



Chairman
Ed Lynch

TOWN OF LEDYARD CONNECTICUT

741 Colonel Ledyard Highway
Ledyard, Connecticut 06339

Water Pollution Control Authority

~ AGENDA ~

Regular Meeting

Tuesday, August 22, 2023

7:00 PM

Council Chambers - Hybrid

REMOTE MEETING INFORMATION

Meeting ID: 884 5893 6631

Passcode: 797747

Zoom Meeting Link:

<https://us06web.zoom.us/j/88458936631?pwd=R1h5dS9qeHlkeHhGdE53Q3RqME5WUT09>

Dial by your location

+1 646 558 8656 US (New York)

I. CALL TO ORDER

II. ROLL CALL

III. APPOINTMENT OF ALTERNATES

IV. PLEDGE OF ALLEGIANCE

V. RESIDENTS & PROPERTY OWNERS COMMENTS

VI. APPROVAL OF MINUTES

1. Motion to ACCEPT Regular Meeting Minutes from July 25, 2023, as written.

Attachments: [WPCA minutes 7-25-23](#)

VII. COMMUNICATIONS AND CORRESPONDENCE

1. Operations Report.

Attachments: [7 - Ledyard Water Systems Monthly Report - July 2023.](#)

2. Service Correspondence.

3. Aged Reports/Finance.

Attachments: [WPCA AGED A-R SUMMARY TREND FEBRUARY 2023- JULY 2023](#)

4. Year to Date Water/Sewer Report.

Attachments: [Water YTD](#)
[Sewer YTD](#)

5. PSR - Steve Banks.

Attachments: [August 2023 PSR](#)

VIII. OLD BUSINESS

1. Ledyard Center Trail and Sewer Line Project status proceeding to a spring construction start continued.

Attachments: [Col. Ledyard Highway_Multi-Use Pathway_APPROVED w
CONDITIONS_GU Comments_05-12-23 \(1\)
L171-0001-Ledyard MUP_Bid Plans_2023-05](#)

2. Cost of Service quote review and discussion.

Attachments: [Ian Stammel_discussion](#)
[Ledyard WPCA - Cost of Service Quote & General Information Request](#)

3. Rules and Regulation review and possible changes continued.

Attachments: [Complete Policy Manual](#)
[WPCA Relief policy](#)
[WPCA Relief policy_rev01](#)

4. Inspection of the Holmberg Tank quote.

Attachments: [Estimate 1274 from Shoreline Diving Services Inc](#)

5. Any Other Old Business to come before the Authority.

IX. NEW BUSINESS

1. Motion to ACCEPT Utility Financial Solutions' proposal to provide water cost of service for Ledyard WPCA on behalf of Groton Utilities at a cost of \$13,000.00.

Attachments: [Ledyard WPCA - Cost of Service Quote & General Information Request](#)

2. Any Other New Business to come before the Authority.

X. ADJOURNMENT

DISCLAIMER: Although we try to be timely and accurate these are not official records of the Town.



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1993

Agenda Date: 8/22/2023

Agenda #: 1.

MINUTES

Minutes:

Motion to ACCEPT Regular Meeting Minutes from July 25, 2023, as written.



Chairman
Ed Lynch

TOWN OF LEDYARD

Water Pollution Control Authority

Meeting Minutes

741 Colonel Ledyard Highway
Ledyard, Connecticut 06339

Regular Meeting

Tuesday, July 25, 2023

7:00 PM

Council Chambers - Hybrid

I. CALL TO ORDER

Chairman Lynch called the meeting to order at 7:00 p.m.

II. ROLL CALL

Present Board Member Monir Tewfik
Board Member Sharon Wadecki
Board Member Terry Jones
Board Member Stanley Juber
Board Member Edmond Lynch
Non-voting Alternate Member Tony Capon
Alternate Member James A. Ball
Alternate Member Jeremy Norris

Also in attendance:

Bill Saums, Town Councilor

Mauricio Duarte, GU General Foreman Water Operations

Tina Daniels, GU Customer Service General Manager

Aaron Brooks, GU General Manager of Business Development

III. APPOINTMENTS OF ALTERNATES

Not needed.

IV. PLEDGE OF ALLEGIANCE

V. RESIDENTS & PROPERTY OWNERS COMMENTS

None present.

VI. APPROVAL OF MINUTES

1. Motion to APPROVE Regular Meeting Minutes from June 27, 2023.

RESULT: APPROVED AND SO DECLARED

MOVER: Edmond Lynch

SECONDER: Terry Jones

AYE 5 Tewfik Wadecki Jones Juber Lynch

VII. COMMUNICATIONS AND CORRESPONDENCE.

1. Operations Report.

- GU monthly report.
- GU Communication from July 20, 2023, regarding the Holmberg tank, Ledyard Center tank and Seabury Ave.
- SCWA Service area Map.
- CorrTech proposal for washout, spot cleaning and ROV inspection of the Fairway Drive Hydropillar.
- Ledyard PWS ID: CT0727091 response.

Painting the top of the Ledyard Center Tank is scheduled for August. Chairman Lynch asked if there was a fixed date. Maurice Duarte replied August 14, 2023.

Chairman Lynch asked if Mr. Duarte is still seeking quotes for the inspection of the Holmberg tank, he replied that GU received one quote and is still seeking two more.

Routine flushing of specific hydrants and blow-offs is being conducted to lower water age in both the Ledyard Center and Gales Ferry systems, as part of efforts to maintain the lowest TTHM levels possible in both systems.

Chairman Lynch asked if there was an alert on one of the Town's water samples. Mr. Duarte answered that two of the lead samples came back positive. GU has written a response to the DPH showing that they are in compliance with what they need to do next, which is notifying the customer within 24 hours and retaking the samples. GU is working on the explanation to DPH.

RESULT: DISCUSSED

2. Service Correspondence.

None.

3. Aged Reports/Finance.

No comments.

4. Year to Date Water/Sewer Report.

Mr. Jones said that sewer report looks how he would expect it to look at the end of July but he doesn't understand why the water budget still as items over 100% usage.

RESULT: DISCUSSED

5. PSR - Steve Banks.

The motor starter for one of the new skid mount sewer pumps burned up because the wiring came loose during transit from the manufacturer. A replacement starter has been ordered by the manufacturer. Chairman Lynch said the pump is still operating, although at a reduced rate.

The starter needed to be replaced at the Lakeside pump station.

RESULT: DISCUSSED

VIII. OLD BUSINESS

1. Ledyard Center Trail and Sewer Line Project status proceeding to a spring construction start continued.

The WPCA has received no word on when the multi-modal trail and sewer line extension can proceed, but Steve Masalin, Public Works Director reported that he believes SECOG has completed its approval process. DOT has another turn at it from a funding standpoint, after which it will be ready to bid.

RESULT: DISCUSSED

2. Rules and Regulation review and possible changes continued.

Ms. Wadecki thinks the policy needs to more accurately explain that only sewer can receive relief, that water charges cannot be adjusted. In extreme cases a water charge may be reviewed but that is an exception. Chairman Lynch said he will modify the policy and present it the Authority during the August meeting.

ACTION ITEM:

Update Water/Sewer relief policy.

RESULT: CONTINUE

3. Route 12/Baldwin Hill Road hydrant relocation.
Status on recent public hearing held on July 13, 2023.

Chairman Lynch said the well was fracked, he believes it was successful and there is no need to consider a water main extension for now.

RESULT: COMPLETED

4. Cost of Service quote review and discussion.

Ian Stammel, Assistant Finance Director told Chairman Lynch he doesn't believe the WPCA has money freed up to fund this endeavor. Ms. Wadecki said if the Authority wants to seriously consider completing the Cost of Service Study then the WPCA needs to know how to fund it. Mr. Jones said he doesn't believe the funds should come from the Capital account; clarification is needed from Finance. Chairman Lynch will speak with Mr. Stammel and report his findings during the August meeting.

ACTION ITEM:

Chairman Lynch will discuss the funding options with Ian Stammel, Assistant Finance Director.

RESULT: CONTINUE

5. Any Other Old Business to come before the Authority.

None.

IX. NEW BUSINESS

1. Motion to APPROVE Groton Utilities invoice #23512 dated June 30, 2023, in the amount of \$1065.43, for labor from May 25, 2023, through June 30, 2023.

RESULT: APPROVED AND SO DECLARED

MOVER: Edmond Lynch

SECONDER: Sharon Wadecki

AYE 5 Tewfik Wadecki Jones Juber Lynch

2. Motion to APPROVE Groton Utilities invoice #23339 dated March 31, 2023, in the amount of \$235.00, for materials and services billed on March 17, 2023.

RESULT: APPROVED AND SO DECLARED

MOVER: Edmond Lynch

SECONDER: Sharon Wadecki

AYE 5 Tewfik Wadecki Jones Juber Lynch

3. Any Other New Business to come before the Authority.

None.

X. ADJOURNMENT

Motion to ADJOURN the Regular meeting at 7:32 p.m.

RESULT: APPROVED AND SO DECLARED

MOVER: Sharon Wadecki

SECONDER: Stanley Juber

AYE 5 Tewfik Wadecki Jones Juber Lynch

DISCLAIMER: Although we try to be timely and accurate these are not official records of the Town.



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1536

Agenda Date: 8/22/2023

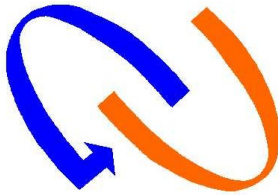
Agenda #: 1.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:
Operations Report.

Background:
(type text here)

Department Comment/Recommendation:
(type text here)



GROTON UTILITIES

**Subject: Ledyard Water Systems
Monthly Report: July 2023**

To: Ed Lynch, WPCA Chairman
Cc: Mark Biron, GM Operations
Joseph Pratt, Manager Water & Wastewater

From: Mauricio Duarte

Date: August 15, 2023

Water Operations and Maintenance Monthly Report and Updates for July 2023.

Operations:

- Daily rounds of all systems
- Operation and maintenance
- Manage water storage tanks

Laboratory:

- Distribution system sample testing per CTDPH schedule (microbiological & physical analyses). All results met CTDPH standards.
- Submitted results of monthly microbiological & physical analyses to CTDPH via CMDP as required.
- Completed data entry and e-mailed all required monthly forms to CTDPH.
- Gales Ferry and Ledyard Center: All lead and copper results for spring 2023 were submitted to DPH on time, all lead results sent to customers within the required 30 days, and all required certifications were sent to DPH. Both systems' 90th percentile values continue to be below the Action Level, so Ledyard Center and Gales Ferry continue to be in compliance the Lead and Copper Rule.

- Printed copies of Ledyard Center and Gales Ferry CCRs were distributed to public locations as required: the Bill Library, the Gales Ferry Library, and Ledyard Town Hall. Certification of CCR production and distribution for LC and GF sent to DPH by August 9th, as required.
- Routine flushing of specific hydrants and blow-offs is being conducted to lower water age in both the Ledyard Center and Gales Ferry systems, as part of our efforts to maintain the lowest THM levels possible in both systems. In addition, Groton Utilities is blending raw water sources to lower THMs leaving the water treatment plant. We had hoped to be blending both Smith Lake and Production Well #3 water into the Poquonnock Reservoir intake, but were only able to use Smith Lake water, due to higher than usual caustic demand to achieve pH target in the finished water. PW#3 would have increased pH demand even further, which would have been unsustainable.
- 3rd quarter THM/HAA5 samples were collected in July for Ledyard Center. Results indicate we are still in compliance with the Running Annual Average MCL, but an OEL report for the third quarter will be required.
- Gales Ferry 3rd quarter samples will be collected in August as per each system's DPH schedule. Due to improving raw water conditions, we anticipate being able to blend both Smith Lake and PW#3 water into Poquonnock Reservoir at that time, which is a better scenario than was possible during the Ledyard Center 3rd quarter THM/HAA5 sampling.

Distribution:

- Daily call before you dig.
- Replaced fire hydrant #10 at Meetinghouse Lane.
- Hydrant inspection for Ledyard and Gales Ferry.
- Fixed curb box in the Highlands.
- We received the 2021 and 2022 Cross Connection Inspection report response from DPH for the Ledyard Center system. We replied to DPH regarding their questions and are in compliance.
- We received the 2021 and 2022 response for the Cross Connection report for the Gales Ferry system, we are currently working on a response.
- The top of the Ledyard Center tank is currently being painted, it's expected to be completed the week of August 21st.

Ledyard Utility Commission Report - May 2023

METER & SERVICE							
PERIODIC REPLACE		METER WORK				CUSTOMER SERVICE	
5/8"			Repair Meter	3		Seasonal On	0
1"			Repair Transmitter	7		Seasonal Off	0
2"			Data Log / High Consu	0		Terminate Paymernt	0
3"			Test Meter Shop	0		Terminate Non Comp	0
4"			Test Meter Field	7		Turn Off Repair	0
6"			Leak Detection	0		Paperwork:	0
8"			Flush Service	2		New Connection	
10"			Low Pressure Test	0		Frozen Serv / Meter	0
Comments: 12 Sleepy Hollow install Turn on 1							
Monday through Friday, one hour per day preparing Bluff Road reads and Gales Ferry chem reads.							

CROSS CONNECTION & BACKFLOW					
BACKFLOW DEVICE TEST		BACKFLOW DEVICE RETEST		CROSS CONNECTION INSPECTION	
RPZ		RPZ	0	Cross Connection Inspect	0
DCVA		DCVA	0	Cross Connction Reinspect	0
PVB		PVB	0	Paperwork	0
Comments: .					

SAMPLES & WATER QUALITY					
SYSTEM SAMPLES ROUTINE		WATER QUALITY COMPLAINTS		COMPLAINT SAMPLES TAKEN	
BACTERIA	16	COLOR	0	BACTERIA	0
PHYSICAL	16	ODOR	0	PHYSICAL	0
CHLORINE	24	TASTE	0	VOC	0
PH	16	OTHER	0	CHLORINE	0
TEMPERATURE	16				
VOC					
Comments: Monday and Friday, flushed the Ledyard system at certain hydrants to improve.					

OTHER RELATED DEPARTMENT WORK			
		NUMBER	DETAILS / WHEN/WHERE/WHO/WHAT/WHY
Meter Vaults Pumped		2	Gales Ferry chem and Bluff Road
Contract Work		0	
Computer Record Entry		10 Hours	
Education		0	
Safety Meeting		0	
Vehicle Maintenance		0	
Tools & Equipment Maintenance		0	
Misc Work		0	
OTHER NOTES FOR THE MONTH		0	



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1680

Agenda Date: 8/22/2023

Agenda #: 2.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Service Correspondence.

Background:

(type text here)

Department Comment/Recommendation:

(type text here)



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1681

Agenda Date: 8/22/2023

Agenda #: 3.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

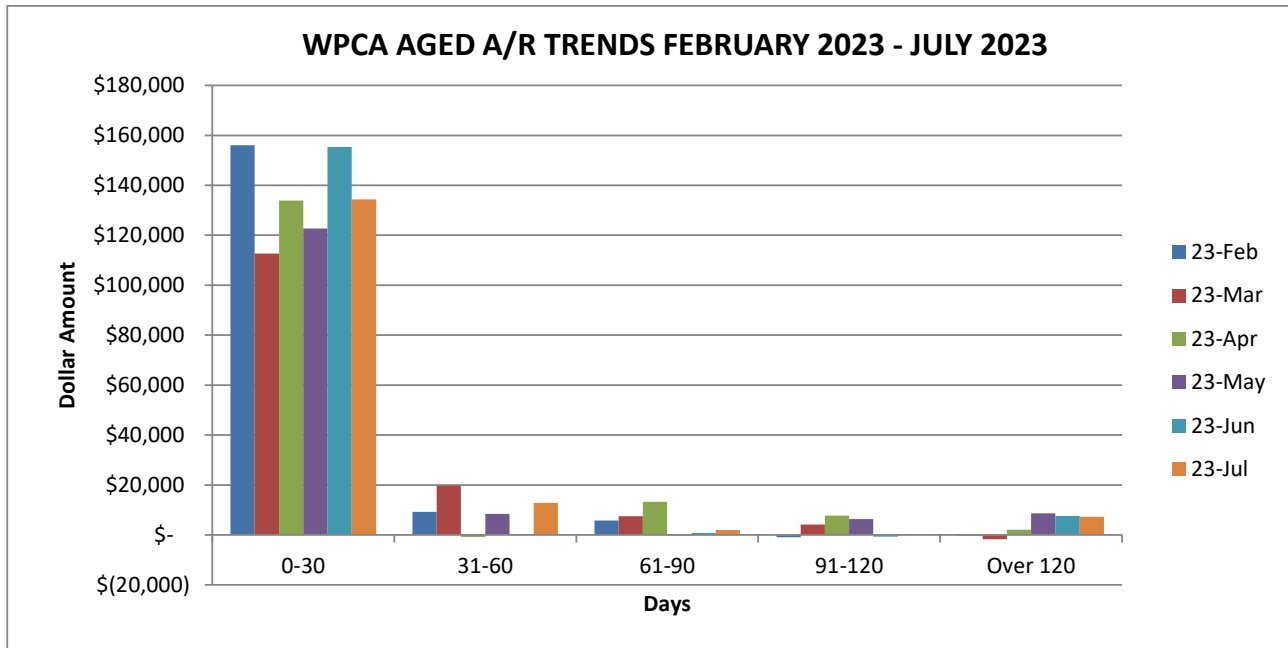
Aged Reports/Finance.

Background:

(type text here)

Department Comment/Recommendation:

(type text here)



FEB	FEB	FEB	FEB	FEB	
0-30	31-60	61-90	91-120	OVER 120	
\$ 156,025	\$ 9,207	\$ 5,770	\$ (922)	\$ (335)	\$ 169,745

MAR	MAR	MAR	MAR	MAR	
0-30	31-60	61-90	91-120	OVER 120	
\$ 112,673	\$ 19,744	\$ 7,490	\$ 4,153	\$ (1,758)	\$ 142,302

APR	APR	APR	APR	APR	
0-30	31-60	61-90	91-120	OVER 120	
\$ 133,836	\$ (832)	\$ 13,287	\$ 7,692	\$ 2,071	\$ 156,055

MAY	MAY	MAY	MAY	MAY	
0-30	31-60	61-90	91-120	OVER 120	
\$ 122,754	\$ 8,431	\$ (171)	\$ 6,326	\$ 8,634	\$ 145,973

JUNE	JUNE	JUNE	JUNE	JUNE	
0-30	31-60	61-90	91-120	OVER 120	
\$ 155,351	\$ (109)	\$ 857	\$ (693)	\$ 7,656	\$ 163,061

JULY	JULY	JULY	JULY	JULY	
0-30	31-60	61-90	91-120	OVER 120	
\$ 134,350	\$ 12,789	\$ 1,965	\$ (48)	\$ 7,218	\$ 156,274

Foot Notes:

Cash Collected in the month of JuLY 2023: \$152,185.68



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1682

Agenda Date: 8/22/2023

Agenda #: 4.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Year to Date Water/Sewer Report.

Background:

(type text here)

Department Comment/Recommendation:

(type text here)

Town and Schools of Ledyard

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01							
	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
5059001 OTHER-GEN - GRANTS/CONTR							
5059001 49002 TRANS IN	-388,678	0	-388,678	.00	.00	-388,678.27	.0%
TOTAL OTHER-GEN - GRANTS/CONTR	-388,678	0	-388,678	.00	.00	-388,678.27	.0%
TOTAL REVENUES	-388,678	0	-388,678	.00	.00	-388,678.27	
50590991 CONTRIBUTION TO CNR							
50590991 59305 CONT CNR	130,000	0	130,000	.00	.00	130,000.00	.0%
TOTAL CONTRIBUTION TO CNR	130,000	0	130,000	.00	.00	130,000.00	.0%
TOTAL EXPENSES	130,000	0	130,000	.00	.00	130,000.00	
50591603 SOURCE OF SUPPLY							
50591603 58100 DUES FEES	3,100	0	3,100	.00	.00	3,100.00	.0%
TOTAL SOURCE OF SUPPLY	3,100	0	3,100	.00	.00	3,100.00	.0%
TOTAL EXPENSES	3,100	0	3,100	.00	.00	3,100.00	
50591623 POWER PURCHASED							
50591623 56225 POWER PURC	10,000	0	10,000	.00	.00	10,000.00	.0%
TOTAL POWER PURCHASED	10,000	0	10,000	.00	.00	10,000.00	.0%
TOTAL EXPENSES	10,000	0	10,000	.00	.00	10,000.00	
50591626 GU OPERATION-EMERGENCY							
50591626 53720 GU OP EMER	9,000	0	9,000	.00	.00	9,000.00	.0%
TOTAL GU OPERATION-EMERGENCY	9,000	0	9,000	.00	.00	9,000.00	.0%
TOTAL EXPENSES	9,000	0	9,000	.00	.00	9,000.00	
50591627 GU OPERATING AGREEMENT ANNUAL							

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01								
50591627 GU OPERATING AGREEMENT ANNUAL	ORIGINAL APPROP	TRANFRS/ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL	
50591627 53725 GU OPS ANN	298,120	0	298,120	.00	.00	298,120.00	.0%	
50591627 53726 GU CUST SE	96,632	0	96,632	.00	.00	96,632.18	.0%	
TOTAL GU OPERATING AGREEMENT ANNUAL	394,752	0	394,752	.00	.00	394,752.18	.0%	
TOTAL EXPENSES	394,752	0	394,752	.00	.00	394,752.18		
50591663 METER/SYSTEMS EXPENSE								
50591663 54110 RTE 12 MET	257,576	0	257,576	.00	.00	257,576.05	.0%	
50591663 54115 RTE 117 WT	252,515	0	252,515	.00	.00	252,514.51	.0%	
50591663 54120 METERS	16,000	0	16,000	.00	.00	16,000.00	.0%	
TOTAL METER/SYSTEMS EXPENSE	526,091	0	526,091	.00	.00	526,090.56	.0%	
TOTAL EXPENSES	526,091	0	526,091	.00	.00	526,090.56		
50591921 MISC								
50591921 54420 FIN SERV	26,000	0	26,000	.00	.00	26,000.00	.0%	
50591921 54506 FIRE HYDRA	5,000	0	5,000	.00	.00	5,000.00	.0%	
50591921 58810 GOBONDPR	85,275	0	85,275	.00	.00	85,274.54	.0%	
50591921 58811 GOBONDINT	5,782	0	5,782	.00	.00	5,782.03	.0%	
50591921 58820 CWF PRIN	250,644	0	250,644	.00	.00	250,643.62	.0%	
50591921 58821 CWF INT	46,978	0	46,978	.00	.00	46,978.08	.0%	
50591921 58822 LOAN PMT	12,500	0	12,500	.00	.00	12,500.00	.0%	
TOTAL MISC	432,178	0	432,178	.00	.00	432,178.27	.0%	
TOTAL EXPENSES	432,178	0	432,178	.00	.00	432,178.27		
50591923 PROFESSIONAL FEES								
50591923 53600 ACCTG SERV	9,738	0	9,738	.00	.00	9,738.00	.0%	
TOTAL PROFESSIONAL FEES	9,738	0	9,738	.00	.00	9,738.00	.0%	
TOTAL EXPENSES	9,738	0	9,738	.00	.00	9,738.00		
50591926 BENEFITS								
50591926 52300 RETIREMENT	3,865	0	3,865	.00	.00	3,865.31	.0%	

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01							
50591926 BENEFITS	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
TOTAL BENEFITS	3,865	0	3,865	.00	.00	3,865.31	.0%
TOTAL EXPENSES	3,865	0	3,865	.00	.00	3,865.31	
5059801 WATER-CHARGE / SERVICE							
5059801 46045 NEW METER	-5,000	0	-5,000	.00	.00	-5,000.00	.0%
5059801 46046 WATER MISC	-3,000	0	-3,000	-737.49	.00	-2,262.51	24.6%
5059801 46048 TIE IN	-5,000	0	-5,000	.00	.00	-5,000.00	.0%
5059801 46049 TRANS FEE	-21,000	0	-21,000	.00	.00	-21,000.00	.0%
5059801 46050 WATER USE	-1,081,646	0	-1,081,646	-98,598.20	.00	-983,047.85	9.1%
5059801 46051 WATER LATE	0	0	0	-289.32	.00	289.32	100.0%
5059801 46054 HYDRANT	-14,400	0	-14,400	.00	.00	-14,400.00	.0%
TOTAL WATER-CHARGE / SERVICE	-1,130,046	0	-1,130,046	-99,625.01	.00	-1,030,421.04	8.8%
TOTAL REVENUES	-1,130,046	0	-1,130,046	-99,625.01	.00	-1,030,421.04	
GRAND TOTAL	0	0	0	-99,625.01	.00	99,625.01	100.0%

** END OF REPORT - Generated by Ian Stammel **

YEAR-TO-DATE BUDGET REPORT

REPORT OPTIONS

	Field #	Total	Page Break
Sequence 1	9	Y	N
Sequence 2	0	N	N
Sequence 3	0	N	N
Sequence 4	0	N	N

Report title:
YEAR-TO-DATE BUDGET REPORT

Includes accounts exceeding 0% of budget.
Print totals only: N
Print Full or Short description: S
Print full GL account: N
Format type: 1
Double space: N
Suppress zero bal accts: Y
Include requisition amount: N
Print Revenues-Version headings: N
Print revenue as credit: Y
Print revenue budgets as zero: N
Include Fund Balance: N
Print journal detail: N
From Yr/Per: 2022/ 1
To Yr/Per: 2022/12
Include budget entries: Y
Incl encumb/liq entries: Y
Sort by JE # or PO #: J
Detail format option: 1
Include additional JE comments: N
Multiyear view: D
Amounts/totals exceed 999 million dollars: N

Year/Period: 2024/ 1
Print MTD Version: N

Roll projects to object: N
Carry forward code: 1

Find Criteria	
Field Name	Field value
Fund	0505
TWN FUNCTION	
DEPT / LOCAT	
SDEP/BOEFUNC	
Character Code	
Org	
Object	
Project	
Account type	
Account status	
Rollup Code	

Town and Schools of Ledyard

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01							
	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
5019001 OTHER-GEN - GRANTS/CONTR							
5019001 49002 TRANS IN	-153,485	0	-153,485	.00	.00	-153,484.98	.0%
TOTAL OTHER-GEN - GRANTS/CONTR	-153,485	0	-153,485	.00	.00	-153,484.98	.0%
TOTAL REVENUES	-153,485	0	-153,485	.00	.00	-153,484.98	
50190603 SOURCE OF SUPPLY							
50190603 54225 SLUDGE HAU	17,300	0	17,300	.00	15,000.00	2,300.00	86.7%
50190603 58100 DUES FEES	3,100	0	3,100	1,722.50	27.50	1,350.00	56.5%
TOTAL SOURCE OF SUPPLY	20,400	0	20,400	1,722.50	15,027.50	3,650.00	82.1%
TOTAL EXPENSES	20,400	0	20,400	1,722.50	15,027.50	3,650.00	
50190611 MAINTENANCE OF STRUCTURE							
50190611 54510 ELECTRICIA	3,000	0	3,000	.00	.00	3,000.00	.0%
TOTAL MAINTENANCE OF STRUCTURE	3,000	0	3,000	.00	.00	3,000.00	.0%
TOTAL EXPENSES	3,000	0	3,000	.00	.00	3,000.00	
50190620 WAGES (SEWER)							
50190620 51305 OT/SEASON	15,000	0	15,000	1,226.00	.00	13,774.00	8.2%
50190620 51705 LONGEVITY	500	0	500	.00	.00	500.00	.0%
TOTAL WAGES (SEWER)	15,500	0	15,500	1,226.00	.00	14,274.00	7.9%
TOTAL EXPENSES	15,500	0	15,500	1,226.00	.00	14,274.00	
50190621 EMPLOYEE UNIFORMS							
50190621 52160 EE UNIFORM	1,000	0	1,000	.00	.00	1,000.00	.0%
TOTAL EMPLOYEE UNIFORMS	1,000	0	1,000	.00	.00	1,000.00	.0%
TOTAL EXPENSES	1,000	0	1,000	.00	.00	1,000.00	

Town and Schools of Ledyard

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01							
50190623 POWER PURCHASED	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
50190623 POWER PURCHASED							
50190623 56200 HEAT	3,000	0	3,000	.00	.00	3,000.00	.0%
50190623 56220 ELECTRICIT	50,000	0	50,000	.00	.00	50,000.00	.0%
50190623 56261 GAS/DESIEL	4,500	0	4,500	.00	2,500.00	2,000.00	55.6%
TOTAL POWER PURCHASED	57,500	0	57,500	.00	2,500.00	55,000.00	4.3%
TOTAL EXPENSES	57,500	0	57,500	.00	2,500.00	55,000.00	
50190624 PUMPING SUPPLY & EXPENSE							
50190624 56914 PUMP SUPP	3,300	0	3,300	.00	.00	3,300.00	.0%
TOTAL PUMPING SUPPLY & EXPENSE	3,300	0	3,300	.00	.00	3,300.00	.0%
TOTAL EXPENSES	3,300	0	3,300	.00	.00	3,300.00	
50190641 CHEMICALS							
50190641 56912 CHEMICALS	23,000	0	23,000	3,624.91	15,175.09	4,200.00	81.7%
TOTAL CHEMICALS	23,000	0	23,000	3,624.91	15,175.09	4,200.00	81.7%
TOTAL EXPENSES	23,000	0	23,000	3,624.91	15,175.09	4,200.00	
50190643 TREATMENT EXPENSE							
50190643 56916 TRTMT EXP	7,500	0	7,500	2,547.50	4,352.50	600.00	92.0%
TOTAL TREATMENT EXPENSE	7,500	0	7,500	2,547.50	4,352.50	600.00	92.0%
TOTAL EXPENSES	7,500	0	7,500	2,547.50	4,352.50	600.00	
50190663 METER EXPENSE							
50190663 53710 MTR CALIBR	750	0	750	.00	.00	750.00	.0%
TOTAL METER EXPENSE	750	0	750	.00	.00	750.00	.0%
TOTAL EXPENSES	750	0	750	.00	.00	750.00	

Town and Schools of Ledyard

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01							
50190673 MAINTENANCE OF MAINS	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
50190673 MAINTENANCE OF MAINS							
50190673 54515 MNT MAINS	3,000	0	3,000	.00	.00	3,000.00	.0%
TOTAL MAINTENANCE OF MAINS	3,000	0	3,000	.00	.00	3,000.00	.0%
TOTAL EXPENSES	3,000	0	3,000	.00	.00	3,000.00	
50190678 MAINTENANCE OF MISC. PLANT							
50190678 54505 MNT MISC P	12,000	0	12,000	1,061.22	3,970.83	6,967.95	41.9%
50190678 56802 SFTY EQUIP	1,000	0	1,000	.00	.00	1,000.00	.0%
50190678 56804 LAB EQP	2,900	0	2,900	.00	.00	2,900.00	.0%
TOTAL MAINTENANCE OF MISC. PLANT	15,900	0	15,900	1,061.22	3,970.83	10,867.95	31.6%
TOTAL EXPENSES	15,900	0	15,900	1,061.22	3,970.83	10,867.95	
50190920 PLANT OPERATIONS WAGES							
50190920 51610 SPVR SAL	91,609	0	91,609	7,381.45	.00	84,227.57	8.1%
50190920 51635 SHIFT OPER	75,046	0	75,046	6,107.80	.00	68,938.60	8.1%
50190920 51640 LAB TECH	52,021	0	52,021	4,036.60	.00	47,984.20	7.8%
TOTAL PLANT OPERATIONS WAGES	218,676	0	218,676	17,525.85	.00	201,150.37	8.0%
TOTAL EXPENSES	218,676	0	218,676	17,525.85	.00	201,150.37	
50190921 MISC							
50190921 54150 LAKESIDE	2,500	0	2,500	.00	.00	2,500.00	.0%
50190921 54420 FIN SERV	14,000	0	14,000	.00	.00	14,000.00	.0%
50190921 56100 OPER EXP	11,000	0	11,000	147.08	3,402.92	7,450.00	32.3%
50190921 58810 GOBONDPR	117,388	0	117,388	.00	.00	117,388.24	.0%
50190921 58811 GOBONDINT	36,097	0	36,097	.00	.00	36,096.74	.0%
TOTAL MISC	180,985	0	180,985	147.08	3,402.92	177,434.98	2.0%
TOTAL EXPENSES	180,985	0	180,985	147.08	3,402.92	177,434.98	
50190923 PROFESSIONAL FEES							
50190923 53600 ACCTG SERV	3,000	0	3,000	.00	.00	3,000.00	.0%

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01								
50190923 PROFESSIONAL FEES	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL	
50190923 53705 LAB TESTS	7,000	0	7,000	.00	.00	7,000.00	.0%	
50190923 58110 TMDs	1,500	0	1,500	.00	.00	1,500.00	.0%	
TOTAL PROFESSIONAL FEES	11,500	0	11,500	.00	.00	11,500.00	.0%	
TOTAL EXPENSES	11,500	0	11,500	.00	.00	11,500.00		
50190926 BENEFITS								
50190926 52000 HLTHCARE	50,565	0	50,565	.00	.00	50,564.54	.0%	
50190926 52300 RETIREMENT	19,902	0	19,902	.00	.00	19,901.98	.0%	
50190926 52500 SOCSEC	16,746	0	16,746	.00	.00	16,746.22	.0%	
50190926 52900 GG WORKCOM	8,463	0	8,463	.00	.00	8,462.77	.0%	
TOTAL BENEFITS	95,676	0	95,676	.00	.00	95,675.51	.0%	
TOTAL EXPENSES	95,676	0	95,676	.00	.00	95,675.51		
50190933 TRANSPORTATION EXPENSE								
50190933 54305 CAR MNTNC	1,900	0	1,900	.00	800.00	1,100.00	42.1%	
TOTAL TRANSPORTATION EXPENSE	1,900	0	1,900	.00	800.00	1,100.00	42.1%	
TOTAL EXPENSES	1,900	0	1,900	.00	800.00	1,100.00		
50190990 CAPITAL								
50190990 57505 SEWER TIE	1,000	0	1,000	.00	.00	1,000.00	.0%	
TOTAL CAPITAL	1,000	0	1,000	.00	.00	1,000.00	.0%	
TOTAL EXPENSES	1,000	0	1,000	.00	.00	1,000.00		
50190991 CONTINGENCY								
50190991 58910 CONTINGENC	10,710	0	10,710	.00	3,500.00	7,210.00	32.7%	
50190991 59305 CONT CNR	20,000	0	20,000	.00	.00	20,000.00	.0%	
TOTAL CONTINGENCY	30,710	0	30,710	.00	3,500.00	27,210.00	11.4%	
TOTAL EXPENSES	30,710	0	30,710	.00	3,500.00	27,210.00		

YEAR-TO-DATE BUDGET REPORT

FOR 2024 01							
50191627 GU OPERATING AGREEMENT	ORIGINAL APPROP	TRANFRS/ ADJSTMTS	REVISED BUDGET	YTD ACTUAL	ENCUMBRANCES	AVAILABLE BUDGET	PCT USE/COL
50191627 GU OPERATING AGREEMENT							
50191627 53726 GU CUST SE	15,731	0	15,731	.00	.00	15,730.80	.0%
TOTAL GU OPERATING AGREEMENT	15,731	0	15,731	.00	.00	15,730.80	.0%
TOTAL EXPENSES	15,731	0	15,731	.00	.00	15,730.80	
5019701 SEWER-CHARGE / SERVICE							
5019701 46020 SEWERUSE	-553,043	0	-553,043	-45,398.72	.00	-507,643.81	8.2%
5019701 46021 SEWER LATE	-500	0	-500	-165.18	.00	-334.82	33.0%
TOTAL SEWER-CHARGE / SERVICE	-553,543	0	-553,543	-45,563.90	.00	-507,978.63	8.2%
TOTAL REVENUES	-553,543	0	-553,543	-45,563.90	.00	-507,978.63	
GRAND TOTAL	0	0	0	-17,708.84	48,728.84	-31,020.00	100.0%
** END OF REPORT - Generated by Ian Stammel **							

YEAR-TO-DATE BUDGET REPORT

REPORT OPTIONS

	Field #	Total	Page Break
Sequence 1	9	Y	N
Sequence 2	0	N	N
Sequence 3	0	N	N
Sequence 4	0	N	N

Report title:
YEAR-TO-DATE BUDGET REPORT

Includes accounts exceeding 0% of budget.
Print totals only: N
Print Full or Short description: S
Print full GL account: N
Format type: 1
Double space: N
Suppress zero bal accts: Y
Include requisition amount: N
Print Revenues-Version headings: N
Print revenue as credit: Y
Print revenue budgets as zero: N
Include Fund Balance: N
Print journal detail: N
 From Yr/Per: 2022/ 1
 To Yr/Per: 2022/12
Include budget entries: Y
Incl encumb/liq entries: Y
Sort by JE # or PO #: J
Detail format option: 1
Include additional JE comments: N
Multiyear view: D
Amounts/totals exceed 999 million dollars: N

Year/Period: 2024/ 1
Print MTD Version: N

Roll projects to object: N
Carry forward code: 1

Find Criteria	
Field Name	Field value
Fund	0501
TWN FUNCTION	
DEPT / LOCAT	
SDEP/BOEFUNC	
Character Code	
Org	
Object	
Project	
Account type	
Account status	
Rollup Code	



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1838

Agenda Date: 8/22/2023

Agenda #: 5.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

PSR - Steve Banks.

Background:

(type text here)

Department Comment/Recommendation:

(type text here)

**Town of Ledyard
Highlands W.W.T.F.
Plant Supervisor's Report
Meeting Date: August 22, 2023**

The goal of the plant staff is to efficiently collect and treat the wastewater and to produce the best quality effluent possible while maintaining the equipment and protecting the Town's assets.

- Recent Effluent BOD results have increased again due to algal growth in SBR tanks. Lightly chlorinating EQ Tank and ABW Filters to combat algae. Will clean out EQ tank and plant water tank and monitor test results.
- Waiting on motor starter from Smith & Loveless for pump # 2 on new pump station. Will install unit when we receive it.
- Blowers 2&3 going out on low oil pressure as temperatures increase. Increased minimum low speed on blowers 2&3 to alleviate this issue.
- Beaver activity near bridge on Town Farm Road. Trapper coming in to address this issue.
- Have closed all purchase orders for last year. Opened purchase orders for this year.
- Smith and Loveless Pump station project is a little over budget due to electrical upgrades.
- Waiting for US Automation to complete SCADA program for new pump station.
- Mission is reporting inaccurate pump run hours for Lakeside pump station. Replaced a relay and that did not fix the problem. Could be a wire or console issue. Continuing to troubleshoot this problem with US Automation.
- RI Harvesting has repaired Kubota tractor.

Respectfully,

**Stephen W. Banks
Plant Supervisor**



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1542

Agenda Date: 8/22/2023

Agenda #: 1.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Ledyard Center Trail and Sewer Line Project status proceeding to a spring construction start continued.

Background:

\

From the July 25, 2023 meeting:

The WPCA has received no word on when the multi-modal trail and sewer line extension can proceed, but Steve Masalin, Public Works Director reported that he believes SECOG has completed its approval process. DOT has another turn at it from a funding standpoint, after which it will be ready to bid.

Department Comment/Recommendation:

(type text here)

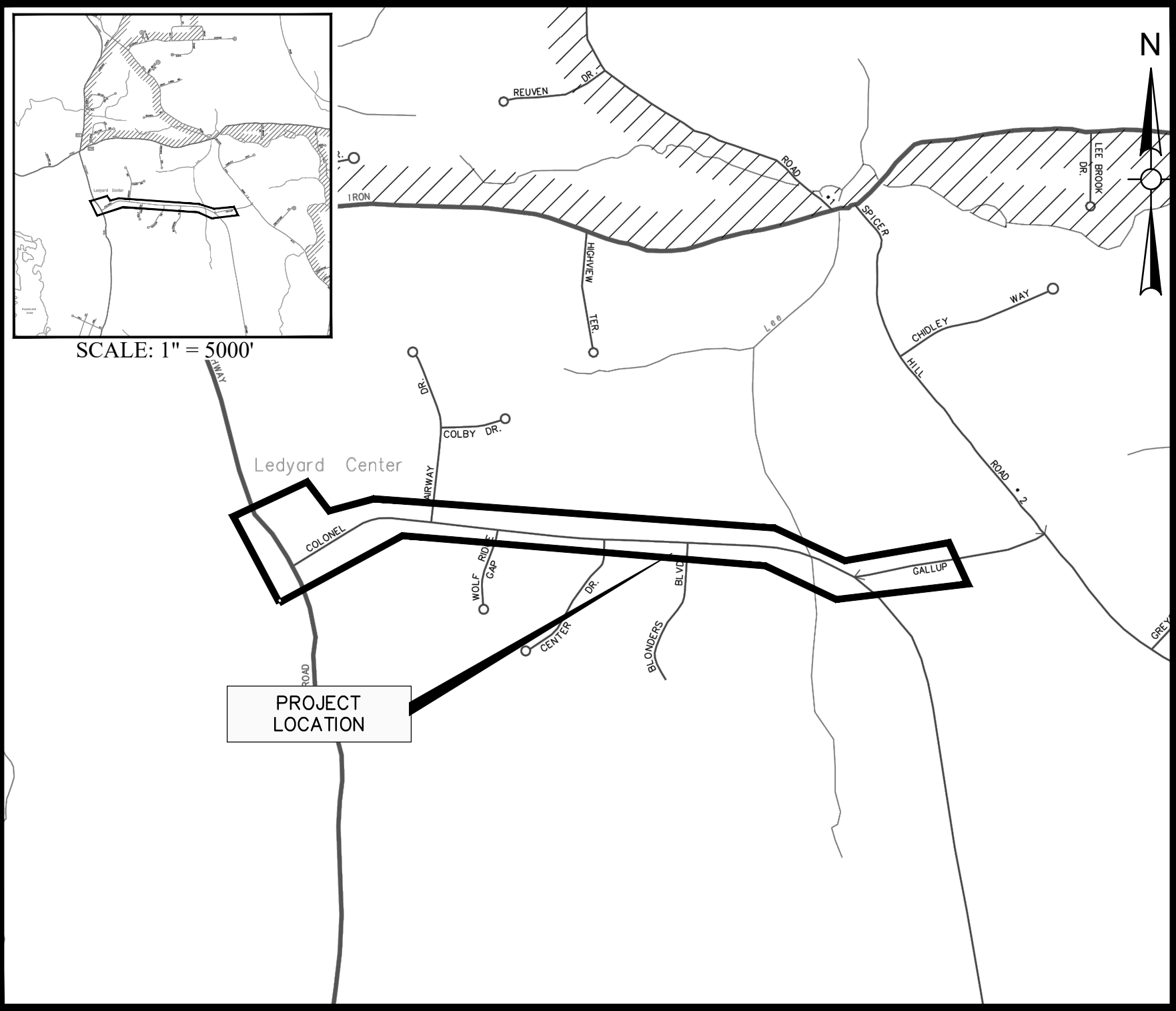
CITY OF GROTON
DEPARTMENT OF UTILITIES – WATER DIVISION
SITE PLAN REVIEW SHEET

Title of Plan: Colonel Ledyard Highway – Multi-Use Pathway Latest Revision Date: October 22'
 Location Colonel Ledyard Highway & Gallup Hill Rd W.I.P. #
 Engineer Weston & Sampson Phone # 860-513-1473
 Reviewed By D. Lafontaine & M. Duarte Date of Review 5/12/23

<u>Check for the Following:</u>		<u>Notes Required on Plan</u>	
		Yes	No
1.	Note - All water main and service installations shall conform to the City of Groton, Department of Utilities, Water Main and Service Construction Specifications, with most current revisions.	x_____	_____
2.	Note - Approved backflow preventers are required on all fire sprinkler and domestic water lines.	_____	x_____
3.	Note - Remote water meter read box required.	_____	x_____
4.	Size of water mains and services and note indicating minimum cover shall be 4' – 6" from finish grade.	x_____	_____
5.	Pipe separations - 10' min between water and sewer 10' min between water and buildings 5' min between water and catch basins or drain pipes.	x_____	_____
6.	Site must be at subgrade before water utilities can be installed.	x_____	_____
7.	Valve locations - All branch line valves to be located as close as possible to main lines.	x_____	_____
8.	Engineer should provide flow calculations to confirm hydrant flow and domestic flow requirements (meter size).	_____	x_____
9.	Architectural plans showing utility room locations and entry point of water service.	_____	x_____
10.	Meter location inside building or meter pit.	_____	x_____
11.	Comments: Plans APPROVED with CONDITIONS. Final Approved plans should address comments on page #2 of this review.		

11. Comments: (Continued)

1. Existing curb-boxes will require height adjustments depending on grade changes and/or relocated as required. Groton Utilities (GU) Project Management Staff to observe/inspect all field work.
2. All water main and service pipe crossings at new sewer and drainage pipes are to be per Groton Utilities (GU) Specifications Technical Spec. Drawing #5
3. Provide the following GU Water Standards – Technical Drawings on Detail Sheets of the drawing set:
 - a. Drawing #1 – Gate Box Detail
 - b. Drawing #2 – Gate Valve Connection Detail
 - c. Drawing #3 – Tapping Sleeve & Valve Detail
 - d. Drawing #4 – Thrust Block Details
 - e. Drawing #5 – Sewer & Drainage Crossing Detail
 - f. Drawing #6 – Hydrant & Valve Assembly
 - g. Drawing #7 – Brass Wedge Detail
 - h. Drawing # 11 – REV. Typical 1” Service Detail
 - i. Drawing #20 – REV. Typical Trench Detail
4. Note: All hydrant relocations to be confirmed with Ledyard Fire Marshall.
5. Note: All hydrants to be relocated/installed per GU Specifications and Standards and are to be min. of 24” behind curb. GU representative to inspect all work.
6. Note: All Water Service Interruptions / Scheduled Shutdowns are to be coordinated with GU Project Management.
7. Note: Valves and Service Curb Stops are to be operated by GU staff only.
8. Sheet HWY-03: Hyd. #209 @ Town Greene Drive to be relocated to be closer to edge of road and on the south edge of the new bike path. OK by GU.
9. Sheet HWY-04: Hyd. #208 @ Fairway Drive to be relocated to be closer to edge of road and on south edge of new path and moved to the east to be further away from Fairway Drive radius in order to keep large vehicles from hitting the hydrant when turning right onto Fairway Drive.
10. Sheet HWY-04: Hyd. #206 @ Colby Drive near Parke’s Place restaurant. Proposed relocation to west side of Colby Drive at intersection of Colonel Ledyard Highway. OK by GU.
11. Sheet HWY-07: Hyd. #202 at the relocated intersection of Gallup Hill Rd & Colonel Ledyard Hwy to be located behind new curbing. OK by GU.
12. Sheet HWY-07: Hyd. #201 near the high school exit to be relocated to be closer to curb-line in order to avoid proposed bike rack location. OK by GU.



PROJECT LOCATION PLAN
SCALE: 1" = 1000'

SHEET NAME	SHEET TITLE
GEN-01	INDEX PLANS, LEGENDS, AND NOTES
DET-01	SEDIMENTATION AND EROSION CONTROL DETAILS
DET-02	MISCELLANEOUS DETAILS
DET-03	HYDRODYNAMIC SEPARATOR DETAILS
DET-04 - DET-05	LOW PRESSURE SEWER DETAILS
DET-06	LANDSCAPE DETAILS
DET-07	GROTON UTILITY DETAILS
DET-08 - DET-11	CTDOT HIGHWAY GUIDE SHEETS
DET-12 - DET-14	CTDOT TRAFFIC GUIDE SHEETS
TYP-01	MULTI-USE PATHWAY AND SIDEWALK TYPICAL SECTIONS
TYP-02	ROADWAY TYPICAL SECTIONS
IGP-01	INTERSECTION GRADING PLANS
HWY-01	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 10+00 TO 16+50
HWY-02	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 211+50 TO 214+96 & STA. 110+00 TO 112+50
HWY-03	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 16+50 TO 22+00
HWY-04	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 22+00 TO 33+00
HWY-05	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 33+00 TO 44+00
HWY-06	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 44+00 TO 55+00
HWY-07	MULTI-USE PATHWAY & SIDEWALK PLAN STA. 55+00 TO 65+90
PRO-01 - PRO-11	MULTI-USE PATHWAY PROFILES
XSC-01 - XSC-08	CRITICAL CROSS SECTIONS
S-1	EMBANKMENT WALL SITE NO. 1, NO. 2, NO. 3 PLAN AND ELEVATION
S-2	EMBANKMENT WALL SITE NO. 4 PLAN AND ELEVATION
S-3	EMBANKMENT WALL SECTIONS AND DETAILS
S-4	BORING LOGS
TCS-07	TRAFFIC CONTROL SIGNAL PLAN CTDOT HIGHWAY STANDARD DRAWINGS CTDOT TRAFFIC STANDARD DRAWINGS

TOWN OF LEDYARD, CT

LEDYARD HIGH SCHOOL MULTI-USE PATHWAY AND SIDEWALK EXTENSION

L171-0001

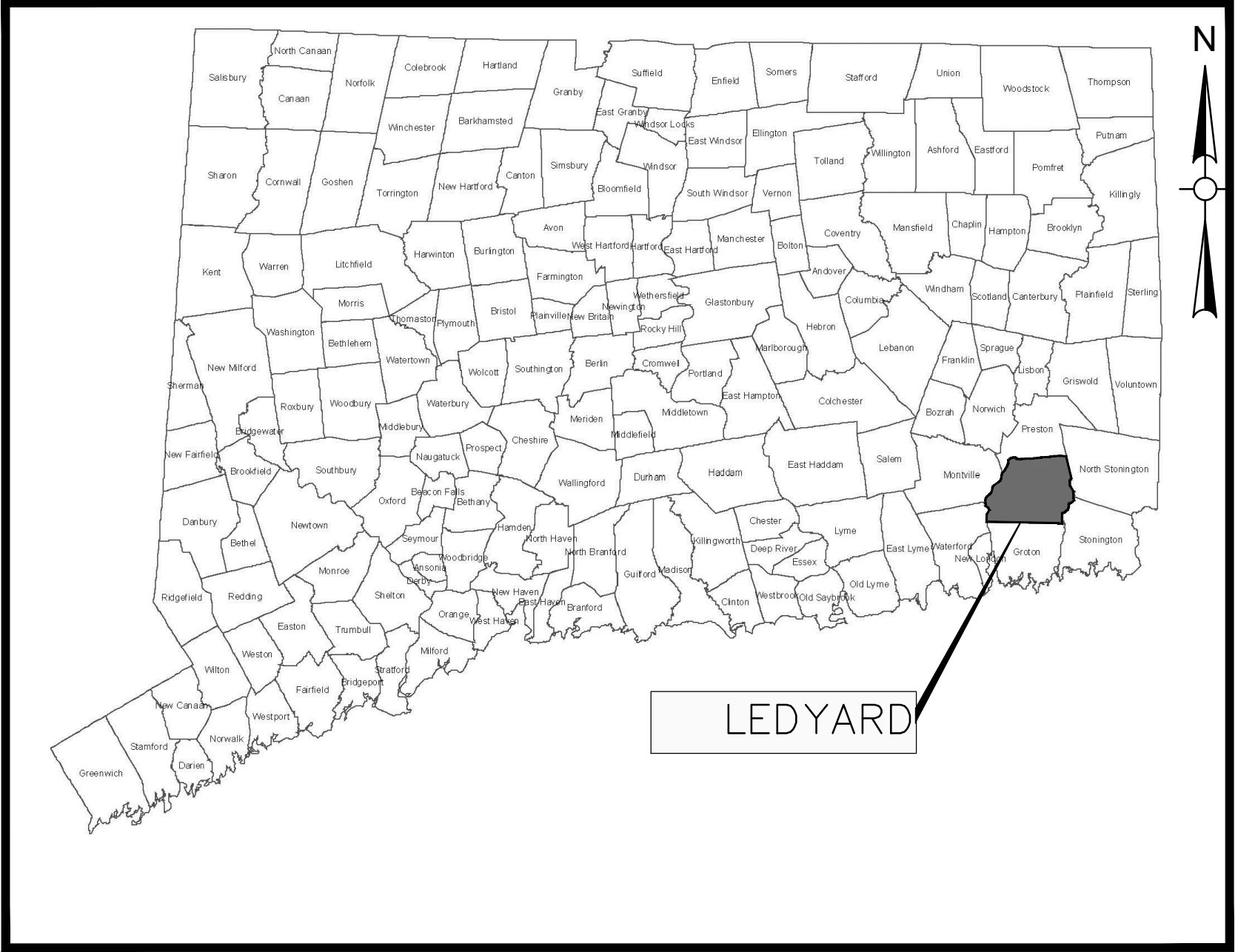


FRED ALLYN, III
MAYOR

STEVE MASALIN, P.E.
DIRECTOR OF PUBLIC WORKS

JOSEPH TILLMAN
HIGHWAY SUPERINTENDENT

COLONEL LEDYARD HIGHWAY MULTI-USE PATHWAY
(STA: 10+00 TO 65+90)



TOWN LOCATION MAP
SCALE: N.T.S.

PROJECT SPECIFICATIONS:
CONNECTICUT DEPARTMENT OF
TRANSPORTATION, STANDARD SPECIFICATIONS
FOR ROADS, BRIDGES, FACILITIES AND
INCIDENTAL CONSTRUCTION, FORM 818, DATED
2020; AND SPECIAL PROVISIONS

SURVEY INFORMATION DERIVED FROM:
WESTON & SAMPSON LAND SURVEYORS, INC.

VERTICAL DATUM - NAVD88
HORIZONTAL DATUM - NAD83

DESIGNED BY:
WESTON & SAMPSON ENGINEERS, INC.
712 BROOK STREET, SUITE 103
ROCKY HILL, CT 06067

CT. LIC. NO. XXXXX
MARCH 15, 2019

Issued Date:

MAY 2023

COA:

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712 Brook Street, Suite 103
Rocky Hill, CT 06067

860-513-1473 800.SAMPSON

www.westonandsampson.com

NOT RELEASED FOR CONSTRUCTION

CONSTRUCTION NOTES:

GENERAL:

- SYMBOLS AND LEGENDS OF PROJECT FEATURES ARE GRAPHIC REPRESENTATIONS AND ARE NOT NECESSARILY SHOWN ON THE DRAWINGS TO SCALE OR TO THEIR ACTUAL DIMENSIONS OR LOCATION. COORDINATE DETAIL SHEET DIMENSIONS, MANUFACTURERS' LITERATURE, SHOP DRAWINGS AND FIELD MEASUREMENTS OF SUPPLIED PRODUCTS FOR LAYOUT OF THE PROJECT FEATURES.
- DO NOT RELY SOLELY ON ELECTRONIC VERSIONS OF THESE DRAWINGS, SPECIFICATIONS, AND DATA FILES THAT ARE PROVIDED BY THE ENGINEER. FIELD VERIFY LOCATION OF PROJECT FEATURES.
- THE CONTRACTOR SHALL PERFORM NECESSARY CONSTRUCTION NOTIFICATIONS, APPLY FOR AND OBTAIN NECESSARY PERMITS, PAY FEES, AND POST BONDS ASSOCIATED WITH THE WORK AS REQUIRED BY THE CONTRACT DOCUMENTS.
- FENCES, MAIL BOXES, ETC. SHALL BE REMOVED AND REPLACED AS NECESSARY TO PERFORM THE WORK. UNLESS OTHERWISE INDICATED, ALL SUCH WORK SHALL BE PAID FOR UNDER CLEARING AND GRUBBING.
- ALL AREAS DISTURBED BY THE CONTRACTOR BEYOND PAYMENT LIMITS SHALL BE RESTORED AT NO ADDITIONAL COST TO THE TOWN. PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH THE SPECIFICATIONS AND AS SHOWN ON THE DRAWINGS.
- THE CONTRACTOR SHALL MAINTAIN SIDE SLOPES AND DRAINAGE SWALES DURING CONSTRUCTION TO PREVENT PONDING AND EROSION.
- THE CONTRACTOR SHALL NOT STORE ANY APPARATUS, MATERIALS, SUPPLIES OR EQUIPMENT ON DRAINAGE STRUCTURES OR WITHIN 100 FEET OF WETLANDS.
- THE CONTRACTOR SHALL GRADE PROPOSED SLOPES TO MEET EXISTING SLOPES WHERE SHOWN ON PLANS, IN ACCORDANCE WITH THE MINIMUM AND MAXIMUM SLOPES SPECIFIED.
- ALL STREET EXCAVATIONS SHALL BE COMPLETELY CLOSED AT THE END OF EACH WORKING DAY BY BACKFILLING. COVERING WITH STEEL PLATES MAY BE ALLOWED IF APPROVED BY THE ENGINEER.
- WHERE ENCOUNTERED, UNSUITABLE MATERIAL SHALL BE REMOVED TO A DEPTH OF AT LEAST 12-INCHES BELOW THE BOTTOM OF TRENCH EXCAVATIONS AND REPLACED WITH GRANULAR FILL, UNLESS OTHERWISE SPECIFIED.
- DURING THE PROCESS OF WORK, THE CONTRACTOR SHALL CONDUCT OPERATIONS AND MAINTAIN THE AREA OF CONSTRUCTION ACTIVITIES, INCLUDING SWEEPING AND WATER FOR DUST CONTROL AS NECESSARY, TO MINIMIZE CREATION AND DISPERSION OF DUST.
- WHERE EXISTING FENCES ARE TO BE REMOVED AND RESET, A TEMPORARY CONSTRUCTION FENCE SHALL BE ERECTED AFTER REMOVAL FOR THE PROTECTION OF THE RESIDENTS. TEMPORARY CONSTRUCTION FENCES SHALL BE PAID FOR UNDER CLEARING AND GRUBBING.
- ALL HIGHWAY LINE MONUMENTATION WITHIN THE PROJECT LIMITS MUST BE DELINEATED AND PROTECTED FROM DAMAGE OR MOVEMENT. ANY COST ASSOCIATED WITH RESETTING OF THE MONUMENTATION SHALL BE AT THE CONTRACTOR'S EXPENSE IF DISTURBED BY CONTRACTOR.
- THE CONTRACTOR SHALL COMPLETE ALL LAYOUTS, SURVEYS, ETC. REQUIRED FOR CONSTRUCTION OF THE PROJECT AS SHOWN AND AS SPECIFIED.
- THE CONTRACTOR IS RESPONSIBLE TO ENSURE THAT THE PROPER STORM DRAINAGE AND SANITARY FLOWS ARE MAINTAINED THROUGHOUT THE CONSTRUCTION DURATION.
- ALL PROPOSED MANHOLES, MANHOLE COVERS AND FRAMES, CATCH

BASINS, AND CATCH BASIN GRATES AND FRAMES SHALL CONFORM TO THE REQUIREMENTS AS SHOWN IN THE CONTRACT PLANS AND DOCUMENTS.

- REMOVAL OF ALL TREES WITHIN THE EXCAVATION LINES SHALL BE PAID FOR BY CLEARING AND GRUBBING.
- ALL GUIDE RAIL SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS/SUPPLEMENTS, AND STANDARD DETAILS.

WORK RESTRICTIONS:

- DO NOT CLOSE OR OBSTRUCT ROADWAYS, SIDEWALKS, FIRE HYDRANTS, AND UTILITIES WITHOUT APPROPRIATE PERMITS.
- NO WORK WILL BE ALLOWED TO BE PERFORMED ON SUNDAY AND ON ALL TOWN HOLIDAYS WITHOUT TOWN AUTHORIZATION.
- ALL CONSTRUCTION ACTIVITIES, INCLUDING THE LOADING AND UNLOADING OF MATERIALS AND EQUIPMENT, SHALL BE LIMITED TO MONDAY THROUGH FRIDAY FROM 7:00 AM TO 6:00 PM AND SATURDAY FROM 9:00 AM TO 5:00 PM UNLESS OTHERWISE AUTHORIZED BY THE TOWN. TOWN MUST BE NOTIFIED AT LEAST 24-HOURS IN ADVANCE OF ANY WORK ON SATURDAY.

REGULATORY REQUIREMENTS:

- WITHIN LOCAL RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS AS SUPPLEMENTED BY THE TECHNICAL SPECIFICATIONS INCLUDED IN THIS CONTRACT.
- WITHIN STATE RIGHTS-OF-WAY, PERFORM THE WORK IN ACCORDANCE WITH THE LATEST EDITION OF THE DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS AND ISSUED REVISIONS/SUPPLEMENTS.
- PROVIDE TRAFFIC SIGNAGE AND PAVEMENT MARKINGS IN CONFORMANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- BE RESPONSIBLE FOR SITE SECURITY AND JOB SAFETY, PERFORM CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH OSHA STANDARDS AND LOCAL REQUIREMENTS.
- DISPOSE OF DEMOLITION DEBRIS IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, ORDINANCES AND LOCAL REQUIREMENTS.

EROSION AND SEDIMENT CONTROL:

- THE CONTRACTOR SHALL INSTALL SPECIFIED EROSION AND CONTROL DEVICES BEFORE BEGINNING OTHER WORK ON SITE AND MAINTAIN THEM FOR THE DURATION OF THE PROJECT.
- CONSTRUCT ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING INLET PROTECTION FOR EXISTING AND PROPOSED CATCH BASINS, IN ACCORDANCE WITH THE STANDARDS AND SPECIFICATIONS OF THE MOST RECENT EDITION OF THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (CT DEEP BULLETIN 34). ALL MEASURES SHALL BE MAINTAINED AND UPGRADED TO ACHIEVE PROPER SEDIMENT CONTROL DURING CONSTRUCTION.
- REFER TO THE DRAWINGS FOR EROSION AND SEDIMENT CONTROL LOCATIONS AND DETAILS.
- IMPLEMENT ALL NECESSARY MEASURES REQUIRED TO CONTROL STORMWATER RUNOFF, DUST, SEDIMENT, AND DEBRIS FROM EXITING THE SITE. PERFORM CORRECTIVE ACTION AS NEEDED FOR EROSION CLEAN-UP AND REPAIRS TO OFF SITE AREAS, IF ANY, AT NO COST TO OWNER.
- EXISTING DRAINAGE STRUCTURES AND PIPES ARE TO BE CLEANED AND FLUSHED WHERE INDICATED ON THE PLANS AND SHALL BE PAID FOR BY

"CLEAN EXISTING DRAINAGE SYSTEM".

