

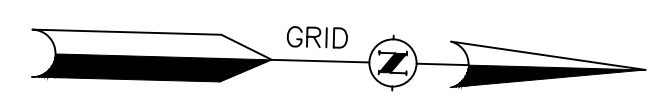
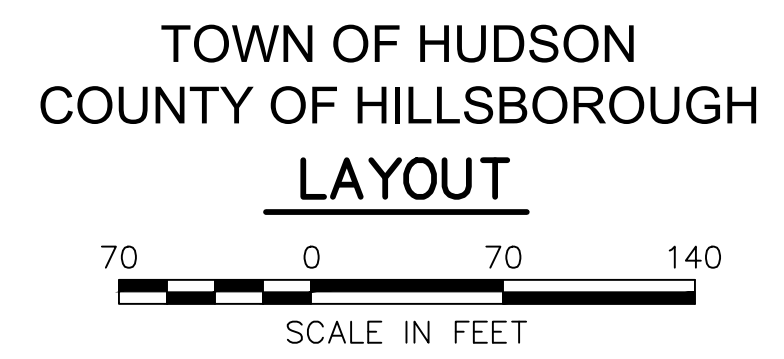
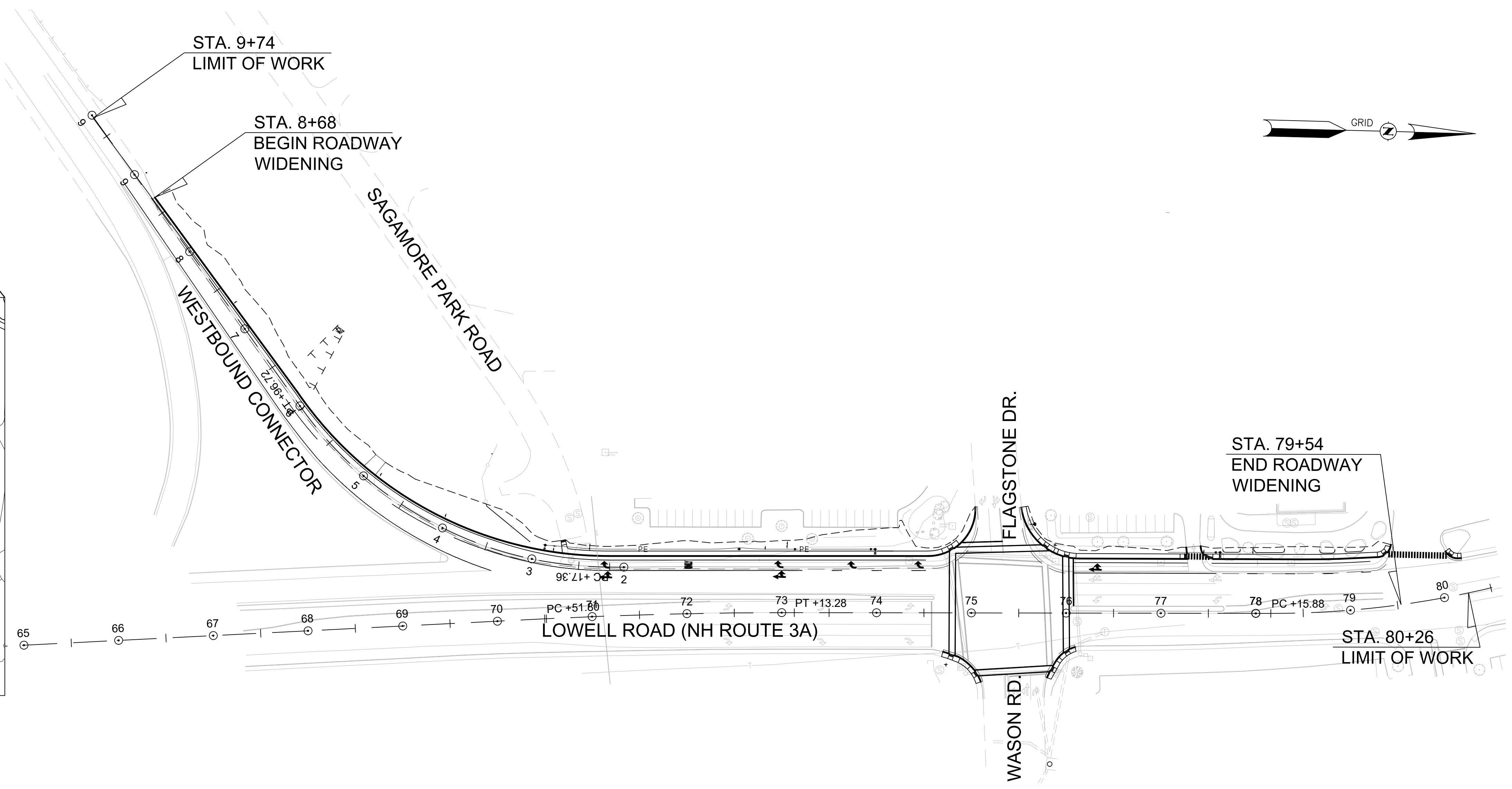
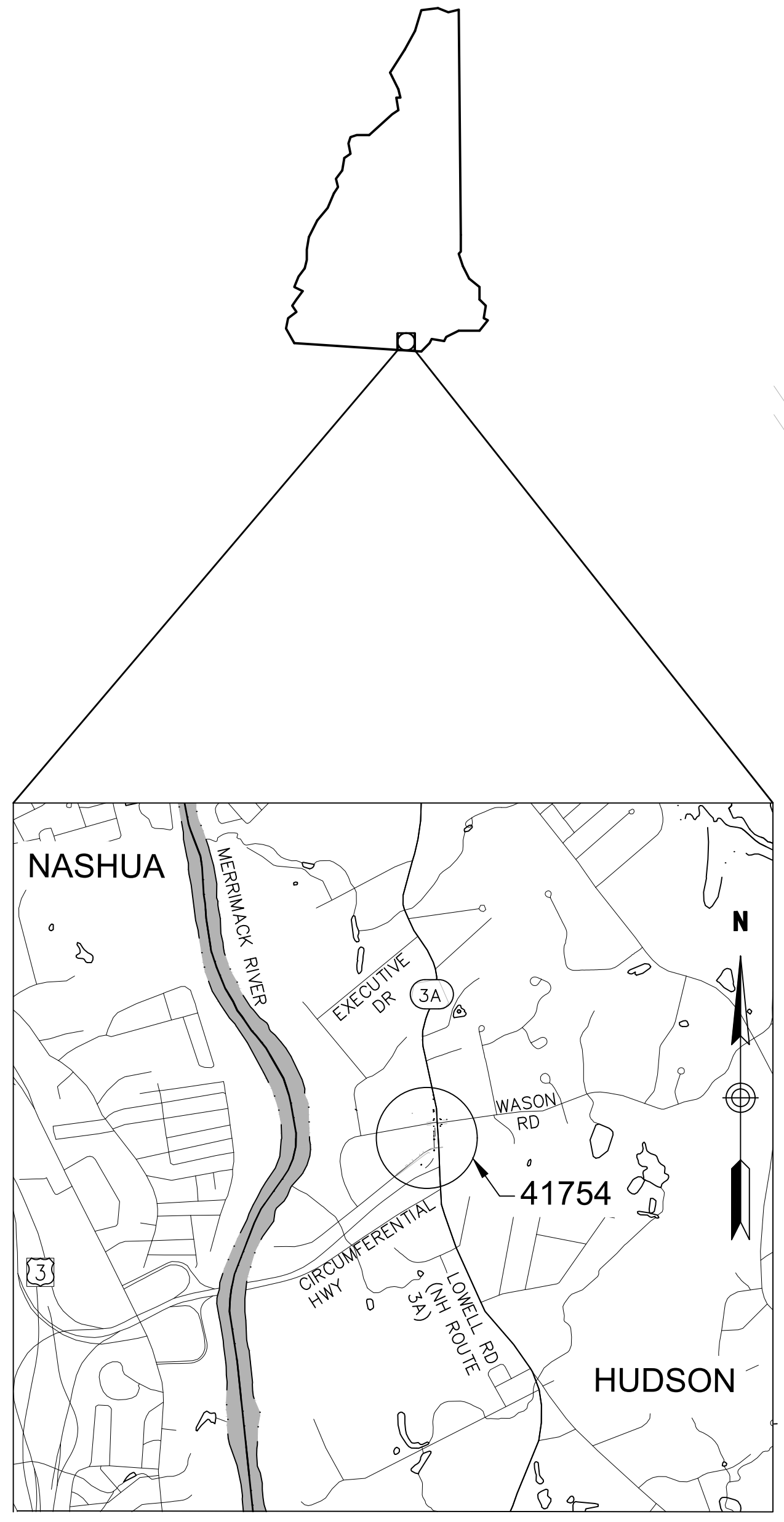
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NEW DESIGN	T. ST. PETER	DATE	2/17/23
SHEET CHECKED	J. HILTON	DATE	2/17/23
AS BUILT DETAILS		DATE	

REVISIONS AFTER PROPOSAL	STATION	DESCRIPTION

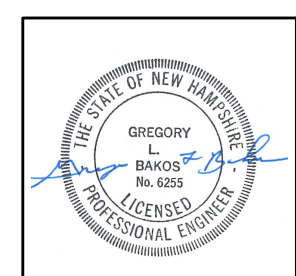
CONSTRUCTION PLANS
 HUDSON LOCAL PUBLIC AGENCY PROJECT
 FEDERAL PROJECT NUMBER: X-A00(742)
 N.H. PROJECT NO. 41754

LOWELL ROAD TO SAGAMORE BRIDGE
 TRANSPORTATION IMPROVEMENTS

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
1	COVER SHEET
2	LEGEND & GENERAL NOTES
3	TYPICAL SECTIONS
4	SUMMARY TABLE
5	DETAILS
6-14	SIDEWALK CURB RAMP DETAILS
15-17	GENERAL PLANS
18-20	ALIGNMENT & LAYOUT PLANS
21-22	SIGNAL PLANS
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26	SIGN SUMMARY
27-28	TRAFFIC CONTROL PLANS
29-31	SOIL MANAGEMENT PLANS
32-35	CROSS SECTIONS



LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
COVER SHEET					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-March-23	52573.00	52573COV	41754	1	35



LEGEND

ABBREVIATIONS

NOTES:

Legend table with columns: EXIST., PROP., and descriptions for various construction elements like PROPERTY LINE, CURB ELEVATION, ROAD, and UTILITIES.

Abbreviations table with columns: GENERAL and UTILITY, listing codes for items like ABANDON, CATCH BASIN, and CONDUIT.

- Notes section containing: GENERAL CONSTRUCTION SEQUENCE (CONT.), EXISTING CONDITIONS INFORMATION, EROSION CONTROL, UTILITIES, SIGNING, CROSS SECTIONS, LAYOUT AND MATERIALS, and GENERAL CONSTRUCTION SEQUENCE.

Vertical text on the left margin: REVISIONS AFTER PROPOSAL, STATION, DATE, NUMBER, DATE, DATE, DATE.

Project information box including: LOWELL ROAD TO SAGAMORE BRIDGE, TOWN OF HUDSON, NEW HAMPSHIRE, vhb logo, and a table with columns: DATE PLOTTED, VHB PROJECT NO., DRAWING, STATE PROJECT NO., SHEET NO., TOTAL SHEETS.

LEGEND & GENERAL NOTES

DESCRIPTION

REVISIONS AFTER PROPOSAL

STATION

DATE

NUMBER

DATE

DATE

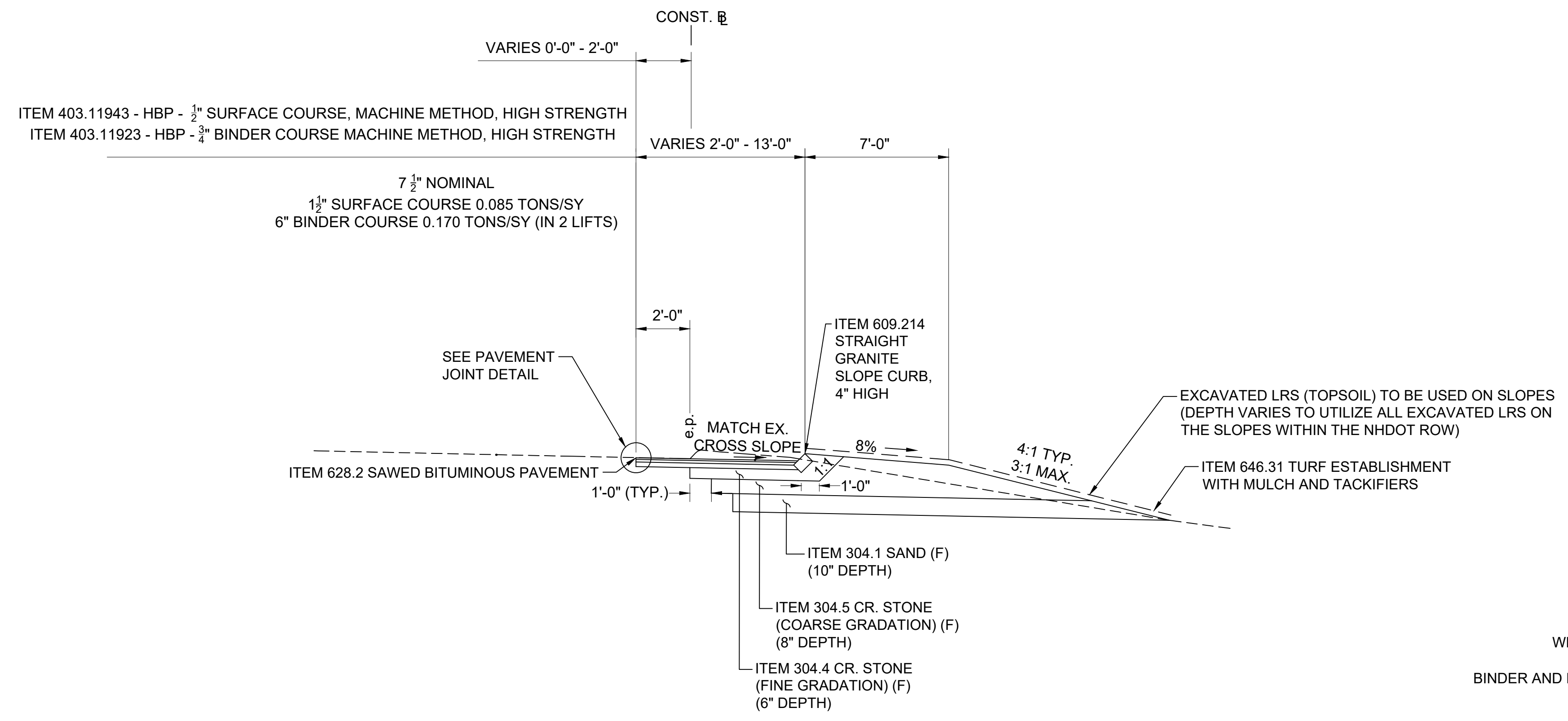
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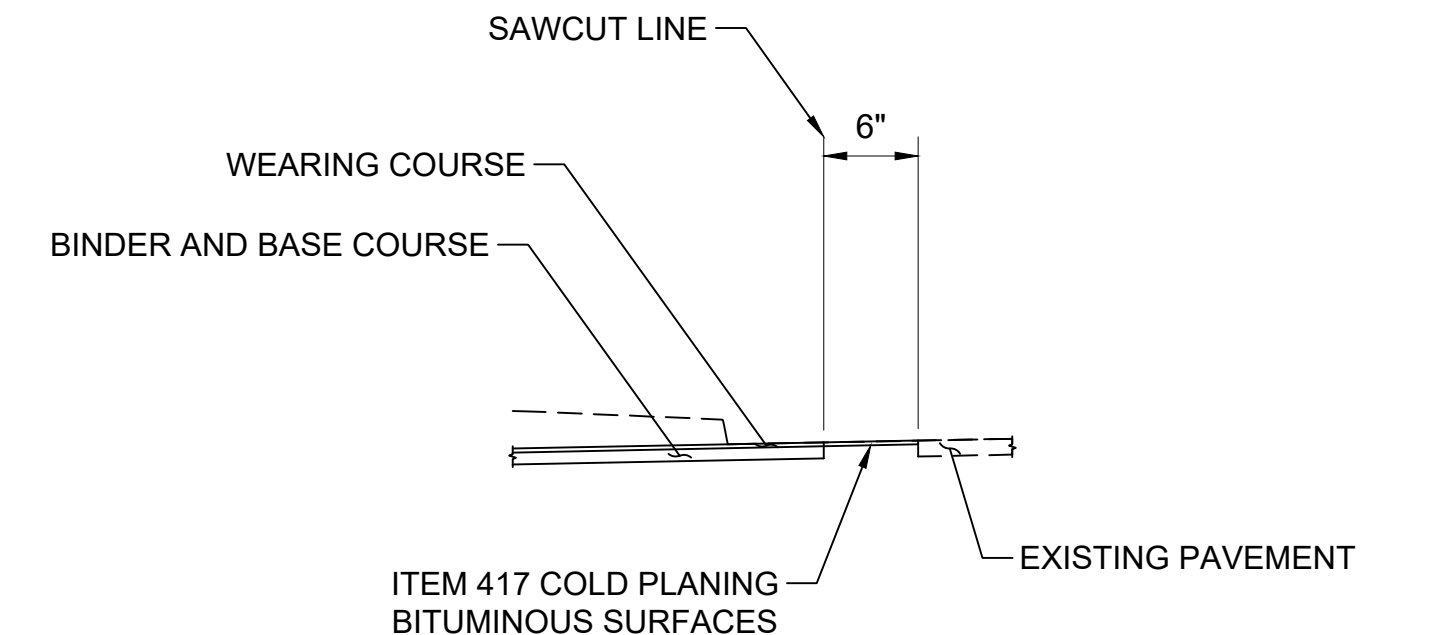
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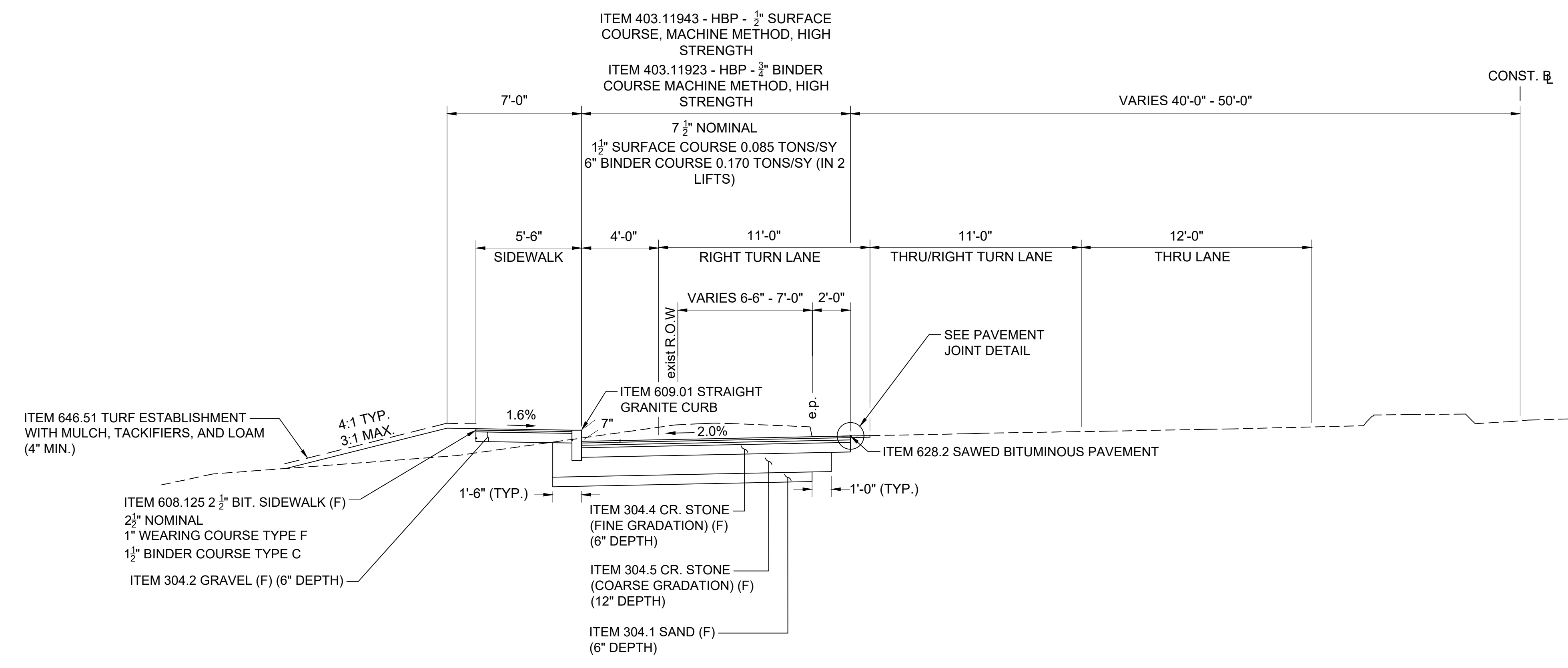
WESTBOUND CONNECTOR ON RAMP

STA 2+66 TO STA 8+66
N.T.S.



PAVEMENT JOINT DETAIL

N.T.S.

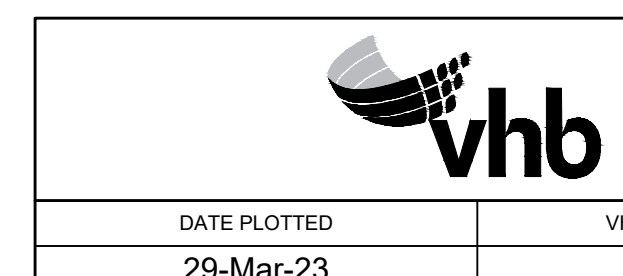


LOWELL ROAD (NH ROUTE 3A)

STA 70+73 TO STA 80+17

NOTES:

- ITEM 403.16 - PAVEMENT JOINT ADHESIVE, SHALL BE APPLIED ON ALL LONGITUDINAL JOINTS ASSOCIATED WITH ALL LAYERS AND COURSES OF BITUMINOUS PAVEMENT AND AT ALL PAVEMENT MATCHES TO EXISTING
- ITEM 410.22 - ASPHALT EMULSION FOR TACK COAT, SHALL BE APPLIED BETWEEN ALL PAVEMENT COURSES AND OVERLAYS



LOWELL ROAD TO SAGAMORE BRIDGE
TOWN OF HUDSON, NEW HAMPSHIRE

TYPICAL SECTIONS

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Mar-23	52573.00	52526TYP	41574	3	35

REVISIONS AFTER PROPOSAL

NUMBER	DATE	STATION	STATION	DESCRIPTION

DATE	DATE	DATE	DATE

SDR PROCESSED

NEW DESIGN

SHEET CHECKED

AS BUILT DETAILS

	ITEM DESCRIPTION	UNIT	QUANTITY
201.1	CLEARING AND GRUBBING (F)	A	0.1
203.1	COMMON EXCAVATION	CY	1960
203.11	COMMON EXCAVATION - LRS	CY	365
203.6	EMBANKMENT IN PLACE (F)	CY	592
206.19	COMMON STRUCTURE EXCAVATION EXPLORATORY	CY	5
214.	FINE GRADING	U	1
304.1	SAND (F)	CY	589
304.2	GRAVEL (F)	CY	84
304.35	CRUSHED GRAVEL FOR DRIVES	CY	9
304.4	CRUSHED STONE (FINE GRADATION) (F)	CY	343
304.5	CRUSHED STONE (COURSE GRADATION) (F)	CY	909
403.11923	HBP-3/4" BINDER MIX, MACHINE METHOD, HIGH STRENGTH	TON	592
403.11943	HBP-1/2" SURFACE MIX, MACHINE METHOD, HIGH STRENGTH	TON	171
403.12	HOT BITUMINOUS PAVEMENT, HAND METHOD	TON	51
403.16	PAVEMENT JOINT ADHESIVE	LF	7000
403.19	HBP - TEMPORARY	TON	5
410.22	ASPHALT EMULSION FOR TACK COAT	GAL	170
417	COLD PLANING BITUMINOUS SURFACES	SY	300
585.3	STONE FILL, CLASS C	CY	2
603.0001	VIDEO INSPECTION	LF	145
603.00212	12" R.C. PIPE, 2000D	LF	8
603.00215	15" R.C. PIPE, 2000D	LF	71
603.00224	24" R.C. PIPE, 2000D	LF	74
603.30124	24" R.C. END SECTIONS	EA	1
604.0007	POLYETHYLENE LINER	EA	10
604.124	CATCH BASINS TYPE B, 4-FOOT DIAMETER	U	11
604.52	RECONSTRUCTING / ADJUSTING DRAINAGE MANHOLES	LF	20
604.62	DRAINAGE MANHOLE COVERS AND FRAMES	EA	9
607.9340	RESET CHAIN LINK FENCE WITH VINYL COATED FABRIC, 4' HIGH	LF	129
608.125	2 1/2" BITUMINOUS SIDEWALK (F)	SY	401
608.24	4" CONCRETE SIDEWALK (F)	SY	106
608.54	DETECTABLE WARNING SURFACES, CAST IRON	SY	12
609.01	STRAIGHT GRANITE CURB	LF	850
609.02	CURVED GRANITE CURB	LF	23
609.214	STRAIGHT GRANITE SLOPE CURB, 4" HIGH	LF	584
609.5	RESET GRANITE CURB	LF	100
611.811	ADJUSTING/RELOCATING HYDRANTS	EA	1
614.511	CONCRETE PULL BOX 14"	EA	10
614.73114	3" PVC CONDUIT SCH. 40	LF	850
614.73118	3" PVC CONDUIT SCH. 80	LF	165
615.0201	TRAFFIC SIGN TYPE B	SF	7
615.024	RELOCATING TRAFFIC SIGN, TYPE B	U	1
615.0301	TRAFFIC SIGN TYPE C	SF	30
615.033	REMOVING TRAFFIC SIGN, TYPE C	U	3
615.034	RELOCATING TRAFFIC SIGN, TYPE C	U	4
615.0501	TRAFFIC SIGN TYPE BB	SF	8
615.0601	TRAFFIC SIGN TYPE CC	SF	9
615.072	REMOVE AND RELOCATE BUSINESS SIGN	U	1
616.191	ALTS. TO TRAFFIC SIGNALS	U	1
618.61	UNIFORMED OFFICERS W/ VEHICLE	\$	1
618.7	FLAGGERS	HR	960
619.1	MAINTENANCE OF TRAFFIC	U	1
619.253	PORTABLE CHANGEABLE MESSAGE SIGN	UWK	20
622.2	CONCRETE BOUNDS (REMOVE)	EA	2
622.4	STONE BOUNDS	EA	9
625.2	CONCRETE LIGHT POLES BASES, TYPE B	EA	3
628.2	SAWED BITUMINOUS PAVEMENT	LF	1550
632.0104	RETROREFLECTIVE PAINT PAVE. MARKING, 4" LINE	LF	1050
632.0106	RETROREFLECTIVE PAINT PAVE. MARKING, 6" LINE	LF	2750
632.0108	RETROREFLECTIVE PAINT PAVE. MARKING, 8" LINE	LF	975
632.0118	RETROREFLECTIVE PAINT PAVE. MARKING, 18" LINE	LF	184
632.02	RETROREFLECTIVE PAINT PAVE. MARKING, SYMBOL OR WORD	SF	354
632.3104	RETROREFLECTIVE THERMOPLASTIC PAVE. MARKING, 4" LINE	LF	192
632.3106	RETROREFLECTIVE THERMOPLASTIC PAVE. MARKING, 6" LINE	LF	760
632.32	RETROREFLECTIVE THERMO. PAVE. MARKING, SYMBOL OR WORD	SF	175
632.911	OBLITERATE PAVEMENT MARKING, 12" WIDE & UNDER	LF	860
632.92	OBLITERATE PAVEMENT MARKING, SYMBOL OR WORD	SF	200
645.512	COMPOST SOCK FOR PERIMETER BERM	LF	1485
645.531	SILT FENCE	LF	1485
645.7	STORMWATER POLLUTION PREVENTION PLAN	U	1
645.71	MONITORING SWPPP AND EROSION AND SEDIMENT CONTROLS	HR	40
646.31	TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS	SY	1400
646.51	TURF ESTABLISHMENT W/ MULCH, TACKIFIERS & LOAM	SY	800
650.2	LANDSCAPING	U	1
692	MOBILIZATION	U	1
697.31	PROJECT OPERATIONS PLAN	U	1
698.13	FIELD OFFICE TYPE C	MON	6
699	MISCELLANEOUS TEMPORARY EROSION AND SEDIMENT CONTROL	\$	1
1010.15	FUEL ADJUSTMENT	\$	20000
1010.2	ASPHALT CEMENT ADJUSTMENT	\$	10000

LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

QUANTITY SUMMARY



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Mar-23	52573.00	52573SUM	41574	4	35

REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

STATION

DATE

NUMBER

DATE

DATE

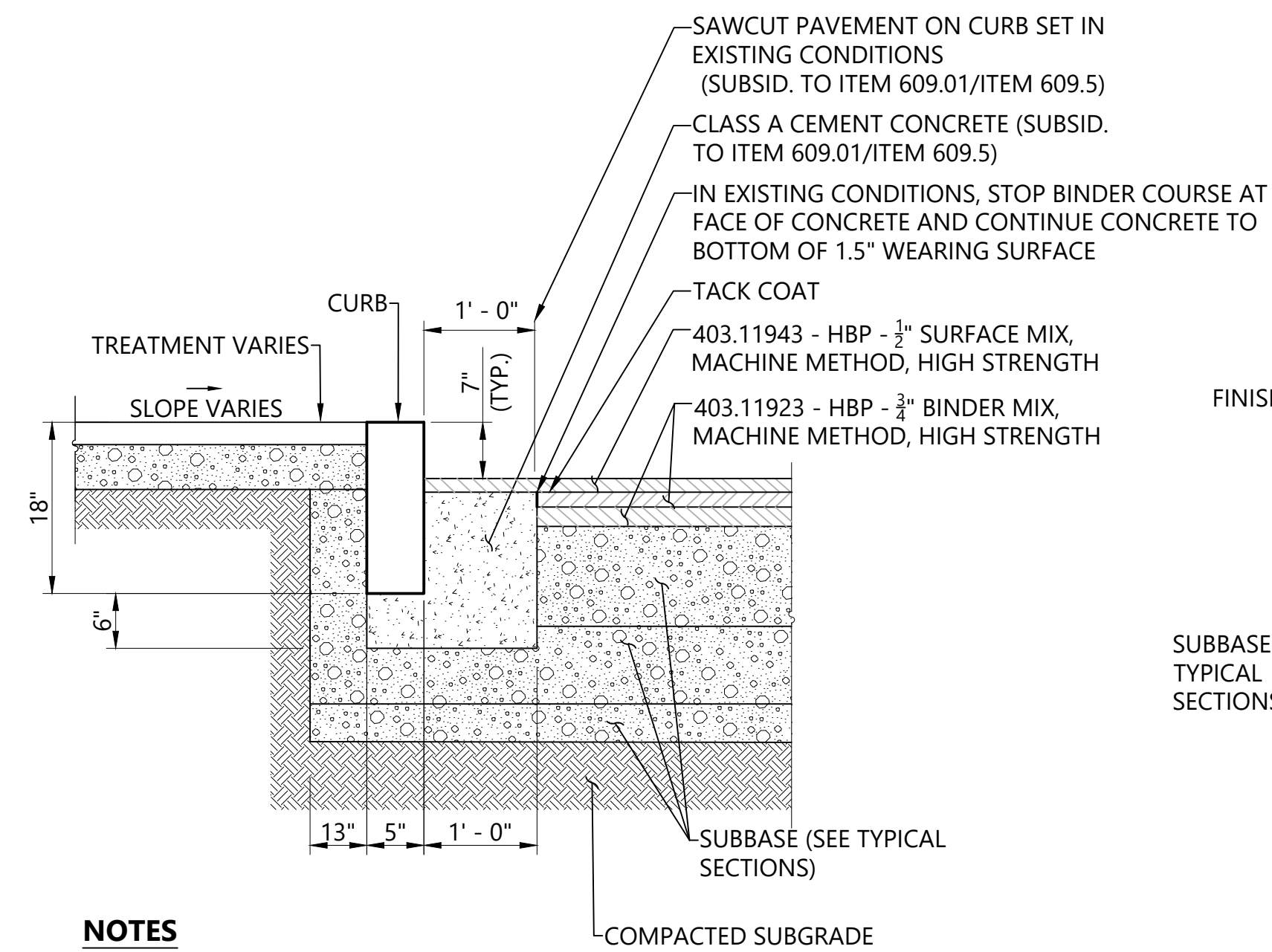
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SDR PROCESSED

NEW DESIGN

SHEET CHECKED

AS BUILT DETAILS

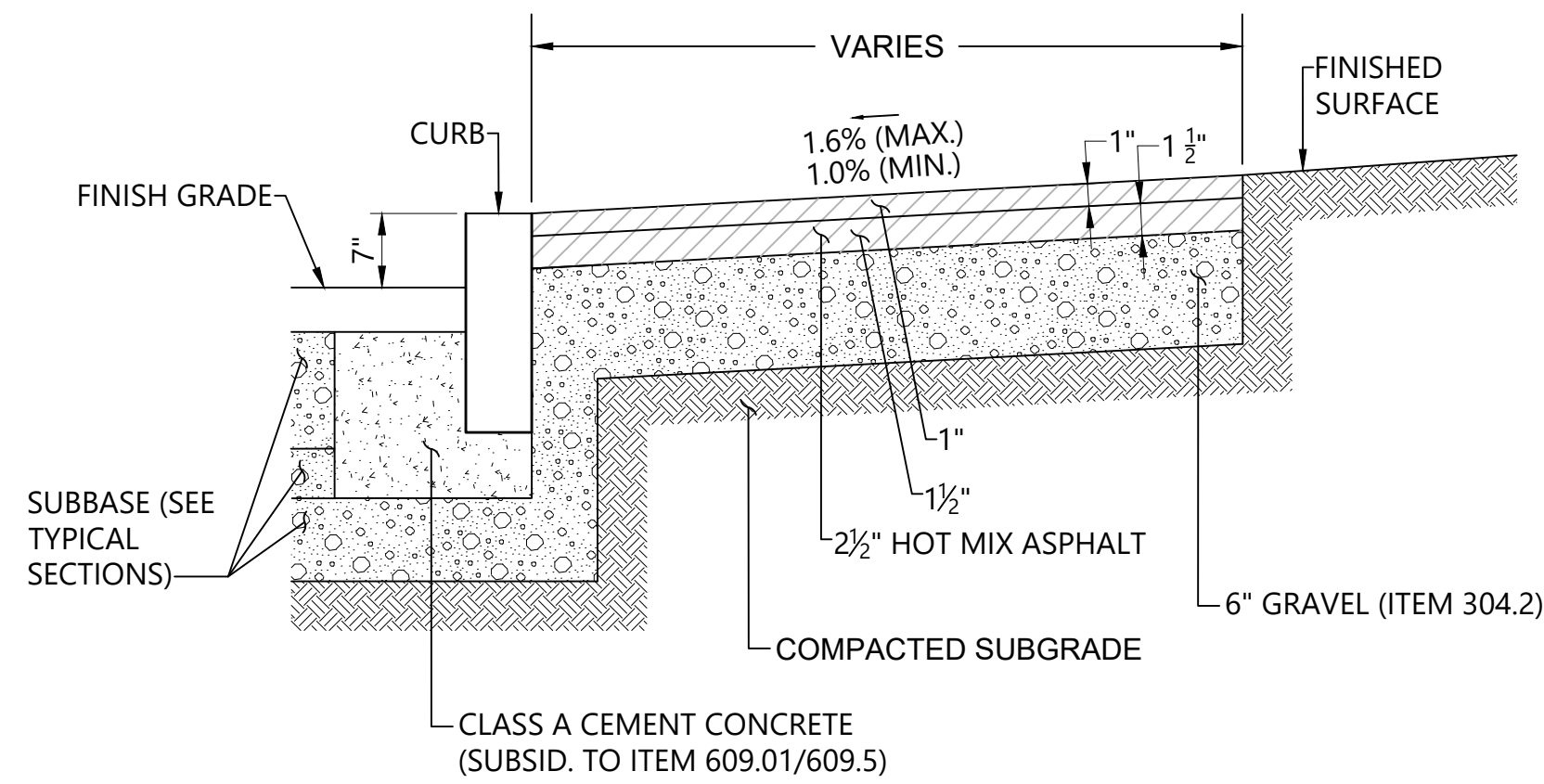


NOTES

1. APPLY TACK COAT TO CONCRETE BEDDING PRIOR TO PAVING OVER IT.
2. DETAIL ALSO APPLIES TO CURVED GRANITE CURB.

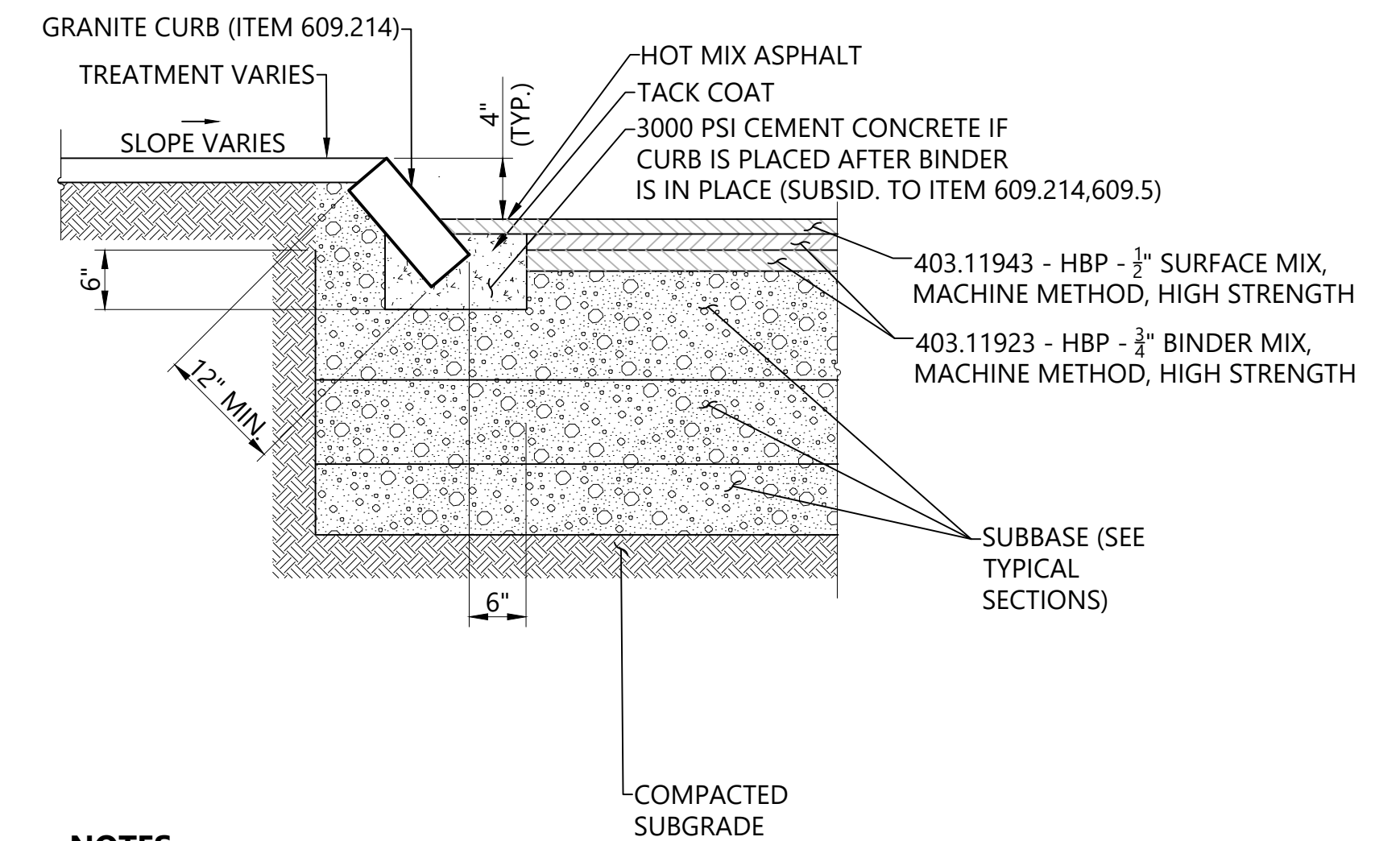
Straight Granite Curb (STA 70+73 TO 80+17)

N.T.S.



Item 608.125 - 2 1/2" Bituminous Sidewalk (Sta 70+73 to 80+17)

N.T.S.



NOTES

1. APPLY TACK COAT TO CONCRETE BEDDING PRIOR TO PAVING OVER IT.

Straight Granite Slope Curb (Sta. 2+66 to 8+66)

N.T.S.

LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

DETAILS

		DRAWING					
		DATE PLOTTED	VHB PROJECT NO.	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS	
		17-Feb-23	52573.00	52526DET	41754	5	35

GENERAL NOTES:

- THESE SHEETS ARE IN ACCORDANCE WITH THE AMERICANS WITH DISABILITIES ACT (ADA), AND THE REQUIREMENTS OF THE 2011 PROPOSED ACCESSIBILITY GUIDELINES FOR PEDESTRIAN FACILITIES IN THE PUBLIC RIGHT OF WAY (PROWAG).
- NOT ALL FACILITIES CAN BE CONSTRUCTED TO MEET THE DESIGN STANDARDS. FACILITIES THAT CANNOT BE CONSTRUCTED TO MEET THE DESIGN STANDARDS SHALL BE CONSTRUCTED TO MEET THE STANDARDS TO THE GREATEST EXTENT PRACTICABLE. NONSTANDARD FEATURES SHALL BE DOCUMENTED ON TECHNICAL INFEASIBILITY FORM AND SUBMITTED TO NHDOT ADA COORDINATOR FOR APPROVAL.
- TO CHECK FIELD LAYOUT ALL SLOPES AND GRADES SHALL BE MEASURED WITH A DIGITAL LEVEL USING AT LEAST TWO READINGS. WHERE THE READINGS VARY, THE MEASUREMENTS SHALL BE AVERAGED. GRADE (RUNNING SLOPE) SHALL BE MEASURED ALONG THE CENTERLINE AND OFFSET 1.00' TO 1.50' FROM THE CENTERLINE. CROSS SLOPES SHALL BE MEASURED PERPENDICULAR TO CENTERLINE AT 5.00' TO 10.00' INTERVALS.
- GRADES (RUNNING SLOPES) ARE MEASURED IN THE DIRECTION OF PEDESTRIAN TRAVEL. CROSS SLOPES ARE MEASURED PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
- JOINTS BETWEEN SIDEWALKS, CURB RAMPS, TURNING SPACES AND ROADWAYS SHALL BE FLUSH AND FREE FROM ABRUPT VERTICAL CHANGES GREATER THAN 1/4". VERTICAL SURFACE DISCONTINUITIES BETWEEN 1/4" AND 1/2" SHALL BE BEVELED WITH A SLOPE NOT STEEPER THAN 2:1. THE BEVEL SHALL BE APPLIED ACROSS THE ENTIRE JOINT. SEE DETAIL ON SHEET 9 OF 9.
- SIDEWALKS ARE CONNECTED TO ROADWAYS BY EITHER BLENDED TRANSITIONS OR CURB RAMPS. BLENDED TRANSITIONS ARE CONNECTIONS BETWEEN THE SIDEWALK LEVEL AND THE ROADWAY LEVEL THAT HAVE A MAXIMUM GRADE (RUNNING SLOPE) OF 5%, AND TRANSITIONS GREATER THAN 5% ARE CONSIDERED CURB RAMPS.
- CURB RAMPS AND BLENDED TRANSITIONS MAY REQUIRE THE INSTALLATION OF DETECTABLE WARNINGS. SEE ADDITIONAL "DETECTABLE WARNING DEVICE NOTES" ON THIS SHEET, AND DETAILS ON SHEET 6 OF 10 FOR DIMENSIONS, ORIENTATION AND INSTALLATION.
- VERTICAL ALIGNMENT SHALL BE GENERALLY PLANAR. GRADE BREAKS WITHIN THE PEDESTRIAN ACCESS ROUTE SHALL BE PERPENDICULAR TO THE DIRECTION OF TRAVEL AND SHALL NOT BE ROUNDED.
- THE CROSS SLOPE OF PEDESTRIAN ACCESS ROUTES (PAR) SHALL BE 2% MAXIMUM. THE FOLLOWING EXCEPTIONS ARE ALLOWED:
 - WHERE PEDESTRIAN CROSSINGS ARE PROVIDED AT INTERSECTIONS WITHOUT YIELD OR STOP CONTROL OR WHERE THERE IS ANY TRAFFIC SIGNAL, THE CROSS SLOPE OF A PEDESTRIAN ACCESS ROUTE CONTAINED WITHIN A CROSSING SHALL BE 5% MAXIMUM.
 - WHERE MIDBLOCK PEDESTRIAN CROSSINGS ARE PROVIDED, THE CROSS SLOPE OF A PEDESTRIAN ACCESS ROUTE CONTAINED WITHIN A MIDBLOCK CROSSING SHALL BE PERMITTED TO EQUAL THE STREET OR HIGHWAY GRADE.
- THE MINIMUM CLEAR WIDTH FOR PEDESTRIAN ACCESS ROUTES IS 4.00', EXCLUSIVE OF THE CURB. WHEN WALKWAY WIDTHS ARE LESS THAN 5.00', 5.00' x 5.00' PASSING SPACES, OR A FEATURE OF EQUAL OR GREATER DIMENSIONS (E.G., DRIVEWAYS) THAT MEET THE SLOPE CRITERIA, SHALL BE PROVIDED AT A MAXIMUM INTERVAL OF 200'. EXISTING DRIVEWAYS AND STREET CROSSING MAY ALSO SERVE AS PASSING SPACES.
- THE BUFFER ZONE IS A PHYSICAL DISTANCE SEPARATING THE PEDESTRIAN ACCESS ROUTE FROM THE VEHICLE TRAVELED WAY. THE BUFFER ZONE MAY BE PLANTED OR PAVED.
- WHEN CROSSING DRIVEWAYS, THE WORK SHALL BE IN CONFORMANCE WITH NHDOT DRIVEWAY DETAILS SHEET. THE CROSS SLOPE ACROSS DRIVEWAYS SHALL BE 2% MAXIMUM.
- FOR ACCESSIBLE PEDESTRIAN SIGNAL PUSH BUTTONS, SEE DETAILS ON SHEET 8 OF 9.
- FOR RAMP COUNTER SLOPE REQUIREMENTS, SEE DETAILS ON SHEET 9 OF 9.

