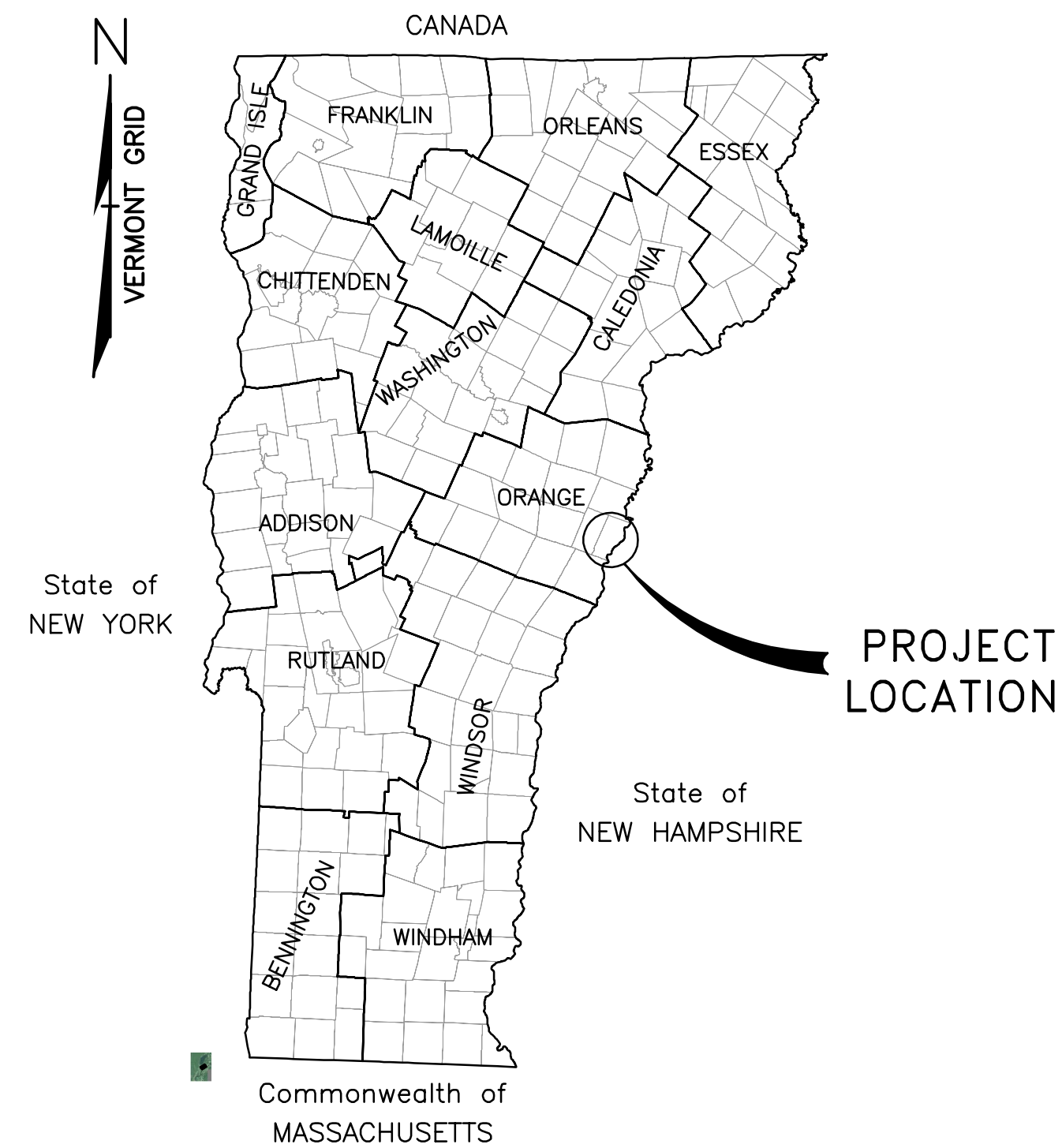


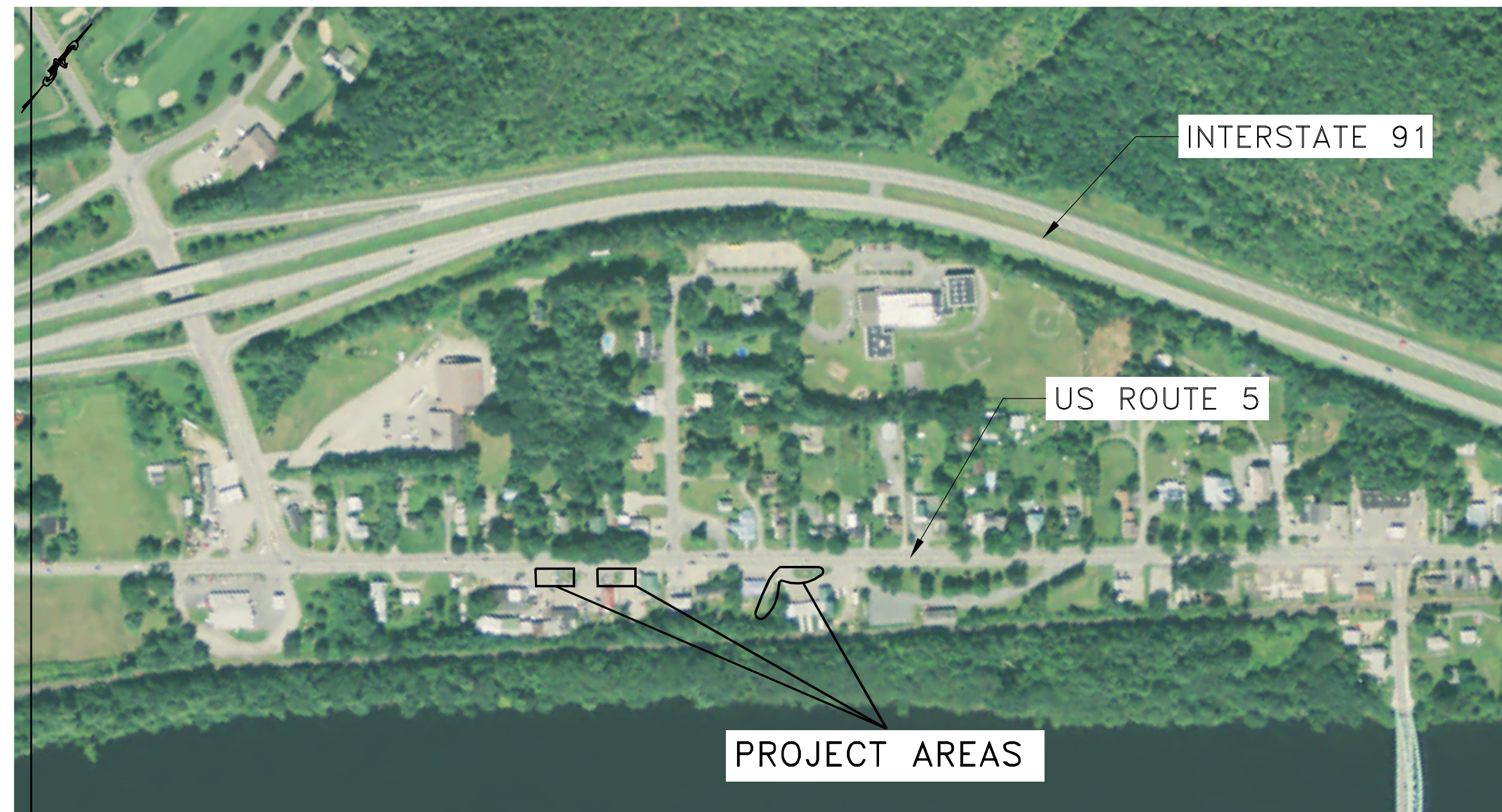
**NOT FOR  
CONSTRUCTION  
DRAFT**

# TOWN OF FAIRLEE, VERMONT COUNTY OF ORANGE APRIL 3, 2025 CONSTRUCTION PLANS

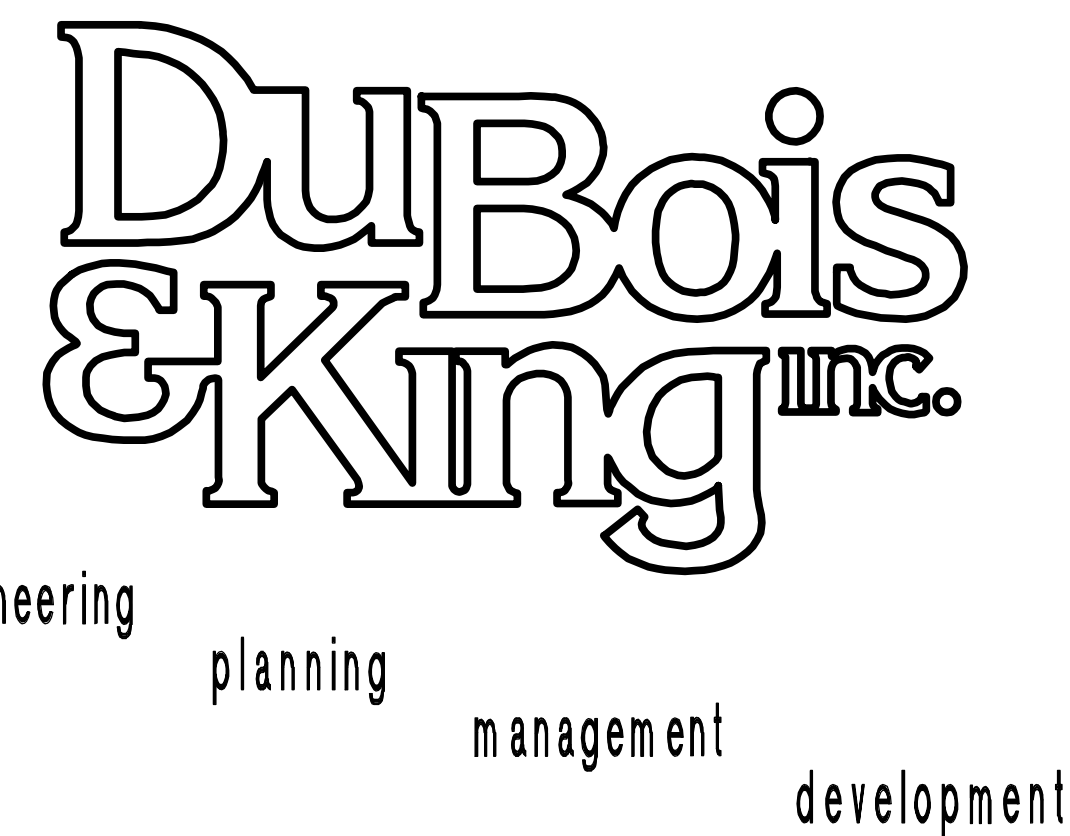
PROJECT LOCATION: THREE SITES ALONG US ROUTE 5 (MAIN STREET) IN FAIRLEE, VERMONT  
PROJECT DESCRIPTION: WORK TO BE PERFORMED INCLUDES THE INSTALLATION OF BIORETENTION BASINS, INFILTRATION BASIN, GRASS SWALE, AND REMOVING AN EXISTING ACCESS TO ROUTE 5.



