

FILE NAME = Projects(P:\)Mpls23 MM2723271793 Holland Pond Retrofit\WorkFiles\CAD\02-StatementOfEstimatedQuantities.dgn DATE PRINTED = 08/28/20

STATEMENT OF ESTIMATED QUANTITIES - 2020

ITEM NO.	DESCRIPTION	CONSTRUCTION YEAR	UNIT	TOTAL ESTIMATED QUANTITY
2021.501	MOBILIZATION	2020	LUMP SUM	1
2101.524	REMOVE LANDSCAPING	2020	LUMP SUM	1
2104.503	REMOVE CURB AND GUTTER	2020	LIN FT	55
2104.504	REMOVE BITUMINOUS PAVEMENT	2020	SQ YD	267
2104.504	REMOVE CONCRETE SIDEWALK	2020	SQ FT	420
2105.507	EXCAVATION - COMMON, 16" DEPTH	2020	CU YD	465
2211.507	AGGREGATE BASE (CV) CLASS 5	2020	CU YD	45
2574.505	SOIL LOOSENING - 2 FT. DEPTH MIN.	2020	SQ YD	1,420
2574.505	STRIP SOD AND DISPOSE OFF SITE	2020	SQ YD	2,100
2574.505	SALVAGE TOPSOIL	2020	CU YD	175
2360.509	TYPE SP 12.5 NON WEARING COURSE MIXTURE (4,L)	2020	TON	61
2360.509	TACK COAT	2020	TON	61
2360.509	TYPE SP 12.5 WEARING COURSE MIXTURE (5,L)	2020	GAL	28
2503.503	12" PVC PIPE SEWER	2020	LIN FT	118
2503.503	15" PVC PIPE SEWER	2020	LIN FT	107
2506.503	6" PERFORATED CPEP DRAIN TILE WITH CLEANOUT (1)	2020	LIN FT	235
2503.602	CONNECT TO EXISTING STORM SEWER	2020	EACH	2
2503.602	CONNECT INTO EXISTING DRAINAGE STRUCTURE	2020	EACH	1
2506.502	CONSTRUCT DRAINAGE STRUCTURE GALV. APRON	2020	EACH	2
2506.502	CASTING ASSEMBLY	2020	EACH	6
2506.502	ADJUST FRAME AND RING CASTING - 36" DIA.	2020	EACH	2
2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 48-4020	2020	EACH	2
2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 72-4020 - SPECIAL	2020	EACH	1
2506.502	CONSTRUCT DRAINAGE STRUCTURE DESIGN 96-4020 - SPECIAL	2020	EACH	1
2521.518	3.5" CONCRETE WALK	2020	SQ FT	420
2531.503	CONCRETE CURB AND GUTTER, MATCH EXISTING	2020	LIN FT	55
2563.601	TRAFFIC CONTROL	2020	LUMP SUM	1
2571.602	TREE PROTECTION	2020	EACH	1
2573.502	STORM DRAIN INLET PROTECTION - TYPE A + C	2020	EACH	12
2574.507	PLANTING SOIL	2020	CU YD	250
2574.507	PLACE SALVAGED TOPSOIL	2020	CU YD	175
2574.507	COMMON TOPSOIL BORROW	2020	CU YD	50
2575.504	EROSION CONTROL BLANKET	2020	SQ YD	900
2503.602	TEMPORARY 12" PIPE PLUG	2020	EACH	2
2511.507	FIELDSTONE RIPRAP - CL I WITH GEOTEXTILE	2020	CU YD	6

(1) DRAIN TILE WILL ONLY BE INSTALLED IF SOIL CONDITIONS ARE NOT CONDUSIVE TO INFILTRATION AS DETERMINED BY INSPECTION OF TEST PITS BY ENGINEER.

STATEMENT OF ESTIMATED QUANTITIES - 2021

ITEM NO.	DESCRIPTION	CONSTRUCTION YEAR	UNIT	TOTAL ESTIMATED QUANTITY
2021.501	MOBILIZATION	2021	LUMP SUM	1
2106.507	SOIL TILLING - 8" DEPTH	2021	SQ YD	1,420
2571.525	DECIDUOUS SHRUB NO. 2 CONT.	2021	SHRUB	77
2571.527	PERENNIAL NO 1 CONT	2021	PLANT	1,330
2571.527	PERENNIAL 4" CONT.	2021	PLANT	2,681
2575.504	EROSION CONTROL BLANKET	2021	SQ YD	2,600
2575.507	BEE LAWN SEEDING	2021	SQ YD	850
2575.507	LANDSCAPE EDGING	2021	LIN FT	135
2574.507	REMOVE EROSION CONTROL BLANKET	2021	SQ YD	900

BASIS OF ESTIMATED QUANTITIES

WEARING COURSE MIXTURE IS COMPUTED AT 2.12 TON PER CU YD (157 LB PER CU FT).
 NON WEARING COURSE MIXTURE IS COMPUTED AT 2.05 TON PER CU YD (151.5 LB PER CU FT).
 BITUMINOUS MATERIAL FOR TACK COAT COMPUTED AT 0.05 GAL PER SQ YD PER LAYER
 AGGREGATE CLASS 5 IS COMPUTED AT 1.8 TON PER CU YD (135 LB PER CU FT).
 SALVAGED TOPSOIL ASSUMES 3" OF TOPSOIL IS SALVAGED AFTER SOD STRIPPING
 EXISTING PAVEMENT SECTION IS ESTIMATED AT 6" CLASS 5, 4" NON-WEARING, AND 1 1/2" WEAR COURSE
 PIPE LENGTHS ARE MEASURED CENTER TO CENTER OF MANHOLES AND CENTER MANHOLE TO END OF PIPE AT APRON

NO.	DATE	DRW	CKD	APP	REVISION
1	9/21/20	DDP	MDB2	KAL	SECTIONS AND RIPRAP NOTE REVISIONS
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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.

Kurt A. Leuthold
 KURT LEUTHOLD 22225 08/28/20
 LIC. NO. DATE

BARR
 BARR ENGINEERING CO.
 4300 MARKETPOINT DR.
 SUITE 200
 MINNEAPOLIS, MN 55435
 Ph: 1-800-632-2277
 Fax: (952) 832-2601

STATEMENT OF ESTIMATED QUANTITIES-2020&2021

Minneapolis
 Public Works

DRW: AKK	DATE: 08/28/20
CHK: KAL	DATE: 08/28/20
APP: KAL	DATE: 08/28/20

HOLLAND BASIN RETROFIT

DATE PRINTED = 08/28/20

FILE NAME =Projects(P:)\\mpis\23 MM\27\23271793 Holland Pond Retrofit\WorkFiles\CAD\03-General\Notes.dgn

DESIGN ENGINEER BARR ENGINEERING CO. 4300 MARKET POINT DRIVE MINNEAPOLIS, MN 55435 WEB PAGE: www.barr.com CONTACT: KURT LEUTHOLD TEL: 952-832-2859 MOBILE: 612-751-3100 FAX: 952-832-2601 EMAIL: kleuthold@barr.com	STREET DESIGN STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx	UTILITIES	
		COMMUNICATIONS AT&T TRANSMISSION 511 11TH AVE. S. SUITE 360 MINNEAPOLIS, MN 55415 CONTACT: DAVID ROTERT TEL: 612-804-1797 EMAIL: dr2945@att.com	GAS CENTERPOINT ENERGY 700 WEST LINDEN AVE. BOX 1165 MINNEAPOLIS, MN 55440 CONTACT: ANDREW BALGOBIN TEL: 612-321-5425 EMAIL: andres.balgovin@centerpointenergy.com
CONSTRUCTION ENGINEER STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx	STREET CONSTRUCTION STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx	POWER EXCEL ENERGY 1516 CHESTNUT AVE. MINNEAPOLIS, MN 55403 CONTACT: LAURA MCCAWLEY TEL: 612-237-2343	COMMUNICATIONS CENTURYLINK 2800 WAYZATA BLVD. 3RD FLOOR MINNEAPOLIS, MN 55405 CONTACT: SHAWN NIESS TEL: 612-381-5056 EMAIL: shawn.niess@centurylink.com
			CONSTRUCTION INSPECTION STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx
PARK & RECREATION BOARD STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx	TRAFFIC CONSTRUCTION STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx	COMMUNICATIONS COMCAST CABLE COMMUNICATIONS, INC. 2621 FAIRVIEW AVE. N ROSEVILLE, MN 55113 CONTACT: DUANE CARLSON TEL: 651-493-5303 EMAIL: duane.carlson@cable.comcast.com	
		SEWER DESIGN STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx	WATER DESIGN STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx
SEWER CONSTRUCTION STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx	WATER CONSTRUCTION STREET ADDRESS CITY, STATE 00000-0000 WEB PAGE: www.webpage.com CONTACT: J.Q. PUBLIC TEL: 000-000-0000 MOBILE: 000-000-0000 FAX: 000-000-0000 EMAIL: xxxxx.xxxxx@xxxxx.xxx		

1. ALL WORK PERFORMED AND ALL MATERIALS FURNISHED SHALL BE IN CONFORMANCE WITH THE LINES, GRADES, CROSS SECTIONS, DIMENSIONS, AND MATERIAL REQUIREMENTS, INCLUDING TOLERANCE, SHOWN IN THE PLANS OR INDICATED IN THE SPECIFICATIONS.
2. THE PLAN INDICATES THE APPROXIMATE LOCATION OF THE KNOWN UTILITIES ON THE PROJECT.
3. IF THE CONTRACTOR DISCOVERS UTILITY PROPERTY WHOSE EXISTENCE WAS NOT KNOWN, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE UTILITY OWNER AND THE ENGINEER.
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY OWNERS AND TO ASCERTAIN THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES BEFORE PERFORMING EXCAVATION OPERATIONS. THE CONTRACTOR SHALL CONDUCT OPERATIONS IN THE VICINITY OF EXISTING UNDERGROUND UTILITIES IN A MANNER THAT WILL PREVENT DAMAGE TO ANY OF THEM.
5. STATE LAW REQUIRES ANYONE EXCAVATING OR DRILLING IN THE GROUND IN THE STATE OF MINNESOTA WITH POWER EQUIPMENT TO CALL "GOPHER STATE ONE CALL" AT 651-454-0002 FOR UTILITY LOCATIONS AT LEAST 48 HOURS BEFORE STARTING WORK.
6. STRUCTURE LOCATIONS ARE TO SETNER OF STRUCTURE. CASTING ELEVATIONS ARE GIVEN TO FLOW LINE OR STRUCTURE.
7. PIPE SEWERS CONNECTING MANHOLES AND CATCH BASINS SHALL BE IN ACCORDANCE WITH SPEC. 2503. BEDDING AND BACKFILL SHALL CONSIST OF UNIFORM SELECT GRADING MATERIAL MATCHING ADJACENT SOILS UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
8. DISPOSITION OF EXCAVATED MATERIAL SHALL BE IN ACCORDANCE WITH MNDOT STANDARD SPECIFICATION 2105.30.

