTH WALL SIMILAR)
⅜" = 1'-0"

NOTES:

1. FOR SECTIONS B-B AND C-C, SEE SHEET S-11.

Scale: AS NOTED

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

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82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

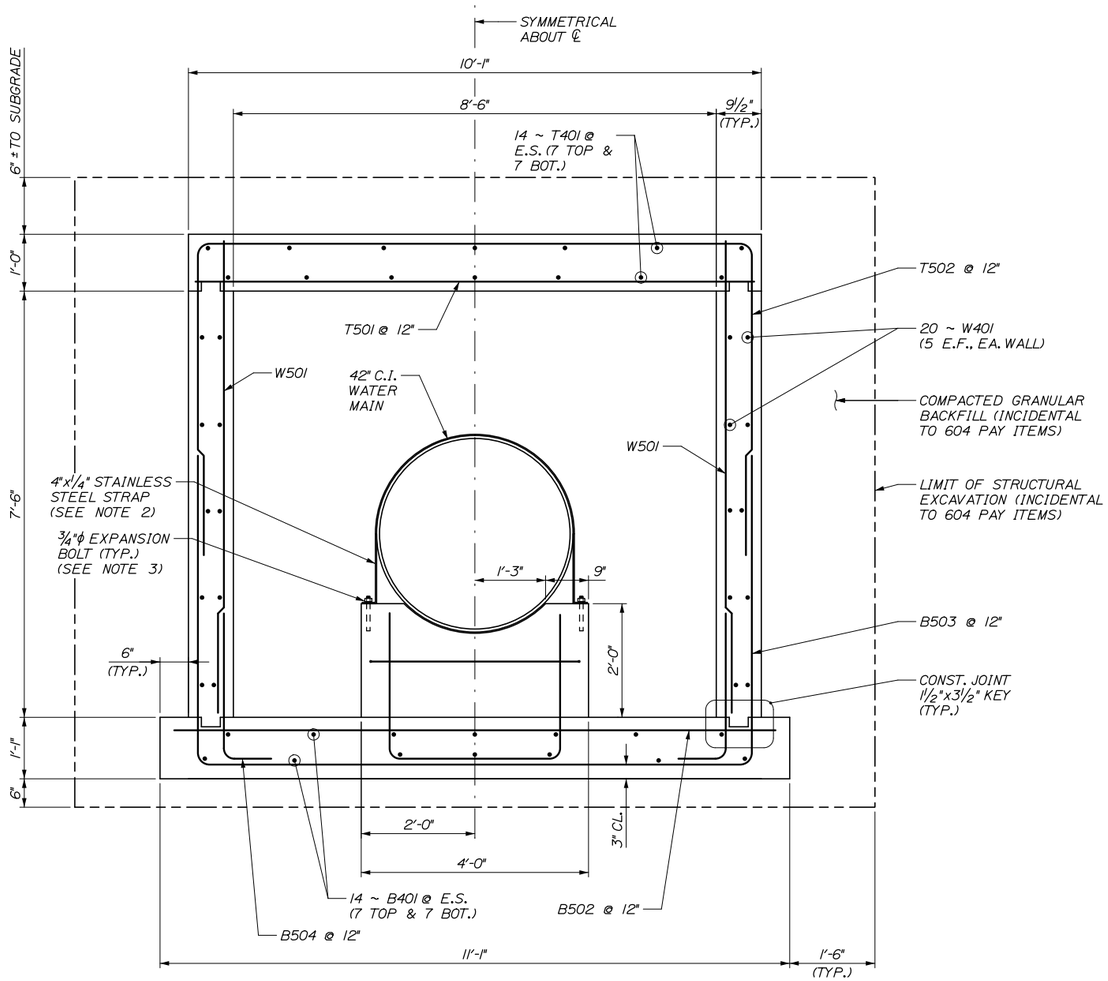
UTILITY VAULT DETAILS STA. 2360+02.55 - DETAILS 1

SHEET NUMBER: S-09

CONTRACT:2021.02

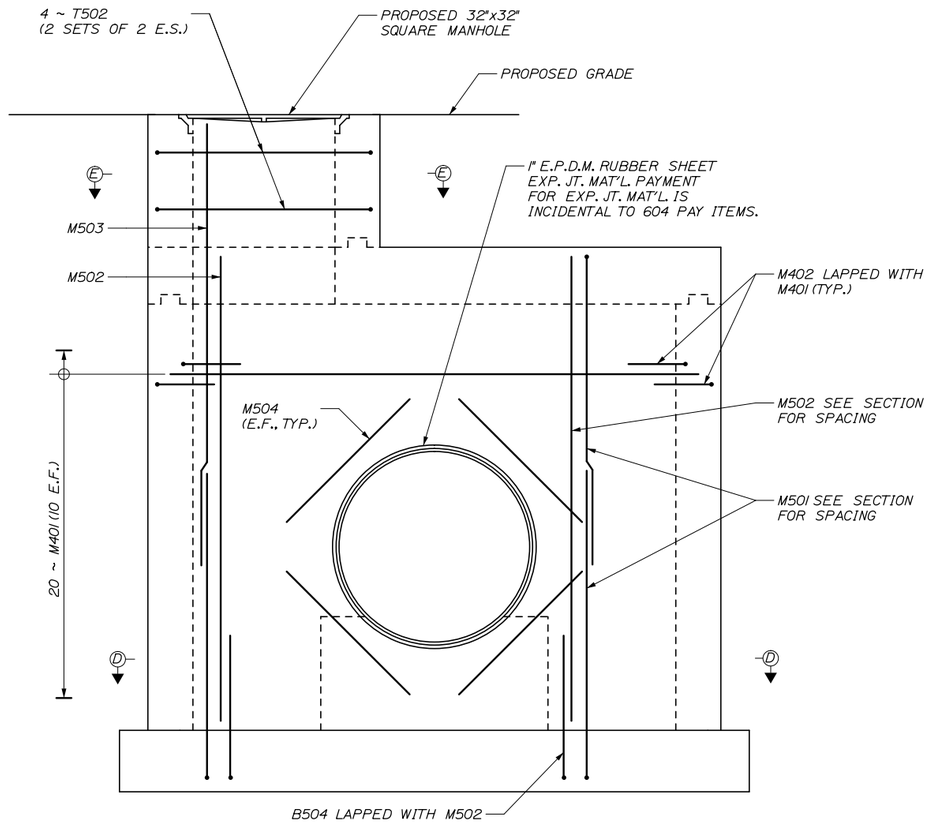
Date:5/24/2021

Filename: 027_Utility Vault Details - Tunnel 1 - Details 1 Rev. 1



TYPICAL SECTION

¾" = 1'-0"



NOTE:
FIELD CUT REINFORCEMENT AT 42" CIP WHERE REQUIRED.

CLOSURE WALL ELEVATION

¾" = 1'-0"

NOTES:

1. FOR SECTIONS D-D AND E-E, SEE SHEET S-11.
2. STAINLESS STEEL STRAP SHALL BE ASTM A666, TYPE 201 AND BE INSTALLED AT 2'-0" O.C. ALONG THE WATERMAIN PIPE.
3. EXPANSION BOLT SHALL BE ¾"ϕ STAINLESS STEEL HILTI QUICK BOLT WITH 6" EMBEDMENT OR APPROVED EQUAL.