CURB RAMP NOTES:

- THE MINIMUM WIDTH OF A CURB RAMP SHALL BE 4.00'.
- THE FULL WIDTH OF THE RAMP OR LANDING SHALL BE CONTAINED WITHIN THE PAVEMENT MARKINGS AT MARKED CROSSWALKS.
- CURB RAMPS ARE NOT REQUIRED IN LOCATIONS WHERE THERE IS NO ACCESSIBLE PEDESTRIAN ACCESS ROUTE. UNLESS IT IS SERVING AS A LANDING FOR A PEDESTRIAN SIGNAL.
- THE GRADE (RUNNING SLOPE) OF A CURB RAMP SHALL BE A MAXIMUM OF 8.3%.
- WHERE EXISTING CONDITIONS DO NOT ALLOW THE CONSTRUCTION OF A CURB RAMP WITH A GRADE (RUNNING SLOPE) OF 8.3% OR LESS, THE RAMP LENGTH SHALL NOT BE REQUIRED TO EXCEED 15.00'.
- THE CROSS SLOPE OF THE CURB RAMP SHALL BE AS FLAT AS POSSIBLE AND STILL PROVIDE POSITIVE DRAINAGE. THE CROSS SLOPE OF A CURB RAMP 2% MAXIMUM. SEE NOTE 9 FOR EXCEPTIONS. WHERE THE EXISTING ROADWAY GRADE EXCEEDS 2%, THE CURB RAMP MAY BE WARPED ACCORDING TO THE DETAIL ON SHEET 9 OF 9 TO TIE INTO THE ROADWAY GRADE.
- RAMP SIDE TREATMENT OPTIONS ARE DETAILED ON SHEET 7 OF 9 FOR USE WITHIN THE BUFFER ZONE. WHERE A PEDESTRIAN CIRCULATION PATH CROSSES THE CURB RAMP, FLARED SIDES SHALL BE INSTALLED WITH A SLOPE OF 10% MAXIMUM. THE SLOPE OF FLARED SIDES IS MEASURED PARALLEL TO THE CURB LINE. (ALSO SEE CURB RAMP CONFIGURATION TYPE 7 ON SHEET 3 OF 9.)
- THE BACKSIDE OF A PARALLEL RAMP SHOULD BE GRADED TO MATCH EXISTING TERRAIN, UNLESS OTHERWISE SHOWN IN THE CONTRACT DOCUMENTS. WHERE GRADING IS NOT FEASIBLE DUE TO LIMITED ROW OR PHYSICAL CONSTRAINTS, A BACK CURB MAY BE INSTALLED. SEE DETAILS ON SHEET 7 OF 9.

TURNING SPACE AND CLEAR SPACE NOTES:

- WHERE A CHANGE IN DIRECTION IS REQUIRED TO UTILIZE A CURB RAMP, A TURNING SPACE SHALL BE PROVIDED AT THE BASE AND/OR THE TOP OF CURB RAMP AS APPLICABLE. TURNING SPACES SHALL BE PERMITTED TO OVERLAP CLEAR SPACES.
- WHERE THERE ARE NO VERTICAL CONSTRAINTS AT THE BACK OF SIDEWALK, (E.G., VERTICAL CURB, BUILDINGS, FENCES) THE TURNING SPACE DIMENSIONS SHALL BE 4.00' x 4.00' MINIMUM. WHERE THE TURNING SPACE IS CONSTRAINED AT THE BACK OF SIDEWALK, THE TURNING SPACE SHALL BE 4.00' x 5.00' MINIMUM. THE 5.00' DIMENSION SHALL BE TURNED PERPENDICULAR TO THE CONSTRAINT.
- TURNING SPACE MAXIMUM CROSS SLOPE IS 2% IN ANY DIRECTION.
- BEYOND THE BOTTOM GRADE BREAK, A CLEAR SPACE OF 4.00' x 4.00' MINIMUM SHALL BE PROVIDED WITHIN THE WIDTH OF THE PEDESTRIAN CROSSWALK, AND OUTSIDE THE PARALLEL VEHICLE TRAVEL LANE. THE CLEAR SPACE MAY OVERLAP TURNING SPACES, DETECTABLE WARNING SURFACES, AND DROP CURBS.

DETECTABLE WARNING DEVICE NOTES:

- DETECTABLE WARNING DEVICES (DWD) SHALL BE PROVIDED AT THE FOLLOWING LOCATIONS ON PEDESTRIAN ACCESS ROUTES:
 - CURB RAMPS AT PEDESTRIAN CROSSINGS.
 - PEDESTRIAN REFUGE ISLANDS (WHERE THE LENGTH OF THE PEDESTRIAN ACCESS ROUTE ACROSS THE REFUGE ISLAND IS GREATER THAN OR EQUAL TO 6.00'). SEE SHEET 8 OF 9.
 - PEDESTRIAN AT-GRADE RAIL CROSSINGS NOT LOCATED WITHIN A STREET OR HIGHWAY.
 - DRIVEWAY CROSSINGS WITH NHDOT APPROVED AND MAINTAINED SIGNALS. YIELD OR STOP CONTROL. DETECTABLE WARNING DEVICES SHALL NOT BE PROVIDED AT CROSSINGS OF UNCONTROLLED DRIVEWAY APRONS.
- SOME DETECTABLE WARNING PRODUCTS REQUIRE A CONCRETE BORDER FOR PROPER INSTALLATION. IF REQUIRED, THE BORDER SHALL NOT EXCEED 2" IN WIDTH OR 6" ALONG ROADWAY EDGE/CURB. THE BORDER DIMENSION SHALL BE MEASURED FROM THE INSIDE EDGE OF THE RADIUS.
- THE DETAILS PROVIDED ARE NOT DRAWN TO SCALE. THE QUANTITY OF DOMES DEPICTED ON THE DETECTABLE WARNING DEVICE DETAIL IS FOR ILLUSTRATION ONLY. THE SIZE OF THE DETECTABLE WARNING FIELD SHALL BE 2.00' MINIMUM IN THE DIRECTION OF TRAVEL AND SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OR FLUSH SURFACE, EXCLUDING ANY FLARED SIDES. THE WIDTH OF THE DETECTABLE WARNING FIELD INCLUDES A CONCRETE BORDER, IF PROVIDED. PLACEMENT AND ORIENTATION SHALL BE IN COMPLIANCE WITH THE DETAILS.
- ON SLOPES OF 5% OR GREATER, THE ROWS OF DOMES SHALL BE ALIGNED TO BE PERPENDICULAR OR RADIAL TO THE LOWER GRADE BREAK ON THE RAMP RUN. WHERE DOMES ARE ARRAYED RADIALY THEY MAY DIFFER IN DOME DIAMETER AND CENTER-TO-CENTER SPACING WITHIN THE RANGES SPECIFIED ON SHEET 9. ON SLOPES LESS THAN 5%, DOME ORIENTATION IS LESS CRITICAL AND MAY DIFFER FROM PERPENDICULAR OR RADIAL ALIGNMENT TO THE GRADE BREAK.
- THE DETECTABLE WARNING SURFACES SHALL CONTRAST VISUALLY WITH ADJACENT GUTTER, STREET OR HIGHWAY, OR PEDESTRIAN ACCESS ROUTE SURFACE.
- DETECTABLE WARNING PANELS SHALL BE CAST IRON WITH NO SURFACE COATING AND SHALL BE ALLOWED TO TRANSITION TO THEIR NATURAL PATINA.

DEFINITION OF TERMS:

LANDING: A 4.00' x 4.00' CLEAR SPACE WITH A 2% SLOPE OR LESS IN ALL DIRECTIONS.

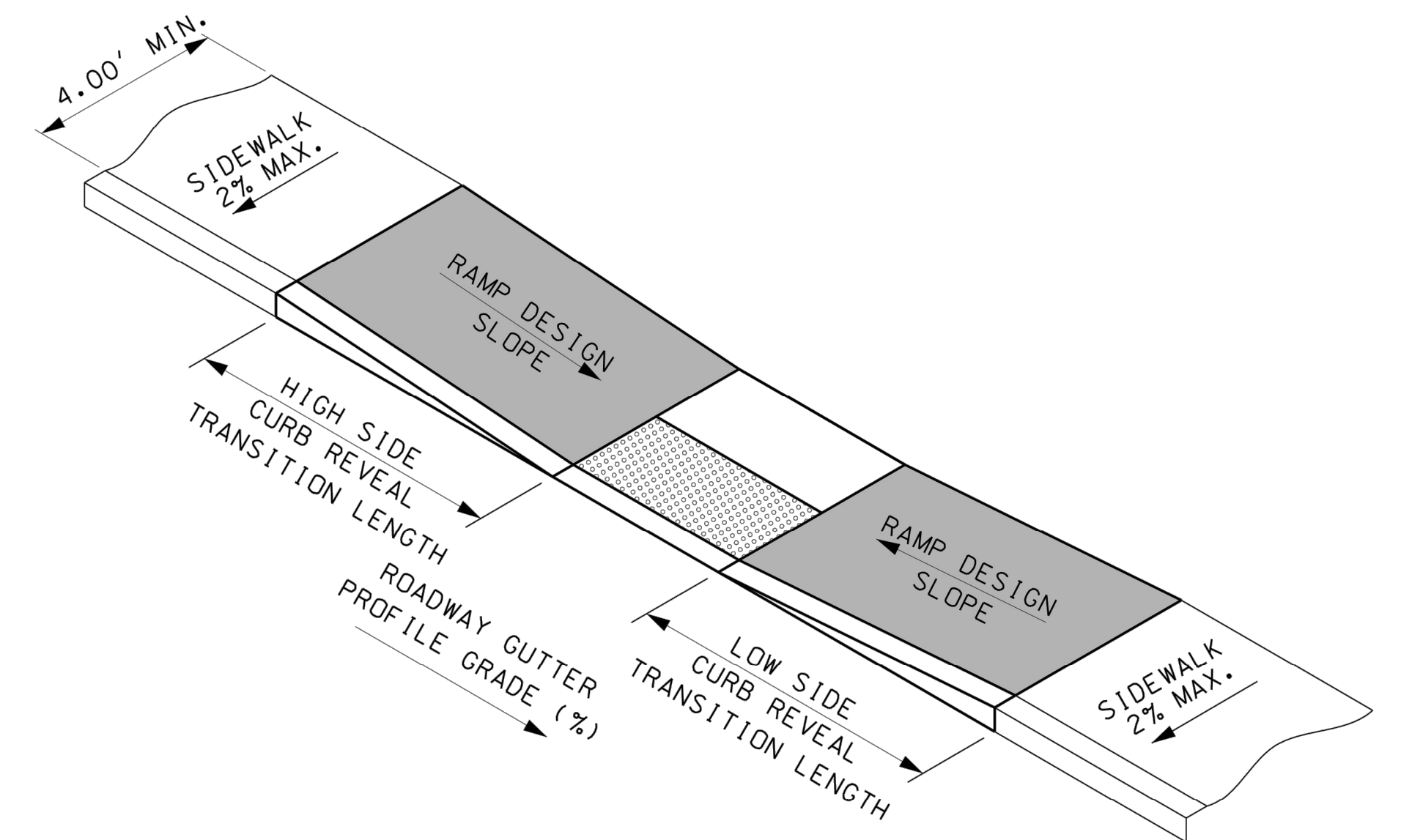
MAXIMUM EXTENT FEASIBLE: ALL CHANGES THAT ARE POSSIBLE ARE MADE TO COMPLY WITH ACCESSIBILITY STANDARDS.

PEDESTRIAN ACCESS ROUTE (PAR): A CONTINUOUS AND UNOBSTRUCTED PATH OF TRAVEL PROVIDED FOR PEDESTRIANS WITH DISABILITIES WITHIN OR CONINCIDING WITH A PEDESTRIAN CIRCULATION PATH. PAR SHALL BE 4' W MIN.(EXCLUDING CURBING), 2% MAX. CROSS SLOPE AND 1/4" OR LESS VERTICAL DISCONTINUITY.

TECHNICAL INFEASIBILITY: EXISTING PHYSICAL OR SITE CONSTRAINTS THAT PROHIBIT MODIFICATIONS OR ADDITIONS OF ELEMENTS, SPACES OR FEATURES TO COMPLY WITH MINIMUM ACCESSIBILITY REQUIREMENTS.

INDEX OF SHEETS

1 OF 9	INDEX OF SHEETS AND GENERAL NOTES
2 OF 9	CURB RAMP CONFIGURATIONS TYPE 1 - 5
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4 OF 9	CURB RAMP CONFIGURATIONS TYPE 8 - 11
5 OF 9	SLIP RAMP, SIDEWALK TO SHOULDER TRANSITION, ACCESS ISLAND
6 OF 9	DETECTABLE WARNING DEVICE PLACEMENT OPTIONS
7 OF 9	RAMP SIDE CONFIGURATIONS AND BACK TREATMENTS
8 OF 9	RR X-INGS, ROUNDABOUTS, PEDESTRIAN BUTTONS
9 OF 9	DETECTABLE WARNING DEVICE, TRUNCATED DOMES, MISCELLANEOUS DETAILS

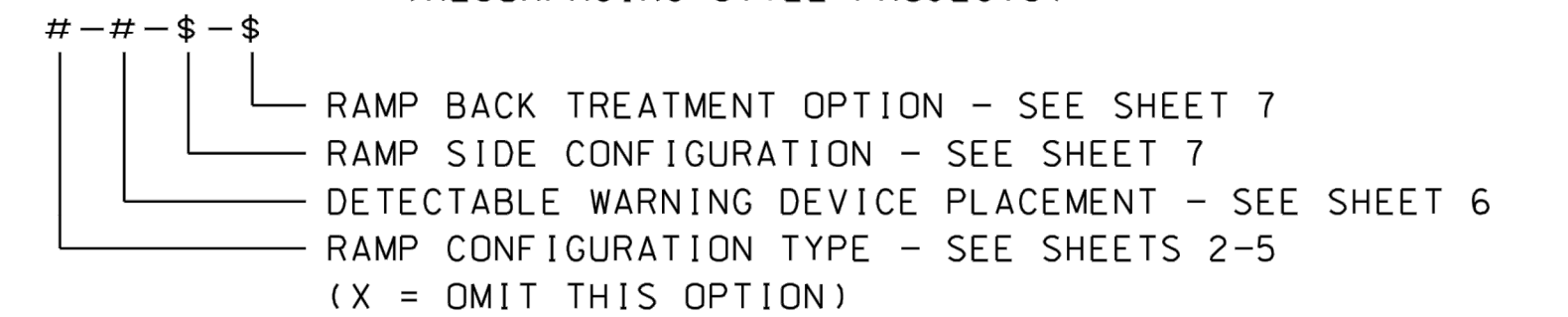


CURB REVEAL (INCHES)		7	6	5	4	3	2	1
ROADWAY PROFILE GRADE (%)	Minimum Transition Length Required (FT)							
Low Side Transition Length	-10%	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	-9%	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	-8%	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	-7%	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	-6%	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	-5%	5.0	5.0	5.0	5.0	5.0	5.0	5.0
	-4%	5.1	5.0	5.0	5.0	5.0	5.0	5.0
	-3%	5.6	5.0	5.0	5.0	5.0	5.0	5.0
	-2%	6.1	5.3	5.0	5.0	5.0	5.0	5.0
	-1%	6.9	5.9	5.0	5.0	5.0	5.0	5.0
High Side Transition Length	0%	7.8	6.7	5.6	5.0	5.0	5.0	5.0
	1%	9.0	7.7	6.4	5.1	5.0	5.0	5.0
	2%	10.6	9.1	7.6	6.1	5.0	5.0	5.0
	3%	13.0	11.1	9.3	7.4	5.6	5.0	5.0
	4%	15.0	14.3	11.9	9.5	7.1	5.0	5.0
	5%	15.0	15.0	15.0	13.3	10.0	6.8	5.0
	6%	15.0	15.0	15.0	15.0	15.0	11.3	5.3
	7%	15.0	15.0	15.0	15.0	15.0	15.0	15.0
	8%	15.0	15.0	15.0	15.0	15.0	15.0	15.0
	9%	15.0	15.0	15.0	15.0	15.0	15.0	15.0
10%	15.0	15.0	15.0	15.0	15.0	15.0	15.0	

THIS TABLE REPRESENTS THE MINIMUM LENGTH OF CURB RAMP TRANSITION BASED ON THE EXISTING ROADWAY PROFILE GRADE AND THE CURB REVEAL AT FULL HEIGHT ALONG THE SIDEWALK. THE MINIMUM TRANSITION LENGTH REQUIRED IS BASED ON 7.5% SLOPE AND INDICATED CURB REVEAL.

TREATMENT KEY LEGEND

(RESURFACING STYLE PROJECTS)

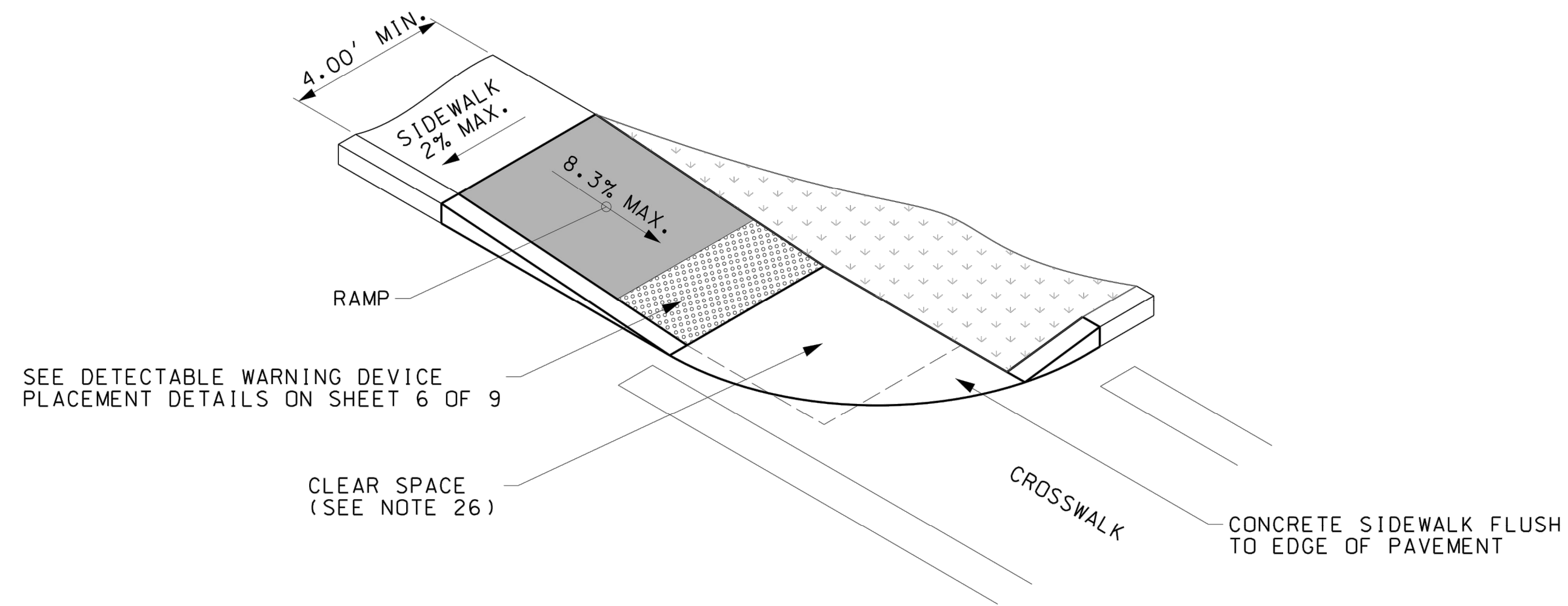


NOTES:

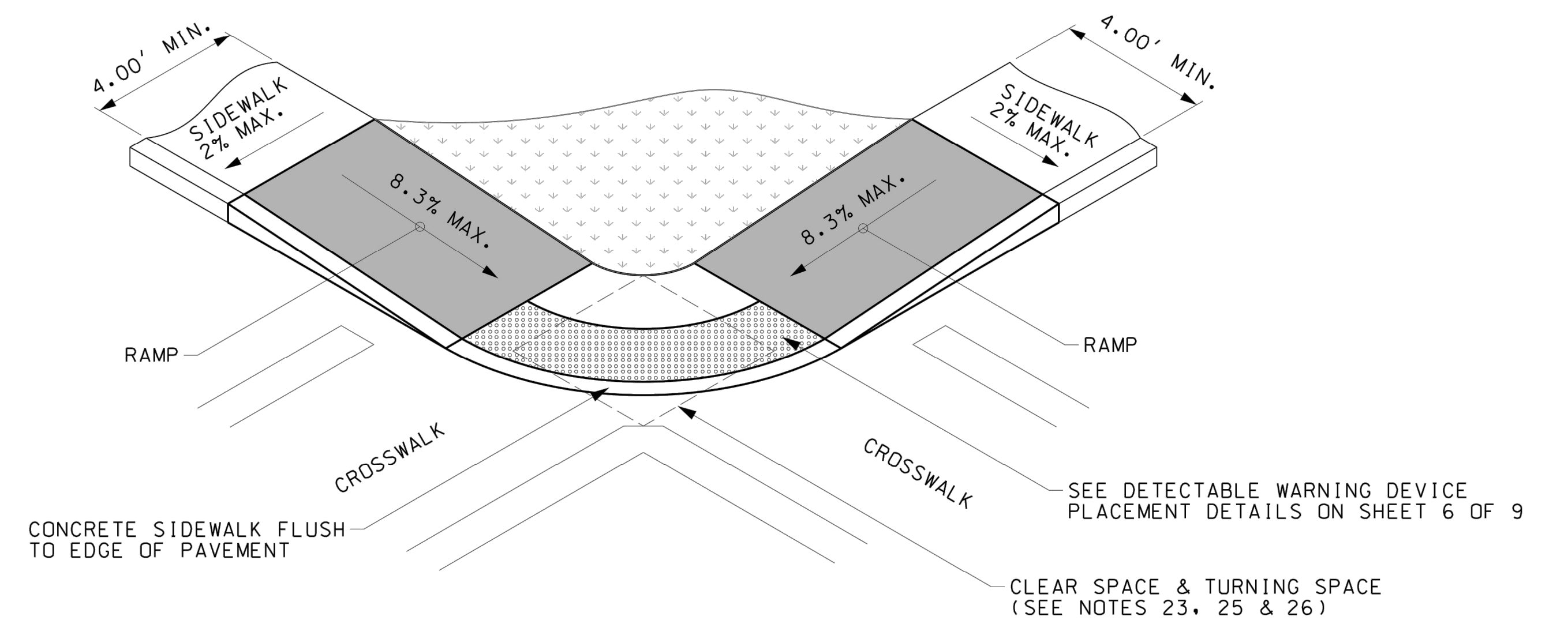
- SIDEWALK CURB RAMP DETAILS (SHEET 1-9) ARE NHDOT STANDARD DETAILS

LOWELL ROAD TO SAGAMORE BRIDGE
TOWN OF HUDSON, NEW HAMPSHIRE
SIDEWALK CURB RAMP DETAILS
(SHEET 1 OF 9)

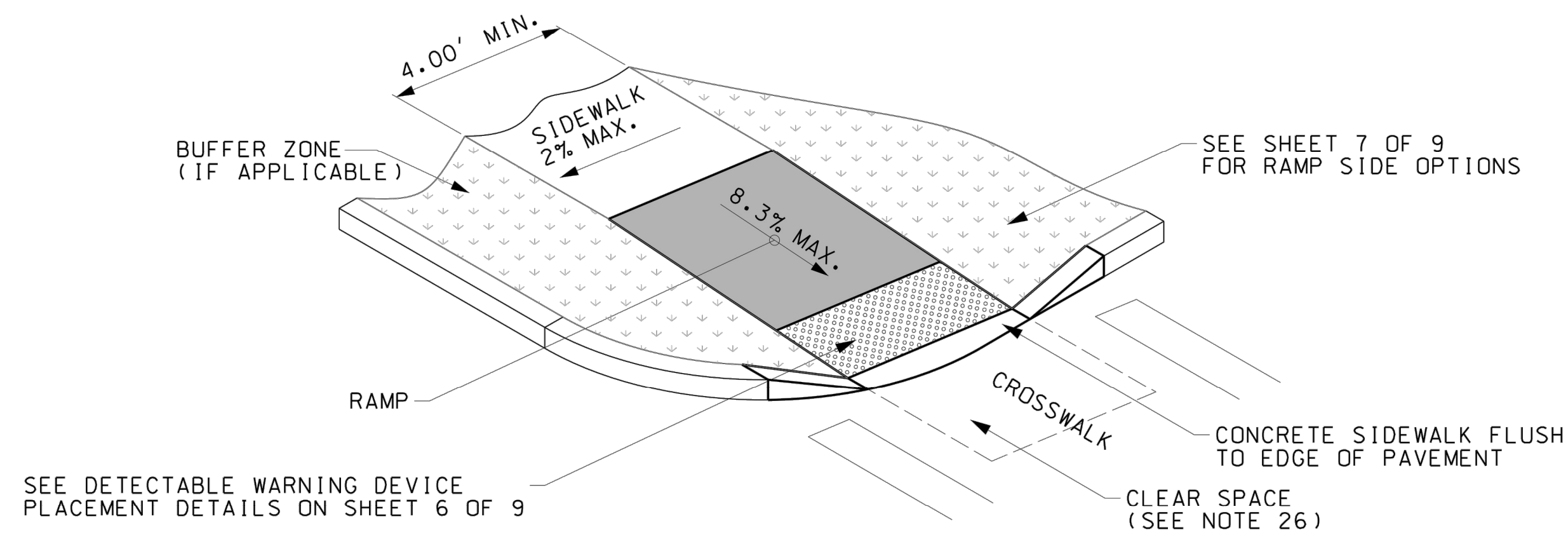
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	6	35



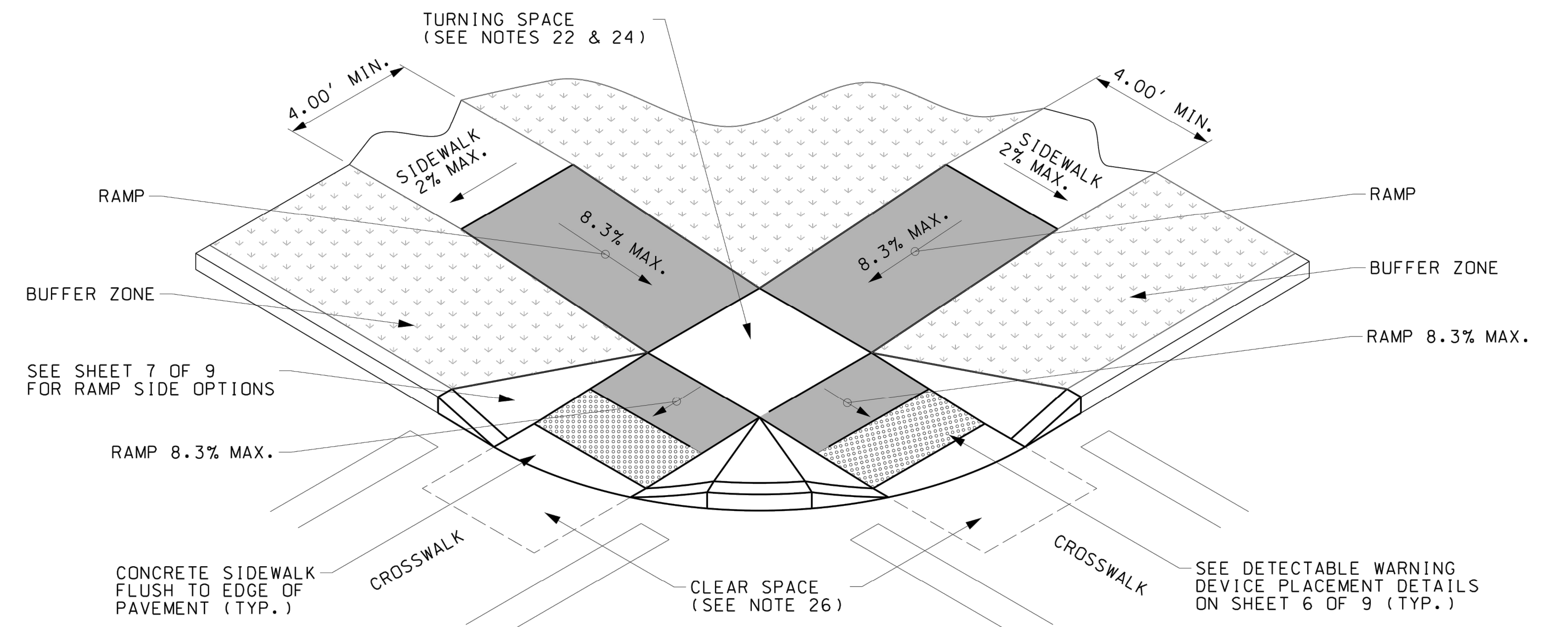
TYPE 1



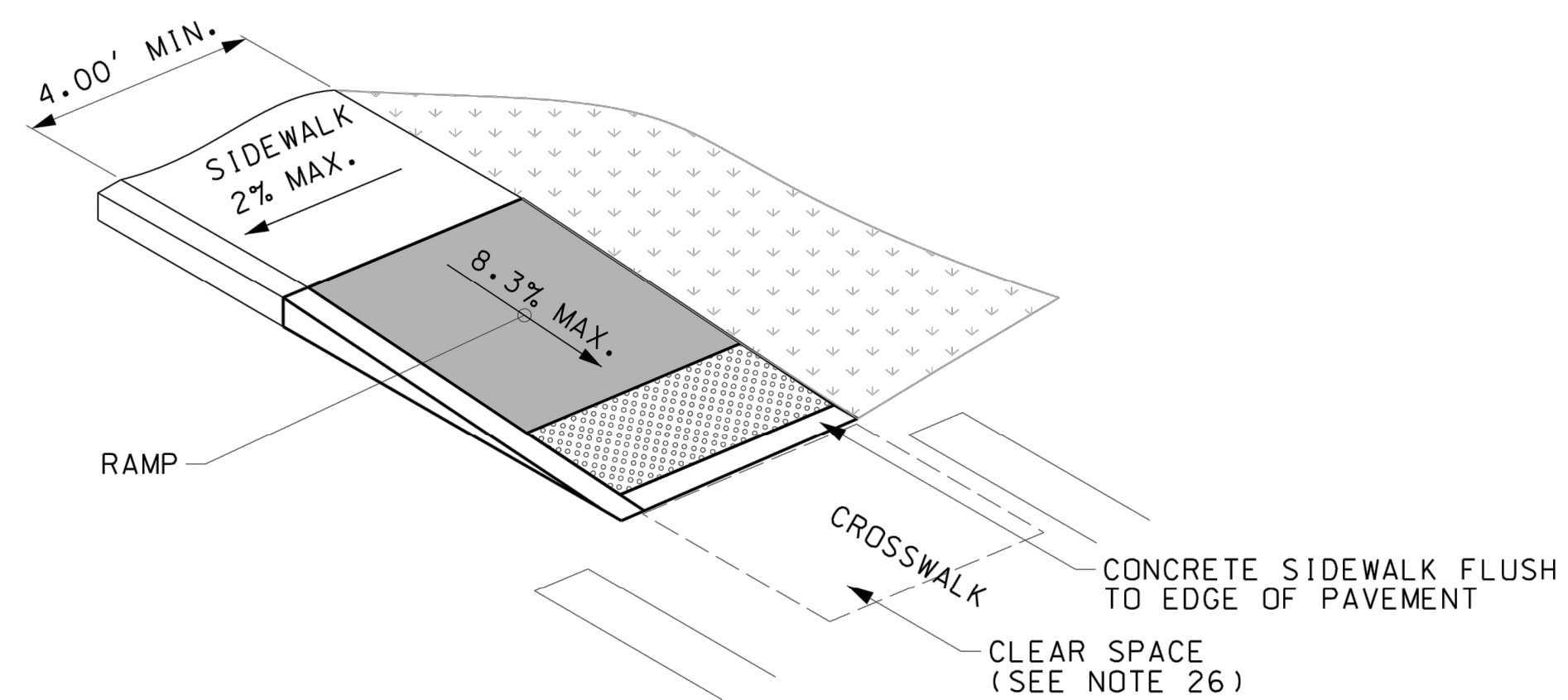
TYPE 4
NOT FOR NEW DESIGNS - RETROFITS ONLY



TYPE 2



TYPE 5

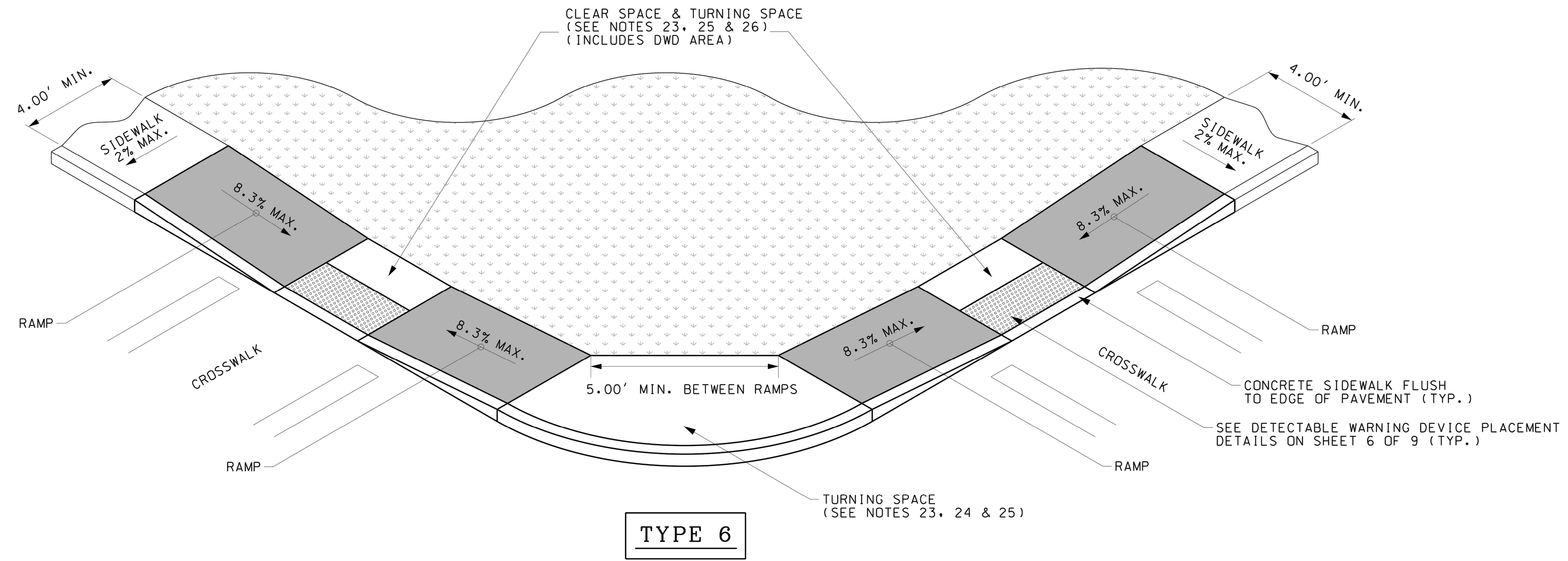


TYPE 3

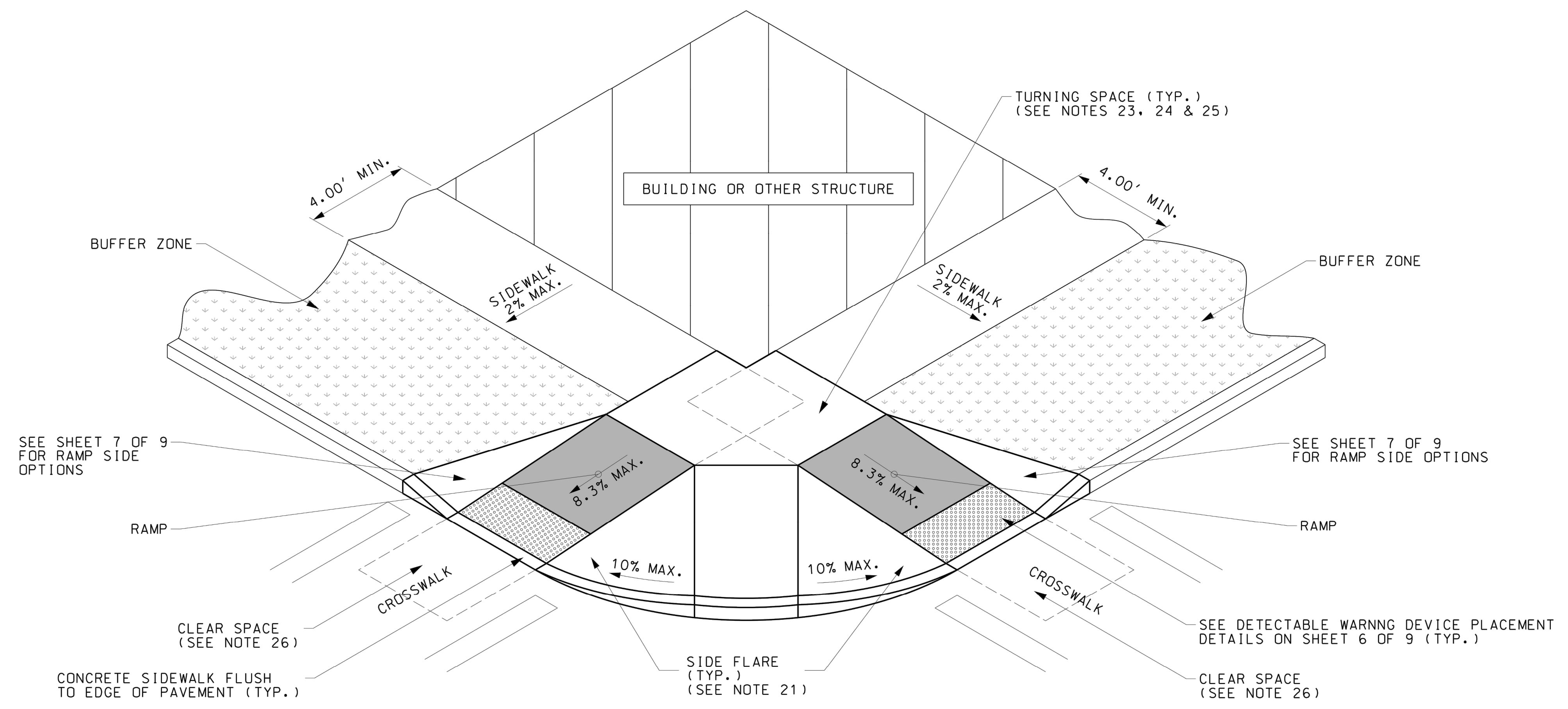
CURB RAMP CONFIGURATIONS

NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
SIDEWALK CURB RAMP DETAILS					
(SHEET 2 OF 9)					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	7	35