- INSPECT AND MAINTAIN EROSION CONTROL MEASURES WEEKLY AND AFTER MAJOR RAINFALL EVENTS, DISPOSE OF SEDIMENT IN AN UPLOAD AREA. DO NOT ENCUMBER OTHER DRAINAGE STRUCTURES AND PROTECTED AREAS.
- UPON COMPLETION OF CONSTRUCTION AND ESTABLISHMENT OF PERMANENT GROUND COVER, REMOVE AND DISPOSE OF TEMPORARY EROSION CONTROL MEASURES. CLEAN SEDIMENT AND DEBRIS FROM TEMPORARY MEASURES AND FROM PERMANENT STORM DRAIN AND SANITARY SEWER SYSTEMS.

UTILITIES:

- THE CONTRACTOR SHALL NOTIFY "CALL BEFORE YOU DIG" AT 1-800-922-4455 AND THE TOWN AT LEAST 72 HOURS PRIOR TO EXCAVATING AT ANY LOCATION, EXCLUDING SATURDAYS, SUNDAYS, AND HOLIDAYS. A COPY OF THE CBYD PROJECT REFERENCE NUMBER(S) SHALL BE PROVIDED WHEN COMPLETING THE HIGHWAY PERMIT APPLICATION. EXCAVATION SHALL COMMENCE ONCE A HIGHWAY PERMIT IS RECEIVED BY THE CONTRACTOR.
- LOCATIONS OF EXISTING PIPES, CONDUITS, UTILITIES, FOUNDATIONS AND OTHER UNDERGROUND OBJECTS ARE NOT WARRANTED TO BE CORRECT AND THE CONTRACTOR SHALL HAVE NO CLAIM ON THAT ACCOUNT SHOULD THEY BE OTHER THAN SHOWN.
- TEST PITS TO LOCATE EXISTING UTILITIES MAY BE ORDERED BY THE ENGINEER AND SHALL BE PAID FOR UNDER ITEM "TEST PIT".
- THE CONTRACTOR SHALL TERMINATE EXISTING UTILITIES IN CONFORMANCE WITH LOCAL, STATE AND INDIVIDUAL UTILITY COMPANY STANDARD SPECIFICATIONS AND DETAILS. COORDINATE UTILITY SERVICE DISCONNECTS WITH UTILITY REPRESENTATIVES.
- THE CONTRACTOR SHALL COORDINATE THE WORK AND WORK SCHEDULE WITH UTILITY COMPANIES. PROVIDE ADEQUATE NOTICE TO UTILITIES TO PREVENT DELAYS IN CONSTRUCTION. VALVES AND SERVICE CURB STOPS ARE TO BE OPERATED BY GROTON UTILITY STAFF ONLY.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESETTING OF FRAMES, GRATES, GATES, VALVE BOXES ETC., WHICH SHALL BE DONE IN ACCORDANCE WITH INDIVIDUAL UTILITY COMPANY REQUIREMENTS.
- RIM ELEVATIONS FOR MANHOLES, VALVE COVERS, GATE AND PULL BOXES, AND OTHER STRUCTURES SHALL BE SET OR RESET FLUSH WITH FINAL GRADES.
- EXISTING STRUCTURES SHALL BE CORED PRIOR TO INSTALLING PIPE.

SURVEY NOTES:

- THIS SURVEY AND MAP HAS BEEN PREPARED IN ACCORDANCE WITH THE REGULATIONS OF CONNECTICUT STATE AGENCIES, SECTIONS 20-300b-1 THRU 20-300b-20 AS AMENDED, AND THE "STANDARDS FOR SURVEYS AND MAPS IN THE STATE OF CONNECTICUT" ADOPTED BY THE CONNECTICUT ASSOCIATION OF LAND SURVEYORS, INC. THE TYPE OF SURVEY IS AN EXISTING CONDITIONS SURVEY, NO BOUNDARY DETERMINATION / OPINION HAS BEEN DEVELOPED. THIS SURVEY CONFORMS TO THE FOLLOWING ACCURACY CLASSES: HORIZONTAL CLASS A-2, TOPOGRAPHIC CLASS T-3, AND VERTICAL CLASS V-3.
- PROPERTY LINES AND RIGHT OF WAY LINES DEPICTED, WERE DEVELOPED VIA GIS AND TAX MAPS AND ARE APPROXIMATE ONLY.
- ELEVATIONS AND CONTOURS AS DEPICTED HEREON REFER TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD) AS ESTABLISHED USING GPS SURVEY METHODS IN MARCH, 2021.
- SURVEY PERFORMED BY WESTON & SAMPSON LAND SURVEYORS, INC. IN MARCH, 2021.
- THE UTILITIES AS DEPICTED HEREON ARE BASED UPON OBSERVED EVIDENCE AT THE TIME OF THE FIELD SURVEY. NO ATTEMPT WAS MADE TO VERIFY THE LOCATIONS AND NO MAPPING WAS OBTAINED FROM THE RESPECTIVE UTILITY COMPANIES, GOVERNMENTAL AGENCIES AND/OR OTHER SOURCES. THESE LOCATIONS MUST BE CONSIDERED APPROXIMATE IN NATURE. ADDITIONALLY, OTHER SUCH FEATURES MAY EXIST ON THE SITE, THE EXISTENCE OF WHICH ARE UNKNOWN TO WESTON & SAMPSON. THE EXISTENCE, SIZE AND LOCATION OF ALL SUCH FEATURES MUST BE DETERMINED AND VERIFIED IN THE FIELD BY THE APPROPRIATE AUTHORITIES PRIOR TO CONSTRUCTION. CALL BEFORE YOU DIG.

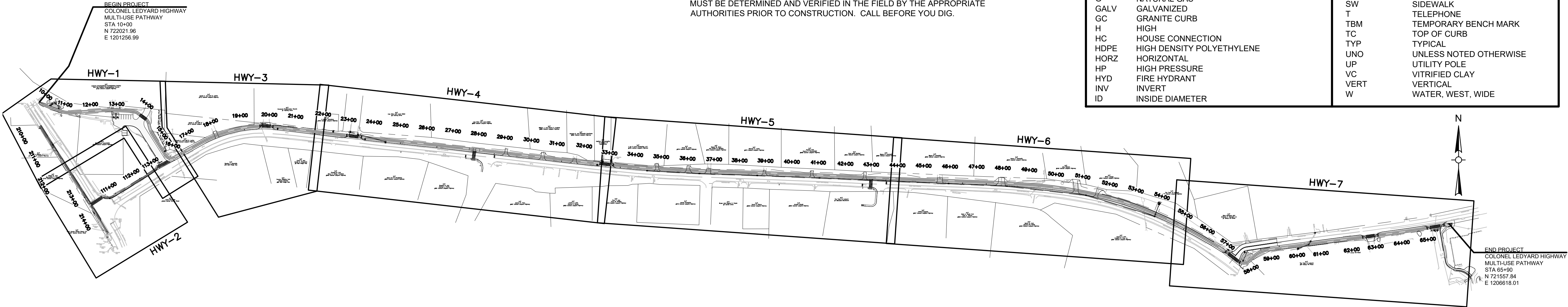
LEGEND

DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED
SANITARY SEWER	8" PVC SAN.	8" PVC SAN.	FENCE	X	X
WATER MAIN	W	W	INDIVIDUAL DECIDUOUS TREE	☀	☀
STORM DRAIN	D	D	INDIVIDUAL EVERGREEN TREE	☀	☀
ELECTRIC	E	E	TREE LINE	☀	☀
TELEPHONE	T	T	BUSH	☀	☀
SANITARY SEWER LATERAL	SS	SS	STUMP	☀	☀
WATER SERVICE	WS	WS	SURVEY MARKER	☀	☀
SANITARY SEWER MANHOLE	SMH	SMH	PROPERTY LINE	---	---
STORM DRAIN MANHOLE	DMH	DMH	EASEMENT LINE	---	---
ELECTRICAL MANHOLE	EMH	EMH	SPOT ELEVATIONS	× 100.2	× 101.5
TELEPHONE MANHOLE	TMH	TMH	CONTOUR LINES	56	56
CATCH BASIN	☀	☀	DEPRESSION CONTOUR LINES	☀	☀
HYDRANT	☀	☀	HOUSE NUMBER	#35	☀
WATER GATE	WG	WG	FLOOR ELEVATION	FL=56.7	☀
SPRINKLER HEAD	☀	☀	SILL ELEVATION	S=56.7	☀
UTILITY POLE	☀	☀	WETLAND	☀	☀
GUY POLE	☀	☀	WETLAND FLAGS	☀	☀
GUY WIRE	☀	☀	GRASS PAVERS	☀	☀
OVERHEAD WIRE	☀	☀	GUIDE RAIL	☀	☀
LIGHT POST	☀	☀	POST	☀	☀
EDGE OF PAVEMENT	---	---	SIGN	☀	☀
EDGE OF UNPAVED ROAD	---	---	BENCH MARK	☀	☀
SAFETY EDGE	---	---	TEST PIT	TP-1	☀
BERM	---	---	BORING	B-1	☀
SIDEWALK	CONC. WALK	CONC. WALK	DRAINAGE DITCH / SWALE	---	---
BOULDER	☀	☀	MAILBOX	☀	☀
STONE WALL	---	---	FENCE	X	X
RETAINING WALL	RET. WALL	RET. WALL			

ITEMS SHOWN IN THE LEGEND MAY NOT BE PRESENT IN THESE PLANS

ABBREVIATIONS

AC	ASBESTOS CEMENT PIPE	IP	IRON PIPE
BC	BITUMINOUS CONCRETE, BOTTOM OF CURB	LF	LINEAR FEET
BIT	BITUMINOUS	LPS	LOW PRESSURE SEWER
BLDG	BUILDING	LS	LUMP SUM
BM	BENCH MARK	MAX	MAXIMUM
CATV	CABLE TELEVISION	MB	MAIL BOX
CB	CATCH BASIN	MECH	MECHANICAL
CC	CONCRETE CURB	MH	MANHOLE
CI	CAST IRON	MIN	MINIMUM
CL	CENTERLINE	MISC	MISCELLANEOUS
CMP	CORRUGATED METAL PIPE	N	NORTH
CONC	CONCRETE	NF	NOT FOUND
CP	CONTROL POINT	NO OR #	NUMBER
CU FT	CUBIC FEET	PE	POLYETHYLENE
CY	CUBIC YARD	PVC	PROPERTY LINE
DI	DROP INLET, DUCTILE IRON	PR	POLYVINYL CHLORIDE
DIA	DIAMETER	PVMT	PROPOSED
DMH	DRAIN MANHOLE	RCP	PAVEMENT
E	ELECTRIC, EAST	ROW	REINFORCED CONCRETE PIPE
EA	EACH	S	RIGHT-OF-WAY
EL	ELEVATION	SF	SEWER, SOUTH
EOP	EDGE OF PAVEMENT	SPEC	SQUARE FEET
EW	EACH WAY	SQ FT	SPECIFICATIONS
EX	EXISTING	SS	SQUARE FEET
FT	FEET, FOOT	STA	SEWER SERVICE
G	NATURAL GAS	SW	STATION
GALV	GALVANIZED	T	SIDEWALK
GC	GRANITE CURB	TBM	TELEPHONE
H	HIGH	TC	TEMPORARY BENCH MARK
HC	HOUSE CONNECTION	TYP	TOP OF CURB
HDPE	HIGH DENSITY POLYETHYLENE	UNO	TYPICAL
HORZ	HORIZONTAL	UP	UNLESS NOTED OTHERWISE
HP	HIGH PRESSURE	VC	UTILITY POLE
HYD	FIRE HYDRANT	VERT	VITRIFIED CLAY
INV	INVERT	W	VERTICAL
ID	INSIDE DIAMETER		WATER, WEST, WIDE



INDEX PLAN - COLONEL LEDYARD HIGHWAY
MULTI-USE PATHWAY
SCALE 1"=200'

Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

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INDEX PLAN,
LEGEND, AND
GENERAL NOTES

Sheet Number:

GEN-01

SEDIMENTATION AND EROSION CONTROL PLAN

GENERAL

THIS PLAN PROPOSES EROSION CONTROL MEASURES TO ADEQUATELY CONTROL ACCELERATED EROSION AND SEDIMENTATION AND REDUCE THE DANGER FROM STORM WATER RUNOFF AT THE SITE. THE RUNOFF SHALL BE CONTROLLED BY THE INTERCEPTION, DIVERSION, AND SAFE DISPOSAL OF PRECIPITATION. RUNOFF SHALL ALSO BE CONTROLLED BY STAGING CONSTRUCTION ACTIVITY AND PRESERVING NATURAL VEGETATION WHENEVER POSSIBLE.

EXISTING VEGETATION SHALL BE PROTECTED AND ONLY THAT CLEARING AND GRUBBING ABSOLUTELY NECESSARY FOR THE PROPOSED CONSTRUCTION SHALL BE PERFORMED. ALL DISTURBED AREAS SHALL BE RESTORED TO THEIR ORIGINAL CONDITION AND CONTOUR, UNLESS OTHERWISE INDICATED ON THE PLANS. THE CONTRACTOR SHALL TAKE SPECIAL CARE WITH HIS CONSTRUCTION METHODS AND SHALL COMPLY WITH THE FOLLOWING GUIDELINES.

REFERENCE IS MADE TO THE "CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL" (2002), AS AMENDED. THE GUIDELINES ARE OBTAINABLE ONLINE FROM THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION AT WWW.CT.GOV/DEEP AND SHOULD BE USED AS A REFERENCE IN CONSTRUCTING THE EROSION AND SEDIMENT CONTROLS INDICATED ON THESE PLANS.

SEDIMENTATION CONTROL

ALL AREAS SHALL BE PROTECTED FROM SEDIMENTATION DURING AND AFTER CONSTRUCTION, PARTICULARLY THE STORAGE OF EXCAVATED OR STOCKPILED MATERIAL. THE CONTRACTOR SHALL CAREFULLY STRIP ALL TOPSOIL, LOAM, OR ORGANIC MATTER PRIOR TO TRENCHING OR OTHER OPERATIONS AND SHALL STORE THEM SEPARATELY FROM ALL OTHER MATERIALS DURING EXCAVATION. EACH STOCKPILE MUST BE ADEQUATELY RINGED WITH SEDIMENT CONTROL MATERIAL (I.E. SILT FENCE).

STABILIZING OF SLOPES SHALL BE DONE IMMEDIATELY AFTER CONSTRUCTION OF SLOPES. SLOPES THAT ARE STEEPER THAN 2:1 SHALL BE PROTECTED WITH EROSION CONTROL MATTING TYPE H. ALL OTHER AREAS SHALL BE MULCHED WITH HAY OR STRAW AS REQUIRED.

EROSION AND SEDIMENTATION CONTROL PLAN

SEDIMENTATION CONTROL SYSTEM – THE SEDIMENTATION CONTROL SYSTEM SHALL CONSIST OF SILT FENCE.

GEOTEXTILE BARRIER FENCE – THE SEDIMENTATION CONTROL SYSTEM SHALL BE INSTALLED IMMEDIATELY AFTER A CUT SLOPE HAS BEEN GRADED, BEFORE A FILL SLOPE HAS BEEN CREATED AND AS INDICATED ON THE PLANS. THE SYSTEM IS DESIGNED TO INTERCEPT SILT AND SEDIMENT BEFORE IT REACHES THE WETLAND AREAS, OR WATERCOURSES. DEPOSITS OF SEDIMENT AND SILT ARE TO BE PERIODICALLY REMOVED FROM THE UPSTREAM SIDE OF THE FENCE. THIS MATERIAL IS TO BE SPREAD AND STABILIZED IN AREAS NOT SUBJECT TO EROSION, OR IN AREAS WHICH ARE NOT TO BE PAVED OR BUILT ON. THE SEDIMENTATION CONTROL SYSTEM IS TO BE REPLACED AS NECESSARY TO PROVIDE PROPER FILTERING ACTION. THE SYSTEM IS TO REMAIN IN PLACE AND BE MAINTAINED TO INSURE EFFICIENT SILTATION CONTROL UNTIL ALL AREAS ABOVE THE FENCE ARE STABILIZED AND VEGETATION HAS BEEN ESTABLISHED.

RIPRAP – RIPRAP, IF REQUIRED OR SPECIFIED, IS TO BE INSTALLED AS ENERGY, DISSIPATION STRUCTURES. THE RIPRAP IS TO BE INSTALLED BEFORE OUTLET STRUCTURES ARE ACTIVATED, AND ALL ADJACENT AREAS ARE TO BE IMMEDIATELY SEEDED IF IN SEASON OTHERWISE THE SOIL IS TO BE STABILIZED BY OTHER METHODS.

IN ALL AREAS, REMOVAL OF TREES, BUSHES AND OTHER VEGETATION, AND DISTURBANCE OF THE SOIL, IS TO BE KEPT TO AN ABSOLUTE MINIMUM WHILE ALLOWING PROPER DEVELOPMENT OF THE SITE.

DURING CONSTRUCTION, AS SMALL AN AREA OF SOIL AS POSSIBLE SHOULD BE EXPOSED FOR AS SHORT A TIME AS POSSIBLE. AFTER CONSTRUCTION, GRADE, RESPREAD TOPSOIL, AND STABILIZE SOIL BY SEEDING AND MULCHING SO AS TO PREVENT EROSION.

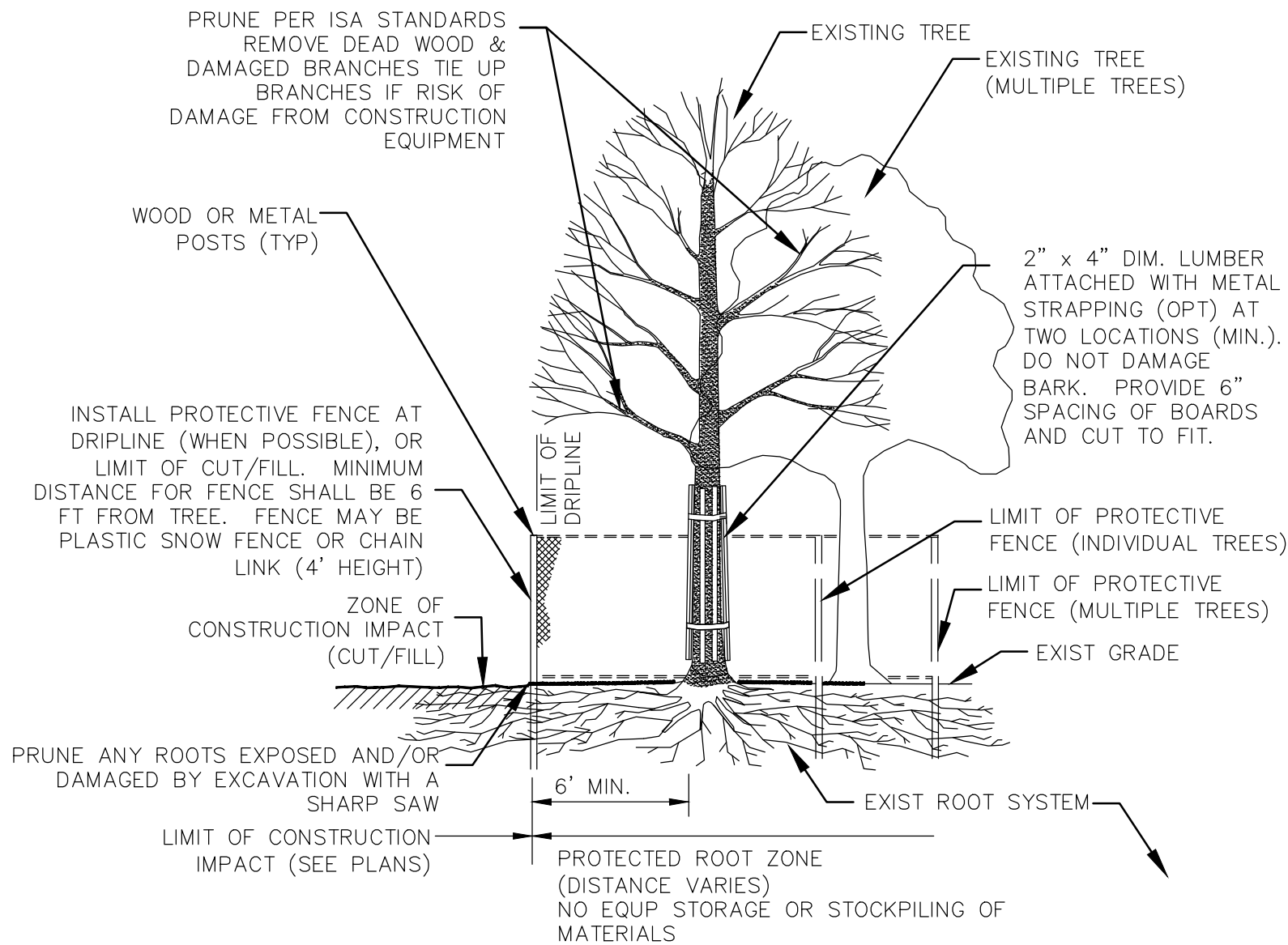
SEDIMENTATION AND EROSION CONTROL MAINTENANCE PROCEDURES

ALL SEDIMENTATION AND EROSION CONTROL DEVICES SHALL BE INSPECTED DURING CONSTRUCTION ON A WEEKLY BASIS, AND FOLLOWING ALL STORMS, BY THE RESIDENT ENGINEER. THE CONTRACTOR SHALL MAINTAIN AND MAKE REPAIRS AND REMOVE SEDIMENT AS REQUESTED BY THE RESIDENT ENGINEER. THIS WORK SHALL BE PERFORMED WITHIN 24 HOURS OF THE REQUEST AND THERE SHALL BE NO SEPARATE PAYMENT FOR THIS WORK.

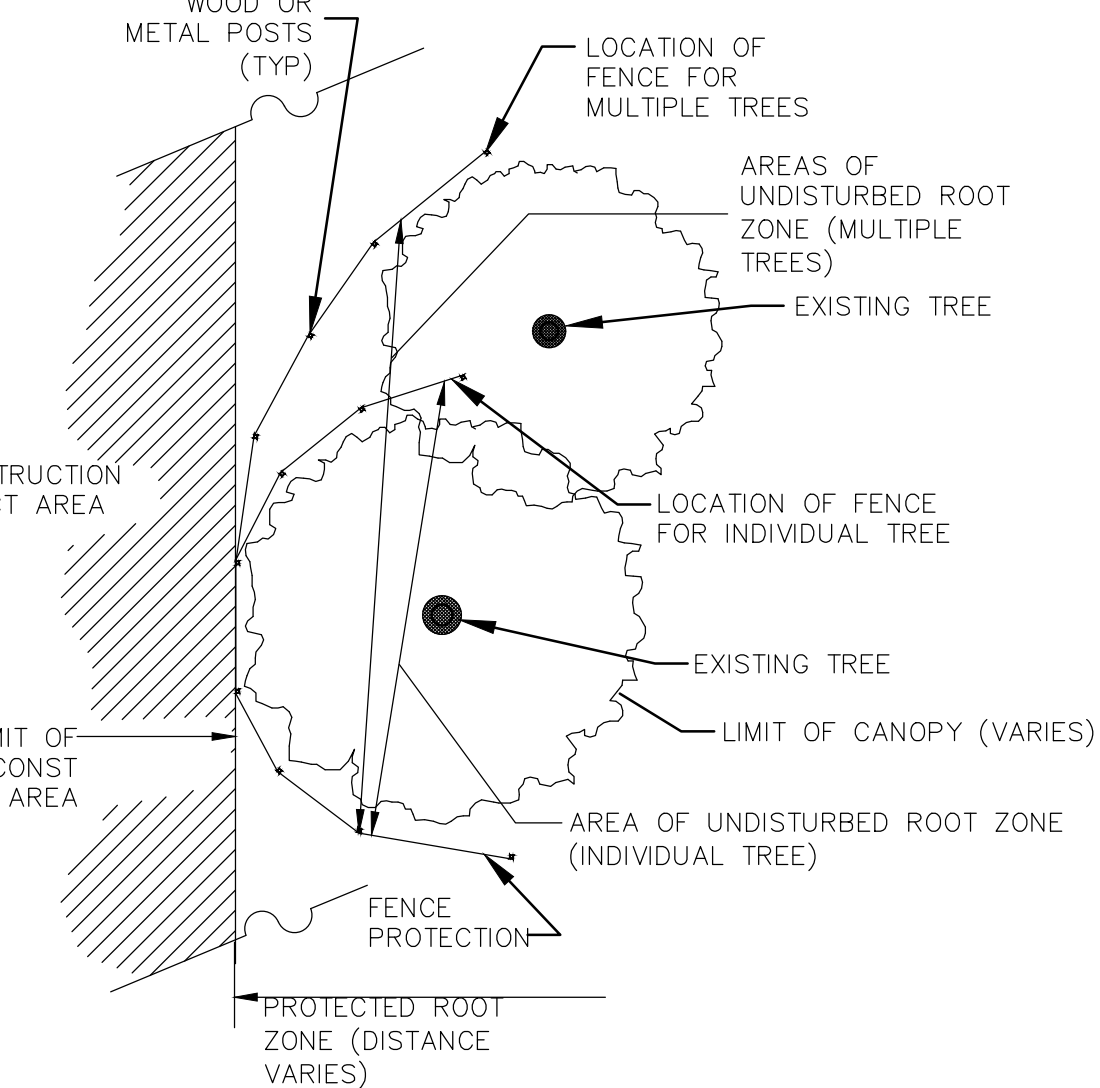
THE CONTRACTOR SHALL PROVIDE ROUTINE SWEEPING OF ALL PAVED SURFACES SUBJECT TO SEDIMENT ACCUMULATION DURING CONSTRUCTION ACTIVITIES.

THE CONTRACTOR SHALL CLEAN SEDIMENT AND DEBRIS FROM ALL DRAINAGE STRUCTURES, AND PIPES AT THE COMPLETION OF CONSTRUCTION, AND AS REQUESTED BY THE RESIDENT ENGINEER TO KEEP THE SYSTEM FUNCTIONING PROPERLY DURING CONSTRUCTION.

FOLLOWING COMPLETION OF CONSTRUCTION, THE CONTRACTOR SHALL REPAIR ALL ERODED AREAS AND ENSURE A GOOD STAND OF TURF IS ESTABLISHED THROUGHOUT. THE CONTRACTOR SHALL REPAIR ALL ERODED OR DISPLACED RIPRAP, AND CLEAN SEDIMENT COVERED STONES.



EXISTING TREE PROTECTION
N.T.S.



TYPICAL CONSTRUCTION SEQUENCE

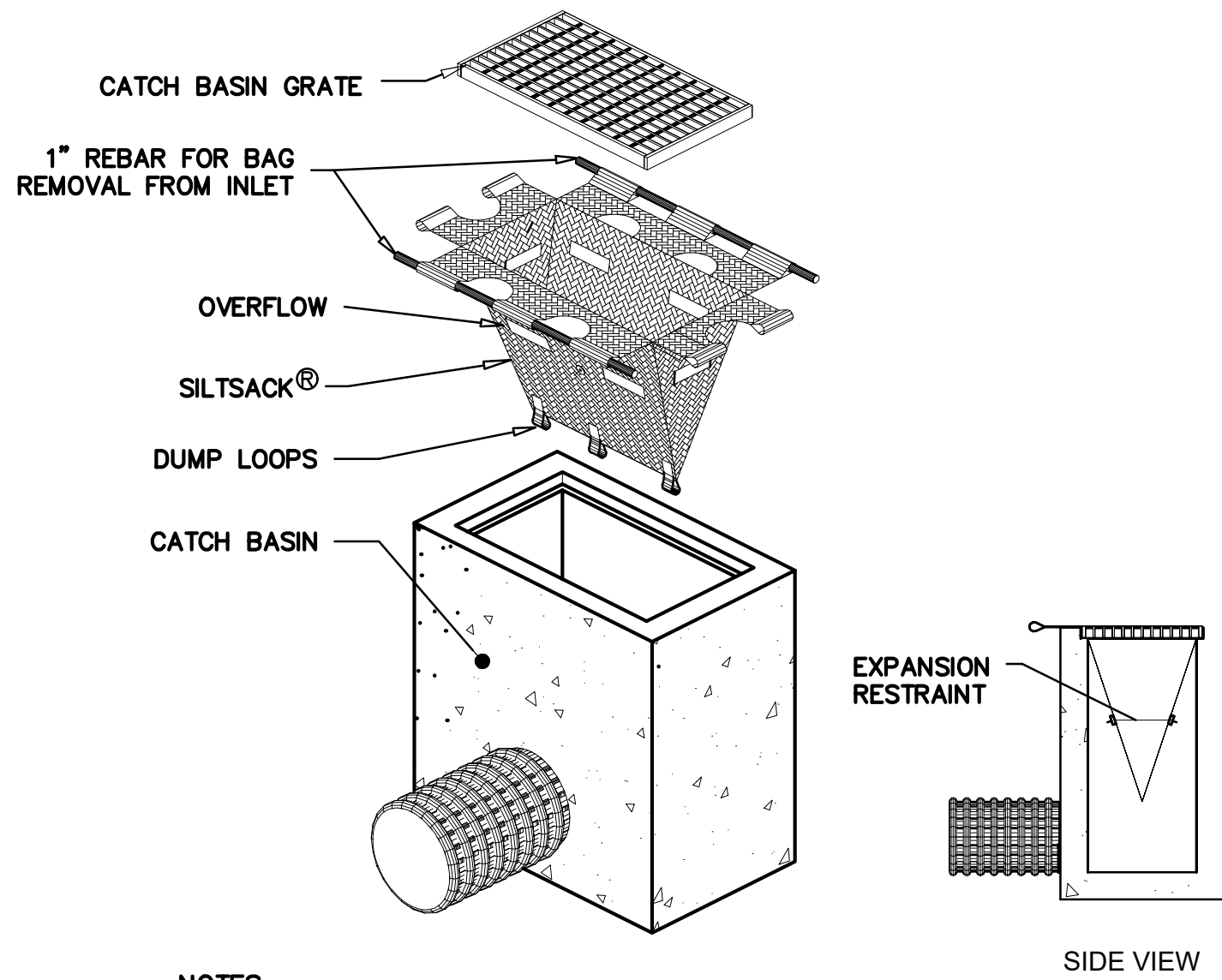
PRIOR TO COMMENCEMENT OF WORK, EROSION AND SEDIMENT CONTROL STRUCTURES SHALL BE INSTALLED. A TYPICAL SEQUENCE OF CONSTRUCTION IS:

1. OBTAIN APPROPRIATE PERMITS, NOTIFY TOWN OFFICIALS OF CONSTRUCTION COMMENCEMENT, AND SUBMIT CONSTRUCTION TIMETABLE.
2. ON-SITE CONSTRUCTION SEQUENCE SHALL START WITH THE MINIMUM AMOUNT OF CLEARING REQUIRED TO INSTALL EROSION CONTROL MEASURES AS SHOWN ON PLAN. THIS INCLUDES SILTATION FENCING, SILT CURTAIN, AND OTHER MEASURES NOTED ON THE PLAN. NO WORK SHALL TAKE PLACE UNTIL THE ENGINEER AND WETLAND ENFORCEMENT OFFICER HAVE INSPECTED AND APPROVED INSTALLED MEASURES.

DURING CONSTRUCTION ALL EROSION AND SEDIMENT STRUCTURES SHALL BE MAINTAINED IN PROPER WORKING ORDER. DISTURBED AREAS SHALL BE KEPT TO A MINIMUM AND SHALL ONLY TAKE PLACE WHERE IMMEDIATELY REQUIRED TO FURTHER CONSTRUCTION. IT IS DESIRABLE FROM AN EROSION PREVENTION CONCERN TO MINIMIZE DISTURBED AREAS. FINAL GRADING AND SEEDING SHALL TAKE PLACE AS SOON AS PRACTICAL.

A RAIN GAUGE SHALL BE PLACED AT THE PROJECT SITE IN A WORKABLE LOCATION AND MONITORED DURING RAINFALL PERIODS UNTIL ALL DISTURBED AREAS ARE STABILIZED. IN THE EVENT THERE IS A RAINFALL GREATER THAN 1/2" IN A 12 HOUR PERIOD, ALL EROSION CONTROL MEASURES SHALL BE CHECKED AND REPAIRED AS REQUIRED. IF NO RAIN GAUGE IS USED, ALL EROSION CONTROL MEASURES SHALL BE CHECKED AFTER ALL RAINFALL EVENTS.

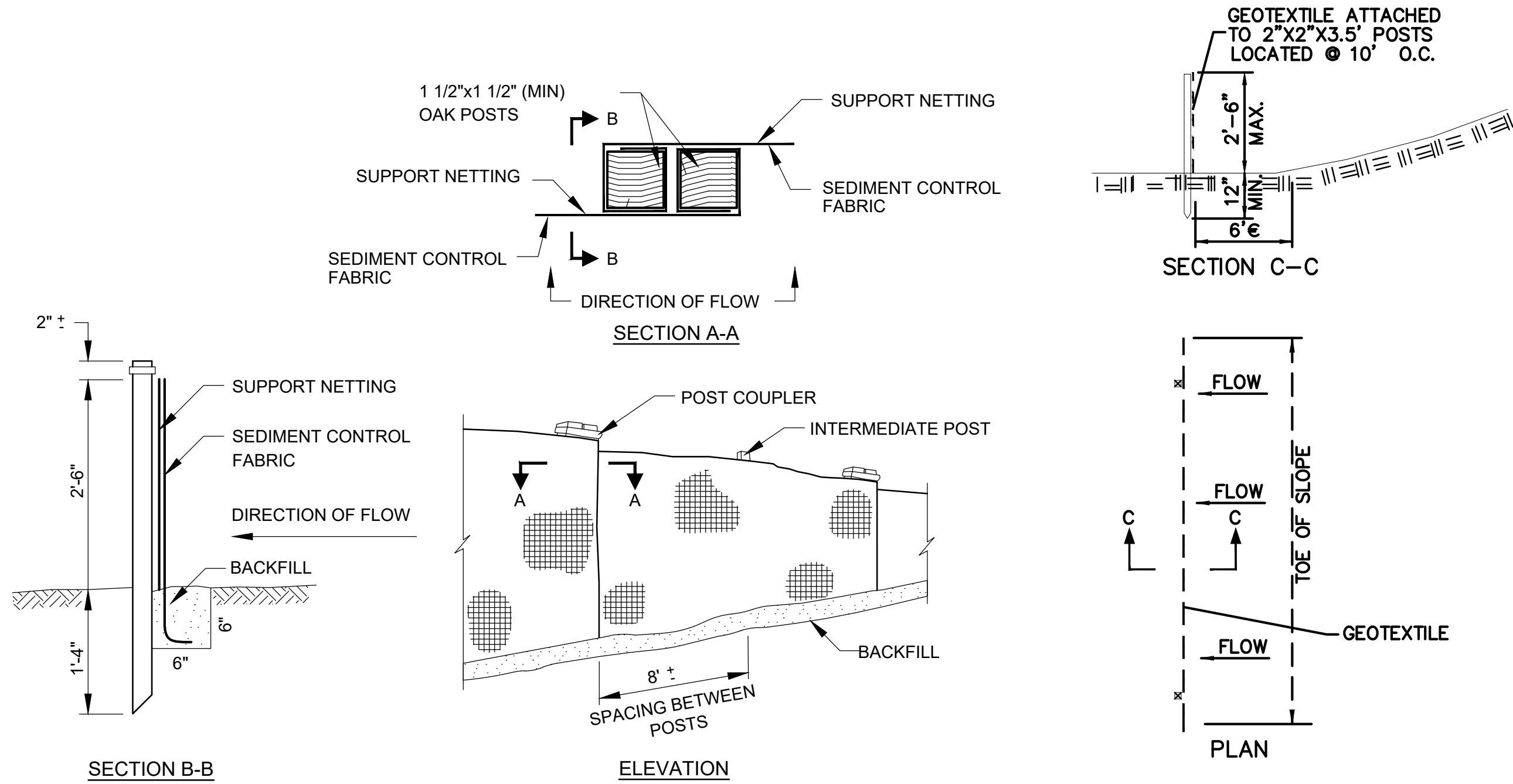
A CHECK LIST PROVIDED BY THE ENGINEER SHALL BE FILLED OUT EVERY WEEK OR AFTER EACH RAINFALL EVENT OF 1/2" OR GREATER.



- NOTES:
1. PROVIDE HI-FLOW SILT SACK TYPE A FOR TYPE "C-L" CATCH BASIN TOPS AND TYPE B WITH CURB DEFLECTOR FOR TYPE "C" CATCH BASIN TOPS OR OTHER STRUCTURES WITH CURB INLET.

CATCH BASIN INLET PROTECTION

N.T.S.



SEDIMENTATION AND EROSION CONTROL DETAIL

(SILT FENCE)

N.T.S.

Project: TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
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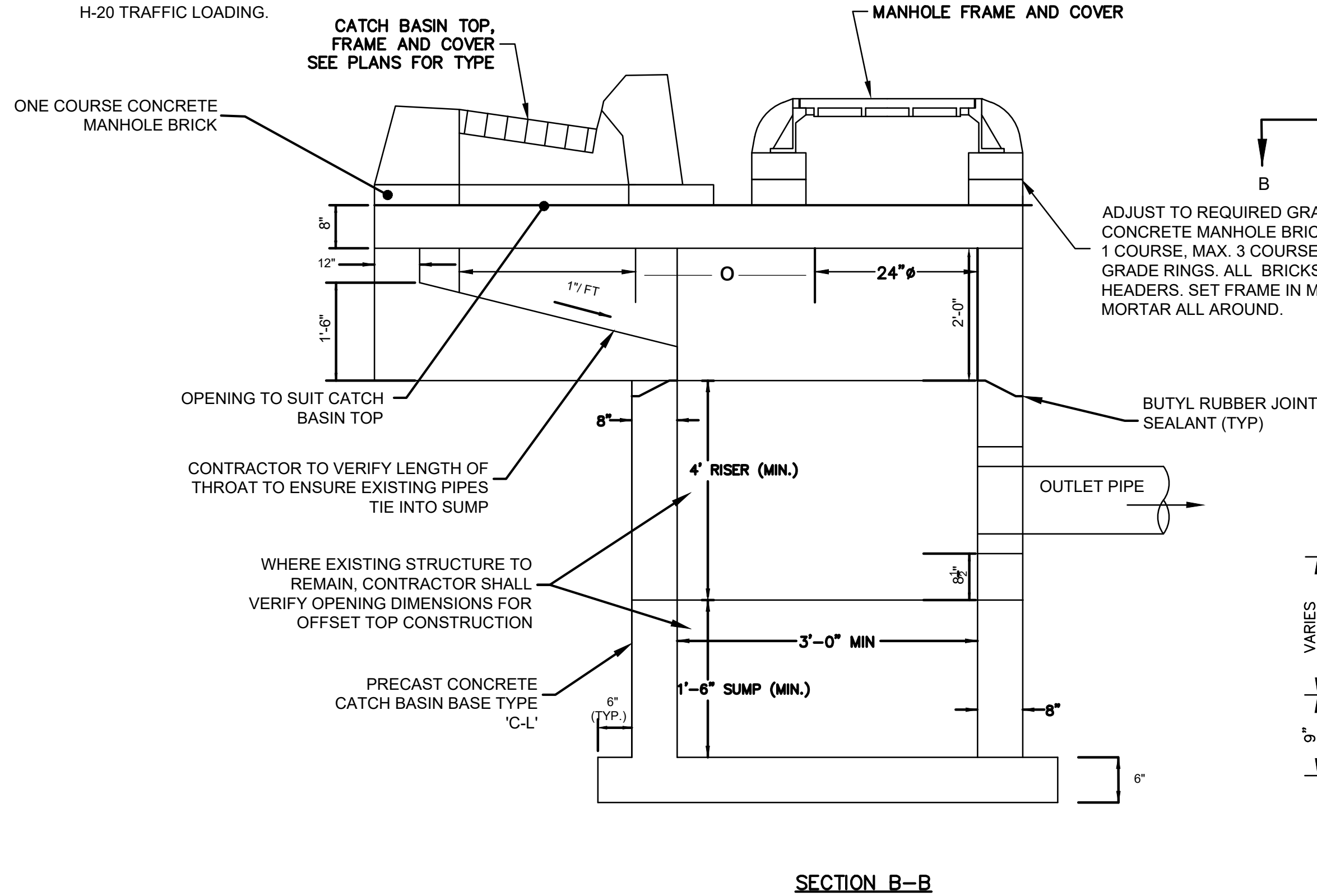
SEDIMENTATION AND
EROSION CONTROL
DETAILS

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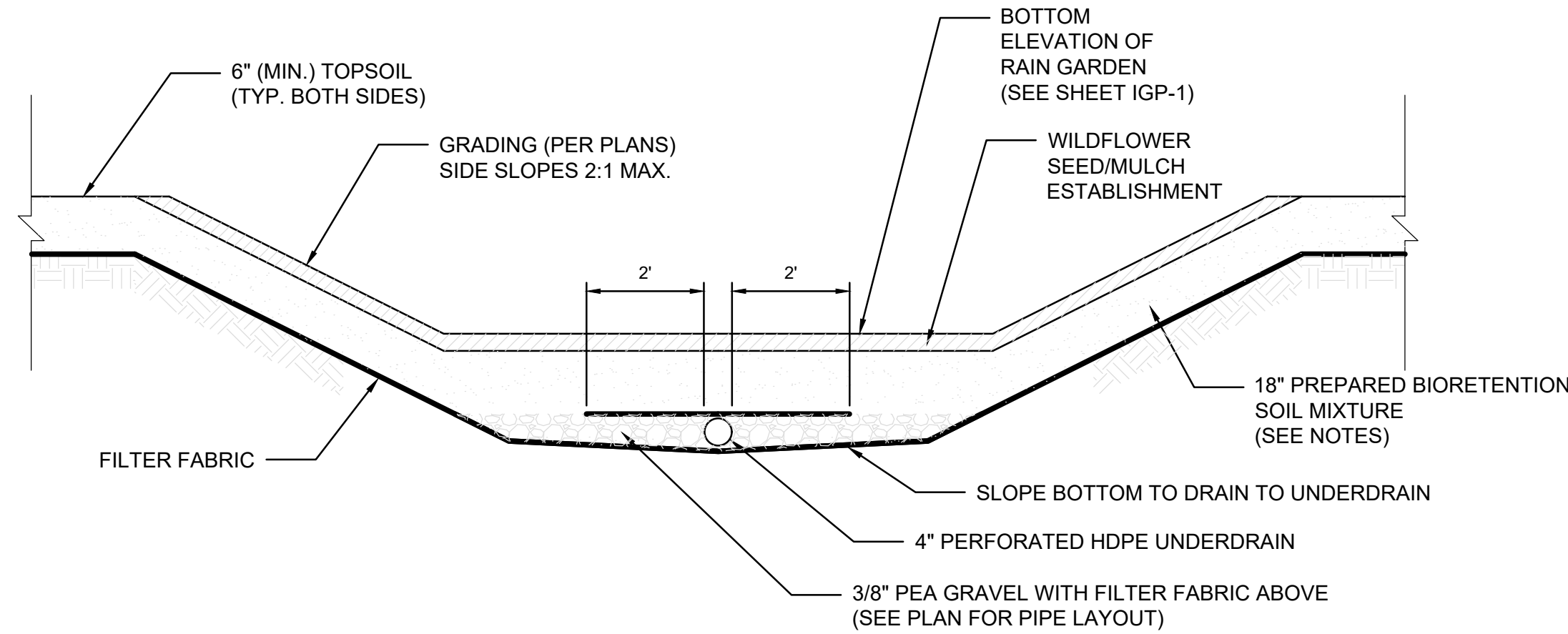
DET-01

Rev: 1.6 Date: 04/10/2019

- NOTES
1. SET TOP SLAB TO MEET EXIST. SLOPE OF CURB LINE AND CROSS SLOPE OF SIDEWALK. ADJUST DIMENSIONS OF CAST-IN-PLACE SECTION.
 2. PRECAST SECTIONS SHALL BE CAPABLE OF WITHSTANDING AASHTO H-20 TRAFFIC LOADING.



OFFSET CATCH BASIN
N.T.S.



BIORETENTION SOIL MIXTURE SHALL BE A MIXTURE OF SAND COMPOST AND SOIL

50% SAND
30% TOPSOIL, AND
20% COMPOST.

THE SOIL MIX MUST BE UNIFORM, FREE OF STONES, STUMPS, ROOTS, OR SIMILAR OBJECTS LARGER THAN 2 INCHES. CLAY CONTENT SHOULD NOT EXCEED 5%. SOIL PH SHOULD GENERALLY BE BETWEEN 5.5-6.5, A RANGE THAT IS OPTIMAL FOR MICROBIAL ACTIVITY AND ADSORPTION OF NITROGEN, PHOSPHORUS, AND OTHER POLLUTANTS. USE SOILS WITH 1.5% TO 3% ORGANIC CONTENT AND MAXIMUM 500-PPM SOLUBLE SALTS.

THE SAND COMPONENT SHOULD BE GRAVELLY SAND THAT MEETS ASTM D 422.

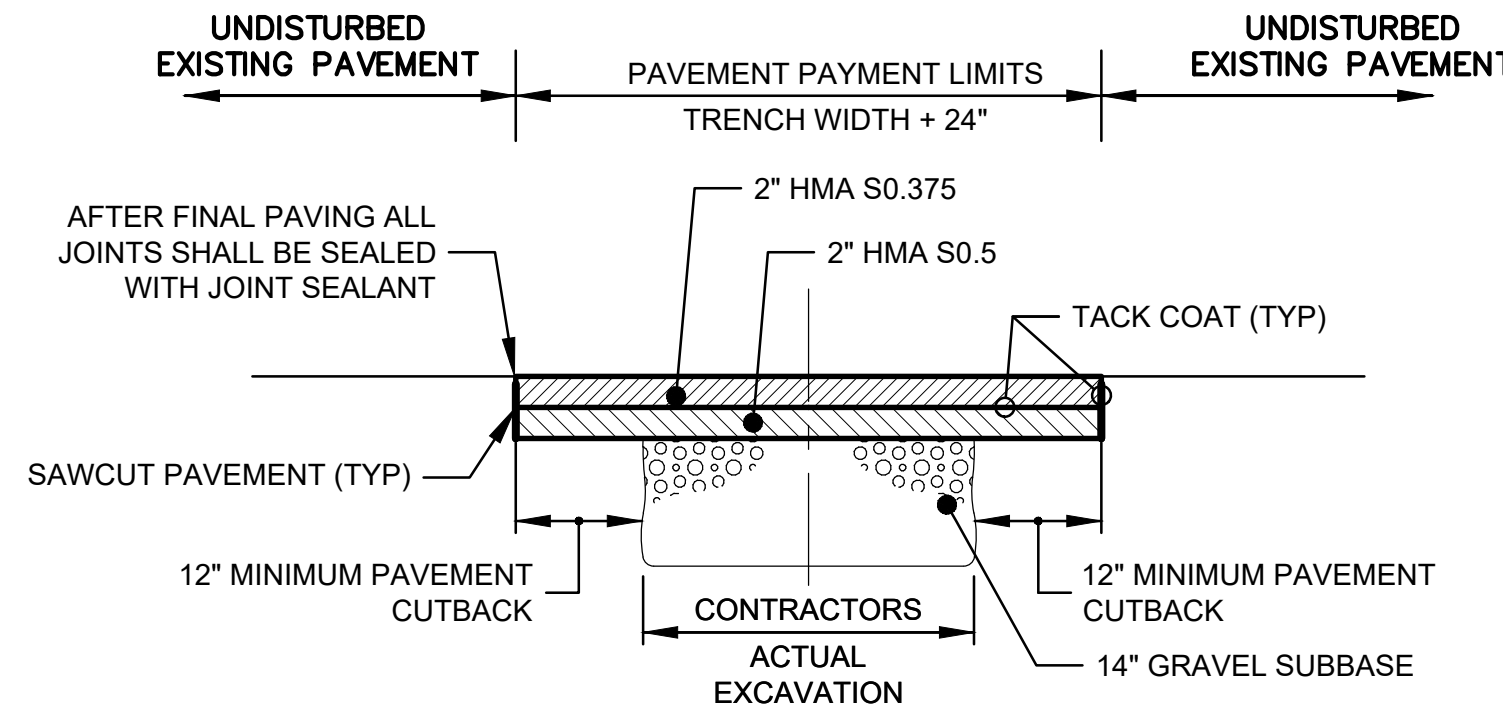
SIEVE SIZE	PERCENT PASSING
2-INCH	100
3/4-INCH	70-100
1/2-INCH	50-80
U.S. NO. 40	15-40
U.S. NO. 20	0-3

THE TOPSOIL COMPONENT SHALL BE A SANDY LOAM, LOAMY SAND OR LOAM MIXTURE.

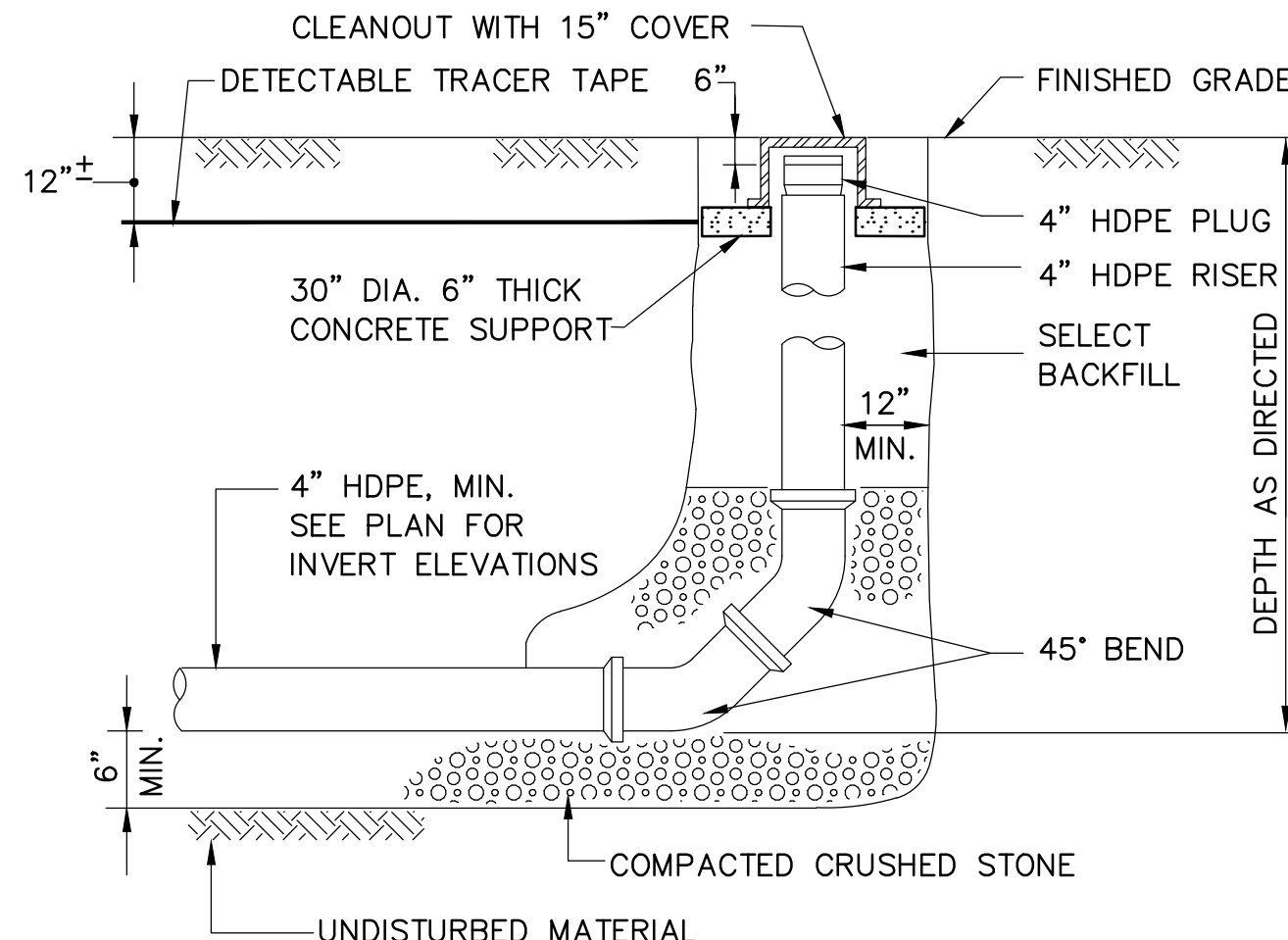
BIO-RETENTION (RAIN GARDEN) DETAIL
N.T.S.

CONSTRUCTION NOTES FOR BIORETENTION BASIN (RAIN GARDEN):

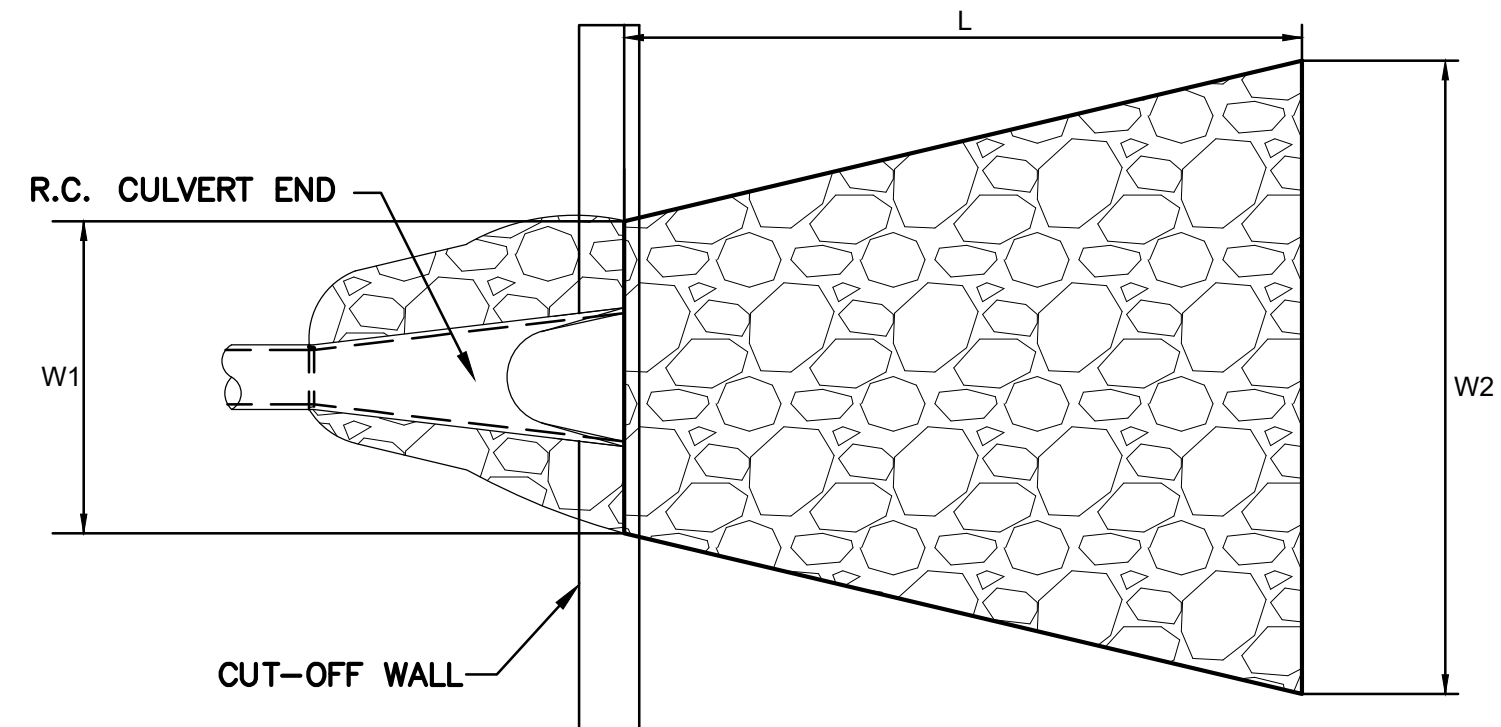
1. IN ORDER TO MINIMIZE SEDIMENT IMPACT ON THE ABILITY OF THE PROPOSED BASINS TO INFILTRATE, THE CONSTRUCTION OF THE BASINS SHALL BE DONE DURING THE LATE STAGES OF SITE WORK ONCE ALL UPGRADIENT AREAS HAVE BEEN STABILIZED WITH A FIRST COURSE OF BITUMINOUS PAVING AND VEGETATIVE STABILIZATION HAS BEEN ACHIEVED.
2. INSTALL SEDIMENTATION CONTROL SYSTEM AROUND THE PERIMETER OF THE BASINS TO PREVENT SEDIMENT LADEN WATER FROM ENTERING THE BASIN.
3. CONSTRUCTION EQUIPMENT SHALL NOT BE ALLOWED TO DRIVE OVER THE AREA INTENDED TO SERVE AS INFILTRATION. STOCKPILING OF MATERIAL SHALL NOT BE ALLOWED OVER THESE AREAS AS WELL.
4. ONLY LOW GROUND PRESSURE EQUIPMENT SHALL BE USED TO EXCAVATE THE BASINS TO MINIMIZE COMPACTION OF SOILS BENEATH BASIN FLOOR AND SIDE SLOPES.
5. THE BASINS SHALL NOT BE CONSTRUCTED DURING OR IMMEDIATELY AFTER A RAIN EVENT OR CONSTRUCTED DURING SATURATED CONDITIONS.
6. THE ENGINEER SHALL BE CONTACTED IMMEDIATELY IF NON-NATIVE FILL, LEDGE, OR UNSUITABLE MATERIAL IS ENCOUNTERED AT THE PROPOSED BOTTOM OF THE BASINS PRIOR TO CONSTRUCTION.



PERMANENT TRENCH PAVEMENT REPLACEMENT DETAIL
N.T.S.



CLEANOUT DETAIL
N.T.S.

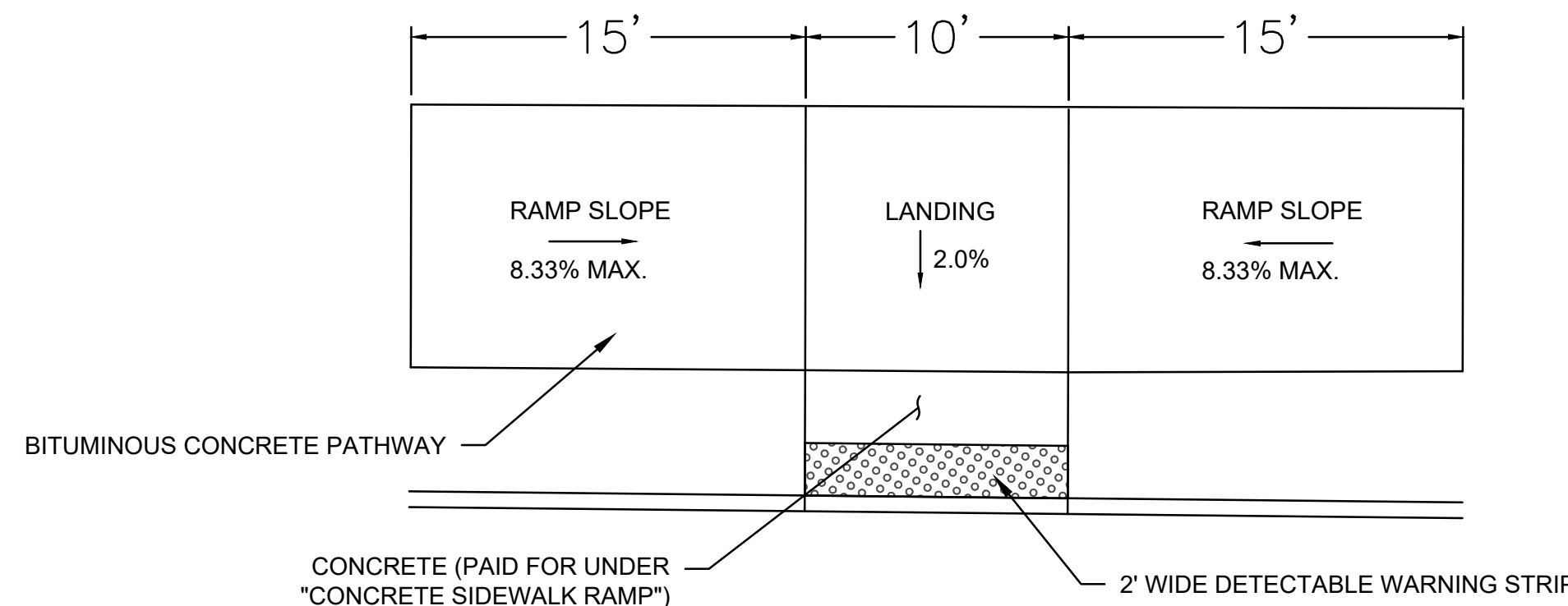


PLAN

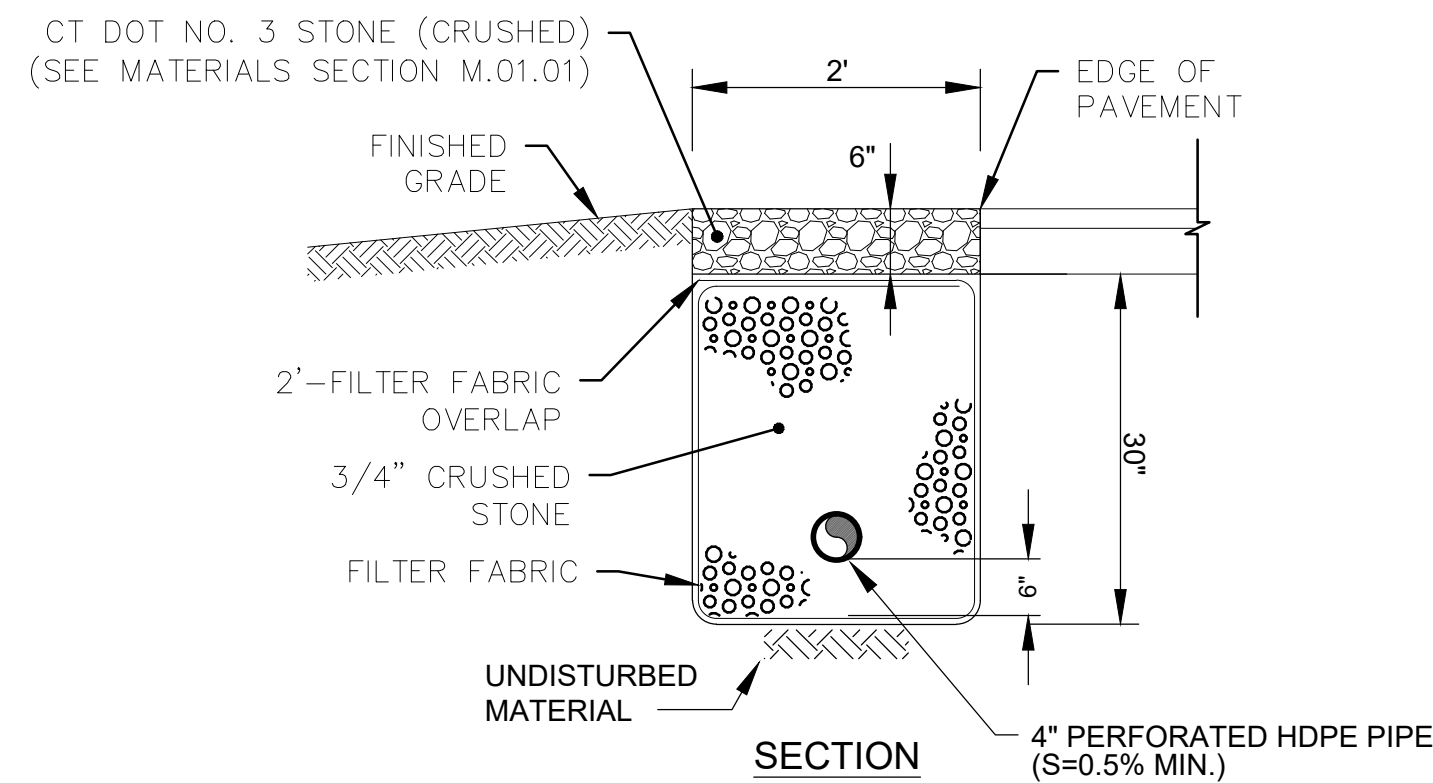
SECTION

DIMENSIONS			
STA	W1	W2	L
54+00	6'	10'	10'
60+10	5'	5'	6'

RIPRAP APRON
N.T.S.



