

CITY OF SHOREWOOD, MN

CONSTRUCTION PLANS FOR

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

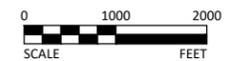
SEPTEMBER 2022



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MAP OF THE
CITY OF SHOREWOOD
HENNEPIN COUNTY, MN



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.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY 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."

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.

PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022



2638 SHADOW LANE, SUITE 200
CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
Email: Chaska@bolton-menk.com
www.bolton-menk.com

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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
TITLE SHEET

SHEET
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EXISTING TOPOGRAPHIC SYMBOLS

	ACCESS GRATE		REGULATION STATION GAS
	AIR CONDITION UNIT		SATELLITE DISH
	ANTENNA		SIGN NON TRAFFIC
	AUTO SPRINKLER CONNECTION		SIGN TRAFFIC
	BARRICADE PERMANENT		SIGNAL CONTROL CABINET
	BASKETBALL POST		SOIL BORING
	BENCH		SIREN
	BIRD FEEDER		TELEPHONE BOOTH
	BOLLARD		TILE INLET
	BUSH		TILE OUTLET
	CATCH BASIN RECTANGULAR CASTING		TILE RISER
	CATCH BASIN CIRCULAR CASTING		TRANSFORMER-ELECTRIC
	CURB STOP		TREE-CONIFEROUS
	CLEAN OUT		TREE-DEAD
	CULVERT END		TREE-DECIDUOUS
	DRINKING FOUNTAIN		TREE STUMP
	DOWN SPOUT		TRAFFIC ARM BARRIER
	FILL PIPE		TRAFFIC SIGNAL
	FIRE HYDRANT		TRASH CAN
	FLAG POLE		UTILITY MARKER
	FLARED END / APRON		VALVE
	FUEL PUMP		VALVE POST INDICATOR
	GRILL		VALVE VAULT
	GUY WIRE ANCHOR		VAULT
	HANDHOLE		VENT PIPE
	HANDICAP SPACE		WATER SPIGOT
	IRRIGATION SPRINKLER HEAD		WELL
	IRRIGATION VALVE BOX		WETLAND DELINEATED MARKER
	LIFT STATION CONTROL PANEL		WETLAND
	LIFT STATION		WET WELL
	LIGHT ON POLE		YARD HYDRANT
	LIGHT-GROUND		
	MAILBOX		

PROPOSED TOPOGRAPHIC SYMBOLS

	CLEANOUT
	MANHOLE
	LIFT STATION
	STORM SEWER CIRCULAR CASTING
	STORM SEWER RECTANGULAR CASTING
	STORM SEWER FLARED END / APRON
	STORM SEWER OUTLET STRUCTURE
	STORM SEWER OVERFLOW STRUCTURE
	CURB BOX
	FIRE HYDRANT
	WATER VALVE
	WATER REDUCER
	WATER BEND
	WATER TEE
	WATER CROSS
	WATER SLEEVE
	WATER CAP / PLUG
	RIP RAP
	DRAINAGE FLOW
	TRAFFIC SIGNS

SURVEY SYMBOLS

	BENCHMARK LOCATION
	CONTROL POINT
	MONUMENT FOUND
	CAST IRON MONUMENT
	STONE MONUMENT

EXISTING TOPOGRAPHIC LINES

	RETAINING WALL
	FENCE
	FENCE-DECORATIVE
	GUARD RAIL
	TREE LINE
	BUSH LINE

SURVEY LINES

	CONTROLLED ACCESS BOUNDARY
	CENTERLINE
	EXISTING EASEMENT LINE
	PROPOSED EASEMENT LINE
	EXISTING LOT LINE
	PROPOSED LOT LINE
	EXISTING RIGHT-OF-WAY
	PROPOSED RIGHT-OF-WAY
	SETBACK LINE
	SECTION LINE
	QUARTER LINE
	SIXTEENTH LINE
	TEMPORARY EASEMENT

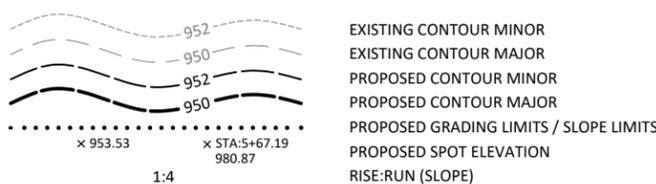
EXISTING UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE

PROPOSED UTILITY LINES

	FORCEMAIN
	SANITARY SEWER
	SANITARY SERVICE
	STORM SEWER
	STORM SEWER DRAIN TILE
	WATERMAIN
	WATER SERVICE
	PIPE CASING

GRADING INFORMATION



HATCH PATTERNS

	BITUMINOUS		GRAVEL
	CONCRETE		

EXISTING PRIVATE UTILITY LINES

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	UNDERGROUND FIBER OPTIC
	UNDERGROUND ELECTRIC
	UNDERGROUND GAS
	UNDERGROUND COMMUNICATION
	OVERHEAD ELECTRIC
	OVERHEAD COMMUNICATION
	OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL:

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-02.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

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BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
LEGEND

SHEET
C0.02

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CONSTRUCTION / SOILS NOTES

GRADING, BASE AND SURFACE:

1. TOP OF THE SUBGRADE IS DEFINED AS THE BOTTOM OF THE SELECT GRANULAR MATERIAL. TOP OF THE GRADING GRADE IS DEFINED AS THE BOTTOM OF THE CLASS 5 AGGREGATE BASE.
2. SUITABLE GRADING MATERIAL ON THIS PROJECT SHALL CONSIST OF ALL SOILS ENCOUNTERED WITH THE EXCEPTION OF TOPSOIL, DEBRIS, ORGANIC MATERIAL, AND OTHER UNSTABLE MATERIAL. NO ORGANIC SOIL SHALL BE ALLOWED IN THE TOP 5 FEET BELOW THE GRADING GRADE. FOR FIELD PURPOSES, ORGANIC SOIL WILL BE IDENTIFIED AS BEING BLACK IN COLOR AND CONTAINING VISIBLE ORGANIC MATTER.
3. STRIP ALL INPLACE TOPSOIL IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING. ALL TOPSOIL STRIPPING WILL BE CONSIDERED COMMON EXCAVATION.
4. UNLESS OTHERWISE NOTED, IN ANY EMBANKMENT CONSTRUCTION, PROVIDE FOR SUBCUTS TO THE DEPTHS AND LOCATIONS SHOWN ON THE TYPICAL SECTIONS. SLOPES FOR THIS CONTRACT WILL BE REPRESENTED WITH VERTICAL:HORIZONTAL NOTATION, Y(V):X(H).
5. TOPSOIL SHALL BE USED THROUGHOUT THE PROJECT AND AS DIRECTED BY THE ENGINEER. NO TOPSOIL SHALL BE ALLOWED TO BE REMOVED FROM THE SITE UNLESS APPROVED BY THE ENGINEER.
6. IN FILL SECTIONS, TOPSOIL AND OTHER UNSUITABLE MATERIALS SHALL BE ELIMINATED FROM THE UPPER 5 FEET OF THE "SUBGRADE" BENEATH THE ROADWAY, WITHIN THE LIMITS SHOWN ON THE TYPICAL SECTIONS.
7. TEST ROLLING WILL BE REQUIRED ON ALL PREPARED SUBGRADE PRIOR TO PLACEMENT OF GRANULAR MATERIAL AND AT ANY LOCATIONS DIRECTED BY THE ENGINEER, WITH A LOADED TANDEM AXLE TRUCK. THIS WORK WILL BE CONSIDERED INCIDENTAL.
8. IN THE PROPOSED CONSTRUCTION, THE CONTRACTOR SHOULD STRIVE TO SUBSTANTIALLY MATCH THE SOILS AND LAYERS INPLACE IN THE UPPER 4 FEET OF THE ROADWAYS. GRANULAR BACKFILL SHALL NOT BE PERMITTED ADJACENT TO IN PLACE NON-GRANULAR SOILS IN ORDER TO PREVENT AN ABRUPT SOILS DIFFERENTIAL.
9. IN ANY CASE WHERE GRANULAR EMBANKMENTS OR BACKFILL JOIN NON-GRANULAR SOIL EMBANKMENTS OR BACKFILL, PROVIDE A (V):20(H) TRANSITION TAPER BETWEEN THE CHANGES IN MATERIAL TO PREVENT AN ABRUPT SOILS DIFFERENTIAL. THE 1(V):20(H) TAPER SHALL BE CONSTRUCTED SO THAT THE GRANULAR BACKFILL MATERIAL OVERLAYS THE ADJACENT NON-GRANULAR SOIL BACKFILL.
10. WHERE SUBCUTS RUN INTO DRIVEWAYS OR LOCAL ROADS, CUT VERTICALLY TO THE BOTTOM OF THE INPLACE SURFACING OR TO THE BOTTOM OF THE NEW SURFACING DESIGN, WHICHEVER IS DEEPER, THEN AT A 1(V):4(H) TAPER TO THE BOTTOM OF THE RECOMMENDED SUBGRADE EXCAVATION.
11. PROVIDE 1(V):20(H) TAPERS WHEN CHANGING SUBCUT DEPTHS OR WHEN GOING FROM GRANULAR MATERIAL TO SUITABLE GRADING MATERIAL.
12. DITCH BOTTOMS, TOE OR FILL, CUT RUNOUTS AND THE TOP EDGE OF THE BACKSLOPES SHALL BE ROUNDED REGARDLESS OF THE SECTION USED ON THE CROSS SECTION SHEETS.
13. STABILIZING AGGREGATE SHALL BE INCORPORATED INTO THE SUBGRADE TO ACHIEVE SATISFACTORY SURFACE STABILITY AT LOCATIONS DEEMED NECESSARY BY THE ENGINEER.
14. ALL SALVAGED ROADWAY MATERIALS SUCH AS CONCRETE, BITUMINOUS AND AGGREGATES MAY BE UTILIZED ACCORDING TO MN/DOT SPECIFICATIONS AND PROJECT SPECIAL PROVISIONS. MATERIALS NOT UTILIZED ON THIS PROJECT WILL BECOME THE PROPERTY OF THE CONTRACTOR AND DISPOSED OF OFF THE RIGHT OF WAY IN ACCORDANCE WITH MN/DOT SPECIFICATION 2104.3C3 AND AS AGREED UPON BY THE ENGINEER.

REMOVALS:

15. PROVIDE A SAWCUT WHERE PLACING NEW PAVEMENT ADJACENT TO INPLACE PAVEMENT TO ENSURE A UNIFORM JOINT. LOCATE ALL SAWCUTS ALONG LANE LINES OR PERPENDICULAR TO LANE LINES. ALL SAWING SHALL BE WET SAWN AND ALL DUST/SLURRY SHALL BE COLLECTED TO THE EXTENT PRACTICABLE BY SWEEPING OR VACUUM AND DISPOSED OF ACCORDING TO THE SPECIFICATIONS. THIS WORK IS INCIDENTAL.
16. PROVIDE FOR THE REMOVAL AND DISPOSAL OF ANY INPLACE SURFACING, OTHER STRUCTURES OR DEBRIS THAT WOULD INTERFERE WITH CONSTRUCTION. ALL SUCH MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL EITHER BE RECYCLED TO THE EXTENT ALLOWED OR DISPOSED OF OFF THE RIGHT OF WAY IN ACCORDANCE WITH SPECIFICATION 2104.C3C. ALL BORINGS WITHIN THE EXISTING ROADWAYS ENCOUNTERED ABOUT 3.5" TO 7" OF BITUMINOUS PAVEMENT OVER APPROXIMATELY 6" TO 11" OF CRUSHED LIMESTONE BASE, SEE GEOTECHNICAL REPORT. NO COMPENSATION WILL BE MADE FOR VARIATIONS IN EXISTING BITUMINOUS PAVEMENT THICKNESS OR EXISTING BASE THICKNESS.
17. CONTRACTOR SHALL PROTECT AND SUPPORT AS NECESSARY ALL TREES, BUILDINGS, LANDSCAPING, RETAINING WALLS, WALKWAYS, DRIVEWAYS, CURB & GUTTER, ETC. UNLESS NOTED OTHERWISE AND APPROVED FOR REMOVAL IN THE FIELD BY THE ENGINEER.
18. CONTRACTOR SHALL SALVAGE AND INSTALL OR PROTECT ALL LANDSCAPING INCLUDING BOULDERS, EDGING, LANDSCAPE ROCK, MULCH, BUSHES, PLANTS, LAWN ORNAMENTS, ETC. THAT ARE DISTURBED BY CONSTRUCTION.

TURF ESTABLISHMENT:

19. CONTRACTOR SHALL STRIP ALL INPLACE TOPSOIL IN AREAS TO BE DISTURBED BY CONSTRUCTION AND REUSE AS SLOPE DRESSING.
20. PLACE A MINIMUM OF 6 INCHES OF TOPSOIL ON ALL AREAS SCHEDULED FOR PERMANENT TURF ESTABLISHMENT.
21. IMPACTED TRESS SHALL BE REMOVED OR TREATED PRIOR TO CONSTRUCTION. IF ADDITIONAL TREES NEED TO BE REMOVED THE CONTRACTOR SHALL INFORM THE ENGINEER IMMEDIATELY.
22. PROVIDE FERTILIZER TYPE 2, PHOSPHOROUS FREE, 20-0-10, OR EQUIVALENT ON ALL AREAS TO BE SEEDED AT AN APPLICATION RATE OF 200 LBS/ACRE. THIS WORK IS INCIDENTAL.
23. PRIOR TO IMPORTING TOPSOIL THE CONTRACTOR SHALL REUSE AND SPREAD SALVAGED TOPSOIL. MATERIAL IMPORTED AND NOT NEEDED WILL NOT BE PAID FOR.

MISCELLANEOUS:

24. WHERE SEDIMENT DEPOSITS IN WATERS OF THE STATE THE MATERIAL MUST BE REMOVED IN 7 DAYS.
25. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MOST CURRENT MINNESOTA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, INCLUDING THE FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS.
26. THE CONTRACTOR IS HEREBY REMINDED OF HIS/HER RESPONSIBILITY UNDER STATE LAW TO CONTACT ALL UTILITIES THAT MAY HAVE FACILITIES IN THE AREA. CONTACT MUST BE MADE THROUGH GOPHER STATE ONE-CALL.
27. WHENEVER THE WORD "INCIDENTAL" IS USES IN THIS PLAN, IT SHALL MEAN THIS WORK WILL BE INCIDENTAL FOR WHICH NO DIRECT COMPENSATION WILL BE MADE.
28. THE GAS MAINS AND SERVICES IN PROJECT LIMITS ARE PROPOSED TO BE REMOVED AND REPLACED PRIOR TO CONSTRUCTION. THE EXISTING GAS MAINS AND SERVICES MUST BE REMOVED WHERE NO LONGER IN SERVICE. THE CONTRACTOR MAY CONTRACT SEPARATELY WITH CENTERPOINT ENERGY TO PERFORM THE REMOVALS.
29. TWO TREES WILL BE OFFERED TO EACH PROPERTY OWNER. THE LOCATIONS AND SPECIES OF EACH TREE WILL BE DETERMINED IN THE FIELD BY THE HOME OWNER.

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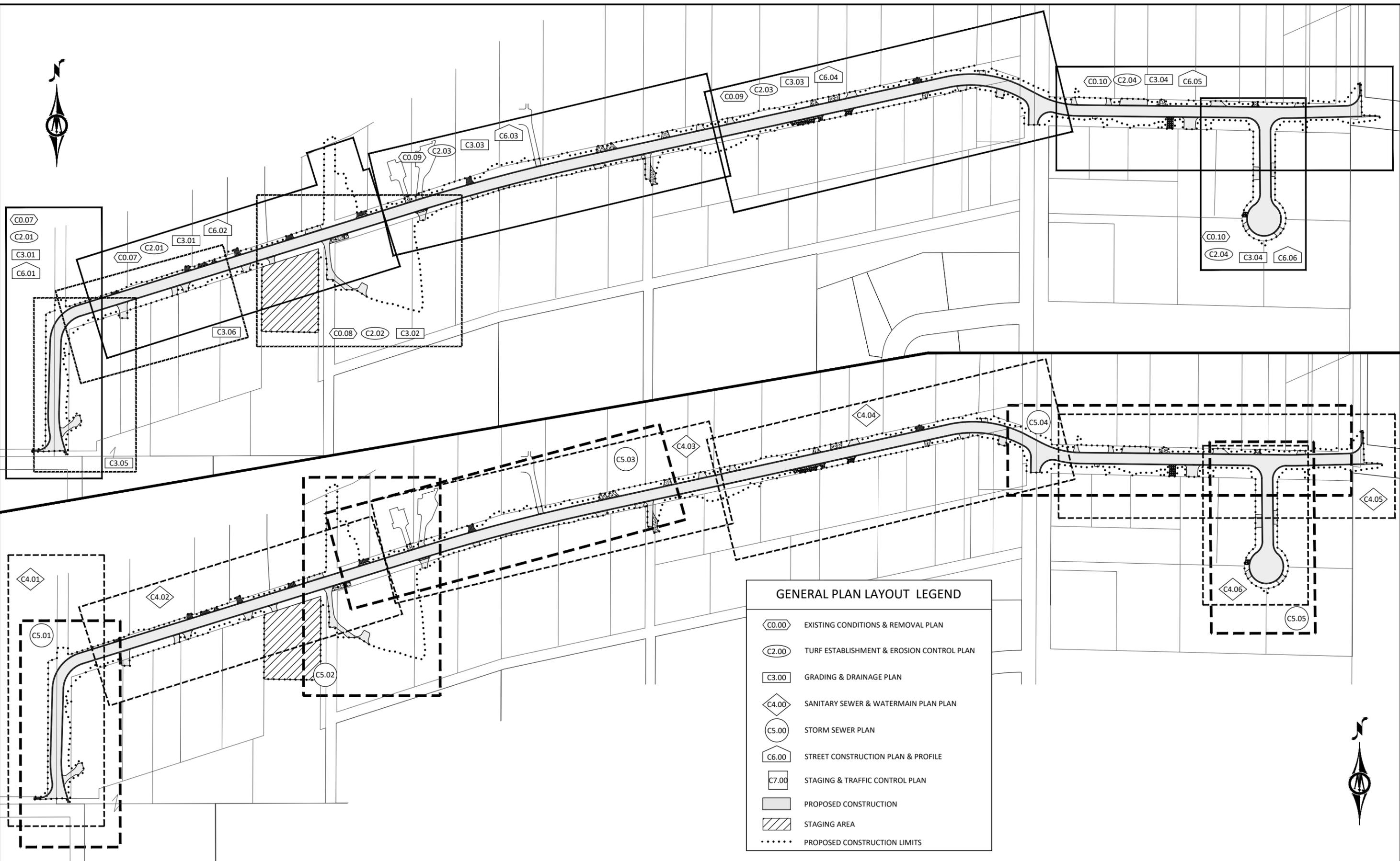


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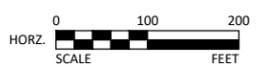
GENERAL PLAN LAYOUT LEGEND

- C0.00 EXISTING CONDITIONS & REMOVAL PLAN
- C2.00 TURF ESTABLISHMENT & EROSION CONTROL PLAN
- C3.00 GRADING & DRAINAGE PLAN
- C4.00 SANITARY SEWER & WATERMAIN PLAN PLAN
- C5.00 STORM SEWER PLAN
- C6.00 STREET CONSTRUCTION PLAN & PROFILE
- C7.00 STAGING & TRAFFIC CONTROL PLAN
- PROPOSED CONSTRUCTION
- STAGING AREA
- PROPOSED CONSTRUCTION LIMITS



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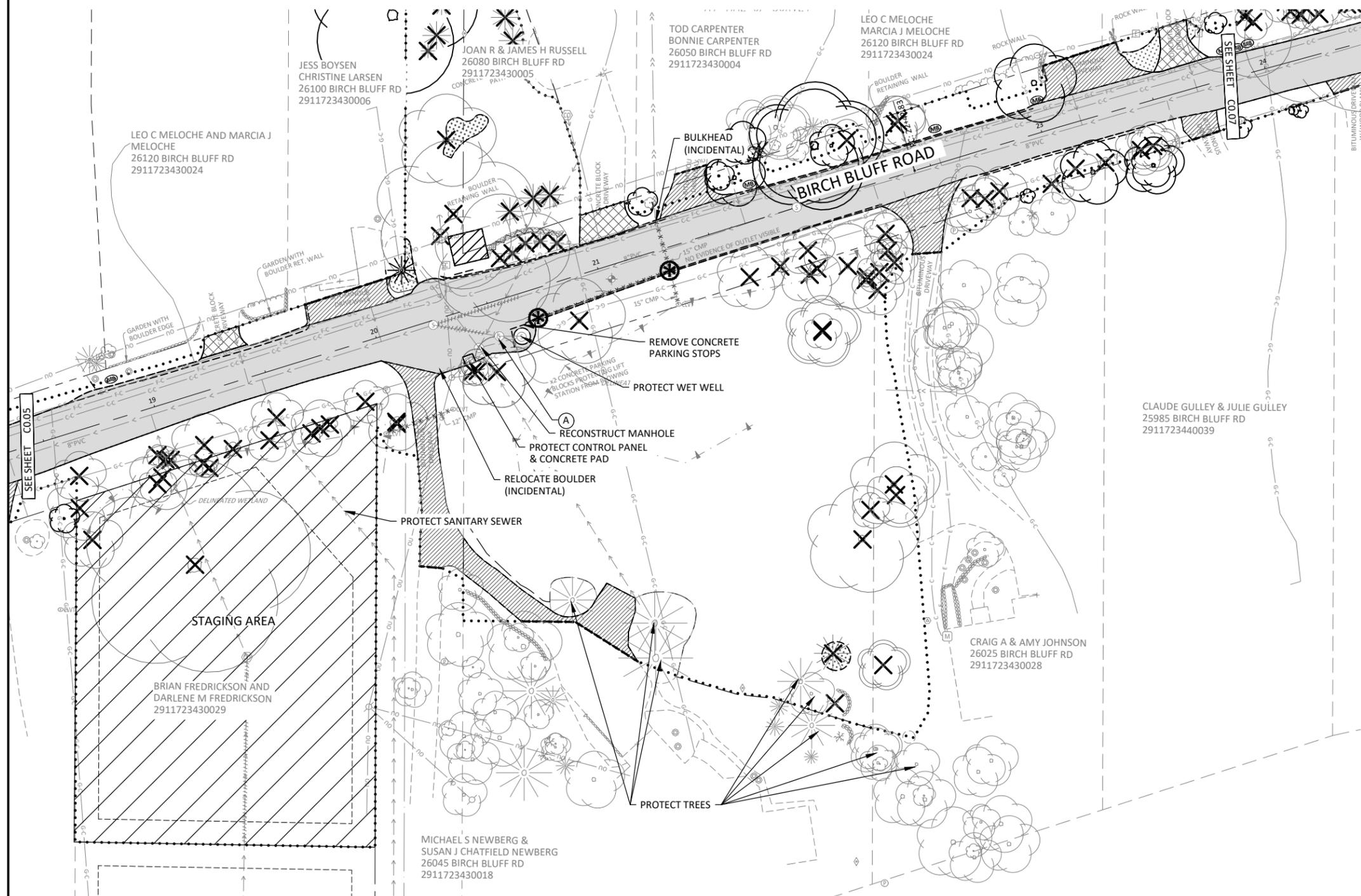


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 GENERAL PLAN LAYOUT

SHEET
 C0.04

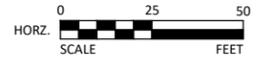


NOTE:
 1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND HAVE BEEN PROVIDED BY THE UTILITY OWNER. IT IS NOT GUARANTEED THAT ALL EXISTING UTILITIES ARE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
 2. SEE UTILITY COORDINATION PLAN SHEETS FOR PROPOSED RELOCATIONS.

REMOVAL LEGEND			
(A)	ADJUST FRAME & RING CASTING	.....	REMOVE PIPE SEWER (STORM)
(B)	RECONSTRUCT MANHOLE	-----	REMOVE PIPE SEWER (SANITARY)
(C)	REMOVE SIGN	XXXXXXXXXX	SALVAGE & REINSTALL RETAINING WALL
MB	SALVAGE & REINSTALL MAILBOX	~~~~~	REMOVE RETAINING WALL
⊗	REMOVE DRAINAGE STRUCTURE	X	CLEAR & GRUB
		⊗	CLEAN ROOT CUTTING
		.....	CONSTRUCTION LIMITS
		-----	SAWCUT CONCRETE PAVEMENT (FULL DEPTH) (INCIDENTAL)
		-----	SAWCUT BITUMINOUS PAYMENT (FULL DEPTH) (INCIDENTAL)
		+++++	SALVAGE & REINSTALL FENCE
		.....	REMOVE LANDSCAPING (INCIDENTAL)
		[Pattern]	REMOVE CONCRETE PAVEMENT
		[Pattern]	REMOVE BITUMINOUS DRIVEWAY
		[Pattern]	SALVAGE AND REINSTALL PAVER DRIVEWAY
		[Pattern]	REMOVE GRAVEL DRIVEWAY
		[Pattern]	REMOVE BITUMINOUS PAVEMENT

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PHILIP J. SCHRUPP
 LIC. NO. 54198 DATE 09/20/2022



2638 SHADOW LANE, SUITE 200
 CHASKA, MINNESOTA 55318
 Phone: (952) 448-8838
 Email: Chaska@bolton-menk.com
 www.bolton-menk.com

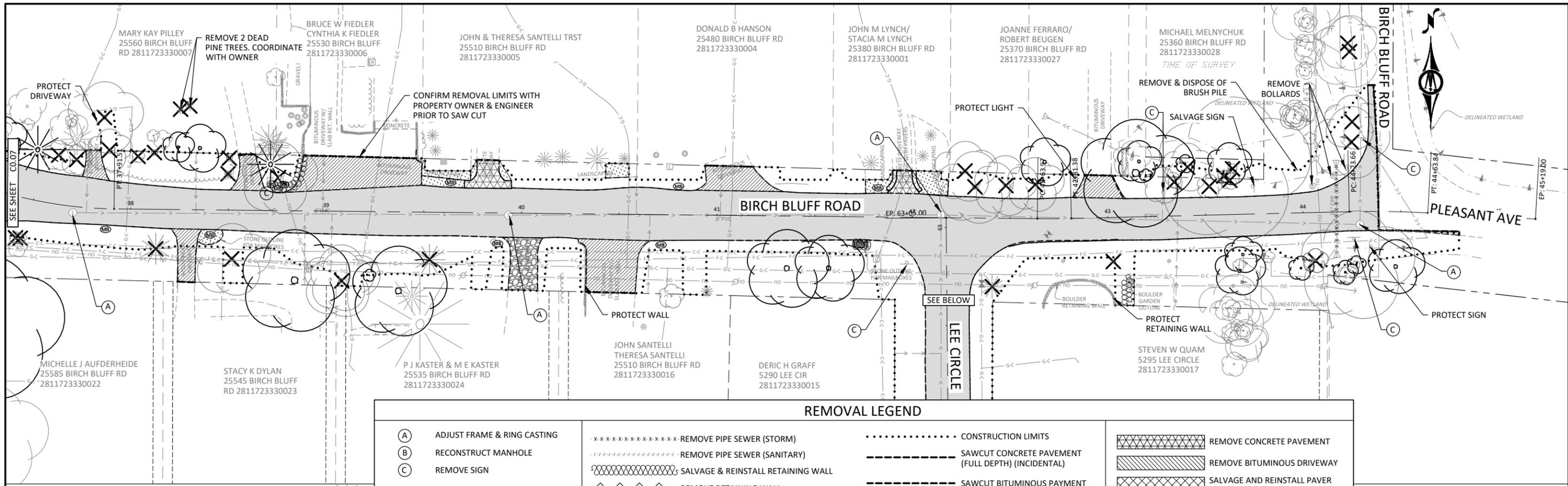
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CITY OF SHOREWOOD

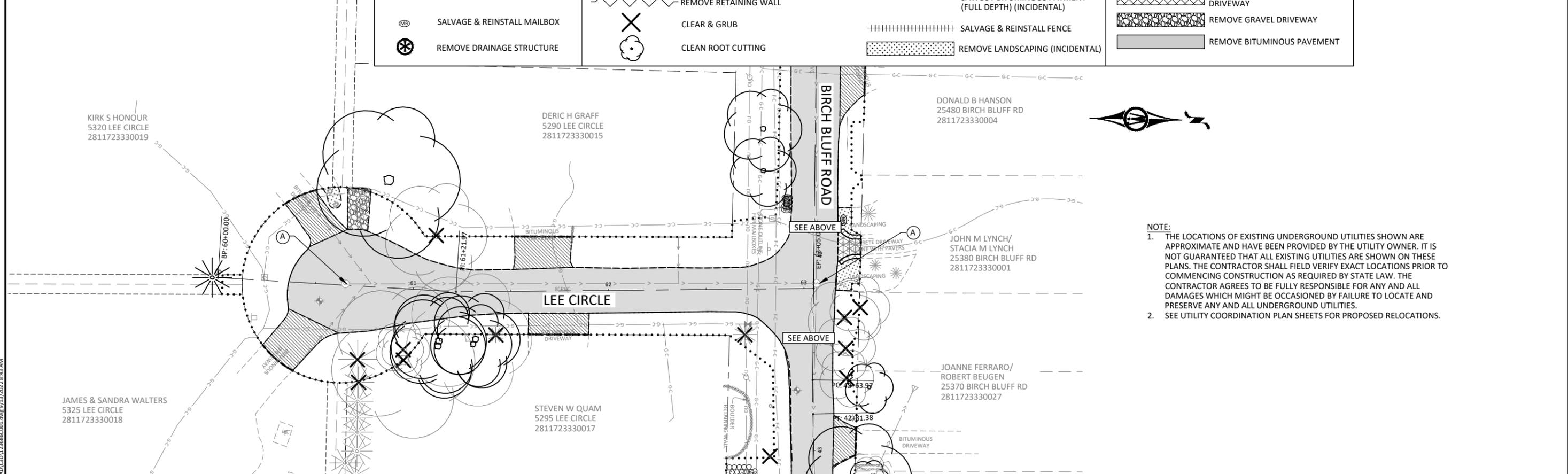
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

EXISTING CONDITIONS & REMOVAL PLAN-26045 & 26025

SHEET
C0.06



REMOVAL LEGEND			
(A)	ADJUST FRAME & RING CASTING	.....	REMOVE PIPE SEWER (STORM)
(B)	RECONSTRUCT MANHOLE	.....	REMOVE PIPE SEWER (SANITARY)
(C)	REMOVE SIGN	~~~~~	SALVAGE & REINSTALL RETAINING WALL
MB	SALVAGE & REINSTALL MAILBOX	~~~~~	REMOVE RETAINING WALL
⊗	REMOVE DRAINAGE STRUCTURE	X	CLEAR & GRUB
		⊗	CLEAN ROOT CUTTING
		.....	CONSTRUCTION LIMITS
		-----	SAWCUT CONCRETE PAVEMENT (FULL DEPTH) (INCIDENTAL)
		-----	SAWCUT BITUMINOUS PAYMENT (FULL DEPTH) (INCIDENTAL)
		+++++	SALVAGE & REINSTALL FENCE
		.....	REMOVE LANDSCAPING (INCIDENTAL)
		XXXXX	REMOVE CONCRETE PAVEMENT
		|||||	REMOVE BITUMINOUS DRIVEWAY
		XXXXX	SALVAGE AND REINSTALL PAVER DRIVEWAY
		.....	REMOVE GRAVEL DRIVEWAY
		.....	REMOVE BITUMINOUS PAVEMENT



NOTE:
 1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ARE APPROXIMATE AND HAVE BEEN PROVIDED BY THE UTILITY OWNER. IT IS NOT GUARANTEED THAT ALL EXISTING UTILITIES ARE SHOWN ON THESE PLANS. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
 2. SEE UTILITY COORDINATION PLAN SHEETS FOR PROPOSED RELOCATIONS.

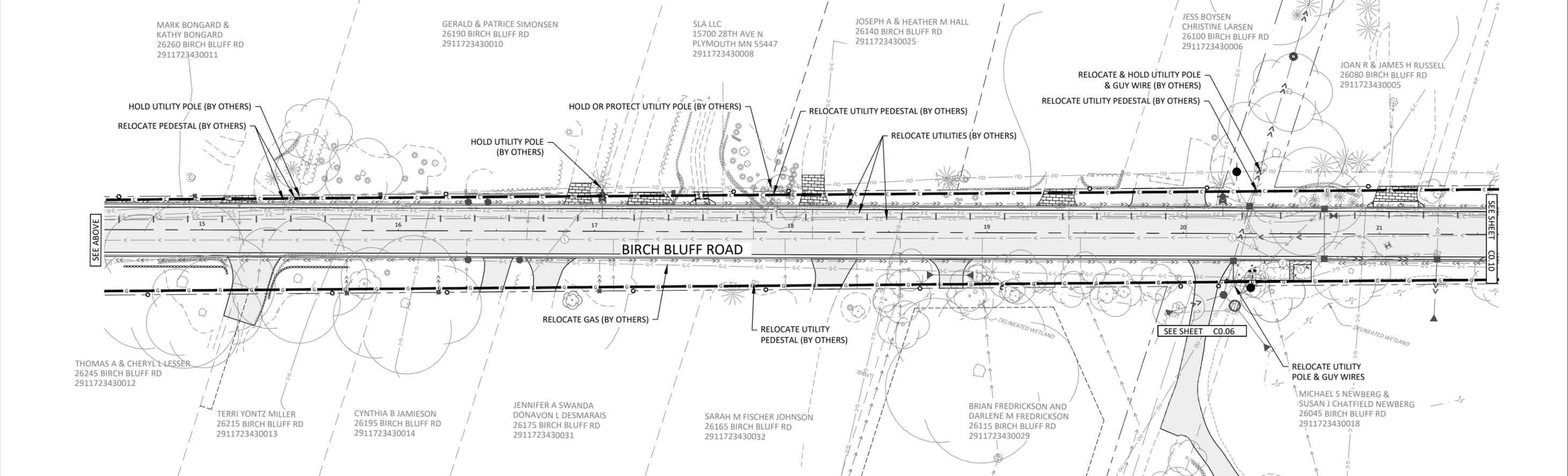
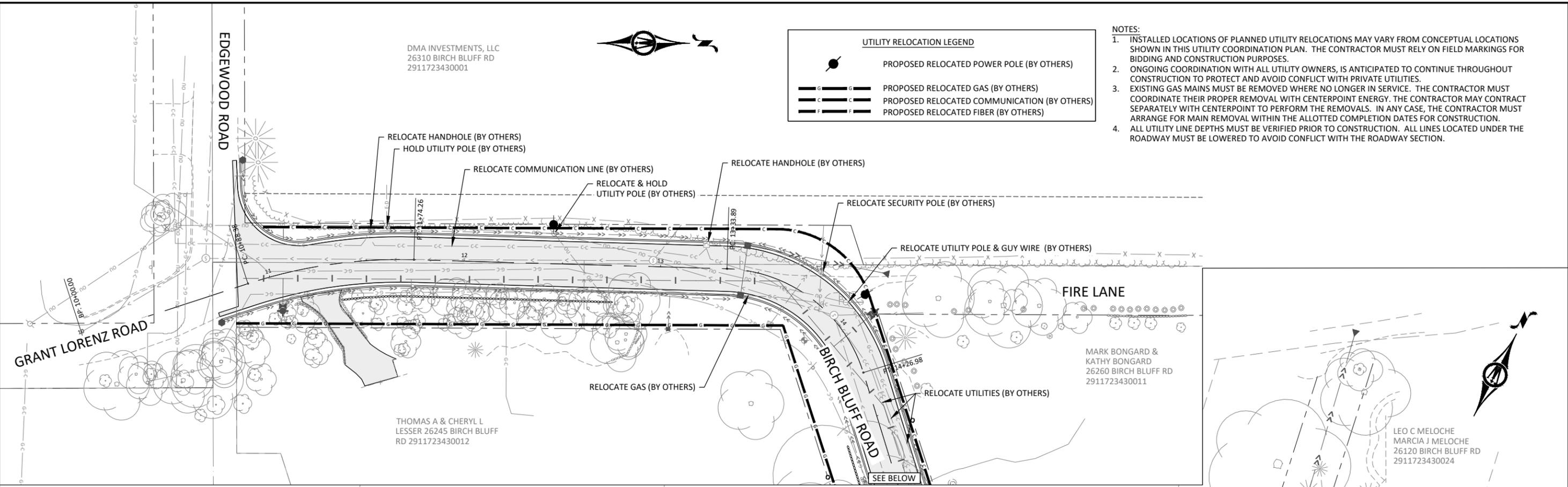


DMA INVESTMENTS, LLC
26310 BIRCH BLUFF RD
2911723430001

UTILITY RELOCATION LEGEND

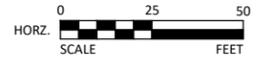
- PROPOSED RELOCATED POWER POLE (BY OTHERS)
- PROPOSED RELOCATED GAS (BY OTHERS)
- PROPOSED RELOCATED COMMUNICATION (BY OTHERS)
- PROPOSED RELOCATED FIBER (BY OTHERS)

- NOTES:**
1. INSTALLED LOCATIONS OF PLANNED UTILITY RELOCATIONS MAY VARY FROM CONCEPTUAL LOCATIONS SHOWN IN THIS UTILITY COORDINATION PLAN. THE CONTRACTOR MUST RELY ON FIELD MARKINGS FOR BIDDING AND CONSTRUCTION PURPOSES.
 2. ONGOING COORDINATION WITH ALL UTILITY OWNERS, IS ANTICIPATED TO CONTINUE THROUGHOUT CONSTRUCTION TO PROTECT AND AVOID CONFLICT WITH PRIVATE UTILITIES.
 3. EXISTING GAS MAINS MUST BE REMOVED WHERE NO LONGER IN SERVICE. THE CONTRACTOR MUST COORDINATE THEIR PROPER REMOVAL WITH CENTERPOINT ENERGY. THE CONTRACTOR MAY CONTRACT SEPARATELY WITH CENTERPOINT TO PERFORM THE REMOVALS. IN ANY CASE, THE CONTRACTOR MUST ARRANGE FOR MAIN REMOVAL WITHIN THE ALLOTTED COMPLETION DATES FOR CONSTRUCTION.
 4. ALL UTILITY LINE DEPTHS MUST BE VERIFIED PRIOR TO CONSTRUCTION. ALL LINES LOCATED UNDER THE ROADWAY MUST BE LOWERED TO AVOID CONFLICT WITH THE ROADWAY SECTION.



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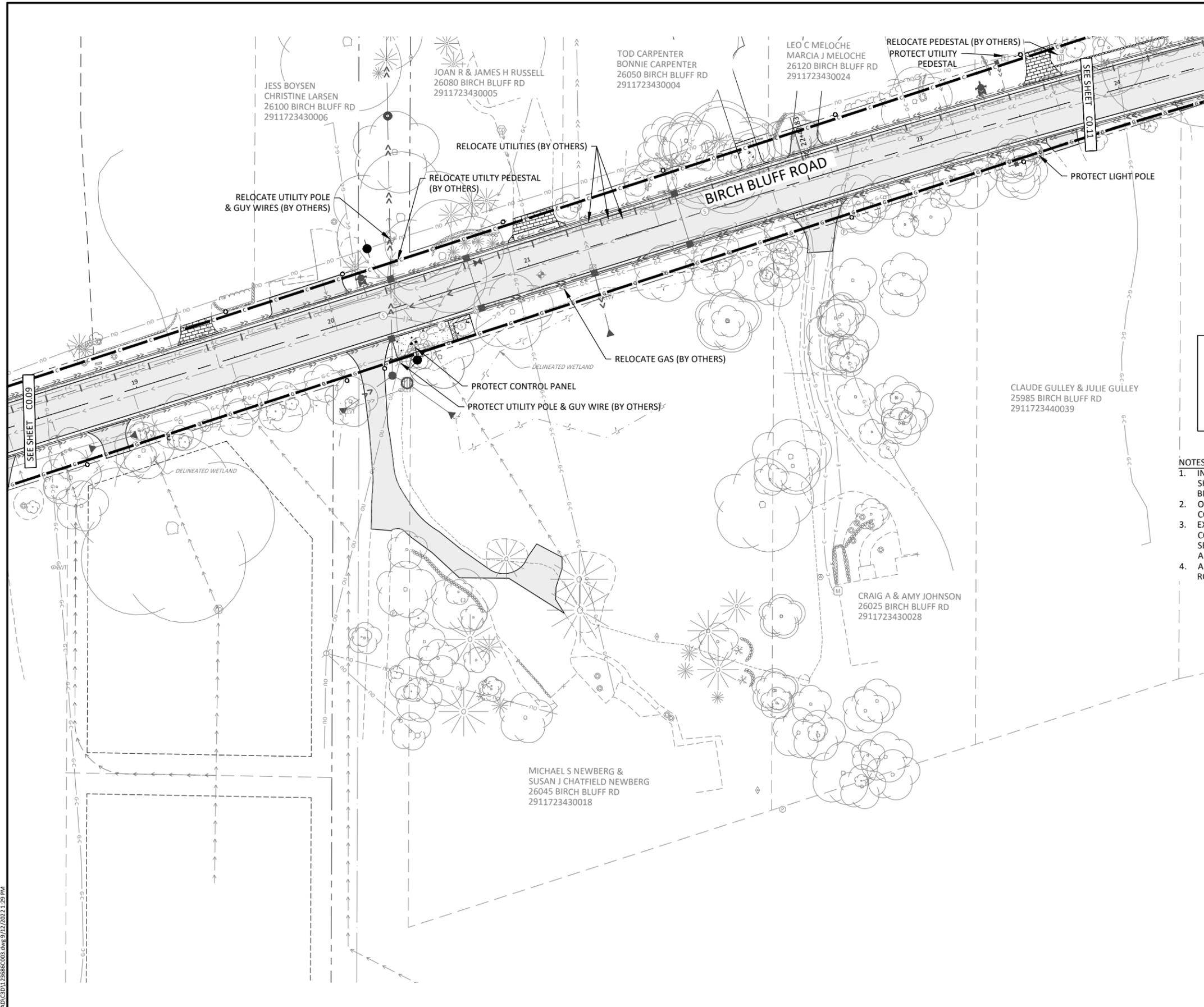


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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
UTILITY COORDINATION PLAN

SHEET
C0.09



UTILITY RELOCATION LEGEND

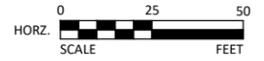
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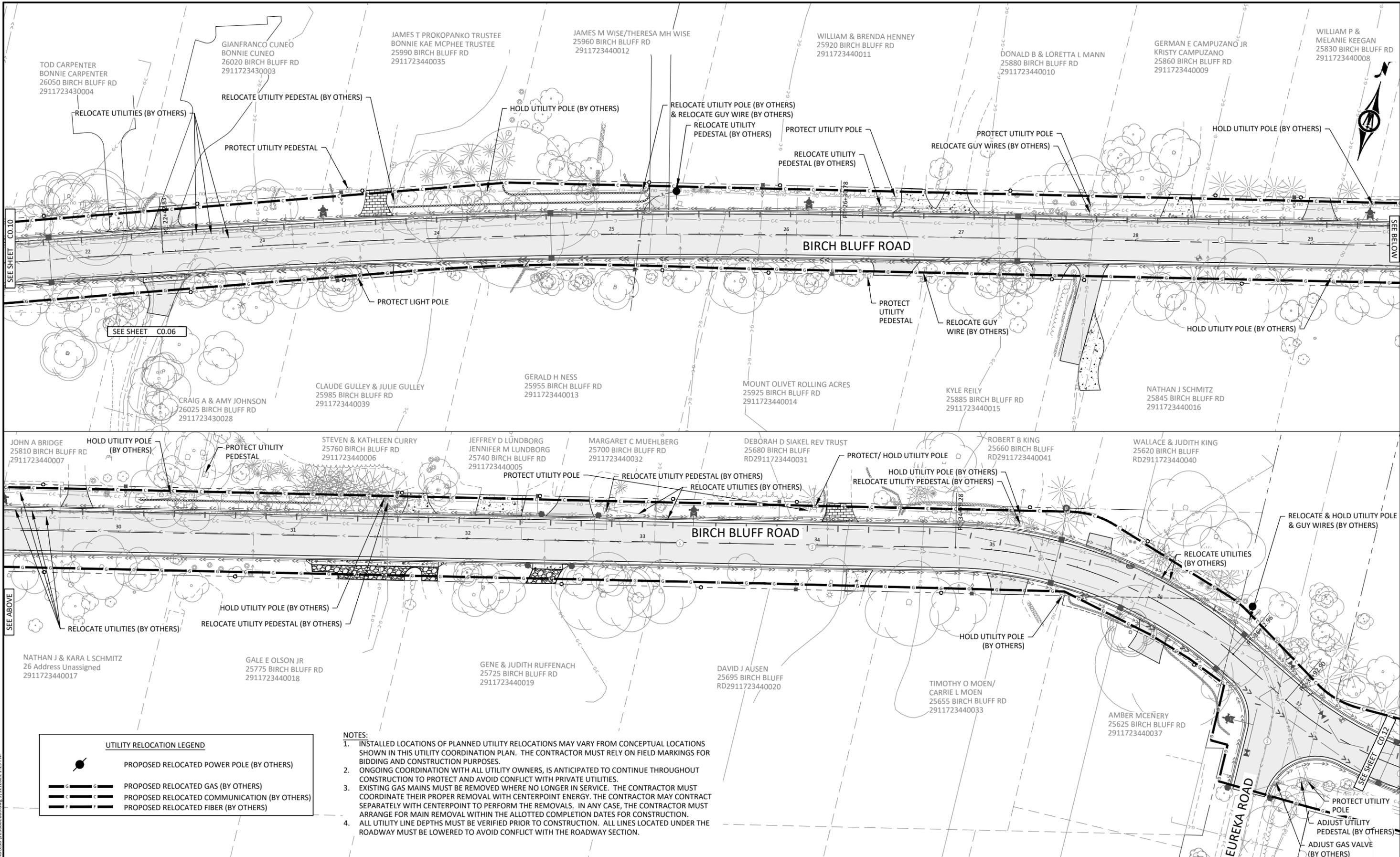


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UTILITY COORDINATION PLAN

SHEET
C0.10

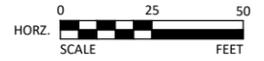


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UTILITY RELOCATION LEGEND	
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	PROPOSED RELOCATED GAS (BY OTHERS)
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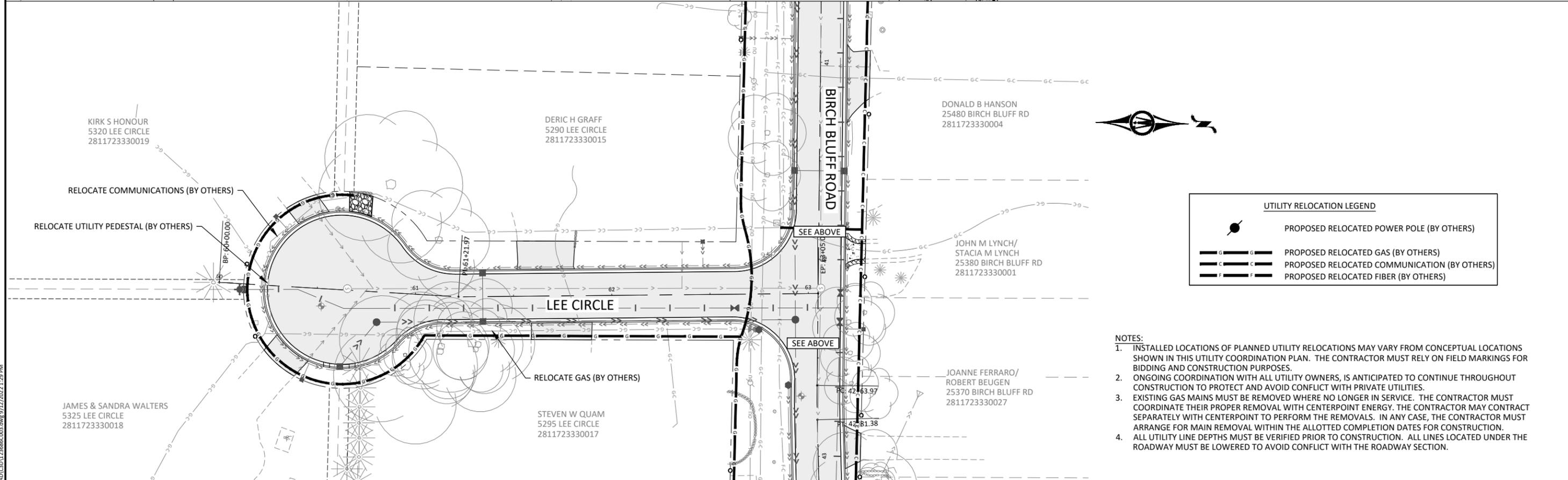
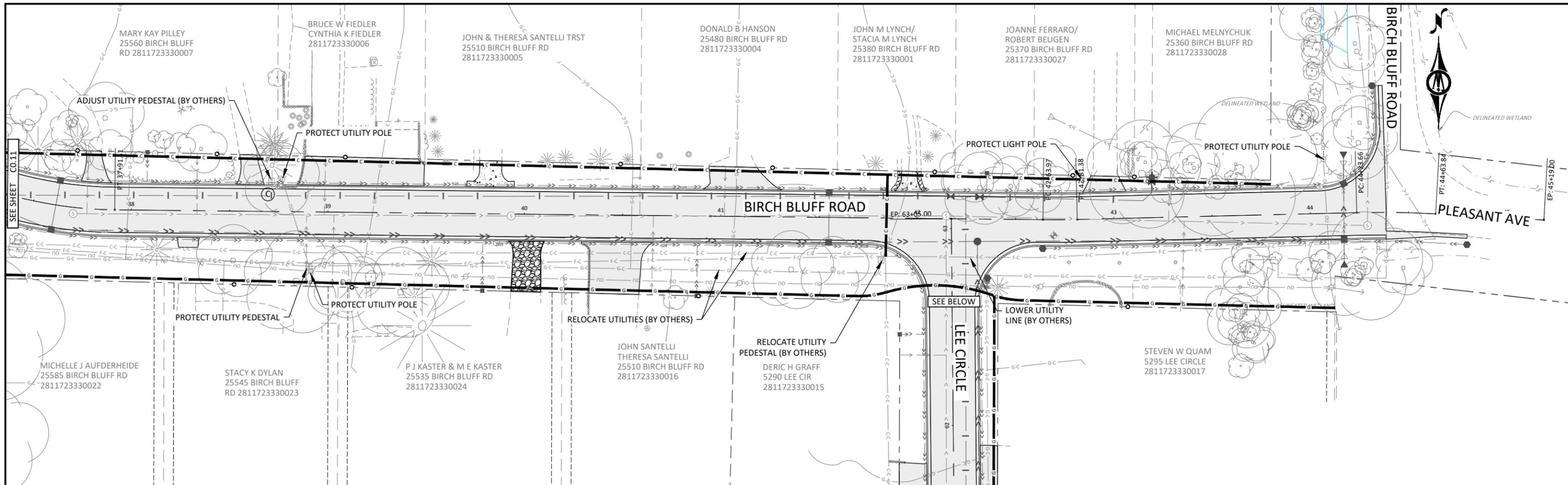


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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
UTILITY COORDINATION PLAN

SHEET
C0.11



UTILITY RELOCATION LEGEND	
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UTILITY COORDINATION PLAN

SHEET
C0.12

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A		EARTHWORK BALANCE [2] [3]									
EXCAVATION (CU YD)										EMBANKMENT (CU YD)	
				COMMON TOPSOIL & UNSUITABLE MATERIAL (AVAIL.)=							
				1,321 (EV) - [1,271 (CV) x 1.4] = -459 (LV) [4] [5]							
EXCAVATION - COMMON=		13,459 (EV) [1]		14,082 (EV)		SUITABLE GRADING MATERIAL (AVAIL.)= 12,761 (EV) - [712 (CV) x 1.2] = 11,907 (LV)		1,983 (CV)		1,271 (CV) =SLOPE DRESSING [4]	
EXCAVATION - SUBGRADE=		623 (EV) [6]								712 (CV) =SUITABLE GRADING	

EARTHWORK SUMMARY						B
SECTION	EXCAVATION		EMBANKMENT		TOTAL EXCAVATION (CU YD)	TOTAL EMBANKMENT (CU YD)
	COMMON (EV)	SUBGRADE (EV)	SUITABLE GRADING (CU YD)	COMMON TOPSOIL (CV)		
	(CU YD)	(CU YD)	(CU YD)	(CU YD)		
	13,436	0	-573	1,271	13,436	698
TOTAL	13,436	0	-573	1,271	13,436	698

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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
TABLES

SHEET
C1.01

STORM SEWER TABLE

STRUCTURE		LOCATION		DRAINAGE STRUCTURE								RC PIPE SEWER														
FLOWS FROM	FLOWS TO	ALIGNMENT	STATION (1)	DESIGN 2'X3'	DESIGN 4020 - 48"	DESIGN 4020-72"	DESIGN 4022 - 48"	DESIGN 4022-60"	DESIGN 4022-72"	CASTING ASSEMBLY	RIM ELEV.	UP STREAM INVERT ELEV.	DOWN STREAM INVERT ELEV.	12" RC PIPE SEWER DES 3006 CL. V (3)	15" RC PIPE SEWER DES 3006 CL. V (3)	18" RC PIPE SEWER DES 3006 CL. III (3)	24" RC PIPE SEWER DES 3006 CL. III (3)	36" RC PIPE SEWER DES 3006 CL. III (3)	43" X 26" ARCH PIPE SEWER CL. IIA (3)	12" RC PIPE APRON	15" RC PIPE APRON	24" RC PIPE APRON	43" X 26" ARCH PIPE APRON	CONNECT TO EXISTING STORM STRUCTURE	CONNECT TO EXISTING STORM SEWER	
				(2)	(2)	(2)	(2)	(2)	(2)	(2)	(4,5)	FT.	FT.	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	LIN FT	EACH	EACH	EACH	EACH	EACH
FES - 100		BIRCH BLUFF	13+96.53																		1					
101	FES - 100	BIRCH BLUFF	13+42.63	4.0							941.15	937.12	936.75	74												
102	101	BIRCH BLUFF	13+42.63	3.9							941.14	937.24	937.12	26												
FES - 200		BIRCH BLUFF	20+87.36																							
201	FES - 200	BIRCH BLUFF	20+55.87		3.9						933.25	929.34	929.17				113									
202	201	BIRCH BLUFF	20+33.76						12.0		937.47	929.45	929.34				80									
203	202	BIRCH BLUFF	20+25.68						8.1		937.65	929.54	929.45		29											
204	203	BIRCH BLUFF	20+20.67			5.6					936.10	930.50	930.10				18									
FES - 205		BIRCH BLUFF	19+91.90																		1					
206	204	BIRCH BLUFF	20+26.48								934.00	927.50	927.40					8								
FES - 207		BIRCH BLUFF	20+43.26																28							
FES - 300		CENTRAL EAST STORM	0+79.58																							
301	FES - 300	CENTRAL EAST STORM	0+81.18					8.7			937.84	933.10	930.50					32								
302	301	CENTRAL EAST STORM	0+23.66	3.4							937.22	933.80	933.50					58								
302A	302	CENTRAL EAST STORM	0+23.67	3.1							937.22	934.10	933.90					26								
303	301	BIRCH BLUFF	21+77.99				4.1				939.31	935.20	933.20					49								
303A	303	BIRCH BLUFF	21+77.99	3.1							939.33	936.26	936.05	26												
304	303	CENTRAL EAST STORM	4+16.25	4.3							958.48	954.23	935.27					287								
304A	304	CENTRAL EAST STORM	4+16.25	4.1							958.49	954.35	954.23	26												
305	304	CENTRAL EAST STORM	6+82.97	4.5							968.91	964.39	954.23	267												
305A	305	CENTRAL EAST STORM	7+08.30	4.4							968.91	964.52	964.39	26												
400	401	25660 Storm Addition	0+10.04		3.1						970.59	967.49	967.40	19												
401	402	25660 Storm Addition	0+28.33	4.7							972.07	967.40	967.27	26												
402	404	25660 Storm Addition	0+53.67	4.8							972.07	967.31	967.09	43												
404	405	25660 Storm Addition	0+96.22	4.5							971.61	967.09	966.77	65												
405	406	BIRCH BLUFF	36+50.67	4.4							971.17	966.77	965.46	114												
405A	405	BIRCH BLUFF	36+50.58	4.3							971.17	966.90	966.77	26												
406	407	BIRCH BLUFF	37+61.03	4.2							969.63	965.46	939.52	396												
406A	406	BIRCH BLUFF	37+61.89	4.0							969.61	965.59	965.46	26												
407	408	BIRCH BLUFF	41+55.01	4.7							944.27	939.52	933.61		76											
407A	407	BIRCH BLUFF	41+55.01	4.6							944.27	939.65	939.52	26												
408	409	BIRCH BLUFF	42+30.71		9.2						939.24	930.07	929.13					187								
409	411	BIRCH BLUFF	44+16.91					4.8			933.90	929.13	929.08													
FES - 410		BIRCH BLUFF	44+16.69																							
411	FES - 412	BIRCH BLUFF	44+17.37				3.7				932.78	929.08	929.04													
FES - 412		BIRCH BLUFF	44+17.64																							
500	408	LEE CIRCLE	1+08.43	6.4							937.30	930.86	930.07	160												
500A	500	LEE CIRCLE	1+08.35	4.4							938.02	933.63	933.38	25												
501	500	LEE CIRCLE	0+54.30		4.735						935.87	931.13	930.86	55												
502	501	LEE CIRCLE	0+25.00	3.7							934.98	931.28	931.13	30												
SUBTOTALS				89.5	20.9	5.6	7.8	13.5	20.1						1487	557	187	272	8	28	2	1	3	1		

- Notes:**
- (1) STATIONS ARE TO THE CENTER OF STRUCTURE
 - (2) ALL STRUCTURES GREATER THAN 4.5' SHALL HAVE STEPS (INCIDENTAL)
 - (3) PIPE LENGTH SHOWN ON THE TABLE INCLUDES APRON LENGTH
 - (4) STRUCTURES ST-11 & ST-15 TO BE PER DETAIL STO-5 ON SHEET C8.03
 - (5) STRUCTURE ST-7 TO BE PER DETAIL STO-17 ON SHEET C8.03 AND DETAIL ON THIS SHEET

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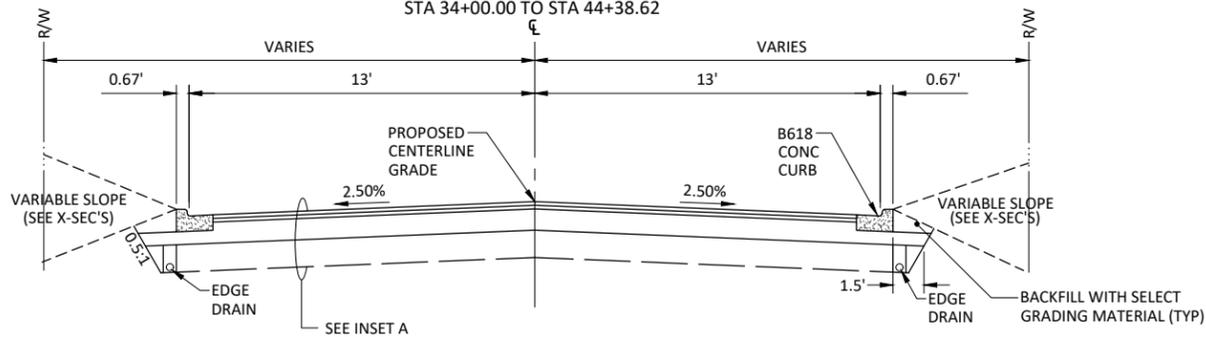
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
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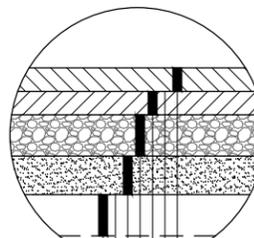
SHEET
C1.02

TYPICAL SECTION- BIRCH BLUFF CROWNED

STA 12+75.00 TO STA 14+26.98
 STA 20+75.00 TO STA 25+75.00
 STA 27+50.00 TO 29+75.00
 STA 34+00.00 TO STA 44+38.62



INSET A
NOT TO SCALE



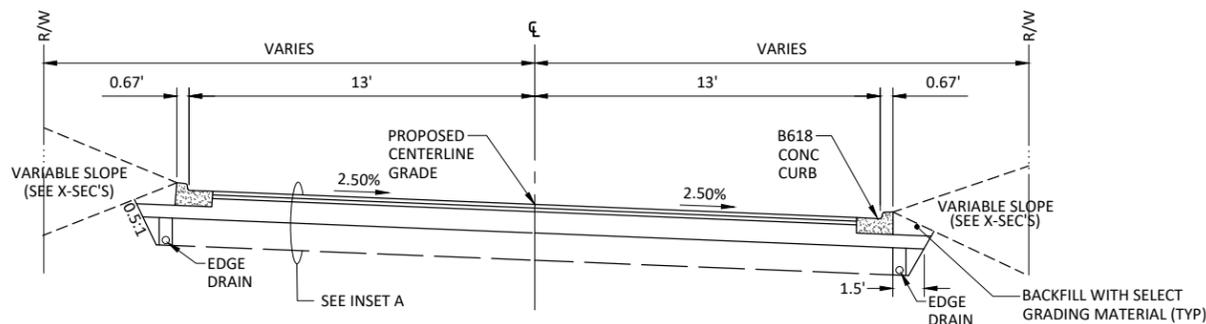
- 2" TYPE SP 9.5 WEARING COURSE (SPWEA240C) (2360)
- BITUMINOUS TACK COAT (2357) (INCIDENTAL)
- 2" TYPE SP 12.5 NON WEARING COURSE (SPNWB240C) (2360)
- 8" AGGREGATE BASE, CL 5 (100% CRUSHED LIMESTONE) (2211)
- 24" SELECT GRANULAR EMBANKMENT (2106)
- GEOTEXTILE FABRIC, TYPE V (2105)
- SUBGRADE PREPARATION (2112) (INCIDENTAL)

GENERAL NOTES:

1. UNLESS OTHERWISE SPECIFIED, THE CROSS SLOPE OF THE GRADING GRADE MATCHES THE CROSS SLOPE OF THE DRIVING LANES.
2. PLACE BITUMINOUS TACK COAT BETWEEN ALL BITUMINOUS LIFTS AND ON EXISTING BITUMINOUS PRIOR TO PAVING WEAR COURSE. PLACE TACK COAT ON ALL VERTICAL FACES OF SAWCUT BITUMINOUS SURFACES (INCIDENTAL).
3. INSLOPES SHOWN ARE NORMAL. SEE CROSS SECTIONS FOR VARIATIONS.
4. ANY VARIATIONS FROM THE TYPICAL SECTION DIMENSIONS ARE SHOWN ON THE PLAN DRAWINGS.
5. PAVEMENT CROSS SLOPES VARY. SEE CONSTRUCTION PLANS FOR PAVEMENT SLOPES.
6. PAVEMENT SLOPES AT INTERSECTION LOCATIONS MAY VARY FROM THOSE SHOWN ON THE TYPICAL SECTION.
7. BOULEVARD SLOPES VARY. CONTRACTOR SHALL ENSURE POSITIVE DRAINAGE.
8. PAVEMENT CROSS-SLOPES TRANSITIONS 1.0% EVERY 25 FEET. SEE CONSTRUCTION PLANS.

