STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

PLAN LEGEND

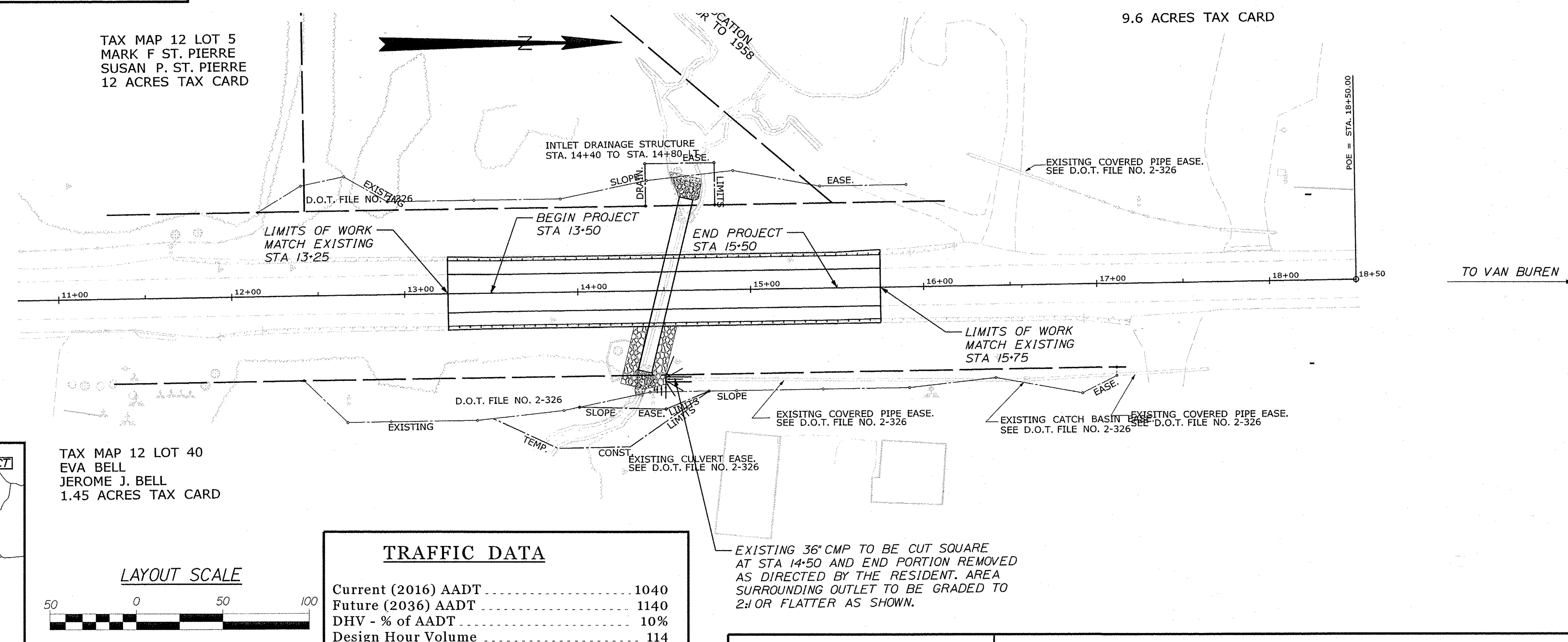
Town, County, State	Centerline-Existing
Property Lines	Centerline-Proposed
R/W Lines-Existing	Travelway-Existing
R/W Lines-Proposed	Travelway-Proposed
Culvert-Existing	Railroad
Culvert Proposed	Catch Basins Existing Proposed
Curbing Existing Proposed	Manholes Existing Proposed
Type 1	Proposed Underdrain
Type 3	Proposed Ditch
Type 5	Existing Ditch
Outline of Bodies of Water	Utility Poles Existing Proposed
Boring HB-XXX-###	Fire Hydrants Existing Proposed
Pavement Core PC-#	Existing Water Line
Test Pit TP-XXX-###	Existing San. Sewer
Probe P-#.#X	Existing San. Sewer Manhole
#.# = Depth	Guardrail-Existing
X = W (Weathered Rock)	Guardrail-Proposed
R (Refusal)	Guardrail-Cable, Other
NR (No Refusal)	Exposed Bedrock
	Buildings
	Trees Conifer Deciduous
	Tree Line
	Clearing Limit Line

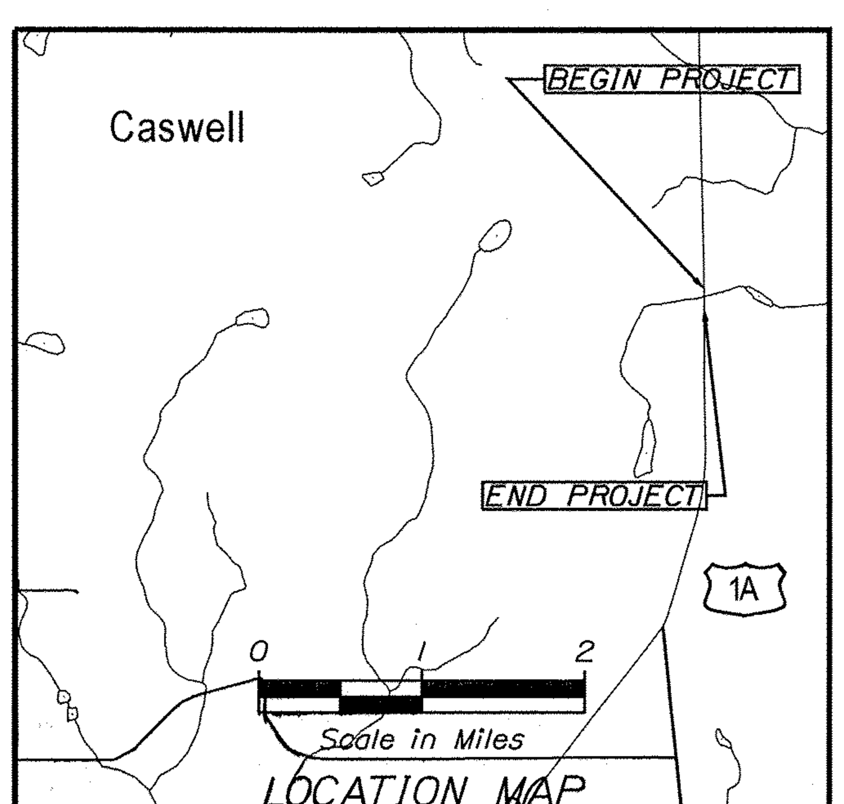
CASWELL
AROOSTOOK COUNTY
US ROUTE 1A

STATE PROJECT NO. 021769.00

PROJECT LENGTH : 0.02 MILES

INDEX OF SHEETS





TRAFFIC DATA

Current (2016) AADT	1040
Future (2036) AADT	1140
DHV - % of AADT	10%
Design Hour Volume	114
% Heavy Trucks (AADT)	15%
Directional Distribution (DHV)	55%
Design Speed (mph)	55
Functional Class:	MAJOR URBAN COLLECTOR
Corridor Priority	3

PROJECT LOCATION:	LOCATED ON RTE 1A IN CASWELL 2.38 MILES SOUTH OF THE BOUNDARY LINE RD INTERSECTION WITH RTE 1A
PROGRAM AREA:	HIGHWAY PROGRAM
SCOPE OF WORK:	LARGE CULVERT REPLACEMENT

WIN 021769.00 21769.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

	DATE
APPROVED	
COMMISSIONER:	4/9/18
CHIEF ENGINEER:	4-9-18

STATE OF MAINE CHRISTOPHER L. HELSTROM 13550 LICENSED PROFESSIONAL ENGINEER

SIGNATURE	
P.E. NUMBER	13550
DATE	4/3/2018

PROJECT INFORMATION

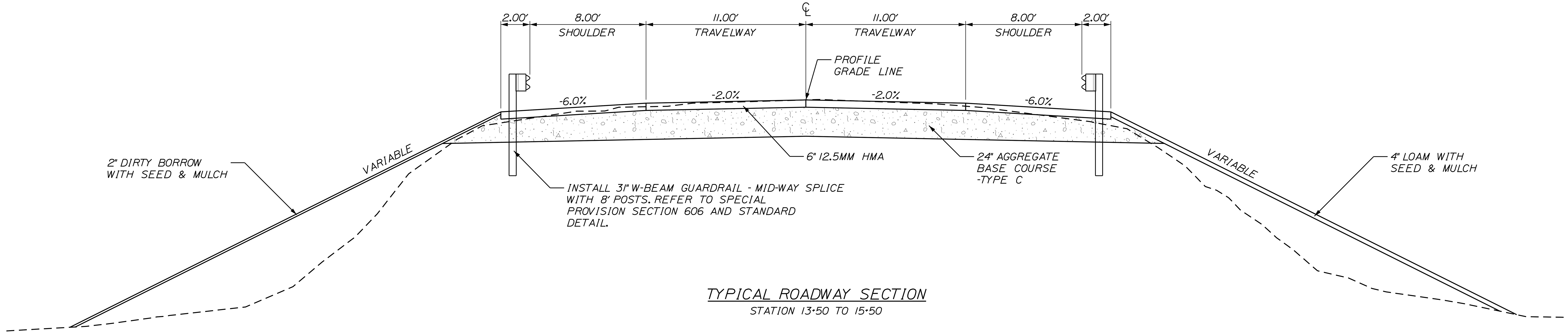
PROGRAM	HIGHWAY PROGRAM
PROJECT MANAGER	ROGER SOUCY
DESIGNER	
CONSULTANT	
PROJECT RESIDENT	
CONTRACTOR	
PROJECT COMPLETION DATE	

CASWELL
US ROUTE 1A

TITLE SHEET

SHEET NUMBER
1
OF 15

Filename: ...\00\HIGHWAY\MSTA\001_Title.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/3/2018



TYPICAL ROADWAY SECTION

STATION 13+50 TO 15+50

ROADWAY TYPICAL SECTION NOTES

1. THE PAVEMENT BASE AND SUBBASE DEPTHS AS SHOWN ON THE PLANS ARE INTENDED TO BE NOMINAL.

2. CROWNS FOR BOTH THE NORMAL AND SUPERELEVATION SECTIONS FOR ALL COURSES OF SUBBASE AND PAVEMENT SHALL BE STRAIGHT.

3. THE GRAVEL QUANTITY CALCULATION IS BASED ON A 4" LOAM OR 2" DIRTY BORROW DEPTH. THE ACTUAL DEPTH MAY VARY. SEE GENERAL NOTES.

4. MIDWAY SPLICE GUARDRAIL WILL TRANSITION TO EXISTING GUARDRAIL USING A 9'-4½" SECTION OF W-BEAM GUARDRAIL. TO BE PAID FOR UNDER ITEM 606.1301.

