

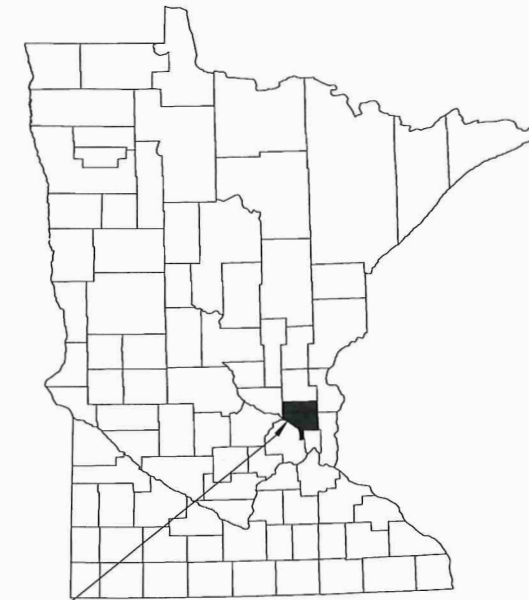
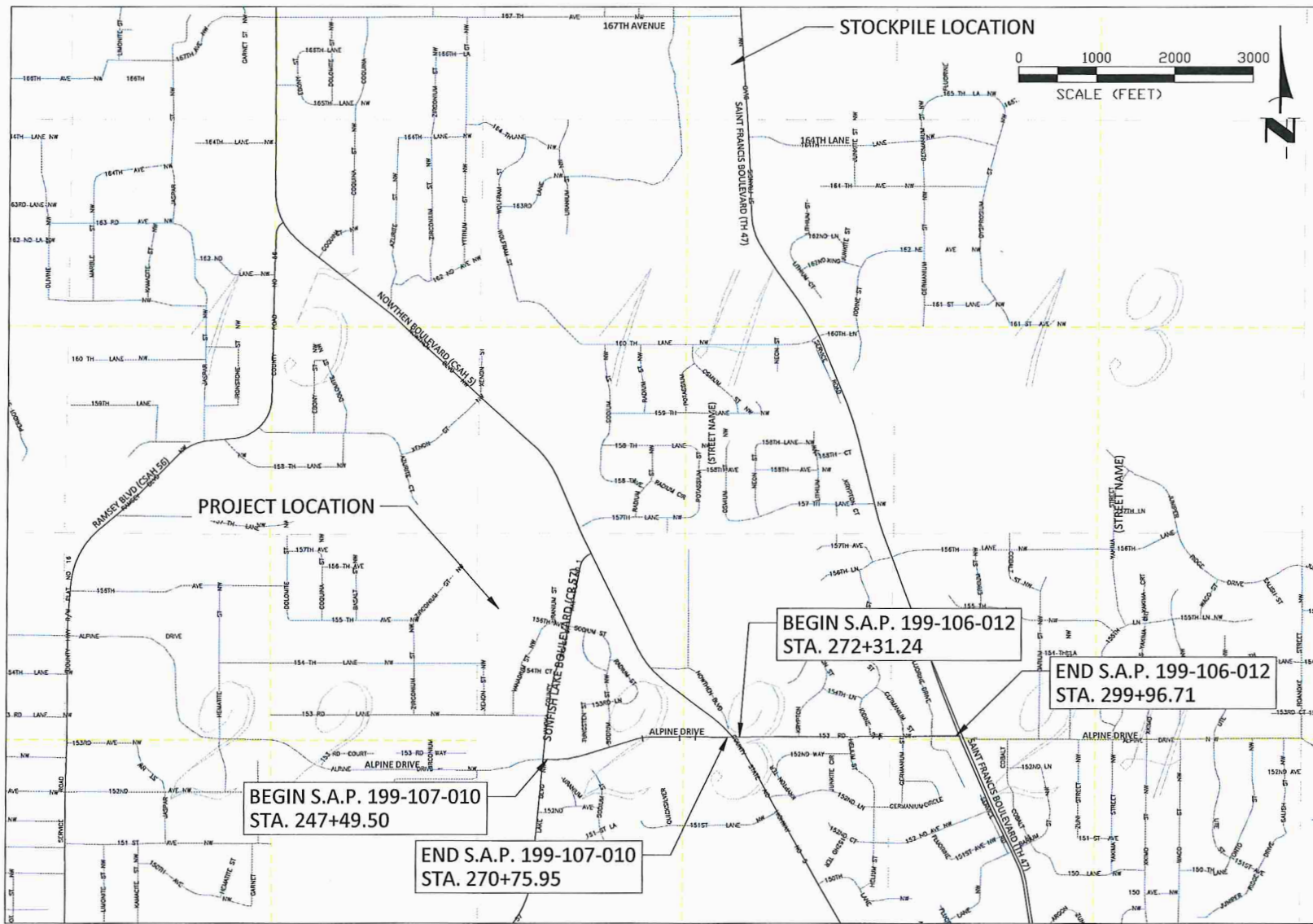
CITY OF RAMSEY

STREET CONSTRUCTION PLANS FOR BITUMINOUS RECLAMATION AND PAVING.

S.A.P. 199-106-012 & S.A.P. 199-107-010

S.A.P. 199-107-010 LOCATED ON ALPINE DRIVE BETWEEN SUNFISH LAKE BOULEVARD (CR 57) AND NOWTHEN BOULEVARD (CSAH 5) FROM NW 1/4 OF THE SW 1/4 OF S23, T32, R25 TO NW 1/4 OF THE SE 1/4 OF S23, T32, R25

S.A.P. 199-106-012 LOCATED ON ALPINE DRIVE BETWEEN NOWTHEN BOULEVARD (CSAH 5) AND SAINT FRANCIS BOULEVARD (TH 47) FROM NW 1/4 OF THE SE 1/4 OF S23, T32, R25 TO SW 1/4 OF THE NW 1/4 OF S24, T32, R25



CITY OF RAMSEY
ANOKA COUNTY, MINNESOTA
DISTRICT: METRO

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL 1-800-252-1166 OR 651-454-0002



GOVERNING SPECIFICATIONS

THE 2020 EDITION OF THE MINNESOTA DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION SHALL GOVERN.

THE 2023 EDITION OF THE CITY ENGINEERS ASSOCIATION OF MINNESOTA "STANDARD SPECIFICATIONS" SHALL GOVERN FOR UTILITY INSTALLATIONS.

ALL FEDERAL, STATE AND LOCAL LAWS, REGULATIONS AND ORDINANCES SHALL BE COMPLIED WITH IN THE CONSTRUCTION OF THIS PROJECT.

ALL TRAFFIC CONTROL DEVICES AND SIGNING SHALL CONFORM TO THE MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.

SHEET INDEX

THIS PLAN CONTAINS 84 SHEETS

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01	TITLE SHEET
02	STATEMENT OF ESTIMATED QUANTITIES
03	TABULATIONS
04	ALIGNMENT LAYOUT
05-06	TYPICAL SECTIONS
07-09	CITY DETAILS
10	INTERSECTION DETAILS
11-16	MNDOT PEDESTRIAN RAMP DETAILS
17	MNDOT LOOP DETECTORS STANDARD PLAN
17A	ANOKA COUNTY LOOP DETECTOR DETAIL
18-19	SWPPP
20-27	GRADING & EROSION CONTROL
28-35	EXISTING CONDITIONS & REMOVALS
36-43	STREET CONSTRUCTION
44-47	PAVEMENT MARKINGS
48-65	CROSS SECTIONS - CR 57 TO CSAH 5
66-84	CROSS SECTIONS - CSAH 5 TO TH 47

Apr 24, 2025 - 10:03am G:\Engineering\AutoCad Dwg\Projects A-M\Alpine Drive - CR 57 to TH 47 25-03\Plan Drawings\25-03 Title Sheet.dwg

PROJECT	STA. TO STA.	GROSS LENGTH (FEET)	BRIDGE LENGTH (FEET)	NET LENGTH (FEET)	NET LENGTH (MILES)	ADT (2025)	ADT (2045)	DESIGN ESAL	R VALUE	TON DESIGN	DESIGN SPEED (MPH)	DESIGN SPEED NOT MET	NO. OF LANES	LANE WIDTH (FEET)	NO. OF SHOULDERS	SHOULDER WIDTH (FEET)	FUNCTIONAL CLASSIFICATION
S.A.P. 199-106-012	272+31.24 TO 299+96.71	2,765	0	2,765	0.5200	2,590	3,010	316,000	70	10	45	N/A	2	12	1 TO 2	0 TO 11	COLLECTOR
TRAIL S.A.P. 199-106-012 NORTH SIDE	278+59.97 TO 299+38.71	2,079	0	2,079	0.3900	N/A	N/A	N/A	70	N/A	20	299+12.42 TO 299+27.98 MATCH EXISTING	1	8	N/A	N/A	TRAIL
TRAIL S.A.P. 199-106-012 SOUTH SIDE	272+90.09 TO 299+95.82	2,706	0	2,706	0.5100	N/A	N/A	N/A	70	N/A	20	289+37.48 TO 289+62.22 MATCH EXISTING	1	8 TO 10	N/A	N/A	TRAIL
S.A.P. 199-107-010	247+49.50 TO 270+75.95	2,326	0	2,326	0.4400	3,020	4,590	433,000	70	10	45	N/A	2	12	1 TO 2	3 TO 10	COLLECTOR
TRAIL S.A.P. 199-107-010 NORTH SIDE	247+49.50 TO 270+75.95	2,288	0	2,288	0.4300	N/A	N/A	N/A	70	N/A	20	257+49.24 TO 257+79.76 MATCH EXISTING	1	8	N/A	N/A	TRAIL
TRAIL S.A.P. 199-107-010 SOUTH SIDE	247+49.50 TO 256+31.52	901	0	901	0.1700	N/A	N/A	N/A	70	N/A	20	256+20.38 TO 256+31.50 MATCH EXISTING	1	8	N/A	N/A	TRAIL

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

JOE FERIANDEK, P.E. *Joe Feriandek* 57095 DATE 03/21/25
LIC. NO.

APPROVED: *Bruce J...* DATE 4/25/2025
CITY ENGINEER, CITY OF RAMSEY

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

STOPPING SIGHT DISTANCE BASED ON:
3.5 FT - HEIGHT OF EYE
2.0 FT - HEIGHT OF OBJECT

DATUM:
VERTICAL: NAVD 88
HORIZONTAL: ANOKA COUNTY COORDINATES (1996 ADJUSTMENT)

SAP 199-106-012
SAP 199-107-010

DATE	REVISION
04/24/25	ADD LOOP DET. DETAIL
	ADD STORM STRUCTURE

DISTRICT STATE AID ENGINEER: REVIEWED FOR COMPLIANCE WITH STATE AID RULES/POLICY

FOR STATE AID ENGINEER: APPROVED FOR STATE AID FUNDING DATE

STATEMENT OF ESTIMATED QUANTITIES											
IP 25-03 ALPINE DRIVE RECONSTRUCTION (CR 57 / TH 47)											
CITY OF RAMSEY											
BASE BID											
NOTE	ITEM NO.	MNDOT NO.	ITEM	UNIT	PROJECT TOTALS QUANTITY	S.A.P. 199-106-012		S.A.P. 199-107-010		NON-PARTICIPATING QUANTITY	
						PARTICIPATING		PARTICIPATING			
						STREET	STORM	STREET	STORM		
	1	2021.501	MOBILIZATION	LS	1.000			0.4	0.01	0.06	0.53
1	2	2101.502	CLEARING AND GRUBBING	TREE	11					11	
	3	2104.502	REMOVE CURB AND GUTTER	EA	6					6	
1	4	2104.502	REMOVE LOOP DETECTOR	EA	5		4			1	
1	5	2104.503	REMOVE CURB AND GUTTER	LF	3479	630		2849			
	6	2104.503	REMOVE SEWER PIPE (STORM)	LF	256	57		199			
1	7	2104.503	SAWING PAVEMENT (FULL DEPTH)	LF	1109	721		388			
1	8	2104.504	REMOVE PAVEMENT (BITUMINOUS)	SY	231	231					
1	9	2104.504	REMOVE PAVEMENT (CONCRETE)	SY	40	34		6			
2	10	2105.607	SELECT GRANULAR BORROW (LV)	CY	2855			2855			
	11	2106.507	EXCAVATION - COMMON (EV)	CY	556	181		375			
	12	2106.601	DEWATERING	LS	1				1		
11	13	2106.607	HAUL & STOCKPILE RECLAIM MATERIAL (LV)	CY	4422	2108		2314			
	14	2108.504	GEOTEXTILE FABRIC TYPE 4	SY	47			47			
	15	2112.519	SUBGRADE PREPARATION	RDST	41.8	25.1		16.7			
	16	2112.604	SUBGRADE PREPARATION (TRAIL)	SY	1303			1303			
	17	2123.610	STREET SWEEPER (WITH PICKUP BROOM)	HR	60	20		40			
	18	2130.523	WATER	MGAL	64	19		45			
2	19	2211.507	AGGREGATE BASE CLASS 5 MODIFIED (CV)	CY	1920			1920			
11	20	2215.504	FULL DEPTH RECLAMATION	SY	20440	12849		7591			
11	21	2215.504	FULL DEPTH RECLAMATION (BIT. TRAIL)	SY	1354			1354			
	22	2232.504	MILL BITUMINOUS SURFACE (2.0")	SY	581	187		394			
4	23	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	1783	1010		773			
5	24	2360.509	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3,C)	TON	3016	1903		1113			
5	25	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) (DRIVEWAY)	TON	17	17					
5	26	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) (ROADWAY)	TON	3023	1712		1311			
5	27	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) (TRAIL)	TON	196	3		193			
	28	2411.502	CONSTRUCT CONCRETE END CAP	EA	2				2		
	29	2452.618	SHEET PILING	SF	126				126		
	30	2501.502	15" RC PIPE APRON	EA	1				1		
	31	2501.502	18" RC PIPE APRON	EA	2		1		1		
	32	2501.502	58" SPAN RC PIPE-ARCH APRON	EA	2				2		
	33	2501.602	TRASH GUARD FOR 15" RC PIPE APRON	EA	1				1		
	34	2501.602	TRASH GUARD FOR 18" RC PIPE APRON	EA	2		1		1		
12	35	2503.503	15" RC PIPE SEWER DESIGN 3006 CLASS III	LF	170					170	
12	36	2503.503	18" RC PIPE SEWER DESIGN 3006 CLASS III	LF	136		77			59	
12	37	2503.503	58" SPAN RC PIPE-ARCH SEWER CLASS IIA	LF	69					69	
	38	2503.602	CONNECT TO EXISTING STORM SEWER	EA	1		1				
	39	2503.603	CLEAN & VIDEO TAPE PIPE SEWER (STORM)	LF	367		69			298	
	40	2506.502	ADJUST FRAME AND RING CASTING	EA	2	2					
	41	2506.502	CASTING ASSEMBLY (STORM)	EA	7					7	
	42	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 2'X3'	EA	3					3	
	43	2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	EA	4					4	
	44	2506.602	GROUT CATCH BASIN	EA	9		5			4	
	45	2511.507	RANDOM RIP RAP CLASS III	CY	12					12	
	46	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	LF	3480	631		2849			
10	47	2563.601	TRAFFIC CONTROL	LS	1	0.4		0.6			
	48	2565.602	RIGID PVC LOOP DETECTOR 6'X6'	EA	5	4		1			
	49	2565.603	2" NON-METALLIC CONDUIT	LF	119	105		14			
	50	2573.501	STORM DRAIN INLET PROTECTION	EA	21	11		10			
	51	2573.502	STABILIZED CONSTRUCTION EXIT	EA	4	2		2			
	52	2573.503	SILT FENCE; TYPE MS	LF	5143	304		4839			
3	53	2574.507	TOPSOIL (LV)	CY	722	235		487			
6	54	2574.508	FERTILIZER TYPE 3	LB	112	68		44			
7	55	2574.508	FERTILIZER TYPE 4	LB	58			58			
	56	2575.504	ROLLED EROSION PREVENTION CATEGORY 20	SY	2326			2326			
	57	2575.505	SEEDING	ACRE	1.04	0.34		0.7			
9	58	2575.508	HYDAULIC MULCH MATRIX	LB	2240	1360		880			
6	59	2575.508	SEED RESIDENTIAL TURFGRASS	LB	112	68		44			
8	60	2575.508	SEED WET DITCH	LB	10			10			
	61	2575.601	LANDSCAPE RESTORATION	LS	1	0.5		0.5			
	62	2582.503	24" SOLID LINE MULTI COMP	LF	545	341		204			
	63	2582.503	4" DOUBLE SOLID LINE MULTI COMP	LF	5815	2909		2906			
	64	2582.503	4" SOLID LINE MULTI COMP	LF	11503	6190		5313			
	65	2582.518	PAVT MSSG MULTI COMP	SF	210	90		120			

STATEMENT OF ESTIMATED QUANTITIES										
IP 25-03 ALPINE DRIVE RECONSTRUCTION (CR 57 / TH 47)										
CITY OF RAMSEY										
ALTERNATIVE BID										
NOTE	ITEM NO.	MNDOT NO.	ITEM	UNIT	PROJECT TOTALS QUANTITY	S.A.P. 199-106-012		S.A.P. 199-107-010		NON-PARTICIPATING QUANTITY
						PARTICIPATING		PARTICIPATING		
						STREET	STORM	STREET	STORM	
1	66	2104.503	REMOVE CURB AND GUTTER	LF	229	209				20
1	67	2104.503	SAWING PAVEMENT (FULL DEPTH)	LF	333	272		57		4
1	68	2104.504	REMOVE PAVEMENT (BITUMINOUS)	SY	421	421				
1	69	2104.504	REMOVE PAVEMENT (CONCRETE)	SY	49	49				
	70	2106.507	EXCAVATION - COMMON (EV)	CY	290	198		82		10
11	71	2106.607	HAUL & STOCKPILE RECLAIM MATERIAL (LV)	CY	501	348		137		16
	72	2112.604	SUBGRADE PREPARATION (TRAIL)	SY	5332	3687		1489		156
	73	2130.523	WATER	MGAL	26	19		7		
2	74	2211.507	AGGREGATE BASE CLASS 5 MODIFIED (CV)	CY	60	60				
11	75	2215.504	FULL DEPTH RECLAMATION (BIT. TRAIL)	SY	5480	3812		1499		169
	76	2232.504	MILL BITUMINOUS SURFACE (2.0")	SY	27	27				
4	77	2357.506	BITUMINOUS MATERIAL FOR TACK COAT	GAL	28	28				
5	78	2360.509	TYPE SP 12.5 NON-WEARING COURSE MIXTURE (3,C)	TON	48	48				
5	79	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) (DRIVEWAY)	TON	3	3				
5	80	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) (ROADWAY)	TON	36	36				
5	81	2360.509	TYPE SP 9.5 WEARING COURSE MIXTURE (3,C) (TRAIL)	TON	791	547		221		23
	82	2504.602	ADJUST VALVE BOX	EA	8	5		3		
	83	2504.602	VALVE BOX SECTION	EA	3	2		1		
	84	2506.502	ADJUST FRAME AND RING CASTING	EA	2	2				
	85	2506.602	GROUT CATCH BASIN	EA	2		2			
	86	2521.504	6" CONCRETE WALK	SY	168	157				11
	87	2521.602	DRILL & GROUT REINF BAR (EPOXY COATED)	EA	105	98				7
	88	2531.503	CONCRETE CURB AND GUTTER DESIGN B618	LF	226	209				17
	89	2531.618	TRUNCATED DOMES	SF	134	116				18
	90	2563.601	ALTERNATE PEDESTRIAN ROUTE	LS	1	0.7		0.25		0.05
	91	2573.501	STORM DRAIN INLET PROTECTION	EA	4	4				
	92	2573.503	SILT FENCE; TYPE MS	LF	583	103		480		
3	93	2574.507	TOPSOIL (LV)	CY	378	258		107		13
6	94	2574.508	FERTILIZER TYPE 3	LB	106	74		28		4
7	95	2574.508	FERTILIZER TYPE 4	LB	2			2		
	96	2575.504	ROLLED EROSION PREVENTION CATEGORY 20	SY	52			52		
	97	2575.505	SEEDING	ACRE	0.54	0.37		0.15		0.02
9	98	2575.508	HYDAULIC MULCH MATRIX	LB	2120	1480		560		80
6	99	2575.508	SEED RESIDENTIAL TURFGRASS	LB	106	74		28		4
8	100	2575.508	SEED WET DITCH	LB	1			1		
	101	2575.601	LANDSCAPE RESTORATION	LS	1	0.8		0.1		0.1

PAY ITEM NOTES:

- REMOVAL LIMITS SHALL BE MARKED IN THE FIELD BY CITY STAFF.
- EV TO CV CONVERSION FACTOR = 1.25.
- LV TO CV CONVERSION FACTOR = 1.30.
- ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 0.07 GAL/SY.
- ESTIMATED QUANTITY BASED ON APPLICATION RATE OF 113 LB/SY-IN.
- ESTIMATED QUANTITY BASED ON 200 LB/ACRE.
- ESTIMATED QUANTITY BASED ON 120 LB/ACRE.
- ESTIMATED QUANTITY BASED ON 20 LB/ACRE.
- ESTIMATED QUANTITY BASED ON 4000 LB/ACRE.
- LUMP SUM QUANTITY SHALL INCLUDE ALL COST REQUIRED FOR MAINTAINING ALL FLAGGING OPERATIONS AS NECESSARY, MAINTAINING PEDESTRIAN ACCESS ROUTES, ANY SIGNAGE AND BARRICADES AS NECESSARY.
- EXCESS RECLAMATION MATERIAL SHALL BE HAULED FROM THE ONSITE STOCKPILE LOCATION TO THE CITY OF RAMSEY WATER TOWER SITE, 16600 SAINT FRANCIS BLVD. THE EXPECTED RECLAMATION DEPTH IS 10 INCHES. QUANTITY IS ESTIMATED FROM 4.5-INCHES OF REMOVAL BETWEEN CSAH 5 AND TH 47, 10-INCHES OF REMOVAL BETWEEN CR 57 AND CSAH 5, AND 2.5-INCHES REMOVAL ON TRAIL SECTIONS. HAULING BACK TO THE PROJECT SITE IS INCIDENTAL. RECLAIM MATERIAL USED AS AGGREGATE BASE SHALL BE PAID BY THE AGGREGATE BASE CLASS 5 MODIFIED PAY ITEM.
- THE EXCAVATION REQUIRED FOR UTILITY INSTALLATION IS INCIDENTAL TO THE UTILITY PAY ITEM. IF SUBGRADE MATERIAL IS DETERMINED TO BE UNUSABLE BY THE ENGINEER REPLACEMENT MATERIAL SHALL BE SELECT GRANULAR AND PAYMENT SHALL BE BY THE SELECT GRANULAR PAY ITEM.

GENERAL NOTES:

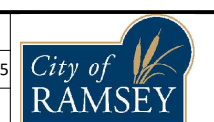
- THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. IT IS NOT GUARANTEED ANY OR ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. HE AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
- THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING IRRIGATION SYSTEMS WITHIN THE PROJECT CONSTRUCTION LIMITS BEFORE COMMENCING WORK. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING DAMAGE TO IRRIGATION SYSTEMS WHERE POSSIBLE.
- PERMANENT SIGN REMOVAL AND INSTALLATION IS TO BE PERFORMED BY CITY OF RAMSEY PUBLIC WORKS DEPARTMENT.

DATE	REVISION
04/24/25	REVISED STORM SEWER / REVISED PEDESTRIAN RAMPS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Joe Feriancek
 JOE FERIANCEK
 Date 03/21/25 Lic. No. 57095

DESIGNED BY:	JJF
DRAWN BY:	JJF
CHECKED BY:	JJF



CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

STATEMENT OF ESTIMATED QUANTITIES
 S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA

SHEET 02 OF 84 SHEETS

STORM SEWER TABULATION

STRUCTURE	STATION, OFFSET	STRUCTURE SIZE DIA. (IN.)	CASTING TYPE	RIM ELEV.	INVERT ELEV.	SUMP ELEV.	BUILD HEIGHT	INVERT DIRECTION	PIPE DIA. (IN.)	PIPE MATERIAL	PIPE GRADE (%)	PIPE LENGTH (LF)	STRUCTURE CONNECTED TO:
FES 100	259+19.13, R 37.42	N/A	N/A	N/A	863.32	N/A	N/A	N	18	RCP	0.49	16.0	CBMH 101
CBMH 101	259+13.13, R 21.42	48	R-3246R	866.604	863.40	859.40	7.62	S	18	RCP	-0.49	16.0	FES 100
					863.50			W	15	RCP	0.50	8.0	CBMH 102
					863.40			N	18	RCP	0.47	43.0	CBMH 103
CBMH 102	259+10.84, R 21.42	48	R-3246R	866.606	863.54	863.54	3.48	E	15	RCP	-0.50	8.0	CBMH 101
					863.54			W	15	RCP	0.50	111.0	CB 105
CBMH 103	259+19.13, L 21.42	48	R-3246R	866.604	863.60	863.60	3.42	S	18	RCP	-0.47	43.0	CBMH 101
					863.85			W	15	RCP	1.00	8.0	CB 104
CB 104	259+11.40, L 21.40	2' X 3'	R-3246R	866.606	863.93	863.93	3.00	E	15	RCP	-1.00	8.0	CBMH 103
CB 105	257+99.63, R 21.41	2' X 3'	R-3246R	866.976	864.10	864.10	3.27	E	15	RCP	-0.50	111.0	CBMH 102
FES 200	266+45.16, R 35.05	N/A	N/A	N/A	863.40	N/A	NA	N	15	RCP	0.51	14.0	CBMH 201
CBMH 201	266+45.17, R 21.29	48	R-3246R	866.41	863.47	859.47	7.36	S	15	RCP	-0.51	14.0	FES 200
					863.47			N	15	RCP	0.30	43.0	CB 202
CB 202	266+45.16, L 21.52	2' X 3'	R-3246R	866.47	863.60	863.60	3.20	S	15	RCP	-0.30	43.0	CBMH 201
FES 300	266+70.13, R 33.75	N/A	N/A	N/A	861.90	N/A	N/A	N	58 SPAN	ARCH RCP	0.00	69.0	FES 301
FES 301	266+70.07, L 35.41	N/A	N/A	N/A	861.90	N/A	N/A	S	58 SPAN	ARCH RCP	0.00	69.0	FES300
FES 400	290+11.68, R 34.85	N/A	N/A	N/A	871.60	N/A	N	N	18	RCP	-0.26	77.0	EX. CBMH

EARTHWORK SUMMARY

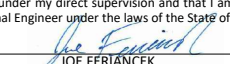
NOTES	ITEMS	UNIT	PROJECT TOTAL
	UNADJUSTED VOLUMES BASED ON CROSS SECTIONS		
	EXCAVATION		
1	TOPSOIL (EV)	CY	556
1	ALT BID TOPSOIL (EV)	CY	290
	EMBANKMENT		
2	TOPSOIL REQUIRED (CV)	CY	555
2	ALT BID TOPSOIL (EV)	CY	291
3	EMBANKMENT MATERIAL REQUIRED (CV)	CY	2284
	EARTHWORK QUANTITIES TO SEQ		
4	COMMON EXCAVATION (EV)	CY	556
4	ALT BID COMMON EXCAVATION (EV)	CY	290
5	SUBGRADE EXCAVATION (EV)	CY	0
6	COMMON TOPSOIL BORROW (LV)	CY	722
6	COMMON TOPSOIL BORROW (LV)	CY	378
7	SELECT GRANULAR BORROW (LV)	CY	2855
1	ASSUMES AVERAGE OF 4 INCHES OF TOPSOIL THICKNESS, QUANTITY ADDED TO COMMON EXCAVATION AND POND EXCAVATION PAY ITEMS.		
2	MINIMUM 4 INCHES OF TOPSOIL PLACED IN ALL VEGETATED AREAS DISTURBED DURING CONSTRUCTION.		
3	FILL VOLUMES FROM CROSS SECTIONS.		
4	INCLUDES TOPSOIL EXCAVATION AND REGULAR EXCAVATION.		
5	INCLUDES SUBGRADE EXCAVATION, BELOW EXISTING AGGREGATE.		
6	TOPSOIL GENERATED ON-SITE MAY BE RE-USED. CV TO LV FACTOR = 1.3.		
7	RECLAMATION MATERIAL MAY BE USED AS REPLACEMENT FOR SELECT GRANULAR BOROW		

STANDARD PLATES

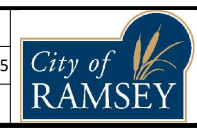
THE FOLLOWING STANDARD PLATES, APPROVED BY THE FEDERAL HIGHWAY ADMINISTRATION, SHALL APPLY ON THIS PROJECT	
3000 M	REINFORCED CONCRETE PIPE (6 SHEETS)
3006 H	GASKET JOINT FOR R.C. PIPE (2 SHEETS)
3007 F	SHEAR REINFORCEMENT FOR PRECAST DRAINAGE STRUCTURES
3014 L	REINFORCED CONCRETE PIPE ARCH (3 SHEETS)
3100 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE
3110 G	CONCRETE APRON FOR REINFORCED CONCRETE PIPE-ARCH
3133 D	RIPRAP AT RCP OUTLETS
3145 G	CONCRETE PIPE OR PRECAST BOX CULVERT TIES
4011 E	PRECAST CONCRETE BASE
4020 J	MANHOLE OR CATCH BASIN FOR (FOR USE WITH OR WITHOUT TRAFFIC LOADS) (2 SHEETS)
4026 B	CONCRETE-ENCASED CONCRETE ADJUSTING RINGS
4108 F	ADJUSTING RINGS (FOR CATCH BASINS AND MANHOLES)
4180 J	MANHOLE OR CATCH BASIN STEP
7038 A	DETECTABLE WARNING SURFACE (TRUNCATED DOMES)
7100 H	CONCRETE CURB AND GUTTER (DESIGN B AND DESIGN V)
8000 K	TEMPORARY CHANNELIZERS (TYPE C) (3 SHEETS)

DATE	REVISION
04/24/25	REVISED STORM SEWER

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota


 JOE FERIANCEK
 Date 03/21/25 Lic. No. 57095

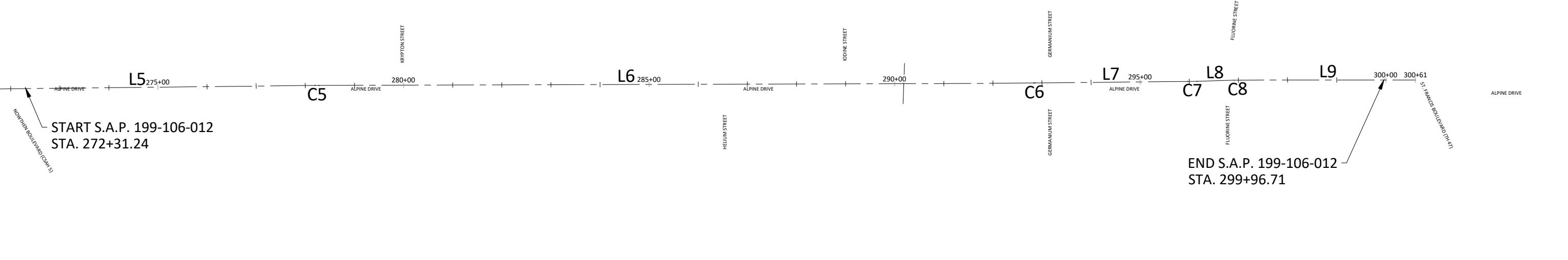
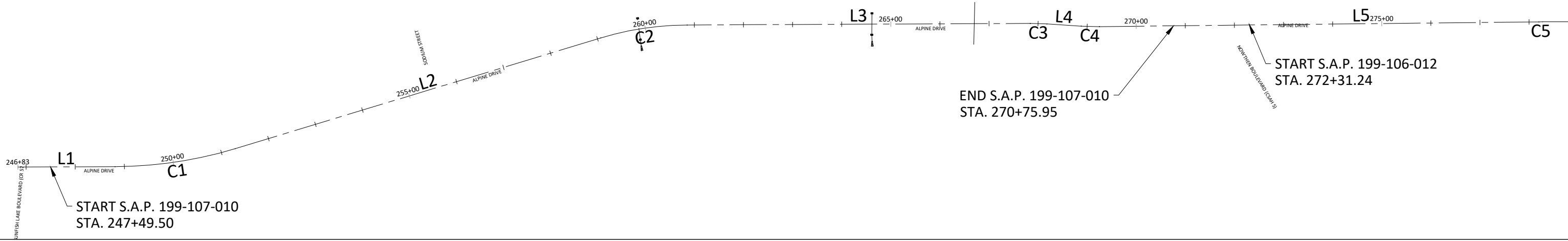
DESIGNED BY:	JJF
DRAWN BY:	JJF
CHECKED BY:	JJF



CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

TABULATIONS
 S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LINE TABLE: 25-03 PROPOSED CL ALIGNMENT

LINE #	LENGTH	DIRECTION	START POINT	END POINT
L1	197.630	N89° 48' 50.63"E	(458924.4040, 177493.6464)	(459122.0325, 177494.2878)
L2	777.683	N73° 09' 37.80"E	(459366.7649, 177530.9188)	(460111.1012, 177756.2072)
L3	698.673	N89° 44' 47.89"E	(460286.9772, 177782.6378)	(460985.6434, 177785.7273)
L4	69.880	S86° 21' 38.53"E	(461019.5919, 177784.7239)	(461089.3312, 177780.2883)
L5	894.928	N89° 22' 50.78"E	(461126.4724, 177779.3092)	(462021.3484, 177788.9810)
L6	1327.454	N89° 49' 32.14"E	(462029.1118, 177789.0348)	(463356.5597, 177793.0755)
L7	310.925	N89° 25' 13.41"E	(463487.2194, 177794.0280)	(463798.1284, 177797.1733)
L8	76.102	N88° 21' 18.27"E	(463816.7179, 177797.5342)	(463892.7887, 177799.7187)
L9	355.199	N89° 57' 09.77"E	(463906.7287, 177799.9246)	(464261.9275, 177800.2177)

CURVE TABLE: 25-03 PROPOSED CL ALIGNMENT

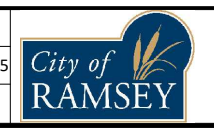
CURVE #	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT
C1	854.374	248.332	N81° 29' 14.22"E	(459122.0325, 177494.2878)	(459366.7649, 177530.9188)
C2	616.525	178.473	N81° 27' 12.84"E	(460111.1012, 177756.2072)	(460286.9772, 177782.6378)
C3	500.000	33.970	S88° 18' 25.32"E	(460985.6434, 177785.7273)	(461019.5919, 177784.7239)
C4	500.000	37.163	S88° 29' 23.87"E	(461089.3312, 177780.2883)	(461126.4724, 177779.3092)
C5	1000.000	7.764	N89° 36' 11.46"E	(462021.3484, 177788.9810)	(462029.1118, 177789.0348)
C6	1000.000	2.858	N89° 30' 08.14"E	(463356.5597, 177793.0755)	(463487.2194, 177794.0280)
C7	1000.000	18.593	N88° 53' 15.84"E	(463798.1284, 177797.1733)	(463816.7179, 177797.5342)
C8	500.000	13.942	N89° 09' 14.02"E	(463892.7887, 177799.7187)	(463906.7287, 177799.9246)

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

Joe Feriancek
 JOE FERIANCEK
 Date 03/21/25 Lic. No. 57095

DESIGNED BY:	JJF
DRAWN BY:	JJF
CHECKED BY:	JJF

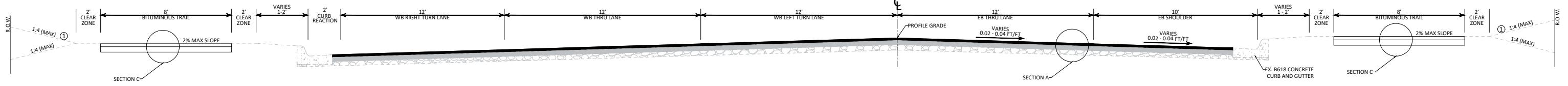


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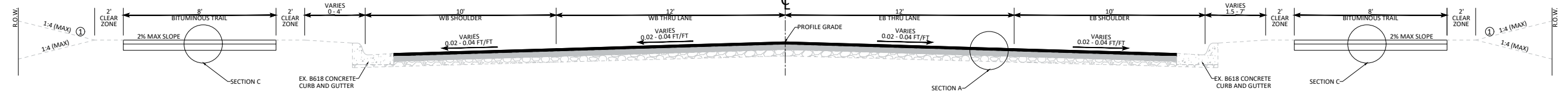
ALIGNMENT LAYOUT
 S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA

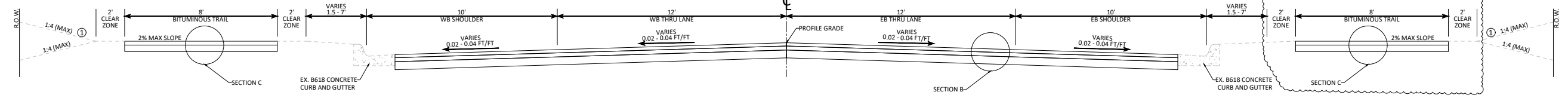
TYPICAL SECTION: 2-INCH MILL & OVERLAY W/ WB TURN LANES
ALPINE DRIVE STA. 247+49.50 TO 248+75.71



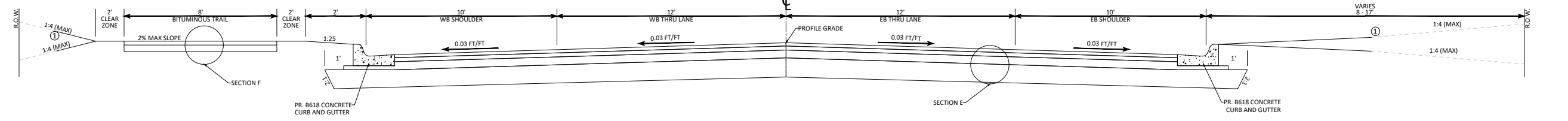
TYPICAL SECTION: 2-INCH MILL & OVERLAY
ALPINE DRIVE STA. 248+75.71 TO 251+85.06



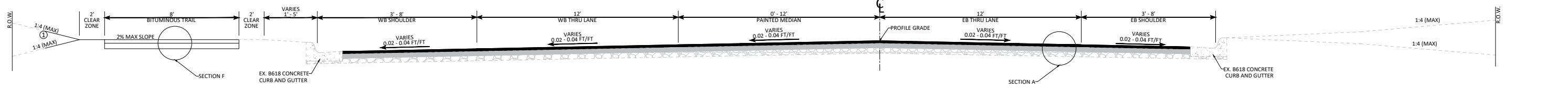
TYPICAL SECTION: FULL-DEPTH RECLAMATION
ALPINE DRIVE STA. 251+85.06 TO 255+75.00



TYPICAL SECTION: RAISE PROFILE
ALPINE DRIVE STA. 255+75.00 TO 268+50.10



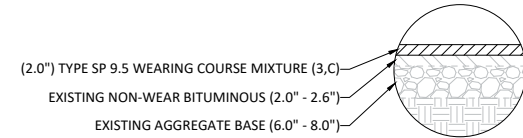
TYPICAL SECTION: 2" MILL & OVERLAY W/PAINTED MEDIAN
ALPINE DRIVE STA. 268+50.10 TO 269+00.00



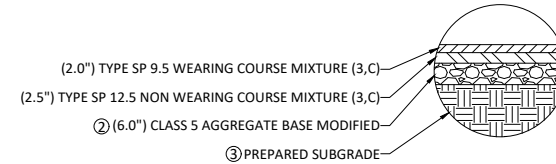
REFERENCE NOTES:

- ① GRADE TO MATCH EXISTING GROUND. ESTABLISH TURF USING A MINIMUM OF 4" TOPSOIL AND HYDROSEED WITH MNDOT SEED MIXTURE 25-151. SEE CITY DETAIL ERO-6 FOR TOPSOIL REQUIREMENTS.
- ② MODIFY CLASS 5 AGGREGATE BASE PER CITY STANDARD DETAIL STR-26. SEE SHEET 09. RECYCLED RECLAMATION MATERIAL MEETING STR-26 MAY BE USED AS AGGREGATE BASE.
- ③ CONTRACTOR SHALL SCARIFY AND COMPACT, ACCORDING TO THE SPECIFIED DENSITY METHOD, THE TOP 12 INCHES OF MATERIAL PRIOR TO PLACING CLASS 5 AGGREGATE BASE. THIS PROCESS SHALL BE INCIDENTAL TO THE SUBGRADE PREPARATION PAY ITEM.

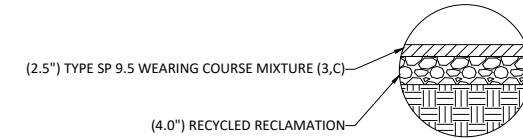
SECTION A: 2" MILL & OVERLAY



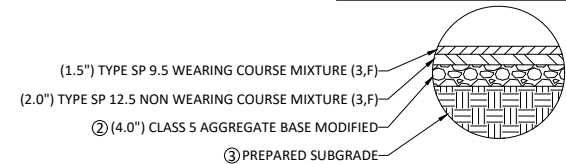
SECTION B: ROADWAY RECLAIM



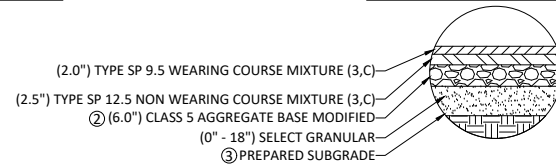
SECTION C: TRAIL RECLAIM



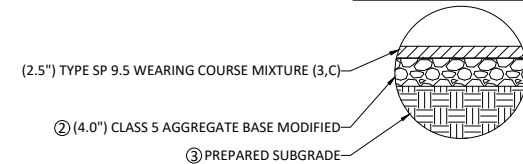
SECTION D: SIDE STREET CONNECTIONS



SECTION E: ROADWAY REBUILD



SECTION F: TRAIL REBUILD



PAVEMENT DESIGN:		PAVEMENT DESIGN:	
S.A.P. 199-106-012		S.A.P. 199-107-010	
20 YR DESIGN LANE BESALS:	316,000	20 YR DESIGN LANE BESALS:	433,000
DESIGN R-VALUE:	70	DESIGN R-VALUE:	70
MINIMUM REQUIRED		MINIMUM REQUIRED	
MINIMUM BIT (GE)	7.00	MINIMUM BIT (GE)	7.00
MIN. AGG. BASE (GE)	4.89	MIN. AGG. BASE (GE)	5.88
TOTAL REQUIRED GE	11.89	TOTAL REQUIRED GE	12.88

PROPOSED DESIGN		PROPOSED DESIGN	
WEARING COURSE (2.0")	4.50	WEARING COURSE (2.0")	4.50
NON-WEAR COURSE (2.5")	5.63	NON-WEAR COURSE (2.5")	5.63
AGG. BASE CLASS 5 (6.0")	6.00	AGG. BASE CLASS 5 (6.0")	6.00
TOTAL DESIGN GE	16.13	TOTAL DESIGN GE	16.13

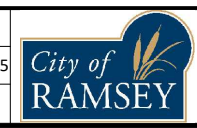
DATE	REVISION
04/24/25	SHOW 2' CLEAR ZONES ON TRAILS
05/19/25	SHOW 2' CLEAR ZONES ON TRAILS

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Joe Feriancek
JOE FERIANCEK
Date 03/21/25 Lic. No. 57095

DESIGNED BY: JJF
DRAWN BY: JJF
CHECKED BY: JJF

DATE: 03/21/25
FILE: 25-03

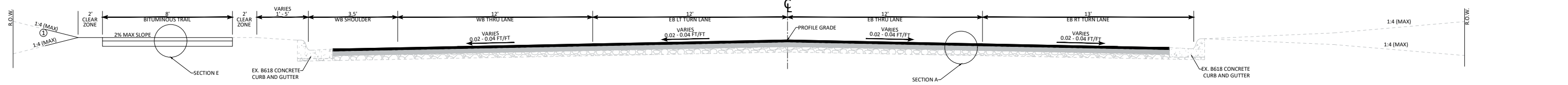


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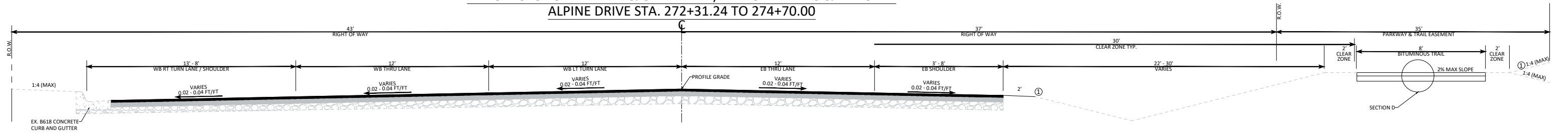
TYPICAL SECTIONS
S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA

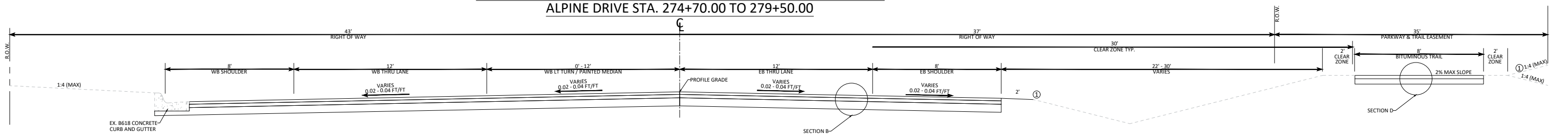
TYPICAL SECTION: 2" MILL & OVERLAY W/EB TURN LANES
ALPINE DRIVE STA. 269+00.00 TO 270+75.95



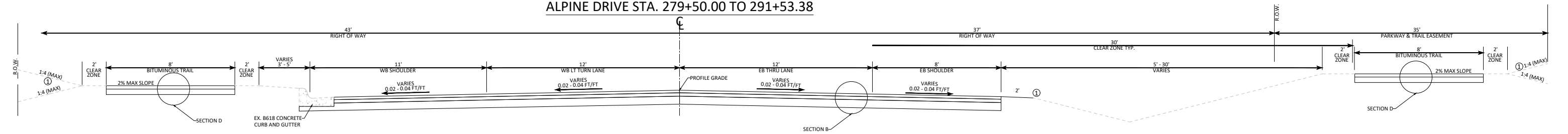
TYPICAL SECTION: 2" MILL & OVERLAY W/WB TURN LANES & EB RURAL
ALPINE DRIVE STA. 272+31.24 TO 274+70.00



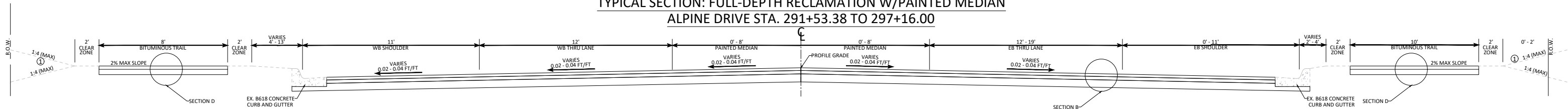
TYPICAL SECTION: FULL-DEPTH RECLAMATION W/PAINTED MEDIAN
ALPINE DRIVE STA. 274+70.00 TO 279+50.00



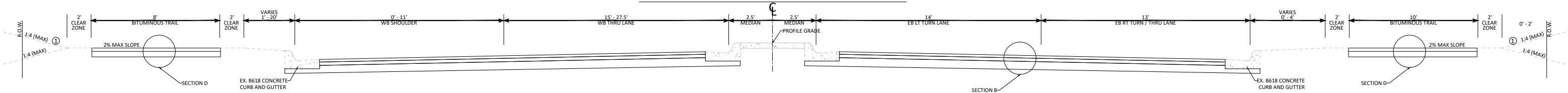
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ALPINE DRIVE STA. 279+50.00 TO 291+53.38



TYPICAL SECTION: FULL-DEPTH RECLAMATION W/PAINTED MEDIAN
ALPINE DRIVE STA. 291+53.38 TO 297+16.00



TYPICAL SECTION: FULL-DEPTH RECLAMATION W/CONCRETE MEDIAN
ALPINE DRIVE STA. 297+16.00 TO 299+96.71

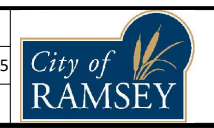


DATE	REVISION
04/24/25	SHOW 2' CLEAR ZONES ON TRAILS

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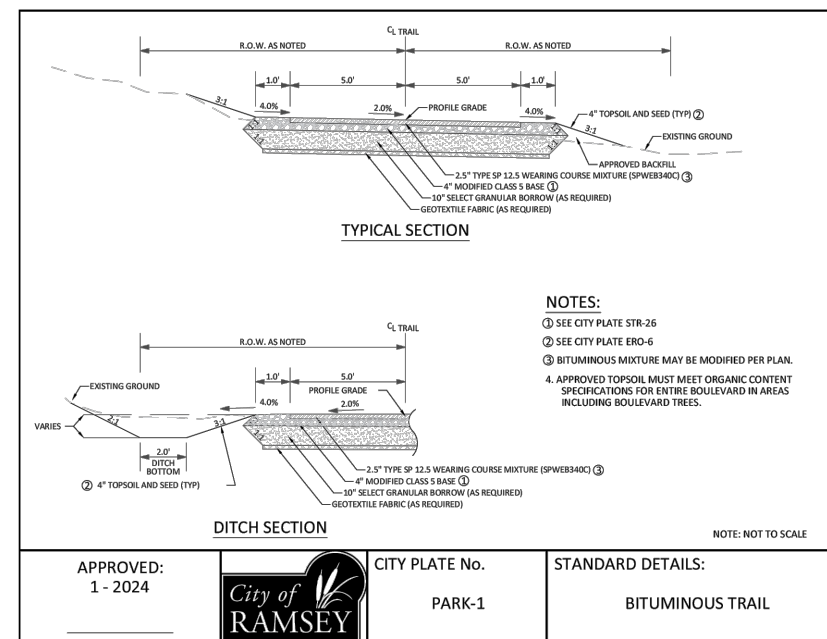
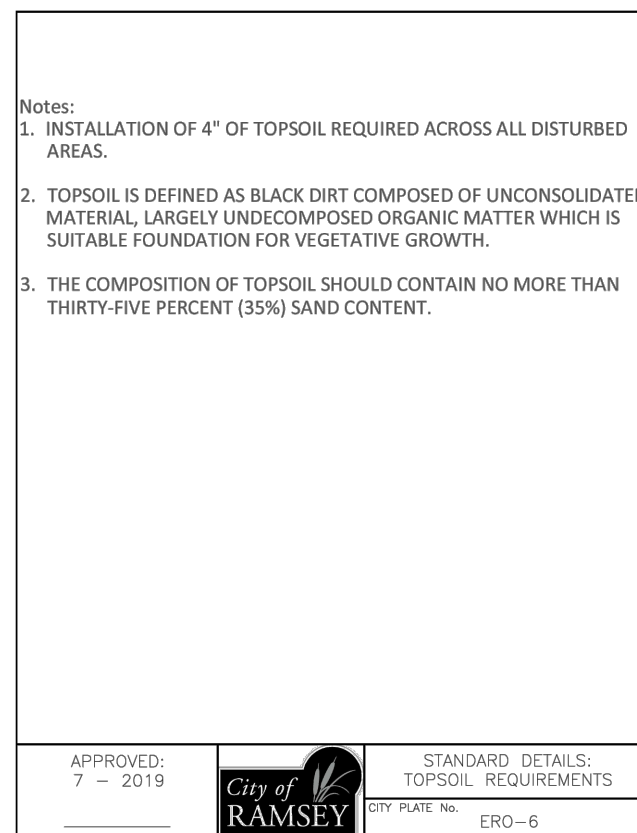
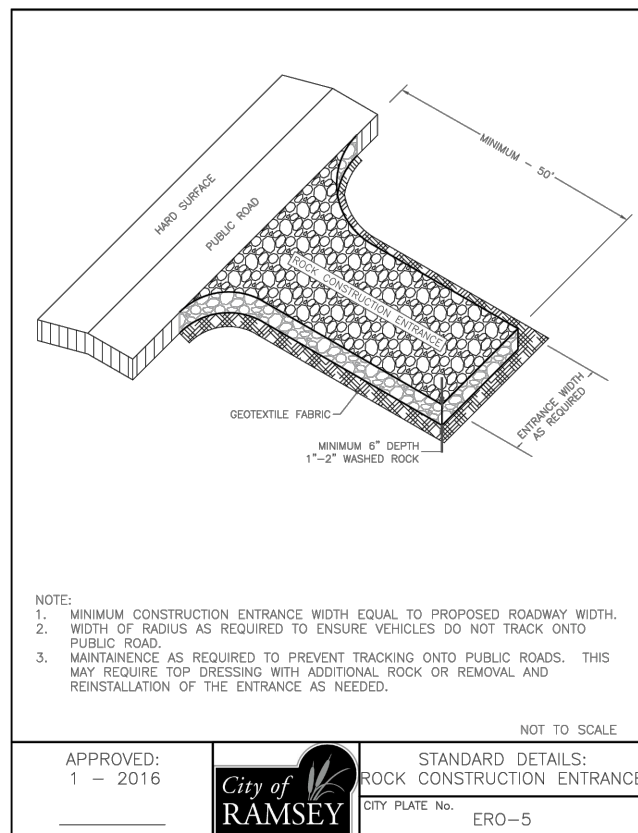
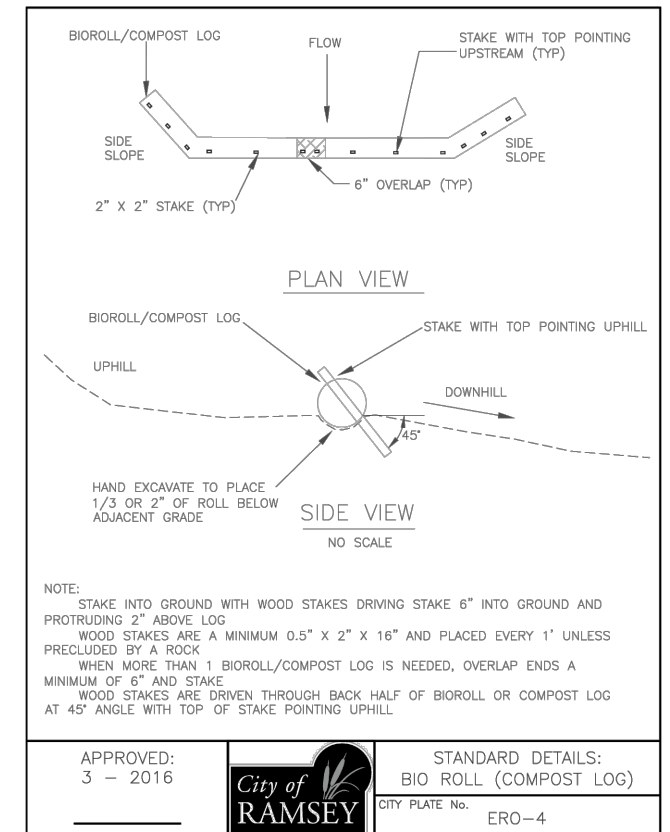
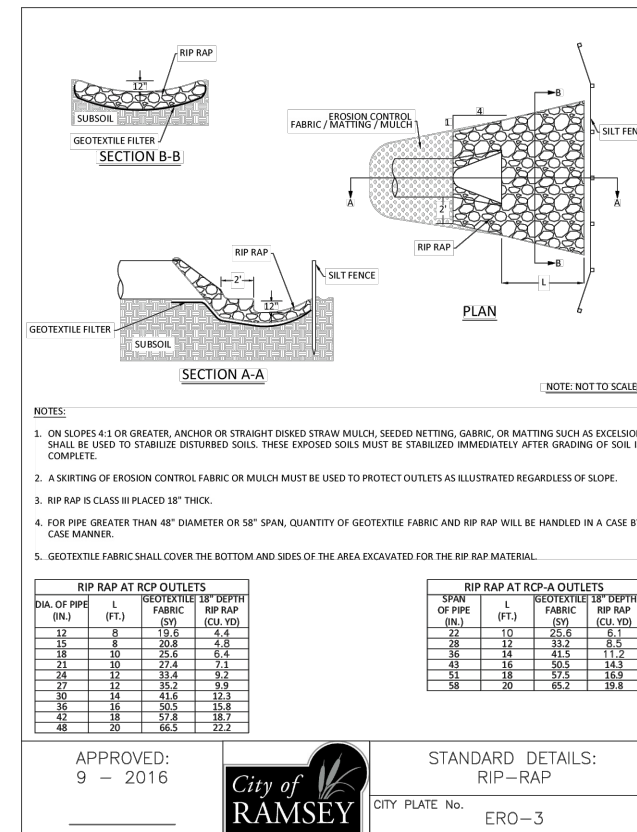
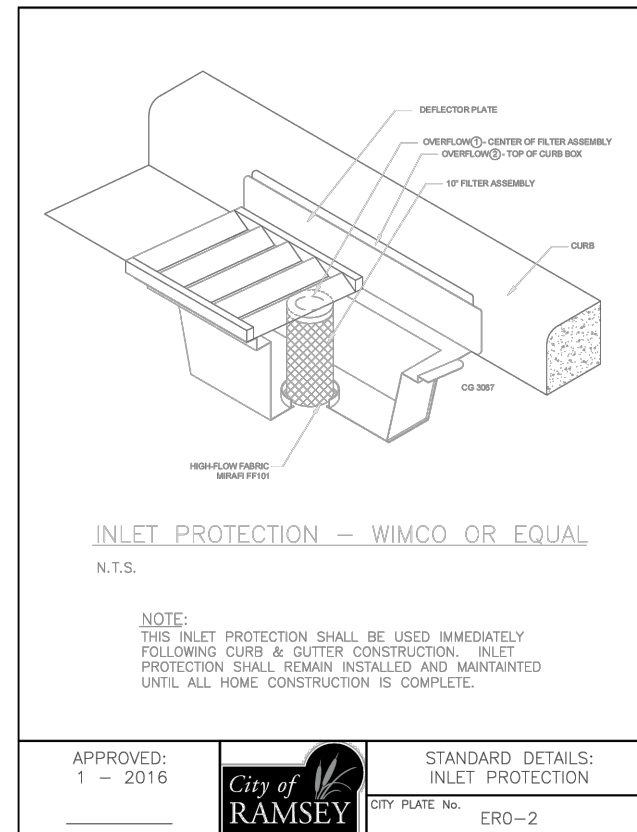
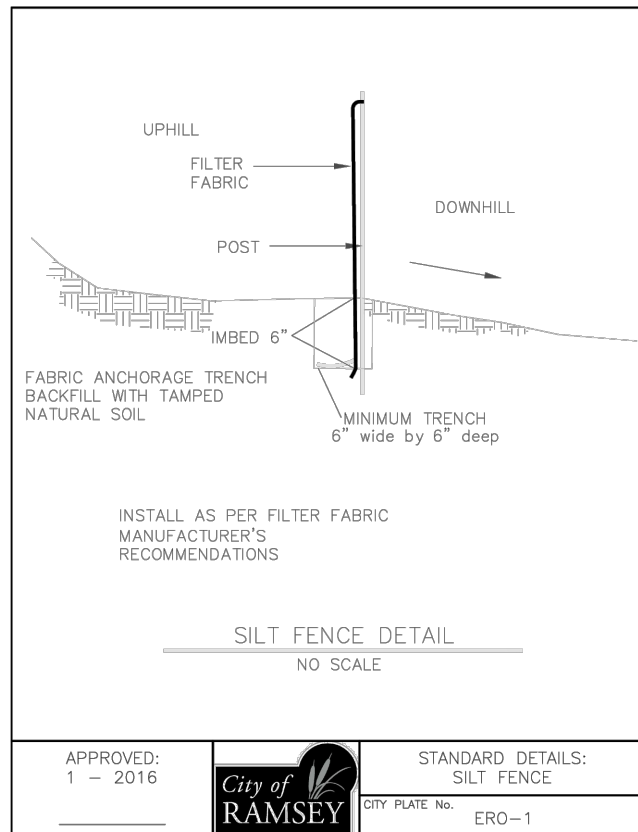
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CITY OF RAMSEY
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TYPICAL SECTIONS
 S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



DATE	REVISION

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Date 03/21/25 Lic. No. 57095

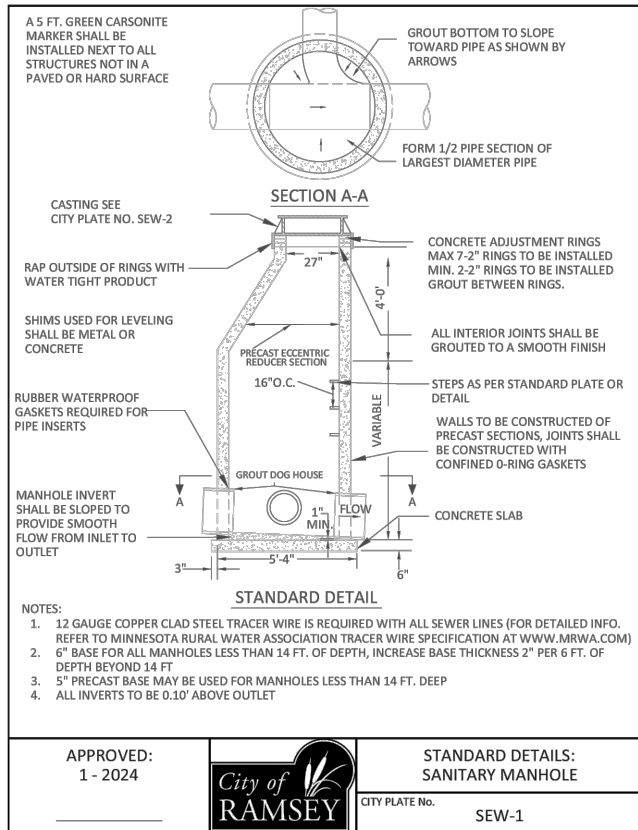
DESIGNED BY: JJF
DRAWN BY: JJF
CHECKED BY: JJF

DATE: 03/21/25
FILE: 25-03

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
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CITY DETAILS
S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA

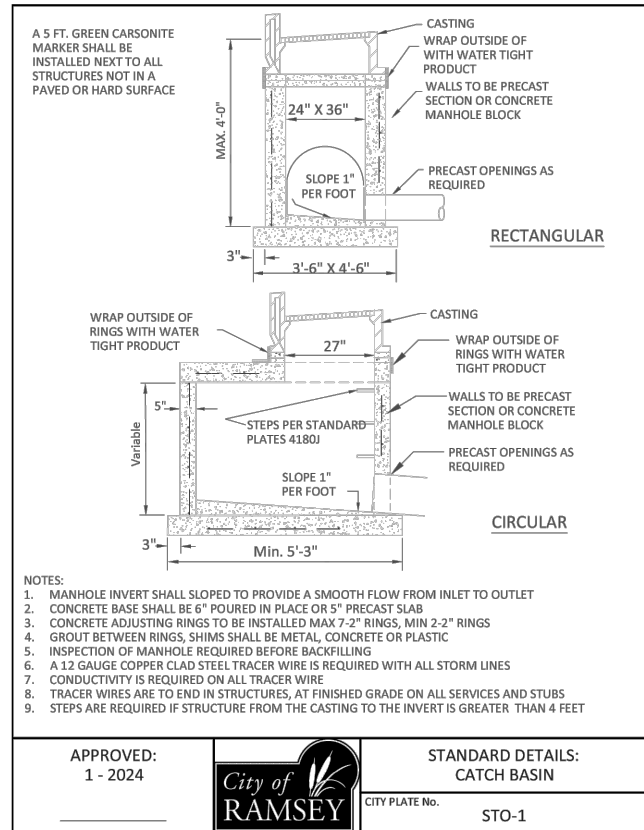


APPROVED: 1 - 2024

City of RAMSEY

CITY PLATE No. **SEW-1**

STANDARD DETAILS: **SANITARY MANHOLE**

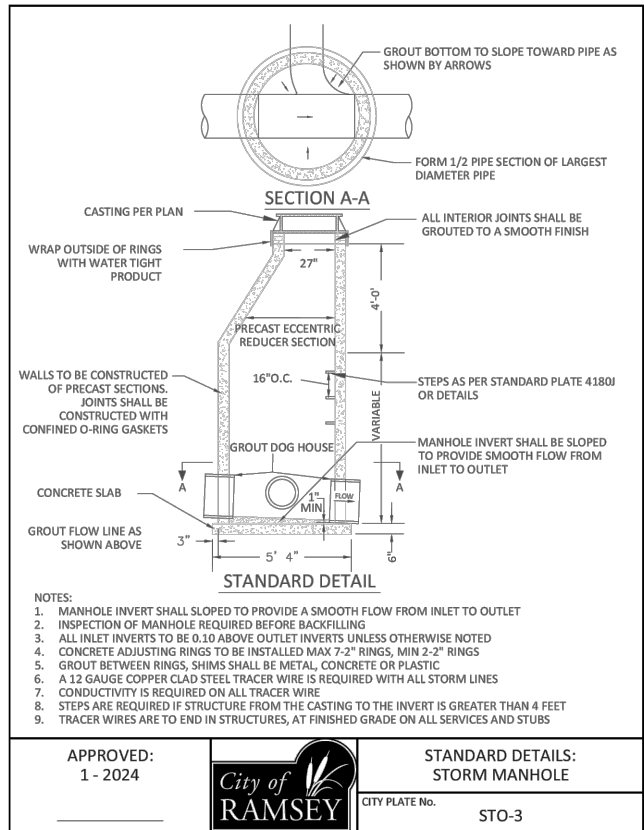


APPROVED: 1 - 2024

City of RAMSEY

CITY PLATE No. **STO-1**

STANDARD DETAILS: **CATCH BASIN**

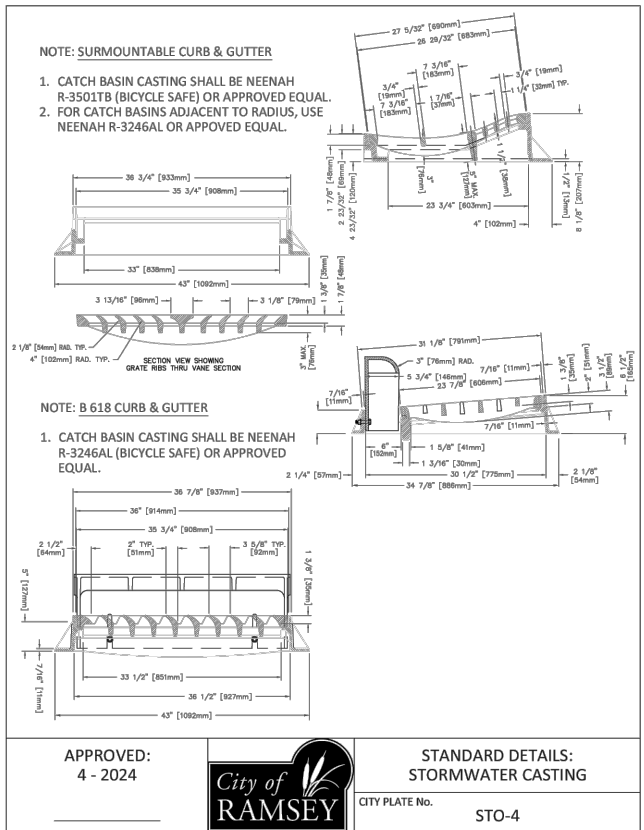


APPROVED: 1 - 2024

City of RAMSEY

CITY PLATE No. **STO-3**

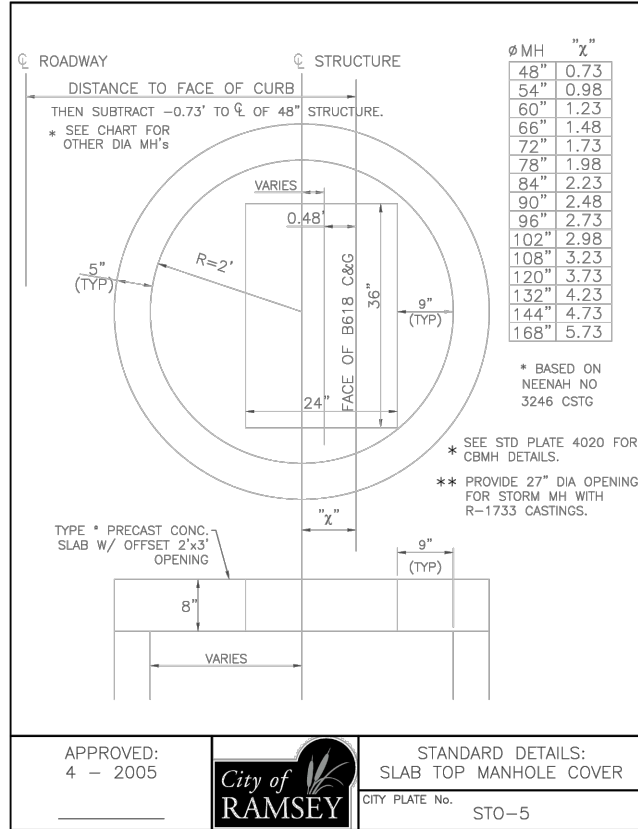
STANDARD DETAILS: **STORM MANHOLE**



APPROVED: 4 - 2024

City of RAMSEY

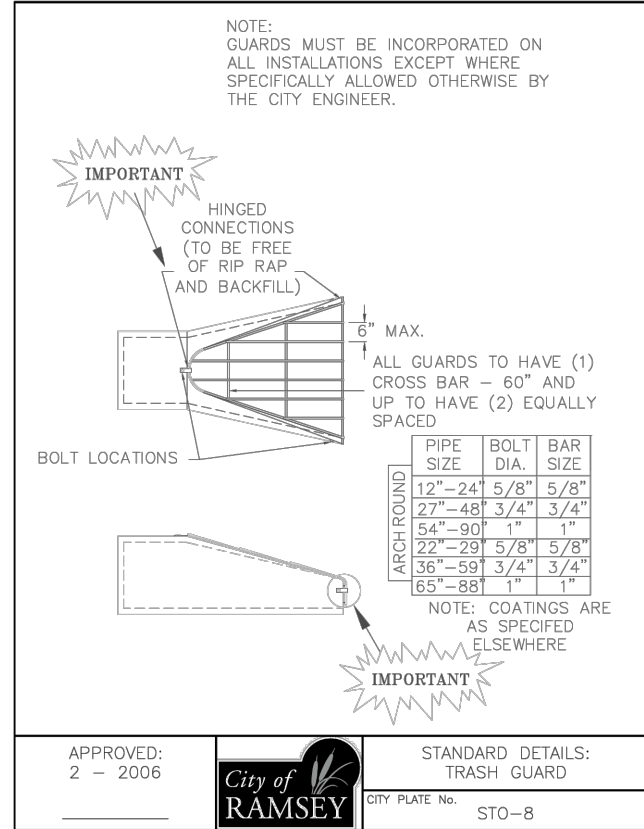
CITY PLATE No. **STO-4**



APPROVED: 4 - 2005

City of RAMSEY

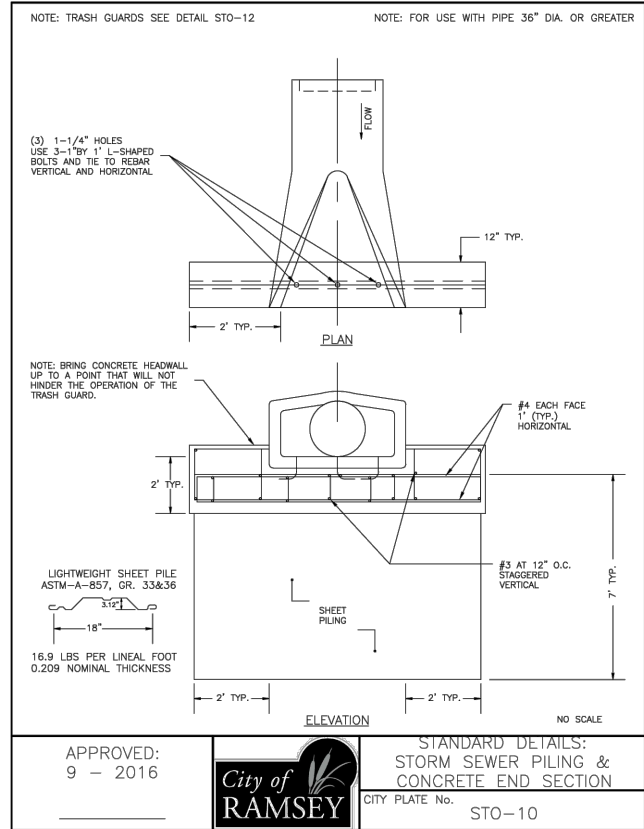
CITY PLATE No. **STO-5**



APPROVED: 2 - 2006

City of RAMSEY

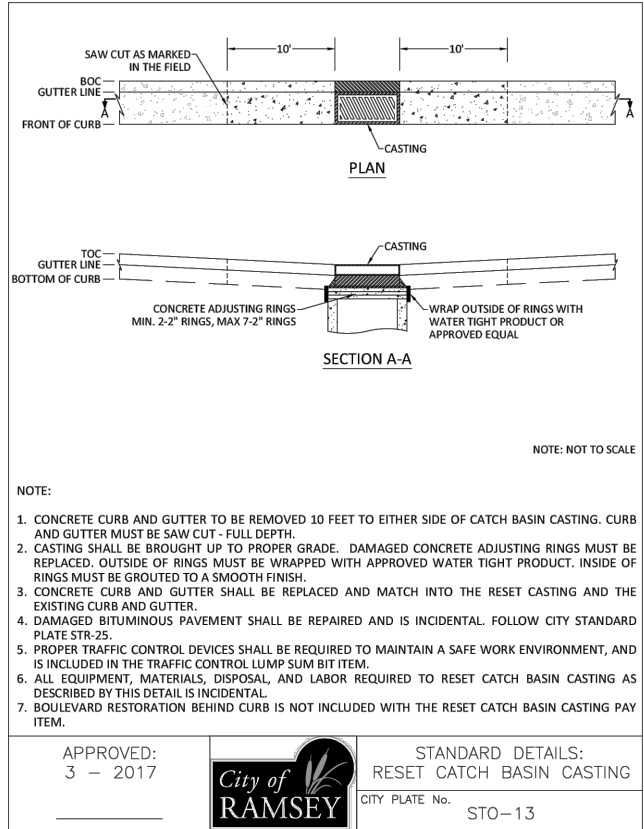
CITY PLATE No. **STO-8**



APPROVED: 9 - 2016

City of RAMSEY

CITY PLATE No. **STO-10**



APPROVED: 3 - 2017

City of RAMSEY

CITY PLATE No. **STO-13**

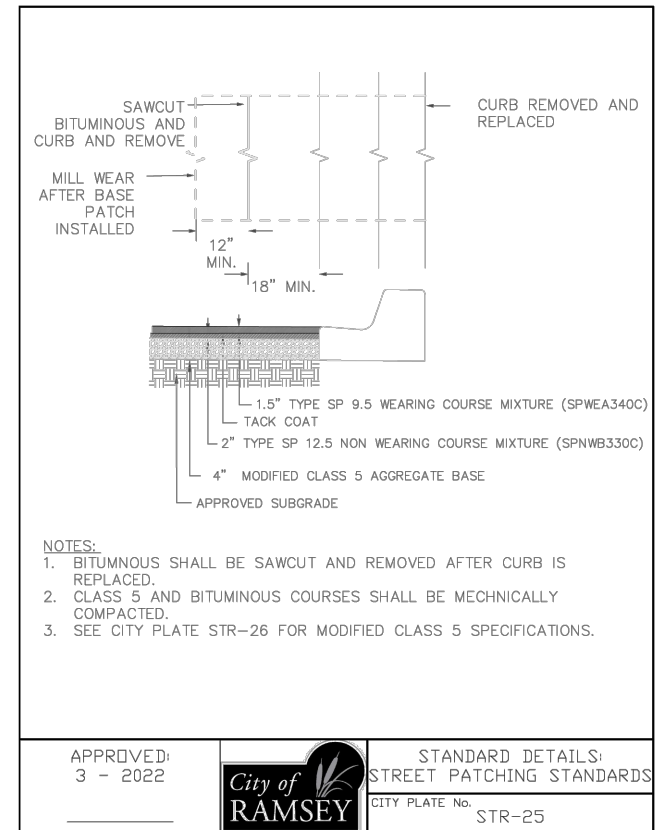
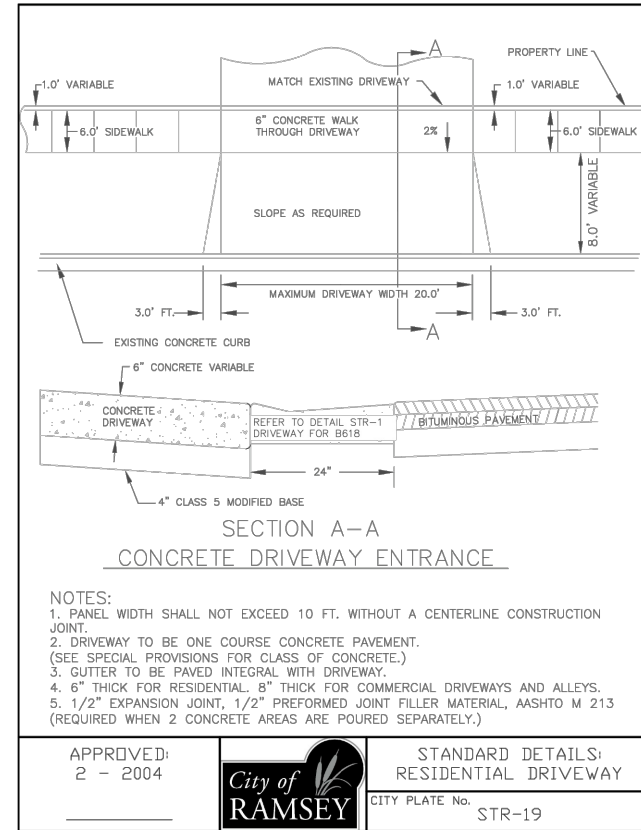
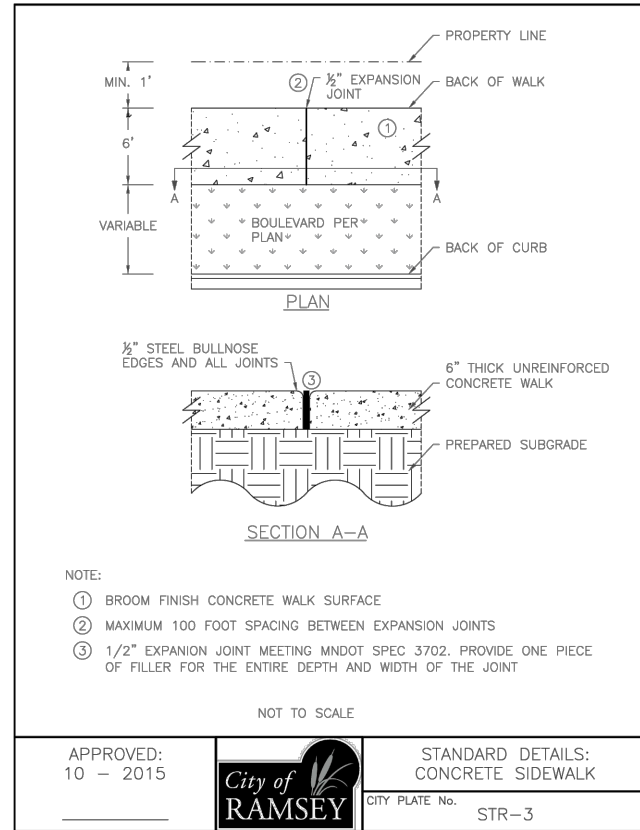
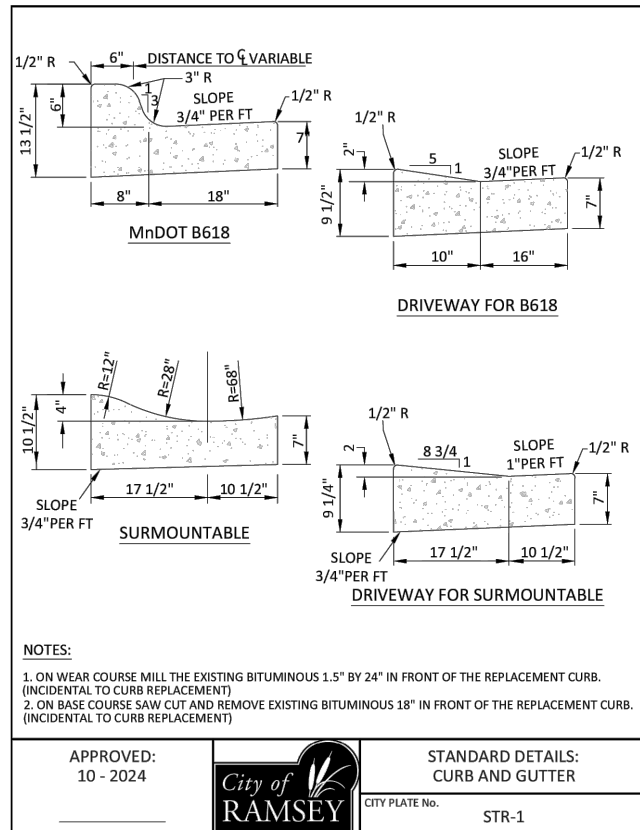


TABLE A
MODIFIED CLASS 5 SPECIFICATIONS

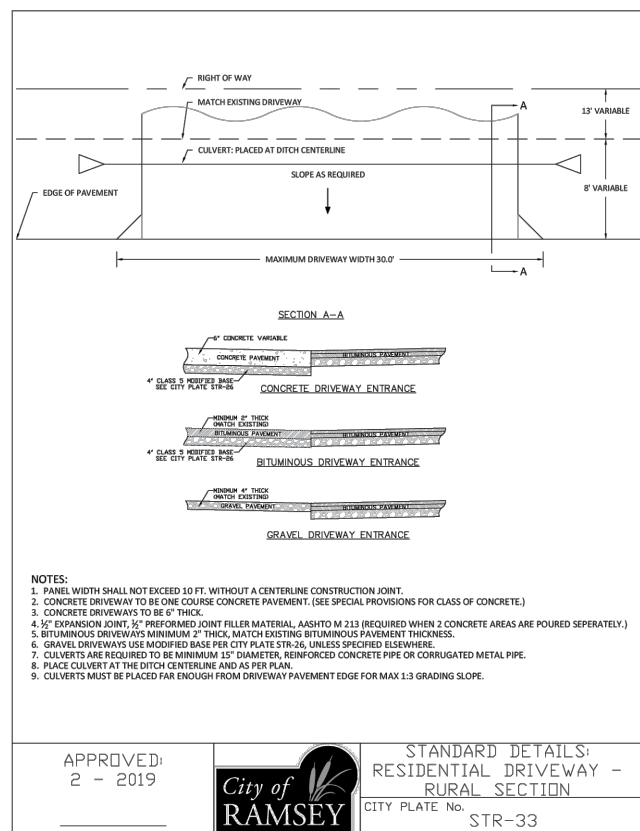
% PASSING

1"	100
3/4"	90 - 100
3/8"	50 - 80
No.4	35 - 70
No.10	20 - 60
No.40	10 - 35
No.200	5 - 10

NOTES:

- THE AGGREGATE BASE CONSTRUCTION WILL BE ACCEPTED FOR PAYMENT IN ACCORDANCE WITH THE PROVISIONS IN TABLE A.
- IF THE AGGREGATE BASE FAILS TO MEET THE REQUIREMENTS OF TABLE A THE MATERIAL CAN BE CORRECTED IN PLACE OR REMOVED AND REPLACED WITH MATERIAL THAT MEET THE REQUIREMENTS OF TABLE A.
- IN THE EVENT THAT RECYCLED MATERIAL IS USE IT MUST MEET MNDOT REQUIREMENTS FOR RECYCLED BASE.

APPROVED: 2 - 2003
 City of RAMSEY
 STANDARD DETAILS: MODIFIED CLASS 5 SPECIFICATIONS
 CITY PLATE No. STR-26



DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Joe Feriancek
 JOE FERIANCEK
 Date 03/21/25 Lic. No. 57095

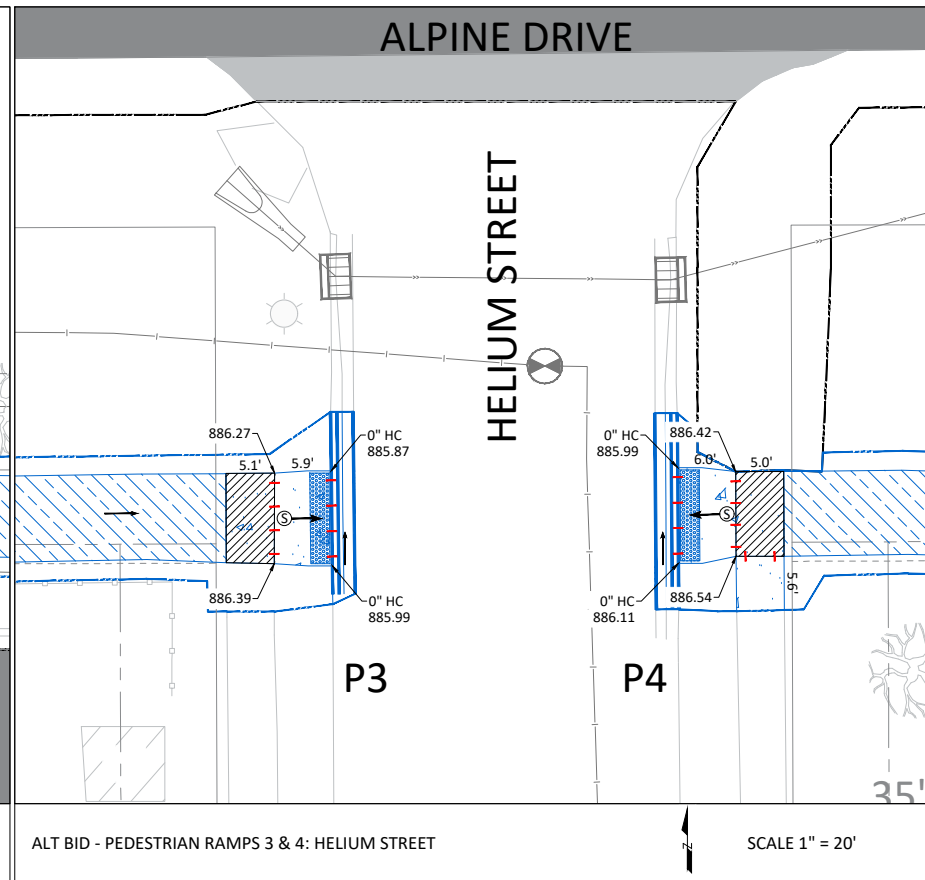
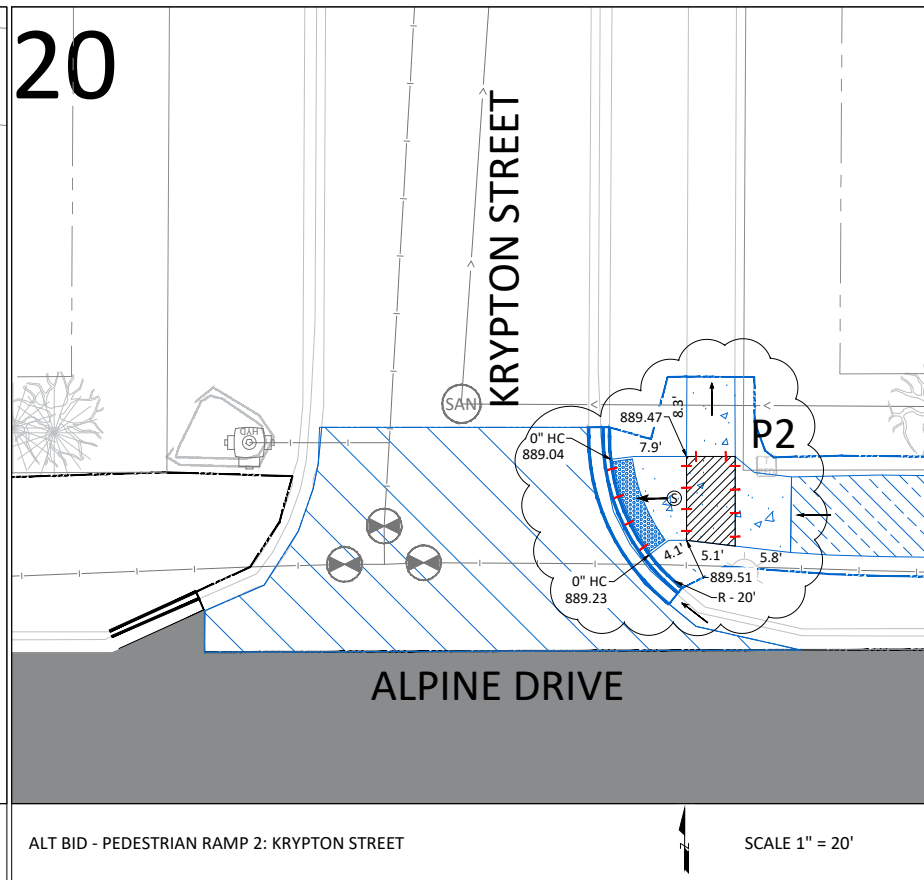
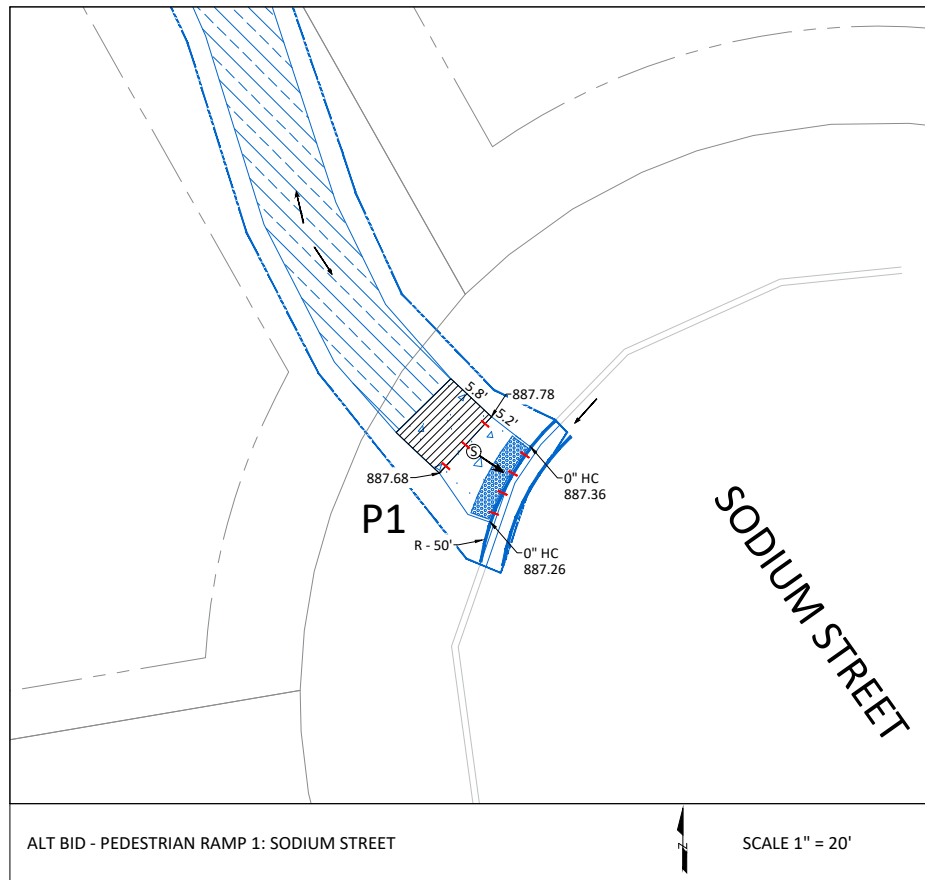
DESIGNED BY: JJF
 DRAWN BY: JJF
 CHECKED BY: JJF

DATE: 03/21/25
 FILE: 25-03

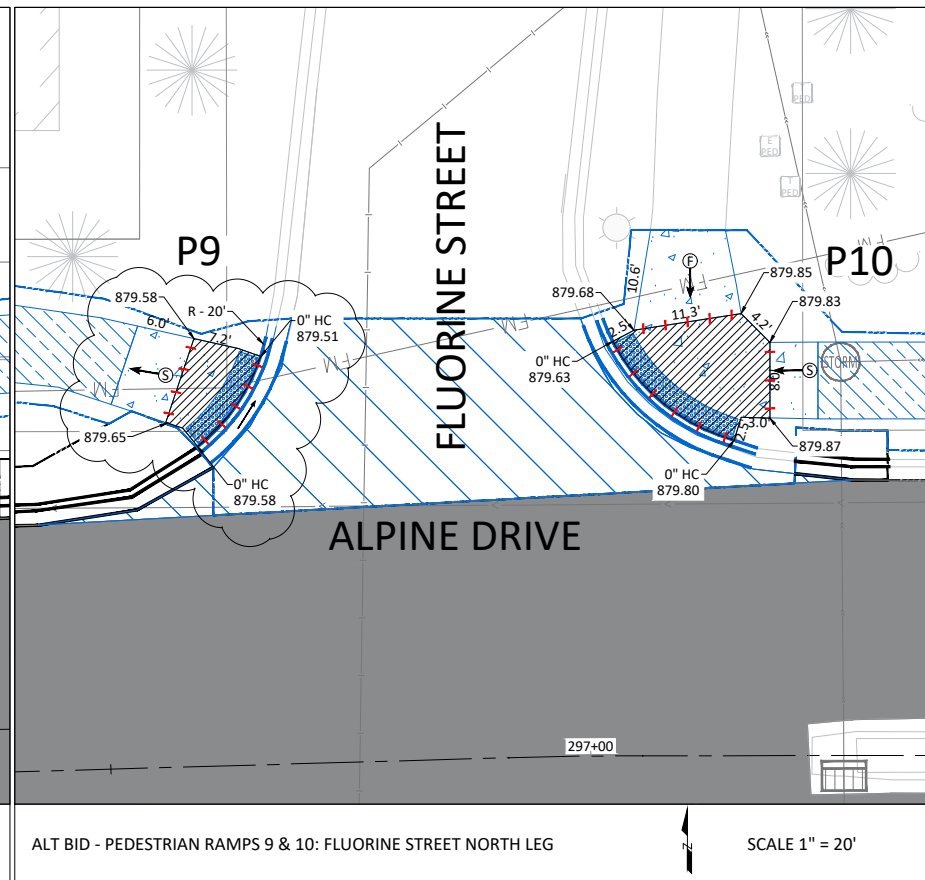
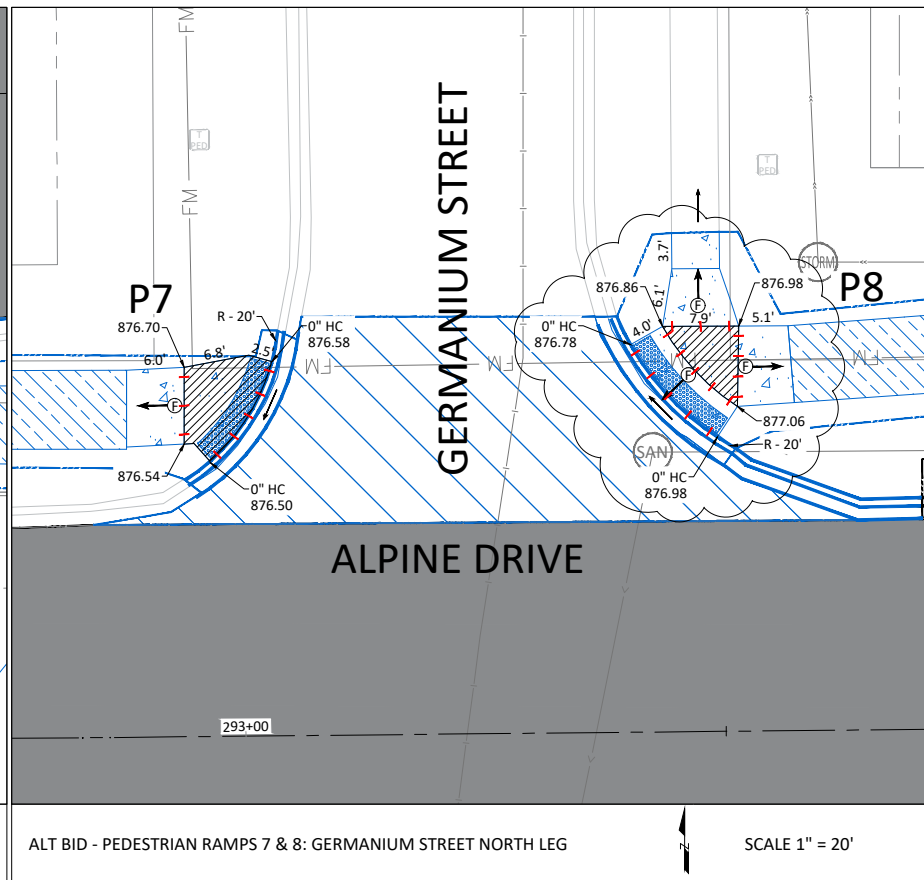
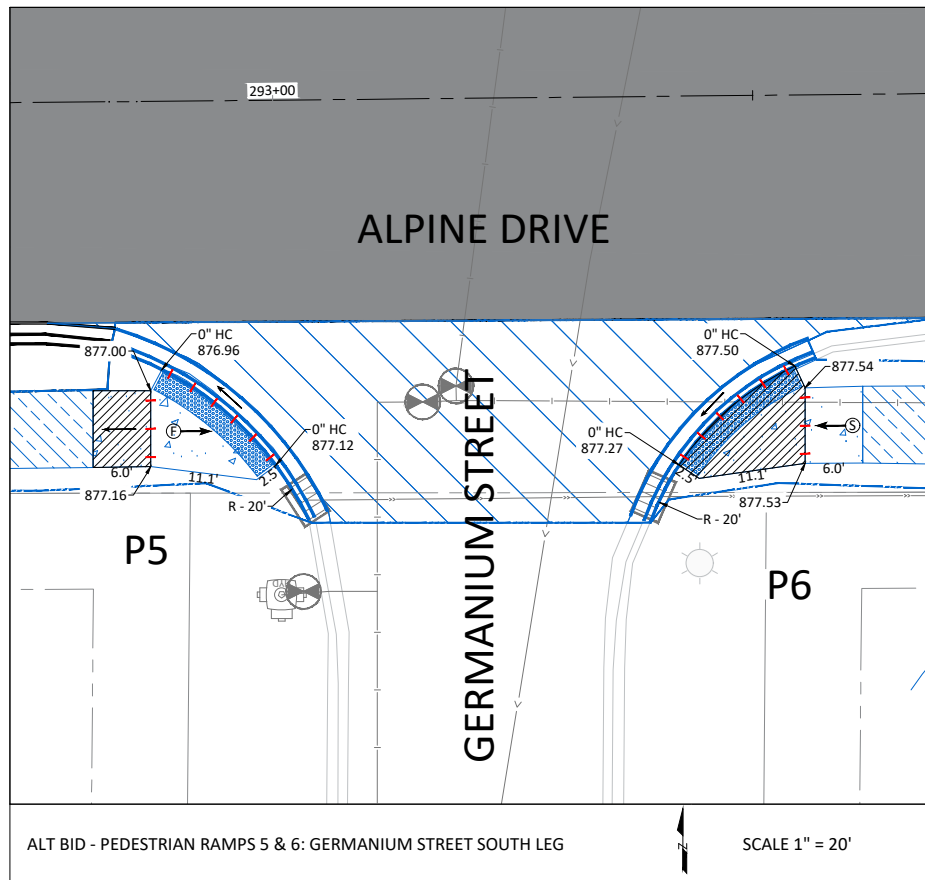
CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

CITY DETAILS
 ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA

S.A.P. 199-106-012 / S.A.P 199-107-010



- PED RAMP LEGEND**
- (S) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
 - (F) INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
 - ▨ LANDING AREA - 4'x4' MIN. DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS.
 - ← DRAINAGE FLOW ARROW



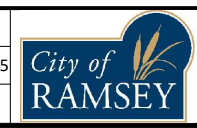
DATE	REVISION
04/24/25	REVISED PEDESTRIAN RAMPS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Joe Feriancek
 Joe Feriancek
 Date 03/21/25 Lic. No. 57095

DESIGNED BY: JJF
 DRAWN BY: JJF
 CHECKED BY: JJF

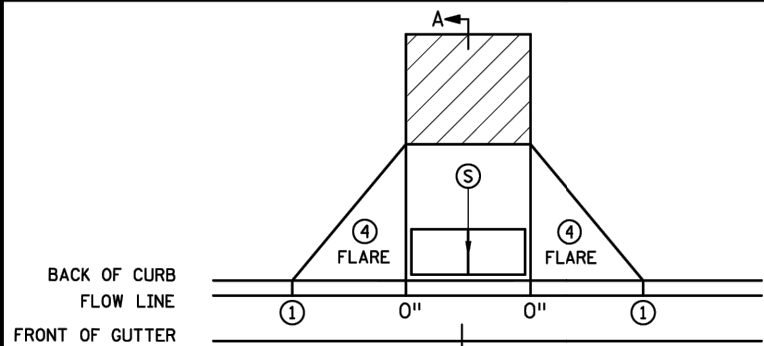
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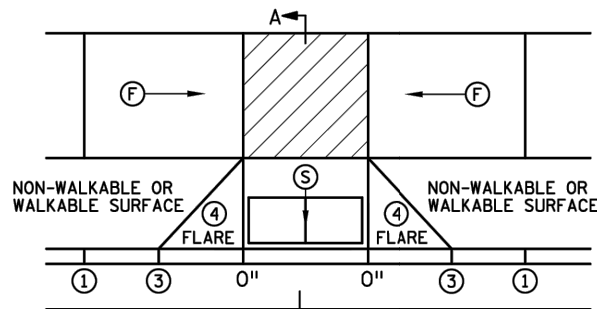
CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

INTERSECTION DETAILS
 S.A.P. 199-107-010

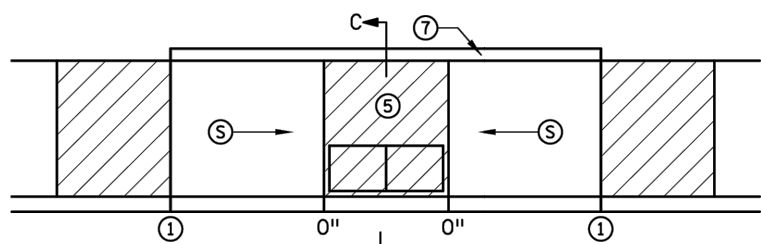
ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



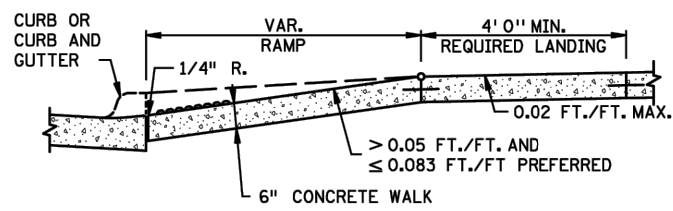
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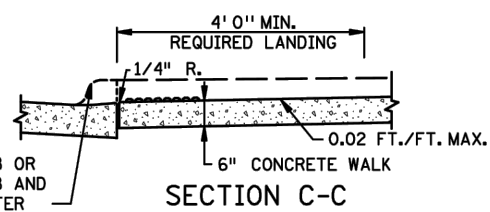
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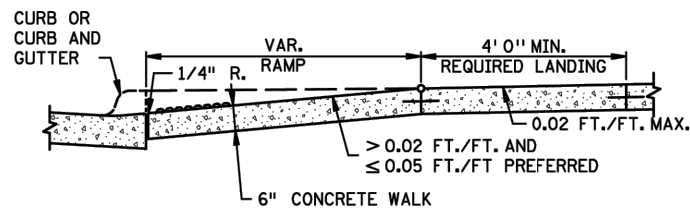
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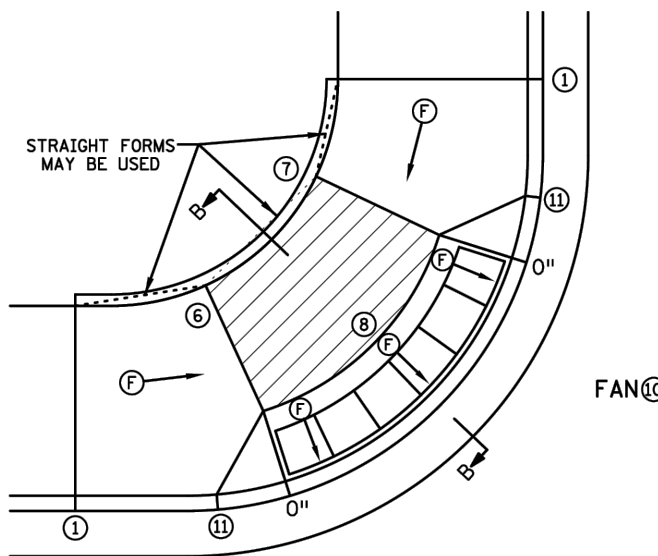
SECTION A-A
PERPENDICULAR/TIERED/DIAGONAL



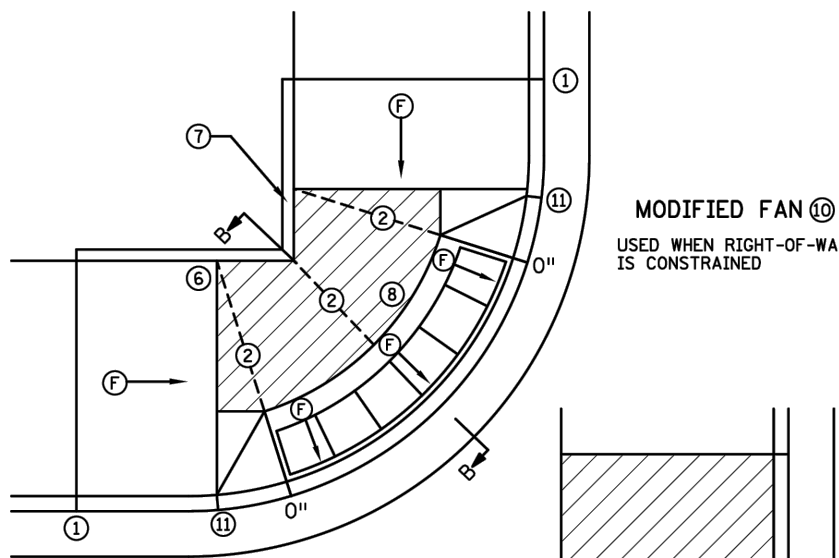
SECTION C-C
PARALLEL/DEPRESSED CORNER



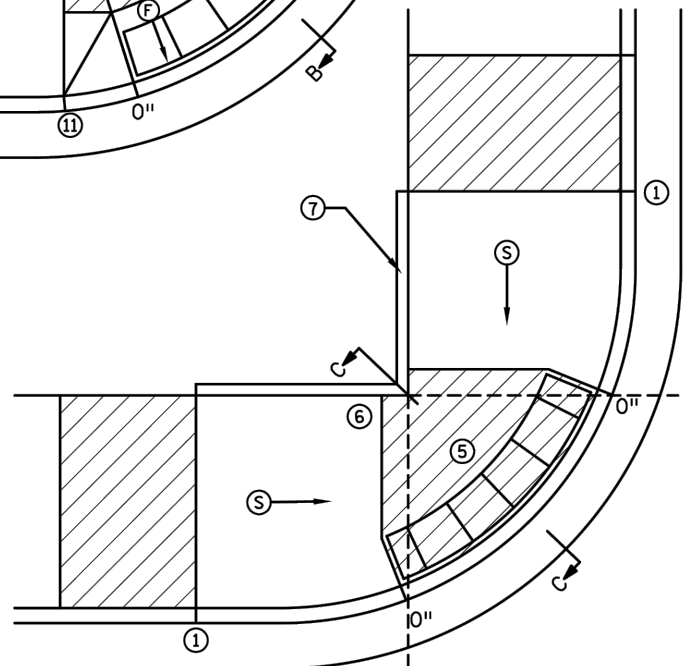
SECTION B-B
FAN



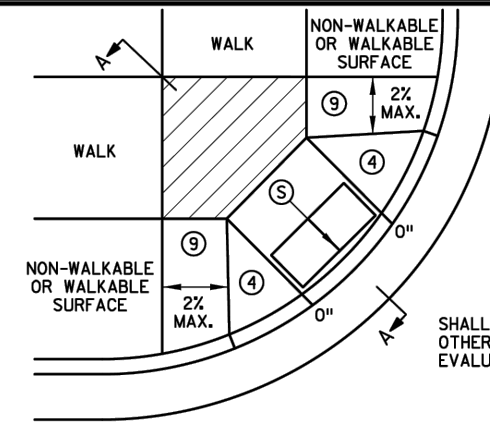
FAN 10



MODIFIED FAN 10
USED WHEN RIGHT-OF-WAY IS CONSTRAINED



DEPRESSED CORNER



DIAGONAL

SHALL ONLY BE USED AFTER ALL OTHER CURB RAMP TYPES HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL

NOTES:

- LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE GREATER THAN 2%.
 - INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.
 - SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL RUNNING SLOPE IS GREATER THAN 5.0%.
 - CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOPS OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.
 - ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL, THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH. (EXCEPT AS STATED IN 6) BELOW.
 - TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 OF 6 FOR ALL SEPARATELY POURED INITIAL LANDINGS.
 - WHEN SIDEWALK IS AT BACK OF CURB, TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE. MAINTAIN POSITIVE BOULEVARD DRAINAGE TO TOP OF CURB.
 - ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.
 - 4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE, WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.
 - WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.
 - RECTANGULAR DETECTABLE WARNINGS SHALL BE SETBACK 3" FROM THE BACK OF CURB. RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB.
- 1 MATCH FULL HEIGHT CURB.
 - 2 4' MINIMUM DEPTH LANDING REQUIRED ACROSS TOP OF RAMP.
 - 3 3" HIGH CURB WHEN USING A 3' LONG RAMP, 4" HIGH CURB WHEN USING A 4' LONG RAMP.
 - 4 SEE SHEET 4 OF 6, TYPICAL SIDE TREATMENT OPTIONS, FOR DETAILS ON FLARES AND RETURNED CURBS.
 - 5 DETECTABLE WARNINGS MAY BE PART OF THE 4' X 4' MIN. LANDING AREA IF IT IS NOT FEASIBLE TO CONSTRUCT THE LANDING OUTSIDE OF THE DETECTABLE WARNING AREA.
 - 6 THE GRADE BREAK SHALL BE PERPENDICULAR TO THE BACK OF WALK. THIS WILL ENSURE THAT THE GRADE BREAK IS PERPENDICULAR TO THE DIRECTION OF TRAVEL. (TYPICAL FOR ALL)
 - 7 WHEN ADJACENT TO GRASS, GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS. WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS LESS THAN 5% RUNNING SLOPE SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.
 - 8 A 7' MIN TOP RADIUS GRADE BREAK IS REQUIRED TO BE CONSTRUCTIBLE.
 - 9 PAVE FULL WALK WIDTH.
 - 10 "S" SLOPES ON FANS SHALL ONLY BE USED WHEN ALL OTHER FEASIBLE OPTIONS HAVE BEEN EVALUATED AND DEEMED IMPRACTICAL.
 - 11 INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3" CURB HEIGHT. REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.

LEGEND	
(S)	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
(F)	INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.
[Hatched Box]	LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.
X"	CURB HEIGHT

REVISION:
APPROVED: 11-04-2021
Jeff J. Perkins
JEFFREY PERKINS
OPERATIONS DIVISION

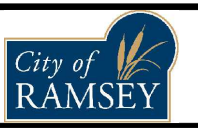
MINNESOTA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN 5-297.250 1 OF 6
APPROVED: 11-04-2021
REVISOR:
THOMAS STYBRICKI
STATE DESIGN ENGINEER
STATE PROJ. NO. (TH) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

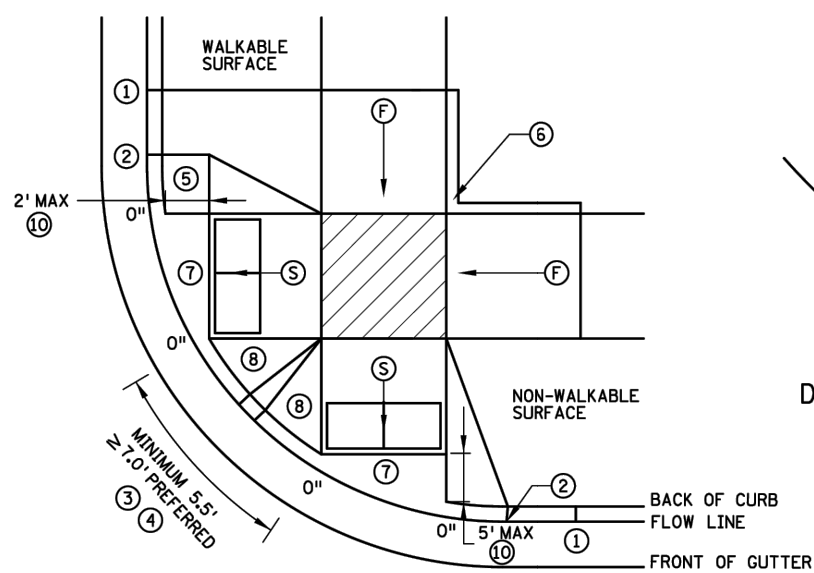
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DRAWN BY: JJF
CHECKED BY: JJF
DATE: 03/21/25
FILE: 25-03



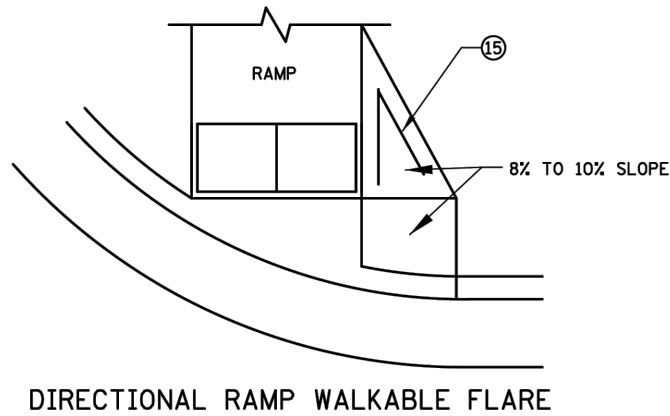
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

MNDOT PEDESTRIAN RAMP DETAILS
S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA

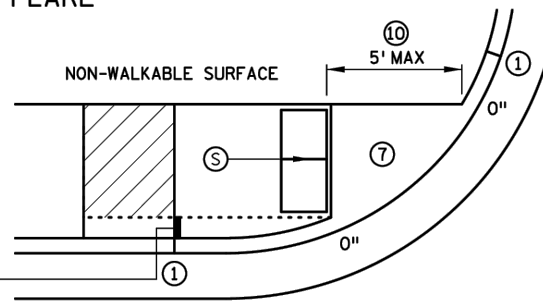


COMBINED DIRECTIONAL

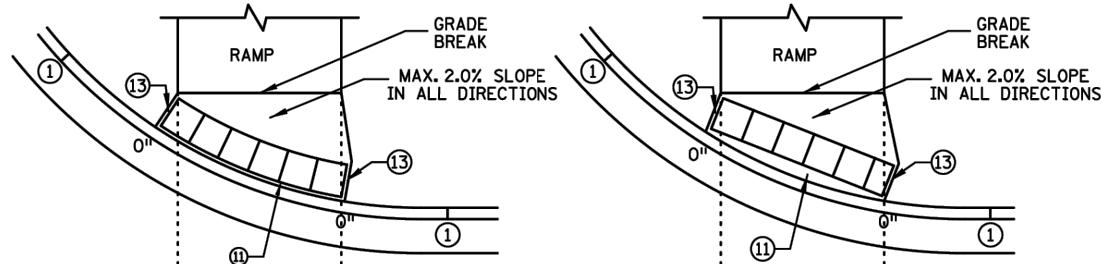


DIRECTIONAL RAMP WALKABLE FLARE

IF NON-CONCRETE BLVD. IS CONSTRUCTED AND IS LESS THAN 2' IN WIDTH AT TOP OF CURB TRANSITION, PAVE CONCRETE RAMP WIDTH TO ADJACENT BACK OF CURB.

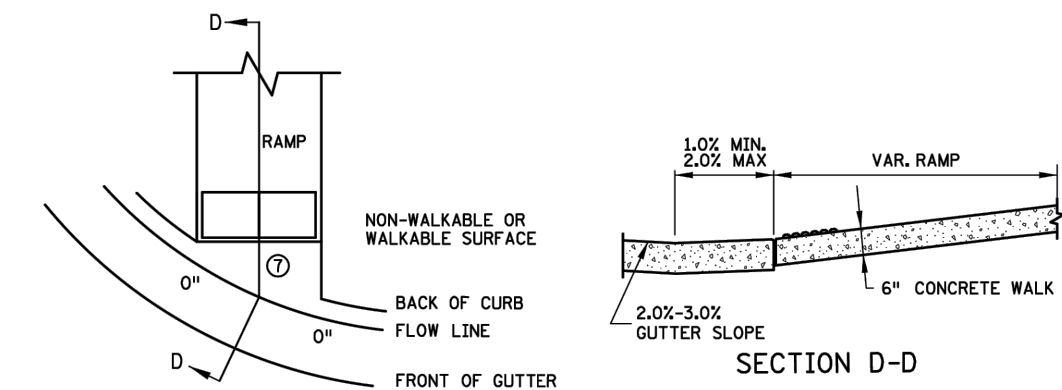


STANDARD ONE-WAY DIRECTIONAL ⑨

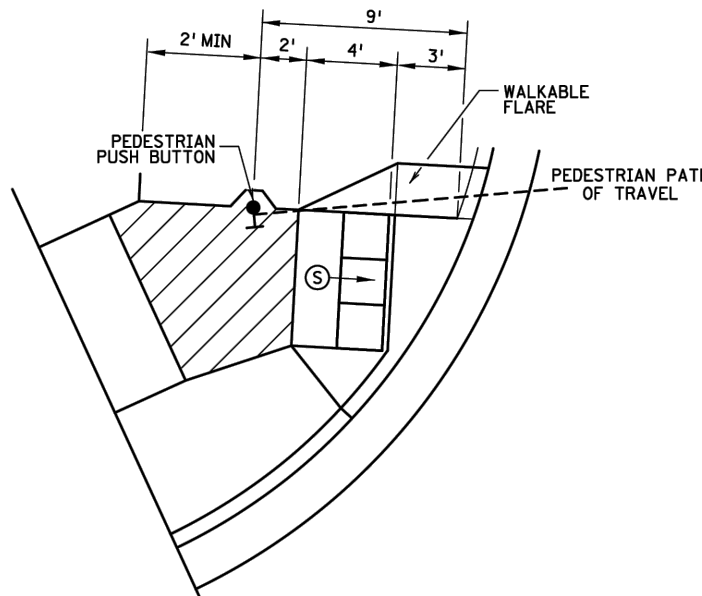


DETECTABLE WARNING PLACEMENT WHEN SETBACK CRITERIA IS EXCEEDED ⑫

ONE-WAY DIRECTIONAL WITH DETECTABLE WARNING AT BACK OF CURB



CURB FOR DIRECTIONAL RAMPS ⑭



SEMI-DIRECTIONAL RAMP ③④⑨

3' DOME SETBACK, 4' LONG RAMP AND PUSH BUTTON 9' FROM THE BACK OF CURB PRIMARILY USED FOR APS APPLICATIONS WHERE THE PAR DOES NOT CONTINUE PAST THE PUSH BUTTON (DEAD-END SIDEWALK)

NOTES:

LANDINGS SHALL BE LOCATED ANYWHERE THE PEDESTRIAN ACCESS ROUTE (PAR) CHANGES DIRECTION, AT THE TOP OF RAMPS THAT HAVE RUNNING SLOPES GREATER THAN 5.0%, AND IF THE APPROACHING WALK IS INVERSE GRADE.

INITIAL CURB RAMP LANDINGS SHALL BE CONSTRUCTED WITHIN 15' FROM THE BACK OF CURB, WITH 6' FROM THE BACK OF CURB BEING THE PREFERRED DISTANCE, ONLY APPLICABLE WHEN THE INITIAL RAMP RUNNING SLOPE IS OVER 5.0%.

SECONDARY CURB RAMP LANDINGS ARE REQUIRED FOR EVERY 30" OF VERTICAL RISE WHEN THE LONGITUDINAL SLOPE IS GREATER THAN 5.0%.

CONTRACTION JOINTS SHALL BE CONSTRUCTED ALONG ALL GRADE BREAKS WITHIN THE PAR. 1/4" DEEP VISUAL JOINTS SHALL BE USED AT THE TOP GRADE BREAK OF CONCRETE FLARES ADJACENT TO WALKABLE SURFACES.

ALL GRADE BREAKS WITHIN THE PAR SHALL BE PERPENDICULAR TO THE PATH OF TRAVEL. THUS BOTH SIDES OF A SLOPED WALKING SURFACE MUST BE EQUAL LENGTH.

TO ENSURE INITIAL RAMPS AND INITIAL LANDINGS ARE PROPERLY CONSTRUCTED, LANDINGS SHALL BE CAST SEPARATELY, FOLLOW SIDEWALK REINFORCEMENT DETAILS ON SHEET 6 AND THE ADA SPECIAL PROVISION (PROSECUTION OF WORK).

TOP OF CURB SHALL MATCH PROPOSED ADJACENT WALK GRADE.

WHEN THE BOULEVARD IS 4' WIDE OR LESS, THE TOP OF CURB TAPER SHALL MATCH THE RAMP SLOPES TO REDUCE NEGATIVE BOULEVARD SLOPES FROM THE TOP BACK OF CURB TO THE PAR.

ALL RAMP TYPES SHOULD HAVE A MINIMUM 3' LONG RAMP LENGTH.

4' MINIMUM WIDTH OF DETECTABLE WARNING IS REQUIRED FOR ALL RAMPS. DETECTABLE WARNINGS SHALL CONTINUOUSLY EXTEND FOR A MIN. OF 24" IN THE PATH OF TRAVEL. DETECTABLE WARNING TO COVER THE ENTIRE PAR WIDTH OF SHARED-USE PATHS AND THE ENTIRE PAR WIDTH OF THE WALK WITH THE EXCEPTION OF 3" MAXIMUM ON EACH OUTSIDE EDGE WHICH ENSURES THE DETECTABLE WARNINGS ARE ENCASED IN CONCRETE WHEN ADJACENT TO TURF. WHEN ADJACENT TO CONCRETE FLARES 0" - 3" OFFSET IS ALLOWED.

WHEN DESIGNING OR ORDERING RECTANGULAR DETECTABLE WARNING SURFACES SHOULD BE 6" LESS THAN THE INCOMING PAR. ARC LENGTH OF THE RADIAL DETECTABLE WARNINGS SHOULD NOT BE GREATER THAN 20 FEET.

RADIAL DETECTABLE WARNINGS SHALL BE SETBACK 3" MINIMUM TO 6" MAXIMUM FROM THE BACK OF CURB. SEE NOTES ⑩ & ⑪ FOR INFORMATION REGARDING RECTANGULAR DETECTABLE WARNING PLACEMENT.

① MATCH FULL CURB HEIGHT.

② 3" HIGH CURB WHEN USING A 3' LONG RAMP
4" HIGH CURB WHEN USING A 4' LONG RAMP.

③ 3" MINIMUM CURB HEIGHT (5.5' MIN. DISTANCE REQUIRED BETWEEN DOMES)
4" PREFERRED (7' MIN. DISTANCE REQUIRED BETWEEN DOMES).

④ THE "BUMP" IN BETWEEN THE RAMPS SHOULD NOT BE IN THE PATH OF TRAVEL FOR COMBINED DIRECTIONAL RAMPS. IF THIS OCCURS MODIFY THE RAMP LOCATION OR SWITCH RAMP TO A FAN/DEPRESSED CORNER.

⑤ WHEN USING CONCRETE PAVED FLARES ON THE OUTSIDE OF DIRECTIONAL RAMPS, AND ADJACENT TO A WALKABLE SURFACE, DIRECTIONAL RAMP FLARES SHALL BE USED. SEE THE DETAIL ON THIS SHEET.

⑥ GRADING SHALL ALWAYS BE USED WHEN FEASIBLE. V CURB, IF USED, SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS, WHEN ADJACENT TO PARKING LOTS, CONCRETE OR BITUMINOUS TAPERS SHOULD BE USED OVER V CURB TO REDUCE TRIPPING HAZARDS AND FACILITATE SNOW & ICE REMOVAL.

⑦ MAX. 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK AND DRAIN TO FLOW LINE. SHALL BE CONSTRUCTED INTEGRAL WITH CURB AND GUTTER.

⑧ 8% TO 10% WALKABLE FLARE.

⑨ PLACE DOMES AT THE BACK OF CURB WHEN ALLOWABLE SETBACK CRITERIA IS EXCEEDED.

⑩ FRONT EDGE OF DETECTABLE WARNING SHALL BE SET BACK 2' MAXIMUM WHEN ADJACENT TO WALKABLE SURFACE, AND 5' MAXIMUM WHEN ADJACENT TO NON-WALKABLE SURFACE WITH ONE CORNER SET 3' FROM BACK OF CURB. A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.

⑪ RECTANGULAR DETECTABLE WARNINGS MAY BE SETBACK UP TO 9" FROM THE BACK OF CURB WITH CORNERS SET 3" FROM BACK OF CURB. IF 9" SETBACK IS EXCEEDED USE RADIAL DETECTABLE WARNINGS.

⑫ FOR DIRECTIONAL RAMPS WITH THE DETECTABLE WARNINGS PLACED AT THE BACK OF CURB, THE DETECTABLE WARNINGS SHALL COVER THE ENTIRE WIDTH OF THE WALK/PATH. THIS ENSURES A DETECTABLE EDGE AND HELPS ELIMINATE THE CURB TAPER OBSTRUCTING THE PATH OF PEDESTRIAN TRAVEL.

⑬ THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE BACK OF CURB. MAINTAIN 3" BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.

⑭ TO BE USED FOR ALL DIRECTIONAL RAMPS, EXCEPT WHERE DOMES ARE PLACED ALONG THE BACK OF CURB.

⑮ PLACE 2 NO. 4 BARS 4 INCHES FROM SIDE OF FORMS WITH A MINIMUM 2 INCHES OF CONCRETE COVER ALONG EACH SIDE OF FLARE (INCIDENTAL).

LEGEND

THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.

Ⓢ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.

Ⓣ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE GREATER THAN 2.0% AND LESS THAN 5.0% IN THE DIRECTION SHOWN AND CROSS SLOPE SHALL NOT EXCEED 2.0%.

▨ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PAR.

X" CURB HEIGHT

REVISION:
APPROVED: 11-04-2021
Jeff J. Perkins
JEFFREY PERKINS
OPERATIONS DIVISION

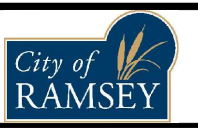
MINNESOTA DEPARTMENT OF TRANSPORTATION
STANDARD PLAN 5-297.250 2 OF 6
APPROVED: 11-04-2021
REVISOR:
THOMAS STYBRICKI
STATE DESIGN ENGINEER
STATE PROJ. NO. (T.H.) SHEET NO. OF SHEETS

PEDESTRIAN CURB RAMP DETAILS

DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota
Date _____ Lic. No. _____

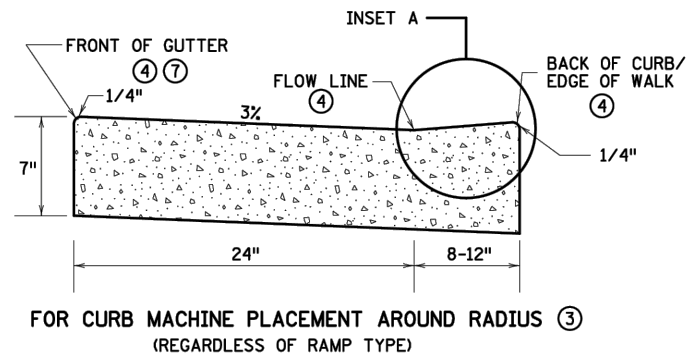
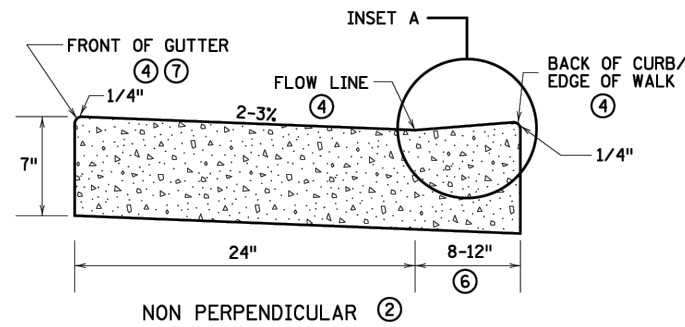
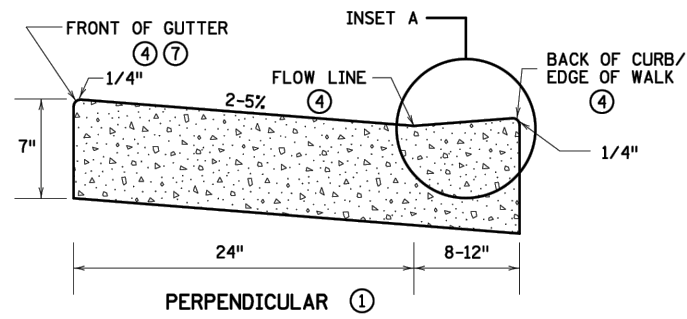
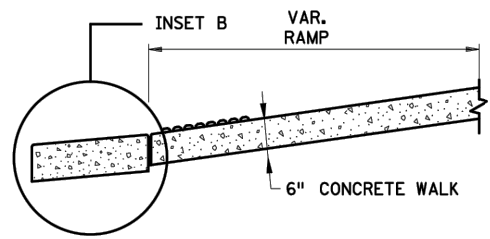
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DRAWN BY: JJF
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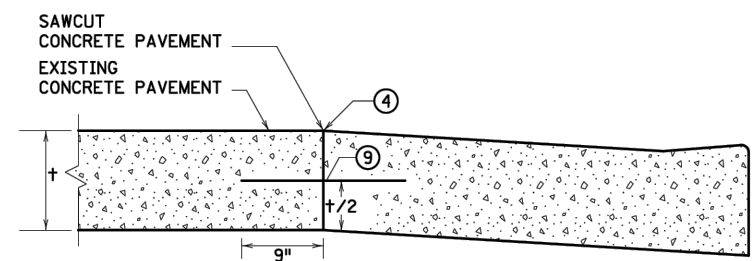
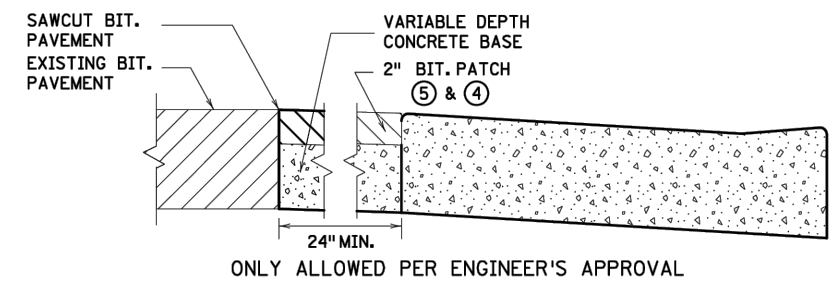
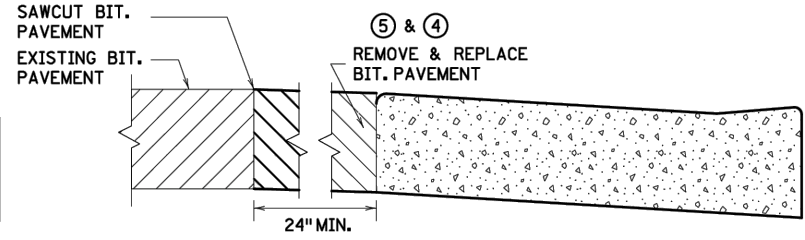
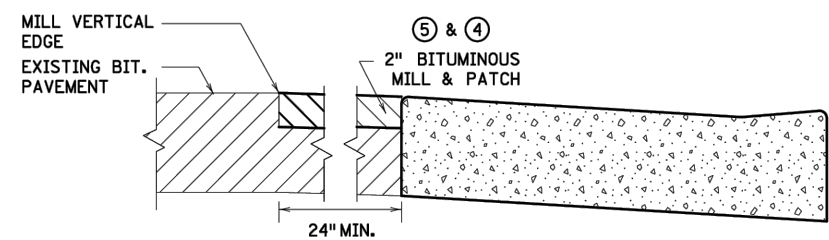
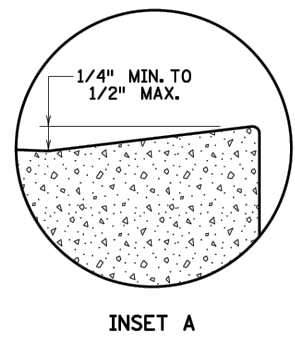
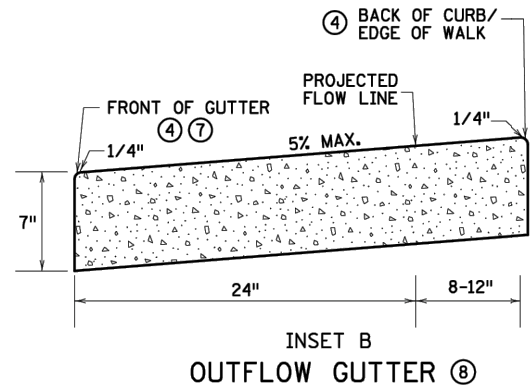
CITY OF RAMSEY
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ALPINE DRIVE RECONSTRUCTION
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CITY OF RAMSEY, MINNESOTA

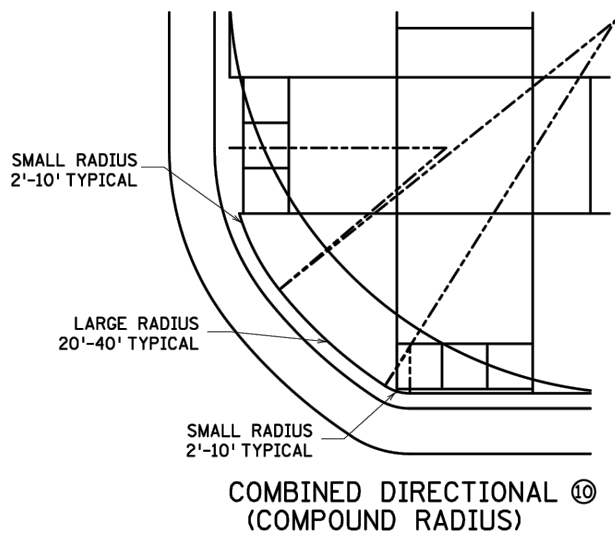
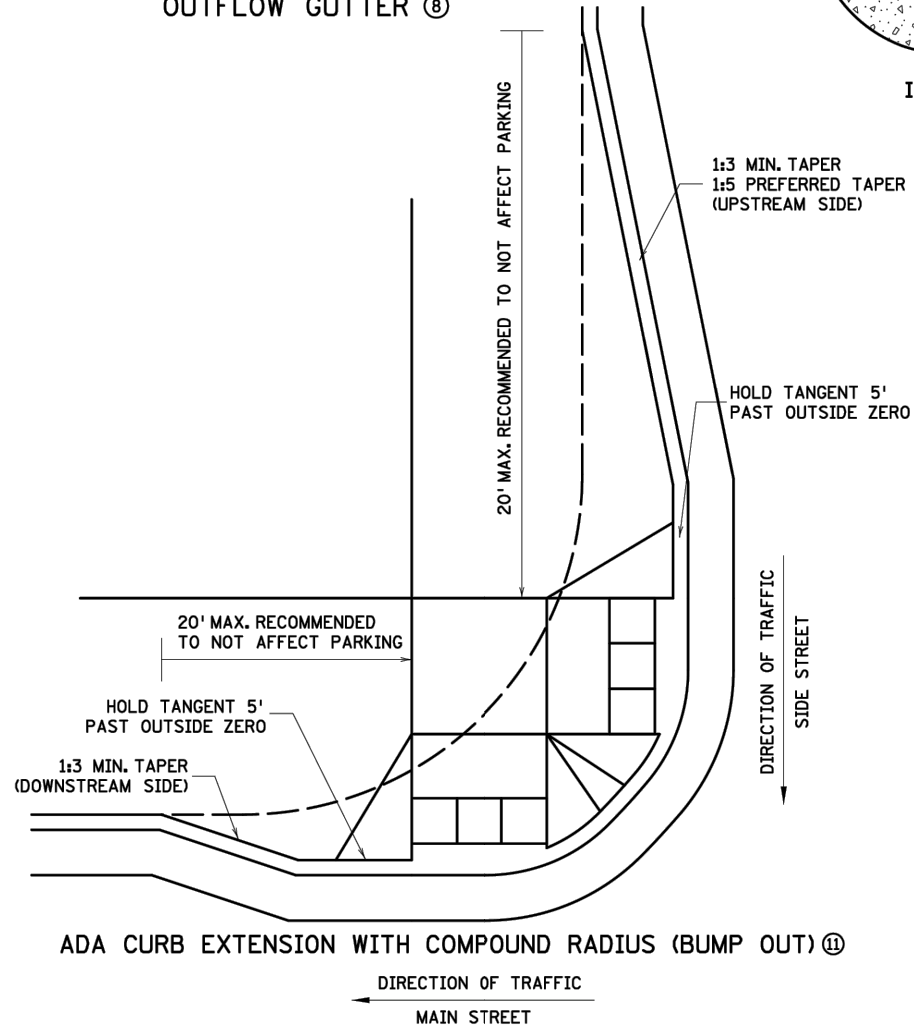


PEDESTRIAN ACCESS ROUTE CURB & GUTTER DETAIL



ONLY ALLOWED PER ENGINEER'S APPROVAL

PAVEMENT TREATMENT OPTIONS IN FRONT OF CURB & GUTTER FOR USE ON CURB RAMP RETROFITS



- NOTES:**
- POSITIVE FLOW LINE DRAINAGE SHALL BE MAINTAINED THROUGH THE PEDESTRIAN ACCESS ROUTE (PAR) AT A 2% MAXIMUM. NO PONDING SHALL BE PRESENT IN THE PAR.
 - ANY VERTICAL LIP THAT OCCURS AT THE FLOW LINE SHALL NOT BE GREATER THAN 1/4 INCH.
 - 1 FOR USE AT CURB CUTS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: PERPENDICULAR, TIERED PERPENDICULAR, PARALLEL, AND DIAGONAL RAMPS.
 - 2 FOR USE AT CURB RAMPS WHERE THE PEDESTRIAN'S PATH OF TRAVEL IS ASSUMED NON PERPENDICULAR TO THE GUTTER FLOW LINE. RAMP TYPES INCLUDE: FANS & DEPRESSED CORNERS.
 - 3 BEGIN GUTTER SLOPE TRANSITION 10' OUTSIDE OF ALL CURB RAMPS.
 - 4 THERE SHALL BE NO VERTICAL DISCONTINUITIES GREATER THAN 1/4".
 - 5 ELEVATION CHANGE TAKES PLACE FROM THE EXISTING TO NEW FRONT OF GUTTER. PATCH IS USED TO MATCH THE NEW GUTTER FACE INTO THE EXISTING ROADWAY.
 - 6 VARIABLE WIDTH FOR DIRECTIONAL CURB APPLICATIONS. SEE SHEET 2 FOR DIRECTIONAL CURB SLOPE REQUIREMENTS.
 - 7 TOP FRONT OF GUTTER SHALL BE CONSTRUCTED FLUSH WITH PROPOSED ADJACENT PAVEMENT ELEVATION. TOP 1.5" OF THE GUTTER FACE MUST BE A FORMED EDGE. PAR GUTTER SHALL NOT BE OVERLAID.
 - 8 SHOULD BE USED AT VERTICALLY CONSTRAINED AREAS WHEN AT A DRAINAGE HIGH POINT OR SUPER ELEVATED ROADWAY SEGMENTS.
 - 9 DRILL AND GROUT NO. 4 EPOXY-COATED 18" LONG TIE BARS AT 30" CENTER TO CENTER INTO EXISTING CONCRETE PAVEMENT 1' MINIMUM FROM ALL JOINTS.
 - 10 HELPS PROVIDE TWO SEPARATE RAMPS, REDUCES THE DOME SETBACK LENGTH AND MINIMIZES DIRECTIONAL CURB. THIS RADIUS DESIGN CLOSELY FOLLOWS THE TURNING VEHICLE PATH WHILE OPTIMIZING CURB RAMP LENGTH.
 - 11 CURB EXTENSIONS SHOULD BE USED IN VERTICALLY CONSTRAINED AREAS, USUALLY IN DOWNTOWN ROADWAY SEGMENTS WHERE ON-STREET PARKING IS AVAILABLE. CURB EXTENSIONS SHOULD BE CONSIDERED FOR APS INTERSECTIONS WHERE SPACE IS LIMITED. PUSH BUTTONS MUST MEET APS CRITERIA AS DESCRIBED IN THE PUSH BUTTON LOCATION DETAIL SHEET.