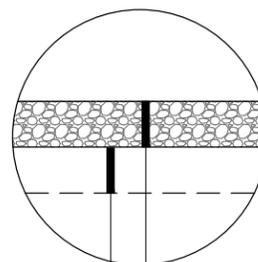
TYPICAL SECTION- BIRCH BLUFF SHEET FLOW RIGHT

STA 14+26.98 TO STA 15+96.00
 STA 29+75.00 TO STA 34+00.00



6" AGGREGATE DRIVEWAY

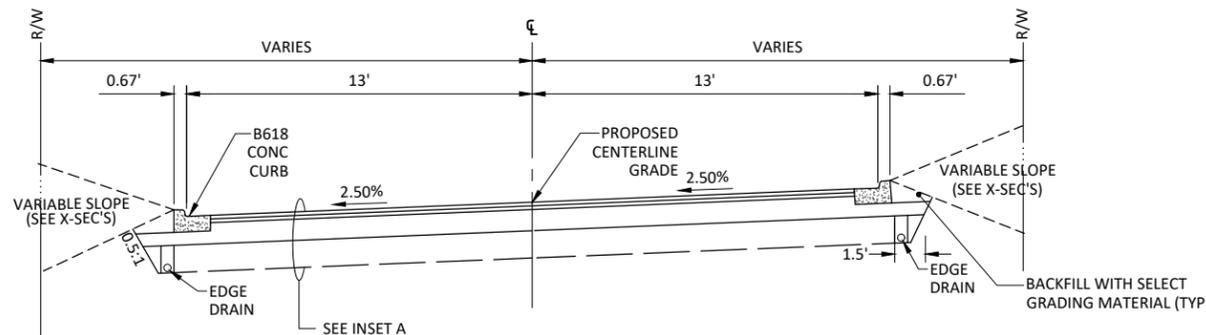
NOT TO SCALE



- 6" AGGREGATE BASE, CL 2
- SUBGRADE PREPARATION (2111)

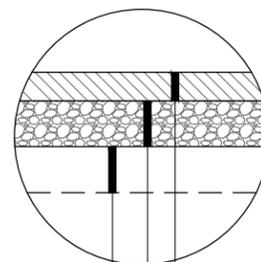
TYPICAL SECTION- BIRCH BLUFF SHEET FLOW LEFT

STA 10+95.52 TO STA 12+75.00
 STA 15+96.00 TO STA 20+75.00
 STA 25+75.00 TO 27+50.00



6" CONCRETE DRIVEWAY

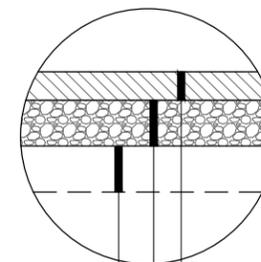
NOT TO SCALE



- 6" CONCRETE (2521)
- 6" AGGREGATE BASE, CL 5 (2211)(INCIDENTAL)
- SUBGRADE PREPARATION (2111)

4" CONCRETE WALK

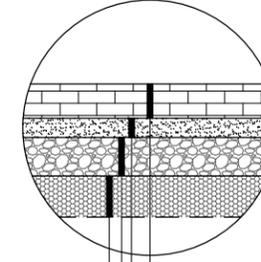
NOT TO SCALE



- 4" CONCRETE WALK (2521)
- 6" AGGREGATE BASE, CL 5 (2211)(INCIDENTAL)
- SUBGRADE PREPARATION (2111)

SALVAGED PAVERS

NOT TO SCALE



- SALVAGED PAVERS
- 1" SETTING SAND (INCIDENTAL)
- 6" AGGREGATE BASE CL 5 (2211) (INCIDENTAL)
- SUBGRADE PREPARATION (2111)

NOTES:

1. DRAINTILE SHALL BE INSTALLED BEHIND CURB DRAINTILE TO BE INSTALLED AS REQUIRED TO DRAIN ALL SELECT GRANULAR FILL AREAS. (SEE STANDARD PLATE NO. STO-13).
2. THE CITY RESERVES THE RIGHT TO INCREASE THE STREET SECTION BASED ON SOIL CONDITIONS.
3. CONSTRUCT FINAL LIFT OF BITUMINOUS WEAR COURSE ONE FREEZE/THAW CYCLE AFTER UTILITIES ARE INSTALLED.

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 PHILIP J. SCHRUPP
 LIC. NO. 54198 DATE 09/20/2022

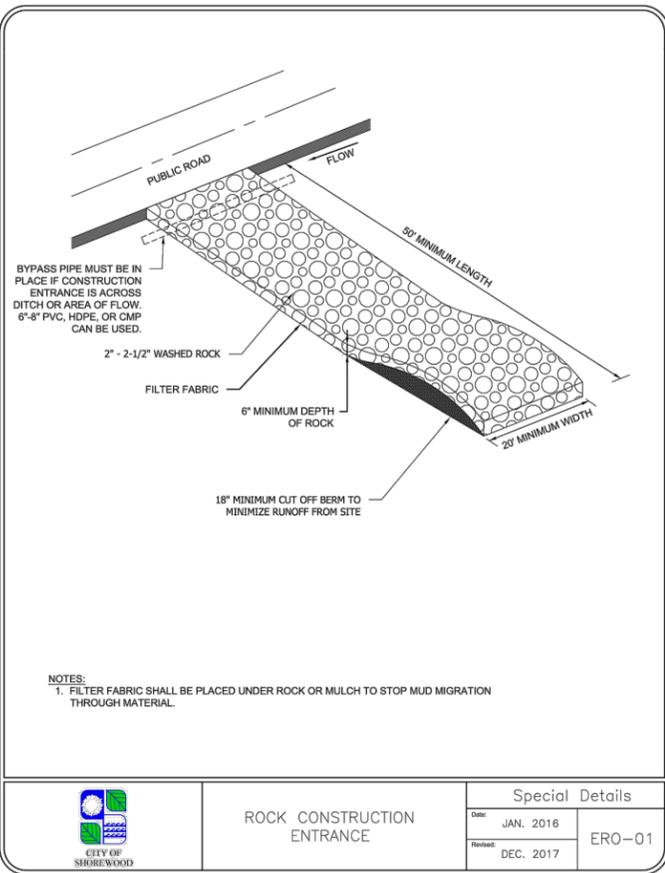


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 CHASKA, MINNESOTA 55318
 Phone: (952) 448-8838
 Email: Chaska@bolton-menk.com
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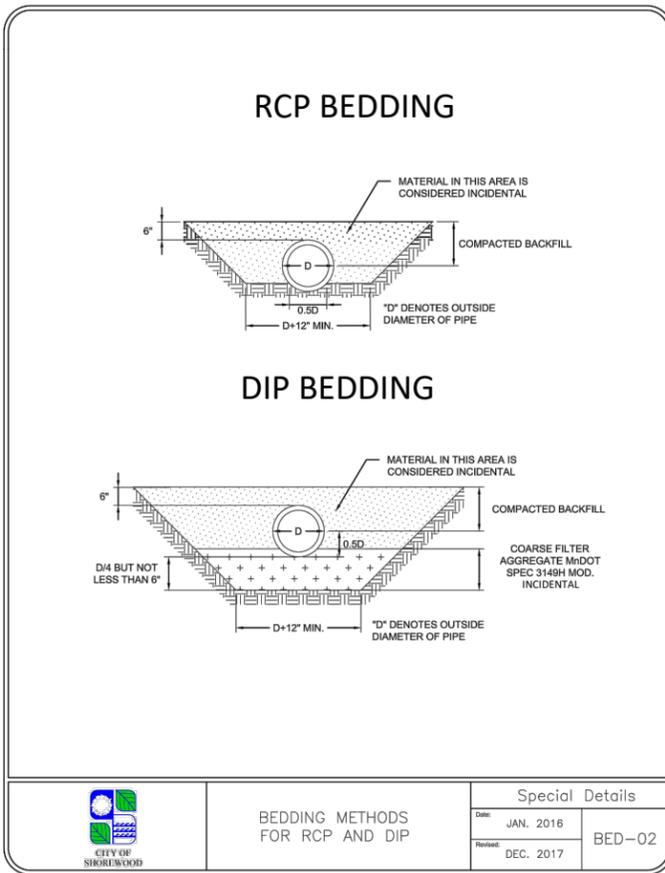
DESIGNED	NO.	ISSUED FOR	DATE
PJS/KJW			
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SCD			
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ALB			
CLIENT PROJ. NO.			
0C1.123686			

CITY OF SHOREWOOD
 BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
 TYPICAL SECTIONS

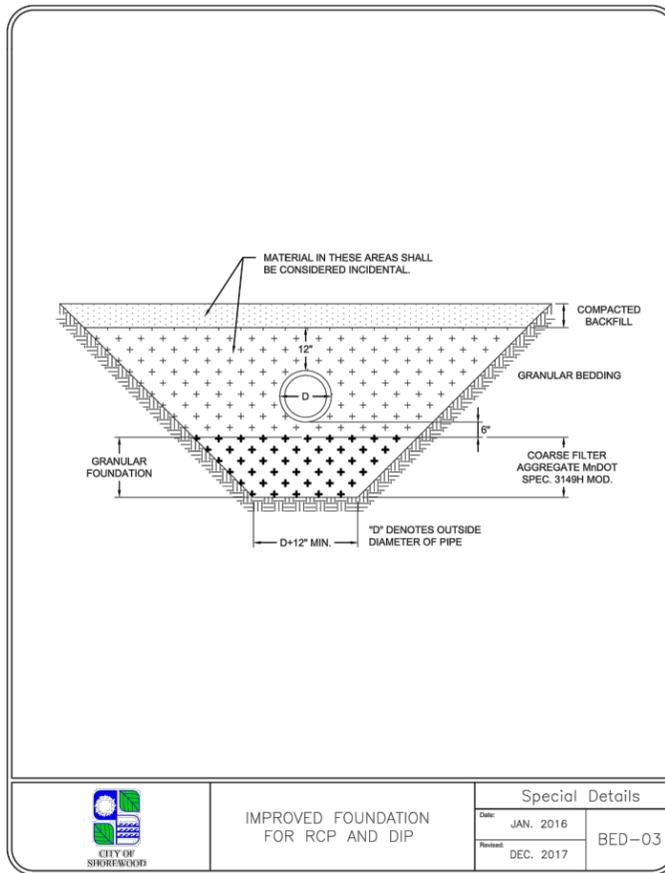
SHEET
C1.03



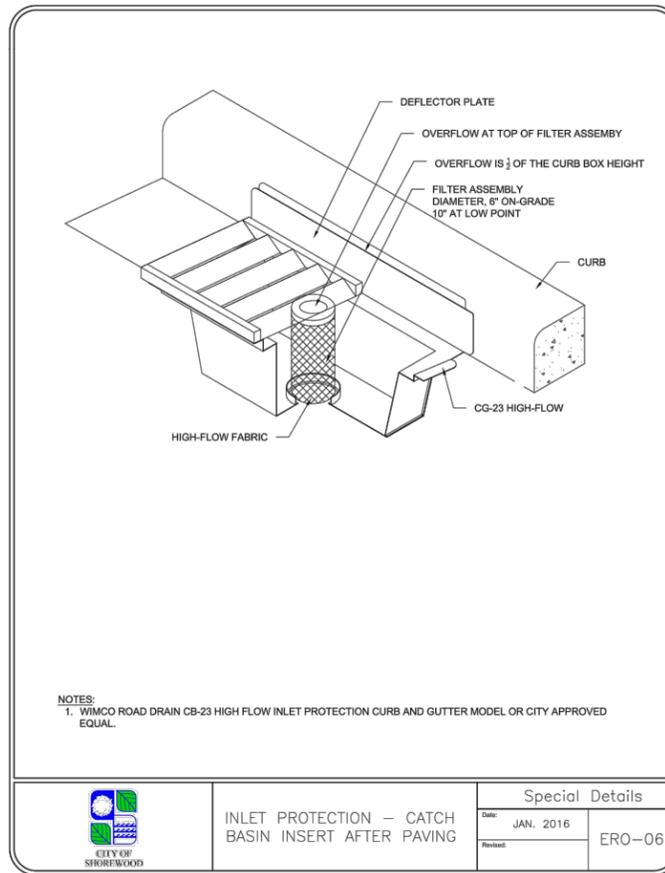
	ROCK CONSTRUCTION ENTRANCE	Special Details	
		Date: JAN. 2016	ERO-01
		Revised: DEC. 2017	



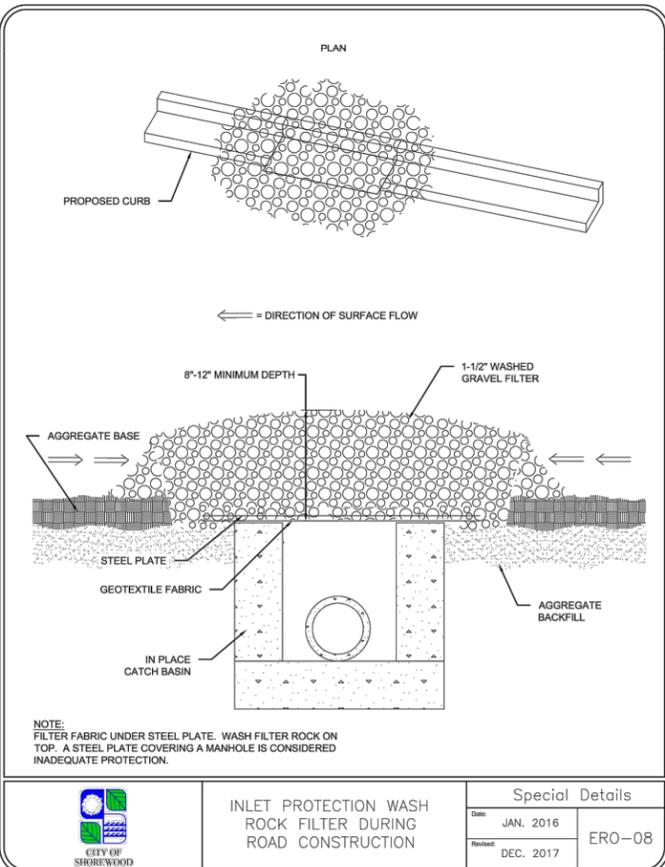
	BEDDING METHODS FOR RCP AND DIP	Special Details	
		Date: JAN. 2016	BED-02
		Revised: DEC. 2017	



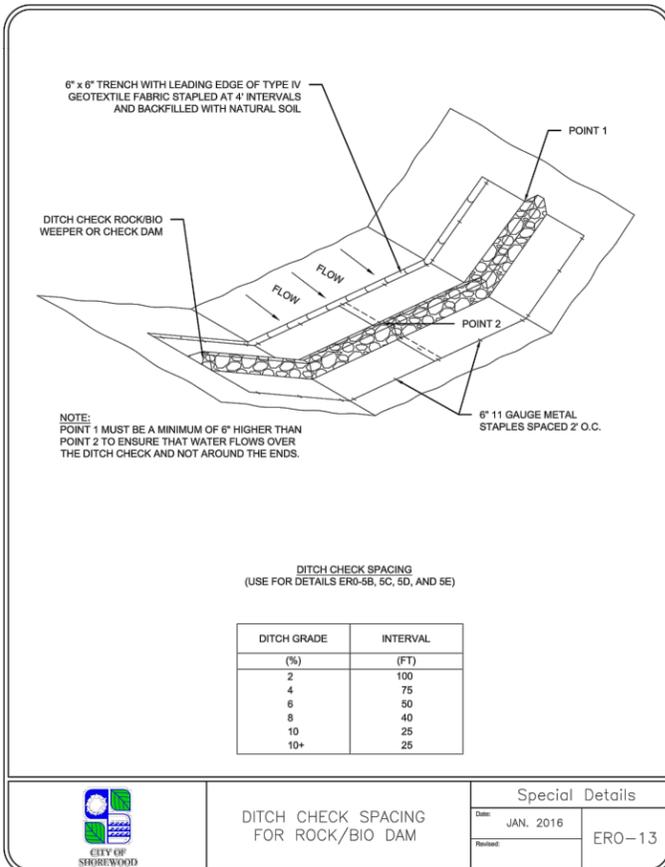
	IMPROVED FOUNDATION FOR RCP AND DIP	Special Details	
		Date: JAN. 2016	BED-03
		Revised: DEC. 2017	



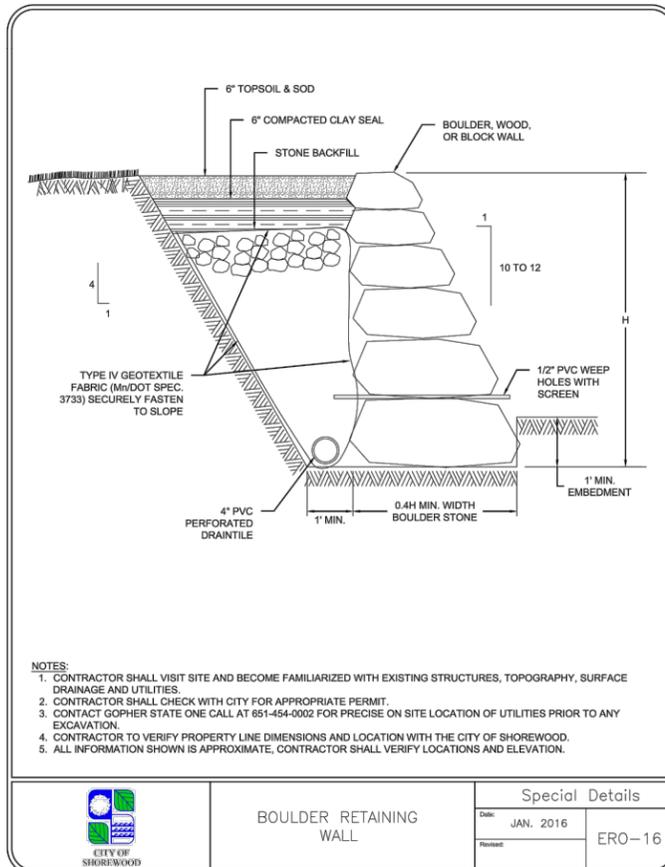
	INLET PROTECTION - CATCH BASIN INSERT AFTER PAVING	Special Details	
		Date: JAN. 2016	ERO-06
		Revised:	



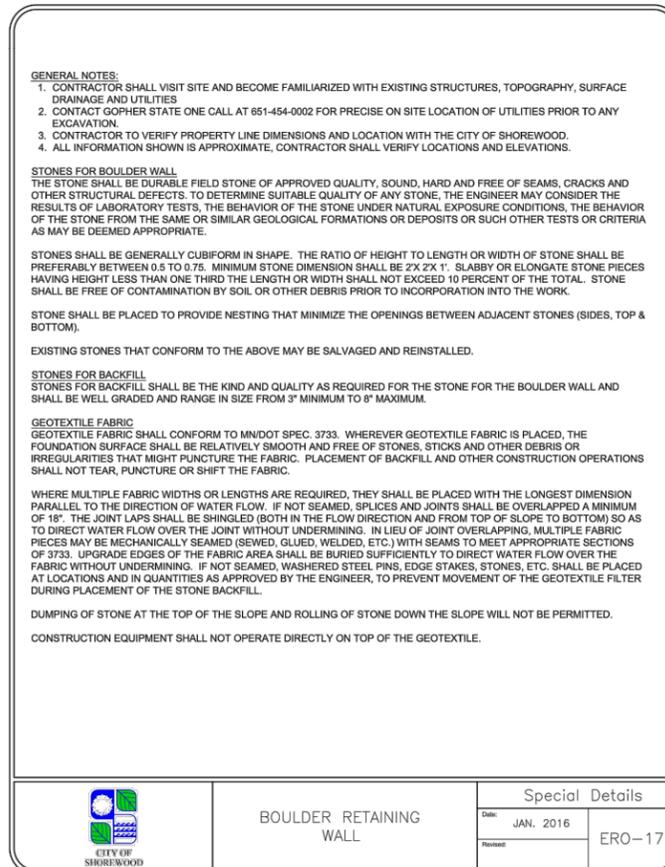
	INLET PROTECTION WASH ROCK FILTER DURING ROAD CONSTRUCTION	Special Details	
		Date: JAN. 2016	ERO-08
		Revised: DEC. 2017	



	DITCH CHECK SPACING FOR ROCK/BIO DAM	Special Details	
		Date: JAN. 2016	ERO-13
		Revised:	



	BOULDER RETAINING WALL	Special Details	
		Date: JAN. 2016	ERO-16
		Revised:	



	BOULDER RETAINING WALL	Special Details	
		Date: JAN. 2016	ERO-17
		Revised:	

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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022

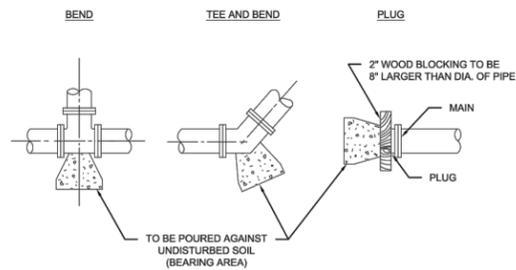


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CHASKA, MINNESOTA 55318
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CLIENT PROJ. NO.	0C1.123686		

CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
CONSTRUCTION DETAILS

SHEET
C1.04

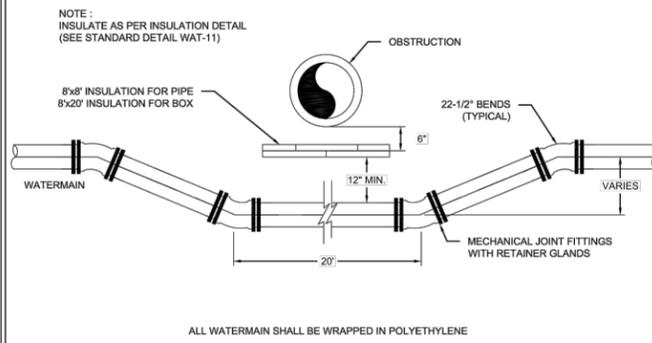


NOTE:
 1. THRUST BLOCKING TO BE USED FOR BENDS 22-1/2" AND OVER
 2. THRUST BLOCKING SHALL ONLY BE USED WHERE WORKING PRESSURES ARE LESS THAN 150 PSI

PIPE SIZE	BEARING AREA
6"	4.0 SQ. FT.
8"	6.0 "
10" - 12"	12.0 "
16"	20.0 "

THRUST BLOCK

Special Details
 Date: JAN. 2016
 Revised: JAN. 2017
 WAT-04

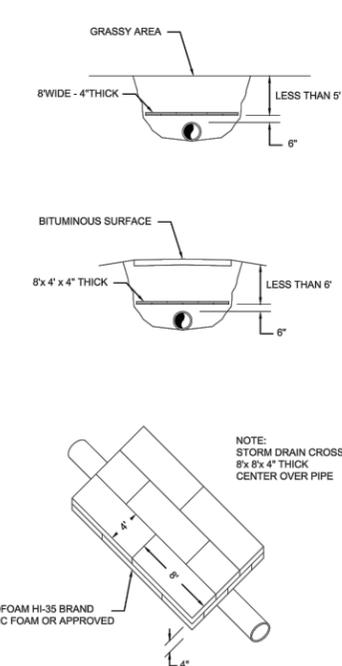


NOTE:
 INSULATE AS PER INSULATION DETAIL (SEE STANDARD DETAIL WAT-11)

ALL WATERMAIN SHALL BE WRAPPED IN POLYETHYLENE

WATERMAIN INSULATION & LOWERING

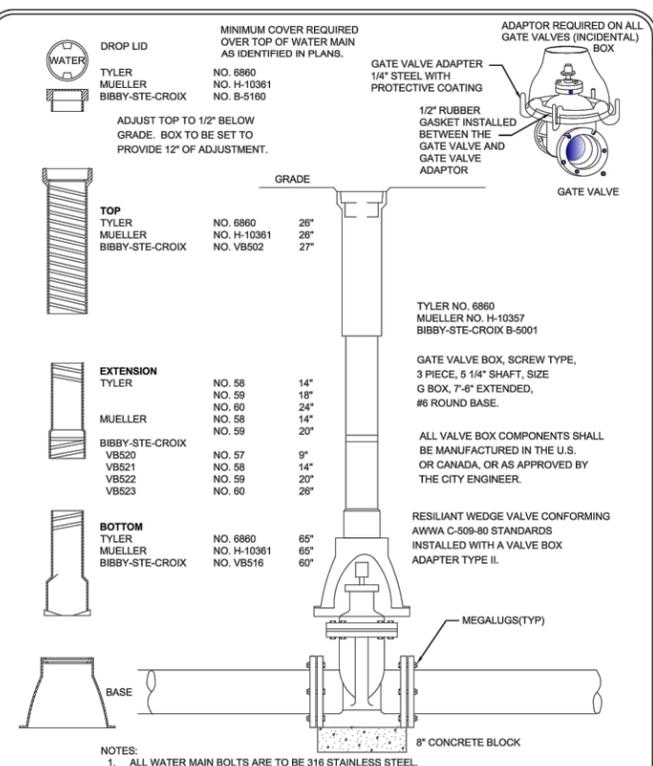
Special Details
 Date: JAN. 2016
 Revised: JAN. 2017
 WAT-10



NOTE:
 STORM DRAIN CROSSING
 8'x 4' THICK
 CENTER OVER PIPE

INSULATION DETAIL

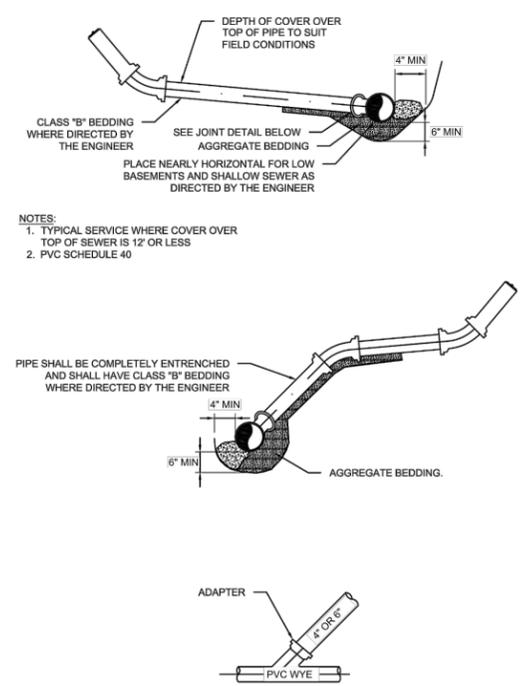
Special Details
 Date: JAN. 2016
 Revised: WAT-11



NOTES:
 1. ALL WATER MAIN BOLTS ARE TO BE 316 STAINLESS STEEL.
 2. VALVE INSTALLATION TO INCLUDE ANODE BAG (INCIDENTAL).

GATE VALVE AND BOX INSTALLATION

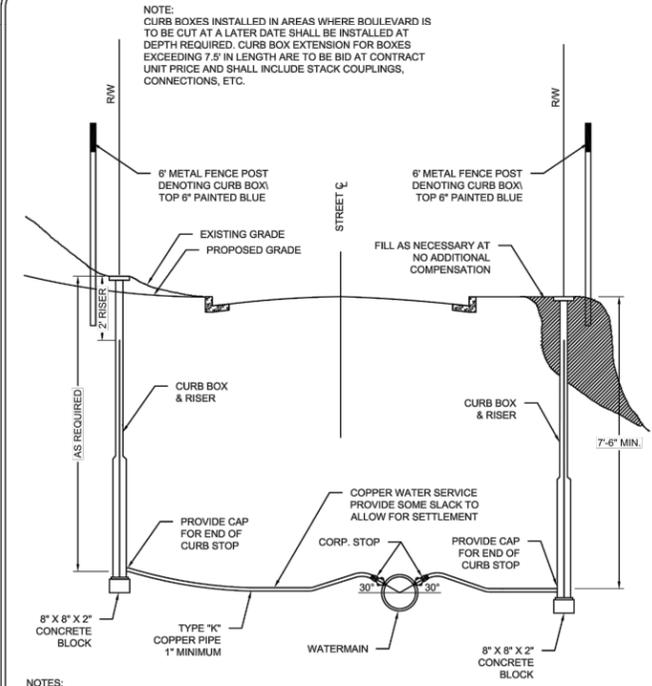
Special Details
 Date: JAN. 2016
 Revised: WAT-12



NOTES:
 1. TYPICAL SERVICE WHERE COVER OVER TOP OF SEWER IS 12' OR LESS
 2. PVC SCHEDULE 40

SANITARY SEWER SERVICE CONNECTION

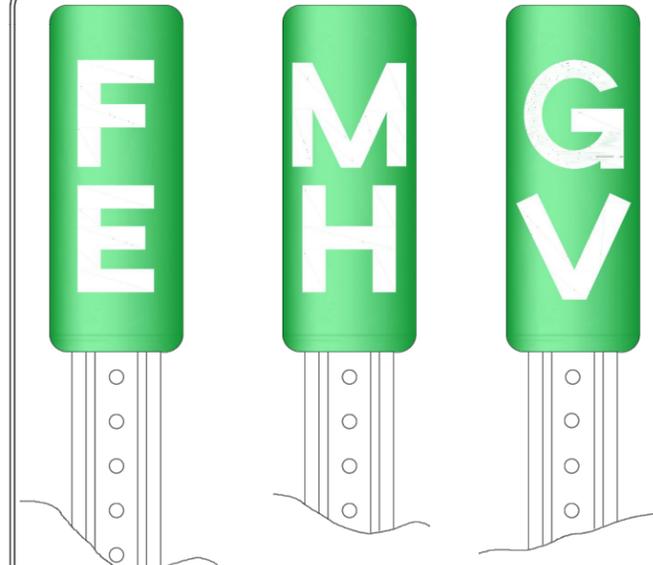
Special Details
 Date: JAN. 2016
 Revised: JAN. 2017
 SAN-09



NOTES:
 1. THE COPPER SERVICE LINE BETWEEN THE MAIN LINE AND CURB BOX SHALL BE ONE CONTINUOUS PIECE. SPLICES WILL NOT BE PERMITTED.
 2. SADDLE REQUIRED ON 6" D.I.P. OR SMALLER AND ALL P.V.C. AND STAINLESS STEEL
 3. CURB BOXES LOCATED WITHIN PAVED SURFACE SHALL RECEIVE A FORD A1 METER BOX COVER (INCIDENTAL).

WATER SERVICE CONNECTION

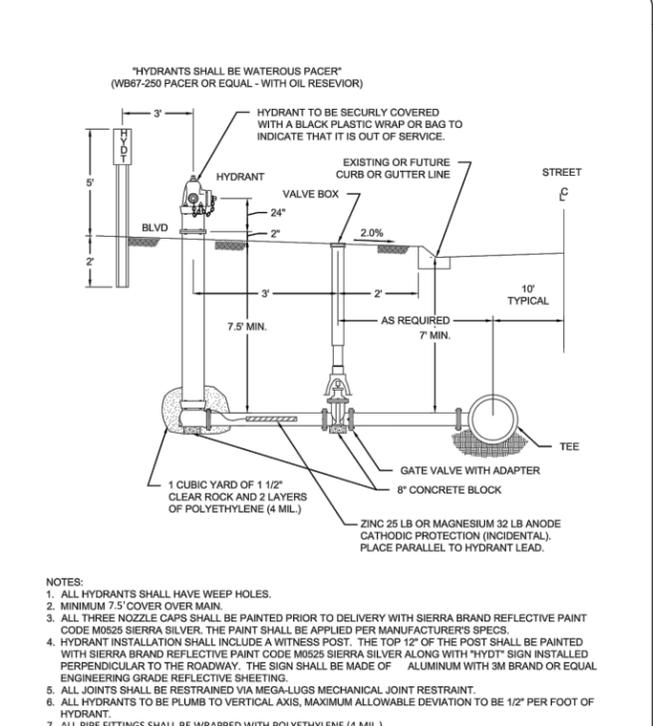
Special Details
 Date: JAN. 2016
 Revised: DEC. 2017
 WAT-02



NOTES:
 1. 0.063" THICK ALUMINUM SIGN. LETTERS ON WHITE HIGH INTENSITY REFLECTORIZED BACKGROUND SHALL BE THE FOLLOWING COLORS:
 1.1. WATER GV - BLUE
 1.2. SEWER GV - GREEN
 1.3. MH - SEWER - GREEN
 1.4. MH - STORM BLACK
 1.5. FE BLACK
 2. U-CHANNEL POST, MINIMUM 3LB./FT. 6'-6" LONG, PAINTED GREEN.
 3. STRUCTURE MARKER SIGNS SHALL BE FURNISHED AND CONSTRUCTED FOR ALL STRUCTURES LOCATED OUTSIDE OF THE STREET RIGHT OF WAY.
 4. SIGNS ARE NOT REQUIRED IF STRUCTURE IS LOCATED IN A MAINTAINED LAWN.

STRUCTURE MARKER SIGNS

Special Details
 Date: JAN. 2016
 Revised: SAN-12



NOTES:
 1. ALL HYDRANTS SHALL HAVE WEEP HOLES.
 2. MINIMUM 7.5' COVER OVER MAIN.
 3. ALL THREE NOZZLE CAPS SHALL BE PAINTED PRIOR TO DELIVERY WITH SIERRA BRAND REFLECTIVE PAINT CODE M0525 SIERRA SILVER. THE PAINT SHALL BE APPLIED PER MANUFACTURERS SPECS.
 4. HYDRANT INSTALLATION SHALL INCLUDE A WITNESS POST. THE TOP 12" OF THE POST SHALL BE PAINTED WITH SIERRA BRAND REFLECTIVE PAINT CODE M0525 SIERRA SILVER ALONG WITH "HYD" SIGN INSTALLED PERPENDICULAR TO THE ROADWAY. THE SIGN SHALL BE MADE OF ALUMINUM WITH 3M BRAND OR EQUAL ENGINEERING GRADE REFLECTIVE SHEETING.
 5. ALL JOINTS SHALL BE RESTRAINED VIA MEGA-LUGS MECHANICAL JOINT RESTRAINT.
 6. ALL HYDRANTS TO BE PLUMB TO VERTICAL AXIS, MAXIMUM ALLOWABLE DEVIATION TO BE 1/2" PER FOOT OF HYDRANT.
 7. ALL PIPE FITTINGS SHALL BE WRAPPED WITH POLYETHYLENE (4 MIL).

TYPICAL HYDRANT INSTALLATION

Special Details
 Date: JAN. 2016
 Revised: JAN. 2017
 WAT-09

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 PHILIP J. SCHRUPP
 LIC. NO. 54198 DATE 09/20/2022

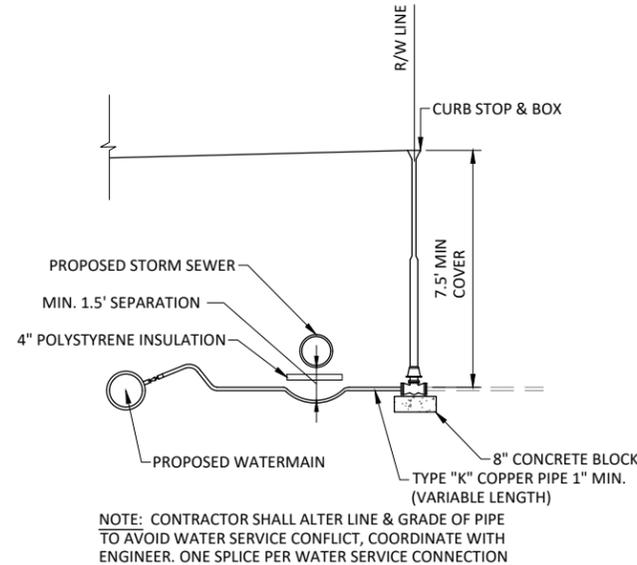
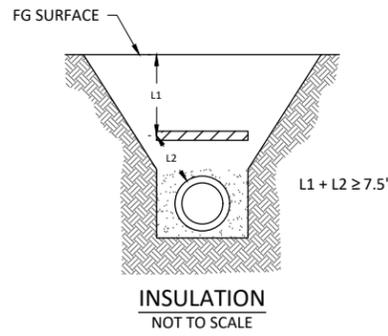


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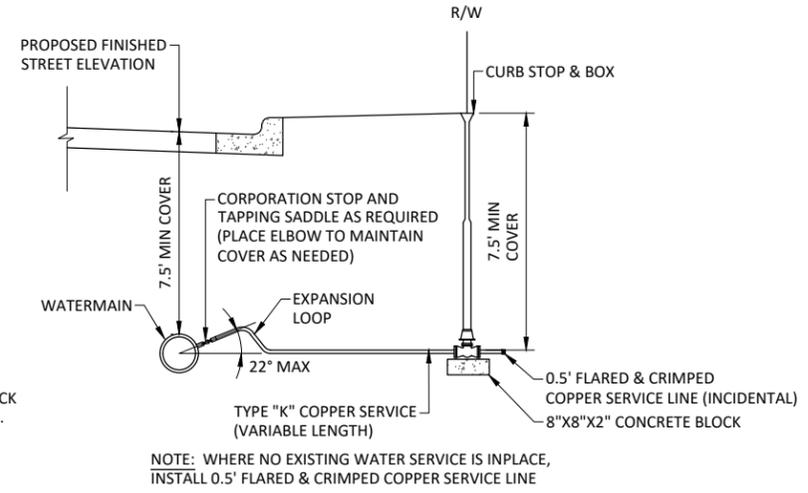
CITY OF SHOREWOOD
 BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
 CONSTRUCTION DETAILS

SHEET
C1.05



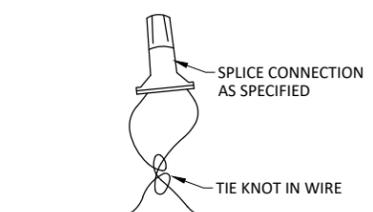
NOTE: CONTRACTOR SHALL ALTER LINE & GRADE OF PIPE TO AVOID WATER SERVICE CONFLICT, COORDINATE WITH ENGINEER. ONE SPLICE PER WATER SERVICE CONNECTION

WATER SERVICE LINE CONFLICT
NOT TO SCALE



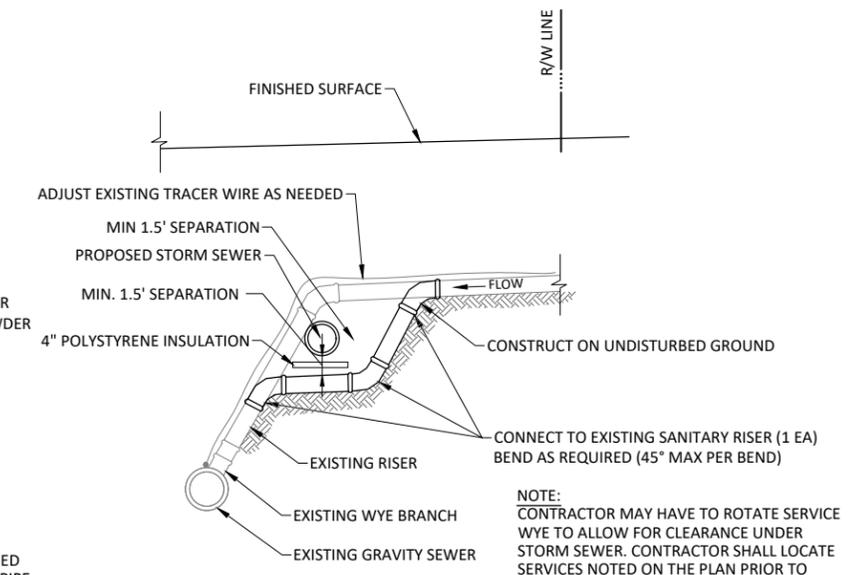
NOTE: WHERE NO EXISTING WATER SERVICE IS IN PLACE, INSTALL 0.5' FLARED & CRIMPED COPPER SERVICE LINE

WATER SERVICE INSTALLATION
NOT TO SCALE



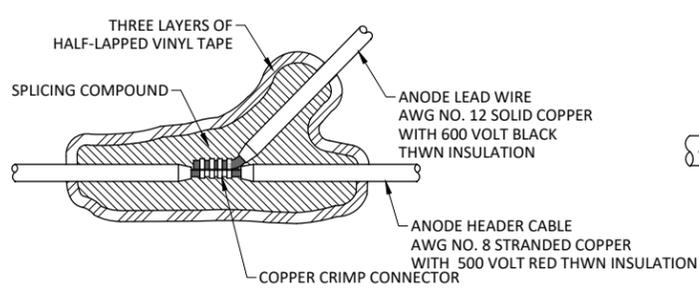
WHERE IN-LINE SPLICES ARE REQUIRED ALONG PIPES, THE TRACER WIRE SHALL BE KNOTTED PRIOR TO INSERTION INTO THE SPLICE CONNECTION.

IN-LINE TRACER WIRE SPLICE
NOT TO SCALE



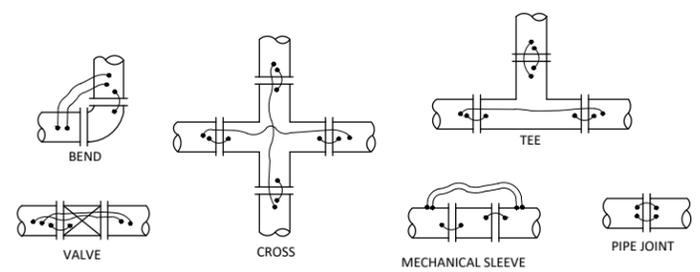
NOTE: CONTRACTOR MAY HAVE TO ROTATE SERVICE WYE TO ALLOW FOR CLEARANCE UNDER STORM SEWER. CONTRACTOR SHALL LOCATE SERVICES NOTED ON THE PLAN PRIOR TO CONSTRUCTING STORM RUN.

REMOVE & REPLACE SANITARY SEWER LINE
NOT TO SCALE



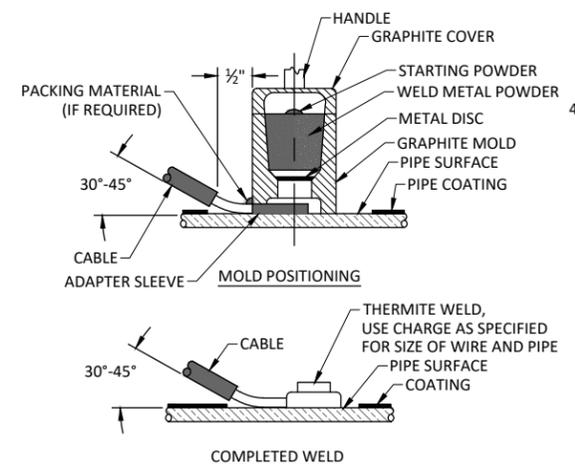
NOTES:
1. TAPER AND ROUGHEN WIRE INSULATION IN SPLICING COMPOUND.
2. COAT ENTIRE SPLICE WITH ELECTRICAL COATING COMPOUND.

GALVANIC ANODE SPLICE
NOT TO SCALE



NOTES:
1. COATING REQUIRED FOR ALL WELD LOCATIONS
2. WIRE SIZE SHALL BE #4 AWG COPPER WIRE
3. USE A MINIMUM OF TWO BONDS PER PIPE JOINT

PIPE JOINT BONDING DETAIL
NOT TO SCALE



NOTES:
1. CLEAN SURFACE OF PIPE OR BONDING PLATE TO BRIGHT METAL.
2. STRIP INSULATION FROM END OF COPPER WIRE.
3. INSTALL ADAPTER SLEEVE ON WIRE.
4. HOLD THERMITE MOLD FIRMLY AGAINST PIPE OR BONDING PLATE, INSERT WIRE, IGNITE WELD METAL.
5. REMOVE SLAG FROM THERMITE WELD.
6. STRIKE WELD FIRMLY WITH HAMMER TO VERIFY CONNECTION.
7. COAT WELD AREA AND ALL EXPOSED COPPER.
8. FOR MORTAR COATED PIPE, COVER PIPE WELD WITH A MORTAR COATING.

THERMITE WELDING DETAIL
NOT TO SCALE

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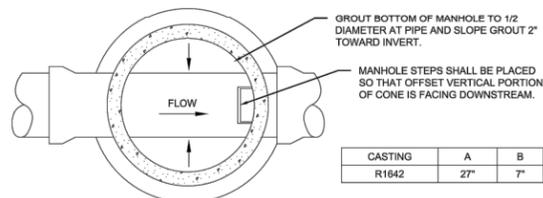


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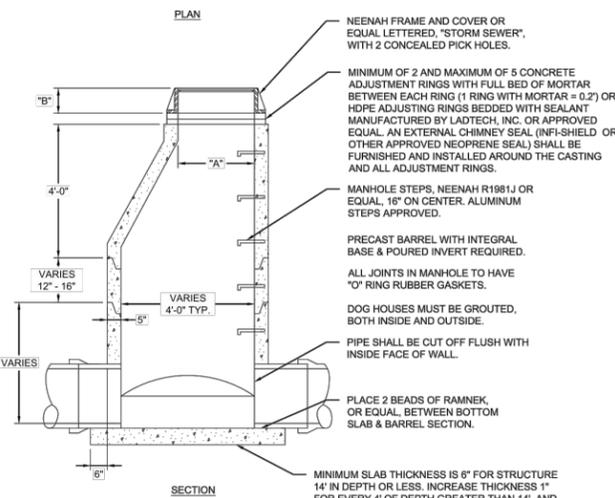
CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
CONSTRUCTION DETAILS

SHEET
C1.06



CASTING	A	B
R1642	27"	7"

NO BLOCK STRUCTURES ARE ALLOWED.

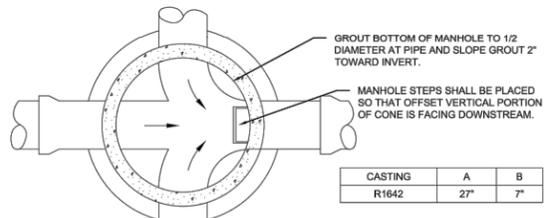


MINIMUM SLAB THICKNESS IS 6" FOR STRUCTURE 14" IN DEPTH OR LESS. INCREASE THICKNESS 1" FOR EVERY 4" OF DEPTH GREATER THAN 14" AND REINFORCE WITH 6" X 6" MESH.



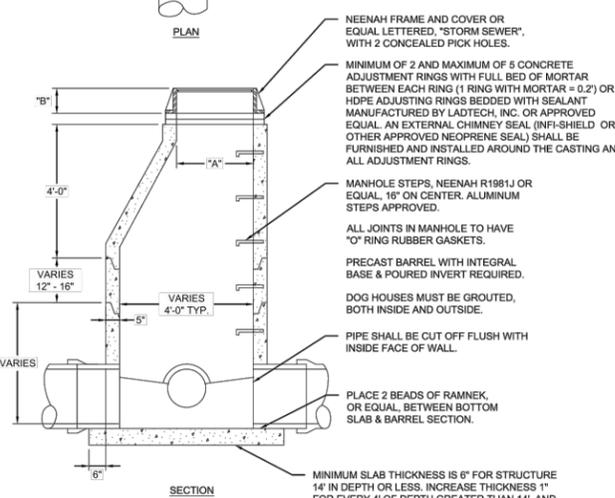
STORM SEWER MANHOLE

Special Details	
Date:	JAN. 2016
Revised:	DEC. 2017
	STO-01



CASTING	A	B
R1642	27"	7"

NO BLOCK STRUCTURES ARE ALLOWED.

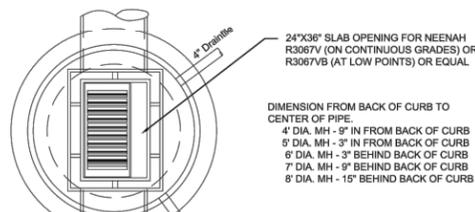


MINIMUM SLAB THICKNESS IS 6" FOR STRUCTURE 14" IN DEPTH OR LESS. INCREASE THICKNESS 1" FOR EVERY 4" OF DEPTH GREATER THAN 14" AND REINFORCE WITH 6" X 6" MESH.

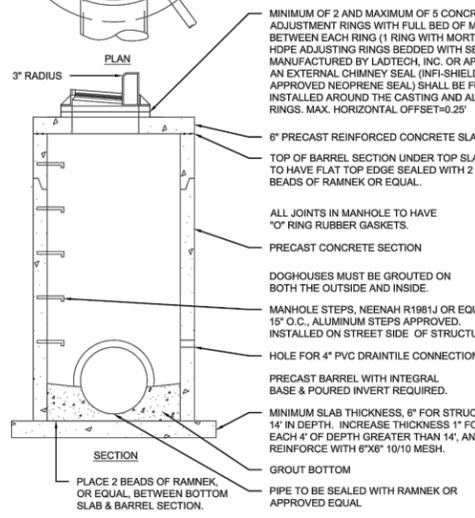


STORM SEWER JUNCTION MANHOLE

Special Details	
Date:	JAN. 2016
Revised:	DEC. 2017
	STO-02



MINIMUM OF 2 AND MAXIMUM OF 5 CONCRETE ADJUSTMENT RINGS WITH FULL BED OF MORTAR BETWEEN EACH RING (1 RING WITH MORTAR = 0.2) OR HDPE ADJUSTING RINGS BEDDED WITH SEALANT MANUFACTURED BY LADTECH, INC. OR APPROVED EQUAL. AN EXTERNAL CHIMNEY SEAL (NFI-SHIELD OR OTHER APPROVED NEOPRENE SEAL) SHALL BE FURNISHED AND INSTALLED AROUND THE CASTING AND ALL ADJUSTMENT RINGS. MAX. HORIZONTAL OFFSET=0.25"

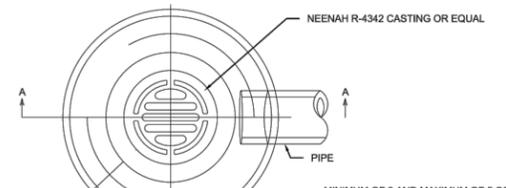


MINIMUM SLAB THICKNESS IS 6" FOR STRUCTURE 14" IN DEPTH OR LESS. INCREASE THICKNESS 1" FOR EVERY 4" OF DEPTH GREATER THAN 14" AND REINFORCE WITH 6" X 6" MESH.

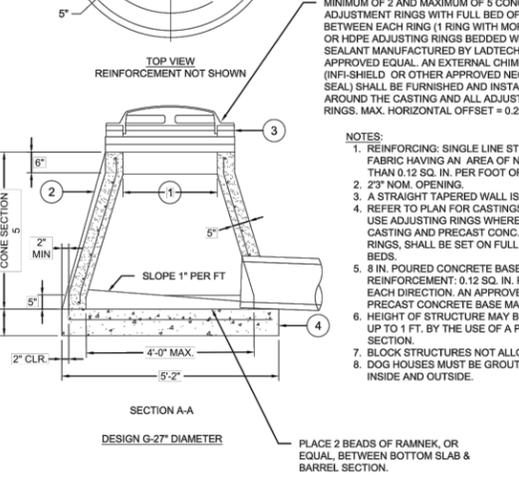


CATCH BASIN MANHOLE

Special Details	
Date:	JAN. 2016
Revised:	JAN. 2017
	STO-04



MINIMUM OF 2 AND MAXIMUM OF 5 CONCRETE ADJUSTMENT RINGS WITH FULL BED OF MORTAR BETWEEN EACH RING (1 RING WITH MORTAR = 0.2) OR HDPE ADJUSTING RINGS BEDDED WITH SEALANT MANUFACTURED BY LADTECH, INC. OR APPROVED EQUAL. AN EXTERNAL CHIMNEY SEAL (NFI-SHIELD OR OTHER APPROVED NEOPRENE SEAL) SHALL BE FURNISHED AND INSTALLED AROUND THE CASTING AND ALL ADJUSTMENT RINGS. MAX. HORIZONTAL OFFSET = 0.25"



- NOTES:
1. REINFORCING: SINGLE LINE STEEL WIRE FABRIC HAVING AN AREA OF NOT LESS THAN 0.12 SQ. IN. PER FOOT OF HEIGHT.
 2. 2" NOM. OPENING
 3. A STRAIGHT TAPERED WALL IS ACCEPTABLE.
 4. REFER TO PLAN FOR CASTINGS REQUIRED. USE ADJUSTING RINGS WHERE NECESSARY. CASTING AND PRECAST CONC. ADJUSTING RINGS, SHALL BE SET ON FULL MORTAR BEDS.
 5. 8 IN. Poured concrete base. BASE REINFORCEMENT: 0.12 SQ. IN. PER FT. IN EACH DIRECTION. AN APPROVED ALTERNATE PRECAST CONCRETE BASE MAY BE USED.
 6. HEIGHT OF STRUCTURE MAY BE INCREASED UP TO 1 FT. BY THE USE OF A PRECAST SECTION.
 7. BLOCK STRUCTURES NOT ALLOWED.
 8. DOG HOUSES MUST BE GROUTED, BOTH INSIDE AND OUTSIDE.

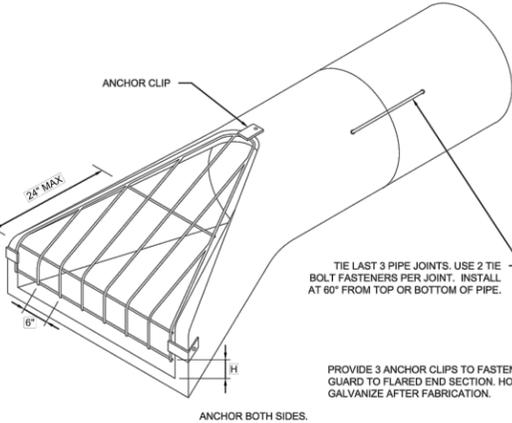
NOTE: SUMPS REQUIRED AS SPECIFIED.



CATCH BASIN MANHOLE TYPE G

Special Details	
Date:	JAN. 2016
Revised:	DEC. 2017
	STO-06

SEE STANDARD PLATE NO. STO-12 FOR RIPRAP PLACEMENT.



TIE THE LAST 3 PIPE JOINTS. USE 2 TIE BOLT FASTENERS PER JOINT. INSTALL AT 80° FROM TOP OR BOTTOM OF PIPE.

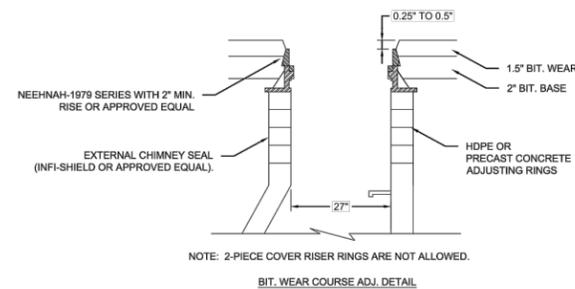
PROVIDE 3 ANCHOR CLIPS TO FASTEN TRASH GUARD TO FLARED END SECTION. HOT DIP GALVANIZE AFTER FABRICATION.

PIPE SIZE	TRASH GUARD SIZING
12" - 18"	1" BARS (NO TRASH GUARD FOR 12" - 18")
21" - 42"	1" O.D. 8" 3/4"
48" - 72"	1-1/4" O.D. 12" 1"

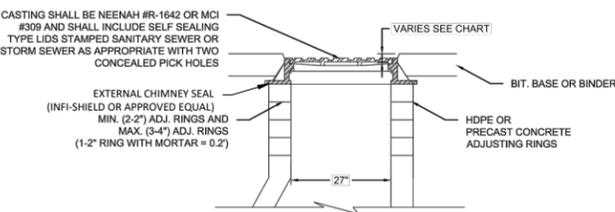


FLARED END SECTION AND TRASH GUARD

Special Details	
Date:	JAN. 2016
Revised:	
	STO-08



NOTE: 2-PIECE COVER RISER RINGS ARE NOT ALLOWED.