5. THE STATIONING SHOWN UNDER EACH TYPICAL SECTION IS APPROXIMATE.

NOT TO SCALE

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN
21769.00

HIGHWAY PLANS

	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	C. HELSTROM	
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

CASWELL
US ROUTE 1A

TYPICAL SECTIONS

SHEET NUMBER

2

OF 16

ESTIMATED QUANTITIES			
ITEM NO.	DESCRIPTION	QUANTITY	UNIT
203.20	COMMON EXCAVATION	150	CY
203.25	GRANULAR BORROW	100	CY
203.33	SPECIAL FILL	48	CY
304.16	AGGREGATE BASE COURSE - TYPE C	940	CY
403.208	HOT MIX ASPHALT 12.5MM HMA SURFACE	160	T
403.213	HOT MIX ASPHALT 12.5MM BASE	310	T
409.15	BITUMINOUS TACK COAT APPLIED	110	G
511.07	COFFERDAM: UPSTREAM	1	LS
511.07	COFFERDAM: DOWNSTREAM	1	LS
526.301	TEMPORARY CONCRETE BARRIER TYPE I 80 LF	80	LS
603.4077	96" POLYMER COATED STEEL PIPE OPTION III	105	LF
606.1301	GURADRAIL W-BEAM GUARDRAIL MID-WAY SPLICE	580	LF
606.1303	W-BEAM MID-WAY SPLICE- 15FT RADIUS AND LESS	25	LF
606.265	TERMINAL END SINGLE RAIL- GALVANIZED STEEL	1	EA
606.353	REFLECTORIZED FLEXIBLE GUARDRAIL MARKER	2	EA
610.08	PLAIN RIP RAP	240	CY
610.09	HAND LAID RIP RAP	25	CY
610.210	STREAM CHANNEL ROCK	15	CY
615.07	LOAM	50	CY
615.10	DIRTY BORROW	25	CY
618.13	SEEDING METHOD NUMBER 1	1	UN
618.14	SEEDING METHOD NUMBER 2	2	UN
619.12	MULCH	3	UN
620.58	EROSION CONTROL GEOTEXTILE	452	SY
627.733	4" WHITE OR YELLOW PAINTED PAVE MARK LINE	450	LF
629.05	HAND LABOR, STRAIGHT TIME	20	HR
631.10	AIR COMPRESSOR (INC OPERATOR)	15	HR
631.11	AIR TOOL (INC OPERATOR)	15	HR
631.12	ALL-PURPOSE EXCAVATOR (INCLUDING OPERATOR)	15	HR
631.172	TRUCK-LARGE (INCLUDING OPERATOR)	15	HR
631.18	CHAINSAW RENTAL (INCLUDING OPERATOR)	15	HR
639.19	FIELD OFFICE - TYPE B	1	EA
643.72	TEMPORARY TRAFFIC SIGNAL	1	LS
652.312	TYPE III BARRICADE	6	EA
652.33	DRUM	25	EA
652.34	CONE	50	EA
652.35	CONSTRUCTION SIGNS	250	SF
652.36	MAINTENANCE OF TRAFFIC CONTROL DEVICES	45	CD
652.38	FLAGGER	20	HR
656.75	TEMP SOIL EROSION & WATER POLLUTION CTRL PLAN	1	LS
659.10	MOBILIZATION	1	LS

GENERAL NOTES

1. A TEMPORARY RAMP SHALL BE CONSTRUCTED WITH HMA AT THE ENDS OF THE ROADWAY SECTION PAVED OR MILLED EACH DAY. THE USE OF MILLINGS OR RAP WILL NOT BE ALLOWED, BUT COLD PATCH MAY BE TEMPORARILY UTILIZED UNTIL HMA PLANTS ARE OPEN FOR THE SEASON. TEMPORARY RAMPS SHALL BE CONSTRUCTED AT A LENGTH OF FOUR FEET PER INCH OF TRANSITION DEPTH. MATERIALS, PLACEMENT, MAINTENANCE AND REMOVAL SHALL BE INCIDENTAL TO CONTRACT ITEMS.
2. 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.
3. ALL CLEARING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT AND NO SEPARATE PAYMENT WILL BE MADE. THE ACTUAL LINES FOR CLEARING SHALL BE ESTABLISHED IN THE FIELD BY THE CONTRACTOR AS INDICATED ON THE PLANS AND APPROVED BY THE RESIDENT.
4. THE CONTRACTOR SHALL PLAN AND CONDUCT THEIR WORK ACCORDINGLY SO THAT UPON FINAL COMPLETION OF THE PROJECT THERE IS NO DROP-OFF FROM THE EDGE OF SHOULDER PAVEMENT.
5. ALL WASTE MATERIAL NOT USED ON THE PROJECT SHALL BE DISPOSED OF OFF THE PROJECT IN ACCEPTABLE WASTE AREAS REVIEWED BY THE RESIDENT. GRADING, SEEDING AND MULCHING OF WASTE AREAS SHALL BE CONSIDERED INCIDENTAL.
6. GRANULAR BORROW USED TO BACKFILL MUCK EXCAVATION, IN LOW WET AREAS TO 1' ABOVE WATER LEVEL OR OLD GROUND, OR AS FOUNDATION MATERIAL UNDER CULVERTS SHALL MEET REQUIREMENTS FOR GRANULAR BORROW MATERIAL FOR UNDERWATER BACKFILL AS SPECIFIED IN STANDARD SPECIFICATION 703.19.
7. NO EXISTING DRAINAGE SHALL BE ABANDONED, REMOVED OR PLUGGED WITHOUT PRIOR APPROVAL OF THE RESIDENT.
8. GUARDRAIL WHICH IS REMOVED AND NOT REUSED ON THE PROJECT SHALL BECOME THE PROPERTY OF THE DEPARTMENT AND SHALL BE DELIVERED TO THE MAINE DOT MAINTENANCE GARAGE LOCATED AT 271 STATE STREET IN VAN BUREN, MAINE. REMOVAL AND DELIVERY SHALL BE CONSIDERED INCIDENTAL TO THE GUARDRAIL ITEMS.
9. LOAM HAS BEEN ESTIMATED FOR DISTURBED LAWN AREAS. ACTUAL PLACEMENT OF THE LOAM SHALL BE AS NOTED ON THE PLANS OR DESIGNATED BY THE RESIDENT.
10. DIRTY BORROW HAS BEEN ESTIMATED FOR ALL DISTURBED SLOPE AREAS OTHER THAN LAWN AREAS. ACTUAL PLACEMENT OF THE DIRTY BORROW SHALL BE AS NOTED ON THE PLANS OR DESIGNATED BY THE RESIDENT.
11. UNLESS OTHERWISE NOTED SEEDING METHOD NO. 1 SHALL BE UTILIZED ON ALL LAWNS AND DEVELOPED AREAS; SEEDING METHOD NO.2 SHALL BE UTILIZED ON ALL OTHER AREAS.
12. LOAM SHALL BE PLACED TO A NOMINAL DEPTH OF 4 INCHES IN LAWN AREAS AND 2 INCHES IN OTHER AREAS UNLESS OTHERWISE NOTED OR DIRECTED.
13. DIRTY BORROW SHALL BE PLACED TO A NOMINAL DEPTH OF 2 INCHES UNLESS OTHERWISE NOTED OR DIRECTED.
14. ANY DAMAGE TO THE SLOPES CAUSED BY THE CONTRACTOR'S EQUIPMENT, PERSONNEL OR OPERATION SHALL BE REPAIRED TO THE SATISFACTION OF THE RESIDENT. ALL WORK, EQUIPMENT AND MATERIALS REQUIRED TO MAKE REPAIRS SHALL BE AT THE CONTRACTOR'S EXPENSE.
15. THE PROJECT GEOTECHNICAL REPORT TITLED GEOTECHNICAL DESIGN REPORT FOR THE REPLACEMENT OF LARGE CULVERT #47246 ROUTE 1A, CASWELL, MAINE SOILS REPORT 2018-11, APRIL 02, 2018 CAN BE ACCESSED AT THE MAINEDOT WEBSITE.
16. GEOTECHNICAL INFORMATION FURNISHED OR REFERRED TO IN THIS PLAN SET IS FOR THE USE OF THE BIDDERS AND THE CONTRACTOR. NO ASSURANCE IS GIVEN THAT THE INFORMATION OR INTERPRETATIONS WILL BE REPRESENTATIVE OF ACTUAL SUBSURFACE CONDITIONS AT THE CONSTRUCTION SITE. MAINEDOT SHALL NOT BE RESPONSIBLE FOR THE BIDDERS OR CONTRACTOR'S INTERPRETATIONS OF OR CONCLUSIONS DRAWN FROM THE GEOTECHNICAL INFORMATION. THE BORING LOGS CONTAINED IN THE PLAN SET PRESENT FACTUAL AND INTERPRETIVE SUBSURFACE INFORMATION COLLECTED AT DISCRETE LOCATIONS. DATA PROVIDED MAY NOT BE REPRESENTATIVE OF THE SUBSURFACE CONDITIONS BETWEEN BORING LOCATIONS.
17. THE EXISTING CULVERT INDICATED ON THE PLANS SHALL BE REMOVED AND BECOME THE PROPERTY OF THE CONTRACTOR.
18. AREAS REQUIRING FILL ON THE PROJECT WILL COME FROM SUITABLE EXCAVATION FROM EXCAVATION, DITCH AND INSLOPE OR EQUIPMENT RENTAL AREAS.
19. NO SEPARATE PAYMENT FOR SUPERINTENDENT OR FOREMAN WILL BE MADE FOR THE SUPERVISION OF EQUIPMENT AND LAYOUT OF WORK BEING PAID UNDER EQUIPMENT RENTAL ITEMS.
20. "UNDETERMINED LOCATIONS" SHALL BE DETERMINED BY THE RESIDENT.
21. FINAL STRIPING FOR THE PROJECT SHALL BE DONE BY THE CONTRACTOR PER THE STRIPING LAYOUT IN THE CONTRACT DOCUMENTS OR AS PROVIDED BY THE DEPARTMENT. PAYMENT SHALL BE MADE UNDER APPROPRIATE CONTRACT ITEMS.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN 21769.00

HIGHWAY PLANS

			DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	C. HELSTROM		
CHECKED-REVIEWED	-----		
DESIGN2-DETAILED2	-----		
DESIGN3-DETAILED3	-----		
REVISIONS 1	-----		
REVISIONS 2	-----		
REVISIONS 3	-----		
REVISIONS 4	-----		
FIELD CHANGES	-----		