TYPE 6

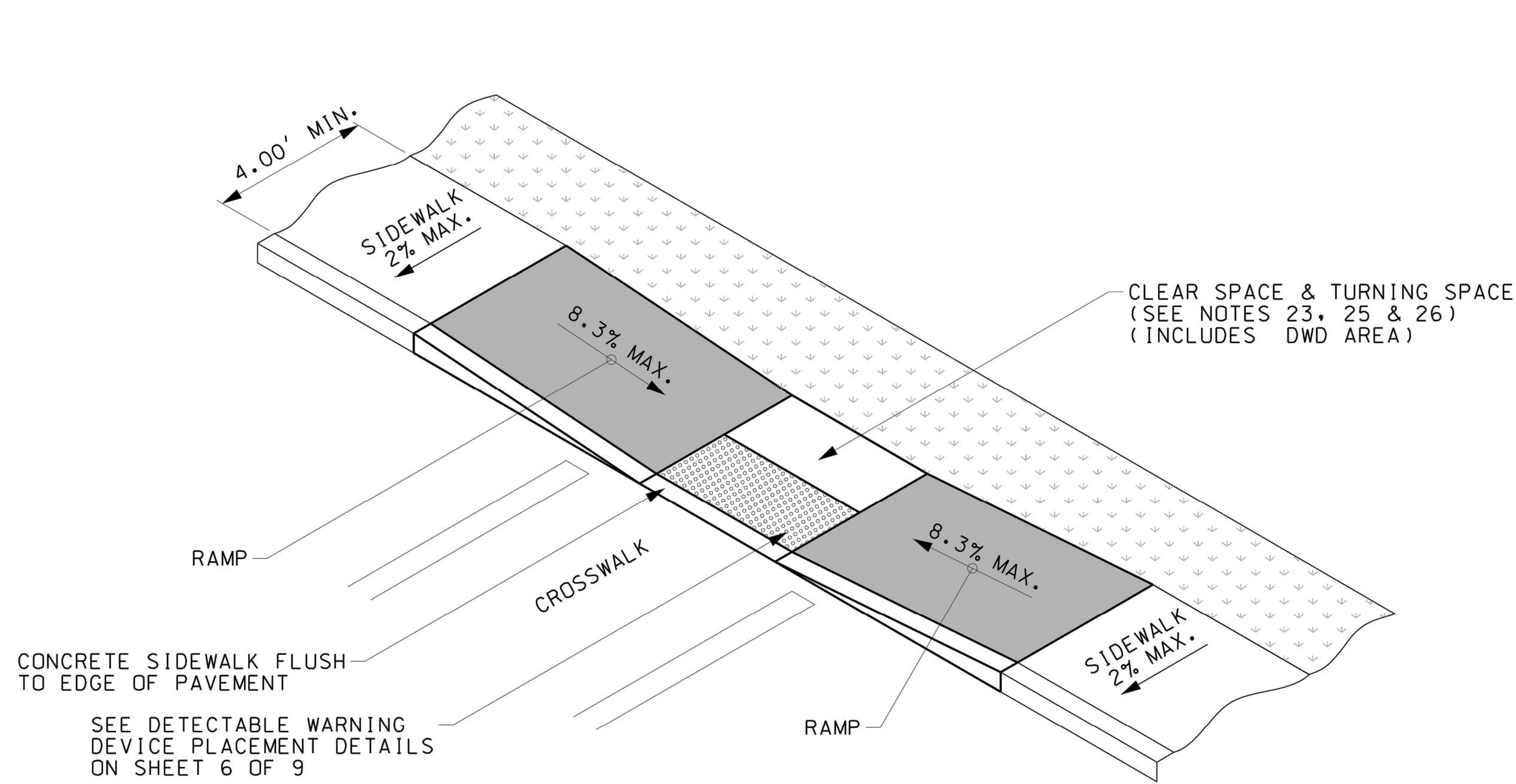


TYPE 7

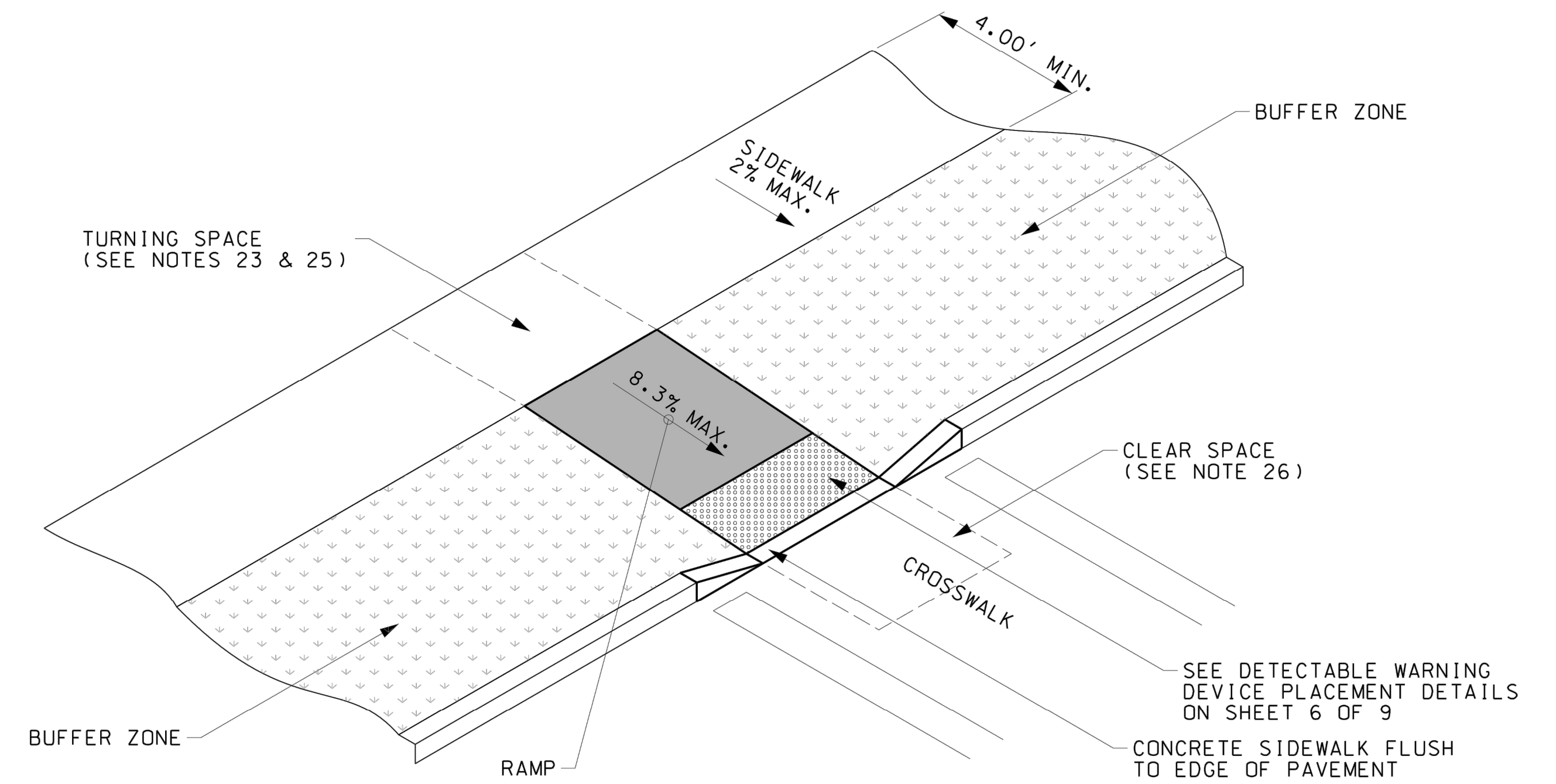
CURB RAMP CONFIGURATIONS

NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

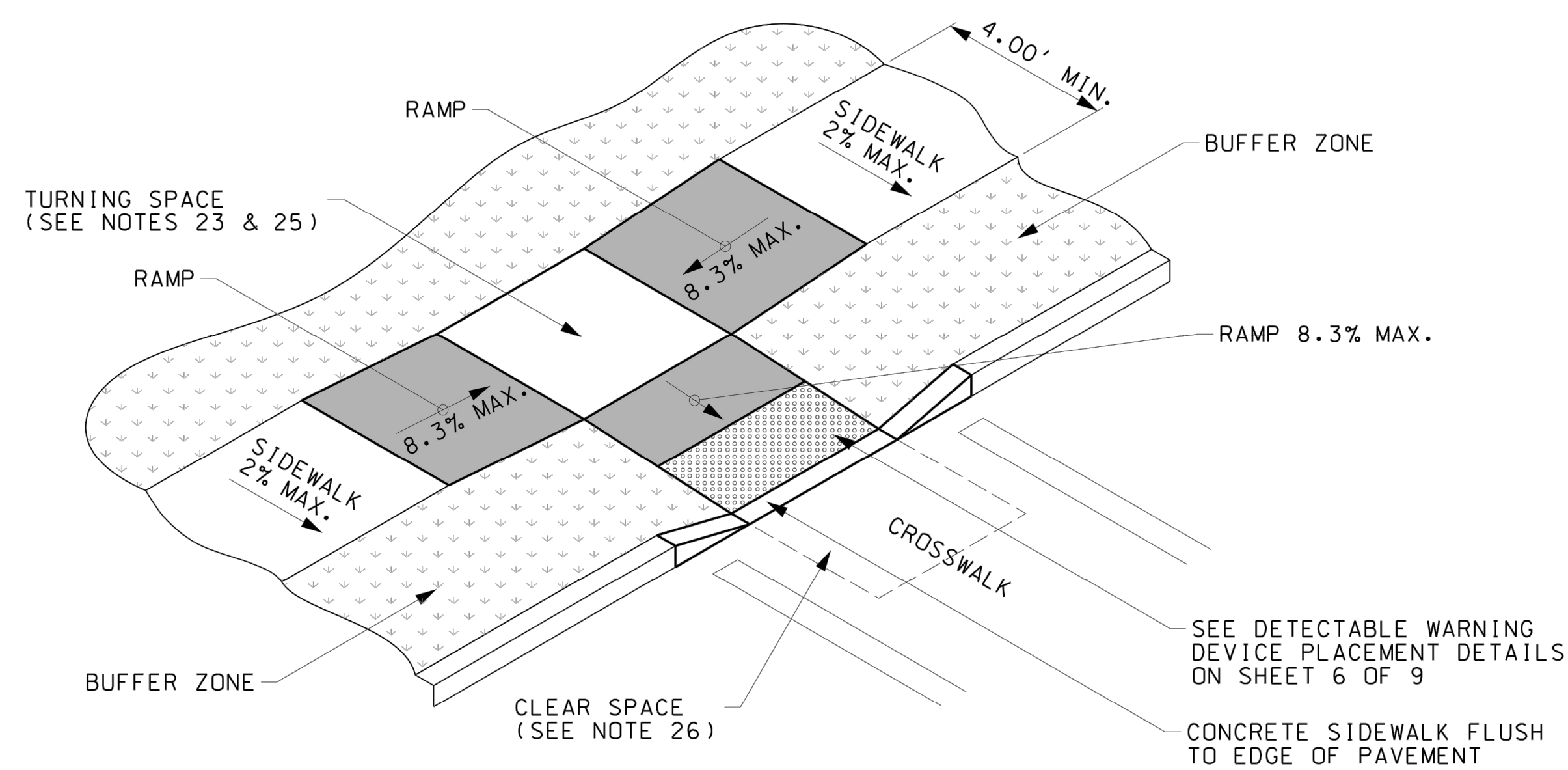
LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
SIDEWALK CURB RAMP DETAILS					
(SHEET 3 OF 9)					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	8	35



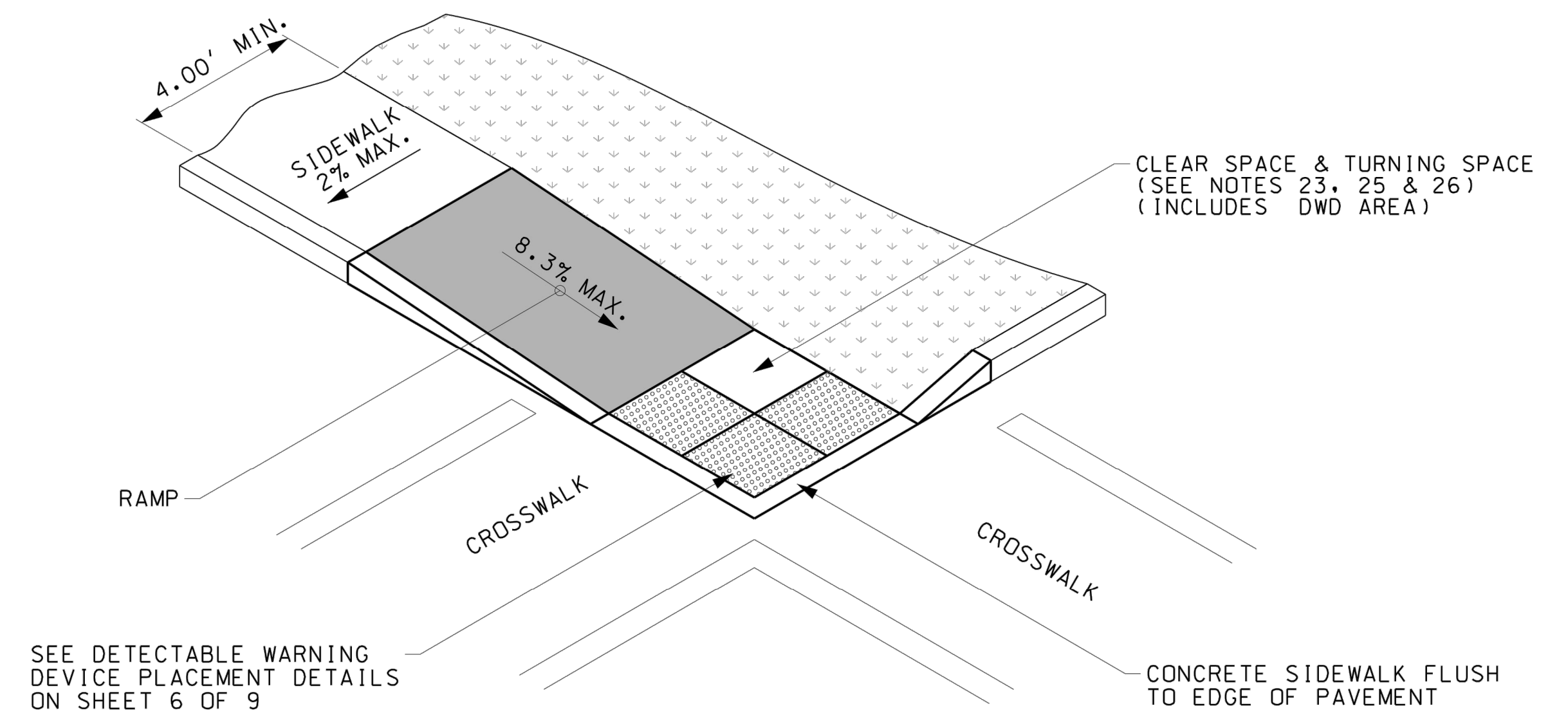
TYPE 8
MID BLOCK CROSSING OR T INTERSECTION



TYPE 10
MID BLOCK CROSSING OR T INTERSECTION



TYPE 9
MID BLOCK CROSSING OR T INTERSECTION

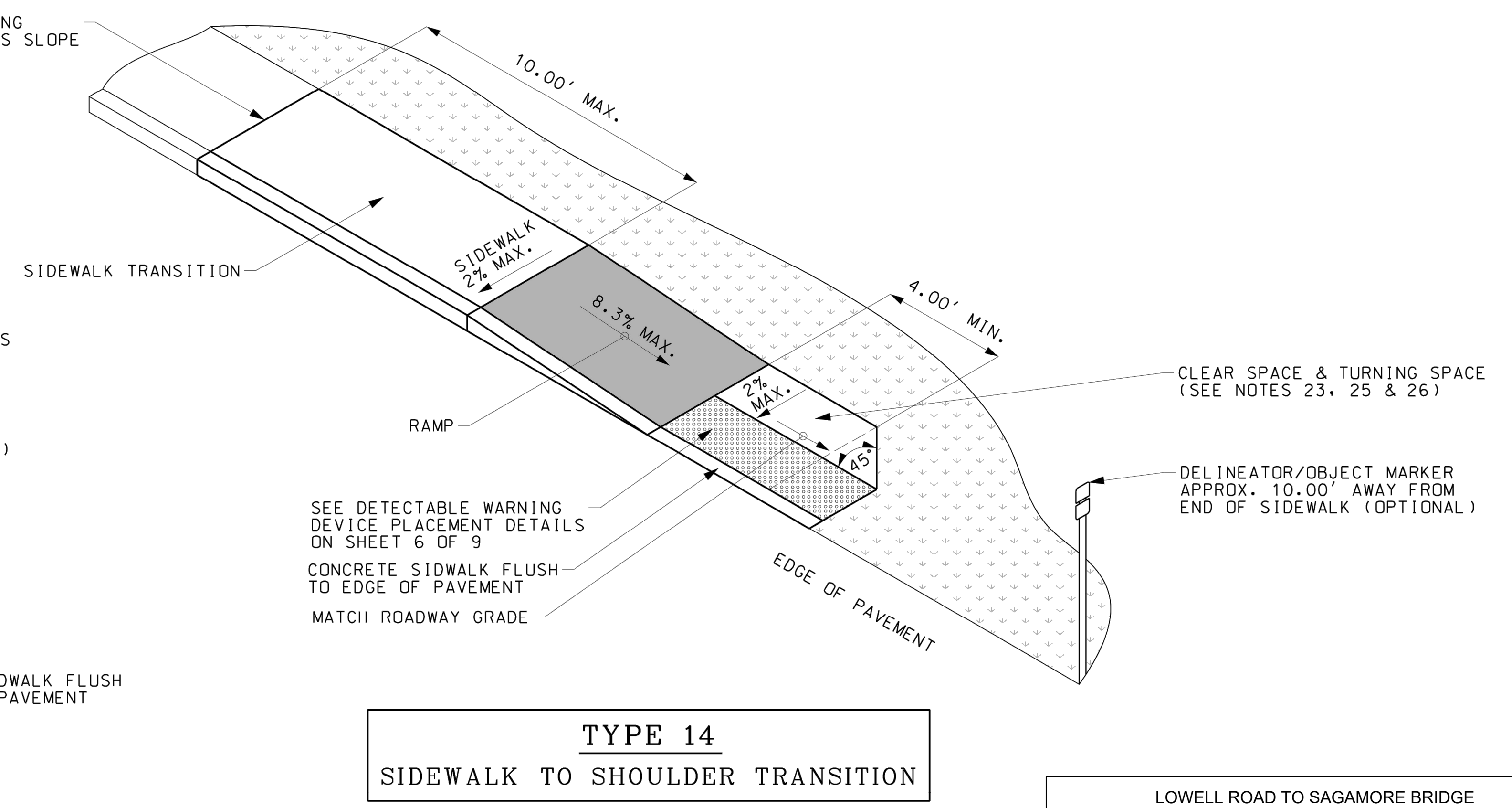
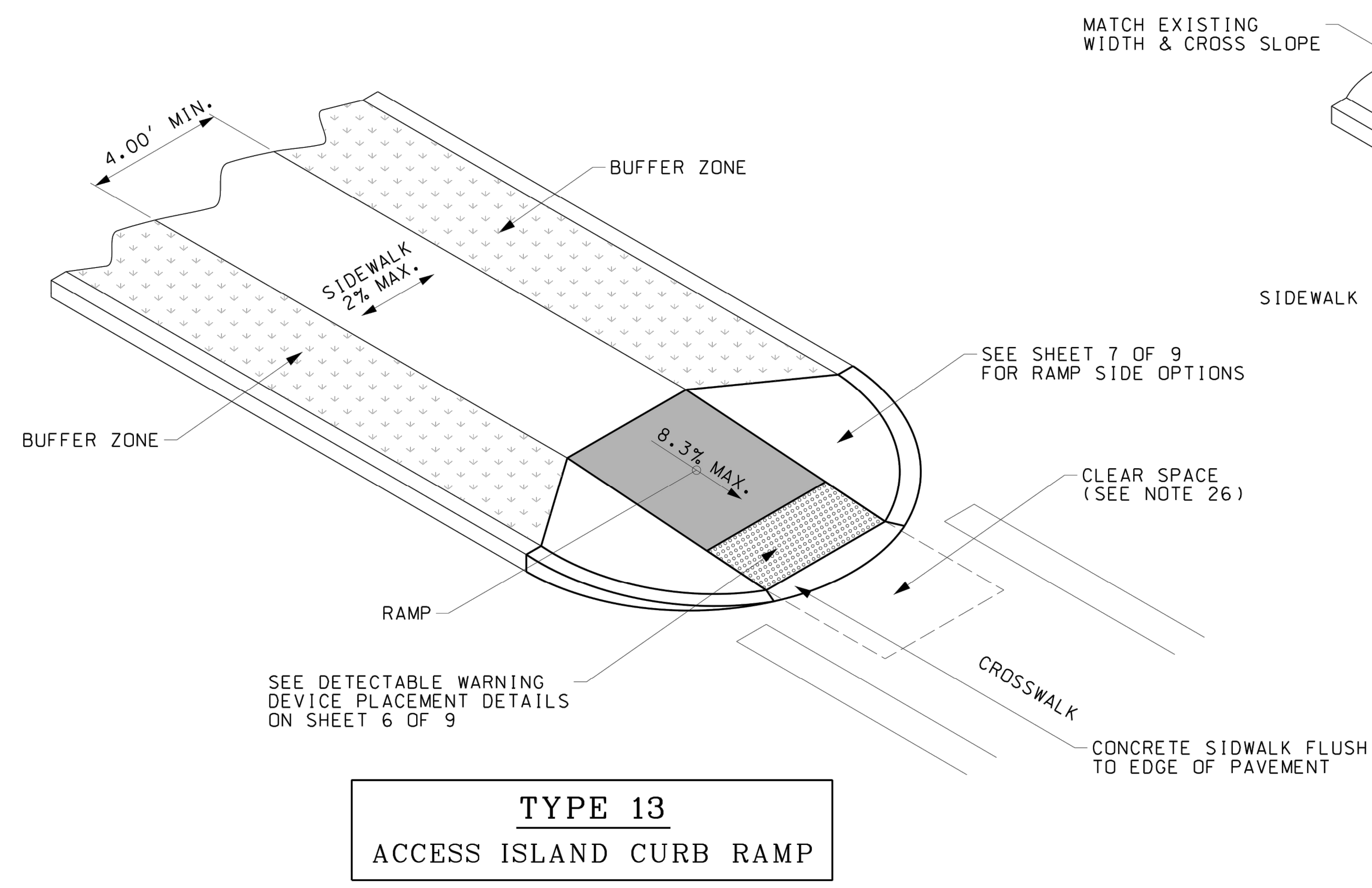
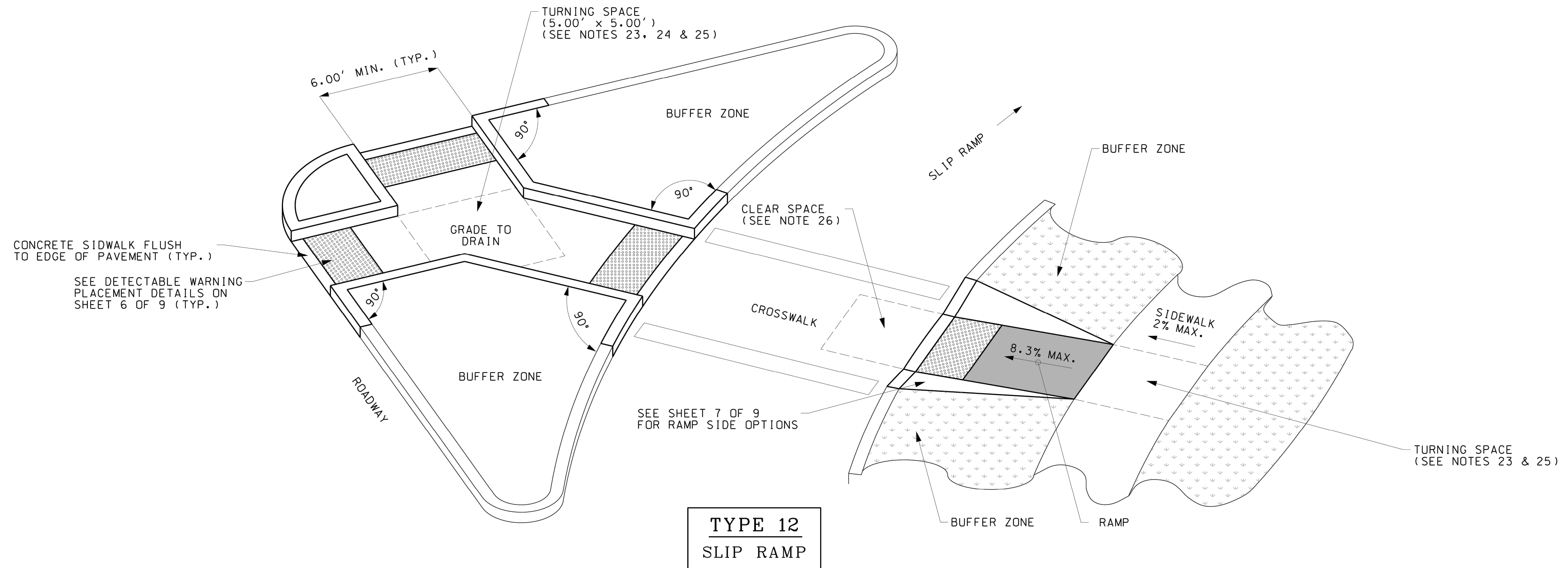


TYPE 11

CURB RAMP CONFIGURATIONS

NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

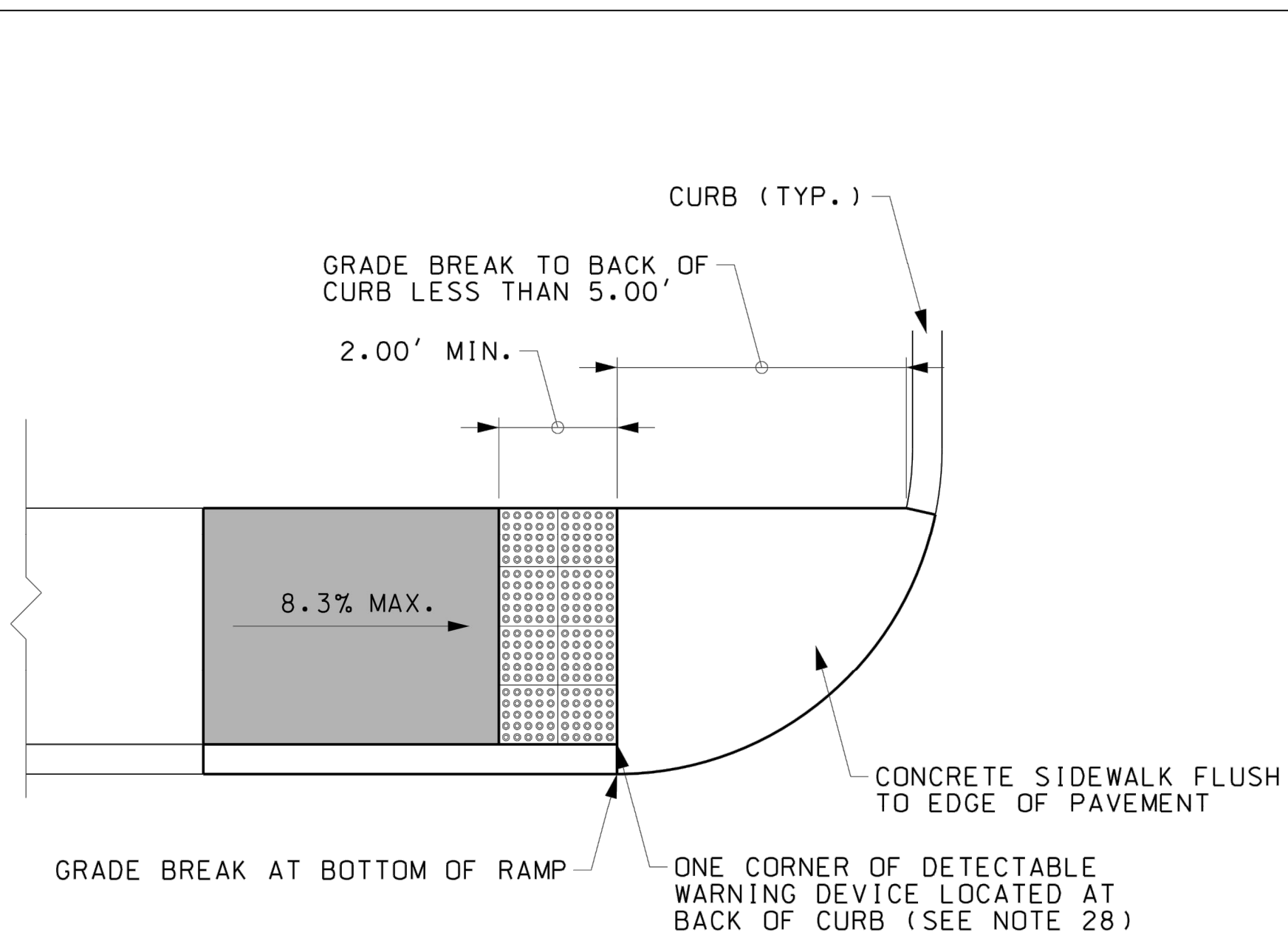
LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
SIDEWALK CURB RAMP DETAILS					
(SHEET 4 OF 9)					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	9	35



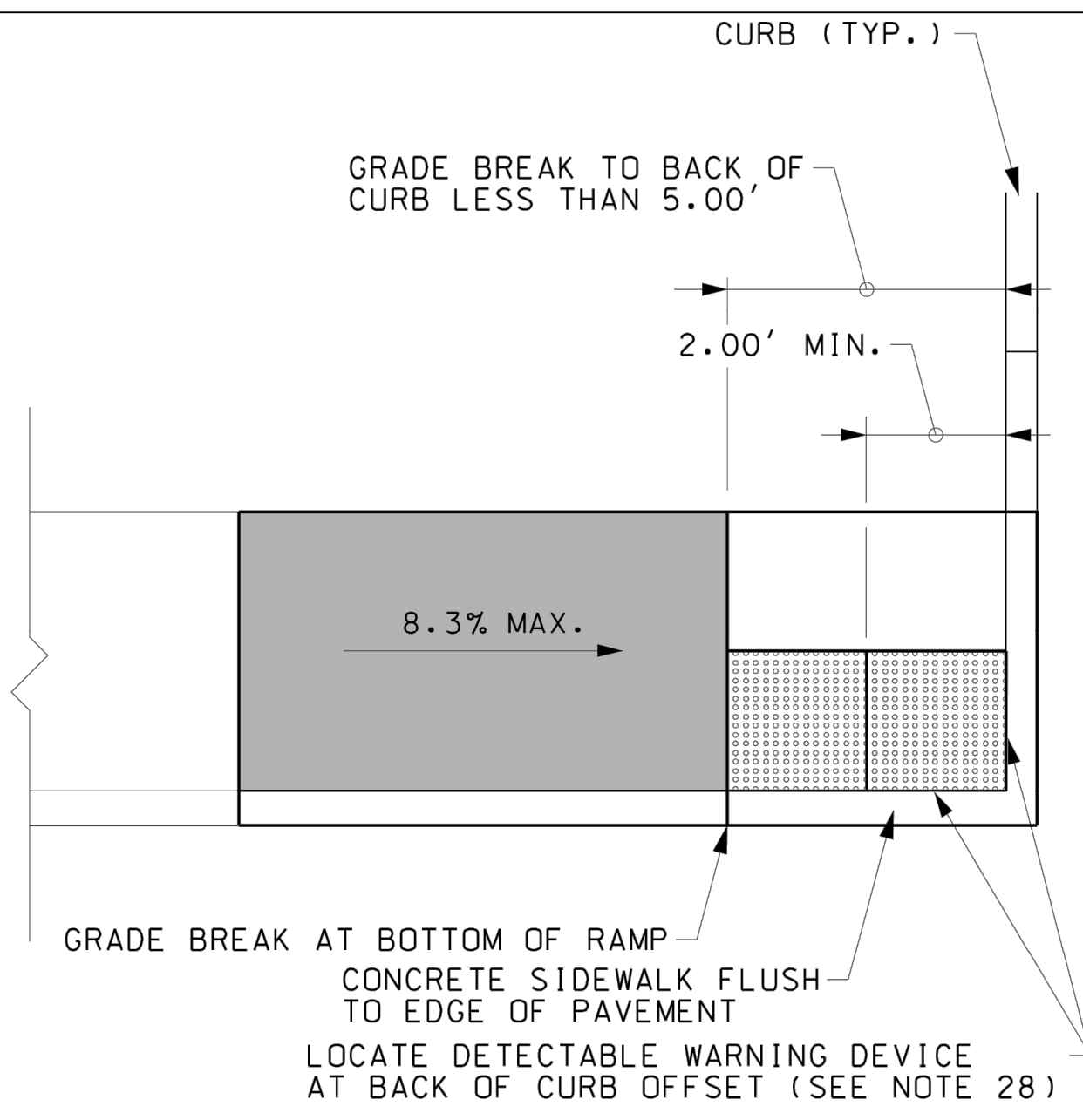
NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

CURB RAMP CONFIGURATIONS

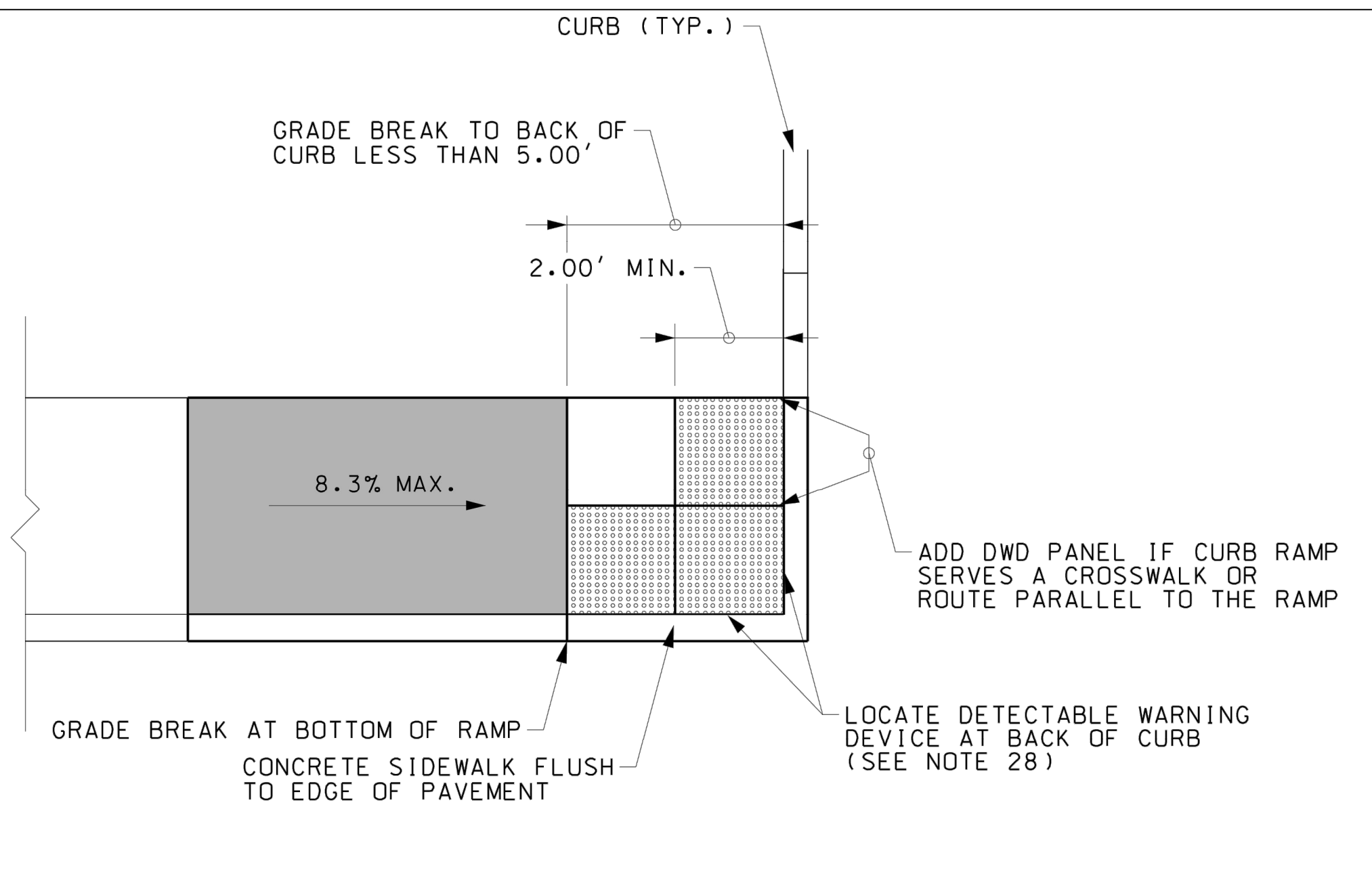
LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
SIDEWALK CURB RAMP DETAILS					
(SHEET 5 OF 9)					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	10	35



OPTION 1

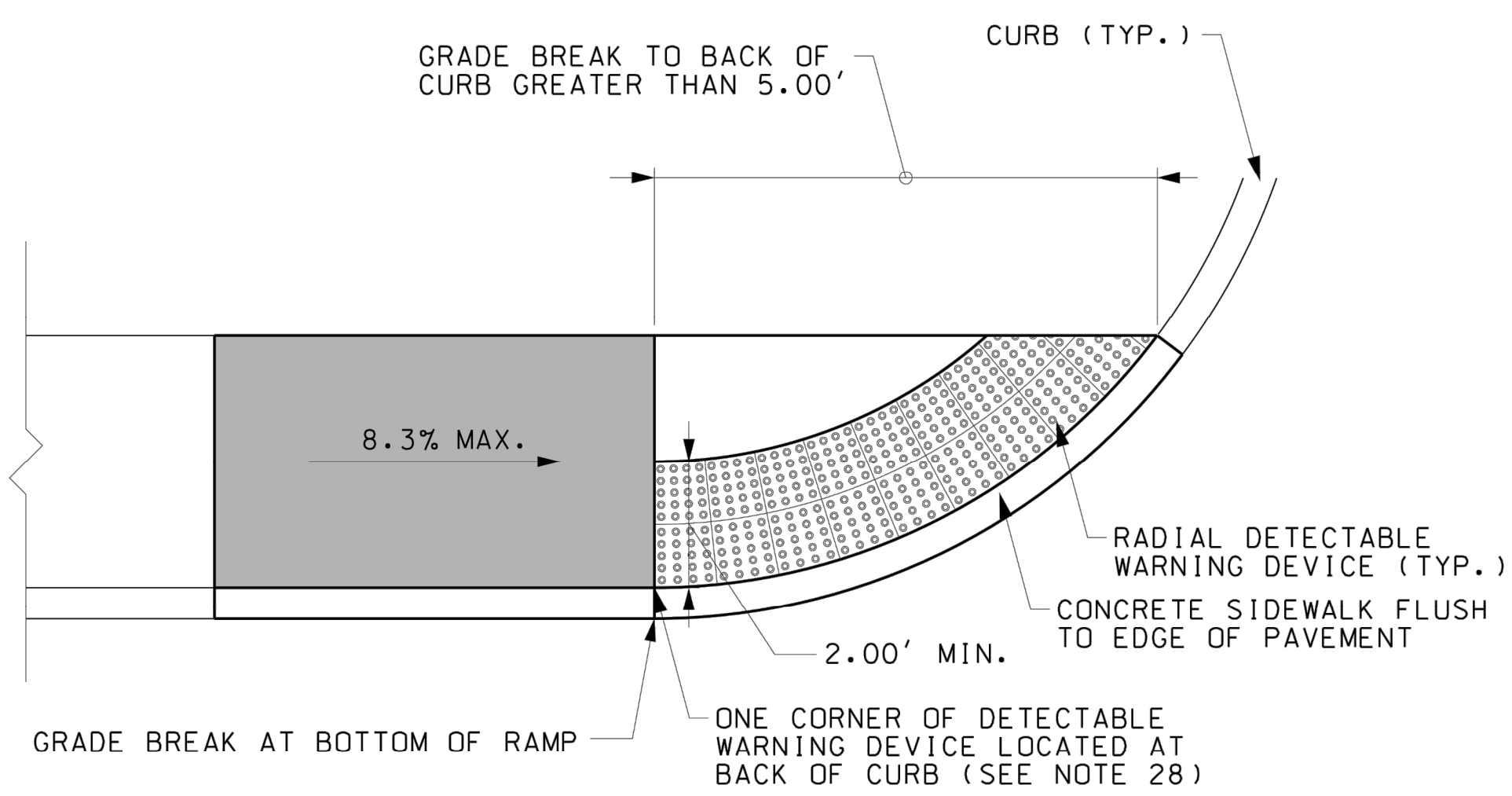


OPTION 2

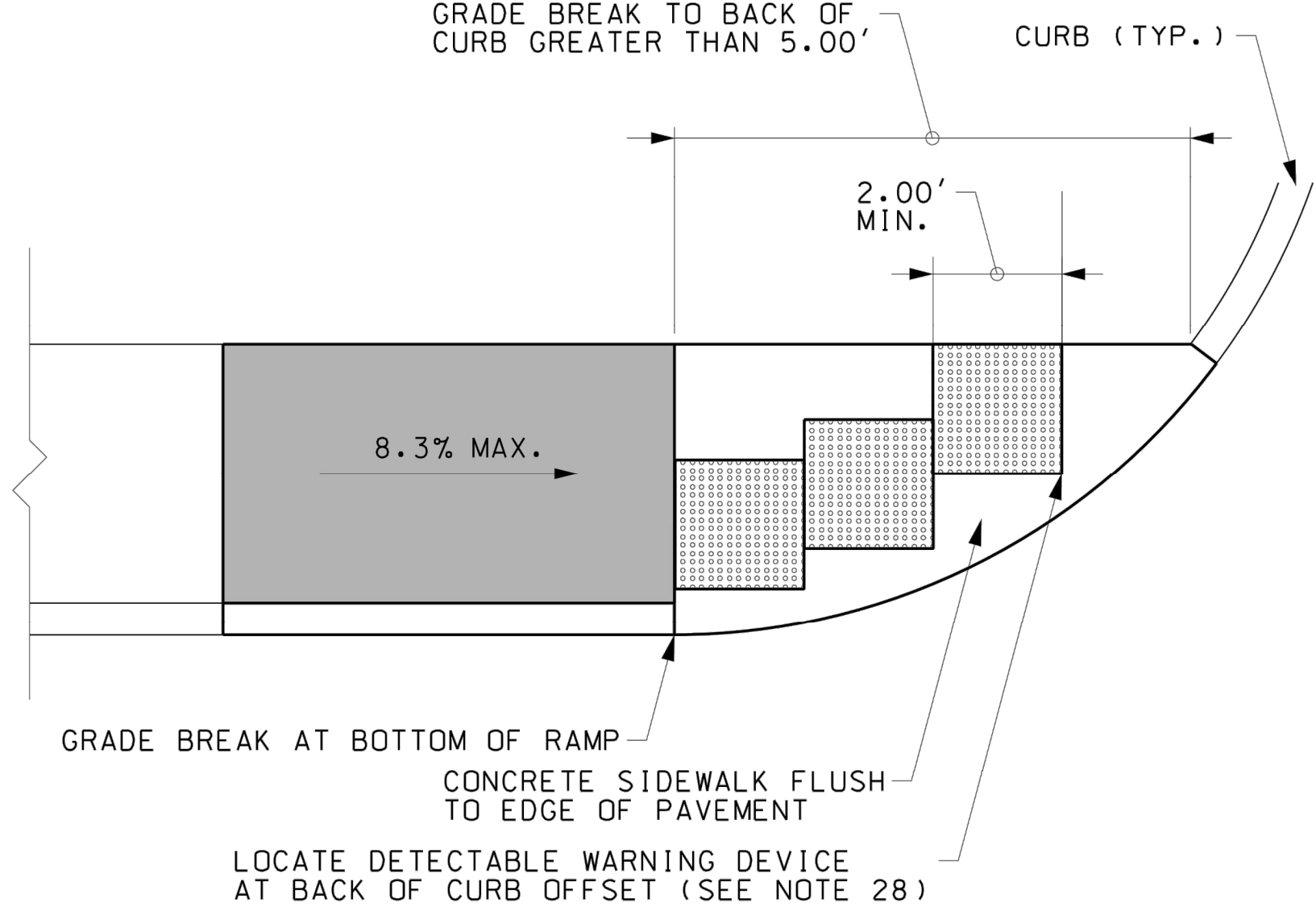


OPTION 2A

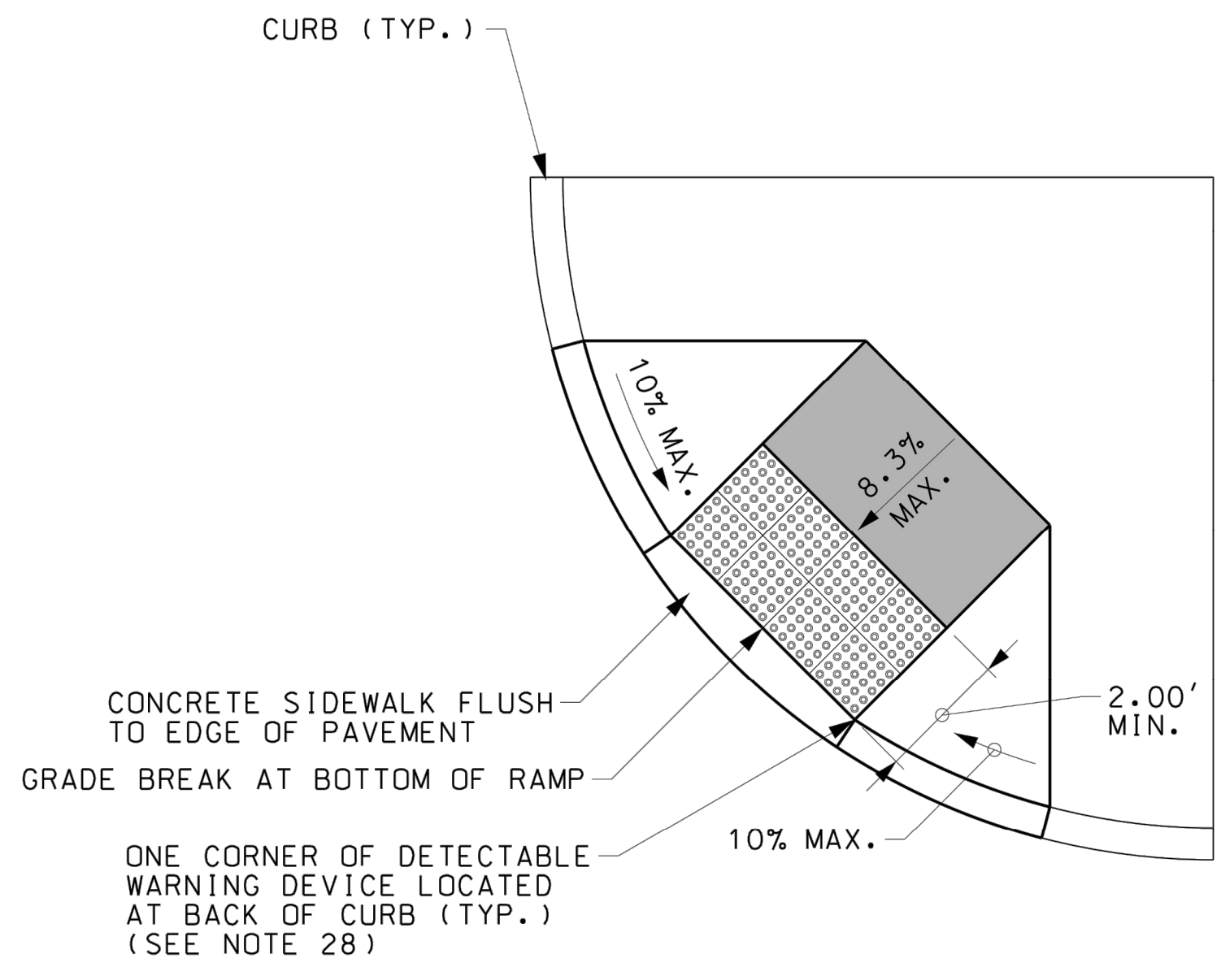
GRADE BREAK TO BACK OF CURB LESS THAN 5.00'