WEAR COURSE THICKNESS	COVER RISER SIZE	DEPTH OF CASTING SET BELOW BASE COURSE OR BINDER COURSE
1.5"	2" RISE	1.25"
2.0"	2" RISE	0.75"
2.5"	2" RISE	0.25"

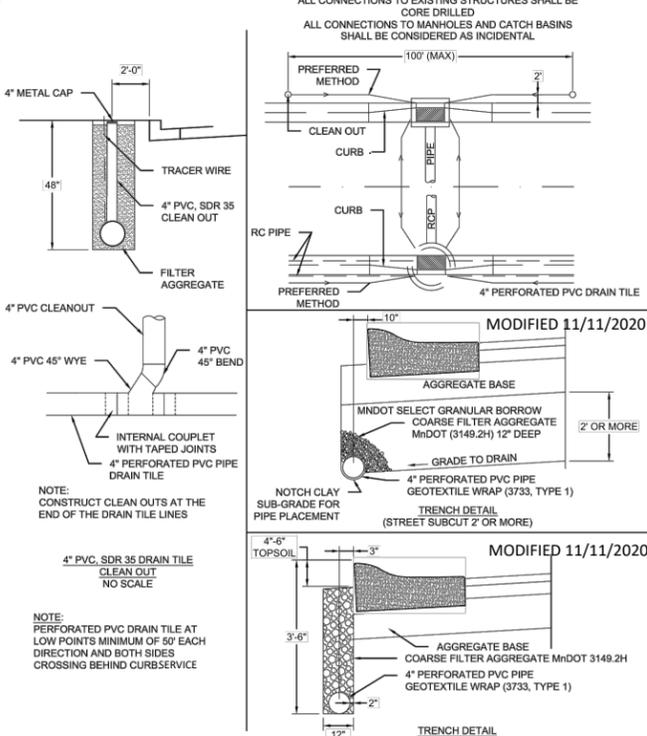
- NOTES:
1. PRECAST CONCRETE ADJUSTING RINGS SHALL BE BEDDED WITH 1/4" TO 1/2" MORTAR.
 2. HDPE ADJUSTING RINGS SHALL BE BEDDED WITH SEALANT MANUFACTURED BY LADTECH, INC. OR APPROVED EQUAL.

MODIFIED 11/11/2020



TYPICAL MANHOLE CASTING ADJUSTMENT

Special Details	
Date:	JAN. 2016
Revised:	
	RDW-18



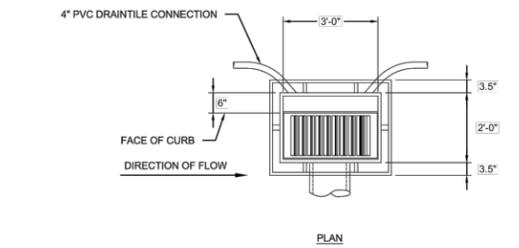
NOTE: CONSTRUCT CLEAN OUTS AT THE END OF THE DRAIN TILE LINES

NOTE: PERFORATED PVC DRAIN TILE AT LOW POINTS MINIMUM OF 50' EACH DIRECTION AND BOTH SIDES CROSSING BEHIND CURBSERVICE



PVC PERFORATED PIPE INSTALLATION

Special Details	
Date:	JAN. 2016
Revised:	JAN. 2017
	STO-13



NO BLOCK STRUCTURES ARE ALLOWED.

CATCHBASIN CASTING NEENAH R3067V (ON CONTINUOUS GRADES) OR R3067VB (AT LOW POINTS)

MINIMUM OF 2 AND MAXIMUM OF 5 CONCRETE ADJUSTMENT RINGS WITH FULL BED OF MORTAR BETWEEN EACH RING (1 RING WITH MORTAR = 0.2) OR HDPE ADJUSTING RINGS BEDDED WITH SEALANT MANUFACTURED BY LADTECH, INC. OR APPROVED EQUAL. AN EXTERNAL CHIMNEY SEAL (NFI-SHIELD OR OTHER APPROVED NEOPRENE SEAL) SHALL BE FURNISHED AND INSTALLED AROUND THE CASTING AND ALL ADJUSTMENT RINGS. MAX. HORIZONTAL OFFSET=0.25"

DOGHOUSES MUST BE GROUTED ON BOTH THE INSIDE AND OUTSIDE.

NOTE: SUMPS REQUIRED AS SPECIFIED.



CATCH BASIN 2' X 3' BOX

Special Details	
Date:	JAN. 2016
Revised:	DEC. 2017
	STO-05

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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022



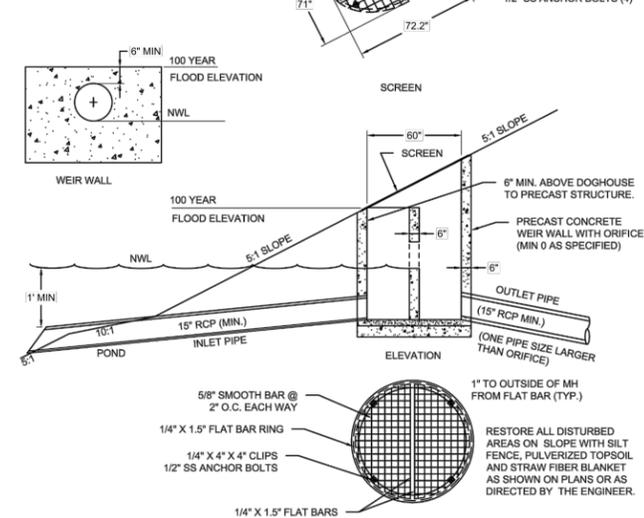
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
CONSTRUCTION DETAILS

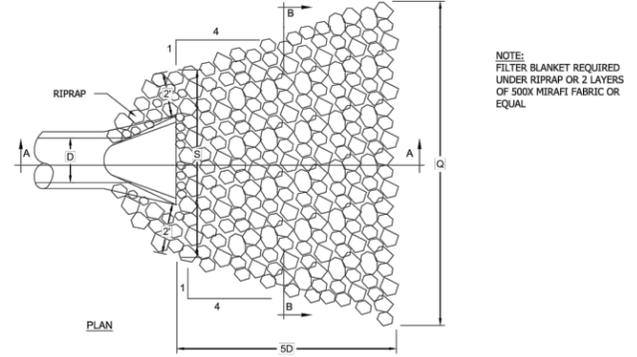
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C1.07

WEIR WALL TO BE CONNECTED TO STRUCTURE BY PRE-CAST KEYS OR BY 3" X 3" ANGLE IRON ALONG EACH SIDE OF THE VERTICAL LENGTH OF THE WALL. CONNECTION SHALL USE 4-3/4" X 3/4" SS WEDGE ANCHOR BOLTS SPACED 6" O.C. JOINTS SHALL BE GROUTED AND SEALED TO BE WATER PROOF.

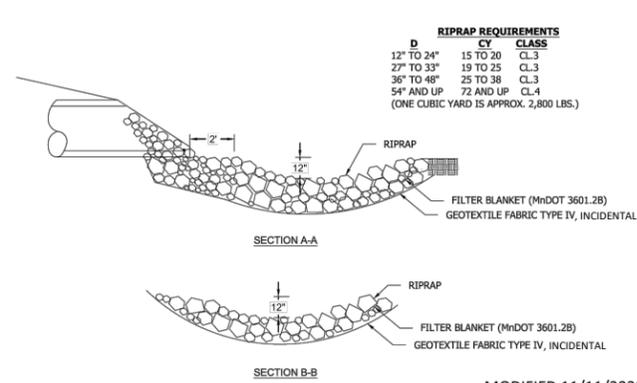


POND	100 YR	NWL	ORIFICE Ø	INLET Ø	INLET EL.	OUTLET Ø	OUTLET EL.	OUTLET %
GIDEON	944.43	943.26	8-INCH	15-INCH	941.75	12-INCH	943.26	

CITY OF SHOREWOOD	POND SKIMMER WITH WEIR WALL	Special Details	
		Date: JAN. 2016	STO-22



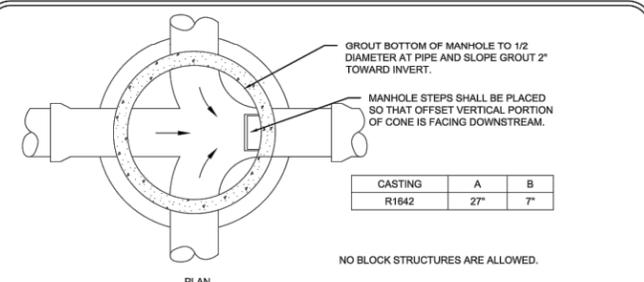
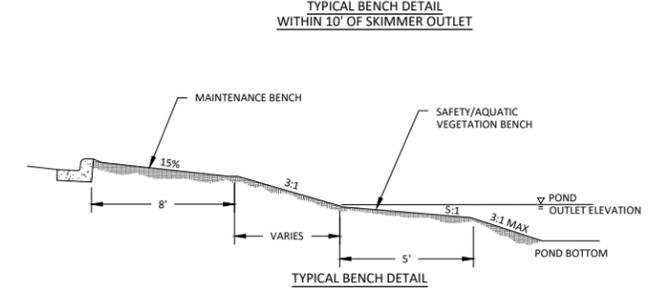
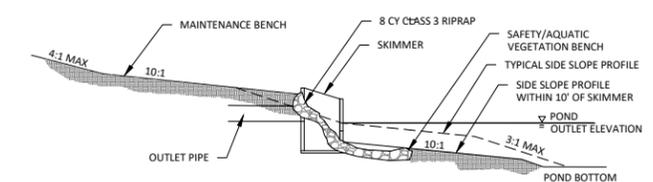
NOTE: FILTER BLANKET REQUIRED UNDER RIPRAP OR 2 LAYERS OF 500X MIRAFI FABRIC OR EQUAL.



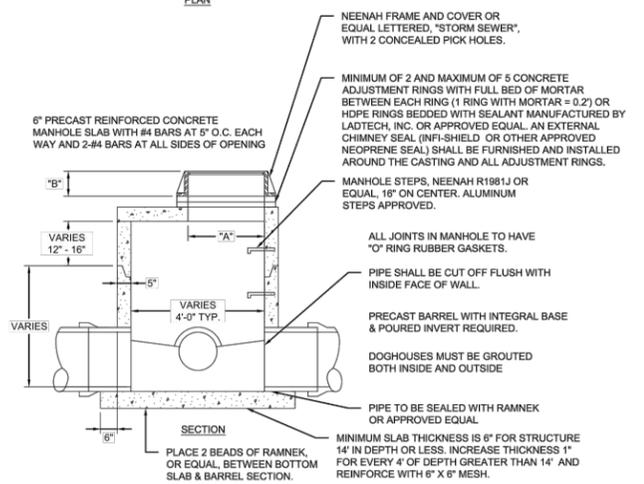
CITY OF SHOREWOOD	RIPRAP AT OUTLETS	Special Details	
		Date: JAN. 2016	STO-12

TABLE 2575-3 RAPID STABILIZATION	
METHOD	MATERIALS
1	TYPE 1 MULCH PLACED AT A RATE OF 2 TONS PER ACRE (4.5 TONNE PER ha) WITH DISC ANCHORING
2	TYPE 3 MULCH PLACED AT A RATE OF 1.5 TON PER ACRE (3.4 TONNE PER ha), 3884, TYPE HYDRAULIC MULCH, PLACED AT A RATE OF 750 LB/ACRE (835 kg/ha)
3	3884, TYPE HYDRAULIC MULCH, PLACED AT 350 LB PER 1000 GALLONS OF SLURRY MIXTURE (159 kg PER 3.8 CU. METERS) OF SLURRY MIXTURE. SEED MIXTURE 22-111 PLACED AT A RATE OF 10 LB PER 1,000 GALLONS (4.5 kg PER 3.8 CU. METERS) OF SLURRY MIX. TYPE 3 SLOW RELEASE FERTILIZER 10-10-10 PLACED AT A RATE OF 50 LB PER 1000 GALLONS (22.7 kg PER 3.8 CU. METERS) OF SLURRY MIX. WATER PLACED AT A RATE OF 875 GALLONS PER 1,000 GALLONS (3.3 CU. METERS PER 3.8 CU. METERS) OF SLURRY MIX. APPLY MIXTURE AT A RATE OF 6,000 GALLONS PER ACRE (56 CU. METERS PER ha).
4	CATEGORY 3 EROSION CONTROL BLANKET. SEED MIXTURE 22-111 PLACED AT A RATE OF 2 LB PER 100 SQ. YD. (1.1 kg PER 100 CU. METERS). TYPE 3 SLOW RELEASE FERTILIZER 10-10-10 PLACED AT A RATE OF 8 LB PER 100 SQ. YD. (3.6 kg PER 84 SQ. METERS).
5	RIP RAP CLASS II. GEOTEXTILE TYPE III.

CITY OF SHOREWOOD	RAPID STABILIZATION METHODS 1-5	Special Details	
		Date: DEC. 2017	ERO-18



CASTING	A	B
R1842	27"	7"



CITY OF SHOREWOOD	STORM SEWER MANHOLE WITH REINFORCED TOP SLAB	Special Details	
		Date: JAN. 2016	STO-03

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CHASKA, MINNESOTA 55318
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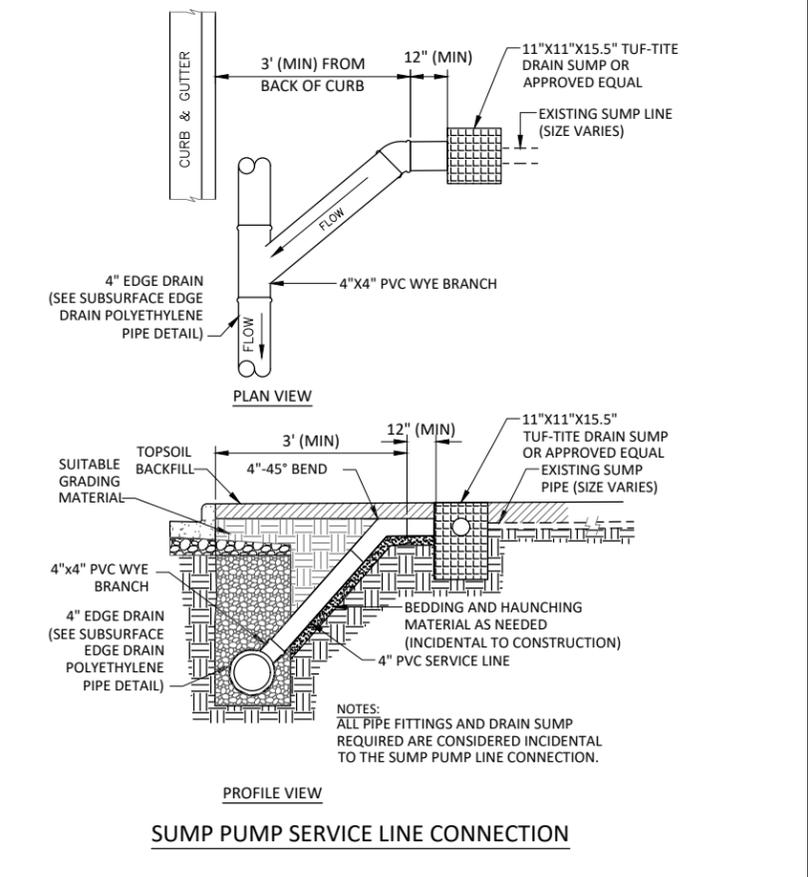
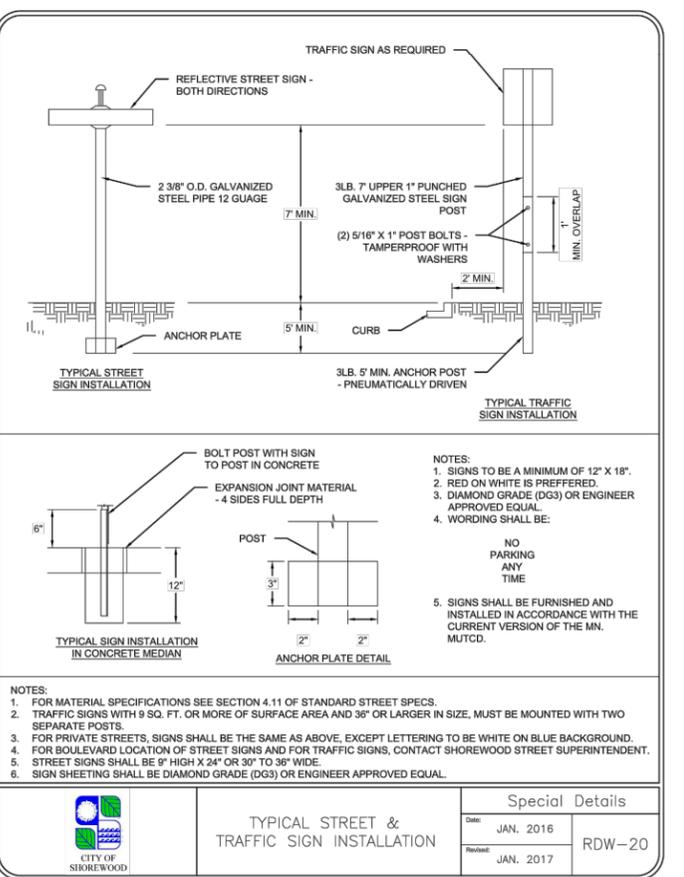
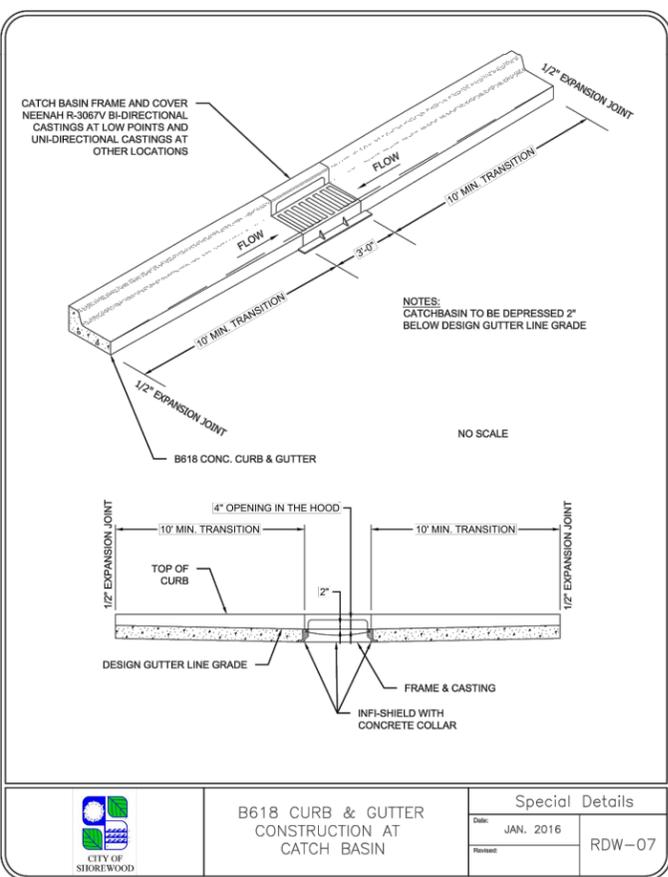
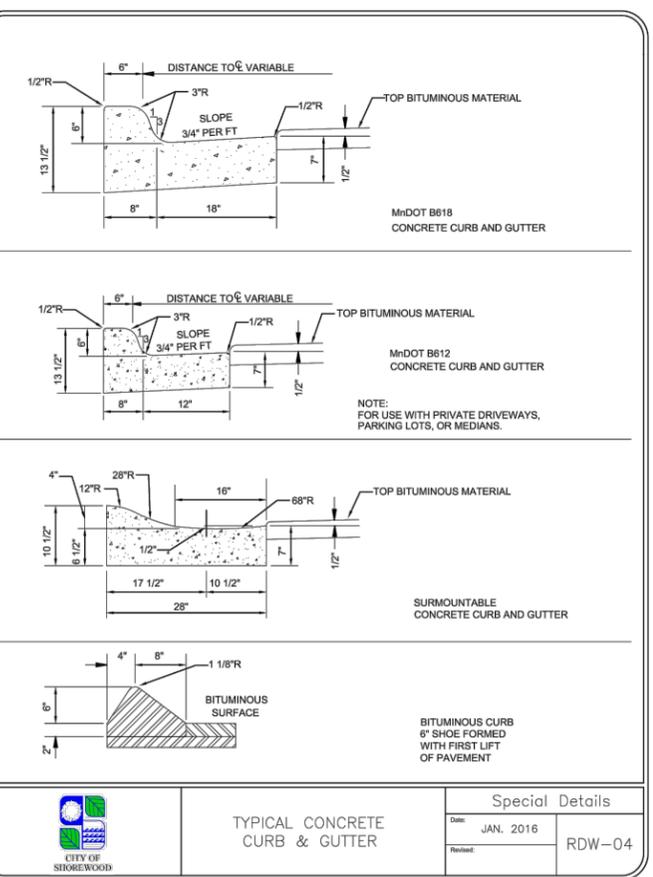
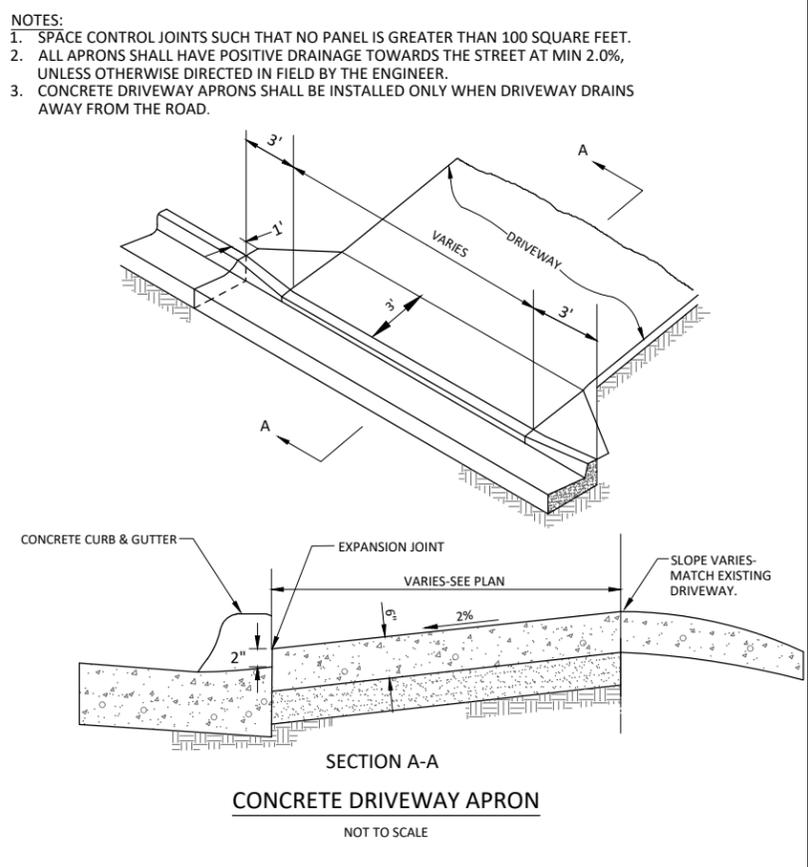
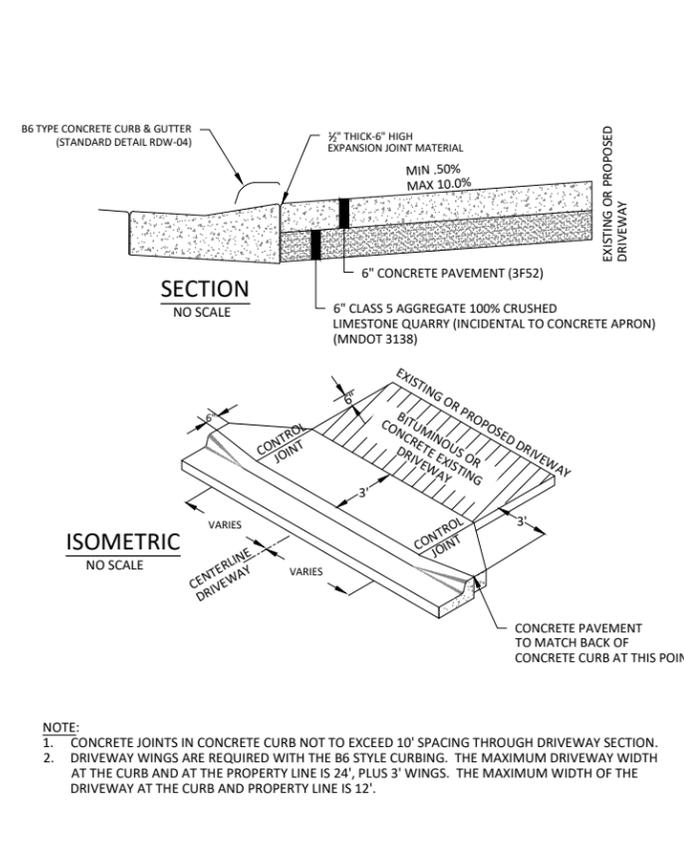
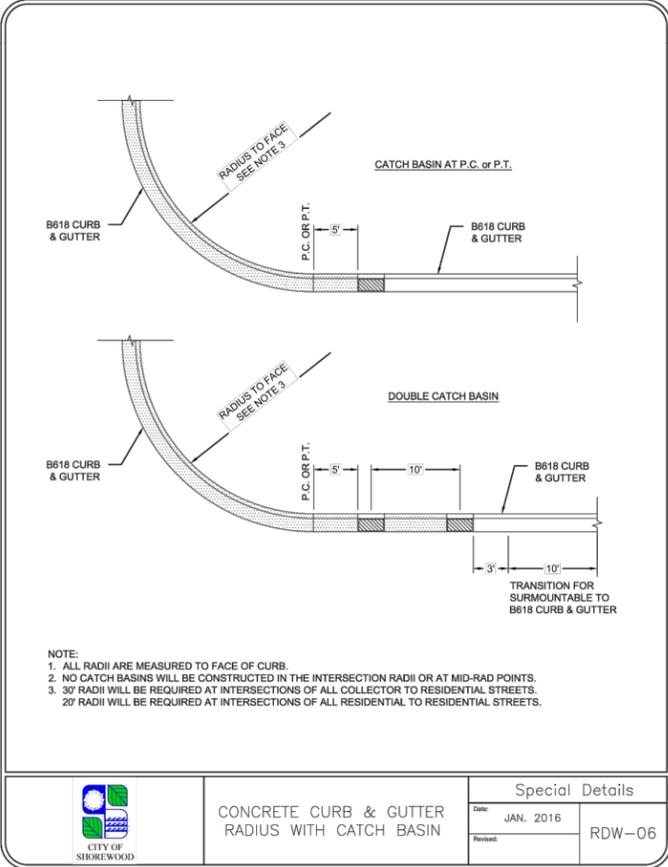
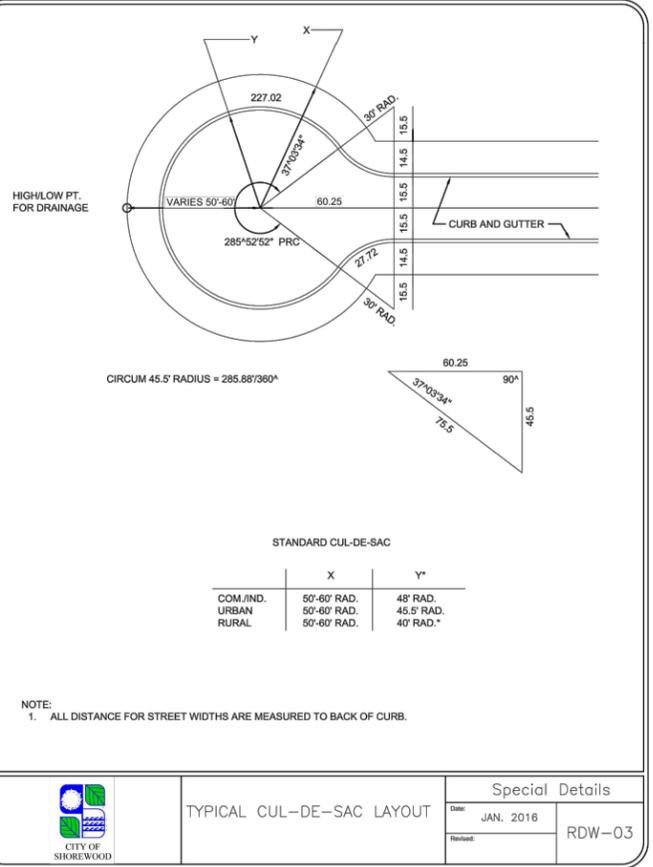
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
CONSTRUCTION DETAILS

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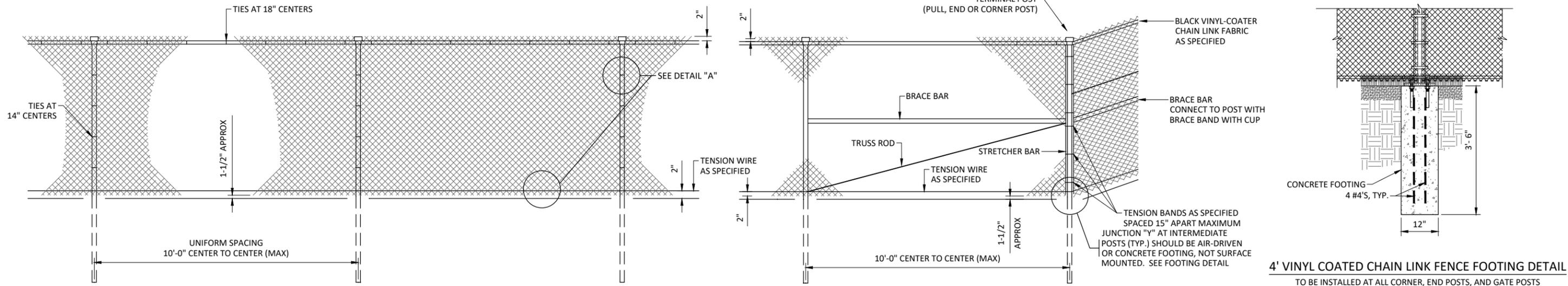


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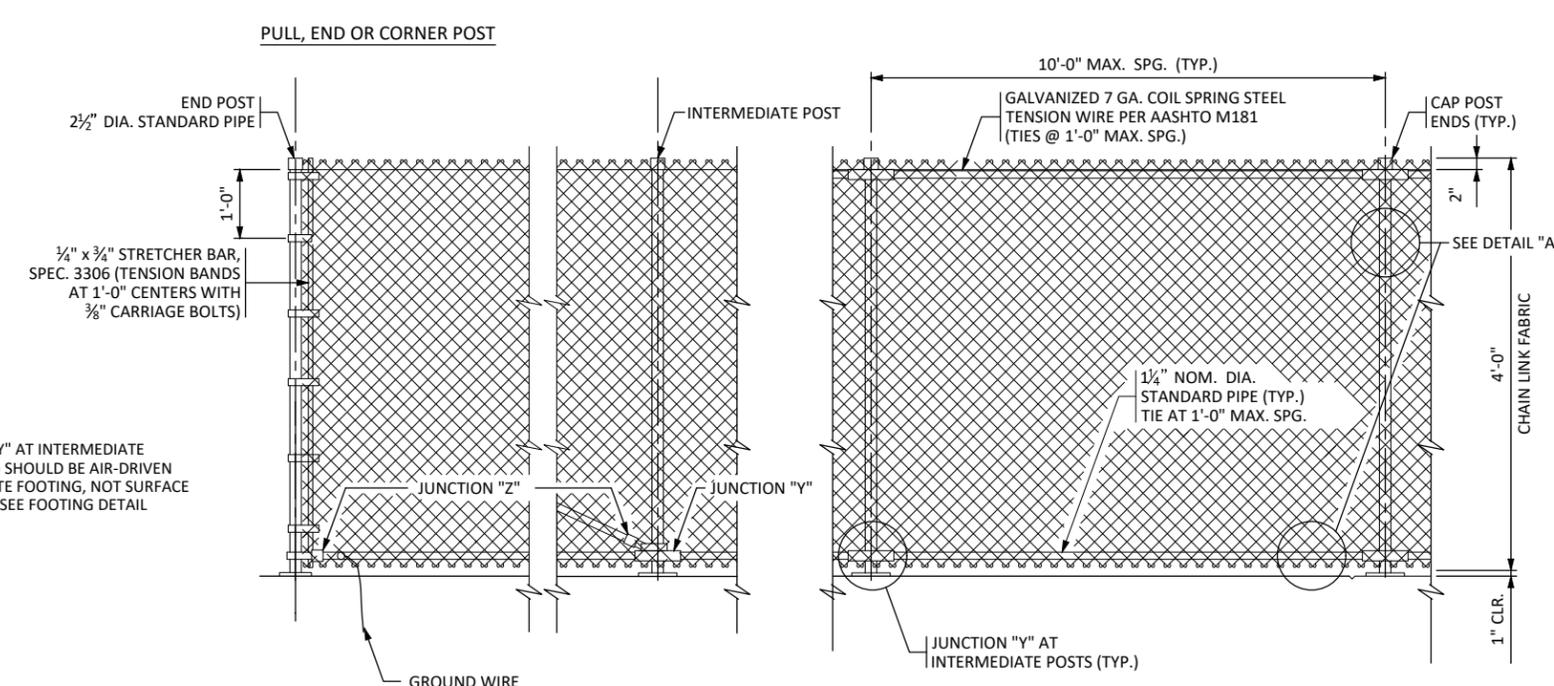
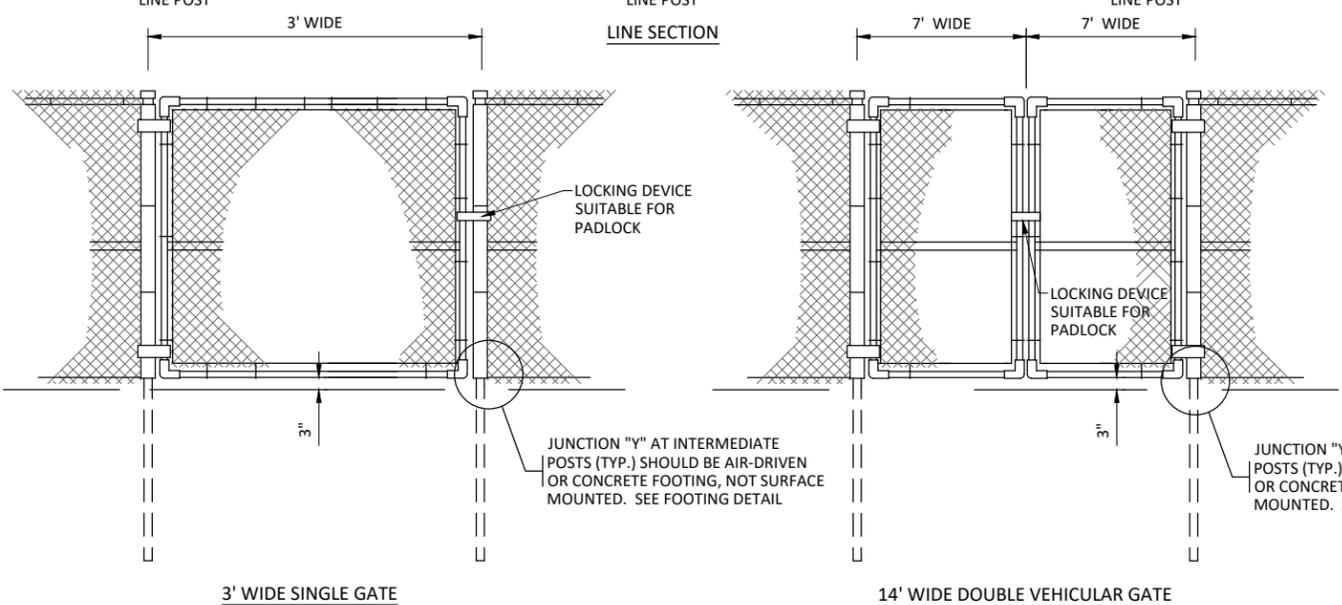
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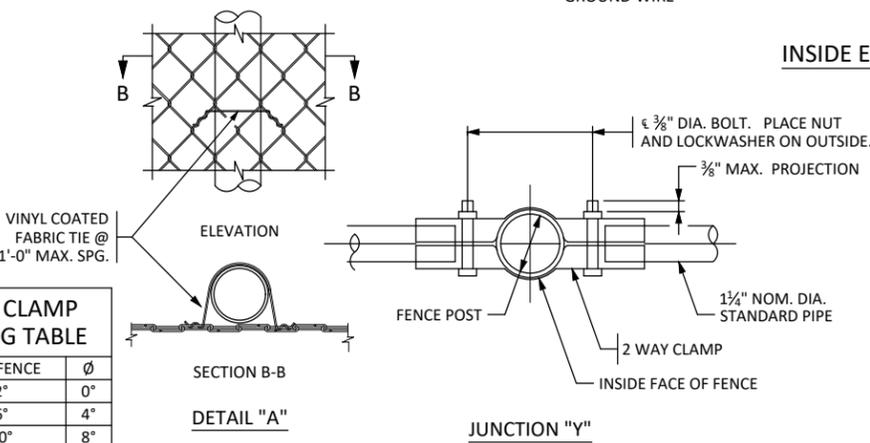
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4' VINYL COATED CHAIN LINK FENCE FOOTING DETAIL
TO BE INSTALLED AT ALL CORNER, END POSTS, AND GATE POSTS
NOT TO SCALE



INSIDE ELEVATION OF RAILING



2 WAY CLAMP BENDING TABLE

GRADE OF FENCE	∅
0" TO 2"	0°
2" TO 6"	4°
6" TO 10"	8°

INSIDE ELEVATION OF RAILING

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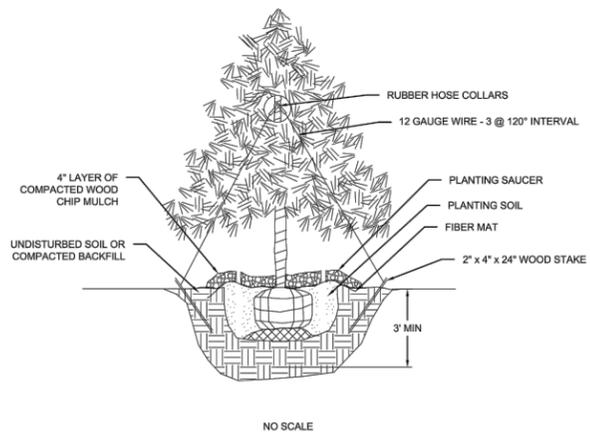


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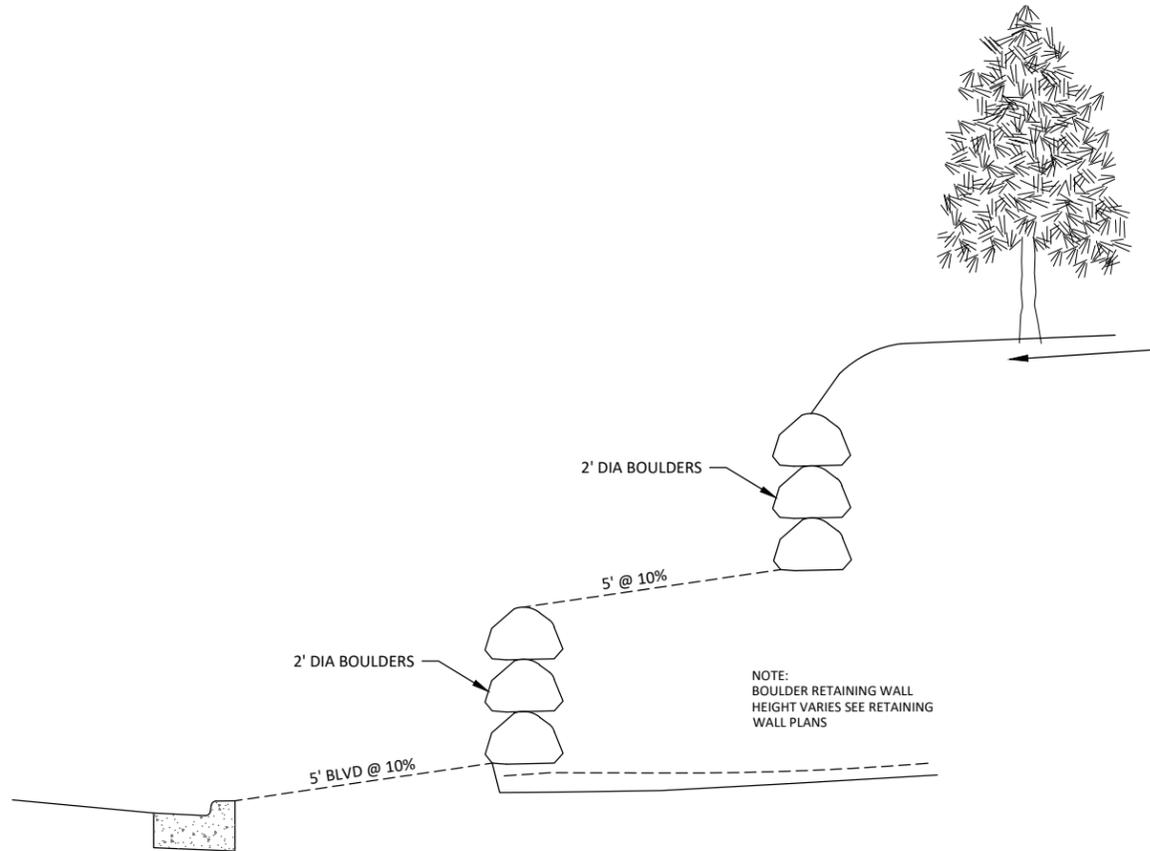
- NOTES:**
1. PROVIDE AND INSTALL PLANT MATERIALS THAT MEET SPECIFICATIONS AND ARE OF THE SIZE TYPE AND SPECIES GIVEN IN PLANT
 2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF THE SHRUB.
 3. PLACE WEED BARRIER.
 4. PLACE 4" LAYER (AFTER SETTLEMENT) OF SHREDDED HARDWOOD BARK MULCH OR AS SPECIFIED OTHERWISE.
 5. PLACE MULCH TO FORM SAUCER TO HOLD WATER.
 6. REMOVE TOP 1/3 OF BURLAP FROM ROOTBALL.
 7. DIG PLANT HOLE 1'-0" MIN. LARGER THAN BALL, ALL SIDES.
 8. BACKFILL WITH PLANTING SOIL.
 9. SCARIFY BOTTOM OF PLANTING HOLE.



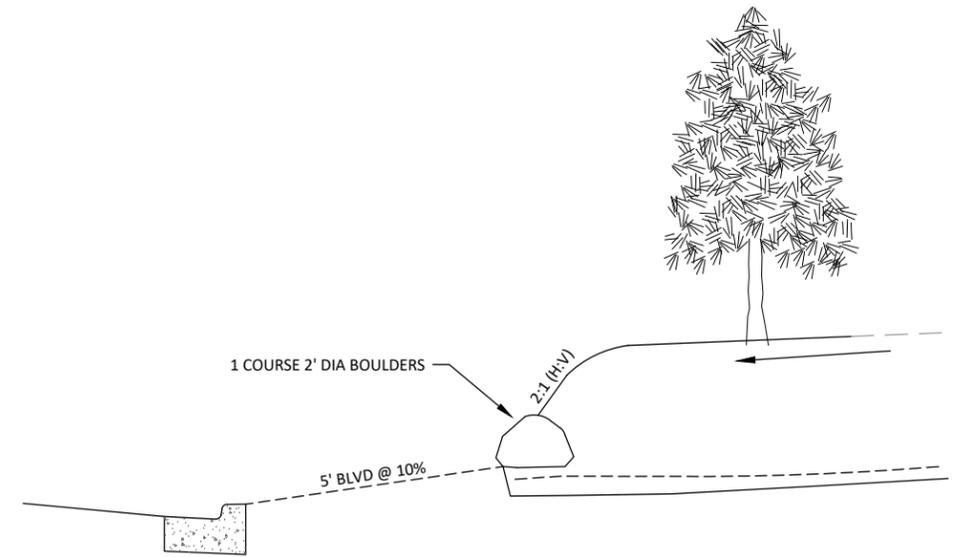
CONIFEROUS TREE PLANTING

Special Details

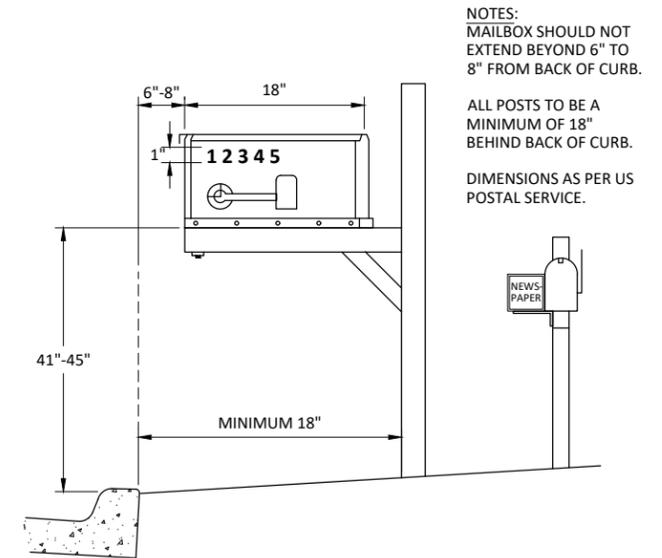
Date:	JAN. 2016
Revised:	MISC-02



2 LEVEL 2' BOULDER RETAINING WALL
NOT TO SCALE



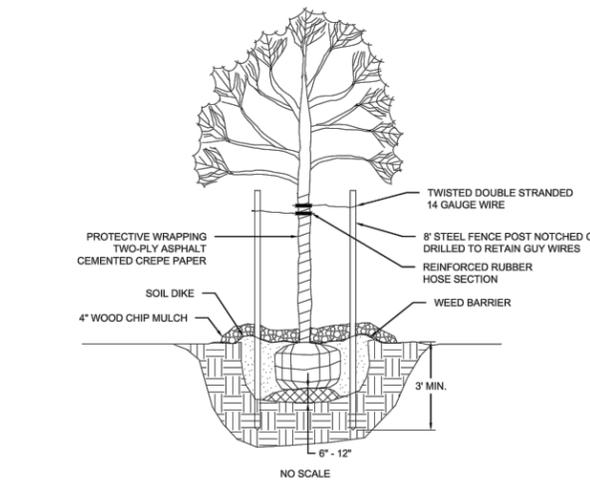
2' BOULDER RETAINING WALL
NOT TO SCALE



MAILBOX INSTALLATION
NOT TO SCALE

- HEIGHT-41 TO 45 INCHES ABOVE STREET LEVEL.
- HAVE BOX EXTEND AS FAR IN FRONT OF SUPPORT POST AS POSSIBLE. THIS PREVENTS POSSIBLE SNOW PLOW DAMAGE.
- ADDRESS MUST BE ON SIDE OF BOX FROM WHICH CARRIER APPROACHES IN LETTERS ABOUT ONE INCH HIGH, OR ON FRONT WHERE BOXES ARE GROUPED.
- IF MAILBOX IS ON A DIFFERENT STREET FROM HOUSE OR APARTMENT, FULL STREET ADDRESS MUST BE ON THE BOX.
- BOX MUST BE LOCATED SO CARRIER CAN SERVE WITHOUT LEAVING VEHICLE OR AS USPS HAS DETAILED.

- NOTES:**
- MAILBOX SHOULD NOT EXTEND BEYOND 6" TO 8" FROM BACK OF CURB.
- ALL POSTS TO BE A MINIMUM OF 18" BEHIND BACK OF CURB.
- DIMENSIONS AS PER US POSTAL SERVICE.



- NOTES:**
1. PROVIDE AND INSTALL PLANT MATERIALS THAT MEET SPECIFICATIONS AND ARE OF THE SIZE TYPE AND SPECIES GIVEN IN PLANT SCHEDULE OR SHOWN ON THE PLANS.
 2. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF THE SHRUB.
 3. PLACE WEED BARRIER.
 4. PLACE 4" LAYER (AFTER SETTLEMENT) OF SHREDDED HARDWOOD BARK MULCH OR AS SPECIFIED OTHERWISE.
 5. PLACE MULCH TO FORM SAUCER TO HOLD WATER.
 6. REMOVE TOP 1/3 OF BURLAP FROM ROOTBALL.
 7. DIG PLANT HOLE 1'-0" MIN. LARGER THAN BALL, ALL SIDES.
 8. BACKFILL WITH PLANTING SOIL.
 9. SCARIFY BOTTOM OF PLANTING HOLE.



DECIDUOUS TREE PLANTING

Special Details

Date:	JAN. 2016
Revised:	MISC-01

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CHASKA, MINNESOTA 55318
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Email: Chaska@bolton-menk.com
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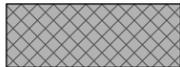
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GENERAL NOTES:

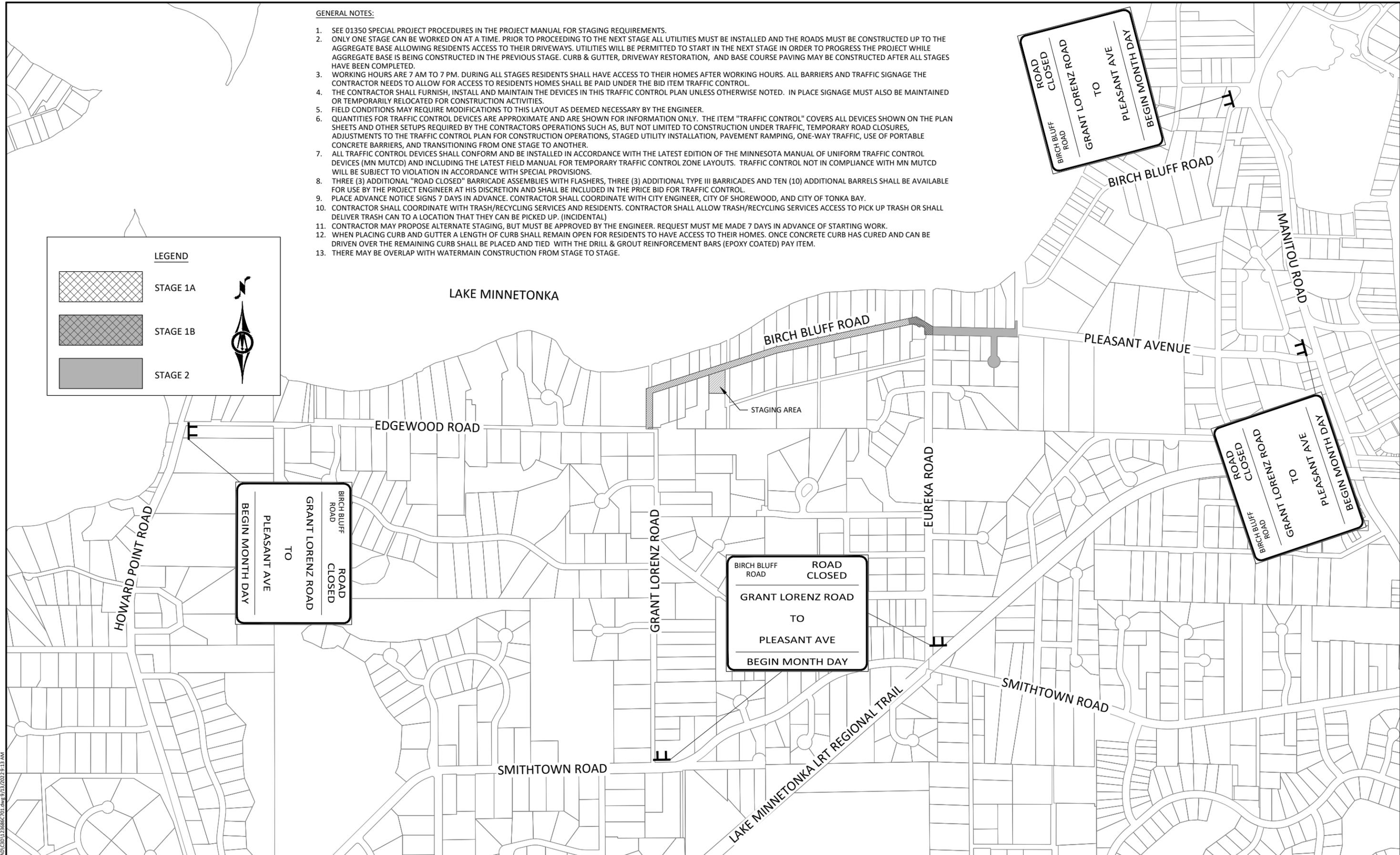
- SEE 01350 SPECIAL PROJECT PROCEDURES IN THE PROJECT MANUAL FOR STAGING REQUIREMENTS.
- ONLY ONE STAGE CAN BE WORKED ON AT A TIME. PRIOR TO PROCEEDING TO THE NEXT STAGE ALL UTILITIES MUST BE INSTALLED AND THE ROADS MUST BE CONSTRUCTED UP TO THE AGGREGATE BASE ALLOWING RESIDENTS ACCESS TO THEIR DRIVEWAYS. UTILITIES WILL BE PERMITTED TO START IN THE NEXT STAGE IN ORDER TO PROGRESS THE PROJECT WHILE AGGREGATE BASE IS BEING CONSTRUCTED IN THE PREVIOUS STAGE. CURB & GUTTER, DRIVEWAY RESTORATION, AND BASE COURSE PAVING MAY BE CONSTRUCTED AFTER ALL STAGES HAVE BEEN COMPLETED.
- WORKING HOURS ARE 7 AM TO 7 PM. DURING ALL STAGES RESIDENTS SHALL HAVE ACCESS TO THEIR HOMES AFTER WORKING HOURS. ALL BARRIERS AND TRAFFIC SIGNAGE THE CONTRACTOR NEEDS TO ALLOW FOR ACCESS TO RESIDENTS HOMES SHALL BE PAID UNDER THE BID ITEM TRAFFIC CONTROL.
- THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED. IN PLACE SIGNAGE MUST ALSO BE MAINTAINED OR TEMPORARILY RELOCATED FOR CONSTRUCTION ACTIVITIES.
- FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
- QUANTITIES FOR TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND ARE SHOWN FOR INFORMATION ONLY. THE ITEM "TRAFFIC CONTROL" COVERS ALL DEVICES SHOWN ON THE PLAN SHEETS AND OTHER SETUPS REQUIRED BY THE CONTRACTORS OPERATIONS SUCH AS, BUT NOT LIMITED TO CONSTRUCTION UNDER TRAFFIC, TEMPORARY ROAD CLOSURES, ADJUSTMENTS TO THE TRAFFIC CONTROL PLAN FOR CONSTRUCTION OPERATIONS, STAGED UTILITY INSTALLATION, PAVEMENT RAMPING, ONE-WAY TRAFFIC, USE OF PORTABLE CONCRETE BARRIERS, AND TRANSITIONING FROM ONE STAGE TO ANOTHER.
- ALL TRAFFIC CONTROL DEVICES SHALL CONFORM AND BE INSTALLED IN ACCORDANCE WITH THE LATEST EDITION OF THE MINNESOTA MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MN MUTCD) AND INCLUDING THE LATEST FIELD MANUAL FOR TEMPORARY TRAFFIC CONTROL ZONE LAYOUTS. TRAFFIC CONTROL NOT IN COMPLIANCE WITH MN MUTCD WILL BE SUBJECT TO VIOLATION IN ACCORDANCE WITH SPECIAL PROVISIONS.
- THREE (3) ADDITIONAL "ROAD CLOSED" BARRICADE ASSEMBLIES WITH FLASHERS, THREE (3) ADDITIONAL TYPE III BARRICADES AND TEN (10) ADDITIONAL BARRELS SHALL BE AVAILABLE FOR USE BY THE PROJECT ENGINEER AT HIS DISCRETION AND SHALL BE INCLUDED IN THE PRICE BID FOR TRAFFIC CONTROL.
- PLACE ADVANCE NOTICE SIGNS 7 DAYS IN ADVANCE. CONTRACTOR SHALL COORDINATE WITH CITY ENGINEER, CITY OF SHOREWOOD, AND CITY OF TONKA BAY.
- CONTRACTOR SHALL COORDINATE WITH TRASH/RECYCLING SERVICES AND RESIDENTS. CONTRACTOR SHALL ALLOW TRASH/RECYCLING SERVICES ACCESS TO PICK UP TRASH OR SHALL DELIVER TRASH CAN TO A LOCATION THAT THEY CAN BE PICKED UP. (INCIDENTAL)
- CONTRACTOR MAY PROPOSE ALTERNATE STAGING, BUT MUST BE APPROVED BY THE ENGINEER. REQUEST MUST ME MADE 7 DAYS IN ADVANCE OF STARTING WORK.
- WHEN PLACING CURB AND GUTTER A LENGTH OF CURB SHALL REMAIN OPEN FOR RESIDENTS TO HAVE ACCESS TO THEIR HOMES. ONCE CONCRETE CURB HAS CURED AND CAN BE DRIVEN OVER THE REMAINING CURB SHALL BE PLACED AND TIED WITH THE DRILL & GROUT REINFORCEMENT BARS (EPOXY COATED) PAY ITEM.
- THERE MAY BE OVERLAP WITH WATERMAIN CONSTRUCTION FROM STAGE TO STAGE.