SIGNATURE

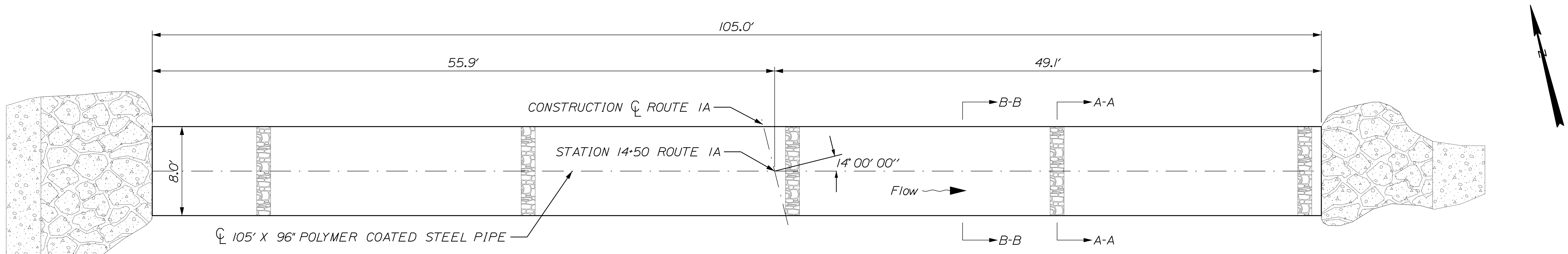
P.E. NUMBER

DATE

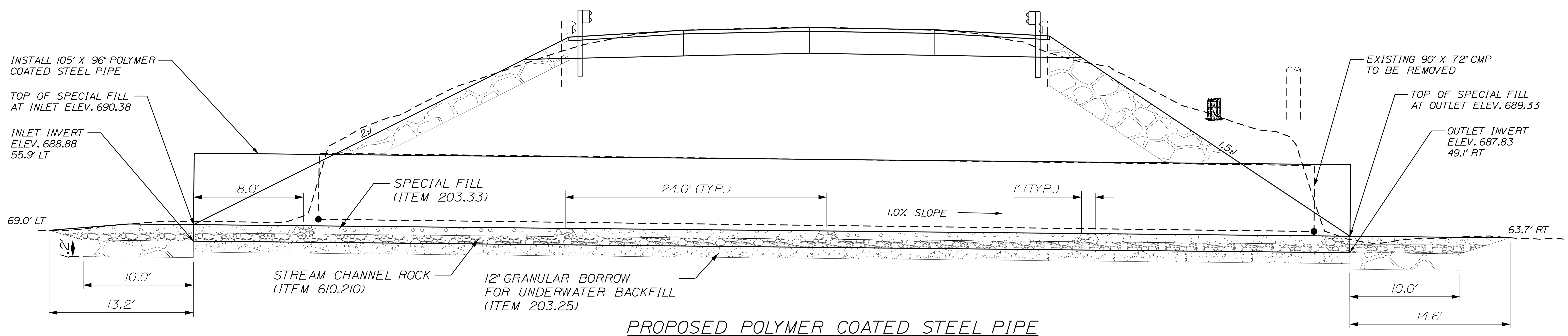
CASWELL
US ROUTE 1A

ESTIMATED QUANTITIES
AND GENERAL NOTES

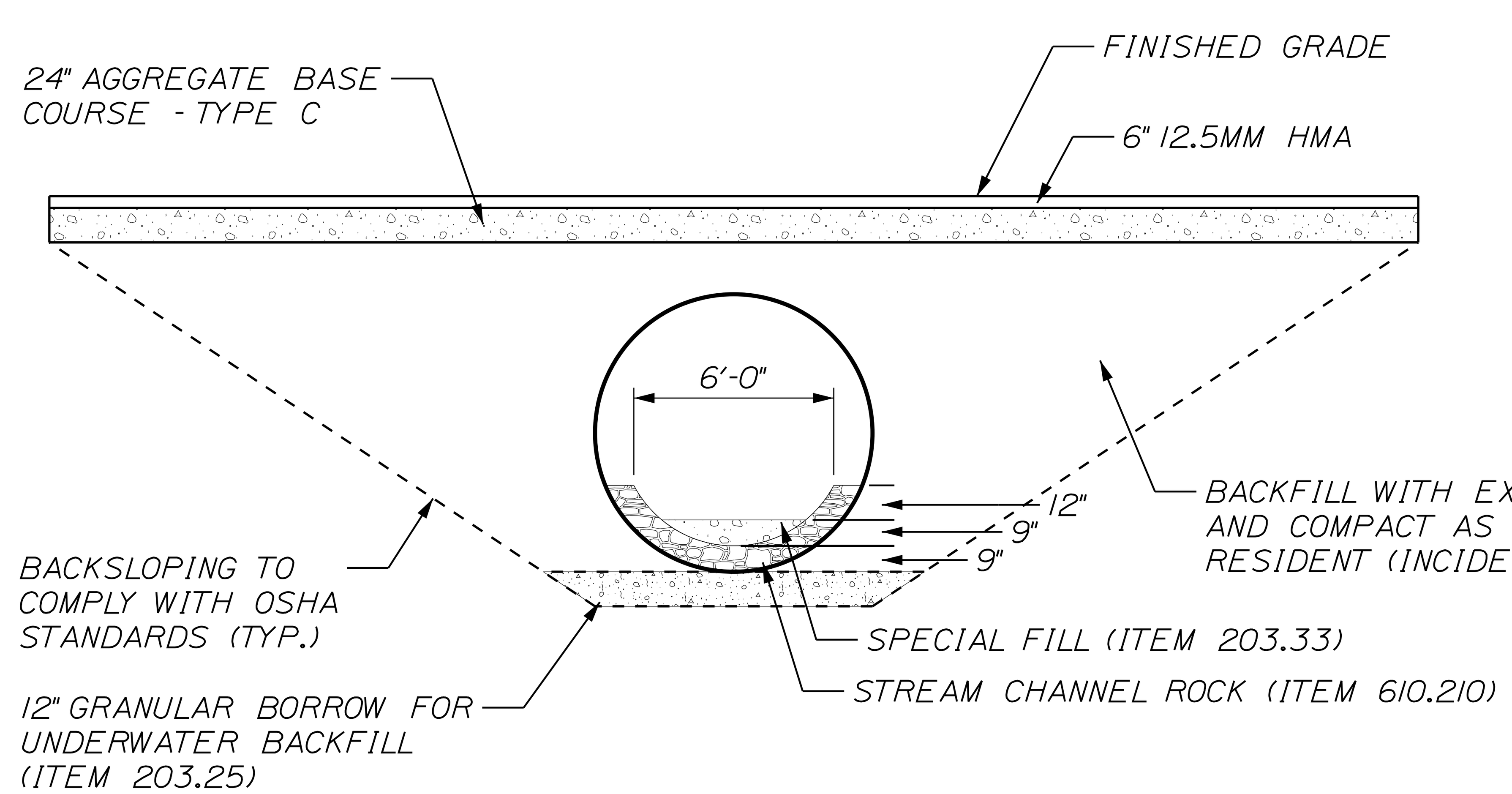
Filename: ...\003_Estimate and GeneralNotes.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018



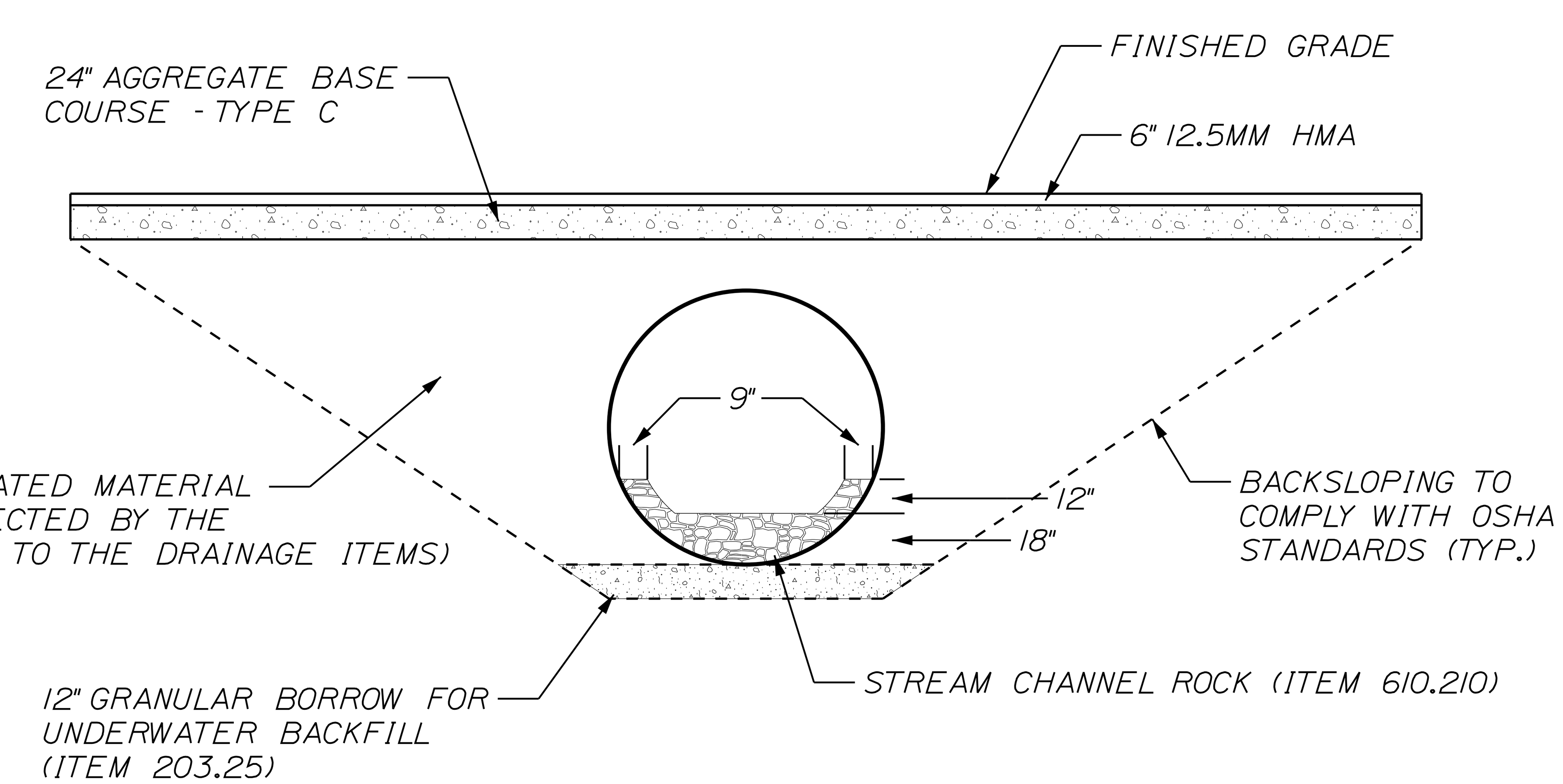
PROPOSED POLYMER COATED STEEL PIPE
PLAN VIEW
N.T.S.



PROPOSED POLYMER COATED STEEL PIPE
TRANSVERSE SECTION
(ALONG CENTERLINE OF PIPE) N.T.S.



POLYMER COATED STEEL PIPE SECTION B-B (BETWEEN BANDS)
N.T.S.



POLYMER COATED STEEL PIPE SECTION A-A (ROCK BAND)
N.T.S.

NOTES

1. THE POLYMER COATED STEEL PIPE SHALL BE BEDDED ON A 1-FOOT LAYER OF COMPACTED GRANULAR BORROW MATERIAL FOR UNDERWATER BACKFILL.
2. COFFERDAMS ARE TO BE PLACED BOTH UPSTREAM AND DOWNSTREAM OF THE PIPE TO ALLOW FOR INSTALLATION IN THE DRY.
3. RIPRAP SHALL BE PLACED SO AS NOT TO DAMAGE THE PIPE.
4. ALL VOIDS IN RIPRAP APRONS SHALL BE INFILLED WITH SPECIAL FILL, WATERED-IN AND TAMPED.
5. ANY DISTURBANCE TO WETLAND AREAS NOT SHOWN ON THE PLANS SHALL BE REPAIRED TO PRE-CONSTRUCTION CONDITIONS AT THE CONTRACTOR'S EXPENSE.
6. ALL DREDGE MATERIAL SHALL BE REUSED ONSITE AS DIRECTED BY THE RESIDENT.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
21769.00
WIN 21769.00
HIGHWAY PLANS