**GENERAL LOCATION MAP**  
NOT TO SCALE



**PROJECT AREA MAP**  
SCALE IN FEET



LIST OF DRAWINGS

TITLE	SHEET NO.
TITLE SHEET	G1 1 OF 13
GENERAL CONSTRUCTION NOTES	G2 2 OF 13
QUANTITIES SHEET	G3 3 OF 13
EXISTING CONDITIONS OVERALL PLAN	C1 4 OF 13
LAKESIDE AUTOMOTIVE PLAN (SITE #1)	C2 5 OF 13
LAKESIDE AUTOMOTIVE PROFILE (SITE #1)	C3 6 OF 13
SAMURAI SOUL FOOD DRIVEWAY PLAN (SITE #2)	C4 7 OF 13
SAMURAI SOUL FOOD DRIVEWAY PROFILE (SITE #2)	C5 8 OF 13
STORMWATER TREATMENT DETAILS	C6 9 OF 13
RIGHT-OF-WAY DETAIL SHEET	C7 10 OF 13
RIGHT-OF-WAY LAYOUT SHEET	C8 11 OF 13
LAKESIDE AUTOMOTIVE AND SAMURAI SOUL FOOD PLANTING PLAN	L1 12 OF 13
PLANTING DETAILS	L2 13 OF 13

TOWN OF FAIRLEE  
75 TOWN COMMON  
ROAD, P.O. BOX 95  
FAIRLEE, VT 05045  
TAD NUNEZ, TOWN  
ADMINISTRATOR

FAIRLEE ST MM22(1)  
ROUTE 5  
STORMWATER  
DESIGN AND  
IMPLEMENTATION

SHEET TITLE  
  
TITLE SHEET

DRAWN BY LD/JDI	DATE 10/10/2025
CHECKED BY CJR	D&K PROJECT # 128828
PROJ. ENG. CJR	D&K ARCHIVE #

SHEET NUMBER  
  
**G1**  
  
SHEET 1 OF 13





PROFESSIONAL SEAL

**NOT FOR  
CONSTRUCTION  
DRAFT**

NO.	DATE	DESCRIPTION	BY	CK'D

TOWN OF FAIRLEE  
75 TOWN COMMON  
ROAD, P.O. BOX 95  
FAIRLEE, VT 05045  
TAD NUNEZ, TOWN  
ADMINISTRATOR

FAIRLEE ST MM22(1)  
ROUTE 5  
STORMWATER  
DESIGN AND  
IMPLEMENTATION

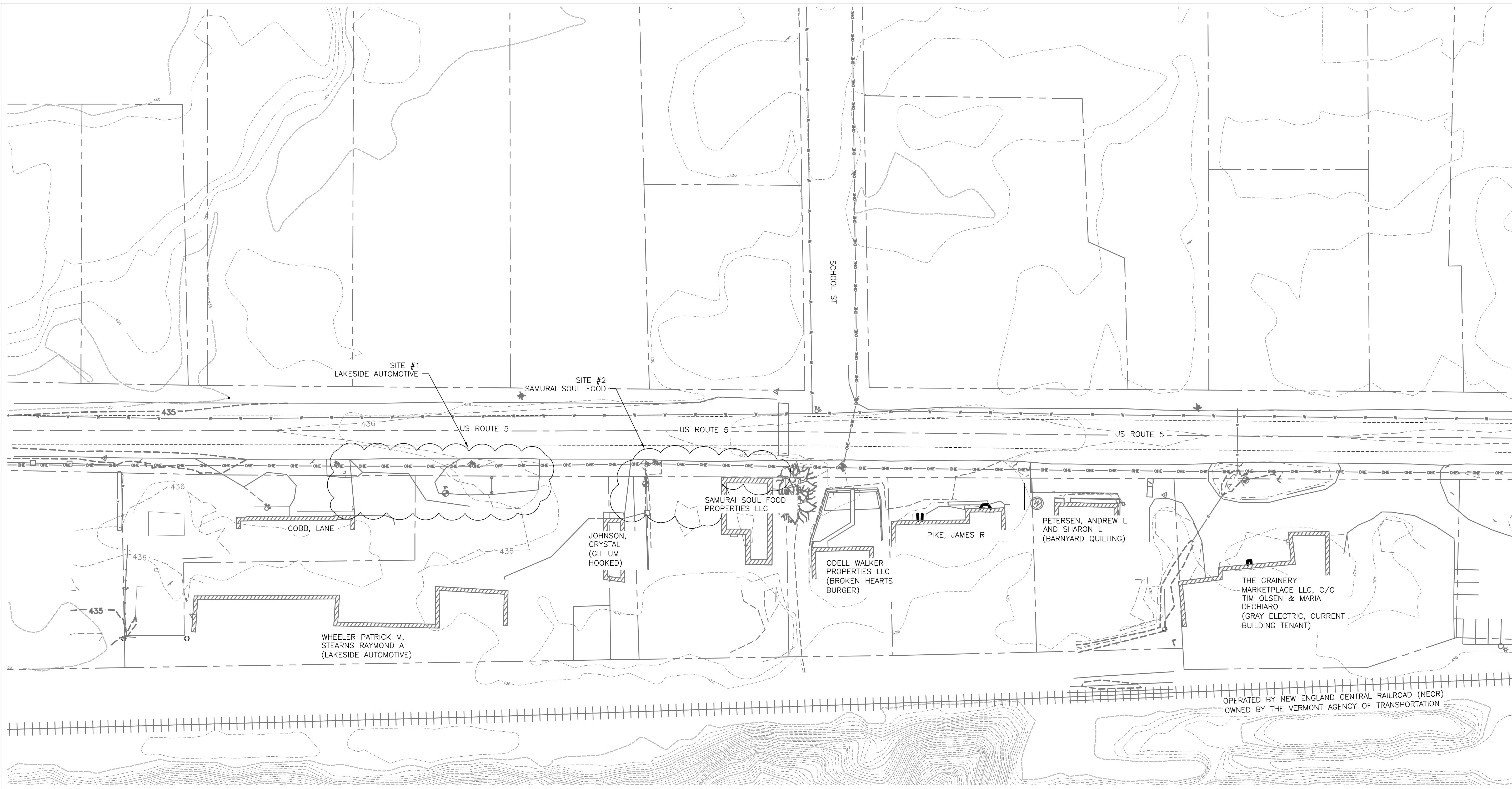
SHEET TITLE

OVERALL  
EXISTING  
CONDITIONS PLAN

DRAWN BY LD/JDI	DATE 10/10/2025
CHECKED BY CJR	D&K PROJECT # 128828
PROJ. ENG. CJR	D&K ARCHIVE #

SHEET NUMBER

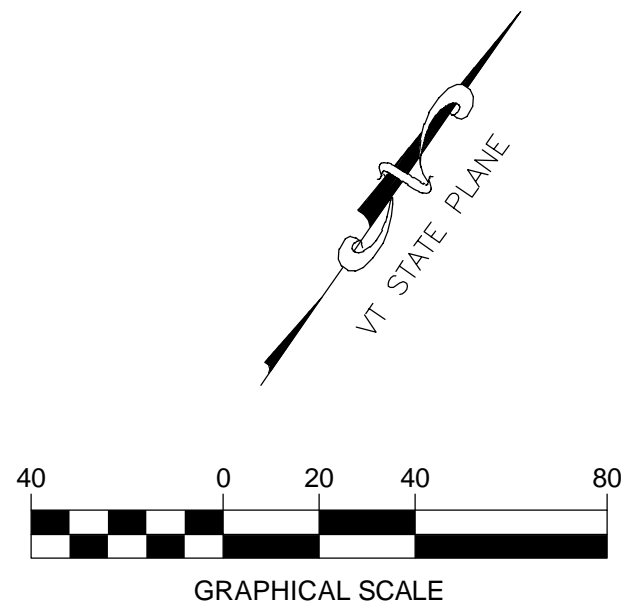
# C1



LEGEND

	LIDAR 5-FOOT CONTOUR		TREE LINE
	LIDAR 1-FOOT CONTOUR		WOODEN FENCE
	SURVEY 5-FOOT CONTOUR		EDGE OF PAVEMENT
	SURVEY 1-FOOT CONTOUR		UTILITY POLE
	APPROXIMATE LOCATION OF PROPERTY LINE		MAILBOX
	APPROXIMATE LOCATION OF RAIL LINE		
	ROAD CENTERLINE		
	STORM DRAIN/CULVERT		
	OVERHEAD ELECTRIC		
	APPROXIMATE LOCATION OF WATER LINE		
	BUILDING OUTLINE		
	SITE		
	TEST PIT		

- NOTES
- SEE SHEET G2 FOR ADDITIONAL NOTES.
  - TOPOGRAPHY, SITE FEATURES, AND UTILITIES WITHIN SURVEY BOUNDARIES ARE BASED ON A SURVEY PERFORMED BY DUBOIS & KING ON MARCH 27, 2023.
  - BUILDING FOOTPRINTS, OTHER UTILITY INFORMATION, RAIL LINES, AND PROPERTY BOUNDARIES ARE BASED ON DATA FROM VCGI, AND SHOULD BE CONSIDERED APPROXIMATE ONLY.
  - EXISTING TOPOGRAPHY OUTSIDE THE SURVEY BOUNDARY IS FROM VERMONT STATEWIDE LIDAR. DOWNLOADED FROM VCGI.
  - HORIZONTAL DATUM: NAD 83 (2011); VERTICAL DATUM: NAVD 86



**NOT FOR  
CONSTRUCTION  
DRAFT**

NO.	DATE	DESCRIPTION	BY	CK'D
2	03/25/2026	REVISE LAKESIDE AUTOMOTIVE ACCESS	CJR	
1	02/27/2025	OUTLINE ACCESSES TO BE REMOVED	CJR	