LEGEND

 STAGE 1A
 STAGE 1B
 STAGE 2

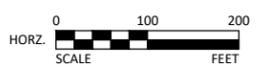


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LIC. NO. 54198 DATE 09/20/2022

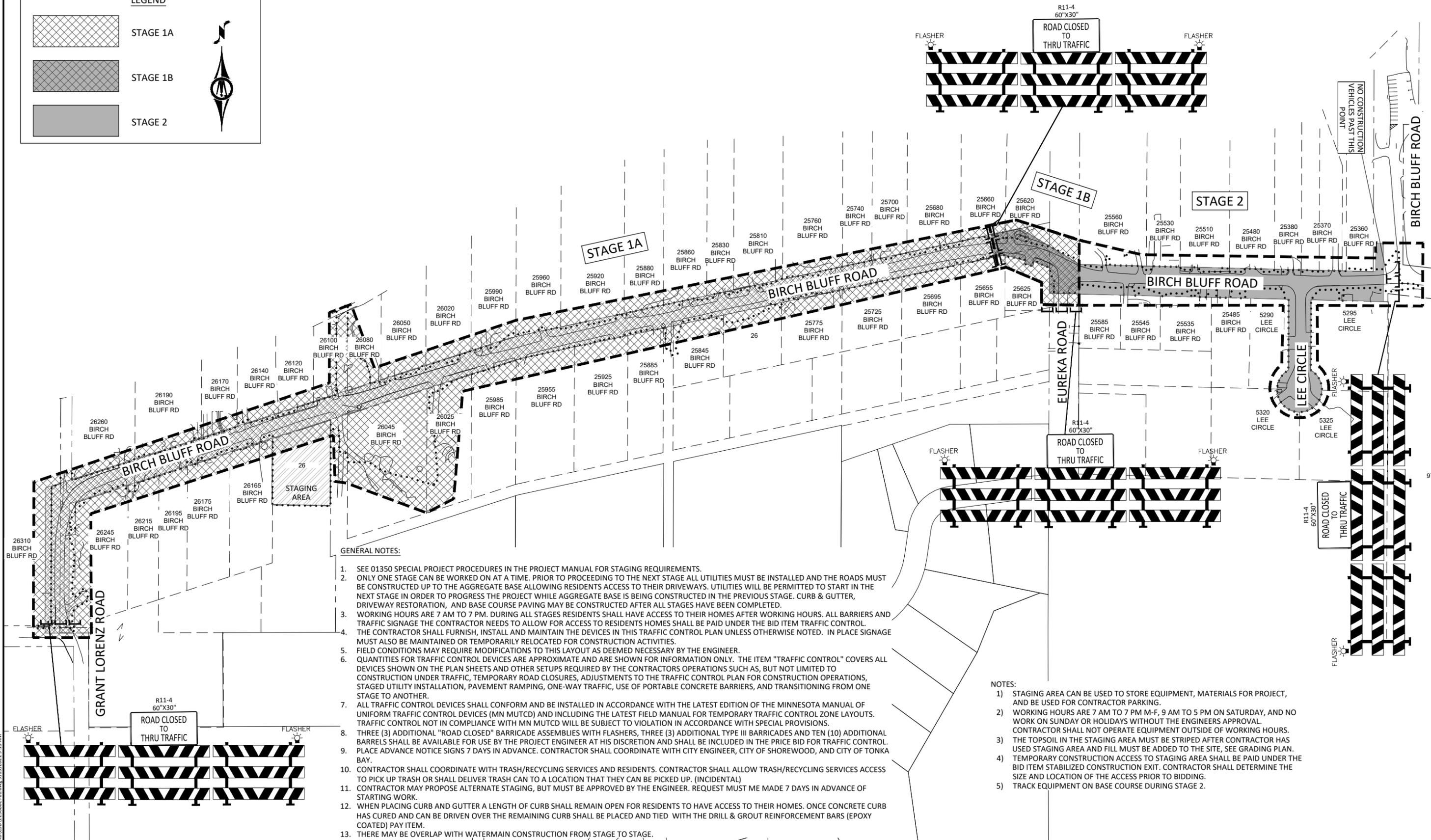


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LEGEND

 STAGE 1A
 STAGE 1B
 STAGE 2

GENERAL NOTES:

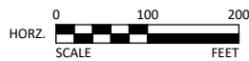
- SEE 01350 SPECIAL PROJECT PROCEDURES IN THE PROJECT MANUAL FOR STAGING REQUIREMENTS.
- ONLY ONE STAGE CAN BE WORKED ON AT A TIME. PRIOR TO PROCEEDING TO THE NEXT STAGE ALL UTILITIES MUST BE INSTALLED AND THE ROADS MUST BE CONSTRUCTED UP TO THE AGGREGATE BASE ALLOWING RESIDENTS ACCESS TO THEIR DRIVEWAYS. UTILITIES WILL BE PERMITTED TO START IN THE NEXT STAGE IN ORDER TO PROGRESS THE PROJECT WHILE AGGREGATE BASE IS BEING CONSTRUCTED IN THE PREVIOUS STAGE. CURB & GUTTER, DRIVEWAY RESTORATION, AND BASE COURSE PAVING MAY BE CONSTRUCTED AFTER ALL STAGES HAVE BEEN COMPLETED.
- WORKING HOURS ARE 7 AM TO 7 PM. DURING ALL STAGES RESIDENTS SHALL HAVE ACCESS TO THEIR HOMES AFTER WORKING HOURS. ALL BARRIERS AND TRAFFIC SIGNAGE THE CONTRACTOR NEEDS TO ALLOW FOR ACCESS TO RESIDENTS HOMES SHALL BE PAID UNDER THE BID ITEM TRAFFIC CONTROL. THE CONTRACTOR SHALL FURNISH, INSTALL AND MAINTAIN THE DEVICES IN THIS TRAFFIC CONTROL PLAN UNLESS OTHERWISE NOTED. IN PLACE SIGNAGE MUST ALSO BE MAINTAINED OR TEMPORARILY RELOCATED FOR CONSTRUCTION ACTIVITIES.
- FIELD CONDITIONS MAY REQUIRE MODIFICATIONS TO THIS LAYOUT AS DEEMED NECESSARY BY THE ENGINEER.
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- THERE MAY BE OVERLAP WITH WATERMAIN CONSTRUCTION FROM STAGE TO STAGE.

NOTES:

- STAGING AREA CAN BE USED TO STORE EQUIPMENT, MATERIALS FOR PROJECT, AND BE USED FOR CONTRACTOR PARKING.
- WORKING HOURS ARE 7 AM TO 7 PM M-F, 9 AM TO 5 PM ON SATURDAY, AND NO WORK ON SUNDAY OR HOLIDAYS WITHOUT THE ENGINEERS APPROVAL. CONTRACTOR SHALL NOT OPERATE EQUIPMENT OUTSIDE OF WORKING HOURS.
- THE TOPSOIL IN THE STAGING AREA MUST BE STRIPED AFTER CONTRACTOR HAS USED STAGING AREA AND FILL MUST BE ADDED TO THE SITE, SEE GRADING PLAN.
- TEMPORARY CONSTRUCTION ACCESS TO STAGING AREA SHALL BE PAID UNDER THE BID ITEM STABILIZED CONSTRUCTION EXIT. CONTRACTOR SHALL DETERMINE THE SIZE AND LOCATION OF THE ACCESS PRIOR TO BIDDING.
- TRACK EQUIPMENT ON BASE COURSE DURING STAGE 2.

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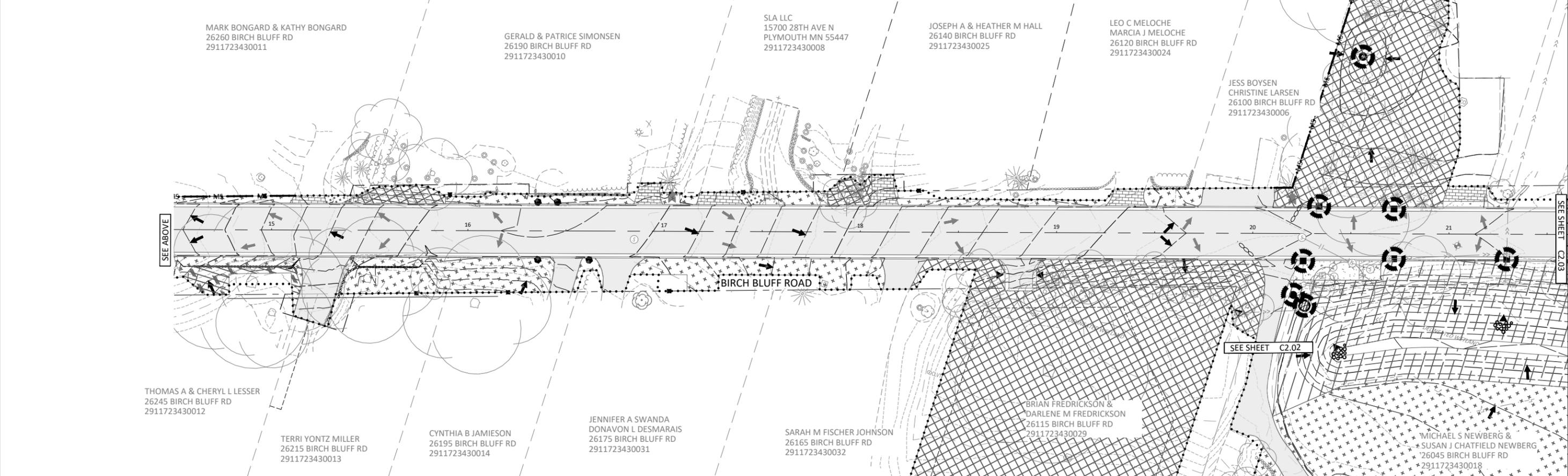
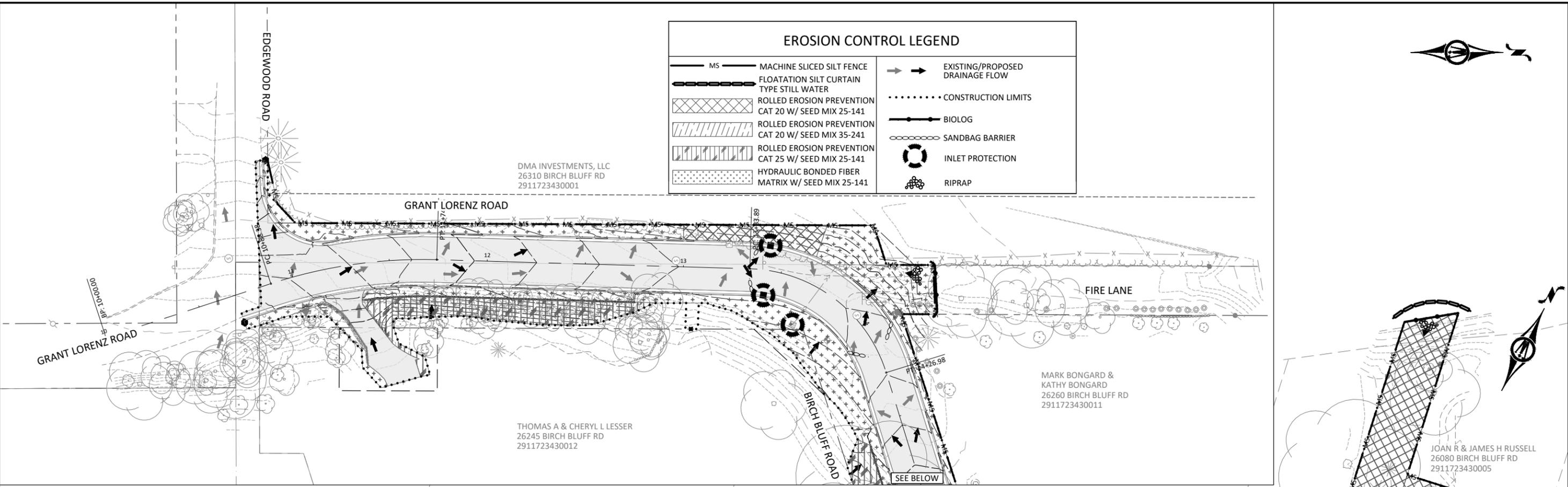
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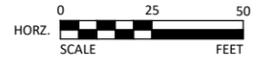
CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
STAGING PLAN

SHEET
C1.13

EROSION CONTROL LEGEND	
	MS MACHINE SLICED SILT FENCE
	FLOATATION SILT CURTAIN TYPE STILL WATER
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 25-141
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 35-241
	ROLLED EROSION PREVENTION CAT 25 W/ SEED MIX 25-141
	HYDRAULIC BONDED FIBER MATRIX W/ SEED MIX 25-141
	EXISTING/PROPOSED DRAINAGE FLOW
	CONSTRUCTION LIMITS
	BIOLOG
	SANDBAG BARRIER
	INLET PROTECTION
	RIPRAP



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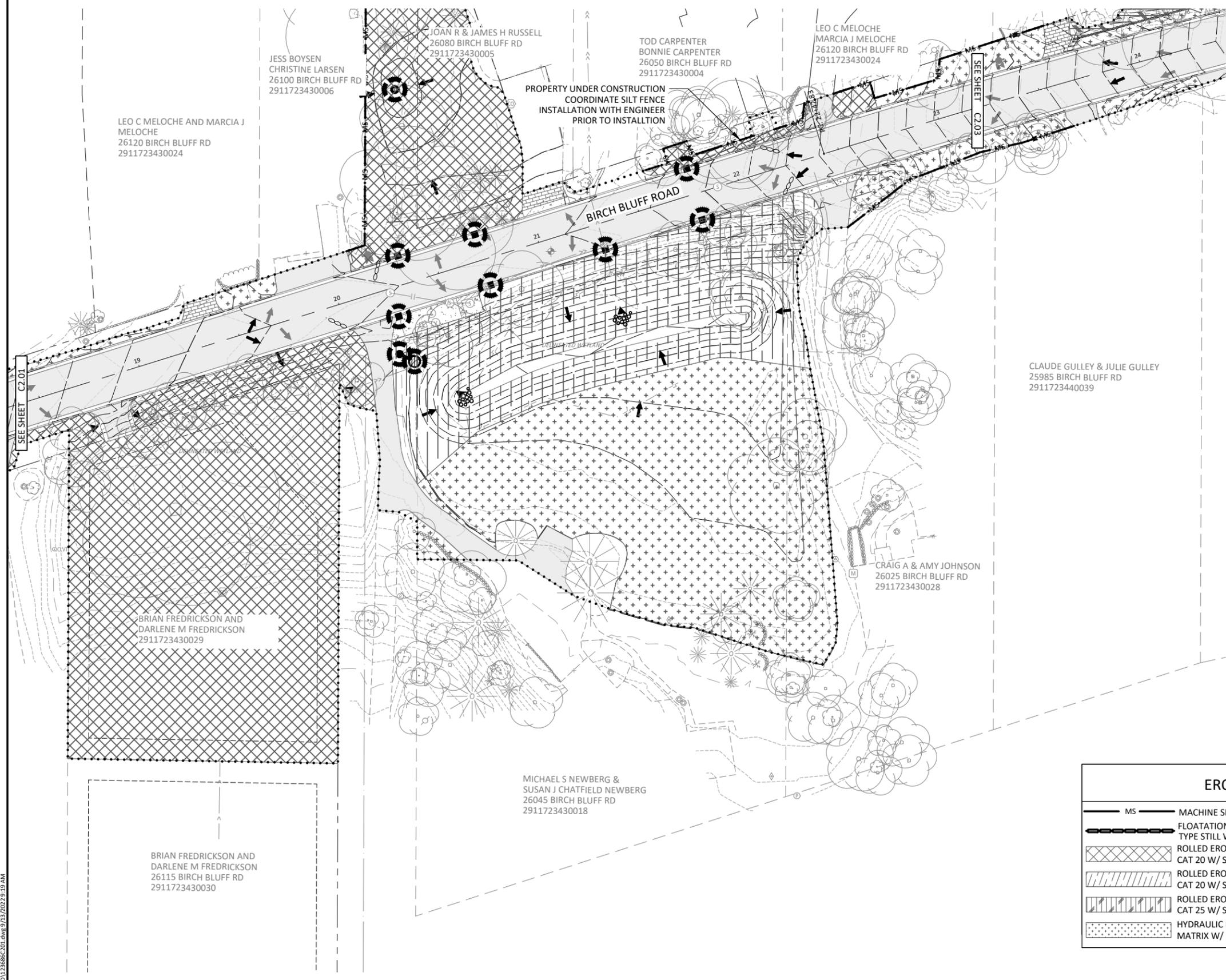
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
EROSION CONTROL & TURF ESTABLISHMENT PLAN

SHEET
C2.01

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LEO C MELOCHE AND MARCIA J MELOCHE
26120 BIRCH BLUFF RD
2911723430024

JESS BOYSEN
CHRISTINE LARSEN
26100 BIRCH BLUFF RD
2911723430006

JOAN R & JAMES H RUSSELL
26080 BIRCH BLUFF RD
2911723430005

TOD CARPENTER
BONNIE CARPENTER
26050 BIRCH BLUFF RD
2911723430004

LEO C MELOCHE
MARCIA J MELOCHE
26120 BIRCH BLUFF RD
2911723430024

PROPERTY UNDER CONSTRUCTION
COORDINATE SILT FENCE
INSTALLATION WITH ENGINEER
PRIOR TO INSTALLTION

CLAUDE GULLEY & JULIE GULLEY
25985 BIRCH BLUFF RD
2911723440039

CRAIG A & AMY JOHNSON
26025 BIRCH BLUFF RD
2911723430028

BRIAN FREDRICKSON AND
DARLENE M FREDRICKSON
2911723430029

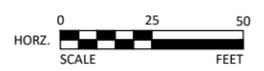
MICHAEL S NEWBERG &
SUSAN J CHATFIELD NEWBERG
26045 BIRCH BLUFF RD
2911723430018

BRIAN FREDRICKSON AND
DARLENE M FREDRICKSON
26115 BIRCH BLUFF RD
2911723430030

EROSION CONTROL LEGEND	
	MACHINE SLICED SILT FENCE
	FLOATATION SILT CURTAIN TYPE STILL WATER
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 25-141
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 35-241
	ROLLED EROSION PREVENTION CAT 25 W/ SEED MIX 25-141
	HYDRAULIC BONDED FIBER MATRIX W/ SEED MIX 25-141
	EXISTING/PROPOSED DRAINAGE FLOW
	CONSTRUCTION LIMITS
	BIOLOG
	SANDBAG BARRIER
	INLET PROTECTION
	RIPRAP

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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
EROSION CONTROL & TURF ESTABLISHMENT PLAN-26045 & 26025

SHEET
C2.02

TOD CARPENTER
BONNIE CARPENTER
26050 BIRCH BLUFF RD
2911723430004

GIANFRANCO CUNEO
BONNIE CUNEO
26020 BIRCH BLUFF RD
2911723430003

JAMES T PROKOPANKO TRUSTEE
BONNIE KAE MCPHEE TRUSTEE
25990 BIRCH BLUFF RD
2911723440035

JAMES M WISE/THERESA MH WISE
25960 BIRCH BLUFF RD
2911723440012

WILLIAM & BRENDA HENNEY
25920 BIRCH BLUFF RD
2911723440011

DONALD B & LORETTA L MANN
25880 BIRCH BLUFF RD
2911723440010

GERMAN E CAMPUZANO JR
KRISTY CAMPUZANO
25860 BIRCH BLUFF RD
2911723440009

WILLIAM P &
MELANIE KEEGAN
25830 BIRCH BLUFF RD
2911723440008

PROPERTY UNDER CONSTRUCTION
COORDINATE SILT FENCE
INSTALLATION WITH ENGINEER
PRIOR TO INSTALLTION

BIRCH BLUFF ROAD

SEE SHEET C2.01

SEE BELOW

CLAUDE GULLEY & JULIE GULLEY
25985 BIRCH BLUFF RD
2911723440039

GERALD H NESS
25955 BIRCH BLUFF RD
2911723440013

MOUNT OLIVET ROLLING ACRES
25925 BIRCH BLUFF RD
2911723440014

KYLE REILY
25885 BIRCH BLUFF RD
2911723440015

NATHAN J SCHMITZ
25845 BIRCH BLUFF RD
2911723440016

CRAIG A & AMY JOHNSON
26025 BIRCH BLUFF RD
2911723430028

JOHN A BRIDGE
25810 BIRCH BLUFF RD
2911723440007

STEVEN & KATHLEEN CURRY
25760 BIRCH BLUFF RD
2911723440006

JEFFREY D LUNDBORG
JENNIFER M LUNDBORG
25740 BIRCH BLUFF RD
2911723440005

MARGARET C MUEHLBERG
25700 BIRCH BLUFF RD
2911723440032

DEBORAH D SIAKEL REV TRUST
25680 BIRCH BLUFF
RD2911723440031

ROBERT B KING
25660 BIRCH BLUFF
RD2911723440041

WALLACE & JUDITH KING
25620 BIRCH BLUFF
RD2911723440040

SEE ABOVE

BIRCH BLUFF ROAD

NATHAN J & KARA L SCHMITZ
26 Address Unassigned
2911723440017

GALE E OLSON JR
25775 BIRCH BLUFF RD
2911723440018

GENE & JUDITH RUFFENACH
25725 BIRCH BLUFF RD
2911723440019

DAVID J AUSEN
25695 BIRCH BLUFF
RD2911723440020

TIMOTHY O MOEN/
CARRIE L MOEN
25655 BIRCH BLUFF RD
2911723440033

AMBER MCENERY
25625 BIRCH BLUFF
RD 2911723440037

EROSION CONTROL LEGEND

	MACHINE SLICED SILT FENCE		EXISTING/PROPOSED DRAINAGE FLOW
	FLOATATION SILT CURTAIN		CONSTRUCTION LIMITS
	TYPE STILL WATER		BIOLOG
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 25-141		SANDBAG BARRIER
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 35-241		INLET PROTECTION
	ROLLED EROSION PREVENTION CAT 25 W/ SEED MIX 25-141		RIPRAP
	HYDRAULIC BONDED FIBER MATRIX W/ SEED MIX 25-141		



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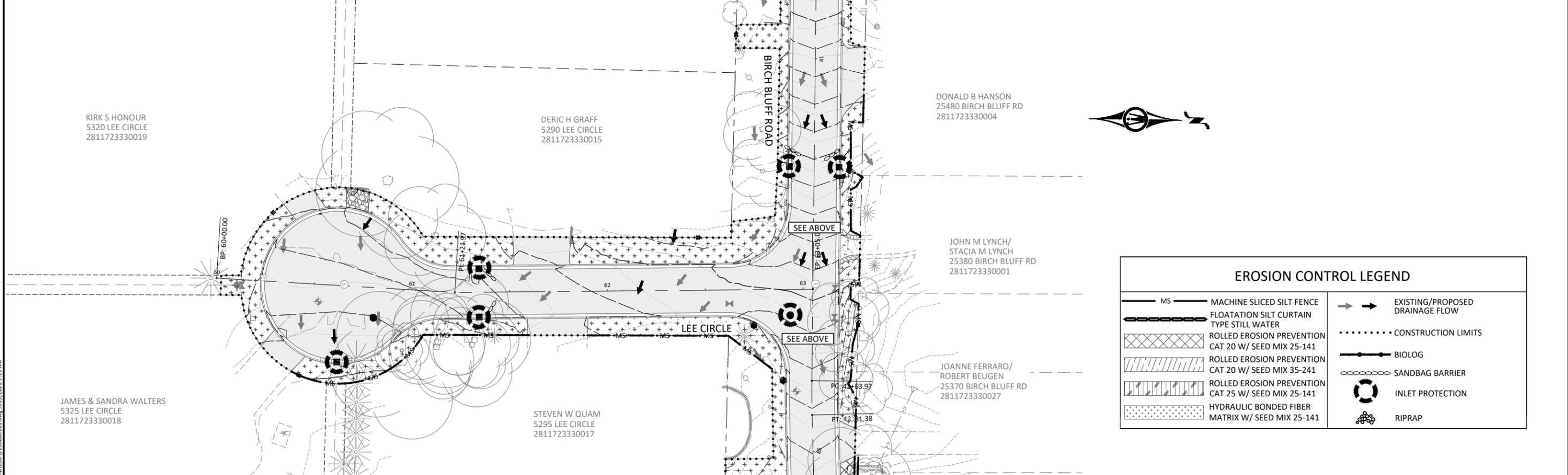
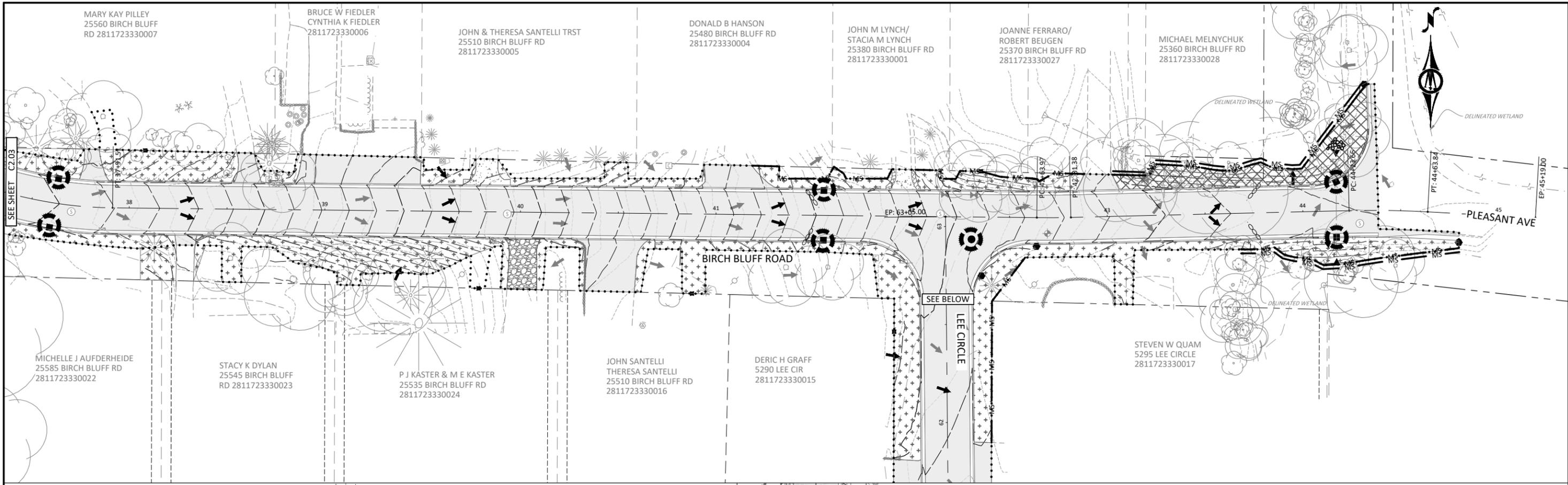
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
EROSION CONTROL & TURF ESTABLISHMENT PLAN

SHEET
C2.03

DRAFT



EROSION CONTROL LEGEND	
	MACHINE SLICED SILT FENCE
	FILTRATION SILT CURTAIN
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 25-141
	ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 35-241
	ROLLED EROSION PREVENTION CAT 25 W/ SEED MIX 25-141
	HYDRAULIC BONDED FIBER MATRIX W/ SEED MIX 25-141
	EXISTING/PROPOSED DRAINAGE FLOW
	CONSTRUCTION LIMITS
	BIOLOG
	SANDBAG BARRIER
	INLET PROTECTION
	RIPRAP

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BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
EROSION CONTROL & TURF ESTABLISHMENT PLAN

SHEET
C2.04

Information contained in this SWPPP narrative sheet summarizes requirements of the GENERAL PERMIT AUTHORIZATION TO DISCHARGE STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/STATE DISPOSAL SYSTEM PROGRAM - Permit No: MN RI00001 (Permit) as they apply to this project. All provisions of the Permit including those not specifically cited herein shall apply to this project. The Contractor is responsible to be familiar with and comply with all conditions of the permit. The full text of the Permit is available at: <https://www.pca.state.mn.us/sites/default/files/wq-strm2-80a.pdf>

SWPPP AMENDMENTS AND SUBMITTALS

Contractor must prepare and submit to the Engineer a SWPPP amendment as necessary to include additional Best Management Practices (BMPs) to correct problems identified or address the following situations.

1. Contact information and training documentation for Construction SWPPP Manager and BMP Installer,
2. There is a change in construction method of phasing, operation, maintenance, weather or seasonal conditions not anticipated during the design of the SWPPP including but not limited to:
 - a. Types and/or Locations of BMPs
 - b. Material Storage and Spill Response
 - c. Fueling Plans
 - d. Locations for Stockpiles, Concrete Washout, and Sanitation Facilities and
 - e. Project Phasing
3. It is determined that the SWPPP is not achieving objectives of minimizing pollutants in stormwater discharges associated with construction activity, or
4. The SWPPP is not consistent with the terms and conditions of the permit.

The Contractor may implement SWPPP amendments immediately and is not required to wait for Engineer review of the submittal. The responsibility for completeness of SWPPP amendments and compliance with the Permit lies with the Contractor. Review, comment, or lack of comment by the Engineer on a SWPPP amendment shall not absolve the responsibilities of the Contractor in any way.

If a change order is issued for a design change the SWPPP amendment will be prepared by the Engineer and included in the change order.

In addition to SWPPP amendments, the Contractor shall submit to the Engineer Weekly Erosion and Sediment Control Schedule meeting the requirements of MnDOT 1717.

The Contractor shall keep copies of all SWPPP amendments, Weekly Erosion and Sediment Control Schedules, inspection logs, and maintenance logs with the field copy of the SWPPP. A PDF copy of these documents will be provided along with a copy of the final Field Copy of the SWPPP to the Engineer along with the signed Notice of Termination when final stabilization is complete.

EROSION PREVENTION PRACTICES

Stormwater conveyance channels shall be routed around unstabilized areas. Erosion controls and velocity dissipation devices shall be used at outlets within and along the length of any constructed conveyance channel.

The normal wetted perimeter of all ditches or swales, including storm water management pond slopes, that drain waters from the site must be stabilized within 200' of any property edge or discharge point, including storm sewer inlets, within 24 hours of connection.

Temporary or permanent ditches or swales used as sediment containment during construction do not need to be stabilized during temporary period of use and shall be stabilized within 24 hours after no longer used as sediment containment.

Mulch, hydromulch, tackifier, or similar practice shall not be used in any portion of the wetted perimeter of a temporary or permanent drainage ditch or swale section with a continuous slope of greater than 2 percent.

Energy dissipation shall be installed at all temporary or permanent pipe outlets within 24 hours of connection to a surface water or permanent stormwater treatment system.

The Contractor shall phase construction and use construction methods to the extent practical to minimize exposed soils. The project phasing shall be documented in the Weekly Erosion and Sediment Control Schedule.

SEDIMENT CONTROL PRACTICES

Down gradient BMPs including perimeter BMPs must be in place before up gradient land- disturbing activities begin and shall remain in place until final stabilization.

All BMPs that have been adjusted or removed to accommodate short-term activities shall be re-installed or replaced the earlier of the end of the work day or before the next precipitation event even if the activity is not complete.

Inlet BMPs may be removed for specific safety concerns. The BMPs shall be replaced as soon as the safety concern is resolved. The removal shall be documented in the SWPPP as a SWPPP amendment.

Temporary stockpiles must have sediment control BMPs. The Contractor shall prepare and submit to the Engineer a SWPPP amendment showing the location of temporary stockpiles and the BMPs for each stockpile. The SWPPP amendment must meet the minimum requirements of Section 9 of the Permit.

Soil compaction shall be minimized and topsoil shall be preserved, unless infeasible or if construction activities dictate soil compaction or topsoil stripping.

The use of polymers, flocculants, or other sedimentation treatment chemicals are not proposed as part of this SWPPP as designed by the Engineer. If methods or phasing of construction require the use of any of these chemicals, the Contractor shall prepare and submit to the Engineer a SWPPP amendment that meets the minimum requirements of Section 9 of the Permit.

TEMPORARY SEDIMENTATION BASINS

A temporary sedimentation basin has not been included in this SWPPP as designed by the Engineer. If a basin is later determined to be desirable or necessary the Contractor shall prepare and submit to the Engineer a SWPPP amendment. Temporary sedimentation basins shall meet or exceed the minimum requirements of Section 14 of the Permit and shall include a basin draining plan meeting or exceeding the minimum requirements of Section 10 of the Permit. Where the site discharges to Special and/or Impaired Waters the SWPPP amendment shall also meet or exceed the minimum requirements of Section 23 of the permit.

DEWATERING

A dewatering plan has not been included in this SWPPP as designed by the Engineer. If dewatering is required for this project, the Contractor shall prepare and submit to the Engineer a SWPPP amendment. All dewatering shall meet or exceed the minimum requirements of Section 10 of the Permit.

POLLUTION PREVENTION

Products and materials that have the potential to leach pollutants that are stored on the site must be stored in a manner designed to minimize contact with stormwater. Materials that are not a source of potential contamination to stormwater or that are designed for exposure to stormwater are not required to be covered.

Hazardous materials including but not limited to pesticides, fertilizer, petroleum products, curing compounds and toxic waste must be properly stored and protected from stormwater exposure as recommended by the manufacturer in an access restricted area.

Solid waste must be stored, collected and disposed of in compliance with Minnesota Administrative Rules Chapter 7035.

Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. CH 7041.

Exterior vehicle or equipment washing on the project site shall be limited to a defined area of the site. No engine degreasing is allowed on site. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

The Contractor shall prepare and submit a SWPPP amendment detailing the location and BMPs proposed for storage of materials, solid waste, portable toilets, and exterior vehicle or equipment washing on the site. The SWPPP amendment shall include a spill prevention and response plan that is appropriate for the materials proposed to be on the site. The SWPPP amendment shall meet or exceed the minimum requirements of Section 12 of the Permit.

INSPECTION & MAINTENANCE

A trained person shall routinely inspect the entire construction site at the time interval indicated on this sheet of the SWPPP 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 at the time interval indicated in the Receiving Waters Table found on the SITE PLAN AND INFORMATION SHEET of the SWPPP.

All inspections and maintenance conducted during construction must be recorded on the day it is completed and must be retained with the SWPPP. Inspection report forms are available in the Project Specifications. Inspection report forms other than those provided shall be approved by the engineer.

The Contractor may request a change in inspection schedule for the following conditions:

- a. Inspections of areas with permanent cover to be reduced to once per month,
- b. Inspections of areas that have permanent cover and have had no construction activity for 12 months to be suspended until construction resumes,
- c. Inspections of areas where construction is suspended due to frozen ground conditions, inspections to be suspended until the earlier of within 24 hours of runoff occurring, or upon resuming construction.

No change in inspection schedule shall occur until authorized by the Engineer.

Inspections must include:

1. All erosion prevention and sediment control BMPs and Pollution Prevention Management Measures to ensure integrity and effectiveness.
2. Surface waters, including drainage ditches and conveyance systems for evidence of erosion and sediment deposition.
3. Construction site vehicle exit locations, streets and curb and gutter systems within and adjacent to the project for sedimentation from erosion or tracked sediment from vehicles.
4. Infiltration areas to ensure that no sediment from ongoing construction activity is reaching the infiltration area and that equipment is not being driven across the infiltration area.

All non-functioning BMPs and those BMPs where sediment reaches one-half (1/2) of the depth of the BMP, or in the case of sediment basins one-half (1/2) of the storage volume, must be repaired, replaced, or supplemented by the end of the next business day after discovery, or as soon as field conditions allow.

Permittees must repair, replace or supplement all nonfunctional BMPs with functional BMPs by the end of the next business day after discovery, or as soon as field conditions allow.

Any sediment that escapes the site must be removed and the area stabilized within 7 calendar days of discovery unless precluded by legal, regulatory, or physical access in which case the work shall be completed within 7 calendar days of authorization. Paved surfaces such as streets shall have any escaped or tracked sediment removed by the end of the day that it is discovered. Sediment release, other than paved surfaces that can be cleaned up with street sweeping shall be reported immediately upon discovery to the Engineer.

PUBLIC WATER RESTRICTIONS:

For public waters that have been promulgated "work in water restrictions" during fish spawning time frames, all exposed soil areas that are within 200 feet of the water's edge, and drain to these waters must complete stabilization within 24-hours during the time period. MN DNR permits are not valid for work in waters that are designated as infested waters unless accompanied by an Infested Waters Permit or written notification has been obtained from MN DNR stating that such permit is not required. There is no exception for pre-existing permits. If a MN DNR Permit has been issued for the project and the water is later designated as infested, the Contractor shall halt all work covered by the MN DNR Permit until an Infested Waters Permit is obtained or that written notification is obtained stating that such permit is not required.

FINAL STABILIZATION

Final Stabilization is not complete until all the following requirements have been met:

1. Substantial Completion has been reached and no ground disturbing activities are anticipated.
2. Permanent cover has been installed with an established minimum uniform perennial vegetation density of 70 percent of its expected final growth. Vegetation is not required in areas where no vegetation is proposed by this project such as impervious surfaces or the base of a sand filter.

3. Accumulated sediment has been removed from all permanent stormwater treatment systems as necessary to ensure the system is operating as designed.
4. All sediment has been removed from conveyance systems
5. All temporary synthetic erosion prevention and sediment control BMPs have been removed. BMPs designated on the SWPPP to remain to decompose on-site may remain.
6. For residential construction only, permit coverage terminates on individual lots if the structures are finished and temporary erosion prevention and downgradient perimeter control is complete, the residence sells to the homeowner, and the permittee distributes the MPCA's "Homeowner Fact Sheet" to the homeowner.
7. For agricultural land only (e.g., pipelines across cropland), the disturbed land must be returned to its preconstruction agricultural use prior to submitting the NOT.

SITE STABILIZATION COMPLETION:

Stabilization of exposed soils shall begin immediately and shall be completed after the construction activity has temporarily or permanently ceased no later than:	7 calendar days
--	-----------------

SITE INSPECTION INTERVAL:

A trained person shall routinely inspect the entire construction site during active construction at an interval of no less than:	7 calendar days
--	-----------------

SPECIAL ENVIRONMENTAL CONSIDERATIONS AND PERMITS:

1)	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
2)	Does any portion of the site have the potential to affect threatened or endangered species or their critical habitat?	NO
3)	Does any portion of this site discharge to a Calcareous fen.	NO
4)	Will any portion of the site potentially affect properties listed on the National Register of Historic Places or a known or discovered archeological site?	NO
5)	Have any Karst features have been identified in the project vicinity?	NO
6)	Is compliance with temporary or permanent stormwater management design requirements infeasible for this project?	NO
7)	Has the MN DNR promulgated "work in water restrictions" for any Public Water this site discharges to during fish spawning?	NO

TYPE OF PERMIT	PERMITTING AGENCY	PERMIT STATUS AND CONDITIONS
Construction Stormwater NPDES	MPCA	

SWPPP DESIGNER TRAINING DOCUMENTATION:

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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022



2638 SHADOW LANE, SUITE 200
CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
Email: Chaska@bolton-menk.com
www.bolton-menk.com

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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
SWPPP NARRATIVE

SHEET
C2.05

STORMWATER POLLUTION PREVENTION PLAN (SWPPP)

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

CITY OF SHOREWOOD
HENNEPIN COUNTY, MINNESOTA



LEGEND

	1-MILE BOUNDARY	
	PROJECT BOUNDARY	
	OR	IMPAIRED, SPECIAL OR PROTECTED WATERS
	NATIONAL WETLANDS INVENTORY	
	CALCAREOUS FEN	
	RECEIVING WATERS	

PROJECT AREAS:

Total Project Size (disturbed area) =	5.1	ACRES
Existing area of impervious surface =	2.4	ACRES
Post construction area of impervious surface =	3.1	ACRES
Total new impervious surface area created =	0.7	ACRES

Planned Construction Start Date: 05/01/2023
Estimated Construction Completion Date: 07/01/2024

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

<input type="checkbox"/>	Wet Sedimentation Basin
<input type="checkbox"/>	Infiltration/Filtration
<input type="checkbox"/>	Regional Pond
<input type="checkbox"/>	Permanent Stormwater Management Not Required

PROJECT LOCATION:

COUNTY	TOWNSHIP	RANGE	SECTION	LATITUDE	LONGITUDE
HENNEPIN	T117N	R23W	33	44.9035°	-93.5963°

BMP SUMMARY

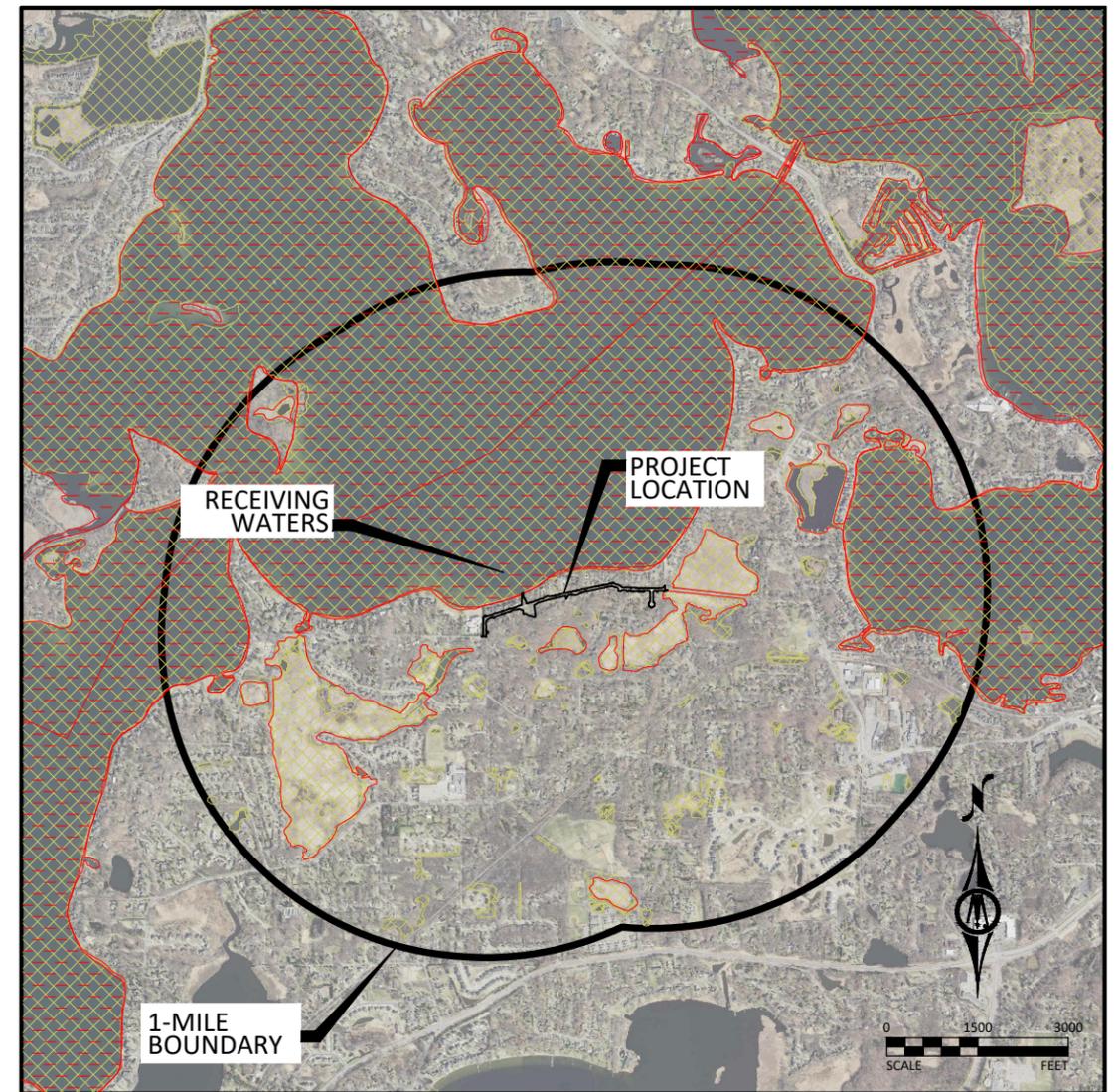
BMP	QUANTITY	UNIT
SILT FENCE, MACHINE SLICED	3,184	LF
BIO LOG	30	LF
FLOATING SILT CURTAIN TYPE STILL WATER	42	LF
INLET PROTECTION	33	EA
CONSTRUCTION EXIT	1	LUMP SUM
RIPRAP	30	CY
ROLLE3D EROSION PREVENTION CAT 20 W/ SEED MIX 25-141	2,271	SY
ROLLED EROSION PREVENTION CAT 20 W/ SEED MIX 35-241	1,367	SY
ROLLED EROSION PREVENTION CAT 25 W/ SEED MIX 25-141	535	SY
HYDRAULIC BONDED FIBER MATRIX W/ SEED MIX 25-141	7,164	SY

DESCRIPTION OF CONSTRUCTION ACTIVITIES AND STORMWATER MANAGEMENT:
Construction activities include: Site grading, sanitary sewer and water main extensions, temporary erosion and sediment control, and permanent stabilization.

Stormwater generated within the project limits currently runs off the roadway into the adjacent yards. The runoff then surface flows through the yards and culverts, ultimately draining to Lake Minnetonka to the north.

After construction is complete stormwater generated within the project limits will be captured by catch basins and routed through through the proposed storm sewer system and ultimately discharged north to Lake Minnetonka.

This project includes the following stormwater management BMPs: Inlet protection, silt fence, bio log, site stabilization, storm pond.



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

NAME OF WATER BODY	TYPE (ditch, pond, wetland, lake, etc.)	Special, Prohibited, Restricted Water ¹	Flows to Impaired Water Within 1-Mile ²	USEPA Approved Construction Related TMDL ³
MINNETONKA LAKE	LAKE	NO	YES	NONE

¹ Special, prohibited, and restricted waters are listed in Section 23 of the MN Construction Stormwater General Permit (MNR100001).
² Identified as impaired under section 303 (d) of the federal Clean Water Act for phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.
³ Construction Related TMDLs include those related to: phosphorus, turbidity, TSS, dissolved oxygen, and/or aquatic biota.

IMPLEMENTATION SCHEDULE AND PHASING: The Contractor is required to provide an updated schedule and site management plan meeting the minimum requirements of Section 1717 of the Minnesota Standard Specifications for Construction.

- Submit SWPPP Updates to Engineer. Submittal shall include any requested changes to the SWPPP, including but not limited to: Trained Personnel, Locations for Stockpiles, Concrete Washout, Sanitation Facilities, Types and Locations of Erosion & Sediment Control. Failure to submit updates shall be considered acceptance of the SWPPP as designed with no changes.
- Install perimeter sediment control, inlet protection, and construction exit.
- Control of existing bituminous.
- Storm water system construction
- Street construction
- Final stabilization
- Add additional temporary BMPs as necessary during construction based on inspection reports.
- Ensure final stabilization measures are complete.
- Provide digital copy of all Field SWPPP Documentation including Inspection Reports and SWPPP Revisions to the Owner.
- Submit Notice of Termination (NOT) to MPCA. NOTE: The NOT must be submitted to MPCA before Final Stabilization is considered complete.

RESPONSIBLE PARTIES:
The Contractor and Owner will be joint applicants under the MPCA's General Stormwater Permit for Construction Activity as required by the National Pollutant Discharge Elimination System (NPDES) Phase II program.

The Contractor shall provide one or more trained Construction SWPPP Manager(s) knowledgeable and experienced in the application of erosion prevention and sediment control BMPs that will oversee the implementation of the SWPPP, and the installation, inspection and maintenance of the erosion prevention and sediment control BMPs.

A Construction SWPPP Manager must be available for an on-site inspection within 72 hours upon request by the MPCA.

	COMPANY	CONTACT PERSON	PHONE
OWNER:	CITY OF SHOREWOOD	ANDREW BUDDE	612-756-2486
SWPPP DESIGNER:	Bolton & Menk, Inc.	ROBERT BEAN	952-448-8838
CONTRACTOR:	TBD	TBD	TBD
CONSTRUCTION SWPPP MANAGER:	TBD	TBD	TBD
PARTY RESPONSIBLE FOR LONG TERM O&M:	CITY OF SHOREWOOD	ANDREW BUDDE	612-756-2486

The SWPPP Designer, Construction SWPPP Manager, and BMP Installer must have appropriate training. 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. Training documentation for the SWPPP Designer is included on the Narrative sheet. The Contractor shall attach training documentation to this SWPPP for the Construction SWPPP Manager and BMP Installer prior to the start of construction. This information shall be kept up to date until the project NOT is filed.

ADDITIONAL COMPENSATION
Payment for all work associated with Erosion and Sediment Control shall be as described in the Project Manual. Unless otherwise authorized by the Owner no additional payment shall be made for any work required to administer and maintain the site erosion and sediment control in compliance with the Minnesota Pollution Control Agency (MPCA) - General Stormwater Permit for Construction Activity (MN R100001) including but not limited to inspection, maintenance, and removal of BMPs or addition of BMPs to accommodate Contractor phasing.

DOCUMENT RETENTION
Permittees must make the SWPPP, including all inspection reports, maintenance records, training records and other information required by this permit, available to federal, state, and local officials within three (3) days upon request for the duration of the permit and for three (3) years following the NOT.

GENERAL STORMWATER DISCHARGE REQUIREMENTS
All requirements listed in Section 5.1 of the Permit for the design of the permanent stormwater management system and discharge have been included in the preparation of this SWPPP. These include but are not limited to:
1. The expected amount, frequency, intensity, and duration of precipitation.
2. The nature of stormwater runoff and run-on at the site
3. Peak flow rates and stormwater volumes to minimize erosion at outlets and downstream channel and stream bank erosion.
4. The range of soil particle sizes expected to be present on the site.

Permanent stormwater treatment systems for this project have been designed in accordance with the guidance in the MN Stormwater Manual in place at the time of bidding. Copies of the design information and calculations are part of this SWPPP and will be provided in digital format upon written request to the Engineer.

DRAFT

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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022



2638 SHADOW LANE, SUITE 200
CHASKA, MINNESOTA 55318
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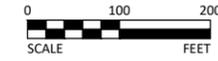
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
SWPPP PLAN



LEGEND

-  PROJECT BOUNDARY
-  SOIL TYPE
-  IMPAIRED, SPECIAL OR PROTECTED WATERS
-  NATIONAL WETLANDS INVENTORY
-  DWSMA, LOW VULNERABILITY
-  STEEP SLOPES (>33.3%)
-  RECEIVING WATERS



SOIL TYPE SUMMARY

Map Unit Symbol	Soil Name	Hyd. Soil Group	Erodibility
MUSYM	MUNAME	HYDGRP	MUHELCL
L22C2	Lester loam, morainic, 6 to 12 percent slopes, eroded	B	NHEL
L22D2	Lester loam, morainic, 12 to 18 percent slopes, eroded	B	NHEL
L22F	Lester loam, morainic, 25 to 35 percent slopes	B	NHEL
L24A	Glencoe loam, depressional, 0 to 1 percent slopes	B/D	NHEL
L36A	Hamel, overwash-Hamel complex, 1 to 4 percent slopes	C/D	NHEL
L37B	Angus loam, 2 to 6 percent slopes	C	NHEL
L50A	Houghton and Muskego soils, depressional, 0 to 1 percent slopes	C/D	NHEL
U1A	Urban land-Udorthents, wet substratum, complex, 0 to 2 percent slopes		NHEL

NHEL - Not Highly Erodible Land
 PHEL - Potentially Highly Erodible Land
 HEL - Highly Erodible Land

LOCATION OF SWPPP REQUIREMENTS IN PROJECT PLAN

DESCRIPTION	SHEET NO.
SITE MAP	C2.06
DIRECTION OF FLOW	C2.01-C2.03
FINAL STABILIZATION	C2.01-C2.03
SOILS	C2.06
DRAINAGE STRUCTURES	C1.01
DRAINAGE TABULATION	C1.01
STORM SEWER PLAN & PROFILE SHEETS	C5.01-C5.08
EROSION & SEDIMENT CONTROL DETAILS	C2.04
EROSION CONTROL TABULATION	C2.05
TURF ESTABLISHMENT TABULATION	C2.06
NARRATIVE & NOTES	C2.04-C2.05

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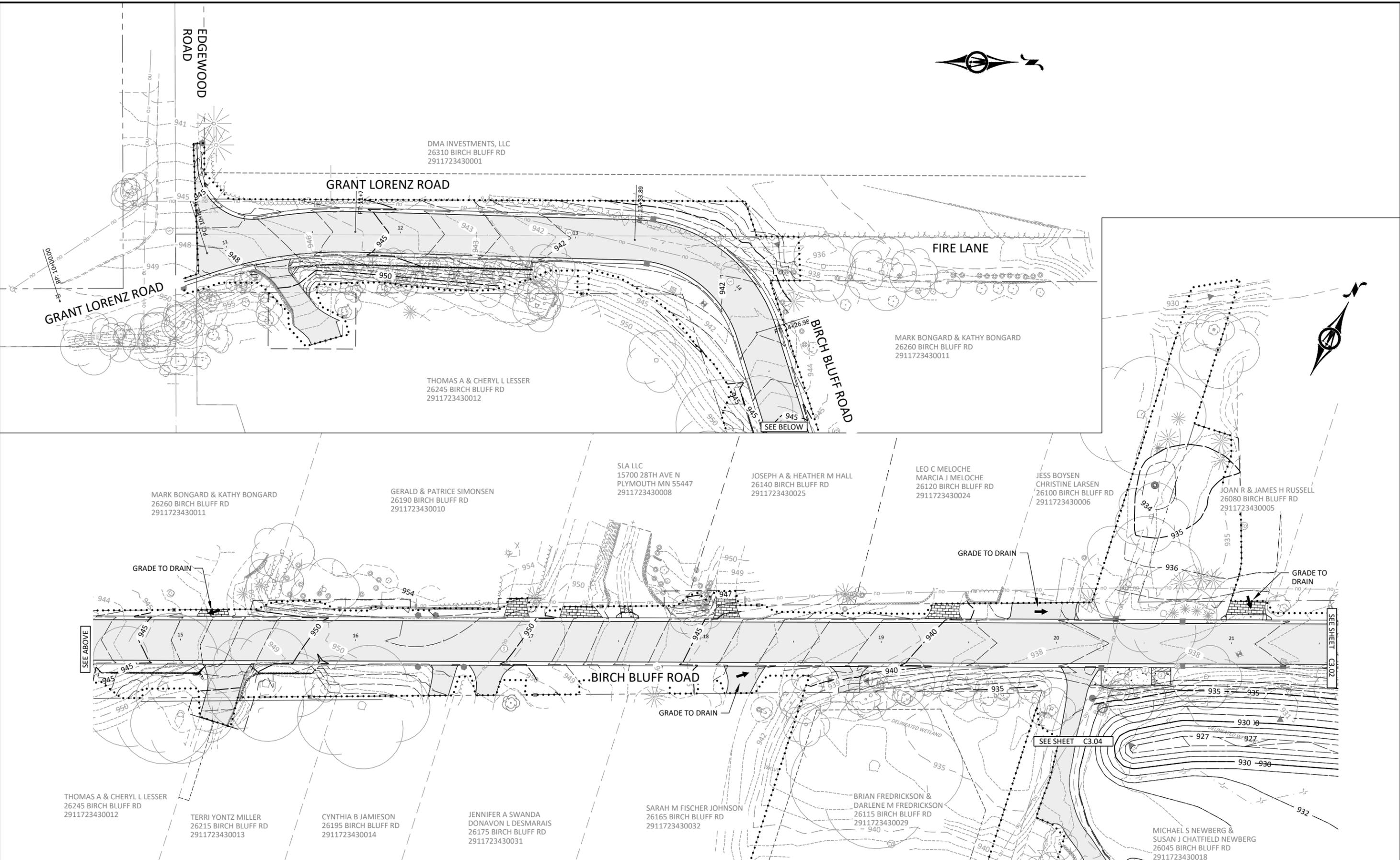


2638 SHADOW LANE, SUITE 200
 CHASKA, MINNESOTA 55318
 Phone: (952) 448-8838
 Email: Chaska@bolton-menk.com
 www.bolton-menk.com

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CITY OF SHOREWOOD
 BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
 SWPPP SOILS

SHEET
C2.07



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CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
GRADING PLAN

SHEET
C3.01

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TOD CARPENTER
BONNIE CARPENTER
26050 BIRCH BLUFF RD
2911723430004

GIANFRANCO CUNEO
BONNIE CUNEO
26020 BIRCH BLUFF RD
2911723430003

JAMES T PROKOPANKO TRUSTEE
BONNIE KAE MCPHEE TRUSTEE
25990 BIRCH BLUFF RD
2911723440035

JAMES M WISE/THERESA MH WISE
25960 BIRCH BLUFF RD
2911723440012

WILLIAM & BRENDA HENNEY
25920 BIRCH BLUFF RD
2911723440011

DONALD B & LORETTA L MANN
25880 BIRCH BLUFF RD
2911723440010

GERMAN E CAMPUZANO JR
KRISTY CAMPUZANO
25860 BIRCH BLUFF RD
2911723440009

WILLIAM P &
MELANIE KEEGAN
25830 BIRCH BLUFF RD
2911723440008

FUTURE GRADING (BY OTHERS)
COORDINATE IN FIELD
W/ENGINEER

FUTURE GRADING (BY OTHERS)
COORDINATE IN FIELD
W/ENGINEER

BIRCH BLUFF ROAD

GRADE TO DRAIN

KYLE REILY
25885 BIRCH BLUFF RD
2911723440015

NATHAN J SCHMITZ
25845 BIRCH BLUFF RD
2911723440016

CLAUDE GULLEY &
JULIE GULLEY
25985 BIRCH BLUFF RD
2911723440039

GERALD H NESS
25955 BIRCH BLUFF RD
2911723440013

MOUNT OLIVET
ROLLING ACRES
25925 BIRCH BLUFF RD
2911723440014

JOHN A BRIDGE
25810 BIRCH BLUFF RD
2911723440007

STEVEN & KATHLEEN CURRY
25760 BIRCH BLUFF RD
2911723440006

JEFFREY D LUNDBORG
JENNIFER M LUNDBORG
25740 BIRCH BLUFF RD
2911723440005

MARGARET C MUEHLBERG
25700 BIRCH BLUFF RD
2911723440032

DEBORAH D SIAKEL REV TRUST
25680 BIRCH BLUFF
RD2911723440031

ROBERT B KING
25660 BIRCH BLUFF
RD2911723440041

WALLACE & JUDITH KING
25620 BIRCH BLUFF
RD2911723440040

GRADE TO DRAIN

BIRCH BLUFF ROAD

NATHAN J & KARA L SCHMITZ
26 Address Unassigned
2911723440017

GALE E OLSON JR
25775 BIRCH BLUFF RD
2911723440018

GENE & JUDITH RUFFENACH
25725 BIRCH BLUFF RD
2911723440019

DAVID J AUSEN
25695 BIRCH BLUFF
RD2911723440020

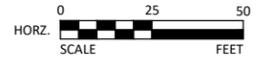
TIMOTHY O MOEN/
CARRIE L MOEN
25655 BIRCH BLUFF RD
2911723440033

AMBER MCENERY
25625 BIRCH BLUFF RD
2911723440037

EUREKA ROAD

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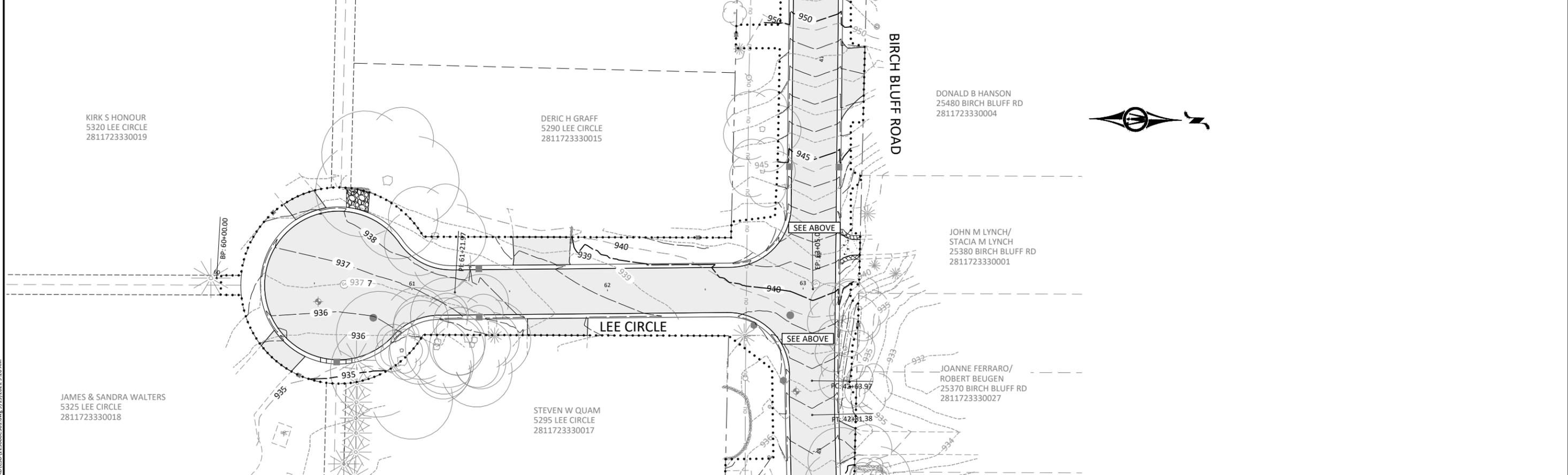
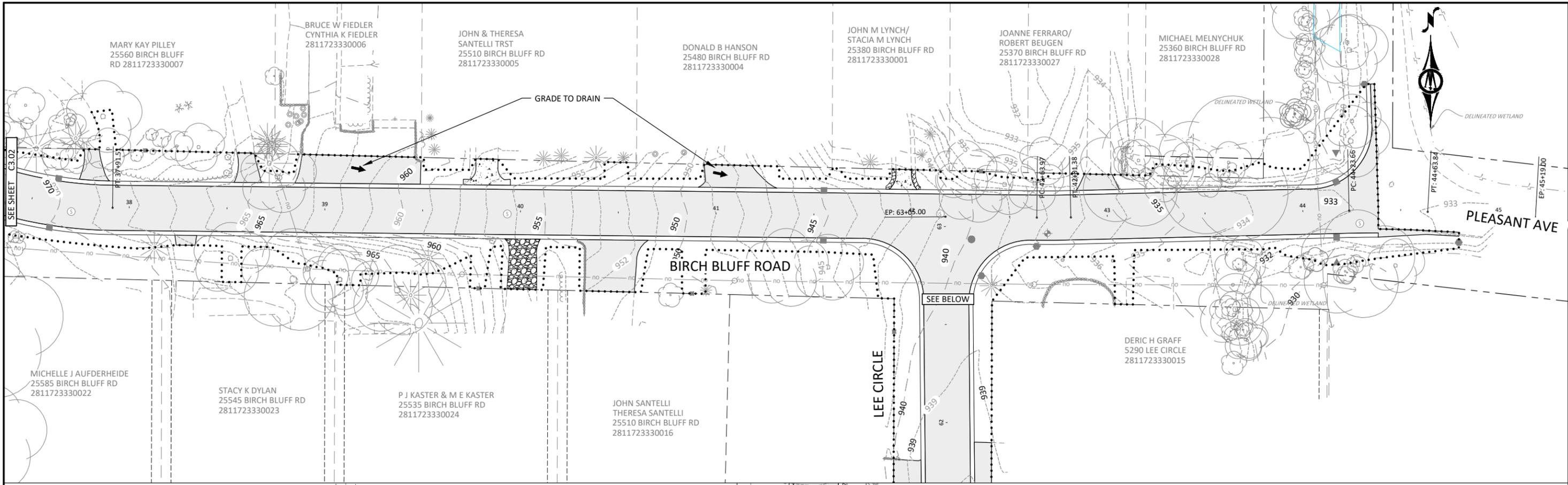