NO.	DATE	DRW	CKD	APP	REVISION
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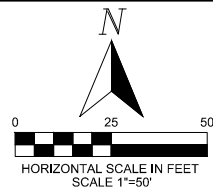
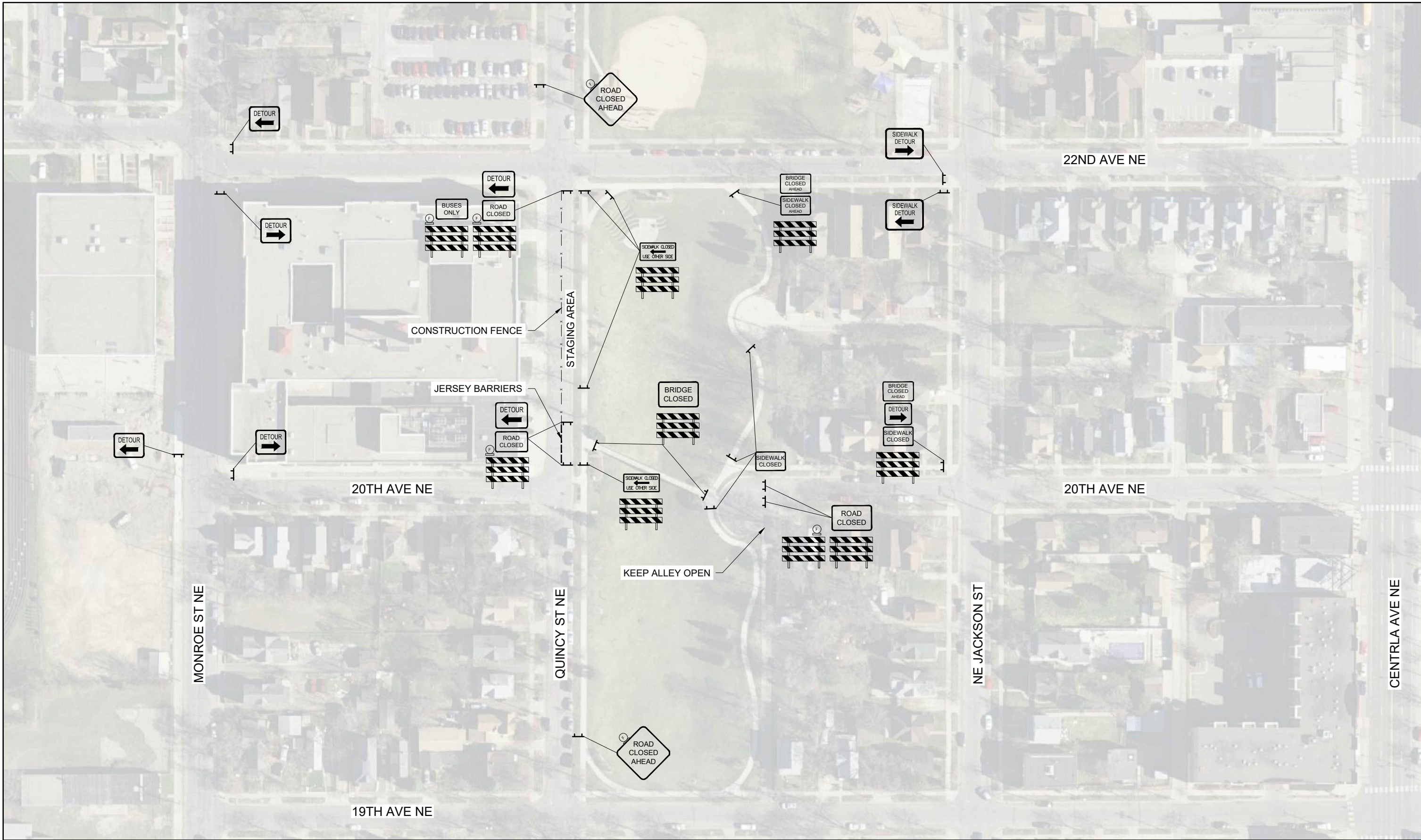
Kurt A. Leuthold
KURT LEUTHOLD 22225 08/28/20
LIC. NO. DATE



GENERAL NOTES-2020

DRW: AKK	DATE: 08/28/20
CHK: KAL	DATE: 08/28/20
APP: KAL	DATE: 08/28/20

HOLLAND BASIN RETROFIT



NO.	DATE	DRW	CKD	APP	REVISION
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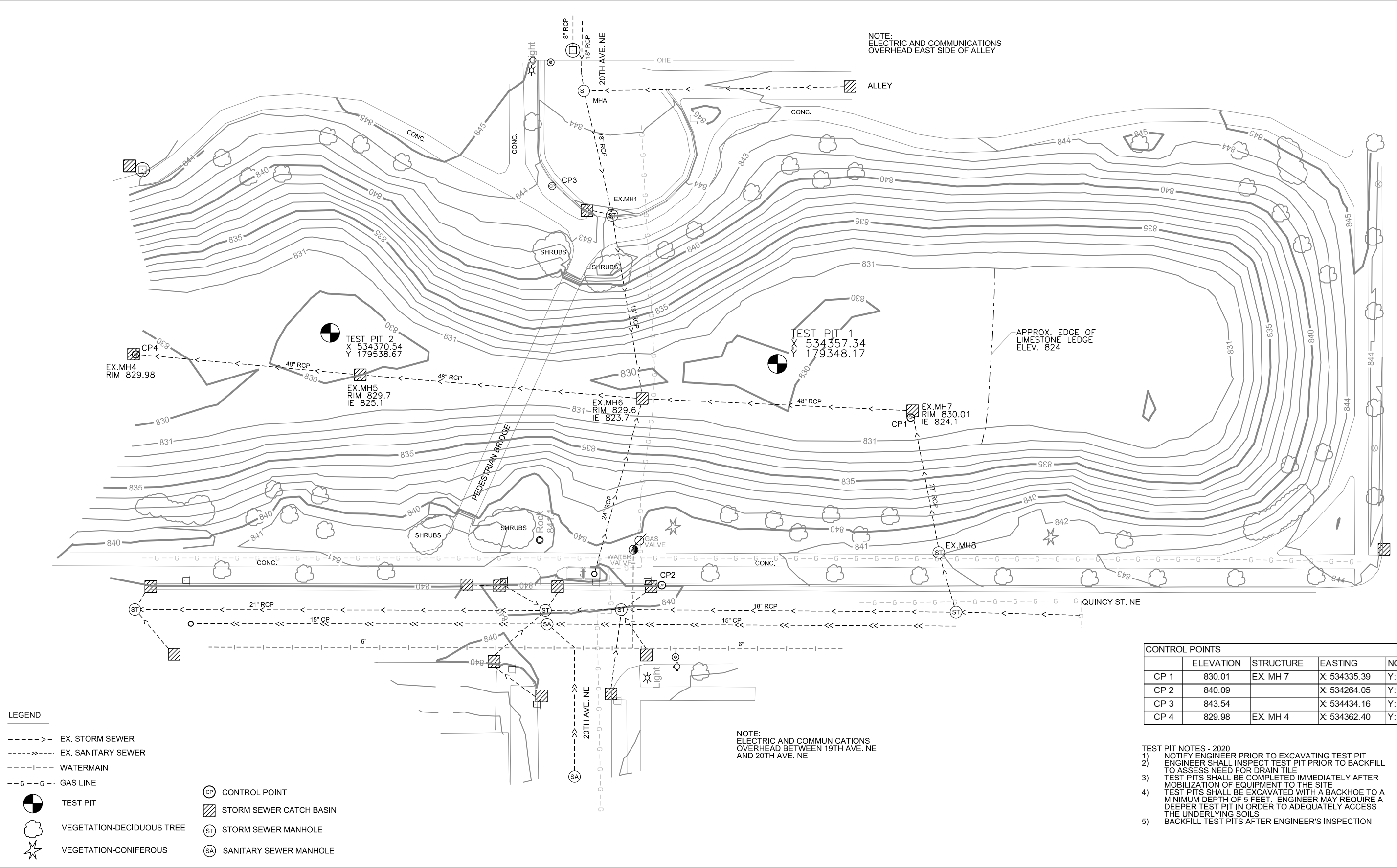
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TRAFFIC CONTROL PLAN	
DRW: PEB	DATE: 8/24/20
CHK: KAL	DATE: 8/24/20
APP: KAL	DATE: 8/28/20

HOLLAND BASIN RETROFIT



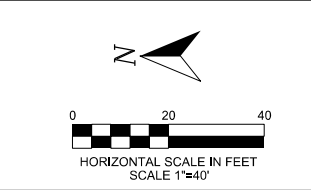
LEGEND

----->	EX. STORM SEWER	CP	CONTROL POINT
----->>	EX. SANITARY SEWER	SB	STORM SEWER CATCH BASIN
-----	WATERMAIN	ST	STORM SEWER MANHOLE
---G---	GAS LINE	SA	SANITARY SEWER MANHOLE
⊙	TEST PIT		
☁	VEGETATION-DECIDUOUS TREE		
★	VEGETATION-CONIFEROUS		

CONTROL POINTS

CONTROL POINT	ELEVATION	STRUCTURE	EASTING	NORTHING
CP 1	830.01	EX MH 7	X 534335.39	Y: 179291.40
CP 2	840.09		X 534264.05	Y: 179397.72
CP 3	843.54		X 534434.16	Y: 179444.28
CP 4	829.98	EX MH 4	X 534362.40	Y: 179621.82

- TEST PIT NOTES - 2020**
- 1) NOTIFY ENGINEER PRIOR TO EXCAVATING TEST PIT ENGINEER SHALL INSPECT TEST PIT PRIOR TO BACKFILL TO ASSESS NEED FOR DRAIN TILE
 - 2) TEST PITS SHALL BE COMPLETED IMMEDIATELY AFTER MOBILIZATION OF EQUIPMENT TO THE SITE
 - 3) TEST PITS SHALL BE EXCAVATED WITH A BACKHOE TO A MINIMUM DEPTH OF 5 FEET ENGINEER MAY REQUIRE A DEEPER TEST PIT IN ORDER TO ADEQUATELY ACCESS THE UNDERLYING SOILS
 - 4) BACKFILL TEST PITS AFTER ENGINEER'S INSPECTION



NO.	DATE	DRW	CKD	APP	REVISION
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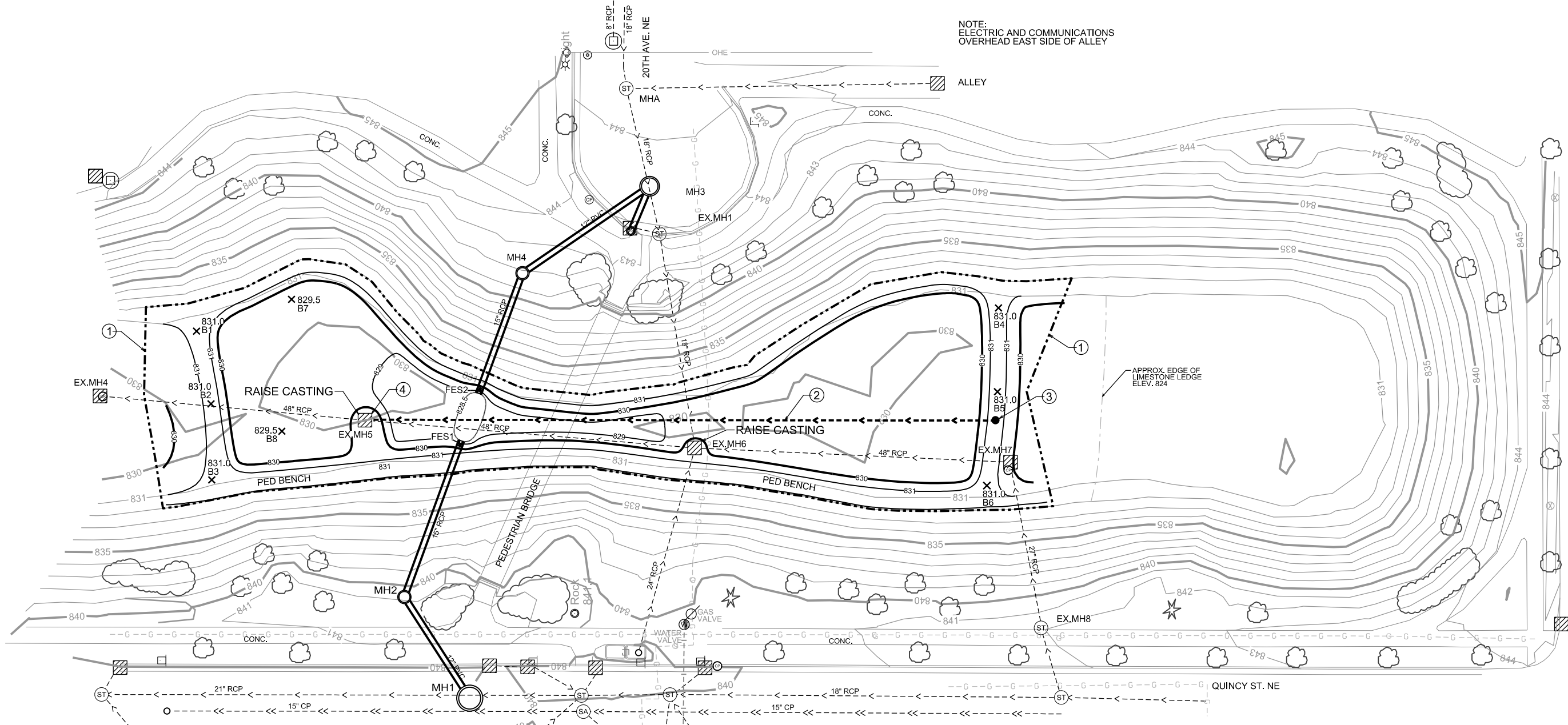
Kurt A. Leuthold
 KURT LEUTHOLD LIC. NO. 22225 DATE 08/28/20