MULTI-USE PATH RAMP
N.T.S.



STONE TRENCH (PRE-TREATMENT)
NOT TO SCALE

Project: TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

Weston & Sampson

Weston & Sampson Engineers, Inc.
712 Brook Street, Suite 103
Rocky Hill, CT 06067
978.532.1900 800.SAMPSON
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Consultants:

Revisions:

No.	Date	Description

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Approved By: MJJ

W&S Project No.: ENG20-1119

W&S File No.:

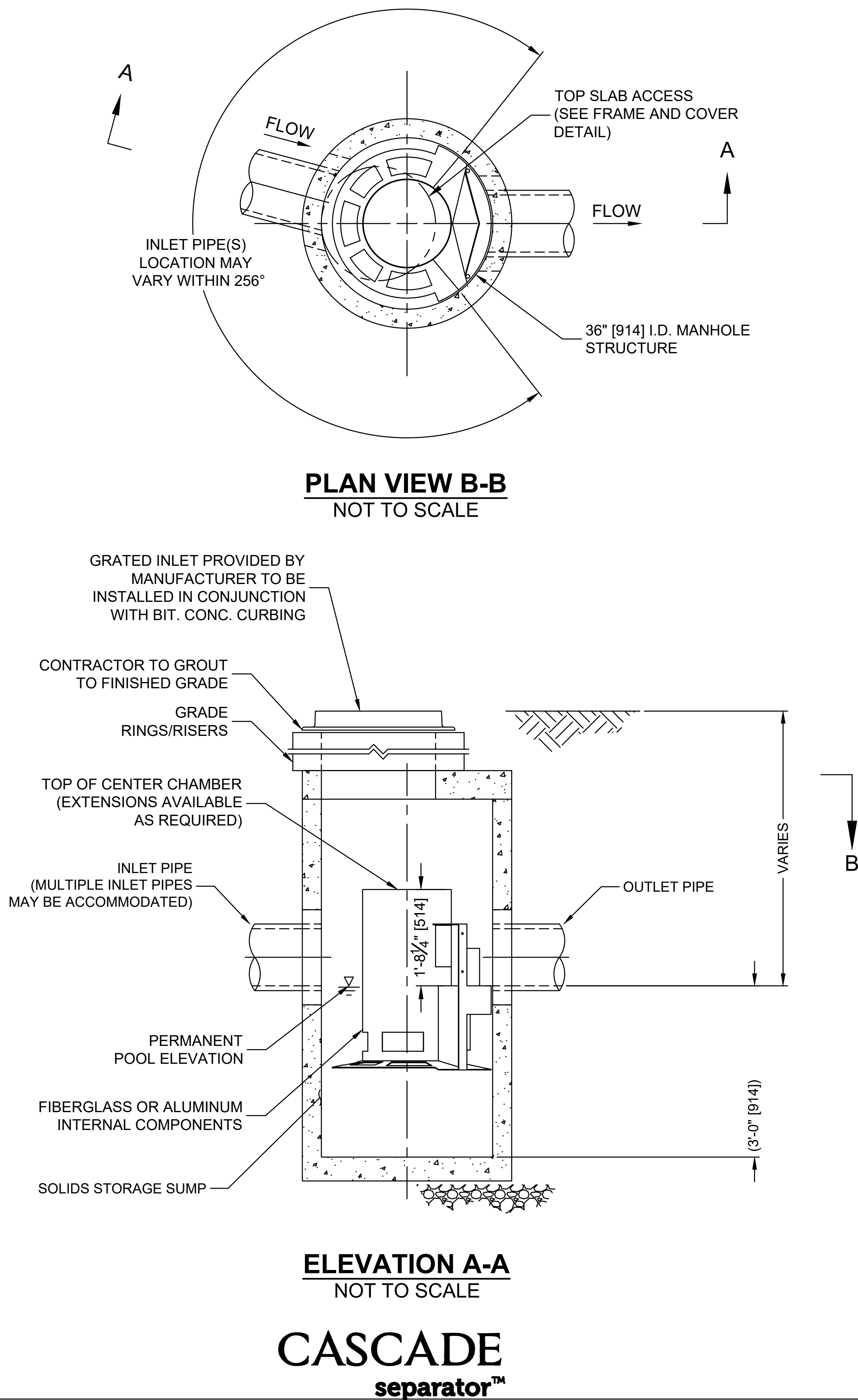
Drawing Title:

MISCELLANEOUS
DETAILS

Sheet Number:

DET-02

\\us03\vol\MSB\Projects\CT\Ledyard\CTENG\20-1119\GTPP\Main\TIA 2020\04\LEDYARD_MU1_DET.dwg



CASCADE SEPARATOR DESIGN NOTES

THE STANDARD CS-3 CONFIGURATION IS SHOWN. ALTERNATE CONFIGURATIONS ARE AVAILABLE AND ARE LISTED BELOW. SOME CONFIGURATIONS MAY BE COMBINED TO SUIT SITE REQUIREMENTS.

CONFIGURATION DESCRIPTION

GRATED INLET ONLY (NO INLET PIPE)

GRATED INLET WITH INLET PIPE OR PIPES CHOSEN CONFIGURATION

CURB INLET ONLY (NO INLET PIPE)

CURB INLET WITH INLET PIPE OR PIPES

SITE SPECIFIC DATA REQUIREMENTS

STRUCTURE ID	STA. 54+00		
WATER QUALITY FLOW RATE (cfs [L/s])	0.08 cfs		
PEAK FLOW RATE (cfs [L/s])	5.28 cfs		
RETURN PERIOD OF PEAK FLOW (yrs)	10-YR.		
RIM ELEVATION	244.13		
PIPE DATA:	INVERT	MATERIAL	DIAMETER
INLET PIPE 1	240.88	RCP	15"
INLET PIPE 2			
OUTLET PIPE	240.80	RCP	18"

FRAME AND GRATE (DIAMETER VARIES) NOT TO SCALE

GENERAL NOTES

- CONTECH TO PROVIDE ALL MATERIALS UNLESS NOTED OTHERWISE.
- FOR SITE SPECIFIC DRAWINGS WITH DETAILED STRUCTURE DIMENSIONS AND WEIGHT, PLEASE CONTACT YOUR CONTECH ENGINEERED SOLUTIONS LLC REPRESENTATIVE. www.ContechES.com
- CASCADE SEPARATOR WATER QUALITY STRUCTURE SHALL BE IN ACCORDANCE WITH ALL DESIGN DATA AND INFORMATION CONTAINED IN THIS DRAWING. CONTRACTOR TO CONFIRM STRUCTURE MEETS REQUIREMENTS OF PROJECT.
- CASCADE SEPARATOR STRUCTURE SHALL MEET AASHTO HS20 LOAD RATING, ASSUMING EARTH COVER OF 0' - 2' [610], AND GROUNDWATER ELEVATION AT, OR BELOW, THE OUTLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. CASTINGS SHALL MEET AASHTO M306, SHALL BE MADE IN USA, AND BE CAST WITH THE CONTECH LOGO.
- CASCADE SEPARATOR STRUCTURE SHALL BE PRECAST CONCRETE CONFORMING TO ASTM C478 AND AASHTO LOAD FACTOR DESIGN METHOD.
- ALTERNATE UNITS ARE SHOWN IN MILLIMETERS [mm].

INSTALLATION NOTES

- ANY SUB-BASE, BACKFILL DEPTH, AND/OR ANTI-FLOTATION PROVISIONS ARE SITE-SPECIFIC DESIGN CONSIDERATIONS AND SHALL BE SPECIFIED BY ENGINEER OF RECORD.
- CONTRACTOR TO PROVIDE EQUIPMENT WITH SUFFICIENT LIFTING AND REACH CAPACITY TO LIFT AND SET THE CASCADE SEPARATOR MANHOLE STRUCTURE.
- CONTRACTOR TO INSTALL JOINT SEALANT BETWEEN ALL STRUCTURE SECTIONS AND ASSEMBLE STRUCTURE.
- CONTRACTOR TO PROVIDE, INSTALL, AND GROUT INLET AND OUTLET PIPE(S). MATCH PIPE INVERTS WITH ELEVATIONS SHOWN. ALL PIPE CENTERLINES TO MATCH PIPE OPENING CENTERLINES.
- CONTRACTOR TO TAKE APPROPRIATE MEASURES TO ASSURE UNIT IS WATER TIGHT, HOLDING WATER TO FLOWLINE INVERT MINIMUM. IT IS SUGGESTED THAT ALL JOINTS BELOW PIPE INVERTS ARE GROUTED.

CONTECH
ENGINEERED SOLUTIONS LLC

www.contechES.com

9025 Centre Pointe Dr., Suite 400, West Chester, OH 45069

800-338-1122

513-645-7000

513-645-7993 FAX

CS-3
CASCADE SEPARATOR
STANDARD DETAIL

Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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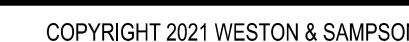
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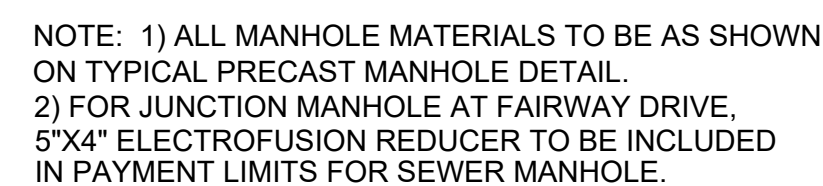
HYDRODYNAMIC
SEPARATOR
DETAILS

Sheet Number:

DET-03

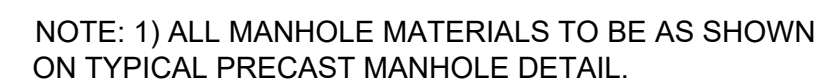
Rev: 1.6 Date: 04/10/2019





SECTION A
N.T.S.

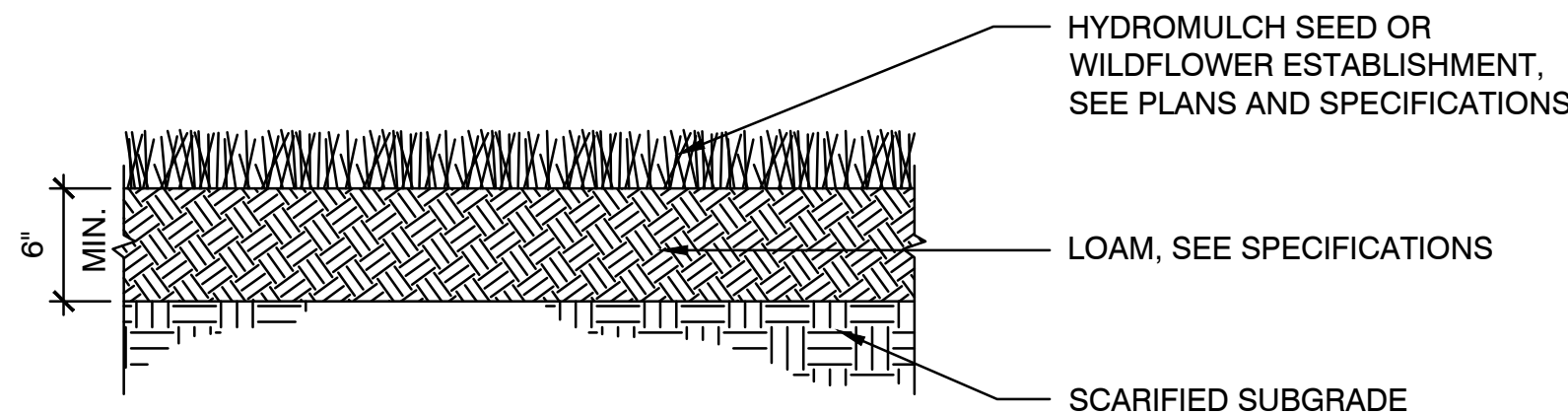
LOW PRESSURE SEWER JUNCTION MANHOLE
N.T.S.



SECTION B
N.T.S.

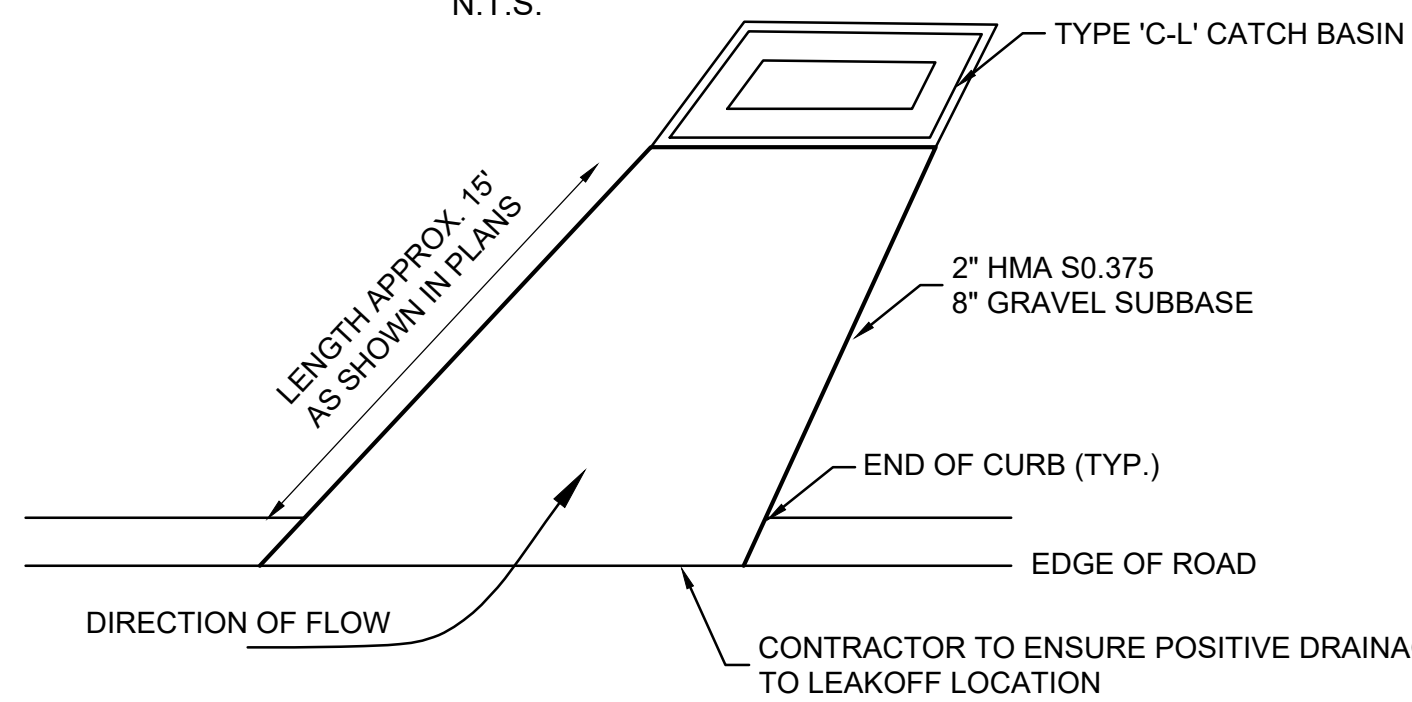
LOW PRESSURE SEWER "HIGH SCHOOL" MANHOLE
N.T.S.

PAYMENT LIMITS FOR "SEWER MANHOLE - ITEM 1403001A" MAY VARY. SEE RESPECTIVE SEWER MANHOLE DETAILS FOR LIMITS AS DEFINED.



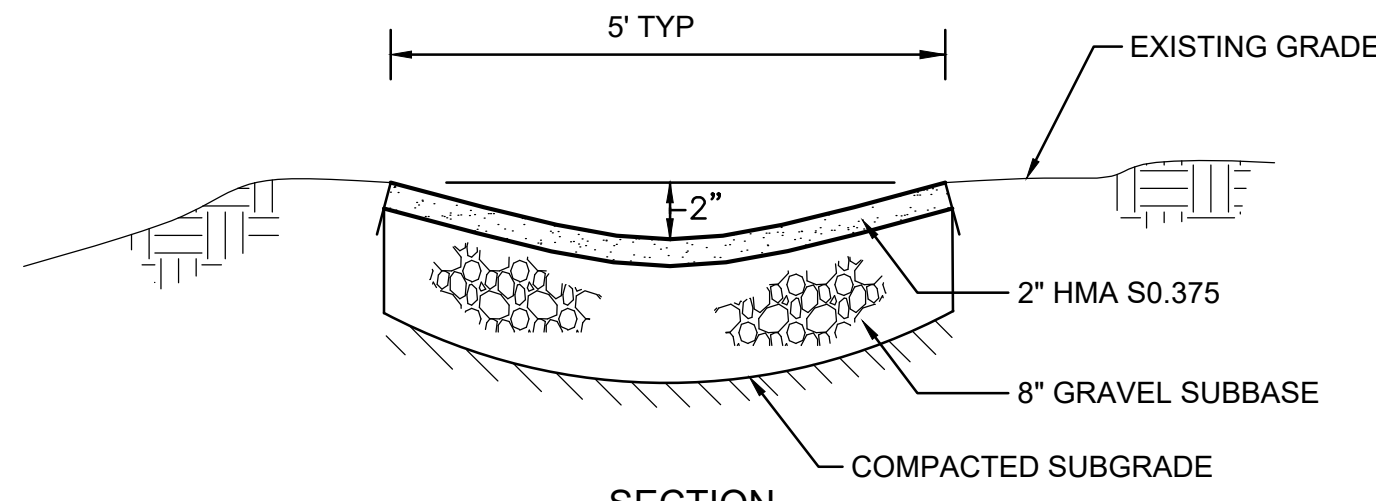
LOAM AND SEED

N.T.S.



NOTES:
1. LEAK-OFF CONFIGURATION TO MATCH PROPOSED PLANS

PLAN



SECTION

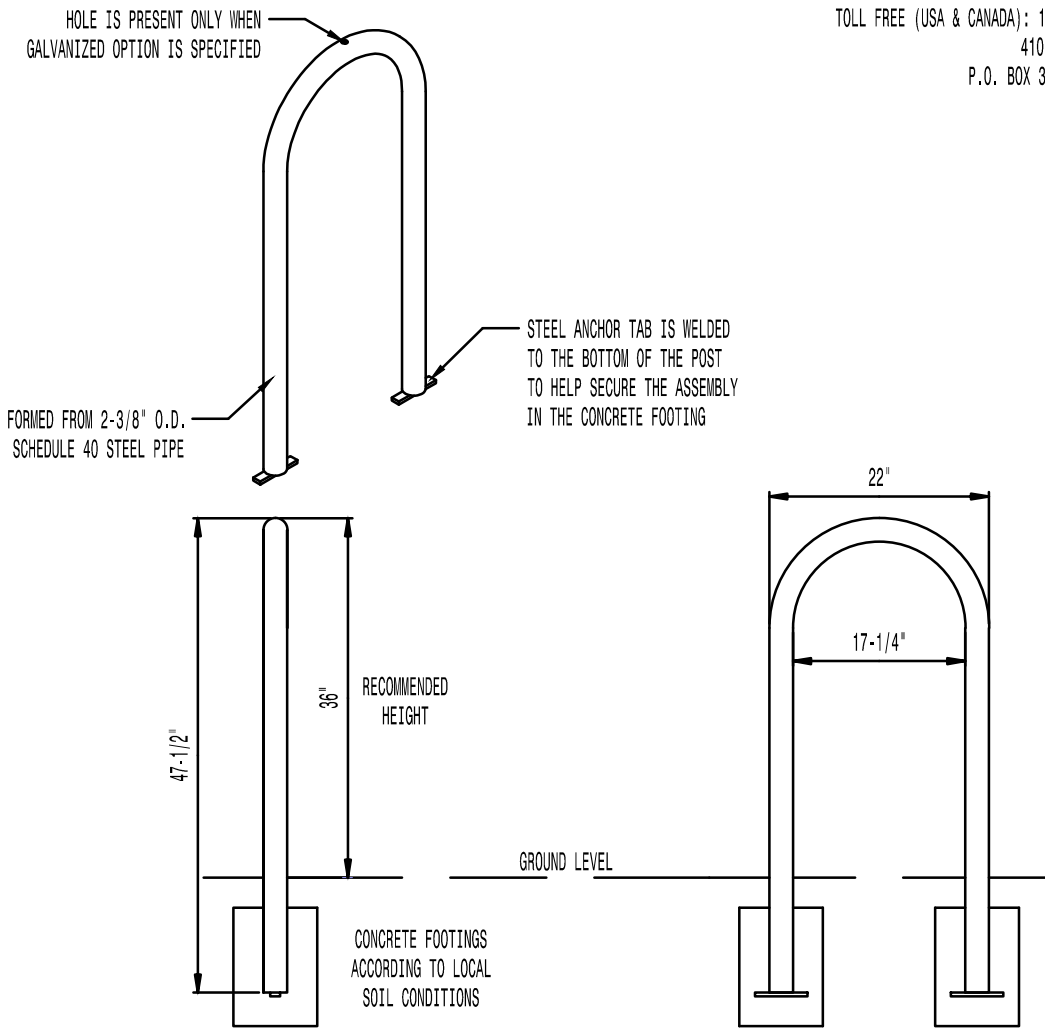
LEAK-OFF DETAIL

N.T.S.

SECURE SITE DESIGN™ L.L.C.
(a VICTOR STANLEY, INC.® affiliate)

TOLL FREE (USA & CANADA): 1-888-4NTI-RAM (888-268-4726)
410-286-3375 ; FAX 410-479-0175
P.O. BOX 307, DUNKLEW, MD 20754 U.S.A.
INFO@SECURESITEDESIGN.COM
WWW.SECURESITEDESIGN.COM

* ALL DIMENSIONS ARE IN INCHES *



AVAILABLE OPTIONS:
POWDER COATING
10 STANDARD COLORS, 2 OPTIONAL METALLIC COLORS, CUSTOM COLORS (INCLUDING THE RAL RANGE)
(ALL POWDER COAT FINISHES ARE DONE AT VICTOR STANLEY, INC. (VSI) TO MATCH THE VSI PRODUCT LINE)
OTHER FINISHES: GALVANIZED, STAINLESS STEEL (SPECIAL QUOTE NEEDED)

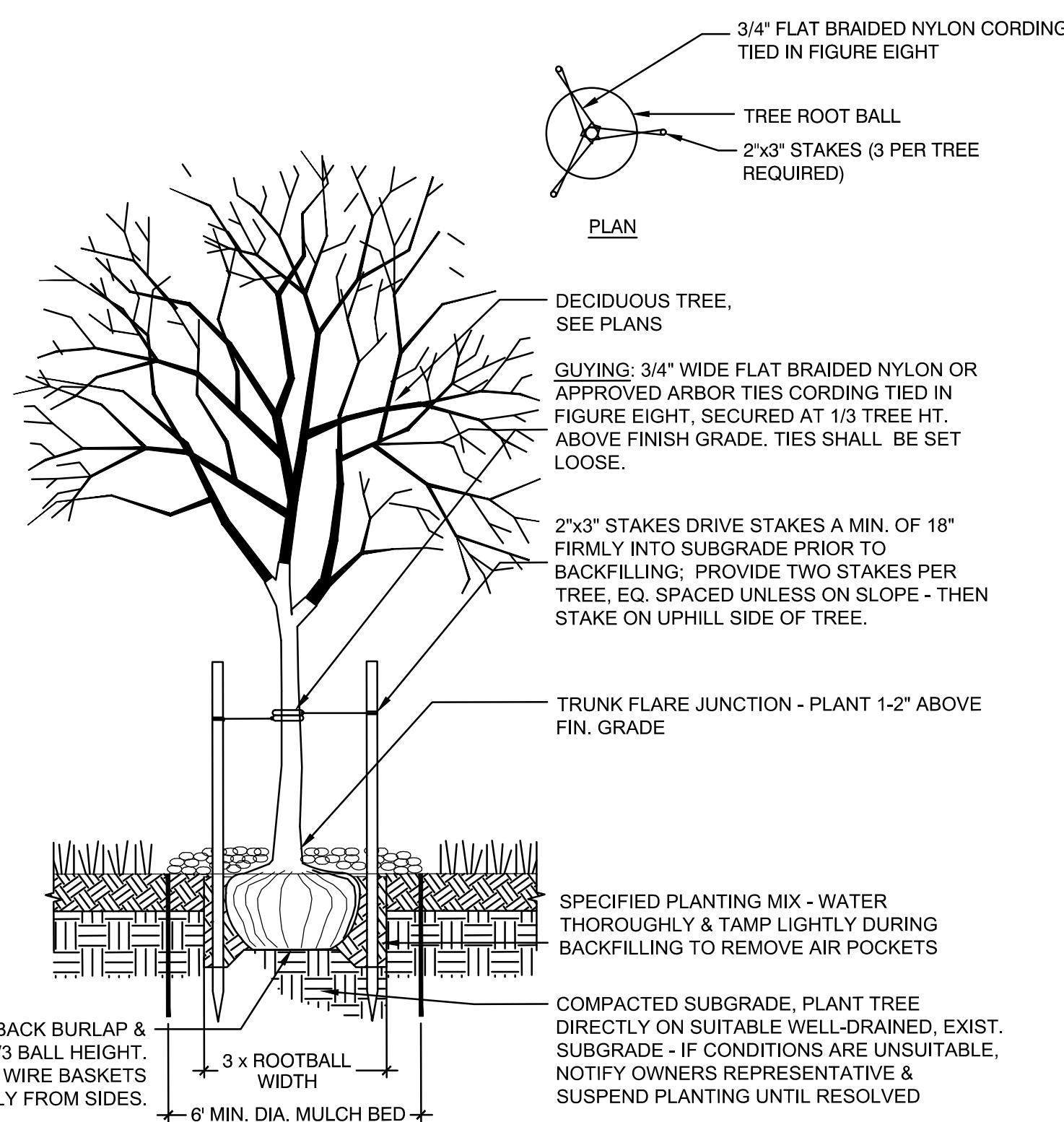
- NOTES:
1. DRAWINGS NOT TO SCALE. DO NOT SCALE DRAWINGS.
2. ALL FABRICATED METAL COMPONENTS ARE STEEL SHOTBLASTED, ETCHED, PHOSPHATIZED, PRIMERED, AND ELECTROSTATICALLY POWDER-COATED WITH T-6, I.C. POLYESTER POWDER COATINGS. PRODUCTS ARE FULLY CLEANED AND PRIMERED, PRIMERED AND COATED WHILE HOT TO FULL CRACKS AND BUILT COATING FILM. COATED PARTS ARE THEN FULLY CURED TO COUNTER MANUFACTURER'S SPECIFICATIONS. THE THICKNESS OF THE RESULTING FINISH AVERAGES 8-10 MILS (200-250 MICRONS).
3. THIS SECURE SITE DESIGN, L.L.C. PRODUCT MUST BE PERMANENTLY AFFIXED IN THE GROUND.
CONSULT YOUR LOCAL CODES FOR REGULATIONS.
4. ALL SPECIFICATIONS ARE SUBJECT TO CHANGE. CONTACT MANUFACTURER FOR DETAILS.
5. THIS PRODUCT IS SHIPPED FULLY ASSEMBLED.



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REV. 8/9/13 DRAWN C.R.K. 2013-078

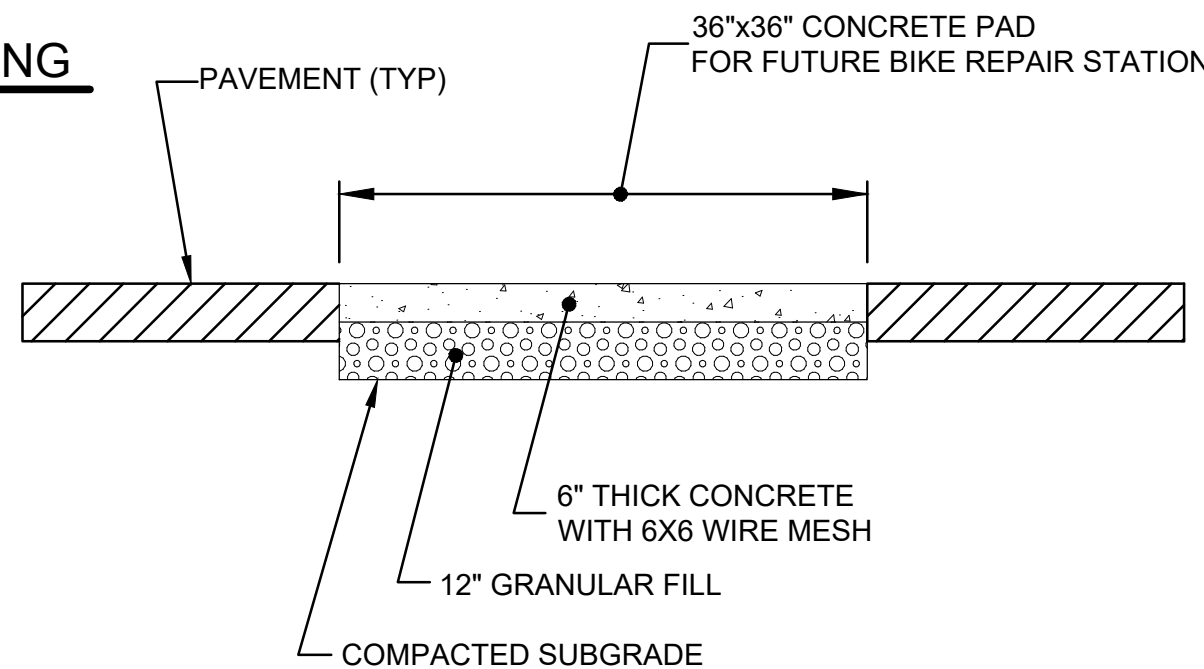
BICYCLE STAND

N.T.S.



TREE STAKING AND PLANTING

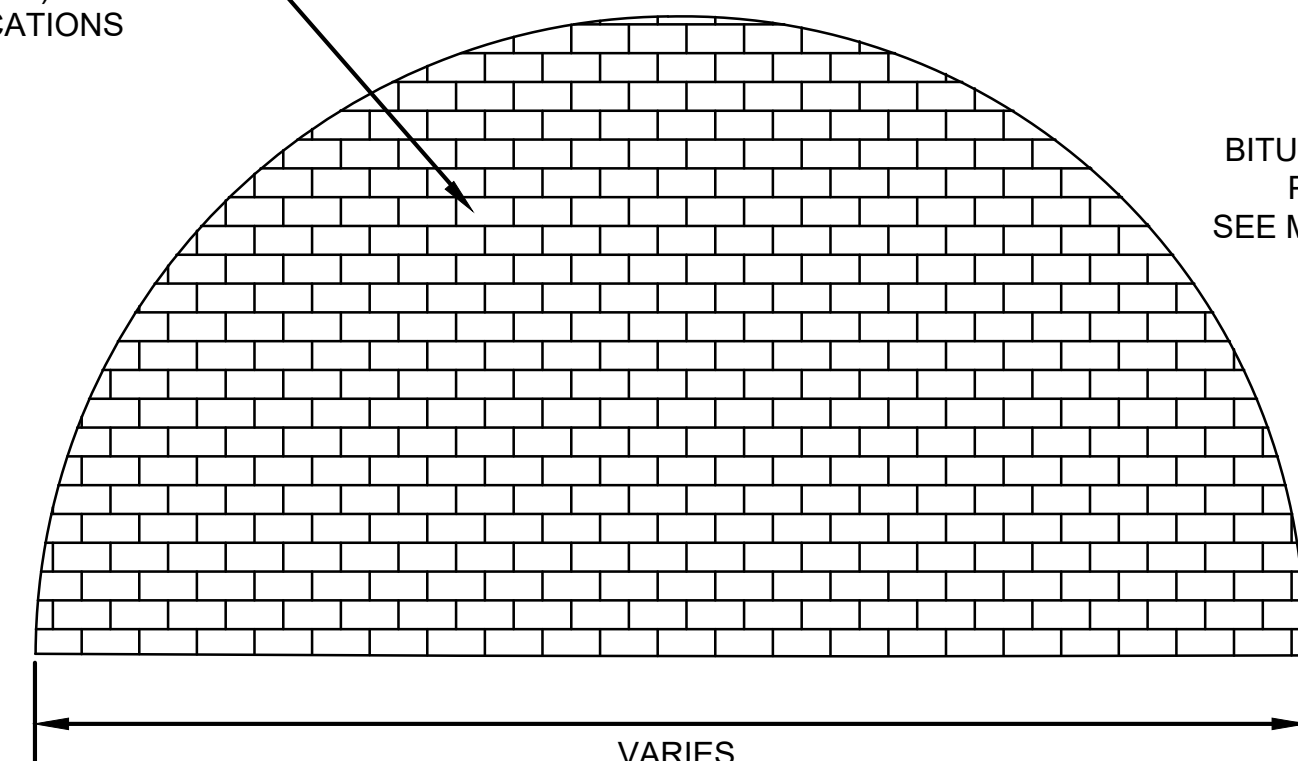
N.T.S.



CONCRETE PAD DETAIL

N.T.S.

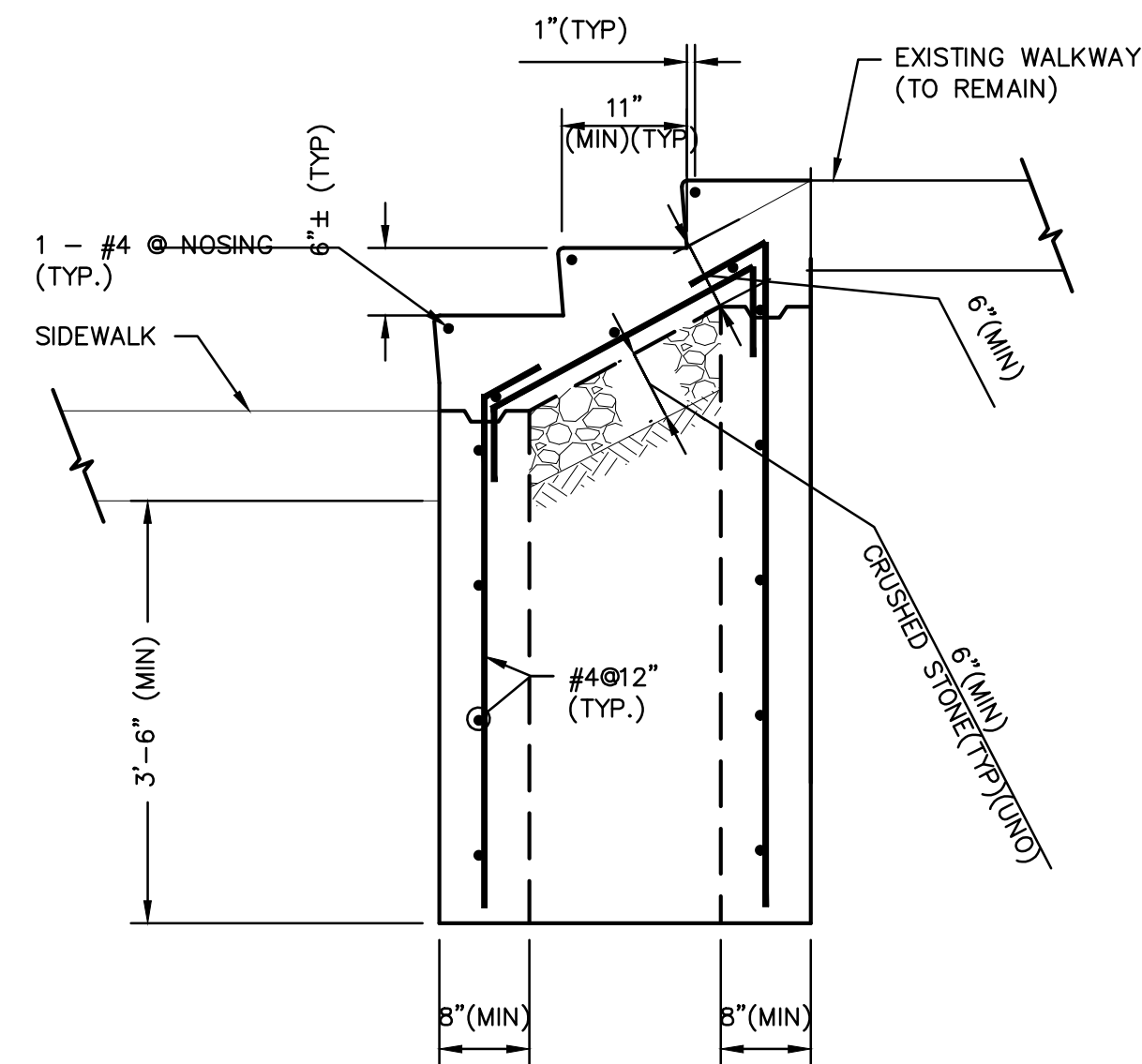
IMPRESSED PREFORMED THERMOPLASTIC PAVEMENT (BRICK PATTERN) SEE SPECIFICATIONS



BITUMINOUS CONCRETE PAVEMENT, TYP. SEE MULTI-USE PATHWAY STRUCTURE

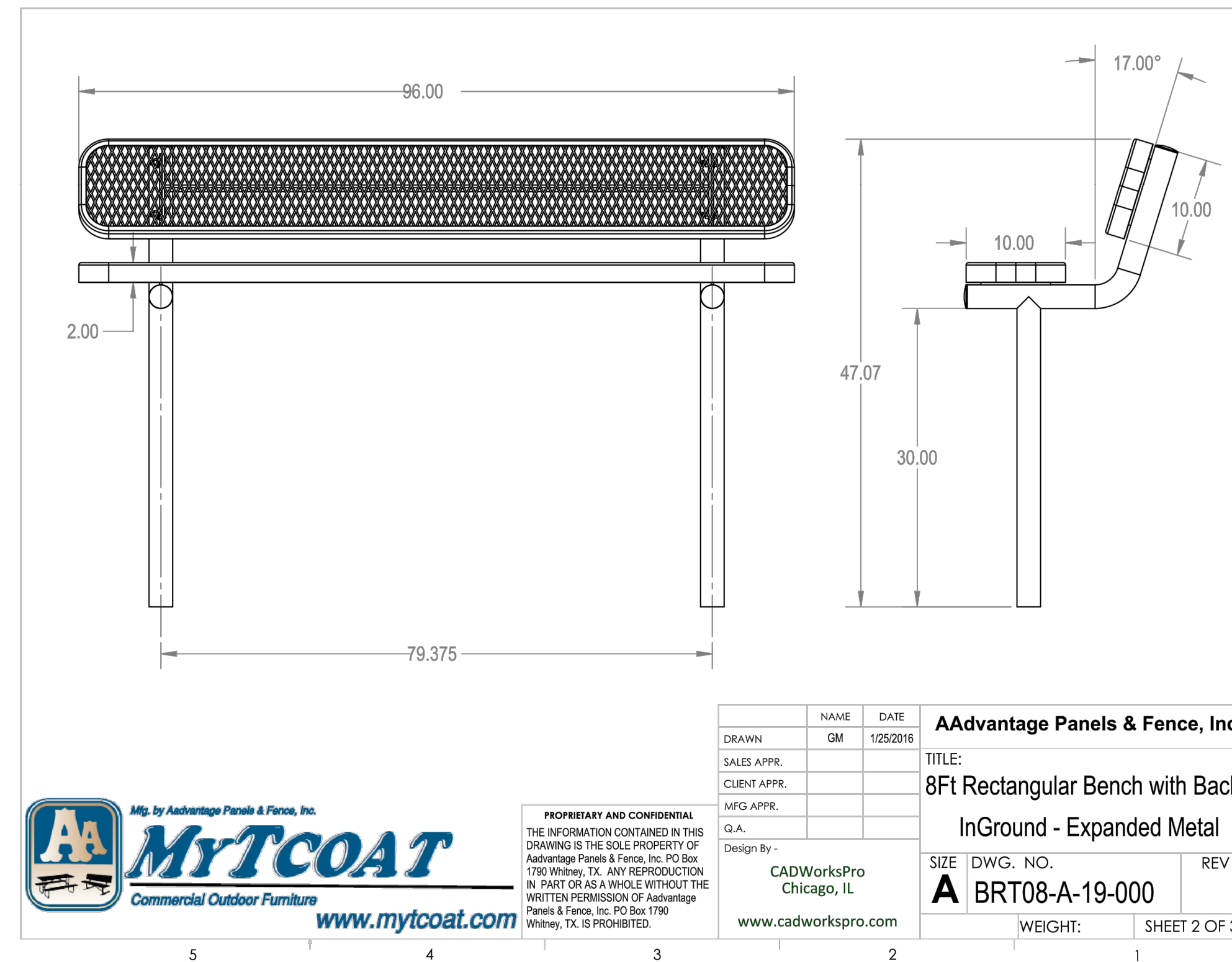
DECORATIVE CROSSWALK

N.T.S.



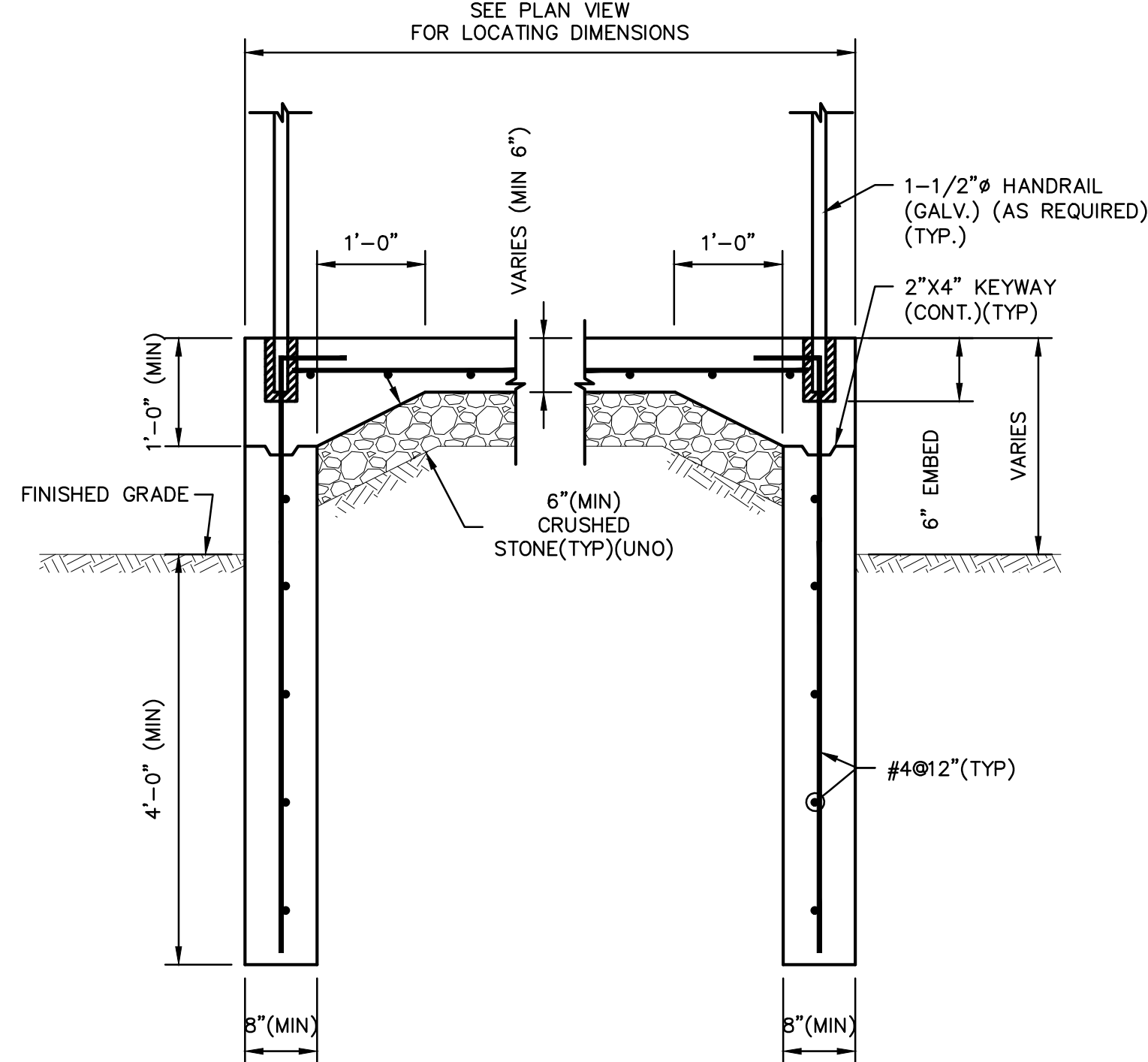
1 TYPICAL STAIR DETAIL

SCALE: 3/4" = 1'-0"



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NAME	DATE
GM	1/25/2016
DRAWN	
SALES APPR.	
CLIENT APPR.	
MFG APPR.	
G.A.	
Design By -	CADWorksPro Chicago, IL
www.cadworkspro.com	
AAdvantage Panels & Fence, Inc.	
TITLE: 8Ft Rectangular Bench with Back	
InGround - Expanded Metal	
SIZE DWG. NO.	REV
A BRT08-A-19-000	
WEIGHT:	SHEET 2 OF 3



2 TYPICAL STAIR SECTION

SCALE: 3/4" = 1'-0"

Project: TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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W&S Project No.: ENG20-1119

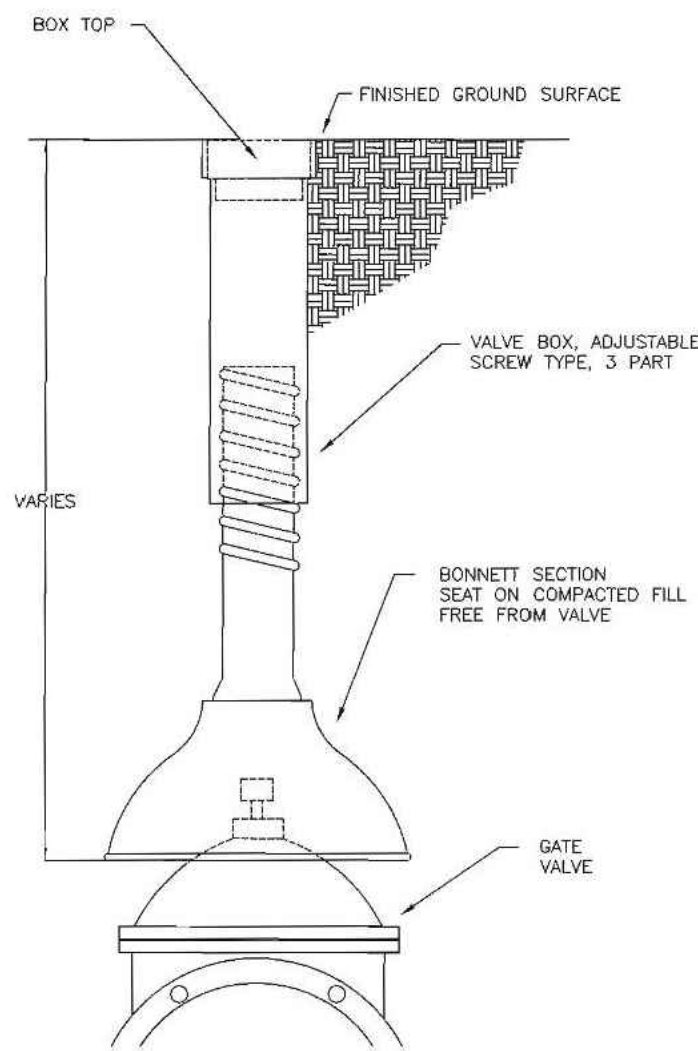
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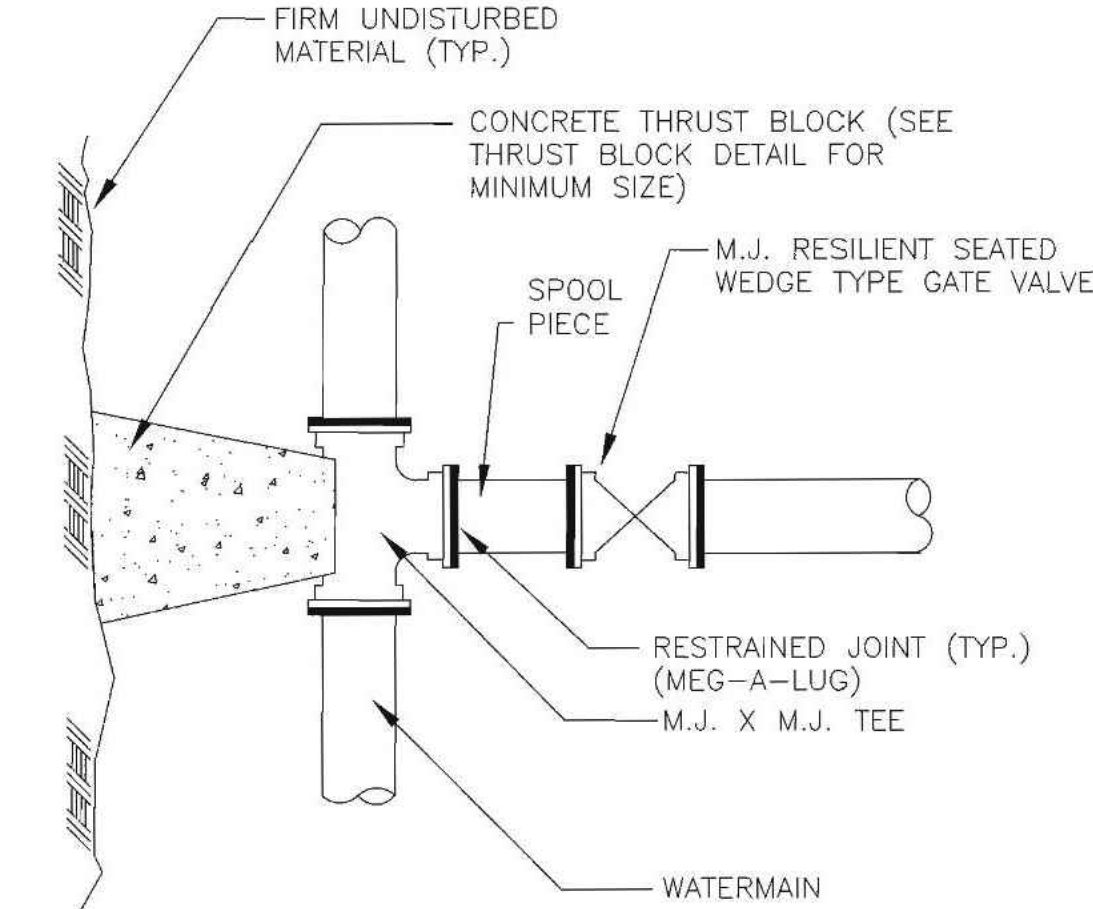
**LANDSCAPE
DETAILS**

Sheet Number:

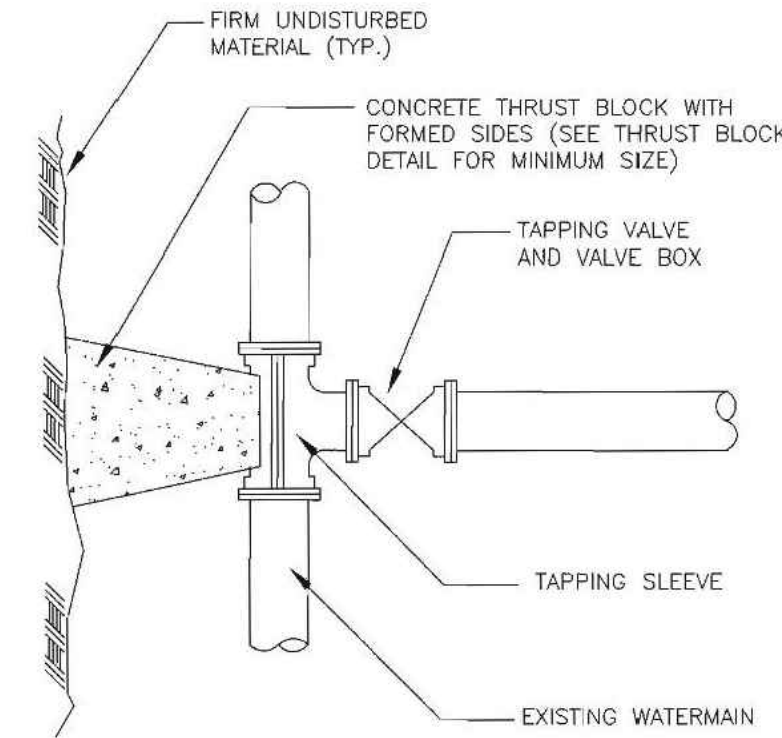
DET-06



GATE BOX DETAIL
NOT TO SCALE



GATE VALVE CONNECTION DETAIL
NOT TO SCALE



NOTE: CONTRACTOR TO VERIFY OUTSIDE DIAMETER OF EXISTING MAIN.

TAPPING SLEEVE & VALVE DETAIL
NOT TO SCALE

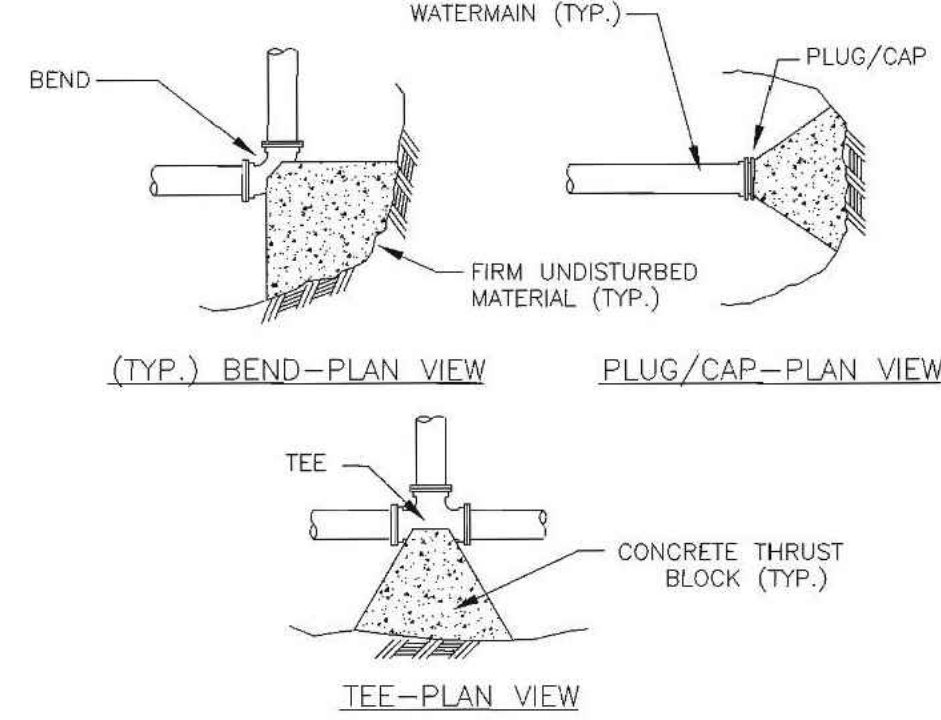
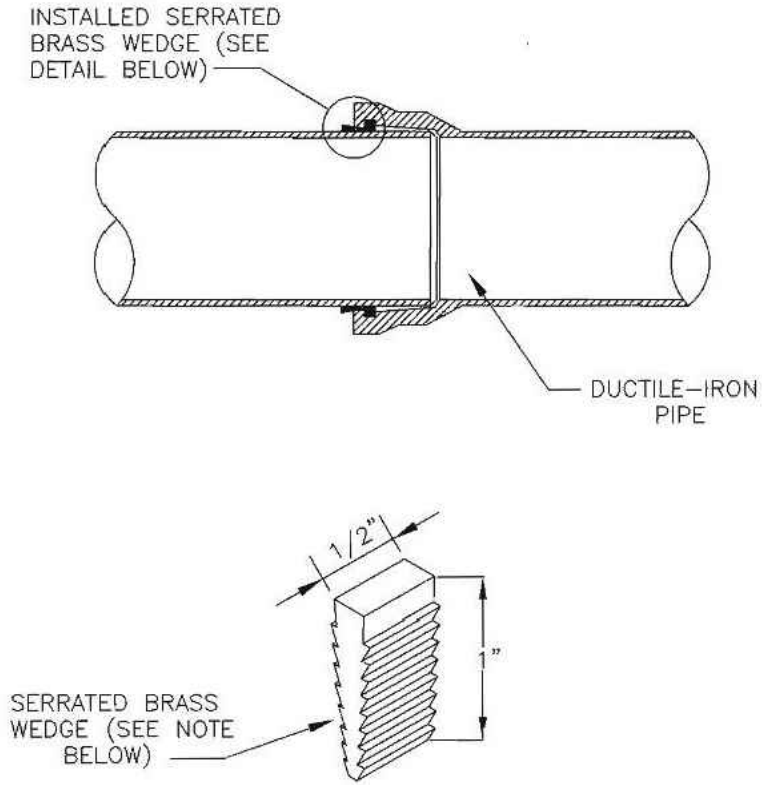


TABLE OF BEARING AREAS (S.F.)			
SIZE OF MAIN (IN.)	BEND (90)	BENDS (45 & UNDER)	TEES, CAPS OR PLUGS
8 & UNDER	6	3	4
10 & 12	12	6	9

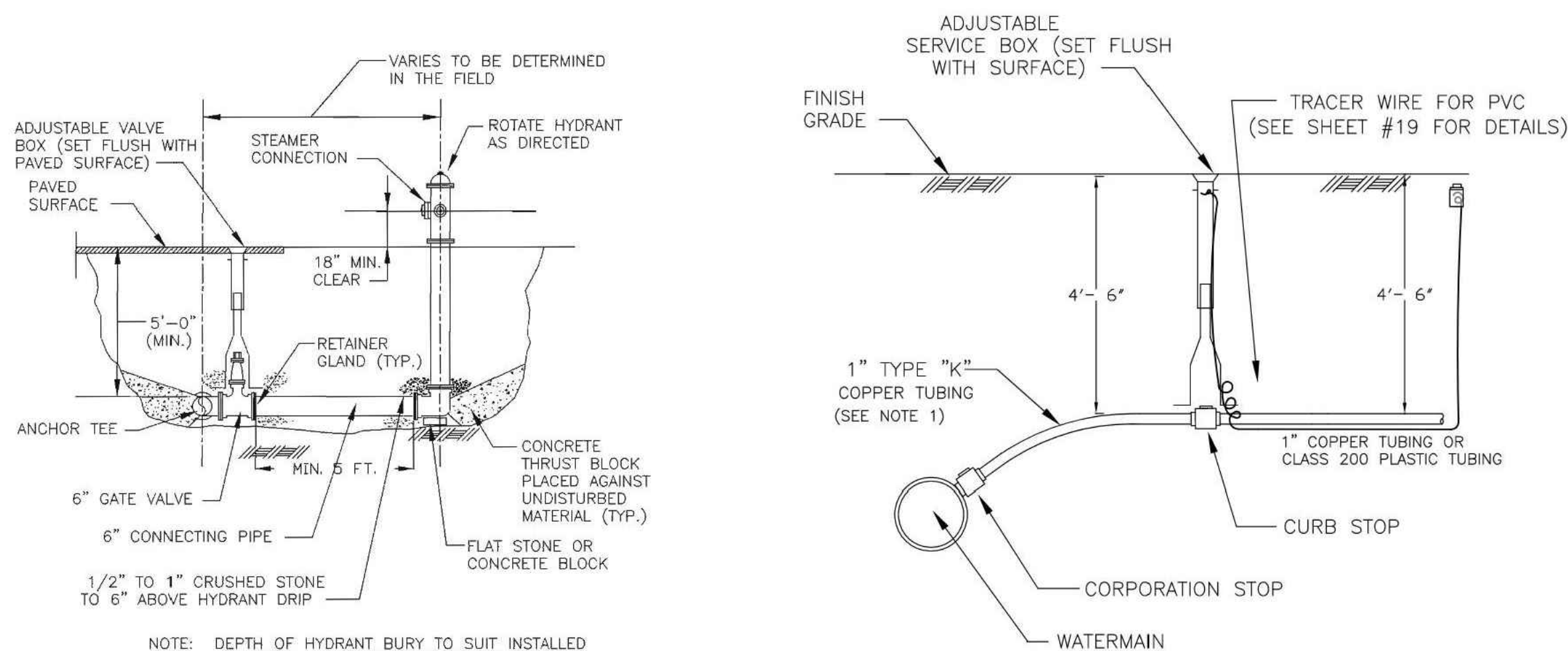
- NOTES: 1. CONCRETE FOR THRUST BLOCKS SHALL HAVE MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT 28 DAYS.
2. THRUST BLOCK BEARING AREAS TOO BE IN ACCORDANCE WITH TABLE, UNLESS DETERMINED OTHERWISE BY THE ENGINEER BECAUSE OF SOIL CONDITIONS.
3. THRUST BLOCK SIDES SHALL BE FORMED WITH PLYWOOD.