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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
GRADING PLAN

SHEET
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
GRADING PLAN

SHEET
C3.03

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LEO C MELOCHE AND MARCIA J
MELOCHE
26120 BIRCH BLUFF RD
2911723430024

JESS BOYSEN
CHRISTINE LARSEN
26100 BIRCH BLUFF RD
2911723430006

JOAN R & JAMES H RUSSELL
26080 BIRCH BLUFF RD
2911723430005

CRAIG A & AMY JOHNSON
26025 BIRCH BLUFF RD
2911723430028

BRIAN FREDRICKSON AND
DARLENE M FREDRICKSON
2911723430029

MICHAEL S NEWBERG &
SUSAN J CHATFIELD NEWBERG
26045 BIRCH BLUFF RD
2911723430018

BIRCH BLUFF ROAD

DELINEATED WETLAND

DELINEATED WETLAND

SEE SHEET C3.01

SEE SHEET C3.02



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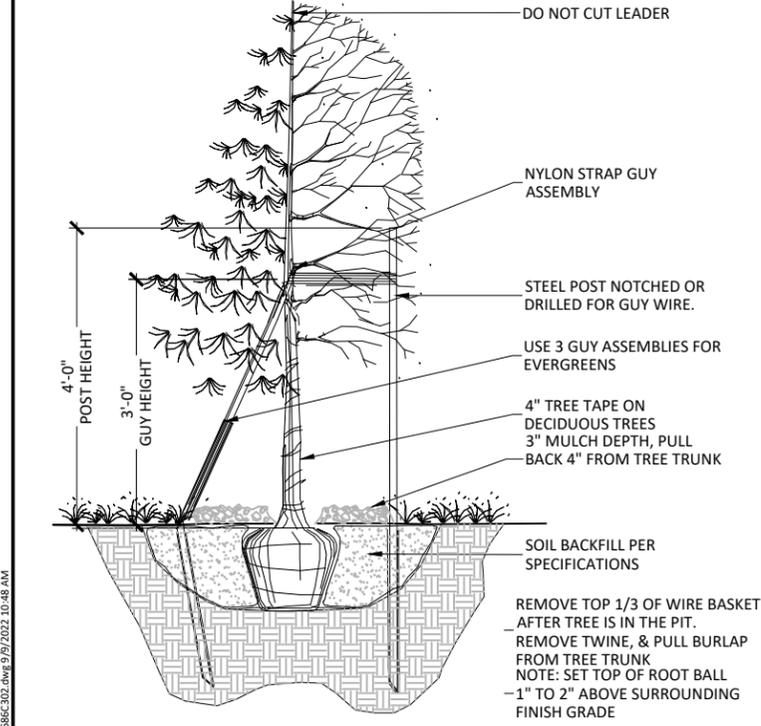
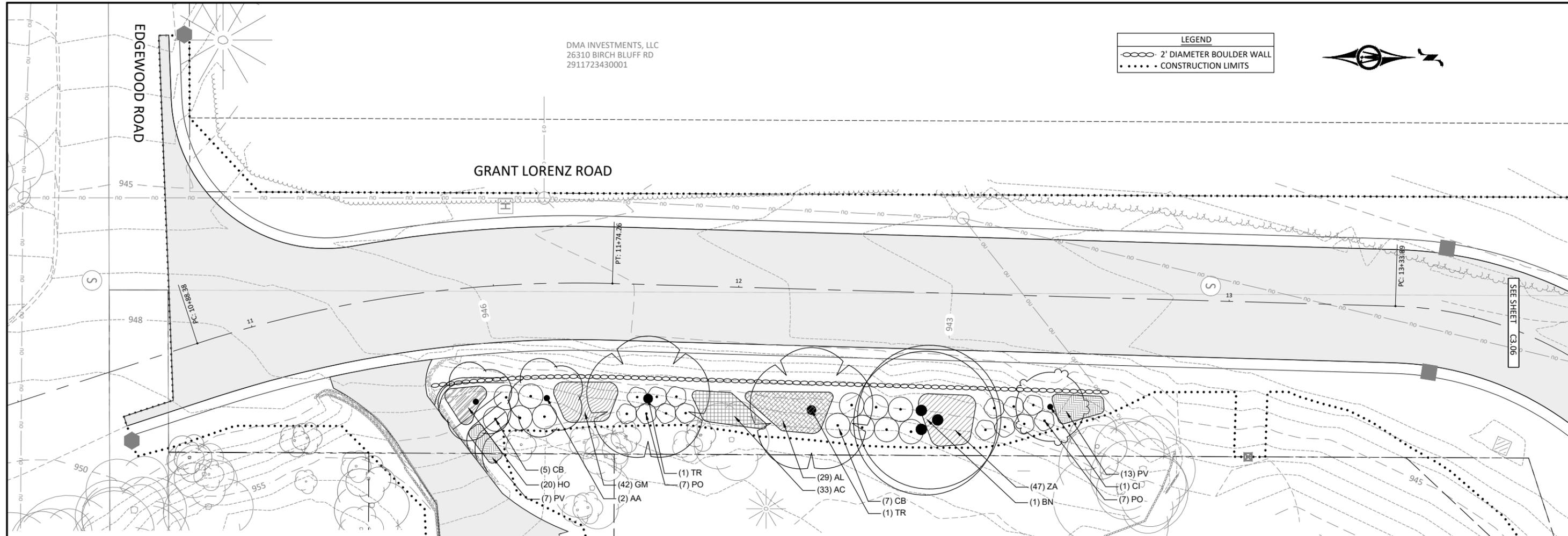
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
GRADING PLAN-26045 & 26025

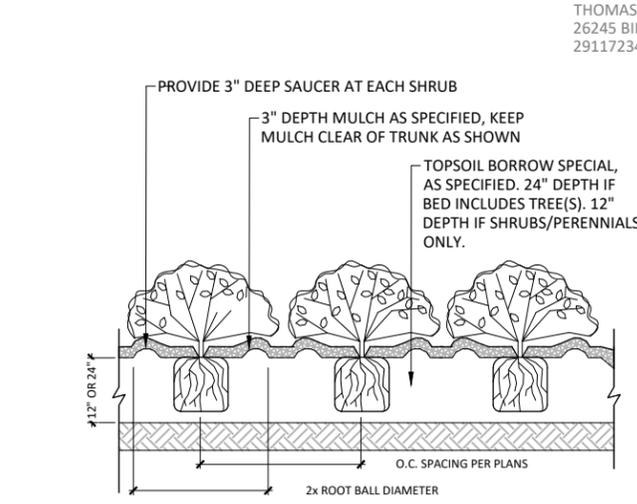
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DMA INVESTMENTS, LLC
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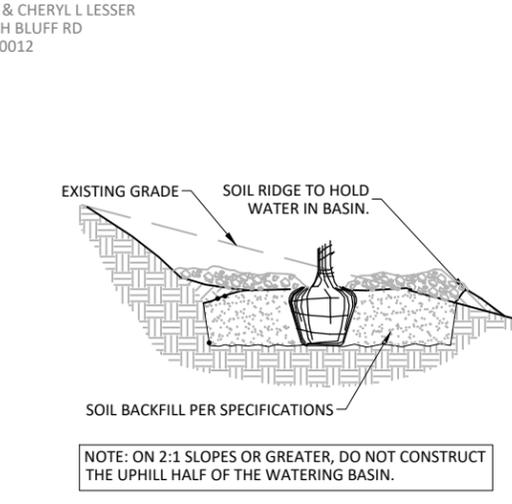
LEGEND	
	2' DIAMETER BOULDER WALL
	CONSTRUCTION LIMITS



1 TREE PLANTING
SCALE: N.T.S.



2 SHRUB/PERENNIAL BED PLANTING
SCALE: N.T.S.



3 PLANTING ON SLOPES
SCALE: N.T.S.

- GENERAL NOTES: LANDSCAPE PLANTING
1. MASTER PLANT SCHEDULE: ALL TREES AND SHRUBS ARE LISTED IN THE MASTER PLANT SCHEDULE. IF THERE IS A CONFLICT BETWEEN THE QUANTITIES SHOWN ON THE DRAWINGS AND THE QUANTITIES SHOWN IN THE PLANT SCHEDULE, THE PLAN QUANTITIES SHALL PREVAIL.
 2. PROVIDE PLANT MATERIAL OF SIZE, GENUS, SPECIES AND VARIETY SHOWN AND COMPLYING WITH REQUIREMENTS OF 2014 ANSI Z60.1 "AMERICAN STANDARD FOR NURSERY STOCK." ALL PLANTING MATERIAL SUBJECT TO APPROVAL BY OWNER OR OWNER'S REPRESENTATIVE.
 3. PLANTING LAYOUT: STAKE ALL TREE AND SHRUB LOCATIONS AND OBTAIN APPROVAL OF THE OWNER'S REPRESENTATIVE PRIOR TO PLANTING.
 4. ALL TREES SHALL RECEIVE A 3" LAYER OF SHREDDED HARDWOOD MULCH 18" FROM THE TRUNK (36" DIA. RING) IN ALL DIRECTIONS.

PLANT SCHEDULE L3.05					
DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.
AA	2	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	1.5" CAL.	B&B
BN	1	BETULA NIGRA	RIVER BIRCH MULTI-TRUNK	2.5" CAL.	B&B
CI	1	CRATAEGUS CRUS-GALLI INERMIS	THORNLESS COCKSPUR HAWTHORN	1.5" CAL.	B&B
TR	2	TILIA AMERICANA 'REDMOND'	REDMOND AMERICAN LINDEN	2.5" CAL.	B&B
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
CB	12	CORNUS SERICEA 'BAILADELINE'	FIRE DANCE™ RED TWIG DOGWOOD	5 GAL.	
PO	14	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY'	LITTLE DEVIL™ DWARF NINEBARK	5 GAL.	
GRASSES	QTY	BOTANICAL NAME	COMMON NAME	TYPE	
PV	20	PANICUM VIRGATUM	SWITCH GRASS	1 GAL.	
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	TYPE	
AC	33	AQUILEGIA CANADENSIS	EASTERN COLUMBINE	1 GAL.	
AL	29	ASTER LAEVIS	SMOOTH ASTER	1 GAL.	
GM	42	GERANIUM MACULATUM	SPOTTED GERANIUM	1 GAL.	
HO	20	HEMEROCALLIS X 'STELLA DE ORO'	STELLA DE ORO DAYLILY	1 GAL.	
ZA	47	ZIZIA AUREA	GOLDEN ALEXANDER	1 GAL.	

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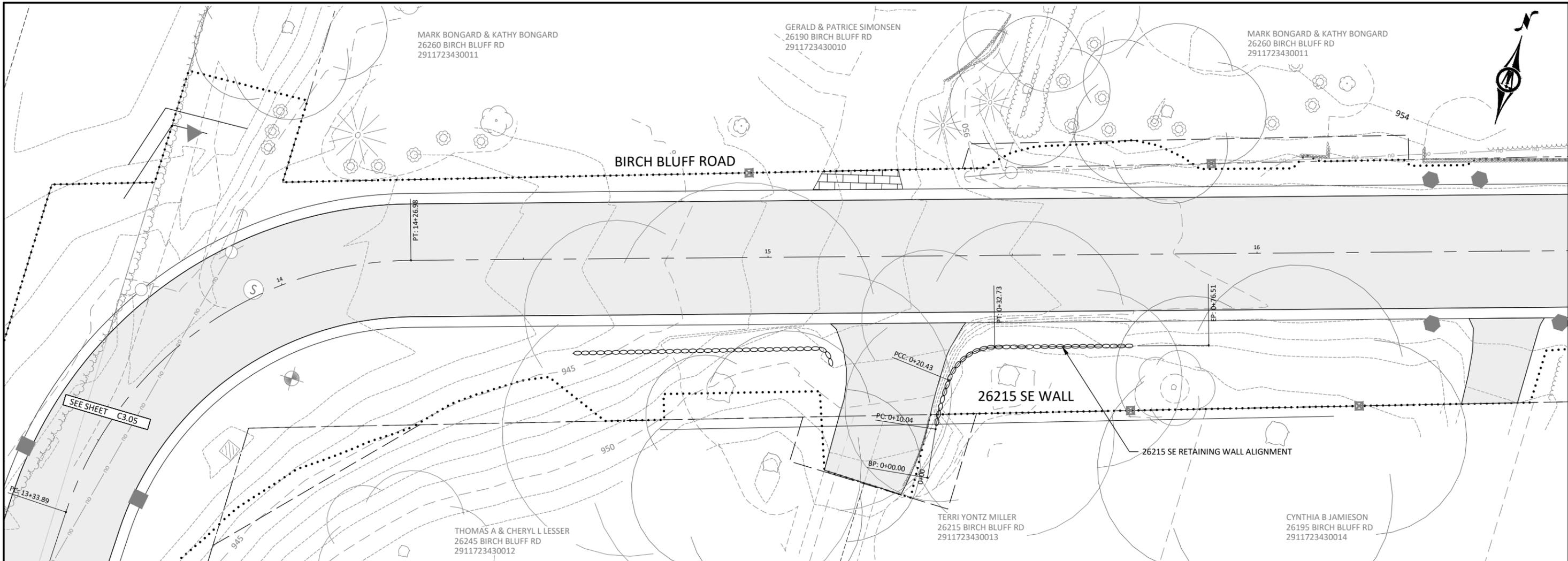


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CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
Email: Chaska@bolton-menk.com
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
RETAINING WALL PLAN

SHEET
C3.05



LEGEND	
	2' DIAMETER BOULDER WALL
	CONSTRUCTION LIMITS

Station	0+00	0+50	1+00
960			
955			
950			
945			
940	952.89	953.91	952.93

VPI: 0+27.37 EL: 954.07
 2.73%
 VPI: 0+61.52 EL: 955.00

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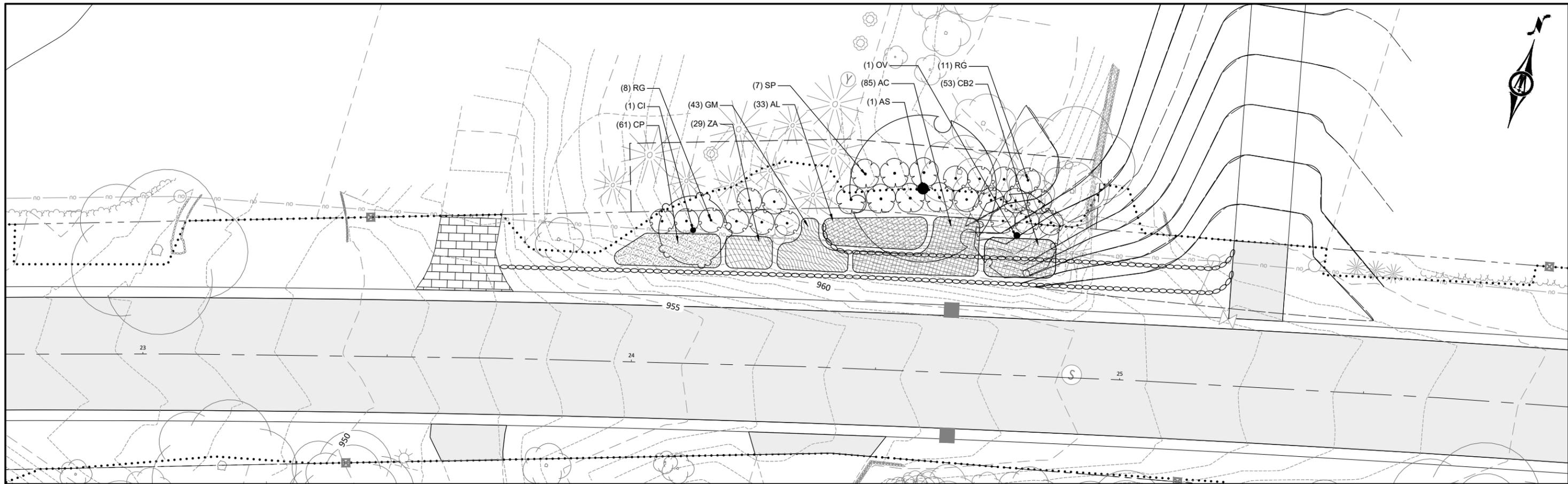


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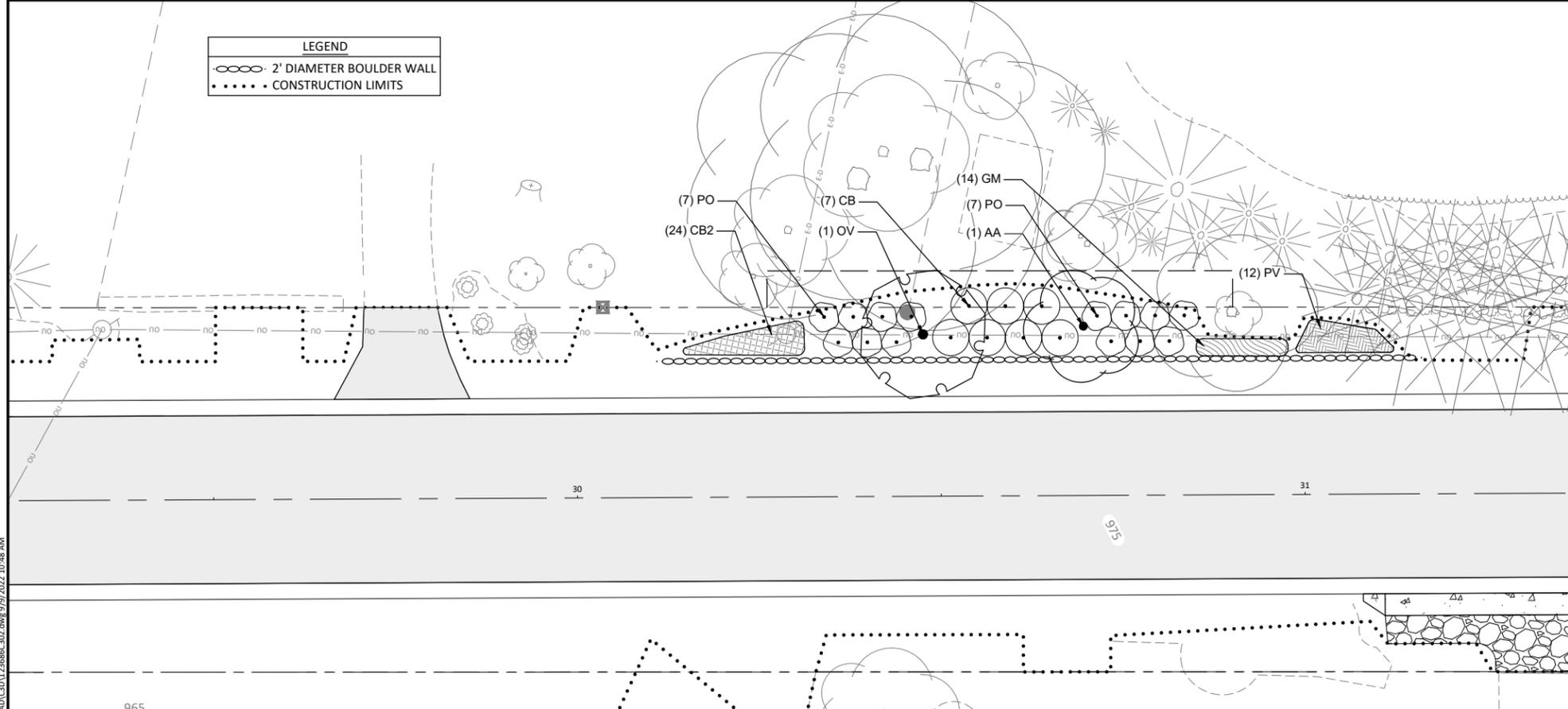
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CITY OF SHOREWOOD
 BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
 RETAINING WALL PLAN

SHEET
C3.06



LEGEND	
	2' DIAMETER BOULDER WALL
	CONSTRUCTION LIMITS



PLANT SCHEDULE L3.07					
DECIDUOUS TREES	QTY	BOTANICAL NAME	COMMON NAME	SIZE	CONT.
AS	1	ACER SACCHARUM	SUGAR MAPLE	2.5" CAL.	B&B
AA	1	AMELANCHIER ARBOREA	DOWNY SERVICEBERRY	1.5" CAL.	B&B
CI	1	CRATAEGUS CRUS-GALLI INERMIS	THORNLESS COCKSPUR HAWTHORN	1.5" CAL.	B&B
OV	2	OSTRYA VIRGINIANA	AMERICAN HOPHORNBEAM	2.5" CAL.	B&B
SHRUBS	QTY	BOTANICAL NAME	COMMON NAME	SIZE	
CB	7	CORNUS SERICEA 'BILADELIN'	FIREDANCE™ RED TWIG DOGWOOD	5 GAL.	
PO	14	PHYSOCARPUS OPULIFOLIUS 'DONNA MAY'	LITTLE DEVIL™ DWARF NINEBARK	5 GAL.	
RG	19	RHUS AROMATICA 'GRO-LOW'	GRO-LOW FRAGRANT SUMAC	5 GAL.	
SP	7	SALIX PURPUREA 'NANA'	DWARF PURPLE OSIER WILLOW	5 GAL.	
GRASSES	QTY	BOTANICAL NAME	COMMON NAME	TYPE	
CB2	77	CAREX BROMOIDES	BROME-LIKE SEDGE	1 GAL.	
CP	61	CAREX PENNSYLVANICA	PENNSYLVANIA SEDGE	1 GAL.	
PV	12	PANICUM VIRGATUM	SWITCH GRASS	1 GAL.	
PERENNIALS	QTY	BOTANICAL NAME	COMMON NAME	TYPE	
AC	85	AQUILEGIA CANADENSIS	EASTERN COLUMBINE	1 GAL.	
AL	33	ASTER LAEVIS	SMOOTH ASTER	1 GAL.	
GM	57	GERANIUM MACULATUM	SPOTTED GERANIUM	1 GAL.	
ZA	29	ZIZIA AUREA	GOLDEN ALEXANDER	1 GAL.	

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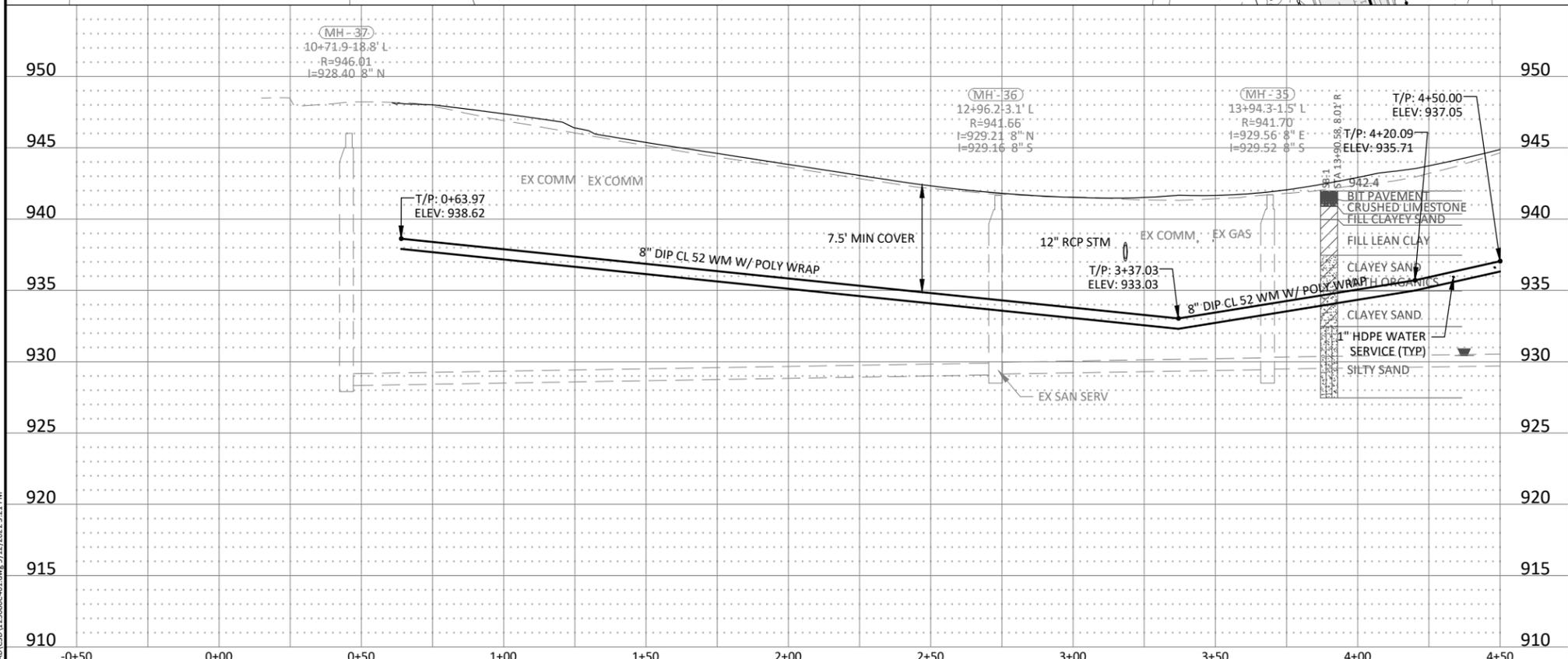
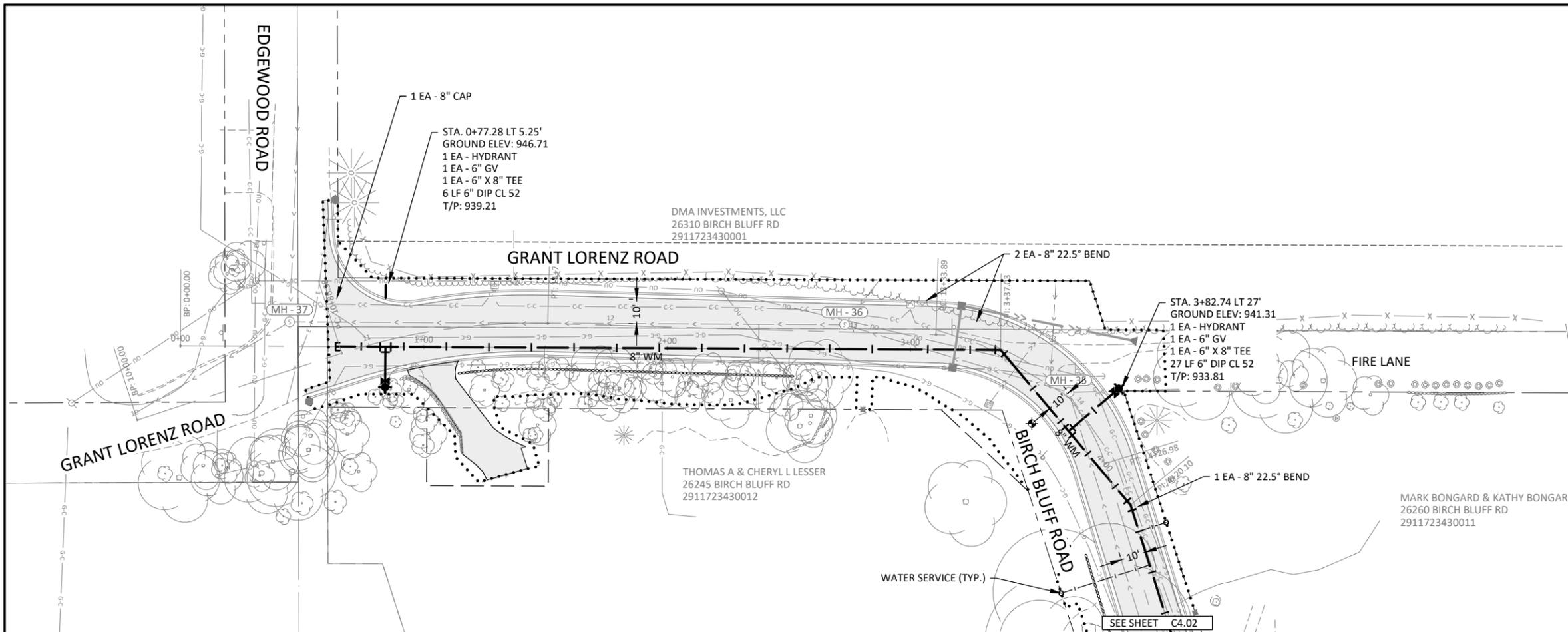
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CITY OF SHOREWOOD		SHEET
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS		C3.07
RETAINING WALL PLAN		



- NOTE:**
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 3. MINIMUM COVER OVER PIPE SHALL BE 7.5' OR AS SHOWN IN PLANS.
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VERT. SCALE: 0 5 10 FEET

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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022



2638 SHADOW LANE, SUITE 200
CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
Email: Chaska@bolton-menk.com
www.bolton-menk.com

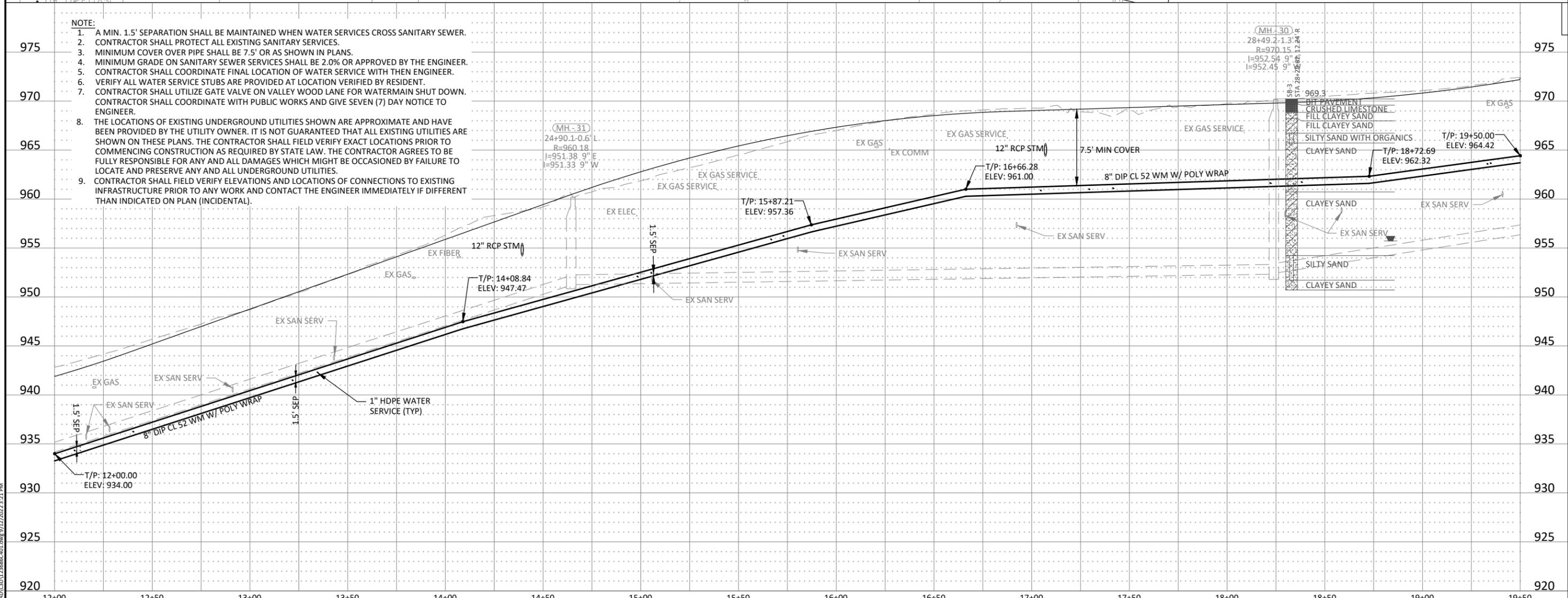
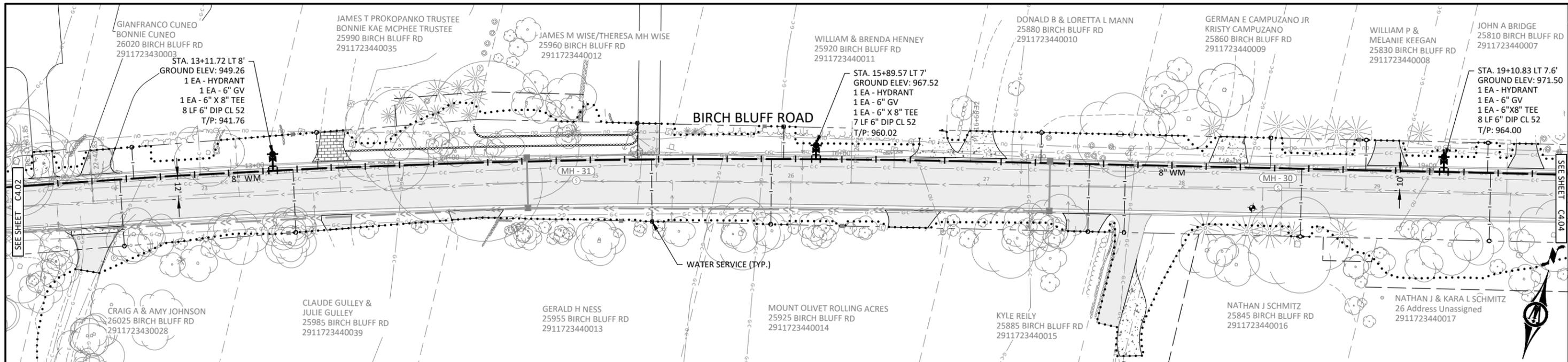
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CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

SANITARY SEWER & WATERMAIN PLAN & PROFILE

SHEET C4.01



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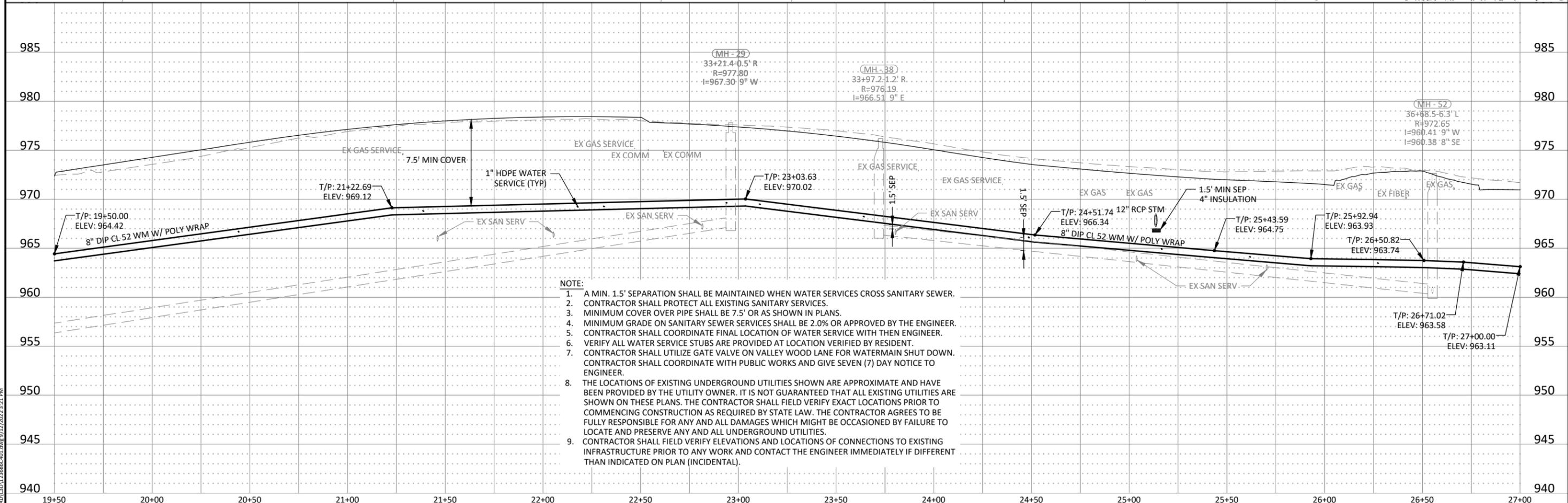
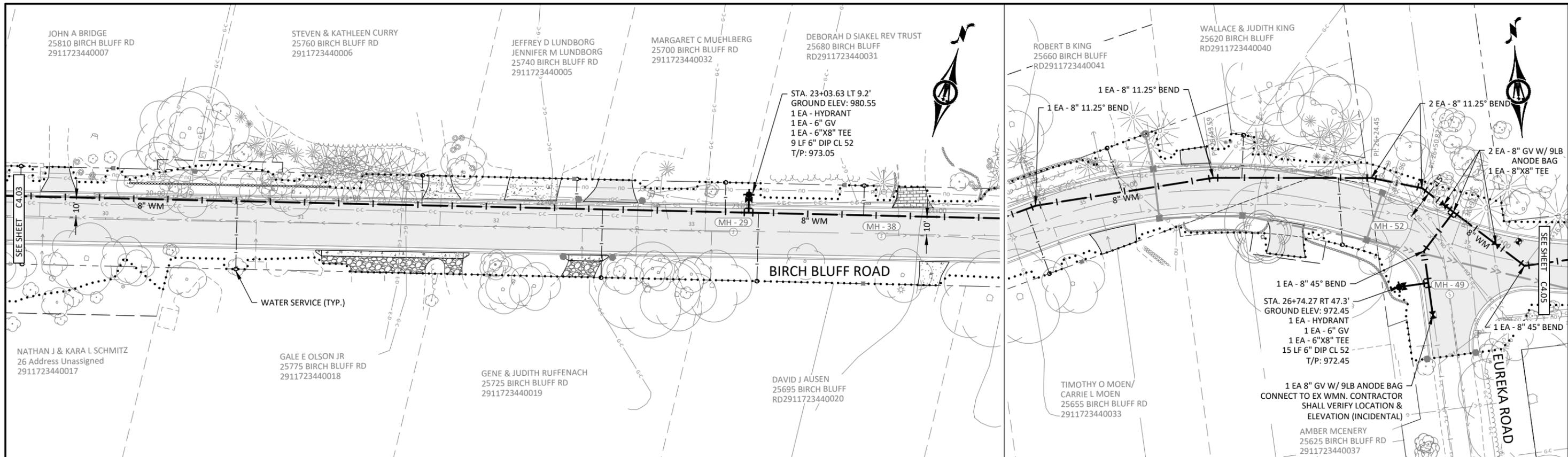
CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

SANITARY SEWER & WATERMAIN PLAN & PROFILE

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- NOTE:
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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022

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CHASKA, MINNESOTA 55318
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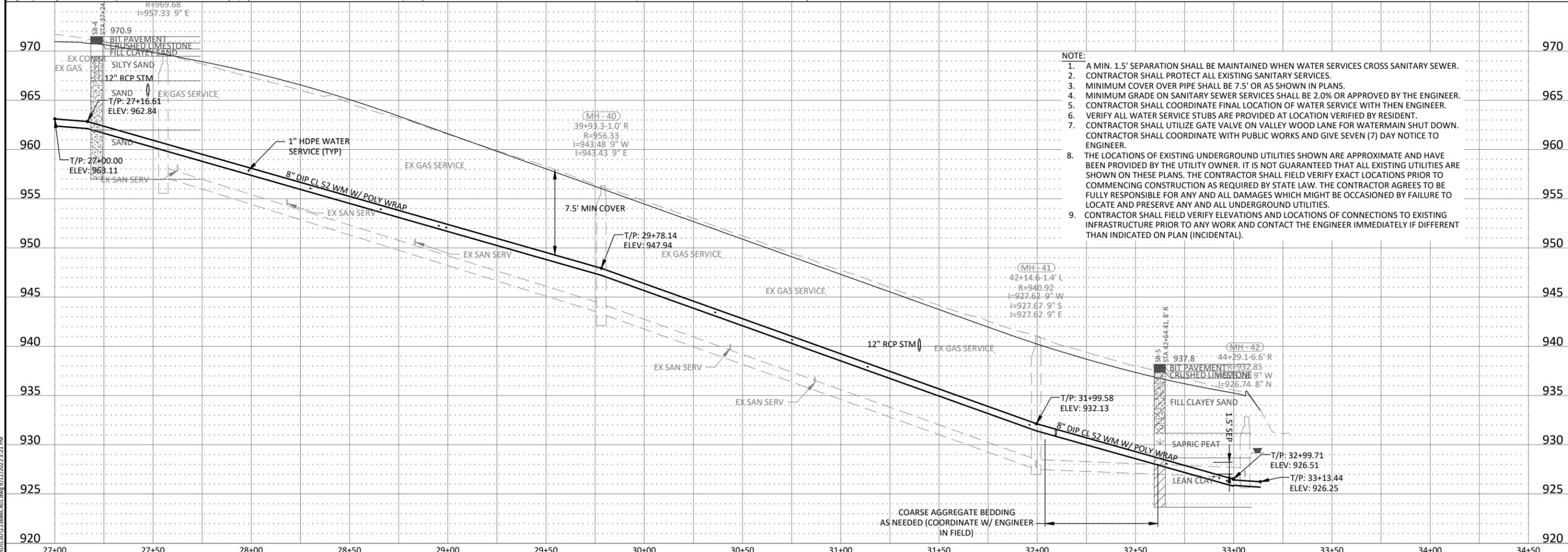
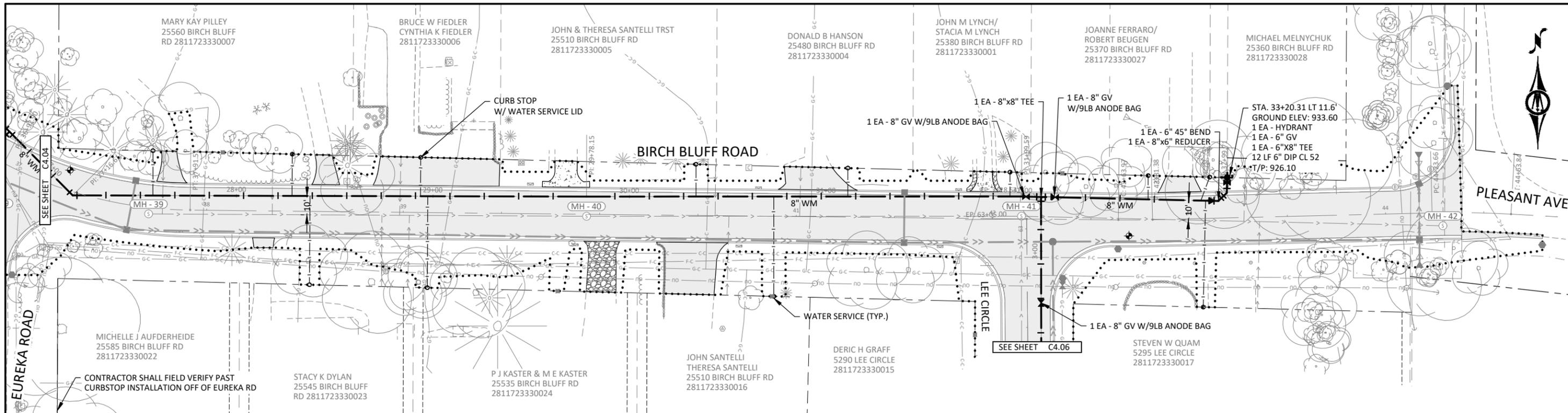
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CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

SANITARY SEWER & WATERMAIN PLAN & PROFILE

SHEET C4.04



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 CHASKA, MINNESOTA 55318
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5320 LEE CIRCLE
2811723330019

DERIC H GRAFF
5290 LEE CIRCLE
2811723330015

JOHN M LYNCH/
STACIA M LYNCH
25380 BIRCH BLUFF RD
2811723330001

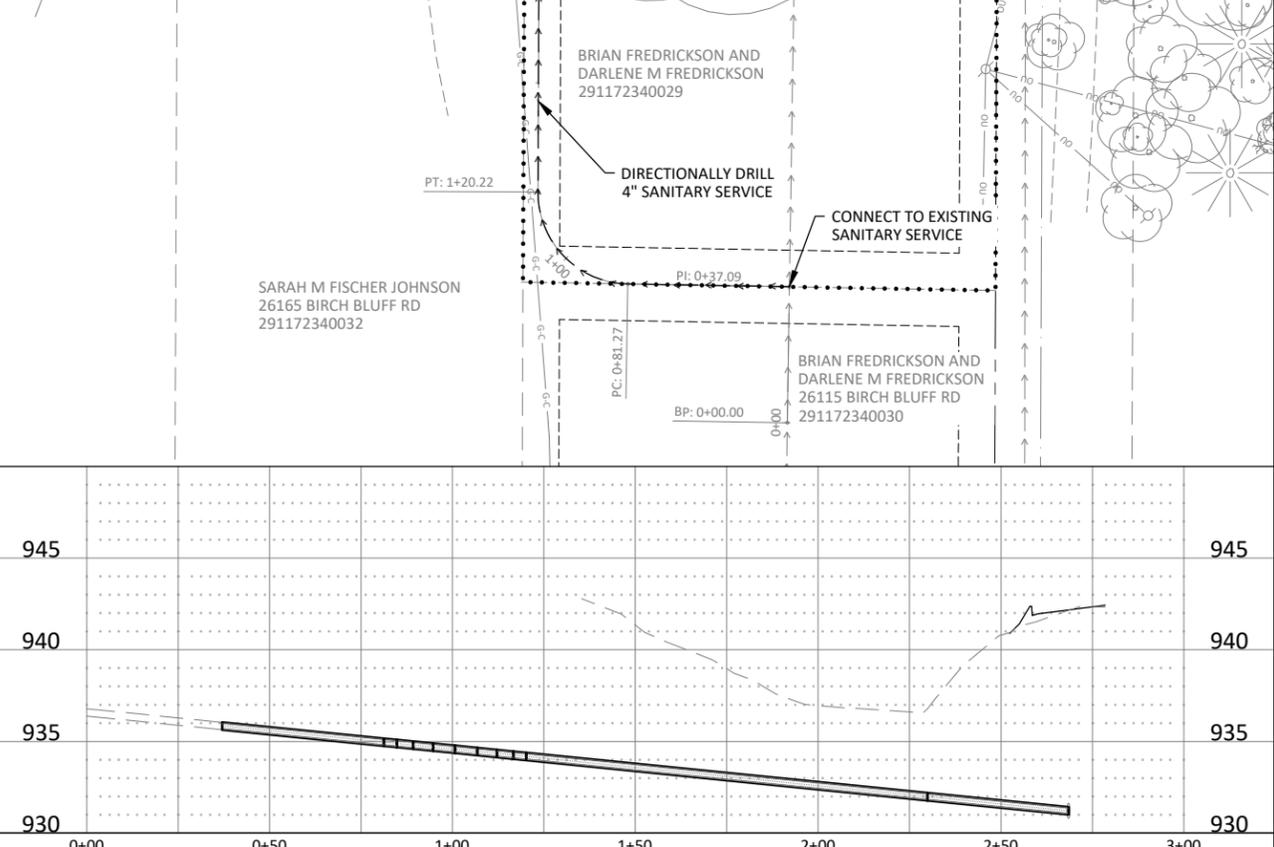
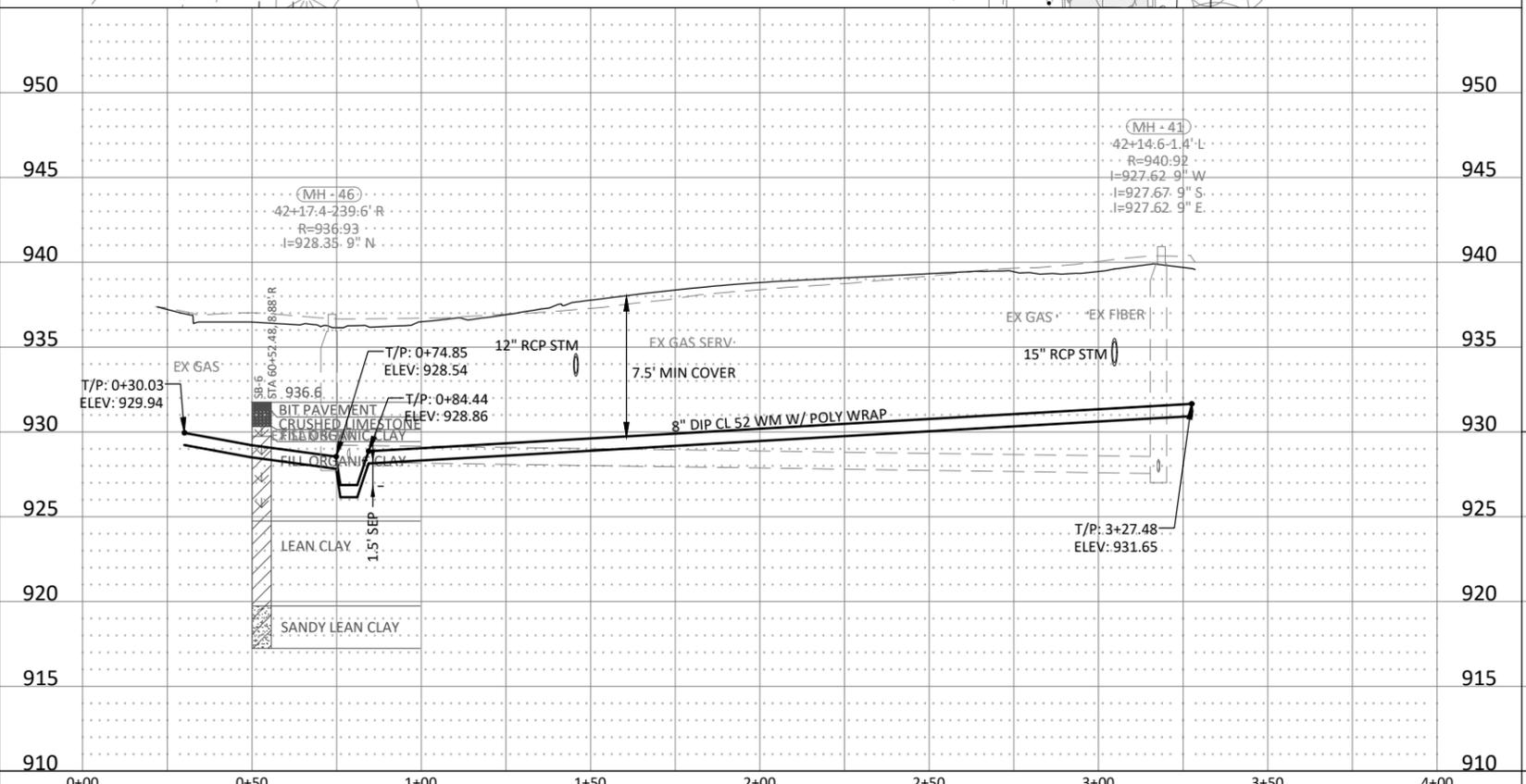
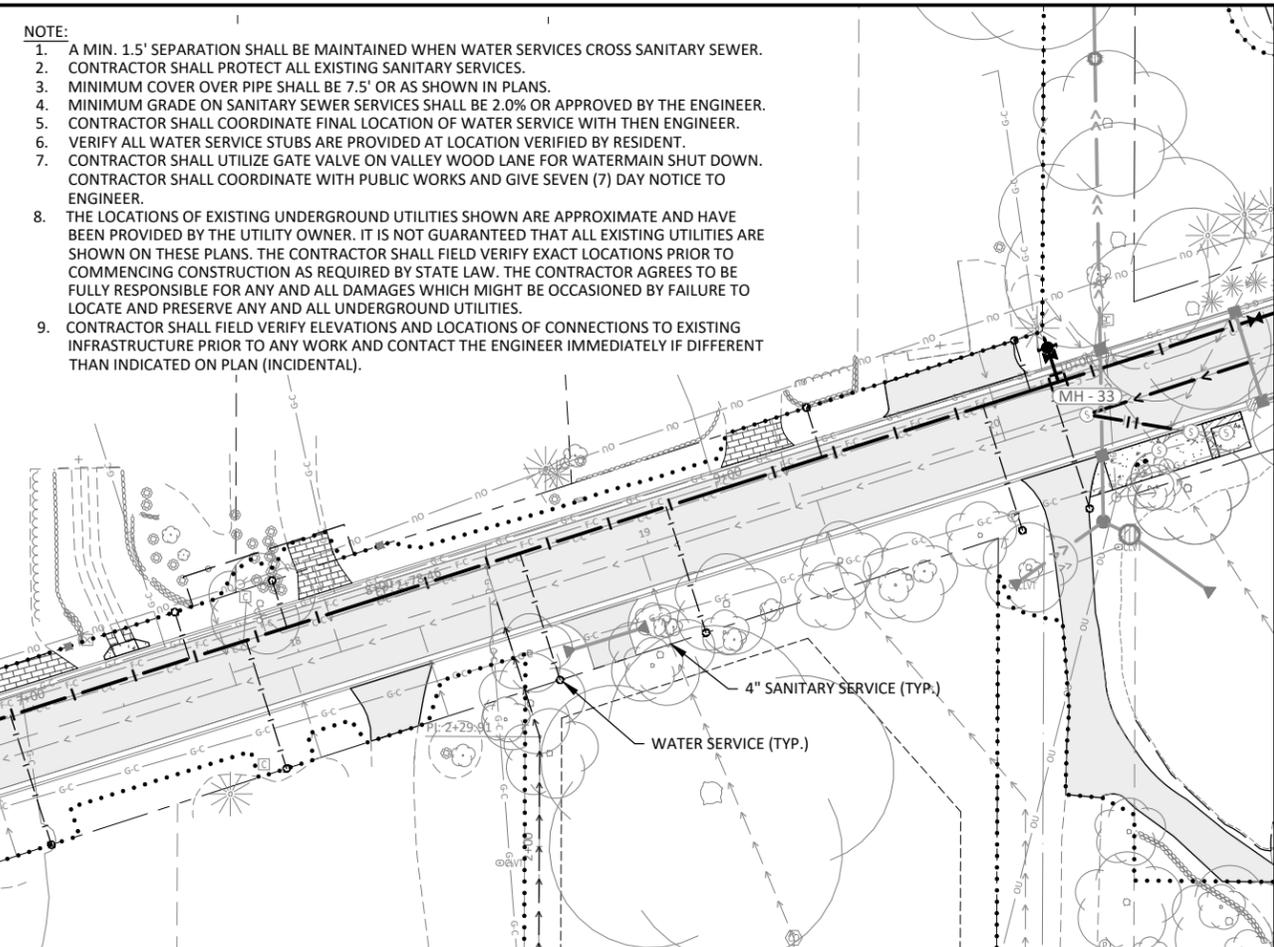
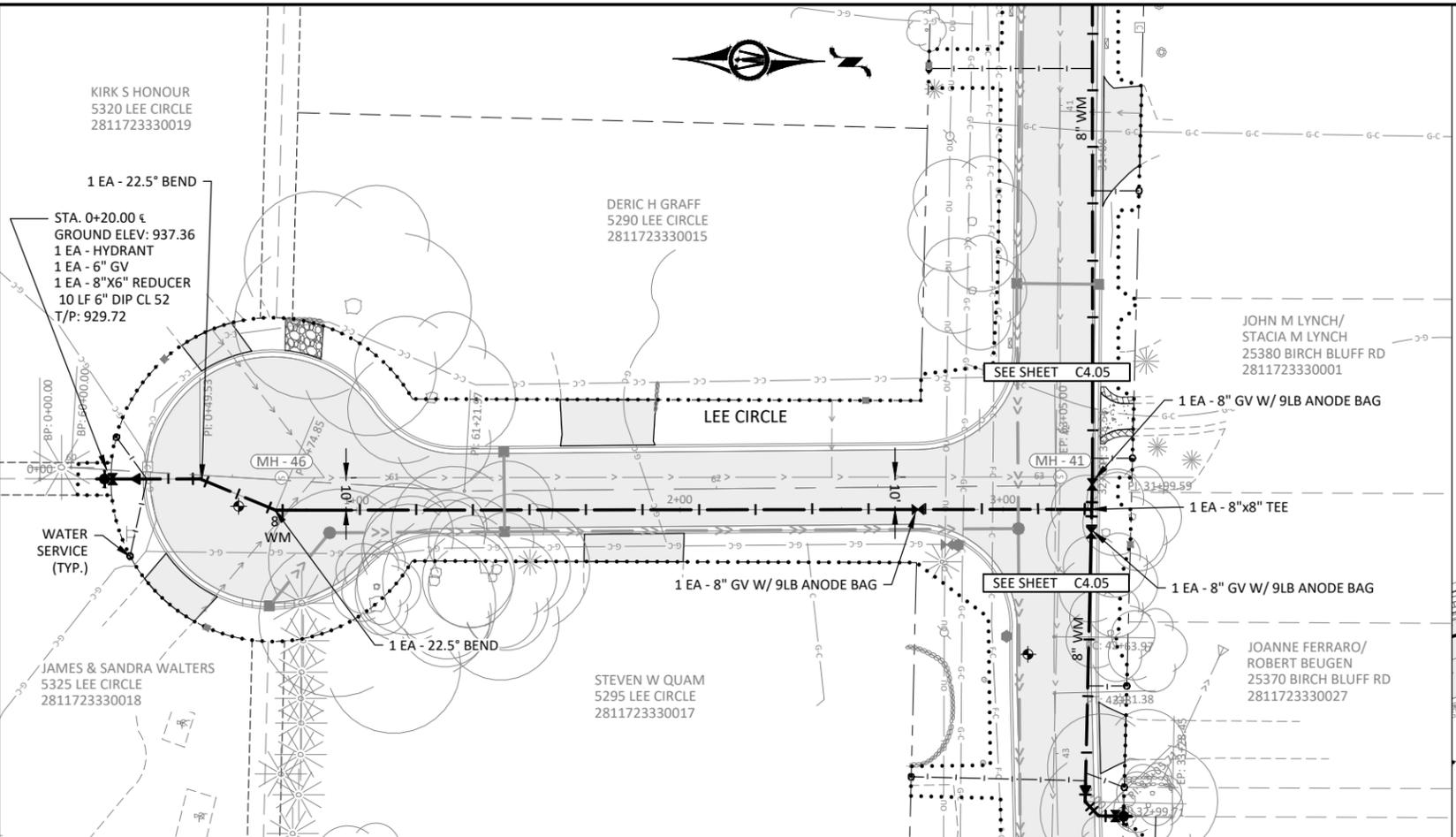
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1 EA - 8"x6" REDUCER
10 LF 6" DIP CL 52
T/P: 929.72

JAMES & SANDRA WALTERS
5325 LEE CIRCLE
2811723330018

STEVEN W QUAM
5295 LEE CIRCLE
2811723330017

JOANNE FERRARO/
ROBERT BEUGEN
25370 BIRCH BLUFF RD
2811723330027

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VERT. SCALE 0 5 10 FEET

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CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

SANITARY SEWER & WATERMAIN PLAN & PROFILE

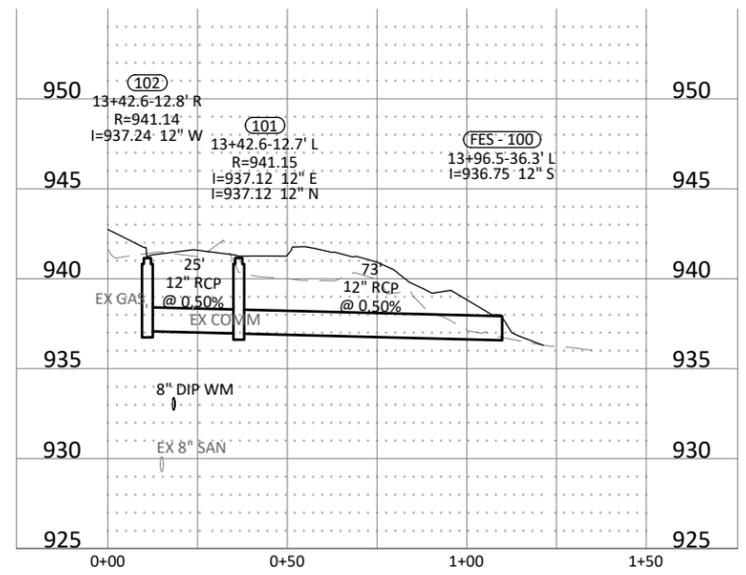
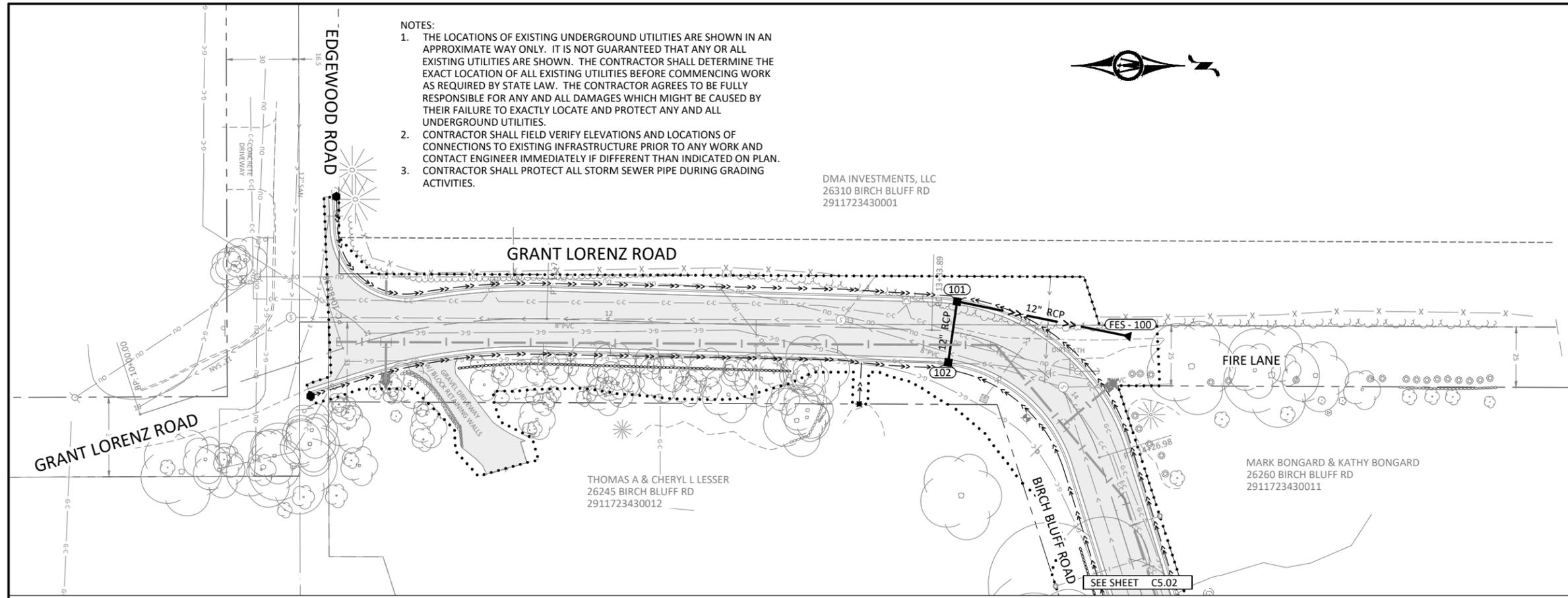
SHEET C4.06

- NOTES:
1. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. IT IS NOT GUARANTEED THAT ANY OR ALL EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK AS REQUIRED BY STATE LAW. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY THEIR FAILURE TO EXACTLY LOCATE AND PROTECT ANY AND ALL UNDERGROUND UTILITIES.
 2. CONTRACTOR SHALL FIELD VERIFY ELEVATIONS AND LOCATIONS OF CONNECTIONS TO EXISTING INFRASTRUCTURE PRIOR TO ANY WORK AND CONTACT ENGINEER IMMEDIATELY IF DIFFERENT THAN INDICATED ON PLAN.
 3. CONTRACTOR SHALL PROTECT ALL STORM SEWER PIPE DURING GRADING ACTIVITIES.