EXISTING CONDITIONS AND TEST PITS-2020		HOLLAND BASIN RETROFIT	
DRW: AKK	DATE: 08/28/20		
CHK: KAL	DATE: 08/28/20		
APP: KAL	DATE: 08/28/20		



NOTE:
ELECTRIC AND COMMUNICATIONS
OVERHEAD EAST SIDE OF ALLEY



LEGEND

- > EX. STORM SEWER
- - - -> PROPOSED STORM SEWER
- - - -> EX. SANITARY SEWER
- - - -> WATERMAIN
- - - -> GAS LINE
- ⊕ TEST PIT
- ☁ VEGETATION-DICIDUOUS TREE
- ★ VEGETATION-CONIFEROUS
- CP CONTROL POINT
- ▨ STORM SEWER CATCH BASIN
- ST STORM SEWER MANHOLE
- SA SANITARY SEWER MANHOLE

IDENTIFICATION POINTS	EASTING	NORTHING
B1	X: 534385.134	Y: 179587.301
B2	X: 534358.596	Y: 179582.033
B3	X: 534330.874	Y: 179581.874
B4	X: 534393.591	Y: 179294.947
B5	X: 534363.034	Y: 179295.299
B6	X: 534328.79	Y: 179299.171
B7	X: 534348.619	Y: 179556.197
B8	X: 534396.744	Y: 179552.658

GENERAL NOTES:

- SEE SHEET 9 FOR PIPE AND STRUCTURE PROFILES AND REFERENCES TO STRUCTURE DETAILS.
- SEE SHEET 8 FOR REMOVAL AND REPLACEMENT OF PAVEMENT.
- SEE SHEET 11 FOR CROSS SECTIONS OF THE BASIN. ALL GRADING, SOIL LOOSENING, AND SOIL PLACEMENT SHALL BE AS SHOWN ON SHEET 11.

SPECIAL NOTES:

- LIMITS OF TURF STRIPPING. REMOVE AND DISPOSE OFF SITE. PRESERVE AS MUCH TOPSOIL AS POSSIBLE. FOLLOW THE 832 CONTOUR AT THE TOE OF THE EXISTING SLOPE. PROTECT EXISTING TREES FROM DAMAGE.
- (AS DIRECTED BY THE ENGINEER) SAND TRENCH AND 6-INCH DIAMETER DUAL WALL PERFORATED CPEP WITH SLITS FOR PERFORATIONS NOT HOLES. NO GEOTEXTILE SOCK. SEE SHEET 9 FOR SECTION OF SAND TRENCH AND PERFORATED PIPE. PERFORATED PIPE SHALL NOT BE INSTALLED IF UNDERLYING SOIL CONDITIONS ARE DETERMINED TO BE SUITABLE FOR INFILTRATION BASED ON THE TEST PIT RESULTS.
- (AS DIRECTED BY THE ENGINEER) CLEAN OUT STRUCTURE FOR PERFORATED PIPE. INVERT OF UPSTREAM END OF PIPE=827.5. SEE SHEET 9 FOR DETAIL.
- (AS DIRECTED BY THE ENGINEER) CONNECT DRAIN TILE TO MH 8 (EXISTING) WITH INVERT ELEVATION=825.5.

NO.	DATE	DRW	CKD	APP	REVISION
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Kurt A. Leuthold
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LIC. NO. 22225 DATE 08/28/20

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Minneapolis
Public Works

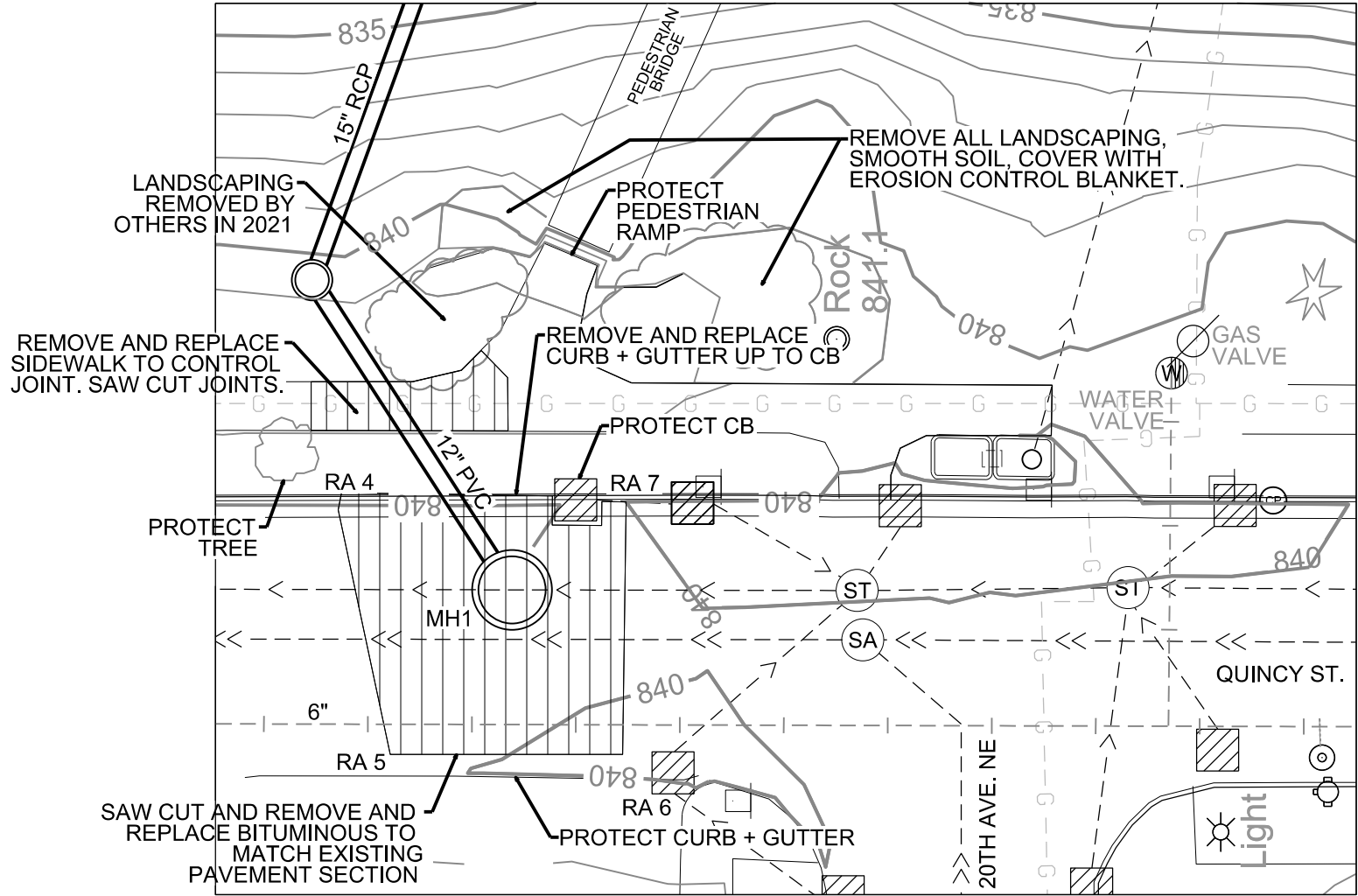
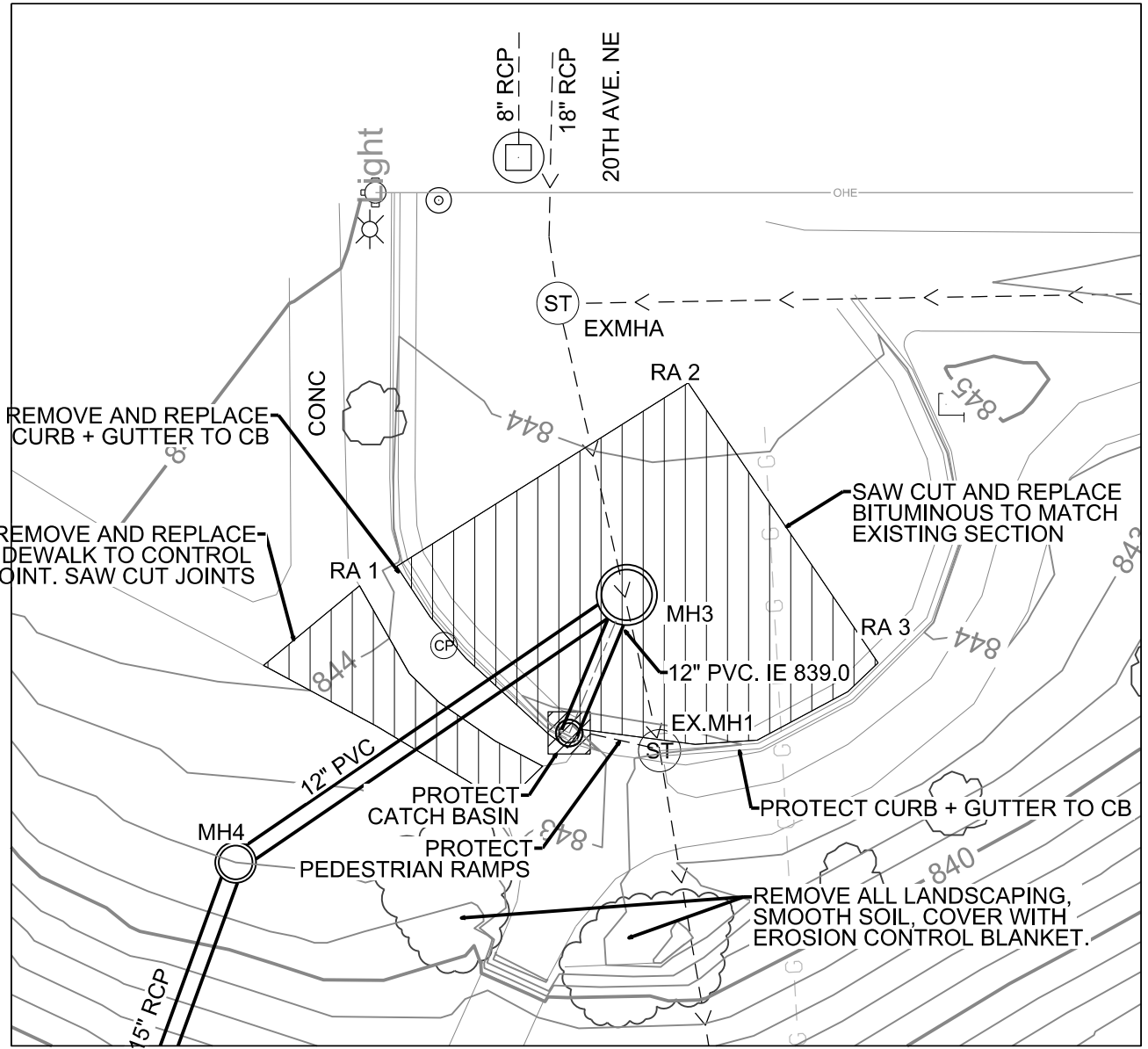
PROPOSED PLAN-2020