PROJ. MANAGER	ROGER SOUCY	BY	DATE
DESIGN-DETAILED	C. HELSTROM		
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

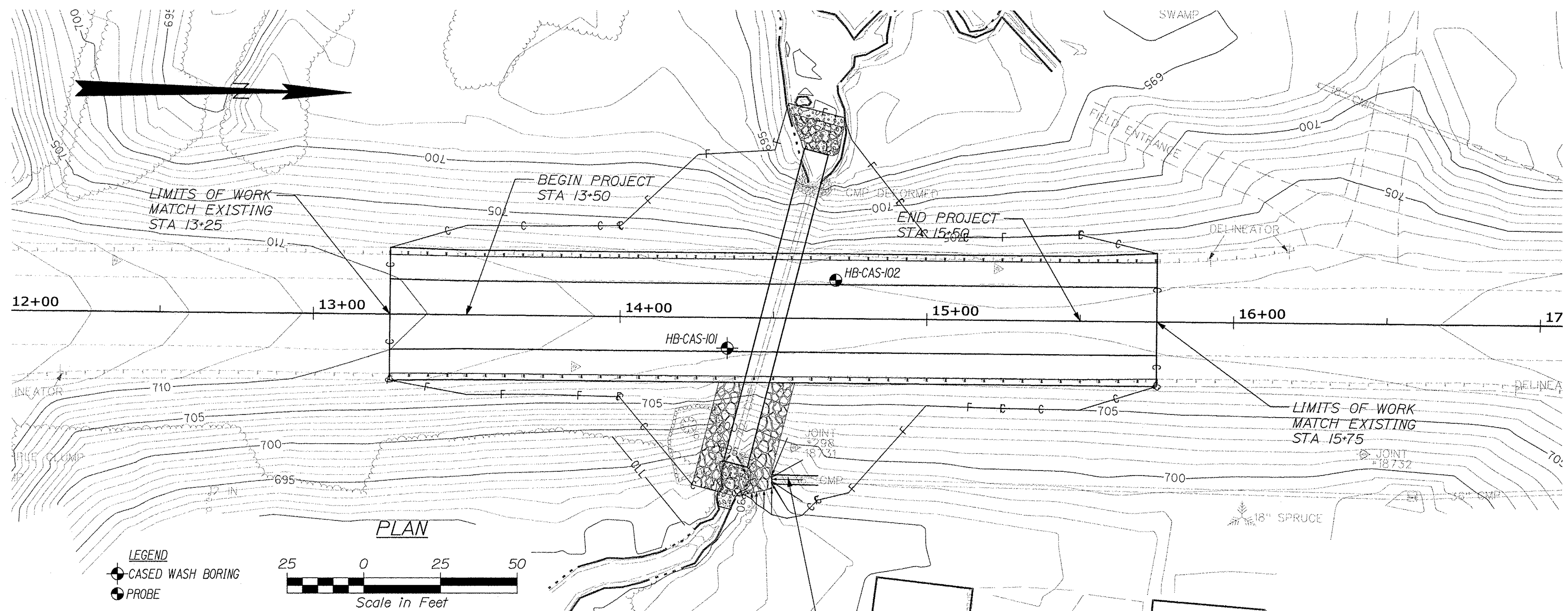
SIGNATURE
P.E. NUMBER
DATE

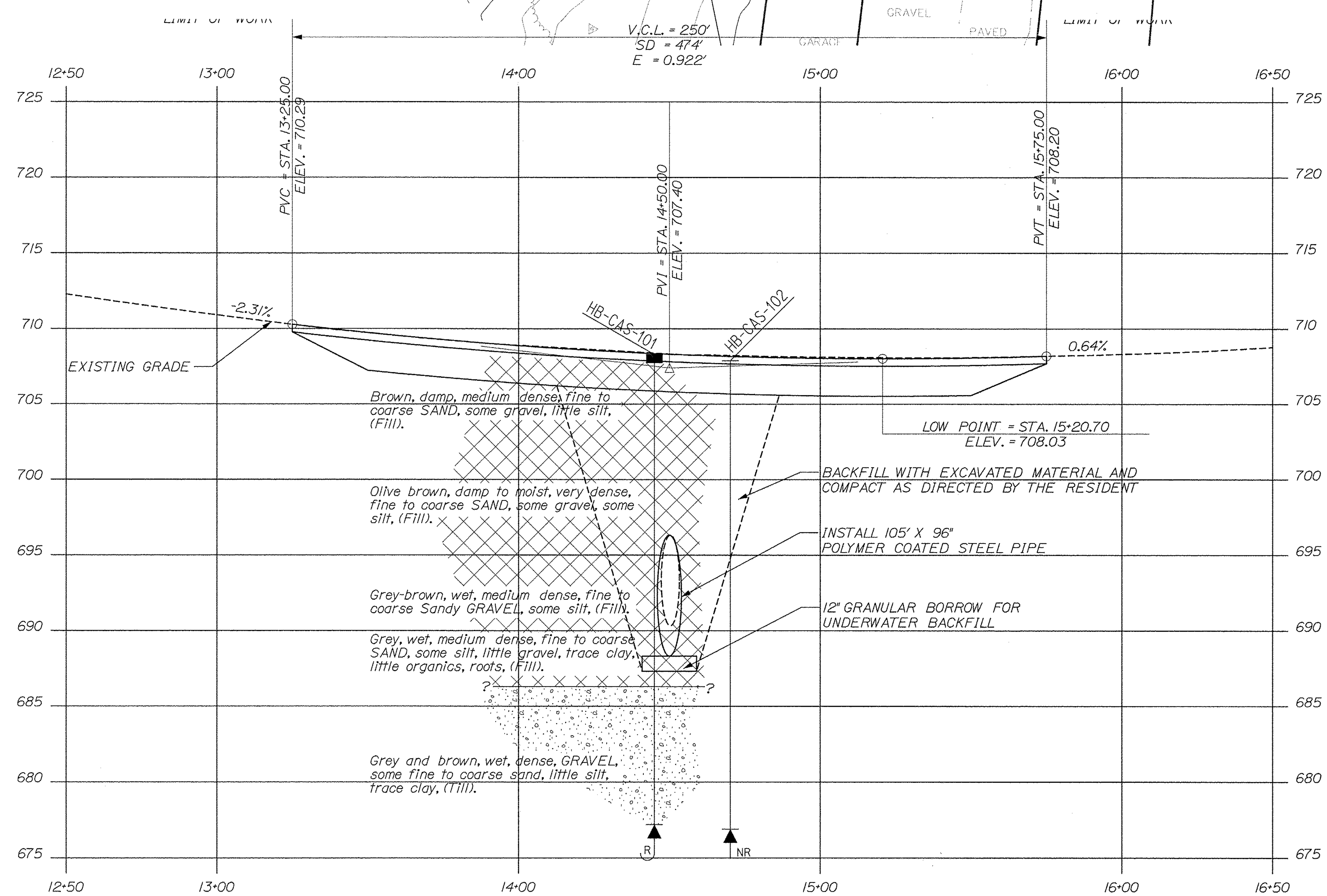
CASWELL
US ROUTE 1A
SPECIAL DETAILS
POLY COATED STEEL PIPE

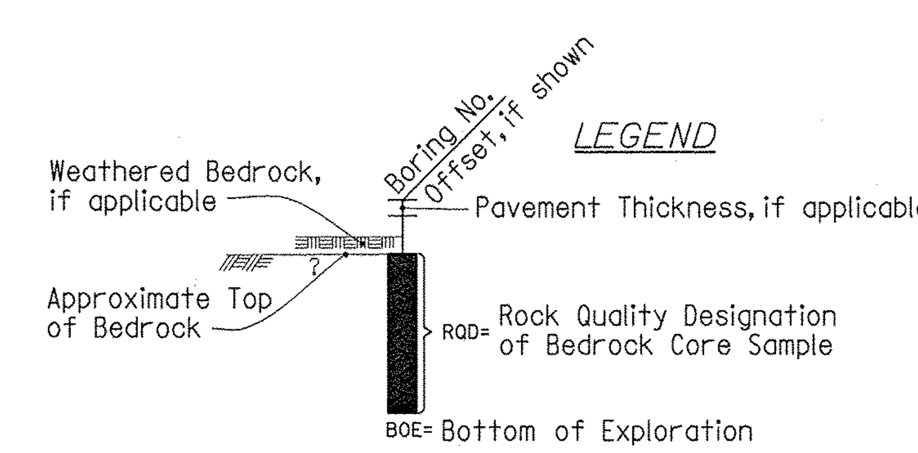
SHEET NUMBER
4
OF 16

Filename: ...\MSTA\004_SpecialDetail.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018

Filename: ...\GEOTECH\MSTA\002_BLP&ISP1.dgn Division: GEOTECH Username: Kate.Maguire Date:4/3/2018







PROFILE

HORIZ 25 0 25 50
VERT 5 0 5 10
SCALE

Note: This generalized interpretive soil profile is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized, and have been developed by interpretations of widely spaced explorations and samples. Actual soil and bedrock transitions may vary and are probably more erratic. For more specific information refer to the exploration logs.

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

021769.00

WIN 021769.00

HIGHWAY PLANS

STATE OF MAINE — Kathleen Maguire — 7120 — LICENSED PROFESSIONAL ENGINEER

SIGNATURE 7120
P.E. NUMBER
DATE 4/3/18

	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED		
CHECKED-REVIEWED		
DESIGN2-DETAILED2	C.RUSSELL T.WHITE	FEB 2018
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

CASWELL
ROUTE 1A

BORING LOCATION PLAN &
INTERPRETIVE SUBSURFACE PROFILE

SHEET NUMBER
5
OF 16

Filename: ...\MSTA\003_BORING LOGS1.dgn   Division: GEOTECH   Username: Kate.Maguire   Date:4/3/2018

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 1A
Location: Caswell, Maine

Boring No.: HB-CAS-101
WIN: 21769.00

Driller:	MaineDOT	Elevation (ft.)	708.3	Auger ID/OD:	5" Solid Stem
Operator:	Travis	Datum:	NAVD88	Sampler:	Standard Split Spoon
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	140#/30"
Date Start/Finish:	8/17/2016; 10:00-14:30	Drilling Method:	Cased Wash Boring	Core Barrel:	N/A
Boring Location:	14+35, 10.0 ft Rt.	Casing ID/OD:	NW-3"	Water Level*:	None Observed
Hammer Efficiency Factor: 0.943		Hammer Type:	Automatic ☒ Hydraulic ☐ Rope & Cathead ☐		

Definitions:
D = Split Spoon Sample
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MU = Unsuccessful Thin Wall Tube Sample Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MV = Unsuccessful Field Vane Shear Test Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of One Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-uncorrected = Raw Field SPT N-value
Hammer Efficiency Factor = Rig Specific Annual Calibration Value
N_{60} = SPT N-uncorrected Corrected for Hammer Efficiency
N_{60} = (Hammer Efficiency Factor/60%)*N-uncorrected
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-uncorrected	N_{60}	Casing Blows	Elevation (ft.)	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0							SSA	707.8	6.5" HMA ———— 0.5	
	1D	24/17	1.00 - 3.00	9/10/8/8	18	28			Brown, damp, medium dense, fine to coarse SAND, some gravel, little silt, (Fill).	G#304273 A-1-a, SM WC=4.8%
5	2D	24/16	5.00 - 7.00	11/19/18/13	37	58			Olive-brown, damp, very dense, fine to coarse SAND, some gravel, some silt, (Fill).	G#304274 A-2-4, SM WC=8.4%
10	3D	24/20	10.00 - 12.00	22/26/23/20	49	77			Olive-brown, moist, very dense, fine to coarse SAND, some silt, some gravel. (Fill).	G#304275 A-2-4, SM WC=6.9%
15	4D	24/14	15.00 - 17.00	7/7/4/6	11	17	6		Grey-brown, wet, medium dense, fine to coarse Sandy GRAVEL, some silt, (Fill).	G#304276 A-1-b, GM WC=9.3%
							20			
							19			
							18			
							12			
20	5D	24/17	20.00 - 22.00	3/4/9/12	13	20	4		Grey, wet, medium dense, fine to coarse SAND, some silt, little gravel, trace clay, little organics, roots, (Fill).	G#304277 A-4, SC-SM WC=35.3%
							10	686.3	———— 22.0	
							10			
							9			
							12			
25	6D	24/16	25.00 - 27.00	9/9/12/14	21	33	7		Grey, wet, dense, GRAVEL, some fine to coarse sand, little silt, trace clay, (Till).	G#304278 A-1-b, GC-GM WC=11.0%
							26			
							28			
							41			
							50			
30	7D	13.2/6	30.00 - 31.10	17/21/25(1.2")	---				Brown, wet, dense, GRAVEL, some fine to coarse sand, little silt, (Till).	G#304279 A-1-b, GM WC=8.3%
								677.2	———— 31.1 Bottom of Exploration at 31.1 feet below ground surface. REFUSAL, very good bounce on Hammer.	
35										
40										
45										
50										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: HB-CAS-101

Maine Department of Transportation
Soil/Rock Exploration Log
US CUSTOMARY UNITS

Project: Large Culvert Replacement on Route 1A
Location: Caswell, Maine

Boring No.: HB-CAS-102
WIN: 21769.00

Drilling Contractor:	MaineDOT	Elevation (ft.)	707.9	Auger ID/OD:	5" Dia.
Operator:	Travis	Datum:	NAVD88	Sampler:	N/A
Logged By:	B. Wilder	Rig Type:	CME 45C	Hammer Wt./Fall:	N/A
Date Start/Finish:	8/17/2016; 10:00-14:30	Drilling Method:	Solid Stem Auger	Core Barrel:	N/A
Boring Location:	14+70.2, 12.5 ft Lt.	Casing ID/OD:	N/A	Water Level*:	None Observed

Definitions: D = Split Spoon Sample
S = Sample off Auger Flights
B = Bucket Sample off Auger Flights
MD = Unsuccessful Split Spoon Sample Attempt
U = Thin Wall Tube Sample
MV = Unsuccessful Field Vane Shear Test Attempt
V = Field Vane Shear Test, PP = Pocket Penetrometer
MU = Unsuccessful Thin Wall Tube Sample Attempt
R = Rock Core Sample
SSA = Solid Stem Auger
HSA = Hollow Stem Auger
RC = Roller Cone
WOH = Weight of 140lb. Hammer
WOR/C = Weight of Rods or Casing
WO1P = Weight of 1 Person
S_u = Peak/Remolded Field Vane Undrained Shear Strength (psf)
$S_{u(lab)}$ = Lab Vane Undrained Shear Strength (psf)
q_p = Unconfined Compressive Strength (ksf)
N-value = Raw Field SPT N-value
T_v = Pocket Torvane Shear Strength (psf)
WC = Water Content, percent ? = Similar or Equal too
LL = Liquid Limit
PL = Plastic Limit
PI = Plasticity Index
G = Grain Size Analysis
C = Consolidation Test

Depth (ft.)	Sample No.	Pen./Rec. (in.)	Sample Depth (ft.)	Blows (/6 in.) Shear Strength (psf) or RQD (%)	N-value	Casing Blows	Elevation (ft.)	Graphic Log	Visual Description and Remarks	Laboratory Testing Results/ AASHTO and Unified Class
0						SSA			Probe, no soils samples taken.	
5										
10										
15										
20										
25										
30							676.9		———— 31.0 Bottom of Exploration at 31.0 feet below ground surface. NO REFUSAL	
35										
40										
45										
50										

Remarks:

Stratification lines represent approximate boundaries between soil types; transitions may be gradual.

* Water level readings have been made at times and under conditions stated. Groundwater fluctuations may occur due to conditions other than those present at the time measurements were made.