Scale: AS NOTED

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

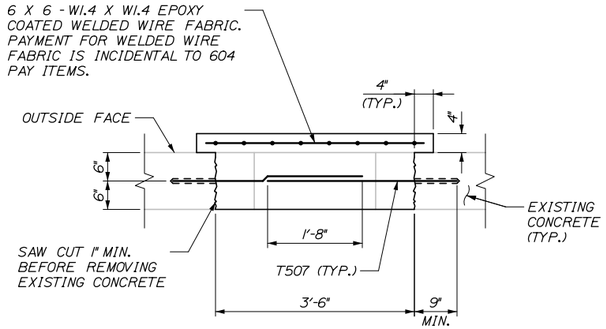
UTILITY VAULT DETAILS
STA. 2360+02.55 - DETAILS II

SHEET NUMBER: S-10

CONTRACT:2021.02

Date:5/24/2021

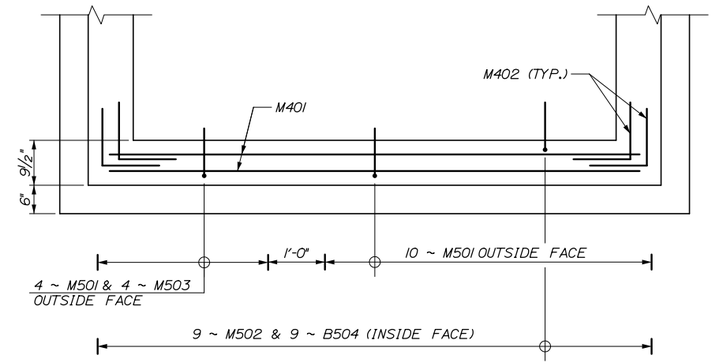
Filename: 028_Utility Vault Details - Tunnel 1 - Details II Rev. 1



SECTION B-B

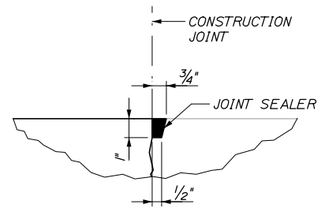
(CAPPED EXISTING MANHOLE OPENING)

3/4" = 1'-0"



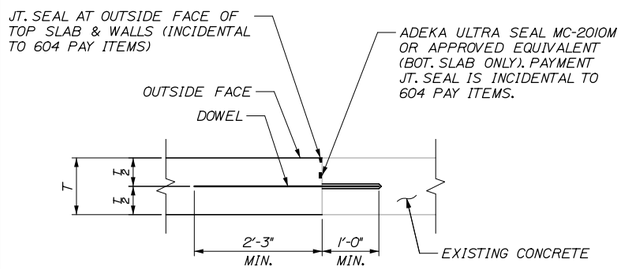
SECTION D-D

3/4" = 1'-0"



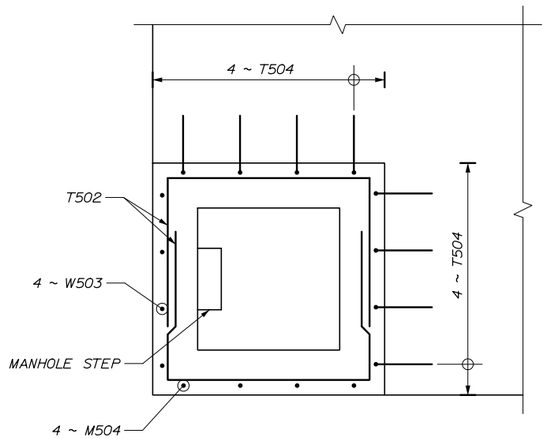
JOINT SEAL DETAIL

3" = 1'-0"



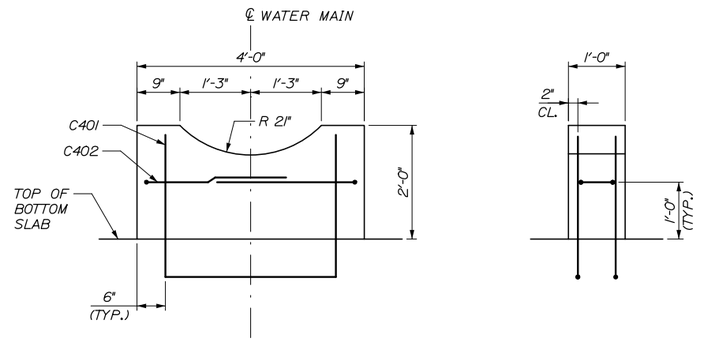
SECTION C-C

3/4" = 1'-0"



SECTION E-E

3/4" = 1'-0"



CRADLE REINFORCEMENT DETAIL

3/4" = 1'-0"

NOTE:

1. CONTRACTOR SHALL VERIFY CRADLE RADIUS MATCHES PIPE RADIUS IN FIELD. IF REQUIRED, RADIUS SHALL BE ADJUSTED SUCH THAT THE PIPE SEATS WITH NO GAPS. ADJUSTMENTS SHALL BE INCIDENTAL TO RELATED 604 PAY ITEMS.

Date:5/24/2021

Filename: 029_Utility Vault Details - Tunnel 1 - Details III Rev. 1

Scale: AS NOTED

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

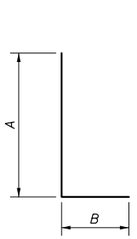
UTILITY VAULT DETAILS
STA. 2360+02.55 - DETAILS III

SHEET NUMBER: S-11

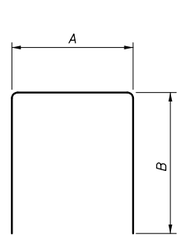
CONTRACT:2021.02

UTILITY VAULT REINFORCING SCHEDULE

MARK	SIZE	NO.	LENGTH	TYPE	A	B	REMARKS
STA. 2360+02.55							
T401	4	14	11' - 8"	STR			Top Slab: Longitudinal
T501	5	14	9' - 9"	STR			Top Slab: Transverse Bottom
T502	5	14	21' - 11"	129	9'-9"	6'-1"	Top Slab: Transverse Top
T503	5	4	9' - 8"	129	3'-4"	2'-2"	Top Slab: Horizontal Manhole
T504	5	8	4' - 6"	118	3'-4"	1'-2"	Top Slab: Vertical Manhole
T507	5	16	3' - 4"	STR			Top Slab: Existing Manhole Infill
T508	5	7	3' - 6"	STR			Top Slab: Dowel
W401	4	20	11' - 8"	STR			Sidewalls: Longitudinal
W501	5	28	8' - 2"	STR			Sidewalls: Vertical Int. Face
W502	5	10	3' - 6"	STR			Sidewalls: Dowels
W503	5	4	9' - 0"	STR			Sidewalls: Vertical @ Manhole
B401	4	14	12' - 2"	STR			Bottom Slab: Longitudinal
B501	5	7	3' - 6"	STR			Bottom Slab: Dowels
B502	5	14	10' - 9"	STR			Bottom Slab: Transverse Top
B503	5	14	22' - 9"	129	9'-9"	6'-0"	Bottom Slab: Transverse Bottom
B504	5	37	6' - 10"	118	6'-0"	10"	Bottom Slab: Vertical Hook
M401	4	20	9' - 9"	STR			Closure Wall: Horizontal
M402	4	40	4' - 0"	118	2'-0"	2'-0"	Closure Wall: Horizontal Hooks
M501	5	14	6' - 11"	118	6'-1"	10"	Closure Wall: Vertical Ext. Face
M502	5	9	8' - 2"	STR			Closure Wall: Vertical Int. Face
M503	5	4	9' - 0"	STR			Closure Wall: Vertical Manhole Outside Face
M504	5	8	5' - 0"	STR			Closure Wall: Utility Diagonal
C401	4	4	8' - 8"	129	3' 6"	2' 7"	Cracle: Vertical
C402	4	4	6' - 8"	129	8"	3'-0"	Cracle: Horizontal



TYPE 118



TYPE 129

Date:5/24/2021

Filename: 030_Utility Vault Details - Tunnel 1 - Reinforcing Shcedule Rev. 1

Scale: NO SCALE

No.	Revision	By	Date

Designed by: HNTB

CONSULTANT PROJECT MANAGER: Dale A. Mitchell, P.E.