DRW: AKK	DATE: 08/28/20
CHK: KAL	DATE: 08/28/20
APP: KAL	DATE: 08/28/20

HOLLAND BASIN RETROFIT

DATE PRINTED = 08/28/20

FILE NAME = Projects(P:\)Mpls23 MM2723271793 Holland Pond Retrofit\WorkFiles\CAD\07-PavingRemoval-ReplacementPlan.dgn



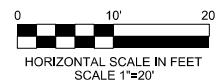
LEGEND

- EX. STORM SEWER
- PROPOSED STORM SEWER
- EX. SANITARY SEWER
- WATERMAIN
- GAS LINE
- ⊙ TEST PIT
- ⊙ VEGETATION-DICIDUOUS TREE
- ⊙ VEGETATION-CONIFEROUS
- ⊙ CONTROL POINT
- ▨ STORM SEWER CATCH BASIN
- ⊙ STORM SEWER MANHOLE
- ⊙ SANITARY SEWER MANHOLE

IDENTIFICATION POINTS		
	EASTING	NORTHING
RA 1	X: 534206.60	Y: 179896.79
RA 2	X: 534228.34	Y: 179862.19
RA 3	X: 534195.14	Y: 179839.66
RA 4	X: 534205.32	Y: 179765.95
RA 5	X: 534174.19	Y: 179760.14
RA 6	X: 534174.19	Y: 179732.47
RA 7	X: 534204.26	Y: 179732.05

NOTES:

- SAWCUT IN-PLACE PAVEMENT TO ENSURE A UNIFORM JOINT. SAWCUT AT NEAREST SIDEWALK OR CURB JOINT OR AS DIRECTED BY ENGINEER. ASPHALT MIX SHALL BE AS PER CITY OF MINNEAPOLIS SPECIFICATIONS FOR CONSTRUCTION (2016)
- PROVIDE A UNIFORM TACK COAT AS DOCUMENTED IN MNDOT STANDARD SPECIFICATION 2357 - BITUMINOUS TACK COAT REQUIREMENTS, WHICH SHALL BE INCIDENTAL.



NO.	DATE	DRW	CKD	APP	REVISION
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Kurt A. Leuthold

KURT LEUTHOLD

22225 08/28/20
LIC. NO. DATE

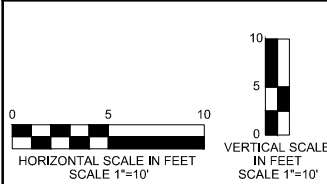
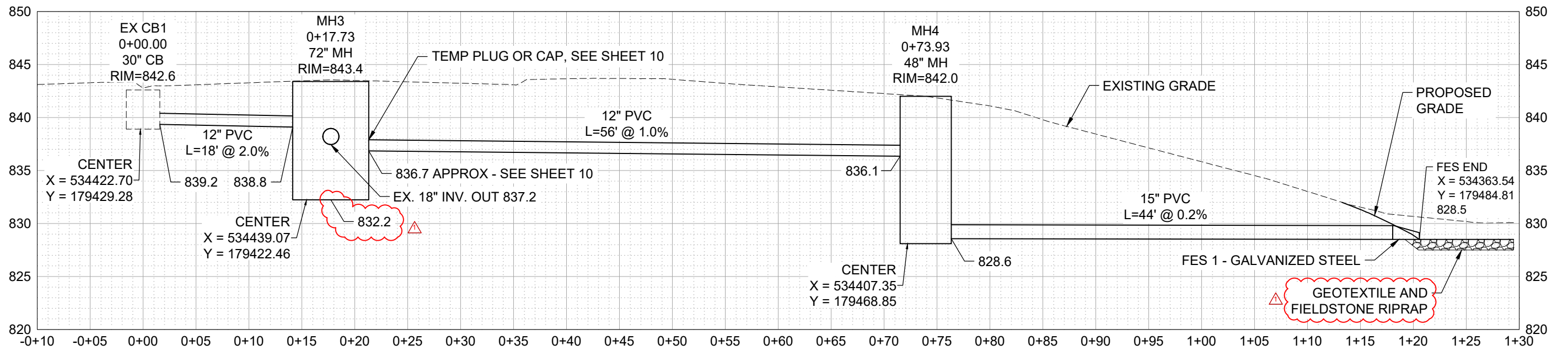
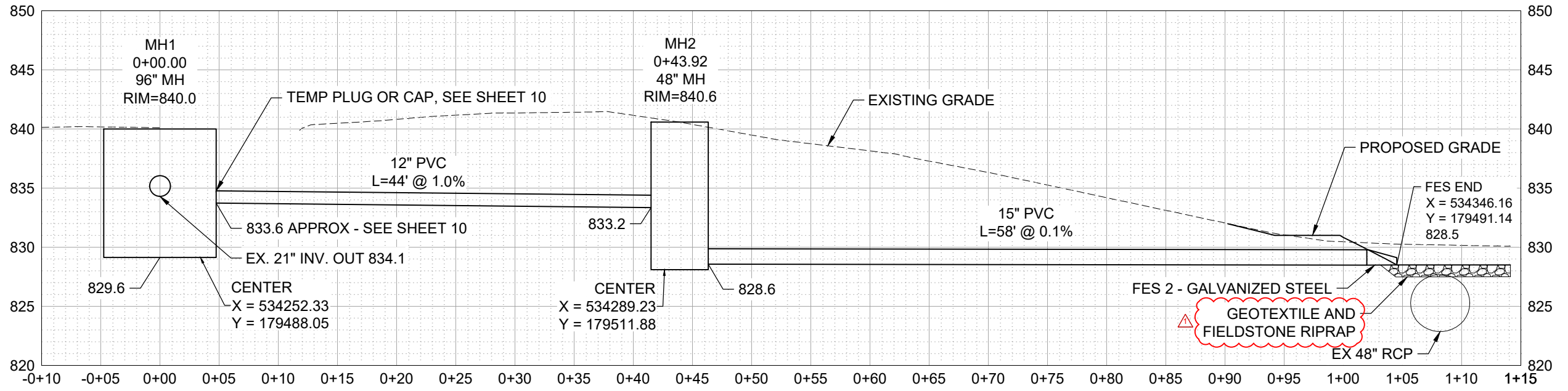
PAVING REMOVAL/REPLACEMENT PLAN-2020

DRW: AKK	DATE: 08/28/20
CHK: KAL	DATE: 08/28/20
APP: KAL	DATE: 08/28/20

HOLLAND BASIN RETROFIT

PLOT DATE: 9/21/2020 10:30 AM

FILE NAME: P:\MPLS\23 MIN\2723271793 HOLLAND POND RETROFIT\WORKFILES\CAD\09-STORMSEWERPROFILES.DWG



NO.	DATE	DRW	CKD	APP	REVISION
1	9/21/20	PEB	MDB2	KAL	MH3 ELEVATION AND RIPRAP NOTE REVISIONS
2					
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 KURT LEUTHOLD
 22225 LIC. NO. 9/21/20 DATE

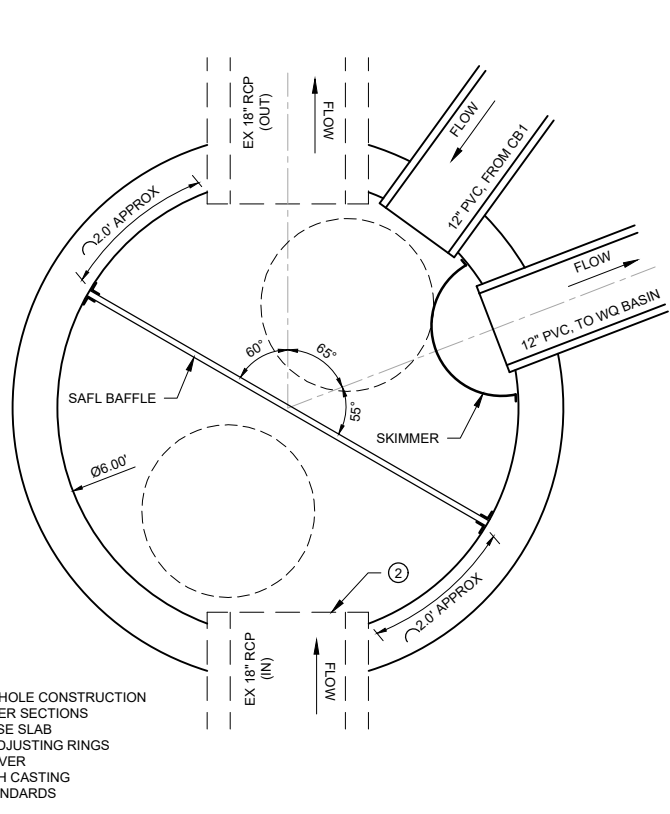
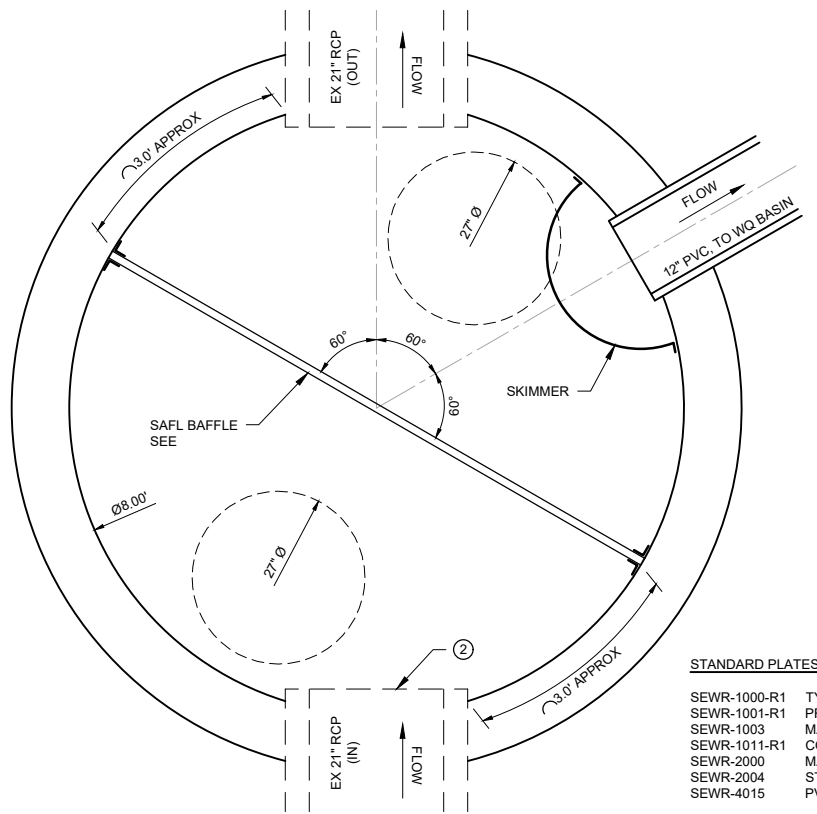
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 Ph: 1-800-632-2277
 Fax: (952) 832-2601

STORM SEWER PROFILES-2020	
DRW: PEB	DATE: 9/21/20
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APP: KAL	DATE: 9/21/20