DMA INVESTMENTS, LLC
26310 BIRCH BLUFF RD
2911723430001

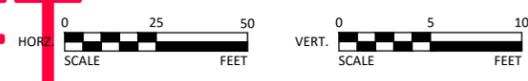
THOMAS A & CHERYL L LESSER
26245 BIRCH BLUFF RD
2911723430012

MARK BONGARD & KATHY BONGARD
26260 BIRCH BLUFF RD
2911723430011



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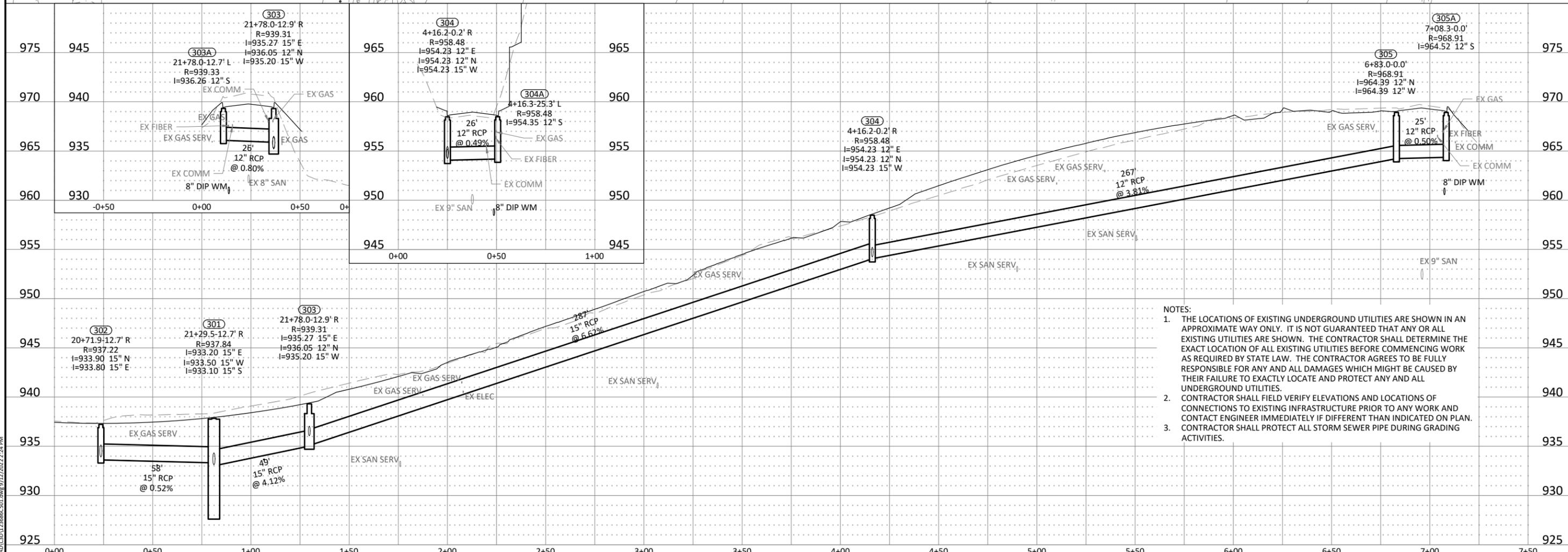
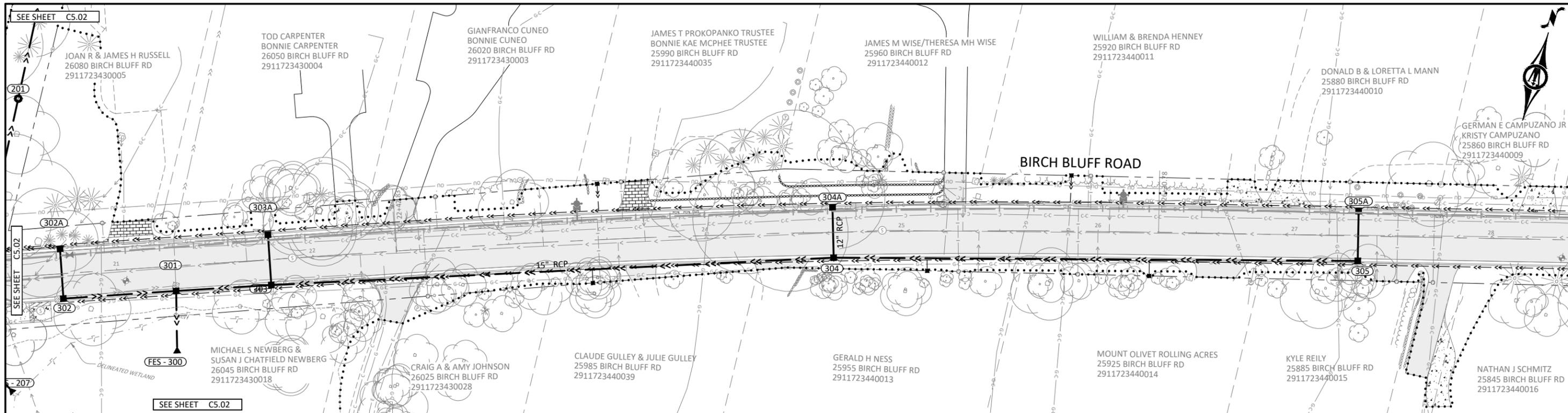


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Phone: (952) 448-8838
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www.bolton-menk.com

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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
STORM SEWER PLAN & PROFILE

SHEET
C5.01



- NOTES:
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DRAFT

HORIZ. SCALE: 1" = 25 FEET
 VERT. SCALE: 1" = 5 FEET

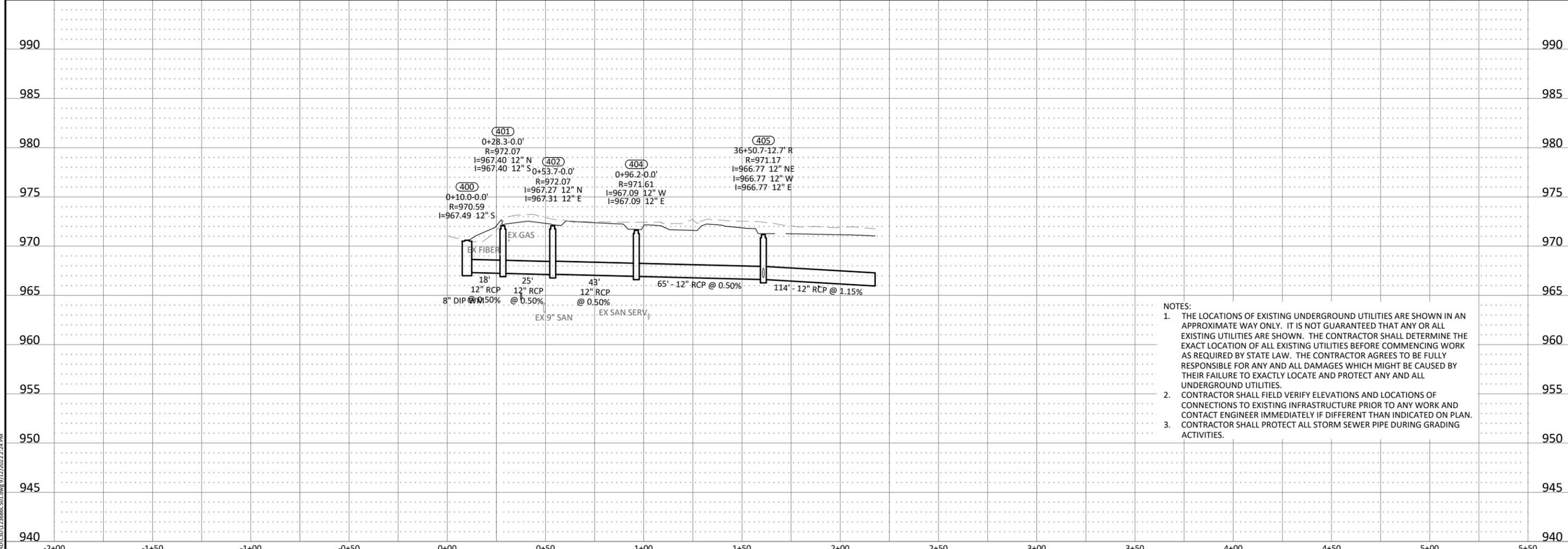
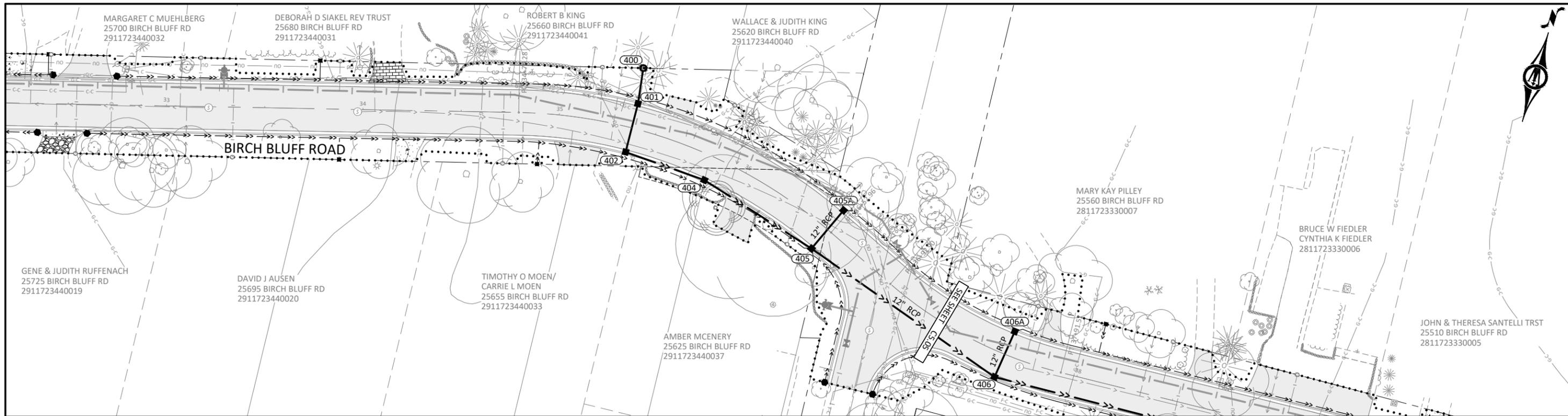
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PHILIP J. SCHRUPP
 LIC. NO. 54198 DATE 09/20/2022



2638 SHADOW LANE, SUITE 200
 CHASKA, MINNESOTA 55318
 Phone: (952) 448-8838
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- NOTES:
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DRAFT

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VERT. SCALE: 0 5 10 FEET

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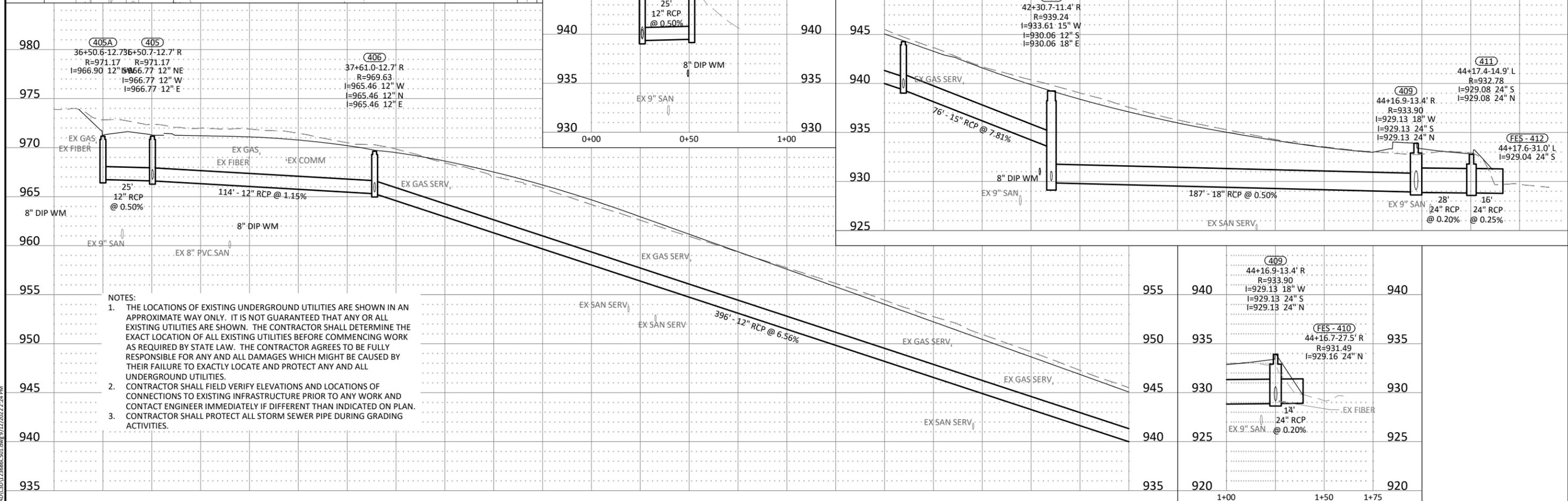
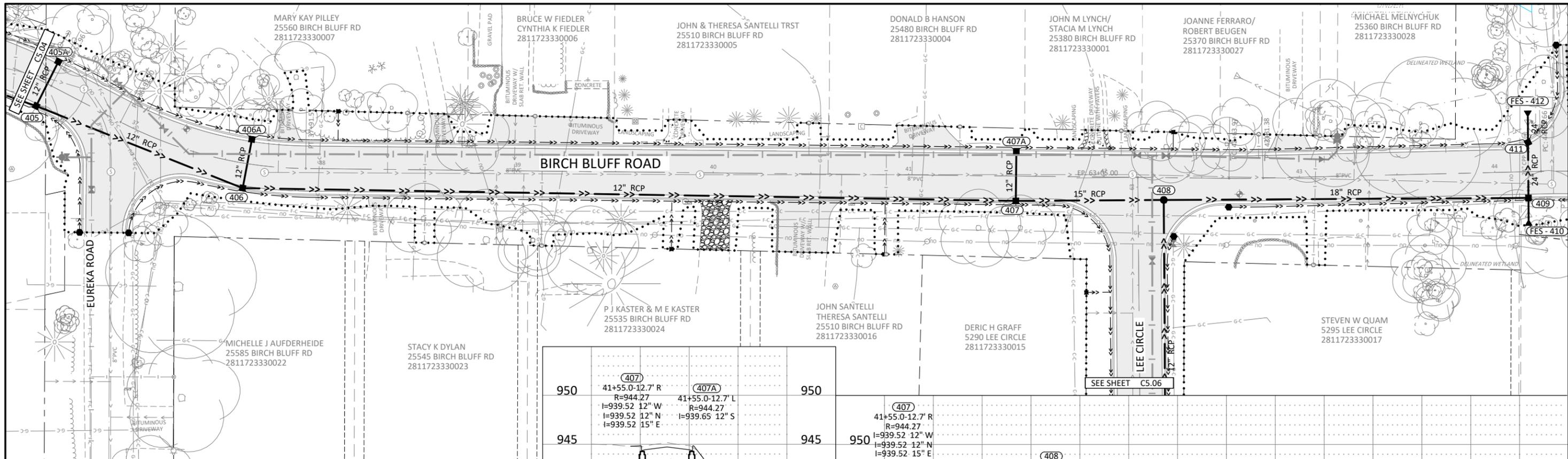
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CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

STORM SEWER PLAN & PROFILE

SHEET C5.04



NOTES:
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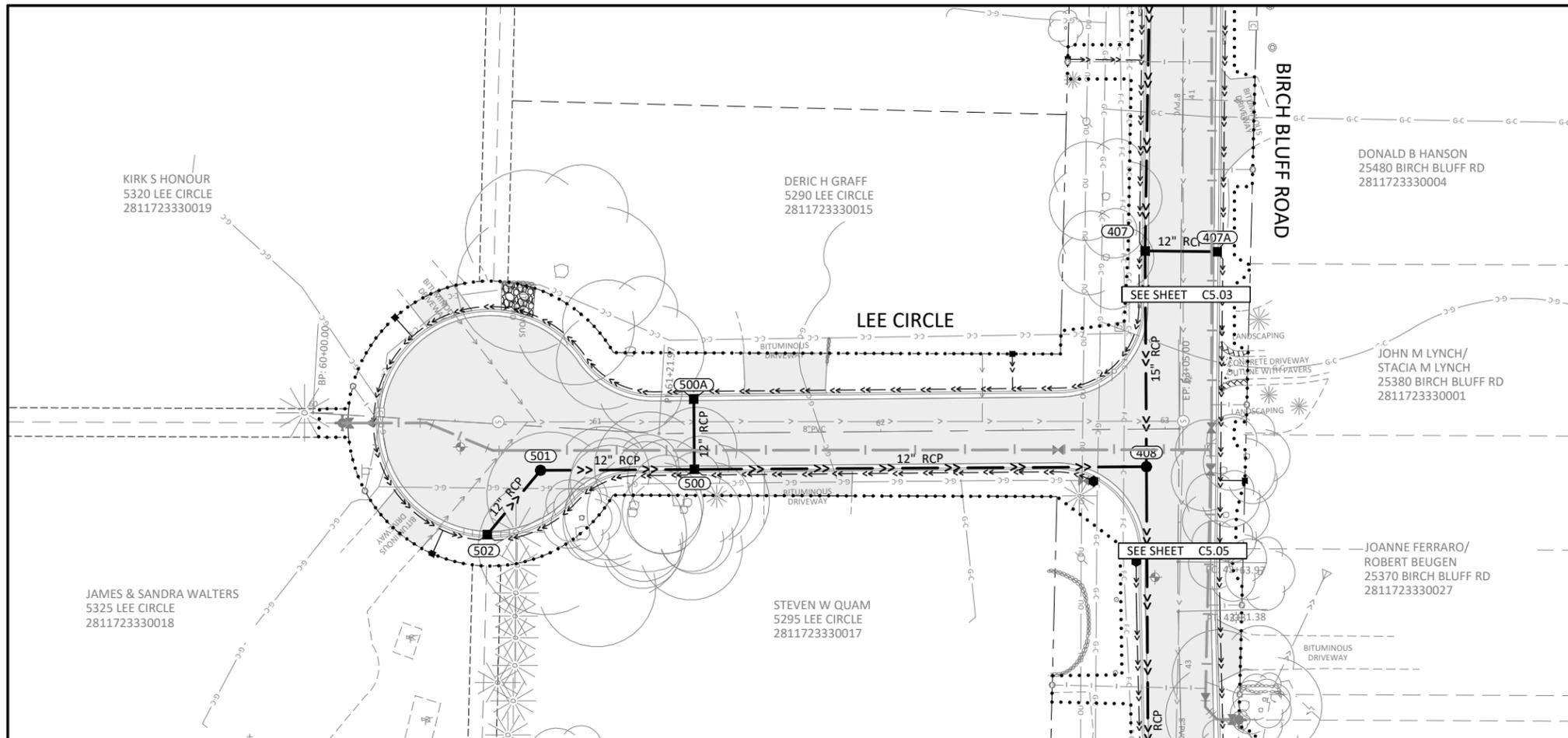


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 Email: Chaska@bolton-menk.com
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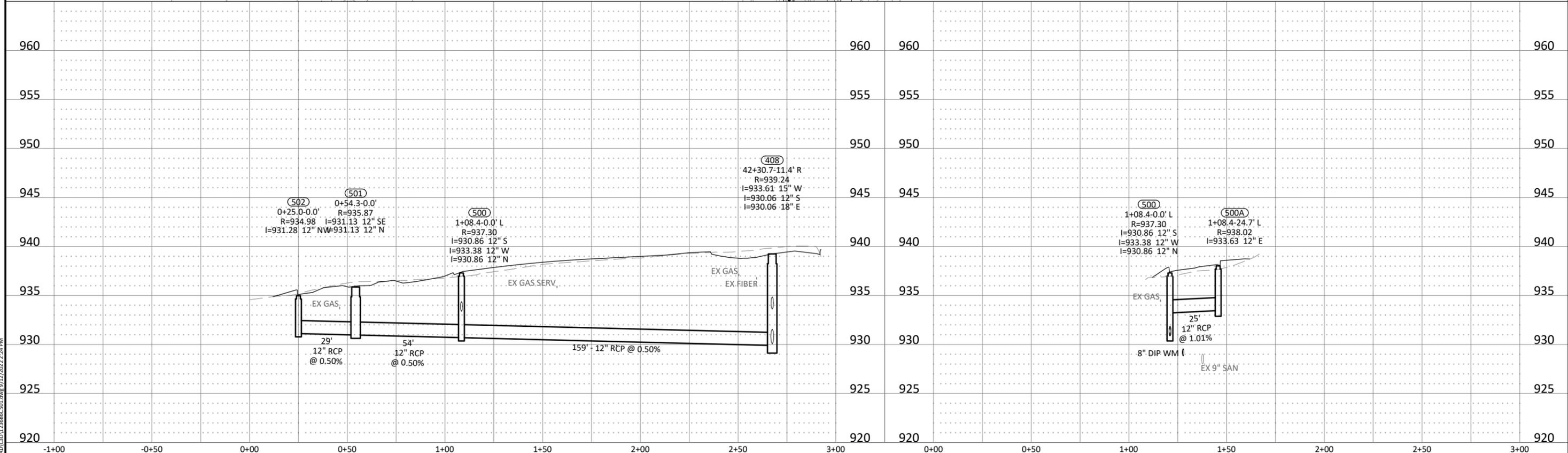
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CITY OF SHOREWOOD
 BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
 STORM SEWER PLAN & PROFILE

SHEET C5.05



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DRAFT

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 VERT. SCALE: 0 5 10 FEET

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 Email: Chaska@bolton-menk.com
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CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

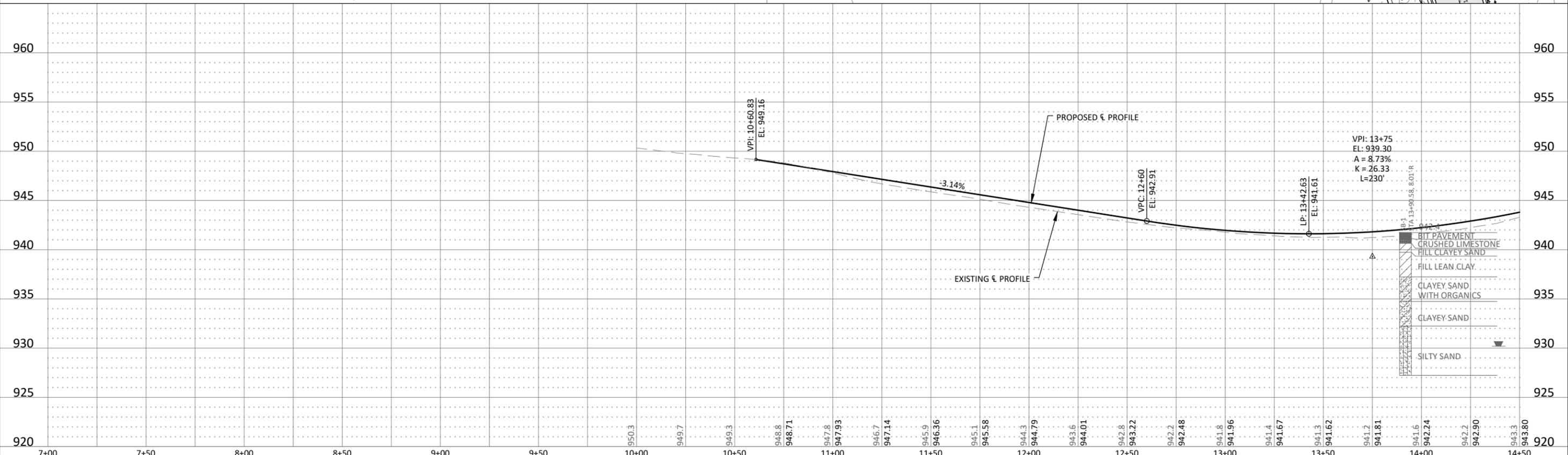
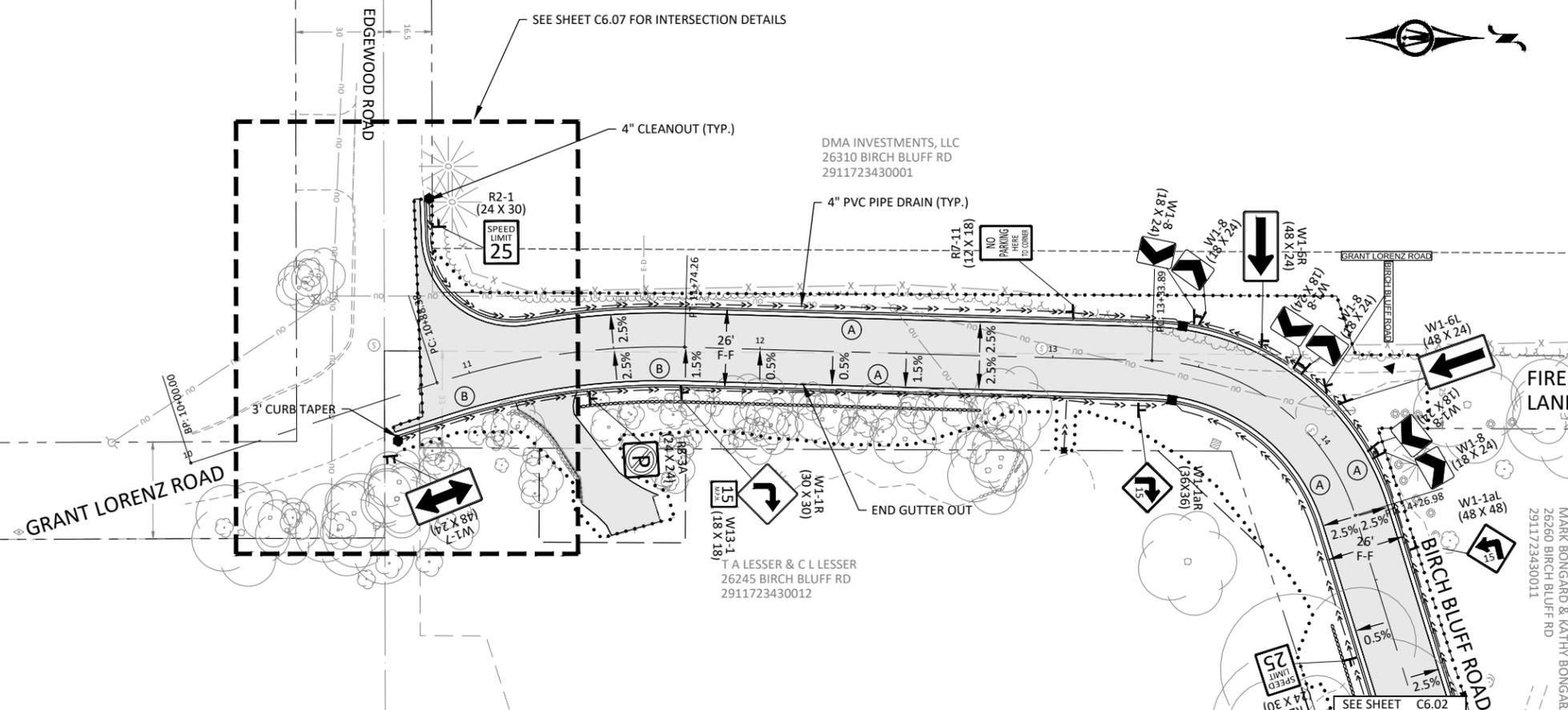
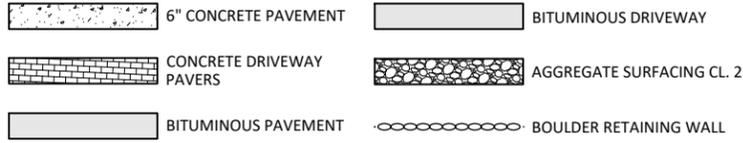
STORM SEWER PLAN & PROFILE

SHEET
C5.06

- NOTES:
1. ALL DIMENSIONS AREA SHOWN TO FACE OF CURB UNLESS NOTED.
 2. CONSTRUCT B618 CURB AND GUTTER AT ALL LOCATIONS EXCEPT WHERE SPECIFIED.
 3. SEE INTERSECTION DETAILS FOR PAVEMENT WARPING.
 4. PAVEMENT CROSS SLOPE TRANSITIONS OCCUR AT A RATE OF 1.0% EVERY 25'.
 5. CONTRACTOR SHALL VERIFY LOCATION & DEPTH OF DRAINTILE PRIOR TO SIGN INSTALLATION.

- (A) CONSTRUCT B618 CURB & GUTTER
- (B) CONSTRUCT B618 CURB & GUTTER OUT

CONSTRUCTION LEGEND



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HORIZ. SCALE: 0 25 50 FEET

VERT. SCALE: 0 5 10 FEET

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CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

CONSTRUCTION PLAN & PROFILE

SHEET C6.01

MARK BONGARD &
KATHY BONGARD
26260 BIRCH BLUFF RD
2911723430011

GERALD & PATRICE SIMONSEN
26190 BIRCH BLUFF RD
2911723430010

SLA LLC
15700 28TH AVE N
PLYMOUTH MN 55447
2911723430008

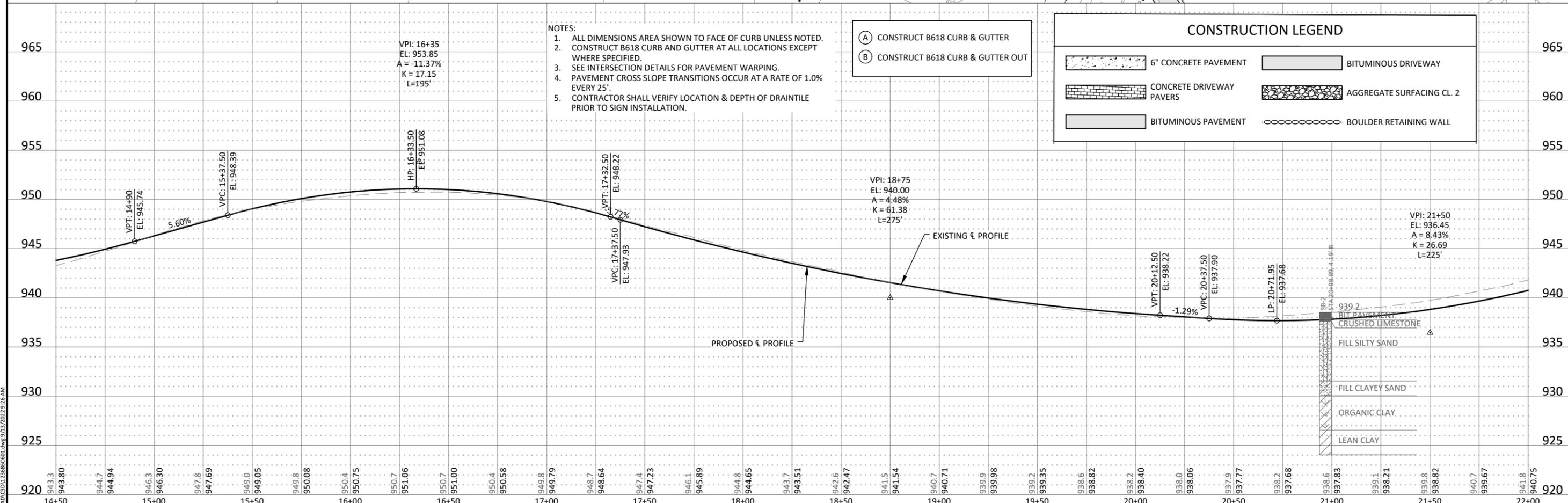
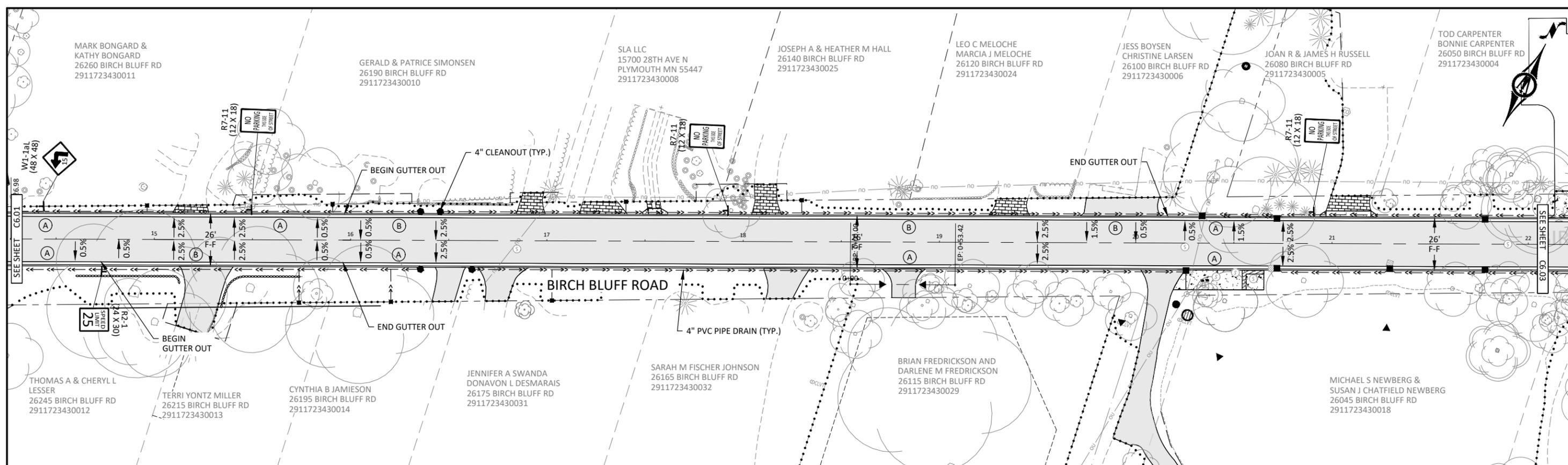
JOSEPH A & HEATHER M HALL
26140 BIRCH BLUFF RD
2911723430005

LEO C MELOCHE
MARCIA J MELOCHE
26120 BIRCH BLUFF RD
2911723430024

JESS BOYSEN
CHRISTINE LARSEN
26100 BIRCH BLUFF RD
2911723430006

JOAN R & JAMES H RUSSELL
26080 BIRCH BLUFF RD
2911723430005

TOD CARPENTER
BONNIE CARPENTER
26050 BIRCH BLUFF RD
2911723430004



- NOTES:**
- ALL DIMENSIONS AREA SHOWN TO FACE OF CURB UNLESS NOTED.
 - CONSTRUCT B618 CURB AND GUTTER AT ALL LOCATIONS EXCEPT WHERE SPECIFIED.
 - SEE INTERSECTION DETAILS FOR PAVEMENT WARPING.
 - PAVEMENT CROSS SLOPE TRANSITIONS OCCUR AT A RATE OF 1.0% EVERY 25'.
 - CONTRACTOR SHALL VERIFY LOCATION & DEPTH OF DRAINTILE PRIOR TO SIGN INSTALLATION.

- (A) CONSTRUCT B618 CURB & GUTTER
- (B) CONSTRUCT B618 CURB & GUTTER OUT

CONSTRUCTION LEGEND

- 6" CONCRETE PAVEMENT
- CONCRETE DRIVEWAY PAVERS
- BITUMINOUS DRIVEWAY
- AGGREGATE SURFACING CL. 2
- BITUMINOUS PAVEMENT
- BOULDER RETAINING WALL

DRAFT

HORIZ. SCALE: 0 25 50 FEET
VERT. SCALE: 0 5 10 FEET

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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022



2638 SHADOW LANE, SUITE 200
CHASKA, MINNESOTA 55318
Phone: (952) 448-8838
Email: Chaska@bolton-menk.com
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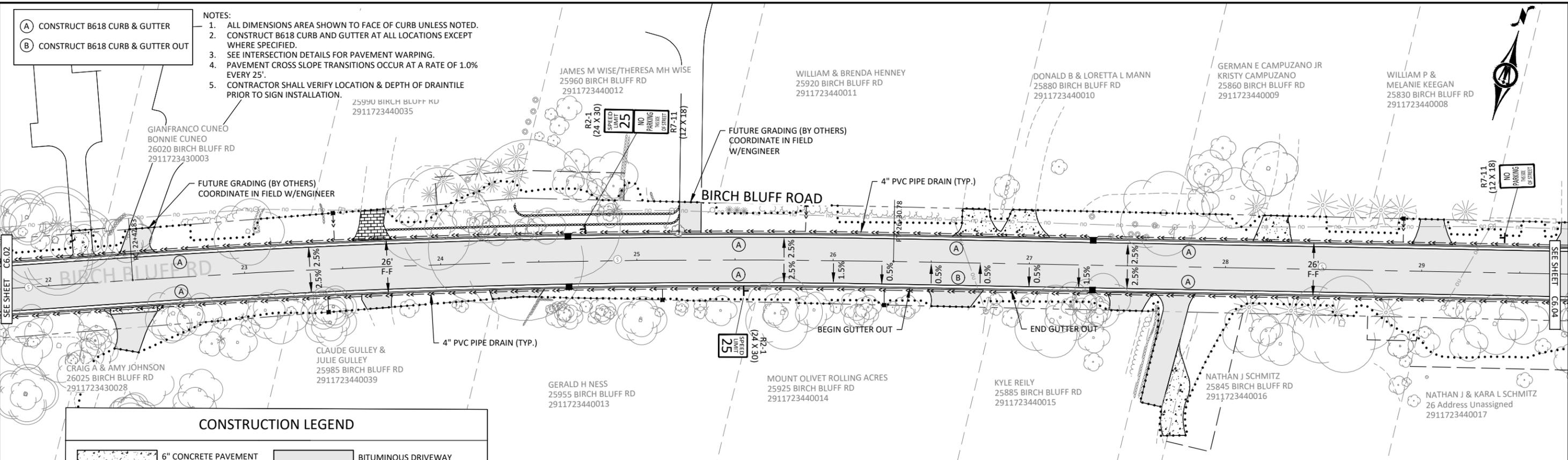
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CONSTRUCTION PLAN & PROFILE

SHEET C6.02

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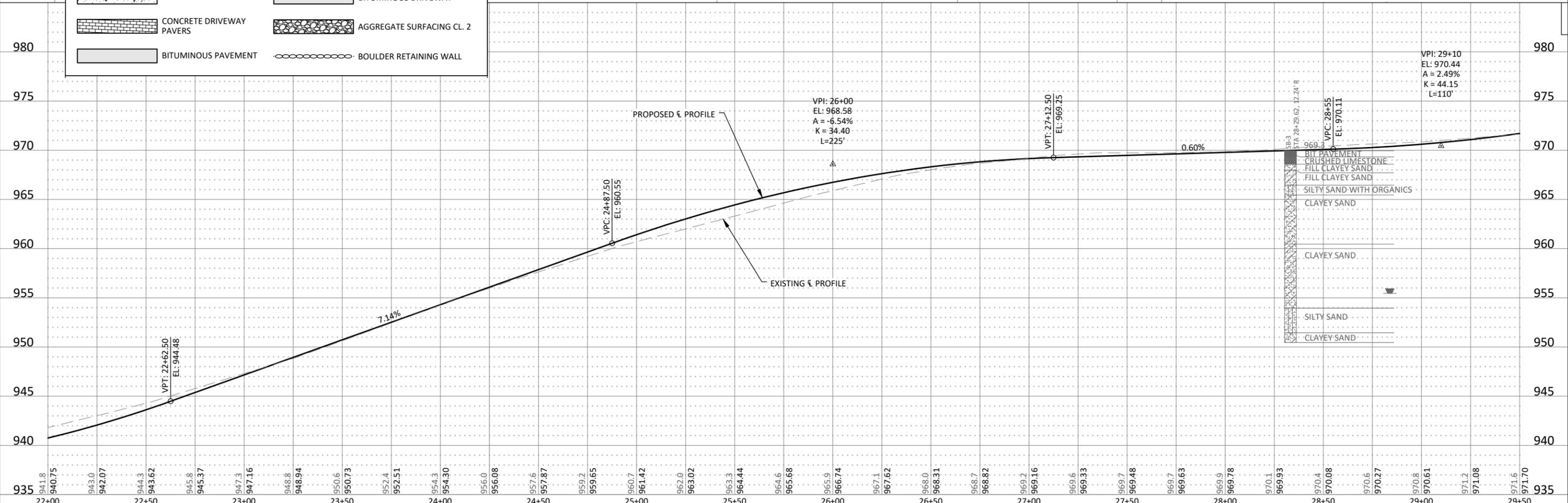
- (A) CONSTRUCT B618 CURB & GUTTER
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CONSTRUCTION LEGEND

6" CONCRETE PAVEMENT	BITUMINOUS DRIVEWAY
CONCRETE DRIVEWAY PAVERS	AGGREGATE SURFACING CL. 2
BITUMINOUS PAVEMENT	BOULDER RETAINING WALL



DRAFT

0 25 50

SCALE

FEET

0 5 10

SCALE

FEET

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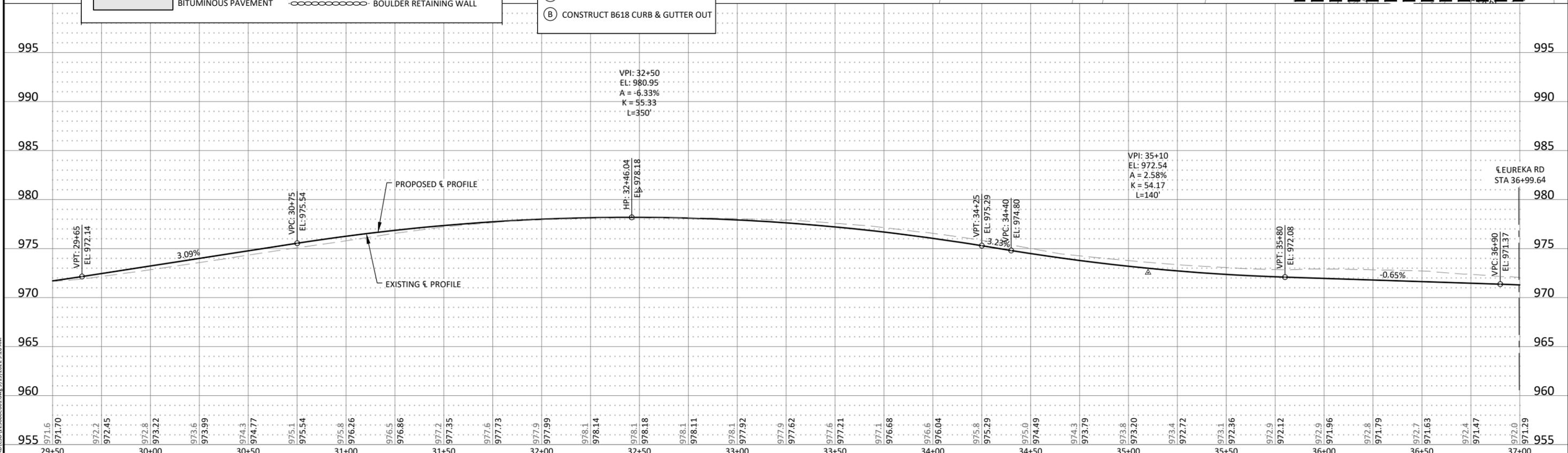
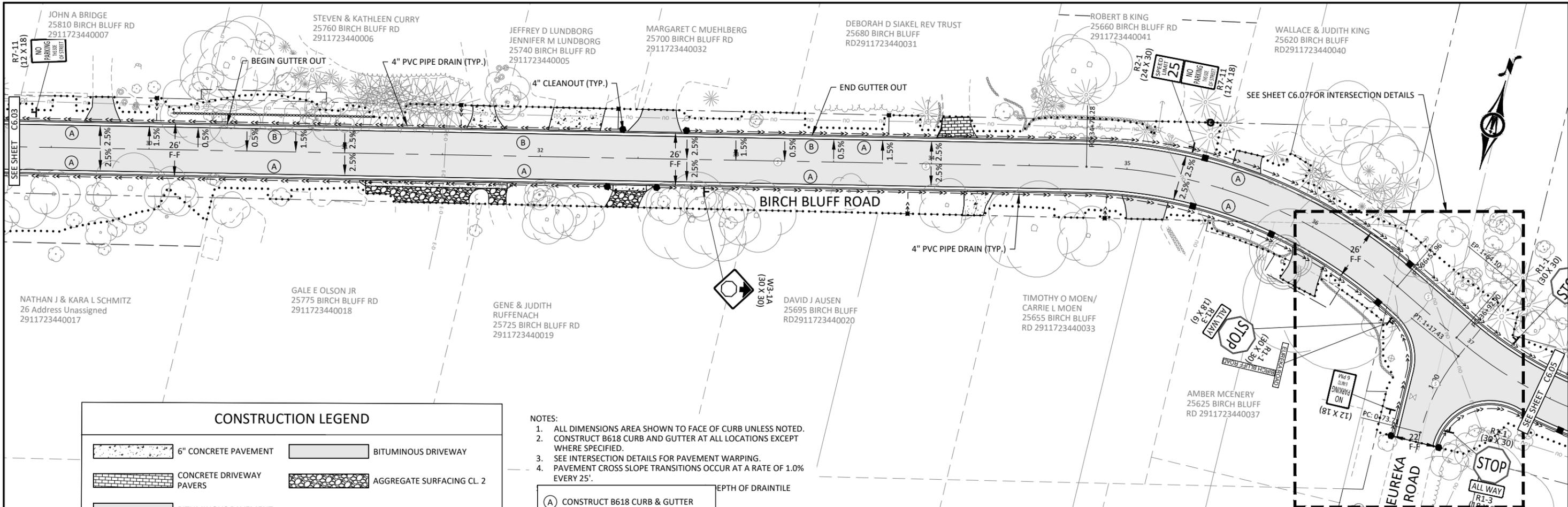
CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

CONSTRUCTION PLAN & PROFILE

SHEET
C6.03

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CONSTRUCTION LEGEND			
6" CONCRETE PAVEMENT	BITUMINOUS DRIVEWAY		
CONCRETE DRIVEWAY PAVERS	AGGREGATE SURFACING CL. 2		
BITUMINOUS PAVEMENT	BOULDER RETAINING WALL		

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- (A) CONSTRUCT B618 CURB & GUTTER
- (B) CONSTRUCT B618 CURB & GUTTER OUT

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DRAFT

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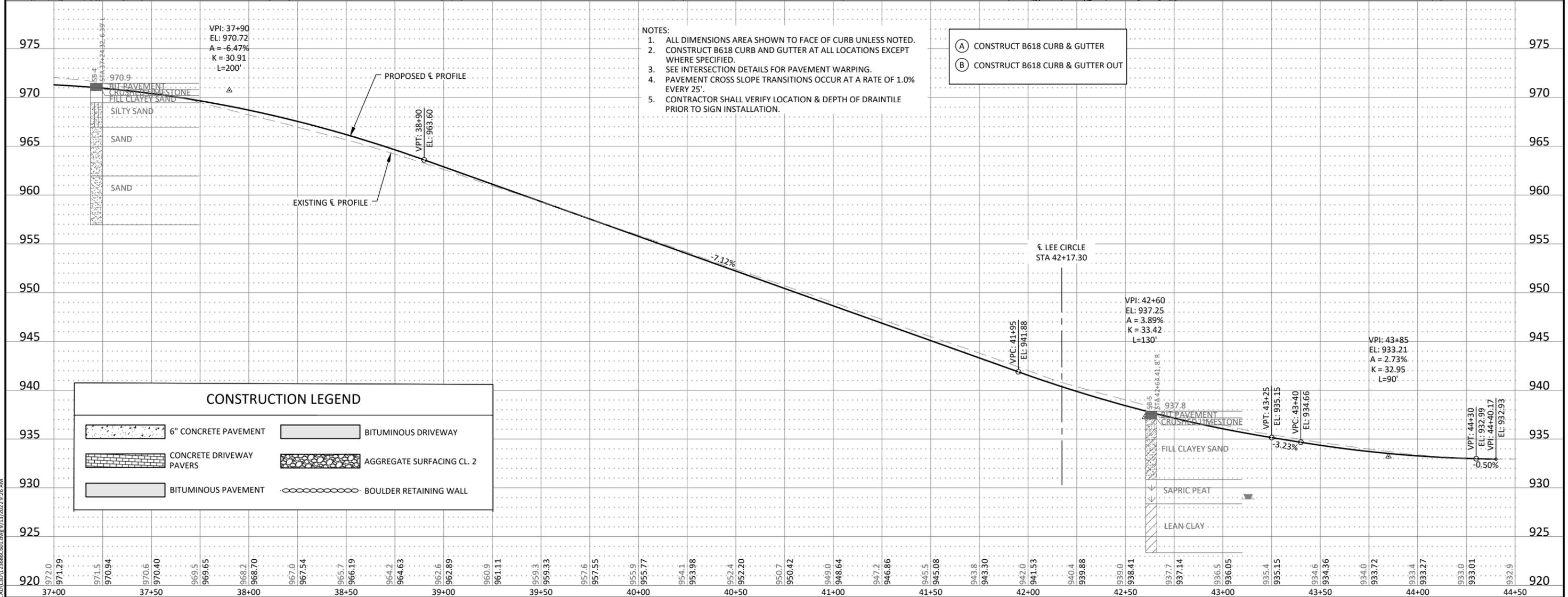
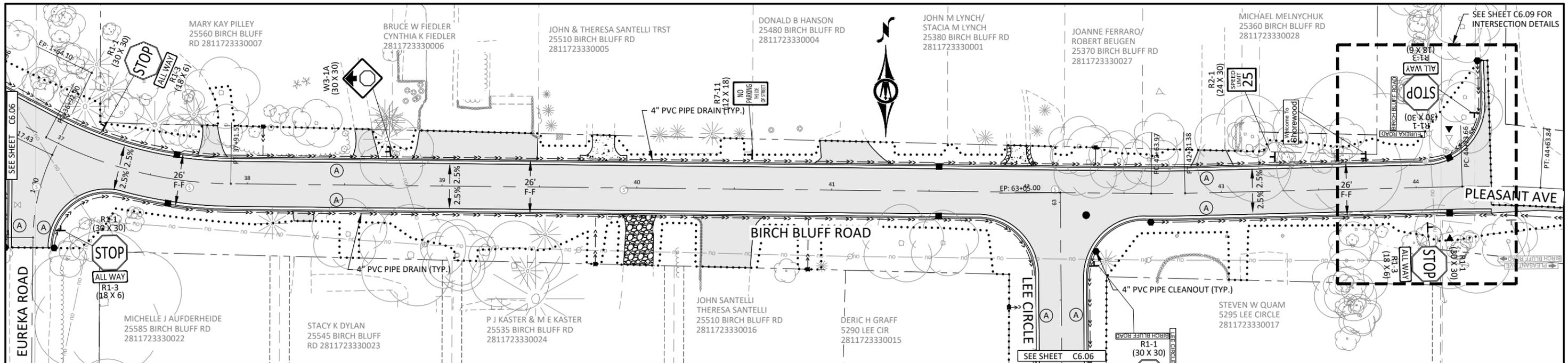
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CITY OF SHOREWOOD

BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

CONSTRUCTION PLAN & PROFILE

SHEET C6.04



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- (A) CONSTRUCT B618 CURB & GUTTER
- (B) CONSTRUCT B618 CURB & GUTTER OUT

CONSTRUCTION LEGEND

	6" CONCRETE PAVEMENT		BITUMINOUS DRIVEWAY
	CONCRETE DRIVEWAY PAVERS		AGGREGATE SURFACING CL. 2
	BITUMINOUS PAVEMENT		BOULDER RETAINING WALL