REVISION:	
APPROVED:	11-04-2021
<i>Jeff J. Perkins</i>	
JEFF PERKINS OPERATIONS DIVISION	

	STANDARD PLAN 5-297.250	3 OF 6
	APPROVED: 11-04-2021	
		REVISOR:
THOMAS STYRBICKI STATE DESIGN ENGINEER		STATE PROJ. NO.

PEDESTRIAN CURB RAMP DETAILS		
(TH)	SHEET NO.	OF SHEETS

DATE	REVISION

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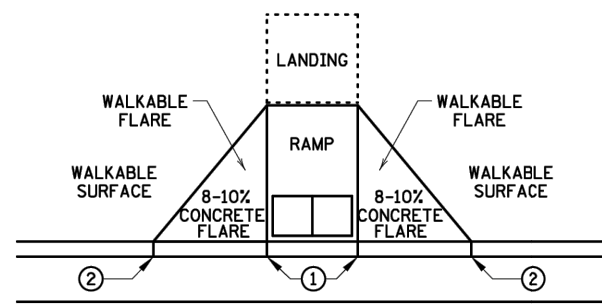
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DESIGNED BY:	JJF
DRAWN BY:	JJF
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DATE:	03/21/25
FILE:	25-03

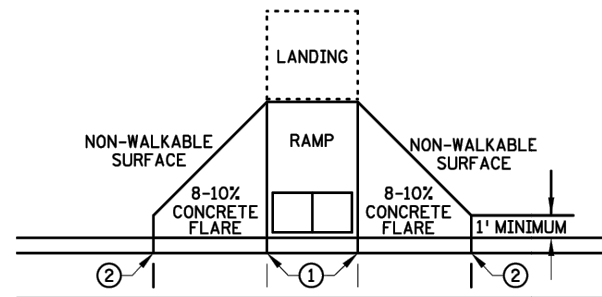
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RAMSEY, MN 55303
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MNDOT PEDESTRIAN RAMP DETAILS
S.A.P. 199-106-012 / S.A.P 199-107-010

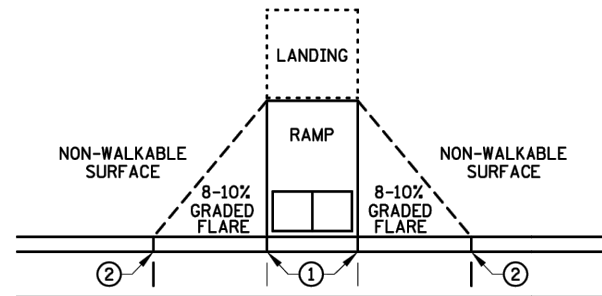
ALPINE DRIVE RECONSTRUCTION
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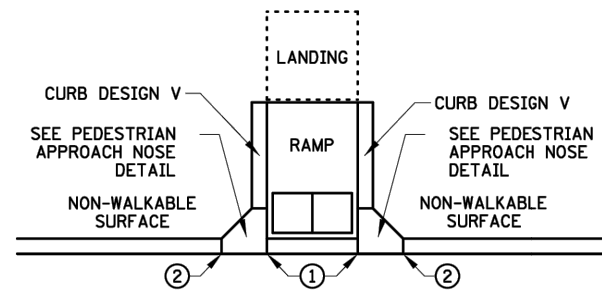
PAVED FLARES
ADJACENT TO WALKABLE SURFACE



PAVED FLARES
ADJACENT TO NON-WALKABLE SURFACE

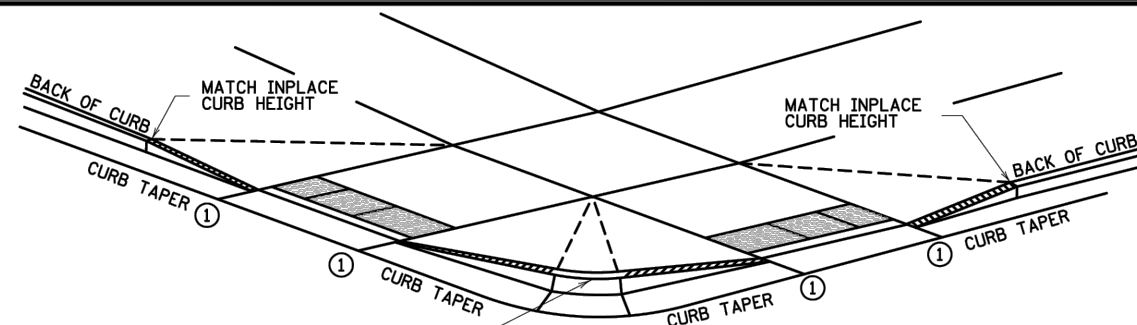


GRADED FLARES



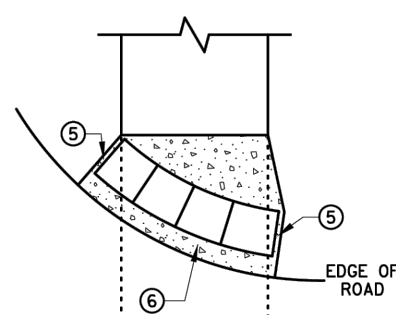
RETURNED CURB ④

TYPICAL SIDE TREATMENT OPTIONS ③ ⑩

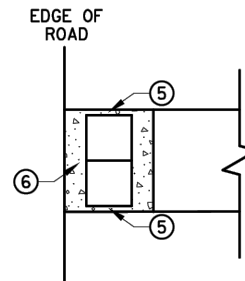


3" MINIMUM CURB HEIGHT, 4" PREFERRED
(MEASURED AT FRONT FACE OF CURB)
FOR A MIN. 6" LENGTH (MEASURED ALONG FLOW LINE)

DETECTABLE EDGE WITH CURB AND GUTTER ⑦

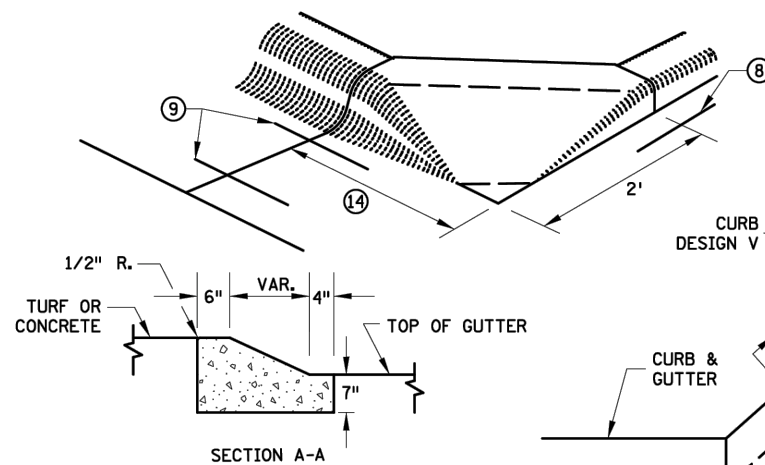


RADIAL DETECTABLE WARNING

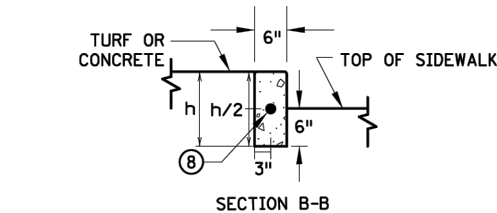


RECTANGULAR DETECTABLE WARNING

DETECTABLE EDGE WITHOUT CURB AND GUTTER

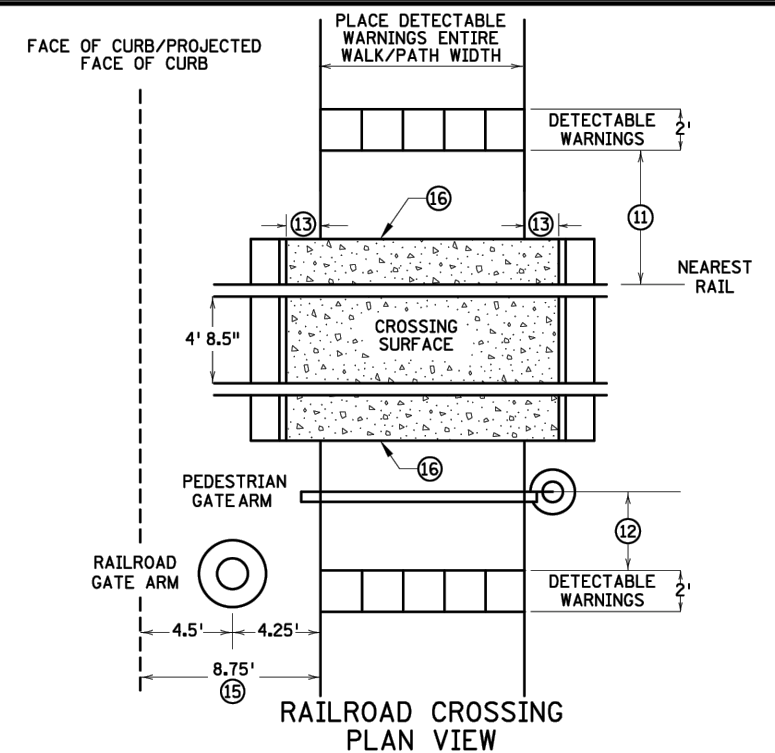


SECTION A-A



SECTION B-B

PEDESTRIAN APPROACH NOSE DETAIL
(FOR RETURNED CURB SIDE TREATMENT)



RAILROAD CROSSING
PLAN VIEW

NOTES:

- INTERMEDIATE CURB HEIGHTS TAPER SHALL RISE AT 8-10% TO A MINIMUM 3 INCH CURB HEIGHT. INCREASE CURB TAPER LENGTH AT LESS THAN 8% OR REDUCE INTERMEDIATE CURB HEIGHT TO 2+ INCHES IF NECESSARY TO MATCH ADJACENT BOULEVARD OR SIDEWALK GRADES.
- SEE STANDARD PLATE 7038 AND THIS SHEET FOR ADDITIONAL DETAILS ON DETECTABLE WARNING.
- A WALKABLE SURFACE IS DEFINED AS A PAVED SURFACE ADJACENT TO A CURB RAMP WITHOUT RAISED OBSTACLES THAT COULD MISTAKENLY BE TRAVERSED BY A USER WHO IS VISUALLY IMPAIRED.
- CONCRETE FLARE LENGTHS ADJACENT TO NON-WALKABLE SURFACES SHOULD BE LESS THAN 8' LONG MEASURED ALONG THE RAMP FROM THE BACK OF CURB.
- ① 0" CURB HEIGHT. SEE INSET A ON SHEET 3 OF 6.
- ② FULL CURB HEIGHT.
- ③ SIDE TREATMENTS ARE APPLICABLE TO ALL RAMP TYPES AND SHOULD BE IMPLEMENTED AS NEEDED AS FIELD CONDITIONS DICTATE. THE ENGINEER SHALL DETERMINE THE RAMP SIDE TREATMENTS BASED ON MAINTENANCE OF BOTH ROADWAY AND SIDEWALK, ADJACENT PROPERTY CONSIDERATIONS, AND MITIGATING CONSTRUCTION IMPACTS.
- ④ TYPICALLY USED FOR MEDIANS AND ISLANDS.
- ⑤ WHEN NO CONCRETE FLARES ARE PROPOSED, THE CONCRETE WALK SHALL BE FORMED AND CONSTRUCTED PERPENDICULAR TO THE EDGE OF ROADWAY. MAINTAIN 3" MAX. BETWEEN EDGE OF DOMES AND EDGE OF CONCRETE.
- ⑥ IF NO CURB AND GUTTER IS PLACED IN RURAL SECTIONS, DETECTABLE WARNINGS SHALL BE PLACED 1' FROM THE EDGE OF BITUMINOUS ROADWAY AND/OR BITUMINOUS SHARED-USE PATH TO PROVIDE VISUAL CONTRAST.
- ⑦ ALL CONSTRUCTED CURBS MUST HAVE A CONTINUOUS DETECTABLE EDGE FOR THE VISUALLY IMPAIRED. THIS DETECTABLE EDGE REQUIRES DETECTABLE WARNINGS WHEREVER THERE IS ZERO-INCH HIGH CURB. CURB TAPERS ARE CONSIDERED A DETECTABLE EDGE WHEN THE TAPER STARTS WITHIN 3" OF THE EDGE OF THE DETECTABLE WARNINGS. AND UNIFORMLY RISES TO A 3-INCH MINIMUM CURB HEIGHT. ANY CURB NOT PART OF A CURB TAPER AND LESS THAN 3 INCHES IN HEIGHT IS NOT CONSIDERED A DETECTABLE EDGE AND THEREFORE IS NOT COMPLIANT WITH ACCESSIBILITY STANDARDS.
- ⑧ DRILL AND GROUT 1 - NO. 4 12" LONG REINFORCEMENT BAR (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE V CURB.
- ⑨ DRILL AND GROUT 2 - NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) WITH 3" MIN. COVER. REINFORCEMENT BARS ARE NOT NEEDED IF THE APPROACH NOSE IS POURED INTEGRAL WITH THE CURB AND GUTTER.
- ⑩ SIDE TREATMENT EXAMPLES SHOWN ARE WHEN THE INITIAL LANDING IS APPROXIMATELY LEVEL WITH THE FULL HEIGHT CURB (I.E. 6' LONG RAMP FOR 6" HIGH CURB). WHEN THE INITIAL LANDING IS MORE THAN 1" BELOW FULL HEIGHT CURB REFER TO SHEETS 1 & 2 TO MODIFY THE CURB HEIGHT TAPERS AND MAINTAIN POSITIVE BOULEVARD DRAINAGE. CONSTRUCT THESE TAPERS AT 0"-3" AT 8-10%, THEN LESS THAN 5% FROM 3" CURB TO FULL CURB HEIGHT.
- ⑪ NEAREST EDGE OF DETECTABLE WARNING SURFACES SHALL BE PLACED 12' MINIMUM TO 15' MAXIMUM FROM THE NEAREST RAIL. FOR SKEWED RAILWAYS IN NO INSTANCE SHALL THE DETECTABLE WARNING BE CLOSER THAN 12' MEASURED PERPENDICULAR TO THE NEAREST RAIL.
- ⑫ WHEN PEDESTRIAN GATES ARE PROVIDED, DETECTABLE WARNING SURFACES SHALL BE PLACED ON THE SIDE OF THE GATES OPPOSITE THE RAIL, 2' FROM THE APPROACHING SIDE OF THE GATE ARM. THIS CRITERIA GOVERNS OVER NOTE ⑪.
- ⑬ CROSSING SURFACE SHALL EXTEND 2' MINIMUM PAST THE OUTSIDE EDGE OF WALK OR SHARED-USE PATH.
- ⑭ 3' FOR MEDIANS AND SPLITTER ISLANDS. NOSE CAN BE REDUCED TO 2' ON FREE RIGHT ISLANDS.
- ⑮ SIDEWALK TO BE PLACED 8.75' MIN. FROM THE FACE OF CURB/PROJECTED FACE OF CURB. THIS ENSURES MIN. CLEARANCE BETWEEN THE SIDEWALK AND GATE ARM COUNTERWEIGHT SUPPORTS.
- ⑯ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.

REVISION:
APPROVED: 11-04-2021
<i>Jeff J. Perkins</i>
JEFFREY PERKINS OPERATIONS DIVISION

	STANDARD PLAN 5-297.250	4 OF 6
	APPROVED: 11-04-2021	
		REVISOR:
THOMAS STYRBICKI STATE DESIGN ENGINEER		STATE PROJ. NO.

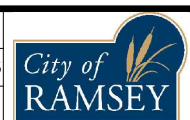
PEDESTRIAN CURB RAMP DETAILS		
(TH)	SHEET NO.	OF SHEETS

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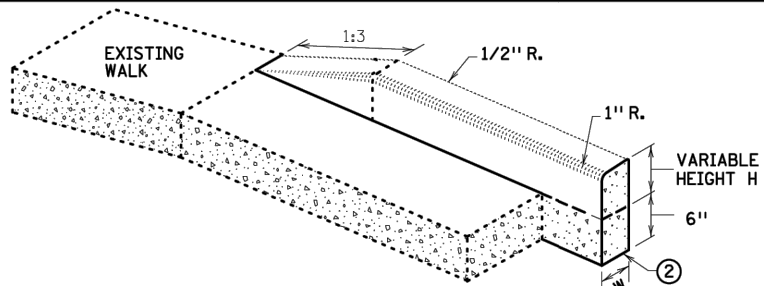
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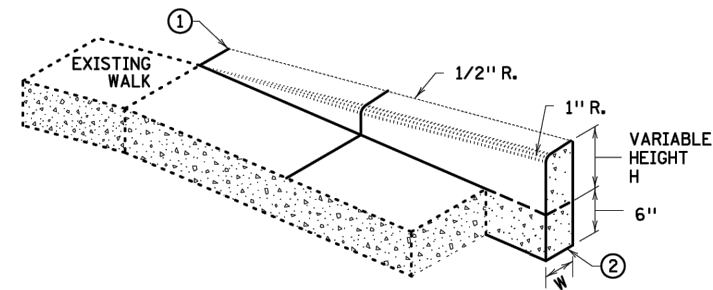
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MNDOT PEDESTRIAN RAMP DETAILS
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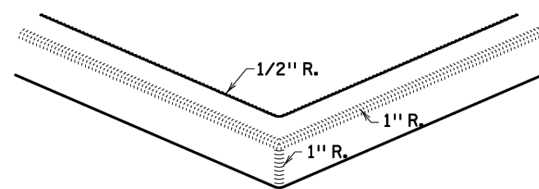
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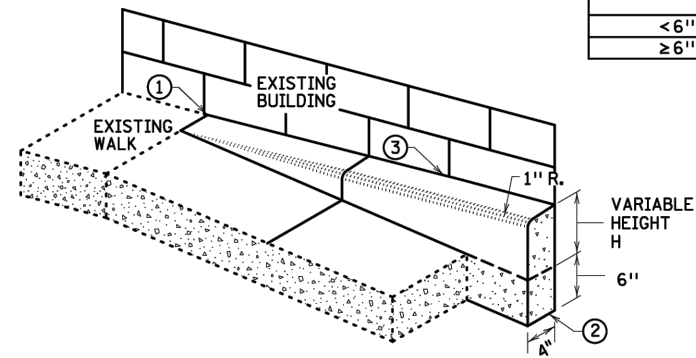
V CURB ADJACENT TO LANDSCAPE
CURB WITHIN SIDEWALK LIMITS



V CURB ADJACENT TO LANDSCAPE
CURB OUTSIDE SIDEWALK LIMITS

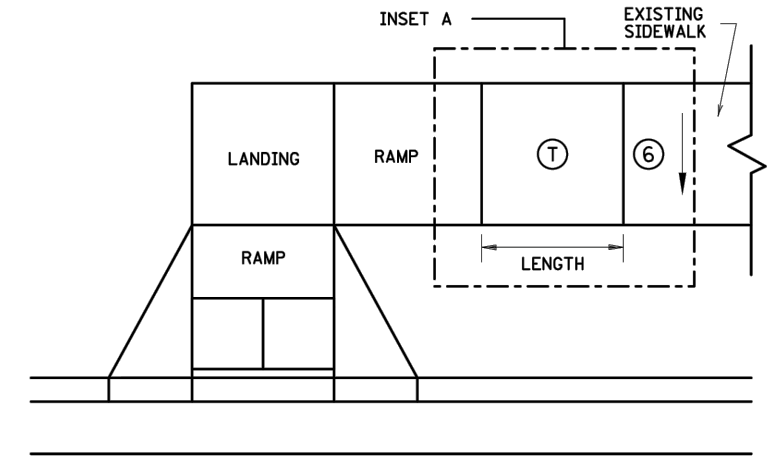


V CURB INTERSECTION

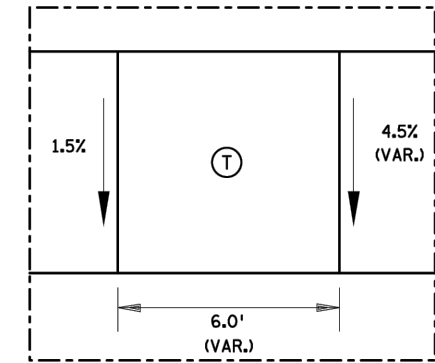


V CURB ADJACENT TO BUILDING
OR BARRIER

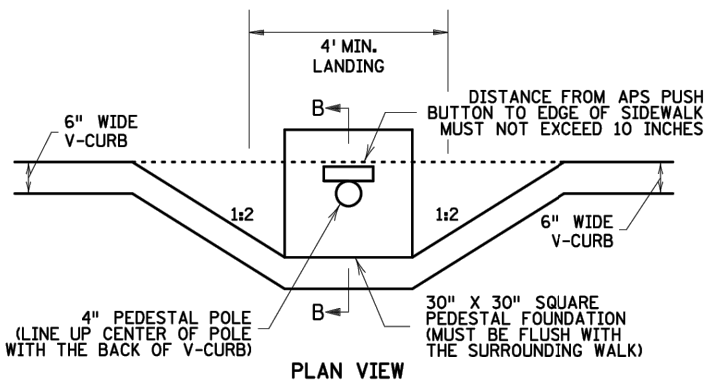
CONCRETE CURB DESIGN V	
CURB HEIGHT H	CURB WIDTH W
< 6"	4"
≥ 6"	6"



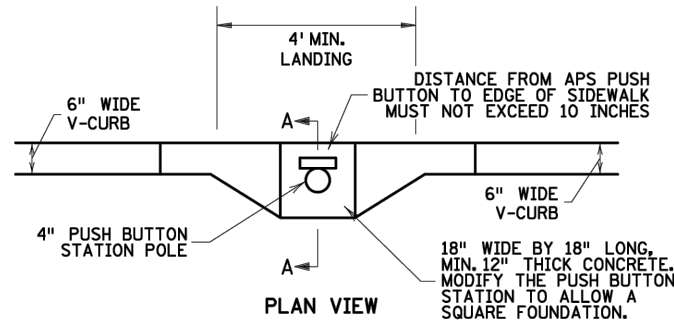
TRANSITION PANEL ④ ⑤



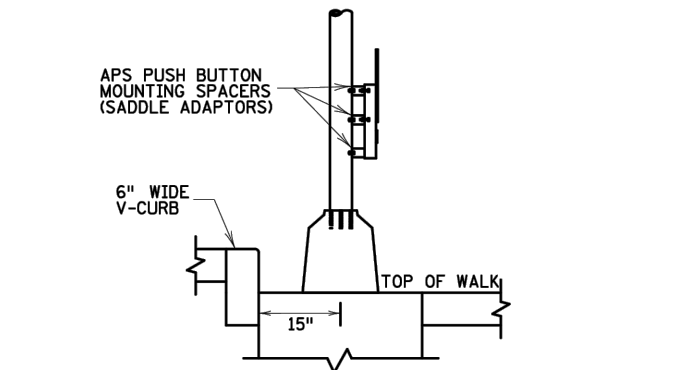
INSET A



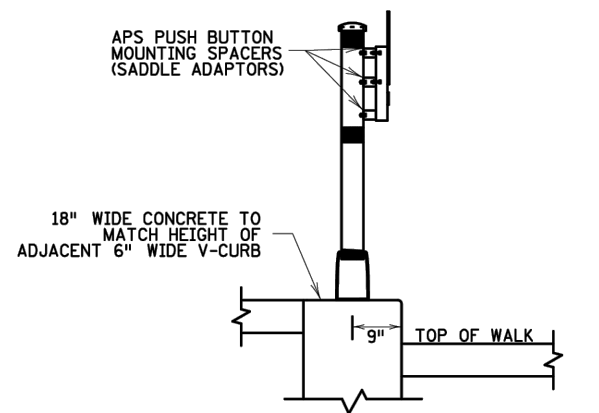
PLAN VIEW



PLAN VIEW



SECTION B-B
SIGNAL PEDESTAL & PUSH BUTTON (V-CURB)



SECTION A-A
PUSH BUTTON STATION (V-CURB)

NOTES:

- A WALKABLE FLARE IS AN 8-10% CONCRETE FLARE THAT IS REQUIRED WHEN THE FLARE IS ADJACENT TO A WALKABLE SURFACE, OR WHEN THE PEDESTRIAN PATH OF TRAVEL OF A PUSH BUTTON TRAVERSES THE FLARE.
- ALL V CURB CONTRACTION JOINTS SHALL MATCH CONCRETE WALK JOINTS.
- WHERE RIGHT-OF-WAY ALLOWS, USE OF V CURB SHOULD BE MINIMIZED. GRADING ADJACENT TURF OR SLOPING ADJACENT PAVEMENT IS PREFERRED.
- V CURB SHALL BE PLACED OUTSIDE THE SIDEWALK LIMITS WHEN RIGHT OF WAY ALLOWS.
- V CURB NEXT TO BUILDING SHALL BE A 4" WIDTH AND SHALL MATCH PREVIOUS TOP OF SIDEWALK ELEVATIONS.
- ① END TAPERS AT TRANSITION SECTION SHALL MATCH INPLACE SIDEWALK GRADES.
- ② ALL V CURB SHALL MATCH BOTTOM OF ADJACENT WALK.
- ③ CONSTRUCT USING APPROVED EXPANSION MATERIAL PER MNDOT TYPE A-E EXPANSION. LEAVE A MINIMUM 1/2" TOP GAP AND SEAL WITH MNDOT APPROVED SILICONE PER MNDOT SPEC 3722.
- ④ THE MAX. RATE OF CROSS SLOPE TRANSITIONING IS 1' LINEAR FOOT OF SIDEWALK PER HALF PERCENT CROSS SLOPE. WHEN PAR WIDTH IS GREATER THAN 6' OR THE RUNNING SLOPE IS GREATER THAN 5%, DOUBLE THE CALCULATED TRANSITION LENGTH.
- ⑤ TRANSITION PANELS ARE TO ONLY BE USED AFTER THE RAMP, OR IF NEEDED, LANDING ARE AT THE FULL CURB HEIGHT (TYPICAL SECTION).
- ⑥ EXISTING CROSS SLOPE GREATER THAN 2.0%.

LEGEND

- THESE LONGITUDINAL SLOPE RANGES SHALL BE THE STARTING POINT. IF SITE CONDITIONS WARRANT, LONGITUDINAL SLOPES UP TO 8.3% OR FLATTER ARE ALLOWED.
- ⑤ INDICATES PEDESTRIAN RAMP - SLOPE SHALL BE BETWEEN 5.0% MINIMUM AND 8.3% MAXIMUM IN THE DIRECTION SHOWN AND THE CROSS SLOPE SHALL NOT EXCEED 2.0%.
- ④ LANDING AREA - 4' X 4' MIN. (5' X 5' MIN. PREFERRED) DIMENSIONS AND MAX. 2.0% SLOPE IN ALL DIRECTIONS. LANDING SHALL BE FULL WIDTH OF INCOMING PARS.
- ① TRANSITION PANEL(S) - TO BE USED FOR TRANSITIONING THE CROSS-SLOPE OF A RAMP TO THE EXISTING WALK CROSS-SLOPE. RATE OF TRANSITION SHOULD BE 0.5% PER 1 LINEAR FOOT OF WALK. SEE THIS SHEET FOR ADDITIONAL INFORMATION.

REVISION:
APPROVED: 11-04-2021
Jeffrey J. Perkins
JEFFREY PERKINS
OPERATIONS DIVISION



STANDARD PLAN 5-297.250 5 OF 6

APPROVED: 11-04-2021
REVISOR:
Thomas Styrbicki
THOMAS STYRBICKI
STATE DESIGN ENGINEER

STATE PROJ. NO.

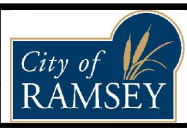
PEDESTRIAN CURB RAMP DETAILS

(TH) SHEET NO. OF SHEETS

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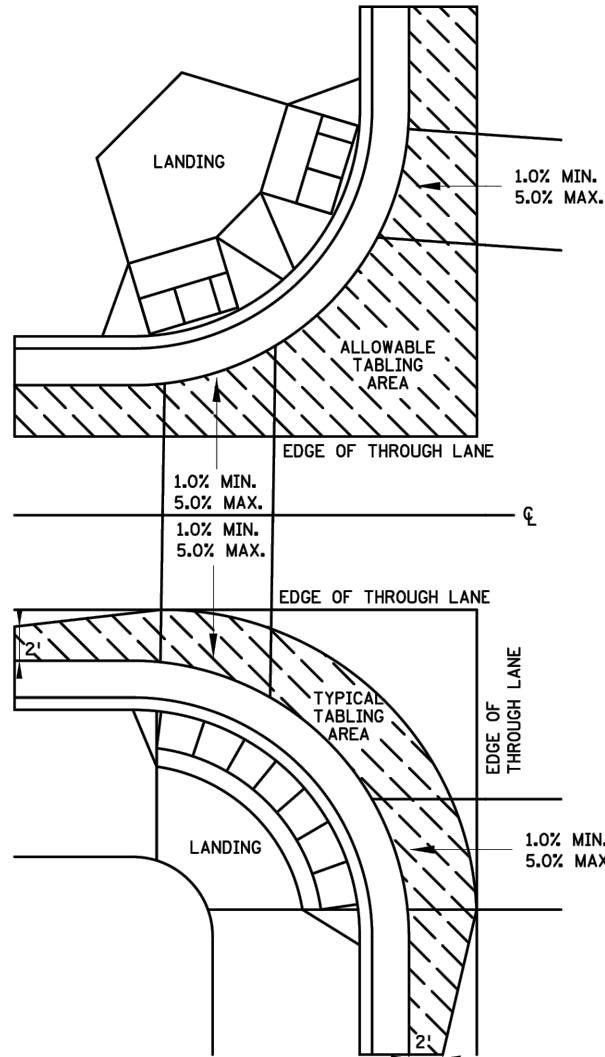
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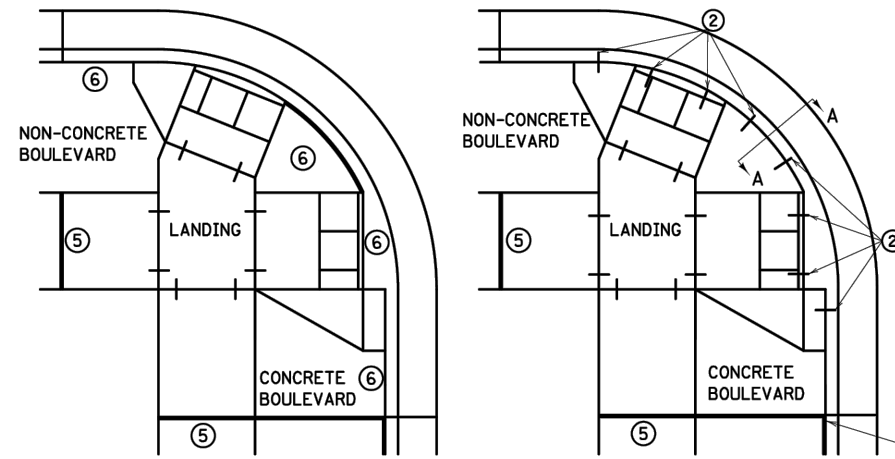
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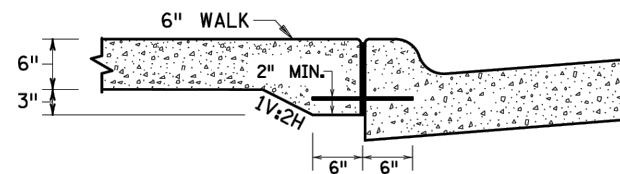


CURB LINE AND ROAD CROSSING ADJUSTMENTS

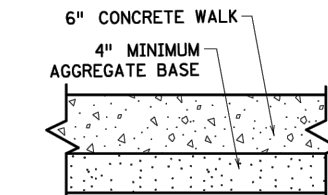


EXPANSION MATERIAL PLACEMENT FOR CONCRETE ROADWAYS

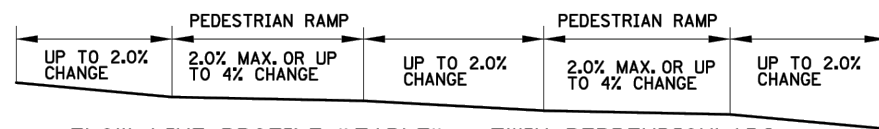
CURB LINE REINFORCEMENT ④ PLACEMENT ON BITUMINOUS ROADWAYS



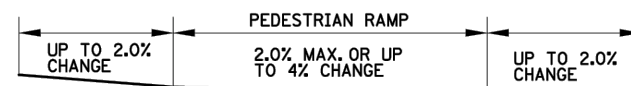
SECTION VIEW A-A THICKENED SECTION THROUGH CURB RAMP FLARES



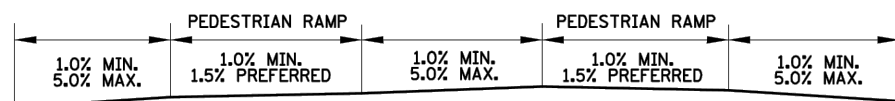
TYPICAL SIDEWALK SECTION WITHIN INTERSECTION CORNER



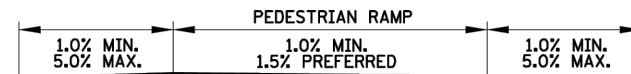
FLOW LINE PROFILE "TABLE" - TWIN PERPENDICULARS



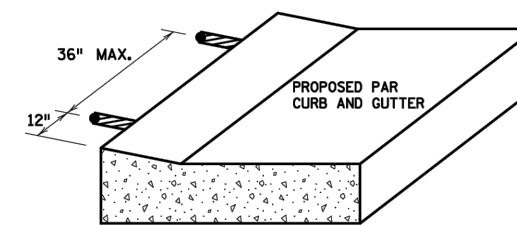
FLOW LINE PROFILE "TABLE" - FAN



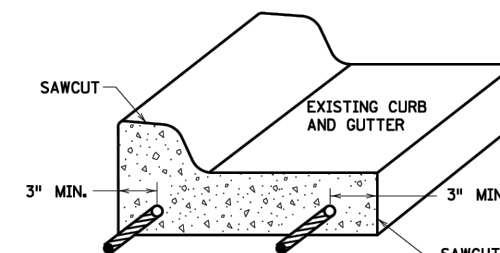
FLOW LINE PROFILE RAISE - TWIN PERPENDICULARS



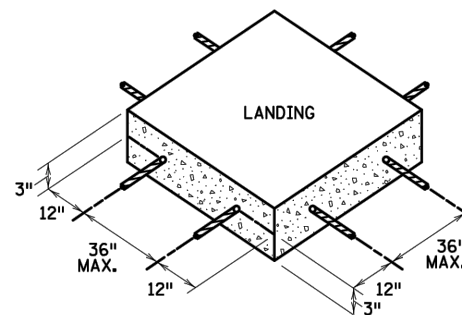
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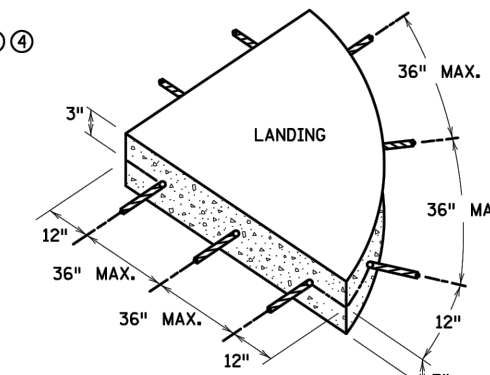
CURB RAMP REINFORCEMENT DETAILS ② ④



CURB AND GUTTER REINFORCEMENT ③



SEPARATE LANDING POUR REINFORCEMENT ① ②



GENERAL NOTES:

"TABLING" OF CROSSWALKS MEANS MAINTAINING LESS THAN 2% CROSS SLOPE WITHIN A CROSSWALK, IS REQUIRED WHEN A ROADWAY IS IN A STOP OR YIELD CONDITION AND THE PROJECT SCOPE ALLOWS.

RECONSTRUCTION PROJECTS: ON FULL PAVEMENT REPLACEMENT PROJECTS "TABLING" OF ENTIRE CROSSWALK SHALL OCCUR WHEN FEASIBLE.

MILL & OVERLAY PROJECTS: "TABLING" OF FLOW LINES, IN FRONT OF THE PEDESTRIAN RAMP, IS REQUIRED WHEN THE EXISTING FLOW LINE IS GREATER THAN 2%. WARPING OF THE BITUMINOUS PAVEMENT CAN NOT EXTEND INTO THE THROUGH LANE. TABLE THE FLOW LINE TO 2% OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. CROSS-SLOPE OF THE ROAD
- 2) 5.0% MAX. CROSS-SLOPE OF THE ROAD
- 3) "TABLE" FLOW LINE UP TO 4% CHANGE FROM EXISTING SLOPE IN FRONT OF PEDESTRIAN RAMP
- 4) UP TO 2% CHANGE IN FLOW LINE FROM EXISTING SLOPE BEYOND THE PEDESTRIAN CURB RAMP

STAND-ALONE ADA RETROFITS: FOLLOW MILL & OVERLAY CRITERIA ABOVE HOWEVER ALL PAVEMENT WARPING IS DONE WITH BITUMINOUS PATCHING ON BITUMINOUS ROADWAYS AND FULL-DEPTH APRON REPLACEMENT ON CONCRETE ROADWAYS.

RAISING OF CURB LINES SHOULD OCCUR IN VERTICALLY CONSTRAINED AREAS. RAISE THE CURB LINES ENOUGH TO ALLOW COMPLIANT RAMPS OR AS MUCH AS POSSIBLE WHILE ADHERING TO THE FOLLOWING CRITERIA:

- 1) 1.0% MIN. AND 5.0% MAXIMUM CROSS-SLOPE OF THE ROAD
- 2) 1.0% MIN. FLOW LINE (ON EITHER SIDE OF PEDESTRIAN RAMP) TO MAINTAIN POSITIVE DRAINAGE
- 3) 5.0% RECOMMENDED MAX. FLOW LINE
- 4) LONGITUDINAL THROUGH LANE ROADWAY TAPERS SHOULD BE 1" VERTICAL PER 15' HORIZONTAL

NOTES:

- ① TO ENSURE RAMPS AND LANDINGS ARE PROPERLY CONSTRUCTED, ALL INITIAL LANDINGS AT A TOP OF A RAMPED SURFACE (RUNNING SLOPE GREATER THAN 2%) SHALL BE FORMED AND PLACED SEPARATELY IN AN INDEPENDENT CONCRETE POUR. FOLLOW SIDEWALK REINFORCEMENT DETAILS ON THIS SHEET FOR ALL SEPARATELY POURED INITIAL LANDINGS.
- ② DRILL AND GROUT NO. 4 12" LONG REINFORCEMENT BARS (EPOXY COATED) AT 36" MAXIMUM CENTER TO CENTER MINIMUM 12" SPACING FROM CONSTRUCTION JOINTS. BARS TO BE ADJUSTED TO MATCH RAMP GRADE. BARS TO BE PAID BY EACH.
- ③ DRILL AND GROUT 2 - NO. 4 X 12" LONG (6" EMBEDDED) REINFORCEMENT BARS (EPOXY COATED). REINFORCEMENT REQUIRED FOR ALL CONSTRUCTION JOINTS. BARS TO BE PAID BY EACH.
- ④ THIS CURB LINE REINFORCEMENT DETAIL SHALL BE USED ON BITUMINOUS ROADWAYS. FOR CONCRETE ROADWAYS, SEE NOTE 6.
- ⑤ CONSTRUCT WITH EXPANSION MATERIAL PER MNDOT SPECIFICATION 3702 TYPES A-E. EXPANSION MATERIAL SHALL MATCH FULL HEIGHT OF ADJACENT CONCRETE.
- ⑥ USE AN APPROVED TYPE F (1/4 INCH THICK) SEPARATION MATERIAL. SEPARATION MATERIAL SHALL MATCH FULL HEIGHT DIMENSION OF ADJACENT CONCRETE.

REVISION:
APPROVED: 11-04-2021
Jeff J. Perkins
JEFF PERKINS
OPERATIONS DIVISION



STANDARD PLAN 5-297.250 6 OF 6

APPROVED: 11-04-2021
REVISOR:

PEDESTRIAN CURB RAMP DETAILS

STATE PROJ. NO.

(TH) SHEET NO. OF SHEETS

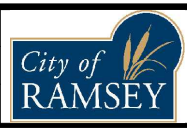
DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Date _____ Lic. No. _____

DESIGNED BY: JJF
DRAWN BY: JJF
CHECKED BY: JJF

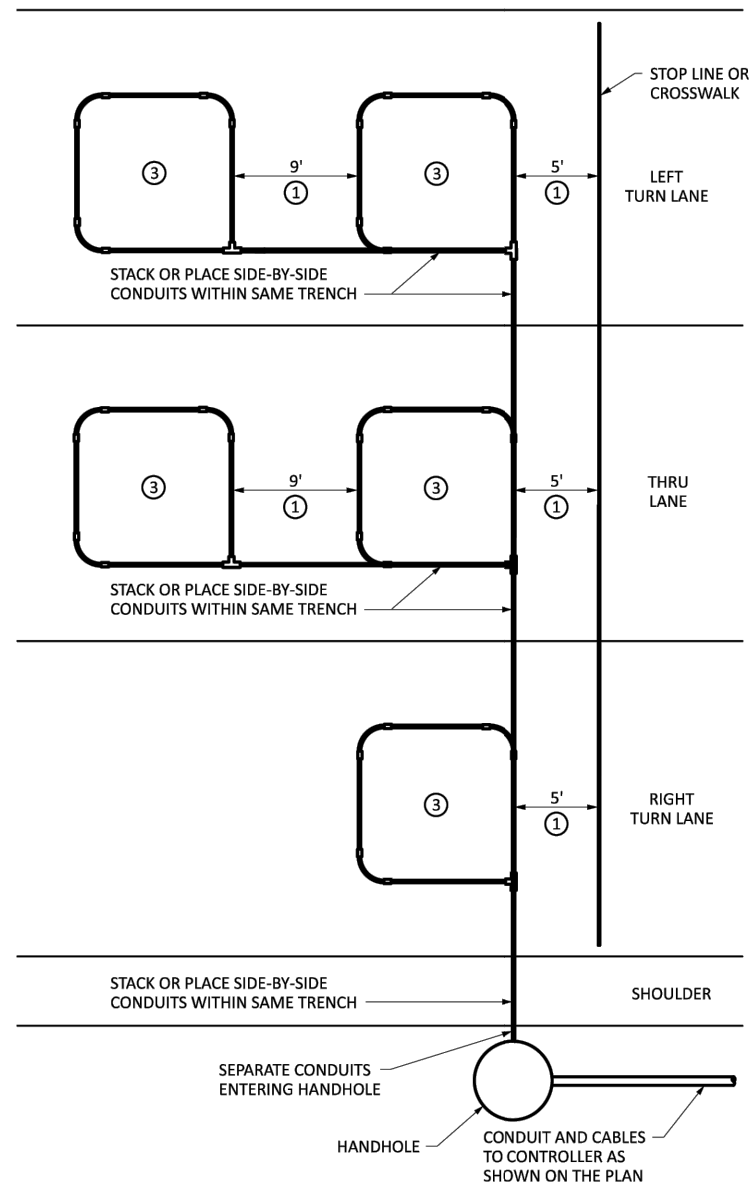
DATE: 03/21/25
FILE: 25-03



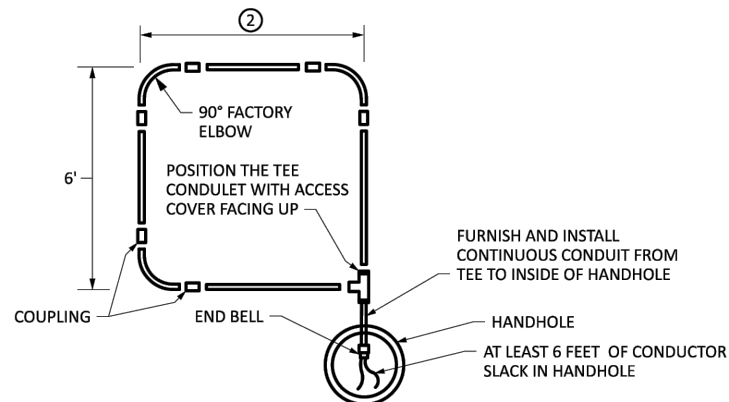
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

MNDOT PEDESTRIAN RAMP DETAILS
S.A.P. 199-106-012 / S.A.P 199-107-010

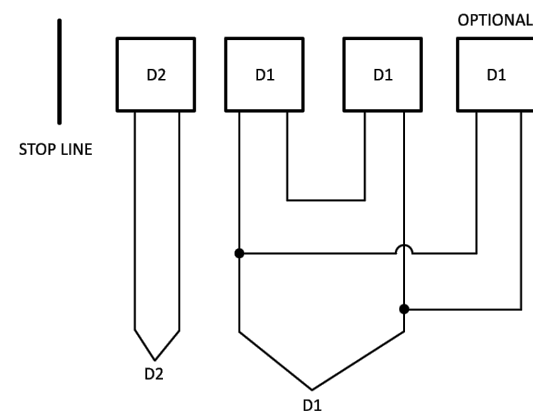
ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



RIGID PVC LOOP DETECTOR PLACEMENT DETAIL



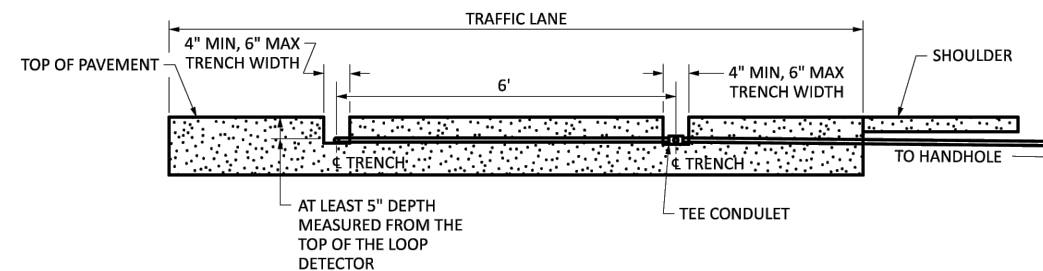
PREFORMED RIGID PVC LOOP DETECTOR DETAIL



MULTIPLE LOOP SERIES HOOKUP DETAIL

NOTES:

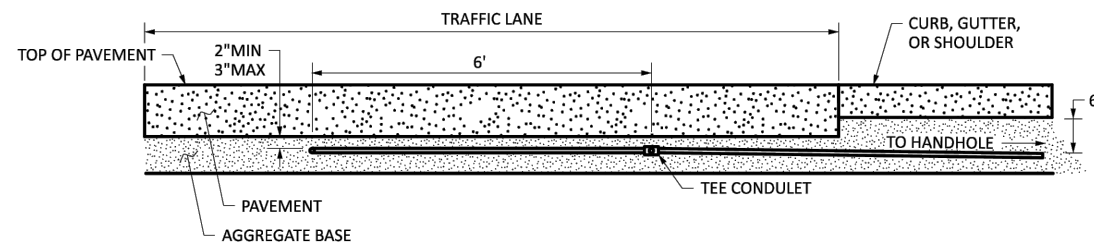
- FURNISH AND INSTALL 3/4" CONDUIT AND FITTINGS.
- ASSEMBLE THE PREFORMED RIGID PVC CONDUIT LOOP DETECTOR AS SHOWN IN THE DETAIL.
- USE PRIMER AND PVC SOLVENT CEMENT MADE FOR JOINING RIGID PVC CONDUIT AND FITTINGS.
- ATTACH A FERROUS METAL ITEM IN OR ADJACENT TO THE TEE CONDULET COVER OR AS APPROVED BY THE ENGINEER.
- SLOPE CONDUITS FROM THE TEE CONDULETS TOWARDS THE HANDHOLE.
- LOOP DETECTOR CONDUITS TO THE HANDHOLE MAY BE PLACED WITHIN THE SAME TRENCH.
- ① USE DIMENSION SHOWN ON THE PLAN.
- ② DIMENSION ACCORDING TO LOOP SIZE SHOWN ON THE PLAN.
- ③ CENTER RIGID PVC LOOP DETECTOR IN THE LANE.



LOOP DETECTOR PLACEMENT IN EXISTING PAVEMENT

NOTES:

- FURNISH AND INSTALL THE SAME LOOP DETECTOR USED TO TRACE OUT THE SPECIFIC LOCATION ON THE PAVEMENT TO ASSURE A PROPER FIT IN THE TRENCH.
- MILL BEYOND THE LOOP DETECTOR PAVEMENT MARKINGS TO ACHIEVE FULL TRENCH DEPTH OF THE LOOP DETECTOR.
- BEFORE APPLYING THE TACK COAT, REMOVE DEBRIS AND FOREIGN MATTER FROM THE TRENCH AND USE COMPRESSED AIR TO CLEAN AND DRY THE TRENCH.
- APPLY A BITUMINOUS TACK COAT IN ACCORDANCE WITH SPEC. 2357 TO THE BOTTOM OF A CLEAN AND DRY TRENCH.
- BACKFILL THE LOOP DETECTOR TRENCHES WITH A PLANT-MIXED ASPHALT IN ACCORDANCE WITH SPEC 2360, UNLESS OTHERWISE APPROVED BY THE ENGINEER TO USE AN ALTERNATE MIXTURE TYPE.
- BACKFILL THE TRENCH WITH THE REQUIRED MIXED ASPHALT IN AT LEAST TWO COMPACTED LIFTS. BEFORE COMPACTING THE FIRST LIFT OF MIXED ASPHALT, ENSURE THERE IS AN ADEQUATE AMOUNT OF MIX ON THE SIDES AND ABOVE THE LOOP DETECTORS TO PREVENT DAMAGE DURING COMPACTION. USE "ORDINARY COMPACTION" METHOD IN ACCORDANCE WITH SPEC 2560.3D.2 FOR EACH LIFT. LEAVE 3/4" TO 1/2" COMPACTED MIXED ASPHALT IN THE TRENCH ABOVE THE EXISTING PAVEMENT TO ALLOW FOR ADDITIONAL COMPACTION BY TRAFFIC.
- FILL THE TRENCH WITH PACKAGED, DRY, NON-SHRINK, RAPID-HARDENING, CEMENT MATERIAL FOR CONCRETE REPAIRS LISTED ON MnDOT'S APL UNDER "CONCRETE PRODUCTS."
- MILLING IS REQUIRED FOR RIGID PVC LOOP INSTALLATIONS. WHEN MILLING INTO EXISTING SURFACE THAT WILL BE OVERLAYED WITH BITUMINOUS, MILL THE TRENCH DEPTH NO LESS THAN THE HIGHEST LOOP DETECTOR IN THE TRENCH.
- CONCRETE UNDER THE EXISTING BITUMINOUS SURFACE MAY BE ENCOUNTERED DURING MILLING OPERATIONS.



LOOP DETECTOR PLACEMENT IN NEW PAVEMENT

NOTES:

- OBTAIN THE REQUIRED COMPACTION OF THE AGGREGATE BASE AFTER PLACEMENT OF LOOP DETECTOR AND LEAD-IN CONDUIT.
- PLACE THE LOOP DETECTORS INTO THE AGGREGATE BASE 2" MINIMUM TO 3" MAXIMUM, MEASURED FROM THE TOP OF THE AGGREGATE BASE TO THE TOP OF THE LOOP DETECTOR AND LEAD-IN CONDUIT.

LEAD EXPERT OFFICE
BRIAN SORENSON
STATE TRAFFIC ENGINEER
OFFICE OF TRAFFIC ENGINEERING

PREFORMED RIGID PVC CONDUIT LOOP DETECTORS

APPROVED:
10-04-2024

THOMAS STYRBICKI
STATE DESIGN ENGINEER

STANDARD PLAN
5-297.874

1 OF 1



STANDARD PLAN

STATE PROJ. NO.

SHEET NO.

TRUNK HWY.

TOTAL SHEETS

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Date _____ Lic. No. _____

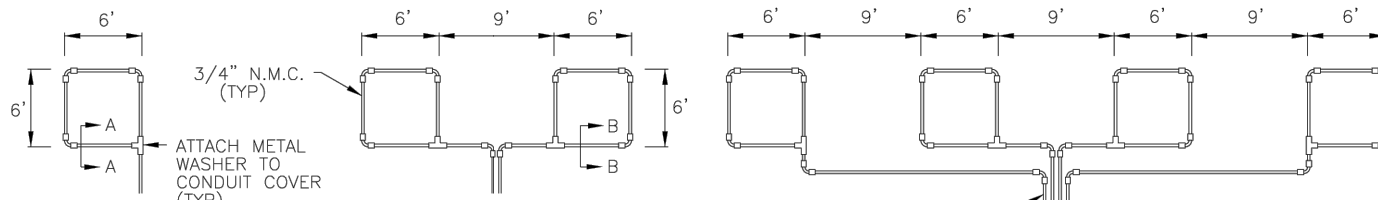
DESIGNED BY: JJF
DRAWN BY: JJF
CHECKED BY: JJF
DATE: 03/21/25
FILE: 25-03



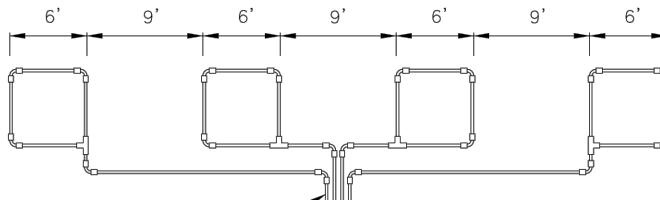
CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

MNDOT LOOP DETECTORS STANDARD PLAN
S.A.P. 199-106-012 / S.A.P 199-107-010

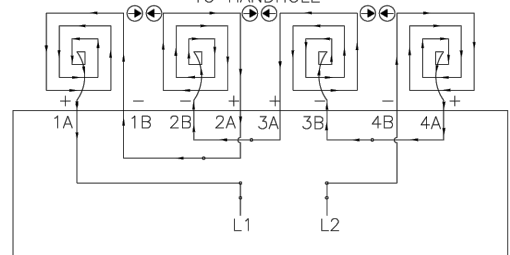
ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



3/4" N.M.C. (TYP)
ATTACH METAL WASHER TO CONDUIT COVER (TYP)



LOOP RETURN CONDUITS MAY BE PLACED IN COMMON TRENCH (TYP)

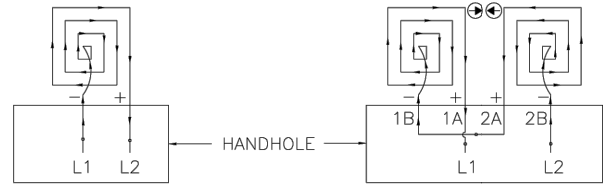


LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

- L1 TO 1A 3B TO 4A
- 1B TO 2A 4B TO L2
- 2B TO 3A

SPLICE CONTROL CABLE TO L1 & L2 IN HANDHOLE. ALL CONDUCTORS SHALL BE TAGGED IN HANDHOLE (1A, 1B, ECT)

LOOP DETECTOR DETAIL 'C'
(LOOP PHASING FOR SERIES CONNECTION)

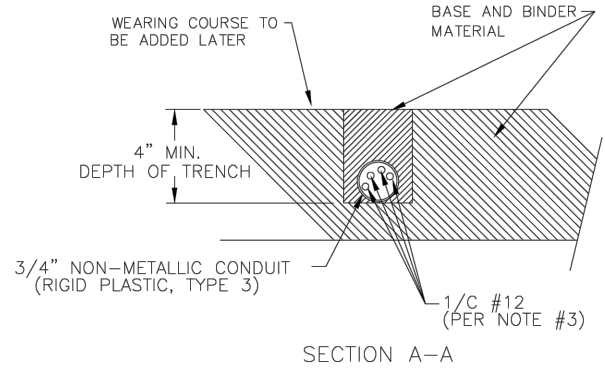


LOOP DETECTOR DETAIL 'A'
(LOOP PHASING FOR SINGLE CONNECTION)

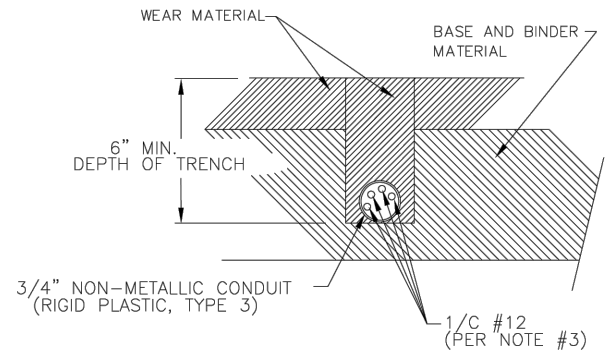
LOOP CONNECTIONS SHALL BE LABELED AND SPLICED IN THE HANDHOLE AS FOLLOWS:

- L1 TO 1A
- 1B TO 2A
- 2B TO L2

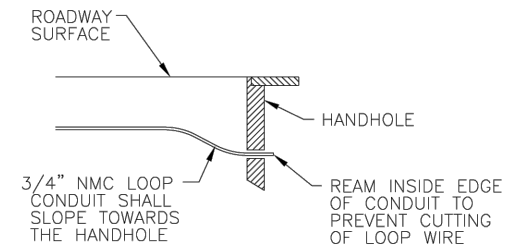
LOOP DETECTOR DETAIL 'B'
(LOOP PHASING FOR SERIES CONNECTION)



SECTION A-A
DETAIL FOR LOOP INSTALLATION IN NEW ROADWAY



SECTION B-B
DETAIL FOR LOOP INSTALLATION IN EXISTING ROADWAY



DRAINAGE DETAIL

LOOP DETECTOR WIRING

- 1) ALL CORNERS SHALL BE 90° CONDUIT BENDS.
- 2) CONNECT WIRES IN HANDHOLES USING SPLICE KIT METHOD DESCRIBED IN THE SPECIAL PROVISIONS.
- 3) LOOP DETECTOR WIRES SHALL BE #12 AWG CROSSED LINKED POLYETHYLENE (XLP). SEE SPECIAL PROVISIONS.
- 4) LOOP LEAD IN WIRES SHALL BE TWISTED A MIN. OF (5) TURNS PER FOOT THROUGH THE CONDUIT TO THE HANDHOLE.
- 5) NMC DESIGNATES NON-METALLIC CONDUIT (SPEC. 3803)
- 6) LOOPS 6' x 6' THRU 6' x 14' SHALL HAVE (4) TURNS.
- 7) LOOPS 6' x 15' AND LARGER SHALL HAVE (2) TURNS.

NO	DATE	BY	CKD	APPR	REVISION
NAME: H:\Design\Manuals\Signal\Anoka Co Signal Details.dgn					
3/4/2025 1:05:56 PM					

ANOKA COUNTY HIGHWAY DEPT.

LOOP DETECTOR TYPICAL

DATE	REVISION
04/24/25	ADDED ANOKA COUNTY LOOP DETECTOR DETAIL

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Date _____ Lic. No. _____

DESIGNED BY:	JJF
DRAWN BY:	JJF
CHECKED BY:	JJF

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

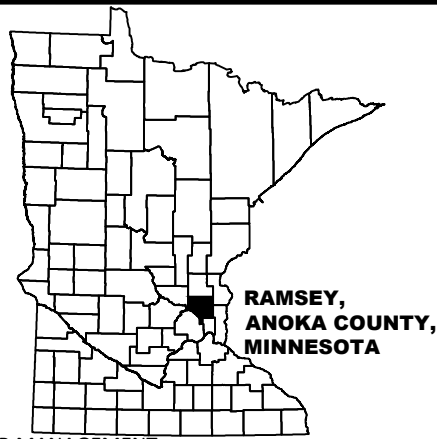
ANOKA COUNTY LOOP DETECTOR DETAIL
S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

ALPINE DRIVE RECONSTRUCTION
S.A.P. 199-106-012 & 199-107-010

CITY OF RAMSEY
ANOKA COUNTY, MINNESOTA



DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:

Construction activities include; Site Grading, Storm Sewer Construction, Temporary Erosion and Sediment Control, Roadway Construction, and Permanent Stabilization.

Project Description: This project consists of reconstruction of 1.02 miles of existing bituminous streets including spot replacement of concrete curb and gutter. The drainage for the existing streets uses storm sewer inlets at low points. The proposed runoff will be collected in storm sewer inlets in the curb and gutter, and routed to the same low points. There is no change to the outfall location of the storm water runoff proposed with this project.

RESPONSIBLE PARTIES:

The Contractor and Owner must apply for coverage under the MPCA's General Storm Water Permit for Construction Activity as required by the National Pollution Discharge Elimination System (NPDES) Phase II program. Coverage under the permit will begin automatically 7 calendar days after the electronic submittal date or after the postmarked date of a complete application. (Longer time frames will apply to areas disturbing 50 acres or marked within 1 mile of a special water).

	COMPANY	CONTACT PERSON	PHONE
OWNER:	CITY OF RAMSEY	BRUCE WESTBY, PE	763-433-9825
SWPPP DESIGNER:	CITY OF RAMSEY	JOE FERIANCEK, PE	763-433-9893
CONTRACTOR:			
STIE MANAGER:			
PARTY RESPONSIBLE FOR LONG TERM O&M:	CITY OF RAMSEY	BRUCE WESTBY, PE	763-433-9825

Individuals listed above, including the SWPPP preparer, individual overseeing implementation of, revising and amending the SWPPP, Individuals performing or supervising the installation, maintenance and repair of BMP's must be trained. At least one individual present on the permitted project, or available within 72 hours shall be trained in the applicable job duties. Documentation showing training commensurate with the job duties and responsibilities is required to be included in the SWPPP prior to any work beginning on the site. Copies of the SWPPP preparer information is included in the Project Manual. The Contractor shall provide information for the individual(s) overseeing implementation, supervising installation, maintenance, and repair of BMP's to be included in the Project Manual prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

Documentation shall include:

- Names of trained personnel associated with this project.
- Dates of training, names of instructor(s) and entity providing training.
- Content of training course or workshop including the number of hours trained.
- As an alternative to a, b, and c listed above, a photocopy of the current Erosion and Stormwater Management card issued by the University of Minnesota can be attached to the SWPPP as suitable documentation of training.

DOCUMENTATION RETENTION:

The following documentation will be retained for a period of not less than 3-years from the date of submittal of the NOT.

- The final SWPPP.
- Copies of all stormwater related permits required for the project.
- Records of all inspection and maintenance conducted during construction.
- Copies of all permanent operation and maintenance agreements; including all right-of-way, contracts, covenants and other binding requirements regarding perpetual maintenance.
- All required calculations for design of temporary and permanent BMP's.