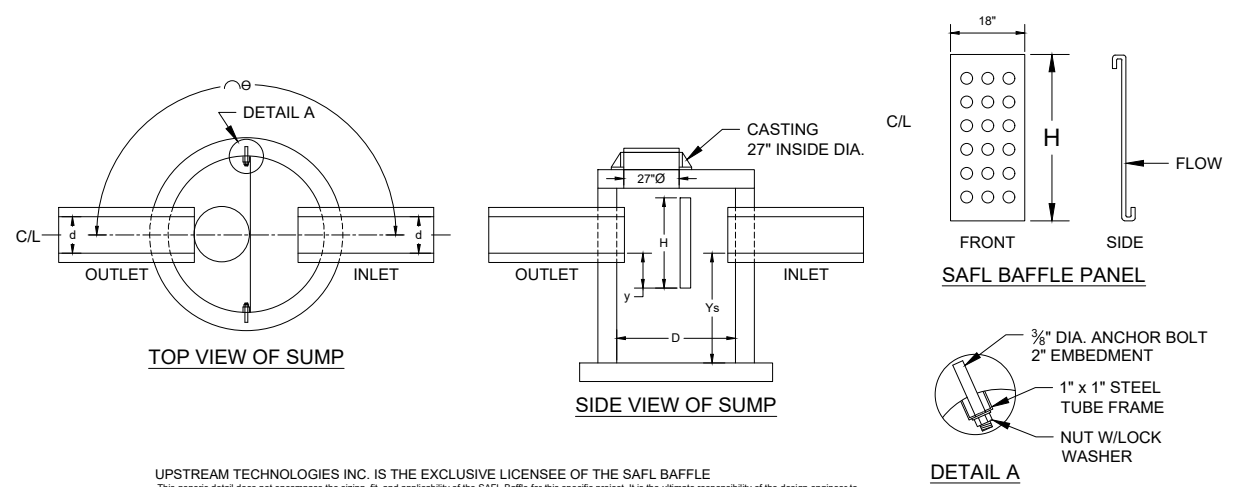
HOLLAND BASIN RETROFIT	

PLOT DATE: 8/27/2020 4:46 PM

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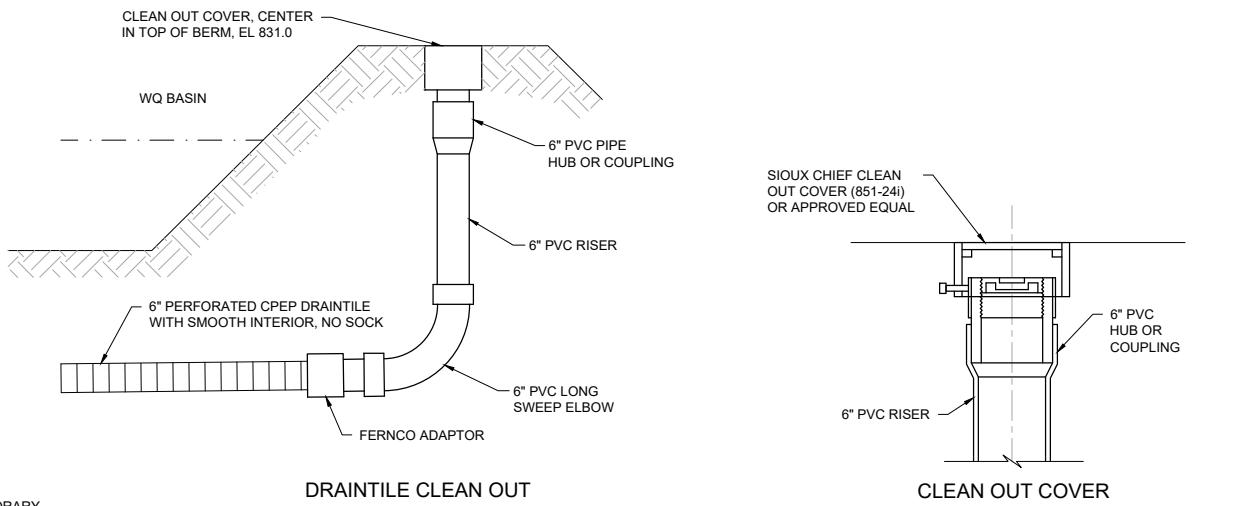
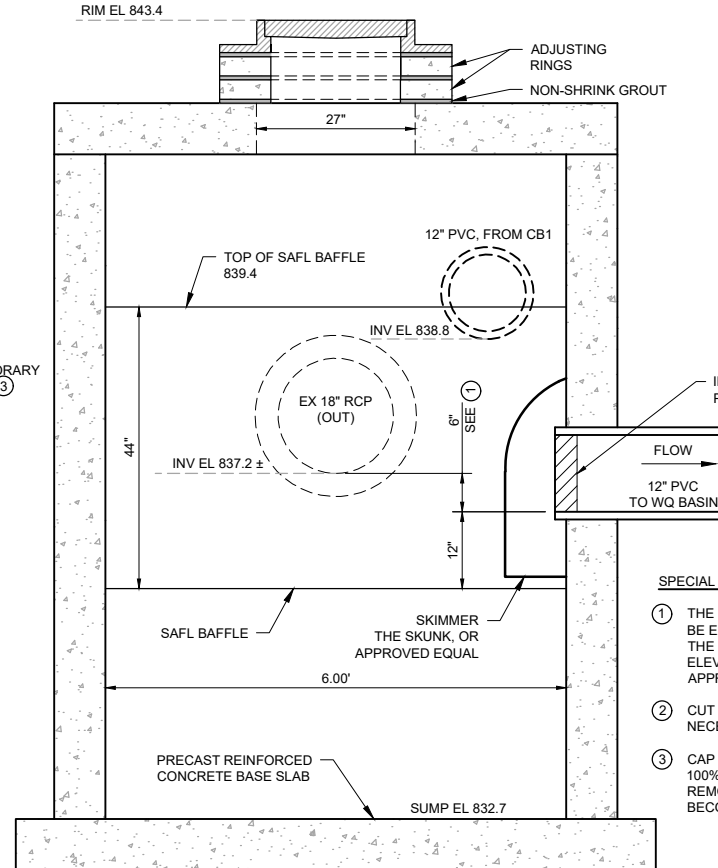
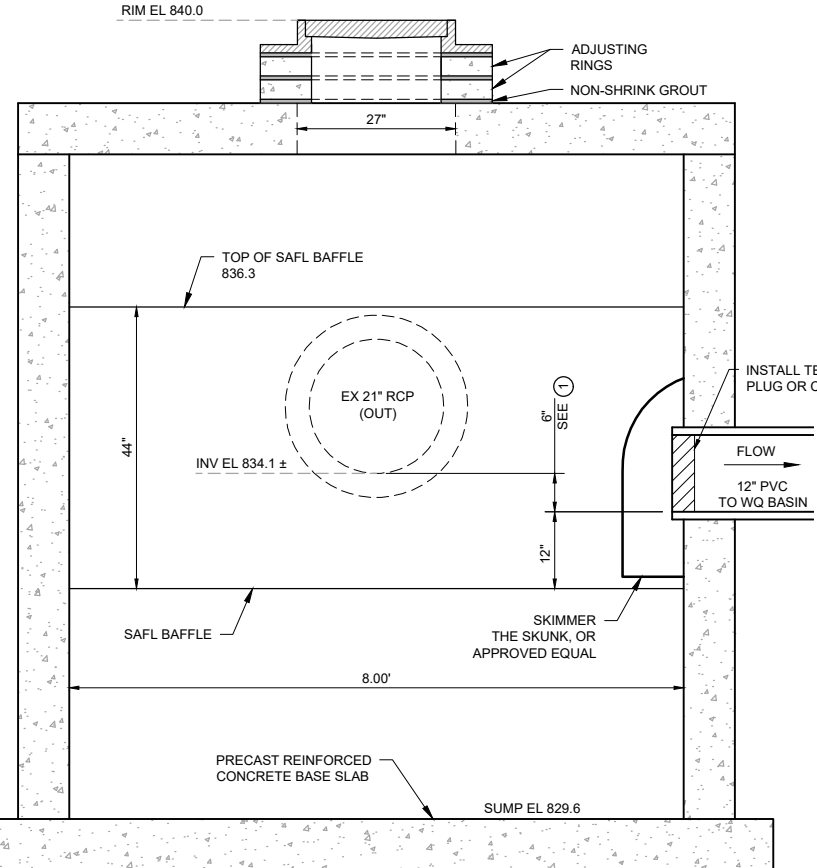


STANDARD PLATES
 SEWR-1000-R1 TYPICAL MANHOLE CONSTRUCTION
 SEWR-1001-R1 PRECAST RISER SECTIONS
 SEWR-1003 MANHOLE BASE SLAB
 SEWR-1011-R1 CONCRETE ADJUSTING RINGS
 SEWR-2000 MANHOLE COVER
 SEWR-2004 STANDARD MH CASTING
 SEWR-4015 PVC PIPE STANDARDS



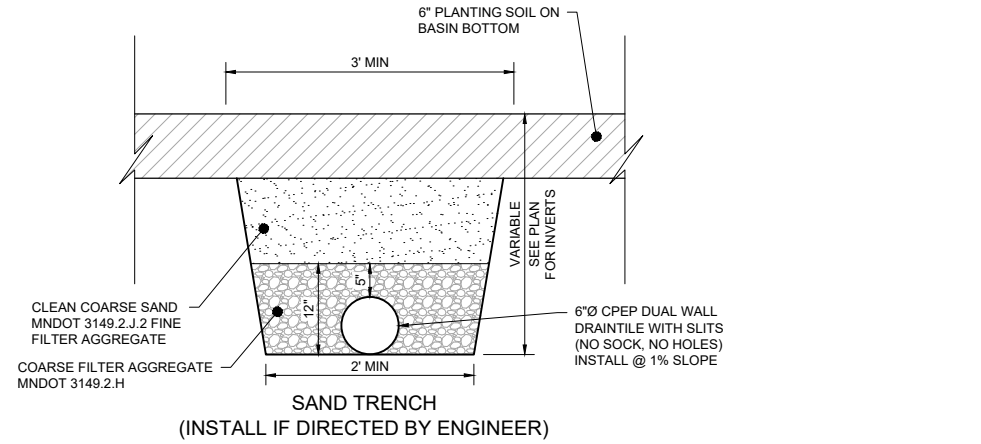
UPSTREAM TECHNOLOGIES INC. IS THE EXCLUSIVE LICENSEE OF THE SAFL BAFFLE. This generic detail does not encompass the sizing, fit, and applicability of the SAFL Baffle for this specific project. It is the ultimate responsibility of the design engineer to assure that the design is in compliance with all applicable laws and regulations. The SAFL Baffle is patent pending technology of the University of Minnesota and Upstream Technologies, Inc. Neither the University of Minnesota nor Upstream Technologies approves plans, sizing, or system designs.

SAFL BAFFLE (OR APPROVED EQUAL)



SPECIAL NOTES:

- THE INVERT OF THE NEW PVC PIPE SHALL BE EXACTLY 6" BELOW THE INVERT OF THE EXISTING DOWNSTREAM PIPE. ELEVATIONS ON THE EXISTING PIPE AREA APPROXIMATE.
- CUT AND REMOVE EXISTING RC PIPES AS NECESSARY TO INSTALL STRUCTURE.
- CAP OR PLUG DOES NOT NEED TO BE 100% WATERTIGHT AND SHALL BE REMOVED IN 2021 AFTER PLANTS IN BASIN BECOME ESTABLISHED.