DRAFT

HORIZ. SCALE: 0 25 50 FEET
 VERT. SCALE: 0 5 10 FEET

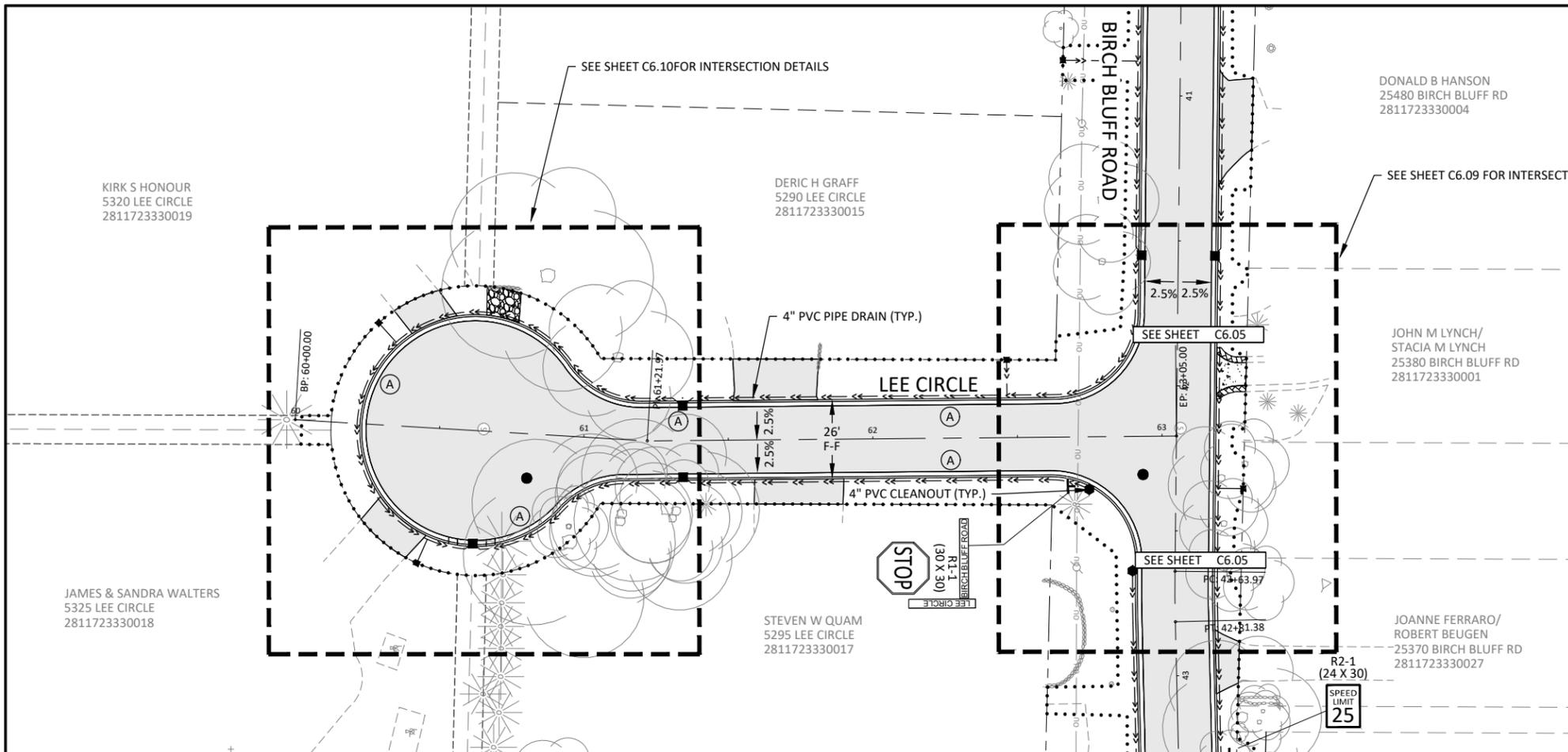
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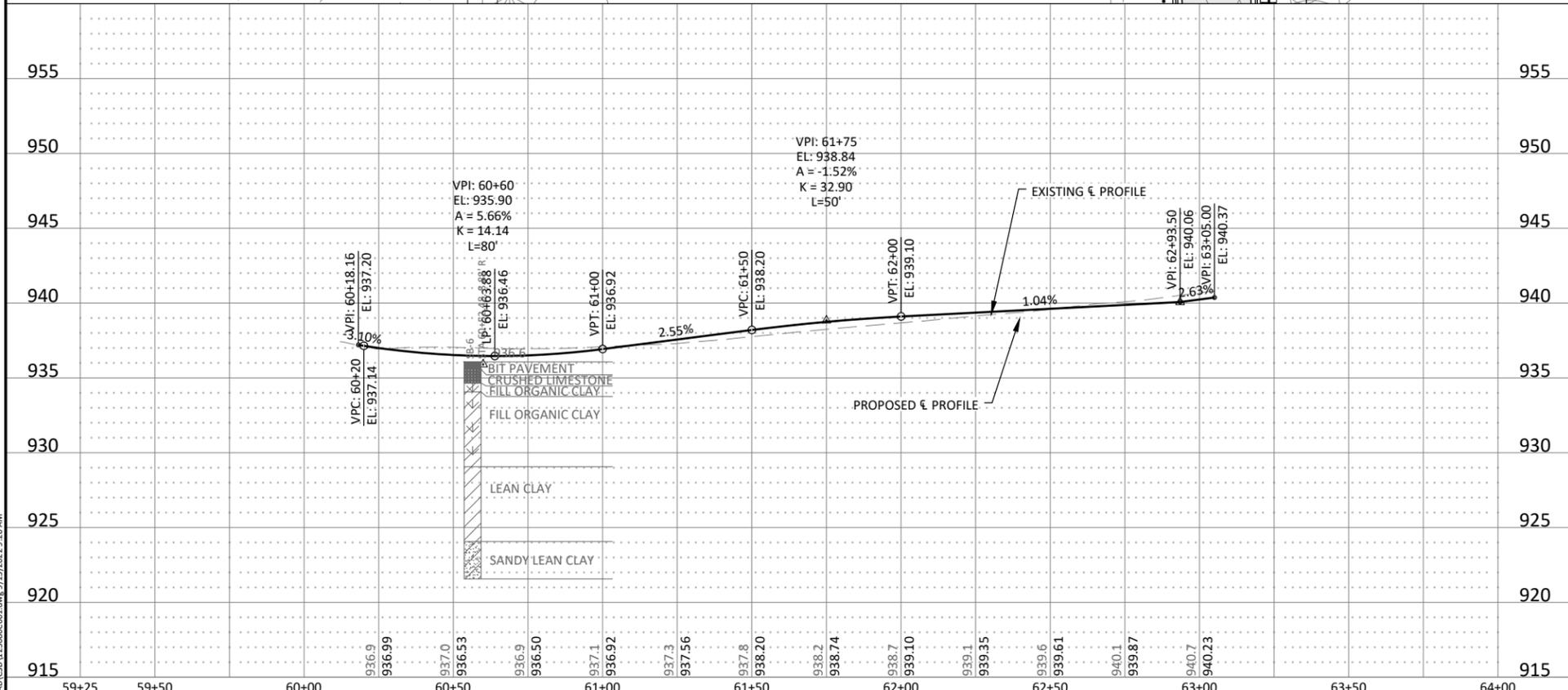
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 5. CONSTRUCT 6\"/>

- PR
- (A) CONSTRUCT B618 CURB & GUTTER
 - (B) CONSTRUCT B618 CURB & GUTTER OUT

CONSTRUCTION LEGEND	
	6" CONCRETE PAVEMENT
	CONCRETE DRIVEWAY PAVERS
	BITUMINOUS PAVEMENT
	BITUMINOUS DRIVEWAY
	AGGREGATE SURFACING CL. 2
	BOULDER RETAINING WALL



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HORIZ. SCALE: 0 25 50 FEET

VERT. SCALE: 0 5 10 FEET

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PHILIP J. SCHRUPP
LIC. NO. 54198 DATE 09/20/2022



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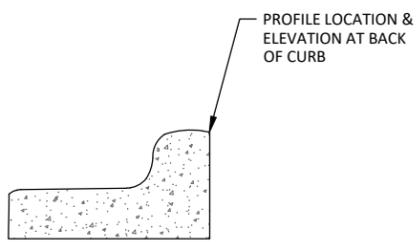
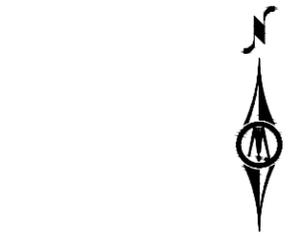
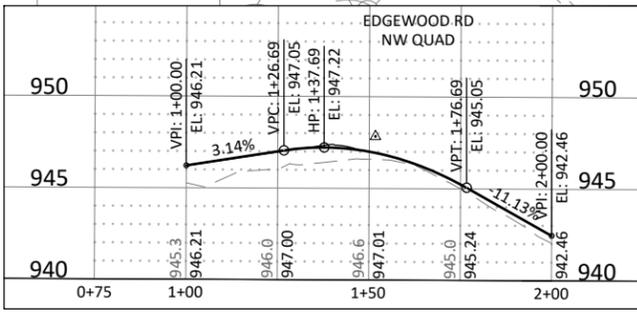
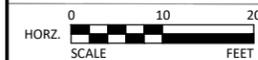
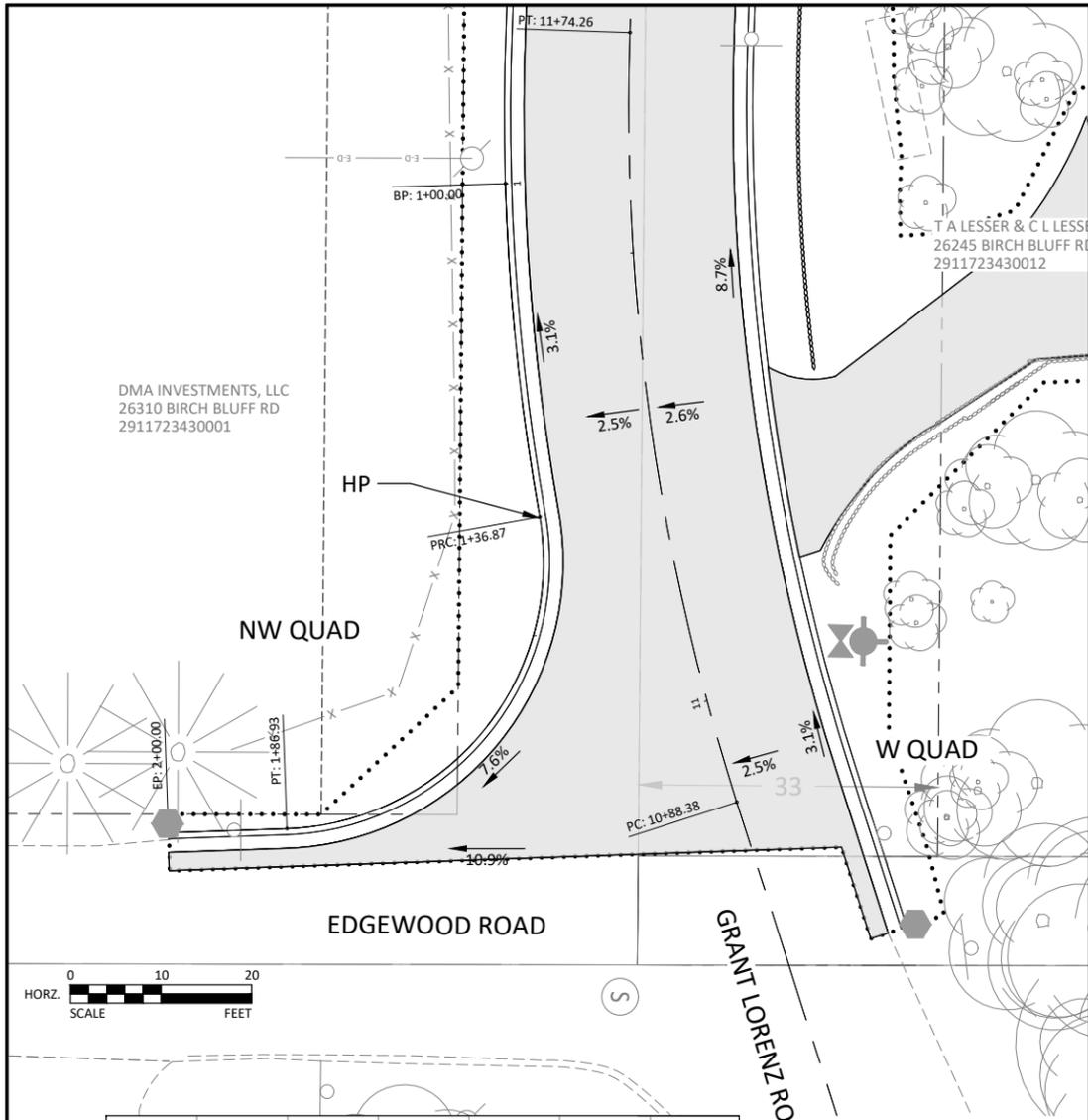
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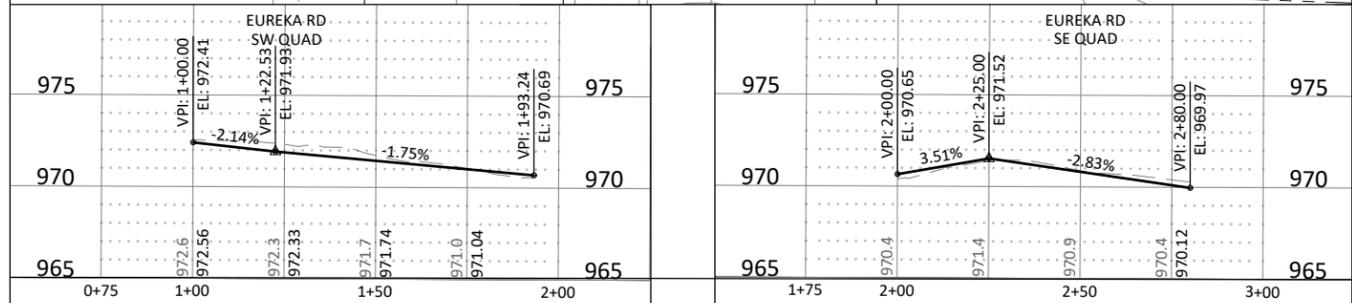
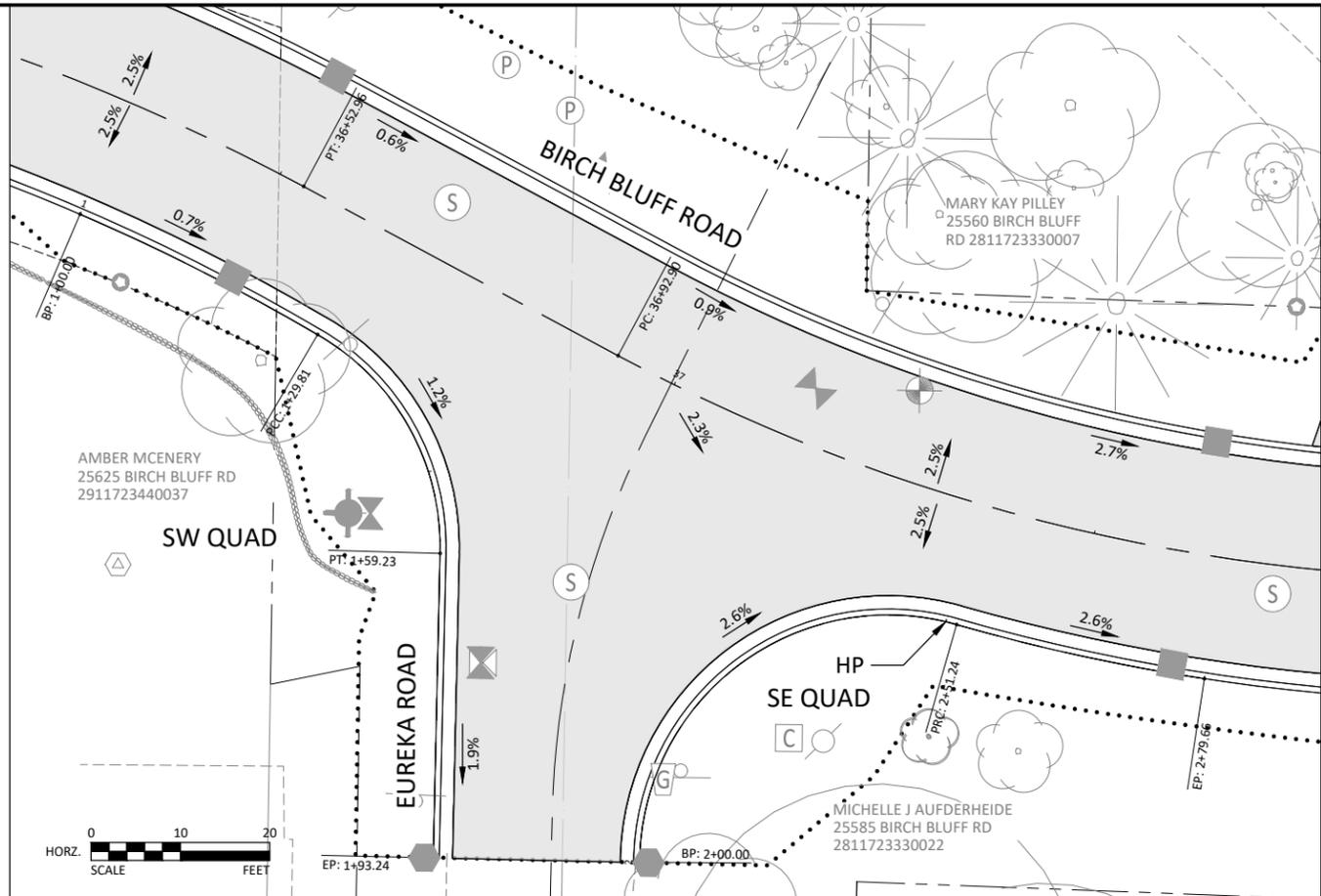
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS

CONSTRUCTION PLAN & PROFILE

SHEET C6.06



LEGEND	
	DRAINAGE GRADE
	SPOT ELEVATION
	CONSTRUCT CONCRETE CURB & GUTTER
	PROPOSED DRAINAGE STRUCTURE
	PROPOSED HYDRANT
	PROPOSED VALVE
	EXISTING DRAINAGE STRUCTURE
	EXISTING VALVE



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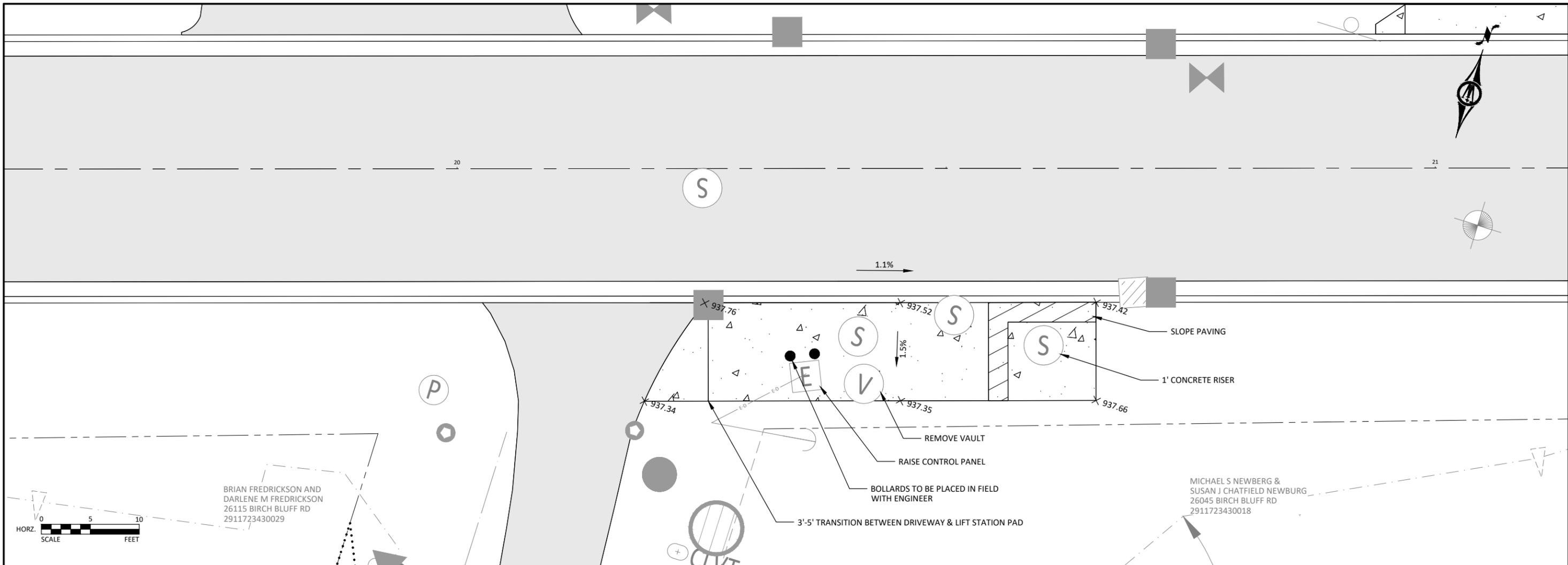


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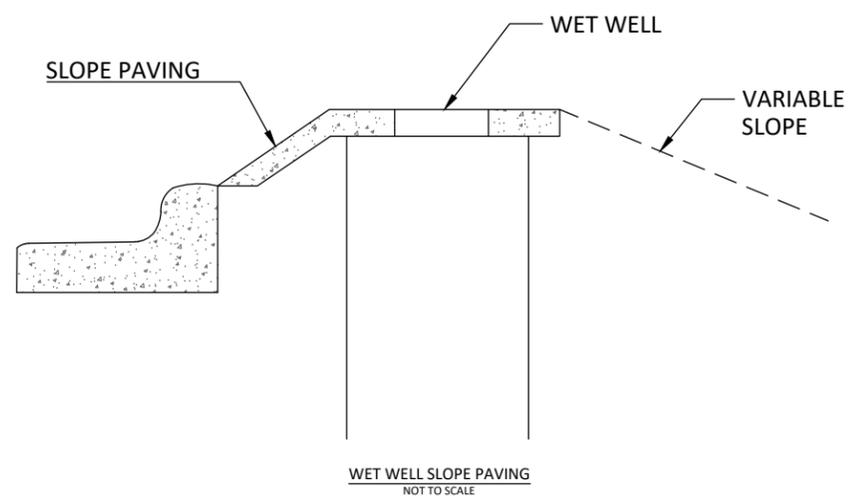
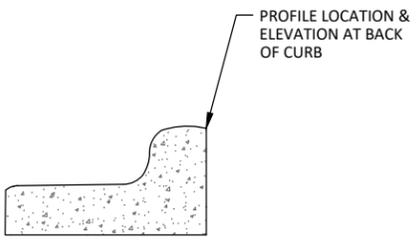
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C6.07



BRIAN FREDRICKSON AND
DARLENE M FREDRICKSON
26115 BIRCH BLUFF RD
2911723430029

MICHAEL S NEWBERG &
SUSAN J CHATFIELD NEWBURG
26045 BIRCH BLUFF RD
2911723430018

LEGEND	
← X.X%	DRAINAGE GRADE
×XXX.XX	SPOT ELEVATION
=====	CONSTRUCT CONCRETE CURB & GUTTER
■	PROPOSED DRAINAGE STRUCTURE
⊕	PROPOSED HYDRANT
⊗	PROPOSED VALVE
□	EXISTING DRAINAGE STRUCTURE
⊗	EXISTING VALVE



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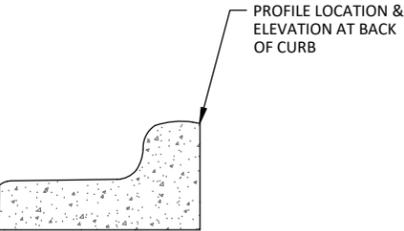
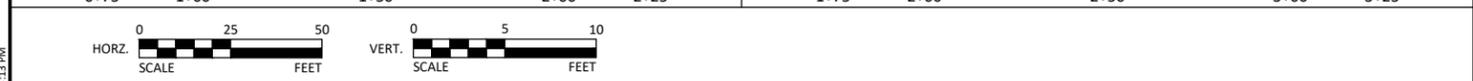
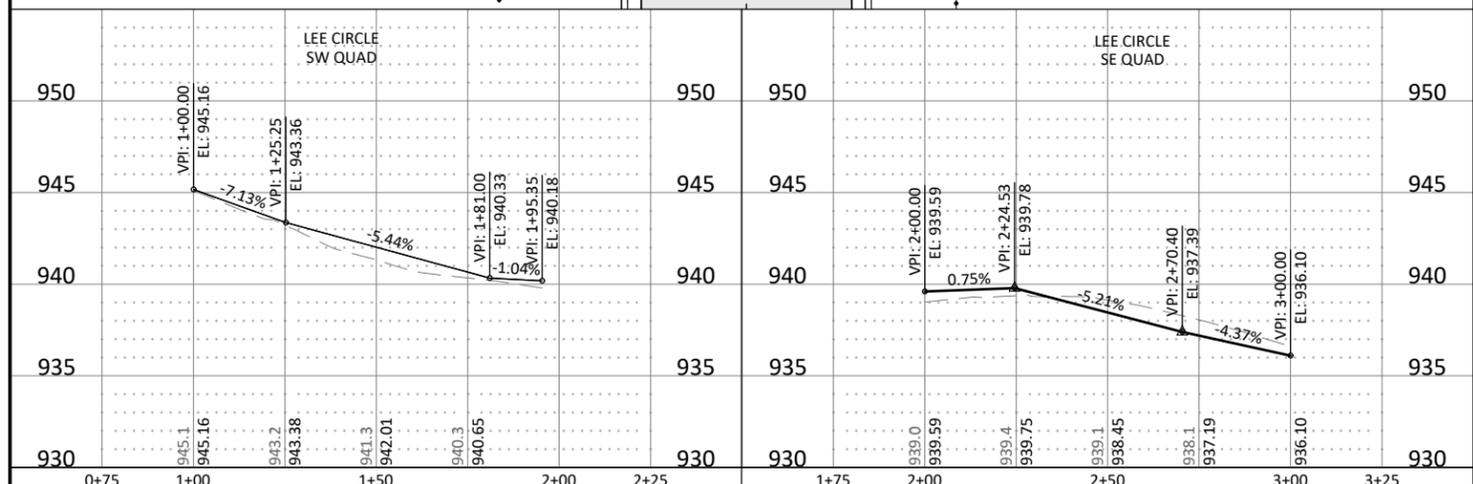
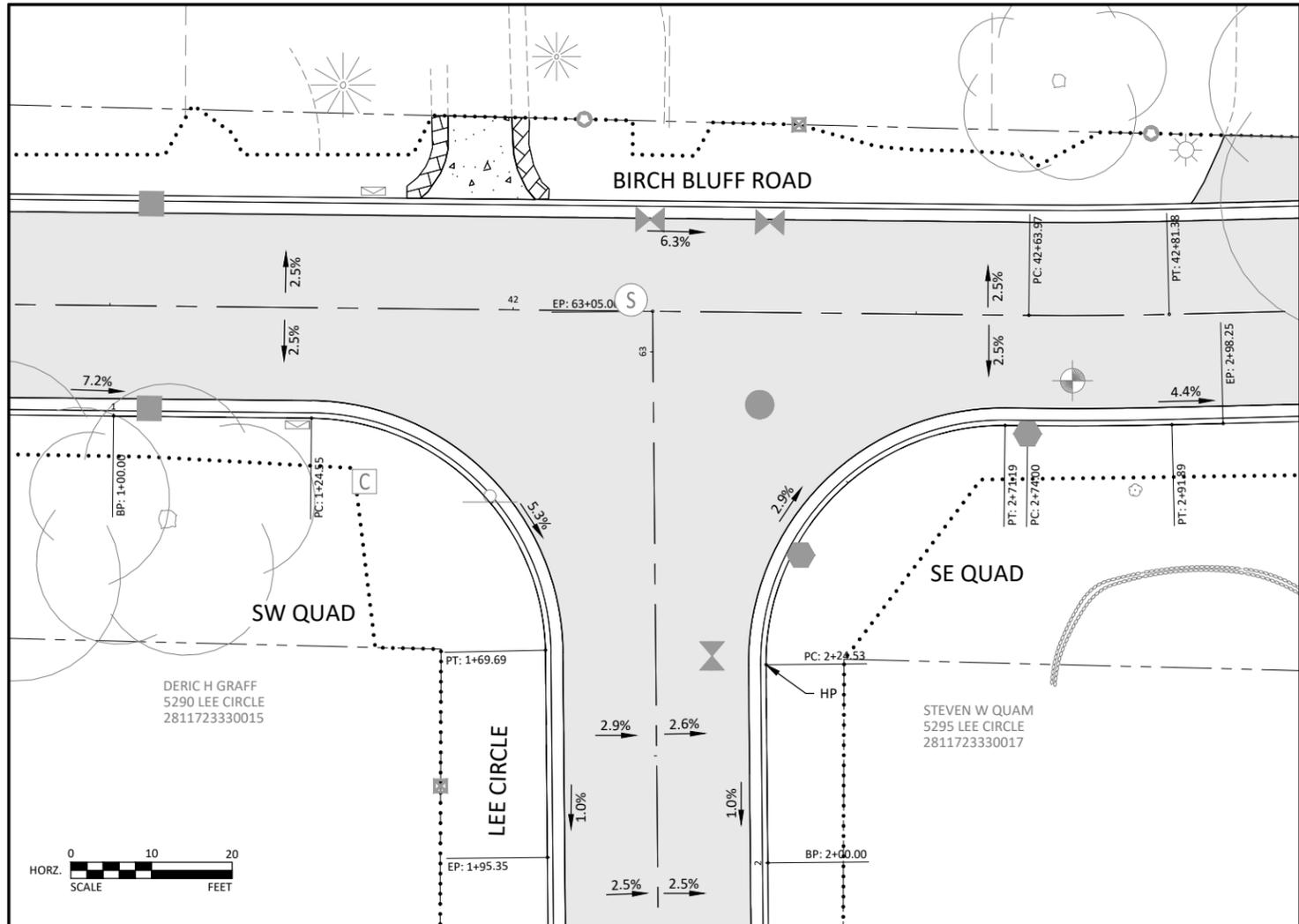


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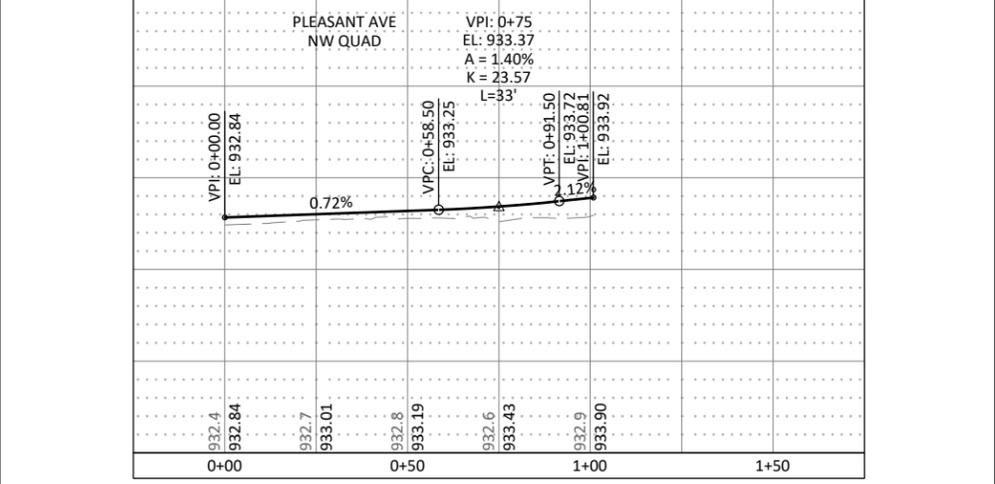
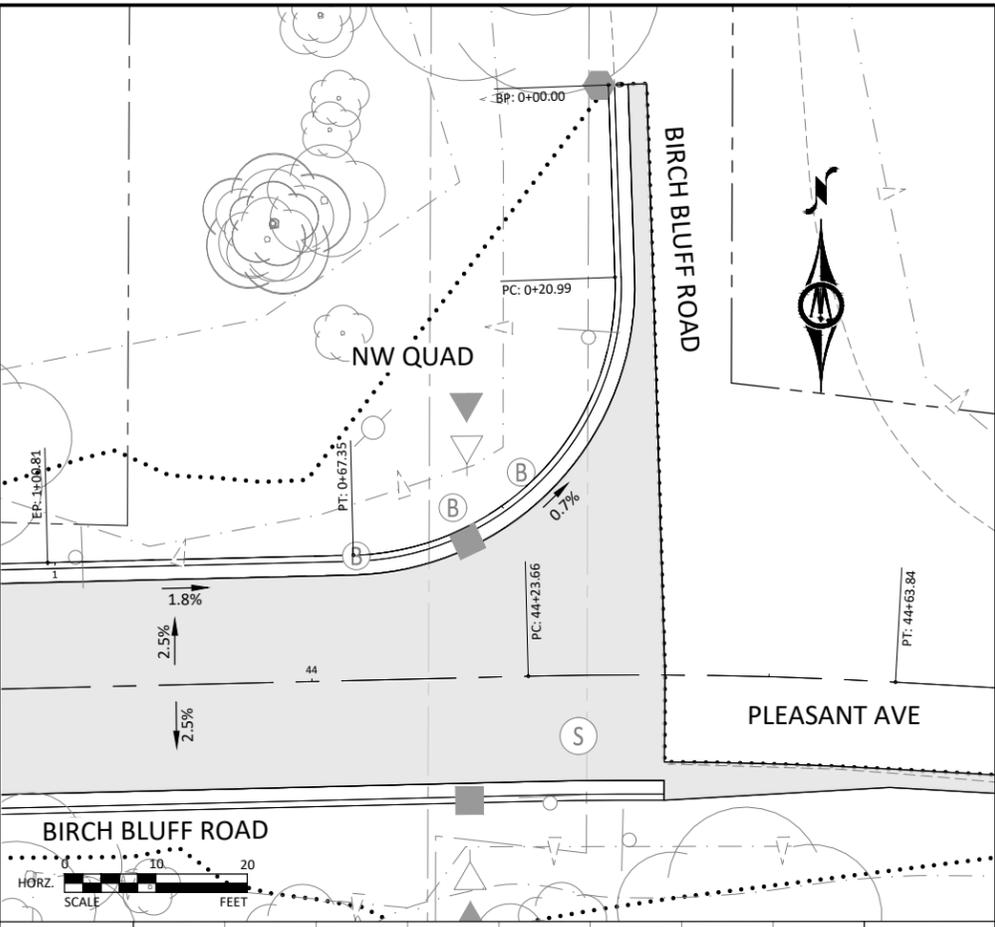
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CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
INTERSECTION DETAILS

SHEET
C6.08



LEGEND	
← X.X%	DRAINAGE GRADE
×XXX.XX	SPOT ELEVATION
====	CONSTRUCT CONCRETE CURB & GUTTER
■	PROPOSED DRAINAGE STRUCTURE
⊕	PROPOSED HYDRANT
⊗	PROPOSED VALVE
□	EXISTING DRAINAGE STRUCTURE
⊗	EXISTING VALVE



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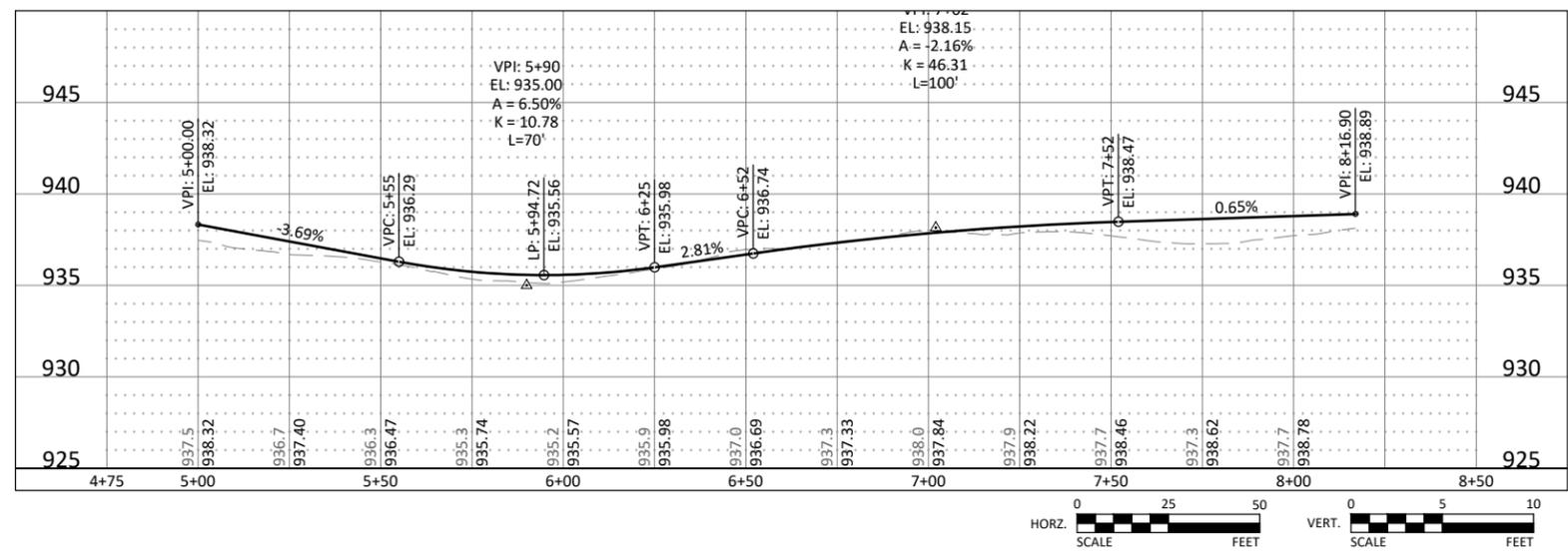
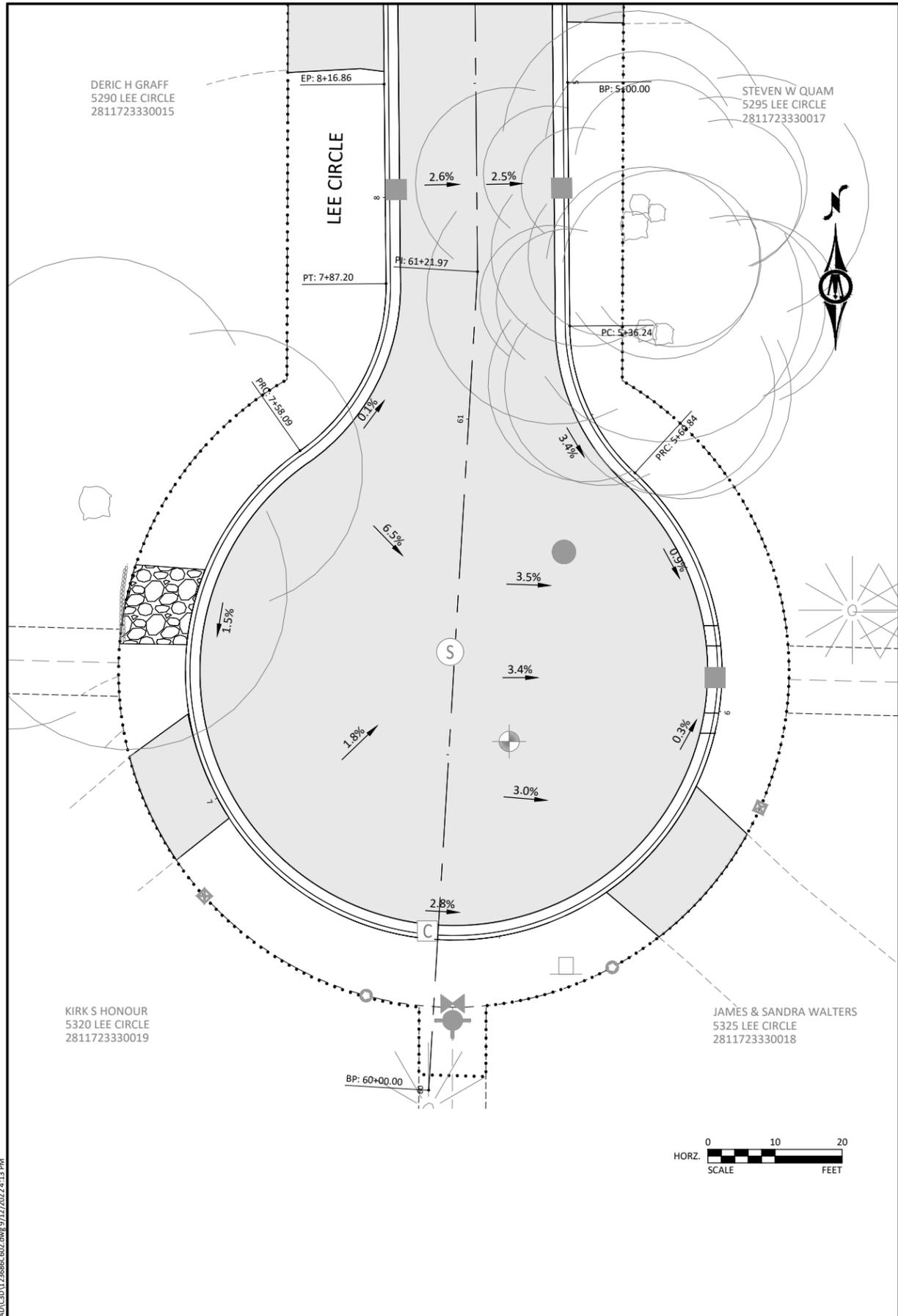


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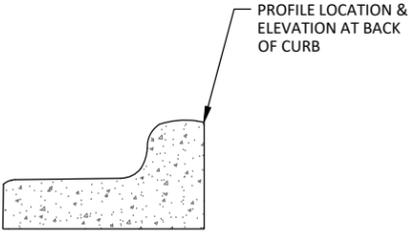
CITY OF SHOREWOOD
BIRCH BLUFF ROAD STREET & UTILITY IMPROVEMENTS
INTERSECTION DETAILS

SHEET
C6.09



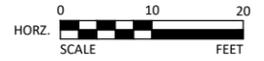
LEGEND

- X.X% DRAINAGE GRADE
- XXX.XX SPOT ELEVATION
- CONSTRUCT CONCRETE CURB & GUTTER
- PROPOSED DRAINAGE STRUCTURE
- PROPOSED HYDRANT
- PROPOSED VALVE
- EXISTING DRAINAGE STRUCTURE
- EXISTING VALVE



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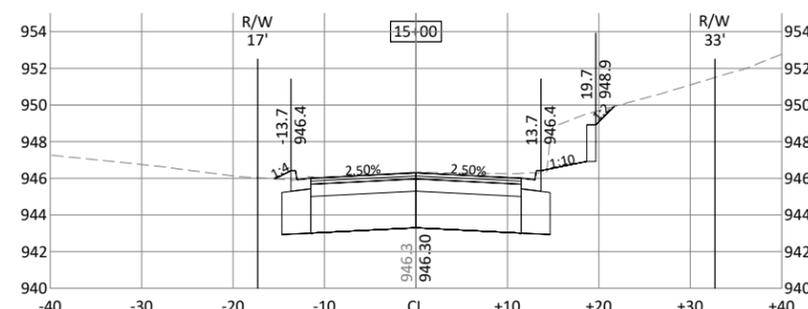
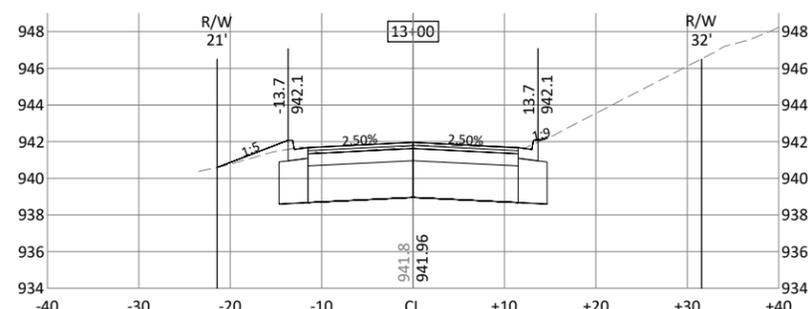
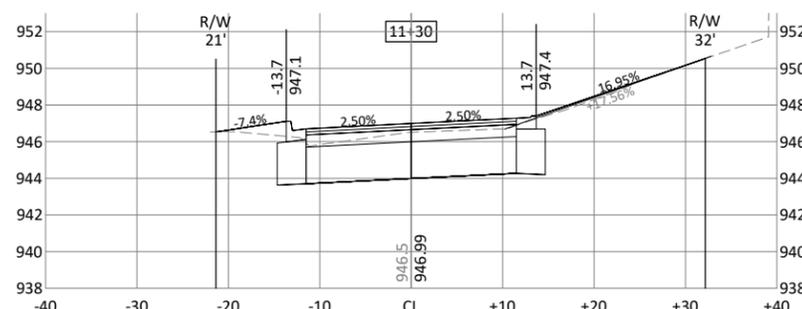
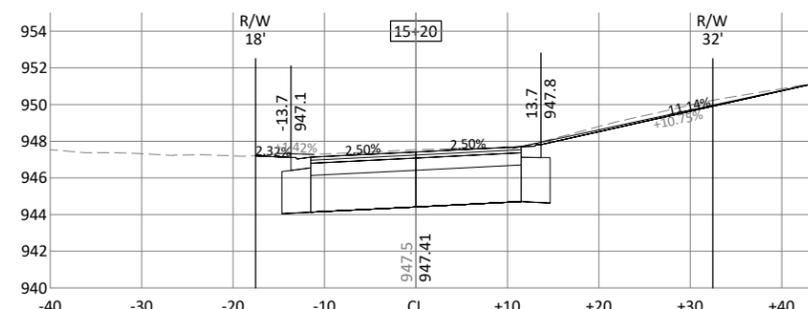
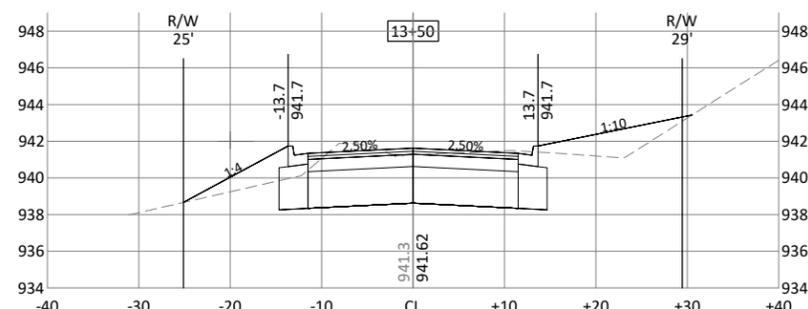
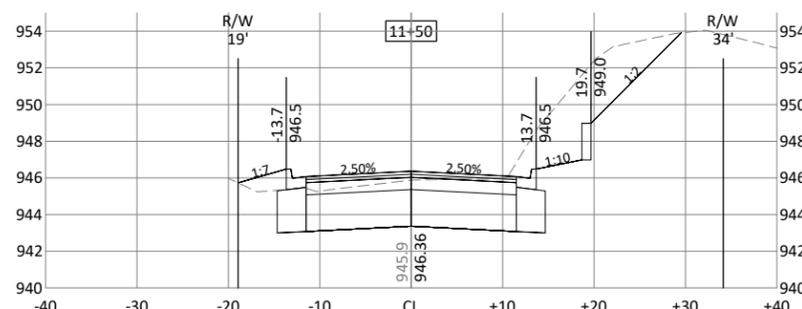
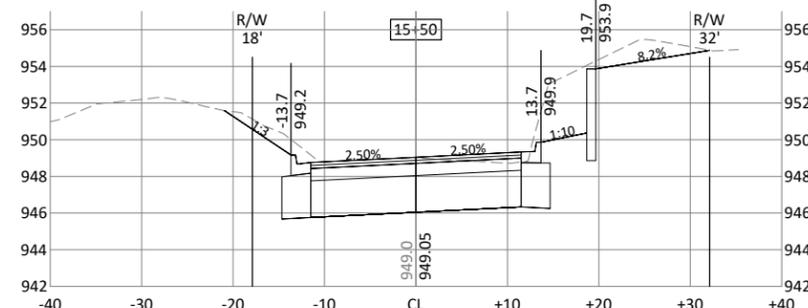
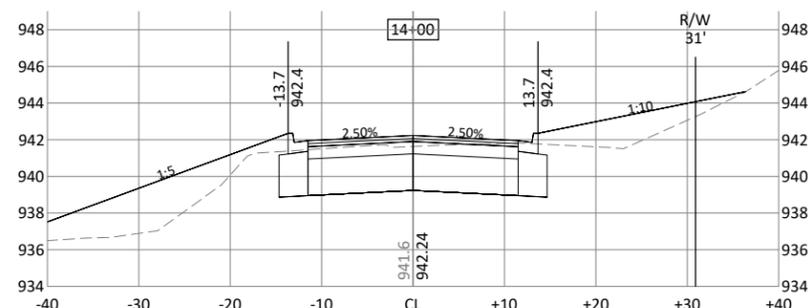
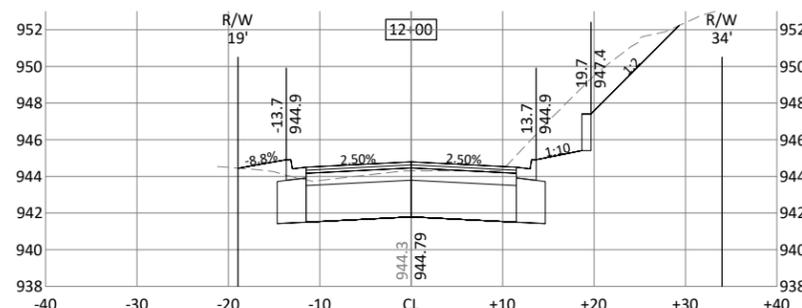
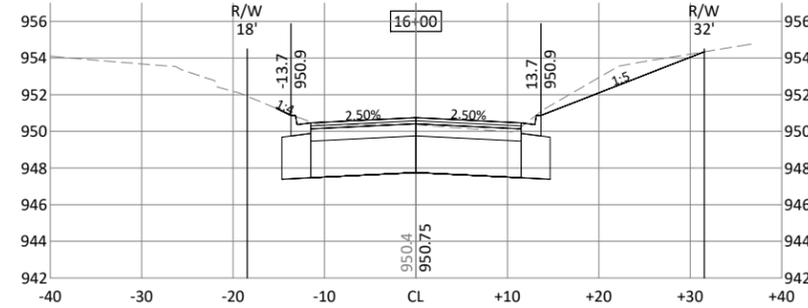
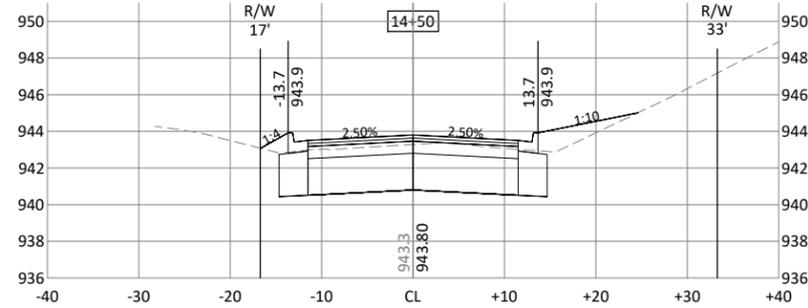
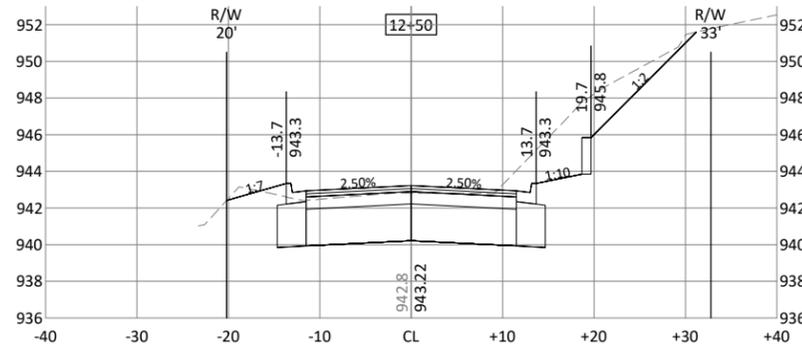


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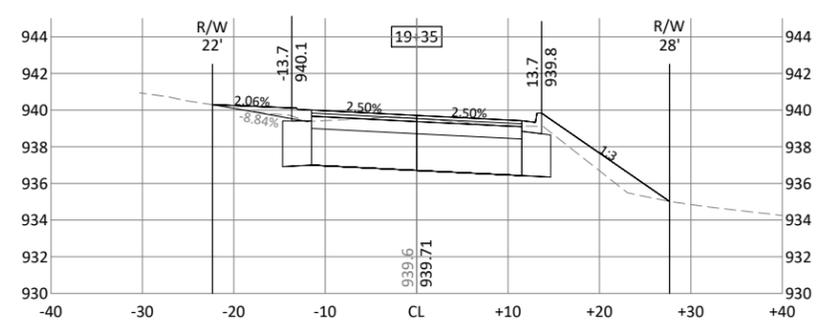
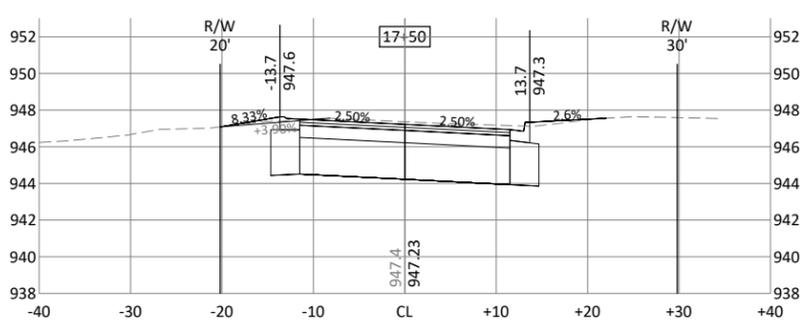
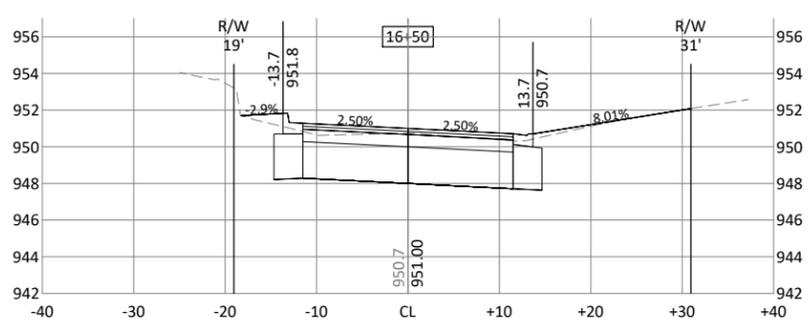
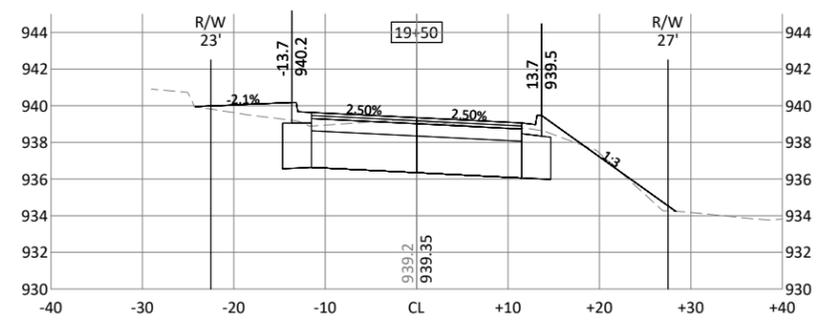
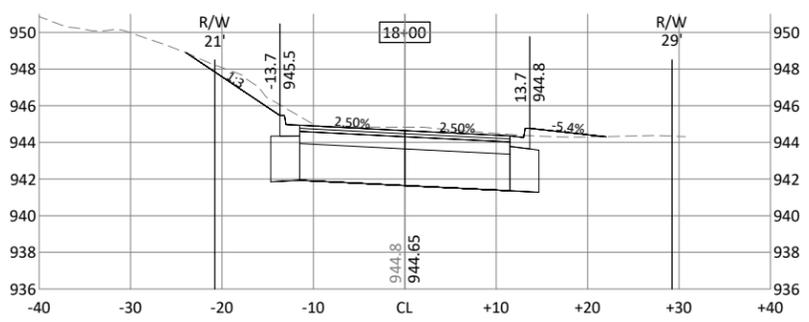
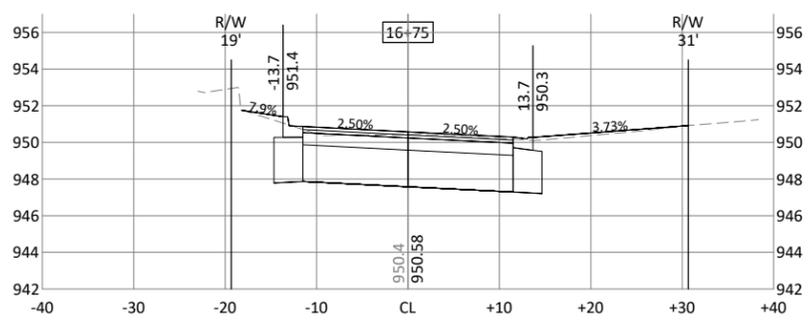
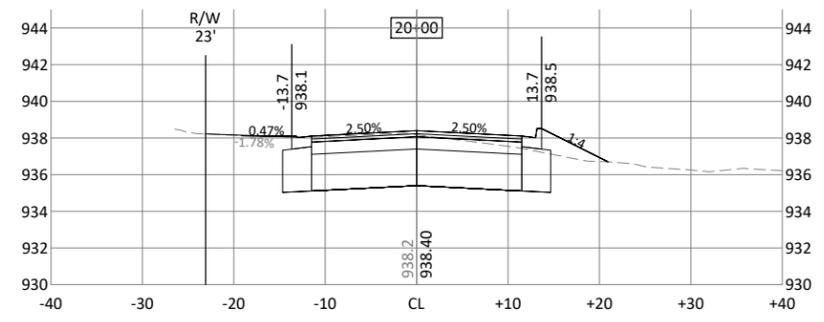
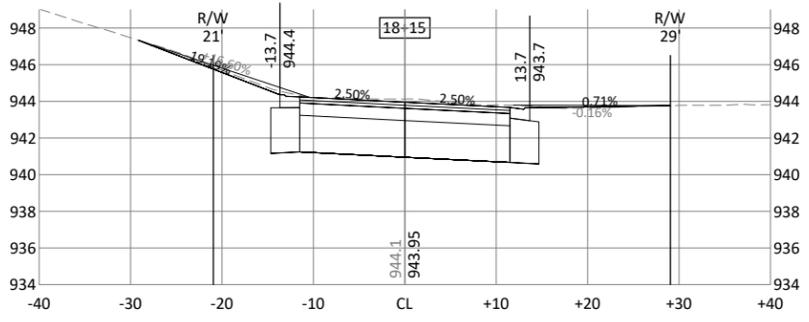
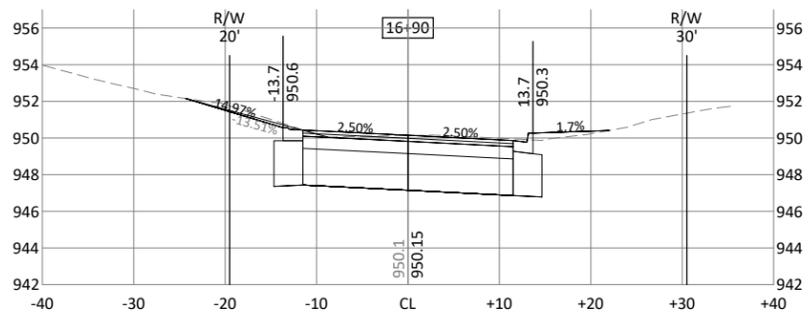
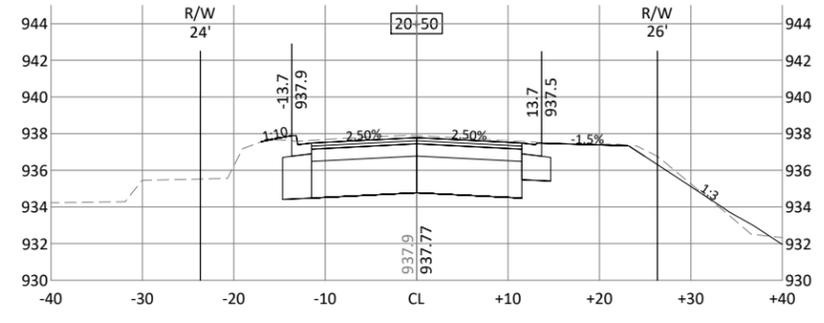
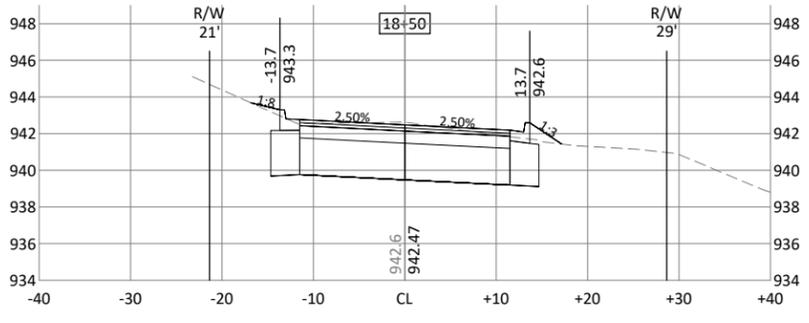
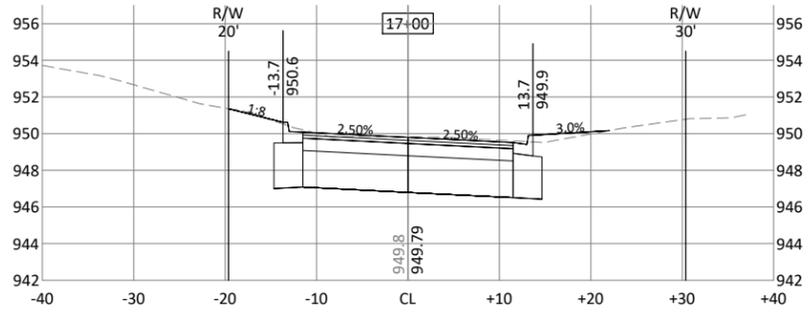
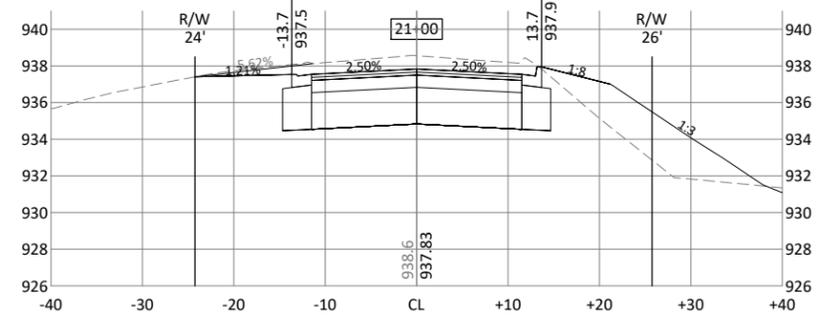
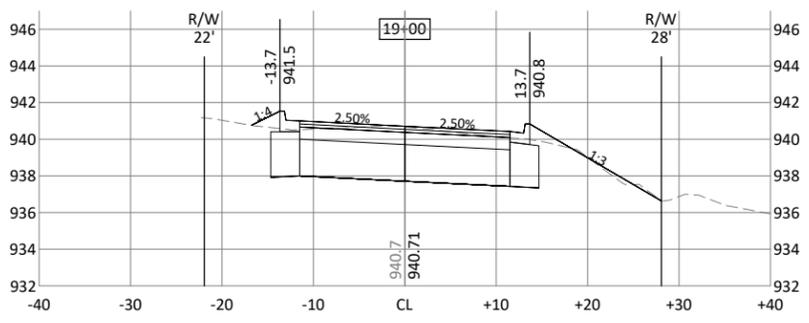
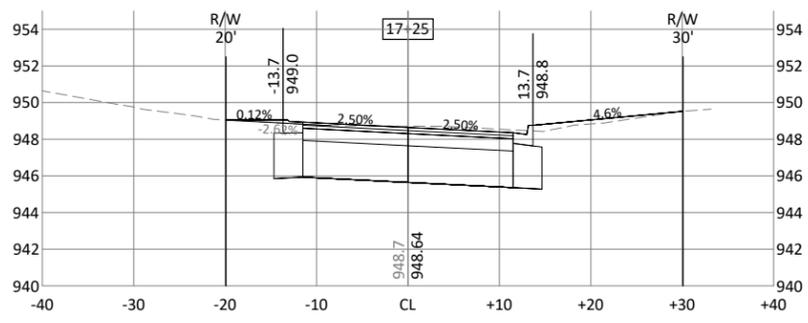