	By	Date		By	Date
Designed	BRG	03/21	Checked	JDW	03/21
Drawn	ERB	03/21	In Charge of	TRC	03/21

HNTB CORPORATION
82 Running Hill Road, Suite 201
South Portland, ME 04106
TEL (207) 774-5155
FAX (207) 228-0909

MAINE TURNPIKE

THE GOLD STAR MEMORIAL HIGHWAY

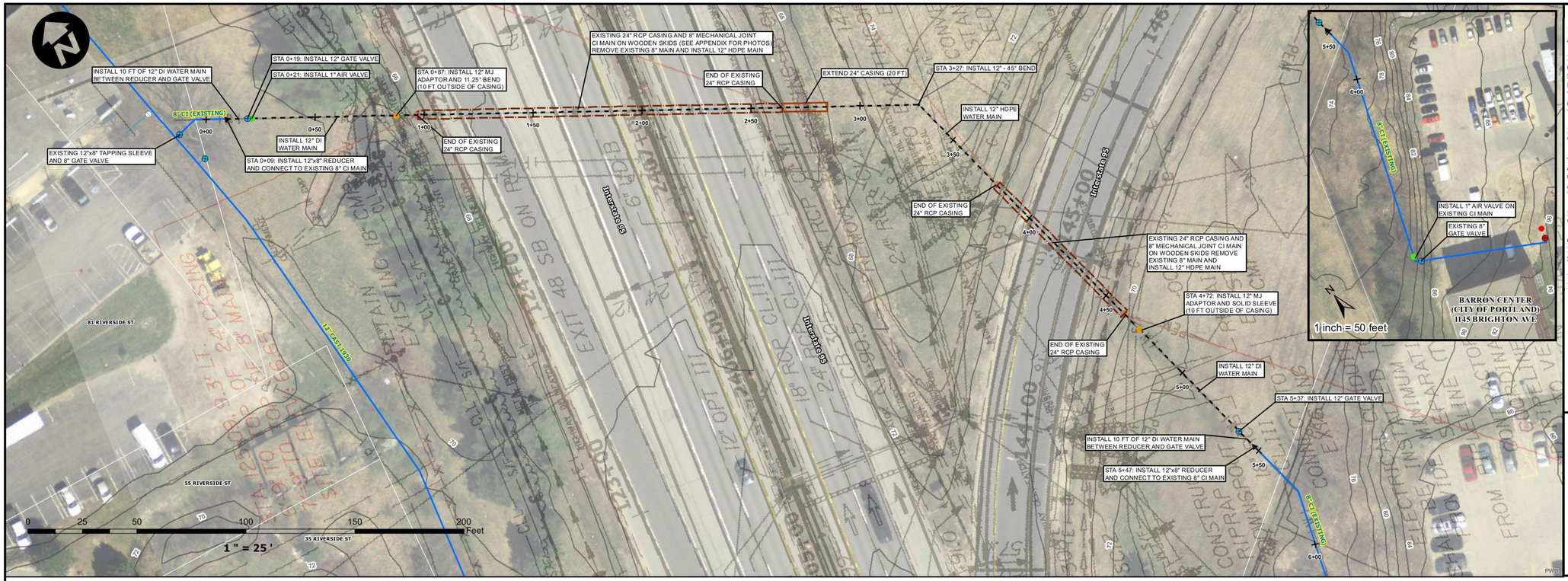
MTA PROJECT MANAGER: Ralph C. Norwood, IV, P.E., P.T.O.E.

WATER LINE AND UTILITY VAULTS

UTILITY VAULT DETAILS
STA. 2360+02.55 - REINFORCING SCHEDULE

SHEET NUMBER: S-12

CONTRACT:2021.02

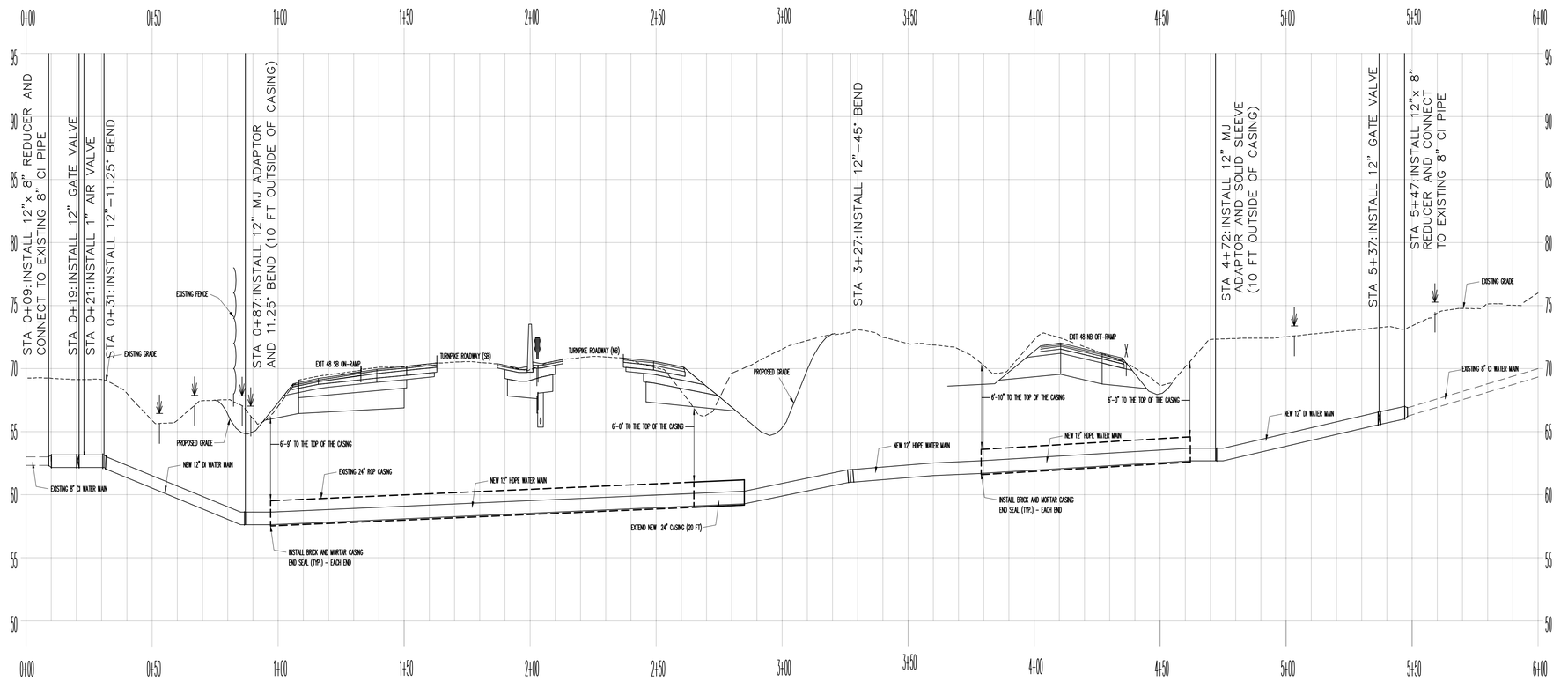


NOTES

1. CONTRACTOR SHALL DISPOSE OF ALL EXCAVATED PIPING AND APPURTENANCES.
2. THE PORTLAND WATER DISTRICT WILL NOTIFY CUSTOMERS FOR ALL WORK INVOLVING TEMPORARY SHUTDOWN OF SERVICE. CUSTOMERS MUST RECEIVE AT LEAST 48 HOURS NOTIFICATION PRIOR TO ANY SHUTDOWN. THE DISTRICT MUST RECEIVE NOTICE FROM THE CONTRACTOR OF THE SHUTDOWN AT LEAST 48 HOURS PRIOR TO CUSTOMER NOTIFICATION.
3. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE POLY-WRAPPED PER SPECIICATIONS.
4. LOCATIONS OF UTILITIES OTHER THAN WATER ARE APPROXIMATE, AND NOT ALL UTILITES ARE SHOWN. THE CONTRACTOR IS RESPONSIBLE FOR LOCATING, SUPPORTING AND PROTECTING ALL UTILITIES DURING INSTALLATION OF THE WATER MAIN.
5. THE ANNULAR SPACE OF EACH CASING SHALL BE FILLED WITH 3/8" STONE.
6. THE RCP CASING SHALL BE TONGUE AND GROOVE CLASS 4 IN ACCORDANCE WITH AASHTO M170. JOINTS SHALL BE SEALED WITH BUTYL IN ACCORDANCE WITH AASHTO M198.
7. INSTALL RESTRAINED JOINT GASKETS IN ALL DUCTILE IRON PUSH ON JOINTS.