QUINCY ST. PRETREATMENT AND DIVERSION MH-1

20TH AVE NE PRETREATMENT AND DIVERSION MH-3

NO.	DATE	DRW	CKD	APP	REVISION
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Kurt A. Leuthold
 KURT LEUTHOLD LIC. NO. 22225 DATE 8/28/20

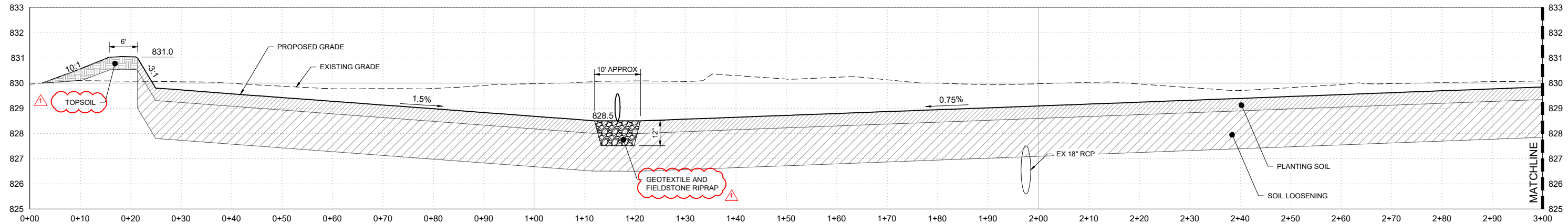
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STORM SEWER DETAILS	
DRW: PEB	DATE: 8/28/20
CHK: KAL	DATE: 8/28/20
APP: KAL	DATE: 8/28/20

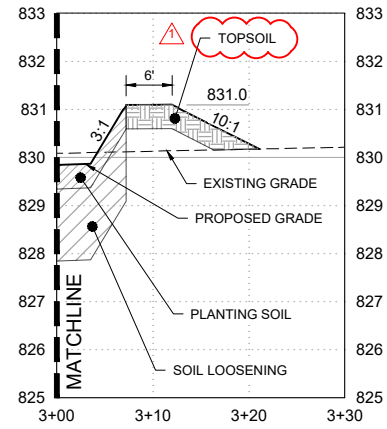
HOLLAND BASIN RETROFIT	

PLOT DATE: 9/21/2020 10:32 AM

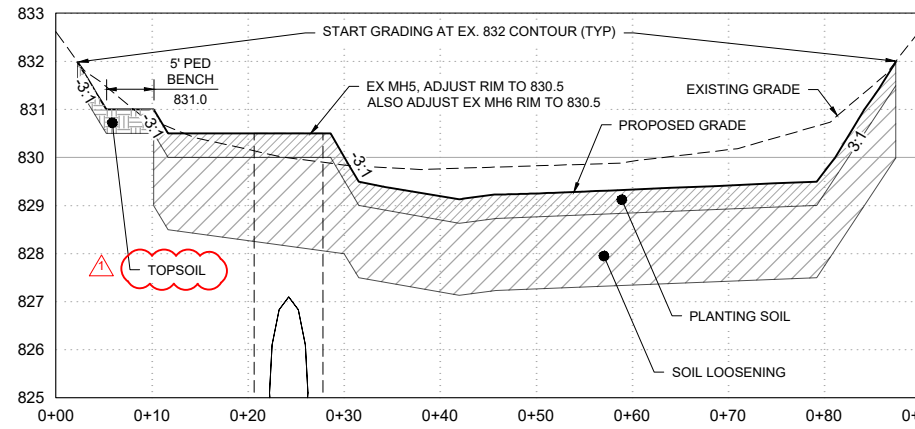
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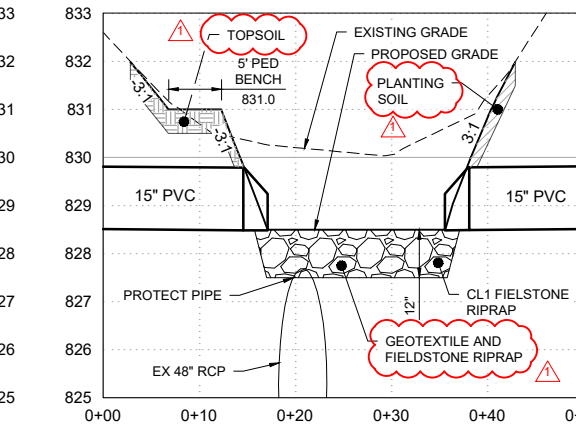
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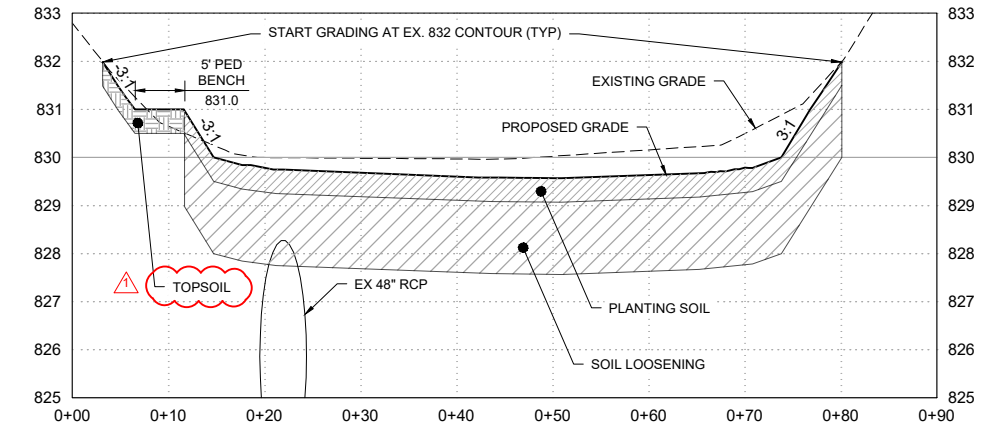
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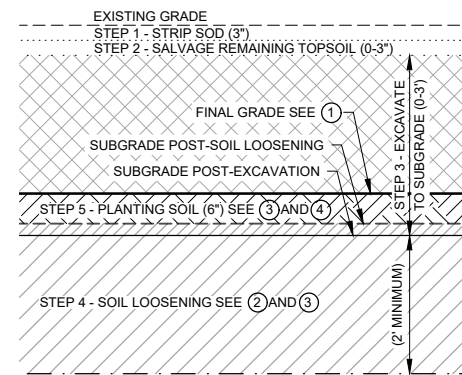
GRADING SECTION B-B



GRADING SECTION C-C

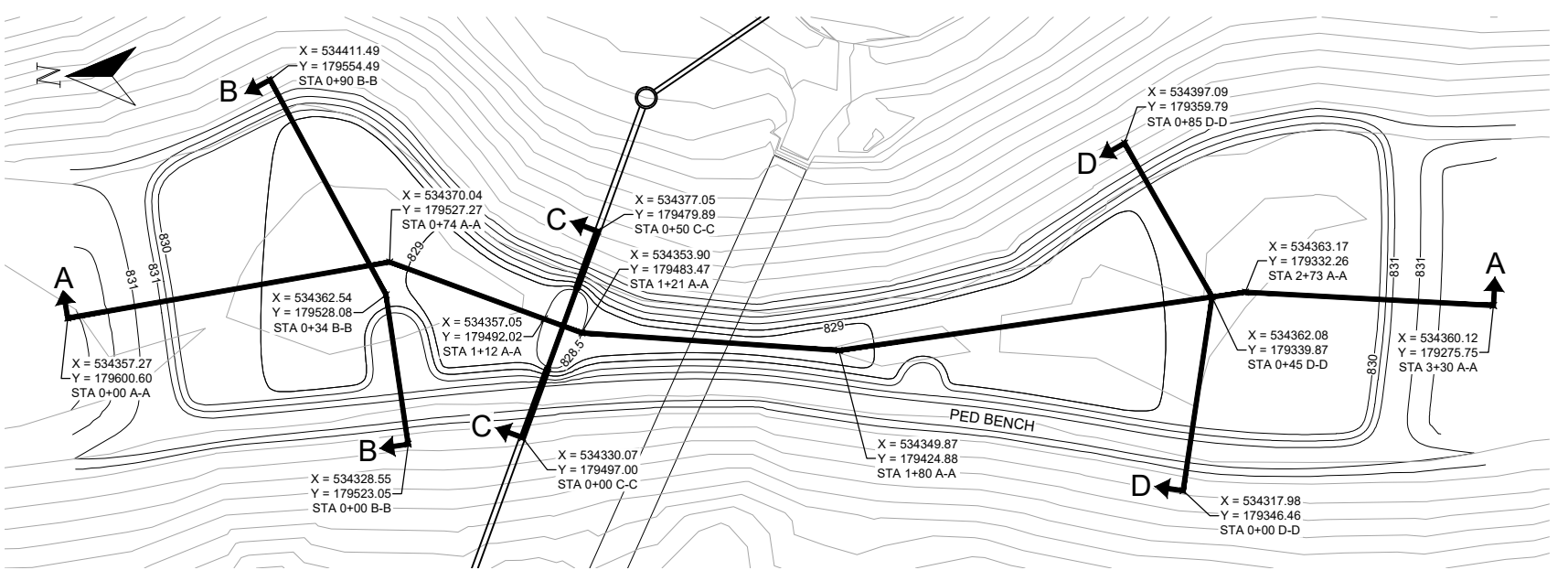


GRADING SECTION D-D



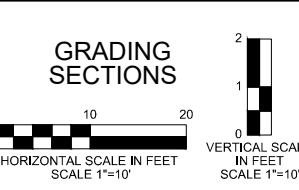
- SPECIAL NOTES:**
- SOIL WILL EVENTUALLY SETTLE APPROX 0.2' BELOW FINAL GRADE.
 - LOOSEN SOIL BY EXCAVATION WITH BACKHOE, AVOID EXISTING STORM SEWER.
 - LOOSEN SOIL AND PLACE PLANTING SOIL AT THE SAME TIME.
 - AVOID COMPACTION DURING AND AFTER PLANTING SOIL PLACEMENT.

- SOIL NOTES:**
- TOPSOIL**
- ALL DISTURBED AREAS OUTSIDE OF THE 831 CONTOUR SHALL HAVE 6 INCHES OF TOPSOIL.
 - IF PRACTICAL, EXISTING TOPSOIL SHALL BE SALVAGED FOR REUSE.
 - IMPORTED TOPSOIL SHALL BE MNDOT ORGANIC TOPSOIL BORROW FOR TURF ESTABLISHMENT.
- PLANTING SOIL**
- PLANTING SOIL SHALL BE PRODUCED BY UNIFORMLY MIXING LOAMY SAND TOPSOIL WITH COMPOST. THIS IS NOT THE SAME AS SANDY LOAM. THE MIXTURE SHALL CONSIST OF 75% LOAMY SAND BY WEIGHT WITH 25% COMPOST BY WEIGHT, UNIFORMLY MIXED PRIOR TO PLACEMENT.
 - LOAMY SAND SHALL BE AS DETERMINED BY THE USDA SOIL TEXTURE CLASSIFICATION BASED ON GRAIN SIZE. LOAMY SAND IS DEFINED AS A MATERIAL THAT CONTAINS AT THE UPPER LIMIT 85% TO 90% SAND, AND THE PERCENTAGE OF SILT PLUS 1.5 TIMES THE PERCENTAGE OF CLAY IS NOT LESS THAN 15. AT THE LOWER LIMIT IT CONTAINS NOT LESS THAN 70 TO 85% SAND AND THE PERCENTAGE OF SILT PLUS TWICE THE PERCENTAGE OF CLAY DOES NOT EXCEED 30. IN ADDITION, THE MAXIMUM PARTICLE SIZE IS 1".
 - COMPOST SHALL MEET REQUIREMENTS OF MNDOT STANDARD SPECIFICATION 3890 FOR GRADE 2 COMPOST AND BE SUPPLIED BY A MNDOT APPROVED VENDOR. SUBMIT MNDOT CERTIFICATION OF SOURCE FOR THE GRADE 2 COMPOST.
 - SOIL GRADATION TEST RESULTS SHALL BE PROVIDED TO THE ENGINEER FOR LOAMY SAND AND GRADE 2 COMPOST A MINIMUM OF 2 WEEKS PRIOR TO DELIVERY OF PLANTING SOIL TO THE SITE. SUBMIT GRADATION AND USDA SOIL TEXTURE CLASSIFICATION FOR LOAMY SAND.
 - ALL AREAS WITHIN THE 831 CONTOUR SHALL HAVE 6 INCHES OF PLANTING SOIL. TAPER PLANTING SOIL INTO TOPSOIL ABOVE 831.
- GENERAL EXECUTION**
- IN ORDER TO MAXIMIZE THE INFILTRATION RATE OF THE SOILS, MAKE EVERY EFFORT POSSIBLE TO AVOID COMPACTION OF THE SUBSOILS AND PLANTING SOIL IN THE BASIN.
 - THE BACKHOE SHALL BE FITTED WITH A BUCKET WITH TEETH. LOOSENING SHALL BE ACCOMPLISHED BY "FLUFFING" THE SOIL WITH A BACKHOE BUCKET. LEVEL LOOSENEED SOIL WITH THE BUCKET.
- SOIL LOOSENING**
- SOIL LOOSENING SHALL START AT EACH END OF THE BASIN AND WORK OUT BACKWARD TO THE LOW POINT. EXCAVATION EQUIPMENT SHALL NOT BE ALLOWED TO TRAVEL IN THE BASINS AFTER THEY HAVE BEEN LOOSENEED AND PLANTING SOIL HAS BEEN PLACED.
- PLACEMENT**
- THE PLANTING SOIL SHALL BE PLACED TO MINIMIZE COMPACTION OF THE SOIL. NO CONSTRUCTION VEHICLES, INCLUDING SKID STEER LOADERS SHALL BE ALLOWED WITHIN THE FOOTPRINT OF THE EXCAVATION AFTER PLANTING SOIL HAS BEEN PLACED.
 - PLACEMENT OF PLANTING SOIL SHALL BE ACCOMPLISHED BY PLACEMENT AND SPREADING WITH A BACKHOE BUCKET AT THE SAME TIME AS SOIL LOOSENING.
 - SMALL IRREGULARITIES SHALL BE WORKED OUT WITH HAND TOOLS.
 - TRAVEL OVER THE PLANTING SOILS WITH CONSTRUCTION EQUIPMENT SHALL BE PROHIBITED.
 - GRADING TOLERANCES FOR FINISHED GRADE OF PLANTING SOIL
 - DEPTH +/- 0.2 FEET
 - HORIZONTAL +/- 2.0 FEET