OPTION 3



OPTION 4



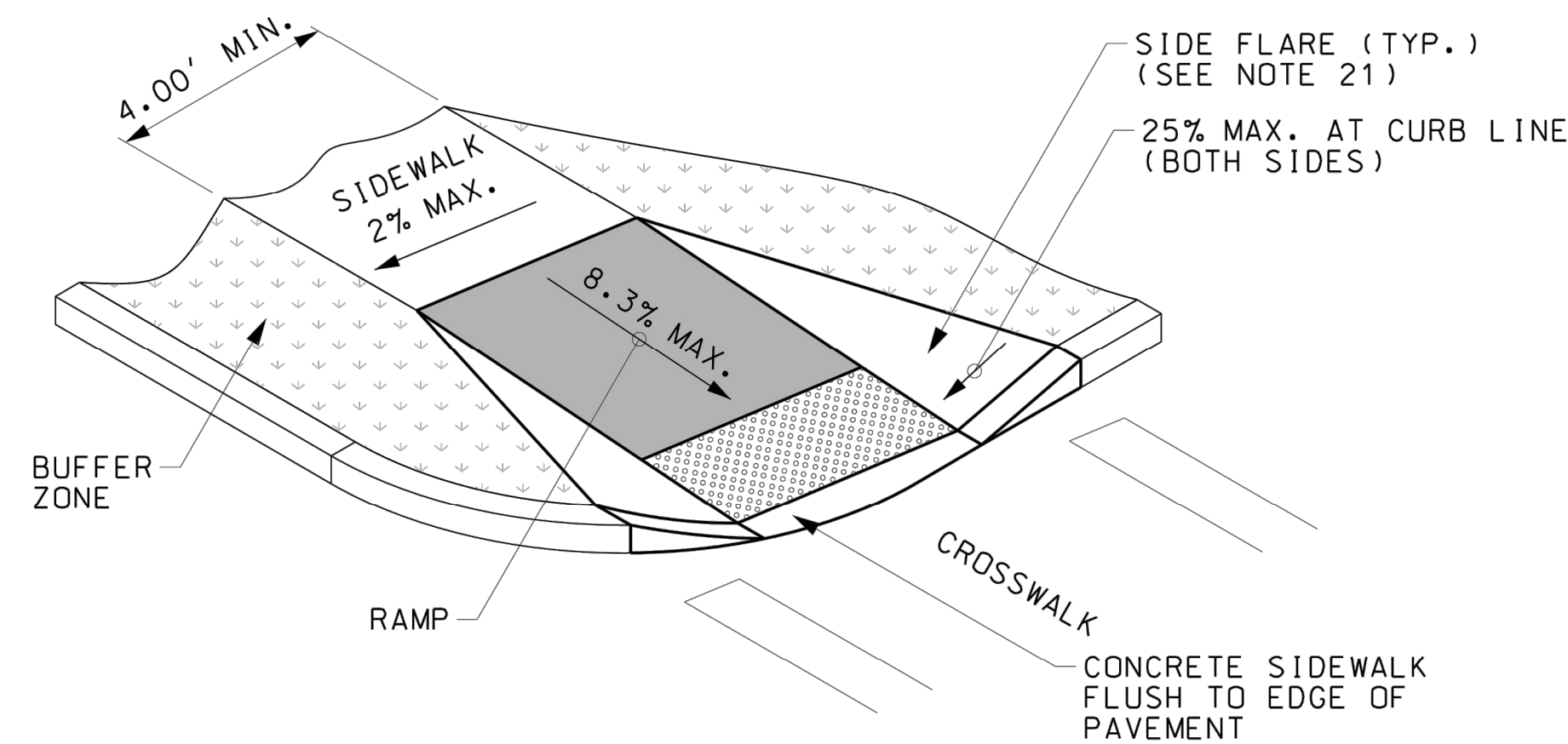
OPTION 5

GRADE BREAK TO BACK OF CURB GREATER THAN 5.00'

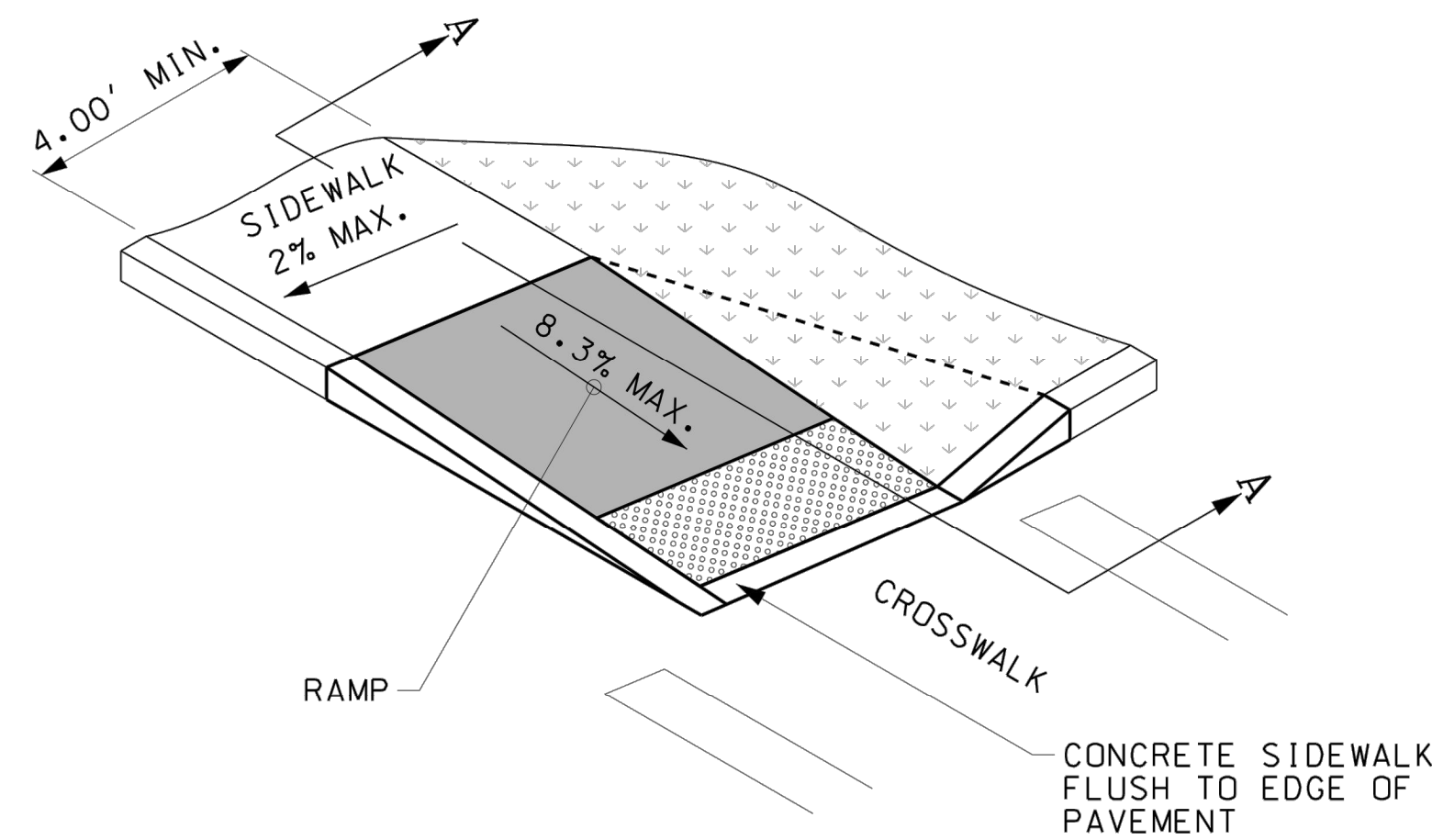
DETECTABLE WARNING DEVICE (DWD) PLACEMENT OPTION DETAILS

NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

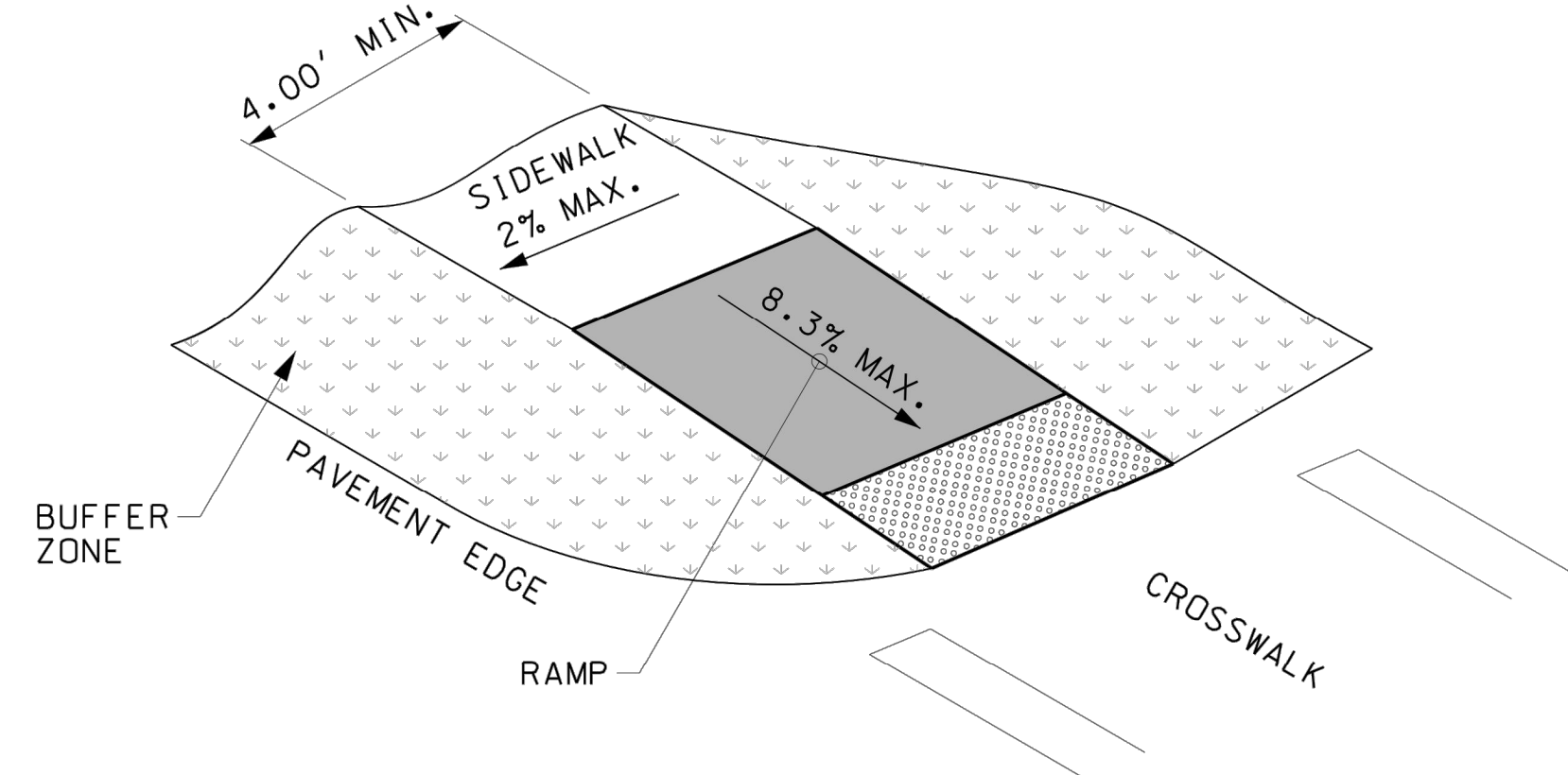
LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
SIDEWALK CURB RAMP DETAILS					
(SHEET 6 OF 9)					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	11	35



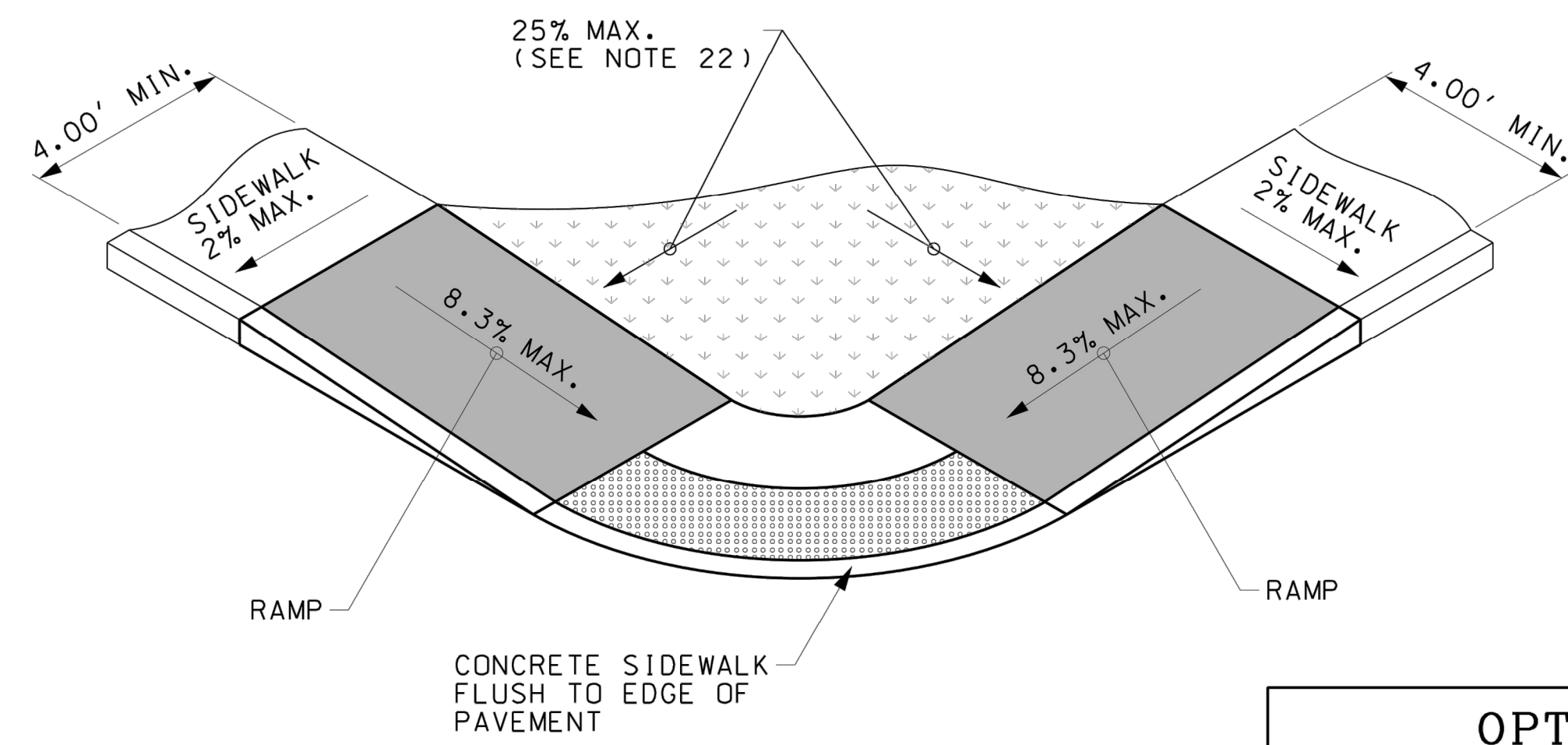
OPTION A
FLARED CONCRETE



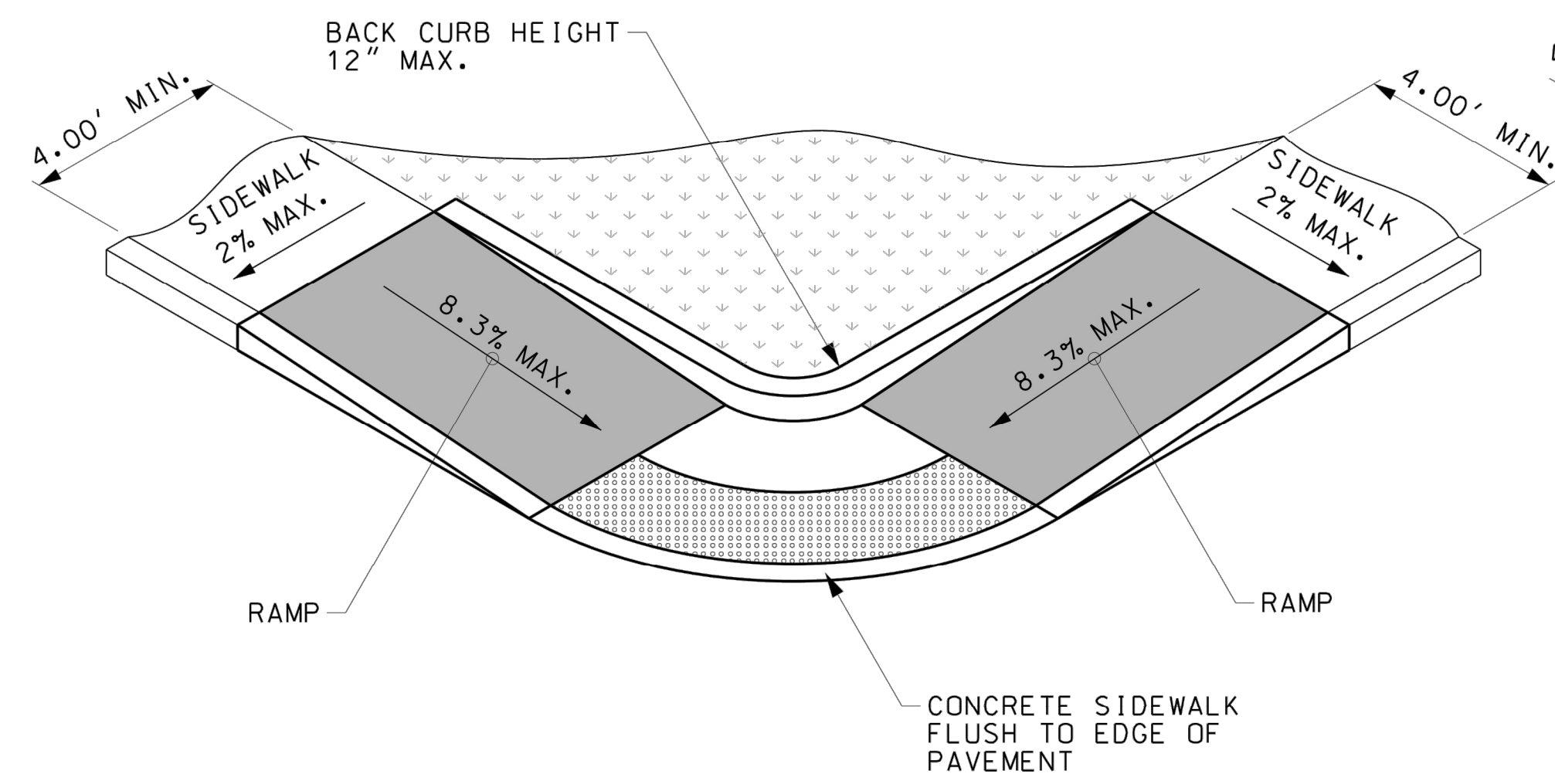
OPTION B
GRADED EARTH



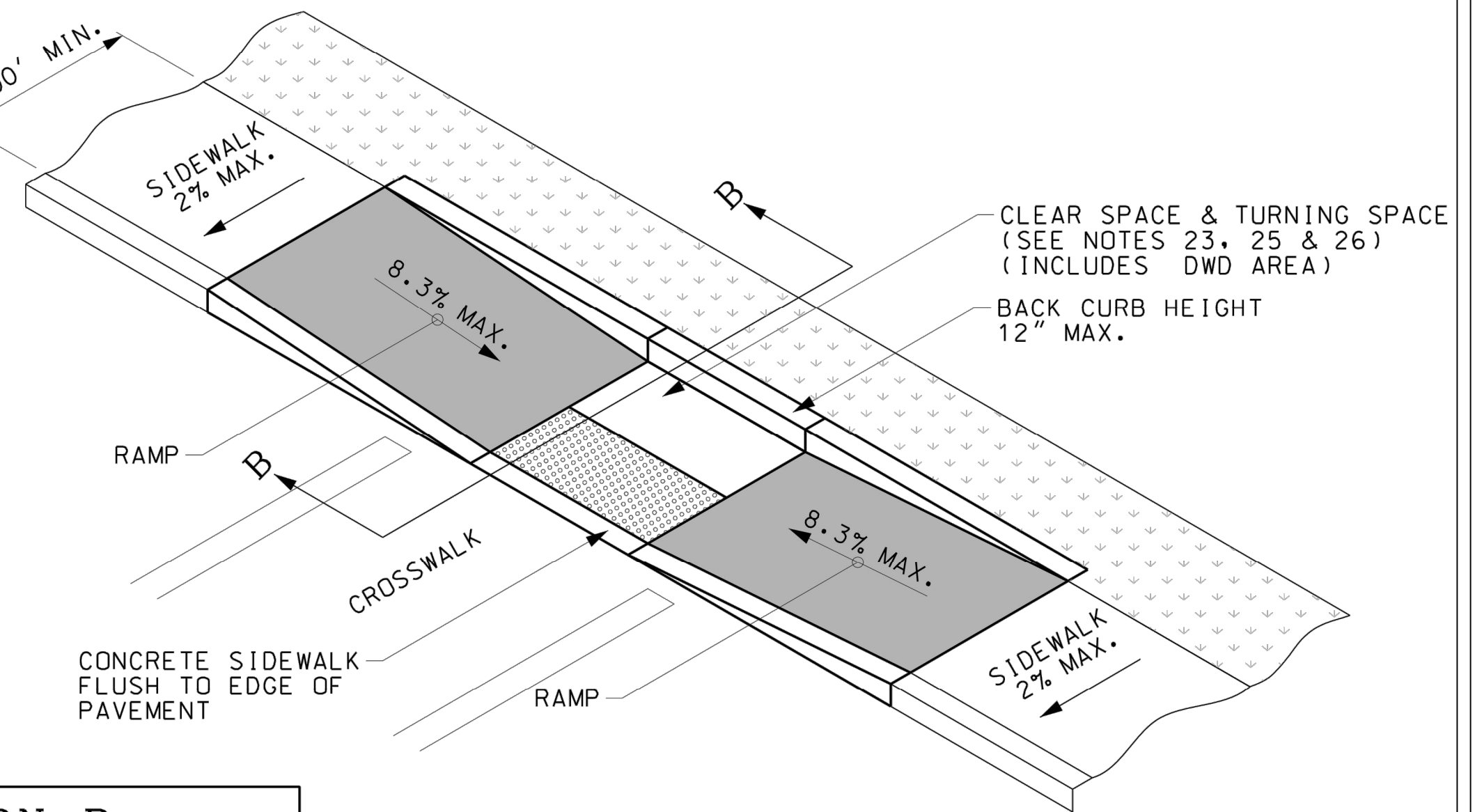
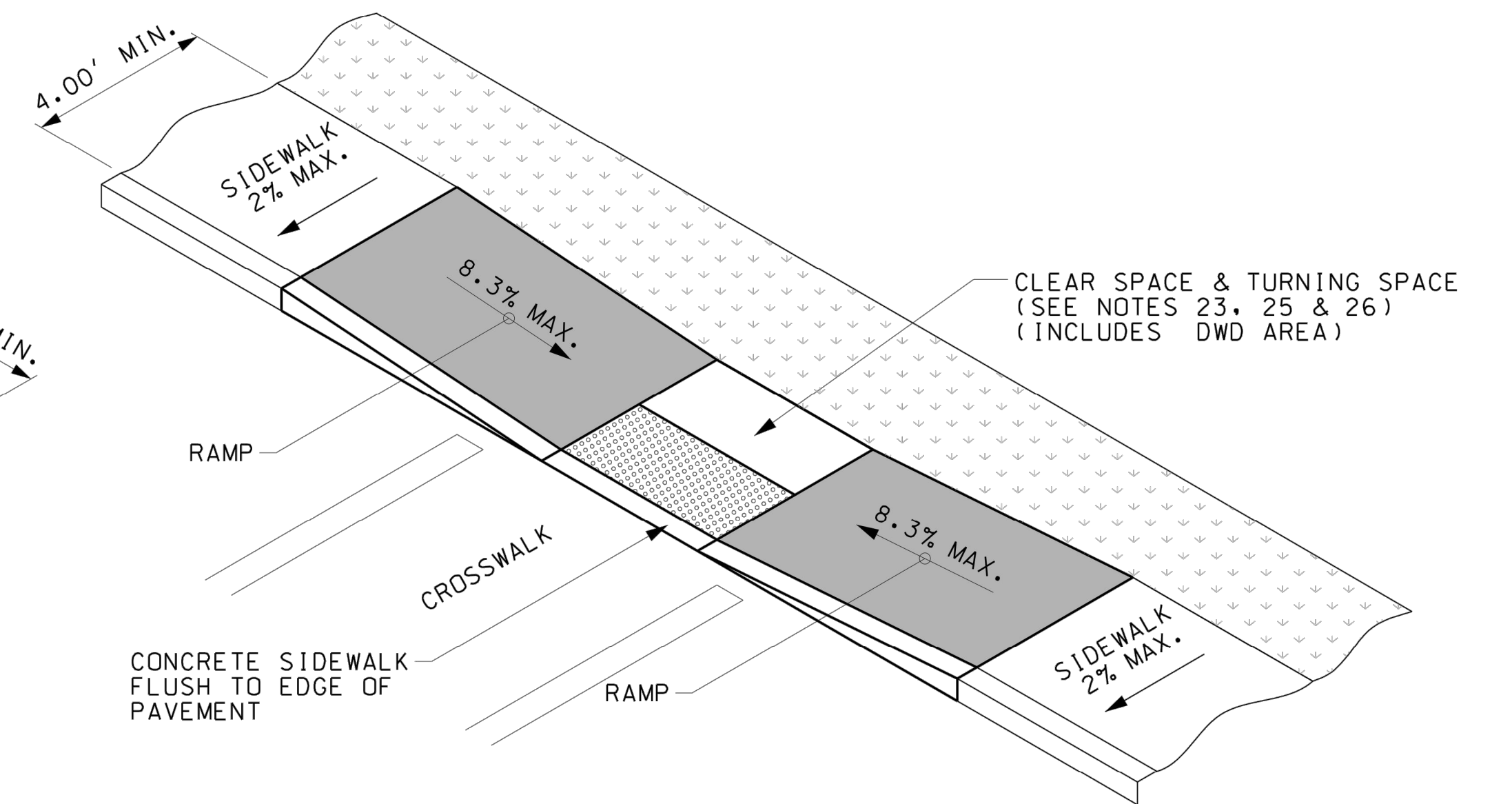
OPTION C
UNCURBED INTERSECTION



OPTION A
GRADED EARTH AND TURF



OPTION B
BACK CURB

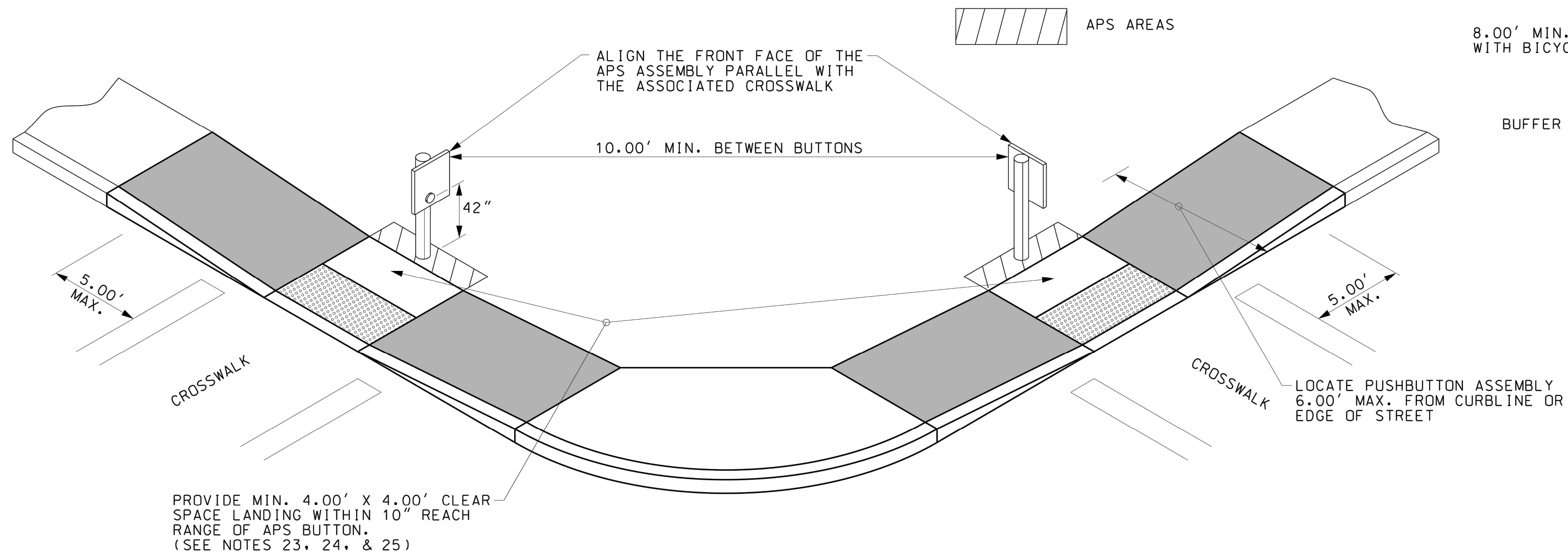


RAMP SIDE CONFIGURATIONS

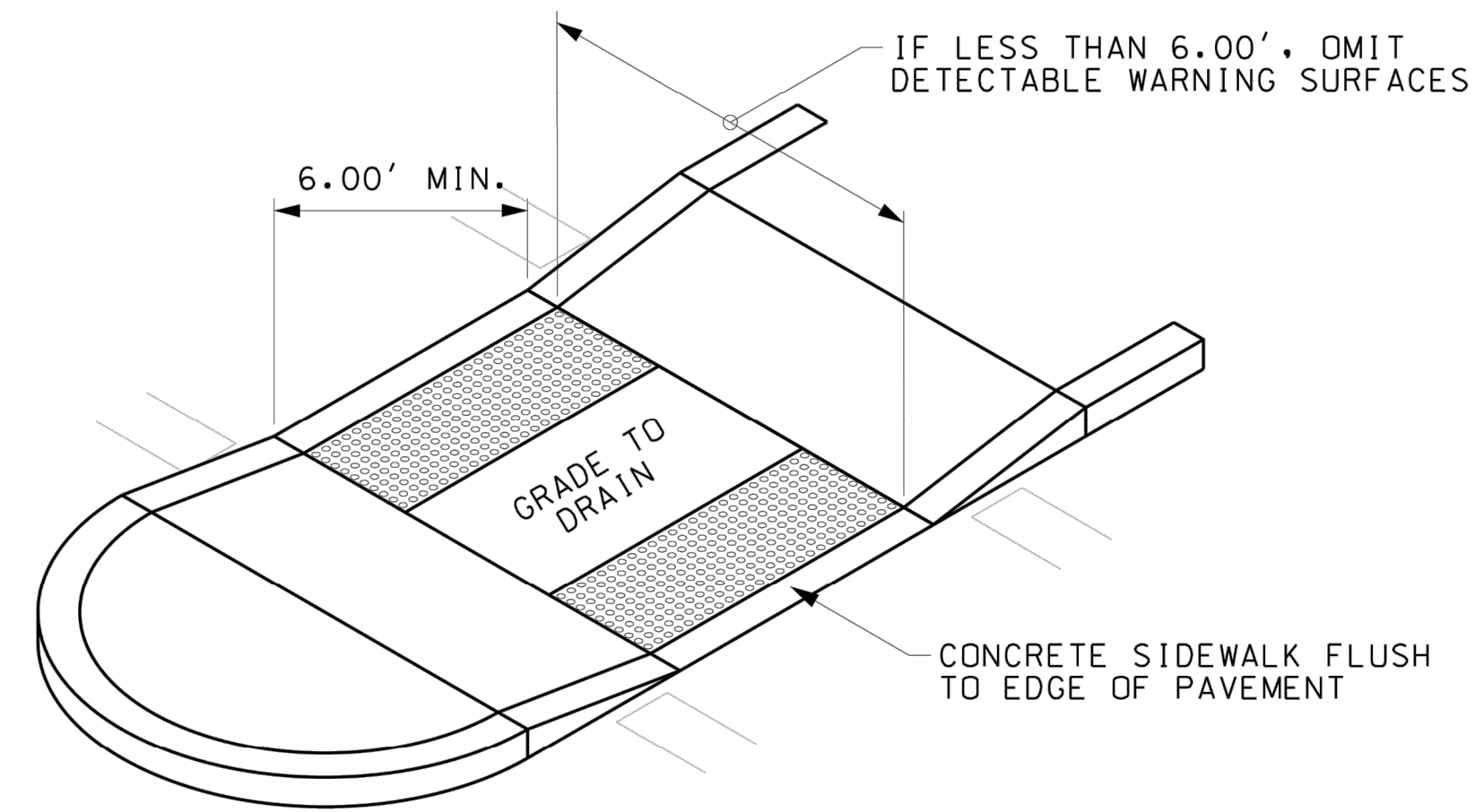
RAMP BACK TREATMENTS

NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
SIDEWALK CURB RAMP DETAILS					
(SHEET 7 OF 9)					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	12	35