THRUST BLOCK DETAILS
NOT TO SCALE



NOTE: BRASS WEDGES ARE TO BE INSTALLED ON ALL DUCTILE-IRON, PUSH-ON PIPING, INCLUDING HYDRANT BRANCHES, ETC., TO PROVIDE FOR ELECTRICAL THAWING. FOR 2" THROUGH 12" PIPE, TWO WEDGES SHALL BE USED PER JOINT; FOR LARGER DIAMETER PIPE FOUR WEDGES SHALL BE USED PER JOINT. EACH WEDGE IS DRIVEN INTO THE OPENING BETWEEN THE PLAIN END AND THE BELL UNTIL SNUG. WHEN FOUR WEDGES ARE USED, THEY ARE INSTALLED SIDE BY SIDE, IN PAIRS.

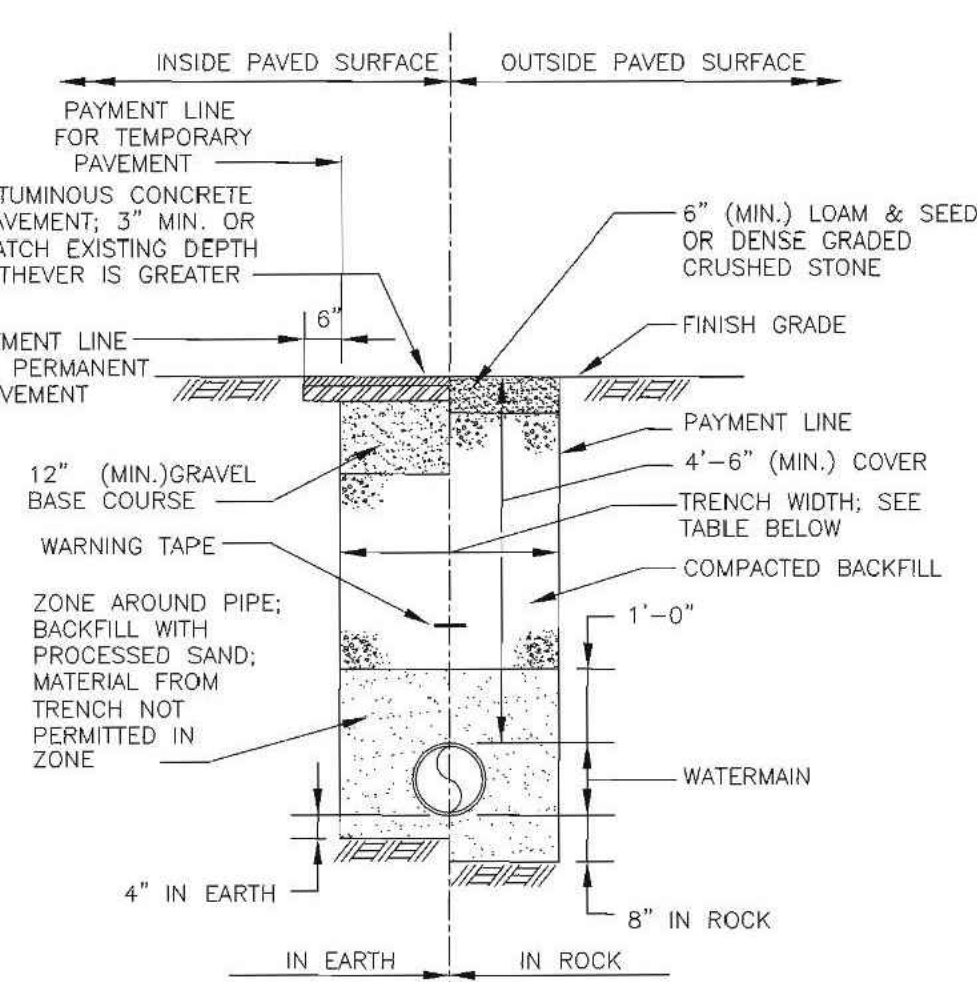
SERRATED BRASS WEDGE DETAIL
NOT TO SCALE



NOTE: DEPTH OF HYDRANT BURY TO SUIT INSTALLED DEPTH OF COVER OVER WATERMAIN.

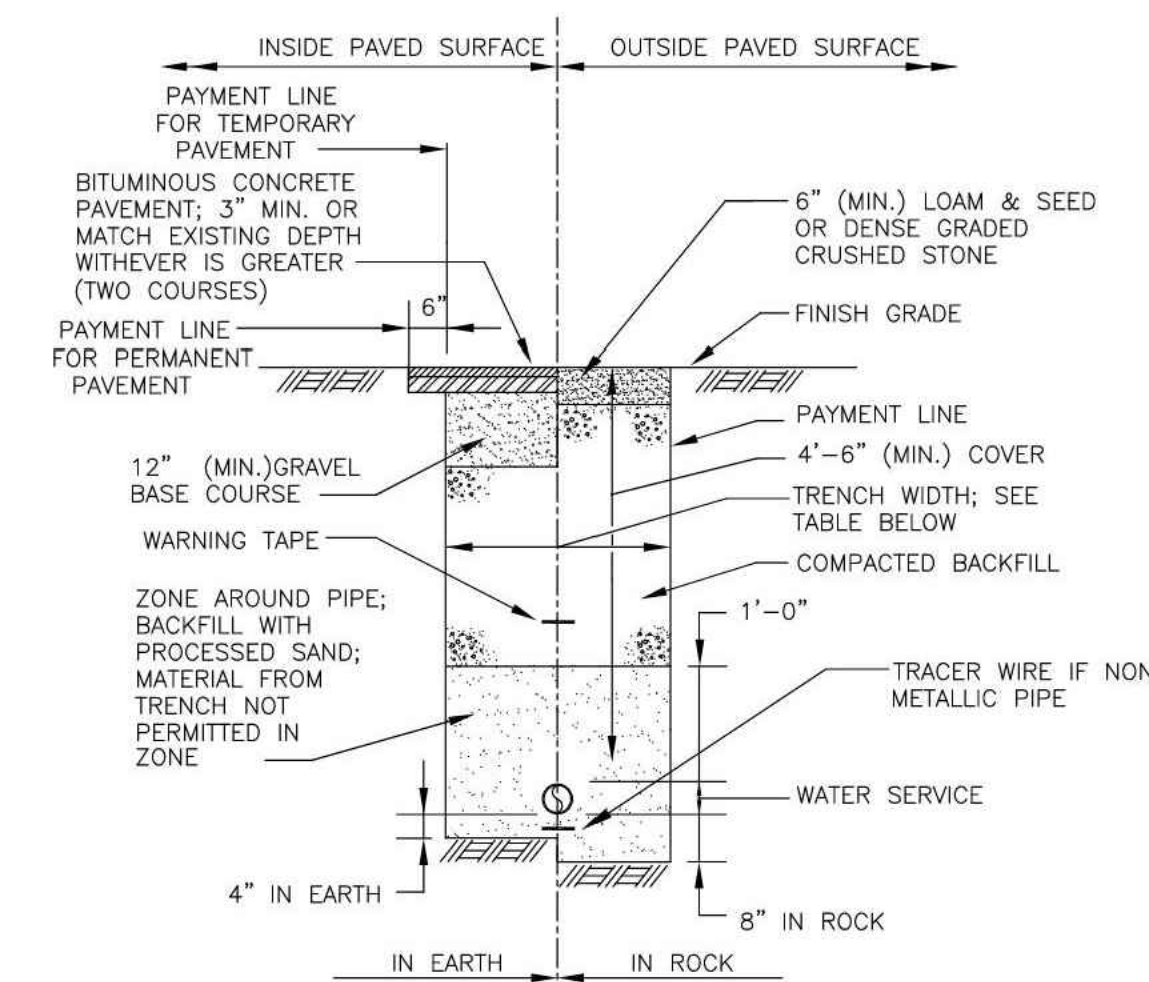
HYDRANT ASSEMBLY DETAIL
NOT TO SCALE

1. MINIMUM SIZE OF ANY WATER SERVICE INSTALLED FROM MAIN TO PROPERTY LINE SHALL BE 1".
 2. TYPE "K" COPPER TUBING MUST BE INSTALLED FROM MAIN TO PROPERTY LINE.
 3. TYPE "K" COPPER TUBING OR CLASS 200 PLASTIC TUBING MUST BE INSTALLED FROM PROPERTY LINE TO BUILDING WITH TRACER WIRE (SEE SHEET 19 FOR DETAILS).
 4. METER PIT MAY REPLACE CURB STOP, BOX, AND HOUSE METER IN BASEMENT.
 5. ALL JOINTS TO METER SHALL BE FLARED OR COMPRESSION TYPE.
 6. BUILDINGS WITHOUT BASEMENTS MUST HAVE EXTERIOR METER PITS.
 7. SERVICE LINES MUST BE CALLED INSIDE FOUNDATION WALL SLEEVE.
 8. BACKFILL: HAND-FILL WITH SAND OR EQUAL TO 12" ABOVE PIPE.
 9. TAPPED COLLARS MAY BE USED FOR SERVICE CONNECTIONS.
 10. ELECTRICAL GROUNDING WILL NOT BE PERMITTED ON ANY PORTION OF AN EXISTING COPPER WATER SERVICE PARTIALLY REPLACED BY PLASTIC PIPE.
- * Pipe rating shall be class 200 water service pipe manufactured to meet or exceed requirements of water service tubing Class 200 (ASTM Standard D-2737 CTS-00). The pipe shall bear the emblem of National Sanitation Foundation for use in potable water systems. Class 200 water service pipe must be approved by I.A.P.M.D. for use as underground water service pipe and shall bear the seal of the Uniform Plumbing Code. The pipe must conform to the National Bureau of Standards Product Standards Requirements.
- *(CTS-00 Indicates Copper Tubing Size, Outside Diameter)



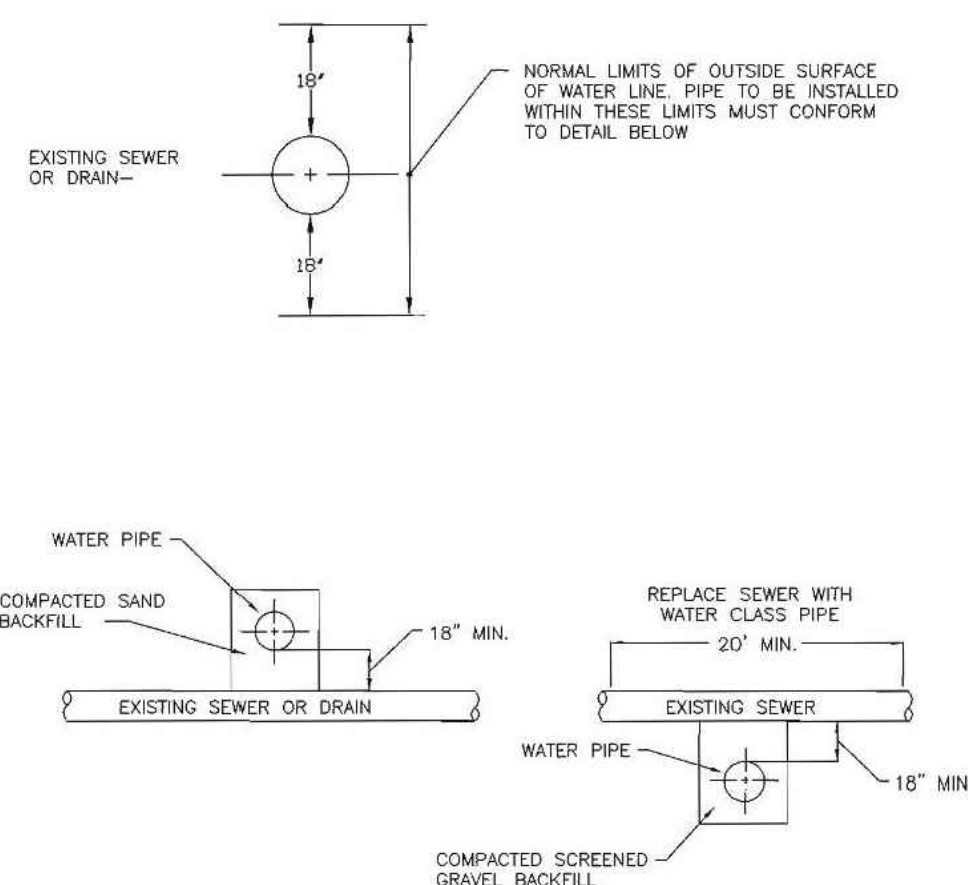
NOTE: PAYMENT FOR PAVEMENT INSTALLED BEYOND PAYMENT LINE WILL BE MADE ONLY WHEN SUCH INSTALLATION IS APPROVED BY THE ENGINEER.

WATERMAIN TRENCH DETAIL
NOT TO SCALE



NOTE: PAYMENT FOR PAVEMENT INSTALLED BEYOND PAYMENT LINE WILL BE MADE ONLY WHEN SUCH INSTALLATION IS APPROVED BY THE ENGINEER.

WATER SERVICE TRENCH DETAIL
NOT TO SCALE



TYPICAL SEWER AND DRAIN CROSSING
NOT TO SCALE

Project: TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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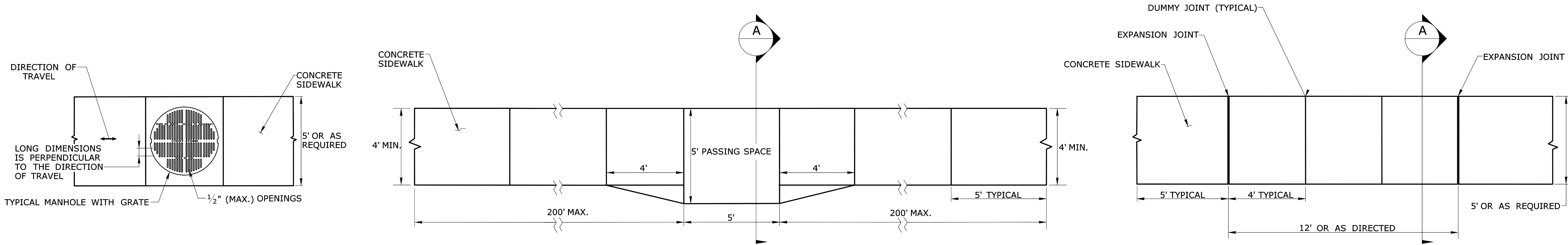
Drawing Title:

GROTON UTILITY
DETAILS

Sheet Number:

DET-07

- GENERAL NOTES:**
1. SEE CONCRETE SIDEWALK RAMP GUIDE SHEETS FOR PEDESTRIAN RAMP TYPES.
 2. ALL CURBING SHALL BE INSTALLED AS EITHER PRECAST OR CAST IN PLACE AS DIRECTED.



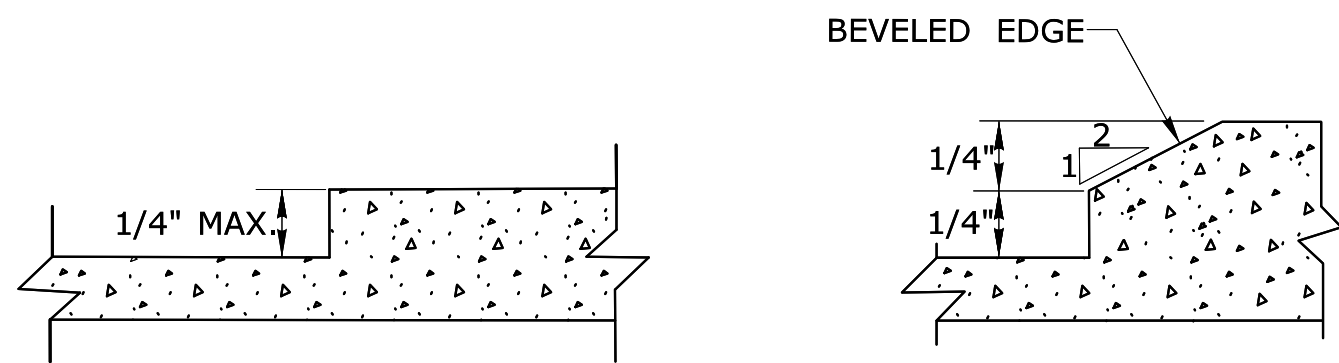
**PEDESTRIAN ACCESS ROUTE
OVER A MANHOLE WITH GRATE**

1. HORIZONTAL OPENINGS IN GRATES AND JOINTS MUST NOT BE MORE THAN $\frac{1}{2}$ INCH
2. ELONGATED OPENINGS IN GRATES MUST BE PLACED SO THAT THE LONG DIMENSION IS PERPENDICULAR TO THE DIRECTION OF TRAVEL

**5' PASSING SPACE FOR 4' WIDE SIDEWALK
PLAN**

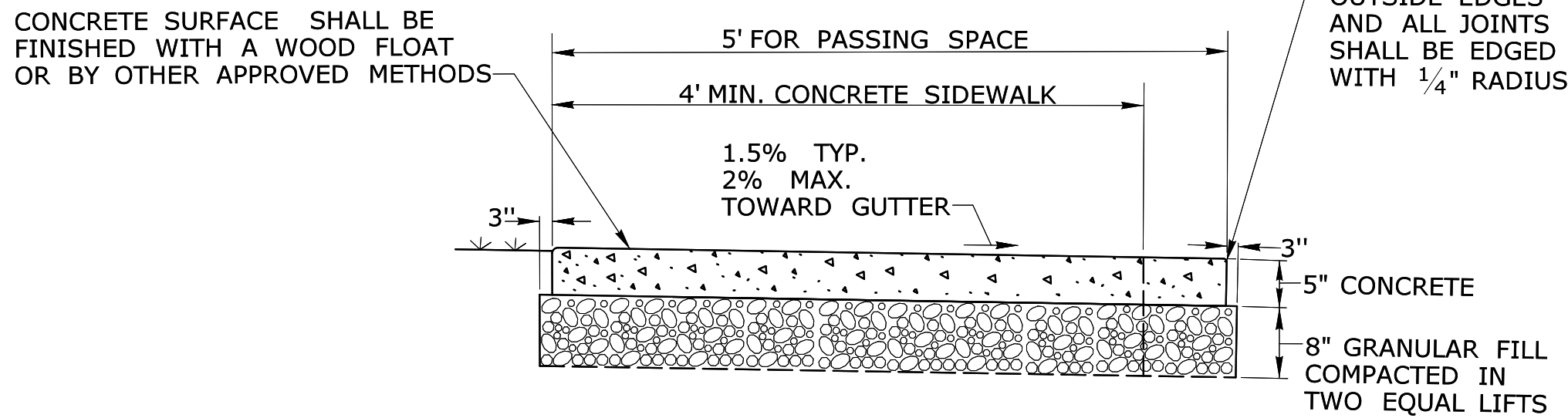
PASSING SPACES SHALL BE PROVIDED AT INTERVALS OF 200' MAXIMUM FOR SIDEWALKS LESS THAN 5' IN WIDTH

**5' WIDE SIDEWALK
PLAN**



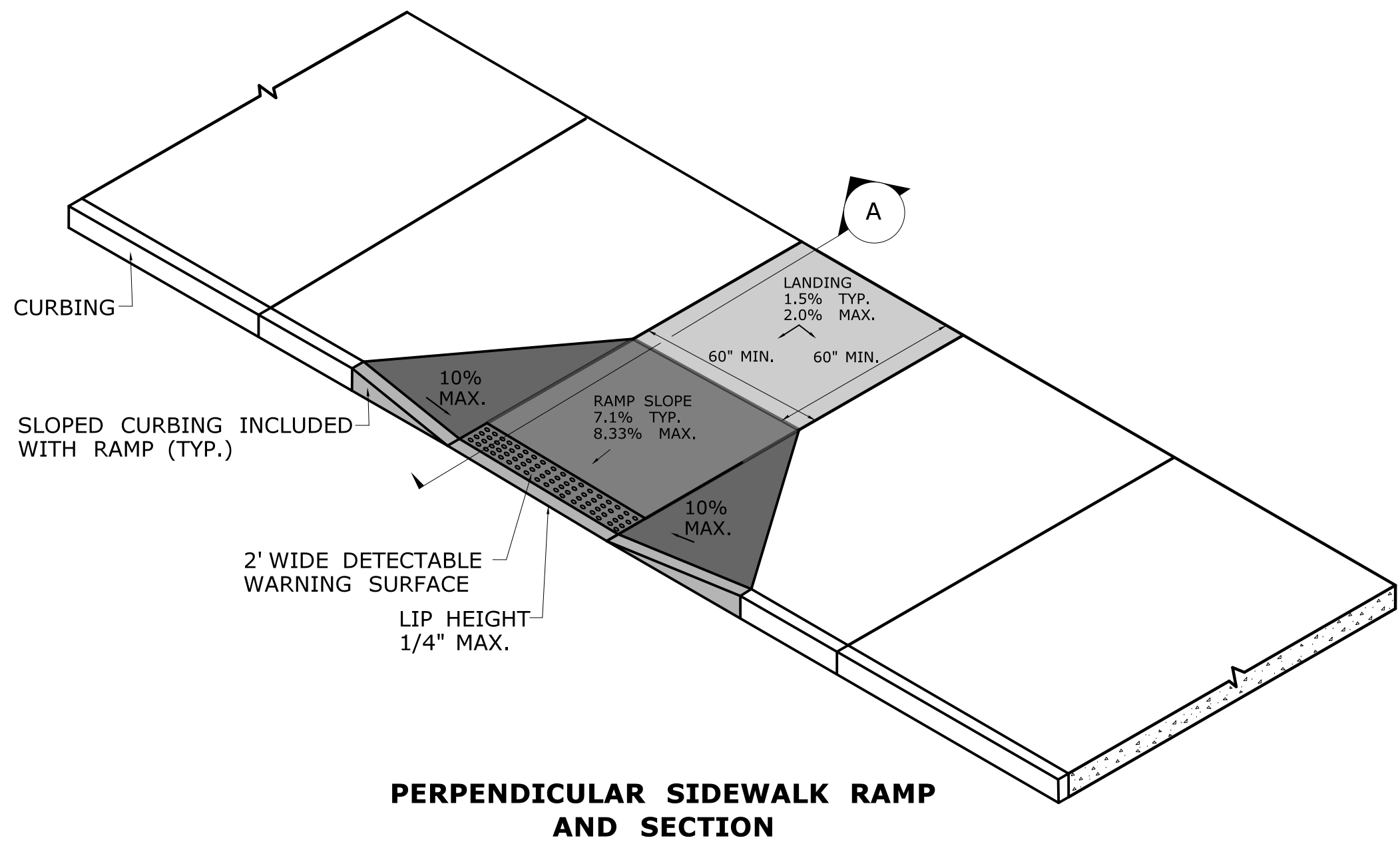
VERTICAL SURFACE DISCONTINUITIES

VERTICAL SURFACE DISCONTINUITIES MUST BE BEVELED TO A HEIGHT NOT GREATER THAN $\frac{1}{4}$ INCH. THE BEVEL MUST BE THE ENTIRE WIDTH OF THE DISCONTINUITY.

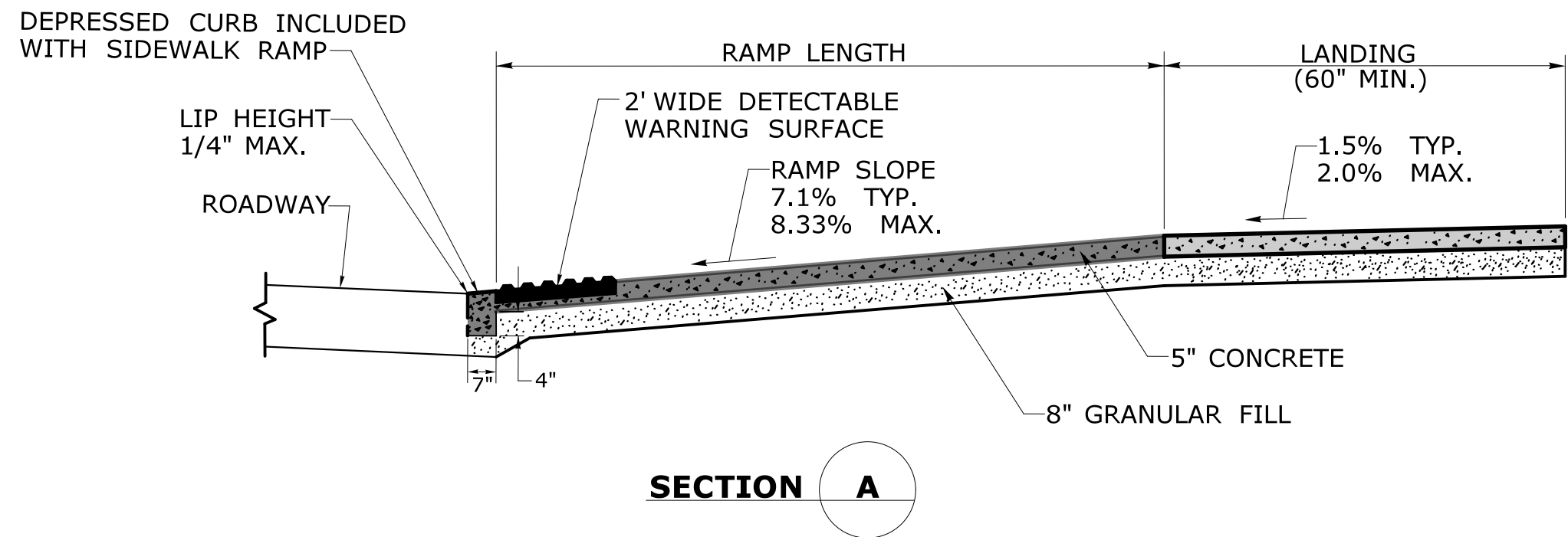


5' PASSING SPACE FOR 4' WIDE SIDEWALK

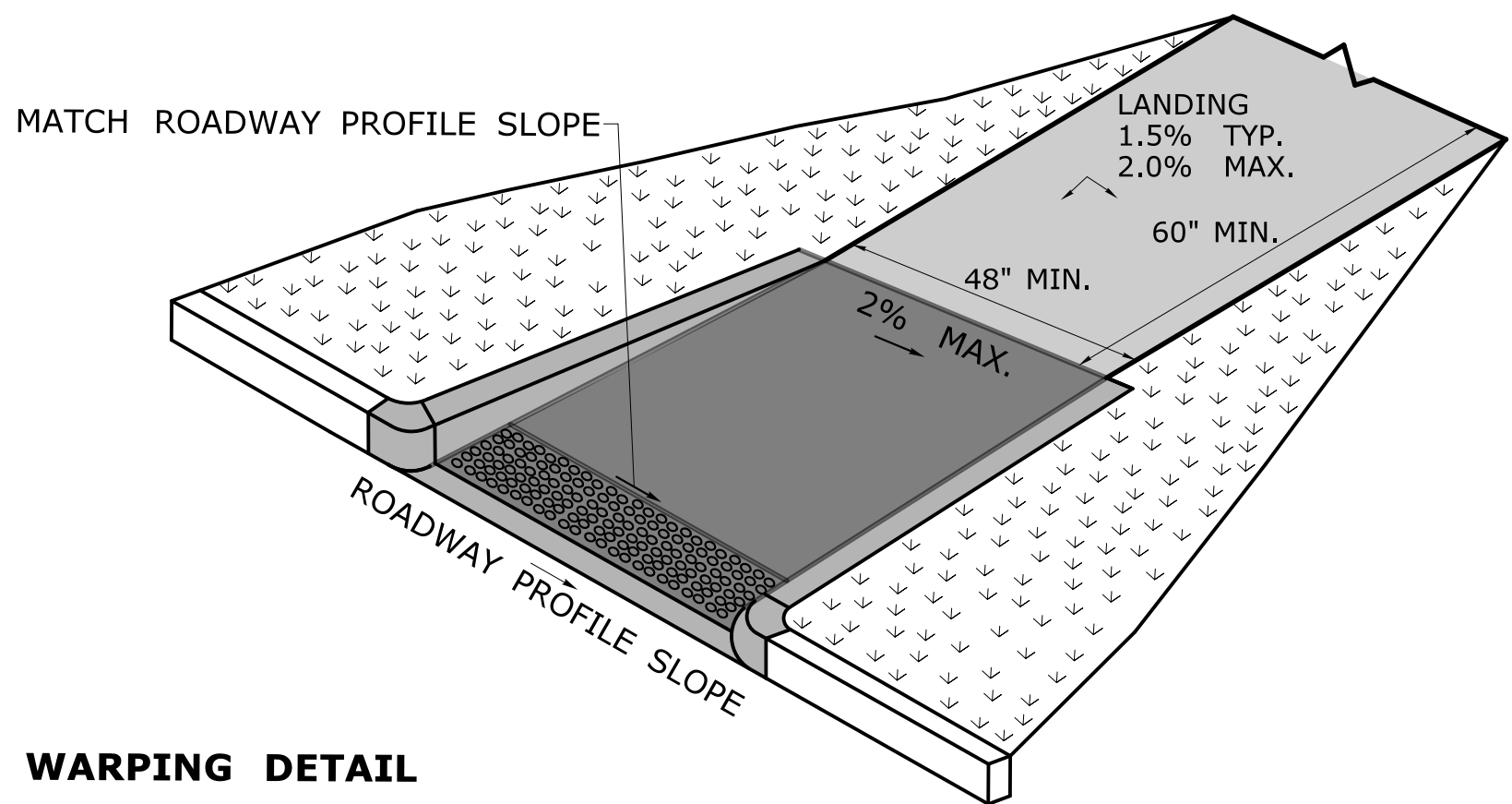
SECTION A



PERPENDICULAR SIDEWALK RAMP
AND SECTION

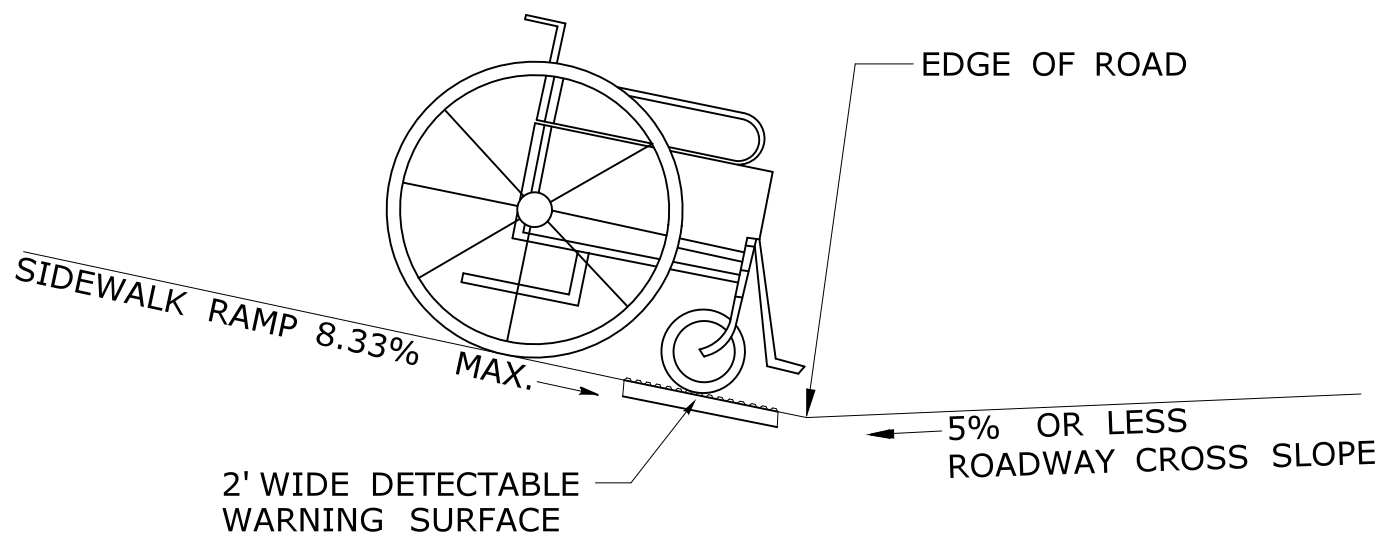


SECTION A

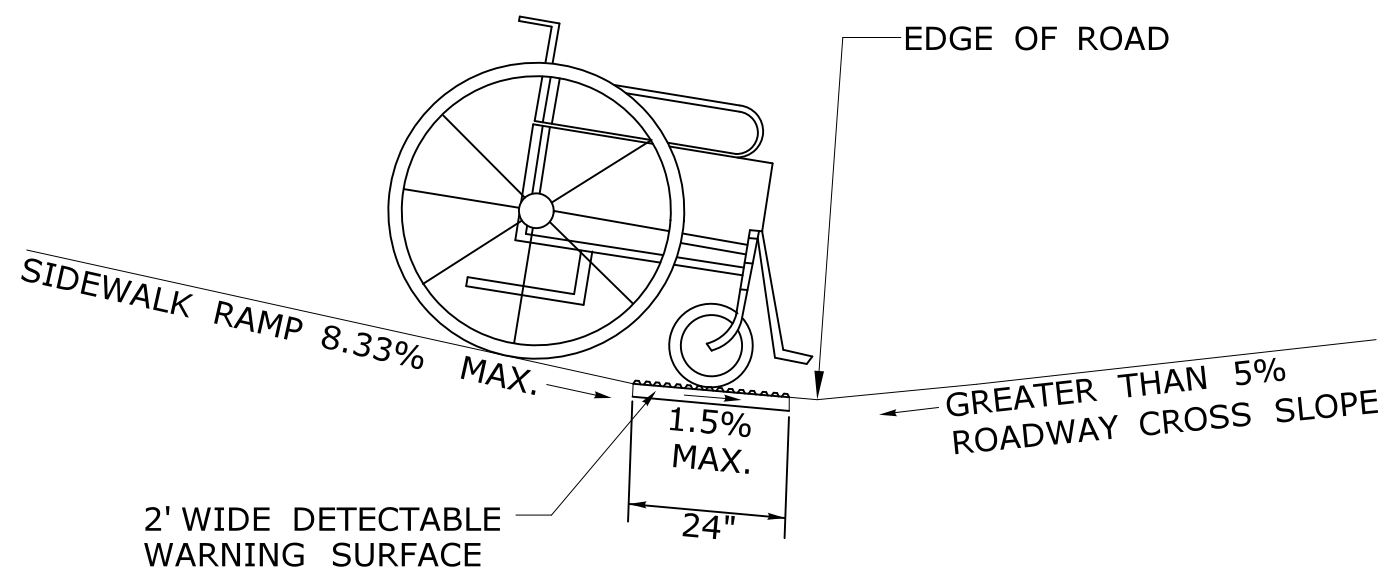


RAMP WARPING DETAIL

1. TRANSITION SIDEWALK RAMP TO MATCH ROADWAY PROFILE AS GRADUALLY AS POSSIBLE. DO NOT EXCEED 3 % PER FOOT CROSS SLOPE RATE OF CHANGE WHEN TRANSITIONING TO ROADWAY PROFILE.
2. COMPLETE TRANSITION TO ROADWAY PROFILE BEHIND DETECTABLE WARNING SURFACE.



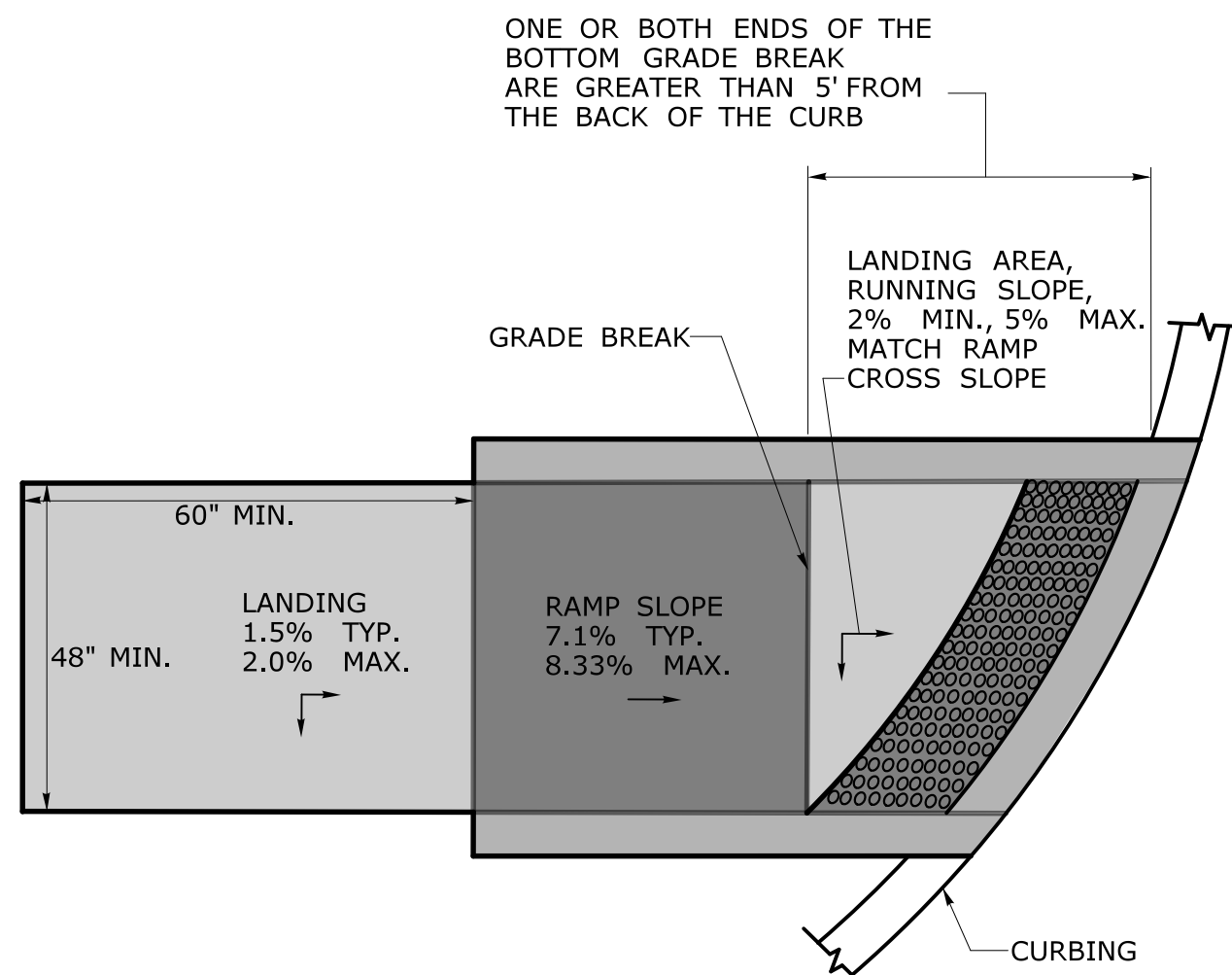
SIDEWALK RAMP GRADE AT
ROADWAY CROSS SLOPE OF 5% OR LESS
GUTTER COUNTER SLOPE



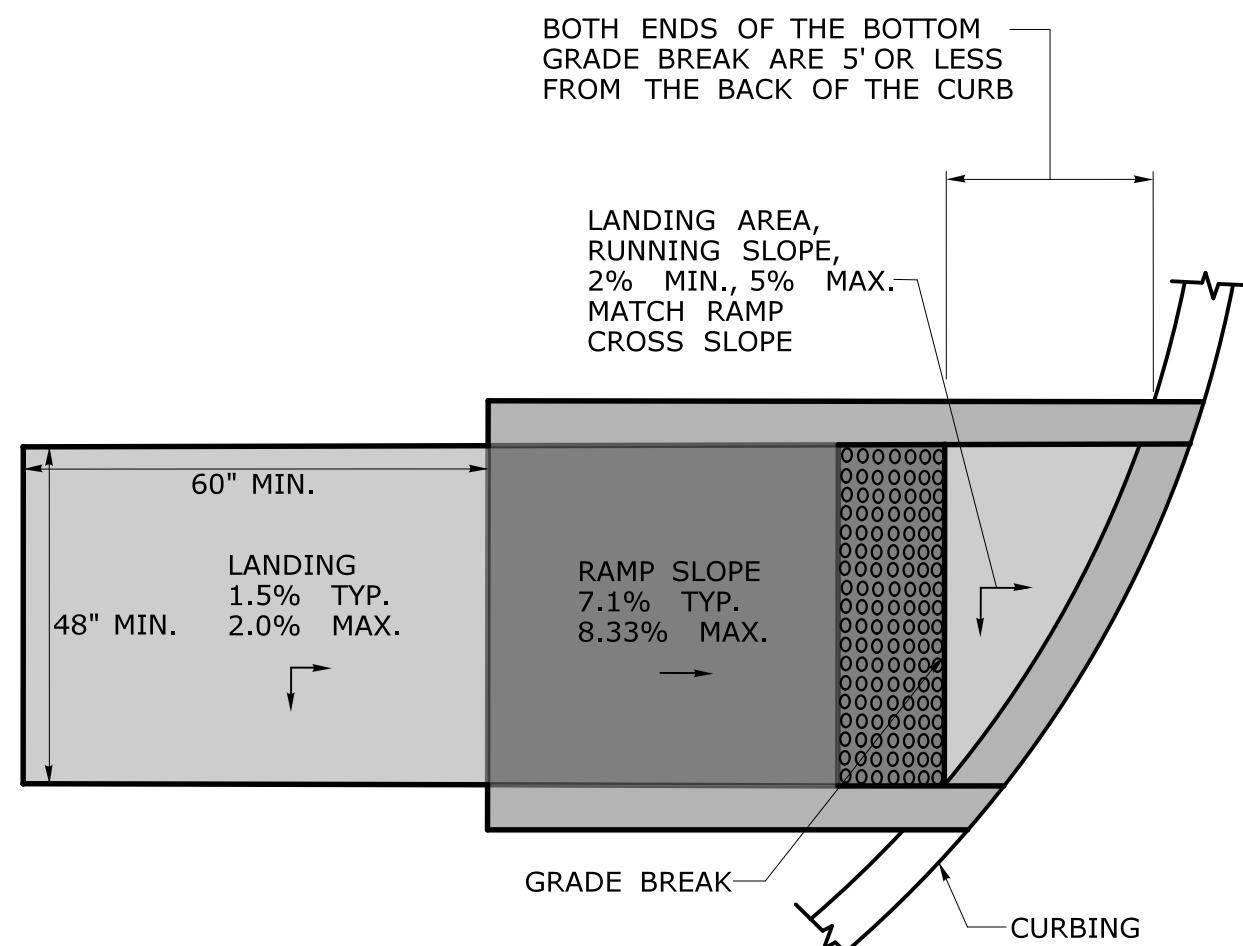
SIDEWALK RAMP GRADE AT
ROADWAY CROSS SLOPE OF GREATER THAN 5%
GUTTER COUNTER SLOPE

GENERAL NOTES:

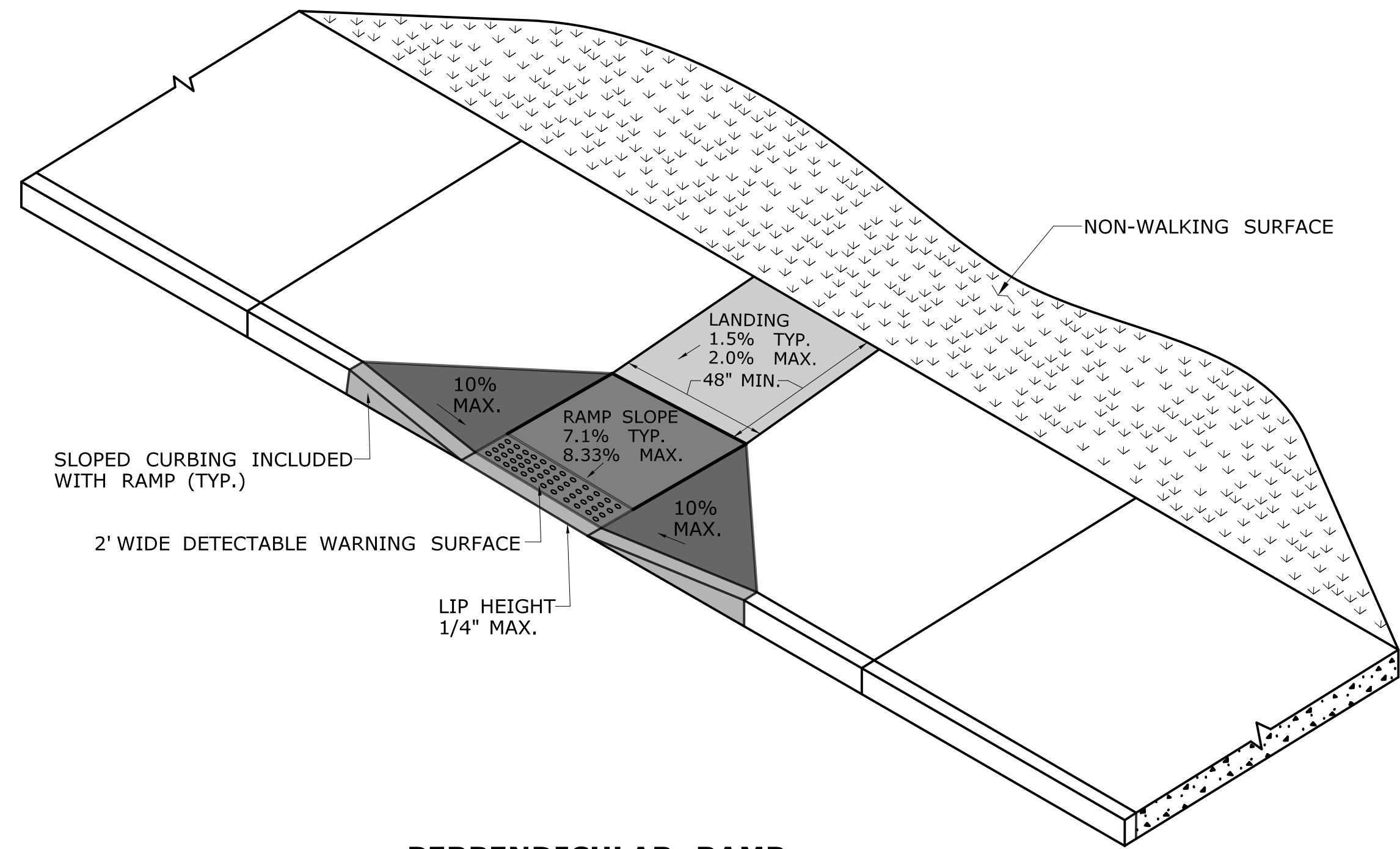
1. SIDEWALK RAMPs SHALL HAVE A COARSE BROOM FINISH TRANSVERSE TO THE SLOPE OF THE RAMP.
2. VERTICAL SURFACE DISCONTINUITIES AT JOINTS SHALL NOT EXCEED 1/4 INCH.
3. REMOVAL OF EXISTING SIDEWALK FOR NEW RAMP INSTALLATIONS SHALL BE TO THE NEAREST EXPANSION OR CONTRACTION JOINT.
4. THE RUNNING SLOPE OF THE CURB RAMP SHALL BE 8.33 PERCENT MAXIMUM BUT SHALL NOT REQUIRE THE RAMP LENGTH TO EXCEED 15 FEET.



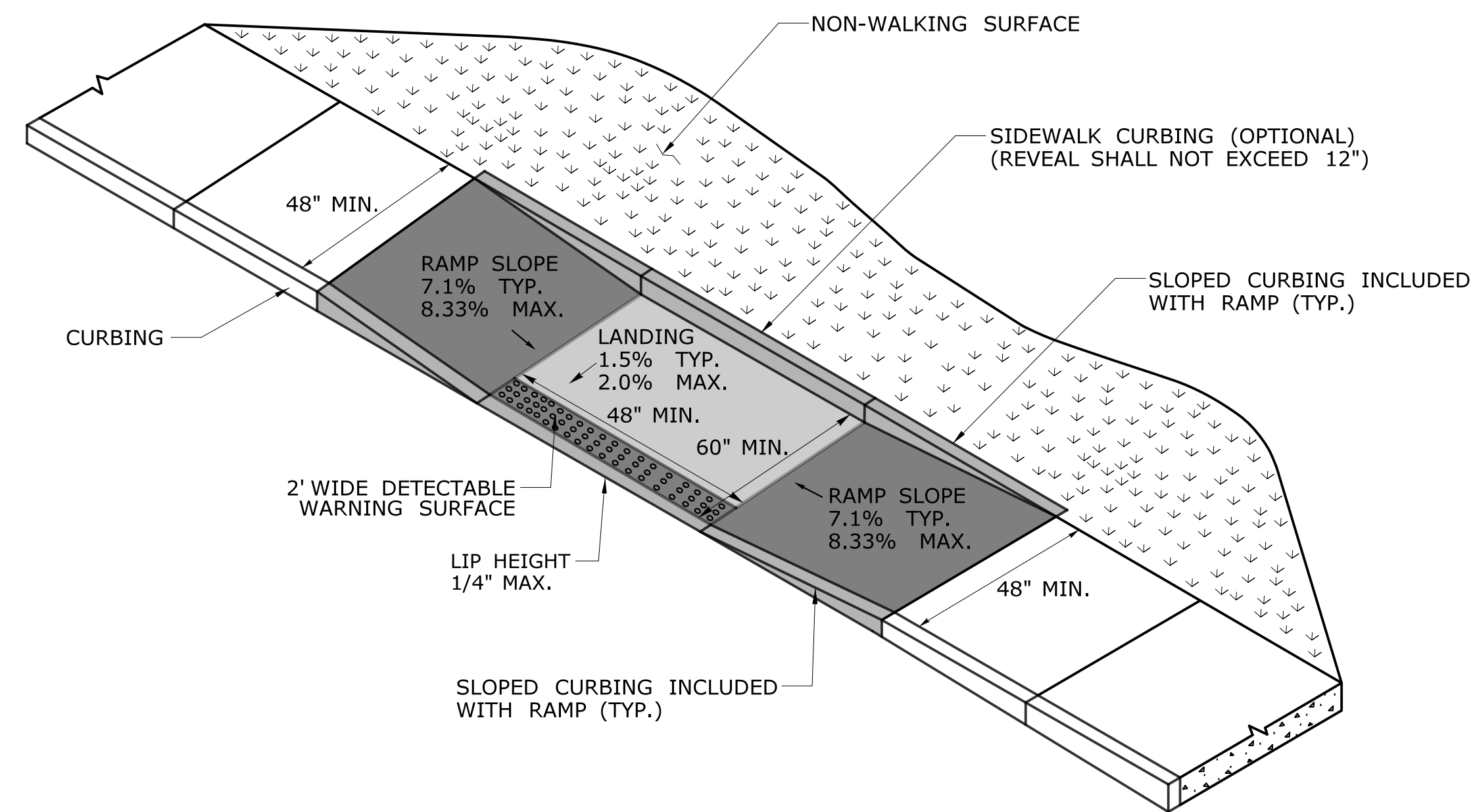
GRADE BREAK GREATER THAN 5'
DETECTABLE WARNING SURFACE LOCATION



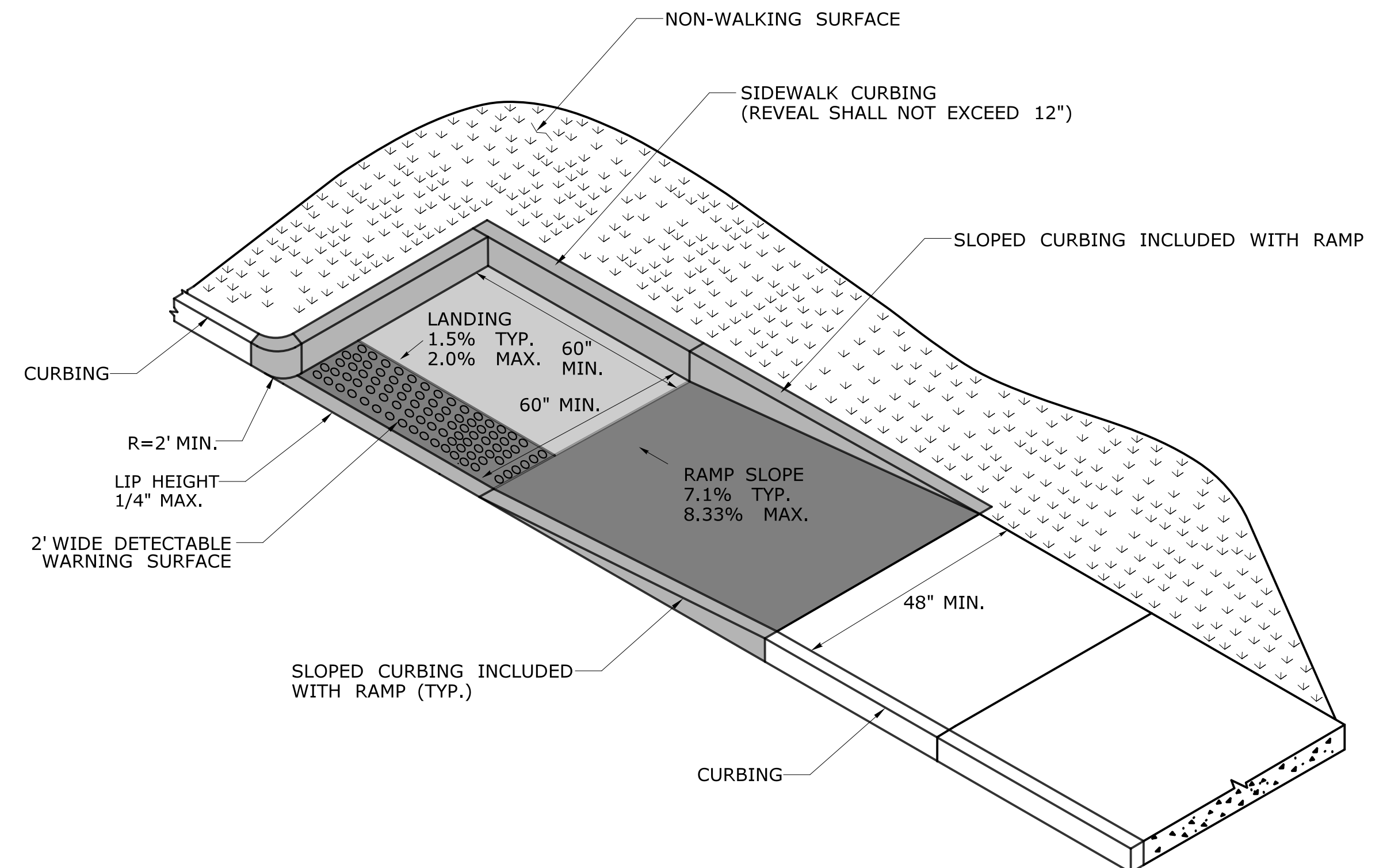
GRADE BREAK OF 5' OR LESS
DETECTABLE WARNING SURFACE LOCATION



**PERPENDICULAR RAMP
WITH 48" BY-PASS
(TYPE 8)**

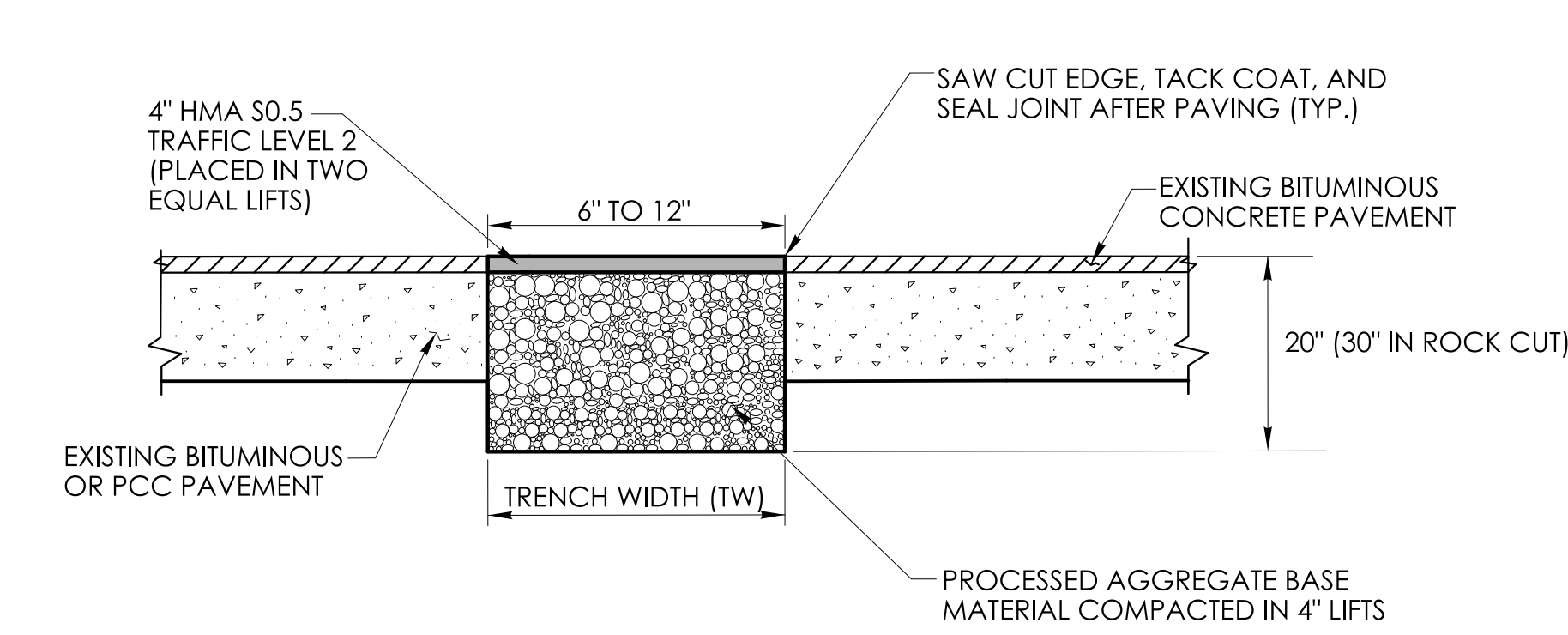


**PARALLEL RAMP WITHOUT
NON-WALKING SURFACE
(TYPE 9)**

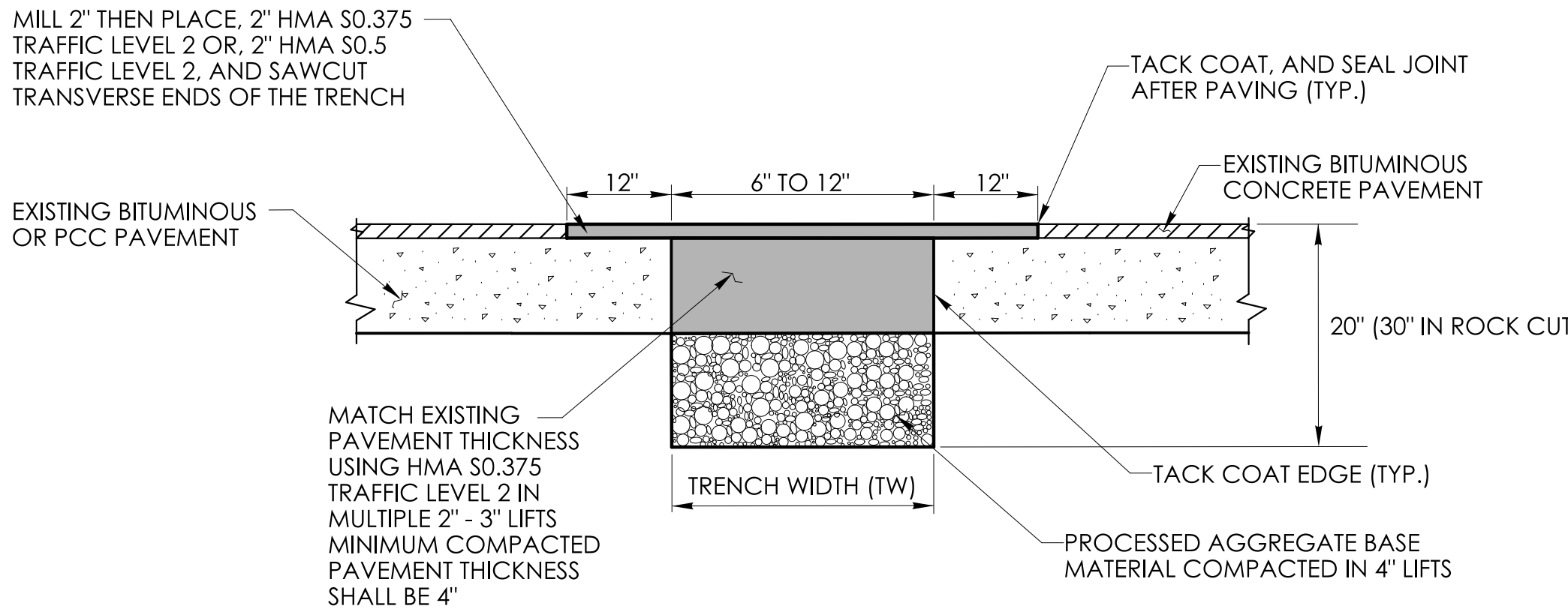


**PARALLEL RAMP
WITH LANDING AT BOTTOM ON CORNER
(TYPE 10)**

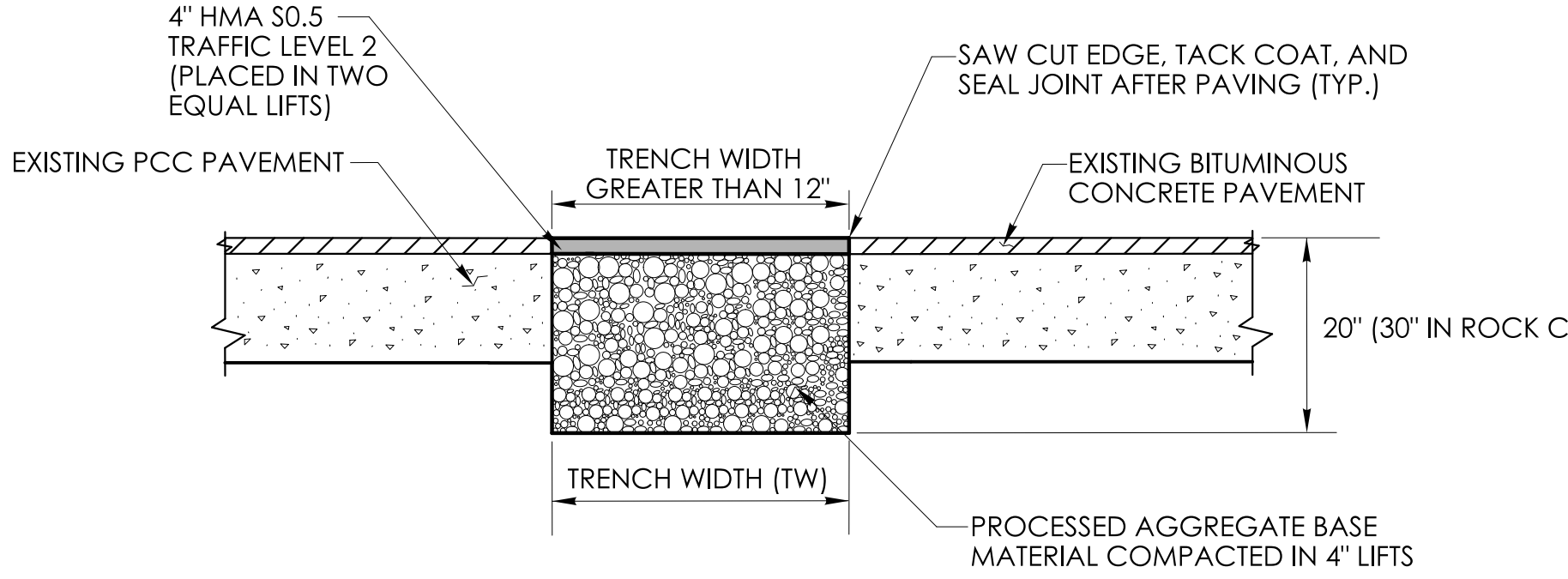
- GENERAL NOTES:
1. LONGITUDINAL TRENCHING FOR JOINTED CONCRETE PAVEMENT:
- A. IF THE LONGITUDINAL TRENCH FALLS BETWEEN THE SLAB CENTERLINE AND THE EDGE OF SLAB, REMOVE CONCRETE AND BITUMINOUS CONCRETE PAVEMENT FROM THE TRENCH EDGE TO THE EDGE OF ROAD. IF THE LONGITUDINAL TRENCH FALLS BETWEEN THE LONGITUDINAL JOINT AND THE SLAB CENTERLINE, REMOVE THE ENTIRE CONCRETE SLAB AND BITUMINOUS CONCRETE PAVEMENT TO THE EDGE OF ROAD. IN EITHER CASE REBUILD WITH THE FOLLOWING:
- a. PLACE HMA S1.0 TRAFFIC LEVEL 2 IN TWO EQUAL 4" - 5" LIFTS TO MATCH EXISTING CONCRETE PAVEMENT THICKNESS
- b. PLACE HMA S0.5 TRAFFIC LEVEL 2 IN 2" - 3" LIFTS TO MATCH EXISTING BITUMINOUS CONCRETE PAVEMENT THICKNESS, WITH THE FINAL LIFT BEING 2"
2. TRANSVERSE TRENCHING FOR JOINTED CONCRETE PAVEMENT:
- | TOTAL SLAB LENGTH (L) | MIN. LENGTH REMAINING |
|-----------------------|--------------------------|
| 40' OR LONGER | 1/4 L |
| 15' - 40' | 10' |
| 15' OR SHORTER | REBUILD TO NEAREST JOINT |
- A. FOR TRANSVERSE TRENCHES, THE MINIMUM SLAB LENGTH AS SHOWN IN TABLE 1 SHALL BE LEFT IN PLACE TO THE NEAREST TRANSVERSE JOINT. IF THIS CRITERIA CANNOT BE MET, THE EXISTING SLAB AREA FROM THE TRENCH EDGE TO THE NEAREST TRANSVERSE JOINT SHALL BE REMOVED AND REBUILT AS FOLLOWS:
- a. PLACE HMA S1.0 TRAFFIC LEVEL 2 IN TWO EQUAL 4" - 5" LIFTS TO MATCH EXISTING CONCRETE PAVEMENT THICKNESS
- b. PLACE HMA S0.5 TRAFFIC LEVEL 2 IN 2" - 3" LIFTS TO MATCH EXISTING BITUMINOUS CONCRETE PAVEMENT THICKNESS, WITH THE FINAL LIFT BEING 2"