TOWN OF FAIRLEE  
75 TOWN COMMON  
ROAD, P.O. BOX 95  
FAIRLEE, VT 05045  
TAD NUNEZ, TOWN  
ADMINISTRATOR

FAIRLEE ST MM22(1)  
ROUTE 5  
STORMWATER  
DESIGN AND  
IMPLEMENTATION

SHEET TITLE  
**LAKESIDE  
AUTOMOTIVE  
DRIVEWAY PLAN  
(SITE #1)**

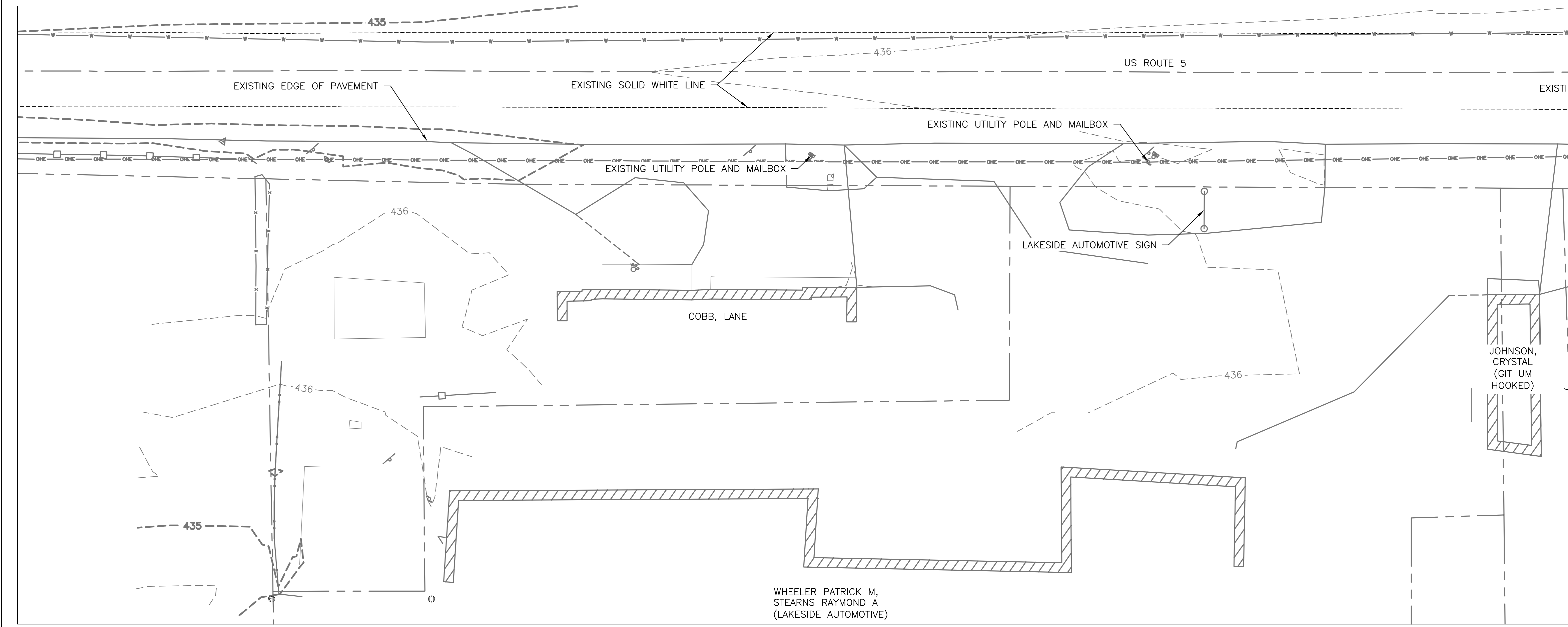
DRAWN BY SLR/JDI	DATE 10/10/2025
CHECKED BY CJR	D&K PROJECT # 128828
PROJ. ENG. CJR	D&K ARCHIVE #

SHEET NUMBER

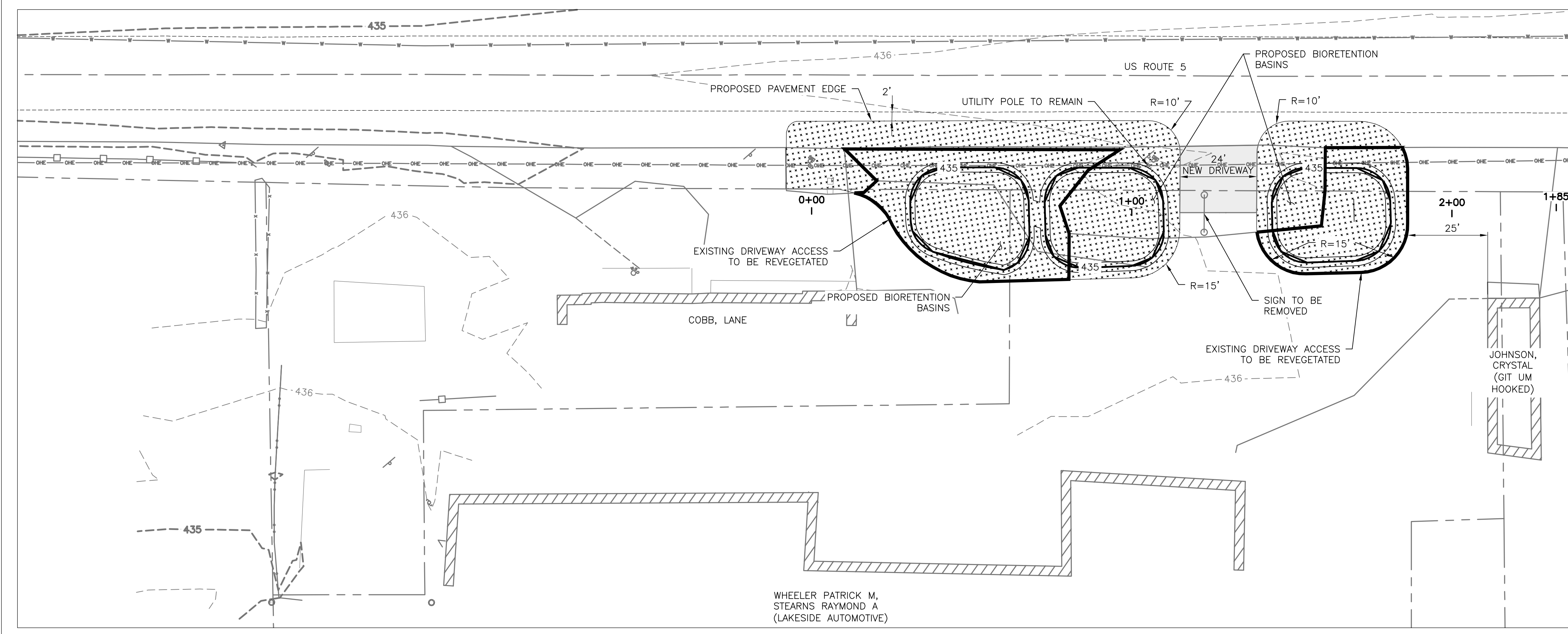
**C2**

- LEGEND
- 435 — PROPOSED 1 FT CONTOUR
  - 436 — PROPOSED 0.5 FT CONTOUR
  - PROPOSED PAVEMENT EDGE
  - ▨ PROPOSED PAVEMENT
  - ▤ PROPOSED VEGETATED AREA

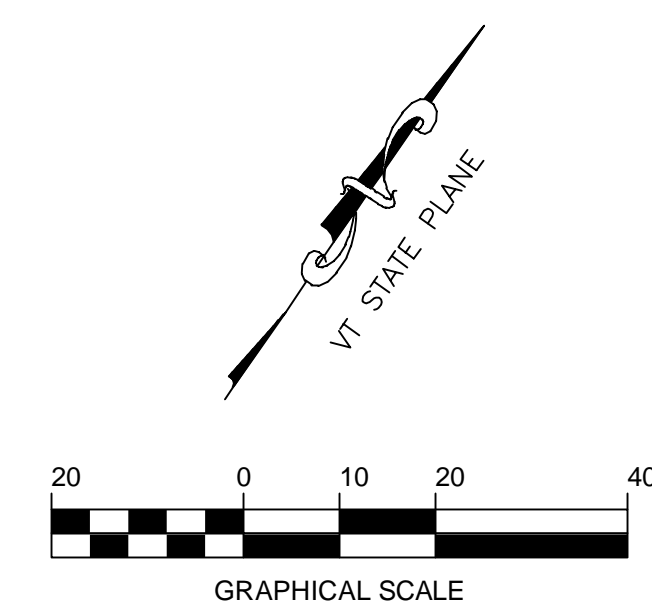
- NOTES
1. SEE SHEET G2 AND C1 FOR ADDITIONAL NOTES AND LEGEND INFORMATION.
  2. BASIN IS SIZED FOR THE WATER QUALITY VOLUME.
  4. PROPOSED DRIVEWAY TO BE CONSTRUCTED TO VTRANS STANDARDS. SEE VTRANS STANDARD B-71B FOR DRIVEWAY PLAN AND SECTION DETAILS.
  5. SEE SHEETS L1 AND L3 FOR PLANTING PLAN, DETAILS, AND NOTES.