LEGEND

- EXISTING WATER MAIN
- PROPOSED WATER MAIN
- PROPOSED/RENEWED SERVICE
- RECONNECT SERVICE



PROFILE
VERTICAL: 1"=5'
HORIZONTAL: 1"=25"

CONTRACT: 2021.02

31 OF 36

PROJECT:
437698

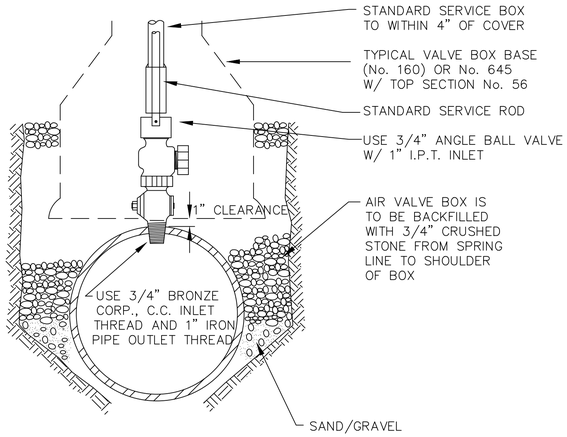
MTA CROSSING - EXIT 48 PORTLAND, MAINE WATER MAIN REPLACEMENT

STATE OF MAINE TIMOTHY J. MCMULLIN 13180 REGISTERED PROFESSIONAL ENGINEER

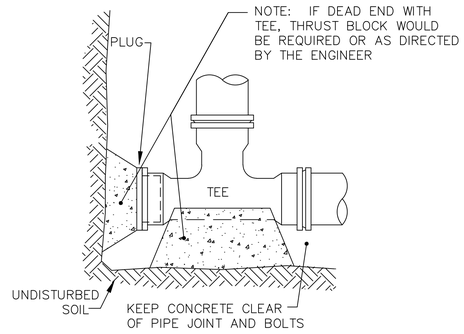
DRAWN BY: BSJ
DESIGN BY: TM
DATE: 12/31/2020

Portland Water District
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 • WWW.PWD.ORG

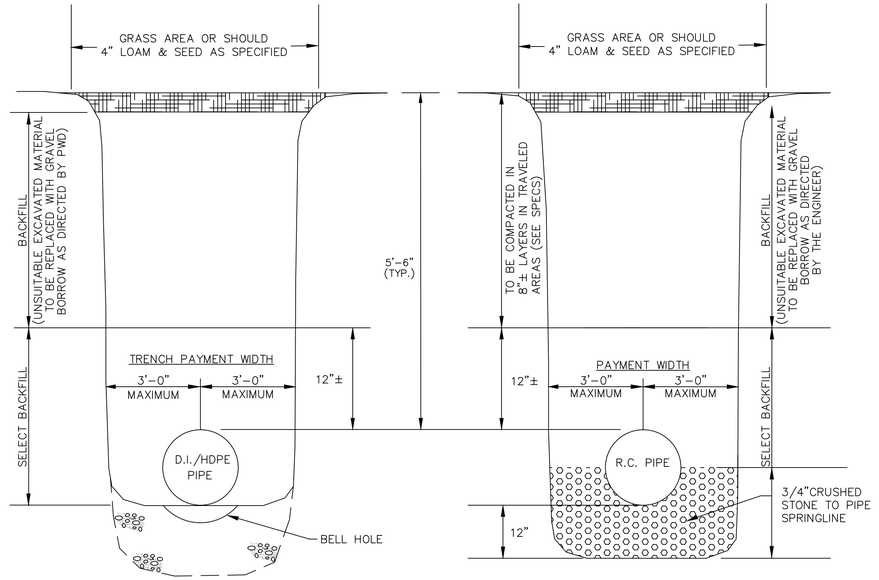
SHEET:
1 OF 3



TYPICAL AIR VALVE (1")

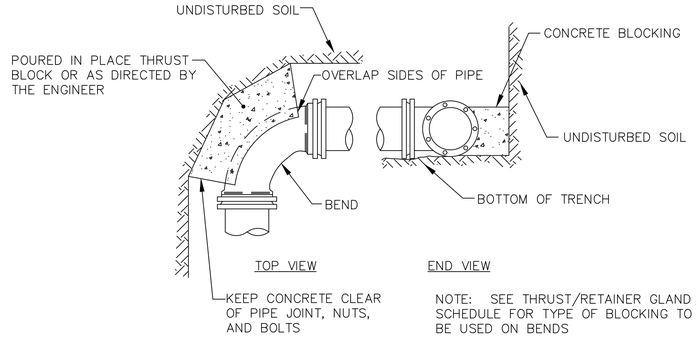


STANDARD TEE BLOCKING

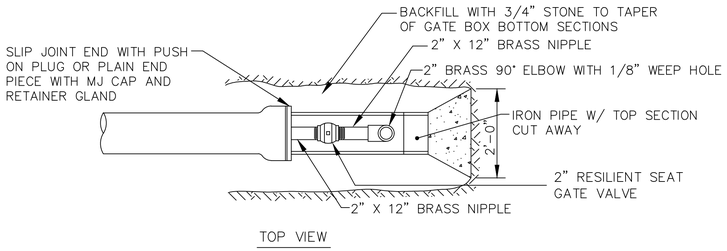


SECTION THRU EARTH TRENCH

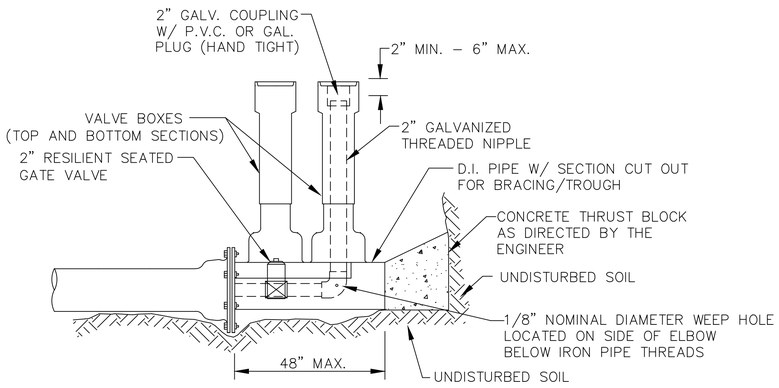
N.T.S.



STANDARD BEND BLOCKING



TOP VIEW



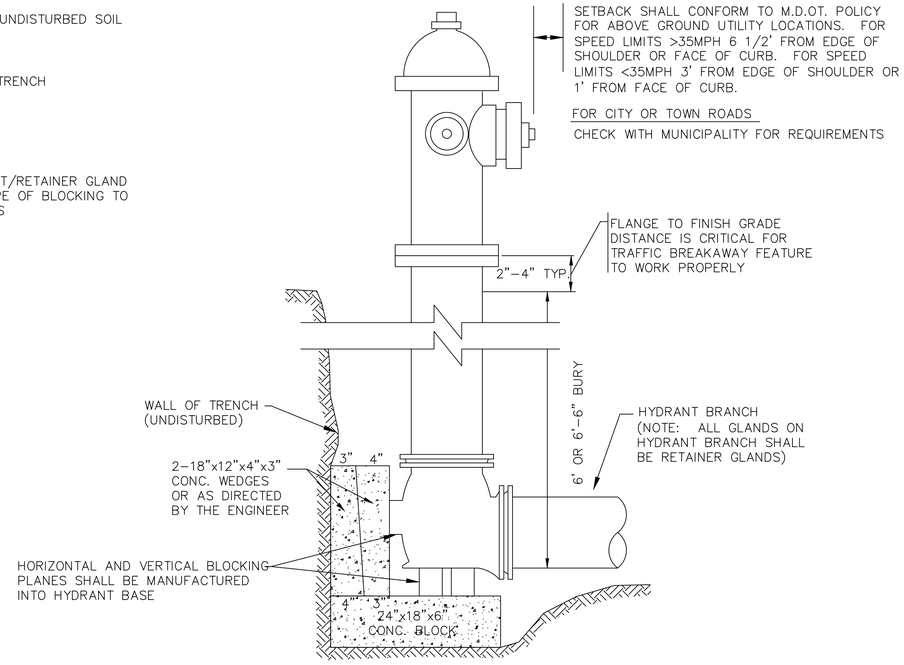
STANDARD 2" BLOW OFF

FOR STATE ROADS

SETBACK SHALL CONFORM TO M.D.OT. POLICY FOR ABOVE GROUND UTILITY LOCATIONS. FOR SPEED LIMITS >35MPH 6 1/2' FROM EDGE OF SHOULDER OR FACE OF CURB. FOR SPEED LIMITS <35MPH 3' FROM EDGE OF SHOULDER OR 1' FROM FACE OF CURB.