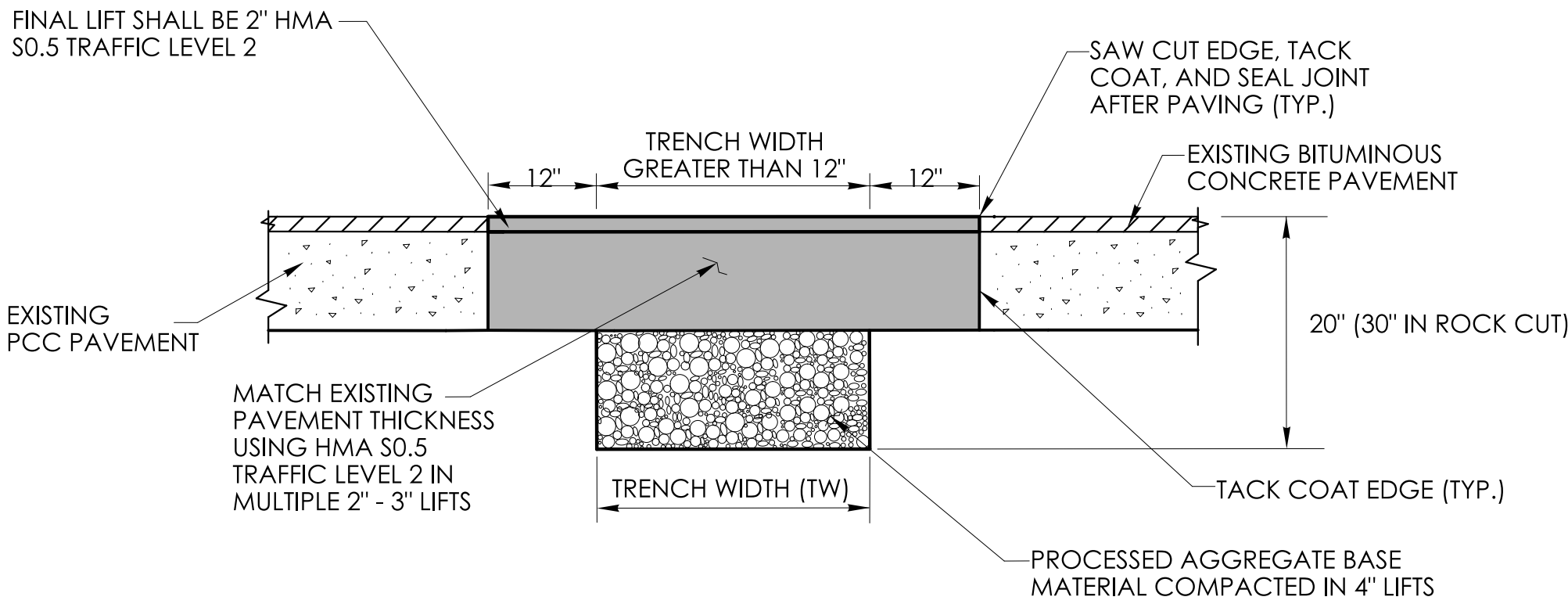
TEMPORARY PAVEMENT - FOR NARROW TRENCH
THROUGH BITUMINOUS CONCRETE OR
OVERLAID PORTLAND CEMENT CONCRETE (PCC)
(TRENCH WIDTH BETWEEN 6" AND 12")



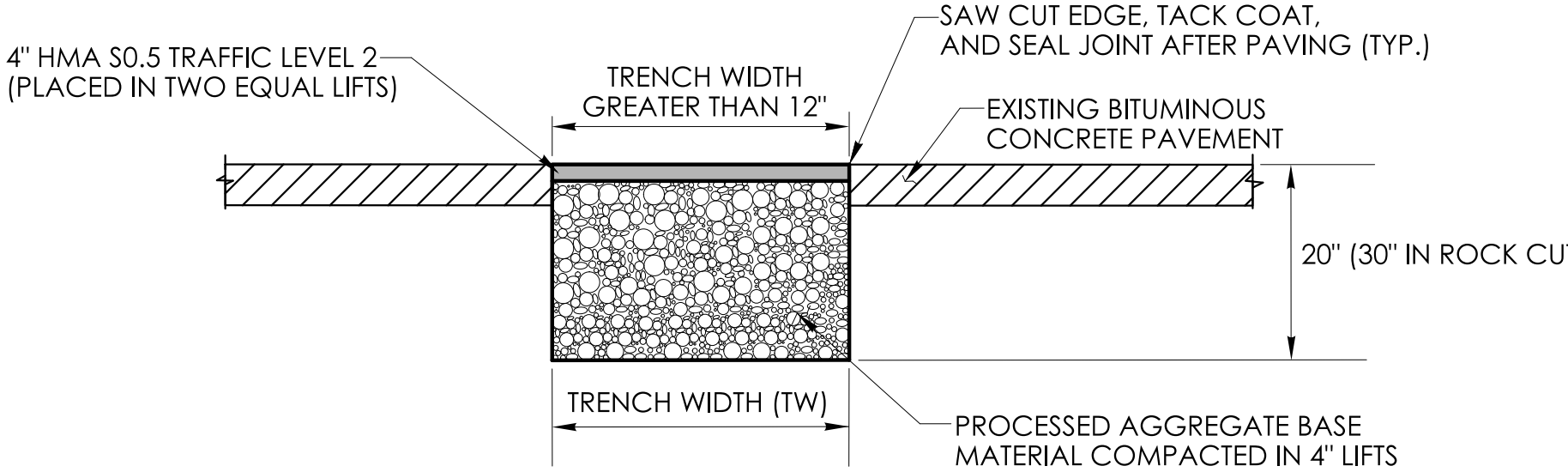
PERMANENT PAVEMENT - FOR NARROW TRENCH
THROUGH BITUMINOUS CONCRETE
OR OVERLAID PORTLAND CEMENT CONCRETE (PCC)
(TRENCH WIDTH BETWEEN 6" AND 12")



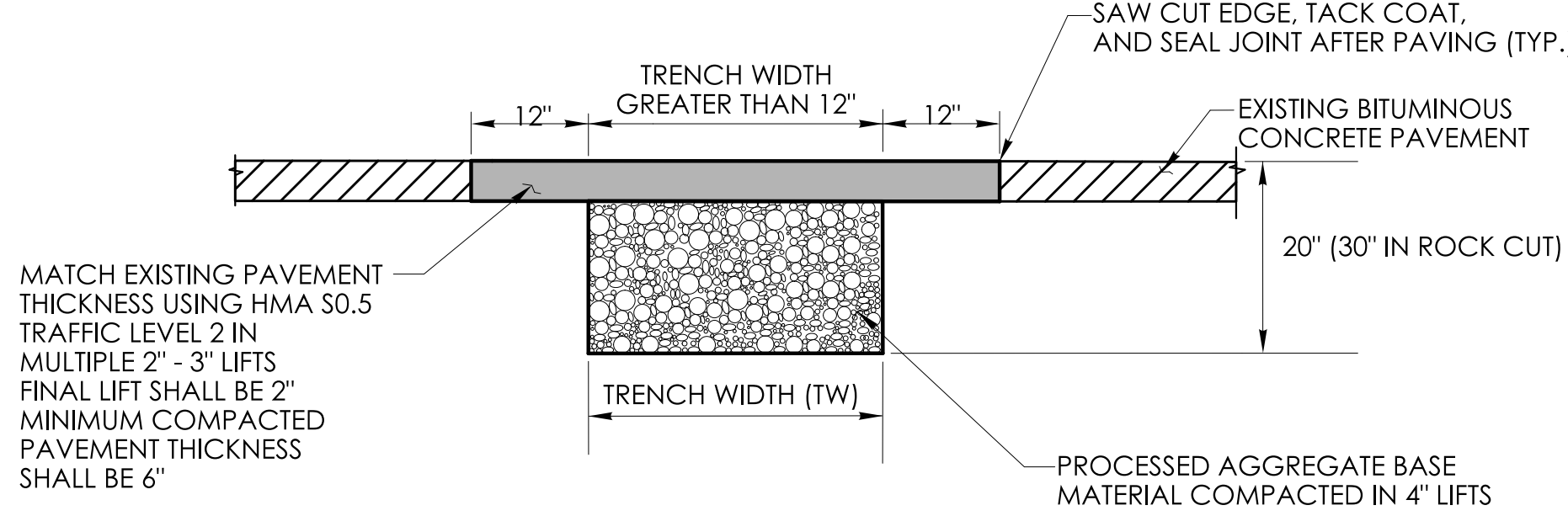
TEMPORARY PAVEMENT FOR TRENCH
THROUGH OVERLAID PORTLAND CEMENT CONCRETE (PCC)
(TRENCH WIDTH GREATER THAN 12")



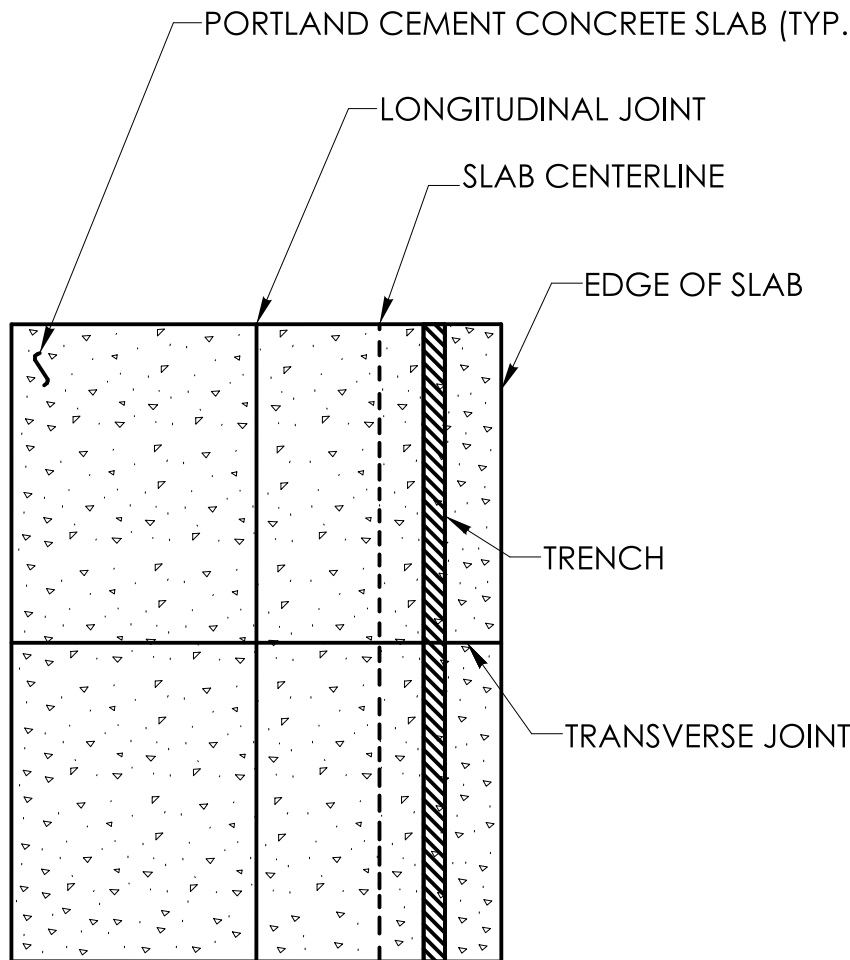
PERMANENT PAVEMENT FOR TRENCH
THROUGH OVERLAID PORTLAN CEMENT CONCRETE (PCC)
(TRENCH WIDTH GREATER THAN 12")



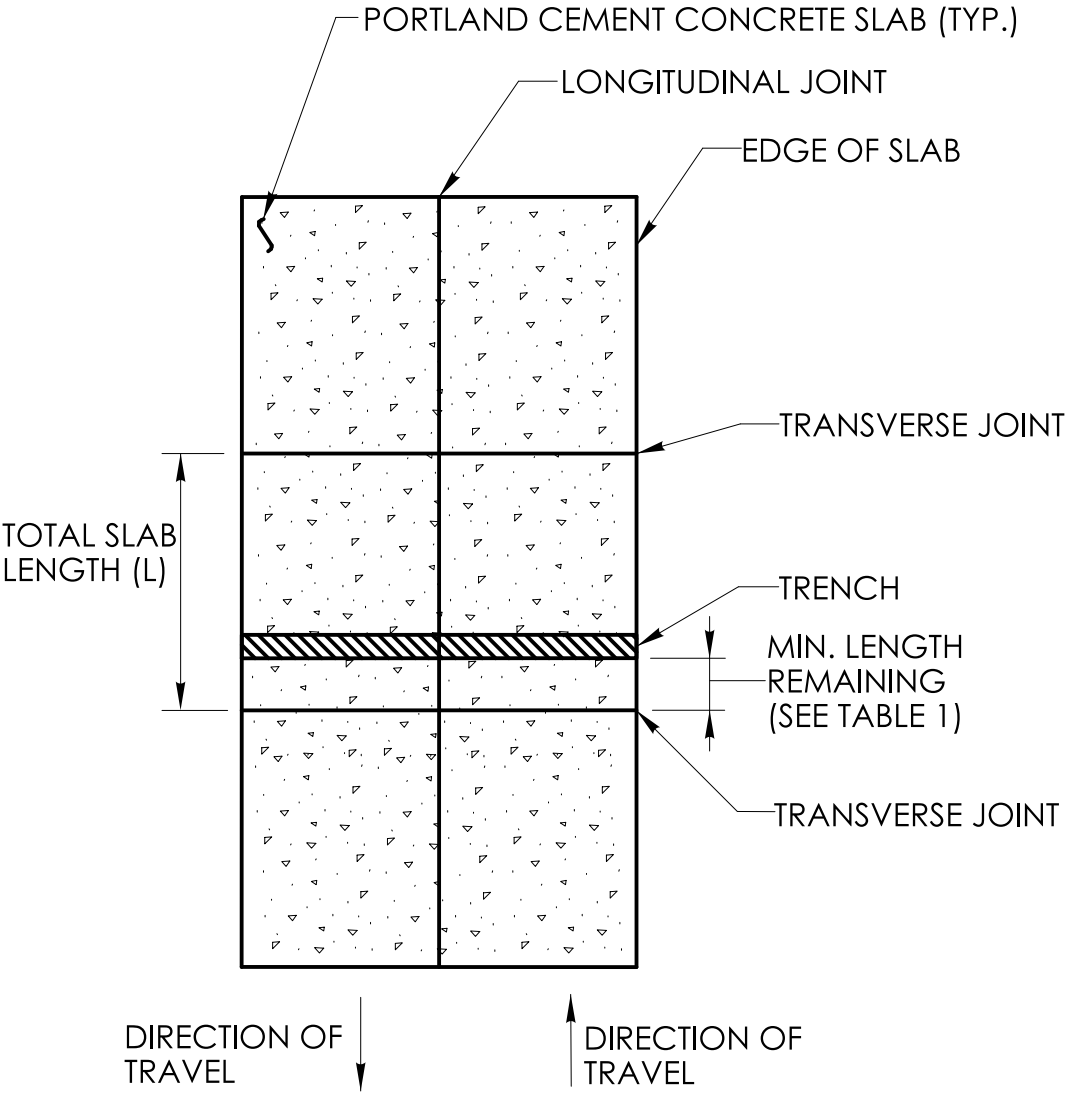
TEMPORARY PAVEMENT FOR
TRENCH THROUGH BITUMINOUS CONCRETE
(TRENCH WIDTH GREATER THAN 12")



PERMANENT PAVEMENT FOR
TRENCH THROUGH BITUMINOUS CONCRETE

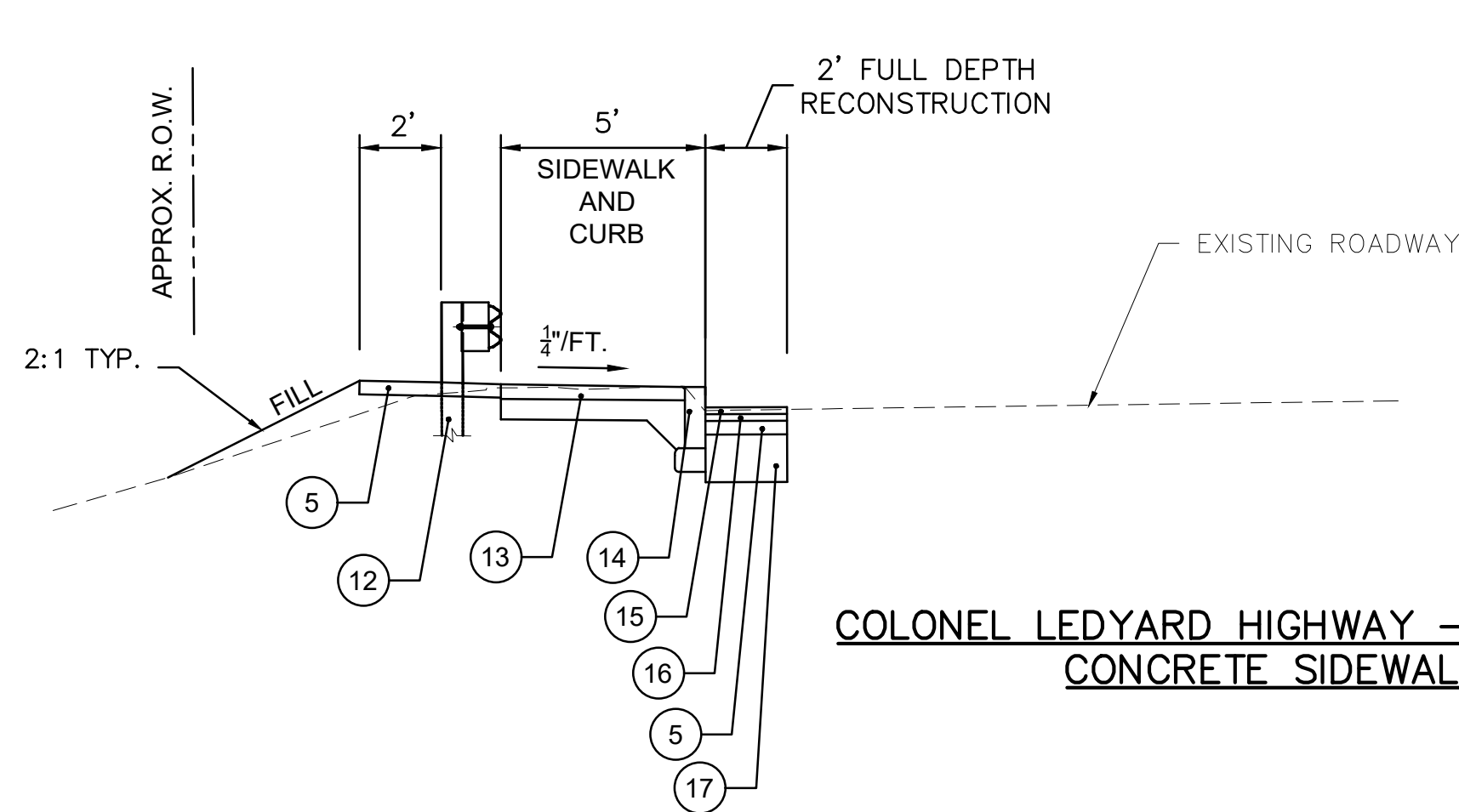


LONGITUDINAL TRENCHING
FOR JOINTED CONCRETE PAVEMENT
(SEE NOTE 1)

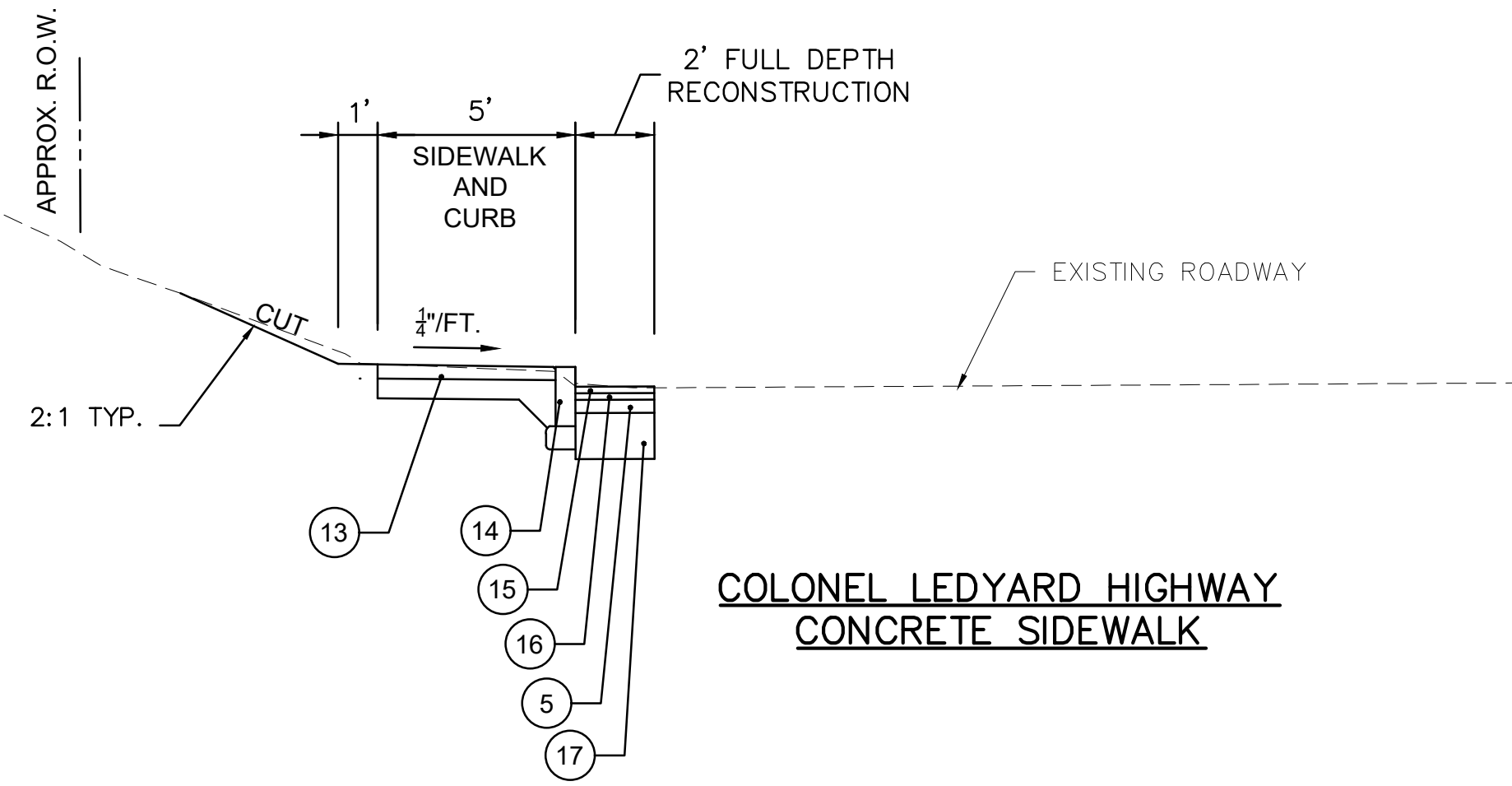


TRANSVERSE TRENCHING
FOR JOINTED CONCRETE PAVEMENT
(SEE NOTE 2)

R1 - SERIES					R2 - SERIES					R3 - SERIES															R4 - SERIES					R5 - SERIES																																																																																																																																						
<div>R1-1</div> <div></div> <div>LEGEND - WHITE BACKGROUND - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>1.85</td><td>18</td><td>31-0532</td><td>1</td><td>.080</td></tr><tr><td>5.19</td><td>30</td><td>31-0552</td><td>1</td><td>.080</td></tr><tr><td>7.98</td><td>36</td><td>31-0553</td><td>1</td><td>.080</td></tr><tr><td>13.3</td><td>48</td><td>31-0557</td><td>2</td><td>.100</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	1.85	18	31-0532	1	.080	5.19	30	31-0552	1	.080	7.98	36	31-0553	1	.080	13.3	48	31-0557	2	.100	<div>R2-1</div> <div></div> <div>LEGEND - WHITE BACKGROUND - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>5.00</td><td>24X30</td><td>31-5505</td><td>1</td><td>.080</td></tr><tr><td>7.50</td><td>30X36</td><td>31-5504</td><td>1</td><td>.080</td></tr><tr><td>12.00</td><td>36X48</td><td>31-5506</td><td>2</td><td>.100</td></tr><tr><td>20.00</td><td>48X60</td><td>31-5507</td><td>2</td><td>.100</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	5.00	24X30	31-5505	1	.080	7.50	30X36	31-5504	1	.080	12.00	36X48	31-5506	2	.100	20.00	48X60	31-5507	2	.100	<div>R3-1</div> <div></div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>4.00</td><td>24X24</td><td>31-1604</td><td>1</td><td>.080</td></tr><tr><td>9.00</td><td>36X36</td><td>31-1627</td><td>2</td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	4.00	24X24	31-1604	1	.080	9.00	36X36	31-1627	2	.080	<div>R3-5</div> <div></div> <div>31-0183</div> <div></div> <div>31-0184</div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>7.50</td><td>30X36</td><td></td><td>1</td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	7.50	30X36		1	.080	<div>R3-6</div> <div></div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>7.50</td><td>30X24</td><td>31-0175</td><td>1</td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	7.50	30X24	31-0175	1	.080	<div>R3-8</div> <div></div> <div>31-0282</div> <div></div> <div>31-0283</div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>7.50</td><td>36X30</td><td></td><td>2</td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	7.50	36X30		2	.080	<div>R3-8b</div> <div></div> <div>31-0282</div> <div></div> <div>31-0283</div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>10.00</td><td>48X30</td><td>31-0302</td><td>2</td><td>.100</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	10.00	48X30	31-0302	2	.100																									
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<div>R1-3P</div> <div></div> <div>LEGEND - WHITE BACKGROUND - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>0.75</td><td>18X6</td><td>31-0508</td><td></td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	0.75	18X6	31-0508		.080	<div>R3-3</div> <div></div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>4.00</td><td>24X24</td><td>31-1648</td><td>1</td><td>.080</td></tr><tr><td>9.00</td><td>36X36</td><td>31-1647</td><td>2</td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	4.00	24X24	31-1648	1	.080	9.00	36X36	31-1647	2	.080	<div>R3-7</div> <div></div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>6.25</td><td>30X30</td><td>31-0117</td><td>1</td><td>.080</td></tr><tr><td>9.00</td><td>36X36</td><td>31-0120</td><td>2</td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	6.25	30X30	31-0117	1	.080	9.00	36X36	31-0120	2	.080	<div>R3-8</div> <div></div> <div>31-0222</div> <div></div> <div>31-0223</div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>6.25</td><td>30X30</td><td></td><td>1</td><td>.080</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	6.25	30X30		1	.080	<div>R3-8</div> <div></div> <div>31-0222</div> <div></div> <div>31-0223</div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>8.75</td><td>42X30</td><td>31-0279</td><td>2</td><td>.100</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	8.75	42X30	31-0279	2	.100	<div>R3-8b</div> <div></div> <div>31-0370</div> <div></div> <div>31-0371</div> <div>LEGEND - BLACK BACKGROUND - WHITE CIRCLE & DIAGONAL - RED</div> <table><tr><th>AREA (SQ. FT)</th><th>SIZE (INCHES)</th><th>CONN. D.O.T. #</th><th>POSTS</th><th>ALUM. THK.</th></tr><tr><td>8.75</td><td>42X30</td><td></td><td>2</td><td>.100</td></tr></table>					AREA (SQ. FT)	SIZE (INCHES)	CONN. D.O.T. #	POSTS	ALUM. THK.	8.75	42X30		2	.100																																																																	
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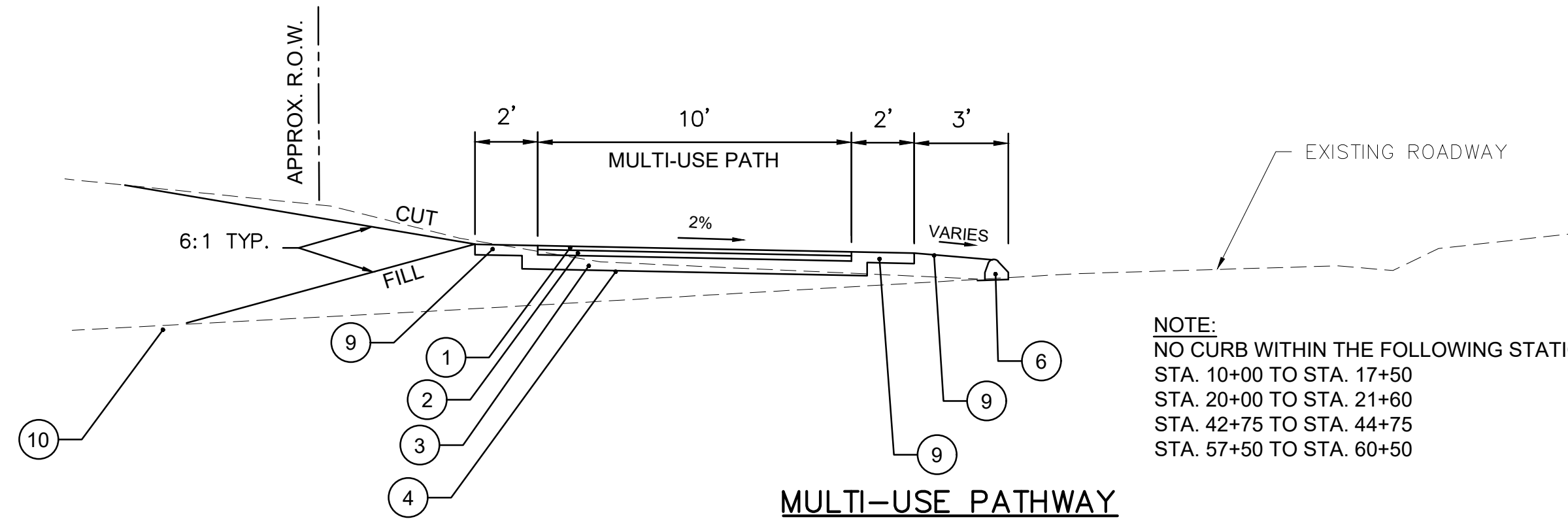


COLONEL LEDYARD HIGHWAY - ROUTE 117
CONCRETE SIDEWALK



COLONEL LEDYARD HIGHWAY
CONCRETE SIDEWALK

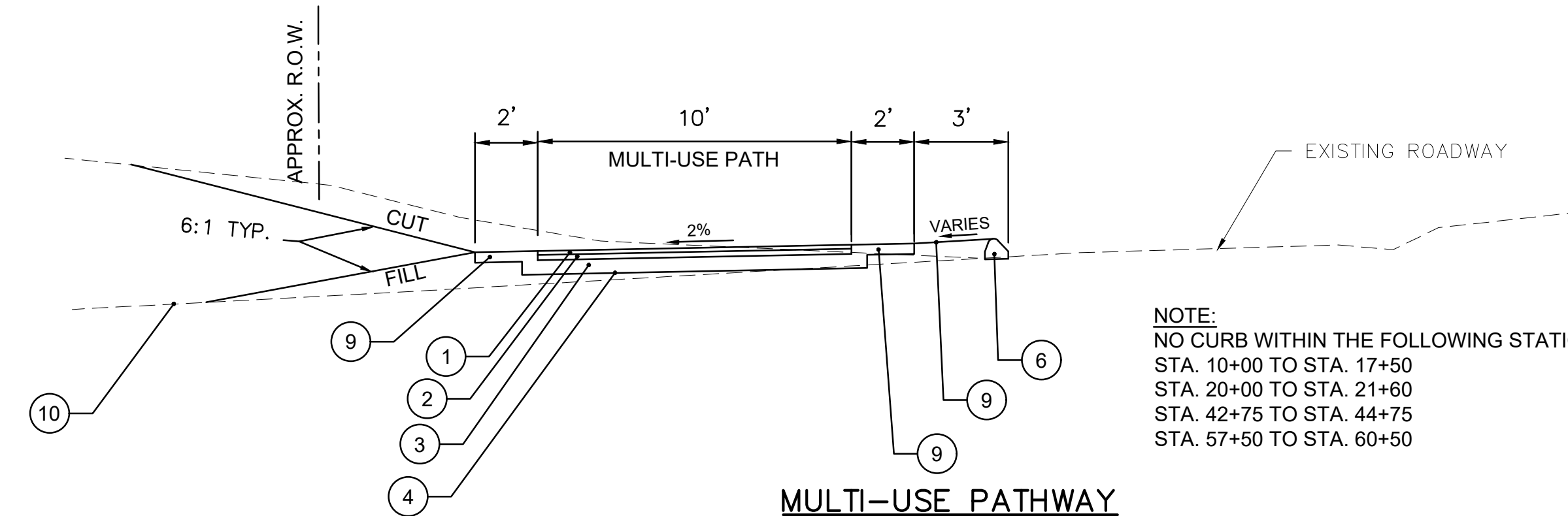
START - STA. 11+00
STA. 12+75 - STA. 13+25
STA. 17+70 - STA. 20+00
STA. 22+00 - STA. 24+50
STA. 31+00 - STA. 31+80
STA. 33+50 - STA. 37+50
STA. 40+50 - STA. 42+00
STA. 45+50 - STA. 47+50
STA. 61+00 - END



MULTI-USE PATHWAY

NOTE:
NO CURB WITHIN THE FOLLOWING STATION RANGES -
STA. 10+00 TO STA. 17+50
STA. 20+00 TO STA. 21+80
STA. 42+75 TO STA. 44+75
STA. 57+50 TO STA. 60+50

STA. 11+50 - STA. 12+50
STA. 13+50 - STA. 17+50
STA. 25+00 - STA. 30+50
STA. 32+00 - STA. 33+20
STA. 38+00 - STA. 40+00
STA. 42+50 - STA. 45+00
STA. 48+00 - STA. 51+65
STA. 56+50 - STA. 60+50



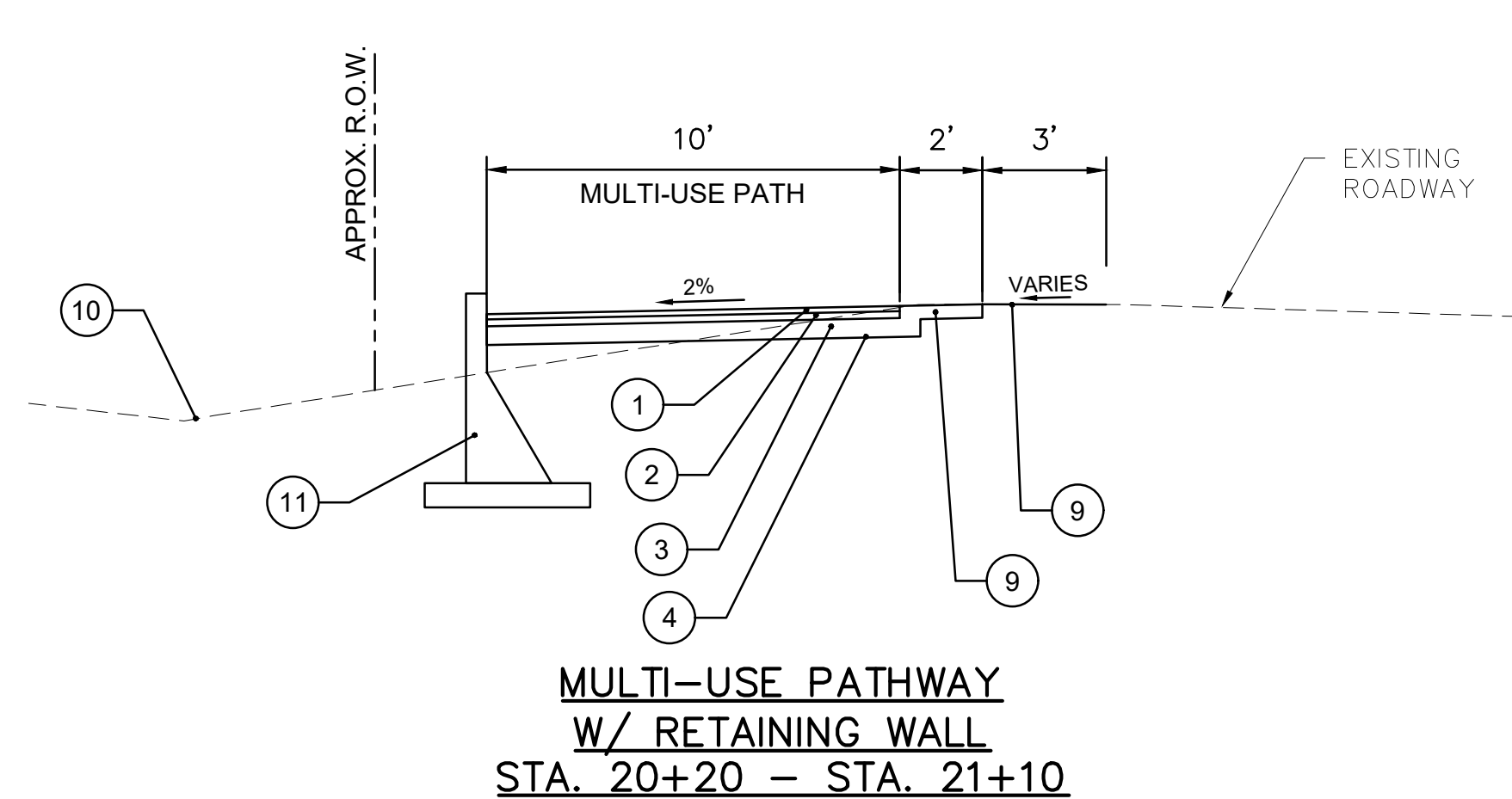
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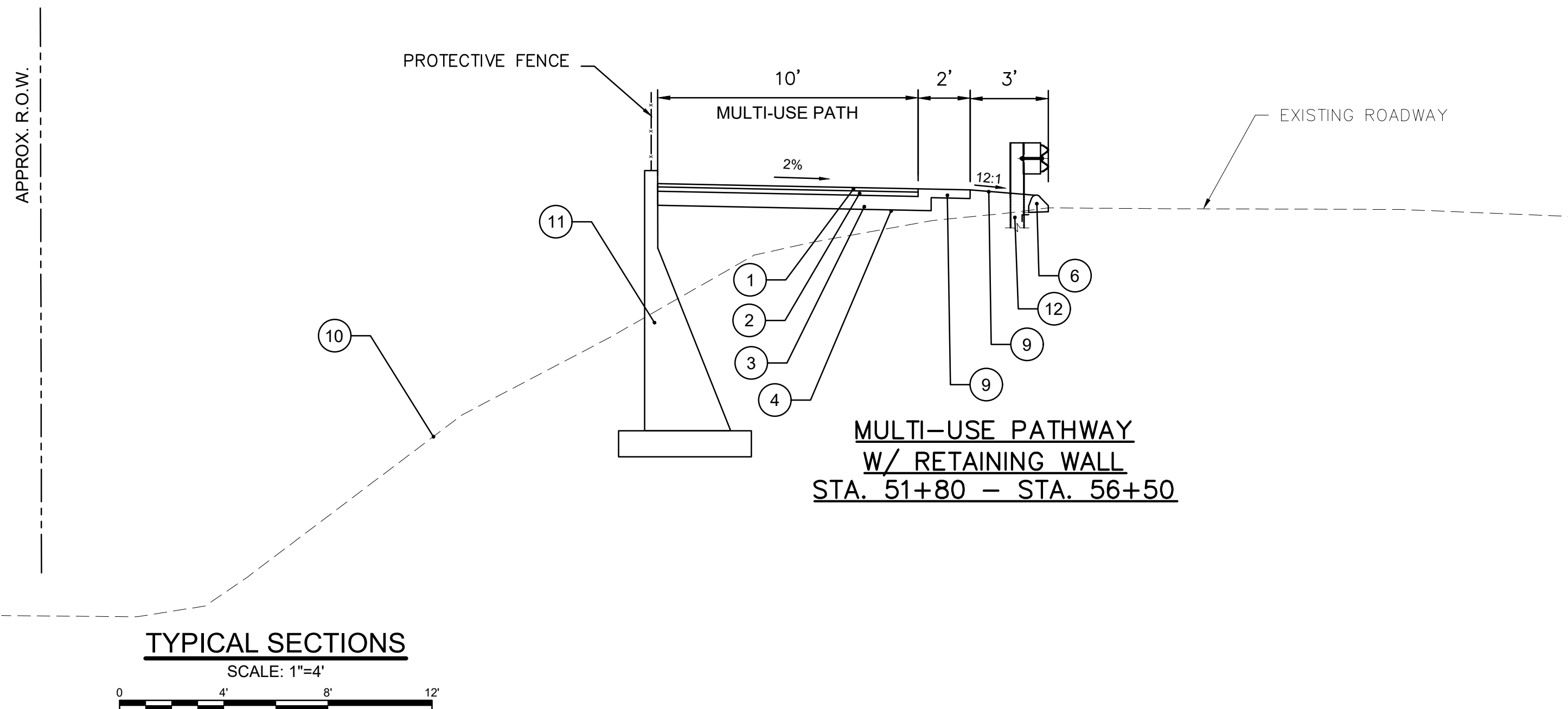
LEGEND

- ① - 1.5" HMA S0.375
- ② - 2" HMA S0.5
- ③ - 6" PROCESSED AGGREGATE BASE
- ④ - COMPACTED SUBGRADE
- ⑤ - 4" PROCESSED AGGREGATE BASE
- ⑥ - 6" BITUMINOUS CONCRETE LIP CURBING
- ⑦ - 6" CONCRETE CURBING
- ⑧ - CONCRETE SIDEWALK
- ⑨ - 4" TOPSOIL AND TURF ESTABLISHMENT
- ⑩ - EXISTING GRADE
- ⑪ - RETAINING WALL
- ⑫ - METAL BEAM RAIL (R-B MASH)
- ⑬ - CONCRETE SIDEWALK
- ⑭ - CONCRETE CURB
- ⑮ - 2" HMA S0.375
- ⑯ - 2" HMA S0.5
- ⑰ - 14" SUBBASE

NOTES:
1. ALL CUT OR FILL SLOPES TO BE 2:1 MAX, UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS OR APPROVED BY THE ENGINEER
2. CONTRACTOR TO TRANSITION CROSS SLOPE OF MULTI-USE PATHWAY AS NEEDED BETWEEN THE SPECIFIED STATION RANGES



MULTI-USE PATHWAY
W/ RETAINING WALL
STA. 20+20 - STA. 21+10



MULTI-USE PATHWAY
W/ RETAINING WALL
STA. 51+80 - STA. 56+50

TYPICAL SECTIONS

SCALE: 1"=4'



Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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W&S Project No.: ENG20-1119

W&S File No.:

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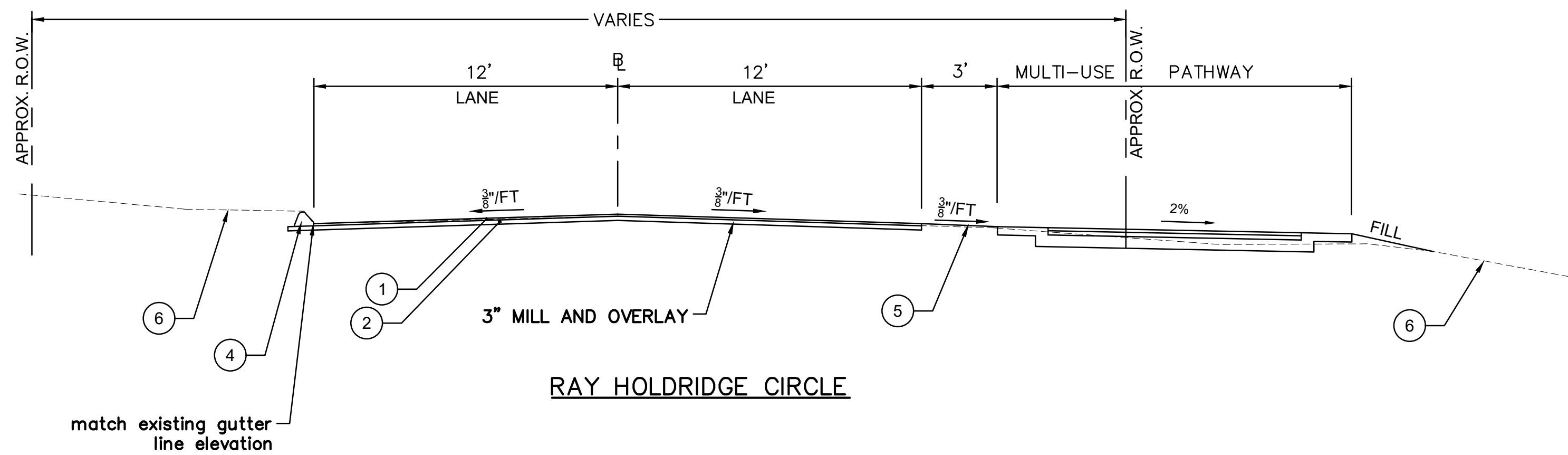
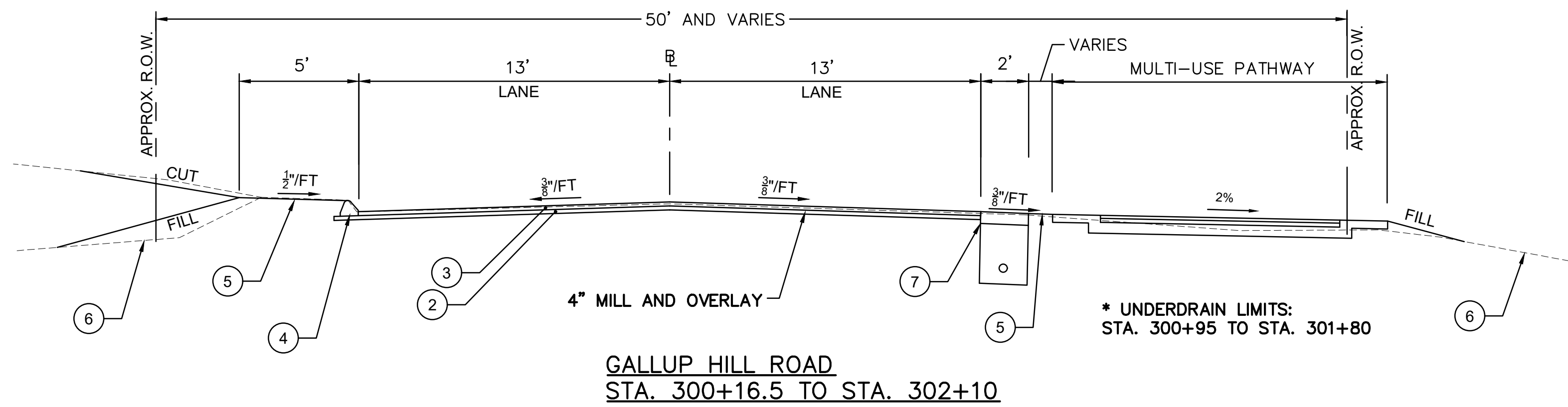
MULTI-USE PATHWAY
AND SIDEWALK
TYPICAL SECTIONS

Sheet Number:

TYP-01

Rev: 1.6 Date: 04/10/2019

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TYPICAL SECTIONS

SCALE: 1"=4'



LEGEND

- 1 - 1" HMA S0.375
- 2 - 2" HMA S0.5
- 3 - 2" HMA S0.375
- 4 - 6" BITUMINOUS CONCRETE LIP CURBING
- 5 - 4" TOPSOIL AND TURF ESTABLISHMENT
- 6 - EXISTING GRADE
- 7 - 6" CRUSHED STONE W/ 4" UNDERDRAIN *

NOTES:

1. ALL CUT OR FILL SLOPES TO BE 2:1 MAX, UNLESS OTHERWISE NOTED ON THE CROSS SECTIONS OR APPROVED BY THE ENGINEER

Project:
TOWN OF LEDYARD, CT



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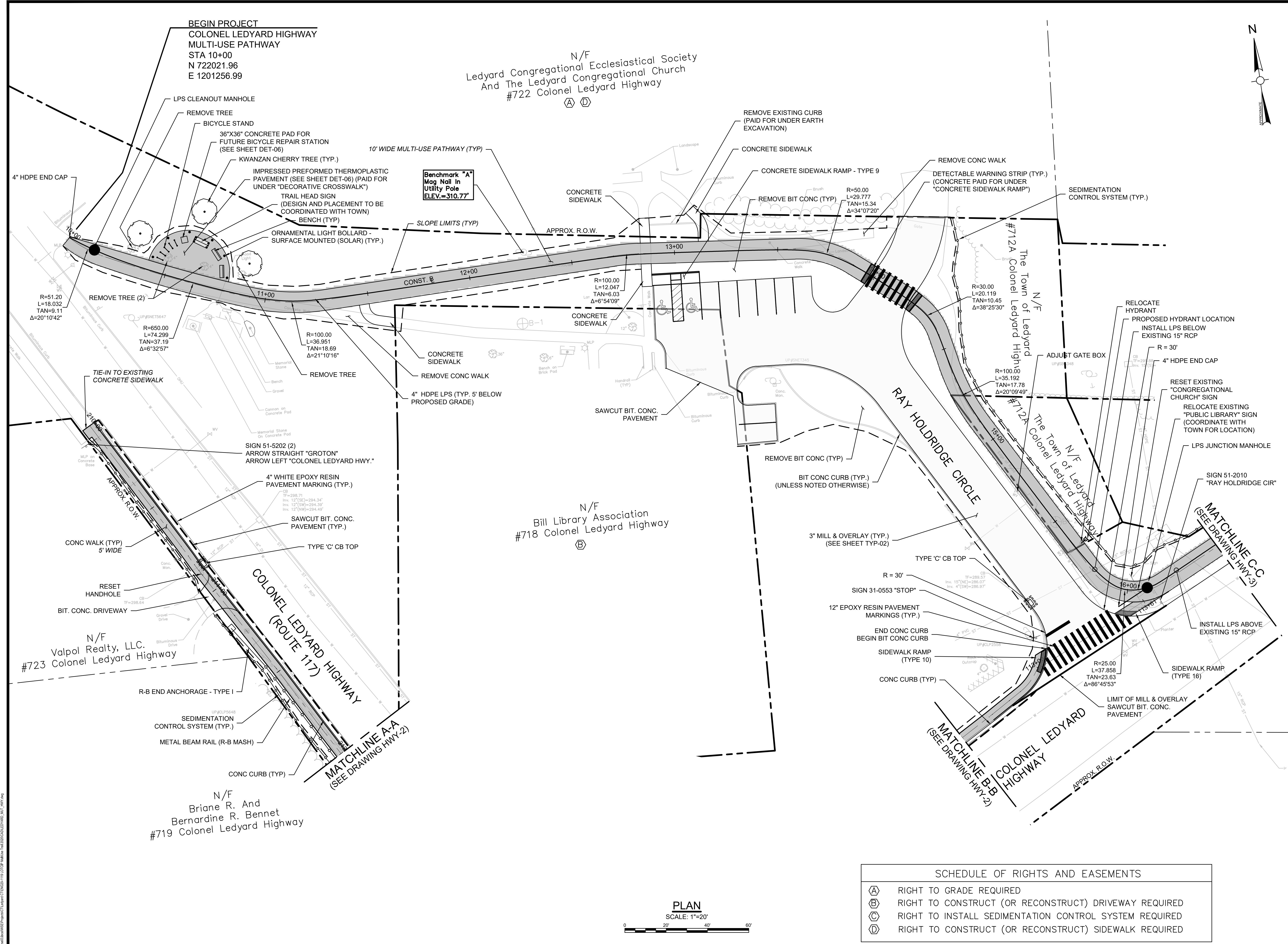
Drawing Title:

ROADWAY TYPICAL
SECTIONS


Sheet Number:

TYP-02

Rev: 1.6 Date: 04/10/2019



Project:
TOWN OF LEDYARD, CT



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W&S File No.:	

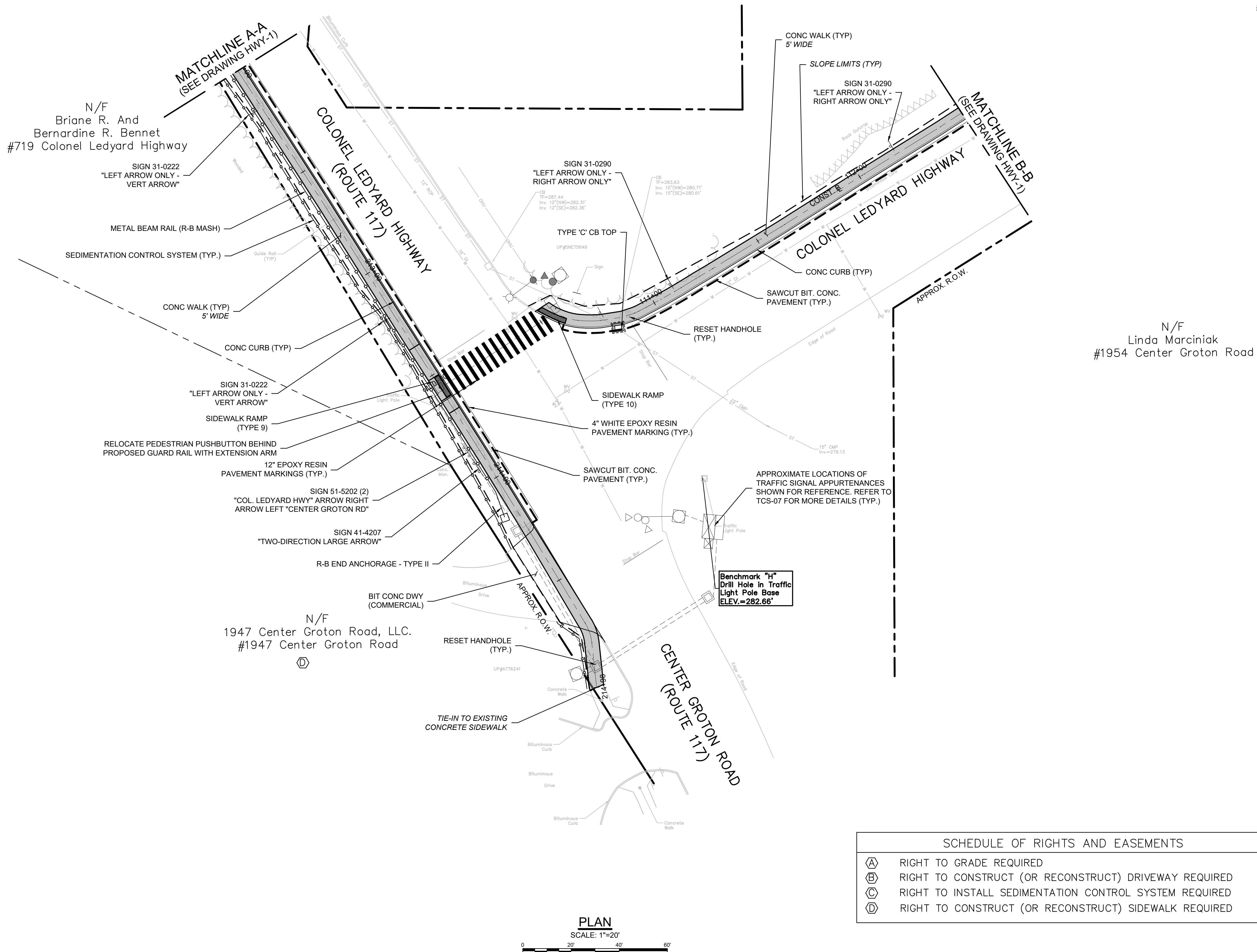
Drawing Title:

**MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 10+00 TO 16+50**

Sheet Number:


HWY-1

Rev: 1.6 Date: 04/10/2019



SCHEDULE OF RIGHTS AND EASEMENTS	
(A)	RIGHT TO GRADE REQUIRED
(B)	RIGHT TO CONSTRUCT (OR RECONSTRUCT) DRIVEWAY REQUIRED
(C)	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
(D)	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED

Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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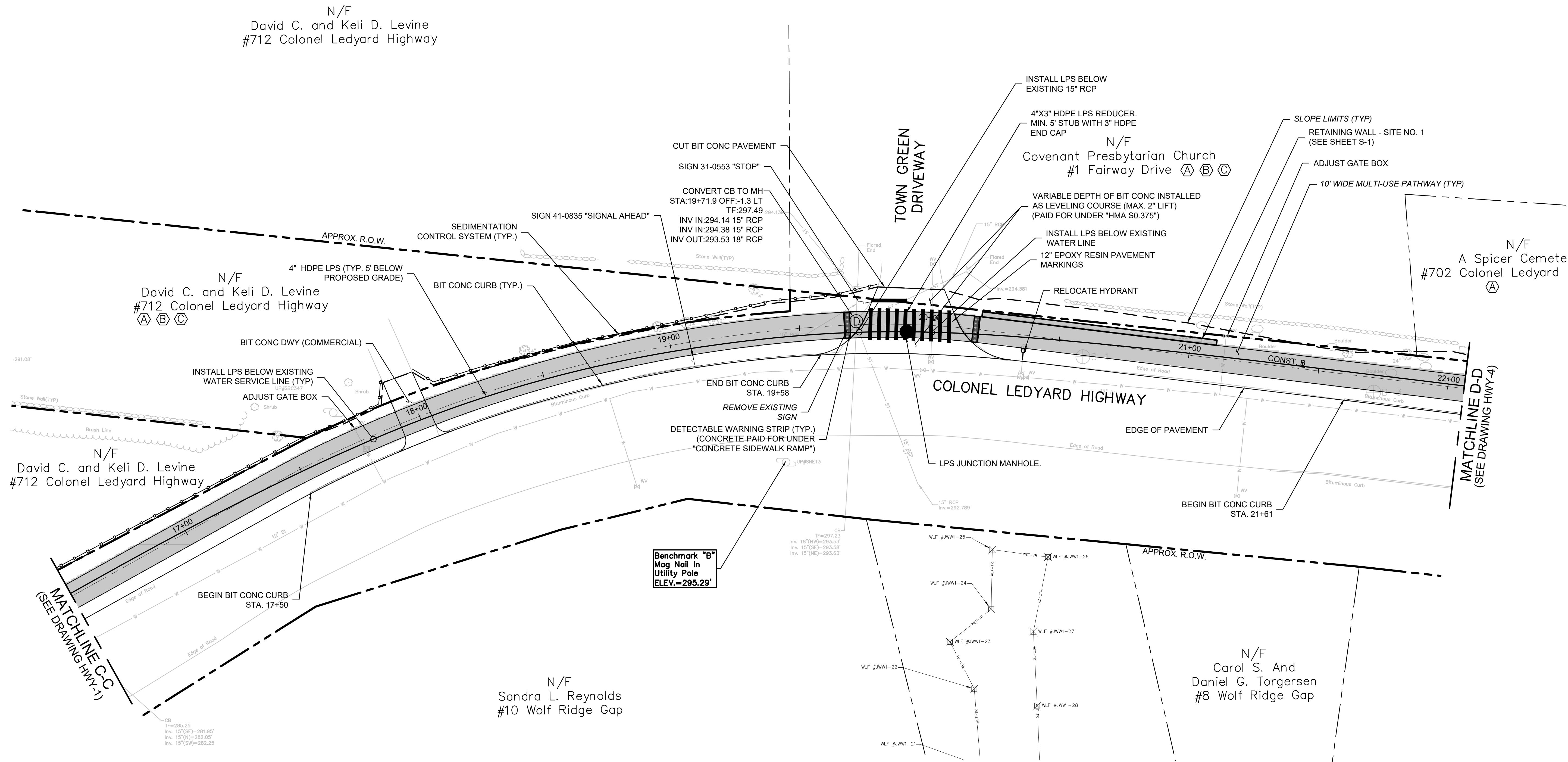
Drawing Title:

MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 211+50 TO 214+96
STA. 110+00 TO 112+50

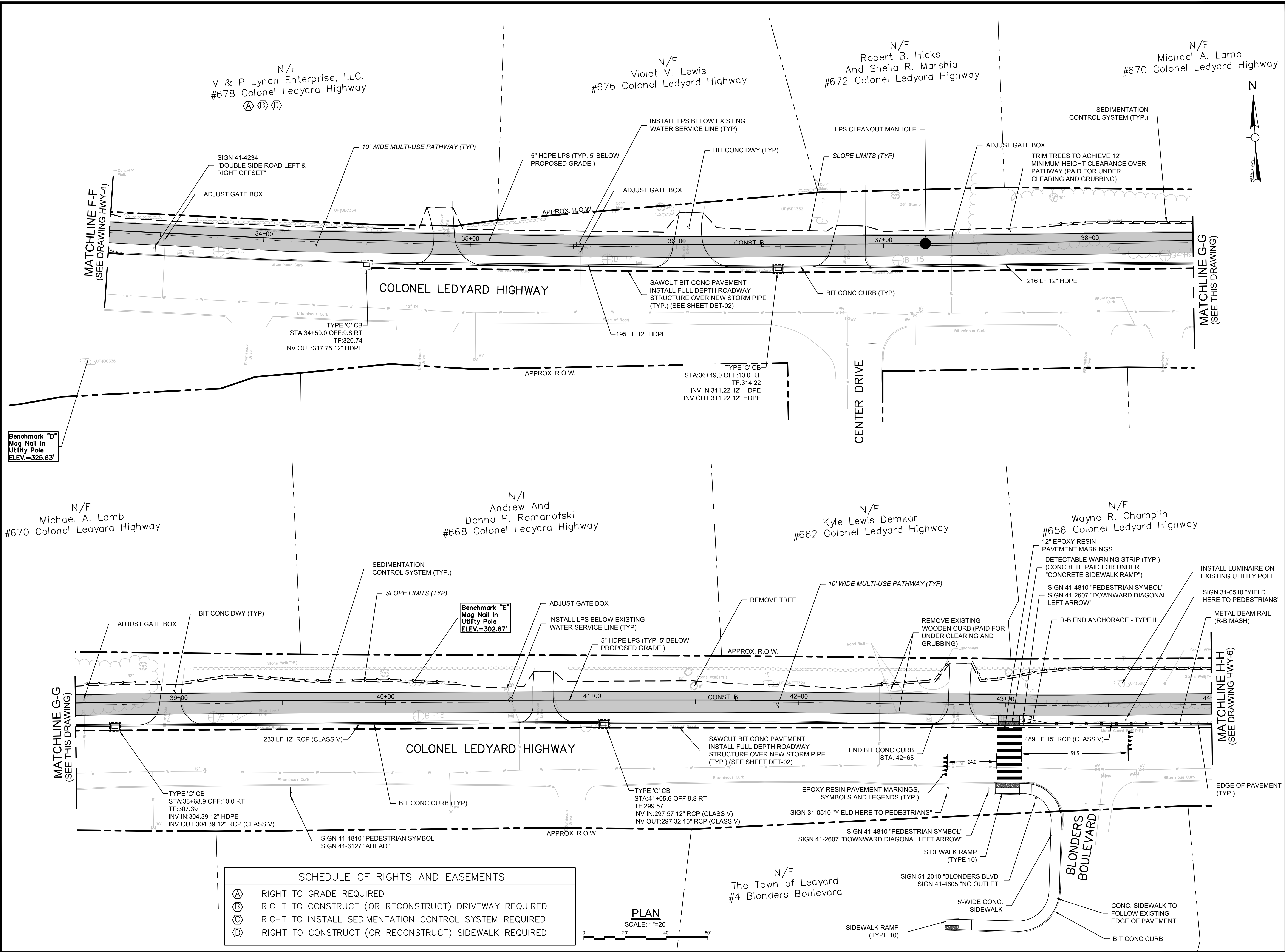
Sheet Number:

HWY-2

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(C)	RIGHT TO INSTALL SEDIMENTATION CONTROL SYSTEM REQUIRED
(D)	RIGHT TO CONSTRUCT (OR RECONSTRUCT) SIDEWALK REQUIRED



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Drawing Title:

MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 33+25 TO 44+00

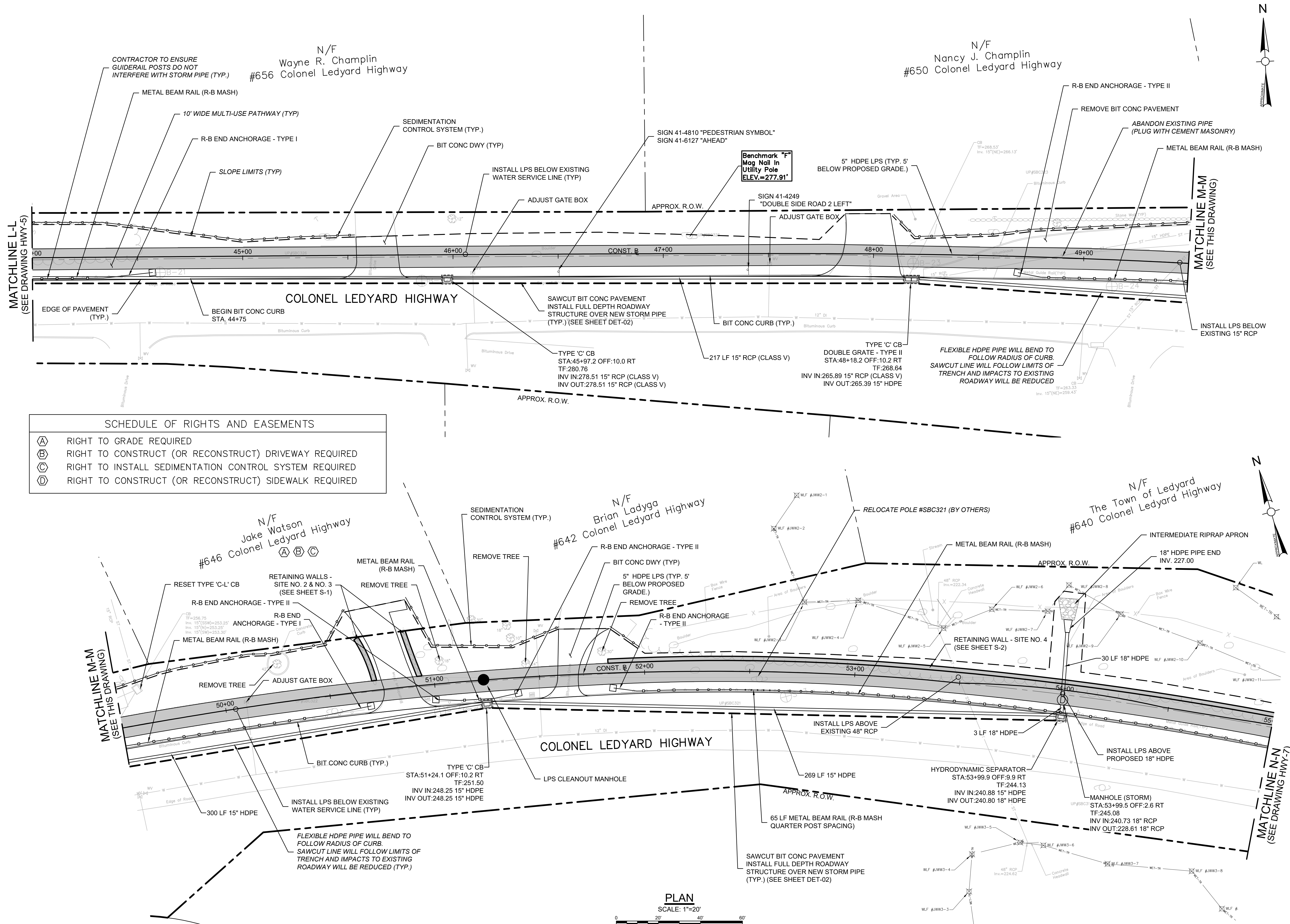
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HWY-5

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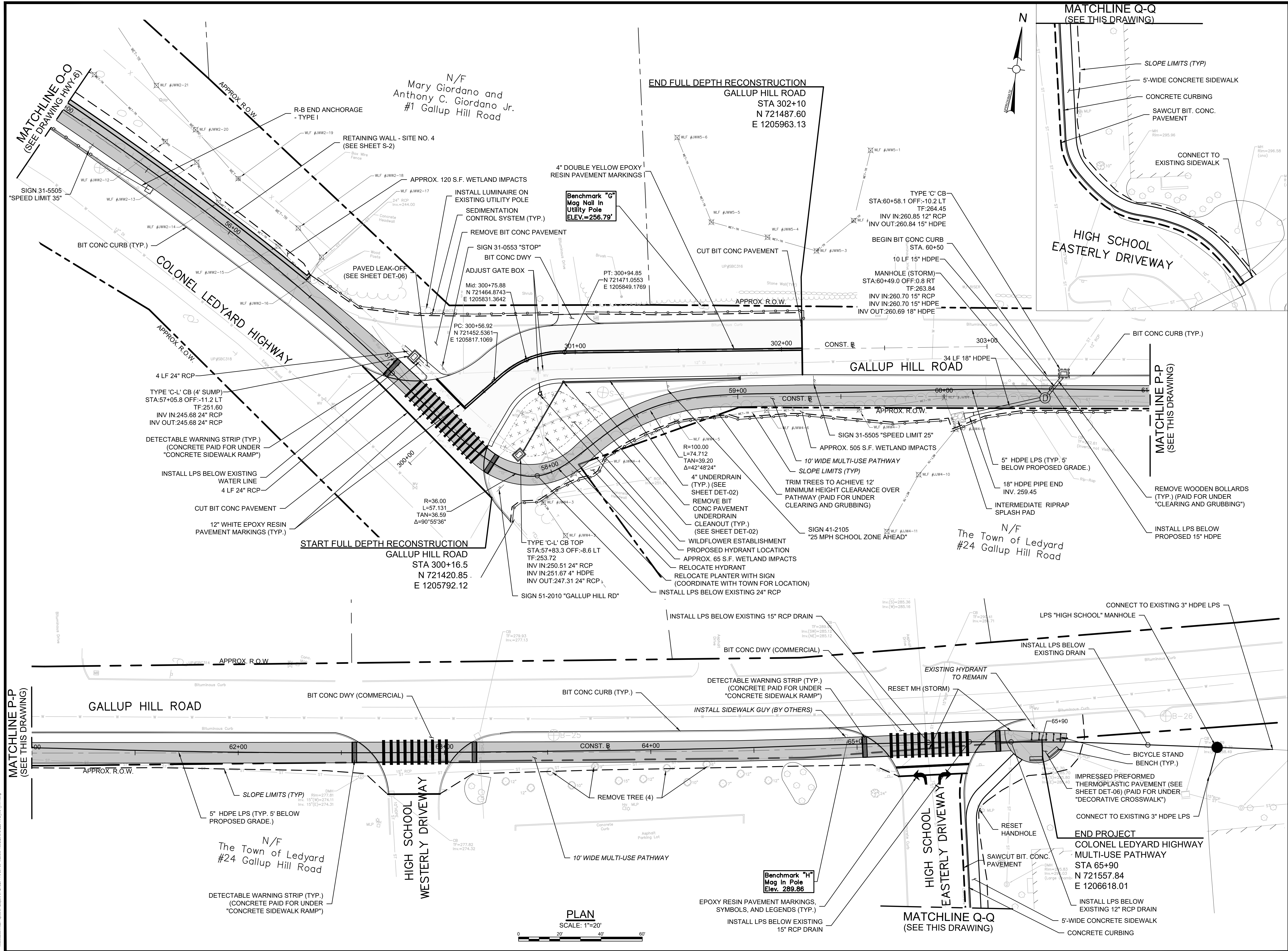
MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 44+00 TO 55+00

Sheet Number:

HWY-6


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MULTI-USE PATHWAY
& SIDEWALK PLAN
STA. 55+00 TO 65+90

Sheet Number:

HWY-7



Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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Drawing Title:

**MULTI-USE PATHWAY
PROFILE
STA. 10+00 TO 16+00**

Sheet Number:

PRO-01

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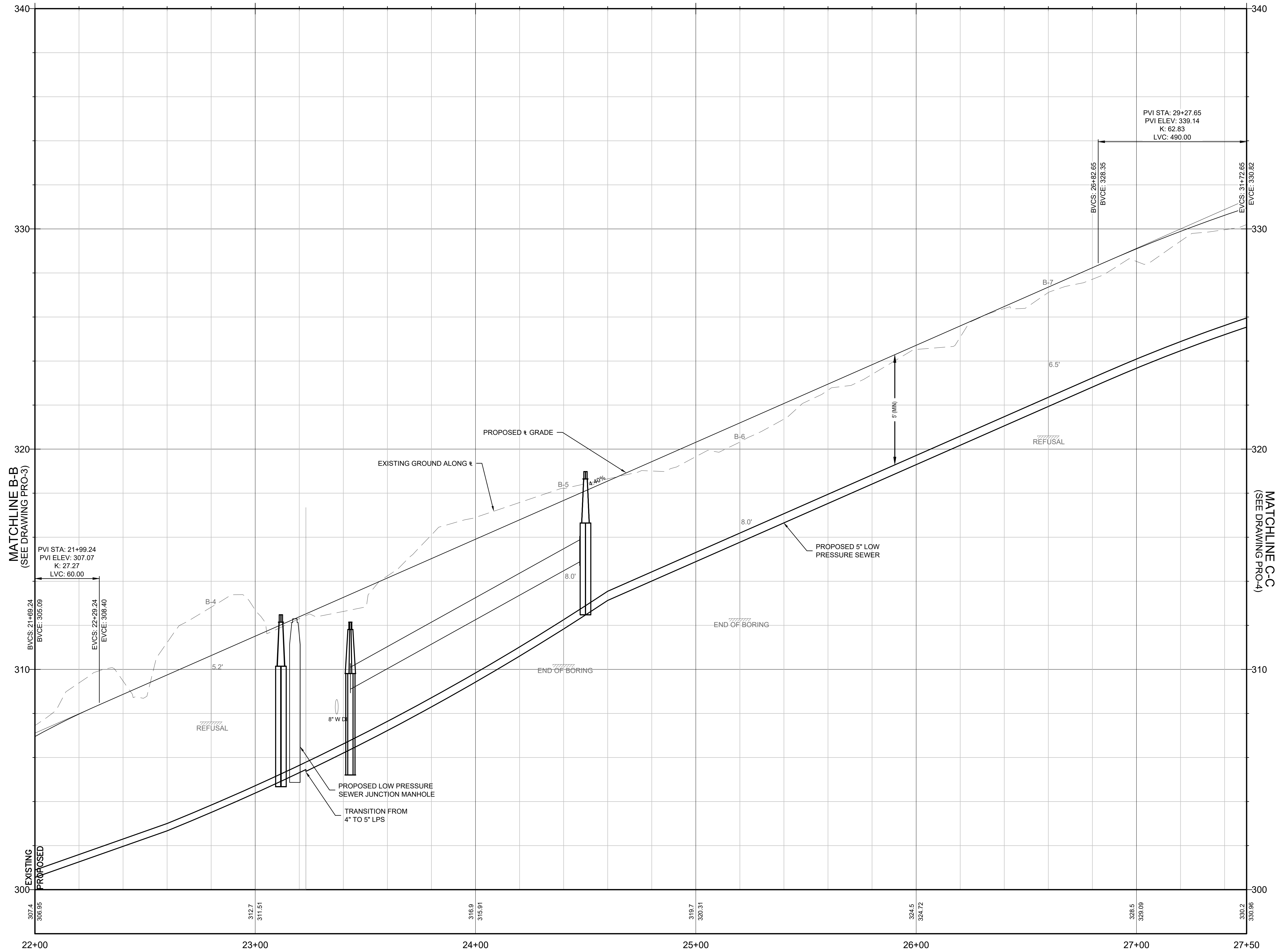
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W&S File No.:

MULTI-USE PATHWAY
PROFILE
STA. 16+00 TO 22+00

PRO-02



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CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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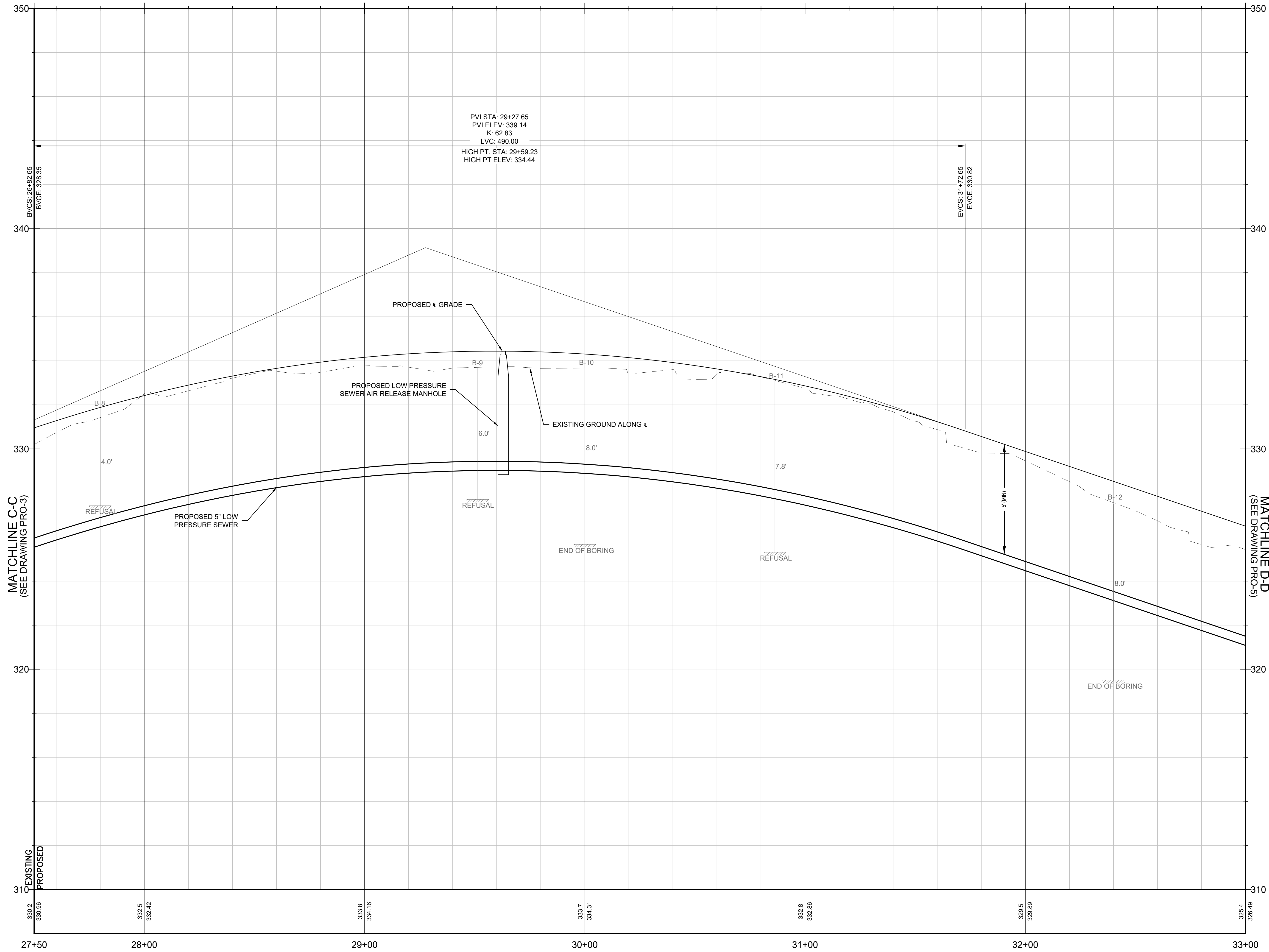
**MULTI-USE PATHWAY
PROFILE**
STA. 22+00 TO 27+50

Sheet Number:

PRO-03

Rev: 1.6 Date: 04/10/2019

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SCALE: 1"=20' HORZ, 1"=2' VERT

Project: TOWN OF LEDYARD, CT



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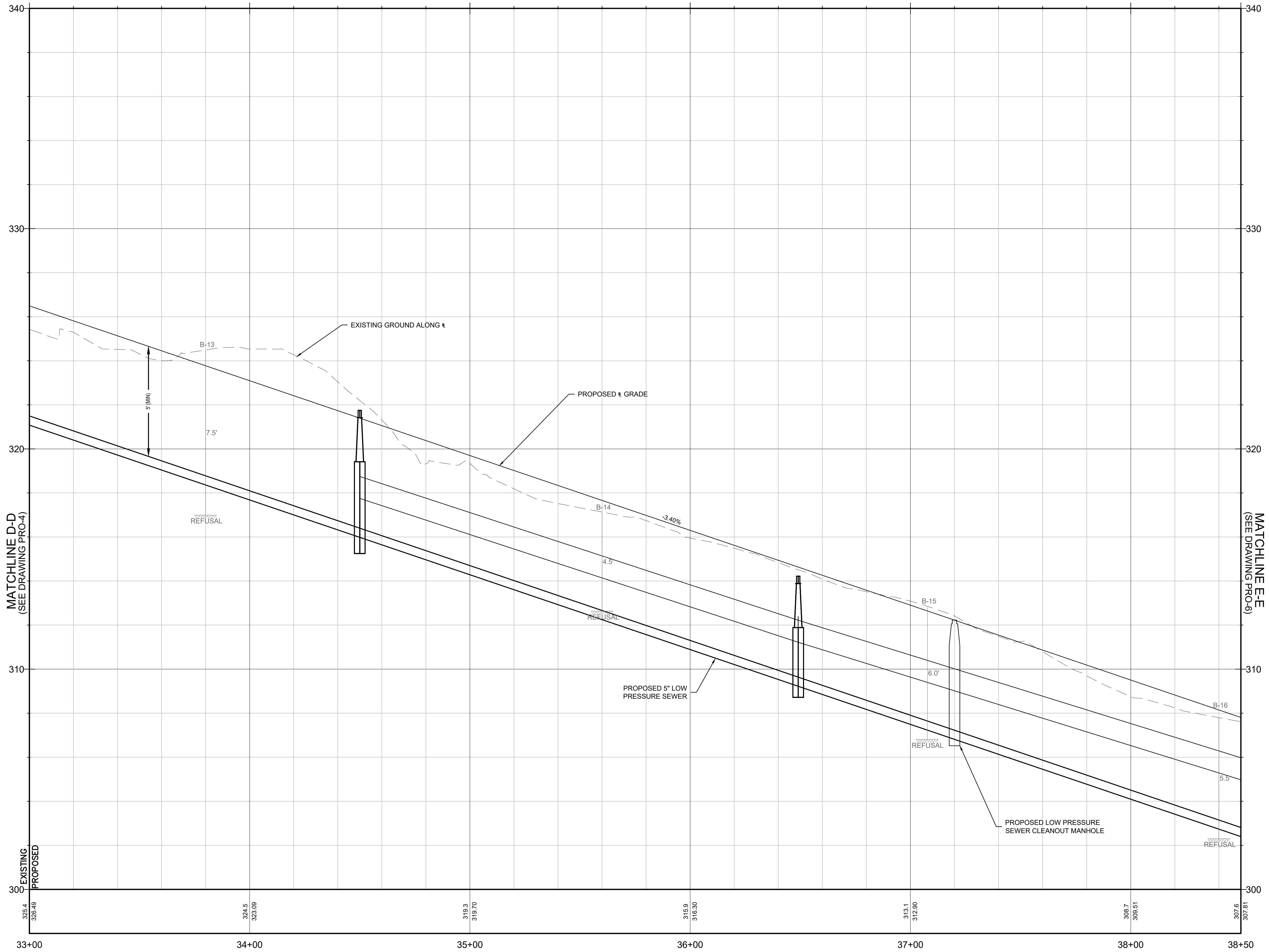
**MULTI-USE PATHWAY
PROFILE
STA. 27+50 TO 33+00**

Sheet Number:

PRO-04

Rev: 1.6 Date: 04/10/2019

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SCALE: 1"=20' HORZ, 1"=2' VERT

Project: TOWN OF LEDYARD, CT



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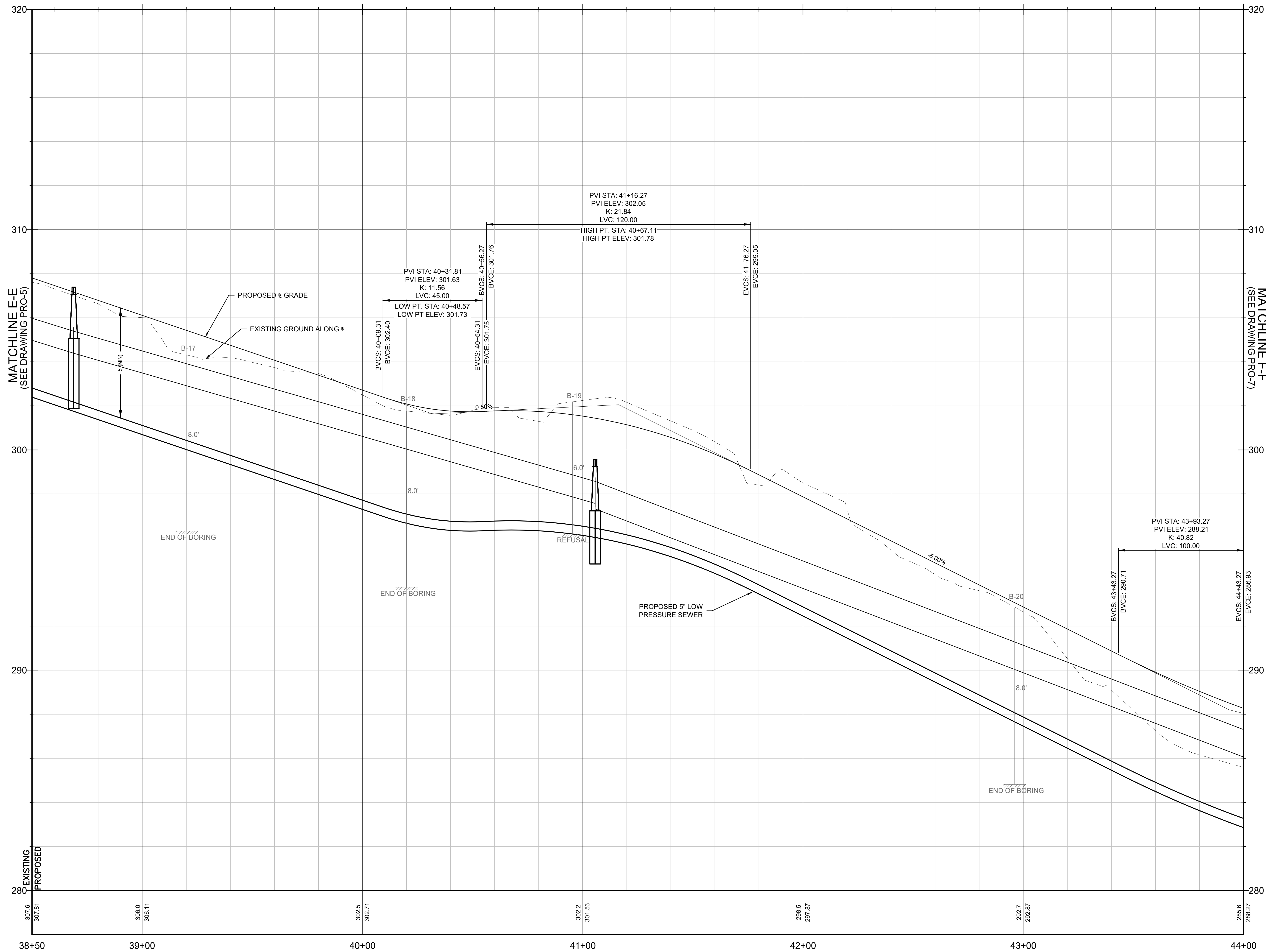
**MULTI-USE PATHWAY
PROFILE**
STA. 33+00 TO 38+50

Sheet Number:

PRO-05

Rev: 1.6 Date: 04/10/2019

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CENTERLINE TRAIL PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT



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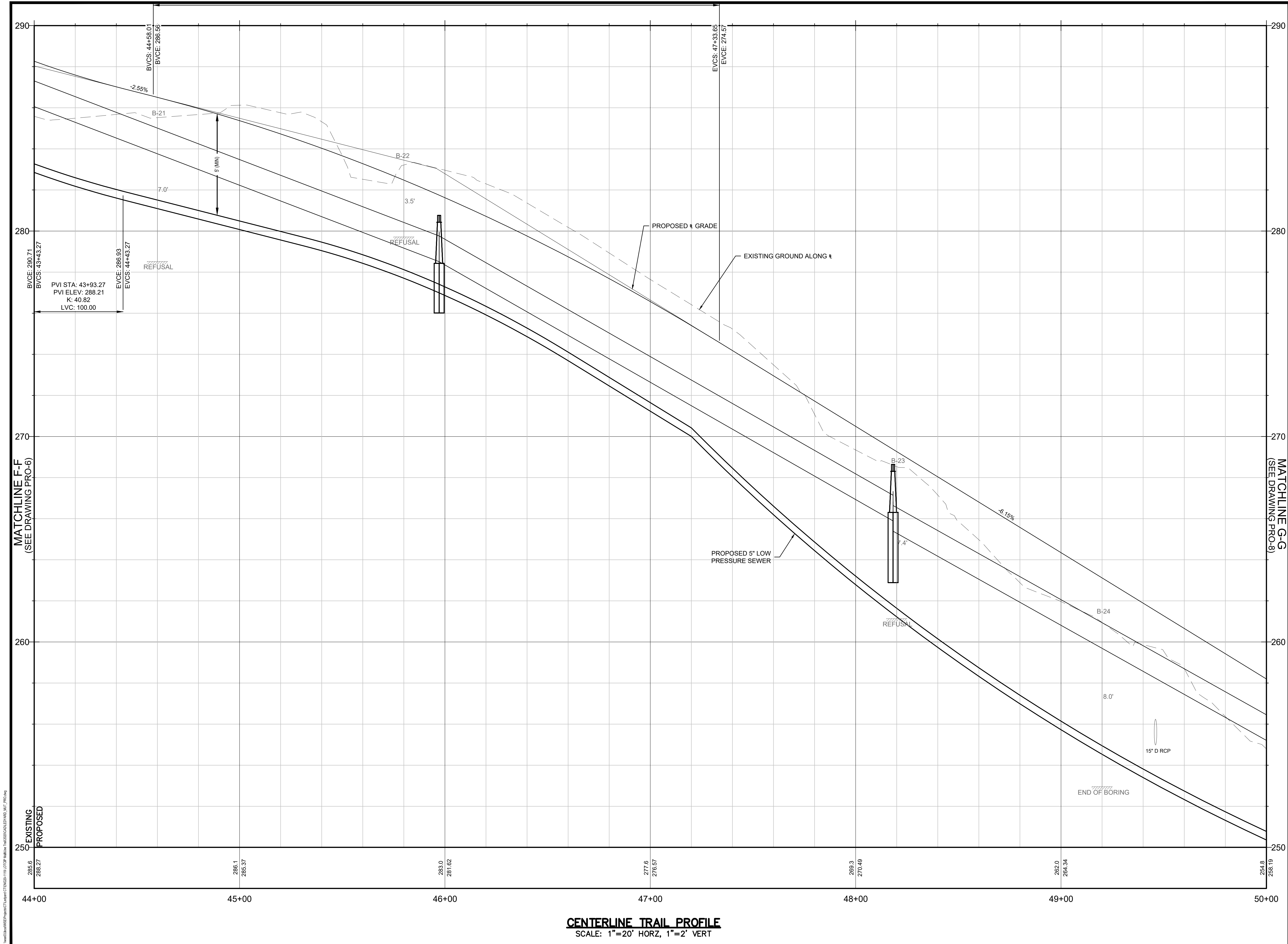
MULTI-USE PATHWAY
PROFILE
STA. 38+50 TO 44+00

Sheet Number:


PRO-06

Rev: 1.6 Date: 04/10/2019

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W&S Project No.: ENG20-1119

W&S File No.:

Drawing Title:

**MULTI-USE PATHWAY
PROFILE
STA. 44+00 TO 50+00**

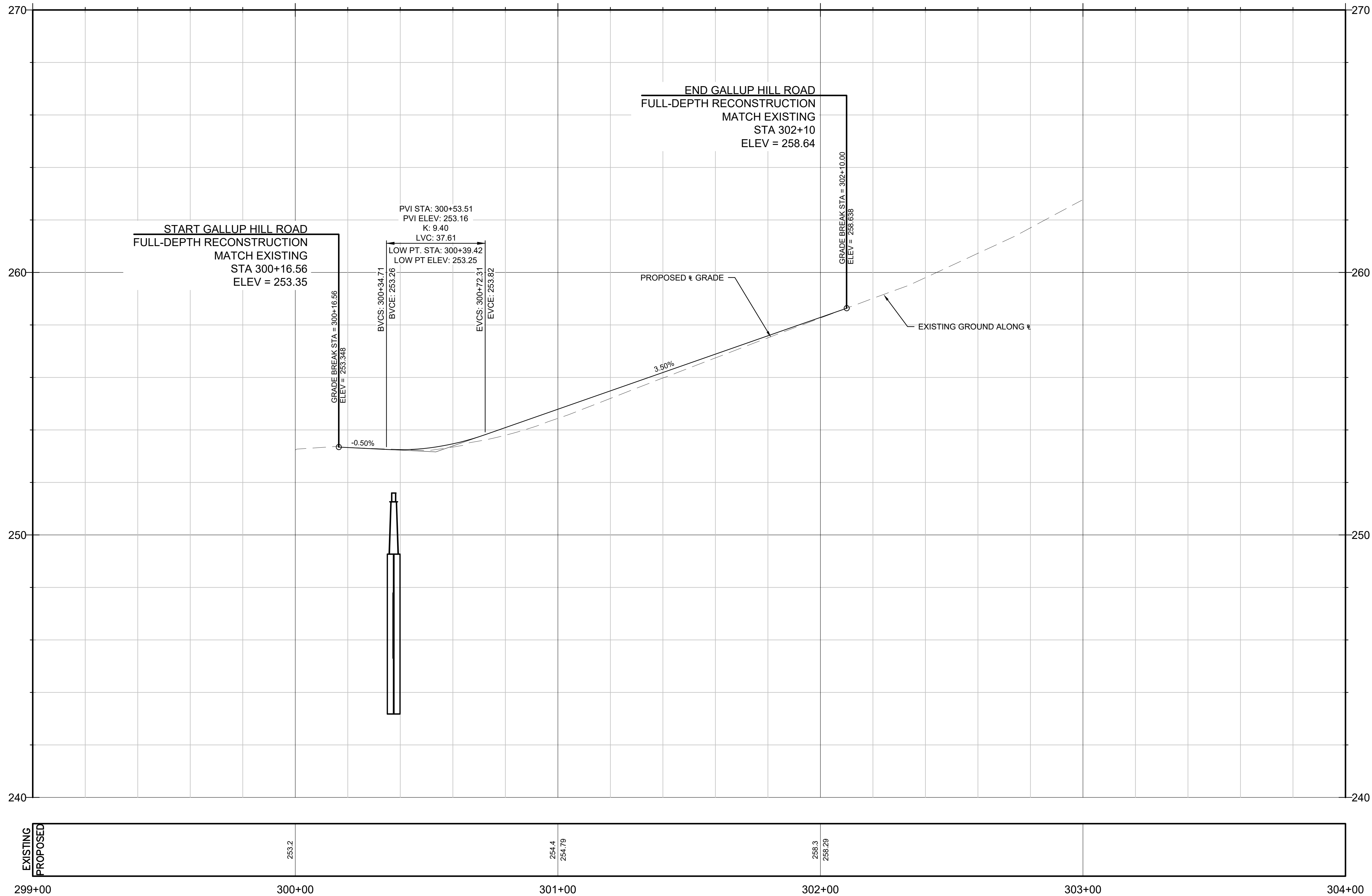
Sheet Number:

PRO-07

SCALE: 1"=20' HORZ, 1"=2' VERT

v: 1.6 Date: 04/10/2019

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CENTERLINE ROAD PROFILE
SCALE: 1"=20' HORZ, 1"=2' VERT

Project:
TOWN OF LEDYARD, CT



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Approved By: MUJ

W&S Project No.: ENG20-1119

W&S File No.:

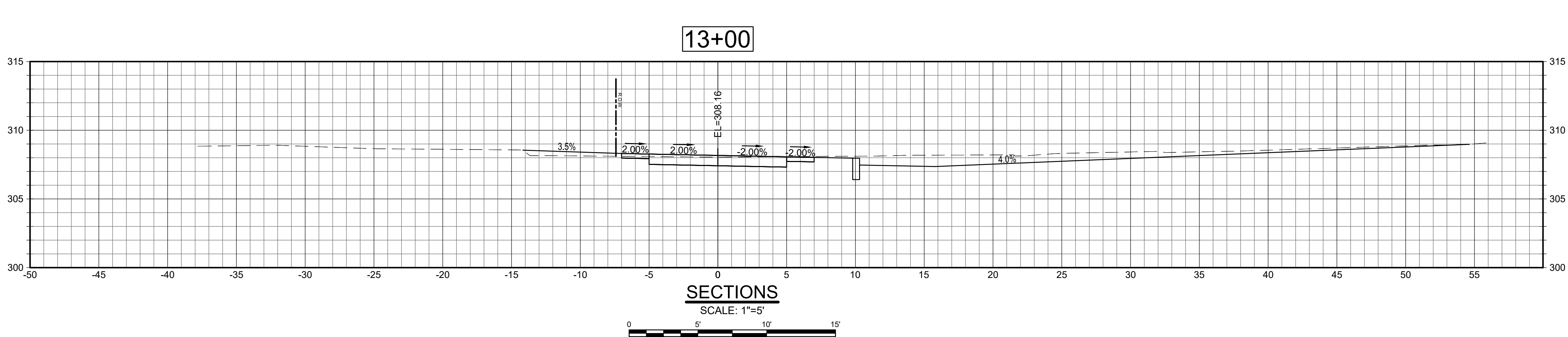
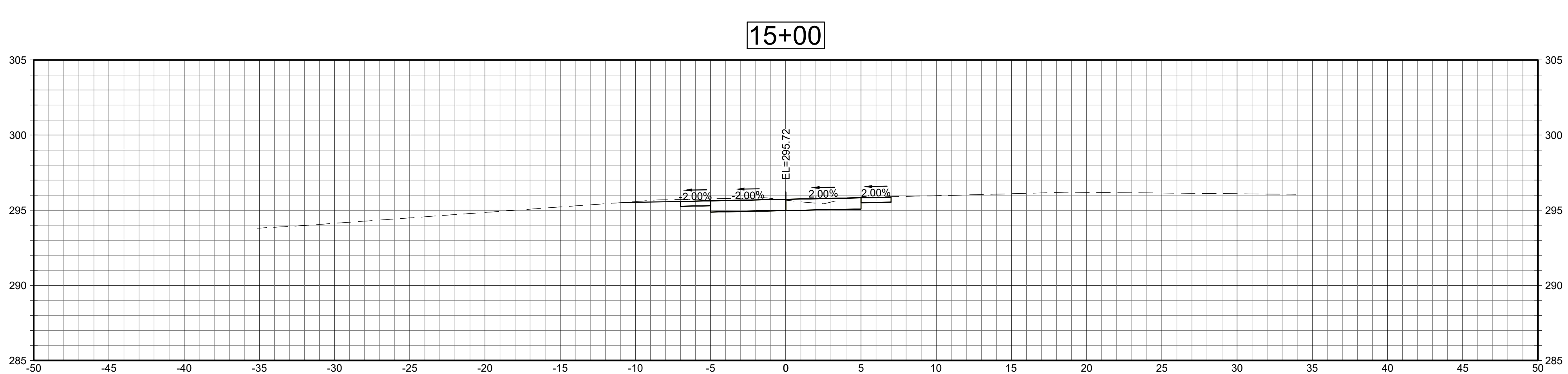
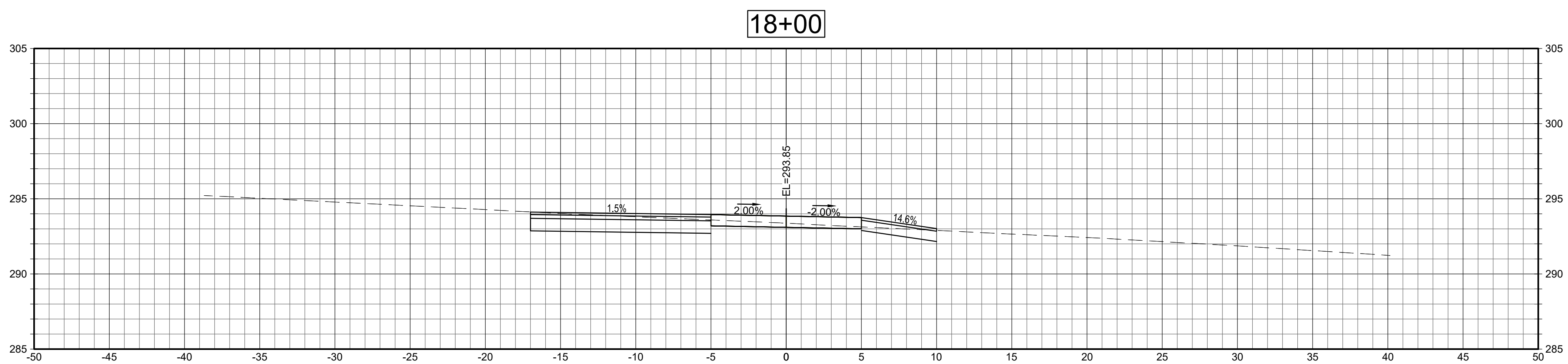
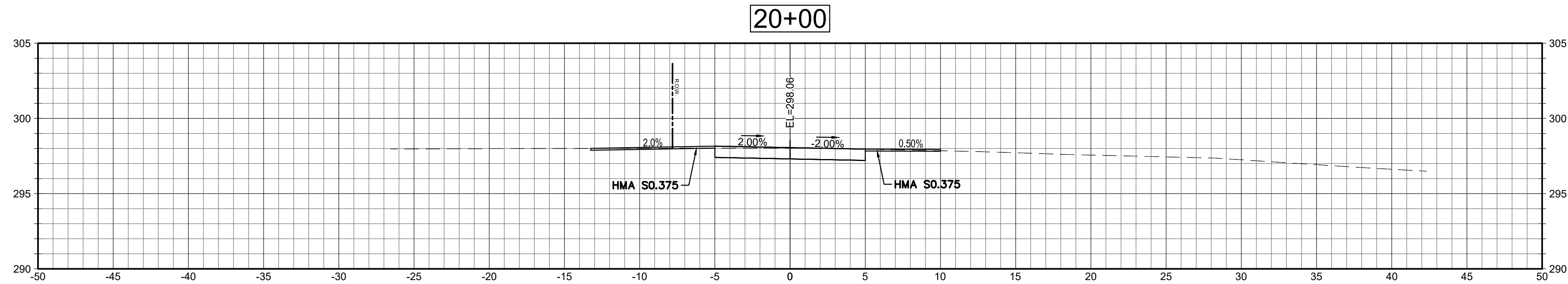
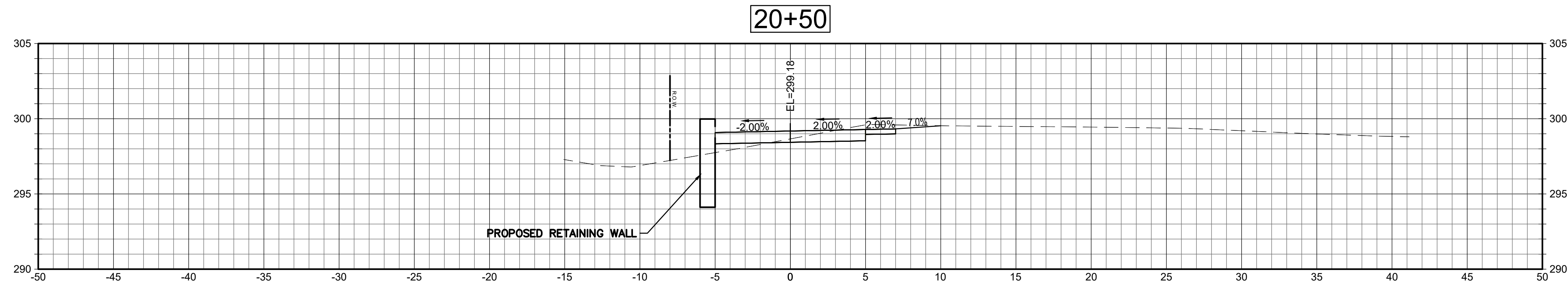
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**GALLUP HILL ROAD
PROFILE
STA. 300+00 TO
303+00**

Sheet Number:

PRO-11

Rev: 1.6 Date: 04/10/2019



Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

741 COLONEL LEDYARD HIGHWAY
LEDYARD, CT 06339

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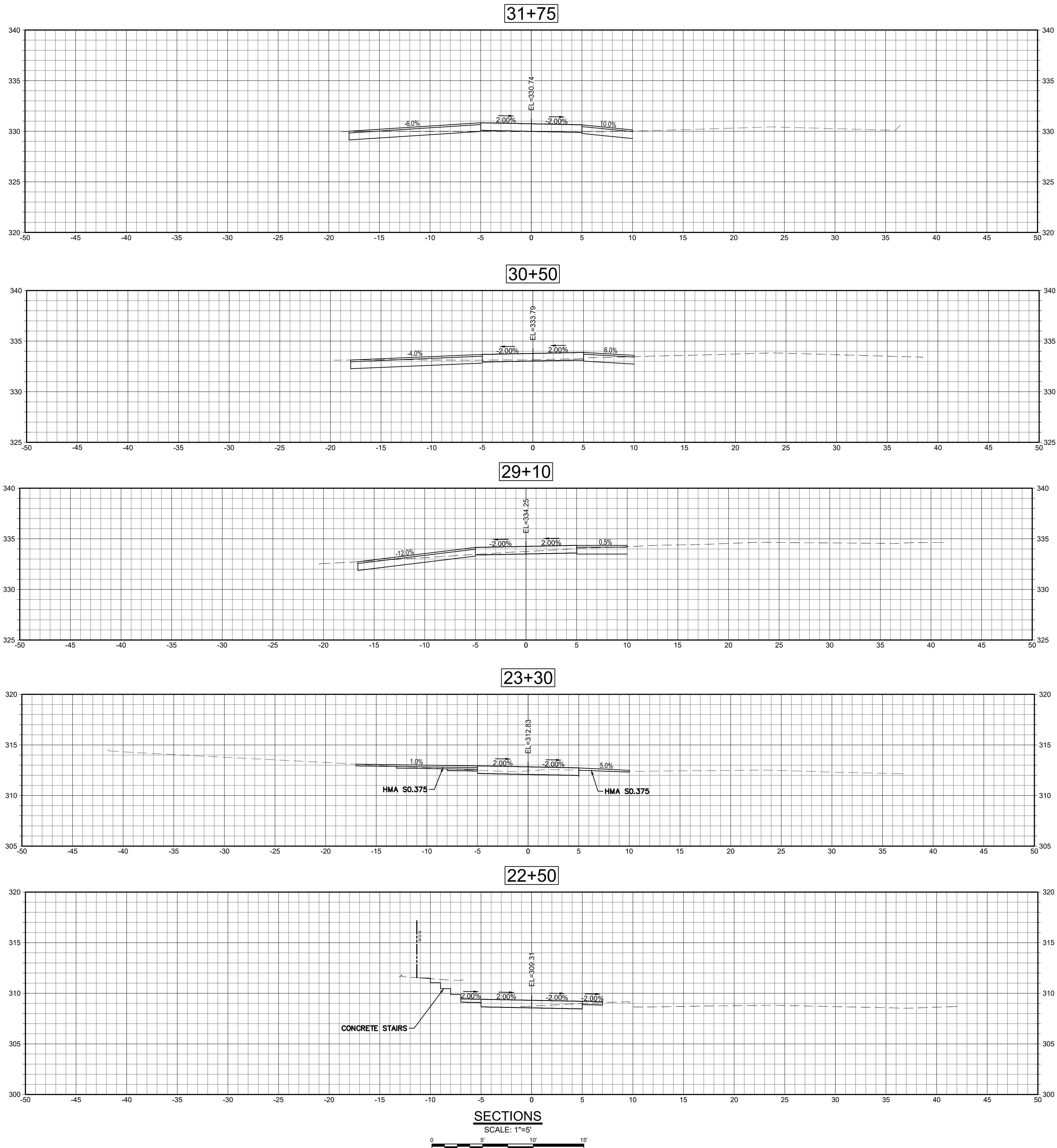
CRITICAL CROSS
SECTIONS

Sheet Number:

XSC-1

Rev: 1.6 Date: 04/10/2019

\\us03\vol\MS&E\Projects\CT\Ledyard\CT18119\GTPP\MillPlan_Traffic\2020\LEDYARD_XSC.dwg



Project: TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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Reviewed By: RC

Approved By: MJJ

W&S Project No.: ENG20-1119

W&S File No.:

Drawing Title:

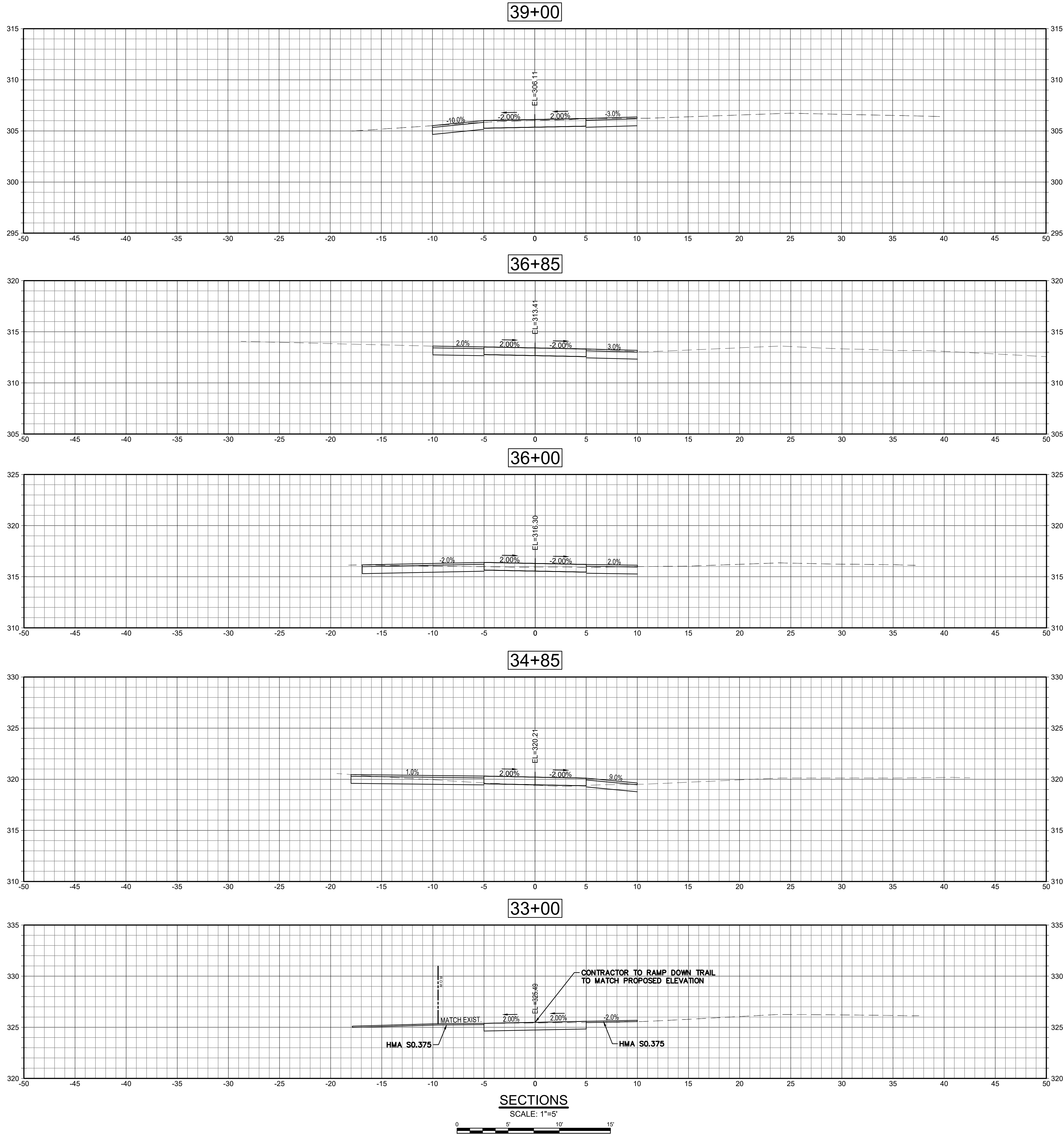
**CRITICAL CROSS
SECTIONS**

Sheet Number:

XSC-2

Rev: 1.6 Date: 04/10/2019

\\us03\hwy\SE\Projects\CT\Ledyard\CTENGD20-1119\GTPP\W\Drawn_Tail\2020\LEDYARD_MU1_XSC.dwg



Project:
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LEDYARD HIGH SCHOOL
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SIDEWALK EXTENSION
L171-0001

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W&S Project No.: ENG20-1119

W&S File No.:

Drawing Title:

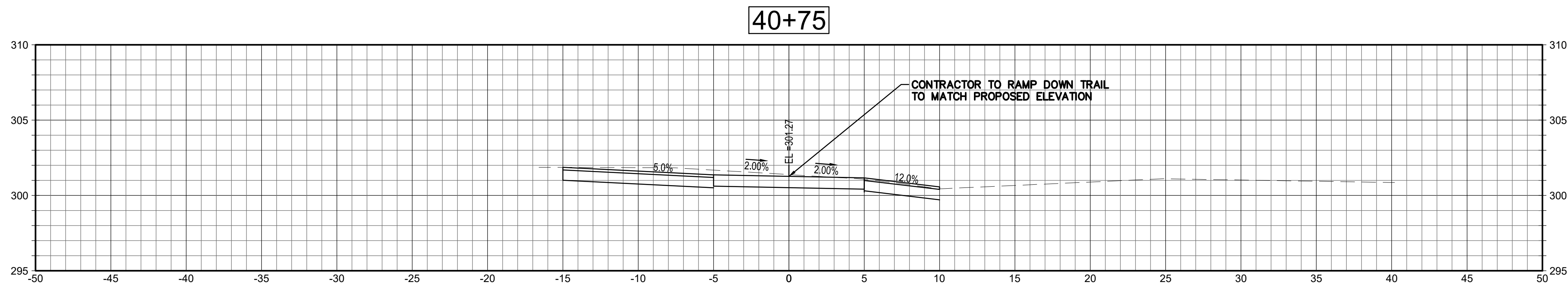
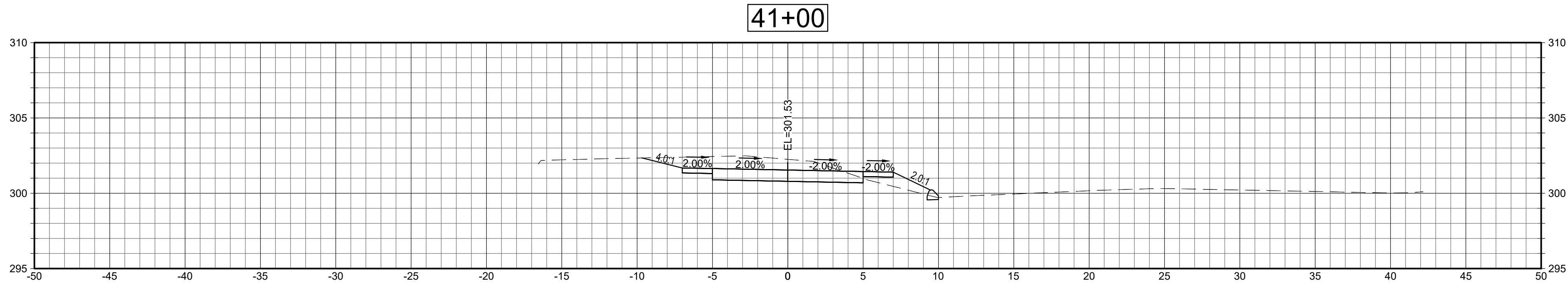
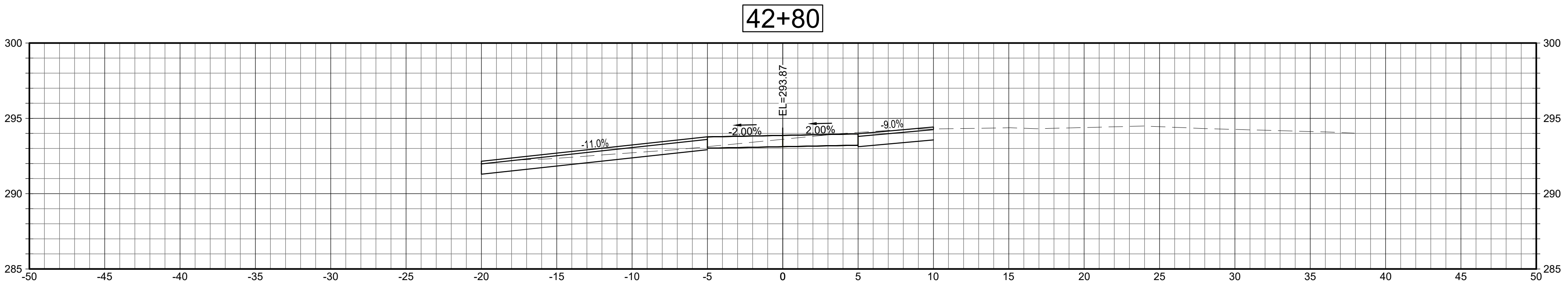
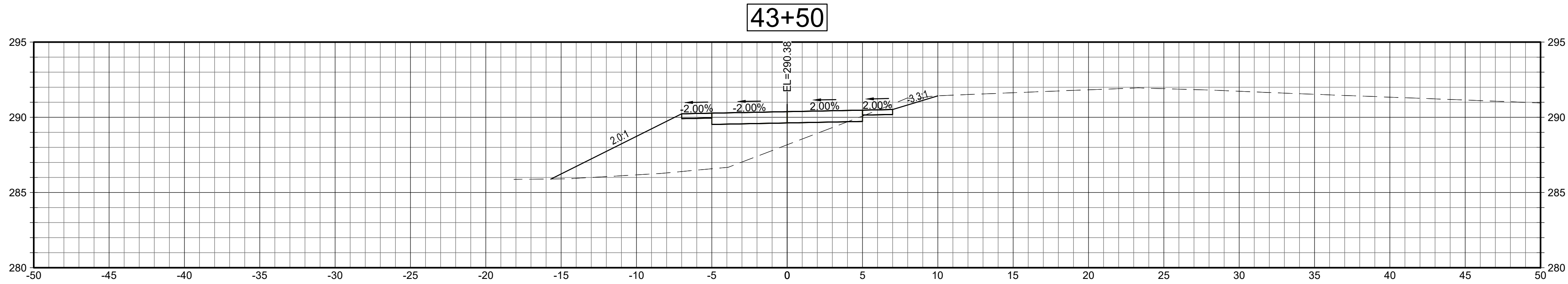
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SECTIONS**