**EXISTING CONDITIONS**



**PROPOSED CONDITIONS**

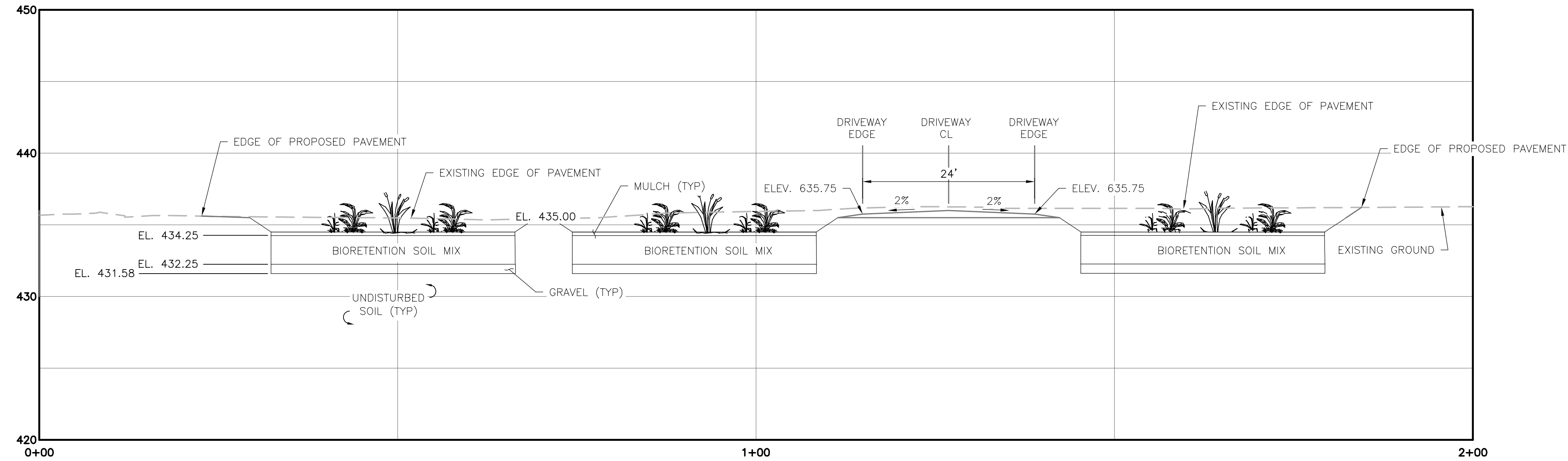


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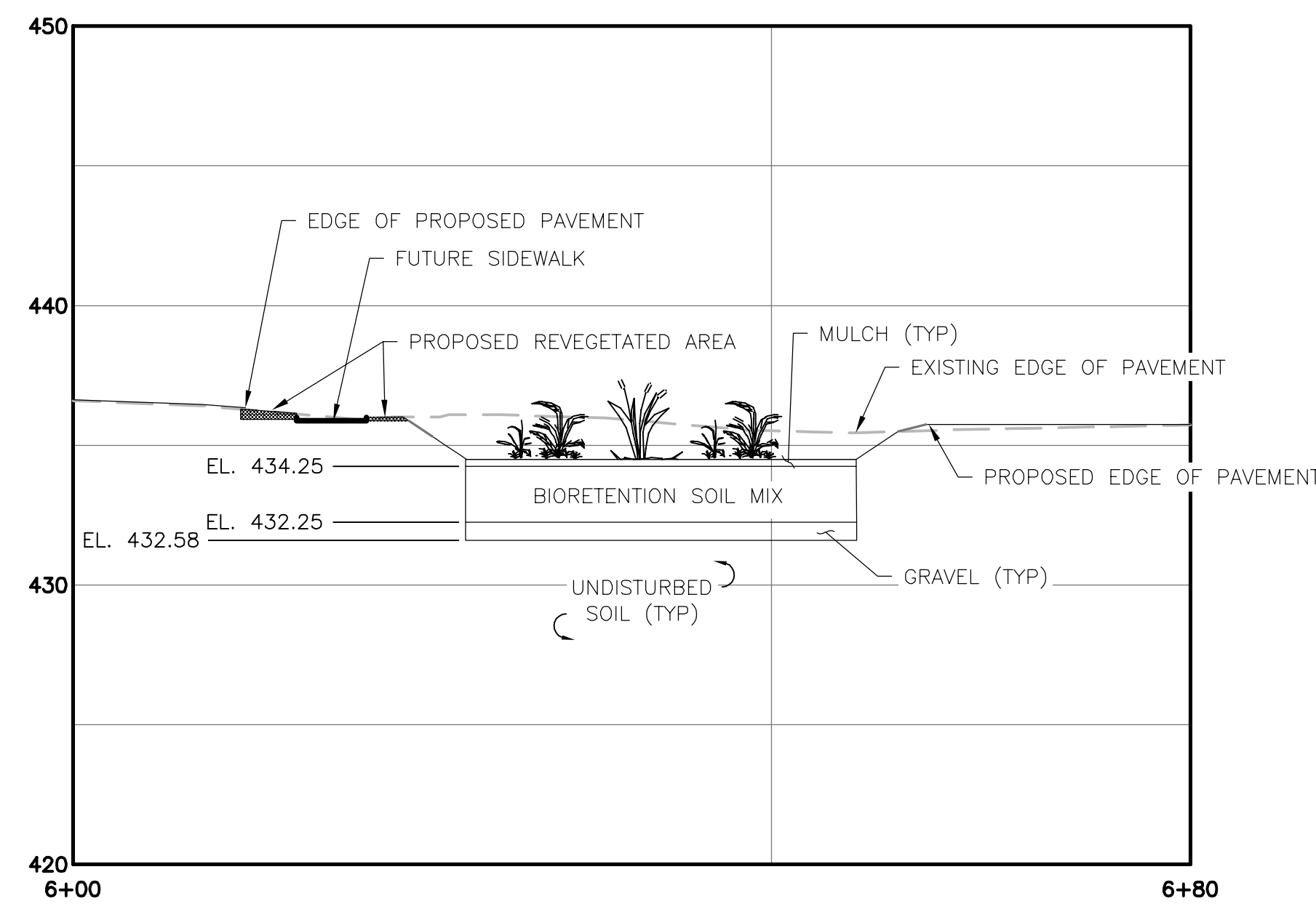
**NOT FOR CONSTRUCTION DRAFT**

NOTES

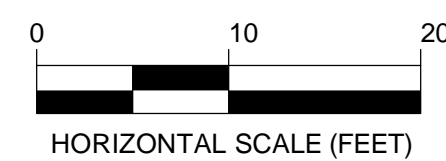
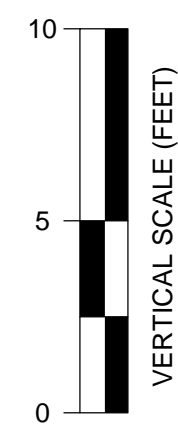
1. SEE SHEET G2, C1, AND C2 FOR ADDITIONAL NOTES AND LEGEND INFORMATION.
2. BASIN IS DESIGNED TO RETAIN THE WATER QUALITY VOLUME.
3. SEE SHEET C8 FOR BIORETENTION DETAILS
4. SEE VTRANS STANDARD B-71B FOR DRIVEWAY PLAN AND SECTION DETAILS.
5. SEE SHEETS L1 AND L3 FOR PLANTING PLAN, DETAILS, AND NOTES.



**BIORETENTION PROFILE**



**BIORETENTION CROSS-SECTION**



NO.	DATE	REVISION	DESCRIPTION	BY	CHK'D
1	03/25/2026			CJR	

TOWN OF FAIRLEE  
 75 TOWN COMMON  
 ROAD, P.O. BOX 95  
 FAIRLEE, VT 05045  
 TAD NUNEZ, TOWN  
 ADMINISTRATOR

FAIRLEE ST MM22(1)  
 ROUTE 5  
 STORMWATER  
 DESIGN AND  
 IMPLEMENTATION

SHEET TITLE  
 LAKESIDE  
 AUTOMOTIVE  
 DRIVEWAY PROFILE  
 (SITE #1)

DRAWN BY	DATE
SLR/JDI	10/10/2025
CHECKED BY	D&K PROJECT #
CJR	128828
PROJ. ENG.	D&K ARCHIVE #
CJR	

SHEET NUMBER

**C3**

PROFESSIONAL SEAL  
**NOT FOR CONSTRUCTION DRAFT**

NO.	DATE	DESCRIPTION	BY	CHK'D
1	04/02/2026	REVISE STORMWATER DESIGN FEATURES	CJR	

TOWN OF FAIRLEE  
 75 TOWN COMMON ROAD, P.O. BOX 95  
 FAIRLEE, VT 05045  
 TAD NUNEZ, TOWN ADMINISTRATOR

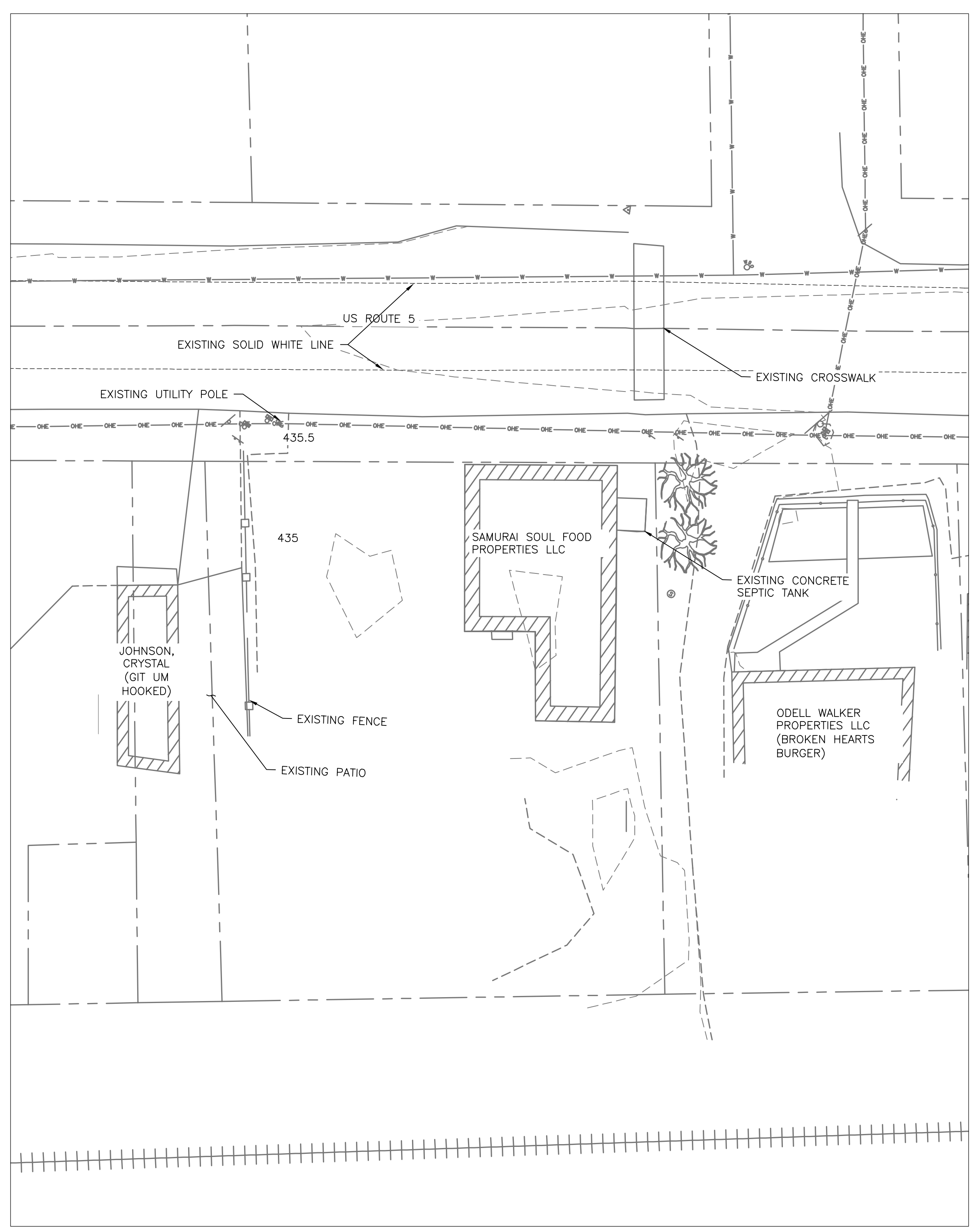
FAIRLEE ST MM22(1)  
 ROUTE 5  
 STORMWATER DESIGN AND IMPLEMENTATION

SHEET TITLE  
 SAMURAI SOUL FOOD DRIVEWAY PLAN (SITE #2)

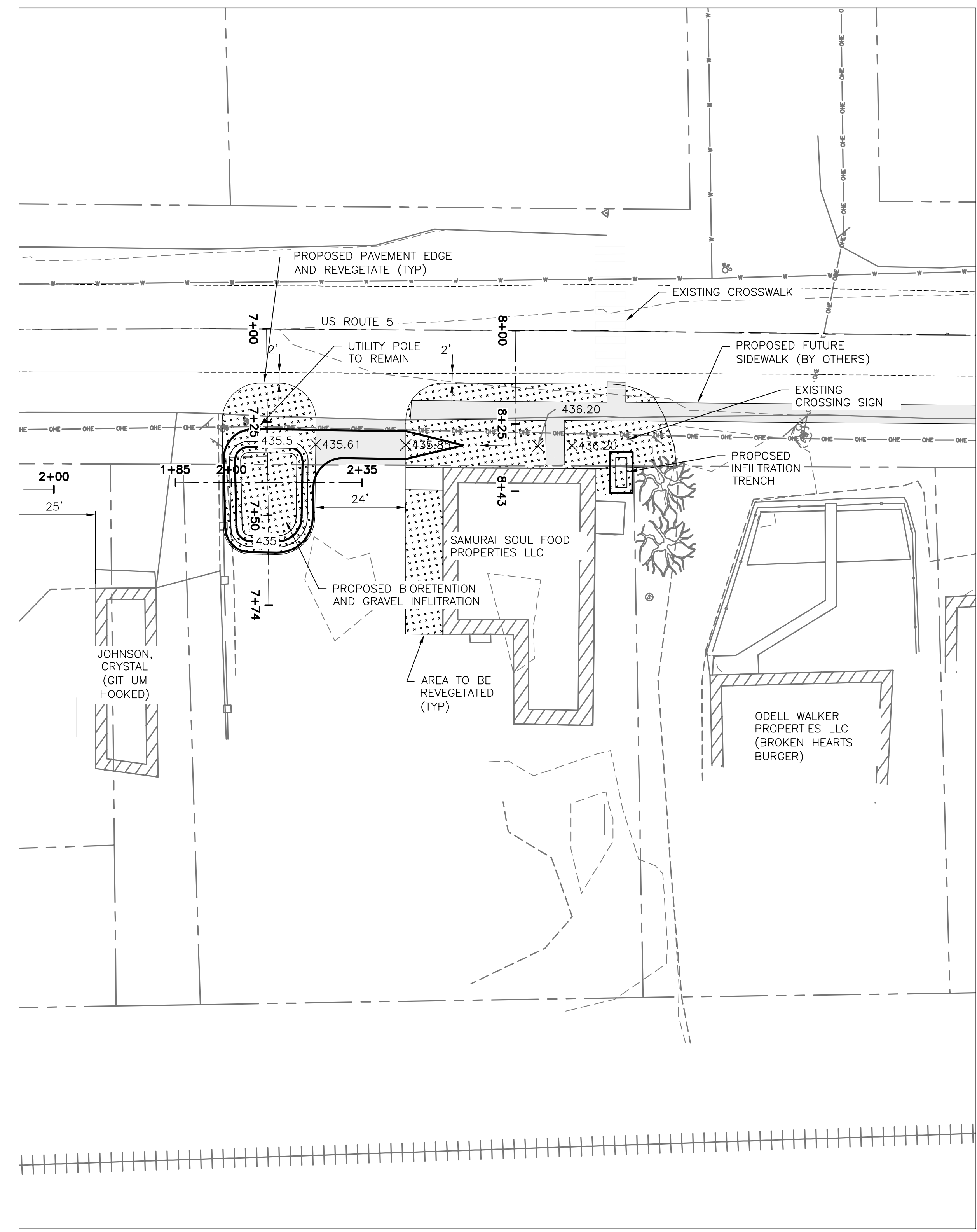
DRAWN BY	DATE
SLR/JDI	10/10/2025
CHECKED BY	D&K PROJECT #
CJR	128828
PROJ. ENG.	D&K ARCHIVE #
CJR	