FOR CITY OR TOWN ROADS

CHECK WITH MUNICIPALITY FOR REQUIREMENTS



TYPICAL HYDRANT
INSTALLATION DETAIL

PROJECT:
437698

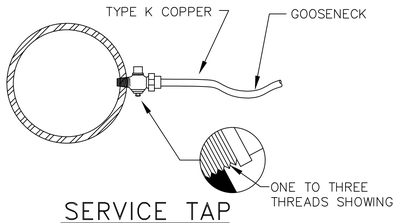
MTA CROSSINGS - EXIT 48
PORTLAND, MAINE
WATER MAIN REPLACEMENT
STANDARD DETAILS

STATE OF MAINE * TIMOTHY J. MCMULLIN * 13135 * REGISTERED PROFESSIONAL ENGINEER

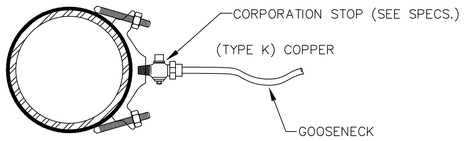
DRAWN BY: BSJ
CHECKED BY: TM
DATE: 12/31/2020

Portland Water District
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 EXT. 3041 • MEANS@PWD.ORG

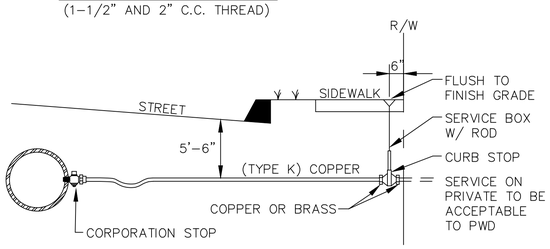
SHEET:
2 OF 3



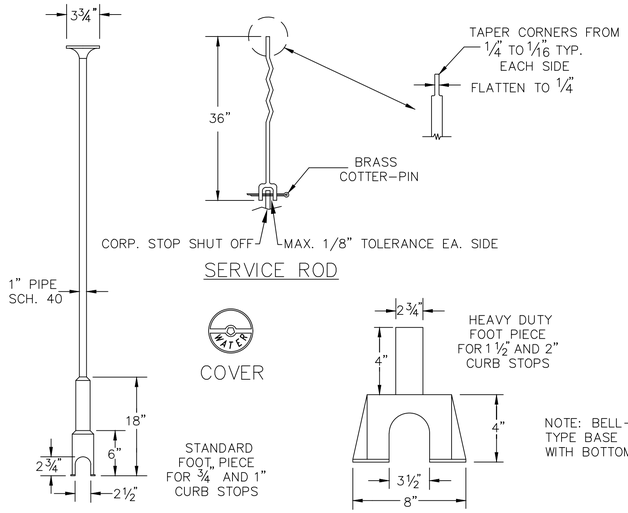
SERVICE TAP
(3/4" AND 1" C.C. THREAD)



SERVICE SADDLE
(1-1/2" AND 2" C.C. THREAD)



TYPICAL SERVICE CONNECTION



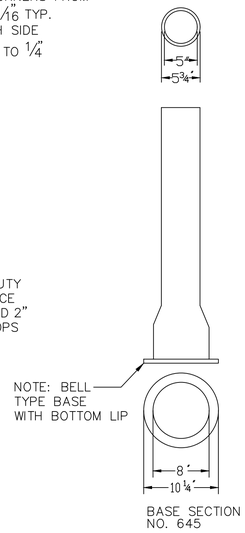
SERVICE ROD

COVER

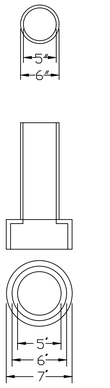
SERVICE BOX

FOOT PIECE

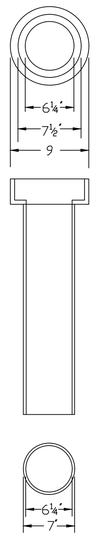
NOTE : ANY EXTENSION OF SERVICE BOX REQUIRES:
1) 1" FEMALE IRON PIPE COUPLING
2) 1" THREADED PIPE
(THIS IS TO BE A NON-WELDED, TWO PIECE ARRANGEMENT.
SLIP ON ADAPTERS ARE NOT PERMISSIBLE.)



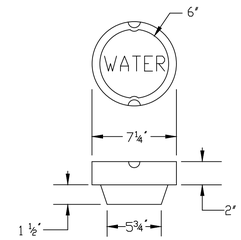
BASE SECTION
NO. 645



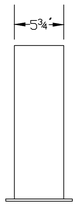
INTERMEDIATE
SECTION NO.58



TOP SECTION
NO.56

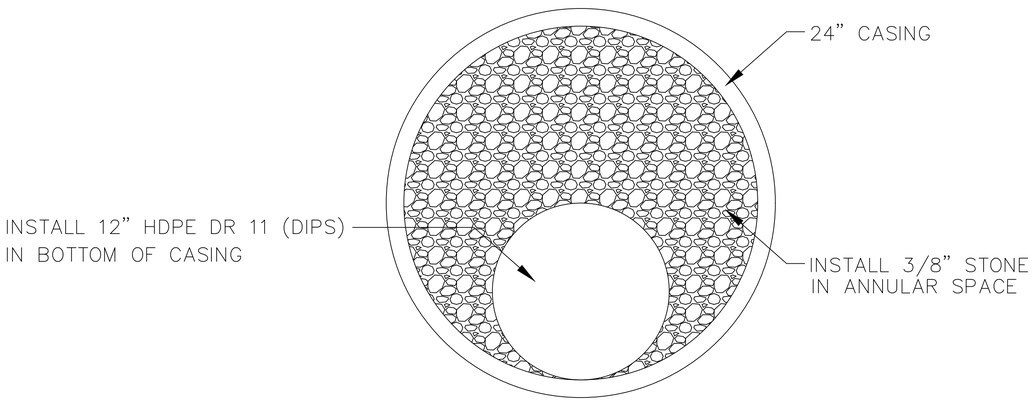


DROP STYLE COVER

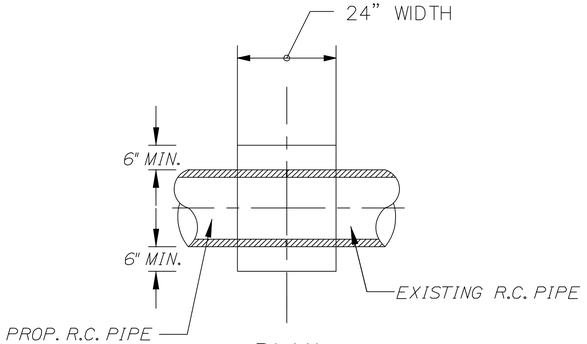


(NUMBERS ARE FOR 5 1/4" BUFFALO VALVE BOXES)
(BASE SECTION MAY BE USED AS INTERMEDIATE SECTION)

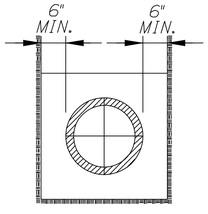
VALVE BOX & COVER



TYPICAL CASING / PIPE SECTION
N.T.S.



PLAN



SECTION A-A
N.T.S.

NOTES:
1. CONNECTION AND PIPE TO BE BACKFILL PER ASTM D2321 (CRUSHED STONE)
2. CONCRETE SHALL BE CLASS A FIBER REINFORCED.