IMPLEMENTATION SCHEDULE AND PHASING:

- Furnish & Install perimeter sediment control and inlet protection.
- Reclamation of existing bituminous pavement.
- Rough grade site.
- Furnish & install bituminous pavement.
- Add additional temporary BMP's as necessary during construction based on inspection reports.
- Submit Notice of Termination (NOT) to MPCA within 30 days of final stabilization.

FINAL STABILIZATION:

The permittee(s) must ensure final stabilization of the site. The permittee(s) must submit a NOT within 30 days after final stabilization is complete, or another owner/operator (permittee) has assumed control over all areas of the site which have not undergone final stabilization. Final stabilization can be achieved in one of the following ways:

- All soil disturbing activities at the site have been completed and all soils must be stabilized by a uniform perennial vegetative cover with a density of 70 percent over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions and;
 - All drainage ditches, constructed to drain water from the site after construction is complete, must be stabilized to preclude erosion;
 - All temporary synthetic, and structural erosion prevention and sediment control BMP's (such as silt fence) must be removed as part of the site final stabilization; and
 - The permittee(s) must clean out all sediment from conveyances and from temporary sedimentation basins to be used as permanent water quality management basins. Sediment must be stabilized to prevent it from being washed back into the basin, conveyances or drainage ways discharging off-site or to surface waters. The cleanout of permanent basins must be sufficient to return the basin to design capacity.
- Final vegetation cover shall be in the Project Specifications.
- For residential construction only, final stabilization has been achieved when temporary erosion protection and down gradient perimeter control for individual lots has been completed and the residence has been transferred to the homeowner. Additionally, the permittee must distribute the MPCA "Homeowner fact sheet" to the homeowner to inform the homeowner of the need for, and benefits of, final stabilization.

SPECIAL ENVIRONMENTAL CONSIDERATIONS:

Was an environmental review required for this project or any part of a common plan of development or sale that includes all or any portion of this project?	NO
Does any portion of the site have the potential to affect threatened or endangered species?	NO
Does any portion of this site discharge to a Calcareous Fen and the letter of approval from the DNR is located in the Project Manual?	NO
Will any portion of this site potentially affect properties listed on the National Register of Historic Places or a Known or Discovered Archeological site?	NO
Have any Karst features been identified in the project vicinity?	NO
Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO

POLLUTION PREVENTION MANAGEMENT MEASURES:

The permittee(s) shall implement the following pollution prevention management measures on the site:

- Solid waste: collected sediment, asphalt and concrete millings, floating debris, paper, plastic, fabric, construction and demolition debris and other wastes must be disposed of properly and must comply with MPCA disposal regulations.
- Hazardous materials: oil, gasoline, paint and any hazardous substances must be properly stored, including secondary containment, to prevent spills, leaks or other discharge. Restricted access to storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste must be in compliance with MPCA regulations.
- External washing of trucks and other construction vehicles must be limited to a defined area of the site. Runoff must be contained and waste properly disposed of. No engine degreasing is allowed on site.

GENERAL STORMWATER DISCHARGE REQUIREMENTS:

All requirements listed in Part 15 of the permit for the design of permanent stormwater treatment system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:

- The expected amount, frequency, intensity and duration of precipitation.
- The nature of stormwater runoff and run-on at the site.
- Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
- The range of soil particle sizes expected to be present on the site.

RECEIVING WATERS:

Receiving waters, including surface water, wetlands, Public Waters, and stormwater ponds are identified on the USGS 7.5min quad map within 1 mile of the project boundary. Receiving waters that are impaired, the impairment and WLA are listed as follows. All specific BMP's relative to construction activities listed in this permit for special and impaired waters have been incorporated into this plan. All specific BMP's listed in approved TMDLs and those BMP's listed for construction related waste load allocations have also been incorporated.

NAME OF WATER BODY	TYPE (DITCH, POND, WETLAND, LAKE, ETC.)	APPENDIX A SPECIAL WATER?	FLOWS TO IMPAIRED WATER WITHIN 1 MILE?	USEPA APPROVED TMDL?
RUM RIVER	RIVER	YES	YES	YES

IMPAIRMENTS: DO; FISHEBIO; INERTBIO

PROJECT AREAS:

Total project size (disturbed area) =	6.59 acres
Existing area of impervious surface =	5.56 acres
Post construction area of impervious surface =	5.56 acres
New impervious surface area created =	0.00 acres

Planned construction start date: June 2025
Planned construction completion date: October 2025

PROJECT LOCATION:

County: ANOKA Township: 32 Range: 25 Section: 16 Latitude: 45.248537 Longitude: -93.416690

PERMANENT STORMWATER MANAGEMENT SYSTEM:

Type of storm water management used if more than 1 acre of new impervious surface is created:

- Wet Sedimentation Pond
- Infiltration / Filtration
- Regional Pond
- Permanent Stormwater Management Not Required

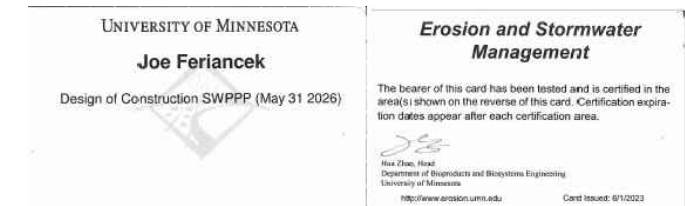
LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN:

DESCRIPTION	LOCATION
TEMPORARY EROSION CONTROL MEASURES	SHEETS No. 20 - 27
FINAL STABILIZATION	SHEETS No. 20 - 27
STORM SEWER TABULATION	SHEETS No. 03
EROSION AND SEDIMENT CONTROL DETAILS	SHEETS No. 20 - 27

EROSION AND SEDIMENT CONTROL QUANTITIES:

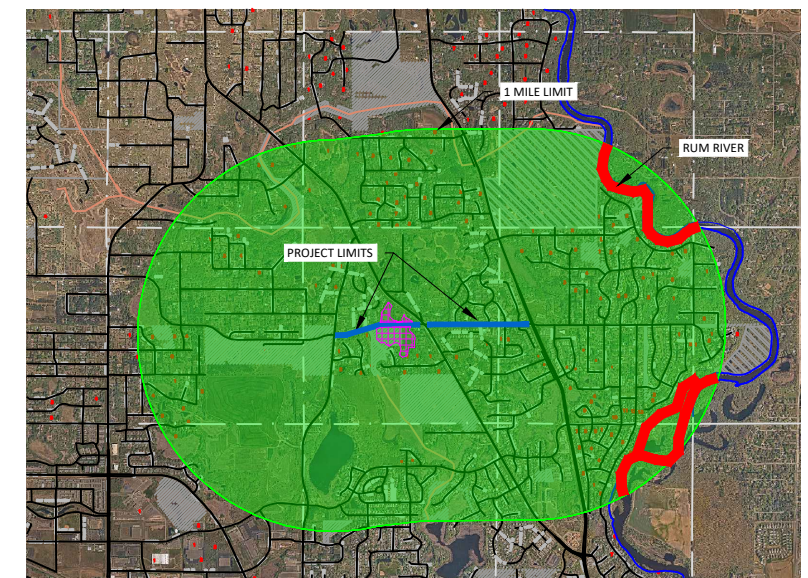
DESCRIPTION	QUANTITY	
	BASE BID	ALT BID
SILT FENCE TYPE MS	5143 LF	583 LF
INLET PROTECTION	20 EA	4 EA
RANDOM RIP RAP CLASS III	12 CY	-
EROSION BLANKET CATEGORY 20	2326 SY	52 SY
CONSTRUCTION EXIT	4 EA	-

CERTIFICATION:



LEGEND

- PROJECT LIMITS
- 1 MILE LIMIT
- RECEIVING WATER
- IMPAIRED WATER



DATE	REVISION

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Joe Feriancek
JOE FERIANCEK
Date: 03/21/25 Lic. No. 57095

DESIGNED BY:	JJF	DATE:	03/21/25
DRAWN BY:	JJF	FILE:	25-03
CHECKED BY:	JJF		

CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
(763) 427-1410 FAX (763) 433-9898

SWPPP
S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA

SEQUENCE OF CONSTRUCTION:

Construction shall proceed in the following sequence:

1. Contractor shall schedule and conduct a pre-construction meeting with the City.
2. Contractor shall secure all necessary permits and licenses.
3. Furnish & install erosion control measures.
4. Maintain erosion control measures, i.e. silt fence, inlet protection.
5. Remove existing bituminous pavement and base.
6. Excavate and grade storm water ponds.
7. Install utilities; backfill excavation, grade and compact as required.
8. Furnish & install concrete curb and gutter.
9. Furnish & install aggregate base, base course of bituminous pavement
10. Install restoration per plan.
11. Furnish & install wear course of bituminous pavement.
12. Remove erosion control after vegetation is established.

ADDITIONAL STORMWATER POLLUTION PREVENTION, GRADING PLAN, AND SCHEDULE NOTES:

1. All slopes to be 1:4 unless approved by the city engineer.
2. Below grade structures shall be protected and meet drainage requirements per the city engineer.
3. Construction operation hours are from 7:00 a.m. - 10:00 p.m. Monday through Saturday.
4. Call Gopher State One Call for utility locations prior to any work at 1-800-252-1166.
5. Permittee may need to modify SWPPP if the general objectives of controlling pollutants is not being met.
6. Operator shall implement these and any other BMP's that may be required to meet the general permit requirements.
7. Site is not in karst area or pollution or remediation site.
8. Silt fence to be installed downhill from any grading activity.
9. If tracking onto adjacent streets occurs a street sweeper shall be used to clean streets within 8 hours or as directed by the engineer.
10. Dust control may be necessary during rough grading. No grading can take place if wind speed exceeds 25 mph.
11. Solid waste shall be collected and disposed of properly and must comply with MPCA disposal requirements.
12. Hazardous materials shall be stored properly to prevent spills and vandalism.
13. No engine degreasing is allowed on site. External washing of vehicles shall be limited to a defined area (bone yard) on site.
14. Permittee(s) shall adhere to all SWPPP specifications on the plan and other MPCA permit requirements.

EROSION PREVENTION PRACTICES:

1. The permittee(s) must plan for and implement appropriate construction phasing, vegetative buffer strips, horizontal slope grading, and other construction practices that minimize erosion, so that the inspection and maintenance requirements are complied with. The location of areas not to be disturbed must be delineated (e.g. with flags, stakes, signs, silt fence, etc.) on the development site before work begins.
2. All exposed soil areas must be stabilized as soon as practical, but in no case later than 7 days after the construction area has temporarily or permanently ceased.
These areas include constructed stormwater management pond side slopes, and any exposed soil areas with a positive slope to a stormwater conveyance system, such as a curb and gutter system, storm sewer inlet, temporary or permanent drainage ditch or other natural or man made systems that discharge to a surface water.
3. The normal wetted perimeter of any temporary or permanent drainage ditch that drains water from a construction site, or diverts water around a site, must be stabilized within 200 lineal feet from the property edge, or from the point of discharge to any surface water. Stabilization must be completed within 24 hours of connecting to a surface water.
4. Pipe outlets must be provided with temporary or permanent energy dissipation within 24 hours of connection to a surface water.
5. All disturbed areas, except roadways, building areas, parking areas, islands and sidewalk, shall be restored with minimum 4 inches topsoil, seeded and mulched within 7 days of completion of site grading. Seeding shall be in accordance with MnDOT Specification 2575. Where side slopes exceed or equal 1:3 and running slope is greater than 1:50, a polypropylene netting or wood fiber blanket shall be provided and staked over the mulched area. Seed and mulch types and applications rates are per plan and specification.
6. Refer to restoration plan for areas to be seeded or sodded for erosion control.

DEWATERING AND BASIN DRAINING:

1. Dewatering or basin draining (e.g. pumped discharges, trench/ditch cuts for drainage) related to the construction activity that may have turbid or sediment laden discharge water must be discharged to a temporary or permanent sedimentation basin on the project site whenever possible. If the water cannot be discharged to a sedimentation basin prior to entering the surface water, it must be treated with the appropriate BMP's, such that the discharge does not adversely affect the receiving water or downstream landowners. The permittee(s) must ensure that discharge points are adequately protected from erosion and scour. The discharge must be dispersed over natural rock rip rap, sand bags, plastic sheeting or other accepted energy dissipation measures. Adequate sedimentation control measures are required for discharge water that contains suspended solids.
2. All water from dewatering or basin draining activities must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in wetlands causing significant adverse impact to the wetland.

SEDIMENT CONTROL PRACTICES:


1. Sediment control practices must minimize sediment from entering surface waters, including curb and gutter systems and storm sewer inlets.
 - a. Temporary or permanent drainage ditches and sediment basins that are designed as part of a treatment system (e.g. ditches with rock check dams) require sediment control practices only as appropriate for site conditions.
 - b. If the down gradient treatment system is overloaded, additional upgradient sediment control practices must be installed to eliminate the overloading, and the SWPPP must be amended to identify these additional practices.
 - c. In order to maintain sheet flow and minimize rills and/or gullies, there shall be no unbroken slope length of greater than 75 feet for slopes with a grade of 1:3 or steeper.
2. Sediment control practices must be established on all down gradient perimeters before any upgradient land disturbing activities begin. These practices shall remain in place until final stabilization has been established.
3. The timing of the installation of sediment control practices may be adjusted to accommodate short-term activities such as clearing or grubbing, or passage of vehicles. Any short-term activity must be completed as quickly as possible and the sediment control practices must be installed immediately after the activity is completed. However, sediment control practices must be installed before the next precipitation event even if the activity is not complete.
4. All storm drain inlets must be protected by appropriate BMP's during construction until all sources with potential for discharging to the inlet have been stabilized.
5. Temporary soil stockpiles must have silt fence or other effective sediment controls, and cannot be placed in surface waters, including stormwater conveyances such as curb and gutter systems, or conduits and ditches.
6. Stockpile areas which remain on the site for more than seven days shall be seeded, mulched, and surrounded by silt fence.
7. Vehicle tracking of sediment from the construction site must be minimized by BMP's such as stone pads, concrete or steel wash racks, or equivalent systems. Street sweeping must be used if such BMPs are not adequate to prevent sediment from being tracked onto the street.
8. The permittee must install temporary sedimentation basins as required.

INSPECTIONS AND MAINTENANCE:

1. The permittee(s) (either the owner or operator, whoever is identified in the SWPPP) must routinely inspect the construction site once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5-inches in 24 hours. Following an inspection that occurs within 24 hours after a rainfall event, the next inspection must be conducted within 7 days.
2. All inspections and maintenance conducted during construction must be recorded in writing and these records must be retained with the SWPPP. Records of each inspection and maintenance activity shall include:
 - a. Date and time of inspections;
 - b. Name of persons conducting inspections;
 - c. Accurate findings of inspections, including the specific location where corrective actions are needed;
 - d. Corrective actions taken (including dates, times, and party completing maintenance activities);
 - e. Date of all rainfall events greater than ½ inches in 24 hours, and the amount of rainfall for each event. Permittee(s) must obtain rainfall amounts by either a properly maintained rain gauge installed onsite, a weather station that is within one (1) mile of your location, or a weather reporting system that provides site specific rainfall data from radar summaries;
 - f. If permittee(s) observe a discharge (i.e., color, odor, settled or suspended solids, oil sheen, and other obvious indicators of pollutant(s));
 - g. Any amendments to the SWPPP proposed as a result of the inspection must be documented as required in Section 6 of the general permit within seven (7) calendar days.
3. Where parts of the construction site have undergone final stabilization, but work remains on other parts of the site, inspections of the stabilized areas may be reduced to once per month. Where work has been suspended due to frozen ground conditions, the required inspections and maintenance must take place within 24 hours after runoff occurs at the site or 24 hours prior to resuming construction, whichever occurs first.
4. All erosion prevention and sediment control BMP's must be inspected to ensure integrity and effectiveness. All nonfunctional BMP's must be repaired, replaced, or supplemented with functional BMP's. The permittee(s) must investigate and comply with the following inspection and maintenance requirements:
 - a. All silt fence must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches ½ of the height of the fence. These repairs must be made within 24 hours of discovery, or as soon as field conditions allow access.
 - b. Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches ½ the storage volume. Drainage and removal must be completed within 72 hours of discovery, or as soon as field conditions allow access.
 - c. Surface waters, including drainage ditches and conveyance systems, must be inspected for evidence of sediment being deposited by erosion. The permittee(s) must remove all deltas and sediment deposited in surface waters, including drainage ways, catch basins, and other drainage systems, and restabilize the areas where sediment removal results in exposed soil. The removal and stabilization must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. The permittee shall use all reasonable efforts to obtain access. If precluded, removal and stabilization must take place within seven (7) calendar days of obtaining access. The permittee is responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work.
 - d. Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces within 3 hours after notification by the City that sweeping is required.
 - e. The permittee(s) are responsible for the operation and maintenance of temporary and permanent water quality management BMP's as well as all erosion prevention and sediment control BMP's, for the duration of the construction work at the site. The permittee(s) are responsible until another permittee has assumed control over all areas of the site that have not been finally stabilized or the site has undergone final stabilization, and a NOT has been submitted to the MPCA.
 - e. If sediment escapes the construction site, off-site accumulations of sediment must be removed in a manner and at a frequency sufficient to minimize off-site impacts (e.g. fugitive sediment in streets could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).
5. All infiltration areas must be inspected to ensure that no sediment from ongoing construction activities is reaching the infiltration area and these areas are protected from compaction due to construction equipment driving across the infiltration area.
6. Storm sewer pipes and structures to be inspected and cleaned out.

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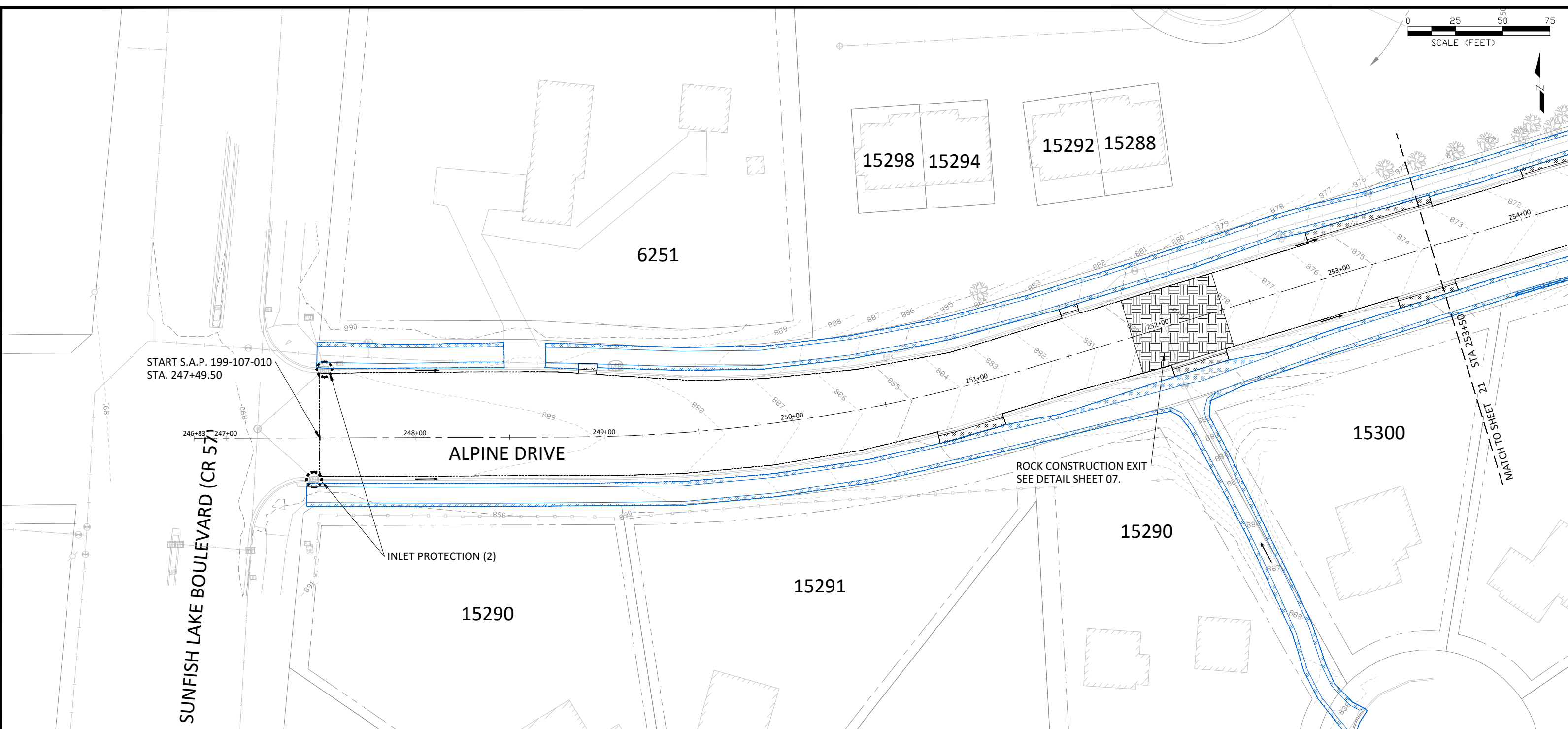

 JOE FERIANCEK
 Date 03/21/25 Lic. No. 57095

DESIGNED BY:	JJF	DATE:	03/21/25
DRAWN BY:	JJF	FILE:	25-03
CHECKED BY:	JJF		

CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

SWPPP
 S.A.P. 199-106-012 / S.A.P 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LEGEND

	PR. MAJOR CONTOUR		ROCK CONSTRUCTION EXIT
	PR. MINOR CONTOUR		RANDOM RIP RAP CLASS III
	DRAINAGE ARROW		HYDRO-MULCH SEEDING
	EX. MAJOR CONTOUR		ALT BID - HYDRO-MULCH SEEDING
	EX. MINOR CONTOUR		EROSION CONTROL BLANKET
	CONSTRUCTION LIMIT		ALT BID - EROSION CONTROL BLANKET
	DRAINAGE & UTILITY EASEMENT		INLET PROTECTION
	RIGHT OF WAY LINE		ALT BID - INLET PROTECTION
	SECTION LINE		SILT FENCE
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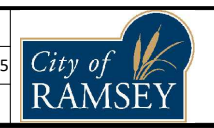
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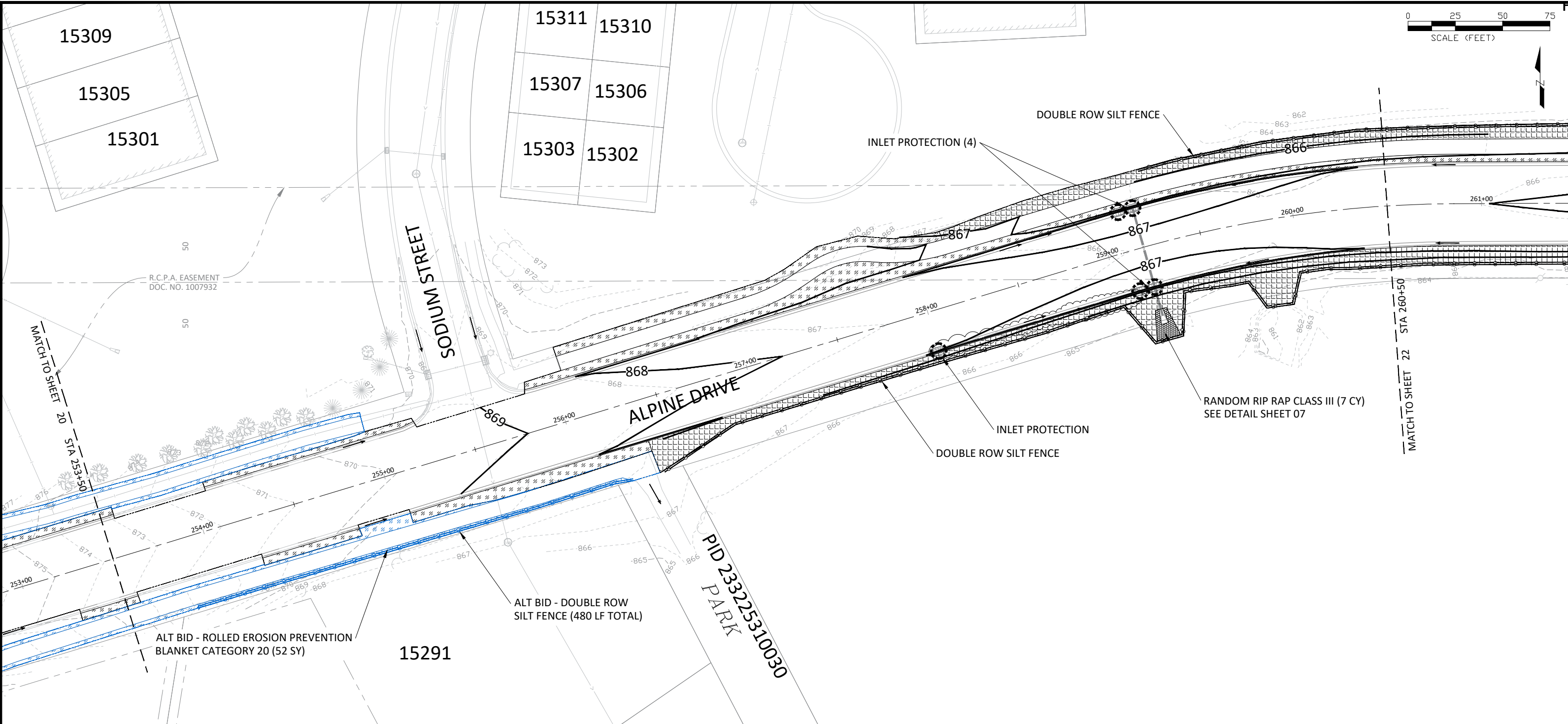
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CITY OF RAMSEY
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GRADING & EROSION CONTROL
 S.A.P. 199-107-010

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LEGEND

	PR. MAJOR CONTOUR		ROCK CONSTRUCTION EXIT
	PR. MINOR CONTOUR		RANDOM RIP RAP CLASS III
	DRAINAGE ARROW		HYDRO-MULCH SEEDING
	EX. MAJOR CONTOUR		ALT BID - HYDRO-MULCH SEEDING
	EX. MINOR CONTOUR		EROSION CONTROL BLANKET
	CONSTRUCTION LIMIT		ALT BID - EROSION CONTROL BLANKET
	DRAINAGE & UTILITY EASEMENT		INLET PROTECTION
	RIGHT OF WAY LINE		ALT BID - INLET PROTECTION
	SECTION LINE		SILT FENCE
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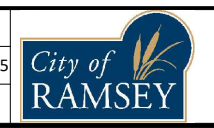
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04/24/25	REVISED STORM SEWER

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Joe Ferencik
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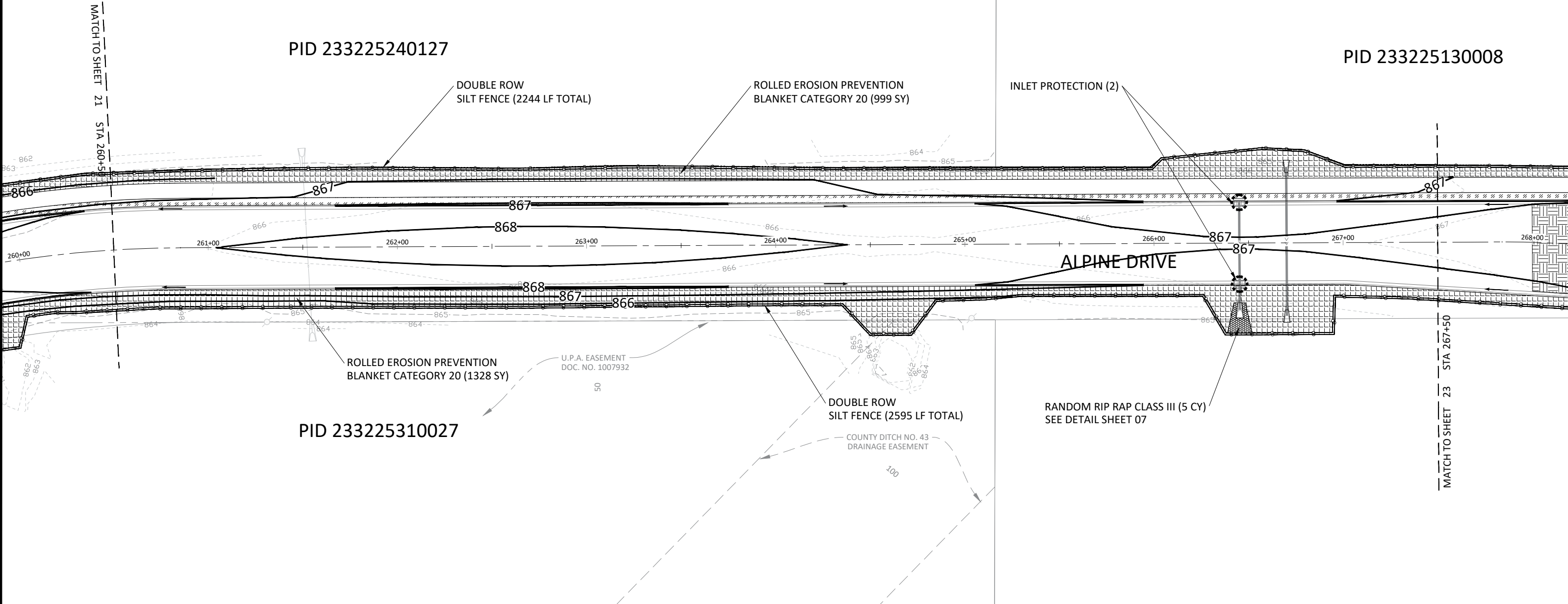
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ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



PID 233225240127

PID 233225130008



LEGEND

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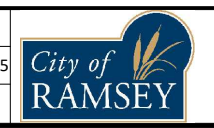
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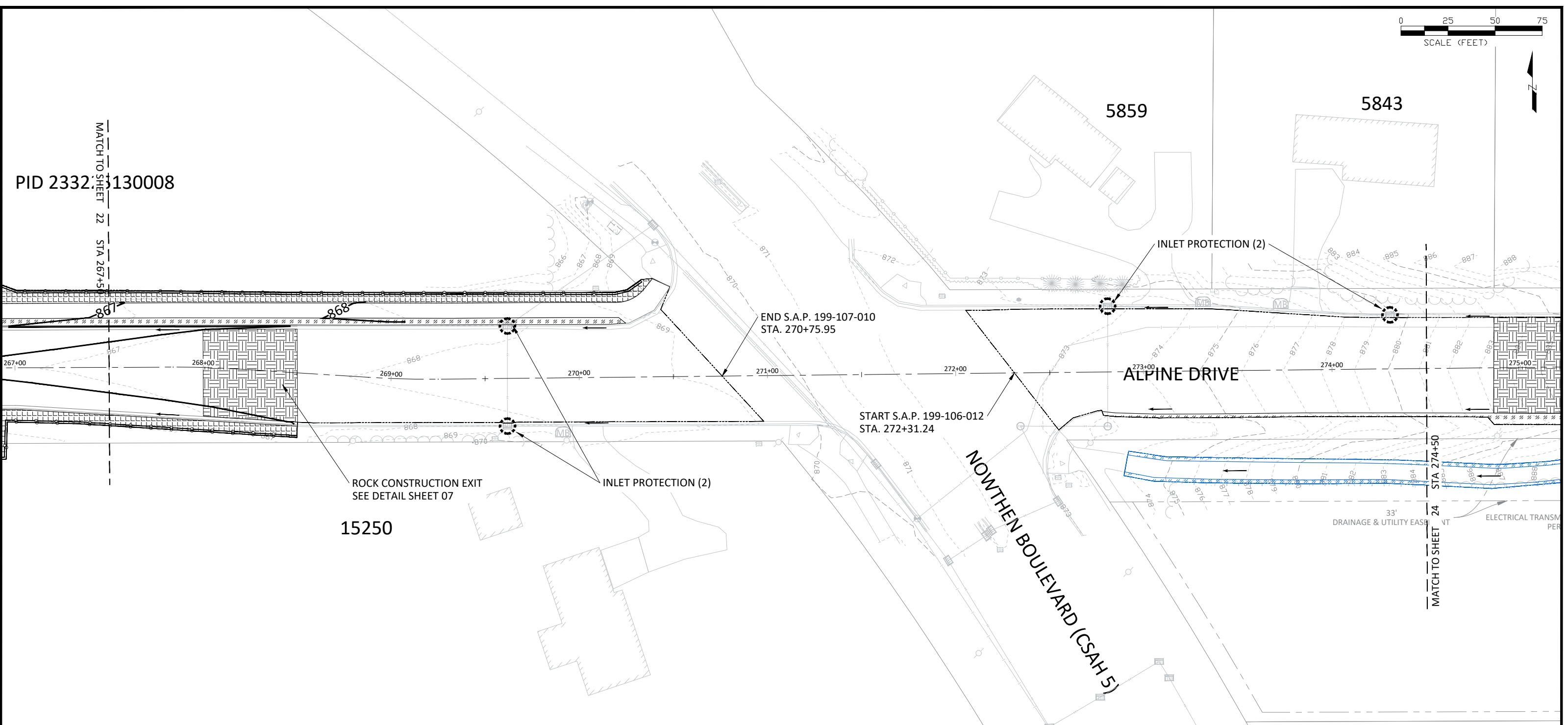
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ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



LEGEND

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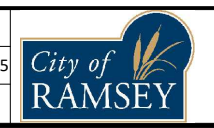
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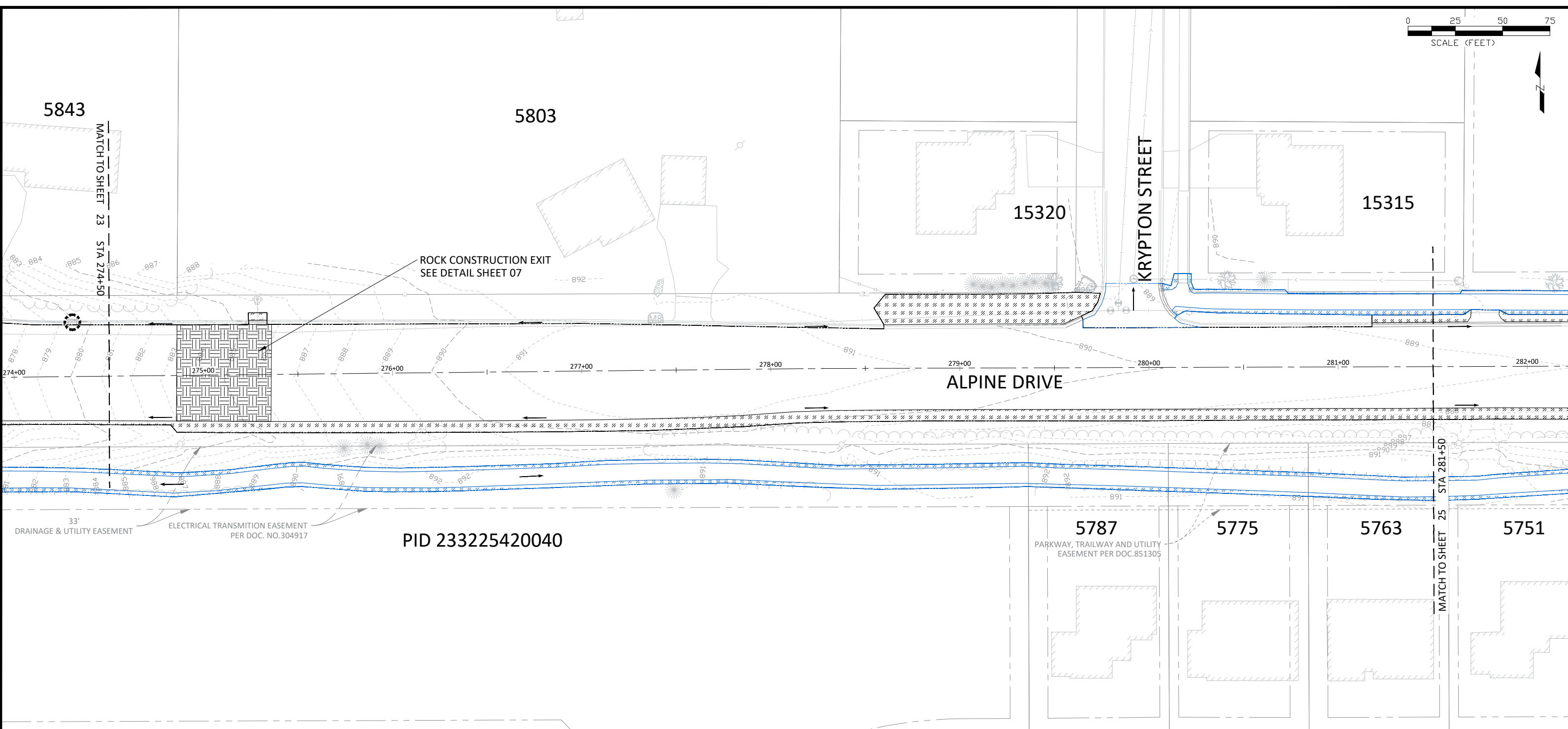
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ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



LEGEND

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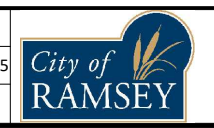
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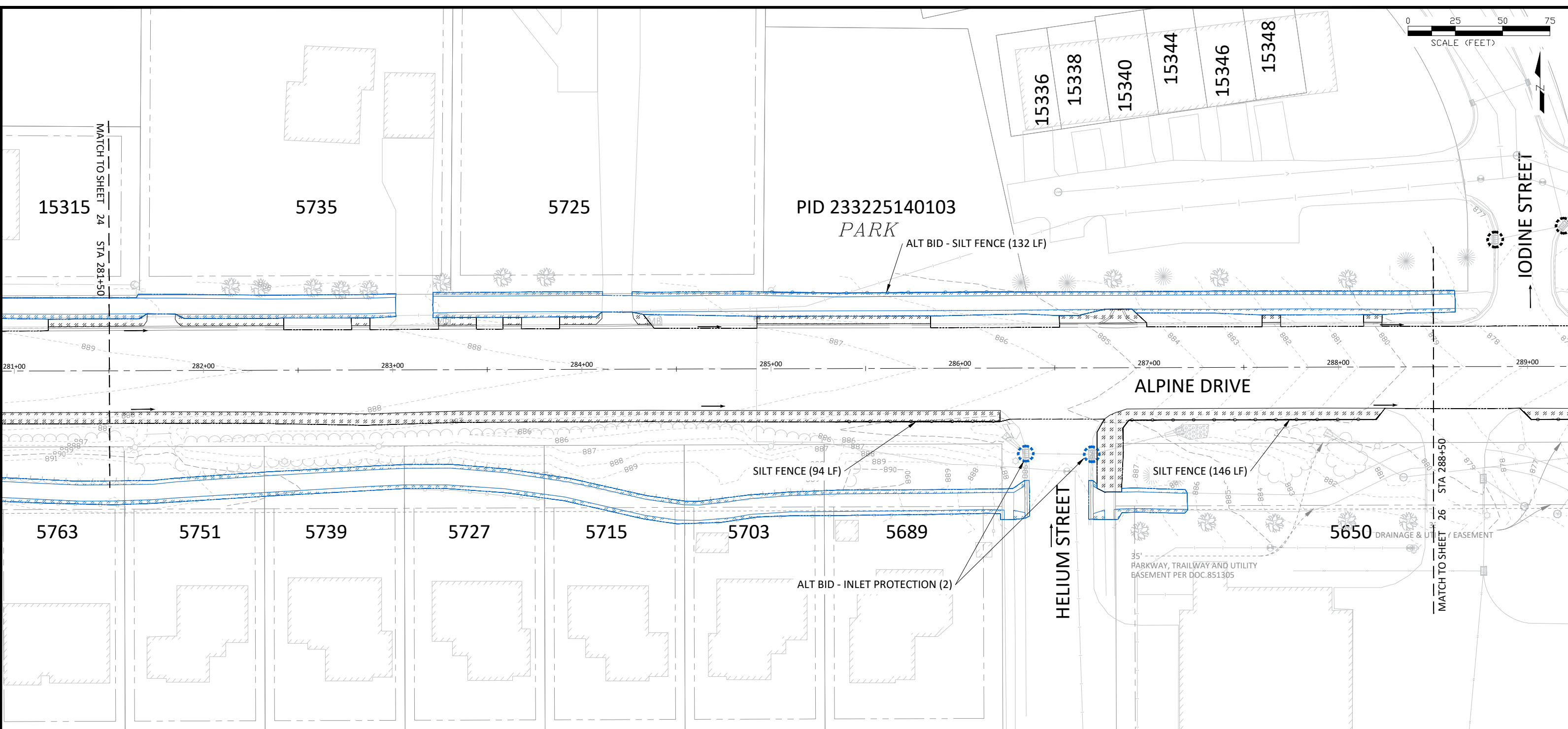
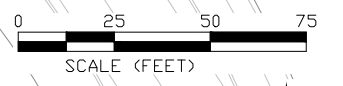
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ALPINE DRIVE RECONSTRUCTION
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LEGEND

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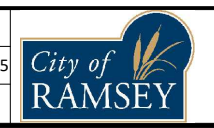
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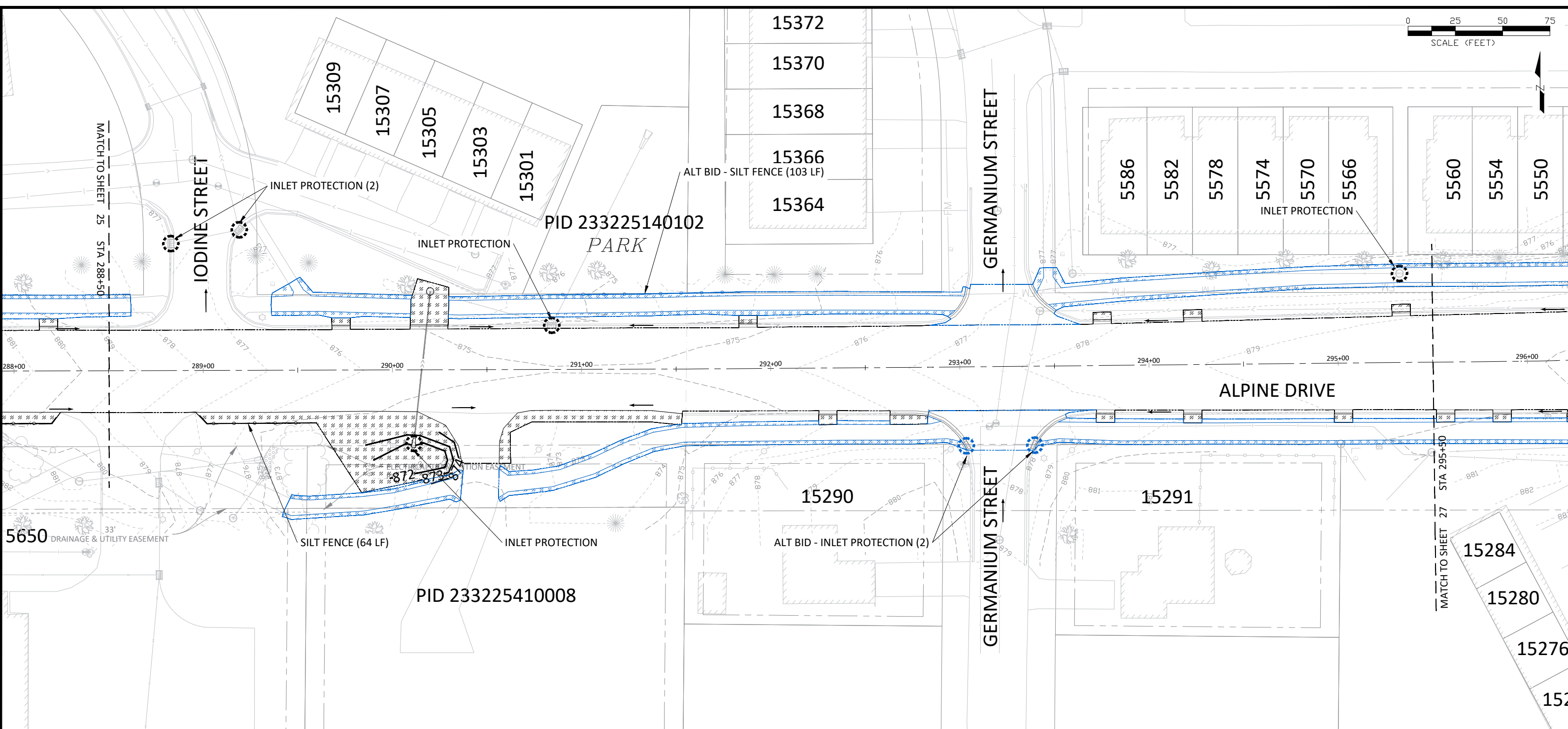
DESIGNED BY:	JJF
DRAWN BY:	JJF
CHECKED BY:	JJF



CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

GRADING & EROSION CONTROL
 S.A.P. 199-106-012

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LEGEND

	PR. MAJOR CONTOUR		ROCK CONSTRUCTION EXIT
	PR. MINOR CONTOUR		RANDOM RIP RAP CLASS III
	DRAINAGE ARROW		HYDRO-MULCH SEEDING
	EX. MAJOR CONTOUR		ALT BID - HYDRO-MULCH SEEDING
	EX. MINOR CONTOUR		EROSION CONTROL BLANKET
	CONSTRUCTION LIMIT		ALT BID - EROSION CONTROL BLANKET
	DRAINAGE & UTILITY EASEMENT		INLET PROTECTION
	RIGHT OF WAY LINE		ALT BID - INLET PROTECTION
	SECTION LINE		SILT FENCE
			ALT BID - SILT FENCE

NOTE:

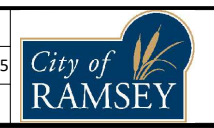
- SILT FENCE MUST BE INSTALLED BEFORE ANY REMOVAL ACTIVITIES ON-SITE.
- STORM SEWER INLET PROTECTION IS TO BE INSTALLED IMMEDIATELY FOLLOWING CASTING INSTALLATION. FOR EXISTING INLETS, MUST BE INSTALLED PRIOR TO ANY REMOVAL ACTIVITIES. INLET PROTECTION MUST BE MAINTAINED UNTIL TURF ESTABLISHMENT IS APPROVED.
- ROCK CONSTRUCTION EXITS MUST BE MAINTAINED THROUGHOUT THE PROJECT.
- THE CONTRACTOR IS RESPONSIBLE FOR SWEEPING ANY SOIL/DEBRIS TRACKING ONTO ADJACENT STREETS WITHIN 3 HOURS OF NOTIFICATION FROM THE CITY.
- RESTORATION AREAS ARE SHOWN IN A GENERAL MANNER ONLY.
- RESTORE ALL DISTURBED AREAS WITH 4" TOPSOIL, MNDOT RESIDENTIAL TURFGRASS MIX, AND HYDRAULIC MATRIX TYPE MULCH UNLESS MARKED FOR EROSION CONTROL BLANKET.
- RESTORE AREAS MARKED FOR EROSION CONTROL BLANKET WITH 4" TOPSOIL, MNDOT WET DITCH MIX, AND ROLLED EROSION PREVENTION CATEGORY 20.
- STOCKPILING OF ANY SALVAGED TOPSOIL USED INCIDENTAL TO THE TOPSOIL PAY ITEM.
- CONTRACTOR IS RESPONSIBLE FOR RESTORING ALL LANDSCAPING TO AS GOOD OR BETTER CONDITION. PAYMENT MADE UNDER LANDSCAPE RESTORATION.

DATE	REVISION

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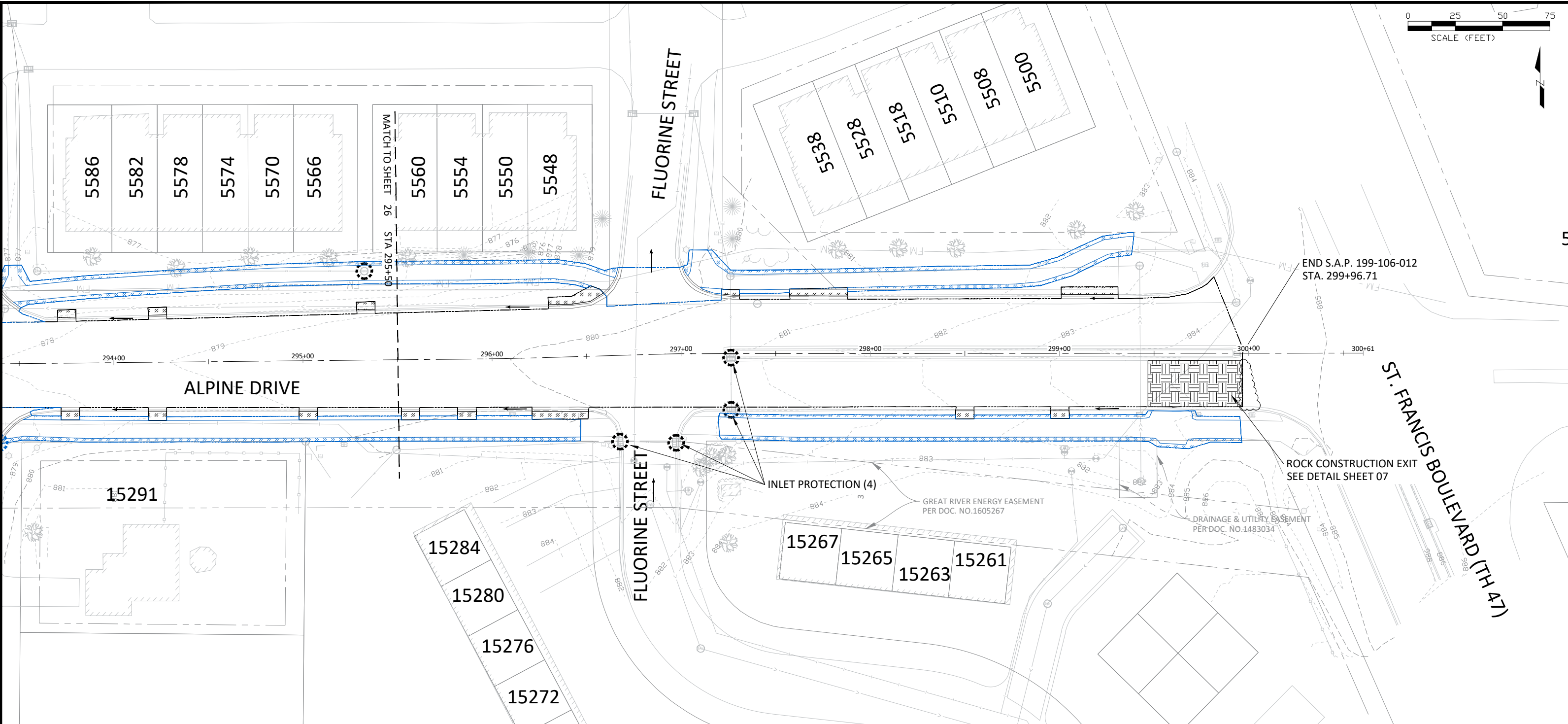
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ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



LEGEND

	PR. MAJOR CONTOUR		ROCK CONSTRUCTION EXIT
	PR. MINOR CONTOUR		RANDOM RIP RAP CLASS III
	DRAINAGE ARROW		HYDRO-MULCH SEEDING
	EX. MAJOR CONTOUR		ALT BID - HYDRO-MULCH SEEDING
	EX. MINOR CONTOUR		EROSION CONTROL BLANKET
	CONSTRUCTION LIMIT		ALT BID - EROSION CONTROL BLANKET
	DRAINAGE & UTILITY EASEMENT		INLET PROTECTION
	RIGHT OF WAY LINE		ALT BID - INLET PROTECTION
	SECTION LINE		SILT FENCE
			ALT BID - SILT FENCE

NOTE:

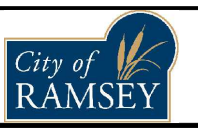
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DATE	REVISION
04/24/25	REVISED STREET TIE-IN.

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Joe Feriancek
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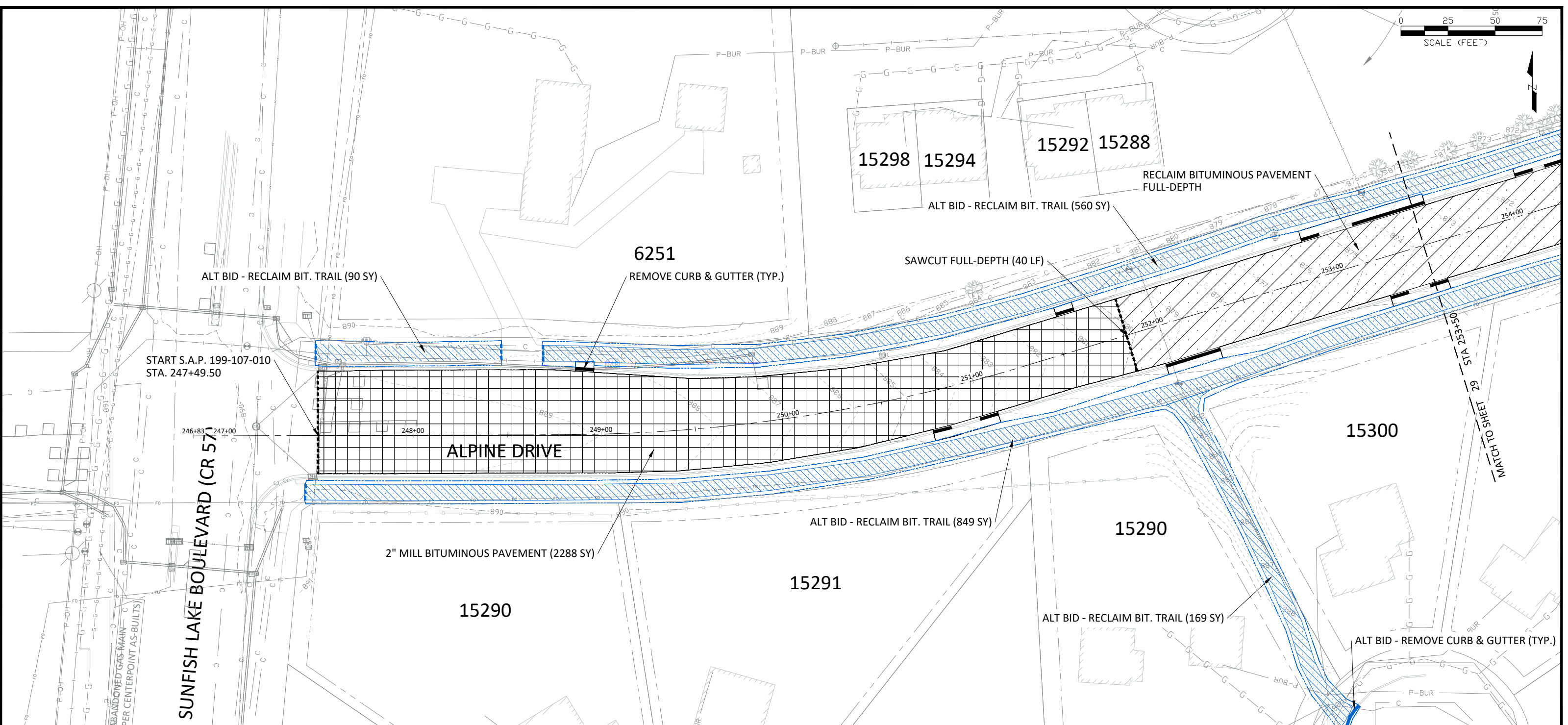
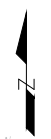
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S.A.P. 199-106-012

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



LEGEND

	RECLAMATION - FULL DEPTH		REMOVE STRUCTURE - STORM		DRAINAGE & UTILITY EASEMENT LINE
	RECLAMATION - FULL DEPTH (RAISE PROFILE AREA)		REMOVE PIPE - STORM		RIGHT OF WAY LINE
	ALT BID - RECLAMATION - BIT TRAIL		REMOVE CONCRETE CURB & GUTTER		SECTION LINE
	REMOVE PAVEMENT - BITUMINOUS		ALT BID - REMOVE CONCRETE CURB & GUTTER		TREE LINE
	ALT BID - REMOVE PAVEMENT - BITUMINOUS		SAWCUT PAVEMENT - FULL DEPTH		MAJOR CONTOUR
	REMOVE PAVEMENT - CONCRETE		ALT BID - SAWCUT PAVEMENT - FULL DEPTH		MINOR CONTOUR
	ALT BID - REMOVE PAVEMENT - CONCRETE		REMOVE TREE (INDIVIDUAL)		OVERHEAD POWER LINE
	MILL BITUMINOUS PAVEMENT		CONSTRUCTION LIMITS		BURIED POWER LINE
			ALT BID - CONSTRUCTION LIMITS		FIBER OPTIC LINE
					COMMUNICATION LINE
					GAS LINE

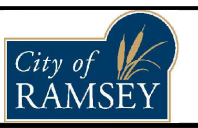
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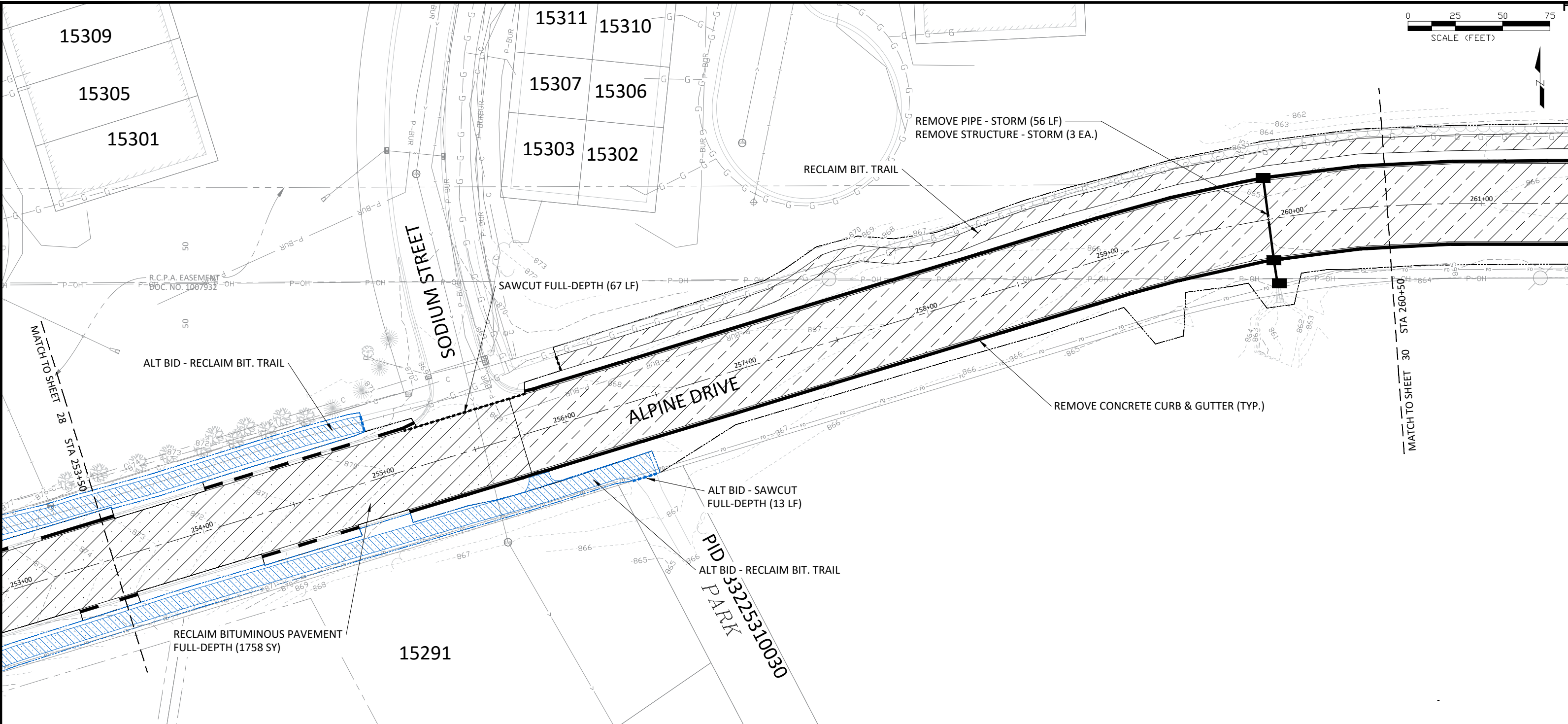
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EXISTING CONDITIONS & REMOVALS
 S.A.P. 199-107-010

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LEGEND

	RECLAMATION - FULL DEPTH		REMOVE STRUCTURE - STORM		DRAINAGE & UTILITY EASEMENT LINE
	RECLAMATION - FULL DEPTH (RAISE PROFILE AREA)		REMOVE PIPE - STORM		RIGHT OF WAY LINE
	ALT BID - RECLAMATION - BIT TRAIL		REMOVE CONCRETE CURB & GUTTER		SECTION LINE
	REMOVE PAVEMENT - BITUMINOUS		ALT BID - REMOVE CONCRETE CURB & GUTTER		TREE LINE
	ALT BID - REMOVE PAVEMENT - BITUMINOUS		SAWCUT PAVEMENT - FULL DEPTH		MAJOR CONTOUR
	REMOVE PAVEMENT - CONCRETE		ALT BID - SAWCUT PAVEMENT - FULL DEPTH		MINOR CONTOUR
	ALT BID - REMOVE PAVEMENT - CONCRETE		REMOVE TREE (INDIVIDUAL)		OVERHEAD POWER LINE
	MILL BITUMINOUS PAVEMENT		CONSTRUCTION LIMITS		BURIED POWER LINE
			ALT BID - CONSTRUCTION LIMITS		FIBER OPTIC LINE
					COMMUNICATION LINE
					GAS LINE

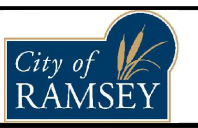
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ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA

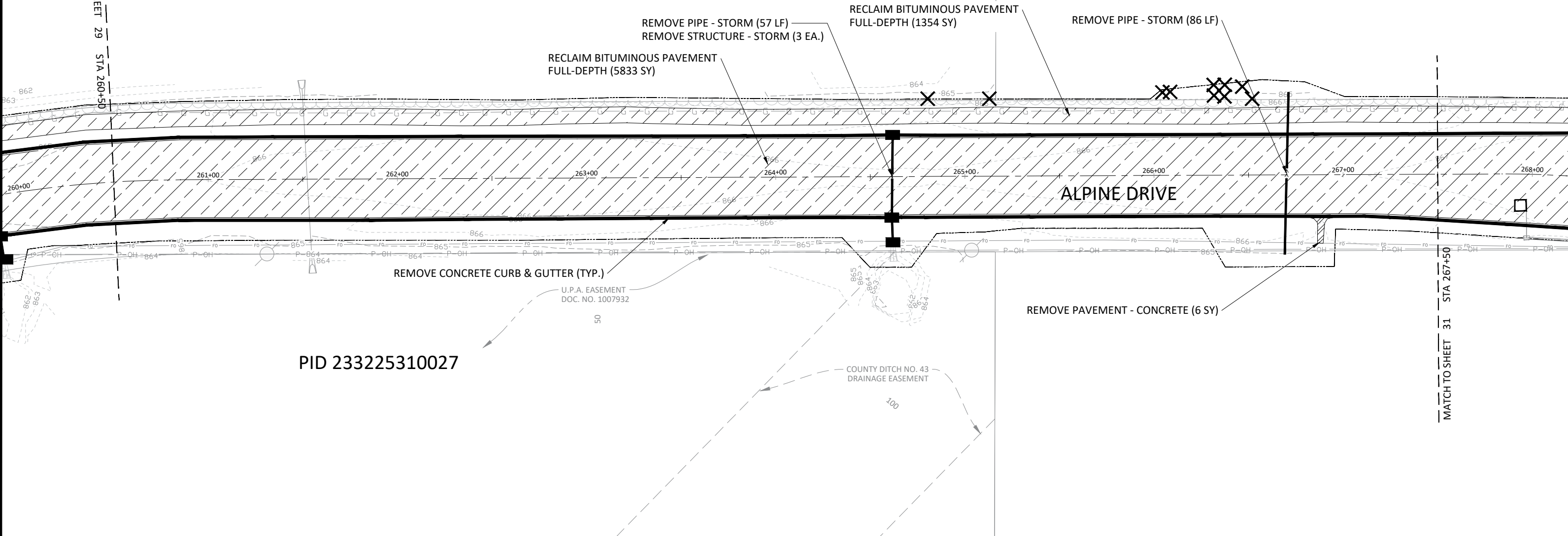


PID 233225240127

PID 233225130008

MATCH TO SHEET 29 STA 260+50

MATCH TO SHEET 31 STA 267+50



LEGEND

	RECLAMATION - FULL DEPTH		REMOVE STRUCTURE - STORM		DRAINAGE & UTILITY EASEMENT LINE
	RECLAMATION - FULL DEPTH (RAISE PROFILE AREA)		REMOVE PIPE - STORM		RIGHT OF WAY LINE
	ALT BID - RECLAMATION - BIT TRAIL		REMOVE CONCRETE CURB & GUTTER		SECTION LINE
	ALT BID - REMOVE PAVEMENT - BITUMINOUS		ALT BID - REMOVE CONCRETE CURB & GUTTER		TREE LINE
	REMOVE PAVEMENT - BITUMINOUS		SAWCUT PAVEMENT - FULL DEPTH		MAJOR CONTOUR
	ALT BID - REMOVE PAVEMENT - BITUMINOUS		ALT BID - SAWCUT PAVEMENT - FULL DEPTH		MINOR CONTOUR
	REMOVE PAVEMENT - CONCRETE		REMOVE TREE (INDIVIDUAL)		OVERHEAD POWER LINE
	ALT BID - REMOVE PAVEMENT - CONCRETE		CONSTRUCTION LIMITS		BURIED POWER LINE
	MILL BITUMINOUS PAVEMENT		ALT BID - CONSTRUCTION LIMITS		FIBER OPTIC LINE
					COMMUNICATION LINE
					GAS LINE

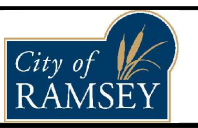
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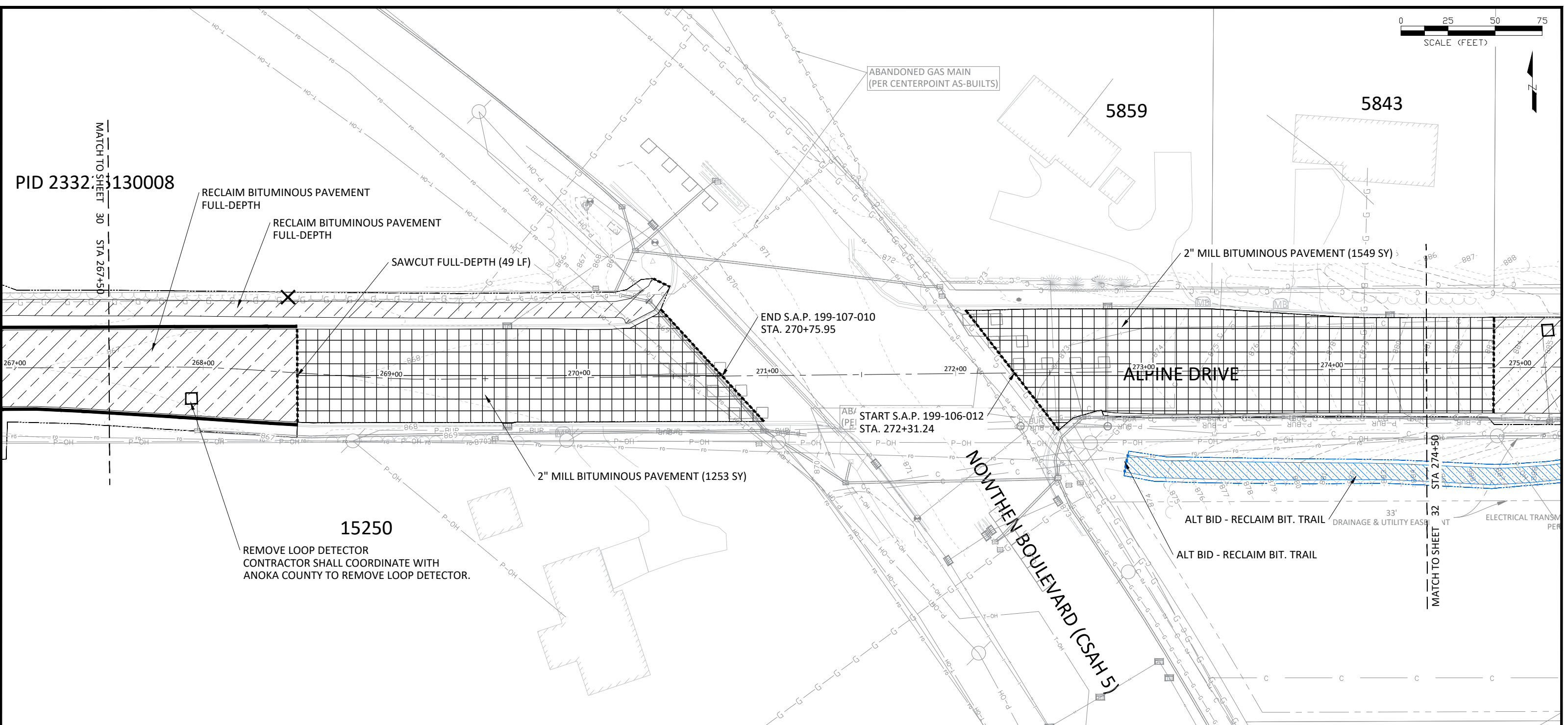
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7550 SUNWOOD DRIVE
RAMSEY, MN 55303
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EXISTING CONDITIONS & REMOVALS
S.A.P. 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