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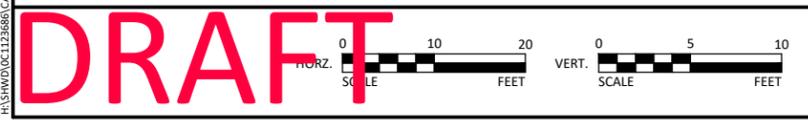
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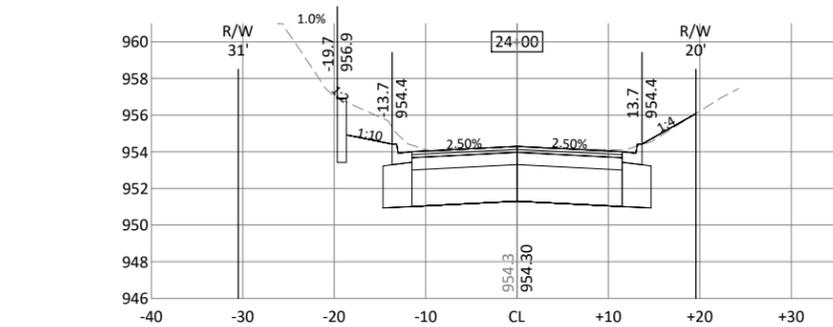
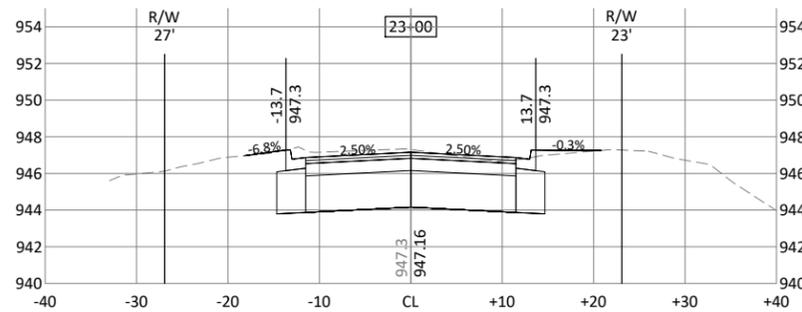
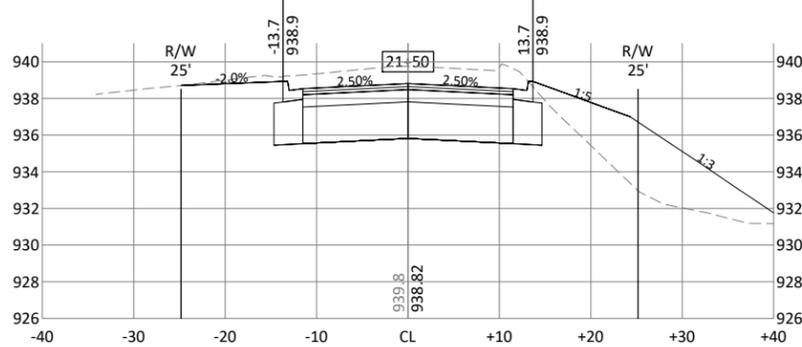
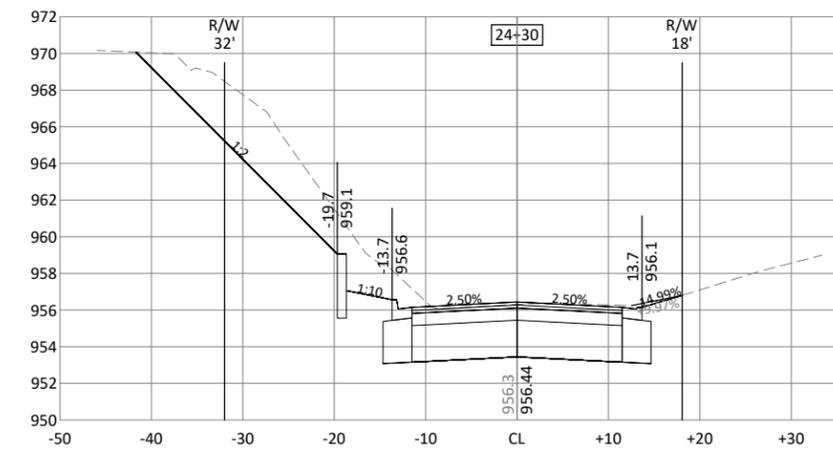
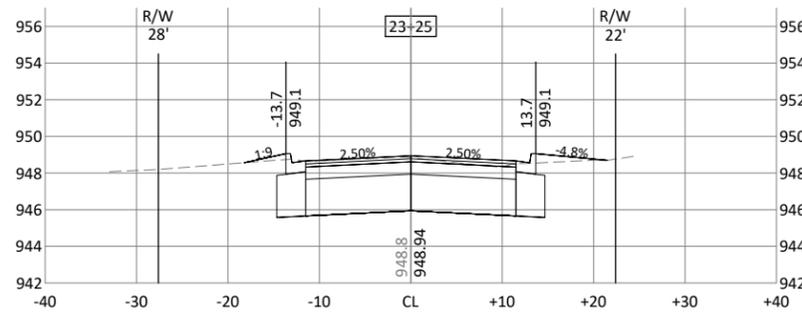
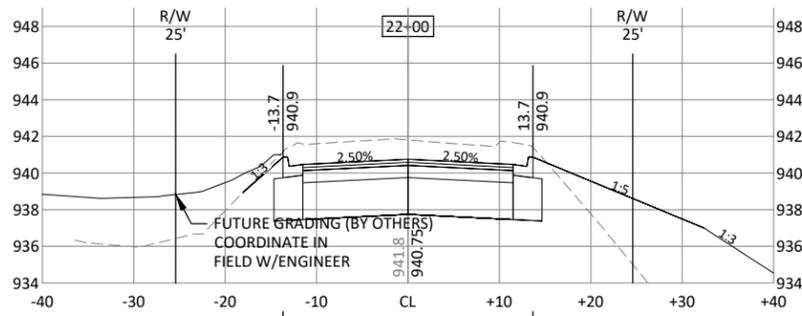
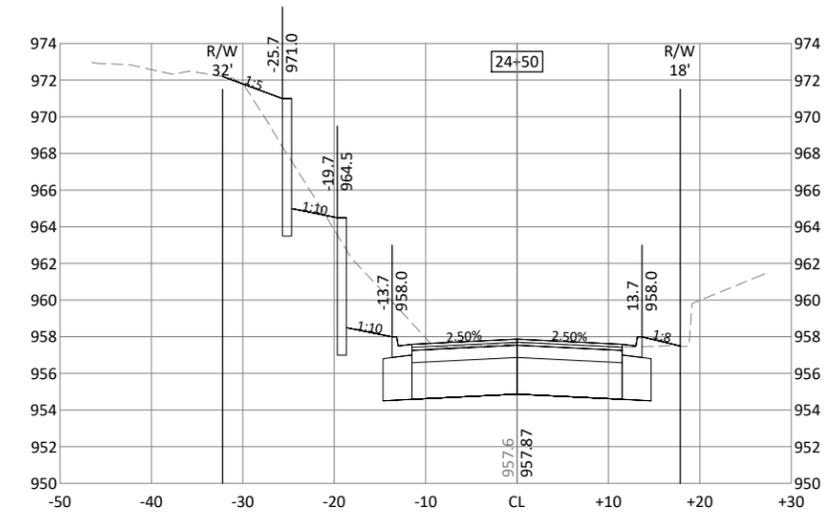
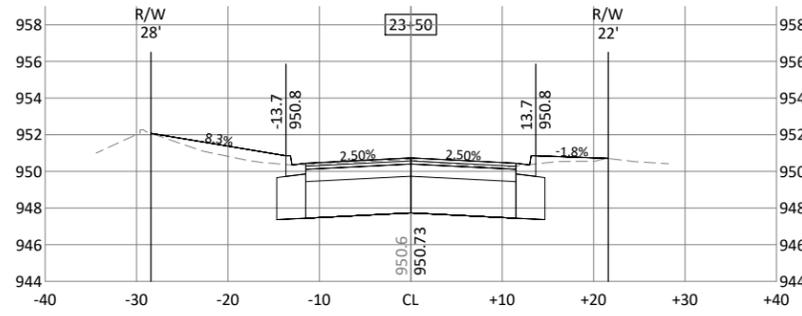
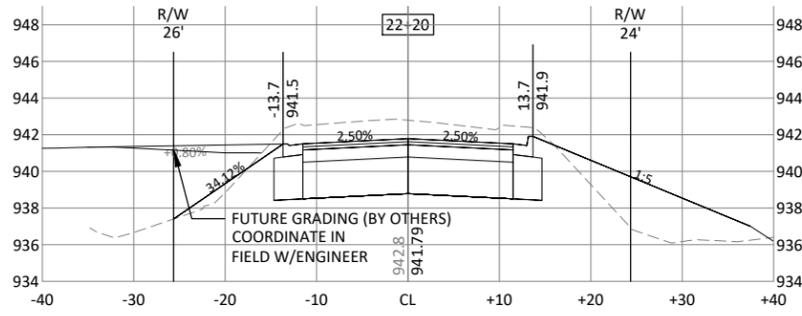
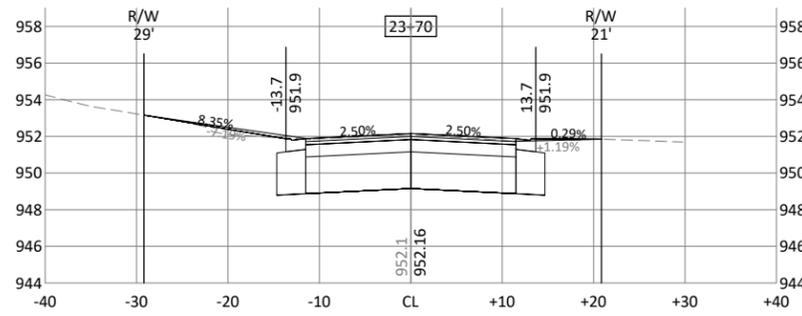
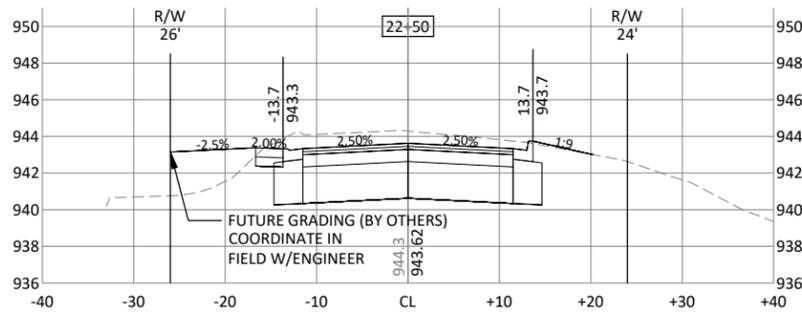


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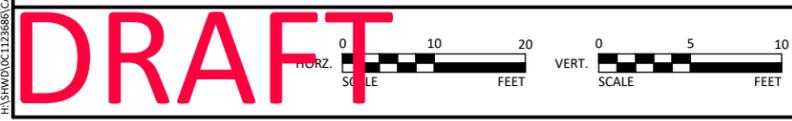
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PHILIP J. SCHRUPP
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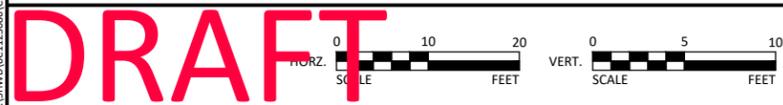
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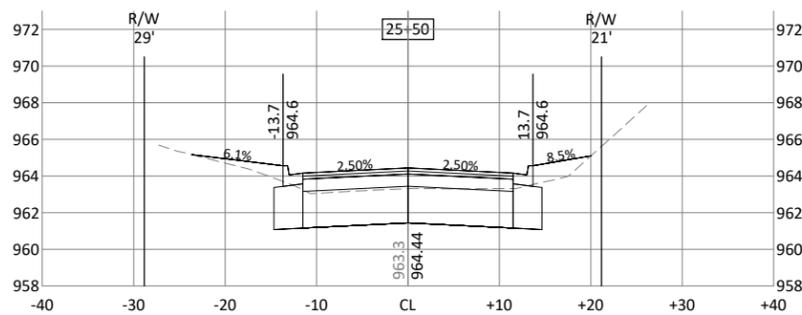
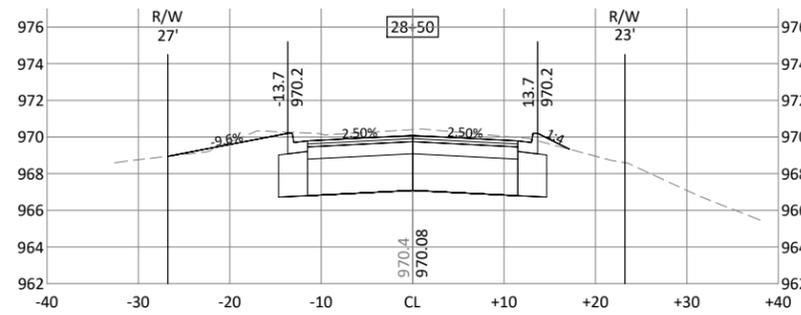
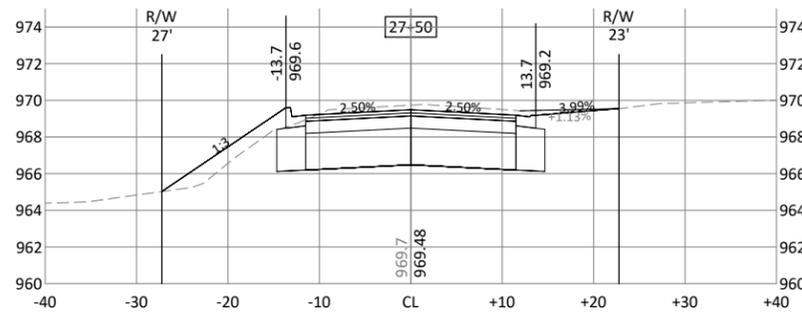
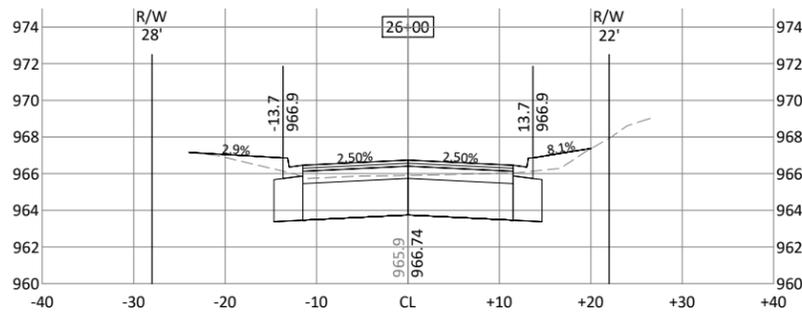


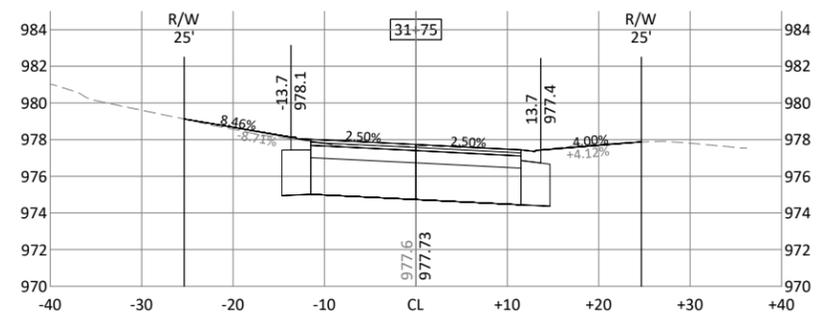
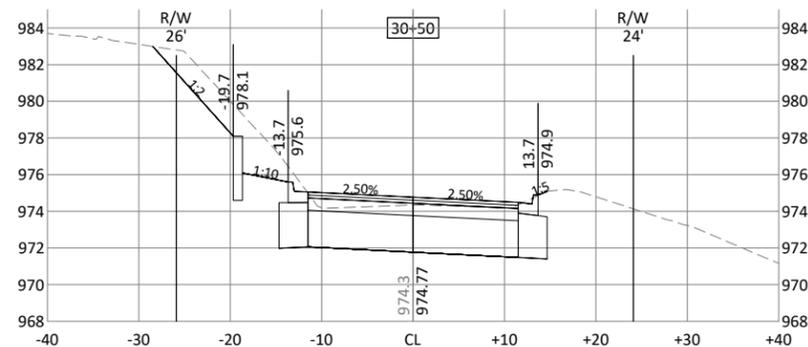
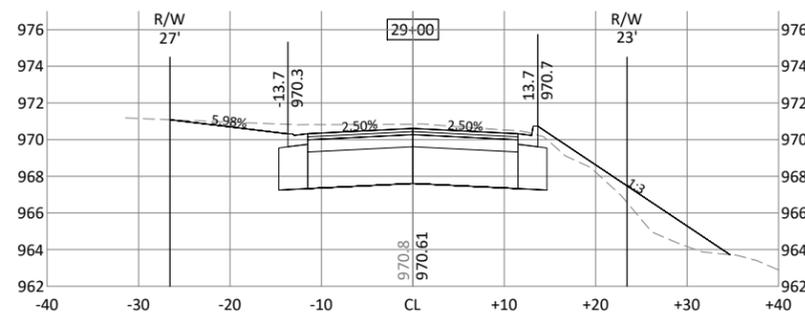
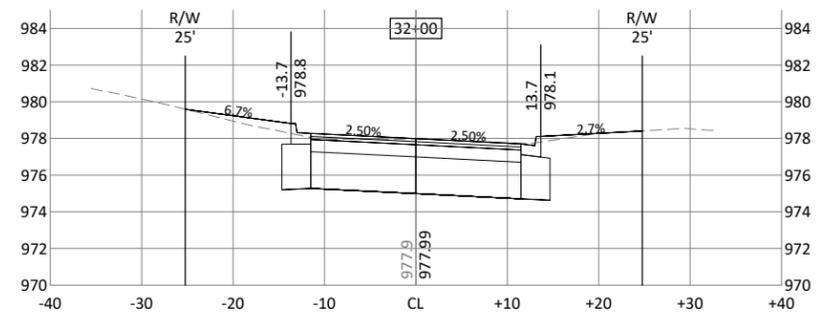
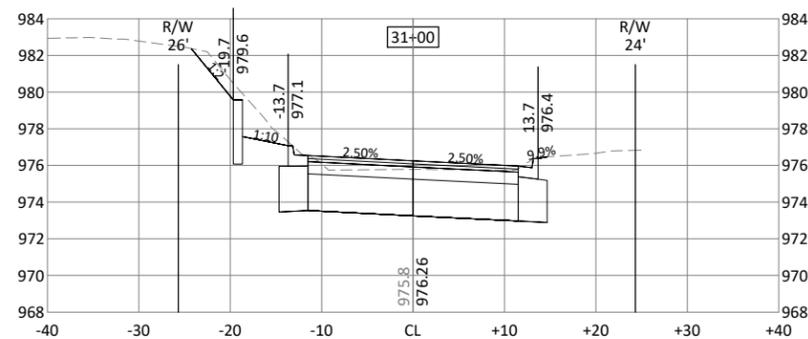
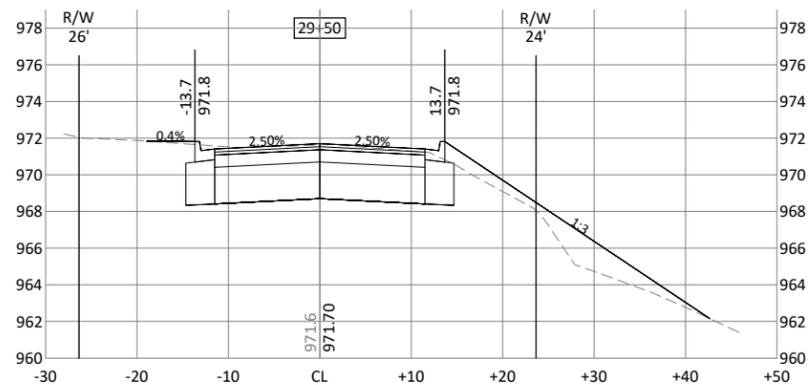
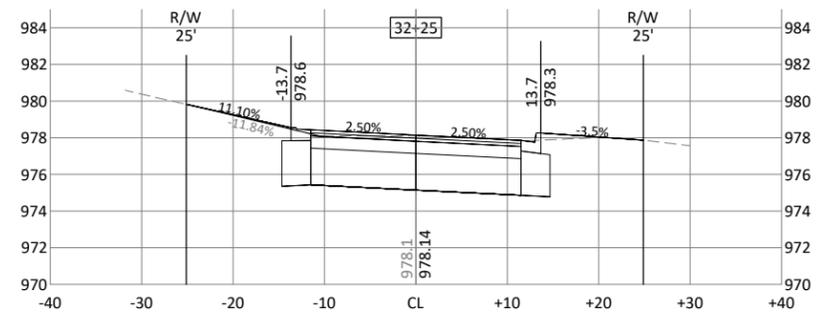
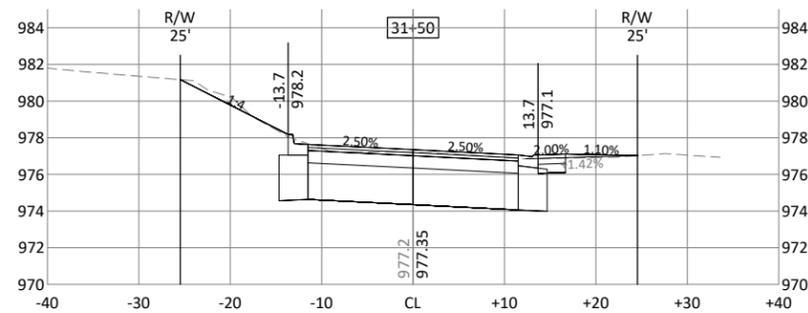
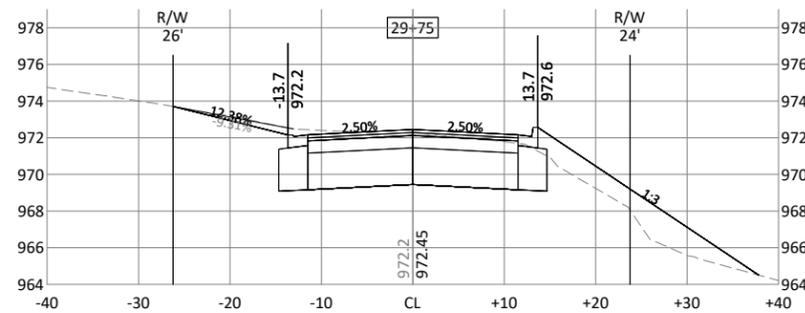
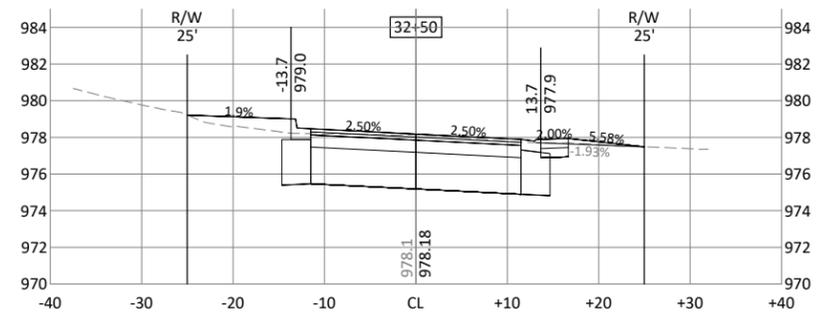
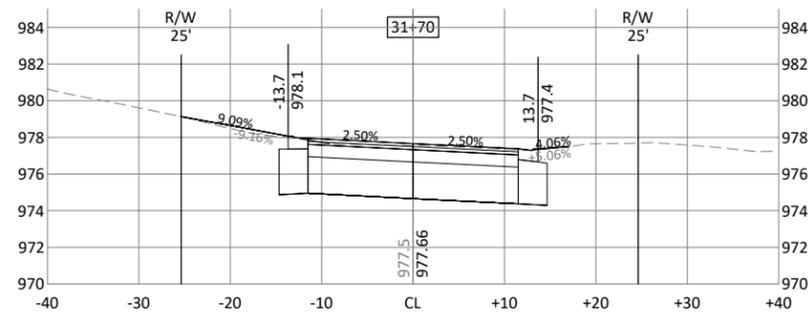
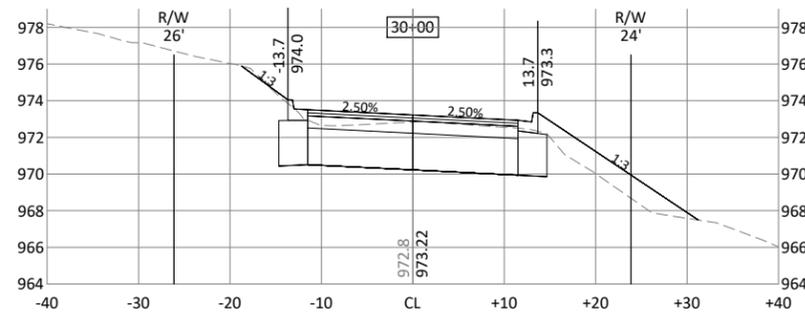
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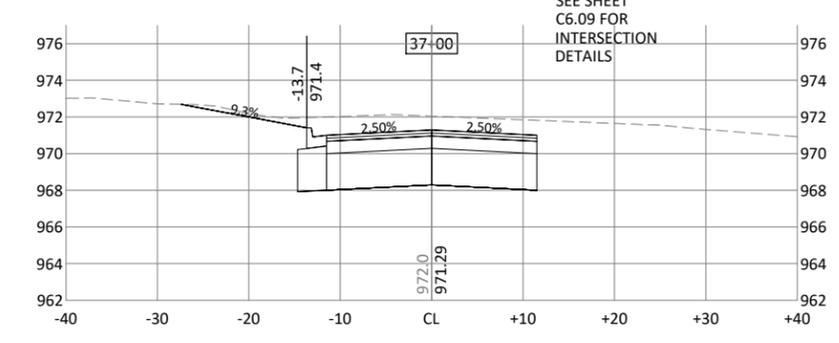
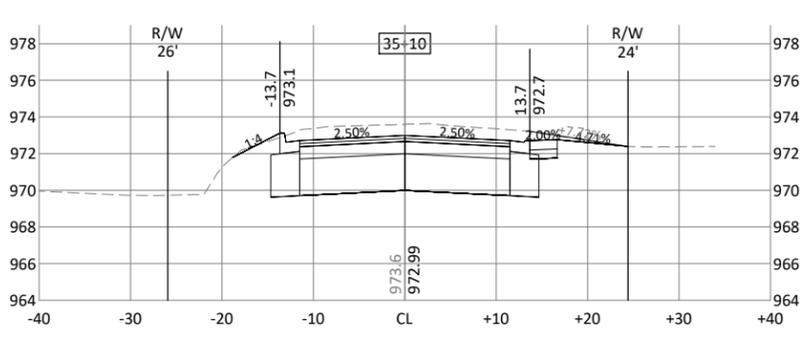
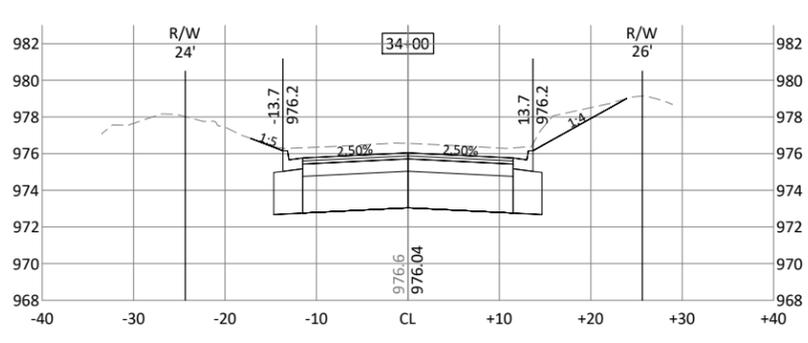
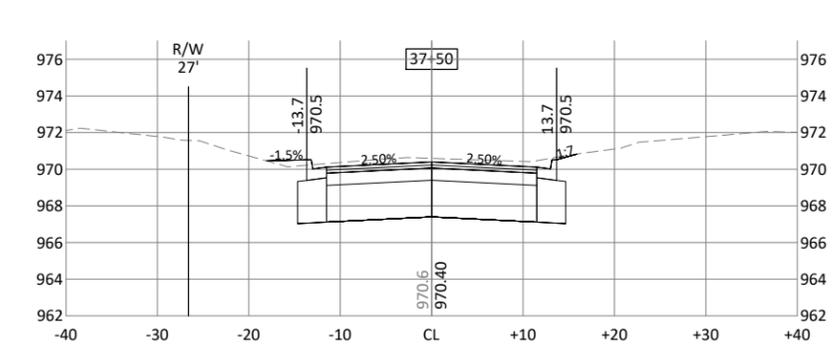
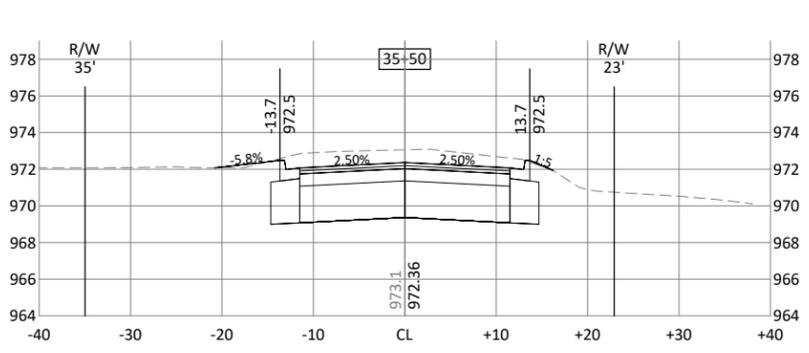
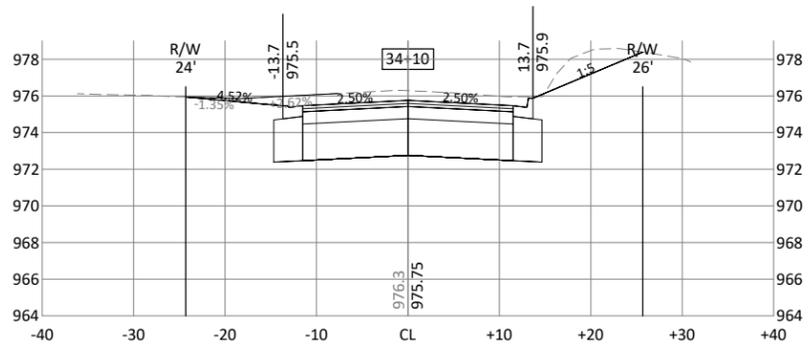


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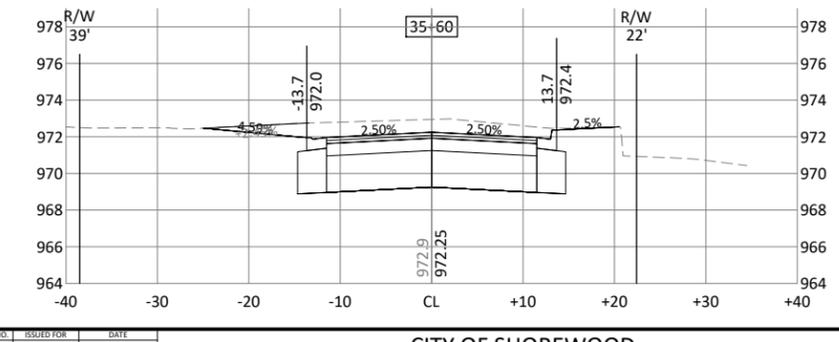
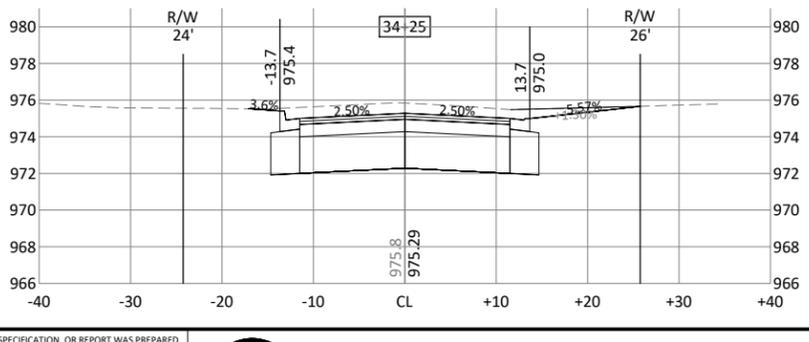
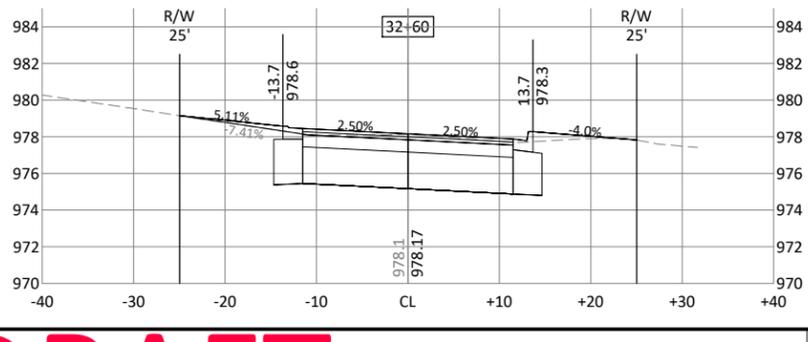
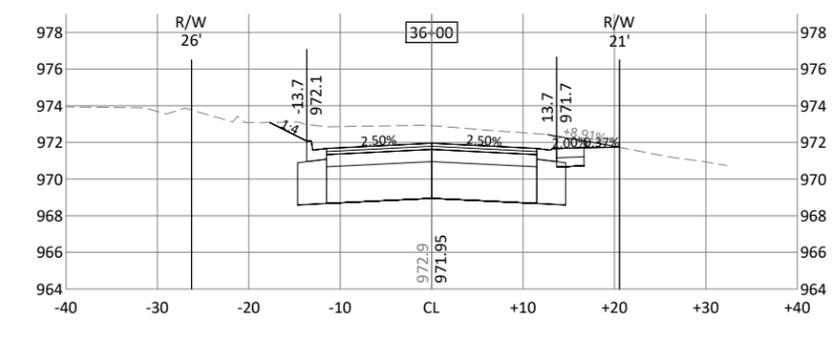
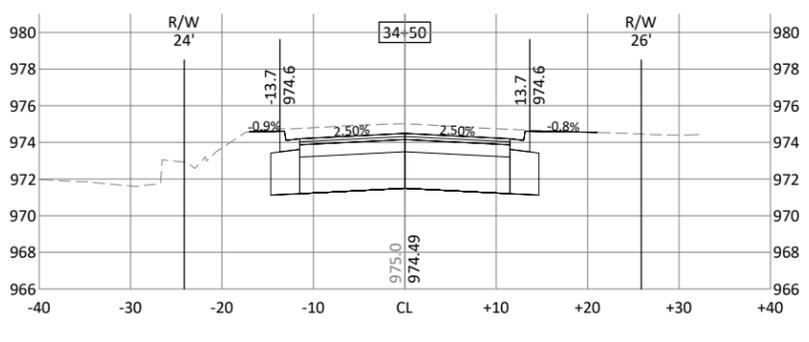
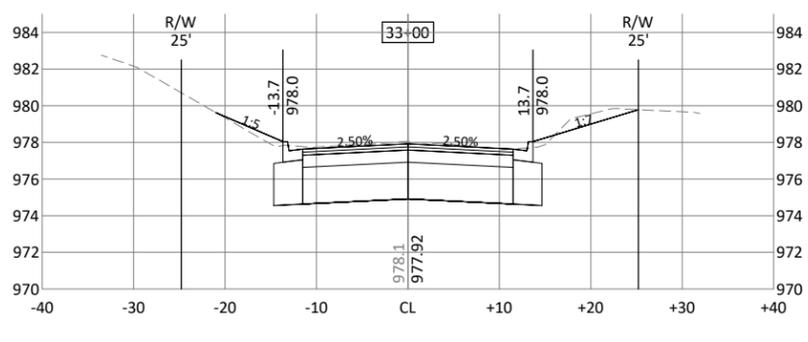
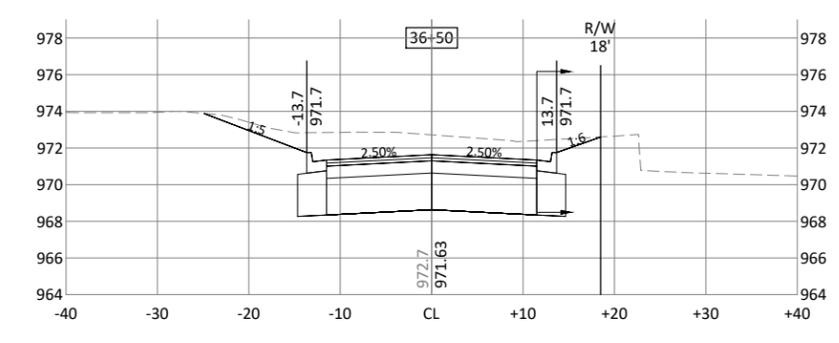
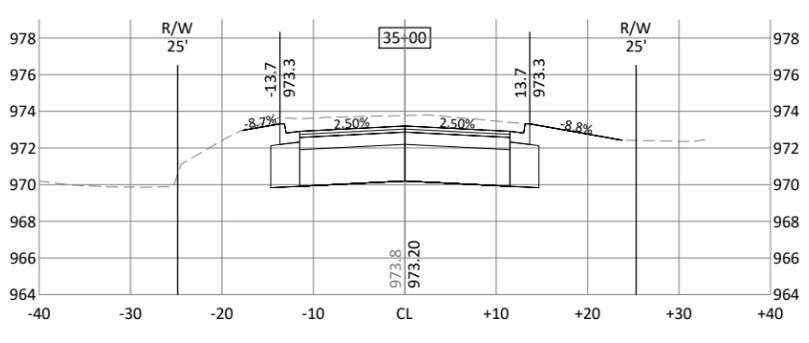
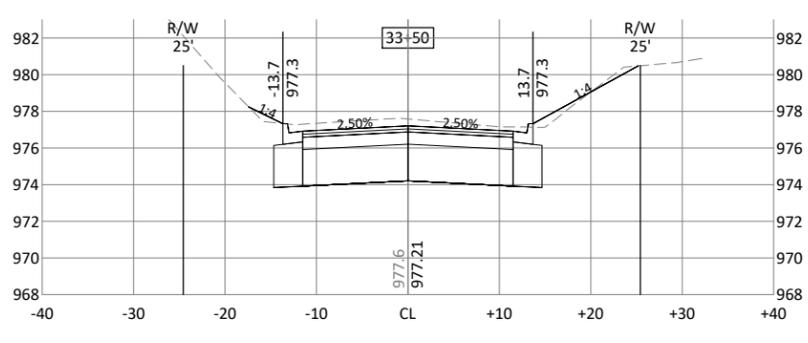
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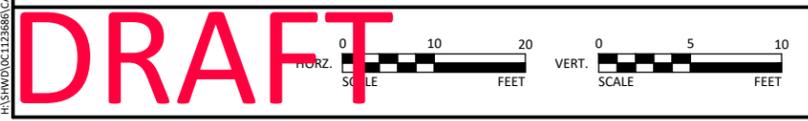
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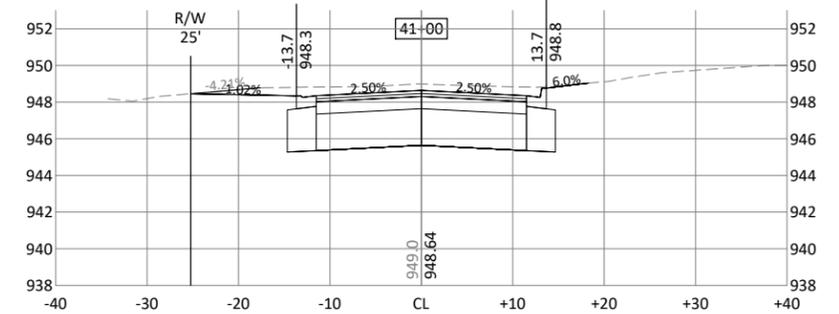
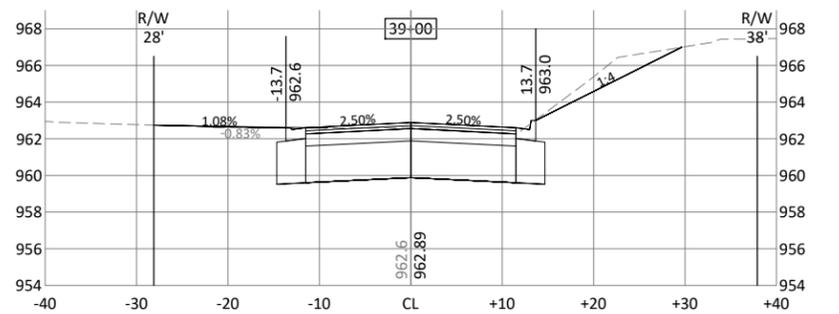
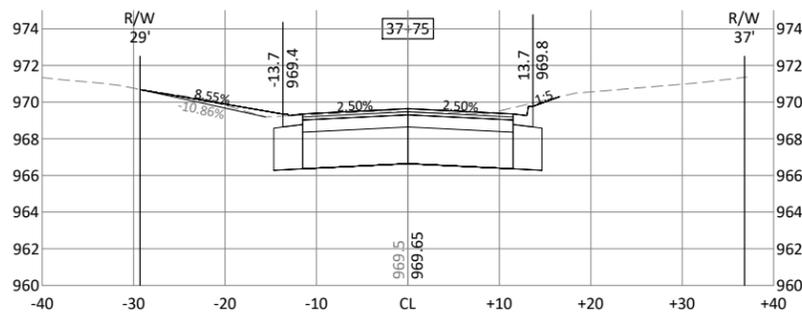
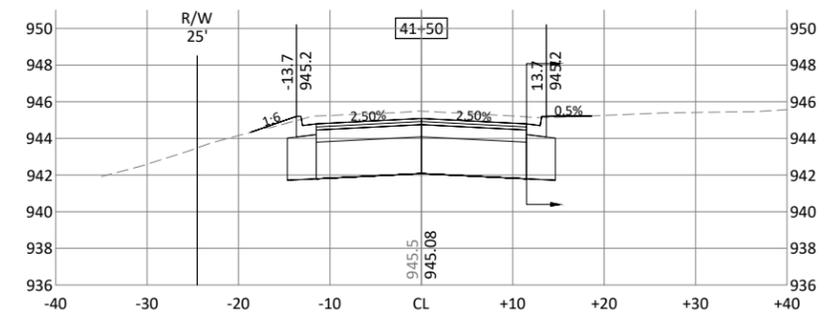
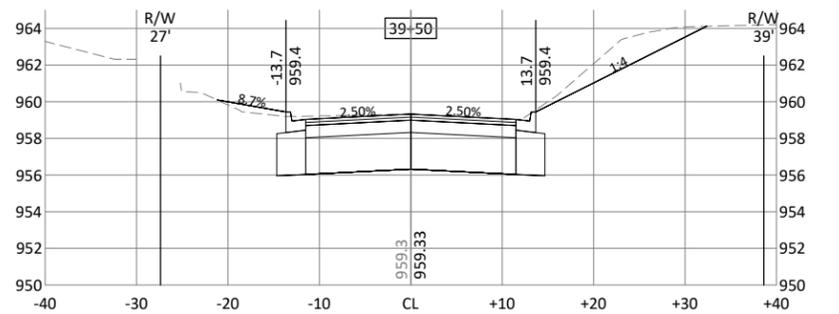
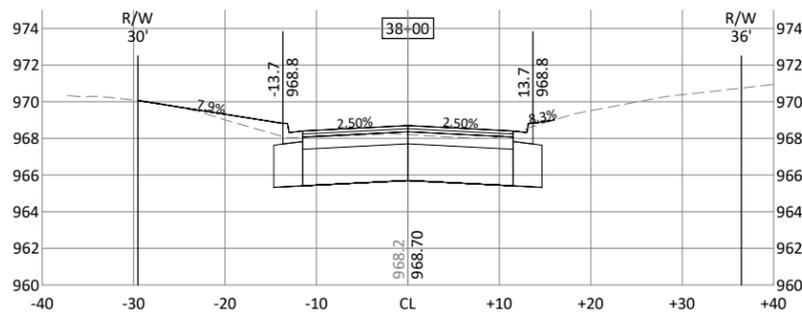
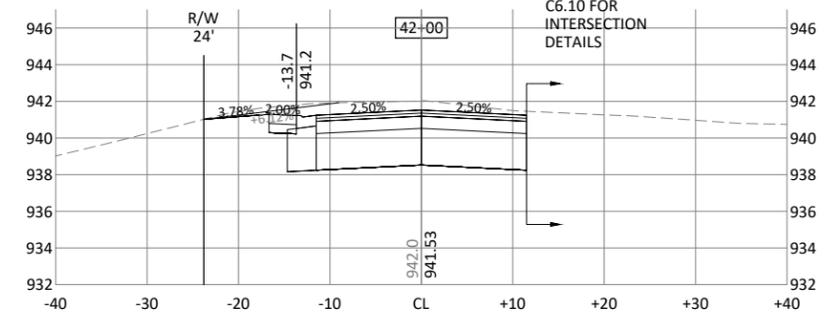
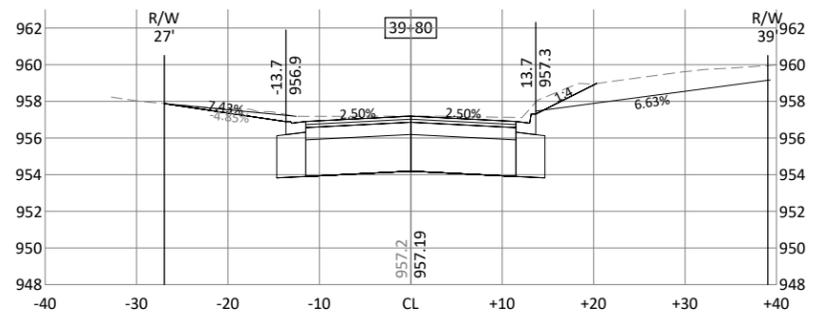
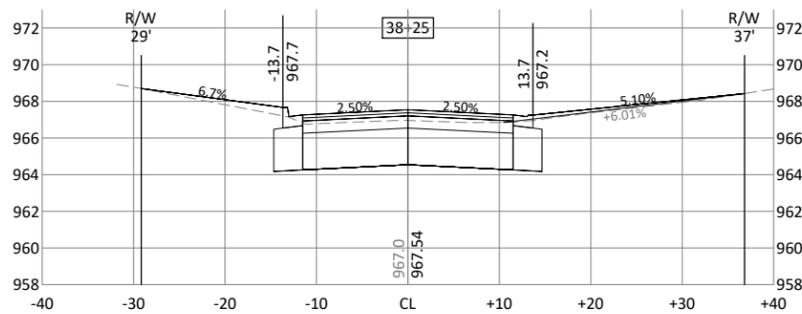
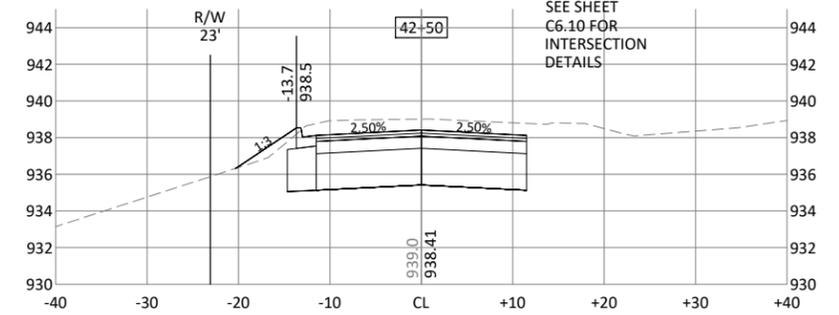
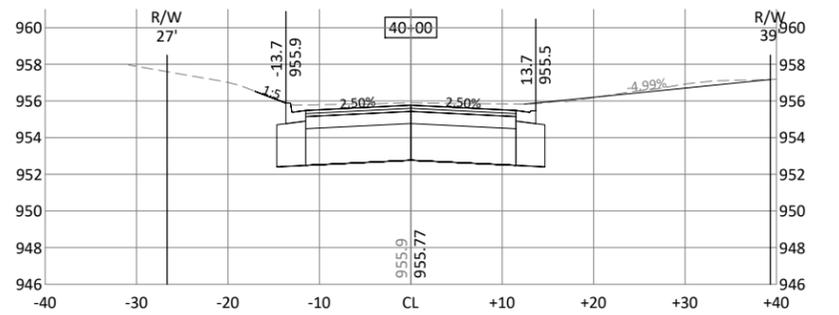
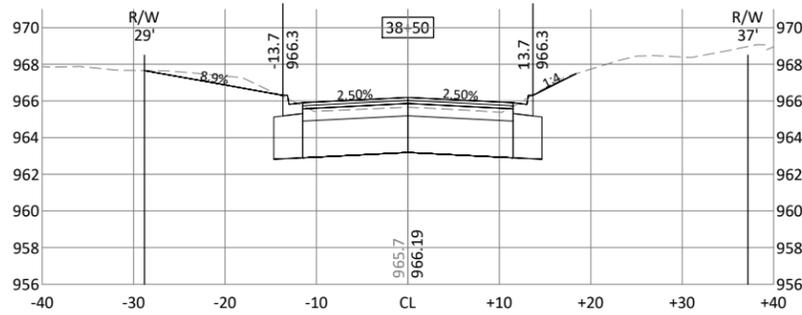
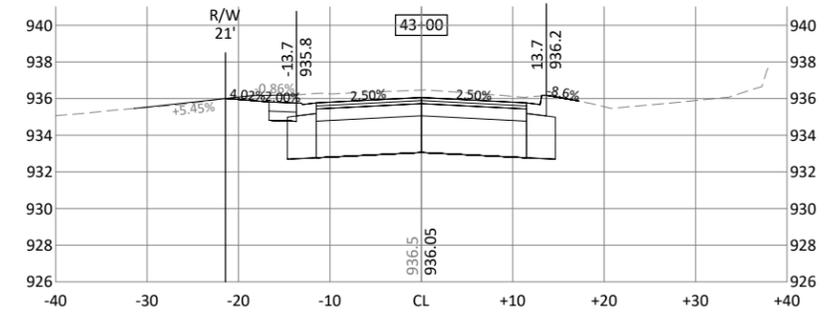
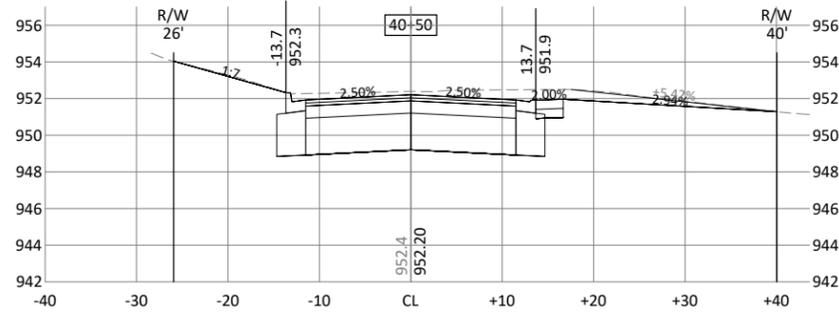
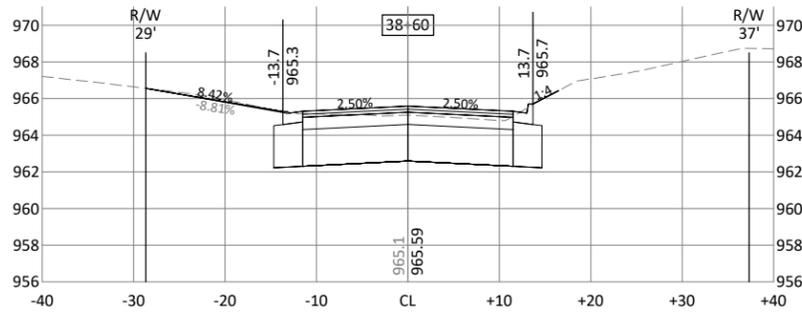


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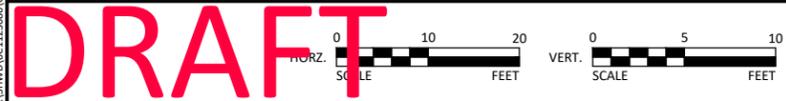
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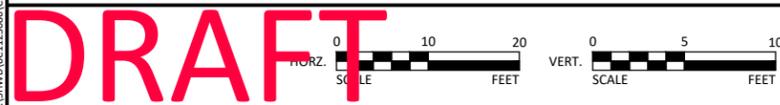
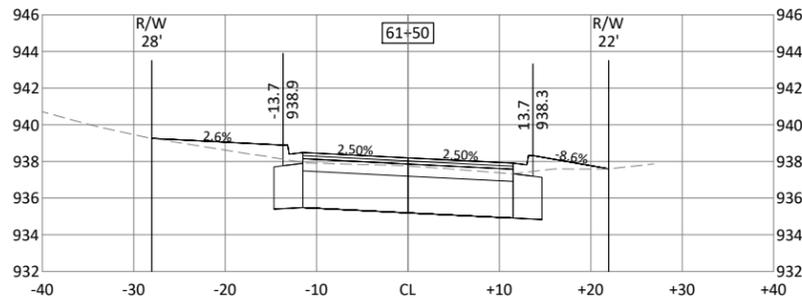
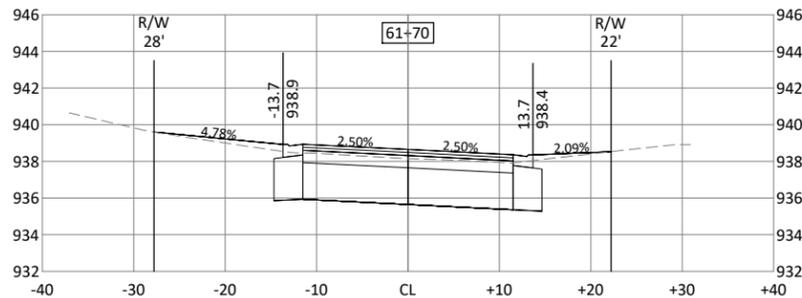
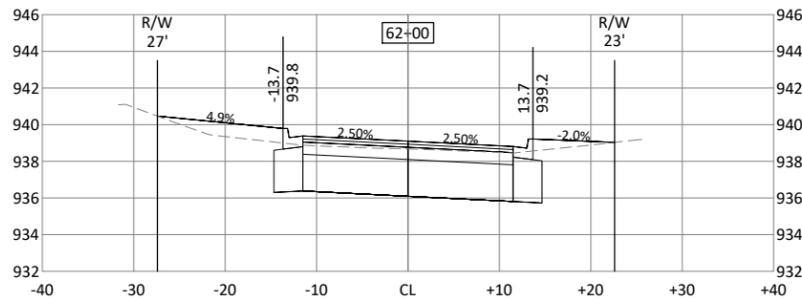
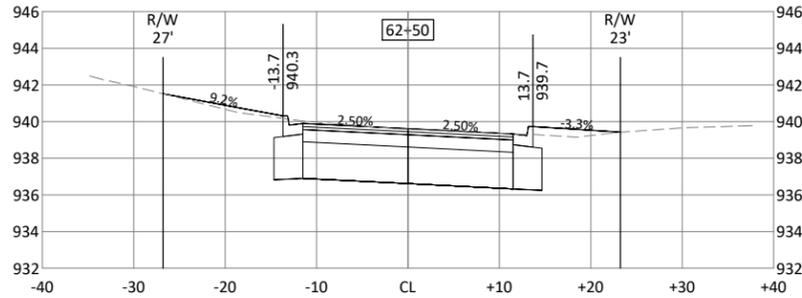
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