Sheet Number:

XSC-3

Rev: 1.6 Date: 04/10/2019

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Project:
TOWN OF LEDYARD, CT



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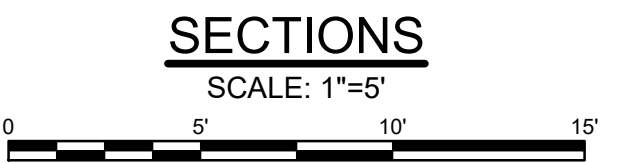
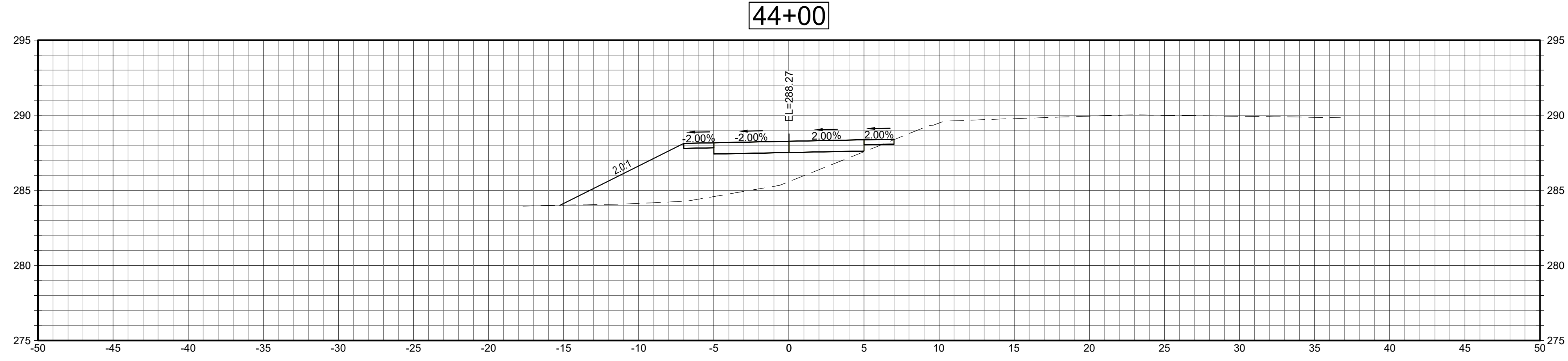
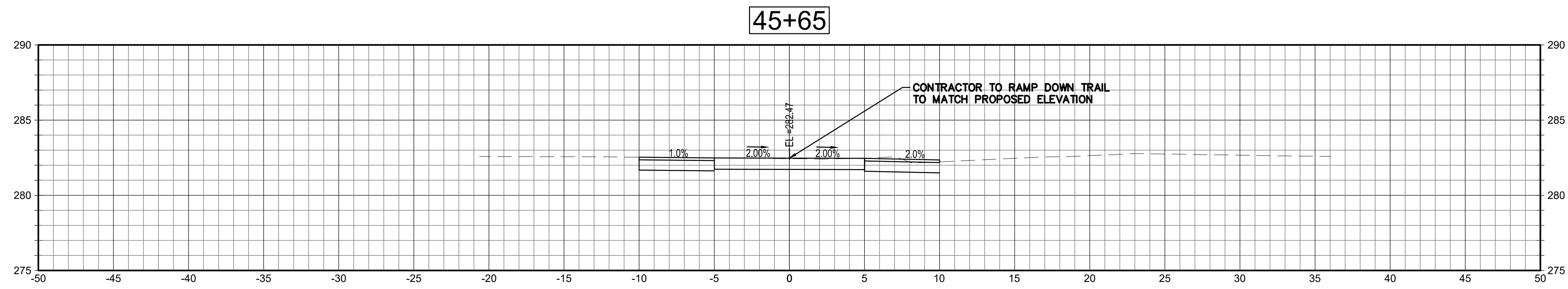
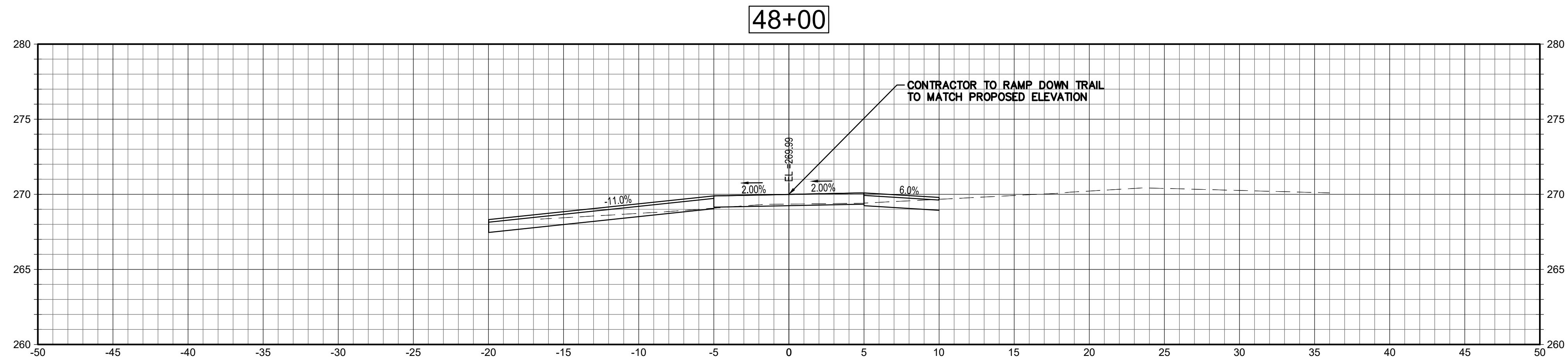
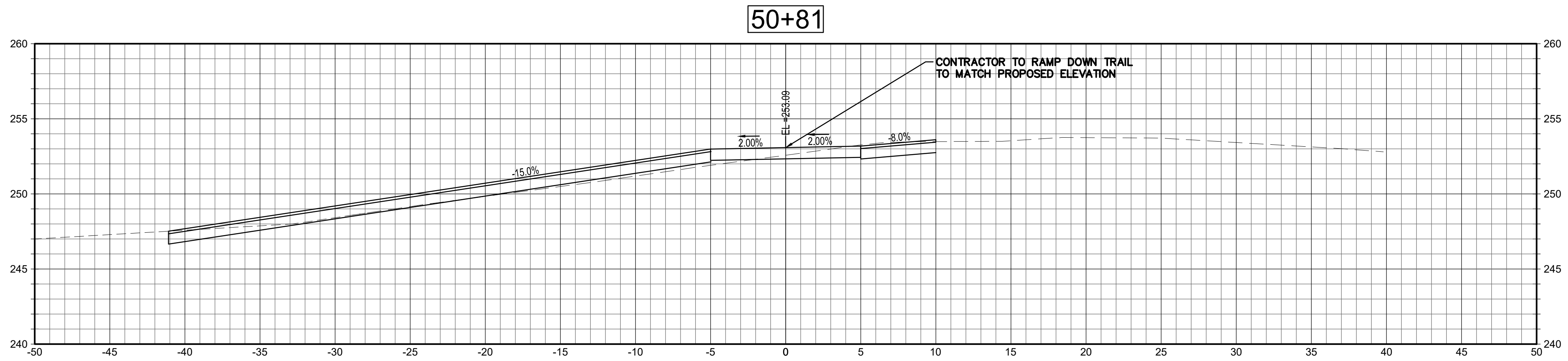
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Drawing Title:

CRITICAL CROSS
SECTIONS

Sheet Number:

XSC-4



Project:
TOWN OF LEDYARD, CT

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L171-0001

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Drawing Title:

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SECTIONS

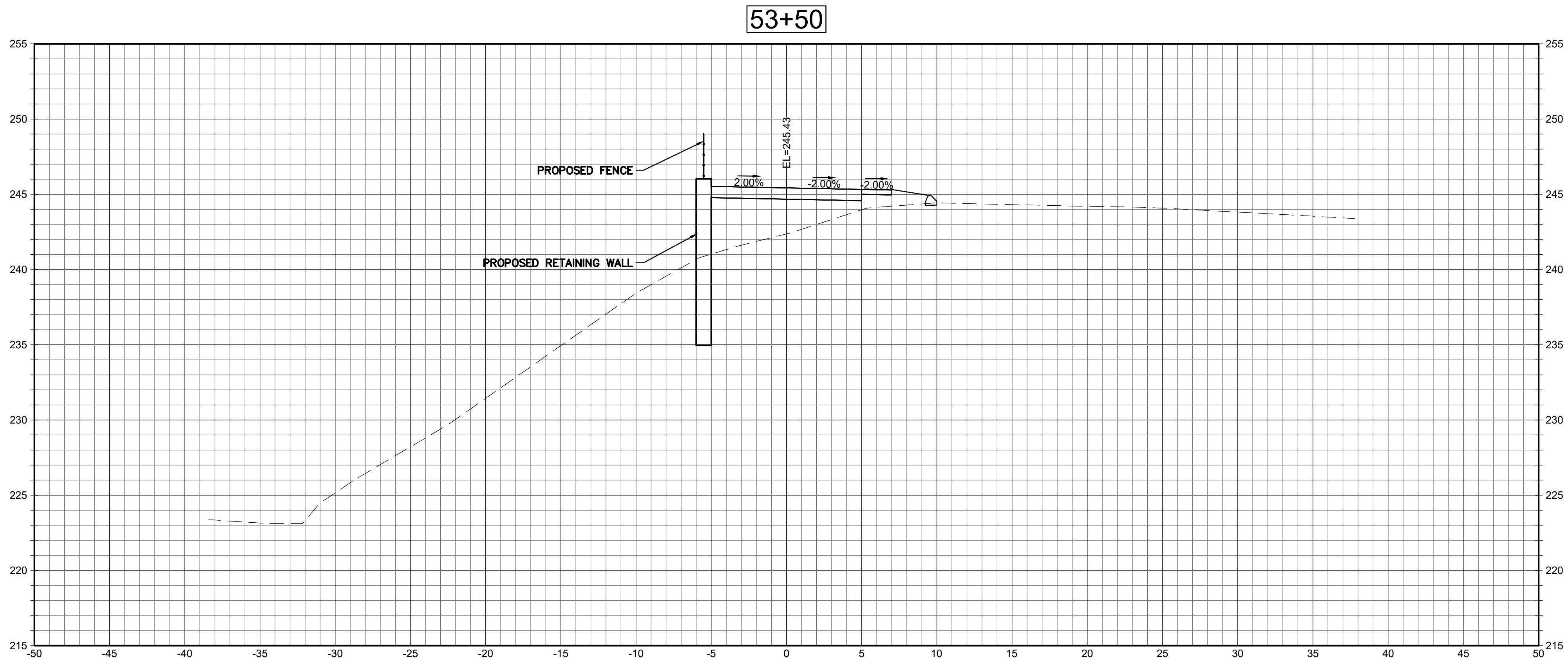
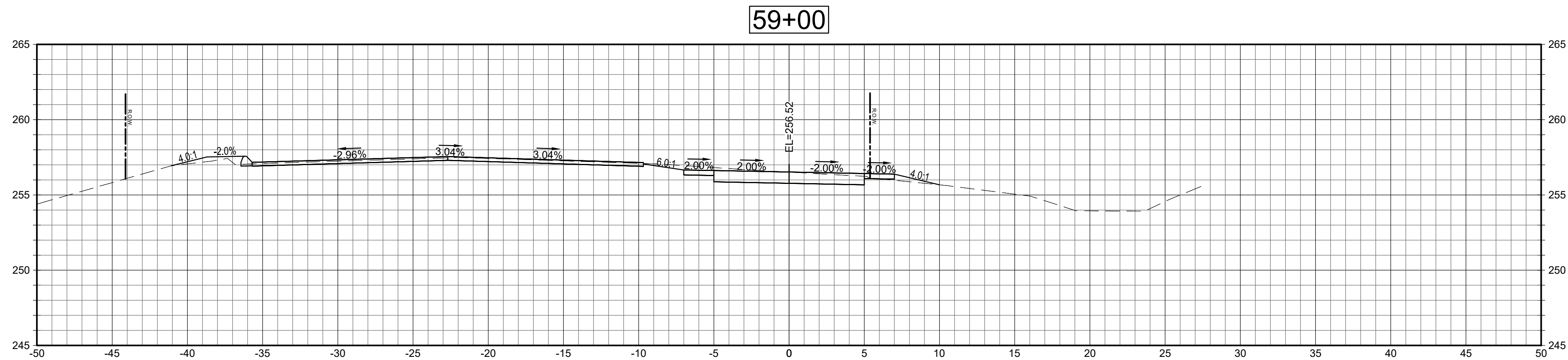
Sheet Number:

XSC-5

Rev: 1.6 Date: 04/10/2019

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Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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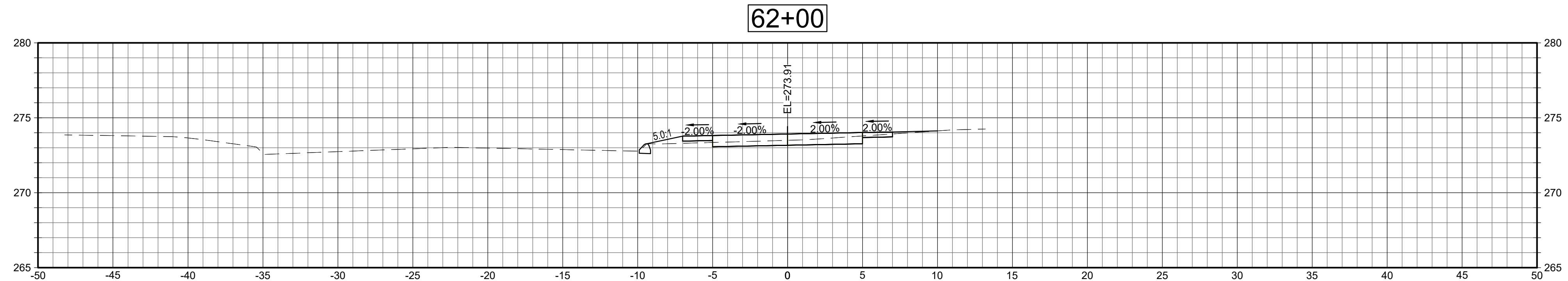
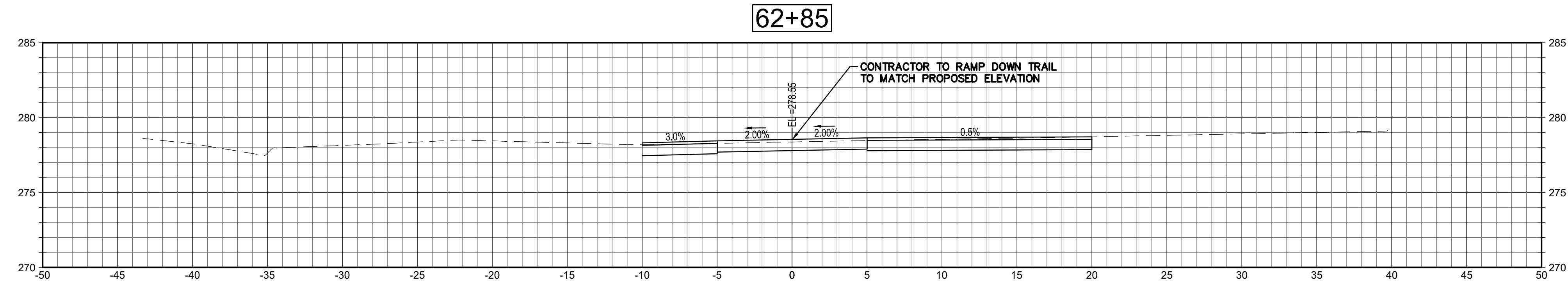
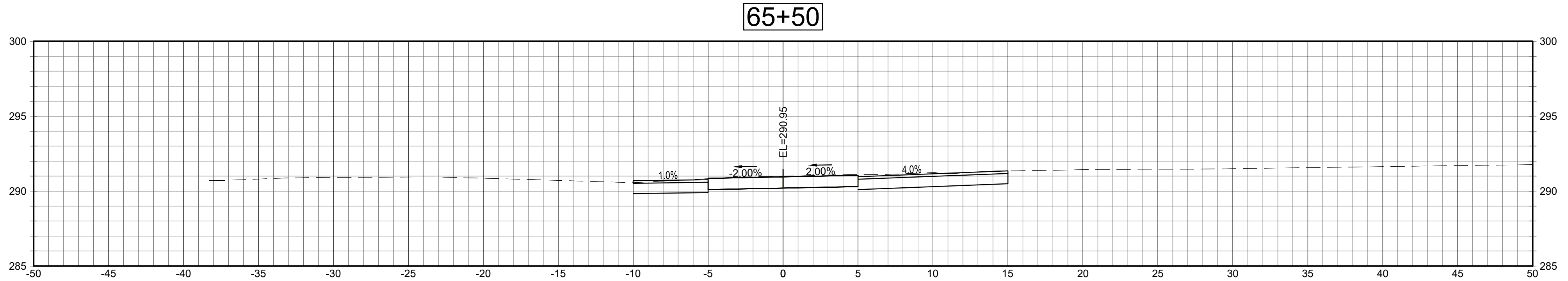
CRITICAL CROSS
SECTIONS

Sheet Number:

XSC-6

Rev: 1.6 Date: 04/10/2019

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SECTIONS

SCALE: 1"=5'



Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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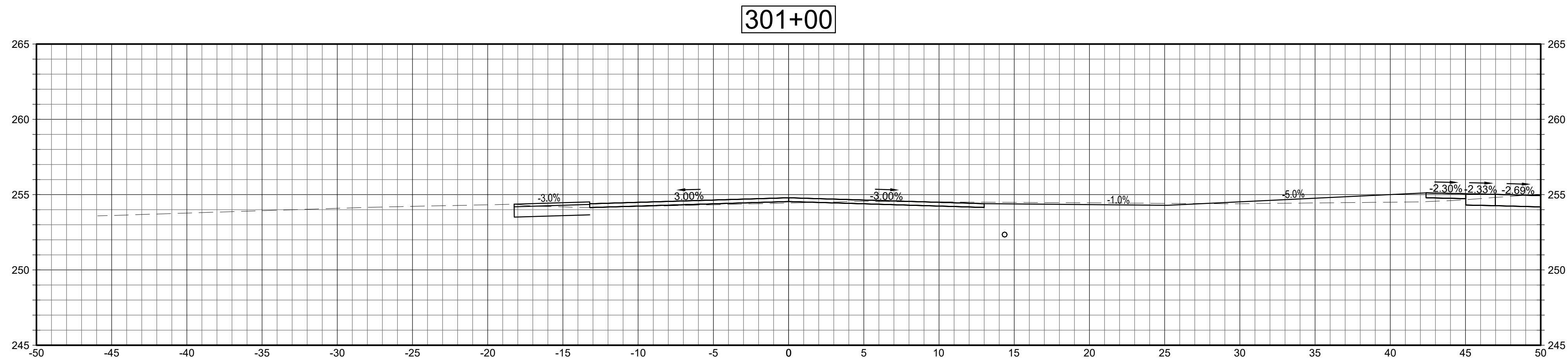
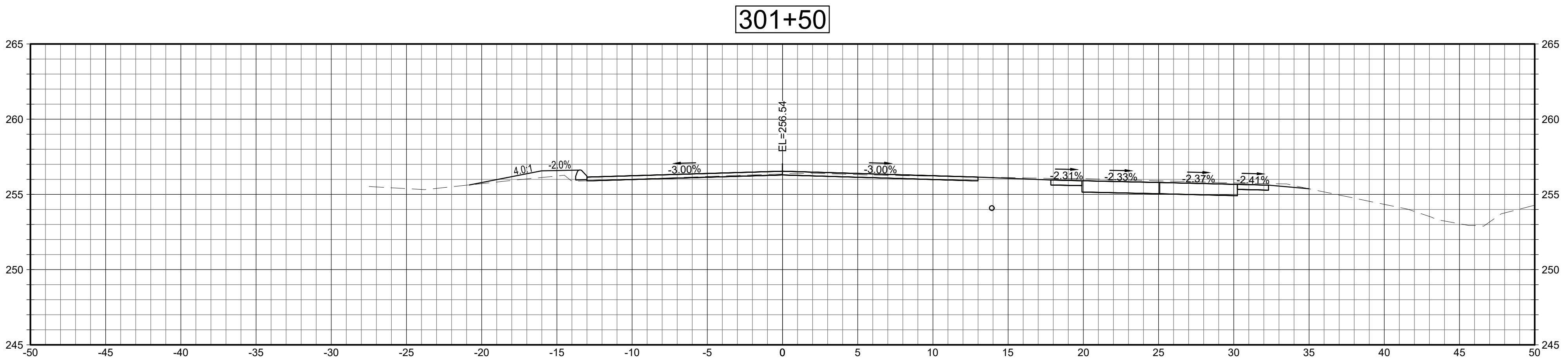
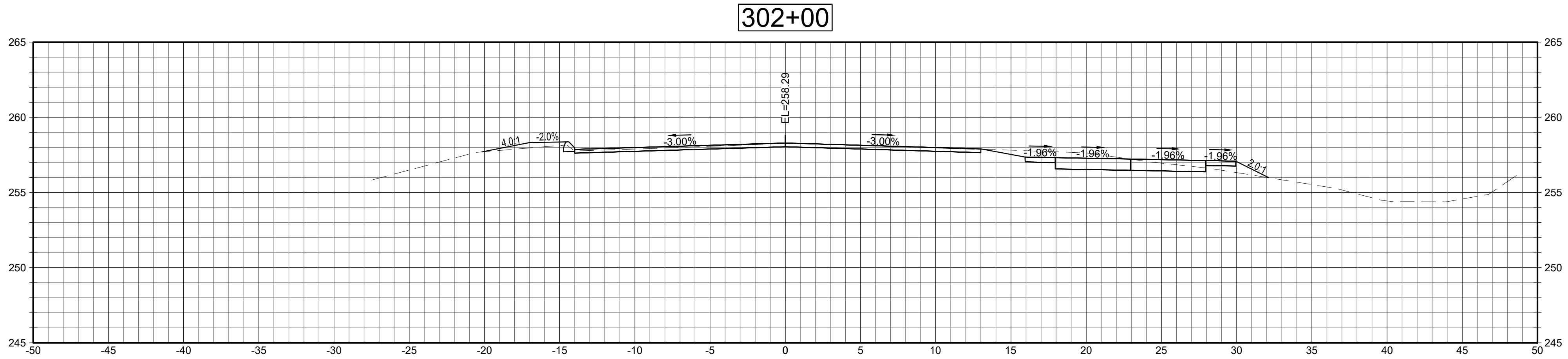
**CRITICAL CROSS
SECTIONS**

Sheet Number:

XSC-7

Rev: 1.6 Date: 04/10/2019

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Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
L171-0001

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SECTIONS

Sheet Number:

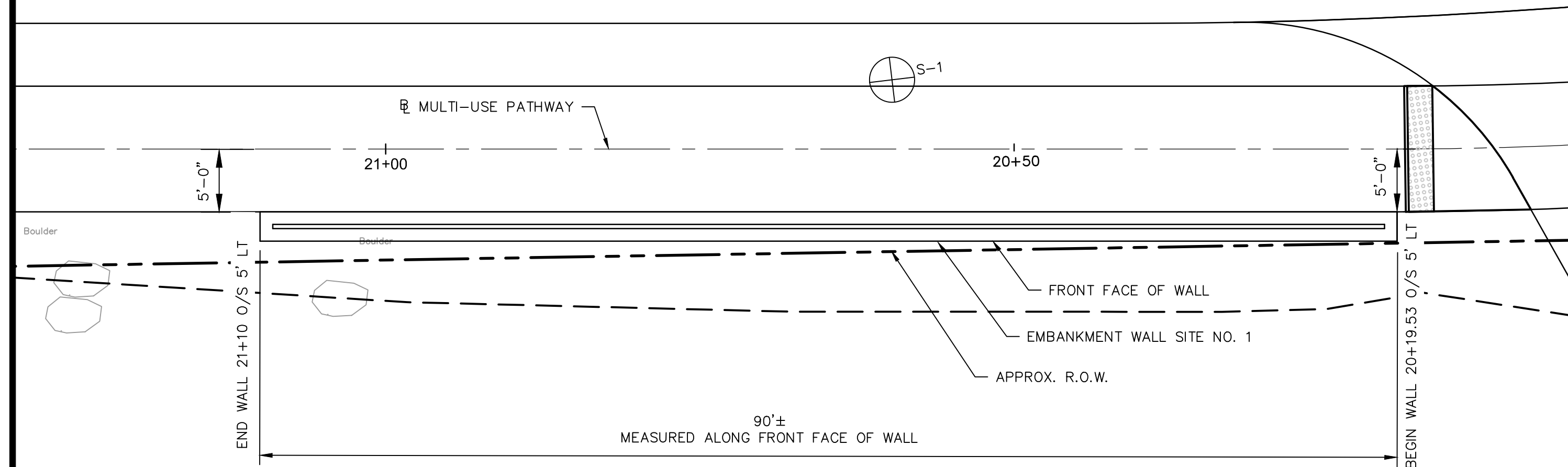
XSC-8

Rev: 1.6 Date: 04/10/2019

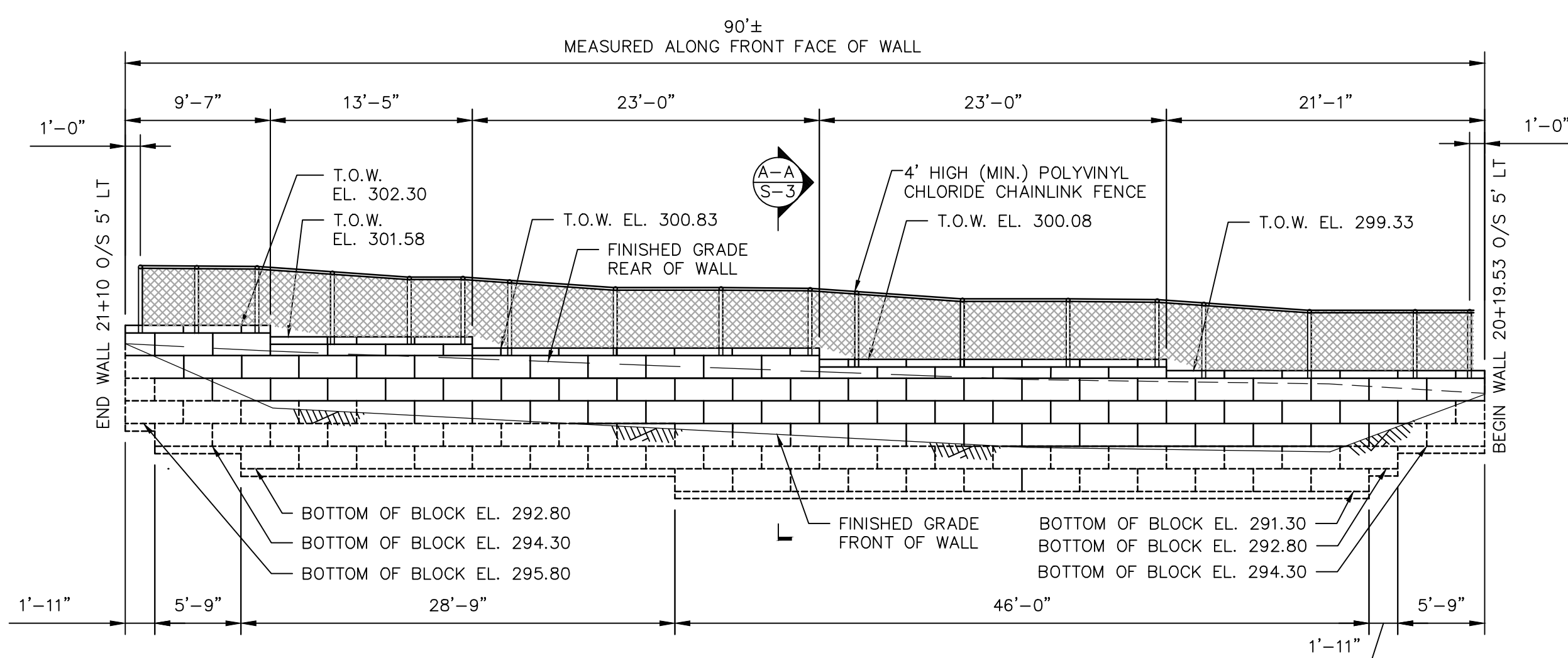
PROPOSED DIMENSIONS:
DIMENSIONS OF THE PROPOSED EMBANKMENT WALLS ARE BASED ON RED-ROCK BLOCK FACE AND ARE USED AS A GENERAL REFERENCE FOR THE WALL LAYOUT. THE CONTRACTOR IS TO VERIFY THE MEASUREMENTS NECESSARY TO ASSURE PROPER FIT OF THE FINISHED WORK OF THE EMBANKMENT WALLS AND SHALL ASSUME FULL RESPONSIBILITY OF THEIR ACCURACY.

THE FOLLOWING PAY ITEMS (AS PART OF THE LUMP SUM COST) AND CONCRETE CLASSES ARE REQUIRED FOR EMBANKMENT WALL COMPONENTS:

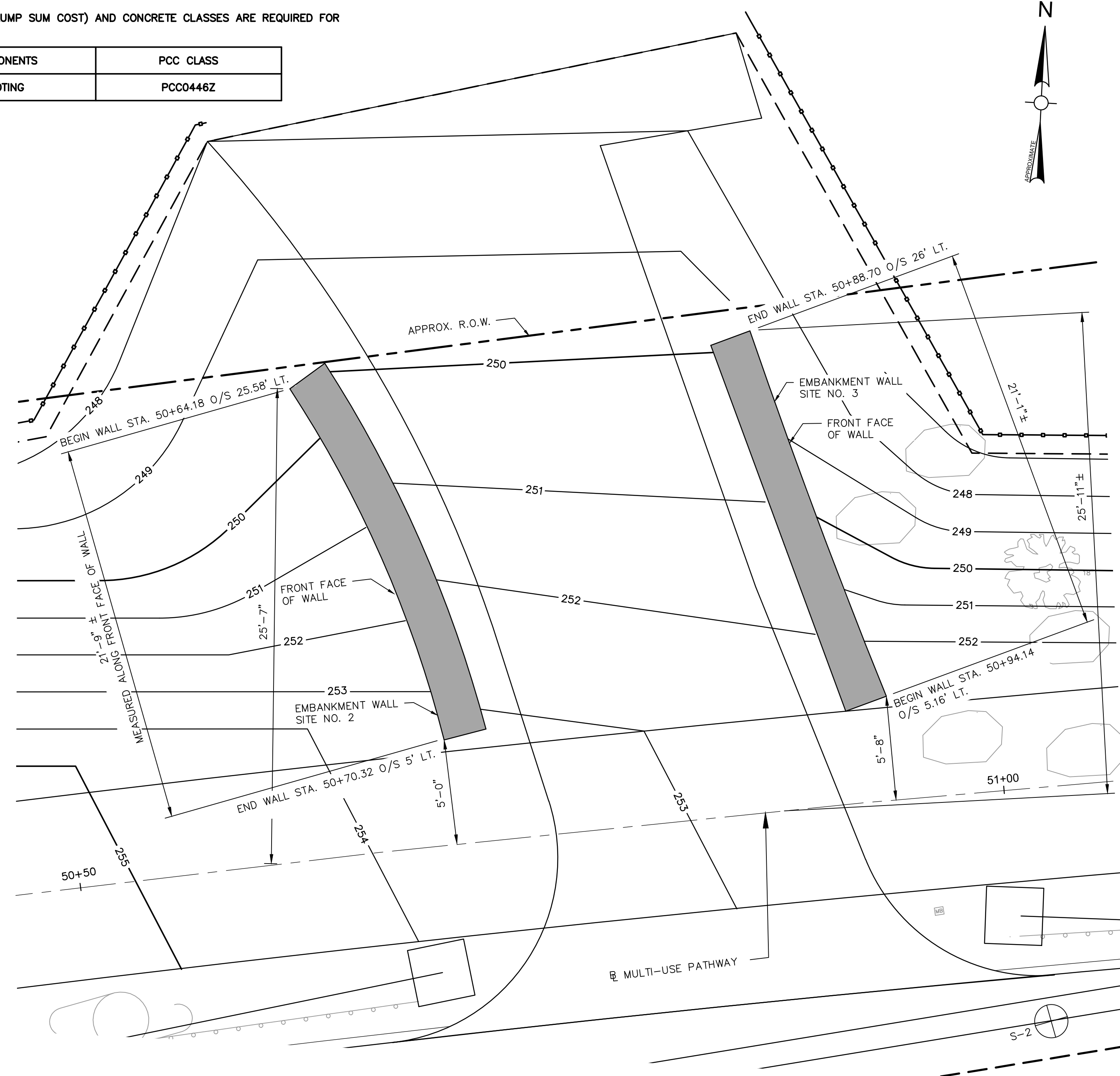
ITEM	COMPONENTS	PCC CLASS
LEVELING PAD	FOOTING	PCC0446Z



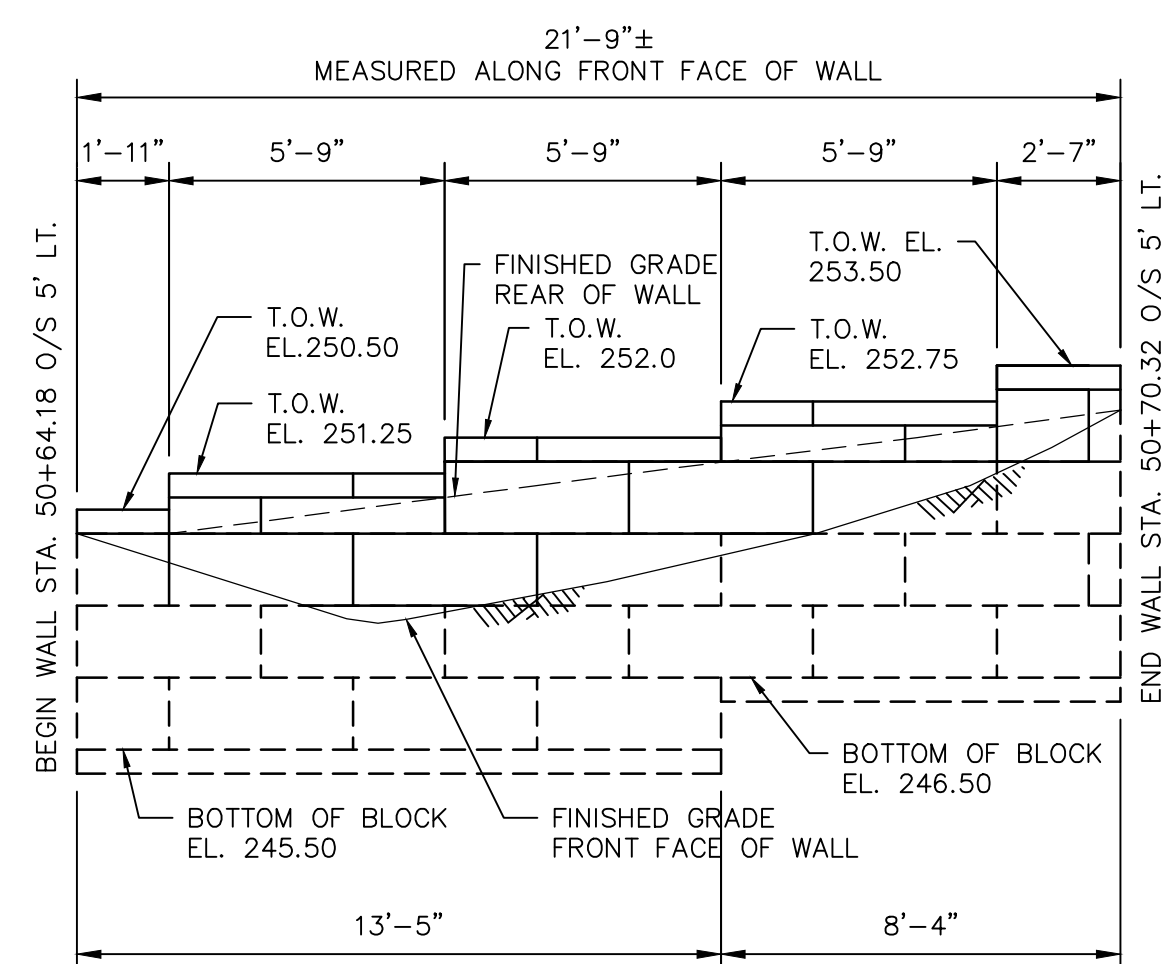
PLAN
SCALE 1/8"=1'-0"



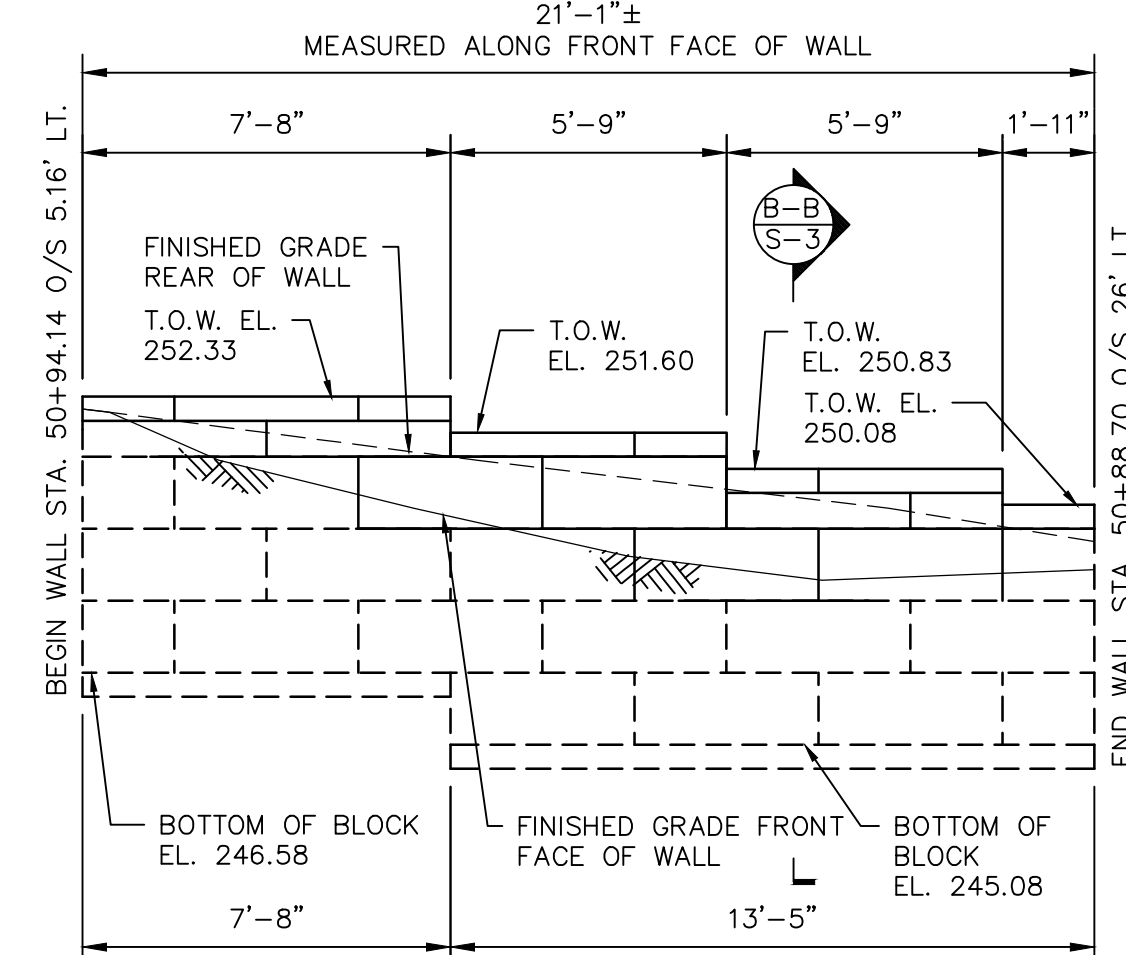
ELEVATION - SITE NO. 1
SCALE 1/8"=1'-0"



PLAN
SCALE 1/4"=1'-0"



ELEVATION - SITE NO. 2
SCALE 1/4"=1'-0"



ELEVATION - SITE NO. 3
SCALE 1/4"=1'-0"

LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION

741 COLONEL LEDYARD HIGHWAY
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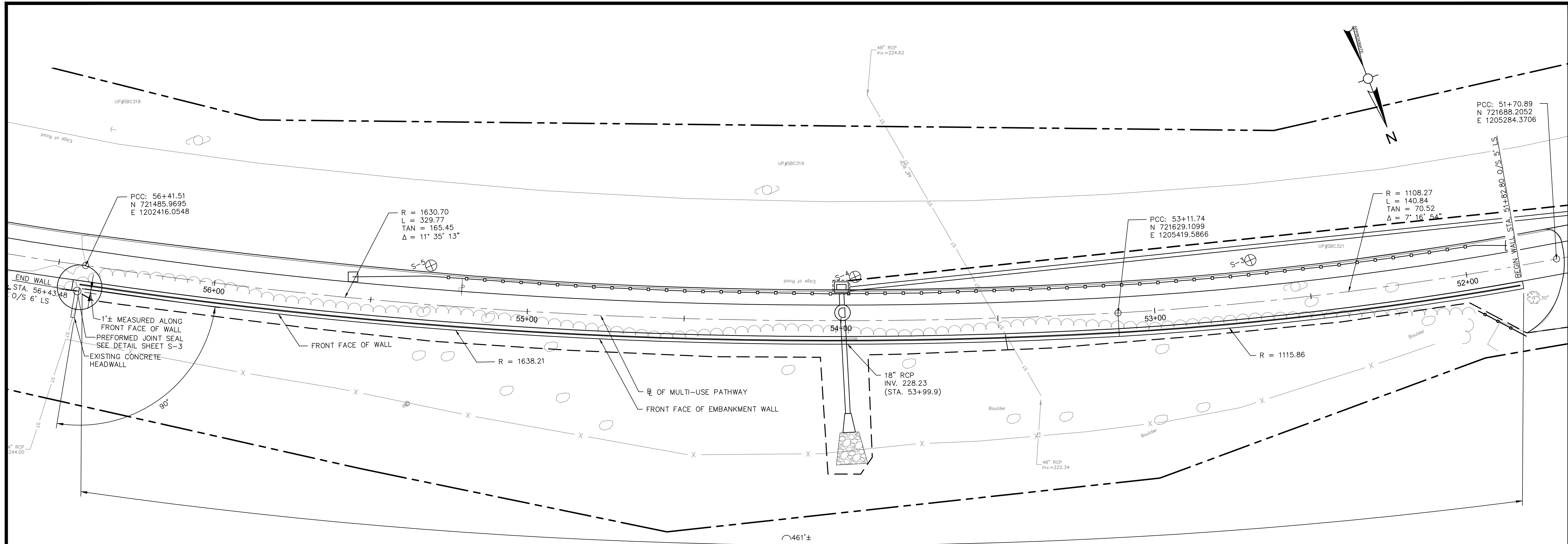
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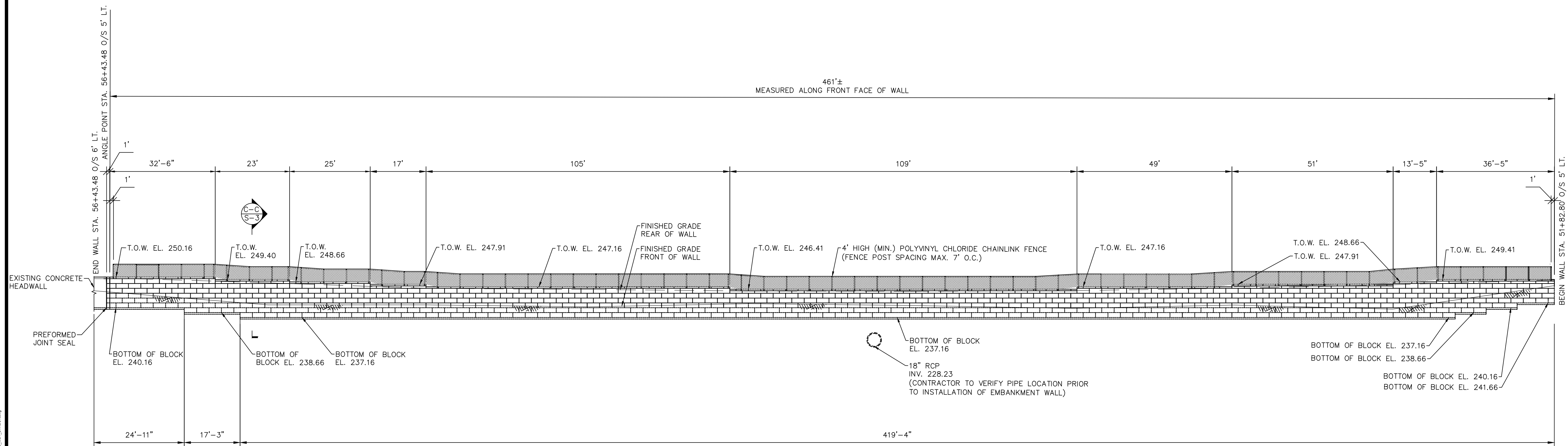
EMBANKMENT WALL
SITE NO. 1,
NO. 2, NO.3
PLAN AND
ELEVATION

Sheet Number:

S-1



PLAN
SCALE 1/16"=1'-0"



DEVELOPED ELEVATION — SITE NO. 4
SCALE 1/16"=1'-0"

Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
SIDEWALK EXTENSION
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Approved By: LAS

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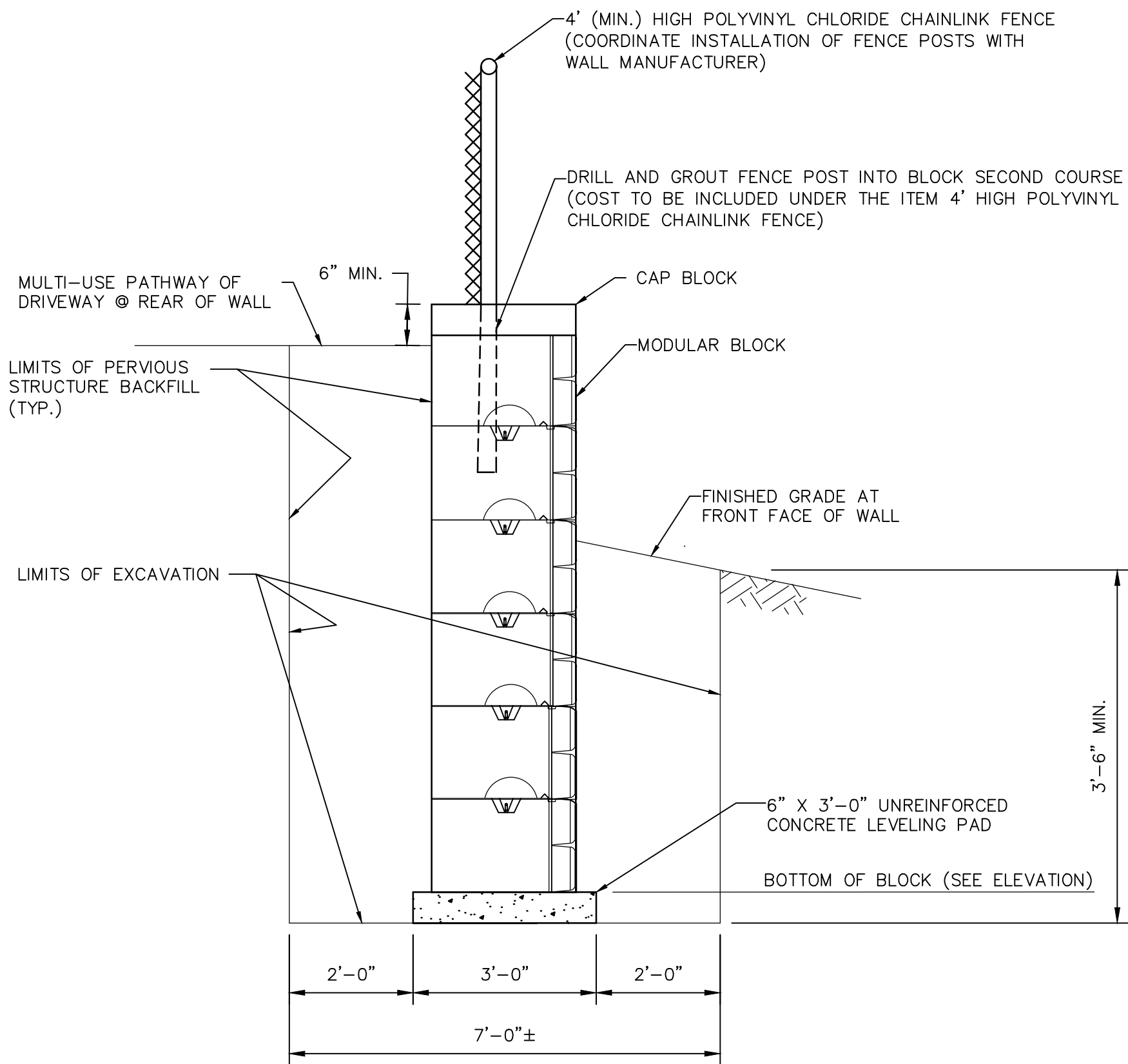
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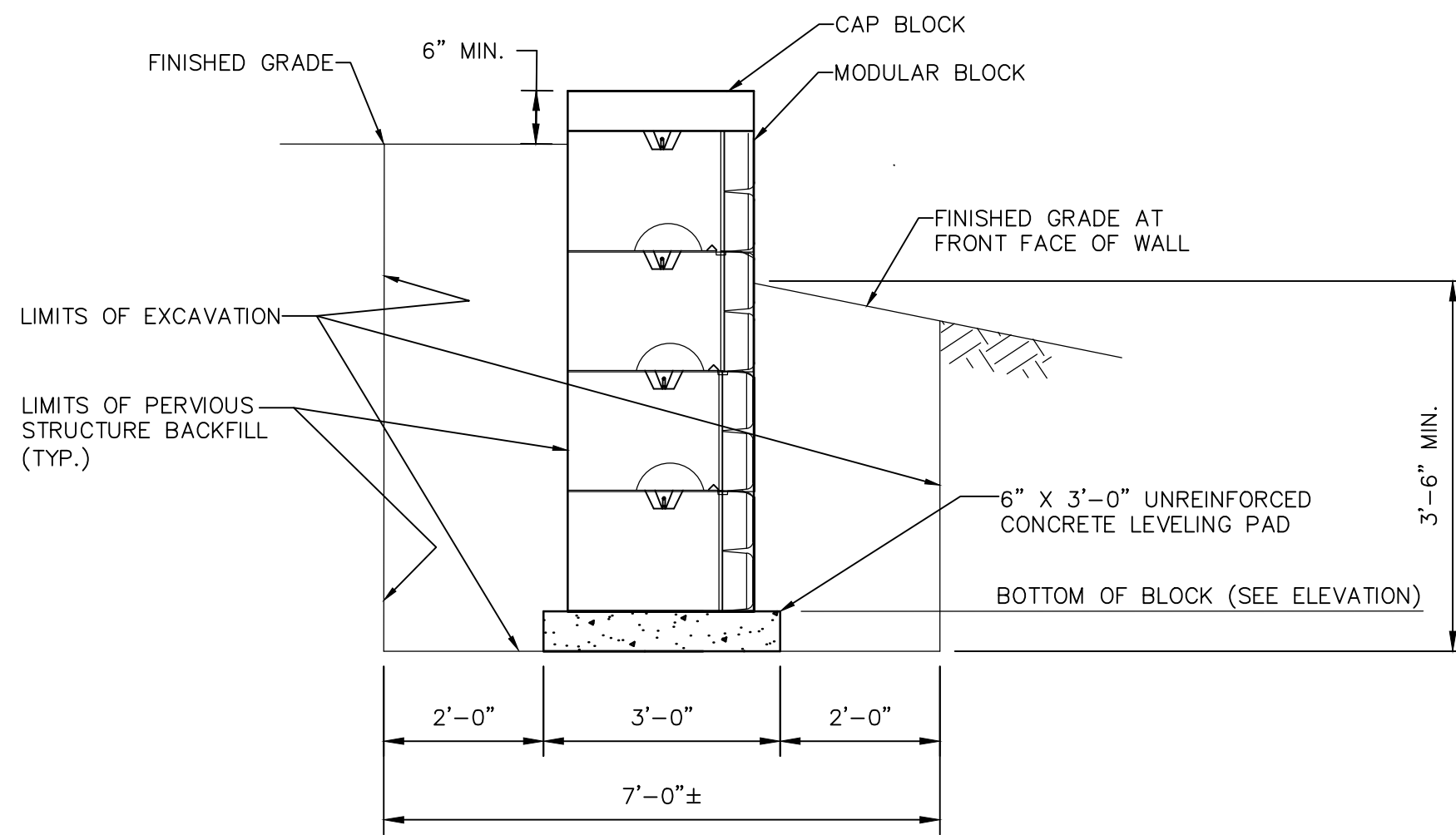
EMBANKMENT WALL
SITE NO. 4 PLAN, AND
ELEVATION

Sheet Number:

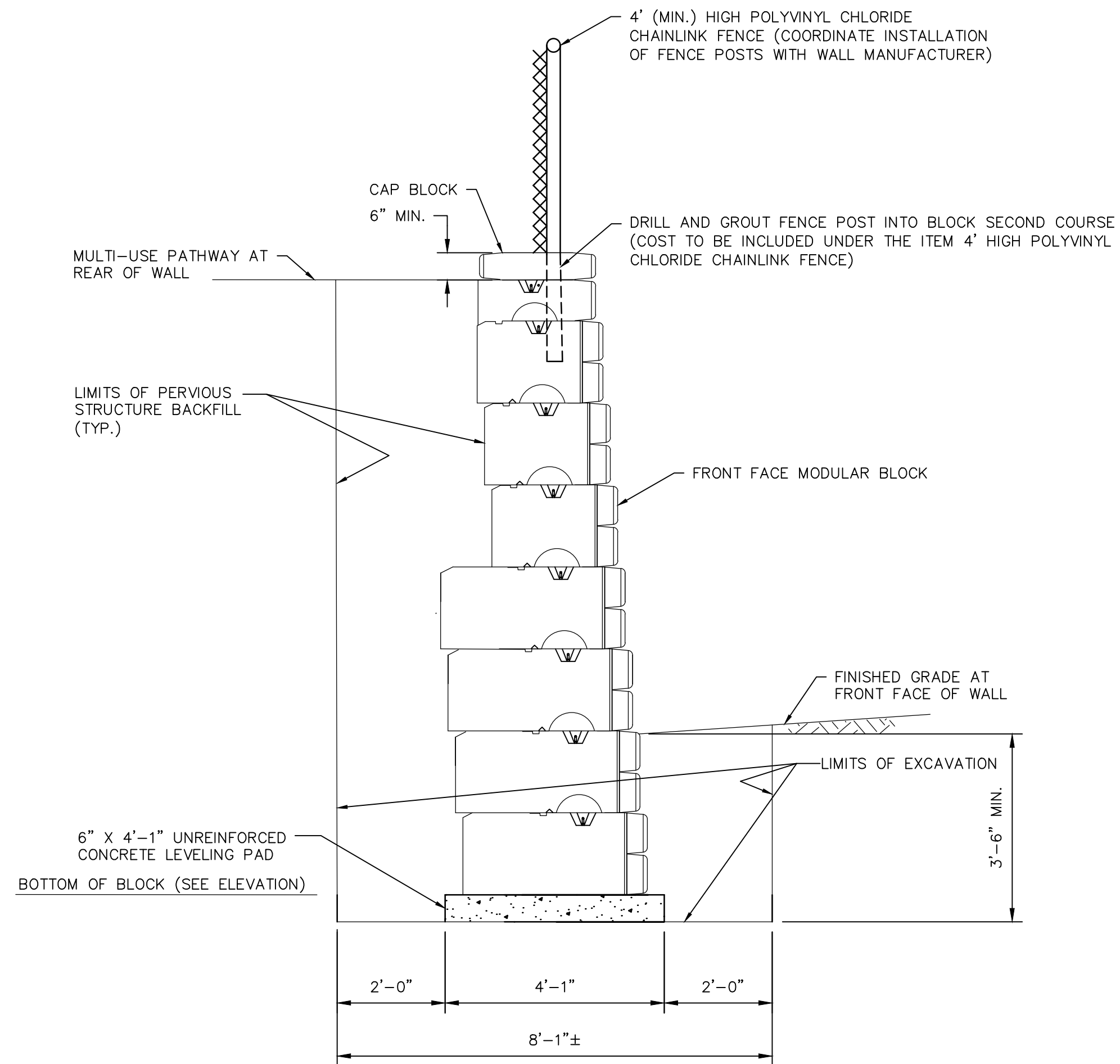
S-2



SECTION A-A
SCALE 1/2"=1'-0"



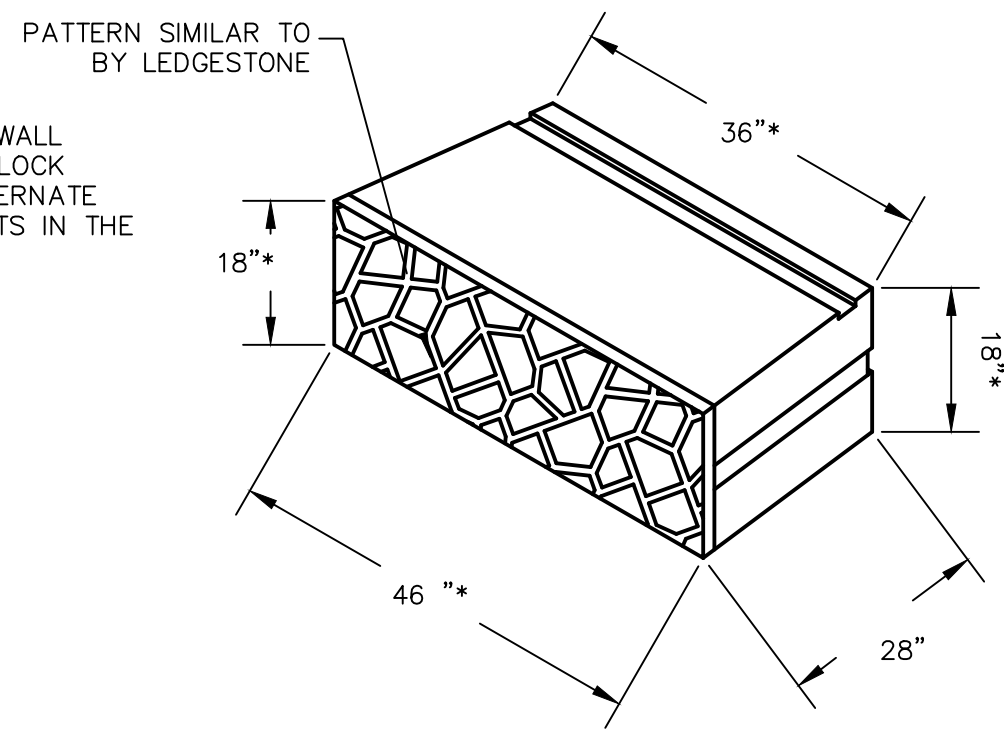
SECTION B-B
SCALE 1/2"=1'-0"



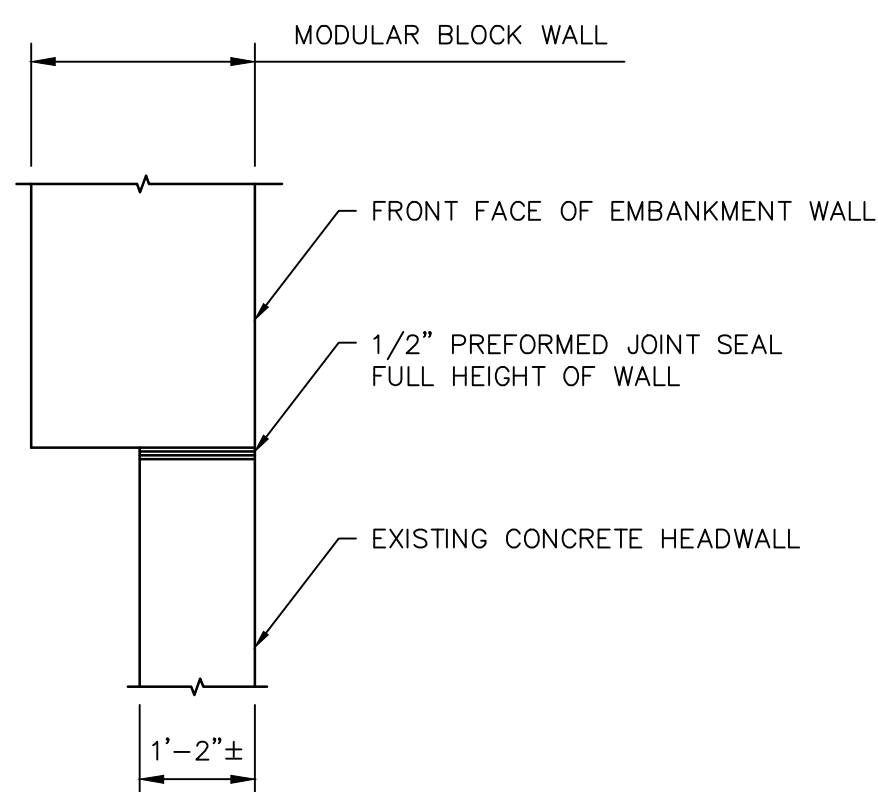
SECTION C-C
SCALE 1/2"=1'-0"

NOTE:

* - CONTRACTOR TO DESIGN MODULAR WALL SYSTEM. BLOCK SHOWN IS REDI-ROCK BLOCK DIMENSIONS. CONTRACTOR MAY USE ALTERNATE BLOCKS PROVIDED ALL THE REQUIREMENTS IN THE PLANS AND SPECIFICATIONS ARE MET.