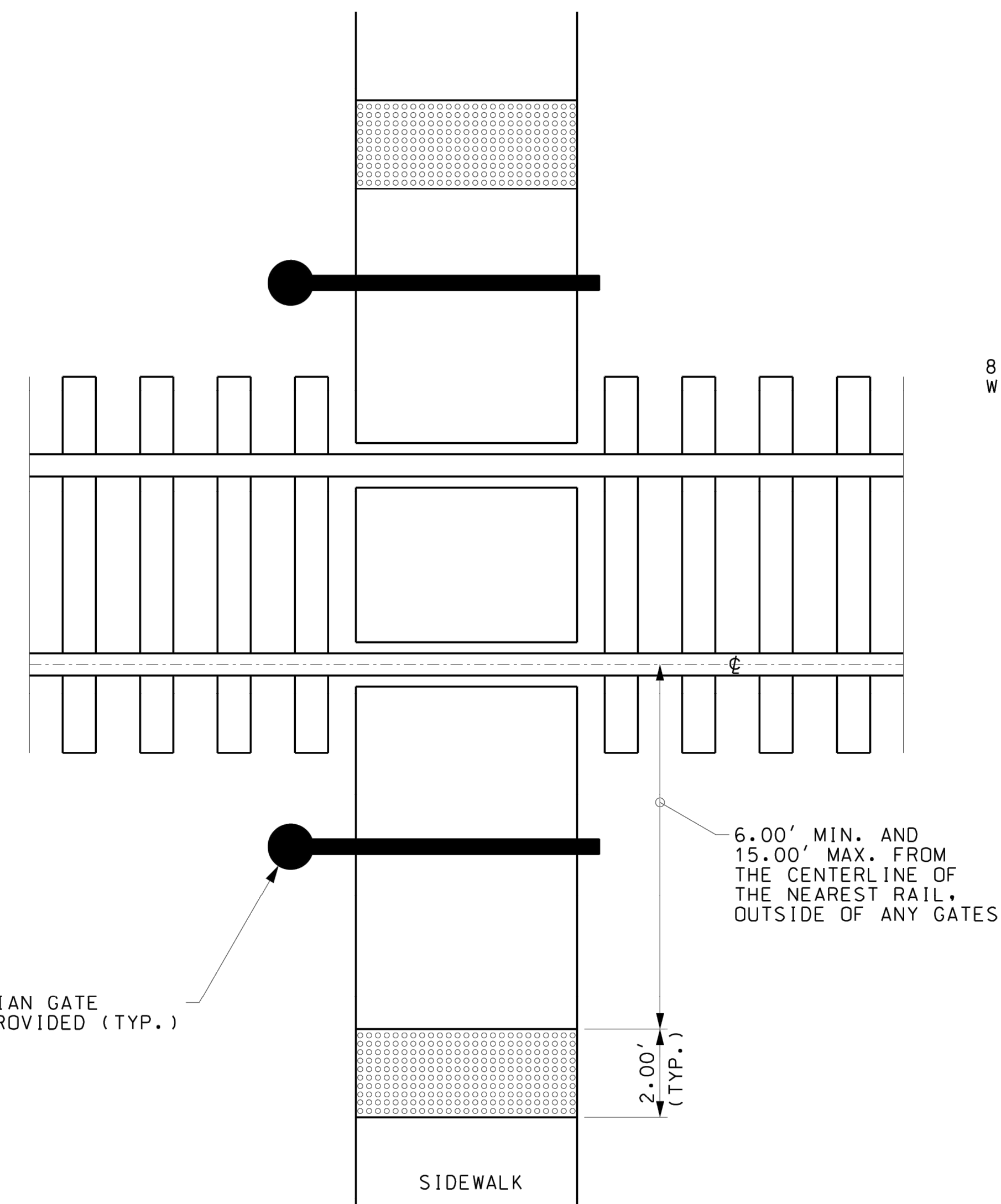


ACCESSIBLE PEDESTRIAN SIGNAL (APS)
PUSHBUTTON LOCATION

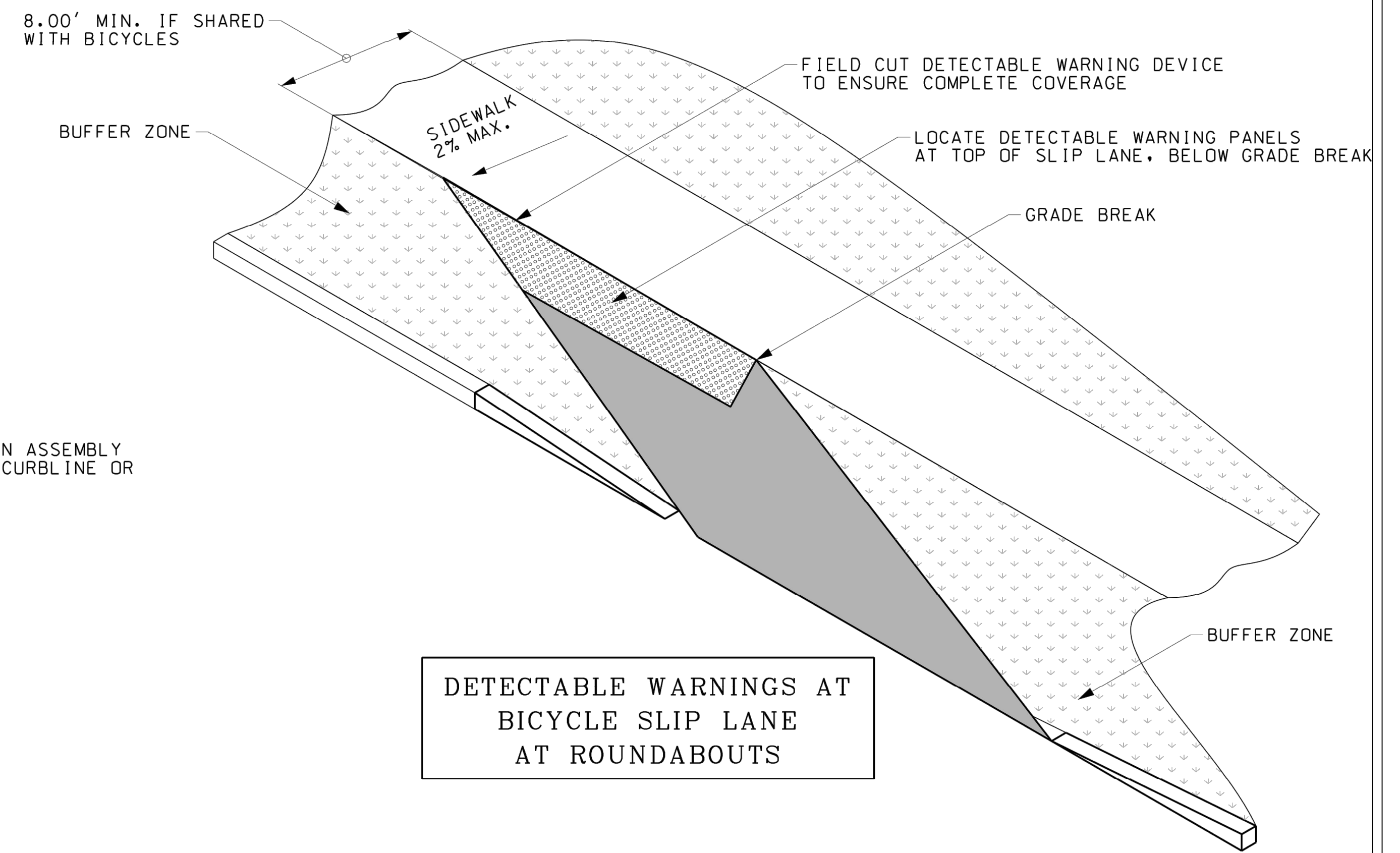


DETECTABLE WARNINGS AT
PEDESTRIAN REFUGE ISLANDS

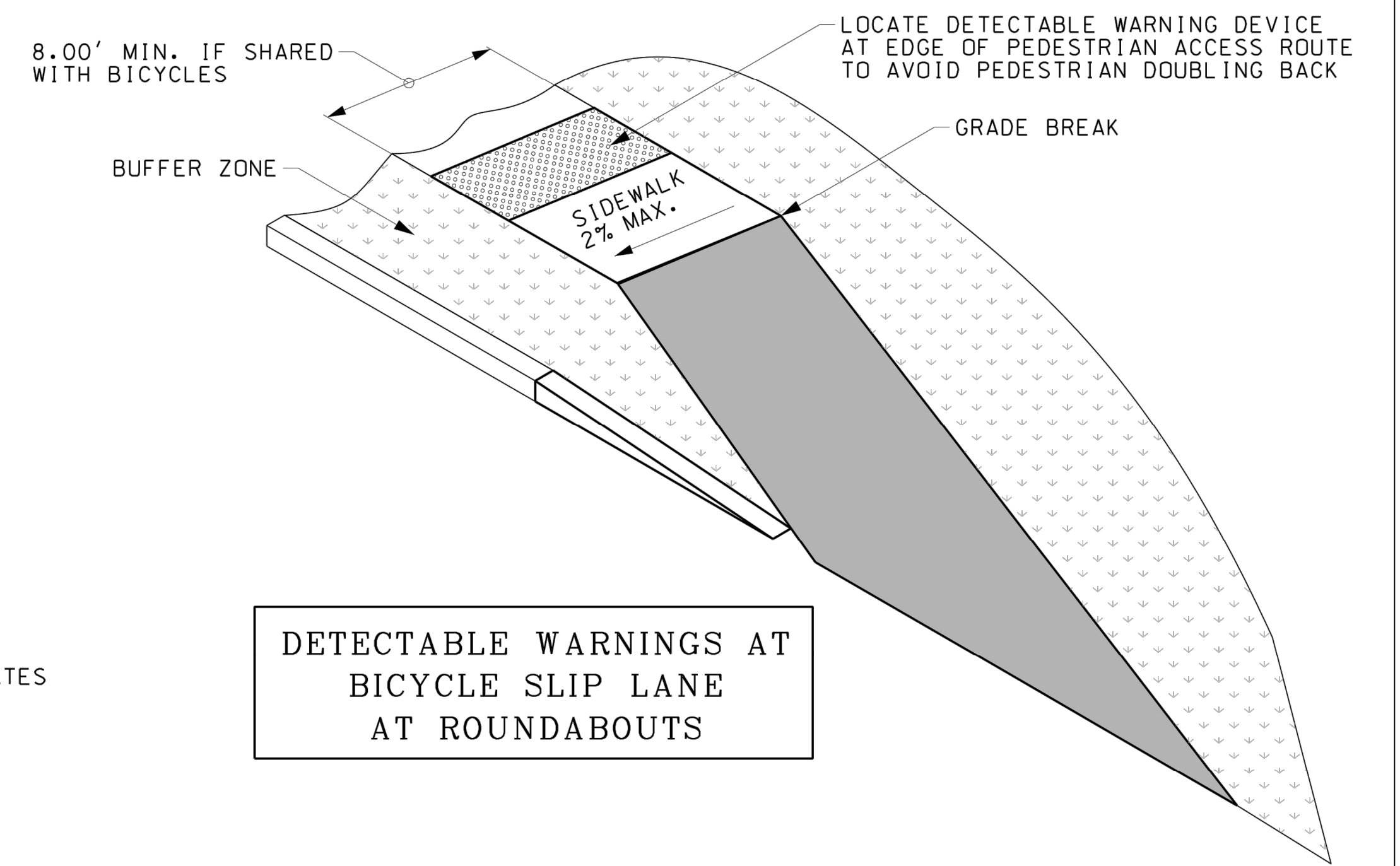
NON-ELEVATED
CROSSING



DETECTABLE WARNINGS
AT RAILROAD CROSSING



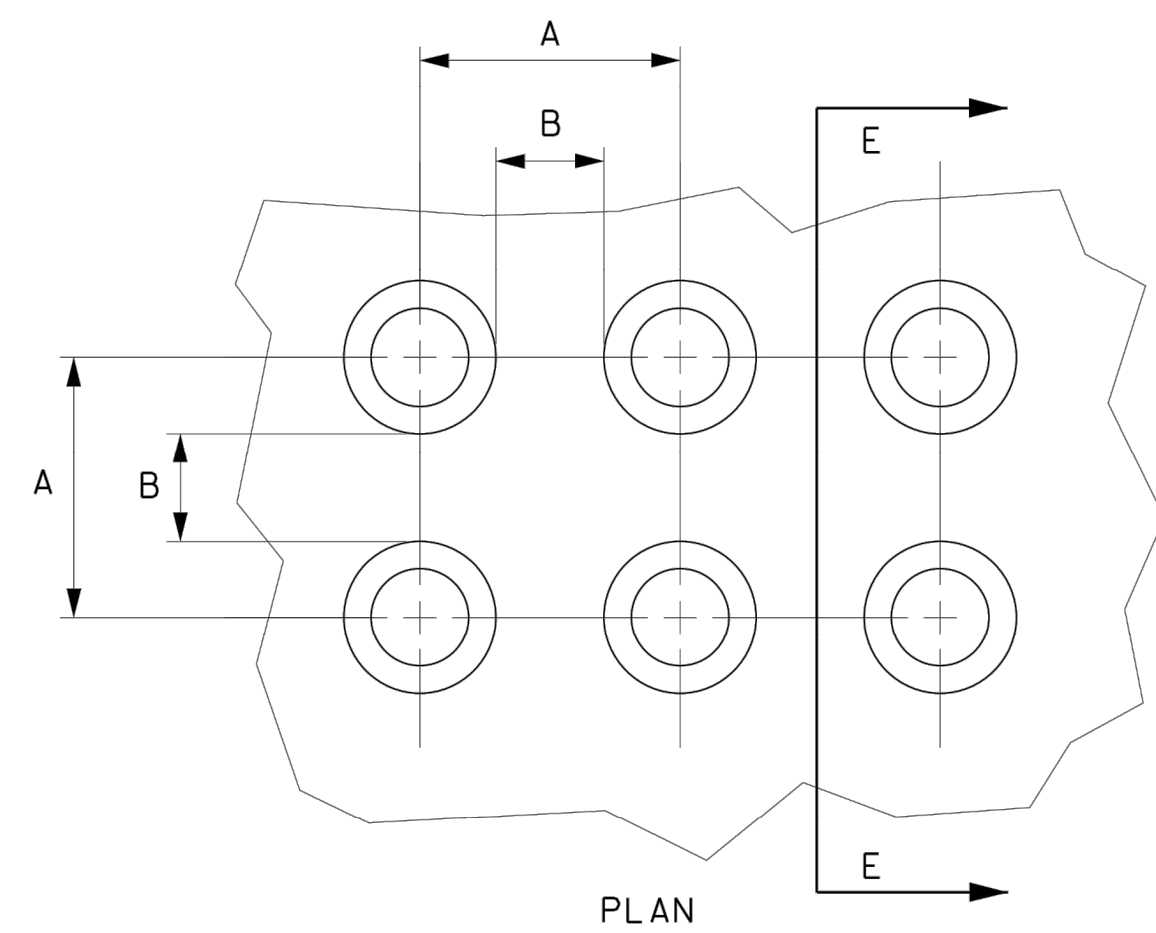
DETECTABLE WARNINGS AT
BICYCLE SLIP LANE
AT ROUNDABOUTS



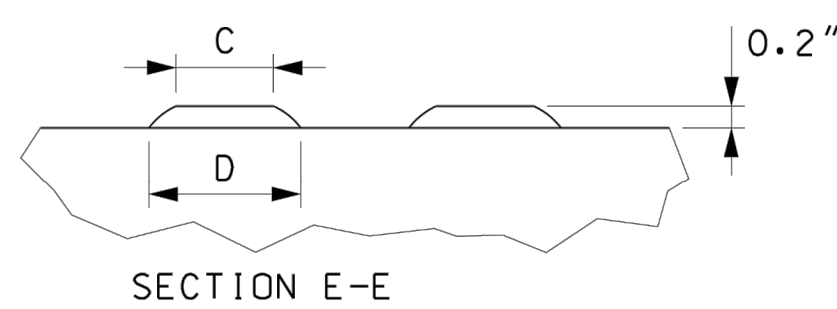
DETECTABLE WARNINGS AT
BICYCLE SLIP LANE
AT ROUNDABOUTS

NOTE:
ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

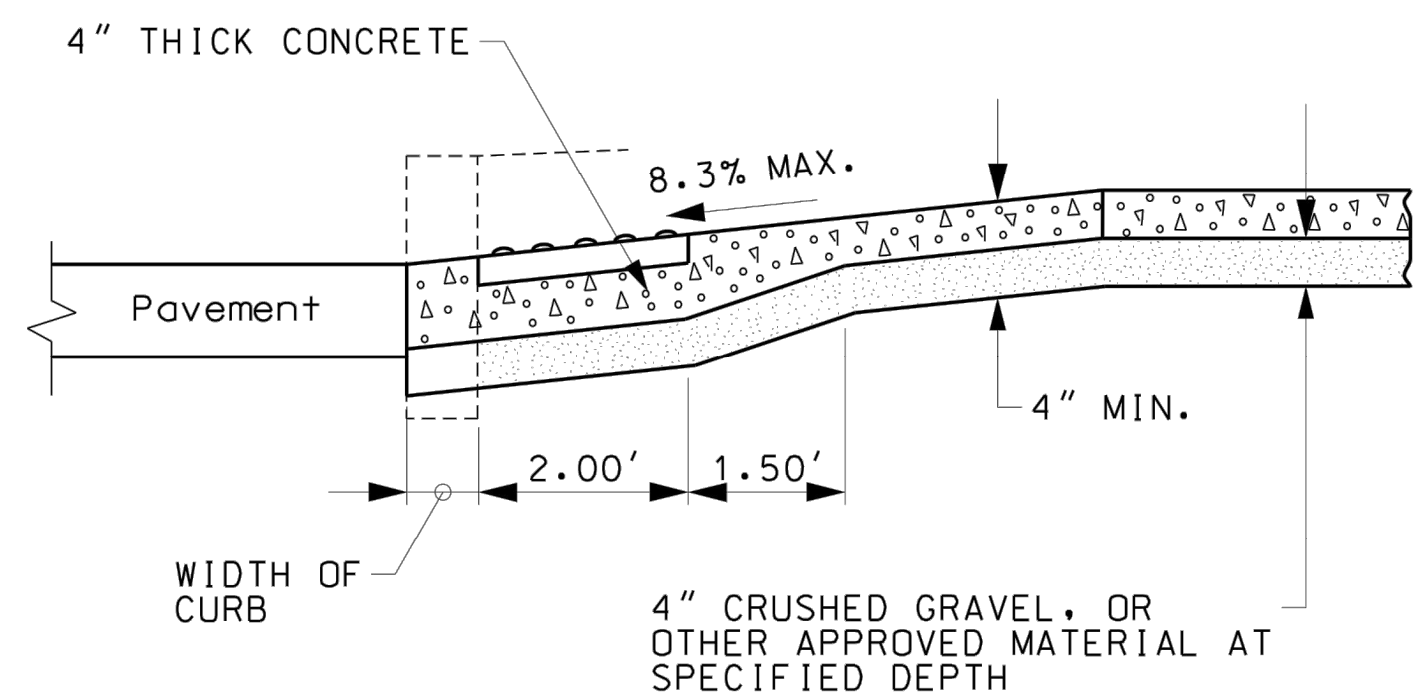
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	13	35



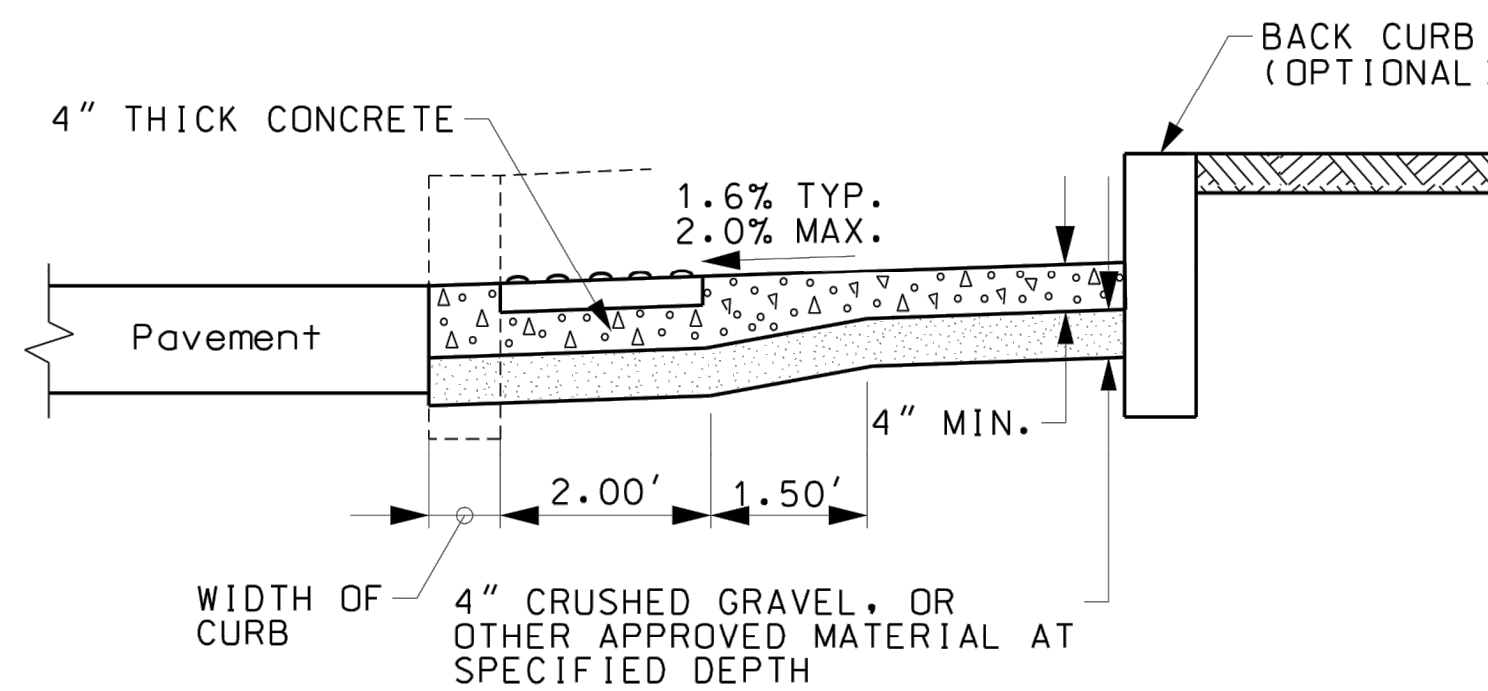
TRUNCATED DOME DIMENSIONS		
DIM.	MIN. (IN)	MAX. (IN)
A	1.6"	2.4"
B	0.65"	1.5"
C	50% - 65% OF D DIM.	
D	0.9"	1.4"



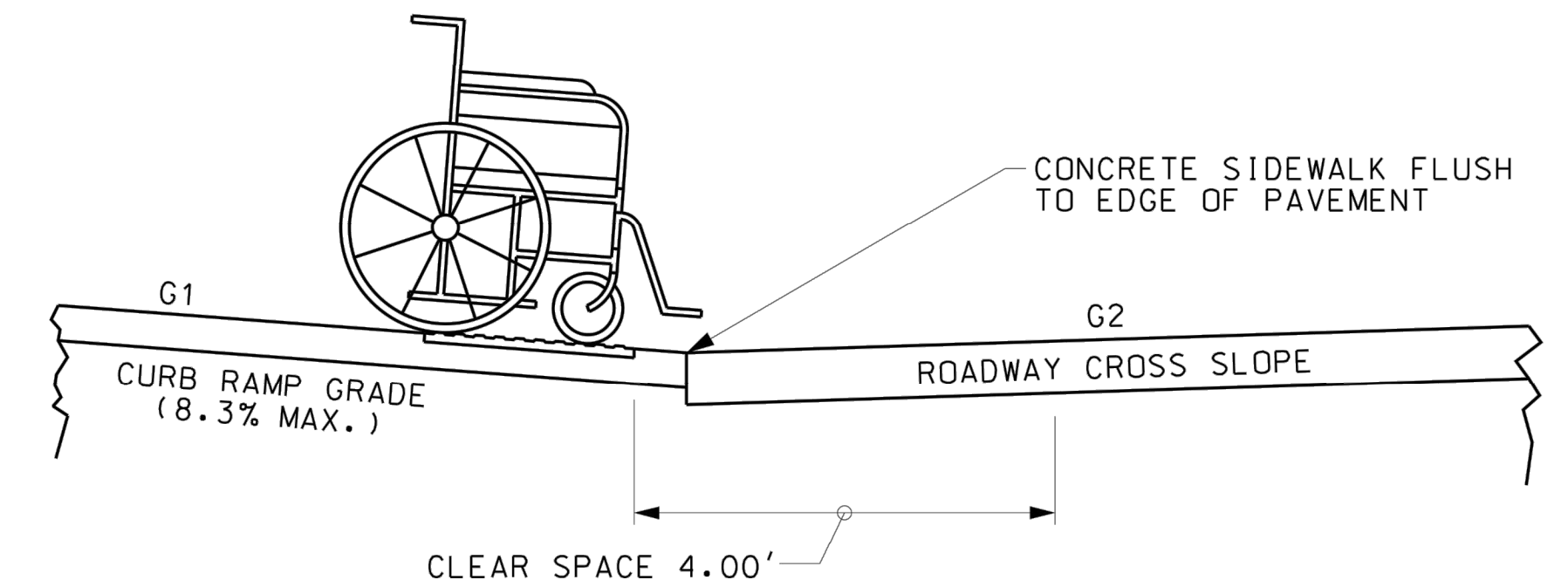
**DETECTABLE WARNING DEVICES (DWD)
TRUNCATED DOME DETAILS**



SECTION A-A
SEE SHEET 7 OF 9

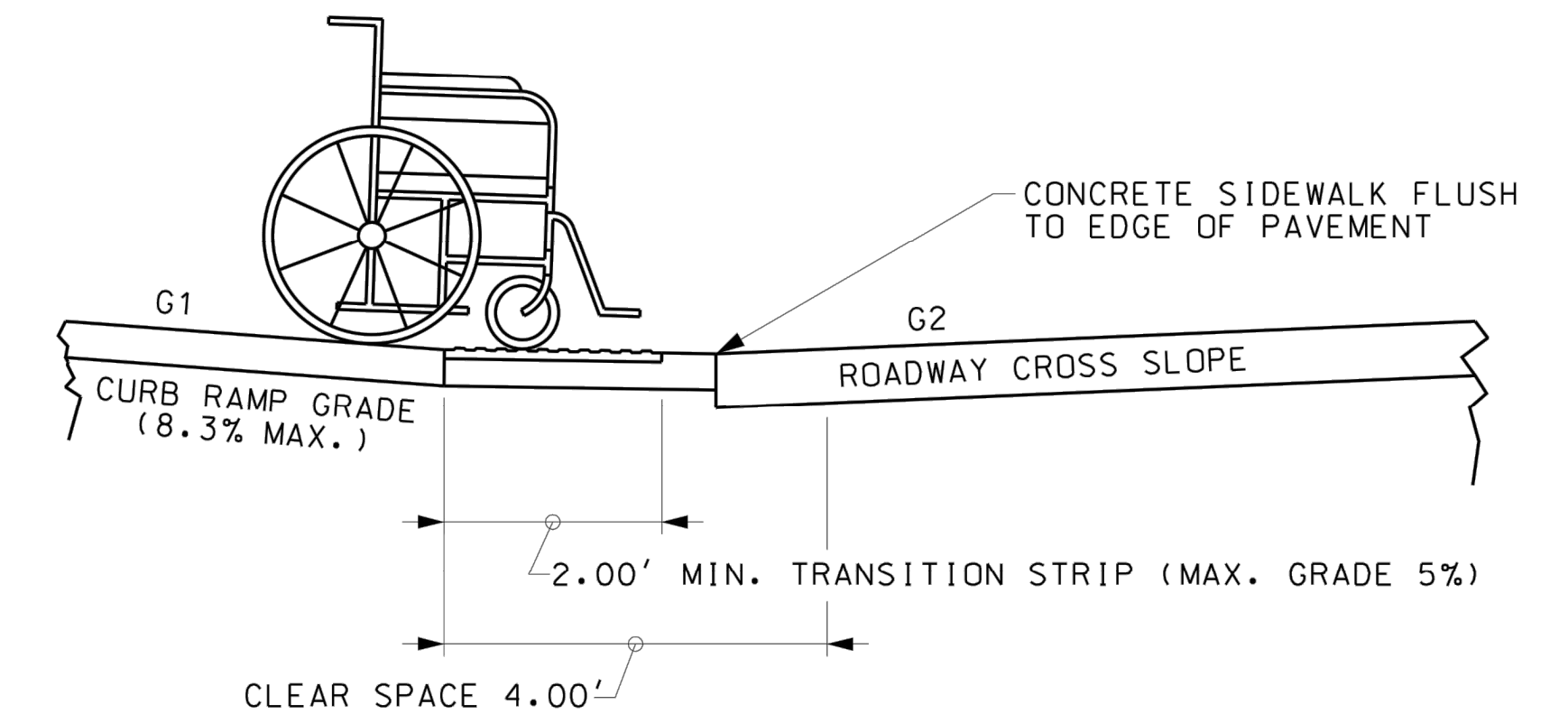


SECTION B-B
SEE SHEET 7 OF 9



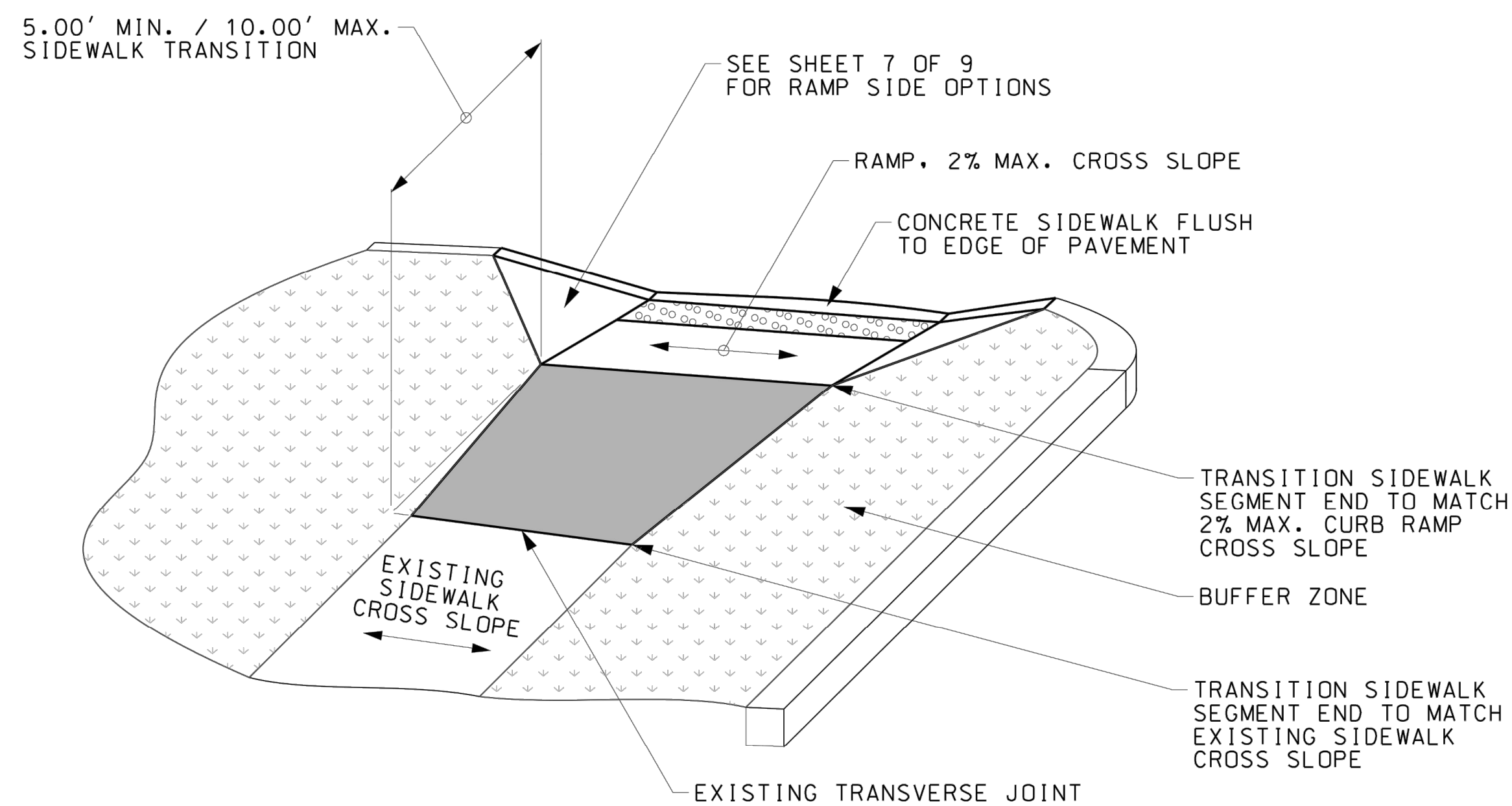
COUNTER SLOPE CONDITION 1

$A = G2 - G1$
ALGEBRAIC DIFFERENCE (A) BETWEEN ROADWAY CROSS SLOPE AND CURB RAMP GRADE IS LESS THAN 13.3%.



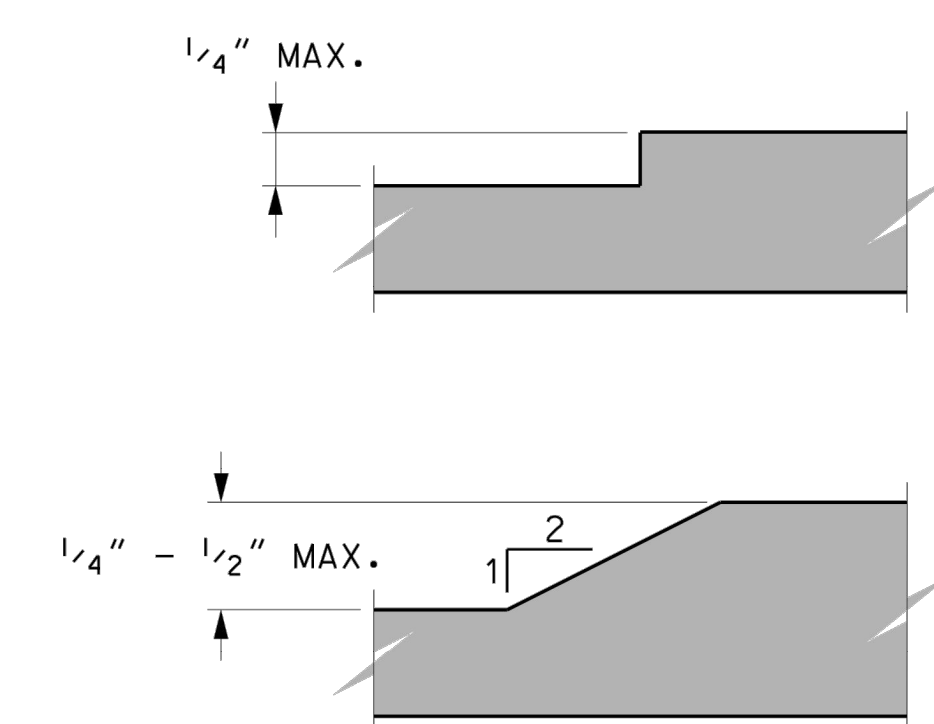
COUNTER SLOPE CONDITION 2

$A = G2 - G1$
ALGEBRAIC DIFFERENCE (A) BETWEEN ROADWAY SLOPE AND CURB RAMP GRADE IS GREATER THAN 13.3%. TRANSITION STRIP REQUIRED (MAX. GRADE 5%)



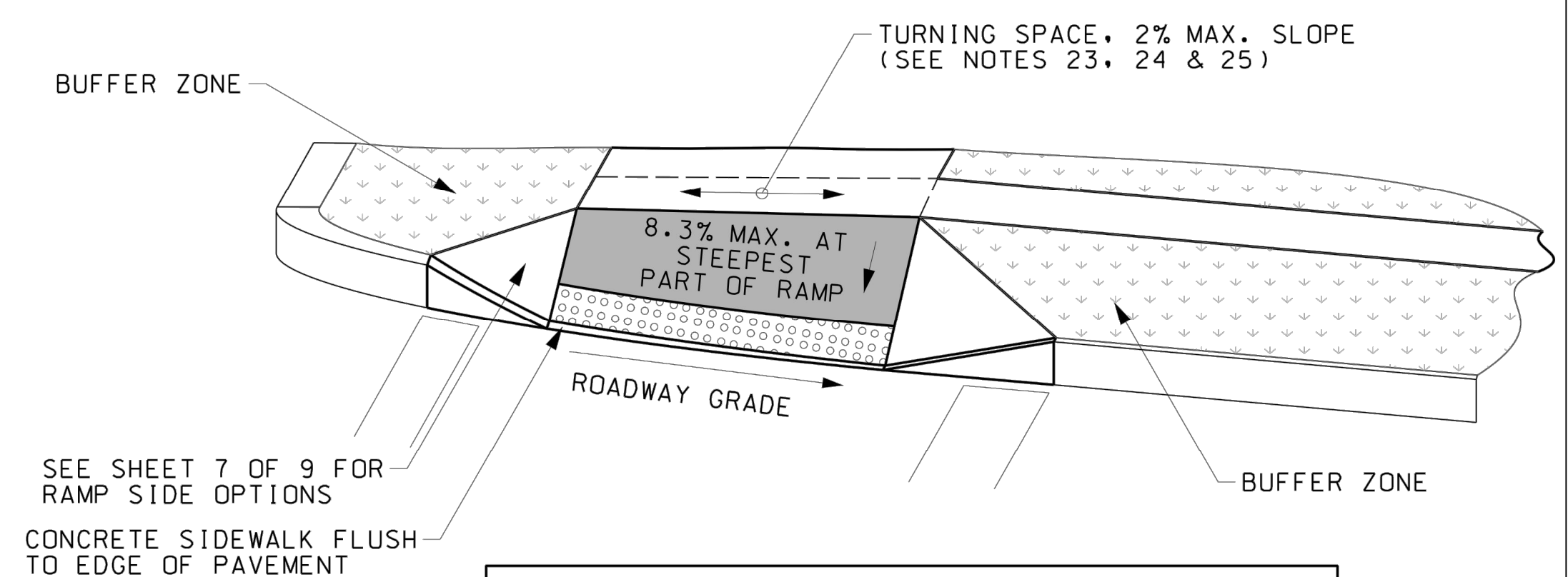
TRANSITION BETWEEN CURB RAMP AND EXISTING SIDEWALK

USE FOR CROSS SLOPE AND WIDTH TRANSITIONS



VERTICAL SURFACE DISCONTINUITIES

SEE NOTE 5



CURB RAMP CROSS SLOPE TRANSITION

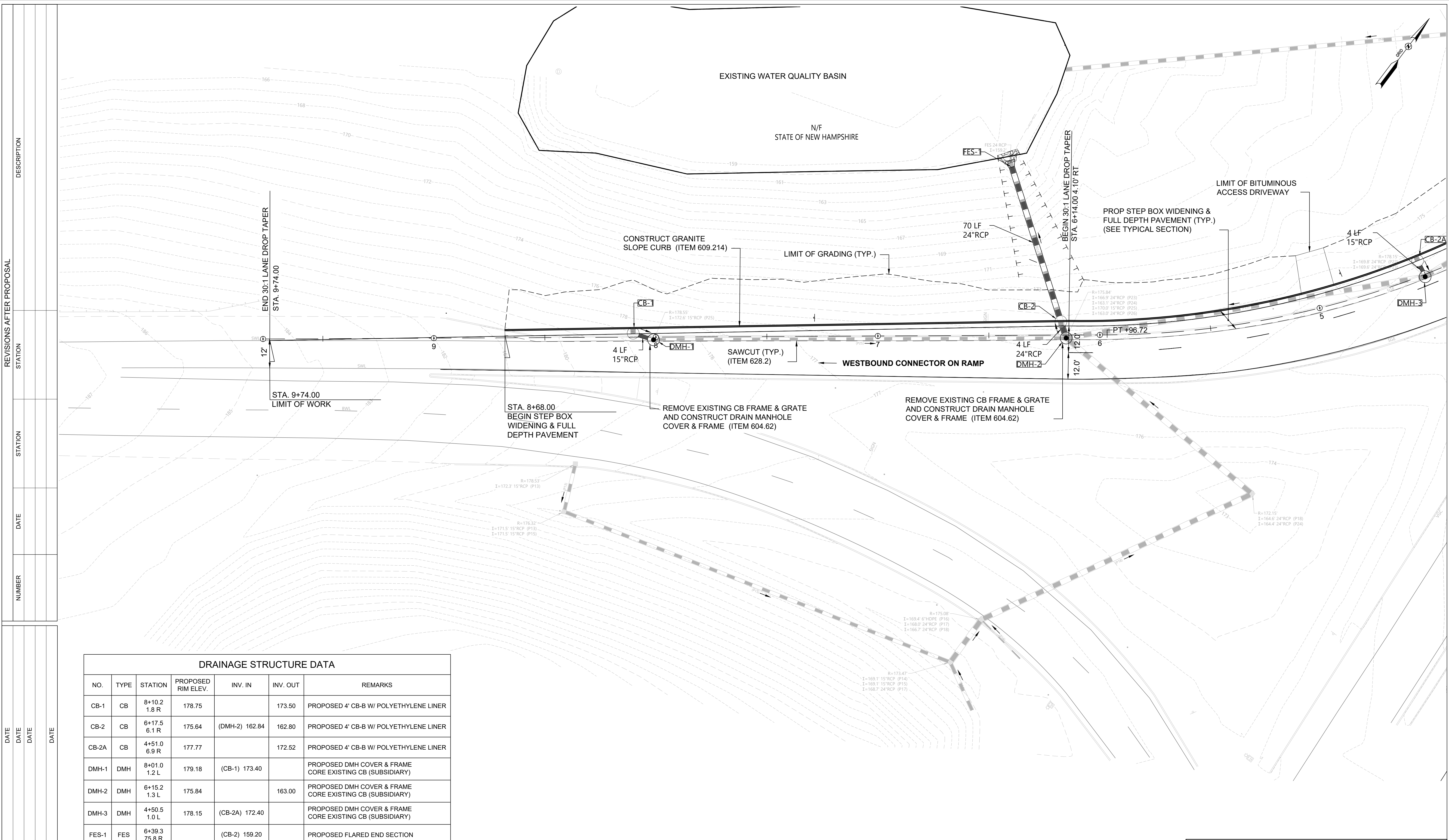
REFER TO NOTE 20 FOR CROSS SLOPE REQUIREMENTS

NOTE:

ALL NOTES REFERENCED ON THIS SHEET CAN BE FOUND ON SIDEWALK CURB RAMP DETAILS, SHEET 1 OF 9.

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	CRB_RAMPS	41754	14	35

LOWELL ROAD TO SAGAMORE BRIDGE
TOWN OF HUDSON, NEW HAMPSHIRE
SIDEWALK CURB RAMP DETAILS
(SHEET 9 OF 9)



DRAINAGE STRUCTURE DATA

NO.	TYPE	STATION	PROPOSED RIM ELEV.	INV. IN	INV. OUT	REMARKS
CB-1	CB	8+10.2 1.8 R	178.75		173.50	PROPOSED 4' CB-B W/ POLYETHYLENE LINER
CB-2	CB	6+17.5 6.1 R	175.64	(DMH-2) 162.84	162.80	PROPOSED 4' CB-B W/ POLYETHYLENE LINER
CB-2A	CB	4+51.0 6.9 R	177.77		172.52	PROPOSED 4' CB-B W/ POLYETHYLENE LINER
DMH-1	DMH	8+01.0 1.2 L	179.18	(CB-1) 173.40		PROPOSED DMH COVER & FRAME CORE EXISTING CB (SUBSIDIARY)
DMH-2	DMH	6+15.2 1.3 L	175.84		163.00	PROPOSED DMH COVER & FRAME CORE EXISTING CB (SUBSIDIARY)
DMH-3	DMH	4+50.5 1.0 L	178.15	(CB-2A) 172.40		PROPOSED DMH COVER & FRAME CORE EXISTING CB (SUBSIDIARY)
FES-1	FES	6+39.3 75.8 R		(CB-2) 159.20		PROPOSED FLARED END SECTION

GENERAL PLAN NOTES:

- SEE SIGNING AND STRIPING PLAN FOR PROPOSED PAVEMENT MARKINGS AND SIGNS.
- CONFIRM EXISTING DRAINAGE INVERT ELEVATIONS PRIOR TO ANY CONSTRUCTION AND CONFIRM PROPOSED DRAINAGE INVERT ELEVATIONS.
- COORDINATE WITH EVERSOURCE PRIOR TO CONSTRUCTION FOR RELOCATION OF EXISTING UTILITY POLES, OVERHEAD WIRES AND RELOCATIONS OF ROADWAY LIGHTING SYSTEMS



LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

GENERAL PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	52573GEN	41754	15	35

SDR PROCESSED	DATE	STATION	DESCRIPTION
NEW DESIGN	DATE		
SHEET CHECKED	DATE		
AS BUILT DETAILS	DATE		

REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

STATION

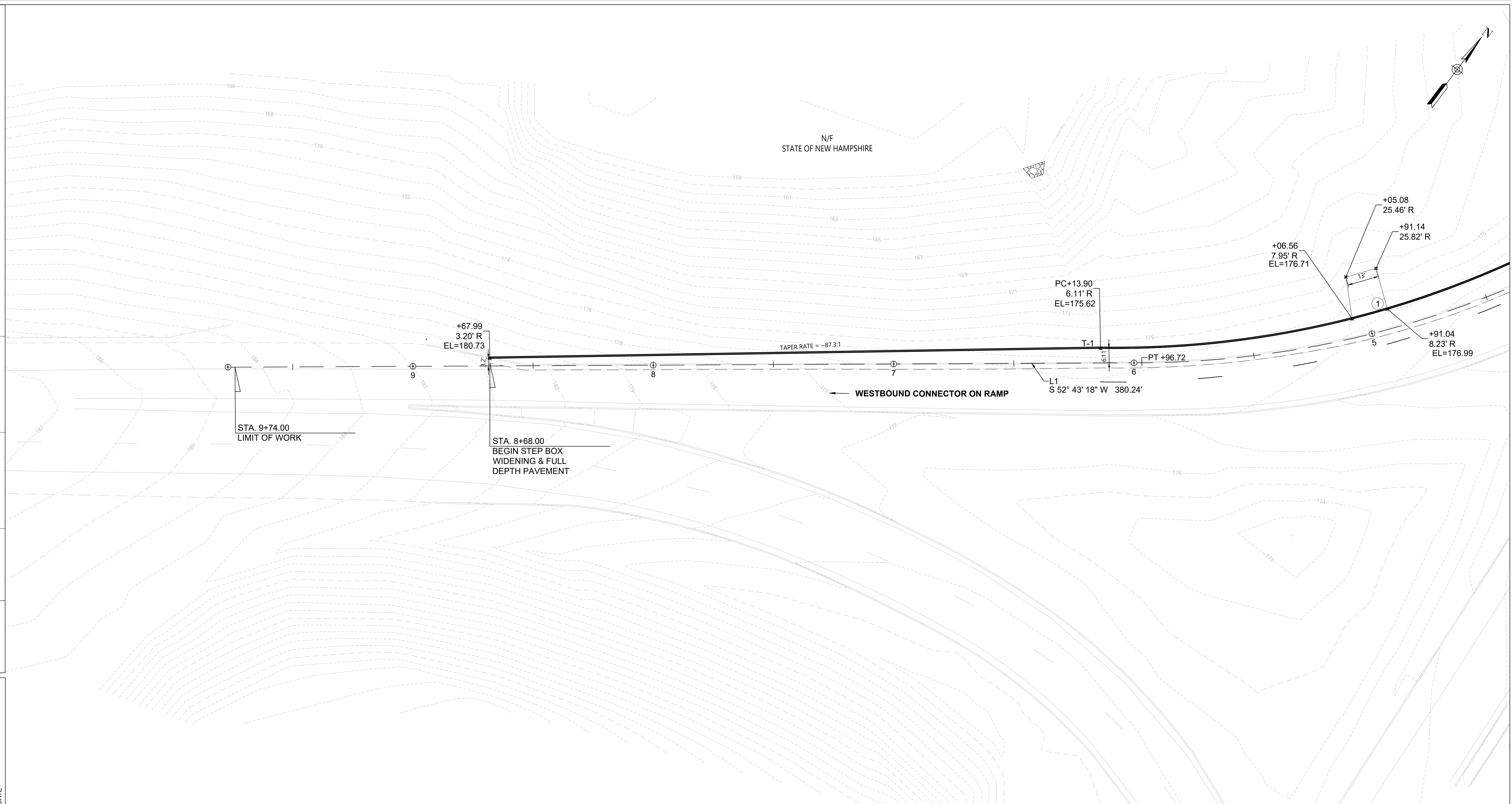
DATE

NUMBER

DATE

DATE

SDR PROCESSED
NEW DESIGN
SHEET CHECKED
AS BUILT DETAILS

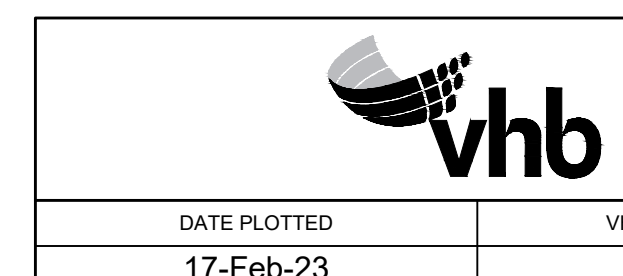


TANGENT SEGMENTS CURB TABLE	
NUMBER	LENGTH
T-1	5.54

RADI SEGMENTS CURB TABLE		
NUMBER	LENGTH	RADIUS
①	386.55'	398.00'

RAMP 3A WB CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	5+96.72	83827.348	1048941.878		S52° 43' 18.20"W 380.24'	9+76.96	83597.040	1048639.318

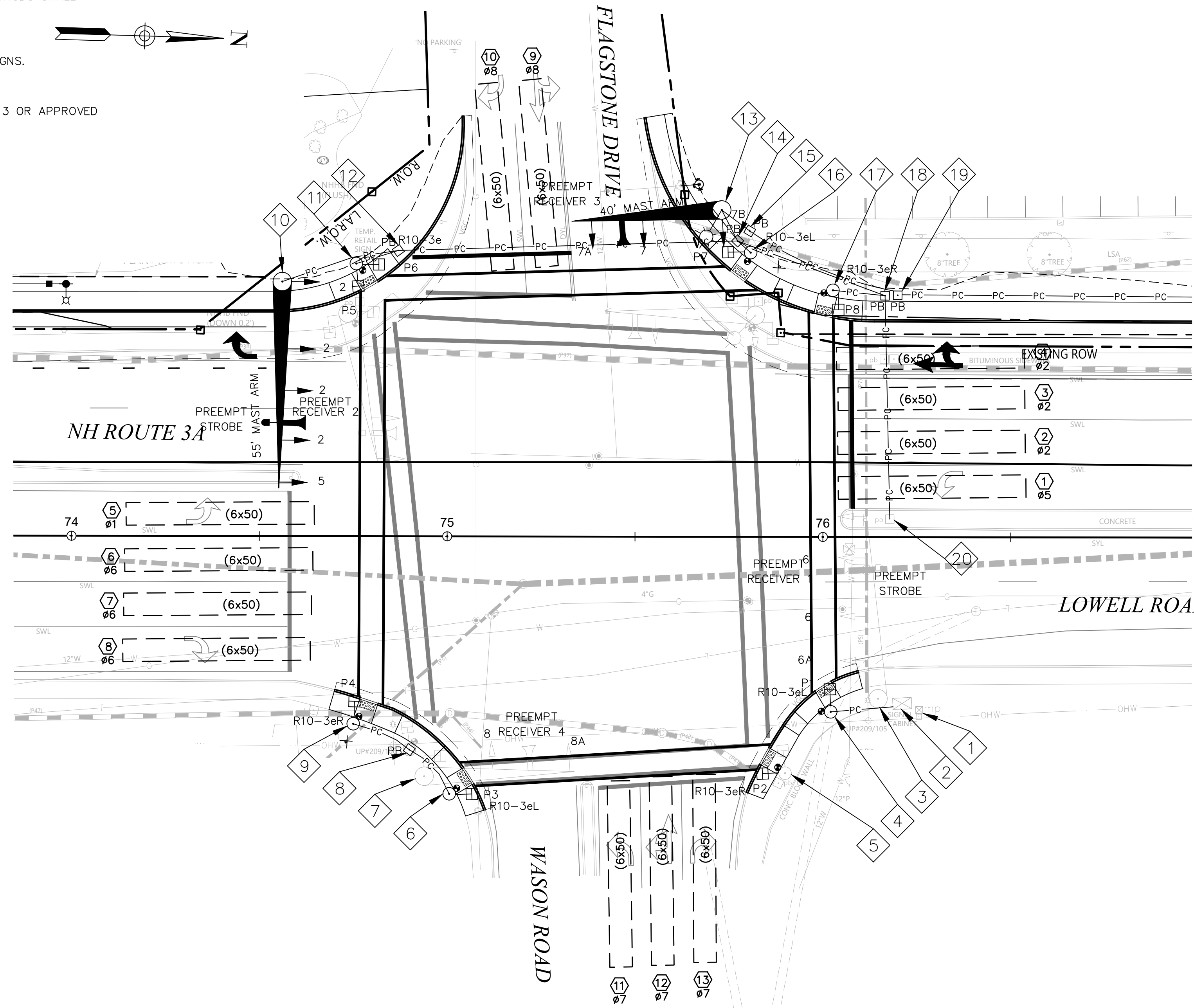
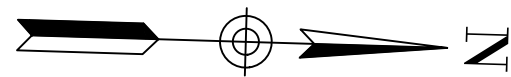
- NOTES**
- ALL VERTICAL GRANITE CURB WITH A RADIUS OF LESS THAN 21 FEET SHALL BE PAID FOR AS ITEM 609.02, CURVED GRANITE CURB.
 - ALL ELEVATIONS LISTED ARE BOTTOM OF CURB ELEVATIONS.
 - CURB POINTS WITH NO ELEVATIONS LISTED SHALL MATCH EXISTING ELEVATION.
 - SEE SIDEWALK CURB RAMP DETAILS FOR ADDITIONAL INFORMATION.



LOWELL ROAD TO SAGAMORE BRIDGE					
TOWN OF HUDSON, NEW HAMPSHIRE					
ALIGNMENT & LAYOUT PLAN					
DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	52573GRAD	41754	18	35

CONSTRUCTION NOTES:

- ALL CONSTRUCTION SHALL CONFORM WITH THE NEW HAMPSHIRE DEPARTMENT OF TRANSPORTATION, BUREAU OF HIGHWAY DESIGN SPECIFICATION UNLESS OTHERWISE NOTED.
- THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED HEREIN USING NEW MATERIALS. THE TERM "REMOVE AND SALVAGE"(R+S) MEANS EQUIPMENT TO BE REMOVED AND DELIVERED TO THE TOWN OF HUDSON. THE TERM "REMOVE AND RELOCATE" (R+R) MEANS EQUIPMENT TO BE REMOVED AND RE-USED AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.
- PAVEMENT SAWCUTTING FOR CONDUITS AND JACKING PITS (WHEN REQUIRED) SHALL BE SUBSIDIARY TO ITEM 616.191. REPLACEMENT OF PAVEMENT FOR CONDUIT TRENCHES AND JACKING PITS WILL BE PAID UNDER ITEM 403.12 OR 403.99
- MAST ARMS SHALL BE DESIGNED TO INCLUDE A 30"x36" SIGN MOUNTED 2- FEET TO THE RIGHT OF EACH SIGNAL HEAD.
- ALL MAST ARM FOUNDATIONS SHALL INCLUDE A 12 INCH LAYER OF STRUCTURAL FILL BELOW THE BOTTOM OF THE FOOTING GRADE.
- ALL MAST ARM FOUNDATIONS SHALL BE CONSTRUCTED FOLLOWING NHDOT STANDARD SPECIFICATIONS AND DETAILS.
- ANY BEARING SURFACE MATERIAL DISTURBED BY EXCAVATION AND/OR BY DEWATERING METHODS SHALL BE REMOVED TO A DEPTH OF 12 INCHES AND REPLACED WITH STRUCTURAL FILL.
- PLACEMENT OF STRUCTURAL FILL MATERIAL SHALL BE SUBSIDIARY TO ITEM 616.191.
- SEE PAVEMENT MARKING AND SIGNING PLANS FOR ADDITIONAL PROPOSED AND EXISTING SIGNS.
- PEDESTRIAN PUSHBUTTONS SHALL BE MOUNTED 42" ABOVE THE SIDEWALK.
- PERMANENT LIGHTING SHALL CONSIST OF 1 (ONE) 250-WATT H.P.S. SEMI CUT-OFF, TYPE 3 OR APPROVED EQUAL MOUNTED ON A 12-FOOT BRACKET ARM.