SHEET NUMBER

**C4**



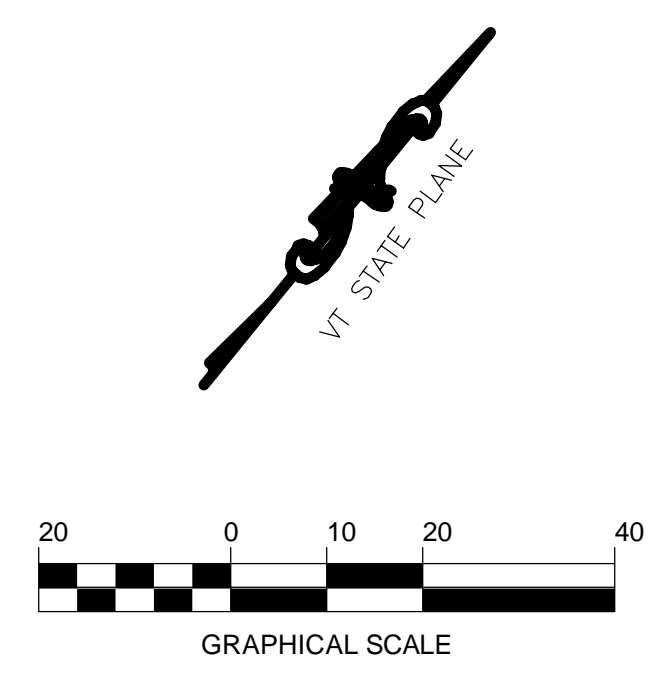
**EXISTING CONDITIONS**



**PROPOSED CONDITIONS**

- LEGEND
- 435 — PROPOSED 5 FT CONTOUR
  - 436 — PROPOSED 1 FT CONTOUR
  - — PROPOSED PAVEMENT EDGE
  - ▬▬▬ PROPOSED PAVEMENT

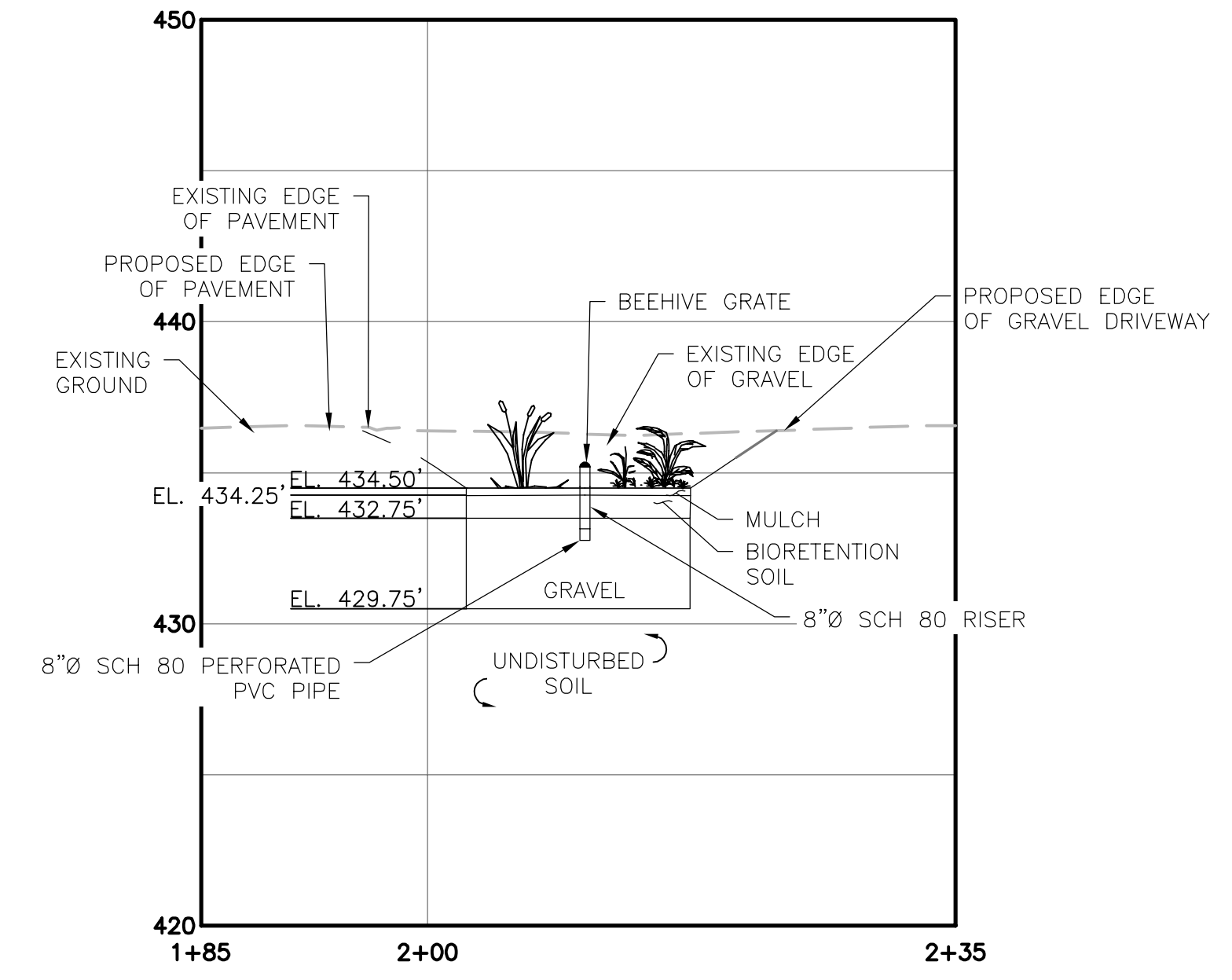
- NOTES
1. SEE SHEET G2 AND C1 FOR ADDITIONAL NOTES AND LEGEND INFORMATION.
  2. BASIN IS SIZED FOR THE WATER QUALITY VOLUME.
  3. SEE SHEETS L1 AND L3 FOR PLANTING PLAN, DETAILS, AND NOTES.
  4. PROPOSED FUTURE SIDEWALK SHOWN TO BE CONSTRUCTED BY OTHERS.