Page 1 of 1
Boring No.: HB-CAS-102

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

021769.00

WIN
021769.00

HIGHWAY PLANS

STATE OF MAINE ★ Kathleen Maguire 7120 LICENSED PROFESSIONAL ENGINEER

SIGNATURE
7120
P.E. NUMBER
4/3/18
DATE

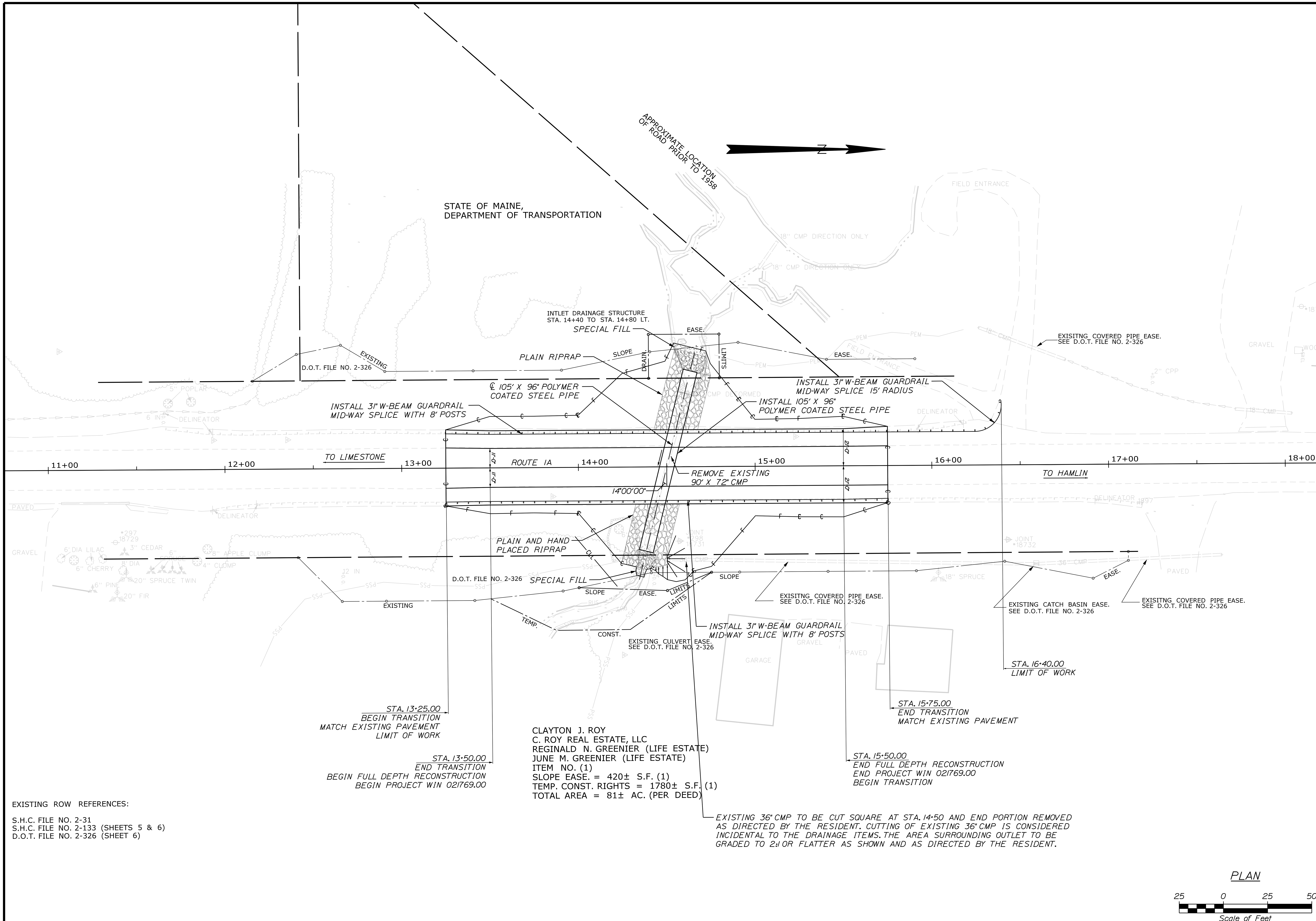
		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED			
CHECKED-REVIEWED	C.RUSSELL	T.WHITE	APR 2018
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

CASWELL
ROUTE 1A

BORING LOGS

SHEET NUMBER
6
OF 16

Filename: ...\00\HIGHWAY\MSTA\007_Plan.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN 21769.00

HIGHWAY PLANS

PROJ. MANAGER ROGER SOUCY
DESIGN-DETAILED C. HELSTROM
CHECKED-REVIEWED
DESIGN2-DETAILED2
DESIGN3-DETAILED3
REVISIONS 1
REVISIONS 2
REVISIONS 3
REVISIONS 4
FIELD CHANGES

BY | DATE | SIGNATURE | P.E. NUMBER | DATE

CASWELL
US ROUTE 1A

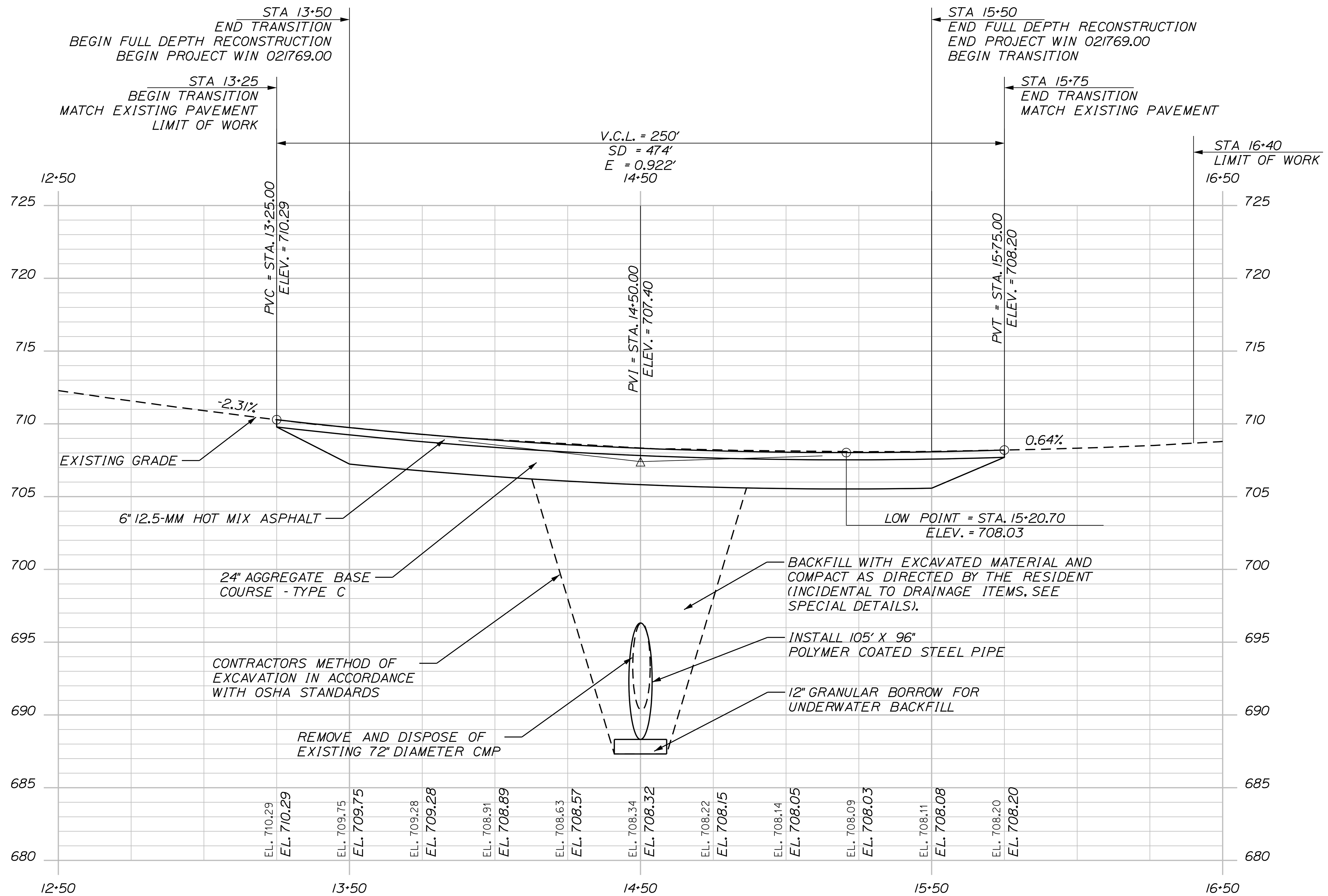
PLAN

SHEET NUMBER

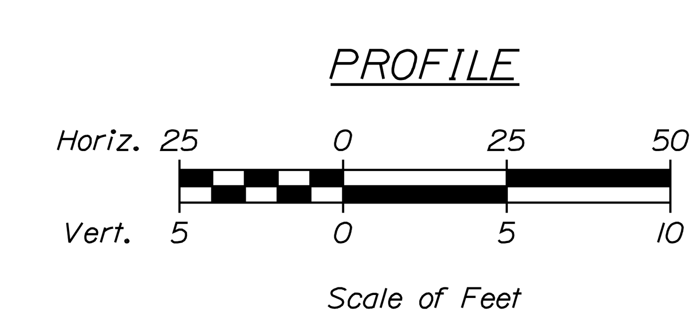
7

OF 16

Filename: ...\HIGHWAY\MSTA\008_Profile.dgn   Division: HIGHWAY   Username: chris.l.helstrom   Date:4/11/2018