MATCH TO SHEET 30 STA 267+50
PID 2332-130008

MATCH TO SHEET 32 STA 274+50

LEGEND

	RECLAMATION - FULL DEPTH		REMOVE STRUCTURE - STORM		DRAINAGE & UTILITY EASEMENT LINE
	RECLAMATION - FULL DEPTH (RAISE PROFILE AREA)		REMOVE PIPE - STORM		RIGHT OF WAY LINE
	ALT BID - RECLAMATION - BIT TRAIL		REMOVE CONCRETE CURB & GUTTER		SECTION LINE
	ALT BID - REMOVE PAVEMENT - BITUMINOUS		ALT BID - REMOVE CONCRETE CURB & GUTTER		TREE LINE
	REMOVE PAVEMENT - BITUMINOUS		SAWCUT PAVEMENT - FULL DEPTH		MAJOR CONTOUR
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	REMOVE PAVEMENT - CONCRETE		REMOVE TREE (INDIVIDUAL)		OVERHEAD POWER LINE
	ALT BID - REMOVE PAVEMENT - CONCRETE		CONSTRUCTION LIMITS		BURIED POWER LINE
	MILL BITUMINOUS PAVEMENT		ALT BID - CONSTRUCTION LIMITS		FIBER OPTIC LINE
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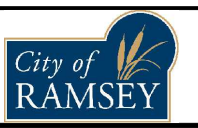
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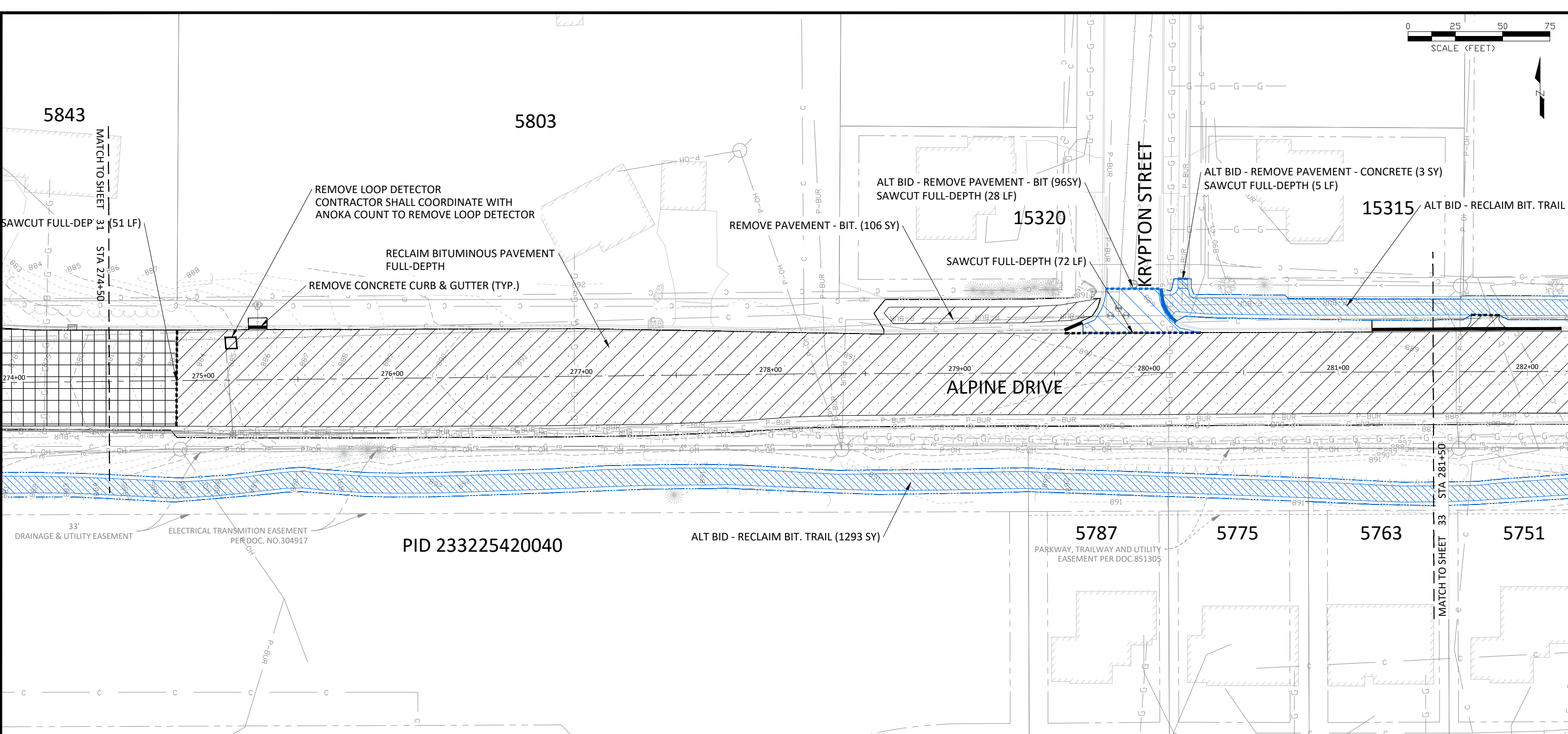
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EXISTING CONDITIONS & REMOVALS
S.A.P. 199-106-012 / S.A.P. 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



LEGEND

- | | | | | | |
|--|---|--|---|--|----------------------------------|
| | RECLAMATION - FULL DEPTH | | REMOVE STRUCTURE - STORM | | DRAINAGE & UTILITY EASEMENT LINE |
| | RECLAMATION - FULL DEPTH (RAISE PROFILE AREA) | | REMOVE PIPE - STORM | | RIGHT OF WAY LINE |
| | ALT BID - RECLAMATION - BIT TRAIL | | REMOVE CONCRETE CURB & GUTTER | | SECTION LINE |
| | REMOVE PAVEMENT - BITUMINOUS | | ALT BID - REMOVE CONCRETE CURB & GUTTER | | TREE LINE |
| | ALT BID - REMOVE PAVEMENT - BITUMINOUS | | SAWCUT PAVEMENT - FULL DEPTH | | MAJOR CONTOUR |
| | REMOVE PAVEMENT - CONCRETE | | ALT BID - SAWCUT PAVEMENT - FULL DEPTH | | MINOR CONTOUR |
| | ALT BID - REMOVE PAVEMENT - CONCRETE | | REMOVE TREE (INDIVIDUAL) | | OVERHEAD POWER LINE |
| | MILL BITUMINOUS PAVEMENT | | CONSTRUCTION LIMITS | | BURIED POWER LINE |
| | | | ALT BID - CONSTRUCTION LIMITS | | FIBER OPTIC LINE |
| | | | | | GAS LINE |
| | | | | | |

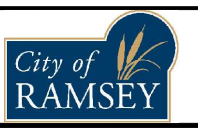
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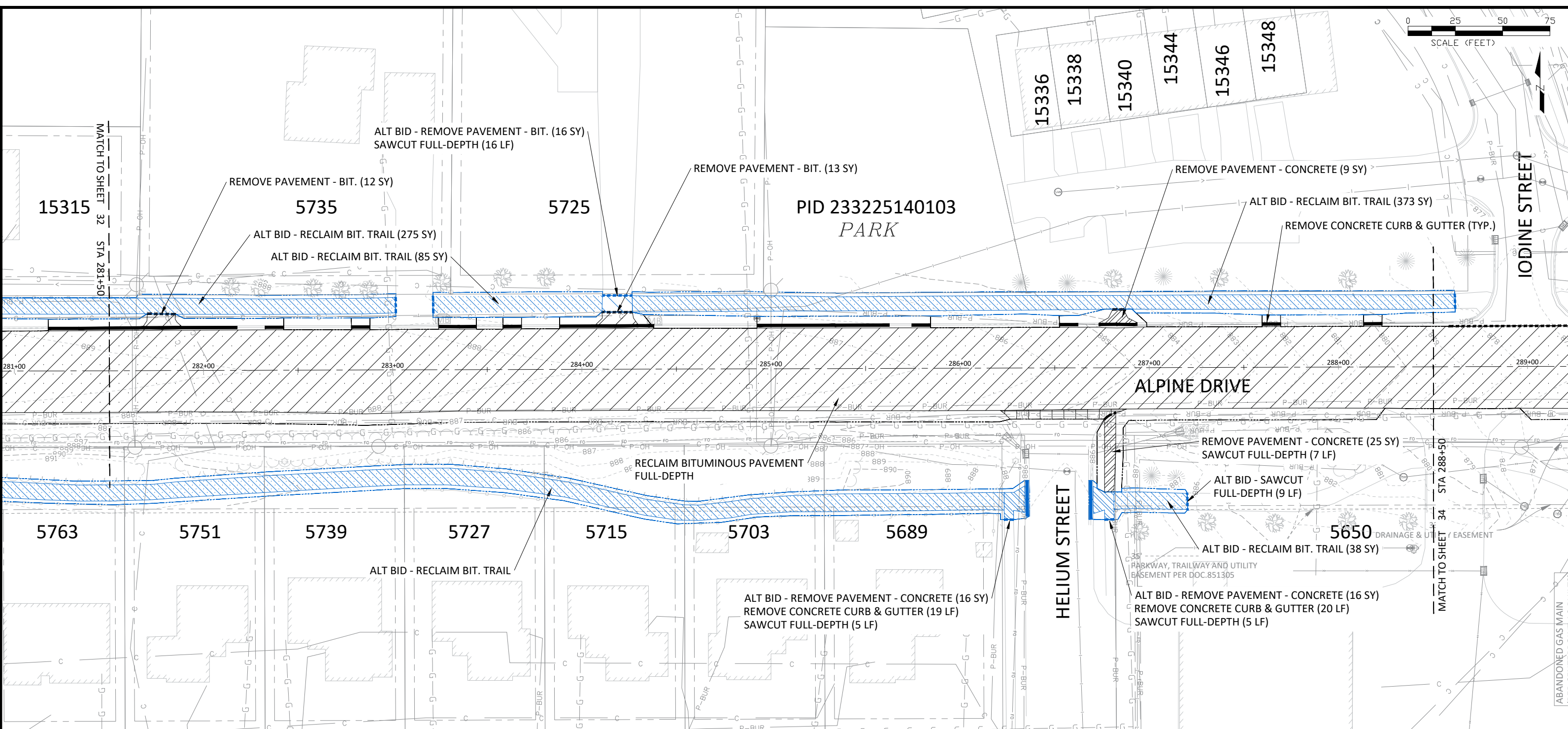
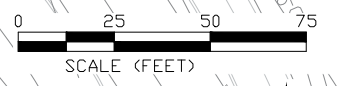
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EXISTING CONDITIONS & REMOVALS
S.A.P. 199-106-012

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



LEGEND

	RECLAMATION - FULL DEPTH		REMOVE STRUCTURE - STORM		DRAINAGE & UTILITY EASEMENT LINE
	RECLAMATION - FULL DEPTH (RAISE PROFILE AREA)		REMOVE PIPE - STORM		RIGHT OF WAY LINE
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	REMOVE PAVEMENT - BITUMINOUS		ALT BID - REMOVE CONCRETE CURB & GUTTER		TREE LINE
	ALT BID - REMOVE PAVEMENT - BITUMINOUS		SAWCUT PAVEMENT - FULL DEPTH		MAJOR CONTOUR
	REMOVE PAVEMENT - CONCRETE		ALT BID - SAWCUT PAVEMENT - FULL DEPTH		MINOR CONTOUR
	ALT BID - REMOVE PAVEMENT - CONCRETE		REMOVE TREE (INDIVIDUAL)		OVERHEAD POWER LINE
	MILL BITUMINOUS PAVEMENT		CONSTRUCTION LIMITS		BURIED POWER LINE
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					GAS LINE

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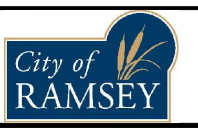
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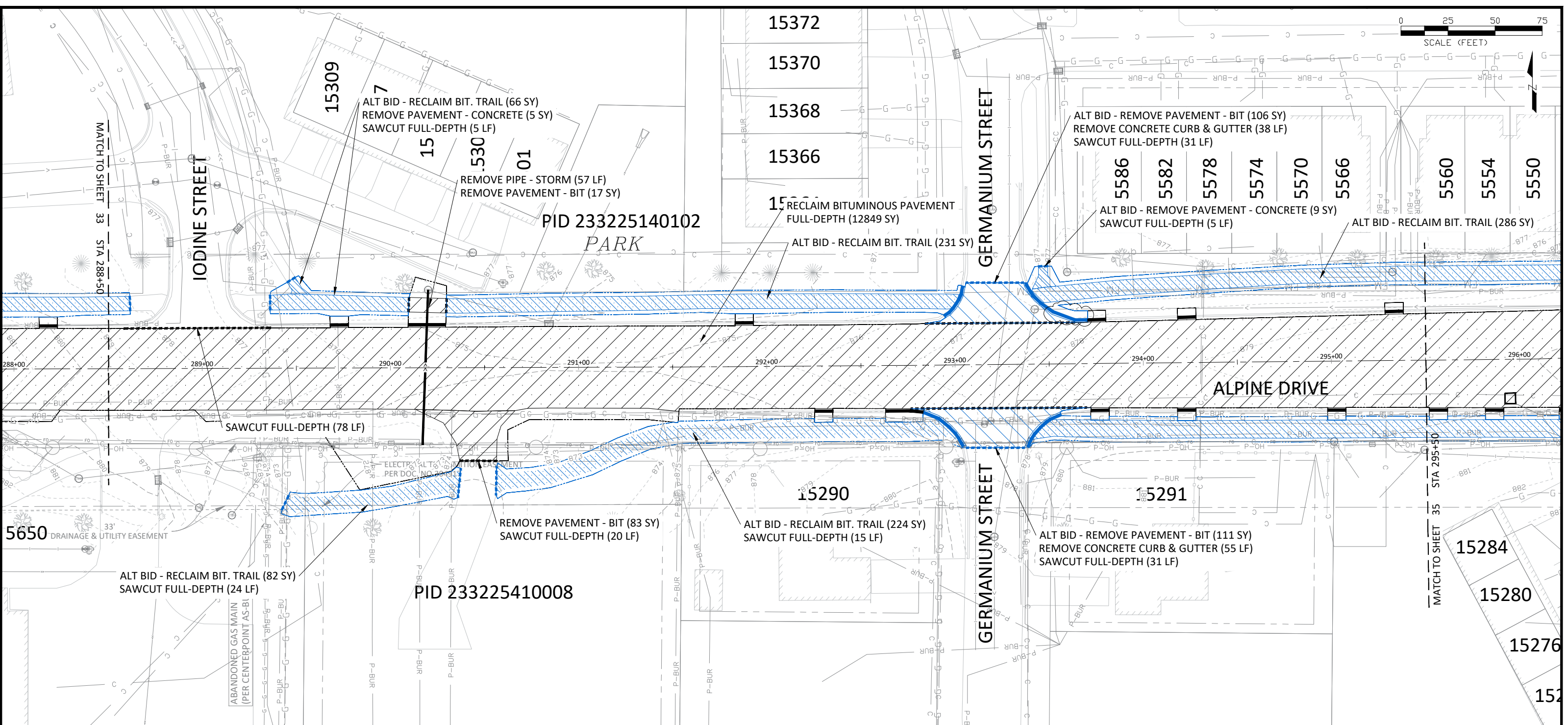
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ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LEGEND

	RECLAMATION - FULL DEPTH		REMOVE STRUCTURE - STORM		DRAINAGE & UTILITY EASEMENT LINE
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	ALT BID - REMOVE PAVEMENT - BITUMINOUS		SAWCUT PAVEMENT - FULL DEPTH		MAJOR CONTOUR
	REMOVE PAVEMENT - CONCRETE		ALT BID - SAWCUT PAVEMENT - FULL DEPTH		MINOR CONTOUR
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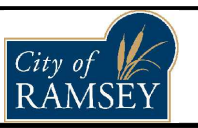
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04/24/25	REVISED PEDESTRIAN RAMPS

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 Joe Feriancek
 Date 03/21/25 Lic. No. 57095

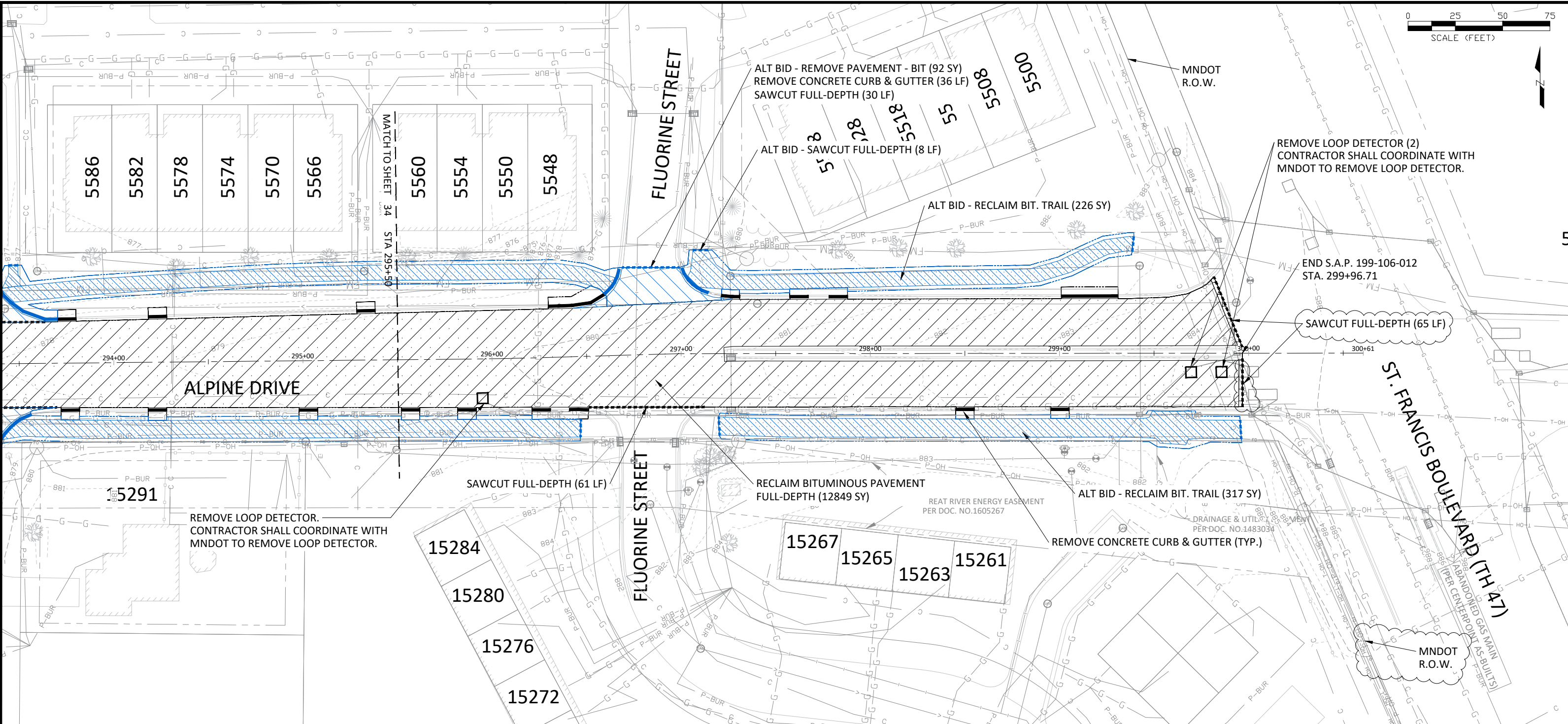
DESIGNED BY:	JJF
DRAWN BY:	JJF
CHECKED BY:	JJF



CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

EXISTING CONDITIONS & REMOVALS
 S.A.P. 199-106-012

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LEGEND

	RECLAMATION - FULL DEPTH		REMOVE STRUCTURE - STORM		DRAINAGE & UTILITY EASEMENT LINE
	RECLAMATION - FULL DEPTH (RAISE PROFILE AREA)		REMOVE PIPE - STORM		RIGHT OF WAY LINE
	ALT BID - RECLAMATION - BIT TRAIL		REMOVE CONCRETE CURB & GUTTER		SECTION LINE
	REMOVE PAVEMENT - BITUMINOUS		ALT BID - REMOVE CONCRETE CURB & GUTTER		TREE LINE
	ALT BID - REMOVE PAVEMENT - BITUMINOUS		SAWCUT PAVEMENT - FULL DEPTH		MAJOR CONTOUR
	REMOVE PAVEMENT - CONCRETE		ALT BID - SAWCUT PAVEMENT - FULL DEPTH		MINOR CONTOUR
	ALT BID - REMOVE PAVEMENT - CONCRETE		REMOVE TREE (INDIVIDUAL)		OVERHEAD POWER LINE
	MILL BITUMINOUS PAVEMENT		CONSTRUCTION LIMITS		BURIED POWER LINE
			ALT BID - CONSTRUCTION LIMITS		FIBER OPTIC LINE
					COMMUNICATION LINE
					GAS LINE

NOTE:

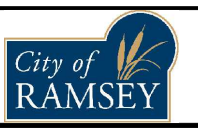
1. REMOVALS WILL BE MARKED IN THE FIELD BY CITY STAFF. ALL REMOVALS MUST BE SAWCUT.
2. BITUMINOUS PATCHING IS INCIDENTAL TO THE REMOVE CONCRETE CURB & GUTTER PAY ITEM.
3. PROTECT LANDSCAPING AND IRRIGATION. PROPERTY OWNERS ARE TO LOCATE AND MOVE IRRIGATION BEFORE CONSTRUCTION.
4. PROTECT ALL EXISTING PAVEMENT NOT CALLED OUT FOR REMOVAL.

DATE	REVISION
04/24/25	REVISED STREET TIE-IN.

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota

Joe Feriancek
Joe Feriancek
Date 03/21/25 Lic. No. 57095

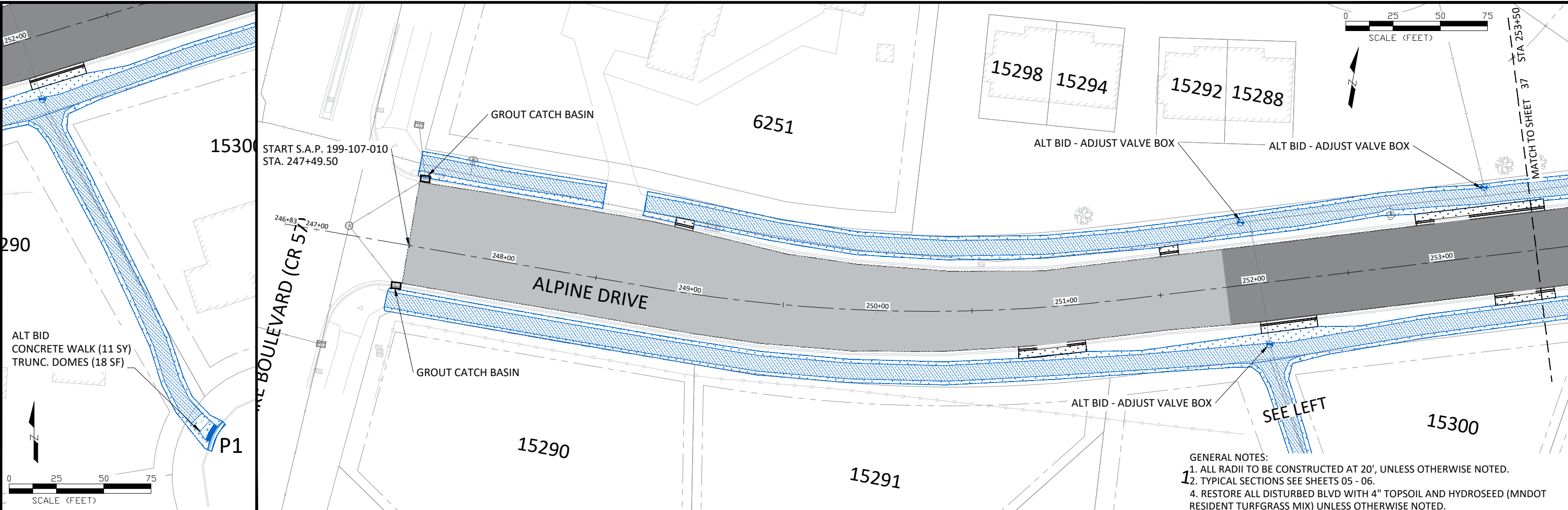
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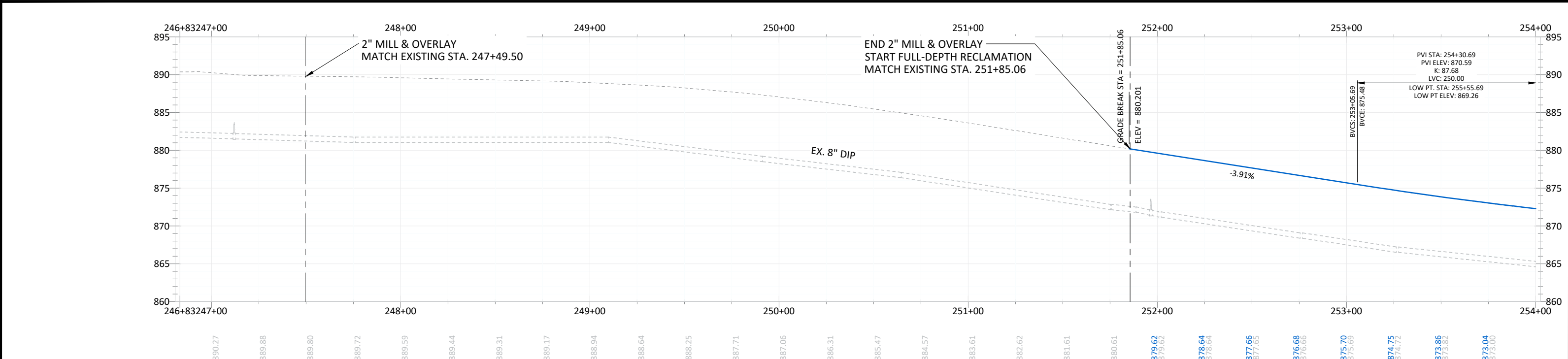
EXISTING CONDITIONS & REMOVALS
S.A.P. 199-106-012

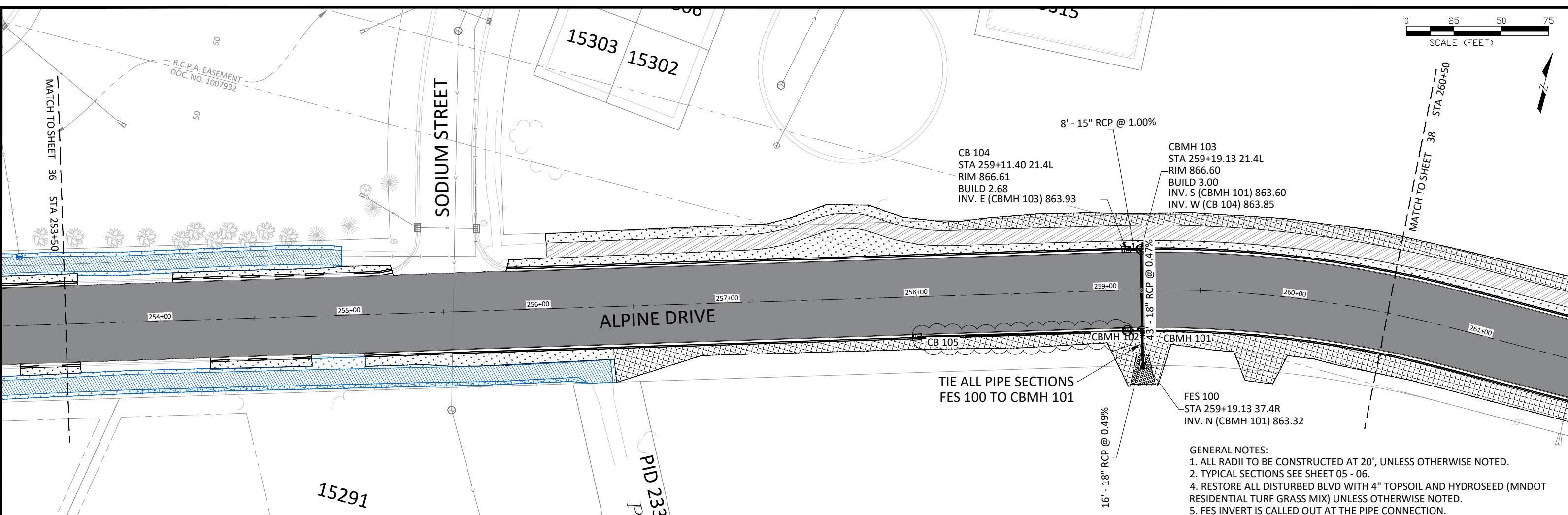
ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA



LEGEND	
	CONSTRUCTION LIMITS
	ALT BID - CONSTRUCTION LIMITS
	PR. B-STYLE CURB
	ALT BID - PR. B-STYLE CURB
	PR. BITUMINOUS PAVEMENT - 2" OVERLAY
	PR. BITUMINOUS PAVEMENT - FULL DEPTH
	ALT BID - PR. BITUMINOUS PAVEMENT - FD
	ALT BID - PR. TRUNCATED DOME
	ALT BID - PR. 6" CONCRETE WALK
	PR. RESTORATION
	PR. BITUMINOUS PAVEMENT - TRAIL
	ALT BID - PR. BITUMINOUS PAVEMENT - TRAIL
	ADJUST CASTING
	ALT BID - ADJUST CASTING
	ADJUST VALVE BOX
	ALT BID - ADJUST VB
	GROUT CATCH BASIN
	PR. STORM SEWER
	PR. 2'X3' CATCH BASIN
	PR. CATCH BASIN MANHOLE
	PR. STORM SEWER MANHOLE
	PR. FLARED END SECTION

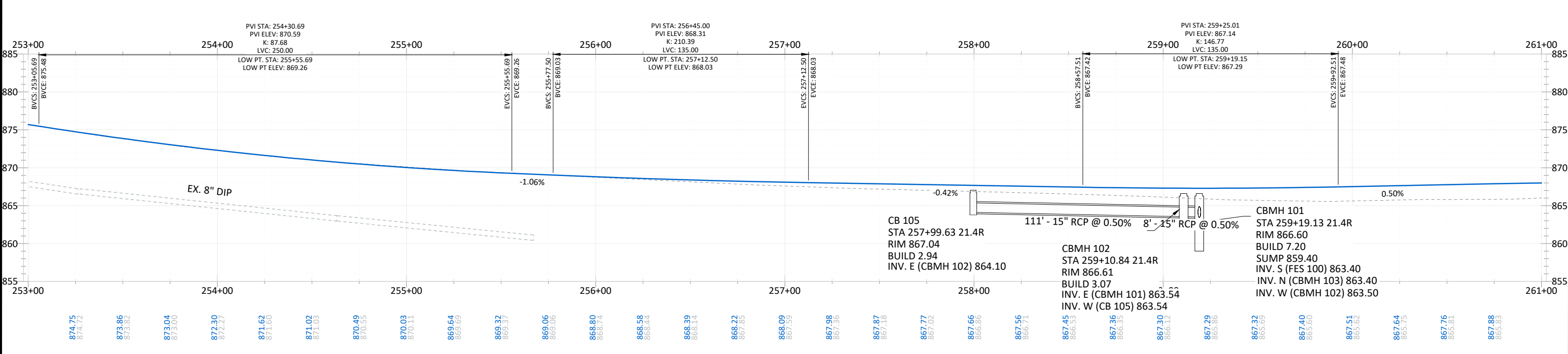
GENERAL NOTES:
 1. ALL RADII TO BE CONSTRUCTED AT 20', UNLESS OTHERWISE NOTED.
 2. TYPICAL SECTIONS SEE SHEETS 05 - 06.
 4. RESTORE ALL DISTURBED BLVD WITH 4" TOPSOIL AND HYDROSEED (MNDOT RESIDENT TURFGRASS MIX) UNLESS OTHERWISE NOTED.





- GENERAL NOTES:**
1. ALL RADII TO BE CONSTRUCTED AT 20', UNLESS OTHERWISE NOTED.
 2. TYPICAL SECTIONS SEE SHEET 05 - 06.
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 4. FES INVERT IS CALLED OUT AT THE PIPE CONNECTION.

LEGEND	
	CONSTRUCTION LIMITS
	ALT BID - CONSTRUCTION LIMITS
	PR. B-STYLE CURB
	ALT BID - PR. B-STYLE CURB
	PR. BITUMINOUS PAVEMENT - 2" OVERLAY
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	PR. BITUMINOUS PAVEMENT - TRAIL
	ALT BID - PR. BITUMINOUS PAVEMENT - TRAIL
	PR. RESTORATION
	ALT BID - PR. RESTORATION
	PR. DRIVE - BITUMINOUS
	ALT BID - PR. DRIVE - BITUMINOUS
	ADJUST CASTING
	ALT BID - ADJUST CASTING
	ADJUST VALVE BOX
	ALT BID - ADJUST VB
	GROUT CATCH BASIN
	PR. STORM SEWER
	PR. 2'X3' CATCH BASIN
	PR. CATCH BASIN MANHOLE
	PR. STORM SEWER MANHOLE
	PR. FLARED END SECTION

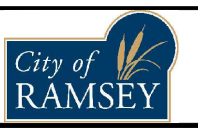


DATE	REVISION
04/24/25	REVISE STORM SEWER

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Joe Feriancek
 Joe Feriancek
 Date 03/21/25 Lic. No. 57095

DESIGNED BY:	JJF
DRAWN BY:	JJF
CHECKED BY:	JJF



CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

STREET CONSTRUCTION
 S.A.P. 199-107-010

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA

PID 233225240127

PID 233225130008



INSTALL STORM SEWER PILING (63 SF) & CONCRETE END SECTION SEE DETAIL STO-10 SHEET 08.

FES 301
STA 266+70.07 35.4L
INV. S (FES 300) 861.90
CB 202
STA 266+45.16 21.5L
RIM 866.47
BUILD 2.87
INV. S (CBMH 201) 863.60

TIE ALL PIPE SECTIONS FES 300 TO FES 301

ROLLED EROSION PREVENTION BLANKET CATEGORY 20
WET DITCH SEED MIX

ALPINE DRIVE

TIE ALL PIPE SECTIONS FES 200 TO CBMH 201
RANDOM RIP RAP CLASS III (5 CY)
SEE DETAIL SHEET 07

INSTALL STORM SEWER PILING (63 SF) & CONCRETE END SECTION SEE DETAIL STO-10 SHEET 08.

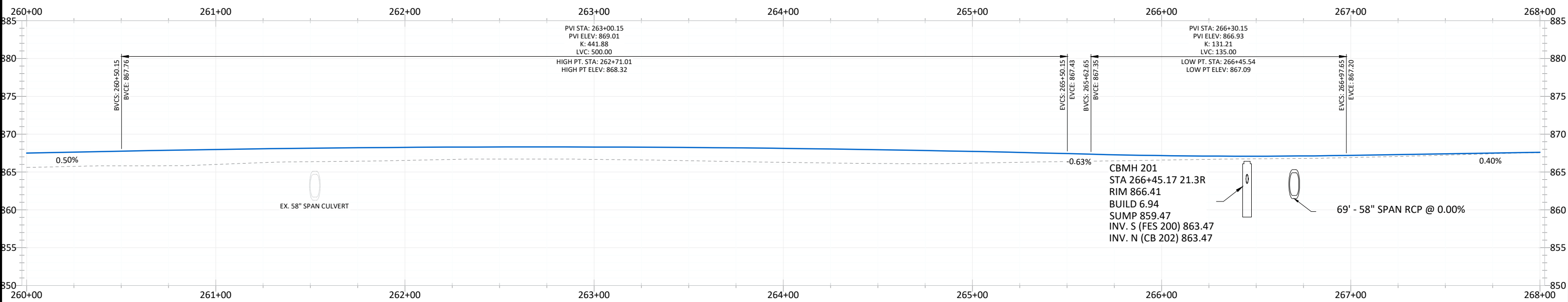
ROLLED EROSION PREVENTION BLANKET CATEGORY 20
WET DITCH SEED MIX

PID 233225310027

- GENERAL NOTES:
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LEGEND

	CONSTRUCTION LIMITS		PR. BITUMINOUS PAVEMENT - 2" OVERLAY		ALT BID - PR. TRUNCATED DOME		PR. RESTORATION		ADJUST CASTING		PR. STORM SEWER
	ALT BID - CONSTRUCTION LIMITS		PR. BITUMINOUS PAVEMENT - FULL DEPTH		ALT BID - PR. 6" CONCRETE WALK		ALT BID - PR. RESTORATION		ALT BID - ADJUST CASTING		PR. 2'X3' CATCH BASIN
	PR. B-STYLE CURB		ALT BID - PR. BITUMINOUS PAVEMENT - FD		PR. BITUMINOUS PAVEMENT - TRAIL		PR. DRIVE - BITUMINOUS		ADJUST VALVE BOX		PR. CATCH BASIN MANHOLE
	ALT BID - PR. B-STYLE CURB				ALT BID - PR. BITUMINOUS PAVEMENT - TRAIL		ALT BID -PR. DRIVE - BITUMINOUS		ALT BID - ADJUST VB		PR. STORM SEWER MANHOLE
									GROUT CATCH BASIN		PR. FLARED END SECTION



867.64 865.75	867.76 865.81	867.88 865.83	867.98 866.00	868.07 866.25	868.15 866.37	868.21 866.43	868.26 866.54	868.29 866.67	868.31 866.72	868.32 866.72	868.31 866.67	868.28 866.60	868.24 866.50	868.19 866.38	868.13 866.26	868.05 866.20	867.95 866.14	867.84 866.11	867.72 866.18	867.59 866.29	867.43 866.39	867.28 866.48	867.17 866.58	867.11 866.68	867.09 866.75	867.13 866.80	867.21 866.92	867.31 867.06	867.40 867.23	867.50 867.42
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DATE	REVISION

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Joe Feriancek
Joe Feriancek
Date 03/21/25 Lic. No. 57095

DESIGNED BY: JJF
DRAWN BY: JJF
CHECKED BY: JJF

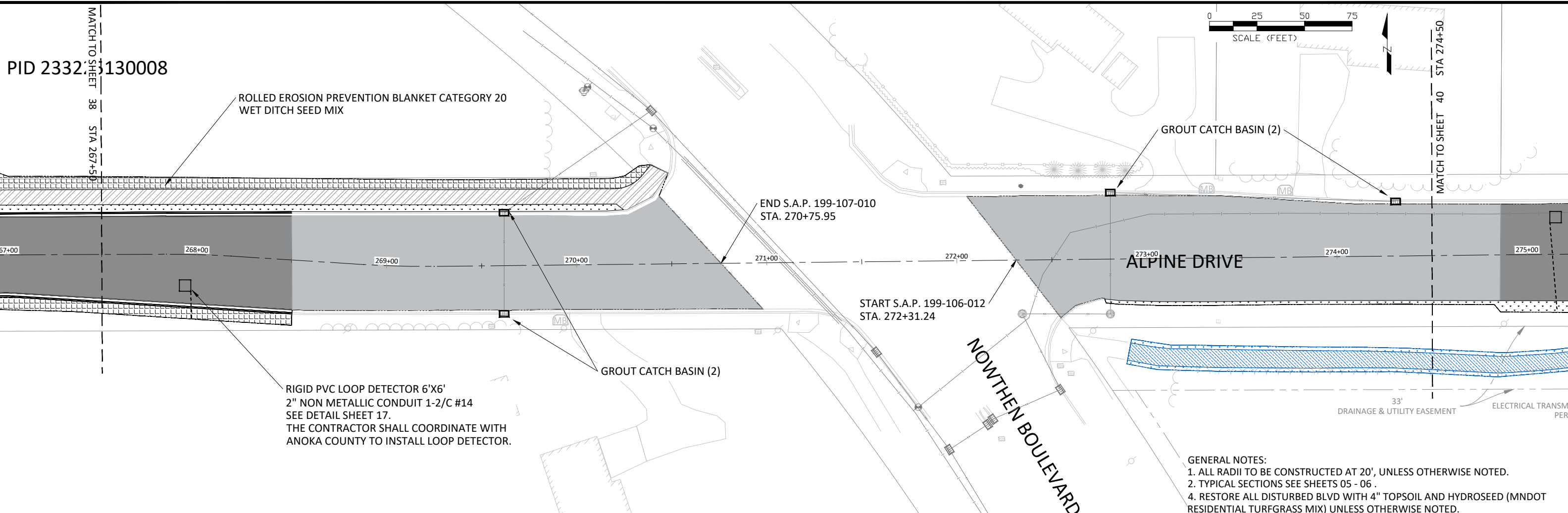
DATE: 03/21/25
FILE: 25-03



CITY OF RAMSEY
7550 SUNWOOD DRIVE
RAMSEY, MN 55303
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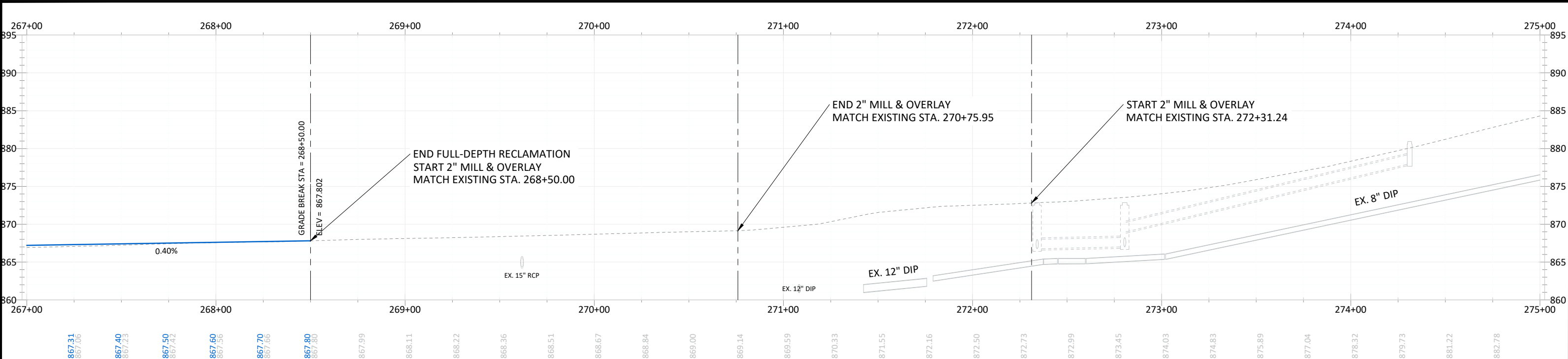
STREET CONSTRUCTION
S.A.P. 199-107-010

ALPINE DRIVE RECONSTRUCTION
CITY PROJECT NO. 25-03
CITY OF RAMSEY, MINNESOTA

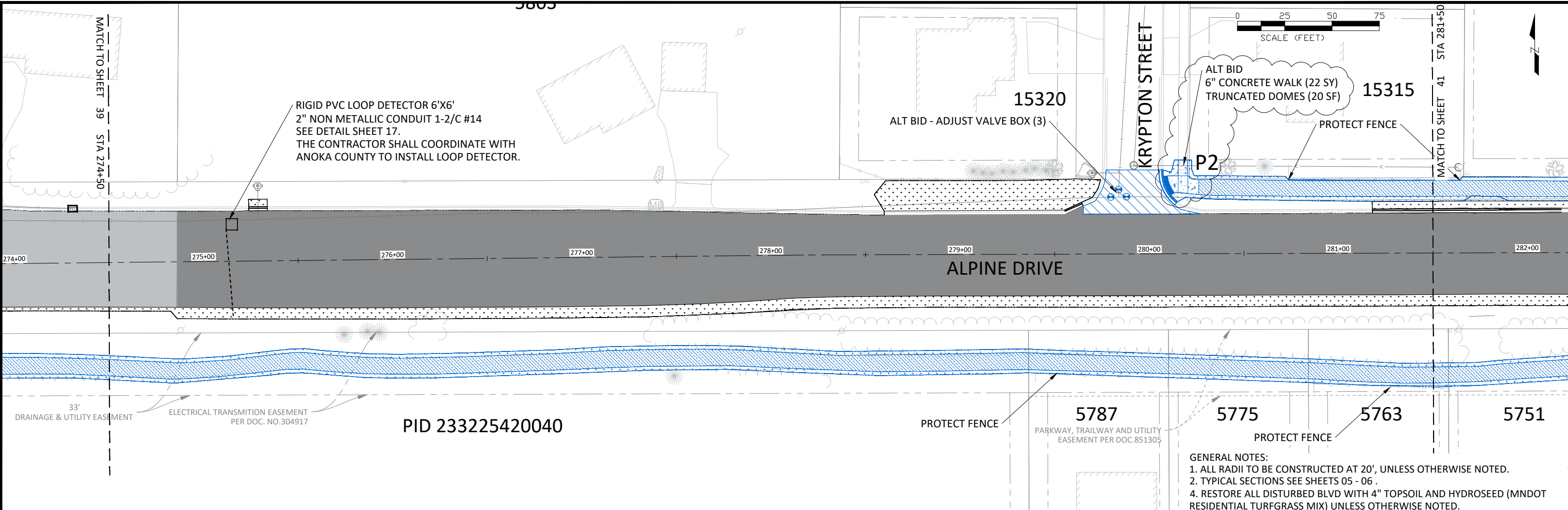


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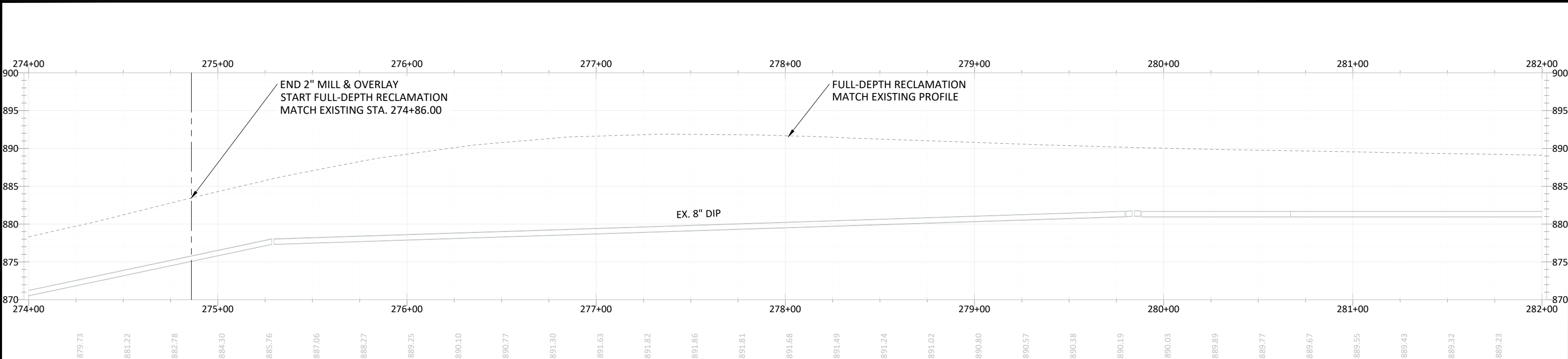
LEGEND	
	CONSTRUCTION LIMITS
	ALT BID - CONSTRUCTION LIMITS
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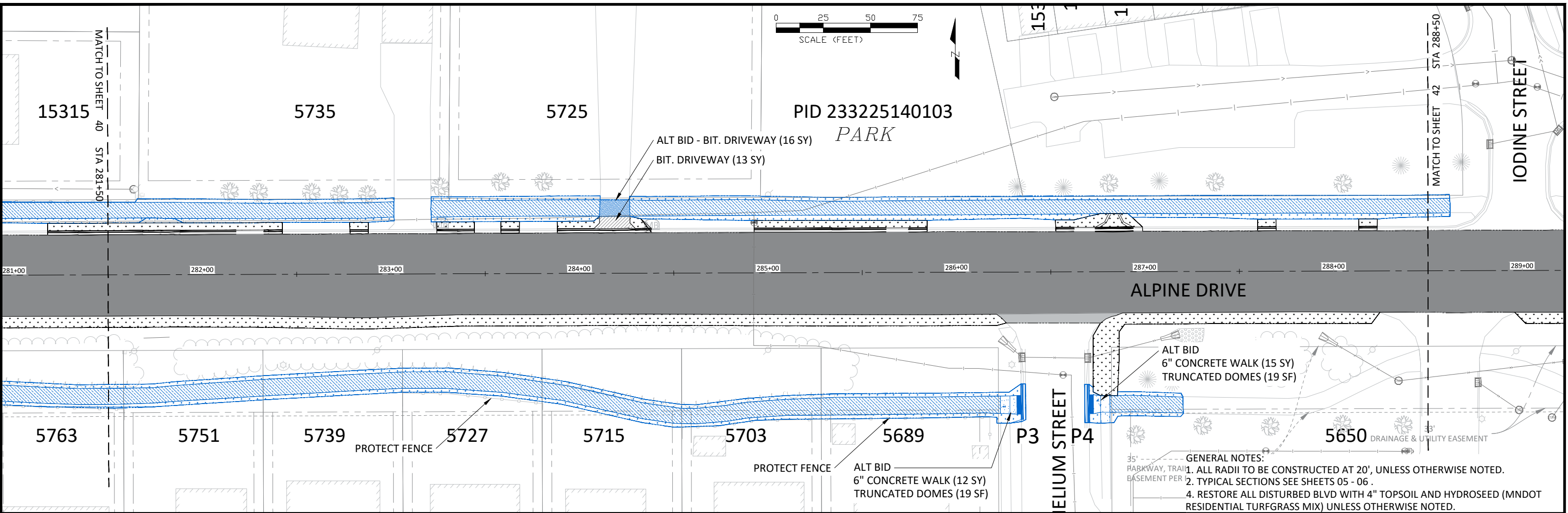


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DATE	REVISION										

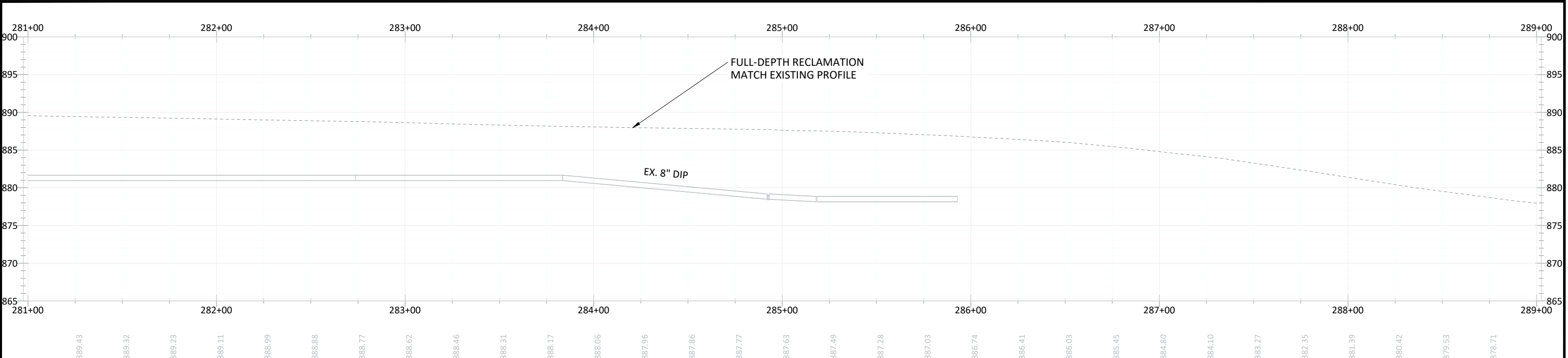


LEGEND	
	CONSTRUCTION LIMITS
	ALT BID - CONSTRUCTION LIMITS
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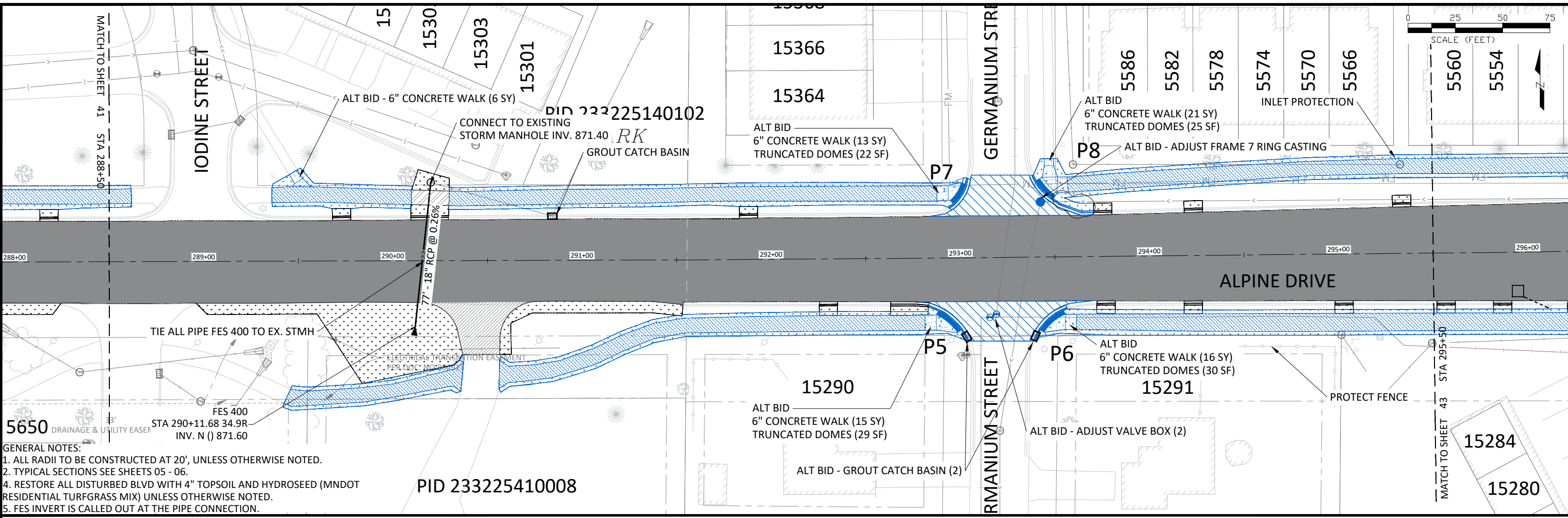




	CONSTRUCTION LIMITS ALT BID - CONSTRUCTION LIMITS PR. B-STYLE CURB ALT BID - PR. B-STYLE CURB		PR. BITUMINOUS PAVEMENT - 2" OVERLAY PR. BITUMINOUS PAVEMENT - FULL DEPTH ALT BID - PR. BITUMINOUS PAVEMENT - FD		ALT BID - PR. TRUNCATED DOME ALT BID - PR. 6" CONCRETE WALK PR. BITUMINOUS PAVEMENT - TRAIL ALT BID - PR. BITUMINOUS PAVEMENT - TRAIL		PR. RESTORATION ALT BID - PR. RESTORATION PR. DRIVE - BITUMINOUS ALT BID - PR. DRIVE - BITUMINOUS		ADJUST CASTING ALT BID - ADJUST CASTING ADJUST VALVE BOX ALT BID - ADJUST VB GROUT CATCH BASIN		PR. STORM SEWER PR. 2'X3' CATCH BASIN PR. CATCH BASIN MANHOLE PR. STORM SEWER MANHOLE PR. FLARED END SECTION
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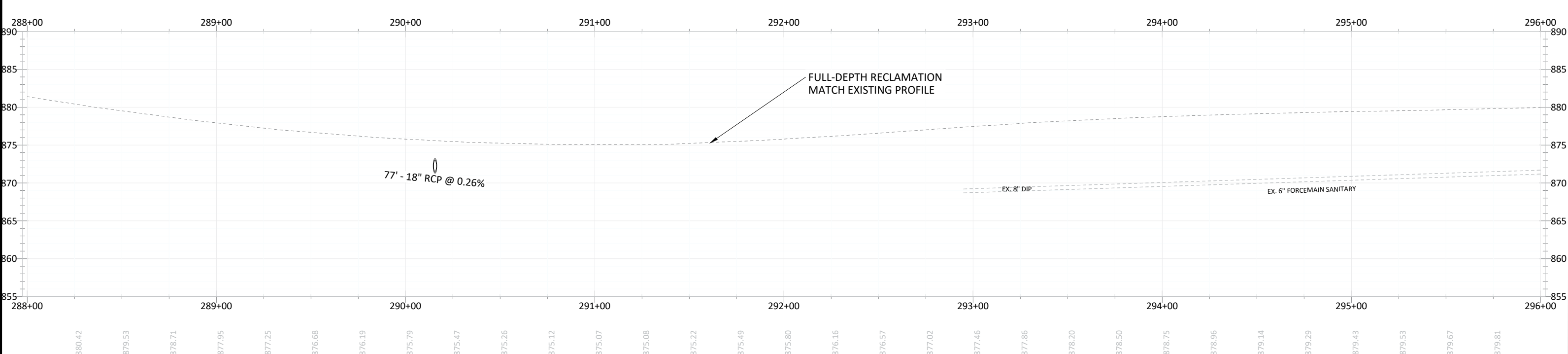


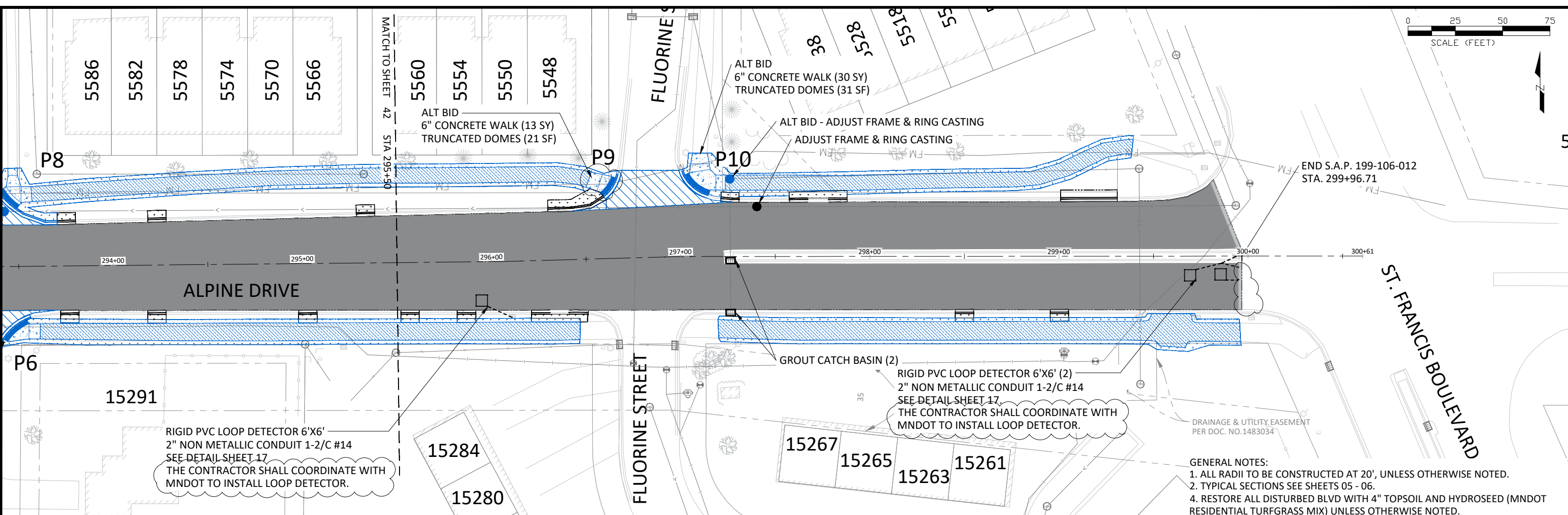
DATE	REVISION	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota. Joe Feriancek Date 03/21/25 Lic. No. 57095	DESIGNED BY: JJF	 CITY OF RAMSEY 7550 SUNWOOD DRIVE RAMSEY, MN 55303 (763) 427-1410 FAX (763) 433-9898	STREET CONSTRUCTION S.A.P. 199-106-012	ALPINE DRIVE RECONSTRUCTION CITY PROJECT NO. 25-03 CITY OF RAMSEY, MINNESOTA	SHEET 41 OF 84 SHEETS	
			DRAWN BY: JJF					DATE: 03/21/25
			CHECKED BY: JJF					FILE: 25-03



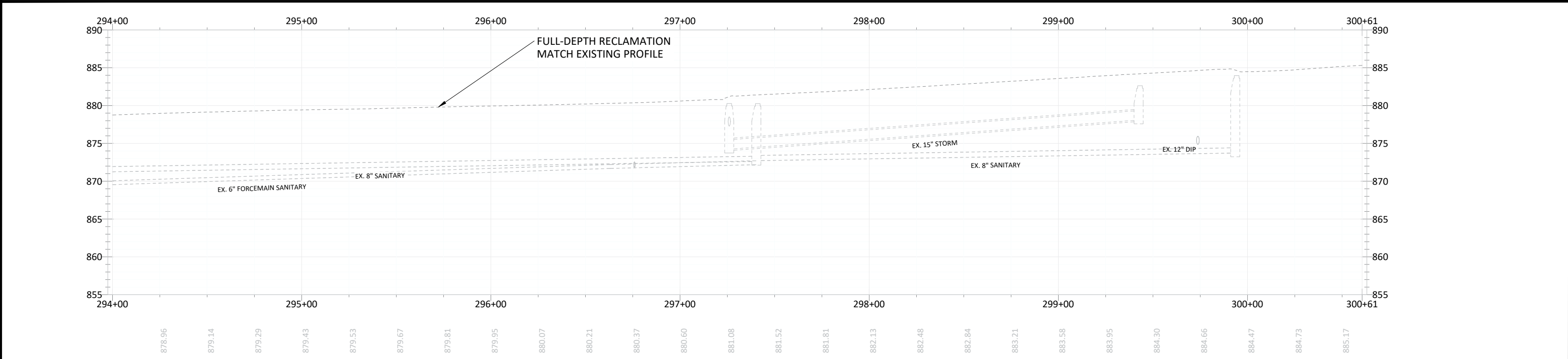
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LEGEND	
	CONSTRUCTION LIMITS
	ALT BID - CONSTRUCTION LIMITS
	PR. B-STYLE CURB
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	PR. 2'x3' CATCH BASIN
	PR. CATCH BASIN MANHOLE
	PR. STORM SEWER MANHOLE
	PR. FLARED END SECTION





LEGEND	
	CONSTRUCTION LIMITS
	ALT BID - CONSTRUCTION LIMITS
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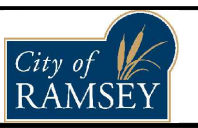


DATE	REVISION
04/24/25	REVISED STREET TIE-IN / REVISED PEDESTRIAN RAMP

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Joe Feriancek
 Joe Feriancek
 Date 03/21/25 Lic. No. 57095

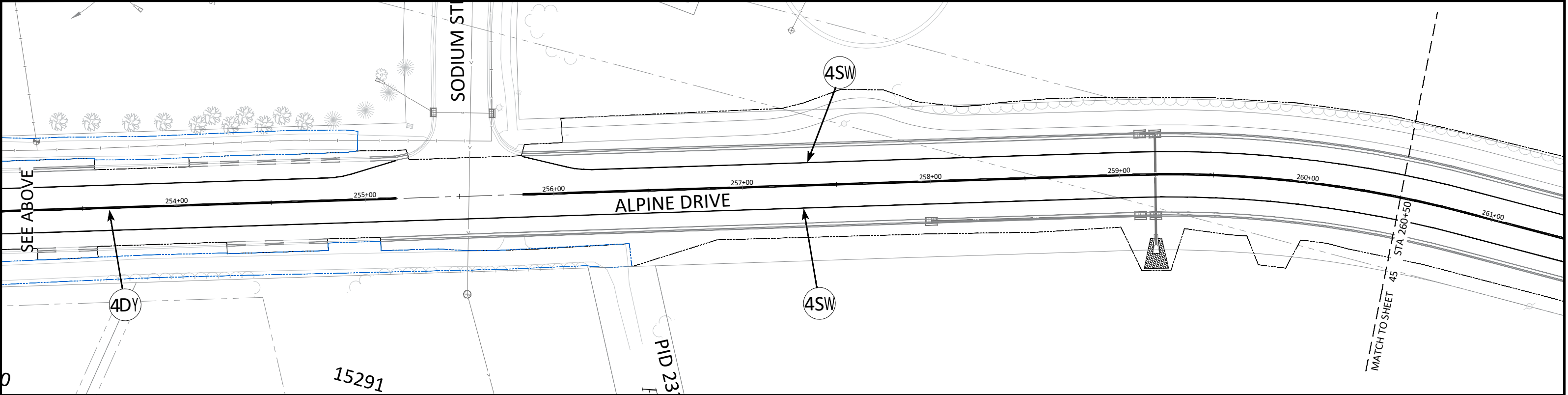
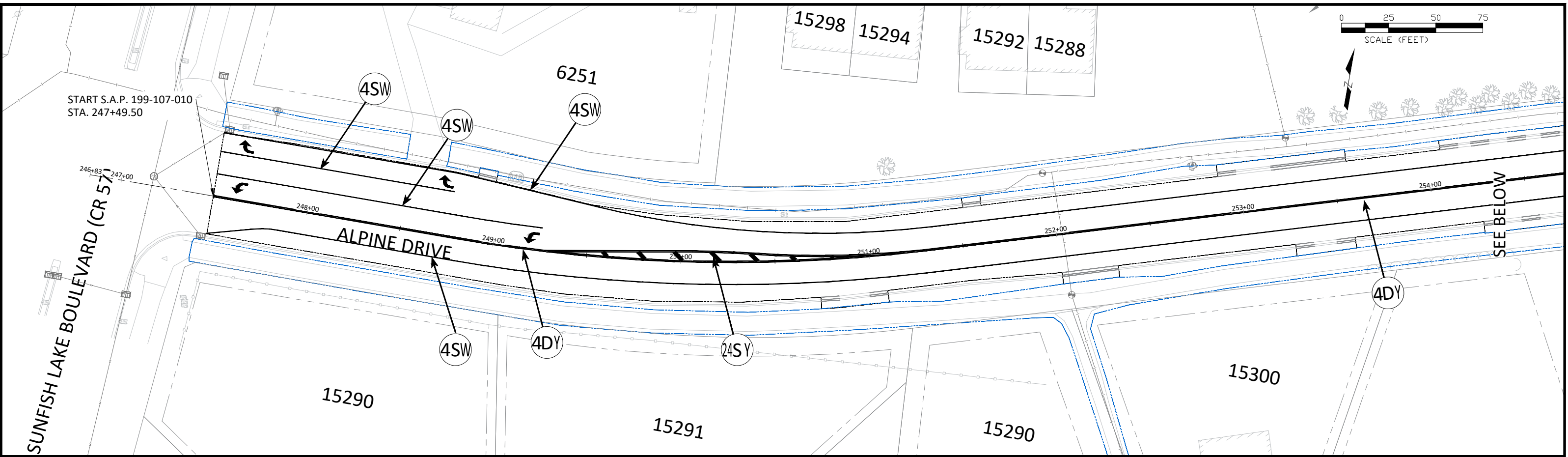
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CITY OF RAMSEY
 7550 SUNWOOD DRIVE
 RAMSEY, MN 55303
 (763) 427-1410 FAX (763) 433-9898

STREET CONSTRUCTION
 S.A.P. 199-106-012

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA

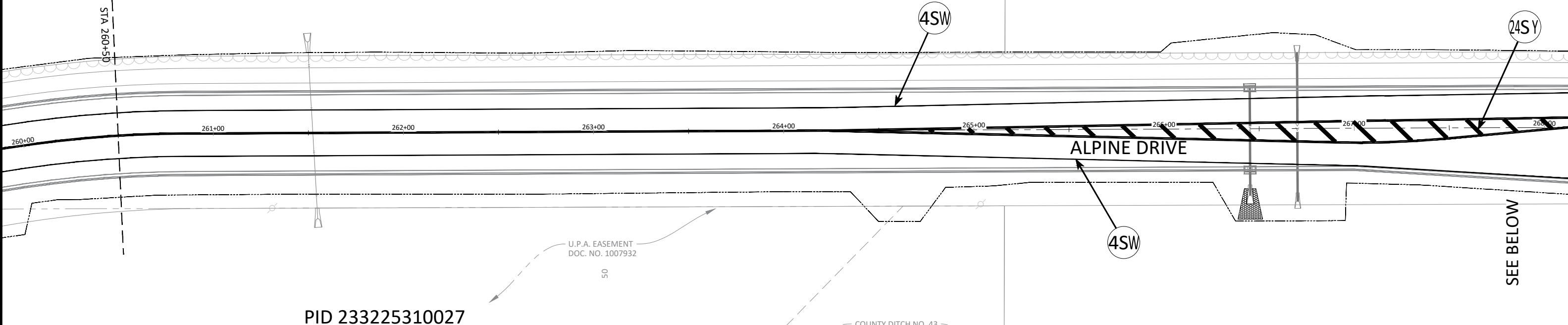


DATE 04/24/25	REVISION REVISED STORM SEWER	I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota Joe Feriánek Date 03/21/25 Lic. No. 57095	DESIGNED BY: JJF DRAWN BY: JJF CHECKED BY: JJF	DATE: 03/21/25 FILE: 25-03	<p>CITY OF RAMSEY 7550 SUNWOOD DRIVE RAMSEY, MN 55303 (763) 427-1410 FAX (763) 433-9898</p>	PAVEMENT MARKINGS S.A.P. 199-107-010	ALPINE DRIVE RECONSTRUCTION CITY PROJECT NO. 25-03 CITY OF RAMSEY, MINNESOTA	SHEET 44 OF 84 SHEETS
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PID 233225240127

PID 233225130008

MATCH TO SHEET 44 STA 260+50



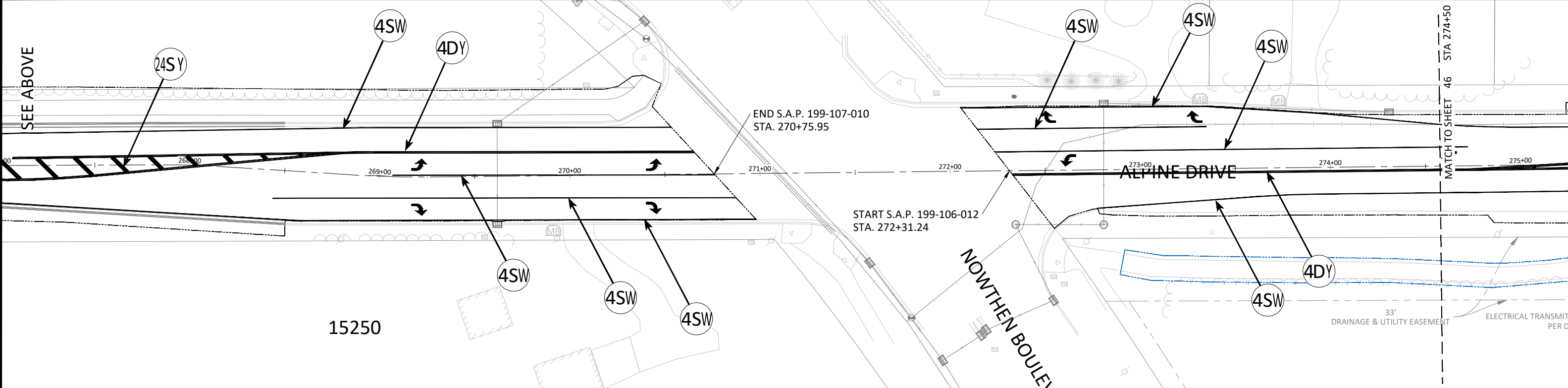
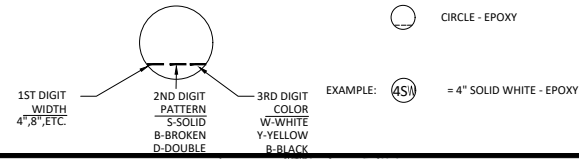
PID 233225310027

SEE BELOW

LEGEND

- PAVEMENT MARKING
- CROSSWALK MARKING
- TURN ARROW

STRIPING KEY & LEGEND



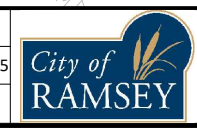
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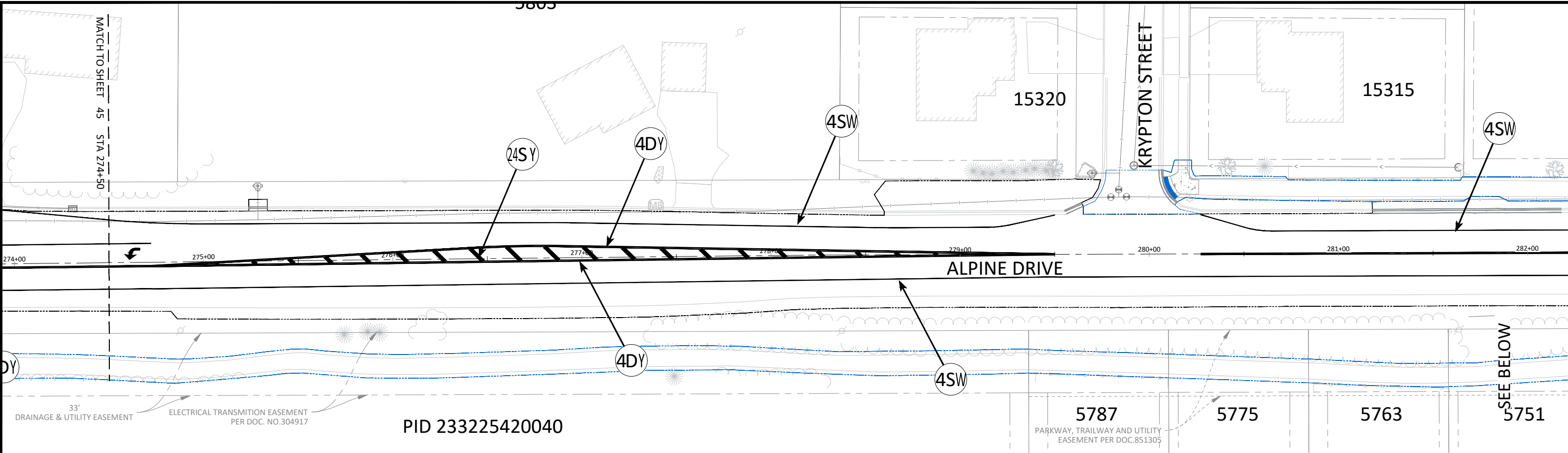
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CITY OF RAMSEY
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 RAMSEY, MN 55303
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PAVEMENT MARKINGS
 S.A.P. 199-107-010 / S.A.P. 199-106-012

ALPINE DRIVE RECONSTRUCTION
 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



LEGEND

- PAVEMENT MARKING
- CROSSWALK MARKING
- TURN ARROW

STRIPING KEY & LEGEND

1ST DIGIT WIDTH 4", 8", ETC.