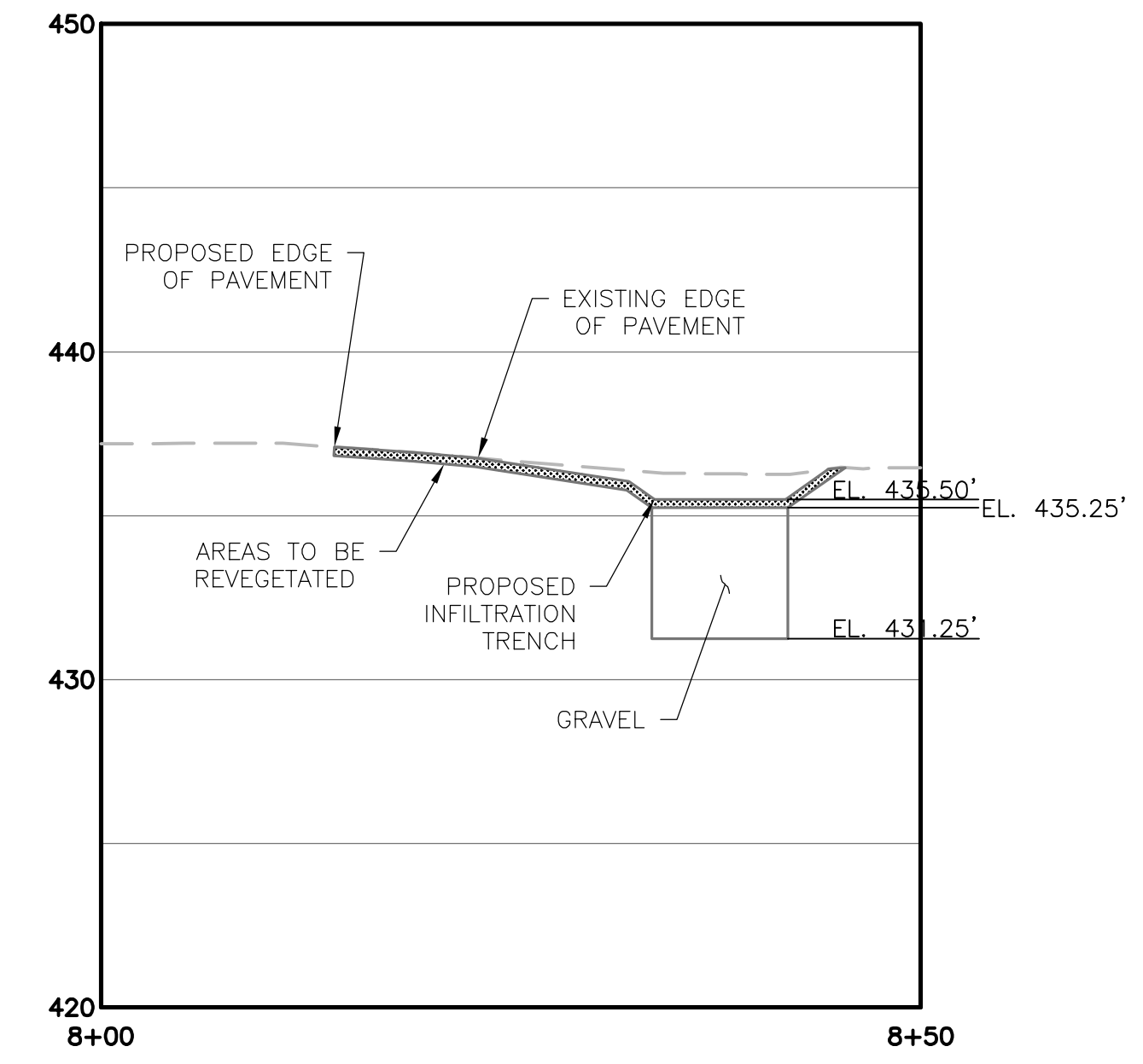
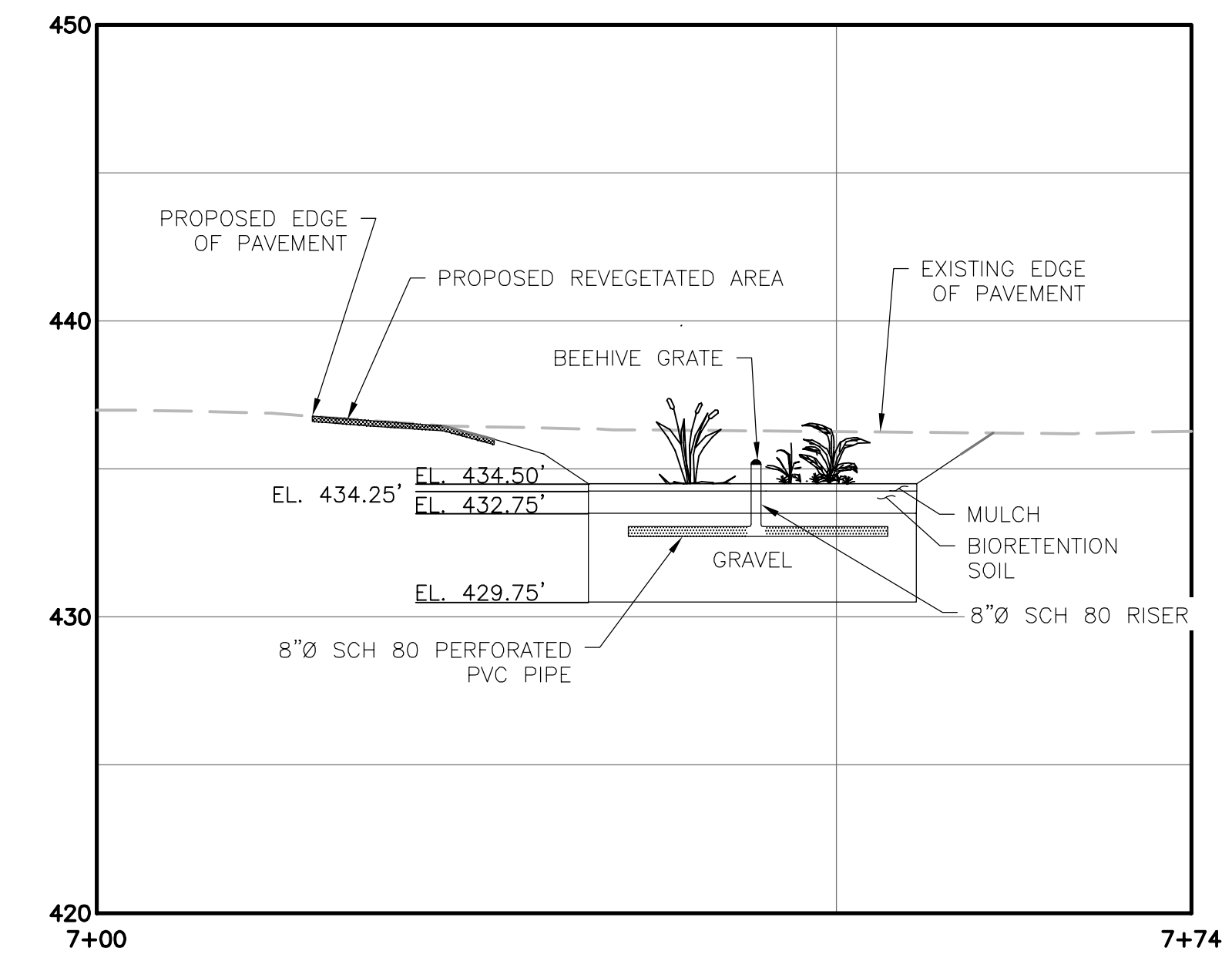
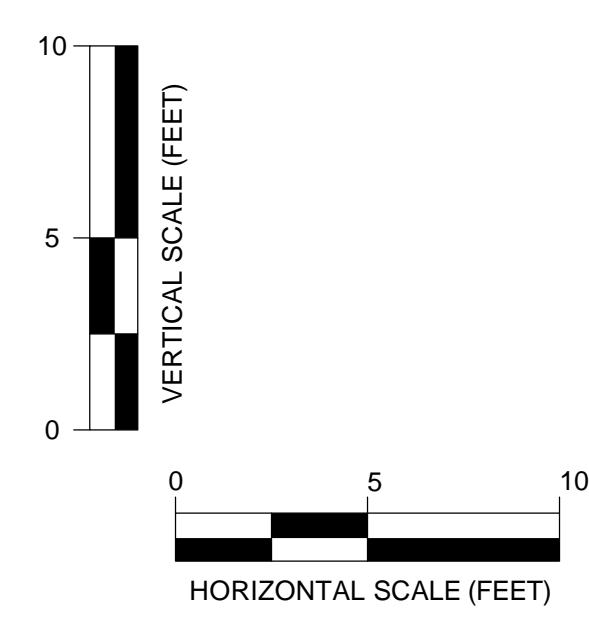
**NOT FOR  
CONSTRUCTION  
DRAFT**

NOTES

1. SEE SHEET G2, C1, AND C4 FOR ADDITIONAL NOTES AND LEGEND INFORMATION.
2. BASIN SIZING IS DESIGNED TO RETAIN THE WATER QUALITY VOLUME.
3. SEE SHEET C8 FOR BIORETENTION DETAILS.
4. SEE SHEETS L1 AND L3 FOR PLANTING PLAN, DETAILS, AND NOTES.



**BIORETENTION WITH GRAVEL INFILTRATION PROFILE**



**BIORETENTION WITH GRAVEL INFILTRATION CROSS-SECTIONS**

NO.	DATE	BY	CK'D	DESCRIPTION

TOWN OF FAIRLEE  
75 TOWN COMMON  
ROAD, P.O. BOX 95  
FAIRLEE, VT 05045  
TAD NUNEZ, TOWN  
ADMINISTRATOR

FAIRLEE ST MM22(1)  
ROUTE 5  
STORMWATER  
DESIGN AND  
IMPLEMENTATION

SHEET TITLE  
**SAMURAI SOUL  
FOOD DRIVEWAY  
PROFILES (SITE #2)**

DRAWN BY SLR/JDI	DATE 10/10/2025
CHECKED BY CJR	D&K PROJECT # 128828
PROJ. ENG. CJR	D&K ARCHIVE #

SHEET NUMBER

**C5**

**NOT FOR CONSTRUCTION DRAFT**

NO.	DATE	DESCRIPTION	BY	CK'D
1	04/02/2026	ADD INFILTRATION TRENCH DETAIL	CJR	

TOWN OF FAIRLEE  
 75 TOWN COMMON ROAD, P.O. BOX 95  
 FAIRLEE, VT 05045  
 TAD NUNEZ, TOWN ADMINISTRATOR

FAIRLEE ST MM22(1)  
 ROUTE 5  
 STORMWATER DESIGN AND IMPLEMENTATION

SHEET TITLE

DETAIL SHEET #1

DRAWN BY	DATE
SLR/JDI	10/10/2025
CHECKED BY	D&K PROJECT #
CJR	128828
PROJ. ENG.	D&K ARCHIVE #
CJR	

SHEET NUMBER

**C6**

**BIORETENTION AREA NOTES:**

- MULCH LAYER CAN BE APPLIED AROUND SHRUBS ONLY AND TO A MAXIMUM DEPTH OF 3 INCHES. MULCH SHOULD BE SHREDDED HARDWOOD THAT IS AGED AT LEAST 6 MONTHS.
- 3/8-INCH ROUNDED AND WASHED PEA STONE CAN BE USED AS AN ALTERNATIVE TO MULCH.
- BIORETENTION SOIL MIX SHALL CONSIST OF SAND TO LOAMY SAND BY USDA CLASSIFICATION, WITH SOME ORGANIC MATERIAL. THE BIORETENTION SOIL MIX SHALL MEET THE FOLLOWING SPECIFICATIONS:

UPPER MEDIA LAYER (0-12)  
 SAND: 85-95% (<25% FINE OR VERY FINE SAND)  
 SILT AND CLAY: <15%  
 CLAY: 2-5%  
 ORGANICS: <3%

LOWER MEDIA LAYER (12-24)  
 SAND: 85-95% (<25% FINE OR VERY FINE SAND)  
 SILT AND CLAY: <15%  
 CLAY: 2-5%  
 NO ORGANICS

- P TESTING IS REQUIRED FOR UPPER MEDIA LAYER OF BIORETENTION SYSTEMS. BIORETENTION SOIL MIX MUST HAVE A PHOSPHORUS SATURATION RATIO (PSR) LESS THAN OR EQUAL TO 0.10. PSR IS TO BE DETERMINED USING THE PROTOCOL OUTLINED BELOW, AS DEFINED IN THE BIORETENTION AND GRAVEL WETLAND SOIL MEDIA TESTING GUIDANCE DOCUMENT PREPARED BY THE UNIVERSITY OF VERMONT AND WATERSHED CONSULTING, LLC.

- SAMPLES ARE TO BE AIR DRIED AND SIEVED THROUGH 2 MM PRIOR TO TESTING
- AIR-DRIED, SIEVED SOIL SAMPLES ARE TO THEN BE EXTRACTED WITH THE MEHLICH-3 SOLUTION (0.2 M CH3COOH + 0.25 M NH4NO3 + 0.015 M NH4F + 0.013 M HNO3 + 0.001 M EDTA) BY SHAKING A SOIL-SOLUTION SUSPENSION FOR 5 MINUTES AT A 1:10 RATIO (SOIL MASS IN GRAMS: SOLUTION VOLUME IN ML), FOLLOWED BY FILTERING TO REMOVE PARTICLES (PORE SIZE OF 2 MM IS RECOMMENDED, MAX PORE SIZE = 8 MM).
- EXTRACTS FROM THE MEHLICH-3 PROCEDURE ARE TO BE ANALYZED FOR P, FE, AND AL BY ICP-OES.
- THE PHOSPHORUS SATURATION RATIO (PSR) IS THEN CALCULATED AS FOLLOWS:

$$PSR = (P_{M3}/31)/((FE_{M3}/56)+(AL_{M3}/27))$$

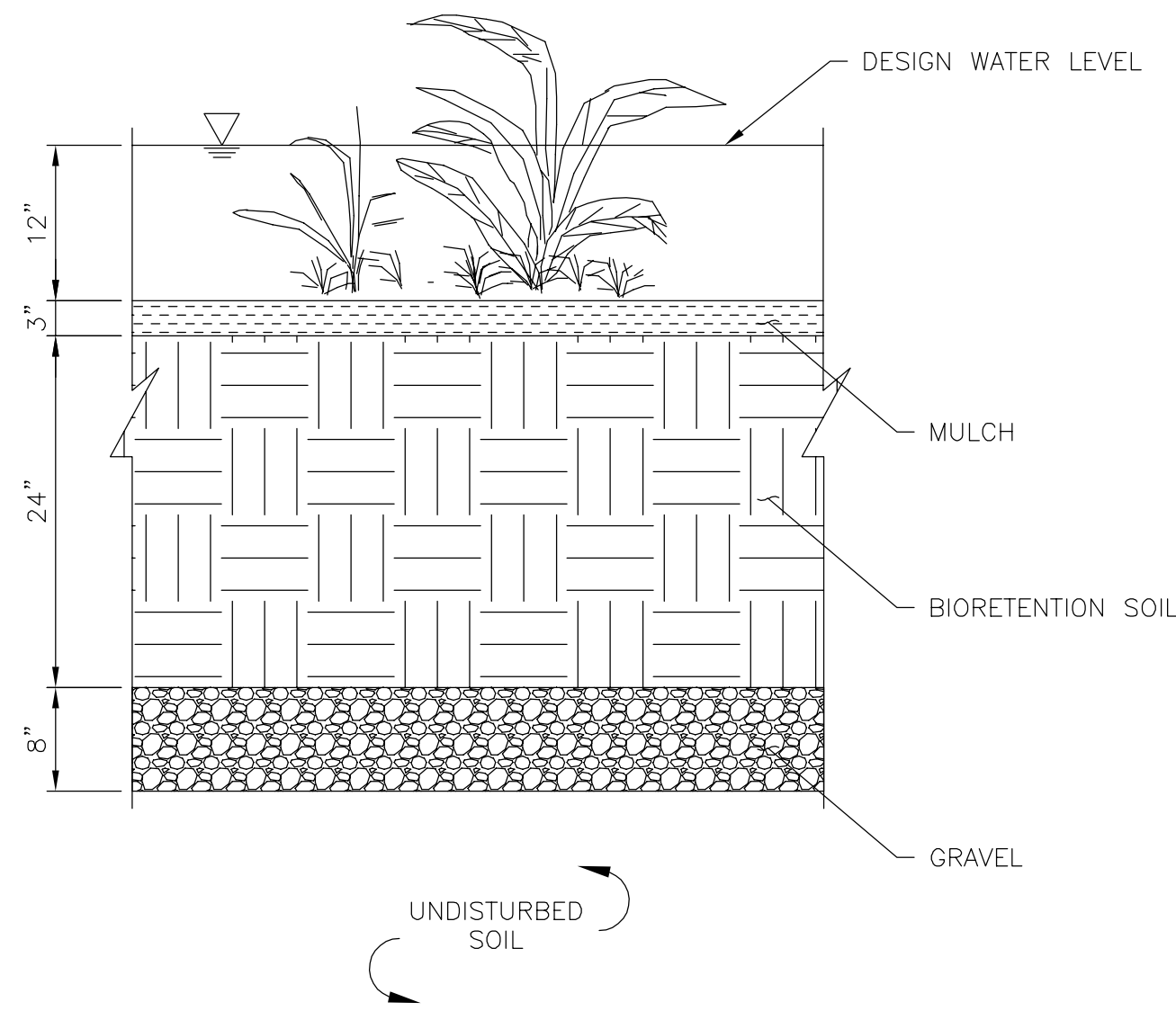
- WHERE,  
 •  $P_{M3}$  = MEHLICH-3 P IN MG P PER KG DRY SOIL  
 •  $FE_{M3}$  = MEHLICH-3 FE IN MG FE PER KG DRY SOIL  
 •  $AL_{M3}$  = MEHLICH-3 AL IN MG AL PER KG DRY SOIL

MEHLICH-3 EXTRACTIONS FOLLOW THE ABOVE PROTOCOL (FOR MORE DETAILS, SEE WOLF AND BEEGLE, 2009). OTHER SOIL TEST EXTRACTIONS, INCLUDING MODIFIED MORGAN TESTS, OXALATE EXTRACTIONS, WATER EXTRACTIONS, OR EXTRACTIONS USED TO QUANTIFY TOTAL ELEMENTS, ARE NOT ACCEPTABLE FOR THIS REQUIREMENT.

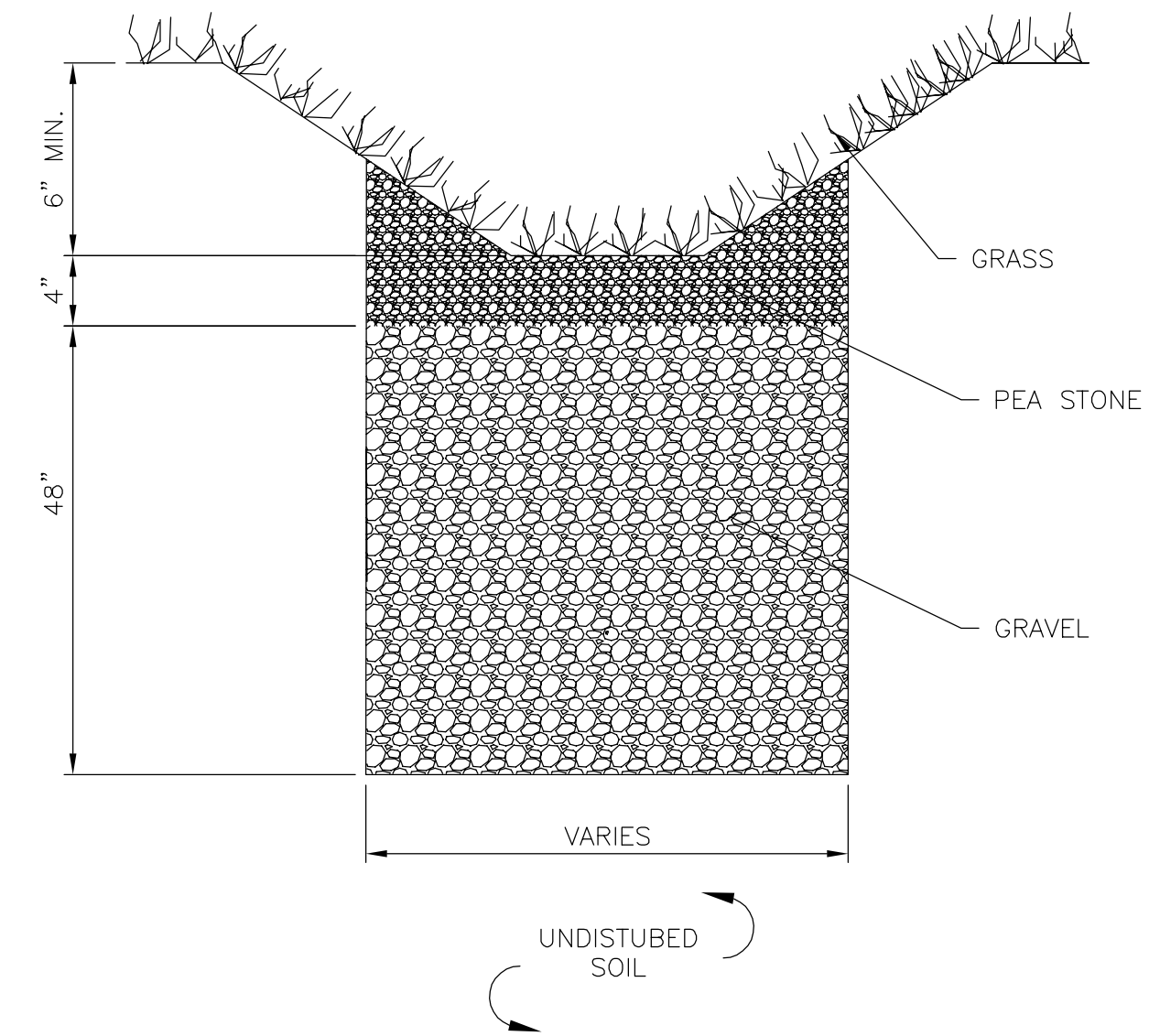
IN CASES WHERE INGREDIENT MIXING HAS NOT YET OCCURRED, INGREDIENTS CAN BE MIXED AT THE INTENDED VOLUMETRIC PROPORTIONS IN A SMALL BATCH (AT LEAST ONE QUART IN VOLUME) FOR TESTING PURPOSES. IF THIS SMALL BATCH TESTING APPROACH IS TAKEN, THE FINAL MATERIAL TO BE USED DURING INSTALLATION MUST BE RE-TESTED TO CONFIRM ACCEPTABLE PSR.

**MAINTENANCE NOTES:**

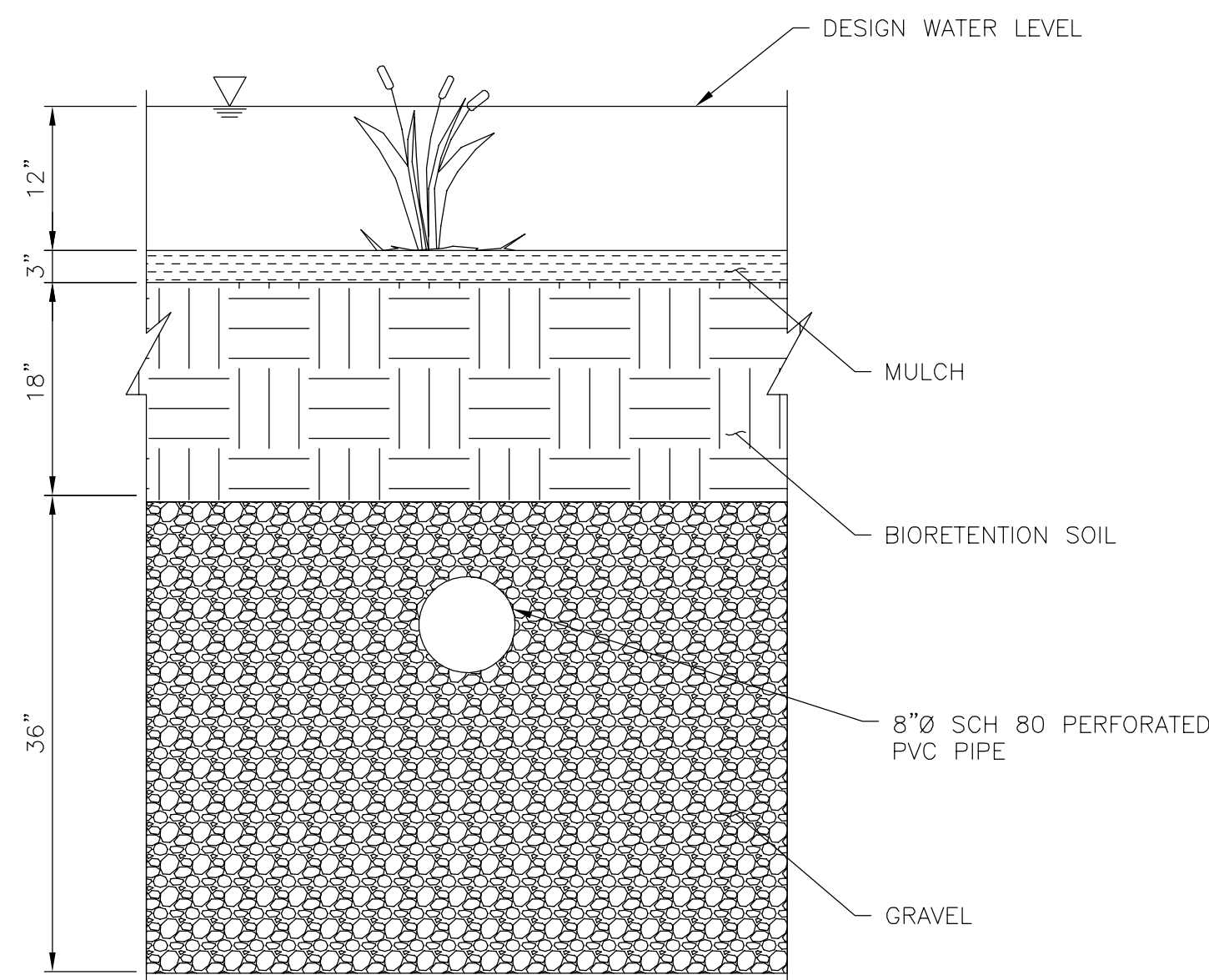
- SURFACE CONVEYANCE FEATURES:
  - SWALES: CHECK FOR EROSION, TRASH OR DEBRIS, AND SEDIMENT ACCUMULATION ON A SEMI-ANNUAL BASIS. ADDRESS ANY DEFICIENCIES AS NECESSARY.
  - CATCH BASINS: CHECK FOR SEDIMENT ACCUMULATION IN THE SUMP OF THE CATCHBASIN ON A SEMI-ANNUAL BASIS. IF SEDIMENT ACCUMULATION IS GREATER THAN 2 FEET THE SEDIMENT SHOULD BE REMOVED.
- STONE DIAPHRAGM: CHECK FOR EROSION, TRASH OR DEBRIS, AND SEDIMENT ACCUMULATION ON A SEMI-ANNUAL BASIS. ADDRESS ANY DEFICIENCIES AS NECESSARY.
- DISCONNECTION AREAS: CHECK FOR EROSION AND BARE AREAS. RE-SEED AS NECESSARY ON A SEMI-ANNUAL BASIS. DISCONNECTION AREAS MUST BE PROTECTED FROM DEVELOPMENT AND COMPACTION.
- TRASH AND DEBRIS REMOVAL: REMOVE TRASH OR DEBRIS FROM THE DRY SWALE AND STONE DIAPHRAGM ON A SEMI-ANNUAL BASIS.
- SEDIMENT ACCUMULATION: VISUALLY INSPECT THE SURFACE TO ENSURE THERE IS NO SEDIMENT BUILD-UP ON AN ANNUAL BASIS. DO NOT LET SEDIMENT BUILD UP TO COVER VEGETATION.
- IMPROPER DRAINAGE: AFTER 1" OR MORE RAIN EVENTS, CHECK FOR STANDING WATER FOR LONGER THAN 48 HOURS AFTER RAIN EVENT.
- EROSION: CHECK AREA FOR EROSION, CHANNELIZATION, OR SCOURING. REGRADE, SEED, AND MULCH AS NEEDED ON A SEMI-ANNUAL BASIS.
- VEGETATION:
  - MOW GRASS VEGETATION AND REMOVE GRASS CLIPPINGS MONTHLY.
  - CHECK FOR BARE AREAS AND UNDESIRABLE GROWTH. RE-SEED AS NECESSARY ON A SEMI-ANNUAL BASIS.