GRADING SECTIONS REFERENCE PLAN

SCALE 1" = 20'



NO.	DATE	DRW	CKD	APP	REVISION
1	9/21/20	PEB	MDB2	KAL	SECTIONS AND RIPRAP NOTE REVISIONS
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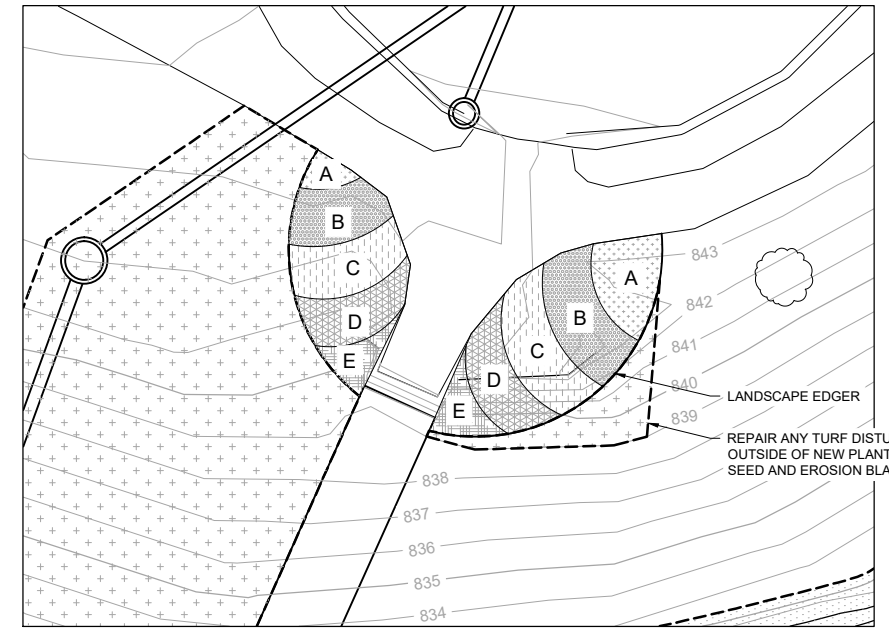
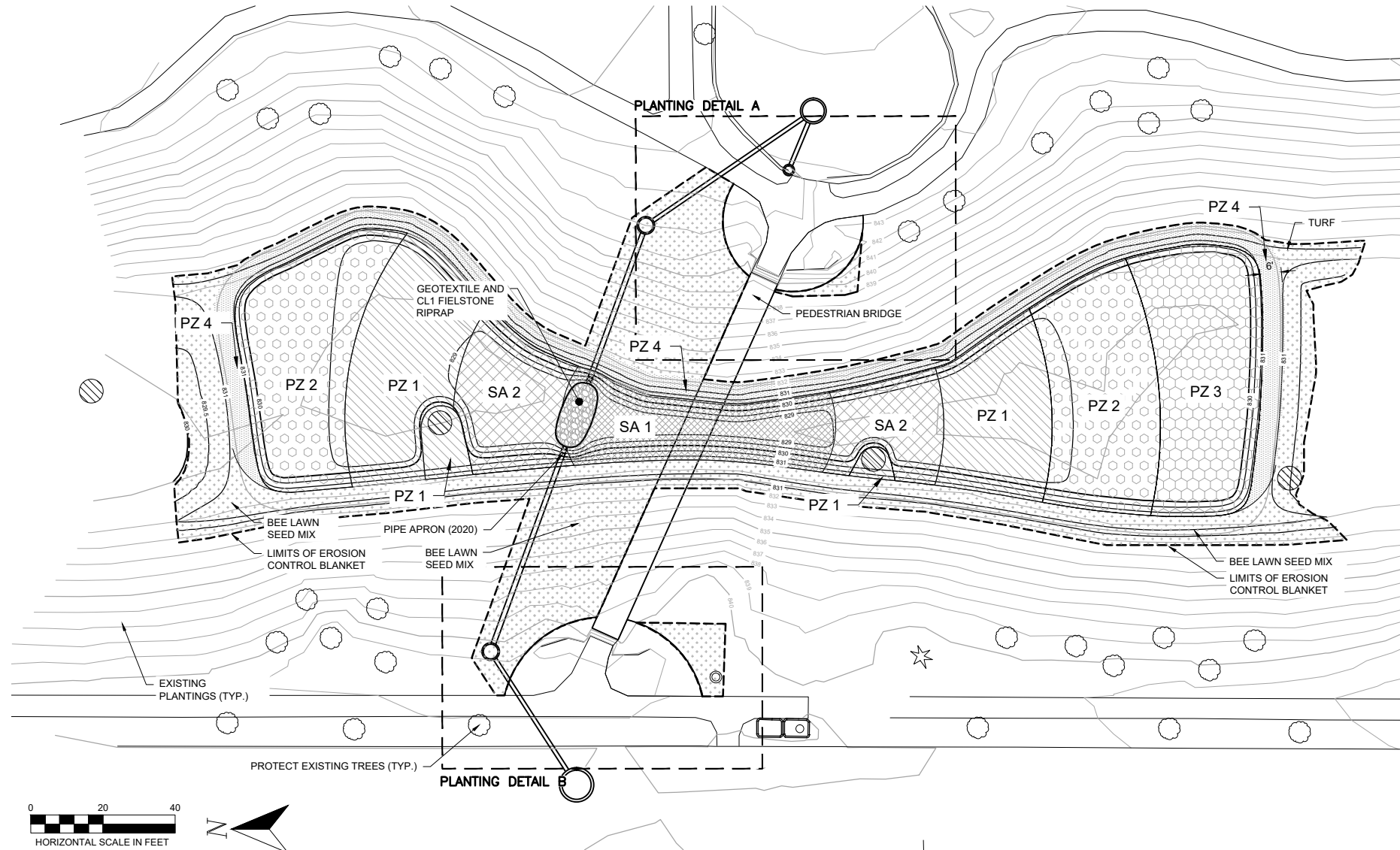
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Kurt A. Leuthold
 KURT LEUTHOLD
 LIC. NO. 22225
 DATE 9/21/20

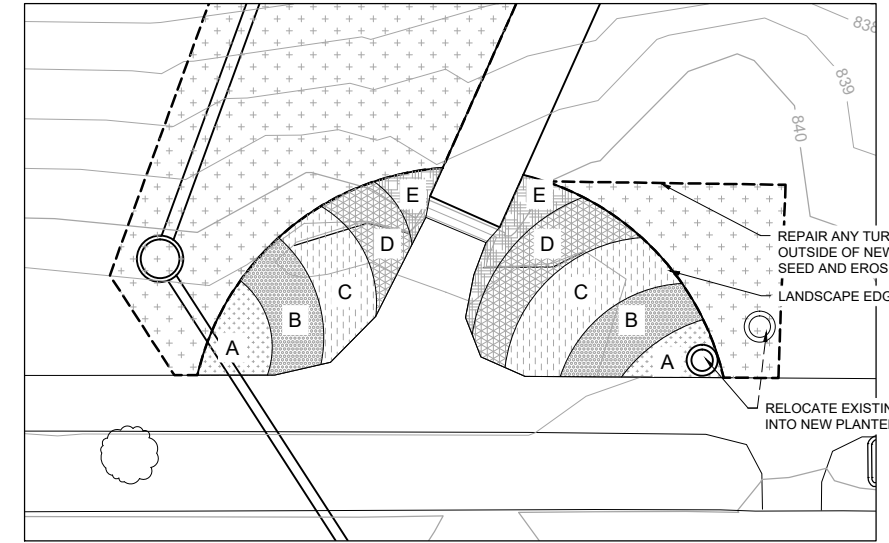
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 MINNEAPOLIS, MN 55435
 Ph: 1-800-632-2277
 Fax: (952) 832-2601

GRADING SECTIONS-2020		HOLLAND BASIN RETROFIT	
DRW: PEB	DATE: 9/21/20		
CHK: KAL	DATE: 9/21/20		
APP: KAL	DATE: 9/21/20		

FILE NAME: P:\MPLS\23 MIN\2723271793 HOLLAND POND RETROFIT\WORKFILES\CAD\12-LANDSCAPE PLAN.DWG PLOT DATE: 9/18/2020 11:58 AM



PLANTING DETAIL A



PLANTING DETAIL B

PLANTING SCHEDULE

Code	Common Name	Botanical Name	Size	Spacing	Quantity
PLANTING ZONES					
PZ 1	Prairie Cordgrass	<i>Spartina pectinata</i>	4" pot	36"	139
	Fox Sedge	<i>Carex vulpinoidea</i>	4" pot	18"	139
	Joe Pye Weed	<i>Eupatorium maculatum</i>	1 gallon	36"	139
	Mountain Mint	<i>Pycnanthemum virginianum</i>	4" pot	24"	139
PZ 2	Fox Sedge	<i>Carex vulpinoidea</i>	4" pot	18"	356
	Tussock Sedge	<i>Carex stricta</i>	4" pot	18"	356
	Swamp Milkweed	<i>Asclepias incarnata</i>	1 gallon	24"	356
	Turtlehead	<i>Chelone glabra</i>	1 gallon	18"	356
PZ 3	Cardinal Flower	<i>Lobelia cardinalis</i>	4" pot	12"	356
	Fox Sedge	<i>Carex vulpinoidea</i>	4" pot	18"	157
	Palm Sedge	<i>Carex muskingumensis</i>	4" pot	18"	157
	Blue Vervain	<i>Verbena hastata</i>	4" pot	24"	157
PZ 4 (Buffer)	Canada Anemone	<i>Anemone canadensis</i>	4" pot	12"	157
	Bee Balm	<i>Monarda punctata</i>	4" pot	30"	157
	Prairie Dropseed	<i>Sporobolus heterolepis</i>	1 gallon	36"	97
	Little Bluestem	<i>Schizachyrium scoparium</i>	4" pot	24"	97
TOTAL 3703					