PROPOSED CONDUIT SCHEDULE				
I.D.	NO.	LENGTH	SCHEDULE TYPE	REMARKS
①-②	1	20	40	FROM ex pp to PROP PP
③-④	1	17	40	FROM PROP PB TO PROP PP
⑤-⑥	1	17	40	FROM PROP PB TO PROP PP
⑦-⑧	1	32	40	FROM PROP MA TO PROP PB
⑨-⑩	1	12	40	FROM PROP PP TO PROP PB
⑪-⑫	1	90	80	FROM PROP PB TO PROP PB
⑬-⑭	1	10	40	FROM PROP MA TO PROP PB
⑮-⑯	1	10	40	FROM PROP MA TO PROP PB
⑰-⑱	1	5	40	FROM PROP PB TO PROP PP
⑲-⑳	1	42	40	FROM PROP PB TO PROP PB
㉑-㉒	1	43	40	FROM PROP PB TO PROP PB
㉓-㉔	1	142	40	FROM PROP PB TO RELOCATED LP
㉕-㉖	1	14	40	FROM PROP PP TO PROP PB
㉗-㉘	1	60	80	FROM PROP PB TO ex pb
TOTAL:		40	80	40 = 3-INCH PVC SCHEDULE 40 80 = 3-INCH PVC SCHEDULE 80

CONDUIT ITEMS	
ITEM 614.73114	3" PVC PLASTIC CONDUIT SCH. 40
ITEM 614.73118	3" PVC PLASTIC CONDUIT SCH. 80

PROPOSED SIGNS

R10-3eR 9"x15" 3 - PROPOSED
 R10-3eL 9"x15" 3 - PROPOSED
 R10-3e 9"x15" 1 - PROPOSED

EXISTING / PROPOSED FOUNDATION SCHEDULE			
I.D.	STATION	FOUNDATION TYPE	REMARKS
①	STA 76+26 RT 44	tsfnd	existing meter pedestal
②	STA 76+22 RT 46	ccfnd	existing control cabinet
③	STA 76+15 RT 43	type x	existing w/ anchor bolts for signal pole
④	STA 76+02 RT 47	TSFND	PROPOSED PEDESTAL POLE
⑤	STA 75+90 RT 63	tsfnd	existing pedestal pole
⑥	STA 75+01 RT 69	TSFND	PROPOSED PEDESTAL POLE
⑦	STA 74+94 RT 64	type x	existing w/ anchor bolts for signal pole
⑧	STA 74+90 RT 57	PB	PROPOSED PULL BOX
⑨	STA 74+75 RT 50	TSFND	PROPOSED PEDESTAL POLE
⑩	STA 74+56 LT 68	TYPE TBD	W/ ANCHOR BOLTS FOR SIGNAL POLE
⑪	STA 74+76 LT 73	TSFND	PROPOSED PEDESTAL POLE
⑫	STA 74+87 LT 76	PB	PROPOSED PULL BOX
⑬	STA 75+73 LT 87	TYPE TBD	W/ ANCHOR BOLTS FOR SIGNAL POLE
⑭	STA 75+77 LT 79	PB	PROPOSED PULL BOX
⑮	STA 75+80 LT 81	PB	PROPOSED PULL BOX
⑯	STA 75+80 LT 77	TSFND	PROPOSED PEDESTAL POLE
⑰	STA 76+03 LT 66	TSFND	PROPOSED PEDESTAL POLE
⑱	STA 76+17 LT 64	PB	PROPOSED PULL BOX
⑲	STA 76+19 LT 64	PB	PROPOSED PULL BOX
㉑	STA 76+18 LT 05	pb	existing pull box

TRAFFIC SIGNAL MAST ARM TEST BORING SUMMARY		
LOCATION	FOUNDATION TYPE	BORING #
STA 74+56 LT 68	PER TS-7	TBD
STA 75+73 LT 87	PER TS-7	TBD

WHERE:

TYPE # = TRAFFIC SIGNAL MAST ARM FOUNDATION CONSTRUCTED IN ACCORDANCE WITH NHDOT TRAFFIC SIGNAL STANDARD TS-1, TS-2, TS-3, OR TS-4 AS APPLICABLE. TBD MEANS TO BE DETERMINED BY CONTRACTOR OR HIS ENGINEER BASED ON BORINGS TO BE COMPLETED BY THE CONTRACTOR.

PB = 14-INCH CONCRETE PULL BOX CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARD SL-1 (UNLESS OTHER SIZE NOTED) (ITEM 614.511 CONCRETE PULL BOX 14" (TYPE "A" 14" X 14"))

CCFND = CONCRETE FOUNDATION FOR CONTROLLER CABINETS CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2

TSFND = CONCRETE FOUNDATION FOR PEDESTALS (SIGNAL AND METER) CONSTRUCTED IN ACCORDANCE WITH NHDOT SIGNAL AND LIGHTING STANDARDS SL-2



DATE PLOTTED: 17-Feb-23
VHB PROJECT NO.: 52573.00

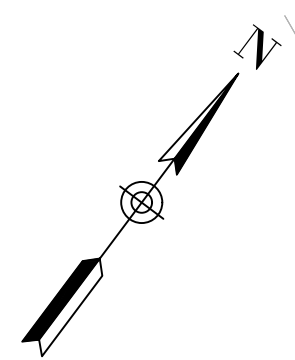
LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

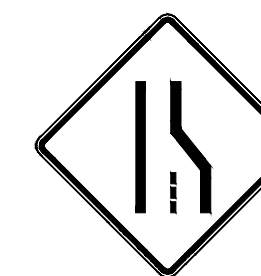
SIGNAL PLAN

DRAWING: 52573SIGNAL
STATE PROJECT NO.: 41754
SHEET NO.: 22
TOTAL SHEETS: 35

REVISIONS AFTER PROPOSAL
 STATION
 STATION
 DATE
 NUMBER
 DATE MAY 2018
 DATE 2/17/23
 DATE 2/17/23
 DATE
 SDR PROCESSED
 NEW DESIGN
 SHEET CHECKED
 AS BUILT DETAILS



N/F
STATE OF NEW HAMPSHIRE



**RIGHT
LANE
ENDS**

W4-2 STA. 4+87
(ITEM 615.0301)
W4-2a
(ITEM 615.0601)

MATCH EXISTING
PAVEMENT MARKING

END 30:1 LANE DROP TAPER

BEGIN 30:1 LANE DROP TAPER
STA. 6+14

R&R W4-3 FROM STA
6+50 TO STA 7+29
(ITEM 615.034)

← WESTBOUND CONNECTOR ON RAMP

6" SSL(W)

6" SSL(Y)

PT +96.72 6" SSL(W)

6" SBL(W)

6" SSL(Y)

STA. 9+74.00
LIMIT OF WORK

STA. 8+68.00
BEGIN STEP BOX
WIDENING & FULL
DEPTH PAVEMENT

MATCH EXISTING
PAVEMENT MARKING

SIGN/PVMT. MARKING LEGEND

SYMBOL	DESCRIPTION
SSL	SINGLE SOLID LINE
SBL	SINGLE BROKEN LINE
SDL	SINGLE DOTTED LINE
DSL	DOUBLE SOLID LINE
(W)	WHITE
(Y)	YELLOW
(T)	THERMOPLASTIC
XW(T)	12" CROSSWALK (ITEM 632.32) SEE NHDOT STANDARD DRAWING PM-15
R&R	REMOVE AND RELOCATE SIGN (ITEM 615.024/615.034)
R	REMOVE SIGN (ITEM 615.033)
L	LEAVE SIGN

NOTES

1. THE CONTRACTOR SHALL CONTACT JULIE MATHEWS- NHDOT BUREAU OF TRAFFIC AT (603) 271-2291 TWO WEEKS PRIOR TO PAVEMENT MARKING INSTALLATION.
2. PLACE WORDS/SYMBOLS PER LATEST NHDOT STANDARD PLAN SHEETS.
4. PAVEMENT MARKINGS SHALL EXTEND BEYOND PROJECT PAVING LIMITS TO OVERLAP EXISTING MARKINGS DISTURBED BY CONSTRUCTION OPERATIONS.



DESCRIPTION

REVISIONS AFTER PROPOSAL
STATION

STATION

DATE

NUMBER

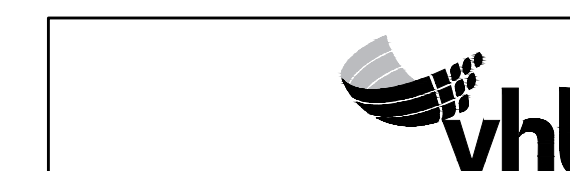
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NEW DESIGN
SHEET CHECKED
AS BUILT DETAILS

LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

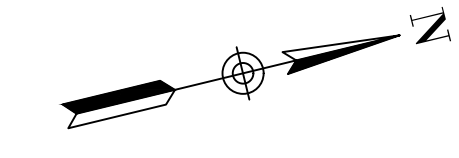
SIGNING & STRIPING PLAN



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	52573PMSIGN	41754	23	35

MAP 222 LOT 005-000
N/F
RH FLAGSTONE, LLC
BOOK 9259 PAGE 888

MAP 222 LOT 003-000
N/F
ROB HOLDINGS, LLC
BOOK 7532 PAGE 1206



DESCRIPTION

REVISIONS AFTER PROPOSAL

STATION

DATE

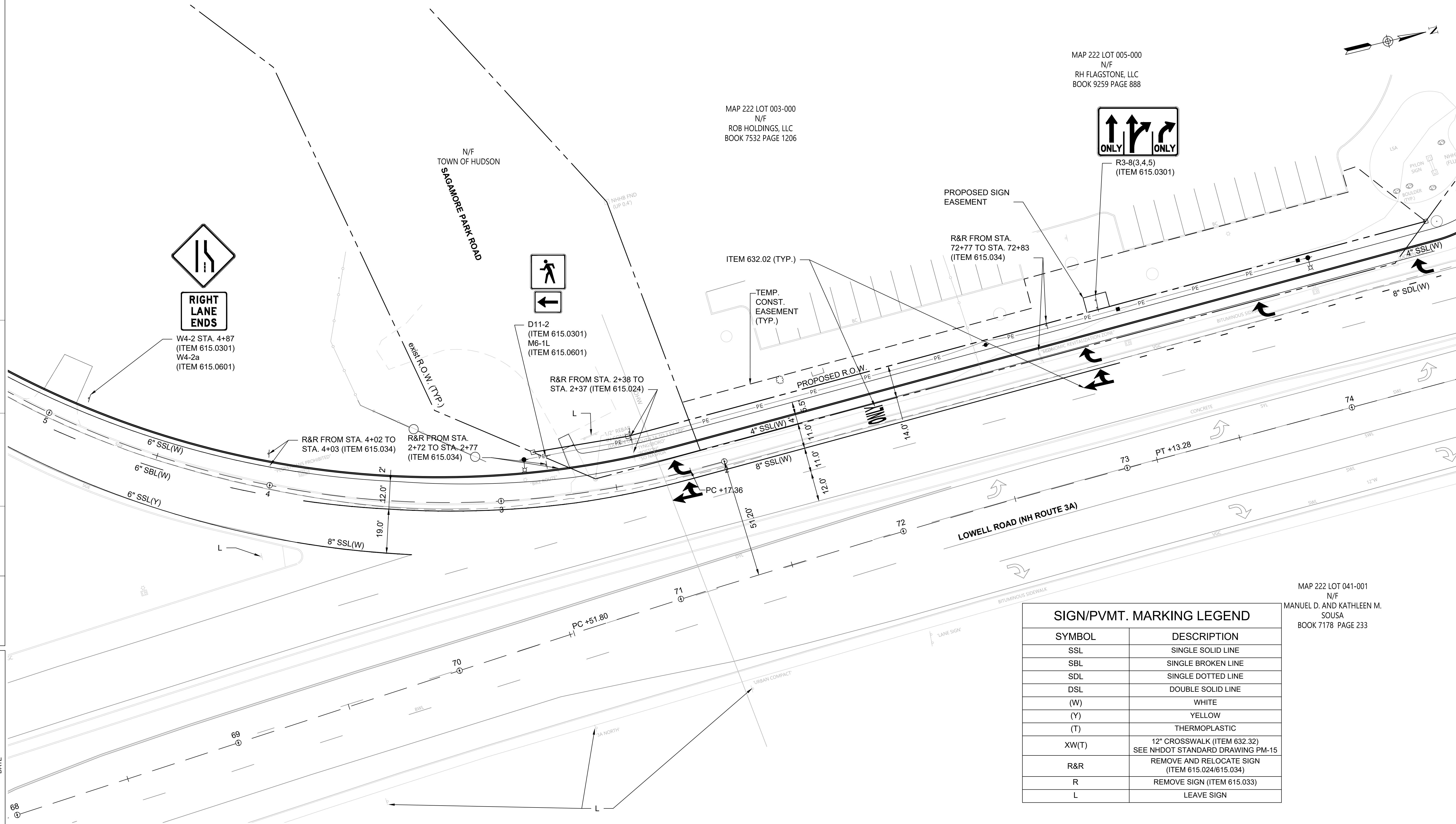
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DATE

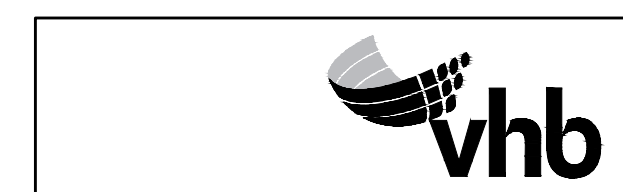
DATE

SDR PROCESSED
NEW DESIGN
SHEET CHECKED
AS BUILT DETAILS



SIGN/PVMT. MARKING LEGEND	
SYMBOL	DESCRIPTION
SSL	SINGLE SOLID LINE
SBL	SINGLE BROKEN LINE
SDL	SINGLE DOTTED LINE
DSL	DOUBLE SOLID LINE
(W)	WHITE
(Y)	YELLOW
(T)	THERMOPLASTIC
XW(T)	12" CROSSWALK (ITEM 632.32) SEE NHDOT STANDARD DRAWING PM-15
R&R	REMOVE AND RELOCATE SIGN (ITEM 615.024/615.034)
R	REMOVE SIGN (ITEM 615.033)
L	LEAVE SIGN

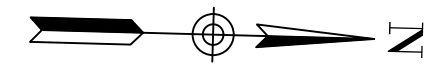
MAP 222 LOT 041-001
N/F
MANUEL D. AND KATHLEEN M.
SOUSA
BOOK 7178 PAGE 233



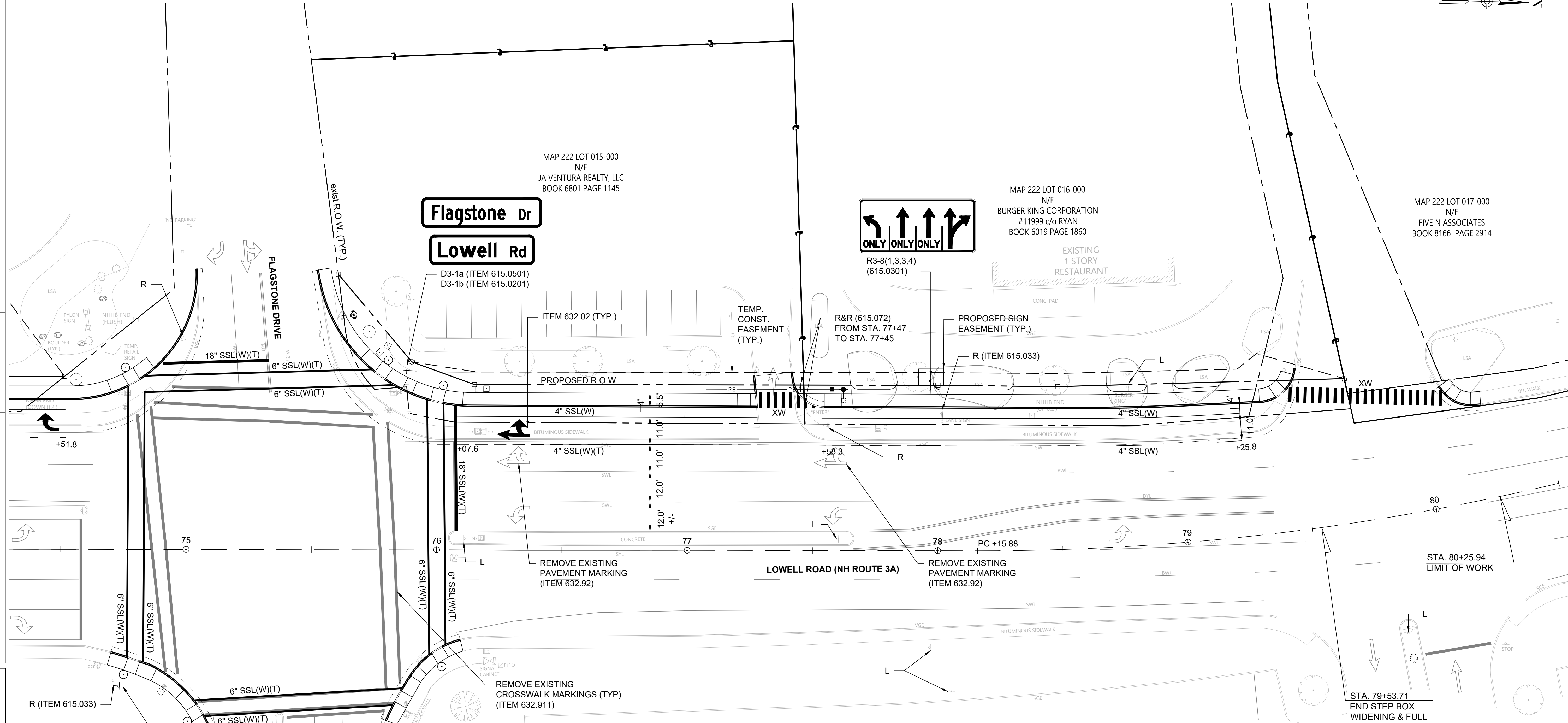
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17-Feb-23	52573.00	52573PMSIGN	41754	24	35

LOWELL ROAD TO SAGAMORE BRIDGE
TOWN OF HUDSON, NEW HAMPSHIRE

SIGNING & STRIPING PLAN



REVISIONS AFTER PROPOSAL
STATION
STATION
DATE
NUMBER
DATE
DATE
DATE
SDR PROCESSED
NEW DESIGN
SHEET CHECKED
AS BUILT DETAILS



MAP 222 LOT 015-000
N/F
JA VENTURA REALTY, LLC
BOOK 6801 PAGE 1145

MAP 222 LOT 016-000
N/F
BURGER KING CORPORATION
#11999 c/o RYAN
BOOK 6019 PAGE 1860

MAP 222 LOT 017-000
N/F
FIVE N ASSOCIATES
BOOK 8166 PAGE 2914

Flagstone Dr

Lowell Rd

Lowell Rd

Wason Rd

SIGN/PVMT. MARKING LEGEND	
SYMBOL	DESCRIPTION
SSL	SINGLE SOLID LINE
SBL	SINGLE BROKEN LINE
SDL	SINGLE DOTTED LINE
DSL	DOUBLE SOLID LINE
(W)	WHITE
(Y)	YELLOW
(T)	THERMOPLASTIC
XW(T)	12" CROSSWALK (ITEM 632.32) SEE NHDOT STANDARD DRAWING PM-15
R&R	REMOVE AND RELOCATE SIGN (ITEM 615.024/615.034)
R	REMOVE SIGN (ITEM 615.033)
L	LEAVE SIGN

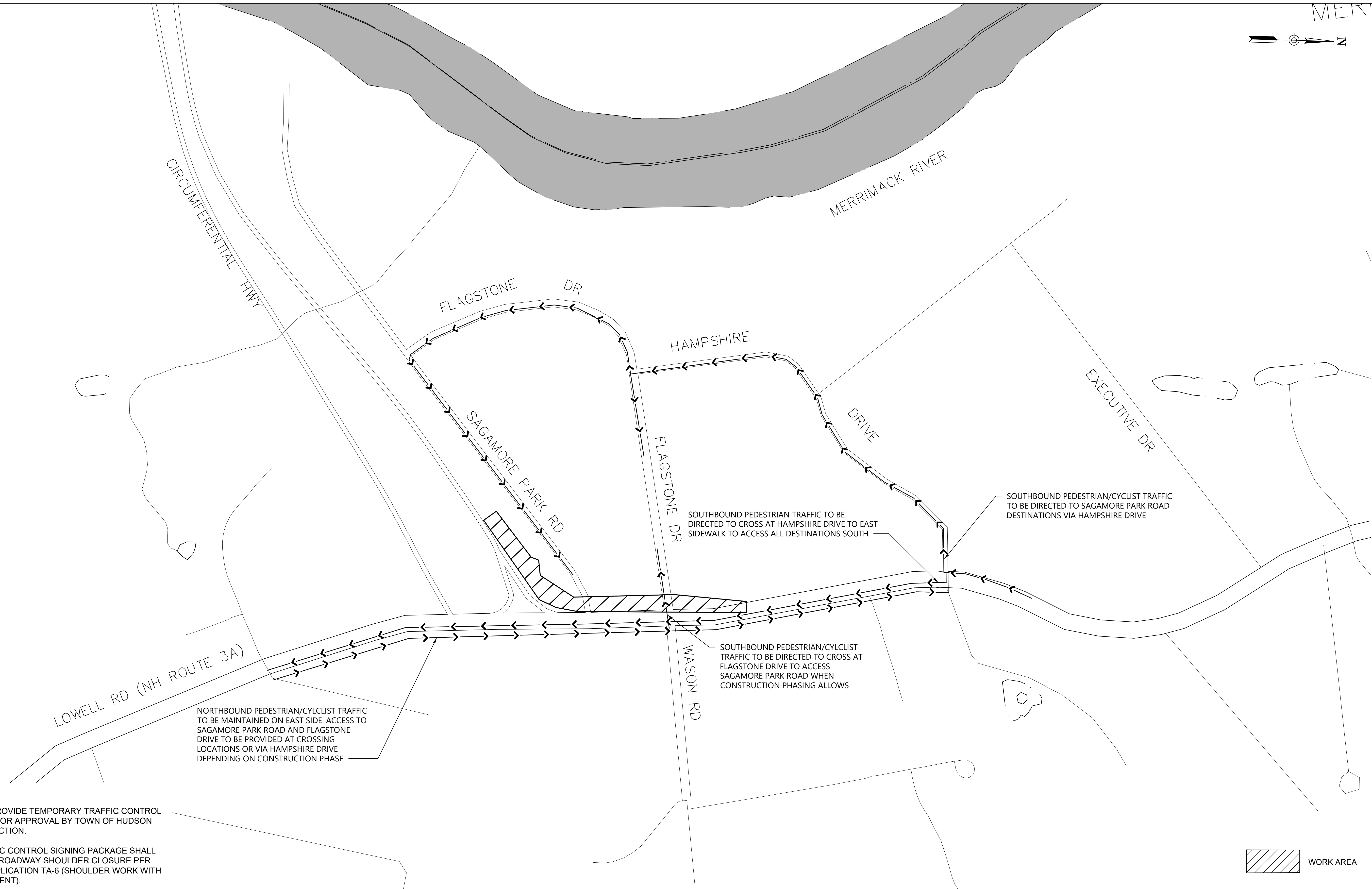
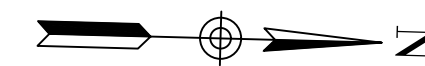
MAP 222 LOT 018-000
N/F
DSM MB II, LLC
BOOK 8716 PAGE 219



LOWELL ROAD TO SAGAMORE BRIDGE
TOWN OF HUDSON, NEW HAMPSHIRE

SIGNING & STRIPING PLAN

DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	52573PMSIGN	41754	25	35



DESCRIPTION

REVISIONS AFTER PROPOSAL

STATION

DATE

NUMBER

DATE

DATE

DATE

DATE

DATE

NOTES

1. CONTRACTOR TO PROVIDE TEMPORARY TRAFFIC CONTROL SIGNING PACKAGE FOR APPROVAL BY TOWN OF HUDSON PRIOR TO CONSTRUCTION.
2. TEMPORARY TRAFFIC CONTROL SIGNING PACKAGE SHALL INCLUDE A TYPICAL ROADWAY SHOULDER CLOSURE PER MUTCD TYPICAL APPLICATION TA-6 (SHOULDER WORK WITH MINOR ENCROACHMENT).
3. TEMPORARY TRAFFIC CONTROL SIGNING PACKAGE SHALL INCLUDE A SIDEWALK CLOSURE DETOUR PER MUTCD TYPICAL APPLICATION TA-28 (SIDEWALK DETOUR) AND TA-29 (CROSSWALK CLOSURES AND PEDESTRIAN DETOURS).
4. IF CONTRACTOR UTILIZES A LANE CLOSURE, CLOSURE SHOULD FOLLOW APPLICABLE MUTCD TYPICAL APPLICATION.
5. REFER TO CONTRACT DOCUMENTS FOR FULL TRAFFIC CONTROL NARRATIVE

NORTHBOUND PEDESTRIAN/CYCLIST TRAFFIC TO BE MAINTAINED ON EAST SIDE. ACCESS TO SAGAMORE PARK ROAD AND FLAGSTONE DRIVE TO BE PROVIDED AT CROSSING LOCATIONS OR VIA HAMPSHIRE DRIVE DEPENDING ON CONSTRUCTION PHASE

SOUTHBOUND PEDESTRIAN TRAFFIC TO BE DIRECTED TO CROSS AT HAMPSHIRE DRIVE TO EAST SIDEWALK TO ACCESS ALL DESTINATIONS SOUTH

SOUTHBOUND PEDESTRIAN/CYCLIST TRAFFIC TO BE DIRECTED TO SAGAMORE PARK ROAD DESTINATIONS VIA HAMPSHIRE DRIVE

SOUTHBOUND PEDESTRIAN/CYCLIST TRAFFIC TO BE DIRECTED TO CROSS AT FLAGSTONE DRIVE TO ACCESS SAGAMORE PARK ROAD WHEN CONSTRUCTION PHASING ALLOWS



LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

TRAFFIC CONTROL PLAN
PEDESTRIAN AND BICYCLE DETOUR ROUTES

		DATE PLOTTED: 17-Feb-23			
		VHB PROJECT NO.: 52573.00			
DRAWING: 52573TCP		STATE PROJECT NO.: 41754		SHEET NO.: 28	
TOTAL SHEETS: 35					

REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

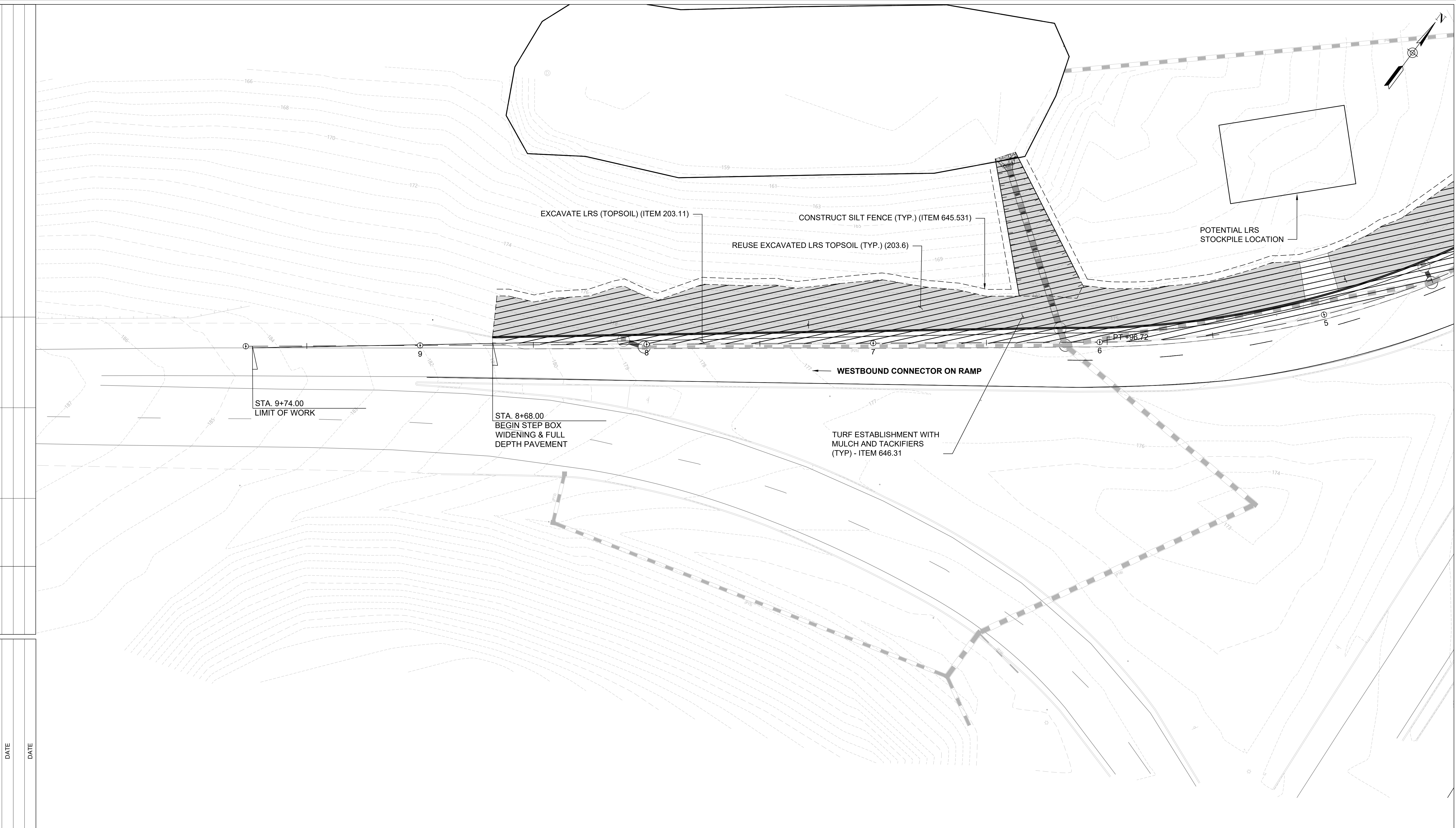
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DATE



NUMBER

DATE

SDR PROCESSED
NEW DESIGN
SHEET CHECKED
AS BUILT DETAILS

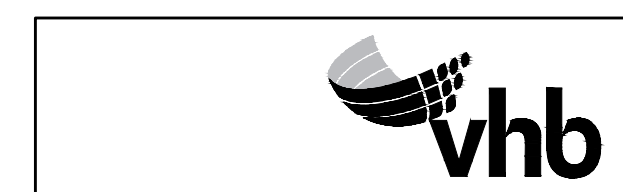


LEGEND

-  EXCAVATE LRS TOPSOIL (ITEM 203.11)
-  EXCAVATE LRS TOPSOIL & REUSE LRS TOPSOIL ON SLOPES (ITEM 203.11) (ITEM 203.6)

NOTES

1. REMOVAL OF TOPSOIL (6" DEPTH) WITHIN THE TOWN AND STATE RIGHT-OF-WAY SHALL BE PAID FOR AS ITEM 203.11 COMMON EXCAVATION - LRS (LIMITED REUSE SOIL). EXCESS LRS SHALL BE PLACED IN DESIGNATED AREAS AND PAID AS ITEM 203.6 EMBANKMENT-IN-PLACE.
2. THE LRS SHALL BE STABILIZED WITH ITEM 646.31 TURF ESTABLISHMENT WITH MULCH AND TACKIFIERS.



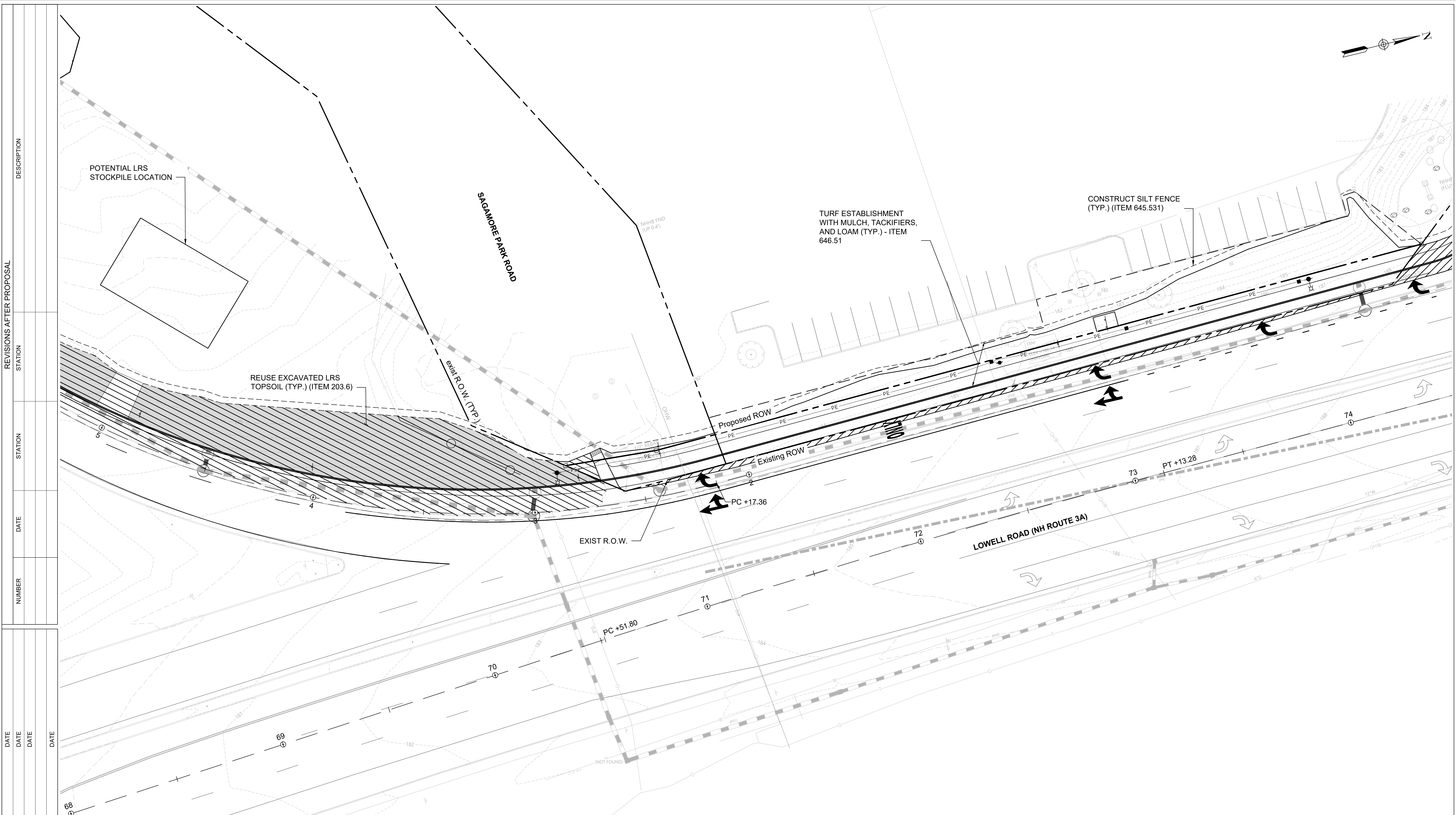
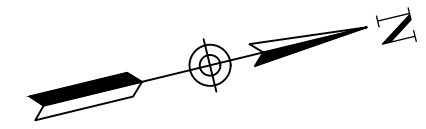
DATE PLOTTED
29-Mar-23

VHB PROJECT NO.
52573.00

LOWELL ROAD TO SAGAMORE BRIDGE
TOWN OF HUDSON, NEW HAMPSHIRE

SOIL MANAGEMENT PLANS

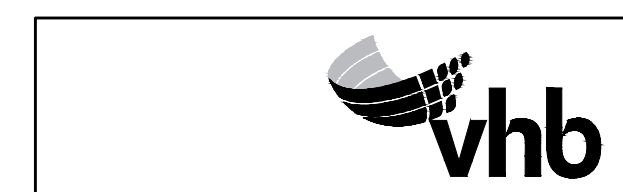
DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
52573SMP	41754	29	35



SDR PROCESSED	DATE	
	NEW DESIGN	
	SHEET CHECKED	
	AS BUILT DETAILS	
REVISIONS AFTER PROPOSAL	STATION	
	STATION	
	DATE	
NUMBER		

LEGEND

	EXCAVATE LRS TOPSOIL (ITEM 203.11)
	EXCAVATE LRS TOPSOIL & REUSE LRS TOPSOIL ON SLOPES (ITEM 203.11) (ITEM 203.6)



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
29-Mar-23	52573.00	52573SMP	41754	30	35