PROFILE



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN 21769.00

HIGHWAY PLANS

PROJ. MANAGER	ROGER SOUCY	BY	DATE
DESIGN-DETAILED	C. HELSTROM		
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

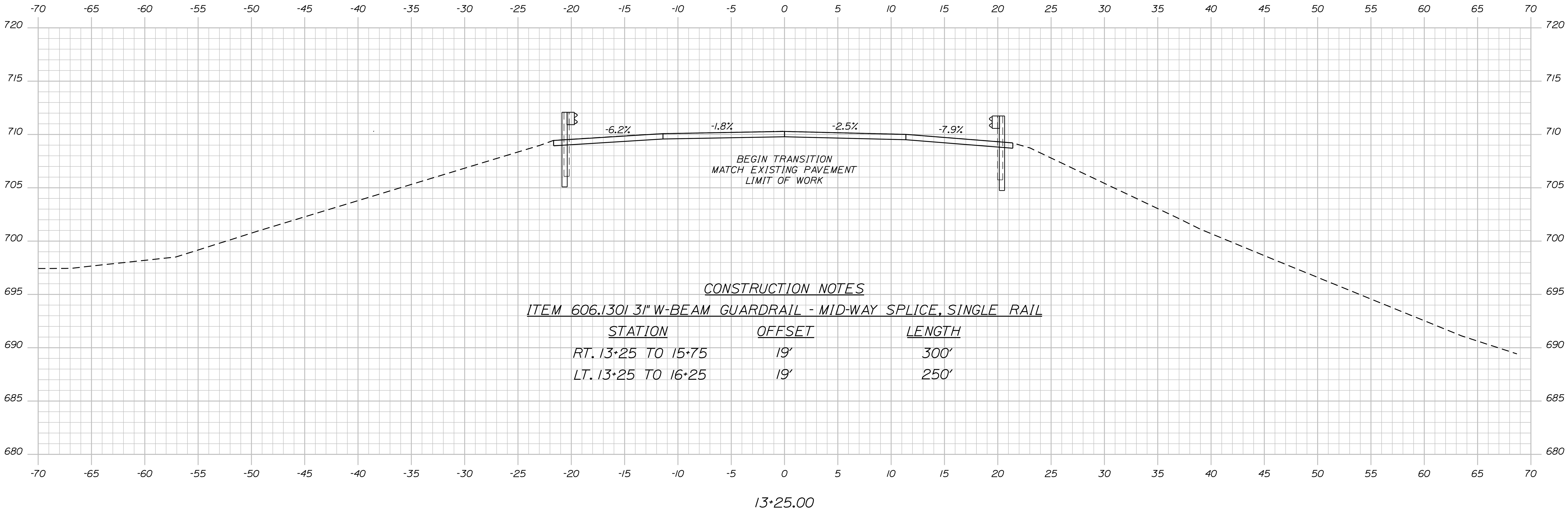
CASWELL
US ROUTE 1A

PROFILE

SHEET NUMBER

8

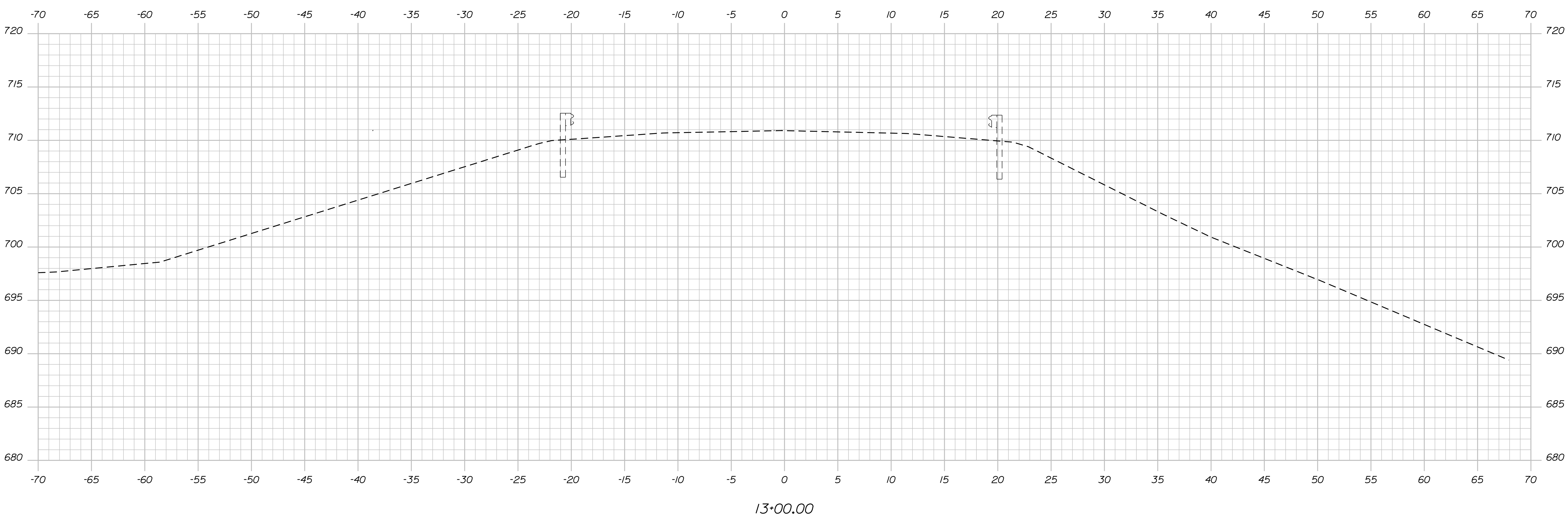
OF 16



CONSTRUCTION NOTES

ITEM 606.1301 31" W-BEAM GUARDRAIL - MID-WAY SPLICE, SINGLE RAIL

STATION	OFFSET	LENGTH
RT. 13+25 TO 15+75	19'	300'
LT. 13+25 TO 16+25	19'	250'



STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN 21769.00

HIGHWAY PLANS

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	C. HELSTROM		
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

CASWELL
US ROUTE 1A

CROSS SECTIONS

SHEET NUMBER

9

OF 16

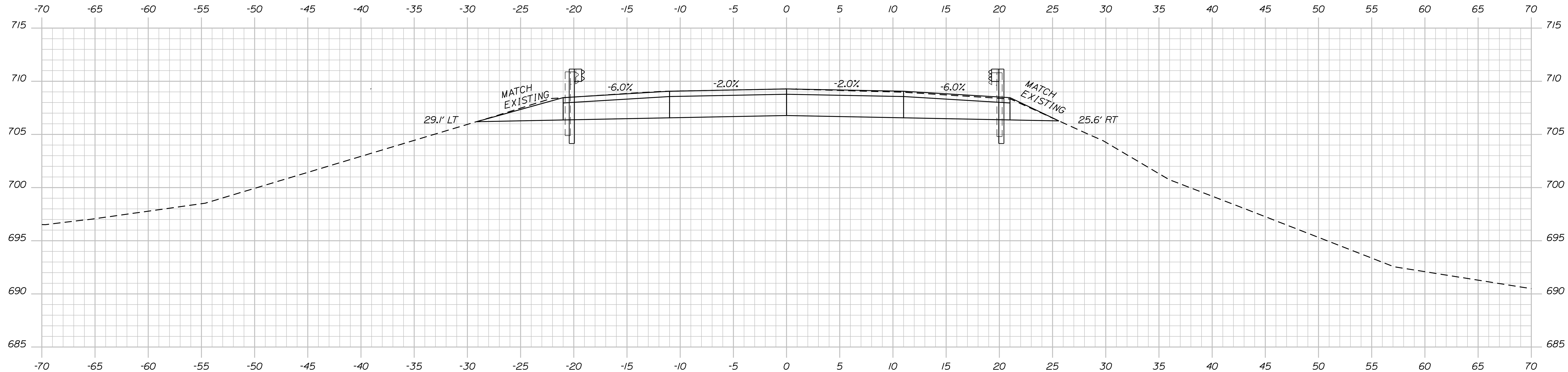
Filename: ...\MSTA\010_XSECT_13+50_002.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

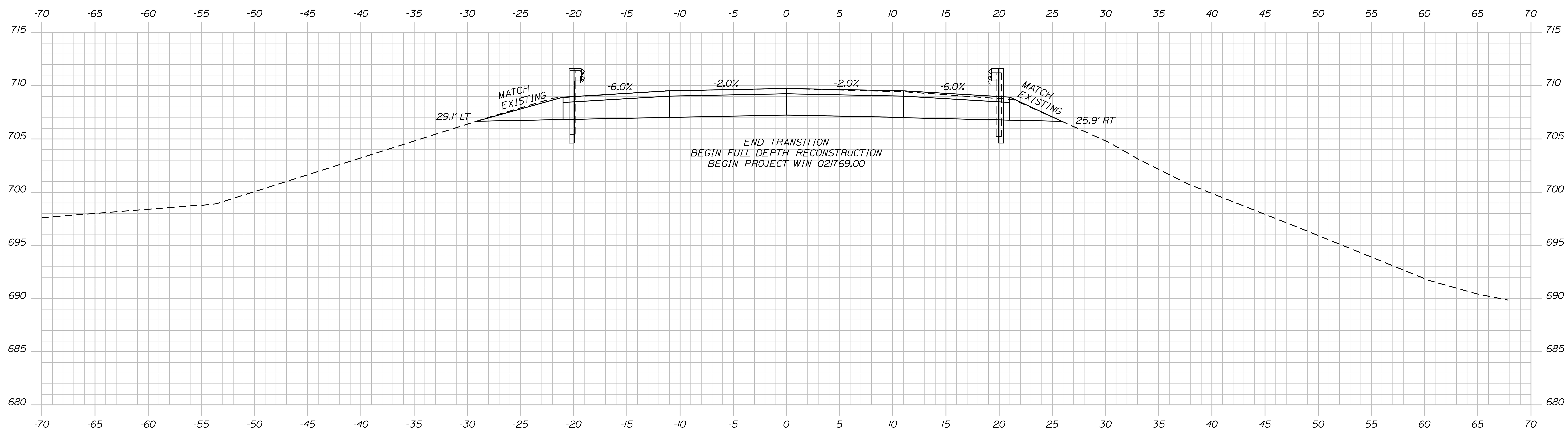
21769.00

WIN
21769.00

HIGHWAY PLANS



13+75.00



13+50.00

PROJ. MANAGER	ROGER SOUCY	BY	DATE
DESIGN-DETAILED	C. HELSTROM		
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

CASWELL
US ROUTE 1A

CROSS SECTIONS

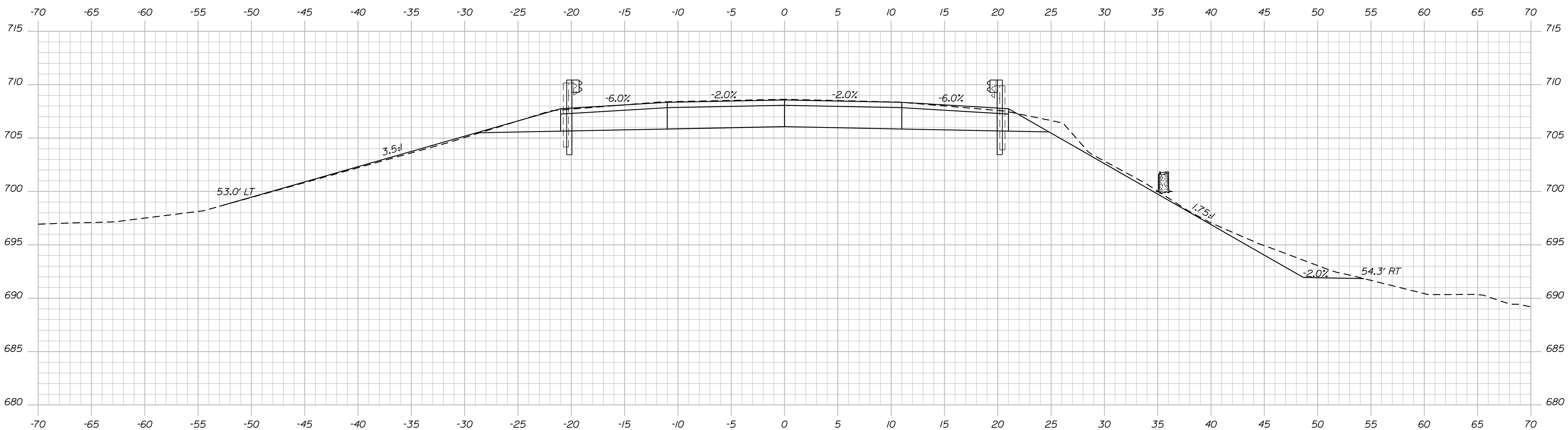
SHEET NUMBER

10

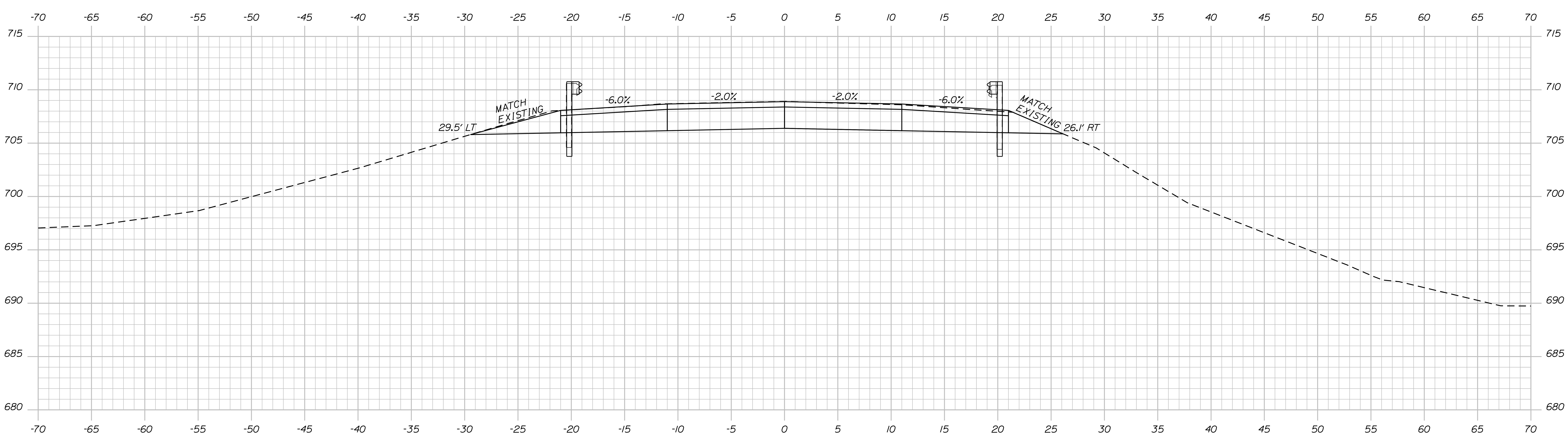
OF 16

Sta. 13+50.00 to Sta. 13+75.00

Filename: ...\MSTA\011_XSECT_14+00_003.dgn   Division: HIGHWAY   Username: chris.l.helstrom   Date:4/11/2018



14+25.00



14+00.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN 21769.00

HIGHWAY PLANS

	BY	DATE
PROJ. MANAGER	ROGER SOUCY	
DESIGN-DETAILED	C. HELSTROM	
CHECKED-REVIEWED		
DESIGN2-DETAILED2		
DESIGN3-DETAILED3		
REVISIONS 1		
REVISIONS 2		
REVISIONS 3		
REVISIONS 4		
FIELD CHANGES		