Code	Common Name	Botanical Name	Size	Spacing	Quantity
SHRUB AREAS					
SA 1	Black Chokeberry	<i>Aronia melanocarpa var. elata</i>	2 gallon	60"	56
SA 2	Firedance Dogwood	<i>Cornus sericea 'Bailladeline'</i>	2 gallon	60"	21
	Isanti Dogwood	<i>Cornus sericea 'Isanti'</i>	2 gallon	96"	22
TOTAL 99					
BRIDGE PLANTINGS					
A	Black Eyed Susan	<i>Rudbeckia fulgida var. sullivantii 'Golds'</i>	1 gallon	24"	23
	Prairie Smoke	<i>Geum triflorum</i>	4" pot	12"	23
	Butterfly Milkweed	<i>Asclepias tuberosa</i>	1 gallon	18"	23
B	Prairie Dropseed	<i>Sporobolus heterolepis</i>	1 gallon	24"	70
C	Purple Coneflower	<i>Echinacea purpurea 'Ruby Star'</i>	1 gallon	18"	56
	Bee Balm	<i>Monarda didyma 'Raspberry Wine'</i>	1 gallon	24"	56
D	Blue Heaven Little Bluest	<i>Schizachyrium scoparium 'Minnblue A'</i>	1 gallon	30"	42
E	Joe Pye Weed	<i>Eupatorium maculatum 'Gateway'</i>	1 gallon	36"	15
TOTAL 308					

- NOTES:**
- PLANTING:**
- NOTIFY THE LANDSCAPE ARCHITECT OF PLANTING AT LEAST TWO DAYS PRIOR TO PLANT DELIVERY. LANDSCAPE ARCHITECT TO REVIEW PLANT LAYOUT PRIOR TO PLANTING. SOME FIELD ADJUSTMENT MAY BE NECESSARY.
 - PLANTING LAYOUT SHALL BE GROUPED BY CLUSTERS OF 7-10 PLANTS IN SQUARE PLANTING PATTERNS WITHIN EACH PLANTING ZONE.
 - PROTECT PLANTS AT SITE FROM STRESS PRIOR TO INSTALLATION.
 - ANY COMPACTION OF PREVIOUSLY LOOSENEED SOIL MUST BE LOOSENEED PRIOR TO PLANT INSTALLATION.
 - THOROUGHLY WATER ALL PLANTINGS WITHIN 2 HOURS AFTER INSTALLATION. CONTRACTOR WILL BE RESPONSIBLE FOR WATERING PLANTS REGARDLESS OF NOTIFICATION DURING ENTIRE WARRANTY PERIOD.
- TURF SEEDING:**
- TURF SEED SHALL BE MINNESOTA-BASED BEE LAWN MIX.
- EROSION CONTROL BLANKET:**
- REMOVE EXISTING TEMPORARY EROSION CONTROL BLANKET.
 - TURF SEED SHOULD BE PLACED PRIOR TO NEW BLANKET.
 - REPLACE BLANKET AND COVER ANY AREAS OF DISTURBANCE WITH MnDOT Cat 4N, 100% COIR FIBER WITH ALL NATURAL FIBER AND NETTING AND 12" LONG BIODEGRADABLE STAKES.
 - PLANTING WILL BE DONE THROUGH IN-PLACE BLANKET.
- LANDSCAPE EDGING:**
- LANDSCAPE EDGING SHALL BE 4-INCH HIGH BY 1/8-INCH THICK BLACK POWDER COATED STEEL EDGING.

NO.	DATE	DRW	CKD	APP	REVISION
1	9/18/20	MDB3		MDB3	A
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Marcy D. Bean
 MARCY D. BEAN 48430 8/28/2020
 LIC. NO. DATE

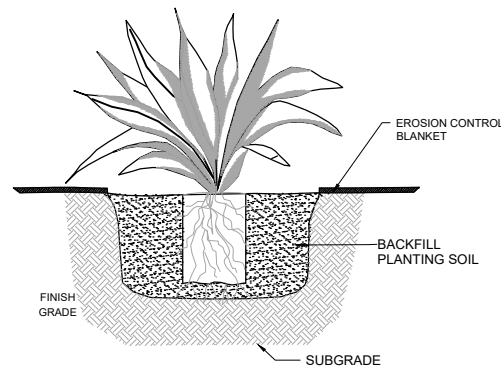
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LANDSCAPE PLAN - 2021

DRW: MDB3 DATE: 8/28/20
 CHK: MEK DATE: 8/28/20
 APP: MDB3 DATE: 8/28/20

HOLLAND BASIN RETROFIT

FILE NAME: P:\MPLS\23 MIN\2723271793 HOLLAND POND RETROFIT\WORKFILES\CAD\13-LANDSCAPE DETAILS.DWG PLOT DATE: 8/28/2020 12:51 PM



1
13 **DETAIL: PERENNIAL PLANTING**
NOT TO SCALE

HERBACEOUS PLUG AND POT PLANTING NOTES:

1. PLANTS WILL BE INSTALLED INTO EROSION CONTROL BLANKET.
2. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
3. EXCAVATE HOLE 3 TIMES WIDTH OF ROOTBALL.
4. BREAK BOTTOM OF ROOTBALL TO LOOSEN ROOTS.
5. PLANT THROUGH MULCH ALIGNING ROOTBALL TOP EVEN WITH SOIL - DO NOT PLANT TOO DEEP OR TOO SHALLOW. FIRM SOIL TO ENSURE GOOD CONTACT WITH ROOTS.
6. BACK FILL WITH PLANTING SOIL. FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
7. WATER THOROUGHLY AFTER PLANTING.

PLANT AND SEED WARRANTY:

All plants provided by the Contractor shall be guaranteed for one-year from the date of preliminary acceptance. At the end of the one-year warranty period, all perennials and shrubs shall be in satisfactory condition, excluding instances of vandalism, as determined by Landscape Architect or Owner.

At the end of the one-year warranty period, as determined by Landscape Architect, all plants shall:

- Be free of dead branches and twigs
- Bear a minimum of 50% of the foliage present when planted
- Have normal density, size, shape and color

Any plants failing to satisfy these conditions shall be replaced per the preliminary and final acceptance process. Plants may be replaced prior to the end of their warranty period if such an agreement exists between the contractor and the owner. Replacement stock shall be subject to all requirements as to selection, inspections, preparation, planting and maintenance operations. Replacements shall match size of other plants on site.

Contractor shall notify owner for final inspection after the end of the warranty period, and again after any and all replacements are planted.

REVIEW AND ACCEPTANCE OF WORK

A. Preliminary Review

1. Upon completion of the work specified herein, the Contractor must request a review by the OWNER/ENGINEER to determine whether the work conforms to the requirements of the Specifications.
2. If it is found that the work does not conform to the requirements of the Specifications, the Contractor will receive written notification from the OWNER/ENGINEER of required corrections.
3. Perform corrective work within ten (10) business days after the Preliminary Review.
4. Upon completion of the corrective work, the Contractor must request another Preliminary Review to determine whether work conforms to the requirements of the Specifications.

B. Preliminary Acceptance

1. When the OWNER/ENGINEER determines that the work conforms to the requirements of the Specifications, the Contractor will receive written notification of Preliminary Acceptance.
2. The warranty period will commence upon the date specified by the notification of Preliminary Acceptance.

C. Final Review

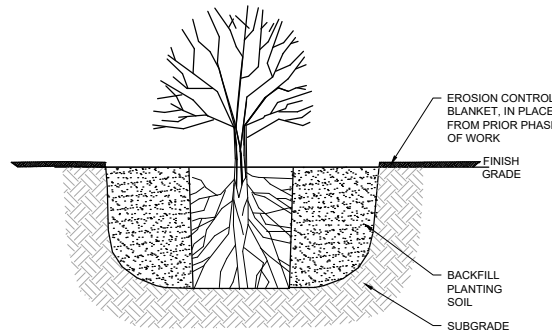
1. Thirty (30) days prior end of the warranty period, Contractor must request a review by the OWNER/ENGINEER to determine whether the work conforms to the requirements of the Specifications.
2. If the OWNER/ENGINEER determines that work does not conform to the requirements of the Specifications, the Contractor will receive written notification of required corrections.
3. Perform corrective work within ten (10) business days of Final Review.
4. Upon completing the required corrections, request another Final Review inspection by the OWNER/ENGINEER to determine whether the corrective work conforms with the requirements of the Specifications.
5. Repeat steps 2 - 4 until all noted correction items are addressed.
6. Failure to address correction items within the Warranty period must extend the Warranty accordingly until all items are corrected and accepted by the OWNER/ENGINEER.

D. Final Acceptance

1. The OWNER/ENGINEER will issue a written notification of Final Acceptance at which time as the Warranty corrections are completed and accepted by the OWNER/ENGINEER. This notification will not be issued until the OWNER/ENGINEER determines that all work conforms to the requirements of the Specifications.
2. Upon Final Acceptance by the OWNER/ENGINEER, contract obligations will be considered complete.

E. Payment

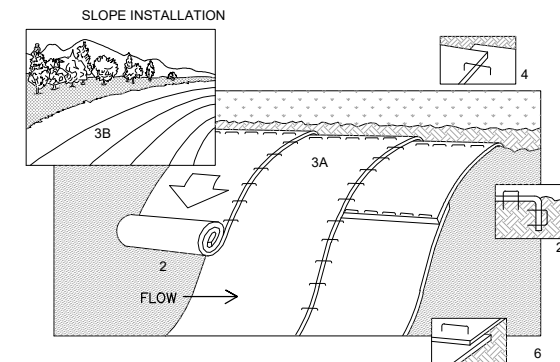
1. OWNER will retain 10% of the contract value until Final Acceptance has been issued.



2
13 **DETAIL: SHRUB PLANTING**
NOT TO SCALE

SHRUB PLANTING NOTES:

1. PLANTS WILL BE INSTALLED INTO EROSION CONTROL BLANKET.
2. PROVIDE AND INSTALL PLANTS PER SCHEDULE.
3. REMOVE DEAD OR DAMAGED BRANCHES. RETAIN THE NATURAL FORM OF PLANT.
4. EXCAVATE HOLE 3 TIMES WIDTH OF ROOTBALL.
5. BREAK BOTTOM OF ROOTBALL TO LOOSEN ROOTS.
6. PLANT THROUGH EROSION CONTROL BLANKET ALIGNING ROOTBALL TOP EVEN WITH SOIL - DO NOT PLANT TOO DEEP OR TOO SHALLOW.
7. BACK FILL WITH PLANTING SOIL. FIRM SOIL AROUND ROOT MASS TO MAINTAIN PLUMB AND ENSURE NO AIR GAPS AROUND ROOT MASS.
8. WATER THOROUGHLY AFTER PLANTING.



NOTES:

1. REFER TO MANUFACTURER RECOMMENDATIONS FOR STAPLE PATTERNS FOR SLOPE INSTALLATIONS.
2. PREPARE SOIL BY LOOSENING TOP 1-2 INCHES PRIOR TO INSTALLING BLANKETS. GROUND SHOULD BE SMOOTH AND FREE OF DEBRIS.
3. BEGIN (A) AT THE TOP OF THE SLOPE AND ROLL THE BLANKETS DOWN OR (B) AT ONE END OF THE SLOPE AND ROLL THE BLANKETS HORIZONTALLY ACROSS THE SLOPE.
4. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROXIMATELY 6" OVERLAP, WITH THE UPHILL BLANKET ON TOP.
5. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROXIMATELY 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" APART.
6. BLANKET MATERIALS SHALL BE AS NOTED OR AS APPROVED BY ENGINEER.

3
13 **DETAIL: EROSION CONTROL BLANKET - INSTALLATION**
NOT TO SCALE

NO.	DATE	DRW	CKD	APP	REVISION
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Marcy D. Bean

 MARCY D. BEAN LIC. NO. DATE

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LANDSCAPE DETAILS - 2021



DRW: MDB3	DATE: 8/28/20
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APP: MDB3	DATE: 8/28/20

HOLLAND BASIN RETROFIT