LOWELL ROAD TO SAGAMORE BRIDGE
TOWN OF HUDSON, NEW HAMPSHIRE

SOIL MANAGEMENT PLANS

REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

STATION

DATE

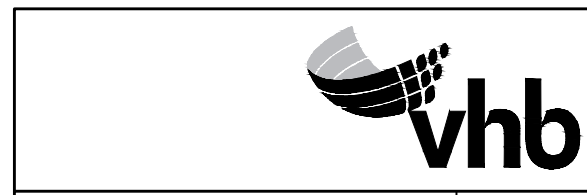
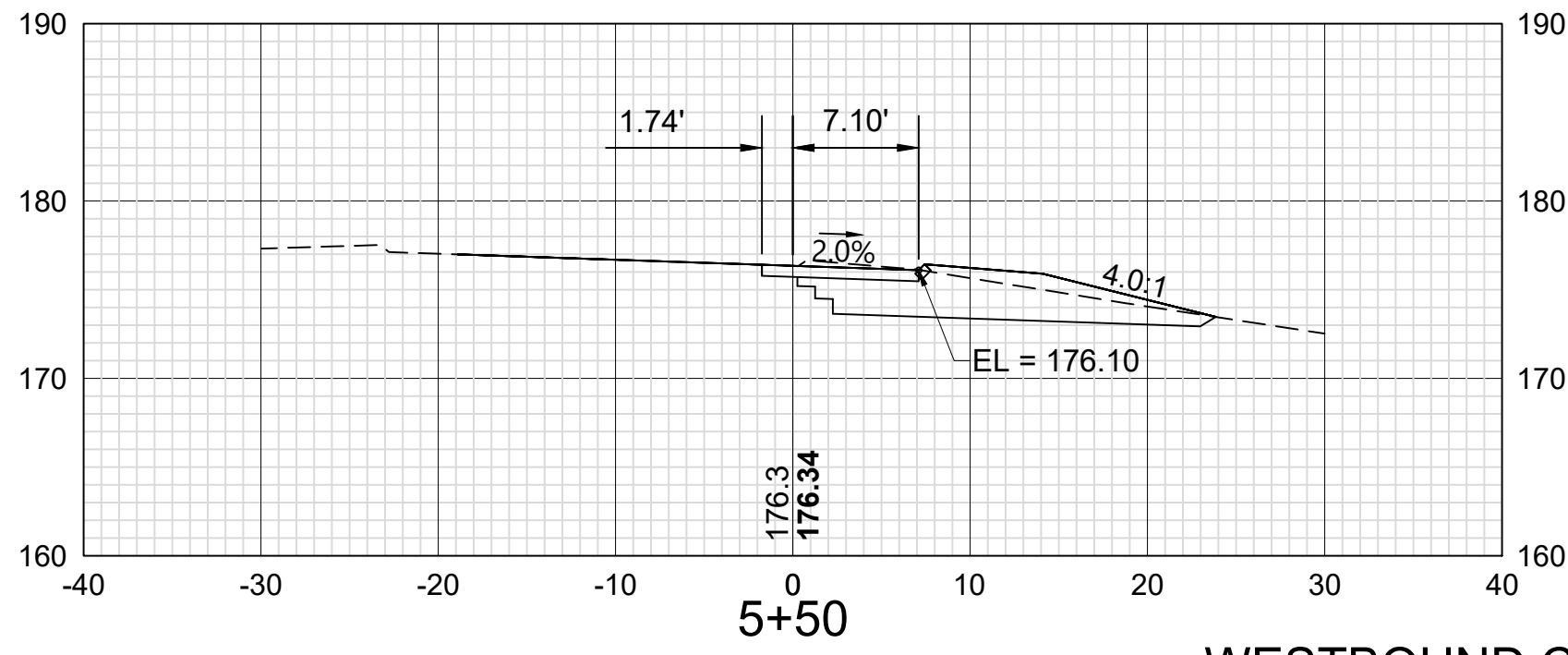
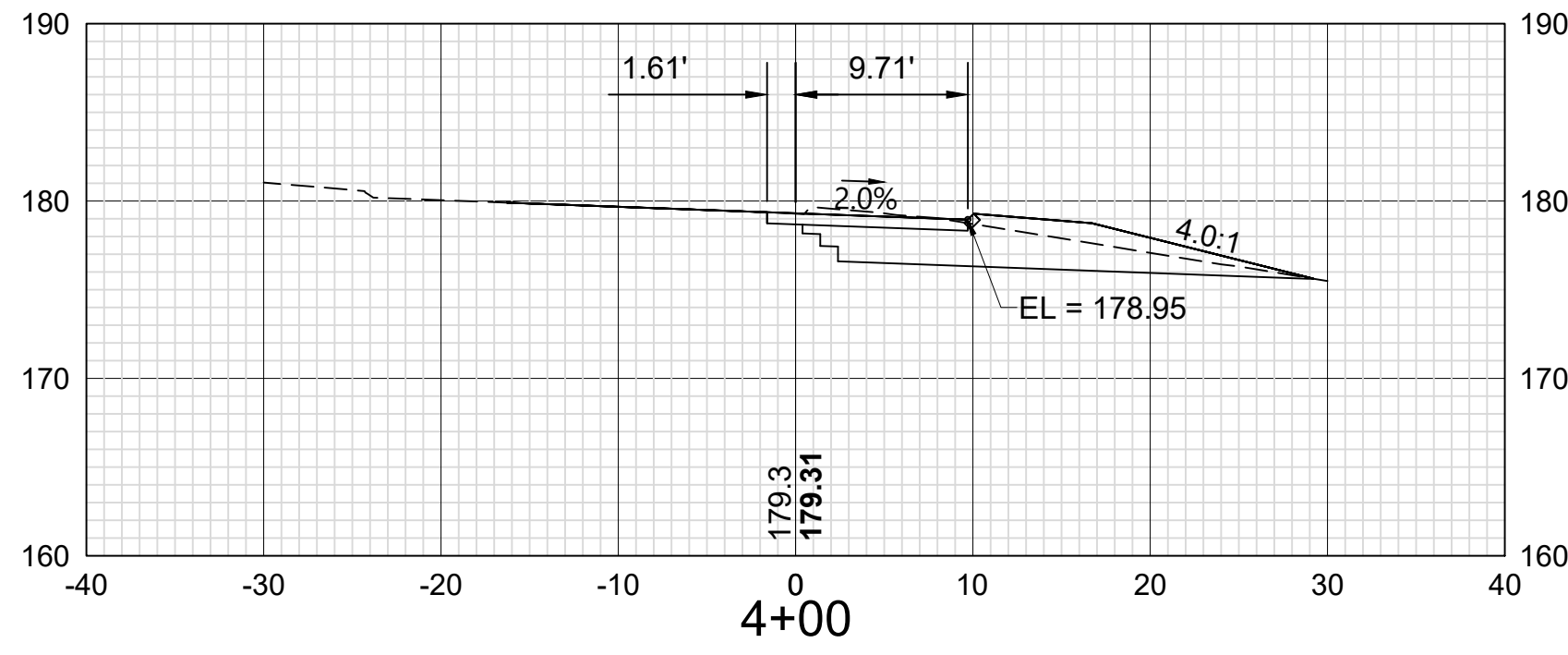
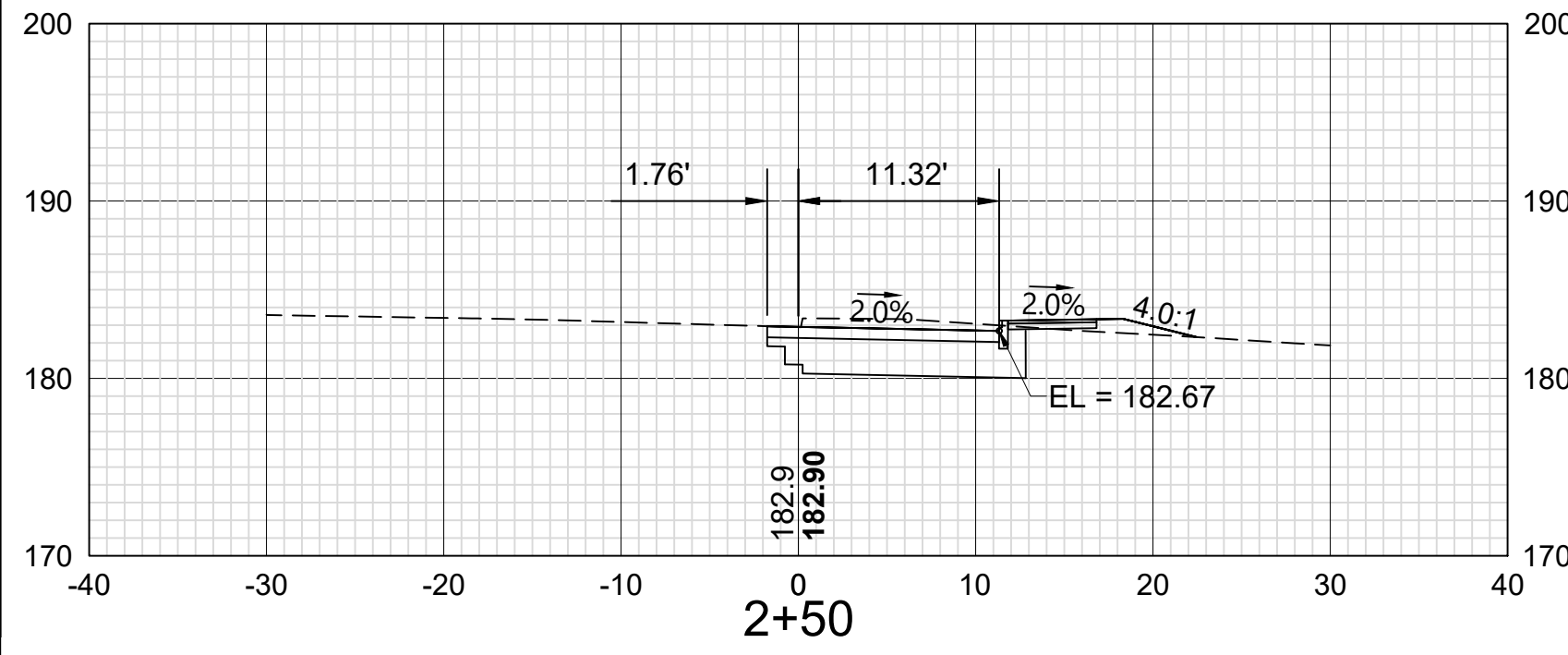
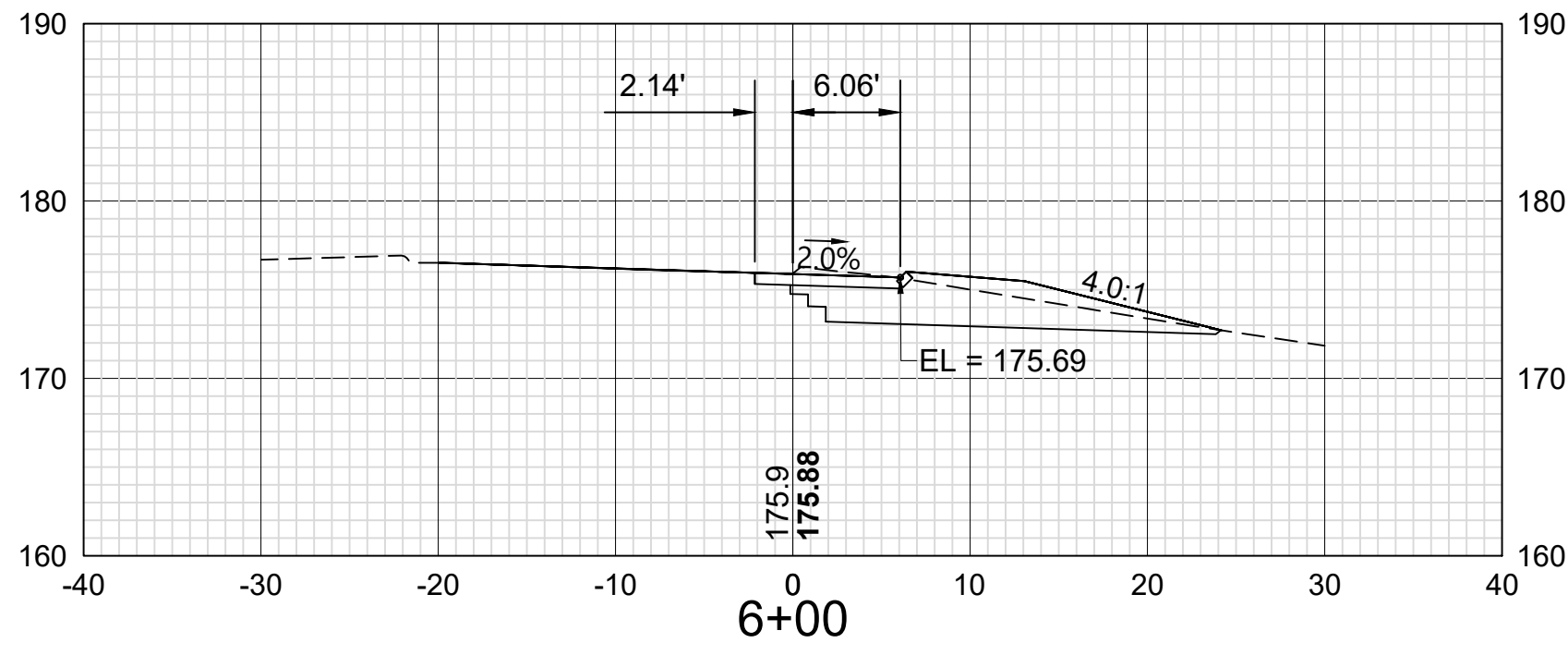
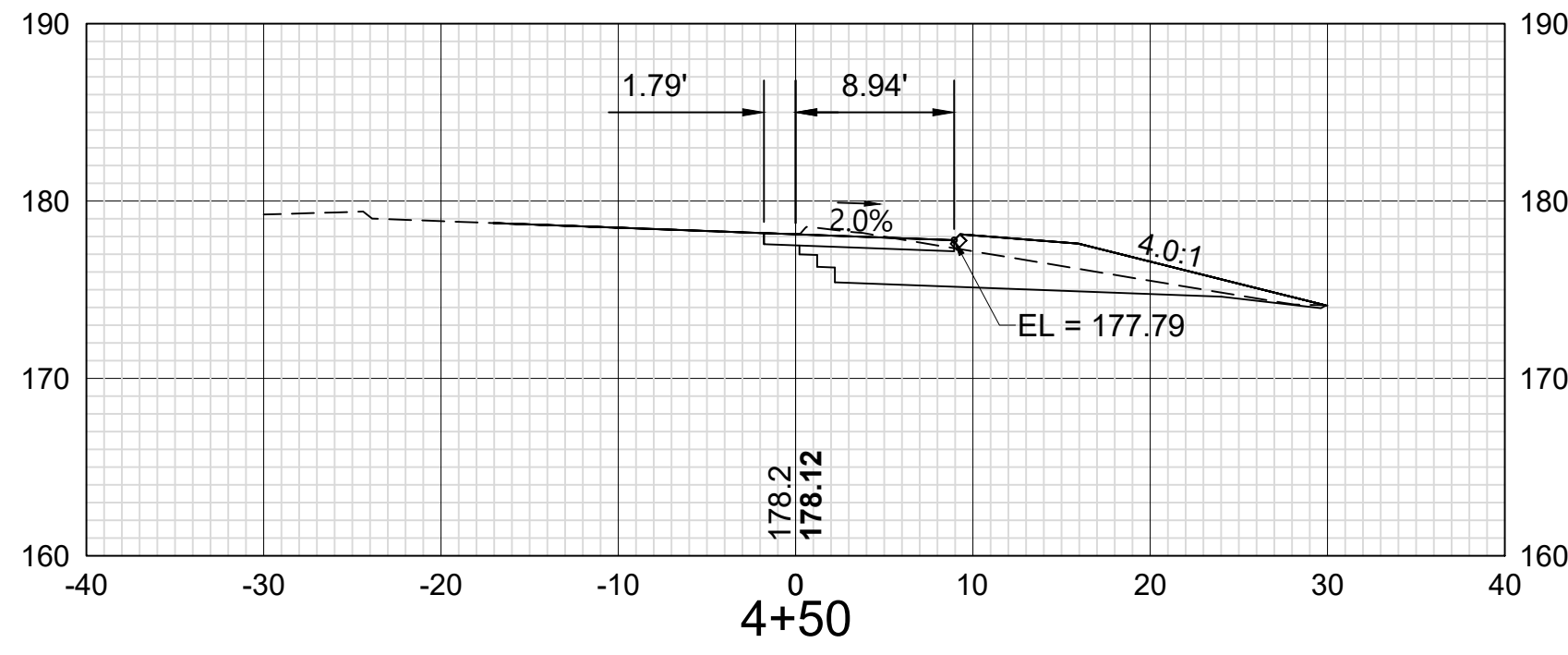
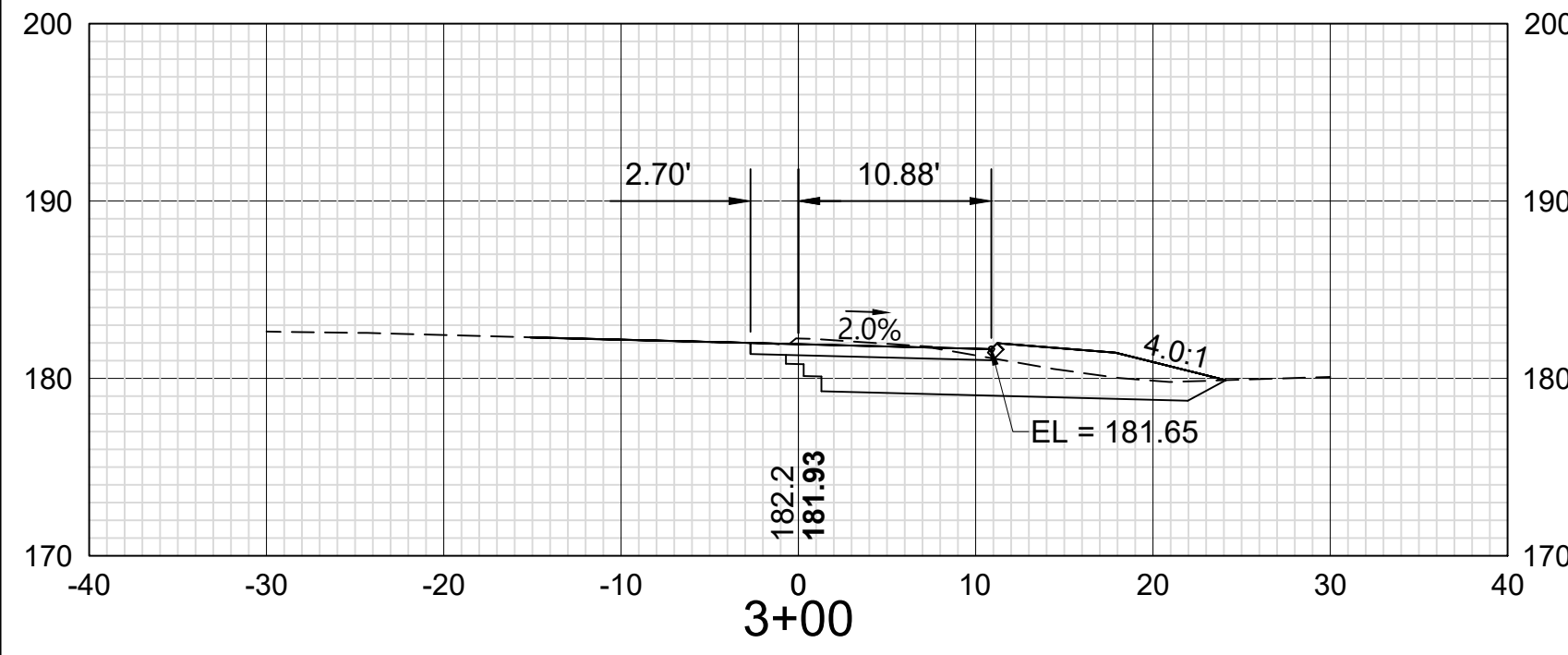
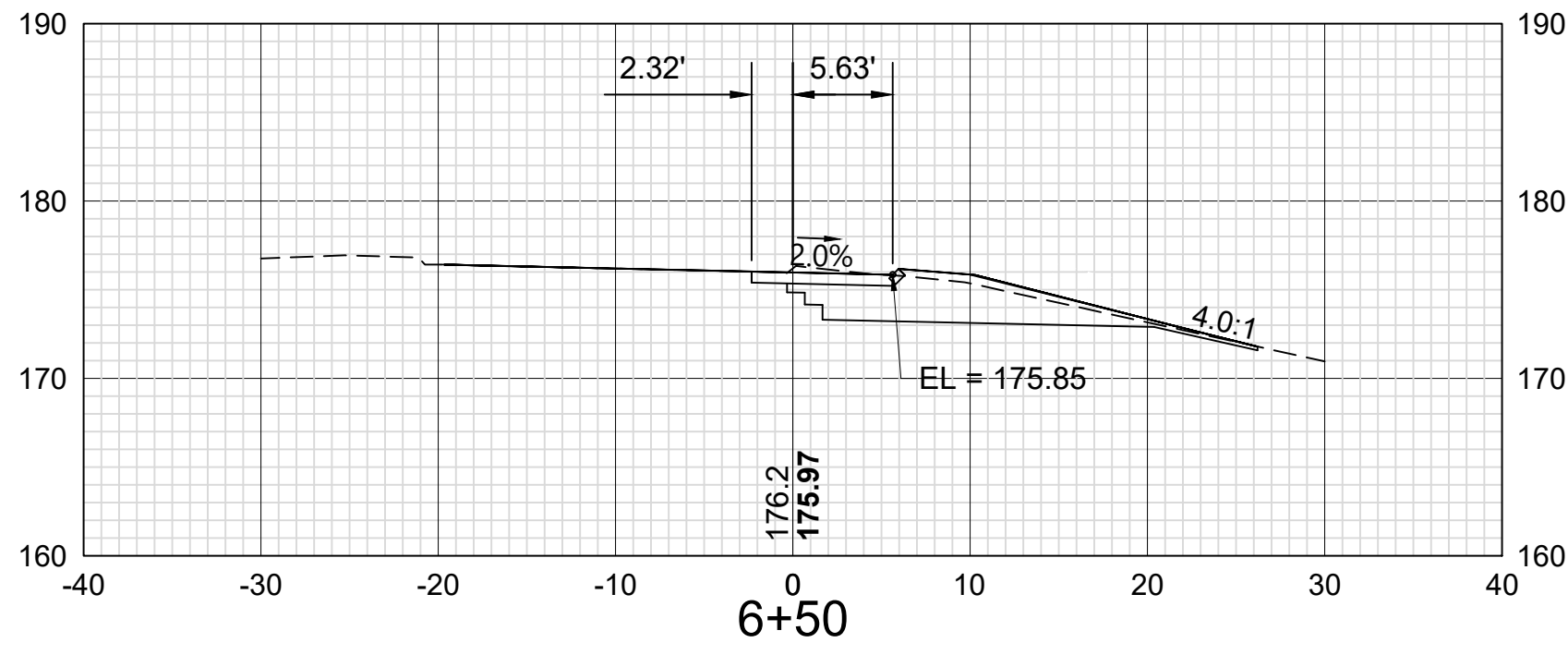
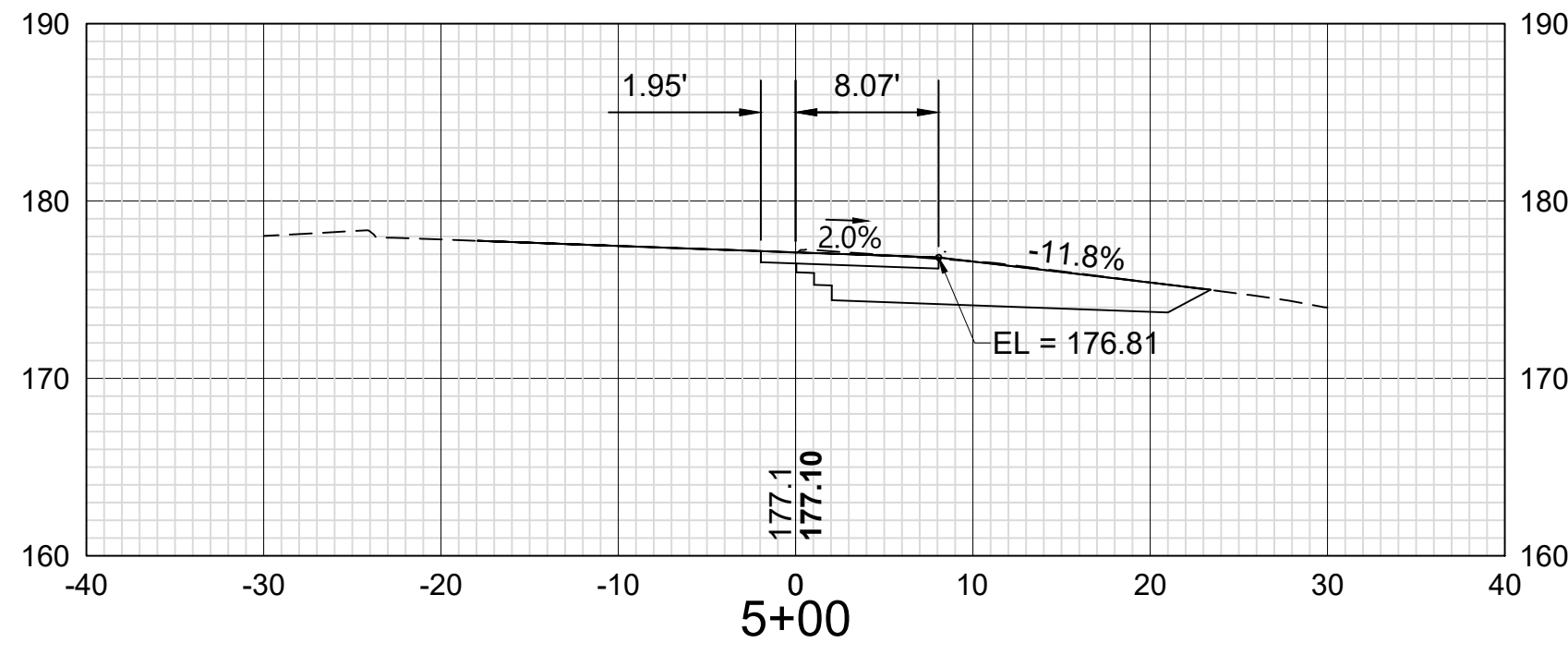
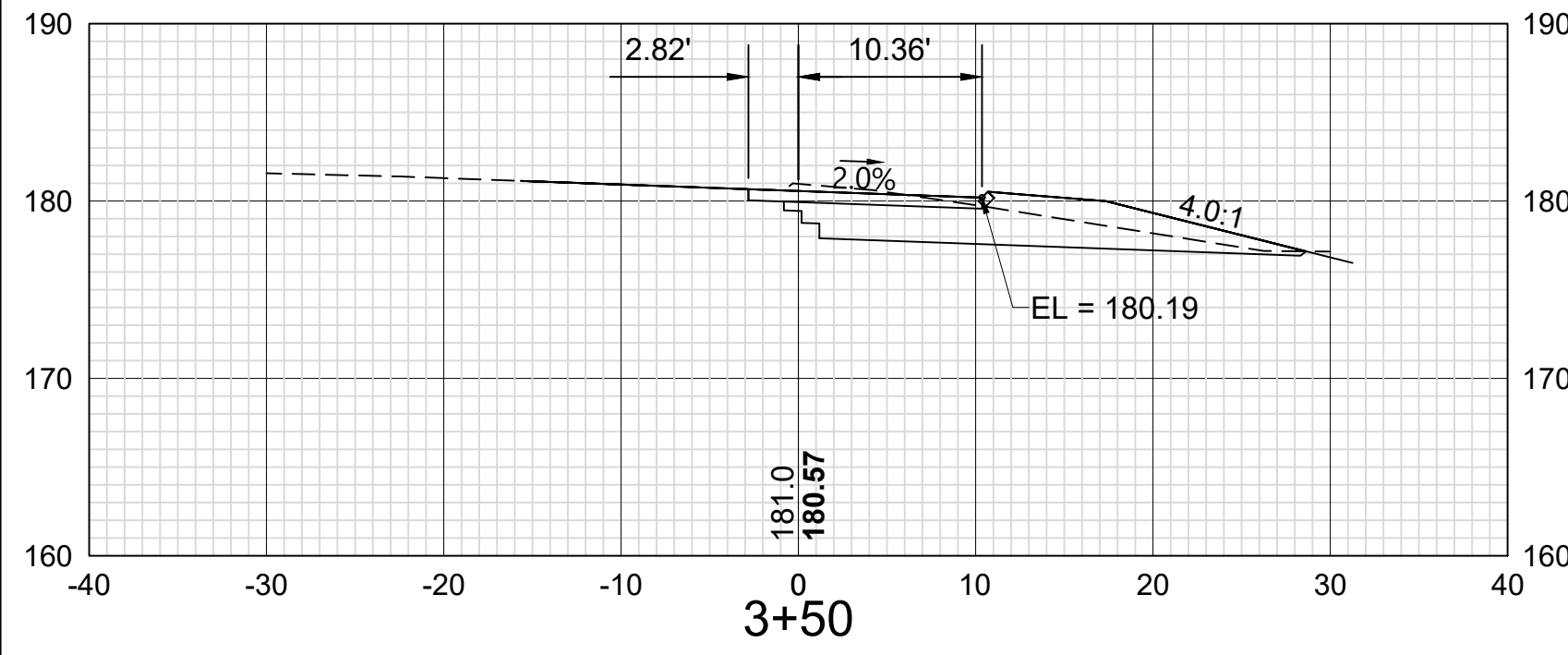
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DATE

DATE

DATE

SDR PROCESSED
NEW DESIGN
SHEET CHECKED
AS BUILT DETAILS



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	52573XS	41754	32	35

WESTBOUND CONNECTOR ON RAMP

LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

CROSS SECTIONS

REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

STATION

DATE

NUMBER

DATE

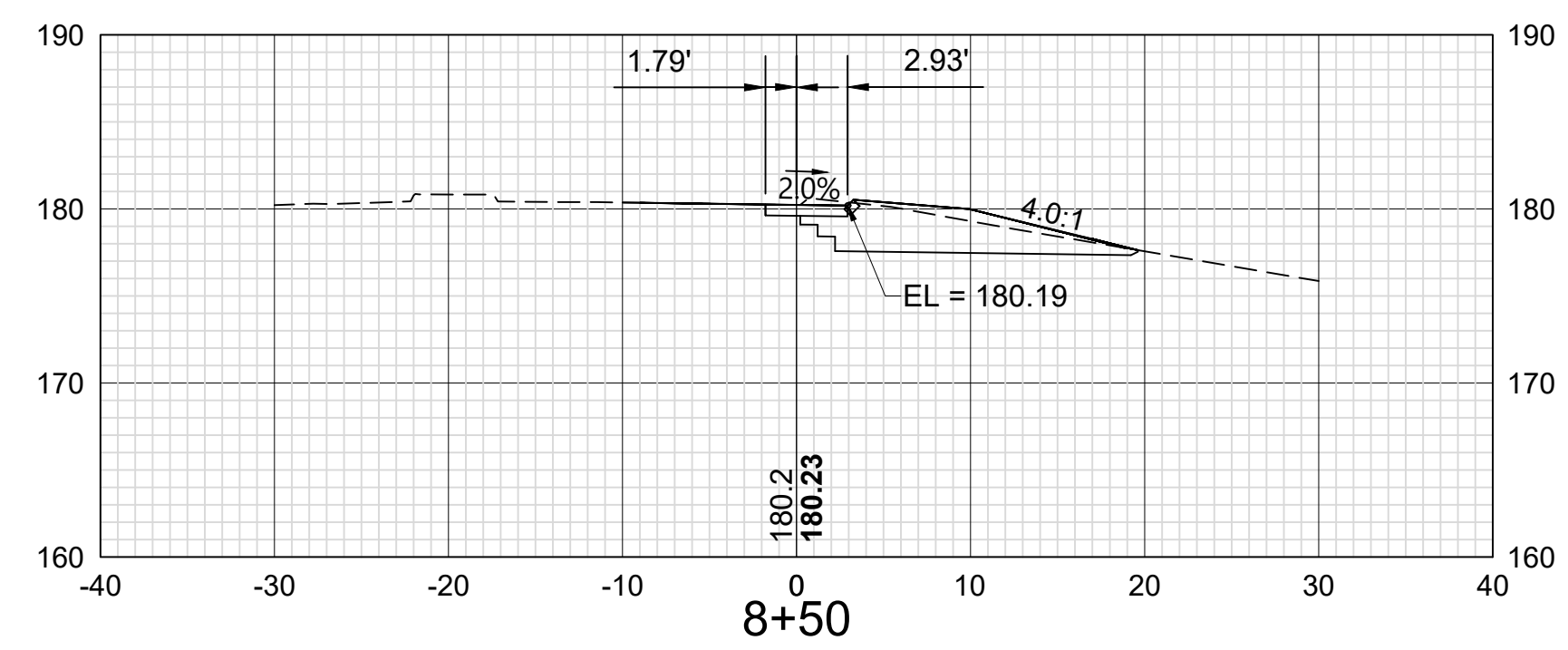
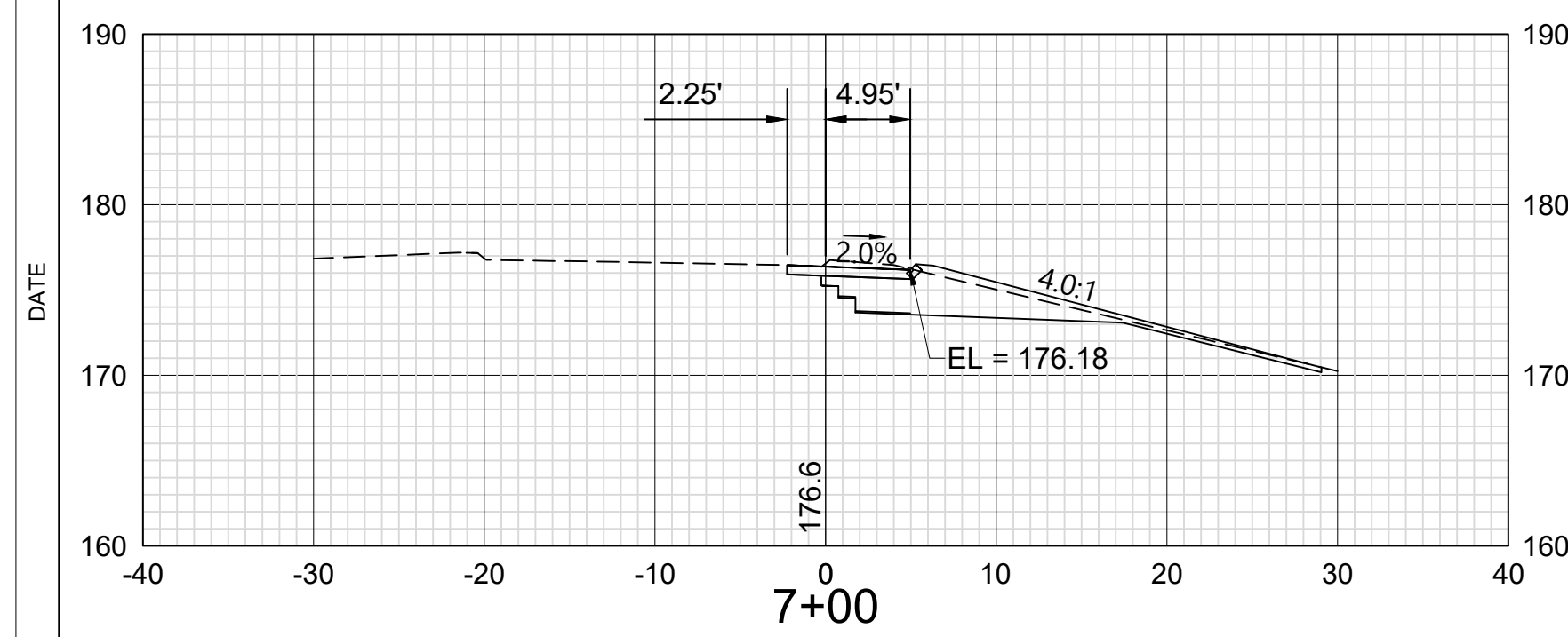
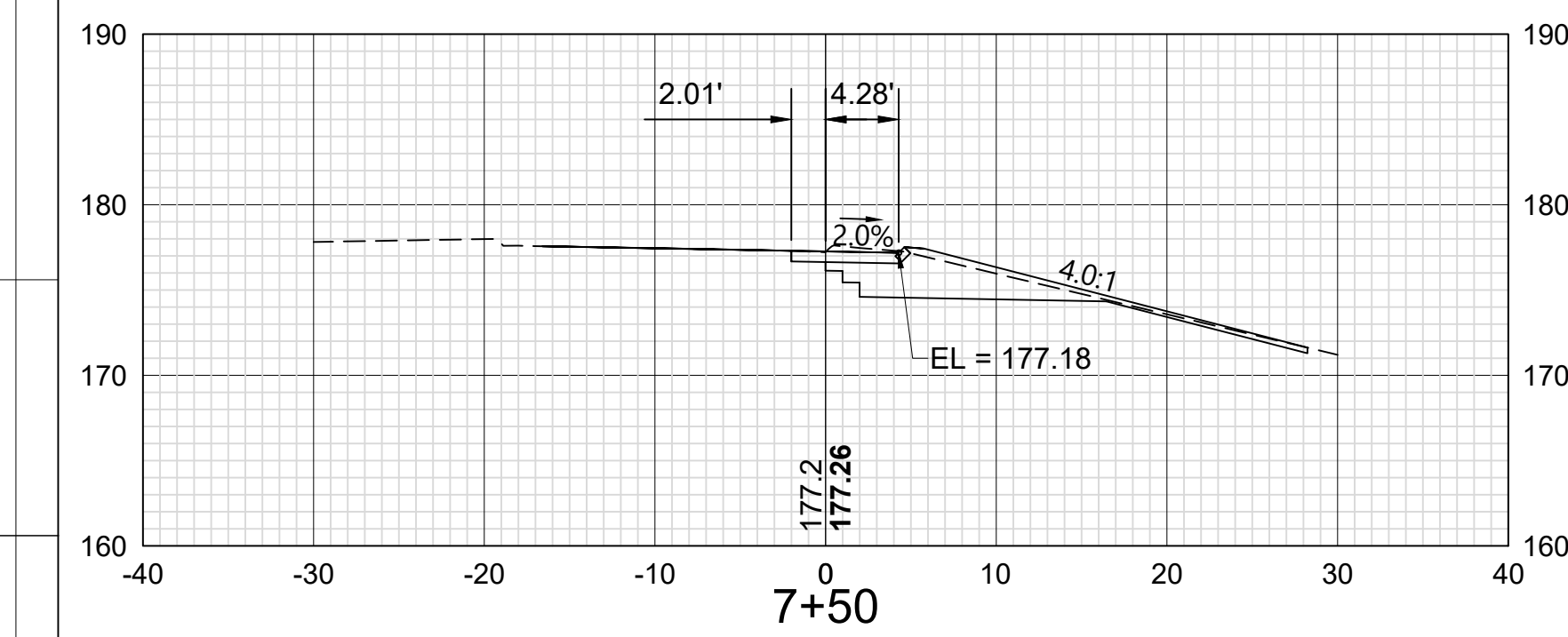
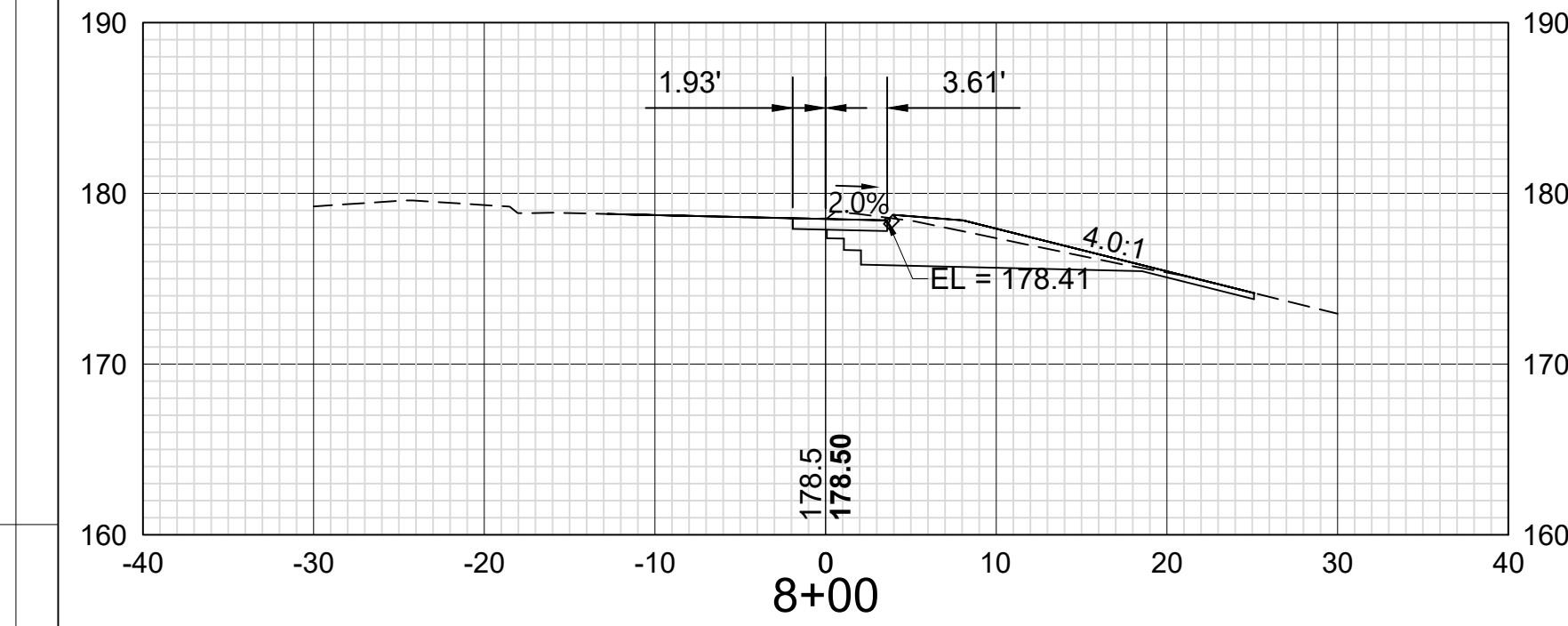
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NEW DESIGN

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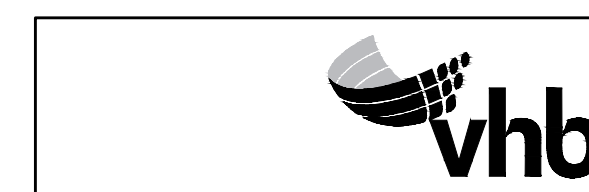