MODULAR BLOCK
SCALE: N.T.S.



PREFORMED JOINT SEAL DETAIL
SCALE: 1/2"=1'-0"

Project:
TOWN OF LEDYARD, CT



LEDYARD HIGH SCHOOL
MULTI-USE PATHWAY &
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Reviewed By: PJG

Approved By: LAS

W&S Project No.: ENG20-1119

W&S File No.:

Drawing Title:

**EMBANKMENT WALL
SECTIONS AND
DETAILS**

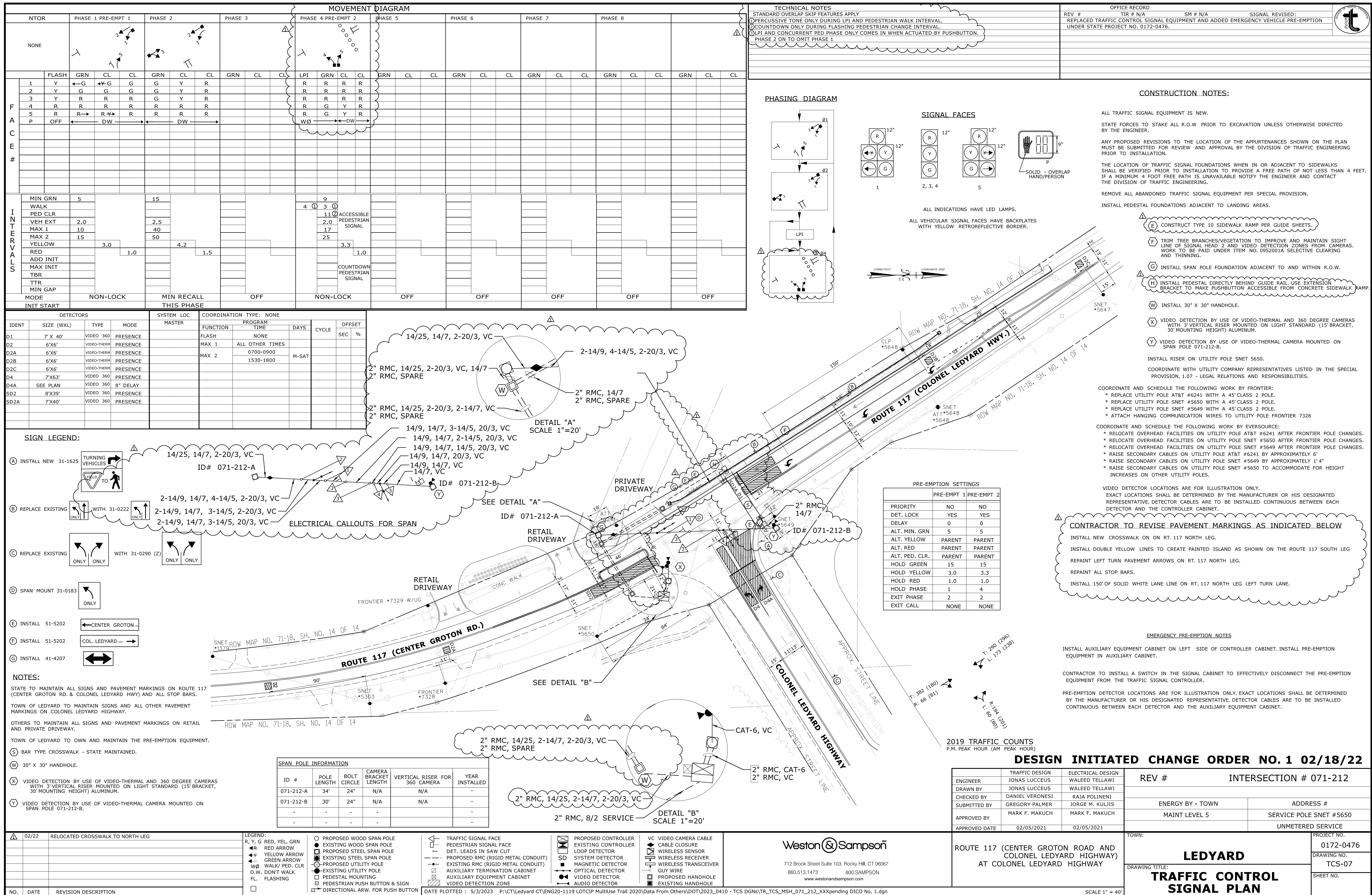
Sheet Number:

S-3

Client: Weston & Sampson				SEABOARD DRILLING, INC.				Test Boring B-1, B-2, S-1, B-3, B-4, B-5, B-6, B-7, B-8			
Location: Ledyard, CT				649 Meadow St., Chicopee, MA 01013							
Project: Colonel Ledyard Hwy				DRILLING/SOIL LOG							
Contractor: Seaboard Drilling, Inc.								Sheet No.		1 of 1	
Type	Casing	SS	Core Barrel	Hammer (Weight-lb./fall-30")				Start: 5/31/2022			
O.D. Inch	8-1/2"		N/A	140/30 300/24				Finish: 5/31/2022			
I.D. Inch	4-1/4"			Rig Type: Mobile B-53				Driller: Doug Feeley			
				FIELD CLASSIFICATIONS AND REMARKS							
Depth (ft.) Range	Blows	Sample No.	Recovery								
0-6"	N/A	B-1		HSA probe to 8", Auger Refusal @ 2.5' Silty Loam, some Sand and Gravel (0-3') No water observed							
0-8"	N/A	B-2		HSA probe to 8", Auger Refusal @ 7.5' Silty Loam, some Sand and Gravel (0-2') some Clay/Gravel (2-8') No water observed							
0-15'	5-3-3-5	S-1		HSA probe to 15', Auger refusal @ 4' Sandy Loam/Clay (0-2') Silty Sand/clay Gravel (2-4') No water observed							
0-15'	N/A	B-3		HSA probe to 15', Auger refusal @ 7.7' Silty loam (0-2), Sandy Loam (2-8')							
0-15'	N/A	B-4		HSA probe to 15', Auger refusal @ 5.2' Silty Loam (0-2), Sand, Loam some Gravel (2-8')							
0-8"	N/A	B-5		HSA probe to 8' Silty Loam (0-2') Sandy Loam (2-8') No Refusal No water observed							
0-8"	N/A	B-6		HSA probe to 8' Silty Loam (0-2') Sandy Loam (2-6'), Sand, No Refusal No water observed							
0-8"	N/A	B-7		HSA probe to 8', Auger refusal @ 6.5' Silty Loam (0-3), Sandy Loam (3-7') No water observed							
0-8"	N/A	B-8		HSA probe to 8', Auger Refusal @ 4' Loam/Silty Loam (0-4') No water observed							
SAMPLE PENETRATION RESISTANCE - 140 lb. Wt. Falling 30" on 2" O.D. sampler											
Density (# Hammer Blows)			Cohesive Consistence (# Hammer Blows)						PROPORTIONS		
0-4	Very Loose	0-2	Very Soft	3-4	Soft	Trace	0 to 10%				
5-9	Loose	5-8	Medium-Stiff	9-15	Stiff	Little	10 to 20%				
10-29	Medium-Dense	16-30	Very Stiff	31+	Hard	Some	20 to 35%				
30-49	Dense					and	30 to 50%				
50+	Very Dense										

BORING LOG S-1

Client: Weston & Sampson			SEABOARD DRILLING, INC.			Test Boring/ Monitor Well ID: S-4			
Location: Ledyard, Ct			649 Meadow St., Chicopee, MA 01013						
Project: Colonel Ledyard Hwy			DRILLING/SOIL LOG						
Contractor: Seaboard Drilling, Inc.						Sheet No. 1 of 1			
Type	Casing		Core Barrel	Hammer (Weight-lb./fall-30")			Start: 6/3/2022		
O.D. Inch	HSA	SS	N/A	140/30 300/24			Finish: 6/3/2022		
I.D. Inch	8-1/2"			Rig Type: Mobile B-53			Driller: Doug Feeley		
4-1/4"									
FIELD CLASSIFICATIONS AND REMARKS									
Depth (ft.) Range	Blows	Sample No.	Recovery						
1-3"	18-13-11-11	S-1	10"	2" Asphalt Brown SAND and Gravel					
5-7"	28-50/2"	S-2	1"	Brown SAND and Gravel					
5-7" a	22-10-11-15	S-3	1"	Brown fine to coarse SAND and Gravel (Cobbles 5.5' offset)					
10-12"	11-11-6-8	S-4	0	No recovery, casing refusal, no water return					
				End of Boring @ 12'					





TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1842

Agenda Date: 8/22/2023

Agenda #: 2.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Cost of Service quote review and discussion.

Background:

From the July 25, 2023 meeting:

Ian Stammel, Assistant Finance Director told Chairman Lynch he doesn't believe the WPCA has money freed up to fund this endeavor. Ms. Wadecki said if the Authority wants to seriously consider completing the Cost of Service Study then the WPCA needs to know how to fund it. Mr. Jones said he doesn't believe the funds should come from the Capital account; clarification is needed from Finance. Chairman Lynch will speak with Mr. Stammel and report his findings during the August meeting.

ACTION ITEM:

Chairman Lynch will discuss the funding options with Ian Stammel, Assistant Finance Director.

From the June 27, 2023, meeting:

The WPCA discussed assessing a connection fee and credit check. Chairman Lynch asked if charging a connection fee would have to go to Town Council since it is not a rate increase. Mr. Jones said that in the WPCA manual there are provisions that allow for a connection.

Mr. Jones read the Customer Rules and regulation policy:
Section 2.2

A new account fee may be charged to each customer collecting water or sewer services this charge applies all rate classifications and helps to pay the cost of setting up a new account, reading the meter and/or connecting to water services, possibly turning on the meter.

Mr. Jones added that he believes that relating the fee to the efforts required in setting up a new account (ex - 1 or 2 labor hours) collections is better than just having an arbitrary fee.

Councilor Saums said since adding a new account fee would not be a change to the existing policy it would not be necessary to go to the Town Council.

ACTION ITEM - Ms. Juber asked Chairman Lynch to find out what the cost for a credit check and what the actual cost to the Authority would be for the efforts of opening a new account. Chairman Lynch said he would ask Ms. Daniels for a copy of GU's policy and cost for new accounts.

It was stated that standard practice for utility companies is to run a credit check and require a security deposit if the customer's credit score is low.

Mr. Jones asked Mr. Duarte if the Authority could receive a copy of Groton Utilities' current practices on opening a new account.

Department Comment/Recommendation:
(type text here)

Ian Stammel

To:

- water pollution control authority

Cc:

- Matthew Bonin;
- Stephen Banks

Mon 7/3/2023 5:09 PM

Hi Ed,

I spoke with Steve and Matt about this. My opinion is that the WPCA really doesn't have enough free money sitting around to use to pay for this. Ultimately though it is up to the WPCA to make the final decision. If the discussion about GU purchasing the WPCA from the town is serious in the near future I think doing something might be pointless as GU I'm sure is going to restructure all the billing rates and things of that nature anyway.

Ian Stammel



Assistant Finance Director, Town of Ledyard
741 Colonel Ledyard Hwy.
Ledyard, CT 06339
(860) 464-3258
www.ledyardct.org

***NOTICE* Effective June 11,2018 Town Hall hours
will be: 7:30AM-4:45PM Mon-Thursday
CLOSED FRIDAYS**



May 2, 2023

Aaron Brooks, General Manager
Groton Utilities
295 Meridian Street
Groton, CT 06340

Utility Financial Solutions, LLC (UFS) is pleased to submit a proposal to provide water and wastewater cost of service studies for Ledyard WPCA on behalf of Groton Utilities. Our proposal is based on years of experience navigating complex financial challenges for municipal utilities around the United States.

We approach challenges strategically, partnering with your team to understand your goals before using innovative processes and in-depth research to determine the best solution to suit your needs. We stay on top of industry trends and anticipate challenges to help you solve existing problems and prepare your utility for long-term success. Our methodology and educational components have earned us a reputation as the preferred provider of rate studies in the United States.

Our project team members are experts in their respective fields and instruct for leading utility groups including the American Public Power Association, Southern Gas Association, and the National Association of Regulatory Utility Commissioners. Our specialized team of accountants, engineers, and economists have years of industry-specific experience to help ensure that you reach your goals. Your team lead will be Mark Beauchamp. A recognized industry leader in utility finance, Mark started UFS in 2001 and brings decades of experience to the team, having conducted thousands of cost of service studies.

For your project, UFS will complete a cost of service and rate design study, as well as develop educational materials to communicate with members of your governing body and community. The goal of these efforts is to:

- Earn positive engagement from members of government
- Obtain rate approval
- Ultimately create long-term financial stability for your utility

We appreciate the opportunity to submit this proposal and look forward to discussing it with you. If you have questions or need additional information, please contact me at (616) 403-5450.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Beauchamp", written over a horizontal line.

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Detailed Breakout of Scope of Services

Completion of Cost of Service and Financial Projection– Summary of deliverables for each utility

- Cost of Service Analysis
 - a. Cost of service identifying cost to serve each class of customers
 - b. Minimum system analysis to identify cost to recover in customer charges
 - c. Development of component costs to determine how customers use water/wastewater
 - i. Base Costs
 - ii. Extra-capacity
 - d. Distribution/collection breakdown of costs
 - i. Customer charge
 - ii. Distribution/collection charges
- Financial Projection and long term rate track
 - a. Development of five-year financial projection
 - b. Identification of long term rate adjustments
 - c. Identification of projected debt coverage ratios
 - d. Minimum cash reserve for the utility to maintain
 - e. Identification of target operating income
- Rate Design for one year
 - a. Impact of rate designs at various usage levels within each class
 - b. Movement of rate toward cost of service
- Detailed report for Management in PDF format
 - a. Identifying process and result of study
- Presentation
 - a. Present the findings and recommendations to Management and governing body via WebEx – one presentation included

Financial Projection Summary of Deliverables

- Assessment of Key Financial Targets:
 - a. Days Cash on Hand
 - b. Rate of Return
 - c. Debt Coverage Ratio
 - d. Age of System
 - e. General adequacy of infrastructure re-investment
 - f. General Rate Design observations
 - g. General observations on debt vs NBV
 - h. Other general financial observations
 - i. Separated enterprise funds
 - ii. Where applicable, observations about transfer to the City
 - iii. Cash VS Utility Basis observations



Proposed Professional Services Agreement

Prices, terms, and conditions are good for a period of 90 days from this proposal date of May 2, 2023.

Payment will be made through submission of invoice which itemizes the work performed.

Fees for Services Provided:

Water Financial Projection, Cost of Service, Rate Design **\$13,000**

(*Onsite meetings will be separately charged at \$3,000)

Anticipated Meetings (Online platform):

- Project kickoff
- Data collection summary
- Financial review summary
- Draft report to management
- Final report to management

Hourly Rates (travel is discounted at 50%)

Mark Beauchamp	\$ 330.00
Dawn Lund	\$ 290.00
Dan Kasbohm	\$ 255.00
Mike Johnson	\$ 255.00
Chris Lund	\$ 255.00
Joan Bakenhus	\$ 155.00
Jillian Jurczyk	\$ 175.00
Robert Blank	\$ 120.00

Deliverables in pdf:

- 1) Long-term financial projection and rate track
- 2) Cost of service analysis
- 3) Minimum cash reserve determination
- 4) Debt service ratio
- 5) Target operating income (rate of return)
- 6) One-year rate design & revenue proof

Onsite Meetings

Any requested and approved onsite presentation will be billed at hourly rates with a 50% discount on related travel time. Out of pocket travel expenses are billed at cost. All costs incurred from schedule changes initiated by client after booking will be considered out of pocket.

Out of Scope Pricing

Out of scope items and work hours will be billed at the hourly rates listed on this page.

We look forward to exceeding your expectations. Please sign, date, and return to clund@ufsweb.com at your earliest convenience.

Sincerely,

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Date:

Accepted By:

Groton Utilities



Proposed Professional Services Agreement

Prices, terms, and conditions are good for a period of 90 days from this proposal date of April 12, 2023.
Payment will be made through submission of invoice which itemizes the work performed.

Fees for Services Provided:

Water and Wastewater Financial Projection, Cost of Service, Rate Design

\$26,000

(*Onsite meetings will be separately charged at \$3,000)

Anticipated Meetings (Online platform):

- Project kickoff
- Data collection summary
- Financial review summary
- Draft report to management
- Final report to management

Deliverables in pdf for each utility:

- 1) Long-term financial projection and rate track
- 2) Cost of service analysis
- 3) Minimum cash reserve determination
- 4) Debt service ratio
- 5) Target operating income (rate of return)
- 6) One-year rate design & revenue proof

Hourly Rates (travel is discounted at 50%)

Mark Beauchamp	\$ 330.00
Dawn Lund	\$ 290.00
Dan Kasbohm	\$ 255.00
Mike Johnson	\$ 255.00
Chris Lund	\$ 255.00
Joan Bakenhus	\$ 155.00
Jillian Jurczyk	\$ 175.00
Robert Blank	\$ 120.00

Onsite Meetings

Any requested and approved onsite presentation will be billed at hourly rates with a 50% discount on related travel time. Out of pocket travel expenses are billed at cost. All costs incurred from schedule changes initiated by client after booking will be considered out of pocket.

Out of Scope Pricing

Out of scope items and work hours will be billed at the hourly rates listed on this page.

We look forward to exceeding your expectations. Please sign, date, and return to clund@ufswest.com at your earliest convenience.

Sincerely,

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Date:

Accepted By:

Groton Utilities

Ledyard WPCA Cost of Service Study General Request for Information

Item	Responsible Party
· Electronic trial balance (2020, 2021, 2022)	CUSI / Ledyard Finance
· Audited balance sheet, income statement, cash flow (2020, 2021, 2022)	CUSI / Ledyard Finance
· Fixed asset detail for FYE 6/2022	Ledyard Finance
· Copy of O&M and Capital Budget FY2023 and FY2024	Ledyard Finance
· Anticipated Capital Projects FY2024 - FY2029 (or longer if available)	Ledyard Finance
· Copies of all Outstanding Debt Amortization Schedules	Ledyard Finance
· Anticipated debt issuances (debt issues "in the works")	Ledyard Finance
· Current rate schedule and rate schedules applicable to FY2022 billings	CUSI
· Contribution to City/PILOT basis if any	Ledyard Finance
· FY 2022 Revenues by Class (spreadsheet provided at kickoff)	CUSI
· Monthly Billing data for FY 2022 by Class (spreadsheet provided at kickoff)	CUSI
· Water Plant Information (spreadsheet provided at kickoff)	Groton Utilities
· Minimum System Information (spreadsheet provided at kickoff)	Groton Utilities
· Meter Cost Information (spreadsheet provided at kickoff)	CUSI / Groton Utilities



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1543

Agenda Date: 8/22/2023

Agenda #: 3.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Rules and Regulation review and possible changes continued.

Background:

From the July 25, 2023, meeting:

Ms. Wadecki thinks the policy needs to more accurately explain that only sewer can receive relief, that water charges cannot be adjusted. In extreme cases a water charge may be reviewed but that is an exception. Chairman Lynch said he will modify the policy and present it the Authority during the August meeting.

ACTION ITEM:

Update Water/Sewer relief policy.

From the June 27, 2023, meeting:

Recommendation to name the updated policy manual the "Customer handbook" and to combine the rules and regulations and the policies into one handbook

Department Comment/Recommendation:

(type text here)

Policy Manual
of the
Ledyard, CT
Water Pollution Control
Authority



Table of Contents

Policy

Page Number

Application for Water Service Pipe Construction

Cross-Connection and Backflow Prevention Inspection Program

Installation of Water Mains at Customer Request on Public Streets

Multiple Service Connections to Private Water Mains

Ownership of Water Mains

Swimming Pool Filling

Thawing Frozen Water Services

Water Main and Service Definitions

Water Meters and Services per Premise

Water Services – Installation and Maintenance Responsibilities

APPLICATION FOR WATER SERVICE PIPE CONSTRUCTION

1. Scope:

This policy shall cover the installation of any water service pipe whether domestic or fire. It shall also cover customer owned mains on private property (whether or not they are to be eventually turned over to the WPCA) but exclude those on proposed streets. It shall not cover the installation of fire hydrants.

2. Water Service / Water Main Definition:

- a. Any water pipe serving two or more buildings or one building with two or more separate service branches (such as a shopping center or condominium) shall be considered a main.
- b. Any main serving only one property shall be considered a private main and title shall remain in the name of the property owner.
- c. Any main serving two or more properties under separate ownerships shall be considered a public main and the WPCA may require transfer of ownership to the WPCA.

3. Applications:

- a. The customer shall completely fill out and sign an "Application for Water Service Pipe", available from the WPCA's service provider, for any permanent installation of any new water service pipe or for the renewal of an existing water service pipe in our franchised service area.
- b. Completed applications shall be submitted to the service provider's Project Management Office in order for engineering orders and construction work orders required to initiate the work to be prepared.
- c. The "Application for Water Service Pipe construction" should not be confused with the "Application for Service", which is a separate application for service that establishes responsibility for charges for water used. This application is made at the service provider's Customer Service Center.

4. Service Proposal and Estimate:

Upon receipt of an application from a prospective customer setting forth the location of the premises to be served, the extent of service to be required, and other pertinent information, the WPCA's service provider will review the application, prepare a proposal for providing the service, together with a written estimate of cost, and submit same to the applicant in writing. No verbal estimates will be given.

5. Security Deposits:

The WPCA may require a security deposit, equal to the estimated cost of any work to be done, to be paid in advance. When the final figures of cost are known, the deposit will be applied to the bill. If the security deposit is insufficient, the difference will be billed. If the security deposit is in excess of costs, the excess will be refunded.

6. Separate Applications:

A separate application must be made for each separately owned, metered service, each fire sprinkler service if not in combination with a metered service, and each unmetered private main through which water is supplied to separately metered buildings in a complex of buildings on one privately owned property.

7. Availability of Existing Mains:

Applications for service connections will be accepted subject to there being existing mains in the streets or right of ways abutting the premises to be served. The WPCA shall in no way be obligated to extend its mains to serve the premises.

8. Adequacy of Existing Pipe:

Upon receipt of an application for a new service installation, a service installation renewal, or for the restoration of a supply to an existing service, the WPCA will assume that the piping and fixtures which the service will supply are in proper order and the WPCA will not be liable in the event of any accident, break, leakage, or damage to the owner's premises or property resulting from a failure of said piping or fixtures.

9. Changes in Existing Services:

Any changes in location of existing meters or services must first have approval of the WPCA and, if approved, shall be made only at the expense of the owner.

10. Scheduling of Work:

Due to workloads and scheduling requirements, deposits should be made as soon as possible. It is recommended that deposits be made no later than one week in advance of the construction date.

11. Inspection of Installation:

The WPCA's service provider will inspect the installation of the water service pipe. When the installation has been approved, the service provider will oversee the backfill over the water service pipe and will install the water meter. The Ledyard Building Inspector will inspect and approve the water system downstream of the meter.

Approved By: Ledyard WPCA

Date: _____

Supersedes: N/A

CROSS CONNECTION AND BACKFLOW PREVENTION INSPECTION PROGRAM

1. Purpose

The purpose of this Policy is to establish a Cross Connection and Backflow Prevention Inspection Program to:

- A. Protect the public potable water supply served by the Ledyard Water Pollution Control Authority (WPCA) from the possibility of contamination or pollution by isolating, within its customers' internal distribution system, such contaminants or pollutants which could backflow or back-siphon into the public water system.
- B. Promote the elimination or control of existing cross-connections, existing or potential, between its customers' potable water systems and non-potable systems.
- C. Provide for the maintenance of a continuing program of cross-connection control, which will effectively prevent the contamination, or pollution of all potable water systems by cross-connection.

2. Authority

This Program shall be regulated under the authority of:

- A. The Federal Safe Drinking Water Act of 1974 as amended and the Regulations of Connecticut State Agencies (RCSA) as they pertain to the Public Health Code, which state the water purveyor has the primary responsibility for preventing water from unapproved sources, or any other substances, from entering the public potable water system.

3. Responsibility

- A. The WPCA shall be responsible for the protection of the public potable water distribution system from contamination or pollution due to the backflow or back-siphonage of contaminants or pollutants through the water service connection. If, in the judgment of the WPCA, an approved backflow device is required at the water service connection to any customer's premises, the WPCA or its service provider shall give notice in writing to said customer to install an approved backflow prevention device at each service connection to his premises. The customer shall, within 90 days, install such approved device or devices at his own expense. Failure or refusal or inability on the part of the customer to install said device or devices

within ninety (90) days shall constitute grounds for discontinuing water service to the premises until such device or devices have been properly installed.

1. **Definitions**

A. **Approved** –

Accepted by the WPCA as meeting an applicable specification stated or cited in policy or as suitable for the proposed use.

B. **Auxiliary Water Supply** –

Any water supply, on or available, to the premises other than the WPCA's approved public potable water supply.

C. **Backflow** –

The flow of water or other liquids, mixtures, or substances under positive or reduced pressure in the distribution pipes of a potable water supply from any source other than its intended source.

D. **Backflow Preventer** –

A device or means designed to prevent backflow or back-siphonage. Most commonly categorized as air gap, reduced pressure principle device, double check valve assembly, pressure vacuum breaker, spill resistant vacuum breaker, atmospheric vacuum breaker, breaker, residential dual check, double check with intermediate atmospheric vent, hose bibb vacuum breaker, and barometric loop.

1.) **Air Gap**

A physical separation sufficient to prevent backflow between the free-flowing discharge end of the potable water system and any other system. Physically defined as a distance equal to twice the diameter of the supply side pipe diameter but never less than one (1) inch.

2.) **Atmospheric Vacuum Breaker**

A device which prevents back-siphonage by creating an atmospheric vent when there is either a negative pressure or sub-atmospheric pressure in a water system.

3.) **Barometric Loop**

A fabricated piping arrangement rising at least thirty-five (35) feet at its topmost point above the highest fixture it supplies. It is utilized in water supply systems to protect against back-siphonage.

4.) **Double Check Valve Assembly**

An assembly of two (2) independently operating spring loaded check valves with tightly closing shut off valves on each side of the check valves, plus properly located test cocks for the testing of each check valve.

5.) **Double Check Valve with Intermediate Atmospheric Vent**

A device having two (2) spring loaded check valves separated by an atmospheric vent chamber.

6.) Hose Bibb Vacuum Breaker

A device which is permanently attached to a hose bibb and which acts as an atmospheric vacuum breaker.

7.) Pressure Vacuum Breaker, Spill Resistant Vacuum Breaker

A device containing one or two independently operated spring loaded check valves and an independently operated spring loaded air inlet valve located on the discharge side of the check or checks. Device includes tightly closing shut-off valves on each side of the check valves and properly located test cocks for the testing of the check valve(s).

8.) Reduced Pressure Principle Backflow Preventer

An assembly consisting of two (2) independently operating approved check valves with an automatically operating differential relief valve located between the two (2) check valves, tightly closing shut-off valves on each side of the check valves plus properly located test cocks for the testing of the check valves and the relief valve.

9.) Residential Dual Check

An assembly of two (2) spring loaded, independently operating check valves without tightly closing shut-off valves and test cocks. Generally employed immediately downstream of the water meter to act as a containment device.

E. Backpressure –

A condition in which the owner's system pressure is greater than the supplier's system pressure.

F. Back-siphonage –

The flow of water or other liquids, mixtures or substances into the distribution pipes of a potable water supply system from any source other than its intended source caused by the sudden reduction of pressure in the potable water supply system.

G. Commission –

The State of Connecticut, Department of Public Health; 34 – Cross-Connection Control Manual

H. Containment –

A method of backflow prevention which requires a backflow preventer at the water service entrance.

I. Contaminant –

Any physical, chemical, biological, or radiological foreign substance that tends to degrade water quality so as to constitute a hazard or to impair its usefulness.

J. Cross-Connection –

Any actual or potential connection between the public water supply and a source of contamination or pollution.

K. Fixture Isolation –

A method of backflow prevention in which a backflow preventer is located to correct a cross connection at an in-plant location rather than at a water service entrance.

L. Owner –

Any person who has legal title to, or license to operate or inhabit in, a property upon which a cross-connection inspection is to be made or upon which a cross-connection is present.

M. Person –

Any individual, partnership, company, public or private corporation, political subdivision or agency of the State, agency or instrumentality of the United States, or any other legal entity.

N. Permit –

A document issued by the WPCA that allows the use of a backflow preventer.

O. Pollutant –

A foreign substance that if permitted to get into the public water system will degrade its quality so as to constitute a moderate hazard, or impair the usefulness or quality of the water to a degree which does not create an actual hazard to the public health but which does adversely and unreasonably effect such water for domestic use.

P. Water Service Entrance –

That point in the owner's water system beyond the sanitary control of the WPCA; generally considered to be the outlet end of the water meter and always before any unprotected branch.

2. Administration

A. The WPCA will operate a cross-connection control program, to include the keeping of necessary records, which fulfills the requirements of the Commission's Cross-Connection Regulations and is approved by the Commission.

B. The Owner shall allow his property to be inspected for possible cross-connections and shall follow the provisions of the WPCA's program and the Commission's Regulations if a cross-connection is permitted.

C. If the WPCA requires that the public supply be protected by containment, the Owner shall be responsible for water quality beyond the outlet end of the containment device and should utilize fixture outlet protection for that purpose.

The Owner shall utilize the WPCA's service provider personnel to assist in the survey of his facilities and to assist in the selection of proper fixture outlet devices and the proper installation of these devices.

3. **Requirements**

A. **WPCA**

1.) On new installations, the WPCA's service provider will provide onsite evaluation and/or inspection of plans in order to determine the type of backflow preventer, if any, that will be required, and will issue the permit and perform inspection and testing services as required with the cost of any testing to be the responsibility of the Owner.

2.) For premises existing prior to the approval of this program, the WPCA's service provider will perform evaluations and inspections of plans and/or premises and inform the Owner by letter of any corrective action deemed necessary, the method of achieving the correction, and the time allowed for the correction to be made. Ordinarily, ninety (90) days will be allowed; however, this time period may be shortened depending upon the degree of hazard involved and the history of the device(s) in question.

3.) The WPCA will not allow any cross-connection to remain unless it is protected by an approved backflow preventer and which will be regularly tested to insure satisfactory operation.

4.) The WPCA's service provider shall inform the Owner by letter of any failure to comply by the time of the first re-inspection. The WPCA will allow an additional fifteen (15) days for the correction. In the event the Owner fails to comply with the necessary correction by the time of the second re-inspection, the WPCA will inform the Owner by letter that the water service to the Owner's premises will be terminated within a period not to exceed five (5) days. In the event that the Owner informs the WPCA of extenuating circumstances as to why the correction has not been made, a time extension may be granted by the WPCA but in no case will exceed an additional thirty (30) days.

5.) If the WPCA determines at any time that a serious threat to the public health exists, the water service will be terminated immediately.

6.) The WPCA will continue premise inspections to determine the nature of existing or potential hazards during the calendar year.

B. Owner

1.) The Owner shall be responsible for the elimination or protection of all cross-connections on his premises.

2.) The Owner, after having been informed by a letter from the WPCA, shall at his expense, install, maintain, and test, or have tested, any and all backflow preventers on his premises.

3.) The Owner shall correct any malfunction of the backflow preventer that is revealed by periodic testing.

4.) The Owner shall inform the WPCA of any proposed or modified cross-connections and also any existing cross-connections of which the Owner is aware but has not been found by the WPCA.

5.) The Owner shall not install a bypass around any backflow preventer unless there is a backflow preventer of the same type on the bypass. Owners who cannot shut down operations for testing of the device(s) must supply additional devices necessary to allow testing to take place during the normal working hours.

6.) The Owner shall install backflow preventers in a manner approved by the WPCA

7.) The Owner shall install only backflow preventers approved by the WPCA or the Commission.

8.) Any Owner having a private well or other private water source shall be required to install a backflow preventer at the service entrance if a private water source is maintained, even if it is not cross-connected to the WPCA's system.

9.) Plumbing installed by the Owner to provide potable water for domestic purposes must have its own backflow preventer installed.

10.) The Owner shall be responsible for the payment of all fees for permits, annual device testing, retesting in the case that the device fails to operate correctly, and second re-inspections for non-compliance with WPCA or Commission requirements.

4. **Degree of Hazard**

The WPCA recognizes the threat to the public water system arising from cross-connections. All threats will be classified by degree of hazard and will require the installation of approved reduced pressure principle backflow prevention devices or double check valves.

5. **Cross Connections**

The WPCA shall not permit a cross-connection within the public water supply system.

6. **Existing In-Use Backflow Prevention Devices**

Any existing backflow preventer shall be allowed by the WPCA to continue in service unless the degree of hazard is such as to supersede the effectiveness of the present backflow preventer, or result in an unreasonable risk to the public health. Where the degree of hazard has increased, as in the case of a residential installation converting to a business establishment, any existing backflow preventer must be upgraded to a reduced pressure principle device, or a reduced pressure principle device must be installed in the event that no backflow device was present.

7. **Periodic Testing**

- A. If an Owner has an operational well on the premises, it must be inspected at least every five years to ensure that there is an air gap between the well piping and the potable water service provided by the WPCA.
- B. Reduced pressure principle backflow devices shall be tested and inspected at least annually.
- C. Periodic testing shall be performed by the WPCA's service provider. This testing will be done at the owner's expense.
- D. The testing shall be conducted during regular business hours. When at the request of the owner, exceptions to this may require additional charges to cover the increased costs to the WPCA.
- E. Any backflow preventer that fails during a periodic test will be repaired or replaced. When repairs are necessary, the device will be re-tested at the owner's expense upon completion of repairs to insure correct operation. High hazard situations will not be allowed to continue unprotected if the backflow preventer fails the test and cannot be repaired immediately. In other situations, a compliance date of not more than fifteen (15) days after the test date will be established. The owner is responsible for spare parts, repair tools, or a replacement device. Parallel installation of two (2) devices is an effective means of insuring uninterrupted water service during testing or repair of devices and is strongly recommended when the owner desires such continuity.
- F. Backflow prevention devices will be tested more frequently than specified in paragraph 7.B. above in cases where there is a history of test failures and the WPCA feels that due to the degree of hazard involved, additional testing is warranted. Cost of the additional tests will be borne by the owner.

8. **Records and Reports**

A. **Records –**

The WPCA's service provider will initiate and maintain the following:

- 1.) Master files of customer cross-connections and backflow prevention devices.
- 2.) Master files of cross-connection tests and/or inspections.
- 3.) Copies of permits and permit applications.
- 4.) Copies of lists and summaries supplied to the Commission.

B. Reports

The WPCA's service provider will submit the following to the Commission:

- 1.) Initial listing of low hazard cross-connections to the State.
- 2.) Initial listing of high hazard cross-connections to the State.
- 3.) Annual update lists of items 1 and 2 above.
- 4.) Annual summary of cross-connections inspections to the State.

9. **Fees and Charges**

The WPCA will publish a list of fees or charges for the following services:

- A. Testing fees
- B. Re-testing fees
- C. Fee for re-inspection
- D. Charges for after-hours inspections or tests.

1. Strainers

The WPCA strongly recommends that all new retrofit installations of reduced pressure principle devices and double check valve backflow preventers include the installation of strainers located immediately upstream of the backflow device. The installation of strainer will preclude the fouling of backflow devices due to both foreseen and unforeseen circumstances occurring to the water supply system such as water main repairs, water main breaks, fires, periodic cleaning and flushing of mains, etc. The occurrences may "stir up" debris within the water main that will cause fouling of backflow devices installed without the benefit of strainers.

Approved By: Ledyard Water Pollution Control Authority

Date: _____

Supersedes: N/A

INSTALLATION OF WATER MAINS AT CUSTOMER REQUEST ON PUBLIC STREETS

1. Scope

This Policy is intended to cover the installation of water mains, by the Ledyard WPCA if so requested, or by others authorized by the WPCA to do so within the public right-of-way of streets, either as accepted or as proposed for acceptance, providing that any proposed street has received approval of the responsible municipal governmental authority where subdivision regulations and/or requirements for road acceptance are involved. It will not install mains on private property under the conditions of this Policy, unless the mains are intended to be incorporated into, and accepted into, the WPCA's water system.

2. Application

All requests for installation of water mains that are intended to become part of the WPCA's water system shall be made in writing to the WPCA's service provider. When a group of two or more customers are involved in one application, one of the group shall be designated as the person responsible for all negotiations and for accepting billing. When a business firm is involved, a duly authorized officer shall be designated as the person responsible. No construction will take place until an agreement is signed by all responsible parties representing the customer(s) and the WPCA.

3. Allocation of Work and Costs

a.

Work to be done	Accepted Street		Proposed Street	
	By	Cost	By	Cost
Review of Customer's request to determine relationship to system requirements, size of facilities to be built, and procedures to be followed.	WPCA's service provider	WPCA	WPCA's service provider	WPCA
Design for construction	WPCA's service provider	Cust.	Cust.	Cust.
Review of Customer Design	---	---	WPCA's service provider	WPCA

Construction to existing mains	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Construction	WPCA's service provider	Cust.	Cust.	Cust.
Construction Inspection	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Work to be done	Accepted Street		Proposed Street	
	By	Cost	By	Cost
Testing	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Supervision of Testing	WPCA's service provider	Cust.	WPCA's service provider	Cust.
Sanitizing	WPCA's service provider	Cust.	Cust.	Cust.
Hydrants, Tees, Branches, Valves --Where required by agency accepting annual charges	WPCA's service provider	WPCA	Cust.	Cust.

- b. The WPCA's service provider shall determine, or approve, the size, type, and location of all water mains. The minimum main size shall be 8 inches. Should a pipe in excess of the minimum be required in order to serve the projected system requirement in excess of the size required by the customer, the WPCA will be responsible for the added cost of the pipe and fittings subject to the availability of public funds. In order to prevent the installation of water mains designed solely to serve only an individual customer's needs, it will be required that where no public funds are available, the customer shall be required to install pipe which is consistent with the projected system requirement.
- c. Benefit assessments will be derived in accordance with approved ordinances.
- d. Where the work is done by the WPCA's service provider, a deposit prior to construction equal to 100 percent of the estimated costs, or an adequate payment bond, will be required. Any excess of deposit over cost will be refunded; any deficit will be billed to the customer.
- e. The amount paid by the customer for construction by the WPCA's service provider shall be considered a "Contribution in Aid of Construction", and all rights and title to

the water main shall remain with the WPCA with all future maintenance at the expense of the WPCA. Where a water main is installed by a customer under private contract, all rights and title to the main shall be transferred in writing to the WPCA after testing and acceptance of the test by the WPCA's service provider and before any water is allowed to enter the new facilities for customer use.

4. Easements

- a. Although this Policy is not intended to cover water mains on private property, where necessary, connections on easements in subdivisions will be allowed in order to provide optimum flow characteristics. Easement documents satisfactory to the WPCA must be submitted prior to construction of any facilities.

5. General Requirements

- a. All work shall be done to Ledyard WPCA specifications. All testing shall be done in accordance with, and meet the requirements of, the WPCA.
- b. The cost of all work required for disinfection and water analysis shall be at the expense of the customer. Water analysis testing can be performed by either the WPCA's service provider or by a certified laboratory. All sample collection must be by a certified operator.

Approved By: Ledyard WPCA

Date: _____

Supersedes Previous Policy Dated: N/A

POLICY NUMBER

Page 1 of 1

MULTIPLE SERVICE CONNECTIONS TO PRIVATE WATER MAINS

1. No water service shall be connected to a water main or water service owned and controlled by a second party, including lessees or separate property owners, except condominiums where the main is owned by an Association composed of all owners of units in the complex.
2. The Ledyard WPCA cannot maintain a safe and adequate water supply and may have no legal right to use the pipes to deliver water to a customer when the pipes are controlled by a second party.
3. Privately owned water mains serving two or more separately owned properties are prohibited.

Approved By: Ledyard WPCA

Date: _____

Supersedes: N/A

OWNERSHIP OF WATER MAINS

1. Water mains installed within the limits of a Proposed Public Highway, such as an approved subdivision, by persons other than the Ledyard WPCA, shall have their ownership transferred to the Ledyard WPCA by virtue of a Water Main Extension Agreement entered into by, and signed by, the owner and a representative of the Ledyard WPCA prior to the construction, with the effective date of acceptance by the WPCA and ownership transfer being the date that the agreement is recorded in the Land Records of the Town of Ledyard.
2. Water mains installed within the limits of an Existing Public Highway by the Ledyard WPCA or its assignees as an extension of its system at the request of a second party paying for such extension, shall remain the property of the Ledyard WPCA in accordance with a Water Main Extension Agreement entered into by, and signed by, The Second Party and a representative of the Ledyard WPCA prior to construction, with the effective date of ownership rights vested in the Ledyard WPCA being the date of signing of the Agreement by both parties.
3. Water mains installed within the limits of a Private Right-of-Way by persons other than the Ledyard WPCA, such as tie lines across private property, may be considered for acceptance by the Ledyard WPCA as a public water main if, in the opinion of the Ledyard WPCA, there is sufficient justification to include the main as a system improvement. Consideration shall be given to such factors as flow characteristics, an evaluation of the main's contribution to the grid in support of a significant number of customers including fire protection customers, location on an accessible Right-of-Way, conformance to the WPCA's construction standards, absence of water contaminating factors including backflow potential, etc. Transfer of ownership shall be by virtue of a Water Main Extension Agreement covering the development or by a separate transfer of facilities document. Approval for the transfer shall be by the director of public works and the chairman of the WPCA.

Approved By: Ledyard WPCA

Date: _____

Supersedes: N/A

POLICY FOR RATE ADJUSTMENTS FOR SWIMMING POOL FILLING

In the past, Ledyard Water Pollution Control Authority (WPCA) customers could apply for and receive an adjustment for the cost of water used to fill a swimming pool one time each year.

Ledyard now purchases 100% of its water from the City of Groton as a result of recent upgrades to Ledyard's infrastructure including the Route 12 and Route 117 water mains. All water used by Ledyard is sourced from Groton as part of a long term regional interconnection strategy for the long term preservation of sustainable water sources.

Since Ledyard pays the cost of treating and pumping all water purchased from Groton, the past practice of providing discounts for large quantities of water used to fill swimming pools can not be continued. Any and all requests for adjustments (rate reductions or credits) for water used to fill swimming pools will not be accepted. This practice would unfairly shift the cost of swimming pool water to other WPCA rate payers.

However, any Ledyard WPCA customer that has sewer service can avoid having the sewer fee applied to the water used for swimming pool filling by obtaining a meter from Groton Utilities (GU) and measuring the actual volume of water used. The meter is to be promptly returned to GU in order to have the sewer fee waived for the pool water.

Alternate sources of commercially available water for such purposes include local bulk pool water supply companies. As always, Ledyard water customers have the option of purchasing water in bulk from these companies.

Approved by the WPCA:

THAWING FROZEN WATER SERVICES

1. It is the policy of the Ledyard WPCA not to thaw customer-owned frozen water facilities.
2. It will be the responsibility of the customer to have the water service thawed by a plumber at the customer's expense. If it can be satisfactorily demonstrated to the WPCA's service provider that the water service is frozen between the water main and the property line, the service provider will reimburse the property owner's plumber for the expense of thawing only this portion of the service.

Approved By: Ledyard WPCA

Date: _____

Supersedes Previous Policy Dated: N/A

WATER MAIN AND SERVICE DEFINITIONS AND MAINTENANCE RESPONSIBILITIES

1. Water Main:
Any water pipe serving two or more buildings, or one building with two or more separate service branches (such as a shopping center or condominium), shall be considered a main.
2. Public Water Main:
Any main on a public highway whether title has been transferred or not (including water mains that were installed by developers in new streets for which the Ledyard WPCA assumed ownership), or any main on public or private property whose title has been transferred to the Ledyard WPCA, or which was installed at Ledyard WPCA expense, shall be considered a public water main with maintenance by the WPCA.
3. Private Water Main:
Any main on private property serving only one property shall be considered a private water main and title and maintenance responsibility for all pipe on private property shall remain in the name of the property owner. Pipe within the public highway shall be maintained by the Ledyard WPCA in accordance with service policy.

Any main on private property which serves two or more separate properties but whose title has not been transferred to the Ledyard WPCA will be considered a private water main with cost of maintenance billed to the original property owner who installed the main, or the current property owner of record as indicated by the Town of Ledyard Land Records, as ownership of the pipe goes with ownership of the land on which it is located.
4. Water Service:
Water Service is the branch piping connecting the building to the main.
5. DPUC Water Service
For purposes of reporting to DPUC, “services” shall refer to pipes serving private property, i.e., pipes connecting to a public water main, or private water mains connecting to a public water main (with services off private water mains considered as part of the “service” and not counted separately).

Approved By: Ledyard WPCA _____

Date: _____

Supersedes: N/A _____

NUMBER OF WATER METERS AND SERVICES PER PREMISE

1. In general, separate premises (individually owned buildings or residential units) shall be metered separately.
2. Separate meters are required for each of the following:
 - a. Each separate residential dwelling.
 - b. Each separate commercial building. Contiguous units are considered one building.
 - c. Each separate residential or commercial unit in a condominium or apartment building, except as noted in 3.c. below. A separate meter is required for common facilities.
3. Master meters are permitted only for the following:
 - a. A combination of buildings owned or leased and occupied by one customer/corporation on one contiguous property as a place of business, "Contiguous Property" being property not bounded by facilities allowing public access, such as state highways or city streets.
 - b. Government and non-residential complexes where metered facilities extend to and through contiguous properties only.
 - c. In a condominium complex conversion where due to the physical layout of the existing building, or in an apartment building where the installation of separate meters would cause an unreasonable burden on the owner, the owner may request in writing giving sufficient justification that the separate meter requirement be waived.

Billing will be calculated by dividing the total consumption of each meter by the number of units on the meter; applying the rate to the result; adding a "Readiness to Serve" charge equivalent to a normal ¾-inch residential meter for each unit; and rendering one bill equal to the total for all units on the meter. Separate buildings require separate meters.
 - d. Wholesale for resale customers

4. Separate services from a main are required for separate buildings. A condominium building may have one service line with a common header within or outside the building in accordance with the Construction Standards of the Ledyard WPCA. Interconnection of the buildings is not permitted.

DRAFT

Approved By: Ledyard WPCA

Date: _____

Supersedes Previous Policy Date: N/A

WATER SERVICES: INSTALLATION AND MAINTENANCE RESPONSIBILITIES

1. Control and Supervision

- a. The Ledyard Water Pollution Control Authority (WPCA) shall have control and supervision of any installation, maintenance, or renewal of any water service pipe installed on its system, with ownership in accordance with succeeding sections of this policy.

2. Compliance with Ordinances

- a. Before the WPCA will furnish service, the customer shall comply with all applicable ordinances, codes, and requirements of Federal, State, or Municipal bodies and may be required to furnish to the WPCA satisfactory evidence of such compliance. Persons, firms, or corporations performing installation work may be required to show evidence of compliance with state licensing requirements.

3. Inspection

- a. All work on facilities serving large industrial or commercial installations which are master metered, located up to and including the meter, shall be done in accordance with WPCA specifications and shall be subject to the WPCA inspection, testing, and acceptance before water is provided for use.
- b. All work on facilities other than large industrial or commercial installations as covered under 3a of this policy, located from main to building, shall be subject to WPCA inspection, testing, and acceptance before water is provided for use.
- c. Prior to backfilling trenches, the customer shall make arrangements for inspection by the WPCA's service provider at least two hours in advance. Any facility backfilled without inspection, either intentionally, as an expediency, or in error, may be required to be uncovered for inspection. Notice may also be given to the property owner or notice placed on records of the WPCA and Town of Ledyard Land Records which may result in a cloud on the property title and inability to mortgage or resell the property.
- d. Water service will not be turned on or will be discontinued provided any defects are found in materials or workmanship or in case of any noncompliance with the WPCA construction standards until such defects have been remedied to the complete satisfaction of the WPCA. Backflow prevention devices where required must be in place.

- e. The cost of inspection required under this policy shall be borne by the property owner or his agent.

4. Changes in Customer's Service Installation

The customer shall give advance notice to the WPCA of any proposed change in location of his installation. No change in the customer's service installation shall be made until notice has been given and permission has been received from the WPCA. Failure to give notice of such changes shall render the customer liable for any damage to the meters or other apparatus and equipment of the WPCA caused by the changed installation.

5. Protection of Facilities

All customers must keep their service pipes, house pipes, and fixtures in good order and protected from freezing, and they shall be liable for any damage which may result from their failure to do so. The responsibility for thawing frozen water services shall be as outlined in the policy on thawing frozen water services.

6. Responsibility for Installation Work and Costs

All Town-owned or non-metered privately-owned mains which are in service will be tapped and service connections made by the WPCA or its contractors. New construction which does not involve tapping in-service facilities may be done by the property owner, providing suitable application and arrangements for future ownership and maintenance have been made with the WPCA.

Metered, privately-owned mains which are in service may be tapped and service connections made by the owner or by the WPCA at the owner's expense.

Excavation for service installations within a public highway may be done by the property owner or the Town, providing that if the property owner does the work, he obtains a road opening permit from either the State of Connecticut or the Town of Ledyard Public Works Department, depending on whether the public highway is under State or Town jurisdiction.

Excavation on private property may be done by the property owner or by the WPCA and/or its contractors.

The laying of service pipe may be done by the property owner or by the WPCA and/or its contractors.

Property owners will be responsible for the total cost of any installation or renewal of a service from the main to the building. The WPCA will maintain at its expense (but not replace or make any capital improvement to) any service from a Town-owned main to the property line. Ownership will remain with the property owner.

The installation of meter pits may be done by the property owner or by the WPCA at the property owner's expense.

The cost of all work required for disinfection and water analysis shall be at the expense of the customer. Water analysis testing can be performed by either the WPCA's service provider or by a certified laboratory. All sample collection must be by a certified operator.

7. Locations

Water services shall not be installed so that they run along a right-of-way in front of other properties, or in a similar manner so as to be, in effect, an extension of the main. Such construction shall be in accordance with the WPCA's requirements for extension of water mains.

Water services may cross intervening lots owned by others providing that each service to each separate building extends from the building to the main, serves no other property owned by others, and suitable easement rights are obtained which include the WPCA's right to provide service.

8. An authorized agent of the property owner may act in the property owner's place within the scope of this policy.

Approved By: Ledyard Water Pollution Control Authority_____

Date:_____

Supersedes Previous Policy Dated: N/A_____

Draft Policy Proposal for Ledyard WPCA Water Leak Investigations

The following policy procedures are to be used for customers petitioning high water bills due to leaks:

1. It should be emphasized here that the customer is responsible for all water usage between the meter and the dwelling. As a nonprofit entity, the WPCA pays Groton Utilities for all water usage.
2. If the customer is also tied into WPCA sewer and the leak is outside the sewer system such as an outside faucet, then the WPCA commissioners may waive the sewer cost that is a result of the leak.
3. Upon a customer request, our service provider, GU will pull the meter to check for accuracy and report back to the customer the state of the meter.
4. No determination will be done until the following conditions are met:
 - a. Meter has been checked
 - b. Leak has been fixed with proof of repair (either a plumber, parts receipt or other documentation that shows leak repair)
 - c. A formal request has been made to the WPCA commissioners at their monthly meeting
5. The WPCA review officer will present all the information to the commissioners for review and a determination of relief based on their analysis of the information.

Draft Policy Proposal for Ledyard WPCA Water Leak Investigations

The following policy procedures are to be used for customers petitioning high water bills due to leaks:

1. It should be emphasized here that the customer is responsible for all water usage between their meter and their dwelling and that relief from that water usage cannot be granted. As a nonprofit entity, the WPCA pays Groton Utilities for all water usage.
2. If the customer is also tied into WPCA sewer and the leak is outside the sewer system such as an outside faucet, then the WPCA commissioners may waive the sewer cost that is a result of the outside sewer system leak.
3. Upon a customer request, our service provider, GU will pull the meter to check for accuracy and report back to the customer the state of the meter.
4. No determination will be done for the sewer cost relief above until the following conditions are met:
 - a. Meter has been checked
 - b. Leak has been fixed with proof of repair (either a plumber, parts receipt or other documentation that shows leak repair)
 - c. A formal request has been made to the WPCA commissioners at their monthly meeting
5. The WPCA review officer will present all the above information to the commissioners for review and a determination of relief based on their analysis of the information.



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1998

Agenda Date: 8/22/2023

Agenda #: 4.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Inspection of the Holmberg Tank quote.

Background:

From the July 25, 2023, meeting:

Chairman Lynch asked if Mr. Duarte is still seeking quotes for the inspection of the Holmberg tank, he replied that GU received one quote and is still seeking two more.

Department Comment/Recommendation:

(type text here)

Shoreline Diving Services, Inc
P.O. Box 600
Coventry, CT 06238 US
shorelinedivingct@gmail.com
shorelinedivingservices-ct.com

Estimate



ADDRESS
CITY OF GROTON DEPT OF UTILITIES 295 MERIDEN ST GROTON, CT 06340

SHIP TO
CITY OF GROTON WATER DIVISION HOLMBERG TANK

ESTIMATE #	DATE	
1274	08/16/2023	

ACTIVITY	QTY	RATE	AMOUNT
DIVE TEAM 3 man dive team to inspect HOLMBERG TANK	1	2,960.00	2,960.00
CAMERA HD VIDEO	1	100.00	100.00

TOTAL

\$3,060.00

Accepted By

Accepted Date



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1839

Agenda Date: 8/22/2023

Agenda #: 5.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Any Other Old Business to come before the Authority.

Background:

(type text here)

Department Comment/Recommendation:

(type text here)



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1992

Agenda Date: 8/22/2023

Agenda #: 1.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Motion to ACCEPT Utility Financial Solutions' proposal to provide water cost of service for Ledyard WPCA on behalf of Groton Utilities at a cost of \$13,000.00.

Background:

The quote is for both water and wastewater. The Authority is only pursuing water only (not wastewater).

Chairman Lynch has discussed the funding options with Ian Stammel. Assistant Finance Director and will report these findings during the August 25, 2023, meeting.

Department Comment/Recommendation:

(type text here)



May 2, 2023

Aaron Brooks, General Manager
Groton Utilities
295 Meridian Street
Groton, CT 06340

Utility Financial Solutions, LLC (UFS) is pleased to submit a proposal to provide water and wastewater cost of service studies for Ledyard WPCA on behalf of Groton Utilities. Our proposal is based on years of experience navigating complex financial challenges for municipal utilities around the United States.

We approach challenges strategically, partnering with your team to understand your goals before using innovative processes and in-depth research to determine the best solution to suit your needs. We stay on top of industry trends and anticipate challenges to help you solve existing problems and prepare your utility for long-term success. Our methodology and educational components have earned us a reputation as the preferred provider of rate studies in the United States.

Our project team members are experts in their respective fields and instruct for leading utility groups including the American Public Power Association, Southern Gas Association, and the National Association of Regulatory Utility Commissioners. Our specialized team of accountants, engineers, and economists have years of industry-specific experience to help ensure that you reach your goals. Your team lead will be Mark Beauchamp. A recognized industry leader in utility finance, Mark started UFS in 2001 and brings decades of experience to the team, having conducted thousands of cost of service studies.

For your project, UFS will complete a cost of service and rate design study, as well as develop educational materials to communicate with members of your governing body and community. The goal of these efforts is to:

- Earn positive engagement from members of government
- Obtain rate approval
- Ultimately create long-term financial stability for your utility

We appreciate the opportunity to submit this proposal and look forward to discussing it with you. If you have questions or need additional information, please contact me at (616) 403-5450.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Beauchamp", is written over a horizontal line.

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Detailed Breakout of Scope of Services

Completion of Cost of Service and Financial Projection– Summary of deliverables for each utility

- Cost of Service Analysis
 - a. Cost of service identifying cost to serve each class of customers
 - b. Minimum system analysis to identify cost to recover in customer charges
 - c. Development of component costs to determine how customers use water/wastewater
 - i. Base Costs
 - ii. Extra-capacity
 - d. Distribution/collection breakdown of costs
 - i. Customer charge
 - ii. Distribution/collection charges
- Financial Projection and long term rate track
 - a. Development of five-year financial projection
 - b. Identification of long term rate adjustments
 - c. Identification of projected debt coverage ratios
 - d. Minimum cash reserve for the utility to maintain
 - e. Identification of target operating income
- Rate Design for one year
 - a. Impact of rate designs at various usage levels within each class
 - b. Movement of rate toward cost of service
- Detailed report for Management in PDF format
 - a. Identifying process and result of study
- Presentation
 - a. Present the findings and recommendations to Management and governing body via WebEx – one presentation included

Financial Projection Summary of Deliverables

- Assessment of Key Financial Targets:
 - a. Days Cash on Hand
 - b. Rate of Return
 - c. Debt Coverage Ratio
 - d. Age of System
 - e. General adequacy of infrastructure re-investment
 - f. General Rate Design observations
 - g. General observations on debt vs NBV
 - h. Other general financial observations
 - i. Separated enterprise funds
 - ii. Where applicable, observations about transfer to the City
 - iii. Cash VS Utility Basis observations



Proposed Professional Services Agreement

Prices, terms, and conditions are good for a period of 90 days from this proposal date of May 2, 2023.

Payment will be made through submission of invoice which itemizes the work performed.

Fees for Services Provided:

Water Financial Projection, Cost of Service, Rate Design \$13,000

(*Onsite meetings will be separately charged at \$3,000)

Anticipated Meetings (Online platform):

- Project kickoff
- Data collection summary
- Financial review summary
- Draft report to management
- Final report to management

Hourly Rates (travel is discounted at 50%)

Mark Beauchamp	\$ 330.00
Dawn Lund	\$ 290.00
Dan Kasbohm	\$ 255.00
Mike Johnson	\$ 255.00
Chris Lund	\$ 255.00
Joan Bakenhus	\$ 155.00
Jillian Jurczyk	\$ 175.00
Robert Blank	\$ 120.00

Deliverables in pdf:

- 1) Long-term financial projection and rate track
- 2) Cost of service analysis
- 3) Minimum cash reserve determination
- 4) Debt service ratio
- 5) Target operating income (rate of return)
- 6) One-year rate design & revenue proof

Onsite Meetings

Any requested and approved onsite presentation will be billed at hourly rates with a 50% discount on related travel time. Out of pocket travel expenses are billed at cost. All costs incurred from schedule changes initiated by client after booking will be considered out of pocket.

Out of Scope Pricing

Out of scope items and work hours will be billed at the hourly rates listed on this page.

We look forward to exceeding your expectations. Please sign, date, and return to clund@ufsweb.com at your earliest convenience.

Sincerely,

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Date:

Accepted By:

Groton Utilities



Proposed Professional Services Agreement

Prices, terms, and conditions are good for a period of 90 days from this proposal date of April 12, 2023.
Payment will be made through submission of invoice which itemizes the work performed.

Fees for Services Provided:

Water and Wastewater Financial Projection, Cost of Service, Rate Design

\$26,000

(*Onsite meetings will be separately charged at \$3,000)

Anticipated Meetings (Online platform):

- Project kickoff
- Data collection summary
- Financial review summary
- Draft report to management
- Final report to management

Deliverables in pdf for each utility:

- 1) Long-term financial projection and rate track
- 2) Cost of service analysis
- 3) Minimum cash reserve determination
- 4) Debt service ratio
- 5) Target operating income (rate of return)
- 6) One-year rate design & revenue proof

Hourly Rates (travel is discounted at 50%)

Mark Beauchamp	\$ 330.00
Dawn Lund	\$ 290.00
Dan Kasbohm	\$ 255.00
Mike Johnson	\$ 255.00
Chris Lund	\$ 255.00
Joan Bakenhus	\$ 155.00
Jillian Jurczyk	\$ 175.00
Robert Blank	\$ 120.00

Onsite Meetings

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Out of Scope Pricing

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We look forward to exceeding your expectations. Please sign, date, and return to clund@ufswest.com at your earliest convenience.

Sincerely,

Mark Beauchamp, CPA, MBA, CMA
President, Utility Financial Solutions, LLC

Date:

Accepted By:

Groton Utilities

Ledyard WPCA Cost of Service Study General Request for Information

Item	Responsible Party
· Electronic trial balance (2020, 2021, 2022)	CUSI / Ledyard Finance
· Audited balance sheet, income statement, cash flow (2020, 2021, 2022)	CUSI / Ledyard Finance
· Fixed asset detail for FYE 6/2022	Ledyard Finance
· Copy of O&M and Capital Budget FY2023 and FY2024	Ledyard Finance
· Anticipated Capital Projects FY2024 - FY2029 (or longer if available)	Ledyard Finance
· Copies of all Outstanding Debt Amortization Schedules	Ledyard Finance
· Anticipated debt issuances (debt issues "in the works")	Ledyard Finance
· Current rate schedule and rate schedules applicable to FY2022 billings	CUSI
· Contribution to City/PILOT basis if any	Ledyard Finance
· FY 2022 Revenues by Class (spreadsheet provided at kickoff)	CUSI
· Monthly Billing data for FY 2022 by Class (spreadsheet provided at kickoff)	CUSI
· Water Plant Information (spreadsheet provided at kickoff)	Groton Utilities
· Minimum System Information (spreadsheet provided at kickoff)	Groton Utilities
· Meter Cost Information (spreadsheet provided at kickoff)	CUSI / Groton Utilities



TOWN OF LEDYARD

741 Colonel Ledyard
Highway
Ledyard, CT 06339-1511

File #: 23-1840

Agenda Date: 8/22/2023

Agenda #: 2.

AGENDA REQUEST
GENERAL DISCUSSION ITEM

Subject:

Any Other New Business to come before the Authority.

Background:

(type text here)

Department Comment/Recommendation:

(type text here)