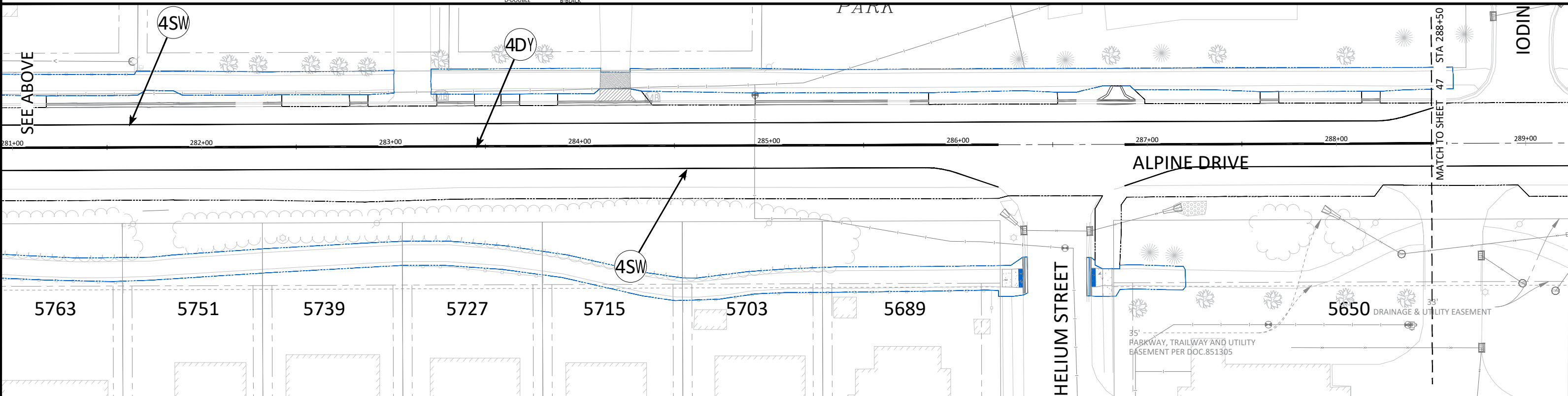
2ND DIGIT PATTERN S-SOLID B-BROKEN D-DOUBLE

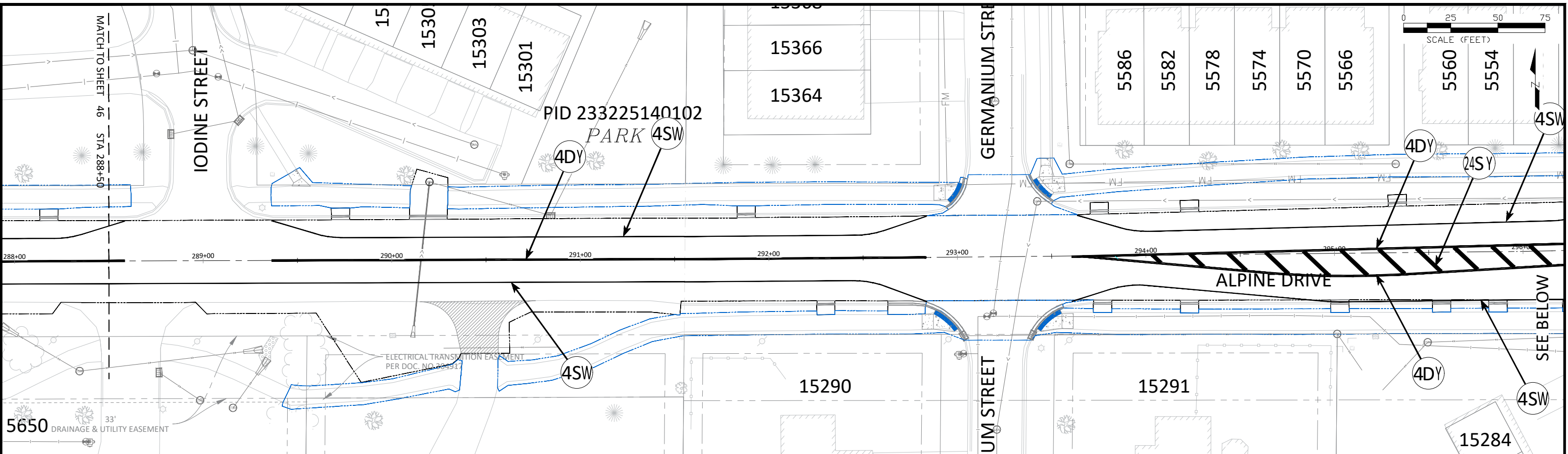
3RD DIGIT COLOR W-WHITE Y-YELLOW B-BLACK

EXAMPLE: (4S) = 4" SOLID WHITE - EPOXY

CIRCLE - EPOXY

SCALE (FEET): 0, 25, 50, 75





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STRIPING KEY & LEGEND

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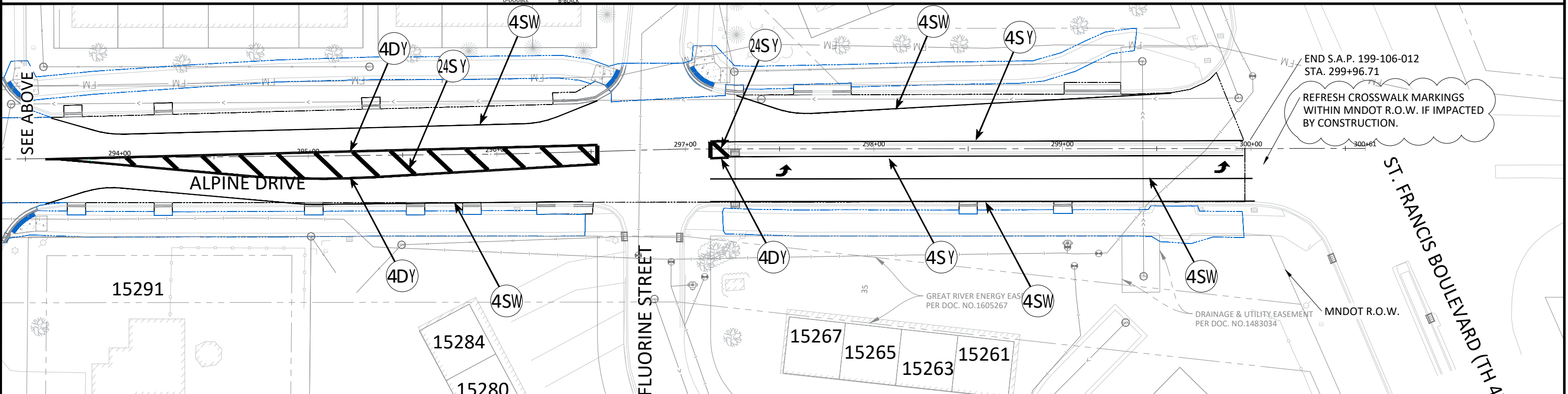
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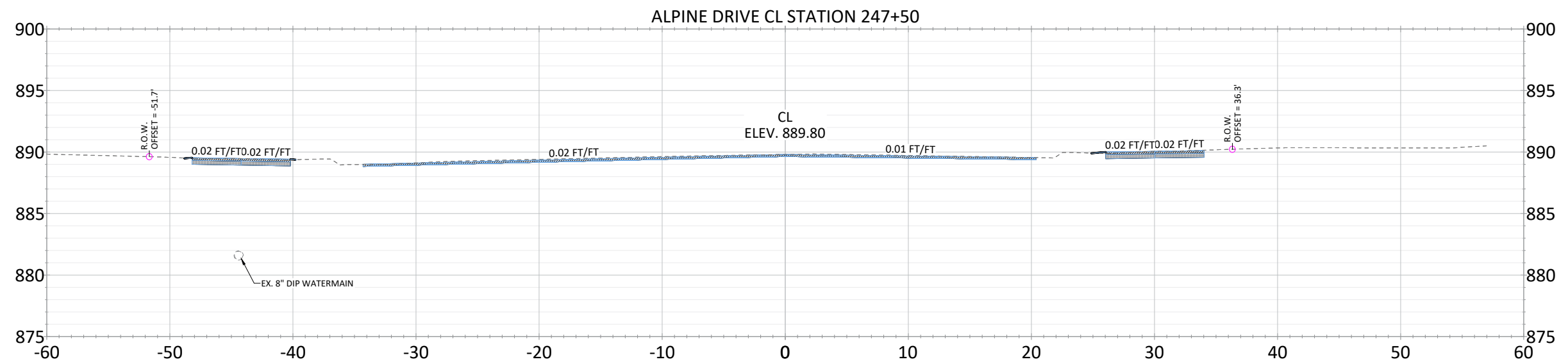
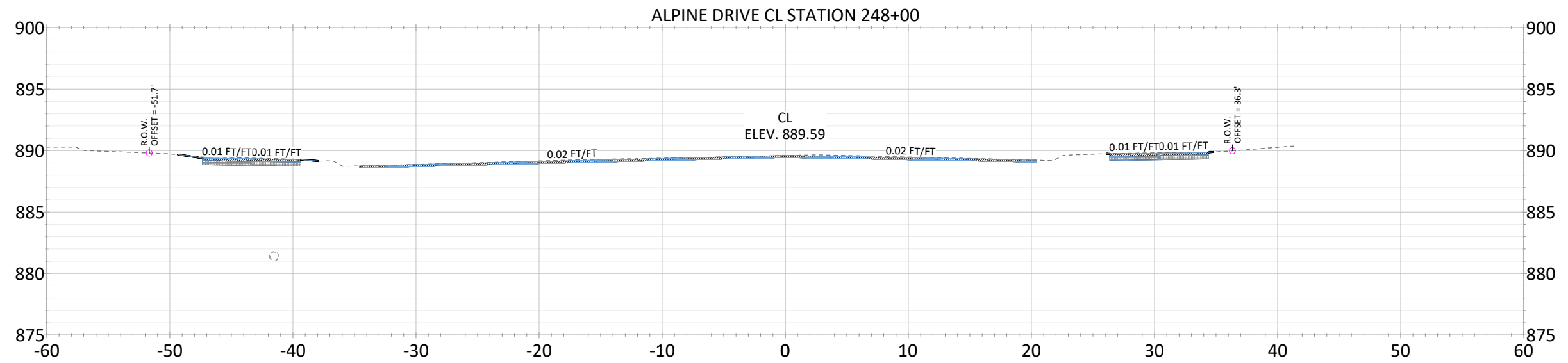
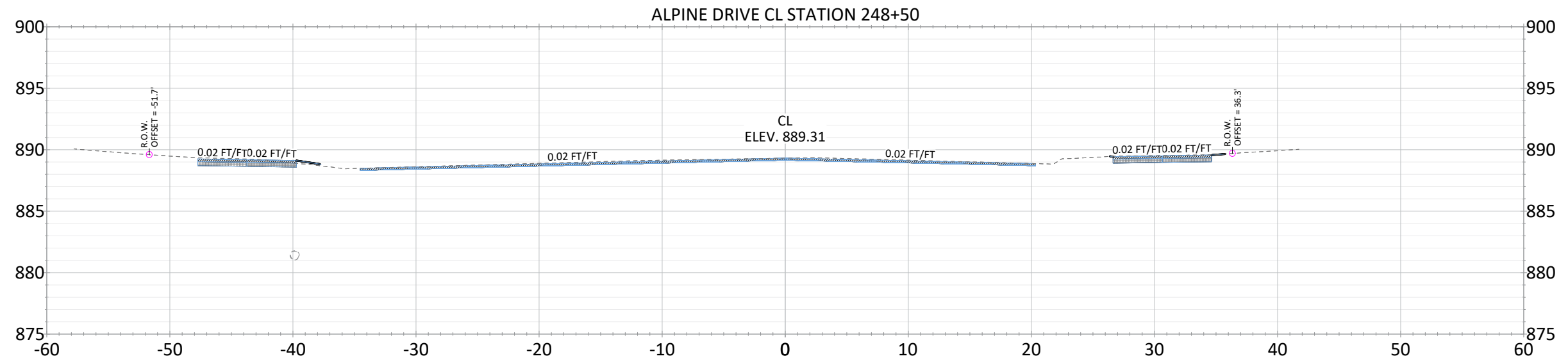
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SCALE (FEET) 0 25 50 75





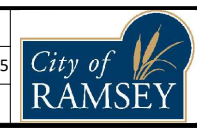
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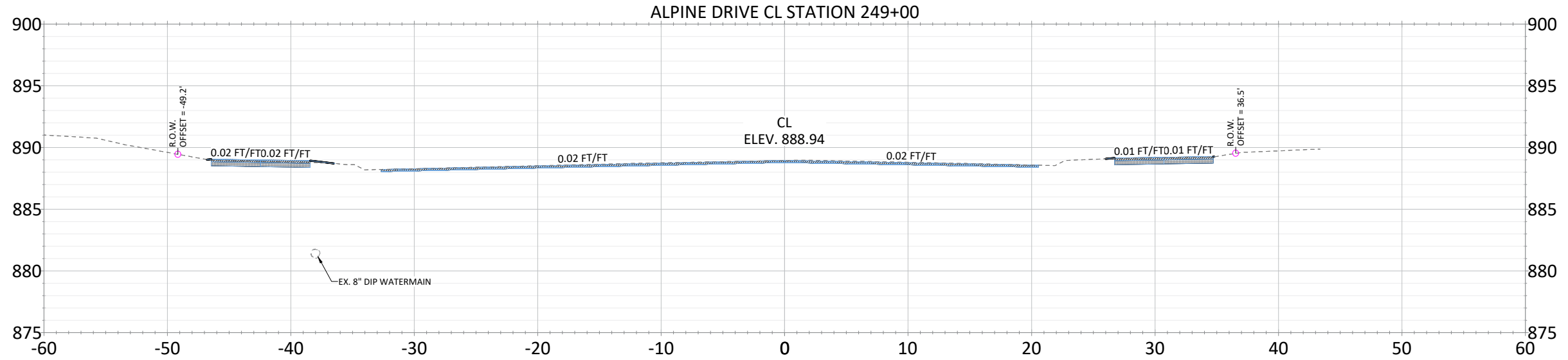
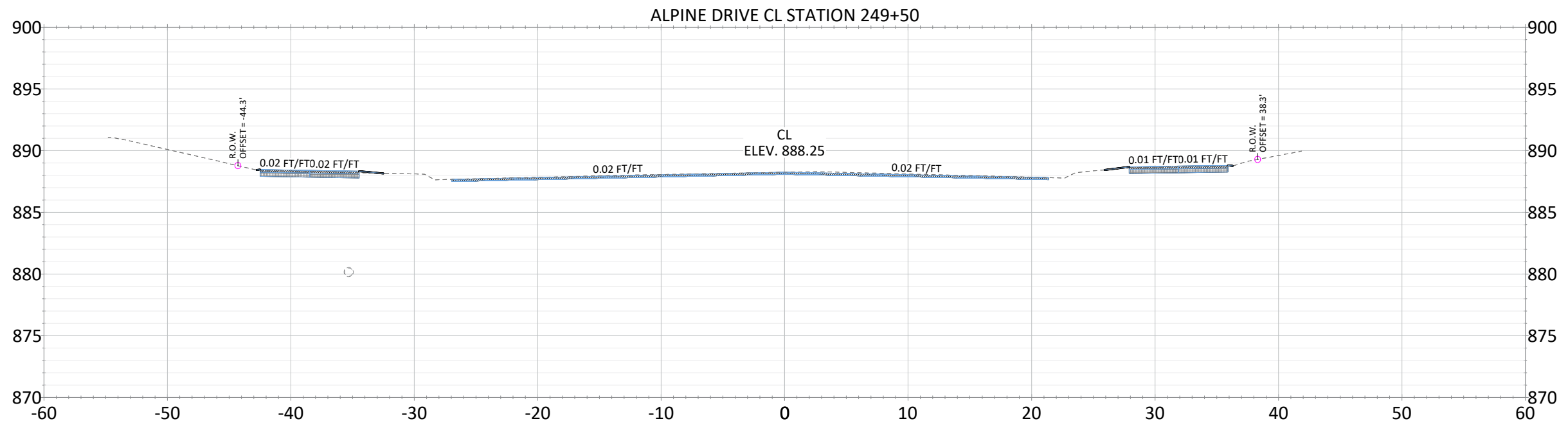
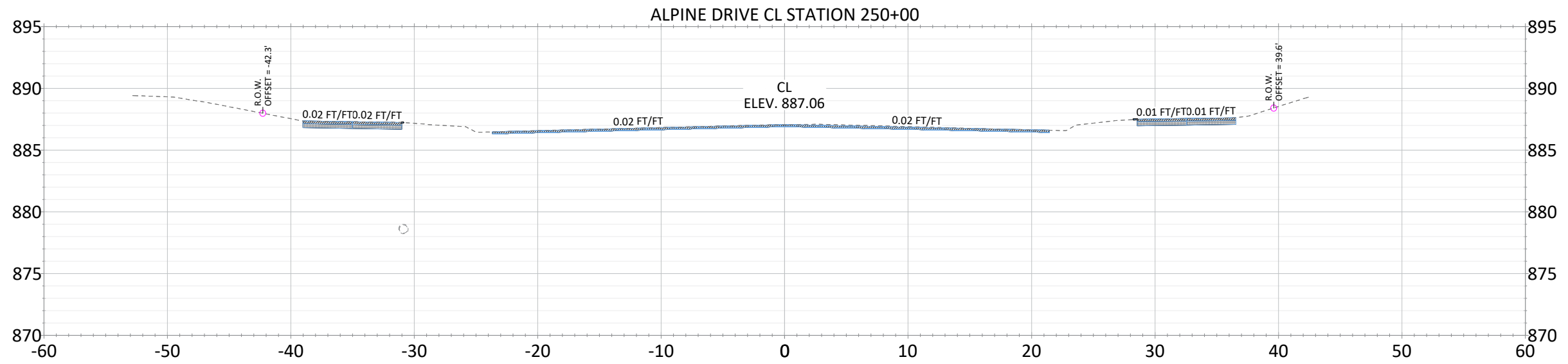
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 CITY PROJECT NO. 25-03
 CITY OF RAMSEY, MINNESOTA



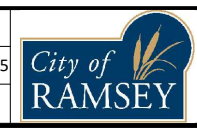
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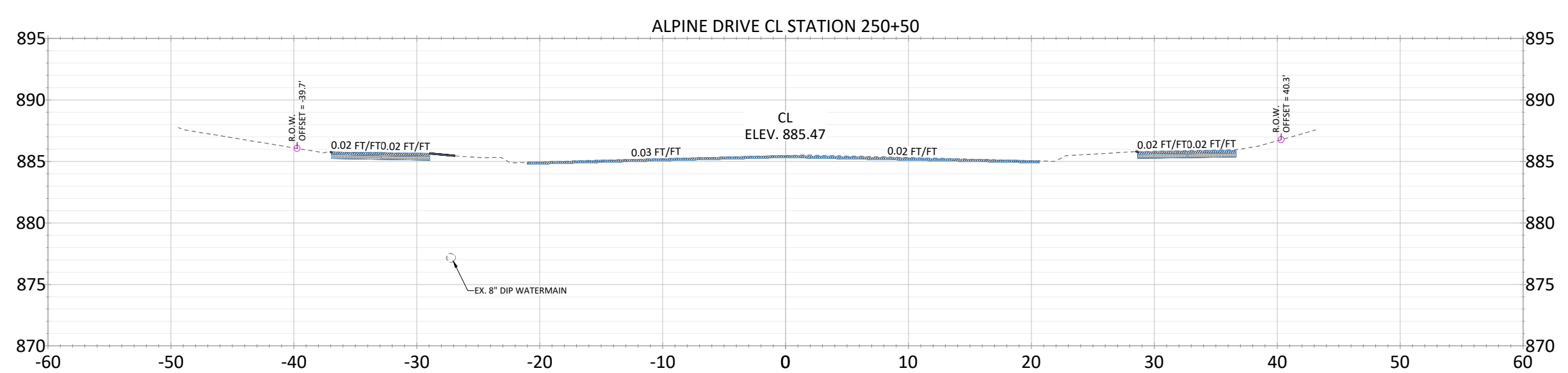
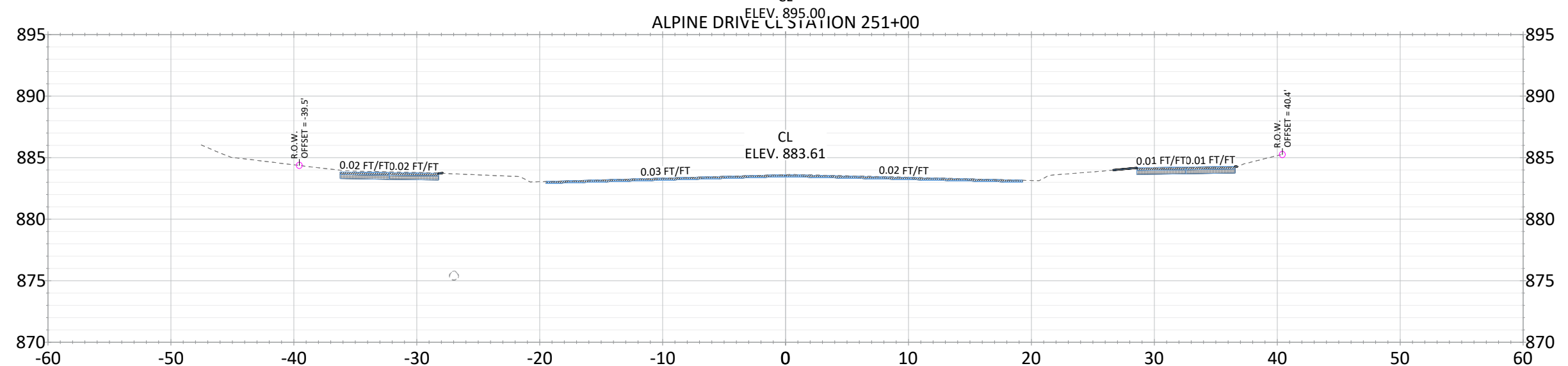
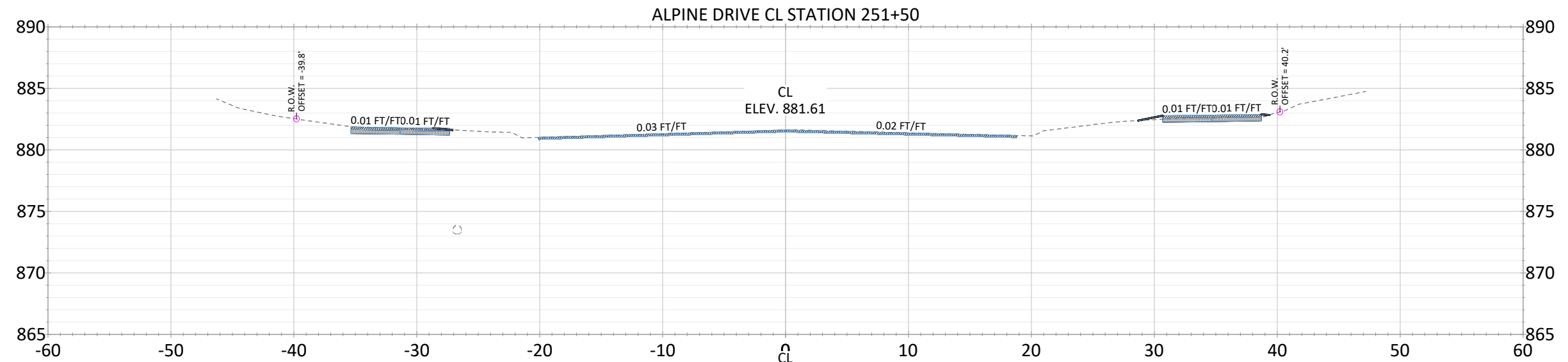
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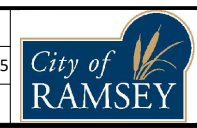
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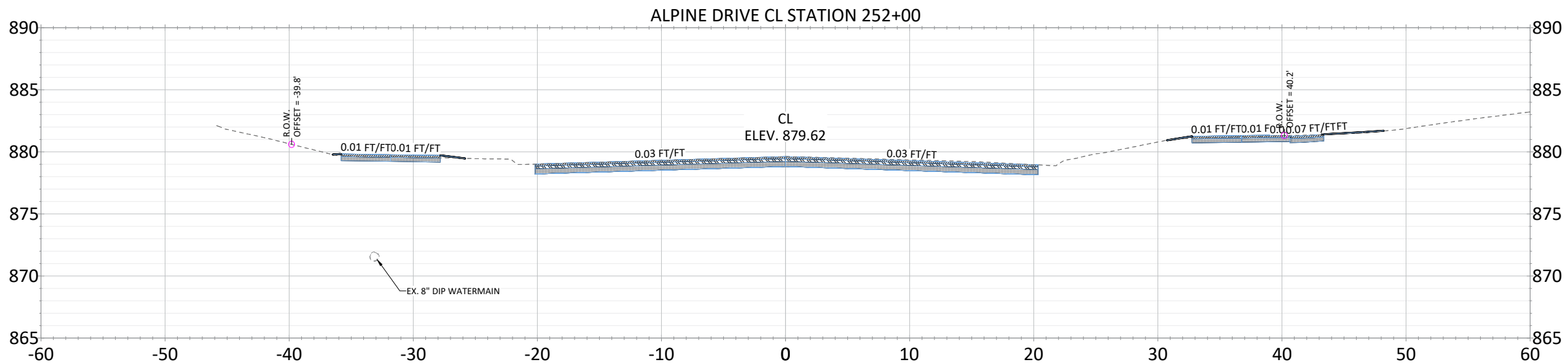
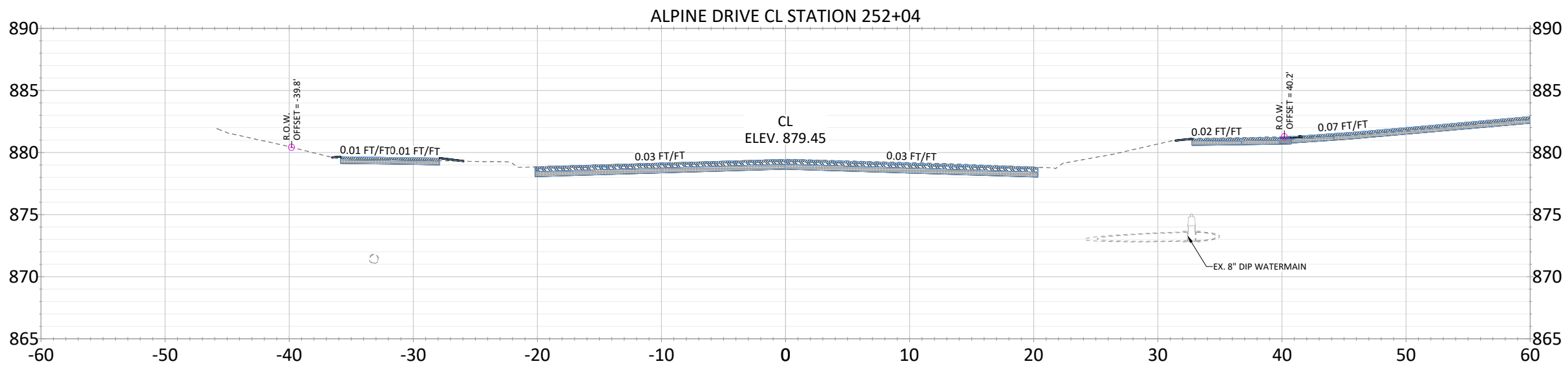
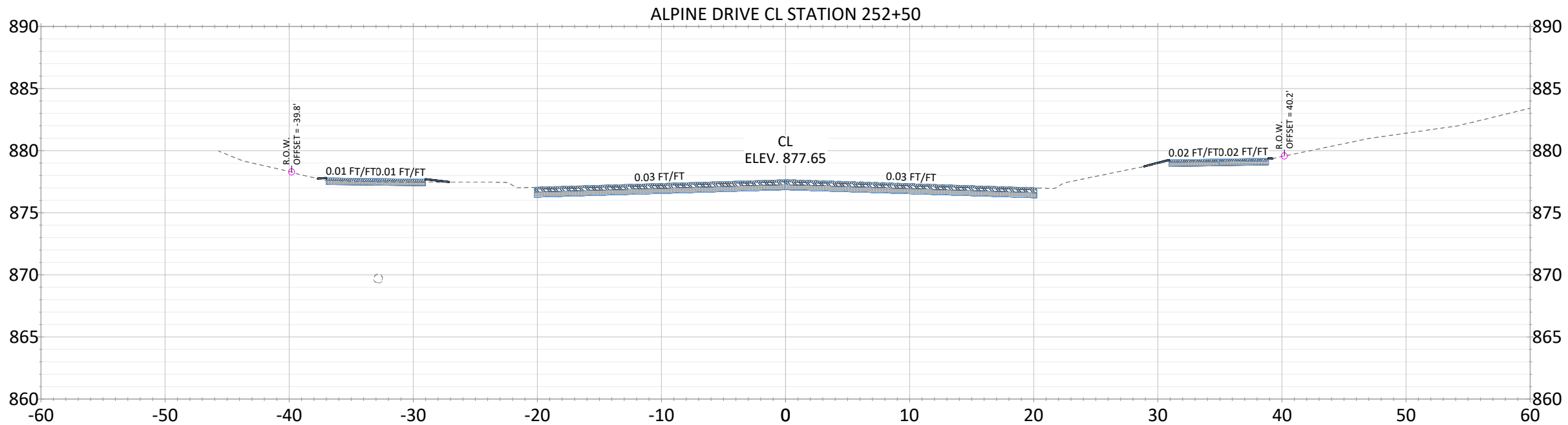
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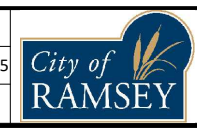
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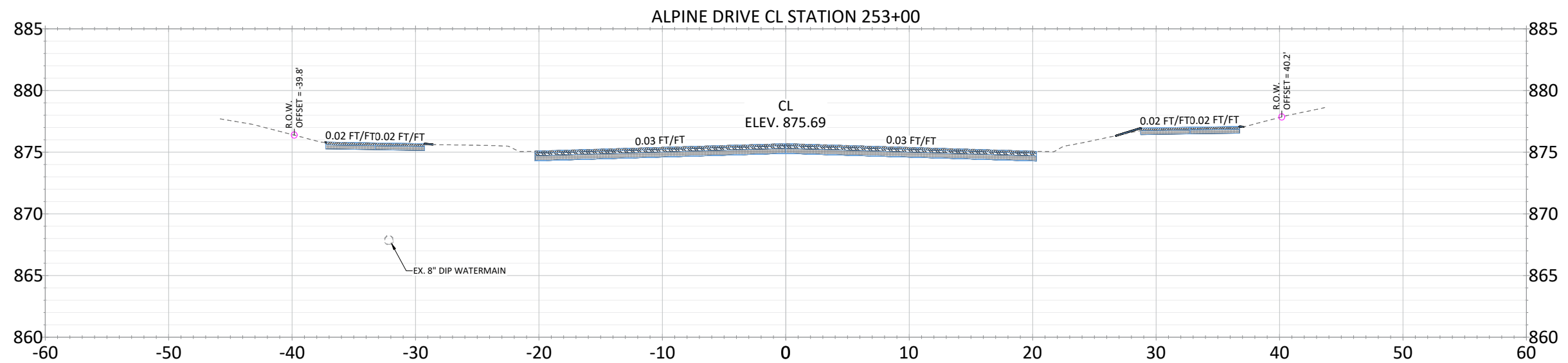
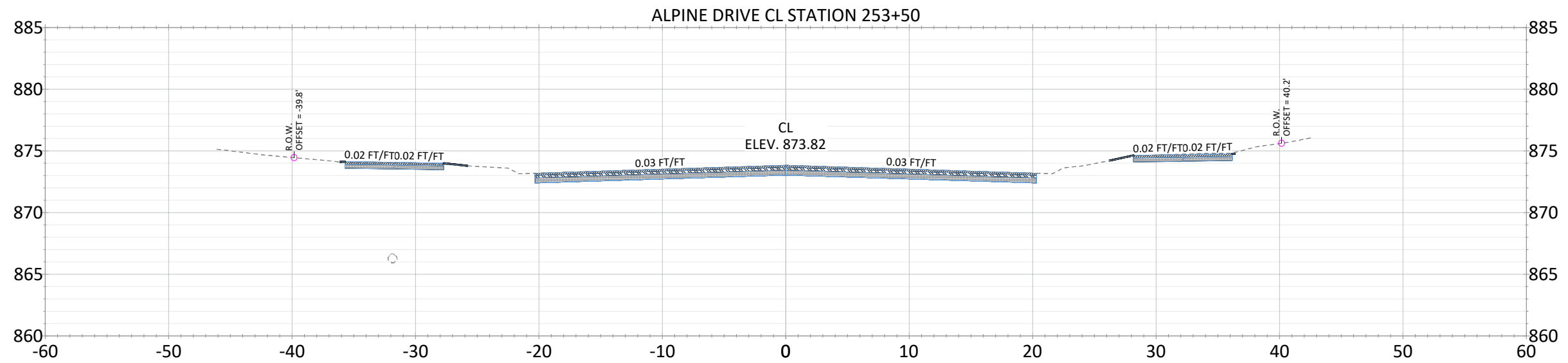
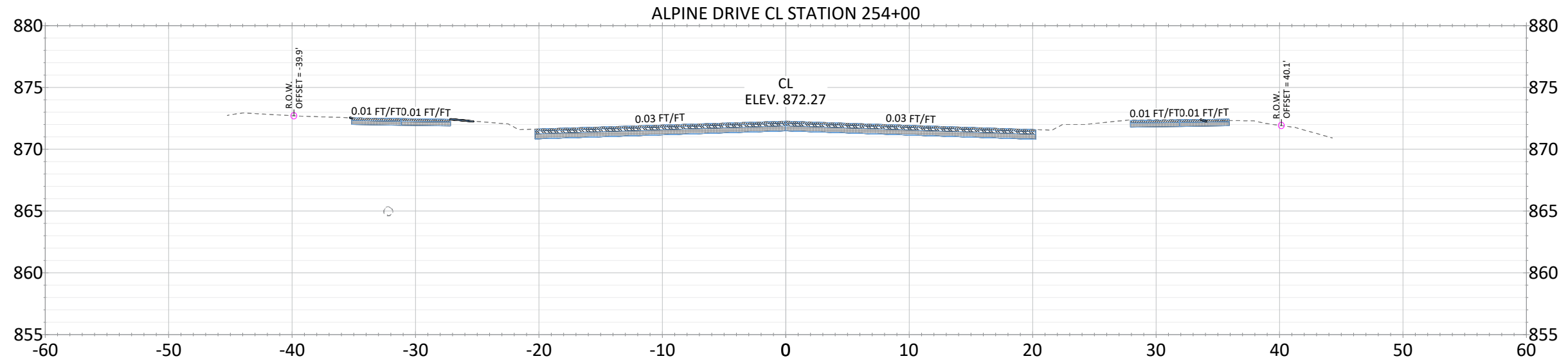
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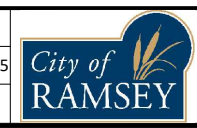
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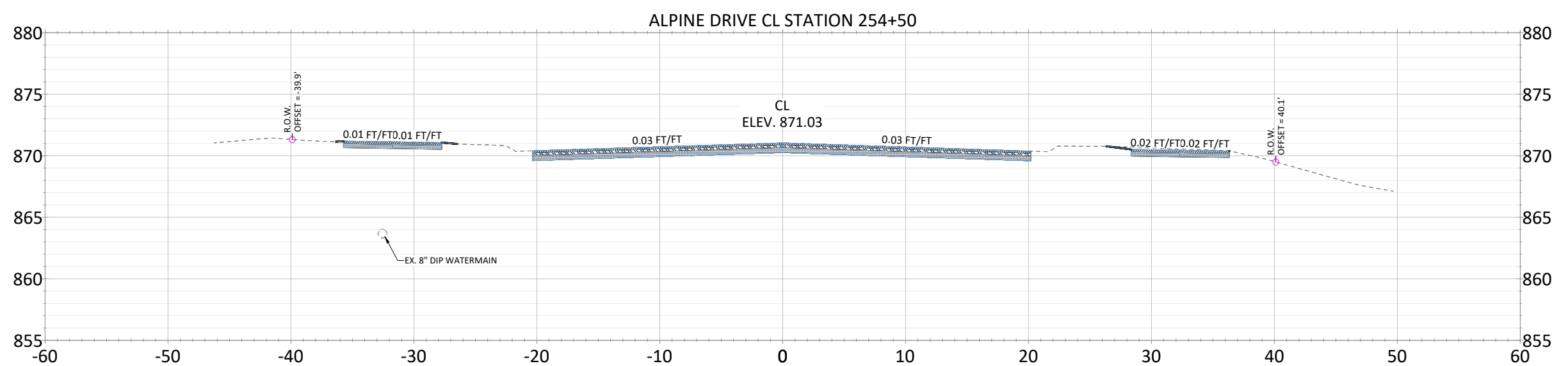
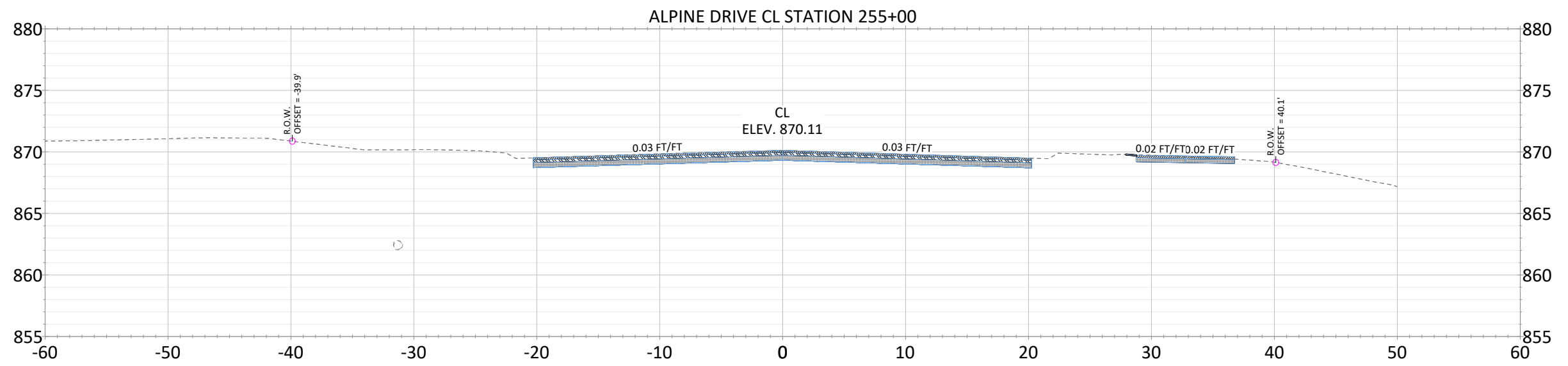
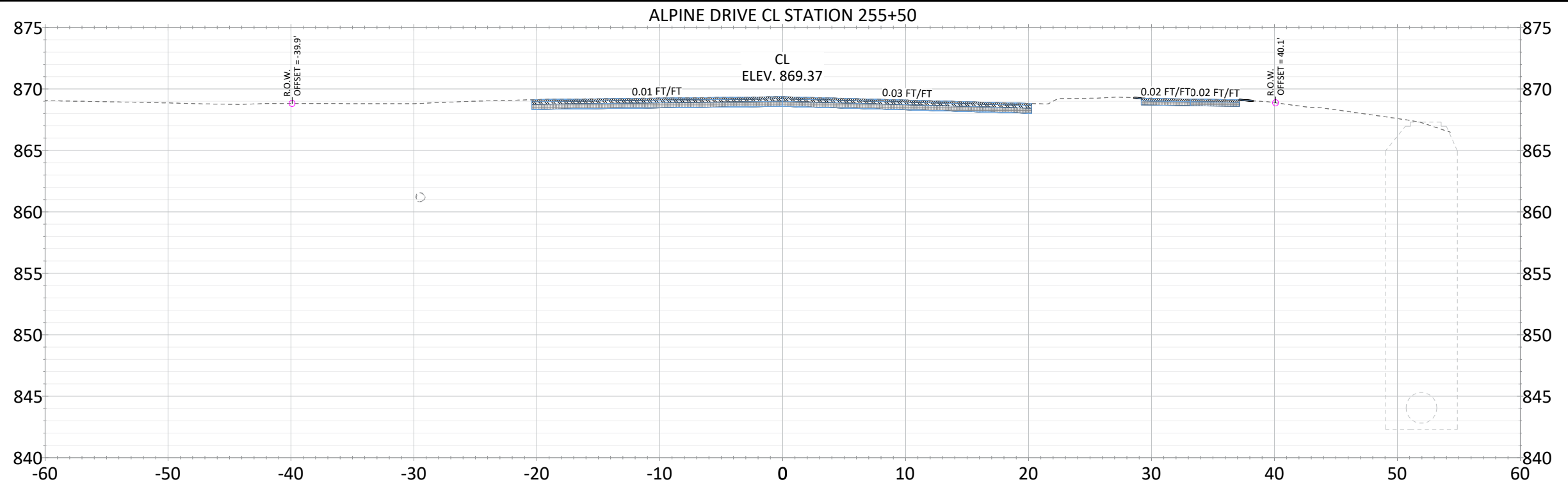
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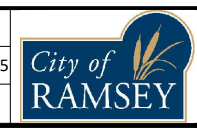
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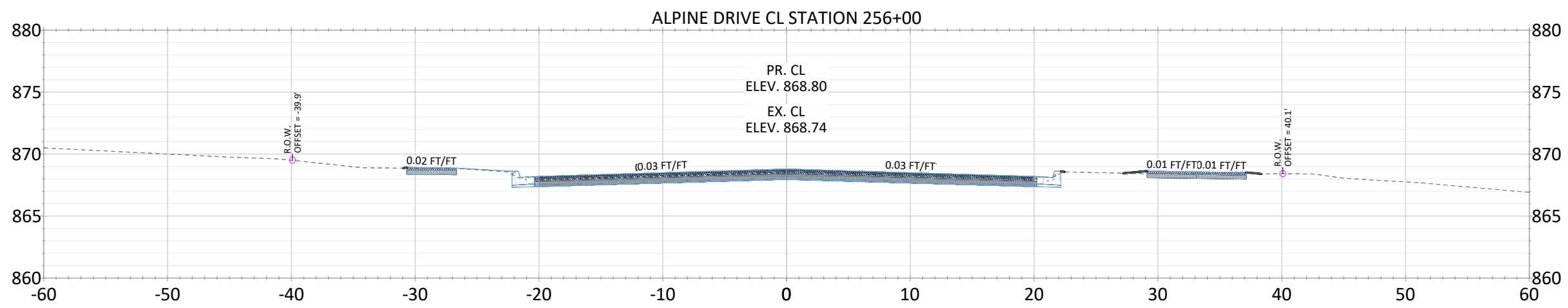
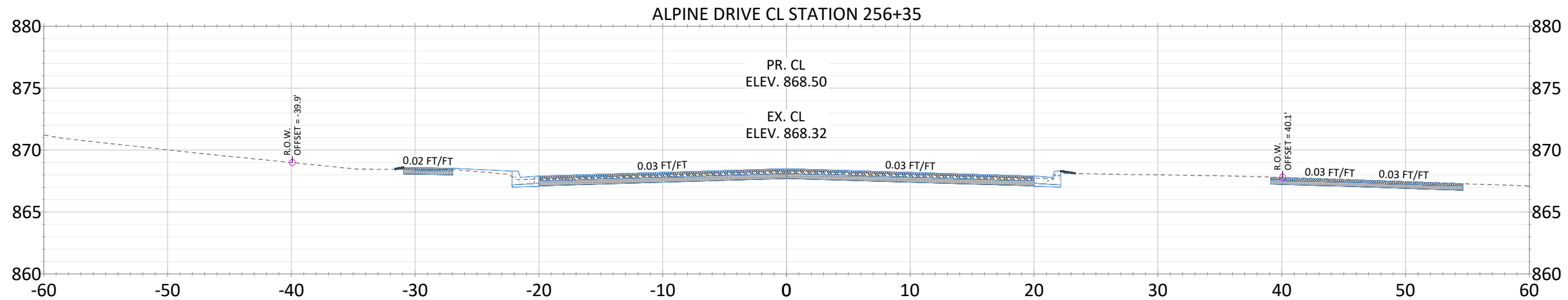
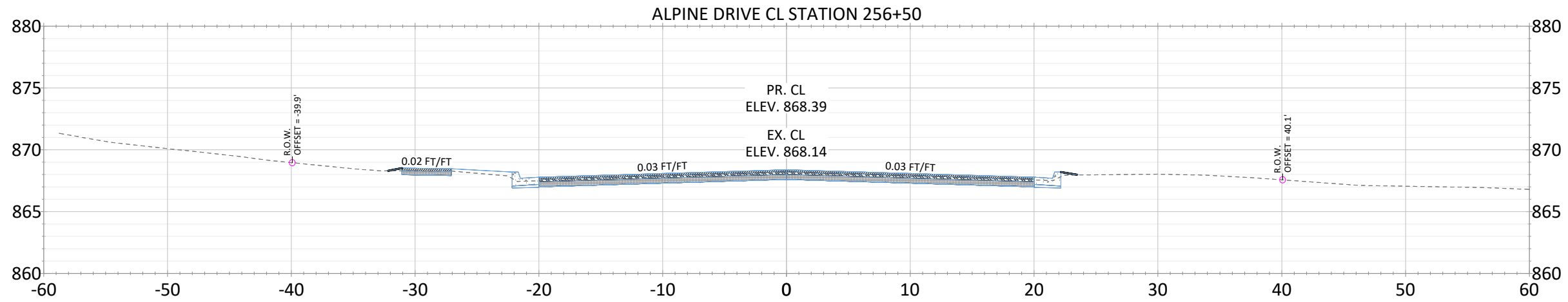
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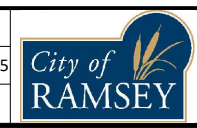
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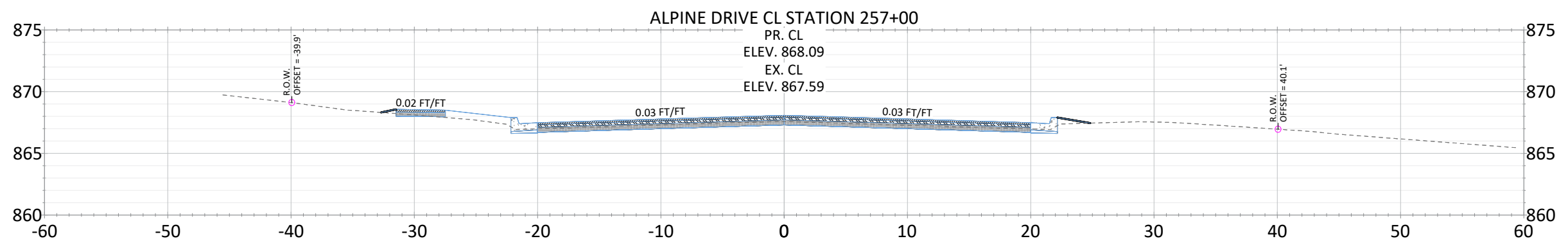
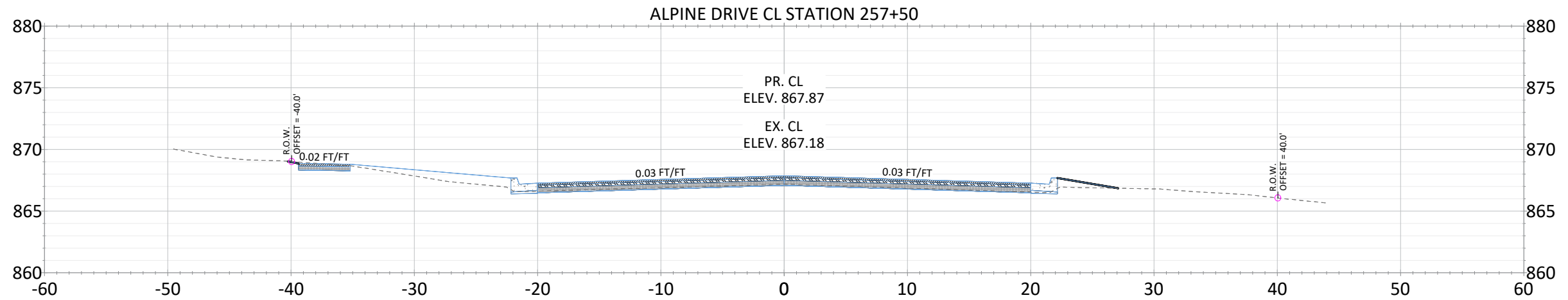
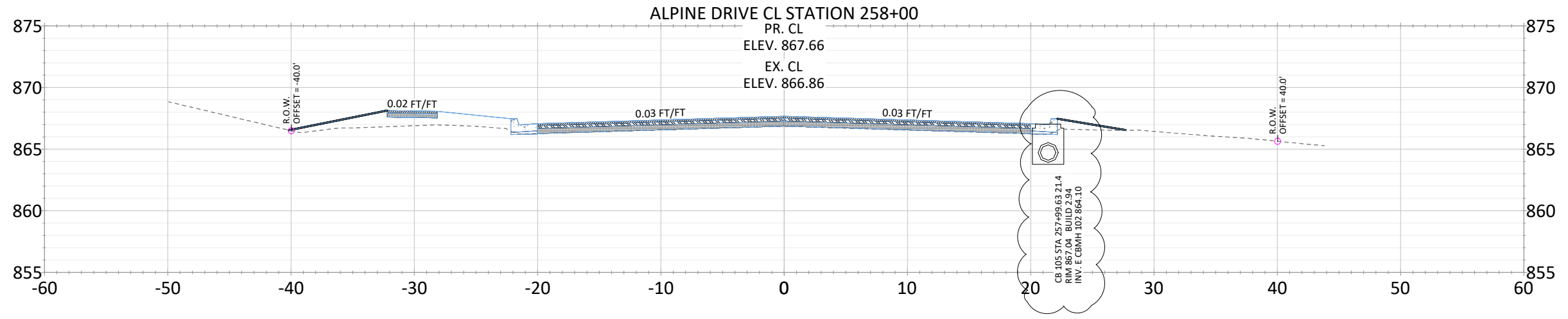
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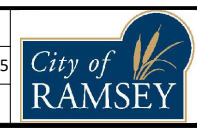
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04/24/25	REVISE STORM SEWER