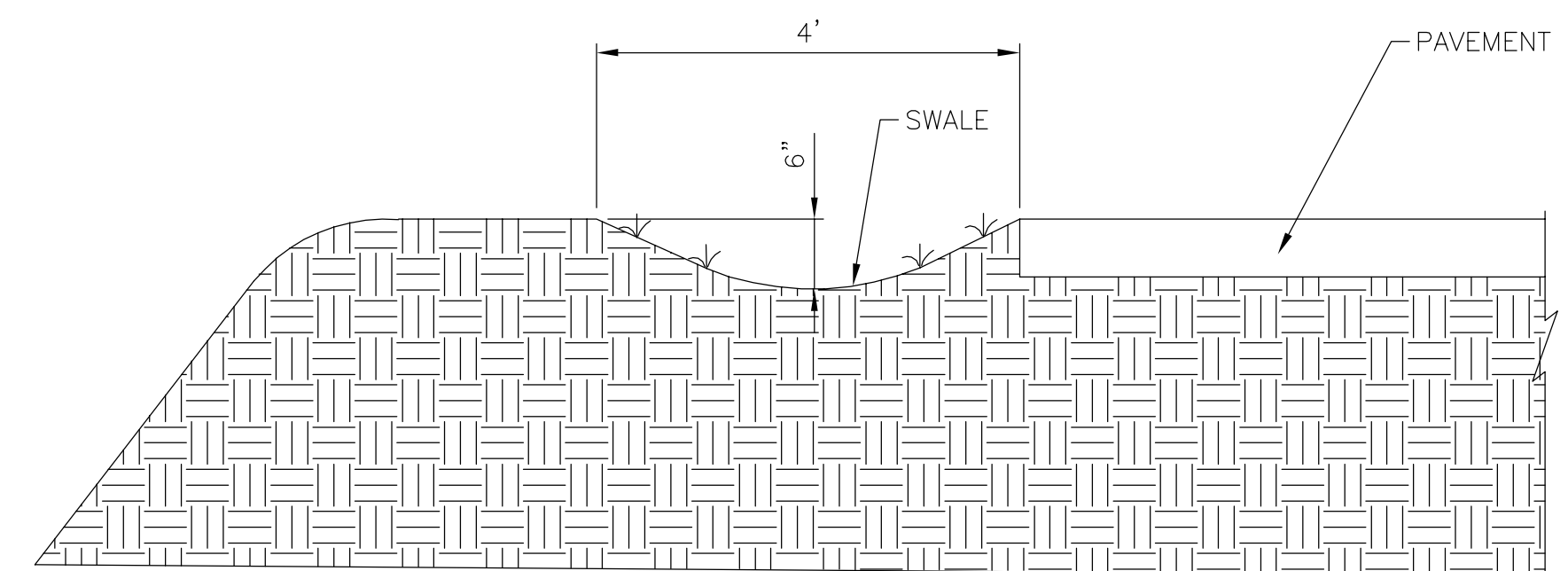
**BIORETENTION TYPICAL SECTION**  
 NOT TO SCALE



**INFILTRATION TRENCH DETAIL**  
 NOT TO SCALE

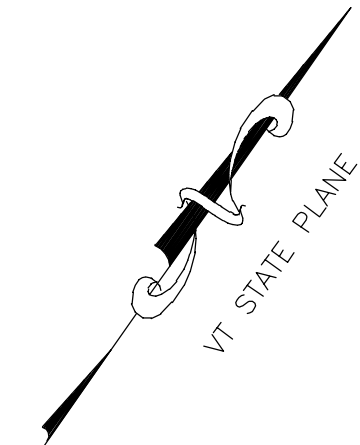


**BIORETENTION AND GRAVEL INFILTRATION TYPICAL SECTION**  
 NOT TO SCALE

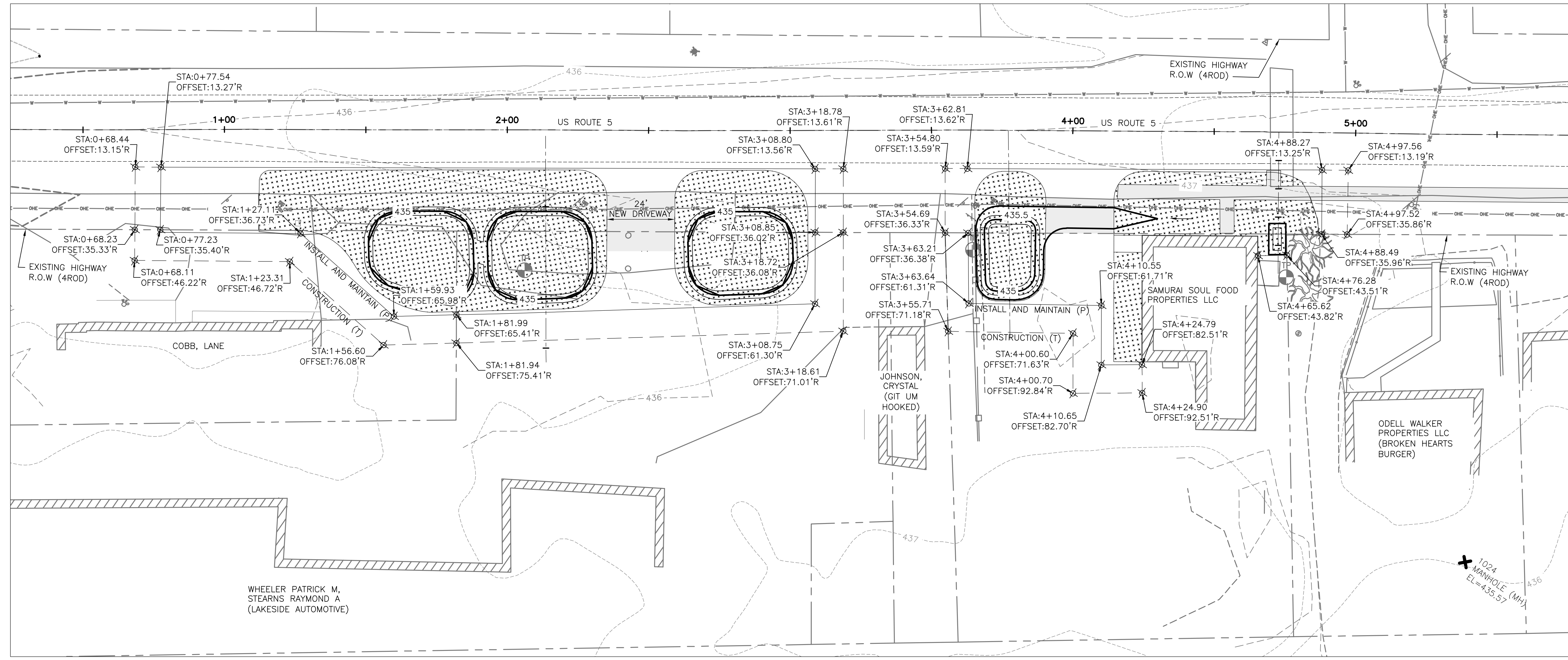


**TYPICAL SWALE DETAIL**  
 NOT TO SCALE





**NOT FOR  
 CONSTRUCTION  
 DRAFT**

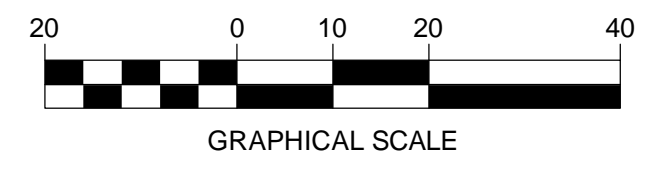


**RIGHT-OF-WAY**

NOTES: EXISTING ROAD RIGHT OF WAY (R.O.W)  
 BASED ON SURVEYED CENTERLINE OF ROAD AND A 4  
 ROD WIDTH. THIS PLAN DOES NOT CONSIDER ANY  
 ROAD MIGRATION, OR OTHER FACTORS THAT MAY  
 AFFECT THE R.O.W. LOCATION.

LEGEND  
 - - - - - TEMPORARY EASEMENT  
 \_\_\_\_\_ PERMANENT EASEMENT

THIS SHEET IS FOR  
 R.O.W. PURPOSES ONLY



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NO.	DATE	DESCRIPTION	BY	CK'D
1	04/03/2026			

TOWN OF FAIRLEE  
 75 TOWN COMMON  
 ROAD, P.O. BOX 95  
 FAIRLEE, VT 05045  
 TAD NUNEZ, TOWN  
 ADMINISTRATOR

FAIRLEE ST MM22(1)  
 ROUTE 5  
 STORMWATER  
 DESIGN AND  
 IMPLEMENTATION

SHEET TITLE  
 RIGHT-OF-WAY  
 LAYOUT SHEET

DRAWN BY JDI	DATE 10/10/2025
CHECKED BY CJR	D&K PROJECT # 128828
PROJ. ENG. CJR	D&K ARCHIVE #

SHEET NUMBER  
**C8**  
 SHEET 11 OF 13