WESTBOUND CONNECTOR ON RAMP

LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

CROSS SECTIONS



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	52573XS	41754	33	35

REVISIONS AFTER PROPOSAL

DESCRIPTION

STATION

STATION

DATE

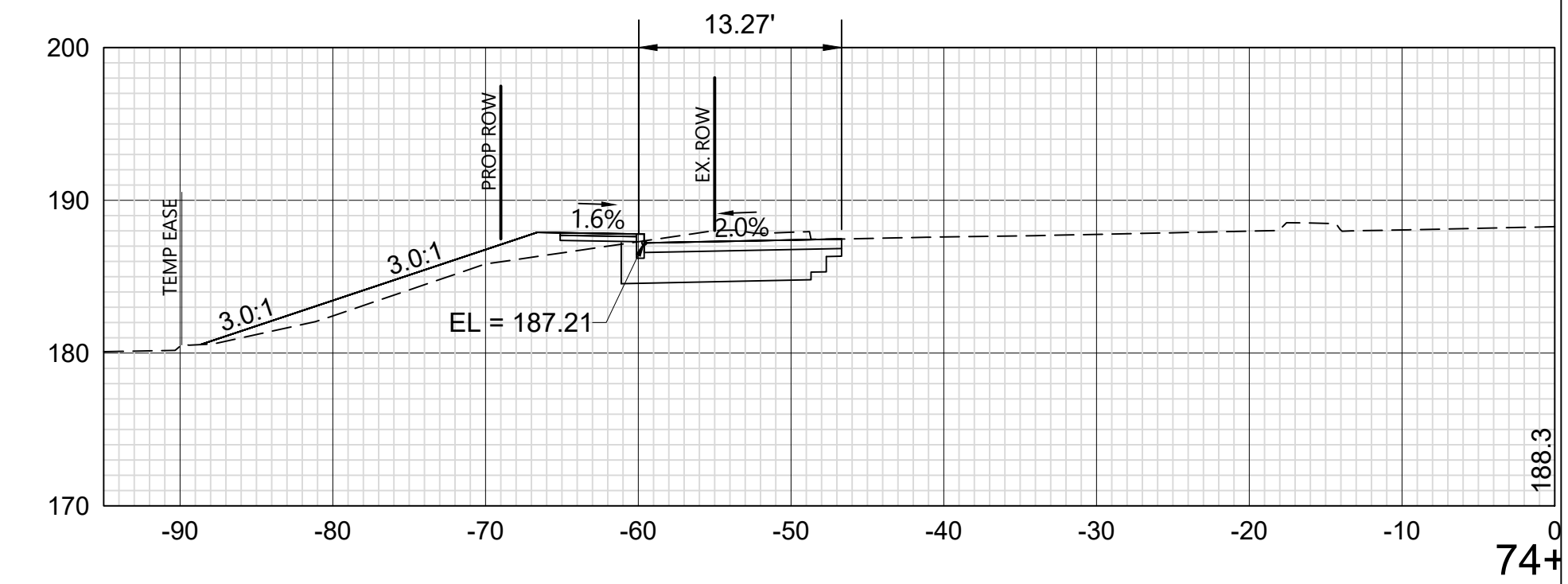
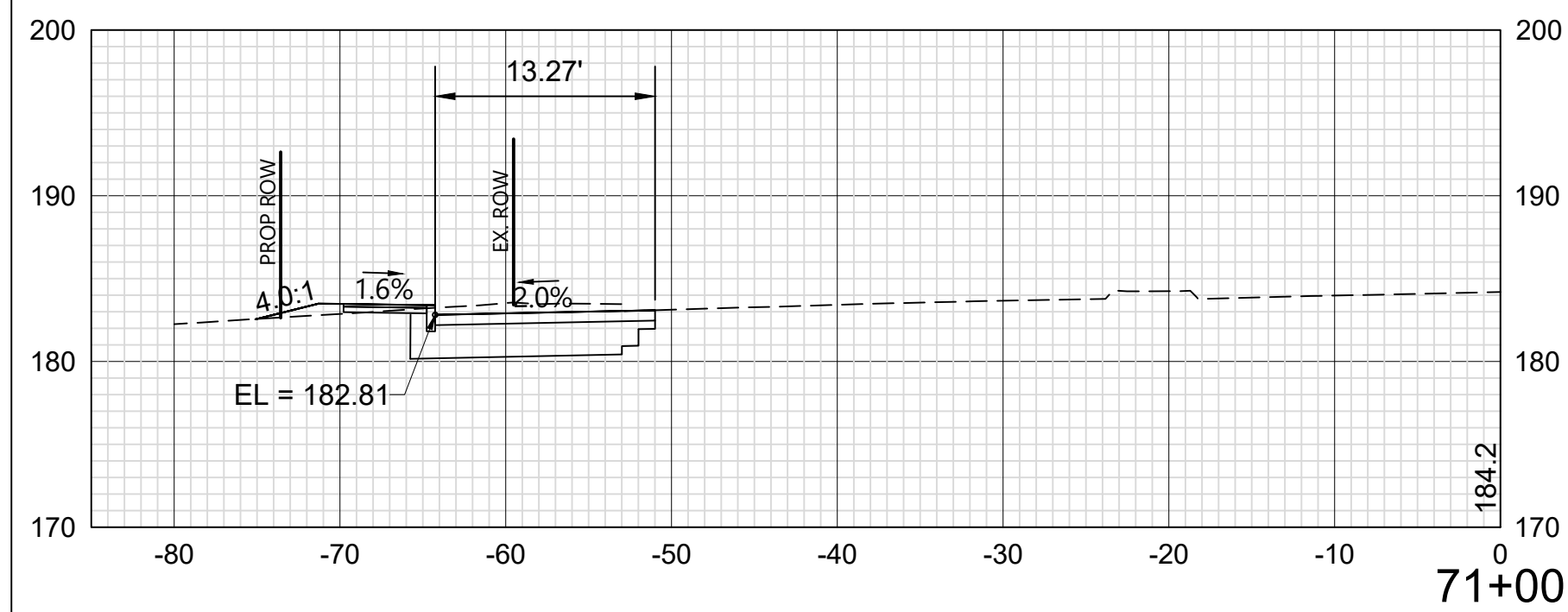
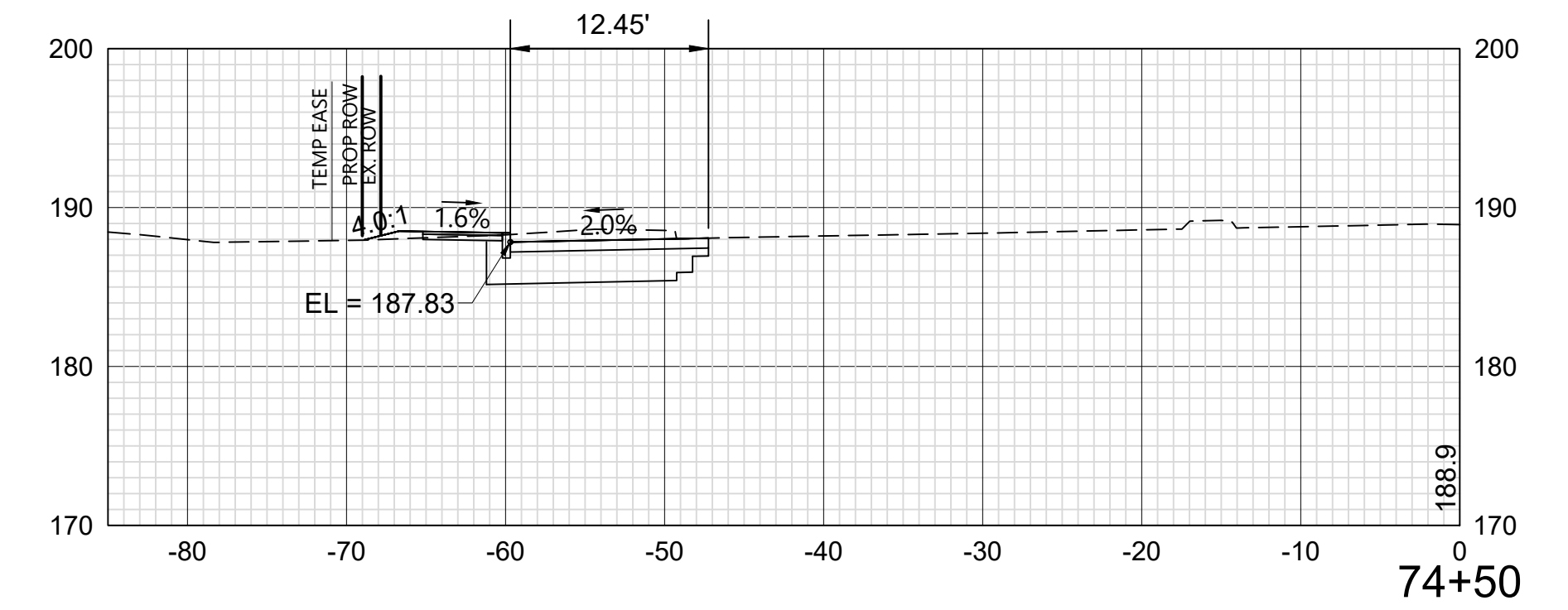
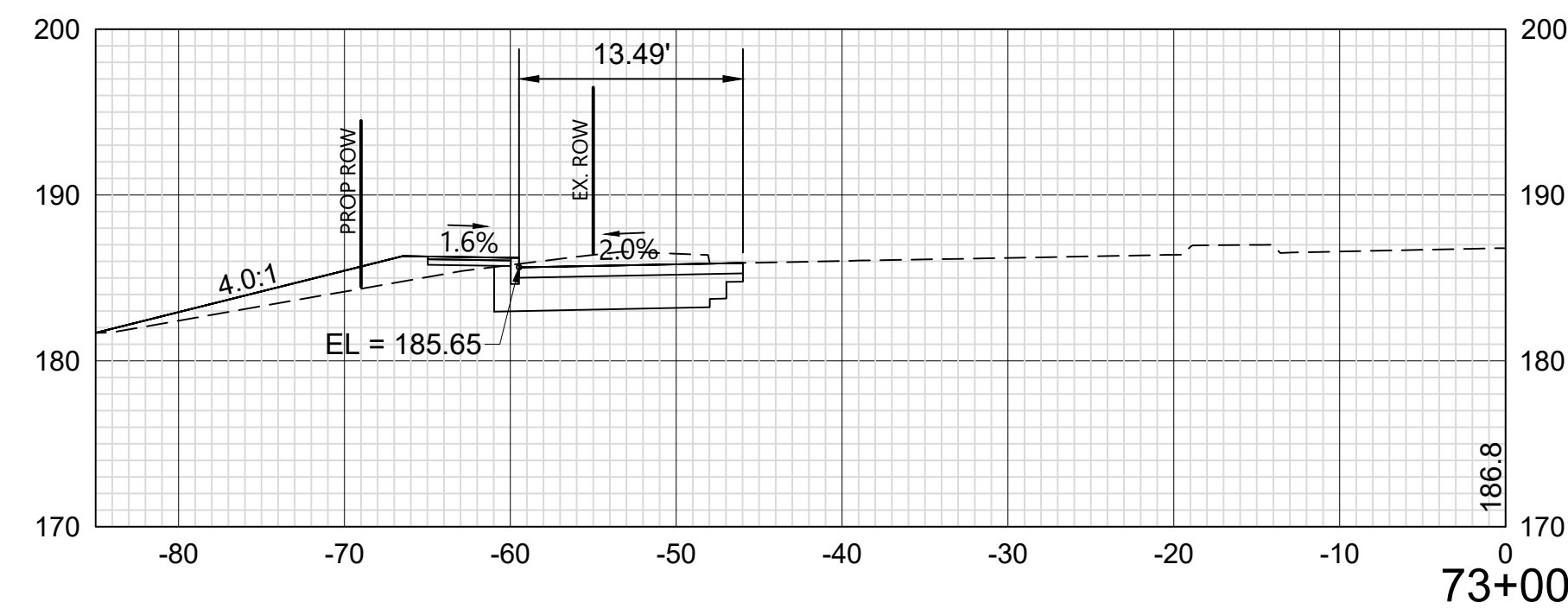
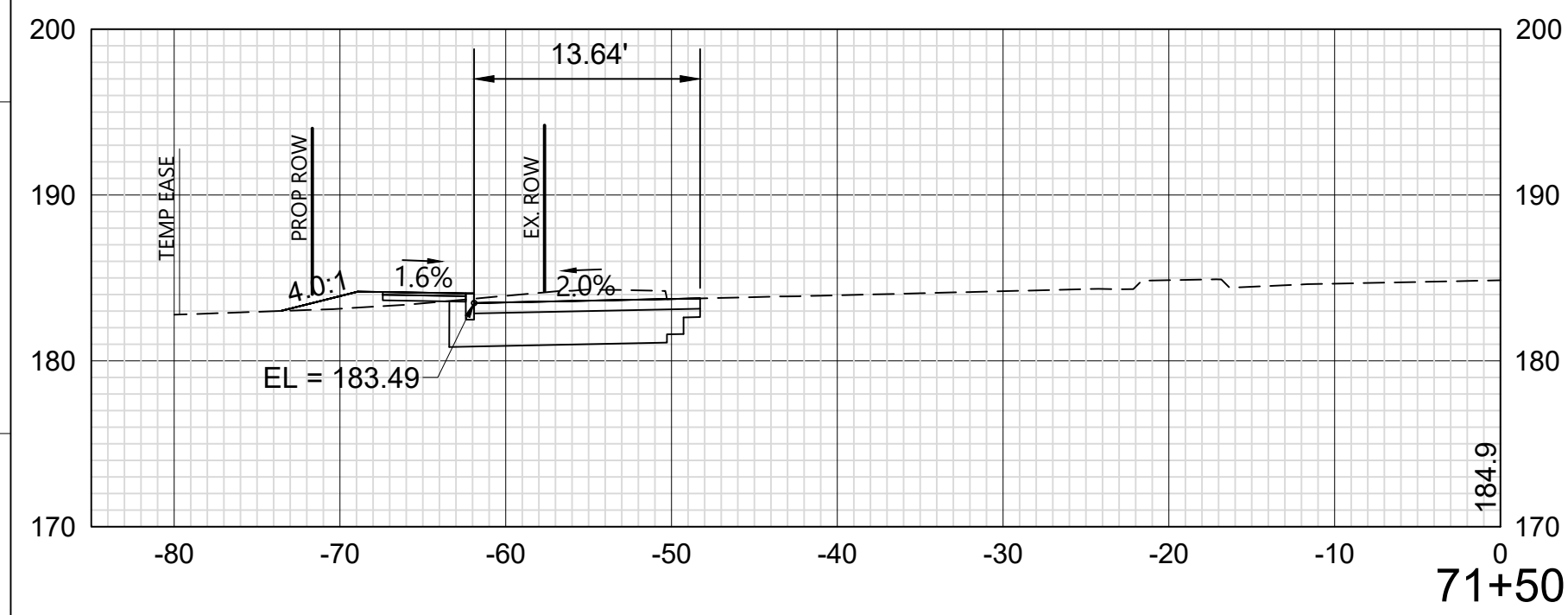
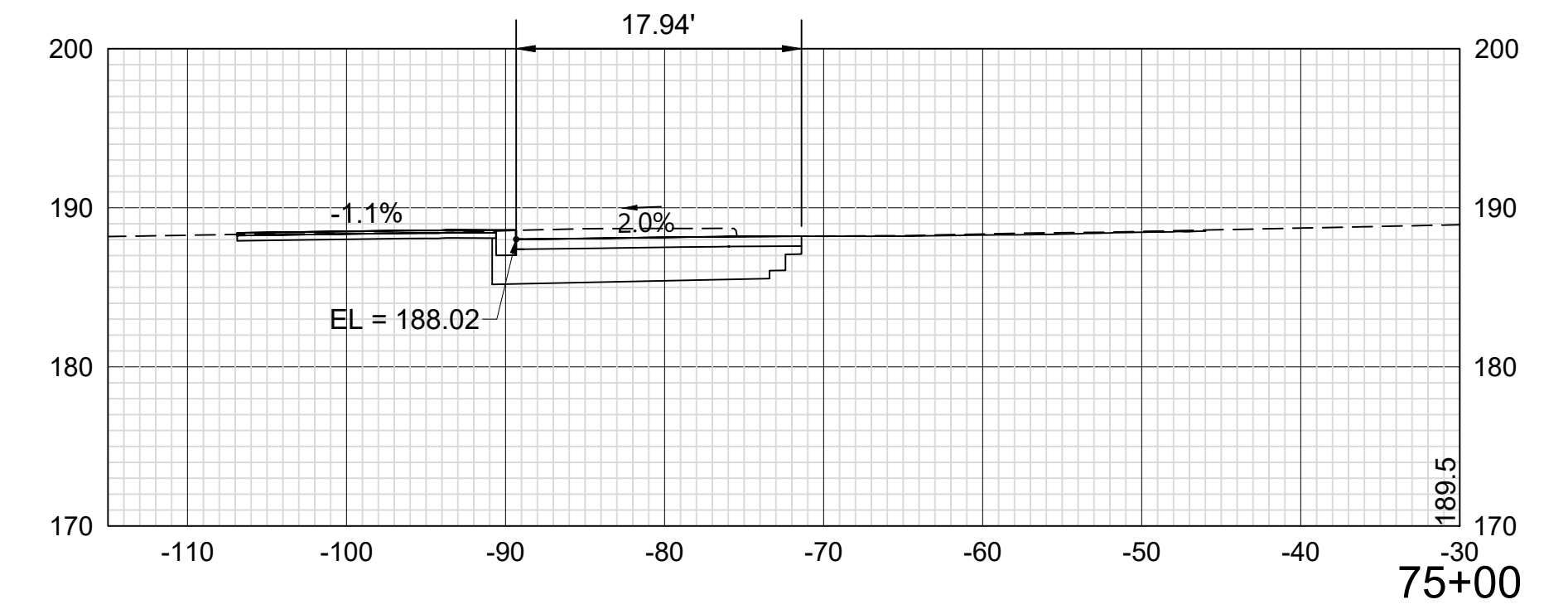
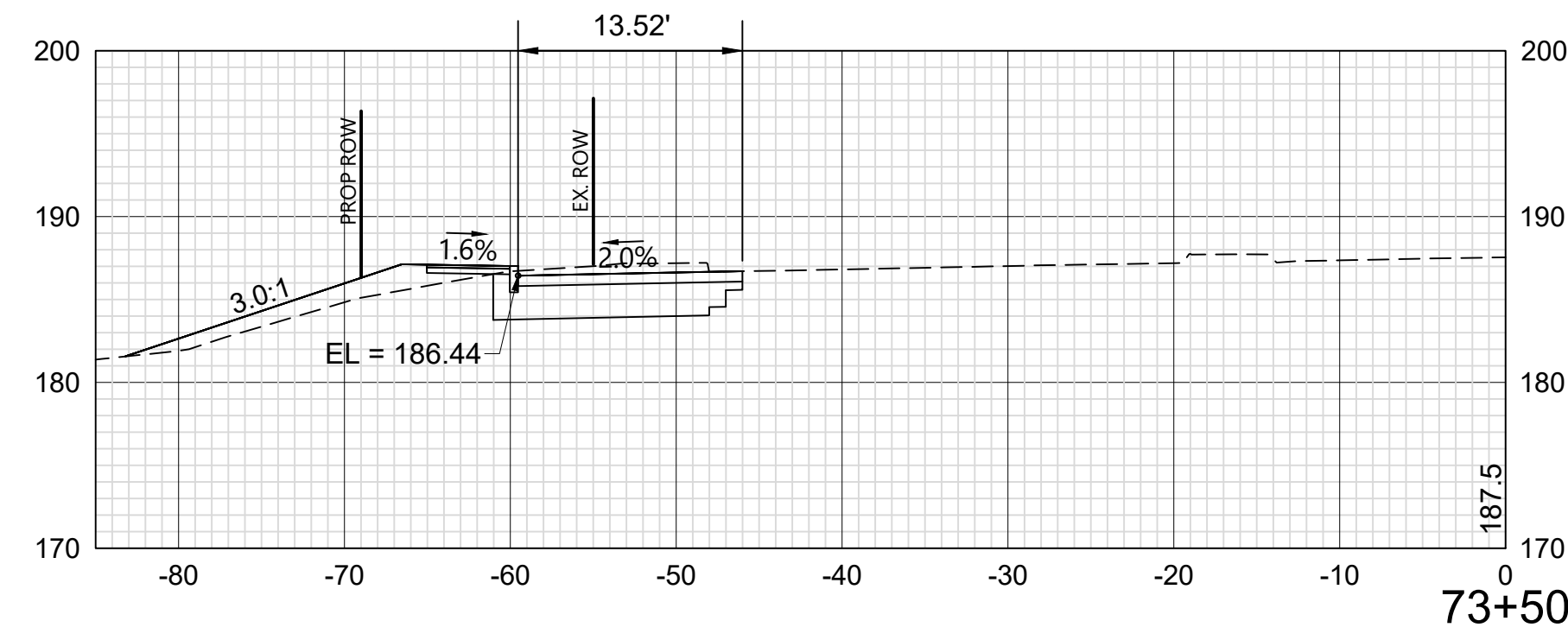
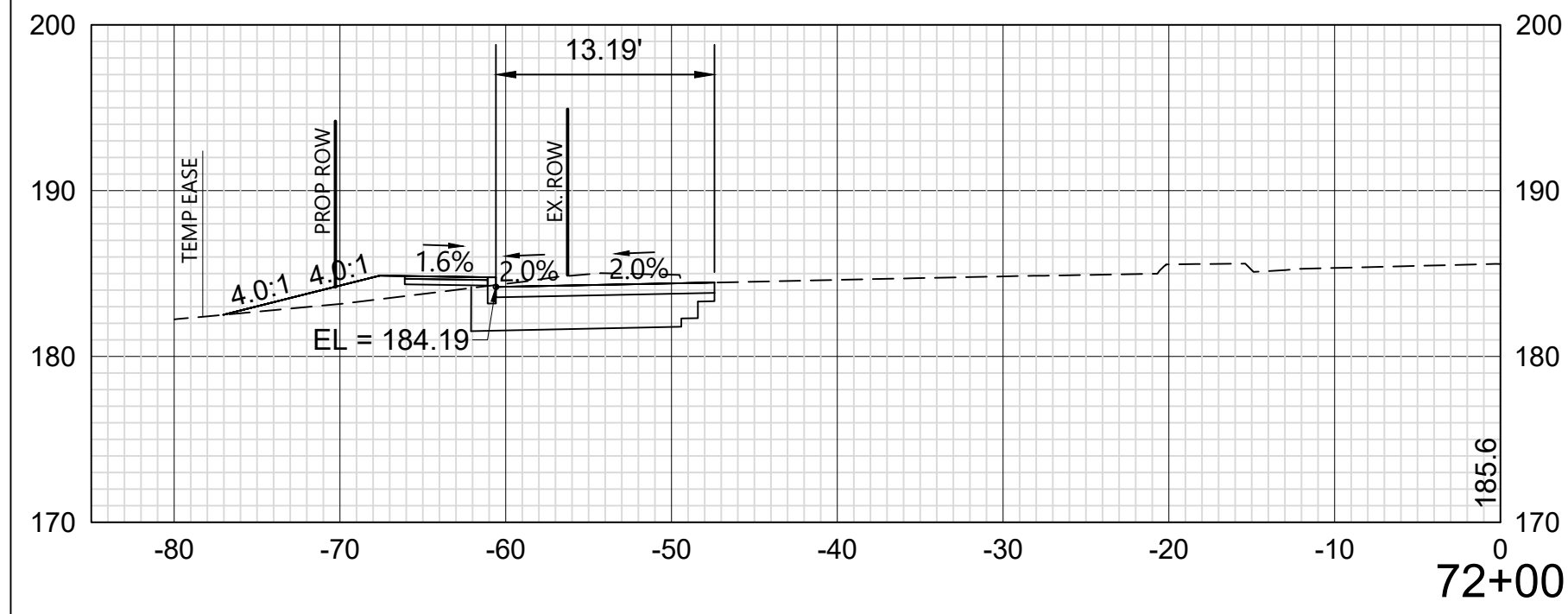
NUMBER

DATE

DATE

DATE

SDR PROCESSED
NEW DESIGN
SHEET CHECKED
AS BUILT DETAILS



LOWELL ROAD (NH ROUTE 3A)

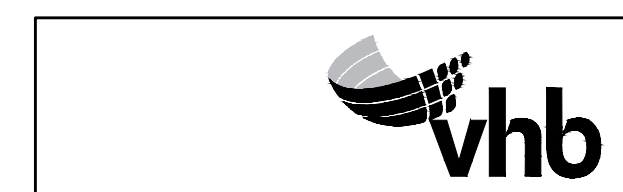
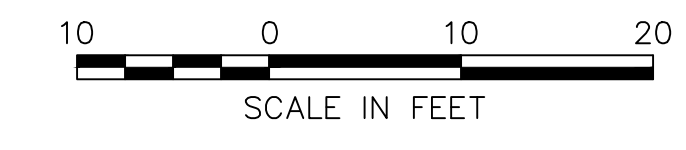
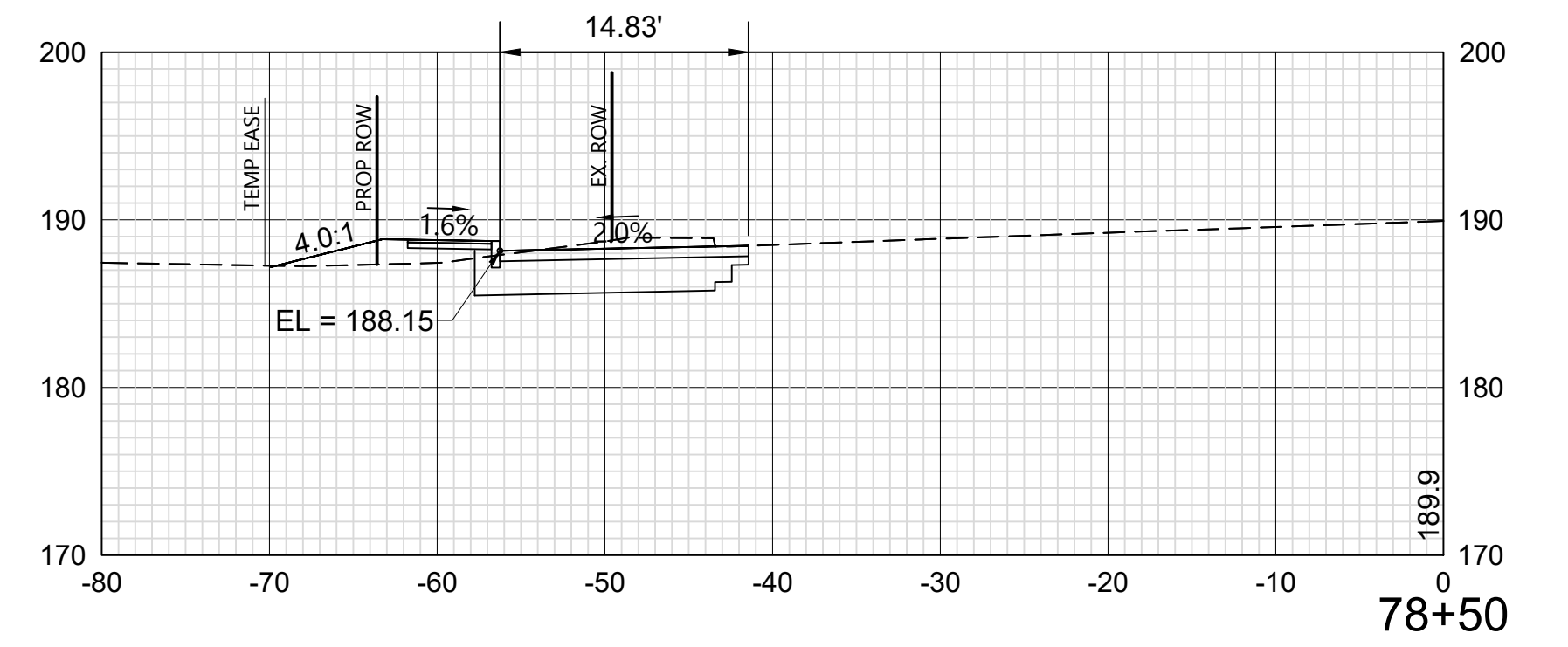
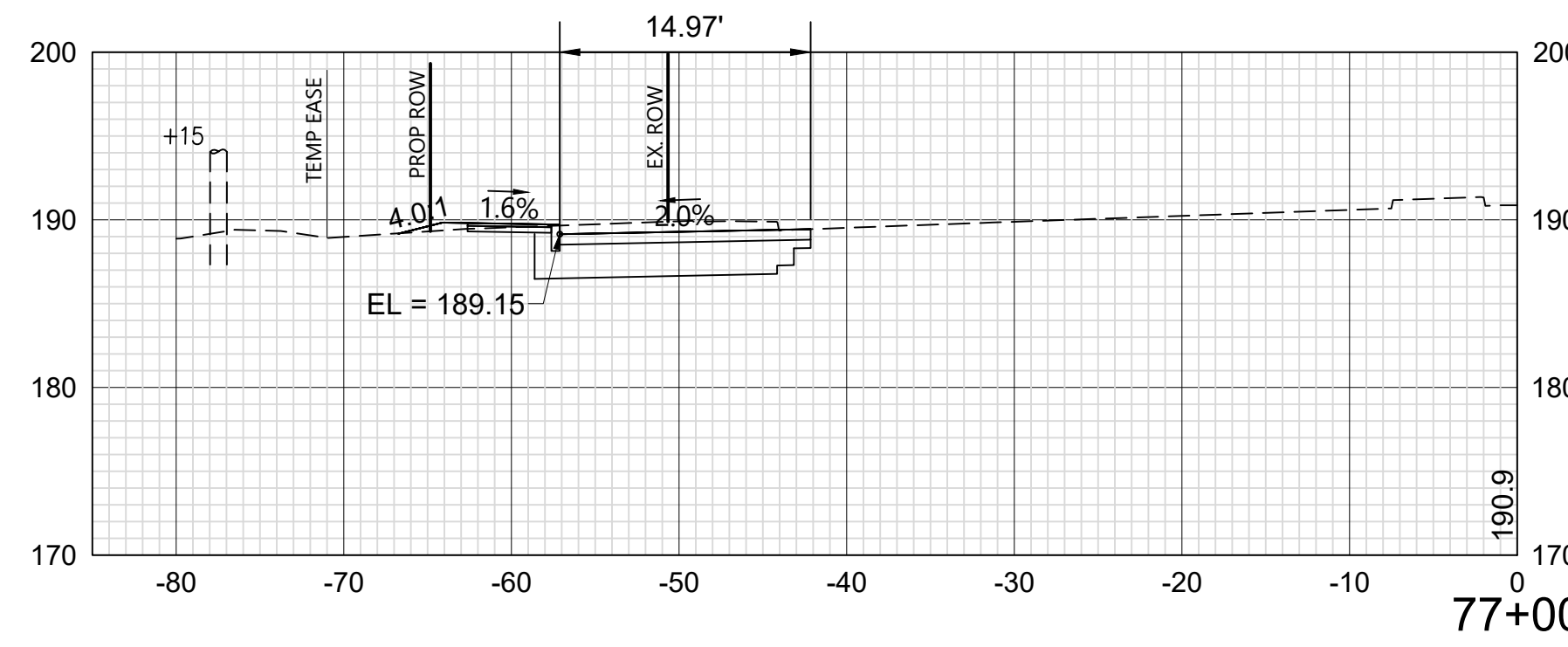
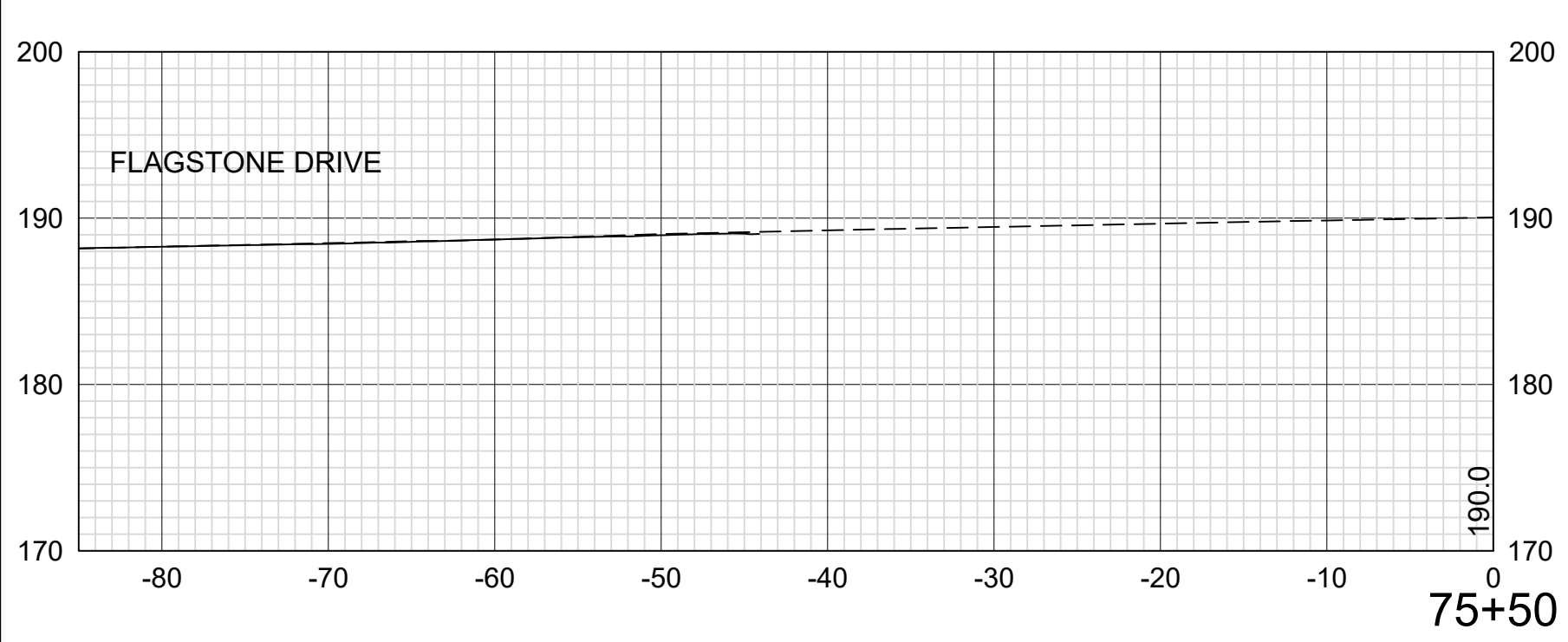
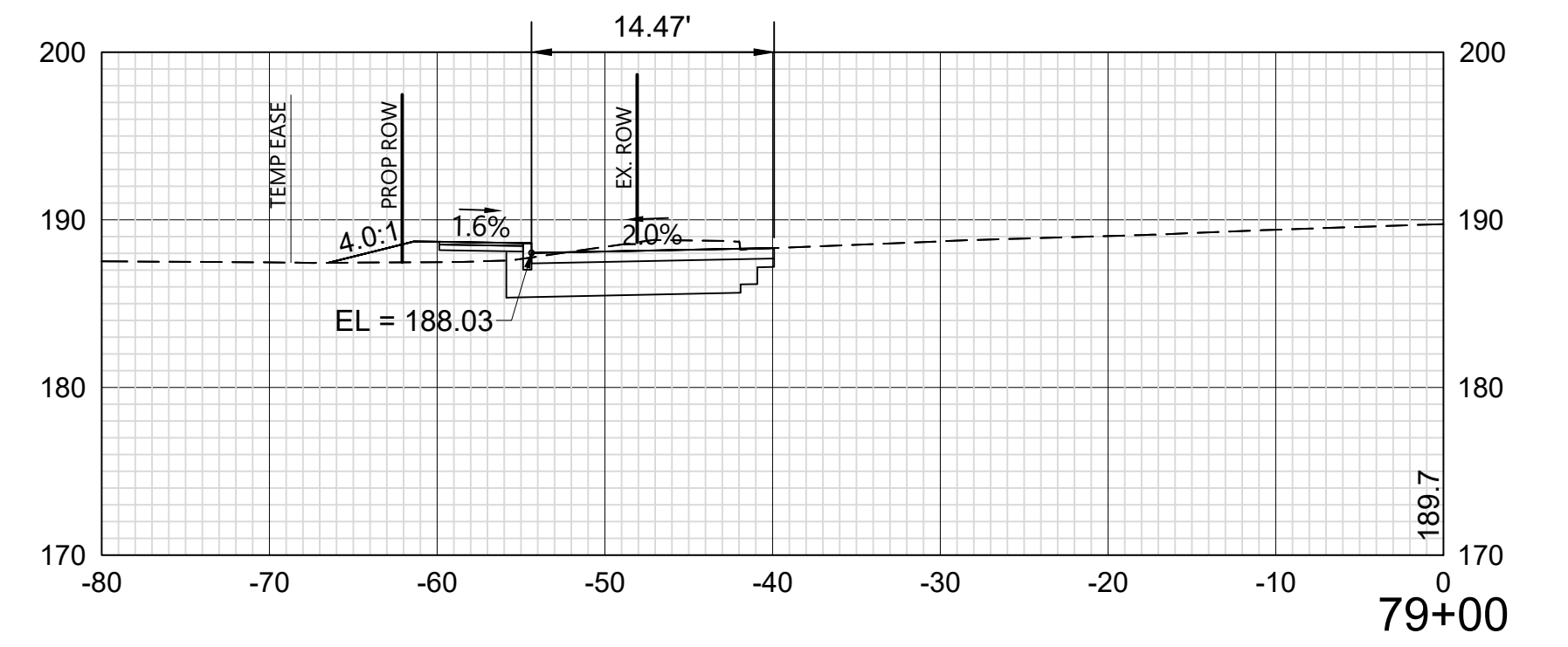
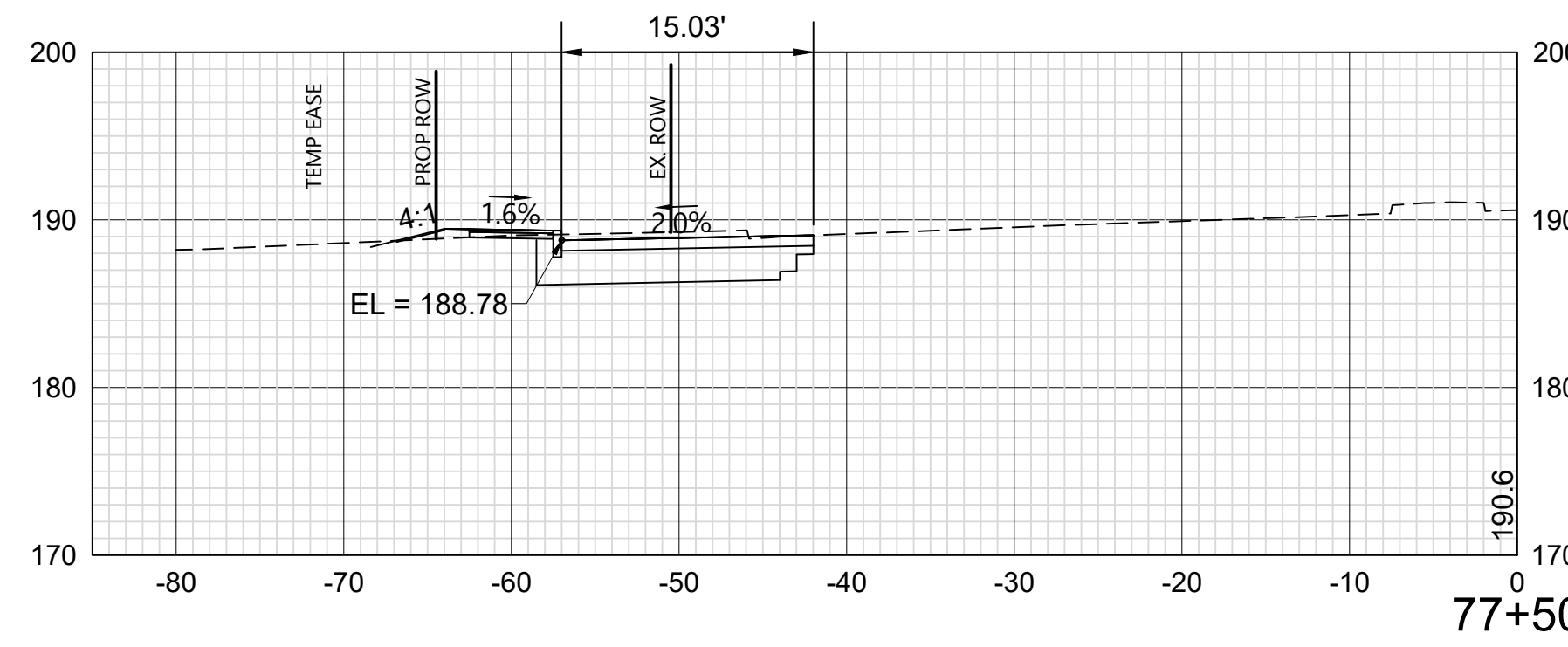
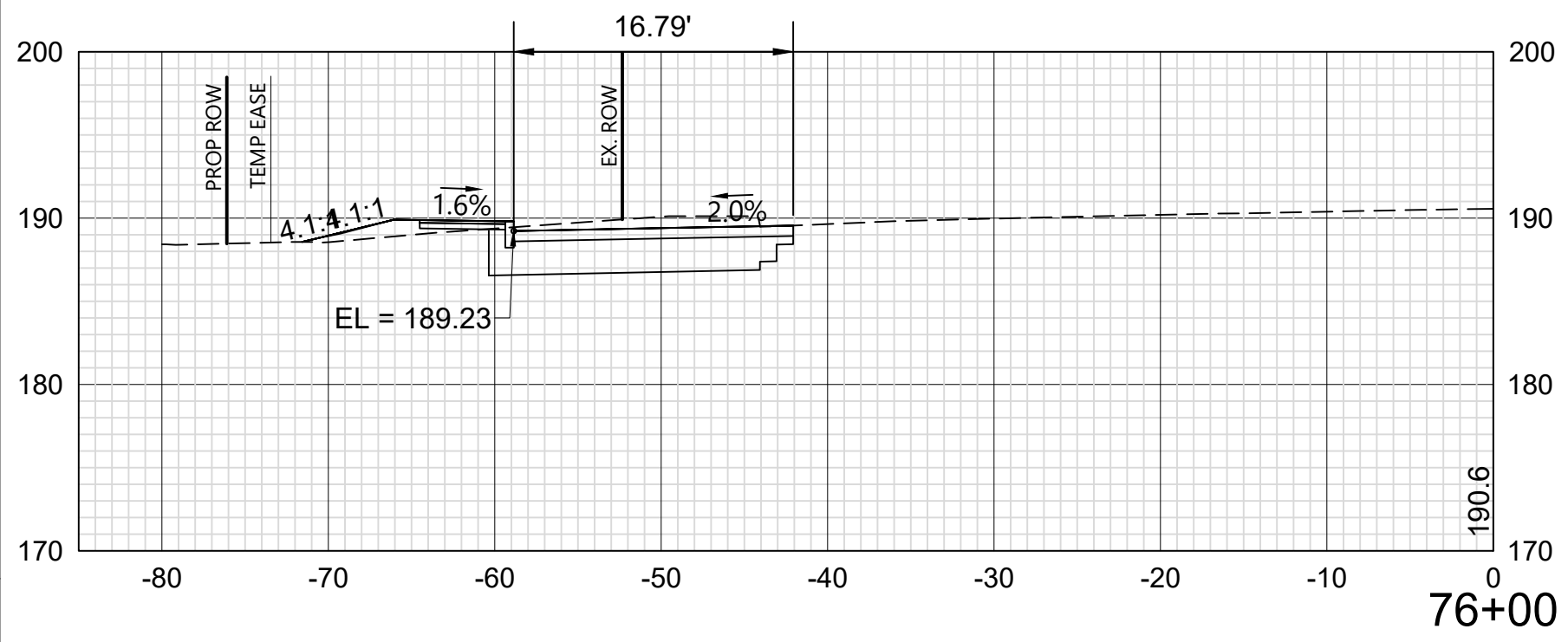
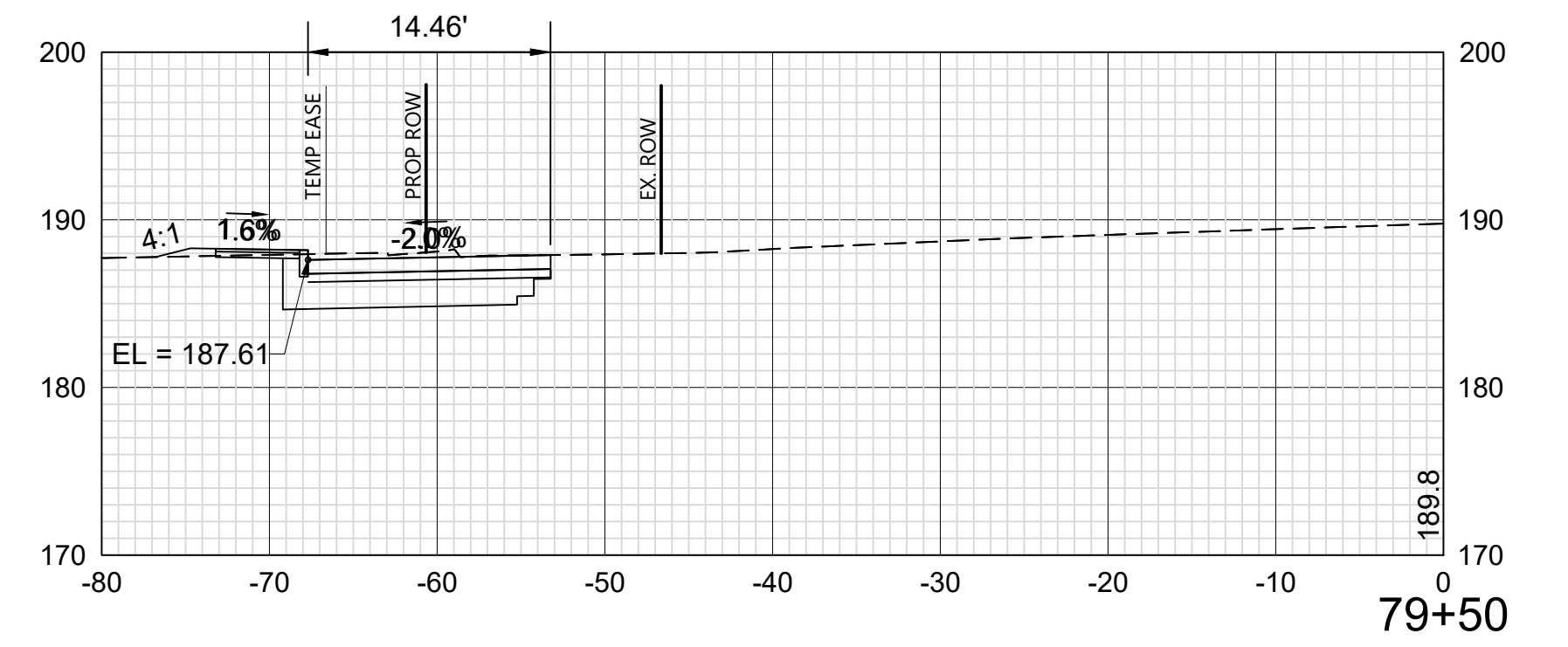
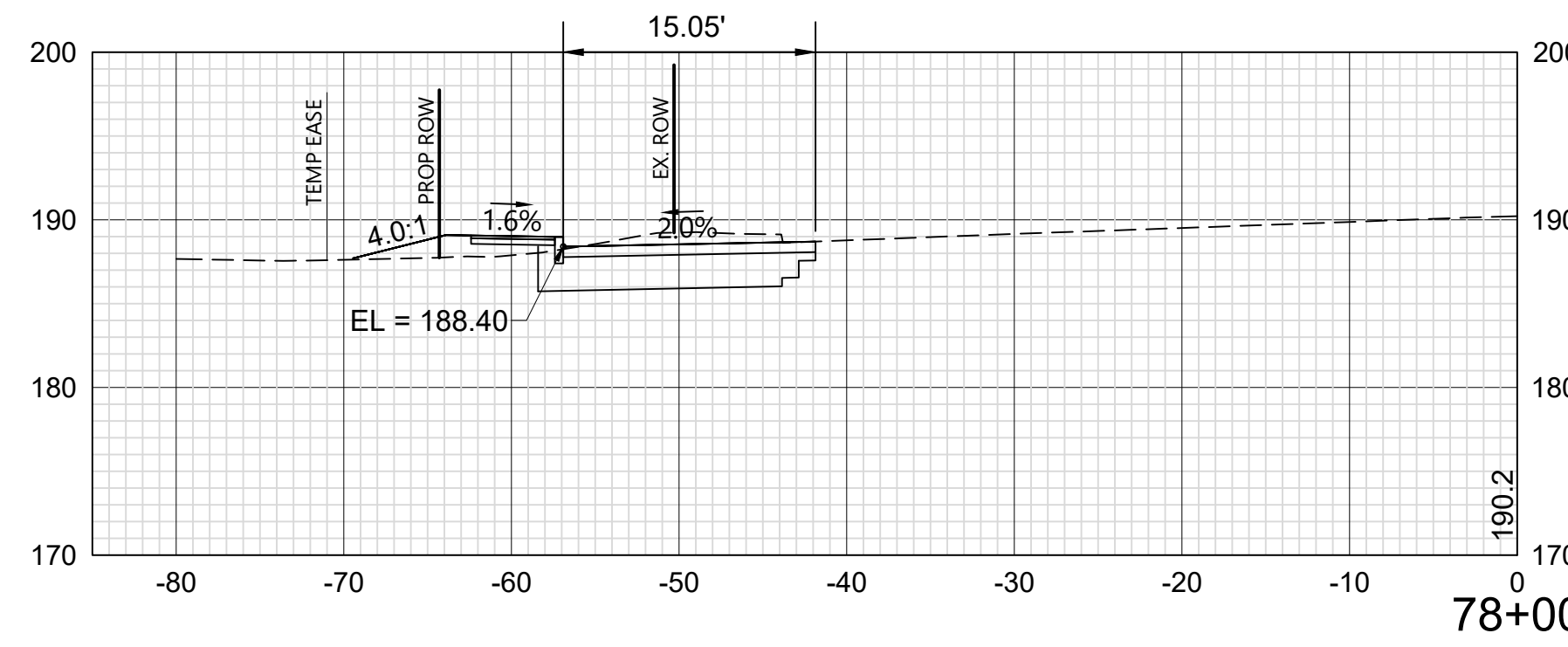
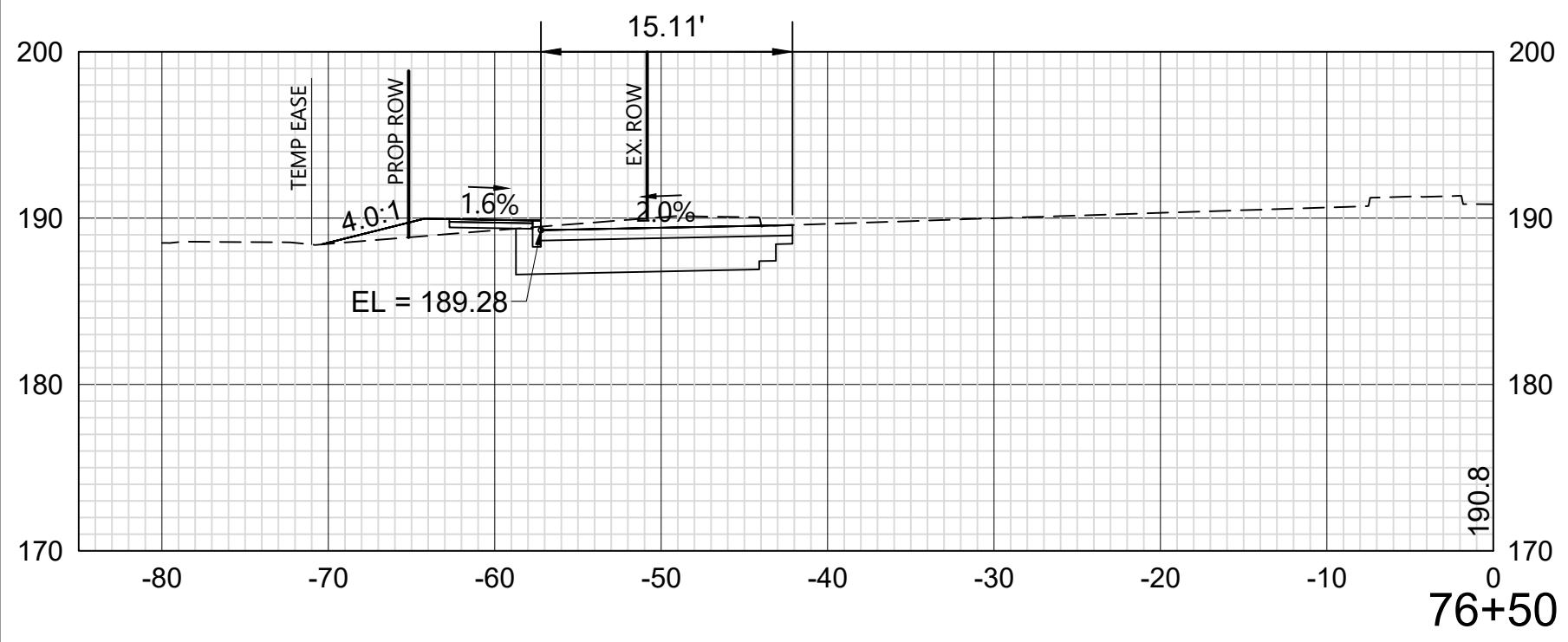
LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

CROSS SECTIONS

		DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
		17-Feb-23	52573.00	52573XS	41754	34	35

SDR PROCESSED	DATE	
	NEW DESIGN	
	SHEET CHECKED	
AS BUILT DETAILS	DATE	
	DATE	
	DATE	
NUMBER		
DATE		
STATION		
REVISIONS AFTER PROPOSAL		
DESCRIPTION		



DATE PLOTTED	VHB PROJECT NO.	DRAWING	STATE PROJECT NO.	SHEET NO.	TOTAL SHEETS
17-Feb-23	52573.00	52573XS	41754	35	35

LOWELL ROAD (NH ROUTE 3A)

LOWELL ROAD TO SAGAMORE BRIDGE

TOWN OF HUDSON, NEW HAMPSHIRE

CROSS SECTIONS