CONCRETE COLLAR DETAIL

CONTRACT: 2021.02

PROJECT:
437698

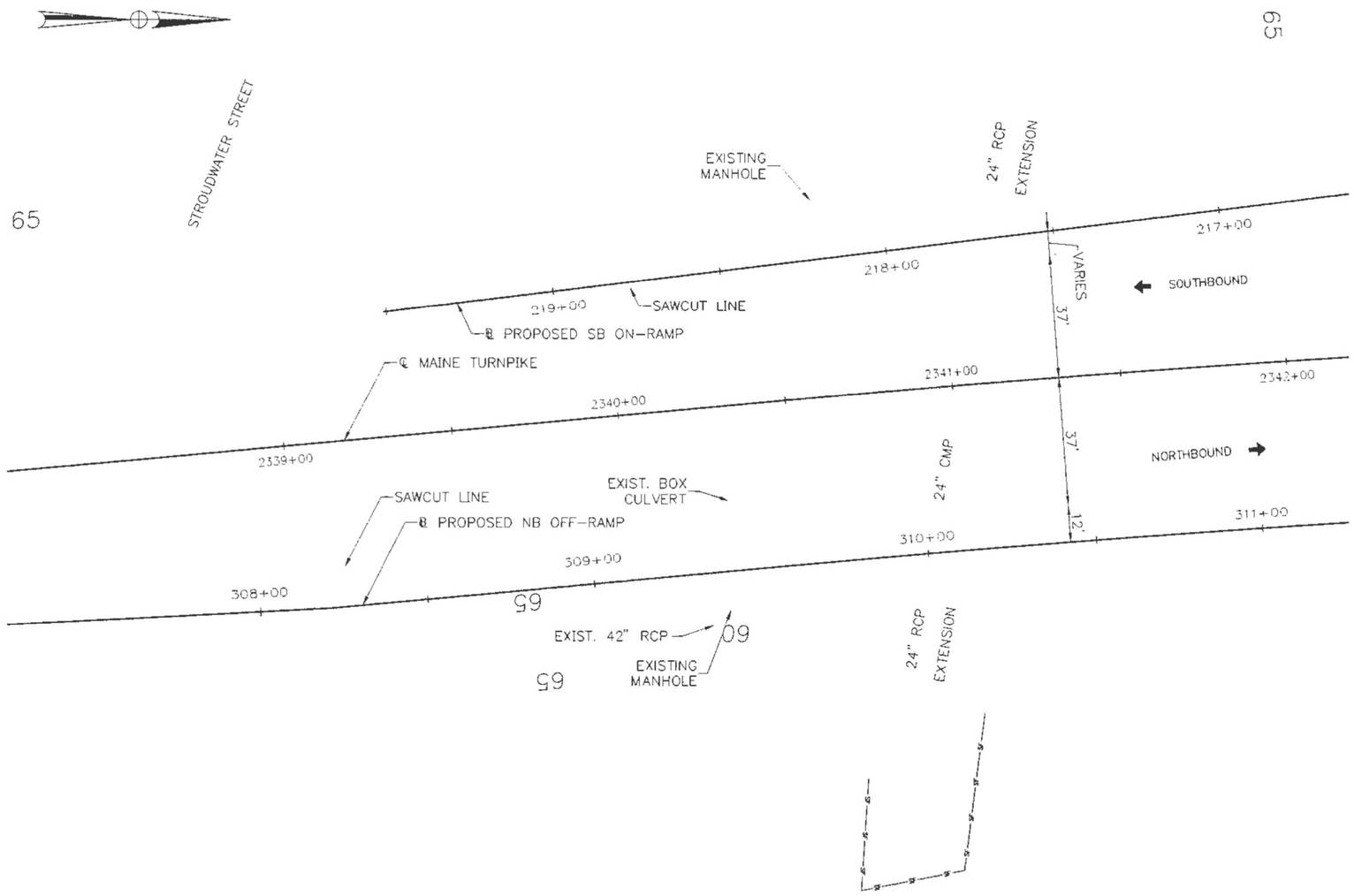
MTA CROSSINGS - EXIT 48
PORTLAND, MAINE
WATER MAIN REPLACEMENT
STANDARD DETAILS

STATE OF MAINE
TIMOTHY J. MCMULLIN
3285
REGISTERED
PROFESSIONAL
ENGINEER

DRAWN BY: BSJ
CHECKED BY: TM
DATE: 12/31/2020

Portland Water District
ASSET MANAGEMENT AND PLANNING DEPARTMENT
225 DOUGLASS STREET, PORTLAND ME 04104
(207) 774-5961 EXT. 3041 • MEANS@PWD.ORG

SHEET:
3 OF 3



PLAN
1" = 20'

INDEX OF DRAWINGS	
SHEET NO.	TITLE
PWD-S1	GENERAL PLAN
PWD-S2	PLAN AND CROSS SECTIONS
PWD-S3	RETAINING WALL DETAILS
PWD-S4	REINFORCING SCHEDULE

QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
206.061	STRUCTURAL EARTH EXCAVATION – DRAINAGE MINOR STRUCTURES, BELOW GRADE.	300	CY
203.26	GRAVEL BORROW	230	CY
502.21	STRUCTURAL CONCRETE, ABUTMENTS AND RETAINING WALLS	6	CY
503.14	EPOXY COATED REINFORCING STEEL – FABRICATED	984	LBS
503.15	EPOXY COATED REINFORCING STEEL – PLACING	984	LBS
514.06	CURING BOX FOR CONCRETE CYLINDERS	1	EACH
635.14	PREFAB. CONCRETE MODULAR GRAVITY WALL	585	SF

SPECIFICATIONS

DESIGN
AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES SIXTEENTH EDITION 1996 WITH LATEST INTERIM REVISIONS.

CONSTRUCTION
STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD SPECIFICATIONS, HIGHWAYS AND BRIDGES, REVISION OF APRIL 1995.

DESIGN LIVE LOAD
AASHTO HS 25-44

DESIGN METHOD
LOAD FACTOR DESIGN

ALLOWABLE STRESSES
CIP CONCRETE: fc = 1,600 PSI (N=8 & f'c = 4,000 PSI)
REINFORCING STEEL: AASHTO DESIGNATION M31, EPOXY-COATED GRADE 60, fs = 24,000 PSI.
SOIL BEARING CAPACITY = 1 TSF

CONCRETE CLASSIFICATION
ALL CIP CONCRETE SHALL BE f'c = 4,000 PSI (CLASS A)
ALL PRECAST CONCRETE SHALL BE f'c = 4,000 PSI

GENERAL NOTES

1. ALL PROPOSED ELEVATIONS REFERENCE THE NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.
2. FOR ADDITIONAL DETAILS REFERENCED OR NOT SHOWN IN THESE DRAWINGS, SEE THE STATE OF MAINE, DEPARTMENT OF TRANSPORTATION, STANDARD DETAILS, HIGHWAYS AND BRIDGES, APRIL 1997.
3. ANY REQUIRED TEMPORARY EARTH SUPPORT SHALL BE INCIDENTAL TO ITEM 635.14.