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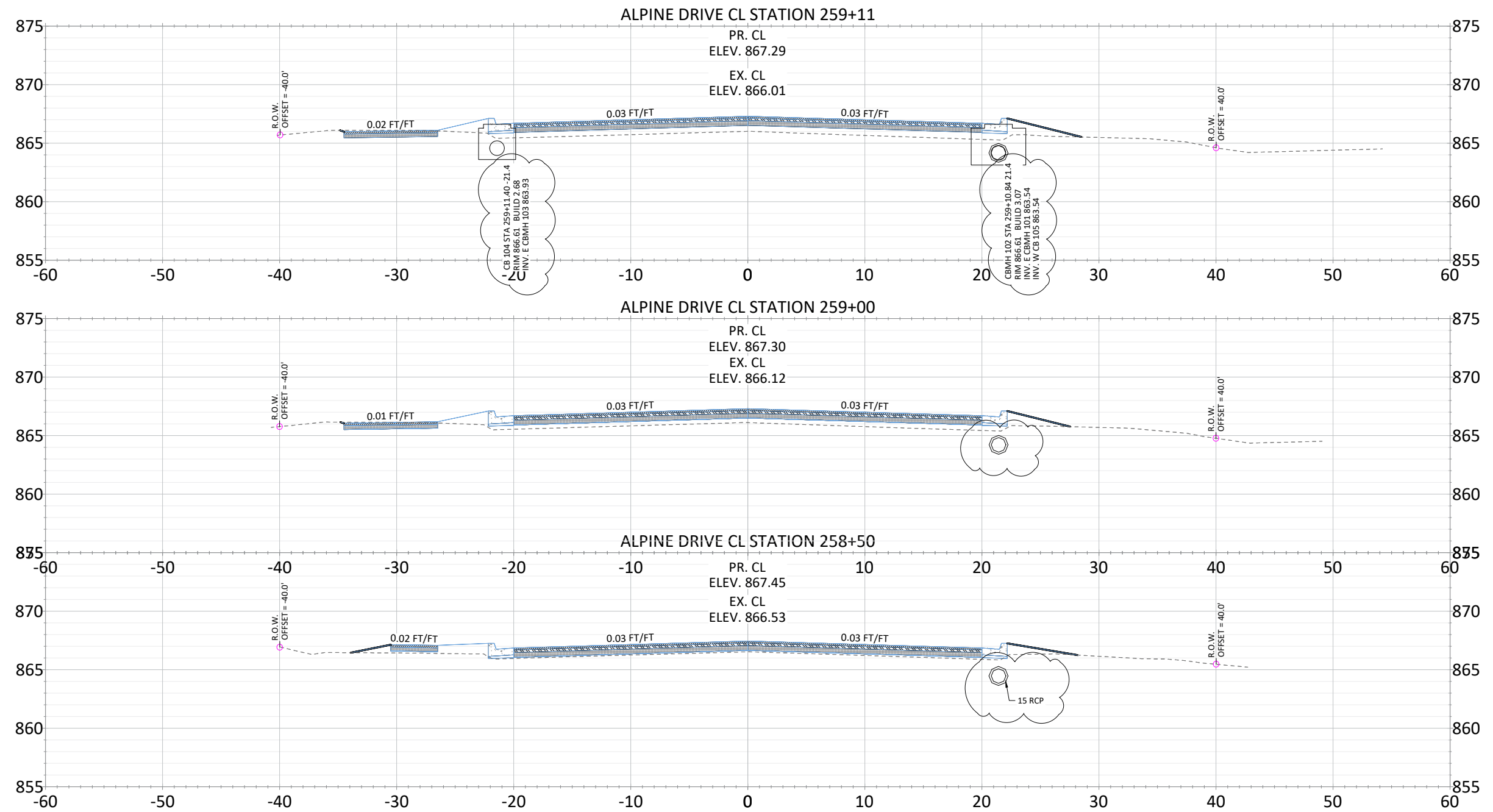
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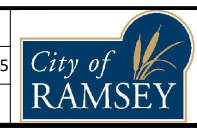
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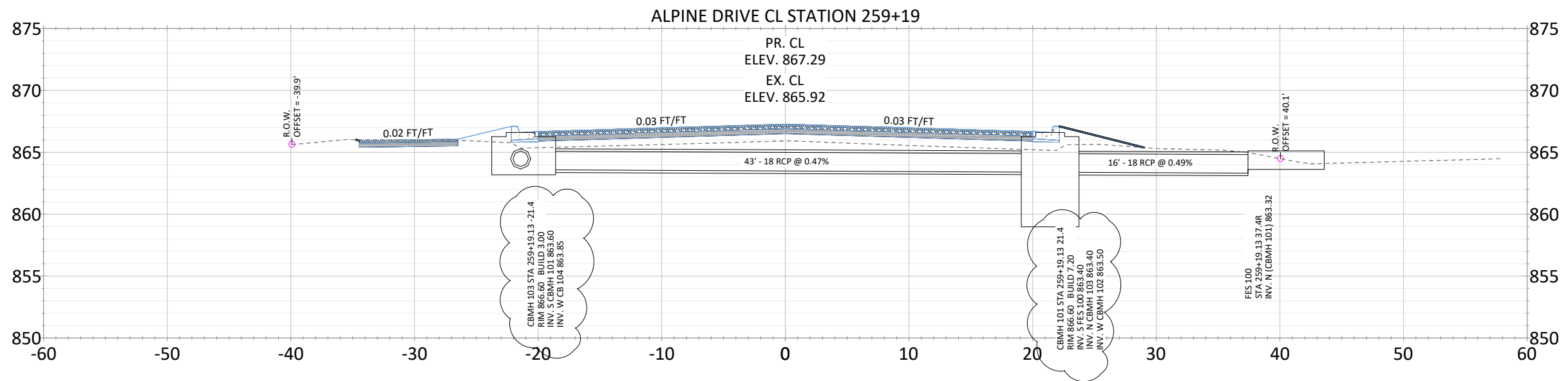
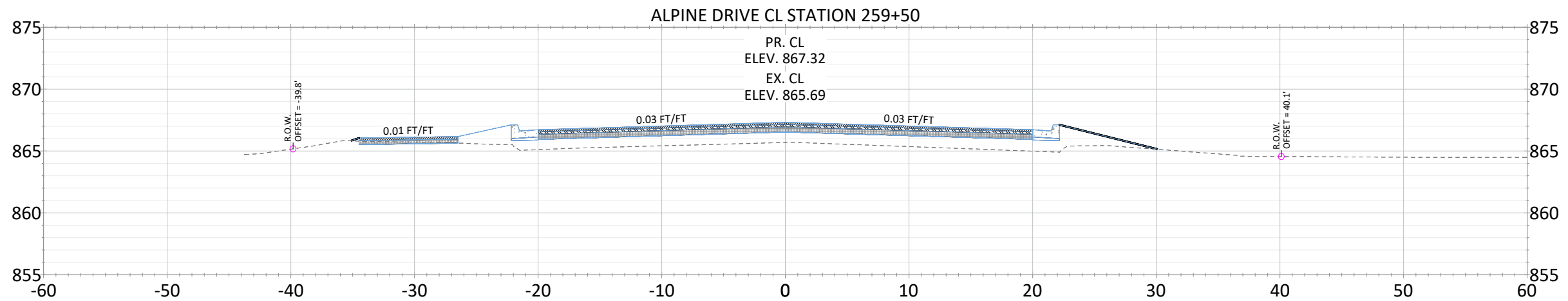
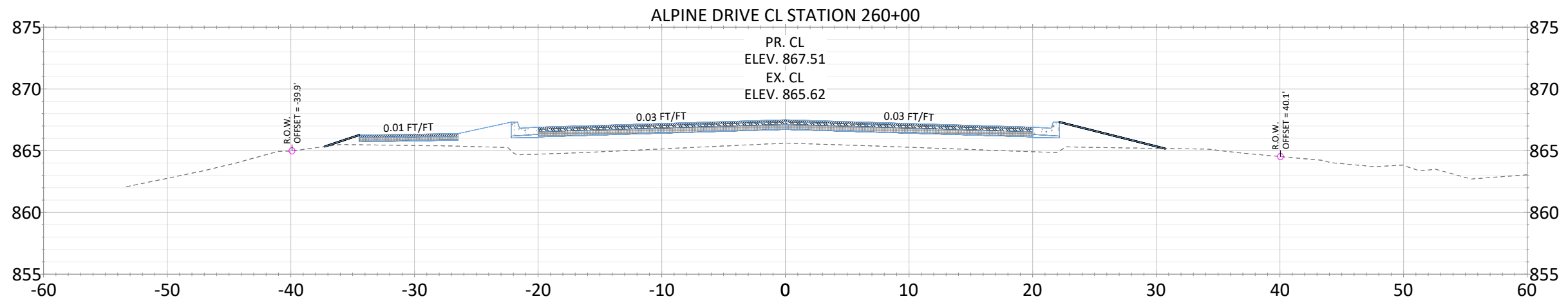
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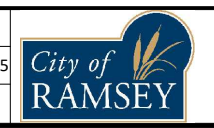
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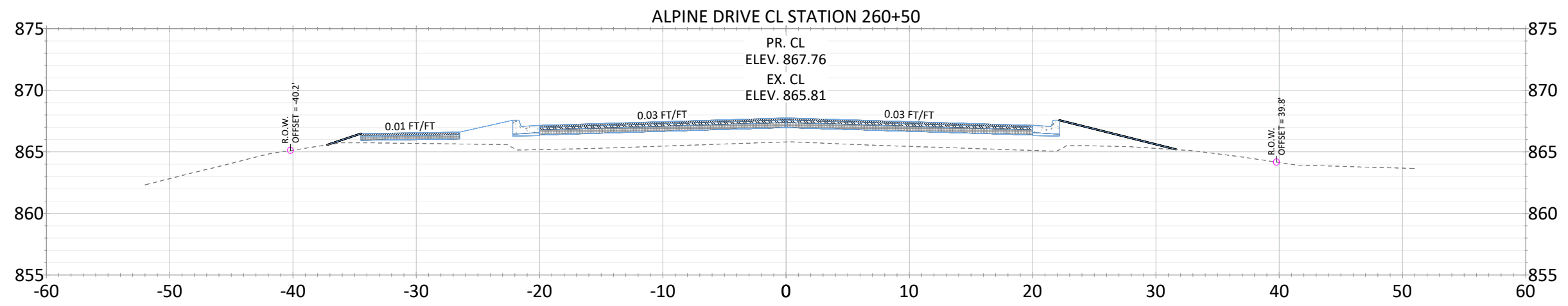
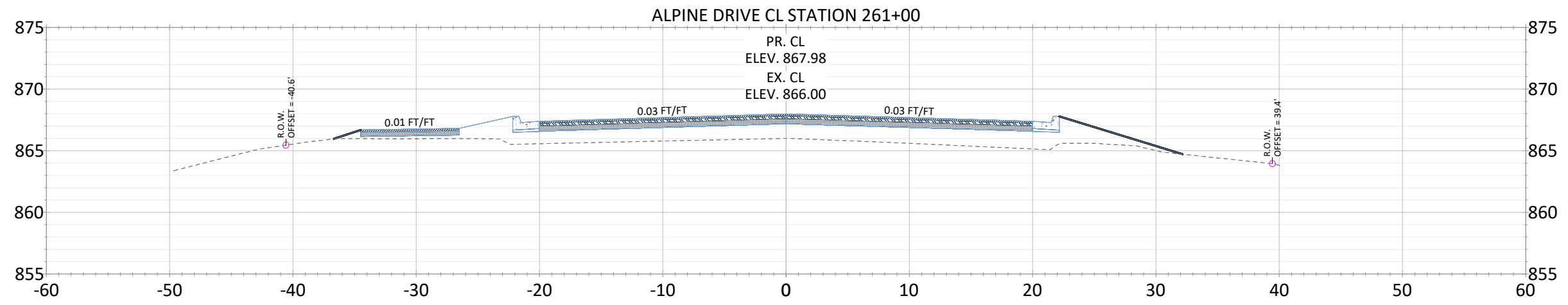
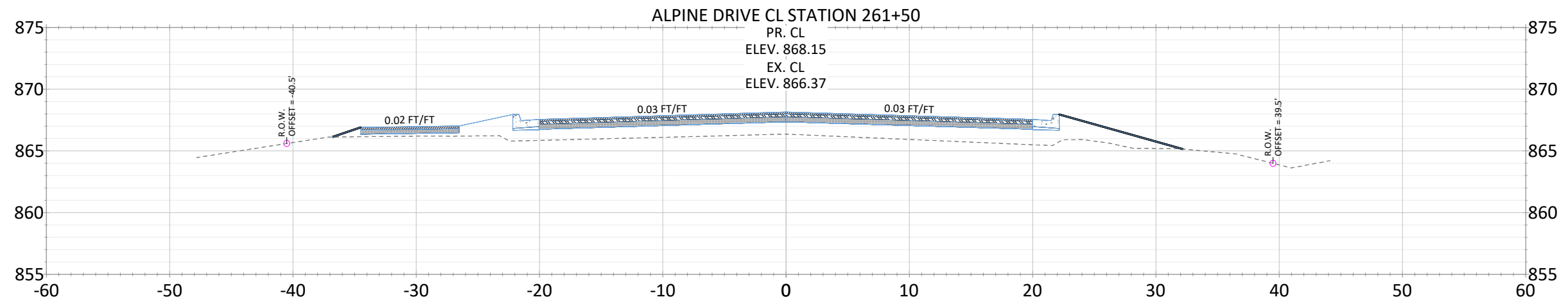
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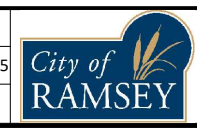
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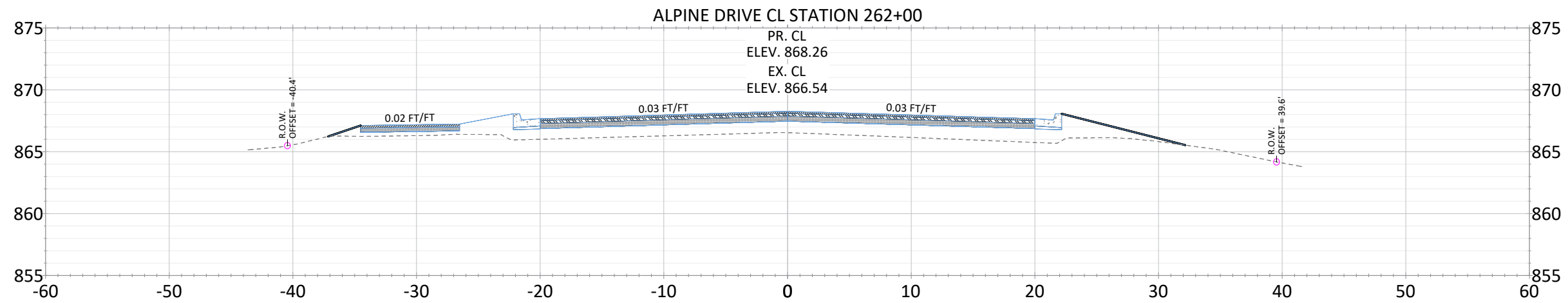
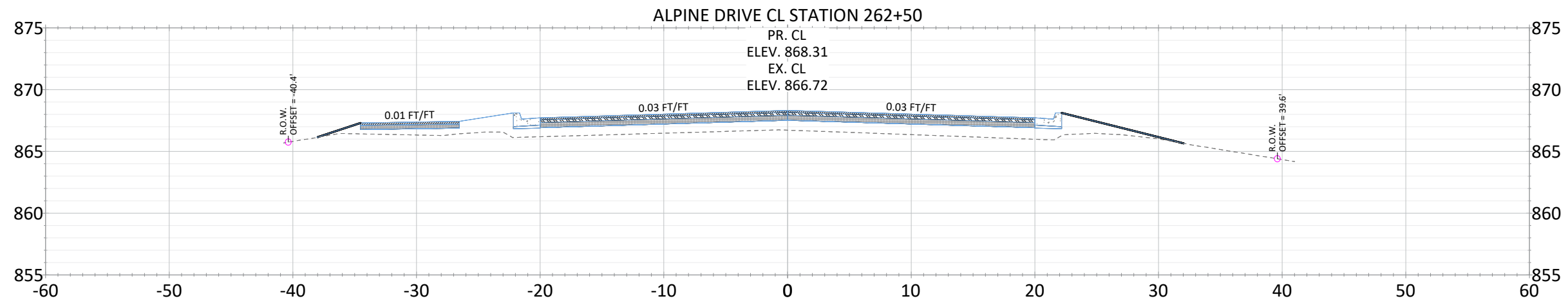
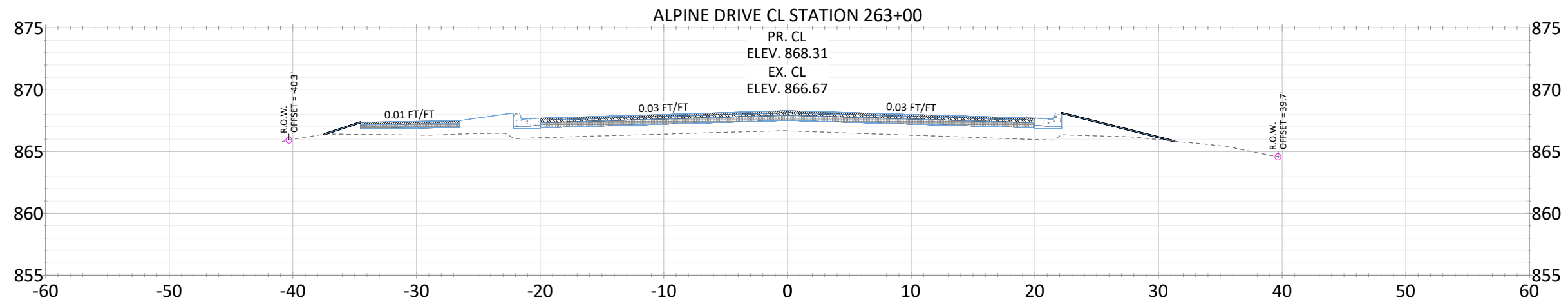
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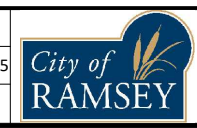
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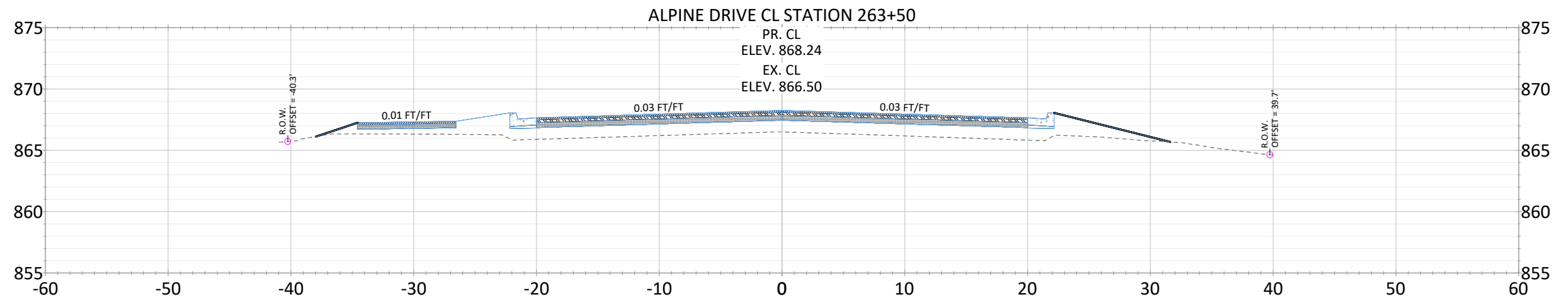
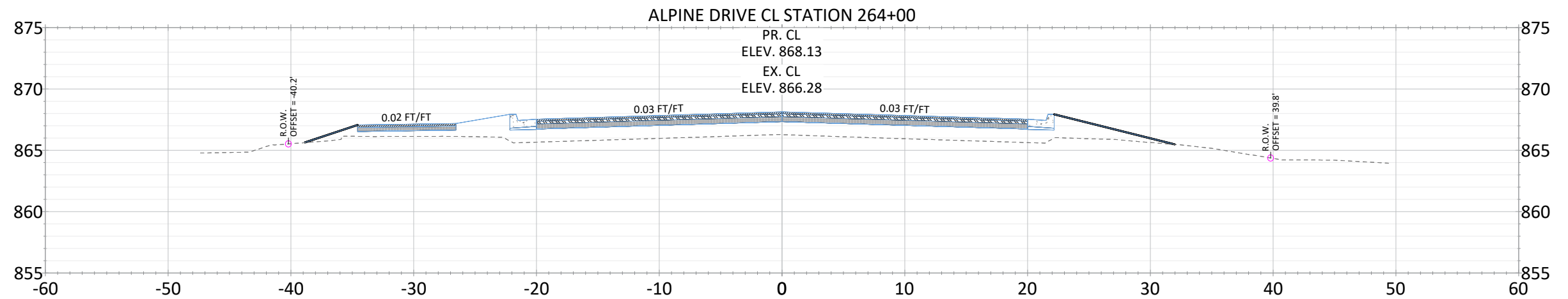
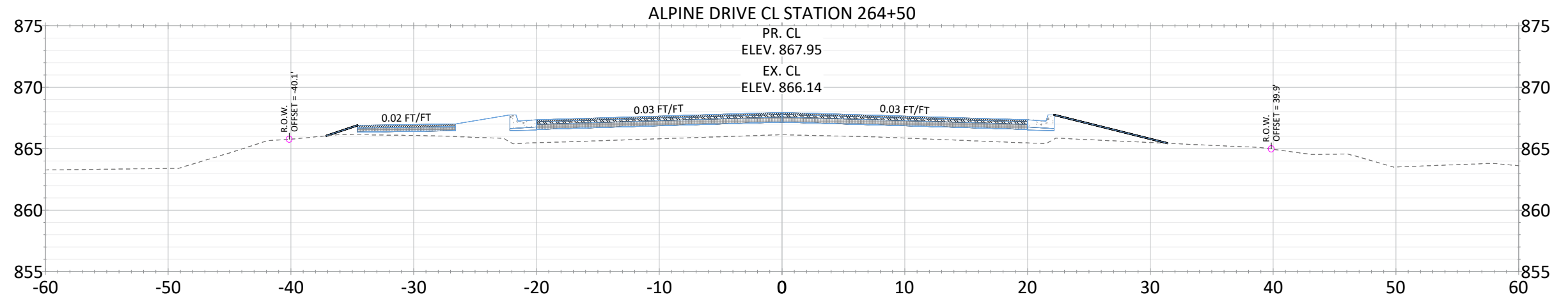
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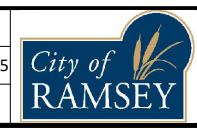


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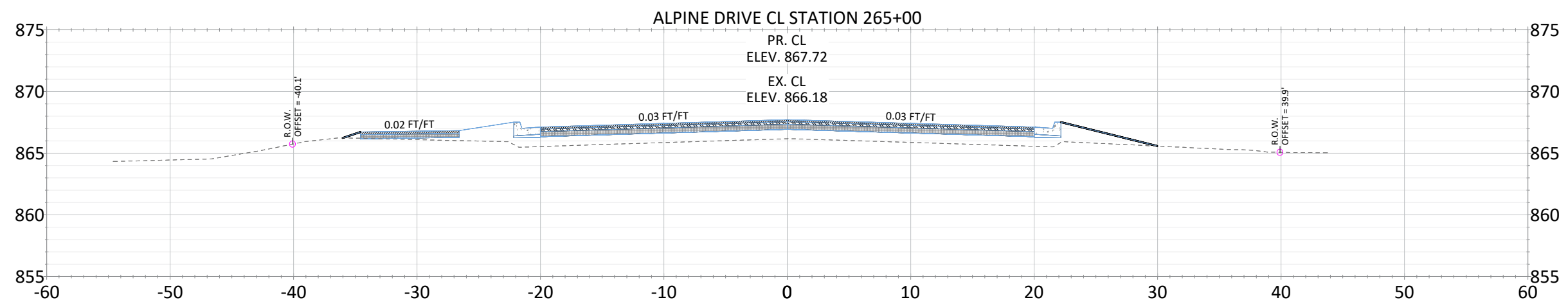
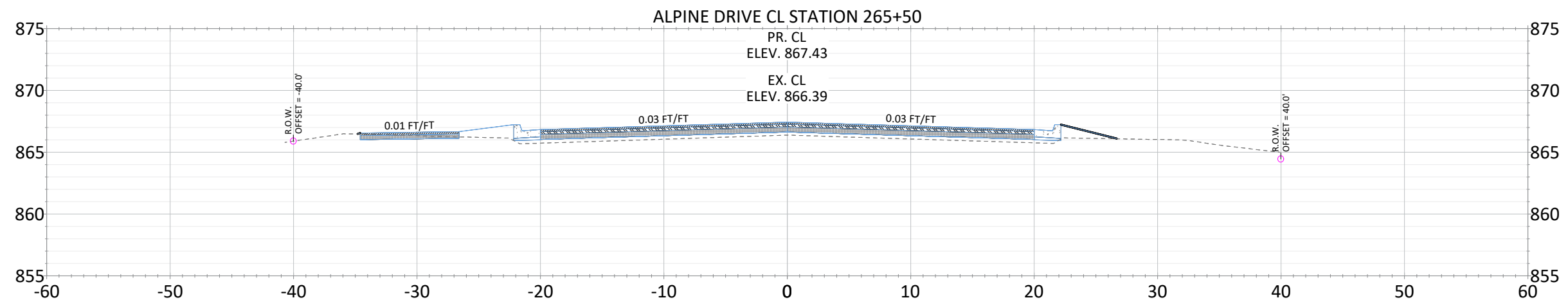
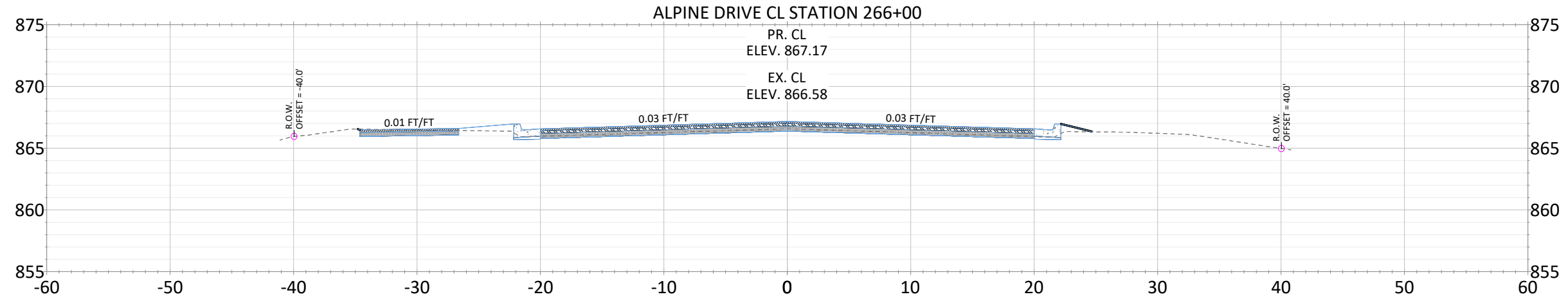
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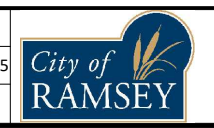
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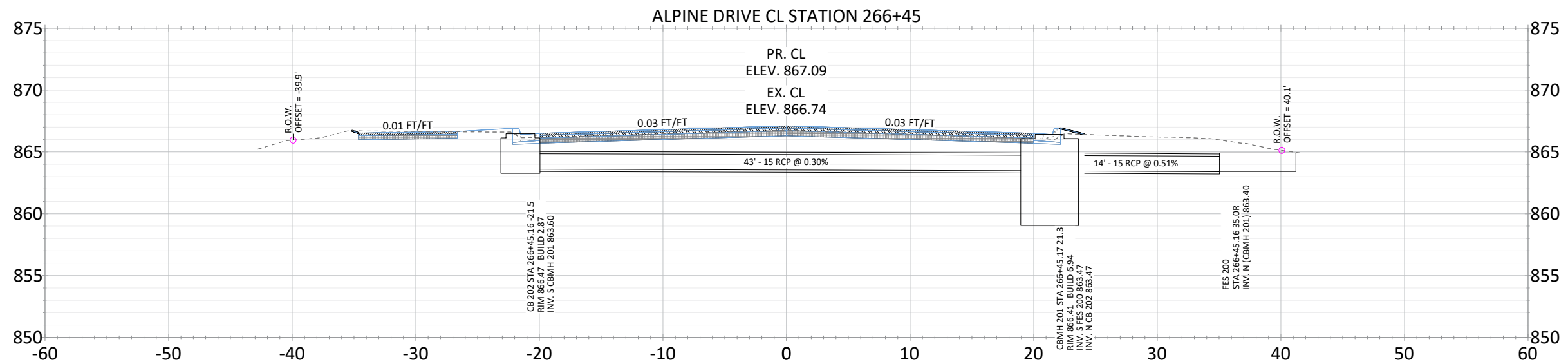
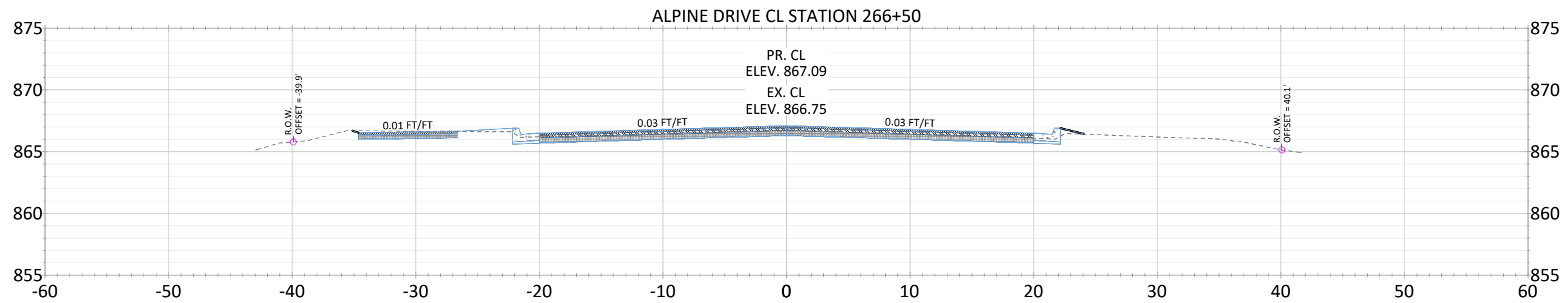
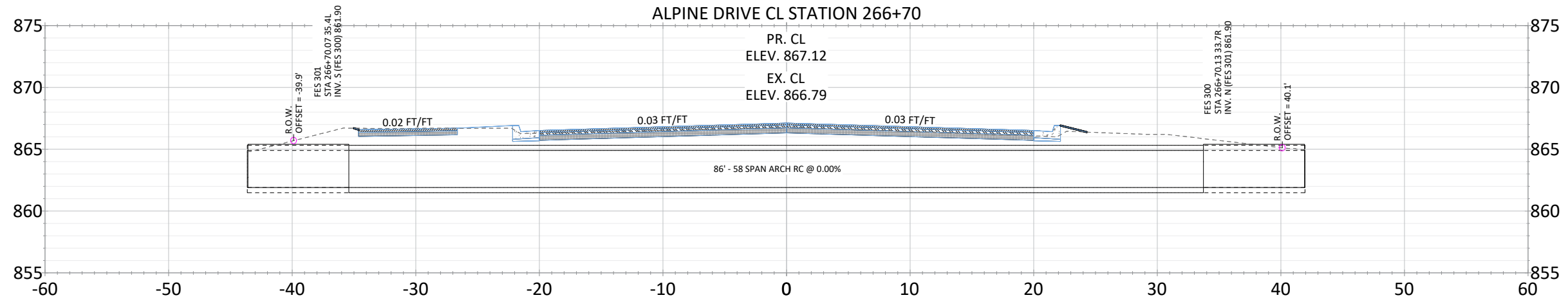
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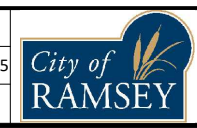
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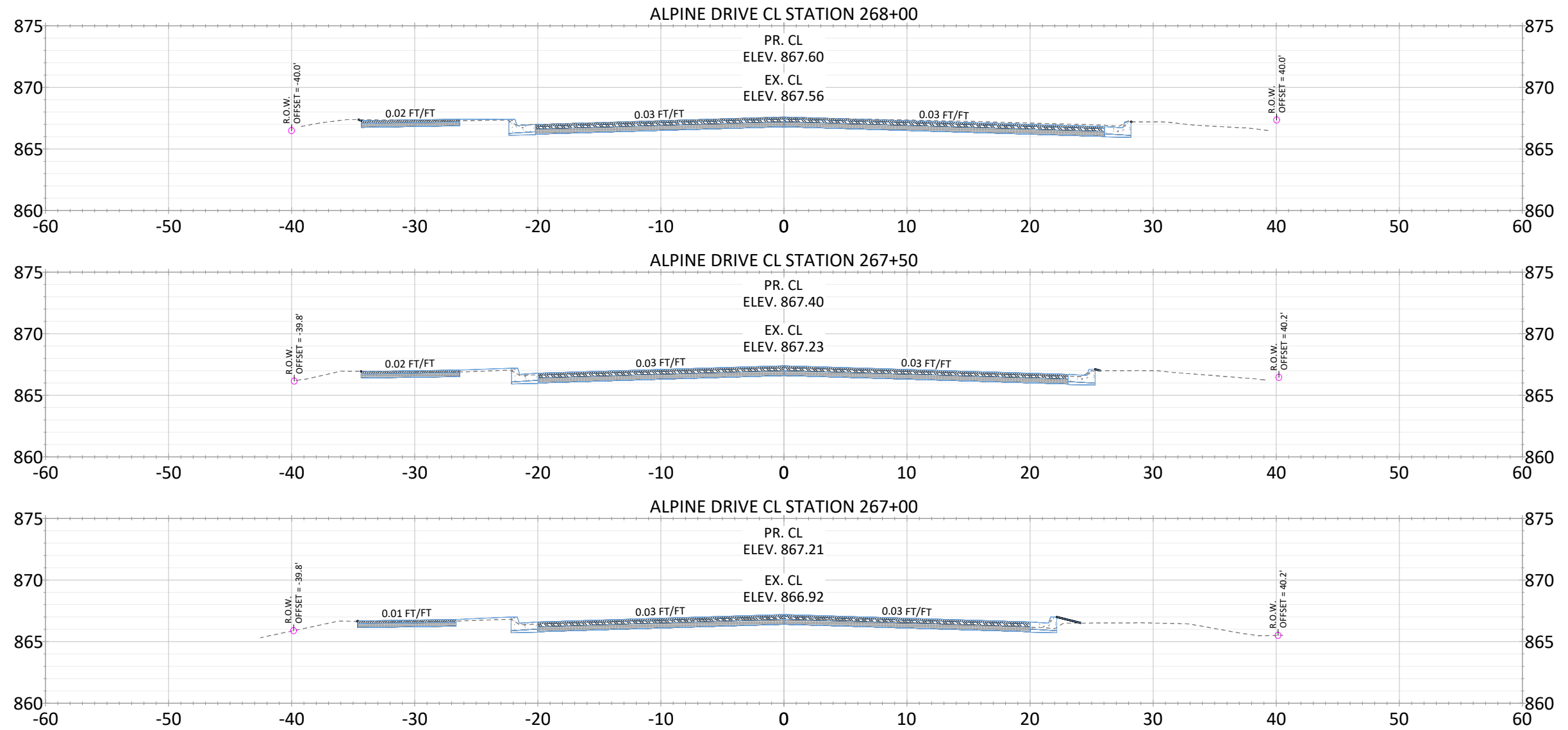
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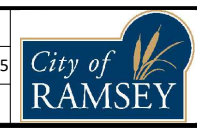
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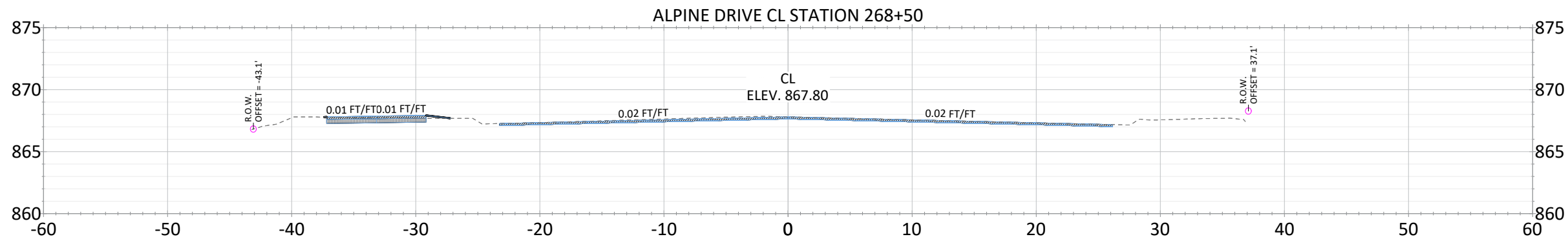
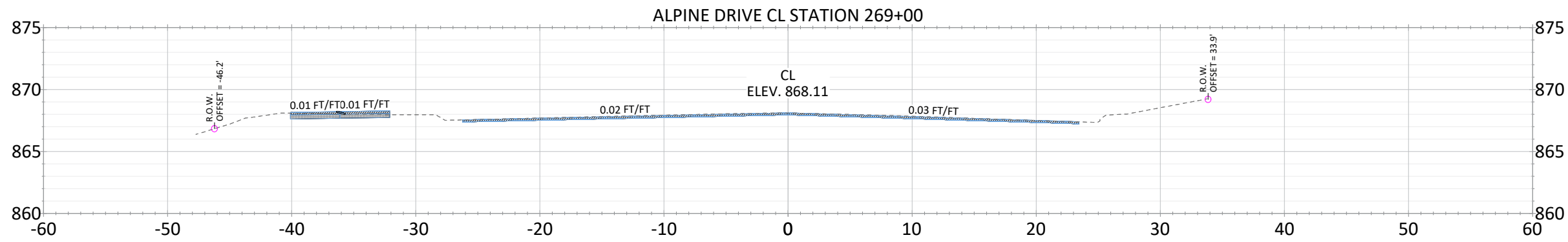
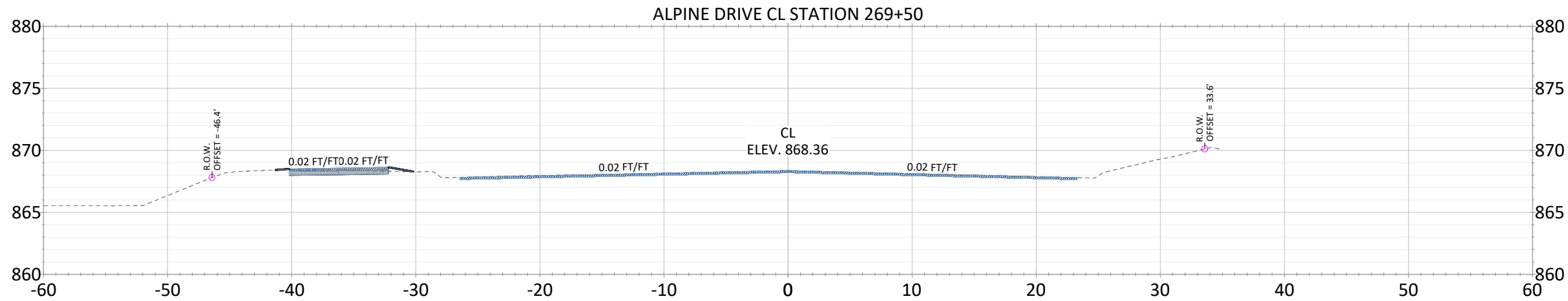
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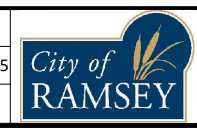
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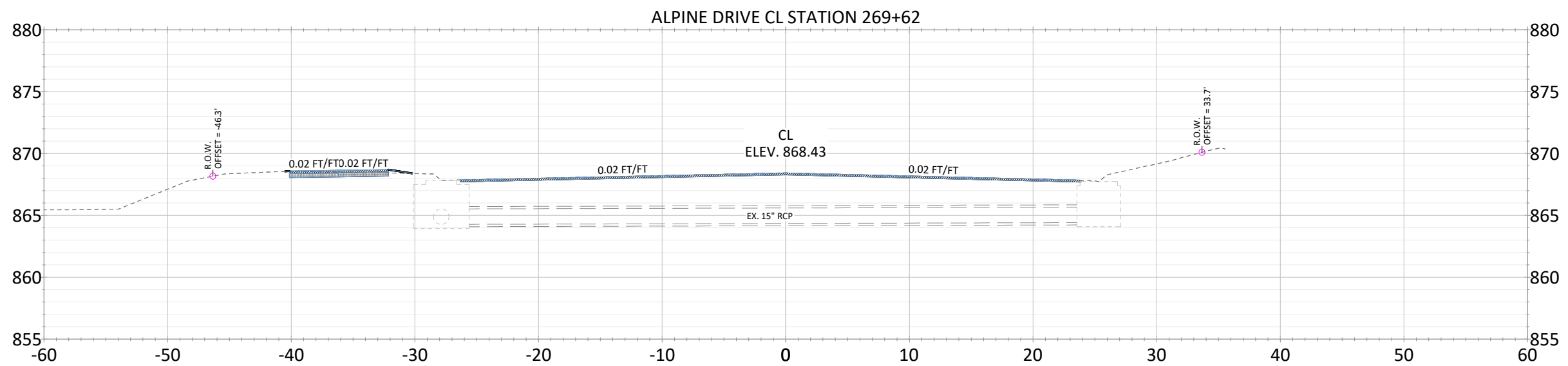
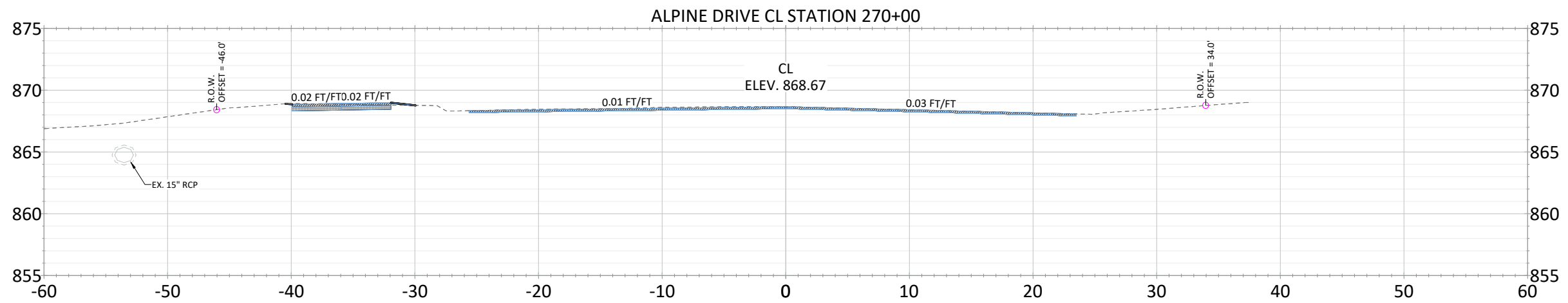
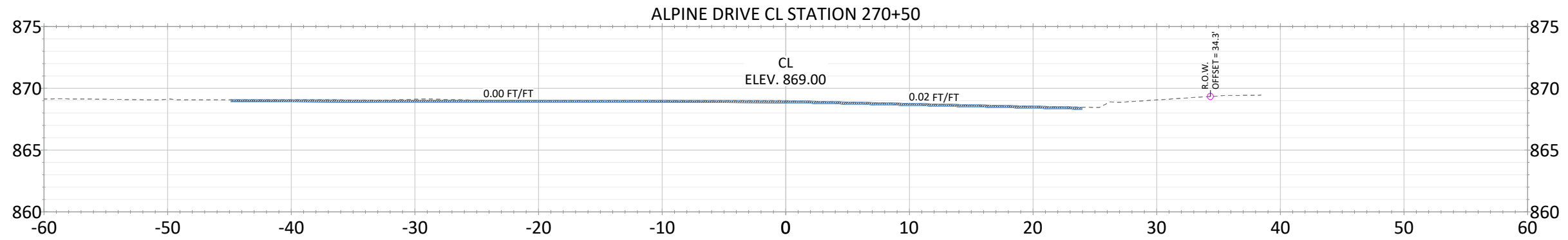
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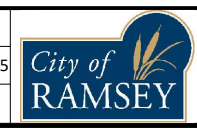
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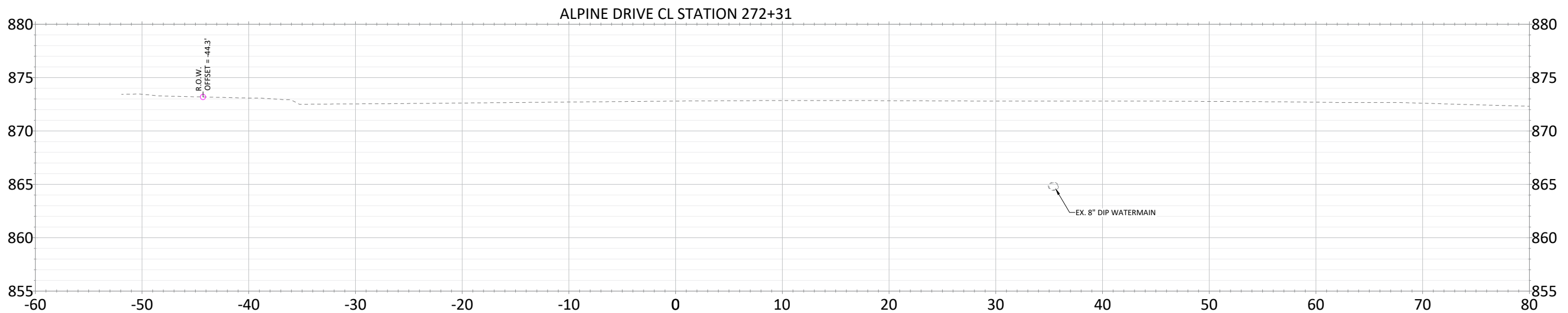
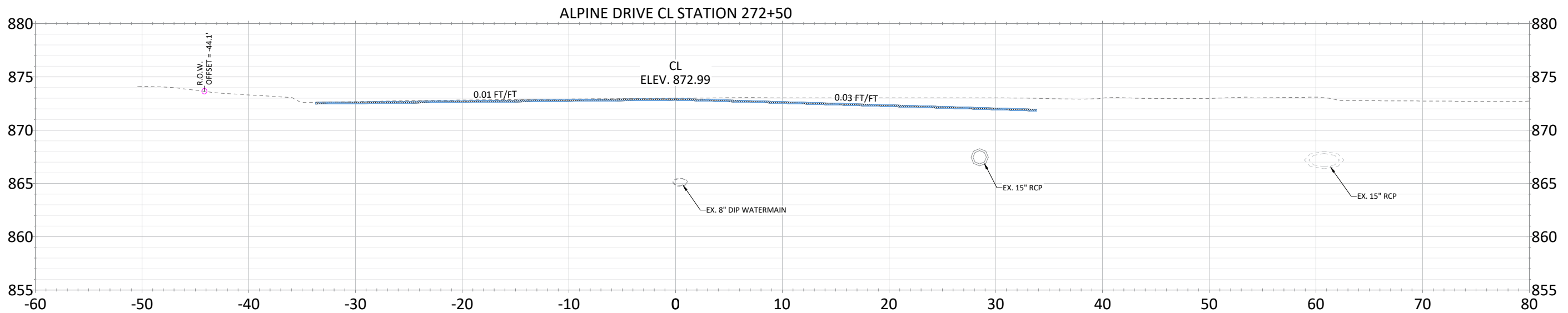
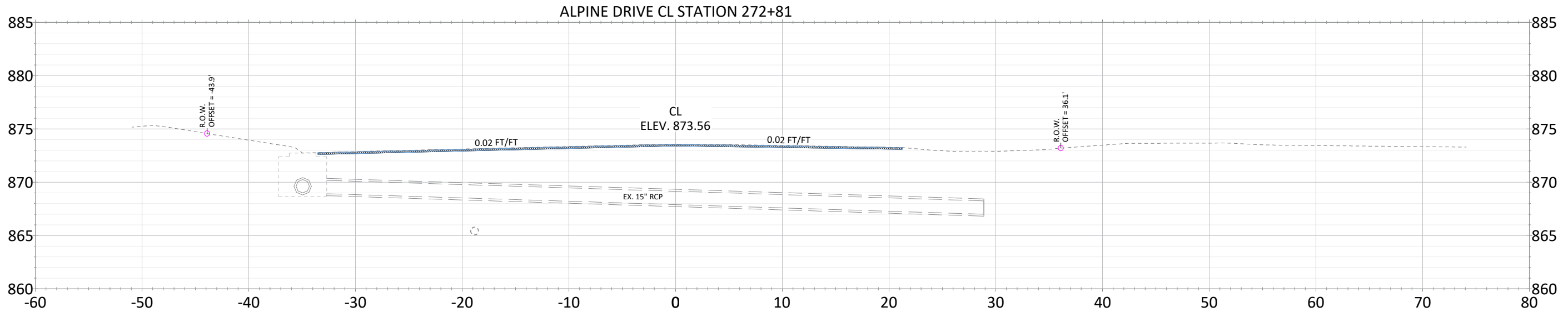
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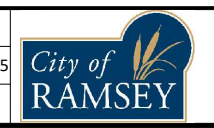