SIGNATURE

P.E. NUMBER

DATE

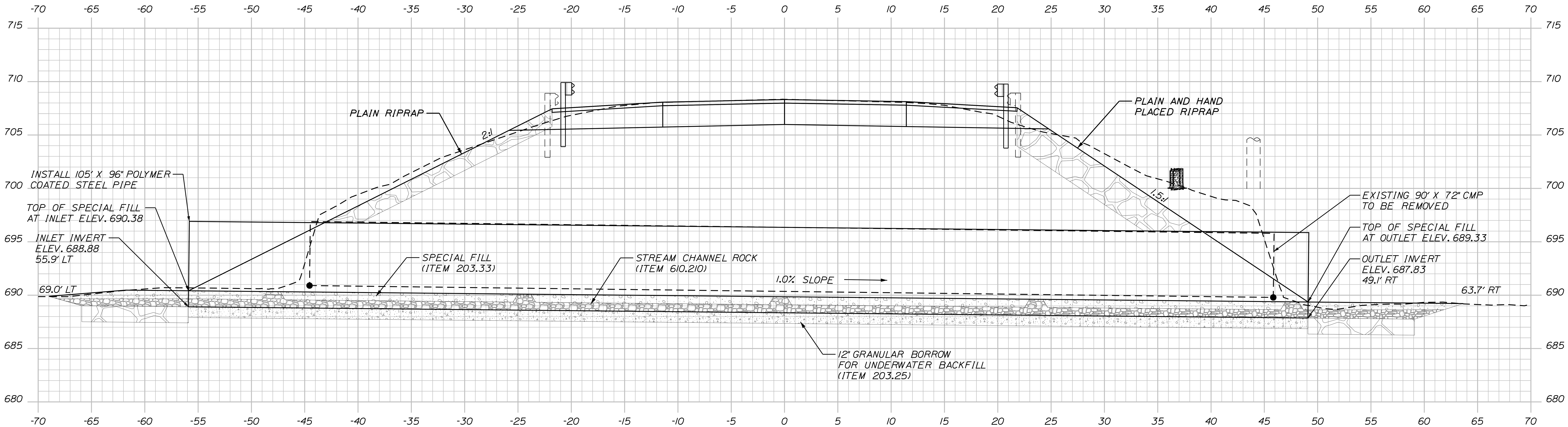
CASWELL
US ROUTE 1A

CROSS SECTIONS

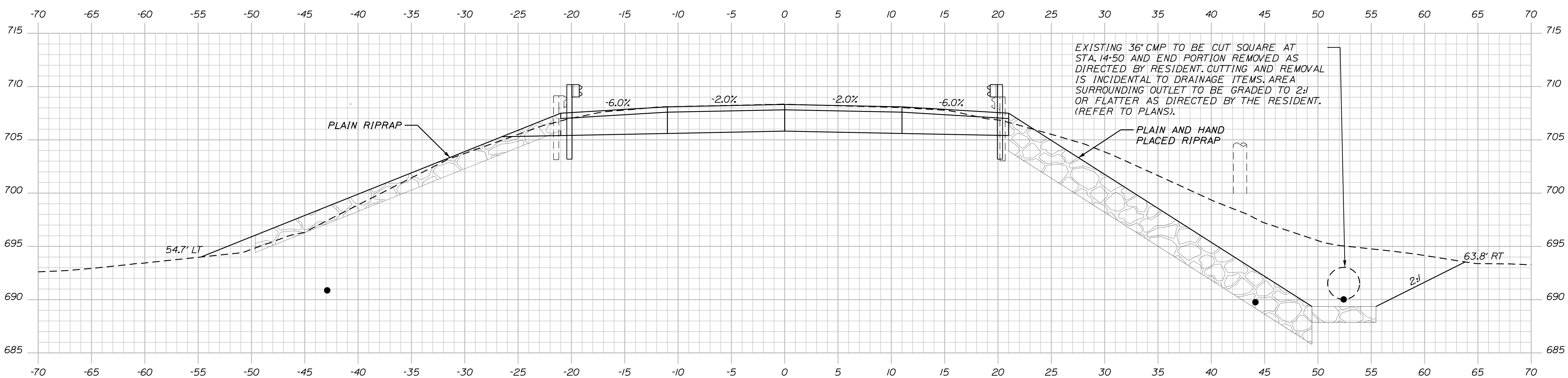
SHEET NUMBER
11
OF 16

Sta. 14+00.00 to Sta. 14+25.00

Filename: ...\MSTA\012_XSECT_14+50_004.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018



14+50.00 (SKEWED SECTION)



14+50.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN
21769.00

HIGHWAY PLANS

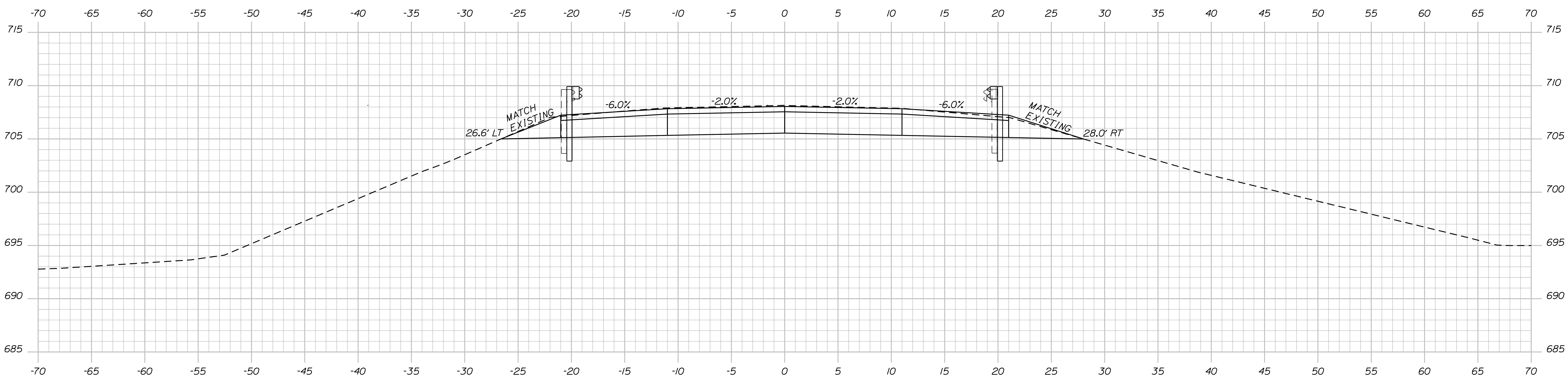
	BY	DATE	SIGNATURE	P.E. NUMBER	DATE
PROJ. MANAGER	ROGER SOUCY				
DESIGN-DETAILED	C. HELSTROM				
CHECKED-REVIEWED					
DESIGN2-DETAILED2					
DESIGN3-DETAILED3					
REVISIONS 1					
REVISIONS 2					
REVISIONS 3					
REVISIONS 4					
FIELD CHANGES					

CASWELL
US ROUTE 1A

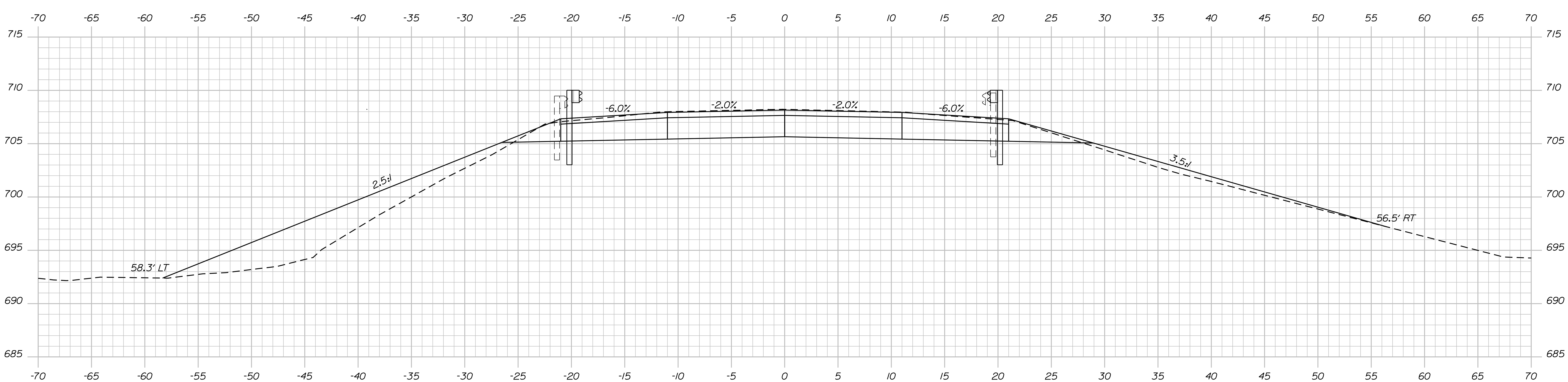
CROSS SECTIONS

SHEET NUMBER
12
OF 16

Sta. 14+50.00 to Sta. 14+50.01



15+00.00



14+75.00

Filename: ...\MSTA\013_XSECT_14+75_005.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN 21769.00

HIGHWAY PLANS

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	C. HELSTROM		
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

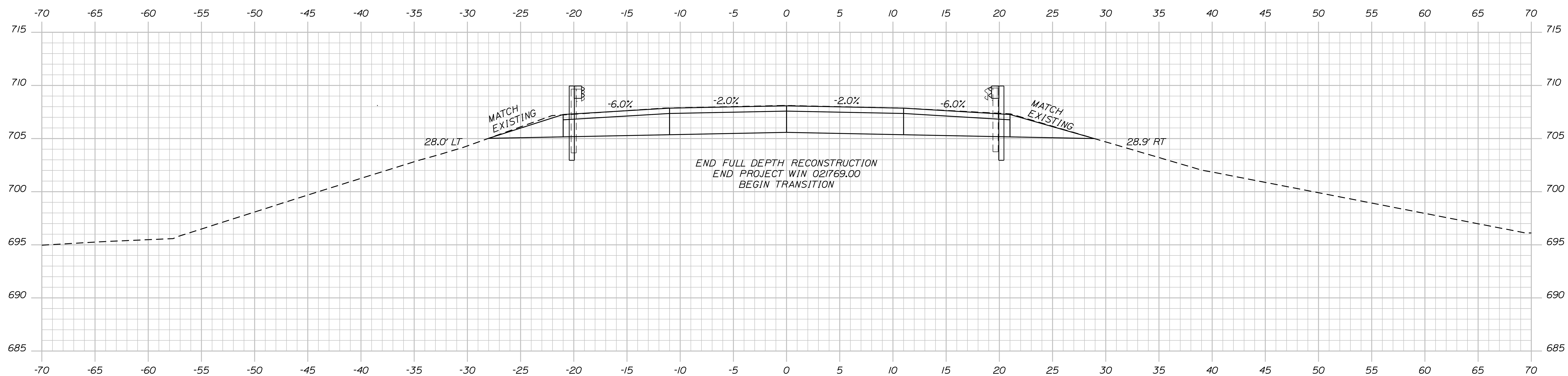
CASWELL
US ROUTE 1A

CROSS SECTIONS

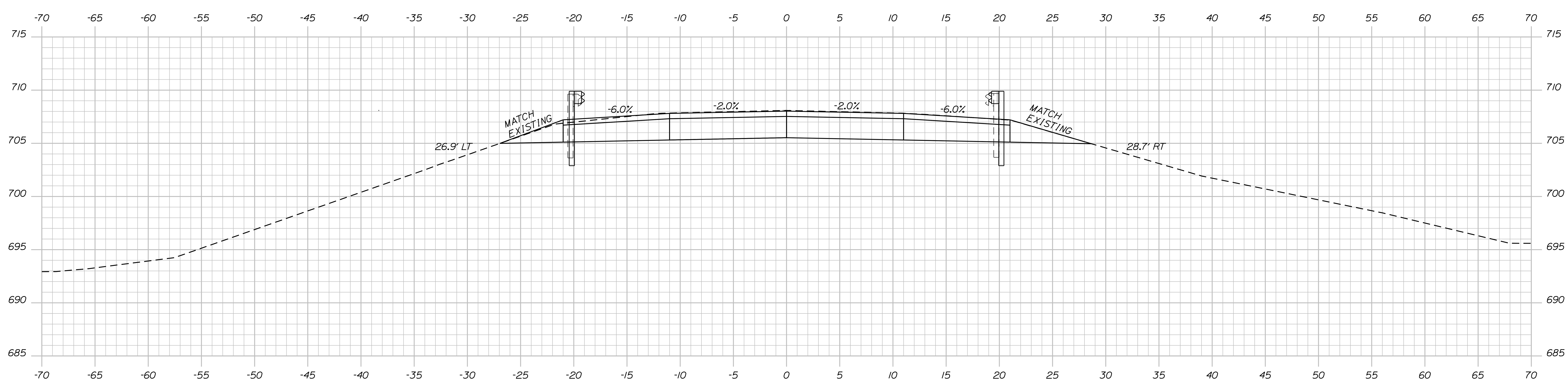
SHEET NUMBER
13
OF 16

Sta. 14+75.00 to Sta. 15+00.00

Filename: ...\MSTA\014_XSECT_15+25_006.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018