ABBREVIATIONS	
N.F.	NEAR FACE
F.F.	FAR FACE
E.F.	EACH FACE
T	TOP
B	BOTTOM
&	AND
TYP.	TYPICAL
EXIST.	EXISTING
PROP.	PROPOSED

Scale:

No.	Revision	By	Date

Designed by:
HNTB
ARCHITECTS ENGINEERS PLANNERS

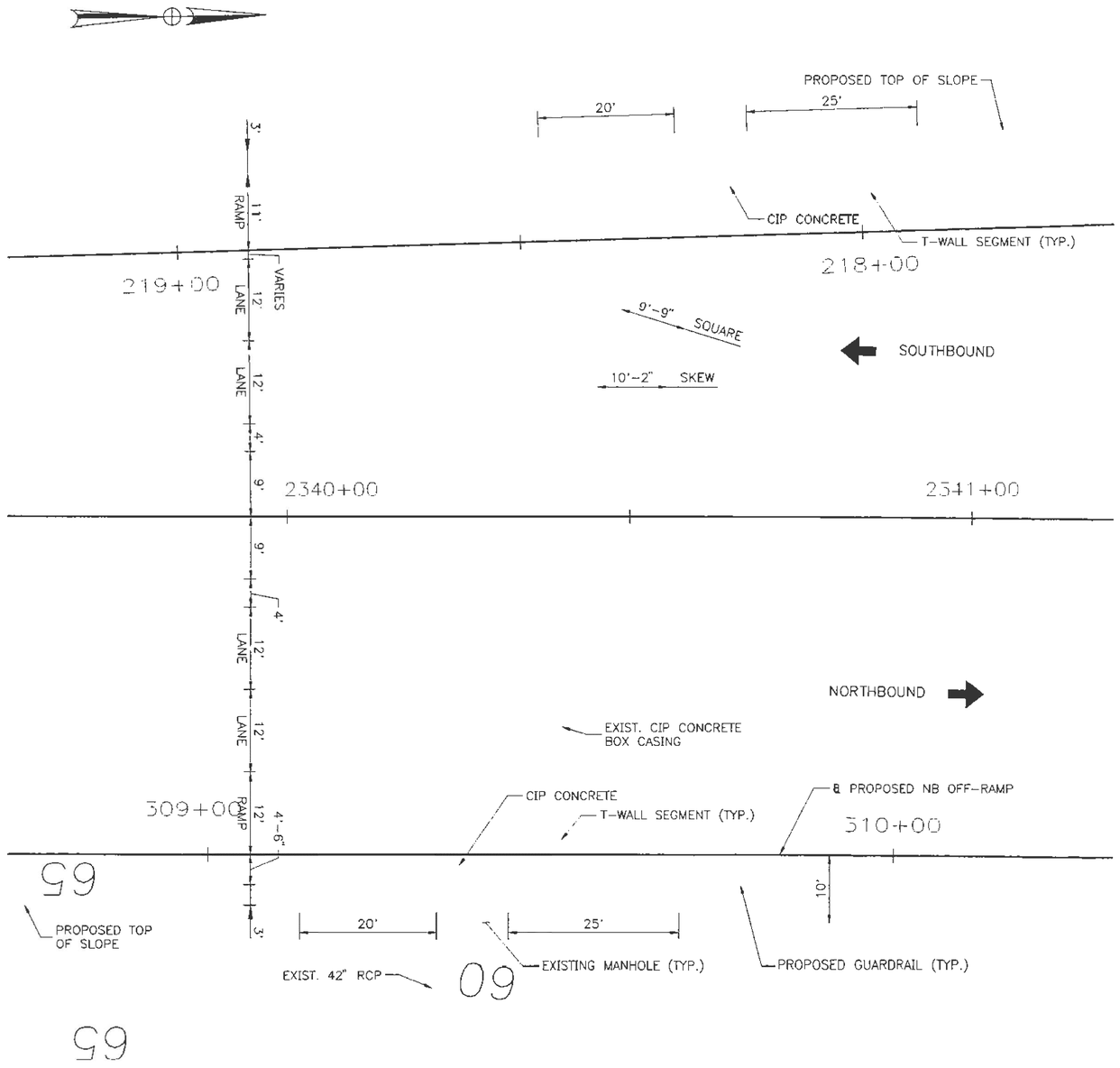
	By	Date		By	Date
Designed	JRB	04/01	Checked		
Drawn	TRC	04/01	In Charge of	RAL	

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

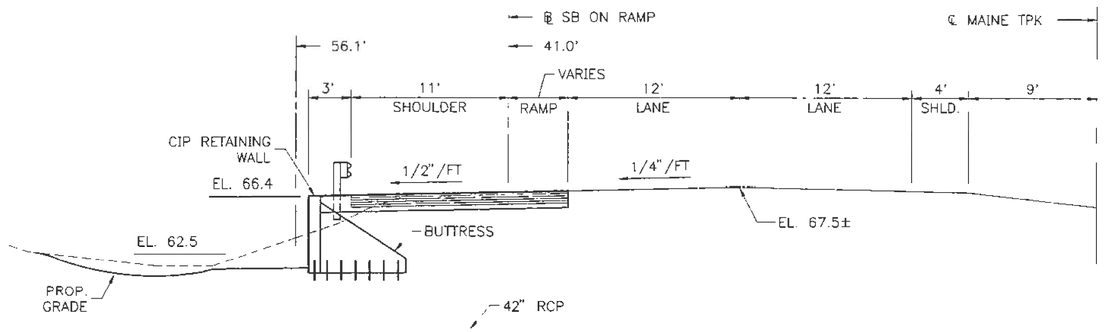
MAINE TURNPIKE AUTHORITY
MAINE TURNPIKE Trans pass

WESTBROOK INTERCHANGE
WESTBROOK, MAINE
42" RCP WATER MAIN
GENERAL PLAN

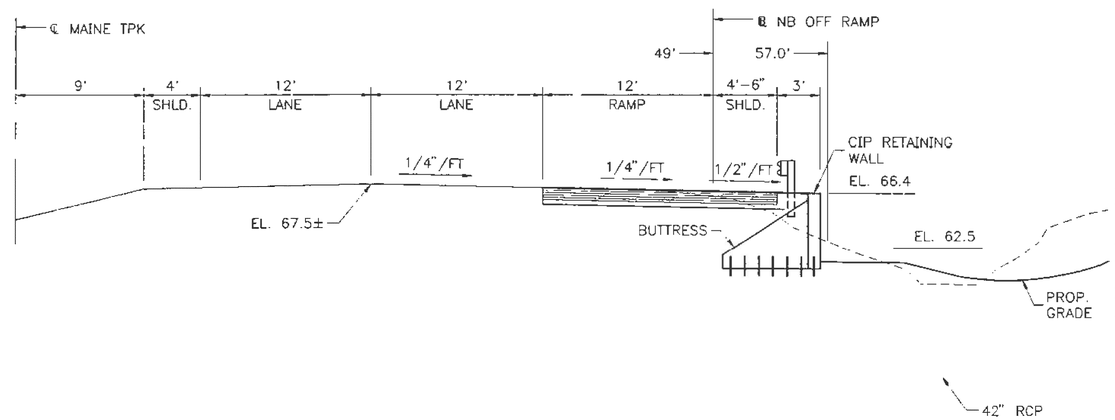
SHEET NUMBER:PWD-RW1
CONTRACT: 2001.02
185 OF 198
CONTRACT:2021.02



PLAN
1"=10'



CROSS SECTION @ STA. 2340+65
3/16" = 1'-0"



CROSS SECTION @ STA. 2340+28
3/16" = 1'-0"

Scale:

No.	Revision	By	Date

Designed by:

HNTB
ARCHITECTS ENGINEERS PLANNERS

	By	Date		By	Date
Designed	JRB	04/01	Checked		
Drawn	TRC	04/01	In Charge of	RAL	

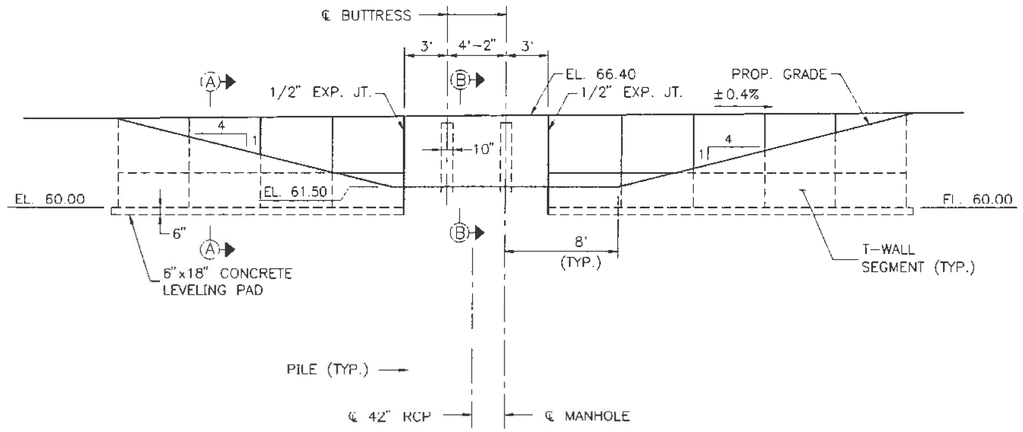
HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINE TURNPIKE Trans pass