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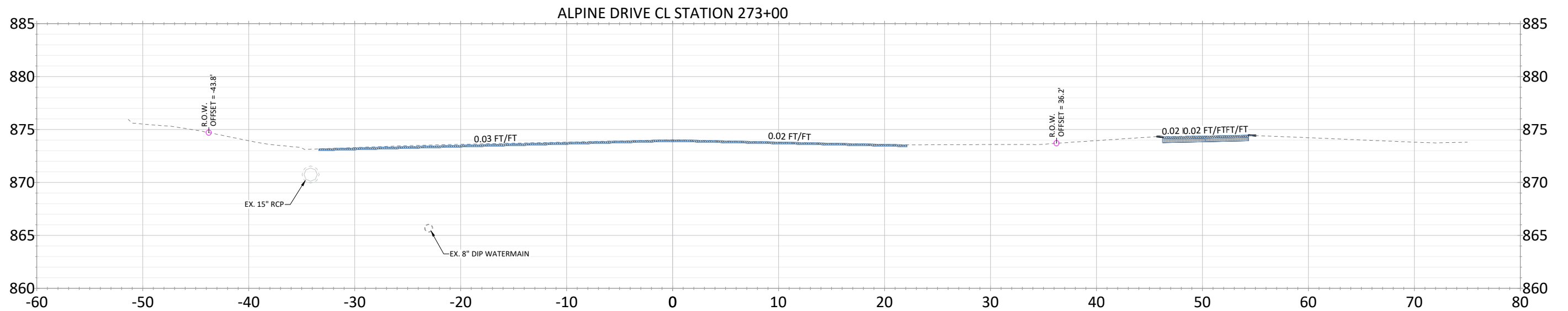
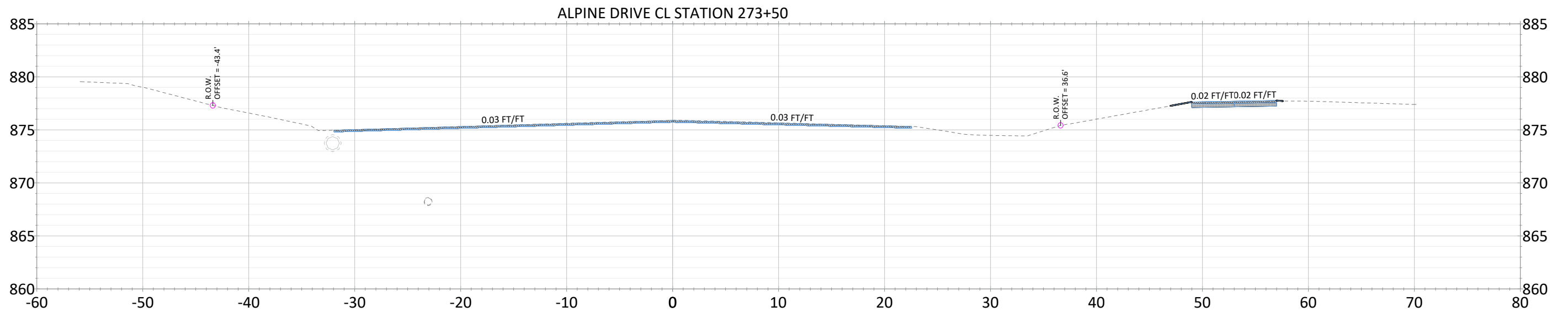
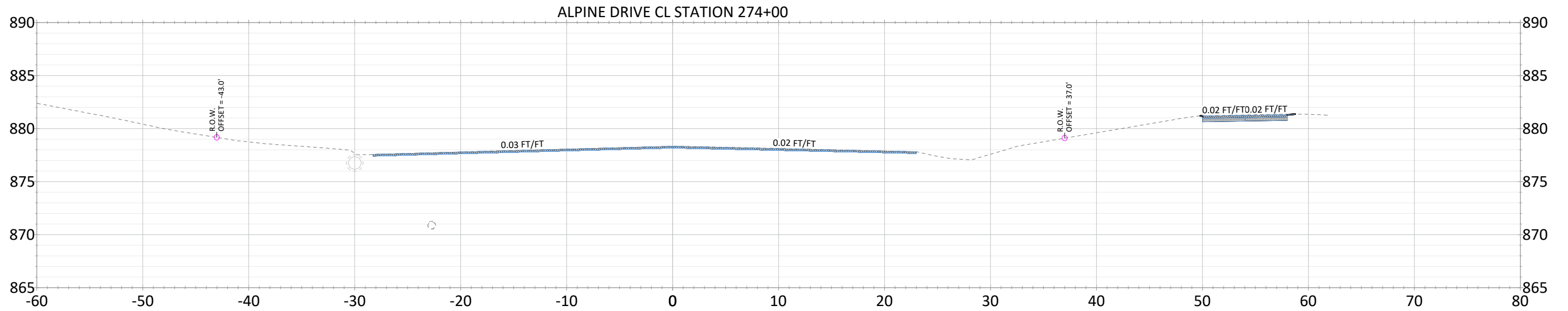
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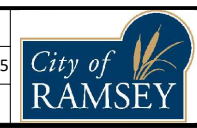
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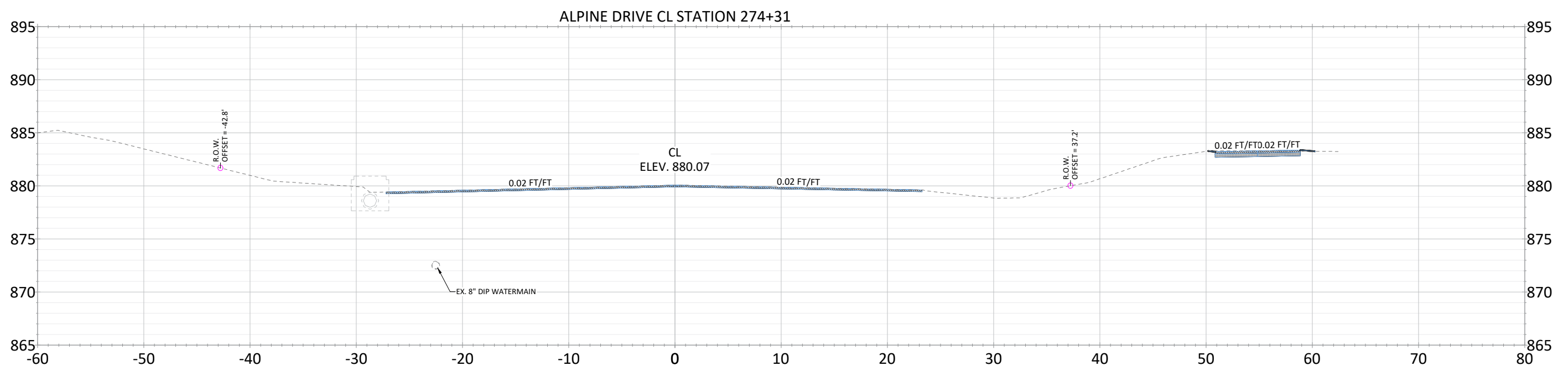
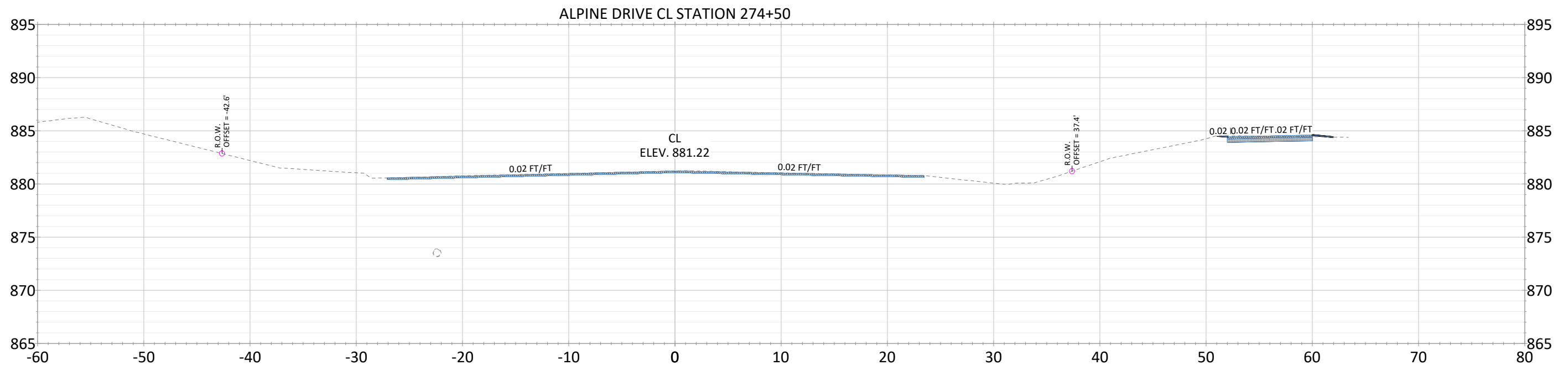
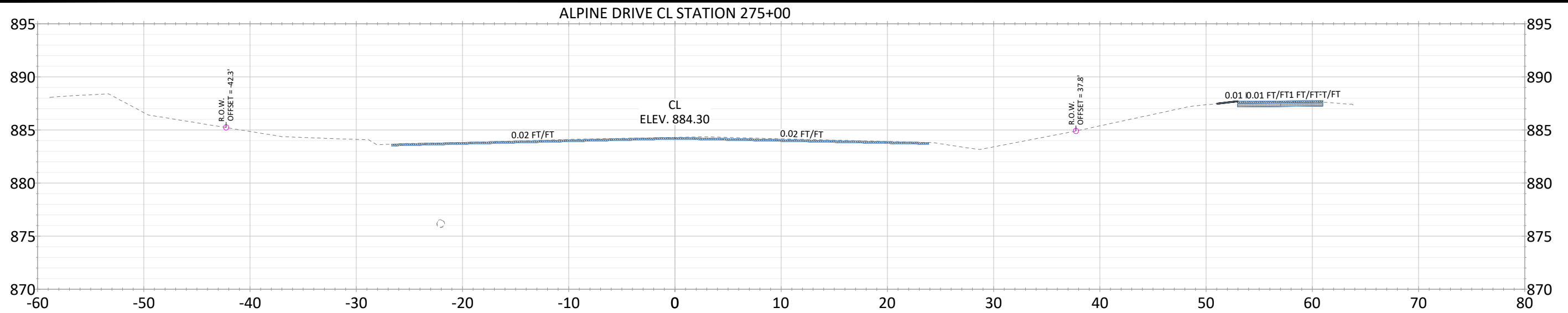
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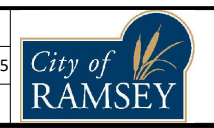
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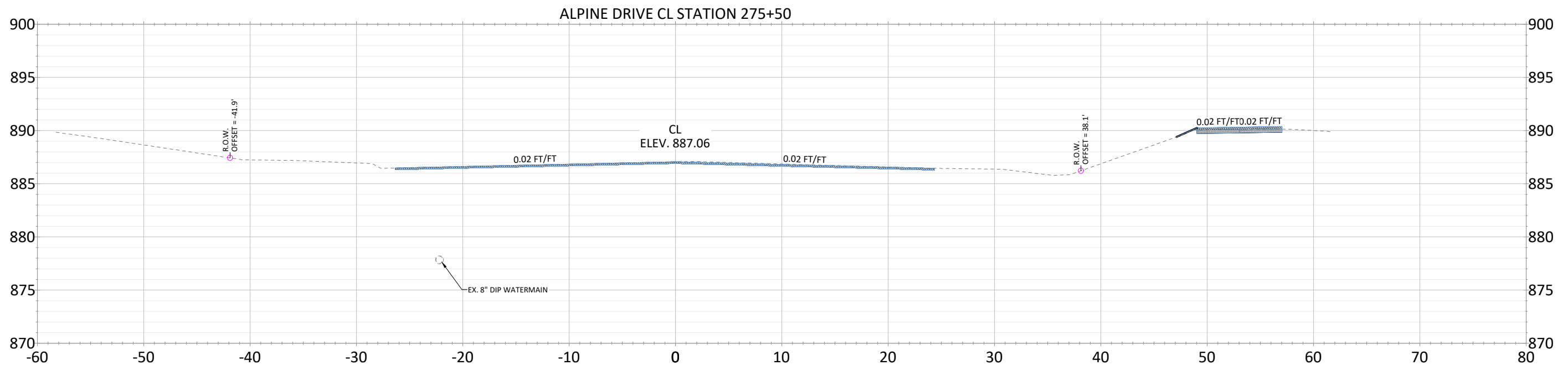
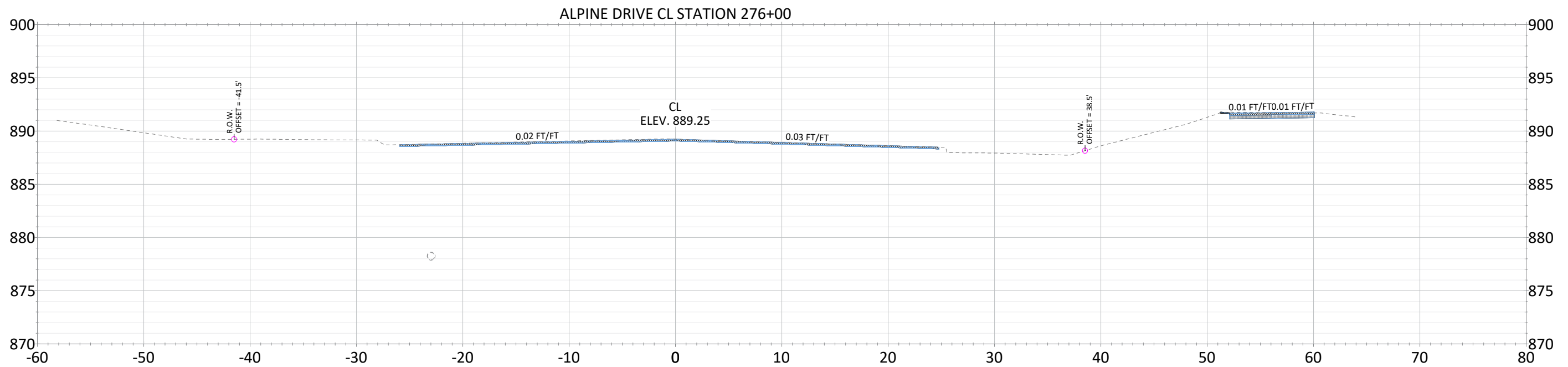
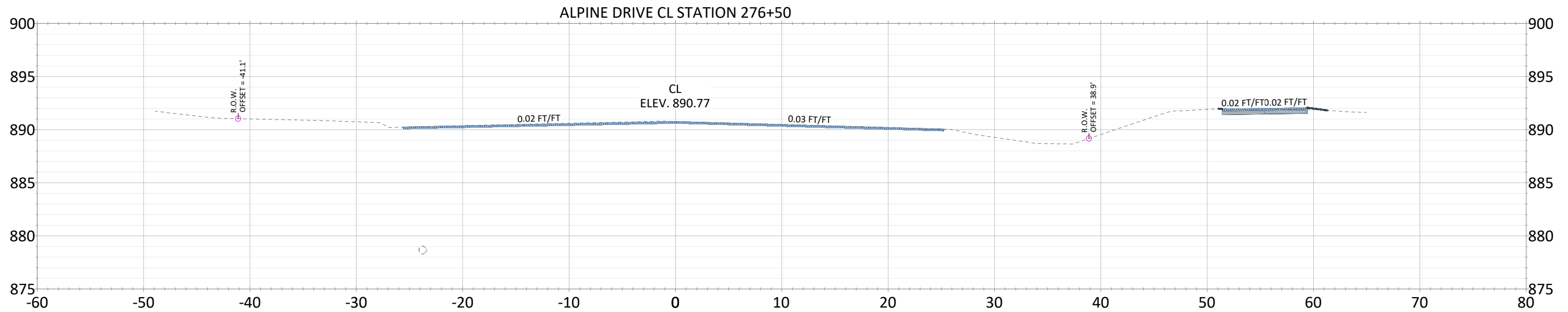
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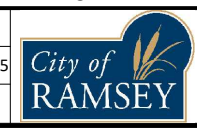
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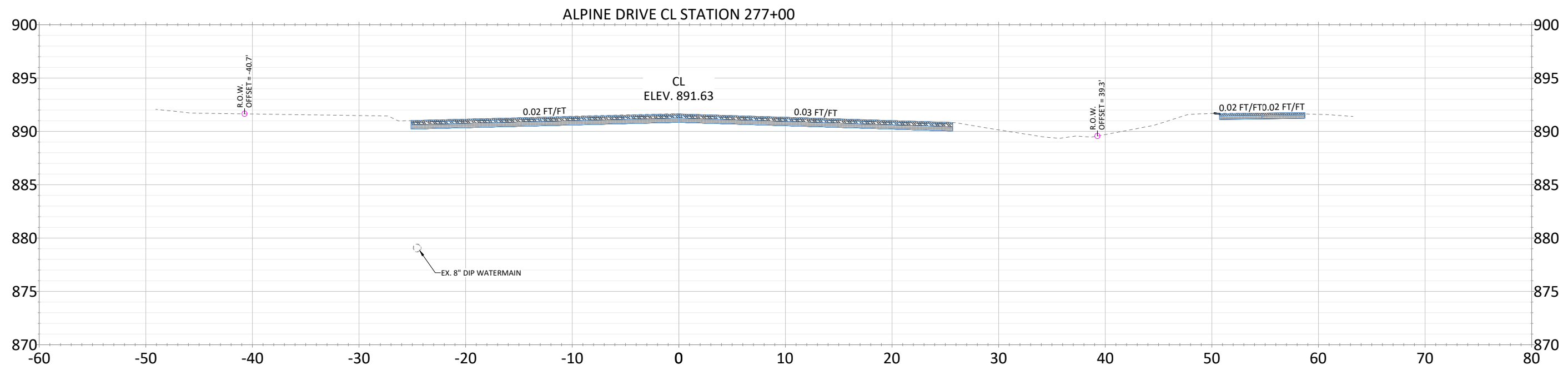
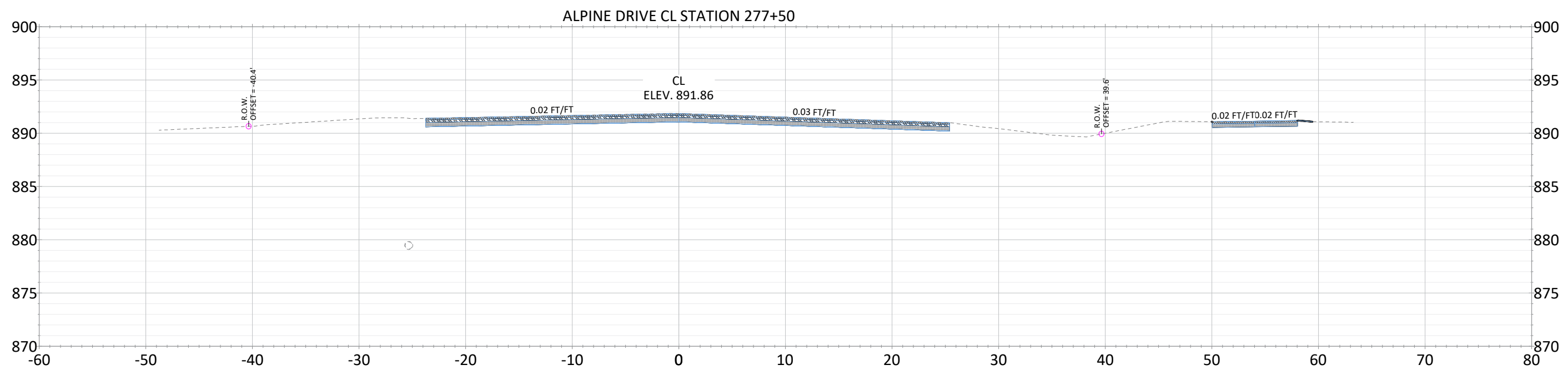
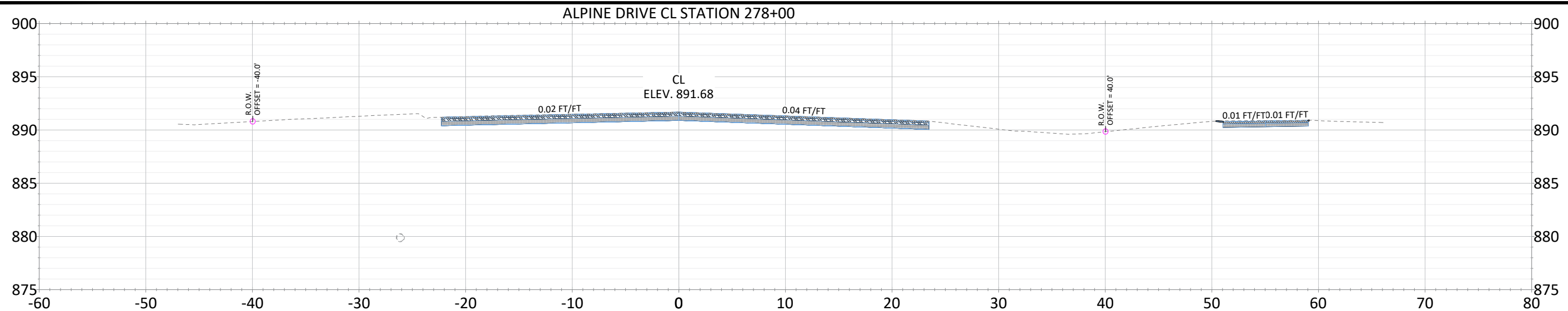
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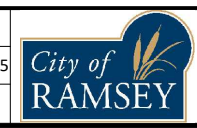
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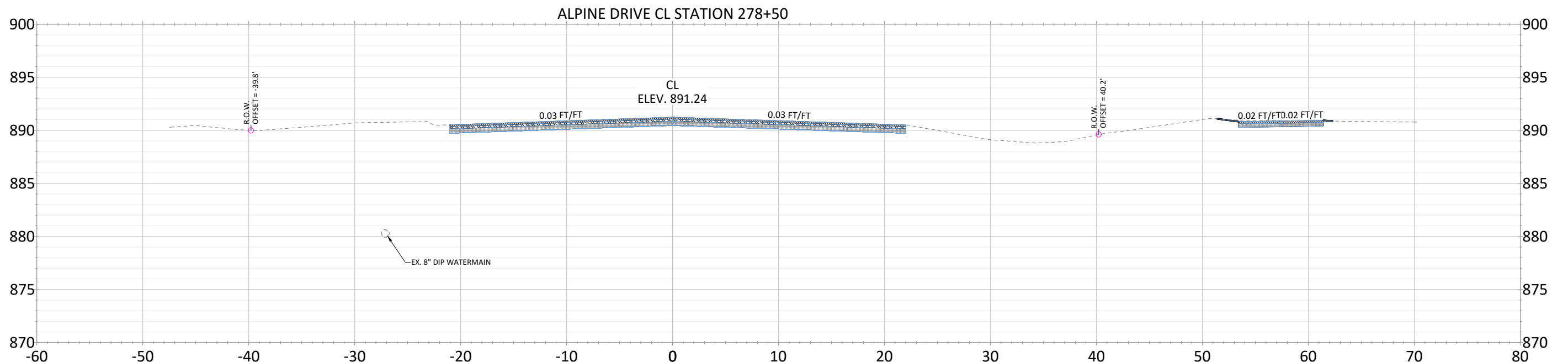
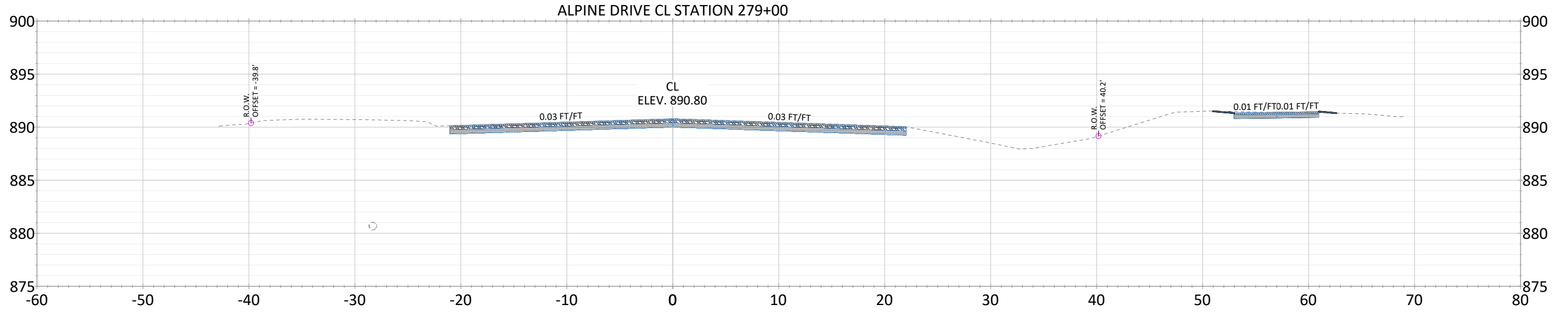
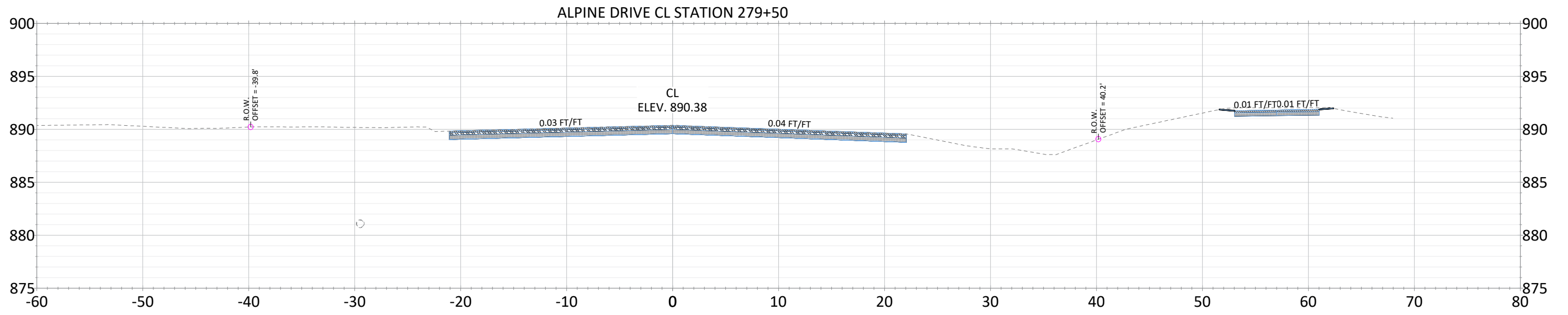
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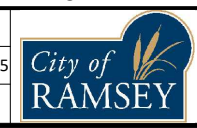
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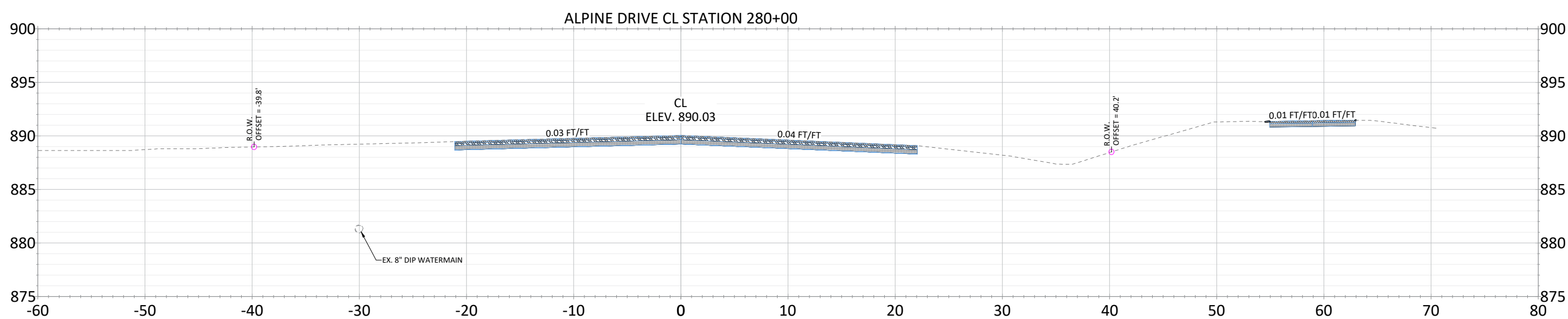
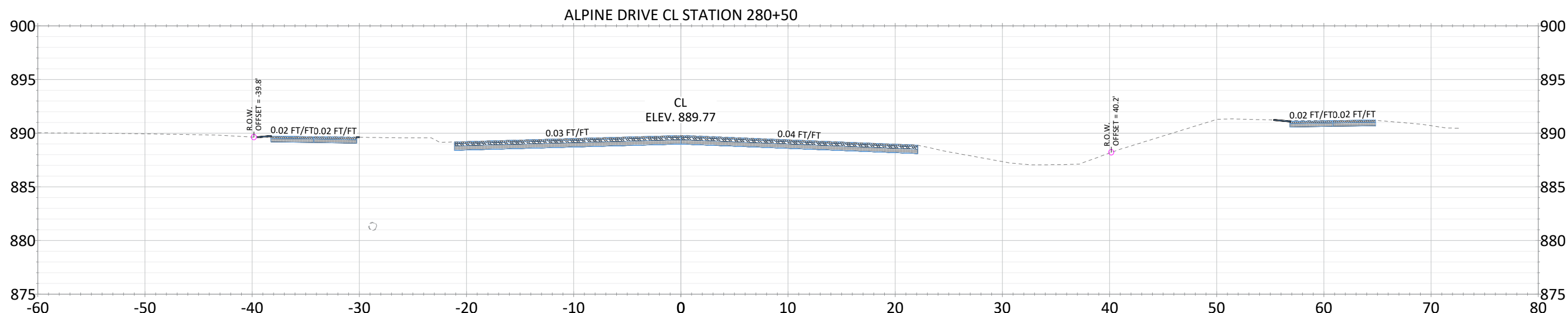
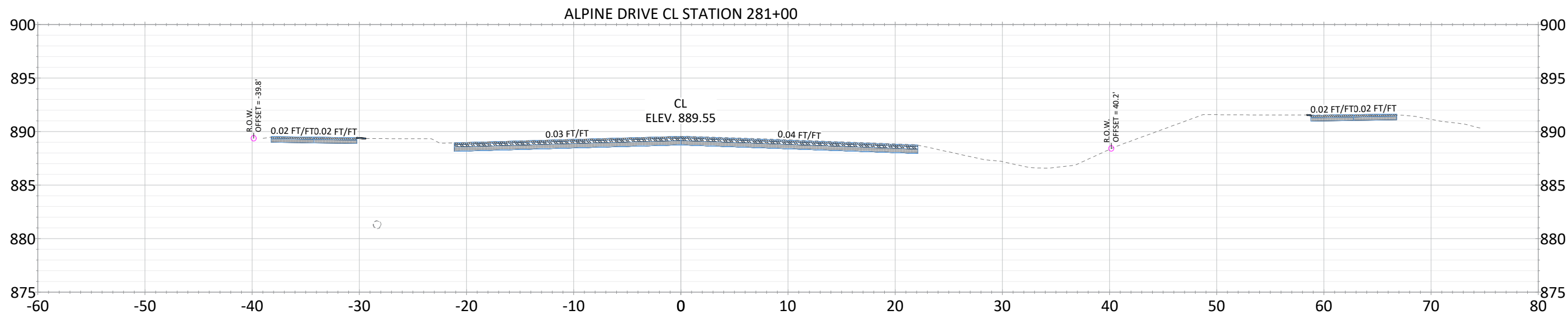
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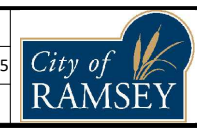
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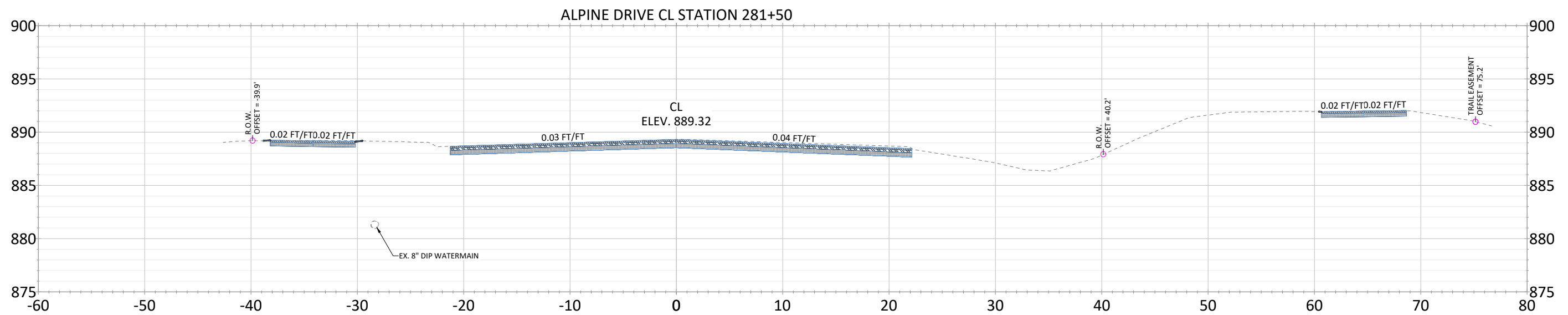
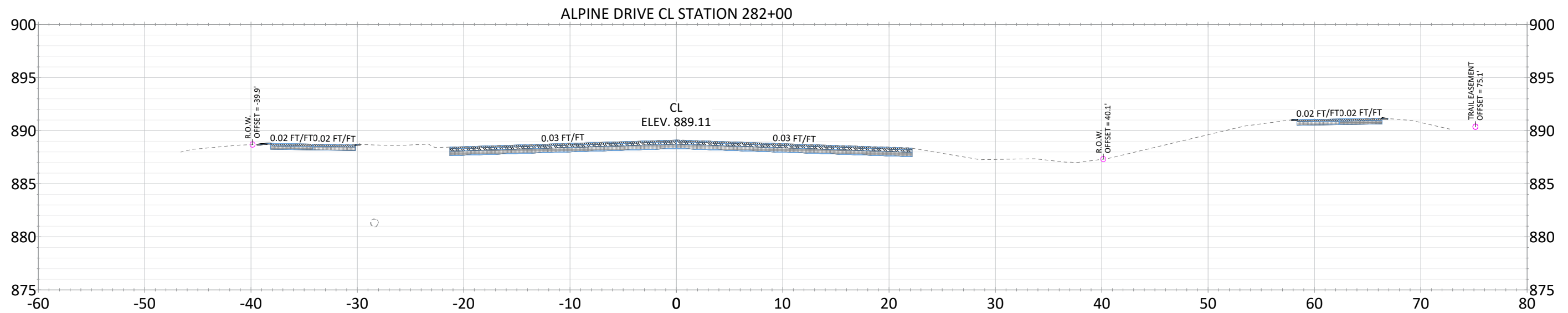
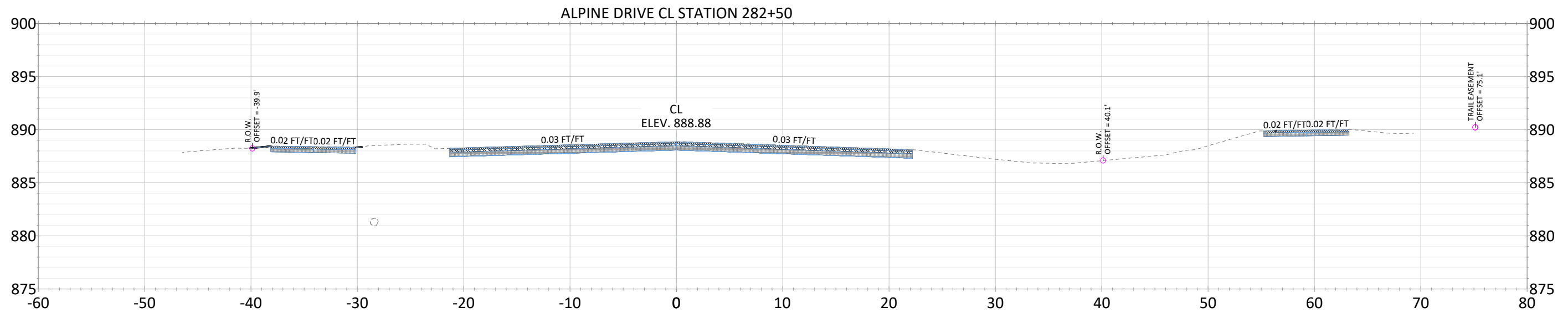
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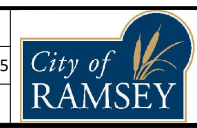
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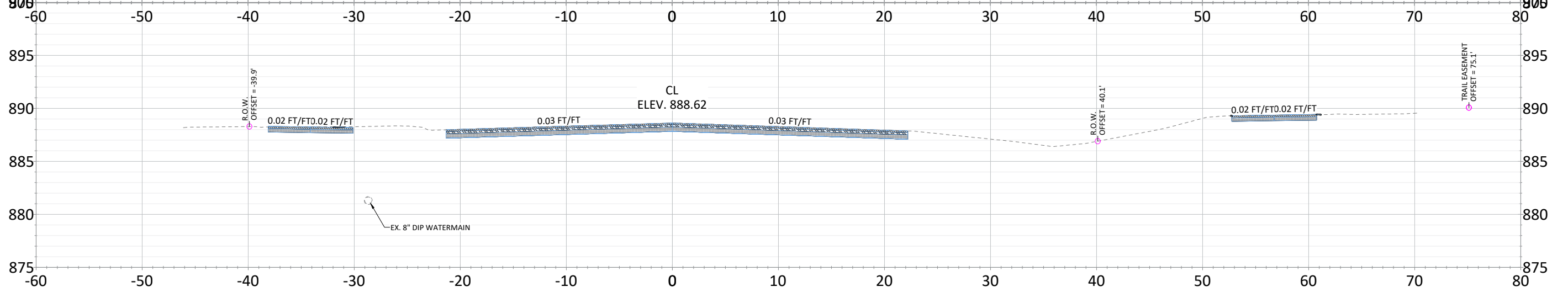
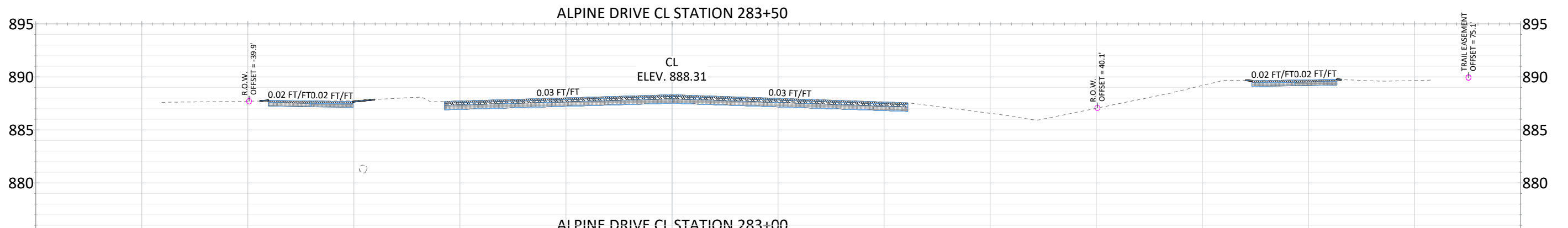
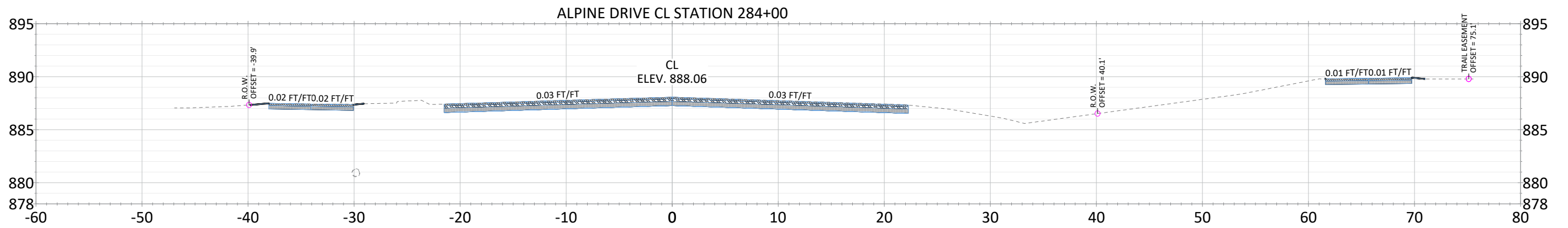
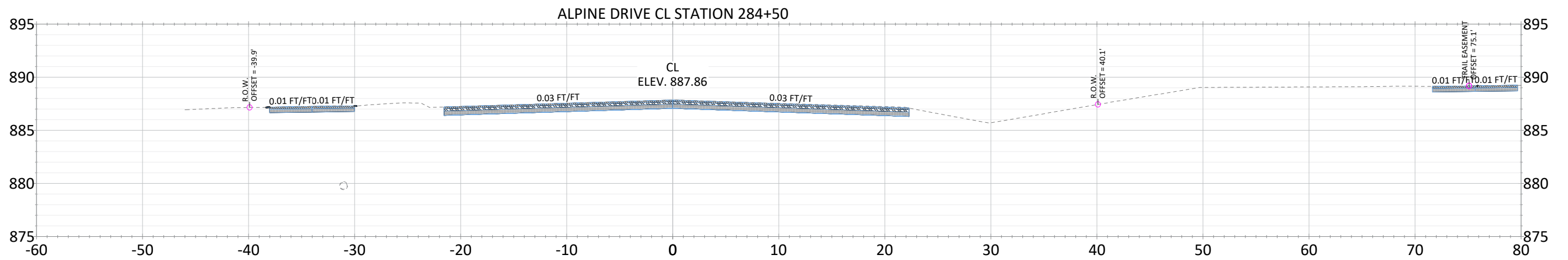
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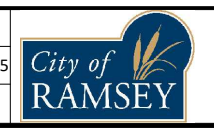
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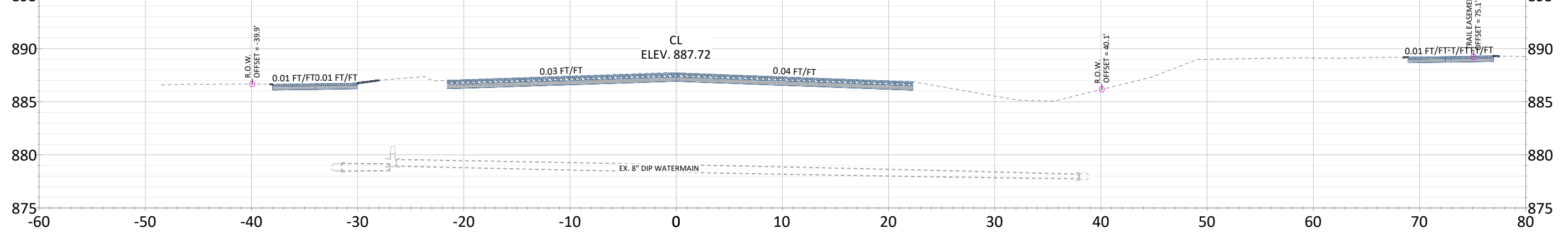
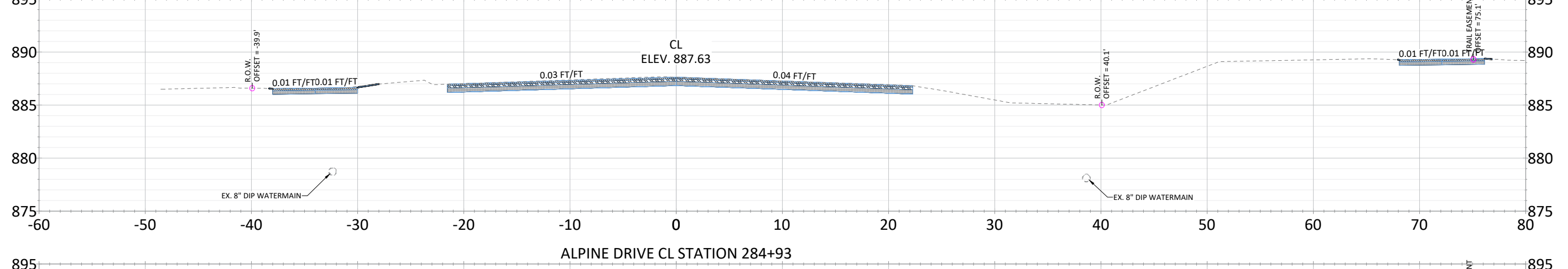
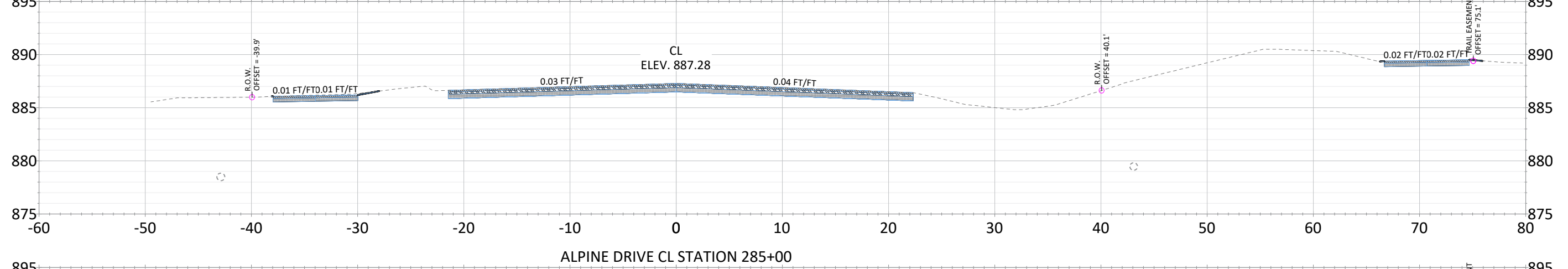
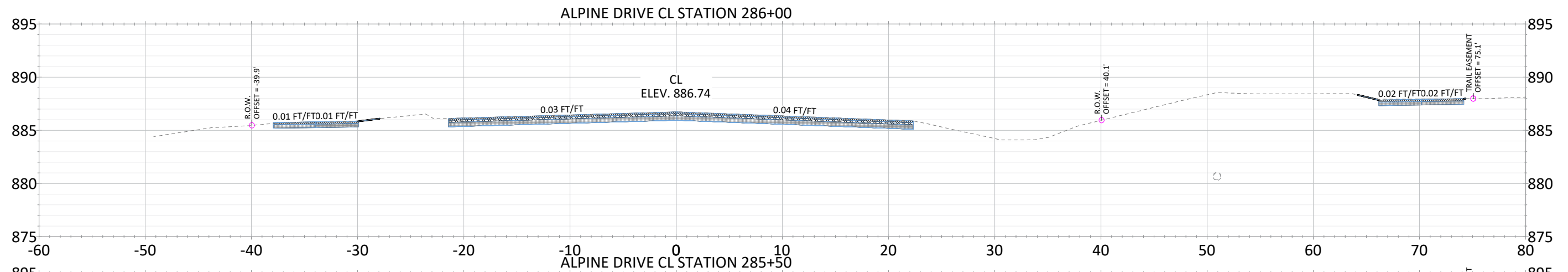
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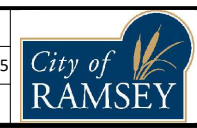
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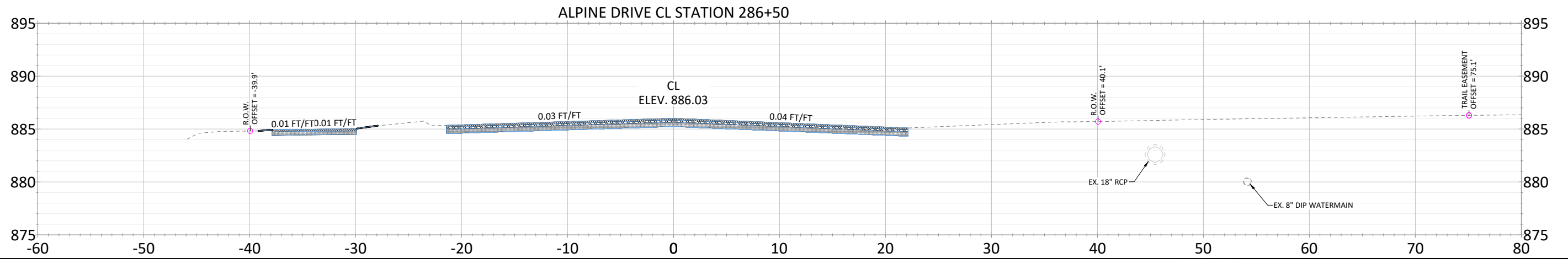
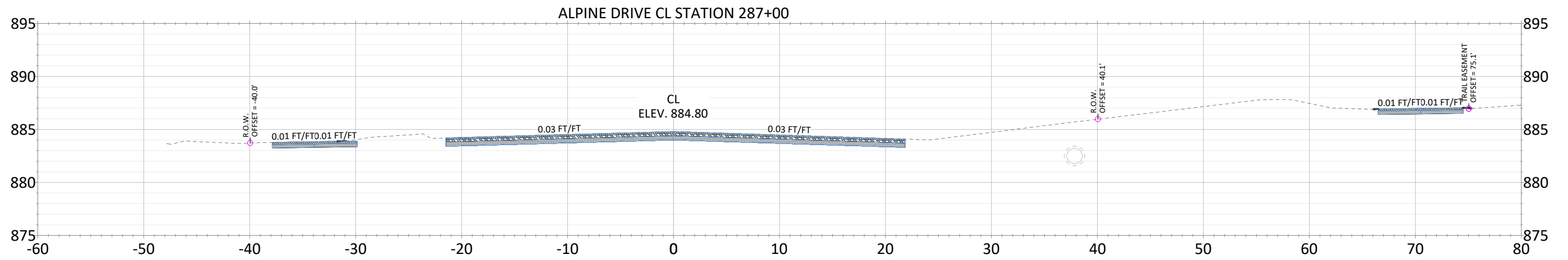
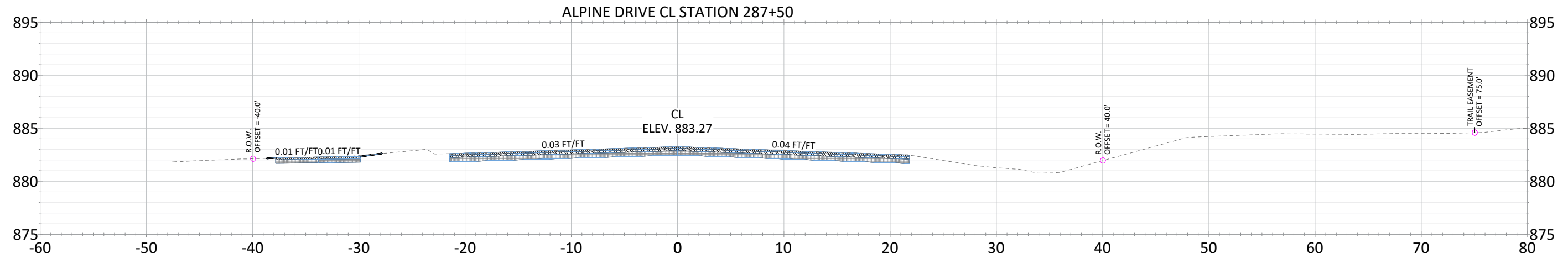
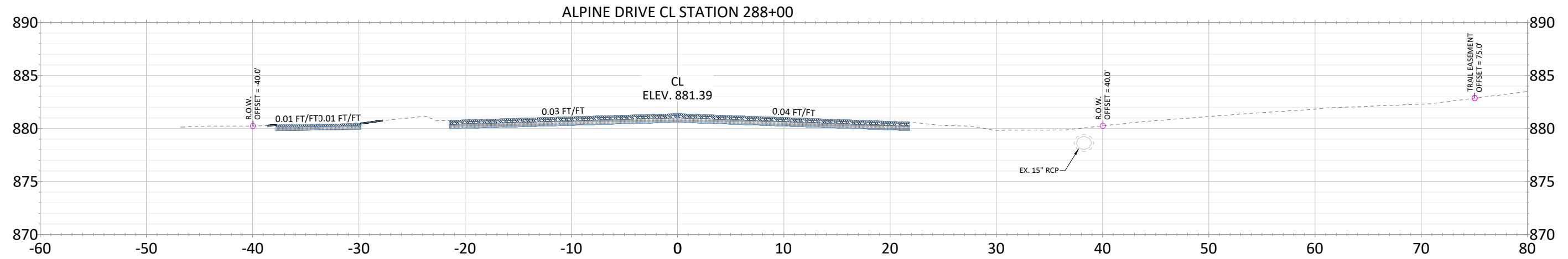
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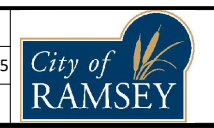
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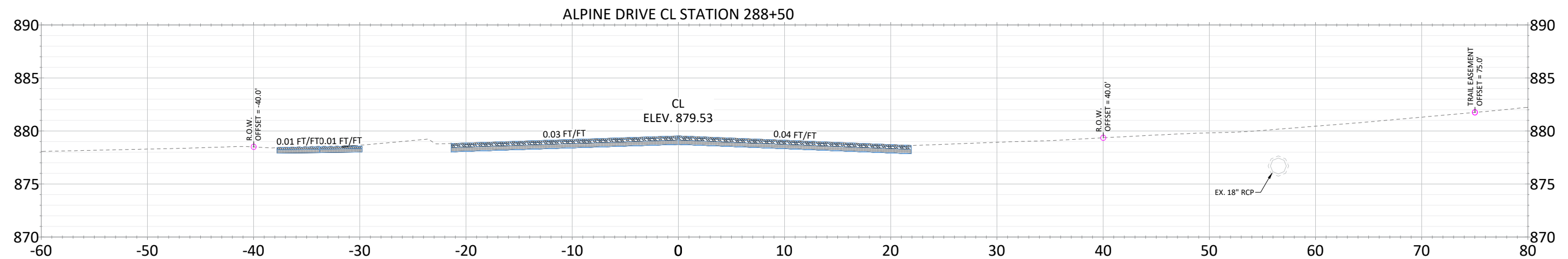
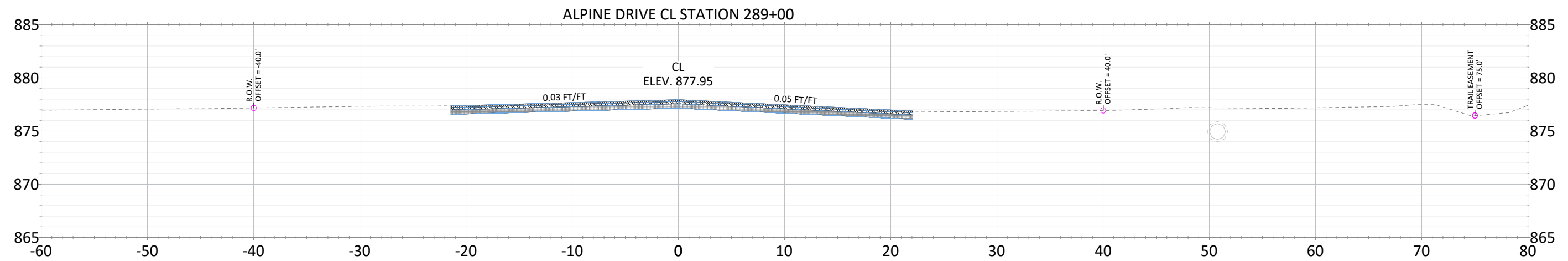
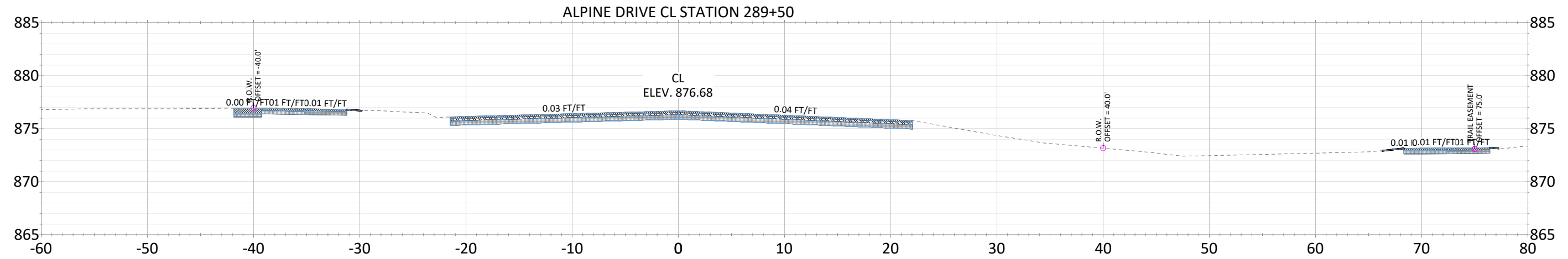
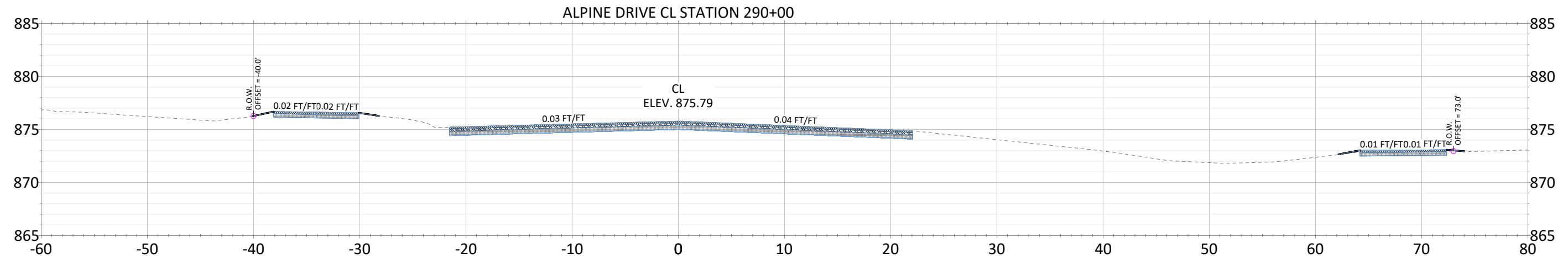
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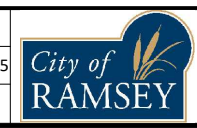
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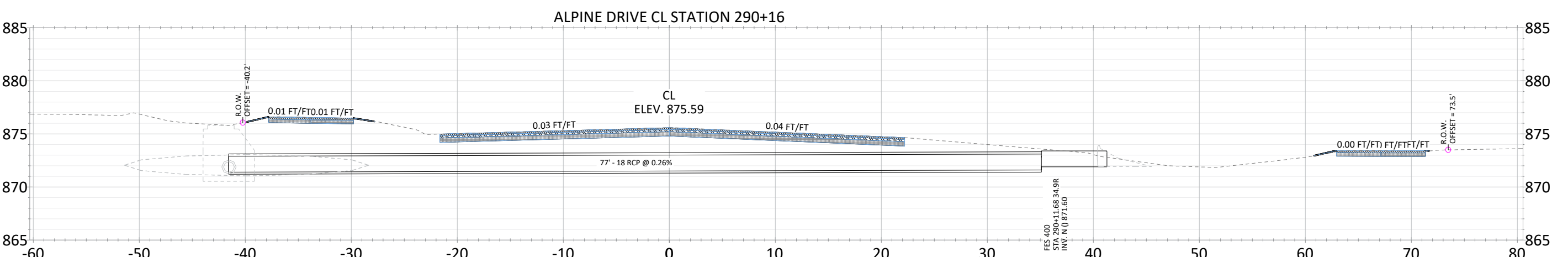
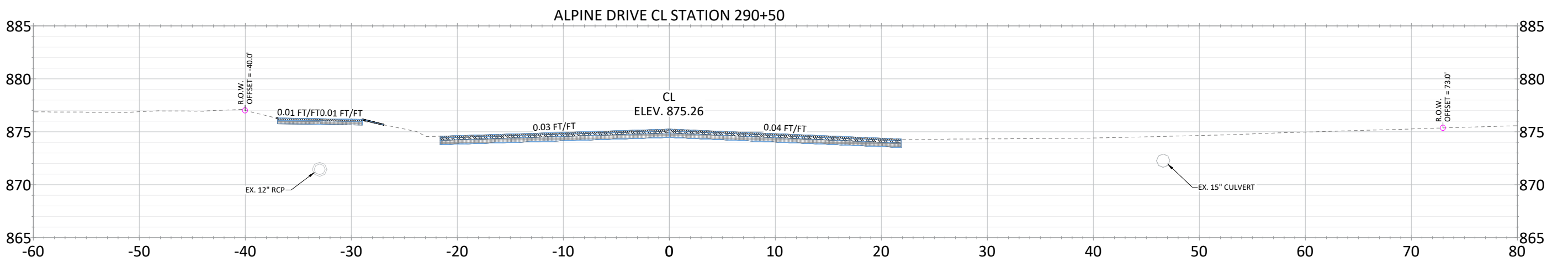
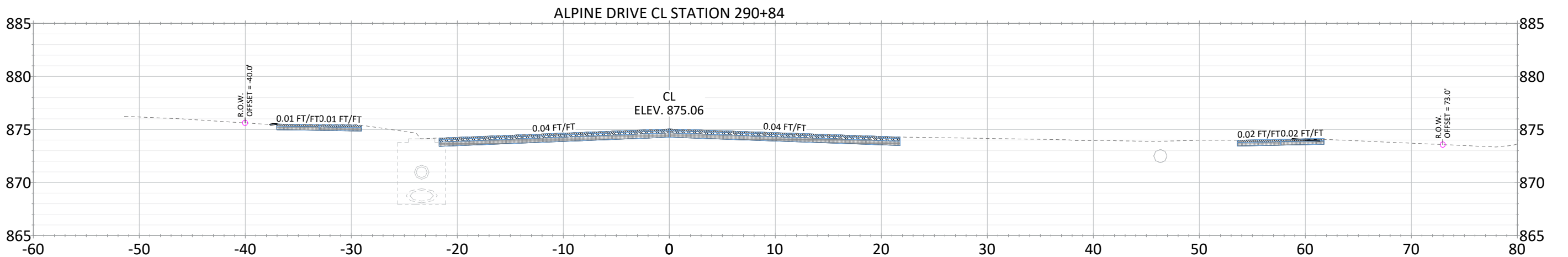
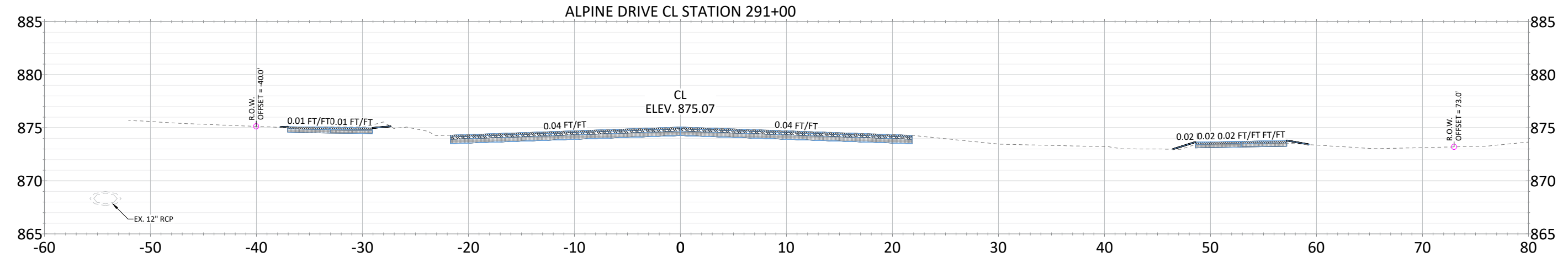
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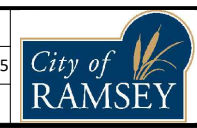
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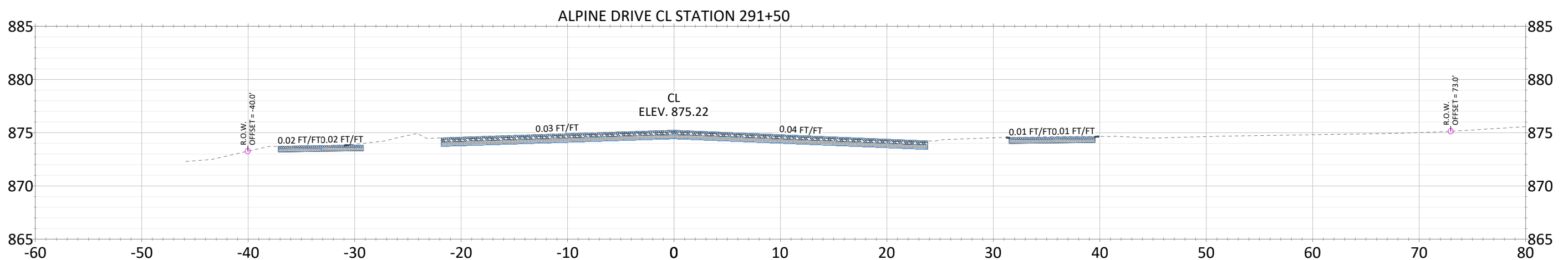
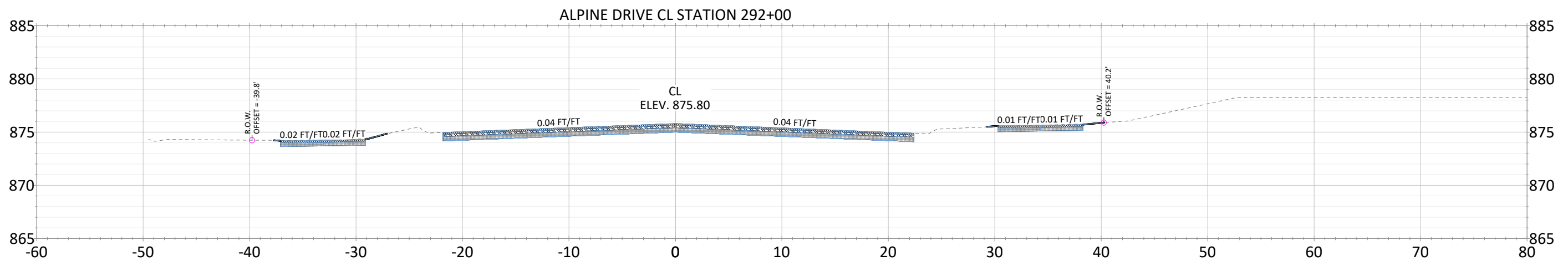
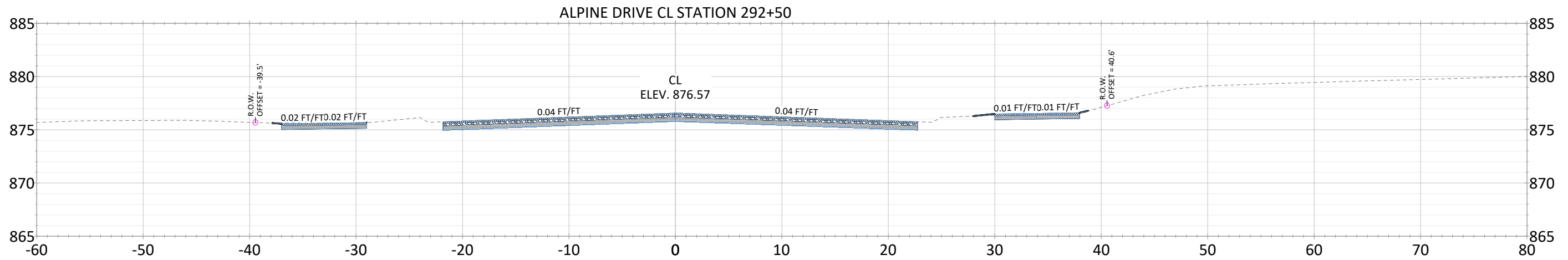
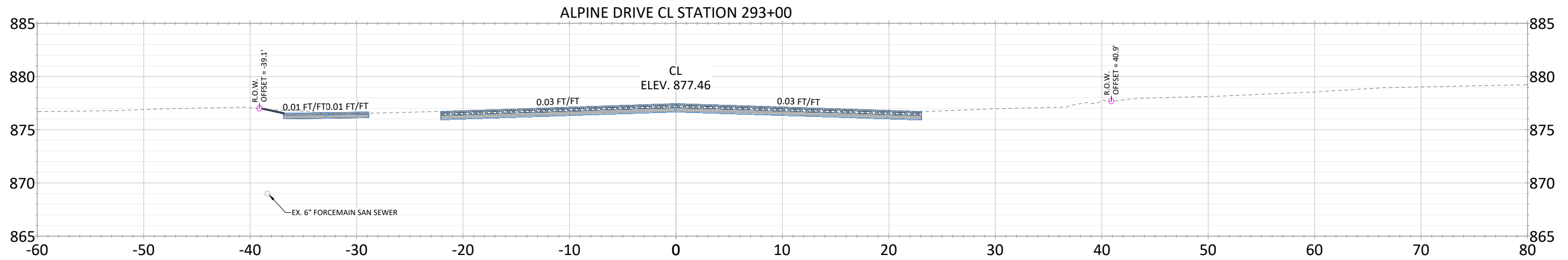
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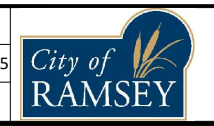
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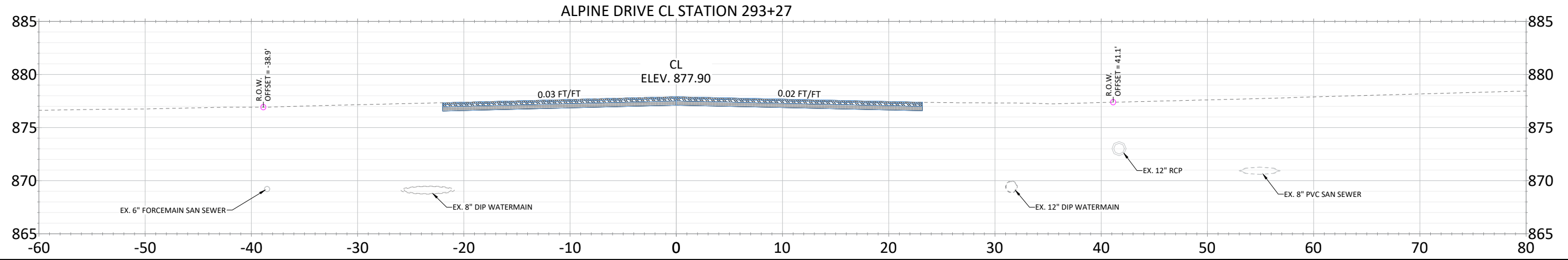
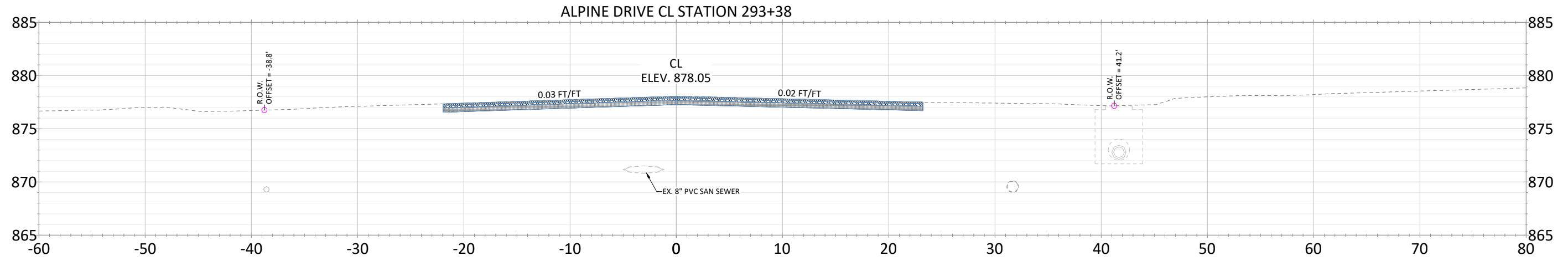
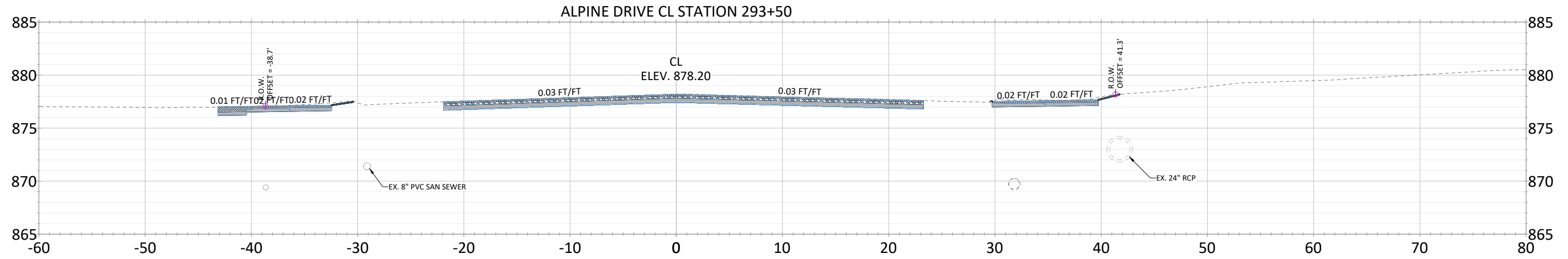
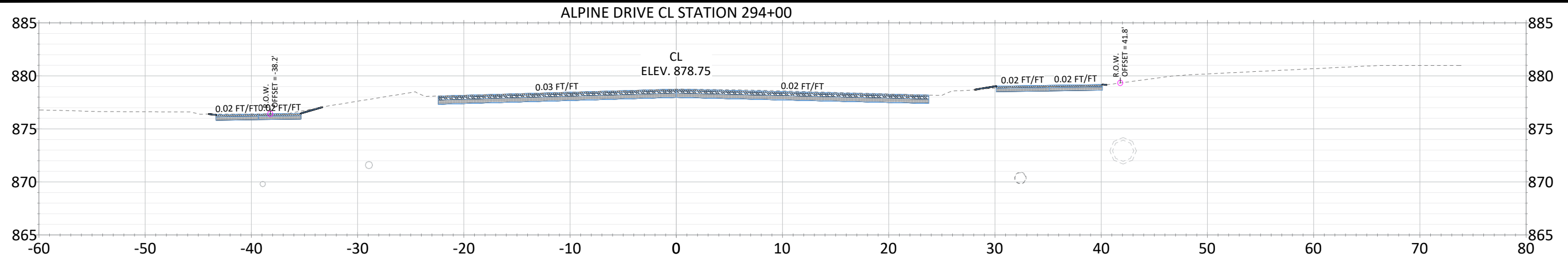
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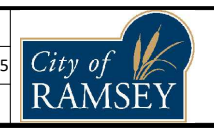
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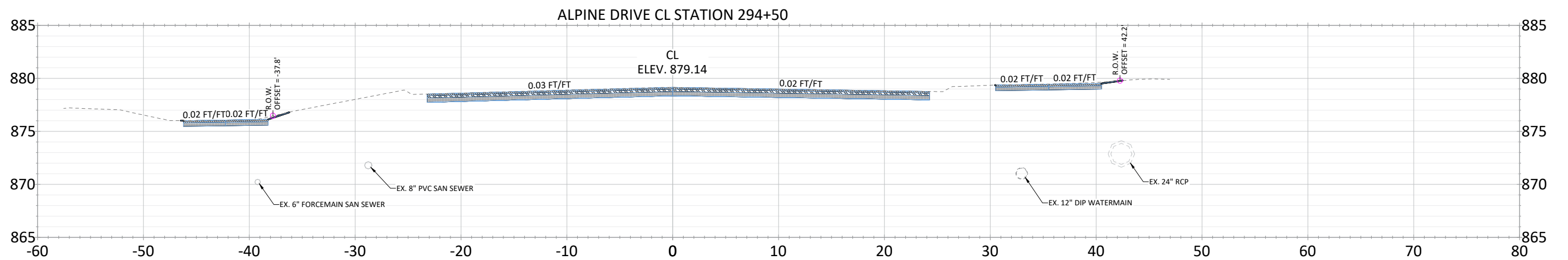
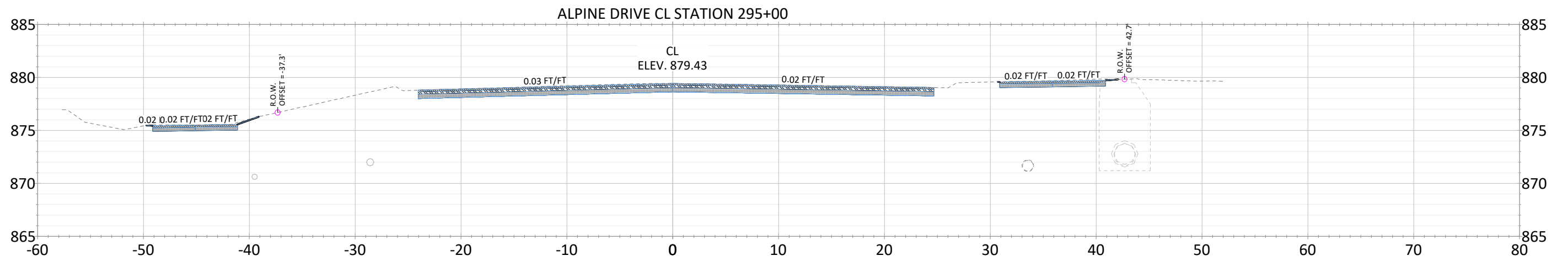
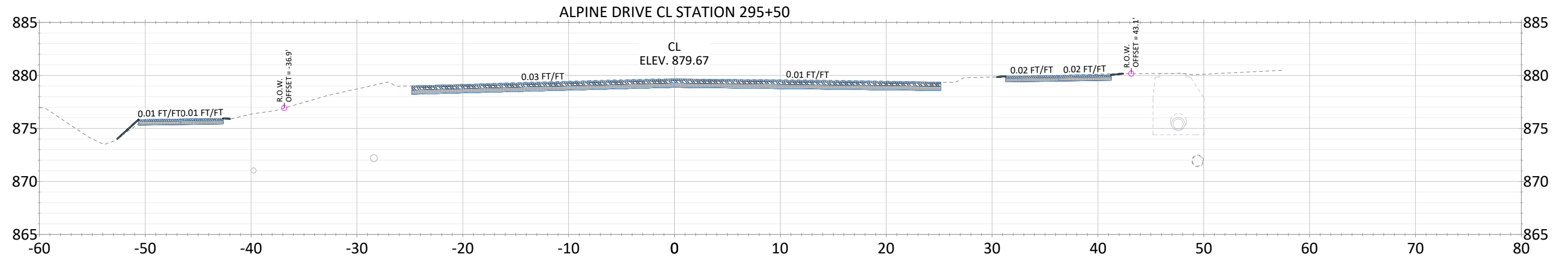
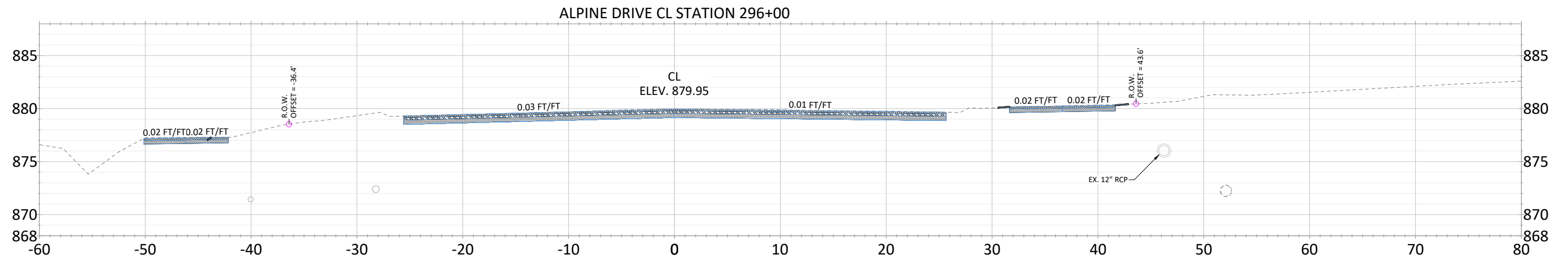
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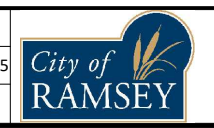
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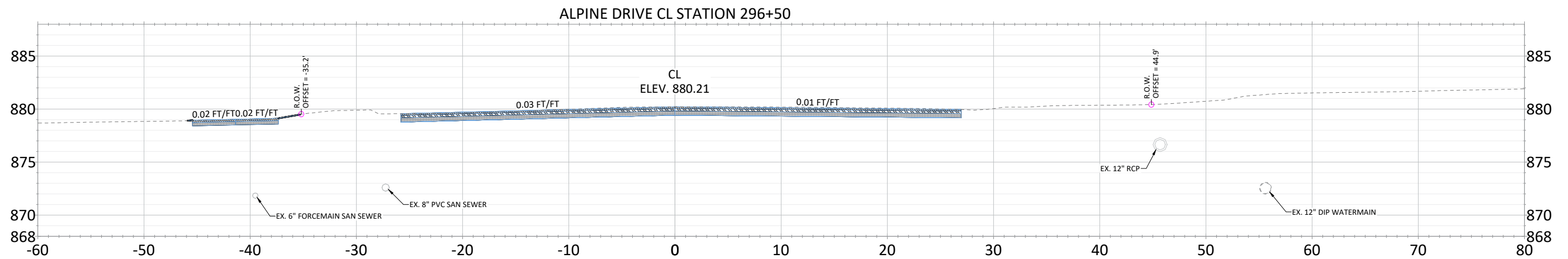
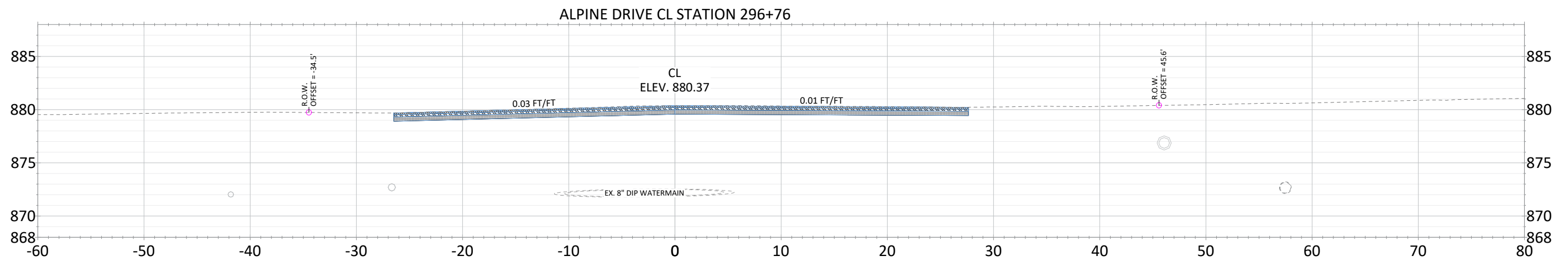
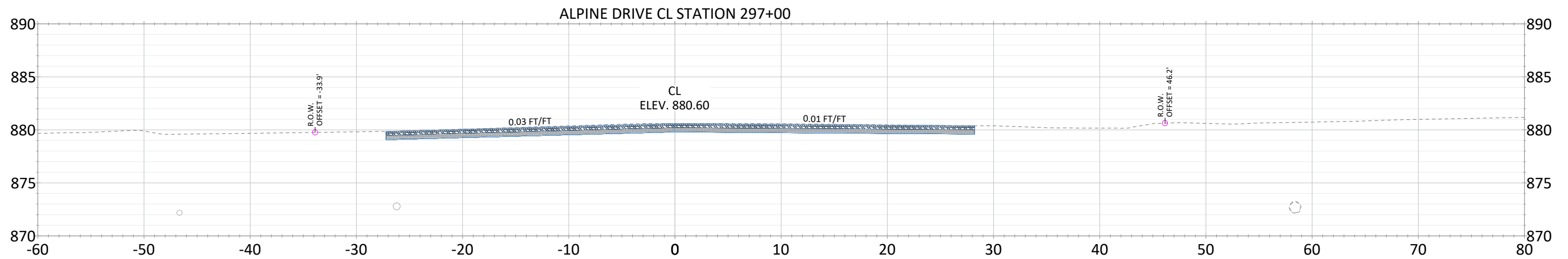
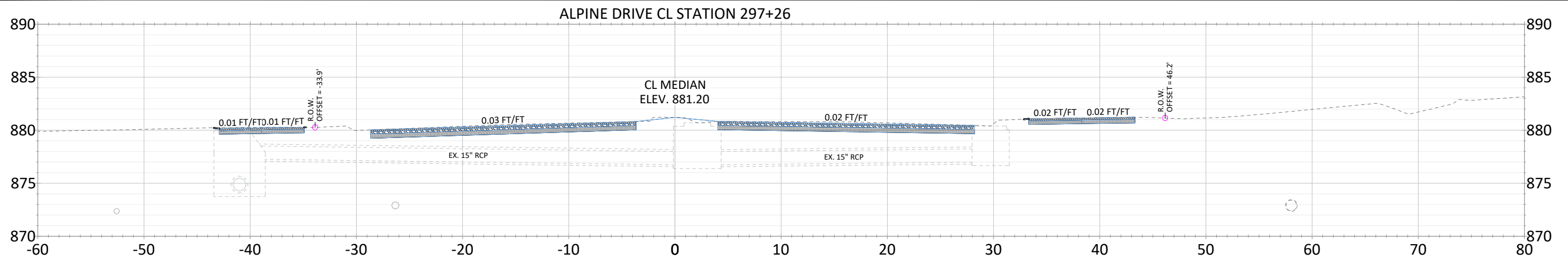
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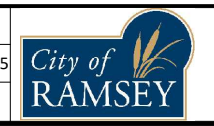
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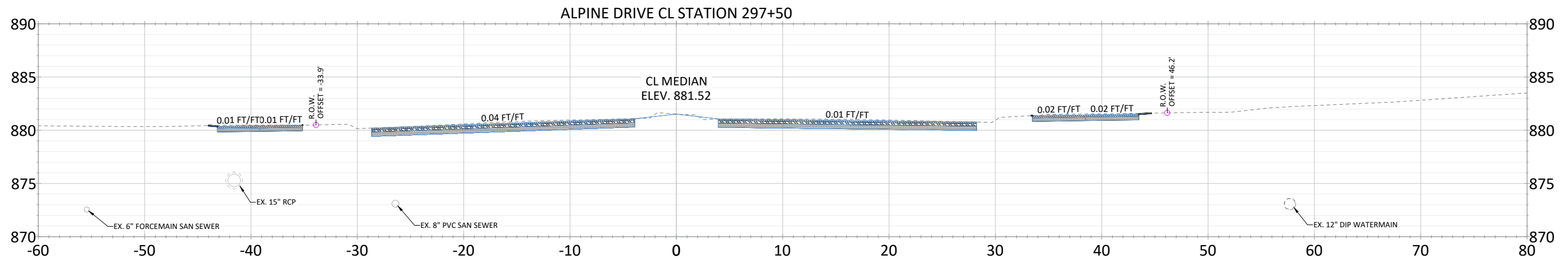
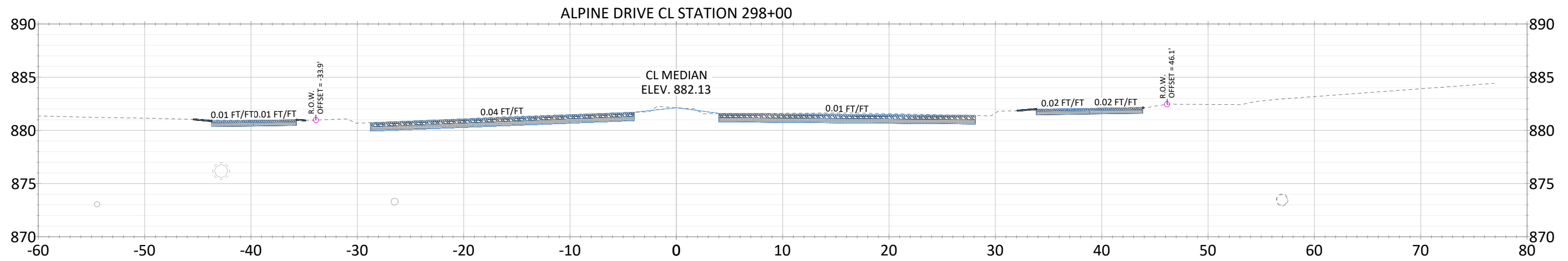
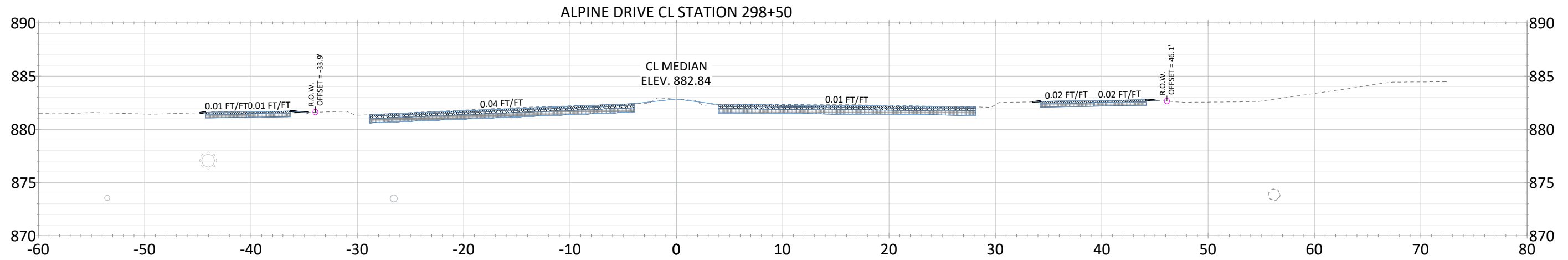
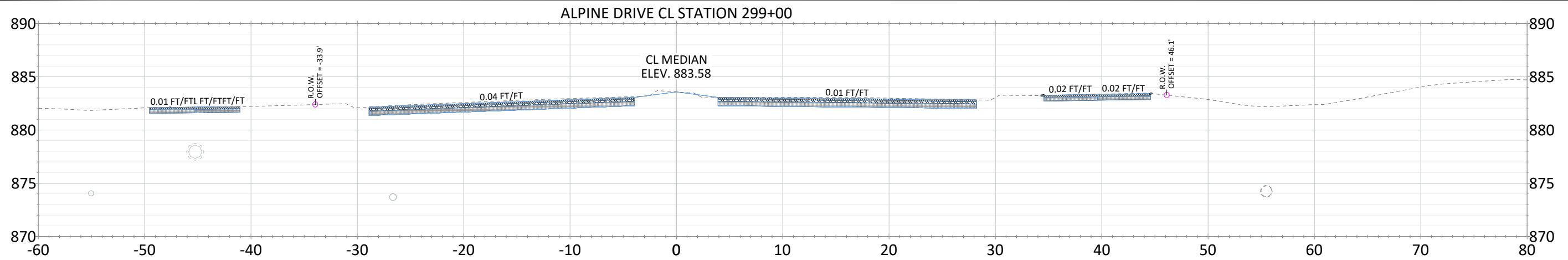
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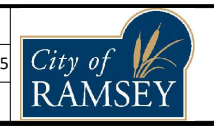
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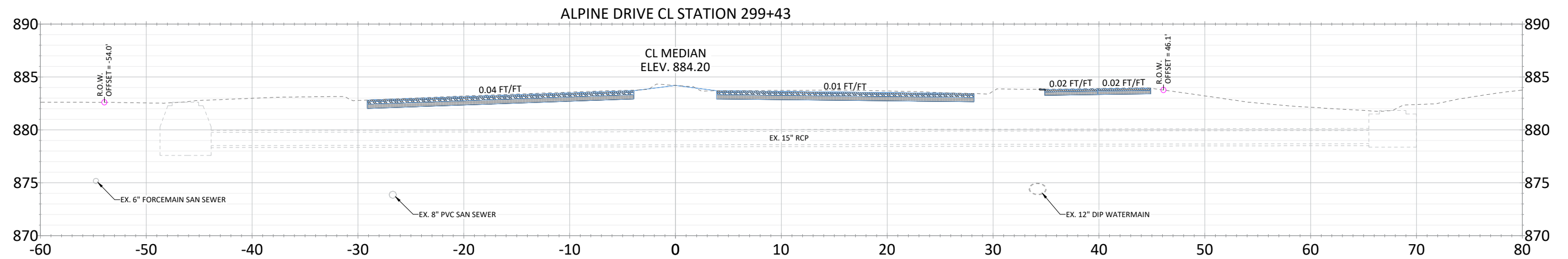
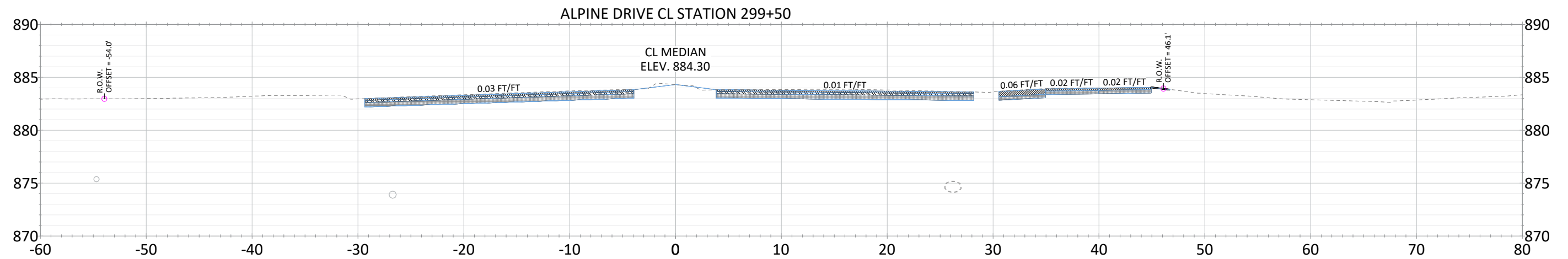
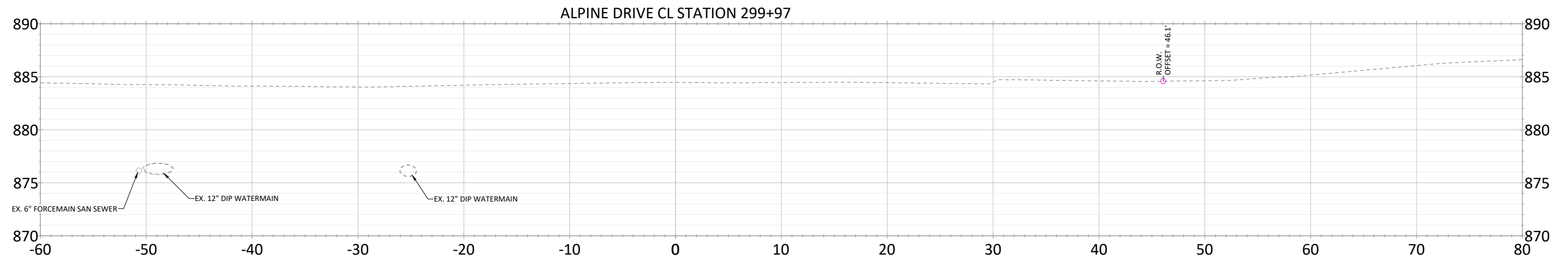
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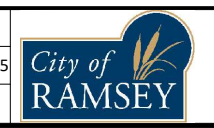
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