15+50.00



15+25.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

21769.00

WIN 21769.00

HIGHWAY PLANS

		BY	DATE
PROJ. MANAGER	ROGER SOUCY		
DESIGN-DETAILED	C. HELSTROM		
CHECKED-REVIEWED			
DESIGN2-DETAILED2			
DESIGN3-DETAILED3			
REVISIONS 1			
REVISIONS 2			
REVISIONS 3			
REVISIONS 4			
FIELD CHANGES			

SIGNATURE

P.E. NUMBER

DATE

CASWELL
US ROUTE 1A

CROSS SECTIONS

SHEET NUMBER
14
OF 16

Sta. 15+25.00 to Sta. 15+50.00

CONSTRUCTION NOTES

ITEM 606.1303 31" W-BEAM GUARDRAIL - MID-WAY SPLICE, 15' RADIUS OR LESS

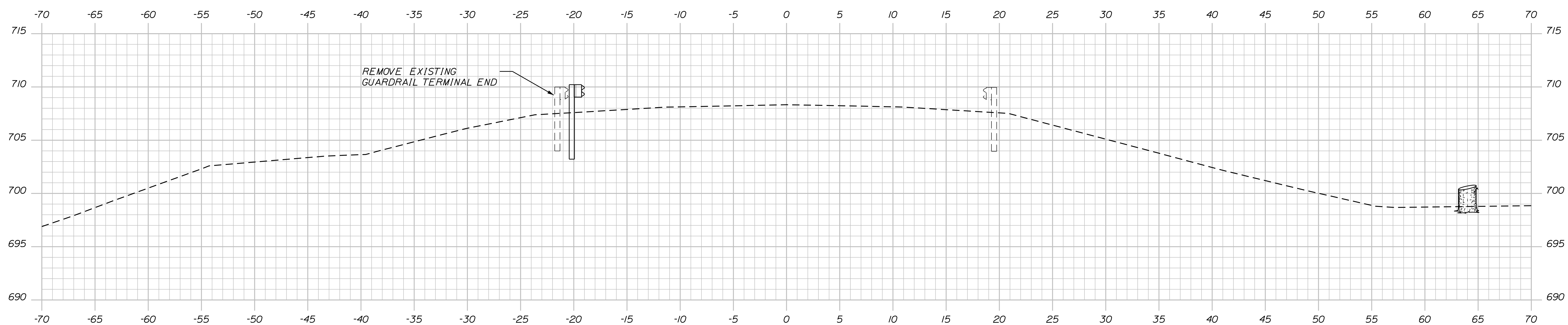
STATION	OFFSET (END OF RADIUS)	LENGTH
LT. 16+25 TO 16+40	36.8'	25'

ITEM 606.265 TERMINAL END SINGLE RAIL - GALVANIZED STEEL

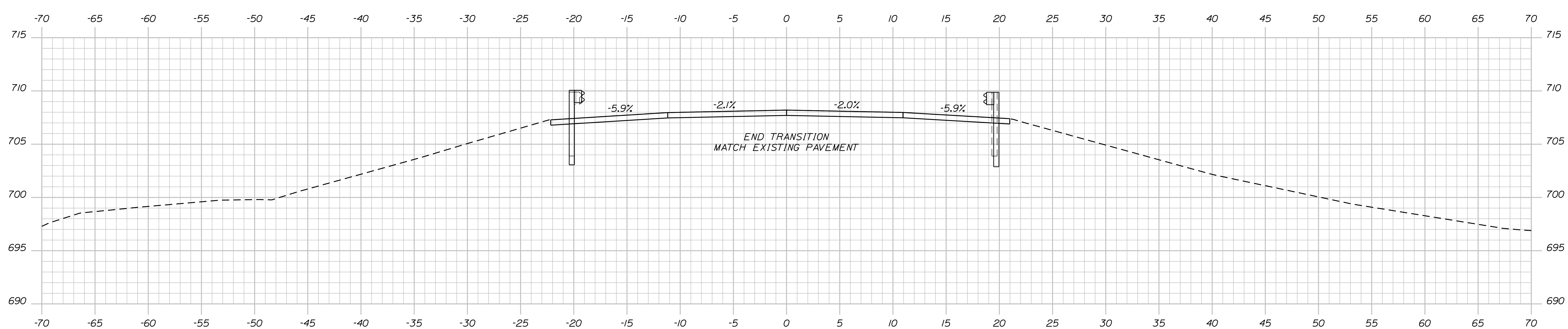
STATION	OFFSET (END OF RADIUS)
LT. 16+40	36.8'

ITEM 606.353 REFLECTORIZED FLEXIBLE GUARDRAIL MARKER

STATION	QUANTITY
LT.16+25	1
LT.16+40	1



16+00.00



15+75.00

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
21769.00
WIN 21769.00
HIGHWAY PLANS

PROJ. MANAGER ROGER SOUCY
DESIGN-DETAILED C. HELSTROM

CASWELL
US ROUTE 1A
CROSS SECTIONS

SHEET NUMBER
15
OF 16

Sta. 15+75.00 to Sta. 16+00.00

Filename: ...\MSTA\015_XSECT_15+75_007.dgn Division: HIGHWAY Username: chris.l.helstrom Date:4/11/2018

PLAN LEGEND

Town, County, State — Approx. Property Lines (P.L.) — Existing Right of Way — Limits of Wrought Portion (L.O.W.P.) — Control Of Access (C.O.A.) — New Right of Way — New Easement — New Temporary Rights — New R/W Within Existing R/W

New R/W Along Existing R/W — Building — Clearing Limit Line (CLL) — Trees: Conifer, Deciduous — Tree Line — Bush Line — Water Edge — Ledge — Rock/Boulder — Flag Pole — Fence: Chain Link, Barb Wire, Stockade — Sign — Well — Mailbox

Existing / Proposed: Sanitary Sewer — Telephone Line — Electric Line — Water Line — Underdrain Line — Gas Line — Guardrail — Culvert

Existing / Proposed: Traveled Way — Ditch — Catch Basin — Manhole — Sewer Manhole — Utlity Pole — Fire Hydrant — Curbing

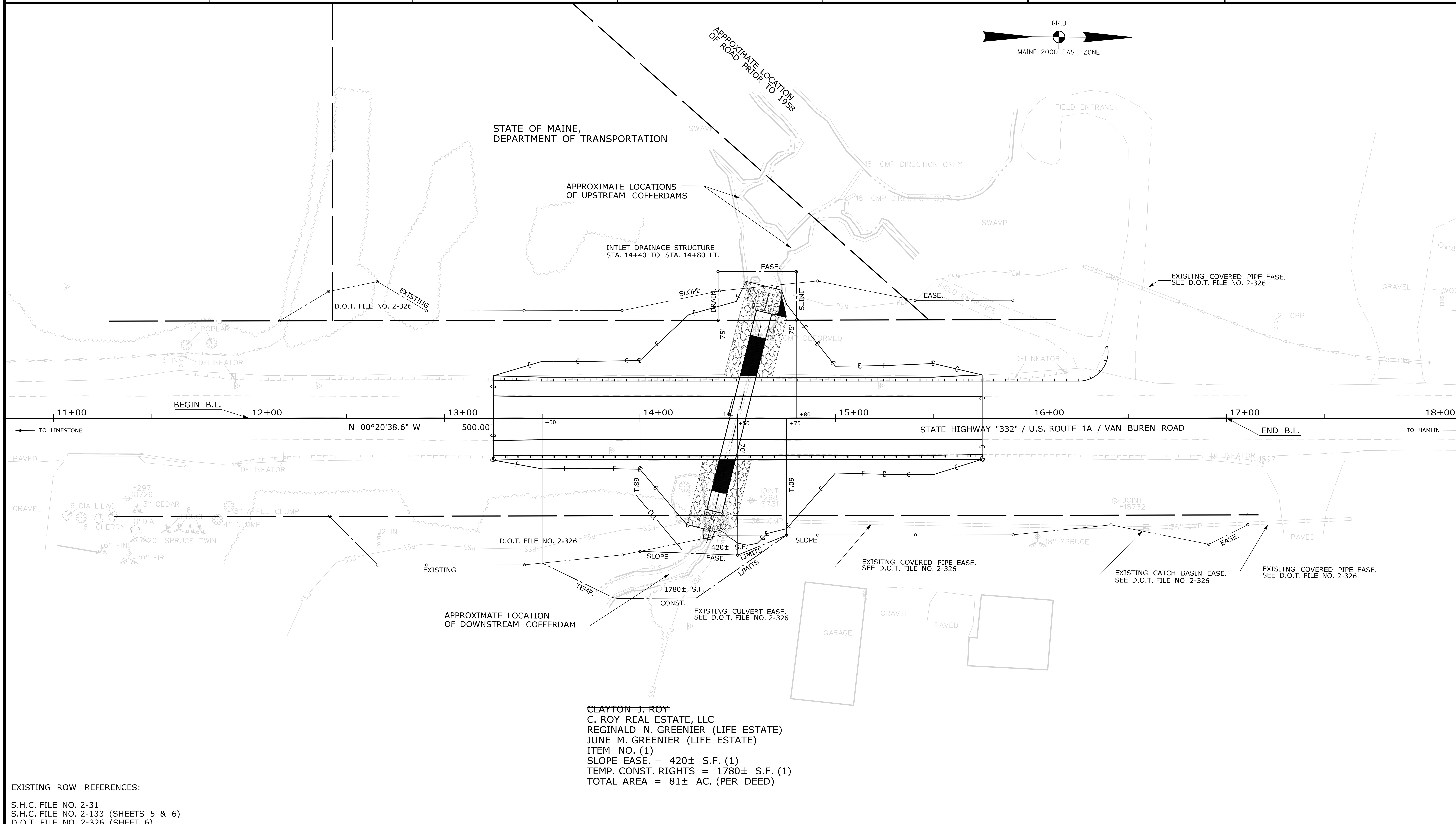
Cut Line — Fill Line — Stonewall — Retaining Wall — Baseline (10+00, 11+00, 12+00) — Monument — Traverse Point — Iron Rod Found (IRF) — Pipe Found (IPF) — Replacement Pin Set

STATE OF MAINE
REGISTRY OF DEEDS

COUNTY ______________
RECEIVED ______________, ______
at ______h______m______M and recorded in
Plan Book ______________, Page ______
Attest: ______________
REGISTER

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

25 0 25 50 75 100
Scale of Feet



~~CLAYTON J. ROY~~
C. ROY REAL ESTATE, LLC
REGINALD N. GREENIER (LIFE ESTATE)
JUNE M. GREENIER (LIFE ESTATE)
ITEM NO. (1)
SLOPE EASE. = 420± S.F. (1)
TEMP. CONST. RIGHTS = 1780± S.F. (1)
TOTAL AREA = 81± AC. (PER DEED)

EXISTING ROW REFERENCES:

S.H.C. FILE NO. 2-31
S.H.C. FILE NO. 2-133 (SHEETS 5 & 6)
D.O.T. FILE NO. 2-326 (SHEET 6)

WIN 021769.00

ITEM	TECH	CHECKED
EXISTING CONDITION PLAN	T.L.B.	
FINAL RIGHT OF WAY	T.L.B.	
AREAS	T.L.B.	

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION
16 STATE HOUSE STATION - AUGUSTA, ME 04333-0016 - 207-624-3460
CASWELL
RIGHT OF WAY MAP

REVISIONS			
NO.	DATE	DESCRIPTION	BY

PLAN FILED IN PLAN BOOK	PAGE	COUNTY RECORD			NORTH
NO.	GRANTOR	INSTRUMENT	DATE	BOOK	PAGE
		COND.	3/12/18	2009	185

DAVID BERNHARDT
COMMISSIONER
JOYCE NOEL TAYLOR
CHIEF ENGINEER
DATE

STATE HIGHWAY "332"
U.S. ROUTE 1A \ VAN BUREN ROAD
CASWELL AROOSTOOK COUNTY
STATE PROJECT NO. 21769.00

OCTOBER 2017 | RIGHT-OF-WAY MAP | D.O.T. FILE NO. 2-603
SCALE 1" = 25' | SHEET 1 OF 1

SHEET NUMBER
16
OF 16

Date:4/11/2018 Username: Terri.L.Blair Division: ROW Filename: ...\00\ROW\MSTA\001_RWPLAN1.dgn