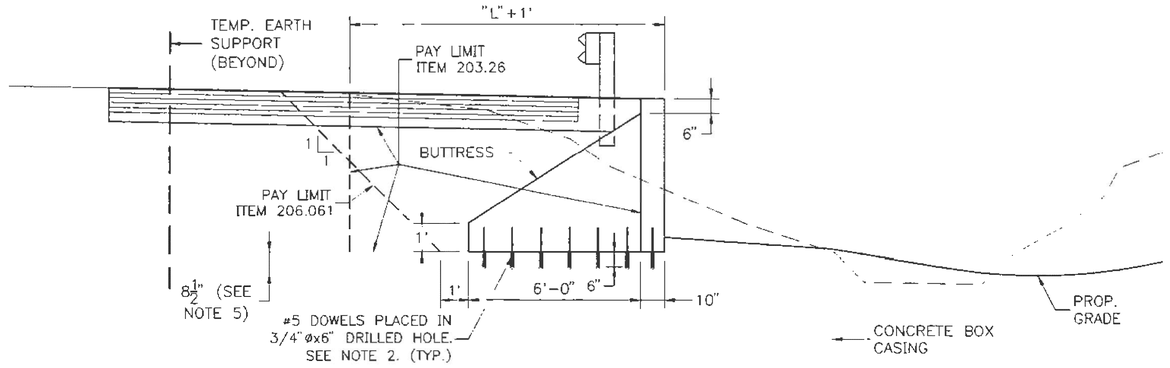
WESTBROOK INTERCHANGE
WESTBROOK, MAINE
42" RCP WATER MAIN
PLAN AND CROSS SECTIONS

SHEET NUMBER: PWD-RW2
CONTRACT: 2001.02
186 OF 198
CONTRACT: 2021.02



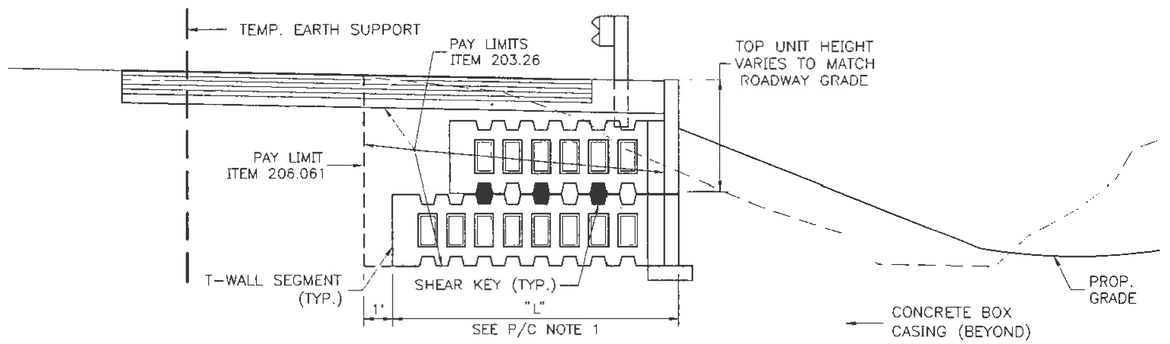
EAST ELEVATION

(WEST END SHOWN, EAST END SIMILAR)
3/16" = 1'-0"



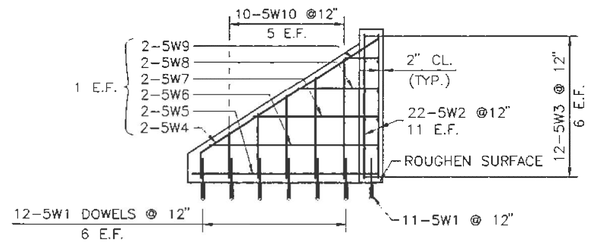
CROSS SECTION B-B

3/8" = 1'-0"



CROSS SECTION A-A

3/8" = 1'-0"



RETAINING WALL REINFORCING

(WEST END SHOWN, EAST END SIMILAR)
3/8" = 1'-0"

PRECAST CONCRETE

1. PRECAST CONCRETE ELEMENTS SHALL BE DESIGNED BY THE MANUFACTURER AND BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE T-WALL RETAINING WALL SEGMENTS SHALL BE DESIGNED IN ACCORDANCE WITH AASHTO SPECIFICATIONS FOR THE VARIOUS MINIMUM AND MAXIMUM LOAD COMBINATIONS TO PRODUCE MAXIMUM SHEARS, BENDING MOMENTS, AND BEARING PRESSURES.
2. MINIMUM REQUIREMENTS FOR PRECAST CONCRETE SHALL BE AS SPECIFIED IN ASTM C789 (AASHTO M259) & ASTM C850 (AASHTO M273).
3. THE CONTRACTOR SHALL PREPARE THE DESIGN, SHOP DETAILS, ERECTION AND ANY OTHER WORKING DRAWINGS IN ACCORDANCE WITH REQUIREMENTS OF SUBSECTION 105.02 OF THE MDOT STANDARD SPECIFICATIONS. SUBSTITUTIONS OF SECTIONS, MATERIALS, OR DETAILS DIFFERING FROM THOSE SHOWN SHALL BE MADE ONLY WHEN APPROVED BY THE ENGINEER. ALL CHANGES AND REVISIONS TO THE APPROVED WORKING DRAWINGS SHALL BE SUBJECT TO APPROVAL BY THE ENGINEER.
4. PRECAST CONCRETE ELEMENTS SHALL BE THOSE MANUFACTURED BY "SUPERIOR CONCRETE CO., INC." OF AUBURN, MAINE, OR EQUIVALENT.
5. ALL CONNECTION HARDWARE SHALL CONFORM TO ASTM A36. PAYMENT SHALL BE INCIDENTAL TO ITEM 502.302. ALL JOINT SEALS BETWEEN PRECAST UNITS SHALL BE INCIDENTAL TO ITEM 502.302.

NOTES

1. CHAMFER ALL EXPOSED CORNERS 3/4" UNLESS OTHERWISE NOTED.
2. MATERIAL USED FOR DRILLING AND ANCHORING DOWELS SHALL BE "KELIGROUT" AS MANUFACTURED BY KELKEN-GOLD, INC., OR EQUAL. INSTALLATION SHALL BE IN CONFORMANCE WITH THE MANUFACTURER'S RECOMMENDATIONS. THE CAPACITY OF THE ANCHORAGE SHALL BE SUFFICIENT TO DEVELOP THE FULL YIELD STRENGTH OF THE DOWEL. EMBEDMENT SHALL BE 6" MINIMUM. PAYMENT FOR DRILLING AND ANCHORING BARS SHALL BE INCIDENTAL TO ITEM 502.21.
3. REINFORCING STEEL SHALL HAVE 2" CONCRETE COVER UNLESS OTHERWISE INDICATED.
4. GUARDRAIL SHALL BE INSTALLED SO THAT POSTS AVOID CONCRETE BUTTRESSES AND STEMS OF T-WALL.
5. THE CONTRACTOR SHALL FIELD VERIFY THE THICKNESS OF THE TOP SLAB OF THE CONCRETE BOX CASING.

Scale:

No.	Revision	By	Date

Designed by: HNTB ARCHITECTS ENGINEERS PLANNERS

	By	Date		By	Date
Designed	JRB	4/01	Checked		
Drawn	TRC	4/01	In Charge of	RAL	

HNTB CORPORATION
2 Thomas Drive
Westbrook, ME 04092
TEL (207) 774-5155
FAX (207) 772-7410

MAINE TURNPIKE AUTHORITY
MODERNIZATION AND WIDENING PROJECT

MAINE TURNPIKE Trans pass

WESTBROOK INTERCHANGE
WESTBROOK, MAINE
42" RCP WATER MAIN
RETAINING WALL DETAILS

SHEET NUMBER: **PWD-RW3**

CONTRACT: **2001.02**
187 OF 198

CONTRACT:2021.02